

IBM System/3

▷ completely compatible with those of other System/3 models.

Local workstations can be located up to 2000 feet from the Model 4 processor. The 480-character 3277 Model 1 provides 12 lines of 40 characters each, while the 3277 Model 2 provides 1920 display positions arranged in 24 lines of 80 characters. A separately priced keyboard is available for each. Both the 3284 and 3286 matrix printers are available as either a Model 1 that includes a 480-character buffer or a Model 2 that includes a 1920-character buffer. The 3284 operates at 40 characters per second; the 3286, at 66 characters per second. Characters are formed by a 4-by-7 dot matrix. The 3288 Model 2 operates at a nominal speed of 120 lines per minute and has a 120-character buffer. The print mechanism uses an engraved metal belt. All displays and printers use a 64-character set. Each display or printer counts as one of the five possible local workstations.

The disk enclosure, which houses either an A1 or A2 model, provides space on top for the 5213 printer, operator keyboard console, and 3277 system display.

Software support for the System/3 Model 4 consists of a new Communications Control Program (CCP) that is functionally equivalent to CCP for the System/3 Model 10 and a subset of the software support for the System/3 Model 6. The only programming language supported is RPG II.

CCP provides control of the multi-user environment. Previously compiled RPG II programs are initiated from a workstation. Up to four tasks can be active simultaneously, and multiple workstations can be connected through the Bisync adapter. The basic supervisor occupies 3.25K bytes of memory. Two pre-generated versions of CCP are available. The minimum version occupies 25K bytes and supports only 3270-family display and printer remote workstations, while the maximum version occupies 31.5K bytes and supports the full array of remote workstation types. All active tasks are co-resident in main memory. If insufficient memory space is available, a task cannot be initiated; i.e., no swapping facility is implemented. The workspace allocated to a task, however, need not be as large as the complete task itself. If the task is larger than the workspace available, the task will be automatically segmented. A new disk sort routine (\$15 per month), requiring 12K bytes, can be run as a CCP task. User tasks need not require user interaction on the CRT display or other peripheral devices; such "batch" tasks on multi-user systems are frequently referred to by other vendors as "phantom tasks." Access to the system is controlled via a password arrangement.

Instead of running under CCP, the user can operate the System/3 as a Model 6 with the following support: RPG II compilation, RPG II execution including the Auto Report and Telecommunications features, Conversational Utilities (Keyboard Source Entry and Keyboard Data Entry), Overlay Linkage Editor, Disk Sort Program, and Multileaving Remote Job Entry Workstation ▷

▶ **INSTRUCTION REPERTOIRE:** All models have 28 instructions, including addition and subtraction of unpacked (1 digit per byte) decimal operands, but no multiply or divide. Also included are an edit instruction and addition, subtraction, and comparison of logical characters.

In addition to these 28 basic instructions, Model 15 has 3 new instructions—Load CPU, Store CPU, and Command CPU—which are used to implement its multiprogramming capability.

INSTRUCTION TIMINGS: The following times, in microseconds, assume the use of direct (2-byte) operand addresses.

	Model 15D	All Other Models
Decimal add (5 digits):	19.76	24.32
Decimal subtract (5 digits):	19.76	24.32
Binary (logical) add (5 bytes):	19.76	24.32
Binary (logical) subtract (5 bytes):	19.76	24.32
Move (5 bytes):	19.76	24.32
Compare (5 bytes):	19.76	24.32
Edit (5 digits):	13.68	18.24
Load or store register (2 bytes):	6.08	9.12
Add to register (2 bytes):	6.08	9.12
Jump on condition:	3.04	4.56

INTERRUPTS: Model 8, Model 10, and Model 12 have five levels of program interrupts, in descending priority order: (1) Serial I/O Channel, (2) Unassigned, (3) BSCA, (4) Data Entry Keyboard or Printer-Keyboard, and (5) Dual Program Control (Interrupt Key). Any level of interrupt can interrupt the main program or the servicing of any lower-level interrupt. An interrupt causes a transfer of control to a predetermined location; the interrupt servicing program must store and then restore the index registers and program status register for the interrupt program.

Model 15 has a total of eight levels of program interrupts, including an I/O Operation End Interrupt, which facilitates spooling; a Program Check Interrupt, which improves throughput by preventing errors in one partition from halting the entire system; and a Supervisor Program Interrupt, for transfer of control from a problem program to the supervisor program.

OPTIONAL FEATURES: For Model 4 and Model 6, the Command Keys feature provides an additional set of eight keys which can be programmed to perform specific arithmetic operations in the Desk Calculator Mode. (Eight Command Keys are standard equipment.)

For Model 8, Model 10, and Model 12, the Dual Program feature permits independent loading and processing of two simultaneous programs. The operator can initiate, restart, or terminate either program independently of the other one. Whenever one of the two programs halts to await completion of an I/O operation, the other program is automatically initiated. (The feature is software-supported only for the Model 8, Model 10, and for Model 12 disk-oriented systems with at least 12K bytes).

Extra-cost features, called attachments, controls, or channels, must be added to the System/3 Processing Units to accommodate each of the standard peripheral devices.

