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16-3007-103  
November, 1982

# *Moon Patrol*

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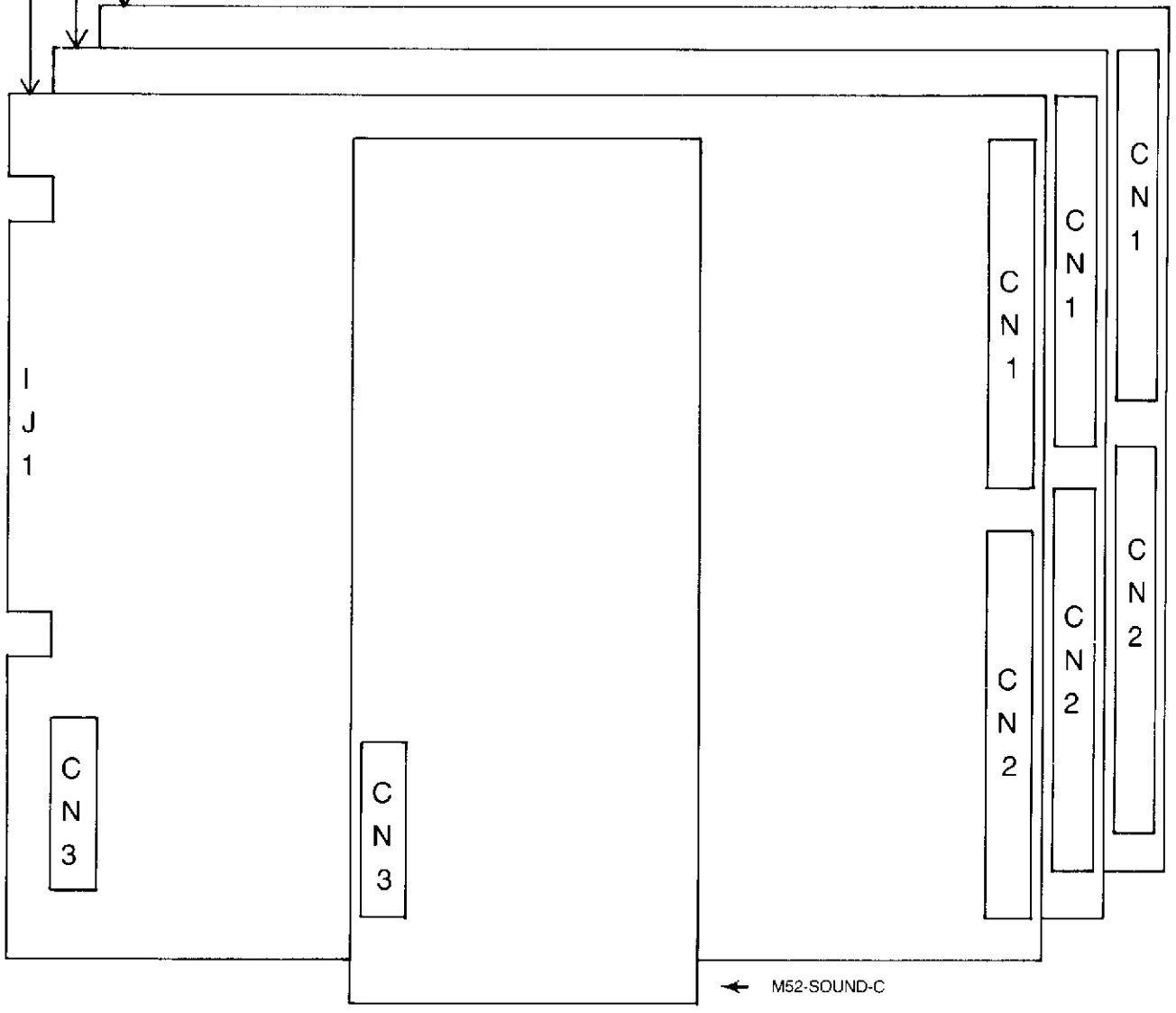
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- M52-A-C CPU BOARD
- M52-B-C CHARACTER BOARD
- M52-E-C SCROLLING VIDEO BOARD



