TAPSS

computers and automation



THE COMPUTER DIRECTORY AND BUYERS' GUIDE, 1963

the June,1963 issue of "Computers and Automation"

Roster of Organizations in the Computer Field

Buyers' Guide for the Computer Field: Products and Services for Sale or Rent

Surveys of Computing and Consulting Services

Descriptions of Computers: Digital, Analog, Special Purpose

Over 600 Areas of Application of Computers

and more besides

, volume... \$20,000 less in yearly operating

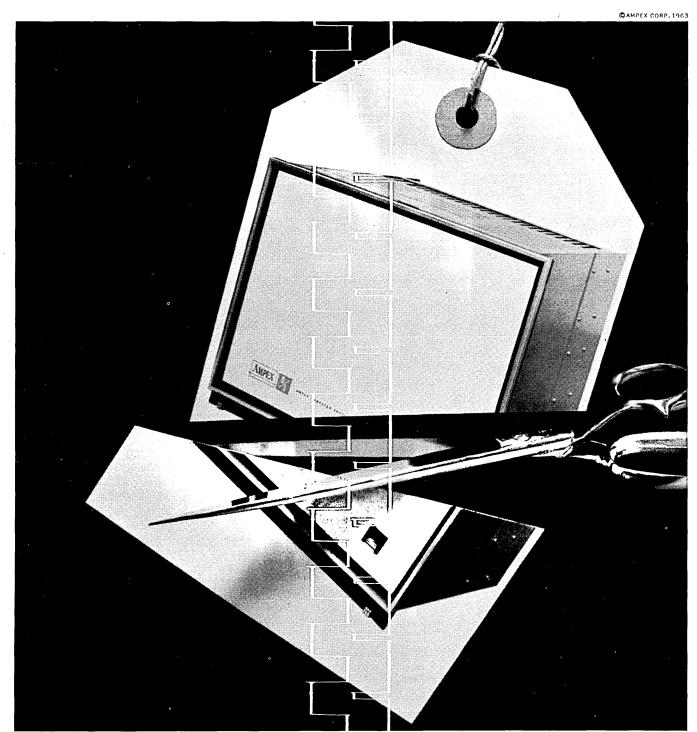
DATA-PHONE service has achieved for Bergen Drug Company, wholesaler of Hackensack, N.J. Used with card-punching equipment, DATA-PHONE service enables the firm to send great quantities of inventory, sales and billing data over regular telephone lines at a 1600-words-per-minute clip.



Operator at Bergen Drug's South Brunswick division places a DATA-PHONE call to the firm's headquarters in Hackensack. Next, machines will "talk" to machines, exchanging data from 12,000 punched cards in six hours.

Are you transmitting <u>your</u> business data as quickly and profitably as you might be? Talk with one of our Communications Consultants and find out. Just call your Bell Telephone Business Office and ask for him. Do it today.





Who made the best medium-speed core memory faster—and then cut your cost 25%? AMPEX

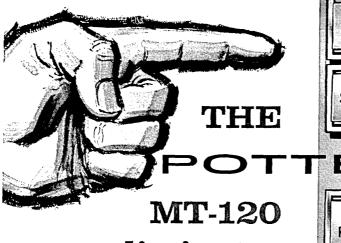
Yesterday the best core memory for small-to-medium capacities was the Ampex RVQ series. It was reliable.

And it did the job. But Ampex wanted to make the best better. Today it is. It's called the RVS. And here's how it's better. Memory cycle: 5 microseconds—1 microsecond faster than the RVQ. Word length: 8 to 40 bits—4 bits longer than the RVQ. And the cost? 25% less than the RVQ. The RVS has a capacity up to 4,096 words. At the same time, it has the flexibility needed for random access applications or high

speed sequential or buffer operation. It operates on conventional unfiltered and unregulated AC power. It's

designed for rack mounting—a 40-bit word RVS takes up only 15% inches of rack space. It's reliable. It's simple to operate. And it has a flip-down front panel for easy maintenance. The RVS is just one instance of the constant refinements made by Ampex to make sure you get the finest equipment in the world. That's the Ampex tradition. For information, write to Ampex Corporation, Redwood City, California.





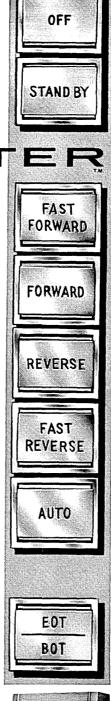
eliminates program restrictions

The new Potter MT-120 Magnetic Tape Transport features high performance in a COMPLETELY STANDARD, LOW COST PACKAGE. An evolutionary development of the reliable M906II tape deck, the MT-120 incorporates a patented tape handling system* that eliminates program restrictions. This unique engineering achievement permits Start/Stop, Reverse/Stop or Forward/Reverse operation at up to 200 commands per second and at tape speeds to 120 ips without external program delays.

The MT-120 delivers extremely high data transfer rates. Using the Potter Contiguous Double Transition** High Density recording technique, rates of 1.6 x 10⁶ information bits per second are obtained. And with standard 7-channel format, 556 bits per inch are provided at speeds of 120 ips.

To learn more about the MT-120 and its unprecedented 1-year warranty of reliability, write to our Director of Marketing today...

*Potter Patent No. 3,016,207 **Potter Patent No. 2,853,357 (other patents pending)







POTTER INSTRUMENT CO., INC.

151 Sunnyside Boulevard • Plainview, New York

COMPUGENS and sutemation

computers and data processors: the design, applications, and implications of information processing systems.

JUNE, 1963 Vol. XII, No. 6

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THE COMPUTER DIRECTORY

and

BUYERS' GUIDE

For 1963

. . . commencing page 10

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COMPUTER RESEARCH SCIENTISTS

SALARIES \$10,000 TO \$20,000 +

Our client is a leading nonprofit organization, located in the Washington, D. C. area, whose end product is reports.

They are comparatively new in the computer sciences field, although very well established as an organization and in other activities. This comparative newness, in conjunction with their determination for excellence, requires new programs and new approaches on their part, and provides exceptional opportunities for advancement and development for those joining them.

Since they are new in this field, they need outstanding professionals to head up and give direction to their work in the areas noted below.

Actually, two types of computer scientists are needed.

Common denominators will be the interest, determination, and ability to push back, if not to hurdle, the frontiers of the "state of the art" in computer science.



- A. ONE GROUP OF PROFESSIONALS WILL WORK INDEPENDENTLY ON PROGRAMS THAT THEY THEMSELVES TAKE THE LEAD IN DEVELOPING AND FORMULATING.
- B. The other group will be just as imaginative and creative, but will work in sponsored areas, with goals laid out a bit more.

Areas of interest include, but are not limited to:

- 1. Machine problem or procedure oriented languages
 - Pattern recognition
 - Programmed learning
 - Artificial intelligence
 - On-line programming
 - To work on research in computer science
- 2. Compiler development for problem or procedure oriented languages. Experience on 7090 machine languages and in machine war gaming useful. To work on compiler for war game oriented languages.
- 3. Model making and programming of machine war games, machine simulation of military operations, or other military computer applications. Experience in construction and/or maintaining operating systems and compilers desirable, for work on a war game oriented language and compiler study.
- 4. Developing scientific computer applications. Emphasis in machine language coding for IBM 709 or 7090. Will assist in design, development and maintenance of an operating system for IBM 1401-7040. Will also provide consultation and/or instruction in computing techniques and processes.

Desired backgrounds should include graduate degrees in Mathematics, Engineering, or the Physical Sciences. Candidates, particularly for level A., should also be capable of successfully making verbal and written presentations, and of communicating effectively with non-computer scientists as well.

WE HAVE OTHER POSITIONS OF A BASICALLY SIMILAR NATURE, AS WELL AS OPENINGS COVERING EVERY PHASE OF THE ELECTRONIC DATA PROCESSING FIELD, WITH OTHER CLIENTS COAST TO COAST.

Resumes should be as complete as possible. Indicate the type of work sought and include current salary, salary requirements, and geographic areas you will not consider.



All inquiries treated confidentially. All charges and relocation expenses are paid for by our client company.

Contact: Herbert Halbrecht

Herbert Halbrecht Associates, Inc.

332 SOUTH MICHIGAN AVENUE, DEPT. CA-6
CHICAGO 4, ILLINOIS
HArrison 7-2876

11691 NATIONAL BLVD., DEPT. CA-6 LOS ANGELES 64, CALIF. Phone: 478-8657

THE COMPUTER DIRECTORY AND BUYERS' GUIDE, 1963

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American Telephone & Telegraph Co., 195 Broadway, New York 7, N. Y. / Page 2 / N. W. Ayer & Son, Inc.

Ampex Corporation, Redwood City, Calif. / Pages 3, 103 / Cunningham & Walsh, Inc.

Audio Devices, Inc., 444 Madison Ave., New York 22, N.Y. / Page 100 / Charles W. Hoyt Co., Inc.

Benson-Lehner Corp., 1476 Califa St., Van Nuys, Calif. / Page 101 / Studio Artists, Inc.

Berkeley Enterprises, Inc., 815 Washington St., Newtonville 60, Mass. / Pages 84, 91 / -

Burroughs Corp., Detroit, Mich. / Page 8 / Campbell-Ewald Co.

Dialight Corp., 60 Stewart Ave., Brooklyn 37, N.Y. / Page 49 / H. J. Gold Co.

Douglas Aircraft Co., Inc., 3000 Ocean Park Blvd., Santa Monica, Calif. / Page 98 / J. Walter Thomp-

Gordon & Breach, Science Publishers, Inc., 150 Fifth Ave., New York 11, N.Y. / Page 27 / --

Herbert Halbrecht Associates, Inc., 332 So. Michigan Ave., Chicago 4, Ill. / Page 6 / J. D. Culea Advertising, Inc.

H-W Electronics, Inc., 14 Huron Dr., Natick, Mass. / Pages 52, 53 / --

Litton Systems, Inc., Guidance & Control Systems Div., 5500 Canoga Ave., Woodland Hills, Calif. / Page 29 / Ellington & Co., Inc.

National Cash Register Co., Main & K Sts., Dayton 9, Ohio / Page 102 / McCann-Erickson, Inc.

Potter Instrument Co., Inc., 151 Sunnyside Blvd., Plainview, N.Y. / Page 5 / Gamut, Inc.

Princeton University Press, Princeton, N. J. / Page 24 / Franklin Spier, Inc.

Stanford University Press, Stanford, Calif. / Page 96 / -Systemat, 1107 Spring St., Silver Spring, Md. / Page 96 / Spectra Associates

Univac, Div. of Sperry Rand Corp., Univac Park., St. Paul 16, Minn. / Page 66 / Pidgeon Savage Lewis, Inc. Valley Consultants, Inc., 716 York Rd., Towson 4, Md. / Page 7 / George C. Ruehl, Jr.



PERSONNEL SPECIALISTS

Missiles and Aerospace

Electronics Systems and Products

Data Processing

Nuclear

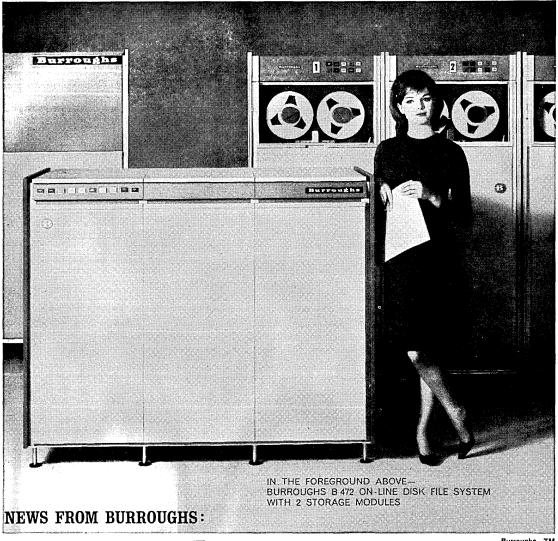
Industrial

EXECUTIVE SEARCH

Salaries commensurate with senior status and degree of contribution. Send resume or write for our Professional Information Form. Client companies assume all expenses.



VALLEY CONSULTANTS, Inc. 716 YORK ROAD . BALTIMORE 4, MD. AREA CODE 301 VALLEY 5-0256 Designed to Serve the Professional . . . in a Professional Manner



Burroughs—TM

A SIGNIFICANT apvance in DATA PROCESSING

Burroughs introduces a new type of random access magnetic disk file which-with its data communications and inquiry devicesmakes practical real time applications possible.

In addition, it allows significant advances in memory capacity, reliability and economy.

The new file eliminates hydraulic or mechanical read/write head positioners and gives each track of information an electronic head of its own. This head-per-track principle allows an average access speed of 20 milliseconds-five times faster than the best of its type now available.

Instant availability of data eliminates the need for artificial file organization techniques-and the programing and use problems which they impose.

Read/write head assemblies self-adjust to maintain a uniform, precision-controlled air gap between head and disk. Retraction is automatic as disks decelerate. Result: a completely reliable system.

A totally new disk-plating technique allows high packing density. Per-module capacity is 9.6 million alphanumeric characters. Thus data storage can be "built up" in small economical increments to a maximum of nearly one billion characters. Modules can be added to your system as needed.

The new disk file greatly extends the application range of our B 5000 and B 200 series, while giving both systems additional immunity to obsolescence. For additional details, write us at Detroit 32, Michigan. Remember: our business is computation for all businesses of all sizes, everywhere.

Burroughs Corporation



c & a

Computers and the Real World

The occasion of publishing the "9th Annual Computer Directory and Buyers' Guide" -- the June 1963 issue of "Computers and Automation", vol. XII, no. 6, -- is perhaps an appropriate time to consider again the relation of computers and the real world. For this directory and buyers' guide is a report about the real world, a report which is basically produced not by computers or data processors but by people. In fact, it is improbable that computers of this century could produce such a report from directly observing the real world.

It is true that every organization mentioned in this directory is a part of the real world. But the organization cannot be seen or sensed directly by any instrumentation. The buildings it occupies can be seen: the signs showing its name can be seen; the machines and equipment assembled in its premises can be seen; but the organization, the company, the government department, the university, etc., cannot be seen—nor can it be detected by any instrument that senses temperature, pressure, liquid level, viscosity, etc. Only human beings so far can detect, describe, and give original first-hand reports about organizations.

A computer or a data processor seems to have a relation to a human organization much like the relation of a man to an anthill. The man can see the ants working at their tasks; he can watch the queen ant eat and lay eggs; but he can't talk to the ants nor listen to what they communicate; he has to infer or deduce the organization of the anthill. A computer could only infer or deduce a human organization.

This being the case, a directory like this one is the result of cooperation and help from many human beings. This is the main reason why we are able to publish this directory. We express our gratitude to all those kind persons whose contributions of information and reporting have helped us produce this directory.

If there are errors of omission or commission, changes or revisions, we shall be very grateful to any reader who tells us; and we plan to publish the revised information in an early issue of "Computers and Automation".

Even though computers cannot directly observe organizations in the real world, the effects of computers upon the real world and upon the organizations in it, are becoming steadily greater and greater. For example, in this directory is a list of over 600 areas of application of computers. This list is interesting: a careful reading of this list gives striking evidence of the variety and quantity of places where a computer can be applied in organizations and elsewhere. "Over 600", now; in a few more years, the number will be "over 1000". And in the years to come, the fabric of organization will be woven with strands in which computers and data processors will be indispensable.

Edmind C. Berfally

EDITOR

ROSTER OF ORGANIZATIONS - 15-10 IN THE COMPUTED TO IN THE COMPUTER FIELD

(Cumulative, information as of May 1, 1963)

I.

The purpose of this Roster is to report organizations in the computer field: organizations making or developing computing machinery or data-processing machinery; organizations supplying services in the computer field; and organizations supplying significant components used in the computer field if related to the field (for example, ferrite cores would be such a component).

Entries. Each Roster entry if complete contains: Name of the organization, its address / Telephone number / Description of its main activities, main products in the field, any comments / Types of activities it engages in, size (expressed in number of employees), year established, nature of its interest in the computer field. In cases where we do not have complete information, we put down what we have.

Accuracy. We have tried to make each entry accurate to the extent of information in our possession. We shall be grateful for any more information or additions or corrections that anyone is kind enough to send us. Although we have tried to be accurate and complete, we assume no liability for any statements expressed or implied.

Abbreviations

The key to the abbreviations follows:

Activities

- Ma Manufacturing activity
- Sa Selling activity
- Ra Research and development
- Ca Consulting
- Ga Government activity
- Pa Problem-solving
- Ba Buying activity

(Used also in combinations as in RMSa "research, manufacturing and selling activity")

- Ls Large size, over 500 employees
- Ms Medium size, 50 to 500 employees
- Ss Small size, under 50 employees (no. in parentheses is approx. no. of employees)

When Established

- Le Long established organization (1932 or earlier)
- Me Organization established a "medium" time ago (1933 to 1952)
- Se Organization established a short time ago (1952
 - (no. in parentheses is year of establishment)

Interest in Computers and Automation

- Dc Digital computing machinery
- Ac Analog computing machinery
- Incidental interests in computing machinery
- Servomechanisms
- Cc Automatic control machinery
- Mc Automatic materials handling machinery

*C This organization has kindly furnished us with information expressly for the purpose of the Roster and therefore our report is likely to be more complete and accurate than otherwise might be the case. (C for Checking) / 63: information furnished in 1963 / 62: information furnished in 1962 / etc.

Organization Entry Form

1	Your organization's corre	at.	nama?				
٠.	Tour organization's corre	Ci	name:				
2.	Street address?	_					
3.	Telephone number?						
4.	City, zone, state?						
5.	components, services, et	-	· ·				
	offer?						
6.		ens	rage in:				
6.	Types of activity that you	eng	gage in:				
6.		eng	gage in:				
6.	Types of activity that you	eng					
6.	Types of activity that you () Research	eng () Selling				
	Types of activity that you () Research () Manufacturing () Other (please explain)	() Selling) Consulting				
6. 7. 8.	Types of activity that you () Research () Manufacturing () Other (please explain)	((our) Selling) Consulting employees?				

President:

Title

This data supplied by

Public Relations Director:

Advertising Manager:

II.

Date

In putting together the "Roster of Products and Services, Buyers' Guide to the Computer Field" this year, we found it desirable to include many products and services for organizations not included in the main "Roster of Organizations".

The names and addresses of these other organizations are listed in the "Supplement to the Roster of Organizations", beginning after the main Roster.

A

Abacus Inc., 1718 21st St., Santa Monica, Calif. / UPton 0-9422; EXbrook 3-9777 / *C 63

Digital modules, programmable digital general purpose buffers, stored program general purpose digital computers, custom systems / RNCa Ss(40) Se(1957) DIC

Se(1957) DIC
Abacus Information Management Co., P.O. Box 399,
New York 8, N.Y. / *C 63
Technical and managerial guidance to administrative officials responsible for wide variety of
civilian and military systems. Functions served
include appraisal, audit, professional criticism, review, crystallization of procedures and
standards, and financial valuation / CGPa Ss(2)
Se(1962) Ic
ABJ. Inc., P.O. Roy 11103 Pala Alex Colife / /

Inc., P.O. Box 11193, Palo Alto, Calif. / - /

*C 63
Engineering and consulting services in the processing of analog, audio, digital and optical signals / Ca Ss(2) Se(1961) Ic
ACF Electronics Div., ACF Industries, Inc., 48 Lafayette St., Riverdale, Md. / WArfield 7-4444 / *C 62

Special purpose analog computers, test equipment computers, magnetic clutches, simulators, digital data transmission equipment / RMSa Ls(1300) Le(ACF, 1899) AIC Acme Visible Records, Inc., Crozet, Va. / 703-823-3611 / *C 63

Accessory filing equipment for control of in-put/output in data processing / RMSCa Ls(700) Le(1914) Ic

AC Spark Plug Div., General Motors Corp., 7929 S. Howell Ave., Milwaukee 1, Wis. / SOuth 2-7000 /

Design, development and production of general

Design, development and production of general purpose and special purpose digital computer for space and airborne systems and other applications / RMa Ls (8100) Me (1940) Dc Actuarial Computing Service, Inc., 1339 Peachtree St., N.E., Atlanta 9, Ga. / TR 5-6727 / °C 63 Specializing in computer applications for the insurance industry, job shop computing / Ca Ss(T) Se (1956) Dc Adage, Inc., 292 Main St., Cambridge 42, Mass. / UN 4-6620 / °C 63 A-D and D-A converters, bi-directional computer links, multiplexers, digital multimeters, hybrid data systems / MSa Ms (over 100) Se (1957) Ic

Ic
ADB Institutet (Scandinavian Automatic Data Processing Institute), Chalmers University of Technology, Gibraltargatan 5, Gothenburg 5, Sweden / *C 63 University training in automatic data processing. Consulting, programming, coding, and running problems on Alwac III E (Wegematic 1000) and SAAB D27 computers for industries in Scandinavia / RCPa Ss(25) Se(1957) Dc
Adcom Corp., 9732 Cozycroft Ave., Chatsworth, Calif. / 341-4635 / *C 63
Design, develop, and manufacture line of high-

/ 341-4635 / *C 63

Design, develop, and manufacture line of highspeed, low-cost, analog-to-digital converters,
digital-to-analog converters, analog multiplexers and related items / Ma Ss (25) Se (1962) I
Addo-x Inc., 300 Park Ave., New York 22, N.Y. /
PL 5-5420 / *C 63

Add punches; adding machines linked to IEM key-punches / MSa Ms(60) Me(1947) Ic Admiral Corp., 3800 W. Cortland St., Chicago 47, Ill. / 312-SP2-0100 / °C 63

Ill. / 312-5P2-0100 / *C 63

Power supplies, delay lines, code converters, decoders, digital communications equipment / RMa Ls (6000) Me (1934) DIC

Adtrol Electronics, Inc., 116 N. 7th St., Philadelphia 6, Pa. / WA 2-4231 / *C 63

Recorders / RNSa Ss(15) Se(1961) Ic

Advance Data Systems Corp., 2037 Granville Ave., Los Angeles 25, Calif. / 478-0245 / *C 63

Systems analysis / RNSC(special engineering) a Ss(26) Se(1962) DIC

Advanced Information Systems, Inc., 3002 Midvale

Ave., Los Angeles 34, Calif. / GR 8-9801 / *C 63

Consulting services, application implementations, research studies / RCa Ss(15) Se(1960) DIC

Advanced Scientific Instruments, Div. of EMR, 5249

Hanson Court, Minneapolis 29, Minn. / KEllogg 3-2501 / *C 63

Electronic digital computers and related peri-

2501 / *C 63

Electronic digital computers and related peripheral equipment / RMSa Ms (90) Se (1961) DIC

Aemco, Div. of Telex -- name changed to Telex/Aemco, a Div. of Telex Inc., which see

Aeronutronic Div., Ford Motor Co., Ford Rd., Newport Beach, Calif. / ORiole 5-1234 / *C 63

Memories, elements and stacks / RMCa Ls (2500)
Se (1956) DIC

Se(1956) DIC
Aerovox Corp., Bellville Ave., New Bedford, Mass. /
WYman 4-9661 / *C 62
Capacitors -- all types, resistors, jacks,
switches / RMSa Ls(3000) Le(1922) Ic
Aetna Products Co., Inc., New South Rd. 6 Commercial,
Hicksville, N.Y. / 516-WElls 1-3120 / *C 63
Inked ribbons for computers and data processing /
Ma Ss(30) Me(1941) Ic
Aircraft Armoments, Inc., York Rd., Cockeysville,
Md. / 301-666-1400 / *C 63
Special purpose computers, simulators, training
systems, telemetering systems, test equipment,
instrumentation, and special purpose devices for
missiles, space vehicles and other military weapons systems, air traffic control, etc., based on
custom specifications / RMSa Ls(1150) Me(1950)
DAIc

AiResearch Mfg. Co. of Arizona (a div. of The Garrett Corp.), 402 S. 36th St., Phoenix 34, Ariz. / BR 5-

Roster of Organizations

6311 / °C 62
Pneumatic analog computers / RMSa L.s(3600) Me
(1950) Ac
Airflyte Electronics Co., 535 Ave. A, Bayonne, N.J. /
201 IE 6-2230 / °C 63
Analog-digital converters, commutating devices,
programming switches / RMa Ms(75) Me(1940)
DATe.

DAIC
Airpax Electronics, Inc., 6601 N.W. 19th St., Fort
Lauderdale, Fla. / 567-1100 / *C 63
Differential, analog computer type magnetic amplifiers; complete line of servo, data logging and control systems; choppers, circuit breakers, transformers and telemetry equipment / RMSa Ms (500) Me (1947) Ic
Alden Electronic and Impulse Recording Equipment Company Inc., 1 Washington St., Westboro, Mass. / FOrest 6-4467 / *C 63
All purpose facsimile equipment / RMSa Ms Me (1948) Ic
Alden Products Co., 1140 N. Main St.. Brockton

All purpose facsimile equipment / RMSa Ms Me (1948) Ic
Alden Products Co., 1140 N. Main St., Brockton,
Mass. / JUniper 3-0160 / *C 62
Cable assemblies, metal chassis, patch cords,
coil winding bobbins, breadboard kits, computer
packaged circuits, connectors, magnetic cores,
fastening devices, jacks, magnetic storage,
lights, indicator systems; components to mount,
package, connect, and monitor electronic circuitry / RMSa Ms(300) Le(1930) Ic
All American Engineering Co., Lancaster Ave. & Centre
Rd., Wilmington 99, Del. / 994-0951 / *C 63
Equipment performance recorders, plethysmograph,
medical and electrical instruments / RMSPa Ms
(345) Se(1952) Ic
Allied Control Company, Inc., 2 East End Ave., New
York 21, N.Y. / Butterfield 8-7403 / *C 63
Relays, subminiature toggle and push button
switches, solenoid valves / RMSa Ls (950) Me
(1933) Ic
**Allied Research Associates, Inc., 43 Leon St., Bos-

**Itiches, Solenoid valves / Mussa LstyJob Me
(1938) Ic

**Allied Research Associates, Inc., 43 Leon St., Boston 15, Mass. / GArrison 7-2434 / *C 62
Service on IBM 1620 digital computer and a GPS
high-speed analog computer; generalized research
and development in the physical sciences / RMCa
Ms(230) Me(1951) DAIc

American Bosch Arma Corp., Roosevelt Field, Garden
City, N.Y. / - / *C 62
Digital and analog computers, packaged computer
circuits, high-speed printers, photoelectric
readers, computer test equipment and fire control equipment / MSa Ls(8651) Le(1919) DAICc
American Business Systems, Inc., 2929 "B" St.,
Philadelphia 34, Pa. / - / *C 63
Data processing cards, recording papers / Ma
?s ?e Ic

?e Ic

American Concertone, Inc., 9449 W. Jefferson Blvd., American Concertone, Inc., 9449 M. Jefferson Blvd., Culver City, Calif. / UPton 0-7245 / *C 63 Manufacturers of magnetic tape recorders/reproducers / Ma Ms (225) Mc(1947) Ic American Data Machines, Inc., 7 Commercial St., Ilicksville, N.Y. / - / *C 62 Portable card punch; converter, card to paper tape; data recording and collating equipment / RMSCa Ms (75) Sc(1961) Ic American Data Services, Inc., 0110 [sic] S.W. Bancroft St., Portland 1, Ore. / CApitol 6-6051 / *C 63 System design, programming, data processing and

C 63 System design, programming, data processing and machine services provided business, governmental and scientific groups. Computers used are Bur-roughs 205 and IBM 1401 / Ca Ss(20) Se(1960)

roughs 205 and IBM 1401 / Ca Ss(20) Se(1960)
Ic
American Hydromath Corp., 24-20 Jackson Ave., Long
Island City 1, N.Y. / EX 2-4242 / *C 62
Mechanical and electro-mechanical analog computers; special purpose slide rules, quality control computers, mechanical nomographs / RMSCc
Ss(10) Me (1940) A.
American Lava Corp., Manufacturers Rd., Chattanooga
5, Tenn. / 265-3411 / *C 63
Custom manufacturing services including technical ceramics and metal-ceramic combinations /
Ma Ls(over 1000) Le(1902) Ic
American Research and Manufacturing Corp., 920 Halpine Ave., Rockville, Md. / HA 7-7116 / *C 62
Electronic components, preparation of manuals and training aids, electromechanical design services / RMa Ms(75) Se(1954) Ic
American Telephone & Telegraph Co. and Associated Bell Systems Telephone Companies, (Hq) 195 Broadway, New York 7, N.Y. / - / *C 63
Complete communications services for data processing systems / RMS(service)a Ls(735,000) Le

Ic

The American University, Center for Technology and Administration, 1901 F St. N.W., Washington 6, D.C. / STerling 3-4040 / *C 63

Research; teaching; training; consulting. Two LGP-30's; off-line Flexowriter, systems design courses, ADP courses / RC (education-training) a Ss (8) Se (1960) Ic

Amperex Electronic Corp., 230 Duffy Ave., Hicks-ville, L.I., N.Y. / 516-WEI-6200 / *C 63

Electron tubes, semiconductors (transistors, diodes, rectifiers), circuit blocks, solid stat digital systems and sub-systems / Ma Ls (600) Le (1925) Ic

Amphenol-Borg Electronics Corp., Broadview 111 /

digital systems and sub-systems / Ma Ls(600)
Le(1925) Ic
Amphenol-Borg Electronics Corp., Broadview, Ill. / - /
Connectors and potentiometers for computer applications: all types / RMSa Ls Se(1950) Ic
Amphenol Connector Div., Amphenol-Borg Electronics
Corp., 1830 S. 54th Ave., Chicago 50, Ill. / BIshop
2-1000 / *C 62
Standard, miniature, and microminiature connectors. Intercon printed circuitry. Cable assemblies / RMSa Ls(2500) Le(1932 as American Phenolic) Ic

(oilor AMP Inc., Harrisburg, Pa. / 564-0101 / *C 63 Solderless terminals, connectors, patchcord programming systems and pinboards, computer power supplies / Ma Ls(4500) Me(1941) Ic Amplifier Corp. of America, 390 Broadway, New York 13, N.I. / WOrth 6-2929 / *C 63

N.Y. / Worth 6-2929 / *C 63

Tape recorders, tape decks, transistorized electronic modules and plug-in boards, transistorized power supplies, transistorized amplifiers; flutter meters, demagnetizers; instruments to order / EMCPa Ss (25; as an affiliate of Keystone Camera Co., Inc., additional personnel and facilities readily available) Me(1936) Ic

Amulex Electronics, Inc., 467 Connecticut Ave., South Norwalk, Conn. / 203-366-3020 / *C 63

Time code generators, automatic component testers, custom test equipment / MCa Ss (12) Se (1962) Ic

Anadex Instruments Inc., 7617 Hayvenhurst Ave., Van

(1962) Ic

Anadex Instruments Inc., 7617 Hayvenhurst Ave., Van
Nuys, Calif. / 782-9527 / *C 63

Electronic counters / Ma Ss (40) Se (1957) Ic

Analogue Controls, Inc., 200 Frank Rd., Hicksville,
L.I., N.Y. / OVerbrook 1-7300 / *C 63

Resistors / Ma Ms (150) Se (1956) Ic

Andersen Laboratories Inc., 501 New Park Ave., West

Hartford 10, Conn. / ADams 6-1281 / *C 62

Digital delay lines, transistorized memory devices, magnetostrictive delay lines ultrasonic

delay lines, electromagnetic delay lines / RMSa
Ms (140) Me (1951) DSc

Anelex Corp., 150 Causeway St., Boston 14, Mass. /

Ms(140) Me(1951) DSc
Anelex Corp., 150 Causeway St., Boston 14, Mass. /
RIchmond 2-1720 /**e 63
High-speed printer systems, Series 4 Print
Station, high-speed listers, airborne printer.
Special purpose and militarized printer systems,
random access disc storage and other peripheral
EDP equipment, Anelex printer training school /
RMSa Ls(650) Me(1952) Is
Applied Data Research, Inc., 759 State Rd., Princeton, N.J. / 609-MAInut 1-0550 / *C 62
Consulting and programming on all electronic digital computing systems / RCPa Ss(30) Se(1959)
Ic

Ic
Applied Dynamics, Inc., 2275 Platt Rd., Ann Arbor,
Mich. / 313-662-4493 / *C 63
General and special purpose analog computers /
RMSa Ms (80) Se (1957) Ac
Applied Magnetics Corp., 749 South Kellogg Ave.,
Goleta, Calif. / 805-907-0123 / *C 63
Custom designed precision magnetic recording
heads for computer and instrumentation applications / RMSCa Ms (100) Se (1957) Ic
Aracon Laboratories Div., Allied Research Associates,
Inc., Virginia Rd., Concord, Mass. / 617-369-9000 /
*C 63
Service on IEM 1620 digital computer and a GPS

*C 63

Service on IBM 1620 digital computer and a GPS high-speed analog computer; generalized research and development in the physical sciences / RMCn Ms (230) Me (1952) DAIC

ANADA DIV. of All American Engineering Co., 135 Main St., Delieville 9, N.J. / - / *C 62

Custom designed test equipment, instrumentation, controls, power supplies, pulse amplifiers, special purpose analog computers / RMSCn Ss (15)

Se (1956) AICc Se(1955) ALC Arenberg Ultrasonic Lab. Inc., 94 Green St., Jamai-ca Plain 30, Mass. / 617-JAmaica 2-8640 / *C 63 Ultrasonic test equipment / Ma Ss(25) Me(1950)

Ore. / CY 2-3149 / *C 63
Biophysical analog computers, operational amplifiers / RMCa Ss(17) Se(1958) AIC
Aries Corp., 7722 Morgan Ave. So., Minneapolis 23, Minn. / UN 6-3321 / *C 63

Aries Corp., 1722 Morgan Ave. Sov., minneaports 2.5.

Minn. / UN 6-3321 / *C 63

System engineering, system analyses and programming services / Ca Ss (22) Se (1962) Ic

Arkay Engineering, Inc., 11800 W. Olympic Blvd.,

Los Angeles 64, Calif. / GRanite 9-8026 / *C 63

Engineering and consulting services. Experienced in designing and shipping hardware. Semiconductor circuits, data systems, automatic checkout and control, complete computers, telemetry, instruments, value analysis, proposals /

Ca Ss (12) Se (1950) Ic

Arma Div., American Bosch Arma Corp., Garden City,

N.Y. / Ploneer 2-2000 / *C 63

Microminiature digital computers, memory subsystems, displays, velocity counters / RMa

Ls (3003) Le (1918) Dic

The Arnold Engineering Co., Railroad Ave. & West

St., Marengo, Ill. / (Chicago) ANdover 3-6300 /

*C 63

Magnetic materials / MSa Ls (800) Me (1936) Ic

*C 63
Magnetic materials / MSa Ls (800) Me (1936) Ic
A R 6.T Electronics Inc. -- name changed to Baldwin
Electronics, Inc., which see
Assembly Producers; Inc., 75 Wilson Mills Rd., Chesterland, Ohio / HA 3-3131 / *C 62
Contact meter relays, panel meters, "packaged controls," special electronic controls, electrically actuated controls, automatic control

controls," special electronic controls, electrically actuated controls, automatic control equipment / RMSCa Ms (300) Me (1945) DACc Associated Sales Analysts, Inc., 220 West 42nd St., New York 36, N.Y. / - / *C 63

Punched card and magnetic tape electronic data processing / C (data processing) a MS (200) Se (1952) Ic.

Association of Data Processing Service Organizations, 947 Old York Rd., Abington, Pa. / 215-659-1300 / *C 63

*C 63
A non-profit association; symposium, literature.
General association services to owners and managers of data processing service centers / CaSs(2) Sc(1960) Ic
Astrodata Inc., 240 E. Palais Rd., Anaheim, Calif. / 714-772-1000 / ° C 63
Computer-centered data reduction systems
((wholly-owned subsidiary COMCOR, Inc. manufactures analog computers and components) MaMs (430) Sc(1958) Ic





64

Astrometrics, Inc., 1108 Santa Barbara St., San Barbara, Calif. / Woodland 5-0931 & 965-0406

Astrometrics, Inc., 1108 Santa Barbara St., Santa Barbara, Calif. / Woodland 5-0931 & 965-0106 /

*C. 62

Electronic commutators, decommutators, FM receivers (telemetry), low-level switches and choppers, multiplexers, demultiplexers, Servosound high-fidelity audio systems, Articulator audio system (intelligence improving receiving equipment), no-moving parts recorder and playback system, low-level amplifiers, etc., automatic data processing systems, telemetry systems, amplitude probability-density analyzer system / RMa Ss(12) Sc(1957) DAIC

Astron Div., Renwell Industries, Inc., 255 Grant Ave., E. Newark, N.J. / Himboldt 2-7800 / *C. 63

Various types of paper capacitors, electrolytic capacitors, solid tantalum capacitors and fixed dielectric and R.F. interference noise suppression filters / Ma Ms (350) Me(1950) Ic

Atlas Precision Products Co. Div. of Prudential Industries, Inc., 3001 Castor Ave., Philadelphia 24, Pa. / JEfferson 5-3700 / *C. 63

Mechanical analog computers for fire control, radar, etc.; geared mechanisms, servos, etc.; analog-to-digital converters, sub-assemblies; precision gears, differentials, bearings / Ma/Ms(102) Le(1927) Alc

Audio Devices, Inc., 444 Madison Ave., New York 22, N.Y. / PLaza 1-6640 / *C. 63

Computer audiotape, magnetic recording tape for computers / RMSa Ms (275) Me(1937) Ic

Audio Instrument Co., Inc., 135 West 14 St., New York 11, N.Y. / ORgon 5-7820 / *C. 63

Analog time delay devices; logarithmic converters / RMSa Ss (9) Me (1949) Ic

Auerbach Corporation, 1634 Arch St., Philadelphia 3, Pa. / LO 3-7737 / *C. 63

Can sutting services in systems engineering, computer programming, business information systems, product and market planning, programmed teaching, computer analysis (standard EDP reports) / Ca Ms (100) Se (1957) DAIC

Automated Accounting Center of Connecticut, 7 Field St., Waterbury, Conn. / Pt. 6-0309 / *C. 63

Data processing services. Equipment: Bendix G-15 computer, NCR sorter-reader, sorter-coupler, adding machine punches, magnetic tape accessories / SCa

Automatic Electric Co. -- name changed to Automatic Electric Sales Corp., which see Automatic Electric Sales Corp., Northlake, Ill. / 345-7111 / *C 62

Lectric Sales Corp., which see
Automatic Electric Sales Corp., Northlake, Ill. /
345-7111 / *C 62
Relays and rotary stepping switches for industrial control, and control systems / RMSa Ls
(8500) Le(1891) Ic
Automation Engineers, 344 W. State St., Trenton 8,
N.J. / OWhen 5-2628 / *C 63
Consultants in automatic control machinery, automatic materials handling equipment, and information handling equipment. Designers of specialized data processing equipment, including office machinery coupling mechanisms. Analysis of automation economics; supervision of installations / RMSCa Ss(20) Mc(1942) ICMc
Automation Management, Inc., 25 Brigham St., Westboro, Mass. / 366-4423 / *C 63
Performance computer: management and automation engineering; contractors of integrated processes / RSCa Ss(3) Se(1955) Ic
Autometics Industrial Products, Operating Div. of Autometics, a Div. of North American Aviation, Inc., 3400 East 70th St., Long Beach 5, Calif. / MEtcalf 4-3220 / *C 63
RECOMP general purpose digital computers and peripheral equipment including: RECOMP II, medium-scale general purpose solid-state digital computer; RECOMP III, small-scale general purpose solid-state digital computer; RECOMP III, medium-scale general purpose solid-state digital computer; RECOMP III, medium-scale general purpose solid-state digital computer; RECOMP III, small-scale general purpose solid-state digital computer; RECOMP III, small-scale general purpose solid-state digital computer; RECOMP Sarpatic Tape memory system; RECOMP X-Y Digital Plotter; RECOMP Card adapter unit, Model 151 150 cps tope punch, Model 110 600 cps capacitance-sensing tape reader, for original equipment manufacturers and electronic systems engineering firms / RNSa Ls(35,000) Me (1950)
DISCC
Avtron Manufacturing, Inc., 10409 Meech Ave., Cleveland 5, Ohio / 641-0310 / *C 63

NISCc
Avtron Manufacturing, Inc., 10409 Meech Ave., Cleveland 5, Ohio / 641-0310 / *C 63
Design, development and manufacture of special and general digital indication/control equipment; solid-state power computers and multipliers; semi-automatic test equipment / RMCa Ms (75) Se (1954) DIc

<u>B</u>

Babcock Electronics Corp., 1640 Monrovia Ave., Costa Mesa, Calif. / Liberty 8-0611 / *C 63 Command control and guidance systems including receivers, transmitters, encoders, decoders,

signal generators and support equipment / RMSa Ls(1000) Me(1947) Ic
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio / 451-4600 / °C 63
Automatic control equipment, special purpose computers, data processing equipment, analog and digital information systems / RMSa Ls(2000) Le(1916) DACC
Baldwin Electronics, Inc., 1101 McAlmont, Little Rock, Ark. / 501-FR 5-6441 / °C 63
Photoelectric analog to digital shaft-position encoders / RMa Ms(175) Sc(1953) Ic
Basic & Experimental Physics, 133 Palmer, Box 689, Falmouth, Mass. / KI 8-2175 / °C 63
Digital computer programming, numerical analysis, design of analog and digital real-time control, data processing / RCa Ms(230) Sc(1953)
DAIC

sis, design of analog and digital real-time control, data processing / RCa Ms(230) Se(1953)

BAIC

Battelle Memorial Institute, 505 King Ave., Columbus 1, Ohio / - / *C 62

Digital and analog research in systems engineering, servomechanism, automatic control machinery, and automatic materials handling machinery / Ra Ls(2200) Le(1929) DAISCMC

Beckman Instruments, Inc., Berkeley Div., 2200

Wright Ave., Richmond, Calif.; Helipot Div., 2500

Harbor Blvd., Fullerton, Calif.; Systems Div., 2400 Harbor Blvd., Fullerton, Calif.; Systems Div., 2500 Linstruments, systems and components for analysis, measurement and components for analysis, measurement and components for analysis, measurement and components and services; all types of information converters; electronic counters; high-speed multi-channel data processing systems, recording and reduction equipment; delay lines, dials; potentiometers; Hall Effect devices; high-speed multi-channel data processing systems; recording and reduction equipment; delay lines, dials; potentiometers; Hall Effect devices; high-speed printers; servomechanisms; telemetering systems; test equipment, translating equipment; systems components; missile checkout systems; and military study contracts in areas of computing instrumentation and data processing / RMSGa Ls (5000) Me(1935) DAISCC Beemak Plastics, 7424 Santa Monica Blvd., Los Angeles 46, Calif. / 215-463-5627 / *C 63

Plastic holders for punched cards / Ma Ss (25) Se(1952) Ic

Bell Aerosystems Co., P.O. Box 1, Buffalo 5, N.Y. / - / *C 62

Bell Aerosystems Co., P.O. Box 1, Buffalo 5, N.Y. /

Bell Aerosystems Co., P.O. Box 1, Buffalo 5, N.Y. /

-/*C 62

IBM 607, 1401, 704 and 7090 / RMa Ls (3800) Se (1960) DAc

Bell & Howell Micro-Data Div., 7100 McCormick Rd.,
Chicago 45, Ill. / AM 2-1600 / *C 63

Microfilm recorders.and readers designed to complement computer and tab printers / RMS (servicing) a ?s Se(1961) Ic

Belock Instrument Corp., 112-03 14th Ave., College Point 56, N.Y. / HI 5-4200 / *C 63

Research and development, design, development and production of electronic and electromechanical systems and devices. Inertial, navigation systems, radar systems, radar simulation systems, gun fire and missile launch control systems, gyros, accelerometers, stabilized platforms, north-seckers, timers, programmers, exploders, and missile components, publications, training and engineering services / RMA Ls (700) Me (1950)

AISCC

AISCC
Bendix Computer Div., 5630 Arbor Vitae St., Los Angeles 45, Calif. / ORchard 0-3640 / *C 62
G-15 and G-20 general purpose computing systems;
G-21 special purpose military system / RMSa Ls
Se(1952) Dic

Se(1952) DIc
The Bendix Corp., Bendix Systems Div., 3300 Plymouth
Rd., Ann Arbor, Mich. / 665-7766 / *C 63
Bendix G-20 computer service bureau facility /
RCa Ls(900) Se(1957) DIc
The Bendix Corp., Eclipse-Ploneer Div., Teterboro,
N.J. / ATlas 8-2000 / *C 63

J. / Allas O-2000 / "Co ball Aliborne digital computer, analog-to-digital converters, resolvers, motor generators, memory storage devices, visual output indicators, automatic check-out systems / RMSa Ls(10,000) Le (1916) DAIc

(1916) DAIC
Bendix Corp., Industrial Controls Section, 21820 Wyoming Ave., Detroit 37, Mich. / JO 6-9800 / *C 62
Numerical control systems for machine tools,
circuit cards, card testers, servo drives / MSa
Ms (300) Se (1957) Ic

BENDIX CORP., RESEARCH LABORATORIES DIV., ENDIX CORF., RESEARCH LABORATORIES DIV., South-field (Detroit), Mich. / KEnwood 7-3300 / *C 63 Research in analog, digital, and hybrid tech-niques; special purpose analog and digital com-puting and control systems / RCa Ls (700) Le (1929) DASCMc

Benson-Lehner Corp., 14761 Califa St., Van Nuys, Calif. / 213-STate 1-7100 / *C 63
Data reduction, handling and translating equipment: record readers (oscillographic, film, etc.), data storage and retrieval machines; data display devices including line drawing plotters, point and symbol plotters, special readers including map and blue print readers, digital microscopes and comparators; shaft rotation-tudigital converters; electrically controlled typewriters. Very high speed CRT printer-plotters, plotting equipment with inputs from computars, magnetic tape and cards; film and oscillograph readers with computer compatible output / RMSa Ms (200) Me (1950) Dic

Berg Electronics, Inc., 142 Reno St., New Cumber-land, Pa. / CE 8-9394 / *C 63 Strip connectors, solderless terminals, automa-tic assembly equipment / MSa Ms(115) Me(1952)

Ic Edmund C. Berkeley and Associates, 815 Washington St., Newtonville 60, Mass. / DEcatur 2-5453 or 2-3926 / °C 63 Courses by mail in automatic computing machinery, mathematics, and other scientific subjects / PCa Ss(3) Me(1940) Dc(affillated with Berkeley Enterprises, Inc.)

Berkeley Enterprises, Inc., 815 Washington St., Newtonville 60, Mass. / DEcatur 2-5453 or 2-3928 / °C 63 Electric brain construction bis 6-1-1

*C 63
Electric brain construction kit for educational purposes: Brainiac. Publisher of "Computers and Automation" and other publications. Small robots; Relay Moc (lit-tat-toe machine) / RMSa Ss (8) Se (1954) Dc (affiliated with Edmund C. Berkeley & Associates)
Bethlehem Instrument Co., Inc., Prospect & Conestoga Sts., Bethlehem, Pa. / UN 6-0777 / *C 63
Electrical indicating instruments / Ma Ss (45) Se (1959) Ic
Ernest E. Blanche & Associates. Inc., 10335 Kensing

Electrical indicating instruments / Ma Ss (45) Se (1950) Ic
Ernest E. Blanche & Associates, Inc., 10335 Kensington Parkway, Kensington, Md. / 949-0500 / ° 6 63
Bata processing, 1401 with 4 magnetic tapes,
42 IBM punch card machines; mathematical and statistical work / RC(computing and data processing) a Ms (105) Se (1955) Ic
Bonner & Moore Associates, Inc., 500 Jefferson St., Houston 2, Tex. / CA 8-0871 / °C. 63
Consulting and research in operations research, economics, systems engineering, process control, computer applications and programming (proprietur) inear programming and general data reduction packages for several machines) / RCPa Ss (20) Se (1956) DASc
Boonshaft and Fuchs, Inc., Hatboro Industrial Park, Hatboro, Pa. / OSborne 2-1240 / °C. 63
Special analog computers, statistical computers, computer analyzers, computer control systems, servo mechanisms / RMa Ms (65) Se (1959) DAISCE
Booz, Allen Applied Research Inc., 135 S. LaSalle St., Chicago 3, Ill. (offices also in Bethesda, Md., and Cleveland, Ohio) / FRanklin 2-1728 / °C. 63
Broad range of computer services including computer and brothers of the control of the statistics of the control of the c

Md., and Cleveland, Ohio) / FRanklin 2-1728 / °C 63

Broad range of computer services including computer and hardware systems design, installation of management, computer feasibility, applications, systems analysis, software design, data processing, and scientific computation / RCa Ms (200) Sc (1955) Ic/
Booz, Allen & Hamilton Inc., 135 S. LaSalle St., Chicago 3, Ill. (offices also in New York, Washington, D.C., Cleveland, Detroit, San Francisco, and Los Angeles) / Financial 6-1900 / °C 63

Management consultants, technical and management services in electronic and automatic data processing for integrated management information and control systems for industry, commence, government, and institutions; feasibility studies, system design, equipment selection, implementation, systems conversion, EDP audit and review / CPa Ms (400) Le (1914) Ic

Bourns, Inc., Trimpot Div., 1200 Columbia Ave., Riverside, Calif. / - / °C 62

Trimpot potentiometers, adjustment and precision types as well as relays / Ma Ls (1300) Ms (1940) Ic

Bowmar Instrument Corp., 8000 Bluffton Rd., Ft.
Wayne, Ind.; TIC Div. of Bowmar, Acton, Mass.; Acton Laboratories, Inc. (subsidiary), Newbury Park, Calif. / - / *C 62

Precision servo components and assemblies, counters, electronic devices, measurement and

Calif. / - / *C 62
Precision servo components and assemblies,
counters, electronic devices, measurement and
test instruments / RMSa Ls (1000, including subsidiaries) Me (1951) Ic
W. H. Brady Co., 727 W. Glendale Ave., Milwaukee 9,
Wis. / ED 2-8100 / *C 63

W. H. Brady Co. 727 W. Glendale Ave., Milwaukee 9, Wis. / ED 2-8100 / *C 63

Data processing labels, key punch correction seals, computer tape contact tabs, tape reel labels / Ma ?S Le(1914) Ic

Brand - Rex Division, American Enka Corp., 31 Sudbury Rd., Concord, Mass. / EMerson 9-9630 / *C 63

Wire, cable, electrical insulating materials / RNSa Ls(1000) Le(1920) Ic

Richard D. Brew and Co., Inc., 90 Airport Rd., Concord, N.H. / 225-6605 / *C 63

Digital delay lines lumped and distributed constant / RNSa Ms(140) Me(1945) Ic

The Bristol Co., P.O. Box 1790 CAG, Waterbury 20, Conn. / PLaza 6-4451 / *C 62

Electronic and potentiometric recording, indicating, controlling, signalling; alarm and telemetering instruments for standard and special functions; components including choppers, high speed relays, capsular elements, remote positioners, pressure switches and transducers; miniature standard and special socket screws; recording papers; data logging equipment / RNSa Ls(over 1000) Le(1889) Ic

Broadview Research Corp. — name changed to United Research Services Inc., which see

Bryant Computer Products, Div. of Ex-Cell-O Corp., 050 Ladd Rd., Walled Lake, Mich. / MArket 4-4571 / *C 63

Magnetic storage drums, read/write heads and amplifiers, disc files / RNA Ms (250) Se (1952)

Magnetic storage drums, read/write heads and amplifiers, disc files / RMa Ms(250) Se(1952)

Budd Electronics, 43-22 Queens St., Long Island City 1, N.Y. / - / *C 62

, N.Y. / - / ~ 02 Data retrieval systems, data display systems, special purpose computers, custom designing of logic circuitry, data encoders and decoders, storage systems, cathode ray tube displays and

print-out units. Specialists in weather radar data processing / RMa Ls(900) Se(1960 as a division of The Budd Co.) DAIC
Bulova Research & Development Laboratories, 62-10
Woodside Ave., Woodside 77, N.Y. / - / °C 63
Research and development of special-purpose electronic and electromechanical devices includelectronic and electromechanical devices including servomechanisms, binary modules, computing
elements and integrators, timers and counters /
RSa ? ?e DISc

J. H. Bunnell & Co., 61 Prospect St., Brooklyn 1,
N.Y. / ULster 8-0100 / °C 63

Tape winders and spoolers, punched tape readers /
Ma Ms(6) Le(1678) Ic
Burlingame Associates, Ltd., 510 S. Fulton Ave., Mt.
Vernon, N.Y. / MO 4-7530 / °C 63

Analog computers, computing applications and power.

Analog computers, computing amplifiers and power supplies, analog recorders, analog-to-digital converters, digital voltmeters / Sa Ss (40) Le (1928) DALC

Burndy Corp., Norwalk, Conn. / TEmple 8-4444 / *C 62 Electrical and electronic connectors, printed circuit connectors / RMSa Ls (2000) Le (1924)

Burndy Corp., Norwalk, Conn. / TEmple 8-4444 / *C 62
Electrical and electronic connectors, printed
circuit connectors / RMSa Ls (2000) Le (1924)
1c
Burroughs Corp., 6071 Second Ave., Detroit 32, Mich. /
075-2260 / *C 63
Burroughs 5000, 205, 220 and B200 series (250,
260, 270, 280) electronic data processing systems and digital computer components; also the
El01 and El03 desk-size electronic digital computers for scientific and general business usages, respectively; specialized punched card inputoutput systems; card-to-paper-tape conversion equipment; magnetic tape storage systems; tape handlers, keyboards, magnetic tape filing systems and tape recorders, paper tape and card readers and punches. Adding machines, bookkeeping machines, multiple tape listers, high speed printers, photo readers, etc. / RMSCa Ls (37,000)
Le (1086) D1c
Burroughs Corp., Ann Arbor Laboratory, 7300 Huron
River Drive, Dexter, Mich. / 313-426-5111 / *C 63
Digital display equipment and systems (modules, consoles, recorders, and inquiry systems) / RMSCa Ms (over 100) Se (1955) Ic
Burroughs Corp., Electronic Components Div., P.O.
Box 1226, Plainfield, N.J. / Pt. 7-5000 / *C 63
Visual readout devices, NIXIE (Blndicator Tubes, sphericular optic displays, semiconductors, magnetic thin film memory planes, EEAM-X(R) Switches / MSa Ms (350) Se (1954) Ic
Business Automation, 288 Park Ave. W., Elmhurst,
111. / TErrace 4-9350 / *C 63
Monthly magazine devoted to business automation and data processing for corporate and middle management. Covers systems, machine accounting, communications and use of business forms for management in all types of industry, commerce, institutions and the government / MS (publishing) a Ms (60) Le (1904) DAc
Business Electronics Inc., 420 Market St., San Francisco II, Calif. / Douglas 2-0094 / *C 62
Home study courses in computer programming.
Courses include programming technology and systems design in terms of business applications.
General programming technology and systems design in terms of business applications.
General

Multi-channel strain gage data loggers, digital recording systems, electronic weighing and measuring systems, transducers / Ma Se(30) Se (1956) Ic

Cadre Industries Corp., 20 Valley St., Endwell,
N.Y. / PI 6-3373 / *C 63
Cable harnesses, cable assemblies, wiring harnesses, custom manufacturing: amplifiers, plugin modules and panels, test equipment, communications equipment and systems / RMS (contract manufacturing) a Ls (1100) Me (1951) Ic
California Computer Products, Inc., 305 Muller Ave., Anaheim, Calif. / 714-774-9141 / *C 63
Design, develop, manufacture digital incremental plotters and systems for automatic plotting of output from medium-scale and large-scale digital computers / RMa Ms (200) Sc (1958) Ic
California Instruments Corp., 3511 Midway Drive, San Diego 10, Calif. / 714-224-3241 / *C 63
Wideband DC amplifiers, automatic oscilloscopes, and analog voltage comparators / RMSa Ss (23)
Sc (1957) Ic
Calvert Electronics Inc., 220 E. 23rd St., New York

(1)

Se(1957) Ic
Calvert Electronics Inc., 220 E. 23rd St., New York
10, N.Y. / CAnal 6-7400 / *C 62
Microwave tubes, power tubes, cold cathode tubes, semi-conductors, storage oscilloscope which permits storage of signal for one week and permits comparison of 10 traces / Sa Ss(25) Me(1949)

Ic
Cambridge Communications Corp., 238 Main St., Cambridge 42, Mass. / 491-0710 / *C 63
Solid state abstracts; solid state abstracts on cards and microcards; information processing journal; computer abstracts on cards and microcards / (publishing)a Ss(9) Se (1957) Ic
Canadian Applied Research Ltd. -- name changed to
The de Havilland Aircraft of Canada, Ltd., Special
Products & Applied Research Div., which see

Roster of Organizations

Canadian Aviation Electronics Ltd., Box 2030 "St.
Laurent", Montreal, Canada /ME 1-6781 / *C 63
Digital computers and data processors, analog
computers, servomechanisms, automatic control
machinery, automatic materials handling machinery / RMSa Ls (2500) Me (1947) DASCMc
Capital Business Service, 520 East Michigan Ave.,
Lansing, Mich. / IV 7-5963 / *C 62
Complete data processing service with large number of tested standard programs for accountants
and businesses. IBM 1401 computer and punched
card equipment. Experienced in paper tape
handling. Nation-wide service / C (data processing services) a Ms (55) Me (1943) Ic
Carlton Controls Corp., 15 Sagamore Rd., Worcester
5, Mass. / 756-7159 / *C 63
Numerical control systems / RMSa Ss (5) Se
(1957) Cc
CRS Laboratories, a div. of Columbia Broadcasting
System, Inc., High Ridge Rd., Stamford, Conn. /
Davis 5-4321 / ** 63

CBS Laboratories, a div. of Columbia Broadcasting
System, Inc., High Ridge Rd., Stamford, Conn. /
DAvis 5-4321 /*C 63

VIDIAC character generator, GA-1000, composerprinter / BNCa Ms(250) Me (1936) Ic
C-E-I-R, Inc., 1 Farragut Square So., Washington 6,
D.C. / EXecutive 3-1111 /*C 63
Problem-solving for industry and government
worldwide; proprietary programs and general computer program development / RCP (war and business
gaming, programming) a Ls(600) Se(1954) Ic
Centralab, 900 E. Keefe Ave., Milwaukee 1, Wis. /
W0 2-9200 / *C 63
Logic, plug-in, potted, printed circuits; capacitors, potentiometers / Ma Ls(3000) Le(1928)
Ic

Ic
Century Electronics & Instruments, Inc., 6540 E.
Apache St., Tulsa 15, Okla. / 918-TE 5-9951 / *C 63
Multi-channel recording oscillographs of direct
writing, electrophotographic and conventional
photographic types; vibration and stress analysis systems; data recording equipment and cameras; input-output devices; galvanometers; null
balance recording potentiometers. UV direct
writing oscillograph, hi-speed digital printer,
telemetry calibrator, precision oscillator / RNa
Ms (650) Me (1945) Ic

CG ELECTRONICS (DIV. OF GULTON INDUSTRIES, INC.).

G ELECTRONICS ONV. OF GLUTON INDUSTRIES, INC.),
15000 Central Ave., East, Albuquerque, N. Mex. /
505-299-7601 / *C 63
Digital data acquisition and reduction systems;
missile and satellite-borne low and high-level
PCM telemetry systems; low level-solid state
multiplexers; high security digital command and
monitoring systems; high speed A/D, D/A convertcrs; digital timers; supervisory control systems; physiological data collection systems;
untomatic chockeut and location systems; automatic checkout and testing systems; computer linkage; data translation and formating systems; digital serializer and visual rendout devices; printed circuits, microwelded, copper deposition modules / RASa Ms(155) Se(1954) DICC

Chadwick-Helmuth Co., 111 E. Railroad Ave., Monrovia, Calif. / ELliot 8-4567 / *C 63
Oscilloscope sweep control, pulse camera, slow motion sampling, electronic counters / RMSCa Ss(12) Se(1953) Ic
Chalco Engineering Corp., 15126 S. Broadway, Gardena, Calif. / FAculty 1-0121 / *C 63

Chalco Engineering Corp., 15126 S. Broadway, Gardena, Calif. / FAculty 1-0121 / *C 63
Punched tape readers / RNa Ms (60) ?e Ic Chrono-log Corp., 2583 West Chester Pike, Broomall, Pa. / Elgin 6-6771 / *C 63
Real-time reference systems for digital computers, including time and date. Programmable real-time clocks for digital computers. Digital clocks, calendars, counters. Consultants in process control, computer control, industrial and military / MSCa Sci00 Sci0560 Dc
Cinch Manufacturing Co., 1026 S. Homan Ave., Chicago 24, Ill. / NE 2-2000 / *C 63
Connectors / RNSa Ls(1100) Lc(1920) Ic
The Cincinnati Time Recorder Co., 1733 Central Ave., Cincinnati 14, Ohio / - / *C 63
Timing devices, data collection systems / RNSCa Ms(300) Le(1896) Ic
Circuit Engineering, 102 Ellis Rd., Weston 93, Mass. / TWinbrook 4-6071 / *C 63
Consultants. Transistor, magnetic, electronic, conductive, and other information handling circuits / Ca Ss Sc(1954) Ic
Civil Engineering Systems Laboratory, M.I.T. -- name changed to Massachusetts Institute of Technology, which see

which see

which see
C & K Components, Inc., 103 Morse St., Newton 58,
Mass. / WAlnut 6-0800 / *C 63
Magnetic shift registers, encapsulated logic circuits, transistorized indicator assemblies,
special purpose ultra-low power magnetic counting systems / Ma Ms (75) ≤ 6(1950) Ic
C. P. Clare & Co., 3101 W. Pratt Blvd., Chicago 45,
Ill. / AM 2-7700 / *C 62
Sealed contact reed relays, mercury wetted contact relays, telephone type relays, seconing

Sealed contact reed relays, mercury wetted contact relays, telephone type relays, stepping switches / RMa Ls(1600) Me(1937) Ic Clarkson Press Inc., 169 Van Rensselaer St., Buffalo 10, N.Y. / TL.3-7500 / °C 63 GC data processing forms, GC panelLOGIC, GC forms-handling equipment / RMSa Ms(125) Me(1947)

Clarostat Mfg. Co., Inc., Dover, N.H. / 603-742-1120 /

°C 63 Precision potentiometers (wirewound and composition element), switches, wirewound power resistors / RMSCa Ls(1400) Le(1922) Ic Clary Corp., 408 Junipero St., San Gabriel, Calif. / CUmberland 3-2724 / °C 63

Solid state scientific computers, arithmetic W)

ers, graphic arts products, construction automation machinery, missile components and tape perforating equipment / MSa Ms (344) Me (1939) DIC center, high-speed line printers, solenoid print-

Clevite Transistor, 200 Smith St., Waltham 54, Mass. / TWinbrook 4-7780 / *C 62

TWinbrook 4-7780 / °C 62
Gold bonded germanium diodes, silicon alloy diodes, silicon mesa diodes, milliminiature germanium diodes, silicon diffused rectifiers, germanium alloy power transistors, silicon planar epitaxial transistor, encapsulated modules / Ma Ls(1800) Se(1953) Ic
Clifton Precision Products Co., Inc., Marple at Broadway, Clifton Heights, Pa. / 215-MAdison 2-1000 / °C 63

*C 63
Synchros, rotary components / Ma Ls (900) Me (1946) DAIc
Codamite Corp., P.O. Box 2914, Anaheim, Calif. / 714-774-4707, 714-776-6432 / °C 63
Code generators and translaters / RMSCa Ss (30) Se (1962) Ic
Cognitronics Corp., 549 Pleasantville Rd., Briar-cliff Mañor, N.Y. / RO 9-7900 / °C 63
General purpose programmable computers for graphic arts. Magnetic memory drum systems. Digital to audio outputs / RMSCa Ss (25) Se (1961) DIc
Colemna Electronic Systems. 3210 W. Central Ave..

to audio outputs / RMSCa SS (25) Se (1961) DIC
Coleman Electronic Systems, 3210 W. Central Ave.,
Santa Ana, Calif. / 546-1600 / °C 63
Analog to digital encoders, data logging systems,
data link systems, positioning equipment, automatic tool positioning systems, digital tape or
card recording from servo recorders / MSa Ms (75)
Me (1950) Ic
Collins Radio Co.

card recording from servo recorders / MSa Ms(7s)
Me(1950) Ic
Collins Radio Co., Dallas, Tex. / AD 5-9511 / *C 63
Communication oriented data processors and peripheral equipment including high speed data transmission devices / RMSCa Ls(16,000) Me(1933) DI
Collins Radio Co., Information Science Center, 19700
San Joaquin Rd., Newport Beach, Calif. / KImberly
9-2911 / *C 62
Collins Kineplex data communications systems for

Collins Kineplex data communications systems for transmission of punched card, magnetic tape and other digital information over telephone line, radio circuit or other voice channels. Commercial and military communication and data processing systems and equipment including airborne data systems, teletype and other message switching systems / RMSa Ls (750) Me (1950) DIc Columbia Ribbon & Carbon Mfg. Co., Inc., Herbhill Rd., Glen Cove, N.Y. / 08 6-2730 / °C 63 Fabric and smudge proof film base ribbons for high speed printers and other data processing equipment, continuous duplicating masters, spirit and offset / RMSa Ls (900) Le (1905) Ic Comcor, Inc., 430 S. Navajo St., Denver 23, Colo. / 777-3066 / °C 63 Bevelopment, manufacture and wales of components

777-3066 / % 63

Development, manufacture and water of components and systems for computers, controls and data handling / RMS (computer maintenance and modernization) m Ms (77) set (1959) DAIC

Comptoweter Corp. — name changed to Victor Comptometer Corp. Business Machines Div., which see Components Corp., 106 Main St., Denville, N.J. / 201-627-0290 / % C 63

201-627-0290 / °C 63
Decade counting units -- DIGI-NLIPS® (Printed circuit connectors) / Ma Ss(10) Me (1943) Ic
Compumatix, Inc., 440 S, Brentwood Blvd., St. Louis 5, Mo. / PA 6-2770 / °C 62
Consultants on all computers including systems and procedures, data processing on the LGP-30, °C IBM 650, IBM 702, IBM 709, IBM 7090, IBM 1401 / RCa Ss(10) Se(1956) DAIc

COMPUTER ASSOCIATES, INC., 44 Winn St., Woburn, Mass. / Wells 5-2121 / *C 63

ass. / WElls 5-2121 / *6 63
Research, development, production, and consulting activities in digital computer programming, including: utility programs and packages, compilers and assemblers, programming and operating systems, command and control systems, information storage and retrieval systems, artificial intelligence, and scientific and commercial applications / RMCPa Ss(20) Se(1961) Ic

Computer Concepts, Inc., 1012 14th St., N.W., Washington 5, D.C. / 703-7215 / °C 62
Programming services, computer efficiency studies, machine translations / Ca Ss(35) Se(1961)

Computer Consultants Ltd., 3 Cecil Court, London Rd Enfield, Middlesex, England / ENField 7185, 9219; cable "COMPUTERS ENFIELD" / *C 63

cable "COMPUTERS ENFIELD" / *C 63
Consulting services. Associated companies: Computer Assembling Ltd., Computer Colleges Ltd.,
Computer Consultants (International) Ltd., Computer Spares Ltd., Computer Research Ltd.,
Computer Spares Ltd., Computer Staff Selection
Ltd., Computer Time Hire Ltd. / Ca Ss(20)
Se(1957) Ic
Computer Control Co., Inc., Old Connecticut Path,
Framingham, Mass.; 2251 Barry Ave., Los Angeles
64, Calif. / Framingham: 617-235-6220; Los Angeles
64, Calif. / Framingham: 617-235-6220; Los Angeles
65, Computers and special-purpose digital systems
for space, engineering, training, scientific and

Computers and special-purpose digital systems for space, engineering, training, scientific and business applications. Digital modules, magnetostrictive delay lines, shaft angle encoders, magnetic core memories, decimal or octal to binary electromechanical switches and keyboards. Space vehicle instrumentation, simulation and data handlers; information storage and retrieval; missile tracking and positioning; signal processing and time compression; language translators; industrial process and machine tool control; business data processing; pulse pattern and range time code generation; computer training devices / RUSCa Ls(G20) Sc (1952) Die

13

Computer Engineering Associates, an affiliate of Susquehanna Sciences, Inc., 350 N. Halstead St., Pasadena, Calif. / Elgin 5-7121 / °C 63
Direct analog computer, specialists in complex structural analysis / RMSCa Ss(35) Sc(1954)

Computer Equipment Corporation, 11612 W. Olympic Blvd., Los Angeles 64, Calif. / GR 9-4131 / °C CC Digital data acquisition systems; range instru-mentation; time sequencing systems. Time-to-

mentation; time sequencing systems. Time-to-digital converters. Computer-formatting systems / RNSa Ms (60) Se (1950) DIC Computer Laboratories, Inc., 7015 Gulf Freeway, Houston, Tex. / MI 4-1671 / °C 63
Scientific and business data processing on hourly or contract basis. Programming and consulting services. Problem definition to finished report. Digital plotting from on-line plotter / RSC (computer programming) a Ss (20) Se (1961) Ic Computer Logic Corp., 11000 Olympic Blvd., Los Angeles 64, Calif. / GRanite 9-3318 / °C 63
Small custom digital systems, standard and special digital instruments; manufacture and sale of proprietary logic cards and system comsmall custom digital systems, standard am a special digital instruments; manufacture and sale of proprietary logic cards and system components; Logic-Lab, special purpose digital computers and automatic checkout devices / RMSCa Ss(12) Se(1960) DICc
Computer Methods Corp., 107 Mamaroneck Ave., White Plains, N.Y. / RO 1-1998 / °C 63
Specialists in real-time data processing, communications, information systems and simulation techniques / RCa Ss(14) Se(1961) Ic
Computer Operations, Inc., 50 Jericho Turnpike, Jericho, New York / Ploneer 1-5180 / °C 62
Professional services, including: logical design, mathematical analysis, computer programmer ming, data reduction, computer systems analysis, design and evaluation / C(programming; systems design & analysis)a Ss (80) Se(1960) DAIC
Computer Products Inc., 1717 "F" St., South Belmar, N.J. / 201-601-3100 / °C 63
Analog computers, general purpose, precision; si-

Analog computers, general purpose, precision; si-mulators; analog computer components; analog com-puter modernization and modification; electronic

puter modernization and modification; electronic mode control; display systems; analog computer field service / RMSCa Ms (50) Se (1961) AIc Computer Usage Co., Inc., 655 Madison Ave., New York 21, N.Y. (also Washington, D.C., Los Angeles, Calif., Newton Upper Falls, Mass.) / PLaza 2-5900 / *C 63

Analysis and programming, all digital computers;
machine time rental, various systems / Re(application development) a Ms(175) Se(1955) Ic
Computers and Automation, 815 Washington St., Newton-ville 60, Mass. / DEcatur 2-5453 or 2-3920 / *c 63
Magazine dealing with the design, applications, and implications of information processing systems including automatics; while help monthly by tems, including automation; published monthly by Berkeley Enterprises, Inc. / MSa Ss(8) Me (1951)

Computron Inc., 122 Calvary St., Waltham, Mass. / 617-TW9-0880 / *C 63

617-TW9-0000 / *C 63

Magnetic tape for computers and instrumentation exclusively / RMSa Ms(140) Se(1960) Ic

CONMESS (Computer Research Systems and Software). Inc., 2916 V St., N.E., Washington 18, D.C. / 529-0363 / *C 63

Development of software packages. SCERT (Systems and Computers Evaluation and Review Technique), a computerized simulation technique for evaluating hardware/software in terms of descriptions of the systems applications to be programmed; TRANSIM, a machine to machine language translator and simulator / RSC(development and marketing of proprietary software) a Ss(7) Se(1962) Ic

ing of proprietary software) a Ss (7) Se (1962) Ic

Condenser Products Co. P.O. Box 1046, Brooksville, Fla. / 796-3562 and 796-4411 / *C 62
Capacitors (trademark copyright "Plasticon" and "Glassmike"), power supplies, pulse forming networks / RNSa Ss (36) Le (1910) Ic

Connecticut Technical Corp., 3000 Main St., Hartford 5, Conn. / 203-522-6167 / *C 63

Peripheral equipment. Input-output typewriters, numeric data loggers, keyboards, tape punching systems, listing printers (serial and parallel entry) / MC(development of customer products) a Ss (20) Se (1960) Ic

Consolidated Avionics Corp., 800 Shames Dr., Westbury, N.Y. / 516-ED 4-0400 / *C 63

Transistorized power supplies, automatic test equipment, digital systems, logic modules, special magnetostrictive delay lines ("Vari-bit"); magnetic card readers, engine generator control modules / RNA MS (200) Se (1955) DAIC

Consolidated Controls Corp. — name changed to
Unimation Inc., which see

Consolidated Electrodynamics Corp., 360 Sierra Madre Villa, Pasadena, Calif. / Mirray 1-0421 or Sycamore 6-9301 / *C 63

Electronic instruments for measurement, analysis, and control; instruments for measureme

Electronic instruments for measurement, analysis, and control; instrumentation for dynamic testing; amplifiers; automatic control equipment, data processing and data recording equipment, information retrieval devices, input-output devices, regulated power supplies, magnetic tape recorders, magnetic storage systems, tape handlers, recording papers, transducers / RMSa Ls(3000) Me(1937)

DAc Consolidated Ohmic Devices, Inc., 900 Third Ave., New Hyde Park, N.Y. / HUnter 8-1606 / °C 63 Precision wire wound resistors / Ma Ms(100) Se(1957) Ic

Se (1957) Ic
Consolidated Systems Corp., 1500 S. Shamrock Ave.,
Monrovia, Calif. / - / °C 62
A wide range of electronic and electro-mechanical
systems for data handling, ground and space support, checkout, industrial control, and analog
and flight instrumentation. Also analog to digi-

tal conversion and recording systems; printed circuit boards; military cameras, optics and electro-optical systems / MSCa Ls(700) Se(1954)

DICc
Continental Connector Corp., 34-63 56th St., Woodside 77, N.Y. / TW9-4422 / °C 63
Complete line of printed circuit, micro-miniature, miniature, center screwlock, power, special
designs and crimp-type removable contact plug
and socket precision electronic connectors for

designs and crimp-type removable contact plug and socket precision electronic connectors for computer, guided missile, aircraft and communications of RNSa Ms (500) Se(1952) It Control Data Corp., 9100 34th Avenue South, Minneapolis 20, Minn. / 888-5555 / *C 63
Digital computers, systems, and devices; guidance and communications systems; data processing equipment; visual output devices; peripheral equipment; source data collectors; magnetic tape units; digital control equipment; control equipment / RNSa Ls (3000) Se(1957) DASc Control Equipment Corp., 19 Kearney Rd., Needham Heights 94, Mass. / 617-444-7550 / *C 63
Design, development and manufacture of special purpose digital computers, data processing systems, and digital industrial control systems. Complete line of digital modules and system components / Ma Ss(25) Se(1950) DIC Control Logic, Inc., 11 Mercer Rd., Framingham, Mass. / 617-655-1170, 617-235-1865 / *C 63
Welded digital circuit modules; digital training systems, data and control systems / RMa Ms(50) Se(1960) DIC Control Science Corp., 5150 Duke St., Alexandria,

Set(1961) Dic
Control Science Corp., 5150 Duke St., Alexandria,
Va. / - / *C 63
Decoders, encoders / Ma ?s ?e Ic
Control Switch Div., Controls Co. of America, 1420
Delmar Dr., Folcroft, Pa. / LU 3-2100 / *C 62
Switches, lighted panel components, complete
electromechanical subassemblies / MSa Is (600)
Set(1960 merger) Ic

Se(1960 merger) Ic Control Technology, Inc., 1232 Belmont Ave., Long Beach 4, Calif.; 194 Nassau St., Princeton, N. J./ Long Beach: 213-433-3360; Princeton: 609-921-2617 / *C 63

Long Beach: 213-433-3360; Princeton: 609-9212617 / **C 63
Consulting, research and development studies,
analysis, programming, training, systems engineering; on-line computer control, data processing, simulation, scientific computation /
RCPa Ss(21) Se(1960) DAICc
Controls Co. of America, Control Switch Div., 1420
Delmar Drive, Folcroft, Pa. / 215-LU6-7500 / **C 63
Complete line of switches and indicator lights /
Msa Ls(510) ?e Ic
Contronics Inc., 43 Leon St., Boston 15, Mass. /
HI 2-8080 / **C 63
Alpha-numeric display systems, automatic test
equipment / RMa Ss(40) Se(1959) Ic
Convair Electronics, a Div. of General Dynamics
Corp. -- see General Dynamics/Electronics
Cook Electric Co., Data-Stor Div., 8100 N. Monticello, Skokie, Ill. / OR 3-9200 / **C 63
Digital magnetic tape recorders, photoelectric
punched tape readers, analog magnetic tape
recorders, miniature magnetic tape recorders, miniature magnetic tape recorders, magnetic drum recorders, for both military and
commercial applications / RMa Ms (240) Se(1959)
Ic
Copy Research Corp., 875 W. Fifteenth, Newport

Copy Research Corp., 875 W. Fifteenth, Newport Beach, Calif. / KI 5-5731 / *C 63 KALCON 201 Film Duplicator / RMa Ss(10) Se (1960)

Copyrite Duplicator & Supply Co. Inc., 1201 Cort-land St., Chicago 14, Ill. / DIversey 8-2711 /

*C 63 Spirit duplicators, hand and electric, various models / Ma Ss(40) Me(1935) Ic prnell-Dublier Electronics, Div. of Federal Pacific Electric Co., 50 Paris St., Newark 1, N.J. / MArket 4-7500 / *C 62

MArket 4-7500 / *C 62
Capacitors, relays, pulse networks, filters, converters, semiconductors, delay lines, vibrators, antenna rotors, inverters, test instruments, packaged circuits and systems / RMa LS (4000) Le (1910) Ic
Corning Electronics, Corning Glass Works, 3900 Electronics Drive, Raleigh, N. C. / 919-828-0511 / *C 63

Electronic components, capacitors, printed circuit boards, ultrasonic delay lines, resistors, trimmers, metallized glass components, fluid amplifiers, electronic devices / RMSa Ls(800) Le(1851) DAIC

Creed & Co., Ltd. (assoc. of ITT Corp.), Telegraph House, Croydon, Surrey, England / MUNicipal 2424 / *C 63

Wide range of teleprinters and punched tape equipment for communications, data processing, automation. Product range includes 300 characters per second punch -- Model 3000; and 100 characters per second printer -- Model 1000, for computer output recording / RMSa Ms(2300) Le (1909) DIC

Crystalonics Inc., 147 Sherman St., Cambridge 40, Mass. / 617-491-1670 / *C 63
Semiconductors, solid circuits / RMa Ms (100)

Se (1958) Ιc

James Cunningham, Son & Co., Inc., 10 Carriage St., Honeoye Falls, N. Y. / 716, Honeoye Falls 486 / *C 63

Scanners, switches, scanning and switching sys tems, video and high frequency applications fo special requirements / RMSa Ms(125) Le(1838) Ic

1c betronics Inc., 132 Calvary St., Waltham 54, Mass. / 617-TW 9-0012 / *C 63

Magnetic tape testers, magnetic tape cleaner, digital system for controls, consulting services, special-purpose computer and peripheral memory systems / RMSCa Ss(15) Se(1960) ICc

Cycle Equipment Co., 17480 Shelburne Way, Los Gatos, Calif, / 356-4242 / *C 63 Tape winders, unwinders, feeders and transports for handling perforated paper tape / Ma Ss(6)

Me (1948) Ic

D

Dale Electronics, Inc., P.O. Box 488, Columbus, Nebr. / LOcust 4-3131 / *C 62
Resistors, precision and trimmer potentiometers, cable assemblies, resistor networks, logic circuits / Ma Ls(1000) Se(1951) Ic
Daniel, Mann, Johnson & Mendenhall, 3325 Wilshire
Blvd., Los Angeles 5, Calif. / DUnkirk 1-3663 / *C 63

System design for military, commercial and industrial needs. Consulting services in the system and automation field. Design, evaluate, implement, train, supervise conversion to automated systems / RC(education) a Ms(400) Me(1948)

Dashew Business Machines, Inc., 3655 Lenawee Ave., Los Angeles 16, Calif. / UPton 0-5376 / °C 63 Card readers, tape readers, data collection and transmission systems / RNSCa Ms (300) Me (1951)

Ic Data Computing Corp., 229 Baldwin Rd., Hempstead, L.I., N.Y. / - / *C 63
Serves approximately 200 companies in the metropolitan New York area as their data processing and computing agency. Uses latest IBM equipment / RC(IBM services) a MS (60) Se(1955) DIC Data Display, Inc., 1820 Como Ave., St. Paul 8, Minn./ 612-646-6371 / *C 63
Micro-recorder / Ma MS (200) Se(1958) Ic Dataman Associates, 120 Boylston St., Boston 16, Mass. / - / *C 62
Personnel consulting / Ca SS(8) Se(1959) Ic Datamec Corp., 345 Middlefield Rd., Mountain View, Calif. / 415-968-7291 / *C 63
Digital magnetic tape units; low cost electromechanical computer peripherals including in-

mechanical computer peripherals including in-put/output devices / RMSa Ss(25) Se(1961) I Data Processing Consultants, Inc. (Successors to H. Jefferson Mills, Jr., Management Consultant), 375 Park Ave., New York 22, N.Y. / PL 3-4260 /

Management counsel in systems analysis, equip-Management counsel in systems analysis, equipment evaluation, organization and facilities planning; personnel recruitment, selection and training; and installation programs for electronic computer and other automatic data processing systems in business, industry and government / RCGPa Ss Se(1954) DIC at Processing Corp., 311 S. Sharp St., Baltimore 1, Md. / MU 5-6773 / *C 63 IBM 1401 Computer, optical scanning, hi-speed addressing; specializing in applied programs in banking, retailing and publishing. Systems and programming staff available for consultation / C(computer services) a Ms(110) Le(1929) Ic

Data Processing Corporation of America, 375 Park Ave., New York 22, N.Y. / PLaza 3-4260 / *C 63 Management and operation of data processing systems service centers, including programming and electronic computer services / RCPa Ss Se(1958) DIC

Data Processing Digest, Inc., 1140 S. Robertson Blvd., Los Angeles 35, Calif. / BRadshaw 2-8425 /

Publishers of "Data Processing Digest" / Sa

rublishers of "Data Processing Digest" / Sa Ss(5) Se(1954) Ic Data Processing Employment Service, 1343 H St., N.W., Washington 5, D.C. / 393-1488 / *C 63 Recruiting, screening and selection of data processing personnel / (employment services) a Ss(7) Se(1962) Ic Data Processing Equipment Exchange Co., 366 Francis Blvd., Louisville, Ky. / GL 1-7457; JU 5-5454 / *C 63

*C 63
Used data processing equipment specialist, buy or sell used DP equipment, KP's through accounting, engineering and scientific computers, through DA-FEX Co. / Sa ?s ?e Ic
Data Processing, Inc., 1334 Main St., Waltham 54,
Mass. / 617-899-2000 / *C 63
Analytical, programming, and general consulting services for scientific and advanced business digital computer applications. Special emphasis on high standards of programming quality, and on logical programming / Ca Ss(12) Se(1957) Ic

on logical programming / Ca Ss(12) Se(1957)

Ic

Datapulse Inc., 509 Hindry Ave., Inglewood 1, Calif. /
ORchard 1-7713, ORegon B-3983 / 62

Test instrumentation: pulse generators, data simulators / RNSa Ss(30) Se(1961) Ic

Data Sciences, Inc., 230 Middle Neck Rd., Great

Neck, N.Y.; Boston office: Hickory Drive, Waltham 54, Mass. / Hunter 7-0220 (N.Y.); TWinbrook 9-2400 (Mass.) / *C 62

Data Processing, information handling, information management training, systems design, programming / Ca Ss(10) Se(1960) DICc

Data Systems Devices of Boston Inc., 342 Western

Ave., Boston 35, Mass. / AL 4-0440 / *C 63

High-speed printers, custom research and development in all phases of digital computer peripheral equipment / RMA Ss(20) Se(1962) Ic

Data Trends, Inc., 1259 Route 46, Parsipany, N.J. / 334-1515 / 63

Computer peripheral and data communications equipment / RC(programming) a ?s Se(1962) Ic

Datatrol Corp., 8115 Fenton St., Silver Spring, Md. / JUniper 7-4386 / *C 63

Counseling and programming services for application on digital computers; information storage

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and retrieval, feasibility studies, standard business systems, software systems, programming for real-time applications / Ca '8' '8' IC Datex Corp., 1307 S. Myrtle Ave., Monrovia, Calif. / ELliott 9-5381 / **C 63 Analog-to-digital shaft position encoders, automatic controls, data recording and control systems, card readers, printers, meteorological recording systems, servo positioning and control systems, stress analysis and computing systems, numerically controlled machine tools, telemetry supervisory and control systems, process control systems, digitizing and recording of data in scientific instrument. Design and development of all types of digital equipment for industrial and military applications / RMa Ms (250) Set(1952) DAISCE

DAISCC
Davidson Electronic & Development Co., 2211 Peninsula Drive, Erie, Pa. / TE 3-9818 / C 63
Input consoles / MC (system input devices) a Ss (10) Mc (1951) Ic
Daystrom, Inc., Weston Instruments & Electronics
Div., 614 Frelinghuysen Ave., Newark 14, N.J. / Blgelow 3-4700 / C 63
Instruments and components; indicating, recording, and controlling instruments; product resolvers, input-output devices, multipliers, relays, and resistors / RMSa Ls (over 2000)
Le (1889) Ic

The de Havilland Aircraft of Canada, Ltd., Special

he de Havilland Aircraft of Canada, Ltd., Special Products & Applied Research Div., Malton, Ontario, Canada / 416-677-4411 / *C 63
Research, analysis, design, development, test, manufacture, repair and overhaul of diversified range of products including infrared fuzing and acquisition systems; airborne radar systems; optical devices; solid state power supplies; magnetometers; cameras; film processors; aerospace flight instruments; analog computers and

magnetometers; cameras; 111m processors; aero-space flight instruments; analog computers and computer test equipment / RMa Ls Me AIc DeJur-Amsco Corp., Electronics Div., 45-01 Northern Blvd., Long Island City 1, N.Y. / RAvenswood 1-8000 / *C 62

1-8000 / *C 62
Precision potentiometers, panel instruments /
RNSa Ms(500) Le(1922 Ic
Delco Radio Div., General Motors Corp., 700 E.
Firmin St., Kokomo, Ind. / 312-GL 2-8211 / *C 63
Solid-state precision power supplies; solidstate industrial control circuits, data format
converters; data acquisition and recording systems; digital circuit modules to 10 m.c. speeds;
special purpose digital systems / RNSa Ls (5000)
Me(1936) DIc
Dennison Manufacturing Co., Machines Systems Div.

Dennison Manufacturing Co., Machines Systems Div., 300 Howard St., Framingham, Mass. / 617-873-3511 / *C_63

Print-punch marking machines, tag readers and print-punch tickets -- single or multiple stub-coded basic input media / RMSa Ls (2700, Dennison) Le (1844) Ic

Denver Electronic Computing Service, Inc., 360

Western Federal Bldg., Denver, Colo. / 534-8244 / *C 63

*C 63
Engineering and accounting data processing /
Sa Ss(20) Se(1953) Ic
Designers,for Industry, Inc., 4241 Fulton Parkway,
Cleveland 9, Ohio / SH 9-0700 / *C 62
Research and development services — digital
computers and data handling including designing and building / RM(special and prototype) CPa.
Ms(120) Me(1935) DCMc
G. C. Dewey Corp., 202 E. 44 St., New York 17, N.Y. /
212-W12-7369 / *C 63
Data handling, formatting, logging and processing / RNCa Ms(100) Se(1955) DICc
Dialight Corp., 60 Stewart Ave., Brooklyn 37, N.Y. /

Dialight Corp., 60 Stewart Ave., Brooklyn 37, N.Y. / HYacinth 7-7600 / *C 63

HYacinth 7-7600 / *C 63

Indicator lights, pilot lights, ultra-miniature indicator lights ("Datalites") for computer and automation fields. Data-Strip and Data-Matrix for computers, etc. Telephone light strips and indicator lights; transistorized indicator lights, Illuminated pushbutton switches. Oiltight indicator lights for heavy-duty industrial applications / RMSa Ms (250) Me (1937) Ic Dialtron Corporation, 203 Harrison Pl., Brooklyn 37, N.Y. / HYacinth 7-7600 / *C 63

Thermal time delay relays / RMSa Ms (230) Me (1938) Ic Diamond Electronics. Diamond Power Specialty Corp.

Thermal time delay relays / RMSa Ms (230) Me (1930) Ic
Diamond Electronics, Diamond Power Specialty Corp.,
Box 415, Lancaster, Ohio / Ol. 3-6540 / *C 63
CCTV systems and components, cameras, power supplies, sync generators, switchers, monitors; color camera chains / Ma Ls (600) Me (1947) Ic
Diamonite Products Mfg. Co., McConkey St. Ext.,
Shreve, Ohio / 216-567-4211 / *C 63
Computer components of alumina ceramics, high strength, low loss, high density, electrical insulating, vacuum tight, readily metallized.
Sizes available, subminiature through normal size requirements / RMSa Ms (175) Me (1940) Ic
DI/AN Controls, Inc., 944 Dorchester Ave., Dorchester 25, Mass. / 617-AV 8-7700 / *C 63
Buffer storages, memories, special purpose digital and analog computers, code and format converters, digital computer elements, counters, magnetic and transistor shift registers and logical elements, transistor circuit packages, plug-in circuits, servo amplifiers, special instrumentation equipment / RMA Ms (170) Se
(1950) DAISC

(1958) DAISc

(1950) DAISC
Dian Laboratories, Inc., 611 Broadway, New York 12,
N.Y. / VI 6-4155 / *C 63
D. C. analog computers -- analog computing
services. Analog computing services; general
purpose analog computers. Design and construction of special purpose computers, simulators,
and trainers / RMSCPa Ss(10) Se(1955) Ac
The Diebold Group, Inc., 430 Park Ave., New York 22,

N.Y. / - / *C 63 Full range of integrated services in the fields of modern management and management science. Areas of specialization include automation.

automation data processing, programming, information technology, product and business planning analyses. Subsidiary companies in 13 cities on three continents / RC (training, publication) a Ms (150) Me (1954) Ic

ms (150) Me(1954) Ic Digital Development Corp., 7541 Eads Ave., La Jolla, Calif. / 714-459-3383 / *C 63 Memory drums and systems; special peripheral equipment / RM(product development) a Ms (55) Se(1959) Ic

Se(1959) Ic
Digital Devices, Inc., 212 Michael Drive, Syosset,
L.I., N.Y. / 516-WA 1-2400 / *C 63
Magnetostrictive delay line memory systems /
RMSCa Ss(12) Se(1962) Ic
Digital Electronics Inc., 2200 Shames Drive, Westbury, N.Y. / ED 3-2115 / *C 63
General purpose computers, training computers,
data conversion equipment, computer test equipment, magnetic tape systems / RMa Ss(25) Se
(1961) DIC
Digital Equipment Corp., 146 Main St. Maynard

ment, magnetic tape systems / RMa Ss (25) Se (1961) Dic
Digital Equipment Corp., 146 Main St., Maynard,
Mass. / 617-TW 7-8022 / *C 63
Solid state, general purpose digital computers,
memory test systems, special purpose systems,
and digital circuit modules / MSa Ms (475)
Se (1957) Dic
Digital Service Labs, 23922 Crenshaw Blvd., Torrance,
Calif. / DAvenport 5-0711 / *C 62

Electronic computers, service test equipment,
and paper tape preparation equipment / RMSCa
Ss (8) Se (1955) DAIC
Digitronics Corp., 1 Albertson Ave., Albertson,
L.I., N.Y. / 516-HT 4-1000 / *C 63
Data transmission systems, magnetic-tape papertape converters, photoelectric paper tape
readers and handlers / Ma Ms (300) Se (1957)
DICC
DIT-MCO, Inc., Electronics Div., 911 Broadway, Kans-

DICC DICC.
DIT-MCO. Inc., Electronics Div., 911 Broadway, Kansas City 5, Mo. / HArrison 1-0011 / *C 62
Automatic circuit analyzers, logic circuit testers and electro-mechanical systems analyzers / RMSa Ms (200) Me(1948) Ic
Ditto, Inc., 6600 N. McCormick Rd., Chicago 45, Ill. / OR 5-7600 / *C 63

ers / MRSA Ms (200) Me(1948) 1c
Ditto, Inc., 6800 N. McCormick Rd., Chicago 45, 111. /
OR 5-7600 / *C 63
Complete line of direct (Spirit) process and
offset process duplicating machines and supplies; Masterfax master making and copying
machines and supplies. Designers of data processing systems / RMSCa Ls (1600) Le (1910) 1c
Diversified Concepts, Inc., Becker Rd., Skaneateles 3,
N.Y. / 315-636-7722 / *C 63
MASCOT and COMPLOTTER (test scoring machines);
UNIGATE (Universal Logic Module); consulting /
RMCa Ss (6) Sc (1955) DIc
Documentation Inc., 4033 Rugby Avc., Bethesda 14,
Md. / 556-9500 / *C 63
Systems design -- advanced systems design and
operation of large information centers and
libraries; mechanized publication techniques -computer-penerated indexes and tape-operated
photocomposition for producing high-quality
journals; Docuforms -- commercial version of
government/DOC INC development using transparent
flat film, provides compact, random-access filing
with rapid retrieval and reproduction capabilities; information searching, indexing and abstracting -- scientific information staff available / RSCa Ms (325) Me (1951) Tc
Documentation Inc., 4833 Rugby Ave., Bethesda 14,
Md. / 556-9500 / *C 63

Design, installation and operation of management
information centers / RSCa Ms (325) Me (1951) Tc
Dolin Metal Products, Inc., 315 Lexington Ave.,
Brooklyn 16, N.Y. / NE 8-9472 / *C 63
Bulla-up "Tape-Stor" units for storage of electronic data processing tape / Ma Ms (80) Me
(1946) Ic
Douglas Aircraft Co., Inc., Douglas Computer Service,
Debt. 6-34. 3000 Ocean Park Blyd. Santa Monica

tronic data processing tape / Ma Ms(80) Me (1948) Ic

Douglas Aircraft Co., Inc., Douglas Computer Service, Dept. G-34, 3000 Ocean Park Blvd., Santa Monica, Calif. / Exbrook 9-9311, ext. 2122 / *G 63

Rental of excess digital computing machine time on the wide range of business and scientific computers (IEW 7094, 1620, and 1401 computers) / RMa Ms(400) Se(1959) Dc

Douglas Computing Service, 3000 Ocean Park Blvd., Santa Monica, Calif. / EX 9-9311 / *C 63

Rental of excess digital computing machine time on the wide range of business and scientific computers (IEW 7094, 1620, and 1401 computers) / RMa Ms(400) Se(1959) Dc

Douglas Randall Inc., a subsidiary of Walter Kidde & Co., Inc., 441 Pawcatuck Ave., Westerly, R.1. / LYric 5-5757 / *C 63

Reed relays, coils / MSa Ms Me(1950) Ic

Drake Manufacturing Co., 4626 N. Olcott Ave., Chicago 31, 111. / 867-7227 / *C 63

Specialists in miniature lighting for computers and automatic equipment, Products include indicator and read-out lights, lampholders, metal stampings, wire harnessing, brackets, neon and incandescent lamps and other accessories. For commercial or military projects / Ma Ms (over 125) Le(1932) Ic

Dresser Electronics, SIE Div., a division of Dresser Industries, Inc., 10201 Westheimer Rd., Houston

commercial or military projects / Ma Ms(over 125) Le(1932) Ic
Dresser Electronics, SIE Div., a division of Dresser Industries, Inc., 10201 Westheimer Rd., Houston 42, Tex. / SUnset 2-2000 / *C 62
Analog computers, special purpose military and industrial digital and analog systems, digital computers, solid state analog/digital and digital/analog converters, magnetic amplifiers, integrators, automatic control systems, telemetry systems, reading and recording heads.
Geophysical instruments, government contracting, heavy manufacturing, consulting services / RMSCGa Ls(761) Me(1945) DAICC

Dresser Products Inc., 114 Baker St., Providence 5, R. I. / 401-781-4430 / *C 63

Dresser Products Inc., 114 Baker St., Providence S, R. I. / 401-781-4130 / *C 63

Accessories -- tape handling equipment and filing supplies / Ma Ss (U) Sc (1955) Ic

Duke University, Computing Laboratory, Durham, N.C. / 601-0111, Ext. 3695 / *C 62

IBM 7070 used for research and instruction / R (instruction) a Ss (16) Sc (1958) Ic

Arnold I. Dumey, 29 Barberry Lane, Roslyn Heights, N.Y. / Mayfair 1-7239 / *C 63

**Consultant, data handling problems / Ca Ss Sc (1954) Dic

Durant Mfg, Co., 1900 N. Buffum St., Milwaukee 1, Wis. / LOcust 2-5035 / *C 63

Digital read-out instrument counters and indicators / RNSa Ms (300) Le (1879) Ic

Dynatech Corp., 17 Tudor St., Cambridge 39, Mass. / 868-8050 / *C 63

Automatic control, analysis, design, development, and manufacturing / RCa Ms (91) Se (1957) DACc

Eastman Kodak Co., 343 State St., Rochester 4, N.Y. / LOcust 2-6000 / *C 63
Photographic equipment, staple synthetic and

Eastman Kodak Co., 343 State St., Rochester 4, N.Y. / Doust 2-6000 / **C 63

Photographic equipment, staple synthetic and organic chemicals and dyestuffs; facsimile equipment (photocopy); recording paper / RMSa Ls (50,000) Le (1889) Ic

Ebasco Services Incorporated, 2 Rector St., New York 6, N.Y. / Digby 4-4400 / **C 63
 Engineering and management consultants; consulting services in application of electronic data processing to accounting and business systems; engineering applications; plant automation; feasibility studies; installations / CPa Ls (1600) Le (1905) DIC

Edin, a Div. of Epsco, Inc. — company no longer exists. Now Medical Div. of Epsco, Inc.

Thomas A. Edison Industries, Instrument Div. of McGraw-Edison Co., 36 Lakeside Ave., West Orange, N.J. / REdwood 6-1000 / **C 62

Servo motors, motor generators, gear heads, electro-mechanical packages. Time delay relays, thermostats and sensitive D.C. relays / Ma Ms (350) Le (1928) Is C

Editorial Services for Management, P.O. Box 222, Concord, Mass. / EM 9-5946 / **C 63

Consulting services in business forms-data processing interface; editorial services in the field of data processing including writing, copy editing, layout and design, and production / Ca Ss (3) Se (1962) Ic

EDP Corp., 3501 South Orange Blossom Trail, Orlando, Fla. / 305-241-5324 / **C 63

Analog to digital converters, timing devices, Liming generators, logic circuits, test equipment / Msa 7s 7e 1c

Electronic solid-state counters for industrial and laboratory use. Photometric devices and picosecond time measurement instruments / Ma* Ms (6)6 Me (1939) Ic

Electronic solid-state counters for industrial and laboratory use. Photometric devices and picosecond time measurement instruments / Ma-Ms (65) Me (1930) Ic

The Electrada Corp., 11244 Playa St., Culver City, Calif. / UPton 0-9832 / *C 62

Data Entry Console, i.e., Datacom; input-output devices / RMSa Ms (77) Se (1959) Ic

Electric Boat Div., General Dynamics, Groton, Conn. / -/ *C 62

devices / RNSa Ms(77) Se(1959) Ic
Electric Boat Div., General Dynamics, Groton, Conn. /
- /*C 62
Computer services / Ca 's 'e Alc
Electro Instruments, Inc., 8611 Balboa Ave., San
Diego 11, Calif. / 277-6590 / *C 63
Digital voltmeters, ohmmeters, ratiometers,
analog-to-digital converters; wideband DC amplifiers, X-Y recorders, monitor oscilloscopes,
digital data systems and telemetry systems /
Ma 'Ms(400) Se(1954) DAIC
N. V. Electrologica, 214 Stadhoudersplantsoen. The
Hague, The Netherlands / 514641 / *C 63
Digital computers, high speed tape reader, high
Speed printer, trunsistorized magnetic core
memory up to 32,768 words of 27 bits, including
sign; time-sharing features; input-output:
punched tape and cards, magnetic tape, drum,
typewriter / RNSCa Ms(450) Se(1956) DIc
Electro-Mec Instrument Corp., 47-51 337d St., Long
Island City I, N.Y. / STillwell 6-3402 / *C 63
DIGITOMETERS (trade name), analog to digital
converters; potentiometers (computer type);
resistors, wirewound, precision; goniometers
(angle measuring fixture for calibration of
potentiometers, synchros, etc.), rotary switches /
MSa Ms (130) Me(1950) DAIC
Electro-Mechanical Research, Inc., P.O. Dox 3041,
Sarasota, Fla. (company divisions include: Sarasota Div., Sarasota, Fla.; Advanced Scientific
Instruments Div., Minneapolis, Minn.; Princeton
Div., Princeton, N.J.; Solartron, Inc. (a subsidiary), Anaheim, Calif.) / 950-7731 / *C 63
Ceneral purpose digital computers and accespries, telemetry data acquisition and processing equipment, shaft position digital encoders /
RNSa Is (1650) Me(194D) DIC
Electro-Miniatures Corp., 606 Huyler St., S. Hackensack, N.J. / HUbbard 8-7770 / *C 63
Slip ring and brush assemblies, commutators,
rotary switches / Ma Ms (125) Sc(1955) Ic
The Electro Motive Mfg. Co., Inc., S. Park & John
St., Willimantic, Conn. / 423-0231 / *C 63
Capacitors: dipped mica, molded mica, silvered
mica films, mylar-paper dipped, paper dipped,
mylar dipped, tubular paper, variable mica /
Ma Ls (2200) Le (1920) Ic
Electronic counters,

L.I., N.Y. / WAlnut 1-5000 / °C 62 Electronic counters, timers, and digital meters,

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high speed or quick look digital recorders / MSa Ss(25) Se(1960, subsidiary of Potter est. 1942) DIc

MSa Ss(25) Se(1960, subsidiary of Potter est. 1942) DIc Electronic Data Service, Inc., 802 Philadelphia Pike, Wilmington, Del. / P02-2500 / *C 63
80 Column punched card tabulating service; 1401
IBM system and 7070 IBM, EDP system for lease; punched card and EDP educational program / CP(data center) a Ss(15) Se(1950) Ic Electronic Engineering Company of California, 1601
E. Chestnut Ave., Santa Ana, Calif. / 714-547-5501 / *C 63
DATACHRON computer tice and control of the control of the computer tice and control of the control o

*C 63

DATACHRON computer time clock, punched tape reader for computers, computer tape conversion service / MS(translation service bureau) a Ms(200) Me(1947) Ic

Electronic Processing Center Inc., 253 N. Broad St., Philadelphia 7, Pa. / - / *C 62

Punched card service center providing conversion

of punched paper tape to cards and computer processing service for small businesses. 650 card system, 1401 tape system (4 tapes, 8K) and usage of a GE 225 4 tape system / (service, preparing reports) a Ss(30, plus part timers) Se(1950) Ic

De(1958) Ic Electronic Memories, Inc., 9430 Bellanca Ave., Los Angeles 45, Calif. / SPring 6-1333 / *C 63 Magnetic core memories, magnetics tester, memory cores, ferrite core arrays, planes, stacks and assemblies / RMa Ms(150) Se(1961) Ic

lectron Ohio, Inc., 1111 Power Ave., Cleveland 14, Ohio / 621-5196 / °C 63
Data delay systems / Ma Ss(6) Se(1961) Ic
The Electro Nuclear Systems Corp., 9449 Science
Center Drive, Minneapolis 27, Minn. / 533-2771 / °C 62

Automatic control equipment; circuits; digital and special purpose computers; analog-to-digital and digital-to-analog converters; data recording equipment; data reduction equipment; magnetic heads; input/output devices; character and photoelectric readers; scanners; visual output devices / RMa Ms (130) Se (1960) DAICMC
Electropac, Inc., a subsidiary of Computer Control Company, Inc., Industrial Park, Peterborough, N.H. / 603-924-3821 / © 63
Contract manufacturer of electronic and electromechanical equipment (computer, aerospace, industrial, medical) / MPa Ms (120) Se (1960) DIc

ELECTROPAC INC., Industrial Park, Peterborough, N.H. / 603-924-3821; 603-964-6712 / °C 63 Contract manufacturing / Ma Ms(150) Se(1960) DICMC

Electroplex, Inc., 120 West 131 St., Los Angeles 61, Calif. / FAculty 1-6212 / *C 62
Plug-in digital circuit modules (welded or soldered; digital systems; high efficiency power supplies, time base generators / RMSa Ss(30) Se(1961) Ic
Electro Products Laboratories, Inc., 4501 N. Ravenswood Ave., Chicago 40, Ill. / LOngbeach 1-1707 / *C 62
Metal sensing transducers, over/under cood

*C 62
Metal sensing transducers, over/under speed
controls, electronic tachometers / RMSa
Ms (50) Me (1936) DAISCMc
Elgenco, Inc., 1231 Colorado Ave., Santa Monica,
Calif. / 213-393-3023 / *C 63
Electronic noise generators, computer auxiliary
equipment, statistical equipment / RMSa Ss (12)
Se (1955) Ic

ELLIOTT EROS. (LONDON) LTD. (a member of the Elliott-Automation Group), Elstree Way, Borehamwood, Hertfordshire, England / Elstree 2040 / *C 63
General purpose digital computers for scientific, research, industrial, and commercial applications; real-time data processing systems; airborne digital computers; mobile digital computers; analog and digital computing modules for automation systems; data loggers, data acquirers, alarm scanning systems; medium and high-speed tape readers, card readers, tape spoolers. Manufacturers of N.C.R. 315 Data Processing Systems in the United Kingdom. Divisions wholly concerned with computing: Elliott Computing Div., National Computing Div., Mobile Computing Div., Airborne Computing Div., Computer Maintenance Div., Automation Accessories Div., Computer Maintenance Div., Automation Accessories Div., Data Processing Research Laboratory / RMSC (comprehensive computing service facilities) a Ls (10,000) Le (1800) DIc

Elliott Industries Inc., 143 Albany St., Cambridge 39, Mass. / TRowbridge 6-2020 / *C 63
Addressing machines, data imprinting systems, address stencils / MSa Ms(500) Le(1900) Ic El-Rad Manufacturing Co., 4300 N. California Ave., Chicago 10, 111. / IRving 8-7300 / *C 62
Delay lines and pulse transformers for computer application / Ma Ms(300) Me(1944) Ic Engineered Electronics Co., 1441 E. Chestnut Ave., Santa Ana, Calif. / 714-547-5651 / *C 63
Transistorized plug-in modules, indicators and decades; rotary thumbwheel switches. Complete line of digital building blocks. Transistorized plug-in modules, transistorized Minisig

Roster of Organizations

indicators, transistorized decade counters.

Systems development racks available for patching up preliminary systems prior to production work. All units use standard pin connections / Ma Ms(200) Se(1954) Ic

The English Electric Co., Ltd., English Electric House, Strand, London, W.C. 2, England / Covent Garden 1234 / *C 62

KDP10, KDF9, KDN2 and DATAPAC data processing and data handling systems / RMSCa Ls(1100) ?e Dc

Epsco, Inc., 275 Massachusetts Ave., Cambridge 39,

and data handling systems / RMSCa Ls (1100)
The Do
Epsco, Inc., 275 Massachusetts Ave., Cambridge 39,
Mass. / University 4-4950 / *C 62
Computer components and equipment: shift registers and assemblies, buffer storage units,
printers, special purpose computers, monitoring
systems, computer linkages and format recorders,
l and 5 megacycle digital circuit cards, wideboard amplifier series, portable data gathering systems, high speed A/D converters, voltmeters, reference sources. Pulse code modulation air and ground telemetry systems / RMSCa
MS(500) Se(1954) DAIC
ESC Electronics Corp., 534 Bergen Blyd., Palisades
Park, N.J. / Windsor 7-0400 / *C 63
LC delay lines and magnetostrictive delay
lines / Ma MS(170) Se(1953) Ic
Essex Systems Co., Inc., 9 East 38th St., New York,
N.Y. / OR 9-6190 / *C 63
Specialists in the design and production of all
printed forms for tabulators and computers /
Sa SS(IR) Se(1957) T.

printed forms for tabulators and computers / Sa Ss(10) Se(1957) Ic ss-Gee, Inc., 15 Havens St., Elmsford, N.Y. / LYric 2-8620 / *C 62

-0620 / °C 62
Airborne data processing equipment and instrumentation. Instrumentation and recording equipment for operation into computers, A/D converters, and computer interconnection components.

Ground data handling systems / RMa Ss (35)

ers, and computer interconnection components.
Ground data handling systems / RMa Ss(35)
Se(1959) IMC
Exact Electronics, Inc., 455 So. 2nd St., Hillsboro, Ore. / MI 8-3590 / °C 63
Catalog function generating and waveform
generating equipment for producing all types
of complex and standard waveforms.001 cycles
to 250 KC / Ma Ss(16) Se(1957) IC
Executone, Inc., 47-37 Austell Place, Long Island
City 1, N.Y. / EX 2-4800 / °C 63
Electronic data gathering (centralized timekeeping) systems, communicating systems / MSa
Ms(500) Me(1936) Ic
E-Z Sort Systems, Ltd., 45 Second St., San Francisco
5, Calif. / GArfield 1-8005 / °C 62
Edge-punched cards for filing and sorting data.
Special cards for correlation of facts. Control
systems for a number of electronic computers.
Teaching machines, program scheduling / RMSa
Ms(225) Me(1935) Ic

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F
Fabri-Tek Inc., Amery, Wisc. / - / *C 63
Coincident magnetic core planes, stacks and systems, printed circuits / RNSa ?s ?e Ic
Fae Instrument Corp., 16 Norden Lane, Huntington
Station, L.I., N.Y. / AR 1-0300 / *C 62
Magnetic clutches and brakes, mechanical differentials, gear heads and speed reducers, bellows coupling, design servo systems / M(design special servo systems) a Se(28) Me(1950) Ic
Fairchild Controls, a Div. of Fairchild Camera and Instrument Corp., 225 Park Ave., Hicksville, L.I., N.Y. / 516-WElls 0-5600 / *C 63
Silicon semiconductor strain-gage pressure transducers, silicon semiconductor strain-gage load cells, conductive plastic potentiometers; single and multi-turn wirewound potentiometers, linear and non-linear; metal film trimmers, potentiometric pressure transducers, accelerometers, subminiature rate gyros, guidance control packages, switches, machmeters, pot-clutch-brake modules / RNa Ms(500) Me(1945) Ic
Fairchild Semiconductor, 545 Whisman Rd., Mountain View, Calif. / VOrkshire 8-B161 / *C 63
Diffused silicon planar transistors, diffused silicon planar diddes; micrologic elements; custom microcircuits; transistor and diode test equipment / RNSa Ls (3200) Se(1957) Ic
Fairchild Space and Defense Systems, a Div. of Fairchild Camera and Instrument Corp., 300 Robbins Lane, Syosset, L.I., N.Y. / 516-WElls 1-4500 / *C 63
Reconnaissance and mapping systems; data acquisition, processing, display, interpretation,

Reconnaissance and mapping systems; data acneconnaissance and mapping systems; data acquisition, processing, display, interpretation, storage and retrieval systems; communication systems; electronic control and support equipment; precision optics and ordnance products / RMSa Ls(1000) Le(1920) DIC arrand Controls, Inc., 99 Wall St., Valhalla, N.Y. / ROckwell 1-2600 / %C 62

NUckwell 1-2600 / % 62

Linear and rotary control equipment / RMSCa Ms
(less than 500) Se(1956) Ic

Farrington Electronics, Inc., 7019 Edsall Rd.,
Alexandria, Va. / Fleetwood 4-5000 / % 63

Farrington optical scanners -- ID, IP, and 9SP
Series / RMSa Ms(280) Se(1953) Ic

Federated Engineering Development Corp., 4630 E.
Floral Dr., Los Angeles 22, Calif. / AN 8-6761 / % 63

Auxiliaries used in automation or processing lines / M(custom designed controls) a Ss(20) Se(1953) ICc

Se(1953) ICc
Feedback Controls, Inc., 8 Erie Dr., Natick, Mass. /
OLympic 3-3441 / *C 63
Magnetic amplifiers, quadrature rejectors, data
repeaters, servo multipliers, servomotor gearheads, analog computers, computer test equipment / RMSa Ms (60) Se(1954) AIC
Fenwal, Inc., 362 Pleasant St., Ashland, Mass. /

Temperature controls, fire detection systems, monitoring systems / Ma Ls(700) Me(1935) Cc
Ferranti Electric, Inc., Plainview, L.I., N.Y. /
516 WE 0-7500 / mg, plant at Plainview. Agent for Ferranti Ltd., Hollinwood, England and Ferranti-Packard Electric Ltd., Toronto, Ont., Canada / % C 2 General purpose computers (Atlas, Orion, Sirius, Gemin), process control computers (Arqus Series).

Special purpose computers, airline reservation systems, check sorting systems, data processing and digital communication systems, display systems, magnetic drums, magnetostriction delay lines, fixed memories, matrix display modules, high resolution display tubes / Ma Ls(16,000) Le (1896) DIC
Ferranti Electronics, a div. of Ferranti-Packard Electric Ltd., Data Systems Dept., Industry St., Toronto 15, Ontario, Canada / 416-762-3661 / % C 63 General and special purpose digital computers and systems, including airline reservation, traffic control, process control, data process and cheque sorting computer systems. Large digital memory systems. Consulting, development and manufacturing services / RMSC(system management) a Ms (div. only - 350) Le(1894) DICc
Ferroxcube Corp. of America, Kings Highway, Saugerties, N.Y. / Clerry 6-2811 / % C 63
Ferrite cores, including pot cores, and microminiature toroids with square hysteresis loop; memory arrays, thermistors, varistors, light-dependent resistors, ceramic permanent magnets; recording head poles and assemblies, positive temperature coefficient resistors, peltier batteries / RMS Ms (425) Me(1949) IC
Fischbach, McGoach & Associates, Inc., 30 East 42nd
St., New York 17, N.Y. / Murray Hill 2-5696 / % C 63
Management consultants specializing in application of scientific techniques to business-type problems.

Complete service in appraisals and installation of electronic data processing and control systems / Rab Ss(8) Se(1959) DAISC
Fischer & Porter Co., County Line Rd., Warminster, Pa. / OSborne 5-6000 / % C 63
Industrial and military data acquisition equipment. Digital computer process contro

Digital systems for on-line applications in the process industries / MSa Ls (2800) Le (1908) DAIC
Franklin Electronics Inc., E. 4th St., Bridgeport, Pa. / Broadway 2-4800 / °C 63
Data reduction systems, digital voltmeters, high speed digital printers, analog to digital converters / RMSa Ms (90) Se(1951) Ic
Franklin Ribbon & Carbon Co., Inc., 172-178 Nassau St., Brooklyn 1, N.Y. / 212-IR5-4700 / °C 63
Inked ribbons for use on all data processing machines / RMSa Ss (40) Le (1920) Ic
Friden, Inc., 2350 Washington Ave., San Leandro, Calif. / NEptune 8-0700 / °C 63
Broad range of data processing and data collecting systems, including: Flexowriter, automatic writing machine with tape or card input/output; Collectadata 30 System with punched card transmitters, badge transmitters, time recorders, and tape receivers for data collection and attendance recording; CTP Computyper, automatic writing-computing machine with tape or card input/output and interchangeable program panels; Teledata, automatic tape transmitter-receiver which uses existing communications lines; Selectadata, automatic tape reader and data selector used with Flexowriters and Computypers; Code Converter, for tape-to-tape conversion; Add-Punch, punched tape adding machine; remotely-controlled input/output devices and printers; special Flexowriters for pre-encoding checks with MICR symbols, for preparing tapes for numerical control of machine tools, for off-fine use with electronic computers. Complete line of equipment for reading, punching, verifying, converting, regenerating, and transmitting paper tape, edge-punched cards, or tabulating cards. Also supplies used with data processing equipment. Adding machines. Automatic desk calculators / RMSa Ls (9500)

G

Gamma Scientific, 1170 Broadway, New York 1, N.Y. /

Readers / Ma ?s ?e Ic Readers / Ma ?s ?e Ic
Gannett Fleming Corddry and Carpenter, Inc., 600 N.
Second St., Harrisburg, Pa, / CEdar 8-0451 / *C 63
Consulting engineering firm with a 1620 IBM
Computer and other EDP equipment, doing work
for own organization plus operating a service
bureau / Ca Ms (500) Le(1915, Computer Section
in 1955) Ic

GAP Instrument Corp., 17 Brooklyn Ave., Westbury, L.I., N.Y. / 516-ED3-8020 / *C 63 Electromechanical servo systems, analog to digital and digital to analog converters, stepping motors, plotting boards / Ma Ss(40) Se(1956) ISc

H. S. Gellman & Co. Ltd., 481 University Ave.,
Toronto 2, Ontario, Canada / EMpire 4-4247 / °C 63

Systems consultants specializing in automatic
data processing and operations research / Ca
Ss(15) Se(1955) DIC

General Atronics Corp., 1200 E. Mermaid Lane,
Philadelphia 10, Pa. / Citestnut Hill 7-6000 / °C 63
Automatic sorting, routing and control systems
and devices / RMSC(engineering) a Ms(200)
Se(1955) ICc

General Computers, Inc., 9000 W. Pice Blad Loc.

Se(1955) ICc
General Computers, Inc., 9000 W. Pico Blvd., Los
Angeles 35, Calif. / BRads haw 2-6010 / °C 62
Analog computers, card programmed function
generators, amplifiers, DC operational amplifiers, chopper amplifiers, Self powered operational amplifiers / RMSa Ss(25) Se(1957) AIC
General Controls Co., 801 Allen Ave., Glendale 1,
Calif. / Victoria 9-2181 / °C 63
Automatic controls for product or process. Counters and counting devices. actualors magnetic

Automatic controls for product or process. Counters and counting devices, actuators, magnetic valves, Hydromotor electrohydraulic valves and actuators, industrial controls and instruments, mercury switches, Klikswitch snap-acting switches, time switches (sequence), transformer-relays, contactors, limit controls (temperature) precision potentiometers, turns counters / Ma Ls (3000) Mc (1936) Cic General Data Corp., 1250 N. Parker St., Orange, Calif. / - / *C 62
Data processing accessories. Hi-speed A/D converters, low-level operational amplifiers, sample and hold devices, multiplexers / RMa Ss (10) Sc (1959) Ic

Se(1959) Ic

General Devices, Inc., P.O. Box 253, Princeton, N.J. /
699-WA 4-2500 / © 63

Electromechanical and solid state commutators
for computers; multiplexers / RMS (engineering), a
Ss(45) Se(1953) Ic

Ss (45) Se (1953) Ic

General Dynamics/Electronics, 3302 Pacific Highway,
P.O. Box 127, San Diego 12, Calif. / 298-4641 / °C 63

Computer readout devices, high speed electronic
printers, high speed communications printers,
microfilm recorders, plug-in and potted circuits,
digital devices for display of computer information, input_and visual output devices (the
CHARACTRON® shaped beam tube), facsimile printing
systems / RMa Ls (1300) Se (1955) Dlc

General Dynamics/Electronics-Rochester, 1400 N.
Goodman St., Rochester 1, N.Y. / - / °C 62

Digital computers, process control computers,
statistical analog computers, data transmission
systems, data logging systems / RMSCa Ls (4000)
Le (1894) Dalc

G-E Communication Products Dept., Lynchburg, Va./

systems, data logging systems / RMSCa Ls (4000)
Le (1894) DAIC
G-E Communication Products Dept., Lynchburg, Va../
VI 6-7311 / *C 63
TIS-91 Data Communications / RMS (systems engineering) a Ls Le Ic
General Electric Co., Capacitor Dept., John St.,
Hudson Falls, N.Y. / RH 7-3341 / *C 63
Capacitors for computer circuitry and power
supplies / Ma Ls (1100) Le (1878) Ic
General Electric Co., Computer Dept., 13430 N. Black
Canyon Highway, Phoenix, Ariz. / V41-2500 / *C 63
GE-210, GE-215, GE-235, CE-235, Complete dataprocessing systems, including full line of peripherals. Computer services offered non-computer
customers through 6 Information Processing Centers in major metropolitan areas / RMSC (computer
services) a Ls (3500) Se (1950 DAICC
General Electric Communication Products, Mountain
View Rd., Lynchburg, Va. / Victor 6-7311 / *C 62
Equipment providing the communications link for
computer facilities / RMSCa Ls Le Ic
General Electric Co., Electric Utility Sales Operation, 1 River Rd., Schenectady 5, N.Y. / 518-3742211 / *C 63
Computer automation systems for steam-electric
generating plants for data processing, sequence
control and optimization of the operating cycle;
analog and digital computer systems for electric
power systems and dispatching applications / RMSa
Ls Le (1892) DAc
General Electric Co., Electronic Speciality Capacitor Product Section, P.O. Box 158, Irmo, S.C. /
Alpine 2-6332 / *C 63
Capacitors for computers / RMSa Ls (750) Le
(before 1900) 'Ic
General Electric Co., Industrial Sales Operation,
1 River Rd., Schenectady 5, N.Y. / 518-374-2211 /
*C 63

1 River Rd., Schenectady 5, N.Y. / 518-374-2211 /

Computer control systems for integrated plant computer control systems for integrated plant automation and for control of specific industrial processes in: blast furnaces and all iron and steel making plants, cement, mills, chemical and petro-chemical plants, metal rolling and processing plants, oil, gas and product gathering and transmission lines, petroleum refineries, pulp and paper mills, etc. / RMSa Ls Le(1892)

DASCMC
General Electric Co., Radio Guidance Operation, 300
South Geddes St., Syracuse, N.Y. / 456-0123 / *C 63
Real-time computers used in precision timing
systems, data processing and analysis, and frequency monitoring and calibration equipment for
range and space networks; network technical
services; quidance systems (except totally inertial); trajectory measurement systems; components, sub-assemblies, and parts / RM(electronic systems design and systems management) a
Ls (2200) Se(1963) DIc
General Electric Co., Receiving Tube Dept., 316 E.
Ninth St., P.O. Box 1009, Owensboro, Ky. /
MUrray 3-2401 / *C 63
Glass and metal octal receiving tubes; miniature

Jrray 3-2401 / *C 63
Glass and metal octal receiving tubes; miniature and sub-miniature glass receiving tubes; industrial receiving tubes; planar type metal-ceramic, miniature and micro-miniature ceramic receiving tubes for severe environments; Compactron multifunction receiving tubes; photoconductive cells

and arrays; thermionic integrated micro-module circuits (TIMMS); reed relay switches / RMSa Ls(7000) Le(1876) Ic

General Electric Co., Specialty Devices Operation, 1811 Lemoyne Ave., Syracuse, N.Y. / 456-5496 /

Custom design, develop, and manufacture integra-ted electronic devices and systems for military and commercial computers and data processing systems. Majority encapsulated to withstand vibration, shock, extreme temperatures / RMSa Ms (250) Se (1955) Ic

systems, Majority encapsulated to Withstand vibration, shock, extreme temperatures / RNSa Ms(250) Se(1955) Ic

General Instrument Corp., 65 Gouverneur St., Newark
4, N.J. / HU 5-2100 / *C 63

Transistors, diodes, rectifiers, microcircuits, resistors, capacitors / Ma Ls(9000) ?e Ic

General Instrument Corp., Semiconductor Div., 96
Mill St., Woonsocket, R.I. / - / *C 62

Silicon and germanium diodes and transistors, precision resistors, microcircuits, microdiodes and microtransistors / Ma Ls(1373) Se(1954) Ic

General Intellitronics Inc., 900 Nepperhan Ave., Yonkers, N.Y. / Y0 9-2522 / *C 63

Low cost, solid state, general purpose digital computer / RMa Ss(6) Se(1962) Dc

General Kinetics Inc., 2611 Shirlington Rd., Arlington 6, Va. / 703-671-4500 / *C 63

Services in: digital computer programming; programming research; computer test equipment.

Programming services for all general purpose computers. Recommendation, design, and congramming systems to fit specific needs, Mathematical studies; numerical analysis; datareduction information retrieval; magnetic tape ultrasonic cleaners; acceptance test equipment; problem solving / RNSPG a Ss Se(1954) DICMc

General Mills Electronics Group, 1620 Central Ave., Minneapolis 13, Minn. / STerling 9-8611 / *C 62

AD/ECS Digital Computer Systems, analog to digital converters, computer components, automatic handling and packaging equipment / RNSa

AD/ECS Digital Computer Systems, analog to digital converters, computer components, automatic handling and packaging equipment / RMSa Ls (1500) Le (1920) DIMC Genisco Systems, a div. of Genisco Inc., 16435 Susana Rd., Compton, Calif. / 774-1650 / *C 63 Data acquisition systems, digital voltmeters, analog to digital converters, automatic programmed test equipment / RMa Ms (175) Me (1947) Ic

The Geotechnical Corp., 3401 Shiloh Rd., Garland, Tex. / BR 8-8102 / *C 63 ex, / ER 8-8102 / *C 63
Analog data transmission equipment for radio or telephone circuits, data processing systems, automatic-processing film recorders, motarized film viewers. Geophysical and seismological instruments. Low-noise, low-frequency capability / RMSC (field programs) a LS (650) Me (1930) DAICC
DAICC
DEF Scientific Instrument Co., P.O. Hox 305.