INPUT/OUTPUT CONTROL

I/O CHANNELS: The Processing Unit acts as a controller for all System/3 I/O operations. All I/O devices are connected through appropriate attachment features to an integral I/O channel. This channel includes buses and logic to determine interrupt priorities and to perform data transfers between main memory and the attached peripherals by "cycle-▶

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► **RPG-oriented description of each program, and a sample of each report.**

Customized Source Code is now available as an optional additional output from the Application Customizer Service. The user who elects this option receives raw, machine-generated RGP II source code on a 5440 Disk Cartridge; he must then add various constants and indicators, compile the programs, and test and debug them in the usual fashion.

For the System/3 Model 6, the Application Customizer Service currently covers four applications, available with or without Customized Source Code:

- Order Writing and Invoicing
- Inventory Accounting and Management
- Accounts Receivable
- Sales Analysis

The same packages are available tailored for two specific classes of users: lumber and building supplies dealers, and electrical distributors.

For card-oriented System/3 Model 10 computers, the Application Customizer Service currently covers eight applications:

- Order Writing and Invoicing
- Inventory Accounting
- Accounts Receivable
- Sales Analysis
- Payroll
- General Ledger
- Accounts Payable
- Labor Distribution

For disk-oriented System/3 Model 10 computers, the Application Customizer Service currently includes the following, with or without Customized Source Code:

- Order Writing and Invoicing
- Inventory Accounting and Management
- Accounts Receivable
- Sales Analysis

APPLICATION PROGRAMMING SERVICE: This IBM service, introduced in September 1971, enables System/3 Model 6 and Model 10 users to have their basic business application programs designed, generated, tested, and documented by IBM Systems Engineers at fixed prices. The service currently covers four applications: Order Writing and Invoicing, Accounts Receivable, Inventory Accounting and Management, and Sales Analysis.

The Application Programming Service consists of four main steps. First, the user and an IBM representative fill out questionnaires defining the application and the formats of the required reports. Second, IBM processes the information at its Application Customizing Center to generate the required programs. Third, IBM tests the programs to make sure they produce the agreed-upon results, using test data and machine time provided by the user. Fourth, IBM turns over the tested application programs and associated documentation to the user.

APPLICATION PROGRAMS: In addition to the two services described above, IBM offers a limited number of packaged programs for specific applications. The current Application Program Products, which receive centralized IBM support, are listed in the price list at the end of this report. Also available are a variety of Field Developed Programs (FDP's) and Installed User Program (IUP's). Support for the FDP's and IUP's is limited to pertinent error-correction information during the first six months after initial availability of each program.

Other sources of programs, technical information, and education are the System/3 user groups. Two IBM-affiliated user groups, COMMON and Guidance International, are open to System/3 users. Moreover, at least two independent organizations, Group 3 and the National Association of IBM System/3 Users, have been formed specifically to aid System/3 users.

PRICING

POLICY: IBM offers the System/3 on a purchase or rental basis. The standard IBM rental contract includes equipment maintenance and entitles the customer to up to 176 hours of billable time per month. Time used in excess of that amount is billed, for most System/3 components, at an extra-use rate of 10% of the basic hourly rate, (i.e., 10% of 1/176 of the monthly rental for each hour of extra use).

IBM's new Agreement for Lease or Rental of IBM Machines, announced on April 4, 1977, abolished the Term Availability Plan, Term Lease Plan, Extended Term Plan, and other specially developed longer-term leasing contracts. The new agreement provides users with a single contract on which they can specify mixtures of rental and leased equipment, each with various terms. CPU's rented under the new plan can be terminated or downgraded on 90 days' notice, and all other rented equipment can be terminated or downgraded on 30 days' notice. Base terms and extension terms are specified for each piece of equipment obtained through a leasing agreement. As was the case with the various extended lease plans (FTP, ETP, TAP, etc.), the more extension periods in the contract term, the lower the lease price.

Generally, the base term and extension terms for the System/3 models coincide with those of the abolished Term Availability Plan: a three-year basic term followed by one-year extension terms. Accruals toward purchase of up to 50 percent of the purchase price are permitted during the first base term (36 months) of a lease contract. The new agreement also continues IBM's policy of upper-limit price protection for both lease and purchase contracts. Specified maximum second-year and third-year lease and purchase prices correspond to annual increases of about 5 percent.

SOFTWARE: System/3 users receive the basic System Control Programs at no additional cost. All other IBM software, including compilers and utility routines, is priced separately. Prices of the current IBM Program Products are listed at the end of this report.

SUPPORT: IBM Systems Engineering assistance is available to System/3 users at a basic charge of \$33.00 per hour.

EDUCATION: Two-day introductory courses are offered at no charge. Various other System/3 courses are available at separate charges.

MAINTENANCE: The IBM System/3 is leased to the user under rental plan A, which entitles the user to maintenance for 24 hours per day, 7 days per week.

For purchased systems, the IBM System/3 is under maintenance group D. The minimum period of maintenance service is 9 consecutive hours between 7:00 a.m. and 6:00 p.m. Monday through Friday. Charges for maintenance coverage outside this period are based upon the following percentages of the minimum monthly maintenance charge (MMC) added to the MMC:

	Consecutive hours				
	9*	12	16	20	24
Monday-Friday (until 8:00 a.m. Saturday)	10	12	14	16	18
Saturday (until 8:00 a.m. Sunday)	4	5	7	8	9
Sunday (until 8:00 a.m. Monday)	5	7	9	11	12

*Outside of the hours 7:00 to 6:00 p.m.

