"COMM-STOR*" II COMMUNICATIONS STORAGE UNIT

WIRING DIAGRAMS

1. GENERAL

1.01 This section covers the COMM-STOR II Communications Storage Unit manufactured by Sykes Datatronics, Incorporated, as described in their section SYKS 578-400-400, Issue 2.

1.02 This section is reissued to:

(a) Include information for COMM-STOR II units equipped with the 8A1/8B1 protocol option.

1.03 The wiring diagrams for the COMM-STOR II Communications Storage Unit are contained in the attached reprint of the practice prepared by Sykes Datatronics, Incorporated.

1.04 This section will aid in locating operational faults when used with BSPs 578-400-500 or -501, "Testing and Troubleshooting."

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Comm-Stor II
COMMUNICATIONS STORAGE UNIT
WIRING DIAGRAMS

CONTENTS PAGE

1. GENERAL

1.01 This section provides wiring diagrams and cable components for the Comm-Stor® II Communications Storage Unit, hereafter referred to as the Comm-Stor II unit.

1.02 This section has been reissued to include information for Comm-Stor II units equipped with the 8A1/8B1 protocol option.

1.03 When used with Section 578-400-500 or 578-400-501, Testing and Troubleshooting, this section will aid in locating operational faults.

2. CABLE CONNECTIONS

2.01 The tables presented in this part will aid the technician in locating connections of assemblies and related components.

2.02 Comm-Stor II unit assemblies are defined by seven ***area designations:***

A-1—DISK DRIVE ASSY—8120A

A2—DISK DRIVE ASSY—8220A

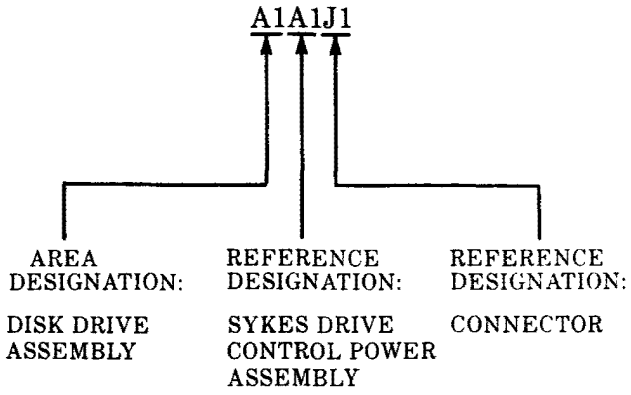
A3—FRONT PANEL ASSY—8120A/8220A

A4—8000 PRINTED WIRING BOARD (PWB) BASE CARD ASSY—8120A/8220A

A5—POWER SUPPLY ASSY

A6—REAR PANEL ASSY—8120A/8220A

A7—RACK MOUNT INSERT OPTION—8120A/8220A



2.03 The major components (Tables A-E) of each assembly are further defined by a ***reference designation.*** Subcomponents are assigned an additional reference designation. An example of a component identification code is shown:

TABLE A

PRINTED CIRCUIT CARD IDENTIFICATION

AREA	REF DESIGNATION	DESCRIPTION	BOARD ASSY NUMBER
A4	—	8000 Base Card PWB Assy—Five Slot	1030A6043
A4	—	8000 Base Card PWB Assy—Six slot	1030A5010
A4	A1	MP/RAM IIA PWB Assy	1030A5171
A4	A2	ROM IIA PWB Assy	1030A6486
A4	A3	Communication Ports PWB Assy	1030A5162
A4	A4	16K RAM Memory	1030A5013
		16K RAM Memory/Printer	1030A5014
		Printer Port	1030A5012
A4	A5	Disk Controller PWB Assy	1030A6054
A1/A2	A1	Sykes Drive Control PWB Assy	1030A3251
A5	A2	8120A Power Supply Base Card	1030A6024
A5	A3	Power Supply Control Card	1030A0299
A5	A4	8220A Power Supply Base Card	1030A0296
A5	A5	Power Supply Control Card	1030A0299
A6	A1	Rear Panel PWB Assy	1030A6084

This code identifies the J1 connector on the drive control board layout (Paragraph 4.16). The area designation is located by referring to paragraph 2.02. The first reference designation was then located in Table A. Finally, component J1 was identified by referring directly to the drive control board layout.

TABLE B

MOTOR IDENTIFICATION

AREA	REF DESIGN	DESCRIPTION
—	B1	Intake Fan 1, 8120A/8220A
—	B2	Intake Fan 2, 8220A
A1	B1	SYNC Drive Motor, Drive 1—8120A/8220A
A2	B1	SYNC Drive Motor, Drive 2—8220A
A1	B2	Drive 1 Stepper Motor—8120A/8220A
A2	B2	Drive 2 Stepper Motor—8220A

TABLE C

LAMP IDENTIFICATION

AREA	REF DESIGN	DESCRIPTION
A1	DS1	Drive 1 Index Lamp, 8120A/8220A
A2	DS1	Drive 2 Index Lamp, 8220A
A3	DS1	FR PNL RDY 1 Lamp, 8120A/8220A
A3	DS2	FR PNL BUSY 1 Lamp, 8120A/8220A
A3	DS3	FR PNL Carrier Lamp, 8120A/8220A
A3	DS4	FR PNL Status Lamp, 8120A/8220A
A3	DS5	FR PNL RDY 2 Lamp, 8220A
A3	DS6	FR PNL BUSY 2 Lamp, 8220A

TABLE D

SWITCH IDENTIFICATION

AREA	REF DESIGN	DESCRIPTION
—	SCB1	Main Power Switch/Circuit Breaker
A1	S1	Drive 1 Track 00, 8120A/8220A
A1	S2	Drive 1 Track 76, 8120A/8220A
A2	S1	Drive 2 Track 00, 8220A
A2	S2	Drive 2 Track 76, 8220A
A3	SDS1	Restart/Power on Indicator, 8120A/8220A
A6	S2	Binary Mode—8120A/8220A
A7	S2	Binary Mode Rack Mount—8120A/8220A

TABLE E

MISCELLANEOUS ELECTRICAL OR ELECTRICAL/MECHANICAL COMPONENTS

AREA	REF DESIGN	DESCRIPTION
—	K1	Solid State Relay—8120A/8220A
—	FL1	AC Line Filter—8120A/8220A
A1	PU1	Read/Write Head—8120A/8220A
A2	PU1	Read/Write Head—8220A
A1	L1	Head Load Solenoid—8120A/8220A
A2	L1	Head Load Solenoid—8220A
A1	Q1	Index Sensor—8120A/8220A
A1	Q1	Index Sensor—8220A

TABLE F

HARNESS CONNECTOR IDENTIFICATION

REF DESIGN	DESCRIPTION
	Hi/Low Level Harness—8120A, 1030A5071
P1	Power Supply Mate
P2	ACN—Power Cord
P3	ACN—Power Cord Mate
P4	AC Line Filter Mate
P5	
P6	Fan Mate
P7	Disk Drive Motor Mate
P8	DC Power—Base Card Mate
	Cable Assy—Disk INTFC I/O, 1030A6073
P17	Disk Control PWB Mate
P18	Drive Control PWB Mate
	Rack Mount Switch Assy—8120A/8220A, 1030A5087
A7P1	Rack Mount Binary Switch Opt Mate
	Low Level Harness—8220A, 1030A6061
P1	Power Supply Mate
P12	DC Power Base Card Mate
	Hi Level Harness—8220A, 1030A5072
P2	ACN—Power Cord
P3	ACN—Power Cord Mate
P4	AC Line Filter Mate
P5	
P6	AC Power Distribution—Disk Drive
P10	Fan Mate(B1)
P11	Fan Mate(B2)
	AC Power Harness—8220A, 1030A0253
P7	AC Power Distribution Mate
P8	AC Power Drive 1 Mate
P9	AC Power Drive 2 Mate
	Low Level Power Harness, Disk Drive 8220A, 1030A6069
P13	8000 Base Card Mate
P14	Disk Drive Control PWB Mate

TABLE F (Cont)

HARNESS CONNECTOR IDENTIFICATION

REF DESIGN	DESCRIPTION
	Cable Assy—Disk INTFC I/O—8220A 1030A6071
P17	Disk Control PWB Mate
P18	Drive 1 Control PWB Mate
P19	Drive 2 Control PWB Mate

TABLE G

CONNECTOR MATING—MODEL 8120A

CONNECTOR	MATES WITH	IDENTIFICATION
P1	A5J2	DC Power from Power Supply
P2	P3	ACN—Power Cord
P3	P2	ACN—Power Cord
P4	FL1P1	AC Line Filter
P5		
P6	B1P1	AC Power-Fan
P7	A1J1	AC Power-Disk Drive
P8	A4J1	Base Card—Low Level Power
P17	A4A5J2	Disk INTFC I/O—Low Level
P18	A1A1J1	Disk INTFC I/O—Low Level
A3P1	A4A3J3	FR Panel Indicators
A6P1	A4A3J2	Rear Panel Term & Modem I/O
A6P2	A4A4J2	Rear Panel Printer Port I/O
A6J7	A7P1	Rack Mount Binary Opt

TABLE H

CONNECTOR MATING—MODEL 8220A

CON-NECTOR	MATES WITH	IDENTIFICATION
P1	A5J1	DC Power from Power Supply
P2	P3	ACN—Power Cord
P3	P2	ACN—Power Cord
P4	FL1P1	AC Line Filter
P5		
P6	P7	AC Power Distribution
P7	P6	AC Power Distribution
P8	A1J1	AC Power Disk Drive 1
P9	A2J1	AC Power Disk Drive 2
P10	B1P1	AC Power Fan 1
P11	B2P1	AC Power Fan 2
P12	A4J1	DC Power to Base Card
P13	A4J3	DC Power from Base Card
P14	A1A1J5	DC Power to Disk Drive 2
P15		
P16		
P17	A4A5J2	Disk INTFC I/O—Controller
P18	A1A1J1	Disk INTFC I/O—Drive 1
P19	A2A1J1	Disk INTFC I/O—Drive 2
A3P1	A4A3J3	FR Panel Indicators
A6P1	A4A3J2	Rear Panel Term & Modem I/O
A6P2	A4A4J2	Rear Panel Printer Port I/O
A6J7	A7P1	Rack Mount Binary Option

