DWG NO. 98A1169

REVISIONS					
REV	EN	CHG CODE	DESCRIPTION	DR	APPD
A	84179	-	PRODUCTION RELEASE		

J. F. R. Desrosiers, Director
Systems Software

G. Watson
Vice-President, Engineering

NEXT ASSEMBLY		
MODEL NO. 620f-118, 7X-9006		
DR	G.M. Johnson	9/75
CHK		
DSGN		
ENGR		9-3-75
APPD		9-8-75
APPD		

varian data machines / a varian subsidiary
2722 michelson drive / irvine / california / 92664

CODE IDENT NO. 21101

TITLE
SERIES I/O EXPANDER DM 394
HARDWARE PERFORMANCE SPEC.

SIZE	DWG NO.	REV
A	98A1169	A

SHEET 1 OF 17

This Document Totals 17 Pages

1.0 INTRODUCTION

The purpose of the DM 394 Series I/O Expander (44P0670) is to provide the capability of expanding the I/O bus of a 620 Series or V70 Series computer. The DM 394 provides connection for up to 10 additional peripheral device controllers, BICs, and/or PIMs. All input/output signals of the DM 394 have characteristics and timing similar to those of the I/O bus which is expanded.

The DM 394 is a printed circuit version of the earlier wire wrap DM 297 I/O expander. The DM 394 is implemented with faster IC types thus presenting less throughput delay and control delay. It requires only one card slot instead of three. In addition, it provides two priority look-ahead circuits which are not available on the DM 297. The DM 394 supersedes and replaces the DM 297 for all applications.

2.0 FUNCTIONAL DESCRIPTION

A functional block diagram of the Series I/O Expander is shown in Figure 1. The numbers (Pn) within the blocks reference the applicable page of the logic diagram (91C0435).

2.1 Control Signal Drivers and Receivers

This section provides the receivers and drivers for receiving and repowering the unidirectional I/O bus control signals. Typical circuits for control signals in and for control signals out are shown in Figure 2. In addition to being retransmitted, many of the control signals are used as control inputs by the control section.

2.2 Control

The control section utilizes changes in the I/O bus control signals to determine which way the bidirectional I/O E-bus signals will be gated (i.e., towards the computer or away from it). These changes fire one-shots which either set or reset an input-output control flip-flop. The two outputs of the flip-flop are repowered by inverters to generate the following control signals for use by the E-bus receiver and gated driver section:

> Data Transfer Out enables (DTOX1+ and DTOX2+) and Data Transfer In enables (DTIX1+ and DTIX2+).

In the quiescent state, output transfers are enabled. The following conditions switch the enable from output transfers to input transfers:

A. Occurrence of the trailing edge of Function Ready (FRYX) during a Data-Transfer-In instruction.

B. Occurrence of the leading edge of Interrupt Acknowledge (IUAX) during a Trap In (TPIX), Trap Out (TPOX), or Interrupt (IUAX).

The following conditions will switch the enable from input transfers to output transfers:

A. Occurrence of System Reset (SYRT).
B. Occurrence of the trailing edge of any Data Ready (DRYX).
C. Occurrence of the trailing edge of Function Ready (FRYX) during a Trap Out (TPOX).
D. Occurrence of the trailing edge of Interrupt Acknowledge (IUAX).

The control timing is summarized in the timing diagrams of Figure 3.

2.3 E-Bus Receivers and Gated Drivers

This section contains the receivers and gated drivers for receiving and repowering the bi-directional E-bus. A typical circuit for the E-bus line is shown in Figure 2. The drivers are gated by data-transfer-in enable (DTIX1+,2+) and data-transfer-out enable (DTOX1+,2+) signals from the control section. These signals control the direction of data flow through the board.

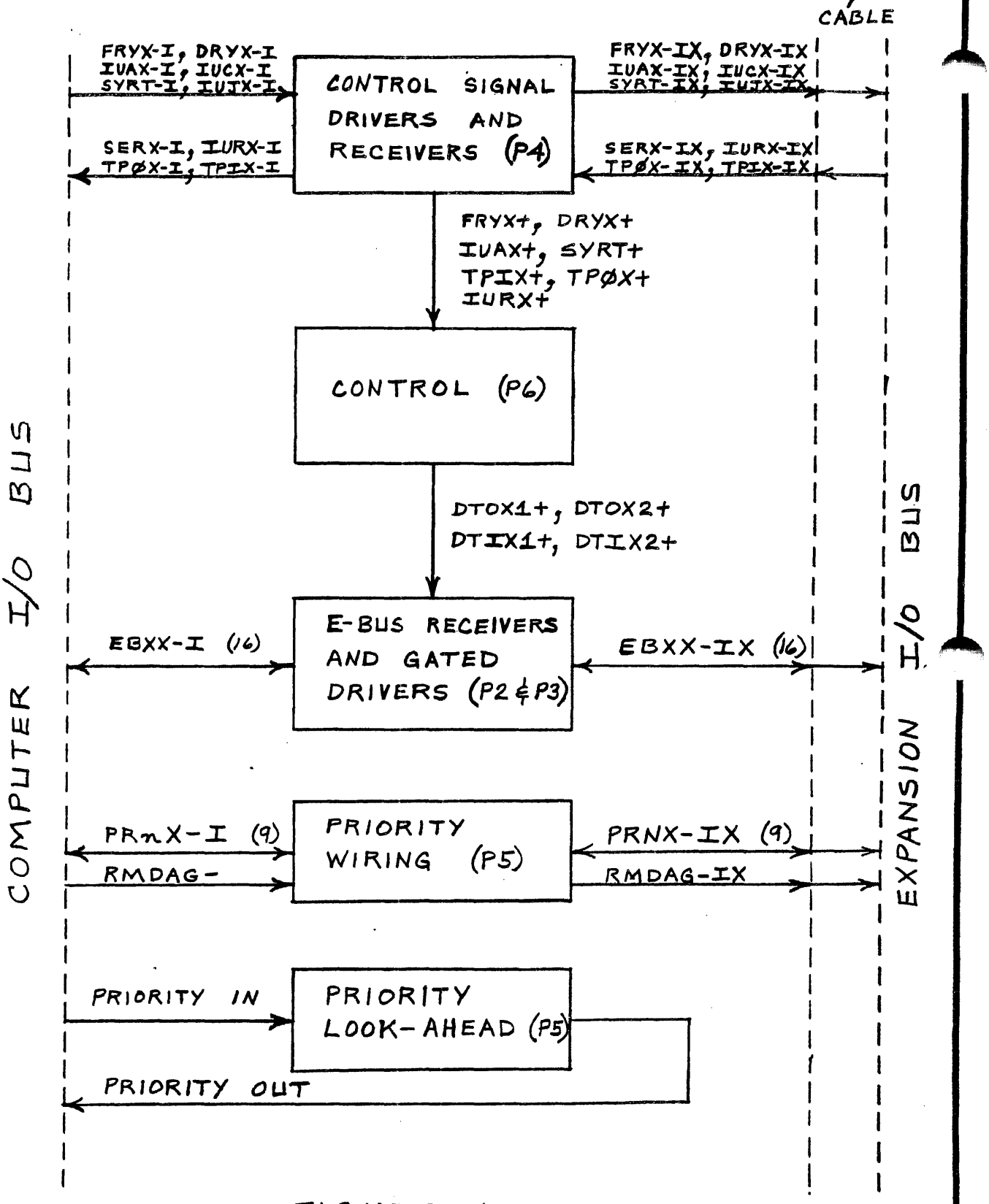
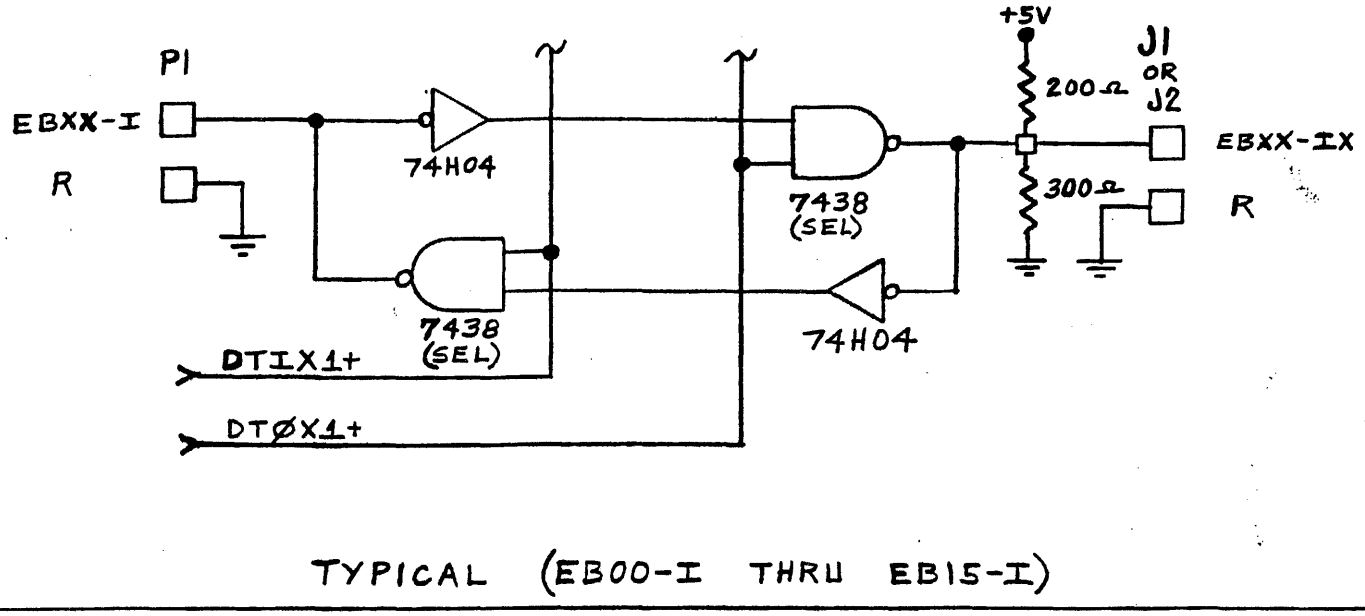
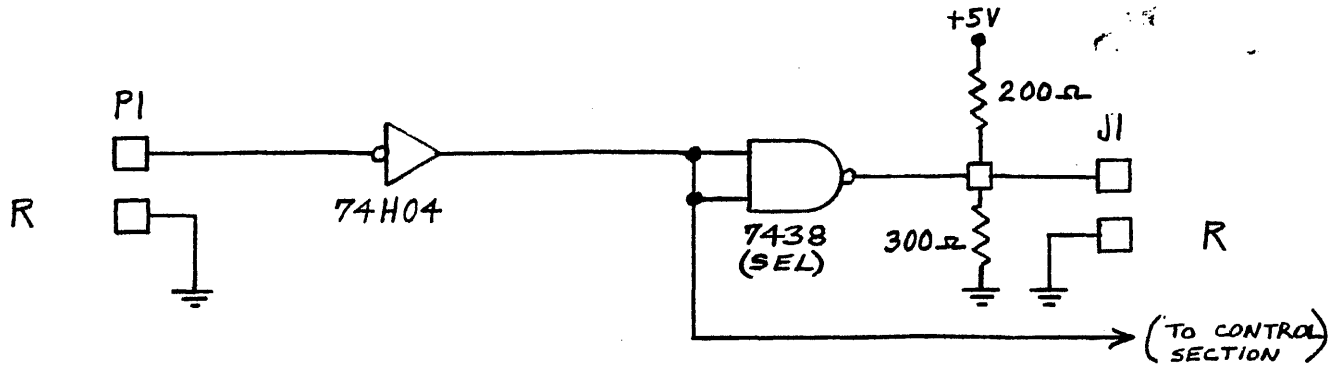


FIGURE 1

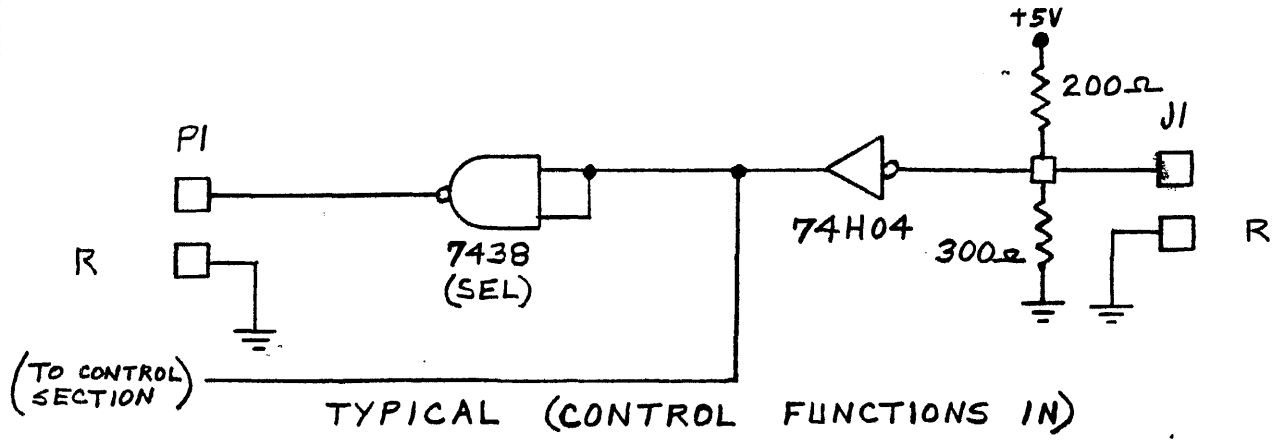
varian data machines a varian subsidiary	CODE IDENT NO. 21101		98A1169	A
			SH 4 OF 17	REV



TYPICAL (EB00-I THRU EB15-I)



TYPICAL (CONTROL FUNCTIONS OUT)



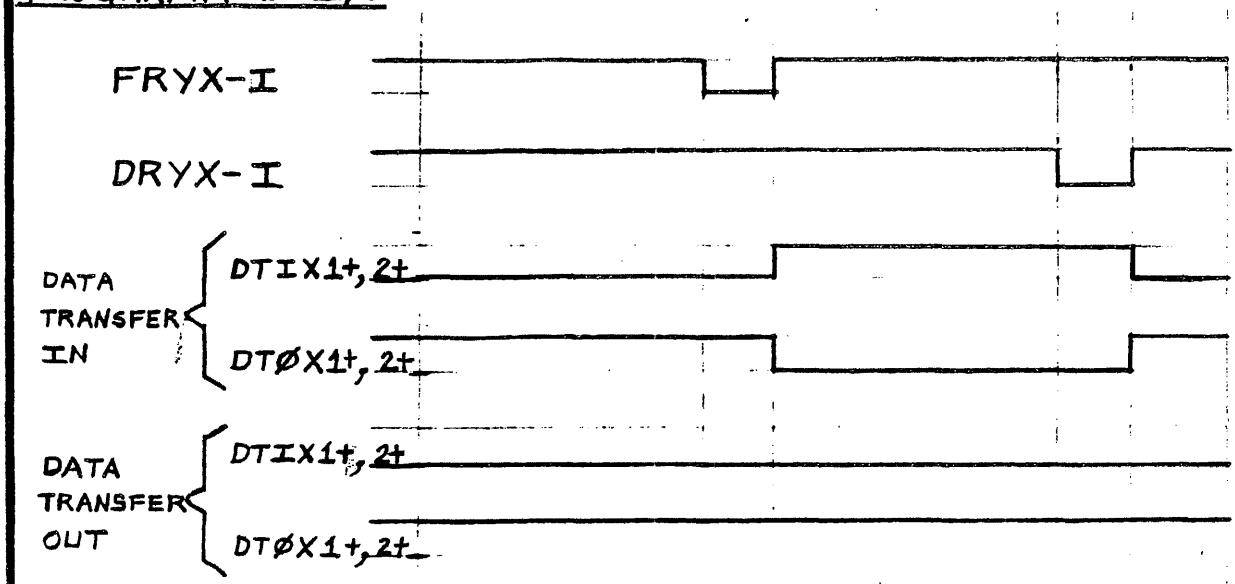
TYPICAL (CONTROL FUNCTIONS IN)

FIGURE 2

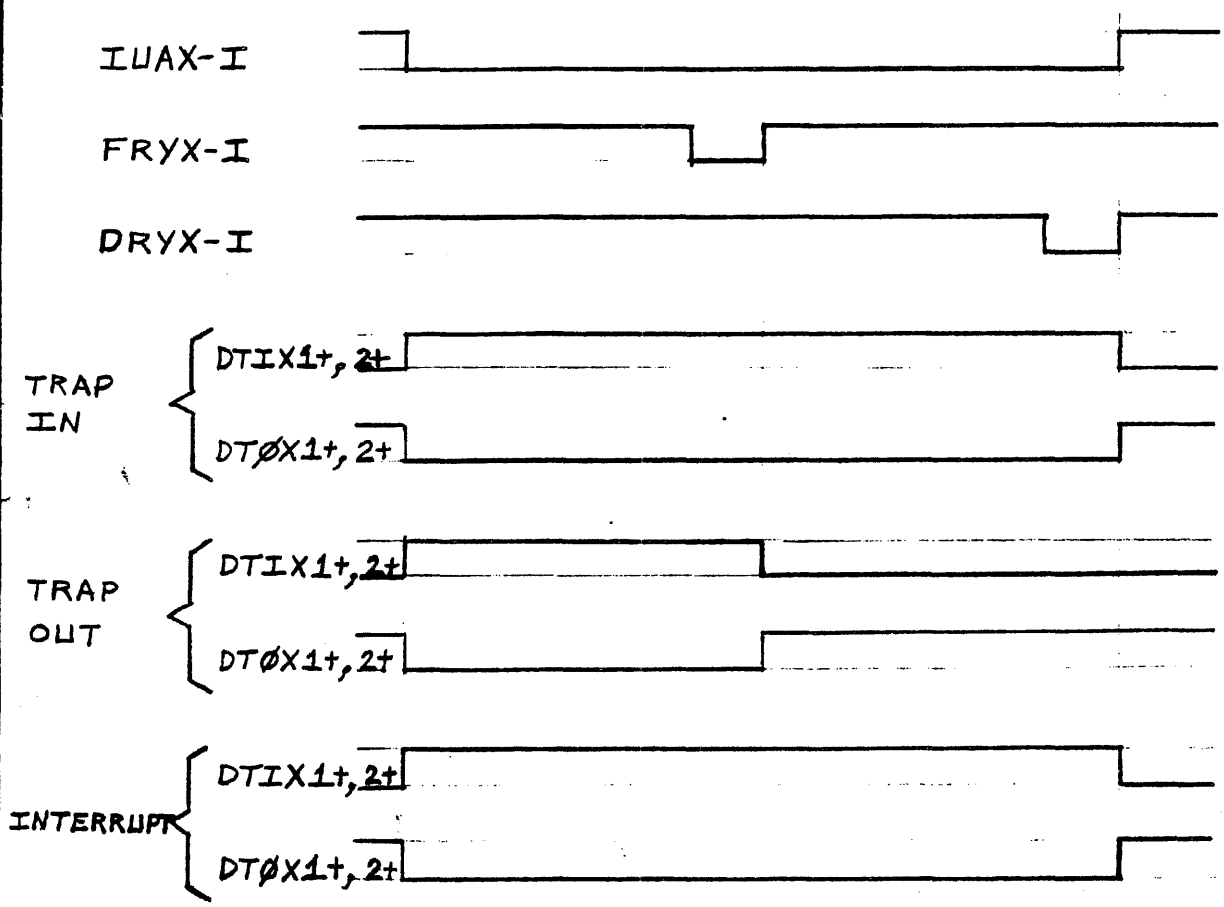
varian data machines a varian subsidiary	CODE IDENT NO. 21101		98A1169 SH 5 OF 17	A REV

FIGURE 3

PROGRAMMED I/O



DMA AND INTERRUPT



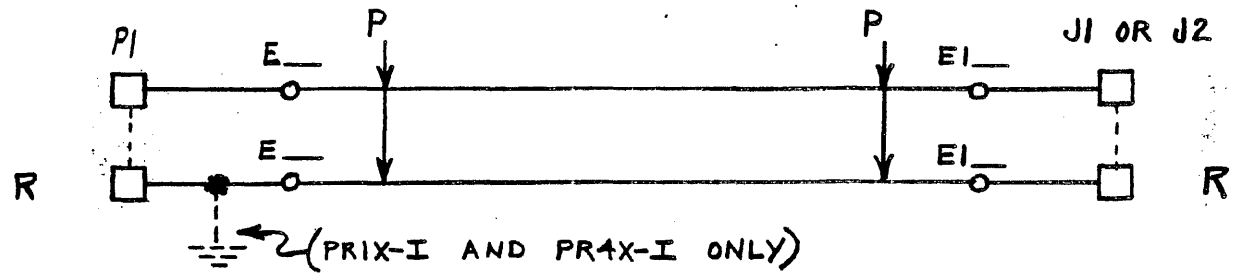
2.4 Priority Wiring

Four twisted pairs are provided on the board to bring priority lines through the board between the P1 connector of the board and the J1 connector (typical circuit shown in Figure 4). In addition, one twisted pair is provided between P1 and J2 to bring Rotating Memory Data Guard (RMDAG-) through the board. Provision is made for five more twisted pairs which can be added at the users option for bringing additional priority lines through the board (between P1 and J2).