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► For users without a maintenance contract, the System/3 is maintained under per-call class 2. Under this class the per-call charge during regular hours is \$58.00 per hour, and during off hours the charge is \$67.00 per hour. The hourly rate for systems engineering service is \$47.50.

EQUIPMENT: The following typical purchase prices include controllers and adapters.

System/3 Model 4

MINIMUM SYSTEM: Consists of 64K 5404 Processing Unit, one 5447 Disk Storage Drive and Control, one 5213 Model 3 Printer, one 3277 Model 1 Display Station, and one 78-key operator console keyboard. Purchase price, \$33,867.

System/3 Model 8

MINIMUM SYSTEM: Consists of 16K 5408 Processing Unit, 5444 Model A1 Disk Storage Drive, 5203-1 Printer, and 5471 Printer-Keyboard. Purchase price, \$43,520.

MINIMUM DATA STATION SYSTEM: Consists of 16K 5408 Processing Unit, 5444 Model A1 Disk Storage Drive, 5203-2 Printer, and a directly attached 3741 Data Station. Purchase price, \$53,785.

System/3 Model 10

TYPICAL DISK SYSTEM: Consists of 12K 5410 Processing Unit, 5424 Model A2 MFCU, 5203 Model 2 Printer

(with 120 print positions), 5471 Printer-Keyboard, and one 5444 Model 2 Disk Storage Drive (4.90 million bytes). Purchase price, \$63,655.

System/3 Model 12

MINIMUM SYSTEM: Consists of 32K 5412 Processing Unit, 5424 Model A2 MFCU, 5203 Model 1 Printer, and 3340 Model C2 DASF. Purchase price, \$95,026.

System/3 Model 15

MINIMUM SYSTEM: The basic configuration required to utilize the Model 15 processing support consists of a 5415 Model A17 Processing Unit (48K bytes), 3277 Model 1 Display Station, 1403 Model 5 Printer, 5424 Model A1 MFCU, and one 5444 Model A2 Disk Storage Drive, plus all necessary attachments and control units. Purchase price, \$110,901.

EXPANDED SYSTEM: A typical large Model 15 disk system consists of a 5415 Model A20 Processing Unit (128K bytes), 3277 Model 1 Display Station, 1403 Model N1 Printer, 2560 Model A1 MFCM, 2501 Model A2 Card Reader, one 5444 Model A2 Disk Storage Drive, and four 5445 Disk Storage Drives, plus all necessary attachments and control units. Purchase price, \$228,995.■

EQUIPMENT PRICES

PROCESSORS AND MAIN STORAGE		Purchase Price	Monthly Maint.	Rental (1-year lease)*
5404	Processing Unit (for Model 4 systems): Model A18; 65,536 bytes	\$13,790	\$176.00	\$ 725
5406	Processing Unit (for Model 6 systems): Model B2; 8,192 bytes Model B3; 12,288 bytes Model B4; 16,384 bytes	20,190 23,140 23,490	130.00 136.00 136.00	816 978 1,133
1550	Command Keys (9-16)	689	0.50	25
5408	Processing Unit (for Model 8 systems): Model A14; 16,384 bytes Model A16; 32,768 bytes Model A17; 49,152 bytes Model A18; 65,536 bytes	19,540 20,715 21,890 23,065	100.00 105.00 110.00 115.00	779 846 913 980
5410	Processing Unit (for Model 10 non-disk systems): Model A2; 8,192 bytes Model A3; 12,288 bytes Model A4; 16,384 bytes Model A5; 24,576 bytes Model A6; 32,768 bytes Model A7; 49,152 bytes	11,310 14,260 14,610 23,360 23,710 32,810	43.00 47.50 47.50 63.50 63.50 88.00	452 597 768 1,106 1,430 1,865
5410	Processing Unit (for Model 10 disk systems): Model A12; 8,192 bytes Model A13; 12,288 bytes Model A14; 16,384 bytes Model A15; 24,576 bytes Model A16; 32,768 bytes Model A17; 49,152 bytes	15,850 18,800 19,150 27,900 28,250 37,350	94.50 99.00 99.00 115.00 115.00 140.00	638 781 949 1,282 1,606 2,035
5412	Processing Unit (for Model 12 systems): Model B16; 32,768 bytes Model B17; 49,152 bytes Model B18; 65,536 bytes Model C19; 81,920 bytes Model C20; 98,304 bytes	36,680 37,885 39,030 45,855 47,030	223.00 228.00 233.00 243.00 248.00	1,529 1,596 1,663 1,888 1,935
5415	Processing Unit (for Model 15 systems without 3340): Model A17; 49,152 bytes Model A18; 65,536 bytes Model A19; 98,304 bytes Model A20; 131,072 bytes	56,020 57,195 61,245 63,595	204.00 209.00 214.00 223.00	1,947 2,014 2,214 2,348

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EDUCATION: Two-day introductory courses are offered at no charge. Various other System/3 courses are available at separate charges.

MAINTENANCE: The IBM System/3 is leased to the user under rental plan A, which entitles the user to maintenance for 24 hours per day, 7 days per week.