DAICC
Gerber Scientific Instrument Co., P.O. Box 305,
Hartford, Conn. / 209-2731 / 6 63
Scientific Instruments and systems to reduce
data / MSa Ms(115) Mc(1940) Ic
Giannini Controls Corp., 1600 S. Mountain Ave.,
Duarte, Calif. / - / 6 62
Data acquisition devices, automatic test equipment and controls, potentiometers, synchros
and resolvers, tachometers, systems engineering,
timing devices, transducers, servomechanisms /
RMA LS(1500) Me

and resolvers, tachometers, systems engineering, timing devices, transducers, servomechanisms / RMa Ls(1500) Me

Gilmore Industries, Inc., 3355 Richmond Rd., Cleveland 22, 0, / 464-1200 / °C 62

Electronic control and data handling equipment; scanners, analog to digital converters, force instrumentation, transducer instrumentation, card to magnetic tape and paper tape converters, data loggers, automatic controls and equipment / RMSa Ms (80) Sc(1953) DICc

Goodyear Aircraft Corp., 1210 Massillon Rd., Akron 15, Ohio / 216-794-3631 / °C 63

Parallel data processors; data logging and control systems; analog data processing systems; associative memories; digital data processing systems; special purpose computers / RMSa Ls(6000) Le(1925) DACC

Gordon and Breach, Science Publishers, Inc., 150

Fifth Ave., New York Il, N.Y. / YUKon 9-1120 / °C 63

Professional books and journals on computer science and technology. Current books include "Symbolic Languages in Data Processing", "Analog Computation Applied to the Study of Chemical Processes", "Programming for Digital Computers", others. Journals include "International Bibliography of Automatic Control" (quarterly), "International Journals on Computer Mathematics" (quarterly), "Proceedings of the International Association for Analog Computer Mathematics" (quarterly), "Proceedings of the International Association for Analog Computer Mathematics" (quarterly), "Dublishing a Ss(12) Se(196) Ic

Gordon Enterprises, 5362 N. Cahuenga Blvd., North Hollywood, Calif, / POplar 6-3725 / *C 62

Data recording, processing, and reduction equipment; geophysical apparatus; punch card machines and readers / RMSa Ms(112) Mc(1945) Ic

GPE Controls, Inc., 240 E. Ontario St., Chicago Il, 111. / Whitehall 4-3700 / *C 62

Components: Electric flow, position, and furnace pressure transmitters; floating indicator and ratio indicator controllers; electronic o

Ic
GPL Div., General Precision, Inc., 63 Bedford Rd.,
Pleasantville, N.Y. / 914-RO9-5000 / *C 63
Data retrieval closed circuit television /
RMSCa Ls(1200 Me(1945) Ic
GPS Instrument Co., Inc., 180 Needham St., Newton 64,
Mass. / DEcatur 2-8110 / *C 62
High-speed, high-accuracy repetitive analog com-

puters, statistical and iterative types; computer center and services rental; computer components, function and noise generators, multiplier/divider, etc. / RMSCa Ss(30) Se(1955) Alc

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center and services rental; computer components, function and noise generators, multiplier/divider, etc. / RMSCa Ss(30) Se(1955) ALC
Grico, Inc., 234 Portage Trail, Cuyahoga Falls, Ohio / 929-1556 / *C 63
Rotary diazo printer satellite and super satellite, satellite booster developer / RMSa Ss(3) Se(1957) Ic
Guardian Electric Mfg. Co., 1550 W. Carroll Ave., Chicago 7, Ill. / CH 3-1100 / *C 63
Relays; switches, solenoids, steppers / Ma ?s Le(1931) Ic
The Gudeman Co. Inc., 340 W. Huron St., Chicago 10, Ill.; 7473 Ave. 304, Visalia, Calif. / Chicago: DElaware 7-7400; Visalia: REdwood 2-4011 / *C 63
Capacitors, pulse transformers, delay lines / Ma ?s ?e Ic
Guidance Controls Corp., a subsidiary of Warner Electric Brake & Clutch Co., Commercial St., Engineers Hill, Plainview, L.I., N.Y. / WElls
8-9500 / *C 63
Precision control devices for aerospace, instrumentation and industrial applications; electric clutches and brakes, potentiometers, servo motor gearhead and speed reducers, encoders / Ma Ms(50) Se(1950) Ic
Gulton Industries, Inc., 212 Durham Ave., Metuchen,

Se(1950) Ic
Gulton Industries, Inc., 212 Durham Ave., Metuchen,
N.J. / 548-2800 / *C 63
Cables and connectors, capacitors, circuit boards,
computing services, digital logic modules, data
acquisition and reduction systems, recorders,
scanners, telemetering systems, thermistors, test
equipment, transducers, tape editors, amplifiers,
magnetic amplifiers / RMSCa Ls(1850) Me(1945)
DAISG.

H

Hagan Chemicals & Controls, Inc., Rte. 60 & Campbell's Run Rd., Pittsburgh 30, Pa. / WAlnut 2-3737 / *C 62

-3737 / *C 62

Open hearth, blast furnace and soaking pit control systems; magnetic amplifiers and control units; patchboards; combustion controls; electro-pneumatic converters; power positioners; temperature, pressure, flow level scanners / RMSC (technical field service) a Is (1990) Lo (1910)

Herbert Halbrecht Associates, Inc., 332 S. Michigan Ave., Chicago 4, 111.; 11601 National Blvd., Los Angules 61, Calif. / Chicago: Harrison 7-2076; Los Angules 140-057 / © 63

Management consultants, personnel and executive recruitment specialists in the fields of electronic data processing, operations research, mathematical sciences, and scientific management / Ca Ss(9) Se(1957) Dic Hallamore Electronics Div. of the Siegler Corp., 714 N. Brookhurst St., Anaheim, Calif. / PRospect 4-1010 / © 62

Analog and digital computers / RMCa Ls(1000)

Analog and digital computers / RMCa Ls(1000) Me(1952) DAc The Hallicrafters Co., 4401 W. 5th Ave., Chicago 24, Ill. / *C 62

The Hallicrafters Co., 4401 W. 5th Ave., Chicago 24, 111. /* C62

Digital communications equipment, special digital control equipment / RMa Ls(2800) Me(1933)

DIC

Hammarlund Manufacturing Co., 53 W. 23rd St., New York 10, N.Y. / YU 9-2200 / *C 63

Digital and analog data transmission equipment for wire lines, coaxial cable and microwave. Analog-to-digital converters, shaft encoders and other peripheral equipment. Mr. Hr. VHF and UHF radio transmission equipment. Coaxial cable data transmission system components / Ma Ls(525) Le(1910) DAIC

Hammer Business Service, Inc., 99 Hanover St., Manchester, N.H. / 669-1730 / *C 63

Consulting, IBM punched card tabulating (IBM-604-407, Royal McGee-LGP-30 computer / C (data processing) a Ss(3) Se(1961) Ic

Hampshire Engineering Co., Inc., 2300 Washington St., Newton Lower Falls 62, Mass. / 617-B1 4-5937 / *C 63

Special purpose digital computers, data proces-

*C.63

**Special purpose digital computers, data processing systems / RMa Ss(10) Se(1954) Dc

Harman Kardon Inc., Data Systems Div., 55 Ames Ct.,

Plainview, L.I., N.Y. / OV 1-4000 / *C 63

Digital modules, digital systems, data processors / RMGPa Ls (550) Me (1949) DMC c

Harvey-Wells Electronics, Inc., 14 Huron Drive,

Natick, Mass. / 617-0L 5-1120 / *C 63

Digital computers, digital systems, instruments, components / RMSCPa Ss(30) Se(1960) DIC

Hathaway Instruments Inc. 5900 F lawell Ave

ments, components / RMSCPa Ss(30) Se(1960) DIG
Hathaway Instruments Inc., 5000 E. Jewell Ave,
Denver 22, Colo. / SKline 6-8301 / *C 62
Commutators, rotary stepping switches, audio
response plotter, drired switches / RMSCa
Ms(400) Me(1940) Ic
The A. W. Haydon Company, 232 N. Elm St., Waterbury
20, Conn. / 756-4461 / *C 63
Binary encoders, encoder system, stepping devices and systems, time delay relays, repeat
cycle timers, AC, DC and stepper motors (miniature and microminiature), servo head motors /
RMSa Ms(460) Me(1946) Isc
Heath Co., subsidiary of Daystrom Inc., Hilltop Rd.,
Benton Harbor, Mich. / YUkon 3-3961 / *C 62
Analog computers and components in easy to build
kit form / MSa Ls(575) Me(1940) Alc



17

Hewlett-Packard Co., 1501 Page Mill Rd., Palo Alto, Calif. / 415-326-7000 / *C 63

Design and manufacture of general purpose electronic test equipment including electronic counters, digital recorders, frequency synthesizers, digital to analog converters, pulse generators, oscilloscopes, sampling oscilloscopes, switching time testers, electronic voltmeters, clamp-on dc milliammeters, oscillators, audio signal generators, microwave sweep oscillators and signal generators, microwave power and SWR meters, wave guide and coaxial equipment / MSa Ls (3000) Mc (1939) Ic

The Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio / 541-8060 / *C 63

Cardmatic switches / RMSa Ms (450) Le (1910) Ic

Hillburn Electronic Corp., 55 Greenpoint Ave., Brooklyn, N.Y. / - / *C 62

Stepping switches / Ma Ss (35) Me (1945) Ic

S. Himmelstein & Co., 6015 North Ridge Ave., Chicago 26, Ill. / 312-465-6022 / *C 63

Consulting and design engineering services, Magnetic recording systems and computer peripheral equipment development / RCa Ss (10) Se (1960) DIc

Hogan Faximile Corp., 635 Greenwich St., New York 14 N.Y. / CH 2-7855 / *C 63

pheral equipment development / RCa Ss(10) Se (1960) Dic
Hogan Faximile Corp., 635 Greenwich St., New York
14, N.Y. / CH 2-7055 / *C 63
High speed printer-plotters and event recorders / RMa Ms(65) Le(1929) Ic
Allen Hollander Co., Inc., 305 Gerard Ave., Bronx
51, N.Y. / - / *C 63
Pinfeed labels / Ma 7s 7e Ic
Hollander Associates, P.O. Box 2276, Fullerton,
Calif. / 714-LA 5-8777 / *C 63
Design and consulting in general and special purpose computers and their application to business, control, communications switching, and defense; including technical liaison overseas / RCa Ss(5) Se(1961) DASCc
Holley Computer Products Co., 11955 E. Nine Mile
Rd., Warren, Mich. / JE 6-1900 / *C 63
Line printers / Ma Ms(33) Se(1962) Ic
Honeywell Electronic Data Processing Div., 60 Walnut
St., Wellesley Hills 81, Mass. / CEdar 5-7450 / *C 63
Electronic data processing systems. Sales,

Control of the contro

Dic

Honeywell, Special Systems Div., Queen & So. Bailey
Sts., Pottstown, Pa. / 215-FAculty 3-4000 / *C 63

General purpose digital computers for on-line
real-time applications; digital data handling
systems; special purpose analog computers; manufacturing, programming, and maintenance of these
systems / MSCPa Ms (400) Se(1960) DAIc

The Hoover Co., Electronics Div., P.O. Box 876, 500
N. Andrews Ave., Ext., Pompano Beach, Fla. / 9425200 / *C 63

Research, development and manufacture of telemetry
systems and components, airborne electronic

S200 / *C 63

Research, development and manufacture of telemetr systems and components, airborne electronic instrumentation, electronic ground support and control equipment, special electronic test sets, automatic checkout equipment, instrumentation vans, precision electronic devices such as highly regulated power supplies and military ordnance and logic equipment / RMa Ms(60)

Se(1955) Ic

Houston Fearless Corp., 11801 W, Olympic Blvd., Los Angeles 64, Calif. / 272-4331 / *C 63

Data monitoring devices, magnetic memory drums, information storage/retrieval systems, microfilm processors / RSMa Ls (930) Me(1943) Ic

Houston Instrument Corp., 4950 Terminal Ave., Bellaire 101, Tex. / MO 7-7403 / *C 63

Recorders, voltmeters, converters, DVM / Ma Ss(30) Se(1959) Ic

HRB-Singer, Inc., P.O. Box 60, Science Park, State College, Pa. / AD 7-7611 / *C 63

Memory and processing units and systems -- SEMA, SIM, SEMAC; systems programming and consulting services / Ra Ls (1000) Me(1947) DIC

HRB-Singer, Inc., a subsidiary of The Singer Mfg. Co., 396 Fifth Ave., New York 18, N.Y. / OX 5-6075 / *C 63

Data processing systems -- sele and service; SEMA and SEMMC Systems: digital electronic

Co., 396 Fifth Ave., New York 18, N.Y. / OX 5-6875 / °C 63
Data processing systems -- sales and service;
SEMA and SEMAC Systems: digital electronic memory systems for punched eard, paper tape and direct input/output; high speed punched paper tape reader; auxiliary plugboard wiring devices / RMSC (data processing services) a Ls (900) Me (1947) Dlc
Hughes Aircraft Co., Ground Systems Group, P.O. Box 3310, Fullerton, Calif. / 871-3232 / °C 63
Digital data processing systems, general purpose computing systems, materials development, microelectronics / RMS (systems analysis, integration and management) a Ls (7000) Se (1956) Dlc Hughes Dynamics, Inc., 100899 Wilshire Blvd., Los Angeles 24, Callif. / 477-2531 / °C 63
Operations research, total information systems design, implementation and operation, computer programming and operations, project management systems, integrated system management, market research, new product planning, software design and programming, education and training in management sciences / RMSA MS (100) Se (1962) Dlc
Hughes Semiconductor Div., 500 Superior Ave., New-

minagement sciences / named mactory Section Dic Dic Bughes Semiconductor Div., 500 Superior Ave., Newport Beach, Calif. / Ll 8-0671 or MA 9-3271 / *C 62 Silicon and germanium diodes, microminiature diodes and transistors, silicon transistors, silicon power rectifiers, packaged assemblies, micro weld modules, capacitors, voltage regulator diodes / Ma Ls (1000 Me (1951) Ic Burletron Control Products Div., 920 Manchester Rd., Wheaton, 111. / 312-666-2330 / *C 63 Components -- relays and sensing devices / RMSa Ms C237 Me (1946) Ic Blydro Molding Company, Inc., 100 Sharron Ave., Plattsburgh, N.Y. / JOrdan 1-5320 / *C 63

Roster of Organizations

Precision molded plastic components / Ma $\,$ Ms (125) Se (1950) $\,$ I c

Se(1950) Ic
Hydropoise Inc., 230 S. Wells Fargo Ave., Scottsdale,
Ariz. / - / *C 62
Turbine type flow meters and associated readout
and control equipment / RMSa Ss(10) ?e Ic
Hyperion industries, Inc., 127 Coolidge Hill Rd.,
Watertown, Mass. / WA 6-0140 / *C 63
Magnetic tape search units, digital language
translators, computer power supplies / Ma Ms
(152) ?e Ic

The I.D.R. Co. (Industrial Data Reduction), 4740
Spruce St., Philadelphia 39, Pa. / GRanite 2-5023
/ *C 63
Full line data processing with specialty of
publishing industry services / CP (data processing services) a Ss (25) Se (1961) DIC
IMC Magnetics Corp., Western Div., 6058 Walker Ave.,
Maywood, Calif. / LUdlow 3-4705 / *C 63
Linear and rotary solenoids, step-servo motors,
synchros, resolvers, digital to shaft angle
converters / Ma MS (150) Me (1946) IC
Image Instruments, Inc., 2300 Washington St., Newton
Lower Falls 62, Mass. / 617-969-0440 / *C 63
Recording storage tube systems, scan converters,
computer data display storage / RMa Ss (30)
Se (1959) Ic
IMI Magnetics Div. of Idaho Maryland Industries

Se(1959) Ic IMI Magnetics Div. of Idaho Maryland Industries Inc., 1733 Flower, Glendale 1, Calif. / 245-7371 / *C 63

Magnetic heads and memory drums / Ma Ms Se

(1954) Ic
Indiana General Corp., Electronics Div., Crows Mill
Rd., Keasbey, N.J. / VAlley 6-5100 / *C 63
Ferramic memory cores, memory planes, arrays,
microstacks, memory systems, buffers, large
memory systems / RMSa Ls (600) Le (1903) Ic
Indiana General Corp., Magnet Div., 405 Elm St., Valparaiso, Ind. / Il0ward 2-3131 / *C 63
Permanent magnets / RMSCa Ls (750) Le (1908) Ic
Industrial Electronic Engineers, Inc., 5528 Vineland Ave., North Hollywood, Calif. / 877-1144 /
*C 63
Rear-projection readout devises for data of

Rear-projection readout devices for data dis-Mear-projection readout devices for data dis-play; front plug-in readouts; fina-View, binary input, self-decoding readouts; cue indicator switches; status indicators; push-button illu-minated switches; Digivisor; analog to digital readout display units / MSa Ms(150) Me(1945)

Ic
Industrial Nucleonics Corp., 650 Ackerman Rd., Columbus 2, Ohio / AMherst 7-6351 / *C 62
AccuRay industrial process measurement and automatic control systems, data reduction and readout systems for paper, plastics, metal and other industries / RMSa MS(500) Sc(1950) Clc
Informatics, Inc., P.O. Box 5569, Sherman Oaks, Calif. / - / *C 62

Complete systems and programming services / Ca

Ss Se(1962) Ic
Information For Industry, Inc., 1000 Connecticut
Ave., N.W., Washington 36, D.C. / 296-4936 / *C 63

Magnetic tape searching capabilities; information retrieval devices / RMSCa Ss(40) Se(1955)

T tion retrieval devices / RMSCa Ss (40) Se (1955)

LC

Information International, Inc., Bldg. #6, Maynard Industries, Maynard, Mass. / TW 7-9159 / *€ 63

Research and consulting in the computer sciences.

Computer reading of scientific data recorded on film. Display techniques for analysis of scientific data / RC (processing of scientific data recorded on film a Ss (8) Se (1962) Ic

Information Products Corp., 207 Bent St., Cambridge, Mass. / 617-491-1140 / *€ 63

Random access file interrogators, computer input and display equipment, data editing equipment, symbol generators, coding keyboards / MSa Ms (60) Se (1961) Ic

Information Retrieval Corp., 1000 Connecticut Ave., N.W., Washington 6, D.C. / 703-4522 / *€ 63

Information retrieval devices; information services, and information engineering / SCa Ss (20) Se (1961) Ic

Ingejörsfirma Nordisk ADB, Pyramidy, 9D, Solnal, Sweden (subsidiary companies: Nordisk ADB Deutsche GmbH Düsseldorf/Holthausen Bonner Strasse 117, Germany, Nordisk ADB, Weerner and Co., Rämistrasse 8, Zurich 1, Switzerland; Iberica ADB, Torre de Madrid, Spacial (1990) (** 6.5) (***) (

Zurich 1, Switzerland; Iberica ADB, Torre de Madrid, Spain) / 820270 / *C 62 Spain) / 820270 / *C 62
Consulting engineers in civil engineering and data processing. Specializing in road planning and construction, and structural calculations / RCa Ss(25) Sc(1959) Ic
The Institute of Management Sciences, P.O. Box 273, Pleasantville, N.Y. / *C 62
Non-profit scientific society, publishers of quarterly journal "Management Science" / Se(1954) Ic

quarterly journal "Management Science" / Se(1954)
Ic
Institute for Scientific Information, Inc., 33 So.
17th St., Philadelphia 3, Pa. / 215-564-400 / * 63
Consulting, research, publications, facsimile
hardware, information engineering, publishers
of Current Contents of Space, Electronic and
Physical Sciences / RC(information dissemination
and retrieval, screening, coding and indexing) a
Ms(75) Se(1955) Ic
Instrument Development Laboratories, Inc., 67 Mechanic
St., Attleboro, Mass. / 222-3800 / * 63
Custom design and manufacturing of electromechanical computer switching elements and multicircuit switches for programming and time-sharing
of computer inputs, particularly low level high
performance data / Ma Ms(100) Me(1947) Ic
Instrument Society of America, Penn-Sheraton Hotel,
530 Wm. Penn Place, Pittsburgh 19, Pa. / ATlantic
1-311 / *C-62

Professional, technical society serving the field

Professional, technical society serving the fiel of instrumentation, data handling, computation, and automatic control systems. Publishes "ISA Journal" / PCa Ss (42) Me (1946) Ic Instrument Systems Corp., 111 Cantiague Rd., Westbury, L.I., N.Y. / WE 8-8000 / *C 63 Magnetic storage drums, hall effect devices, tape heads, controls, multipliers, servo mechanisms, counters, switches, amplifiers, transformers, etc. / Ma Ls (650) Se (1960) ISC Interchemical Corp., 417 E. 7th St., Cincinnati 1, Ohio / *C 63 Ribbons and reinking service / Ma '8' ?e IC Intercontinental Dynamics Corp., 170 Coolidge Ave., Englewood, N.J. / LDwell 7-3600 / *C 62 Random noise generators / RMSa Ss (45) Se (1956) Ic Intercontinental Instruments Inc., 123 Gazza Rival

(1956) Ic
Intercontinental Instruments Inc., 123 Gazza Blvd.,
Farmingdale, N.Y. / MY 4-6060 / *C 63
Digital logic elements, pulse and square wave
generators, low frequency spectrum analyzers,
digital system development / Ma Ss(18) Se(1962)

International Business Machines Corp., Data Processing Div., 112 E. Post Rd., White Plains, N.Y. / WH 9-1900 / °C 63

International Business Machines Corp., Data Processing Div., 112 E. Post Rd., White Plains, N.Y. / WH 9-1900 / *C 63
Complete line of data processing systems and equipment, including the IBM RAMAC 305 (Model 2), 1401, 1410, 1440, 1460, 1620, 7010, 7040, 7044, 7070, 7072, 7074, 7080, 7090, and 7094 data processing systems; 1420 bank transit system; 1062 teller terminal; numeric and alphameric optical character readers; 1230 optical mark scoring reader; magnetic character inscribing and sensing equipment; 1710 control system; airline reservations systems; Tele-processing devices and systems including data collection and transmission equipment; Hypertape; marksensing equipment; and a full line of punched card equipment including the low-cost Series 50 line. Also punched cards, magnetic tape, magnetically encoded paper checks, and other supplies used with data processing systems / RWSa Ls (116,000) Le(191D DIC.

International Business Machines Corp., Federal Systems Div., 326 E. Montgomery Ave., Rockville, Md. / 64 4-6700 and Ha 7-4110 / *C 63
Electronic information handling and control & systems for U.S. government space, defense, and civil programs. Systems management, systems for U.S. government, engineering, production, installation, and field support / RMSGC (systems) a Ls(12,000) Se(1955) Dd.

International Computers and Tabulators Ltd., 149 Old Park Lane, London W.I, England / Hyde Park 8080 / *C 63
Punched card equipment and electronic digital computers, card to paper tape converters, paper tape to card converters, data collection and

Punched card equipment and electronic digital computers, card to paper tape converters, paper tape to card converters, data collection and recording equipment, magnetic drums, inputoutput devices, memory systems, office equipment, line-a-time high speed printers, magnetic character, paper tape and punch card readers, magnetic tape filing systems, readers, and recorders / RMSCa Ls(22,000) Le(1907) DISC International Diode Corp., 90 Forrest St., Jersey City 4, N.J. / HE 2-0242 / *C 63
Germanium crystal computer diodes with high switching speeds / RMS* SS(15) Se(1959) Ic International Electric Corp., Route 17 and Garden State Parkway, Paramus, N.J. / Colfax 2-6800 / *C 63

State Parkway, Paramus, N.J. / COlfax 2-6800 /
* (63

Electronic systems management / (systems management) a Ls(1300) Se(1950) Ic

International Rectifier Corp., 233 Kansas St., El

Segundo, Calif. / ORegon 8-6201 / * 62

Complete line of general purpose silicon diodes, zener voltage regulator diodes, silicon controlled rectifiers, silicon readout photocells /

RNSa Ls(950) Me(1947) Ic

International Resistance Co., 401 N. Broad St.,

Philadelphia 8, Pa. / WAlnut 2-8900 / * C 62

Resistors (composition, film, power and precision wire wound and special application);

potentiometers, flexible etched circuits; multiconductor flat wire cable; displacement transducers; low pressure cell; rectifiers / RNSa Ls(9500) Le(1927) Ic

Invac Corporation, 26 Fox Rd., Waltham 54, Mass. / - / * C 62

Peripheral input/output equipment, punched

- / *U 62
Peripheral input/output equipment, punched
paper tape equipment / RMa Ms(56) Se(1959) Ic
tek Corp., 10 Maguire Rd., Lexington 73, Mass. /
V01unter 2-6200 / *C 63
Digigraphic System / RMSa Ls(2089) Se(1957)

The ITT Data Processing Center, Rte. 17 and Garden State Parkway, Paramus, N.J. / Colfax 2-8700 / *C 62

*C 62
A complete range of services from computer time to systems analysis design and programming are available through our IBM 7090, 1401 and supporting equipment and our 200 programmers and analysts who have a wide diversity of backgrounds on a wide variety of computers. Direct communications data links between customer's office and our facility. Equipment is available on an hourly or repetitive basis / RC (data processing services) a Ms (250) Se(1961) Ic
ITT Federal Div., International Tel. & Tel. Corp.—name changed to ITT Federal Laboratories, which see

see
ITT Federal Laboratories, a div. of International
Telephone and Telegraph Corp., 500 Washington
Ave., Nutley 10, N.J. / North 1-1100 / *C 63
Medium and large scale real time data processors
for on-line applications; ITT 025 data processor,
ITT 525 Versatile Automatic Data Exchange /
RMSa Ls(7000) Le(1920) Dc
ITT Information Systems Div., 320 Park Ave., New



York 22, N.Y. / - / *C 62
Telegraph and data switching system -- ITT
ADX System / RMSa Ms(250) Se(1961) DACC

Jay-El Products, Inc., 1859 W. 169th St., Gardena, Calif. / FAculty 1-3260 / *C 63
Illuminated switches, indicators, readout devices, lamp coating and solid state time delays / RMSa Ss(25) Sc(1956) Ic
Jonker Business Machines, Inc., 26 N. Summit Ave., Gaithersburg, Md. / 940-9440 / *C 63
Termatrex and Minimatrex information and data retrieval equipment and information services, including consulting, indexing and abstracting / RMSCa Ss(42) Se(1950) Ic
Jordan Electronics, a div. of The Victoreen Instrument Co., 121 So. Palm Ave., Alhambra, Calif. / CU 3-6425 / *C 63
Timing devices, power supplies, sensors, voltage comparators, keyers, flashers, audible warning, intervalometers, servo amplifiers, static switches, programmers, and systems / Ma Ms (194) Se(1952) Ic
Clark H. Joy Co., 27005 Knickerbocker Rd., P.O. Box 9695, Bay Village 40, Ohio / - / *C 63

Kay Electric Co., Maple Ave., Pine Brook, N.J. / CApital 6-4000 / *C 62
Electronic test instruments / Ma Ms (130) Me

Electronic test instruments / Ma Ms (130) Me (1947) I. (

Group, 1150 McBride Ave., Little Falls, N.J. / CL. 6-4000 / *C. 63

Analog and hybrid airborne navigation computers / Ma Ls (7700) Le (1917) DAc

George Kelk Ltd., 5 Lesmill Rd., Don Mills, Ontario,
Canada / 416-444-8464 / *C. 63

AC line voltage regulators designed and manufactured; special models to order / Ma Ss(21)
Ss(1953) Ic

Kelvin Sales Co., 5919 Noble Ave., Van Nuys, Calif. / ST 2-6662 / *C. 63

Precision wirewound resistors and resistor networks / MSa Ms (200) Ss(1955) Ic

Kepco, Inc., 131-38 Sanford Ave., Flushing 52,
N.Y. / 212-IN 1-7000 / *C. 63

Manufacturers of a complete line of standard voltage/current DC regulated power supplies / RMSa Ms(150) Me(1946) Ic

Walter Kidde & Co., Inc., Aerospace Div., 441 Main St., Belleville 9, N.J. / 201-PLymouth 9-5000 /
*C. 63

Solid state power supplies, static converters and static inverters / RMSCa Ls(1614) Le(1917) ICc

ICc

Walter Kidde & Co., Inc., Alarms Div., 441 Brighton Rd., Clifton, N.J. / GRegory 2-5000 / *C 63

Automatic fire detection systems; engineered proprietary alarm systems console; ultrasonic, photoelectric, and capacitance burglar alarm systems; temperature monitoring systems / RMSCa Ls Le(1917) ICc

Walter Kidde & Co., Inc., Industrial & Marine Div., 441 Main St., Belleville 9, N.J. / PLymouth 9-5000 / *C 63

Fire detecting and extinguishing equipment / RNSCa Ls Le(1917) ICc

A. Kimball Co., a div. of Litton Industries, 8 Rewe St., Brooklyn 11, N.Y. / STagg 2-2700 / *C 63
Punch tag-integrated data processing; PM75, tag reader and Kard Pack / Ma 's Le(1867) DIc Kinelogic Corp., 20 So. Pasadena Ave., Pasadena, Calif. / 664-0434 / *C 63
Design, develop and manufacture special purpose magnetic recording equipment and systems; electronic, electromechanical, and mechanical instrumentation components and systems (all types except RP); and belts, seamless mylar. Theoretical studies involving same / RMa Ss(30) Se(1960) Ic
Kollmorgen Corp., 347 King St., Northampton, Mass. / JUstice 4-0280 / *C 63
Direct drive torque motors for tape transport,

Direct drive torque motors for tape transport, tachometers, and high speed switches for telemetering, commutating, multiplexing, computing, sampling, programming / RMa Ls(700) Le(1916)

he Walter S. Kraus Co., 48-02 43 St., Woodside 77, N.Y. / STillwell 4-5922 / % 62 Electronic controls for exact control / RMa Ss(17) Me(1941) Ic

Labelon Corp., 10 Chapin St., Canandaigua, N.Y. / 2925 / *C 63

2925 / *C 63

Inked ribbons for all tabulating and high speed printing equipment / MSa Ms(160) Le(1898) Ic Laboratory for Electronics Inc., Monterey Laboratory, 305 Webster St., Monterey, Calif. / - / *C 62 Computer programming for scientific, engineering and data handling applications. Military and industrial operations research. Systems analysis,

mathematical modeling, simulation, conceptual design of large-scale systems / RCa Ss(40) Me(1945)

Lamson Corp., Lamson St., Syracuse 1, N.Y. /
HO 3-0221 / *C 63
Lamson Airtubes* / NSa Ls (860) Le (1800) Ic
Leach Corp., 405 Huntington Drive, San Marino,
Calif. / 682-3506 / *C 63

Manufacture electronic, electro-mechanical components and systems, data recording equipment and systems, telemetry equipment / RNSa Ls(1000) Le(1919) Ic
Ledex Inc., 123 Webster St., Dayton 2, Ohio / BA 4-9891 / *C 63

Ledex Inc., 123 Webster St., Dayton 2, Ohio /
BA 4-9991 / *C 63
Research, development, design, and production
of remote switching and actuating components
and subsystems, such as intervalometers, automatic checkout, mode selectors, programmers,
sequency controls, positive/negative circuit
searching, pulsing devices, guidance control,
power transfer, switching and/or actuating
subsystems to meet extreme environments. Standard products include: rotary and medium stroke
linear solenoids, protected silicon bridge rectifiers, transient controls, stepping and servostep motors, open and hermetically sealed switches
for multi-circuit switching / RNSa MS (320)
Me(1947) ISc
Leeds & Northrup Co., 4901 Stenton Ave., Philadelphia 44, Pa. / DAvenport 9-4900 / *C 63
Analog and digital computers for industrial process applications; also data loggers for industrial use / RNSa LS (3000) Lec (1900) DAtc
IFE Electronics, A Div. of Laboratory for Electronics, Inc., 1079 Commonwealth Ave., Boston 15, Mass. /
617-Algonquin 4-4223 / *C 63
HD (high density) file drums; flexible rotating
storage disks (Gernoulli Disks); display devices;
random access storage and display systems; computer programming; operations research; systems
analysis; read/write heads; memory systems;
digital-operational computers. Advanced research in special devices and applied research
in thin ferromagnetic films for the computer
field; data recording equipment; data reduction
equipment; magnetic disks, magnetic drums;

in thin ferromagnetic films for the computer field; data recording equipment; data reduction equipment; magnetic disks, magnetic drums; magnetic storage systems; logical circuits; plug-in circuits; delay lines; analog and digita modules / RMSCPa Ls(2000) Me(1940) DAISCMc Librascope Div., General Precision, Inc., 808 Western Ave., Glendale 1, Calif. / CItrus 4-6541 / *C_62

Data processors and computers for air traffic

Data processors and computers for air traffic control, business, industrial control, space—craft guidance, antisubmarine warfare, aircraft navlgation and science; computer controls and electronic test equipment; explosive ordance devices / RMSa Ls.(1000) Mc(1937) DAICC.
Licon Div., Illinois Tool Works Inc., 6615 W. Irving Park Rd., Chicago 34, 111, 40 2-04010 / *0.63
Full line of precision snap-action switches, illuminated pushbutton switches, environment-free switches, and rotary solenoids / Ma Ms (150) Sc(1953) Ic
Link Div., General Precision, Inc., Simulation & Control Group, Binghamton, N.Y. / RA 3-9311 / *0.63
Special purpose, solid state, digital computers / RMa Ls (2200) Le(1929) Dc
Edwin A. Lipps Engineering, 1511 Colorado Ave., Santa Monica, Calif. / EXbrook 3-0449 / *0.63
Micro-magnetic instruments; magnetic tape recording and reading heads; consulting services; memory systems; magnetic tape readers / RMSCa Ms(60) Mc(1946) Ic
Liskey Aluminum, Inc., Box 506, Glen Burnie, Md. / CIrcle 2-7300 / *0.63

Circle 2-7300 / *C 63

Computer-room free-access flooring. Two types of floor: "ELFLOR" -- extruded aluminum panels on aluminum or steel support stringers; and "Steel-Core" -- steel-armored plywood panels on same support structure / MSCa Ms (100) Se(1950) Ic

Littelfuse, Inc., 1665 Miner St., Des Plaines, Ill. / VAnderbilt 4-1188 / *C 62

Fuses, fuse posts, fuse mountings, and other circuit protective devices / Ma Ms(500) Le (1927) Ic

Lloyd Industries, 40 Grove St., So. Hackensack, N.J. / HUbbard 8-7770 / *C 62

Ultra-precise code discs / Ma Ss(10) Se(1959) Ic

Lockheed Electronics Co., Route 22, Plainfield, N.J. / PL 7-1600 / *C 63 Printed circuit boards, ceramic cores, memory devices, magnetic heads, transducers,

devices, magnetic heads, transducers, instrumentation recorders (tape) / RNSa Ls(2500) Mc(1945) Ic
Lockheed Electronics Co., Avionics and Industrial Products Div., 6201 E. Randolph St., Los Angeles 22, Calif. / OV 5-7070 / *C 63
Electronic ceramics consisting of ferrites, ferrite cores, memory planes, logic module assemblies, multi-aperture devices, and memory units / RMa Ls(600) Se(1959) Ic
Lockheed Electronics Co., Information Technology Div., U.S. Highway 1, Metuchen, N.J. / Liberty 9-5000 / *C 63
Computer centered systems including data transmission / RMPSa Ms(120) Me(1945) DIc
Loral Electronics Corp., 025 Bronx River Ave., New York 72, N.Y. / TI 2-9500 / *C 63
Special purpose digital and analog computers /

Special purpose digital and analog computers / RMSCa Ls (2255) Me (1948) DAc

LUTTER, MAREMONT AND CO., INC., 35 E. Wacker Drive, Chicago 1, Ill. / 332-6935 / *C 63
Computer time sales, computer usage analysis, systems design, programming, proprietary program marketing, computer education seminars, used computer placement / SCa Ss(15) Se(1962)

M

Mace Corp., 900 N.E. 13th St., Ft. Lauderdale, Fla. / - / *C 62 Magnetic amplifiers, servo-amplifiers, magnetic computer readout devices, power magamps, frequency detectors, magnetic relays, magnetic focusing devices, electro-mechanical assemblies / RNSCa Ss(40) "Se(1961). Ic
Machine Computing Services, 138 S. Second East, Salt Lake City 11, Utah / Davis 8-9446 / °C 63
Broker of idle computer and punched card equipment time / SCa Ss(0) Ss(1960) DIc
F. B. MacLaren & Co., Inc., 15 Stepar Place, Huntington Station, L.I., N.Y. / 516-HAmilton 3-4433 / °C 63
Analog computers serve and server and server server.

Analog computers, servo systems, servo ampli-fiers, electronic circuits / Ma Ss(12) Me(1950)

AISc The Magnavox Co., 2131 Bueter Rd., Fort Wayne, Ind. / 743-9721 / °C 63
Large scale information storage and retrieval

The Magnavox Co., 2131 Bueter Rd., Fort Wayne, Ind. / 743-9721 / °C 63

Large scale information storage and retrieval systems, fire control computers, special purpose computers, research and development of data systems / RMSC (development of products)a Ls (9300) Le (1911) BIC

Magne-Head, a div. of General Instrument Corp., 3216 W. El Segundo Blvd., Hawthorne, Calif. / OSborne 9-3377 / °C 63

Magnetic memory drums, magnetic heads, reading and recording / MSa Ms (225) Le (1923) Ic

Magnetic Aids, Inc., 11 W. 42nd St., New York 36, N.Y. / Gl 4-6396 / °C 63

Magnetic visual control boards for charting and scheduling / Ma Ss (10) Se (1952) Ic

Magnetic Research Corp., 3160 W. El Segundo Blvd., Hawthorne, Calif. / OSborne 5-1171 / °C 62

Components / Ma Ms (100) Se (1952) Ic

Magnetics Inc., Butler, Pa. / Bitler 7-1745 / °C 63

Design, manufacture and sell high permability bobbin cores, for computer shift registers and buffers. Other products: tape wound cores, permalloy powder cores, nickel laminations / RNSa Ms (305) Me (1970) Ic

P. R. Mallory & Co., Inc., (3029 E. Washington St., Indianapolis &, Ind. / MK 4-9671 / °C &2

Computer grade capacitors, silicon rectifiers, contacts / RNSa Ls (6000) Le (1916) Ic

Management Assistance Inc., 40 Exchange Place, New York 5, N.Y. / HAnover 2-1234 / °C &3

Data processing company specializing in the purchasing and leasing of used IBM business machines. Vofers systems engineering and consulting services from Chicago and New York data centers.

Develops and manufactures devices to expand the capability of IBM equipment, such as MROC 330 and WROC 452 / MRSCPa Ms (150) Se (1955) Ic

Management Research Assoc., 14 Hill Drive, Dune Acres, Chesterton, Ind. / - / °C 63

Training courses in specialized areas of management science such as information retrieval, data communications, programming, programmed learning and Leaching machines, marketing, managing and Decenter, etc. Conducted by senior members

ment science such as information retrieval, data communications, programming, programmed learning and teaching machines, marketing, managing an ADP Center, etc. Conducted by senior members of the professional staff of The Diebold Group, Inc. / Pa ?s ?e Ic
Management Systems Corp., 1 Story St., Cambridge 38, Mass. / UN 4-0450 / *C 63
Management consulting / Ca Ms (100) Se (1960) Ic
Marginal Punched Stock Forms, Inc., 9 East 38th St., New York 16, N.Y. / OR 9-7434 / *C 63
Complete line of computer and tabulator stock paper sold to the trade only. Wholesale prices quoted direct to the trade for resale / Sa Ss (8) Se (1959) Ic
Markite Corp., 155 Waverly Place, New York 14, N.Y. / ORegon 3-1304 / *c 63
Precision potentiometers; conductive plastic

ORegon 5-1304 / *C 63
Precision potentiometers; conductive plastic
type. Rotary and rectilinear configuration;
both function (non-linear) and linear output, f
computers and servo controls; conductive plasti
type precision rotary switches / RMSa Ms (375)
Me (1946) DAIC
Massachusetts Institute of Technology, 77 Massachusetts Ave., Cambridge 39, Mass. / UN 4-6900, Ext.
3801 / *C 63

setts Ave., Cambridge 39, Mass. / NN 4-0900, EXT. 3881 / °C 63
Research and development on the uses of analog and digital computers in engineering. Instrumentation design and prototype development. Research on information systems. IBM 60K 1620, IBM 407, 557, 982, 026, 056 / Ra Ss(15) Se (1960) DAIC
Massey Dickinson Co., Inc., 9-11 Elm St., Saxonville, Mass. / 617-073-7401 / °C 63
Computer programming and equipment for physiological and psychological research / MSCa Ss(10) Sc(1957) DIC
Mast Development Co., 2212 E. 12th St., Davenport, Iowa / 319-323-9729 / °C 63
Mast Model 131 and Model 132 Random Access Projectors / MSCa MS(100) Mc(1941) Ic
Mathatronics, Inc., 257 Crescent St., Waltham, Mass. / - / °C 63

19

Mathatron Desk Top Computer, strip printer, and consulting service / MSCa ?s ?e DIc Mathematischer Beratungs- und Programmierungsdienst Gmbli. Kleppingstr. 26, Dortmund, Germany / 528697 / °C 63

Electrologica X1 / RC(computing center)a Ss(40) Se(1957) Ic

Electrologica XI / RC(computing center)a Ss (40) Sc (1957) Ic

Matrix Research and Development Corp., 11 Mulberry
St., Nashua, N.H. / 603-003-3303 / *C 63
Analog to digital converters, regulated power supplies / RNa Ms (05) Sc (1960) DIc
Mauchly Associates Inc., Ft. Washington Industrial
Pk., Ft. Washington, Pa. / - / *C 62
Special purpose computers, management services, specializing in planning and scheduling techniques / MCa Ms (50) Sc (1959) DAIC
Maxson Electronics Corp., 475 Tenth Ave., New York
18, N.Y. / LOngacre 5-1900 / *C 62
Design, research, development, electronic, electromechanical systems and equipment for aviation, missile and ordnance application. Amplifiers, automatic control equipment, plotting boards, computers, fire control equipment, regulated power supplies, telemetering, antennas, communication, test equipment / RNa Ls (047) Mc (1935) DAICC
May Tag & Label Corp., 111 W. 19th St., New York 11, N.Y. / Wa 9-0357 / *C 63
Macomatic Pinfeed Automation Labels / MSa Ms (150)

Macomatic Pinfeed Automation Labels / MSa Ms (150)
Le (1916) Ic
H. B. Maynard & Co., Inc., 718 Wallace Ave., Pittsburgh 21, Pa. / 371-9600 / *C 63
Manufacturing area computer system consulting -production, inventory, real time systems / Ca
Ms (125) Me (1934) Ic
McDonnell Automation Center, Box 516, St. Louis 66,
Mo. / PErshing 1-2121 / *C 63
Complete automation service center / RSC (systems
design, programming, data processing) a Ms (500)
Se (1961) Ic
Memorex Corp., 1180 Shulman Ave.. Santa Clara. Calif.

Sec1961) Ic

Memorex Corp., 1180 Shulman Ave., Santa Clara, Calif.
/ Cllery 8-3344 / *C 62
Magnetic tape / RNSa Ns (50) Se(1961) Ic

Wood, Calif. / 756-1343 / *C 63
Consulting in computer design and programming /
Ca Sc(20) Se(1957) Ic

Mesur-Matic Electronics Corp., Church St., Warner,
N.H. / 603-456-2285 / *C 63
Digital circuit test equipment / Ma Ss(12)
Se(1960) Ic

M-H Standard Corp., 400 Heaton St., Hamilton, Ohio
/ -/ *C 63
Palletflo and Versarack, components for computer

M-H Standard Corp., 400 Heaton St., Hamilton, Ohio / -/ *C 63
Palletflo and Versarack, components for computer controlled live storage racks / Ma 2s ?e Ic Micro Switch, A Div. of Honeywell, 1 ll W. Spring St., Freeport, I11. / 232-1122 / *C 63
Precision snap-action and mercury switches including lighted and unlighted pushbutton assemblies / MSa Ls Mc (1937) Ic Microtran Co., Inc., 145 E. Mineola Avc., Valley Stream, N.Y. / 516-LOcust 1-6050 / *C 63
Industrial and military caliber transformers / Ma Ss (100) Mc (1951) Ic
Midwest Automatic, Inc. of Iowa, 510 Third St., Des Moines 9, Iowa / CH 4-3103 / *C 63
"Instop" brake; "Slip-Rite" slip clutch / RMa Ss (2) Sc (1952) Ic
Midwest Research Institute, 425 Volker Blvd., Kansas City 10, Mo. / LOgan 1-0202 / *C 62
Studies in application of digital and analog computers to business and scientific problems; mathematical analysis and computation; computing service; IEM 1620; contract research; operations research; systems engineering; information retrieval, digital and analog simulation / Ra Ms (300) Me (1944) DAIC
Midwestern Instruments, Inc., 41st and Sheridan Rd., P.O. Box 7509, Tulsa 18, Okla. / NAtional 7-1111 / *C 62
M3000 digital tape systems, analog and audio tape recorder/reproducers, facsimile recorders,

P.O. Box 7509, Tulsa 18, Okla. / NAtional 7-1111 / °C 62

M3000 digital tape systems, analog and audio tape recorder/reproducers, facsimile recorders, recording oscillographs, servo components, telemetry systems and amplifiers / RMSGa Ms (500) Me (1950) DASC.

Miles Reproducer Co., 598 Broadway, New York 12, N.Y. / WA 5-6985 / °C 63

Sound recorders / Ma Ss (47) Le (1924) Ic

Milgo Electronic Corp., 7620 N.W. 36th Ave., Miami 47, Fla. / OXford 1-1220 / °C 63

Data handling and instrumentation systems including computer peripheral and special purpose buffering and formatting equipment; plotting boards and special display systems; analog and digital conversion equipment; time code generators and timing distribution systems, analog computers, data transmission systems, missile countdown and sequencing systems / RMa Ms (300) Sc (1955) DAIC

H. Jefferson Mills, Jr., Management Consultant — name changed to Data Processing Consultants, Inc., which see

Mincom Div., Minnesota Mining and Manufacturing Co., 2049 S. Barrington Ave., Los Angeles 25, Calif. /

manner changed to Data Processing Consultants, Inc., which see
Mincom Div., Minnesota Mining and Manufacturing Co.,
2049 S. Barrington Ave., Los Angeles 25, Calif. /
BRadshaw 2-9971 and GRanite 9-3751 / *C 63
General instrumentation recorder-reproducers and video band recorder-reproducers / RMSa Ms (250)
Mc (1949) Ic
Minneapolis-Honeywell Regulator Co., Aeronautical
Div., Florida Facility, 13350 U.S. Highway 19, St.
Petersburg, Fla. / HEMIOCK 5-1151 / *C 62
Airborne digital general purpose and digital differential analyser high speed computers, memory drums, buffer memory systems, digital encoders, pulse generators, SCR switches / RMa Ls (1500)
Lc (1975) Dic
Mitre Corp., P.O. Box 200, Bedford, Mass. / CR 4-9100 / *C 62
Systems engineering -- technical advisor to the

Systems engineering -- technical advisor to Air

Force Electronic Systems Div. / RCPa Ls(1700)

Se (1958) Ic

Monarch Metal Products, Inc., MacArthur Ave., New
Windsor Newburgh), N.Y. / John 2-3100 / % 63

/ Data processing accessory equipment and tape
handling and storage equipment / RMSa Ms (80)

Me (1945) Ic

Fort Washington, Pa. /

/ handling and storage equipment / RMSa Ms (80)
Me (1945) Ic
Monitor Systems, Inc., Fort Washington, Pa. /
MItchell 6-8100 /* C 63
PCM telemetry/computer interface systems, computer format conversion systems, PCM telemetry
ground stations, digital data recording systems,
scanning systems, automatic checkout and monitoring systems / RMA Ms (50) Sc (1959) DICc
Monroe Calculating Machine Co. Div., Business Machines
Group of Litton Industries, 555 Mitchell St.,
Orange, N.J. / 201-OR 3-6600 / *C 63
Special and general purpose electronic computers,
magnetic heads and drums, punched tape and punched
card equipment, Data/Log printers / RMS (data processing services) a Ls (6000) Le (1912) DIC
Monroe Industries, Inc., 934 36th St., S.E., Grand
Rapids 8, Mich. / CH 1-3648 / *C C
Instrument lighting components and visual displays / RMA Ms (75) Se (1953) Ic
Mog Servocontrols, Inc., Industrial Div., East
Aurora, N.Y. / N. 2-0220 / *C 63
Servovalves and electrohydraulic servo systems
for industrial applications / RMSa Ls (1300)

for industrial applications / RMSa Ls (1300) Me (1951) Sc

for industrial applications / RMSa Ls (1300)

Me (1951) Sc

Moore Associates, Inc., 893 American St., San Carlos, Calif. / 591-5363 / *C 63

Telemetering and data transmission systems / Ma Ms (50) Sc (1957) Ic

Moran Instrument Corp., 170 E. Orange Grove Blvd., Pasadena, Calif. / SYcamore 6-7158 / *C 63

Special servo systems; resolution multipliers, calibrators, regulated high voltage power supply, radiation measurement equipment, radar survey equipment, radar navigation equipment, servo data printer / RMs Ss (15) Me (1950) Ic

F. L. Moseley Co., 409 No. Fair Oaks, Pasadena, Calif. / SY 2-1176 / *C 63

X-Y recorders (with time base); strip chart recorders, logarithmic amplifiers, curve followers, computer accessories / Ma Ms (250) Me (1951) Ic

Motorola Semiconductor Products Inc., 5005 E. McDowell Rd., Phoenix 8, Ariz. / 273-6900 / *C 63

Semiconductor devices including germanium and silicon transistors, silicon rectifiers and rectifier stacks, silicon controlled rectifiers, silicon zener diodes and integrated circuits / Ma Ls Sc (1955) Ic

Moulic Specialities Co., 1013 W. Washington, Bloomington, Ill. / 966-1235 / *C 62

Ls Sc (1955) Ic

Moulic Specialities Co., 1013 W. Washington, Bloomington, Ill. / 966-1235 / *C 63

Tape cartridge recorders-playbacks, auto loaders, etc. / RMSCa SS (30) Me (1945) Ic

tape cartridge recorders-playbacks, auto loaders, etc. / RNSCa Ss (30) Me (1945) Ic

Nountain Associates, Charles Rd., Mt. Kisco, N.Y. / MO 6-3939 / % 6 d

Programming for various computers such as IBM 7090, 704, 1620, Dendix G-15D, G-20, and others. Our facility cleared for SECRET / Cyrogramming 6 systems analysis)a Ss (4) Se (1959) DAIc Mountain Data Systems, Inc., 4 Depot Plaza, Bedford Hills, N.Y. / - / *C 62

Data processing, problem solution, programming, systems analysis and IBM 1620 time rental. Educational applications including scheduling. Business applications from any punched paper tape code / CPa Ss (6) Se (1959) Ic

Multnomah Data Processing Center, 430 N.W. 10th Ave., Portland 9, Ore. / 224-1410 / *C 63

Computer applications of engineering, statistical and management science problems / SC (computer service) a Ms (60) Se (1958) Ic

N

Naniloa Corp., Station B, P.O. Box 2791, Toledo 6, Ohio / CHerry 1-8065 / *C 63
Electronic machine control systems and logic - components / Ma Ss(15) Se(1956) DICc
National Bureau of Standards, Connecticut & Van Ness
Sts., Washington 25, D.C. / EMerson 2-4040, Ext.
7741, 7501 / *C 63

General purpose data processing service. Numer-

7741, 7501 / *C 63
General purpose data processing service. Numerical analysis and programming research / RGP (computing services, statistical and operations analysis) a Ms (95) Me (1947) Ic

The National Cash Register Co., Main & K Sts., Dayton 9, Ohio / 226-1411 / *C 63

NCR 304, 315, 310, 390 data processing systems; electronic bank posting machines; punched paper tape recorders; card punch couplers; input-output devices; digital computers / RMSa Ls (40,000) Le (1884) DIc

National Computer Analysts, Inc., Route 1, R.F.D. *30, Princeton, N.J. / 609-921-2272 / *C 63

EDP and information handling systems analysis; design and implementations; programming; consulting; software development; data processing services; banking and automation services / Ca Ss (25) Se (1961) Ic

National Computer Mathods Corp., which see
National Cybernetic Corp., 111 Broadway, Room 114, New York, N.Y. / - / *C 62

Computer feasibility survey, system evaluation, computer processing, data transmission, application research systems / RCa Ss (6) Se (1962) DIc

National Data Processing Co., dept. of UNIVAC Div,

DIC

National Data Processing Co., dept. of UNIVAC Div. of Sperry Rand Corp. — name changed to Univac Div. of Sperry Rand Corp., which see National Physical Laboratory, Mathematics Div., Teddington, Middlesex, England / TEDdington Lock 3222 / %C 63

Computing service using DEUCE and ACE. Digital and punched card / RGPCa Ms (60) Me (1945) Dc

National Scientific Laboratories, Inc., 2010 Massa-chusetts Ave., N.W. Washington 6, D.C. / HUdson 3-4030 / °C 63

Research and development on computer application engineering / R(field engineering) a Ms(300)
Me(1948) Ic

Mengineering / R(field engineering) a Ms(300)
Me(1948) Ic
Navigation Computer Corp., Valley Forge Industrial
Park, Norristown, Pa. / GLendale 2-6531 / *C 62
Transistorized digital modules and special purpose computers / Ma Ms(150) Se(1955) Dc
New Era Carbon & Ribbon Co., Inc., 1011 Cherry St.,
Philadelphia, Pa. / WA 3-0155 / *C 63
All types of computer ribbons; also chain printer ribbons / RMSA Ss(14) Se(1959) Ic
Simon M. Newman, 1411 Hopkins St., N.W., Washington 6, D.C. / DU 7-4672 / *C 63
Consultant in documentation; specializing in information retrieval / Ca Ss(0) Se(1961) Ic
Nexus Research Laboratory, Inc., 19 Needham St.,
Dedham, Mass. / 326-6414 / *C 63
Solid state operational amplifiers and related modules / RMa Ss(10) Se(1962) Ic
The Nissho Co., Ltd., Electronic Section, Machinery 2nd Dept., 30, Imabashi 3 chome, Higashiku, Osaka, Japan / 202-1201 / *C 63
Sales and service for data processing systems; cooperate with prospects for system survey and data processing planning; computers of various scales; computer related components and devices / SCa Ls(3000) Le(1928) DAIc
NJE Corporation, 20 Boright Ave., Kenilworth, N.J. / BR 2-6000 / *C 63
Electronic power supplies / RMa Ms(190) Se (1955) Ic

Electronic power supplies / RMa Ms (190) Se (1955) Ic

NON-LINEAR SYSTEMS, INC., Del Mar Airport, Del Mar, Calif. / SKyline 5-1134 / *C 63
Digital voltmeters, ohmmeters, ratiometers; oscillogram trace readers, electronic measurement instruments for missile, nuclear, scientific and manufacturing fields; digital readouts, data processing and recording equipment, scanners, visual output devices, analog to digital converters, digital to analog converters, AC and DC amplifiers (precision), statistical digital voltmeters, digital telemetering / RMSa Ms (350) Se (1952) DAIC

Normandie Press, Inc., 350 W. 4th St., New York 14, N.Y. / OR 5-6500 / °C 63
Labels / Ma Ms (100) Le (1907) Ic
Northrop Co., 9744 Wilshire Blvd., Beverly Hills, Calif. / CRestview 4-6061 / °C 63
DATICO — automatic checkout equipment; NDC-100 airborne multipurpose digital computer / RMSCa Ls (20,000) Me (1939) DIC
Northrop Nortronics, Systems Support Dept., 500 E.
Orangethorpe, Anaheim, Calif. / 071-5000 / °C 63
Automatic test and checkout systems, optical instruments and systems, countermeasures/explosive ordnance / RMSa Ls (4100) ?e ICc
Norton Associates, Inc., 240 Old Country Rd., Hicks-ville, N.Y. / Overbrook 1-6161 / °C 62
Standard and special magnetic record, playback, and erase heads in single and multi-track arrangements for magnetic tape, film, drum, and magnetic ink character recognition / RMSCa Ss (less than 50) Se (1955) Ic
Nortronics, a div. of Northrop Corp., Electronic Systems & Equipment Dept., Research Park, Palos Verdes Estates, Calif. and 222 North Prairie Ave., Hawthorne, Calif. / - / °C 62
Astronertial navigation systems, inertial navigation systems, computers, control systems, and electromechanical, optomechanical and infrared devices / RMa Ls (7500 in Nortronics Div.) Se (1957 as Nortronics Div.) DIC
Nortronics, a div. of Northrop Corp., Marine Equipment Dept., 77 "A" St., Needham Heights 94, Mass. / HI 9-0400 / °C 62
Radiometric sextants, navigation periscopes, stabilization controls, marine plotting equipment,

HI 9-0400 / *C 62
Radiometric sextants, navigation periscopes, stabilization controls, marine plotting equipment, precision servos / RMa Ls (7500 in Nortronics Div.) Se (1957 as Nortronics Div.) ISCC Nortronics, a div. of Northrop Corp., Precision Products Dept., 100 Morse St., Norwood, Mass. / - / *C 62

Precision gyroscopes, gyro systems, inertial com-ponents, flight control systems, accelerometers / RMa Ls(7500 in Nortronics Div.) \ Se(1957 as Nor-tronics Div.) ICC Nortronics, a div. of Northrop Corp., Systems Support Dept. -- name changed to Northrop Nortronics, which see

see
Nucleonic Products Co., Inc., 3133 East 12th St., Los
Angeles 23, Calif. / AN 2-3503 / °C 62
Diodes, thermisters, tubes, varistors, resistors /
NSa Ms(under 500) Se(1952) Ic

OA Business Publications, Inc., 288 Park Ave. W., Elmhurst, Ill. / - / °C 63
Business Automation News Report and Looseleaf Services for EDP / MSa ?s ?e Ic Edward Ochman Systems, Box 141, Fairfield, Conn. / CL 9-1927 / °C 63

CL 9-1927 / °C 63

Manufacturers and sellers of control panels and wires for IBM and Remington Rand equipment; also data processing accessories and computer tape storage equipment / MSa Ss(15) Me(1949) Ic Ohio Envelope Co., Lock Box 19086, Cincinnati 19, Ohio / 961-6698 / °C 63

W

Tabulating forms, filing systems for tab forms and tape filing / M(distributing)a Ss(23) ?e





Old Town Corp., 750 Pacific St., Brooklyn 38, N.Y. / MA 2-2600 / *C 63 Continuous forms and EDP ribbons / RMSa Ms (250) Le (1917) Ic

Continuous forms and EDP ribbons / RMSa Ms (250) Let(1917) Ic
Omnitronics, Inc., Subsidiary of Borg-Warner Corp., 511 N. Broad St., Philadelphia 23, Pa. / 215-925-434) *C 63
Digital communication systems; space electronic devices and systems; digital data handling equipment such as checkout equipment, small special purpose computers, tape-to-tape converters, editors, and buffering equipment. Communications terminal equipment such as high-speed photoelectric tape readers, recorders, and displays / MSa Ls Se (1960) DAISCC
Ortronix, Inc., P.O. 2217, Orlando, Fla. / MI 7-4807

Ortronix, Inc., P.O. 8217, Orlando, Fla. / MI 7-4807 / *C 63

Format converters, line repeaters, buffers, logic cards / RMa Ms (420) Se (1959) Ic

P

Pacific Data Systems, Inc., 1058 E. 1st St., Santa Ana, Calif. / KI 7-4125 / *C 63 General purpose digital computers / Ma Ss(10) Se(1960) Dc

Pacific Electro Magnetics Co., Inc., 942 Commercial St., Palo Alto, Calif. / 415-321-1177 / *C 63 Portable, mobile and airborne instrumentation magnetic tape recorders / RMSa Ss(10) Se(1959)

Ic
Pacific Magnetic Corp., Electronic Center, Romoland, Calif. / OLympia 7-2637 / *C 62
Transformers, magnetic amplifiers, magnetic speed pickups, power supplies, coils, electronic assemblies, etc. / Ma Ss (30) Me (1947) Ic
Pacific Tabulating & Statistical Ltd., B202, 355
Burrard St., Marine Bldg., Vancouver I, B.C., Canada / MU 2-4262 / *C 63
Univac Solid State 80, IBM 1401, IBM unit record equipment available on an hourly use basis / C (data processing services) a Ss (15) Me (1952) Ic

Packard Bell Computer, a div. of Packard Bell Elec-tronics, 1905 Armacost Ave., Los Angeles 25, Calif. / GR 8-0051 / *C 63

(R 8-0051 /*C 63
PB250 low-cost general purpose computer and PB440 dual memory storage logic computer. TRICE digital differential analyzer. Silicon and germanium modules for operating at 200KC, IMC, 3MC, 5MC. A/D converters for 30KC, I5-bit operation and 70KC, 12-bit operation; commutators, multiplexers; sample and hold units, differential ampliflers and other digital and data systems equipment. Systems engineering and fabrication for industry and military; data processing, reduction, acquisition applications / RMS (engineering) aM (3350) Se (1957) DIC
n K. Paden Co., 2624 Shelby St., Dallas 19, Tex. / *C 62

Electronic data processing management consult-ing / Ca Ss(1) Se(1960) Ic

Paper Manufacturers Co., 9800 Bustleton Ave., Phila-delphia 15, Pa. / ORchard 3-4500 / *C 63 Film, fiber, and paper tapes / Ma Ms(250) Le(1905) Ic

delphia 15, Pa. / ORchard 3-4500 / *C 63
Film, fiber, and paper tapes / Ma Ms (250)
Le(1905) Ic
Paradynamics Inc., 10 Stepar Place, Huntington
Station, L.I., N.Y. / HA 7-7961 / *C 63
Delay lines / Ma Ms (80) Me (1951) Ic
The Ralph M. Parsons Co., Electronics Div., 151 South
DeLacey, Pasadena, Calif. / MU 1-0461 / *C 63
Miniature magnetic tape recorders and telemetry
equipment / Ma Ms (350) Me (1930) Ic
Pastoriza Electronics, Inc., 265 Columbus Ave., Boston 16, Mass. / 617-00 6-1919 / *C 63
Special purpose analog and digital computers
using Signal Flow modules. Personal Analog Computer, a calculus and dynamics teaching aid / my secondary and dynamics teaching aid / RMa Ss (25) Se (1961) DAc
P C A Electronics Inc., 16799 Schoenborn St., Sepulveda, Calif. / Empire 2-0761 / *C 63
Miniature pulse transformers, delay lines, toroids, telemetering filters / RNSa Ms (120) Me (1940) Ic
Pendar, Iñc., 14744 Arminto St., Van Nuys, Calif. / TRiangle 3-3136 / *C 62
Illuminated pushbutton switches, gang switch assemblies, indicators, key-operated switches / Ma Ms (75-100) Se (1952) Ic
Perceptual Development Laboratories, 6767 Southwest Ave., St. Louis IT, Mo. / STerling I-7300 / *C 63
Variety of training programs dealing with various office skills such as card punch operator training, typewriting training, 10-key adding machine training, basic office skills training / RMSCa Sc (36) Se (1954) Ic
Perfelope Manufacturing deal continuous business forms; manufacture and sell Perfelope Continuous Envelopes / MSa Ss (27) Se (1956) Ic
Pererental Electronic components. Recording missile track systems, chemical analytical instruments, electronic components. Recording missile track systems, infrared systems, analog computers, potentiometers / RNSa Ls (1600) Me (1936) Alc
George A. Philbrick Researches, Inc., 127 Clarendon St., Boston 16, Mass. / C0 6-5375 / *C 62

(1936) AIC
George A. Philbrick Researches, Inc., 127 Clarendon
St., Boston 16, Mass. / CO 6-5375 / °C 62
Electronic analog computers, operational amplifiers, regulated power supplies / RMSa Ms (200)
Me (1946) AIC
Philco Corp., a subsidiary of Ford Motor Co., Computer Div., 3900 Welsh Rd., Willow Grove, Pa. / 215GL9-7700 / °C 63

Digital computers: general purpose, scientific, commercial and military; special purpose compu-

ters; integrated command and control systems / RMSC (service bureau operations)a Ls (1350) Se (div. 1958) DICc
Philco. Corp., Lansdale Div., a subsidiary of Ford Motor Co., Church Rd., Lansdale, Pa. / ULysses 5-4681 / *C 63

Motor Co., Church Rd., Lansdale, Pa. / Utysses 5-4681 / % 63
Solid silicon, thin films, micrologics silicon planar and silicon precision alloy transistor, germanium transistors, photosensors and tunnel and backward diodes. Also Voltacaps (variable capacitors) / RNSa Ls (2000) Me (1940) Ic
Philor Technological Center, P.O. Box 4730, Philadelphia 34, Pa. / 443-1600 / % 63
Home study courses and training services / (education) a Ss (25) Se (1957) Ic
Philips Electronic Instruments, 750 So. Fulton Ave., Mt. Vernon, N.Y. / 914-Mount Vernon 4-4500 / % 63
X-ray diffractometers, spectrographs, cameras and detectors, industrial radiographic equipment - x-ray and isotopes, electron microscopes, plating thickness gauges, process control instrumentation, electronic and nuclear measuring equipment / RNSCa Ms (350) Me (1942) Ic
Phillips Control Co., 59 W. Washington, Joliet, Ill. / 723-3431 / % 63
Telephone relays, power relays, micro-miniature relays; solenoids; breadboards / RNSa Ms (350) Me (1945) Ic
Photocircuits Corp., 31 Sea Cliff Ave., Glen Cove, N.Y. / OR 6-6000 / % 63
Photoelectric paper tape readers, printed circuit motors for capstan drives / MSa Ms (450) Me (1951) Ic
Photon, Inc., 355 Middlesex Ave., Wilmington, Mass. / 933-7000 / % 63
Photographic typesetting and printout devices capable of mixing type sizes and styles with

933-7000 / *C 63

Photographic typesetting and printout devices capable of mixing type sizes and styles with full graphic arts quality, operated from magnetic or paper tape produced by computers / MSa Ms (210) Me (1940) DIc

Plastic Capacitors Inc., 2620 No. Clybourn Ave., Chicago 14, Ill. / DIversey 6-3735 / *C 62
Manufacture capacitors, power supplies, and pulse forming networks / Ma Ms (100) Sc (1952) Ic

Polyphase Instrument Co., E. Fourth St., Bridgeport, Pa. / BR 9-4660 / *C 63

Transformers, filters, toroidal components, magnetic amplifiers, delay lines / Ma Ms (120)

Me (1940) Ic

James Addison Potter, Consulting Engineer. 12 Green

Me (1948) Ic James Addison Potter, Consulting Engineer, 12 Green House Blvd., West Hartford 10, Conn. / 232-7637 /

*C 63

Plan, staff, and execute projects in research, development and design, sales engineering, management consulting, and automation systems consulting / RCPa Ss Se(1960) DAICe

Potter & Brumfield, Princeton, Ind. / FUlton 5-5251 /

Electro-magnetic relays / Ma Ls (1500) Me (1932)

Ic
Potter Instrument Co., Inc., Sunnyside Blvd., Plainview, L.I., N.Y. / Overbrook 1-3200 / °C 63
Digital magnetic tape transports, record-playback heads and amplifiers, high-speed printers,
photoelectric paper tape readers / RMa Ms (425)
Me (1942) Dic
Albert Pratt, 114 W. Lake View Ave., Milwaukee 17,
Wis. / ED 2-8888 / *C 63
Electronic test equipment / RMSa Ms (480) Me
(1934) Ic

(1934)Ιc

(1934) I.C.
Procedyne Associates Inc., 376 Ridgeley St., Perth
Amboy, N.J. / HI 2-4042 / *C 63
Fourier transform computer, frequency response
analyzer, signal generators, converters and
transducers / RNCa Ss(6) Se(1961) AISc
Pro-Tex Reel Band Co., 200 Film Bldg., 2108 Payne
Ave., Cleveland 14, Ohio / TOwer 1-2624 / *C 63
Tape reel accessories design and development /
Ma Ss(6) Me(1946) Ic

Quest Manufacturing Co., 220 W. Monroe St., Chicago 6, Ill. / STate 2-7838 / *C 63 Inked ribbons for all computer/data processing and machine accounting equipment / MSa Ss (30) Le (1918) Ic

Rabinow Engineering Co., Inc., 1425 Research Blvd.,
Rockville, Md. / 301-762-5310 / *C 63
Reading machines, sorters / RMCa Ms (85) Se
(1954) Ic
Radiation Inc., Melbourne, Fla. / PA 3-1511 / *C 63
Ground/aerospace information handling systems /
RMa LS (1400) Me (1951) Ic
Radio Corp. of America, Electronic Data Processing,
RCA - Cherry Hill, Camden 8, N.J. / WOodlawn 3-8000
/ *C 63

*C 63
Commercial systems: RCA 301, 501, and 601 electronic data processing systems; computers, magnetic tape stations, data record files, data disc, files, card readers, card punches, paper tape printers, MICR equipment, CGR equipment, communications equipment, remote inquiry units, command translator units. Data communications and custom projects / RMSa Ls (2500, EDP) Le (1919, RCA) DICe

Radio Corp. of America, Semiconductor and Materials Div. Rte. 202, Somerville, N.J. / RAndolph 2-320 Div., Rt

Computer and power transistors, switching and tunnel diodes, microcircuits and multiple devices, ferrite cores, planes and stacks / RMSa Ls(3500) Se(1954) Ic

Rank Precision Industries Ltd., Electronics Dept., Woodger Rd., Hammersmith, London W.12, England / *C 63

"C 63
Xeronic high-speed computer printer / RMSCa
Ls (3500) Me (1940) Ic
The Rapids Standard Co., Inc., 144 Trowbridge N.W.,
Grand Rapids 2, Mich. / 451-2001 / *C 63
Manufacturers of materials handling equipment:
conveyors, storage racks, etc. / Ma Ms (300) ?

Mc
Ray Myers Corp., 1302 E. Main St., Endicott, N.Y. /
PI 8-0424 / *C 63
Data processing accessory equipment. Systems development and production programs for input/output departments in data handling. Complete floor plan service / RMSCa Ms (50) Se (1955) Ic
Raytheon Co., Communications and Data Processing
Operation, 1415 Boston-Providence Turnpike, Norwood,
Mass. / - / *C 63
, Special A/D converters, multiplexers, commutators,
digital modules and accessories for ultra-high
speed applications / RMSa Ls (650) Se (1959)
DAIC
Raytheon Co., Industrial Components Div. 55 Ct.

DAIC

Raytheon Co., Industrial Components Div., 55 Chapel

St., Newton 50, Mass. / BIgelow 4-7500 / *C 63

Reliable miniature and subminiature electron

tubes, high density modules, miniaturized light
indicators, decade counters, magnetostriction fil
ters, recording storage tubes and special cathode

ray tubes, electrostatic printer tubes for compu
ter output data, connectors, piezoelectric accelerometers, memory cores, LC filters and delay
lines, knobs and mechanical components, and

Raytheon Raysistor (R) relays / RMSCa Ls (43,000)

Le (1923) Ic

Raytheon Co., Microwave and Power Tube Div., Spencer

Laboratory, Burlington, Mass. / - / *C 63

Transformers, pulse transformers / RMSCa ?s ?e

Ic

Icansaurmers, purse transionmers / named is fella
Raytheon Co., Semiconductor Div., 350 Ellis St.,
Mountain View, Calif. / 968-9211 / °C 63
Avalanche mode switching transistors, all varieties of germanium and silicon transistors, all varieties of germanium and silicon diodes, silicon rectifiers, and photo-sensitive transistors / RMSa Ls (43,000 Le (1923) Ic
RCA Service Compnay, Electronic Data Processing Service, Bldg. 206-1, Cherry Hill Offices, Camden 8,
N.J. / Woodlawm 3-8000, Ext. PY-5041 / °C 63
Centers located in Cherry Hill, N.J., Washington, Chicago and San Francisco. Systems analyses,
programming and data processing services, using
RCA 301 or RCA 501 computer systems, specializing in demand deposit banking and subscription fulfillment services / SCa Ms (190) Se (1950)

Intiliment services / SGa MS (190) Set(190)

Te Recognition Equipment Inc., 4703 Ross Ave., Dallas 4, Tex. / Taylor 3-0194 / *C G3

Optical character recognition systems, high-speed document handling equipment, electronic and electromechanical apparatus / RWSa MS (75)

Set(1961) Ic

Recording & Statistical Corp. (Nationwide and Canada), Pacific Coast Offices: 417 Market St., San Francisco, Calif. / YU 1-7011 / *C C

Data processing and computing servicenters. R G

S Corp., the first and oldest data processing service organization in the U.S., installed the first commercial computer used by a service center. The company has made a place for itself in the space age with highly technical assistance to CPFF contractors in cost detail reporting, spares provisioning, wiring specifications, listings, etc. / (service bureau) a Ms (500) Le (1911)

1c Redcor Corp., 7760 Deering Ave., Canoga Park, Calif. / 348-5892 / *C 63 Data acquisition system; A-D and D-A converters;

Data acquisition system; A-D and D-A converters; digital logic modules / Ma Ms (70) Sc (1956) Ic Redifon Computer Dept., Gatwick Rd., Crawley, Sussex, England / Crawley 20811 / °C 63 General and special purpose analogue computers, educational analogue computers, analogue computer courses, data processing equipment / RNSC (special systems engineering) a ?s ?e DAIc Redmond-Fairchild Inc., 610 So. Arroyo Pkwy., Pasadena, Calif. / MU 1-6721 / °C 62 Magnetic data storage drums / RMa Ss (45) Me (1951) Ic Reeves Instrument Corp., Roosevelt Field, Garden Ci-

(1951) Ic
Reves Instrument Corp., Roosevelt Field, Garden City, N.Y. / Ploneer 6-8100 / *C 63
Analog computers and systems, analog-to-digital and digital-to-analog converters, gyros, resolvers, servo mechanism system, radar and guidance systems, computing services, data recording equipment, computers for simulation, automation and control, differential analyzers, electronic integrators / RMSa Ls(1400) Me(1946) AISc

AISc
Reeves Soundcraft Corp., Great Pasture Rd., Danbury,
Conn. / 743-7601 / *C 63
Magnetic recording tapes and accessories / MSCa
Ms (300) Me (1946) Ic
Reflectone Electronics, Inc., a subsidiary of Universal Match Corp., W. Main St., Stamford, Conn.
/ - / *C 63
Special purpose digital and analog simulator computers / RM (design and development of military
and industrial simulators) a Ms (400) Me (1940)
DAICc

DATCE
Regency Electronics, Inc., 7900 Pendleton Pike, Indianapolis 26, Ind. / LIberty 7-5581 / % 62
Components, readouts, digital and alpha-numeric / RMSa MS (2000 Me (1945) DIc
Reinhold Book Div., Reinhold Publishing Corp., 430
Park Ave., New York 22, N.Y. / MII 0-8600 / % 63
Technical books on the subjects of computers, automation automatic control and electronics /

automation, automatic control and electronics / Se (40) he (1926) Ic

21

Remington Rand Div. of Sperry Rand Corp. -- see
UNIVAC Div. of Sperry Rand Corp.
Republic Aviation Corp., Missile Systems Div., Conklin St., Farmingdale, N.Y. /- /*C 62
The design, development and manufacture of
special purpose and general purpose digital com-

puters, data processing systems, digital control systems, and digital communications equipment for military applications / RMa Ls(15,000) Le(1930)

/ systems, and digital communications equipment for military applications / RMa Ls(15,000) Le(1930) DICC
Resdel Engineering Corp., 990 South Fair Oaks Ave., Pasadena, Calif. / 799-9161 / °C 63
Analog to digital and digital to analog converters; special custom data processing and acquisition systems / RMa Ms(120) Me(1951) DIC
Rese Engineering, Inc., A & Courtland Sts., Philadelphia 20, Pa. / GL 5-9000 / °C 62
Special purpose computers, digital computer test equipment / Ma Ms(90) Se(1953) DIC
Resistance Products Co., 914 S. 13th St., llarrisburg, Pa. / CEdar 6-5001 / °C 62
Resistors: wire wound, high voltage, high frequency, high megohm, metal film and resistance networks / Ma Ms(337) Me(1947) Ic
Rheem Electronics Corp., 5200 W. 104th St., Los Angeles 45, Calif. / 213-776-18000 / °C 63
Photocell readers: unidirectional and bidirectional models available for 20 to 1000 ch/s continuous. Asychronous or line-at-a-time operation from 16 to 200 ch/s. Sensing of 5 to channels and feed hole. Mil-Spec units available. Photocell block readers can sense 2 to 16 characters of 8 bits each at up to 50 block/sec. Numerical position controls for machine tools of point-to-point type. Up to 6 axis control with either 0.001 in. or 0.0001 in. accuracy / RMSa Ms (70) Sc (1960) Ic
Rixon Electronics, Inc., 2121 Industrial Parkway, Silver Spring, Md. / 622-2121 / °C 63
Custom equipment, Data communications equipment includes Sebit-24B, Sepath. DD Line, Adfax and Paser. Special purpose digital and analog laboratory equipment, solid-state power supplies and special purpose filters / RNSa Ms (190) Se (1953) Ic
RIXASSOCIATES / RNSA Ms (190) Se (1953) Ic

(1953) Ic

RMS Associates, Inc., 102 E. Sandford Blvd., Mt.

Vernon, N.Y. / 914-0W 9-5515 / °C 63

Computer controlled character writing CRT display systems / RMA SS (30) Me (1945) Ic

Robins Industries Corp., 15-55 127 St., Flushing 56,

N.Y. / HI 5-7200 / °C 63

Splicers for magnetic computer tapes; splicers for punched paper computer tapes / Ma Ms (75)

Sc (1954) Ic

Robotomics Enterprises. Inc. 4504 N 1645 Sc

Se(1954) Ic

Robotomics Enterprises, Inc., 4504 N. 16th St.,

Phoenix 16, Ariz. / 266-8602 / *C 63

Alpha-numerical displays and computer message display; numerical displays; electronic counters / MMa Ss(25) Se(1960) Ic

Rockford Research Institute Inc., 140½ Mt. Auburn St.,

Cambridge 38, Mass. / TRowbridge 6-6776 / *C 63

Information retrieval research and artificial intelligence research / Ra Ss(5) Se(1961) Ic

Rotiform Corp., 1925 Pontius Ave., Los Angeles 25,

Calif. / 473-9920 / *C 63

Card readers, static / Ma Ss(26) Se(1957) Ic

Rotron Manufacturing Co., Inc., Hasbrouck Lane, Woodstock, N.Y. / 679-2401 / *C 63

Cooling equipment, fans, and blowers for electronics industry / Ma Ms(405) Me(1949) Ic

Saab Aircraft Co., Electronics Div., Linköping, Sweden / 013/30020 / °C 63

Digital computers; commercial and technical data processing, process control, special purpose, airborne, ground. Converters. Magnetic tape systems. Numerical control systems. Computing service / RMSCa Ls (550) Me (1949) Die Sage Electronics Corp., Box 3926, Rochester 10, N.Y. / LUdlow 6-0010 / °C 63

Miniature wirewound precision power resistors / MSa Ms (95) Me (1940) Ic Sanborn Company, 175 Wyman St., Waltham 54, Mass. / TWinbrook 4-6300 / °C 62

Oscillographic recording instruments and systems, X-Y recorders and transducer syndiate and interest of the systems of the Saab Aircraft Co., Electronics Div., Linköping, Sweden / 013/30020 / *C 63

components, mechanisms) / Sa Ss (3)

The Scam Instrument Corp., 7401 N. Hamlin Ave., Skokie, Ill. / OR 5-2500 / °C 63

Design and manufacture analog/digital data scanners, loggers, digital controllers, recording annunciators, graphic control panels, special purpose digital computers. Also G.P. programming services / RMSCa Ms (3000) Me (1945) DAIC Scun-Am Co., 4108 W. Crystal Lake Rd., McHenry, Ill. / 015-305-3499 / °C 63

Ring-Master Intercommunication Systems / Sa Ss Se (1959)

Science Research Associates, Inc., Data Services Div., 259 E. Erie St., Chicago 11, Ill. / Wilitehall 4-7552 / °C 62

Science Research Associates, Inc., Data Services Div., 259 E. Erie St., Chicago 11, I11. / Wilitehall 4-7552 / *C 62

Document transcription services using high-speed photo-electric scanners as input to magnetic tape computer or punched card systems. DocuTran (TN) service capability for reading up to 5320 pencil responses on both sides of 0½ x 11 sheet at over 5000 sheets per hour. Related EDP services, applications and systems consulting, statistical research / RC(computer & statistical services) a Ms (100) Se (1956) Ic Scientific Computing Service, 23 Bedford Square, London W.C.1, England / MDSeum 6000 / *C 62

Problem solving, mathematical and statistical consulting. Digital computing service / RCPa Ss (15) Me (1937) DIc

Scientific Data Systems, Inc., 1649 17th St., Santa Monica, Calif. / UP 0-5471 / *C 63

Two low cost, high performance, solid-state, magnetic core, general purpose digital computers, the SDS 910 and SDS 920, for scientific engineering computation and for integration into on-line real time digital systems. Complete line of digital logic modules and system components, such as analog-to-digital converters, multiplexers, etc., design and manufacture of computer-based digital systems for industry and government use / MSGa Ms (220) Se (1961) DIc Scientific Development Corp., 131 Lexington St., Waltham, Mass. / TW 9-5330 / *C 63

Nordac, Minivac 601 and Minivac 6010 — small computer simulators designed for educational/ training purposes / Ma ?s ?e Ic

M. Semarne, 5341 Oso Ave., Woodland Hills, Calif. / TR 0-0444, DI 0-3903 / *C 62

Development of computer systems and of application techniques. Planning of information systems and documentation aids. Design of computer user training programs and manuals. Assistance in computer equipment selection. Computer market studies. Educational Systems and decision-process automation for management / RCPa Ss Se (1962) DAICC

The Service Bureau Corp., a subsidiary of IBM, 425
Park Ave., New York 22, N.I. / PLaza 1-5600 / *C 63
Data processing, programming, syst

(1962) DAICC
Park Ave., New York 22, N.Y. / PLaza 1-5600 / *C 63
Pata processing, programming, systems analysis, and machine services on a contractual basis for business and scientific problems using IBM 650, 1401, 7070, 704, 709, 7090, 1620, dataplotting. MICR reader-sorter, and unit record equipment. Offices in 70 cities. Extensive computer application experience in fields too numerous to list. The following data processing systems are avail-

cation experience in fields too numerous to list. The following data processing systems are available on an hourly basis: IRM 650, 1401, 1620, 7070, 704, 7090 / RCPa Ls(1600) Le(1932) DAIC Servomechanisms/Inc. 200 No. Aviation Blvd., El Segundo, Calif. / OSborne 5-7111 / *C 62 Air data computers, transcuers, motors, transformers, ground support equipment, microminiaturized thin film computer elements, welded module assemblies, resistors / RNA Ls (722) Me (1946) DAISCC Shand and Jurs Co. 2630 Eighth St., Berkeley 10,

dule assemblies, resistors / RMa Ls (722) Me (1946) DAISCE
Shand and Jurs Co., 2630 Eighth St., Berkeley 10, Calif, 748-2345 / *C 63
Dataloggers, telemetering systems, data-handling equipment / RMSo Ms (175) Le (1920) Ic
Shelby Business Forms, Inc., High School Ave., Shelby, Ohio / 2-2010 / *C 63
Business forms / MSa Ls (675) Le (1904) Ic
Shepard Laboratories, Inc., 480 Morris Ave., Summit, N.J. / 201-CR3-5255 / *C 63
Small and large high-speed typers for data processing field / RMCa Ss (40) Me (1940) Ic
F. W. Sickles Div., General Instrument Corp., 165
Front St., Chicopee, Mass. / LYceum 4-4781 / *C 63
Computer components; electromagnetic delay lines, lumped constant and distributed constant, fixed and variable step; audio and ultrasonic filters; toroidal inductors; embedded assemblies; L-C tuned circuits; etc. / Ma Ls (1900) Le (1921) Ic
S-I Electronics, Inc., 103 Park Ave., Nutley 10, N.J. / NO 7-0055 / *C 63
Magnetic memory systems / RMa Ms (55) Se (1959) Ic

Ic Signetics Corp., 680 W. Maude Ave., Sunnyvale, Calif. / 408-739-7700 / °C 63
Semiconductor integrated circuits for digital and linear applications / RNSa Ms (175) Se (1961) Ic Simplex Time Recorder Co., 24 South Lincoln St., Gardner, Mass. / 632-2500 / °C 63
Productograph machines, monitoring, read-back systems / RNSCa ?s ?e Ic
The Simulmatics Corp., 501 Madison Ave., New York 22, N.Y. / - / °C 62
Applications of computer simulation to marketing, advertising, economic and behavioral problems /

Applications of computer simulation to marketing, advertising, economic and behavioral problems / RCa SS(20) Se(1959) Ic

N. E. Slavin & Co., 297 Third St., Cambridge, Mass. / 491-2400 / *C 63

Producers of stainless steel shim and foil stock / MSa SS(10) Me(1945) Ic

Societe d'Electronique et d'Automatisme, 138 Boulevard de Verdun, Courbevoie, Seine, France / DEfense 41-20 / *C 62

Apalog computers Type NADSC 20 and NADAC 100 with

Value Vertual, Controlled All 207 *C 62

Analog computers Type NADSC 20 and NADAC 100 with non-linear components and recorders; flight simulators; digital computers Type CAB 500 and 3900 for scientific applications and data processing, using punched tape and magnetic tape; input and output equipment, tape reader, paper tape punches. Electronic high speed printers, digital to analog converter "ENAC"; automation devices, coders, storage, etc.; numerical control / RNSa Ls(500) Me (1948) DASCIC

Sola Electric Co., 1717 Busse Rd., Elk Grove Village, Ill. / HE 9-2000 / *C 63

Power supplies / Ma Ls(700) Le(1931) Ic

Solid State Electronics Corp., 15321 Rayen St., Sepulveda, Calif. / 364-2271 / °C 63
Line of solid state silicon digital logic modules; 10 megacycle speed, -550°C to +125°C; microminiature. Logic modules available include: J-K flip-flop (logic), flip flop, counter/shift register, "and-or" gates, Schmitt Trigger, inverting amplifier, non-inverting amplifier, slave clock, clock oscillator, free running multivibrator, one-shot multivibrator / RMa Ss(15) Se(1958) Ic

Sonic Memory Corp., 494 Oak St., Copiague, N.Y. / Myrtle 1-0010 / *C 63 Magnetostrictive delay lines / RMCa ?s Se(1961)

Ic

Sorensen, a unit of Raytheon Co., Richards Ave.,
South Norwalk, Conn. / 830-6571 / °C 63

Electronic power supplies, voltage regulators,
frequency changers / Ma Ms (350) Me(1943) Ic

Soroban Engineering, Inc., Box 1717, Melbourne, Fla.
/ PArkway 3-7221 / °C 62

Data input-output systems; data preparation devices; output tabulating devices; coding keyboards; paper tape readers and perforators; specialized data computing systems and consulting
services on all of above; computer components;
relays; storage systems; paper tape punches and
readers; translating equipment; electric controlled typewriters / RMSCa Ms (190) Se (1954)
Ic

trolled typewriters / RMSCa Ms (190) Se (1954)
Ic
Southern Electronics Corp., 150 W. Cypress Ave., Burbank, Calif. / Victoria 9-3193 / *C 62
Precision capacitors / RMa Ms (64) Me (1951) Ic
Southwestern Computing Service, Inc., 1631 So. Boston, Tulsa 19, Okta. / LUther 7-8146 / *C 63
Computing service, solving data reduction, engineering and business problems; IBM 604, Alwac
III, and associated equipment, Burroughs B260 / RC (service) a Ss (12) Sc (1953) DAc
Space Technology Laboratories, Inc., One Space Park, Redondo Beach, Calif. / - / *C 62
Research and development of missiles and space
vehicles. Management information processing systems. 2 IBM 7090 s, 6 IBM 1401 s, RCA 501, RCA
301, plus a special purpose data reduction and analogue computation center / Ra Ls (4400) Se (1954) DAICC
Sperry Farragut Co., Div. of Sperry Rand Corp., Bris-

301, plus a special purpose data reduction and analogue computation center / Ra Ls(4400) Se (1954) DAICe

Sperry Farragut Co., Div. of Sperry Rand Corp., Bristol, Tenn. / 966-1151 / *C 63

Amplifiers; packaged computer circuits, plug-in circuits, printed circuits; computer type coils; analog computers; computer components; fire control equipment; systems engineering / RMa Ls (1000) Me(1951) AICc

Sperry Gyroscope Co., Div. of Sperry Rand Corp., Great Neck, N.Y. / LR 4-0111 / *C 62

Research, design development and manufacture of digital and analog computers for underwater, surface and airborne applications, including general purpose and special miniature computers for airborne and space applications; data processing equipment; electronic digital to analog and analog to digital conversion equipment; magnetic drums and memory systems; stable platforms, gyroscopes and accelerometers for inertial guidance systems for ships, aircraft and missiles, specializing in automatic transistorized, miniaturized devices / RMSCa Ls(17,500) Le (1910) DAIc Sperry Semiconductor Div. of Sperry Rand Corp., Norwalk, Conn. / Victor 7-3851 / *C 62

Silicon diodes, transistors, semiconductor products and semiconductor integrated networks / RMSa Ms(300) Se (1956) Ic

Sprague Electric Co., 377 Marshall St., North Adams, Mass. / 664-4411 / *C 63

Capacitors, transistors, resistors, magnetic shift registers, integrated microcircuits, thinfilm microcircuits, pulse transformers, toroidal inductors, packaged digital circuits / Ma Ls (0500) Le (1926) Ic

Stackpole Carbon Co., Stackpole St., St. Marys, Pa. / Terminal 4-1521 / *C 63

Carbon and graphite products and electronic and electromechanical components / Ma Ls (2800) Le (1906) Ic

Carbon and graphite products and electronic and electromechanical components / Ma Ls (2800) Le (1906) Ic

The Standard Register Co., 626 Albany St., Dayton 1, Ohio / 513-223-6181 / *C 63

Business forms for source data collection (input) and (output) EDP equipment plus forms handling equipment (bursters, separators, etc.) MSa Ls (3700) Le (1912) Ic

Statistical Tabulating Corp., 104 S. Michigan Ave., Chicago 3, Ill., '312-Dearborn 2-2484 / *C 63

Fourteen Data Processing and Computer Centers containing IBM 1400 Series card and tape systems plus peripheral equipment and conventional punch of card tabulating and data processing machines. Administrative management, scientific management, engineering and general data processing, programming, systems, analysis, and consultation. Divisions: Data Processing; TASK FORCE; Computer Advisors to Management; Space Services / RCSPa Ls (5000) Me (1933) DIC

Stellarmetrics, 210 E. Ortega St., Santa Barbara, Calif. / - / *C 62

Development and production of standard and special electronic commutators/multiplexers for telemetry and data reduction applications. Also manufacture state-of-the-art low/high level "Microplexer" all-purpose 100 channel sampling switch and the low-level "Magristor" switching device used in Microplexer. Decommutation system development and pilot production for general and specialized applications including, but not limited to, computer data reduction facilities / RMA Se (14) Se (1961) Ic

Strand Engineering Co. — name changed to Burroughs Corp., Ann Arbor Laboratory, which see



Roster of Organizations — Supplement

Sunshine Scientific Instruments, 1810 Grant Ave.. Philadelphia 15, Pa. / ORchard 3-5600 / °C 63
Testing and measuring equipment, calibration, certification. Analog field plotter, prototypes, precision electromechanical assemblies, mechanical components / RMSCa SC363 Me (1947) AIC
Superex Electronics Corp., 4-6 Radford Pl., Yonkers, N.Y. / Yonkers 5-6906 / °C 62
Cable assemblies, plug in and printed circuits, coils, ferrite cores, jacks, transformers, headphones, headsets, and other components / RMSa Ms (60) Se (1950) Ic
The Superior Electric Co., 303 Middle St., Bristol, Conn. / 203-LU2-9561 / °C 63
Synchronous, stepping, d-c and 400 cycle motors; pulse-to-step translators; preset indexers; variable transformers; automatic voltage regulators; electrical connectors / Ma Ls (600) Me (1930) Ic
Superior Manufacturing & Instrument Corp., 36-07 20
Ave., Long Island City 5, N.Y. / YE 2-1000 / °C 63
Analog computers, solid state data processing equipment; A-D and D-A conversion systems, servomechanisms / RMa Ms (150) Me (1951) DAISc
Sutherland Co., 1112 First National Bank Bldg., Peoria, 111. / 673-5431 / °C 62
Integrated management information systems utilizing electronic data processing equipment. Developed DATIS -- Development and Analysis Techniques for Information Systems / Ca Ss (35) Me (1950) Dc
Swingline, Inc., 3200 Skillman Ave., Long Island City 1, N.Y. / ST 4-8555 / °C 63

9 (1950) Dc
Swingline, Inc., 3200 Skillman Ave., Long Island
City 1, N.Y. / ST 4-8555 / *C 63
Office equipment used with computing, processing,
collating equipment: electric staplers, heavy
duty staplers, staples, electric pencil sharpeners / Ma Ls(2000) Le(1923) Mc
Sylvania Electric Products, Inc., Semiconductor Div.,
100 Sylvan Rd., Woburn, Mass. / WE 3-3500 / *C 63
Semiconductor products / RMa Ls(1800) Me (1942)
Ic

Sylvan Electronic Systems, 40 Sylvan Rd., Waltham 54, Mass. / TWinbrook 4-0444 / °C 62 Small, medium, and large-scale computers; special

Systematics, a Div. of General Instrument Corp., 3216 W. El Segundo Blvd., Hawthorne, Calif. / - /

*C 63

Systematics, a Div. of General Instrument Corp., 3216 W. El Segundo Blvd., Hawthorne, Calif. / - / *C 63

Tape to card converters, card to tape converters, tape to tape converters, tape to tape converters, tape and card communication systems, data system input/output devices / RSa Ms (175) Se (1955) Ic

Systemation Div., Ross-Martin Co., 6504 E. 44th St., P.O. Box 000, Tulsa, Okla. / 910-NAT-4460 / *C 63

Fifty week systems course; also semi-monthly publication "The Systemation Letter" / RMS (education) a Ms (200) Se (1955) Dic

System Development Corp., 2500 Colorado Ave., Santa Monica, Calif. / Exbrook 3-9411 / *C 62

Perform design, analysis, implementation and training of large data processing systems / Ra

Ls (4000) Se (1956) Ic

Systems Data Processing Co., 908 15th St., Sacramento 14, Calif. / - / *C 62

Punched card, punched tape, and punched ticket data processing services / (data processing services / (data processing services / (ata processing services) Se (9) Se (1959) Ic

Systems Engineering Laboratories, Inc., P.O. Box 9148, 4066 N.E. Fifth Ave., Fort Lauderdale, Fla. / LO 4-7616 / *C 63

Digital data acquisition; processing and display systems / RMSs Ms (130) Se (1961) Dic

Systems Programming Corp., 1833 E. 17th St., Santa Ana, Calif. / KT 7-0069 / *C 63

Computer programming and consulting / Ca Ss (30) Se (1962) Ic

Systems Programming, Inc., 3150 Wilson Blvd., Arlington 1, Va. / 525-5206 / *C 63

Design and development of linear programming, statistical and other special computer applingation systems / RMC (software systems programming) Sc (195) Ic

Systems Research Corp., 7635 Tobias Ave., Van Nuys, Calif. / RT 3-3311 / *C 63

Manufacture and design of highly stable and special purpose voltage sources and power supplies / Ma Ss (35) Se (1963) Ic

Systems Research Corp., 7635 Tobias Ave., Van Nuys, Calif. / TR 3-3311 / *C 63

Manufacture and design of highly stable and special purpose voltage sources and power supplies / Ma Ss (35) Se (1963) Ic

Systems Research Corp., 7635 Tobias Ave., Van Nu

Systron-Donner Corp., 888 Galindo St., Concord. Calif. / - / *C 62

Analog computers, data acquisition and logging systems / RMSa Ms (400) Se (1960) Ac

Tabulating & Business Services Inc., 136 W. 52 St., New York 19, N.Y. / 212-C15-8000 / °C 63

Data processing and computer services including programming and data processing consulting / RMS (market research) a Ms(110) Me(1956) Ic

Tabulating Service of Dallas, 1222 Ft. Worth Ave., Dallas 8, Tex. / - / °C 62

IBM 407, 402, etc. Sales analyses, payrolls, inventories, statistical, etc. / RSC (IBM training) a Ss(25) Me(1946) Ic

Tally Register Corp., 1310 Mercer St., Seattle 9, Wash. / Máin 4-0760 / °C 63

plotters, computer input-output, display, and data transmission equipment / MSa Ms (80) Me (1951) DIC

(1951) DIC
Taurus Corp., Academy Hill, Lambertville, N.J. / EXport 7-2390 / °C 63
Static punched card readers, Teflon insulated
terminals / RMSCa Ms (70) Se (1956) IC
Technical Advisors, Inc., Municipal Court Bldg., Ann
Arbor, Mich.; 3603 Lemmon Ave., Dallas 19, Tex.;
3033 No. Central, Phoenix 12, Ariz. / (Mich.) NOrmandy 2-1159; (Tex.) LAKeside 6-1658; (Ariz.) AMherst 4-1715 / °C 63
Digital computer, service burgan using PBC-4000 /

mandy 2-1199; (Tex.) Lakeside 6-1656; (Ariz.) AMherst 4-1715 / © 63
Digital computer service bureau using RPC-4000 / Ca SS (15) Se (1954) De
Technical Information Company, Ltd., Chancery House, Chancery Lane, London, W.C.2, England / - / °C 63
Publishers of "Computer Abstracts" and "Computer News" / Ms (130) Me (1951) Ic
Technical Operations Research, a div. of Technical Operations, Inc., South Ave., Burlington, Mass.; Washington Research Center, 3600 M St., N.W., Washington Research Center, 3600 M St., N.W., Washington: FEderal 3-9200 / °C 63
Industrial, commercial and military operations research; automatic programming systems and digital simulations; war gaming (access to computers) / CPa Ls (600) Me (1951) Ic
Techniques Inc., 40 Jay St., Englewood, N.J. / LOwell 9-5333 / °C 62
Printed circuits; blank modular P.C. boards with

9-5333 /*C 62
Printed circuits; blank modular P.C. boards with circuits for digital operations; photo-etched metal parts / RNSa Ss (under 50) Se (1954) Ic
Technitrol, Inc., 1952 E. Allegheny Ave., Philadelphia 34, Pa. / 215-646-9105 / *C 63
Custom built digital data processors, high speed print stations, buffer memories. Pulse transformers, electromagnetic delay lines. Programming, computer maintenance / Ms (350) Me (1947) DAIC
Tech Panel Co., Inc., 27 March 19

Tech Panel Co., Inc., 37 Milford St., Binghamton, N.Y. / 607-RA3-8231 / *C 63 Control panels, accessories and wires. Forms bursters and deleavers / NSa Ss(13) Se(1959)

Tech Serv Inc., 5451 Holland Drive, Beltsville, Md. / 474-2900 / *C 63

Tech Serv Inc., 5451 Holland Drive, Beltsville, Md. / 474-2900 / *C 63

Transistorized digital logic elements and digital systems / Ma Ss (35) Sc (1959) Dlc

Telecomputing Corp., 9229 Sunset Blvd., Los Angeles 69, Calif. / CRestview 4-0771 / *C 62

Data analysis and processing equipment, special purpose computers, data reduction analysis and counselling / RMSCa Ls (3000) Sc (1942) DAICe Telecomputing Services, Inc., 0949 Reseda Blvd., Northridge, Calif. / - / *C 62

Services for the study, design, implementation and operation of data reduction and data processing systems. Data measurement, programming, and computer services available on an hourly basis.

Extensive data reduction experience at missile test ranges, including the development and operation of automatic telemetry data reduction. Management data; inventory control, PERT, labordistribution, payroll, etc., available on IBM 1401-7070 / Sa Ms (290) Me (1947) Ic

The Teleregister Corp., 445 Fairfield Ave., Stamford, Conn. / FI 8-4291 / *C 63
Data processing systems, designed for particular applications, including input/output, integrated

Conn. / FI 8-4291 / *C 63

Data processing systems, designed for particular applications, including input/output, integrated communications: data display and storage facilities, and central processors. Over 1,000,000 hours' experience with commercial on-line operation: systems designed, built and maintained / MS(systems engineering) a Ls(1100) Le(1929) DIG Teletype Corp., 5555 Touhy Ave., Skokie, [11]. / Cornelia 7-6700; ORchard 6-1000 / *C 63

Message and data communications equipment. Tape readers and tape punches for computer input/output. Page printers / RNSa Ls(5200) Le(1907) Ic

Telex/Aemco, a div. of Telex, Inc., 30 State St., Mankato, Minn. / 8-6286 / $^{\circ}$ C 63 Manufacturing electro-magnetic relays and industrial timers / Ma Ms (385) Le (1910) Ic Telex/Ballastran, 1701 N. Calhoun St., Fort Wayne 7, Ind. / $^{\circ}$ C 62 Specialty transformers / RMCa Ms (185) Me (1946)

Tellertron Corp., a subsidiary of Stone Laboratories Inc., 1312 Tremont St., Boston 20, Mass. / 617427-3600 / °C 63
Information retrieval systems, data retrieval and processing systems / MSa Ss(10) Se(1959) DIC Tempo Instrument Inc., E. Bethpage Rd., Plainview, L.I., N.Y. / MYrtle 4-4400 / °C 63
Timers, timing sequence programmers, precision time base generators / MSa Ms(150) Se(1956) Ic M. Ten Bosch, Inc., 80 Wheeler Rd., Pleasantville, N.Y. / ROgers 9-3000 / °C 63
Amplifiers, automatic controls, servo mechanisms, mechanical integrators / RMa Ms(60) Me(1950) ISCe

Test Equipment Corp., 3009 S. Post Oak Rd., Houston 27. Tex. / SU 1-0004 / % 63 In-circuit transistor and diode testers / RMa Ss (18) Se (1962) Ic Texas Instruments Inc., 13500 N. Central Expressway, Dallas 22. Tex. / ADams 5-3111 / % 62 Semiconductor products and components, silicon and germanium transistors, silicon diodes and rectifiers, resistors, tantalum capacitors / RMSa Ls (80000) Se (1954) Ic Texas Instruments Inc., Apparatus Div., P.O. Box 6015, Dallas, Tex. / - / % 62 Amplifiers, multipliers, power supplies / RMSa ?8 ?8 Ic Texas Instruments Inc., Industrial Inc., Ind

Texas Instruments Inc., Industrial Products Group, 3609 Buffalo Speedway, Houston 6, Tex. / JA 6-1411 / *C 63

Pulse generators, transistor and component testers, analog to digital converters / Ma Ms(500) Le(1930) Ic

Le (1930) Ic was Instruments Inc., Semiconductor Components Div., Box 5012, Dallas 22, Tex. / AD 5-3111 / °C 62 Transistors (germanium and silicon); solid cir-cuit semiconductor networks; silicon diodes; si-

cuit semiconductor networks; silicon diodes; silicon rectifiers; capacitors; resistors / RMSa Ls (14,000) Me (1933) Ic
Thermosen, Inc., 375 Fairfield Ave., Stamford, Conn. / 203-324-6125 / °C 63
Temperature limited diodes and other special purpose vacuum tubes; MULTIREED Relay / RMa Ss (15) Me (1951) Ic
Thompson Ramo Wooldridge Inc., RW Div., 8433 Fallbrook Ave., Canoga Park, Calif. / - / °C 62
Digital computers for on-line real time control; peripheral equipment; display devices; information system design / RMSa Ls (1000) Se (1954)

DICc
Time & Frequency, 127 S. Batavia Ave., Batavia, Ill. /
312-879-7800 / *C 63
High precision time standards, real time generators, precision oscillators / RMa Ss(16) Se (1959) Ic
Towson Laboratories, Inc., 200 E. Joppa Rd., Towson 4, Md. / VAlley 5-6361 / *C 63
A/D converters and multiplexers / RMa Ss(18) Se (1959) Ic

Se (1959) Ic
Traid Corp., 17136 Ventura Blvd., Encino, Calif. /
213-073-3373 / *C 63
Photographic instrumentation equipment, highspeed and data recording motion picture cameras
and related accessories, advanced electronic missdistance systems / RMSa Ss (40) Me (1946) Ic
Trak Electronics Co., Inc., 59 Danbury Rd., Wilton,
Conn. / POrter 2-5521 / *C 62
Morse-to-teleprinter code converters, TWX-to-CCIT
translators; teletype multiplexers / RMa Ms (250)
Me (1947) Ic
Transistor Electronics Corp., Box 6191, Minneapolis

translators; teletype multiplexers / RNa Ms (25 Me (1947) Ic Transistor Electronics Corp., Box 6191, Minneapolis 24, Minn, / 612-941-1100 / °C 63 Display devices for computers, precision subassembly of printed circuit modules / Ma Ms (210) Me (1957) Ic

Transitel International Corp., 615 Winters Ave., Paramus, N.J. / 262-0200 / *C 63

Data transmission terminals of the standard and

Data transmission terminals of the standard and self-optimizing types, supervisory control and telemotering / RMSa Ss(30) Se(1959) Ic Transitron Electronic Corp., 160 Albion St., Wakefield, Mass. / 617-245-4500 / °C 63
Semiconductors / RMSa Is (3000) Me(1952) Ic Transkrit Corp., 704 Broadway, New York 3, N.Y. / OR 3-2200 / °C 63
Magnetic ink encoding, consecutive MICR numbering, including modulus and self-check / Ma Ms(100) Me(1939) Dic Tro Laboratories, Inc., DuPont Rd. Planning L. I.

Mc(1739) Dic
Trio Laboratorics, Inc., DuPont Rd., Plainview, L.I.,
N.Y. / Overbrook 1-0100 / % C2
Analog component for solving three dimensional
equations (RODIAC); all transistor voltage comparator; voltage monitor; test instruments / RMa
Ms(75) Se(1954) AIc
Triton Electronics, Inc., (2-05 30th Ave., Woodside
77, N.Y. / RA 1-7500 / % C 63
Computer magnetic tape / Ma Ms(65) Me(1939) Ic
TRW Computers, a div. of Thompson Ramo Wooldridge,
Inc., 6433 Fallbrook Ave., Canoga Park, Calif. /
346-6000 / % C63
Industrial process control computers (TRW-330.

Industrial process control computers (TRW-330, TRW-340, TRW-530) / RMSCa Ls(1500) Se(1957) Dc Tung-Sol Electric Inc., 1 Summer Ave., Newark 4, N.J. / 201-484-8500 / *C 63 Electronic components / MSa ?s ?e Ic

Uarco Inc., West County Line Rd., Barrington, Ill. / 301-4030 / °C 63
All types of business forms and forms handling equipment / RMSCa Ls (2700) Le (1894) Ic
H. W. Ulmer Co., 3018 San Luis Rey Rd., Oceanside. Calif. / 722-1511 / °C 63
Vacuum tubes including data display. Vacuum systems and gauges. Fabrication equipment, stored energy welders. Micro module circuit assembly and encapsulations / RMa Ss (40) Se (1961) Ic
Underwood Corp., I Park Ave., New York 16, N.Y. / ORegon 9-3400 / °C 63
Paper tape producing equipment and paper tape to

derwood Corp., 1 Park Ave., New York 16, N.Y. / DRegon 9-3400 / % C 63

Paper tape producing equipment and paper tape to card, paper tape to magnetic tape converters. Portable, manual, electric, and variable space electric typewriters; manual and electric adding machines; high speed one- and two-register printing calculators; Audit accounting machines, with fully automatic programming, with or without electric typewriter keyboards; Mercator billing / accounting machines, with fully automatic programming, electric typewriter keyboards, and high-speed solid state electronic multiplying units; Bata-Flo accounting machines, with fully automatic programming, with or without electric typewriter keyboards, and integral paper tape punches; Data-Flo Mercator billing/accounting machines, with fully automatic programming, electric typewriter keyboards, high-speed solidstate electronic multiplying units, and integral paper tape punches; Data-Flo 1aper tape to 1aper tape for Converters, to convert Data-Flo paper tape into punched cards at 6000 cards per hour, with completely flexible plug-board programming, and automatic self-verification / 1805a Ls (18000) Ls (1800) / % C 63

Unimation Inc., 16 Durant Ave., Bethel, Conn. / 741-1000 / *C 63

Magnetic storige and memory systems, automatic



controls, digital automation, magnetic drums, Unimate robot / RMSa Ms (250) Se (1962) DAISCMC Union Carbide Nuclear Co., Central Data Processing, P.O. Box P. Oak Ridge, Tenn. / 615-483-8611, ext. 8671 / *C 62

0671 / *C 62 Numerical analysis and data processing using di-gital computers / RGP(AEC contractor)a Ms(85) Me(1948) De Union Switch & Signal Div. of Westinghouse Air Brake Co. 1789 Braddock Ave., Pittsburgh 18, Pa. / 412-424-5000 / *C 63

Co., 1709 Braddock Ave., Pittsburgh 16, Pa. /
412-242-5000 / *C 63

"Readall" readout instruments, miniature and subminiature relays, remote control systems for
railroads and pipelines; control and communication systems for industry; remote controls for
locomotives and vehicles / RMSa Ls(1500) Le
(1881) IC(control systems engineering)c
United Research Services Inc., 1811 Trousdale Drive,
Burlingame, Calif. / D14-7625 / *C 63

Analysis, design and programming of automatic
data processing systems for administrative,
management support, command and control, and
other information processing operations and
functions / ROPa Ms(63) Se(1952) DAIc
U.S. Air Force, Computation Div., Data Services Center, ARADS-B, Headquarters USAF, Washington 25,
D.C. / OXford 7-7275 / *C 63

Management science, computing systems and computer programming / (management systems and computer programming / (management systems and computational support for decision making)a Ss (34)
Ms (1948) Ic

Weily40) Ic
U.S. Air Force, Management Computations Branch, Data
Processing Div. — name changed to U.S. Air Force,
Computation Div., Data Services Center, which see
U.S. Army, Ballistic Research Laboratories, Aberdeen
Proving Ground, Md. / CRestwood 2-4000, Ext. 47146
/ *C. 63

/ *C 63
High-speed digital computers and computing service for government and government contractors / RCGPa Ms(120) Me(1940) Dc
U.S. Naval Weapons Laboratory, Computation and Analysis Lab., Dahlgren, Va. / NOrth 3-2511 / *C 63
Mathematical analysis and research, programming, engineering computing and date processing services. engineering, computing and data processing services for government and government contractors only; operate NORC and IBM 7030 (STRETCH) systems,

vices for government and government contractors only; operate NORC and IBM 7030 (STRETCH) systems, Universal Data Transcriber and a variety of auxiliary equipment / RCPGa Ms (325) Me (1942) Dc U.S. Navy, Aviation Supply Office, Data Processing Div., 700 Robbins Avc., Philadelphia 11, Pa. / RA 6-1212, Ext. 388 / *C 63

Two IBM 1410's, five IBM 1401's, one 1405, Transciever and EAM equipment services for Naval Aviation Inventory Control / G(inventory control)a Ms (255) Me (1941) Dc U.S. Science Corp., 5221 W. 102nd St., Los Angeles (45, Calif. / SP 6-0450 / *C 63

Air data, aircraft landing computer; computer test equipment, special timers / RNA Ms (215) Mc (1952) DAIc UNIVAC Div. of Sperry Rand Corp., 315 Park Ave. So., New York 10, N.Y. / SPring 7-8000 / *C 63

Digital electronic computing systems (Univac), computing services, office machines, and systems / RNSa Ls (35,000) Le (1876) Dir. (1974) Mr. of Sperry Rand Corp., 10924 Ave. J East, Grand Prairie, Tex. / AN 2-3511 / *C 63

Complete MICR bank processor systems including high-speed document sorters, audit listers, and Central Processor with accumulating and dictionary look-up capabilities. MICR document encoding devices to print the amount, account number, and transit number fields. Optical Character Recognition systems for automation of accounts receivable and inventory control, including Readstron Card Punch and Charge Sales Recorders / RMSa Ms (150) Se (1957) Dic UNIVAC Nilitary Operations of Sperry Rand Corp.. UNIVAC Park, St. Paul 16, Minn. / - / *C 62
Digital electronic computing and data processing systems airborne and ground-based, real time computers, peripheral equipment programming services / RMA Ls (6000) Me (1947) Dic

Valor Instruments, Inc., 13214 Crenshaw Blvd., Gardena, Calif. / DAvis 3-6160 / *C 63
Power supply modules / MSa Ms (108) Se (1954) Ic
Veeder-Root Inc., 70 Sargeant St., Hartford 2, Conn. / 203-527-7201 / *C 63

vecuer-moot Inc., /U Sargeant St., Hartford 2, Com. / 203-527-7201 / *C 63

Analog-to-digital converters; electronic counters and controls; mechanical, electro-mechanical and instrument counting, recording and controlling devices; gasoline pump computers; aviation instruments; photoelectric actuator controls / MSa Ls (3000) Le (1928) ISc

Vernistat Div., Perkin-Elmer Corp., 771 Main Ave., Norwalk, Conn. / 847-0411 / *C 63

Vernistat a.c. potentiometers, adjustable function generators, digital data recorders, specialized analog computer components, one-brush absolute-position analog to digital shaft encoders (linear motion and rotary), bidirectional counters / RNSa Ms (85) Sc (1954) Ic

Victor Comptometer Corp. Business Machines Div., 3900

N. Rockwell St., Chicago 18, Ill. / KEystone 9-8210 / *C (3)

Digit-Matic solenoid operated calculators

Digit-Matic solenoid operated calculators, listers, accumulators; Electrowriter System hand-written communications; adding machines and cal-culators, comptometer calculators / MSa Ls(3200) Le(1809) Dic

Let(1009) DIc Viewlex Inc., Holbrook, N.Y. / 516-LT9-6600 / *C 63 Projection optics, 35mm strip film, etc. / RMSCa Ms (200) Me (1946) Ic Virginia Electronics Co., Inc., River Rd. and BSO Railroad, Washington 16, D.C. / 654-6680 / *C 63

Communication control systems, circuit programming systems, transformers and coils, amplifiers and power supplies / RMa Ms (70) Me (1951) Ic itramon, Inc., P.O. Box 544, Bridgeport 1, Conn. / AWherst 8-6261 / °C 63
"VY" solid state porcelain capacitors, "VK" microminiature ceramic capacitors; "VG" switching modules; mechanically actuated dry circuit switches / Ma Ms (450) Me (1948) Ic

The Walkirt Co., 10321 S. La Gienega Blvd., Los Angeles 45, Calif. / SPring 6-0323 / *C 63

Plug-in pulse circuit packages; complete counters, multivibrators, amplifiers, gates, triggers, pulse generators, etc. / Ma Ss (50) Me (1940) Ic
Wang Laboratories Inc., 12 Huron Drive, Natick, Mass.
/ OL. 3-910 (Boston line, CE 7-9572) / *C 62
Special purpose data reduction systems, block tape readers, encoder systems / RMSa Ss (10)
Me (1951) DCc
Ward Leonard Electric Co., Mt. Vernon, N.Y. / *C 62
Electronic and electric control components: resistors, relays, rheostats, contactors, etc. /
Ma Ls Gover 500 Le (1892) Ic
F. S. Webster Co., 1 Amherst St., Cambridge 42,
Mass. / Kirkland 7-2300 / *C 63
Inked ribbons for all computers / Ma Ms (225)
Le (1879) Ic
Western Electronic Co., 717 Dexter Ave., Seattle 9,

Le(1879) Ic
Western Electronic Co., 717 Dexter Ave., Seattle 9,
Wash. / AT 4-0200 / *C 62
Heat radiation analog our "Reastan". Also the
general use "Western Electronic analog computer"
/ RMSa Ss(25) Me(1946) Ac
Westgate Laboratory, Inc., 506 S. High St., Yellow
Springs, Ohio / Rockwell 7-7375 (Dayton, Ohio -VIctor 9-1330) / *C 63
Research, development, prototype, and small lot
production in electronics, physics, optics and
photography; X-Y plotters and vehicle position
displays, simulators and missile guidance equipment, controls, industrial instrumentation, can
leak testers, eye movement cameras, air traffic
control instrumentation / RMSa Ms(55) Se(1956)
DICC
Westinghouse Electric Corp., Pittsburgh 35 Pa /

control instrumentation / RMSa Ms (55) Se (1956)
DICC
Westinghouse Electric Corp., Pittsburgh 35, Pa. /
EX 1-2800 / *C 63
Complete line of industrial computer systems. Digital: Prodac industrial computers for all industrial processes and electric utility generation and dispatching applications. Analog: economic dispatch computer for dispatching power on electric utility systems / RMSCa Ls (125,000) Le (prior to 1900) DAC
Westinghouse Electric Corp., Air Arm Div., P.O. Box 746, Baltimore 3, Md. / SO 1-1000 / *C 62
Analog and digital computers, analog/digital and digital/analog converters, and other complete line of peripheral equipment for military systems / RMSa Ls (4000) Me (1950) DALc
Westinghouse Electric Corp., Electronic Tube Div., Box 264, Elmira, N.V. / RE 9-3611 / *C 63
Receiving tubes: image, storage, multiplier phototubes; special purpose tubes; military and industrial cathode ray tubes / RMSa Ls (2500)
Le (before 1930) Ic
Westonics, Inc., 3605 McCart St., P.O. Box 11250, Berry St. Sta., Ft. Worth 10, Tex. / WA 3-8211 / *C 63
Manufacturer of strip chart recorders / RMSa

Manufacturer of strip chart recorders / RMSa Ms (60) Me (1946) Ic Whiteford Laboratory, 258 Broad St., Lynn, Mass. / 598-9119 / *C 63

Paper tape winding equipment; paper tape re-

corders / RMa Ss(15) Me(1947) Ic Whitnon Mrg. Co., Route 6, Farmington, Conn. / 677-2607 / *C 63 Design and manufacture of precision revolving mechanisms including memory drums of all sizes, coated and complete with motor drive, but not reading and writing heads / Ma Ms (50) Me (1946)

Wiancko Engineering, Div. Tamar Electronics, Inc., 255 N. Halstead Ave., Pasadena, Calif. / EL 5-7186 / *C 63

Telemetry, control and data acquisition systems;

*C.63
Telemetry, control and data acquisition systems; pressure, acceleration and force transducers; test and calibration instruments / RMa Ms C240) Mc (1946) Ic
John Wiley & Sons, Inc., 605 3rd Ave., New York 16, N.Y. / TN 7-9800 / *C.63
Technical books / MSa Ms (500) Le (1607) Ic
Winchester Electronics, Inc., 19 Willard Rd., Norwalk, Conn. / VI 7-7231 / *C.62
Connectors, connector accessories, terminals / Ma Ls Me (1940) Ic
Winsco Instruments & Controls Co., 1533 26th St., Santa Monica, Calif. / GR 8-4728 / *C.62
Digital converters, temperature transducers, digital temperature controllers / Ma -Ss (22) Se (1960) DICc
Wolf Research & Development Corp., P.O. Box 136, West Concord, Mass. / EM 9-2111 / *C.63
Digital computer consulting, programming, and operation. Bendix G-159 with trace generator, WMI computer / RC (general computer services)a Ms (135) Se (1954) DIC
Woods, Gordon & Co., 15 Wellington St. West, Toronto, Ontario, Canada (also at Montreal, London, Calgary, Vancouver) / 366-4761 / *C.63

vancouver) / 300-4/01 / % 63

Management consulting and system design / CPa Ms
(55) Le(1930) Ic

Wright Engineering Co., Inc., 180 E. California

Blvd., Pasadena, Calif. / MUrray 1-2651 / *C 63

Shaft encoders; magnetic digital logic components and systems; buffers and storage systems;
aerospace timers; system and lab power supplies.

magnetic tape transports / Sa Ss (10) Me (1950) DAIc

DAIC
Wright Line, a div. of Barry Wright Corp., 160 Gold
Star Blvd., Worcester 6, Mass. / 791-0933 / *C 63
Specialists in data handling and filing systems.
Data processing accessory equipment, computer
department accessories, check handling equipment / RMSCa Ms (350) Me (1934) Ic
Write Inc., 420 Lexington Ave., New York 17, N.Y. /
Lexington 2-6171/2 / *C 63
Data processing ribbors / No. Mc(50) Lex(1023)

Data processing ribbons / Ma Ms (50) Le (1923)

<u>z</u>

Zator Company, 140½ Mount Auburn St., Cambridge 38, Mass. / TRowbridge 6-6776 / %C 63

Consulting and service in information retrieval systems / SCa Ss(30) Me(1947) Ic

** ADDENDA

Allied/Egry Business Systems, Inc., 429 E. Monu-ment Ave., Dayton 2, Ohio / 223-3133 / *C 63 Data processing forms / MSa Ls(2500) Se(1960) Ic

Se (1960) Ic

Avery Label Co., 1616 S. California Ave., Monrovia, Calif., 736-2524; 681-3421 / *C.63

Pressure-sensitive pin-feed labels for use in data processing / MSa Ms (500) Mc (1935) Ic

Basic Systems, Inc., 2900 Broadway, New York, N.Y.

/ UN 6-2410 / *C.63

Training products and services using programmed instruction for computer field; off-the-shelf programs in "PEK" and "Required COBGL-1961"; application of behavioral science to industrial training systems; custom contract and consulting services / C(involving training) a Ms (100) Se (1960) Ic

- END -

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ADC Products Div., Magnetic Controls Co., 6405 Cambridge St., Minneapolis 26, Minn.
AREDA Div., All American Engineering Co., 135 Main St., Beleville, N.J.
Abbey Electronics Corp., 143 Old Country Rd., Carle Pl., N.Y.
Abrams Instrument Corp., 606 E. Shlawassee, Lansing, Mich.
Abtronics Inc., 64 S.P.S., Livermore, Calif. Calif. American Electronics, Inc., 1594 E. Ross Ave., Fullerton, Calif. American Elite Inc. (Telefunken) 48-50 34th St., Long Island City 1, N.Y.
American Gyro Div., Tamar Electronics
Inc., 9320 Lincoln Blvd., Los Angeles 25, Calif.
American Machine & Foundry Co., 4304
Wheeler Ave., Alexandria, Va.
Ampco Mfg. Co., 246 E. 2nd St.,
Plainfield, N.J.
Ampex Corp., 934 Charter St., Redwood Plainfield, N.J.
Ampex Corp., 934 Charter St., Redwood
City, Calif.
Amtron Inc., 14631 S. Waverly Ave.,
Midlothian, Ill.
Analab Instrument Corp., 30 Canfield
Rd., Cedar Grove, N.J.
Anchor Specialty Mfg. Co. Inc., 300
Hollister Rd., Teterboro, N.J.
Angler Industries, Main St., Metuchen,
N.J. Calif. Accurate Electronics Corp., Box 935 G. Elyria, Ohio Accurate Instrument Co., 2414 W. Alabama, Houston 6, Texas Acme Electric Corp., Water St., Cuba, N.J.
As obv., G. A. F., Vestal Pkwy.,
E. Binghamton, N.Y.
Ansell-Simplex Ticket, 2834 W. Chicago,
Chicago 22, 111.
Anzac Electronics, Inc., 375 Fairfield
Ave., Stamford, Conn.
Apahouser of New England, 1312 Boylston St., Boston, Mass.
Applied Control Corp., 1000 Main St.,
Hackensack, N.J.
Applied Electronics Co., 213 E. Grand
Ave., South, San Francisco, Calif, Acoustica Associates, Inc., 10400 Aviation Blvd., Los Angeles 45, Calif. Calif.
Acromag Inc., 15360 Telegraph Rd.,
Detroit 39, Mich.
Actan Electronics Inc., 130 County
Court House Rd., New Hyde Park, N.Y.
Acton Laboratories, Inc., 533 Main St., Acton Laboratories, Inc., 533 Main St.,
Acton, Mass.,
Acton, Mass.,
Adams & Westlake Co., 1025 N. Michigan St., Elkhart, Ind.
Adcole Corp., 166 Massachusetts Ave.,
Cambridge 39, Mass.
Addressograph-Multigraph Corp., 1200
Babbit Rd., Cleveland 17, Ohio
Adler Electronics Inc., 1 Lefevre Ln.,
New Rochelle, N.Y.,
Advance Components Ltd., Hainault,
Ilford, Essex, Eng.,
Advanced Electronics Inc., 94 Silas
Deane Hwy., Rocky Hill, Conn. Applied Electronics Co., 213 E. Grand Ave., South, San Francisco, Calif. Applied Electronics Corp. of N.J., 22 Center St., Metuchen, N.J. Applied Technology Inc., 930 Industrial Ave., Palo Alto, Calif. Ariel Davis Mfg. Co., 3687 S. State, Salt Lake City 15, Utah Armstrong Whitworth Equipment, Huc-clecote, Gloucester, Eng. Armstrong Whitworth Equipment, Nucclecote, Gloucester, Eng.
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Artisan Metal Works Co., 11410 Madison Ave., Cleveland 2, Ohio
Artronic Instrument Co., 11232 Triangle Ln., Silver Spring, Md.
Artted Co. Inc., 367 Worthington St.,
Springfield, Mass.
Arvey Corp., 3500 N. Kimball Ave.,
Chicago 10, 111.
Associated Engineering Corp., 65 Kent
St., Brookline 46, Mass.
Astatic Corp., Conneaut, Ohio
Astrosystems, Inc., 220 E. 23 St.,
New York 10, N.Y.
Atchley Div., Raymond, American Brake
Shoe Co., 2231 S. Barrington Ave.,
Los Angeles 64, Calif.
Atlantic Research Corp., Shirley Hwy,
at Edsall Rd., Alexandria, Va.
Atlantic Transformer Corp., 30 Hynes
Ave., Groton, Conn. Ilford, Essex, Eng.
Advanced Electronics Inc., 94 Silas
Deane Hwy., Rocky Hill, Conn.
Advanced Instrument Corp., 2829 7th
St., Berkeley, Calif.
Advancement Devices Inc., 86 Denton
Ave., New Hyde Park, N.Y.
Aero Geo Astro Corp., Edsall & Lincolnia, Alexandria, Va.
Aeroflex Labs, Inc., 48-25 36 St.,
Long Island City 1, N.Y.
Aerolite Electronics Corp., 2207
Summit Ave., Union City, N.J.
Aeronca Mfg. Corp., 1712 Germantown
Rd., Middletown, Ohio
Aerospace Controls Corp., 602 Colorado Ave., Santa Monica, Calif.
Aetna Electronics Corp., Readington
Rd., North Branch, N.J.
Airborne Instruments Lab., Div.
Cutler-Hammer Inc., Apparatus Div.,
Cutler-Hammer Inc., Apparatus Wktg.
Div., Comac Rd., Deer Park, N.Y.
Airmet Ltd., High Wycombe, Bucks, Eng.
Aladdin Electronics Div., Aladdin
Ind., Inc., 711 Murfreesboro Rd. Atlantic Transformer Corp., 30 Hynes Ave., Groton, Conn.
Atlas Engineering Co. Inc., 10 Cheney St., Roxbury, Mass., Atomium Corp., 575 Middlesex Tpke., Billerica, Mass. Audiotex Mgg. Co., Div. Textron Electronics Inc., 400 S. Wyman St., Rockford, Ill.
Ault Magnetics, Inc., 3501 48 Ave. N., Minneapolis 22, Minn.
Auto-Trol Corp., 1359 Harlan, Denver Div., Comac Rd., Deer Park, N.Y.
Airmec Ltd., High Wycombe, Bucks, Eng.
Aladdin Electronics Div., Aladdin
Ind. Inc., 711 Murfreesboro Rd.,
Nashyille 10, Tenn.
Albany Printing & Tag Mfg. Co. Inc.,
598 Atlantic Ave., Boston, Mass.
Alfax Paper & Engineering Co. Inc.,
Washington St., Westboro, Mass.
Allegheny Plastics Inc., 10 Thorn Run
Rd., Coraopolis, Pa.
Allen Avionics Inc., 255 E. 2nd St.,
Mineola, N.Y.
Allen-Bradley Co., 136 W. Greenfield
Ave., Milwaukee 4, Wisc.
Allen Electric & Equipment Co., 2101
N. Pitcher, Kalamazoo, Mich,
Allied Engineering & Product Corp.,
2421 Blanding Ave., Alameda, Calif.
Allison Electronics, Inc., 2545 Diversified Way, Orlando, Fla.
Alpha-Tronics Corp., 1033 Engracia
Ave., Torrance, Calif.
Alphomega Research Labs. Inc., 338
Westbury Ave., Carle Place, N.Y.
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Automation Development Corp., 11824
W. Jefferson Blvd., Culver City, Automation Development Var.