3. BASE BOARD BUS CONNECTIONS

3.01 This part lists and describes all signal connections on the base board assembly (Table I).

TABLE I

BASE BOARD BUS CONNECTIONS

PIN NO.	MNEMONIC	SIGNAL NAME	USED ON				
			MP/RAM	ROM II	EIA	DISK CONT.	16K RAM/ PRINTER
1	GRD	Ground (5V Return)	X	X	X	X	X
2	GRD	Ground (5V Return)	X	X	X	X	X
3	KEY	KEY	X	X	X	X	X
4	KEY	KEY	X	X	X	X	X
5	+5V	+5VDC	X	X	X	X	X
6	+5V	+5VDC	X	X	X	X	X
7	+24V	+24VDC				X	
8	+24V	+24VDC				X	
9	24V RET.	24V Return				X	
10	24V RET.	24 V Return				X	
11	+5V BAT	+5VDC Battery	X				
12	+5V BAT	+5VDC Battery	X				
13	STR/	Baud Strobe Not	X		X		X
14	4 MHZ	4 Megahertz Clock	X			X	
15	RESTR/	Restart Not	X		X		X
16	31 KHZ	31 Kilohertz Clock	X			X	
17							
18	IRQ2/	Interrupt Request 2 Not	X		X		X
19	IRQ1	Interrupt Request 1 Not	X		X		X
20	PHG	Phase G	X			X	
21	ROMCK	ROM Clock	X	X			
22	IRQ4	Interrupt Request 4 Not	X				
23	MEMS	Memory Select Not	X	X			
24	IRQ3/	Interrupt Request 3 Not	X			X	
25	DS/	Device Strobe Not	X		X	X	X
26	PFIELD/	Patch Field Not	X	X			
27	POR/	Power On Reset Not	X	X	X	X	X
28	WR	Write-Read	X	X	X	X	X
29	-5V	-5VDC					
30	-5V	-5VDC					

TABLE I (Cont)

BASE BOARD BUS CONNECTIONS

PIN NO.	MNEMONIC	SIGNAL NAME	USED ON				
			MP/RAM	ROM II	EIA	DISK CONT.	16K RAM/ PRINTER
31	RW	Read-Write	X		X	X	X
32	A12	Address Bit 12	X	X			X
33	SPIN 1/	Spindle 1 Power Not				X	
34	A13	Address Bit 13	X	X			X
35	RDY	Ready	X				
36	A15	Address Bit 15	X	X			X
37							
38							
39							
40	A14	Address Bit 14	X	X			X
41							
42	500 KHZ	500 Kilohertz Clock	X				
43							
44							
45							
46	250 KHZ	250 Kilohertz Clock	X				
47	DISROM	Disable ROM		X			
48							
49							
50	NMI/	Non-Maskable Interrupt Not	X			X	
51	DEV/	Device Enable Not	X				
52	A10	Address Bit 10	X	X			X
53	All	Address Bit 11	X	X			X
54	A3	Address Bit 3	X	X			X
55	8 MHZ	8 Megahertz Clock	X				
56	A4	Address Bit 4	X	X			X
57							
58	DG1/	Device Group 1 Not	X		X		X
59							
60	DG2/	Device Group 2 Not	X		X		X
61							

TABLE I (Cont)

BASE BOARD BUS CONNECTIONS

PIN NO.	MNEMONIC	SIGNAL NAME	USED ON				
			MP/RAM	ROM II	EIA	DISK CONT.	16K RAM/ PRINTER
62	DG3/	Device Group 3 Not	X			X	
63	GRD	Ground		X			
64	GRD	Ground		X			
65	GRD	Ground		X			
66	DB5	Data Bus 5	X	X	X	X	X
67							
68	DB0	Data Bus 0	X	X	X	X	X
69							
70	DB4	Data Bus 4	X	X	X	X	X
71	RAM INH/	RAM Inhibit Not					X
72	DB1	Data Bus 1	X	X	X	X	X
73	DB2	Data Bus 2	X	X	X	X	X
74	DB3	Data Bus 3	X	X	X	X	X
75	DO2	Data Out 2	X		X	X	X
76							
77	DB6	Data Bus 6	X	X	X	X	X
78	DO0	Data Out 0	X		X	X	X
79	DO1	Data Out 1	X		X	X	X
80	DO3	Data Out 3	X		X	X	X
81	DO6	Data Out 6	X		X	X	X
82	DB7	Data Bus 7	X	X	X	X	X
83	SYNC/	SYNC Not	X	X			
84	DO4	Data Out 4	X		X	X	X
85	DO5	Data Out 5	X		X	X	X
86	PH2/	Phase 2 Not	X	X			X
87	A5	Address Bit 5	X	X			X
88	A6	Address Bit 6	X	X			X
89	WE/	Write Enable Not	X	X			X
90	A7	Address Bit 7	X	X			X
91	A9	Address Bit 9	X	X			X

TABLE I (Cont)

BASE BOARD BUS CONNECTIONS

PIN NO.	MNEMONIC	SIGNAL NAME	USED ON				
			MP/RAM	ROM II	EIA	DISK CONT.	16K RAM/ PRINTER
92	A8	Address Bit 8	X	X			X
93	A2	Address Bit 2	X	X	X	X	X
94	A1	Address Bit 1	X	X	X	X	X
95	A0	Address Bit 0	X	X	X	X	X
96	DO7	Data Out 7	X		X	X	X
97	-12V	-12VDC			X	X	X
98	-12V	-12VDC			X	X	X
99	+12V	+12VDC	X	X	X		X
100	+12V	+12VDC	X	X	X		X