For purchased systems, the IBM System/3 is under maintenance group D. The minimum period of maintenance service is 9 consecutive hours between 7:00 a.m. and 6:00 p.m. Monday through Friday. Charges for maintenance coverage outside this period are based upon the following percentages of the minimum monthly maintenance charge (MMC) added to the MMC:

	Consecutive hours				
	9*	12	16	20	24
Monday-Friday (until 8:00 a.m. Saturday)	10	12	14	16	18
Saturday (until 8:00 a.m. Sunday)	4	5	7	8	9
Sunday (until 8:00 a.m. Monday)	5	7	9	11	12

*Outside of the hours 7:00 to 6:00 p.m.

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EQUIPMENT PRICES

		Purchase Price	Monthly Maint.	Rental (1-year lease)*
PROCESSORS AND MAIN STORAGE (Continued)				
5415	Processing Unit (for Model 15 systems with 3340):			
	Model B17; 49,152 bytes	81,800	212.00	2,761
	Model B18; 65,536 bytes	82,975	216.00	2,828
	Model B19; 98,304 bytes	87,025	221.00	3,028
	Model B20; 131,072 bytes	89,375	230.00	3,162
	Model C21; 163,840 bytes	95,890	234.00	3,515
	Model C22; 196,608 bytes	98,240	239.00	3,649
	Model C23; 229,376 bytes	100,590	243.00	3,783
	Model C24; 262,144 bytes	102,940	252.00	3,917
	Model D19; 98,304 bytes	94,760	239.00	3,316
	Model D20; 131,072 bytes	97,110	248.00	3,450
	Model D21; 163,840 bytes	101,160	252.00	3,650
	Model D22; 196,608 bytes	103,510	257.00	3,784
	Model D23; 229,376 bytes	105,860	261.00	3,918
	Model D24; 262,144 bytes	108,210	270.00	4,052
	Model D25; 393,216 bytes	120,810	349.00	4,608
	Model D26; 524,288 bytes	130,210	389.00	5,144
PROCESSOR OPTIONS AND ATTACHMENTS				
For Model 4:				
3960	5203 Printer Base Attachment; for 115-cps printing	2,700	25.50	163
7081	Serial I/O Channel	4,380	6.00	204
For Model 6:				
1550	Command Keys 9 through 16	689	0.50	25
3210	5496 Data Recorder Attachment	1,375	2.00	52
3901	Printer Attachment for 5213 Model 1	2,410	19.50	92
3902	For Model 2	2,410	19.50	92
3903	For Model 3	2,410	19.50	92
3960	5203 Printer Base Attachment; for 115-cps printing	2,700	22.00	163
5732	Processing Unit Expansion A; required for any combination of 7081 Serial I/O Channel, 2074 BSCA, 4765 LCA, or 3741 Attachment (8220)	972	6.50	42
6378	Second Disk Attachment; for 5444 Model 3 or second Model 2	1,420	5.00	58
7081	Serial I/O Channel	4,380	5.00	204
7951	Printer Attachment for 2222 Model 1	2,410	19.50	92
7952	For Model 2	2,410	19.50	92
7960	Display Station Attachment	2,580	1.50	102
8220	3741 Display Station/Programmable Work Station Attachment	4,525	15.50	244
For Model 8:				
3480	Dual Feed Carriage Control; for 5203 Printer	727	1.00	32
3500	Dual Programming Feature	3,220	1.00	151
3960	5203 Printer Base Attachment	1,290	7.50	51
3970	5203 Printer Speed Attachment; for Model 1 or 2	615	3.00	19
3972	For Model 3	1,400	6.50	70
4040	5448 Disk File Attachment	2,590	24.00	136
4110	5741 Printer Keyboard Attachment	1,670	5.00	67
4701	Magnetic Tape Base Attachment	1,105	2.50	60
5732	Processing Unit Expansion A; required for 7081 Serial I/O Channel or 2074 BSCA	972	6.50	42
5733	Processing Unit Expansion B; requires 5732	451	0.50	24
6378	Second Disk Attachment; for 5444 Model 3 or second Model 2	1,970	6.00	82
7081	Serial I/O Channel	4,380	5.00	204
7960	3411 Magnetic Tape Attachment	2,740	7.50	156
8220	3741 Display Station/Programmable Work Station Attachment	4,525	15.50	244
For Model 10:				
3480	Dual Feed Carriage Control; for 5203 Printer	727	1.00	32
3500	Dual Programming Feature	3,220	1.00	151
3901	First 5445 Attachment	14,060	32.00	646
3902	Second 5445 Attachment; requires 3901	422	1.00	17
3970	5203 Printer Attachment for Model 1	1,845	10.50	71
3971	For Model 2	1,845	10.50	73
3972	For Model 3	2,690	14.00	121
4040	5448 Disk File Attachment	2,590	24.00	136
4100	5424 MFCU Attachment for Model A1	3,125	13.50	107
4101	For Model A2; requires 4100	3,758	15.50	125
4110	5741 Printer Keyboard Attachment	1,670	5.00	67
4120	Data Entry Keyboard Attachment	1,875	1.00	60
4130	1442 Card Reader/Punch Attachment; for Models 6 and 7	4,890	14.50	244
4140	1403 Printer Attachment for Model 2	2,900	20.50	150
4150	For Model 1	3,175	20.50	221
4501	Higher Performance First Disk Attachment	554	1.00	25
4502	Second Disk Attachment	554	1.00	25
5501	Power Supply Expansion; provides additional 6-volt power	1,580	1.00	63
5732	Processing Unit Expansion A; required for any combination of RPQ 1442, 5445, 3411, or 3741 attachments	1,285	3.00	46
5733	Processing Unit Expansion B	451	50	24
5734	Processing Unit Expansion C	1,550	1.00	69
5735	Processing Unit Expansion D	451	1.00	24

*Rental prices include equipment maintenance.