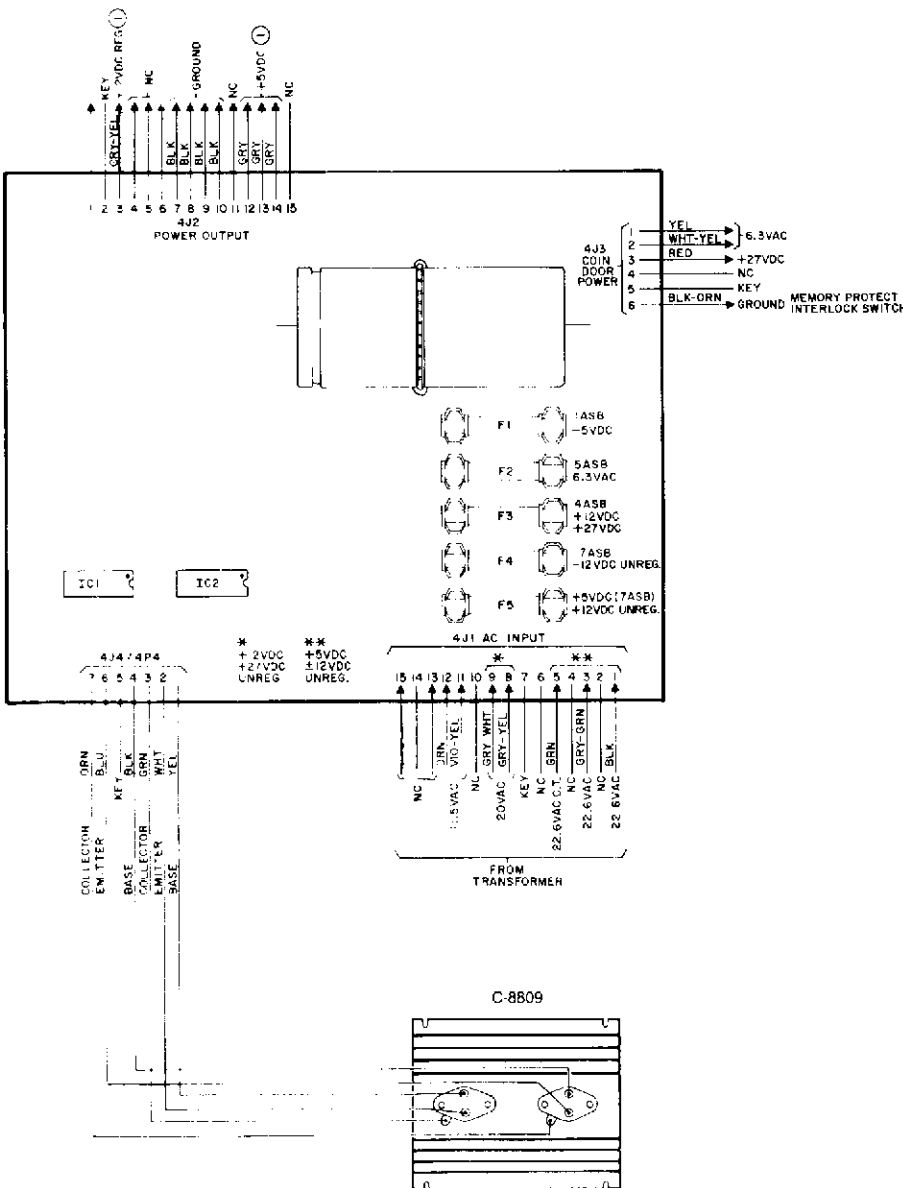
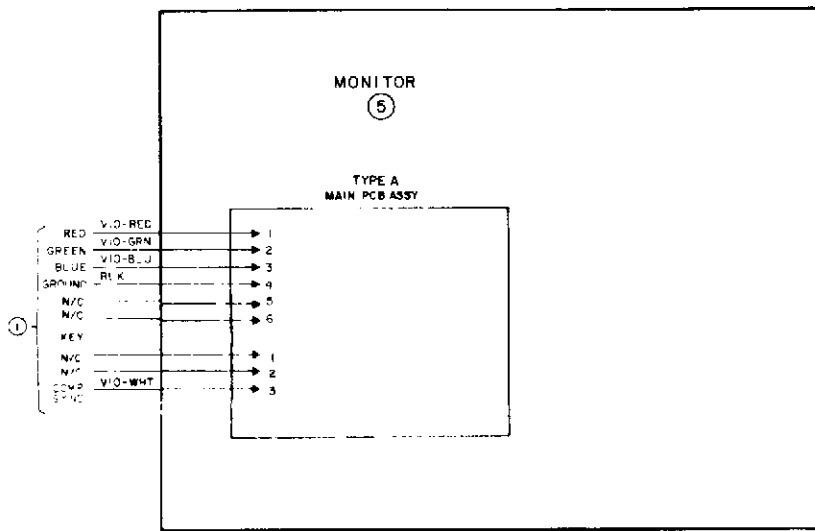
DIP SWITCH NO. 1

ADJUSTMENT	OPTIONS	1
		ON
*RECOMMENDED SETTINGS		ON
+COIN MODE 1	2 PLAYS/1 COIN 3 PLAYS/1 COIN 4 PLAYS/1 COIN	
	5 PLAYS/1 COIN 6 PLAYS/1 COIN *1 PLAY/1 COIN	
	1 PLAY/2 COINS 1 PLAY/3 COINS 1 PLAY/4 COINS	
	1 PLAY/5 COINS 1 PLAY/6 COINS FREE PLAY	
+COIN MODE 2	1 PLAY/1 COIN 1 PLAY/2 COINS 1 PLAY/3 COINS	
	FREE PLAY 2 PLAYS/1 COIN 3 PLAYS/1 COIN 5 PLAYS/1 COIN 6 PLAYS/1 COIN	
# PATROL CARS	5 PATROL CARS *4 PATROL CARS 3 PATROL CARS 2 PATROL CARS	OFF ON OFF ON
ADDITIONAL CAR AT:	*10,000/30,000/50,000 20,000/40,000/60,000 10,000 ONLY NO EXTENDED PLAY	

DIP SWITCH NO. 2

ADJUSTMENT	OPTIONS	1
		OFF
*RECOMMENDED SETTINGS		OFF
FLIP PICTURE	NO YES	OFF ON
**CABINET TYPE	TABLE UPRIGHT	
COIN MODE SETTINGS FOR DIP SWITCH 1	COIN MODE 1 COIN MODE 2	
FREEZE SCREEN	*NO YES	
SECTOR-SELECTION FEATURE	*NO YES	
DEMO MODE	*NO YES	
TEST MODE	*NO YES	
SWITCH 4 (not used)		

\*recommended settings  
 \*\*For upright games, select ON for switch 2. Table games require OFF.  
 †For games with a single coin selector or 2 selectors of the same value, select ON.



C-8809 heat sink assembly

Part No.	Description
5162-09425	2N6057, Transistor, NPN
5161-09552	2N3055, Transistor, NPN
5705-09684	Heat Sink
5700-09445	Socket, TO3
5701-09562	Thermal Pad
4006-01003-10	Machine Screw 6-32x5/8"