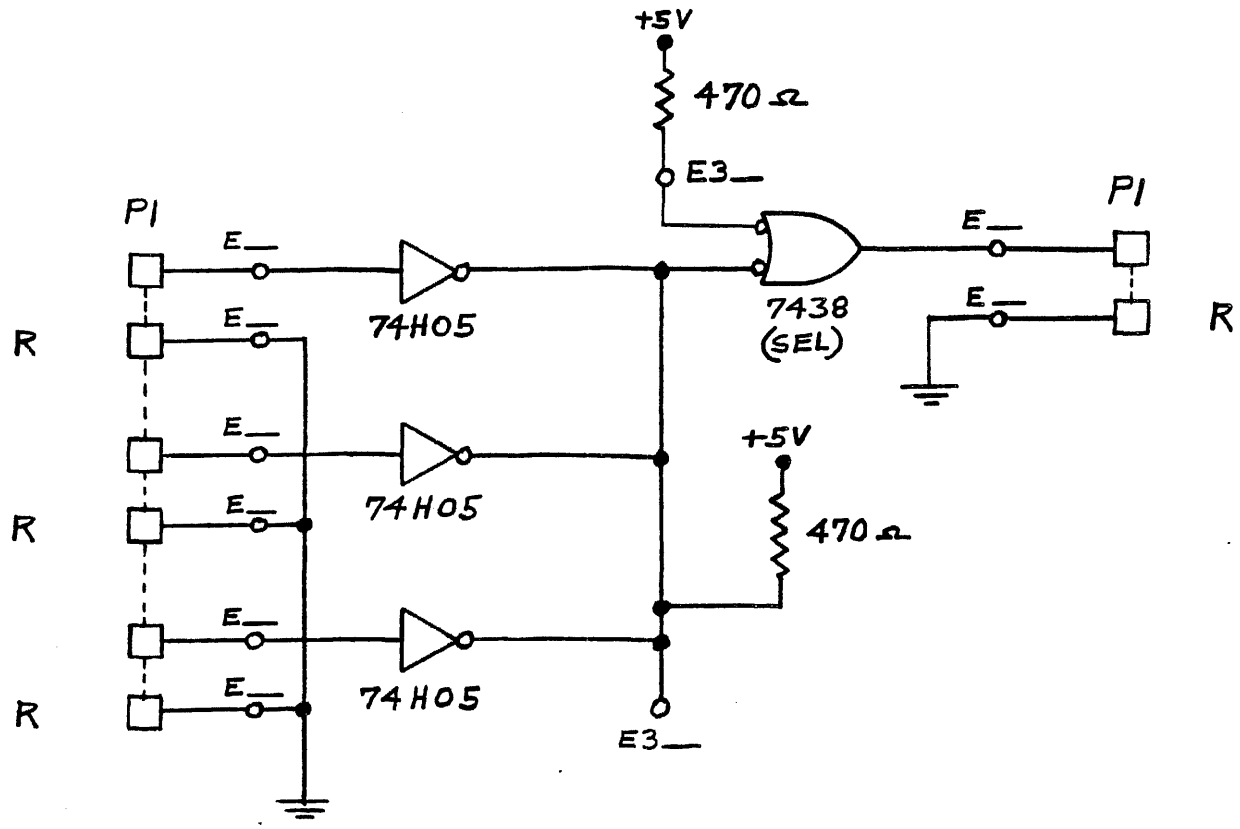
2.5 Priority Look-Ahead

Two separate priority look-ahead circuits are provided for convenience in system configuration. A typical circuit is shown in Figure 4.

Each circuit receives its inputs and outputs via the P1 connector. However, uncommitted priority line pins on the J2 connector may alternatively be tied into the look-ahead circuits using the E-points provided on both the pins and the look-ahead circuits.



TYPICAL (PRIX-I THROUGH PR9X-I, RMDAG-)



TYPICAL (PRIORITY LOOK-AHEAD)

FIGURE 4

varian data machines a varian subsidiary	CODE IDENT NO. 21101		98A1169	A
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3.0 PHYSICAL DESCRIPTION

The DM 394 Series I/O Expander is packaged on one 7 3/4-by-12-inch printed circuit board and requires only one I/O board slot. The Series I/O Expander Option (01P1095) also includes a term shoe and an expansion cable. The expansion cable attaches to the J1 and J2 connectors of the board and has a paddleboard connector at the opposite end for plugging into the expanded bus backplane.

4.0 INTERFACE DATA

4.1 Logic Levels

False ≠ +2.4 VDC to +3.2 VDC

True = 0 VDC to +0.5 VDC

4.2 Signal Definitions

Mnemonic	Description	Function
EB00-I through EB17-I	E-bus lines 00 through 17	Bi-directional I/O bus data lines used to transmit data between the CPU and the I/O controllers.
FRYX-I	Function ready	I/O bus control line from the computer used to indicate to the external device controller that the computer has placed a device address and a control code on the E-bus. Also, used during a DMA and/or interrupt to indicate that the computer has read the address from the E-bus.
DRYX-I	Data ready	I/O bus control line from the computer used to indicate to the external device controllers that the data transfer has been completed during a data transfer instruction or DMA sequence.
IUAX-I	Interrupt acknowledge	I/O bus control line from the computer used to acknowledge to the requesting external device controller that a DMA or interrupt operation is in progress.
IUCX-I	Interrupt clock	I/O bus clock line used to synchronize DMA and interrupt operation on the I/O bus.
IUJX-I	Interrupt jump	I/O bus control line used to inhibit all interrupting device controllers on the I/O bus when a jump-and-mark instruction occurs during an interrupt sequence.
IURX-I	Interrupt request	I/O bus control line from a peripheral controller or PIM requesting the computer to initiate an interrupt cycle.
PRnX-I	Priority line n	I/O bus priority line n where n = 1, 2, ... 9.
SYRT-I	System reset	I/O bus control line from the computer used to initialize external device controllers on the I/O bus

(continued)

Mnemonic	Description	Function
SERX-I	Sense response	I/O bus control line used to transmit the status of a selected external device condition from the selected external device controller to the computer.
TPIX-I	Trap in request	I/O bus control line from a peripheral controller or BIC requesting the computer to initiate a trap (DMA) in cycle.
TPOX-I	Trap out request	I/O bus control line from a peripheral controller or BIC requesting the computer to initiate a trap (DMA) out cycle.

NOTE: Mnemonics for corresponding signals on the expansion I/O bus end in "-IX" instead of "-I".

4.3 Terminations

The terminations for one end of the expansion I/O bus are located on the DM 394 board. A term shoe is supplied with the Series I/O Expander option to provide the terminations for the other end of the expansion I/O bus.

4.4 Pin Assignments

4.4.1 Main I/O Bus

Name	Connector - Pin
GRD	P1- 1
EB00-I	- 2
R	- 3
EB01-I	- 4
R	- 5
EB02-I	- 6
R	- 7
EB03-I	- 8
R	- 9
EB04-I	-10
EB05-I	-11
EB06-I	-12
EB07-I	-13
EB08-I	-14
EB09-I	-15
EB10-I	-16
EB11-I	-17
EB12-I	-18
EB13-I	-19
EB14-I	-20
EB15-I	-21
R	-22
R	-24
R	-26
FRYX-I	-27
DRYX-I	-29
R	-30
SERX-I	-31
R	-32
TPIX-I	-33
R	-34
TPOX-I	-35
R	-36
PR1X-I	-37
R	-38
PR2X-I	-39
R	-40
PR3X-I	-41
PR4X-I	-42
SYRT-I	-43

(continued)

Name	Connector - Pin
IUAX-I	P1-44
IUCX-I	-45
IURX-I	-46
IUJX-I	-47
R	-51
R	-53
R	-59
PR5X-I	-60
PR6X-I	-63
R	-64
PR7X-I	-65
R	-66
PR8X-I	-67
R	-68
PR9X-I	-69
R	-70
RMDAG-	-71
R	-72
LA1A-	-80
R	-81
LA1B-	-82
R	-83
LA1O-	-84
R	-85
LA2B-	-86
R	-87
LA2C-	-88
R	-89
(Ret) LA2O-	-90
R	-91
R	-105
LA1C-	-106
R	-109
LA2A-	-110
+5V	-118
+5V	-121
GRD	-122

4.4.2 Expanded I/O Bus

Name	Connector - Pin
EB13-IX	J1- 2
R	- 3
EB14-IX	- 4
R	- 5
EB15-IX	- 6
R	- 7
FRYX-IX	- 8
R	- 9
DRYX-IX	-10
R	-11
SERX-IX	-12
R	-13
TPIX-IX	-14
R	-15
TPOX-IX	-16
R	-17
IUJX-IX	-18
R	-19
SYRT-IX	-20
R	-21
IUAX-IX	-22
R	-23
IUCX-IX	-24
R	-25
IURX-IX	-26
R	-27
PR1X-IX	-30
R	-31
PR2X-IX	-32
R	-33
PR3X-IX	-34
R	-35
PR4X-IX	-36
R	-37
EB00-IX	J2- 2
R	- 3
EB01-IX	- 4
R	- 5
EB02-IX	- 6
R	- 7
EB03-IX	- 8
R	- 9

(continued)

Name	Connector - Pin
EB04-IX	J2-10
R	-11
EB05-IX	-12
R	-13
EB06-IX	-14
R	-15
EB07-IX	-16
R	-17
EB08-IX	-18
R	-19
EB09-IX	-20
R	-21
EB10-IX	-22
R	-23
EB11-IX	-24
EB12-IX	-26
R	-27
R	-29
PR6X-IX	-30
R	-31
PR5X-IX	-32
R	-33
PR7X-IX	-34
R	-35
PR8X-IX	-36
R	-37
PR9X-IX	-40
R	-41
RMDAG-IX	-42
R	-43

5.0 FEATURES AND OPTIONS

5.1 When more than one DM 394 Series I/O Expander is required in a system, the expanders must be placed in parallel on the computer I/O bus (not in series).

5.2 Each DM 394 presents one load to the computer I/O bus. The computer I/O bus can drive 10 loads maximum.

5.3 Each DM 394 can drive up to 10 loads maximum.

6.0 APPENDICES

6.1 Reference Documents

01P1095, 01A1095	Parts list and top assembly, I/O Expander Option.
44P0670, 44D0670	Parts list and assembly, Series I/O Expander Board
40D0606	PW board, Series I/O Expander
97E0835	Artwork, Series I/O Expander
97E0836	Soldermask, Series I/O Expander
91C0435	Logic diagram, Series I/O Expander

SPERRY UNIVAC — SPERRY UNIVAC IS A DIVISION OF SPERRY RAND CORP

PARTS LIST

MFG CODE	ISSUE DATE	CONTROL	CA	TYPE	COMM CODE	SI
J W	02/04/80	W777		M		A

PL	DOC NO	SH	REV
	W 0101095	1	G

CI A | U/M A | AC 7 | DOC SIZ A | RATING | TYPE | CODE | CH REV G

TITLE: I/O EXPANDER OPTION

FIND NO	QUANTITY REQUIRED	U/M	I	SPECIFICATION NO DOCUMENT NO	DASH	NOMENCLATURE OR DESCRIPTION			F	H
Z07				W-8796A	-02	PL REV G, PIC REV G, RANGE 00 - 03 EIR RELEASED		02/04/80		
Z08				W-8747A	-27	PL REV F, PIC REV D, RANGE 00 - 03 EIR RELEASED		10/15/79		
						********** COMMON DATA **********				
1	1	EA		W 9400670	-00	PC ASSEMBLY - SERIES I/O EXPANDER			A	
7	AR	IN		W 5300453	-50	WIRE,STR,TWISTED PAIR,I.P.V.C.30 AWG BLACK & GREEN			A	
8	AR	EA		W 9000007	-00	POTTING COMPOUND			A	
F01		X		W 9100435	-00	LOGIC DIAGRAM - SERIES I/O EXPANDER			A	
S01		X		S-01162	-00	PART IDENTIFICATION	MARKING SPEC		A	
S02		X		S-00830	-00	TEST SPECIFICATION	I/O EXPANDER OPTION		A	
S03		A		S-01169	-00	HARDWARE PERFORMANCE SPEC	SERIES I/O EXPANDER (DH396)		A	
						SEE TABULATION ON DRAWING	* VARIABLE DATA - 00			
2	1	EA		W 5300537	-00	CABLE ASSY, I/O EXPANDER			A	
						SEE TABULATION ON DRAWING	* VARIABLE DATA - 01			
3	1	EA		W 5300650	-00	CABLE ASSY, I/O EXPANDER			A	
				F3036-00		SEE TABULATION ON DRAWING	* VARIABLE DATA - 02			
4	1	EA		6600709	-00	CABLE ASSY - I/O BUS EXPANDER			A	*
5	1	EA		W 9400660	-02	PC ASSEMBLY - TERM SHOE DH389	NORMAL I/O AND HIGH SPEED DMA		A	
				F3036-01		SEE TABULATION ON DRAWING	* VARIABLE DATA - 03			
9	1	EA		6600709	-00	CABLE ASSY - I/O BUS EXPANDER			A	*
6	1	EA		W 0101958	-00	TERMINATOR OPTION	1 TERMINATOR		A	

UDI 1517 REV 3/75

DUPLICATE

DWG NO. W0101095

REVISIONS				
REV	EIR	DESCRIPTIONS	DR	APPD
D	W87474-27	RELEASED TO API	T.N	12-25-8
G	W87968-02	UPDATED FORMAT, DOC NO. WAS 01A1095	T.N	12-25-8

TABULATION BLOCK		
PART NO.	FEATURE NO.	USED WITH
W 0101095 - 00		620 F
W 0101095 - 01		620 F WITH EXP CHASSIS 3
W 0101095 - 02	F 3036 - 00	620/L, F-100, V70 I/O
W 0101095 - 03	F 3036 - 01	V77, I/O EXP CHASSIS

PART NO.: SEE TABULATION

FOR MATL REQUIREMENTS SEE PL
PL REV LETTER CONTROLS DOCUMENT.

NEXT ASSEMBLY			MODEL NO.	SPERRY UNIVAC
DR	J.R.LUTHER	11-30-71	CODE IDENT NO. 21101	TITLE: I/O EXPANDER OPTION
CHK	DUSTON	12-21-72		
DSGN	J.R LUTHER	11-30-71		
ENGR	E.MC COY	5-22-72		
APPD	P.W. ANDERSON	5-22-72		
APPD				

SIZE	DWG NO.	REV
A	W 0101095	G

SHEET 1 OF

NOTES: UNLESS OTHERWISE SPECIFIED

1. THE PURPOSE OF THIS OPTION IS TO PROVIDE CONNECTION FOR 10 ADDITIONAL PERIPHERAL DEVICE CONTROLLERS VIA THE CPU I/O CHANNEL

2. IF OPTION IS TO BE SHIPPED FOR CUSTOMER INSTALLATION PACK IN SUITABLE CONTAINER AND MARK CONTAINER WITH THE FOLLOWING INFORMATION:
   I/O EXPANSION OPTION
   MODEL NO. (APPLICABLE MODEL AND SERIAL NO)
   PART NO. W0101095- (APPLICABLE DASH NO. AND REVISION LTR)

3. FOR TYPICAL INSTALLATION INTO A 620/f SEE FIGURES 1 OR 2

4. FOR TYPICAL INSTALLATION OF THE -02 VERSION SEE FIGURE 3.

5. FOR TYPICAL INSTALLATION INTO A V70 SERIES SYSTEM SEE FIGURES 4 OR 5. SEE SYSTEMS MEMO FOR DETAIL.

6. ADD PRIORITY WIRING TO P.C. VERSION (W4400670) AT THE SYSTEMS LEVEL AS REQUIRED (REF W9100435 SHT 5). USE 30 AWG TWISTED PAIR GREEN/BLACK WIRE (S.U P/N W 5300453- 50) ROUTE WIRES PARALLEL TO EDGES OF BOARD AND SECURE IN PLACE WITH ADHESIVE (S.U P/N W 9000007-00) .

7. INSTALL FIND NO. 5 IN I/O EXPANSION CHASSIS SLOT IF AND AS SPECIFIED BY SYSTEMS MEMO.

8. FOR TYPICAL INSTALLATION OF -03 VERSION INTO A V77 I/O EXP CHASSIS SEE FIGURE 6. REFER TO SYSTEMS MEMO FOR DETAIL.

(NOTE : CONTINUED)

9. IN ALL CASES F/N 1 MUST BE INSTALLED ON THE CPN PRIMARY I/O BUS . I/O EXPANDERS MAY NOT BE INSTALLED ON AN EXPANDED BUS .