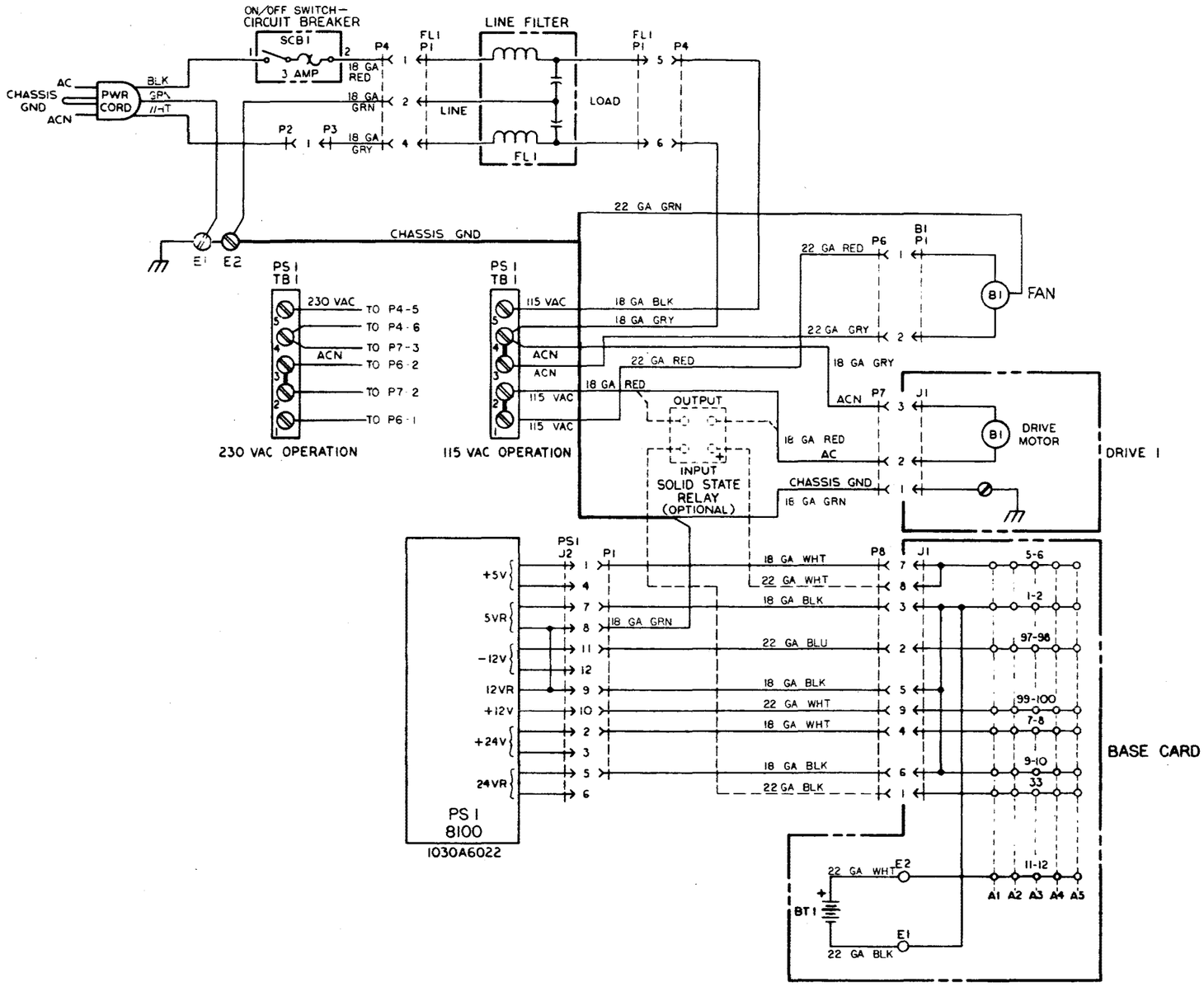
4. WIRING DIAGRAMS

4.01 The following wiring diagrams provide coverage for Comm-Stor II.

HI/LOW LEVEL POWER DISTRIBUTION

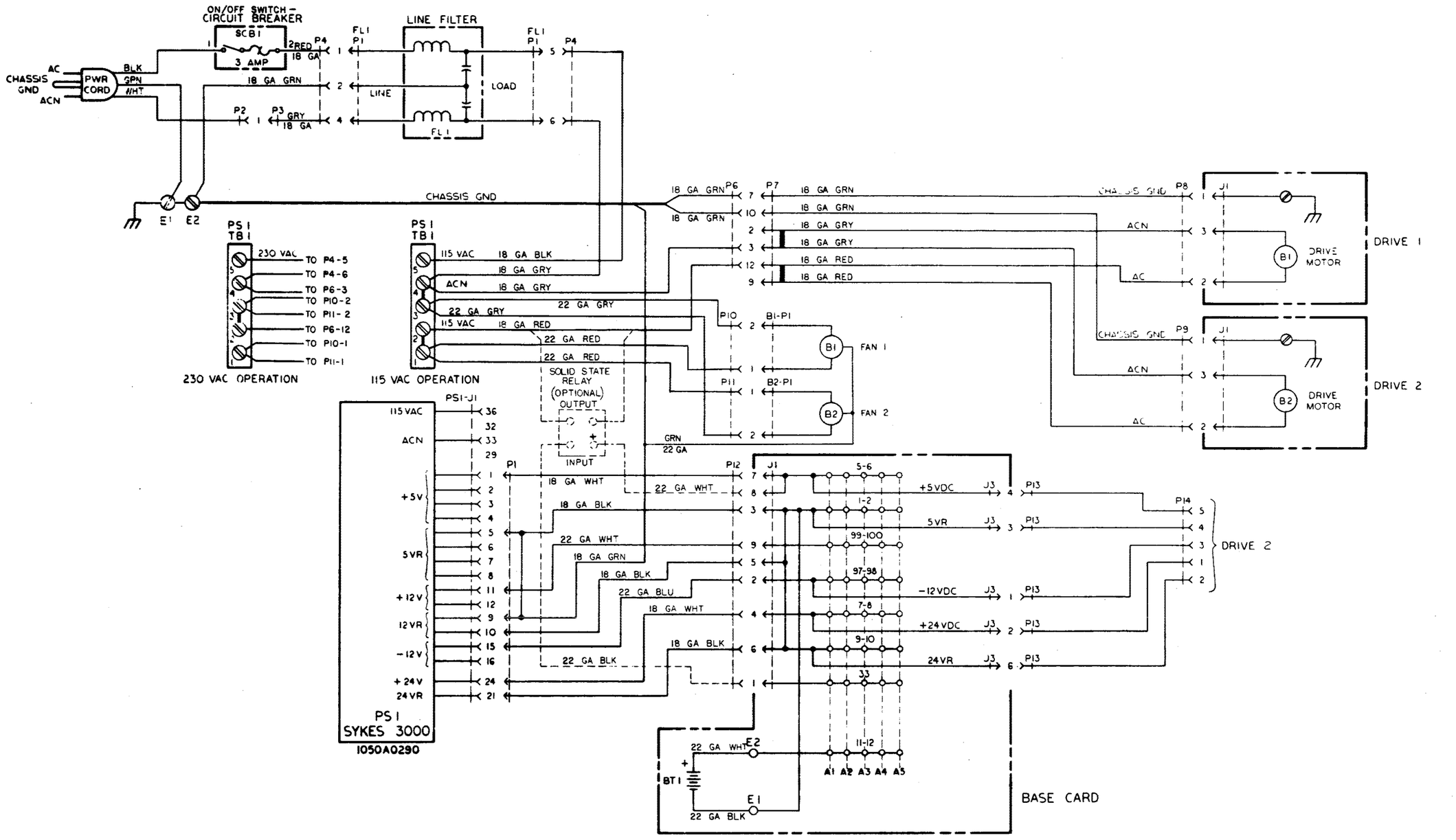
4.02

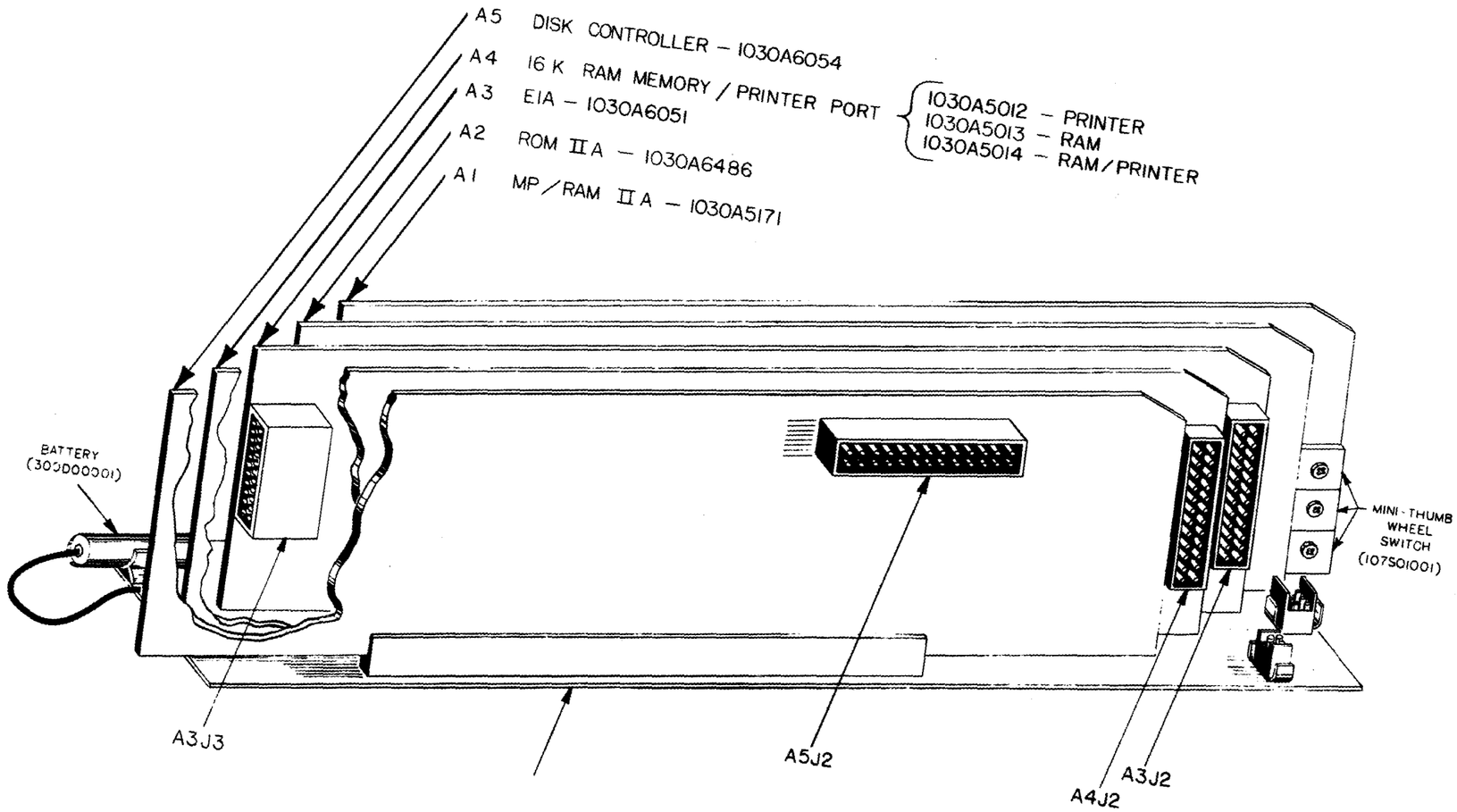
Model 8120A

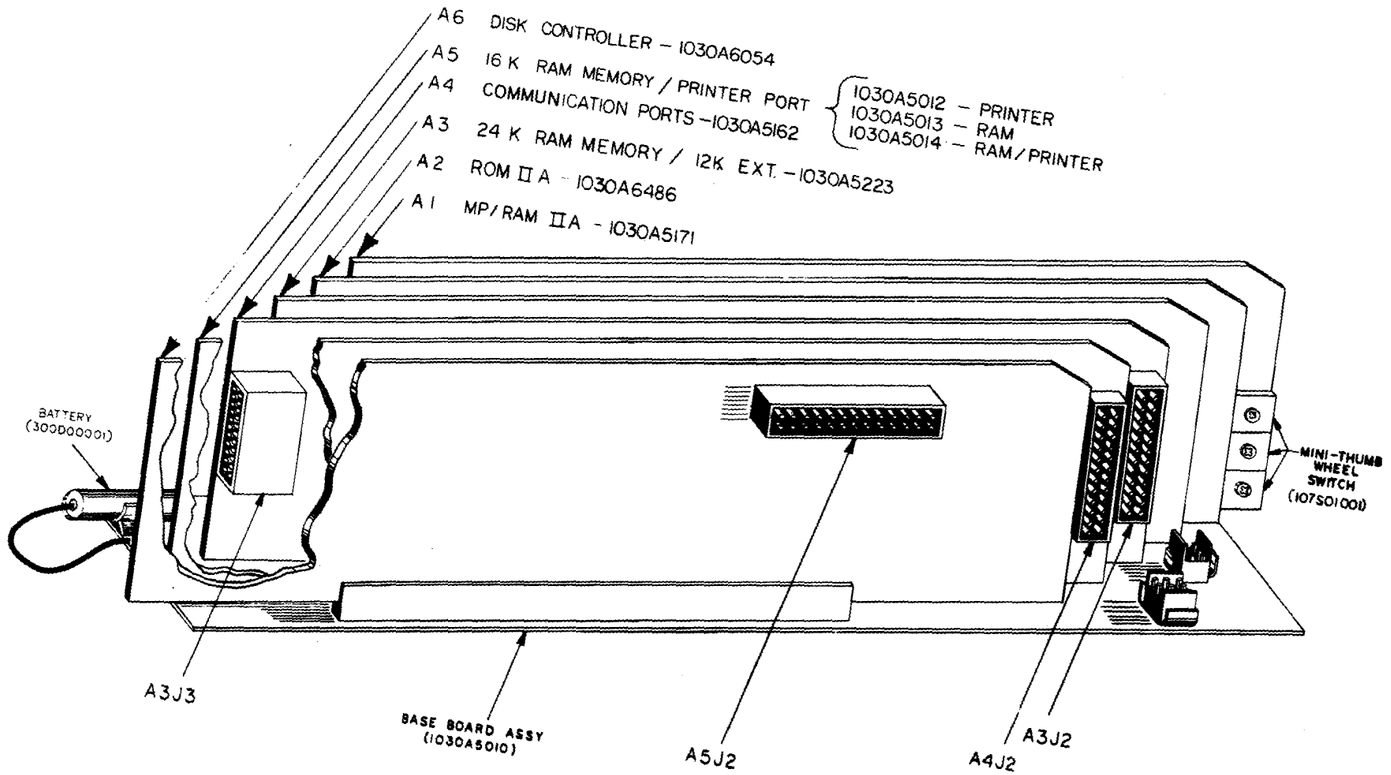


4.03

Model 8220A

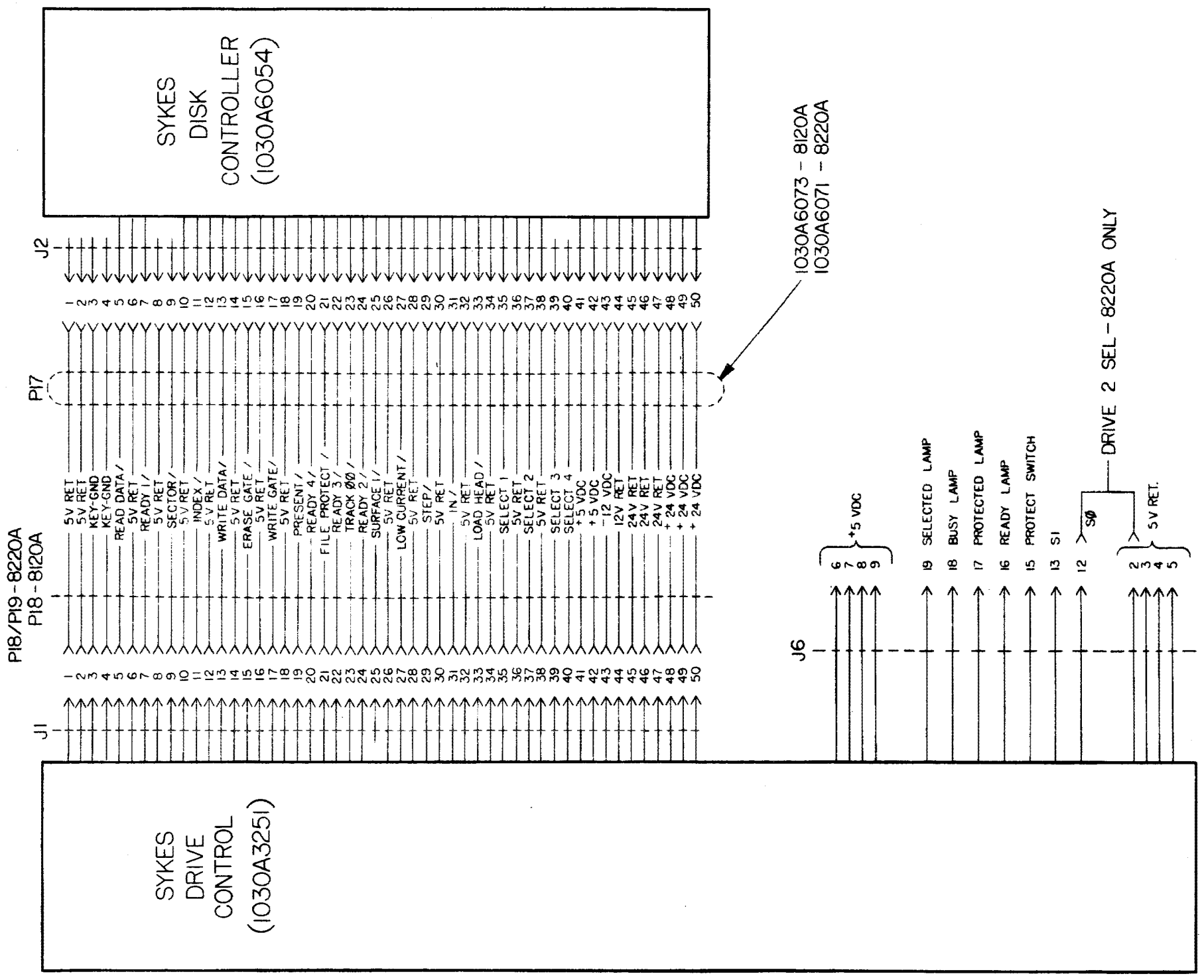



A5 DISK CONTROLLER – 1030A6054
A4 16 K RAM MEMORY / PRINTER PORT
1030A5012 – PRINTER
1030A5013 – RAM
1030A5014 – RAM/PRINTER
A3 EIA – 1030A6051
A2 ROM IIA – 1030A6486
A1 MP/RAM IIA – 1030A5171
BATTERY (303D00001)
MINI - THUMB WHEEL SWITCH (107S01001)
A3J3
A5J2
A4J2
A3J2


A6 DISK CONTROLLER – 1030A6054
A5 16 K RAM MEMORY / PRINTER PORT
A4 COMMUNICATION PORTS –1030A5162
1030A5012 – PRINTER
1030A5013 – RAM
1030A5014 – RAM/PRINTER
A3 24 K RAM MEMORY / 12K EXT. –1030A5223
A2 ROM II A – 1030A6486
A1 MP/RAM IIA – 1030A5171
BATTERY (300D00001)
MINI-THUMB WHEEL SWITCH (107S01001)
A3J3
BASE BOARD ASSY (1030A5010)
A5J2
A4J2
A3J2