## DIP SWITCH SETTINGS

DIP SWITCH NO. 1

ADJUSTMENT	OPTIONS	SWITCH NUMBER							
		1	2	3	4	5	6	7	8
*RECOMMENDED SETTINGS		ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
†COIN MODE 1	2 PLAYS/1 COIN					OFF	OFF	OFF	ON
	3 PLAYS/1 COIN					ON	OFF	OFF	ON
	4 PLAYS/1 COIN					OFF	ON	OFF	ON
	5 PLAYS/1 COIN					ON	ON	OFF	ON
†COIN MODE 2	6 PLAYS/1 COIN					OFF	OFF	ON	ON
	*1 PLAY/1 COIN					OFF	OFF	OFF	OFF
	1 PLAY/2 COINS					ON	OFF	OFF	OFF
	1 PLAY/3 COINS					OFF	ON	OFF	OFF
# PATROL CARS	1 PLAY/4 COINS					ON	ON	OFF	OFF
	1 PLAY/5 COINS					OFF	OFF	ON	OFF
	1 PLAY/6 COINS					ON	OFF	ON	OFF
	FREE PLAY					ON	ON	ON	ON
*COIN MODE 2	1 PLAY/1 COIN					OFF	OFF		
	1 PLAY/2 COINS					ON	OFF		
	1 PLAY/3 COINS					OFF	ON		
# PATROL CARS	FREE PLAY					ON	ON		
	2 PLAYS/1 COIN							OFF	OFF
	3 PLAYS/1 COIN							ON	ON
*COIN MODE 2	5 PLAYS/1 COIN							OFF	OFF
	6 PLAYS/1 COIN							ON	ON
	5 PATROL CARS	OFF	OFF						
	*4 PATROL CARS	ON	OFF						
ADDITIONAL CAR AT:	3 PATROL CARS	OFF	ON						
	2 PATROL CARS	ON	ON						
	*10,000/30,000/50,000			OFF	OFF				
	20,000/40,000/60,000			ON	OFF				
ADDITIONAL CAR AT:	10,000 ONLY			OFF	ON				
	NO EXTENDED PLAY			ON	ON				

DIP SWITCH NO. 2

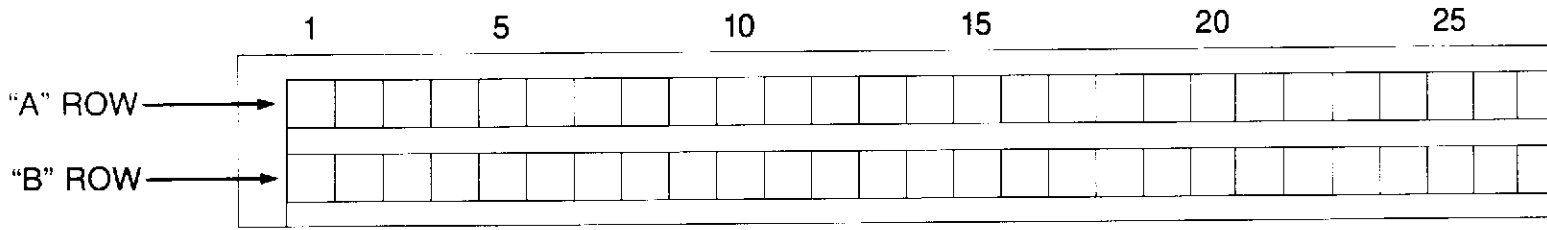
ADJUSTMENT	OPTIONS	SWITCH NUMBER							
		1	2	3	4	5	6	7	8
*RECOMMENDED SETTINGS		OFF	ON	†	OFF	OFF	OFF	OFF	OFF
FLIP PICTURE	NO YES	OFF ON							
**CABINET TYPE	TABLE UPRIGHT		OFF ON						
COIN MODE SETTINGS FOR DIP SWITCH 1	COIN MODE 1 COIN MODE 2			OFF ON					
FREEZE SCREEN	*NO YES					OFF ON			
SECTOR-SELECTION FEATURE	*NO YES						OFF ON		
DEMO MODE	*NO YES							OFF ON	
TEST MODE	*NO YES								OFF ON
SWITCH 4 (not used)					OFF				

\*recommended settings

\*\*For upright games, select ON for switch 2. Table games require OFF for switch 2.

†For games with a single coin selector or 2 selectors of the same value, S3 must be turned off. For games with selectors for 2 different coin values, S3 must be turned on.