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EQUIPMENT PRICES

		Purchase Price	Monthly Maint.	Rental (1-year lease)*
PROCESSOR OPTIONS AND ATTACHMENTS (Continued)				
6378	Second Disk Attachment; for 5444 Model 3 or second Model 2	1,420	5.00	58
7081	Serial I/O Channel	4,380	5.50	204
7951	3411 Magnetic Tape Attachment	3,370	9.50	205
8220	3741 Display Station/Programmable Work Station Attachment	4,525	15.50	244
8642	Universal Character Set Control; for 6639 on 5203 Printer	269	1.00	16

For Model 12:

3480	Dual Feed Carriage Control	727	1.00	32
3500	Dual Programming Feature	3,220	1.00	151
3960	5203 Printer Base Attachment	1,290	7.50	51
3970	5203 Printer Attachment for Model 1 and 2; requires 3960	615	3.00	19
3972	For Model 3; requires 3960	1,400	6.50	70
4100	5424 MFCU Attachment for Model A1	3,125	13.50	107
4101	For Model A2; requires 4100	703	2.00	18
4110	5741 Printer Keyboard Attachment	1,670	5.00	67
4130	1442 Card Reader/Punch Attachment; for Models 6 and 7	4,890	14.50	244
4135	1403 Printer Attachment for Model 5	177	1.50	7
4140	For Model 2	460	1.50	18
4150	For Model N1	693	1.50	89
4160	1403 Printer Base Attachment	2,485	19.00	132
4701	Magnetic Tape Base Attachment	1,105	2.50	60
5501	Power Supply Expansion; provides 6-volt power	1,580	1.00	63
5502	Provides 24-volt power	706	1.00	21
5732	Processing Unit Expansion A; required for any combination of 3411, 8220, card reader, or 7801	1,285	3.00	46
5733	Processing Unit Expansion B	451	.50	24
5734	Processing Unit Expansion C	1,550	1.00	69
5735	Processing Unit Expansion D	451	1.00	24
7081	Serial I/O Channel	4,380	5.50	204
7960	3411 Magnetic Tape Attachment	3,045	7.50	150
8220	3741 Display Station/Programmable Work Station Attachment	4,525	15.50	244
8642	Universal Character Set Control; for 6639 on 5203 Printer	299	1.00	16

For Model 15:

1580	Card Print Control for 2560	1,165	3.00	31
1601	Channel Terminator	2,185	1.00	56
3901	First 5445 Attachment	14,060	32.00	646
3903	Second 5445 Attachment	2,700	1.00	96
4100	5424 MFCU Attachment for Model A1	3,125	13.50	107
4101	For Model A2; requires 4100	703	2.00	17
4130	1442 Card Reader/Punch Attachment; for Models 6 and 7	4,890	14.50	244
4135	1403 Printer Attachment for Model 5	177	1.50	7
4140	For Model 2	460	1.50	18
4150	For Model N1	693	1.50	89
4160	1403 Printer Base Attachment	2,485	19.00	132
5501	Power Supply Expansion; provides 6-volt power	1,580	1.00	63
5502	Provides 24-volt power	706	1.00	21
5733	Processing Unit Expansion 1	451	.50	24
5734	Processing Unit Expansion 2	1,550	1.00	69
5735	Processing Unit Expansion 3	451	1.00	24
5813/14	DDS Adapter	756	4.50	26
6378	Second Disk Attachment; for 5444 Model 3 or second Model 2	1,970	6.00	82
7081	Serial I/O Channel	4,380	6.00	204
7901	3284/3287 Printer Attachment	1,050	3.00	31
7951	3411 Magnetic Tape Attachment	3,370	9.50	205
8090	2501 Card Reader Attachment	6,270	7.00	194
8100	2560 MFCM Attachment	5,890	15.50	194
8220	3741 Display Station/Programmable Work Station Attachment	4,525	15.50	244

CONSOLE

3277	Display Station, Model 1 (required in Model 15 systems)	2,470	9.00	74
4632	78-key Operator Console Keyboard (required on 3277)	1,010	14.00	33
3277 CRT display (for 5404):				
	Model 1; 480-character display	2,470	9.00	74
	Model 2; 1920-character display	3,200	20.00	108
4630/ 31/34	Keyboard for either model; 66 keys; EBCDIC typewriter/EBCDIC Data Entry/ASCII typewriter	520	5.00	13
4633/35	Keyboard for either model; 78 keys; EBCDIC typewriter/ASCII typewriter	869	8.50	29

MASS STORAGE

3340 Direct Access Storage Facility:				
	Model A-2 (2-drives plus control)	36,000	96.50	1,154
	Model B-1 (additional drive)	19,800	51.00	645
	Model B-2 (2 additional drives)	25,200	82.50	814
	Model C-2 (2 drives plus control)	27,580	86.50	892
3348	Data Module (for 3340 drives):	2,200	Time & Mat'l	82
	Model 70; 41.04 million bytes plus 9.83 million bytes exclusively for program support			
3344	Direct Access Storage Facility (for use with 3340 DASF on Model 15D only)	49,500	150.00	1,351

*Rental prices include equipment maintenance.