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Calif.
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Rd., Tenafly, N.J.
Automation Industries, Inc., Industrial
Park, Boulder, Colo.
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Danville, Ill.
Avco Corp. Electronics & Ordnance Div.,
Cincinnati 41, Ohio
Avco Research & Adv. Devel. Div., 201
Lowell St., Wilminaton, Mass.
Avien Inc., 56-15 Northern Blvd.,
Woodside 77, N.Y.
Avnet Electronics Corp., 70 State St.,
Westbury, N.Y.
Axel Electronics Inc., 134-20 E,
Jamaica Ave., Jamaica 10, N.Y. ford, Conn.
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Alwac Computer Div., El-Tronics Inc.,
13040 S. Cerise Hawthorne, Calif.
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Mass.

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Cambridge 38, Mass.
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Baltic Metal Products Co., 126 Sutton
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Rockford, Ill.

B&F Instruments, Inc., 3644 N. Law-rence St., Philadelphia 40, Pa. B&K Instruments Inc. of Bruel & Kjaer,

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Beattie-Coleman, Inc., 1000 N. Olive, Anaheim, Calif.
Beauchaine & Sons Inc., 584 Union Ave., Lakeport, N.H.
Beckman Instruments Inc., Systems Div., 2400 Harbor Blvd., Fullerton, Calif.
Beckman & Whitley Inc., 993 San Calif.
Beckman & Whitley, Inc., 993 San
Carlos Ave., San Carlos, Calif.
Beck's, Inc., 298-300 E. Fifth St.,
St. Paul 1, Minn.
Beckley Corp., Data Systems Div.,
West Hartford, Conn.
Bel Air Industries, Inc., P.O. Box 311
Bel Air, Md.
Belock Instrument Corp., 112-03 14th
Ave., College Point, N.Y.
Bendix Corp., Montrose Div., South
Montrose, Pa.
Bendix-Pacific Div., Bendix Corp.,
11600 Sherman Way, N. Hollywood,
Calif. Bendix-Facilit Div., walther Pick Since Sover Street Bendix-Facility Div., was a confidence of the con Danbury, Conn.
Boonton Molding Co. Inc., 300 Myrtle Boonton Molding Co. Inc., 300 Myrtle
Ave., Boonton, N.J.
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Whippany, N.J.
Bristol Motors Div., Cocaline Co. of
America Inc., 01d Saybrook, Conn.
Brooks & Perkins Inc., 1950 W. Fort
St., Detroit 16, Mich.
Brown Engineering Co. Inc., Box 917,
Huntsville, Ala.
Bruning Co. Inc., Charles, 1800 W.
Central Rd., Mt., Prospect, Ill.
Brush Instruments Div., Clevite Corp.,
37th & Perkins, Cleveland 14, Ohio
Bud Radio, Inc., 2118 E. 55 St.,
Cleveland 3, Ohio
Budelman Electronics Corp., Sub.
General Railway Signal Co., 375 Budelman Electronics Corp., Sub.
General Railway Signal Co., 375
Fairfield Ave., Stamford, Conn.
Bulow Electric Co., 11000 Capital
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Burmac Electronics Co. Inc., 126 Central Dr., Farmingdale, N.Y.
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Tucson, Ariz.
Burr Electronics, River Rd., Cos
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Garden City, N.Y.
Bush Transformer Corp., 707 North St.,

Endicott. N.Y.

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Cable Electronics, 95 Kitts Ln., Newington 11, Conn.
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Calbest Electronics Co., 4001 Exposition, Los Angeles 16, Calif.
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Ave., Montreal 16, Quebec
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Blvd., Palo Alto, Calif.
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more St., Westbury, N.Y.
Central Dynamics Ltd., 147 Hymus
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Paris 18e, France
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Atwell Rd., Shadyside, Md. Chesapeare Instrument Copp., 100 Atwell Rd., Shadyside, Md. Chicago Aerial Industries Inc., 550 W. Northwest Hwy., Barrington, Ill. Chicago Dynamic Industries Inc., 1725 W. Diversey Blvd., Chicago 14, 1725 W. Diversey Blvd., Chicago 14, 111.

Churchill Lighting Corp., 344 Frank-lin St., McIrose 76, Mass. Cimron Corp., 1152 Morena Blvd., San Diego 10, Callf.
Circon Component Corp., Santa Barbara Airport, Goleta, Callf.
Coast Coll Co., McKay Manning Inc., 5333 W. Washington Blvd., Los Angeles 16, Callf.
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Cary, Ill.
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St., Gardena, Calif.
Collectron Corp., 304 E. 45th St.,
New York 17, N.Y.
Colorado Instruments, Inc., Garden
Office Center, Broomfield, Colo.
Colorado Research Corp., Broomfield, Office Center, Broomfield, Colo.
Colorado Research Corp., Broomfield,
Colo.
Columbia Technical Corp., 24-30
Brooklyn-Queens Expwy., W. Woodside
77, N.Y.
Columbia Wire & Supply Co., 2850 W.
Irving Park Rd., Chicago, Ill.
Comar Electric Co., 3349 W. Addison,
Chicago 18, Ill.
Communications Control Corp., 14707
Keswick St., Van Nuys, Calif.
Component Mfg. Service, Inc., W.
Bridgewater, Mass.
Component Research Co. Inc., 3019 S.
Orange Dr., Los Angeles 16, Calif.
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Rd., Hatboro, Pa.
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Wyck Exp., Jamaica 18, N.Y.
Computer Devices Corp., 6 W. 18th
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Hackensack, N.J.
Computer Measurements Co., 12970
Bradley Ave., San Fernando, Calif.
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Computer Systems, Inc., Culver Rd., Computer Sciences, Inc., 603 Main St., Westbury, N.Y.
Computer Systems, Inc., Culver Rd., Monmouth Junction, N.J..
Concord Control Inc., 1282 Soldiers Field Rd., Boston 35, Mass.
Consolidated Business System, 400
Jersey, New Brunswick, N.J.
Consolidated Controls Corp., Box 3300, Albuquerque, N.M.
Consolidated Instruments Corp., 110
Atlantic Ave., Lynbrook, N.Y. Consolidated Instruments Corp., 110
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Continental Industrial Electronics
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Angeles 50, Calif.
Control Corp., 710 Central Ave., NE.,
Minneapolis 14, Minn.
Control Devices, Inc., 925 S. Eton Rd.,
Birmingham, Mich.

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American Avionics, Inc., 2032 Stoner Ave., West Los Angeles 25, Calif. American Electronic Wire & Cable,

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Control Engineering Div., J.B. Webb Co., Control Engineering Div., J.B. Webb Co. 8951 Alpine Ave., Detroit 4, Mich. Control Indicating Corp., 107 Turnpike Rd., Windsor Locks, Conn. Controlomag Labs., 2459 Susquehanna Rd., Roslyn, Pa. Cook Technological Center, 6401 Oakton St., Morton Grove, Ill. Courter Products Div., Model Engineering & Manufacturing Inc., Boyne City, Mich. Mich.

M1ch.
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Cambridge 38. Mass. St., Camden 3, N.J.

Cycle Transformer Corp., 354 Glenwood

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Daystrom, Inc., Transicoil Div., Worcester, Pa.
Dayton Electronic Products Co. Inc.,
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Decco, Inc., 2025 Farrington, Dallas
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Del Mar Engineering Labs., 6901 W.
Imperial Hwy. Los Angeles 45, Calif.
Delta Instrument Corp., 250 Delawanna
Avc., Clifton, N.J.
Deltime, Inc., 139 Hoyt St., Mamaroneck, N.Y.
Denson Electronic Corp., Box 85,
Rockville, Com.
Developmental Electronics Corp., 12839
Chadron Ave., Hawthorne, Calif.
Dick Co., A.B., 5700 W. Touhy Ave.,
Chicago 48, 111.
Diebold, Inc., P.O. Box 231, Canton
1, Ohio 1. Ohio 1, Ohio
Diehl Mfg. Co., 1129 Finderne Ave.,
Somerville, N.J.
Dielectric Materials Inc., 225 E.
144th St., New York 51, N.Y.
Dielectric Products Engineering Co. DIELECTRIC Products Engineering Co. Inc., Raymond, Maine Dietz Design, Inc., Grandview 6, Mo. Dietzgen Co., Eugene, 2425 N. Shef-field, Chicago 14, 111. Digital Design Corp., Box 21, Clay, N.Y. Digital Design Corp., Box 21, Clay, N.Y.

Digital Sensors Inc., 6443 N. Figueroa St., Los Angeles 42, Calif.

Digitool Corp., 5300 Brownway Rd., Houston 27, Texas

Digitran Co., 660 S. Arruya Pkwy., Pasadena, Calif.

Dimensions, Inc., 7314 20th Ave., Brooklyn 4, N.Y.

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Documat, Inc., 84 Fourth, Waltham 54, Mass. Calif. Calif.
E1-Tronics Inc., 20 S. 15th St.,
Philadelphia 2, Pa.
Elzee Metal Products Co. Inc., 779
39 St., Brooklyn 32, N.Y.
Embree Electronics Corp., 993 Farmington Ave., W. Hartford 7, Conn.
Emerson Electric Mfg. Co., 8100 W.
Florissant Ave., St. Louis 36, Mo.
Emertron, Inc., 1140 East-West Hwy.,
Silver Spring, Md.
Emmco Plastics Corp., 68 Vine St.,
Everett 49, Mass.
Empire Electronics Co. Inc., 60
Spruce St., Paterson 1, N.J.
Empire Services, 40-3, Skaneateles,
N.Y. Don Bosco Electronics, Inc., Littell Don bosco Electronics, inc., Littell Rd., Hanover, N.J.,
Don-Lan Electronics Inc., 2520 Colorado Ave., Santa Monica, Calif.
Donnelly Mfg. Co., 580 Winter St.,
Waltham 54, Mass.
Double "E" Products Co., 208 Standard St., El Segundo, Calif.

Dresser Electronics, Hst. Div. Dresser
Ind. Inc., 555 N. 5 St., Garland, Texas Dukane Corp., N. 11th Ave., St. Charles, 111.
Dumont Airplane & Marine Corp., Box 92, Clearfield, Pa.
Dublont Lubs, Allen B., Divs. Fairchild Cam. & Instr. Corp. (Instruments), 750 Bloomfield Ave., Clifton, N.J. Dupont de Nemours & Co. Inc., E. I., Wilmington 98, Del.
Dura Plastics of N.Y. Inc., 303 Fifth Ave., New York 16, N.Y.
Duralith Corp., 1025 Race St., Phila-N.Y.
Equipto Electronics Corp., 319 N.
Webster St., Naperville, Ill.
Erie-Pacific Div., Erie Resistor Corp.,
12932 S. Weber Way, Hawthorne, Calif.
Erie Resistor Corp., 644 W. 12th St.,
Cric Pe

delphia 7, Pa.

Dymcc Div., Hewlett-Packard Co., 395
Page Mill Rd., Palo Alto, Calif.
Dynair Electronics, Inc., 7564 Broadway, Lemon Grove, Calif.
Dynalog Electronics Corp., 300 Great
Neck Rd., Great Neck, N.Y.
Dynatronics, Inc., Box 2566, Orlando,
Fla.

EMI/US, 1750 N. Vine St., Los Angele 28, Calif. Ealing Corp., 33 University Rd., Cambridge 38, Mass., Eastern Industries Div., Lab. for Electronics, Inc., 100 Skiff St., Hamden 14, Conn. Eclipse-Pioneer Div., Bendix Corp., Teterboro, N.J. Hamden 14, Conn.
Eclipse-Pioneer Div., Bendix Corp.,
Teterboro, N.J.
Edgerton, Germeshausen & Grier, Inc.,
160 Brookline Ave., Boston 15, Mass.
Eldema Corp., 1805 Belcroft Ave.,
El Monte, Calif.,
Electrac, Inc., 1001 Arlee Pl.,
Anaheim, Calif.,
Electric Indicator Co. Inc., Camp
Ave., Stamford, Conn.,
Electric Switch Corp., 2320 S. Tibbs
Ave., Indianapolis 41, Ind.
Electric Tachometer Corp., 68th &
Upland Sts., Philadelphia 42, Pa.
Electricord Mfg. Co. Inc., 2554 E.
18th St., Brooklyn, N.Y.
Electro-Medical Lab. Inc., South
Woodstock 8, Vt.
Electro-Mack, Inc., 11501 Jefferson,
Culver City, Calif.,
Electro-Winders Co. Inc., 854 W.
Front St., Covina, Calif.
Electrodynamic Instrument Corp., 1841
Old Spanish Tr., Houston 25, Texas
Electron Echnology, Inc., 626 Old Spanish Tr., Houston 25, Texas Electron Technology, Inc., 626 Schuyler Ave., Kearny, N.J. Electronic Associates, Inc., Long Branch, N.J.
Electronic Communications, Inc., 1501
72nd St. N. St. Petersburg 10, Fla.
Electronic Communication & Component
Des. & Dev. Corp., 503 McCarter Hwy.,
Newark, N.J.
Electronic Control Corp., 15341 Dale,
Detroit 23, Mich.
Electronic Control Products, Rt. 22,
Box 286, Dunellen, N.J.
Electronic Controls, Inc., 66 Southfield Ave., Stamford, Conn.
Electronic Development Corp., 423 W.
Broadway, Boston 27, Mass.
Electronic Enclosures, Inc., 3629
Holdrege Ave., Los Angeles 16, Calif.
Electronic Eng. Co. of Calif., Automation Div., Box 58, Santa Ana,
Calif.
Electronic Modules Corp., 1949 Green-Branch. N.J. Calif.

Electronic Modules Corp., 1949 Greenspring Dr., Timonium, Md.

Electronic Modding Corp., 42 Church
St., Pawtucket, R.I.

Electronic Products Corp., 4642 Belair Rd., Baltimore 6, Md.
Electronic Specialty Co., 5121 San
Fernando Rd., Los Angeles 39, Calif.
Electronic Transformer Corp., 29 Park Electronic Transformer Corp., 29 Park Pl., Passaic, N.J.
Electronic Tube & Instr. Div., General Atronics Corp., 1200 E. Mermaid Ln., Philadelphia 18, Pa.
Electronics Corp. of America, 1 Memorial Dr., Cambridge 42, Mass.
Electropac, Inc., 62 Union St., Peterborough, N.H. Elesta Ltd., Electronic Controls, Bad Ragaz, Switzerland Elgin Electronics Div., Elgin National Watch, 2435 N. Naomi St., Burbank,

Erie, Pa. Erwood Inc., 1770 Berteau Ave.,

Marunouchi, Chiyoda-ku, Tokyo, Jap. G

GB Components, Inc., 14621 Arminta St., Van Nuys, Calif.
GC Electronics Co., Div. Textron Electronics, Inc., 400 S. Wyman St., Rockford, Ill.
G-V Controls Inc., 107 Okner Pkwy., Livingston, N.J.
Garde Mfg. Co., 53 John St., Cumberland, R.I.
Gates Radio Co., 123 Hampshire St., Quincy, Ill.
Gavin Instruments Inc., Depot Sq. & Division St., Somerville, N.J.

Division St., Somerville, N.J.
General Aniline & Film Corp., Ansco
Div., Vestal Pkwy. E. Binghamton,

N.Y.

General Applied Science Labs, Inc.,
Merrick & Stewart, Westbury, N.Y.
General Bronze Electronics Corp.,
711 Stewart Ave., Garden City, N.Y.
General Communication Co., 677 Beacon
St., Boston 15, Mass.
General Controls Co., Automation Controls Div., 2000 S. Wolf Rd., Des
Plaines, Ill.
General Diode Corp., Box 172, Framingham Center. Mass.

General Diode Corp., Box 172, Framing-ham Center, Mass.
General Electric Co., Defense Systems Dept., Spec. Dev. Oper., 1811 Lemoyne Ave., Syracuse, N.Y. General Electric Co., Light Military Electronics Dept., French Rd., Utica, N.Y. General Electric Co., X-Ray Dept., 4856 Flectric Ave., Milwaykee 1

4856 Electric Ave., Milwaukee 1.

Wisc General Electrodynamics Corp., 4430 Forest Ln., Dept. E-62, Garland, Texas

General Electronic Labs. Inc., 195 Massachusetts Ave., Cambridge, Mass General Fireproofing Co., The, 413 Dennick, Youngstown 1, Ohio General Indicator Corp., Pardeeville,

General Individual Wisc.
General Magnetics Inc., 135 Bloomfield Ave., Bloomfield, N.J.
General Precision, Inc., 50 Prospect Ave., Tarrytown, N.Y.

Chicago 13, Ill.
Eugene Engineering Co. Inc., 1217
Hyde Park Ave., Hyde Park 36, Mass.
Evershed & Vignoles Ltd., Chiswick,
London W4, Eng.
Exact Engineering & Mfg. Inc., Box 447,
Oceanside, Calif. Chicago 13, Ill.

Geo-Science inc., box late, gammagete, N.M.
Geophysics Corp. of America, Burlington Rd., Bedford, Mass.
Geotronic Labs. Inc., 1314 Cedar Hill Ave., Dallas 8, Texas
Gertsch Products Inc., 3211 S. La
Cienega Blvd., Los Angeles 16, Calif.
Gibbs Mfg. & Research Corp., 450 N.
Main St., Janesville, Wisc.
Giffillan Bros. Inc., 1815 Venice
Blvd., Los Angeles 6, Calif.
Globe-Wernicke Co., The, Norwood,
Cincinnati 12, Ohio
Golding Mfg. Co., 90 Porete Ave., F F&F Enterprises Inc., 1733 Milwaukee Ave., Chicago 47, Ill. FF&M Electronics, Inc., 12820 Panama St., Los Angeles 66, Calif. Fairchild Camera & Instr. Corp., Fairchild Camera & Instr. Corp.,
Defense Products Div., 300 Robbins
Ln., Syosset, N.Y.
Fairchild Camera & Instr. Corp.,
Indl., Products Div., 580 Midland
Ave., Yonkers, N.Y.
Farmer Electronic Products Co. Inc.,
Tech Circle, Natick, Mass.
Farrand Optical Co. Inc., E. 238th &
Bronx Blvd., New York 70, N.Y.
Farwell Metal Fabricating, 87 W.
Fairfield Ave., St. Paul 7, Minn,
Feay Co., Neal, 133 La Patera, Goleta,
Calif.
Ferranti Electric. Inc., Industrial Cincinnati 12, Unio
Golding Mg. Co., 90 Porete Ave.,
N. Arlington, N.J.
Good Electronic Corp., Box 2406, W.
Palm Beach, Fla.
Goodkin, M.P., Co., 112 Arlington,
Newark 2, N.J.
Gorn Electric Co. Inc., 843 Main St., Gorn Electric Co. Inc., 843 Main St., Stamford, Conn. Goslin Corp., 2921 W. Olive Ave., Burbank, Calif. Gotham Audio Corp., 2 W. 46 St., New York 36, N.Y. Graphic Systems, 925 Danville Rd., Yanceyville, N.C. Griscombe Products, 133 W. 21st, New York 11, N.Y. Gubelman Charts Div., Nashua Corp., 100 E. Kinney St., Newark 5, N.Y. Gunnar Labs. Inc., 3003 26th St., W. Bradenton, Fla. Gyrotronics, Inc., Monmouth Airport, Farmingdale, N.J. Calif.
Ferranti Electric, Inc., Industrial
Park #1, Plainview, N.Y.
Ferrodynamics Corp., Gregg St. & Rt.
17, Lodi, N.J.
The Control of the California Control of the Californi Ferrodynamics Corp., Gregg St. & Rt.
17, Lodi, N.J.
Film Resistors, Inc., 242 Ridgedale
Ave., Morristown, N.J.
Filmon Corp., 40 W. 25th St., New
York 10, N.Y.
Filtron Co. Inc., 131-15 Fowler Ave.,
Flushing 55, N.Y.
Flight Research Inc., Box 1-F, Richmond, Va.
Forbes & Wagner, Inc., 345 Central
Ave., Silver Creek, N.Y.
Ford Instrument Co., Div. Sperry Rand
Corp., 31-10 Thomson Ave., Long
Island City 1, N.Y.
Formica Metal Products Co., Corporation Way, Medford, Mass.
Foster Transformer Co., 3820 Colerain
Ave., Cincinnati 23, Ohio
Franklin Systems Inc., Box 3250, West
Palm Beach, Fla.
Freed Transformer Co., Inc., 1736
Weirfield St., Brooklyn 27, N.Y.
Frequency Electronics Inc., 22-60 46th
St., Astoria, N.Y.
Frontier Electronics Div., International Resistance Co., 4600 Memphis
Ave., Cleveland 9, Ohio
Full Sushinki Seizo K. K., 2,3 chome,
Marunouchi, Chiyoda-ku, Tokyo, Jap. Н

HRB-Singer Inc., Science Pk, Box 60, State College, Pa. Hamilton Standard Div., United Air-Hamilton Standard Div., United Aircraft Corp., Windsor Locks, Conn.
Hamilton Watch Co., Ind. Prods. Div.,
Lancaster, Pa.
Hammond Mfg. Co. Ltd., Speedvale &
Edinburg, Guelph, Ontario
Hammer Electronics Co. Inc., Box 531,
Princeton, N.J.
Harowe Servo Controls Inc., W. Chester Pa Harowe Servo Controls Inc., W. Chester PikeeWesttown Rd., West Chester, Pa. Hart Mfg. Co., 242 Bartholomew Ave., Hartford'l, Conn.
Hastings Raydist, Inc., Newcomb Ave., Hampton 9, Va.
Haydon Co., A.W., 238 N. Elm St., Waterbury, Conn.
Haydon Instrument, Inc., 17 Brown St., Waterbury 20, Conn.
Helipot Div., Beckman Instruments, Inc., 2500 Harbor Blvd., Fullerton, Calif. Hi-Spec Electronics Corp., 7328 Ethel Ave., N. Hollywood, Calif.
Hoffman Electronics Corp., Military Prods. Div., 3761 S. Hill St., Los Angeles 7, Calif.
Holyoke Wire & Cable Corp., 720 Main St., Holyoke Wire & Cable Corp., 720 Main St., Holyoke, Mass. St., Holyoke, Mass. Horiba Instruments Inc., Nakashinmichi Horiba Instruments Inc., Nakashinmichi Sanjo, Kyoto, Jap. Howe Scale Co., Div. Howe Richardson Corp., Rutland, Vt. Howel Instruments, Inc., 3479 W. Vickery Blvd., Fort Worth, Texas Bughes Aircraft Co., Vac. Tube Prods. Div., Storage Tubes, 2020 Short St., Oceanside, Calif. Humphrey Inc., 2805 Canon St., San Diego 6, Calif. Hunter Mfg. Co., Box 153, Coralville Br., Iowa City, Iowa Huyck Systems Co., Div. Huyck Corp., 360 Wolf Hill Rd., Huntington Sta. N.Y. N.Y. Hydro-Aire Co., Div. Crane Co., 3000 Winona Ave., Burbank, Calif.

General Radio Co., 22 Baker Ave., West Concord, Mass. General Time Corp., Electronic Sys-tems Div., 201 Summer St., Stamford,

IBM Federal Systems Division, 1120 Connecticut Ave., NW., Washington 6, Connecticut Ave., Nw., Washington 6, D.C.

IMC Magnetics Corp., Arizona Div., 917 W., Madison St., Phoenix, Ariz.

ITT Federal Labs., 3301 Wayne Trace, Fort Wayne, Ind.

ITT Industrial Labs. Div., 3700 E. Pontiac St., Fort Wayne, Ind.

ITT Kellogg, Div. ITT., 6650 S. Cicero Ave., Chicago 38, Ill.

Iconix Inc., 1175 O'Brien Dr., Menio Park, Calif.

Inductor Engineering Inc., 117 Schley Ave., Lewes, Del. Ave., Lewes, Del. Industrial Control Co., Central at

Pinelawn, Farmingdale, N.Y.
Industrial Engravers Inc., 130-25
180 St., Springfield Gardens 34, N.Y.
Industrial Instrument Div., Electronic
Assistance Corp., 7 Fairchild Ct.,
Plainview, N.Y. Plainview, N.Y.
Industrial Transformer Corp., Gouldsboro, Pa.
Information Retrieval Corp., 1 Farragut
Square S., Washington 6, D.C.
Information Systems, Inc., 10131
National Blvd., Los Angeles 34, National Blvd., Los Angeles 34,
Calif.
Infotronics Corp., 1401 S. Post Oak
Rd., Houston 27, Texas
Instrol, Inc., 135 E. Dela Guerra,
Santa Barbara, Calif.
Instrument Corp. of Florida, Box 1226,
Melbourne, Fla.
Instruments for Industry Inc., 101
New South Rd., Hicksville, N.Y.
Intectron Inc., 2300 Washington St.,
Newton Lower Falls 62, Mass.
Intellux Inc., 30 S. Salsipuedes St.,
Santa Barbara, Calif.
Intercontinental Electronics Corp.,
300 Shames Dr., Westbury, N.Y.
Interelectronics Corp., 2432 Grand
Concourse, New York 56, N.Y.
International Electro-Magnetics Co.,
Inc., 1901 Marquette Ave., Chicago,
Ill.
International Electronics Corp. Odul-International Electronics Corp. (Mullard), 81 Spring St., New York 12, Interstate Electronics Corp., Dept. Interstate Electronics Corp., Dept. 868, 707 E. Vermont Ave., Anaheim, Calif.
Intimex Corp., Bonifant & Fenton, Silver Spring, Md.
Iron Fireman Mfg. Co., Electronics Div., 2838 SE 9th Ave., Portland, Ore., Irvan Ferromagnetics Corp., 13856 Saticoy St., Van Nuys, Calif.
Isotope Developments Ltd., Bath Rd., Beenham Nr. Reading, Berks, Eng.
Itek Business Products Div., Rochester, N.Y. N.Y.
Itek Electro-Products Co., 75 Cambridge
Pkwy., Cambridge 42, Mass.
Itek Labs., Div. Itek Corp., 10 Maquire
Rd., Lexington 73, Mass.
Iwasaki Communications Apparatus Co.,
Ltd., 710, 2-chome, Kugayama, Suginami-ku, Tokyo, Japan

JB Electronic Transformers Inc., 2310
W. Armitage Ave., Chicago 47, Ill.
JFD Electronics Corp., 6101 16th Ave.,
Brooklyn 4, N.Y.
Jaidinger Mfg. Co. Inc., 1921 W. Hubbard St., Chicago 22, Ill.
James Electronics Inc., 4050 N. Rockwell St., Chicago 18, Ill. Jansen Electronics Mfg. Inc., 2285
University Ave., St. Paul 14, Minn.
Jennings Radio Mfg. Corp., 970 McLaughlin Ave., San Jose, Calif.
Johnson Electronics Inc., Box 17, Casselberry, Fla.
Julie Research Labs. Inc., 603 W.
130th St., New York 27, N.Y.

K K-V Transformer Corp., 81 Water St.,

K-V Transformer Corp., 81 Water St.,
Ossining, N.Y.
Kapitol Magnetic Corp., 2241 N. Knox
Ave., Chicago 39, Ill.
Kennedy Antenna Div., Electronic Spec.
Co., Cohasset, Mass.
Kennedy Co., 2029 N. Lake Ave., Altadena, Calif.
Kenyon Transformer Co. Inc., 1057
Summit Ave., Jersey City, N.Y.
Keystone Electronics Corp., 49 Bleecker
St., New York 12, N.Y.
Keystone Froducts Cor., 904-6 23 St.,
Union City, N.J.
Kinetic Instrument Corp., 1070 Linwood St., Brooklyn 8, N.Y.
Kinetron Corp., Red Bank, N.J.
Kings Electronics Co. Inc., 40 Marbledale Rd., Tuckahoe, N.Y.
Klann Organ Supply Co., Box 2398,
Waynesboro, Va.
Kleinschnidt Div., Smith-Corona
Marchant Inc., Lake-Cook Rd., Deerfield, Ill.
Kobe Kogyo Corp., 5 Wadayama-dori 1chome, Hyogo-ku, Kobe, Japan
Kallsman Instrument Corp., 80-08 chome, Hyogo-ku, Kobe, Japan Kollsman Instrument Corp., 60-08 45th Ave., Elmhurst 73, N.Y. Kollsman Motor Corp., Mill St., Dublin,

Pa. Korry Mfg. Co., 223 8th Ave. N., Seattle 9, Wash. Krohn-Hite Corp., 580 Massachusetts Ave., Cambridge 39, Mass. Kurman Electric Co., Sub. Crescent

Petroleum Corp., 191 Newel St., Brooklyn 22, N.Y.

Lab-Tronics, Inc., 3656 N. Lincoln Ave., Chicago 13, Ill. Laguna Scientific Industries, 773

Laguna Scientific Industries, (78)
Broadway, Laguna Beach, Calif,
Laine Electronics & Mfg. Co. Inc., 91
Industrial Ave., Little Ferry, N.J.
Land-Air Inc., 440 Hester St., San
Leandro, Calif.
Landsverk Electrometer Co., 641 Sonora
Ave. Glendale 1, Calif Ave., Glendale I, Calif.
Langan Corp., 14 Plaza Rd., Greenvale,
L.I., N.Y. LaPointe Industries Inc., 155 W. Main St., Rockville, Conn.
Larson Instrument Co., Greenbush Rd.,
Orangeburg, N.Y.
Lavoie Laboratories Inc., Morganville, N.J.
Lear Inc., 3171 S. Bundy Dr., Santa
Monica, Calif.
Lear, Inc., Electro-Mechanical Div.,
110 Ionia Ave., Grand Rapids, Mich.
Lear Inc., Instrument Div., 110 Ionia
NW., Grand Rapids 2, Mich.
Leesona Moos Labs., 90-28 Van Wyck
Exp., Jamaica 18, N.Y. Lefebure Corp., 716 Oakland Rd. N.E., Cedar Rapids, Iowa Lenkurt Electric Co. Inc., 1105 County Rd., San Carlos, Calif. Line Electric Co., 229 River St., Orange, N.J.
Lintronic Ltd., 54-58 Bartholomew
Close, London ECl., Eng.
Lithoid, Inc., 318 Cleveland, Highland Park, N.J.
Litton Industries, Electron Tube Div.,
960 Industrial Rd., San Carlos, Calif. Calif.
Litton Systems Inc., Guidance & Control Systems Div., 5500 Canoga Ave., Woodland Hills, Calif.
Logitek, Inc., 54 Rome St., Farmingdale, N.Y. Ludlow Corp., Needham Heights 91, Ludlow Corp., accommudate Mass.
Lumatron Electronics Inc., 116 County Courthouse Rd., New Hyde Park, N.Y.
Luther Electronic Mfg. Co., 5720 W.
Washington Blvd., Los Angeles 16, Calif.
Lynch Communiction Systems Inc., 695
Bryant St., San Francisco 7, Calif.
Lynch Mfg. Co., R.H., 7831 E. Arroyo
Dr., S., San Gabriel, Calif.

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McIntyre Associates, 3447B Oceanview Blvd., Glendale, Calif.
MF Electronics Corp., 118 E. 25th St., New York 10, N.Y.
M.K.S. Data, Inc., 500 Cypress Ln., El Cajon, Calif.
M-T Electronics Co., 550 Lewelling Blvd., San Leandro, Calif.
M. Ten Bosch, Inc., 60 Wheeler Ave., Pleasantville, N.Y.
Machinery Electrification Inc., 56
Hudson St., Northboro, Mass.
Machlett Labs. Inc., 1063 Hope St.,
Springdale, Conn.
Mack Electric Devices, Inc., 49 Glenside Ave., Wyncote, Fac. Mack Liettric Devices, Inc., 49 dienside Ave., Mynotote, Pa.
Magnalectric Co., Box 6008, Tulsa,
Okla.
Magnasync Corp., 5546 Satsuma, N.
Hollywood, Calif.
Magnecord by MI, Box 7509, Tulsa 18, Okla.
Magnecraft Electric Co., 5575 N. Lynch
Ave., Chicago 30, Ill.
Magnetic Amplifiers Div., Siegler Corp.,
632 Tinton Ave., New York 55, N.Y.
Magnetic Circuit Elements Inc., 3722
Park Pl., Montrose, Calif.
Magnetic Components Inc., 13750 A Better Way, Garden Grove, Calif.
Magnetic Devices, Inc., 712 East St.,
Frederick, Md. Ökla. Magnetic Devices, Inc., 712 East St., Frederick, Md.
Magnetics Research Co., 179 Westmore-land Ave., White Plains, N.Y.
Marco Industries Co., 207 S. Helena St., Anaheim, Calif.
Marconi Instruments Div., English Elec. Corp., 111 Cedar In., Englewood, N.J.
Marquardt Corp., Pomona Div., 2709 N.
Garey Ave., Pomona, Calif.
Marstan Electronics Corp., 204 Babylon Tpke., Roosevelt, N.Y.
Martin Marietta Corp., Electronic Systems & Prods. Div., Mail No. F-3036, Baltimore 3, Md.
Mason, Shaver & Rhoades Inc., Box 551,

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Dexter Rd., E. Providence 14, R.I.
Master-Craft Corp., 631 Cobb, Kalamazoo 52., Mich.
Matsushita Electric Industrial Co.
Ltd., 1006 Kadoma, Osaka, Jap.
Matthews 6 Co., J.H., 3821 Forbes Ave.,
Pittsburgh 13, Pa.
Measurement Systems Inc., 140 Water
St., S. Norwalk, Conn.
Mecannar Inc., 120 Union Ave., Sudbury,
Mass. Mass,
Mechatrol Div., Servomechanisms Inc.,
1200 Prospect Ave., Westbury, N.Y.
Megadyne Electronics Inc., N. Walnut
St., Wauregan, Conn.
Melcor Electronics Corp., 48 Toledo
St., Farmingdale, N.Y.
Meriam Instrument Co., Electronics
Div., 10920 Madison Ave., Cleveland
2, Ohio 2, Unio Merit Short Wave Diathermy Co., 2758 Whittier Blvd., Los Angeles 23, Calif. Metalphoto of Cincinnati, Inc., 7 E. Metalphoto of Cincinnati, Inc., 7 E. 75 St., Cincinnati 16, Ohio Metal Works, Inc., 9th & Jefferson, Hermann, Mo.
Michigan Magnetics, Inc., 203 W. 3 St., Vermontville, Mich.
Micro GEP Products, Inc., 6319 W. Slauson Ave., Culver City, Calif.
Micro-Lectric, Inc., 19 Debevoise Ave., Roosevelt, N.Y. Micro Measurements Corp., 2412 Norwood, Melrose Park, Ill. Microcard Reader Corp., P.O. Box 1588, Microcard Reader Corp., P.O. Box 1588, Madison 1, Wisc.
Microdealers, Inc., 1560 Trapelo, Waltham 54, Mass.
Microdot Inc., 220 Pasadena Ave., S. Pasadena, Calif.
Microseal Corp., 6282 N. Cicero, Chicago 46, 111.
Microsecond Electronics Inc., 3213 E. Washington, Phoenix, Ariz.
Microsonics Inc., Hingham Ind. Center, Hingham, Mass. Mashington, Phoenix, Ariz.
Microsonics Inc., Hingham Ind. Center,
Hingham, Mass.
Microtron Inc., Pyrocircuits Div., 6
Manhasset Ave., Port Washington, N.Y.
Microwave Technology Inc., 235 High St.
Waltham 54, Mass.
Mid-West Coil G Transformer Co., 1642
N. Halstead St., Chicago 14, 111.
Midwest Tabulating Card Procedures,
Inc., 3575 W. Touby, Chicago 45, 111.
Military G Computer Electronics Corporation, 900 N.E., 13th St., Fort
Lauderdale, Fla.
Millen Mfg. Co. Inc., James, 150 Exchange St., Malden 48, Mass.
Minicord Corp. of America, 1913 Atlantic Ave., Atlantic City, N.J.
Mini-Rad Inc., 7416-E Varna Ave.,
N. Hollywood, Calif.
Minneapolis-Honeywell Regulator Co.,
Apparatus Controls Div., 2753,4th
Ave., S., Minneapolis 8, Minn.
Minneapolis-Honeywell Regulator Co.,
Heiland Div., 4000 E., Dry Creek Rd.,
Box 8776, Denver 10, Colo.
Minneapolis-Honeywell Regulator Co.,
Military Products Group, 2600 Ridgway Rd., Minneapolis 13, Minn.
Minnesota Mining & Mfg. Co., Magnetic
Products Div., 900 Bush Ave., St.
Paul 1, Minn.
Minnesota Mining & Mfg. Co., Magnetic
Products Div., 900 Bush Ave., St.
Paul 1, Ninn.
Missie Systems Corp., 9025 Wilshire
Blvd., Beverly Hills, Calif.
Missouri Research Labs, Inc., 2109
Locust St., St. Louis 3, Mo.
Mnemotron Corp., 45 S. Main St.,
Pearl River, N.Y. Mnemotron Corp., 45 S. Main St., Pearl River, N.Y. Mobil Electronics Inc., Box 1132, Pearl River, N.Y.
Mobil Electronics Inc., Box 1132,
Anderson, Ind.
Mode Electronics Inc., 6407 Warrick
Ave., Cincinnati 27, Ohio
Model Engineering & Mfg. Corp., 50
Frederick St., Huntington, Ind.
Modelectric Products Corp., 1500 Bangs
Ave., Asbury Park, N.J.,
Molded Insulation Co., 335 E. Price
St., Philadelphia 44, Pa.
Molecular Research, Inc., 3105 Belvedere, West Palm Beach, Fla.
Molex Products Co., 9515 Southwiew
Ave., Brookfield, Ill.
Moloney Electric Co., 5390 Bircher
Blyd., St. Louis 20, Mo.
Moore Business Forms, Inc., 900
Buffalo, Niagara Falls, N.Y.
Morrow Radio Mfg. Co., 2794 Market
St., Salem, Oregon
Motorola Communications Div., 4501
W. Augusta Blyd., Chicago 51, 111.
Muirhead & Co., Ltd., Beckenhead,
Kent, England
Mullard Overseas Ltd., Torrington Pl., Kent, England Mullard Overseas Ltd., Torrington Pl., London WC1, England
Multronics Inc., 1747 E. Montgomery,
Rockville, Md.

Myers Corp., Ray, 1302 Main, Endicott,

N

Nash Controls Inc., 1275 Bloomfield
Ave., Caldwell, N.J.
Nash & Harrison Ltd., 1355 Wellington
St., Ottawa 3, Ont., Can.
Natel Engineering Co. Inc., 15922
Strathern St., Van Nuys, Calif.
National Co. Inc., 61 Sherman St.,
Malden, Mass.
National Ultrasonic Corp., 95 Park
Ave., Nutley 10, N.J.
National Union Electric Corp., 1201 E.
Bell St., Bloomington, 111. Bell St., Bloomington, Ill. Neff Instrument Corp., 1088 E. Hamil-ton Rd., Duarte, Calif. Nelson Instrument Co., Box 68, Spring Nelson Instrument Co., Box 69, Spring Valley, 111, Neshaminy Electronic Corp., 382 Easton Rd., Neshaminy, Pa. Network Designers Inc., 38 E. 57 St., New York 22, N.Y. New Brunswick General Sheet Metal Works, 425 Cleveland Ave., Highland Pk., N.J. New England Transformer Co., 47 Mc-Grath Hwy., Somerville, Mass. New York Coil Co. Inc., 40-48 2nd Ave., Phoenixville, Pa. New York Transformer Co., Div. Nytronics New York Transformer Co., Div. Nytronics:
Inc., 3rd Ave., Alpha, N.J.
Nichols Co. Ltd., R.H., 4544 Dufferin
St., Toronto, Ont.
Nihon Kaiheiki Ind. Co. Ltd., 644 3Chome, Magome, Higashi, Ota-Ku,
Tokyo, Jap.
Nord Photocopy & Electronics Corp.,
300 Denton, New Hyde Park, L.I., N.Y.
Norden Div. United Aircraft Corp.,
Helen St., Norwalk, Conn.
North Atlantic Industries Inc., Terminal Dr., Plainview, N.Y.
North Electric Co., Portland Way, N.
Gallon, Ohio Gallon, Ohio North Hills Electronics, Inc., Alexander Pl., Glen Cove, N.Y. ander F1., Gien Cove, N.I.
Northeastern Engineering, Inc., 25
S. Bedford, Manchester, N.H.
Northern Electronics, Inc., 0440
P111sbury Ave., Minneapolis 2, Minn.
Northern Radio Co. Inc., 143-9 W.
22 St., New York 11, N.Y.
Nothelfer Winding Labs, Inc., Box 455,
Trenton 3, N.J.
Nuclear Corn, of America, 2 Michael Trenton 3, N.J.
Nuclear Corp. of America, 2 Richwood
Pl., Denville, N.J.
Nuclear Industries, Inc., 10 Holland
Ct., Valley Stream, N.Y.
Nuclear Measurements Corp., 2463 N.
Arlington Ave., Indianapolis 18,
Ind.
Nytronics, Inc., Essex Elect. Div.,
550 Sprincfold ave. Berkeley.

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550 Springfield Ave., Berkeley Hgts. N.J.

OSS Research, Inc., 1910 Bannard St., Riverton, N.J. Oceanographic Engineering Corp., 4930 Naples Pl., San Diego 10, Calif. Offner Div., Beckman Instrument Inc., 3900 River Rd., Schiller Pk, Ill. Oki Electric Industry Co. Ltd., 10 Shiba Kotohira-cho, Minato-ku, Tokya, Jan Shiba Kotohira-cho, Minato-ku,
Tokyo, Jap.
Oki & Willadsen Ltd., 1335 Lawrence
Ave., E. Don Mills, Ont.
Olympic Radio & TV Div., Siegler
Corp., 3401 38 Ave., Long Island
City 1, N.Y.
Optics Technology Inc., 248 Harbor
Blvd., Belmont, Calif.
Optomechanisms Inc., Basin St., Plainview, N.Y. Optomechanisms Inc., Basin St., Plainview, N.Y.
Orbitec Corp., 512 30th St., Newport
Beach, Calif.
Orbitran Co., Inc., 11487 Woodside
Ave., Lakeside, Calif.
Oread Electronics Lab. Inc., Hillcrest
Ctr., Box 165, Lawrence, Kan.
Orion Electronic Corp., 108 Columbus
Ave., Tuckahoe, N.Y.
Ortho Industries Inc., 7 Paterson St.,
Paterson I, N.J. Paterson 1, N.J. Ortron Electronics Inc., 151 Taylor St., Orange, N.J. Osborne Electric Co. Ltd., 95 Wesley Osborne Electric Co. Ltd., 95 Wesley St., Toronto 18, Ont.
Sborne Electronics Corp., 13105 S.
Crenshaw Blvd., Hawthorne, Calif.
Oster Mfq. Co., John, Avionic Div.,
1 Main St., Racine, Wisc.
Otis Elevator Co., Def. & Ind. Prod.
Div., 35 Ryerson St., Brooklyn, N.Y.
Ovitron Corp., 42-62 Johnes St.,
Newburgh, N.Y.
Oxford Engineering Corp., 47B River
St., Wellesley Hills 01, Mass.
Oxford Filing Supply Co., Inc.,
Clinton Rd., Garden City, N.Y.



P

PM Electronics, Inc., 3511 Midway Dr.,
San Diego 10, Calif.
PRD Electronics, Inc., 202 Tillary
St., Brooklyn 1, N.Y.
Pace Controls Corp., 661 Highland
Ave., Needham Heights, Mass.
Pacific Automation Products Inc.,
1200 Air Way, Glendale 1, Calif.
Pacific Relays Inc., 13915 Saticoy
St., Van Nuys, Calif. Page Communications Engineers, Inc., 2001 Wisconsin Ave. NW., Washington 2001 Wisconsin Ave. NW., Washington 7, D.C.

Panelgraphic Corp., 66 Kulick Rd., Caldwell, N.J.

Panellit Div., ISI Inc., 7401 N.

Hamlin Ave., Skokie, III.

Panoramic Electronics Inc., 520 S.

Fulton Ave., Mt. Vernon, N.Y.

Parabam Div., Houston Fearless Corp., 12022 Yukon Ave., Hawthorne, Calif.

Par Products Corp., 602 Colorado Ave., Santa Monica, Calif.

Parks Lab., Henry Francis, Box 1665, Lake City Station, Seattle 15, Wash.

Pearson Electronics Inc., 707 Urban Ln., Palo Alto, Calif.

Peeco Corp., 2760 Whittier Blvd., Los Angeles 23, Calif.

Peerless Photo Products Inc., Rt. 25A, Shoreham, N.Y. 7. D.C. Shoreham, N.Y.
Pegasus Labs Inc., 3500 Eleven Mile
Rd., Berkley, Mich.
Penn Keystone Corp., Box 350, Derby, Conn Conn.
Pennwood Numechron Co., 7249 Frankstown Ave., Pittsburgh 8, Pa.
Performance Measurements Co., 15120
Third Ave., Detroit 3, Mich.
Philamon Laboratories Inc., 90 Hopper St., Westbury, N.Y.
Philoo Corp., Sub. Ford Motor Co.,
4700 Wissahickon Ave., Philadelphia 44, Pa.
Philips' Gloeilampenfabrieken, N.V.,
Eindhoven, Holland
Philips' Telecommunicate Industrie,
N.V., Box 32, Hilversum, The Netherlands
Photo Chemical Products, Inc., 999A
Stewart Ave., Garden City, N.Y.
Photo Electronics Corp., 1547 Tenth
St., Santa Monica, Calif.
Photocon Research Products, 421 N.
Altudena Dr., Pasadena, Calif.
Photographic Instrumentation Devel.
Co., 19458 Ventura Blvd., Tarzana,
Calif. lands Co., 1945B Ventura Blvd., Tarzana, Calif.
Photomechanisms, Inc., 15 Stepar Pl., Huntington Station, N.Y.
Photo-Sonics Inc., 820 S. Mariposa St., Burbank, Calif.
Physical Science Corp., 176 Linwood Ave., Fairfield, Conn.
Planet Instrument Inc., 616 S. Lafayette St., Fort Wayne, Ind.
Planoranics Inc., 631 E. First St., Boston 27, Mass.
Plastic Wire & Cable Corp., E. Main St., Jewett City, Conn.
Plug-In Instruments, Inc., 1416
Lebanon Rd., Nashville 10, Tenn.
Pollak Corp., Joseph, 85 Freeport
St., Boston 22, Mass.
Pomona Electronic Co. Inc., 1500 E.
Ninth St., Pomona, Calif.
Post Electronic Products Inc., 12
Lothrop St., Beverly, Mass.
Potter Aeronautical Corp., US Rt. 22,
Union, N.J. Calif. Potter Aeronautical Corp., US Rt. 22 Union, N.J.
Power Instruments Corp., 235 Oregon St., El Segundo, Calif.
Power-Tronic Systems Inc., 10 Pine Ct., New Rochelle, N.Y.
Practa Data-Card System, E. Walnut, Pasadena, Calif.
Precision Electronics, Inc., 9101 King St., Franklin Park, Ill.
Precision Instrument Co., 1011 Commercial St., San Carlos, Calif.
Precision Mechanisms Corp., 44 Brook mercial St., San Carlos, Calif.

Precision Mechanisms Corp., 44 Brooklyn Ave., Westbury, N.Y.

Precision Metal Prod. Co. of Malden,
41 Elm St., Stoneham 00, Mass.
Precision Printed Circuits Mfg. Co.,
440 Old Elm St., Conshohocken, Pa.
Premier Metal Products Co. Inc., Sub.
Renwell Electric Corp. of Delaware,
337 Manida St., Bronx 59, N.Y.

Presin Co. Inc., 2014 Broadway, Santa
Monica, Calif.
Printloid Inc., 10-04 44th Ave., Long
Island City I, N.Y.
Prototype Transformer Corp., 1 Henry
St., Bloomfield, N.J.
Pulse & Digital Labs. Inc., 417 Tremont Ave., Orange, N.J.
Pulse Engineering Inc., 560 Robert
Ave., Santa Clara, Calif.
Pyrometer Co. of America Inc., 600 E.
Lincoln Hwy., Penndel, Pa. Q

Quanta/Dyne Co., Box 353, Woodland Hills, Calif. Quindar Electronics Inc., 5 Lawrence St., Bloomfield, N.J.

RBM Controls Div., Essex Wire Corp., 131 Godfrey St., Logansport, Ind. RIL Electronics Corp., Box 143, Southhampton, Pa. Racal Electronics Ltd., Western Rd., Racal Electronics Ltd., Western Rd., Bracknell, Berks, Eng. Radiation at Stanford, 3180 Hanover St., Palo Alto, Calif. Radiation Counter Labs. Inc., 5121 W. Grove St., Skokie, Ill. Radiation Electronics Co., Div. Comptometer Corp., 5600 W. Jarvis, Chicago 48, Ill. Radiation Technology Inc., 715 Miami Circle NE, Atlanta, Ga. Radio Corp. of America, Broadcast & Commun. Equip. Div., Bldg. 15-5, Camden 2, N.J. Radio Corp. of America, Def. Elec. Radio Corp. of America, Def. Elec. Prods., Bldg. 15-2, Camden, N.J. Radio Corp. of America, Electron Tube Div., 415 S. 5th St., Harrison, Radio Engineering Labs. Inc., 29-01 Borden Ave., Long Island City 1, N.Y. Radio Frequency Labs. Inc., Boonton 2, N.J.
Radionics, Inc., 76 Cambridge St.,
Burlington, Mass.
Rabinow Engineering Co., Inc., 1025
Research Blvd., Rockville, Md.
RAM Electronics, Inc., 600 Industrial
Ave., Paramus, N.J.
Randall, Inc., Douglas, 6 Pawcatuck
Ave., Westerly, R.I.
Randam Electronics Inc., 3091 Shadycrest Dr., Cincinnati 39, Ohio
Rank Cintel Ltd., Worsley Bridge Rd.,
London, 5E 26, Eng.
Raydata Corp., 1078 E. Granville Rd.,
Columbus 24, Ohio
Raypar Electronics Inc., 7000-10 W. columbus 24, Ohio Raypar Electronics Inc., 7000-10 W. Addison St., Chicago 34, Ill. Raytheon Company, Distributor Prods. Div., 411 Providence Tpke., West-wood, Mass. Recordak Corp., Subsid. of Eastman Kodak Co., 770 Broadway, New York 3, N.Y. Rectico Inc., 20 Factory St., Cedar Rectico Inc., 20 Factory St., Cedar Grove, N.J. Redman Electronics Corp., Box 72, Thompsonville, Conn. Reed & Reese Inc., 717 N. Lake Ave., Pasadena, Calif. Regent Controls, Inc., 102 Harvard Ave., Stamford, Conn. Relays, Inc., 162 W. 83 St., New York, 24, N.Y. 24, N.Y.
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Monica, Calif.
Research, Inc., Box 6164, Edina P.O.,
Minneapolis 24, Minn.
Research Calculations, Inc., 200 Boylston St., Chestnut Hill 67, Mass.
Ribet-Desjardinas S.A., 13/17 rue
Périer, Montrouge, Seine, France
Richardson Camera Co., Inc., 2526 N.
Ontario, P.O. Box 3066, Burbank, Ontario, P.O. Box 3066, Burbank, Calif.
Ridgefield Instrument Gr., Div. Schlumberger Well Surveying Corp., Box 337, Ridgefield, Conn.
Rimak Electronics Inc., 10929 Vanowen St., N. Hollywood, Calif.
Roberts Electronics, Inc., 5920 Bow-croft St., Los Angeles 16, Calif.
Robertshaw-Fulton Controls Co., Aero.
& Instr. Div., Santa Ana Freeway & Euclid, Anaheim, Calif.
Robotron Corp., 21300 W. 8 Mile Rd.,
Detroit 19, Mich.
Rochar Electronique Sub. Schlumberger
Ltd., 51 rue Racine, Montrouge,
Seine, France
Rockwell Engineering Co., 2125 E. 45th
St., Indianapolis 5, Ind.
Rotary Devices Corp., 30-40 Jay St.,
Englewood, N.J.
Rotating Components, Inc., 1560 Fifth
Ave., Bay Shore, N.Y.
Runzel Cord & Wire Co., 4723 W. Montrose Ave., Chicago 41, Ill.
Ryan Electronics/Ryan Aeronautical
Co., 5650 Kearny Mesa Rd., San
Diego 12, Calif.

<u>s</u> S-E Labs. Ltd., 606 N. Feltham Est., Middlesex, England S.E.J. Memories, Inc., 231 Rte. 17, Rutherford, N.J. RULDETIOTA, N.J. SRIS Data, Inc., 432 Park Ave. S., New York 16, N.Y. San'ei Instrument Co., Ltd., 1635 Kichijoji, Musashino-Shi, Tokyo, Japan Scantlin Electronics, Inc., 2215 Scantlin Electronics, Inc., 2215
Colby Ave., Los Angeles 64, Calif,
Schweitzer, Peter J., Div. KimberlyClark Corp., Lee, Mass.
Scopes Co. Inc., Box 56, Monsey, N.Y.
Sealectro Corp., 139 Hoyt St., Mamaroneck, N.Y.
Security Devices Lab., Div. Sargent
G Greenleaf, Inc.
Seiscor Div., Seismograph Service
Corp., Box 1590, Tulsa, Okla. Corp., Box 1590, Tulsa, Okla.

Servo Corp. of America, 111 New South
Rd., Hicksville, N.Y.

Servomex Controls Ltd., Crowborough,
Sussex, England
Servonic Instruments Inc., 1644 Whittier Ave., Costa Mesa, Calif.

Servotronics, Inc., 190 Gruner Rd.,
Buffalo 25, N.Y.

Shaw-Walker Co., The, Muskegon 15, Mich.
Shepherd Industries Inc., 103 Park Ave.,
Nutley 10, N.J. Nutley 10. N.J. Shumate Business Forms Co., Lebanon, Shumate Business rorms co., Lebanon, Ind.
Shure Brothers, Inc., 222 Hartrey, Evanston, Ill.
Siemon Mfg. Co., Box 275, Wayne, Ill.
Sierra Research Corp., Box 22, Buffalo 25, N.Y.
Sigma Instruments Inc., Sigma Div., 180 Pearl St., S. Braintree 85, Mass. Mass.
Signal Indicator Corp., 42 Stewart
Ave., Brooklyn 37, N.Y.
Signal Transformer Co. Inc., 1661
McDonald Ave., Brooklyn 30, N.Y.
Siltronics Inc., 2231 Saw Mill Run
Blvd., Pittsburgh 10, Pa.
Sittler Corp., 18 N. Ada St., Chicago
7, Ill. 7. 111. Skiatron Electronics & Television Corp., 180 Varick St., New York 14, N.Y. Smith Inc., Herman H., 2326 Nostrand Smith Inc., Herman H., 2326 Nostrand Ave., Brooklyn 10, N.Y. Solar Systems, Inc., 8241 N. Kimball Ave., Skokie, Ill. Solartron, Inc., 1743 S. Zeyn St., Anaheim, Calif. Sony Corp., 514 Broadway, New York 12, N.Y. N.Y. Southern Instruments Ltd., Frimley Rd. Southern Instruments Ltd., Frimley R Camberley, Surrey, England Space-General Corp., 9200 E. Flair Dr., El Monte, Calif.
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Specialty Electronics Development Corp., 131-01 39th Ave., Flushing 54, N.Y.
Sperry Phoenix Co., 21111 N. 19th Ave. Sperry Phoenix Co., 21111 N. 19th Ave., Phoenix 27, Ariz. Sperry Utah Co., Div. Sperry Rand Corp., 322 N. 21st W. Salt Lake City 16, Utah Square D Co., 4041 Richards, Milwaukee 12, Wisc. Stancor Electronics, Inc., 3501 W. Addison St., Chicago 18, 111. Standard Electric Time Co., 89 Logan St., Springfield 2. Mass. St., Springfield 2, Mass.
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Standard Telephones & Cables Ltd. 29-30 Glasshouse Yd., London EC1, England
Stanley Transformer Co., 31-23 Vernon
Blvd., Long Island City 6, N.Y.
Steelcase, Inc., 1120 36th, S.E., Grand
Rapids 8, Mich.
Sterling Transformer Corp., 510 Driggs
Ave., Brooklyn 11, N.Y.
Stevens-Arnold Inc., 7 Elkins St.,
S. Boston 27, Mass.
Stevens Mfg. Co. Inc., Box 1007,
Mansfield, Ohio
Stewart-Warner Electronics Div., Stewart-Warner Corp., 24 Seneca Ave.,
Rochester 21, N.Y.
Stony Brook Labs. Inc., 55 State Rd.,
Princeton, N.J.
Strand Engineering Co., 7300 Huron England Princeton, N.J.
Strand Engineering Co., 7300 Huron
River Dr., Dexter, Mich.
Stranton Div., Wyco Metal Prods.,
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Strato-Floor, Inc., 795 E. 152nd,
Cleveland 10, Ohio
Straza Electronics Div., 790 Greenfield
Dr., El Cajon, Calif.
Streeter-Amet Co., Grayslake, Ill.
Struthers-Dunn Inc., Lamb's Rd., Pitman, N.J. Non Lifettions Nyam Actionattical Co., 5650 Kearny Mesa Rd., San Diego 12, Calif. Rye Sound Corp., 145 Elm St., Mamaro-neck, N.Y. Rytron Co. Inc., 7301 Lankershim Blvd., North Hollywood, Calif.

tronic Tubes, 1740 Broadway, New York 19, N.Y. Syracuse Electronics Corp., Box 566, Syracuse I, N.Y. Systems Research Labs. Inc., 500 Woods Dr., Dayton 32, Ohio T

TIC of California, Sub, Bowmar Instr. Corp., 850 Lawrence Dr., Newbury Park, Calif.

TRW Computers Co., 8433 Fallbrook Ave., Canoga Park, Calif.

Tab Products Co., 550 Montgomery, San Francisco Il, Calif.

Taber Instrument Corp., 107 Goundry St., N. Tonawanda, N.Y.

Tamar Electronics Div., Tamar Electronics Inc., 2045 W. Rosecrans Ave., Gardena, Calif.

Tamura Electric Works, Ltd., 364 Shimomeguro-2, Meguro, Tokyo, Japan Tamura Seisakusho Ltd., 689 4-chome, Kasiwaqi, Shinjuku-ku, Tokyo, Japan Taper Micrometer Corp., 100 Grove St., Worcester, Mass.

Tarc Electronics Div., Gotham Broadcasting Corp., 48 Urban Ave., Westbury, N.Y.

Taylor Instrument Co. (Ohio) Inc., 557 E. Tallmadge Ave., Akron 10, Ohio Taylor Instrument Cos., 95 Ames St., Rochester I, N.Y.

Tech Laboratories Inc., Bergen & Ed-Taylor Instrument Cos., 95 Ames St.,
Rochester 1, N.Y.
Tech Laboratories Inc., Bergen G Edsall, Palisades Park, N.J.
Technical Associates, 140 W. Providencia Ave., Burbank, Calif.
Technical Measurement Corp., 441 Washington Ave., North Haven, Conn.
Techni-Rite Electronics, Inc., 65
Centerville Rd., Warwick, R.I.
Tech-ohm Electronics Inc., 36-11 33rd
St., Long Island City 6, N.Y.
Tektronix Inc., Box 500, Beaverton,
Ore. Tektronix Inc., Box 500, Beaverton, Ore.
Telautograph Corp., 8700 Bellanca Ave., Los Angeles 45, Calif.
Telco Inc., 45 Rue de la Div du Gen. Leclerc, Gentilly, Seine, France Tele-Dynamics Div., American Bosch Arma Corp., 5000 Parkside Ave., Philadelphia 31, Pa.
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Telectro Industries Corp., 35-16 37th St., Long Island City 1, N.Y.
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Telemetering Corp. of America, 8345 Hayvenhurst Ave., Sepulveda, Calif.
Telemetrics, Inc., 12927 S. Budlong, Gardena, Calif.
Telex/Lumen, Box 905, Joliet, Ill. Telex/Lumen, Box 905, Joliet, Ill.
Tenco Electronics, Inc., 108 Cummington St., Boston, Mass.
Tenlo Research Corp., 9424 Lyndale
Ave., S. Minneapolis 20, Minn.
Tensor Electric Development Co. Inc.,
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Thermo Electric Co., Inc., 109 5th St.,
Saddle Brook, N.J.
Thermocal Div., Jamieson Labs. Inc.,
7000 Haskell Ave., Van Nuys, Calif.
Thermovolt Ltd., 70 Advance Rd.,
Toronto 18, Ontario, Canada
Theta Instrument Corp., 520 Victor St.,
520 Victor St., Saddle Brook, N.J.
Thomas Electronics Inc., 118 9th St.,
Passaic, N.J.
Thordarson-Meissner Mfg. Co., 7th &
Belmont, Mt. Carmel, Ill.
Titan Transformer Co., 229 Binney St.,
Cambridge 42, Mass.
Torotel Inc., 5512 E. 110 St. Kansas
City 37, Mo.
Torotron Corp., Div. Douglas Microwave
Co. Inc., 256 E. 3rd St., Mt. Vernon,
N.Y.
Transformer Design Inc., of Milwaukee, Telex/Lumen, Box 905, Joliet, Ill. N.Y.
Transformer Design Inc. of Milwaukee,
7377 N. 76th St., Milwaukee, Wisc.
Transformer-Electronics Co., Industrial
Park, Boulder, Colo.
Transformer Engineers, 1039 E. Valley
Blvd., San Gabriel, Calif.
Transformers Inc., 200 Stage Rd.,
Vestal, N.Y. Transformers Inc., 200 Stage Rd.,
Vestal, N.Y.
Transistor Specialties, Inc., Terminal
Dr., Plainview, N.Y.
Trepac Corp. of America, 30 W. Hamilton Ave., Englewood, N.J.
Triad Transformer Corp., 4055 Redwood
Ave., Venice, Calif.
Trimm Inc., 400 W. Lake St., Libertyville, Ill.
Trompeter Electronics Inc., 7238 Eton
Ave., Canoga Park, Calif.
Trott Electronics Inc., 412 Smith St.,

Switchcraft, Inc., 5537 N. Elston Ave., Chicago 30, Ill. Sylvania Electric Products Inc., Elec-

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Tuffweld Industries, 4245 W. Roosevelt
Rd., Chicago 24, Ill.
Twentieth Century Electronics Ltd.,
King Henry's Dr., New Addington, Surrey, England

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United Transformer Corp., 150 Varick
St., New York 13, N.Y.
Universal Circuit Controls Corp., 3610 Oakton St., Skokie, Ill.
Universal Match Corp., 472 Paul Ave.,
St. Louis 35, Mo.
Universal Toroid Coil Winding Inc., 171 Colt St., Irvington 11, N.J. Utrad Corp., 305 N. Briant St., Hunt-ington, Ind.

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Flower St., Glendale I, Calif.

Yega Electronics Corp., 10781 N. Hwy.
9, Cupertino, Calif.

Yemaline Products Co., Box 1-ED, Franklin Lakes, N.J.

Garden City, N.Y.

Yickers Inc., Electric Products Div., 1815 Locust St., St. Louis 3, Mo., 1/2 Corp., 2296 Mora Dr., Mountain

Yiew, Calif.

YISIrecord, Inc., 54 Railroad, Copiague, N.Y.

N.Y.

Yith Labs., Div. Vitro Corp. of America, 14000 Georgia Ave., Silver Spring, Md.

Yith Labs., Div., Vitro Corp of America, 200 Pleasant Valley Way, W. Orange, Md.

Young Instrument Corp., 2350 Linden

Blyd., Brooklyn B. N.Y. Vector Electronic Co. Inc., 1100
Flower St., Glendale I, Calif.
Vega Electronics Corp., 10701 N. Hwy.
9, Cupertino, Calif.
Vemaline Products Co., Box 1-ED, Franklin Lakes, N.J.
Vernitron Corp., 600 Old Country Rd.,
Garden City, N.Y.
Vickers Inc., Electric Products Div.,
1815 Locust St., St. Louis 3, Mo.
Vidar Corp., 2296 Mora Dr., Mountain
View, Calif. VISIrecord, Inc., 54 Railroad, Copiague, Vitro Labs., Div. Vitro Corp. of Ameri-ca, 14000 Georgia Ave., Silver Spring, Vogue Instrument Corp., 2350 Linden Blvd., Brooklyn 8, N.Y.

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Waugh Engineering Div., Foxboro Co., 7740 Lemona Ave., Van Nuys, Calif. Wayne-George Corp., 322 Needham St., Newton Highlands 61, Mass. Wayne Kerr Corp., 1633 Race St., Philadelphia 3, Pa.

Webcor Sales Co., 5610 Bloomingdale Ave., Chicago 39, Ill.

Weber Showcase 6 Fixture Co., Inc., P.O. Box 11065, Kearny Station, Los Angles 11, Calif.

Welex Electronics Corp., 1000 16th St., N.W., Washington, D.C.

Wells Electronics Corp., 1701 S. Main St., South Bend 23, Ind.

Weltronic Co., 19500 W. 0 Mile Rd., Southfield, Mich.

Western Union Telegraph Co., 60 Hudson St., New York 13, N.Y.

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bution Transformer Dept., Sharon, Pa. Westinghouse Electric Corp., Electronics Div., Box 1897, Baltimore 3, Md. Westinghouse Electric Corp., Relay & nestingnouse Electric Corp., Relay & Instrument Dept., 95 Orange St., Newark I, N.J. Weston Hydraulics Ltd., Sub. Borg-Warner Corp., 7500 Tyrone Ave., Van Nuys, Calif.

Westport Electric, 149 Lomita St., Westport Electric, 149 Lomita St., El Segundo, Calif. Westrex Co., Div. Litton Systems Inc., 540 W. 58th St., New York 19, N.Y. Wheaton Engineering Div., Hurletron Inc., Box 191, 920 Manchester Rd., Wheaton, Ill. Wheeldex & Simpla, 1000 N. Division, Peckskill, N.Y.

Peckskill, N.Y.

Wheeler Electronic Co., Div. Sperry Rand Corp., 150 Aurora St., Water-bury 20, Conn. Wheelock Signals, Inc., 273 Branch-

Wurlitzer Co., Electronics & Defense Prods. Div., N. Tonawanda, N.Y.

York Metal Products, Inc., 350 Green-wich St., New York 13, N.Y.

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BUYERS' GUIDE FOR THE COMPUTER FIELD: PRODUCTS AND SERVICES FOR SALE OR RENT

(Cumulative, information as of June 1, 1963)

The purpose of this roster "The Buyers' Guide for the Computer Field: Products and Services for Sale or Rent" is to give information about the existence and in many cases the properties of every product or service in the computer field that is offered for sale or rent and about which we have received information in 1963. This is the seventh cumulative edition of this roster.

Product Entry Form for THE COMPUTER DIRECTORY and BUYERS' GUIDE, 1963

1. Name or identification of product (or service)?

	2. Brief description?
Kinds of Entries. There are three kinds of en-	
tries in this list: full entries; cross reference entries;	
and name entries. A full entry contains or should con-	
tain the following information:	3. How is it used?
Name of supplier and address / name or identifica-	
tion of product or service / DESCR: a brief	4. Price range? Between and
description of the product in about 25 words or	5. Under what particular heading should it be listed?
more / USE: how it is used / price range, and	(See the 1962 list of headings)
whether for sale or rent.	
Every entry is subject to editing.	
	Note: Up to 25 words (subject to editing) will be published
Cross-reference entries show that a product	FREE.
listed under one product heading is described more	
fully under another product heading.	If you want more than 25 words published, the charge
	for up to 50 words (still subject to editing) is \$15.00
Name entries consist of just the name of the or-	() Please give us 50 words. Enclosed is \$15.00
ganization, listed under the product class.	()
3	If you wish to FLAG your entry so that it will be quickly
Corrections. We have tried to make each entry	noticed, you can choose CAPITAL LETTERS for the
correct to the extent of information in our possession.	name of YOUR COMPANY and YOUR PRODUCT, and a
But it is inevitable that at least some errors have oc-	black ruled line all around your entry so that it is boxed,
curred, and we shall be glad to publish corrections.	and the charge is \$20.00.
outloa, and no binar so give so publish correction.	() Please FLAG our entry as described. Enclosed
Questionnaire. Many of the entries in this	is \$20.00
roster have been derived from answers to question-	
naires which we sent out to over 700 suppliers in the	Organization_
computer field. The entries have been mainly derived	Address
from answers given on the "Product Entry Form," which	This data supplied by
follows:	Title Date
20,2011.0,	
	•
LIST OF HE	ADINGS
As a guide to the products and services offered	— Plug B2
in the computer field, please refer to the following list	Breadboard Kits B6
of headings under which products and services may be	C: Cameras C3
classified. There is some overlapping among these	— Data Recording C3A
headings; it may be necessary or desirable to look under	Cards (SEE ALSO Punch Cards)C5
more than one heading.	- Punch C6
more than one heating.	— Magnetic C7
A. Adding Machines	Circuits
A: Adding MachinesA1 As	
- Magnetic A4	
	- · · · · · · · · · · · · · · · · · · ·
Analog Computers (SEE Computers, Analog)	
B: Boards — PlottingB1	Communications Systems (Computer Types)C22
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	Computers (SEE ALSO specific types)	C22A	M: Memory Systems	M2
	Computers, Analog	C23	Multipliers	M3
	Computers, Digital	C24	- Diode	M4
	Computers, Special Purpose	C24A	- Electronic	M5
	Computers, Test Equipment	C25	- Servo	M7
	Computer Components (SEE ALSO		O: Office Machines	01
	specific types)	C26	Operations Research	_{O2}
	Computing Services	C27	P: Panels	P1
	— Digital	C28	— Jack	—P2
	Consulting Services	C30	- Relay Rack	P3
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	Controls	C31	Paper Tape	P4
	- Automatic	C32	Patch Cords	P5
	— Signaling	C33	Plotters (SEE ALSO Boards — Plotting)	P6
	 Sorting and Counting 	C34	Plugboards	P6A
	Converters, Information	C39	Printers	P9
	- Analog to Digital	C40	 High Speed 	P10
	- Card to Magnetic Tape	C41	- Keyboard	P11
	- Card to Paper Tape	C42	- Line-a-time	P12
	- Code	C42A	Programming Services	P12A
			Publications	P13
	- Computing	C43		
	- Digital to Analog	C44	- Magazines	P15
	- Digital to Graphic	C44A	Punch Card Machines	P16
	- Graphic to Digital	C44B	R: Readers	R1
	 Magnetic Tape to Card 	C45	Character	R2
	 Magnetic Tape to Paper Tape 	C46	- Film	R2. 5
	 Magnetic Tape to Magnetic Tape 	C46A	 Magnetic Card 	R3
	- Paper Tape to Card	C47	- Magnetic Tape	
	- Paper Tape to Magnetic Tape	C48	- Paper Tape	R6
	Cores	C50	- Photoelectric	R7
	- Ferrite	C51	- Punch Card	R8
	- Magnetic	C52	Recording Papers	R9
	~			
	Counters	C53	Registers, Shift	R11
	- Electronic	C54	Relays (Computer Types)	R12
	— Frequency	C55	Research	R12A
	 Mechanical 	C56	Resolvers	R14
	Courses by Mail (Computer Field)	C58	 Coordinate Transform 	R15
D:	Data Processing Machinery		- Product	R16
-	(SEE ALSO specific types)	D1	— Sine-Cosine	R17
	Data Recording		Robots	R18
	Equipment	D2	Ribbons, Data Processing	R18A
	Data Reduction Equipment	D2A	S: Scanners	S1
	- -	D2A	Servomechanisms	S1
	Delay Lines (Computer Types)		•	
	Desk Calculators	D4	Simulators	S3
	Differential Analyzers	D6	Storage Systems	S4
	Digital Computers (SEE Computers, Dig	ital)	— Magnetic	S5
	Discs, Magnetic	D11	Switches	S6
	Drums, Magnetic	D12	Stepping	S7
E:	Economic Research	E0	Synchros	S8
_	Education (SEE ALSO Courses)	E1	Systems Engineering	S9
F:	Facsimile Equipment	F1	T: Tape Handlers	T2
	Floors	F5	Tape, Magnetic	Т3
	Forms, Continuous	F5A	- Filing Systems	T3A
	Forms Handling Equipment	F7	- Readers	13A
σ.		**********	- Recorders	
<u>u:</u>	Generators, Function	G1		T5
	- Electronic	G2	Reels	T5A
	- Mechanical	G3	Tape, Paper	T6
<u>H:</u>	Heads, Magnetic	H1	 Filing Systems 	T7
	Reading	H2	- Punches	T8
	- Recording	Н3	- Readers	T9
<u> </u>	Information Retrieval Devices	<u> </u>	Telemetering Systems	T10
-	Information Engineering	I2A	Thin-films, Magnetic	T11. 2
	Integrators		Timing Devices	T11.3
	- Electronic	I5	Transformers	T12
	- Mechanical	15 I6	- Pulse	T13
77	Inventory Systems		Translating Equipment	T17
	Keyboards	K1	Typewriters, Electric, Controlled	T18
<u>L:</u>	Lights, Indicator	L1	$\underline{\mathbf{v}}$: Visual Output Devices	V1

ROSTER

A1. ADDING MACHINES

Addo-X. Inc.

Burroughs Corp.

Connecticut Technical Corp. -- see P9

Dashew Business Machines, Inc.

Friden, Inc., 2350 Washington Ave.,

San Leandro, Calif. / Friden Adding

Machine / DESCR: ten-key adding

machine with visual check dials.

"Natural Way" keyboard, automatic

credit balance, automatic step-over

of multiplicand, and other features

for rapid multiplication / Seigeneral application / - / Al

Monroe Calculating Machines Co., Inc.

National Cash Register Co.

Underwood Corp.

Victor Business Machines Co.

A3. AMPLIFIERS Abbey Electronics Corp. Acromag. Inc.
Acton Laboratories Inc.
Adage, Inc.
American Avionics Inc.
American Avionics Inc.
Amplifier Corp. of America, 398
Broadway, New York 13, N.Y. / amplifiers / DESCR: transistorized audio amplifiers to order; also constant output amplifiers with automatic volume control / - / - / A3
Andersen Laboratories, Inc.
Applied Control Corp.
Applied Dynamics, Inc.
Argonaut Associates, Inc.
Beeckman Instruments, Inc.
Bell Aerosystems Co.
Belock Instrument Corp.
Benrus Watch Co. Inc.
B & K Instrument Inc. of Bruel & Kjaer
Boonshaft & Fuchs, Inc.
Bryant Computer Products, Div. of Excell-0 Corp.
Surlingma Associates, Ltd.
Burr-Brown Research Corp.
Cadre Industries Corp.
Cadre Industries Corp.
California Instruments Corp., 3511
Midway Drive, San Dlego 10, Calif. / wideband DC amplifiers / DESCR:
ultra stable, low noise, low drift, high output capability. Within 1 db
DC to 10 KC / USE: instrumentation amplifier, integrator / \$600 to \$800
/ A3
CBC Electronics Co. Inc.
EES Electronic Products, Inc. Acromag. Inc. Acton Laboratories Inc. CBC Electronics Co. Inc. CES Electronic Products, Inc. California Magnetic Control Corp. Canadian Aviation Electronics Ltd. Canadian Aviation Electronics Ltd.
Central Dynamics Ltd.
Central Dynamics Ltd.
Comcor, Inc., 430 S. Navajo, Denver
23, Colo. / D-C amplifier / DESCR:
all solid state±100v DC operational
amplifier Model C1-308. Output current±50 MA, gain - 100, noise
- 3mvp-p, frequency response 3db
down @ 40 kc / USE: analog computer applications / \$315 to \$395 / A3
Comcor, Inc. -- see C23
Computer Components Inc.
Computer Components Inc.
Consolidated Electrodynamics Corp.
Control Technology Co. Control Technology Co. Corning Electronics, Corning Glass Works
Daystrom Inc. Control Systems Div.
DI/AN Controls, Inc.
Dian Laboratories, Inc., 611 Broadway, New York 12, N.Y. / D-C amplifiers / DESCR: chopper-stabilized with 10kc bandwidth and drift less than 30 µv/day. New balance amplifier gives years of trouble-free operation / USE: all inputs and outputs available at patchbay / on request / A3
Electrac, Inc.
Electronic Instruments, Inc.
Electronic Associates, Inc.
Embree Electronics Corp.
Epsco, Inc.
The Foxboro Co.
The Foxboro Co.
The Foxboro Co.
The Geotechnical Corp., 3401 Shiloh
Rd., Garland, Tex. / amplifiers, AM and FM / DESCR: noise levels to .005 microvolt rms; voltage gains to 106; pass bands. 0004 to 20 cps; dynamic ranges to 75 db / USE: to amplify ultra-low-noise and frequency / \$1200 to \$2400 / A3
General Computers, Inc.
Gilfillam Bros. Inc.
Good Electronic Corp.
GPE Controls, Inc.
Gulton Industries, Inc. — see D2A Corning Electronics, Corning Glass Works

Hallicrafters Co.
Hewlett-Packard Co.
Industrial Control Co.
Instruments for Industry Inc.
Intectron Inc.
Jordan Electronics, a div. of The Vic-Intectron Inc.
Jordan Electronics, a div. of The Victorean Instrument Co. — see C26
Keystone Products Co.
Lear, Inc.
Lear, Inc. Instrument Div.
F. B. MacLaren & Co., Inc., 15 Stepar
Place, Huntington Station, L.I. N.Y.
/ packaged servo amplifiers / DESCR:
vacuum tube and transistorized,
plug-in units employing MS components
for military and industrial applications / USE: in precision custom
designed servo mechanisms with AC or
DC error signals / \$100 to \$350 / A3
Marquardt Corp. Pomona Div.
Melcor Electronics Corp.
Military & Computer Electronics Corp.
Model Engr. & Mfg. Corp.
F. L. Moseley Co.
Network Designers Inc.
Nexus Research Laboratory, Inc., 19
Needham St., Dedham, Mass. / solid
state operational amplifiers / DESCR:
line of rugged, high-stability, encapsulated operational amplifiers.
Both all-silicon and Si-Ge versions
available. Package sizes as small
as 0.3 cubic inches / USE: feedavailable. Package sizes as small as 0.3 cubic inches / USE: feed-back circuits as analog operators / \$40 to \$200 / A3 \$40 to \$200 / A3
Non-Linear Systems, Inc., P.O. Box
728, Del Mar, Calif. // amplifiers /
DESCR: precision DC amplifiers with
gains from 1 to 1000, accuracies to
0.01%, frequency ranges from DC up
to 10 KC / USE: precision amplification for analog computers and data
acquisition systems / \$900 to \$1550
/ A3
Orion Electropic Comp acquisition systems / \$900 to \$1550 / A3
Orion Electronic Corp.
Ortrontx, Inc.
Otis Elevator Co.
Packard Bell Computer, a div. of
Packard Bell Electronics
Packard Bell Electronics
Packard Bell Computer Corp.
Philbrick Researches, Inc.
Plug-In Instruments, Inc.
PM Electronics, Inc.
Power-Tronic Systems, Inc.
Radiation Electronics Co. Div. Comptometr Corp.
Radiation Electronics Co. Div. Comptometr Corp.
RayData Corp.
Rador Corp., 7760 Deering Ave., Canoga Park, Calif. / electronic components and data acquisition systems capability / DESCR: low level DC amplifiers; precision voltage and current sources; single ended wideband DC amplifiers, fast recovery, differential DC amplifiers, precision active filters, dual channel, single ended DC amplifiers, etc. / USE: commercial, industrial and military applications / - / A3
Redifon Computer Dept. - see C23
Rixon Electronics, Inc.
Sanborn Co.
Servo Corp. of America
Siemon Mfg. Co.
Sperry Farragut Co., Div. of Sperry Rand Corp.
Sperry Utah Co. Div. Sperry Rand Corp.
Stony Brook Labs. Inc.
Systems Engineering Labs Inc.
Systems Engineering Labs Inc.
Systems Engineering Labs Inc.
Systems Engineering Labs Inc.
To the Computer Corp.
Taber Instrument Corp. Orion Electronic Corp. Tektronix Inc.
Telex/Lumen
M. Ten Bosch, Inc., 80 Wheeler Rd.,
Pleasantville, N.Y. / amplifiers /
- / - / \$100 to \$400 / A3
Trott Electronics Inc.
Vickers Inc. Electronic Prods. Div.
Virginia Electronics Co., Inc., River
Rd. and B&O Railroad, Washington 16,
D.C. / VELCO Model 240, 100 Channel
Modular Line Amplifier Group / DESCR:
transistorized plug-in printed circuit amplifiers stacked for maximum
of 100 cards per power supply. 300
to 3000 cycle response. Designed to
compensate for line losses / USE: in
communications equipment / \$1500 to
\$2500 / A3
The Walkirt Co. Telex/Lumen

A4. AMPLIFIERS, MAGNETIC

Airpax Electronics, Inc. Airpax Electronics, Inc.
Feedback Controls, Inc.
General Electric Co., Specialty Devices
Operation -- see C26
Gulton Industries, Inc. -- see D2A
Polyphase Instrument Co. B1. BOARDS, PLOTTING ACF Electronics Div.

ACF Electronics Div.
Accurate Electronics Corp.
Allegheny Plastics Inc.
Avien, Inc.
B 6 F Instruments, Inc.
Belock Instrument Corp., 112-03 14th
Ave., College Point 56, N.Y. / plotting boards / DESCR: series of X-Y
plotting boards, associated accessory analog computer sections and 6channel recorder. Boards up to 46"
x 40'. Available with digital converter / USE: show aircraft position and heading, missile flight
path, etc. / according to application / Bl
Benson-Lehner Corp., *a / Electroplotter II / DESCR: 30" x 30" digital
input plotter. Plots alphanumerics,
draws lines and curves from magnetic
tape, cards or paper tape data, or
on-line / USE: test data analysis,
automatic drafting, etc. / \$20,000
to \$60,000 / Bl
Benson-Lehner Corp., 14761 Califa St.
Van Nuys, Calif. / Miniplotter /
DESCR: 11" x 17" digital input plotter. Plots alphanumeric draws
lines and curves from magnetic tape,
cards or paper tape data, or on-line
/ USE: test data analysis / \$6000
to \$35,000 / Bl
Burr Electronics
Dura Plastics of N.Y. Inc.
EFF 6 M Electronics Inc.
GAP Instrument Corp.
Gerber Scientific Instrument Co.

FF 6 M Electronics Inc.
GAP Instrument Corp.
Gerber Scientific Instrument Co.
Hallicrafters Co.
Huyck Systems Co., Div. Huyck Corp.
Industrial Engravers, Inc.
LaPointe Industries, Inc.
Loral Electronic Corp.
Milgo Electronic Corp.
F. L. Moseley Co. — see V1
Oki G Willadsen Ltd.
OPTOmechanisms Inc.
Photo Chemical Products, Inc.
Planoramics Inc. Photo Chemical Products, Inc.
Planoramics Inc.
Precision Printed Circuits Mfg. Co.
Servo Corp. of America
Sunshino Scientific Instruments
Sylvania Electronics Systems
Vitro Labs, Div. Vitro Corp. of America
Westgate Laboratory, Inc.
Wilson Camera Co. Inc.

B2. BOARDS, PLUG AC Electronics Inc.
Accurate Electronics Corp.
AMP Inc., Harrisburg, Pa. / pinboards
/ DESGR: rapid, simple programming
method / USE: for matrix and other
programming applications / - / B2
Applied Dynamics, Inc.
Applied Electronics Co.
Avien, Inc.
Cadre Industries Corp.
Cambridge Thermionic Corp. Cadre Industries Corp.
Cambridge Thermionic Corp.
Consolidated Avionics Corp.
Embree Electronics Corp.
Garde Mfg. Co.
Howe Scale Co. Div. Howe Richardson Corp.
Hurletron Control Products Div. -- see
C26 C26
Keystone Electronics Corp.
LaPointe Industries, Inc.
Milgo Electronic Corp.
Molex Products Co.
Nelson Instrument Co.
Oki & Willadsen Ltd.
Ortronix, Inc.
Photo Chemical Products, Inc. Pranoramics Inc.
Precision Printed Circuits Mfg. Co.
Rimak Electronics Inc.
Sealectro Corp.
Sylvania Electronics Systems Sealectro Corp.
Sylvania Electronics Systems
Systron Donner Corp.
Tech Panel Co., Inc., 37 Milford St.,
Binghamton, N.Y. / - / DESCR: control panels, wires and accessory
items for data processing equipment
and inexpensive, compact forms
handling equipment / - / - / B2
Thermo Electric Co. Inc.
United Fabricators & Electronics, Inc.
Vector Electronic Co. Inc.
Virginia Electronics Co., Inc., River
Rd. and BeO Railroad, Washington 16,
D.C. / circuit programming systems /
DESCR: permits rapid changes of
interconnection patterns between
sections or groups of electronic
equipment to effect desired changes
in operations of equipment / USE:
in test equipment, computers, ground

support equipment / \$100 to \$2000 / Westgate Laboratory, Inc.

B6. BREADBOARD KITS

Advanced Electronics. Inc. Advanced Electronics, Inc.
Actual Electronics Corp.
Defiance Printed Circuit Corp.
Digital Sensors Inc.
Electronic Engineering Co. of Cal.
Engineered Electronics Co.
Garde Mfg. Co.
General Electronic Labs, Inc. Garde Mfg. Co.
General Electronic Labs, Inc.
Gulton Industries, Inc.
Harman Kardon Inc., Data Systems Div.,
55 Ames Ct., Plainview, L.I., N.Y. /
Facilogic / DESCR: systems interwiring for breadboarding, construction
of specialized test equipment, and
training of personnel / USE: rapid
translation of diagrams into systems / \$975 to \$1500 / B6
Jonsen Electronics Mfg. Inc.
Keystone Electronics Mfg. Inc.
Keystone Electronics Corp.
Laguna Scientific Industries
Marquardt Corp. Pomona Div.
Phillips Control Co.
Precision Metal Products Co. of Malden
Precision Printed Circuits Mfg. Co.
Reeves Instrument Corp.
Rimak Electronics Inc.
Techniques, Inc.
Ucinite Co. Div. UCF
Var-L-Co. Inc.
Walsco Electronics Mfg. Co.
Wells Electronics Co.
Wittek Products Co.

C3. CAMERAS C3. CAMERAS

Analab Instrument Corp.
Beattie-Coleman, Inc.
Burke & James, Inc.
Chicago Aerial Industries, Inc.
Copy Research Corp., 875 W. Fifteenth,
Newport Beach, Calif. / KALCON 201
Film Duplicator / DESCR: provides
permanent high resolution duplicates
with broad gray scale by unique dry
process in normal room light without
aid of technician / USE: aerial
film reproduction / \$2450 / C3
Diamond Electronics, Diamond Power
Specialty Corp., Box 415, Lancaster,
Ohio / CCTV and associated equipment / DESCR: video operating equipment, switchers, sync equipment,
power supplies, professional monitors,
camera chains. Video operating equipment -- color, sync equipment,
camera chains, professional monitors
/ USE: industrial control and process observation / \$2000 to \$6000 /
C3
DUMONT Labs. Allen B. Divs. Fairchild DuMont Labs. Allen B. Divs. Fairchild Cam. & Inst. Corp.
EMI-Cossor Electronics Ltd.
Eastman Kodak Co. Eastman Kodak Co. Edgerton, Germeshausen & Grier Inc. Electro-Medical Lab. Inc. Electronic Tube & Instr. Div. Gen. Atronics Corp. Fairchild Camera & Instr. Corp. De-Atronics Corp.
Fairchild Camera & Instr. Corp. Defense Prods. Div.
Fairchild Camera & Instr. Corp. Ind'l.
Prods. Div.
Flight Research, Inc.
Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif. / Friden ComposO-Line / DESCR: high-speed sequential card camera. Photographs reusable data from cards, produces
positive or reversed negatives or
reproduction proofs ready for platemaking / USE: publishing lists, directories, manuals, etc. / - / C3
Geotechnical Corp.
The M. P. Goodkin Co., 112-120 Arlington St., Newark 2, N.J. / process and
copy cameras / DESCR: complete camera systems for visual inspection and
reproduction of material for one or
more hard copies / USE: for computer print out, to make hard copy or
printing plate / \$500 to \$2200 / C3
Gordon Enterprises
Hathaway Instrument, Inc. Sub. Lionel
Corp.
Hewlett-Packard Co.
Millen Mfg. Co.
OPTOmechanisms Inc. Millen Mfg. Co.
OPTOmechanisms Inc.
Panoramic Electronics Inc. Pan Products Corp.
Philbrick Researches, Inc.
Phillps Electronic Instruments
Philips Cloeilampenfabrieken N.V.
Photographic Instrumentation Develop-

Photomechanisms, Inc. Photo-Sonics, Inc.
Ribet-Desjardins
Southern Instruments Ltd.
Special Products & Applied Research Div.
The de Havilland Aircraft of Canada, Ltd. Tektronix Inc. Traid Corp.
Westgate Laboratory, Inc.

C3A. CAMERAS, DATA RECORDING

ACR Electronics Corp. Abrams Instrument Corp.
Adtrol Electronics Inc.
Anslo Div. G.A.F.
Bach Auricon Inc. Beattie-Coleman, Inc.
Beckman & Whitley, Inc.
Benson-Lehner Corp.
Burke & James, Inc.
Canadian Applied Research Div. A. V. Roe Can. Ltd. Century Electronics & Instruments. Inc.
Chadwick-Helmuth Co., 111 E. Railroad
Ave., Monrovia, Calif. / *370 Pulse
Camera / DESCR: 100 ft. 16 mm
film; requires 15 volt pulse for
each frame; to 30 frames / sec. /
USE: record CRT, CCTV, and counter
outputs / \$2180 / C3A
Eugene Dietzgen Co.
Eastman Kodak Co.
Electro Instruments, Inc.
Electronic Commun. Component Design 6-Electronic Commun. Component Design & Dev. Corp. FF & M Electronics Inc. FMA Inc. Fairchild Camera & Instr. Corp. Defense Prods. Div. Ferranti Electric Co. Inc. Flight Research, Inc. General Aniline & Film Corp. Ansco Div. General Electric Co. X-Ray Dept. General Electric Co. X-Ray Dept.
Geo Science, Inc.
Geophysics Corp. of America
Geotechnical Corp.
Gordon Enterprises
Information International, Inc., P.O.
Box 106, Maynard, Mass. / film
reading services / DESCR: computer
reading of scientific data recorded
on film / - / - / C3A
Instrument Co. of Fla.
Itek Labs Div. Itek Corp.
Midwestern Instruments, Inc.
Northrop Nortronics, Systems Support
Dept. -- see D2
Oceanographic Engrq. Corp. Oceanographic Engrg. Corp.
OPTOmechanisms Inc.
Par Products Corp.
Photo Electronics Corp. Photomechanisms. Inc.
Photo-Sonics, Inc.
Telco, Inc.
Traid Corp.

C5. CARDS (SEE ALSO PUNCH CARDS)

American Business Systems, Inc., 2929
"B" St., Philadelphia 34, Pa. /
data processing cards / DESCR: regular and special cards / - / - /
C5

CS
Computer Logic Corp.
Management Research Assoc., 14 Hill
Drive, Dune Acres, Chesterton, Ind.
/ multiple purpose self-trainer /
DESCR: pull-tab card / USE: as a
study guide, review test and feedback device / \$7.50/hundred to
\$12.00/hundred / CS
National Physical Laboratory, Mathema-

tics Div.

C6. CARDS, PUNCH

C6. CARDS, PUNCH

American Business Systems
Ansell-Simplex Ticket Co.
Beemak Plastics, 7424 Santa Monica
Blvd., Los Angeles 46, Calif. / tab
card holders / DESCR: plastic. Can
be attached to products, conveyor
belts, bins, boxes, shelving, to implement production and inventory
control, invoicing, etc. / free
sample on request / USE: to hold
punched cards / \$10/100 in 10M quantity; \$3.95/dozen in quantity less
than 100 / C6
W. H. Brady Co., 727 W. Glendale Ave.,
Milwaukee 9, Wis. / key punch correction seals / DESCR: SuperThin
seals of tough, self-sticking Mylar
to plug mispunched holes in tab
cards / USE: applied over mispunched hole / 30¢ to 50¢ per card
of 222 seals / C6

Consolidated Business Systems, Inc. International Business Machines Corp. Master-Craft Corp. Midwest Tabulating Card Producers, Inc. Moore Business Forms, Inc. National Physical Laboratory, Mathematics Div. Ortronix, Inc. matics Div.
Ortronix, Inc.
Shelby Salesbook Co.
Shumate Business Forms Co.
Standard Register Co.
Uarco, Inc.
Varifab, Inc.

C7. CARDS, MAGNETIC

Ansell-Simplex Ticket Co.
International Business Machines Corp.

C9. CIRCUITS, ARITHMETICAL (FOR DIGI-TAL COMPUTERS)

Adage, Inc. — see Cll

AMP Inc., Harrisburg, Pa. / AMP-MAD /
DESCR: digital circuit devices
made with exclusive multiaperture
type ferrite cores and wire / USE:
decimal counters, digital counters,
digital comparators, in word generation, sequential selection, and
other logic functions / - / C9
Control Logic, Inc. — see Cll
Crystalonics Inc., 147 Sherman St.,
Cambridge 40, Mass. / neuron logic
device / DESCR: universal logic element (AND-OR-MAND-NOR-exclusive ORflip flop-one shot-inverter) fan out
greater than 100. Logic levels 3
to 30 volts / USE: basic computer
element / - / C9
Delco Radio Div., General Motors Corp.,
700 E. Firmin St., Kokomo, Ind. /
digital circuits / DESCR: plug-in
card and welded module types. Germanium and silicon environments,
speeds to 10 m.c. maintained in inventory, gates, flip-flops, single
shots, multivibrators, drivers, etc.
/ USE: interconnected to form
various computer functions / \$20 to
\$200 / C9 Adage, Inc. -- see C11

various computer functions / \$20 to \$200 / C9

various computer functions / \$200 / C9
G. C. Dewey Corp. -- see Dl
Digital Equipment Corp., 146 Main St.,
Maynard, Mass. / digital circuit modules / DESGR: over 200 types;
solid state, 3 compatible frequencies (500KC, 5MC, 10MC), specially packaged for systems design, test, construction applications. Flipflops, pulse amplifiers, oscillators, etc. / USE: systems design, test, and construction applications / \$28 to \$400 / C9
Harman Kardon Inc., Data Systems Div. -- see B6
International Business Machines Corp., Federal Systems Div.

Federal Systems Div.
Mathatronics, Inc.
Solid State Electronics Corp., 15321

olid State Electronics Corp., 15221
Rayen St., Sepulvedo, Calif. / silicon digital logic modules / DESCR:
operation up to 10 megacycles/second
over temperature range -550°C to
+1259°C. Logic modules avalable: JK flip-flop (logic), flip flop,
counter/shift register, "and-or"
gates, Schmitt Trigger, inverting amplifiers, etc. / USE: custom / \$30
to \$150 / C9

C10. CIRCUITS, COMPUTER, PACKAGED

Adage, Inc. -- see C11 Adage, Inc. -- see C11
Burroughs Corp., Electronic Components
Div., P.O. Box 1226, Plainfield, N.J.
/ BIFCO(B) Modules / DESCR: builtin-place semiconductor assemblies
containing up to 10 silion transistors and 100 silicon diodes. Perform
counting decoding adding adding containing up to 10 silkon transistors and 100 silicon diodes. Perform counting decoding, adding, and general NAND logic functions / USE: as functional circuit packages in electronic systems / \$35 to \$70 / Cl0

Computer Logic Corp., 11800 W. Olympic Blvd., Los Angeles 64, Calif. / LOGIC-LAB / DESCR: ready-to-use 300KC or 3MC units. Includes logic, storage, shift, memory, or display units. Removable program board and patch cords / USE: user patches own applications in simulation, test gear, teaching, or computing / \$1000 to \$12,000 / Cl0

Control Logic, Inc. — see Cl1

Delco Radio Div., General Motors Corp. — see C9

G. C. Dewey Corp. — see D1

Digital Electronics Inc.

Digital Equipment Corp. — see C9

Engineered Electronics Co., 1441 E. Chestnut Ave., Santa Ana, Calif. / digital circuit modules / DESCR: transistor digital circuit modules on
printed circuit cards for frequencies
up to 10 Mc and in plug-in containers
for frequencies up to 250 kc / USE:
in digital systems and equipment (including computers) / \$11 to \$97 /
C10

Elliott Bros. (London) Ltd. (a member
of the Elliott-Automation Group)
Engineered Electronics Co. -- see C10
Enirchid Semiconductor
General Electric Co., Receiving Tube
Dept.

Gulton Industries, Inc. -- see D2A
Harman Kardon Inc., Data Systems Div.

Fairchild Semiconductor
Gulton Industries, Inc. -- see D2A
Harman Kardon Inc., Data Systems Div.,
55 Ames Ct., Plainview, L.I., N.Y. /
digital logic / DESCR: transistorized digital circuit modules and
cards with over 100 standard subminiature logical configurations. Frequency ranges D.C. to 25 Mc.; temperature ranges -250C to +1250C / USE:
in digital systems and data processors / \$7.50 to \$00 / C10
Hurletron Control Products Div. -- see
C26 Fairchild Semiconductor

C26
International Business Machines Corp.,
Federal Systems Div.
Mathatronics, Inc.
Sanders Associates, Inc. — see C44
Solid State Electronics Corp. — see C9
Sperry Farragut Co., Div. of Sperry
Rand Corp.
Sprague Electric Co. — see C26

C11. CIRCUITS, LOGICAL (FOR DIGITAL COMPUTERS)

Abacus Inc., 1718 21st St., Santa Mo-nica, Calif. / digital modules / DESCR: digital modules / USE: in digital systems / \$8 to \$20 per circuit / CII

circuit / Cll
Adage, Inc., 292 Main St., Cambridge
42, Mass. / ADIELOC (TM) / DESCR:
fully-integrated analog and digital
modules; accomplish optimum labor
division between analog and digital
operations; implement exploration,
using combined analog/digital techniques / USE: in design and construction of data systems / modules
individually priced / Cll
AMP Inc. — see C9
Amperex Electronic Corp.
Centralab

AWF Inc. -- see C9
Amperex Electronic Corp.
Centralab
Computer Control Co., Inc., Old Connecticut Path, Framingham, Mass. /
digital logic modules -- 3C PACS /
DESCR: S-PACS (200 kc, 1 mc, 5 mc)
-- all compatible; Silicon S-PACS
(1 mc, - 55°C to + 100°C); H-FACS
(20 mc). Broad range of standard
types, plus memory and supplementary PACS / USE: building blocks
for digital computing, control, and
data processing systems / \$23 to
\$997 / C11
Computer Logic Corp., 11800 W. Olympic Blvd., Los Angeles 64, Calif. /
logic cards and systems / DESCR:
complete line of 300KC, 3MC, and
10MC plug-in logic cards. Many analog cards; 4-3/6" x 3-3/4". Drawers,
cages, power, etc. / USE: user of
CLC assembles parts to make custom
systems / \$13.50 to \$350 (various
components) / C11
Consolidated Avionics Corp.
Control Equipment Corp., 19 Kearney
Rd., Needham Heights 94, Mass. / di-

Consolidated Avionics Corp.
Control Equipment Corp., 19 Kearney Rd., Needham Heights 94, Mass. / digital modules / DESCR: complete family of digital modules operating at speeds from DC to 40 megacycles / USE: to assemble digital systems and instruments / \$10 to \$100 / C11 Control Logic, Inc., 11 Mercer Rd., Framingham, Mass. / digital circuits / DESCR: high reliability miniaturized welded digital circuits. System components such as

cuits / DESCR: high reliability miniaturized welded digital circuits. System components such as analog to digital converters. Digital systems for industrial control and military use / USE: design and production of digital systems / varied / C11
Crystalonics Inc. -- see C9
Delco Radio Div., General Motors Corp. -- see C9
G. C. Dewey Corp. -- see D1
DI/AN Controls, Inc.
Digital Electronics Inc.
Digital Electronics Inc.
Digital Equipment Corp. -- see C9
EDP Corp., 3501 South Orange Blossom Trail, Orlando, Fla. / logic circuits / DESCR: on plug-in printed circuit cards; speeds to 2 mc, 10 mc; multivibrators, NAND gates, lampdrivers, zero crossing detectors, oscillators and tone gates, delay gates, computer inputs / USE: in digitizers, special computers, control systems and timing systems / \$10 to \$106 / C11 \$10 to \$106 / C11

Dept.
Gulton Industries, Inc. -- see D2A
Harman Kardon Inc., Data Systems Div.
-- see C10, B6
Intercontinental Instruments Inc.,

ntercontinental Instruments Inc., 123 Gazza Blvd., Farmingdale, N.Y. digital logic elements / DESCR: 3 mcps and 10 mcps diode-coupled NAVD logic circuits. Plug-ins for rack mounting and chassis mounting. Accessories available / USE: computer systems design / \$40 to \$150 / Cll

International Business Machines Corp., Federal Systems Div.

LFE Electronics, A Div. of Laboratory
For Electronics
Lockheed Electronics Co., Avionics and

Lockheed Electronics Co., Avionics and Industrial Products Div.
F. B. MacLaren & Co., Inc.
Motorola Semiconductor Products Inc.,
5005 E. McDowell Rd., Phoenix 8,
Ariz. / integrated circuits / DESCR:
3-input gate, bias regulator, gate expander, etc. / USE: computer logic circuits / available on request / Cil
Packard Bell Computer, a div. of
Packard Bell Computer, a div. of
Packard Bell Electronics
Raytheon Co., Communications and Data
Processing Operation
Redor Corp.

Processing Operation
Redoor Corp.
Sanders Associates, Inc. -- see C44
Signetics Corp., 600 W. Maude Ave.,
Sunnyvale, Calif. / semiconductor
integrated circuits / DESCR:
standard and custom fabricated within monolithic semiconductor substrates by planar epitaxial techniques. Include gates, flip-flops,
drivers, delays, diode arrays for
high speed, low power computer applications / USE: assembled into
computer systems / \$20 to \$110 / C11
Solid State Electronics Corp. -- see
C9

Sprague Electric Co. -- see C26 Systems Engineering Laboratories, Inc. Tech Serv Inc. Transitron Electronic Corp. H. W. Ulmer Co.

C22. COMMUNICATIONS SYSTEMS (COMPUTER TYPES)

ACF Electronics Div., ACF Industries Adcom Corp. Adler Electronics, Inc. Admiral Corp.
Aero Geo Astro Corp.
Airborne Instruments Lab. Mil. Mktg. Div. Alto Scientific Co. Inc. Alto Scientific Co. Inc.
American Machine & Foundry Co.
American Telephone & Telegraph Co.
and Associated Bell Systems Telephone Companies, Gtq) 195 Broadway,
New York 7, N.Y. / Data-Phone Data
Sets / DESCR: data terminals which
connect compatible business machines
to telephone network or leased connect compatible business machines to telephone network or leased lines / USE: provide serial or parallel transmission of data, digital or analog, at speeds up to 2400 bps / \$5 and up/month / C22 Ampex Corp.
Anadex Instruments, Inc.
Applied Electronics Corp. of N.J.
Applied Technology Inc.
Armstrong Whitworth Equipment
Atlantic Research Corp.
Auto-Trol Corp.

Auto-Trol Corp.
Automation Dynamics Corp.
Automation Management, Inc.
Avco Corp. Electron & Ord. Div.
Avco Research & Adv. Devel. Div. Avco Research & Adv. Devel Div.
Avien, Inc.
Beckman Instruments Inc. Systems Div.
Bell Aerosystems Co.
Bristol Co.
Budd Co. Inc. Electronics Div.
Budelman Electronics Corp. Sub. Gen.
Rwy. Sig. Co.
Burr Electronics

Burr Electronics
C.S.F.
Cadre Industries Corp.
Cardion Electronics Inc.
Codamite Corp., P.O. Box 2914 Anaheim,
Calif. / subminiature digital equipment / DESCR: code generators, decoders, code trunslators; subminiature / USE: mainly in digital communications / \$500 to \$50,000 / - /
C22
Connitronics Corp.

Cognitronics Corp.
Cohu Electronics, Inc. Kin. Tel. Div.

Collins Radio Co. -- see C24A Colorado Instruments
Colorado Research Corp.
Communications Control Corp. Consolidated Systems Corp. Consolidated Systems Corp.
Control Corp.
Control Data Corp.
James Cunningham, Son & Co., Inc.
Data-Control Systems Inc.
Data Products Co. Inc. Data-Control Systems Inc.
Data Products Co. Inc.
Data Products Co. Inc.
Data Trends, Inc., 1259 Route 46, Parsippany, N.J. / consulting — digital equipment and programming / DESCR: engineering and programming ingranization experienced in concept, systems analysis, programming, installation and checkout of largescale, real-time computer systems, both commercial and military / USE: based on client's needs / subject to client's requirements / C22
Daystrom Inc. Control Systems Div. Del Mar Engineering Labs
G. C. Dewey Corp. — see Dl
A. B. Dick Co.
Digital Sensors Inc.
Digitronics Corp., l Albertson Ave.,
Albertson, L.I., N.Y. / Dial-overter System / DESCR: transmits data at high speed over telephone lines, broadband or microwave. Paper tape, punched card and magnetic tape terminals. All compatible with each other / USE: to transmit data between remote points / \$135/month to \$1205 / C22
Dynalog Electronics Corp.
Electro-Mechanical Research, Inc., Advanced Scientific Instruments Div.,
% a / Analog/Digital Buffer Model BO Electro-Mechanical Research, Inc., Advanced Scientific Instruments Div., a / Analog/Digital Buffer Model BO Series / DESCR: accessory to ASI 210 digital computer; analog/digital buffer controls communication with multi-channeled analog-digital conversion systems / USE: computer compatibility with A/D conversion systems / - / C22 Electro-Mechanical Research Inc., Advanced Scientific Instruments Div., 5249 Hanson Court, Minncapolis, Minn., Data Communication Buffer Model A70 Series / DESCR: accessory to ASI 210 digital computer provides direct data communication provides direct data communication between the 210 and either another 210 system or some larger computer system / USE: buffer and translator between computer systems / - / Electronic Communications, Inc.
Electronic Commun. Component Design
& Dev. Corp.
Electronic Control Products & Dev. Corp.

Electronic Control Products
Epsco, Inc.
Executone, Inc. -- see OI
Fairchild Camera & Instr. Corp. Defense Prods. Div.
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera and Instrument Corp.
Friden, Inc., *a / Friden Collectadata Collection System / DESCR: advanced data collection system. Transmitters spotted throughout plant send data over common cable to contral receiver which punches tape with automatic time-code entry. Variety of transmitting units for individual requirements: punched card, dual punched card, punched ID badge, combination card-badge. Special accuracy checks / USE: collects data in punched tape form for preparation of management reports; attendance recording / - / C22
Friden, Inc., *a / Friden Dual Teledata / DESCR: transmitter-receiver for 5-, 6-, 7-, or 8-channel paper tape. Transmission channels to double normal speed. Parity check for accuracy / USE: data communications / - / C22
Friden, Inc., *a / Friden Teledata curacy / USE: data communications / - / C22
Friden, Inc., *a / Friden Teledata Switching Control Unit / DESCR: regulated two-way Teledata transmission in multi-station hookups; signals that data is to be transmitted, selects receiving station, isolates malfunctions or line faults / USE: data communications / - / C22
Friden, Inc., *a / message and data communications equipment / DESCR: special Friden Flexowriters with 3-or 4-bank keyboards and 5- or 8-channel punched tape facilities; prepare original document and punched tape for transmission / USE: data communications / - / C22
Friden, Inc., 2350 Washington Ave.,

San Leandro, Calif. / Friden Teledata / DESCR: transmitter-receiver for 5-, 6-, 7-, or 8-channel paper tape. Parity check for accuracy. Compatible with Data-Phone / USE: data communications / - / C22
Fuji Tsushinki Seizo K.K.
Gates Radio Co.
General Devices, Inc. General Devices, Inc.
General Devices, Inc.
General Dynamics/Electronics Rochester
G-E Communication Products Dept.,
Lynchburg, Va. / data communications
/ DESCR: Design, manufacture and
install data communications equipment operable over microwave or common carrier; high speed TDS-90 and
TDS-91 data equipment / USE: links
peripheral computers to main computer center / to order / C22
General Mills, Inc. Electronics Div.
General Precision Inc.
Getechnical Corp.
Gilfillan Bros. Inc.
Gulton Industries, Inc.
Hallamore Electronics Div. Siegler
Corp. Corp. Hallicrafters Co. Harman Kardon Inc., Data Systems Div. -- see DI Hoffman Electronics Corp. MilProds. Div.
Hughes Dynamics, Inc. -- see C30
International Business Machines Corp.. Federal Systems Div.
ITT Federal Laboratories, a div. of Federal Systems Div.

ITT Federal Laboratories, a div. of
International Telephone and Telegraph Corp., %a / ITT 025-Real Time
Data Processor / BESCR: solid state
parallel binary programmed computer
designed to solve real time/automation problems. Handles 256 different inputs, stores over 400 million bits of information / USE: digital store and forward communications processor / \$1,200,000 to
\$3,000,000 / C22

ITT Federal Laboratories, a div. of
International Telephone and Telegraph Corp., 500 Washington Ave.,
Nutley 10, N.J. / ITT 525 Versatile
Automatic Data Exchange (VADE) /
DESCR: real time processor, 2 microsecond read-write memory, 4 mc
clock. Handles 32 high speed data
lines, 256 start-stop or similar inputs. Accepts serial/parallel information / USE: store and forward
communications processor or similar
applications / \$500,000 to \$2,000,000
/ C22
ITT Industrial Labs Div. ITT Industrial Labs Div.
ITT Kellogg Div.
Instruments for Industry Inc.
Intercontinental Electronics Corp.
Kobe Kogyo Corp.
Lamson Corp., Lamson St., Syracuse 1,
N.Y. / Lamson Airtubes B / DESCR:
custom engineered: conventional,
semi-automatic and automatic pneumatic tube systems with standard size
carriers to 5" x 13". Vacuum or
pressure moves carrier 35'/sec.
Manual or electronic control / USE:
to carry test samples from production
to computer analysis department and
return results; to carry punch cards
and data in inplant collection systems / - / - / C22
Land Air Inc.
Leach Corp. ITT Industrial Labs Div. Land Air Inc.
Leach Corp.
Lenkurt Electric Co. Inc.
Lynch Communication Systems Inc.
Marconi Radio Div. English Elec. Corp.
Marquardt Corp. Pomona Div.
Martin Marietta Corp.
Milgo Electronic Corp.
Mincom Div. Minn. Mining & Mfg. Co.
Minn-Honeywell, Military Prods. Gr.
Monitor Systems Inc.
Motorola Communications Div.
National Co. Inc.
Northern Radio Co. Inc.
Omnitronics, Inc., Subsidiary of BorgWarner Corp.
Ortronix, Inc., Warner Corp.
Ortronix, Inc.
Page Communications Engineers Inc.
Philoc Corp.
Philips' Telecommunicatie Industrie N.V.
Quindar Electronics Inc.
Radio Corp. of America Def. Elec. Prods.
Radio Corp. of America, Electronic
Data Processing
Radio Engineering Labs Inc.
Radio Frequency Labs Inc.
Raytheon Co. Commun. & Data Proc.
Rese Engineering Corp.
Rixon Electronics, Inc., °a / DD Line
/ DESCR: modular line of digital
data communications equipment providing a high degree of systems ver-

satility and reliability at data rates to 4800 bits per second / USE: in almost any requirement involving digital data transmission / -/ C22 Rixon Electronics, Inc., %a / Sepath / DESCR: serial-parallel converter system provides reliable high-speed transmission of digital data over existing H-F radio links at data rates to 2400 bps / USE: with AN/FGC-29 or similar frequency multiplex equipments / -/ C22 Rixon Electronics, Inc., 2121 Industrial Parkway, Silver Spring, Md. / Sebit / DESCR: serial transmission of digital data over nominal voice bandwidth wireline communications circuit at speeds to 2400 bps . Also modular configuration which provides data rates to 4800 bps / USE: in satellite tracking systems and surveillance systems / -/ C22 Robertshaw-Fulton Controls Co. Aero & Instr. Div. Instr. Div.
Ryan Electronics/Ryan Aero. Co.
Scantlin Electronics, Inc. Instr. DIV.
Nyan Electronics/Ryan Aero. Co.
Scantlin Electronics, Inc.
Security Devices Labs.
Soroban Engineering, Inc.
Space-General Corp.
Spartan Corp.
Spartan Corp.
Sperry Phoenix Co.
Standard Telephones & Cables, Ltd.
Strand Engineering Co.
Sylvania Electronic Systems
Systematics, a Div. of General Instrument Corp.
Systems Engineering Labs. Inc.
Tally Register Corp.
Telautograph Corp.
Teleutering Corp. of America
The Teleregister Corp., 445 Fairfield
Ave., Stamford, Conn. / data communications systems / DESCR: complete line of transceivers for large-scale processing systems permitting transmission of computer queries from keysets at various line-speeds and in various formats / USE: with on-line airline reservations systems, on-line bank systems, and others / upon request / C22
Teletype Corp.
Texas Instruments Incorporated Appar.
Div. Govt. Prods. Gr.
Towson Labs Inc.
Transitel International Corp., 615
Winters Ave., Paramus, N.J. /
self-optimizing data terminals / DESCR: paper- or magnetic-tape or punch card terminals with automatic bit rate and code optimization to maximize flow of unerrored data under any link condition / USE: for business-machine to business-machine long distance communication / \$3000 to \$8000 complete / C22 business-machine to business-machine long distance communication / \$3000 to \$8000 complete / C22 Trepac Corp. of America Union Switch & Signal Div. of Westinghouse Air Brake Co. U.S. Science Corp. Victor Adding Machine Co. Victor Comptometer Corp. Business Machines Div. Victor Comptometer Corp. Business
Machines Div.
Vitro Labs. Div. Vitro Corp. of America
Wang Laboratories Inc.
Western Union Telegraph Co.
Westinghouse Electronics Div.
Winder Aircraft Corp.
Wurlitzer Co. Elec. & Def. Prod. Div. C22A. (COMPUTERS) Adage, Inc., 292 Main St., Cambridge 42, Mass. / bi-directional computer links / DESCR: join simultaneously-operating digital and analog compu-ters. Instrumentation includes Adage A-D and D-A converters and input-output accessory equipment / USE: to implement hybrid computation of analog and digital computers / - / C22A
Autonetics Industrial Products, a Div. of North American Aviation, Inc. -- see C24
Basic & Experimental Physics -- see Bendix Corp., Research Laboratories Bendix Corp., Research Laboratories
Div.
Clary Corp.
Control Logic, Inc.
Datex Corp.
The Foxboro Co., Neponset Ave., Foxboro, Mass. / digital systems /
DESCR: design and manufacture of
digital systems which gather process measurements, determine alarm
conditions and calculate performance
parameters for visual display or
direct process control / USE: process control / - / C22A
International Business Machines Corp.,

International Business Machines Corp.,

Federal Systems Div.
Lockheed Electronics Co., Information Technology Div.
Mathatronics, Inc. -- see C24
The Nissho Co., Ltd., Electronic Section
Saunders & Co., 53 Everett CAA, Waltham 54, Mass. / computer needs /
DESCR: small computers, components, DESCR: small computers, components and test equipment for process control. System ready to cable into transducers and/or test equipment required provided according to specifications on input and output transducers and function or logic between same / - / \$100 to \$20,000 / C22A TRW Computers, a div. of Thompson TRW Computers, a div. of Thompson Ramo Wooldridge, Inc. -- see C24
The Teleregister Corp., 445 Fairfield Ave., Stamford, Conn. / computers / PESCR: Telefile data processor, large-scale, on-line, multiple-computer data-processing system with many peripheral subsystems; Magnetronic Reservisor data processor special computer for airline. Magnetronic Reservisor data proces-sor, special computer for airline reservations and inventory systems / USE: airline reservations, inven-tory and passenger-record systems, on-line banking systems, and others / upon request / C22A C23. COMPUTERS. ANALOG AR & DA Div. All-Amer. Engrg. Co. Advancement Devices Inc. Aeroflex Labs. Inc. Aeronca Mfg. Co. Airborne Instruments Lab. Mil. Mktg. Div.

Ampex Corp.

Amplied Dynamics, Inc., 2275 Platt Rd.,
Ann Arbor, Mich. / AD Computers /
DESCR: design, development and manufacture of general purpose and
special purpose analog computers
and computer components. Computers
range in size from 16 to 256 operational amplifiers / USE: engineering research and development, online data reduction / \$1000 to
\$200,000 / C23

Applied Electronics Corp. of N.J.
Argonaut Associates, Inc. Applied Electronics Corp. of N.J.
Argonaut Associates, Inc.
Astrosystems, Inc.
Automation Management, Inc., 25 Brigham St., Westboro, Mass. / PerK I,
PerK II, performance computer /
DESCR: PerK I records actual production rate as a percent of
standard performance minute by
minute. PerK II records percent
averaged from beginning of production run / USE: sensor is attached to office or factory machine
to sense unit produced or machine to sense unit produced or machine cycles. Rate of impulses is compared to standard rate and recorded on a chart in PerK / \$250 to \$490 / C23 Avco Corp. Electron & Ord. Div. Bailey Meter Co. Basic & Experimental Physics -- see Beckman Instruments Inc., Berkeley Div. Beckman Instruments Inc., Berkeley Div. Bell Aerosystems Co. Belock Instrument Corp., 112-03 14th Ave., College Point 56, N.Y. / analog computers / DESCR: precision electromechanical 400-cycle computing servos and transistorized electronics, modular packaging, printed circuits / USE: for special purpose computing / according to application / C23

Bendix Corp., Research Laboratories Div. Div.
Boonshaft & Fuchs, Inc.
Budd Co. Inc. Electronics Div.
Burlingame Associates, Ltd. Canadian Aviation Electronics Ltd. Canadian Aviation Electronics Ltd.
Comcor, Inc., 430 S. Navajo St.,
Denver 23, Colo. / analog computers
/ DESCR: solid state general purpose analog computers and components,
i.e., quarter square multipliers,
sin-cos generators, diode function
generators and DC amplifiers / - /
- / C23 - / C23
Comcor, Inc., 430 S. Navajo, Denver 23,
Colo. / CI-170 SS Analog Computer /
DESCR: all solid state analog computer system has new CI-306 + 100
volt DC operational amplifier and
its associated solid state mode control switch / USE: general purpose
simulations / \$50,000 to \$300,000 /
C23

Computer Engineering Associates, an affiliate of Susquehanna Sciences,

Inc., 350 N. Halstead St., Pasadena, Calif. / direct analog computer / DESCR: simulation of structural, DESCR: simulation of structural, thermal, etc. systems using princi-pally passive electrical element networks / USE: as analysis tool during design phase / \$100,000 to \$700,000 / C23 \$700,000 / C23

Computer Products Inc., 1717 "F" St.,
South Belmar, N.J. / Mark III Analog Computer / DESCR: design, development and manufacture of general purpose and precision analog computers. Analog computer expansion and components, electronic mode control, display systems, analog computer modernization, modification / USE: analog computation, simulation / - / C23

Computer Systems Inc. simulation / - / C23
Computer Systems Inc.
Consolidated Avionics Corp.
Control Technology Co.
Curtiss-Wright Corp. Electronics Div.
Daystrom Inc. Control Systems Div.
Daystrom Inc. Military Electronics
Div.
Del Electronics Corp.
Del Mar Engineering Labs Del Electronics Corp.
Del Mar Engineering Labs
Delta Instrument Corp.
DI/N Controls, Inc.
Dian Laboratories, Inc., 611 Broadway,
New York 12, N.Y. / analog computers / DESCR: complete line of high
precision analog computers, general
and special purpose / USE: simulate physical systems; solve mathematical problems in science and engineering / on request / C23
Djordjevic Engineering Co.
Dresser Electronics, SIE Div.
Elasco Inc. Elasco Inc. Electro Scientific Industries, Inc. Electronic Associates, Inc. Embree Electronics Corp. Emerson Electric Mfg. Co. Emerson Electric Mig. Co. Ensco, Inc. Evershed & Vignoles Ltd. FF & M Electronics Inc. Feedback Controls, Inc. Ferranti Electric Co. Inc. Fischer & Porter Co. Ford Instrument Co. Div. Sperry Rand Corp. The Foxboro Co. -- see C22A GPS Instrument Co., Inc.
Garrett Corp.
General Computers Inc.
General Electric Co., Computer Dept. -- see C22 General Electric Co., Electric Utility Sales Operation General Electric Co. Ind'l Sales Oper. General Electric Co. Light Military General Electric Co. Light Military Electronics Dept. General Mills Inc. Electronics Div. Gilfillan Bros. Inc. Goodyear Aircraft Corp. Heath Co. Sub. of Daystrom Inc. Honeywell, Special Systems Div. ITT Kellogg Div. Industrial Control Co. Industrial Instr. Div. Electronic As-sistance Corp. sistance corp.
Intectron Inc.
Intertron Inc.
International Business Machines Corp.,
Federal Systems Div.
Kearfott Div., General Precision,
Inc., Aerospace Group -- see C24A
Kollsman Instrument Corp. Kollsman Motor Corp. LFE Electronics Div. Lab for Electron-Landsverk Electrometer Co.
Lear Inc.
Leeds & Northrup Co., 4901 Stenton
Ave., Philadelphia 44, Pa. / desired-generation computer / DESCR:
analog computer to calculate values
of desired generation; comprises
one control loop for each generation
station / USE: operates as part of
a control loop / / C23
Librascope Div. Gen Precision Inc.
Link Div. General Precision Inc.
Loral Electronics Corp.
F. B. MacLaren & Co., Inc., 15 Stepar
Place, Huntington Station, L.I.,
N.Y. / analog computers / DESCR:
custom designed precision electromechanical systems to perform spe-Landsverk Electrometer Co. custom designed precision electromechanical systems to perform specific mathematical operations in
military and industrial computer applications / USE: data conversion
-- voltage to position, velocity,
voltage, etc. / variable, depending
on application / C23
Marquardt Corp. Pomona Div.
Martin Marietta Corp.
Matsushita Electric Ind. Co. Ltd.
Mauchly Associates, Inc.
Milgo Electronic Corp.
Minneapolis-Honeywell Regulator Co.,
Special Systems Div., Queen & So.

Bailey Sts., Pottstown, Pa. / analog computers / DESCR: special purpose analog computers for on-line and off-line computation and control / USE: continuous solution of pre-determined mathematical equations / \$2000 to \$100 000 / C23 \$2000 to \$100,000 / C23 / \$2000 to \$100,000 / C23 Mnemotron Corp. Model Engr. & Mfg. Corp. Oki Electric Industry Co. Ltd. Potter Aeronautical Corp. Power-Tronic Systems Radio Corp. of America Def. Elec. Redifon Computer Dept., *a / special purpose analogue computers / DESCR: custom designed and manufactured to solve specified class of problem. solve specified class of problem.
Also data conversion computers / USE: industry / \$14,000-\$66,000
Redifon Computer Dept., Gatwick Rd., Crawley, Sussex, England / general purpose analogue computers / DESCR: drift corrected amplifiers, precision components, high speed repetitive operation programming systems, digital control and output reading; also multipliers, function generators, time delay units, computer hire service / USE: research / \$5600-\$0400
Reeves Instrument Corp. / \$5500-\$5600 Reeves Instrument Corp. Reflectone Electronics, Inc. Reliance Electric & Engrg. Co. Rochar Electronique Sub. Schlumberger Ltd. Ryan Electronics/Ryan Aero Co. Servo Corp. of America Servomechanisms Inc. Servomechanisms inc.
Servonics Inc.
Solartron, Inc.
Special Products & Applied Research
Div., The de Havilland Aircraft of
Canada, Ltd. Canada, Ltd.
Sperry Farragut Co., Div. of Sperry
Rand Corp.
Sperry Gyroscope Div. Sperry Rand Corp.
Stony Brook Labs Inc.
Streeter-Amet Co.
Superior Manufacturing & Instrument Systron Donner Corp.
Tarc Electronics Div. Gotham Blesty.
Corp.
Taylor Instrument Cos. Texas Instruments Incorporated, Appar. Div. Govt. Prods. Gr. Thompson Ramo Woolridge Inc. Topco Westinghouse Electronics Div. C24. COMPUTERS, DIGITAL AC Spark Plug Div., General Motors Corp.