FLEXIBLE DISK DRIVE SIGNAL WIRING

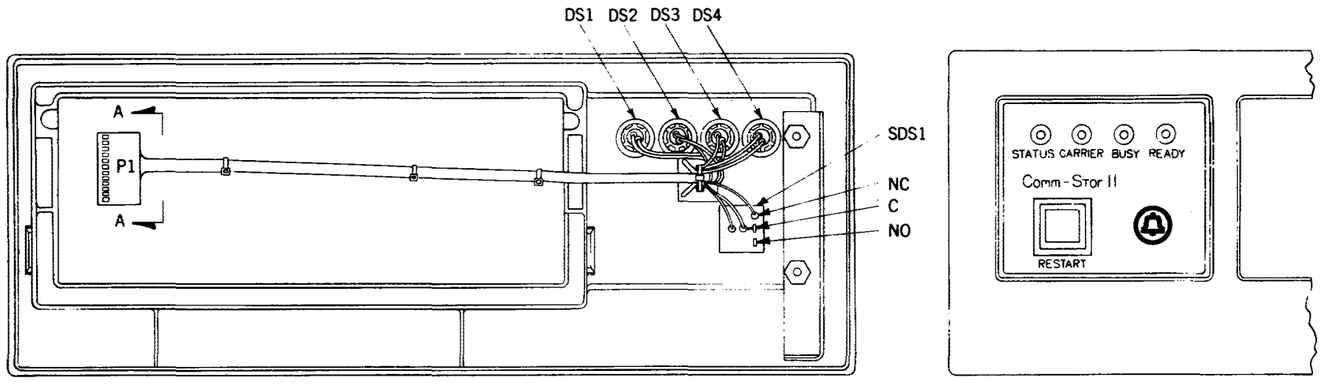
4.06

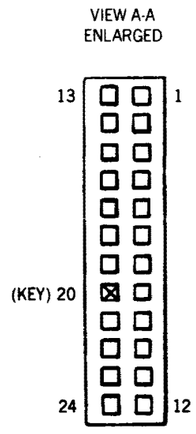


FRONT PANEL ASSEMBLY AND WIRING

4.07

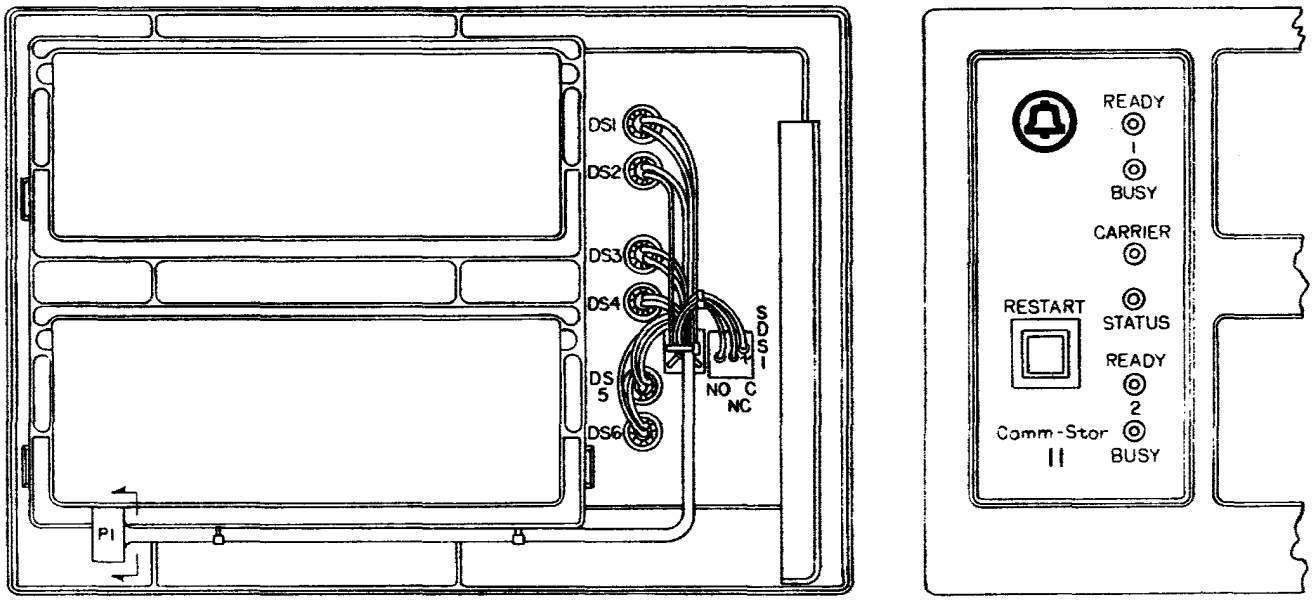
Front Panel Assembly—Model 8120A





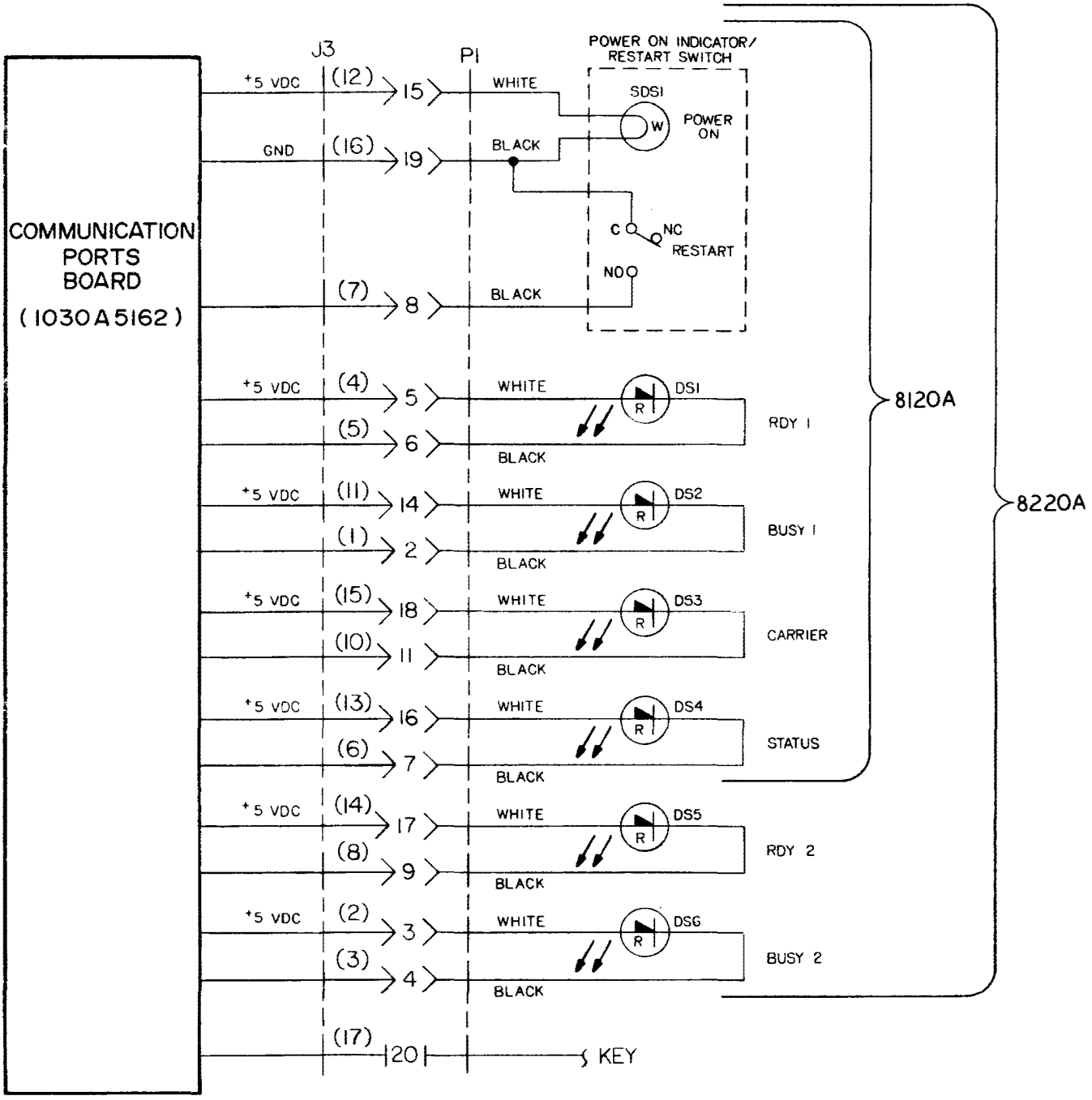
4.08

Front Panel Assembly—Model 8220A



4.09

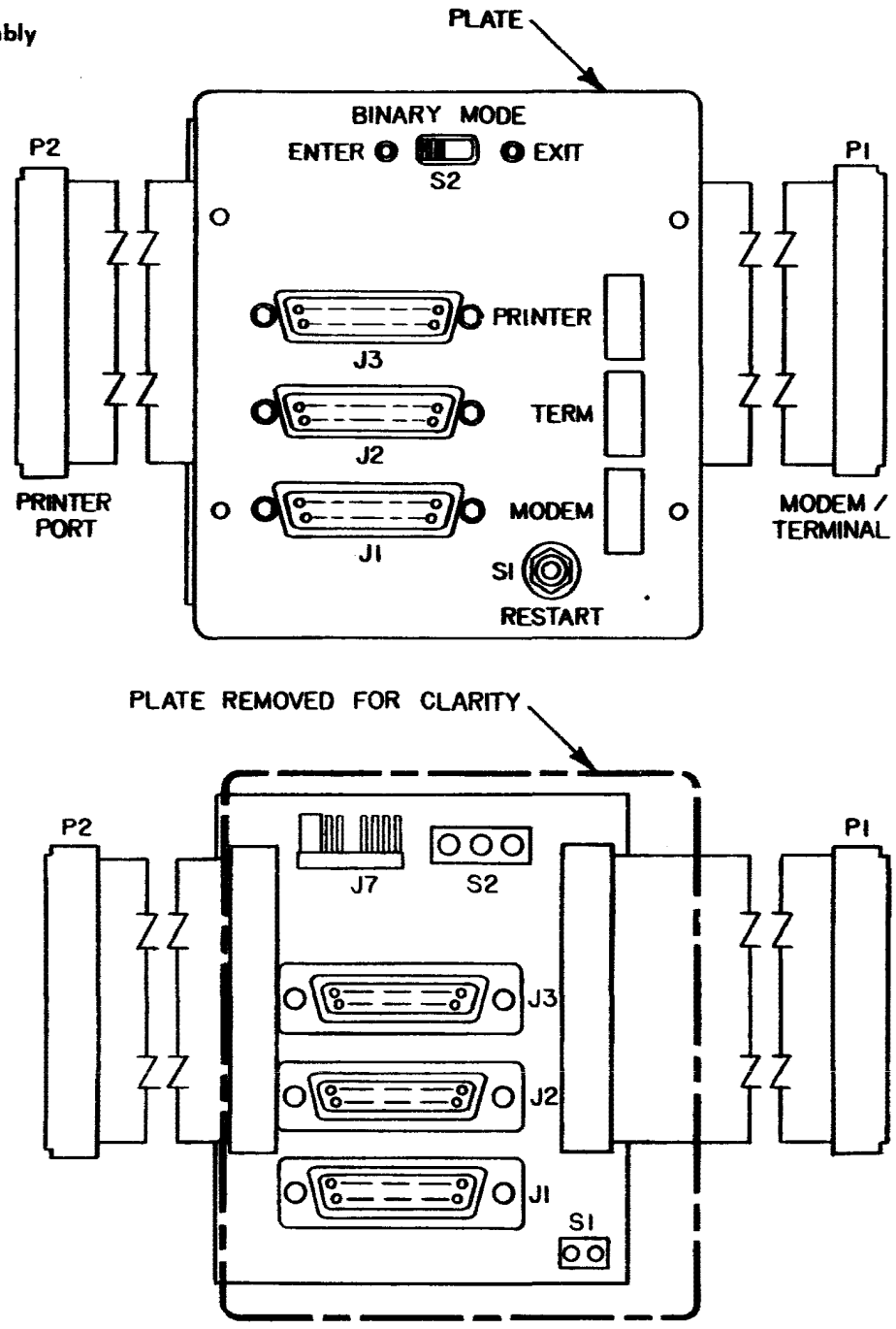
Front Panel Wiring



BACK PANEL ASSEMBLY AND WIRING

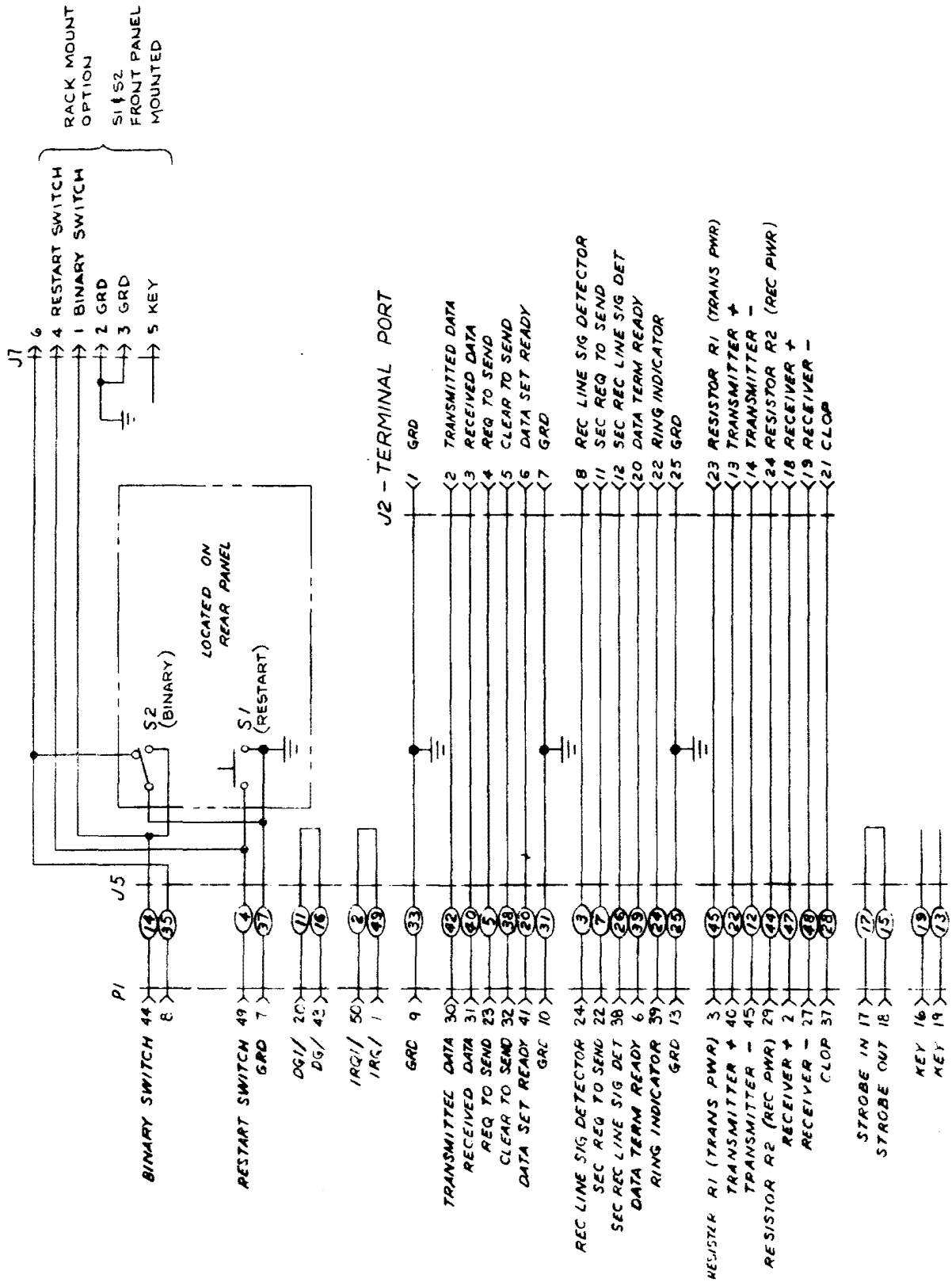
4.10

Back Panel Assembly



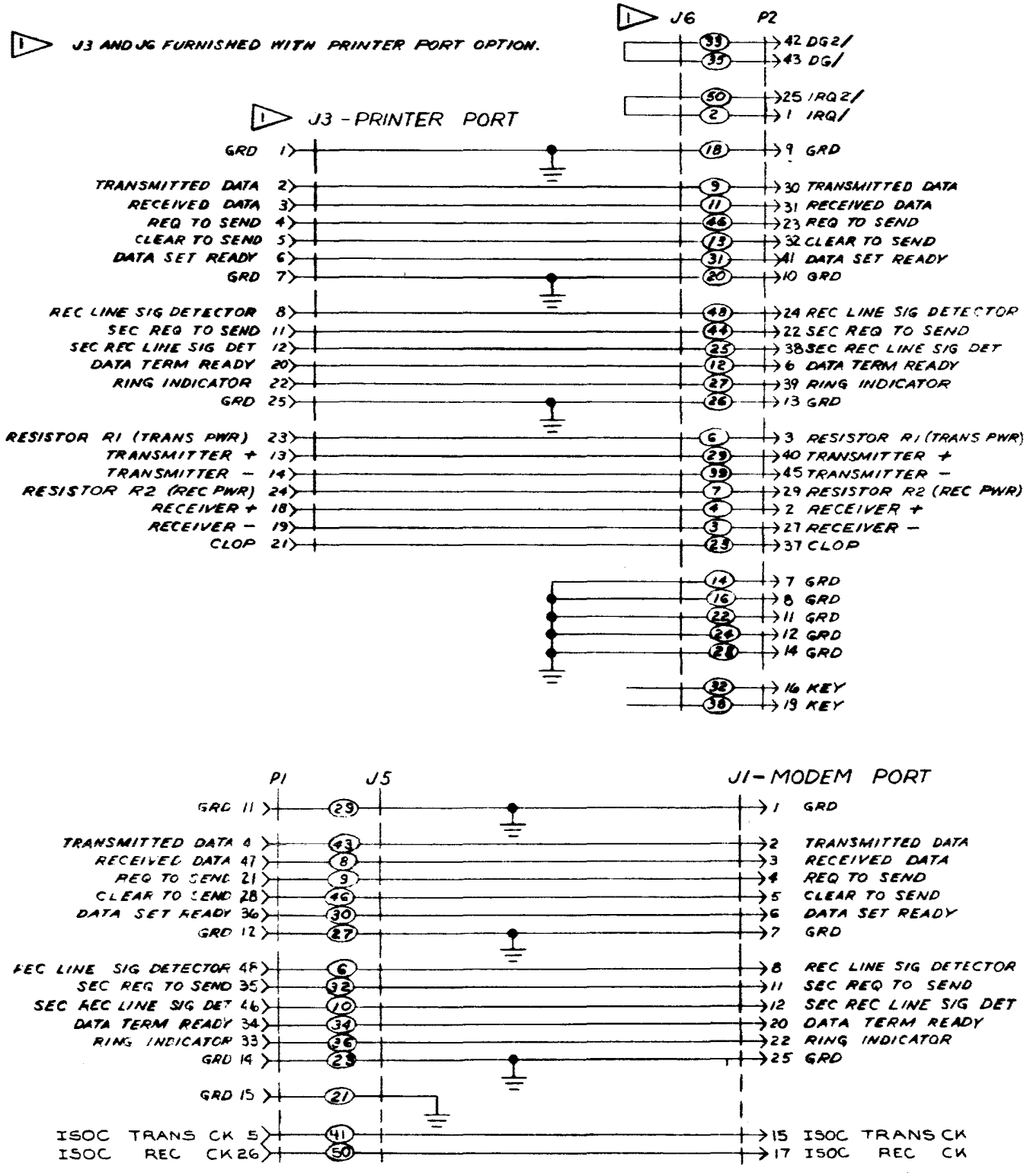
4.11

Terminal Port Wiring



4.12