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EQUIPMENT PRICES

		Purchase Price	Monthly Maint.	Rental (1-year lease)*
MASS STORAGE (Continued)				
5444	Disk Storage Drive:			
	Model A1; 2.46 million bytes	5,935	71.50	239
	Model A2; 4.92 million bytes	7,030	71.50	359
	Model A3; 2.46 million bytes	5,935	71.50	239
	Model 1; 2.46 million bytes	5,700	51.50	196
	Model 2; 4.92 million bytes	6,765	51.50	323
	Model 3; 2.46 million bytes	5,700	51.50	196
5540	Disk Cartridge (for 5444 drives)	175	Time & Mat'l	Purch. only
5422	Disk Enclosure (required for attachment of 5444 Disk Storage Drives when 5424 MFCU is not used)	3,605	11.50	136
5445	Disk Storage Drive:			
	Model 1; first 5445 on 5415; 20.48 million bytes	10,410	128.00	421
	Model 2; second 5445 on 5410 or 5415; 20.48 million bytes	9,965	121.00	401
	Model 3; dual-pack 5445, 40.76 million bytes	20,430	251.00	822
5447 A1	5-megabyte disk drive (for 5404)	8,730	93.00	469
5447 A2	10-megabyte disk drive (for 5404)	12,065	144.00	647
5448	9.8-megabyte disk drive (for 5408 and 5410)	7,060	100.00	325
MAGNETIC TAPE EQUIPMENT				
3410	Magnetic Tape Unit:			
	Model 1; 20 KB	5,655	64.50	216
	Model 2; 40/20 KB	7,560	71.00	287
	Model 3; 80/40 KB	9,360	78.50	358
3411	Magnetic Tape Unit and Control:			
	Model 1; 20 KB	12,460	99.50	476
	Model 2; 40/20 KB	15,770	107.00	606
	Model 3; 80/40 KB	19,220	114.00	736
3211	Single Density Feature (for 3410 & 3411, Models 2 & 3 only)	1,835	9.50	60
3221	Dual Density Feature (for 3410 & 3411, Models 2 & 3 only)	2,645	36.50	88
7003	System/3 Attachment (required on 3411)	2,315	3.50	83
3741	Data Station:			
	Model 1	4,680	46.00	209
	Model 2	5,655	59.00	256
3741	Programmable Work Station:			
	Model 3	6,705	69.50	333
	Model 4	7,680	77.00	382
PUNCHED CARD EQUIPMENT				
5424	Multi-Function Card Unit:			
	Model A1; reads 250 cpm, punches and prints 60 cpm	7,810	212.00	394
	Model A2; reads 500 cpm, punches and prints 120 cpm	10,340	305.00	593
1442	Card Read Punch:			
	Model 6; reads 300 cpm, punches 80 cols./sec.	11,110	119.00	359
	Model 7; reads 400 cpm, punches 160 cols./sec.	11,970	140.00	522
3950	5410/5415 Coupling (required on 1442)	1,160	1.50	36
2501	Card Reader (for Model 15 only):			
	Model A1; 600 cpm	12,330	62.00	262
	Model A2; 1,000 cpm	12,550	88.50	346
3630	1501 Coupling (required on 2501)	168	NC	5
2560	Multi-Function Card Machine (for Model 15 only):			
	Model A1; reads 500 cpm, punches 160 cols./sec.	21,230	209.00	838
	Model A2; reads 310 cpm, punches 120 cols./sec.	15,590	209.00	652
Card Print Feature for 2560 Model A1:				
1575	First Two Lines (requires 1580 on 5415)	4,625	24.50	172
1576	Second Two Lines	4,625	24.50	172
1577	Third Two Lines	4,625	24.50	172
5486	Card Sorter:			
	Model 1; 1000 cpm	3,115	46.00	121
	Model 2; 1500 cpm	3,560	69.50	165
5496	Data Recorder (96-column)	4,005	68.00	213
7501	System/3 Attachment (required on 5496)	1,290	11.50	55
129	Card Data Recorder (80-column):			
	Model 1; Punch-Verifier (non-print)	3,650	58.00	169
	Model 2; Printing Punch (non-verifier)	4,090	63.00	187
	Model 3; Printing Punch Verifier	4,380	64.50	202
7503	Card I/O Attachment (required on 129)	1,560	13.50	96
3610	Expansion Feature (required on 129)	292	NC	10
2265	Display Station	4,700	32.00	192
5471	Printer-Keyboard	3,300	63.00	145
5475	Data Entry Keyboard	1,855	8.50	54

*Rental prices include equipment maintenance.