10. CERTAIN SYSTEM CONFIGURATIONS MAY REQUIRE THE USE OF ADDITIONAL ALTERNATIVES OR MODIFIED ITEMS SUCH AS TERM. SHOE GUARDS, SPECIAL LENGTH CABLES ECT. REFER TO SYSTEMS MEMO FOR DETAIL. TYPICALLY, ITEMS/MATERIAL NOT USED IN THE FINAL CONFIGURATION IS TO BE RETAINED AT MCO.

11. ADDITION OF "LOOK AHEAD" CIRCUITRY. CERTAIN SYSTEMS REQUIRE THE IMPLEMENTATION OF PRIORITY "LOOK AHEAD". THIS WILL BE SPECIFIED VIA THE SYSTEMS MEMO AND WILL TYPICALLY INVOLVE MODIFICATION TO F/N 1 (OR SOMETIMES F/N 5.)

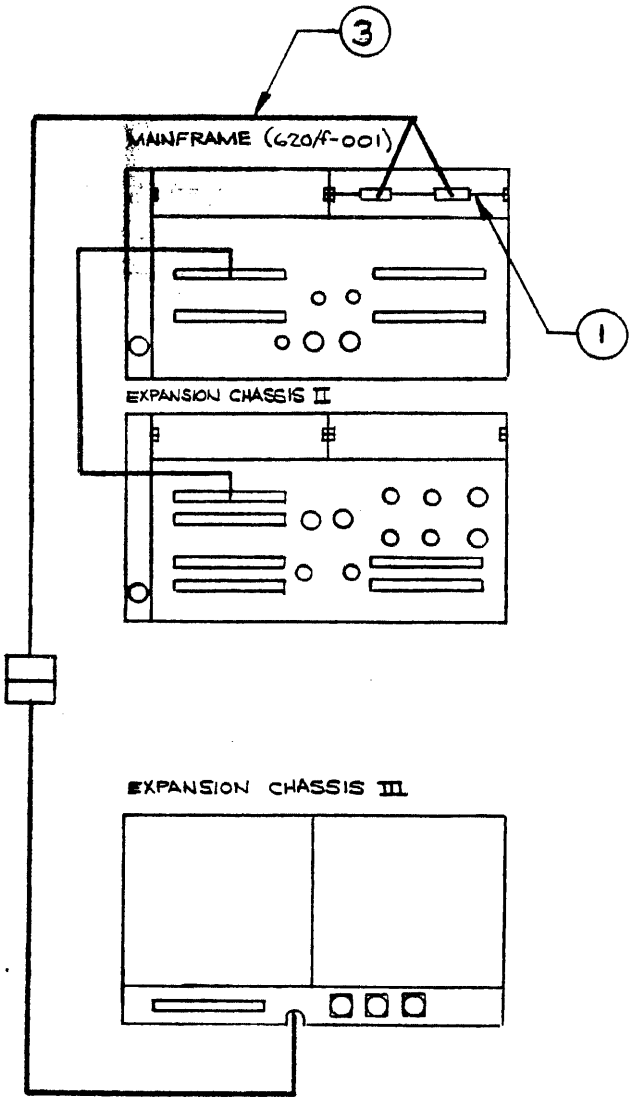


FIGURE 1
W0101095 - 01

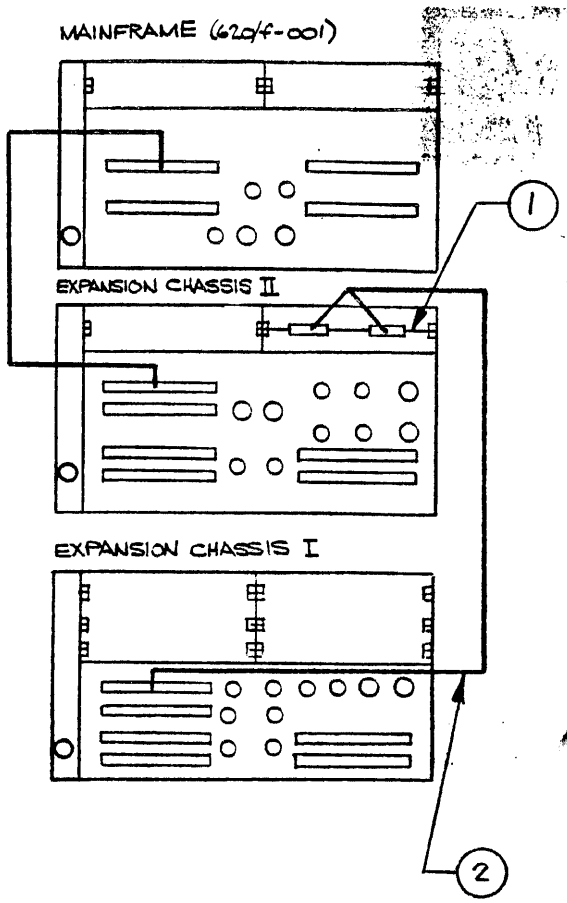


FIGURE 2
W0101095-00

	CODE IDENT NO. 21101		W0101095	G
			SH 4 OF 7	REV

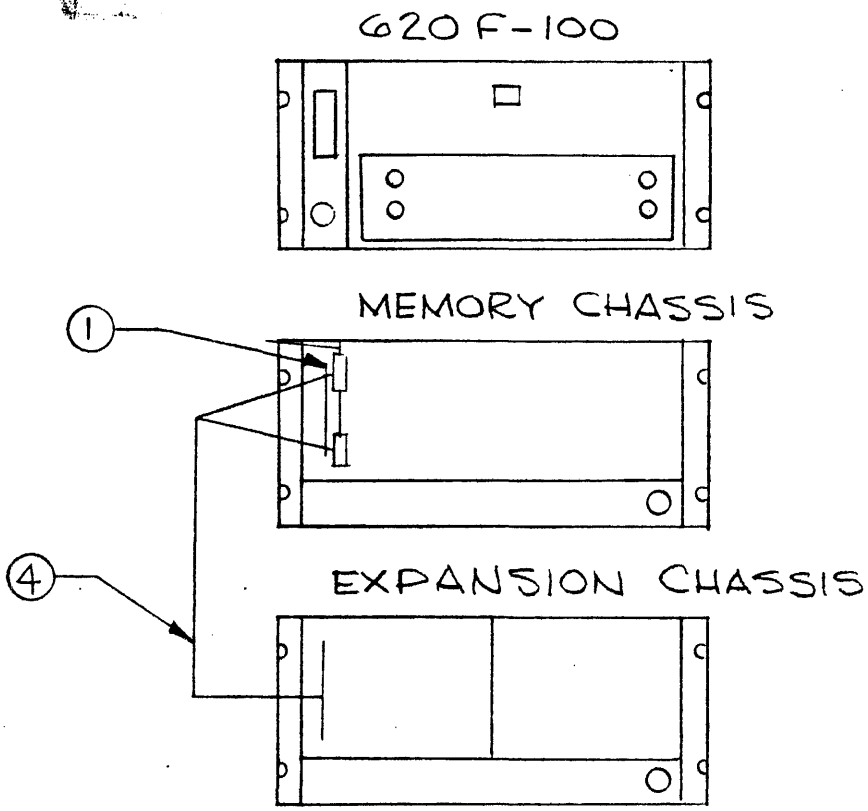


FIGURE 3

W0101095- 02

NOTE : F/N 5 WILL TYPICALLY BE INSTALLED IN AN END SLOT OF THE "EXPANDED" I/O BUS. REFER TO SYSTEMS MEMO FOR DETAIL.

	CODE IDENT NO. 21101		W0101095	G
			SH 5 OF 7	REV

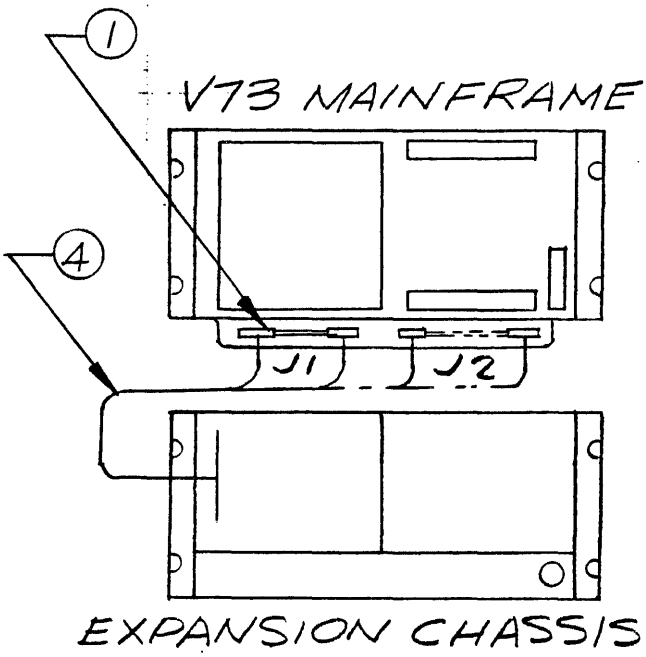


FIGURE 4

NOTE: BOARD MAY BE INSTALLED IN J2 LOCATION.

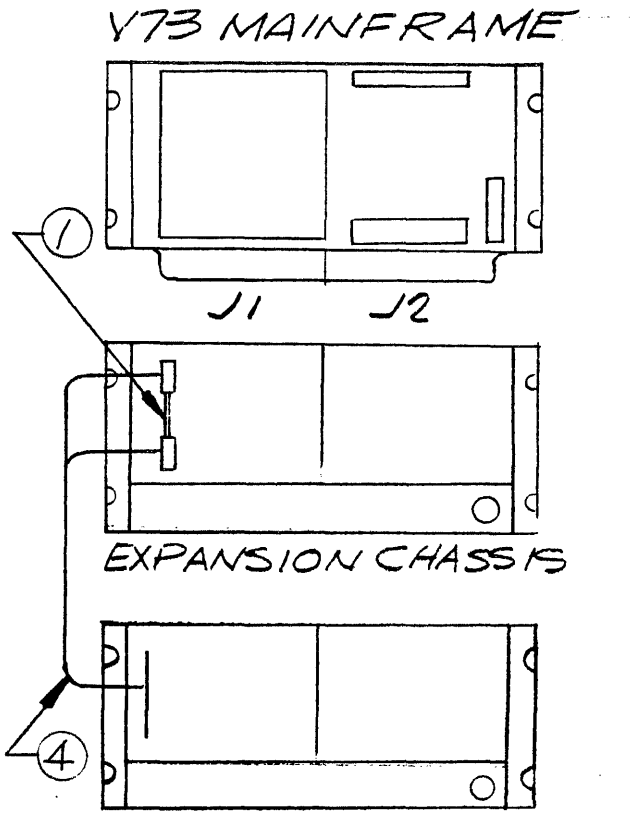
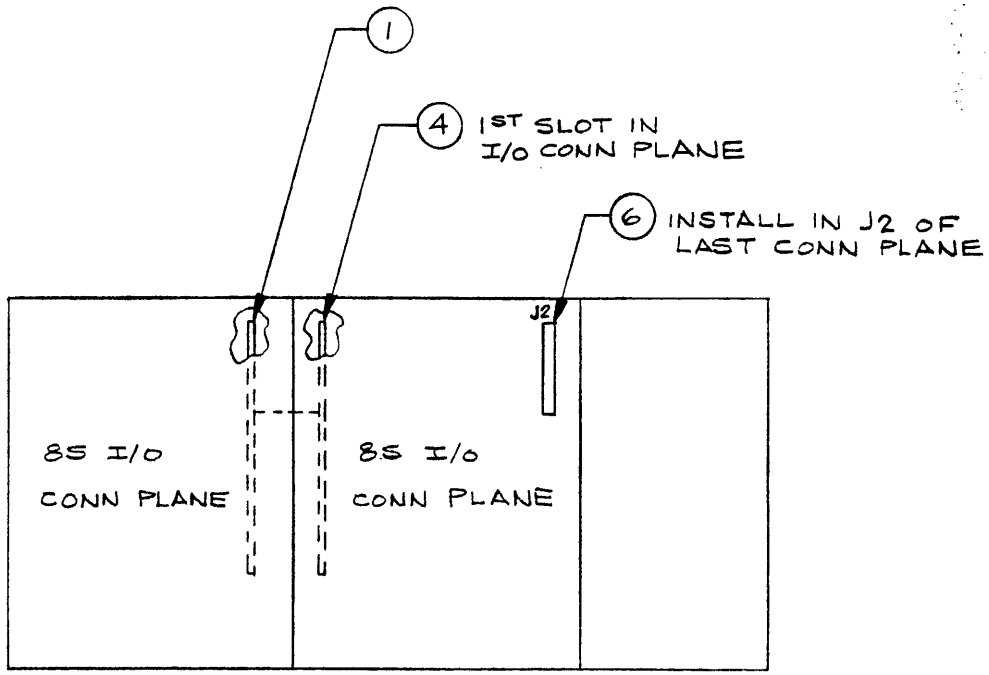


FIGURE 5

NOTE: F/N 5 WILL TYPICALLY BE INSTALLED IN AN I/O SLOT AT THE END OF THE "EXPANDED" BUS. REFER TO SYSTEMS MEMO FOR DETAIL.

	CODE IDENT NO. 21101		W0101095	G
			SH 6 OF 7	REV



V77 I/O EXP CHASSIS
REAR VIEW
FIGURE 6 -03 ONLY

NOTE: IN CERTAIN CONFIGURATION F/N 6 MAY NOT BE USED; F/N 5 MAY BE SUBSTITUTED. IT WOULD BE INSTALLED IN AN I/O SLOT AT THE END OF THE "EXPANDED" BUS REFER TO SYSTEMS MEMO FOR DETAILS

SPERRY UNIVAC PARTS LIST

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MFG CODE	ISSUE DATE	CONTROL		DOC NO.	AC	SHEET
J ,W	81/06/09	W 777	PL	W4400670	1	1

TITLE	PCC	ADC	PCD	COMM CODE	CA	U/M	ST	TYPE	SIZE	CLASS
PC ASSY SERIES I/O EXPANDER						EA	A	M	D	A

FIND NO.	QUANTITY REQUIRED		U/M	PCC	PART OR IDENT NO. DOCUMENT NO.	DASH	EIR AND PART DESCRIPTION INFORMATION		ECC	ST	CHG
Z013					W 94846	-01	PL REV N, PIC REV L, RANGE 00 - 00 EIR RELEASED 81/06/09				*
Z012					W 94603	-04	PL REV M, PIC REV L, RANGE 00 - 00 EIR RELEASED 81/05/20				
*****	*******	***	**	*	**********	****	********** COMMON DATA **********				
1	1		EA		W4000606	-00	PC BOARD	SERIES I/O EXPANDER DM394		A	
2	11		EA		W4900128	-01	INTEGRATED CIRCUIT, DIGITAL	TTL 7438 QUAD 2IN NAND		I	
3	1		EA	I	3008183	-00	INTEGRATED CIRCUIT	TTL 7404 * GT HEX INVERT		I	
4	1		EA	I	3008186	-00	INTEGRATED CIRCUIT	TTL 7410 * GT NAND 3IN		I	
5	1		EA		W4900139	-00	INTEGRATED CIRCUIT	14 DIL - PLASTIC OR CERAMIC		I	
6	8		EA	I	3007755	-00	INTEGRATED CIRCUIT	TTLH 74H04 * GT HEX INVERT		I	
7	1		EA	I	3008194	-00	INTEGRATED CIRCUIT	TTL 7474 * FF D DUAL		I	
8	1		EA		W4900093	-01	INTEGRATED CIRCUIT, DIGITAL	TTLH 74H50		A	
9	1		EA	I	5036505	-00	INTEGRATED CIRCUIT	TTLH 74H08 * GT AND 2IN		I	
10	2		EA		4916806	-02	RESISTOR NETWORK FIXED	28ELEMT 3 W 2% 200AND 300		A	
11	4		EA		W6505000	471	RES,FXD,COMPOSITION	.5W 5% 470 OHMS		A	
					REF DES	(1)	R1 THRU R4				
12	2		EA		W6502500	752	RES,FXD,COMPOSITION,1/4W,5%	7500 OHMS		A	
					REF DES	(1)	R5 R7				
13	1		EA		W6502500	102	RES,FXD,COMPOSITION,1/4W,5%	1000 OHMS		A	
					REF DES	(1)	R6				
14	8		EA		W7100350	475	CAPACITOR, FXD, TANTALUM DIEL	4.70 UF		A	
					REF DES	(1)	C1 THRU C8				
15	18		EA		W7100304	100	CAPACITOR, FIXED, CERAMIC DIEL	.1 UF +80%, -20%		I	
					REF DES	(1)	C9 THRU C26				
19	1		EA	I	3007952	-00	INTEGRATED CIRCUIT	TTL 74123 * MVB DUAL RGT		I	
20	2		EA		W6901500	220	CAPACITOR, FIXED, MICA DIEL	500V 5% 22 PF		A	