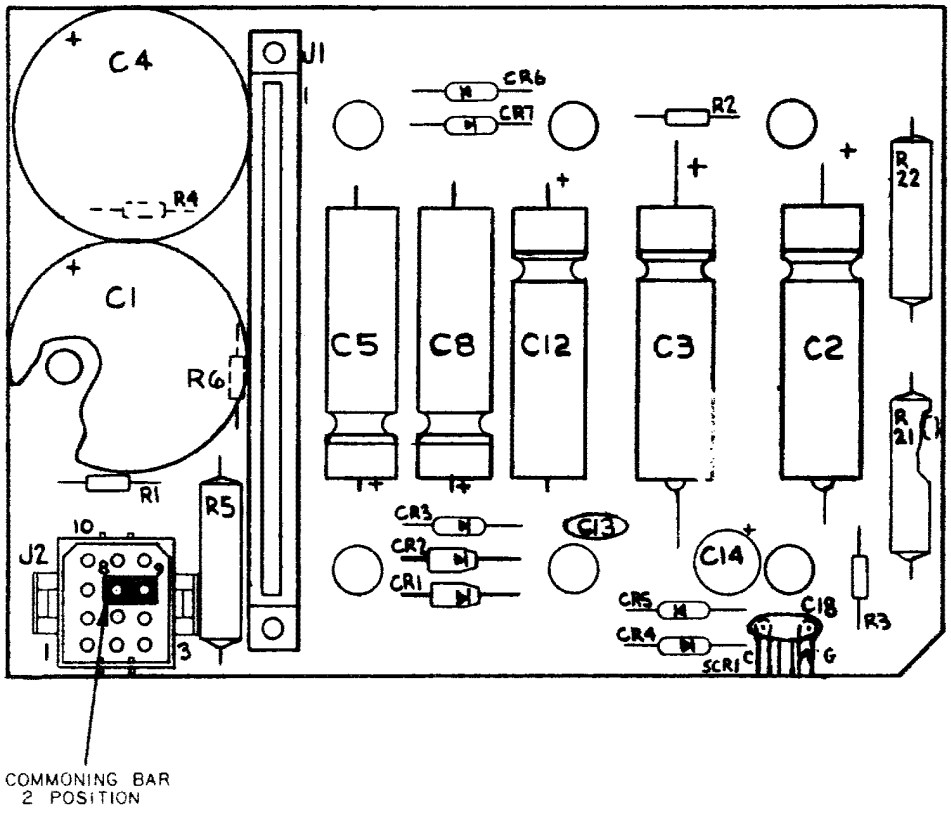
Printer Port and Modem Port Wiring



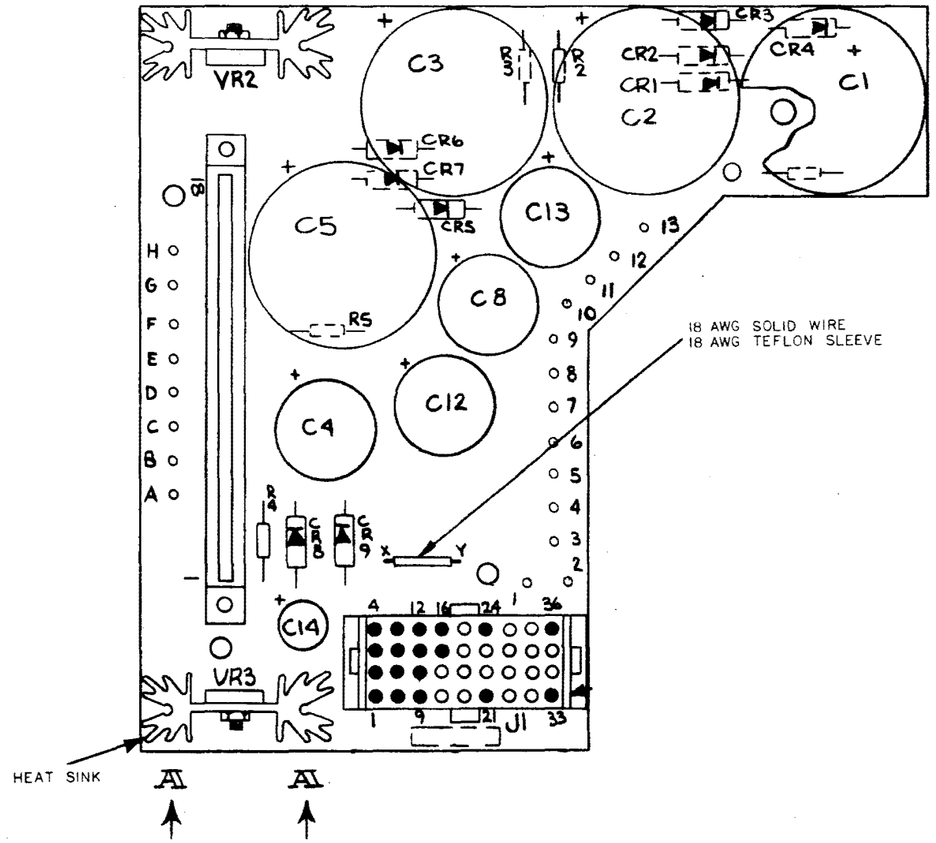
POWER SUPPLY

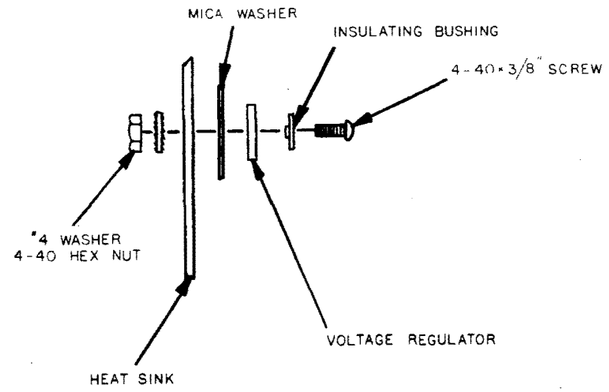
4.13

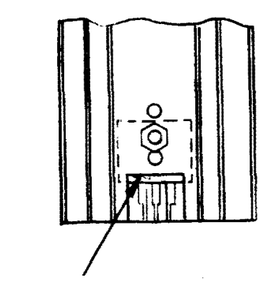
Power Supply Assembly—Model 8120A



4.14 **Power Supply Assembly—Model 8220A**



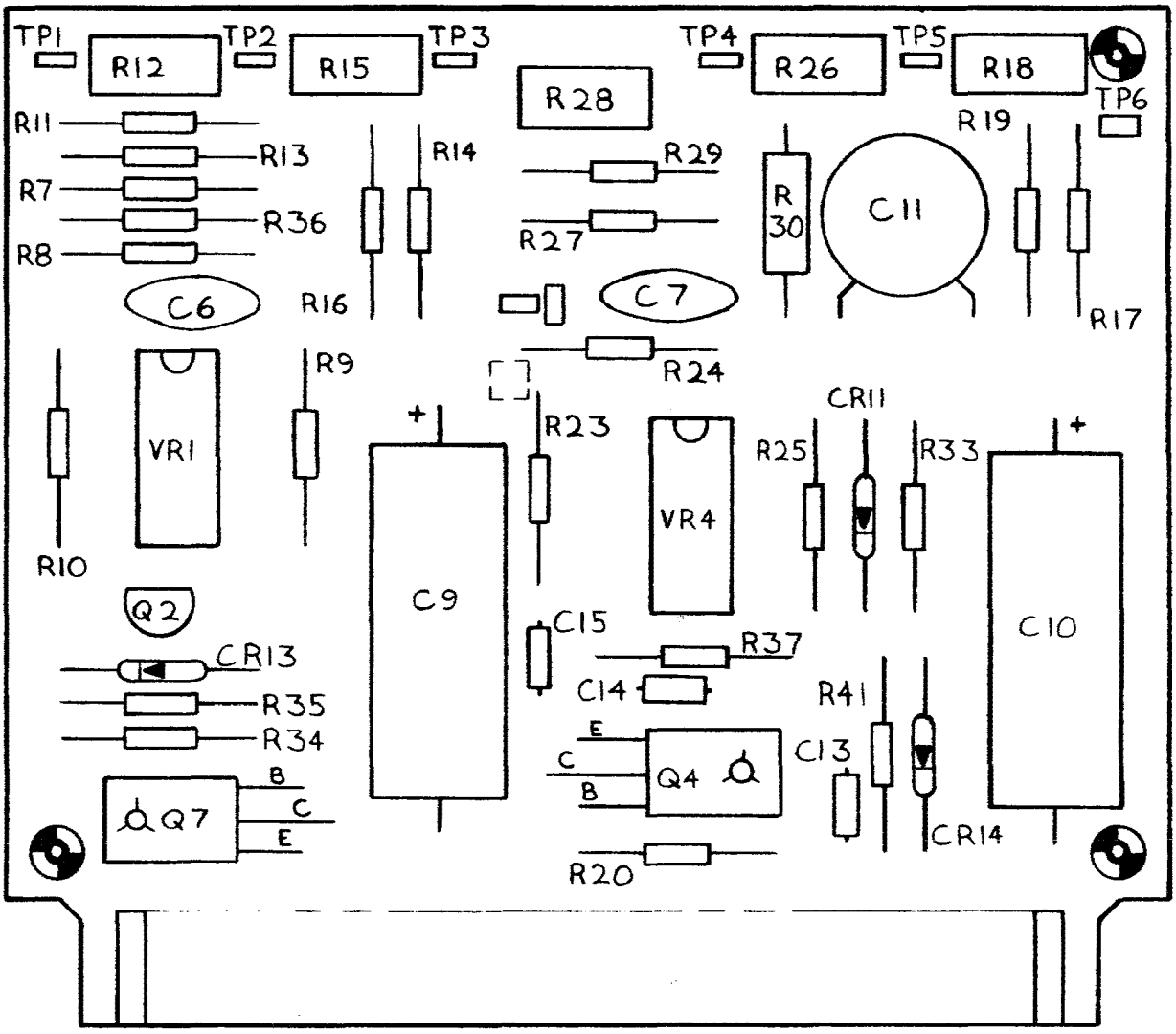




VR2 & 3
HEAT SINK
VIEW A-A

4.15

Power Supply Control Board Assembly

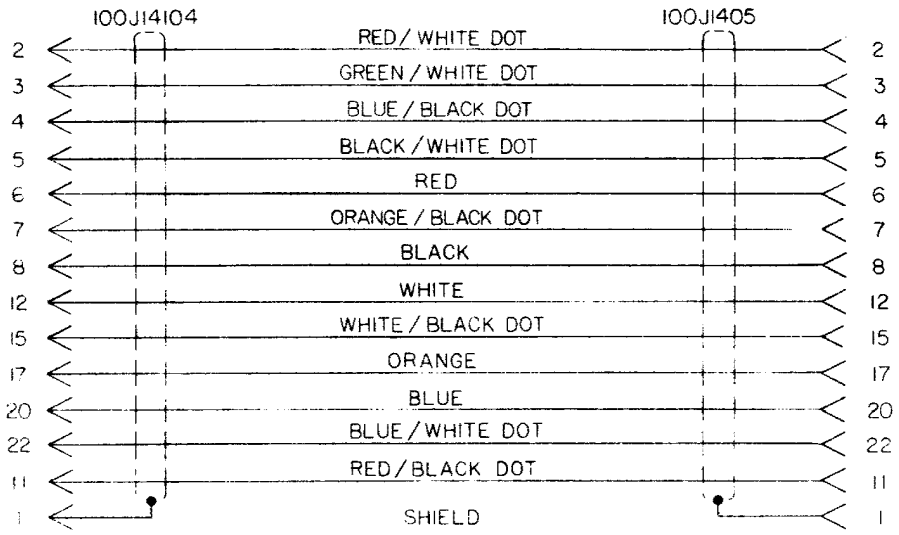


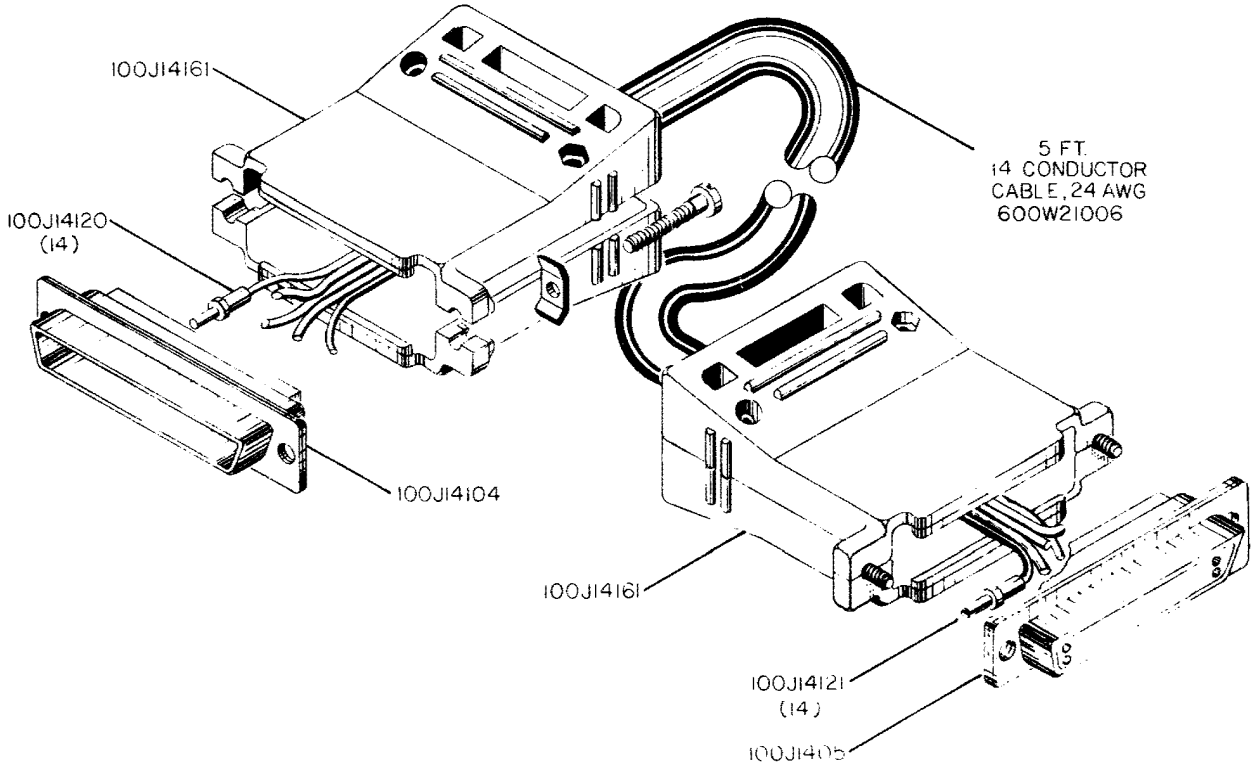
EIA CABLE ASSEMBLY

4.16

1050A0535 EIA CABLE ASSEMBLY