## CONNECTORS CN1 & CN2

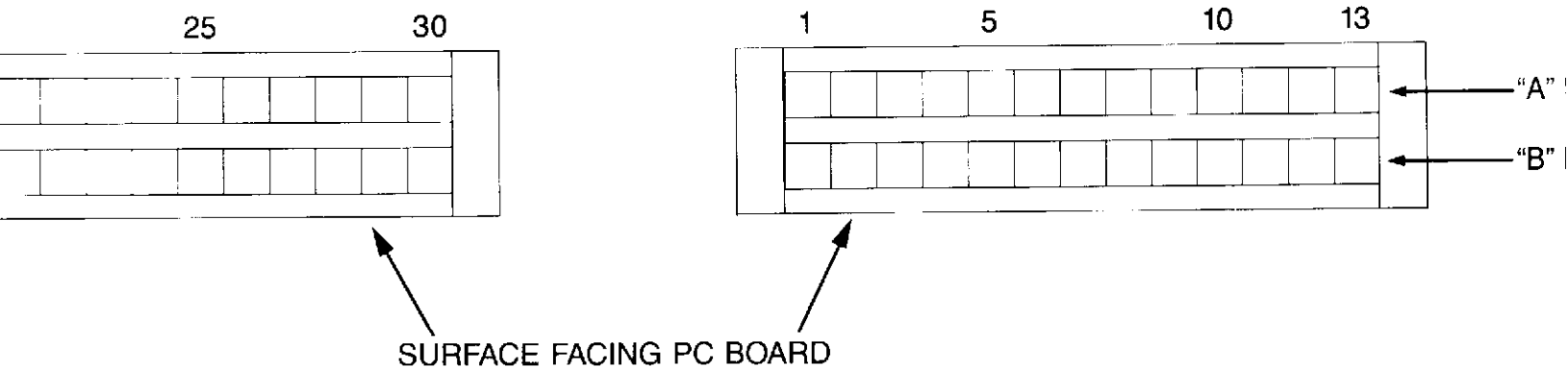


Connector CN1		Connector CN2		
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION	
1A	6 MHz	16A	VE2	
1B	†ANPR	16B	GND	
2A	6 MHz	17A	VE4	
2B	N.C.	17B	GND	
3A	7 HB	18A	VE8	
3B	N.C.	18B	GND	
4A	7 HB	19A	VE16	
4B	†CPR	19B	GND	
5A	HBLB	20A	VE32	
5B	BLUE	20B	GND	
6A	HBLB	21A	VE64	
6B	RED	21B	GND	
7A	VBLB	22A	VE128	
7B	GND	22B	GND	
8A	VBLB	23A	DB0	
8B	GND	23B	HE1	
9A	VB1	24A	DB1	
9B	GND	24B	HE2	
10A	VB128	25A	DB2	
10B	GND	25B	HE4	
11A	GREEN	26A	DB3	
11B	GND	26B	HE8	
12A	C-FLIP 1	27A	DB4	
12B	GND	27B	HE16	
13A	C-FLIP 2	28A	DB5	
13B	GND	28B	HE32	
14A	FLIP	29A	DB6	
14B	GND	29B	HE64	
15A	VE1	30A	DB7	
15B	GND	30B	HE128	
			1A	HB1
			1B	AB14
			2A	HB2
			2B	AB13
			3A	HB4
			3B	AB11
			4A	HB8
			4B	AB10
			5A	HB16
			5B	AB12
			6A	HB32
			6B	AB15
			7A	HB64
			7B	+5V
			8A	HB128
			8B	+5V
			9A	HB256
			9B	+5V
			10A	WAIT
			10B	+5V
			11A	AB0
			11B	+5V
			12A	AB1
			12B	+5V
			13A	AB2
			13B	+5V
			14A	AB3
			14B	+5V
			15A	AB4
			15B	+5V

†ANPR = ALPHA NUMERIC PRIORITY  
 †CPR = CHARACTER PRIORITY

†CPR\* = CHARACTER PRIORITY\*

### CONNECTOR CN3



TIM  
COU

#### Connector CN2

NO.	DESCRIPTION	PIN NO.	DESC.
	HB1	16A	AB5
	AB14	16B	+5V
	HB2	17A	AB6
	AB13	17B	+5V
	HB4	18A	AB7
	AB11	18B	+5V
	HB8	19A	AB8
	AB10	19B	+5V
	HB16	20A	AB9
	AB12	20B	+5V
	HB32	21A	C8WT
	AB15	21B	+5V
	HB64	22A	C000RD
	+5V	22B	+5V
	HB128	23A	C000CS
	+5V	23B	V256
	HB256	24A	RESET
	+5V	24B	DOWT
	WAIT	25A	WRB
	+5V	25B	H30
	AB0	26A	1ORQB
	+5V	26B	+CPR*
	AB1	27A	RFSHB
	+5V	27B	3DIM
	AB2	28A	RDB
	+5V	28B	NOT USED
	AB3	29A	M1B
	+5V	29B	NOT USED
	AB4	30A	MREQB
	+5V	30B	NOT USED

#### Connector CN3

PIN NO.	DESCRIPTION
1A	SP+
1B	SP+
2A	SP-
2B	SP-
3A	+12V
3B	+12V
4A	+5V
4B	GND
5A	+5V
5B	GND
6A	+5V
6B	GND
7A	NOT USED
7B	NOT USED
8A	NOT USED
8B	NOT USED
9A	D0
9B	D1
10A	D2
10B	D3
11A	D4
11B	D5
12A	D6
12B	D7
13A	NOT USED
13B	NOT USED

M52-A

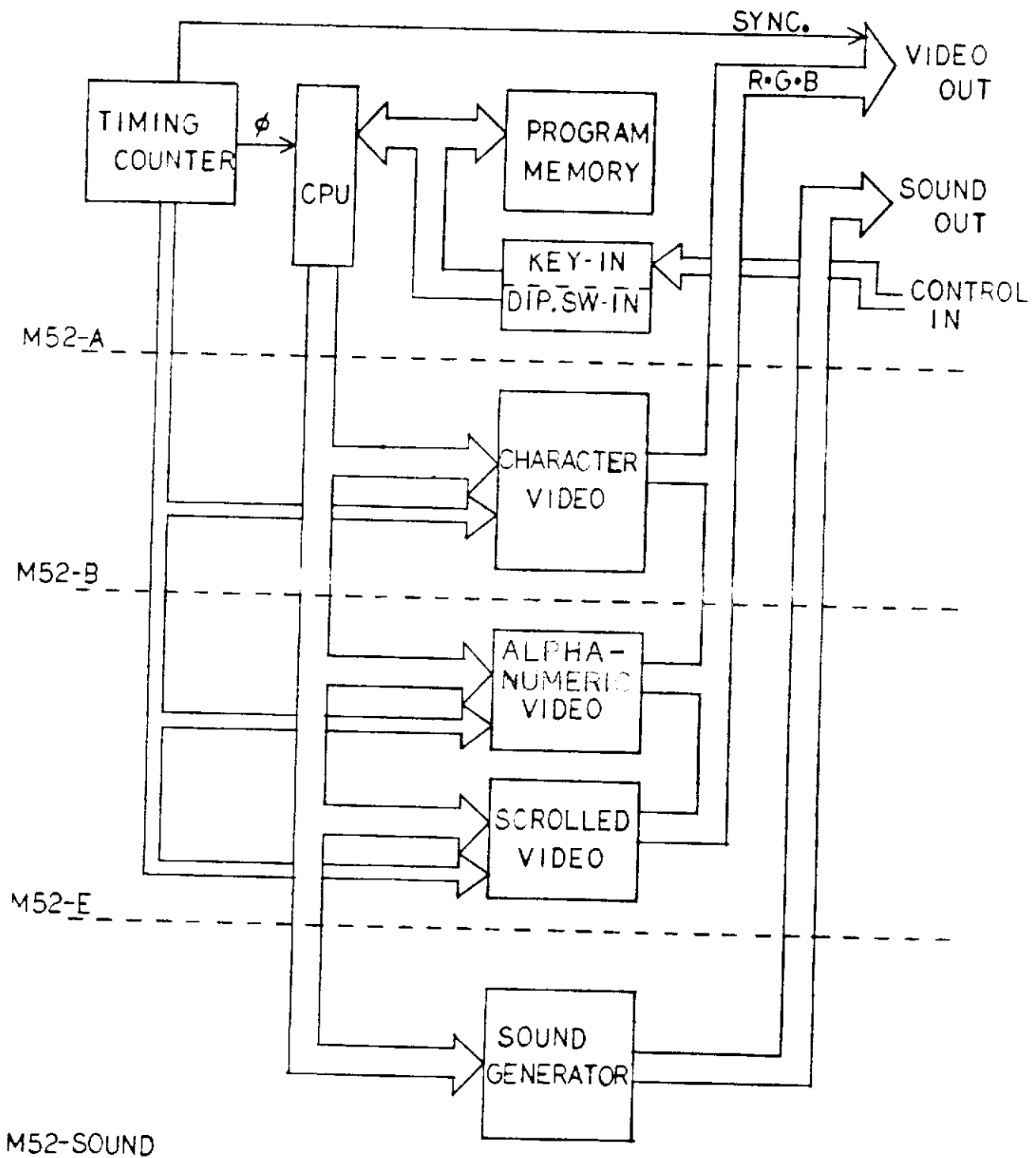
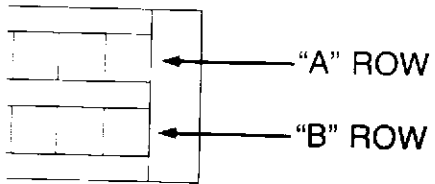
M52-B