SPERRY UNIVAC **PARTS LIST**

SPERRY UNIVAC IS A DIVISION OF SPERRY CORPORATION

MFG CODE	ISSUE DATE	CONTROL		DOC NO.		SHEET
J ,W	81/06/09	W 777	PL	W4400670	1	2

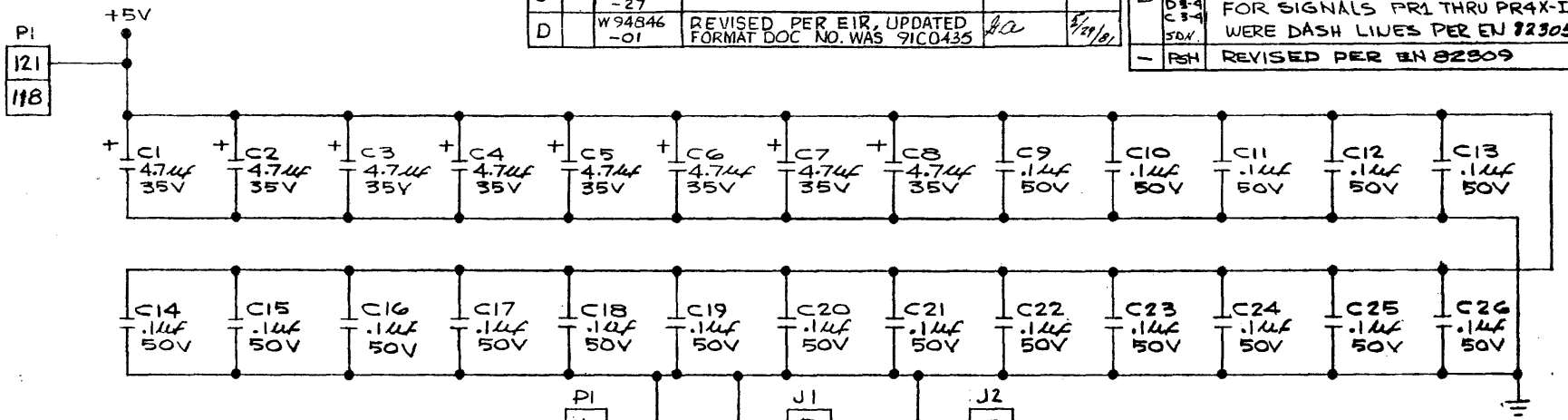
TITLE: PC ASSY SERIES I/O EXPANDER

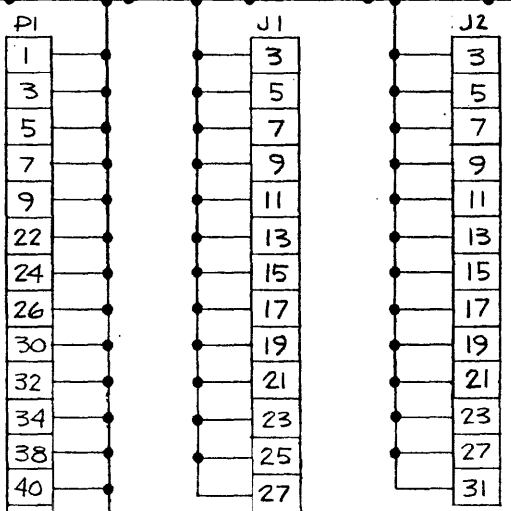
PCC	ADC	PCD	COMM CODE	CA	U/M	ST	TYPE	SIZE	CLASS
					EA	A	M	D	A

FIND NO.	QUANTITY REQUIRED	U/M	PCC	PART OR IDENT NO. DOCUMENT NO.	DASH	EIR AND PART DESCRIPTION INFORMATION	ECC	ST	CHG
				REF DES	(1)	C27 C28			
21	AR	IN		W5300331	-05	CABLE, SPECIAL PURPOSE ELEC 30 AWG, BLACK & GREEN		A	
23	4	EA		W6502500	151	RES,FXD,COMPOSITION,1/4W,5% 150 OHMS		A	*
				REF DES	(1)	R8 THRU R11			
F001		X		W9100435	-00	LOGIC DIAGRAM SERIES I/O EXPANDER		A	
S001		X		SW01163	-00	MARKING,MECHANICAL SPECS DSGN-F/GENERAL IDENTIFICATION		A	
*****	******* ***		*	**********	****	* VAR DATA PART - 00 *********		A	

REVISION					
SYM	CODE	EN	DESCRIPTION	APPROVED	DATE
C	3	82775	ADDED R8-R11 ON SHEET 5 REF DWG WAS: 44D0606	D.B.	7/30/74
C		E I R W87474 -27	RELEASED INTO API		
D		W94846 -01	REVISED PER EIR, UPDATED FORMAT DOC NO. WAS 9IC0435	fa	5/29/81

REVISIONS				
SYM	ZONE	DESCRIPTION	APPROVED	DATE
X		PROTOTYPE RELEASE		
A		PRODUCTION RELEASE EN 81958	[illegible]	5/1977
B	SH5 D8-4 C3-4 SOM.	LINES BETWEEN J1 & P1 FOR SIGNALS PR1 THRU PR4X-IX WERE DASH LINES PER EN 82305	[illegible]	7/31/73
—	PSH	REVISED PER EN 82809	[illegible]	9/4/73





W9100435
D

REFERENCE DESIGNATION	
LAST USED	NOT USED
R11	
C28	
J2, P1	

REFERENCE DRAWINGS

W 4400670 _ _ ASSEMBLY
W 4400670 _ _ PARTS LIST
W 4000606 _ _ PW BOARD
W 9700835 _ _ ARTWORK
W 9700836 _ _ SOLDERMASK

1. ALL RESISTOR ARE IN OHMS ± 5%

NOTES: (UNLESS OTHERWISE SPECIFIED)

MODEL NO. MULTI-USAGE
NEXT ASSY 44P0670
MATERIAL
FINISH

DIMENSIONS ARE IN INCHES AND AFTER FINISHING
TOLERANCES (UNLESS OTHERWISE SPECIFIED)
X ± .1
XX ± .03
XXX ± .010
ANGLES ± 0.5°
BREAK ALL SHARP EDGES .010 R APPROX
DO NOT SCALE DRAWING

DR	MANCARELLA	1-3-73
CHK	[illegible]	5-10-73
DSGN	—	—
ENGR	T. E. Hansen	5-14-73
APPD	[illegible]	5/14/73
APPD		

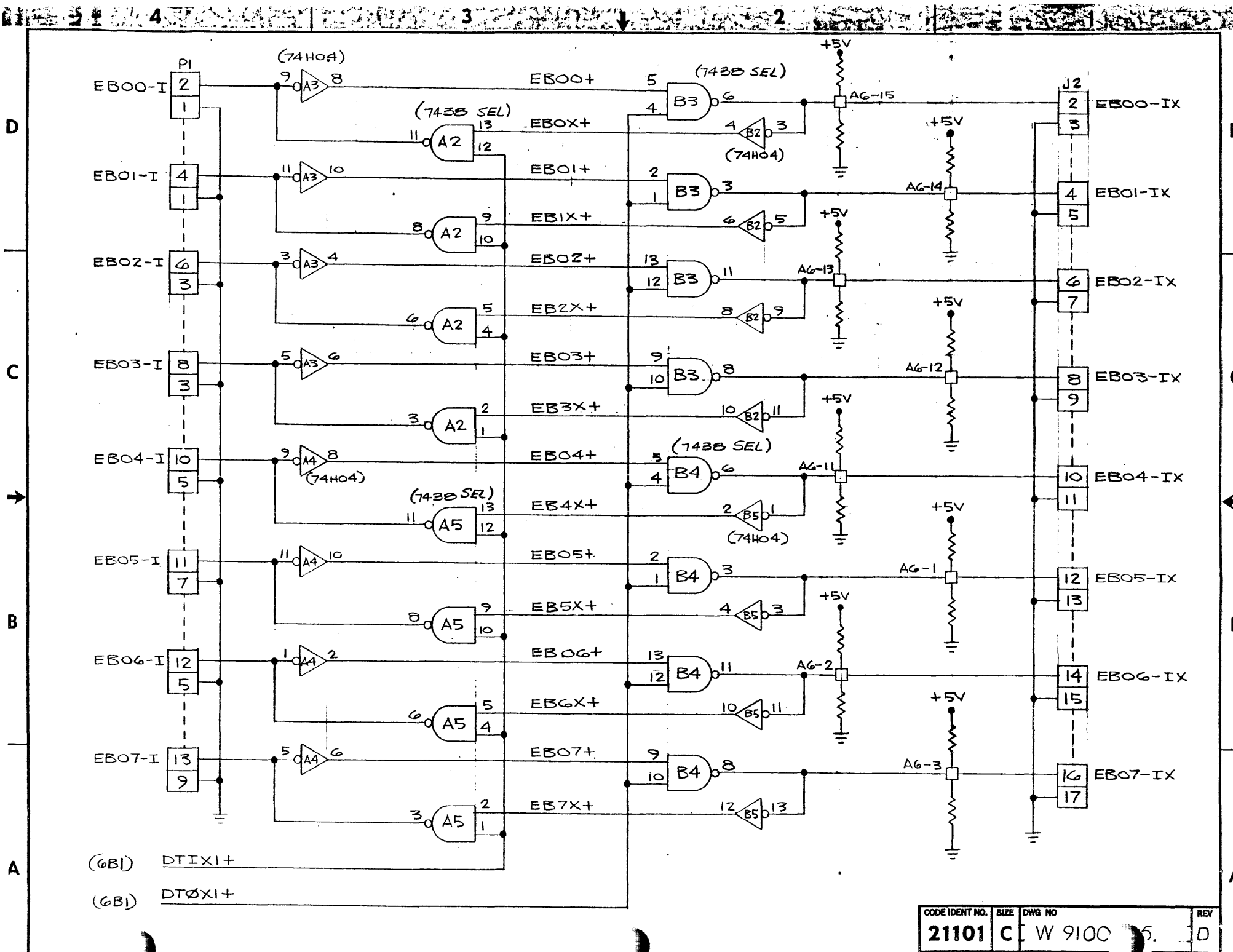
SPERRY UNIVAC

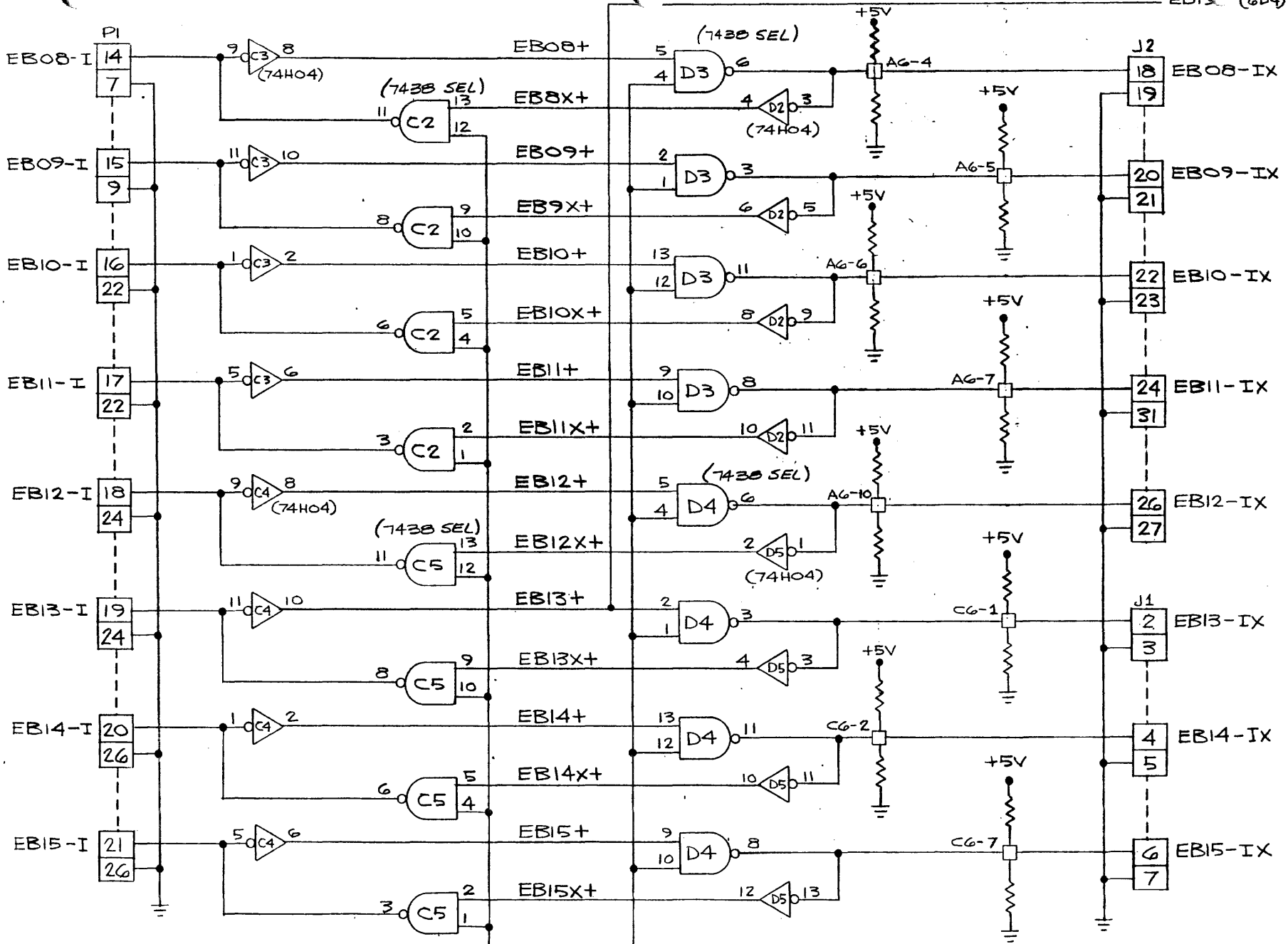
TITLE
LOGIC DIAGRAM
SERIES I/O EXPAN

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	W 9100435	D

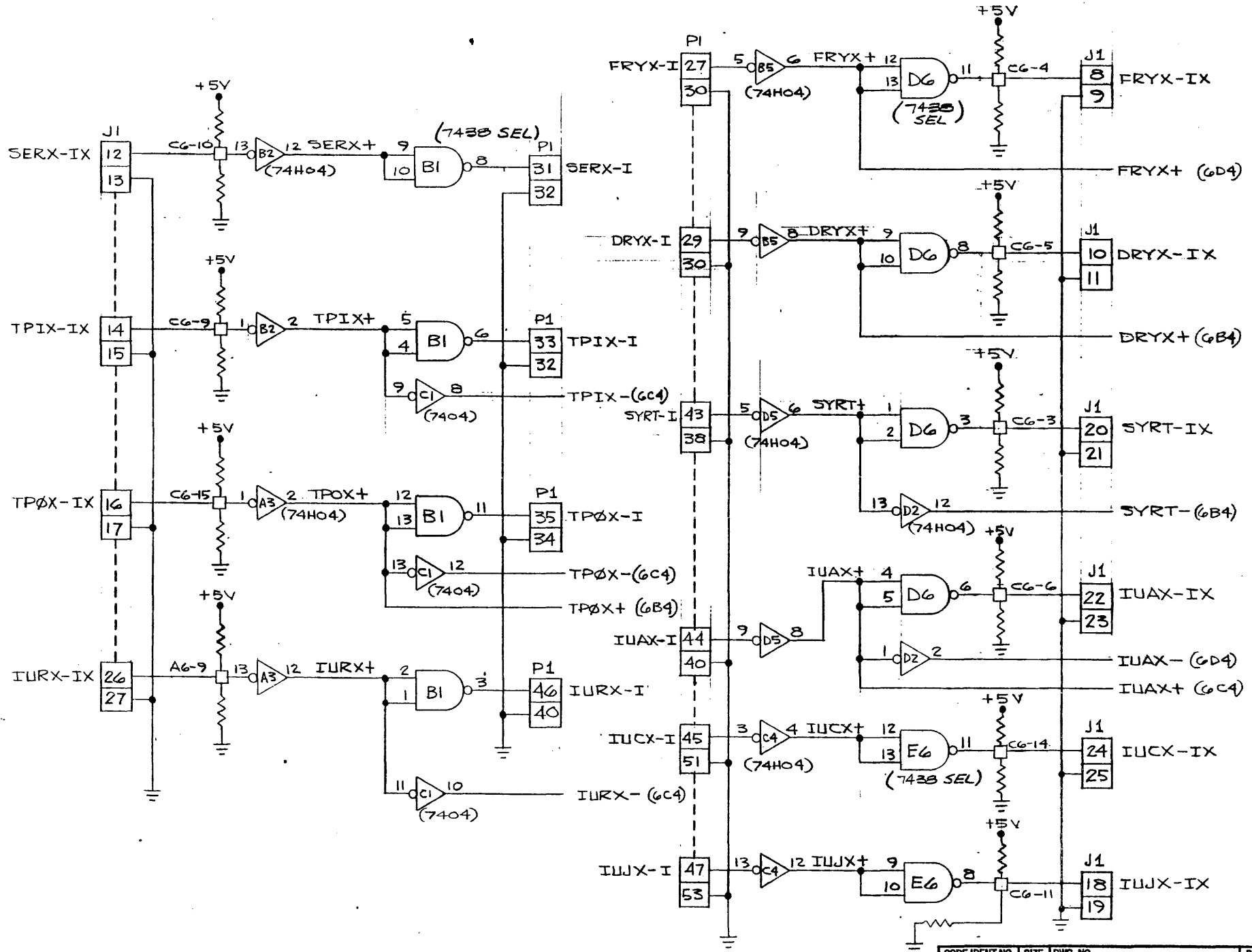
SCALE —
SHEET 1 OF 9

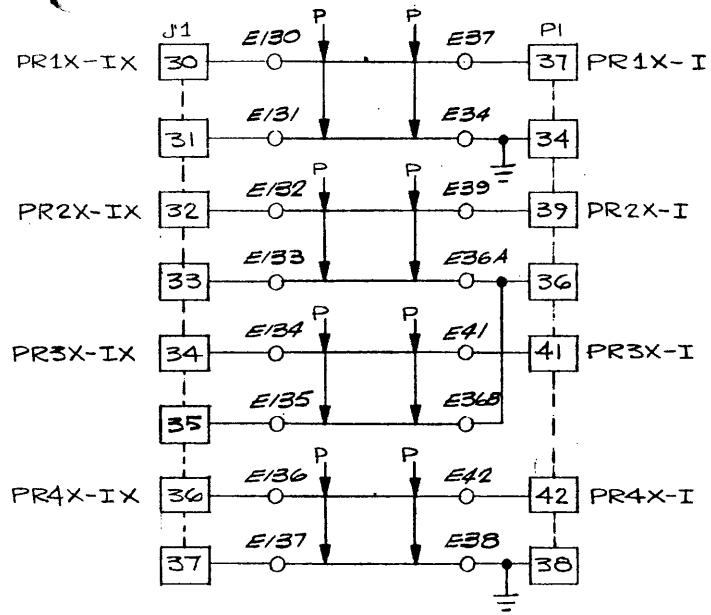
4/71 DIETERICH-POST CLEARPRINT 1000H-10

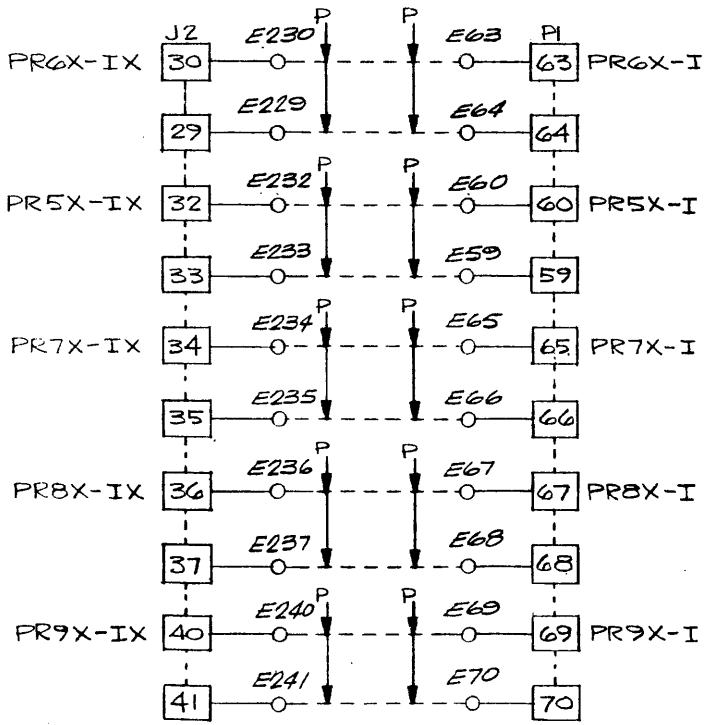

P1
(74H04)
(7438 SEL)
EB00-I
EB01-I
EB02-I
EB03-I
EB04-I
EB05-I
EB06-I
EB07-I
EB00+
EB0X+
EB01+
EB1X+
EB02+
EB2X+
EB03+
EB3X+
EB04+
EB4X+
EB05+
EB5X+
EB06+
EB6X+
EB07+
EB7X+
A2
A3
A4
A5
B2
B3
B4
B5
+5V
AG-15
AG-14
AG-13
AG-12
AG-11
AG-1
AG-2
AG-3
J2
EB00-IX
EB01-IX
EB02-IX
EB03-IX
EB04-IX
EB05-IX
EB06-IX
EB07-IX
(6B1) DTIXI+
(6B1) DTØXI+
CODE IDENT NO. 21101
SIZE C
DWG NO W 9100
REV D
SCALE
2 OF 9