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EQUIPMENT PRICES

		Purchase Price	Monthly Maint.	Rental (1-year lease)*
PRINTERS				
3284	Matrix printer; 40 cps (for 5404): Model 1; 480-character buffer	4,255	51.50	148
	Model 2; 1920-character buffer	4,775	51.50	157
3286	Matrix printer; 66 cps (for 5404): Model 1; 480-character buffer	5,690	54.00	177
	Model 2; 1920-character buffer	6,305	54.00	187
3287	Matrix printer: Model 1; 80 cps	5,680	49.00	175
	Model 2; 120 cps	6,055	60.50	213
8330	3271/3272 Attachment	910	3.50	32
8700	Variable-Width Forms Tractor	160	0.50	6
3288	Line Printer; 120 lpm (for 5404)	10,625	91.00	403
5213	Printer: Model 1; pin-feed platen (for Model 6 only)	4,115	66.00	187
	Model 2; vertical forms control (for Model 6 only)	5,310	90.00	235
	Model 3; vertical forms control, bidirectional printing (for Model 4 or Model 6 only)	5,440	103.00	294
2222	Printer (with ledger card device; for Model 6 only): Model 1; unidirectional printing	10,930	144.00	411
	Model 2; bidirectional printing	11,070	157.00	453
5203	Printer (for Model 8, Model 10, and Model 12 only): Model 1; 100 lpm, 96 positions	7,005	84.00	285
	Model 2; 200 lpm, 96 positions	7,805	94.50	347
	Model 3; 300 lpm, 96 positions	10,880	158.00	512
3475	Dual-Feed Carriage (for 5203)	2,865	24.00	92
4730	Additional Chain Cartridge (for 5203 Mod. 1 & 2)	2,865	1.50	92
4740	Additional Chain Cartridge (for 5203 Mod. 3)	2,145	40.50	129
5558	24 Additional Print Positions (for 5203)	1,180	2.50	61
5559	12 Additional Print Positions for 5203	587	—	30
5560	36 Additional Print Positions (for 5203)	1,750	2.50	92
8639	Universal Character Set Attachment (for 5203)	236	1.50	10
1403	Printer (requires 5421): Model 2; 600 lpm, 132 positions	22,000	339.00	970
	Model 5; 465 lpm, 132 positions	21,070	244.00	750
	Model N1; 1100 lpm, 132 positions	38,140	392.00	1,135
1416	Interchangeable Train Cartridge (for 1403 Mod. N1)	2,665	Time & Mat'l.	106
1376	Auxiliary Ribbon Feeding (for 1403 Mod. 2 or 5)	2,000	29.50	92
4740	Interchangeable Chain Cartridge Adapter (for 1403 Mod. 2 or 5)	2,030	—	92
8640	Universal Character Set Feature (for 1403 Mod. N1)	426	2.50	11
8641	Universal Character Set Feature (for 1403 Mod. 2)	299	2.50	11
5421	Printer Control Unit (required for 1403 Mod. 2, 5, or N1)	7,685	34.00	326
MICR/OCR EQUIPMENT				
1255	Magnetic Character Reader (requires #7081): Model 1; 500 dpm, 6 stackers	35,460	288.00	949
	Model 2; 750 dpm, 6 stackers	40,590	460.00	1,155
	Model 3; 750 dpm, 12 stackers	55,260	606.00	1,520
3215	Dash Symbol Transmission (for 1255)	35	—	56
4380	51-column Card Sorting (for 1255)	661	—	16
4520	High-Order Zero & Blank Selection (for 1255 Mod. 3 only)	1,315	5.00	34
6303	System/3 Adapter (required on 1255)	5,335	4.50	141
7060	Self-Checking Numbers (for 1255)	2,135	2.50	56
3881	Optical Mark Reader (requires #7081): Model 1; for on-line use	51,390	158.00	1,575
	Model 2; for off-line use	46,800	125.00	1,434
	Model 3; for off-line use	59,940	150.00	1,739
1471	BCD Read (for 3881)	2,150	1.50	63
3450	Document Counters (for 3881)	853	2.00	22
3550	Dual Density (for 3881 Model 2 only)	5,410	0.50	163
3801	Expanded Storage (for 3881)	2,150	0.50	63
6451	Serial Numbering (for 3881)	6,325	25.00	192
COMMUNICATIONS EQUIPMENT				
2074	Binary Synchronous Communications Adapter; for Models 4, 8, 10, 12, 15	6,895	78.50	361
1315	Auto Call Feature; for all models	1,170	1.00	52
3601	EIA Local Attachment; for Models 8, 10, 12, 15	563	1.00	31
4703	Internal Clock Feature; for all models	734	1.00	32
4781	1200 bps Integrated Modem (requires #4703 and #5201); for Models 8, 10, 12, 15	387	3.50	16
5201	Modem Base (for mounting #4781); for Models 8, 10, 12, 15	937	2.50	36
7477	Station Selection Feature; for all models	580	1.00	25
7850	Text Transparency Feature; for all models	580	1.00	25
2084	Binary Synchronous Communications Adapter, Second (#2074 is a prerequisite); for Models 10, 12, 15	6,895	63.00	361
2094	Second Binary Synchronous Communications Adapter (for Model 15D only)	9,205	30.00	413
1325	Auto Call Feature; for Models 10, 12, 15	1,170	1.00	52
3602	EIA Local Attachment; for Models 10, 12, 15	563	1.00	31
4723	Internal Clock; for Models 10, 12, 15	734	1.00	32
4782	1200 bps Integrated Modem (requires #4723 and #5202) for Models 8, 10, 12, 15	516	5.00	24
5202	Modem Base (for mounting #4782); for Models 10, 12, 15	937	2.50	36
7487	Station Selection Feature; for Models 10, 12, 15	580	1.00	25
7851	Text Transparency Feature; for Models 10, 12, 15	580	1.00	25

*Rental prices include equipment maintenance.