AR & DA Div. All America Engrg. Co. Ahacus Inc., 1716 21st St., Santa Monica, Calif. / digital computers / DESCR: stored program general purpose digital computers / - \$30,000 to \$40,000 / C24

Addressograph-Multigraph Corp.
Advanced Scientific Instruments, Div. of EMR, 5249 Hanson Court, Minneapolis 29, Minn. / electronic computer Model ASI-210 / See "Descriptions of Digital Computers" in this Directory / C24

Aero Geo Astro Corp.
Aeronca Mfg. Co.
Airborne Instruments Lab. Mil. Mktg.
Div. AC Spark Plug Div., General Motors Alwac Computer Div. El-Tronics, Inc. Ampex Corp.
Applied Electronics Corp. of N.J. Arma Div., American Bosch Arma Corp., Garden City, N.Y. / digital computers and displays / DESCR: microminiature aerospace digital computers, non-rotational high density memory sub-systems, integrated versatile cathode ray displays, multicomputer command and control systems / USE: military and NASA aerospace applications / - / C24
Astrosystems Inc.
Ault Magnetics, Inc.
Auto-Trol Corp. Ault Magnetics, Inc.
Auto-Trol Corp.
Automation Development Corp.
Automation Management, Inc. — see C23
Automatics Industrial Products, a
Div. of North American Aviation,
Inc., *a / RECOMP III / See "Descriptions of Digital Computers" in
this directory / C24
Autometics Industrial Products, a Div.
of North American Aviation, Inc.,
3400 East 70th St., Long Beach 5.
Calif. / RECOMP II / See "Descriptions of Digital Computers" in
this directory / C24

Avco Corp. Electron & Ord. Div.
Bailey Meter Co., 1050 Ivanhoe Rd.,
Cleveland 10, Ohio / Bailey 755 Computing Systems / DESCR: solid-state
system to gather data, make on-line
or off-line computations / USE:
power and process industry applications / -/ C24
Basic & Experimental Physics -- see P12A
Bell Aerosystems Co.
Belock Instrument Corp.
The Bendix Corp., Bendix Systems Div. Belock Instrument Corp.
The Bendix Corp., Bendix Systems Div.
-- see C27
Bendix Corp. Computer Div.
The Bendix Corp., Eclipse-Pioneer Div.
Bendix Corp., Research Laboratories Budd Co. Inc. Electronis Div.
Burroughs Corp.
Burler Roberts Associates, Inc.
Canadian Aviation Electronics Ltd.
Clary Corp.
Cognitronics Corp., 549 Pleasantville
Rd., Briarcliff Manor, N.V. / Editape Computer, drum memory systems
/ DESCR: general purpose computer
programmable to perform required
operations for justified and hyphenated punched paper tape for linecasting use; drum memory systems
used as buffer modules for other
systems / - / computer -- \$30,000
to \$50,000 / C24
Coleman Systems Inc.
Collins Radio Co. -- see C24A
Computer Control Co., Inc., Old Conmecticut Path, Framingham, Mass. /
DDP-24 / See "Descriptions of Digital Computers" in this Directory /
C24 Budd Co. Inc. Electronic Div C24
Computer Control Co., Inc., *a / SPEC
/ See "Descriptions of Digital Computers" in this Directory / C24
Computer Logic Corp.
Consolidated Avionics Corp. Consolidated Avionics Corp.
Control Data Corp.
Consolidated Avionics Corp.
Consolidated Controls Corp.
Control Equipment Corp.
Control Logic, Inc.
Curtiss-Wright Corp. Electronics Div.
Baystrom Inc. Control Systems Div.
Daystrom Inc. Military Electronics Daystrom Inc. Control Systems Div.
Daystrom Inc. Military Electronics
Div.
G. C. Dewey Corp. -- see DI
DI/M Controls, Inc.
Digital Design Corp.
Digital Electronics Inc.
Digital Electronics Inc.
Digital Equipment Corp., 146 Main St.,
Maynard, Mass. / Programmed Data
Processor-1 (EDP-1) / See "Descriptions of Digital Computers" in
this Directory / C24
Digital Equipment Corp., %a / Programmed Data Processor-4 (EDP-4)
See "Descriptions of Digital Computers" in
this Directory / C24
Djordjevic Engineering Co.
Dresser Electronics SEE Div.
Dynalog Electronics Corp.
Eclipse Pioneer Div. Bendix Corp.
Electro-Mechanical Research Inc., Advanced Scientific Instruments Div.
5249 Hanson Court, Minneapolis,
Minn. / ASI 210 Digital Computer /
DESCR: solid state, desk-type,
high-speed digital computer with
2 µ sec. total memory cycle time,
randomly accessible in capacities
up to 0192 21-bit words, rapid input-output communications / USE:
scientific computation; on-line
data processing / \$02,000 to
\$116,800 / C24
Electronic Products Corp.
Elliott Bros. London) Ltd. (a member Electronic Products Corp.
Elliott Bros. (London) Ltd. (a member of the Elliott-Automation Group) El-Tronics, Inc.
Emerson Electric Mfg. Co.
Empire Services
Epsco, Inc.
FF &M Electronics Inc. FF 6M Electronics Inc.
Ferranti Electronics, a div. of Ferranti-Packard Electric Ltd., Data
Systems Dept.
Ferranti Electric Co. Inc.
Fischer & Porter Co.
Ford Instrument Co. Div. Sperry Rand
Corp. Corp.
The Foxboro Co. -- see C22A
Fuji Tsyshinki Seizo K.K.
General Dynamics/Electronics - Rochester
General Electric Co., Computer Dept.
General Electric Co., Electric Utility Sales Operation General Electric Co. Ind'l. Sales Oper. General Electric Co. Light Military

M-236 Computer / DESCR: multi-purpose solid-state digital computer of modular construction. Requires 500 cards, less than 3000 transistors. Magnetic core storage, 4096 words expandable to 262,144; word length, 36 bits / USE: military real-time control applications. Capable of meeting large real-time input/out-put requirements coupled with high computation rate demands / - / C24 General Intellitronics Inc., 900 Nepperhan Ave., Yonkers, N.Y. / Model I-05 Digital Computer / DESCR: low cost, solid state general pur-Model I-85 Digital Computer / DESCR:
low cost, solid state general purpose digital computer. Uses magnetic drum memory to provide 3072
words of length 19 bits. Repetoire
of 18 commands / - / \$13,500 / C24
General Mills Inc. Electronics Div.
Giannini Controls Corp.
Gilfillan Bros. Inc.
Goodyear Aircraft Corp.
HRB-Singer Inc.
Hamilton Standard Div. United Aircraft Corp.
Hampshire Engineering Co., Inc.
Harman Kardon Inc., Data Systems Div.-Harman Kardon Inc., Data Systems Div.-see ClO, DI Harvey-Wells Electronics, Inc., 14 see C10, DI
Harvey-Wells Electronics, Inc., 14
Huron Drive, Natick, Mass. / H-W
15K Digital Computer / See "Descriptions of Digital Computers" in
this Directory / C24
Honeywell, Special Systems Div., Queen
& So. Bailey Sts., Pottstown, Pa. /
Honeywell, Special Systems Div., Queen
& So. Bailey Sts., Pottstown, Pa. /
Honeywell 290 Digital Computer System / See "Descriptions of Digital
Computers" in this Directory / C24
Honeywell, Special Systems Div., *a /
Hol0 Computer System / See "Descriptions of Digital Computers" in
this Directory / C24
Hughes Aircraft Co., Ground Systems
Group, P.O. Box 3310, Fullerton,
Calif. / Hughes Il-330 Computer System / DESCR: large-scale, highspeed, real time computer system for
demanding computational problems in
military, scientific, business,
real-time, and non-real-time automatic data processing / - / - / C24
H W Electronics, Inc.
International Business Machines Corp.,
Data Processing Div., 112 E. Post
Rd., White Plains, N.Y. / HM 1420 International Business Machines Corp., Data Processing Div., 112 E. Post Rd., White Plains, N.Y. / 1184 1420 bank transit system / DESCR: special system combines reading-sorting features of a 1419 magnetic character reader with instruction and storage control features of a general purpose computer / USE: for high speed handling of bank transit operations in Federal Reserve and commercial banks / rental: \$5870/month to \$7960/month; purchase: \$284.875 to \$392.275 / C24
International Business Machines Corp., Data Processing Div., *a / IBM 1440 Data Processing Div., *a / IBM 1440 data processing system / See "De-scriptions of Digital Computers" in scriptions of Digital Computers" in this Directory / C24
International Business Machines Corp., Data Processing Div., *a / IBM 1460 data processing system / See "Descriptions of Digital Computers" in this Directory / C24
International Business Machines Corp., Data Processing Div., *a / IBM 7010 data processing system / See "Descriptions of Digital Computers" in this Directory / C24
International Business Machines Corp., Federal Systems Div. International Business Machines Corp., Federal Systems Div.
International Computers and Tabulators
Ltd., 149 Old Park Lane, London W.1, England / data processing equipment / DESCR: digital computer systems; tapes and punched card equipment range from small machines to larger type 1301, 1500 and 2400 computers. Punched card equipment 21, 40, 80 column / USE: in commerce, industry, and government / \$5700 Cl column installation) to \$712,500 electronic computer system / C24
ITT Federal Labs Div. IT & T
ITT Kellogg Div.
Kearfott Div. General Precision Inc.
Kollsman Motor Corp.
Landsverk Electrometer Co.
Lear Inc. Lear Inc. Leeds & Northrup Co., 4901 Stenton eeds & Northrup Co., 4901 Stenton Ave., Philadelphia 44, Pa. / LN 3000 Computer / DESCR: computer-directed control system comprised of general purpose, on-line digital computer and input-output equipment required to meet process conditions of each application / USE: programs essential operations for process control / - / C21 Electronics Dept. General Electric Co., Radio Guidance Operation, 300 South Geddes St., Syracuse, N.Y. / General Electric

LFE Electronics, A Div. of Laboratory For Electronics, A DIV. of Laboratory
For Electronics
Librascope Div. General Precision, Inc.,
Link Div., General Precision, Inc.,
Simulation & Control Group, Binghamton, N.Y. / Link Mark I digital simulation computer / DESCR: all
solid state digital computer having
optimumly designed memory combination
of programmed drum and high speed
core for extremely rapid rate repeor programmed arum and night speed core for extremely rapid rate repe-titive calculation / USE: as the heart of space and flight simula-tors / - / C24 Litton Systems Inc. Guid. & Con. Sys. Loral Electronics Corp.
M.K.S. Data Inc.,
Martin Marietta Corp.
Mathatronics, Inc., 257 Crescent St.,
Waltham, Mass. / Mathatron Desk Top
Computer / DESCR: keyboard input,
printer output, can learn mathematical formulas / USE: like printing calculator / \$3500 / C24
Matsushita Electric Ind. Co. Ltd.
Micro Measurements Corp.
Minn-Honeywell, Electronic Data Processing Div. Loral Electronics Corp. Minn-Honeywell, Electronic Data Processing Div.
Minn-Honeywell, Special Systems Div.
Mnemotron Corp.
Model Engr. & Mfg. Corp.
Model Engr. & Mfg. Corp.
Mitchell St., Orange, N.J. / Monrobot XI / DESCR: desk-sized,
stored-program electronic computer
/ USE: route accounting, payroll. / USE: route accounting, payroll, stock and bond confirmation, engineering, general accounting, etc. / Rental: \$700/month to \$1000/month / C24
The National Cash Register Co., Main & K Sts., Dayton 9, Ohio / NCR 310 / DESCR: transistorized computer designed for banking and retailing applications / USE: banking and retailing / S2450/month rental / C24
The National Cash Register Co., *a / NCR 315 EDP System / DESCR: transistorized general-purpose computer with CRAM, a high-speed random access system / USE: primarily in business applications / \$4400 to \$8500/month rental / C24
The National Cash Register Co., *a / NCR 390 EDP System / DESCR: low-cost transistorized computer with magnetic ledger card, a machine cost transistorized computer with magnetic ledger card, a machine-readable, hard-copp business record / USE: all accounting applications / \$995 to \$1720/month rental / C24 Northrop Corp. — see C25 N. V. Electrologica, 214 Stadhouders-plantsoen, The Hague, The Netherlands / X1 computer / DESCR: digital computer, high speed tape reader, input-output: punched tape, punched cards, magnetic tape, outputwriter, high speed printer, drum, transistorized magnetic core memory up to 32,768 words / USE: commercial and scientific / Nfl 550,000 to Nfl 3,000,000 / C24 Pacific Data Systems, Inc., 1058 E. scientific Ari 550,000 to Ari
3,000,000 / C24
Pacific Data Systems, Inc., 1058 E.
1st St., Santa Ana, Calif. / digital
computers / DESCR: desk size general purpose computers / USE: for
computation or control / \$10,000 to
\$20,000 / C24
Packard Bell Computer, a div. of
Packard Bell Electronics, 1905 Armacost Ave., Los Angeles 25, Calif.
/ PB440 Computer / See "Descriptions
of Digital Computers" in this Directory / C24
Panellit Div. ISI Inc.
Pennwood Numechron Co.
Philco Corp., a subsidiary of Ford
Motor Co., Computer Div.
Potter Aeronautical Corp. Potter Aeronautical Corp.
Power-Tronic Systems Inc.
Radio Corp. of America Def. Elec. Radio Corp. of America Def. Elec. Prods.
Radio Corp. of America, Electronic
Data Processing
Redifon Ltd.
Reflectone Electronics, Inc.
Reliance Electric & Engrg. Co.
Resc Engineering Corp.
Ryan Electronics / Ryan Aero Co.
Saba Aircraft Co., Electronics Div.,
Linküping, Sweden / D21 / DESCR:
solid-state 2.5 megacyele computer,
core memory 4K-65K, 24 bit wordlength, magtape system unlimited,
100,000 ch/sec transfer, punched
tape, card, printer, analog input/
output / USE: general / \$200,000
to \$1,000,000 / C24
Scantlin Electronics Inc.
Scientific Data Systems, Inc., 1649
17th St., Santa Monica, Calif. /
SDS 910 and SDS 920 Computers / See

"Descriptions of Digital Computers" in this Directory / C24 Scientific Development Corp. Servo Corp. of America Servomechanisms Inc. Solartron, Inc. Solid State Electronics Co. Solid State Electronics Co.
Sperry Gyroscope Div. Sperry Rand Corp.
Sperry Utah Co. Div. Sperry Rand Corp.
Standard Telephones & Cables, Ltd.
Stony Brook Labs Inc.
Stony Labs. Inc.
Streeter-Amet Co.
Sylvania Electronic Systems
Systems Engineering Laboratories, Inc.
— see C46 -- see C46
TRW Computers, a div. of Thompson
Ramo Wooldridge, Inc., 8433 Fallbrook Ave., Canoga Park, Calif. /
TRW-330 and TRW-340 Process Control
Computers / DESCR: digital computers applied to wide variety of industrial applications in steel,
chemical, petroleum, power, paper
and cement industries / USE: online, closed-loop control of conventional instruments / \$200,000 to
\$400,000, including engineering /
C24 C24
Tarc Electronics Div. Gotham Bdcstg. Corp.
Technical Measurement Corp. Tech Serv Inc.
The Teleregister Corp., 445 Fairfield he Teleregister Corp., 445 Fairfield Ave., Stanford, Conn. / Telefile Data Processor / DESCR: general-purpose, stored-program, random-access, on-line/off-line data processor with 32% core memory, 29 transfer points; accomdates wide range of peripheral subsystems / USE: on-line, real-time applications in airline, hotel, banking and other industries / upon request / C24 airline, hotel, banking and other industries / upon request / C24
Texas Instruments Inc. Appar. Div. Govt. Prods. Gr.
UNIVAC Div. of Sperry Rand Corp., 315
Park Ave. So., New York 10, N.Y. / UNIVAC II - large scale electronic digital computing system / See "Descriptions of Digital Computers" in this directory / C24
UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC III - solid state, digital, electronic data processing system / See "Bescriptions of Digital Compuelectronic data processing system ys See "Descriptions of Digital Computers" in this directory / C24 UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC 490 Real Time System / See "Descriptions of Digital Computers" in this directory / C24 UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC 1004 Card Processor / DESCR: 961-character addressable core memory with a µ sec. access time; performs alpha-numeric comparisons, additions, subtractions, program multiplication and division / USE: additions, subtractions, program multiplication and division / USE: for punched card accounting applications / \$46,000 to \$60,000 / C24 UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC 1103A, large-scale scientific, digital computer / See "Descriptions of Digital Computers" in this directory / C24 UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC Sperry Rand Corp., *a / UNIVAC Div. of Sperry Rand Corp., *a / UNI puting system / See "Descriptions of Digital Computers" in this directory / C24
UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC LARC / See "Descriptions of Digital Computers" in this directory / C24
UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC Colid State Model I 00 and 90-column card systems / See "Descriptions of Digital Computers" in this directory / C24
UNIVAC Div. of Sperry Rand Corp., *a / UNIVAC Solid State Model I 00 and 90-column tape systems / See "Descriptions of Digital Computers" in this directory / C24
UNIVAC Solid State Model II computer systems 80-0 ro 90-column / See "Descriptions of Digital Computers" in this directory / C24
UNIVAC Solid State Model II computer systems 80-0 ro 90-column / See "Descriptions of Digital Computers" in this directory / C24
Victor Adding Machine Co.
Westinghouse Electric Corp., Pittsburgh 35, Pa. / PRODAC Computer Sysburgh See - PRODAC Comput

tems / DESCR: 1962 PRODAC computers designed for all forms of process control. 8 μ sec add time, 1.8 μ sec access core memory with auxiliary floating head drum; priority interrupt: flexible for all sizes of application, both Present and predicted / USE: on line, open or closed loop control systems / \$150,000 to \$1,000,000 / C24 Westinghouse, Electronics Div. C24A. COMPUTERS, SPECIAL PURPOSE AC Spark Plug Div., General Motors Corp.
ACF Electronics Div. Acoustica Associates, Inc.
Admiral Corp.
Advanced Scientific Instruments Inc. Aeronutronic Div., Ford Motor Co. Allegheny Plastics Inc. American Bosch Arma Corp. American Hydromath Corp. Ampex Corp. Ampex Corp.
Amtron Inc.
Applied Control Corp.
Applied Dynamics, Inc. -- see C23
Automation Development Corp.
Automation Dynamics Corp.
Automation Management, Inc. -- see C23
Auto-Trol Corp. Automation Management, Inc. -- see Cas Auto-Trol Corp. Avco Corp. Electron & Ord. Div. Avtron Manufacturing, Inc., 10409 Meech Avc., Cleveland 5, Ohio / Model T357 / DESCR: power computer / USE: telemetering, analog or di-gital wattmeters, power recording, gital wattmeters, power recording, remote power measurements, power monitors, reverse power relays, power control, rugged wattmeters, var metering or recording, differential wattmeters, polyphase metering or recording / - / C24A
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio / Bailey 710 Analog Computing System / DESCR: accepts analog data from measuring devices; computes using servos / USE: to compute efficiency, heat-rate, deviation from design, etc. / - / C24A Basic & Experimental Physics -- see P12A Beckman Instruments, Inc. Berkeley Div. Bell Aerosystems Co. Bell Aerosystems Co.
Belock Instrument Corp.
Bendix Corp. Bendix Radio Div.
Bendix Corp. Computer Div.
Boonshaft and Fuchs, Inc., Hatboro
Industrial Park, Hatboro, Pa. / servo control systems, signal analyzers, statistical and special purpose computers / DESCR: sinusoidal random and transient analyzers.
Special purpose analog computers /
- / \$1200 to \$150,000 / C24A
Bowmar Instrument Corp.
Bristol Co.
Budd Co. Inc. Electronics Div.
Bulova Research & Development Laboratories — see R12A
Burroughs Corp.
C.S.F. Canadian Applied Research, Div. A. V. Roe Can. Ltd. Canadian Marconi Robe Can. Long Canadian Marconi Clary Corp.
Collins Bata Central / DESCR: communication and data processing system. Intermediate scale, dual memory, digital computer and peripheral equipment. / USE: message switching and data collection and transmission / - / C24A
Comcor, Inc.
Computer Control Co., Inc.
Computer Logic Corp.
Computer Systems, Inc.
Consolidated Controls Corp.
Consolidated Controls Corp.
Control Equipment Corp., 19 Kearney
Rd., Needham Heights 94, Mass. / digital data systems / DESCR: digital data systems / DESCR: digital data systems for military and scientific applications / - / - / C24A C24A Control Logic, Inc. -- see Cll Daystrom Inc. Control Systems Div. Daystrom Inc. Military Electronics Delco Radio Div., General Motors Corp. Del Mar Engineering Labs.
Designers for Industry
G. C. Dewey Corp. — see Dl
DI/AN Controls, Inc.
Dian Laboratories, Inc., 611 Broadway, New York 12, N.Y. / special
purpose analog computers / - / USE:
in training and control / on request / C24A
Digital Design Corp.

Digital Electronics Inc. Digitool Corp.
Diversified Concepts, Inc. -- see P6 Djordjevic Engineering Co. Eclipse Pioneer Div. Bendix Corp. Electrodynamic Instrument Corp. Electronic Associates Inc. Electronic Control Products Electronic Controls, Inc. Elliott Bros. (London) Ltd. (a member of the Elliott-Automation Group) Embree Electronics Corp. Emerson Electric Mfg. Co. EMI-Cossor Electronics Ltd. EMI-Cossor Electronics Ltd.
Epsco, Inc.
Farrard Optical Co. Inc.
Feedback Controls, Inc.
Ferranti Electronics, a div. of Ferranti-Packard Electric Ltd., Data Systems Dept.
Fischer & Porter Co.
Ford Instrument Co. Div. Sperry Rand Corp.
The Foxboro Co. Fuji Tsushinki Seizo, K.K. GPL Div. General Precision, Inc. GPS Instrument Co., Inc. GPS Instrument Co., Inc. General Applied Science Labs, Inc. General Dynamics/Electronics -Rochester General Electric Co. Light Military Electronics Dept.
General Electric Co. Process Computer Sec. General Mills, Inc. Electronics Div. Gilfillan Bros. Inc. Goodyear Aircraft Corp. Hallicrafters Co. Hamilton Standard Div. United Aircraft Corp. craft Corp.
Hampshire Engineering Co., Inc.
Harman Kardon Inc., Data Systems Div.
-- see Cl0
Harvey-Wells Electronics, Inc.
Hastings-Raydist, Inc.
Hoffman Electronics Corp. Mil. Prods.
Div. Hughes Dynamics, Inc. -- see C30 Huyck Systems Co. Div. Huyck Corp. International Business Machines Corp., Data Processing Div. — see C24 International Business Machines Corp., International Business Machines Corp.
Federal Systems Div.
ITT Federal Labs Div. IT & T
Industrial Instr. Div. Electronic Assistance Corp.
Industrial Nucleonics Corp. Industrial Nucleonics Corp.
Intectron, Inc.,
Kearfott Div., General Precision, Inc.,
Aerospace Group, 1150 McBride Ave.,
Little Falls, N.J. / airborne navigation computers / DESCR: analog
and hybrid computers / USE: aircraft navigation / dependent on application / C24A
Keystone Products Co Keystone Products Co. Kollsman Instrument Corp. Lear, Inc. Lear, Inc. Instrument Div. Leeds & Northrup Co. -- see C23 LFE Electronics Div. Lab for Electronics. Inc. ics, Inc. Link Div., General Precision, Inc., Simulation & Control Group Litton Systems Inc. Guid. & Con. Sys. Lockheed Electronics Co. Info. Tech Div.
Lockheed Electronics Co. Military Sys. Div. Loral Electronics Corp. M Ten Bosch, Inc. F. B. MacLaren & Co. Inc. McDonnell Aircraft Co. McDonnell Aircraft Co.
The Magnavox Co.
Magnetic Amplifiers Div. Siegler Corp.
Marquardt Corp. Pomona Div.
Martin Marietta Corp.
Massey Dickinson Co., Inc., 9-11 Elm
St., Saxonville, Mass. / digital and
analog modules / DESCR: manufacturers of digital and analog modules
for use in physiological, psychological research. Suppliers of computer compatible data retrieval systems and programming services for
medical research / - / \$500 to
\$30,000 / C24A
Matrix Research and Development Corp., \$30,000 / C24A

Matrix Research and Development Corp.,
11 Mulberry St., Nashua, N.H. / computers and elements / DESCR: welded modular very low power logic elements for space applications / USE: analog to digital conversion and readout / special order / C24A

Magadyne Electronics Inc. Micro Gee Products, Inc. Minn-Honeywell, Military Prods. Gr. Minn-Honeywell, Special Systems Div. Missouri Research Labs, Inc. Mnemotron Corp.
Model Engr. & Mfg. Corp.
Monroe Calculating Machine Co., 555

Mitchell St., Orange, N.J. / Monro-bot IX / DESCR: desk-sized, high-speed computer primarily for billing. Performs 15 separate operations, USE: billing and general accounting / \$5800 including electric type-writer / C24A

/ \$5800 including electric type-writer / C24A
Moore Associates, Inc.
Naniloa Corp., Station B, P. O. Box
2791, Toledo 6, Ohio / statistical
summarizer / DESCR: accepts quality
control group; provision for either
manual or machine entry of group totals; computes dispersion factor
and sigma. Digital presentation /
USE: production quality control /
\$2500 / C24A
Nash & Harrison, Ltd.

Nash & Harrison, Ltd. Nash & Harrison, Ltd.
Navigation Computer Corp.
Non-Linear Systems, Inc., P.O. Box
720, Del Mar, Calif. / statistical
digital voltmeters / DESCR: automatically samples input voltages,
classifies them into 19 or 22 different classes, tallies entries in
each class, plots results as a statistical histogram / USE: for statistical data collection in wide
range of scientific, engineering and
production applications / \$3305 to
\$9305 / C24A
North Atlantic Industries. Inc.

North Atlantic Industries. Inc. Northrup Corp.
Omnitronics, Inc., Subsidiary of Borg-Omnitronics, Inc., Subsidiary of Warner Corp.
Ortronix, Inc.
John Oster Mfg. Co. Avionic Div.
Packard Bell Computer Corp.
Panellit Div. ISI Inc.

PASTORIZA ELECTRONICS INC., 285 Colum bus Ave., Boston 16, Mass. / PER-SONAL ANALOG COMPUTER / DESCR: SOWAL ANALOG COMPUTER / DESCR: electronic demonstration system using individual miniature analog computer modules for visually representing and solving mathematical equations. Each module performs one of three basic mathematical operations, adding, multiplication by constant, and integration. Behavior of system variables can be monitored and plotted by the student / USE: teaching calculus and dynamics / \$65 to \$480 / C24A

Performance Measurements Co. Performance Measurements Co.
Philo Corp., a subsidiary of Ford
Motor Co., Computer Div.
Potter Aeronautical Corp.
Power-Tronic Systems, Inc.
Procedyne Associates Inc.
Pulse & Digital Labs, Inc.
Radio Corp. of America, Def. Elec.
Prods. Radio Corp. of America, Def. Elec.
Prods.
Radio Corp. of America Elec. Data Processing Div.
Randam Electronics Inc.
Raytheon Co. Gov't. Mkty.
Redifon Computer Dept. — see C23
Reeves Instrument Corp.
Reflectone Electronics, Inc., a subsidiary of Universal Match Corp.
Rese Engineering Corp.
Ryan Electronics / Ryan Aero. Co.
Saab Aircraft Co., Electronics Div.
Sanders Associates, Inc.
The Scam Instrument Corp.
Servo Corp. of America
Servo Development Corp.
Servo Evelopment Corp.
Servo Evelopment Corp.
Sperry Gyroscope Div. Sperry Rand Corp.
Sperry Utah Co. Div. Sperry Rand Corp.
Sperry Utah Co. Div. Sperry Rand Corp.
Sylvania Electronic Systems
Systems Engineering Laboratories, Inc.
— see C46
Systron Donner Corp.
Taylor Instrument Cos.
The Teleregister Corp., 445 Fairfield
Ave., Stamford, Conn. / Magnetronic
Reservisor / DESCR: special-purpose, on-line data processor with randomaccess drum-type inventory / USE:
airline reservations and inventory
/ upon request / C24A
Tellertron Corp., a subsidiary of Stone
Laboratories Inc. — see I2
Tenlo Research Corp.
Texas Instruments Inc. Appar. Div.
Govt. Prods. Gr.
Thompson Ramo Wooldridge Inc. Tapco
Div.
U.S. Science Corp., 5221 W. 102nd St.
Lee Margles 45 Calif / Computers Prods.
Radio Corp. of America Elec. Data Pro-

Div. S. Science Corp., 5221 W. 102nd St., Los Angeles 45, Calif. / computers airborne, timers, computer test equipment, vmSCK: computers utilized in either helicopters or high

performance aircraft for purposes of processing air data information; either analog or digital output; solid state construction / USE: fire control, hands-off landing. attitude control / - / C24A Veeder-Root Inc. welex Electronics Corp. Weltronic Co. Westinghouse, Electronics Div.

C25. COMPUTERS. TEST EQUIPMENT

Wheaton Engineering Div. Hurletron

Inc., 292 Main St., Cambridge age, Inc., 2/2 Main St., Cambridge 42, Mass. / digital measuring equip-ment / DESCR: voltage-to-digital converters; input, output, control options such as ratio and ohms measurement, AC signal conditioning, measurement, Au Signal Conditioning, high impedance input and differential amplifiers, sample and hold, multi-plexers, etc. / USE: general pur-pose measurements, in-plant testing and ground support equipment / - /

and ground support equipment / - / C25
Aircraft Armaments, Inc., York Rd., Cockeysville, Md. / test and checkout equipment / DESCR: missile telemetering pre-flight (TITAN), components checkout (PCLARIS), factory
test (TERRIER), shipboard radar monitors (TERRIER, TALOS), automatic
shop test (NIKE-AJAX/HERCULES) /
USE: for test and checkout of missile components and systems / varies according to custom specifications / C25
Amulex Electronics, Inc., 467 Connecticut Ave., South Norwalk, Conn.
/ automatic test equipment / DESCR:
design and manufacture of custom designed test equipment; time code
generators, robot testers, automatic component testers, high voltage

tic component testers, high voltage power sources / USE: in laboratory or systems / dependent upon speci-fications / C25

Basic & Experimental Physics -- see P12A

P12A
Boonshaft and Fuchs, Inc. -- see C24A
Control Logic, Inc.
Cybetronics, Inc., 132 Calvary St.,
Waltham 54, Mass. / magnetic tape
certifier / DESCR: works off-line
with any computer tape handler; after interconnection and threshold
selections it automatically conwith any computer tape handler; after interconnection and threshhold selections, it automatically controls writing and reading of program to detect errors / USE: testing computer magnetic tapes for dropout and noise errors / \$4000 and up / C25 G. C. Dewey Corp. — see Dl Digital Electronics Inc. Electronic Memories, Inc., 9430 Bellanca Ave., Los Angeles 45, Calif. / magnetics tester / DESCR: test instrument for evaluation and test of magnetic cores and circuits / USE: interchangeable modules with power supply / \$4500 to \$6000 / C25 Exact Electronics, Inc. — see Gl Feedback Controls, Inc. — see Gl Feedback Controls, Inc. — see Gl Feedback Total Feedback Controls, Inc. — see Gl Feedback

puter programming or control, or

puter programming or control, or for automatic programming on fixed-program basis / USE: testing space equipment under environmental con-ditions / \$2000 to \$35,000 / CZ5 The Hoover Co., Electronics Div., *a / wind tunnel instrumentation sys-tem / DESCR: provides automatic multiple pressure of thermocouple read-out of ballistic model test points at high speeds and precise accuracy. Accuracy of measurements in order of 0.05 to 0.1% / USE: for

in order of 0.05 to 0.1% / USE: for strip recorder automatic typewriter or punched tape results of wind tunnel tests / - / C25
he Hoover Co., Electronics Div., P.O. Box 070, Pompano Beach, Fla. / automatic telemetering test set / DESGR operational and factory test of complete FM-FM transmitter systems.
Completely versatile for testing limits of telemetry systems having a variety of characteristics / USE: rapid (1-/2 minutes) complete cycle check of FM-FM transmitter systems / - / C25

Northrop Corp., 9744 Wilshire Blvd., Beverly Hills, Calif. / DATICO — automatic checkout equipment / DESCR: digital, solid state system provides arithmetic capability, memory storage for test parameters. Predicts impending failures, computes system confidence ind.x, changes test parameters based on previous tests, etc. / USE: checkout of Polaris missile, systems on Polaris submarines, submarine radar system, air force transceiver, automatic pilot amplifiers. Depot level checkout of various Air Force equipment / - / C25

C25
Procedyne Associates Inc., 376 Ridgeley St., Perth Amboy, N.J. / special purpose analog equipment, research and development / DESCR: special purpose Fourier transform computer, frequency response analyzers, signal generators, converters, and transducers. Research and development in data processing field / USE: dynamic analysis of systems; servo mechanism design / \$1000 to \$18,000 / C25 / C25

Saunders & Co., 53 Everett CAA, Wal-tham 54, Mass. / computer needs / small computers, components, and

small computers, components, and test equipment for process control / - / \$100 to \$20,000 / C25
Special Products & Applied Research Div., The de Havilland Aircraft of Canada, Ltd.
Texas Instruments Inc., Industrial Products Group, 3609 Buffalo Speedway, Houston 6, Tex. / pulse generators / DESCR: fast rep rate, rise and fall fast, variable rise and fall and word generator, time delay / - / \$300 to \$5000 / C25
U.S. Science Corp. -- see C24A U.S. Science Corp. -- see C24A

C26. COMPUTER COMPONENTS

Adage, Inc., 292 Main St., Cambridge 42, Mass. / multiplexers / DESCR: high speed, solid state; switch numerous analog inputs to single output; packaged independently or integrated with analog-to-digital converter in single standard housing / USE: in multichannel data acquisition systems; for time sharing an analog-to-digital converter / - / C26
Adcom Corn.

C26 Adcom Corp. Advanced Scientific Instruments, Div. of EMR Aeronutronic Div., Ford Motor Co. -

see M2
Allied Control Company, Inc.
American Lava Corp., Manufacturers Rd.,
Chattanooga 5, Tenn. / custom manufacturers of AlSiMag / DESCR: technical ceramic and metal-ceramic combination components including high
temperature terminals, hermetic
seals, ceramic bobbins, magnetic
tape guides, ceramic substrates for
micro-modules, transistor platforms,
etc. / USE: furnished to manufacturers upon their specifications / -/
C26

rers upon their specifications / - / C26

AMP Inc., Harrisburg, Pa. / patchcord programming systems and panels, pin-boards, power supplies, and digital circuit devices / DESCR: standard and custom designs / USE: computer programming / - / C26

Amperex Electronic Corp.

Ann Arbor Laboratory, Burroughs Corp.

Applied Dynamics, Inc. -- see C23

Autometics Industrial Products, a Div. of North American Aviation, Inc..

3400 East 70th St., Long Beach 5, Calif. / RECOMP Input/Output Adapter Unit / DESCR: provides punched card input/output capability for RECOMP computers. Signal conversion unit mounted on back of C24 or O26 card console links RECOMP II computer and card equipment / USE: computer and card equipment / USE: computer peripheral equipment / \$2625 purchase and \$757month lease / C26

Babcock Electronics Corp.

purchase and \$75/month lease / C26
Babcock Electronics Corp.
Bailey Metr Co., 1050 Ivanhoe Rd.,
Cleveland 10, Ohio / Bailey 760 Digital Control System / DESCR: composed of standardized solid-state modules / USE: to automatically control a plant or process / - / C26
The Bendix Corp., Eclipse-Pioneer Div., Teterboro, N.J. / optical memory system / DESCR: utilizing a glass drum to store information in binary form; lights, photo detector elements and associate electronics are used for readout / USE: computers / quotations upon request / C26
Burroughs Corp.

Cadre Industries Corp. Chalco Engineering Corp. -- see R6 Clary Corp.
Comcor, Inc. -- see C23
Computer Control Co., Inc. Computer Logic Corp.
Computer Products Inc. -- see C23 Control Data Corp. Control Data Corp.
Control Logic, Inc. -- see C11
Controlics Inc. -4 3 Leon St., Boston
15, Mass. / SAND / DESCR: selfcontained system; provides complete
circuitry for display of all alphanumeric symbols. Combines input decoding, character formation and
generation functions with X-Y output for cathode ray tube presentation / - / - / C26
Corning Electronics. Corning Glass Corning Electronics, Corning Glass Works

Daystrom, Inc., Weston Instruments &

Daystrom, Inc., Weston Instruments & Electronics Div.

G. C. Dewey Corp. -- see D1
Dialight Corp., 60 Stewart Ave.,
Brooklyn 37, N.Y. / indicator
lights / DESCR: transistorized indicator lights; eliminate need for
separate drivers. Logically combine
neon lamps or filament lamps with
transistors or other semi-conductor
circuitry / USE: for computers,
etc. / - / C26
Diamonite Products Mfg. Co.
DI/AN Controls, Inc.

Diamonite Products Mfg. Co.
DI/AN Controls, Inc.
Digital Development Corp. -- see S5
Diversified Concepts, Inc., Becker
Rd., Skaneateles 3, N.Y. / "INIGATE" / DESCR: "Universal Logic
Module", single module performs
multiple functions of counting,
switching, pulse generation, relay
driver, inversion, logical functions / USE: computer building
block, low speed logic / \$25 to
\$40 / C26
Drake Manufacturing Co. -- see L1
Eleptro-Miniatures Corp.
Electropac, Inc., a subsidiary of
Computer Control Company, Inc.
Elyenco, Inc.

Elgenco, Inc.
Elliott Bros. (London) Ltd. (a mem-

Computer Control Company, Inc.
Eligneo, Inc.
Erichild Space and Defense Systems,
a Div. of Fairchild Camera and
Instrument Corp.
Feedback Controls, Inc.
Ferroxcube Corp. of America
Franklin Electronics Inc.
Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif. / input-output
devices / DESCR: solenoid or keyboard operated machines which provide data for, or accept data from,
other machines. Functions include
accumulating, printing, transmitting / USE: general data processing / - / C26
Friden, Inc., *a / solenoid Add-Punch
Model ACPTS / DESCR: accepts data
from other machines, accumulates,
prints, and punches a paper tape
for subsequent processing / USE:
general data processing / - / C26
General Dynamics/Electronics, 3302
Pacific Highway, P. O. Box 127, San
Diego 12, Calif. / CHARACTRON
Shaped beam tubes / DESCR: a cathode ray tube with capability to
display high-resolution characters
at speeds of 50,000 characters per
second / USE: in high speed readout and display equipment / available on request / C26
General Electric Co., Computer Dept.
-- see C22
General Electric Co., Radio Guidance

-- see C22

General Electric Co., Radio Guidance

-- see C22
General Electric Co., Radio Guidance
Operation
General Electric Co., Specialty Devices Operation, 1811 Lemoyne Ave.,
Syracuse, N.Y. / electronic devices/
DESCR: delay lines: distributed
constant variable, fixed, lumped
constant variable, lumped constant
fixed, magnetostrictive, ultra sonic
variable, ultra sonic fixed, piezòelectric direct drive torsional,
dispersive; memories, computer:
ferrite core planes, stacks, systems; modules: assembled, conventional, miniature, microminiature,
sealed, encapsulated; computer logic
modules; control and switching
modules; readouts: digital, alphanumeric; shift registers: magnetic;
commutating switch, electronic,
solid state / USE: in computers and
data processing systems / - / C26
General Instrument Corp., a subsidiary
of Warner Electric Brake & Clutch
Co.

The GYREX Corp., 3003 Pennsylvania Ave., Santa Monica, Calif. / high-speed computer inputs / DESCR: sys-tem handles up to 20 pieces per second (linear speeds to 100 feet per second) of paper-based data (sheet sizes to 24 x 36") / USE:

second (Inner speeds to 100 leet per second) of paper-based data (sheet sizes to 24 x 36") / USE: provides photoelectric or magnetic character data for assimilation and computation by computers / \$100,000 to \$250,000 per system / C26 Hammarlund Manufacturing Co. Harman Kardon Inc., Data Systems Div. -- see C10, Dl Hewlett-Packard Co. Houston Fearless Corp., 11801 W. Olympic Blvd., Los Angeles 64, Calif./ data monitoring device / DESCR: centralized automatic sensing, logging and display of chemical processing and environment parameters, in a number of remote locations / USE: for accurate remote surveillance of processes, i.e., film processing, oil refining, atomic energy, etc. / quoted to specific requirements / C26
Hughes Dynamics, Inc. -- see C30
Hurletron Control Products Div., 920
Manchester Rd., Wheaton, Ill. / relays, timing and sensing devices / DESCR: solid state devices for time, voltage, current, phase and frequency control in computer applications. Also electronic, mechanical and solid state switching and programming / - / \$35 to \$500 / C26
Hydro Molding Company, Inc.

C26
Hydro Molding Company, Inc.
Hyperion Industries, Inc., 127 Coolidge Hill Rd., Watertown, Mass./
digital peripheral equipment /
DESCR: magnetic tape search units, time code generators, binary to decimal converter modules, digital language translators / - / - / C26
IMC Magnetics Corp., Western Div.
Indiana General Corp., Electronics
Div.

Industrial Electronic Engineers, Inc. 5528 Vineland Ave., North Hollywood, Calif. / Series 10000, Series 80000. Calif. / Series 10000, Series 00000, Series 120000 Rear-projection Read-out Devices / DESCR: displays num-bers, letters, words, symbols, and colors; character heights from 5/0" to 3-3/0" / USE: for visual communi-cation to display processed data / \$12.75/unit to \$35/unit / C26

cation to display processed data / \$12.75/unit to \$35/unit / C26
Industrial Electronic Engineers, Inc.
*a / Series 220000 Front Plug-in
Readout / DESCR: display inserts
removable from front panel for easy
lamp replacement or complete message
exchange. Displays numbers, letters,
words, symbols, colors / USE: for
data display where front panel accessibility is required / \$30 to
\$46.25 per unit / C26
Industrial Electronic Engineers, Inc.,
*a / Series 280000 Status Indicator /
DESCR: up to 12 back lighted messages displayed individually, in any
combination or all at one time /
USE: to display simultaneous conditions, sequential instructions,
etc. / \$8 to \$12.50 per unit / C26
Industrial Electronic Engineers, Inc.,
*a / Bina-View Self-Decoding Readout
Display / DFSCR: accepts binary code

Industrial Electronic Engineers, Inc.,

*a / Bina-View Self-Decoding Readout
Display / DESCR: accepts binary code
up to 6 bits; translates and displays
proper character (numbers, letters,
words, symbols, colors). Complete
alpha-numeric presentation capable
in each unit / USE: displaying data
where binary input is required /
\$39.25 to \$110.75 / C26
International Business Machines Corp.,
Federal Systems Div.

Federal Systems Div.

Jordan Electronics, a div. of The
Victoreen Instrument Co., 121 So.
Palm Ave., Alhambra, Calif. / solid
state electronic devices / DESCR: state electronic devices, puer supplies, sensors, voltage comparators, keyers, flashers, audible warning, inter-valometers, servo amplifiers, static switches, programmers, systems / - / - / C26

switches, programmers, systems / - / - / C26
Kelvin Sales Co., 5919 Noble Ave., Van Nuys, Calif. / precision wire wound resistors and resistor networks / DESCR: resistors and networks produced to close tolerances, reliability, drift, temperature coefficient, resistance, tracking and matching / USE: in digital and analog computers; readout equipment / - / C26 Leach Corp.

Leach Corp. Licon Div., Illinois Tool Works Inc.

-- see S6 Lockheed Electronics Co., Avionics and Industrial Products Div.

Massey Dickinson Co., Inc. -- see C24A Matrix Research and Development Corp. -- see C24A Milgo Electronic Corp.

Milgo Electronic Corp.
Monarch Metal Products, Inc.
F. L. Moseley Co.
Naniloa Corp.
The Nissho Co., Ltd., Electronic Section
Edward Ochman Systems, Box 141, Fairfield, Conn. / data processing accessories / DESCR: storing equipment
for IBM cards, control panels, and
computer tapes / USE: accessory
equipment in computer or data processing department / \$50 to \$500 /
C26

Committonics, Inc., Subsidiary of Borg-Warner Corp., 511 N. Broad St., Philadelphia 23, Pa. / electro-static strip printers / DESCR: high static strip printers / DESCR: high speed printers using an electrostatic recording technique to print code, symbols or alphanumeric characters on coated paper 1/4" to 12" wide / USE: data processing, communications, telemetry, etc. Output devices / \$7405 to \$200,000 / C26

C26
Omnitronics, Inc., Subsidiary of Borg-Warner Corp., *a / photoelectric paper tape readers / DESCR: photoelectric readers using reflected light for reading and AC-coupled amplifiers for drift free operation / USE: data processing, communications, numerical control, input devices / \$1305 to \$3190 / C26
Ortronix, Inc. -- see D2A
P C A Electronics Inc.
Packard Bell Computer, a div. of Packard Bell Electronics
Phillips Control Co.

ard Bell Electronics
Phillips Control Co.
Polyphase Instrument Co.
RMS Associates, Inc. -- see C44
Raytheon Co., Industrial Components
Div.

Redifon Computer Dept. -- see C23

Redifon Computer Dept. -- see C23
Rixon Electronics, Inc.
Sangamo Electric Co.
Saunders & Co., 53 Everett CAA, Waltham 54; Mass. / computer needs / small computers, components, and test equipment fcr process control / - / \$100 to \$20,000 / C26
F. W. Sickles Div., General Instrument Computers

ment Corp.
E. Slavin & Co., 297 Third St.,
Cambridge, Mass. / Roblinger "PMC"
Stainless Steel Foil and Shim Stock / DESCR: premeasured and cal-ibrated from 0"-60"; packaged in thicknesses from .0005 through

thicknesses from .0005 through .015 / USE: gauges, clips, contacts, shields, diaphrams / \$5.10 to \$18.30/package / C26 Special Products & Applied Research Div., The de Havilland Aircraft of Canada, Ltd.

Canada, Ltd.
Sperry Farragut Co., Div. of Sperry
Rand Corp.
Sprague Electric Co., 377 Marshall St.,
North Adams, Mass. / electronic components and packaged circuits /
DESCR: capacitors, resistors,
transistors, magnetic shift registers, integrated micro-circuits,
thin-film microcircuits, pulse
transformers, toroidal inductors,
packaged digital circuits / USE:
in computer industry / - / C26
Stackpole Carbon Co. Stackpole Carbon Co

Superior Manufacturing & Instrument Corp. Sylvania Electric Products, Inc.,

Sylvania Electric Products, Inc., Semiconductor Div. Semiconductor Div. Systems Sales Co., a div. of Systems Mfg. Corp., 13 Broad St., Binghamton, N.Y. / computer accessories / DESCR: all equipment for the storage, handling, and transporting of magnetic tape / - / - / C26
Technitrol, Inc., 1952 E. Allegheny Ave., Philadelphia 34, Pa. / computer circuit components / DESCR: miniature, subminiature pulse transformers. Pulse widths nanosec. to tens of microseconds. Delay lines, distributed constant, nanosec. to several microseconds. Shift regis-

distributed constant, namosec, to several microseconds. Shift registers, magnetic switch core matrices / USE: as circuit elements in digital computers / 75e to \$15 / C26
Transitron Electronic Corp.
Tung-Sol Electric Inc., 1 Summer Ave., Newark 4, N.J. / electronic components / DESCR: designed for incorporation in devices used by computers and various automated equipment / USE: switching, power and control / - / C26
H. W. Ulmer Co.
Veeder-Root Inc.
Vernistat Div., Perkin-Elmer Corp.

Vernistat Div., Perkin-Elmer Corp.

Vitramon, Inc., P. O. Box 544, Bridge-port 1, Conn. / "VG" Switching ntramon, inc., r. O. Box 344, Bridge-port 1, Conn. / "Vef" Switching Module / DESCR: manually or me-chanically actuated no bounce switch for informational switching up to 1000 cps / USE: in pulsing digital circuitry or in dry circuits and low level control / \$5.55 to \$11 / C26

The Walkirt Co. Westgate Laboratory, Inc. Wright Engineering Co., Inc. Wright Line, a div. of Barry Wright Corp.

COMPUTING SERVICES (see also Survey of Computing Services")

Addressograph-Multigraph Corp Advanced Scientific Instruments Inc.

Advanced Scientific Instruments Inc.
Aero Geo Astro Corp.
Airborne Instruments Lab., Military
Mktg. Div.
Alwac Computer Div., El-Tronics Inc.
American Data Services, Inc.
Amplied Dynamics Inc.
Applied Dynamics Inc.
Applied Electronics Corp. of N.J.
Aracon Laboratories Div., Allied Research Associates, Inc.
Associated Sales Analysts, Inc.
Atlantic Research Corp.
Automated Accounting Center of
Connecticut

Connecticut Avien Inc.
Basic & Experimental Physics -- see

Beckman Instruments Inc., Systems Div. Bell Aerosystems Co.

Bell Aerosystems Co.
Belock Instrument Corp.
Bendix Corp., Computer Div.
The Bendix Corp., Bendix Systems Div.,
3300 Plymouth Rd., Ann Arbor,
Mich. / Bendix G-20 Computer Service Bureau / DESCR: 32 K core
memory, 1000 LPM printer (120 columns), 650 cards/minute reader, 250 omns, 050 cards/minute reader, 250 cards/minute punch, 4 tape drives / DESCR: predominantly scientific applications / 26K/month / C27

applications / 26K/month / C27
Benson-Lehner Corp.
Biophysical Electronics Div.
Ernest E. Blanche & Associates, Inc., 10335 Kensington Parkway, Kensington, Md. / data processing / DESCR: IBM 1401 with 4 magnetic tapes and 42 IBM punch card machines; also mathematical and statistical research and analysis / USE: by clients (commercial and government / - / C27
Boog Allen Applied Research Inc., 13

ment / - / C27

Booz, Allen Applied Research Inc., 135

S. LaSalle St., Chicago 3, Ill. /
scientific and technical services /
DESCR: broad range of computer
services including computer and
hardware systems design, installation
management, computer feasibility,
applications, systems analysis, software design, data processing, and
scientific computation / - / - / C27
Brown Engineering Co. Inc.
Burroughs Corp.
C-E-I-R, Inc.
C.S.F.

C.S.F.

Computer Laboratories, Inc. Computer Methods Corp. -- see P12A Computer Systems Inc.

COMRESS (Computer Research Systems OMMESS (Computer Research Systems and Software), INC., 2916 V St., N. E., Washington 18, D.C. / SCERT (Systems and Computers Evaluation and Review Technique) / DESCR: theory/simulation technique; builds mathematical models of computer run to be programmed, then simulates performance on hardware/software performance factor matrix for each configuration to be evaluated / USE: for selection of optimum configuration and optimum systems approach / \$2500 to \$1000 / C27

Cook Technological Center
Data Computing Corp.
Data Processing Corp., 311 S. Sharp
St., Baltimore 1, Md. / computer
services / DESCR: complete data
processing service; optical scanning;
specializing in banking, retailing
and publishing applications; hispeed addressing / - / - / C27
Data Sciences, Inc.
Denver Electronic Computing Service. Denver Electronic Computing Service,

G. C. Dewey Corp. -- see D1
Dian Laboratories, Inc., 611 Broadway,

New York 12, N.Y. / analog computing service / DESCR: Dian 120 Computers; 440 summing and integrating amplifiers, 70 multipliers, associated function-generating equipment, resolvers, diodes, relay amplifiers, recorders and plotting boards / USE: solution of scientific and engineering problems; simulation of physical systems / on request / C27 Edgerton, Germeshausen & Grier, Inc. Electronic Data Service, Inc., 802 Philadelphia Pike, Wilmington, Del. / data center / DESCR: consultation, education, and custom data processing performed for companies with or without their own equipment; 1401 programs for payroll for sale / USE: for payrolls and sales analysis / \$4,50/hr. to \$100/day / C27 Electronic Engineering Co. of Calif. Elilott Bros. (London) Ltd., Computing Services Div. El-Tronics Inc. Epsco, Inc. Epsco, Inc.
Ferranti Electric Co. Inc.
Gannett Fleming Corddry and Carpenter, Inc. General Atomic Div., General Dynamics Corp.
General Electric Co., Computer Dept. General Electric Co., Computer Dept.
-- see C22
General Kinetics Inc., 2611 Shirlington Rd., Arlington 6, Va. / computing services / DESCR: complete programming services; problem solving; programming research; compiler development / - / hourly and contract rates / C27
Geotechnical Corp.
Gilmore Industries Inc.
GFS Instrument Co. Inc.

Gilmore Industries Inc.
GPS Instrument Co. Inc.
Gulton Industries, Inc. -- see D2A
Hammer Business Service, Inc.
Hughes Dynamics, Inc. -- see C30
Instrument Corp. of Florida
International Business Machines Corp.
International Business Machines Corp. Federal Systems Div.

Lear, Inc., Instrument Div. Librascope Div., General Precision

Machine Computing Services

Machine Computing Services
Mathematischer Beratungs -- und Programmierungsdienst GmbH. -- see C30
Mauchly Associates, Inc.
McDonnell Automation Center, Box 516,
St. Louis 66, Mo. / complete automation service center / DESCR: contains 500 employees, \$13 million in
equipment, including IBM 7000 and
7094. Offers consulting, systems
analysis, programming, data processing services in administrative
and scientific areas / USE: consulting, systems design, programming, sulting, systems design, programming, data processing / - / C27 McIntyre Associates

data processing / - / C27

McIntyre Associates
Minneapolis-Honeywell Electronic Data
Processing Div.
Missile Systems Corp.
Monroe Calculating Machine Co.,
Division of Litton Industries
National Bureau of Standards
National Computer Analysts, Inc.
Nelson Instrument Co.
Norden Div., United Aircraft Corp.
Northern Electronics, Inc.
Oki Electric Industry Co. Ltd.
OPTOmechanisms Inc.
Pacific Tabulating & Statistical Ltd.
Page Communications Engineers Inc.
Philco Corp.
RCA Service Company, Electronic Data
Processing Service, Bldg. 206-1,
Cherry Hill Offices, Camden 8, N.J./
RCA Electronic Data Processing
Service / DESCR: EDP service, using
RCA computers at RCA EDP Centers in
Cherry Hill, Washington, Chicago
and San Francisco, specializing in
demand deposit and subscription
fulfillment services / - / based on
number of transactions processed /
C27 number of transactions processed /

Redifon Computer Dept. -- see C23 Reeves Instrument Corp. Research Calculations, Inc.
Saab Aircraft Co., Electronics Div.
The Scam Instrument Corp.
Scantlin Electronics Inc. Scantlin Electronics Inc.
The Service Bureau Corp., a subsidiary of IBM — see C20
Southwestern Computing Service, Inc.
Sperry Utah Co., Div. of Sperry Rand
Corp.

Standard Telephones & Cables Ltd. Statistical Tabulating Corp.
Systems Research Labs. Inc.
Tabulating & Business Services Inc. Teleregister Corp.

United Research Services Inc. -- see P12A, S9 U.S. Naval Weapons Laboratory, Compu-

U.S. Naval weepons Laboratory, Com tation and Analysis Lab.
U.S. Navy, Aviation Supply Office, Data Processing Div.
UNIVAC Div. of Sperry Rand Corp.
Vitro Labs Div., Vitro Corp. of America

Weltronic Co.

Wolf Research & Development Corp., P. O. Box 136, West Concord, Mass. / computer services / DESCR: digital computer services / DLSAR: digital computer operations, business and scientific programming; engineering analysis. Applications in data reduction, data retrieval, computer controlled communications / - / - /

COMPUTING SERVICE, DIGITAL (see also "Survey of Computing Services")

Aracon Laboratories Div., Allied Research Associates, Inc.
Basic & Experimental Physics -- see P12A

Booz, Allen Applied Research Inc. --see C27 Computer Laboratories, Inc.

Computer Laboratories, Inc.
Computer Usage Co., Inc., 655 Madison
Ave., New York 21, N.Y. / analysis/
programming; computer time / DESCR:
design and full implementation of
new computer applications -- business, scientific, or systems. Time
sales (various computers) / - /
-/ C28 / C28

Data Computing Corp. Data Processing, Inc. -- see C30
G. C. Dewey Corp. -- see D1
Douglas Computing Service
Electronic Engineering Co. of California -- see T17

fornia -- see T17
General Kinetics Inc., 2611 Shirlington Rd., Arlington 6, Va. / computing services, digital / DESCR: problem formulation, numerical analysis; programming; problem solving; programming systems development; compiler development / - / hourly and contract rates / C20
Harvey-Wells Electronics, Inc.
Hughes Dynamics, Inc. -- see C30
The I.D.R. Co. (Industrial Data Reduction), 4740 Spruce St., Philadelphia 39, Pa. / data processing / DESCR: specializing in servicing the publishing industry / - / - / C28
KCS Ltd.

KCS Ltd.

Multnomah Data Processing Center National Computer Analysts, Inc. National Physical Laboratory, Mathe-matics Div., Teddington, Middlesex, England / digital computing service / DESCR: specialists in numerical analysis including prob-

service / Desch: specialists in numerical analysis including prob-lems in applied mathematics and theoretical physics / USE: data processing / - / C20 The Service Bureau Corp., a subsidi-ary of IBM, 425 Park Ave., New York 22, N.Y. / commercial and scientific data processing services / DESCR: data processing, programming, sys-tems analysis, machine services, on contractual basis using IBM 650, 1401, 1620, 7070, 7090, data plot-ting, Magnetic Ink Character Recog-nition, reader-sorter, unit record equipment / USE: for business and scientific problems / - / C28 Statistical Tabulating Corp. Technical Advisors, Inc.

C30. CONSULTING SERVICES (see also "Survey of Consulting Services")

ABL Inc., P. O. Box 11193, Palo Alto, Calif. / consulting / DESCR: serv-ices in processing of analog, audio, digital, optical signals: technical, product and market studies, surveys, evaluations, problem identification and analysis, industry liaison, re-search and development / - / - / C30 Abacus Inc. Abacus Inc. Abacus Information Management Co. ADB Institutet (Scandinavian Automatic Data Processing Institute) Data Processing Institute/
Advance Data Systems Corp. -- see DI
Advanced Information Systems, Inc.
American Data Services, Inc.
The American University, Center for
Technology and Administration -see El Aries Corp.

Arkay Engineering, Inc., 11800 W.
Olympic Blvd., Los Angeles 64,
Calif. / engineering consultants /
DESCR: circuits and data systems
design services; designing and shipping hardware. Semi-conductor circuits, data systems, automatic
checkout and control, complete computers, telemetry, instruments,
value analysis. proposals. etc. / value analysis, proposals, etc. /

Association of Data Processing Service Organizations

Auerbach Corp.
Automated Systems International, Inc.
-- see I7

Automation Engineers Basic & Experimental Physics -- see P12A

Basic Sexperimental thysics — see P12A
Basic Systems Inc. — see E1
Ernest E. Blanche & Associates, Inc.
— see C27
Bonner & Moore Associates, Inc., 500
Jefferson, Houston 2, Tex. / consultation, programming / DESCR:
consulting and research in operations research, mathematical programming, chemical process analysis, management information systems, computer programming and systems design / - / \$1000 to \$100,000 / C30
B000z, Allen & Hamilton Inc., 135 S.

\$1000 to \$100,000 / C30
Booz, Allen & Hamilton Inc., 135 S.
LaSalle St., Chicago 3, Ill. /
management consulting and systems
design services / DESCR: management
consultants; technical services in
electronic and automatic data processing for totally integrated management controls systems / USE: for
industry, commerce, government, institutions / - / C30
C-E-I-R, Inc.

industry, commerce, government, institutions / - / C30
C-E-I-R, Inc.
Chrono-log Corp.
Circuit Engineering, 102 Ellis Rd.,
Weston 93, Mass. / advice / DESCR:
review plans for new device or instrument, point out difficulties,
suggest improvements, develop logical design, help find sources of
components, review performance,
suggest new paths / - / - / C30
Codamite Corp. -- see C22
Computer Associates, Inc.
Computer Consultants Ltd., 3 Cecil
Court, London Rd., Enfield, Middlesex, England / consulting services /
DESCR: all matters relating to computers / - / - / C30
Computer Laboratories, Inc.
Computer Laboratories, Inc.
Computer Logic Corp.
Computer Logic Corp.
Computer Ibage Co. -- see C27
Computer Usage Co. -- see C27
Control Technology, Inc.
Cybetronics Inc.
Data Processing Corp. -- see C27
Datiel, Mann, Johnson & Mendenhall
Data Processing Corp. -- see C27
Data Processing Corp. -- see C27
Data Processing Corp. -- see C27
Data Processing Employment Service,
1343 H. St., N.W., Washington 5,
D.C. / employment / DESCR: recruiting, screening and selection of programmers, systems analysts and engineers, mathematicians and design

grammers, systems analysts and en-gineers, mathematicians and design engineers / USE: serve firms en-gaged in data processing / - / C30

DATA PROCESSING, INC., 1334 Main St., Waltham 54, Mass. / CONSULTING / DESCR: analytical, programming, and general consulting services for scientific and advanced business digital computer applications. Special emphasis on high standards of programming quality, and logical programming / - / - / C30

Data Trends, Inc. -- see C22 Datatrol Corp.
G. C. Dewey Corp. -- see Dl
The Diebold Group, Inc.
Diversified Concepts, Inc. Documentation Inc.

Documentation Inc.
Arnold I. Dumey
Dynatech Corp., 17 Tudor St., Cambridge 39, Mass. / consulting
services / DESCR: analysis, design,
development and manufacture of specialized automatic control systems,
including automation of manufacturing, sorting, packaging or processing systems / - / - / C30
Ebasco Services Incorporated
Editorial Services for Management,

Editorial Services for Management, P. O. Box 222, Concord, Mass. / consulting services, editorial / DESCR: technical consulting in forms/printing-data processing interface; editorial services including writing, copy editing, layout and design, and production / Electronic Data Service, Inc. -- see Elliott Bros. (London) Ltd., Comput-

ing Services Div.
Ferranti Electronics, a div. of Ferranti-Packard Electric Ltd., Data Systems Dept.

Fischbach, McCoach & Associates, Inc. Gannett Fleming Corddry and Carpenter,

H. S. Gellman & Co. Ltd.
General Electric Co., Computer Dept.
-- see C22
General Kinetics Inc., 2611 Shirling-

ton Rd., Arlington 6, Va. / consult-ing services / DESCR: mathematical Ing Services, Deskar, mathematics; automatic programming; computer evaluation and selection; data handling methods; selection of peripheral equipment; magnetic tape qualification studies / - / hourly and contract rates / C30

Hamilton Research Associates, Inc. -- see E1

Hammer Business Service, Inc. Herbert Halbrecht Associates, Inc. S. Himmelstein and Co. Hollander Associates -- see S9

Hughes Dynamics, Inc., 10889 Wilshire Blvd., Los Angeles 24, Calif. / management consulting services / DESCR: broad range of research and consulting services in management sciences and information technology; operations research, systems analy-sis_and design, computer program-ming and operations, market re-search / USE: consultation with businesses, industries, governments, institutions / fee for services /

C30
The I.D.R. Co. (Industrial Data Reduction) -- see C28 Information International, Inc. Jonker Business Machines, Inc. KSC Ltd.

KSC Ltd.
Management Assistance Inc.
Management Systems Corp., 1 Story St.,
Cambridge 38, Mass. / management
consulting / DESCR: application of
scientific management techniques
and operations research to development of computer-based information.

and operations research to development of computer-based information and decision systems / USE; controlling development projects, production and inventories; simulation and management games / - / C30 Mathatronics, Inc.

Millian processing; problems analysis for engineering, science; computing of problems in own computing center; operations research, editing "Elektronische Dateuverarbeitung", education / - / - / C30

H. B. Maynard & Co., Inc.

McDonnell Automation Center -- see C27

Mesa Scientific Corp., 2930 Imperial

McDonnell Automation Center -- see C27 Mesa Scientific Corp., 2930 Imperial Highway, Inglewood, Calif. / computer consulting / DESCR: consulting in all phases of computer technology /- /- / C30 Multnomah Data Processing Center Ray Meyers Corp., 1302 E. Main St., Endicott, N.Y. / consulting services / DESCR: systems development and production programs /- /- / C30

National Computer Analysts, Inc. Simon M. Newman, 1411 Hopkins St., N.W., Washington 6, D.C. / con-sulting / DESCR: documentation consulting; specializing in information retrieva. / - / - / C30 The Nissho Co., Ltd., Electronic

Section James Addison Potter The Service Bureau Corp., a subsidiary of IBM
Statistical Tabulating Corp.
Systems Programming Corp.
Tabulating & Business Services Inc.
United Research Services Inc. -- see

S9
U.S. Air Force, Computation Div.,
Data Services Center
Wolf Research & Development Corp.
Woods, Gordon & Co.
Zator Company

C31. CONTROLS

Acme Visible Records, Inc. Babcock Electronics Corp.
Bendix Corp., Research Laboratories Computer Control Co., Inc. Computer Products Inc. Control Data Corp. Control Equipment Corp.

James Cunningham, Son & Co., Inc.
Daystrom, Inc., Weston Instruments
& Electronics Div.
G. C. Dewey Corp. -- see Dl
Dynatech Corp. -- see C30
Fairchild Controls, A Div. of Fairchild
Camera and Instrument Corp.
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera and
Instrument Corp. Instrument Corp.
General Electric Co., Electric Utility
Sales Operation
General Electric Co., Industrial Sales Operation Goodyear Aircraft Corp.
Guidance Controls Corp., a subsidiary
of Warner Electric Brake & Clutch Harman Kardon Inc., Data Systems Harman Kardon Inc., Data Systems
Div. -- see D1
Instrument Systems Corp.
International Business Machines Corp.,
Federal Systems Div.
Milgo Electronic Corp.
Naniloa Corp., Station B, P.O. Box
2791, Toledo 6, Ohio / electronic
machine control system / DESCR:
solid state electronic machine control system including linear digital
transducers and driving servo-amplifiers for complete multi-axis control / USE: programs two-axis
motorwinding machine / \$10,000 to
\$20,000 / C31 motorwinding machine / \$10,000 to \$20,000 7 C31
Philips Electronic Instruments Saab Aircraft Co., Electronics Div.
Tempo Instrument Inc. -- see T31.3
M. Ten Bosch, Inc. -- see C32
H. W. Ulmer Co., 3018 San Luis Rey Rd., Oceanside, Calif. / vacuum tubes / DESCR: power amplification or control tubes. Vacuum tubes for information display, storage and amplification / USE: controls in automated equipment / \$10 to \$1000 / C31
Union Switch & Signal Div. of Westinghouse Air Brake Co.
Veeder-Root Inc.
Westgate Laboratory, Inc. \$20,000 7 C31 Westgate Laboratory, Inc. Wiancko Engineering, div. Tamar Electronics, Inc.

C32. CONTROLS, AUTOMATIC

Amplifiers Corp. of America, 398 Broadway, New York 13, N.Y. / con-trols, automatic / DESCR: control circuits for special electro-mechanical requirements / - / - /

Avtron Manufacturing, Inc., 10409

Avtron Manufacturing, Inc., 10409
Meech Ave., Cleveland 5, Ohio /
Model T410 / DESCR: digital sheet
length control systems / USE: for
automatic shear lines / - / G32
Avtron Manufacturing, Inc., *a / Model
T427 / DESCR: digital length and
batch controller / - / - / C32
Bailey Meter Co., 1050 Ivanhoe Rd.,
Cleveland 10, Ohio / 720 Analog
Control System / DESCR: single
and multi-element control systems
using solid-state components / USE:
to control process variables according to desired conditions / - /
C32 C32

Basic & Experimental Physics -- see

Canadian Aviation Electronics Ltd.
Carlton Controls Corp., 15 Sagamore
Rd., Worcester 5, Mass. / numerical
control systems / DESCR: control
of linear or rotary machine element
motion from data logged information
from punched tape, cards or manual
input device basically using decimal digital system / USE: machine
control / \$10,000 to \$30,000 / C32
Connecticut Technical Corp., 3000 Main
St., Hartford 5, Conn. / automatic
test and control systems / DESCR:
tape program and relay controlled
automatic test systems for testing
business machines and systems requiring repetitive or programmed Canadian Aviation Electronics Ltd.

business machines and systems requiring repetitive or programmed action testing / USE: repetitive testing of production items / variable / C32 Control Equipment Corp. Control Logic, Inc. James Cunningham, Son & Co., Inc. Datex Corp.

James Cunningham, Son & Co., Inc.
Datex Corp.
Davidson Electronic & Development Co.
2211 Peninsula Drive, Erie, Pa. /
system input devices / DESCR: design and building of input bay for
data processing systems. Input -multiple measurements. Sequencing,
programming and conversion. Output -- in required form for data
processing equipment / USE: automatic input to data processing
systems from measuring devices such

as bridges, transducers, etc. /
- / C32
G. C. Dewey Corp. -- see D1
Dynatech Corp. -- see C30
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera and Instrument Corp.
Federated Engineering Development
Corp Corp.
Ferranti Electronics, a div. of
Ferranti-Packard Electric Ltd.,
Sectoms Dept. Ferranti-Packard Electric Ltd.,
Data Systems Dept.
The Foxboro Co. -- see C22A
General Atronics Corp.
General Controls Co.
Harman Kardon Inc., Data Systems
Div. -- see Dl
Instrument Systems Corp.
Walter Kidde & Co., Inc., Aerospace
Div Walter Kidde & Co., Inc., Aerospace
Div.
Walter Kidde & Co., Inc., Industrial
& Marine Div., 441 Main St., Belleville 9, N.J. / fire extinguishing
systems / DESCR: automatic carbon
dloxide fire extinguishing systems
for EDP computers and tape storage
rooms and under floor spaces / USE:
fire detection / - / C32
Ledex Inc., 123 Webster St., Dayton 2,
Ohio / research, development, design,
production of remote switching and
actuating assemblies / DESCR: rotary and axial solenoids to position, punch and actuate. Stepping
switches and circuit selectors for
programming, checkout, selecting,
power transfer, or other multiple
switching functions / - / \$4 to
\$400 / C32
Leeds & Northrup Co., 4901 Stenton
Ave., Philadelphia 44, Pa. / Speedomax G Frequency Recorder / DESCR:
frequency measuring and recording
instrument that features fast balancing speeds; offers wide choice
of single and dual ranges with or
without time deviation / USE: controls power system frequency / - /
C32
Sanders Associates, Inc.

C32
Sanders Associates, Inc.
The Superior Electric Co., 383 Middle St., Bristol, Conn. / SLO-SYN®
Preset Indexers / DESCR: controls indexing operations in applications using SLO-SYN Motors for positioning. Capable of controlling indexing movements to 9999 steps/cycle.
Stepping speeds adjustable from 2 steps/second / USE: positioning work tables / \$605 to \$035 / C32
M. Ten Bosch, Inc., 80 Wheeler Rd., Pleasantville, N.Y. / automatic controls / - / - / custom designed / C32
Unimation Inc.

Unimation Inc.
Union Switch & Signal Div. of Westinghouse Air Brake Co.

C33. CONTROLS, SIGNALING

Avtron Manufacturing, Inc., Avtron Manufacturing, Inc., 10409
Meech Ave., Cleveland 5, Ohio /
Model T361 / DESCR: digital speed
and percent systems / DSE: for
paper machines and off machine
coaters / - / C33
Control Equipment Corp.
James Cunningham, Son & Co., Inc.
G. C. Dewey Corp. -- see DI
Federated Engineering Development
Corp. Corp.
Instrument Systems Corp. Ledex Inc. -- see C32 Leeds & Northrup Co. -- see C32 Union Switch & Signal Div. of West-inghouse Air Brake Co.

C34. CONTROLS, SORTING AND COUNTING

C34. CONTROLS, SORTING AND COUNTING
Control Equipment Corp.
Control Logic, Inc.
G. C. Dewy Corp. —— see DI
Electro Instruments, Inc., U611 Balboa Ave., San Diego 11, Calif. /
digital measuring instruments /
DESCR: high-speed measurements and
recorders of single or multiple
electrical quantitites / USE: for
inspection and final check out /
\$1000 to \$50,000 / C34
Federated Engineering Development Corp.
General Atronics Corp.
Instrument Systems Corp.
International Business Machines Corp.,
Data Processing Div., 112 E. Post
Rd., White Plains, N.Y. / IBM 1062
Teller Terminal and IBM 1061 Control Unit / DESCR: on-line Teleprocessing ® Lerminal for savings
accounting and other financial
applications; has accumulators and

program tape for off-line operation/ USE: teller enters transaction data, central porcessor refers to random access file, and posts in-terest, prior and current transac-tions in passbook / rental: \$307.50/month to \$390/month; purchase: \$13,225 to \$16,775 / C34 Ledex Inc. -- see C32

C39. CONVERTERS, INFORMATION

Audio Instrument Co., Inc.
Avtron Manufacturing, Inc., 10409
Meech Ave., Cleveland 5, Ohio /
Model T-304 / DESCR: voltage converter / USE: as input for telemetering equipment, instruments, relays, regulators, recorders, etc. / - / C39
Avtron Manufacturing, Inc., *a / Model T-305 / DESCR: current converter / USE: input for telemetering equipment, instruments, relays, regulators, recorders, etc. / - / C39
Babcock Electronics Corp.
Basic & Experimental Physics -- see P12A PIZA
CG Electronics (Div. of Gulton Industries, Inc.) -- see Dl
Davidson Electronic & Development Co.
Delco Radio Div., General Motors Corp. Davidson Electronic & Development Co.
Delco Radio Div., General Motors Corp.
—— see D1
G. C. Dewey Corp. —— see D1
DI/AN Controls, Inc.
Digital Electronics Inc., 2200 Shames
Drive, Westbury, N.Y. / Model 310
Tape Format Converter / DESCR:
custom designed data conversion
equipment. Magnetic tape to all
other input-output equipment / \$15,000 to \$40,000 / C39
Hughes Dynamics, Inc. —— see C30
IMC Magnetics Corp., Western Div.
Monitor Systems, Inc. —— see T10
Ortronix, Inc. —— see D2A
Procedyne Associates Inc. —— see C25
Rabinow Engineering Co., Inc., 1425
Research Blvd., Rockville, Md. /
address plate conversion to computer
language / DESCR: Rabinow Reading
Machine used to convert address
plate impressions to computer
language. Process eliminates key
punching as original raw data is
read / USE: offered as a service /
3¢ to 15¢ per address record / C39
Saab Aircraft Co., Electronics Div.

C40. CONVERTERS, INFORMATION, ANALOG TO DIGITAL

ANALOG TO DIGITAL

Adage, Inc., 292 Main St. Cambridge 42, Mass. / VOLDICON (18) / DESCR: high-speed, semiconductor, analog-digital converters; modular construction, bi-polar operation, variety of input-output options. Speed to 17 kc conversion rate (higher on special order), accuracy of ±.01% / -/ -/ C40

Addom Corp., 9732 Cozycroft Ave., Chatsworth, Calif. / analog-to-digital converters / DESCR: high-speed analog-to-digital converters ranging from 4 through 11 binary bits. Word clocking rates from 50kc to 350kc / USE: real time signal processing / \$2900 to \$5600 / C40

Advanced Instrument Corp. Advancement Devices, Inc.

Aero Geo. Astro Corp.

Aerospace Controls
Airborne Instruments Lab., Military Mktg. Div.

Airflyte Electronics Co., 535 Ave. A. Airborne Instruments Lab., Military Mktg. Div.
Airflyte Electronics Co., 535 Ave. A. Bayonne, N.J. / Special Code A/D Converters / DESCR: analog-digital converters with special read-outs not readily available offered in 4 weeks or less / USE: shaft positioning; determination of pitch, roll, yaw, etc. / \$150 to \$750 / C40 American Bosch Arma Corp.
Ampex Corp.
Amplex Corp.
Applied Control Corp.
Applied Dynamics, Inc.
Applied Electronics Corp. of N.J.
Arnoux Corp.
Astrosystems, Inc.
Automation Development Corp.
Auto-Trol Corp.
Avien, Inc.
Baird-Atomic, Inc.
Baird-Atomic, Inc.
Baidwin Electronics, Inc., 1101
McAlmont, Little Rock, Ark. /
photoelectric shaft postion encoders / DESCR: shaft postion detected by photocells through glass code pattern / USE: resolves shaf American Bosch Arma Corp code pattern / USE: resolves shaf

position to high accuracy. Miss tracking, machine tool / \$200 to \$20,000 / C40 Beckman Instruments Inc., Berkeley Beckman Instruments Inc., Systems Div. Bell Aerosystems Co. The Bendix Corp., Bendix-Pacific
Div.
The Bendix Corp., Eclipse-Pioneer Div. Benrus Watch Co., Inc. Div.
Benrus Watch Co., Inc.
Benson-Lehner Corp., 14761 Califa
St., Van Nuys, Calif. / OSCAR Model
F / DESCR: reduces oscillographic,
strip chart, or film data to digital
form on punched cards. Applies
linear and non-linear calibrations
to single or multi-channel records /
USE: digitize pressure, temperature, liquid level data, well logs,
etc. / \$7000 to \$14,000 / C40
Benson-Lehner Corp., *a / OSCAR Model
K / DESCR: reduces oscillograms
and strip charts to digital form on
punched cards. Applies linear and
non-linear calibrations to single
or multi-channel records / USE:
digitize pressure, temperature,
liquid level data, well logs, etc. /
\$5000 to \$6000 / C40
Bowmar Instrument Corp.
Bristol Co. \$5000 to \$6000 / C40
Bowmar Instrument Corp.
Bristol Co.
Budd Co., Inc., Electronics Div.
Burlingame Associates, Ltd.
Burroughs Corp.
Calibration Standards Corp.
Central Dynamics, Ltd.
CG Electronics (Div. of Gulton Industries, Inc.) -- see Dl
Chesapeake Instrument Corp.
Cimron Corp.
Coleman Electronic Systems, 3210 W.
Central Ave., Santa Ana, Calif. /
analog to digital shaft encoders /
DESCR: parallel decimal Digitizer
shaft encoder / - / \$1500 to
\$50,000 / C40
Coleman Systems Inc.
Collectron Corp. Coleman Systems Inc.
Collectron Corp.
Colorado Instruments
Comcor, Inc.
Computer Control Co.
Computer Equipment Corp.
Computer Systems, Inc.
Concord Control, Inc.
Consolidated Electrodynamics Corp.
Consolidated Systems Corp. Consolidated Systems Corp.
Control Equipment Corp. -- see C24
Control Logic, Inc. -- see C11
Courter Products, Div. Model Engr. & Mfg. Co.
Curtiss-Wright Corp., Electronics
Div.
Data-Control Systems, Inc. Data-Control Systems, Inc.
Data Tech
Data-Tronix Corp.
Datex Corp.
Daystrom Inc., Control Systems Div.
Daystrom Inc., Transicoil Div.
Del Electronics Corp.
G. C. Dewey Corp. -- see Dl
DI/AN Controls, Inc.
Digital Design Corp.
Digital Electronics Corp.
Digital Equipment Corp.
Djordjevic Engineering Co.
Dresser Electronics, SIE Div.
Dynatronics, Inc. Dresser Electronics, SIE Div.
Dynatronics, Inc.
EDP Corp., 3501 South Orange Blossom
Trail, Orlando, Fla. / analog to digital converters / DESCR: special
purpose converters for digitizing
systems, particularly FM conversion to digital / USE: for digitizing
systems / variable / C40
Electrada Corp.
Electro-Mec Instrument Corp.
Electro-Mechanical Research Inc., Advanced Scientific Instruments Div.
-- see C22
Electro Nuclear Systems Corp. Vanced Schemitt Instructural State

-- see C22
Electro Nuclear Systems Corp.
Electronic Associates, Inc.
Electronic Development Corp.
Electronics Corp. of America
EMI-Cossor Electronics, Ltd.
Epsco, Inc.
Erie-Pacific Div., Erie Resistor Corp.
Evershed & Vignoles Ltd.
Feedback Controls, Inc.
FFGM Electronics, Inc.
Fischer & Porter Co.
Ford Instrument Co., Div. Sperry
Rand Corp. Franklin Electronics Inc., E. 4th St., Bridgeport, Pa. / A-D converters / DESCR: 5-50 cps; 0.01% accuracy; transistorized; AC-DC-Ohms / - / \$1300 to \$3500 / C40

GAP Instrument Corp.

GB Components Inc

General Applied Science Labs, Inc.
General Devices, Inc.
General Dynamics/Electronics, Information Technical Div.
General Electrodynamics Corp.
General Mils, Inc., Electronics Div.
General Time Corp., Electronic Systems Cenisco, Inc.
Genisco Systems, a div. of Genisco
Inc., 18435 Susana Rd., Compton,
Calif. / data acquisition system /
DESCR: analog pulse duration converter for conversion of any analog
input into digital output with
Genisco digital voltmeter as an
accessory / USE: sensing low level
input by data acquisition / \$7000
to \$50,000 / C40
Gilfillan Bros., Inc.
Goodyear Aircraft Corp.
Gulton Industries, Inc.
Hagan Chemicals & Controls, Inc.
Hallamore Electronics Div. of the
Siegler Corp. Genisco, Inc. Lear, Inc.
Lear, Inc.
Lear, Inc.
Lear, Inc.
Lear, Inc.
Lear, Inc.
Life Electronics Div., Lab for Electronics, Inc.
Librascope Div., General Precision Lintronic Ltd.
Litton Systems Inc., Guidance & Control Systems Div.
Loral Electronics Corp. magnavox Co. Magnetic Amplifiers Div. of the Siegler Corp. Magnetic Amplifiers Div. of the Siegler Corp.

Marquandt Corp., Pomona Div.

Marstan Electronics Corp.

Martin Marietta Corp.

Matrix Research and Development Corp.

—- see C24A

McDonnell Aircraft Co.

Milgo Electronic Corp.

Mini-Rad, Inc.

Minneapolis-Honeywell, Military Products Group

M.K.S. Data Inc.

Memorton Corp.

Model Engr. & Mfg. Corp.

Monitor Systems, Inc. —- see TIO

Moore Associates, Inc.

Navigation Computer Corp.

Non-Linear Systems, Inc., P. O. Box

720, Del Mar, Calif. / analog-todigital converters / DESCR: 3

analog-to-digital converters, 22
digital voltmeters; convert AC or

DC voltage, voltage ratios and resistance into digital form at readings from 1/second to 15,000/second,

USE: analog-to-digital conversion
for computers and control purposes
and for automatic data acquisition /
\$985 to \$6185 / C40

Norden Div., United Aircraft Corp.

North Electric Co.
Olympic Radio & TV Div. of the
Seigler Corp.

Orbitran Co. Inc.

Packard Bell Computer, a div. of
Packard Bell Computer, a div. of
Packard Bell Computer, Ralph M.
Parsons Co. Parsons Co.

PASTORIZA ELECTRONICS, INC., 285 Columbus Ave., Boston 16, Mass. / CODER / DESCR: converts analoginput voltage into 8-bit parallel binary coded signal by series of successive approximations. Each bit requires about two microseconds. Conversion initiated by external pulse or internal clock. Provides binary number representation of its input voltage and complement of that number in parallel form. Output levels 0 volts, - 10 volts / USE: analog to digital conversion / \$1250 / C40

Performance Measurements Co. Philco Corp. Philips' Gloeilampenfabrieken N.V. Potter Aeronautical Corp. Radiation Counter Labs Inc. Radiation Inc. Radio Corp. of America, Def. Elec. Prods. Ram Electronics, Inc.
Raytheon Co., Communications and
Data Processing Operation Data Processing Operation
Redcor Corp.
Revers Instrument Corp.
Regent Controls, Inc.
Resdel Engineering Corp., 990 South
Fair Oaks Ave., Pasadena, Calif. /
analog to digital and digital to
analog converters / DESCR: specialization in high speed and high accuracy analog to digital and digital
to analog converters. Custom designs / USE: data processing and
reduction systems / \$1000 to \$6000 /
C40
Rixon Electronics, Inc. reduction systems / \$1000 to \$0000 / C40

Rixon Electronices, Inc.
Ryan Electronique, Sub. Schlumberger Ltd.
Ryan Electronicy/Ryan Aero. Co.
Scientific Data Systems, Inc., 1649
17th St., Santa Monica, Calif. / analog-to-digital converters / DESCR: completé line of silicon analog-to-digital converters; high speed, low cost, high reliability at elevated temperatures. Particularly suited to operation with SDS 910 and SDS 920 Computers / USE: conversion of analog signals to digital for computer entry / \$3000 to \$4000 / C40
Servo Corp. of America
Sierra Research Corp.
Solatron, Inc.
Solid State Electronics Co.
Space-General Corp.
Space-General Corp. Space-General Corp. Sperry Utah Co., Div. Sperry Rand Corp.
Stony Brook Labs. Inc. Stony Brook Labs. Inc.
Streeter-Amet Co.
Superior Manufacturing & Instrument
Corp.
Systems Engineering Laboratories, Inc.,
P. O. Box 9148, Fort Lauderdale,
Fla. / analog-to-digital converter /
DESGR: high speed solid-state converter with resolutions from 8 bits
binary to 17 bits BCD at 400 KC bit
rate with display / - / - / C40
Systron Donner Corp.
Taylor Instrument Cos.
Tech-Laboratories, Inc.
Technical Measurement Corp.
Telecomputing Corp. Tech-Laboratories, Inc.
Technical Measurement Corp.
Telecomputing Corp.
Telemet Corp.
Telemet Corp.
Telemetries, Inc.
Texas Instruments Inc., Apparatus Div.
Government Products Group
Texas Instruments Inc., Industrial
Products Group, 3609 Buffalo Speedway, Houston 6, Tex. / analog to
digital converters / DESCR: 40,000
conversions per second, 0.05% accuracy / - / \$7000 to \$10,000 / C40
Theta Instrument Corp.
Towson Laboratories, Inc., 200 E.
Joppa Rd., Towson 4, Md. / Capcoder
A/D Converter / DESCR: uses capacitive charge transfer techniques
for simpler devices with unusual
performance characteristics / USE:
as input to computer or telemetry
systems / - / C40.
Trak Electronics Co. Inc.
Transistor Specialties Inc. Trak Electronics Co. Inc.
Transistor Specialties Inc.
TRW Computers Co.
Veeder-Root Inc.
Vernistat Div., Perkin-Elmer Corp.,
771 Main Ave., Norwalk, Conn. /
one-brush absolute-position shaft
encoders / DESCR: operates with
one brush output to produce absolute
position information; features 6
million shaft turn life, low torque
and no noise / USE: analog to digital (any code) conversion / \$450
to \$750 / C40

Vidar Corp. Vitro Labs. Div. Vitro Corp. of America Wang Laboratories Inc. Wayne-George Corp. Westinghouse, Electronics Div.

C41. CONVERTERS, INFORMATION, ,CARD TO MAGNETIC TAPE

Control Logic, Inc.
G. C. Dewey Corp. -- see D1
Digital Electronics Inc.
Electronic Data Service, Inc. -- see
C27
Electronic Engineering Co. of California -- see T17
Harman Kardon Inc., Data Systems
Div. -- see C10

C42. CONVERTERS, INFORMATION CARD TO PAPER TAPE

Addressograph-Multigraph Corp.
Airborne Instruments Lab., Military
Mktg. Div.
American Data Machines Inc.
Auto-Trol Corp.
Beckman Instruments Inc., Systems Div.
Beekman Instruments Inc., Systems Div.
Benson-Lehner Corp.
Burroughs Corp.
Canadian Aviation Electronics Ltd.
CG Electronics Corp.
Colorado Research Corp.
Computer Control Co. Inc.
Computer Measurements Co.
Consolidated Systems Corp.
Control Logic, Inc.
Datex Corp.
G. C. Dewy Corp. — see Dl
DI/AN Controls, Inc.
Digital Electronics Inc.
Digital Electronics Corp.
Electronic Development Corp.
Electronic Engineering Co. of
California — see TI7
El-Tronics Inc.
Epsco, Inc.
Harman-Kardon, Inc.
Harman-Kardon, Inc.
Harman-Kardon Inc., Data Systems Div.
— see ClO
Hughes Dynamics, Inc. — see C:30
Hyperion Industries Inc.
Information Products Corp.
International Business Machines Corp.,
Federal Systems Div.
International Computers and Tabulators
Ltd.
Lear Inc., Instrument Div.
Librascope Div., General Precision Inc.
Minneapolis-Honeywell, Military Products Group
Monitor Systems Inc.
Navigation Computer Corp.
Orbitran Co. Inc.
Packard Bell Computer Corp.
Philco Corp.
Radiation, Inc.
Radio Corp. of America, Electronic Data
Processing Div.
Rese Engineering Corp.
Systematics, a Div. of General Instrument Corp.
Tally Register Corp.
Telemet Corp.
Vitro Labs. Div. Vitro Corp. of

C42A. CONVERTERS, INFORMATION, CODE

Abacus Inc.
Addressograph-Multigraph Corp.
Admiral Corp.
Admiral Corp.
Adtrol Electronics
Airborne Instruments Lab., Military
Mktg, Div.
Amtron Inc.
Auto-Trol Corp.
Beckman Instruments Inc., Systems Div.
Benson-Lehner Corp.
Budd Co. Inc., Electronics Div.
Canadian Aviation Electronics Ltd.
CG Electronics Corp.
Codamite Corp.
Codamite Corp. — see C22
Computer Control Co., Inc., Old Connecticut Path, Framingham, Mass. /
3C Code Bar Switches and Keyboards /
DESCR: electromechanical encoding of octal/decimal input to binary coded output via came-type code bars and SPDT snap action switches.
Parity and hermetically sealed models / USE: for conversion from octal or decimal input to binary-coded output \(\) is 59 to \$\frac{1}{2}\$ for \(\) Computer Control Co., Inc., *a \(\) optical shaft angle encoders -

DICOTRON / DESCR: rotating disc coupled to input shaft. Non-am-biguous codes on transparent disc, optical light sources, detectors implement shaft angle reading. Low-level amplifiers present information to output / USE: to digitize analog rotation of shafts to absolute or incremental readouts / \$400 to \$5000 / C42A incremental readouts / \$400 to \$5000 / C42A
Connecticut Technical Corp. -- see T17
Consolidated Systems Corp.
Control Equipment Corp. -- see C24A
Control Logic, Inc. -- see C11
Control Science Corp., 5150 Duke St.,
Alexandria, Va. / decoder / DESCR:
modular design, synchronized with
coder; information output of decoder
identical to coder input signal /
USE: any conventional decoder application as specified / - / C42A
Control Science Corp., *a / encoder /
DESCR: binary telemetry encoders of
modular design. Shifting-accumulator type data registers serve both
as accumulator and shift register /
USE: encoder contents shifed out
sequentially and continuously in
NRZ format / - / C42A
Data-Control Systems Inc.
Data Products Co.
Datapulse Inc.
Control Systems Div Data Products Co.
Datapulse Inc.
Daystrom Inc., Control Systems Div.
G. C. Dewey Corp. — see Dl
DI/AN Controls, Inc.
Digital Electronics Corp.
Digitronics Corp.
Dynatronics Inc.
Electronic Development Corp.
Electronic Engineering Co. of
California — see T17
Epsco Inc. Epsco Inc. Friden, Inc., 2350 Washington Ave., riden, Inc., 2350 Washington Ave., San Leandro, Calif. / Friden Tape-to-Tape Code Converter / DESCR: reads on code (5-, 6-, 7-, or 8-channel tape) and simultaneously converts to another; makes various paper tape coding systems compatible / USE: data processing, graphotype addressing, teletype-setter, numerical control / - / 6122 C12A C12A General Devices, Inc. Guidance Controls Corp., a subsidiary of Warner Electric Brake & Clutch Co. of Warner Electric Brake & Clutch (
Hallicrafters Co.
Harman Kardon Inc., Data Systems
Div. -- see Cl0
The Hoover Co., Electronics Div.
Hyperion Industries, Inc., 127 Coolidge Hill Rd., Watertown, Mass. /
4-bit-converter, display module /
DESCR: converts 4 bits of binary
information to decimal for display DESCR: converts 4 bits of binary information to decimal for display — includes storage, converter matrix, etc. Module can be used also as 4 bit shift register or radio counter / - / \$95 each / C42A Information Products Corp.
International Business Machines Corp.
Federal Systems Div. International business machines corp., Federal Systems Div.
Invac Corp.
Lear, Inc., Instrument Div.
Lintronic Ltd.
McDonnell Aircraft Co.
Minneapolis-Honeywell, Electronic
Data Processing Div.
Monitor Systems, Inc. — see TlO
Navigation Computer Corp.
Non-Linear Systems, Inc. P. O. Box
728, Del Mar, Calif. / Model S44
Binary-to-Decimal Converter / DESCR:
converts pure binary numbers to
visual decimal display; 6000 elevenbit conversion per second / USE:
reading binary outputs from computers and analog-to-digital converters in decimal form / \$4035 /
C42A Federal Systems Div. C42A
Oread Electronics Lab. Inc.
Packard Bell Computer Corp.
Radiation, Inc.
Radio Corp. of America, Electronic
Data Processing Div.
Rese Engineering Corp.
Shepherd Industries Inc. Shepherd Industries Inc.
Soroban Engineering, Inc.
Stony Brook Labs, Inc.
Tally Register Corp.
Telemet Corp.
Telemetrics, Inc.
Texas Instruments Inc., Apparatus
Div., Government Products Group
Vitro Labs Div. Vitro Corp. of

C43. CONVERTERS, INFORMATION, COMPUTING

Control Logic, Inc. G. C. Dewey Corp. -- see D1 Harman Kardon Inc., Data Systems Div. -- see C10 Monitor Systems, Inc. -- see T10

C44. CONVERTERS, INFORMATION, DIGITAL TO ANALOG

Abacus Inc. Abacus Inc.
Adage, Inc. -- see C46
Adcom Corp.
Advancement Devices, Inc.
Aero Geo Astro Corp.
Airborne Instruments Lab, Military Mktg. Div.
Ampex Corp.
Applied Dynamics, Inc.
Applied Electronics Corp. of N.J. Applied Electronics Corp. of N.J. Arnoux Corp. Astrosystems Inc. Automation Development Corp. Automation Management, Inc. -- see C23 Auto-Trol Corp. Avien, Inc. Beckman Instruments, Inc., Berkeley Div. Beckman Instruments, Inc., Systems Div. Bell Aerosystems Co. Bell'Aerosystems Co.
Bendix Corp., Bendix Pacific Div.
Benson-Lener Corp.
Bowmar Instrument Corp.
Budd Co. Inc., Electronics Div.
Burroughs Corp.
Central Dynamics Ltd.
CG Electronics (Div. of Gulton Industries, Inc.) — see Dl
Coleman Electronics, Inc.
Colorado Instruments
Concor Inc. Coleman Electronics, inc.
Colorado Instruments
Comcor, Inc.
Computer Control Co. Inc.
Computer Equipment Corp.
Computer Measurements Co.
Computer Systems Inc.
Concord Control, Inc.
Consolidated Systems Corp.
Control Equipment Corp. -- see Cl4A
Control Loqic, Inc. -- see Cl4
Control Loqic, Inc. -- see Cl1
Curtiss-Wright Corp., Electronics Div.
Bata-Control Systems, Inc.
Datupulse, Inc.
Datupulse, Inc.
Datupulse, Inc.
Datystrom Inc., Control Systems Div.
G. C. Dewey Corp. -- see Dl
Dick Co., A. B.
Digltal Electronics Inc.
Digltal Equipment Corp. Digital Electronics Inc.
Digital Equipment Corp.
Djordjevic Engineering Co.
Dresser Electronics, SIE Div.
Dynatronics Inc.
Electronic Associates Inc.
Electronic Controls Inc.
Electronic Controls Inc.
Electronic Evelopment Corp.
Electronic Development Corp.
Electronic Development Corp.
Electronic Divelopment Corp.
EMI-Cossor Electronics Ltd.
Epsco, Inc.
Feedback Controls Inc.
FFFKM Electronics Inc. FFGM Electronics Inc.
Ford Instrument Co., Div. Sperry Rand
Corp.
GAP Instrument Corp.
GB Omponents Inc.
General Applied Science Labs Inc.
General Devices, Inc.
General Devices, Inc.
General Devices, Inc.
General Dramics/Electronics, Information Technical Div.
General Electrodynamics Corp.
General Radio Co.
Gertsch Products, Inc.
Giffillan Bros., Inc.
Godyear Aircraft Corp.
Gulton Industries, Inc. — see D2A
Hallamore Electronics Div. of the
Siegler Corp.
Hallicrafters Co.
Hamma Kardon Inc., Data Systems
Div. — see Cl0
Harvey-Wells Electronics, Inc.
A. W. Haydon Co.
Hewlett-Packard Co., 1501 Page Mill
Rd., Palo Alto, Calif. / digital to
analog converters / DESCR: convert
BCD input to staircase voltage /
USE: to drive strip-chart recorders from electronic counters /
\$525 / C44
Hyperion Industries Inc.
Information Products Corp.
Intercontinental Instruments Inc. FFGM Electronics Inc. Ford Instrument Co., Div. Sperry Rand Intectron Inc. Intercontinental Instruments Inc. International Business Machines Corp., International Business Machines Corp., Federal Systems Div.
Interstate Electronics Corp.
Kearfott Div., General Precision, Inc.
Kollsman Instrument Corp.
Kollsman Motor Corp.
Lear, Inc., Instrument Div.
LFE Electronics Div., Lab for Electronics Live. tronics, Inc. Librascope Div., General Precision Inc.

Lintronic Ltd. Loral Electronics Corp. Magnatox Co.

Magnatic Amplifiers Div. of the
Siegler Corp.

Marquardt Corp., Pomona Div.

Morstan Electronics Corp.

Martin Marietta Corp.

McDonnell Aircraft Co.

Merium Instrument Co., Electronics
Div. Magnayox Co. Div. DIV.
Milgo Electronic Corp.
Minneapolis-Honeywell, Military Products Group
M.K.S. Data, Inc. M.K.S. Data, Inc.
Mnemotron Corp.
Mondel Engr. & Mfg. Corp.
Monitor Systems, Inc. -- see T10
F. L. Moseley Co.
Natol Engineering Co. Inc.
Navigation Computer Corp.
Non-Linear Systems, Inc., P. O. Box
728, Del Mar, Calif. / NLS Model
16 Digital-to-Analog Converter /
DESCR: makes 250,000 digital-toanalog conversions per second. Input range 49999. Output: 110
volts / USE: Model 16 is binary
coded decimal; Model 16B is straight
binary / \$3005 / C44
Olympic Radio & TV Div. of the Siegler
Corp. Organic Radio & V. Brv. of the Six Corp. Orbitran Co., Inc. Oread Electronics Lab. Inc. Ortronix, Inc. Packard Bell Computer Corp. Parsons Electronic Div., Ralph M. Parsons Co.

ASTORIZA ELECTRONICS, INC., 285 Columbus Ave., Boston 16, Mass. / DECOMER / DESCR: converts digital information to analog form; 8-bit parallel binary input converts to corresponding voltage over range of -10 volts to +10 volts. Accepts external reference voltage and uses it to scale voltage output; performs the multiplications of a binary number by a voltage and converts the product to a voltage / USE: digital to analog conversion and multiplication / \$965 / C41 PASTORIZA ELECTRONICS, INC., 285 Col-

Potter Aeronautical Corp. Potter Aeronautron cosp.
Radiation Inc.
Radio Corp. of America, Def. Elec.
Prods.
Ram Electronics, Inc.
Raytheon Co., Communications and
Data Processing Operation Data Processing Operation
Redcor Corp.
Reeves Instrument Corp.
Regent Controls, Inc.
Resdel Engineering Corp. -- see C40
Rixon Electronics, Inc. RIXON Efectronics, Inc., 102 E. Sandford Blvd., Mt. Vernon, N.Y. / digital translog converter / DESCR: solid state unit, converts 8 bit parallel To 500,000 conversions per second / USE: in computer generated CRT display systems / \$240 / C44
Rochar Electronique, Sub, Schlumberger Live Rochar Electronique, Sub. Schlumberger Ltd.
Ryan Electronics/Ryan Aero. Co.
Sanders Associates, Inc., 95 Canal
St., Nashua, N.H. / digital logic
circuitry; digital logic cards;
digital logic modules, encapsulated;
digital to analog converters / - /
- / \$15 to \$100 / C44
S. E. Labs. Ltd.
Servo Corp. of America
Sierra Research Corp.
Solartron, Inc.
Solid State Electronics Co.
Sperry Gyroscope, Div. Sperry Rand Sperry Gyroscope, Div. Sperry Rand Corp. Sperry Utah Co., Div. Sperry Rand Corp.
Sperry Utah Co., Div. Sperry Rand
Corp.
Stony-Brook Labs, Inc.
Strand Engineering Co.
Streeter-Amet Co.
The Superior Electric Co. -- see T17
Superior Manufacturing & Instrument
Corp.
Systems Engineering Labs, Inc.
Taylor Instrument Cos.
Tech Laboratories, Inc.
Technical Neasurement Corp.
Telemet Corp.
Telemetrics, Inc.
Texas Instruments Inc., Apparatus
Div., Government Products Group
Towson Labs, Inc.
Transistor Specialties Inc.
THW Computers Co.
Vitro Labs Div. Vitro Corp. of
America
Maca Laboratories Inc.

Waugh Engineering Div., Foxboro Co. Westinghouse, Electronics Div.

CONVERTERS, INFORMATION, DIGITAL TO GRAPHIC

Itek Corp., 10 Maguire Rd., Lexington 73, Mass. / Digigraphic System / DESCR: digital computer input/output with real-time, flicker-free, time shared CRT display and light-sensing control for graphic image generation and manipulation / USE: real-time computer input/output and control / \$100,000 and up / C44A

C44B. CONVERTERS, INFORMATION, GRAPHIC TO DIGITAL

Itek Corp. -- see C44A

C45. CONVERTERS, INFORMATION, MAGNETIC TAPE TO CARD

Addressograph-Multigraph Corp. Airborne Instruments Lab, Military Mktg. Div. Auto-Trol Corp. Auto-Trol Corp.

Beckman Instruments Inc., Systems Div.
Benson-Lehner Corp.
Canadian Aviation Electronics Ltd.
CG Electronics Corp.
Computer Control Co. Inc.
Consolidated Systems Corp.
Control Logic, Inc.
Datapulse, Inc.
Datex Corp.
G. C. Dewey Corp. -- see Dl
DI/AN Controls, Inc.
Digital Electronics Inc.
Digital Electronics Inc. Digitronics Corp.
Electronic Data Service, Inc. -- see
C27 Electronic Data Service, Inc. -- see C27
Electronic Development Corp.
Electronic Engineering Co. of California -- see T17
El-Tronics Inc.
Epsco, Inc.
Epsco, Inc.
Fischer & Porter Co.
Illarman Kardon Inc., Data Systems Div.
-- see C10
Illyperion Industries
Information Products Corp.
International Business Machines Corp.,
Federal Systems Div.
Lear, Inc., Instrument Div.
Librascope Div., General Precision Inc.
Monitor Systems Inc.
Navigation Computer Corp.
Packard Bell Computer Corp.
Philco Corp.
Radiation, Inc.
Radio Corp. of America, Electronic
Data Processing Div.
Rese Engineering Corp.
Sperry Utah Co., Div. Sperry Rand
Corp.
Streeter-Amet Co. Sperry Utan Co., DIV. Sperry Na Corp. Streeter-Amet Co. Tally Register Corp. Telecomputing Corp. Telemet Corp. Vitro Labs Div. Vitro Corp. of America Wang Laboratories, Inc.

CONVERTERS, INFORMATION, MAGNETIC TAPE TO PAPER TAPE

Abacus Inc.
Addressograph-Multigraph Corp.
Addrol Electronics
Airborne Instruments Lab, Military
Mktg. Div.
Amtron Inc.
Auto-Trol Corp.
Beckman Instruments Inc., Systems Div.
Benson-Lehner Corp.
Budd Co. Inc., Electronics Div.
Canadian Aviation Electronics Ltd.
CG Electronics Corp.
Computer Control Co. Inc.
Consolidated Systems Corp.
Control Logic, Inc.
Data-Control Systems Inc.
Data Products Co.
Datapulse Inc. Data Products Co.
Datapulse Inc.
Daystrom Inc., Control Systems Div.
G. C. Dewey Corp. -- see Dl
DI/AN Controls, Inc.
Digitronics Corp., 1 Albertson Ave.,
Albertson, L.I., N.Y. / data converters / DESCR: solid state; converters / DESCR: solid state; convert paper tape to magnetic tape
(and vice versa) at high speed /
USE: to convert data / varies
depending on options / C46
Dynatronics Inc.

Electronic Development Corp.
Electronic Engineering Co. of
California -- see T17 Epsco, Inc.
General Devices, Inc.
Hallicrafters Co.
Harman Kardon Inc., Data Systems Div. -- see CIO
Hyperion Industries, Inc.
Information Products Corp.
International Business Machines Corp., International Business Machines Corp.,
Federal Systems Div.
Invac Corp.
Lear, Inc., Instrument Div.
Lintronic Ltd.
McDonnell Aircraft Co.
Minneapolis-Honeywell, Electronic
Data Processing Div.
Monitor Systems Inc.
Navigation Computer Corp.
Oread Electronics Lab. Inc.
Packard Bell Computer Corp.
Radiation, Inc.
Radio Corp. of America, Electronic
Data Processing Div.
Redcor Corp.
Rese Engineering Corp.
Shepherd Industries Inc.
Soroban Engineering, Inc.
Soroban Engineering, Inc.
Systems Engineering, Inc.
Systems Engineering Laboratories, Inc.,
P. O. Box 9140, Fort Lauderdale,
Fla. / SEL 700 System / DESCR:
data system to process a variety
of input data tapes or information; compatible with SEL 600
Systems / - / - C46
Tally Register Corp.
Telemettics, Inc.
Texas Instruments Inc., Apparatus
Div., Government Products Group
Vitro Labs Div. Vitro Corp. of
America Federal Systems Div.

CONVERTERS, INFORMATION, MAGNETIC TAPE TO MAGNETIC TAPE C46A.

ADACUS INC.
Addressograph-Multigraph Corp.
Adtrol Electronics
Airhorne Instruments Lab., Military
Mktg. Div.
Amtron Inc. Auto-Trol Corp. Beckman Instruments Inc., Systems Beckman Instruments Inc., Systems
Div.
Benson-Lehner Corp.
Budd Co. Inc., Electronics Div.
CG Electronics Corp.
Canadian Aviation Electronics Ltd.
Computer Control Co. Inc.
Consolidated Systems Corp.
Control Logic, Inc.
Data-Control Systems Inc.
Data-Products Co.
Datapulse Inc.
Daystrom Inc., Control Systems Div.
G. C. Dewey Corp. -- see Dl
DI/AN Controls, Inc.
Digital Electronics Inc.
Digitronics Corp.
Dynatronics Corp.
Dynatronics Inc.
Electronic Development Corp.
Electronic Development Corp.
Electronic Engineering Co. of
California -- see T17
Epsco Inc. Epsco Inc. General Devices, Inc General Devices, Inc. Gulton Industries, Inc. -- see D2A Hallicrafters Co. Harman Kardon Inc., Data Systems Div. -- see ClO Hyperion Industries, Inc. Hyperion Industries, Inc.
Information Products Corp.
International Business Machines Corp.,
Federal Systems Div.
Invac Corp.
Lear, Inc., Instrument Div.
Lintronic Ltd.
McDonnell Aircraft Co.
Minneapolis-Honeywell, Electronic
Data Processing Div.
Monitor Systems, Inc. — see TIO
Navigation Computer Corp.
Oread Electronics Lab. Inc.
Packard Bell Computer Corp.
Radiation, Inc. Packard Bell Computer Corp.
Radiation, Inc.
Radio Corp. of America, Electronic
Data Processing Div.
Rese Engineering Corp.
Shepherd Industries Inc.
S-I Electronics, Inc.
Soroban Engineering, Inc.
Stony Brook Labs, Inc.
Systems Engineering Laboratories,
Inc. - sec CAAA Systems Engineering Laboratories, Inc. -- see C46
Tally Register Corp.
Telemet Corp.
Telemetrics, Inc.
Texas Instruments Inc., Apparatus

Div., Government Products Group Vitro Labs Div. Vitro Corp. of

C47. CONVERTERS, INFORMATION, PAPER TAPE TO CARD

Addressograph-Multigraph Corp. Airborne Instruments Lab., Military Mktg. Div. Auto-Trol Corp. Beckman Instruments Inc., Systems Beckman Instruments Inc., Systems Div.
Benson-Lehner Corp.
CG Electronics Corp.
Canadian Aviation Electronics Ltd.
Computer Control Co. Inc.
Consolidated Systems Corp.
Control Logic, Inc.
Datax Corp.
Datax Corp.
G. C. Dewey Corp. -- see Dl
DI/AN Controls, Inc.
Digital Electronics Inc.
Digital Electronics Inc.
Digital Electronics Inc. Digitronics Corp.
Electronic Data Services, Inc. -see C27
Electronic Development Corp. Electronic Development Corp.
Electronic Engineering Co. of
California -- see T17
El-Tronics Inc.
Epsco, Inc.
Fischer & Porter Co.
Harman Karden Inc. Fischer & Porter Co.
Harmon Kardon Inc., Data Systems
Div. -- see ClO
Harvey-Wells Electronics, Inc.
Hyperion Industries
Information Product Corp.
International Business Machines Corp.,
Federal Systems Div.
International Computers and Tabulators Little ors Ltd. Lear, Inc., Instrument Div. Librascope Div., General Precision Lean, Inc., Seneral Precision
Inc.
Monitor Systems Inc.
Navigation Computer Corp.
Packard Bell Computer Corp.
Philoc Corp.
Radiation, Inc.
Radio Corp. of America, Electronic
Data Processing Div.
Rese Engineering Corp.
Sperry Utah Co., Div. Sperry Rand
Corp.
Streeter-Amet Co.
Systematics, a Div. of General Instrument, Corp.
Tally Register Corp.
Telecomputing Corp. Telecomputing Corp.
Telemet Corp.
Underwood Corp.
Vitro Labs Div. Vitro Corp. of
America Wang Laboratories Inc.

C48. CONVERTERS, INFORMATION, PAPER TAPE TO MAGNETIC TAPE

Abacus Inc.
Addressograph-Multigraph Corp.
Adtrol Electronics
Airborne Instruments Lab., Military
Mktg. Div.
Amtron Inc.
Auto-Trol Corp.
Beckman Instruments Inc.. Systems Di Amtron Inc.
Auto-Trol Corp.
Beckman Instruments Inc., Systems Div
Benson-Lehner Corp.
Budd Co. Inc., Electronics Div.
GG Electronics Corp.
Canadian Aviation Electronics Ltd.
Computer Control Co. Inc.
Consolidated Systems Corp.
Control Logic, Inc.
Data-Control Systems Inc.
Data-Products Co.
Datapulse Inc.
Daystrom Inc., Control Systems Div.
G. C. Dewey Corp. -- see Dl
DI/AN Controls, Inc.
Digital Electronics Inc.
Digital Electronics Inc.
Digital Electronics Corp.
Dynatronics Inc.
Electronic Engineering Co. of
California -- see T17
Epsco Inc.
General Devices, Inc.
Hallicrafters Co.
Harman-Kardon Inc. General Devices, inc.
Hallicrafters Co.
Harman-Kardon, Inc.
Hyperion Industries, Inc.
Information Products Corp.
International Business Machines Corp., International Business Machines Cor Federal Systems Div. Invac Corp. Lear, Inc., Instrument Div. Lintronic Ltd. McDonnell Aircraft Co. Minneapolis-Honeywell, Electronic Data Processing Div.

America Wang Laboratories Inc.

Monitor Systems Inc. Navigation Computer Corp. Oread Electronics Lab. Inc. Packard Bell Computer Corp. Radiation, Inc.
Radio Corp. of America, Electronic
Data Processing Div.
Rese Engineering Corp.
Shepherd Industrics Inc. See I Electronics, Inc.
Soroban Engineering, Inc.
Stony Brook Labs, Inc.
Systematics, a Div. of General Instrument Corp. Tally Register Corp. Telemet Corp.
Telemetrics, Inc.
Texas Instruments Inc., Apparatus Div.,
Government Products Group Underwood Corp.
Vitro Labs Div. Vitro Corp. of
America

C50. CORES

Aeronutronic Div., Ford Motor Co. -see M2
Electronic Memories, Inc., 9430 Bell-anca Ave., Los Angeles 45, Calif. / memory cores / DESCR: ferrite mem-ory cores; switch cores and linear select cores; Transfluxors / USE: memory devices for systems design / on request / CSO Electronic Memories, Inc., *a / fer-rite core arrays planes starks Electronic Memories, Inc., *a / ferrite core arrays, planes, stacks, assemblies / DESCR: arrays, planes, stacks, assemblies for serial/random access applications in commercial/MIL-SPEC memory systems. Cores assembled on standard matrices for standard stack configurations, or special requirements; Transfluxor stacks / USE: memory systems design / on request / C50
Ferroxcube Corp. of America Lockheed Electronics Co. Magnetics Inc. Magnetics Inc. , Omnitronics, Inc., Subsidiary of Borg-Warner Corp.

C51. CORES. FERRITE

Aeronutronic Div., Ford Motor Co. -see M2
Electronic Memories, Inc. -- see C50
Ferroxcube Corp. of America
General Electric Co., Specialty Devices Operation -- see C26
Indiana General Corp., Electronics Div.
Lockheed Electronics Co., Avionics and
Industrial Products Div., 6201 E.
Randolph St., Los Angeles 22,
Calif. / ferrite cores / DESCR:
square loop, single and multi aperture / USE: computer and fire control memory / \$15/1000 to \$50/1000 /
C51 Stackpole Carbon Co. D. M. Steward Manufacturing Co., E. 36th St., Chattanooga, Tenn. / technical ceramics / DESCR: steat-ite, cordierite and ferrites including soft magnetic materials and hard magnetic materials (isotropic and anisotropic) / USE: custom molded / - / C51

C52. CORES, MAGNETIC

Aeronutronic Div., Ford Motor Co. -see M2
Allen-Bradley Co.
The Arnold Engineering Co., Railroad
Ave. & West St., Marengo, Ill. /
magnetic materials / DESCR: permanent magnets -- alnico, ceramic;
cores -- silectron transformer,
high permeability tape wound deltamax, permalloy, supermalloy, supermendur, bobbin, molybdenum permalloy,
carbonyl iron; barium titanate, lead
zirconate transducers / - / C52
Burroughs Corp. Aeronutronic Div., Ford Motor Co. --Zirconate transqueets, -, -, Surroughs Corp.
Electronic Memories, Inc. -- see C50
Indiana General Corp., Electronics Div.
Lockheed Electronics Corp., Avionics
& Industrial Products Div.
Magnetics Inc.
Mullard Overseas Ltd.
Philips' Gloeilampenfalorieken N.V.
Radio Corp. of America, Electron Tube Biv.
Radio Corp. of America, Semiconductor
& Materials Div.
Sperry Rand Sperry Gyroscope, Div. Sperry Rand Corp. Standard Telephones & Cables, Ltd.

C53. COUNTERS

American Bosch Arma Corp., Arma Div. Bulova Research & Development Laboratories -- see R12A Chrono-log Corp. The Cincinnati Time Recorder Co. --Chrono-log corp.
The Cincinnati Time Recorder Co. —
see D2
G. C. Dewey Corp. — see D1
DI/AN Controls, Inc.
Eldorado Electronics, 1832 2nd St.,
Berkeley, Calif. / counters / DESCR:
electronic solid-state counters for
industrial and laboratory use.
Photometric devices and picosecond
time measurement instruments. Digital techniques to one nanosecond /
— / \$500 to \$6500 / C53
General Controls Co.
The A. W. Haydon Company, 232 N. Elm
St., Waterbury 20, Conn. / electromechanical time totalizing meters,
events counters, binary code generators / DESCR: dial face and digital readout indicators for DC or AC
input. 60 or 400 cycles. Up to 6digit readout in micromin. events
counter within 1/2 cu. in. / USE:
military and commercial elapsed
time monitoring / sales request
only / C53
Hewlett-Packard Co., 1501 Page Mill
Rd., Palo Alto, Calif. / electronic
counters / DESCR: measure frequency, period, time interval,
ratio. Maximum counting rates from
100 kc to 50 mc; to 512 kc with
plug-in converters (certain models)
Vacuum tube and solid state types /
— / \$475 to \$3750 / C53
The Walkirt Co. C54. COUNTERS, ELECTRONIC

Abacus Inc.

Abacus Inc.
Abrams Instrument Corp.
Accurate Instrument Co.
Adoole Corp.
Advance Components Ltd.
Advance Instrument Corp.
American Time Products Div., Bulova
Watch Co. Inc.
AMP Inc. -- see C?
Anadex Instruments Inc., 7617 Hayvenhurst Ave., Van Nuys, Calif. /
electronic counters / DESCR: line
of solid state counter-timers Including pre-set, bi-directional, and
variable time base. Also special
counters for automation systems /
- / \$500 to \$1000 / C54
Automation Development Corp.
Automation Development Corp.
Automation Management, Inc. -- see C23
Auto-Trol Corp.
Avien, Inc. Auton, Inc.
Bay State Electronics Corp.
Beckman Instruments, Inc., Berkeley Deckman Instruments, Inc., Berkeley Div.

Bell Aerosystems Co.

Benson-Lehner Corp., 14761 Califa St., Van Nuys, Calif. / Bidirectional Counter, Model A5 or A6 / DESCR: transistorized with input from photo-electric pulse generator or other sources. Automatic direction sensing. Automatic reversal of sign and count direction at zero. Optional punched card output / USE: position measurement on machine tools, coordinatographs, traveling-stage microscopes, other instruments / \$3200 to \$5000 / C54

Beva Electronics Inc.

Boesch Mfg. Div., Waltham Precision Instrument Co. Inc.

Bowmar Instrument Corp. Bowmar Instrument Corp.
Bulova Research & Development Laboratories -- see R12A
Burroughs Corp., Electronic Components Div.
Canadian Marconi Co.
CG Electronics Corp.
Chadwick-Helmuth Co., 111 E. Railroad
Ave., Monrovia, Calif. / #420R DigiMark / DESCR: electronic counter
with output for galvanometer in
recording oscillograph / USE: code
digital frequency on analog
recorder / \$985 / C54
C & K Components, Inc., 103 Morse St.,
Newton 50, Mass. / magnetic shift
registers / DESCR: magnetic shift
registers / DESCR: magnetic shift
registers, encapsulated logic circuits, transistorized indicator
assemblies, special purpose ultralow power magnetic counting systems / USE: digital control division / variable / C54
Cognitronics Corp.
Colorado Research Corp.
Components Corp., 106 Main St., Denville, N.J. / DCU-100 / DESCR: Canadian Marconi Co.

solid state decade counter with inexpensive D'Arsonval readout. Power
requirements approximately 6 volts
at 10 milliamps per decade. No
power required for readout / USE:
for counting at reles up to 200 kc /
\$50 single / C54
Computer Equipment Corp.
Computer Measurements Co.
Control Devices, Inc.
Control Equipment Corp.
Control Indicating Corp.
Control Logic Inc.
Datapulse Inc.
Delta Instrument Corp. Control Logic Inc.
Datapulse Inc.
Delta Instrument Corp.
G. C. Dewey Corp. -- see Dl
Digital Design Corp.
Digital Electronics Corp.
Digital Equipment Corp.
Digital Equipment Corp.
Digitan Co.
Durant Mfg. Co.
Durant Mfg. Co.
Durant Mfg. Co.
Eldorado Electronics -- see C53
Electronic Control Corp.
Electronic Control Products
Electronic Controls, Inc.
Electronic Controls, Inc.
Electronic Controls Corp.
Elestronic Products Corp.
Elesta Ltd. Electronic Controls
Empire Services
Emgineered Electronics Co., 1441 Empire Services
Engineered Electronics Co., 1441 E.
Chestnut Ave., Santa Ana, Calif. /
decade counters / DESCR: transistor decade counters in plug-in containers for operation at frequencies
up to 5 Mc and on printed circuit
cards for operation at frequencies
up to 250 kc / USE: in digital systems and equipment / \$110 to \$250 /
C54 C54
Erie-Pacific Div., Erie Resistor Corp. Erie-Facilic Div., Erie nesistor of Franklin Systems, Inc. Freed Transformer Co. Inc. General Applied Science Labs. Inc. General Radio Co. General Time Corp., Electronic Sys-tems Div. General Time Corp., Electronic Systems Div.
Giffillan Bros. Inc.
Guardian Electric Mfg. Co.
Halliterafters Co.
Hamner Electronics Co. Inc.
Harman-Kardon, Inc.
Harwan-Kardon, Inc.
Haydon Co.
Haydon Instrument Inc.
Hewlett-Packard Co., 1501 Page Mill
Rd., Palo Alto, Calif. / electronic
counters / DESCR: maximum counting
frequencies from 100 kc to 50 mc;
4 models have plug-ins to measure 4 models have plug-ins to measure to 512 mc, time interval, phase, multiple period average / - / \$475 to \$3750 / C54 to \$3750 / C54
Horiba Instruments, Inc.
Hunter Mfg. Co.
Iconix Inc.
Instrument Corp. of Florida
Instrument Systems Corp.
Intectron Inc.
Isotope Developments Ltd.
ITT Kellogg Div.
Landsverk Electrometer Co.
Isotope Inc. Lavoie Laboratories, Inc. Lear, Inc., Instrument Div. Librascope Div., General Precision Lintronic Ltd. Magnetics Research Co. Marquardt Corp., Pomona Div. Matrix Research & Development Co. Matrix Research & Development Co.
Meriam Instrument Co., Electronics
Diy.
MF Electronics Corp.
Micro Measurements Corp.
Minjo Electronic Corp.
Minjo Electronic Corp.
Minjo Electronic Corp.
Minjo Electronic Corp.
MKS Data Inc.
MKS Data Inc.
MKS Data Inc.
MKS Data Inc.
Morrow Radio Mfg. Co.
Naniloa Corp. Station B, P. O. Box
2791, Toledo 6, Ohio / preset
counters and programmers / DESCR:
solid state electronic single or
multiple level, fixed or variable
point, preset counters with or
without indicators / USE: machine
and process control / \$250 to
\$1000 / C54
Navigation Computer Corp.
Network Designers Inc. Meriam Instrument Co., Electronics Network Designers Inc. Northeastern Engineering Inc. Nuclear Corp. of America Nuclear Industries, Inc. Nuclear Measurements Corp. Ortronix, Inc.
Oxford Engineering Corp.
Pacific Automation Products, Inc.
Packard Bell Computer Corp.
Performance Measurements Co. Philip Electron Instruments
Philips Gloeilampenfabricken N.V.
Physical Science Corp.

Plug-In Instruments, Inc.
Post Electronic Products Inc.
Potter Aeronautical Corp.
Presin Co.
Purse & Digital Labs Inc.
Rank Cintel Ltd.
Ridgefield Instrument Group, Schlumberger Corp.
RMS Associates, Inc.
Robotomics Enterprises, Inc., 4504 N RMS Associates, Inc.
Robotomics Enterprises, Inc., 4504 N.
16th St., Phoenix 16, Ariz. / Model
F1802 Decade Counter / DESCR: one
megacycle decade counter with 1" inplane display, 10 line coincidence
output, staircose output, 65 C, 12
volt operations / USE: counts
pulses and displays answer visually
and electrically / \$69 to \$79 / C54
Rochar Electronique, Sub. Schlumberger Ltd. Rochar Electronique, Sub. Schlumberger Ltd.
Ryan Electronics/Ryan Aero. Co. Signa Instruments, Inc., Signa Div. Solid State Electronics Co. Space General Corp. Spraque Electric Co. Standard Telcphones & Cables Ltd. Stony Brook Labs. Inc. Streeter-Amet Co. Systron Donner Corp. Technical Associates Technical Measurement Corp. Telemet Corp. Technical Associates
Technical Measurement Corp.
Telemet Corp.
Telemetrics, Inc.
Tempo Instrument, Inc.
Tenno Research Corp.
Transformer-Electronics Co.
Transistor Specialties Inc.
U.S. Nuclear Corp.
Veeder-Root Inc.
U.S. Nuclear Corp.
Veeder-Root Inc.
Vernistat Div., Perkin-Elmer Corp.,
771 Main Ave., Norwalk, Conn. /
bidirectional counter / DESCR: a
solid state up-down counter. Accepts any pulse shape and counts
(up or down) at rates up to 100
kc; 2-3 wire inputs; binary, BCD
(M21 or dig/min. / - / \$1300 to
\$1500 / C51 Walkirt Co. Wang Laboratories Inc. Wang Engineering Div., Foxboro Co. Weltronic Co. Westport Electric Wheaton Engineering Div., Hurletron

C55. COUNTERS, FREQUENCY

Abacus Inc. Addust Instrument Co. Adcole Corp. Advance Components Ltd. Airmec Ltd. Amerac, Inc. American Time Products, Div. Bulova Watch Co. Inc. Anadex Instruments, Inc. Armec Corp.
Automation Management, Inc. -- see C23 Avien, Inc.
Bay State Electronics Corp.
Beckman Instruments, Inc., Berkeley Div.
Bell Aerosystems Co.
Benson-Lehner Corp.
Canadian Marconi Co.
Chadwick Helmuth Co. Canadian Marconi Co.
Canpoter Equipment Corp.
Computer Measurements Co.
Control Equipment Corp.
Control Indicating Corp.
Control Indicating Corp.
Control Indicating Corp.
Control Electronics Corp.
Digital Electronics Corp.
Electronic Corp.
Dymec Div., Hewlett-Packard Co.
Eldorado Electronics — see C53
Electronic Counters Inc.
Electronic Counters Inc.
Electronic Products Corp.
Erie-Pacific Div., Erie Resistor Corp.
General Applied Science Labs Inc.
General Radio Co.
General Time Corp., Electronics Systems Div. tems Div.
Gilfillan Bros. Inc.
Haydon Instrument Inc.
Hewlett-Packard Co. -- see C53 Hunter Mfg. Co.
Iconix Inc.
Instrument Corp. of Florida
Iwasaki Communications Apparatus Co. Lavole Laboratories, Inc. Lear, Inc., Instrument Div. Matrix Research & Development Co. Meriam Instrument Co., Electronics Micro Measurements Corp. Microwave Technology, Inc.