M52-E

ACTER PRIORITY\*

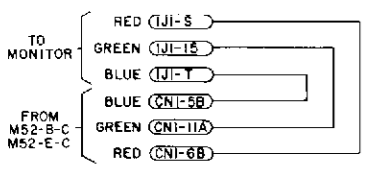
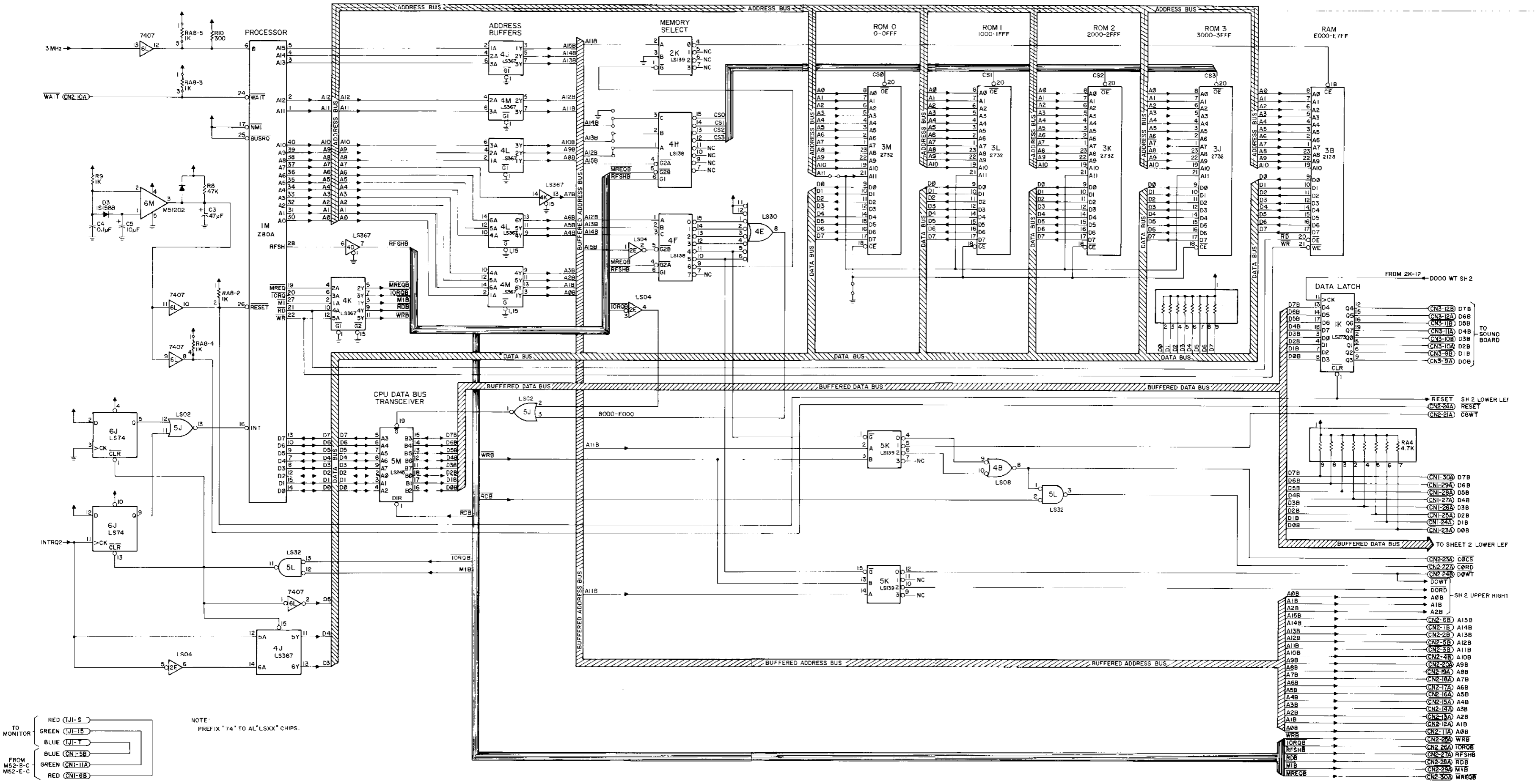
M52-SOU