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EQUIPMENT PRICES

		<u>Purchase Price</u>	<u>Monthly Maint.</u>	<u>Rental (1-year lease)*</u>
COMMUNICATIONS EQUIPMENT (Continued)				
4645	Integrated Communications Adapter; for Models 8 and 12	4,415	17.00	165
4801	8000 bps Local Interface (for local attachment of an IBM binary synchronous 3275 Display; modems not required); for Models 8 and 12	760	1.00	28
4802	2400 bps Local Interface (for local attachment of an IBM binary synchronous terminal; modems not required); for Models 8 and 12	760	1.00	28
6202	Synchronous Line, Medium Speed (up to 7200 bps); for Models 8 and 12	2,300	2.50	87
4702	Local Display Adapter; for 5408, 5412, or 5415; for local attachment of up to three 3277-1 and/or 3284/3286-1/3287 printers	4,495	23.50	186
4704	Display Increment (for three additional displays and/or printers); for Models 4, 8, 12	1,050	1.00	42
4705	Model 2 Attachment (for Model 2 displays or printers); for Models 4, 8, 12	599	3.50	24
4765	Local Communications Adapter; for local attachment of a 3741 Model 2, a 3271 Control Unit, or a 3275 Display; for Model 6	4,570	28.50	194
	For Models 10 and 15	4,570	27.00	194
4601	Display Adapter; for Model 15	9,340	27.00	312
4602	Device Interface; for Model 15	1,310	1.00	42
4891	First Line Base	999	5.00	43
4892	Second Line Base	999	5.00	43

*Rental prices include equipment maintenance.

SOFTWARE PRICES

Monthly License Fees

	<u>Model 4</u>	<u>Model 6</u>	<u>Model 8</u>	<u>Model 10</u>	<u>Model 12</u>	<u>Model 15</u>
PROGRAM PRODUCTS—SYSTEMS						
BASIC	—	\$127	—	—	—	—
Basic Assembler	—	—	\$90	\$90	\$89	\$93
COBOL, subset ANS with library	—	—	94	94	89	93
FORTRAN IV, disk-based	—	120	110	110	118	123
Sort, CCP, disk-based	\$15	—	—	—	—	17
Sort, disk-based	10	10	10	10	47	56
5445 & 5448 feature	—	—	60	69	—	Incl.
Sort, tape-based	—	—	76	76/76*	81	97
RPG II, card-based	—	—	—	37*	—	—
Braille feature	—	—	—	—	—	—
BSCA feature	—	—	—	37*	—	—
Tape feature	—	—	—	32*	—	—
RPG II, disk-based	40	40	54	54	89	106
Auto Report feature	17	17	17	17	Incl.	Incl.
BSCA feature	46	46	46	46	Incl.	Incl.
Tape feature	—	—	39	39	Incl.	Incl.
3270 Display Control feature	22	—	25	25	22	22
5445 & 5448 feature	—	—	39	39	—	Incl.
Utilities, Card	—	—	—	10*	—	17
Utilities, Conversational	16	16	—	—	—	—
Utilities, Disk Based Card	—	—	10	10	16	16
Utility, 1255	—	87	75	75	72	—

*Model 10 card-only system.

Monthly License Fees

	<u>Model 4</u>	<u>Model 6</u>	<u>Model 8</u>	<u>Model 10</u>	<u>Model 12</u>	<u>Model 15</u>
PROGRAM PRODUCTS—APPLICATIONS						
Apparel Business Control**	—	—	—	\$ 82*	—	—
Appropriation Accounting System**	—	—	—	132*	—	—
Bill of Material Processor**	—	—	\$ 61	61	—	—
Business Analysis/BASIC**	\$ 61	\$ 61	—	—	—	—
Card Bill of Material & Requirements Planning**	—	—	—	71*	—	—
Citation Processing**	—	—	—	132*	—	—
Data Collection Support for System/3	—	—	—	—	\$ 38	—
DATA/3	—	—	149	149	142	\$149
EPIC—Socrates	—	—	—	—	192	—
EPIC—Fast	—	—	—	—	104	—
EPIC—Budget Finance	—	—	—	—	121	—
EPIC—Student	—	—	—	—	87	—

*Model 10 card-only system.

**Installation License applies.

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SOFTWARE PRICES

	Monthly License Fees					
	<u>Model 4</u>	<u>Model 6</u>	<u>Model 8</u>	<u>Model 10</u>	<u>Model 12</u>	<u>Model 15</u>
Health Welfare & Pension Fund**	232	232	—	—	—	—
Health Welfare & Pension Fund Disk**	—	—	198	198	—	—
Inventory & Requirements Planning	—	—	94	94	—	—
Job Analysis System (JAS/3)	—	—	86	86	—	—
Law Enforcement System**	—	—	—	87*	—	—
Math/BASIC	54	54	—	—	—	—
Optimum Blending**	—	—	—	98*	—	—
Order Point Technique for Inventory Mgmt.**	—	—	—	55*	—	—
Shop Loading & Control	—	—	163	163	—	—
Stat/BASIC	46	46	—	—	—	—
Unit Inventory Techniques**	—	—	—	82*	—	—
Utility Billing System**	—	—	—	87*	—	—

*Model 10 card-only system.
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