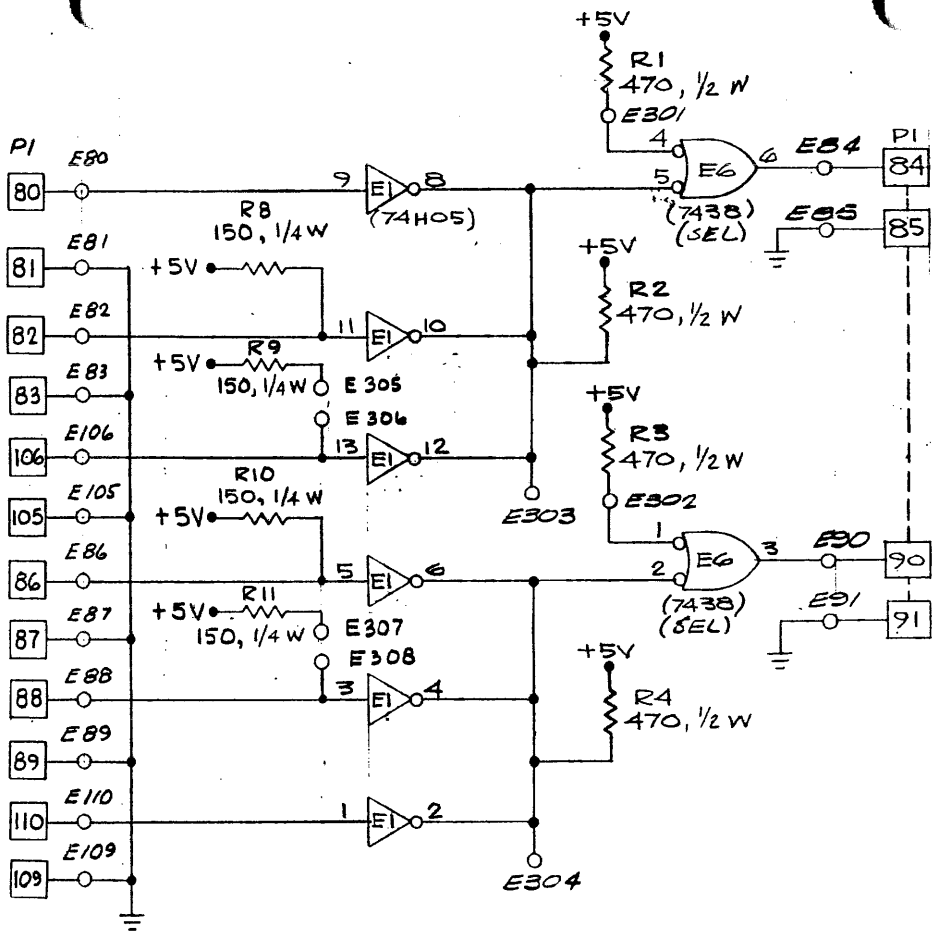


CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	W9100435	D
SCALE		SHEET 3 OF 9	

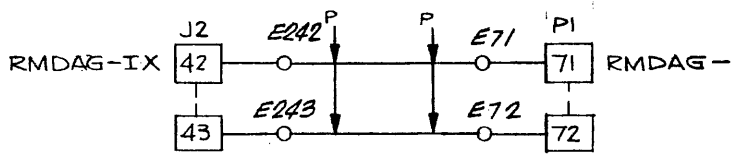

SERX-IX
TPIX-IX
TPØX-IX
IURX-IX
FRYX-I
DRYX-I
SYRT-I
IUAX-I
IUCX-I
IUJX-I
SERX-I
TPIX-I
TPØX-I
IURX-I
FRYX-IX
DRYX-IX
SYRT-IX
IUAX-IX
IUCX-IX
IUJX-IX
FRYX+ (6D4)
DRYX+ (6B4)
SYRT- (6B4)
IUAX- (6D4)
IUAX+ (6C4)
TPIX- (6C4)
TPØX- (6C4)
TPØX+ (6B4)
IURX- (6C4)
(74H04)
(7438 SEL)
(7404)
+5V
CODE IDENT NO. 21101
SIZE C
DWG NO W 9100135
REV D
SCALE
SHEET 4 OF 9



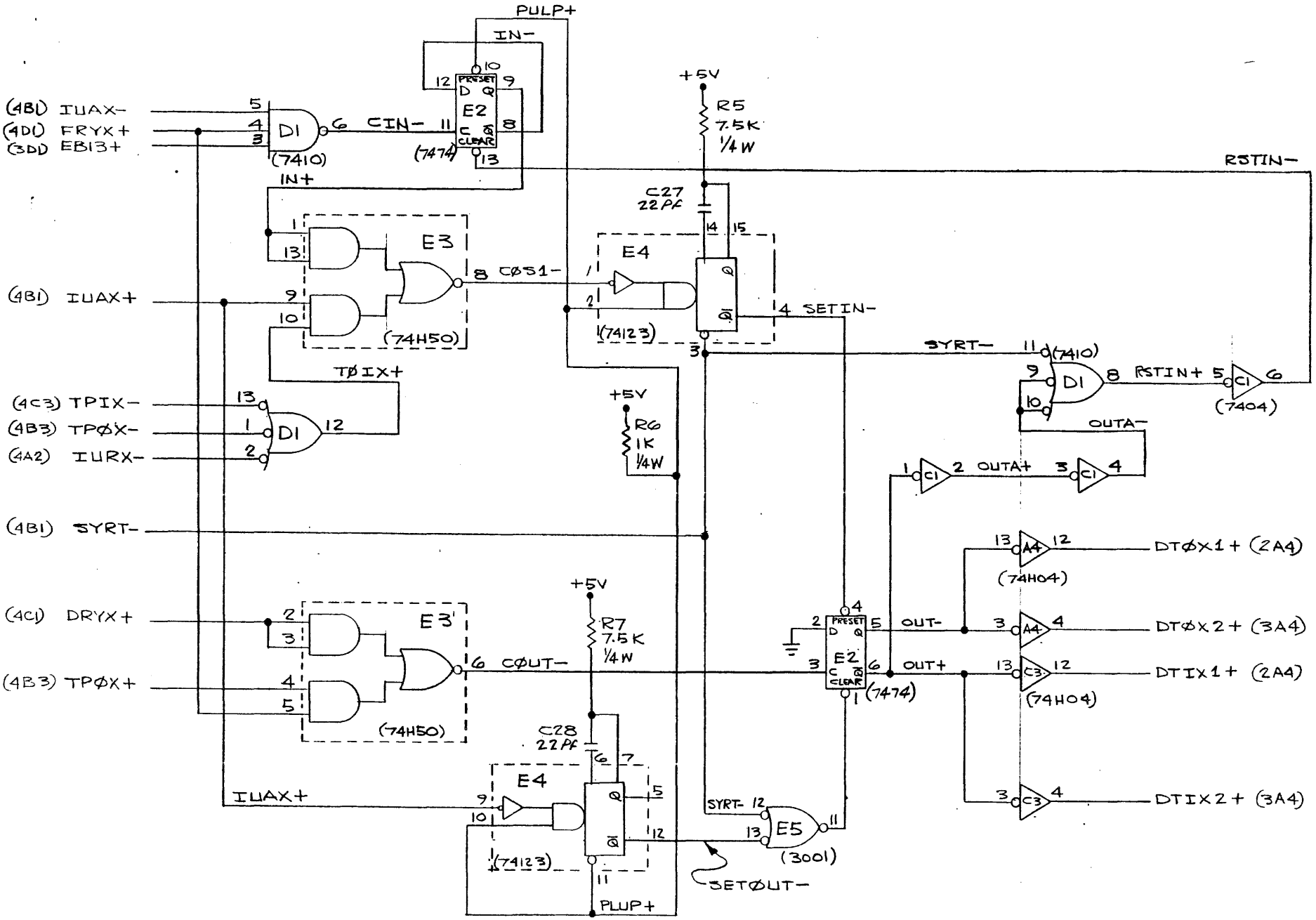




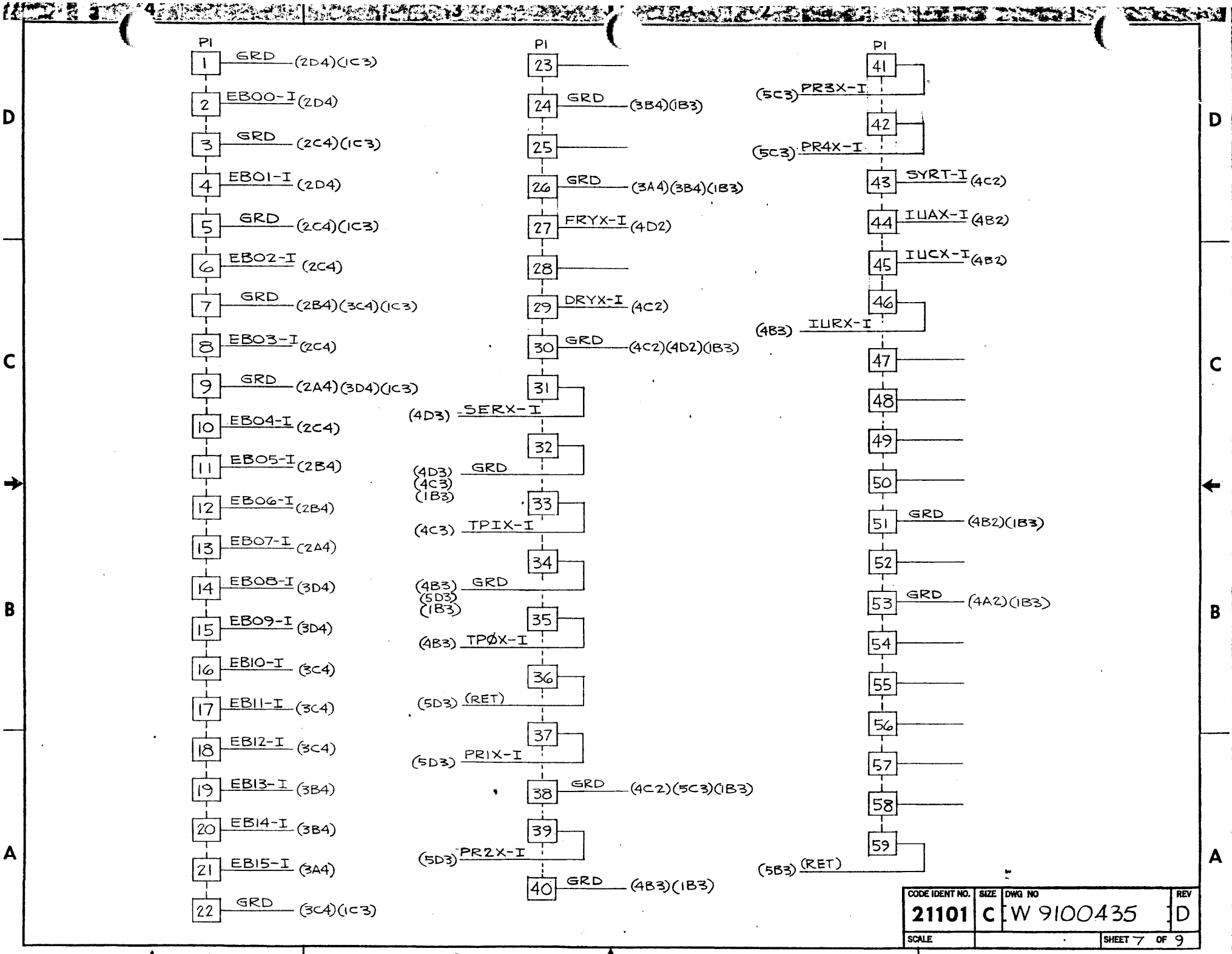
PRIORITY LOOK AHEAD

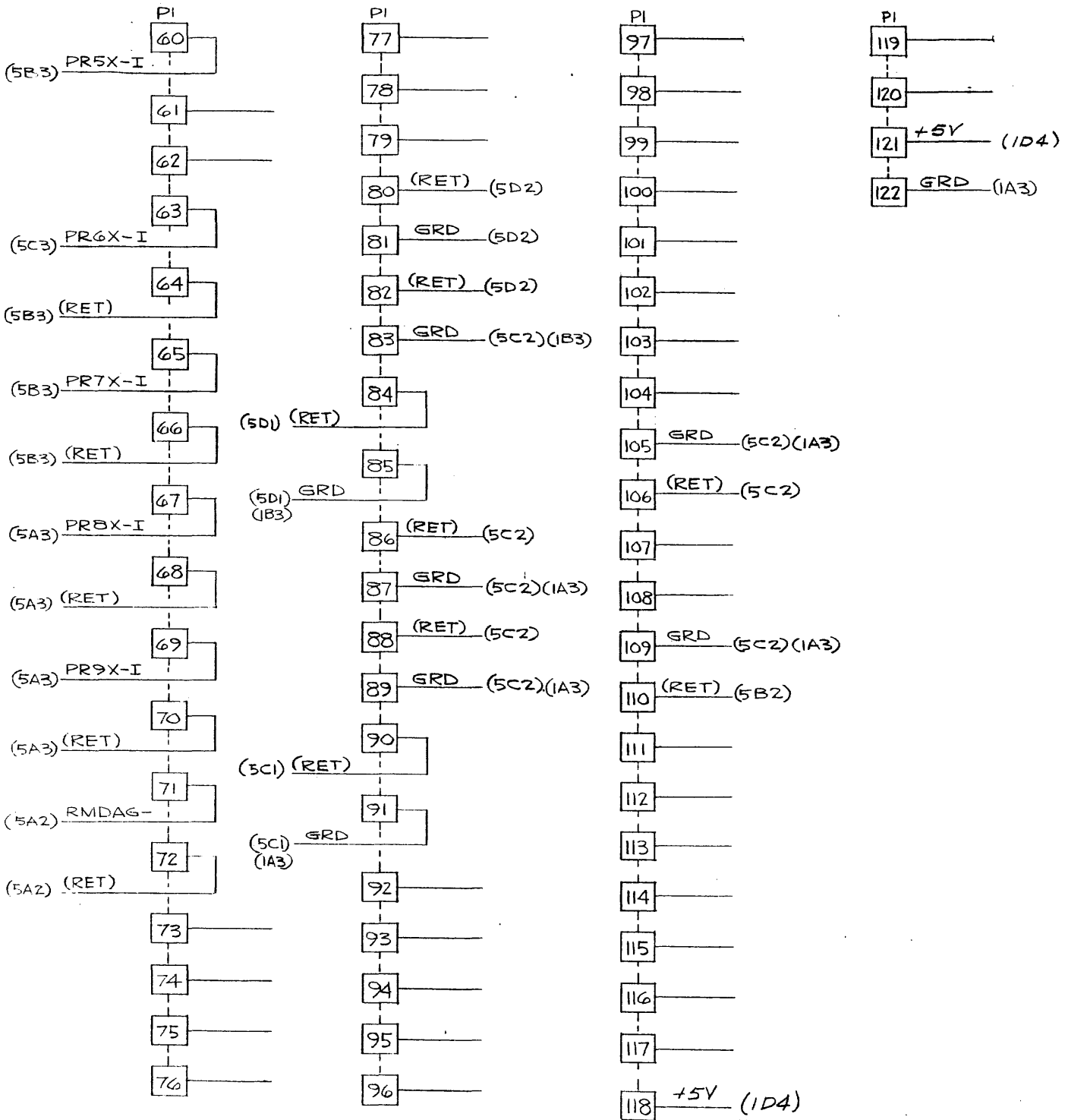


CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	W9100435	D
SCALE		SHEET 5 OF 9	

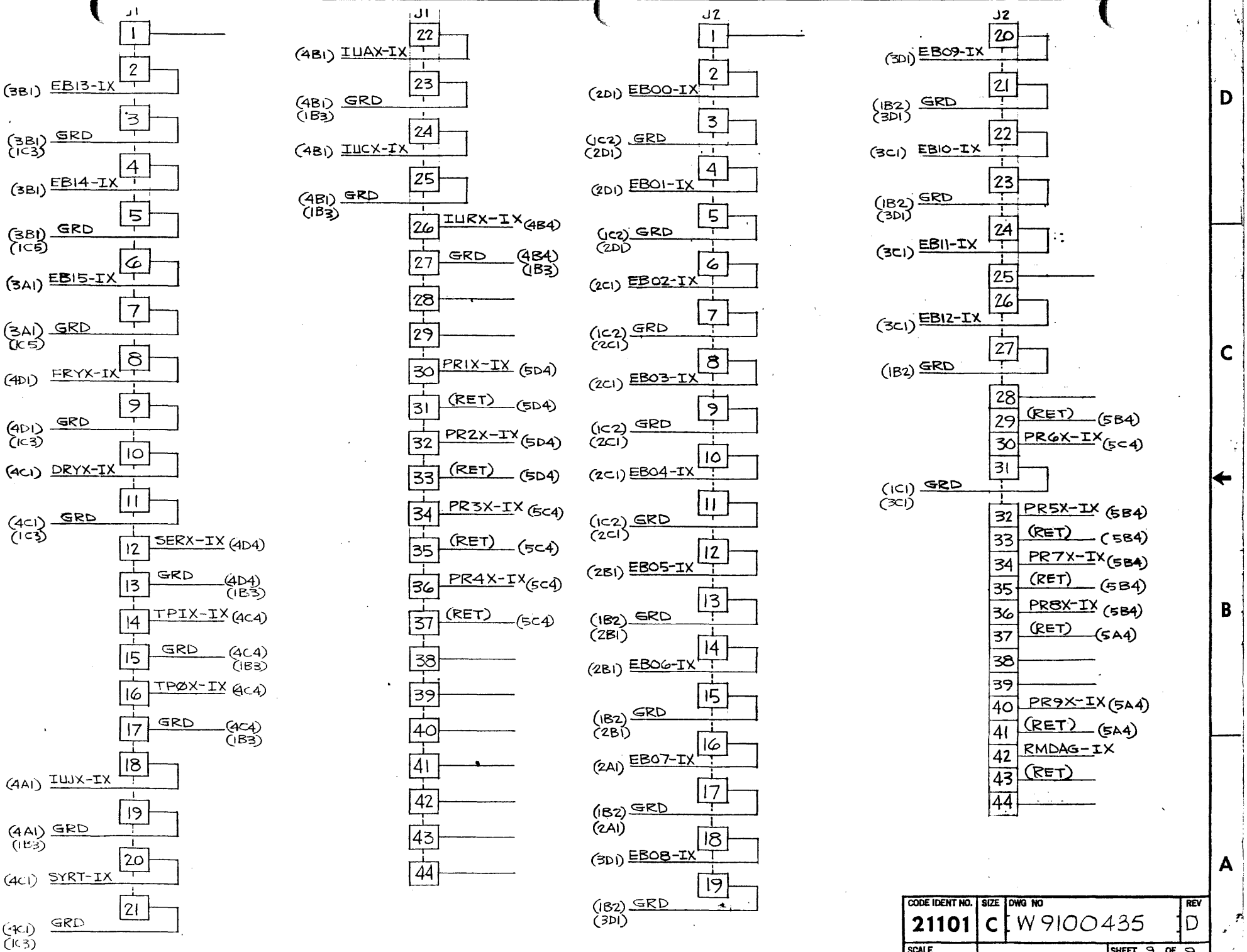


CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	W9100435	D
SCALE			SHT 6 OF 9