13

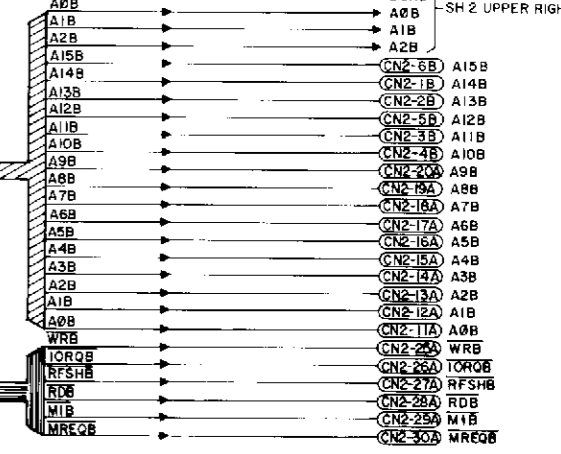
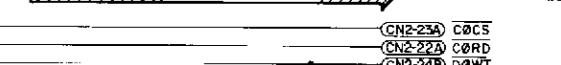
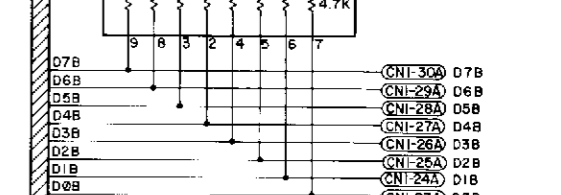
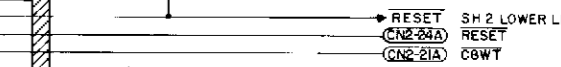
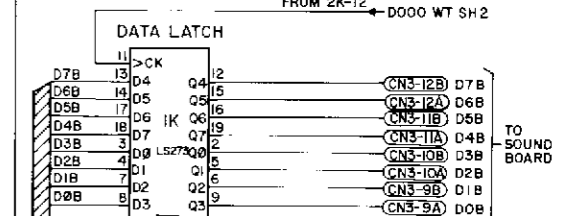


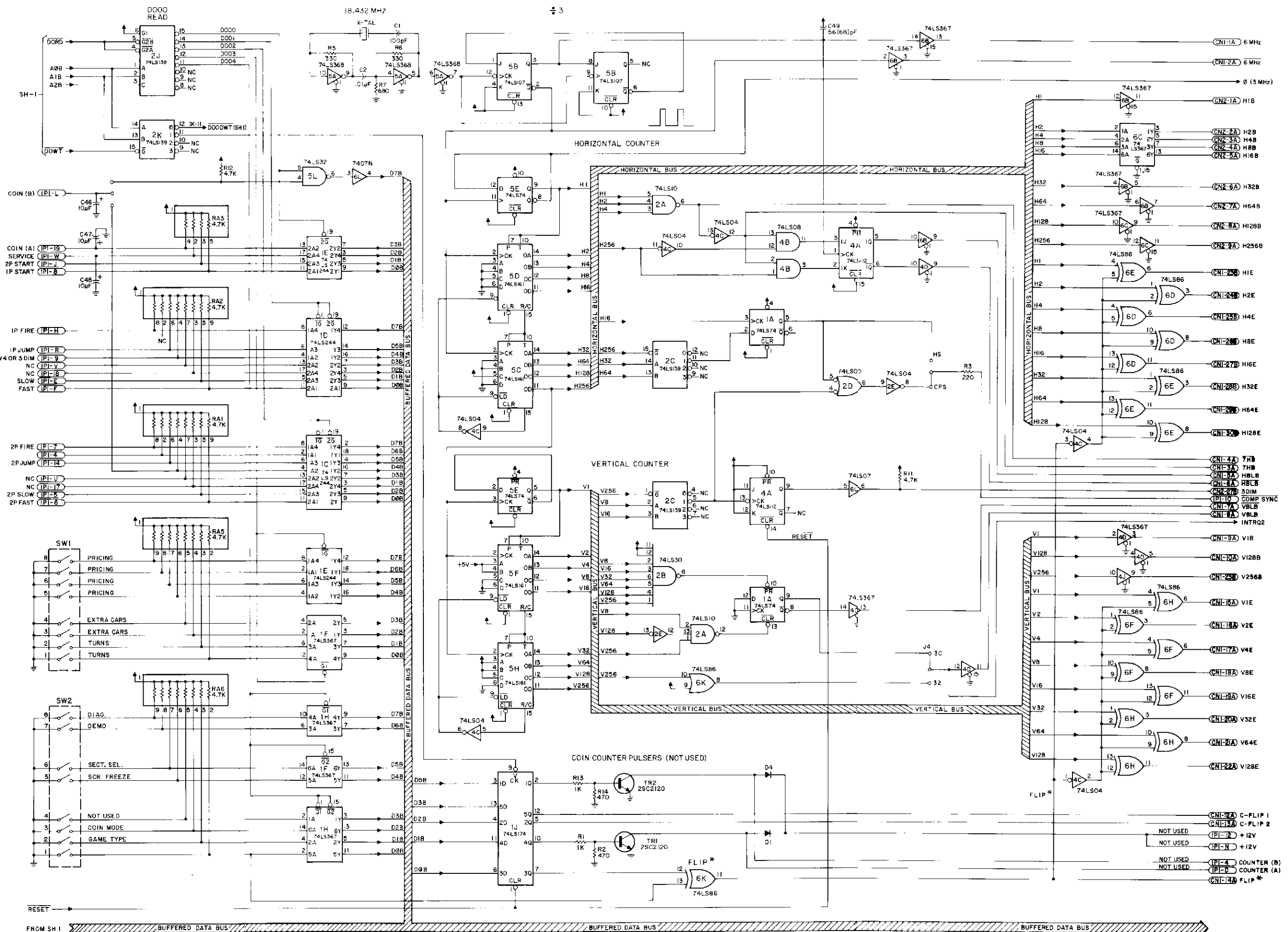
Connector Identification and Block Diagram