M.K.S. Data Inc.
Morrow Radio Mfg. Co.
Northeastern Engineering Inc.
Pacific Automation Products Inc.
Physical Science Corp.
Plug-In Instruments Corp.
Potter Aeronautical Corp.
Pulse & Digital Labs Inc.
Radiation Technology Inc.
Rank Cintel Ltd.
Ridnefield Instrument Group. Schl Rank Cintel Ltd.
Ridgefield Instrument Group, Schlumberger Corp.
Robotomics Enterprises, Inc., 4504
N. 16th St., Phoenix, Ariz. / Model
4202 Frequency Counter / DESCR:
measures frequency, period and interval; can be preset to two different numbers, 100 Kc, all solid
state / USE: accepts input signals
and displays empropriate reading / and displays appropriate reading / \$1495 to \$1750 / C55 Rochar Electronique, Sub. Schlumberger Ltd.
Ryan Electronics/Ryan Aero. Co.
Solid State Electronics Co.
Southern Instruments Ltd.
Streeter-Amet Co.
Systron Donner Corp.
Tempo Instrument, Inc.
Transistor Specialties Inc.
U.S. Nuclear Corp.
Walkist Co. berger Ltd. Walkirt Co. Waugh Engineering Div., Foxboro Co. Westport Electric Wheaton Engineering Div., Hurletron

C56. COUNTERS, MECHANICAL

Amerac. Inc. Amerac, Inc.
Automation Development Corp.
Barker & Williamson, Inc.
Boesch Mfg. Div., Waltham Precision
Instrument Co. Inc.
Bowmar Instrument Corp.
Chicago Dynamic Industries, Inc.
Clifton Precision Products Co. Inc.
DI Clifton Precision Products Co. Inc.
Dif/AN Controls, Inc.
Digitran Co.
Digeo Div. Diordjevic Engineering Co.
Durant Mfg. Co., 1900 N. Buffum St.,
Milwaukee I, Wis. / digital read-out
instrument counters / DESCR: complete line of standard instrument
counters of various sizes, including decimal, double shutter, bearing degree and electric counters.
Special counters also developed /
USE: digital read-out indicators /
\$10 to \$50 / C56
Electric Tachometer Corp.
Electro Instruments, Inc.
Electronic Development Corp.
Exact Engineering & Mfg. Inc.
Prontier Electronics, Div. IRC
Gavin Instruments Inc.
General Controls Co.
General Controls Co., Automation Controls Div.
Hagan Chemicals & Controls Inc. DI/AN Controls, Inc. trois Div.

Bagan Chemicals & Controls Inc.

Haydon Instrument Co.

Howell Instruments Co.

Howell Instruments Co.

Howell Instruments Corp.

Instrument Corp. of Florida

Instrument Systems Corp.

Kearfott Div., General Precision Inc.

Lear, Inc., Instrument Div.

Mast Development Co.

Model Engr. & Mfg. Corp.

Monroe Industries, Inc.

North Electric Co.

Philips' Gloeilampenfabrieken N.V.

Photocon Research Products

Planet Instrument, Inc. Planet Instrument, Inc. Planet Instrument, Inc.
Pressin Co. of America, Broadcasting
& Communications Div.
Standard Telephones & Cables Ltd.
Stevens Mfg. Co. Inc. Geo.
Streeter-Amet Co.
Tamura Electric Works Ltd.
Telecommuting Corn. Telecomputing Corp.
Telemet Corp.
Veeder-Root Inc. vector Adding Machine Co. Washington Scientific Industries, Inc. Weltronic Co.

C58. COURSES BY MAIL (COMPUTER FIELD)

Basic Systems Inc. -- see El

Edmund C. Berkeley and Associates Harman Kardon Inc., Data Systems Div. Philco Technological Center, P. O. Box 4730, Philadelphia 34, Pa. / home study courses / DESCR: home study courses in digital computer electronics, programming and semicon-ductors. Also day and evening

school / USE: education / - / C58 Systemation Div., Ross-Martin Co., 6504 E. 44th St., Tulsa, Okla. / professional systems course / DESCR: 50-week course in management systems, including sections on EAM and EDP / USE: training management and systems analysts, programmers and line managers / \$375 per man / C58

D1 DATA PROCESSING MACHINERY

bacus Inc., 1718 21st St., Santa Mon-ica, Calif. / systems / DESCR: pro-grammable digital general purpose buffers / - / \$35,000 to \$40,000 /

Dl
Adage, Inc.
Advance Data Systems Corp., 2037 Granville Ave., Los Angeles 25, Calif. /
data systems engineering and consulting / DESCR: data systems analysis,
special engineering, digital timing
devices for computers, automatic
revenue collection equipment / - / Dl
Automation Engineers
Bell & Howell Micro-Data Div. -- see
D2

Burroughs Corp. Canadian Aviation Electronics Ltd.

CG ELECTRONICS (DIV. OF GULTON INDUSTRIES, INC.), 15000 Central Ave., East Albuquerque, N. Mex. / DIGITAL DATA SYSTEMS / DESCR: digital data acquisition, reduction, collection, recording systems; high security command and monitoring systems; missile and satellite borne-high and low level solid state telemetry systems, etc. / USE: military and industrial ground and space applications / \$10,000 to \$800,000 / DI

Cognitronics Corp. -- see C24
Computer Control Co., Inc.
Consolidated Electrodynamics Corp.
Control Data Corp.
Control Equipment Corp. -- see C24A
Data Processing Equipment Exchange
Co., 366 Francis Blvd., Louisville,
Ky. / data processing equipment / DESCR: used data processing equipment / DESCR: used data processing equipment bought and sold, KP's through accounting, engineering and scientific computers, through DA-PEX Co. / - / - / Dl
Delco Radio Div., General Motors Corp., 700 E. Firmin St., Kokomo, Ind. / data acquisition systems / DESCR: accept data from analog sensors, converts to digital form, puts in format for analysis, presents output in printed page, punched card, paper or magnetic tape / USE: in all applications where many analog sensors must be continuously monitored and recorded / \$30,000 to \$200,000 / Dl
G. C. Dewey Corp., 202 E. 44 St., New York 17, N.Y. / data processing equipment / DESCR: design and fabrication of digital data translators, converters, formatters, loggers, special purpose digital computers, processors and test devices. Programming, analysis and systems design services / USE: military and commercial / custom / Dl
Digital Electronics Inc.
Diversified Concepts, Inc., Becker Rd.,

Digital Electronics Inc. Digital Electronics Inc., Becker Rd., Skaneateles 3, N.Y. / "MASCOT" / DESCR: "Multiple Answer Score Computing Organizing Translator", accepts marked answer sheets, produces punched cards with raw data and/or scores and totals / USE: scoring educational tests, etc. / \$6000 to \$18,000 / Dl
Douglas Aircraft Co., Inc., Douglas Computer Service

Computer Service
Electro-Mechanical Research Inc., Advanced Scientific Instruments Div. see C22

-- see C22
Electro-Mechanical Research, Inc.,
Sarasota Div., P. O. Box 3041, Sarasota, Fla. / PCM Data Processor 205
Series / DESCR: acquisition, decommutation, and display of PCM
telemetry data / USE: in handling
PCM telemetry data in aerospace
flight instrumentation / - / DI
Electronic Memories, Inc. -- see M2
Elliott Bros. (London) Ltd. (a member
of the Elliott-Automation Group)
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera and
Instrument Corp.

Friden, Inc., 2350 Washington Ave., San Leandro, Calif. / Friden Pro-grammatic Flexowriter / DESCR: auto-matic writing machine. Reads punched tape, edge-punched cards, or tab cards from one or more input sources, cards from one or more input sources, produces documents, punches new tape or cards for further processing. Has facilities for connection of auxiliary input/output units. Automates preparation of original business documents and subsequent reports / USE: general data processing / - / DI Friden, Inc., *a / Friden Add-Punch / DESCR: punched tape adding-listing machine, ten key input keyboard. Performs regular adding machine functions and simultaneously punches tape for subsequent processing /

Performs regular adding machine functions and simultaneously punches tape for subsequent processing / USE: accounting and other data processing / - / Dl Friden, Inc., *a / Friden CTP Computyper / DESCR: automatic writing-computing machine. Reads and produces Be-channel punched tape, edge-punched cards, or tab cards from one or more input/output sources, prepares documents with all necessary calculations. Interchangeable pre-wired program panels permit quick switching of applications. Has facilities for connection of auxiliary input/output units / USE: billing and other data processing / - / Dl Friden, Inc., *a / Friden CTP3 and CTP4 Computypers / DESCR: same as CTP Computyper except that these models read and punch 5-channel tape. CTP3 has a 3-bank keyboard; CTP4 has a 4-bank keyboard / USE: billing and other data processing / - / Dl Friden, Inc., *a / Friden Selectadata / / Friden Select

Friden, Inc., *a / Friden Selectadata / DESCR: searches nunched tage for DESCR: searches punched tape for pre-selected data which is then read out on Friden Flexowriter or Computyper. Also provides program control / USE: general data pro-cessing / - / Dl

General Electric Co., Electric Utility

cessing / - / Dl
General Electric Co., Electric Utility
Sales Operation
The Geotechnical Corp.
Goodyear Aircraft Corp.
The GYREX Corp.
Hampshire Engineering Co., Inc.
Harman Kardon Inc., Data Systems Div.,
55 Ames Ct., Plainview, L.I., N.Y. /
digital volt-ohm meters and multiplexers / DESCR: high accuracy, 4
range both volts and ohms from .001
volts to 1000 volts. Multiplexers
-- 20 channels, low levels / USE:
in digital systems and in laboratories / \$395 to \$599 / Dl
Honeywell Electronic Data Processing
Div., 60 Walnut St., Wellesley
Hills 81, Mass. / electronic data
processing systems / DESCR: smallscale to very large-scale computer
systems, compatible both as to data
organization and programming. Complete package of software for business and scientific applications
included / USE: for business,
industry and government data processing applications / \$300,000
to \$2,500,000 (sales prices) / Dl
HRB-Singer, Inc., P. O. Box 60, Science Park, State College, Pa. /
SEMA 2000 / DESCR: operates with
accounting machines, collators, reproducers, calculators and punches
to provide increased controls / USE.
in inventory control, sales analysis, payroll, store andit, pricing,

to provide increased controls / USE.
in inventory control, sales analysis, payroll, store audit, pricing,
order confirmation, order allocation, production control, labor
distribution reports, unit control /
\$20,000 up / Dl
International Business Machines Corp.,
Data Processing Div. -- see C24
International Business Machines Corp.,
Enderal Systems Biv.

Federal Systems Div.

Federal Systems Div.

Itek Corp.

A. Kimball Co., a div. of Litton Industries, 8 Rewe St., Brooklyn 11,

N.Y. / punch tag-integrated data processing; PM75, tag reader and Kard Pack / DESCR: produces and automatically reads Kimball Punched Marked Tag, which is a machine language / USE: source document traveller; each tag contains up to 48 columns of punched information and approximately 1/6 the size of conventional tabular card / - / Dl Lockbeed Fleetronics Co., Information

Lockheed Electronics Co., Information Technology Div.

Management Assistance Inc., 40 Exchange Place, New York 5, N.Y. /

WROC 452 / DESCR: increases selector capacity of IBM Series 400 and 500 machines, reduces auxiliary machine steps and master cards / - / chine steps and master cards /

-/DI
Milgo Electronic Corp.
The National Cash Register Co.
ton-Linear Systems, Inc., P. O. Box
720, Del Mar, Califf / automatic
digital data acquisition system /
DESCR: standard or custom built
systems that automatically scan,
measure, record and compare a wide
range of voltages and resistances /
-/\$3695 to \$39,000 / DI
Packard Bell Electronics
Radio Corp. of America. Electronic

Packard Bell Computer, a div. of Packard Bell Electronics
Radio Corp. of America, Electronic
Data Processing, RCA - Cherry Hill, Camden 8, N.J. / RCA 301 Data Processing System / DESCR: transistorized, small to medium, general purpose computer. Optional high-speed floating point arithmetic circuitry. Complete line of devices including MICR, OCR, random access and communications equipment / USE: business and scientific computer applications / \$3500 to \$15,000 / D1
Radio Corp. of America, Electronic Data Processing, *a / RCA 501 Data Processing System / DESCR: transistorized, medium-large general purpose computer. Input/output compute simultaneity. Up to 62 tape stations, expandable memory. Four character parallel transfers.
Static and dynamic index registers / USE: business and scientific computer applications / \$13,000 to \$30,000 / D1
Radio Corp. of America, Electronic Data Processing. *a / RCA 601 Data

\$30,000 / D1
Radio Corp. of America, Electronic
Data Processing, *a / RCA 601 Data
Processing System / DESCR: largescale general purpose computer.
Multi-level simultaneity. Fast
computation. Memory cycle 1.5 microseconds. Truly variable data
handling, four different code sizes.
Word or character processing / USE:
business and scientific computer
applications / \$35,000 to \$45,000 /
D1

DI Resdel Engineering Corp. RMS Associates, Inc. Saab Aircraft Co., Electronics Div. The Scam Instrument Corp. Scientiffic Data Systems, Inc. -- see

C24
Technitrol, Inc., 1952 E. Allegheny
Ave., Philadelphia 34, Pa. / digital
data processors / DESCR: custom
equipment: digital data processors,
high speed print stations, buffer
memories, automatic test and check
out equipment. Developed and/or
manufactured on a contract basis /

manufactured on a contract basis
- / - / Dl
Tellertron Corp., a subsidiary of
Stone Laboratories Inc. Underwood Corp.
UNIVAC Div. of Sperry Rand Corp. --

D2. DATA RECORDING EQUIPMENT

Adtrol Electronics, Inc., 116 N. 7th St., Philadelphia 6, Pa. / film recorder / DESCR: records data on film at high speeds / - / \$2000 to \$6000 / D2

All marican Engineering Co., Lancaster Ave. & Centre Rd., Wilmington 99, Del. / performance recorder / DESCR: automatically produces punched tape record showing duration of equipment or system down-time. Alarm and light keep operator alert until identification of problem / - / - / D2.

Ann Arbor Laboratory, Burroughs Corp. Automation Management, Inc. -- see C23. Basic & Experimental Physics -- see P12A

Bell & Howell Micro-Data Div., 7100
McCormick Rd., Chicago 45, 111. /
575 Tab-Tronic microfilm recorder /
DESCR: automatically makes highspeed microfilm copies of unburst,
fan-fold continuous forms. Minimizes forms costs and mailing costs,
speeds information retrieval / USE:
recording continuous forms / - / D2
Benson-Lehner Corp., 14761 Califa St.,
Van Nuys, Calif. / Model 944 PrinterPlotter / DESCR: high-speed off-line
CRT display prints and plots microfilm or immediate hard copy. Input
from IBM 729 at speeds to 62,500
characters/second / USE: computer
output listings, data analysis /
\$80,000 to \$120,000 / D2

Burlingame Associates, Ltd. California Computer Products, Inc., 305 Muller Ave., Anaheim, Calif. / digital plotting systems / DESCR: designed for automatic production of graphs from output data of large-scale and medium-scale computers. Research, development, fabrication of digital systems for military and space application / USE: to plot computer data output / \$4550 to

computer data output / \$4050 to \$47,600 / D2
Century Electronics & Instruments, Inc. CG Electronics (Div. of Gulton Industries, Inc.) -- see D1
The Cincinnati Time Recorder Co., 1733 Central Ave., Cincinnati 14, Ohio / Data Collection Systems / DESCR: re-Data Collection Systems / DESCR: ocives data from remote sources. Paper tape automatic printout at predetermined intervals shows time of printout, on/off times, elapsed time, piece count, location, etc. / USE: timing of single or multiple operations and/or recording as above / \$1200 for basic printer unit and up depending upon input / D2

Coleman Electronic Systems, 3210 W. Central Ave., Santa Ana, Calif. / data logging systems / DESCR: lo data logging systems / DESCR: low speed data logging and data record-ing systems, multiple channel for punched cards, punched tape or printed output / - / \$1500 to \$50,000 / D2 Connecticut Technical Corp. -- see P9 Control Logic, Inc. Cook Electric Co., Data-Stor Div. --see T4

Dashew Business Machines, Inc., 3655 ashew Business Machines, Inc., 3655 Lenawee Ave., Los Angeles 16, Calif./ Dashew Dasharecorder Source Data Automation Systems / DESCR: computer and telephone compatible modular com-ponents-card, badge, tape readers-accounting equipment-kinetic read heads, source punches and imprinters.
Manual and automatic high speed embossing equipment / USE: data collection and transmission / \$1000 to \$4000 / D2

\$4000 / D2
Data Display, Inc., 1820 Como Ave., St.
Paul 8, Minn. / dd 80 Micro-Recorder / DESCR: on-line, 73,000 characters/second; 123 characters, any
length vectors; 19° cathode ray tube
monitor, logic console containing
interface, logic, character, vector
generators, 5° CRT, high-speed camera / USE: on-line to a computer to translate machine language to alphanumerics and vectors / \$125,000 /

Datex Corp.
Daystrom, Inc., Weston Instruments &
Electronics Div. Delco Radio Div., General Motors Corp.

Electronics Div.
Delco Radio Div., General Motors Corp.

— see Dl
G. C. Dewey Corp. — see Dl
Digital Electronics Inc.
Elliott Bros. (London) Ltd. (a member
of the Elliott-Automation Group)
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera and
Instrument Corp.
Fischer & Porter Co.
General Dynamics/Electronics, 3302
Pacific Highway, P. O. Box 127,
San Diego 12, Calif. / S-C 4020
Computer Recorder / DESCR: converts and records digital output in
combination of curves, vectors, and
characters at speeds consistent with
large-scale computers / USE: online or off-line with digital computers / available on request / D2
The Geotechnical Corp., 3401 Shiloh
Rd., Garland, Tex. / Helicorder /
DESCR: direct-writing drum recorder; DC-24 cps. Records 72 datahours on 1' x 3' chart / USE: to
record motion to 10-7mm / \$1575 to
\$2100 / D2
The Geotechnical Corp., *a / Develo-

\$2100 / D2
The Geotechnical Corp., *a / Develocorder / DESCR: records from CRT or 20 galvonometers. Automatically processes 16mm film and displays with 10X magnification / USE: to record motion to 10-7mm / \$0000 to \$10,000 / D2

Storono / D2

Gulton Industries, Inc. -- see D2A

Harman Kardon Inc., Data Systems Div.
-- see C10, D1

Hewlett-Packard Co., 1501 Page Mill

Rd., Palo Alto, Calif. / digital
recorders / DESCR: operate from
staircase, 10-line, or BCD decimal
codes. Print 11-column information
at rates to 5 lines/sec. / - /
\$1150 to \$2400 / D2

Houston Instrument Corp., 4950 Terminal Ave., Bellaire 101, Tex. /

HR95 XY Recorder / DESCR: 0.25% HR95 XY Recorder / DESCR: 0.25% accuracy, 15 in/sec. pen speed; general reference voltages, vacuum hold down, electric pen lift, 600 in/sec. 2 peak acceleration. Also available in 11 x 17 paper size / USE: readout for analog computers / \$1250 to \$1675 / D2
Hughes Dynamics, Inc. -- sec C30
Information International, Inc. --

see C3A

International Business Machines Corp., Federal Systems Div.
International Computers and Tabulators Ltd.

ors Ltd.
Kinelogic Corp.
Leach Corp.
Leach Corp.
Leds & Northrup Co., 4901 Stenton
Ave., Philadelphia 44, Pa. / Speedomax H Recorders and Indicators /
DESCR: compact instrument with
±0.3% full-scale limit of error and
ontional one-second full-scale balone-second full-scale balancing speed. High performance, low cost instrument that meets ASA c39.4 spec. / USE: indicates and/or records tie-line values at load dispatcher office / - / D2

patcher office / - / D2
Leeds & Northrup Co., *a / IN 1000
Digital Data System / DESCR: provides operating flexibility for collection of data on typewriter or
punched tape. Collects up to 100
points of data for use in computer
programming / USE: collects data
for computer-directed process control / - / D2
LFE Electronics, A Div. of Laboratory

LFE Electronics, A Div. of Laboratory

Electronics
Miles Reproducer Co., 598 Broadway,
New York 12, N.Y. / permanent nonalterable recorders / DESCR: re-

New York 12, N.Y. / permanent nonalterable recorders / DESCR: recording on belt up to 3 hours on each side. Records automatically. Stops automatically when no sound / USE: recording / \$450 to \$785 / D2 Mincom Div., Minnesota Mining and Manufacturing Co.
Minneapolis-Honeywell Regulator Co., Special Systems Div., Queen & So. Bailey Sts., Pottstown, Pa. / Logger-Scanner / DESCR: digital data recording system, samples low level analog signals, compares them against high/low limits, converts them to engineering units, records them on tape punch or typewriter / USE: process monitoring / \$25,000 to \$150,000 / DZ
Monitor Systems, Inc.
Northrop Nortronics, Systems Support Dept., 500 E. Orangethorpe, Anaheim, Calif. / ballistic cameras / DESCR: 600mm f/2.0 cameras weighing 1660 lbs.; 8 element lens system, new louvre-type shutter; used to calibrate electronic instruments

ing 1660 lbs.; 8 element lens system, new louvre-type shutter; used to calibrate electronic instruments that track trajectory / USE: USAF missile tracking / quoted upon request / D2
Northrop Nortronics, Systems Support Dept., *a / DATICO/SP-5 / DESCR: small, solid-state, automatic test system, programmed by punched tape and computer oriented. Various adaptations possible by selecting system, programmed by punched use and computer oriented. Various adaptations possible by selecting appropriate "building-blocks" / USE: aircraft, missile and space system checkout / quoted upon rewest / D2

quest / D2
Northrop Nortronics, Systems Support
Dept., *a / DATICO/SP-8 / DESCR:
automatic test system for maintenautomatic test system for mainten-ance and factory checkout. Operates in 3 modes; automatic, semi-automat-ic and manual / USE: aircraft, mis-sile and space system checkout / quoted upon request / D2 Omnitronics, Inc., Subsidiary of Borg-Warner Corp. Packard Bell Computer, a div. of Packard Bell Electronics

Radiation Inc.
Sangamo Electric Co., 1301 North 11th
St., Springfield, Ill. / magnetic
tape recorder/reproducer / DESCR: tape recorder/reproducer / DESCR:
analog recorder; up to 8 speeds,
electrically switched; solid state
electronics; 7 to 28 channels FM
or direct; bin storage option for
continuous loop operation / USE:
data storage and retrieval / - / D2
The Scam Instrument Corp.
Shand and Jurs Co.
S-I Electronics, Inc.

Simplex Time Recorder Co., 24 South implex fime Recorder Co., 24 South Lincoln St., Gardner, Mass. / Productograph / DESCR: recording device. Prints on tape in 17 hrs. - 24 hrs. or min., 10ths of hrs., or 100ths of hrs., also seconds. Sym-

bol wheels to designate a specific station or function / USE: automatically records Tlops and starts or down time on printed indisputable tape / \$325 and up, depending on accessories required / D2
Special Products & Applied Research Div., The de Havilland Aircraft of Canada, Ltd.
Systems Engineering Laboratories, Inc., P. O. Box 9148, Fort Lauderdale, Fla. / MOBIDAC (Mobile Data Acquisition System) / DESCR: accepts up to 100 inputs directly from transducers at levels as low as 14m Vull scale, digitizes and records on magnetic digitizes and records on magnetic tape in computer format / - / - / D2

D2
Systems Engineering Laboratories, Inc.,
*a / SEL 600 System / DESCR: high
speed, solid-state data acquisition
system to scan up to 50 low level
inputs, digitize, and record data

inputs, digitize, and record data on magnetic tape, paper tape, or cards / - / - / D2
Transkrit Corp., 704 Broadway, New York 3, N.Y. / Transkoding / DESCR: magnetic ink encoding of checks / USE: bank automation / - / D2
UNIVAC Div. of Sperry Rand Corp. Vernistat Div., Perkin-Elmer Corp. Westronics, Inc.
Wiancko Engineering, div. Tamar Electronics, Inc.

D2A. DATA REDUCTION EQUIPMENT

Astrodata Inc. Automation Management, Inc. -- see C23
Basic & Experimental Physics -- see

Automation Management, Inc. —— see C29
Basic & Experimental Physics —— see
P12A
Benson-Lehner Corp., 14761 Califa St.,
Van Nuys, Calif. / OSCAR Model N /
DESCR: reduces oscillographic,
strip chart or film data to digital
form on punched cards. Applies
linear and non-linear calibrations
to single or multi-channel records /
USE: digitize pressure, temperature,
liquid level data, well logs, etc. /
\$15,000 to \$40,000 / D2A

Benson-Lehner Corp., *a / BOSCAR Model
N / DESCR: reduces coordinate positions on cinethcodolite or other
film to digital punched card form /
USE: missile tracking triangulation,
general film reading / \$35,000 to
\$50,000 / D2A

Benson-Lehner Corp., *a / large area
record reader / DESCR: reduces
co-ordinate locations on maps and
charts to 40" x 48" to digital form
on punched cards / USE: reduction
of maps and chart data for computer
input / \$37,500 / D2A

CG Electronics (Div. of Gulton Industries, Inc.) — see D1
Consolidated Electrodynamics Corp.
Control Equipment Corp. — see C24A
Control Logic, Inc. — see C11
Davidson Electronic & Development Co.
G. C. Devey Corp. — see D1
Electro-Mechanical Research, Inc.,
Sarasota Div. — see D1

Sarasota Div. -- see Dl
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera and

Alrential Space and Determines Systems, a Div. of Fairchild Camera and Instrument Corp.
Fischer & Porter Co., County Line Rd.,
Warminster, Pa. / multiple pressure readout system / DESCR: measures up to 250 pressures with excellent time correlation. Reads out to typewriter, computer, or tape.
Principally for wind tunnels and test cells / USE: to perform an automatic precision measurement / \$25,000 to \$100,000 / D2A
Fischer & Porter Co., *a / computer control systems / DESCR: digital computer-oriented data acquisition and control systems for process industries / USE: provides a complete instrumentation and control equipment / \$125,000 to \$500,000 / D2A

equipment / \$125,000 to \$500,000 /
D2A
Fischer & Porter Co., *a / data acquistion systems / DESCR: solid
state systems for military and industrial data acquistion. Comprised of standard modules for
economy and predictability / USE:
to acquire data from tests or processes / \$20,000 to \$120,000 / D2A

Franklin Electronics Inc. Gerber Scientific Instrument Co., P.
O. Box 305, Hartford, Conn. / data
reduction equipment / DESCR: highreduction equipment / Duscus: nign-precision data reduction instru-ments and systems for the rapid re-duction of analog data to digital output from strip charts and film / USE: data reduction / \$95 to

\$20,000 / D2A Gulton Industries, Inc., 212 Durham Ave., Metuchen, N.J. / random data processing, converters, encoders,

Ave., Metuchen, N.J. / random data processing, converters, encoders, digital logic modules, tape editors, etc. / DESCR: high veracity data acquisition systems for industry / USE: where data from remote locations must be gathered at a central control station / - / D2A llarman Kardon Inc., Data Systems Div. -- see Clo, Dl lughes Dynamics, Inc. -- see C30 International Business Machines Corp., Federal Systems Div. LFE Electronics, A Div. of Laboratory For Electronics, A Div. of Laboratory For Electronics Monitor Systems, Inc. -- see T10 Non-Linear Systems, Inc. Northrop Nortronics, Systems Support Dept., 500 E. Orangethorpe, Anaheim, Calif. / comparison film viewers / DESCR: viewers developed for comparative analysis of photographic, radar, and infrared air reconnaissance records. Images projected from 35mm, 70mm, or 5 inch roll film / USE: developed for U.S. Navy (BuWeps) / quoted upon request / D2A Ortronix, Inc., P. O. 8217, Orlando, F1a. / data systems / DESCR: design, development and manufacture of data equipment including format converters, modems, synchronizers, repeaters, generators, and test equipment / USE: data handling, data

ers, generators, and test equip-ment / USE: data handling, data reduction, telecommunications / - / D2A

Packard Bell Computer, a div. of Packard Bell Electronics

Redcor Corp.
Resdel Engineering Corp., 990 South
Fair Oaks Ave., Pasadena, Calif.,
data acquisition and reduction systems / DESCR: special purpose systems for acquisition and reduction
of data including "quick look" displays / USE: real time experiments
and other applications / - / D2A
The Scam Instrument Corp.
Systems Engineering Laboratories,
lnc.--sec C16 Redcor Corp.

D3. DELAY LINES (COMPUTER TYPES)

Admiral Corp. Allen Avionics Inc. Andersen Laboratories, Inc. Artronic Instrument Co. Audio Instrument Co., I Automatic Coil Co. Inc. Inc.

Automatic Coil Co. Inc.
Avien, Inc.
Bell Aerosystems Co.
Richard D. Brew and Co., Inc., 90
Airport Rd., Concord, N.H. / delay
lines / DESCR: bit rates in the
order of 25 mc, storage capacities
of 10,000 bits / USE: for digital
computer storage elements for millisecond applications / \$100 to
\$3000 / B3
Coilcraft, Inc.

second applications / \$100 to \$3000 / D3
Coilcraft, Inc.
Columbia Technical Corp.
Computer Control Co., Inc., Old Connecticut Path, Framingham, Mass. / magnetostrictive delay lines -SONILINE / DESCR: 4 to 20,000
microsecond delays. Delay to rise time ratio as high as 30,000 to 1.
Variety of package sizes and modulation techniques as standard options / USE: serial storage, sequential buffering, cross and auto correlation, signal compression and expansion and video analysis / \$50 to \$300 / D3
Computer Devices Corp.
Corning Electronics, Corning Glass Works

Consolidated Avionics Corp.

Works
Consolidated Avionics Corp.
Deltime Inc.
Developmental Electronics Corp.
Digital Devices, Inc., 212 Michael
Drive, Syosset, L.I., N.Y. / magnetostrictive delay lines / DESCR:
basic components or in complete
systems including modularized electronics, with appropriate timing
levels to meet specific computer
memory applications. Militarized
and commercial systems available /
USE: computer memories, temporary
storage of information, precise
delays / \$200 to \$10,000 / D3
Electronic Modules Corp.
Electronic Modu

including magnetostrictive lines / USE: delay and storage applications / - / D3 Filtron Co. Inc.
General Electric Co., Specialty Devices Operation -- see C26 Giffillan Bros. Inc.
The Gudeman Co. Inc. The Gudeman Co. Inc.
Hallicrafters Co.
JFD Electronics Corp.
Kenyon Transformen Co. Inc.
LFE Electronics, A Div. of Laboratory
For Electronics Inc.
Magnetic Components Inc.
Martin Marietta Corp.
Microsocond Electronics, Inc.
Microsonics, Inc.
Missouri Research Labs, Inc.
Network Designers Inc. Network Designers Inc.
P C A Electronics Inc.
Paradynamics Inc., 10 Stepar Place,
Huntington Station, L.I., N.Y. /
delay lines / DESCR: electromagnetic and magnetostrictive delay lines
for radar and computer applications /
USE: storage medium for commutors,
radar calibration / \$15 to \$1000 /
D3 Plug-In Instruments, Inc.
Polyphase Instrument Co.
Raytheon Co., Industrial Components DIV.
Sangamo Electric Co., 1301 North 11th
St., Springfield, Ill. / delay
lines / DESCR: ultra-sonic quartz
type delay lines; options include
temperature controlled, variable,
tapped / - / - / DS
F. W. Sickles Div., General Instrument
Corn

D4. DESK CALCULATORS

Solid State Electronics Co

Technical Measurement Corp. Technitrol, Inc. -- see C26 Valor Instruments Inc. Wang Laboratories.

Solid State Electronics Co.
Sonic Memory Corp., 494 Oak St.,
Copiague, N.Y. / delay lines /
DESCR: standard and custom magnetostrictive delay lines / USE: computer memory / - / D3
Space-General Corp.
Straza Electronics, Div. Straza Ind.
Technical Measurement Corp.

Addo-X, Inc. Addo-X, Inc.

Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif. / calculating
machines / DESCR: full line of
desk calculators including Model
SRW (automatic square root) and
Model SRQ (automatic square root
and automatic square in USE:
solving mathematical problems / - /
PM D4 Hughes Dynamics, Inc. -- see C30 International Business Machines Corp. Mathatronics, Inc. -- see C24 Underwood Corp. Victor Business Machines Co.

D6. DIFFERENTIAL ANALYZERS

Alto Scientific Co., Inc. Applied Electronics Corp. of N.J. Armstrong Whitworth Equipment Avien, Inc.
Bell Aerosystems Co.
CG Electronics Corp.
Computer Control Co. Inc.
Consolidated Systems Corp.
Control Equipment Corp. Datex Corp.
Gilfillan Bros. Inc.
Good Electronic Corp. Barvey-Wells Electronics, Inc.
International Business Machines Corp.,
Federal Systems Div.
Lear, Inc., Instrument Div.
Librascope Div., General Precision Inc.
Lintronic Ltd.
Marquardt Corp., Pomona Div.
Minneapolis-Honeywell, Military Products Group
Mnemotron Corp.
Model Engr. & Mfg. Corp.
OPTOmechanisms
Packard Rall Computer Corp. Taper Micrometer Corp.
Taper Micrometer Corp.
Technical Measurement Corp.
Telemetrics, Inc.

D11. DISCS, MAGNETIC

Autonetics, Div. of North American Aviation, Inc. Brooks & Perkins Inc. Bryant Computer Products, Div. of

Ex-Cell-O Corp. Burroughs Corp.
Cognitronics Corp.
Control Engineering, Div. J. B. Webb Co. Digital Development Corp. Digital Development Corp.
Digital Electronics Corp.
Don-Lan Electronics Inc.
International Business Machines Corp.,
Federal Systems Div.
Librascope Div., General Precision Inc.
LFE Electronics, A Div. of Laboratory
For Electronics
Lockheed Electronics Co., Avionics
and Industrial Products Div., 6201
E. Randolph St., Los Angeles 22,
Calif., Magnetic discs and drums /
DESCR: hard face magnetic material
up to 39" diameter / USE: in computers / \$200 to \$5000 / Dll
Magne-Head Div., General Instrument
Corp. Corp.
Minnesota Mining & Mfg. Co., Magnetic Products Div.
Quantatron, Inc.
Reeves Soundcraft Corp. S-I Electronics, Inc. Sperry Gyroscope Co., Div. of Sperry Rand Corp. Sylvania Electronic Systems

D12. DRUMS, MAGNETIC

Alwac Computer Div., El-Tronics, Inc. Bryant Computer Products, Div. of Ex-Cell-O Corp. Cognitronics Corp. -- see C24 Computer Sciences, Inc. Consolidated Controls Corp.
Control Data Corp.
Control Engineering Div., J. B. Webb Co. Cook Technological Center Cook Technological Center
Daystrom Inc., Control Systems Div.
Digital Development Corp. -- see S5
Electrada Corp.
Electrodynamic Instrument Corp.
N.V. Electrologica
Electro Nuclear Systems Corp.
Electron Ohio, Inc., 1111 Power Ave.,
Cleveland 14, Ohio / data delay
systems / DESCR: memory systems
incorporating low speed magnetic
drums providing delays from a millisecond to many minutes / USE: information storage / \$1000 to
\$20,000 / D12
El-Tronics Inc.
Ferranti Electric Co. Inc. El-Tronics Inc.
Ferranti Electric Co. Inc.
IMI Magnetics Div. of Idaho Maryland
Industries Inc., 1733 Flower, Glendale I, Calif. / magnetic heads and
storage drums / DESCR: design and
manufacture of magnetic heads and
memory drums / USE: information
storage / - / DI2
Information Systems, Inc. Information Systems, Inc.
Instrument Systems Corp.
International Business Machines Corp.,
Federal Systems Div.
IFE Electronics, A Div. of Laboratory
For Electronics
Litton Systems Inc., Guidance and
Control Systems Div.
Lockheed Electronics Co., Avionics Control Systems Div.
Lockheed Electronics Co., Avionics
and Industrial Products Div. -see D11
Magne-Head, A Div. of General Instrument Corp., 3216 W. El Segundo
Blvd., Hawthorne, Calif. / magnetic
drums and memory systems / DESCR:
fixed spacing or contact (air
floating) heads. Bit densities
to 500/inch Manchester of 1000/inch
NRZ. Up to 25 tracks/inch. All
drum input and output electronics
available / - / D12
Marquardt Corp., Pomona Div.
Minneapolis-Honeywell, Heiland Div.
Monroe Calculating Machine Co., 555
Mitchell St., Orange, N.J. / magnetic memory drums / DESCR: compact drums with capacity range of
15,000 to 120,000 bits / USE: information storage for computers and
control systems / \$1000 to \$3000 /
D12 Philips Electronic Equipment Ltd. Redmond Fairchild, Inc. Shepherd Industries Inc. S-I Electronics, Inc. Sony Corp.
Sperry Gyroscope Co., Div. of Sperry
Rand Corp.
Sylvania Electronic Systems

Thompson Ramo Wooldridge Inc., Tapco Unimation Inc.
Whitnon Mfg. Co., Route 6, Farmington, Conn. / computer drums /
DESCR: precision rotating devices.

Memory drums coated and supplied with head holders, but no heads / USE: in computers / \$400 to \$15,000 / D12

EO. ECONOMIC RESEARCH

Abacus Information Management Co. Automation Engineers Booz, Allen & Hamilton Inc. -- see C30 Hughes Dynamics, Inc. -- see C30

E1. EDUCATION

Abacus Information Management Co. Abacus Information Management Co.
ADB Institutet (Scandinavian Automatic Data Processing Institute)
The American University, Center for
Technology and Administration,
1901 F St. N.W., Washington 6, D.C./
consulting, education / DESCR:
courses in systems analysis and
design, middle management executive
development, ADPS orientation and development, AUPs orientation and computer programming / USE: education and training / \$2000 to \$10,000 / E1

Anelex Corp., 150 Causeway St., Boston 14, Mass. / Anelex Printer Training Course / DESCR: intensive course, limit 10 students, on the theory, operations, care, maintenance and ormation students, on the theory, operations, care, maintenance and servicing of the Series 4 High Speed Printer / USE: maintenance and field service repair of Anelex printer systems in data processing installations / - / El

printer systems in data processing installations / - / EI
Auerbach Corp.
Basic Systems Inc., 2900 Broadway,
New York, N.Y. / PERT / DESCR: 5hour programmed instruction course teaches managers to design, understand, replan, and modify PERT networks; prepares trainees for both manual and computer procedures. 92% examination average / USE: selfinstruction / \$17.50/copy / El
Basic Systems Inc., *a / required
COBOL-1961 / DESCR: 50-hour programmed instruction course enables trainees without prio computer experience to prepare operational computer source programs on first pass. 94% student average on stringent final / USE: self-instruction / \$600 for 10 students to \$9000 for full licensing / El
Basic Systems Inc., *a / programmed instruction / DESCR: 100-member full-time staff headed by 5 PhD's in behavioral psychology offers consulting and custom contract services in programmed instruction, training systems design. Management seminars / USE: as needed per analysis of client needs / - / El
Belock Instrument Corp.
Berkeley Enterprises, Inc.

ars / USE: as needed per analysis of client needs / - / El Belock Instrument Corp. Berkeley Enterprises, Inc. C & K Components, Inc. -- see C54 Computer Control Co., Inc. Control Logic, Inc. -- see CII Control Technology, Inc. Digital Electronics Inc. Digital Electronics Inc. Diversified Concepts, Inc. -- see DI Friden, Inc., 2350 Washington Ave., San Leandro, Calif. / Friden Ecucational Center / DESCR: courses in data processing and related fields. No fee. For information write Friden Educational Center, 31 Prince St., Rochester, N.T., or consult local Friden office / USE: training in data processing / - / El Hamilton Research Associates, Inc., Box 38, New Hartford, N.Y. / programmed instruction / DESCR: custom industrial educational systems, particularly in the use, maintenance, repair, manufacture and sale of electronics equipment / - / open / El

Harman Kardon Inc., Data Systems Div.

Harman Naruon Inc., Data Systems 577.

-- see B6
Hughes Dynamics, Inc. -- see C30
Lutter, Maremont and Co., Inc.
Management Science Training Institute

Management Science Training Institute
Mathematischer Beratungs -- und Programmierungsdienst GmbH. -- see C30
Perceptual Development Laboratories,
6767 Southwest Ave., St. Louis 17,
Mo. / IBM card punch operator training program and other office machine
training programs / DESCR: program
rapidly develops basic punching
skill, is effective for proficiency
building, improves motivation, reall efficiency and reduces costs /
USE: for developing basic punching USE: for developing basic punching

skills as well as proficiency building / \$3500 to \$4775 / El Philco Technological Center, P. O. Box 4730, Philadelphia 34, Pa. / training devices / DESCR: digital computer system training units: demonstrate fundamentals of circuits, logical operations, binary members, and demonstrates complete operating computer / USE: training / - / El / E1

operating computer / USE: training /
- / EI
Redifon Computer Dept., Gatwick Rd.,
Crawley, Sussex, England / educational analogue computers, analogue
computer courses / DESCR: specially
designed expansible computer with
color coded removable patchpanel.
Plug-in amplifier, multiplier, and
function generators. High accuracy.
Courses with practical work organized at regular intervals / USE:
colleges and universities / \$5700 to
\$12,250 / EI
Scientific Development Corp., 131
Lexington St., Waltham, Mass. /
Nordac, Minivac 601 and Minivac
6010 / DESCR: small computer simulators designed for computer educational and training purposes / USE:
education and training / \$65 to
\$235 / EI

\$235 / E1

\$235 / El
The Teleregister Corp., 445 Fairfield
Ave., Stamford, Conn. / training devices / DESCR: training programs
in EDP systems, maintenance, digital
computer programming, electronic
communications and special, related
courses. Programmed instruction,
particularly for application to
Teleregister teaching systems / USE:
training / - / El

F1. FACSIMILE EQUIPMENT

Addressograph-Multigraph Corp.
Alden Electronic and Impulse Record-Alden Electronic and Impulse Recording Equipment Company Inc., 1 Washington St., Westboro, Mass. / all purpose facsimile / DESCR: handles all copy sizes and thicknesse with 18" scan width. Direct computer output recording using scan converters. Speed ranges 1 page in 4 minutes to 30 seconds/page / - / Fl Alto Scientific Co., Inc. Bell Aerosystems Co. Bell Aerosystems Co.
Burr Electronics
Datametrics Inc.
Diamond Electronics Div., Diamond Power Speciality Corp.
Eastman Kodak Co.
Electronic Communications Inc., Com-Electronic Communications Inc., Component Design & Development Corp.
Frontier Electronics, Div. IRC
General Dynamics/Electronics
Hogan Faximile Corp. -- see PlO
ITT Federal Labs, Div. ITT
Itek Corp. -- see C448
Midwestern Instruments, Inc.
Minneapolis-Honeywell, Military
Products Group. Products Group
Muirhead & Co. Ltd.
Offner Div., Beckman Instruments Inc.
OPTOmechanisms Inc. Photomechanisms, Inc. Skiatron Electronics & Television Corp. Space-General Corp. Stewart-Warner Electronics Div. Telautograph Telectro Industries Corp. Western Union Telegraph Co. Westers Co., Div. Litton Systems Inc. Winder Aircraft Corp. Woodland Electronics Co. Inc.

F5. FLOORS

F5. FLOORS

Bel Air Industries, Inc.
Commercial Steel Co., Bel Air, Md. /
Data-Floor / DESCR: raised floor /
USE: with electronic computers /
\$3.50 to \$4/sq. ft. / F5
Computer Floors, Inc.
Liskey Aluminum, Inc., Box 506, Glen
Burnie, Md. / elevated floors /
DESCR: modular panels on rigid
support structure comprise freeaccess raised floors. Betweenfloor space serves as cable raceways and air conditioning plenum /
USE: for EDP equipment / - / F5
Strato-Floor, Inc., 795 E. 152nd St.,
Cleveland 10, Ohio / Strato-Floor
DESCR: elevated flooring for computer and television rooms / USE:
creates plenum area for electric
cabling / - / F5
Unistrut Products Co., 933 W. Washington Blvd., Chicago, Ill. /
Met-L-Strut Raised Flooring System /

DESCR: consists of structurally DESCR: consists of structurally laminated panels, supported by gridwork of formed steel channel beams, secured to adjustable columns; 2' x 2' and 3' x 3' modules / USE: raised floor with removable panels permits access to cables and wiring installed below floor level / - / F5 Washington Aluminum Co., Inc.
Weber Showcase & Fixture Co., Inc.

F5A. FORMS, CONTINUOUS

Allen Hollander Co., Inc., 385 Gerard Ave., Bronx 51, N.Y. / Able-Stik / DESCR: pressure-sensitive pinfeed labels for data processing / USE: for print-out on tabulator; also for identification of data processing equipment / - / F5A Avery Label Co., 1616 S. California Ave., Monrovia, Calif. / labeling equipment, pressure sensitive labels / DESCR: pressure-sensitive pin-feed labels for use in data processing. Stock and made-to-order sizes available with either removable or permanent types of adhesive / USE: addressing, file folders, PERT, school test results, etc. / - / F5A Bedinghaus Business Forms Co., Cincinnati 46, Ohio / continuous and

edinghaus Business Forms Co., Cincinnati 46, Ohio / continuous and Snapapart business forms / DESCR: manufactured through lithography / USE: electric typewriters, tabulating machines / - / F5A
H. Brady Co., 727 W. Glendale Ave., Milwaukee 9, Wis. / tab-labels / DESCR: self-sticking labels on pineed liner. Designed for high speed print-out. Roll or fan-fold. Stock sizes for immediate delivery / USE: addressing, personnel forms, payroll forms, etc. / \$3.24 to \$6.50/1000 / F5A

forms, etc. / \$5.24 to \$6.50/1000 / F5A
Clarkson Press Inc., 189 Van Rensselaer St., Buffalo 10, N.Y. / GC data processing forms / DESCR: continuous forms, stock and custom-designed, for all types of printers, both conventional and high-speed / - / - / F5A
May Tag & Label Corp., 111 W. 19th St., New York 11, N.Y. / Macomatic Pinfeed Automation Labels / DESCR: white smudge-proof pressure sensitive labels in 2 put-ups fan-folded 5M to the box or rolls of 25M / USE: addressing, compiling, posting, etc.
Take information directly from punched cards / \$2.94/M to \$7.06/M / F5A
Normandie Press, Inc., 350 W. 4th St.,

Normandie Press, Inc., 350 W. 4th St., New York 14, N.Y. / labels / DESCR: complete line of continuous specicomplete line of continuous speci-alty forms for transfer of EDP out-put data, press-on pin feed labels, gummed labels, paper forms, cards / USE: printed on data processing equipment / \$1 to \$10 / F5A

USE: printed on data processing equipment / \$1 to \$10 / F5A Old Town Corp.

Perfelope Manufacturing Co., 286 E. Cleveland Ave., Newark, Del. / continuous business forms; Perfelope Continuous Envelopes / - / USE: on all high speed computers / - / F5A Shelby Business Forms, Inc., High School Ave., Shelby, Ohio / data processing forms / DESCR: continuous tabulating forms (marginally punched) in single or multicopy style. Tabulating card sets / USE: in computers, printers / - / F5A The Standard Register Co., 626 Albany St., Dayton 1, Ohio / business forms / DESCR: full line from off-the-shelf stock forms to completely tailored designs. Single copy, multiple-part unit sets and continuous, marginally-punched forms / - / - / F5A

F7. FORMS HANDLING EQUIPMENT

Uarco Inc., West County Line Rd., Barrington, Ill. / Uarco 742-B All Purpose Deleaver / DESCR: removes carbons from fastened or unfastened forms. Trims one or two margins on sets up to 12 plies. Maximum form width 19" / - \\$1015 / F7
Uarco Inc., *a / 727. High Speed Deleaver / DESCR: deleaves 2 to 4 plies unfastened forms at speeds up to 200 ft./min. Handles forms with maximum width 18-3/4", from 7" to 17" long / - / \$425 / F7
Uarco Inc., *a / 1722 Trimmer-Imprinter / DESCR: trims and imprints forms or tab cards at speed up to 170 feet/minute; 150,000 signatures from each ink cartridge. All adjustments

manual / USE: independently or in line with other 1700 series equipment / \$1250 / F7
Uarco Inc., *a / Uarco 1740 Burster / DESCR: bursts up to 250 ft. of forms per minute. Automatic stacking tray and settings. Form size: width 3-3/4" to 20"; length 2-5/6" to 17" / USE: independently or in line with other 1700 series equipment / \$1300 / F7
Uarco Inc., *a / Uarco 1750 Tab Card Burster / DESCR: bursts 23,000 single cards an hour. Removes between sets chips. Handles all tab card constructions. Strict numerical sequence assured in stacking / USE: independently or in line with other 1700 equipment / \$1100 / F7

G1. GENERATORS, FUNCTION

Babcock Electronics Corp Basic & Experimental Physics -- see P12A

CBS Laboratories, a div. of Columbia

P12A
CBS Laboratories, a div. of Columbia Broadcasting System, Inc.
Cybetronics Inc. -- see S3
Exact Electronics, Inc., 455 So. 2nd St., Hillsboro, Ore. / waveform and function generators / DESCR: waveform synthesizer; pulse code, square wave, sine. triangle, ramp and cosine generators / USE: generate forcing function and simulation / \$450 to \$2275 / Gl
The GYREX Corp.
Hewlett-Packard Co.
Hyperion Industries, Inc.
Instrument Systems Corp.
Ortronix, Inc. -- see D2A
Redifon Computer Dept.
T71 Main Aye., Norwalk, Conn. /
Vernistat Div., Perkin-Elmer Corp.
T71 Main Aye., Norwalk, Conn. /
Vernistat @ Adjustable Function
Generators / DESCR: nonlinear potentiometer output function completely adjustable by means of sliders on display panel / USE: to introduce controlled nonlinear functions into computers, process control systems, etc. / \$765 to \$795 / Gl
The Walkirt Co.

The Walkirt Co.

G2. GENERATORS, FUNCTION, ELECTRONIC

Advance Components Ltd. Aeroflex Labs. Inc. Avien, Inc. Beckman Instruments, Inc., Berkeley Beckman Instruments, Inc., Div. Bell Aerosystems Co. Canadian Marconi Co. Chauvin-Arnoux Codamite Corp. -- see C22

Codamite Corp. —— see C22
Comcor, Inc.
Computer Control Co. Inc.
Dian Laboratories, Inc. 611 Broadway,
New York 12, N.Y. / diode function
generator / DESCR: a four-quadrant
unit employing diode cards with no
permanently-committed amplifiers /
USE: switches set breakpoint and
slope polarity for each segment.

Calibrated potentiometers set desired breakpoint and slope / on request / G2

sired breakpoint and slope / on request / 62
Dian Laboratories, Inc., *a / photo-electric function generator / DESCR: photographed mask f(x) is inserted between cathode-ray tube and photo-multiplier tube. Circuitry constrains c.r. spot to trace the desired function / USE: generation of arbitrary functions / on request / 62
Djeco Div., Djordjevic Engrg. Co. Eclipse Pioneer, Div. Bendix Corp. EDP Corp., 3501 South Orange Blossom Trail, Orlando, Fla. / timing generators / DESCR: solid state generators / DESCR: solid state generator with accuracy 1 part in 104. Generator output count in minutes and seconds and 5 digits through broadside BCD on 20 lines / USE: in timing, control systems and for insertion of real time data in data handling systems / \$45 to \$6000 / G2 Electronic Specialty Co. Exact Electronics, Inc. — see Gl General Computers Inc.
General Time Corp., Electronic Systems Div. Hallicrafters Co.

tems Div. Hallicrafters Co.

Hallicrafters Co.
Heath Co., Sub. of Daystrom Inc.
Hewlett-Packard Co., 1501 Page Mill
Rd., Palo Alto, Calif. / pulse
generators / DESCR: several models:
0.1 nsec rise time (175mv into 50

ohms); 1 nsec rise time (10v into 50 ohms); ≈13 nsec rise time (200v into 50 ohms); ≈0.02 Asec (50v into 50 ohms) / - / \$215 to \$1675 / G2 Hickok Electrical Instrument Co.

Intercontinental Instrument Inc., 123 Gazza Blvd., Farm Ampdale, N.Y. / pulse generation equipment / DESCR: 1 cps to 24 mcps pulse and square wave generators, 1 cps to 10 mcps square wave generators, unit pulsers, pulse generators. All transistorized, 50 Aoutputs / USE: test equipment / \$895 to \$1300 / G2 Krohn-Hite Corp.
Lintronic Ltd.

Merit Short Wave Diathermy Co. Merit Short Wave Diathermy Co.

Multronics Inc.
National Ultrasonic Corp.
Navigation Computer Corp.
Network Designers Inc. Orbitec Corp. Parabam Div., Houston Fearless Corp. Peeco Corp. Philamon Laboratories, Inc. PRD Electronics Inc.
Radionics, Inc.
Reeves Instrument Corp. Research, Inc. RMS Associates, Inc. Servomex Controls Ltd. Skiatron Electronics & Television

Skiatron Electronics & Television
Corp.
Solid State Electronics Co.
Sperry Utah Co., Div. Sperry Rand
Corp.
Stony Brook Labs. Inc.
Systron Donner Corp.
Taylor Instrument Cos.
Telemetrics, Inc.
Tempo Instrument, Inc.
Vernistat Div., Perkin-Elmer Corp.
Wurlitzer Co., Electronics & Defense
Products Div.

G3. GENERATORS, FUNCTION, MECHANICAL

Avien, Inc.
The Bendix Corp., Eclipse-Pioneer Div.
Comcor, Inc.
General Computers Inc.
Hallicrafters Co.
Historian Electrical Instrument Co.
Instrument Development Laboratories,
Inc., 67 Mechanic St., Attleboro,
Mass. / sampling switch / DESCR:
2 pole, 60 position, 60 RPS mechanical switch scanning filter outputs
on one pole and other pole generating a voltage divider circuit for
comparison and lock-on / USE: high
speed synchronous scanner / \$800 to
\$1100 / G2
Orbitec Corp.
Systron Donner Corp.
Tempo Instrument, Inc.
Tensor Electric Development Co., Inc.
Wurlitzer Co., Electronics & Defense
Products Div.

H1. HEADS. MAGNETIC American Concertone Inc.

American Concertone Inc.
Applied Magnetics Corp., 749 South
Kellogg Ave., Goleta, Calif. /
magnetic recording heads / DESCR:
high precision digital or analog
magnetic heads. Multiple tracks,
single units, redundant or interlaced assemblies / USE: in computer storage units and instrumentation recorders / \$200 to \$2000 /
HI Automation Industries, Inc. Bach Auricon Inc. Brush Instruments, Div. Clevite Corp. Bryant Computer Products, Div. of Ex-Cell-O Corp. Cell-O Corp.
Burroughs Corp.
Burroughs Corp.
Cognitronics Corp.
Components Specialties Corp.
Consolidated Electrodynamics Corp.
Don Bosco Electronics, Inc.
Electrodynamic Instrument Corp.
Electro Nuclear Systems Corp.
El-Tronics Inc.
EMI-Cossor Electronics Ltd.
Gotham Audio Corp.
Houston Instrument Corp.
Idaho Maryland Industries, Inc.
IMI Magnetics Div. of Idaho Maryland
Industries Inc. — see D12
Indiana General Corp., Electronics Div.
Information Systems, Inc.
Instrument Systems Corp.
International Business Machines Corp.
Federal Systems Div. Federal Systems Div. International Electro-Magnetics Co. ITT Federal Labs., Div. ITT (earfott Div., General Precision Inc.

LFE Electronics Div., Lab For Electronics, Inc.
Edwain A. Lipps Engineering, 1511 Colorado Ave., Santa Monica, Colif. /
magnetic tape recording heads /
DESCR: custom and production line, professional graded recording heads manufactured primarily to specifications / USE: with recording equipment / moderate to expensive / H1
Lipps Inc. Lipps Inc.
Litton Systems Inc., Guidance & Control Systems Div.
Lockheed Electronics Co., Information Technology Div.
Magnavox Co.
Magnavox Co.
Magnecord by M
Magnee-Head, A Div. of General Instrument Corp., 3216 W. El Segundo Blvd.,
Hawthorne, Calif. / magnetic tape and drum read/write and erase heads / DESCR: high precision, to military and commercial specifications; up to 3 MC direct recording / USE: for analog and digital application / to quotation / Hl
Matsushita Electric Ind. Co. Ltd.
Michigan Magnetics Inc.
Mincom Div., Minnesota Mining & Mfg.
Co. Technology Div. Co.
Minicord Corp. of America
Minneapolis-Honeywell, Heiland Div.
Monroe Calculating Machine Co., 555
Mitchell St., Orange, N.J. / magnetic heads / DESCR: unit or multiple
high track density read/record head
assemblies / USE: with magnetic
storage drums / \$21 to \$210 / H1
Norton Associates, Inc.
Nortronies Co. Inc. Nortronics Co. Inc.
Potter Instrument Co., Inc.
Radio Corp. of America, Broadcasting
& Communications Div. & Communications Div.
Radio Corp. of America, Electronic
Data Processing Div.
Redmond Fairchild, Inc.
Roberts Electronics, Inc.
S.E.D. Memories, Inc.
Sheperd Industries Inc.
Shure Brothers, Inc.
S-I Electronics, Inc.
S-I Electronics, Inc. Sony Corp. Space-General Corp. Sperry Gyroscope Co., Div. of Sperry Rand Corp.

H2. HEADS, MAGNETIC, READING

Applied Magnetics Corp. -- see Hl Bryant Computer Products, Div. of Ex-Cell-O Corp. IMM Magnetics Div. of Idaho Maryland Industries Inc. -- see Dl2 Instrument Systems Corp. Edwin A. Lipps Engineering -- see Hl Magne-Head, a Div. of General Instrument Corp. -- see Hl Potter Instrument Co., Inc. S-I Electronics, Inc. S-I Electronics, Inc.

H3. HEADS, MAGNETIC, RECORDING

Applied Magnetics Corp. -- see H1
IMI Magnetics Div. of Idaho Maryland
Industries Inc. -- see D12
Edwin A. Lipps Engineering -- see H1
Magne-Head, A Div. of General Instrument Corp. -- see H1
Potter Instrument Co., Inc.
S-I Electronics, Inc.

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INFORMATION RETRIEVAL DEVICES

Abacus, Inc. Addressograph-Multigraph Corp.
Addressograph-Multigraph Corp.
Alden Electronic & Impulse Recording
Equipment Co., Inc.

Equipment Co., Inc.
Avco Corp.
Bailey Meter Co., 1050 Ivanhoe Rd.,
Cleveland 10, Ohio / 750 Information System / DESCR: solid-state
gathers analog data; scans, alarms,
and logs digitally / USE: to provide simplified information display
to plant operators / - / I2
Beakley Comp

Beekley Corp.
Bell & Howell Micro-Data Div. -- see

Bell & Howell Micro-Data Div. -- see D2

Benson-Lehner Corp., 14761 Califa St., Van Nuys, Calif. / COMAC Model II / DESCR: performs field-by-field examination of two Uniterm-indexed punched card files and outputs term numbers to a keypunch when pre-determined conditions are met / USE: information storage and retrieval / \$30,000 / I2

Computer Control Co., Inc. Consolidated Electrodynamics Corp. James Cunningham, Son & Co., Inc. Dashew Business Machines Inc. Data Display, Inc. -- see D2

G. C. Dewey Corp. -- see D1

Dick, A. B., Co.

Digital Electronics Inc.

Documentation Inc.

Electronic Engineering Co. of Calif. Epsco, Inc.

Documentation Inc.
Electronic Engineering Co. of Calif.
Epsco, Inc.
E-Z Sort Systems, Ltd.
Fairchild Camera & Instrument Corp.
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera & Instrument Corp.
Ferranti Electric, Inc.
FMA, Inc., 142 Neveda St., El Segundo,
Calif. / Filesearch System / DESCR:
automated system for storing and
retrieving documentary information /
- / \$167,000 / 12
General Electric Co.
General Flectric Co.
General Frecision Equipment Corp.
Globe-Wernicke Co., The
GPL Div., General Precision, Inc.
Hallicrafters Co.
Harman Kardon Inc., Data Systems Div.
-- see B6

Harman Kardon Inc., Data Systems Div.

-- see B6
Hogan Faximile Corp.
Houston Fearless Corp., 11801 W. Olympic Blvd., Los Angeles 64, Calif. /
storage/retrieval system / DESCR:
6 second access to any one of 10,240
separate photo images. Each image
may contain up to 850 pages of data
/ USE: information retrieval as required by research centers, military data centers, laboratories /
quoted to specific requirements /
12

12
HRB-Singer, Inc.
Hughes Dynamics, Inc. -- see C30
Information For Industry, Inc., 1000
Connecticut Ave., N. W., Washington
36, D.C. / Command Retrieval Information System (CRIS) / DESCR: information storage and rapid retrieval
device / - / \$33,500 and up / 12
Information Products Corp.

Information Products Corp.
Information Retrieval Corp., 1000
Connecticut Ave., N. W., Washington
6, D. C. / Command Retrieval Information System (CRIS) / DESCR:
large capacity microimage storage
device for automatic retrieval and
reproduction of microimages / USE:
for information storage and retrieval / \$33,500 / 12
Institute for Scientific Information,
Inc. -- see P13
International Business Machines Corp.,
Federal Systems Div.

Federal Systems Div.
Invac Corp.
Itek Corp. -- see C44A
Jonker Business Machines, Inc.

Jonker Business Machines, Inc.
Langan Corp.
LPE Electronics, Information Systems
Department, a Div. of LPE, Inc.,
1295 Commonwealth Ave., Boston,
Mass. / SM-2A Display System /
DESCR: system accepts all common
computer codes, keyboards or communication lines; displays messages
on television type tubes; messages munication lines; displays messages on television type tubes; messages can be stored and updated within system, called up and instantly displayed under high ambient conditions; instant erasure / USE: military command and control, situation assessment, air traffic control, ground checkout, training dervices / \$75,000 to \$100,000 / 12 Librascope Div., General Precision, Inc.

Link Div., General Precision, Inc. Lithoid, Inc. Litton Systems, Inc.

Litton Systems, Inc.
The Magnavox Co., 2131 Bueter Rd.,
Fort Wayne, Ind. / Magnacard System / DESCR: low-cost, mass-storage system with complete input/output and computing capabilities. utilizes magnetic cards as basic storage medium. Over 2 billion decimal digits per input/output computer channel / USE: as information storage and retrieval system / \$13,000/month to \$15,000/month / 12

12

Massey Dickinson Co., Inc. -- see C24A
Microcard Reader Corp.
Midwest Automatic Control Co.
Midwest Automatic Control Co.
Moleculor Research, Inc.
Oxford Filing Supply Co., Inc.
Packard Bell Computer Corp.
Practa Data-Card System
Rabinow Engineering Co., Inc.
Radio Corp. of America
Radio Corp. of America
Radio Corp. of America
Ratio Corp. Records
Raytheon Co.
Recordak Corp.
Rese Engineering, Inc.

Recordak Corp.
Rese Engineering, Inc.
Richardson Camera Co., Inc.
RMS Associates, Inc., 102 E. Sandford Blvd., Mt. Vernon, N. Y. /
remote inquiry/display system /
DESCR: keyboard entry; CRT output
unit for communicating with computer memory. Can be used with
data phone / USE: computer input/
output device / \$5000 to \$20,000 /
12

I2
RMS Associates, Inc., *a / general
purpose computer controlled display systems / DESCR: large screen
(to 21") date plotting and character writing consoles / USE: as com-

puter output device / \$15,000 to \$40,000 / I2 SRDS Data, Inc. Sangamo Electric Co. -- see D2 The Scam Instrument Corp. Space-General Corp. Telectro Industries Corp.

Telectro Industries Corp.
The Teleregister Corp. 445 Fairfield
Ave., Stamford, Conn. / automated
voice-reply system (Televox) /
DESCR: on-line digital-to-voice information system; provides automatic
audio output over standard telephones
complete with magnetic drums, logic,
and power supplies / USE: either as
self-contained system or as dataprocessor subsystem / upon request
/ 12

processor subsystem / upon request / I2
Tellertron Corp., a subsidiary of Stone Laboratories Inc., 1312 Tremont St., Boston 20, Mass. / Tellertron-Real Time Systems / DESCR: maintains and updates account information and produces daily transaction records in format compatible with any off-line processor / USE: savings institutions, displays. Maintains all savings accounts in real-time / \$250,000 and up / I2
H. W. Ulmer Co. -- see C31
Viewlex Inc., Holbrook, N. Y. / optical instruments / DESCR: several forms of projection optics supplied to computer manufacturers to serve as read-outs, storage and input devices to digital and special equipment / USE: data or readout stored on film / open / I2

12A. INFORMATION ENGINEERING

Abacus Information Management Co.
Auerbach Corp.
Automation Engineers
Booz, Allen Applied Research Inc. -see C27
Circuit Engineering -- see C30
Computer Associates
G. C. Dewey Corp. -- see D1
Hollander Associates -- see S9
HRB-Singer, Inc., P. O. Box 60, Science
Park, State College, Pa. / information systems methodology / DESCR:
develop systems of problem-solving
in conjunction with machine processing / USE: designing, developing
and testing information systems for
government and industry / range
varies / I2A
Hughes Dynamics, Inc. -- see C3O
Information Retrieval Corp.
Institute for Scientific Information,
Inc. -- see P13
International Business Machines Corp.,
Federal Systems Div.
Itek Corp. -- see C44A
Jonker Business Machines, Inc.
Management Systems Corp. -- see C30
Management Systems Corp. -- see C30 Abacus Information Management Co.

Massachusetts Institute of Technology National Computer Analysts, Inc. The Nissho To., Ltd., Electronic Sec-United Research Services Inc. -- see S9 Wheeldex & Simpla Products, Inc. Zator Company

14. INTEGRATORS

Bulova Research and Development Labor-atories -- see R12A

15. INTEGRATORS, ELECTRONIC

California Instruments Corp. -- see A3

16. INTEGRATORS, MECHANICAL

Instrument Systems Corp.
M. Ten Bosch, Inc., 80 Wheeler Rd.,
Pleasantville, N. Y. / mechanical
integrators / - / - / \$150 / 16

17. INVENTORY SYSTEMS

Automated Systems International, Inc., 10040 Freeland Ave., Detroit 27, Mich. / packaged systems / DESCR: management information systems for automobile dealers including input devices, computer processing and analytical output covering parts inventories, ecounting, warranty, service, new and used car control / USE: recording of daily data by dealer personnel / \$150/month to \$600/month / 17 James Cunningham, Son & Co., Inc. Hughes Dynamics, Inc. — see C30 M-H Standard Corp., 400 Heaton St., Hamilton, Ohio / Palletflo and Versarack / DESCR: components for computer controlled live storage racks. First in first out storage of cartons or palletized inventory / USE: all components necessary for building rack and handling system / \$10 to \$400,000 / I7
The Teleregister Corp., 445 Fairfield Ave., Stamford, Conn. / inventory-control system / DESCR: punched-paper tape and keyset input, magnetic-drum storage, indicator-display output or punched-paper tape / USE: warehousing and inventory control / upon request / I7
United Research Services Inc. — see Automated Systems International, Inc.,

K1. KEYBOARDS

Burroughs Corp.
Computer Control Co., Inc.
Information Products Corp.
North Electric Co. Teleregister Corp.

L1. LIGHTS, INDICATOR

ACF Electronics Div. AGF Electronics Div.
AMP Inc., Harrisburg, Pa. / AMPILLIME
Neon Indicator Light / DESCR: selfmounting nylon housing, 125 or 250
volts, life expectancy 25,000 hours,
wide choice of lenses / USE: equipment requiring indicator lights / L1
Rrown Engineering Co. 1--

/ LI
Brown Engineering Co., Inc.
Burroughs Corp., Electronic Components
Div., Plainfield, N. J. / sphericular
optic displays / DESCR: in-line readout devices which utilize 12 light bulbs to display; 12 word messages, digits, or special symbols / USE: as visual readout device / \$18 in single quantities /

vice / \$18 in single quantities / Ll
Circon Component Corp.
Computer Control Co., Inc.
Computer Logic Corp., 11800 W. Olympic Blvd., Los Angeles 64, Calif.
/decimal indicators Dl-20 series /
DESCR: incandescent type numeric indicators with 75 degree viewing cone, high light output, programmable digital color, and fail-safe. Various sizes, 2" depth / USE: as a system and instrument readouts for various decimal codes / \$22.50 to \$50 / Ll
Computer Measurements Co.
Datex Corp.
Dialight Corp., 60 Stewart Ave.,
Brooklyn 37, N. Y. / indicator lights (Dialco) / DESCR: complete line of indicator lights and pilot lights for every application. For

the computer-automation fields: ultra-miniature (3/8" mounting) indicator lights, tradenamed "Datalites", and made in 2 basic styles: lamp holders with Dialco replaceable lamp cartridges; also integrated "Datalites" with built-in neon lamps that are not replaceable. Also Data-Strip and Data-Matrix for computers, etc.; telephone light strips and indicator lights; transistorized indicator lights; illusized.

minated puch-button switches / - / -/

Drake Manufacturing Co., 4626 N, Olcott Ave., Chicago 31, Ill. / DRAKE "Bi-Pin Cartridge Lamp and Lampholders" / DESCR: quick front lamp replace-ment, exclusive indexing feature. Write for folder 6205-A -- complete line catalog 6302 / USE: computer, data processing equipment / - / Ll

Dymec Div. Hewlett-Packard Co. Eldema Corp. Electronic Control Products Electronic Control Products
Electronic Modules Corp.
Engineered Electronics Co.
Ferranti Electric Co., Inc.
General Electric Co., Def. Sys. Dept.
General Indicator Corp.
Industrial Electronic Engineers, Inc.
Information Systems Inc.
Korry Mfg. Co., Inc.
Laine Electronics & Mfg. Co., Inc.
Marco Industries Co.
Meriam Instrument Co., Electronics Div.
Milgo Electric Corp.
Monroe Industries, Inc.
Non-linear Systems, Inc. Non-linear Systems, Inc.
Ortronix, Inc.
Penn Keystone Corp.
Presin Co.
Radar Relay, Inc. Raytheon Co., Industrial Components Div. Regency Electronics, Inc Robotomics Enterprises, Inc.
Signal Indicator Corp.
Sylvania Electric Products Inc.,
Lighting Products Div.
Technical Measurement Corp. Technical Measurement Corp.
Transistor Electronics Corp.
Veeder-Root Inc.
Veeder-Root Inc.
Wemaline Products Co.
Westinghouse, Relay & Instrument Dept.
Wheaton Engineering Div., Hurletron

(M2.) MEMORY SYSTEMS

Aeronutronic Div., Ford Motor Co., Ford Rd., Newport Beach, Calif. / BIAX Memories, Elements and Stacks / DESCR: up to 2 megacycle non-destructive readout at low power levels, compact package design. Custom memories, BIAX elements, standard size memory stacks / USE: in ground and aerospace EDP systems / - / M2
Anelex Corp., 150 Causeway St., Boston, Mass. / Model 800 Random Access Disc Storage Memory / DESCR: maximum capacity of 160 million bits on 8 discs, positioning time of 125 milliseconds. Uniform 500 KC bit rate for read/write / USE: commercial, industrial or military applications / - / M2
Anelex Corp., *a / Model 4800 Random Access Disc Storage Memory / DESCR: capacity of 624 million bits on 48 discs, positioning time of 65 milliseconds. Uniform 500 KC bit rate for read/write / USE: commercial, industrial or military applications / - / M2
Arma Div., American Bosch Arma Corp.
— see C24
Autonetics Industrial Products, a Div. of North American Aviation, Inc., 3400 East 70 St., Long Beach 5, Calif. / RECOMP Magnetic Tape Unit / DESCR: expands memory capacity of RECOMP II computer to more than 1,000,000 words. Reads 1850 ch/sec., searches and rewinds e 55.5 in/sec., pulse packing density 200 ch/inch / USE: auxiliary memory storage for RECOMP II computers / \$25,000 purchase; \$625/month lease / M2
Beckman Instruments Inc., Systems Div. Beck's Inc.
Bell Aerosystems Co.
Burroughs Corp., Electronic Components Div. P. O. Box 1226, Plainfield, N. J. / magnetic thin film memory planes / DESCR: fast memory devices commercially available in both high

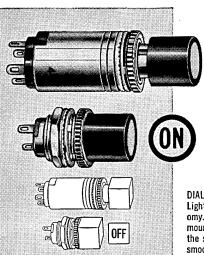
crosecond full cycle random access magnetic core memories. Designed around 3C/s S-PAC modules, TCM memories easily integrated into surrounding logic, offer range of optional configurations, accessories / USE: in digital systems requiring high speed random or sequential access storage, buffering or speed changing operations / - / M2 Control Equipment Corp. -- see C24A Cook Electric Co., Data Stor Div. -see T4 Cybetronics Inc.
Daystrom Inc., Control Systems Div.
Daystrom Inc., Military Electronics DIV.

G. C. Dewey Corp. -- see D1
DI/AN Controls, Inc.
Digital Development Corp. -- see S5
Digital Electronics Inc. Digital Development Corp. -- see 50
Digital Electronics Inc.
Electrodynamic Instrument Corp.
N. V. Electrologica
Electronic Memories, Inc., 9430 Bellanca Ave., Los Angeles 45, Calif. /
magnetic core memories / DESCR:
space satellite memories for severe
environment applications; large
capacity memories to MIL-SPECS/Serial and random access memories /
USE: for systems applications / on
request / M2
Fabri-Tek Inc.
Ferranti Electronics, a div. of Ferranti-Packard Electric Ltd., Data
Systems Dept.
Ferroxcube Corp. of America
General Electric Co., Def. Sys. Dept.
General Electric Co., Specialty Devices Operation -- see C26
Goodyear Aircraft Corp.
Harman Kardon Inc., Data Systems Div.
-- see C10
S. Himmelstein and Co., 6015 North -- see CIO
S. Himmelstein and Co., 6015 North
Ridge Ave., Chicago 26, Ill. / RED
on memory systems / DESCR: developon memory systems / DESCR: development of new memory systems and techniques / - / - / M2

Houston Fearless Corp., 11801 W. Olympic Blvd., Los Angeles 64, Calif. / magnetic memory drums / DESCR: diameter from 3.25 to 20" with speeds from 3600 to 24,000 RPM / USE: digital or analog storage of data / quoted to specific requirements / M2

HRB-Singer. Inc., a subsidiary of HRB-Singer, Inc., a subsidiary of The Singer Mfg, Co. Indiana General Corp., Electronics Instrument Systems Corp.
International Business Machines
Corp., Federal Systems Div.
International Computers and Tabulators Ltd. Irvan Ferromagnetics Corp. Ledex Inc. -- see C32 Librascope Div., General Precision, Lintronic Ltd.
Lintronic Ltd.
Litton Systems Inc., Guid. & Con.
Sys. Div.
Lockheed Electronics Co., Avionics
and Industrial Products Div., 6201
E. Randolph St., Los Angeles 22,
Calif. / memory systems / DESCR:
memory using cores / USE: computers
/ \$500 to \$25,000 / M2
Magne-Head, Div. of General Instrument Corp. -- see D12, H1
Magnetics Research Co.
Marquardt Corp., Pomona Div.
McDonnell Aircraft Co.
Microtron Inc., Pyrocircuits Div.
Mullard Overseas Ltd.
Philips' Gloeilampenfabrieken
Radio Corp. of America, Def. Elec. Lintronic Ltd. Radio Corp. of America, Def. Elec. Prods. Radio Corp. of America, Semiconductor and Materials Div. and Materials Div.
Rose Engineering Corp.
S-I Electronics, Inc.
Sperry Gyroscope Div. Sperry Rand Corp.
Sylvania Electronic Systems
Systems Engineering Laboratories, Inc.,
P. O. Box 9148, Fort Lauderdale, Fla.
/ magnetic memory systems / DESCR:
available in random access, sequential or sequential interlaced address configurations, with automatic self-testing features included, using SEL standard circuit cards throughout / - / - / M2
Technical Measurement Corp.

and low density forms -- 3072 bits per plane and 160 bits per plane / USE: as a high speed store in digi-tal computers / \$175 to \$1500 / M2 Cognitronics Corp. -- see C24 Computer Control Co., Inc., Old Conn-ecticut Path, Framingham, Mass. / core memories -- TCM-20, TCM-30, TCM-32, TCM-35 / DESCR: 2 to 20 mi-



Interchangeable caps, square or round, come in 8 transparent and translucent color combinations. For readout, caps may be hot-stamped or engraved with legends...Caps are rotatable for easy alignment of legends, and edges of square caps, after installation of the units.

Illustrated above, actual size: Switch No. 183-A015-371 (N.O.) or No. 183-B015-371 (N.C.); Indicator Light No. 183-9830-371. Drawings (approx. 1/2 size) show similar assemblies with square cap No. 185NEW...Subminiature

ILLUMINATED **PUSHBUTTON SWITCHES**

and matching **Indicator Lights**

DIALCO-your single source for Switches and Indicator Lights. Assures uniformity, high reliability, and economy. Units are compact; made for single hole (keyed) mounting in panels up to 3/16" thick... Switches are of the silent, momentary type, requiring light pressure for smooth, positive action. Contact arrangement is S.P.S.T., normally open or normally closed. Ratings: 3 amps, 125 V A-C; and 3 amps, 30 V D-C (non-inductive). The switch mechanism is completely enclosed and independent of the lamp circuit. The light source is the T-134 incandescent lamp, available in voltages from 1.3 to 28 Volts.

Units are designed for a wide range of control and read-

out applications-in computers, dataprocessing, communication, and remote control equipment; in automation, etc. For complete data, request our 8-page, full-color Catalog L-169.



DIALCO

Foremost Manufacturer of Pilot Lights CORPORATION

60 STEWART AVE., BROOKLYN 37, N.Y.

Area Code 212, HYacinth 7-7600

Telectro Industries Corp. Unimation Inc. Wang Laboratories Inc. Wiegand Mfg. Co.

M3. MULTIPLIERS

Comcor, Inc. -- see C23
Daystrom, Inc., Weston Instruments &
Electronics Div. Harman Kardon Inc., Data Systems Div. -- see C10
Moran Instrument Corp.
Redifon Computer Dept. -- see C23
Reeves Instrument Corp.

M4. MULTIPLIERS, DIODE

Dian Laboratories, Inc., 611 Broadway, New York 12, N. Y. / diode multipli-er / DESCR: product formed by quar-ter-square principle with diodeshaping cards and high-precision d-c amplifiers / USE: multiplier is precalibrated with inputs and outputs available on patchbay / on request / M4

Reytheon Co., Semiconductor Div. Redifon Computer Dept. -- see C23 Reeves Instrument Corp.

M5. MULTIPLIERS, ELECTRONIC

Avtron Manufacturing, Inc., 10409 Meech Ave., Cleveland 5, Ohio / Model T380 / DESCR: multiplier / USE: for process control; analog computation; product metering, re-cording, or control; division. squaring, square roots, solution of equations / - / M5 Harman Kardon Inc., Data Systems Div.

Instrument Systems Corp.
Redifon Computer Dept. -- see C23
Reeves Instrument Corp.

M7. MULTIPLIERS, SERVO

Dian Laboratories, Inc., 611 Broadway, New York 12, N. Y. / servo multi-plier / DESCR: product of any vari-able with any of four others obtaine

on each servo. .05% 10 turn potentiometers. Readout dial indicates polarity and voltage to .02 volts / USE: all inputs and outputs available on patchbay / on request / M7 Feedback Controls, Inc. Instrument Systems Corp.
Redifon Computer Dept. -- see C23 Reeves Instrument Corp.

01. OFFICE MACHINES

O1. OFFICE MACHINES

Burroughs Corp.
Copyrite Duplicator & Supply Co., Inc.,
1201 Cortland St., Chicago 14, 111.
/ duplicators and supplies / DESCR:
Spirit type duplicators and supplies to operate them / USE: for making
multiple copies of anything written,
drawn or typed / \$149.50 to \$310/ 01

Ditto, Inc., 6000 N. McCormick Rd.,
Chicago 45, 111. / duplicating, copying, reproducing machines and business systems / DESCR: direct (Spirit)
process and offset process duplicating machines, supplies; Masterfax
master making and copying machines,
supplies; diazo and blueprint machines, supplies. Designers of data
processing systems / USE: either to
produce information that goes into
a computer or to take completed reports and make copies / \$595 to
\$3600 / 01

Executone, Inc., 47-37 Austell Place,
Long Island City 1, N. Y. / communi-

ports and make copies / \$595 to \$3600 / 01

Executone, Inc., 47-37 Austell Place, Long Island City 1, N. Y. / communication systems / DESCR: complete line of communication systems for industrial and administrative applications, data gathering (centralized timekeeping) systems / - / 01

Friden, Inc., 2350 Washington Ave., San Leandro, Calif. / office equipment / DESCR: complete line of adding, calculating, data processing machines and related equipment / USE: general office use / - / 01

Glue-Fast Equipment Co., Inc., 9-CA White St., New York 13, N. Y. / gluing and/or moistening equipment / DESCR: gluing machines for applying glue to ungummed punch cards, labels, forms, etc., for adherence to many surfaces. Punch cards can be used

as shipping or inventory control labels by utilizing Glue-Fast glues and gluers. Gluer available for free trial. Water moisteners for gummed labels / USE: manually operated / gluing machines start at \$18.50; moisteners start at \$6.00 / Ol

On the Merican Co. -- see C23
Harvey-Wells Electronics, Inc.
Hughes Dynamics, Inc. -- see C30
Industrial Shredder 6 Cutter Co.,
102 Mill St., Salem, Ohio / paper
shredding machines / DESCR: shred
and make illegible obsolete office
records, records which have been
microfilmed and no longer are valuable, worthless IBM cards, punched
tapes, etc. / USE: manually feeding
papers into it / \$260 to \$2000 / Olter
International Computers and Tabulators International Computers and Tabulators

Ltd.
Mathatronics, Inc. -- see C24
Scan-Am Co., 4108 W. Crystal Lake Rd.,
McHenry, Ill. / Ring-Master Intercommunications System / DESCR: instant intercommunications system
with push button dialing, crystal
clear voice reproduction. Offers with push button dialing, crystal clear voice reproduction. Offers speed, privacy. Easily expandable to as high as 2000 master stations / USE: intercom or paging system, or combination / complete installation of 10 master stations under normal conditions -- \$1750 / 01

The Standard Register Co., £26 Albany St., Dayton 1, Ohio / forms bursters / DESCR: separates continuous forms into individual sheets. Optional features include slitters and forms stacking devices; handles continuous tabulating card forms / USE: electric operation / - / 01

The Standard Register Co., *a / forms separators / DESCR: gravity, motor-controlled and vertical. Optional power slitter. Separates continuous forms into individual stacks and removes carbons / USE: electric operation / - / 01

The Standard Register Co., *a / linefinders / DESCR: mounted on type-writers and similar key-driven equipment. To speed vertical spacing of continuous forms / USE: man-

ual or electric operation / - / 01
Swingline, Inc.
Tech Panel Co., Inc.
Underwood Corp.
UNIVAC Div. of Sperry Rand Corp.
Victor Comptomer Corp. Business Machines Div., 3900 N. Rockwell St.,
Chicago 18, Ill. / Digit-Matic solenoid operated calculators, listers
accumulators / DESCR: Electrowriter
System handwritten communications,
adding machines and calculators,
comptometer calculators / USE: peripheral monitoring digital data / / 01



OPERATIONS RESEARCH (see also "Survey of Consulting Services")

Abacus Information Management Co. Basic & Experimental Physics -- see

Booz, Allen & Hamilton Inc. -- see

G. C. Dewey Corp. -- see D1
H. S. Gellman & Co. Ltd.
Hamilton Research Associates, Inc.
-- see E1

-- see El
Herbert Halbrecht Associates, Inc.
Hollander Associates, P. O. Box 2276
Fullerton, Calif, / operations research / DESCR: mathematical analysis and studies for optimum decision-making and selection of optimum equipment / - / - / O2
Hughes Dynamics, Inc. -- see C30
International Business Machines Corp.,
Federal Systems Div.

Federal Systems Div. LFE Electronics, A Div. of Laboratory

Let electronics, a Div. of Laboratory
For Electronics
Lutter, Maremont and Co., Inc.
Management Systems Corp. -- see C30
Mathematischer Beratungs -- und Programmierungsdienst GmbH. -- see C30
National Scientific Laboratories, Inc.
The Nicola Co., Lit. Electronic Sec. The Nissho Co., Ltd., Electronic Sec-

The Missno Co., 2000, 1000

tion

James Addison Potter

Statistical Tabulating Corp.

Technical Operations Research, a div.
of Technical Operations, Inc.

Pl. PANEIS

Cadre Industries Corp.

Clark H. Joy Co., 27005 Knickerbocker
Rd., P.O. Box 9695, Bay Village 40,
Ohio / design, engineering and
fabrication of control systems or
process systems / DESCR: design,
fabricate, check out complete systems of process control or automatic machinery and material handling equipment, or any specific
phase / USE: throughout all industrial plants / \$200 to \$100,000 /
P1

P1
Grand Rapids Partitions, Inc., 240
Front Ave., S.W., Grand Rapids 2,
Mich. / movable office partitions /
DESCR: GSA approved sound absprbing acoustical walls and partitions
engineered for difficult high freengineered for difficult high frequency and reverberation problems / USE: sound retarding or absorbing / \$10 to \$20 per lineal foot / Pl Minneapolis-Honeywell Regulator Co., Special Systems Div., Queen & So. Bailey Sts., Pottsown, Pa. / panels / DESCR: custom panels and consoles for electrical and pneumatic instrumentation and control devices / USE: process operator control rooms / \$500 to \$300.000 / Pl USE: process operator control rooms / \$500 to \$300,000 / P1 Edward Ochman Systems -- see C26

P2. PANELS, JACK

Accurate Electronics Corp.
Aerolite Electronics Corp.
Allison Electronics, Inc.
AMP Inc., Harrisburg, Pa. / patchcord programming panels, universal and shielded / DESCR: metal frame assembly containing fixed board retaining contact springs and nonremovable programming / - / P2
Anchor Speciality Mfg. Co. Inc.
Apahouser Corp. of N.E.
Beauchaine & Sons Inc.
Brown Engineering Co., Inc.
Bud Radio Inc. Bud Radio Inc. und Kadio inc.
Custom Importing Co.
Cutlor Metal Products Co.
Dielectric Materials Inc.
Dielectric Products Engr. Co. Inc.
Donnelly Mfg. Co.
Duralith Corp.
Electric Switch Corp.

Electronic Enclosures, Inc.
Electronic Molding Corp.
Elzee Metal Products Co. Inc.
Emmco Plastics Corp.
Eugene Engineering Co. Inc.
Gunnar Labs Inc. Eugene Engineering Co. Inc.
Gynotronics, Inc.
Hammond Mfg. Co. Ltd.
Industrial Engravers, Inc.
Instrument Corp. of Fla.
Keystone Electronics Corp.
Kinetron Corp.
Kinetron Corp.
Kings Electronics Co. Inc.
Monroe Industries Inc.
Nichols Co. Ltd. R. H.
North Electric Co.
Panelgraphic Corp.
Photo Chemical Products Inc.
Pyrometer Co. of America, Inc.
Radio Corp. of America, Inc.
Radio Corp. of America, Broadcast &
Commun. Div.
Seiscor Div. Seismograph Service Corp.
Siltronics Inc.
Standard Electric Time Co.
Switchcraft, Inc. Switchcraft, Inc.
Thermo Electric Co. Inc.
Thermovelt Ltd. Trimm Inc. Trompeter Electronics Inc. Ucinite Co. Div. UCF U.S. Radium Corp. Universal Circuit Controls Corp. Wright Equipment Corp. York Metal Products, Inc.

P3. PANELS, RELAY RACK

Allen Electric & Equipment Co.
Allison Electronics, Inc.
Alpitec Inc.
Amoc Engineering Co.
American Machine & Foundry Co.
Anchor Speciality Mfg. Co. Inc.
Apahouser Corp. of N.E.
Artisan Metal Works Co.
Automatic Electric Co.
Baltic Metal Products Co.
Bud Radio, Inc.
California Chassis Co.
Churchill Lighting Corp.
Cutler Metal Products Co.
Dumont Airplane & Marine Corp.
Duralith Corp.
Electro-Hack Inc. Electro-Rack Inc.
Electronic Enclosures, Inc.
Elzee Metal Products Co. Inc.
Equipto Electronics Corp.
Erwood Inc. Erwood Inc.
Eugene Engineering Co. Inc.
Farwell Metal Fabricating
Feay Co., Neal
Formica Metal Products Co.
Golding Mfg. Co.
Gunnar Labs. Inc. Gyrotronics Inc.
Hammond Mfg. Co. Ltd.
Hamner Electronics Co. Inc. Hurletron Control Products Div. --see C26 see C26
Intectron Inc.
Kinetron Corp.
Lynch Mfg. Co. R. H.
M-T Electronics Co.
Metalphoto of Cincinnati
Metal Works, Inc.
Minn-Honeywell Appar, Controls Div.
Mobil Electronics Inc.
Moproel Industries Inc. Monroe Industries, Inc.
New Brunswick General Sheet Metal
Works
North Electric Co. North Electric Co.
Panelograph Corp.
Photo Chemical Products, Inc.
Premier Metal Products Co. Inc.
Radio Corp. of America, Broadcast &
Commun. Div.
Seiscor Div. Seismograph Service Corp.
Siltronics Inc.
Stranton Div. Wyco Metal Prods.
Trott Electronics Inc.
Universal Circuit Controls Corp.
Vector Associates, Inc.
York Metal Products, Inc.

P4. PAPER TAPE

Adtrol Electronics Inc. Anadex Instruments Inc. Auto-Trol Corp.
Clary Corp.
Clary Corp.
Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif, / paper tape /
DESCR: used with Friden tape
punching-reading machines (such as
Friden Flexowriter, Friden Computyper) or allied equipment / USE:
general data processing, numerical
control, etc. / - / P4
Harvey-Wells Electronics, Inc.
Invac Corp.
Kleinschmidt Div. Smith Corona Mar-Auto-Trol Corp.

chant Inc. Omnitronics Inc., Sub. Borg-Warner Omnitronics inc., Sub. Do Corp. Soroban Engineering, Inc. Tally Register Corp. Telecomputing Corp. Teletype Corp. Underwood Corp.

P5. PATCH CORDS ADC Products Div., Magnetic Controls Co. Aerolite Electronics Corp. Aerolite Electronics Corp.
Alden Products Co.
Allied Eng. & Production Corp.
American Electronic Wire & Cable
AMP Inc., Harrisburg, Pa. / universal,
shielded and twin detent patchcords
/ DESCR: patchcords in various
lengths, colors and pin combinations
USE: in programming of patchboards /
- / P5
Ampro Mfg. Co. USE: in programming of patchboards /

- / P5
Ampco Mfg. Co.
Associated Engineering Corp.
Audiotex Mfg. Co.
Barker Products Co.
Birnbach Radio Co. Inc.
CBC Electronics Co. Inc.
Cable Electric Products
Columbia Wire & Supply Co.
Component Mfg. Service Inc.
Ealing Corp.
Electricord Mfg. Co. Inc.
CC Electronics Co.
General Radio Co.
Holyoke Wire & Cable Co.
Lab-Tronics, Inc.
Milgo Electronic Corp.
Molded Insulation Co.
Molex Products Co.
Edward Ochman Systems, Box 141, Fairfield, Conn. / patch cords / DESCR:
wires for use in IBM control panels to
to Rand control panels to grogram
machine / \$1 to \$15/unit / P5
Plastic Wire & Cable Corp.
Pomona Electronics Co. Inc.
Radio Corp. of America, Broadcast &
Commun. Div.
Rectico Inc.
Robins Industries Corp.
Runzel Cord & Wire Co.
Rye Sound Corp.
Siltronics Inc.
Sittler Corp.
Siltronics Inc.
Sittler Corp. Stittler Corp.
Smith, Inc., Herman H.
Switchcraft, Inc.
Thermo Electric Co. Inc. Trimm Inc.
Trompeter Electronics Inc.
Ucinite Co., Div. UCF :
United Fabricators & Electronics, Inc. Vector Electronic Co. Inc Virginia Electronics Co. Inc. Waber Electronics, Inc. Zoron, Inc.

P6. PLOTTERS

ACF Electronics Div.
Accurate Electronics Corp.
Allegheny Plastics Inc.
Autometics Industrial Products, a Div.
of North American Aviation, Inc.,
3400 East 70th St., Long Beach 5,
Calif. / RECOMP X-Y Digital Plotter
/ DESCR: digital X-Y incremental
plotter; operates in 1/100" increments up to 200 increments per second. Program controlled retractable
pen with 6 direction movement accuracy:±,005 / USE: high speed
graphic output of computer data /
\$5450 purchase; \$220/month rental
/ P6 / P6 Avien, Inc.
BGF Instruments, Inc.
Benson-Lehner Corp. -- see Bl, D2
Burr Electronics California Computer Products, Inc. California Computer Products, Inc.
—- see D2
Diversified Concepts, Inc., Becker
Rd., Skaneateles 3, N.Y. / "COMPLOTIER" / DESCR: computing plotter; accepts punched cards, produces graphic chart of educational
test results / USE: plotting
results of educational tests /
\$5000 to \$10,000 / P6
Dura Plastics of N.Y. Inc.
Electro-Mechanical Research Inc.,
Advanced Scientific Instruments
Div., 5249 Hanson Court, Minneapolis,
Minn. / Digital Incremental Plotter
Model A90 / DESCR: accessory to
A51 210 computer; on-line highspeed 2-axis operation; 200 steps/
sec. in 11" or 29-b;" width; 300
steps/sec. in 11" width / USE: -- see D2

provides incremental plot of computer data / \$10,600 / P6
FFEM Electronics Inc.
Gerber Scientific Instrument Co.
Hallicrafters Co.
Hogan Faximile Corp. -- see P10
Industrial Engravers, Inc.
LaPointe Industries, Inc.
Loral Electronics Corp.
Milgo Electronic Corp.
Oki & Willadsen Ltd.
OPTOmechanisms Inc. OPTOmechanisms Inc.
Photo Chemical Products, Inc.
Planoramics Inc.
Precision Printed Circuits Mfg. Co. Precision Printed Circuits Mig. Servo Corp. of America Sunshine Scientific Instruments Sylvania Electronics Systems Tally Register Corp. Vitro Labs. Div. Vitro Corp. of Westgate Laboratory, Inc.

P6A. PLUGBOARDS

AC Electronics Inc.
Accurate Electronics Corp.
AMP Inc. -- see B2
Applied Dynamics, Inc.
Applied Electronics Co.
Avien, Inc.
Cambridge Thermionic Corp.
Consolidated Avionics Corp.
Cybertronics Inc. -- see S3
Embree Electronics Corp.
Garde Mfq. Co. Garde Mfg. Co. HRB-Singer, Inc., a subsidiary of The Singer Mfg. Co. Howe Scale Co., Div. Howe Richardson Corp. LaPointe Industries, Inc. Milgo Electronic Corp. Nelson Instrument Co. Oki & Willadsen Ltd. Ortronix, Inc.
Photo Chemical Products, Inc.
Planoramics Inc.
Precision Printed Circuits Mfg. Co. Sealectro Corp. Sylvania Electronics Systems Sylvania Electronics Systems
Systron Donner Corp.
Tech Panel Co., Inc. -- see B2
The Teleregister Corp., 445 Fairfield
Ave., Stamford, Conn. / plugboards /
DESCR: electro-mechanical plugboards containing 50 rows of 35
receptacles each, special plugs permit either one of three states for
input to computer-stored data and
simultaneously for display / USE:
updating and display or computerstored data for airlines, etc. /
upon request / P6A

P9. PRINTERS

Analex Corp. -- see P10
CBS Laboratories, a div. of Columbia
Broadcasting System, Inc. Broadcasting System, Inc.
Clary Corp.
Codamite Corp. -- see C22
Connecticut Technical Corp., 3000 Main
St., Hartford 5, Conn. / printers /
DESCR: serial and parallel entry
tape listing printers for recording
output of digital voltmeters, counters, scintillation devices. Data
logging typewriters, keyboards.
Input-output typewriters, Special
printers, line printers / USE:
computer input/output devices, digital printout, voltmeters, counters,
nuclear systems / \$250 to \$3,000 /
P9 P9
Creed & Co., Ltd. (assoc. of ITT Corp.)
Data Display, Inc. -- see D2
Datex Corp.
Electro-Mechanical Research, Inc., Datex Corp.

Advanced Scientific Instruments Div.,
5249 Hanson Court, Minneapolis,
Minn, / line printers Models A60,
A63, and A120 / DESCR: accessory to
ASI 210 computer; prints out 120
column 200, 300 or 1000 lines per
minute / USE: as a line printer to
print out computer data / \$25,400 to
\$98,000 / P9
Grico, Inc., 234 Portage Trail, Cuyahoga Falls, Ohio / rotary diazo printer Satellite and Super Satellite /
DESCR: Satellite fills all needs
for prints up to 30" wide, any
length; Super Satellite prints up to
42"; both make perfect intermediates
and sepins / USE: as a diazo printer / \$219 to \$329 / P9
International Computers and Tabulators
Ltd. Ltd.
Moran Instrument Corp.
F. L. Moseley Co. -- see V1 Photon, Inc. Teletype Corp.

P10. PRINTERS, HIGH SPEED

Addressograph-Multigraph Corp.
Anelex Electronics Inc.
Anelex Corp., 150 Causeway St., Boston
14, Mass. / Series 4-1000 Complete
High Speed Printer System / DESCR:
electronics, buffers and logic
packaged in console for large-scale
computer and EDP systems requiring
up to 160 columns and 1000 lpm print
rate / USE: built into data processing systems / - / Pl0
Anelex Corp., *a / multiple tape lister
system / DESCR: six 24 column listers, control electronics and buffers,
prints to 2000 lpm. Prints master
list, 4 transit lists and miscellaneous list in single pass through MICR
Sorter Reader / USE: proving and
clearing operations in demand deposit
accounting in banks / - / Pl0
Anelex Corp., *a / Series 4 High Speed
Print Station / DESCR: complete high
speed printing system for off-line
operation from large scale computer
prepared high or low density magnetic tapes / USE: EDP applications
at industrial, scientific or military installations where volume
documentation is required / - / Pl0
Anelex Corp., *a / Model 500 High
Speed Printer System / DESCR: complete printer system adaptable to
broad range of applications requiring
1000 lpm rate, 80 columns of 64
characters. Military models print
FIELData code / USE: on line with
computers and a variety of satellite systems / - / Pl0
Anelex Corp., *a / Model 300 Complete
High Speed Printer System / DESCR:
low cost 120 column 300 lpm printer
system containing all of the power
electronics buffers and logic / USE:
banking, scientific and commercial
operations / - / Pl0
Anelex Corp., *a / Model 300 Complete
High Speed Printer System / DESCR:
low cost 120 column 300 lpm printer
system containing all of the power
electronics buffers and logic / USE:
banking, scientific and commercial
operations / - / Pl0
Anelex Corp., *a / Model 300 Complete
High Speed Printer System / DESCR:
Computer Measurements Co.
Connecticut Technical Corp. -- see P9
Data Display Inc.
Data Systems Devices of Boston Inc., Addressograph-Multigraph Corp.

Computer Measurements Co.
Connecticut Technical Corp. -- see P9
Data Display Inc.
Data Systems Devices of Boston Inc.,
342 Western Ave., Boston 35, Mass. /
high-speed printer / DESCR: line
printer capable of 1200 alpha-numeric
132 character lines per minute. Two
paper feed modes, normal 30"/sec.,
high speed skip, 60"/sec. / USE: online with digital computers, offline direct to tape mechanisms /
- / P10
DI/AN Controls Inc.
Dick Co., A. B.

Dick Co., A. B. Electro-Mechanical Research, Inc., Advanced Scientific Instruments Div. -- see P9 Electronic Associates Inc.

Electronic Data Services, Inc. -- see

Federated Engineering Development

Federated Engineering Corp.
Corp.
Franklin Electronics Inc., E. 4th St.,
Bridgeport, Pa. / high speed digital
printer / DESCR: 40 LPS; 20 columns; alpha-numeric available // approximately \$2800 / P10
General Dynamics/Electronics -- see
n2

D2
General Dynamics/Electronics, 3302
Pacific Highway, P.O. Box 127,
San Diego 12, Calif. / S-C 3070
Electronic Printer / DESCR: prints
asynchronously, character at a time,
upon receipt of signals from digital computer, high speed teletype
terminal, etc. / USE: in EDP and
digital communication systems /
available on request / P10
General Electric Co., Process Computer Sec.

General Electric Co., Process Computer Sec.

Hogan Faximile Corp., 635 Greenwich
St., New York 14, N.Y. / high speed
printer-plotters / DESCR: provide
hard copy output of simultaneously
occurring events with alpha-numeric
annotations. Over 1000 styli
available enabling multiple plots
of digital information in analog
form / USE: off line from magnetic
tape or facsimile transmitter /
\$6000 to \$85,000 / P10

Holley Computer Products Co., 11955
E. Nine Mile Rd., Warren, Mich. /
line printer / DESCR: 300 lpm
(with 64 character set) printer
featuring permanently-timed hammers, operator-interchanged char-

acter drum, and fully modular construction / USE: with computer, paper tape, communications / \$8000 to \$18,000 / Pl0

to \$18,000 / PIO
IBM Federal Systems Div.
International Computers and Tabulators Ltd.
Kleinschmidt Div., Smith Corona Mar-

chant Inc.
Lear, Inc., Instrument Div.,
Monroe Calculating Machine Company,
Electronics Components Div., 60
Main St., San Francisco, Calif. /
Monroe Data/Log MC 10-40 / DESGR:
4-line coded input strip printer
outputting 1040 lines per minute,
16 digits per line / - / \$1570 to
\$2140 / Pl0
N. V. Electrologica
Oki Electric Industry Co. Ltd.
Omnitronics, Inc., Subsidiary of
Borg-Warner Corp.
Potter Instrument Co., Inc.
RMS Associates, Inc.
RMS Associates, Inc. chant Inc.

RMS Associates, Inc.
Radiation, Inc.
Radiation, Inc.
Radio Corp. of America, Electronic
Data Processing
Rank Precision Industries Ltd.,
Electronics Dept., Woodger Rd.,
Hammersmith, London W.12, England /
Xeronic Printer / DESCR: 3000
Ipm xerographic computer printer
using plain paper. Variable data
and any of 32 forms printed simultaneously, by program. Print cost
under 1c/sq. ft. / USE: off-line
with magnetic tape or on-line /
\$168.300 to \$224.400 / Pl0
Shepard Laboratories, Inc., 480 Morris
Ave., Summit, N.J. / high-speed
typers / DESCR: large and small,
numeric and alphanumeric, highspeed typers with 10 to 190 columns
capacity. Numeric units print up

capacity. Numeric units print up to 3600 lines per minute / USE: on-line and off-line / \$2000 to \$40,000 / Pl0

\$40,000 / Pl0
Soroban Engineering, Inc.
Stony Brook Labs Inc.
Technitrol, Inc. -- see Dl
Telautograph Corp.
Tele-Dynamics Div. American Bosch
Arma Corp.
Victor Adding Machine Co.

P11. PRINTERS, KEYBOARD

Auto-Trol Corp. Benson-Lehner Corp. Burroughs Corp.
Concord Control, Inc.
Connecticut Technical Corp. -- see P9
Dimensions Inc. El-Tronics Inc. General Electric Co. Process Computer Sec.
Harvey-Wells Electronics, Inc.
IBM Federal Systems Div.
Instrument Corp. of Fla. Invac Corp. Kleinschmidt Div., Smith-Corona Mar-Kleinschmidt Div., Smith-Gorona Marchant Inc.
Lear, Inc., Instrument Div.
Mathatronics, Inc., 257 Crescent St.,
Waltham, Mass. / strip printer /
DESCR: 20 print positions rated
at 20 cps / - / \$600 to \$1000 / Pl1
Moseley Co. F. L.
Oki Electric Industry Co. Ltd.
Radio Corp. of America, Elec. Data
Processing Div.
Soroban Engineering, Inc.
Telecomputing Corp.

P12. PRINTERS. LINE-A-TIME

Addressograph-Multigraph Corp. Adtrol Electronics Inc. Anelex Corp. Burroughs Corp. California Technical Industries Clary Corp.
Connecticut Technical Corp. -- see P9 Di/An Controls, Inc. Di/An Controls, Inc.
Dick Co., A. B.
Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif. / Friden RGS
Printer / DESCR: electro-mechanical digital printing device. Solenoid keyboard accepts 1200 digits per minute. Negative values print in red / USE: digital printing / -/ Pl2 Holley Computer Products Co. -- see P10
IBM Federal Systems Div.
International Computers and Tabulators Ltd. Matthews & Co. Jas H. Potter Instrument Co. Inc. Printloid Inc. RMS Associates, Inc. Radiation, Inc.

Shepard Labs. Inc. Teletype Corp. Victor Adding Machine Co.

P12A. PROGRAMMING SERVICES

ADB Institutet (Scandinavian Automatic Data Processing Institute)
Abacus Information Management Co.
American Data Services, Inc. Aries Corp. Associated Sales Analysts, Inc.

Associated Sales Analysts, Inc.
Auerbach Corp.
Basic & Experimental Physics, 133
Palmer, Box 689, Falmouth, Mass. /
Programming, numerical analysis /
DESCR: write flow charts, do coding
operation, testing, debugging, design,
research, development; technical
writing and drafting in fields of
digital and analog computers for
real-time control; data processing /
USE: in our facilities, clients'
plants, at test sites, contract plants, at test sites, contract basis / \$4 to \$15/hour / P12A

basis / \$4 to \$15/hour / P12A
Booz, Allen Applied Research Inc. —
see C27
Booz, Allen & Hamilton Inc. —
see C30
C-E-I-R, Inc.
Computer Laboratories, Inc.
Computer Methods Corp., 107 Mamaroneck
Ave., White Plains, N.Y. / programming and consulting / DESCR: specialists in real-time data processing,
communications, information systems
and simulation techniques / - / - /
P12A P12A

P12A
Computer Usage Co. -- see C28
Control Technology, Inc.
Data Processing Corp. -- see C27
Data Processing, Inc. -- see C30
Data Trends, Inc. -- see C30
Data Trends, Inc. -- see C22
Datatrol Corp.
G. C. Dewey Corp. -- see D1
The Diebold Group, Inc.
Electronic Data Services, Inc. -see C27

Elliott Bros. (London) Ltd., Computing Elliott Bros. (London) Ltd., Computing Services Div.
General Kinetics Inc., 2611 Shirlington Rd., Arlington 6, Va. / programming services / DESCR: programming recommendation, design, and construction of automatic programming systems; mathematical studies; numerical analysis; compiler development / - hourly and contract rates / P12A
Hughes Dynamics, Inc. -- see C30

development / - / hourly and contract rates / P12A

Hughes Dynamics, Inc. -- see C30

LFE Electronics, A Div. of Laboratory for Electronics

Lutter, Maremont and Co., Inc.

McDonnell Automation Center -- see C24A

Minneapolis-Honeywell Regulator Co.,

Special Systems Div.

Ray Myers Corp. -- see C30

National Computer Analysts, Inc.

RCA Service Company, Electronic Data Processing Service -- see C27.

The Scam Instrument Corp.

The Scam Instrument Corp.

The Service Bureau Corp., a subsidiary of IBM -- see C28

Statistical Tabulating Corp., 1833 E. 17th St., Santa Ana, Calif. / computer programming / DESCR: programming for real-time systems and scientific applications / - / P12A

Tabulating & Business Services Inc.

Taurus Corp. -- see R0

Technical Operations Research, a div. of Technical Operations, Inc.

Technical Operations Research, a div. of Technical Operations, Inc.
Technitrol, Inc., 1952 E. Allegheny Ave., Philadelphia 34, Pa. / programming services / DESCR: experienced programmers with IBM, UNIVAC, CDC background. Specialists in space navigation and orbital mechanics problems / USE: short or long term contracts offered / depends on class of contract and personnel require-

tracts offered / depends on class of contract and personnel requirements / P12A
United Research Services Inc., 1811
Trousdale Drive, Burlingame, Calif. / programming services / DESCR: scientific and business programming, assembly routines and compilers, military and business applications, data systems analysis and simulation / - / - / P12A
U.S. Naval Weapons Laboratory, Computation and Analysis Lab.
Wolf Research & Development Corp.

P13. PUBLICATIONS

Association of Data Processing Service Organizations Auerbach Corp.

Belock Instrument Corp., 112-03 14th Ave., College Point 56, N.Y. / publications / DESCR: complete facility for writing and illustration of operation, theory and maintenance manuals for analog computer devices / USE: for company and industry use / according to application / P13
Berkeley Enterprises, Inc.
Cambridge Communications Corp.
Documentation Inc.
Gordon and Breach, Science Publishers, Inc., 150 Fifth Ave., New York 11, N.Y. / publications / DESCR: professional books and journals on computer science and technology; programming; logic, language and EDP; computer mathematics; automatic control; simulation and analytical methods; research and operational applications / - / \$6 to \$34,50 / P13
Hamilton Research Associates, Inc.—see El

see El

Institute for Scientific Information, Inc., 33 So. 17th St., Philadelphia 3, Pa. / Current Contents of Space, Electronic and Physical Sciences / DESCR: pocket-size information service lists title pages from over 600 journals from missiles, rocketry, mathematics, instrumentation, physics and like areas. Reports over 2,000 articles weekly / - / \$50 to \$100 / P13

articles weekly / - / \$50 to \$100 / P13

Mathematischer Beratungs -- und Programmierungsdienst GmbH. -- see C30

OR Business Publications, Inc., 208

Park Ave. W., Elmhurst, III. / Business Automation News Report and Looseleaf Services for EDP / DESCR: weekly news letter of all developments in EDP field. Looseleaf Handbooks for all equipment descriptions plus specialized case study manual for banking EDP applications / USE: reference guide / \$45 to \$102.50 / P13

Redifon Computer Dept. -- see El Reinhold Book Div., Reinhold Publish-

Reinhold Book Div., Reinhold Publishing Corp.
Systemation Div., Ross-Martin Co.
Technical Information Co., Ltd.,
John Wiley & Sons, Inc., 605 3rd Ave.,
New York 16, N.Y. / technical books
/ DESGR: publisher of books in computing field (Berkeley, Grabbe-Ramo-Wooldridge, McCracken, Phister, Ware,
etc.). Write for 420 page 1963
catalog / USE: reference / - / P13

P15. PUBLICATIONS. MAGAZINES

Berkeley Enterprises, Inc. Business Automation Computers and Automation Data Processing Digest, Inc.

P16. PUNCH CARD MACHINES

Albany Printing & Tag Mfg. Co. Inc. America Data Machines Inc. Auto-Trol Corp. Autonetics Industrial Products, a Div. of North American Aviation, Inc. Burroughs Corp. Dennison Manufacturing Co., Machines Dennison Manufacturing Co., Machines Systems Div. Electro-Mechanical Research, Inc., Advanced Scientific Instruments Div., 5249 Hanson Court. Minneapolis, Minn. / punch card in/out buffers, Models A-40, A-43, A-43R, and A-44 / DESCR: accessory to ASI 210 computer; punch card input/output buffer provides logic and control electronics for converting card equipment formats to machine format and vice versa / USE: as a buffer between ASI 210 computer and card equipment / \$6200 to \$19,600 / Pl6 Hughes Dynamics, Inc. — see C30 International Computers and Tabulators Ltd.

tors Ltd.

Monroe Calculating Machine Co.
The National Cash Register Co.
Soroban Engineering, Inc.
Taurus Corp. -- see Rô
Univac Div. of Sperry Rand Corp.

R1. READERS

Autometics Industrial Products, a Div. of North American Aviation, Inc. -- see T2 Bell & Howell Micro-Data Div. J. H. Bunnell & Co. Burroughs Corp. Dashew Business Machines, Inc.

HGGELGETTGER ECONOMICAL ECONOMICAL

COMPUTERWAY

15

OPERATION CODES

BINARY	INSTRUCTION	EFFECT
0000 —	HLT	Halt
0001 —	NOP	No Operation
0010 —	TRA	Transfer
0011 —	TRN	Transfer if AC negative
0100XX	RDE	Read
0101XX	WTE	Write
0110 —	SHR	Shift Right
0111 —	CYR	Cycle Right
1000 —	CLA	Clear and Add
1001 —	spare	
1010 —	ADD	Add
1011 —	SUB	Subtract
1100 —	STO	Store
1101 —	spare	
1110 —	spare	
1111 —	spare	

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IS THIS THE COMPUTER YOU'VE BEEN WAITING FOR?

KEY SPECIFICATION FEATURES

Numerical System: 24 binary bits per word including sign, plus one for parity.

One instruction per word.

12 instructions are provided, plus 4 spares for special uses. Fixed point arithmetic system; programmed floating point. Number range is positive or negative 2 to the 23rd power minus 1 (which is equivalent to 8,388,607).

Arithmetic Unit: All instructions execute in 650 microseconds if programming is optimum.

Pulse rate is 192 kc.

Logic is serial, synchronous.

Storage: Magnetic drum (3600 rpm is standard speed) holds 4096 words, and larger capacities are also available.

Checking Features: Parity is checked on reading from memory.

Input-Output: Paper tape reader and punch operate at 20 characters per second.

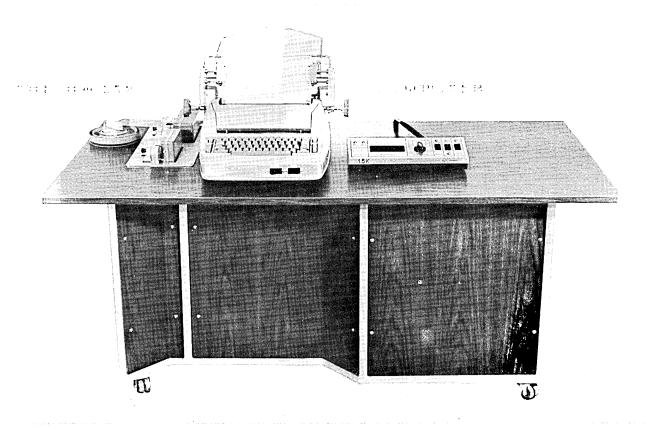
Typewriter is a modified IBM Selectric; output speed is 15 characters per second.

Typewriter is used for both input and output.

Internal processing continues while 1 - 0 devices are operating. Each code read or written contains 6 bits.

This too can be varied to suit special applications.

A maximum of four input and four output devices may be connected to the standard machine.



The HW-15K is an amazingly versatile computer. It may be just the unit you need to get "on the air" in electronic data processing . . . and save money, free personnel for other jobs, promote efficient operations.

We will be happy to send you more information on the HW-15K. To start off, write us for booklet 15K, or call us at OL 5-1120. H-W Electronics, Inc., 14 Huron Drive, Natick, Mass.

Datex Corp.
Dennison Manufacturing Co., Machines Systems Div. Electronic Engineering Company of Electronic Engineering Company of California — see TI7 Elliott Bros. (London Ltd. (a member of the Elliott-Automation Group) Gamma Scientific, 1170 Broadway, New York I, N.Y. / hand micro-reader / DESCR: to preview or scan aperture cards; features lens system with high aperture ratio; 8x objective, Available with AC or battery illuminator / USE: for jacket or aperture cards / \$29.50 to \$49.50 / RI International Business Machines Corp.,

Federal Systems Div.
International Computers and Tabulators Ltd.
N.V. Electrologica Potter Instrument Co., Inc.
Rheem Electronics Corp.
Rotiform Corp. -- see R7
Scientific Data Systems, Inc. -- see
C24

R2. READERS, CHARACTER

Addressograph-Multigraph Corp.
Alphomega Research Labs Inc.
Auto-Trol Corp.
Benson-Lehner Corp.
Budd Co. Inc. Electronics Div.
Burroughs Corp.
Electrada Corp.
International Business Machines Corp.
Data Processing Div. — see C24 Data Processing Div. — see C24
International Business Machines Corp.,
Federal Systems Div.
Lear, Inc. Instrument Div.
Link Div. Gen. Precision Inc. Lear, Inc. Instrument Div.
Link Div. Gen. Precision Inc.
Phileo Corp.
Rabinow Engineering Co., Inc., 1425
Research Blvd., Rockville, Md. /
reading machines / DESCR: complete
line of optical character reading
machines for reading a single line
on a sheet, a full page of data,
adding machine tapes, etc. Digital
output may be punched paper tape,
magnetic tape or punched cards.
Instantaneous reading rates of up to
10,000 characters per second are
available / USE: prepares human
readable data for computer input /
\$75,000 to \$350,000 / R2
Recognition Equipment Inc., 4703 Ross
Ave., Dallas 4, Tex. / electronic
retina character reader / DESCR:
reads ordinary printed alphanuerical
characters from most types of business
documents. Special type fonts µnnecessary. Includes control computer for editing and magnetic tape
output / USE: basic method of data
input to digital computer systems /
\$250,000 to \$500,000 / R2

R2.5. READERS, FILM

Bell & Howell Co. Benson-Lehner Corp. -- see C40, D2A Bruning, Charles, Co., Inc. Burroughs Corp. Burton Mount Corp. Burton Mount Corp.
Dietzgen, Eugene, Co.
Documat, Inc.
DuKane Corp.
FMA, Inc.
Goodkin, M.P., Co.
Graphic Industries, Inc.
Griscombe Products Corp.
Hallicrafters Co.
Information Retrieval Corp.
International Business Machines Corp.
Itek Business Products Div.
Microdealers, Inc.
Microdealers, Inc.
Microdealers, Inc.
Microseal Corp.
Minnesota Mining / Mfg. Co.
Nord Photocopy and Electronics Corp.
Reeordak Corp.
Remington Rand Systems

R3. READERS, MAGNETIC CARD

Consolidated Avionics Corp.
International Business Machines Corp., Federal Systems Div.

R4. READERS, MAGNETIC TAPE

Autonetics Div. NAA Benson-Lehner Corp.
Computer Control Co. Inc. Control Data Corp. Cook Electric Co., Data-Stor Div. -- DI/AN Controls, Inc. E1-Tronics Inc. Hyperion Industries Inc. International Business Machines Corp., Federal Systems Div.
International Computers and Tabulators Ltd.
ITEK Electro-Products Co. Kinelogic Corp.
Minn-Honeywell, Heiland Div.
S-I Electronics, Inc.
Sperry Gyroscope, Div. Sperry Rand Corp.
Sylvania Electronics Systems
Systems Engineering Labs Inc.
Systems Research Labs, Inc.

R6. READERS, PAPER TAPE

Addo-X Inc.

Addressograph-Multigraph Corp. Addressograph-Multigraph Corp. Adtrol Electronics Inc. American Concertone Inc. Ampex Corp. Anadex Instruments, Inc. Atthley Div., Raymond, American Brake Shoc Co. Autonetics Industrial Products, a Div. of North American Aviation, Inc. --Autometics Industrial Products, a Div. of North American Aviation, Inc., 3400 East 70th St., Long Beach 5, Calif. / FACITAPE Model 510 / DESCR: Calif. / FACITAPE Model 510 / DESCR:
600 cps perforated tape reader. Capacitance concept eliminates errors
caused by ambient light conditions
or dust and lint on read heads / USE:
peripheral equipment to RECOMP III
computer / \$4750 purchase; \$125/
month lease / R6
Bendix Corp., Computer Div.
Bulow Electric Co.
Burnewsk Corp. Bulow Electric Co.
Burroughs Corp.
Chalco Engineering Corp., 15126 S.
Broadway, Gardena, Calif. / punched tape readers / DESCR: mechanical block readers (with independent closures). Photo block and line readers. Scanners, tape handlers, power supplies / USE: computer input, programming, sequencing, numerical control, commutating / \$600 to \$6000 / R6
Coleman Systems Inc.
Colorado Instruments
Control Data Corp.

Coleman Systems Inc.
Colorado Instruments
Control Data Corp.
Cook Electric Co., Data-Stor Div.,
8100 N. Monticello, Skokie, Ill./
Model 110 Photoelectric Punched Tape
Reader & Spooler / DESCR: 5 to 8
level code, up to 8" reels, bi-directional operation, 500 characters/
second, stop on stop character / USE:
input to computers, programmer, input to numerical controlled machine
tools and automatic check-out systems / \$2000 to \$5000 / R6
Digitronics Corp., 1 Albertson Ave.,
Albertson, L.I., N.Y. / perforated
tape readers / DESCR: low-speed
and high-speed; all solid state
photo-electric perforated tape readers and handlers / USE: instrumentation, numerical control, etc. /
\$745 to \$5000 / R6
Dymcc Div., Hewlett-Packard Co.
Electro-Mechanical Research Inc.,
Advanced Scientific Instruments Div.
— see T8
Electronic Engineering Co. of Cali-

Advanced Scientific Instruments Div. -- see T8
Electronic Engineering Co. of California -- see T17
Electronic Engineering Co of California, Automation Div.
Ferranti Electric Co. Inc.
Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif. / paper tape readers / DESCR: operate in conjunction with Friden Flexowriters,
Computypers, or other tape-controlled machines (such as numerical control devices). Electro-mechanical operation / LSE: general data processing, numerical control / -/ R6
Friden, Inc.. *a / edge-control / -/ R6
Friden, Inc.. *a / edge-control / -/ R6

Friden, Inc., *a / edge-punched card readers / DESCR: similar to tape readers / DESCR: similar to tape readers except that they are able to handle edge-punched cards (paper tape coding punched on cards) / USE: general data processing / - / R6 General Kinetics Inc. Geotechnical Corp. HRN-Singer, Inc., a subsidiary of The Singer Mfg. Co. Harvey-Wells Electronics, Inc.

Hughes Dynamics, Inc. -- see C30 IBM Federal Systems Div. Information Systems, Inc. International Computers and Tabulators Ltd. Invac Corp. Kleinschmidt Div., Smith-Corona Marchant Inc.
Omnitronics, Inc., Subsidiary of
Borg-Warner Corp.
Philoc Corp.
Photocircuits Corp., 31 Sea Cliff Ave.,
Glen Cove, N.Y.-/ photoelectric
paper tape readers / DESGR: complete
line of photoelectric paper tape
readers incorporating the printed
motor drive which eliminates clutches, brakes and pinch rollers / - /
\$1490 to \$3990 / R6
Potter Instrument Co., Inc.
Tally Register Corp.
Teletype Corp.
Wang Laboratories Inc.

R7. READERS, PHOTOELECTRIC

Addressograph-Multigraph Corp. Adtrol Electronics Inc. Advanced Instrument Corp. Advanced Instrument Corp.
Alphomega Research Labs Inc.
Auto-Trol Corp.
Autometics Div. NAA
Baird-Atomic, Inc.
Burroughs Corp.
Control Data Corp. Control Equipment Corp.
Cook Electric Co., Data-Stor Div. -see R6
Digitronics Corp. Electrada Corp.
Electronic Engineering Co. of California -- see T17
Electronic Engineering of California, Automation Div.

IBM Federal Systems Div.

Image Instruments Inc.

International Rectifier Corp. Invac Corp. Invac Corp.
Kleinschmidt Div., Smith-Corona Marchant Inc.
Omnitronics, Inc., Subsidiary of Borg-Warner Corp.
Philco Corp.
Philco Corp. -- see R6
Photographic Instrumentation Development Co.
Potter Instrument Co., Inc.
Rotiform Corp., 1925 Pontius Ave.,
Los Angeles 25, Calif. / card reader,
static / DESCR: provides digital
output for up to 640 pencil or pen
marked bits or reading points on
6" x 10" card area. Processes 40
hand fed cards/minute / USE: as
computer input data card or programmer (patch board) / \$2500 to \$6500 /
R7
Solar Systems, Inc. Kleinschmidt Div., Smith-Corona Mar-R7 Solar Systems, Inc. Tele-Dynamics Div., American Bosch Arma Corp. Viewlex Inc. Wang Laboratories Inc.

R8. READERS, PUNCH CARD

Addo-X Inc.

Addo-X Inc.
Addressograph-Multigraph Corp.
American Data Machines, Inc.
AMP Inc., Harrisburg, Pa. / AMP Manual
Card Reader / DESCR: reads IBM Type
Cards; compact, easily operated /
USE: verification when punching
cards / - / RB
Auto-Trol Corp.
Autonetics Industrial Products, a Div.
of North American Aviation, Inc.
Benson-Lehner Corp. Benson-Lehner Corp. Burroughs Corp. Burroughs corp.
Datex Corp.
Dynalog Electronics Corp.
Gen. Electric Co., Process Computer Section Section
The Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland 8, Ohio / cardmatic switch / DESCR: cardactuating type mechanism using 50 to 540 self cleaning switches programmed by a vinyl card / USE: programmed automatic switching / \$195 to \$7000 / R8 \$7000 / RB Hughes Dynamics, Inc. -- see C30 Information Systems Inc. International Business Machines Corp., Federal Systems Div. International Computers and Tabulators Ltd.
A. Kimball Co., a div. of Litton Indus-tries -- see Dl
Lear, Inc., Instrument Div.
Philoc Corp.
Radio Corp. of America, Electronic Data Processing Notliorm Co., Taurus Corp., Academy Hill, Lambertville, N.J. / punched card readers / DESCR: statically reads entire IEM or Rem-ington Rand Cards. Units range from 36 switches to 1400 switches. Hole

represents closed switch, no-hole an represents closed switch, no-note an open switch / USE: programming test equipment and processes / \$250 to \$3500 / R8 - Teletype Corp.
U.S. Dielectric Inc.