PI
1 GRD (2D4)(1C3)
2 EB00-I (2D4)
3 GRD (2C4)(1C3)
4 EB01-I (2D4)
5 GRD (2C4)(1C3)
6 EB02-I (2C4)
7 GRD (2B4)(3C4)(1C3)
8 EB03-I (2C4)
9 GRD (2A4)(3D4)(1C3)
10 EB04-I (2C4)
11 EB05-I (2B4)
12 EB06-I (2B4)
13 EB07-I (2A4)
14 EB08-I (3D4)
15 EB09-I (3D4)
16 EB10-I (3C4)
17 EB11-I (3C4)
18 EB12-I (3C4)
19 EB13-I (3B4)
20 EB14-I (3B4)
21 EB15-I (3A4)
22 GRD (3C4)(1C3)
PI
23
24 GRD (3B4)(1B3)
25
26 GRD (3A4)(3B4)(1B3)
27 FRYX-I (4D2)
28
29 DRYX-I (4C2)
30 GRD (4C2)(4D2)(1B3)
31 (4D3) SERX-I
32 (4D3) (4C3) (1B3) GRD
33 (4C3) TPIX-I
34 (4B3) (5D3) (1B3) GRD
35 (4B3) TPØX-I
36 (5D3) (RET)
37 (5D3) PRIX-I
38 GRD (4C2)(5C3)(1B3)
39 (5D3) PR2X-I
40 GRD (4B3)(1B3)
PI
41 (5C3) PR3X-I
42 (5C3) PR4X-I
43 SYRT-I (4C2)
44 IUAX-I (4B2)
45 IUCX-I (4B2)
46 (4B3) IURX-I
47
48
49
50
51 GRD (4B2)(1B3)
52
53 GRD (4A2)(1B3)
54
55
56
57
58
59 (5B3) (RET)
CODE IDENT NO. 21101
SIZE C
DWG NO W 9100435
REV D
SCALE
SHEET 7 OF 9



CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	W 9100435	D
SCALE			8 OF 9


J1
1
2
(3B1) EB13-IX
3
(3B1) (1C3) GRD
4
(3B1) EB14-IX
5
(3B1) (1C5) GRD
6
(3A1) EB15-IX
7
(3A1) (1C5) GRD
8
(4D1) FRYX-IX
9
(4D1) (1C3) GRD
10
(4C1) DRYX-IX
11
(4C1) (1C3) GRD
12 SERX-IX (4D4)
13 GRD (4D4) (1B3)
14 TPIX-IX (4C4)
15 GRD (4C4) (1B3)
16 TPØX-IX (4C4)
17 GRD (4C4) (1B3)
18
(4A1) IUJX-IX
19
(4A1) (1B3) GRD
20
(4C1) SYRT-IX
21
(4C1) (1C3) GRD
J1
22
(4B1) IUAX-IX
23
(4B1) (1B3) GRD
24
(4B1) IUCX-IX
25
(4B1) (1B3) GRD
26 IURX-IX (4B4)
27 GRD (4B4) (1B3)
28
29
30 PRIX-IX (5D4)
31 (RET) (5D4)
32 PR2X-IX (5D4)
33 (RET) (5D4)
34 PR3X-IX (5C4)
35 (RET) (5C4)
36 PR4X-IX (5C4)
37 (RET) (5C4)
38
39
40
41
42
43
44
J2
1
2
(2D1) EB00-IX
3
(1C2) (2D1) GRD
4
(2D1) EB01-IX
5
(1C2) (2D1) GRD
6
(2C1) EB02-IX
7
(1C2) (2C1) GRD
8
(2C1) EB03-IX
9
(1C2) (2C1) GRD
10
(2C1) EB04-IX
11
(1C2) (2C1) GRD
12
(2B1) EB05-IX
13
(1B2) (2B1) GRD
14
(2B1) EB06-IX
15
(1B2) (2B1) GRD
16
(2A1) EB07-IX
17
(1B2) (2A1) GRD
18
(3D1) EB08-IX
19
(1B2) (3D1) GRD
J2
20
(3D1) EB09-IX
21
(1B2) (3D1) GRD
22
(3C1) EB10-IX
23
(1B2) (3D1) GRD
24
(3C1) EB11-IX
25
26
(3C1) EB12-IX
27
(1B2) GRD
28
29 (RET) (5B4)
30 PR6X-IX (5C4)
31
(1C1) (3C1) GRD
32 PR5X-IX (5B4)
33 (RET) (5B4)
34 PR7X-IX (5B4)
35 (RET) (5B4)
36 PR8X-IX (5B4)
37 (RET) (5A4)
38
39
40 PR9X-IX (5A4)
41 (RET) (5A4)
42 RMDAG-IX
43 (RET)
44
CODE IDENT NO. 21101
SIZE C
DWG NO W9100435
REV D
SCALE
SHEET 9 OF 9
4
3
2
1
A
B
C
D

SPERRY UNIVAC

SPERRY UNIVAC IS A DIVISION OF SPERRY RAND CORP.

PARTS LIST

MFG. CODE	ISSUE DATE	CONTROL	CA	TYPE	COMM. CODE	ST	DOC. NO.	SHEET	PL. REV.
W	10/15/79	W777		M		A	PL W 4400664	1	A

TITLE: PC ASSEMBLY - TERM SHUE DM389

CL	U/M		AC	DOC. SIZE	RANGE	THRU	ISSUE	PIC. REV.
A	EA		1	D				A

FIND NO.	QUANTITY REQUIRED	U/M	SIZE	PART OR IDENT. NO. DOCUMENT NO.	DASH	NOMENCLATURE OR DESCRIPTION	SP	CHG
Z01				W-87474	-27	PL REV A, PIC REV A, RANGE 00 - 02 EIR RELEASED 10/15/79		
**********	**********	**	**	**********	**********	********** COMMON DATA **********		
1	1	EA		W 4000559	-00	PC BOARD - TERM SHUE DM389	A	*
2	1	EA		W 7100350	225	CAPACITOR, TANTALUM 35V 10% 2.20 UF	A	*
				REF DES	1	C1		*
3	2	EA		W 7100004	-10	CAPACITOR - CERAMIC .01 UF +80%, -20%	A	*
				REF DES	1	C2 C3		*
F01		X		W 9500970	-00	SCHEMATIC - TERMINATOR SHUE	A	*
S01		X		SW01163	-00	MARKING SPEC PART IDENTIFICATION	A	*
**********	**********	**	**	**********	**********	*NORMAL I/O * VARIABLE DATA - 00**********		
4	2	EA		W 4800007	-00	DUAL TERMINATING RES NETWORK	A	*
				REF DES	1	A1 A2		*
5	1	EA		W 6502500	201	RESISTOR, FIXED COMP, 1/4W, 5%200 OHMS	A	*
				REF DES	1	R2		*
6	1	EA		W 6502500	301	RESISTOR, FIXED COMP, 1/4W, 5%300 OHMS	A	*
				REF DES	1	R1		*
**********	**********	**	**	**********	**********	*HIGH SPEED DMA * VARIABLE DATA - 01**********		
4	1	EA		W 4800007	-00	DUAL TERMINATING RES NETWORK	A	*
				REF DES	1	A3		*
5	3	EA		W 6502500	201	RESISTOR, FIXED COMP, 1/4W, 5%200 OHMS	A	*
				REF DES	1	R2 R4 R6		*
6	3	EA		W 6502500	301	RESISTOR, FIXED COMP, 1/4W, 5%300 OHMS	A	*
				REF DES	1	R1 R3 R5		*
**********	**********	**	**	**********	**********	*NORMAL I/O AND HIGH SPEED DMA * VARIABLE DATA - 02**********		
4	3	EA		W 4800007	-00	DUAL TERMINATING RES NETWORK	A	*
				REF DES	1	A1 A2 A3		*

SPERRY UNIVAC

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PARTS LIST

MFG. CODE	ISSUE DA	CONTROL	CA	TYPE	COMM. CODE	ST	DOC. NO.	S	PL. REV.
W	10/15	W777		M		A	PL W 4400664		A

TITLE: PC ASSEMBLY - TERM SHUE DM389

CL	U/M	AC	DOC SIZE	RANGE	THRU	ISSUE	PIC. REV.
A	EA	1	D				A

FIND NO.	QUANTITY REQUIRED	U/M	SIZE	PART OR IDENT. NO. DOCUMENT NO.	DASH	NOMENCLATURE OR DESCRIPTION	SP	CHG
5	3	EA		W 6502500	201	RESISTOR, FIXED COMp, 1/4W, 5%200 OHMS	A	*
				REF DES	1	R2 R4 R6		*
6	3	EA		W 6502500	301	RESISTOR, FIXED COMp, 1/4W, 5%300 OHMS	A	*
				REF DES	1	R1 R3 R5		*

REVISIONS					
EN	SYM	CODE	DESCRIPTION	APPROVED	DATE
	A	80	PRODUCTION RELEASE EN 31458		5/17/73
	B	548	ADDED W/L 'E PTS FNS 21 & 22 PER EN 32305		5/25/73
32775	C	3	ADDED R8 THRU R11		7/26/73
33435	D	3	ADDED FIND NO. 24 & REMOVED F/N 22		8/27/73
04242	E		REMOVED F/N 24		
W0400670-27	E		RELEASE TO API		
W0400670-01	L		UPDATED FORMAT DOC NO WAS 44D0670		

WIRE LIST			
SIGNAL	FROM	TO	COLOR
PR1X-IX	E130	E37	GRN
	E131	E34	BLK
PR2X-IX	E132	E39	GRN
	E133	E36A	BLK
PR3X-IX	E134	E41	GRN
	E135	E36B	BLK
PR4X-IX	E136	E42	GRN
	E137	E38	BLK

W4400670 L

SERIAL NO. W4400670-00

PART NO. W4400670-00 FOR MATL REQ SEE PL
~~IDENT NO.~~ PL REV CONTROLS DOC

1. FIND NUMBERS FOR PARTS IDENTIFIED BY REFERENCE DESIGNATORS APPEAR IN PARTS LIST.
2. NUMBERS BETWEEN DASHES ARE FIND NUMBERS.

⚠1 IDENTIFY PER (6001)

NOTE: UNLESS OTHERWISE SPECIFIED

REFERENCE DRAWINGS

W 4000606 ——— PW BOARD
W 9700835 ——— ARTWORK
W 9700836 ——— SOLDERMASK

MODEL NO. ~~UNIVAC 1050~~	DIMENSIONS ARE IN INCHES AND AFTER FINISHING	DR [illegible]	4-30-73
NEXT ASSY ~~W 4000606~~	TOLERANCES (UNLESS OTHERWISE SPECIFIED)	CHK [illegible]	5-7-73
MATERIAL	X ± .1	DSGN —	—
	XX ± .03	ENGR R. E. Brown	5-14-73
	XXX ± .010	APPD [illegible]	5/14/73
FINISH	ANGLES ± 0.5°	APPD	
	BREAK ALL SHARP EDGES .010 R APPROX	THIS DOCUMENT MAY CONTAIN PROPRIETARY INFORMATION AND SUCH INFORMATION MAY NOT BE DISCLOSED TO OTHERS FOR ANY PURPOSE OR USED TO PRODUCE THE ARTICLE OR SUBJECT, WITHOUT WRITTEN PERMISSION	
	DO NOT SCALE DRAWING		

SPERRY UNIVAC

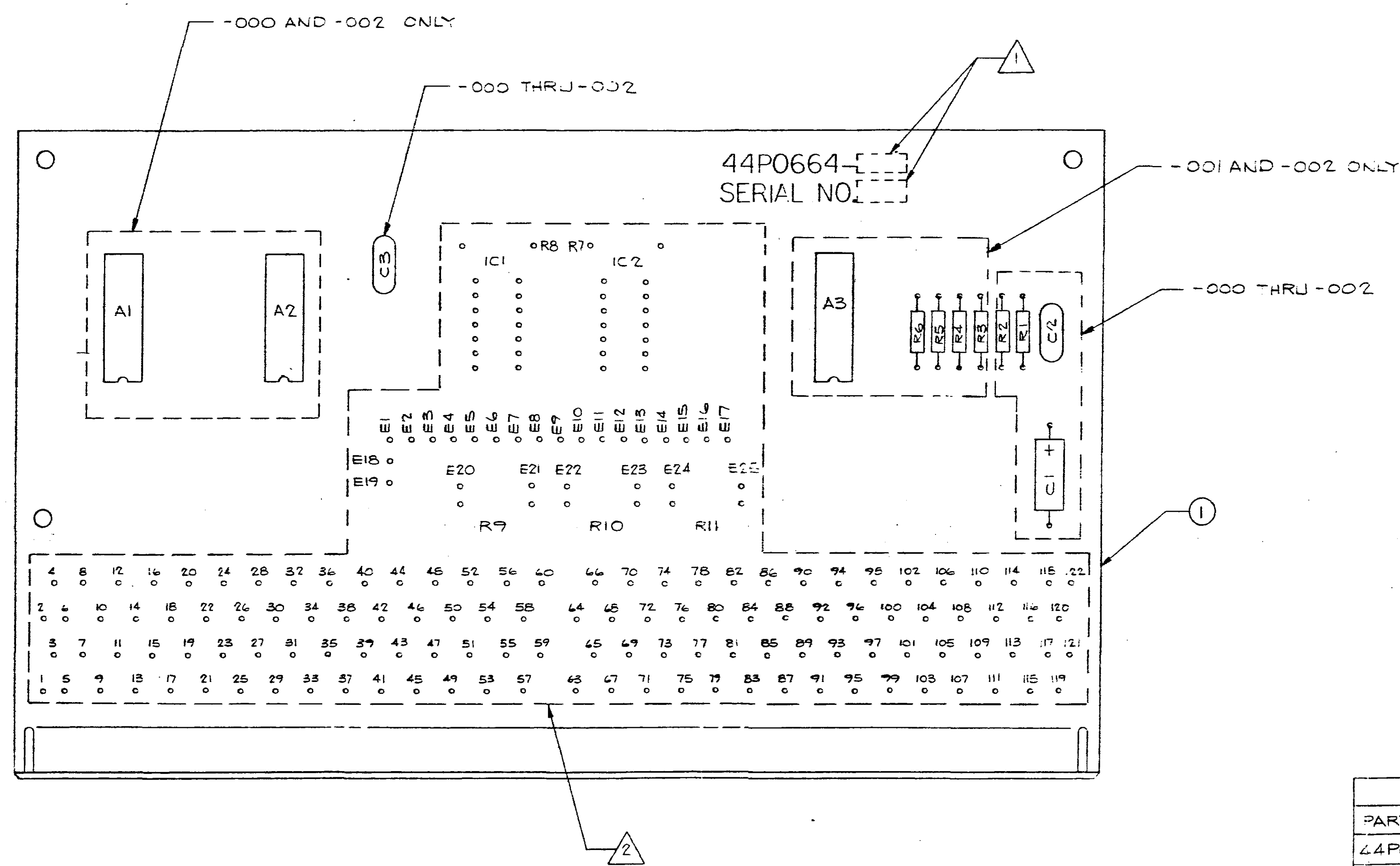
TITLE PC-ASSEMBLY SERIES I/O EXPANDER

CODE IDENT NO.	SIZE	DWG NO	REV
21101	D	W4400670	L

SCALE 1/1 SHEET 1 OF 1

SYM	ZONE	DESCRIPTION	APPROVED	DATE
A		PRODUCTION RELEASE PER EN 81280		

44D0664 A



DASH NUMBER CHART	
PART NUMBER	DESCRIPTION
44P0664-000	NORMAL I/O
44P0664-001	HIGH SPEED DMA
44P0664-002	NORMAL I/O AND HIGH SPEED DMA

FOR PARTS LIST SEE 44P0664

2. NOT USED, DO NOT FILL WITH SOLDER.

1. MARK APPROPRIATE DASH NUMBER AND THE REVISION LETTER OF THE PARTS LIST TO WHICH THE PART WAS MANUFACTURED AND SERIAL NO. APPROX WHERE SHOWN. IDENTIFICATION TO BE .12 HIGH CHARACTERS PERMANENT AND LEGIBLE.