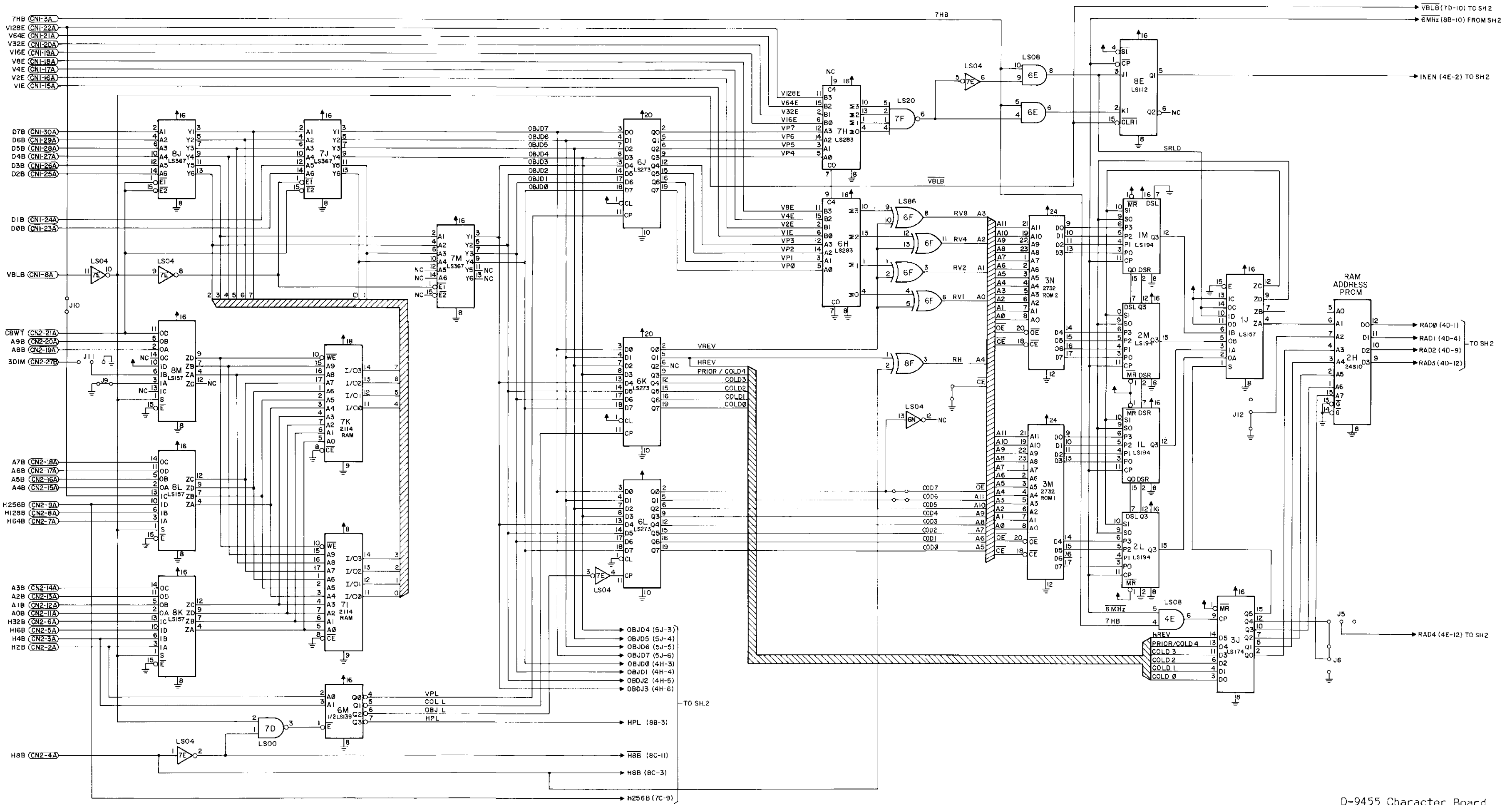




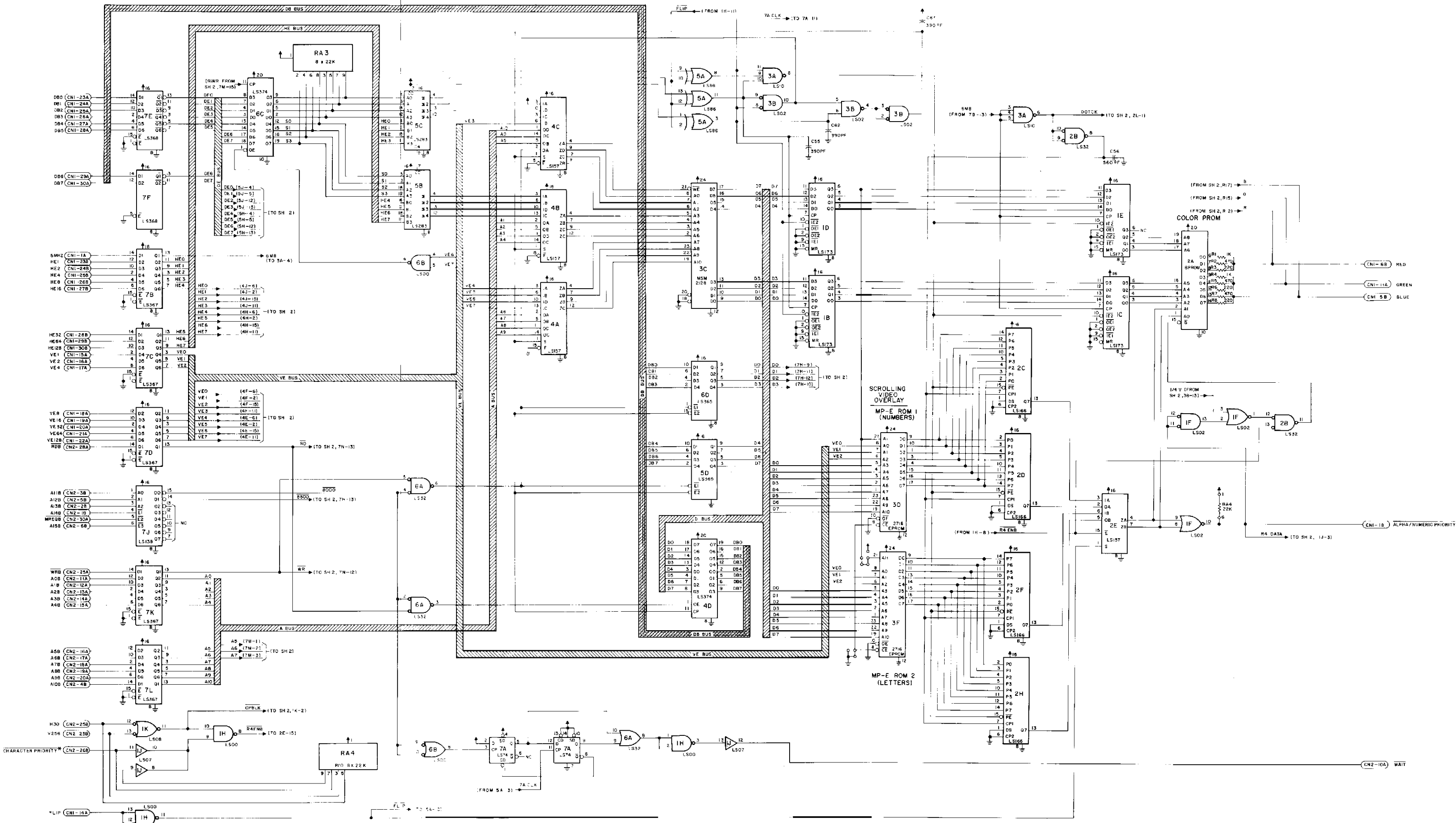
NOTE: PREFIX "74" to all "LSXX" CHIPS.