R9. RECORDING PAPERS

Albany Printing & Tag Mfg. Co. Inc.
Alfax Paper & Engineering Co.
American Business Systems, Inc., 2929
"B" St., Philadelphia 34, Pa. /
Tabset, Tabflo, Fluflo / DESGR:
continuous one-time carbon forms,
custom and stock forms / - / - / R9
Brush Instruments Div., Clevite Corp.
duPont de Nemours & Co. Inc., E.I.
Eastman Kodak Co. Eastman Kodak Co. Essex Systems Co., Inc. Gubelman Charts Div., Nashua Corp. Hogan Faximile Corp. — see Plo Invac Corp. Invac Corp.
Ludlow Corp.
Marginal Punched Stock Forms, Inc.
Neff Instrument Corp.
Offner Div., Beckman Instruments Inc.
Peerless Photo Products Inc.
Philips' Gloeilampen fabrieken
Samborn Co.
Schweitzer, P.J., Div. Kimberly-Clark
Corp. Corp.
Techni-Rite Electronics, Inc.
Westrex Co., Div. Litton Systems Inc.
Westronics, Inc.

R11. REGISTERS, SHIFT

Aero Geo Astro Corp. AMP Inc. -- see C9
Artronic Instrument Co.
Bell Aerosystems Co.
C & K Components, Inc. -- see C54
Coilcraft, Inc. Coilcraft, Inc.
Control Equipment Corp. — see Cll
Control Logic, Inc. — see Cll
Datapulse Inc.
G. C. Dewey Corp. — see Dl
DI/AN Controls, Inc.
Digital Design Corp.
Digital Equipment Corp.
Electrada Corp.
Ence. Lec. Epsco, Inc. General Electric Co., Def. Sys. Dept. General Electric Co., Specialty Devices Operation -- see C26 Hamilton Watch Co., Ind. Prods. Div. Hamilton Watch Co., Ind. Prods. Div. Lear, Inc.
Lockheed Electronics Co., Avionics and Industrial Products Div., 6201
E. Randolph St., Los Angeles 22, Calif. / shift registers / DESCR: use magnetic cores / - / \$500 to \$10,000 / R11
Magnetics Research Co.
Sprague Electric Co. -- see C26
Tenlo Research Corp.
Tunn-Sol Electric Inc. Tung-Sol Electric Inc.

R12. RELAYS (COMPUTER TYPES)

Actan Electrics Inc.
Adams & Westlake Co.
Airpax Electronics Inc., Seminole Div.
Allied Control Company, Inc.
Automatic Electronic Co.
Branson Corp.
Bristol Co.
Clare & Co.
Comar Electric Co.
Cornell-Dubilier Electronics Div.,
Fed. Pac. Elec. Co.
Data-Tronix Corp. Fed. Pac. Elec. Co.
Data-Tronix Corp.
Daystrom, Inc., Weston Instruments & Electronics Div.
Douglas Randall Inc., a subsidiary of Walter Kidde & Co., Inc., 441 Pawcatuck Ave., Westerly, R.I. / read relays / - / - / \$1 and up / R12
Elgin Electronics Div., Elgin National Watch
Fuji Tsushinki Seizo K.K.
General Communication Co.
General Controls Co.
General Electric Co., Industrial Sales Oper. Guardian Electric Mfg. Co. Guardian Electrical Hart Mfg. Co. Harthway Instruments, Inc., Sup. Lionel Hathaway Instruments, Inc., Sup. Lioner Corp. Hi-Spec Electronics Corp. Iron Fireman Mfg. Co., Electronics Div. Jaidinger Mfg. Co. James Electronics Inc. Jennings Radio Mfg. Corp.
Kurman Electric Co., Sub. Crescent
Petroleum Corp.
Larson Instrument Co.

Leach Corp., 405 Huntington Drive, San Marino, Calif. / half-size crystal can relay / DESCR: half-size crystal can relay for printed circuit applications. Low level and 2 amp switching. Height .400", weight .25 oz. / - / - / R12 Ledex Inc. -- see C32 Line Electric Co. Mack Electric Devices, Inc. Manneraft Electric Co. Magnetraft Electric Co.
Magnetic Devices, Inc.
North Electric Co. North Electric Co.
Osborne Electric Co.
Pacific Relays, Inc.
Phillips Control Co., 59 W. Washington,
Joliet, Ill. / relays / DESCR: relays for every quality and high
reliability application in the complete spectrum of automation, datamation and control / USE: to turn
on and off a circuit / 50¢ to \$50 /
R12 Pollak Corp., Joseph
Potter & Brunfield Div., American
Mach. & Foundry Co.
RBM Controls Div., Essex Wire Corp. Mach. & Foundry Co.
RBM Controls Div., Essex Wire Corp.
RBMCOntrols Div., Essex Wire Corp.
Randall Inc., Douglas
Relays, Inc.
Rotary Devices Corp.
Sigma Instruments, Inc., Sigma Div.
Sperry Rand Corp.
Square D Co.
Standard Telephones & Cables Ltd.
Stevens-Arnold, Inc.
Struthers-Dunn, Inc.
Telex/Aemco, a div. of Telex, Inc.
Thermocal Div., Jamieson Labs, Inc.
Thermosen, Inc., 375 Fairfield Ave.,
Stamford, Conn. / MULTIREED Relay /
DESCR: long life, high reliability;
multi-circuit switching in a single
enclosure, high current handling
capacity, low price range / - /
\$18 to \$22 list / R12
Trepac Corp. of America
Union Switch & Sigmal Div. of Westinghouse Air Brake Co.
Westinghouse, Relay & Instrument Dept.
Wheelock Signals, Inc.
Wilson & Co.
Wintronics, Inc.

RESEARCH R12A.

Advanced Information Systems, Inc.
The American University, Center for
Technology and Administration
Aracon Laboratories Div., Allied Research Associates, Inc.
Bendix Corp., Research Laboratories Div.
Blanche, Ernest E., & Associates, Inc.
-- see C27
Bonner & Moore Associates, Inc. -see C30
Booz, Allen Applied Research Inc. -see C27 Booz, Allen Applied Research Inc. —
see C27
Bulova Research & Development Laboratorics, 62-10 Woodside Ave., Woodside 77, N.Y. / research and development / DESCR: research and development of special-purpose electronic
and electromechanisms, binary modules,
computing elements and integrators,
timers and counters / USE: for
advanced requirements / - / R12A
Circuit Engineering -- see C30
Computer Associates, Inc.
Control Technology, Inc.
Data Systems Devices of Boston Inc.
Dialtron Corp.
General Kinetics Inc.
Honeywell, Special Systems Div.
Hughes Dynamics, Inc. -- see C30
Information International, Inc.
ITT Federal Laboratories, 500 Washington Ave., Nutley 10, N.J. /
research, development, manufacturing
/ DESCR: electronic communications, radaf electronic countermeasures, missiles, simulators,
anti-submarine wafare, ground sup-

tions, radar electronic countermensures, missiles, simulators, anti-submarine warfare, ground support, satellites and test equipment $/-/Rl_2$ International Business Machines Corp.,

International Business machines Corp., Federal Systems Div. IFE Electronics, a Div. of Laboratory for Electronics The Magnavox Co. Massachusetts Institute of Technology

National Bureau of Standards National Scientific Laboratories, Inc. Potter, James Addison Procedyne Associates Inc. — see C25

Rockford Research Institute Inc.
Special Products & Applied Research
Div., The de Havilland Aircraft
of Canada, Ltd.
Traid Corp.

United Research Services Inc. -- see U.S. Naval Weapons Laboratory, Computation and Analysis Lab.

R14. RESOLVERS

The Bendix Corp., Eclipse-Pioneer Div. IMC Magnetics Corp., Western Div. Reeves Instrument Corp.

R15. RESOLVERS, COORDINATE TRANSFORM

Reeves Instrument Corp.

R16. RESOLVERS. PRODUCT

Daystrom, Inc., Weston Instruments & Electronics Div. Reeves Instrument Corp.

R17. RESOLVERS, SINE-COSINE

Reeves Instrument Corp.

R18. ROBOTS

Amulex Electronics, Inc. Amulex Electronics, Inc.
Berkeley Enterprises, Inc.
Unimation Inc., 16 Durant Ave., Bethel,
Conn. / UNIMATE / DESCR: teachable
industrial robot; memory controls
hydraulic arm and hand; capacity 200
sequential commands; learns new jobs
easily / USE: universal material
or parts transfer / \$24,250 / R18

R18A. RIBBONS, DATA PROCESSING

Aetna Products Co., Inc., New South Rd. & Commercial, Hicksville, N.Y. / inked ribbons / DESCR: for computers and data processing; black record; offset (all purpose), opti-cal scanning and ozalid / USE: for printing from high speed computers /

cal scanning and ozalid / USE: for printing from high speed computers / - / RION Columbia Ribbon & Carbon Mfg. Co., Inc., Herbhill Rd., Glen Cove, N.Y. / ribbons for high speed printers / DESCR: fabric and film base ribbons; OCR and MICR film and paper ribbons; COR and MICR film and paper ribbons; continuous forms, spirit and offset / USE: on high speed printers / - / RION RIBBORD RIBBOR

ribbons for high speed printers (computers) and conventional type data processing/machine accounting equipment; nylon, silk, "sheer" (high threadcount cotton) and mylar / LSE: EAM and computer printers / \$13.25 - \$2040/dozen / R18A

\$20/40/dozen / R16/4
F.S. Webster Co., 1 Amherst St., Cambridge 42, Mass. / computer ribbons / DESCR: inked ribbons either nylon or silk for all printing units of computers / USE: on printing unit / \$12 to \$350 / R10A
Write Inc., 420 Lexington Ave., New York 17, N.Y. / data processing ribbons / DESCR: designed for maximum wear on IBM, Friden, Remington Rand, Burroughs, National Cash Register,

and related equipment. Variety of ink colors and fabric types available / USE: read out on data processing printers / comparatively priced / R18A

S1. SCANNERS

Auto-Trol Corp. Burr Electronics Chalco Engineering Corp. -- see R6 Chicago Aerial Industries Inc. James Cunningham, Son & Co., Inc. Data Processing Corp. Davidson Electronic & Development Co. Dayton Electronic Products Co. Dayton Electronic Products Co. Electro Instruments, Inc. Electro Nuclear Systems Corp. Elliott Bros. (London) Ltd. (a member of the Elliott-Automation Group) Farrington Electronics, Inc. General Electrodynamics Corp. Gulton Industries, Inc. — see D2A Harman Kardon Inc., Data Systems Div. — see C10 Hickok Electrical Instrument Co. Hogan Faximile Corp.

Hickok Electrical Instrument Co.
Hogan Faximile Corp., 4950 Terminal
Ave., Bellaire 101, Tex. / 3000
Series Scanner / DESCR: 100 point
4 pole or 400 point single pole 100
point/sec. scanner. Automatic sequencing or random access programming / - / \$2925 to \$3475 / S1
International Business Machines Corp.,
Bata Procession 101: 1125 Pers.

nternational Business Machines Corp., Data Processing Div., 112 E. Post Rd., White Plains, N.Y. / IBM 1230 optical mark scoring reader / DESCR: optical scanning machine for reading and scoring 1200 test answer sheets an hour; also for order writing and opinion surveys / ISE: reads answer sheet responses and transfers them into punched cards / rental: \$220/month; purchase: \$15,400 to \$26,000 / S1

Instrument Development Laboratories, Inc., 67 Mechanic St., Attleboro, Mass. / programming switch / DESCR: 5 pole, 12 position, 9 RPS motor driven switch sampling milli-volt and hundred volt potentiometer outputs in sequence with 20 million operations and 18 months operational life / USE: to present real-time oscilloscope patterns of an operational system's performance / \$900 to \$1200 / S1
Measurement Systems Inc., Minn-Honeywell, Military Prods. Gr. Non-Linear Systems, Inc., P.O. Box 728, Del Mar, Calif. / scanners / DESCR: automatically scan 100 to 1000 inputs in 2, 3 or 6-wire configurations. Stepping switches, reed relay and crossbar types available / USE: to Instrument Development Laboratories,

crossbar types available / USE: to sequentially feed each of a large number of inputs into analog computer or data acquisition system / \$2535 to \$4035 / \$1

to \$4035 / SI
Optics Technology, Inc.
The Scan Instrument Corp., 7401 N.
Hamlin Ave., Skokie, III. / analog
or digital loggers/scanners / DESCR:
industrial electro-mechanical or soli
state logging, scanning, monitoring
systems for process variables. Provide various output facilities / USE:
process monitoring / \$1000 and up /
SI
SIMULEY Time Procested (2000)

process monitoring / \$1000 and up / S1
Simplex Time Recorder Co., 24 South
Lincoln St., Gardner, Mass. / Model
658 Transistorized Automatic Readback System Control / - / USE: reports true condition of an element,
function or environment / \$1200 and
up, depending on number of reporting
units involved / S1
Systems Engineering Laboratories, Inc.,
P.O. Box 9148, Fort Lauderdale, Fla.
/ low level multiplexer / DESCR:
supplied with 6 to 50 channel capacity with inputs as low as 4mv with
speeds from DC to 15KC; solid-state
throughout / - / - / S1
Towson Laboratories, Inc., 200 E. Joppa
Rd., Towson 4, Md, / Caplexer Multiplexer / DESCR: uses capacitive
charge transfer techniques for simpler
devices with unusual performance
characteristics / USE: as input to
computer or telemetry systems / - /
S1
Westrex Co., Div., Litton Systems Inc.

Westrex Co., Div. Litton Systems Inc.

S2A. SERVOMECHANISMS

Advance Instrument Corp. American Gyro Div., Tamar Electronics Inc. Angler Industrics Bell Aerosystems Co.

Belock Instrument Corp., 112-03 14th
Ave., College Point 56, N.Y. / servomechanisms / DESCR: all types of
servomechanisms for computing and
control applications, 400 cycle
miniaturized servos with transistorized electronics / USE: in computers, simulators and control devices
/ according to application / S2A
Boonshaft and Fuchs, Inc. -- see C24A
Bowmar Instrument Corp.
Bristol Co.
Bulova Research & Development Labora-Bristol Co.
Bulova Research & Development Laboratories — see R12A
Cadillac Gage Co.
Canadian Aviation Electronics Ltd.
Computer Sciences Inc.
Concord Control, Inc.
Consolidated Controls Corp.
Datex Corp.
Eastern Industries Div. LEE
Edition Industries Thes A Lastr Eastern Industries Div. LFE
Edison Industries, Thos. A., Instr.
Div., McGraw-Edison Co.
Emerson Electric Mfg. Co.
Exact Engineering & Mfg. Inc.
GAP Instrument Corp., 17 Brooklyn Ave.,
Westbury, L.I., N,Y. / servo repeaters / DESCR: pre-engineered, miniaturized servo modules which provide
reliable, transistorized, high density servos / USE: for military and
industrial systems / - / S2A
General Aniline & Film Corp., Ansco
Div. Div. General Bronze Electronics Corp.

General Bronze Electronics Corp.
General Electronic Labs Inc.
Helipot Div. Beckman Instruments Inc.
IMC Magnetics Corp., Eastern Div.
ITT Federal Labs
Industrial Control Co.
Instrument Systems Corp.
Intectron Inc.
International Business Machines Corp.,
Federal Systems Div.

International Business Machines Corp. Federal Systems Div. Kearfott Div., General Precision Inc. Kinetic Instrument Corp.
Lear, Inc., Electro-Mechanical Div. Ledex Inc. -- sec C32
M. Ten Bosch, Inc., 100 Wheeler Rd., Pleasantville, N.Y. / servo mechanisms / - / - / custom designed / S24

F. B. MacLaren & Co., Inc., 15 Stepar Place, Huntington Station, L.I., N.Y. / servo systems / DESCR: cus-tom designed electromechanical astom designed electromechanical as-semblies to perform addition, sub-traction, multiplication, division, integration, differentiation or followup and data conversion func-tions, in both military and indus-trial applications / USE: all instrument servo applications / variable, depending on application / S2A

Mason Shaver & Rhoades Inc.

Mason Shaver & Rhoades Inc.
Mechatrol Div., Servimechanisms Inc.
Midwestern Instruments, Inc.
Minn-Honeywell Appar. Controls Div.
Missouri Research Labs. Inc.
Model Engr. & Mfg. Corp.
Moog Servocontrols, Inc., Industrial
Div., East Aurora, N.Y. / electrohydraulic servomechanisms / DESCR:
complete line of electronic components and electro-hydraulic servovalves for any closed loop applications / USE: for closed loop position and velocity systems in industry / - / S2A
Moran Co. Inc., T.R.
Moran Instrument Corp.
Muirhead & Co. Ltd.
Nash Controls Inc.

Nash Controls Inc. National Co. Inc. Ouitran Corp. Pace Controls Corp.

Pace Controls Corp.
Pegasus Labs Inc.
Pregisus Labs Inc.
Precision Mechanisms Corp.
Reeves Instrument Corp.
Remanco Inc.
Rockwell Engineering Co.
Rotating Components, Inc.
Sangamo Electric Co., 1301 North 11th
St., Springfield, 11l. / servo
motors / DESCR: extensive line of
servo motors as small as size 5.
Gear motors, motor-generators, permanent magnetic generators, drag
cup motors, others / USE: control
functions / - / S2A
Servorex Controls Ltd.
Servotronics, Inc.

Servomex Controls Ltd.
Servotronics, Inc.,
Solartron, Inc., a subsidiary of
Electro-Mechanical Research, Inc.,
1743 South Zeyn St., Anahein, Calif.,
/ Digital Transfer Function Analyzer
Model DASOBR / DESCR: applies a
digitally generated signal to servo
mechanisms and obtains transfer mechanisms and obtains transfer function / USE; in test and checkout of servo mechanisms / - / S2A

Sperry Phoenix Co. Superior Manufacturing & Instrument Corp. TIC of California Tamur Electronics Div.
Texas Instruments Incorporated, Appar.
Div. Govt. Prods. Gr. Theta Instrument Corp. Universal Match Corp.
Vactric Control Equipment Ltd.
Vogue Instrument Corp.
Warner Electric Brake & Clutch Co. Weston Hydraulics, Ltd.

S3. SIMULATORS

ACF Electronics Div. AR & DA Div. All America Engineering Co.
Aircraft Armaments, Inc., York Rd.,
Cockeysville, Md. / simulators /
DESCR: air traffic control, missile
training (REDSTONE, SERGEANT, ATLAS,
POLARIS, NIKE-AJAX/HERCULES), radar
target, 3-axis flight, space vehicle
/ USE: training, test and evaluation of components and systems /
varies according to custom specific varies according to custom specifi-cations / S3 Alto Scientific Co. Inc. Applied Dynamics, Inc. Automation Development Corp. Avien. Inc. Avien, Inc. Avien, Inc.
Belock Instrument Corp., 112-03 14th
Ave., College Point 56, N.Y. / simulators / DESCR: radar simulators
for all types of dynamic units such
as jet engines, ship motion, etc. /
USE: for training and analysis /
according to application / S3
Boonshaft & Fuchs, Inc.
Budd Co. Inc., Electronics Div.
C.S.F. Budd Co. Inc., Electronics Div.
C.S.F.
Canadian Aviation Electronics
Comcor, Inc.
Compulpre Corp.
Computer Control Co., Inc.
Computer Products Inc.
COMMESS, Inc. — see C27
Consolidated Systems Corp.
Control Logic, Inc. — see C11
Curtiss—Wright Corp., Electronics Div.
Cybetronics Inc., 132 Calvary St.,
Waltham 54, Mass. / digital pattern
generator / DESCR: ferrite core
plane; each core can be biased by
using magnetic pins to produce desired digital pattern. Produce 64
10 bit wads at variable rates /
USE: system design, checkout, program checking, program control and
function generation where speed,
variety and no contact closure are
important / \$2000 up depending upon
board size and options / S3
Designers for Industry
Dian Laboratories, Inc., 611 Broadway,
New York 12, N.Y. / reactor simulator. / DESCR: simulator for the
study of reactor kinetic, control
and start-up problems / USE: model
of reactor is mechanized on computer for dynamic and accident studies / on request / S3 of reactor is mechanized on computer for dynamic and accident studies / on request / S3
Digital Equipment Corp.
Djordjevic Engineering Co.
Electro Nuclear Systems Corp.
Electronic Associates, Inc.
Evershed & Vignoles Ltd.
Exact Electronics, Inc. — see G1
Feedback Controls Inc.
Hughes Dynamics, Inc. — see C30
Huyck Systems Co.
ITT Federal Laboratories
International Business Machines Corp.,
Federal Systems Div. International Business Machines Corp.,
Federal Systems Div.
Kollsman Instrument Corp.
Leeds & Northrup Co.
Link Div., Gen. Precision Inc.
Minn-Honeywell Special Systems Div.
Random Electronics Inc.
Redifon Computer Dept. —— see C23
Reflectone Electronics, Inc.
Servomex-Controls Ltd.
Sperry Utah Co., Div. Sperry Rand Corp.
Superior Mfg. & Instrument Co.
Systron Donner Corp.
Thermo Electric Co. Inc.
Westgate Laboratory, Inc.

S4. STORAGE SYSTEMS

Acco Products, a div. of Natser Corp., cco Products, a div. of Natser Corp., P.O. Box 508, Ogdensburg, N.Y. / plastic post binder / DESCR: makes instantly visible entire area of marginally punched turns — burst or unburst. Maximum 6" capacity after magnetic retrieval — visible reten-tion by Acco / USE: retention of marginally punched forms — burst and unburst / - / S4

Anelex Corp. -- see M2
Automation Engineers, 344 W. State St.,
Trenton 8, N.J. / "CRAFT" (Card Random
Access File Technique) / DESCR:
equipment to store and select at random any type of data processing
cards / USE: in data processing
systems / \$3000 to \$20,000 / \$4
Autometics Industrial Products, a Div.
of North American Aviation, Inc. -see M2 of North American Aviation, İnc. — see M2
The Bendix Corp., Eclipse-Pioneer Div. DI/AN Controls, Inc. Dolin Metal Products, Inc., 315 Lexington Ave., Brooklyn 16, N.Y. / tape storage systems / DESCR: build-up "Tape-Stor" units for storage of EDP tapes; I shelf units stack to any height; available in 2 sizes with inserts for 4 reel sizes / USE: storage system for tape reels / \$18, 40 each to \$21,50 / \$4
Dolin Metal Products, Inc., Mobile Storage Div., *a / mobile tape storage gsystem / DESCR: adaptable to all types of tape storage units; permits storage of more tape reels in less space by eliminating normally required aisles / USE: saves space in storage areas / on request / \$4
Electronic Memories, Inc. — see M2
Fairchild Space and Defense Systems, a Div. of Fairchild Camera and Instruments Corp. Div. of Fairchild Camera and Instruments Corp.
Image Instruments, Inc.
International Business Machines Corp.,
Federal Systems Div.
LFE Electronics, a Div. of Laboratory
for Electronics
M-H Standard Corp. -- see 17
The Magnavox Co.
Edward Ochman Systems -- see C26
The Rapids Standard Co., Inc.
Wright Line, a div. of Barry Wright
Corp.

S5. STORAGE SYSTEMS, MAGNETIC

Autonetics Industrial Products, a Div. of North American Aviation,
Inc. -- see M2
Burroughs Corp.
Consolidated Electrodynamics Corp.
Cdok Electric Co., Data Stor Div. see T4
Digital Development Corp., 7541 Eads
Ave., La Jolla, Calif. / storage
systems, magnetic / DESCR: memory
drums and systems, and special
peripheral equipment / - / - / S5
Electronic Memories, Inc. -- see M2
S. Himmelstein and Co.
Instrument Systems Corp.
International Business Machines Corp., Federal Systems Div.
Kinelogic Corp.
LFE Electronics, a Div. of Laboratory for Electronics Saab Aircraft Co., Electronics Div. Unimation Inc.
Wright Engineering Co., Inc.

S6. SWITCHES

Airflyte Electronics Co.
Allied Control Company, Inc.
Clarostat Mfg. Co., Inc.
Dialight Corp., 60 Stewart Ave.,
Brooklyn 37, N.Y. / switches /
DESCR: illuminated push-button,
subminiature switches; also available with matching series of companion indicator lights (2 terminals) / - / - / So
Engineered Electronics Co., 1441 E.
Chestnut Ave., Santa Ana, Calif. /
rotary thumbwheel switches / DESCR:
manually operated thumbwheel
switches which provide decimalcoded and BCD-coded outputs, Units
available with a variety of code
outputs / USE: to generate coded
electrical outputs from a single
manual setting / \$10.50 to \$15 /
S6
General Controls Co. General Controls Co. General Electric Co., Receiving Tube Dept.
Industrial Electronic Engineers, Inc., Industrial Electronic Engineers, Inc., 5528 Vineland Ave., North Hollywood, Calif. / cue indicator switches / EBCR: 12 position rear-projection readout with push-button viewing screen / USE: push-button switch with chanqing displays / \$41/unit to \$61/unit / 56 Industrial Electronic Engineers, Inc., *a / push-button-illuminated-switches / USECR: push-button switches with back lighted displays / USE: to indicate which

processes have been activated / - / S6
Jay-El Products, Inc., 1859 W. 169th
St., Gardena, Calif. / illuminated
switches, indicators, readout
devices, lamp coating and solid
state time delays / DESCR: design,
manufacture and market of a line
of illuminated switches, indicators,
readout devices and solid state
time delays. Aircraft instrument
MIL Spec lamp coating / ISE: control panel or display systems /
\$2 to \$30 / S6
Licon Div., Illinois Tool Works Inc., trol panel or display systems / \$2 to \$30 / S6
Licon Div., Illinois Tool Works Inc., 6615 W. Irving Park Rd., Chicago 34, Ill. / neon indicator/switch / DESCR: pushbutton control, transistor driven neon indicator with switch and built-in test circuit / USE: logic circuits as push to test / on request / S6
Licon Div., Illinois Tool Works Inc., *a / switch-stepper / DESCR: rotary d-c solenoid driving decks of wafer switches. Also available with "homing" devices to insure "back-to-zero" sequencing / USE: remote control switching functions / on request / S6
Markite Corp.
Micro Switch, a Div. of Honeywell, Il W. Spring St., Freeport, Ill. / precision switches / DESCR: complete line of precision snap-action and mercury switches including basic switches, hermetically-sealed switches and multi-circuit pushbuttons and toggle switches / USE: control, indicator and operator / \$3 to \$25 (approx.) / S6

S7. SWITCHES, STEPPING

American Elite Inc. (Telefunken) American Eitle inc. (1998)
Ariel Davis Mfg. Co.
Cunning Son & Co. Inc., James
Dielectric Products Engr. Co. Inc. Cunningham, Son & Co. Inc., James Dielectric Products Engr. Co. Inc. F & F Enterprises Inc. Guardian Electric Mfg. Co.
The A. W. Haydon Company. 232 N. Elm St., Waterbury, Conn. / motorized stepping switches and systems / DESCR: multiple contact printed circuit stepping switches using miniature AC, DC or stepper motors. Binary controlled stepper devices, systems. Pulse counters, generators, dividers using P.C. switching / USE: for automatic circuit sequencing and control / on sales request only / ST
ITT Kellogg Div. ITT Jennings Radio Mfg. Corp. Klann Organ Supply Co.
Ledex Inc. - see C32 Micro-Letric Inc.
Nihon Kaiheiklind Co. Ltd.
North Electric Co.
O & S Research, Inc. O & S Research, Inc. Rye Sound Corp.

Aircraft Armaments, Inc. -- see S3

S8. SYNCHROS

Aircraft Armaments, Inc. -- see S3
American Electronics, Inc.
Barber-Colman Co.
Bendix Corp., Montrose Div.
Biederman Inc.
C.S.F., Campagnie Generale de Telegraphic Sans File
Clifton Precision Products Co., Inc., Marple at Broadway, Clifton Heights, Pa. / synchros/rotary components / DESCR: transmit positional informa-tion electrically to distant point / USE: to transmit information / - / Courter Products Div., Model Eng. & Mfg. Inc.
Data Tech Daystrom Inc. Transicoil Div. Diehl Mfg. Co. Eclipse Pioneer, Div. Bendix Corp. Feedback Controls Inc.
Ford Instrument Co., Div. Sperry Rand Corp.
General Electric Co. Ind 1 Sales Oper. Giannini Controls Corp.
Gorn Electric Co. Inc.
Harowe Servo Controls Inc. Harowe Servo Controls Inc.
IMC Magnetics Corp., Western Div.
Instrol Inc.
Julie Research Labs, Inc.
Kearfott Div., General Precision Inc.
Lear, Inc., Instrument Div.
Ledex Inc. -- see C32 M Ten Bosch, Inc.
Mecanair, Inc.
Muirhead & Co. Ltd.
Norden Div., United Aircraft Corp.

John Oster Mfg. Co., Avionic Div. Reeves Instrument Corp. Servonic Instruments Inc. Servonic Instruments Inc.
Square D Co.
Superior Mfg. & Instrument Co.
Tech-Ohm Electronics Inc.
U.S. Guage Div., Ametek, Inc.
Vactric Control Equipment Ltd. Vactic Control Equipment Ltd.
Varo Inc.
Vernitron Corp.
Warner Electric Brake & Clutch Co.
Wayne Kerr Labs. Ltd.
Westinghouse, Relay & Instrument Dept.

c

SYSTEMS ENGINEERING Abacus Information Management Co. Advance Data Systems Corp. -- see D1 American Data Services, Inc. American Data Services, Inc.
Aries Corp.
Arkay Engineering, Inc. -- see C30
Belock Instrument Corp., 112-03 14th
Ave., College Point 56, N.Y. / systems engineering / DESCR: for
specialized analog computing problems
concerning simulators, missile launch
control, and gun fire control / USE:
for company and industry use / according to application / S9
Boonshaft and Fuchs, Inc. -- see C24A
Booz, Allen Applied Research Inc. -see C27
Booz, Allen & Hamilton Inc. -- see C30
Computer Associates Booz, Allen & Hamilton Inc. -- see Computer Associates Computer Logic Corp.
Computer Methods Corp. -- see P12A Control Logic, Inc. -- see C11 Control Technology, Inc. Daniel, Mann, Johnson & Mendenhall Data Trends, Inc. -- see C22 G. C. Dewy Corp. -- see D1 Documentation Inc. General Electric Co., Computer Dept. -see C22 General Electric Co., Radio Guidance General Electric Co., Radio Guidance Operation
General Kinetics Inc.
Hollander Associates, P.O. Box 2276,
Fullerton, Calif. / system engineering / DESCR: consulting and preliminary designs of large integrated systems. Extensive experience in command and control systems, communication-switching systems, and large industrial and business computer systems / - / - / S9
The Hoover Co., Electronics Div.
Hughes Dynamics, Inc. -- see C30
Intercontinentel Instruments Inc.
International Business Machines Corp., Intercontinentel Instruments Inc.
International Business Machines Corp.,
Federal Systems Div.
International Electric Corp., Route
17 and Garden State Parkway, Paramus,
N.J. / electronic systems management / DESCR: mathematicians, engineers, programmers, psychologists,
administrators for designing, developing, manufacturing, installing,
maintaining and operating data transmission, processing, automatic display, human factors engineering systems / USE: business, engineering,
industry, science, government / -/
S9 S9
Ledex Inc. -- see C32
Lutter, Maremont and Co., Inc.
Massachusetts Institute of Technology
McDonnell Automation Center -- see C27
Monitor Systems, Inc. -- see T10
National Computer Analysts, Inc.
The Nissho Co., Ltd., Electronic
Section
Packard Bell Computer, a div. of
Packard Bell Electronics
James Addison Potter

Packard Bell Electronics
James Addison Potter
Redcor Corp.
Redifon Computer Dept. -- see C23
The Service Bureau Corp., a subsidiary of IBM -- see C28
Southwestern Computing Service, Inc.
Sperry Farragut Co., Div. of Sperry
Rand Corp.
Statistical Tabulating Corp. Statistical Tabulating Corp.
Systems Programming, Inc.
The Teleregister Corp., 445 Fairfield
Ave., Stamford, Conn. / systems
engineering / DESCR: complete
system engineering from studies,
analyses through all stages of R &
D to design and implementation of
individual equipment and large-scale
data-processing systems / - / upon
request / S9
United Research Services Inc. 1811 request / S9
United Research Services Inc., 1011
Trousdale Drive, Burlingame, Calif.
/ automatic data processing systems
design / DESCR: analysis, design
and programming of automatic data
processing systems for administrative, management support, command
and control, and other information

processing operations and functions / USE: in solution of information handling problems / - / S9 U.S. Air Force, Computation Div., Data Services Center U.S. Naval Weapons Laboratory, Computation and Analysis Lab. Woods, Gordon & Co.

T2. TAPE HANDLERS

Amplifiers Corp. of America, 398 Broadway, New York 13, N.Y. / tape handlers / DESGR: special cartridges for protection, simplified handling and storage of endless-loop punched-tape programs / - / - / TZ
Autonetics Industrial Products, a Div. of North American Aviation, Inc., 3400 East 70th St., Long Beach 5, Calif. / FACITAPE Console / DESCR: high-speed tape punch/reader console

JAOU East JOHn St., Long Beach 5, Calif. / FACITARE Console / DESCR: high-speed tape punch/reader console unit. Punches and reads 5 through 8 channel at speeds of: read speed - 600 cps; punch speed - 150 cps / USE: computer peripheral equipment / sale \$16,950; lease \$500/month / T2
W. H. Brady Co., 727 W. Glendale Ave., Milwaukee 9, Wis. / Quik-Cue Contact Tabs / DESCR: self-sticking strips of conductive material to cue magnetic program tapes / USE: applied to edge of program tape / 35¢ to 65¢ per card of 42 tabs / T2 J. H. Bunnell & Co. Burroughs Corp.
Butler Roberts Associates, Inc. Chalco Engineering Corp. — see R6 Cook Electric Co., Data-Stor Div. —

Chalco Engineering Corp. -- see R6 Cook Electric Co., Data-Stor Div. --see R6, T4 Consolidated Electrodynamics Corp.

Cook Electric Co., Data-Stor Div. —
see R6, T4
Consolidated Electrodynamics Corp.
Cybetronics Inc., 132 Calvary St.,
Waltham 54, Mass. / magnetic tape
cleaner / DESCR: employes tungsten
carbide scraping blade, two silicone treated cleaning tissue stations. Cleaner removes 80-90% of
total transient tape dropouts.
Optional adaptors for tape recels,
etc. / USE: to restore recorded
or blank computer tapes to "new"
condition by removal of substantially
all dropout producing defects.
Operates off-line / \$900 up depending upon options / T2
Cycle Equipment Co., 17480 Shelburne
Way, Los Gatos, Calif. / tape
handlers / DESCR: tape winders,
unwinders, feeders and transports
for handling perforated paper tape
/ USE: as accessory to tape punches,
tape readers, tape-perforated typewriters / \$12.75 to \$425 / T2
Dresser Products Inc., 114 Baker St.,
Providence 5, R.1. / tape handling
equipment / DESCR: splicers, winders, unwinders, folders, rewinders.
Punched tape filing supplies —
data processing file folders, punched tape envelopes, mailing and storage boxes / - / - / T2
Elliott Bros. (London) Ltd. (a member
of the Elliott-Automation Group
General Kinetics Inc., 2611 Shirlington Rd., Arlington 6, Va. / tape
handlers, tape testers, ultrasonic
tape cleaners, KINESONIC Tape Cleaners / DESCR: special purpose and
custom made transports with speeds
up to 300 i.p.s. Special purpose
tape recorders and tape testers / / \$2445 to \$33,000 / T2
S. Himmelstein and Co. — see M2
Kinelogic Corp.
Morech West Products Inc.

Himmelstein and Co. -- see M2

/ \$2445 to \$35,000 / T2

Kinelogic Corp.
Monarch Metal Products, Inc.
Moulic Specialties Co., 1013 W. Washington, Bloomington, Ill. / cartridge tape devices / DESCR: recording-playback pulse controlled endless loop cartridge tapes; auto loaders, random selectors and other operating accessories for the cartridge tape field / USE: special electronic test equipment; any programming requiring control / \$345 to \$1100/unit / T2

Ray Myers Corp., 1302 E. Main St., Endicott, N.Y. / tape handlers / DESCR: tape library, storage and mobile accessories / - / - / T2

Omnitronics, Inc., Subsidiary of Borg-Warner Corp., 511 N. Broad St., Philadelphia 23, Pa. / paper tape reclers / DESCR: high speed unidirectional and bidirectional tape handlers capable of speeds up to 100" per second in either direction for the control of the control

handlers capable of speeds up to 100" per second in either direction with recl sizes up to 100" (USE: to feed and tape up paper tape from readers, punches and recorders / \$705 to \$2000 / T2 Radio Corp. of America, Electronic

Data Processing '
S-I Electronics, Inc.
Systems Sales Co., a div. of Systems
Mfg. Corp. -- see C26
Wright Line, a div. of Barry Wright
Corp.

T3. TAPE, MAGNETIC

Addressograph Multigraph Corp. American Concertone Inc. Addressograph Multigraph Corp.
American Concertone Inc.
Ampex Corp.
The Arnold Engineering Co. — see C52
Audio Devices, Inc., 444 Madison Ave.,
New York 22, N.Y. / computer audiotape / DESCR: magnetic recording tape
for electronic computers. Lengths:
2400' on 10½-inch reels, 1200' on 8½inch reels. Certified at bit densities of 200, 556 and 800 bits per
track-inch / USE: data recording / T3
Autonetics Div. NAA
Biophysical Electronics Div.
Burgess Battery Co., Div. Servel, Inc.
Cognitronics Corp.
Computron Inc., 122 Calvary St.,
Waltham, Mass. / COMPUTAPE/ DESCR:
high quality, high density, magnetic tape for computer and instrumentation exclusively. Guaranteed
reliability of 556 or 800 bits per
inch (NRZ) / USE: computers and
instrumentation / available upon
request / T3
Control Data Corp.

request / T3 Control Data Corp.

Control Engineering Div., J.B. Webb

Co.
Cook Technological Center
Cybetronics Inc., 132 Calvary St.,
Waltham 54, Mass. / magnetic tape
re-issuer / DESCR: cleans, certifies, degausses used magnetic tape.
Wear analyzer and tape life predictor indicates safe remaining
tape life / USE: inspects magnetic
tapes to determine whether tape
may be reliably used for future recording / depends upon system requirements / T3
Datamec Corp.
Daystrom Inc., Control Systems Div.
DI/AN Controls Inc.
Electro-Mechanical Research Inc.,
Advanced Scientific Instruments
Div., 5249 Hanson Court, Minncapolis,
Minn. / Magnetic Tape Unit Model
All / DESCR: accessory to ASI digital computer, records and plays back
at 112.4 i.p.s., 200 or 556 bits per
inch packing density; variable length
files and records; lateral and longitudinal parity checks / USE: magnetic tape data storage / \$33,000 /
T3 Cook Technological Center

T3
El-Tronics Inc.
EMI-Cossor Electronics Ltd.
Ferranti Electric Co. Inc.
Ferrodynamics Corp.
Frontier Electronics Div., IRC IBM Federal Systems Div. Lintronic Ltd. Lintronic Ltd.
Midwestern Instruments, Inc.
Minn-Honeywell, Heiland Div.
Minnesota Mining & Mfg. Co., Magnetic
Prods. Div.
N. V. Electrologica
Olympic Radio & T.V. Div.
Panelgraphic Corp.
Radio Corp. of America, Electron Tube
Div.

Radio Corp. of America, Electron Tube Div.

Beeves Soundcraft Corp., Great Pasture Rd., Danbury, Conn. / magnetic tape / DESCR: complete line of magnetic tape for every data recording need / - / - / T3

Robins Industries Corp., 15-58 127 St., Flushing 56, N.Y. / TS Series Splicers / DESCR: 3 standard models; one each for 1/4", 1/2" and 1" tape. Other sizes available / USE: for splicing and editing magnetic recording tape / \$85 standard sizes, will quote on specials / T3

Sanborn Co.

Sanborn Co. Shepherd Industries Inc. Sony Corp.
Sperry Gyroscope Div., Sperry Rand

Corp.
Sylvania Electronic Systems
Triton Electronics, Inc., 62-05 30th
Ave., Woodside 77, N.Y. / computer
magnetic tape / DESCR: heavy-duty,
all-purpose tape available in both
556 and 800 BPI. Each reel has own
test chart, certifying it has zero
errors / - / - / T3

T3A. TAPE, FILING SYSTEMS

Acme Visible Records, Inc.

Burroughs Corp.
Dick, A.B., Co.
Diebold, Inc.
Documentation Inc.
Dolin Metal Products, Inc. -- see S4 Dolin Metal Products, Inc. -- see S4
General Electric Co.
General Fireproofing Co.
Information for Industry, Inc., 1000
Connecticut Ave., N.W., Washington
36, D.C. / magnetic tape edition
of Unitern Index to U.S. Chemical
Patents / DESCR: search capabilities 115,000 chemical and related
patents, 1950-1962; 3,500,000 words
or Uniterms searched on IBM 1401 6W
memory computer with 4 tape drives.
Year, accession number printout /
USE: Uniterms used as input; output accession numbers / \$4500 to
\$5200 / T3A
International Computers and Tabula-International Computers and Tabula-tors Ltd. Midwestern Instruments, Inc.

Midwestern Instruments, Inc.
Minnesota Mining & Mfg. Co.
Monarch Metal Products, Inc.
Ray Myers Corp. — see T2
Remington Rand Systems
Steelcase, Inc.
Systems Sales Co., a div. of Systems
Mfg. Corp. — see C26
Tab Products Co.
Telectro Industries Corp.
Wheeldex & Simpla Products, Inc.
Wright Engineering Co., Inc.
Wright Line

T4. TAPE, READERS

Autonetics Div. NAA Benson-Lehner Corp. Computer Control Co. Inc. Computer Control Co. Inc.
Control Data Corp.
Cook Electric Co., Data-Stor Div.,
8100 N. Monticello, Skokie, Ill. /
Model 59 Digital Magnetic Tape
Transport System / DESCR: IBM
tape compatibility. Other formats
accepted. 3.5 msc. start time;
1.5 msec. maximum stop time / USE:
input, output, or computer memory
device, data acquisition, and program input to checkout systems /
\$6900 to \$16,400 / T4
DI/AN Controls, Inc.
Electro-Mechanical Research Inc.,
Advanced Scientific Instruments Advanced Scientific Instruments
Div. — see T3
Elliott Bros. (London) Ltd. (a member
of the Elliott-Automation Group) Elliott Bros. (London) Ltd. (a member of the Elliott-Automation Group) El-Tronics Inc.
Hyperion Industries Inc.
International Business Machines Corp., Data Processing Div., 112 E. Post Rd., White Plains, N.Y. / Hypertape / DESCR: magnetic tape input/output system; employs cartridge-loading technique to enable IBM 7074, 7000, and 7090/7094 computers to "read" and "write" information faster than standard data processing systems / - / on-line 7340 Hypertape Drive, Model 1, \$1300/month rental; purchase: \$78,000. On-line 7640 Hypertape control, \$3400/month rental; purchase: \$218,000. Off-line 7340 Hypertape Drive, Model 2 (for attachment to 1401, 1410 and 1460 systems), \$1050/month rental; purchase: \$68,500. Off-line 7641 Hypertape control, \$2500/month rental; purchase: \$68,500. \$2500/month rental; purchase: \$168,000 / T4

International Business Machines Corp., Federal Systems Div. International Computers and Tabulators Ltd.

ITEK Electro-Products Co. Minn-Honeywell, Heiland Div.
S-I Electronics, Inc.
Sperry Gyroscope, Div. Sperry Rand

Corp.
Sylvania Electronic Systems
Systems Engineering Labs Inc.
Systems Research Labs Inc.

T5. TAPE RECORDERS

Aero Geo Astro Corp. American Concertone, Inc., 9449 W.
Jefferson Blvd., Culver City, Calif.
/ tape recorders/reproducers / DESCR: / tape recorders/reproducers / DESU series of basic recorder/reprodu-cers and transports which can be modified for many magnetic tape applications / USE: data acquisi-tion / according to individual need American Elite Inc. (Telefunken) American Ellie Inc.
Ampex Corp.
Amplifier Corp. of America, 398
Broadway, New York 13, N.Y. / tape

recorders / DESCR: transistorized mono and stereo magnetic tape and tape decks: also continuous loop tape recorders and playback equip-ment / - / - / T5 Atomium Corp. Autonetics Div. NAA Autonetics Div. NAA
Bendix Corp., Computer Div.
Burroughs Corp.
Concord Control, Inc.
Consolidated Electrodynamics Corp.
Cook Electric Co., Data-Stor Div. --See 14
Datamec Corp.
Daystrom Inc., Control Systems Div.
Djordjevic Engineering Co.
EMI-Cossar Electronics Ltd. EMI-Cossar Electronics Ltd. Eclipse Pioneer, Div. Bendix Corp. Electrodynamic Instrument Corp. Electro-Mechanical Research Inc., Advanced Scientific Instruments Div. -- see T3 Emertron Inc.
Ferranti Electric Co. Inc.
Gen. Electric Co., Process Computer Gen. Electric Co., Process Computer Sec.
General Kinetics Inc. -- see T2
The Geotechnical Corp., 3401 Shiloh Rd., Garland, Tex. / FM recorder-reproducer / DESCR: .045 ips tape speed for record and real-time flux-responsive playback; DC -10 cps response / LSE: to record and reproduce long-term data / \$9750 to \$12,000 / T5
Infotronics Corp.
International Business Machines Corp., Data Processing Div. -- see T4
International Business Machines Corp., Federal Systems Div.
International Computers and Tabulators Ltd.

International Computers and labulator:
Ltd.
Kennedy Co.
Kinelogic Corp.
Leach Corp.
Lintronic Ltd.
Lockheed Electronics Co.
Lockheed Electronics Co., Info. Tech. Magnasync Corp. Midwestern Instruments Inc.
Minn-Honeywell, Heiland Div.
Mnemotron

Minn-Honeywell, Helland Dlv.
Mnemotron
Moulic Specialties Co. -- see T2
The National Cash Register Co.
Olympic Radio & T.V. Div.
Pacific Electro Magnetics Co., Inc.,
942 Commercial St., Palo Alto,
Calif. / PEMCO Model 110 portable
data recorder / DESCR: small, light
weight, low power, high-performance,
multi-channel instrumentation magnetic tape recorder for field,
mobile and airborne data acquisition
applications; high degree of configuration versatility / USE: primarily
for analog (direct and FMO recording /
\$4000 to \$12,000 / T5
The Ralph M. Parsons Co., Electronics
Div., 151 South DeLacy, Pasadena,
Calif. / miniature airborne magnetic
tape recorder / ESCR: instrumentation recorders; speed O.1 to 125 ips;
up to 1" tape; solid-state electronics; 6 to 22 lbs. / USE: carried by
aircraft, missile, and satellite to
record data / \$12,000 to \$30,000 /
T5
Potter Instrument Co. Inc.

Potter Instrument Co. Inc. Precision Instrument Co. Inc. Sanborn Co. Sangamo Electric Co. — see D2 Shepard Labs. Inc. Shepherd Industries Inc. S-I Electronics, Inc. Sony Corp.
Southern Instruments Ltd.
Sylvania Electronic Systems

Telemetrics, Inc. Vega Electronics Corp. Whiteford Laboratory

TSA. TAPE REELS

Astatic Corp. Boonton Molding Co. Inc. Burke & James, Inc. EMI-Cossor Electronics Ltd. EMI-Cossor Electronics Ltd.
Ferrodynamics Corp.
General Kinetics Inc., 2611 Shirlington Rd., Arlington 6, Va. / reels /
DESGR: special tape reels and packaging designed for maximum protection of tapes during handling and long term storage / - / 50¢ to \$50 / T5M
Masonware Co.
Mincom Div., Minn Mining G Mfg. Co.
Mincom Div., Minn Mining G Mfg. Co., Magnetic Prods. Div.
Philips' Gloeilampen Fabricken, N.V.
Potter Instrument Co., Inc. Potter Instrument Co., Inc.

Reeves Soundcraft Corp. -- see T3 Robins Industries Corp. Rooling Industries Corp.
Rye Sound Corp.
Sanborn Co.
Standard Record Mfg. Co.
Superior Mfg. & Instrument Co.
Webcor Sales Co.

TO. TAPE, PAPER

Arvey Corp.
Connecticut Technical Corp., 3000
Main St., Hartford 5, Conn. / tapepaper (systems) / DESGR: tape
punching typewriter. Furnishes code
flexibility in tape punching,
reading systems and verification
systems / LSE: create and verify
punched tape for automatic control
systems / \$1500 to \$3000 / T6
Creed & Co., Ltd. (assoc. of ITT
Corp.) Corp.)
Electronic Engineering Co. of Calif. El-Tronics Inc. Ferranti Electric Co. Inc. Friden, Inc. — see P4 Invac Corp. Invac Corp.
Ohio Envelope Co.
Paper Manufacturers Co., 9800 Bustleton Ave., Philadelphia 15, Pa. /
perforator tapes / DESCR: film,
fiber, paper tapes for all types of
equipment. Paper tapes available
in roll or folded, oiled or unoiled,
colors, various diameters, widths,
and printed / USE: as input or
output / varies according to grade /
T6 T6
Robins Industries Corp., *a / TSPK
Splicer Kits / DESCR: 4 models; one
each for 5, 6, 7 and 8 channel tape
/ USE: for splicing and editing
punched paper tape / \$125 net, each /
T6

T7. TAPE, PAPER-FILING SYSTEMS

Tally Register Corp.
Victor Adding Machine Co.
Whiteford Laboratory

Diebold, Inc. Dresser Products, Inc. General Electric Co. LeFebure Corp. Lefebure Corp.
Ohio Envelope Co.
Remmington Rand Systems
Shaw-Walker Co., The
VISIrecord, Inc.
Wheeldex & Simple Products, Inc. Wright Line

T8. TAPE, PAPER-PUNCHES

T8. TAPE, PAPER-PUNCHES

Acco Products, a div. of Natser Corp.
Adtrol Electronics Inc.
Anadex Instruments Inc.
Autonetics Industrial Products, a Div.
of North American Aviation, Inc.,
3400 East 70th St., Long Beach 5,
Calif. / VERSATAPE II / IESCR:
provides fast economical offline
preparation of computer program
tapes and allows simple format
change by means of interchangeable
cartridges. Produces printed document of tape output / ISE: computer
peripheral equipment-computer tape
preparation / purchase \$2500; lease
\$100/month / T8
Autonetics Industrial Products, a Div.
of North American Aviation, Inc.,
*a / FACITAPE Model 151 Punch /
DESCR: I50 ch/Sec heavy duty precision tape punch. Accommodates 5
through 0 channel tapes — stops on
a character and will idle indefinitely if required / USE: OEM
manufactures, computer peripheral
equipment / \$3000 / T8
Autonetics Industrial Products, a Div.
of North American Aviation, Inc.,
- see T2
Auto-Trol Corp. -- see T2 Auto-Trol Corp. Burroughs Corp. Burroughs Corp.
Clary Corp.
Connecticut Technical Corp. -- see T6
Creed & Co., Ltd. (assoc. of ITT
Corp.)
Electro-Mechanical Research Inc., Ad-Electro-Mechanical Research Inc., Advanced Scientific Instruments Div., 5249 Hanson Court, Minneapolis, Minn. / Paper Tape Unit Model AZO / DESCR: accessory to ASI 210 digital computer, consists of separate 110 cps punch and 500 cps reader with necessary electronics / USE: reads in paper tape and punches paper tape / - / T8

Friden, Inc., 2350 Washington Ave., San Leandro, Calif. / tape punches / DESCR: used with Friden Flexowri-

ters, Friden Computypers, and allied ters, friden computypers, and affice equipment to prepare a second paper tape as a by-product of producing original documents / USE: general data processing / - / TB Harvey-Wells Electronics, Inc.
International Business Machines Corp., Federal Systems Div. Invac Corp. Kleinschmidt Div., Smith Corona Marchant Inc. Monroe Calculating Machine Co. N. V. Electrologica Omnitronics Inc., Sub. Borg-Warner Corp.
Radio Corp. of America, Electronic Data Processing
Soroban Engineering, Inc.
Tally Register Corp.
Telecomputing Corp., Electronic Components Div.
Teletype Corp.
Underwood Corp. Corp.

T9. TAPE, PAPER-READERS

Addo-x, Inc. Addressograph-Multigraph Corp. Adtrol Electronics Inc. American Concertone Inc. Ampex Corp.
Anadex Instruments, Inc.
Atchley Div., Raymond, Amer. Brake Shoe Co. Autonetics Industrial Products. Div. of North American Aviation, Inc. — see T2 Bendix Corp., Computer Div. Bulow Electric Co. Burroughs Corp.
Chalco Engineering Corp. -- see R6
Coleman Systems Inc.
Colorado Instruments Connecticut Technical Corp. -- see T6 Control Data Corp. Cook Electric Co., Data-Stor Div. --Digitronics Corp. -- see R6
Dymec Div., Hewlett-Packard Co.
Electro-Mechanical Research Inc.,
Advanced Scientific Instruments Advanced Scientific Instruments
Div. -- see TO.
Electronic Engineering Co. of Calif.
Electronic Engineering Co. of Calif.
Electronic Engineering Co. of Calif.
Automation Div.
Ferranti Electric Co. Inc.
Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif. / tape readers
/ DESCR: used with Friden Flexowriters, Friden Computypers, and
allied equipment as second input
source / USE: general data processing / - / TO
General Kinetics Inc.
Geotechnical Corp.
Harvey-Wells Electronics, Inc.
Information Systems, Inc.
International Business Machines Corp.,
Federal Systems Div.
Invac Corp. Invac Corp.
Kleinschmidt Div., Smith-Corona Marchant Inc.
Omnitronics, Inc., Subsidiary of Borg-Warner Corp.
Philco Corp.
Photocircuits Corp. -- see R6
Potter Instrument Co., Inc.
Radio Corp. of America, Electronic
Data Processing
Tally Register Corp.
Teletype Corp.
Wang Laboratories Inc. Warner Corp.

TIO. TELEMETERING SYSTEMS Aircraft Armaments, Inc.

Airpax Electronics, Inc.
Century Electronics & Instruments, Inc.
CG Electronics (Div. of Gulton Industries, Inc.) -- see Dl
Control Equipment Corp. Datex Corp.

G. C. Dewey Corp. — see D1
Electro Instruments, Inc.
Electro-Mechanical Research, Inc.,
Sarasota Div., P.O. Box 3041,
Sarasota, Fla. / PCM Signal Conditioner and Bit Synchronizer Model
219 / DESCR: receives PCM telemetry signal, makes bit decisions, and reconstructs signal for further processing / USE: in PCM telemetry systems / - / T10
Electro-Mechanical Research, Inc.,
Sarasota Div., *a / Airborne PCM
System Model 233A / DESCR: converts analog data from transducers into digital serial time-multiplex telemetry data / USE: in flight tests of high performance aircraft and missiles / - / T10 Datex Corp.

The Foxboro Co. — see C22A
General Electric Co., Specialty Devices Operation — see C26
The Geotechnical Corp. 3401 Shiloh
Rd., Garland, Tex. / analog data
telemetry, FM / DESCR: transmits
1 to 7 channels of 0-35 eps over
telephone circuit, radio or microwave
with system accuracy to ±1% / USE:
voice frequency transmission /
\$2550 to \$12,000 / T10
Gulton Industries, Inc. — see D2A
Harpan Kardon Inc., Data Systems Div.
— see C10
Harvey-Wells Electronics Inc.
The Hoover Co., Electronics Div.,
P.O. Box 878, Pompano Beach, Fla. /
FM-FM telemetering system / DESCR:
8 to 16 channel FM-FM telemetering
system. RF output 2 to 50 watts
including signal conditioning / ISE:
airborne instrumentation / — / T10
The Hoover Co., Electronics Div., *a /
Vernitel / DESCR: special quantizer,
continuously separates normal subcarrier oscillator stimulus voltage
into quantized voltage of 1 at 1 of
16 discreet quantum levels in amplified vernier, remainder voltage /
USE: to increase system accuracy
utilizing standard FM-FM telemetering equipment / — / T10
The Hoover Co., Electronics Div., *a /
telemetering components / DESCR:
transistorized components Include
high level and low level subcarrier
oscillators, high input impedance
millivolt oscillators, mixer amplifiers, voltage regulators, and voltage calibrators / USE: in areas of
airborne telemetry systems / — / T10
The Hoover Co., Electronics Div., *a /
FM-FM ground telemetering system /
DESCR: 18 channel receiving and recording station / USE: noperation with sled track / — / T10
The Hoover Co., Electronics Div., *a /
FM-FM telemetering package / DESCR:
pressurized package which provides
12 channel FM-FM telemetering system with RF output signal of 11
watts. Self-contained power supply /
USE: airborne telemetry instrumentation / — T10
The Hoover Co., Electronics Div., *a /
FM-FM telemetering package which provides
12 channel FM-FM telemetering system with RF output signal of 11
watts. Self-contained power supply
USE: airborne analog multiplex system /
DESCR: restores

International Business Machines Corp., Federal Systems Div.
Leach Corp.
Leds & Northrup Co., 4901 Stenton
Ave., Philadelphia 44, Pa. / IN
Transistorized Telemetering /
DESCR: system of components that includes a high-speed thermal converter, 18-30 cycle transistorized oscillator, receiving-end frequency converter and high-speed strip-chart recorder / USE: transmits intelligence with high degree of accuracy and fidelity / - / T10
Leds & Northrup Co., *a / IN Transistorized Telemetering / DESCR: system of components that includes a high-speed thermal converter, 18-30 cycle transistorized oscillator, receiving-end frequency converter and a high-speed strip-chart recorder / USE: transmits data / - / T10
Lockheed Electronics Co., Avionics and Industrial Products Div., 6201 E. Randolph St., Los Angeles 22, Calif. / telemetering systems / DESCR: airborne and ground stations / USE: missile and satellite tracking / - / T10
Monitor Systems, Inc., Fort Washington,

Monitor Systems, Inc., Fort Washington, Pa. / telemetering systems / DESCR: design, development and manufacture of PCM telemetry ground stations, related data conversion systems and related data conversion systems and power station monitoring systems; also proprietary products used in these systems / - / TIO Moore Associates, 093 American St., San Carlos, Calif. / time division multiplex systems / DESCR: telemetering and data transmission ter-

minals. Parallel-to-serial and serial-to-parallel converters / USE: to transmit digital signals / \$30 to \$100 per no-off input / T10 Non-Linear Systems, Inc., P.O. Box 728, Del Mar, Calif. / Model 190/210 Digital Telemeter / DESCR: transmits and receives numbers up to £999 over wire line up to the last one mile. Speed 36 milliseconds per transmission / USE: to record monitor outputs from digital computers or analog-to-digital converters / \$4035 / T10 PC A Electronics Inc.

The Ralph M. Parsons Co., Electronics Div., 151 South DeLacy, Pasadena, Calif. / oscillator stimulus supply 30SS107 / USE: to calibrate voltage controlled oscillators and other devices / \$400 to \$600 / T10 The Ralph M. Parsons Co., Electronics Div., "a / Decommutation System 3DS200 / DESCR: solid-state regulated power supply 5. 3, 1 VDC full Scale. Rack or table mount; 9.5 lbs. / USE: to calibrate voltage controlled oscillators and other devices / \$400 to \$600 / T10 The Ralph M. Parsons Co., Electronics Div., "a / Decommutation System 3DS200 / DESCR: solid-state PAM, PPM, PAM/NRZ demultiplexer; 12 to 5000 pps; 90 channel total; rack mount, 55 to 75 lbs. / USE: ground station decommutation / \$18,000 to \$30,000 / T10 The Ralph M. Parsons Co., Electronics Div., "a / voltage controlled oscillators and the station decommutation / \$18,000 to \$30,000 / T10 The Ralph M. Parsons Co., Electronics Div., "a / voltage controlled oscillators and the station decommutation / \$18,000 to \$30,000 / T10 minals. Parallel-to-serial and

\$30,000 / TIO
The Ralph M. Parsons Co., Electronics
Div., *a / voltage controlled oscillators, 3VCO-102 / DESCR: solidstate; all standard IRIG channels;
5 volt amplitude full scale input;
1.7 cubic inches / USE: in any
high-level signal conditioner oscillator application / \$200 to \$250 / TIO

T10
Sanders Associates, Inc.
Shand and Jurs Co., 2630 Eighth St.,
Berkeley 10, Calif. / telemetering
systems / DESCR: RATE-Remote Automatic Telemetering Equipment. Data
gathering, control and constant
alarm scanning / USE: petroleum,
chemical, and allied industries /
-/ T10 Towson Laboratories, Inc. -- see C40,

Wiancko Engineering, div. Tamar Electronics. Inc.

T11.2. THIN-FILMS, MAGNETIC

Airpax Electronics Inc., Seminole Div.
Burroughs Corp., Electronic Components
Div. -- see M2
CRS Laboratories
DI/AN Controls Inc.
Fabri-Tek Inc.
Filmohm Corp.
Film Resistors Inc.
General Diode Corp.
General Electric Co., Def. Sys. Dept.
International Business Machines Corp.,
Federal Systems Div.
Intellux Inc.
LFE Electronics Div., Lab for Elec-Airpax Electronics Inc., Seminole Div. LFE Electronics Div., Lab for Electronics Inc.
Librascope Div., Gen. Precision Inc.
Litton Systems Inc., Guid. & Con. Sys. Lockheed Electronics Corp., Avionics Lockneed Electronics Corp., Avion. & Ind. Prods. Div. McDonnell Aircraft Co. Microtron Inc., Pyrocircuits Div. Servomechanisms Inc. S-I Electronics, Inc. Space-General Corp. Sylvania Electronic Systems Texas Instruments Incorporated, Appar. Dir. Govt. Prods. Gr. Texas Instruments Incorporated, Components Div.

T11.3 TIMING DEVICES

Abrams Instrument Corp. Accurate Instrument Co. Acton Laboratories, Inc. Acton Laboratories, Inc.
Allen-Bradley Co.
Alpha-Tronics Corp.
Alto Scientific Co. Inc.
American Electronics, Inc.
Amplifiers Corp. of America, 398
Broadway, New York 13, N.Y. / timing
devices / DESCR: special electronic
timing and control devices to order
/ - / - / T11.3 /-/-/T11.3
Amtron Inc.
Amulex Electronics, Inc.
Applied Electronics Corp. of N.J.
Atlantic Research Corp.
Autotron, Inc.
Bell Aerosystems Co.
Belock Instrument Corp., 112-03 14th
Ave., College Point 56, N.Y. /
timing devices / DESCR: precision

electromechanical timers, 5 switch closures plus functional output varying with time. Two seconds to 200 seconds total time, missile environment / USE: timer for missile functions / according to application / Tll.3
Biophysical Electronics Div., Com-Biophysical Electronics Div., Communications Ind.
Bristol Motors Div., Cocaline Co. of America Inc.
Bulova Research & Development Laboratories — see R12A
Burroughs Corp.
GG Electronics Oiv. of Gulton Industries, Inc.) — see D1
Cable Electronics
Calbest Flettronics Co. Cablest Electronics Calbest Electronics Co. Chrono-Log Corp. The Cincinnati Time Recorder Co. -see D2 see D2
Computer Components Inc.
Consolidated Instruments Corp.
Control Equipment Corp.
Controlomag Labs.
Cramer Division, Giannini Controls Controlomag Lans.
Cramer Division, Giannini Controls
Corp.
Curtiss-Wright Corp., Electronics
Div. Intermtn. Br.
DI/AN Controls, Inc.
EDP Corp., 5501 South Orange Blossom
Train, Orlando, Fla. / timing devices / DESCR: timing and counting
systems, elapsed time indicators,
timing display indicators / USE:
for timing, control and display systems / \$275 to \$7000 / Tll.3
Electro Instruments Inc.
Electrodynamic Instrument Corp.
Electron Nuclear Systems Corp.
Electronic Commun, Component Design
6 Dev. Corp.
Electronic Counters Inc.
Electronic Counters Inc.
Electronic Contern Company of Electronic Counters Inc.
Electronic Engineering Company of
California — see T17
Electronic Products Corp.
Electronic Specialty Co.
Elesta Ltd. Electronic Controls
Emerson Electric Mfg. Co.
Fairchild Camera & Inst. Corp., Defense Prods. Div.
Farmer Electric Products Co. Inc.
Flight Passarah T. Flight Research, Inc.
Frequency Electronics Inc.
G-V Controls, Inc.
General Electric Co., Ind'l. Sales Oper.
Oper.
eneral Time Corp., Electronic Sys. General Time Corp., Electronic Sys.
_Div.
Giannini/Controls Corp.
Gibbs Mfg. & Research Corp.
Gibbs Mfg. & Research Corp.
Giffillan Bros. Inc.
Gordon Enterprises
The GKREX Corp., 3003 Pennsylvania
Ave., Santa Monica, Calif. / time and frequency standards / DESCR: time standards: accuracies to 0.001%; miniaturized. Frequency standards: accuracies to 0.001%; all solid state; subminiature; special wave shapes / USE: provide constant frequency to drum, tape power systems.
Provide time data for time-phased quency to drum, tape power systems.
Provide time data for time-phased functions / \$75 to \$1200 / Tll.3
Harman Kardon Inc., Data Systems Div.
-- see ClO
The A. W. Haydon Company, 232 N. Elm
St., Waterbury 20, Conn. / timing devices and systems / DESCR: time delay relays, repeat cycle timers, time totalizing meters, events counters, stop clocks (dialface and digital), binary encoders (dialface and digital) and encoder systems / USE: military and commercial timing applications / sales request only / Tll.3
Hurletron Control Products Div. Hurletron Control Products Div. -- see C26 Iconix Inc. C26
ICONIX Inc.
Intertron Inc.
Interelectronics Corp.
Isotope Developments Ltd.
Jordan Electronics, a div. of The
Victoreen Instrument Co. — see C26
Kennedy Antenna Div., Elec. Spec. Co.
Lear, Inc., Instrument Div.
Leesona Moos Labs
Logitek Inc.
Meriam Instrument Co., Electronic Div.
Milgo Electronic Corp.
Minn-Honeywell, Military Prods. Gr.
Natel Engineering Co. Inc.
Non-Linear Systems, Inc.
Ortron Electronics, Inc.
Parks Lab., Henry Francis
Philips Electronics Instruments
Philips' Gleoilampen Fabrieken, N.V.
Power Instruments Corp.
Rit Electronics Corp.
Racal Electronics Ltd.
Radiation, Inc.

Randam Electronics Inc.
Redifon Computer Dept.
Robotron Corp.
Square D Co.
Syracuse Electronics Corp.
Taylor Instrument Cos.
Telex/Aemco, a div. of Telex, Inc.
Tempo Instrument Inc., E. Bethpage
Rd., Plainview, N.Y. / programmers /
DESCR: timing squence of events
with single or multiple outputs /
USE: timing controls, systems and
subsystems / \$50 and up / Tll.3
Tempo Instrument Inc., *a / timers /
DESCR: time relay relays, repeat
cycle timers, interval timers,
timing systems and subsystems /
USE: timing controls / \$50 and up /
Tll.3
Texas Instrument Incorporated, Appar.
Div. Govt. Prods. Gr.
Time & Frequency. 127 S. Batavia Ave. Texas Instrument Incorporated, Appar.
Div. Govt. Prods. Gr.
Time & Frequency, 127 S. Batavia Ave.,
Batavia, Ill. / time standards,
frequency standards / DESCR: high
precision tuning fork oscillators
from 10kc down to 1 cps. Real time
generators / USE: time bases / \$746
to \$2995 / Tll.3
Trott Electronic Inc.
Tuffweld Industries
U.S. Science Corp. -- see C24A
Walkirt Co.
Wang Laboratories Inc.
Weltronic Co. Weltronic Co. Wheaton Engineering Div. Hurletron Inc. Wilson & Co., G. C. Wright Engineering Co., Inc.

T12. TRANSFORMERS

T12. TRANSFORMERS

Airpax Electronics, Inc.

AMP Inc. — see T13

Amplifiers Corp. of America, 398

Broadway, New York 13, N.Y. / transformers / DESGR: special types to order / - / - / T12

General Controls Co.

Instrument Systems Corp.

Microtran Co., Inc., 145 E. Mineola

Ave., Valley Stream, N.Y. / transformers / DESGR: off-the-shelf minaturized transformers built to MIL-T-27A and industrial specifications; laminated and toroidal constructions; open, hermetically sealed, molded, encapsulated, Also built to special order / USE: in missile, space, communications, and survey circuitry / \$3 to \$20 / T12

Polyphase Instrument Co.

Raytheon Co., Microwave and Power Tube Div.

The Superior Electric Co.

Virolinia Electronics Co., Inc., River Tube Div.
The Superior Electric Co.
Virginia Electronics Co., Inc., River
Rd. and E60 Railroad, Washington
16, D.C. / transformers and coils /
DESCR: single and three phase
transformers operable from 60 and
400 cycles. Power supply and audio
chokes; pulse, audio, DC to AC-DC
transformers / USE: in various
equipment / 80¢ to \$500 / T12

T13. TRANSFORMERS, PULSE

AC Electronics Inc. ACDC Electronics Inc.
ACF Electronics
ADC Products Div., Magnetic Controls Co. Abtronics Inc.
Acme Electric Corp.
Airpax Electronics, Inc.
Aladdin Electronics Div.
Allen Avionics, Inc.
AMP Inc., Harrisburg, Pa. / pulse
transformers / DESCR: high voltage,
hermetically sealed, canned, torroidal / USE: in computers for
amplification of a square wave /
- / TI3
Anzac Electronics Inc.
Artronic Instrument Co. Arzac Electronics Inc.
Artronic Instrument Co.
Artronic Instrument Co.
Artronic Instrument Co.
Artlantic Transformer Corp.
Atlantic Transformer Corp.
Atlas Engineering Co. Inc.
Ault Magnetics, Inc.
Ault Magnetics, Inc.
Ballastran Div., Telex, Inc.
Ballastran Div., Telex, Inc.
Ballastran Div., Telex, Inc.
Ballastran Div., Telex, Inc.
Bell Aerosystems Co.
Berkshire Laboratories
Bitterman Electric Co. Inc.
Burraughs Corp.
Bush Transformer Corp.
CBC Electronics Co. Inc.
Caledonia Electronics & Transformer
Co. Co. California Magnetic Control Corp. Campbell Co. Inc., Colin

Canadian Marconi Co. Carad Corp.
Coust Coil Co.
Cohu Electronics, Inc., Kin Tel Div. Coil Co. of America, Inc. Coilcraft, Inc. Collins Radio Co., Components Div. Components for Research, Inc. Components for Research, Inc.
Cycle Transformer Corp.
DX Radio Products Co. Inc.
Decco, Inc.
Dietz Design, Inc.
Double "E" Products Co.
Dresser Electronics, HST Div.
Electro Winders Co. Inc.
Electronic Transformer Corp.
El-Rad Mfg. Co.
Erie Resistor Corp.
Forbes & Wagner, Inc.
Foster Transformer Co.
Freed Transformer Co.
Freed Transformer Co., Ind'l Sales
Oper. Oper. General Magnetics, Inc. Geotronic Labs, Inc. Geotronic Labs, Inc.
Goslin Corp.
The Gudeman Co. Inc.
Hamilton Watch Co. Ind. Prods. Div.
Hammond Mfg. Co. Ltd.
Hyperion Industries Inc.
Industrial Transformer Co.
Instrument Systems Corp.
Instrument Systems Corp.
Instructionic Transformer Loc. Intercontinental Electronics Corp.
JB Electronic Transformers, Inc.
JFD Electronics Corp.
Johnson Electronics Inc.
K-V Transformer Corp.
Kapitol Magnetic Corp.
Kenyon Transformer Co. Inc.
Keystone Products Co.
Lockheed Electronics Corp., Avionics
E. Ind Prode Div. & Ind. Prods. Div. Lockheed Electronics Co., Military Lockheed Electronics Co., Military Sys. Div.
Luther Electronic Mfg. Co.
Magnalectric Co.,
Magnetic Circuit Elements Inc.
Magnetic Components Inc.
Magnetic Inc.
Matsushita Electric Ind. Co. Ltd.
Microdot, Inc.
Microsecond Electronics, Inc.
Middwar, Coll. 6. Transferrer, Co. Mid-West Coil & Transformer Co.
Military & Computer Electronics Corp.
Mode Electronics Inc.
Modelectric Products Corp. Modelectric Products Corp,
Moloney Electric Co.
Neshaminy Electronic Corp.
New England Transformer Co.
New York Coil Co. Inc.
New York Transformer Co., Div. Nytronics Inc.
North Hills Electronics Inc.
Notch Hills Electronics Inc.
Nytronics Inc. Essex Electronics Div.
Ortho Industries Inc.
Osborne Electronics Corp.
Ovitron Corp.
P C A Electronics Inc.
Pearson Electronics, Inc. P C A Electronics Inc.
Pearson Electronics, Inc.
Philips' Gloeilampenfabrieken N.V.
Physical Science Corp.
Polyphase Instrument Co.
Precision Electronics Inc.
Prototype Transformer Corp.
Pulse Engineering Inc.
RIL Electronics Corp.
Padiation at Stanford Radiation at Stanford
Ram Electronics Inc.
Raypar Electronics Inc.
Raytheon Co., Microwave and Power Tube
Div. niv.

Redman Electronics Corp.

Reed & Reese Inc.

Rytron Co., Inc.

San [e] Instrument Co. Ltd.

Sangamo Electric Co.

Servomechanisms/Inc.

Sickles F W Div., Gen. Instrument

Servomechanisms/Inc.
Sickles F W Div., Gen. Instrument
Corp.
Specialty Electronics Development
Corp.
Sprague Electric Co. — see C26
Stancor Electronics Inc.
Stanley Transformer Co.
Sterling Transformer Corp.
Tamura Seisakusho Ltd.
Technitrol, Inc. — see C26
Tenco Electronics, Inc.
Thordarson-Meissner Mfg. Co.
Titan Transformer Co.
Torotel Inc.
Torotron Corp.
Trak Electronics Co. Inc.
Transformer Engineers
Transformer Engineers
Transformer Engineers
Transformer Sinc.
Titad Transformer Corp.
Universal Toroid Coil Winding Inc.
Utrad Corp., Div. Litton Industries
Valor Instruments, Inc.

Wahlgren Magnetics Div., Marshall Wells Electronics Co. Westinghouse Distribution Transformer Dept. Wheeler Electronic Co., Div. Sperry Rand Corp. Wilcox Electric Co.

T17. TRANSLATING EQUIPMENT

CG Electronics (Div. of Gulton Industries, Inc.) -- see Dl
Codamite Corp. -- see C22
Computer Control Co., Inc.
Connecticut Technical Corp., 3000
Main St., Hartford 5, Conn. / translating equipment / DESCR: relay
translators for changing single line
coding to 5,6,7,8 level codes or
various levels to other levels and
formats / USE: code conversion in
data and test systems / \$250 to
\$1000 / T17
Electronic Engineering Company of
California, 1601 E. Chestnut Ave.,
Santa Ana, Calif. / computer tape
conversion service / DESCR: converts magnetic tape, paper tape,
cards from one media to another. CG Electronics (Div. of Gulton Indusverts magnetic tape, speer tape, cards from one media to another, from one code or format to another, from one code or format to another, from one code or format to another, Translations to/from IEM, Burroughs, RCA, Rem Rand, GE, & NCR equipment / - / depends on quantity and number of tapes to be translated / T17 Hyperion Industries, Inc.
International Business Machines Corp., Federal Systems Div.
Radio Corp. of America, Electronic Data Processing
The Superior Electric Co., 383 Middle St., Bristol, Conn. / SLO-SNN® Translators / DESCR: pulse-to-step converters designed for use with SLO-SIN Motors connected for incremental stepping / USE: for positioning, indexing or indicating / \$325 to \$375 / T17 to \$375 / T17

T18. TYPEWRITERS, ELLCTRIC, CONTROLLED

Benson-tehner Corp., 14761 Califa St., Van Nuys, Calif. / Electrotyper Model C / DESCR: electric typewriter modified for renote control of number keys, space, tabulate and carriage return / DESCR: data readout, data logging / \$950 to \$1250 / TIB Connecticut Technical Corp. -- see P9, T6

Electro-Mechanical Research Inc., Adlectro-Mechanical Research Inc., Advanced Scientific Instruments Div., 5249 Hanson Court, Minneapolis, Minn., Typewriter Model A30 / DESCR: accessory to ASI 210 digital computer; Model A30 Flexowriter writes at 10 characters/sec.; has necessary electronics for input/output operation with computer / USE: for entering data into computer / \$4450 to \$12,000 T18

data into Computer / 3435 to \$12,000 / T18

Friden, Inc., 2350 Washington Ave.,
San Leandro, Calif. / Friden Flexowriter Automatic Writing Machine /
DESCR: operates under control of
punched tape, edge-punched cards or
tab cards; produces documents; punches new tape or cards for further
processing / USE: general data
processing, computer input/output,
numerical control, etc. / - / T18

Friden, Inc., *a / Friden BCP Computyper / DESCR: prepares documents
that require writing and computing,
with tab card output. All data
(numeric and alphabetic) entered
from standard electric typewriter
keyboard. Automatic computing /

(numeric and alphabetic) entered from standard electric typewriter keyboard. Automatic computing / USE: billing and other data processing / - / T18
Friden, Inc., *a / Friden Flexowriter SR Series / DESCR: remotely-controlled machines which prepare related documents (e.g., check registers) simultaneously with preparation of original document (e.g., vouchers) on the master Flexowriter. Several models available / USE: document preparation / - / T18
Friden, Inc., *a / Friden Numerical Control Flexowriter / DESCR: produces and verifies punched paper tape for numerical control of machine tools / USE: numerical control tape preparation / - / T18
Friden, Inc., *a / Friden CTB Computyper / DESCR: prepares documents that require writing and computing, All data (numeric and alphabetic) entered from standard electric type-writer keyboard, Automatic compu-

writer keyboard. Automatic comp

new books, new journals: new contributions to the

- Symbolic Languages in Data Processing: Proceedings of the Symposium sponsored and edited by the International Computation Centre, Rome, 1962 Fifty papers, and discussions, concerning the development of a general theory of symbolic languages, the present and future role of symbolic languages in the computer art. 850 pages. \$34.50
- Programming for Digital Computers by J. F. Davison "This book offers an authoritative and well-written introduction . . . intended for persons with no previous experience in programming. The book is eminently readable and deceptively thorough in its treatment of the subject." — William C. McGee in Proceedings of the IRE 186 pages \$6.00
- Third International Analog Computation Meetings, Proceedings sponsored by the International Association for Analog Computation and the Federal Council of Scientific Research, Yugoslavia, 1961 The 94 papers are mainly concerned with the development of mathematical bases, applications to statistical problems, and the automatic programming of problems. 8½ x 11½ 712 two-column pages \$49.50
- Analog Computation Applied to the Study of Chemical Processes: Proceedings of an International Seminar organized by the International Assoc. for Analog Computation Twenty-three papers dealing with analog process control, analog/digital methods, studies of chemical reactors and heat exchangers. 8½ x 11½ 172 two-column pages \$14.50
- International Bibliography of Automatic Control a new quarterly journal offering world-wide bibliographic coverage of papers and books dealing with all aspects of automatic control and allied subjects. Published with the cooperation of the National Member Organizations of IFAC (International Federation of Automatic Control) and UNESCO, Department of Natural and Exact Sciences. Volume 2 (1963) four issues: \$25.00 (Volume 1, 1962: \$30 / hardbound: Automatic Control Annual, Vol. 1: \$35)
- Proceedings of the International Association for Analog Computation a quarterly journal providing international coverage of modern computer methods and their application in research and industry. Volume 5 (1963) four issues: \$8.00 (All back volumes available)
- International Journal of Computer Mathematics a new journal offering rapid international coverage of computer-mathematical techniques of importance to computer scientists and engineers and to the users of computers. Volume 1 (four issues) 1963: \$20.00



GORDON AND BREACH

SCIENCE PUBLISHERS, INC. 150 FIFTH AVENUE, NEW YORK 11

Products and Services

ting / USE: billing and other writing-computing applications / - / T18
International Business Machines Corp., Federal Systems Div. N. V. Electrologica Underwood Corp.

VI. VISUAL OUTPUT DEVICES

Admiral Corp. Ann Arbor Laboratory, Burroughs Corp. Avnet Electronics Corp. Avtron Manufacturing, Inc. The Bendix Corp., Eclipse-Pioneer Div. Burroughs Corp., Electronic Compon-

Burroughs Corp., Electronic Components Div.

C.S.F. Compagnie Generale de Telegraphie Sans Fil.

California Instruments Corp., 3511

Midway Drive, San Diego 10, Calif./ automatic oscilloscope / DESCR:
automatically adjusts horizontal sweep speed, vertical sensitivity, and DC offset to instantly present a properly sized and positioned picture of the waveform under test / USE: automatic or programmed display (indicator) / approximately \$2500 / V1

Computer Products Inc.

Calvideo Tube Corp.

Canadian Marconi Co.

Continental Industrial Electronics

Corp.

Control Data Corp.
Co. C. Dewey Corp.
Dick Co., A.B.
DuMont Labs., Allen B., Div. Fairchild Cam. & Inst. Corp.

EMI-Cossor Electronics Ltd. EMI-Cossor Electronics Ltd.
EMI/US
Electron Technology Inc.
Electronic Tube & Instr. Div., Gen.
Atronics Corp.
Fairchild Space and Defense Systems,
a Div. of Fairchild Camera and
Instrument Corp.
Ferranti Electric Co. Inc.
General Dynamics/Flottopics Info

General Dynamics/Electronics, Info.
Tech. Div.
General Dynamics/Electronics, 3302

Pacific Highway, P.O. Box 127, San Diego 12, Calif. / S-C 1090 Direct View Display / DESCR: a high-speed display for use in real-time compudisplay for use in real-time computer monitoring, program debugging; command and control, surveillance and monitoring systems for defense, air traffic control, etc. / USE; on-line or off-line with digital computer / available on request / vi

VI The M. P. Goodkin Co. -- see C23 Harman Kardon Inc., Data Systems Div. -- see D1

Div. -- see Di Hughes Aircraft Co., Vac Tubes Prods. Div., Storage Tubes Image Instruments, Inc. Information Products Corp., 207 Bent

Information Products Corp., 207 Bent St., Cambridge, Mass. / interrogators / DESCR: modular, self-powered, computer input/output equipment with numeric or alphanumeric keyboard data entry and visual CRT data output display or typewriter hard copy output / USE: as an instantaneous, two-way communications link with random access DP equipment / \$3500 to \$7825, sales price; \$95/month to \$220/month, rental / VI International Business Machines Corp., Federal Systems Div.

Federal Systems Div.
ITT Industrial Labs Div.
International Electronics Corp.
(Mullard)

(Mullard)
Kobe Kogyo Corp.
LFE Electronics, a Div. of Laboratory
for Electronics
Litton Industries, Electron Tube Div.

Litton Industries, Electron Tube Div.
Machlett Labs. Inc.
Magnetic Aids, Inc., 11 W. 42nd St.
New York 36, N.Y. / magnetic boards
and accessories / DESCR: magnetic
visual control boards for planning,
scheduling, etc. / USE: for computer scheduling, flow charting, etc.
/ \$50 to \$150 (average set-up) / V1
Mast Development Co.,
Milgo Electronic Corp.
F. L. Moseley Co., 409 No. Fair Oaks,
Pasadena, Calif. / servo recorders
and accessories / DESCR: complete
line of servo positioned X-Y and

strip chart recorders. Also DC voltmeters, AC/DC and logarithmic converters, character printers and line curve followers / - / XY recorders \$1190 to \$6500; strip chart recorders \$625 to \$3450 / VI Mullard Overseas, Ltd.
National Union Flectric Corp.
Non-Linear Systems, Inc., P.0. Box 72b, Del Mar, Calif. / digital readouts / DESCR: three different sized digital display devices utilizing engraved edge-lighted plastic plates. Up to 12 characters per window / - / \$25 per window / VI
Northrop Nortronics — see D2A Raytheon Co., Distributor Prods. Div. Raytheon Co., Industrial Components Div.
RMS Associates, Inc. — see I2

Div.

RMS Associates, Inc. - see 12
Robotomics Enterprises, Inc. - 4504 N.
16th St., Phoenix, Ariz. / F2010
Alpha-Numerical Displays / BESCR:
solid state system accepts binary
and other coding and displays numbers, letters, words in bright l"
high in-plane characters / ISE:
computer drives F2010 system which
displays messages / \$1350 to \$2350
/ V1
Scopes Co., Inc.
Special Products & Applied Research
Div., The de Havilland Aircraft of
Canada, Ltd.
Sylvania Elec. Prods. Inc., Electronic
Tubes

Canada, Ltd.
Sylvania Elec. Prods. Inc., Electronic Tubes
The Teleregister Corp., 445 Fairfield
Ave., Stamford, Conn. / electric
stock quotation boards / DESCR:
display boards with numeric indicators displaying close, open,
high, low and last prices of selected
stocks, or other items depending
upon application / ISE: stock quotation system and other data-dissemination systems / upon request / VI
The Teleregister Corp., *a / CathodeRay Tube Display Device (CRD) /
DESCR: two-gun cathode-ray tube
within compact housing operating in
conjunction with separate charactergenerating and communications equipment / ISE: as visual display device with data-processing systems /
upon request / VI
The Teleregister Corp., *a / message
composer with visual display /
DESCR: combination cathode-ray tube
display and alphanumeric keyboard
printer complete with magnetic drum,
solid-state logic and power supplies
/ USE: as input/output device or
subsystem for data-processing systems / upon request / VI
Thomas Electronics
Transistor Electronics Corp., Box 6191,
Minneapolis 24, Minn, / transistorized readout devices / DESCR: internal solid state circuitry controls nixie tube from low voltage
binary coded or decimal input signals. Reads out in decimal or octal
display / USE: computers and instruments, for digital readout / \$60 to
\$100 / VI
Transistor Electronics Corp., *a /
TEC-LITE Indicator Devices / DESCR:

ments, for digital readout / \$60 to \$100 / VI
Transistor Electronics Corp., *a / TEC-LITE Indicator Devices / DESCR: miniature and subminiature indicators; switch-indicators with permanent or replaceable neon or incandescent lamps. Wide range of lens colors and terminals offered. Switches also available / USE: electronic devices of all types / 20¢ to \$4 / VI
Transistor Electronics Corp., *a / TEC-LITE Low Voltage Neon Indicator / DESCR: internal solid state circuitry amplifies low voltage supply (2VIC minimum) to fire high voltage neon lamp / USE: ground support equipment, battery operated portable systems / \$9 to \$10 / VI
Transistor Electronics Corp., *a / TEC-LITE Transistorized Indicators / TEC-LITE Transistorized Indicators /

ransistor Electronics Corp., *a/TEC-LITE Transistorized Indicators / DESCR: neon and incandescent lamp indicators controlled (switched on and off) by internal solid state circuitry functioning from low voltage or current levels / USE: console display devices for computers, missile guidance systems / \$4 to \$10 / V1

Twentieth Century Electronics Ltd. Ulmer Co., H.W. Waterman Products Co. Inc.

- END -

SURVEY OF COMPUTING SERVICES

Following is a survey of computing services.

The survey form asked for:

1. Brief description of the types and quantities of computing machines and equipment which you have?

2. Brief description which you specialize	types	of	problems
3. Number of employee 4. Year established?			

5. Any remarks?__

Filled in by Title Organization Address____

For school, college, and university comput-ing services, see the section of the directory "School, College, and University Computer Cen-ters".

See also in the "Roster of Products and Services", entries under the heading "C27. Computing Services".

Each full entry from an organization that replied to the survey is in the form of: Name and address of computing service / Equipment / Problems specialized in / Size(number of employees) Established(year of establishment). Other entries should be self-explanatory.

The abbreviations used include the following:

Ss - Small size, up to 50 employees; Ms - Medium size, 50 to 500 employees; Ls - Large size, over 500 employees; Se - established a short time ago, 1951 or

Me - established a "medium" time ago, 1931 to 1950; Le - long established organization, 1930 or

earlier;
*C - "Checked" by the organization; "63"
means "ih 1963", etc.
G62 - "information gathered in 1962 but not
checked by the organization"

All additions, corrections, and comments will

Actuarial Computing Service Inc., 1389 Peachtree St., Atlanta 9, Ga. / EQPM: - / PROB: actuarial of any type; specializing in insurance applications / Ss (6) Sc (1956) / % C 63
Admiralty Research Laboratory, Queens Rd., Teddinqton, Middlesex, England / EQPM: Ferranti Pegasus / PROB: - / C 62
Aeronutronic, A Div. of Ford Motor Co., Mathematics and Computing, Research Operations, Ford Rd., Newport Beach, Lalif. / EQPM: Philco 2000 / PROB: missile trajectories, rocket motor performance, aerothermodynamic heating, ordinary and partial differential equations, business data processing / Ms (60, mathematical services personnel) Sc (1956) / % C 63
American Machine & Foundry Co., Digital Computer Facility, 140 Greenwich Ave., Greenwich, Conn. / EQPM: IBM 650 magnetic drum machine with alphabetic and special character device; IBM 653 floating decimal arithmetic unit and 3 index registers; digital plotter (10-½" x 17"), plus standard peripheral equipment / PROB: general engineering calculations; shock and vibration; nuclear reactor, electrical, and petroleum engineering; data processing / Ss (6) Sc (1956) / % C 62
The American University Center for Technology & Administration, 1901 F St. N.W., Washington 6, D.C. / EQPM: two LGP-30, one Flexowriter, one Photoelectric Paper Tape Read-Punch / PROB: education, systems design, information storage and retrieval, governmental / Ss (9) Sc (1950) / % C 63
Association of Data Processing Service Organizations, 1000 Highland, Abington, Pa. / EQPM: -

/ Co. Nasociation of Data Processing Service Organiza-tions, 1000 Highland, Abington, Pa. / EQPM: -/ PROB: service center management / Ss (2) Se (1960) / °C 62

(1960) / °C 62 Automated Accounting Center of Conn., 7 Field St., Waterbury 20, Conn. / EQPM: Bendix G-150 gen-eral purpose computer, National Cash Register Electronic Magnetic Ink Reader-Sorter coupled to and under control of G-150, 2 magnetic tape units with search and erase/rewrite feature,

AN-1 paper tape reader and punch (5, 6, 7 or 8 channel tape), off-line Flexowriters, Automated Postronics for ledger posting, magnetic ink printing equipment and paper tape to magnetic ink conversion equipment / PROB: commercial data processing including accounting functions, inventory and production control, statistical inventory forecasting, payroll, demand deposit accounting, engineering, and miscellaneous applications / Ss(7) Se(1959) / *C 63
Automation Management, Inc., 25 Brigham St., Westboro, Mass. / EQPM: performance computers: Perk I records actual production rate as a per cent of standard perforance compute by min-

Perk I records actual production rate as a per cent of standard performance minute by minute; Perk II records per cent averaged from beginning of production run / PROB: management and automation engineering; integrated systems and processes / Ss(3) Se(1955) / *C 63
Bell Aerosystems Co., P.O. Box 1, Buffalo 5, N.Y. / EQPM: IEM 7090 computer; 2 IBM 1401's; IBM punch card equipment / PROB: engineering calculations, payroll, production control, budgetry control, inventory and accounts payable / Ms(90 in Data Center) Me(1956) / *C 62
Bell Telephone Manufacturing Co. Automation

getary control, inventory and accounts payable / Ms (90 in Data Center) Me (1956) / *C 62
Bell Telephone Manufacturing Co., Automation Systems Division, Berkenrodelei, 33 Hoboken Antwerp, Belgium / EOPM: STANTEC computing system / PROB: - / G 62
Bendix Computer Div. of the Bendix Corp., 5630
Arbor Vitae, Los Angeles 45, Calif. / EOPM: not generally considered a service bureau, but do market time on Bendix G-15's at factory—marketing headquarters / PROB: no specialty, programming services available / Ls (700) Se (1952; computer div.) / *C 62
Bendix Systems Division, 3300 Plymouth Rd., Ann Arbor, Mich. / EOPM: Bendix G-20 large scale digital computer, 32,000 word case storage, 8 magnetic tape stations, high speed printer and other off-line capabilities. High speed analog computer, COED II Digital Display and control console. Punched card processing facilities. PERT, linear programming, operation analyses, other management services and a FORTRAN compiler are available / PROB: engineering, satellite and missile simulations, data processing and reduction; linear programming and PERT, etc. / Ms (55 computer related employees of 1200 Bendix Systems Div. personnel) Se(1956) / *C 62
Berkeley Division, Beckman Instruments, Richmond

62
Berkeley Division, Beckman Instruments, Richmond Computation Center, 2200 Wright Ave., Richmond. Calif. / EQPM: 50-amplifier general analog computer / PROB: research and computation techniques, general purpose problem solving / Ss(5) Sc(1956) / *C 62
Ernest E. Blanche & Associates, Inc., 10335 Kensington, Pkwy., Kensington, Md. / FOPM: IBM

Ss(3) Se(1950) / *C 62'

Ernest E. Blanche & Associates, Inc., 10335 Kensington Pkwy., Kensington, Md. / EQPM: IBM
1401 System with magnetic tape and punch card input and outpur (4 tape drives), high speed printer; 42 IBM punch card machines; high-speed microfilm camera (10-1 and 30-1 reduction); 3 microfilm readers (1-18 and 1-30 magnification) / PROB: statistical analysis, correlation analysis, analysis of variance, frequency distributions, probability, forecasting; accounting large volumes; traffic analysis - origin-destination studies, projection of traffic, highway and transit loading; engineering - cut and fill, highway design, highway construction; mathematical computations / Ms(105) Se(1955) / *C 63
Booz-Arlen Applied Research, Inc., 4241 Fulton Pkwy, Cleveland 9, Ohio / EQPM: access to general purpose digital and analog computers; communication computers; data acquisition, analysis and presentation equipment; control and processing equipment and specialized instrumentation. Services in all technical areas and all phases of scientific consulting from basic research through prototype design, development, and test / PROB: system management, development of detailed software, special purpose circuit design, special purpose equipment design, prototype development and other technical studies

detailed software, Special purpose circuit design, special purpose equipment design, prototype development and other technical studies / Ls(800) Le(1914) / *C 63

Burroughs Corp., Computer Facility, Marketing, 460 Sierra Madre Villa, Pasadena, Calif. / EQPM: Burroughs 220 (10,000 words core, complete punched card and paper tape input-output, 0 magnetic tape units, 25 lines per second high speed printer with 1 magnetic tape unit) / PROB: all types, scientific, data processing, etc. Used by the Marketing Div. for software development, sales promotional demonstrations, and customer training / Ss(0, plus engineers) Se(1954) / *C 62 / Canadian Armament Research and Development Establishment, P.O. Box 1427, Quebec, Canada / EQPM: ALWAC III-E / PROB: - / G 62

C-E-I-R, Inc., One Farragut Square S., Washington, O. D.C.; centers in Washington, New York, Boston, Hartford, San Francisco, Los Angeles, Houston, Mexico City, London, Paris / EQPM: Washington: IBM 7090 and peripheral equipment. New York: IBM 7090 and peripheral equipment. Los Angeles: IBM 7090. Cl 604. Houston: IBM 7090. Hartford: RCA 501 and peripheral equipment. San Francisco: IBM 7090. Boston: IBM 7090 and peripheral equipment. San Francisco: IBM 7090. Boston: IBM 7090 and peripheral equipment / PROB: linear programming, mathematical model building, operations research, military command and control systems, war gaming, information storage and retrieval, weapons systems analysis, space vehicle trajectories, transportation optimization, production scheduling, management decision-making systems, business strategy games, sampling and statistical design, site selection studies, financial analysis, marketing research, process-analysis and interindustry analysis, application of Monte Carlo methods, matrix calculations, engineering problems, reliability and quality-control programs, design of experiments and field tests, engineering and industrial research, electronics and communications, radio-spectrum utilization, value engineering, etc. / Ms (300) Se(1954) / *C 63
Clary Corp., Computer Div., 408 Junipero St., San Gabriel, Calif. / EQPM: Clary DE-60 digital computer, operator oriented console, subroutine cartridges and automatic program control unit / PROB: numerical problems whose programming time on a large scale computer is at least five times greater than the computation time; preliminary and checkcase computations that become tedious on a rotary calculator / Ms Se(1950) / *C 62
Collins Radio Co., Communication & Data Processing Div., Dallas, Tex. / EQPM: - / PROB: computer programming and analysis services / Ls(600) Me(1933) / *C 63
Computer programming and analysis services. computer programing and analysis services. computer programming and analysis services. computer programming and analysis services.

design, market research, and consulting services for problem-solving / Ms(70) Se(1957) / °C 63

Computer Advisors to Management (CAM). Division of Statistical Tabulating Corp., 104 S. Michigan Ave., Chicago 3, Ill. / EQPM: 14 data processing and computer centers, nationwide, containing IBM 1400-series card tape systems plus peripheral equipment and conventional punch card tabulating data processing machines / PROD: professional counseling for business, science, and government in the economic evaluation and application of computer systems for management information and control / Ls(5000 Me(1933) / °C 62

Computer Engineering Associates, 350 N. Halstead, Pasadena, Callí, / EQPM: Direct Analog Computer, built by Computer Stigneering Associates, an affiliate of Susquehanna Sciences, Inc., using electronic amplifiers and passive elements (resistors, capacitors, inductors, and transformers) / PROB: dynamic mechanical and aeroelastic vibration problems; static stress analysis; heat transfer and heat flow problems / Ms(50) Se(1952) / °C 63

ComputerMat, Inc., Ill1 Wilshire Blvd., Los Angeles 17, Callíf., 1664 W. Anaheim St., Wilmington, Callíf. / EQPM: IBM 1620 Data Processing System, complete data processing or "self-serve" use; Calcomp X-Y digital plotting; complete line IBM tab equipment / PROB: civil, structural, petroleum and chemical engineering, numerical control, process and systems analysis, operations research, economic analysis, feasibility studies, business and special commercial applications research, economic analysis, feasibility studies, business and special commercial segundo. Calif. (General Offices); 660 Madison Ave., New York 21, N.Y. (New York Div.); 3773 Richmond Ave., Houston 27, Tex. (Houston Div.); 18 Maddox St., London W.I. England (London Office) / EQPM: small to large scale computers available; 1107 computer and associated equipment in Los Angeles / PROB: computing, consulting, analysis, and programming, and machine computation services; provides contracted analysis, programming and/or machi



one National-Elliott 405, 2 National-Elliott 803 / PROB: scientific, mathematic and engineering; market survey, statistics, project planning and optimisation; business and clerical data processing, only by arrangement with associates, Data Processing Centres, National Cash Pacific Co. Marylebog Rd. London N.W.

ciate's, Data Processing Centres, National Cash Register Co., Marylebone Rd., London N.W.1. England / Ms(75) Se(1954) / *C 63 {
Control Data Corp., 8100 34th Ave. S., Minneapolis 20, Minn. / EQPM: Control Data 1604-A digital computer, advanced, large scale, solid state; Control Data 924-A digital computer, medium scale, solid state; Control Data 3600 advanced large scale digital computer, solid state; Model 180 Data Collector, Model 606 Magnetic Tape Units, Model 166 Line Printer, Model 1612 Line Printer, Model 167 Card Reader / PROB: business, industrial, accounting, engineering, scientific, data processing / Ls(2700) Se(1957) / *C 63
Control Technology, Inc., 1232 Belmont Ave., Long

Set1937 / Co. Control Technology, Inc., 1232 Belmont Ave., Long Beach 4, Calif. / EQPM: no computing devices, but in late 1963 or early 1964 expect to have but in late 1963 or early 1964 expect to have computing facility including analog, digital and hybrid; use facilities such as CEIR, CUC, EAI, etc. / PROB: hybrid, digital and analog computation. PERT, PERT/COST, CPM, linear programming, mathematical model building, simulation, Monte Carlo methods, statistical analysis, all scientific and engineering problems / Ss(12) Se(1960) / *C 63

Sc(1960) / *C 63
Cook Research Laboratories, subdivision of Cook Electric Co., Morton Grove, Ill. / EQPM: Univac Solid State 90 Computer, card input-output and high speed printer / PROB: trajectory calculations; data reduction; many varied scientific problems; inventory control; payroll / Ls(4700) Le(1897) / *C 62
Data Computing Corporation, 229 Baldwin Rd., Hempstead, N.Y. / EQPM: IBN 1401's and peripheral equipment / PROB: business, accounting, engineering and statistical projects / Ms(80) Sc(1954) / *C 63
Data Processing, Incorporated, 1334 Main St..

Se(1934) /*C 63
Data Processing, Incorporated, 1334 Main St.,
Waltham 54, Mass. / EQPM: regular access to a
variety of computers, up to IBM 7094 / PROB;
analytical, programming, and general consulting
services for scientific and advanced business
applications. Wide range of problem-solving
services, including problem statement, programming, computation, and result evaluation;
will assume responsibility for all phases. Emphasis on matching programming and computing
techniques to human requirements / Ss(12)
Se(1957) / *C 63
Jian Laboratories, Inc., 611 Broadway, New York

phasis on matching programming and computing techniques to human requirements / Ss(12)
Se(1957) /*6 63
Dian Laboratories, Inc., 611 Broadway, New York
12, N.Y. / EQPM: Dian 120 computers, 444 summing and integrating amplifiers, 70 multipliers, associated function-generating equipment, recorders and plotting boards / PROB: ordinary and partial differential equations: heat transfer, aircraft guidance and control, nuclear reactor kinetics, process control, simulator design / Ss(12) Se(1955) /*6 63
EAI Computation Center at Los Angeles, Inc., 1500
E. Imperial Highway, El Segundo, Calif. / EQPM: 10 EAI Analog Computers: including 8 Pace 231R computers, 1 model TR-10, 1 model TR-48 (total of 730 amplifiers and associated mbn-linear equipment). High-speed repetitive operation available on three consoles, i.e., one 120 amp., one 80 amp. (Rep-op), one 100 amp., two 40 amp., two 80 amp. computers / PROB: pneumatic and hydraulic control systems; aircraft, missile and aerospace applications; microwave electronics, petroleum-chemical process control; nuclear reactor simulations; physiological medical applications; water conservation studies; statistical correlation studies; iterative and hybrid applications / Ss(11) Se(1956) /*C 62
Electronic Associates, Inc., P. O. Box 562, Princeton, N.J. / EQPM: 3 model 231-R fully expanded analog computer systems, each equipped with 8-channel rectilinar recorder and 11" x 17" X-Y plotter, one Model TR-10 desk-top transistorized analog computer; 1 repetitive operation excessory for oscilloscope display, 1 prototype HTDAC (Electronic Associates' new Hybrid-Digital-Analog Computer) / PROB: aero-space and weapons systems analysis, industrial process and chemical industries studies relating to the design optimization and analysis of processing engineering problems requiring mathematical formulation and computer solution. Bulletins, rate schedule, and unclassified problem reports available on request / Ss(30) Se(1954) /*C 62
Ferranti Electronics, A Div. of Ferranti-Packard Electric Ltd., Data

request / Ss(30) Se(1954) / *C 62
Ferronti Electronics, A Div. of Ferranti-Packard
Electric Ltd., Data Systems Dept., 16 Industry
St., Toronto 15, Canada / EQPM: Ferranti Limited Pegasus Digital Computer; large program
library available for this medium-size, digital,
general purpose computer / PROB: applications
in industry, science and engineering / Ms(400)
Le(1913) / *C 63
Pr. Ivan Florez, Consultant, So, Unchildren De-

Le(1913) / °C 63 r. Ivan Florez; Consultant, So. Huckleberry Dr., Norwalk, Conn. / EQPM: - / PROB: logic design of general purpose computers; special purpose computer design feasibility and proposal; man-machine inter-face; math. models; character recognition; educational seminars / Ss(3) Se(1960) / °C 63

GTS Instrument Co., Inc., 180 Needham St., Newton, Mass. / EQPM: compressed timescale analog computer, including statistical and iterative analyzers and programmers. Equipment available includes both non-linearity simulators such as multipliers, function generators, lag units, etc. Available equipment will handle all conventional applications / PROB: statistical and iterative techniques, including automatic control, basic physical phenomena, evaluation of data, expressible by differential and algebraic equations. Specialize in wide bandwidth operation for high dynamic accuracy in compressed timescale computing with ability to read out in real time / Ss(40) Se(1955) / °C 62 Halbrecht Associates, Inc., 332 S. Michigan Ave., Chicago 4, 111.; 11691 National Blvd., Los Angeles 63, Calif. / EQPM: - / PROB: recruitment and placement, nationally, at all levels, of persons engaged in electronic data processing, operations research, mathematics, management of scientific activities; also personnel research and consulting with reference to organization of data processing and operations research departments / Ss(9) Se(1957) / °C 63 Honeywell, Special Systems Div., Queen 6 S. Bailey Sts., Pottstown, Pa. / EQPM: Honeywell 290 digital computer system with 4096-word core memory, 16, 304-word drum memory, 170 typewriter, paper tape in and out. Double console analog computer (modified EAI 231R) with 220 amplifiers and electronic switching; repetitive operation accessory for oscilloscope display; servoset potentiometers; digital 1/0 system with typewriter and paper tape equipment; digital for hybrid computation / PROB: control unit; X-Y plotters; strip chart recorders. Linkage system to connect analog computer and digital for hybrid computation / PROB: control analysis and simulation / Ss(15) Se(1962) / °C 63

*C 63
IBM World Trade Corporation Data Center, Avda.
Pte. Roque Sgenz 933, Buenos Aires, Argentina /
"EQPM: IBM 650; IBM 1401 with 4 units; complete
IBM peripheral equipment / PROB: program
courses and conferences on the possible applications for the future use of IBM equipment in
Latin America / G 62
The I.D.R. Co. (Industrial Data Reduction), 4740
Spruce St., Philadelphia 39, Pa. / EQPM: large
scale digital computing equipment. IBM 1401 on
premises, Other machines used as needed / PROB.

Spruce St., Philadelphia 39, Pa. / EQPM: large scale digital computing equipment. IBM 1401 on premises, other machines used as needed / PROB: full line of data processing. Service from analysis through execution. Publishing industry services a specialty / ?s Sc(1961) / *C 62
Ing. fra Nordisk ADB AB, Fack, Solna 1, Sweden; Subsidiaries: Nordisk ADB, Wäerner & Co., Rämistrasse 6, Zürich, Nordisk ADB belische GmbH, Bonner Strasse 117, Dusseldorf, Tyskland Iberica ADB, Torre de Madrid, Madrid 13, Spain / EQPM: Facit EDB 3 computer with 4000 core memory and 8000 drum memory, magnetic type and carosel type. Line plotter, made by Dobbie McInnes (Electronics) Ltd., Scotland / PROB: field data processing in civil engineering, road calculations, and a special department for structure calculations / Ss(25) Sc(1959) / *C 62
Institut für Angewandte Physik Abteilung Rechenmaschine, Schloss-Platz 5, Münster (Westfalen) Germany / EQPM: 2 22 electronic computer / PROB: - / G 62
Institute for Scientific Information, 33 S. 17th St., Philadelphia 3, Pa. / EQPM: 10 IBM 026
K.P., 8 IBM 956 Ver., 1 IBM 033 Sort, 1 IBM 557 / PROB: scientific information, processing scientific journals, abstracting chemical literature, indexing scientific literature / Ms(65) Se(1959) / *C 63
I/S Datacentralen of 1959, Ved Stadsgraven 15, Copenhagen 5, Demmark / EQPM: 2 IBM 1401-4K-

scientific journals, abstracting chemical literaruture, indexing scientific literature / Ms(65) Se(1958) / *C 63
I/S Datacentralen of 1959, Ved Stadsgraven 15, Copenhagen 5, Denmark / EQPM: 2 IBM 1401-4K-3/729-2; 1 IBM 7070-10K-6/729-4; input: 80 cols. punched card - magnetic tape; output: magnetic tape-1401 printing or punching; early card read 7070, tape switching device: 7070 up to 8 tapes, floating decimal; 1401 up to 3 tapes / PROB: management consultant services; problem definition; planning; programming; test, etc.; machine operating; quality control; available to all public institutions and to customers outside the state, municipalities and the parish organizations for all sorts of computations / Ms(120) Se(1959) / *C 63
The ITT Data Processing Center, P. O. Bos 285, Paramus, N.J. / EQPM: 1 IBM 7090 large computer, 1 IBM 7070 large computer, 4 IBM 1401 medium computers, one 407 tabulator, two 519 reproducers, one 557 interpreter, one 087 collator, two 082 sorters, five 056 verifiers, fourteen 026 keypunches transceivers, 250 programmers and analysts. Control our own IBM 7090 computer with a backup of communications equipment from the whole ITT System / PROB: business data processing, scientific computing, engineering calculations, statistical analysis, programming, systems analysis, 7090, 7070, and 1401 block time, communications, data transmittal / Ms(300) Se(1958) / *C 62
KCS Ltd., 20 Spadina Rd., Toronto 4, Canada; KCS (Quebec) Ltd., 1170 Beaver Hall Sq., Montreal 2, Canada / EQPM: IBM 7070, 6 tapes and ancillary equipment / PROB: traffic research; data

processing; scientific calculations; linear programming; simulation; etc.; for business, industry and government / Ms(90) Se(1954) /

industry and government / Ms(90) Se(1954) / *C 63
Ling-Temco-Vought, Box 5003, Dallas 22, Texas / EQPM: IBM 7090 digital computer with 6 IBM 1401 computers (1000 amplifier analog facility with auxiliary equipment including hybrid tie-in to two ASI-210 digital computers / PROB: aerodynamics, controls, numberical control for machine tools, electrical load flow, flutter analysis, weight accounting, heat transfer, navigational computations, celestial mechanics, manufacturing control, personnel time accounting, and other scientific and accounting applications / Ms(270) Me(1949) / *C 63
Ling-Temco-Vought, Inc., Data Processing and Computing Facility, Arlington, Texas / EQPM: one IBM 7090, 32K computer with 12 tapes; two 4K, two-tape 1401's; one 8K, four-tape 1401; one 16K, six-tape 1401; two ASI analog computers, with all peripheral equipment / PROB: program and process all types of scientific engineering problems to support this Company; also business or accounting problems such as payroll, cost distribution, budgets, inventories, personnel record support, facilities, etc. / Ms(270) Se(1961) / *C 63
Edwin A. Lipps Engineering, 1511 Colorado Ave., Santa Monies Calif / FDPM: complete line of

or accounting problems such as payroll, cost distribution, budgets, inventories, personnel record support, facilities, etc. / Ms(270)
Se(1961) / *C 63
Edwin A. Lipps Engineering, 1511 Colorado Ave., Santa Monica, Calif. / EQPM: complete line of instrumentation type magnetic record heads for all types of instrumentations / PROB: specialize in highly technical custom applications / Ms(50) Me(1947) / *C 63
Litton Systems, Inc., Guidance and Control Systems Div., 5500 Canoga Ave., Woodland Hills, Calif. / EQPM: one IBM 704 and 1401 with 32K and 8K words core storage respectively. Peripheral equipment: twelve 727 units, sixteen 024, 026 key punches, thirteen 056 verifiers, five 063, 064 sorters, thirteen collators, four 591 reproducers, four 523 summary punches, two 540, 557 interpreters, eight 407 tabulators, one 108 statistical sorter and one 604 calculator / PROB: engineering, scientific, business and manufacturing problems. Fortran language programs in present use with ALGOL use started February 1962. Everything from assembly and sorting programs to Monte Carlo statistical programs exist in the Litton Library / Ls(Litton Industries, 31,000; Litton Systems, Inc., 7500) Se(1953) / *C 62
Lyndeboro House — name changed to Tempus Operations Consultants, which see
Mathematischer Beratungsdienst, Kleppingstr. 26, Dortmund, Germany / EQPM: electronic computer ELECTROLOGICA XI; 8192 core store memory; 4096 words fixed store; 2 punched tape readers (150 ch/sec); l high speed paper tape punch (25 ch/sec); one typewriter / PROB: civil engineering, chemical technology; operations research, data processing with punched tape and punched card; engineering, ship building; other mathematical and physical problems / Ss(40) Sc(1957) / *C 62
Multnomah Data Processing Center, 430 N.W. 10th Ave., Portland, Ore. / EQPM: IBM 1401 Kg and System; IBM 1410 40K, five tapes with on-line reader and printer. Data processing equipment includes: I IBM 407 dNK, five tapes with on-line reader and printer. Data processing equipment includes: I SM 4

offices in Seattle and Boise / Ms(55) Se(1950) *C(63) National Bureau of Standards, Computation Laboratory, 415 South Bldg., Washington 25, D.C., successor of the Mathematical Tables Project, New York, 1938, which pioneered in using punched-card equipment for solving scientific problems and preparing mathematical tables / EOPM: .IBM 7090 with 32,000 word core, 10 tapes (7291V); IBM 1410 with 40,000 character memory, floating-point feature, 5 tapes (729 IV); punched-card peripheral equipment / PROB: problems arising in the physical sciences, engineering, and operations research; numerical experimentation; statistical analysis; preparation of mathematical tables; etc. / Ss(45) Me(1947) / *C 63

The National Cash Register Co., Dayton 9, Ohio / EOPM: chain of NCR Data Processing Centers at Jamaica, L.I., N.Y.; Toronto, Ontario, Canada; Chicago, Ill.; Los Angeles and San Francisco, Calif.; St. Louis, Mo.; and Houston, Texas. New York: 304 system with 4k memory, offiline input card and tape, 8 magnetic tapes, two offiline high speed alpha line printers; 315 system with 20k memory, magnetic tapes, CRAMS, paper tape, card, magnetic character sorter in, paper tape, card, line printers out. Dayton, Ohio: 304

- (same as N.Y.) and two 315's. Hawthorne,
 Calif.: 304, 315 (same as N.Y.). Denver, Colo.
 and Richmond, Va.: one 315 each / PROB: wide
 range of data processing applications including
 accounts receivable, sales analysis, expense
 distribution, job cost records, inventory accounting, merchandise control, deposit accounting for savings banks and savings and loan
 associations. patient accounting for medical and
 dental professions. Input for these applications is created on customers' premises by wide
 line of NCR machines coupled to tape recorders,
 card punches, etc. Have begun to service NCR
 sales registers and adding machines equipped
 with NCR optical type font. NCR data processing centers employ program generators which, if
 applicable to the customer's problem, substanitally reduce programming charges and gettingstarted costs, and also enable customers to
 choose a convenient starting data for processing / Ms(150 in computing services) Se(1960,
 DP Centers) /* 2C 63
 National Physical Laboratory, Mathematics Div.,
 Teddington, Middlesex, England / EQPM: DEUCE
 and ACE / PROB: numerical analysis, applied
 mathematics, theoretical physics, data processing / Ms(60) Me(1945) /* 2C 63
 Naval Research Establishment, Grove St., Dartmouth,
 Nova Scotia, Canada / EQPM: Digital:
 IBM 7090 (second IBM 7090 by 1 November 1962);
 3 IBM 1401's (two to have double printers); 3
 IBM 7044's on order for mid 1963; 2 IBM 1301's
 on order for early 1963; 1 IBM 607 with 407 and
 high-speed plotter; miscellaneous punch card
 equipment. Analog: (as calculators) 416 d-c
 operational amplifiers: 20 servo multipliers;
 30 channels of electronic multiplication; 4
 resolvers; 37 function generators; 8 recorders;
 4 special coefficient racks. Analog: (as
 simulators and model testers) 142 d-c operational amplifiers, 5 recorders. Data Reduction:
 (for reducing test data) 1 Telereadex againg;
 operations research; reconnaissance data handling; engineering and scientific research and
 development; all business data processing including financial,
- N.V. Electrologica, Stadhoudersplantsoen 214, The Hague, Netherlands / EQPM: Electrologica X-1; basic unit, memory 12288 words; input: punched

N.V. Electrologica, Standarderspintsoen 214, the Hague, Netherlands / EQPM: Electrologica X-1; basic unit, memory 12288 words; input: punched tape, punched cards; output: punched tape, punched cards; output: punched tape, punched cards; output: punched tape, punched cards, outputwriter punched card read and punch unit (7200 cards per feed per hour) / FROB; programming, system analyses / 6 62 Ontario Dept. of Highways, Domsview, Ontario, Canada / EQPM: IBM 659 - 4000 word memory, 543 input unit; 544 output unit, 4 mag. tapes. I.A.S.; floating point arithmetic, 1 IBM 407; 12 IBM 026 keepunch; 8 IBM 056 verifier, 5 IBM 003 / FROB: traffic studies; minimum route gravity model, traffic assignment; annual average daily traffic prediction from minimum counts, bridge design; aid in general way on request / 6 62
Philco Corp., a subsidiary of Ford Motor Co., Computer Div., Service Bureau, 3900 Welsh Rd., Willow Grove, Pa.; also Western Computing Center, 3075 Fabian Way, Palo Alto, Calif. / EQPM: Philco 2000, 1000, 4000 series all-transistor data processing systems; Basicpac FIELDATA computers / PROB: digital computers; research in computers / Ss (40) Se (1950) / *C 63
Rand Corporation, Santa Monica, Calif. / EQPM: Johnniac, IBM 7090 / PROB: linear programming, modelling, scientific computing generally / L (1910); 100 in Computer Sciences Dept.) Mc(1947) / *C 62
Recording & Statistical Corp., 100 Sixth Ave., New York 13, N.Y. / EQPM: Burroughs 260 with peripheral equipment / PROB: fire and casualty insurance; commercial / Ms(105) Le(1911) / *C 63
Reeves Instrument Corp., Roosevelt Field, Garden (1947) / *C 610 (1947) / *C 620 (1947) / *C 630 (1947) / *C 640 (19

ansurance; commercial / MS(105) Le(1911) / *C.63
Reeves Instrument Corp., Roosevelt Field, Garden City, N.Y. / - / - / Ls(1600) Me(1946) / *C.62
Space Services Division, Division of Statistical Tabulating Corp., 104 South Michigan Ave., Chicago 3, 111. / EQPM: Support Programs for Aerospace Components and Equipment. Logistics, technical writing, provisioning parts break-down, illustrated parts breakdown, spares documentation; provisioning conferences counseling / PROB: professional counseling for business, science, and government in the economic evaluation and application of computer systems for management information and control / Intimate knowledge of both logistic support specifications (government or manufacturer) and data processing techniques / Ls(5000) Me(1933) / *C.62

Statistical Tabulating Corporation, 104 S. Michi-

gan Ave., Chicago 3, Ill. / EQPM: 14 data processing and computer centers located in principal cities, coast to coast, containing complete complements of EAM equipment and 1401 card and/or tape computers / PROB: all phases of management control and reporting for industry, business, science and government. The oldest and largest independent data processing and computer service in America / Ls(5000)
Me(1933) / *C 63
vstem Development Corp., 2500 Colorado Ave.

and largest independent data processing and computer service in America / Ls(5000) Me(1933) / *C 63
System Development Corp., 2500 Colorado Ave., Santa Monica, Calif. / EQPM: IBW 7090; Philoo S-2000; CDC 1604; AN/FSQ-1 (SAGE Military Computer); AN/FSQ-32; AN/FSQ-8; Philoo 2400; CDC 160A; Bendix G-15; IBM 1401 / PROB: specialize in the design and development of command, control, and management systems for all military, governmental, scientific, and educational applications / Ls(4000) Se(1957) / *C 62
Task Force, Division of Statistical Tabulating Corp., 104 South Michigan Ave., Chicago 3, Ill. / EQPM: organizational problem-solving with one or more temporary office personnel in various skill families (data processing and computer operators, programmers, and supervisors; executive and technical; 'voing and stenographic; bookkeeping and office machines; clerical) for conversions, peak loads, unusual situations, second shift operations, etc. / PROB: administrative management, scientific management, engineering and general data processing, programming, systems, analysis, and consultation / Ls(5000) Se(1933) / *C 62
Tabulating and Business Services Inc., 136 W. 52nd St., New York 19, N.Y. / EQPM: 1401 tape system; 407's and other EAM equipment; 40 024's and 056's / PROB: sales analysis, employees census, and a variety of complex data processing problems including programming / Ms(110) Se(1956) / *C 63
Tata Institute of Fundamental Research, Colaba, Bombay 5, India / EQPM: TIFRAC: a digital

ing problems including programming / Ms(110) Sc(1956) /*C63
Tata Institute of Fundamental Research, Colaba, Bombay S, India / EQPM: TIFRAC: a digital computer, 2048 core memory (40 bits) teleprinter, C.R.O. as outputs, punched tape input and magnetic tape as auxiliary buffer memory / PROB: computation, data processing, numerical mathematics, programming languages, development of computers; programming languages, development of computers; programming courses on TIFRAC / SS(35) Sc(1955) / *C63
Technical Advisors, Inc., Municipal Court Bldg., Ann Arbor, Mich. / EQPM: one RFC 4000 with multiple input/output devices / PROB: surveying and civil engineering computations / Ss(13) Sc(1956), computations) / *C63
Telecomputing Services, Inc., 0155 Van Nuys Blvd., Stc. 250, Punoram City, Calif. / EQPM: one EMM 709, two IBM 7090's, five IBM 401's, one GE 225, two Honopwell 400's, one IBM 620, one IBM 709, one IBM 704, one IBM 1620, one IBM 610, six Electronic Associates analog computers, plus a wide variety of scientific raw data measurement systems, and two automatic telemetry data reduction systems / PROB: post-flight and real-time data reduction; theoretical analyses involving rocket propulsion studies and space flight. Spacegraft design engineering flight and real-time data reduction; theoretical analyses involving rocket propulsion studies and space flight; spacecraft design engineering problems; aeromedical problems; and business data processing problems such as labor distribution, PERT, inventory control, etc. / Ms(400) Me(1947) '* 6 C3 Tempus Operations Consultants, 1 Lyndeboro Pl., Boston 16, Mass. / - / PROB; computation services, programming, EDP and operations research in all fields, scientific, statistical and business; unusual problems / Ss(?) Se(1961) / **C 63

Thompson Ramo Wooldridge Inc., 8433 Fallbrook Ave., Canoga Park, Calif. / EQPM: TRW-330 digital control computer; drum working memory, medium speed, powerful interrupt and input scanning capabilities. TRW-340 digital control computer; core working memory, drum bulk storage, highly efficient intermemory transfer, completely buffered input-output systems. TRW-130 (AN/UYK-1) data processing system; medium-scale, core memory, "Stored logic" militarized computer. TRW-230 scientific/engineering computer. TRW-630 information processor. Computer. TRW-630 information processor. Computer communication console; display analysis console; TRW-65 graphic control/display console; automatic full color group display system; automatic map compilation system / PROB: all problems requiring a high degree of man-machine interaction; industrial process control; television switching control; traffic control; inventory control, etc., and problems requiring the capabilities of a multiple-purpose computer / Ls(29,000) Le(1901) / *C 63
Traffic Research Corporation, a Div. of KCS Ltd., 20 Spadian Road, Toronto 4, Ontario (also Montreal and New York) / EQPM: IBM 7070, 6 tapes and ancillary equipment / PROB: traffic research; data processing; scientific calculations, linear programming; simulation; etc., for business, industry and government / Ms(90) Se(1534) / *C 63
U.S. Air Force, Digital Computation Div., Directorate of Systems Dynamic Analysis, Wright-Patterson AFB, Ohio / EQPM: Datatron 204, IBM 7094, 2-1407's / PROB: solution of scientific and engineering problems and related data re-Thompson Ramo Wooldridge Inc., 8433 Fallbrook Ave., Canoga Park, Calif. / EQPM: TRW-330 digital

D

duction for USAF research and development programs / Ms(70) Me(1950) / *C 63
U.S. Army. Computing Laboratory. Ballistic Research Laboratories, Aberdeen Proving Ground, Md. / EQPM: large-scale, high-speed digital computers: ORDVAC (Ordnance Variable Automatic Computer), BRLESC (BRL Electronic Scientific Computer), and data reduction equipment / PROB: U.S. Army problems in Dallistics, scientific computations / Ms(100) Me(1940) / *C 63
U.S. Dept. of Communications of Ms(100) Me(1940) / *C 63

*C 63
U.S. Dept. of Commerce, Bureau of the Census, Washington 25, D.C. / EQPN: Univac I 7(2); Univac 1105 (2); Unitypers (2); Remington Rand Buffered High-Speed Printers (2); Card-To-Tape Converter (Remington Rand); FOSDIC (5); IBM 1401 / PROB: statistical data processing; monthly, quarterly, annual surveys; periodic population, industry and trade consuses; service activities for other government agencies / Ms (130) Se(1951) / *C 62
U.S. Naval Weenons Laboratory, Computation and

monthly, quarterly, annual surveys; periodic population, industry and trade censuses; service activities for other government agencies/ Ms(130) Se(1951) / *C 62
U.S. Naval Weapons Laboratory, Computation and Analysis Lab. Dahlgren, Va. / Mathematical analysis and research, programming, engineering, computing, and data processing services for government and government contractors only; operate NORC and LBM 7090 computers, Universal Data Transcriber and a variety of auxiliary equipment / Ms(350) Ms(1946) / *C 62
U.S. Navy, Aviation Supply Office, Data Processing Division, 700 Robbins Ave., Philadelphia, Pa. / EQPM: two 705's Model III; two 1410's on order, Aug. 1962; five 1401 4 6 EK; one 1405, 109 Electric Accounting Machines, Including transceivers / FROB: Inventory control, 400,000 stock numbers of Naval Aviation material; Financial Control Reports; cataloging / Ms(250, this division) Me(1941) / *C 62
U.S. Navy, Computation & Analysis Lab., Naval Weapons Lab., Dahlgren, Va. / EQPM: NORC (Naval Ordmance Research Calculator); IBM 7090 systems; Universal data transcriber; IBM 1401 systems; plus auxiliary equipment / PROB; orbits of earth satellites and space vehicles; trajectories of all types of weapons; computer war-gaming; general scientific and engineering problems / Ms(350) Me(1946) / *C 62
U.S. Navy, David Talyor Model Basin, Applied Mathematics Laboratory, Washington 7, D.C. / EQPM: 2 IMIVAC I systems, LRC with 3,000,000 word drum storage and 30,000 word core storage, IEA 7090 with 32,000 word core storage, ECO Computer Data Format Translator / PROB; principal computing facility for Navy's Bureau of Ships, with problems ranging from mathematical types arising in structural mechanics, hydromechanics, and nuclear reactor design, to logistics and inventory control / Ms Se(1952) / *C 62
Univac Service Centers; Univac Div., Sperry Rand Corp., 315 Park Ave. So., New York 10, N.Y., apd 40 Univac Service Centers; Univac Div., Sperry Rand Corp., 315 Park Ave. So., New York 10, N.Y., apd 40 Univac Service Centers; U

Ave., E. Pittsburgh, Pa. / EUPH: (1944 digital computer with periheral 1401's; access to B-5000; Anacom (large passive element analog computer for extensive system transients); PACE (Electronic differential analyzer); Co network calculator; Prodac 580 control computer and systems laboratory / PROB: programming systems problems for electric utility and other industry, for system analysis, control, planning and design / Ms(100) Me(1946) / *C 63
White Sands Missile Range, Flight Simulation Laboratory, Electro-Mechanical Laboratories, White Sands Missile Range, N.M. / EQPM: digital: IBM 704 with 32,000 word core memory, IBM 1401. IBM 1620, and a magnetic tape digital plotter. Analog: 8 consoles with 800 amplifiers, 90 dual product electronic multipliers, 6 Euler angle transformation computers, 70 servo multipliers, 46 quarter square multipliers, 72 diode function generators, 13 Gaussian noise generators, one Addalink conversion system, and associated peripheral equipment / PROB: analog and digital simulation of rockets and guided missiles, real-time and hybrid simulation, data (Please turn to page 67)

(Please turn to page 67)



COMPUTERS and AUTOMATION for June, 1963

SURVEY OF CONSULTING **SERVICES**

Following is a survey of services which provide consulting in the computer field. Many of them also provide computing, and if so, additional description may be found in the "Survey of Computing Services". See also in the "Roster of Products and Services", the headings "C30. Consulting Services", and "P12A. Programming Services".