NOTE: UNLESS OTHERWISE SPECIFIED

REFERENCE DRAWINGS

40D0559 ___ P.W. BOARD
97D0822 ___ ARTWORK
95D0970 ___ SCHEMATIC

MODEL NO. V73
NEXT ASSY OIP 325
MATERIAL
FINISH

DIMENSIONS ARE IN INCHES AND AFTER FINISHING
TOLERANCES (UNLESS OTHERWISE SPECIFIED)
.X ± .1
.XX ± .03
.XXX ± .010
ANGLES ± 0.5°
BREAK ALL SHARP EDGES .010 R APPROX
DO NOT SCALE DRAWING

DR 10-13-72
CHK 10-19-72
DSGN 10-13-72
ENGR 10-20-72
APPD 10-20-72
APPD

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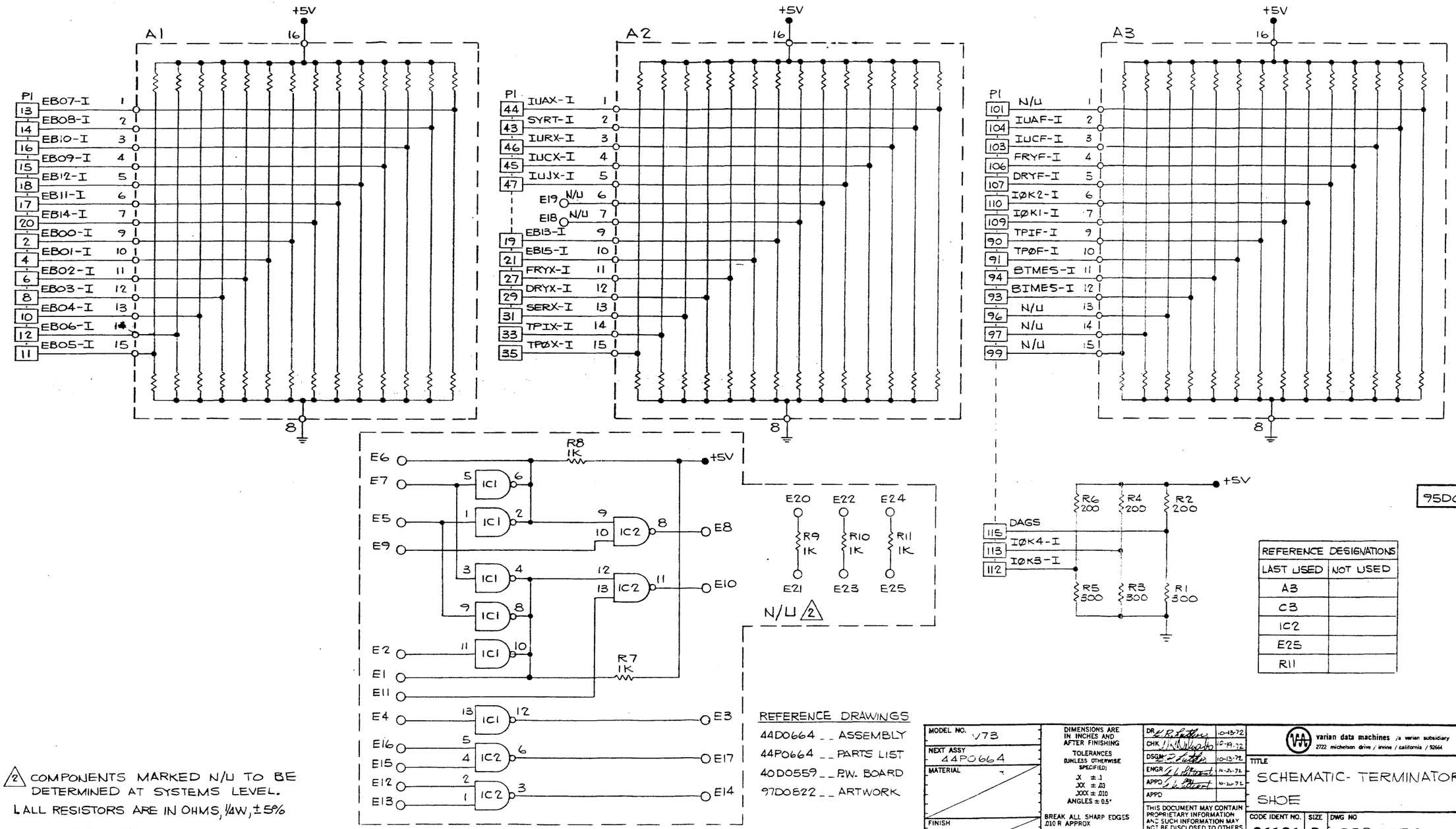
TITLE TERMINATOR SHOE ASSY DM389

CODE IDENT NO. 21101 | SIZE D | DWG NO 44D0664 | REV A

SCALE 2/1 | SHEET 1 OF 1

95D0970 B

REVISIONS					
CODE	SYM	ZONE	DESCRIPTION	APPROVED	DATE
	A		PRODUCTION RELEASE EN 81280		4/4/73
	B		REVISED SIGNALS ON PIN'S, 93, 94 96, 97 & 101 PER EN 82795	W. Brown	3/3/74



REFERENCE DESIGNATIONS	
LAST USED	NOT USED
A3	
C3	
IC2	
E25	
R11	

2 COMPONENTS MARKED N/U TO BE DETERMINED AT SYSTEMS LEVEL.

1 ALL RESISTORS ARE IN OHMS, 1/4W, ±5%

NOTE: UNLESS OTHERWISE SPECIFIED

REFERENCE DRAWINGS

44D0664 _ _ ASSEMBLY
44P0664 _ _ PARTS LIST
40D0559 _ _ P.W. BOARD
97D0622 _ _ ARTWORK

MODEL NO. V73	DIMENSIONS ARE IN INCHES AND AFTER FINISHING	DR	10-13-72
NEXT ASSY 44P0664	TOLERANCES (UNLESS OTHERWISE SPECIFIED) X ±.1 XX ±.03 XXX ±.010 ANGLES ±0.5°	CHK	10-19-72
MATERIAL		DSGN	10-13-72
FINISH	BREAK ALL SHARP EDGES .010 R APPROX	ENGR	11-21-72
	DO NOT SCALE DRAWING	APPD	10-24-72
		APPD	

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2722 michelson drive / irvine / california / 92664

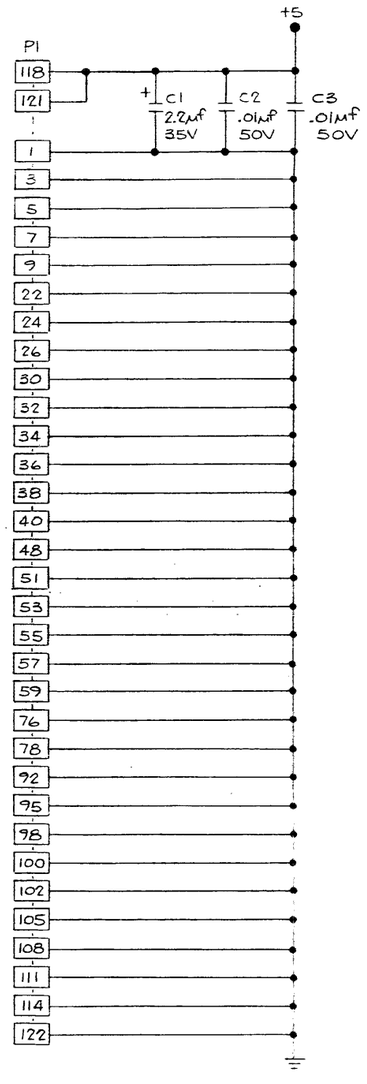
TITLE: SCHEMATIC- TERMINATOR SHOE

CODE IDENT NO.	SIZE	DWG NO	REV
21101	D	95D0970	B

SCALE —— SHEET 1 OF 2

95D0970 B

REVISIONS				
SYM	ZONE	DESCRIPTION	APPROVED	DATE
		SEE SHEET 1		



95D0970 B

NOTE. UNLESS OTHERWISE SPECIFIED

CODE IDENT NO.	SIZE	DWG NO	REV
21101	D	95D0970	B
SCALE —		SHEET 2 OF 2	

SPERRY UNIVAC — SPERRY UNIVAC IS A DIVISION OF SPERRY RAND CORP.

PARTS LIST

MFG. CODE	ISSUE DATE	CONTROL	CA	TYPE	COMM. CODE	ST.	DOC. NO	SHEET	PL. REV.
W	10/22/79	W777		M		M	PL W 0101893	1	E

TITLE: I/O EXPANSION CHASSIS OPTION

CL	U/M	AC	DOC. SIZE	RANGE	THRU	ISSUE	PIC REV.
A	EA	4	A				C

FIND NO.	QUANTITY REQUIRED	U/M	SIZE	PART OR IDENT. NO. DOCUMENT NO.	DASH	NOMENCLATURE OR DESCRIPTION	SP	CHG
Z05				W-87830	-08	PL REV E, PIC REV C, RANGE 00 - 03 EIR RELEASED 10/09/79		
**********						********** COMMON DATA **********		
7	1	EA		W 5300686	-48	CABLE ASSY - I/O POWER	A	*
F01		X		W 9300406	-00	INSTALLATION DRAWING	A	*
S01		X		SW01163	-00	MARKING SPEC PART IDENTIFICATION	A	*
**********						1ST CHASSIS RH BACKPLANES * VARIABLE DATA - 00**********	I	
						ABOVE PT NO INACTIVE FOR NEW DESIGN 10/09/79 W-87830-08		
1	1	EA		W 0101267	-01	EXP, CHASSIS ASSEMBLY - I/O L.H. I/O R.H. I/O	A	*
2	1	EA		W 0101081	-02	INSTL KIT,CHASSIS ASSEMBLY	A	*
4	1	EA		W 5300715	-24	CABLE ASSY I/O EXP RIGHT HAND	A	*
**********						2ND & SUB CHASSIS LH RH BACKP * VARIABLE DATA - 01**********	I	
						ABOVE PT NO INACTIVE FOR NEW DESIGN 10/09/79 W-87830-08		
1	1	EA		W 0101267	-01	EXP, CHASSIS ASSEMBLY - I/O L.H. I/O R.H. I/O	A	*
3	1	EA		W 0101081	-03	INSTL KIT,CHASSIS ASSEMBLY	A	*
5	1	EA		W 5300547	-00	CABLE ASSY - EXPANSION	A	*
6	4	IN		W 5300035	206	CABLE, JUMPER	A	*
**********						1ST CHASSIS LH RH BACKPLANES * VARIABLE DATA - 02**********		
2	1	EA		W 0101081	-02	INSTL KIT,CHASSIS ASSEMBLY	A	*
4	1	EA		W 5300715	-24	CABLE ASSY I/O EXP RIGHT HAND	A	*
8	1	EA		W 0101267	-14	EXP, CHASSIS ASSEMBLY - I/O L.H. I/O R.H. I/O	A	*
**********						2ND & SUB CHASSIS LH RH BACKP * VARIABLE DATA - 03**********		
3	1	EA		W 0101081	-03	INSTL KIT,CHASSIS ASSEMBLY	A	*
5	1	EA		W 5300547	-00	CABLE ASSY - EXPANSION	A	*
6	4	IN		W 5300035	206	CABLE, JUMPER	A	*
8	1	EA		W 0101267	-14	EXP, CHASSIS ASSEMBLY - I/O L.H. I/O R.H. I/O	A	*

DWG NO. 01A1893

REVISIONS					
REV	EN	CHG CODE	DESCRIPTIONS	DR	APPD
C	87086		REV MODEL NO. BLOCK, REV TABULATION, ADDED NOTE (6), REV DWG TO CONFORM TO 01P1893.	RM	8/24/8
C_1	87363		TABULATION: MODEL NO. 70-9010 P/N WAS: 01P1893-003, MODEL NO. 70-9011 P/N WAS: 01P1893-004	MT	10/31/8

TABULATION			
	PART NO.	MODEL NO.	DESCRIPTION
(6)	01P1893-000	70-9010 Q	1st CHASSIS RH BACKPLANES.
(6)	01P1893-001	70-9011 Q	2nd AND SUB CHASSIS LH AND RH BACKPLANES.
	01P1893-002	70-9010	1st CHASSIS LH AND RH BACKPLANES.
	01P1893-003	70-9011	2nd AND SUB CHASSIS LH AND RH BACKPLANES.