APPLICATION: COMM-STOR 8120A/8220A SYSTEM-DATA SYSTEM

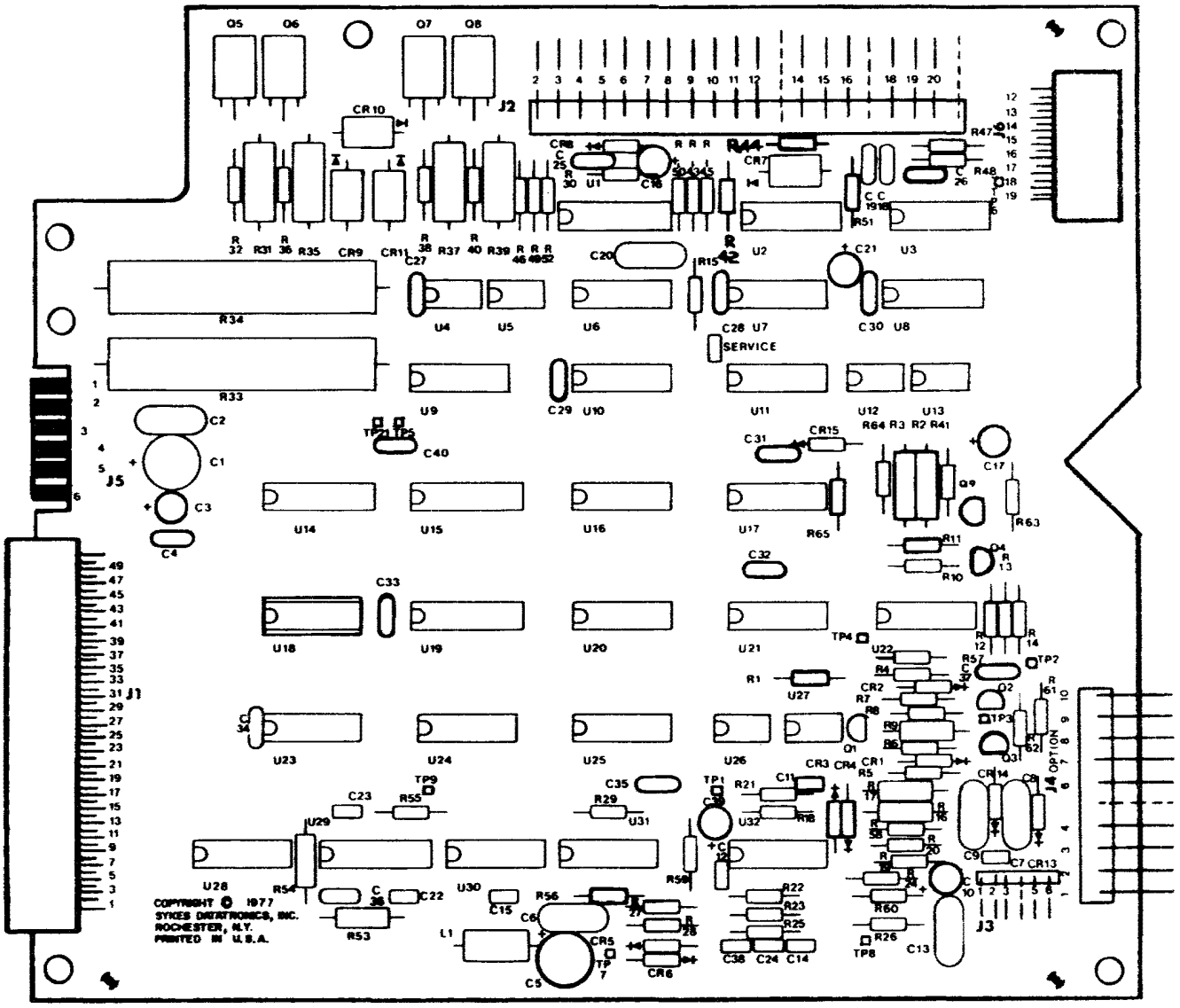




DRIVE CONTROL BOARD LAYOUT AND WIRING

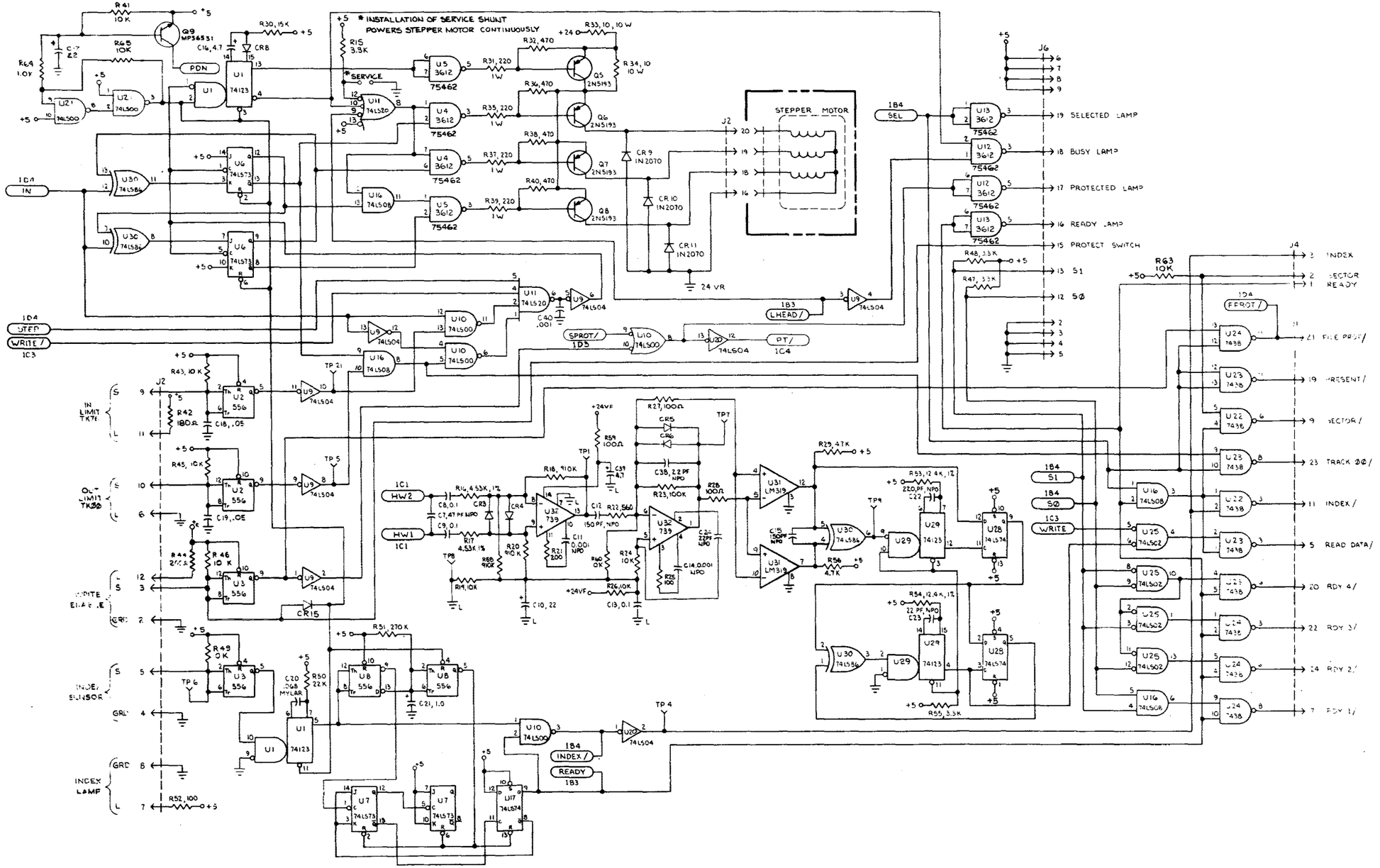
4.17

Drive Control Board Layout



4.18

Drive Control Board Wiring



Drive Control Board Wiring (Cont)

1 TEST POINT IDENTIFICATION:

TP 1 – READ AMPLIFIER
TP 2 – ERASE
TP 3 – WRITE LEVEL
TP 4 – INDEX
TP 5 – OUT LIMIT
TP 6 – INDEX PULSE
TP 7 – LIMIT AMPLIFIER
TP 8 – LINEAR GRD
TP 9 – PEAK POSITION PULSE
TP 21 – IN LIMIT

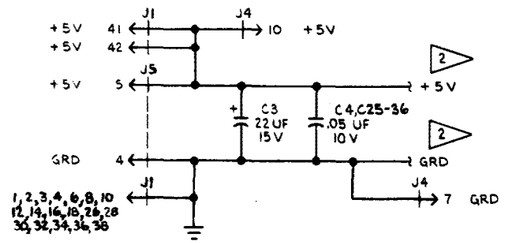
2 DRIVE SELECT JUMPER SEQUENCE:

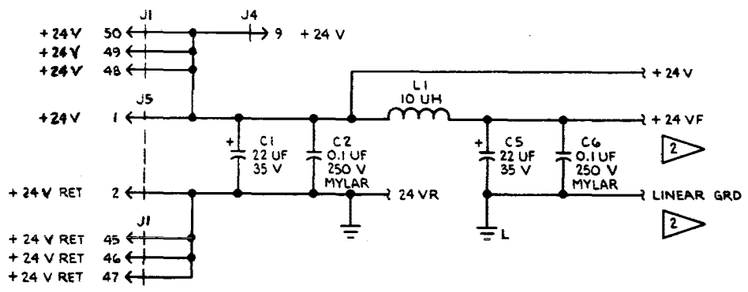
	JUMPER* FROM/TO	DR 1	DR 2	DR 3	DR 4
SØ	CONN J6-12 To J6-2	OUT	IN	OUT	IN
S1	CONN J6-13 To J6-3	OUT	OUT	IN	IN

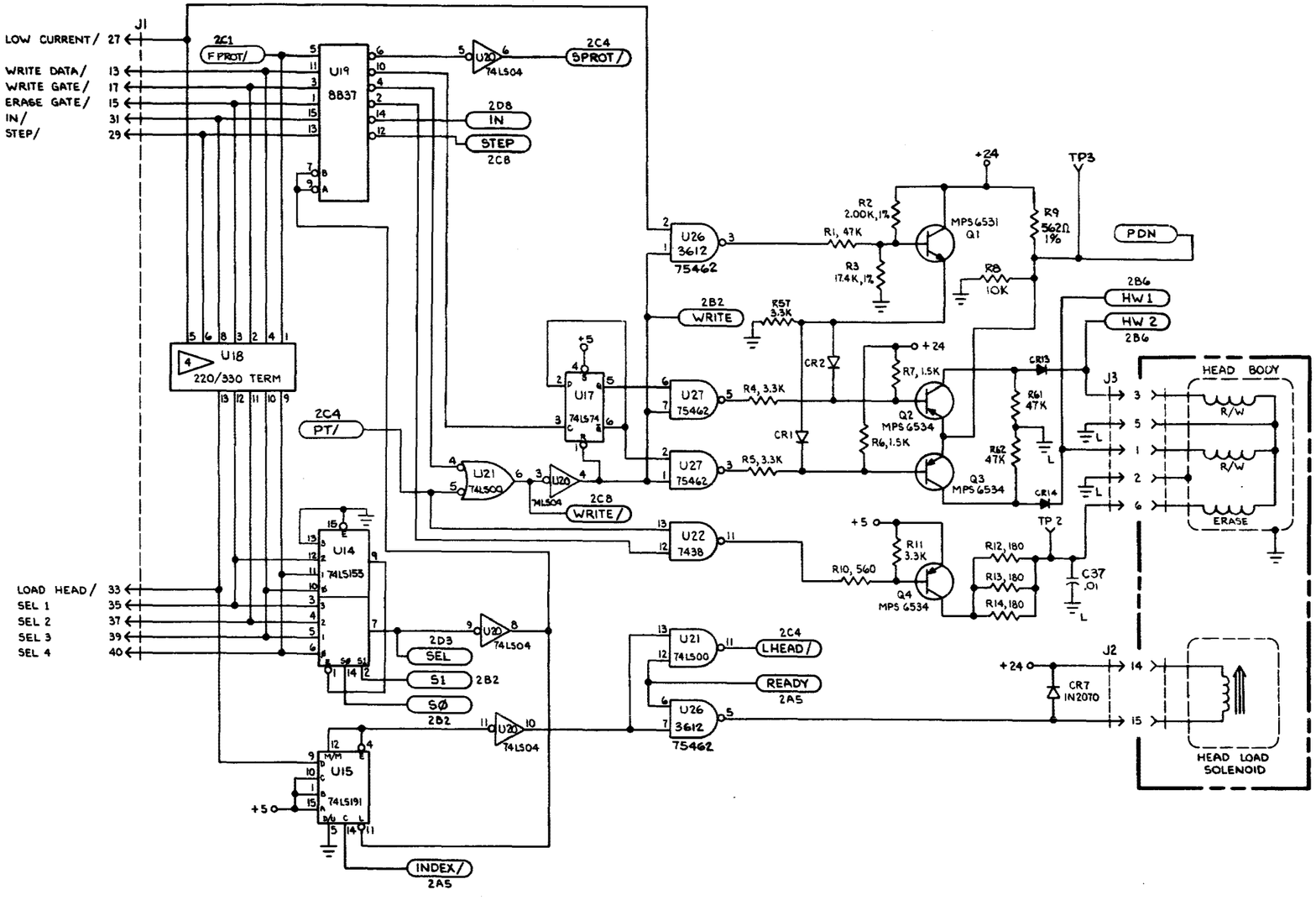
* FOR USE IN 7000 CARD CAGE SYSTEMS NO JUMPER REQUIRED

3 ORIGINS AND DESTINATIONS OF INTERSHEET SIGNAL NETWORKS ARE SHOWN ADJACENT TO THEIR CORRESPONDING SIGNAL CALLOUT AND REFERS TO SHEET NO. AND ZONE. EXAMPLE: 2B7 IS FOUND IN ZONE B7 ON SHEET 2

4 REMOVE INTEGRATED CIRCUIT U18 FOR ALL DRIVES IN A MULTIPLE SYSTEM EXCEPT THE LAST DRIVE IN THE CHAIN.







INTERNAL WIRING OF DRIVE

4.19