The survey form asked for:

- Brief description of the facilities, per-sonnel and capabilities which you have for consulting assistance in the area of com-puters and data processors?
- Brief description of the types of problems that you specialize in?
- Number of employees?_ Year established?___
- Any remarks?_

Each full entry from an organization that replied to the survey is in the form of: Name and address of consulting service / Facilities / Problems / Size and year of establishment. Other entries should be self-explanatory.

The abbreviations used include the following:

- Ss Small size, up to 50 employees; Ms Medium size, 50 to 500 employees; Ls Large size, over 500 employees (number in parentheses is number of employees); Se established a short time ago, 1951 or
- later;
 Me established a medium time ago, 1931 to
- established for a long time, 1930 or earlier (number in parentheses is year establishment); *C - "Checked" by the organization; "63" means "in 1963", etc.
- All additions, corrections, and comments will
- Abacus Information Management Co., P. O. Box 399, New York 8, N.Y. / Technical and managerial guidance to administrative officials responsible for a wide variety of civilian and military systems / Appraisal, audit, professional criticism, review, crystallization of procedures and standards, financial valuation / Ss(2) Se (1962) / *C 63 ttuarial Computing Service Inc. 1389 Peachtree.
- Se (1962) / *C 63
 Actuarial Computing Service Inc., 1389 Peachtree,
 Atlanta 9, Ga. / Four employees with 25 years
 aggregate experience in insurance applications /
 Ss (6) Se (1956) / *C63
 Charles W. Adams Associates, Inc., 142 The Great
 Road, Bedford, Mass. / Personnel with varied
 backgrounds and experience in scientific and
 business data processing, programming, manmachine communications, and development of
 large-scale utility systems / Feasibility
 studies; applications of computers to scientific
 and business problems; technical data handling;
 design of computer systems to process information from multiple locations / Ss(30) Se(1959) /
 *C63
- *C63
 Aeronutronic Division, Ford Motor Company, Ford Rd., Newport Beach, Calif. / Visual output displays utilizing high speed photographic techniques for large screen as well as console projections. Related input devices provide rapid and accurate composing of alphanumeric and graphical input messages / Data input, organization, processing and display of complex situations / Ls(2500) Se(1956) / *C 63
- situations / Ls(2500) Se(1956) / *C 63
 Aeronutronic Division, Mathematics and Computing
 Group, Ford Motor Co., Ford Rd., Newport Beach,
 Calif. / IBM 7090, two IBM 1401 computers, 300
 Amplifier EAI analog computer, A to D and D to
 A converters / Missile trajectories, rocket
 motor performance, aerothermodynamic heating,
 guidance and control, ordinary and partial
 differential equations, data reduction, business
 data processing / Ms(75) Se(1956) / *C 63
 Aries Corporation, 7722 Morgan Ave., S., Minneapolis 23, Minn. / Twenty professional employees

- including 14 with 7 or more years experience in real-time EDP programming, analysis and engin-neering / On-line, real-time problem involving analysis, evaluation and engineering for comman and control, air traffic control and message switching applications / Ss (22) Se(1962) / *C 63
- *C 63
 AUERBACH Corporation, 1634 Arch St., Philadelphia
 3, Pa. / Senior scientists, physicists, mathematicians, engineers, psychologists, market-research specialists. Capabilities in: pure and applied mathematics; computer-system design, analysis, evaluation, automatic programming; analognand digital on-line and off-line systems; emulyment design analognand digital on-line and oir-line systems; equipment design and development; logic and solid-state circuit design; product and market planning; programmed teaching / Systems engineering; specification, design, implementation and utilization of complex information-processing systems, both on-line and off-line, realtime, multicomputer configurations; design, preparation, and integration of real-time programs for large digital communication, control and business systems; mathematical analysis. Business information systems: feasibility studies; system evaluation, design, implementation. Computer-system analysis and application: hardware and software analysis, design, programming, training; system evaluation, in-stallation, organization, and documentation. Technical and scientific information systems; system evaluation, design, installation and operation. Market programs: product definition, comparisons, and use; market surveys, forecast, requirements, and competitive analyses; corporate posture, forecasts, and strategy. Manufacturing processes and services: plant operation, control, economics; facilities management; scheduling; numerical control; quality control; RCD management; traffic and transportation control. Programmed teaching: evaluation and development of training programs, techniques, and hardware / Ms(93)
 Se(1957) / **C 63
 Automation Management, Inc., 25 Brigham St., Westboro, Mass. Office, and factory facilities and engineering personnel available to carry a project from the original idea through to anstallation and training of personnel in integrated office systems / Management control problems of all types involving the use of industrial engineering, operations research, as well as data processing and computer skills / Ss(3) Se(1955) / **C 63
 Beckman/Berkeley, 2200 Wright Ave., Kichmond, Calif. / 50 Amplifier General Purpose Analog Computer / Simulation of electrical, mechanical, thermal, etc. systems, general analog computer skills / Ss(3) Beckman/Berkeley, 2200 Wright Ave., Kichmond, Calif. Po

- tion, system management, development of detail software, special purpose circuit design, special purpose equipment design, prototype development and other technical studies. All phases of scientific consulting from basic research through prototype design, development and test / Ls(800) Le(1914) / *C 63
 Booz, Allen & Hamilton, Inc., 135 So. La Salle St., Chicago 3, Ill. Also offices in Washington D.C., New York, Detroit. Cleveland, Los Angeles. San Francisco / Management consultants / Technical services in electronic and automatic data processing for totally integrated management controls systems for industry, commerce, government and institutions. Used by top management in evaluating, planning, designing and implementing data processing systems for business and scientific purposes / Ms Le(1914) / *C62
 Chrono-log Corp., 2593 West Chester Pike, Broomall, Pa. / / Process control applications and systems; real-time computer control for both industrial and military applications; technical writing services; supply real-time programmable clock systems for digital computers / SS(10) Se(1936) / *C 63
 Chamber of the services of the services of the services and information handling / Organization of new systems or applications / SS(1) Se(1954) / *C 63
 Computer Advisors to Management, Division of Statistical Tabulating Corporation, 104 S. Michi-

- and information handfling / Organization of new systems or applications / Ss(1) Se(1954) / *C 63
 Computer Advisors to Management, Division of Statistical Tabulating Corporation, 104 S. Michigan Ave., Chicago 3, 111. Also offices in New York and Los Angeles / Complete staff of consultants, systems engineers and programmers with a broad range of specialties for problem solving in industry, business, science and government / Professional counselling in the economic evaluation and application of data processing and computer systems; services ranging from feasibility studies to systems design, equipment selection, personnel indoctrination, programming and client servicing / Ms(200) Se(1961) / *C 63
 Computer Methods Corp., 107 Mamaroneck Ave., White Plains, N.Y. / Specialists in command and control, real-time processing, communication and information systems, simulation techniques, and program and project management / Air traffic control, airline reservation systems, military data acquisition and display, and store and forward message switching / Ss(6) Se(1961) / *C 63
 Computer Sciences Corp., 650 N. Sepulveda, El Segundo, Calif. (General Offices); 660 Madison Ave., New York 21, N.Y. (N.Y. Division); 3773
 Richmond Ave., Houston 27, Texas (Houston Division); 19 Maddox St., London W.I. England (London Office) / Complete computing services: small to large-scale computers available. Data processing (both commercial and scientific).
 Consulting analysis, programming, training, machine processing, feasibility studies, sys-
- consulting: analysis, programming, training, machine processing, feasibility studies, systems programming; 1107 computer and associated equipment in Los Angeles / Ms(135) Se(1959) *C 63
- *C 63

 Computing Services Division, Elliott Bros., (London) Ltd., Borehamwood, Herts., England / System planners, problem analysts, programmers (half of 25 degree standard) plus supporting engineers, machine and punch operators, clerical, etc. / Three computers available and ancillary equipment / Engineering design calculations; market survey analyses; project planning (PERT/PEP etc.); production optimization problems; network flow problems / Ms(75) Se(1954) / *C 63

 Control Data Corporation Petr C.
- *C 63 Control Data Corporation, Data Centers Div., 8100 34th Ave. S., Minneapolis 20, Minn. / 1604 and 160-A computation centers also in Palo Alto, Calif. and Washington, D.C. Thoroughly trained staff to assist in all phases of problem solv-ing / analysis, programming, feasibility and applications studies; business, scientific and engineering applications / Ms(150) Se(1962) / *C 63
- *C 63
 Control Technology, Inc., 1232 Belmont Ave., Long Beach 4, Calif. / Now using other facilities; in late 1963 or early 1964 expects to have its own / Hybrid computation, digital and analog computation; PERT, PERT/COST, CPM, linear programming, mathematical model building, simulation, Monte Carlo methods, statistical analysis and all scientific and engineering problems; training of programming and operating personnel for analog, digital and hybrid computers; con-

Consulting Services

trol engineering for industry and government / S_{S} (12) S_{e} (1960) / *C 63

DATA PROCESSING, INCORPORATED, 1334 Main St., Waltham 54, Mass. / Professional group supplying analytical, programming, and general advisory services for scientific and advanced business digital computer applications. Special emphasis on high standards of programming quality, and logical programming. Regular access to a number of computers, up to IBM 7094 / Experience includes varied scientific programming; special business programming such as operations research, Industrial Dynamics; logical programming in such areas as character recognition, artificial intelligence, and software systems including assemblers, compilers, linking loaders, and programming systems / Ss(12) Se(1957) / *C 63

Designers for Industry, an Operation of Booz-Allen Applied Research, Inc., 4241 Fulton Pkwy, Cleveland 9. Ohio / Research and development services including data processing, systems analyses, system management, reliability studies, equipment selection, development and fabrication of special purpose electronic and electro-mechanical equipment / - / *C 63
Dian Laboratories, Inc., 611 Broadway, New York 12, N.Y. / Programming and application of analog computer problems, and design of special prupose analog simulators and trainers / Aerospace and submarine dynamics and control, heat flow, chemical and petroleum kinetics, partial differential equations, noise analysis / \$s(10) \$Se(1955) / *C 63
Arnold I. Dumey, 29 Barberry Lane, Roslyn Heights,

Se(1955) / *C 63
Arnold I. Dumey, 29 Barberry Lane, Roslyn Heights, N.Y. / Consultant on problems of handling large amounts of data by electromechanical or electronic means / Design and application of computers; circulation problems of publishers of periodicals; statistical questions / Se(1954) / *C 63

tronic means / Design and application of computers; circulation problems of publishers of periodicals; statistical questions / Se(1954) / °C 63

Dynatech Corporation, 17 Tudor St., Cambridge 39, Mass. / Access to: IBM 7090, 1401, 1620; Philico Transac; RCA 301; Philbrick Analog. Saall staff of computer programmers, mostly mechanical and electrical engineering oriented / Mechanical, electrical, and chemical engineering with associated sciences / Ms(125) Se(1957) / °C 63

Ebasco Services Incorporated, 2 Rector St., New York, N.Y. / 2 Bendix G-150 with 2 magnetic tapes; Cdc G-20 on order; 16k, buffered 6 magnetic tapes; Cdc G-20 on order; 16k, buffered 6 magnetic tapes; Cdc G-20 on order; 16k, buffered 6 magnetic tapes, card I/O, 1000 line per minute printer; 10 engineers and consultants / Evaluation and design of data processing systems, feasibility determination for electronic, automated and other advanced forms of mechanized data processing systems. "Hardware" evaluation and selection. System design and installation. Data transmission and integrated processing procedures / Ls(1500 - N.Y. office only) Le(1905) / °C 63

Fischbach, McCoach & Associates, Inc., 30 E. 42nd St., New York 17, N.Y. / Management consultants specializing in applying scientific techniques to business-type problems. Complete service in appraisals and installation of electronic data processing and control systems for management / Business industry and government problems. Operations research; product appraisals; marketing analysis / SS(10) Se(1959) / °C 63

The Franklin Institute Computing Center, 20th & The Parkway, Philadelphia 3, Pa. / Modified Univac I data processing system with associated ancillary equipment including card-to-tape, tape-to-card, low-speed and high-speed printers, unitypers and keypunch operators, Maintenance, unitypists and keypunch operators / Business data processing; scientific and engineering computations; large scale inventory control problems; man-machine simulations; photogrammeric problems / Sc(23) Se(1957) / °

*C 62
Philip Hankins & Co., Inc., 800 Massachusetts Ave., Arlington, Mass. / Leases punched card equipment from IBM: rents computer time from available sources to fit requirements of individual projects; nine members of the staff have a total of 54 years of computer experience / Programming and contract data processing services; experience includes both software and scientific programming: compilers, assemblers,

monitors; Monte Carlo simulations, weapons systems Simulations, data reduction, orbit and trajectory calculations. Projects involve full responsibility, from design through delivery of operating programs / Ss(11) Se(1959) / *C 63
S. Himmelstein & Co., 6015 N. Ridge Ave., Chicago 26, Ill. / 1200 square feet of office space and 2000 square feet of combined laboratory and model shop area / Consulting/engineering services concerning magnetic storage systems, punched tape systems, photoelectric readers, high-speed printers, computer peripheral equipments; data acquisition, storage and processing systems engineering / Ss(10) Se(1961) / *C 63
Hollander Associates, P. O. Box 2276, Fullerton, Calif. / Experienced engineers recognized for their contributions in the computer field supplemented by an alert and creative supporting staff / Evaluation and design of computer systems and their component units. Unique objective evaluation procedure clearly demonstrates relative advantages of alternate approaches. Recent contributions to design of spacecraft simulator, evaluation of gigacycle circuits, optimization of data retrieval and associative memories, planning of communication-switching systems and afir-traffic beacons / Ss(5) Se(1961) / *C 63
The 1. D. R. Co. (Industrial Data Reduction), 4740 Spruce St., Philadelphia 39, Pa. / IBM 1401 on premises, other machines used as needed / Full line data processing with specialty of publishing industry services / ?s Se(1961) / *C 62
Ing. firma Nordisk ADB AB, Fack, Solna 1, Sweden. Subsidiaries: Nordisk ADB Newtener & Co., Ramistrasse 8, Zurich, Nordisk ADB Newtener & Co., Ramistrasse 8, Zurich, Nordisk ADB Newtener & Co.

Se(1961) /*C 62
Ing, firma Nordisk ADB AB, Fack, Solna 1, Sweden.
Subsidiaries: Nordisk ADB, Waerner & Co., Ramistrasse 8, Zurich; Nordisk ADB Deutsche GmbH,
Bonner Strasse 117, Dusseldorf, Germany; Iberica
ADB, Torre de Madrid, Madrid 13, Spain / Specialize in civil engineering, data processing.
The programming staff includes 12 civil engineers, specializing in road planning and structure. Develop large scale systems for road departments in Europe / Systems for road planning and constructions / Ss(30) Se(1959) /
*C 63

ning and constructions / Sst.307 Set1937 /
*C 63

The ITT Data Processing Center, P. O. Box 285,
Paramus, N.J. / 1 IBM 7090 Computer (Large),
1 IBM 7070 Computer (Large), 4 IBM 1401 Computers (Medium), one 407 Tabulator, two 519
Reproducers, one 557 Interpreter, one 007
Collator, two 002 Sorters, five 056 Verifiers,
fourteen 026 Keypunches, Transcelver, 250 programmers and analysis available / Business data
processing, scientific computing, engineering
calculations, statistical analysis, programming,
systems analysis; 7090, 7070 and 1401 block
time; communications - data transmittal /
Ms(300) Sc(1950) / *C 62

Math. Beratungsdienst, Kleppingstr. 26, Dortmund,
Germany / Consulting with all problems of electronic computers operations research, etc.;
12-15 consultants (mathematicians, economists,
and management economicts) / Application of
mathematical methods in management economics,
service center application of punched tape

service center application of punched tape with small to medium-size firms / Ss(41) Se(1957) / *C 62 Mesa Scientific Corporation, 2930 W. Imperial

with small to medium-size firms / Ss(41)
Se(1957) / *C 62
Mesa Scientific Corporation, 2930 W. Imperial
Highway, Inglewood, Calif. / Consulting in systems analysis and synthesis, logic design, circuit design, mathematical analysis, programming
systems, and programming related to computers,
automatic checkout systems, guidance and control systems / Analysis and design of digital
of digital equipment; command and control systems; data acquisition, conversion, storage,
and display systems. Consultants to industry
and government on all phases of computer technology / Ss(20) Se(1957) / *C 63
Multnomah Data Processing Center, 430 N. W. 10th
Ave., Portland, Ore. / Facilities for absorbing
all sizes of computer applications work including systems design, programming, coding and
operating. Engineering and scientific personnel on the staff as well as large aggregate of
data processing systems experience / Specialize
in engineering, statistical, and management science computer applications, taking the work at
any stage of development from over-all planning
to operation on our computer or the customer's
computer / Ss(40) Se(1958) / *C 62

The National Cash Register Co., Dayton 9, Ohio /
253 locations in the U.S. and Canada, staffed
with over 3000 systems and programming personnel / Business system design, programming applications, operations research. Consulting services available to customers; no contract consulting service / Ls(59,000 - world-wide)
Le(1884) / *C 63 /Simon M. Newman, Documentation Consultant, 1411
Hopkins St., N.W., Washington 36, D.C. / Independent consultant, with 18 years experience in
construction and integration of scientific and
technical hierarchical classifications; 6 years
experience in the mechanization of scientific and
technical hierarchical classifications; 6 years
experience in the mechanization of scientific and
recommendations for implementation by use of
hardware, whem economically justified / Ss(1)
Se(1961) / *C 63

Scientific Computing Service Ltd., 23 Bedford Sq., London, W.C. 1, England / Access to: Ferranti, Elliott, English Electric, IBM, and Cambridge University EDSAC electronic digital computers; miscellaneous electric and hand desk calculators / General consulting; computations for commerce and industry; advanced applied research; pure research; developing problems in mathematical and statistical fields to the point where they may be effectively computed, then recommending the means / Ss(16) Me(1939) / *C.63

the point where they may be effectively computed, then recommending the means / Ss(16) Me(1939) / *C 63

Space Services Division, Division of Statistical Tabulating Corp., 104 South Michigan Ave., Chicago 3, Ill. / Support Programs for Aerospace Components and Equipment. Logistics; technical writing; provisioning parts breakdown; illustrated parts breakdown; spares documentation; provisioning conferences counseling / Administrative management, scientific management, engineering and general data processing, programming, systems, analysis, and consultation / Ls(5000) Ms(1933) / *C 62

Statistical Tabulating Corp., 104 South Michigan Ave., Chicago 3, Ill. / Fourteen data processing and computer centers, nationwide, containing IBM 1400-Series card and tape systems plus peripheral equipment and conventional punch card tabulating data processing machines / Administrative management, scientific management, engineering and general data processing, programming, systems, analysis, and consultation. Divisions: Data Processing, TASK FORCE; Computer Advisors to Management; Space Services / Ls(5000) Me(1933) / *C 62

Tabulating Service of Dallas, 1222 Ft. Worth Ave., Dallas 8, Tex. / Two 402's, two 514's, three 082's, 552, 085, 602, 046, 026, six 024's, five 056's. Computer experience in 1401 and 1790 / Payrolls, sales analysis, inventories, census, surveys, general punched card and punched tape data processing / Ss(20) Ms(1946) / *C 63

TASK FORCE, Division of Statistical Tabulating Corp., 104 South Michigan Ave., Chicago 3, 111./ Organizational problem-solving with one or more temporary office personnel in various skill families (data processing and computer operators, programmers, and supervisors; executive and technical; typing and stenographic; book-keeping and office machines; clerical) for conversions, peak loads, unusual situations, second shift operations, etc. / Administrative management, scientific management, engineering and office machines; clerical) for conversions, peak loads, unusual situations, second shift

tems, analysis, and consultation / Ls(5000)
Ms(1933) / *C 62
Technical Operations Research, South Ave., Burlington, Mass.; Washington Research Center,
3600 M \$51. N.W., Washington D.C. / Operations research, automatic programming systems, digitals immulations, war gaming (access to computers) / Industrial, commercial, and military / Ls(600) Me(1951) / *C 63
United Nuclear Corporation, 660 Madison Ave., New York 21, N.Y. / CDC 1604-A computer, IBM 088, 523 kepunch machine, sorters, interpreters, etc. / Nuclear shielding calculations and techniques; Monte Carlo codes for neutron simulation, and codes for numerical solutions of boltzman equation in spherically symmetric geometrics, complete performance of problem analysis, coding and running of production problems / Ls(1500) Me(1949) / *C 63
University of Manchester, Computing Machine
Laboratory, Manchester 13, England / Mathematical and engineering / Construction and scientific applications of computers / Ss(30)
Me(1949) / *C 62
Westgate Laboratory, Inc., 506 S. High St., Yel-

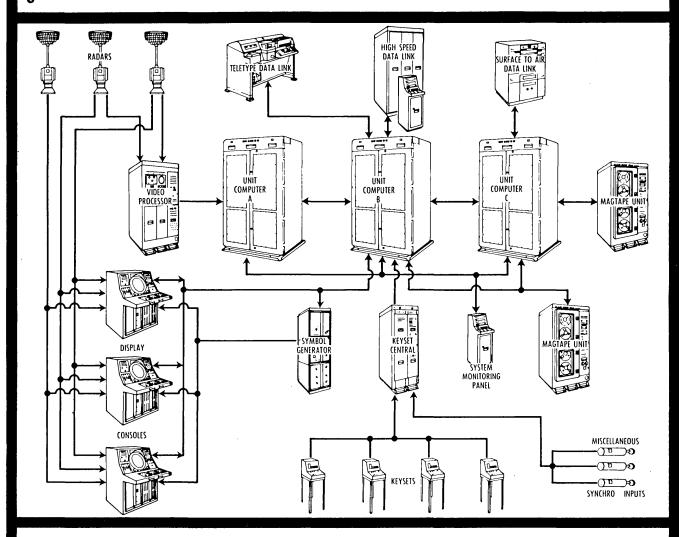
Me(1949) / *C.62
Westgate Laboratory, Inc., 506 S. High St., Yellow Springs, Ohio / Research, development, prototype, and small lot production in electronics, physics, optics and photography; simulators and missile guidance equipment, digital computing and consulting services, controls, X-Y plotters and vehicle position displays, radio receivers and transmitters, industrial instrumentation, can leak testers, airborne servo systems for cooling of electronic equipment, eye movement cameras, air traffic control instrumentation /

can leak testers, airborne servo systems for cooling of electronic equipment, eye movement cameras, air traffic control instrumentation / Ms(55) Se(1956) *C 63
Westinghouse Electric Corp., Advanced Systems Engineering and Analytical Dept., E. Pittsburgh, Pa. / Experienced engineers and scientists in solution of advanced problems; full complement of computing equipment. Digital: 7094, 1401. Analog: Anacom electronic differential analyzer. Prodac 550 on-line control computer and systems laboratory / Electric utility systems studies, mechanical studies, management applications, nuclear applications, control system optimization, automatic design. Development on-line and off-line programs; solution of problems requiring hybrid analog-digital methods / Ms(100) Lc(1929) / *C 63
Wolf Research & Development Corp., Baker Ave., P.O. Box 136, Concord, Mass. / Specialists available for consulting in the fields of: applied mathematics, including applied mechanics and geodesy; electronic and logical circuit design; scientific management techniques; computer systems and applications / - *C 63

- END -



THE NAVAL TACTICAL DATA SYSTEM MODULAR CONCEPT



MULTIPLE COMPUTER PROGRAMMING

The above diagram shows a typical real-time system centered around the use of multiple "Unit" computers. This system has been designed and implemented by UNIVAC for the U.S. Navy and is now operational. Forward thinking, advanced programming and system design techniques have led to this system, and many new applications utilizing the unit computer concept are being developed. A few of the major features of the computer available to the systems analyst and the programmer are:

- Internal high-speed ferrite core storage with a cycle time of 8 microseconds and a capacity of 32,768 words. (Advanced models have several times the effective speed and greatly enhanced storage capacity.)
- 30-bit word length.
- 14 input and 14 output channels for rapid data exchanges with external equipment without program attention.

 The unit computer is very compact, 72" high, 38.1" wide and 36.9" deep, and has proved to be ultra reliable with a mean time to failure of 1500 hours.

If you are qualified for any of the following positions, please contact us as soon as possible.

Immediate Openings for:

Military Systems Analysts and Scientific Programmers for systems development and programming on multiple computer utilization concepts. Several levels of experience are required in each category. Salary level and classification are commensurate with education and experience. Engineering or scientific degree preferred with the company years programs on systems where modern with two or more years' experience on systems using modern real-time computers.

These openings are at Saint Paul, Minnesota and San Diego,

Senior Systems Programmers for business and/or scientific systems language development and the development of Executive, Communications Control and Compiling Systems. Mathematics or business degree preferred with five or more years' programming experience on modern large-scale data processing systems, including ALGOL and FORTRAN.

These openings are at St. Paul, Minnesota and other Univac locations including New York City. $\label{eq:continuous} % \begin{subarray}{ll} \end{subarray} % \begin{subarray}{ll} \end$

Address inquiries with a resume of your education and experience to:

R. K. PATTERSON UNIVAC Univac Park St. Paul 16, Minnesota

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W. K. LOWE UNIVAC P.O. Box 6248 San Diego 6, California

(An Equal Opportunities Employer)

DIVISION OF SPERRY RAND CORPORATION MILITARY DEPARTMENT . UNIVAC PARK . ST. PAUL, MINN.

SURVEY OF SOFTWARE SUPPLIERS

- Following is a survey of software suppliers in the computer field. Many of them also provide computing and consulting services, and if so, additional descriptions may be found in the "Survey of Computing Services" and "Survey of Consulting Services". See also in the "Roster of Products and Services", the headings "C27, Computing Services", "C30, Consulting Services", and "P12A, Programming Services".

The survey form asked for:

- Brief description of the facilities, per-sonnel and capabilities which you have for consulting assistance in the area of com-puters and data processors?
- Brief description of the types of software that you supply?_
- Number of employees?_ Year established?____ Any remarks?____

Each full entry from an organization that replied to the survey is in the form of: Name and address of software supplier / Facilities / Types of software supplied / Size and year of establishment. Other entries should be self-

The abbreviations used include the following:

- Ss Small size, up to 50 employees;
 Ms Medium size, 50 to 500 employees;
 Ls Large size, over 500 employees (number in parentheses is number of employees);
 Se established a short time ago, 1951 or

 - later; Me established a medium time ago, 1931 to 1950
 - established for a long time, 1930 or earlier (number in parentheses is year of establishment); "Checked" by the organization; "63"
 - "Checked" by the organization; "63" means "in 1963", etc.

All additions, corrections, and comments will be welcome.

Aries Corporation, 7722 Morgan Ave. S., Minneapolis 23, Minn. / Programming staff has contributed directly to the program systems of NPDS, SAGE, DNCCC, JOVIAL for the CDC 1604, CS-1 compiler for the AN/USQ-20, and Air Traffic Control / Experience with full range of compilers, assembly, utility systems. Specialize in realtime support including monitors and diagnostics. Have programmed executive control routines, compilers and assemblers, simulators, diagnostic routines, utility support programs, and scientific problems / Ss(22) Se(1962) / % 63

Automation Management, Inc., 25 Brigham St., Westboro, Mass. / Staff or personnel available with experience in management information and control systems, especially those involving communications / AL PUR COM (All Purpose Communications / AL PUR COM (All Purpose Communication System), cost control systems, systems for speeding the flow of materials and/or information / Ss(3) Sc(1955) / C 63

Bonner G Moore Associates, Inc., 500 Jefferson Bldg., Houston 2, Tex. / Senior professional people with experience in design of data processing systems, translators, compilers, and problem-oriented computer languages, technical and other special-purpose coding and operating systems, comprehensive linear programming and operations research systems / Translators, compilers, interpreters, problem-oriented language processors, linear programming systems, general data reduction systems, monitor, executive, and librarian systems, both special and general purpose / Ss(18) Se(1956) / C 63

Computer Methods Corp., 107 Mamaroneck Ave.,
White Plains, N.Y. / Staff includes specialists in real-time processing, simulation techniques, utility systems, and report generators / Control programs, utility systems, sorts, and report generators / Ss(16) Sc(1961) / C 63

Data Processing, Incorporated, 1334 Main St.,
Walthan 54, Mass. / Consulting services include software support for both computer manufacturers and users / Experience in this area includes original developments in assemblers, compilers, linking loaders, debugging routines, automatic programming systems, and operating systems.
Currently under development is a proprietary programming systems for the 704 with such, fcatures as open-ended compiler and automatic memory reallocation / Ss(12) Sc(1957) / C 63

Dela Data Corporation, 3134 Shane Dr., Richmond, Calif. / Programming staff and tabulating equipment in our shop; rent time on 1401 and 7094 / Specialize in unusual applications; test sorium, student scheduling, grade re-

Dela Data Corporation, 3134 Shane Dr., Richmond, Calif. / Programming staff and tabulating equipment in our shop; rent time on 1401 and 7094 / Specialize in unusual applications; test scoring, student scheduling, grade reporting services; programming, consulting / Ss(6) Se(1959) / C 63
The National Cash Register Co., Dayton 9, Ohio / Three major software producing groups: 390 sales, Programming Research Dept. (for larger computers), and Data Processing Systems and Sales Dept. Software Section of Project Specifications Dept. at Electronics Division, Hawthorne, Calif. All groups except 390 use 3-315 installations on about half time basis. 390 Dept. has staff in Dayton for programming research, development of routines, techniques, programs / General hardware-oriented programs (compilers, macros, sort generators, executive programs, etc.); application packages (banking, retail, industrial users); scientific programs (subroutines, operations research, PERT, etc.) 390 has standard routines; standard sort packages; application packages for banking, retail, industrial, government; mathematical programs. Current software for 315 and some 304 with tapes, and/or CRAM (Card Random Access Memory). 390 has prebuilt macro instructions (human language interpreters such as COBOL and FORTRAN

not required) / Ms(107) Se(1956) / *C 63
Systems Programming Corporation, 1833 E. 17th
St., Santa Ana, Calif. / Senior system analysts,
mathematical analysts and programmers with
much experience in real-time systems, command
and control systems, scientific computing, and
computer software. Computer consulting services, software packages, and computer programming for industry and government / Supply
compilers, assemblers, sort generators, executive routines, translators, input-output routines and problem-oriented programming languages / Ss(30) Se(1962) / *C 63
Wolf Research & Development Corp., Baker Ave.,
P.O. Box 136, W. Concord, Mass. / Large staff
of analysts and programmers with experience in
most commercially available computing equipment / - / *C 63

- END -

COMPUTING SERVICES (Continued from page 63)

analysis, systems evaluation, and numerical analysis. Analysis and programming of scientific problems together with related computer services / Ms(100) Sc(1955) * C 63
olf Research & Development Corp., Baker Ave., P.O. Box 136, W. Concord, Mass. / EQPM: Whirlwind I computer system, Bendix G-15D computer system, with two magnetic tape units, special curve tracing input device, card input equipment, off-line flexowriter and IBM 026 key punch unit / PROB: scientific, engineering, business, industrial, and military applications. Service routines. Data processing / Ms(150) Sc(1959) / *C 63

**ADDENDA

Douglas Computing Service, Dept. G-34, Douglas Aircraft Co., Inc., 3000 Ocean Park Blvd., Santa Monica, Calif. / EQPM: IBM 1401/1410 and 7090/94 Computing Systems and peripheral equipment. Remington Rand Univac Solid State Computers and Univac Electronic Tabulators / PROB: all scientific, engineering, manufacturing, and business problems, handled by rental of machine time / Ls(1000) Se(1959) / °C 63 General Electric Co., Electric Utility Engineering Operation, 1 River Rd., Schenectady 5, N.Y. / EQPM: IBM 7090, IBM 704, GE 225, analog network analyzers and differential analyzers / PROB: analysis and solution of systems problems such as systems studies for electric utilities, special studies involving mechanical and control systems / Ms(70) Mc(1949) / °C 63

- END -

DESCRIPTIONS OF

DIGITAL COMPUTERS

Neil D. Macdonald Assistant Editor Computers and Automation

The purpose of this report is to give the characteristics of United States general-purpose digital computers currently available for sale or rent.

The three sections give: (1) Internal Characteristics; (2) Input and Output; and (3) Cost and Use.

Any additions, corrections, or comments are invited.

EXPLANATION OF HEADINGS

Internal Characteristics

Solid State?: If the computer is built with primarily solid state devices such as transistors, distinguished from non-solid state devices such as vacuum tubes, a "Y" appears in this column. Solid state devices are generally more reliable than non-solid state devices.

Number System:

Number Base: the number base the machine uses internally (either binary, octal, or decimal).

Bits/Digit: the number of binary bits per digit (digit is either a binary, octal, or decimal digit; SEE Number Base). Digits/Alphabetic: the number of digits used to represent

an alphabetic character. Word Length: the number or numerical digits per machine

Memory:

Number of Words: the number of machine words contained in the memory; may be broken into two or more memory types on two or more lines. Whenever the machine word length is "variable", the Number of Words refers not to the number of machine words but to the number of digits.

<u>Type:</u> memory type, such as magnetic drum (abbreviated "drum"), core storage or delay line.

Access Time: the time required to retrieve information from the memory.

Timing -- Add, Multiply, Divide: the average time required to get and complete one operation instruction.

Machine Programming:

Number of Instr.: the number of distinct instructions in the machine's repertoire.

Addresses/Instr.: the number of operand addresses per instruction.

No. Index Registers: a "0" indicates no indexing possible;
a "Y" indicates that indexing is possible but information as to the number of index registers was not received.

Indirect Addressing?: "Y" indicates indirect addressing

is possible. "Y" indicates that the machine can per-

Floating Point?: form in a floating-point mode. (Floating-point arithmetic can be programmed on all machines.)

Input and Output

Magnetic Tape:

No. of Units: maximum number of tape transports which can be directly connected to the computer.

Tape Density: characters per inch.

Tape Speed: speed of reading or writing on tape.

Words/Tape: capacity of a reel of tape.

Punched Cards: speed of reading and punching cards.

Paper Tape: speed of reading and punching paper tape.

Printer Speed: speed of printing, complete lines printed per minute.

Cost and Use

Average Monthly Rental: the rental at an average installation.

Rental Range: the monthly rental range made possible by different configurations of available equipment.

One-Sum Price Range: the range of selling price.

Power: electricity requirements for an average installation.

Floor Space: floor space needed at an average installation.

Air Cond. -- Tons: air conditioning required at an average installation.

Percent Good Time: good time divided by attempted-to-run time, expressed as percent.

Abbreviations Used

-- binary В

-- decimal

FBD -- fast bands on memory drum

--- 1000

KK -- 1,000,000

-- millisecond, thousandths of a second

-- no, none

-- octal

-- punch, output

-- read, input

-- microsecond, millionth of a second

-- variable

Manufacturers and Computers Included

Advanced Scientific Instruments Co., a div. of Electro-Mechanical Research, Inc., 5249 Hanson Court, Minneapolis 29. Minn

ASI 210, ASI 420

Alwac Computer Div., El-Tronics, Inc., 13040 S. Cerise Ave., Hawthorne, Calif.

ALWAC III-E

Burroughs Corporation, 6071 Second Ave., Detroit 32, Mich. Burroughs E-103, 205, 220, 200 Series, 5000

Clary Corporation, 408 Junipero St., San Gabriel, Calif. DE-60

Computer Control Co., Inc., Old Connecticut Path, Framingham, Mass. DDP-24

Control Data Corp., 8100 34th Ave., S., Minneapolis 20. Minn. CDC-160, CDC-160A, CDC-924A, CDC-924A, CDC-1604, CDC-1604A, CDC-3600, G-15, G-20

Digital Equipment Corp., Main St., Maynard, Mass. PDP-1, PDP-4

General Electric Co., Computer Dept., 13430 N. Black Canyon Highway, Phoenix, Ariz. GE-210, GE-215, GE-225, GE-235

General Precision, Information Systems Group, 808 Western Ave., Glendale 1, Calif.

LGP-21, LGP-30, L-3000, RPC-4000

- H-W Electronics, Inc., 14 Huron Dr., Natick, Mass. HW-15K
- HRB-Singer, Inc., (Subsidiary of the Singer Mfg. Co.), Science Park, State College, Pa. SEMA 2000, SEMAC
- Honeywell Electronic Data Processing Div., 60 Walnut St.,
 - Wellesley Hills 81, Mass. H-400, H-800, H-1400, H-1800
- Hughes Aircraft Company, Fullerton, Calif. H = 330
- International Business Machines Corp., Data Processing Div., 112 E. Post Rd., White Plains, N.Y.
 IBM Ramac 305, IBM 650, 704, 705 III, 709, 1401, 1410, 1440, 1460, 1620, 7010, 7030, 7040, 7044, 7070, 7072, 7074, 7082, 70 7080, 7090, 7094
- Monroe Calculating Machine Co., Inc., 555 Mitchell St., Orange, N.J.
- ${\tt Monrobot}\ {\tt XI}$ The National Cash Register Co., Main & K Sts., Dayton 9, Ohio NCR 304, 310, 315, 390

- Packard Bell Computer Corp., 1905 Armacost Ave., Los Angeles 25, Calif.
 - PB 250, PB 440
- Philco Corp., Government & Industrial Group, Computer Div., 3900 Welsh Rd., Willow Grove, Pa.
 Philco 1000, 2000-210, 2000-211, 2000-212, P 4000
- Radio Corp. of America, Electronic Data Processing Div., Front & Cooper Sts., Camden 2, N.J.
 - RCA 301, 501, 601
- Ramo-Wooldridge, a Division of Thompson Ramo Wooldridge, Inc. 8433 Fallbrook Ave., Canoga Park, Calif. RW 230, RW 330, RW 340
- Scientific Data Systems, Inc., 1542 Fifteenth St., Santa Monica, Calif. SDS-910, SDS-920
- UNIVAC Division of Sperry Rand Corp., 315 Park Ave. So., New York 10, N.Y.
 - Univac I, II, III, 60/120, 490, 1004, 1050, 1103A, 1105, 1107, Univac File Computer I, II, Univac Larc, Univac SS 80/90 II

	I. INTERNAL CHARACTERISTICS																
		NUMBER SYS	STEM	ME	MORY			TIMING		МАСН	INE PE	ROGRA	MMI	NG			
NAME OF COMPUTER	Solid State?	Number Base Bits/Digit Digits/Alphabetic		Number of Words	Type	Access Time	Add Time	Multiply Time	Divide Time	Number of Instr.	Addresses/Instr.	No. Index Registers	Indirect Addressing?	Floating Point?			
ALWAC III-E	N I	D 4 1.5		128 8192 nd from men	drum drum ory, ov	lm 9m erflow c	lm hecking.	17m	17m	90	1	1	Y	N			
ASI 210	Y A	B 3 Automatic chec	2 21 king by tr	4-32K apped inter	core rupt; c	l.lu ommunica	6u tion betwe	50u een compu	52u ters wit	76 hout buf	l ferin	3	Y	N			
ASI 420	Y A	B 3 Any memory loca	2 42 ation can	4-32K be used as	core an inde	2u x regist	6u er					see 10 te	Y	Y			
Burroughs E-103	N	D	12	220	drum	10m	50m			32	1	2	Ŋ	N			
Burroughs 205	N (2 10 orbidden c	80 4000 ombination,	FBD drum centra	.85m 8.5m Liming	1.7m 17m , drum rev	10.8m olution,	14m overflo	64 w	1	1	N	N			
Burroughs 220	N F	D 4 :	2 10 lock. Che	2-10K cks for for	core	10u combinat	185u ion and ov	2.9m verflow.	3.9m Partial	96 word op	l eratio	l ons.	N	Y			
Burroughs 200 Series		D 7 Add time: 5 d Numerous varia							6.05m	27 5 digit	3 s ÷ 2	0 dig	N its.	N			
Burroughs 5000	V	0 3 Binary, octal, with dual proceexchange. Sim floating point	essors. C ultaneous	omprehensiv parallel me	e inter	rupt sys	tem. Auto	omatic me	mory exc	hange an	d inpu	ıt-oı	ıtpu				
CDC G-15	N F	D 4	2 7 , indexing	16 2K by means o	FBD drum of inter	.54m 14.5m pretive	.54m .54m system on	8m 8m y		100	1	Y	N	N			
CDC G-20	Y (0 3 Overflow, pari	10 ty, illega	4-32K 1 address c	core hecks.	6u Repeat	15u command fo	30u or add, s	70u ubtract,	105 test an	_	63 ic.	Ÿ	Y			
CDC-160	Y F	B 3 (4096 essing; mul	core tiply a	6.4u nd divid	6.4u - 19.2u e are prog	grammed.		65	1	0	Y	N			
CDC-160A	Y F	B 3 (12 irect addr	8-32K essing. Pa	core	6.4u eck on I	6.4 - 19.2u /0 transfe	ers.	10000	92	1	N	Y	N			
CDC-924	Y	B 3 6		8-32K	core	5.3u		27.9 - 47.1u	38u	64	1	6	Y	N			

		INTERNAL CHARACTERISTICS												
		NUMBER SY	STEM	MEM	IORY		7	IMING		MACH1	INE PR	OGRAN	MIN	G
NAME OF COMPUTER	Solid State?	Number Base Bits/Digit Digits/Albhabetic	Word Length	Number of Words	Type	Access Time	Add Time	Multiply Time	Divide Time	Number of Instr.	Addresses/Instr.	No. Index Registers	Indirect Addressing?	Floating Point?
CDC-924A	<u> </u>	Same as 924 e:	xcept: add	litional mas	k interr	upt featu	re, faste	r data t	ransfer	rates (1/0).			
CDC-1604	Y 	B 3	6 48 on I/O tran	8-32K	core nstructi	4.8u		63.6u	65.2u	62 Program	l inter	6 rupt.	Y	Y
CDC-1604A		Same as 1604	except: ad	lditional ma	sk inter	rupt feat	ure, fast	er data	transfe	r rates	(1/0)			
CDC-3600		B 3 Parity checkin expandable in											Y age	Ŷ
DDP-24		B 4 Floating poin destination. commands stan	Eight leve								ific n			N
DE-60	Y 	D 4 Overflow detection	18 ction. Aut cchangeable	32-160 comatic decir e function g	drum mal poin enerator	8.5m t alignme s.	61m ent. Prog	148m ram trac	125m e routi	45 ne built	5 into	Y hard	N ware	N e.
GE 210	Y 	D 4 Double precis	2 6 ion mode.	4-8K	core	32u	64 u	550u	1200u	90	1	l	N	N
GE 215	Y 	B 1 Double precis	6 20 ion arithme	4-8K	core	36u	72u	342u	531 u	300+	1	96	N	Y
GE 225	Y 	B l Double precis	6 20 ion mode.	4-16K	core	18u	36 u	288u	495u	300+	1	96	N	Y
GE 235		B 1 4-bit decimal point divide,		4-16K ubtract; 3 d	core igits pe	6u r word.	12u 40-bit f1	84u oating p	96u oint mu	300+ ltiply,		96 loati	N ng	Y
H-330		B Instruction 10 24, 30, 36 or						sed inte	rnal sp	eed. Wo	l rd siz	24 ze ma	Y y be	Y
H-400	Y 	D 1 May be used a	.5 12 s binary ma	1-4K achine with	core 48 bit w	8u	120u			48	3	3	N	N
H-800	Y 	D 8 multiple cha	12 annel progr	4-32K camming. Ca	core n be use	6u d as a 48	24u bit word	150u size bi	312u nary ma	51 chine.	3	64	Y	Y
H-1400	Y	D 4	12	4-16K	core	6.5u	77u	·		·	3	3	Y	Y
H-1800		D 4 May be used a programs can l				2u nary and	8u decimal i	ns tructi	ons inc	luded.	Up to	eigh	t	
HW-15K		B 6 Multiply, div interlaced on		4K ing point pr	drum ogrammed	8.5m . Parity	650u checking	500u on word	800u s read	12 from dru	l m. Wo	0 ords	N	N
IBM Ramac 305	N 	B Parity check.	V Variable	2000 5-20KK word length	drum disk	10m 600m	50m	V	V		2	0	N	N
IBM 650		D Multiply and							d disk :					Y
1BM 704	N	Disk access comes B 3 Overflow, under	2 36	4-32K	core	12u	24 u	240u	240u	91	ble lo	ook u	p. N	Ŷ
IBM 705111	N 	D 7	l V	20-80K 60K	core drum	8m	.087m	.606m	3.35m	60	1	0	Y	N

							11	TERNAL C	HARACTERI	STICS						
		N	UMBER :	SYSTE	M	ME	MORY			TIMING		MACH	INE PR	ROGRA	MMIN	IG
NAME OF COMPUTER	Solid State?	Number Base	Bits/Digit	Digits/Alphabetic	Word Length	Number of Words	Typę	Access Time	Add Time	Multiply Time	Divide Time	Number of Instr.	Addresses/Instr.	No. Index Registers	Indirect Addressing?	Floating Point?
IBM 709	N	В	3	2	36	4-32K	core	12u	24 u	24 -	36 -	196	1	3	Ŷ	Y
		Overfl indica				vide, floati	ng poin	t trap ch	ecks. Mu	240u ıltiple o	240u hannel pr	ogrammi	ng, s	ense		
IBM 1401	Y	D	7	1	V	1.4 -	core	11.5u	230 u	2.1m	2.6m	43	1,2,	3	N	N
						16K 10-20KK and address rate with th			Multipl	y divide	instruct	ions ar	3	i ona]	! .	
IBM 1410	Y	D	7	1	v	10-40K 10-100KK	core disk	4.5u 550m	110u	1.2m	2.3m	190	2	15	N	· N
		Code a look u	nd add p, syn	ress chron	validi: ization	ty checks, p			al channe	el, prior	ity featu	re, ove	rlap,	tabl	.e	
IBM 1440	_	B.D Parity	4 , oper	6 ation	V code,	V validity.	core	11.5u	99.9u	1.3m	1.5m	43	2	- 3	N	N
IBM 1460	Y	D	7	1	V	8-16K	core	6u	108u	1.lm	1.4m	43	1,2,	3	N	ŀ
						2-15K and address ocessing cap			Multipl	e printe	ers, wide	variety	of to	ape d	rive	≥s
BM 1620	Y 	D Parity	6 check	2 5 a	V dditio	20-60K nal instruct	core tions op	20u tional.	56m Immediate	4.96m address	16.86m ing, bran	32 ch tran	2 nsmit.	0	Y	- 1
BM 7010	Y 	D Parity	6 and b	6 i-qui	6 nary cl	40-80K	core	2.4u o channel	35.2u	260u ss overla	V p, priori		0,1, 2 errupt	15	Ñ	1
BM 7030 (STRETCH)	Y 	B Instru	4 ction	6 look	64 ahead a	16-262K and overlapp	core ed core	2.2u banks al	1.5u low incre	eased int	ernal spe	ed.	1	16	Y	
BM 7040	Y	В	4	6	36	4-32K	core	8.0u	16u	33.5 - 46u	18.5 - 61u	73	1	3	Y	_
			low).	Mult	iple ch	tructions: nannel progr				arity, 1	loating p					l o
		cision	float	ing p	oint.											_
BM 7044	Y	cision B	4	6	36	8-32К	core	2.5u	500u	22.5 - 35u	7.5 -	73	1	3	Y	
BM 7044	Y	B Option (overf	4 al add	6 ition	36 al maci	8-32K nine instruc Multiple ch ng point.	ctions:	42. Mem	ory and I	35u [/O parit	50u y, floati	ng poir		ppinç	,	
	Y	B Option (overf	4 al add	6 ition	36 al maci	nine instruc Multiple ch	ctions:	42. Mem	ory and I	35u [/O parit	50u y, floati tion, clo	ng poir	erval	ppinç	,	
	Y	B Option (overf double D	4 al add low, u preci	6 ition nderf sion 2 refer	36 al machlow). floatin	nine instruc Multiple ch ng point.	ctions: nannel p core ient. F	42. Mem rogrammin	ory and I g - memor	35u I/O parit ry protec	50u y, floati tion, clo 792 - 984u	ng poir ck-inte	erval	pping timer	Y	J .
ВМ 7070	YY	B Option (overf double D Divide Zero s	4 lal add low, us preci 5 time suppres	6 ition nderf sion 2 refer sion.	36 al machlow). floatin	nine instruction Multiple chang point. 5-10K digit quotiter read-wri	ctions: nannel p core ient. F	42. Mem rogrammin	ory and I g - memor	35u I/O parit ry protec	50u y, floati tion, clo 792 - 984u	ng poir ck-inte	erval	pping timer	Y	_
BM 7070 BM 7072	Y Y Y	B Option (overf double D Divide Zero s D SEE re	4 al add low, u preci time uppres 5 emarks	6 ition nderf sion 2 refer sion. 2 under	36 al machlow). floatin 10 s to 5 Scatt	mine instruction of the magnetic of the magnet	ctions: nannel p core ient. F	42. Men rogrammin 6u ully chec	ory and I g - memor 72u ked adder	35u (/O parity ry protect 924u r, transi	50u y, floati tion, clo 792 - 984u er check.	ng poir ck-inte 200 Prior	l rity p	pping timer 99 roces	Y ssing	_
BM 7070 BM 7072 BM 7074	Y Y Y	B Option (overf double D Divide Zero s D SEE re D	4 al add flow, us preci 5 time suppres 5 emarks 7	6 ition nderf sion 2 refer sion. 2 under	36 al mack low). floatin 10 s to 5 Scatt	mine instruction of the magnetic of the magnet	core core ient. Fite. core	42. Mem rogrammin 6u ully chec	ory and I g - memor 72u ked adder 12u	35u (/O parity ry protect 924u r, transi	50u y, floati tion, clo 792 - 984u er check.	ng poir ck-inte 200 Prior 200	l rity p	pping timer 99 roces	Y ssing	_
ВМ 7070 ВМ 7072 ВМ 7074	Y Y Y	B Option (overf double D Divide Zero s D SEE re	4 al add flow, us preci 5 time suppres 5 emarks 7	6 ition nderf sion 2 refer sion. 2 under	36 al mach low). floatin 10 s to 5 Scatt 10 10 IBM 70	mine instruction Multiple chang point. 5-10K digit quotiter read-writer 5-30K 070 5-30K	core core core core core	42. Mem rogrammin 6u ully chec 6u 4u	72u ked adder 12u 10u	35u (/0 parity protect 924u f., transf 64u 100u 4.36 -	792 - 984u er check. 74u 70u 253u	ng poir ck-inte 200 Prior 200	l rity p	99 roces	Y ssing	
IBM 7070 IBM 7072 IBM 7074	Y Y Y Y Y Y	B Option (overf double D Divide Zero s D SEE re D Parity B	4 al add low, us preci 5 time uppres 5 marks 7 check	6 ittion nderf sion 2 refer sion. 2 under 1 ing.	36 al maclow). floatin 10 s to 5 Scatt 10 IBM 70 V	mine instruction in the control of t	core core core core core core	42. Mem rogrammin 6u ully chec 6u 4u 1u 2u	rory and Ing - memory 72u ked adder 12u 10u 11u 4.36u	35u (/0 parity protect 924u c, transf 64u 100u 4.36 - 30.52u	792 - 984u Tercheck. 74u 70u 253u 6.54 - 30.52u	200 Prior 200 200 200 200 227	l rity p	pping 99 roces 99 99 0	Y Y Y Y	
IBM 7070 IBM 7072 IBM 7074 IBM 7080 IBM 7090	Y Y Y Y Y	B Option (overf double D Divide Zero s D SEE re D Parity B Floati	4 al add low, use preci 5 time suppres 5 marks 7 check 3 ng poi	6 ition nderf sion 2 refer sion. 2 under 1 ing. 6 nt, tr	36 al macl low). floatin 10 s to 5 Scatt 10 IBM 70 V 36 ap, tra 36 ransfer	mine instruction in the instruction of the instruct	core core core core core core core core	42. Mem rogrammin 6u ully chec 6u 4u 2u 2.18u erflow, u 2.00u ity, divi	rory and Ing - memory 72u ked adder 12u 10u 11u 4.36u anderflow, 4.8 u	35u (/0 parity protect 924u 7. transf 64u 100u 4.36 - 30.52u and div 4-10u	792 - 984u For check. 74u 70u 253u 6.54 - 30.52u ride check 6-18u	200 Prior 200 200 200 200 200 227 s. Mul	city p	pping frimer 99 roces 99 0 char 7	Y Y Y Y Y Y Y	

			INTERNAL CHARACTERISTICS										
·		NUMBER SYSTEM	MEMORY	TIMING	MACHINE PROGRAMMING								
NAME OF COMPUTER	Solid State?	-Number Base Bits/Digit Digits/Alphabetic Word Length	Number of Words Type Access Time	Add Time Multiply Time Divide Time	Number of Instr. Addresses/Instr. No. Index Registers Indirect Addressing? Floating Point?								
librascope 3000			4-64K core 2.5u ut system, verified arithm am branching via flip-flop	16u 23u 36u netic unit, dual recording c os.	97 1 11 Y Y optional in files.								
Monrobot XI	Y 2	B 1 6 32 2 instructions per word.	1-2K drum 6m	9m 34m	27 1 0								
NCR 304		D 4 1.5 15 Parity and echo checking instruction system is inc		.6m 3m 3m s long. A single-address n	37 3 10 N Y microprogrammed								
NCR 310	Y f	B 1 6 12 No automatic checking. (4K core 6.4u Computer is a version of t	12.8u he CDC-160. Multiply and c	64 l O Y N divide must be programme								
NCR 315	Y I	D 4 1.5 3 Parity and echo checking	5-40K core 6u	36u 294u 1044u	90 1 32 N N								
NCR 390	Y 1	D 4 12 There are 10 "string of a	200 core 1.2m address" type instructions	11.3m 204.6m 248.6m , e.g., "sum A through D".	26 4 0 N N								
PB 250	Y I	B 1 22 Parity checking. Memory	16 delay .09m 16K delay 1.5m 16K core 24u consists of magnetostrict	24u 276u 252u 24u 276u 252u ive delay lines.	59 1 1 N Y								
PB 440		0		ely microprogrammed. Memory	V V V Y Y y parity,								
PDP-1		B 4 6 18 Microprogramming. Option channel. Built-in margin		10u 20u 30u eak, program resumes accord	28 1 0 Y N ling to interrupting								
PDP-4		B 6 4 18 Multiply and divide opera checking, auto-indexing.	4-32K core 8u ations programmed. Floati	16u 100u 184u ang point programmed. Buil	16 l N Y Y t-in marginal voltage								
Philco 1000	! !	BIN and DEC arithmetic a	vailable. Can communicate ough the real-time system.	80u 700u 2000u s. for BTD and DTB, BIN to with a Philco 2000 by mem. Psynchronous logic. Vari	. to mem. transfer, all								
Philco 2000-210	Y 1	D 6 1 8 Repeat modes, asynchrono	8-32K core 4u 32K drum 25m us operation, automatic in	14.8u 69.9u 73.8u	225 1 8 N Y								
Philco 2000-211	Y :	D 6 1 8 Transmission checking.	8-32K core 4u 32K core Repeat modes, asynchronous	4.1u 34.9u 36.7u soperation, automatic inter	225 1 8 N Y								
Philco 2000-212				.55u 4.3u 9.8u g, four repeat modes, automo instructions may be processe									
Philco 4000	_	B,D 6 6 6 Parity checking to and f	4-32K core 3u rom memory. A parity bit	80u 700u 2000u per character. Same as Ph	9 1-4 4 N N ilco 1000.								
RCA 301	Y (D 6 l V Circuitry arithmetic for	10-40K core 7u 8-digit operations, plus	176u 434u 490u 2-digit exponent (-99 to +6	48 2 3 Y Y 99) if floating point.								
RCA 501	Y :	D 6 1 V Indirect addressing limi	16-262K core 15u ted to scatter and gather	360u 1.9 - 1.3 - 9.6m 2.4m operations.	49 2 7 Y N								
RCA 601	Y '	B 1-8 1 56 Variable length instruct	8-32K core .9-1.5t ions are 1/2 word, or 2-1/	1 '2 words long. Automatic ac	2 8 Y Y ddress modification.								
RPC 4000	Y	B 32 Instruction contains the	128 FBD 5m 8K drum 8.5m	lm 17m 17m	42 2 1 N N								

				INTERNAL C	ARACTER I	STICS						
		NUMBER SYSTEM	MEMOR Y	7		TIMING		MACH	INE PR	OGRA	MMIN	G
NAME OF COMPUTER	Solid State?	Number Base Bits/Digit Digits/Alphabetic Word Length	Number of Words	Access Time	Add Time	Multiply Time	Divide Time	Number of Instr.	Addresses/Instr.	No. Index Registers	Indirect Addressing?	Floating Point?
RW 230		B 15 Instructions stored two multiple-word length op	per word in th					, inde	l cing,			N
RW 330	<u>Y</u>	B 28 Parity and overflow che		rum 8.3u	.26m	1.3m	.1.43m	93	284	1-3	N	Y
RW 340		B 28 Parity and overflow che call for automatically 3	8-131K d cking. Operati				20u vs program	173 nmer to	l desig	3 n and	Υ	Y
SDS-910	<u>Y</u>	B 4 6 24 Multiply and divide pro		ore 8u y parity chec	l6u k, input/	248u 'output p	500u arity.	39	1	1	Y	N
SDS-920	Y 	B 4 6 24 Has microprogrammed reg		ore 8u parity check,	16u input/ou	32u itput par	224u ity.	62	1	1	Y	N
SEMA 2000		D 4 8 40 Odd parity checking on instructions. Negative	read and write,		ronizatio				l erform	l ance	N of a	N all
SEMAC	Y 	D 4 8 15 Instructions defined by	10K d	ans. 1m rum 8.5m ng. Parity,	340m 8.5m drum synd	170m 170m hronizat	170m 170m ion.	64	1		N	N
Univac I	N 	D 7 1 11 Duplicate arithmetic and		lay 242u rcuitry, pari	525u ty check.	2.15m	3.95m	45	1	0	N	N
Univac II	N 	D 7 1 12 Parity check, some dupl		ore 40u	200u	1.9m	3.7m	47	1	0	N	N
Univac III		D 4 1.5 6 Field selection, automa write, addressable cloc	tic checking, i	ore 1.07u nterrupt, mul	8u tiple wor	124u d operan	144u ds, scatt	61 ter read	l i, gat	15 her	Y	Y
Univac 490		B 1 6 30 Illegal function and minimaterrupts.	78KK d	ore 1.9u rum 17m ut checks. C	12u Concurrent	84u program	84u operatio	62 on via a	l nutoma	7 tic	N	N
Univac 60/120		riquin- 6 6 V ary Automatic checking. Ab	60-120 vac digits ility to read a		10m ame card.	50m	50m	10	3		N	Y
Univac 1004	Y P	B V rocessor no checking		ore 8u	160u	4880u	7668u	40	2		N	Y
Univac 1050		B 6 6 5 Odd parity checking. An applications.		ore 4.5u e makes possi	270u ble simul	567u taneous	1735u processin	43 ig of mi	l ıltipl	7 e	N	N
Univac 1103A	N 1	B 1 6 36 Parity, overflow, lockor	16-32K d	ore 8u rum 17m 1 checks. In	60u terrupt 1	410u Ceature a	490u nd repeat	50 comman	2 nd.	0	N	Y
Univac 1105	N 	B 1 6 36 Parity, overflow, lockon	16-32K d	ore 8u rum 17m nterrupt feat	60u ure and r	410u epeat co	490u mmand.	50	2	0	N	Y
Univac 1107	Y 	B 1 6 36 Overflow check. Index a	65K c	ilm .3u ore 1.8u adable, 128 1	4u oop count	12u registe	31.8u rs, autom	115 natic in		15 ntat:	Y ion.	Y
Univac File Computer I	N	D 7 1 12 Additional 19 plugboard	1020 d	ore .9m rum 3.1m nd 63 in/out	8.6m	23.8m ons. Co	27.5m	23 partial	3 lly so	O lid:	N	N e.
Univac File Computer II	N :	D 7 1 12 SEE remarks under Univad		ore .63u	3.4u			23	3	0	N	Ñ

						I	NTERNAL CH	ARACTERI	STICS					
		NUMBI	ER SYSTE	EM	ME	MORY			TIMING		MACHI	NE PR	OGRA	MMING
NAME OF COMPUTER	Solid State?	Number Base Bits/Digit	Digits/Alphabetic	Word Length	Number of Words	Туре	Access Time	Add Time	Multiply Time	Divide Time	Number of Instr.	Addresses/Instr.	No. Index Registers	Indirect Addressing? Floating Point?
Univac Larc	Y	D 5	2	12	100 10-97K	core	lu 4u	4 u	— ———— 8u	28u	76	1	99	Y
Univac SS 80/90	1	88 Proces	sor ins t error	tructi	6KK n/out and in ons, includicted. Look-	drums formationg in/ou ahead pe	68m on transfe it. Autom rmits fas	r. 76 s	ummary orde	ers from 20% dupl	icate c	ircui	ts.	A11
	1	Parity, o	verflow	, logi	2.4-7K cal checks.	drum	1.7m							
Univac SS 80/90 II		iquin- 4 ary	6	10	1280	core	17u	136u	688u	1173u	76	1	9	N :
	(Odd parit			200-1200 2400-7600 tiword trans optional).	drum drum fers dru	425u 1700u m to core	1470u and core	1988u e to drum.	2490u Full a	1phanum	eric	compa	are
					II. IN	PUT AND	OUTPUT							
				MAG	NETIC TAPE			PUN	CHED CARDS	PAPE	R TAPE	PR	INTER	SPEE
NAME OF COMPUTER	No	. of Unit		pe Den har/In			Words/Tap	e Ca	ards/Min	Cha	r/Sec	1	Lines	/Min
ALWAC III-E		16 Parity c	heckina	. Mag	5 17	.5K	460K	ne editi	100R 100P		200R 50P	ite-c		50
ASI 210			al equi	20 pment	0 22 can operate nterrupt.	.5K independ	1.5KK ently and	simulta	neously; bu	uffered	communi	catio	n;	200
ASI 420		64 Analog b	uffer a	20 vailab	0 22.5-0		X-Y plo	tter ava	800R 250P ilable. 20		500R 110P rinter	avail		000
Burroughs E-103					olumns per se per sec. Dat				wmns per se	ec. Pri	20R nter, s	emi-g	angeo	* I,
Burroughs 205		as auxil	iary st	orage	g via buffer 20,000,000 both direct	0 digits	per file	, 10 file		Multiple				
Burroughs 220		10		20	8 2	25K	1.3KK		300R 100P	1	000R 60P		1	500 150
		as auxil	iary st	orage	g via buffer 65,000,000 rch and scan	0 digits	per file	, 10 file	Datafile Mes availab	le. Dua	Tape B l lane	magne		
Burroughs B200 Series		Data com	ders, p municat	ions d	5 18-50-6 , printers, l isk file; Bu paper tape.	MICR sor				Ledger				700
Burroughs 5000		units.	Plotter	may b		rtical a	nd horizo	ntal mag	netic tape	ole with				700 291 V
CDC G-15		4				430	300K		100R		250R			100
		editing	and che	cking.	2600 char/se Tape reads erential ana	in both	directio	ns. Tap						

			INPUT AND	OUTPUT			
		MAGNETIC	TAPE		PUNCHED CARDS	PAPER TAPE	PRINTER SPEE
NAME OF COMPUTER	No. of Units	Tape Density Char/Inch	Tape Speed Char/Sec	Words/Tape	Cards/Min	Char/Sec	Lines/Min
DC G-20				lKK t editing. Hig	1000R 250P h print speed ref	500R 100P Cers to wholly	1000 1500 numerical
CDC-160	32	tiple read-writ	15-41.7K	7,6KK	1300R	350R	1000
		rt-stop time.	Magnetic drum		100P D converters, typ	110P bewriter.	150
CDC-160A	32	200-556	15-41.7K	7.6KK	1300R 100P	350R 110P	1000 150
	l buffer ch arithmetic		second buffe	er channel opti	onal. Mag-drum,		
CDC-924	48	200-556	15-41.7K	4KK	1300R 100P	350R 110P	1000 150
	3 bi-direct A/D, typewr		annels. Simu	ıltaneous read,	write and comput		
CDC-924A	Same as 924						
CDC-1604	48	200 556	30-83.4K	2KK	1300R 100P	350R 110P	1000 150
	•	ad-write-comput	e. 3 bi-dire	ectional buffer	channels.		
CDC-1604A	Same as 160	94.					
CDC-3600	96	200-556- 800	30-83.4K	2KK	1300R 100P	350R 110P	1000
		is read, write, ta display devi		Up to 32 data	channels. Satel	lite computer,	disk
DDP-24	16	200-555	6-41.6K	4KK	400R 100P	300R 60P	300 1200
	commands, I options inc	/O directly wit	h AU, max tra digital) A/D-	insfer. I/O rat	tal overlap. Blo e 166,000 24-bit bulk storage (dru	words/second.	1/0
DE-60	N Print and c	ompute simultan	eously. Type	ewriter, plotte	N r. Numeric keybo	N pard.	12
GE 210	13		30K	 	1500R 100P	500R 60P	1000
	Read-write- encoded cha		tic document	sorter-reader	available. Print		nagnetically
GE 215	8	200	15K	2KK	400R 1000R 100P	250R 1000R 110P	450
		ad-write-comput m. Data commun			300P r-reader availabl e.	e. Disk file	with access
GE 225	56	200	15	2KK	1000R	1000R	900
		200-556 ad-write-comput m. Data commun			300P r-reader availabl e.	110P le. Disk file	with access
GE 235	56	200 200–556	15K 15-41K	2KK 5KK	400R 1000R 100P	250R 1000R 110P	900
		ad-write-comput m. Data commun			300P r-reader availabl		with access
H-330	128		30-83K	· · · · · · · · · · · · · · · · · · ·	1500R 300P	350R 110P	1000
1-400	64		64K		800R	1000R	900
	Automatic m	agnetic tape er	ror correction	on. Tape reads	250P in both direction	110P	
I-800	64		64K		800R	1000R	900
	Automatic m	agnetic tape er	ror correction	on. Tape reads	250P in both directio	110P	
H-1400	16		32-89K	-	800R	1000R	900
					250P	110P	

	r		INPUT AND O		T	T	r
		MAGNETI	C TAPE		PUNCHED CARDS	PAPER TAPE	PRINTER SPEED
NAME OF COMPUTER	No. of Units	Tape Density Char/Inch	Tape Speed Char/Sec	Words/Tape	Cards/Min	Char/Sec	Lines/Min
-1800	64 Magnetic t	apes read forwar	89-124K rd and reverse w	ith orthotro	800R 250P nic error correct	1000R 110P	900
W-15K	N				N	20R 20P	N
	Typewriter	input at 120 ch	nar/sec. Simult	aneous read-	write-compute.		
BM Ramac 305	N Control pa	nel editing. Si	imultaneous read	-compute or	125R 100P write-compute.	60R 60P	150
BM 650	6	200	15K	450K	155R 100P	60	150
		nel editing. Au RNAL CHARACTERIS		g. Simultan	eous read-write-o	ompute. Bulk	disk storage
BM 704	10	200	15K		250R 100P		150
	Cathode ra	ay tube plotter oken into any nu	may be attached	. Physical records.	overlap of comput tape records of a		
IBM 705 III	100	556	62.5K	16KK	250R 100P te-compute simult	aneously	1000 500 150
BM 709	48	200-	15-	y. neau-wii	250R	aneously.	150
BM 109	Control par	556 nel editing. Ph	62.5K	ords of any	100P length; physical	records contai	150 in any number
BM 1401	6	200-	7,5-	2-7K	800R	500	600
	printing o	of entirely nume		magnetic in	250P red. High speed k reader-sorter,		
BM 1410	printing o	nel and programm of entirely nume nd many other de	med editing. Prerical lines. A evices may be at	magnetic in	red. High speed k reader-sorter,		fers to the
BM 1410	printing of reader, as 20	nel and programm of entirely nume nd many other de 200- 555 ting commands.	ned editing. Prerical lines. A evices may be at 7.5-62.5K	magnetic in tached.	red. High speed k reader-sorter, 800R 250P isk storage (see	an optical cha	efers to the aracter 600
	printing of reader, as 20	nel and programm of entirely nume nd many other de 200- 555 ting commands.	red editing. Prerical lines. A evices may be at 7.5-62.5K	magnetic in tached.	ed. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R	500R INTERNAL CHARA	efers to the aracter 600
	printing of reader, and 20 In/out eding Read-write Printer but	nel and programm of entirely nume nd many other de 200- 555 ting commands. e-compute. 1412	red editing. Prerical lines. A evices may be at 7.5-62.5K Automatic check magnetic chara	magnetic in tached. ing. Bulk d cter reader Max. 5, 77	red. High speed k reader-sorter, 800R 250P isk storage (see may be added.	500R INTERNAL CHARA 500R 150P removeable an	600 (CTERISTICS).
IBM 1440	printing of reader, and 20 In/out eding Read-write Printer but	nel and programm of entirely nume nd many other de 200- 555 ting commands. e-compute. 1412	red editing. Prerical lines. A evices may be at 7.5-62.5K Automatic check magnetic chara	magnetic in tached. ing. Bulk d cter reader Max. 5, 77	red. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses	500R INTERNAL CHARA 500R 150P removeable an	600 (CTERISTICS).
BM 1440	printing or reader, and 20 In/out eding Read-write Printer but disk packs 6 Overlap proterminal,	and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disk s containing up 200- 800 becassing with re console, 13" di data transmiss	red editing. Prerical lines. A evices may be at 7.5-62.5K Automatic check magnetic chara to 3KK char. ea 7.5-90K eading or writin sk drives, 1060	ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca	800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15kk	500R INTERNAL CHARA 500R 150P removeable and char. on line 500R 150P 0 data communi	600 CTERISTICS). 120-600 add interchangeal
BM 1440	printing or reader, and 20 In/out edirect Read-write Printer but disk packs 6 Overlap proterminal, unit, 7716	and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disk s containing up 200- 800 becassing with re console, 13" di data transmiss	red editing. Prerical lines. A evices may be at 7.5-62.5K Automatic check magnetic chara to 3KK char. ea 7.5-90K eading or writin sk drives, 1060	ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca	ed. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 10 ect data channel	500R INTERNAL CHARA 500R 150P removeable and char. on line 500R 150P 0 data communi 09 data transm connection to	600 CTERISTICS). 120-600 add interchangeal
BM 1440	printing or reader, and 20 In/out eding Read-write Printer but disk packs 6 Overlap proterminal, unit, 7710, 1401, or 1000	and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disk s containing up 200- 800 occassing with re console, 13" di data transmiss 1460. checking. Card	red editing. Prerical lines. A evices may be at 7.5-62.5K Automatic check magnetic chara c storage drives to 3KK char. ea 7.5-90K eading or writin sk drives, 1060 sion unit, magne	magnetic in tached. ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca g. Hypertap data commun tic ink, dir	red. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 106 ect data channel	500R INTERNAL CHARA 500R 150P removeable an char. on line 500R 150P 0 data communi 09 data transm connection to	600 CTERISTICS). 120-600 add interchangeal e.) 600-3,300 deation nission 1440,
BM 1440 BM 1460 BM 1620	printing or reader, and 20 In/out eding Read-write Printer but disk packs 6 Overlap proterminal, unit, 7714, and 771401, or 1000 N Automatic of the reader.	nel and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disk s containing up 200- 800 cessing with re console, 13" di data transmiss 1460. checking. Card t.	red editing. Prerical lines. A evices may be at 7.5-62.5K Automatic check magnetic chara c storage drives to 3KK char. ea 7.5-90K mading or writin sk drives, 1060 sion unit, magne input-output bu	magnetic in tached. ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca g. Hypertap data commun tic ink, dir	red. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 10 ect data channel 250R 125P 1 Data Converter	500R INTERNAL CHARA 500R 150P removeable an char. on line 500R 150P 0 data communi 09 data transm connection to	600 CTERISTICS). 120-600 add interchangeal e.) 600-3,300 deation nission 1440,
BM 1440 BM 1460 BM 1620	printing or reader, and 20 In/out eding Read-write Printer but disk packs 6 Overlap proterminal, unit, 7711, 1401, or service input 20 Buffered u	nel and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disk s containing up 200- 800 occssing with reconsole, 13" di odata transmiss 1460. checking. Card t.	red editing. Precial lines. A recical lines. A recipient of the recipient	magnetic in tached. ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca g. Hypertap data commun tic ink, dir	red. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 10 ect data channel 250R 125P 1 Data Converter	500R INTERNAL CHARA 500R 150P removeable an char. on line 500R 150P 0 data communi 09 data transm connection to 150R 15P can be added f	600 CTERISTICS). 120-600 ad interchangeal c) 600-3,300 cation nission 1440, for real-
EBM 1440 EBM 1460 EBM 1620 EBM 7010	printing or reader, and 20 In/out eding Read-write Printer but disk packs 6 Overlap proterminal, unit, 7711, 1401, or service input 20 Buffered u	and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disks containing up 200- 800 occssing with reconsole, 13" di odata transmiss 1460. checking. Card t. 200- 800 nit record, pape	red editing. Precial lines. A recical lines. A recipient of the recipient	magnetic in tached. ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca g. Hypertap data commun tic ink, dir	red. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 10 ect data channel 250R 125P 1 Data Converter	500R INTERNAL CHARA 500R 150P removeable an char. on line 500R 150P 0 data communi 09 data transm connection to 150R 15P can be added f	600 CTERISTICS). 120-600 ad interchangeales.) 600-3,300 acation nission 1440. For real-
IBM 1440 IBM 1460 IBM 1620 IBM 7010	printing or reader, and 20 In/out eding Read-write disk packs 6 Overlap proterminal, unit, 771(1401, or 1401, or 1401) Automatic time input disk, 130 256 Input and of the reader of	nel and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disks containing up 200- 800 occssing with reconsole, 13" di 0 data transmiss 1460. checking. Card t. 200- 800 nit record, pape output usually controls.	red editing. Precial lines. A recical lines. A recipient of the recipient	magnetic in tached. ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca g. Hypertap data commun tic ink, dir ffered. 171 V cessing, inq	red. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 10 ect data channel 250R 125P 1 Data Converter 800R 250P uiry and paper ta	500R INTERNAL CHARA 500R 150P removeable and char, on line 500R 150P 0 data communi 09 data transm connection to 150R 150P can be added in 500R	600 CCTERISTICS). 120-600 add interchangeales.) 600-3,300 decation mission 1440, for real- 600 mel tape and
IBM 1410 IBM 1440 IBM 1460 IBM 1620 IBM 7010 IBM 7030 (STRETCH)	printing or reader, and 20 In/out eding Read-write disk packs 6 Overlap proterminal, unit, 771(1401, or 1401, or 1401) Automatic time input disk, 130 256 Input and of the reader of	nel and programm of entirely nume and many other de 200- 555 ting commands. e-compute. 1412 ffer. 1311 disks containing up 200- 800 occssing with reconsole, 13" di 0 data transmiss 1460. checking. Card t. 200- 800 nit record, pape output usually controls.	red editing. Prerical lines. A revices may be at 7.5-62.5K Automatic check 2 magnetic chara to 3KK char. ea 90K eading or writin isk drives, 1060 ion unit, magne input-output bu 23-90K er tape, teleprok files.	magnetic in tached. ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca g. Hypertap data commun tic ink, dir ffered. 171 V cessing, inq	red. High speed k reader-sorter, 800R 250P 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 10 ect data channel 250R 125P 1 Data Converter 800R 250P uiry and paper to 1000R 250P ess time of magne	500R INTERNAL CHARA 500R 150P removeable and char, on line 500R 150P 0 data communi 09 data transm connection to 150R 150P can be added in 500R	600 CCTERISTICS). 120-600 add interchangeales.) 600-3,300 decation mission 1440, for real- 600 mel tape and
IBM 1440 IBM 1460 IBM 1620 IBM 7010 IBM 7030 (STRETCH)	printing or reader, and 20 In/out eding Read-write disk packs 6 Overlap proterminal, unit, 771(1401, or 1401, or 1401) Automatic time input disk, 130 256 Input and 51 to 231	and programm of entirely numeral and programm of entirely numeral many other december of the programm of entirely numeral many other december of the programm	red editing. Prerical lines. A revices may be at 7.5-62.5K Automatic check 2 magnetic chara to 3KK char. ea 7.5-90K eading or writing sk drives, 1060 ion unit, magne input-output but 23-90K er tape, teleprok files. 62K aunder separate of on file organi 90K	magnetic in tached. ing. Bulk d cter reader Max. 5, 77 ch. (Max. ca g. Hypertap data commun tic ink, dir ffered. 171 V cessing, inquestion.	red. High speed k reader-sorter, 800R 250P isk storage (see may be added. 300-400R V K char. rate uses pacity up to 15KK 800R 250P e available. 105 ications unit, 10 ect data channel 250R 125P 1 Data Converter 800R 250P in the storage of the second s	500R INTERNAL CHARA 500R 150P removeable and char. on line 500R 150P 0 data communi 09 data transm connection to 150R 15P can be added fi 500R 15P the can be added field to the chara 500R	600 CCTERISTICS). 120-600 Ind interchangeal (1) 600-3,300 Indication (1) 600 real- 600 The second of the second o

	T		INPUT AND	OUTPUT	г	r	
		MAGNETIC	ТАРЕ		PUNCHED CARDS	PAPER TAPE	PRINTER SPEE
NAME OF COMPUTER	No. of Units	Tape Density Char/Inch	Tape Speed Char/Sec	Words/Tape	Cards/Min	Char/Sec	Lines/Min
IBM 7070		nin. printer off			500R 250P printer editing. e-compute. 1401		
IBM 7072	600 line/m		off-line. Mul		500R 250P printer editing. rite-compute. 140		
IBM 7074	600 line/m				500R 250P printer editing. e-compute. 1401		
IBM 7080	40 Uses 1401 i	200- 556 For card, paper	15- 62.5K tape and print	1.6KK	overlap of read-w	rite-compute.	
IBM 7090					250R 100P ng, full tape chec ght 7607 Data Char		150 e read-
IBM 7094		1333 rint editing wit remote inquiry,			250R 100P d-write-compute bontrol.	uffering. Disk	150
LGP-21	N				N	60R 60P	N
LGP-30	N No simultar	neous calculatir	ıg•			200R 20P	
Librascope 3000		555.5 ns read-write-co			200-800R 100P ter, CRT display.	350R 60P File subsyste	1000 ms carry
Monrobot XI	N Up to 4 in/	out devices can	be attached.	Typewriter.	16 columns/sec.	20R 10P card read.	60
NCR 304	back. In/ to 4 MICR	out editing. R	ead-write on t can be used, b	apes simultan	2000R 100P magnetic tape cheously. Card and	d print buffere	d. Up
NCR 310					Automatic magne		900 ng; tape
NCR 315	peripheral cards on a	units. Automa drum) random a	tic checking a ccess memory (nd editing fa 200m access 1	2000R 250P its simultaneous of a cilities. 16 CR/ time) units allow of the checks per minute.	AM (magneticall 240 postings p	y encoded
NCR 390	documents)	unit. Automat	ic checking.	Editing of pu	16R 18P tic tape affixed a unched cards and p gements on multip	paper tape. Pr	
	-			•	•		

	1		INPUT ANI		T	Γ	T
NAME OF COMPUTER		MAGNETIC			PUNCHED CARDS	PAPER TAPE	PRINTER SPEED
	No. of Units	Tape Density Char/Inch	Char/Sec	Words/Tape	Cards/Min	Char/Sec	Lines/Min
В 440					800R 250P with spooler. Sel ape reader and pap		
DP-1	operating	simultaneously.	. Visual catl	node ray tube	200R,800R 100P ape units (each wi displays, 10" or 5 cks, A-D-A convert	" precision.	Light
		tters available		· ·	cks, A-b-A convert	ers, murcipies	7619 ,
PDP-4		200- 556 us read-write-co CRT display,			200R,800R 100P /output devices ar	300R 63P e buffered. M	300 Micro-tape
hilco 1000	64	750- 2,200	90K 240K	19-66кк	2000R 600R 100P 200P	1000R 60P	900 300
					uipment may be buf ons system, any co		
hilco 2000-210	256	750	90К	2.4KK	2000R 100P	1000R 60P	900
	operate si printing a	multaneously w	ith computationg with the al	on. The addit	eads in both direction of a buffer petime scanner, cloc	tions. 4 tape rmits simultar	neous
Philco 2000-211	256	750	90K	2.4KK	2000R 100P	1000R 60P	900
	devices ca		ltaneously, 4	can be magnet	th directions and ic tape units. A	is addressable	
hilco 2000-212	256		0017	0. 41777	00000	10000	
	Tape reads operate si time device	multaneously w	ith computation ranslator, cl	on. 4 of the ock, interval	2000R 100P nd editing. 9 inp 9 can be magnetic timer, and a data	tape units. E	Real-
Philco 4000	Tape reads operate si time device	in both direct: multaneously w. es, IBM tape t: ween computers)	240K ions. Automa ith computationslator, clo	4.9KK tic checking a on. 4 of the ock, interval	100P nd editing. 9 inp 9 can be magnetic	60P ut-output devi tape units. F	ices can Real-
	Tape reads operate si time devic cation bet Same as Phi 14 Data Record	in both direct: multaneously w. multaneously w	240K ions. Automa ith computati ranslator, cle can be adde	4.9KK tic checking a on. 4 of the ock, interval d.	100P nd editing. 9 inp 9 can be magnetic	60P out-output devitape units. E link system (c 1000R 100P	900 300 150
CA 301	Tape reads operate si time devic cation bet Same as Phi 14 Data Record available	in both direct: multaneously w. multaneously w	240K ions. Automa ith computati ranslator, cle can be added 10- 66K le, up to six ity. Read-co	4.9KK tic checking a on. 4 of the ock, interval d. units with 4. mpute, write-c	100P nd editing. 9 inp 9 can be magnetic timer, and a data 600R 250P 5KK capacity each.	1000R 1000R 1000P Data Disc fite simultaned	900 300 150 1000 iles ously.
CA 301	Tape reads operate si time devic cation bet Same as Phi 14 Data Record available 62' Tapes read	in both direct: multaneously w. tes, IBM tape tr ween computers) 11co 1000. 333- 667 1 Files availab 22-176KK capac: 333- 667	240K ions. Automa ith computati ranslator, cli can be added 10- 66K le, up to six ity. Read-co 33- 66K ions. Read-c	4.9KK tic checking a on. 4 of the ock, interval d. units with 4. mpute, write-c	100P nd editing. 9 inp 9 can be magnetic timer, and a data 800R 250P 5KK capacity each. ompute, or read-wr 600R 200P	1000R 1000R 1000P Data Disc fite simultaned	900 300 150 1000 iles ously.
Philco 4000 RCA 301 RCA 501 RCA 601	Tape reads operate si time devic cation bet Same as Phi 14 Data Record available 62' Tapes read 63 Multiple re	in both direct: multaneously w. tes, IBM tape tr ween computers) 11co 1000. 333- 667 1 Files availab: 22-176KK capac: 333- 667 in both direct: 333- 800	240K ions. Automa ith computation ranslator, cli can be added 10- 66K le, up to six ity. Read-col 33- 66K ions. Read-c	4.9KK tic checking a on. 4 of the ock, interval d. units with 4. mpute, write-c	100P nd editing. 9 inp 9 can be magnetic timer, and a data 800R 250P 5KK capacity each. ompute, or read-wr 600R 200P	1000R 1000R 1000P Data Disc fite simultaned	ices can Real- communi- 900 300 150 1000 iles busly. 600
CA 501 CA 601 RPC 4000	Tape reads operate si time devic cation bet Same as Phi 14 Data Record available 62' Tapes read 63 Multiple re	in both direct: multaneously was, IBM tape to the tween computers) alco 1000. 333-667 I Files available 22-176KK capace 333-667 in both direct. 333-800 ead-write-computers	240K ions. Automa ith computation ranslator, cli can be added 10- 66K le, up to six ity. Read-col 33- 66K ions. Read-c	4.9KK tic checking a on. 4 of the ock, interval d. units with 4. mpute, write-c	100P nd editing. 9 inp 9 can be magnetic timer, and a data 800R 250P 5KK capacity each. ompute, or read-wr 600R 200P	1000R 1000R 100P Data Disc fite simultaned 1000R 1000-300P	ices can Real- communi- 900 300 150 1000 iles busly. 600
RCA 301 RCA 501 RCA 601	Tape reads operate si time devic cation bet Same as Phi 14 Data Record available 62 Tapes read 63 Multiple re N No simultan 16	in both direct: multaneously w. tes, IBM tape triveen computers) alco 1000. 333- 667 I Files available 22-176KK capac: 333- 667 in both direct: 333- 800 ead-write-computers)	240K ions. Automa ith computati ranslator, cli can be added 10- 66K le, up to six ity. Read-co 33- 66K ions. Read-co 120K te. 15- 41K ut not recomm 28 word digit	4.9KK tic checking a on. 4 of the ock, interval d. units with 4. mpute, write-c ompute, write-	100P nd editing. 9 inp 9 can be magnetic timer, and a data 800R 250P 5KK capacity each. ompute, or read-wr 600R 200P compute, or read-w	1000R 100P 100-1000R 100P 100P 100P Data Disc firite simultaned 1000R 100-300P Vrite simultaned 500R 300P 500R 60P	1000 1000 1000 1000 1000 1000 1000 100

· · · · · · · · · · · · · · · · · · ·			INPUT AN		т	T	· · · · · · · · · · · · · · · · · · ·
		MAGNETIC			PUNCHED CARDS	PAPER TAPE	PRINTER SPI
NAME OF COMPUTER	No. of Units	Tape Density Char/Inch	Tape Speed Char/Sec	Words/Tape	Cards/Min	Char/Sec	Lines/Min
DS-910	8	200 556	15K	1.5KK	200R	300R	300
				4KK ds. Optional	100P 2nd input/output b	60P ouffer. Option	al levels
5DS-920		556	41.7K		200R	300R	300
	See SDS-910) .			100P	60P	
SEMA 2000	8	50	375	72K	650R	300R	150
					200P dding machine, tel ed paper tape and		
SEMAC	8	50	375	72K	650R 200P	300R 50P	150
Jnivac I	10	128	12.8K	137K	300R	200R	600
		per tape equip . Automatic ma			120P ic tape. Simultan	50P neous read-writ	e-compute.
Univac II	16	250	25K	420K	300R	200R	600
		diting. Card a	and paper tap	e off-line via	120P magnetic tape. S	50P imultaneous re	ad-write-
Univac III	38	1333	133K	8.6KK	700R	1000R	700
	Programmed	250 editing. Mult	25K iple read-wri	.44KK te-compute. C	300P ard punching print	110P er may be used	•
Jnivac 490	192	1027	175K	6.5KK	700R	1500R	700
		250 hecking. Multi specialized in			300P ystem adaptable to	350R 110P analog device	s. A
					processing; paper nch. Paper tape r		
	operation						·
Univac 1004					300-400R		300-400
Univac 1004	Various sim	ultaneous data printer. Card			300-400R 20P c system includes		300-400
	Various sim				c system includes		300-400
	Various sim	printer. Card	d punch is op	tional.	20P c system includes	card processor	300-400 , card
Jnivac 1050	Various sim	printer. Card	d punch is op	tional.	20P c system includes 1KR 300P arious simultaneou	card processor s data handlin	300-400 , card
Univac 1050	Various sim reader and Tapes are n	ot word oriente	133K ed. Printer	has buffer. V	20P c system includes 1KR 300P arious simultaneou	card processor as data handlin 200R 60P	300-400 , card 700-922 g operations
Jnivac 1050 Jnivac 1103A	Various sim reader and Tapes are n	ot word oriente	133K ed. Printer	has buffer. V	20P c system includes 1KR 300P arious simultaneou 120R 120P input-output regi	card processor as data handlin 200R 60P sters. Tape r	300-400 , card 700-922 g operations
Jnivac 1050 Jnivac 1103A	Various sim reader and reader and lo lo card plugbo directions 24	ot word oriented 128 ard editing. A 129 208 as read-write-ce	133K ed. Printer 12.8K Automatic car 21K ompute. Flex	has buffer. V 326K d checking. 2 846K owriter output	20P c system includes 1KR 300P arious simultaneou 120R 120P input-output regi	card processor s data handlin 200R 60P sters. Tape r 200R 60P	300-400 , card 700-922 g operations 600 eads in both 600 nal.
Univac 1050 Univac 1103A Univac 1105	Various sim reader and reader and lo lo card plugbo directions 24	ot word oriented 128 ard editing. A Typewriter. 208 as read-write-celeature on high	133K ed. Printer 12.8K Automatic car 21K ompute. Flex	has buffer. V 326K d checking. 2 846K owriter output	20P c system includes 1KR 300P arious simultaneou 120R 120P input-output regi 120R 120P Cathode ray tub	card processor as data handlin 200R 60P sters. Tape r 200R 60P be output optio levices availab 400R 100P	300-400 , card 700-922 g operations 600 eads in both 600 nal.
Jnivac 1050 Jnivac 1103A Jnivac 1105	Various sim reader and reader and Tapes are n 10 Card plugbo directions 24 Simultaneou Plotting f 192 Programmed	ot word oriented 128 pard editing. A 128 ard editin	133K ed. Printer 12.8K Automatic car 21K compute. Flex speed printe 120K atic checking	has buffer. V 326K d checking. 2 846K owriter output r. Off-line d 5.5KK 1.2KK	20P c system includes IKR 300P arious simultaneou 120R 120P input-output regi 120R 120P . Cathode ray tub ligital to analog d	card processor 200R 60P 200R 60P be output optio levices availab 400R 100P 300P	300-400 , card 700-922 g operations 600 eads in both 600 nal. le. 700 600
Univac 1050 Univac 1103A Univac 1105 Univac 1107	Various sim reader and reader and Tapes are n 10 Card plugbo directions 24 Simultaneou Plotting f 192 Programmed	ot word oriented 128 sard editing. A 208 se read-write-ce eature on high 1000 250 125 editing, automated a	133K ed. Printer 12.8K Automatic car 21K compute. Flex speed printe 120K atic checking	has buffer. V 326K d checking. 2 846K owriter output r. Off-line d 5.5KK 1.2KK	20P c system includes 1KR 300P arious simultaneou 120R 120P input-output regi 120R 120P cathode ray tub igital to analog d 700R 300P multaneous read-wr	card processor 200R 60P Sters. Tape r 200R 60P be output optio levices availab 400R 100P 300P ite-compute.	300-400 , card 700-922 g operations 600 eads in both 600 nal. le. 700 600
Univac 1050 Univac 1103A Univac 1105 Univac 1107	Various sim reader and reader and Tapes are no	ot word oriented 128 ard editing. A 208 as read-write-celeature on high 1000 250 125 editing, automs analog devices 139 control for care	133K ed. Printer 12.8K Automatic car 21K ompute. Flex speed printe 120K atic checking s. 10K ds, paper tapting-collatin	has buffer. V 326K d checking. 2 846K owriter output r. Off-line d 5.5KK 1.2KK . Complete si 200K e and printer.	20P c system includes IKR 300P arious simultaneou 120R 120P input-output regi 120R 120P . Cathode ray tub igital to analog d 700R 300P multaneous read-wr	card processor 200R 60P sters. Tape r 200R 60P ee output optio levices availab 400R 100P 300P rite-compute.	300-400 , card 700-922 g operations 600 eads in both 600 nal. le. 700 600 System 600
Jnivac 1050 Jnivac 1103A Jnivac 1105 Jnivac 1107 Jnivac File Computer I	Various sim reader and reader and lo	ot word oriented 128 ard editing. A 208 as read-write-concenture on high 1000 250 125 editing, automs analog devices 139 control for care re-read. Soriead-write-comple	133K ed. Printer 12.8K Automatic car 21K ompute. Flex speed printe 120K atic checking s. 10K ds, paper tapting-collatinute.	has buffer. V 326K d checking. 2 846K owriter output r. Off-line d 5.5KK 1.2KK . Complete si 200K e and printer.	20P c system includes 1KR 300P arious simultaneou 120R 120P 120P 120P 120P . Cathode ray tub igital to analog d 700R 300P multaneous read-wr 150R 150P Tape is read in	card processor 200R 60P sters. Tape r 200R 60P ee output optio levices availab 400R 100P 300P rite-compute.	300-400 , card 700-922 g operations 600 eads in both 600 nal. le. 700 600 System 600
Univac 1050 Univac 1103A Univac 1105 Univac 1107 Univac File Computer I	Various sim reader and reader and lo	ard editing. A series of high series on high series on high series on high series of high series	d punch is op 133K ed. Printer 12.8K Automatic car 21K ompute. Flex speed printe 120K atic checking s. 10K ds, paper tapting-collatinute.	has buffer. V 326K d checking. 2 846K owriter output r. Off-line d 5.5KK 1.2KK . Complete si 200K e and printer. g device, type	20P c system includes 1KR 300P arious simultaneou 120R 120P 120P 120P 120P . Cathode ray tub igital to analog d 700R 300P multaneous read-wr 150R 150P Tape is read in	card processor 200R 60P Sters. Tape r 200R 60P e output optio levices availab 400R 100P 300P ite-compute.	300-400 , card 700-922 g operations 600 eads in both 600 nal. le. 700 600 System 600
Jnivac 1050 Jnivac 1103A Jnivac 1105 Jnivac 1107 Jnivac File Computer I	Various sim reader and reader and lo	ot word oriented 128 ard editing. A 208 as read-write-creature on high 1000 250 125 editing, automs analog devices 139 control for card re-read. Sorread-write-computer File Computer 1 250 125	133K ed. Printer 12.8K Automatic car 21K ompute. Flex speed printe 120K atic checking s. 10K ds, paper tapting-collatinute. 1 25K to by Proces.	has buffer. V 326K d checking. 2 846K owriter output r. Off-line d 5.5KK 1.2KK . Complete si 200K e and printer. g device, type 600K 300K sor, completel	20P c system includes 1KR 300P arious simultaneou 120R 120P 120P 120P 120P . Cathode ray tub igital to analog d 700R 300P multaneous read-wr 150R 150P Tape is read in	card processor as data handlin 200R 60P sters. Tape r 200R 60P e output optio levices availab 400R 300P ite-compute. 200R 60P both directions s Storage are	300-400 , card 700-922 g operations 600 eads in both 600 nal. le. 700 600 System 600 s and is available.

			INPUT AND	OUTPUT			
		MAGNETIC	TAPE		PUNCHED CARDS	PAPER TAPE	PRINTER SPEED
NAME OF COMPUTER	No. of Units	Tape Density Char/Inch	Tape Speed Char/Sec	Words/Tape	Cards/Min	Char/Sec	Lines/Min
Univac SS 80/9011	10				600R	500R	600

-- Magnetic tape specifications same as for SS 80/90 Model I. Various simultaneous processes.

	III. COST AND USE
NAME OF COMPUTER	Average Monthly Mon
LWAC III-E	\$2,400 \$1,820-\$3,600 \$50,000-\$80,000 7.4KW 35(computer) 85°F 95 Scientific, real-time, business. Computer is modular and extra units are easily added.
SI-210	\$2,390 \$2,300-\$7,500 \$82,000-\$116,000 1KVA 35 N Scientific, business, and real-time. FORTRAN I and II available; diagnostic program.
SI 420	\$12,500 \$8,500-\$33,500 \$400,000-\$450,000 N Scientific, business, and real-time. FORTRAN, Intercom Translator available. Data channel "traps" may be set to ignore or recognize an interrupt.
Burroughs E-103	\$1,000 \$875-\$1,200 \$20,000-\$30,000 220V desk size Scientific and business use, desk size.
Burroughs 205	\$8,000 \$2,400-\$10,000 \$48,000-\$150,000 38KVA 1600 12 97 \$5,760 (3yr.) Scientific and business. Datacode compiler, STAR-O assembly, ALGOL compiler, 604 simulator programs available. Peripheral equipment can be added on a modular basis.
Burroughs 220	\$17,000 \$5,500-\$20,000 \$250,000-\$1,000,000 45KVA 1600 12 95 Scientific, business. STAR 2B, assembly; ALGOL compiler. Computer built on a modular basis, extra memory and peripheral units easily added.
Burroughs 200 Series	\$3,300-\$9,000 \$140,000-\$375,000 300-500 Business. Assembly system, report generator, sort generator available. Multiprocessing software package.
Burroughs 5000	\$16,850 \$13,000-\$50,000 \$533,000-\$2,000,000 29KVA 625 6 Scientific and business. Completely modular in memory, input/output channels and peripheral equipment. ALGOL and COBOL compilers. Built-in operating systems. Simultaneous and multi-processing. Two central processors possible.
CDC G-15	\$1,530 \$1,485 and up \$49,500 and up 3.8KVA 100 N 96 Scientific and business. Intercom 500 and 1000, ALGO compilers. Modular construction. Two computers can be joined.
CDC G-20	\$15,500 \$8,750 and up \$390,000 and up 20KVA 600 6 Scientific, real-time, business. SPAR, PAR, SNAP assemblies; ALCOM and COBOL compilers. Modular construction permits extra units to be added easily.
CDC-160	\$2,500 \$1,500 and up \$60,000 and up .7KW 12 Scientific and business. Power requirements are for the computer only. Desk size. FORTRAN, OSAS (assembler).
CDC-160A	\$4,500 \$2,250 and up \$90,000 and up 115V 12 Scientific, real-time, business. Space stated for computer only. FORTRAN, AUTOCOMM (commercial compiler), OSAS, SICOM.
DC-924	\$11,000 \$8,000 and up \$180,000 and up 3.8KW 400 13 Scientific, real-time. CAP (assembler).
DC-924A	\$12,000 \$9,000 and up \$220,000 and up Same as 924.
CDC-1604	\$47,000 \$22,500 and up \$750,000 and up 7.5KW 600 25 Scientific, real-time, business. Power and floor space requirements refer to computer and console only.
DC-1604A	\$48,000 \$24,000 and up \$790,000 and up Same as 1604.
CDC-3600	\$59,000 \$35,000 and up \$1,400,000 and up 20KW 1500 25 Scientific, real-time, business. FORTRAN, COMPASS (assembler), SCOPE (MONITOR), COBOL. Typewriter included in main console, real-time clock.
DDP-24	\$2,750 \$2,750-\$17,500 \$87,000-\$700,000 115V 99 Scientific, real-time, data reduction, time-shared applications. Easily expanded. DIP, DAP, DEP, and FORTRAN II.
DE-60	\$625 \$525-\$725 \$20,000 and up 115V 8.4 N 98+ Scientific, process control. Desk size, 30" x 36". Hardware allows algebraic statements. Modular construction allows extra units to be added easily. One day programmer training.

			COST AND USE				
NAME OF COMPUTER	Average Monthly Rental	Monthly Rental Range	One-Sum Price Range	Power	Floor Space	Air Cond.	Percent Good Time
SE 210	\$14,000 One pass co	ompiler, report ge	\$700,000 nerator.	10KVA	1200	3	-
GE 215			\$375,000 tible with GE 225 and 235 a ompiler, FORTRAN, Report G				z
SE 225			\$400,000 tible with GE 215 and 235. ompiler, FORTRAN, Report G				IZ
E 235	\$10,900 Program and scientific	d peripheral compa c compiler, ZOOM c	\$475,000 tible with GE 215 and 225. ompiler, FORTRAN, Report G	25KV Assembly, enerator, C	1170 GECOM compile ard Program Ge	5 r (COBOL), W nerator.	IZ
1-330	\$53,000 Scientific		\$1,500,000-\$2,000,000 1-time applications. FORT	RAN IV comp	iler available	•	
1-400	\$8,700 EASY Assemb	\$8,700-\$12,000 oly.	\$397,000	15KVA	600	5	
1-800	\$22,000 Argus Asser	\$12,000-\$30,000 nbly; Algebraic an	\$980,000 d Data Proc Fact compiler.	ЗОКУА	1400	7	
H-1400	\$10,800 Scientific	\$8,000-\$10,000 business and rea	\$256,000-\$320,000 1-time applications. COBO	L '61 and A	UTOMATH progra	mming system	s availab
I-1800	\$35,000 Business co	\$30,000-\$60,000 ompilers: FACT, CO	\$950,000-\$2,000,000 BOL '61 (163). Algebraic co	ompilers:	AUTOMATH 800.	AUŢOMATH 180	0 (163).
W-15K	\$475 Scientific	\$355-\$600 , real-time, busin	\$19,750-\$26,000 ess, process control applic	110V cations.	10	N	
BM Ramac 305	\$3,600 Business. Prices exc		\$167,850 and up y added; computer built on	12.6KVA a modular	370 basis. 305 as	4 sembly progr	am.
IBM 650	\$6,000 Scientific	\$3,750-\$21,500 business. SOAP	\$182,400-\$1,100,000 assembly. Extra units eas	18KVA ily added.	150 Prices exclus	5 ive of tax.	
IBM 704			\$400,000 and up ess. Computer built on a Prices exclude tax.	110KVA modular bas	2200 is; extra unit	45 s easily add	ed.
IBM 705 III		nd limited scienti:	\$1,400,000-\$2,500,000 fic. COBOL, PRINT, Autoco Prices exclude tax.	85KVA der III com	1500-2000 pilers. Modul	15-20 ar construct	ion;
IBM 709			\$2,630,000 and up ess. Compilers: IBM SOS, Prices exclude tax.	150KVA SHARE, FAP	3000 , FORTRAN. Mo	50 dular constr	uction;
IBM 1401			\$125,600 and up LIC, Autocoder assemblies; tax. Extra units easily a		450 mpiler. 7KVA	3.5 without tape	
IBM 1410		\$5,365 and up, real-time, busing added. Prices ex	\$244,550 and up ess. Basic Autocoder assen xclude tax.	29KVA nbly; FORTR	500 AN compiler.	5 Extra units	
IBM 1440			\$90,000 and up File Organization, Utilit 410. Random access, low co			ts provide u	pward
BM 1460	\$9,000 Symbolic, A easily add		\$236,000 and up es, FORTRAN compiler. Bui	7-16KV lt on modul	450 ar basis with	3.5 extra units	
Вм: 1620			\$74,500-\$200,000 RAN, GOTRAN compilers. Syr y. Extra units easily adde			N Floor space	-
BM 7010	\$20,000	%18,000-\$35,000 real-time. busing	\$945,900 ess. Autocoder, COBOL, FOR	208V 230V RTRAN Bui	500	20K asis with	······································
BM 7030		ts easily added.	\$5,000,000-\$7,000,000				i
(STRETCH)	\$11,850		\$625,600	13.9KVA	1220	2.5	ulata-
IBM 7044	\$21.850		\$1,400,000 ess. Assembly and compiler	19KVA	1220	4	

		<u> </u>	COST AND USE	·•		,	·
NAME OF COMPUTER	Average Monthly Rental	Monthly Rental Range	One-Sum Price Range	Power	Floor Space	Air Cond.	Percent Good Time
3M 7070	IOCS compi	and business. 707 llers. Extra units 7074. Prices exc	\$1,077,400 TO Basic AUTOCODER, AUTOCO easily added; computer be clude tax.	45KVA DER, Four-Touilt on mod	1200 ape AU <u>TOC</u> ODER ular basis. Pr	6 Basic FORTRA ogram compat	N. ability
BM 7072			\$860,550 ER compilers. Program co iilt on a modular basis.		with 7070, 707	6 4. Extra ur	nits are
BM 7074			\$1,284,350 UTOCODER compilers. Comp le tax. Program compatabi		on a modular ba	6 sis; extra ı	ınits
BM 7080		d limited scientif	\$2,100,000-\$3,200,000 ie. AUTOCODER III, FORTR exclusive of tax and off-	AN compiler	1000-2000 s. Modular con	7.5-10 struction; e	extra
ВМ 7090			\$2,898,000 ss. Assembly and compile Prices exclude tax.	35KVA r programs:		25 E, FORTRAN,	FAP,
BM 7094		real-time, busine Monitor, Assembly.	\$3,134,500 ess. Assembly and compile	36KVA r programs:		25 L, COMTRAN,	1/0,
GP-21		••	OL subset compiler availa	ble.			
GP-30		\$1,100-\$2,000 nd scientific. Des					
ibrascope 3000		real-time, busine	\$1,000,000 and up ess, command and control o ms: ATCOM, BUS, COBOL (1			mation syste	99 em.
onrobot XI	\$700 Business ar	nd scientific. Use	\$24,500 es wall outlet. 375 lbs.,	850W 48" x 22"		N	
CR 304	\$15,000 Scientific,	\$12,500-\$30,000 business. Extra	\$500,000-\$1,250,000 units are easily added.	45KVA NEAT compile		12	95-99
CR 310			ol sorting of MICR documer OSAP assembly. Extra		O" computer are	N a, with extr	99 ra
CR 315			\$240,000-\$1,000,000 ess. Modular construction	27KVA permits ex		15 easily adde	ed.
CR 390	\$1,300 Business, e	\$995-\$1,633 engineering.	\$49,500-\$76,000	220V	100	N	98.5
В 250			\$33,000-\$38,000 oor space referred to is ided easily. SNAP assembl		only. Modular		99 1 on
B 440	\$2,961 Scientific,	\$3,214-\$3,800 , real-time. Utili	\$110,000-\$130,000 izes Fortran I and II. En	110V ploys dual		ogic.	
DP-1			\$120,000-\$350,000 r space refers to computer AL algebraic assembler ar		e only. Modula	N ir constructi	ion,
DP-4	Scientific FORTRAN II		\$56,500-\$150,000 lar construction, and unit	115V ts easily ad		N Assembly Pro	ogram,
hilco 1000	\$7,000 Scientific OPAL progr		0 \$250,000-\$750,000 ess. Since built on modul	lar basis, e	400 xtra units easi	4-6 lly added.	
hilco 2000-210			\$1,000,000-\$2,000,000 me. Computer is built on OPS compilers.	24KVA a modular l		10-12 units are e	99 easily
Philco 2000-211		\$25,000-\$55,000 , business, real-t AC, ALTAC, COBOL,	\$1,500,000-\$2,900,000 ime. Computer built on a TOPS compilers.		1300 sis and extra u	10-12 nits are eas	99 ily
hilco 2000-212	\$40,000 Scientific	\$35,000-\$60,000 , real-time, busin	\$1,800,000-\$3,500,000 ess. Extra units are eas		1300 TAC, ALTAC, CO	10-12 BOL, TOPS co	99 mpilers.
Philco 4000	\$4,000 Scientific	\$2,250-\$9,500 , real-time, busin	\$200,000-\$500,000 ess. Built on modular ba	sis with ext	400 tra units easil	4-6 y added. OP	AL progra

			COST AND USE			1	
NAME OF COMPUTER	Average Monthly Rental	Monthly Rental Range	One-Sum Price Range	Power	Floor Space Sq. Ft.	Air Cond.	Percent Good Time
RCA 301	\$5,000 Business, s	\$3,600-\$16,000 cientific. Assemb	\$268,000-\$827,000 ly program, COBOL compile	19KVA r, FORTRAN,	400 File control	4 processor.	<u> </u>
RCA 501	\$16,000 Business. A	\$11,000-\$26,000 Assembly and compi	\$1,000,000 ler programs.	30KVA	1200	8	
RCA 601	\$32,000 Assembly pro	\$24,000-\$68,000 ogram. File contr	\$1,750,000 ol processor, Executive s	55KVA ystem, Gene	900 ralized sort a	12 nd merge.	
RPC 4000	\$1,900 Business and	\$1,800-\$4,500 d scientific. Des	\$87,000 k size.	120V	50		
RW-230	\$2,200	\$2,000-\$6,500	\$64,000-\$125,000		· · · · · · · · · · · · · · · · · · ·		<u> </u>
RW- 3 30	\$5,000 Real-time,	industrial process	\$150,000-\$400,000 control. PROCOMP, inclu	500W des FORTRAN	30 II and proces	s control st	99+ atements
RW-340	\$6,000 Real-time,	industrial process	\$200,000-\$400,000 control. PROCOMP includ	2000W es FORTRAN	48 II and process	control sta	99+ tements.
SDS-910	\$1,790 Scientific,	real-time. Assem	\$58,000 bler and FORTRAN II for e	.7KW ither compu	5 ter.	N	99
SDS-920	\$2,690 Same as SDS	-910.	\$98,000	.9KW	9	N	99
SEMA 2000	\$700 Real-time,	\$550-\$1,150 business.	\$22,500-\$46,500	115V	4	N	97
SEMAC	\$1,350 Business.	\$1,200-\$2,000 Built on modular b	\$48,000-\$75,000 asis with extra units eas	115V ily added.	16		
Univac I	\$25,000 Scientific,	\$20,000-\$30,000 real-time, busine	ss. Assembly programs:	FLOW-MATIC,	MATH-MATIC, F	LEXI-MATIC,	XI.
Univac II	\$28,000 Scientific,	\$25,000-\$30,000 business. FLOW-M	\$1,250,000-\$1,500,000 ATIC, MATH-MATIC, XI asse		2000 ms.	30	
Univac III	\$22,500 SALT assemb	\$15,000-\$30,000 ly system, COBOL c	\$720,000-\$1,440,000 ompiler.	52KVA	1850	12	
Univac 490		\$18,000 and up real-time, busine irements refer to	\$810,000 and up ss. Extra units easily a computer area.	61KVA dded. COBO	196 L. SPURT compi	12 lers. Floor	
Univac 60/120		m systems may be e	\$75,000-\$97,500 . 18 library routines ava xpanded by additional sel				99+
Univac 1004		\$1,150-\$1,650 business. Basic I/O devices.	\$46,000-\$66,000 card processor cabinet in	3KV cludes card	190 reader, print	er and proce	ssor.
Univac 1050	\$7,250 Scientific, in increme 7080, 7090	nts of 4K char. T	\$285,000-\$500,000 tem. Memory capacity may he 1050 using IIIC tape u	5KVA be increas nits, is co	23 ed from 8K cha mpatible with	r. to 32K ch IBM 1410, 70	ar. 5, 7070,
Univac 1103A	\$35,000 Scientific.	\$21,500-\$45,000 Extra units easi	\$922,000-\$1,900,000 ly added. USE, UNICODE c		1800	20	
Univac 1105	\$43,000 Scientific,	\$33,060-\$55,000 real-time, busine	\$1,612,000-\$2,700,000 ss. AIMACO and UNICODE a		3100 ilers. Extra	35 units easily	added.
Univac 1107	\$50,000 Scientific,	\$40,000-\$60,000 real-time, busine	\$1,800,000-\$2,700,000 ss. ALGOL, FORTRAN compi		1200	18	
Univac File Computer		\$8,000-\$21,000 real-time, busine	\$384,000-\$1,108,000 ss. FLAP assembly system		1400	60	
Univac File Com- puter II	SEE Univac F	File Computer I		0.20 T. T.			
Univac Larc	\$135,000 Scientific,	\$135,000 and up business, real-ti	\$7,000,000 and up me. Second computer unit	350KVA can be add	3000 ed. SAL assem	90 bly.	
Univac SS 80/90		mpilers. STEP is	ra units easily added. A a modular version of the				
Univac SS 80/9011	\$8,500 Scientific, second syn	business. S-4 as	\$350,000-\$750,000 sembly system. Up to 20	20-38KV tape units		11 d through us	e of a

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ONLY IF, NEITHER . . . NOR Machines
A Simple Kalin-Burkhart Logical Truth Calculator
The Magazine Editor's Argument
The Rule About Semicolons and Commas
The Farnsworth Car Pool

GAME-PLAYING MACHINES

Tit-Tat-Toe Black Match Nim Sundorra 21 Frank McChesney's Wheeled Bandit

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— to convert from decimal to other scales of notation and vice versa, etc.

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Adding Indefinite Quantities
Factoring Any Number from 45 to 60
Prime Number Indicator for Numbers 1 to 100
Thirty Days Hath September
Three Day Weekend for Christmas
Calendar Good for Forty Years 1950 to 1989
Money Changing Machine
Four by Four Magic Square
Character of Roots of a Quadratic
Ten Basic Formulas of Integration

PUZZLE-SOLVING MACHINES

The Missionaries and the Cannibals
The Daisy Petal Machine
Calvin's Eenie Meenie Minie Moe Machine
The Cider Pouring Problem
The Mysterious Multiples of 76923, of 369, etc.
Bruce Campbell's Will
The Fox, Hen, Corn, and Hired Man
The Uranium Shipment and the Space Pirates
General Alarm at the Fortress of Dreadeerie
The Two Suspicious Husbands at Great North Bay

The Submarine Rescue Chamber Squalux The Three Monkeys who Spurned Evil Signals on the Mango Blossom Special The Automatic Elevator in Hoboken Timothy's Mink Traps Josephine's Man Trap Douglas Macdonald's Will Word Puzzle with TRICK

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SURVEY OF COMMERCIAL

ANALOG COMPUTERS

Neil Macdonald Assistant Editor Computers and Automation

Following is a survey of commercial analog computers, based on returns from a current mailing and information previously published in "Computers and Automation". The editors will be glad to receive any additional entries, corrections, or comments for publishing in an early issue of "Computers and Automation".

Nearly all the abbreviations used in these summaries are like those used in a telephone book—contractions of words of such a kind that the words can be easily guessed, especially if the reader refers to the survey form summarized. "FC" means "checked by the organization"; "62" means "in 1962",

REFLY FORM (may be copied on any sheet of paper)

1. Name of Analog Computer:

2. Typical filed(s) of application: ()Scientific ()Business ()Real-time ()Not real-time ()Other (please describe) 3. Accuracy of numerical information the machine

3. Accuracy of numerical information the machine will take in and put out, in number of significant figures: ()2 ()3 ()4 ()5 () other (please describe)
4. Number of physical variables that the machine can store at one time:
5. Number of units in the computer for performing mathematical operations (OK to give maximum in largest existing installation): a. Adders:
b. Multipliers: c. Integrators:
d. Branching operations: e. Other (please explain):

6. Programming: a, Automatic programming of new problem when a problem changes? () Yes () No b. Typical amount of time needed to change from one program to another:
7. Input-Output: method(s) of giving information or problems to the machine:
8. Reliability: a, Automatic checking? () Yes () No b. Typical operating percent (good time DIVIDED BY attempted-to-run time):
9. Price range: a, One sum: between \$ and \$ b. Monthly rental: between \$ and \$ and \$ b.

Sales: a: Number sold or rented: b. Number on order: 11. Any remarks?

This data supplied by:___ Title_ Organization_ Date

When filled in, please send this form to COMPUTERS AND AUTOMATION, Berkeley Enterprises, Inc., 815 Washington St., Newtonville 60, Mass.

Washington St., Newtonville 60, Mass.

A 110 / scientific, real-time, algebraic resolution, simulation, optimization, on-line computation / ACCUR: A signif figures / CAPAC: approx 75 depending on problem / LARGST INSTIN: 40 multipliers, 50 integrators; number of units may be increased to meet requirements of problem; H.F. technique eliminates need for summing amplifiers / PRGMS CHANGEOVER: 30 to 90 min including checking / has autom checkg; operg ratio, 90% to 90% / sale, \$30,000 to \$600,000 / A 110 computer utilizes high-frequency technique which gives unique possibilities for solution of algebraic problems / Société pour l'étude et la réalisation des procédés électroniques de calcul ANALAC, 101 bld Murat, Paris 16è, France / *C 63
Card Programmed Diode Function Generator / scientific problems, real-time or not / ACCUR: 4 signif fiqures / CAPAC: store Y = F (X) physical variables / LARGST INSTIN: 75 function generators / PRGMS: on autom prgmg of new problem when proplem changes; 10 second changeover / IN-OUT: punched card / RELIAB: no autom checkg; operg ratio, 99,95% / sale, \$3000 to \$225,000 / only function generator allowing most instins to program non-linear functions as rapidly as removable patch panel allows them to program the remainder of the computer / General Computers, Inc., 5990 W. Pico Blvd., Los Angeles 35, Calif. / *C 63
Cl-17USS / scientific, real-time, not real-time / ACCUR: 4 signif figures / CAPAC: store 200 physical variables / LARGST INSTIN: 80 adders, 40 multipliers, 40 integrators, 20 servo set diode function generators 5 ea. four channel UNE's / autom prgmg of new problem when problem changes / PRGMS CHANGEOVER: 3 see per variable / IN-OUT: electric typewriter, keyboard, paper tape / RELIAM: autom checkg; operg ratio, 95% / sale, \$50,000 to \$500,000 or Fontod, 2; on order, 5 / machine is an all solid state ± 100 volt analog which may be digitally controlled / Comcor, Inc., 430 S. Navajo, Denver, Col. / *C 63

CM-3 (Special Purpose) Computer / scientific, real-time / ACCUR: 3 signif figures / CAPAC: any num-ber / LARGST INSTIN: 18 adders, 4 multipliers, 5 function generators, 4 level detectors / PRGMG CHANGEOVER: may be incorporated by switch selec-tion / In-OUT: analog instrumentation (in pro-cess) / RELIAB: operg ratio, 99.9% / sale, \$8,000 to \$15,000 / sold or rented: 11; on order: 1 / utilizes solid state components such as magnetic amplifiers and transistors and semiconductors / Dresser Electronics. SIE Div. 10201 Westheimer

amplifiers and transistors and semiconductors /
Dresser Electronics, SIE Div., 10201 Westheimer
Rd., Houston 42, Tex. / *C 62
Desired Generation Computer / for electric power
utilities automatic dispatch / ACCUR: 2 signif
figures / CAPAC: store 1000 variables (actually
no limit) / LARGST INSTIN: 10 adders, 4 multipliers, 4 integrators / ARBIT FUNCT: square,
square root / PRGMG CHANGEOVER: 1 to 15 min /
IN-OUT: AC-voltages / RELIAB: has autom checking; operg ratio *9% / sale \$50,000 to \$500,000
/ sold or rented, 17; on order, 7 / Tied into
automatic process control directly / Leeds & Northrup Co., 4901 Stenton Ave., Philadelphia 44,
Pa. / *C 62
Direct Analog Computer / for scientific problems.

// Sold or rented, 17; on order, 7 / Tied into automatic process control directly / Leeds 6 Northrup Co., 4901 Stenton Ave., Philadelphia 44, Pa. / *C 62
Direct Analog Computer / for scientific problems, not real-time and other (design projects in heat transfer, static stress analysis, vibration, aeroelasticity) / ACCUR: 3 signif figures / CAPAC: store 50 to 200 physical variables / LARGST INSTIN: 40 multipliers; 100 amplifiers, each of which may be adder, integrator, or current generator; 150 inductors; 200 capacitors; 200 resistors; 200 transformers; decade-set, passive elements employed in simulation of physical systems by means of passive-element networks / PRGMS: no autom prgmg of a new problem when the problem changes; 2 days changeover; including checkg / In-0UT: Input — parameters: decade settings, potentiometers; variables: function generators, switching cqumt, oscillators. Output — transient: oscilloscope, camera, graphic level recorder; steady state: digital volt meter, autom printer / ReLIAI: has autom checky / sale, \$150,000 to \$750,000 / sold or rented, 10 / Computer is used for modeling compilcated physical systems (thermal and mechanical). Simulation is rapid, with representation over the frequency range 50 to 2000 cycles per sec / Computer Engineering Associates, 350 N. Halstead, Pasadena, Calif. / *C 63
Donner 3200 / scientific; real-time or high speed iterative / ACCUR: 0.01% / CAPAC: up to 24; 10 to 100 amplifier modules / LARGST INSTIN: 48 adders, up to 16 multipliers, 24 integrators, 120 potentiometers, up to 12 arbitrary functions / PRGMS: autom by removable problem board; 1 min changeover / IN-OUT; problem board and coefficient pot settings / RELIAB: autom checking operg ratio, 75% / sale, \$5,000 to \$100,000 / rental on request / sold or rented, 12; on order, 12 / Systron-Donner Corp., Donner Div., 888 Ga-lindo St., Concord, Califi. / *C 63
DIAN 60, 120, 180, etc. / for scientific problems, real-time or not / ACCUR: Signate fine rended depends on size of problem — from a few minutes to a

the problem changes, change patch boards, function switches, and quadrant control / IN-OUT: manual set, punch tape, card, digital, etc. / RELIAB: has autom checkg; operg ratio, 95% / sale, \$20,000 to \$100,000; rental \$2000 to \$20,000 / sold or rented, 17; on order, 6 / Computer Systems, Inc., Culver Rd., Monmouth Junction, N.J. / *C 62
ASE (Electronic Analog Simulating Equipment), 2100 Series / scientific; real-time and other (on-line hardware) / ACCUR: 4 signif figures / LARGST INSTIN: 168 amplifiers, 72 multipliers, 72 integrators, 24 arbitrary functions, 6 electronic sine generators, 340 coefficient potentiometers / PRGMS: autom prgmg of new problem when problem changes; 10 min changeover / IN-OUT: "DO/IT" (Digital Output-Input Translator), patchboard, and paper tape; also direct pushbutton entry / RELIAB: has autom checkg; operg ratio 90-95% / sale, \$30,000 to \$300,000 / Beckman Instruments,

Inc., Berkeley Division, 2200 Wright Ave., Richmond 3, Calif. / *C 62
EC-1 Educational Analog Computer / scientific, business, real-time, not real-time / ACCUR: 2 signif figures / CAPAC: none / LARGST INSTIN: up to 9 adders, up to 9 multipliers, up to 9 integrators / PRGMG CHANGEOVER: depends upon problem, aver 15 to 30 min / sale, \$199, 95 / Heath Co., Benton Harbor, Mich. / *C 63
Electronic Associates HYDAC 2000 / scientific, business, real-time or not; a hybrid machine with diverse uses / ACCUR: 4 signif figures / CAPAC: 10,000 words / Other: a complete line of analog computers plus digital, logic, memory, and arithmetic / PRGMG: autom prgmg; 20 min changeover / IN-OUT: paper tape, keyboard, typewriter, hand patch, patch panel / RELIAB: has autom checking; operg ratio, 93% / sale, \$75,000 to \$1,000,000 / sold or rented, 2 / analog and digital operations all in one computer / Electronic Associates, Inc., North Long Branch, N.J. / *C 63
Electronic Associates PACE 231R / scientific; real-time; slower than real-time or high speed repetitive operation / ACCUR: 4 signif figures / CAPAC: store 30 variables / LARGST INSTIN: 45 adders, 50 multipliers, 30 integrators / dividers, resolvers, function generators, limiters, comparators also avail. / FRGMG CHANGEOVER: 10 min. / IN-OUT: punched paper tape, keyboard, hand, typewriter, patch paper / RELIAB: has automatic checkg; operg ratio, 93% / sale \$20,000 to \$1,000,000 / rental \$9,100 to \$50,000 / sold or rented or on order, 300 / a medium to large. OUS general purpose analog computer / Electronic Associates, Inc., North Long Branch, N.J. / *C 63
Electronic Associates TR-10 / scientific; real-time or not real-time / ACCUR: 3 signif figures / CAPAC: store 0 to 12 variables / LARGST INSTIN: 12 adders, 9 multipliers, 10 integrators, 9 arbitrary functions / dividers, touch paper / capac, touch paper / capac, sold or rented, 200 / a solid state protable matchine, 20 mmj flipres / Electronic Associates TR-10 / scientific; real-time or not real-time / ACCUR: 3 signif figures /

one microsecond switching rate / GPS Instrument Co., Inc., 180 Needham St., Newton, Mass. / *C

Co., Inc., 180 Needham St., Newton, Mass. / *C 62
GPS Statistical Analog Computer / scientific, business, not real-time, compressed time / ACCUR: 4 signif figures / LARGST INSTN: 80 adders, 48 multipliers, 48 integrators, 21 function generators / PRGMS CHANGEOVER: 2 to 4 hrs / IN-OUT: digital counter readout / RELIAB: oper ratio 95% / sale, \$20,000 to \$200,000 / rental, \$4,500 up / sold or rented, 44; on order, 7 / broadhand operation based on compressed time scale of 3,000 to 1 / GPS Instrument Co., Inc., 180 Needham St., Newton, Mass. / *C 62 Gravity Analog Computer / for scientific problems and potential field studies / ACCUR: 3 signif figures / CAPAC: store 1 variable / LARGST IN-STIN: 1 optical system / PRGMS CHANGEOVER: 3 to 5 min / IN-OUT: shaded drawings to scale / RELIAB: no autom check; operg ratio, 95% / sale, \$2750 / sold or rented, 15 / Instrument uses opaque plate with light openings arranged according to the math of the problem. Problem is presented to instrument as drawing of varying opacity / Scismograph Service Corp., Box 1590, Tulsa, Okla, / *C 63 (Please turn to page 87)

SURVEY OF SPECIAL PURPOSE COMPUTERS AND DATA PROCESSORS

Neil Macdonald Assistant Editor Computers and Automation

Travel reservations machines Simulators Automatic training devices Automatic training devices
Spectroscopic analysis equipment
Process industry plant flow analyzers
Geophysical seismic readers and profile plotters
Digital differential analyzers
Automatic bookkeeping machines
Information retrieval systems
Power company network analyzers
Airborne digital computers
Flight control computers
Machine tool control systems
Automatic elevator control systems
Remote control telemetering systems
Telemetered data reduction systems
Automatic graph readers Telemetered data reduction systems
Automatic graph readers
Air traffic control computers
Early warning analysis and response systems
Fire control computers
Automobile traffic light controllers
Automobile traffic light controllers
Automotic railway traffic controllers
Automatic data sampling systems
File-searching machines
Inventory machines
Automatic navigating systems
Character reading and recognizing systems
Telephone message accounting systems
Telephone message accounting systems
Test scoring machines
Programmable electric typewriters

Following is a roster of organizations making special purpose computers and a description of their computers. The responses are reported in relation to the following reply form.