FOR PARTS LIST SEE 01P1893

NEXT ASSEMBLY END ITEM	MODEL NO. SEE TABULATION	SPERRY UNIVAC

DR	S. JURISCH	1/15/76
CHK	BROWN FIELD	2/9/76
DSGN		
ENGR	J. JENNINGS	2/13/76
APPD	WHITCOMB	2/13/76
APPD		

CODE IDENT NO. **21101**

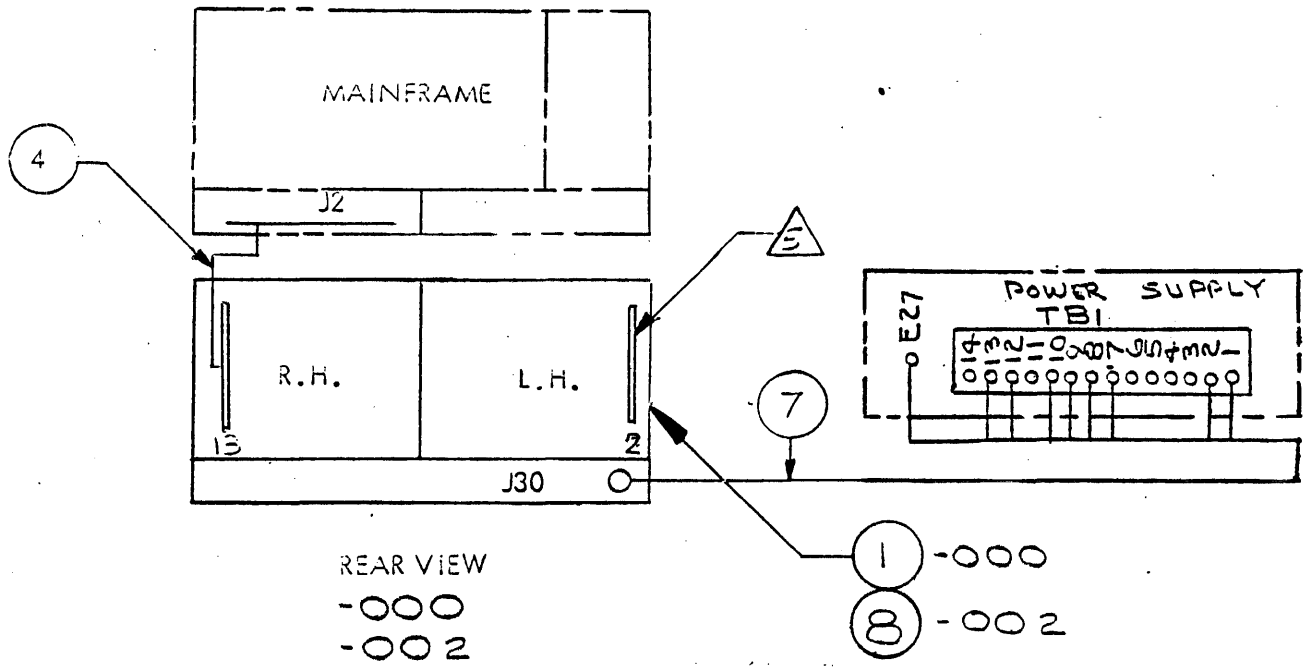
TITLE
I/O EXPANSION CHASSIS OPTION

SIZE	DWG NO.	REV
A	01A1893	C

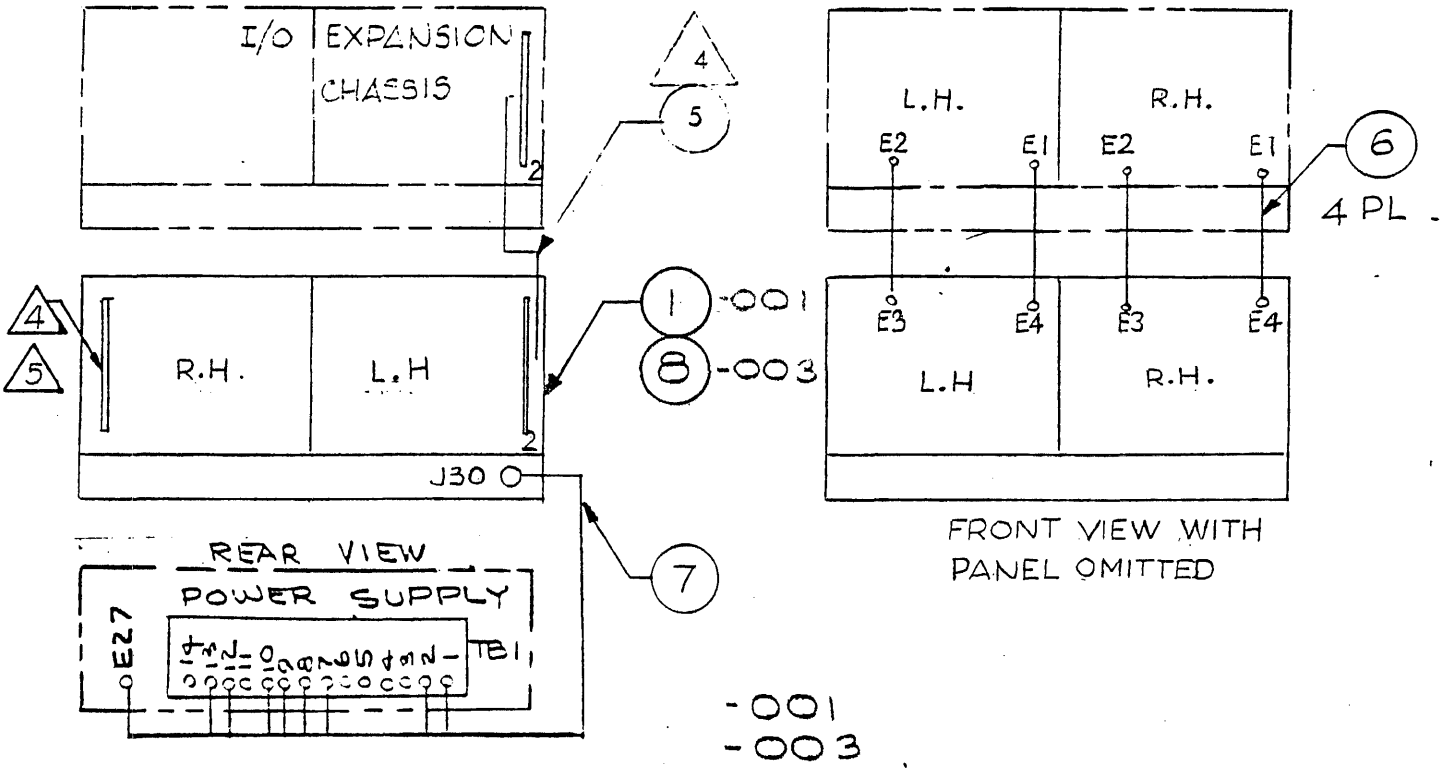
SHEET 1 OF 4

NOTES: UNLESS OTHERWISE SPECIFIED

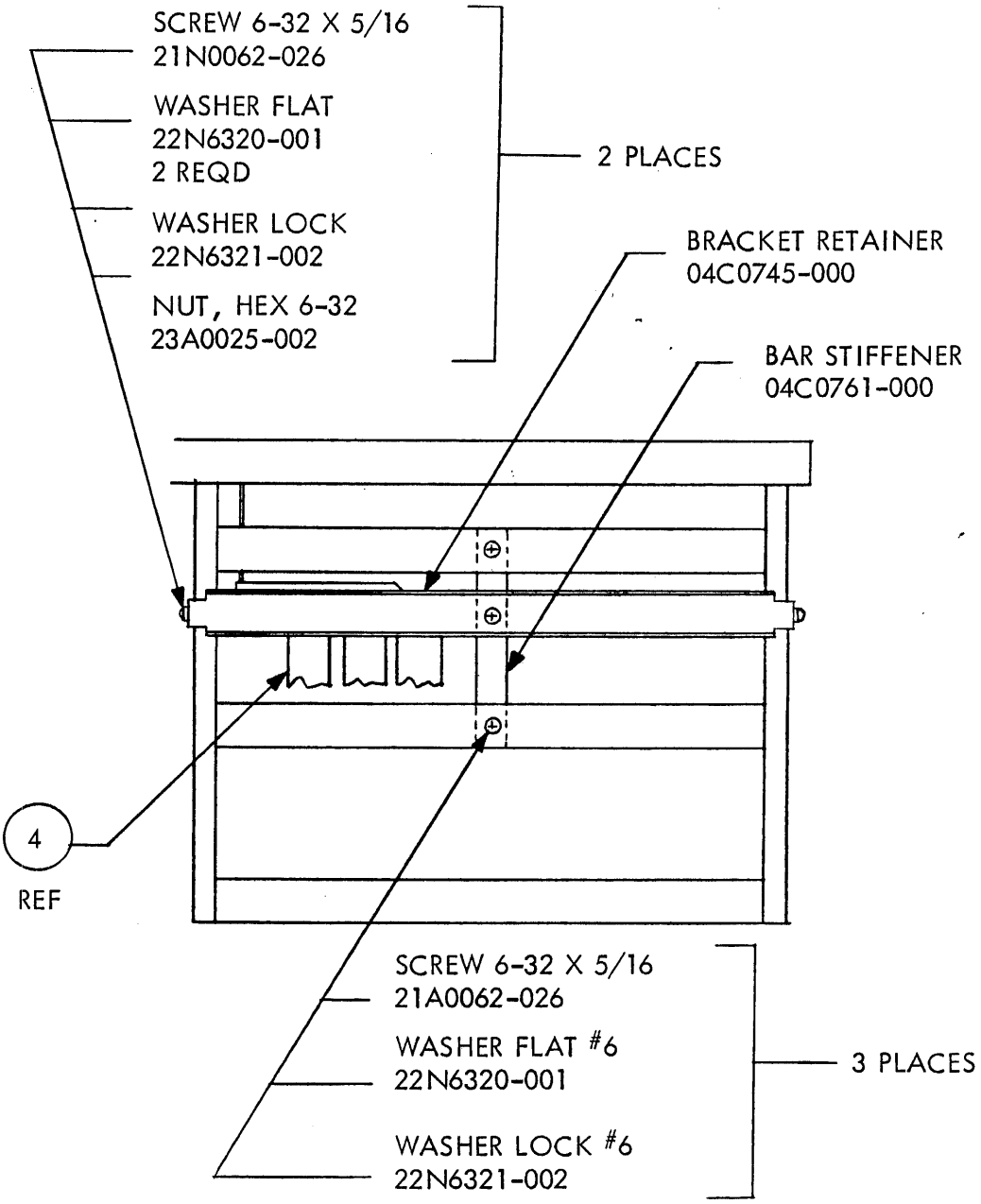
1. This drawing provides for the I/O Chassis Option for the V76.
2. For installation into a Rack, see Installation Drawing 93E0406.
3. Identify per Specification 98A1163.
4. Locations shown are for reference only. Actual locations to be determined by Systems Engineering.
5. Term Shoe supplied with Mainframe.
6. Inactive For New Design.



4 PLACES



	CODE IDENT NO.		01A1693	
	21101		SH 3 OF 4	REV C



TOP VIEW

-000

1. HARDWARE SHOWN SUPPLIED WITH FIND NUMBER 2.
2. REMOVE TOP CARD GUIDE FROM SLOT 13 WHEN INSTALLING FIND NUMBER 4 (53P0715-024) CABLE, I/O EXPANSION.

SPERRY UNIVAC — PARTS LIST

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MFG CODE	ISSUE DATE	CONTROL	CA	TYPE	COMM CODE	S/A	DOC NO	SHEET	PL REV
W	10/24/79	W777		M		A	PL W 5300688	1	C

TITLE: CABLE ASSY - I/O POWER

CL	U/M		AC	DWG SIZE	NEXT HIGHER ASSY	ISSUE	PIC REV
A	FA		1	C			H

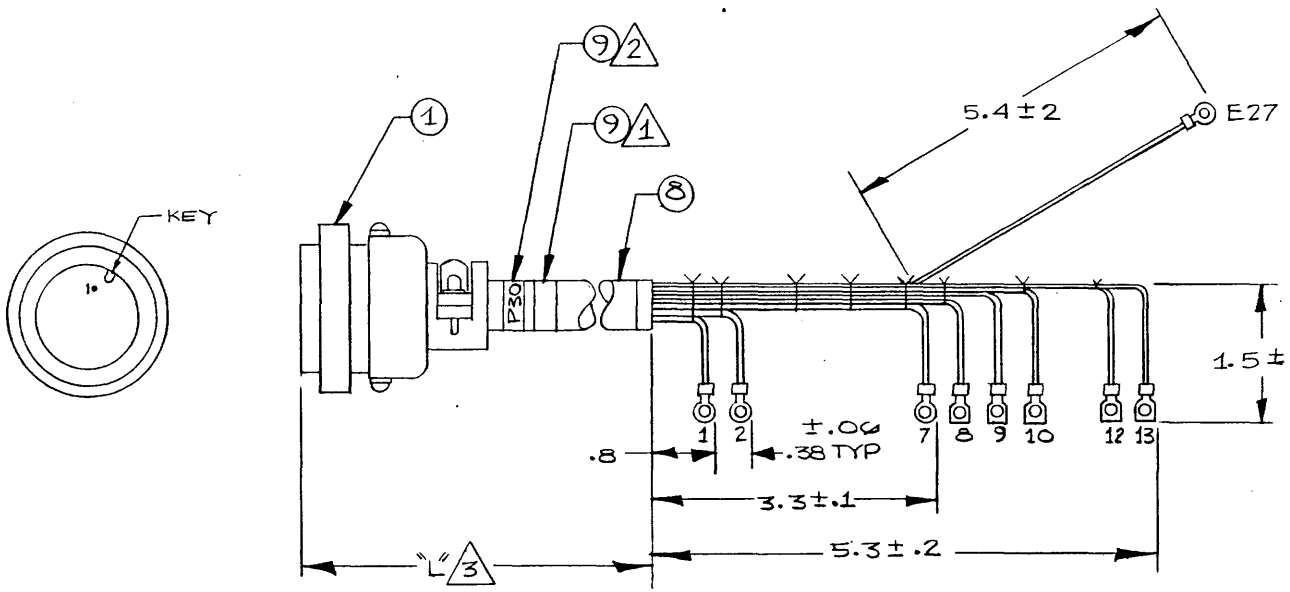
FIND NO	QUANTITY REQUIRED	U/M	S L	PART IDENTIFICATION NO DOCUMENT NO	DASH	NOMENCLATURE OR DESCRIPTION		S P	S M
Z03				W-87849	-13	PL REV C, PIC REV B, RANGE 00 -998 EIR RELEASED 10/24/79			
**********						********** COMMON DATA **********			
1	1	EA		W 5700118	-02	CONNECTOR PLUG	NON LONG LOCKING RING	A	*
				REF DES	1	P30			*
2	5	EA		W 5800158	-00	TERMINAL LUG, INSULATED	12-10 AWG NO.6 STUD	A	*
3	2	EA		W 5800031	-02	TERMINAL, RING TONGUE, INS	#6 16-14 AWG	A	*
4	2	EA		W 5800041	-02	TERMINAL, RING TONGUE	#22-16 AWG WIRE - #6 STUD	A	*
5	AR	IN		W 5300454	190	WIRE STRANDED, I.P.V.C.	10 AWG WHITE	A	*
6	AR	IN		W 5300454	-93	WIRE STRANDED, I.P.V.C.	16 AWG WHITE	A	*
7	AR	IN		W 5300453	-54	WIRE,STR,TWISTED PAIR,I.P.V.C.	18 AWG BLACK & GREEN	A	*
8	AR	IN		W 5400006	-XA	TUBING, INSULATED, NON-SHRINK	SELECTION TO BE MADE	A	*
9	2	EA		W 2600009	-00	CLAMP-HARNESS,IDENTIFICATION		A	*
301		X		SW01163	-00	MARKING SPEC	PART IDENTIFICATION	A	*

UDI-1517 REV. 2 75 DUPLICATE

WIRE LIST

FUNCTION	FROM	TO	COLOR	WIRE F/N	LUG F/N
115 VAC FAN	P30-5	TB1-1	GRN	7	4
115 VAC FAN	-6	TB1-2	BLK		4
CHASSIS GRD	-9	E27	WHT	6	3
+12V	-12	TB1-7		6	3
-12V	-13	-10		5	2
+5V	-14	-12			
-5V	-15	-13			
COMM	-16	-8			
COMM	P30-17	TB1-9	WHT	5	2

CODE	SYM	ZONE	REVISIONS DESCRIPTION	APPROVED	DATE
-	X		PILOT RELEASE PER EN 80802	CWE	6/10/72
-	A	DM	PRODUCTION RELEASE PER EN 80982	DG/G	7/21/72
2	B	LKC	REVISED VIEW OF F/N 2 PER EN 84806	/EW	11-22-76



53C0686
B

3 LENGTH "L" TO BE DETERMINED BY DASH NO. IN INCHES, EXAMPLE: 53P0XX-024 = 24 INCHES. TOLERANCE ±.50 FOR 24.00 AND BELOW, ±.25 PER FOOT ABOVE 24.00.

2 MARK CONNECTOR REFERENCE DESIGNATION AS SHOWN ON ITEM 9 CHARACTERS TO BE PERMANENT AND LEGIBLE ATTACH ITEM 9 TO CABLE APPROX. WHERE SHOWN.

1 MARK ITEM 9 WITH PART NO. 53P0686 THE APPROPRIATE DASH NO. AND THE REVISION LETTER OF THE PARTS LIST TO WHICH THE PART WAS MANUFACTURED, ATTACH ITEM 9 TO CABLE APPROX. WHERE SHOWN. CHARACTERS TO BE PERMANENT AND LEGIBLE

NOTES: (UNLESS OTHERWISE SPECIFIED)

FOR PARTS LIST SEE 53P0686

MODEL NO. V73
NEXT ASSY 01P1395
MATERIAL
FINISH

DIMENSIONS ARE IN INCHES AND AFTER FINISHING
TOLERANCES (UNLESS OTHERWISE SPECIFIED)
X ±.1
XX ±.03
XXX ±.010
ANGLES ± 0.5°
BREAK ALL SHARP EDGES .010 R APPROX
DO NOT SCALE DRAWING

DR	MANCARELLO	6-7-72
CHK	R Gordon	7-17-72
DSGN	R. Nettles	6-10-72
ENGR		7/6/72
APPD		7/21/72
APPD		

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TITLE
CABLE ASSY. I/O POWER

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	53C0686	B

SCALE — SHEET 1 OF 1

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PARTS LIST

MFG. CODE	ISSUE DATE	CONTROL	CA	TYPE	COMM. CODE	ST.		DOC. NO.	SHEET	PL REV.
W	11/19/79	W777		M		A	PL	W 5300715	1	D

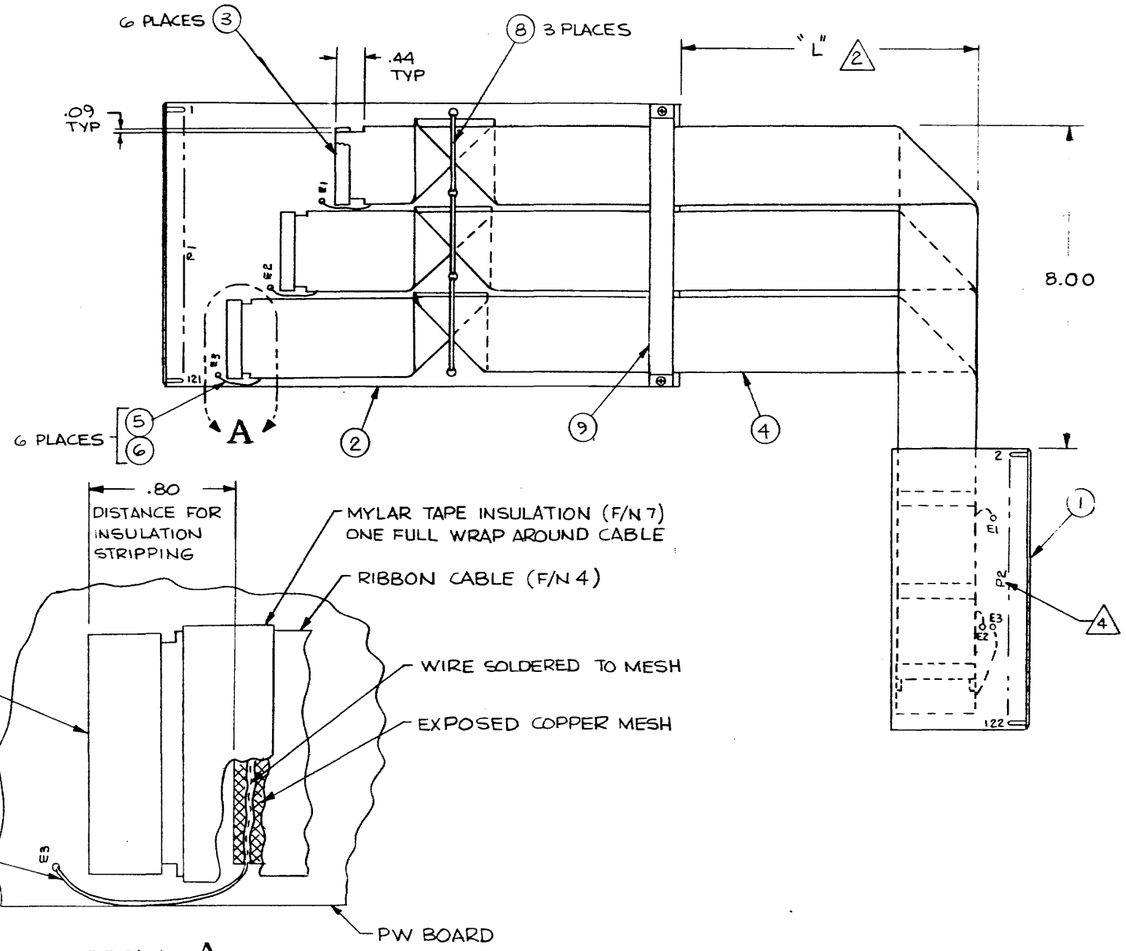
TITLE: CABLE ASSY I/O EXP RIGHT HAND

CL	U/M		AC	DOC. SIZE	RANGE	THRU	ISSUE	PIC. REV.
A	EA		1	D				B

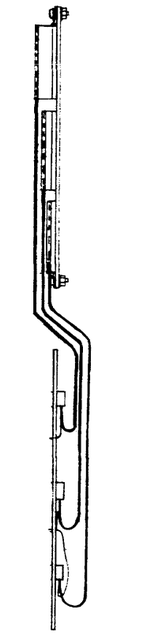
FIND NO.	QUANTITY REQUIRED	U/M	SIZE	PART OR IDENT. NO. DOCUMENT NO.	DASH	NOMENCLATURE OR DESCRIPTION		SP	CHG
Z04				W-87474	-03	PL REV D, PIC REV B, RANGE 00 -998 EIR RELEASED 11/16/79			
Z03				NONE		PL REV C, PIC REV B, RANGE 00 -998			
**********						********** COMMON DATA **********			
1	1	EA	W	4000479	-00	PC BOARD (DM310)		A	
2	1	EA	W	4000542	-00	PC BOARD (DM369)		A	
3	6	EA	W	5700259	-01	CONNECTOR, FLAT CABLE	BODY AND COVER	A	
4	AR	IN	W	5300467	-09	CABLE, FLAT	40 WIRES 65 OHMS IMP	A	*
5	AR	IN	W	5300003	-05	WIRE BUS	22 AWG	A	
6	AR	IN	W	5400001	122	INSULATION SLEEVING ELEC	SIZE 22 BLACK .028 ID	A	
7	AR	EA	W	9000003	-00	TAPE, ADHESIVE		A	
8	3	EA	W	2600012	-01	CLAMP HARNESS - WEDGE LOCK	7.31 X .184	A	
9	1	EA	W	0400757	-00	BRACKET		A	
S01		X		SW01163	-00	PART IDENTIFICATION	MARKING SPEC	A	
S02		X		SW00536	-00	SELECTION & INSTALLATION SPEC	MACH SCREWS & ASSOC HARDWARE	A	

REVISIONS				
SYM	ZONE	DESCRIPTION	APPROVED	DATE
A		PRODUCTION RELEASE E.N. 81351		
B		ADDED NOTE 4 AND ITS REFERENCE/EN83958		

53D0715 B



DETAIL A
SCALE : NONE
TYP RIBBON CABLE GRD CONNECTION



F/N 8 & 9 REMOVED FOR CLARITY OF CABLE ROUTING

53D0715 B

4. PERMANENTLY MARK INDICATED DESIGNATION IN .12 HIGH CHARACTERS. LOCATE APPROX WHERE SHOWN.

3. USE HARDWARE IN ACCORDANCE WITH 98A0536

2. LENGTH "L" TO BE DETERMINED BY DASH NO. IN INCHES
EXAMPLE: 53P0715-024 = 24 IN. TOLERANCE IS ± .25 PER FOOT.

1. TAG WITH PART NO. 53P0715-(APPLICABLE DASH NO.) AND REV LTR OF THE P/L TO WHICH PART WAS MANUFACTURED TAG TO BE PERMANENTLY SECURED TO PART & LEGIBLE.

NOTE: UNLESS OTHERWISE SPECIFIED

FOR PARTS LIST SEE 53P0715

MODEL NO. V73	DIMENSIONS ARE IN INCHES AND AFTER FINISHING	DR	11-13-72
NEXT ASSY 01P1487, 01P1490	TOLERANCES (UNLESS OTHERWISE SPECIFIED) .X ± .1 .XX ± .03 .XXX ± .010 ANGLES ± 0.5°	CHK R. Fisher	11/13/72
MATERIAL		DSGN	11-11-72
FINISH	BREAK ALL SHARP EDGES .010 R APPROX	ENGR	11/15/72
	DO NOT SCALE DRAWING	APPD	11/15/72
		APPD	

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varian data machines a varian subsidiary
2722 michelson drive irvine california 92664

TITLE: CABLE ASSY, I/C EXP R.H.

CODE IDENT NO.	SIZE	DWG NO	REV
21101	D	53D0715	B

SCALE 1:2 SHEET OF 1

4/71 DIETZGEN-POST CLEARPRINT