SURVEY OF SPECIAL PURPOSE COMPUTERS and DATA PROCESSORS -- REPLY SHEET

					types					
compu		data	a p	oroce	essors	tha	it ;	you	cu	r-

Туре	Purpose	Price Range
(atta	ach more paper if	needed)
2. Do you also data processors?	supply general pu	rpose computers and
	ployees?	
Year establi	shed?	
This data suppli	ed by	Title
Address		

Any additions, corrections and comments are

Adage, Inc., 292 Main St., Cambridge 42, Mass. /
SPEC PUR: Mass Spectrum Digitizer, Model VRI6-MSD, for automatic digital readout and recording of mass spectrometer data (\$17,470 to \$20,540); Ambilog Computers (using digitally controlled analog switches), for automatic gaging systems, high speed automatic color measurements for production color sorting, analysis of stress-strain data (\$5000 to \$40,000); computer links, to permit simultaneous operation of digital and analog computers as a hybrid computer facility / GEN PUR: yes / Ms(200) Sc(1957) / % 63
Aircraft Armaments, Inc., Cockeysville, Md. / SPEC PUR: Air Traffic Control Simulator, to develop and evaluate air traffic control procedures (price dependent upon requirements); Anti-Submarine Warfare Trainer, to train anti-submarine fire control crews (price dependent upon requirements); Radar Target Simulator, to evaluate overall performance of airborne radar equipment (\$30,000 to \$40,000) / GEN PUR: none / Ls(1150) Me(1950) / % 63
Allegany Instrument Co., Div. of Textron Electronics, Inc., 1091 Wills Mt., Cumberland, Maryland / STEC PUR: Type K ballistic computer, for measurement of rocket motor force and pressure parameters (\$15,000 to \$100,000); Autocal-Automatic Trainsqueer Calibrator, for dynamic calibration of strain gage pressure cells (\$50,000 to \$200,000); high rate tester, for measurement of tensile and compressive

properties of solid propellants; K-7 error computer, for parameter resistances on strain bridge circuity / Ms (200) & G(1952) / % G2
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio / SPEC PUR: Bailey 755 system, for automation of power plants and industrial processes / GEN PUR: none / Lc (1500) Lc (1916) / % G3
Belock Instrument Corp., 112-03 14th Ave., College Point 56, N.Y., SPEC PUR: Analog-Flectromechanical Computing Servos, Transistorized Electronics, for generation of target coordinates in space for introduction into radar simulation system (\$10,000 to \$60,000 depending on number of targets]: for generation of launcher coordinates and auxiliary tactical information for shipboard missile launching systems (\$200,000); for computing gun orders for 105 mm and 155 mm howitzers for field artillery fire direction \$25,000. Analog-Electromechanical Computing Servos, for multichannel conversion of rectangular coordinates and reverse (\$30,000); for generation of gun orders and fuse settings for automatic radar-tracking anti-direralt and surface fire naval weapons, includes parallax conversion and ballistic conversion (\$100,000); for airborne bombing and navigation computer that permits solution of bombing problem while aircraft is engaged in evasive action (\$50,000 to \$100,000); for computing our orders for fire control for army tank (\$35,000); for computing trajectory of incomiagmortar round from a series of radar plots to determine position of weapon fired (\$20,000); for conjuting most economical load distribution among generators in a given power station under given conditions (\$10,000) / GC 63
Bendix Corp., Bendix Computer Div., \$630 Arbor Vitae St., Los Angeles 45, Calif. / SPEC PUR: simulators for pre-flight design analysis or real-time monitoring (\$200,000 up); digital differential analyzers, for solutions of equations (\$13,700); strategic and tactical systems, for real-time monitoring (\$200,000 up); digital differential analyzers, for solutions of equations (\$13,700); strategic and sucreta systems for

glio,000 to \$000,000; Automatic Checkout & Monitor Systems, for component, assembly & system checkout and visual monitoring (\$15,000 to \$150,000; Data Translator Systems, for format to format conversion, magnetic tape, punched tape & card (\$30,000 to \$150,000; Airborne PCM Telemetry System, for missile, satellite, balloon aircraft, low & high level solid state (\$20,000 to \$200,000); Supervisory Control System, for gas, power, utility and industrial process controls (\$25,000 to \$500,000) / GEN PUR: yes / Ms(155) Se (1954) / % C 63 Clary Corp., Computer Div., 400 Junipero St., San Gabriel, Calif. / SPEC PUR: Clary DAC-2500 Digital Arithmetic Counter, for process control, test, and instrumentation (\$10,000) / GEN PUR: Clary DIE-60, adaptable to spec pur (sale, \$20,000; rental, \$525 to \$725 mo.) / Ls (000) Me (1939) / % C 62 Coleman Electronic Systems, 3210 West Central Ave., Santa Ana, Calif. / SPEC PUR: Machine Tool Control

Systems, for point to point machine tool positioning and position display (\$6000 to \$25,000); Automatic Data Sampling Systems, for multiple channel low speed data sampling with output and printed card and punched paper tape (\$2000 to \$20,000); Test Scoring Machines, for special computers automatic high speed scoring of test results; Automatic high speed scoring of test results; Automatic by the Tallying Machines, for automatic election ballot counting (\$650,000) / GEN PUR: none / M8(75) Me(1950) / °C 63

Computer Control Co., Inc., Old Connecticut Path, Framingham, Mass. / SPEC PUR: Coordinate Conversion Computer, positions parabolic antennas to track orbiting space vehicles; Incremental Digital Computer, computes real-time correction data for shipborne stabilized platform; Airborne Coordinate Rotation Computer, enables an airborne telescope tracking system to photograph missiles during reentry; SPEC, teaches computer logic and programming techniques; Selector-Sorter System for Information Retrieval, performs logic and arithmetic operations concerned with searching and sorting in graphic information system; Space Data Conditioning System, digitizes and reformats data for telemetry to earth; Translator, translates magnetic tape format from one language to another; Random Access Business Computer, updates accounting system in real-time; Digital Chromatograph Analyzer, controls operation of a vapor chromatograph; 6B4, teaches fundamentals of digital computer organization, programming and operation; 6F2, large-scale digital maintenance trainer; 6F4, large-scale digital trainer for teaching computer operation, programming and operation; 6F2, large-scale digital maintenance trainer; 6F4, large-scale digital trainer for teaching computer operation, programming for Sen PUR: DDP-24, a real-time, scientific computer with modular construction; expandability features / Ls (620) Se (1953) / °C 63

expandability features / Ls (620) Se (1953) / °C 63

Connecticut Technical Corp., 3000 Main St., Hartford, Conn. / SPEC PUR: Typewriters - Transmitting & Output Printing, for tape punching, communications, computer application (\$950 to \$2000) / GEN PUR: none / Ss (20) Se (1960) / °C 63

Delco Radio, Div. of General Motors Corp., 700 East Firmin St., Kokomo, Ind. / SPEC PUR: Spectral Comparator Computer, for analyzing low frequency spectra; Vernier Velocity Control Computer, for missile guidance; Data Acquisition System, accepts and converts analog data from dynamic test, converts to digital data and prepares for analysis by digital computer; Time Verification System, for digital interval timing for computer scheduling / GEN PUR: none / Ls (5000) Me (1936) / °C 63

Dian Laboratories, Inc., 611 Broadway, New York 12, N.Y. / SPEC PUR: Sumlator, for study of reactor kinetics; Submarine Dynamics Simulator & Flight Simulator, for training of personnel; Process Analyzer, for automatic control of plants; Navigating System, for automatic tracking of missiles; (prices on request) / Ss (12) Se (1955) / °C 63

Digital Design Corp., Box 21, Clay, N.Y. / SPEC PUR: Digital Power Controller, to monitor & control

gital Design Corp., Box 21, Clay, N.Y. / SPEC PUR: Digital Power Controller, to monitor 6 control power consumption in an industrial plant (\$5000); Multichannel Pulse Height Analyzer, to sort pulses by amplitude, make statistical computations on amplitude distribution (\$5000 to \$15,000) / design and building of computers, simulators, control systems to specific requirements / Ss (4) Se (1960) / %C 63. SSE Print 1900). Not the property of the

sign and building of computers, simulators, control systems to specific requirements / Ss (4)

Sec (1960) / °C 63

Dresser Electronics, SIE Div., 10201 Westheimer Rd., Houston 42, Tex. / SPEC PUR: CM-3 for closed loop process control (\$8000 to \$15,000); CM-3 for automatic gas compressor stations (\$10,000 to \$10,000) / solid state circuitry employing magnetic amplifiers, semi-conductor diodes and transistors / Ls (650) Se (1956) / °C 62

Electronic Products Corp., 2315 Cecil Ave., Baltimore 18, Md. / SPEC PUR: Airborne Programmers, for sequencing time delays (\$1500 to \$5000); Simulators for training purposes (\$1000 to \$0000); ATALA-1 Automatic Temperature & Line Alarm System, for shipboard sensing, monitoring, and status reporting readout (approx. \$5000) (SSE Programmers, for checkout, countdown, and launch sequencing (\$10,000 and up) / GEN PUR: none / Ms(60)

Se (1959) / °C 63

Elliott Brothers (London) Ltd., Aircraft Direction Div., Elstree Way, Borehamwood, Hertfordshire, Eng. / SPEC PUR: Air Traffic Control, using digital general purpose computers, for data processing, data processing and output displays, and data processing output displays conflict predictions, flight clearance resolution (\$113,000 to \$142,000); Air Defense Systems, using digital general purpose computers, for fighter interceptions - voice and data link, missile allocation and control, or combination of both systems (\$255,000 plus); Simulators, using digital general purpose computers, for procedural and roadra ir traffic control, military and civil general purpose computers, for procedural and radar air traffic control, military and civil

1

radar simulators, and simulation extensions of operational systems (\$113,600 plus; Ordered: 1 Air Traffic (Euclid) Control Simulator \$1,420,000; Delivered: 1 Radar Simulator \$1,420,000); Travel Reservations, using digital general purpose computers, for airline and rail seat reservations for use by distant booking agencies; Communications Switching Systems, for control of communications network and priority switching; Mobile Air Defense Systems, based on digital general purpose computers (high specification), for data processing for mobile defense radar systems (\$244,240 plus); Early Warning Analysis and Response Systems to military requirements (price according to specification) / GEN PUR: Elliott general purpose computers, on which all listed special purpose computers are based / Ls (20,000) Le (1800) / *C 63 Ferranti Electronics, a Div. of Ferranti-Packard Electric Limited, Data Systems Dept., 16 Industry St., Toronto 15, Ontario, Canada / SPEC PUR: Argus, for process control (\$150,000 to \$450,000); FP 6000, for check sorting (\$160,000 up); Genini, for airline reservations (\$500,000 to \$1,500,000) / GEN PUR: FP 6000 (\$160,000 up); Orting (\$00,000) / Design and manufacture of reservation and inventory control systems, inquiry and display systems, and large digital storage systems / Ms (360) Me (1949) / *C 63
Fischer and Porter Co., Warminster, Pa. / SPEC PUR: analog-to-digital recorder, records motion, elec. signals, or pulses versus time (\$500 to \$2000);

Fischer and Porter Co., Warminster, Pa. / SPEC PUR: analog-to-digital recorder, records motion, elec. signals, or pulses versus time (\$500 to \$2000); ANR Telemeter, for remote control telemetering of above (\$1000 to \$2500); whiche detector, for traffic count and signal control (\$350 to \$600); millisecond operations rec., for sequence operations (\$7500 to \$30,000); traffic operation punch, for traffic counting (\$600 to \$700) / GEN PUR: yes / Ls (1300) Me (1937) / ~ 63
Ford Instrument Co., 31-10 Thomson Ave., Long Island 'fity, N.Y. / SPEC PUR: airborne digital computer for navigation; airborne analog computer for navigation; airborne analog computer for navigation; airborne analog omputer for mavigation; airborne analog omputer for computer, for drome control; reactor control computer, for reactor control drives and indicators //Ls (2000) Le (1915) / ~ 63
General Electric Co., Light Military Electronics Dept., French Rd., Ught Military Electronics Dept., French Rd., Ught Military Electronics Dept., French Rd., Ught Military Electronics and launch; digital differential analyzer, for missile guidance; toss bomb and missile launch, for armament control; computer detector, for radar data display / All computers are for airborne military application / Ls (1900) Sc (1953) / ~ 62
General Precision, Inc., Librascope Div., 000 Westcren Ave., Glendale, Calif. / SEC PUR: AN-ASN-21 Airborne Navigation Computer, for aircraft navigation and space guidance; Centaur Guidance Computer, for guidance of Centaur spacecraft; CP-209 Airborne Bombing Navigation Computer, for aircraft navigation and spacecraft guidance; Underwater Fire Control System Mk 113, for submarine-based Ass fire control; Underwater Fire Control System Mk 1105, for shipboard fire control of ASN weapons; Central Data Processor for air traffic control; Underwater Fire Control System Mk 105, for shipboard fire control lers; character reading and recognition systems for decument; automatic training devices, Univ. Singled August System, all transistor, highly compact

Special Purpose Computers

LFE Electronics, A Division of Laboratory For Electronics, Inc., 1079 Commonwealth Ave., Boston 15, Mass. / SPEC PUR: SM-3 Display System, for display of transaction data, stocks, reservations, inventory status, schedules, equipment status, etc. (\$15,000 to \$60,000); RD-900 Random Access Storage and Display System, for indexing, situational and tabular displays (\$100,000 up); SM-IIA Data Storage and Display System, for high-speed digital display of up to 500,000 characters per second in sophisticated military command and control systems / automatic bookkeeping machines, information retrieval systems, airborne digital computers, flight control computers, machine tool control systems, air traffic control computers, fire control computers, automatic laby stems, automatic latar sampling systems, automatic navigating systems / GEN PUR: yes / Ls (2000) Me (1946) /* C 63

computers, fire control computers, automobile traffic light controllers, automatic data sampling systems, automatic lavigating systems / GEN PUR: yes / Ls (2000) Me (1946) /*C 63
Litton Systems, Inc., Guidance and Control Systems Div., 5500 Canoga Ave., Woodland Hills, Calif. / SPEC PUR: radar computers and digital differential analyzers for determining ballistic trajectory information; incremental-type digital computers for navigation, weapon delivery, and aircraft cruise control; real-time computers for missile guidance; four-address per instruction work computer for industrial control and processing; digital computers for hyperbolic navigation, Doppler dead reckoning, and inertial guidance of helicopters / Ls (7500) Se (1953) /*C 62
The Magnavox Co., 2131 Bueter Rd., Ft. Wayne, Ind. / SPEC PUR: Information Retrieval Systems, for large-scale on line storage of digital 6 graphic data (\$13,000 and up rental per month); Fire Control Computers, FNADC class (price negotiated); Automatic Data Sampling Systems, military and naval systems (price negotiated) / GEN PUR: none / Ls (9300) Le (1911) /*C 63
Minneapolis-Honeywell Regulator Co., Industrial Products Group, Wayne and Windrim Aves., Philadel-phia 44, Pa. / SPEC PUR: Nuclear reactor simulator for training in nuclear reactor operation (approx. \$17,000). Thermal plant simulator to solve nuclear design and operational problems; training device for nuclear power plant operation (approx. \$21,000) and up). Gas flow computer for measuring gas flows and correcting to standard conditions (\$4000). Analog-digital recorder transcriber for automatic data sampling (\$30,000 and up). Brut meter for computing BTU formulain gas measurements (\$1600 and up). Fractionator reflex analog computer wing B-constant principle for connocidispatch of power system generation (\$25,000 and up). Bratch computers, nnalog type, systems blending liquids, solids, slurries. Special purpose analog computer for calculating amount of internal reflux in distillation column (\$1600). Analog computer sing

analog to digital converters and multiplexers; telemetering systems and timing generators for military use / prices on request / Ms(150) Se (1955) / *C 62
Otis Elevator Co., Defense and Industrial Div., 35
Ryerson St., Brooklyn 5, N.Y. / SPEC PUR: Adaptive Tracking Simulator, for teaching tracking skills (\$25,000) / GEN PUR: none / Ls(30,000)
Le(1853) / *C 63

tive Tracking Simulator, for teaching tracking skills (325,000) / GEN PUR: none / Ls (30,000)

Le (1653) / *C 63

Pacific Data Systems, Inc., 1058 E 1st St., Santa Ana, Calif. / SPEC PUR: Sequential Analyzer, quality control statistical calculator (\$1000) / GEN PUR: PDS 1069, control computer \$10,000 to \$15,000); PDS 1020, engineering computer (\$18,000 to \$15,000); PDS 1020, engineering computer (\$18,000 to \$22,000) / SS (20) Se (1961) / *C 63

Packard Bell Computer, a Div. of Packard Bell Electronics, 1905 Armacost Ave., Los Angeles 25, Calif. / SPEC PUR: TRICE, Digital Differential Analyzer, for solution of differential equations in realtime and simulation studies including open loop integrations and axis transformations involving trigonometric and algebraic operations (price starts at \$09,500 and depends on system configuration); DER-2000, Digital Events Recorder, for monitoring up to 2000 bistable or two position conditions in automatic checkout, process control, etc. (price on request) / GEN PUR: yes / Ms (350) Sc (1957) / *C 63

Philco Corp., a subsidiary of Ford Motor Co., Computer Div., 3900 Welsh Rd., Willow Grove, Pa. / SPEC PUR: BASICPAC, general purpose, mobile transportable, ruggedized FIEDATA computer for military uses such as all types of command and control applications including tactical center operations, aerial surveillance, air traffic requilations, weapons fire planning and support, and vehicle tracking and guidance, real-time data handling, processing and communication, administrative data processing, scientific data computers for use in space vehicles, aircraft, and other military purposes, including simulation, automatic training devices, information retrieval, airport and flight control, traffic control, fire control, navigation, etc. / GEN PUR: yes / Ls C24,0000 Lett1092, corporation; 1952, computer division) / *C 63

Serck Controls Ltd., Queensway, Leamington Spa., War-wickshire, Eng. / SPEC PUR: Solld State Digital

Serck Controls Ltd., Queensway, Leamington Spa., War-wickshire, Eng. / SPEC PUR: Solid State Digital

Telecontrol, for telemetery, remote controls and supervision (\$5600 upwards); Solid State Special Purpose Computers, for special applications (\$2040 upwards); Solid State Sequence Control, for plant sequence control (\$2040 upwards) GEN PUR: none / Ms(100) Se(1959) / *C 63

Stone Laboratories Inc., 1312 Tremont St., Boston 20, Mass. / SFEC FUR: Tellertron, savings bank realtime processing system (\$350,000, up) / GEN PUR: none / Ss(10) Se(1950) / *C 63

Strand Engineering Co. — name changed to Burroughs Corp., Ann Arbor Lab., which see
Wang Laboratories, Inc., 12 Huron Drive, Natick, Mass. / SFEC FUR: Synchro Digital Readout, for synchro shaft position display (\$1500 to \$3600); Precision Optical Digitizing Systems, for data reduction on comparators, microphotometers, precision engines, etc. (\$5000 to \$12,000); Incremental Data Recording Equipment, for data reduction on any recorders or analyzing equipment (\$5000 to \$12,000) / GEN PUR: none / Ss(30) Se(1951) / *C 63

· END -

SURVEY OF COMMERCIAL ANALOG COMPUTERS (Continued from page 85)

SURVEY OF COMMERCIAL ANALOG COMPUTERS (Continued from page 85)

Procedyne Systems Analyzer M 101-A / scientific,
Fourier transform / ACCUR: computes Fourier
transform for 30 harmonics, 2% / CAPAC: plot of
one function / PRGMG: no autom promage of new problem when problem changes; data placed in machine
in form of curve in 1 to 2 min / IN-OUT: input
on Vernistat plotting board, meter output or x-y
plot / sale, \$5000 to \$7000 / sold or rented,
one; on order, one / Procedyne Associates, Inc.,
376_Ridgeley St., Perth Amboy, N.J. / °C 63
REAC@ 500: Reeves Electronic Analog Computer /
scientific, process simulation problems, realtime and other / ACCUR: 4 signif figures / LARGST
INSTIN: 120 scale factor potentiometers, 20 integrators, 34 adders, 20 quarter square multipliers, 20 function generators / automatic in/
out, repetitive operation, electronic resolver
servo mult / PRGMG: autom prgmg of new problem
when problem changes; 5 min changeover / IN-OUT:
elec typewriter, tape / RELIAB:
unden checkg;
operg ratio, 95% / sale, \$30,000 and up / Reeves
Instrument Corp., Garden City, N.Y. / °C 63
Solartron 247 System / scientific, real-time /
ACCUR: S signif figures / CAPAC: flexible /
LARGST INSTIN: 408 adders, 300 multipliers, 272
integrators, 100 function generators / PRGMG
CHANGEOVER: 30 min / IN-OUT: digital voltmeter,
digital line printer, push-button address monitoring and set-up system / RELIAB: autom checkg;
operg ratio, 93% / sale, \$20,000 to \$280,000 /
sold or rented, 6; on order, 8 / The Solartron
Electronic Group Ltd., Victoria Rd., Farnborough,
Hampshire, England / °C 63
TOA-2 Electric Analog Computer / scientific, engineering / ACCUR: within 1% / CAPAC: any number
/ solves Laplace or Poisson equation, will handle
any number of variables put into model being
analyzed / average time to solve typical problem,
including programming and solution, 6 hrs / INOUT: physical model is made and solution obtained
directly from the model / RELIAB: autom checkg;
operg ratio, 100% / sale, \$685 / Carlson Compute

- END -

OVER 600 AREAS OF APPLICATION OF COMPUTERS

Neil Macdonald Assistant Editor Computers and Automation

I. Business and Manufacturing in General

Accounts receivable; posting, rebilling
Advertising effectiveness: analysis,
data handling
Billing and invoicing
Budgeting
Capital investment analysis
Catalog indexing
Charitable contributions
Correspondence: personalized letters to
delinquent accounts
Cost analysis Correspondence: personalized letters t delinquent accounts
Cost analysis
Depreciation calculations
Directory advertising calculations
Dispatching
Expenses: analysis, prompt reports
File maintenance
Filing operations, single and multiple
Forecasting
Information retrieval
Inventory control
Linear programming
Mailing list operations
Management games
Management tempts using the exception
principle, and others
Management simulation
Management statistics analysis
Management statistics analysis
Management statistics analysis
Management statistics
Operations research applications
Order acknowledgment
Order analysis Order acknowledgment
Order analysis
Overhead cost allocation
Payroll changes for general increases
Payroll computation and payment
Pension reporting and updating
Performance evaluation
Plastic plates: emboss, code-punch
Price analysis Property accounting
Production forecasting
Punched tape: automatic production and Punched tape: automatic production and reading
Purchase order writing
Questionnaire analysis
Repair and maintenance: records, scheduling, control
Royalty processing
Salary advances
Sales analysis
Sales area distribution
Sales quota calculations
Savings bond deductions
Taxes, calculation
Transportation optimization
Vacation scheduling
Voucher distribution
Wage and salary analysis Wage and salary analysis
Wage and salary tax computations
Warehousing and stocking: records, analysis Work-in-process records

2. Plant and Production

Assembly line balancing
Cartons: automatic manufacture and
packaging
Factory operation simulation
Labor utilization: schedules, analysis
Lathe operations: automatic control
Machine loading schedules
Machine tools: numerical control
Machine tools: control for automatic
reproduction of complete parts
Machine utilization analysis
Materials and parts: requirements, allocations, scheduling, control
Procurement Procurement Route accounting (Bakeries, Bottling plants, Dairies, etc.)
Shop scheduling, optimum

II. Business -- Specific Fields

1. Advertising

Expenditures: analysis Moneys: advertising, promotional, analysis

2. Banking

Check processing accounting
Corporate trust accounting
Demand deposit accounting
Demand deposit accounting
Deposit processing
Factoring accounts processing
Fund accounting
Installment loan accounting
Interest calculation
Inter-office records: transmission,
filing, recall
Loan accounting, records, and analysis
Money orders
Mortgage loan accounting
Payroll accounting
Real estate loan accounting
Real estate loan accounting
Savings and loan postings
Savings Club deposit accounting
Signature verification
Stockholder records
Trust accounting
Withdrawal processing

3. Educational and Institutional

College board examinations: scoring, College board examinations: scoring, interpreting
Hospital patient billing
Hospital patient records: collation
Laboratory experiments: automatic control
Language teaching
Report cards: preparation, issuance
Revenue and expense accounting
Scheduling of classes, sections, courses, instructors, rooms
Supply accounting
Teaching
Test grading
Theoretical courses: presentation and review of basic concepts

4. Finance

Amortization
Bond evaluation
Dividend calculation
Equipment trust accounting Fund analysis Monthly customer statements Portfolio evaluation Stock analysis Stock marysts
Stock market data transmission
Stock price index computed hourly, etc.
Stock tabulations Stock transfers

5. Government

Appropriation accounting
Bond ownership and redemption records
Budgetary control
Census analysis
Election return analysis
Foreign policy analysis
Income tax accounting
Mail sorting and routing
Motor vehicles: registration
Parts cataloging
Property right-of-way analysis
Property registration
Parts cataloging
Property registration
Statistical analysis
Supplies: inventory and control
Traffic interchanges: designs of angles
and grades
Praffic light service control
Traffic signal regulation
Traffic simulation Traffic simulation
Water and sewer rates revenue

Actuarial research Agency accounting Agents' commission calculations Asset share calculations Automobile coding Claims
Commutation column calculations
Dividend formula analysis Dividend scale calculations
Gross premium calculations
Group annuity calculations
Group insurance commissions
Mean reserve calculations
Mortality tables
Net premium calculations
Non-forfeiture value calculations
Policy issuance
Policy reserve calculations
Premium billing
Premium and loss distribution accounting
Renewal rating calculations
Valuation calculations Dividend scale calculations

Crime: analysis, prediction, detection Laws: analysis, consistency studies Legal research Patent searching Traffic violations: recording, accounting, analysis

Information retrieval Records and control

9. Magazine Publishing

Classified advertisement preparation Newsprint: telephone transmission, highspeed typesetting Renewals: analysis, promotion Subscription fulfillment

10. Military

Air Force engines and parts: regulation of supply
Distressed ships: dispatching aid
Plotting location of all ships and
planes in operation

11. Oil Industry

Absorber calculations
Aerial surveys and exploration: analyses
Bulk stations: wholesale sales, billing,
accounting
Credit card accounting
Crude oil: analysis of properties,
evaluation, processing
Depletion accounting
Distillation tower design
Equilibrium flash calculation
Flow: control
Fuel deliveries: degree-day accounting
Gasoline blending Gasoline blending
Gravity drainage analysis
Gravometric analysis
Heat exchange calculations
Heat and material balances Instrument scanning Lease and well expenses and investments: records and analysis Map construction Map construction
Mass spectrometer data: reduction,
analysis
Material and energy balances
Off-normal variables alarm
Off-shore installations: studies of
design variations
Oil field analysis:
Correlations of data from different
drill holes: Correlations of data from different drill holes;
Correlation of data from seismic tests;
Estimated amount and direction of flow of fluids through porous rocks
Oil pipe-line system: automatic
Oil purchase accounting
Operating records: logging
Pipe stress analysis
Plate-to-plate distillation calculations
Product mix for oil refineries; determination Product mix for oil refineries; determination
Refinery and gas plant components: design, operation
Refinery shutdown and maintenance; scheduling calculations
Refinery simulation Retinery simulation Secondary recovery: analysis Seismic data reduction Well logs: corrections Wells and fields: prorating analysis

Application of Computers

12. Public Utilities

Boiler control
Circuits and lines: mileage analysis
Compressor performance
Dispatch control
Electric distribution networks
Equipment: attrition and life expentancy
Gas distribution networks
Gas well probation
Load duration
Load flows Load flows
Meter reading
Natural gas measurement
Pipe line design
Power distribution calculations
Power plants: stability of control
Power production scheduling
Pressure vessel flange designs: calculating, listing
Rate determination
Rapair calls: dispatching, scheduling
Sag-tension studies
Steam turbines: output, control
Transformer thermal rating
Transmission line design and losses
Water reservoir management Load flows

Football: judging contest entries Racing: determination of prices paid on winning horses Scoring: bowling, Olympic winter games

14. Steel Industry

Billet cut-up line: control Power control: optimization Smelting process: blast furnace stock-house control Steel sample analysis

15. Telephone Industry

Automatic telephone exchange for private lines Coin telephone: collecting, accounting Coin telephone: Collecting, account Customer payments Local service charge billing Long-distance transmission of data Message register billing Toll ticket billing Written message telephoning

16. Textile Industry

Fabric quality control Material availability evaluation Production planning Sales analysis Style reports

17. Transportation

Aircraft maintenance scheduling Aircraft maintenance scheduling
Air traffic control
Automatic toll registration
Bus scheduling
Cloud-height-data analyzer for airports
Collision warning systems
Crew training
Elevators: automatic control
Flight simulation Flight simulation
Motor freight records: analysis
Navigating systems
Parking garages: automatic control
Pilot training
Preventive maintenance scheduling
Railroad freight cars: accounting, allocation, distribution, control
Railroad inventory accounting
Rail traffic control, centralized
Satellite orbit calculations
Ship arrival forecasting
Subways: automatic control
Terminal operation simulation
Trains: automatic control
Travel reservations

18. Miscellaneous

Harbor and port facilities: planning, evaluation, filling shallows calculations
Hotels: registration, reservations
Indexes: preparation
Inventions and patents: filling, retrieval
Literature searching: automatic location of scientific articles
Meat packaging: mixture, optimization
Music: statistical analysis of style
Television stations: real-time program switching operations
Theatre: scheduling, planning productions
Vending machine programming

111. Science and Engineering

I. Aeronautics and Space Engineering

Aerodynamical formulas: evaluation Airborne jet-engines: control, manage-

Aircraft safety: control of cargo weights and fuel supply Airframe stress analysis and fuel supply
Airframe stress analysis
Catastrophe simulation
Critical speed problems
Curve fitting
Factor analysis
Flight simulation
Flight test data reduction
Flight training devices
Flutter analysis
Ground controlled approach: programming
Gyroscopic calculations
Heat transfer analysis
Heliocopter piloting studies
Navigation training devices
Parts catalog changes, processing
Rocket motor propellants: analysis, control during firing
Satellite photography rectification
Satellite tracking
Self-adjusting pilot
Space platform "anchorage"
Suspension reaction for airborne stores
Systems evaluation
Theodolite data reduction
Vibration analysis
Wind tunnel data reduction

2. Biology

Animals: behavior models Hybrid optimization
Livestock breeding analysis
Livestock feeding control
Livestock-feed ingredient-mix: optimization
Species characteristics: correlation analysis Species varieties: automatic classifi-cation

3. Chemical Engineering and Chemistry

Chemical Engineering and Chemistry

Bound chemicals: simulation of reactions between
Chemical compounds: structure studies
Crystal structure factors
Distillation processes: determination
of starting times, etc.
Equilibrium equations: studies
Fertilizer-mix: optimization
Flash vapor calculations
Gas line calculation
Hydrocarbons: structure analysis
Ion exchange column: performance
appraisal
Mass spectrometer analysis
Material flow to batch chemical plants:
program simulation
Organic compounds: classification
Organic compounds: file searching
Permeability, relative: computations
Process control
Process simulation
Reaction analysis
Spectrum analysis
Spectrum analysis
X-ray crystallography analysis

4. Civil Engineering

Abutment design
Adjustment of level net
Area calculation by coordinates and by
other methods
Azimuth determination from sun observation Beam design Beam design
Bridge design
Concrete design, prestressed and reinforced
Construction tie computation
Curve, arc, line computations and intersections
Cut and fill calculations
Cylindrical shell analysis
Dam design Cylindrical shell analysis
Dam design
Distance, station and offset, to a point
Earthwork computations
Embankment stability design
Freeway assignment
Freezing and thawing of soils
Grade sheet processing
Highway profiles
Monthly equipment summary
Pavement design
Photogrammetric data reduction
Pier design
Pile load computation
Pipe design Pipe design Pressure distribution in layered media Pressure distribution in layered media Ramp and interchange design and calculations
Retaining wall design Roadway elevations Route optimization
Slab volumes and other calculations
Soil test analysis
Steel column design
Stress analysis
Survey closure: control
Three-point problem solutions
Traffic density: pictorial simulation

Traffic light maintenance: control Traffic simulation Traffic simulation
Transformation of coordinates
Traverse adjustment
Traverse closure
Triangulation
Vertical alignment
Water distribution systems: analysis,
optimization

5. Economics

Household simulation Industry: analysis, simulation of competition

6. Electrical Engineering

Antenna design
Cathode tube design
Circuit analysis and design
Circuit assembly: control
Domponent design
Computer logic circuits: design by
numerical control
Electromagnetic wave propagation in
various media
Feedback system, single loop, finding
the root locus
Filter analysis
Generator calculations
Logical networks: design
Motor calculations
Radar echoes Radar echoes
Radio interference
Systems evaluation
Transformer design
Transient performance Traveling-wave-tube calculations Triode design

7. Hydraulic Engineering

Backwater profiles
Compressible and incompressible flow
analysis
Culverts: analysis, geometry
Drainage systems design
Flood and flow forecasting
Flood control calculations
Flood frequency analysis
Flood routing
Flow in open channels
Ground water: flow of
Bydraulic circuits and components:
design design Hydraulic network analysis Hydroelectric dam design Multi-purpose water-reservoir system management Pipe stresses Pipe stresses
Reservoir aggradation
Reservoir area computations
Sewer design
Shock-wave effect analysis
Surge-tank analysis
Turbine speed regulation
Unit hydrographs: determination
Water hammer analysis
Wave motion analysis
Wind-wave analysis

0. Linguistics

Concordances: construction Syntax pattern analysis Translation from one language to another Word frequency analysis

9. Marine Engineering

Compartment pressures in emergency situations
Compartment ventilation calculations
Force analysis of space structures
Form calculations
Fuel rate analysis
Gyroscopic-compasses sea-test: data
reduction
Hydrostatic functions
Plate and angle combinations: calculations situations tions
Ship displacement calculations
Ship maneuvering calculations and control
Ship models: extrapolation of observations
Ship waterline characteristics
Shock isolator calculations
Submarine hulls: Bon Jean calculations
Submerged cables: calculation of
transient motion
Turbine reduction gear systems: vibration analysis
Ullage tables tions

10. Mathematics

Boolean algebra calculations Calculus of variations
Constants, important: evaluation
Convolution
Coordinate rotation and translation
Curve fitting

Application of Computers

Determinant evaluation
Difference equations solution
Differential equations solution
Differentiating symbolically
Eigenvalues and eigenvectors: calculations
Fourier analysis and synthesis
Function tables: computation
Integral equations
Integration of functions
Intelligence: simulation of human
thinking processes
Lagrange interpolation
Least squares fit to inconsistent
equations
Matrix multiplication
Maximum likelihood functions
Multi-dimensional partial differentials
Multiple integrals
Numerical base conversion
Partial differential equations
Polynomial roots
Simultaneous for mathematical equations
and solutions
Simultaneous on-linear equations
Simultaneous ordinary differential
equations
Simultaneous ordinary differential
equations
Stochastic difference equation of
functions)

11. Mechanical Engineering

Air conditioning calculations
Arch analysis and design
Building frames for reinforced concrete
construction: Hardy Cross analysis
Cam design
Combustion computations
Composite stringers design
Compressors: horse power calculations
Conveyor geometry
Crankshaft vibration analysis
Engine and piston computations
Flange cross sections, table of
properties
Foundation settling: effects
Heat flow
Heat loss of rooms and huildings
Machine vibration analysis
Moments of inertia
Pipe-stress analysis
Orifice factors: computations
Piping systems, flexibility analysis
Pressure vessel computations
Propeller pitch correction
Reinforced concrete: bending, stress,
etc.
Rigid body vibrations: analysis
Rigid frames: moment distribution
analysis
Shell analysis: stress distribution
Temperature stresses
Throttling device computation
Torsional systems, bearing loads, and
engine forces: Holzer analysis
Truss analysis: stress and deflections
Vehicle checkout calculations

12. Medicine and Physiology

Anesthesia control
Arterial physiology research
Ballistocardiogram analysis
Biologic rhythm studies
Biological specimens: electronic magnification
Blood volume: calculation of total
amount in circulation and loss
Cancer, diagnosis and treatment
Cardiovascular physiology studies
Cerebral slow waves: correlation and
spectral analyses
Compartmental rate exchange parameters
Controlled artificial hand
Coronary artery disease prediction
Cytophotometric analysis
Diagnosis of disease
Eating habit pattern studies
Ecological system simulation
Effect of drugs on human body
Electrocardiogram integration and
analysis
Electroencephalogram analysis
Enzyme kinetic representations
Fatigue research
Fetal heart beat recording
Castrointestinal tract pressures: detection and recording
Gene frequency calculation
General anesthetic simulation
Growth and physique studies
Hearting loss: testing analysis
Hearing loss: testing analysis
Human brain simulation
Human eor simulation for speech analysis

Hypertensive pressure computations
Intestinal absorption rate measurement
Iodine metabolism computation
Medical data: telemetering and analysis
Medical tests: analysis
Metabolic control involving chemical
feedback
Motor system coordination testing
Neuroelectric data processing
Neuros signal conduction theory
Pediatric psychiatric diagnosis
Physiology of the eye: analysis
Probability in medical diagnosis
Pupil servomechanism analysis
Radiation therapy
Red cell volume: calculation
Renal function simulation
Speech research
Statistical analysis of clinical data
Symptom-disease complexes
Temperature of man simulation
Toxicity data analysis
Vessel wall properties and hemodynamic
studies

13. Metallurgy

Alloy calculations Crystal structure computations

14. Meteorology

Flood control Hurricane control Short-range storm observation and forecasting Weather forecasting

15. Military Engineering

Ballistic trajectories
Bomb impact analysis
Bombing tables
City evacuation studies
Fire control
Firing tables
Missiles: designing, drafting structural
parts
Missiles: launching, directing, intercepting, and recovery: calculations
Pursuit and combat: analysis, control
Radar defense systems: analysis, calculations
Rocket trajectories
Strategy analysis and optimization
Trajectory calculations
Weapons control
Weapons systems analysis and evaluation

16. Naval Engineering (see also Marine Engineering)

Cavitation studies Component attrition rate analysis Decompression tables Submerged flow: potential patterns

17. Nuclear Engineering

Engines: tests, data, control
Multigroup criticality calculations
Neutron diffraction
Neutron flux distribution
Neutron transport
Power plant monitoring
Radioactive fallout: analysis, prediction
Radioactive level calculations
Reactor design and evaluation
Reactor simulators

18. Photography

Color analysis
Color separation negatives: scanner for
automatic production
Lens coating calculations
Optical ray tracing
Optical system design

19. Physics

Cosmic radiation: statistical analysis Crystallography analysis Electron distributions Electron trajectories Interatomic bond lengths and angles Shock waves analysis Thermodynamic equations

20. Psychology

Data reduction and analysis
Cognitive processes simulation
Canonical analysis
Factor analytic studies
Multiple regressive models for prediction
Neural behavior simulation
Pattern analytic methods: agreement
analysis, configural analysis, multiple
scalogram analysis, profile analysis
Perception studies

Psychological tests: analysis Study of behavior in space flights Synthesis of human language behavior Time and motion studies: data collection and analysis

21. Sociology

Data reduction and analysis Social behavior simulation Social processes: hypotheses testing Sociometric data: analysis Voting behavior simulation

22. Statistics

Bernoulli probability
Beta function
Binomial coefficient calculations
Chi squared function calculations
Correlation
Coveration
Covariance
F-test
Factor analysis
Forecasting
Gamma function
Gaussian probability
Hypergeometric probability
Least-square-polynomial fitting
Moments
Moving averages
Multiple regression
Non-linear estimation
Period search
Poisson probability
Time series analysis and adjustment
T-test I (sample mean vs. population
mean)
T-test II (difference between two means)
Variance: analysis

- END -

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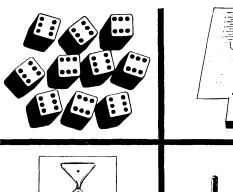
From the Instruction Book's preface by Dr. Frederick Mosteller, Professor of Mathematical Statistics, Department of Statistics, Harvard University, Cambridge, Mass.: . . . Some may feel that this sort of material is only for the youth who is quick at science and mathematics, and certainly such a youngster will profit mightily. But it is not so well known that children, retarded in the mathematical areas, brighten up when presented mathematical tasks derived from experiments they have executed themselves . . .

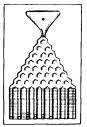
In all the talk about science and mathematics, let's not forget that experimentation with mathematical ideas is fun. And hours and hours of such instructive fun are in the Berkeley book and lab. How do I know? In preparing this introduction, I have been greatly hampered by my not-very-studious 14-year old who busily instructs me in the use of all these materials.

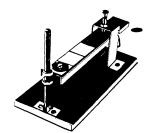
Now if you'll excuse me, I have a new theory I'd like to try on the coin-flipping machine. Have funl

SOME OF THE CONTENT OF THE EXPERIMENTS: If you flip a coin 50 times, what will happen? If you roll 2 dice, what will happen? If you roll 30 dice and do that 40 times, what will happen? How often will you get 5 sixes when you roll 30 dice? How often will you get 10 sixes when you roll 30 dice? How will raindrops be distributed? How do you use the frequency of letters to solve a cryptogram? If you have 20 black beads and 10 white beads in a sampling box, what are you likely to get in ten samples? If you have 20 black beads and 10 white beads in one sampling box and 25 black beads and 5 white beads in another sampling box, are you likely to be able to tell the boxes apart if you sample twenty times? How random is random? Can a person name 100 digits randomly out of his head? How do you measure departure from randomness?

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- Full descriptions of 27 Main Experiments and briefer descriptions of over 36 subsidiary experiments
- Book "Probability and Statistics: An Introduction Through Experiments" by Edmund C. Berkeley—140 pages—with a preface by Dr. Frederick Mosteller; includes a chapter by Martin Gardner

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ROSTER OF SCHOOL, COLLEGE, AND UNIVERSITY COMPUTER CENTERS

Following is a roster of school, college, and university computer centers. Much of the information is derived from a survey form returned by many organizations. This form asked for: 1. Brief description of your main purposes or mission? / la. Do you provide computing services commercially? / 2. Your equipment and facilities? / 3. Courses given in conjunction with your computing center? / 4. Any remarks? / 5. Number of your staff? / 6. Year established? / Filled in by: Name _____ Title ___ Organization ___ Address ____ . __ Address_

In the following each entry contains: Name and address / Purpose or mission / Equipment / Courses / Notes.

The abbreviations used include the following:

- The abbreviations L...

 Activities

 Ra Research and development
 Ca Commercial computing and consulting services
 Ga Government activity
 Pa Problem-solving
 Ea Education
 Ma Manufacturing activity
 (Used also in combinations as in RCEa "research; computing and consulting service; and educational activities")

<u>Size</u> Ls

- Large size, over 500 employees Medium size, 50 to 500 employees Small size, under 50 employees (no. in par-entheses is approx. no. of employees)

- When Established

 Le Long established organization (1930 or ear-lier)

 - lier)

 Me Organization established a "medium" time ago (1931 to 1950)

 Se Organization established a short time ago (1951 or later) (no. in parentheses is year of establishment)

- Interest in Computers
 Dc Digital computing machinery
 Ac Analog computing machinery
 Ic Incidental interests in computing machinery

*C Information checked by the organization (C for Checking)/ 63: information furnished in 1963 / 62: information furnished in 1962 / etc.

- $\ensuremath{\mathsf{G}}$ Information gathered, but not checked by the organization
- EAM Electric punch-card accounting machine
- coml svc Computing services provided commercially
- K thousand (words or digits of core storage)
- CPM cards per minute

For computer identifications, see the survey of digital and analog computers.

- Abilene Christian College, IBM Center, Station ACC, Abilene, Tex. / *C 63

 Business office records; student and alumni records / IBM 402 and support equipment, 3 key punches, sorter, collator, summary punch; on order IBM 1401 data processing system / B.A. 326-0ffice Machines, with 6 of 18 weeks spent on IBM Unit Record Equipment / ERa Ss(7) Se (1956) Ic
- On the other heest European Contert, University of Puerto Rico, Mayaguez, P.R. / *C 63
 Education, research problems, administration control, registration / IBM 1620, 60%, card system, four 024's; 082, 085, 514, 407, and 056; 1401 system on order; coml svc / Courses in Mathematics and Industrial Engineering / RCPEa Ss(8) Se(1959) DIc
 A G M College of Texas, Data Processing Center, College Station, Tex. / *C 63
 Education and research / IBM 1401, 709, 650, unit record equipment; coml svc / 13 courses on computers and their application / MS offered in computer science / RCEa Ss(40) Se(1958) DAc

- The American University, Electronic Data Processing Laboratory, 1901 F. St., N.W., Washington 6, D.C. / *C 62.
 Use of computers as a management tool, for bud-

- The American University, Electronic Data Processing Laboratory, 1901 F. St., N.W., Washington 6, D.C. / *C 62

 Use of computers as a management tool, for budget preparation and execution; information storage and retrieval; student classroom work / IGP-30, with Model 322 Hugh Speed Reader Punch and Model 322 Automatic Switching Control Unit, RRC-4000; coml svc / Various courses, including training courses for the Royal McBee Corporation / CPEa Ss (B) Se (1960) DIC

 Auburn University, Computer Center, 113 Broun Hall, Auburn, Ala. / *C 63

 Education and research for students, staff and faculty / IBM 1620 with 60,000 positions of storage and high speed card input-output, IBM 407, 548, 519, 083, 026; coml svc / Electronic Data Processing Machines; Electronic Data Processing Machines; Electronic Data Processing Machines; Electronic Data Processing Systems; Digital Computer Programming; Numerical Analysis I and II; Computer Principles / RCPEa Ss (G) Sc (1959) DC

 Stephen F. Austin State College, EDP Center, Nacogdoches, Tex. / *C 63

 Teaching, administration, research in Forestry, Physics, Chemistry / IBM 1620, 1622 and two 1311's (on line printer to be ordered when announced) 407, 65, 63, 548, 514, 26, 24 / Business Administration courses leading toward systems design; Mathematics courses / REa Ss (3) Sc (1963) DIC

 Baylor University, Casey Computer Center, Hankamer School of Business, Waco, Tex. / *C 63

 Research and instruction in computer applications / IBM 1620, 1622, 407, sorter and key punch / Data Processing, Basic Computer Center, Chestnut Hill 67, Mass. / *C 63

 Education and research; developing programs useful for high school math teachers in conjunction with modern math programs / IBM 1620, 1622 (20K additional), card punch, high speed printer on order; coml svc / K 60K Card 1620 and auxiliary equipment; coml svc / K 60K Courses in Machine Programming courses / RCPEa Ss (5) Se 1962 DIC

 Boston Gollege Mathematics Institute and Computer on Scientific Computer presign; Data Processing, Scomputer Research Ce
- puter Technical Training Program / RCEa Ss(5) Se(1959) Dc
 Bristol College of Science and Technology, Ashley Down, Bristol 7, England / *C 63
 Education / Elliott 803 digital computer, Solartron Minispace analog computers, calculating machines, relay demonstration computer; coml svc / courses given / CEa 's Se(1962) DAc

- Brooklyn College, Office of Testing & Research,
 Brooklyn 10, N.Y. / *C 63
 College service, instruction, faculty and student research / 1620 card 40K system / courses
 given / REA Ss.(4) Se(1961) Ic
 Bucknell University, Freas-Rooke Computing Center,
 Lewisburg, Pa. / *C 62
 Instruction in use and applications of electronic computers / Burroughs E-101-3 digital computer, IBM 1620, PACE TR-10, Analog Computer;
 coml svc / Introduction for Engineering Freshmen, used within engineering classes / RCEa
 Ss(6) Se(1958) DAc
 California Institute of Technology, Pasadena, Calif.
 / *C 62
 Education and research / IBM 7090; Burroughs
- Education and research / IBM 7090; Burroughs 220 / about fifteen courses / REa Ss (30) ?
- Carleton College, Computer Lab., Northfield, Minn. / *C 63

- Carleton College, Computer Lab., Northfield, Minn.

 / *C 63
 Instruction in programming and computer applications, student and faculty research / IBM
 1620 card system / utilization of Automatic
 Computers; Numerical Analysis; Programming Lecture Series; student independent study associated with computing activity / RFEa Ss(6) Se (1960) DIC
 Carnegie Institute of Technology, Computation Center, Pittsburgh 13, Pa. / *C 63
 Research, service and education / Bendix G-20, 32K, 4 tapes / Elementary Programming; Advanced Programming (Grad. Level); Numerical Analysis, etc. / REa Ss(12) Se(1957) DIC
 Case Institute of Technology, Computing Center, Cleveland 6, Ohio / *C 63
 Computer education, scientific and engineering calculation, computer science research / Univac Scientific 1107, ten tapes, two 800,000 word drums; Burroughs 220, 4 tape drives, Cardatron input-output; auxiliary IBM punched card equipment; coml svc / Numerical Analyses; Advanced Programming (e.g. translators, etc.); Automation Theory / RCPEa Ss(30) Se(1956) Dc
 The Catholic University of America, Computing Center, Washington 17, D.C. / *C 63
 Student education and faculty research / IBM
 1620 with card input-output, 60K storage, floating pt, hardware; coml svc / Fortran Programming; Data Processing in Sociology; Numerical Methods in Engineering / RCPEa Ss(3) Se(1962) DIC
 Chalmers University of Technology, ADB Institutet
- Chalmers University of Technology, ADB Institutet (Scandinavian Automatic Data Processing Institute), Gilbraltargatan 5 S, Gothenburg S., Sweden / *C 63
 - *C 63 University training in automatic data processing; consulting, programming, coding and running problems on computers for industries in Scandinavia / Alwac IIIE (Wegematic 1000), SAAB D21 computer; coml svc / CPEa Ss(25) Se(1957)
- Claremont Men's College, Claremont, Calif. / *C 63 Education / IBM 1620, 1622, 026 / Numerical Analysis; Operations Research / REa Ss(2) Se (1962) Ic
- Clarkson College of Technology, Potsdam, N.Y. / *C
- Scientific and business education and research / IBM 1620-1622; Tr-48 Analog System / Numerical Methods; Digital Computers I and II / REa Ss (1) Se(1961) DAc Clemson College Computing Center, Clemson, S.C. / & 63
- C 63
 Teaching and research / RPC 4000 Computer with RPC 4600 Tape-typewriter system, RPC 4410 Photoreader, also Systematics K-177 for card compatability; coml svc / Computer Programming; Numerical Methods; other courses in Mathematics and Engineering making use of the computer / RCEa Ss(2) Se(1961) ic
- Cornell University Computing Center, Rand Hall, Ithaca, N.Y. / *C 63
 - thaca, N.Y. / **C 63 Research computation and teaching / Burroughs 220, Control Data 1604-1604, IBM 101 statisti-cal machine, misc, sorting and comparing mach-ines; comi svc / Computer Equipment & Indus-trial Applications; Digital Computer Program-ming; Numerical Analysis / RCPEa Ss(15 full time, 15 part time) Se(1953) Dic

Dartmouth College Computation Center, Hanover, N.H.

*C 63 Education and research / LGP-30, 2 off-line flexowriters; IBM 1620 / 3 Numerical Analysis Courses; Business Data Processing; Programmin (non-credit) / REa Ss (2 part time) Se (1959)

Drury College, Springfield, Mo. / *C 63
Education (undergraduate) / LGP-30; coml svc /
Numerical Analysis for science students; Digital
Computer Techniques for non-science students /
CEa Ss(1) Se(1960) DLC
Emory University, Atlanta 22, Ga. / *C 62
Research and instruction / Univac SS-99, 120
and tabulating equipment / Introduction to Computers; Mathematics for Computer Use / REa Ss
(8) Se(1960) 1c
Everett Junior College Data Processing Dept., 801
Wetmore, Everett, Wash. / *C 63
Education in computer programming and adminis-

Education in computer programming and administrative work / IBM 1620 (2 disk packs ordered), 407, 519, 548, 085, 083, four U24's, 026 and 056 / Data Processing Lab, Key Punch / Ea Ss (2) Se(1963) Ic

(2) Se(1963) Ic Fenn College, Euclid & E. 24th, Cleveland 15, Ohio

/ *C 63
Undergraduate education in Data Processing and Computers / Burroughs 205 / Data Processing; Computer Technology / Ea Ss (2) Se (1960) Ic Florida State University, Tallahassee, Fla. / *C 62 Research and instruction / IBM 709, 8 tape drives, 3ZK memory; IBM 1401 / Fortran programming; Numerical analysis / REa Ss (16) Se (1957)

Fordham University, New York 58, N.Y. / *C 63
Research and teaching / Bendix G-15 computer /
REa Ss(2 part time) Se(1960) Ic
The Franklin Institute Computing Center, 20th 6
Parkway, Philadelphia 2, Pa. / *C 62
Advancement of the computing art; education;
accounting; research; government; business /
Modified Univac I data processing system with
associated ancillary equipment / Computers for
Students; Computers for the Layman; Introduction to Univac I Programming / RCEa Sc(23) Se
Fresno State College, Maple & Shaw, Fresno 26, Calis

Fresno State College, Maple & Shaw, Fresno 26, Calif. / *C 63

/*C 63
Education, administration / Western Data Processing Genter Los Angeles: IBM 7090, etc.; installation of a 1620 scheduled in 1964 / EDP & Fortran Programming / Ea Ss '?e Ic Gannon College, Perry Square, Erie, Pa. / *C 63 Instruction and research / LGP-30 and IBM 1620, 1622 card read punch, printing card punch, accounting machine, sorter, etc.; coml svc / Data Processing; Management control Systems; Automated Data Process Programming; Digital Computers; Advanced Digital Computers; Advanced Digital Computers (RCEa Ss(3) Sc(1960) Dc
General Motors Institute, Computer Services Dept.,

General Motors Institute, Computer Services Dept., Flint, Mich. / *C 63 Education / IBM 1620 with 20K, IBM 082, 519, 085, 548, 407 / Introduction to Computers; Nu-merical Analysis; other courses with computer applications / REa Ss(5) Se(1961) DIC

Georgia Institute of Technology, Rich Electronic Computer Center, 225 North Ave., N.W., Atlanta 13, Ga. / *C 62

13, Ga. / *C 62
Education and research / Burroughs 220, 5K
words of core, 6 mag tape units; UNIVAC Scientific (ERA 1101) with 4,096 words of core memory and card input-output added; coml svc /
Over 90 courses on computers and their applications / RCEa Ss (45) Se (1955) Dac
Harvard Computing Center, 33 Oxford St., Cambridge,
Mass. / *C 63
Computing service for the Universe.

Mass. / *C 63

Computing service for the University; teaching and research / IBM 7090, two channels, 12 tapes; two three-tape IBM 1401's; supporting EAM and keypunch equipment / Fortran and FAP courses for Harvard students and faculty only; courses in applications of digital computing equipment / REa Ss (35) Se (1962) DIC Harvey Mudd College, Dept. of Engineering, Claremont, Calif. / *C 63

Engineering education / 1620 card system, document writer, sorter, and Donner 3400 analog computer / used in regular instructional program / Ea Ss (7) Se (1955) DAIc

Hofstra College, Computer Center, Hempstead, N.Y. / *C 63

Student and faculty education / 1620, 20K core position; 1622; 407 accounting machine; sorter; key punch / courses in programming, impact of automation, broad systems theory / PEA Ss(3 full time, plus student assistants part time) Sc(1963) Ic

Howard University, 2400 6th St., N.W., Washington, D.C. / *C 63

.C. / ℃ 63

Service unit for University, processing student
A/R and deposits; registration, grade reports,
W 2's, etc. / IBM 1620, 407, 514, 62, 65, 26,
24, 56, 557 / Survey course covering Data Processing; Digital Computer Programming; Computer
Seminars / RPEa Ss(7 in DP, 2 in Computer Lab) Se (1961) DIc

Idaho State University, Data Processing, Pocatello, Idaho / C 63 Registration, with related work projects; re-

Registration, with related work projects; research and education; and financial recording / Punched-card accounting installation for administrative work; IBM 1620 for education and research / REa Ss(4) Se(1961) Ic Indiana Institute of Technology, 1600 E. Washington Blvd., Ft. Wayne, Ind. / *C 63 Education and research / IBM 1620 with 1622 card 1/0, IBM 403 accounting machine, 082 sorter, 540 interpreter, 024 and 026 card punches;

coml svc / Computer Programming, Numerical Analysis / RCPEa Ss4(part time) Se(1961) Dc Indiana University, Research Computing Center, Gymnasium Addition, Bloomington, Ind. / **C 63 Research and education / IBM 709, 32K, 10 tape drives; IBM 1401, UK, 4 tape drives; usual unit record equipment / Non-credit programming and coding courses; Theory and Application of Digital Computers (3 cr.) / RPEa Ss(21) Se(1954) Dc

Institut für Angewandte Mathematik der Universität Würzburg, Würzburg, Klinikstrasse 6, Germany /

Solving problems in research and in courses of various depts, / Programming and technical courses every term / RPEa Ss (5) Sc (1961) Ic Institut für Massivbau, Technische Hochschule,

Brühlstrasse 27, Hannover, Germany / G 62 Programming for problems of Civil Englneering, in particular Theory of Structures / ZUSE Z 22 R computer / Ra 'rs '?e Ic

Iowa State University, Computation Center, Ames, Iowa / *C 63

DWA / C 63
Provide service to all departments, education and research / IBM 7074-1401 magnetic tape system, Cyclone computer system and IBM 1401 card system; com1 svc / 22 computer oriented credit courses / RCPEa Ss(32) Se(1957) Dc

courses / RCPEa Ss(32) Se(1957) Dc
The Johns Hopkins University, Computer Center, Baltimore 18, Md. / *C 63
Education, research and development / IBM 7094,
1410, 1301, four 1401's / Numerical Methods for
Computers; informal programming courses / RPEa
Ms(90) Se(1957) Dlc
King's College, University Computing Laboratory,
One Kensington Terrace, Newcastle upon Tyne, 2,
England / *C 62
Taching and research into automatic computing

ngland / % 02
Teaching and research into automatic computing and automatic computer applications / Ferranti Pegasus Computer with Decca Twin Magnetic Tape Unit and Ferranti Control System; English Electric KDF.9. System on order; coml svc / Numerical Analysis; Operational Research and Automatic Computing; and others / RCPEa Ss(8) Se(1957)

Lamar State College of Technology, Research Center, Beaumont, Tex. / *C 63
Student instruction in using and programming digital computers / Burroughs 204 Datatron System and IGP-30; coml svc / various courses / RCPEa Ss(3) Se(1954) DAC
Lawrence Institute of Technology, 21000 W. Ten Mile Rd., Southfield, Mich. / *C 62
Provide facilities for students and faculty to solve engineering and business problems / E-102 (IBM 1620 to be added in 1962) / Programming for Engineering Students; Programming for Management Students; Logic Design; Computer Circuits / REa Ss(2) Se(1961) Dic

Students; Logic Design; Computer Circuits / REa Ss(2) Se(1961) DIC Lenigh University, Packard Laboratory, Bethlehem, Pa. / *C 63 Education, research / GE 225, Mag. Tape, Printer, AAU/ISP-30 / Math 105, Computer Programming; 20-25 non-credit courses in 10-15 depts. / RREa Ss12(5 part time) Se(1957) Ic Louisiana Polytechnic Institute, Computing Center, P.O. Box 776, Toch Station, Ruston, La. / *c 63 Graduate and undergraduate computer education; faculty, graduate and staff academic research / IBM card 1620, with 60K core, 800 CPM input and full complement of non-BPQ Hardware; IBM 407, 402, 519, 514, 083, 082, four 026's, 056 / 15 courses relating applications and methodology, using Computer facilities / REa Ss(4) Se(1961) DIC

using Computer facilities / REa Ss(4) Se(1961)
D1c

Louisiana State University, Computing Center, Baton Rouge, La. / *C 63
Research, teaching and administration / IBM 1401; 1620, 60K; 1620, 40K; 1BM 7040 system on order; coml svc / Electronic Data Processing; Applications of Computers to Engineering Problems / RCPEa Ss(15) Se(1959) Dc
Lund University, Dept. of Numerical Analysis, Sölvegatan 14, Lund, Sweden / *C 63
Research and education in numerical analysis and programming; computing service for other universities / SML computer with 4096 word core memory, 4096 word buffer core storage, 1 tape station of FACIT carousel type, ALGOL 60 compiler; coml svc / graduate and post-graduate courses in numerical analysis and programming / RCPEa Ss(13) Se(1956) DIC

Mankato State College, Mankato, Minn. / *C 63
Education / IBM 024, 083, 546, 519, 402, 085, 1620, 1622, 026, 026-21, 002 / Digital Computer Programming; Numerical Analysis; Integrated Data Processing; Filing and Records Management / PEa 's 'e DIc

Marquette University, 1515 W. Wisconsin Ave., Mil-

Marquette University, 1515 W. Wisconsin Ave., Mil-waukee 3, Wisc. / *C 63 Marquette University, 1515 W. Wisconsin Ave., Mil-waukee 3, Wisc. / **C 63 Research and education / IBM 1620; 2 IBM 729, 40,000 digits of storage; IBM 870 / Electrical, Civil, Mechanical Engineering; Mathematics; and Business Administration with application to computers / REa Sc(5) Se(1958) DIC Massachusetts Institute of Technology, Computation Center, 77 Massachusetts Ave., Cambridge 39, Mass. / **C 62

*C 62
For educational and research activities of MIT and 40 other participating colleges / 4-channel, IBM 7090, 19 on-line tape units, direct-data device, interval clock and memory-protect and relocation modes; 2 IBM 1401C 4K three tapes on each, EAM and card-punch machines; coml svc / short programming courses in August, weekly seminars, approximately 20 accredited MIT courses using computers / RCEa Ss(35) Sc(1956) Dc

Miami University, Computing Center, Oxford, Ohio /

*C 63
Research, Education, Administrative / IEM 1620 /
Computer Programming; Electronic Data Processing; Degree program in Systems Analysis / RPEa
Ss (3 full time, 6 students) Se(1959) Dc
lidwest Research Institute, 425 Volker Blvd., Kansas
City 10, Mo. / *C 62
Studies in application of digital and analog
computers to business and scientific problems;
mathematical analysis and computation; economics research: operations research: systems engi-

mathematical analysis and computation; economics research; operations research; systems engineering; simulation / IIIM 1620, Donner 3500, GEDA N3 and L3 / RCPa Ms (300) Mc (1944) DAc Missouri School of Mines and Mctallurgy, Computer Center, Rolla, Mo. / *C 63
Training students and research / IBM 1620 Digital Computer System with 40,000 positions of core storage and floating point hardware; LGP-30 with high speed paper tape input-output; four 026 key punches; 407 accounting machine; sorter; reproducer; autoplotter; flexowriter; IBM 1620 Model II on order; coml svc / Introduction to Computing Techniques; Numerical Analysis; Digital Computing; Programming; Numerical and Statistical Methods of Digital Computing; Data Processing; Analog Computer Techniques; others / RCPEa Ss (24) Se (1960) DAIC

Education and research / IBM 1620 20K machine, 60K to be installed by Sept. 1963; IBM 026, 082, 407, and 519 / Special Orientation Course in Programming 6 Use of the 1620; Numerical Analysis and Programming of Digital Computers / RPEA Ss(5) Se(1961) DIC

Ss(5) Se(1961) DIC

New Mexico Highlands University, Computer Center,

Las Vegas, N.M. / *C 63

Research in health and mental adjustment / IBM

1620 40K storage, 407E4, two 026's, sorter, reproducer; coml svc / Computer Programming / RCPa

Ss(7) Se(1962) DIC

Norges Techniske Høgskole, Institutt for Anvendt

Matematikk, Trondheim, Norway / *C 63

Education and service to industry, commerce,
etc. / GIER; coml svc / ALGOL; other programming languages; general applications / CEa Ss

(S) Se(1963) DC

Northeastern University Computation Center, Boston

(5) Se(1963) De Northeastern University Computation Center, Boston, Mass. / *C 63 Education and Research / IBM 1620 (60K) and usual auxiliary equipment / courses given / REa Ss(4) Se(1959) Dic North Texas State University, Computer Center, Denton, Tex. / *C 63 Research and instruction / IBM card 1620, 402, two 026's, 002, 077, 514 / Technical Programming; Numerical Analysis; Business Programming; Systems Analysis; EMM / RIEA Ss(6) Se(1963) De Northwestern University Computing Center, Evanston,

Northwestern University Computing Center, Evanston, Ill. / *C 63 Education and research to all departments / IBM

Education and research to all departments / IBM 709 Data Processing System, 32K, 8 tapes; IBM 1401 and auxiliary equipment / Introduction to Computer Coding; Digital Computer Programming and Error Analysis; Digital Computer Solution of Differential and Integral Equations; Digital Computer Solution of Algebraic Problems / RPEa Ss(15) Se(1957) Dc
Ohio State University, Numerical Computation Laboratory, 1314 Kinnear Rd., Columbus 12, Ohio / G 62
Research and education; development of an executive routine which will maximize efficiency in time-sharing the IBM 709-7090 / IBM 704 with 4 tapes, 4 K core, 4 drums; IBM keypunches, reproducing punches, sorter, tabulator; IBM 7090 / courses in numerical analysis and data reduction / REa 's 're Dac
Orange Coast College, Business Data Processing Dept., 2701 Fairview Rd., Costa Mesa, Calif. / *C 63
Education, programming and operation for stu-

Dept., 2701 Fairview Rd., Costa Mesa, Calif. / *C 63

Education, programming and operation for students / IBM 1401; LGP 30; IBM 402 accounting machine, 602 calculator, 548 interpreter, 082 sorter, 514 reproducter, 085 collator, 026 and 024 card punch (5 in all), 056 interpreter, Friden Programmatic, and Friden TCPC and Selectadata / Introduction to Data Processing; Data Processing Machines (IBM tab); Systems and Procedures; computer programming courses / PEa Ss(9) Sc(1950) Dc

Oregon State University, Computing Center, Corvallis, Ore. / *C 62
Education and research / ALMAC III-E (8092), photo-reader and high-speed punch, one offiline Flexowriter / Computer Coding; ALMAC Coding; Symbolic Languages; ALGOL Programs; Numerical Calc; Circuits and Fields / REa Ss(5) Se (1957) Ic

(1957)Pennsylvania State Univ., Computer Facilities, Electrical Engineering Dept., University Park, Pa. /

*C 63
Teaching and research in digital and analog computers / Pennstac Digital Computer, Analog Computers, Network Analyzer / Logical Design of Digital Computers (2 courses), Analog (2 courses)
Pomona College, Claremont, Calif. / *C 63
Education / 2 G-15D and MTA-2 / Numerical Analysis (one semester); Applied Math (one semester); use computers in courses of physics and math but do not a jue courses in computer tech-

tery; use computers in courses in computer and math but do not give courses in computer technology / Ea Ss(2) Se(1957) Dic

Pratt Institute, Brooklyn 5, N.Y. / *C 63

Instructional, research and administrative / 1BM 1620, card reader and card punch; key punch; document writing system; com sev / Digital Computer Programming / RCPEa Ss(2) Se(1961) Dc

Purdue University, Computer Sciences Center, W. La-fayette, Ind. / *C 63 Instruction, consultation, research / IBM 7090,

Instruction, consultation, research / IBM 7090, two 1401's, peripheral equipment / Credit and non-credit courses on Programming in FORTRAN, COBOL, FAP, SPS; Introduction to Digital Computers; Numerical Analysis. Department of Computer Sciences offers advanced degrees / RPEa Ss(6) Se(1962) DIC Remington Rand Italia SpA, Centro di Calcolo Elettronico, Via Festa del Perdono, 7 Milano, Italy / °C 62

Scientific research, technical computations, administrative services / Remington Rand UNIVAC Solid-State 90-column tape system; comi svc /
mathematics programming and commercial applications programming / RCPEa SS (25) Se (1960) It.
Research Institute of National Defense, Stockholm
80, Sweden / *C 63
Research / IBM 7090, IBM 1401 / Ra SS (30) Se

80, Sweden / *C 63
Research / IBM 7090, IBM 1401 / Ra Ss(30) Se (1960) Ic
Riverside City College, Data Processing Dept., 3650
Fairfax, Riverside, Calif. / *C 63
Education, data processing training, research / IBM 1620 computer, 1622 r/p unit, 402 accounting machine, 005 collator, 514 reproducer, 082
sorter, 026 and 024 keypunch, 056 verifier /
Introduction to Data Processing; Electromechanical Machines; Practical Problems in DP; Computer Programming; Data Systems; special program for training deaf students in keypunch. Complete program for Associate of Arts degree begins in fall 1963 / RPEa Ss(4) Se(1962) DIc
RPI Computer Laboratory, Troy, N.Y. / *C 62
Teaching and research / IBM 650, IBM 1410 on order; coml svc / Programming; Numerical analysis / RCEa Ss(7) Se(1952) Ic
Royal College of Advanced Technology, Salford 5, Lancashire, England / G 62
Research and education / 4 modules of EMI analog computer Mark II / numerical analysis and programming / Ea ?s ?e Ac
St. Cloud State College, St. Cloud, Minn. / *C 63
Remittation hasic research for the college /

St. Cloud State College, St. Cloud, Minn. / °C 63 Registration, basic research for the college / IBM: summary punch, 000 sorter, 402 accounting machine / Office Automation / Ra Ss(2) Se

(1957) to
St. Mary's University, Computer Center, San Antonio
28, Tex. / °C 63
Educational and academic research / IBM 1620,
card punch / Introduction to Computers and Programming / REa Ss (3) Se (1962) DIc
St. Olaf College, Northfield, Minn. / °C 63
Undergraduate education / IBM 1620 available to
students through Carleton College / One-hour
course in Programming, three-hour course in Numerical Analysis / Ea Ss (1) Se (1959) Ic
San Diego State College, San Diego 15, Calif. /
°C 63
Adjunct to the program of instruction / IBM 1620

Adjunct to the program of instruction / IBM 1620.

**C 63
Adjunct to the program of instruction / IBM 1620, Card I/O, 60% core / Basic Programming; related courses / RPEA Ss(2) Se(1961) Ic
San Fernando Valley State College, School of Business and Economics, 18111 Nordhoff St., Northridge, Calif. / *C 63
Teaching, research, consultation, programming / LGP-30, 3 flexowriters; and add-punch / Introduction to Data Processing; Programming; Fortran Programming / REA Ss(4) Se(1959) DIc
San Jose State College, Computer Center, San Jose 14, Calif. / *C 62
Educational / IEM 1620 computer, 1622 card reader, 1623 core storage; 407 accounting machine, 043 sorter; three 026 key punch machines / Three math programming classes; four business programming classes; miscellaneous Fortran use in engineering / PEA Ss(2) Se(1960) Ic
San Joaquin Delta College, Data Processing Dept., Stockton, Calif. / *C 63
Education, data processing and programming / IEM 1620 computer, 026, 002, 548, 514, 077, 402, 602 / Introductory Data Processing Unit Record Machine Operation and Wiring; Computer Programming; Data Processing Systems and Proceedures; Computer Mathematics / PEA Ss(2) Se(1960) Dc Seattle University, Seattle 22, Wash. / *C 63
Instruction, research, and internal use / 1620, 1311, 407-4E IBM System with peripheral equipment / Appropriate courses to students in mathematics, physics, chemistry, psychology, biology, engineering, commerce and finance, education, and medical technology / REPa Ss(2) Se(1963) DAc
Seton IBall University, Computer Center, South Orange, N. N. / *F 63

Seton Hall University, Computer Center, South Orange, *C 63

N.J. / *C 63

Faculty research with emphasis on medical applications and education for graduate and undergraduate students / IBM 1620 computer with card 1/0, 20K memory automatic divide, indirect addressing and the usual unit record equipment / Computer Programming and Numerical Methods; other courses planned / RPEA Sc 65 Se (1963) DIC South Dakota State College, Brookings, S.D. / *C 63 Education / 1620 with 20K, card I/O; comp swc / Computing courses in GOTRAN and FORTRAN / CEA Sc (2) Sc (1961) DIC Southeast Missouri State College, Cape Girardeau

Southeast Missouri State College, Cape Girardeau, Mo. / *C 63

No. / °C 63

Undergraduate education and faculty research, data processing / IBM 1620 computer, tape fed; card equipment to be added during 1963 / Computer Programming; Numerical Analysis / RPEa Ss (3 part time) Se (1962) Dic

Southern Illinois University, Data Processing and Computing Center, Carbondale, Ill. / °C 63

Administrative, research and instructional; planning for total information system for SIU / IBM

lo20, 40K, card; IBM 1401, 8K, card; IBM 1401, 8K 6-tape; IBM 1401, 8K, 3-tape; IBM 7040 on order Dec. 1904 2-yr, program in Vocational Technical Institute; courses in Mathematics, Accounting, Management Departments; courses planned for School of Technology RPEa Ms (05; 30 part time) Se(1953) De Se (1953)

Southern Methodist University, Dallas 5, Tex.

Research and education / Univac 1103, Univac 90,

Chivac 120, tab equipment, Various programming courses / REa Ss(10) Se(1957) Dc
Southern University, Baton Rouge 13, La. / °C 62
IBM 1020 and tabulating equipment / Engineering;
Math.; Business; Statistics / REa Ss(4) Me (1949)DIc

(1949) DIC
Stanford University, Computation Center, Stanford,
Calif. / *C 63
Education and research / Burroughs 220; IBM 7090;
1401, auxiliary equipment; PDP-1; Burroughs B
5000 / Numerical Analysis; Programming at various
levels; List Processing; Artificial Intellegence;
Mathematical Theory of Computation / RPEa Ms
(approx. 50, incl. 6 part time) Sc(1953) Dc
State University of Iowa, Computer Center, Iowa City,
Ia. / *C 63

Ia. / °C 63 Education and research / IBM 7070-1401 / 10 to 12 courses / REa Ss(7 full time, 14 half-time)

Stevens Institute of Technology, Computer Center, Hoboken, N.J. / °C 63
Research and education in digital computers and related fields / UNIVAC 1105, 12K word core, 2 drums, 17 tapes; IBM 1620, 40K, card I/O; coml svc / Numerical Analysis; Programming; Digital Techniques Laboratories / RCPEa Ss(4) Se(1961) Dc.

Swedish Board for Computing Machinery (Matematikma-skinnämden). Drottninggatan 95 A (P.O. Box 6131). Stockholm 6, Sweden / *C 62

Central state institution for research, develop-Central state institution for research, development, education, consulting, system investigation, problem analysis, documentation; computing service: applied mathematics, technology; data processing: commercial, operational, governmental / BESK, FACIT, EDB, Alwac III E; coml svc / RNCGPEa Ns(70) Ne(1949) DAIC

Temple University, Broad St. & Montgomery Ave., Philadelphia 22, Pa. / °C 63

Education, research, administrative / 16K IRM

Iadelphia 22, Pa. / °C 63
Education, research, administrative / 16K IBM
1401, 4 Nodel 7330 Tape Units, Ramac Unit / 4
one-semester courses: Basic 1401 Programming;
Advanced 1401 Programming; Computer Training;
1401 Autocoder / REa Ss(2) Se(1959) DIC
Tennessee Polytechnic Institute, Cookeville, Tenn. / °C 6?

Make computer available to students and faculty

Make computer available to students and faculty through formal course work; computer service to improve instruction in other courses; research / IBM 1620 with card input-output / Principles of Digital Computers; Digital Computer Laboratory Course / REa Sc(5) Se(1959) DIC

Texas College of Arts and Industries, Computing Center, Kingsville, Tex. / °C 63
Education and research / IBM 1620 card, paper tape 40K, Burroughs Datatron 205; coml svc / Introduction to Digital Computers; Electronic Data Processing; Pulse and Digital Systems / RCEa Sc(3) Se(1961) DIC

Texas Technological College, Data Processing Center, Lubbock, Tex. / °C 63
Education and research / IBM 1620 w/60K memory; 1622 card read punch; IBM 407; 514; 082; six 024's; Bendix G-15; two CRC-102-A's; CRC-105; and Litton 20140 and Engineering Associates TR-48 analog computers; coml svc / Computer Programming Techniques; Engineering Seminar / RCPEa Ss (1 full time, 8 part time) Se(1962) DAc

Trinity University, 715 Stadium Drive, San Antonio 12, Tex. / °C 62
Education / LGP-30 computer and photoelectric tape reader; coml svc / Digital Computer Programming; Numerical Analysis; Research Equations / RCEa Ss (3) Se(1960) DIc

Tutts University, Computation Center, Anderson Hall, Medford 55, Mass. / °C 63

gramming; Numerical Analysis; Research Equations / RCEa Ss (3) Se (1960) Dic
Tufts University, Computation Center, Anderson Hall, Medford 55, Mass. / *C 63
Instruction and research / IBM 1620, 60K memory; coml svc / FORTRAN, SPS and Numerical Methods / RCEa Ss (5) Se (1962) Dc
Tuskegee Institute, Rm. 219, Moton Hall, School of Engineering, Ala. / *C 63
Education and research / IBM 1620 with 20K card system, IBM 26, 82, 407 replacing 402 expanding memory from 20K to 60K in November 1963; coml svc / High-Speed Methods of Computation / RCEa Ss (3) Se (1962) Dc
University of Akron, Computer Center, 302 E. Buchtel Ave., Akron 4, Ohio / *C 63
Instruction and research / IBM 1620, card I/0; two 7330 magnetic tapes, 60K core; coml svc / Digital Computer Programming / RCEa Ss (2) Se (1961) Dc
University of Alabama, Box 2511, University, Ala. /

University of Alabama, Box 2511, University, Ala. /

*C 63
Instruction, research, service to administration / Univac solid-state 80 step with tapes / 3 courses in numerical analysis, 2 courses in data processing and statistical applications / REa Ss (7) Se (1961) Ic
University of Alaska, Computer Center, College, Alaska / *C 63

Alaska / *C 63
Instruction and research / IBM 1620 (20K memory, 20 more on order) / Mathematics / REa Ss (4)
Se (1961) Dic
University of Arizona, Numerical Analysis Laboratory, Tucson 25, Arizona / *C 63
Research and instruction / IBM 7072, 10K 8 tape units (4 may be switched to 1401), flt. pt., bi-

nary read; 1BM 1401, 16K core, 4 tapes; complete EAM facilities; coml svc / Beginning and Advanced Programming; Business Data Processing; Numerical Analysis; Information Retrieval and Special Problems / RCPEa Ss(25) Se(1957) Dc

plete EAM facilities; coml svc / Beginning and Advanced Programming; Business Data Processing; Numerical Analysis; Information Retrieval and Special Problems / RCFa Ss(25) Se(1957) De University of Arkansas, Computing Center, Fayetteville, Ark. / °C 63
 Education and research / IBM 650 with peripheral equipment; coml svc / Digital Computer Programming / RCEa Ss(10) Se(1960) Dic Universität Berlin, Recheninstitut der Technischen, Hardenbergstrasse 34, 1. Berlin 12, Germany / °C 63
 Problem solving in applied mathematics, teaching / ZUSE Z22R and ZUSE Z23; coml svc / Introduction to Programming; Programming Theory; Numerical Analysis; instruction on ZUSE Z22R and Z23 / CPEa Ss(8) Se(1957) De University of California, Computer Center, 201 Campbell Hall, Berkeley 4, Calif. / °C 63
 Computer facilities for education and research / IEM 7090 with 64% memory, 16 tapes; two IBM 1401's; IBM 1405; miscellaneous off-line punchcard equipment / Periodic FORTRAN courses by center, other computer-oriented courses / RCa Ss(45) Se(1957) Dac
University of California, Riverside, Calif. / °C 63
 Research and teaching / IBM 1620, 40K, card read-punch; IBM 407, 026 / University Extension Programming Course / RCa Ss(2) Se(1961) Dic University of California, UCLA Computing Facility, 405 Hilgard Ave., Los Angeles 24 Calif. / °C 63
 Service center for campus, special research, studies in computer languages / IBM 7090, 6 type 729 IV tape, on-line printer, 32K storage; IBM 1401, one type 729 IV tape unit, 1402 reader/ punch, 1403 printer; SMAC, 256 word electrostatic Williams type) memory, 6192 word drum storage, card reader, card punch, 17" display CRT, Moseley Autograph X-Y plotter, direct analog to digital input, direct high speed reciprocal digital transmission with IBM 1401; key punches 407, 519, 083, 557 / Courses in Digital Computers, Numerical Analysis and Computer Programming; Symbolic Debugging at Source Language Level; Co-op Moniter, Bomm System / ERa Ss(24) Se(1960) Dc
University of California, Western Data Proce

Provide computing service for university / Bu Edsac 1 and Edsac 2 / RCPEa Ss(30) Me(1939)

University of Chicago, Institute for Computer Research, 5640 South Ellis Avenue, Chicago 37, Ill. / *C 63

search, 5640 South Ellis Avenue, Chicago 37, 111. /
*C 63

Computer discipline, including logical structure and numerical analysis / Maniac III / Courses in computer discipline, applied mathematics / REa Ss (27) Sc (1960) DIc

University of Cincinnati, Computing Center, Cincinnati 31, Ohio / *C 63

Education and research / 1620 with 40K core, 1311 Disk on order / Fortran Programming, Digital System Design, Programming for Digital Computers, Digital and Analog Computers / REa Ss (5) Sc (1958) DAc

University College of South Wales and Monmouthshire, Cathays Park, Cardiff, Wales / *C 63

Scientific calculations, in particular X-ray Crystallography / STAYTEC ZEBRA computing system; coml svc / Undergraduate teaching; Programming courses for research staff and students / RCPEa Ss (1) Se (1962) Ic

The University of Connecticut, Computer Center, Storrs, Conn. / *C 63

Research and education / IRM 1620, 40K storage and card I/O effolion purphysics and criving.

The University of Connecticut, Computer Center, Stor Conn. '*C 63

Research and education / IBM 1620, 40K storage and card I/O, off-line punching and printing; PACE 231-R analog computer with 80 amplifiers and considerable non-linear equipment; IBM 7010, 6 magnetic tapes to be delivered in 1964 / Noncredit faculty workshops conducted by center; Electrical Engineering Dept. courses in digital and analog computer design and use; courses in digital and analog computer design and use; courses in digital computer programming / REa Ss(1) Se (1961) DAC

University of Delaware, Newark, Delaware / *C 62

Research and instruction / Bendix G15D and 1 magnetic tape; IBM 1620, 40K, with cards; coml svc / Automatic Digital Computation; Numerical Analysis / RCEa Ss(3) Se(1957) Dc

University of Detroit, 4001 W. McNichols Rd., Detroit 21, Mich. / *C 62

Research and education / Burroughs E-101; IBM 1620, and peripheral equipment; coml svc / Com-

nesearch and education / burroughs E-101: Installation and peripheral equipment; coml svc / Computer Concepts; Undergraduate and Graduate Numerical Analysis / RCEa Sci (2) Sci (1957) DAC University of Durham Computing Laboratory, One Kensington Terr., Newcastle upon Tyne 2, England / *C 62

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Research / Ferranti Pegasus Computer; Decca TwinMagnetic Tape Unit with Ferranti Controlled System / RPEa Ss(8) Se(1957) Ic
University of Glasgow, Computing Laboratory, Glasgow, M.2., Scotland / *C 63
Teaching and research in numerical analysis and
automatic computation / English Electric DEUCE
MK. I, 64 col. card read punch, 5-7 channel paper tape read/punch; English Electric KDF 9 computer, line printer, 4 tape units, 5-8 channel
paper tape read/punch / Numerical Analysis; Programming ALGOL / EEa Ss(15) Se(1958) Dc
University of Hawaii, Statistical and Computing Center, Honolulu 14, Hawaii / *C 63
Service center for university, research projects
/ IEW 650, 2K drum; 1401, 8K, 4 tape; 7040, 32K,
8 tape / Numerical Analysis; Numerical Meteorology; SOAP; FORTRAN; Autocoder / REa Ss(8 full
time, 8 part time) Se(1960) DIc
University of Illinois, Digital Computer Laboratory, Urbana, Ill. / *C 63
Research in the design of computers, methods of
use, education and service for the University
/ ILM 7090-1401 system; ILLIAC II, large scale,
high-speed computer built by the Laboratory, and
a Pattern Recognition computer, being designed
and built / Courses in Digital Computing; Data
Processing; Numerical Analysis; Boolean Algebra;
Programming / REA MS(100) Me(1949) Dc
University of Kansas, Computation Center, 112 Summerfield Hall, Lawrence, Kan. / *C 63
Academic research, education / IBM 1620, 60K,
AFP, four 7330 magnetic tape units, off-line
printer, reproducer punch, sorter / Programming
for a Digital Computer / REA Ss(4) Se(1957)
DIC
University of Kentucky, Lexington, Ky. / *C 63
Ald in educational, research and administrative

printer, reproducer punch, sorter / Programming for a Digital Computer / REa Ss(4) Se(1957) DIC

University of Kentucky, Lexington, Ky. / *C 63
Ald in educational, research and administrative activities / IEM 1410 (with 1402, 1403, five 7330 tape units, 40K memory, priority and overlap); IEM 1620 (fast read-punch 1622 unit, 60K memory, automatic floating point); two IEM 407's, two 003's, 514, 007, 552, 7 keypunches and 2 verifiers; IEM 7040-1401 system on order / Automatic Data Processing; Fundamentals of Programming: Data Processing for Business; Cases in Management; Design of Digital Computer; Numerical Analysis / RCEa Ss(20) Se(1958) DIC University of Liverpool, Computer Laboratory, Liverpool 3, England / *C 62
Education and research / English Electric DEUCE MK II Computer, range of punch card equipment; KDF9 on order; coml svc / Numerical Analysis; Programming; Electronic Computation / RCEa Ss(9) Se(1959) Ic University of Loudon Computer Unit, 44 Gordon Square, London, W.C.1, England / *C 63
Computing facilities for research / Ferranti Mercury Computer; Ferranti Atlas being installed 1963-64; coml svc / Programming courses; extended courses (3 terms) on numerical analysis, computers and programming; various symposia and external lectures / RCEa Sc(40) Se(1958) Ic University of Louisville, Computing Laboratory, Louisville 0, Ky. / *C 62
Education and research / IEM 1620, card inputoutput, IEM 407; PACE 221R analog computer / Numerical Methods: Introduction to Digital Computation; Engineering Applications of Automatic Computation; Advanced Digital Programming Courses in *Computation* A

Research and education / IBM 1620, 20K, cardoriented; comi svc / Programming courses in math., civil engrg., mech. engrg., and business and economics departments / RCEa Ss(2) Se(1961)

math., civil engrg., mech. engrg., and business and economics departments / RCEA Ss (2) Se (1961) Dc
University of Mainz, Institute for Applied Mathematics, Jacob Welder Weg 7, Mainz, Germany / *C 62
Instruction, studies in logical design of unorthodox computers, calculations in power networks /Z 22 Digital Computer: RA 462/2 electronic analog computer; Siemens 2002 transistorized digital computer, 12K and three IEM 727 magnetic tape stations / RPEa, 7s ?e DAIC
University of Manchester, Computing Machine Laboratory, The University, Oxford Rd., Manchester 13, England / *C 62
Research into construction and use of digital computers / Ferranti Mercury; Ferranti Atlas being installed; coml svc / Numerical Analysis; Programming; Logical Design / RCPEa Ss (30) Me (1949) Dic
University of Maryland, Computer Science Center, College Park, Md. / *C 63
Computing service and programming assistance to all research activities of the University; education and research in the computer sciences / IDM 7090/1401 system; IBM 1620 in College of Engrg.; CDC 160 in Physics Dept.; IBM 1620 on Baltimore Campus / Numerous courses directly related to computers / RPEa Ss (19) Se (1962) DIC
University of Miami, Coral Gables, Fla. / *C 62
Keeping all student records and accounting records on punch cards / RCA 301, IBM key punches, sorters, reproducers, interpreters, collators, and 407 accounting machines, IBM 1620 / Operation of IBM Machines, IBM 2620 / Operation of IBM Machines, IBM 2620 / Operation of IBM Machines, IBM 1620 / Operation of IBM Machines, IB

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University of Mississippi, Computer Center, University, Miss. / *C 63

Teaching and research / IBM 1620 with 60K memory, unit record equipment; coml sve / Numerical Analysis; Programming for Digital Computers / RCEa Ss(7) Se(1959) Dc
University of Missouri, Computer Research Center,
Columbia, Mo. / *C 63
Computer facilities for University research and educational programs / Burroughs 204, paper tape, card, magnetic tape, and floating point; IBM 1620 card system, 60K digit memory / Fundamentals of Digital Computer Programming; Digital
Computer Applications in Engineering; Numerical Analysis / RCEa Ss(8) Se(1960) Dic
Université de Montreal, P.O. Box 6128, Montreal 26, Quebec, Canada / *C 62
Data processing, research, instruction / UNIVAC 120, LGP-30 / Programming courses / REa Ss(28) Se(1959) Ic

Se(1959) Ic
University of Nebraska, 218 Nebraska Hall, Lincoln 8, Nebr. / *62
Research and instruction / Burroughs 205; coml swc / Only informal coding courses / RCEa Ss(5) Se(1960) Ic
University of Nevada, Reno, Nev. / *C 62
Research, education, and business / IEM 1620, 20 K card and reader; 407, 519, 077, 083, 540, 055, 2-024, 026; coml swc / Computer programming courses, basic and advanced; key punching, machine courses and users seminars / RCEa Ss(5) Se(1959) Dc
University of New Hampshire, Computation Center, Durham, N.H. / *C 62
Research and education / IEM 1620, 40K, card input-output; 407 printer, 4 key punches / FORT-RAN Coding / REa Ss(7) Se(1961) Ic
University of New South Wales, P.O. Box 1, Kensington, N.S.W., Australia / *C 63
Teaching and research activities within University / English Electric DEUCE Mark I, card input-output, delay line store 402 words, magnetic drum 6192 words; coml swc / Programming courses for undergraduates in Engineering 6
Mathematics, special programming courses for University staff and graduates / RCEa Ss(13)
Se(1950) Dc
University of North Carolina, Computation Center, Chapel Hill, N.C. / *C 63
Education and research / UNIVAC 1105, 6K core, 23K drum, 17 magnetic tape units, paper tape input-output; UPTIME 2000 cpm card reader, off-line IBS / Short-courses in programming G hrs.): Introduction to High Speed Computers: Advanced Numerical Analysis; various seminars in computer sciences; Dept. of Computer Sciences is planned / RPEa Ms (80) Sc(1959) Dfc
University of North Dakota, Computer Center, University Station, Grand Forks, N.D. / *C 63
Service Center for students, business and other offices / IRM 1620 computer, 1622; 407, 514, 546, 092, 095; coml svc / Numerical Analysis / RCEa Ss(5) Se(1961) Dc
University of Overson, Statistical Laboratory and Computery; of Overson, Statistical Laboratory and Computery; Oragon, Statistical Laboratory and Computer State 102 / CC and Sc(20) Se(1957) Dc
University of Overson, Statistical Laboratory and Computer programming courses for the

dras, P.R. / *C 63

Administration, research / IBM 1401 card system, conventional punched card equipment (Rfo Piedras Computer Center); IBM 1401 card system (College of Agriculture & Mechanic Arts Computing Lab.); IBM 1620 system (Agricultural Experiment Station, Computer Center) / Introduction to Punched Card Methods; Punched Card Methods / REa Ss(24)

Mc(1944) Dc
University of Puyet Sound, Data Processing Center, 1500 N. Warner, Tacoma 6, Wash. / *C 63

Administration / IBM unit record / limited courses / Ec Ss(3) Se(1955) Ic
University of Rhode Island, Computer Laboratory, Kingston, R.I. / *C 63

Education and research / IBM 1620, 60K core,

ingston, R.I. / °C 63 Education and research / IBM 1620, 60K core, 800CPM card render; two 7330 magnetic tape drives; 407, 514, 557, four 026's, 108, 047, 056; coml svc / Informal Programming; Numerical Methods /

RCEa Ss (6) Se (1959) Dc

University of Rochester, Computing Center, Rochester 20, N.Y. / *C 63
Service, research and teaching / IBM 7074, IBM

University of Nochester, Computing Center, Nochester 20, N.Y. / *C 63

Service, research and teaching / IBM 7074, IBM 1401, IBM 1620 / Elements of Computer Science; Introduction to Data Processing; and others / REa Sc (14) Se (1956) De

University of St. Thomas, Computing Center, 3812

Montrose Blvd., Houston 6, Tex. / *C 63

Instruction in programming, student usage for calculations in Math., Social Science and Natural Science / Bendix El5D computer, off-line flexowriter; coml svc / Algebra for Computation; Digital Computer Programming; Calculus of Finite Differences; Numerical Analysis; Differential Equations; open shop for other student use / CEa Sc (1 with part time students) Se (1962) Dc

University of South Carolina, Computer Center, Columbia, S.C. / *C 63

Research and education / ILM 1620, 60K memory, 1622, 407; LG73 with photoreader; coml svc / Introduction to Numerical Analysis; Computer Programming; Logical Design of Digital Computers / RCEa Ss (2 part time) Se (1961) Dc

University of Southern Callifornia, Computer Sciences Laboratory, University Park, Los Angeles 7, Calif. / *C 63

Education and research for faculty and graduate students / Honeywell-400 and Honeywell-400, plus standard card preparation equipment / Beginning and Advanced Algebraic Compiler; Introduction to Scientific Computing and Computer Programming for Scientific Problems / REa Ss (5) Se (1962) Ic

University of Southern Mississippi, Box 48, Southern

for Scientific Problems / REa Ss(5) Se(1962)
Ic
University of Southern Mississippi, Box 48, Southern
Station, Hattiesburg, Miss. / *C 63
Faculty and staff research projects, administration for data processing, teaching programming / 1620 IBM card 1/0 computer with allied card equipment, 20K memory; 407 printer: coml svc / Programming, with emphasis on FORTRAN / RCEa Ss (6) Se(1962) DIc
University of Southwestern Louisiana, Computing Center, Lafayette, La. / *C 63
Computing techniques and research / IBM 1620, with 1622 card reader-punch; peripheral equipment: coml svc / Introduction to Digital Computers: Digital Computer Programming; Advanced Digital Computer Programming / RCEa Ss (3) Se (1961) DC
University of Tennessee, Knoxville, Tenn. / *C 62
Scientific and engineering research and education / IBM 1620, 60K, cards, machine floating-point, 407 off-line / 4 courses in Mathematics Dept., about 0 short courses per year for faculty and graduate students / REa Ss (9) Sc (1961) DIC
The University of Texas, Computation Center, Austin

DIC
The University of Texas, Computation Center, Austin
12, Tex. / *C 63
Research, computing service for university /
Control Data 1604, Control Data 160 and IIM
1401 / Courses in Computer Programming; Numerical Analysis; Computer Methods in Research; Seminar on Information Programming; Integrated Data Processing; 12 courses in all / RPEa Ss (35)
Se (1958) Dc

Se(1950) Dc University of Toledo, Computation Center, Toledo 6, Ohio / *C 63

Ohio / °C 63

Education and research / IBM 1620 with 20K, card
1/0; 407, two 026's; coml svc / undergraduate
and graduate computer courses / RCEa Ss(3) Se
(1962) Dc

University of Uppsala, Computer Group, Thunbergsva-

university of Uppsala, Computer Group, Thunbergsvagen 7, Uppsala, Sweden / *C 62

Rescarch and teaching / IBM-1620, punched card equipment; paper tape equipment; indirect addressing, off-line tabulator and diverse off-line equipment / Numerical analysis and programming / REa Ss (4) Se (1961) Ic

University of Utah, Computer Center, Salt Lake City, Utah / *C 63

Research and education / IBM 1620, 60K; IBM 1401, 8K-4 tapes; Burroughs 205; teleprocessing with 7090; 7040 to be installed Nov. 1963 / Computer Concept; Elementary, Intermediate, and Advanced FORTRAN Programming; Computer Logic / RPEa Ss (10) Se (1950) Dc

University of Vermont, Burlington, Vt. / *C 63

Education and research / IBM 1620 card system, keypunches, 070 system and sorter; coml svc / Computer Programming; Numerical Analysis / RCEa Ss (2) Sc (1961) Dlc

University of Virginia, Computer Center, Charlottes-ville, Va. / *C 63

University Computer Facility / Burroughs 205 with 2 magnetic tapes and automatic floating point; coml svc / Credit courses on Digital Computation; non-credit programming courses / RCEa Ss (5) Sc (1960) Dlc

University of Washington, Research Computer Laboratory, Seattle 5, Wash. / *C 63

Research and education / IBM 660; IBM 709; IBM 1401; coml svc / Programming; Numerical Analysis; Business Statistics / RCEa Ss (25) Se (1956) Dlc

University of Waterloo, Computing Centre, Waterloo,

DIC
University of Waterloo, Computing Centre, Waterloo,
Ontario, Canada / *C 63
Research and education / IBM 1620 card system
60K memory, 1A, additional instructions, floating point arith., auto. div.; 8 keypunches, 407
Printer / 4 Undergraduate courses in Numerical
Analysis: 1 in Computer Programming: 2 graduate
courses / REa Ss (3) Sc (1960) Dc
University of Wichita, Computer Center, School of
Engineering, Wichita, Kan. / *C 63
Engineering education and research / IBM 1620
with card 1/O; Boeing analog computer, 60 amplifiers, 2 Heathkit 15 amplifier analogs / Digital Computer Programming: Electronic Data Pro-

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Position Geo. Location						

cessing / RPEa Ss(1) Se(1958) DAc
University of Myoming, Computing Center, Box 3275,
Univ. Sta., Laramie, Myo. / *C 63
Teaching and research / Bendix G-15D computer;
IBM 1620, 2 magnetic tape units; Friden flexowriter; IBM 026 card punch, 082 sorter and 402
accounting machine / Electronic Data Processing;
Digital Computer Pages (1958) accounting machine / Electronic Data Processing;
Digital Computer Programming and Numerical Analysis / RPEa Ss(4) Se(1959) Dc
Utah State University, Logan, Utah / *C 63
Teaching and research / IDM 1620, card, 40K, indirect addressing, additional instructions; 024, 026, 056, 062, 085, 514, 407 / 10 courses offered / REa Ss(2) Se(1961) DIC
Valparaise University, Computer Center, Valparaiso, Ind. / *C 63
Educations administration / IDM 1620, 20K; 1622 ad. / ~ 63 Education, administration / IEM 1620, 20K; 1622, I/O; two 026's; 082; 407; 085; 557 / Introduction to Programming; FORTRAN short courses; Introduc-tion to Numerical Analysis / PEa Ss(4) Se(1960) Conderbit University, Nashville 5, Tenn. / *C 63
Research and education / IBM 7072, 1401, 650, and assorted punched card equipment; coml svc / Informal Seminars / RCEs Ss (8) Se (1959) Dc
Villanova University, Villanova, Pa. / *C 62
Education and research / IBM 1620 card inputoutput; coml svc / No courses at present, planning some for summer and fall / RCEs Ss (5)
Se (1962) DLC
Virginia State College, Data Processing Center, Petersburg, Va. / *C 63
Administration / Punch card equipment, 024, 026, 082, 085, 407, 514, 552 / Accounting Machine Operations (Basic Punch Card Equipment Training);
Basic Wiring Principles / PEs Ss (4) Se (1958) Washington & Lee University, Lexington, Va. / *C 63
Research and education / IBM 1620-1622; 402,
514, 082, 077, 548, two 026's; coml svc / Courses
in Programming for the 1620 for faculty and students / RCEa Ss(3) Se(1960) Dc
Wayne State University, Computing and Data Processing Center, 5925 Woodward, Detroit 2, Mich. /
*C 63
Education Wayne State University, Computing and Data Processing Center, 5925 Woodward, Detroit 2, Mich. / *C 63
Education, research, administrative data processing / IEM 7070, 10K; eleven 729-II; 1301; two IEM 1401's / Programming; Numerical Analysis; Computer Design; Business Data Processing; use of facilities by other Depts. / RPEA Ms (73) Sc (1952) Dc
Western Reserve University, Computing Center, 10831
Magnolia Dr., Cleveland 6, 0hio / *C 63
Research, development and education / GE 225, 6 magnetic tape units, high speed printer (900 lines/min.), punched cards input-output, paper tape input, console typewriter output; coml svc / Information Processing on Computers; Machine Literature Searching; Programming; Numeric Orientation to Computers; Language Engineering / RCPEa Ss (22) Sc (1955) Dc
West Texas State College, Canyon, Tex. / *C 63
Education, administration / IBM 026 key punch, 56 verifier, 77 collator, 514 reproducer, 548 interpreter, 082 sorter, 402 accounting machine / Two courses on unit record equipment and two on computers / Ea Ss (22) Sc (1956) Dc
West Virginia University, Data Processing Center.
Morgantown, N. Va. / *C 63
Research, education, administration / two IBM 1620's, 60K, high I/O, card I/O; IBM 1401 (6K, 4-tape) system to be delivered Oct. 1963; IBM 7040/1401 system to be delivered Oct. 1963; IBM 7040/1401 system to be delivered Oct. 1963; IBM 7070/1401 system to be delivered Aug. 1964; coml svc / Introduction to Digital Computation; FORT-RAN Programming; Numerical Analysis / RCEa Ss (3) Sc (1960) Dc
Worester Polytechnic Institute, Computation Facility, Worcester 9, Mass. / *C 63
Education and computing service to the Institute / IEM 1620, 40K card, 2 card punches; (access to IEM 7090 at M.1.T. Computation Center'; coal svc / Digital Computing; occasional short noncredit Programming courses / CEa Ss (2) Sc (1959) Dic

credit Programming courses / CEa Ss (2) Se (1959)

DIC
Yale University, Yale Computer Center, 60 Sacnem
St., New Haven 11, Conn. / *C 63
Research and education / IBM 709, 32K, 11 tapes;
IBM 1401, 4K, 2 tapes; IBM 1620 (card), 60K;
IBM 610', 00K / Over 12 courses given / RCa Sa
(25) Se(1957) De

- END -

ROSTER OF

COMPUTER ASSOCIATIONS

Following is a roster of computer associations, not including "Users' Groups"; for these, see elsewhere in this Directory.

All additions, corrections, and comments will

International Federation for Information Processing, c/o I. L. Auerbach, Pres., Auerbach Corp., 1634
Arch St., Philadelphia 3, Pa.

II.

National Information Processing Organizations included in the International Federation for Information Processing:

ARGENTINA Sociedad Argentina de Calculo c/o Mr. H. R. Ciancaglini Facultad de Ingenieria Universite de Buenos Aires Buenos Aires

AUSTRALIA Australian National Committee on Computation and Automatic Control

c/o Mr. D. Synnott, Honorary Secretary
Australian National Committee on Computation and
Automatic Control
Cnr. Tower Hill & Overport Roads
Frankston, Victoria, Australia

BELGIUM Association Belge pour l'Application des Methodes Scientifiques de Gestion c/o Professor M. Linsman Centre Interdisciplinaire de Calcul

Universite de Liege 6. quai Banning 6, que Liege

CANADA

CANADA
Computing and Data Processing Society of Canada c/o Prof. C. C. Gotlieb
Computation Centre
University of Toronto
Turonto 5, Ontario

CZECHOSLOVAKIA

Commission for Technical Cybernetics, Czechoslovak Commission for feelings of Sciences
c/o Ing. Jiri Kryze
Head, Computing Center
Institute of Information, Theory & Automation
Czechoslovak Academy of Sciences Ceskomalinska 25 Prague 6

DENMARK

Danish Academy of Technical Sciences c/o Dr. Niels I. Bech Regnecentralen G1. Carlsbergvej 2 Copenhagen-Valby

FINLAND The Finnish National Committee for Information Pro-

cussing c/o Prof. Pentti Laasonen Finland Institute of Technology Helsinki

FRANCE Association Francaise de Calcul et de Traitement de l'Information (AFCALTI) c/o Mr. J. Carteron Institut d'Astrophysique

98 bis. Boulevard Arago Paris 14e GERMANY

Deutsche Arbeitsgemeinschaft für Rechen-Anlagen c/o Prof. Dr. A. Walther Technische Hochschule Darmstadt 16

ITALY Associazione Italiana per il Calcolo Automatico c/o Prof. Aldo Ghizzetti Instituto Nazionale per le Applicazioni del Calcolo 7. Piazzale delle Scienze Information Processing Society of Japan c/o Prof. H. Yamashita Japanese Electronic Industry Development Association Nishikubo Tomoecho Minatoku Tokyo

NETHERLANDS Nederlands Rekenmachine Genootschap c/o Prof. Dr. A. van Wijngaarden Mathematisch Centrum 2e Boerhaavestraat 49 Amsterdam

NORWAY

NOUWAY Norwegian Society for Electronic Information Pro-cessing (NSEI) c/o Mr. Jan V. Garwick Chairman NSEI Norwegian Defense Research Establishment Kjeller pr Lillestrom, Norway

Polish Academy of Sciences c/o Prof. Leon Lukaszewicz Koszykowa 79, ZAM Warsaw, Poland

Instituto de Electricidad y Automatica c/o Prof. J. G. Santesmases Instituto de Electricidad y Automatica Facultad de Ciencias Ciudad Universitaria

SWEDEN

Swedish Society for Information Processing c/o Mr. Borje Langefors SAAB Linköping, Sweden

SWITZERLAND Swiss Federation of Automatic Control c/o Dr. A. P. Speiser IBM Research Laboratory Saumerstrasse 4 Ruschlikon ZH, Switzerland

UNITED KINGDOM British Computer Society c/o Dr. S. Gill Ferranti Ltd. 21 Portland Place London W.l., England

UNITED STATES American Federation of Information Processing Societies c/o Mr. I. L. Auerbach Auerbach Corporation 1634 Arch Street Philadelphia 3, Pa.

U.S.S.R. Academy of Sciences of the U.S.S.R. c/o Prof. A. A. Dorodnicyn Computing Centre Academy of Sciences of the U.S.S.R. I-Academichesky Proezd 28 Moscow B-312

III.

Other Computer Associations or Associations with Computer Interests (not regional):

American Institute of Electrical Engineers —
merged into IEEE, which see
Association for Computing Machinery, 14 East 69 St.,
New York 21, N.Y., U.S.A.
Association of Data Processing Service Organizations, 1000 Highland Ave., Abington, Pa., U.S.A.
Association Internationale pour 1e Calcul Analogique,
50 Ave. Franklin D. Roosevelt, Bruxelles, Belgium
Business Equipment Manufacturers Association (BEMA),
235 East 42nd St., New York 17, N.Y., U.S.A.
Data Processing Management Association, International Administrative Headquarters, 524 Busse
Highway, Park Ridge, 111., U.S.A.
European Computer Manufacturers Association (ECMA),
Geneva, Switzerland

Institute of Electrical and Electronics Engineers (IEEE), Box A, Lenox Hill Station, New York 21, N.Y.; One East 79 St., New York 21, N.Y.

N.Y.; One East 79 St., New York 21, N.Y.
IEEE, Professional Group on Electronic Computers,
One East 79 St., New York 21, N.Y.
Institute of Radio Engineers -- merged into IEEE,
which see
International Computation Centre, Palazzo Degli
Uffici, Zona Dell E.U.R., Rome, Italy
National Machine Accountants Association -- name
changed to Data Processing Management Association,
which see

Provisional International Computation Centre -- name changed to International Computation Centre, which

Regional Computer Associations

A. Chapters of the Association for Computing Machinery in the United States

ALABAMA

Montgomery Alabama Chapter, Hugh Wakefield, c/o Mitre Corp., 203 Lee St., Montgomery, Alabama

ARIZONA Southern Arizona Chapter, William Plette, United Research Services, Inc., Sierra Vista, Arizona

CALIFORNIA

CALIFORNIA
Orange County, Calif. Chapter, Charles H. Kirk, 306 N. Siesta St., Anaheim, Calif.
Arrowhead Chapter (San Bernardino), Rex H. Turco, 1215 S. Main St., Corona, Calif.
Los Angeles, Calif., Chapter, R. W. Rector, Aerospace Corp., P. O. Box 95085, Los Angeles 45, Calif. San Francisco Bay Area Chapter, Robert M. Price, Control Data Corp., 3330 Hillview Ave., Palo Alto, Calif.
University of California Berkeley Student Chapter, Ralph E. Love, Jr., 175 Midwood Ave., Piedmont 10, Calif.

Calif.

10, Calif.
San Diego State College Student Chapter, Lee A.
Torgersen, San Diego State College, 3060 Euclid
Ave., San Diego 5, Calif.
San Diego, Calif., Chapter, Carl E. Diesen, Mail
Zone 101-00, Gen. Dynamics/Astronautics, P. O.
Box 1128, San Diego, Calif.
San Fernando, Calif., Chapter, James Tupac, RAND
Corp., 1700 Main St., Santa Monica, Calif.

COLORADO Rocky Mountain Chapter, J. E. Feeley, P. O. Box 15509, Denver 15, Colo.

FLOR IDA

FLORIDA
Southeastern Chapter, James L. Thoreen, 69 Gardner
Dr., Fort Walton Beach, Fla.
Central Florida Chapter, Dr. David Clutterham, The
Martin Co., MP 200, Orlando, Fla.
Palm Beach, Florida Chapter, Robert N. Guadano,
Pratt & Whitney Aircraft, Florida Research &
Dev., United, Fla.
Florida State University, Student Chapter, B. J.
McDonald, 540 Bryan St., Tallahassee, Fla.

ILLINOIS

ILLINOIS
Univ. of Southern Illinois Student Chapter, William
Blose, Data Proc. & Comp. Ctr., Southern Illinois
University, Carbondale, Ill.
Chicago Chapter, Arthur Wachowski, Armour Research
Foundation, 10 West 35th St., Chicago 15, Ill.

KENTUCKY

Kentucky Chapter, Dr. Silvio O. Navarro, Computing Center, Univ. of Kentucky, Lexington, Kentucky

LOUISIANA

Univ. of Southwestern Louisiana, Student Chapter, Dr. James R. Oliver, Director, USL, Computing Center, University of Southwestern Louisiana,

Center, University of Southwestern Courstand, Lafayette, La. Louisiana Polytechnic Institute, Student Chapter, D. A. Hake, Computing Center, Louisiana Poly-technic Inst., Reeston, La. Shreveport, Louisiana, Chapter, Wilbur D. Wright, Research Dept., United Gas Corp., P. O. Box 1407, Shreveport, La.

Shreveport, La.

MASSACHUSETTS

Greater Boston Chapter, Joseph S. DeNatale, Avco Corp., Wilmington, Mass.



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For use with transistorized amplifiers Type A, Model 10 (leads) Type P, Model F (plug)

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COMPANY					
ADDRESS					

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MICHIGAN Metropolitan-Detroit, Michigan Chapter, Douglas T. Lewis, Engineering Staff, General Motors Tech. Ctr., Warren, Mich.

#### MISSOURI

Kansas City, Missouri Chapter, Harley Follmer, IBM Corp., P. O. Box 24, Kansas City 41, Missouri Missouri School of Mines & Metallurgy Student Chapt er, Ralph E. Lee, Director, Computing Center, Missouri School Mines & Metallurgy, Rolla, Missouri St. Louis, Missouri, Chapter, Ray Hollenback, Ernst & Ernst, St. Louis, Missouri

NEBRASKA Midlands, Nebraska, Chapter, R. G. McGrew, 3102 Wallace Ave., Bellevue, Nebraska

#### NEW JERSEY

Northern New Jersey Chapter, Glen K. L. Mulligan, International Electric Corp., Box 285, Paramus,

N.J. Atlantic County Chapter, George Trimble, Computer Usage Co., RD 3-300, Princeton, N.J.

Rio Grande Chapter, Randall M. Conkling, New Mexico University, Box 548, University Park, N.M.

#### NEW YORK

New York Southern Tier Chapter, John W. Forman, 2700 Helen St., Endicott, N.Y. Kingston, New York, Chapter, John Dent, R.D. #2,

Kingston, New York, Chapter, John Dent, R.D. #2, Box 112B, Kingston, N.Y.
Syracuse, New York, Chapter, Dave Bahrs, 10 Apple Tree Lane, Liverpool, N.Y.
Poughkeepsie, New York, Chapter, John B. Gilbert, P. O. Box 27, Poughkeepsie, N.Y.
Hudson-Mohawk Chapter, J. T. Godfrey, RRI-Box 225, 2 Bel-Aire Dr., Scotia 2, N.Y.
Long Island Chapter, John E. Dennes, Applied Math Div., Brookhaven Natl. Lab., Upton, N.Y.
Westchester-Fairfield County Chapter, Ottice Tidwell, ATT, 101 North Broadway, White Plains, N.Y.
Address correspondence to: Florence Jeanne Oswald, Celestron Assoc., 33 West Fort Hill Ave., Yonkers, N.Y. Yonkers, N.Y.

NORTH CAROLINA
Western Carolinas Chapter, Myron K. Simes, 815
Orchard St., Hendersonville, No. Car.
Central Carolina Chapter, Dr. Robert T. Herbst, 260
Chester Rd., Winston-Salem, No. Car.

OHIO Cincinnati-Dayton Area, Ohio Chapter, Richard B. Thoman, Procter & Gamble, Box 599, Cincinnati,

Cleveland-Akron Chapter, Vearl N. Huff, NASA, 21000 Brookpart Rd., Cleveland, Ohio. Address corres-pondence to: P. O. Box 4741, Cleveland 25, Ohio

#### OKLAHOMA

Bartlesville, Oklahoma, Chapter, M. E. Jean, c/o IBM Corp., P. O. Box 730, Bartlesville, Okla. Tulsa, Oklahoma, Chapter, R. A. Semrad, Sinclair Oil & Gas Co., 909 South Boston, Tulsa, Okla.

#### OREGON

Willemette Valley, Oregon, Chapter, Don Witcraft, Oregon State University, Dept. of Mathematics, Corvallis 1, Oregon

PENNSYLVANIA

Delaware Valley Chapter, James P. Anderson, Burroughs Corp., Paoli, Penn.

Pittsburgh Chapter, W. R. Gadwell, Westinghouse Electric Corp., Bettis Atomic Power Lab., Box 1468, Pittsburgh, Penn.

Carnegie Inst. of Tech. Student Chapter, Dr. Aland

J. Perlis, Computation Center, Carnegie Inst. of Tech., Pittsburgh, Penn.

#### TENNESSEE

Mid-Southeast Chapter, C. G. Williams, Oak Ridge National Lab., P. O. Box X, Oak Ridge, Tenn.

TEXAS

Agricultural & Mechanical College of Texas (Texas A & M) Student Chapter, Dan D. Drew, 209 Sulfur Spring Rd., Bryan, Texas

Dallas-Fort Worth, Texas Chapter, Ira Wright, 909

British Blyd., Grand Prairie, Texas
Houston, Texas Chapter, H. H. Rachford, Humble Research Ctr., P. O. Box 2180, Houston, Texas

# UTAH Northern Utah Chapter, G. D. Farnsworth, Scientific Data Processing, Thiokol Chemical Corp., Brigham City, Utah. Utah Chapter, Alfred Weiss, Bear Creek Mining Co., 406 Executive Bldg., 455 East Fourth South, Salt Lake City, Utah.

Lake City, Utah.

#### VIRGINIA

Washington, D.C., Chapter, Solomon Rosenthal, 1201 S. Courthouse Rd., Arlington 4, Va.

#### WISCONSIN

Milwaukee, Wisconsin, Chapter, Robert J. Robinson, 1515 West Wisconsin Ave., Milwaukee 3, Wis.

B. Other Regional Associations No information received

- END -

CITY.

#### COMPUTER USERS **GROUPS**

#### ROSTER

Following is a roster of groups of computer users. All additions, corrections, and comments will be welcome.

 $\begin{array}{c} \underline{\text{Abbreviations:}} \\ ^{\text{eC}} \text{ 63 --- information checked in 1963} \\ \text{G 62 --- information gathered in 1962} \\ \end{array}$ 

ALWAC Users Association / ALWAC III-E / Mr.
Phillip Jarvie, Sec'y, c/o Alwac Computer Div.,
El-Tronics, Inc., 13041 S. Cerise Ave., Hawthorne, Calif. / G 62
ANA — see ALWAC Users Association
Autonetics, computers — see Recomp Users Group
Bendix G-15 Computer — see G-15 Users Exchange
Association

Association

Association
Bendix G-20 Computer -- see G-20 Users Group
Blo/ Dr. James W. Sweeney, Sec'y-Treas., Blo,
c/o Tulane University, 1430 Tulane Ave., New
Orleans, La. / G 62
Burroughs Corp. -- see CUBE
Control Data Corp. 1604 Computer -- see SWAP
CO-OP -- see SWAP
CHEE / Burroughs computers / Mr. Richard Frick,
Sec'y., CUBE, c/o Abhot Laboratories, Nest
Chicago, Ill. / *C 63
Datamatic 1000 Users Group -- see H-BOO Users'
Association
DECUS / Digital PDP-1 and Digital PDP-4 / Miss
Elsa Newman, Sec'y., DECUS, c/o Digital Equip

DECUS / Digital PDP-1 and Digital PDP-4 / Miss Elsa Newman, Sec'y. DECUS, c/o Digital Equipment Corp. Maynard, Mass.
EXCHANGE -- see G-15 Users Exchange Association FAST / Mr. Bruce Clark, Sec'y, FAST, c/o Ramo-Wooldridge, P. O. Box 997. Sierra Vista, Ariz. / G 62
FILE / Mr. Edward C. Marzo, Sec'y., FILE, c/o William Carter Co., Needham, Mass. / G 62
G-15 Users Exchange Association / Bendix G-15
Computer / Mr. Tak Yamashita, Sec'y., EXCHANGE, c/o Bendix Computer Div., The Bendix Corp., 5630 Arbor Vitae St., Los Angeles 45, Calif. / G 62

G-20 Users Group / Bendix G-20 Computer / Mr Robert G. Noel, Chmm., G-20, C/O Space & Information Systems Div., North American Aviation, Inc., 12214 Lakewood Blvd., Downey, Calif., G 62

Calif. / G 62 General Electric 225 Computer Users Association / G.E. 225 and 215 / Mr. Forrest L. Garrison, Jr., Sec'y., G.E. 225, c/o General Electric Company, P. O. Box 0555 (Room 4620-U), Philadelphia 1,

Pa. / *C 63

GUIDE / IBM computers / Mr. Ottice Tidwell,
Sec'y., GUIDE, 'c/o American Telephone & Tele-

Sec'y., GUIDE, 'c/o American Telephone & Telegraph Co., 400 Hamilton Avenue, White Plains, N.Y. / *C63
II-400 Users Group / H-400 and H-1400 computers / Mr. Everett Goff, Sec'y., H-400, c/o New Hampshire Insurance Group, 1750 Elm Street, Manchester, N.H. / *C 63
II-400 Users Association / Honeywell 800 and 1800 computers / Mr. Henry Jucnemann, Sec'y-Treas., c/o National Institute of Health, Bethesda 14, Md. / *C 63
Iloneywell Computers -- see H-400 Users Group and II-800 Users Association

Noneywell Computers — see H-400 Users Group and H-4000 Users Association

IBM computer users groups — see GUIDE and SHARE JNG / Joint Users Group / Mr. Donald B. Houghton, Sec'y., JUG, c/o Westinghouse Electric Corp., Business Systems Equipment, 3 Gateway Center — 15 West, Pittsburgh 22, Pa. / 6 62

LGP-30 — see POOL (Royal McBee Corp.)

LINC / Mr. James Nickitas, Sec'y., LINC, c/o Remington Rand Division, 315 Park Ave., S., New York 10, N.Y. / 6 62

MCUG / Mr. James H. Burrows, Chmn, MCUG, c/o The Mitre Corp., P. O. Box 208, Lexington 73, Mass. / G 62
Minneapolis-Honeywell Regulator Co., computers—see H-400 Users Group and H-900 Users Association National Cash Register Co. computers — see NCR 304 and NCR 390 Users Organization NCR 304 Users Organization / National Cash Register's NCR 304 Computer / L. J. Rushbrook, See'y., c/o The National Cash Register's NCR 304 Computer / L. J. Rushbrook, See'y., c/o The National Cash Register's NCR 309 Users Organization / National Cash Register's NCR 390 Computer / Mr. C. Richard Fruth, Chmn, NCR 390 Users Organization, c/o Professional Bldg., Fostoria, Ohio / G 62
PBUG / Packard Bell computers / Mr. Robert R. Manchester, See'y, PBUG, c/o Packard Bell Computer Corp., 1905 Armacost Ave., Los Angeles 25, Calif. / G62
POOL / LGP-21, LGP-30, and RPC-4000 computers / Miss Juanita Vanderford, See'y-Treas., POOL, 101 W. Alameda Ave., Burbank, Calif. / *C 63
RCA Computer Users Association / RCA 501, 601, and 301 computers / Mr. D. M. Parnell, Jr., See'y., c/o Allegheny Ludlum Steel Corp., Oliver Bldg., Pittsburgh 22, Pa. / *C 63
Recomp Users' Group / Recomp 11 and 111 computers / Mr. Howard L. Judd, See'y., RUG, c/o Autonetics Industrial Products, 3100 E. 70th Street, Long Beach 5, Calif. / *C 63
Philco 2000 computer — see TUG
Remington Rand Univac computers — see Univac

Death 3, 2011. / Death 3, 2012. Beath 3, 2012. Beat

Univac Users Association / Univac Computing Systems / Mr. David D. Johnson, Sec'y., c/o Ethyl Corporation, 100 Pork Ave., New York 17, N.Y. /

USE / Remington Rand Univac computers / Mr. James Nickitas, Sec'y., USE. c/o Remington Rand Univac, 315 Park Ave. S., New York 10, N.Y. /

G 62
UUA -- see Univac Users Association
III-E -- see ALWAC Users Association
205 -- see CUBE
220 -- see CUBE
304 -- see NCR 304 (National Cash Register Co.)
390 -- see NCR 300 Users Organization (National

390 -- see Not 390 Users Organization that Cash Register Co.) 501 -- see RCA Computer Users Association 000 -- see H-800 Users Association 1000 -- see H-800 Users Association 1604 -- see SWAP 2000 -- see TUG (Philco Corp.) 4000 -- see POOL (Royal McBee)

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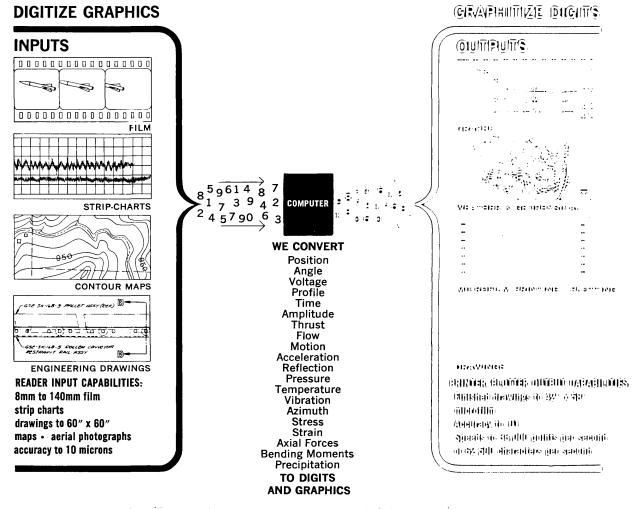
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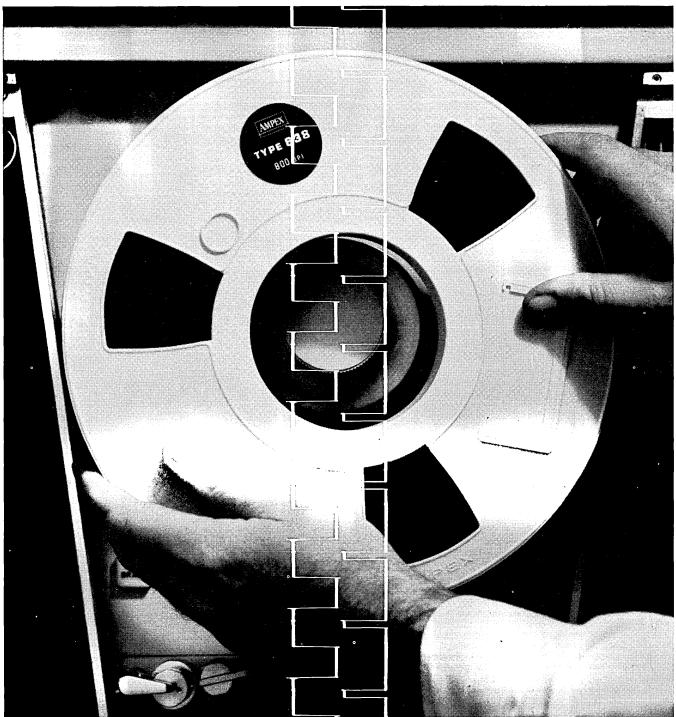
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