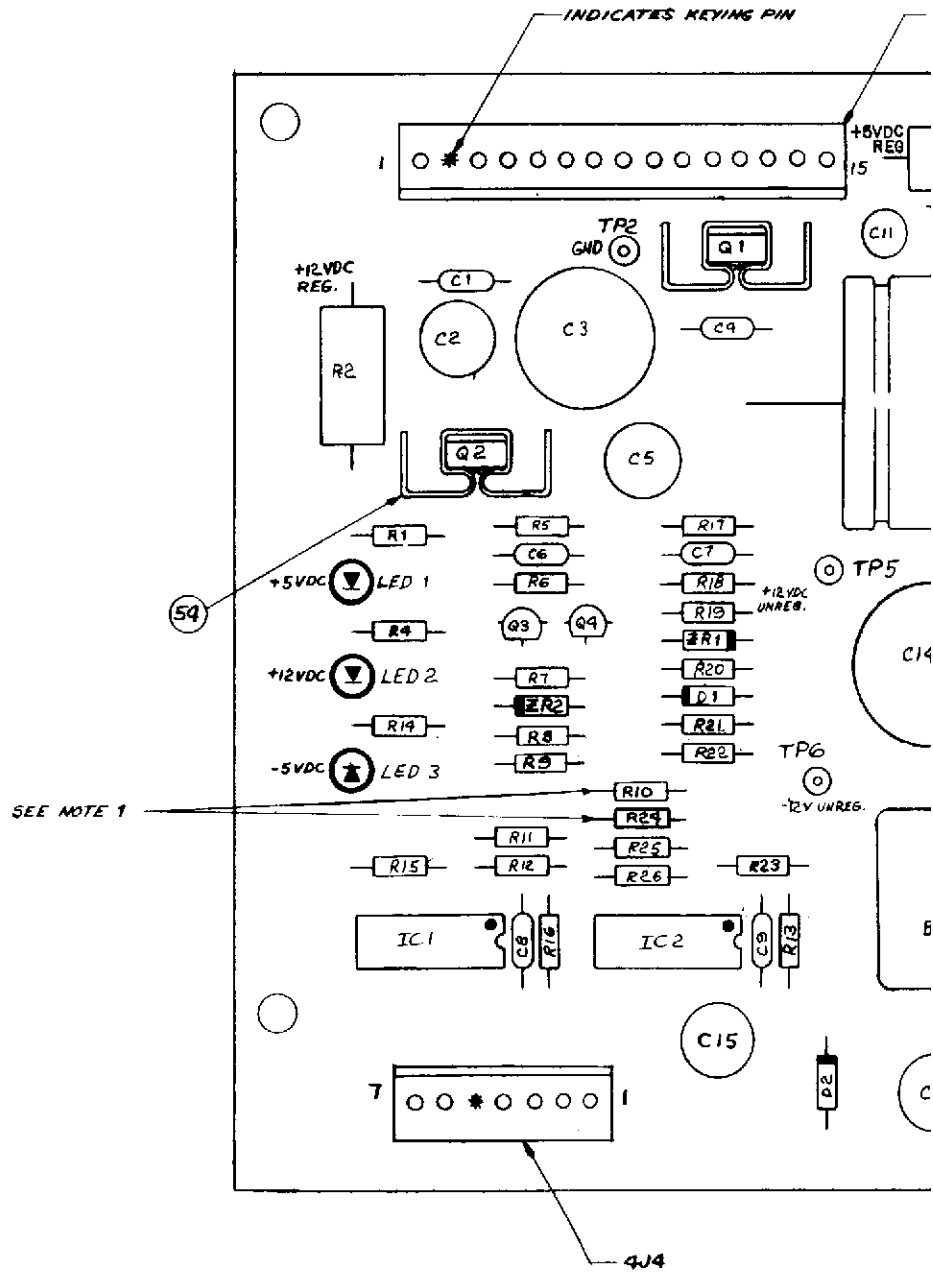




D-9456 Scrolling Video Board (M-52-E-C) Sheet 1 of 2





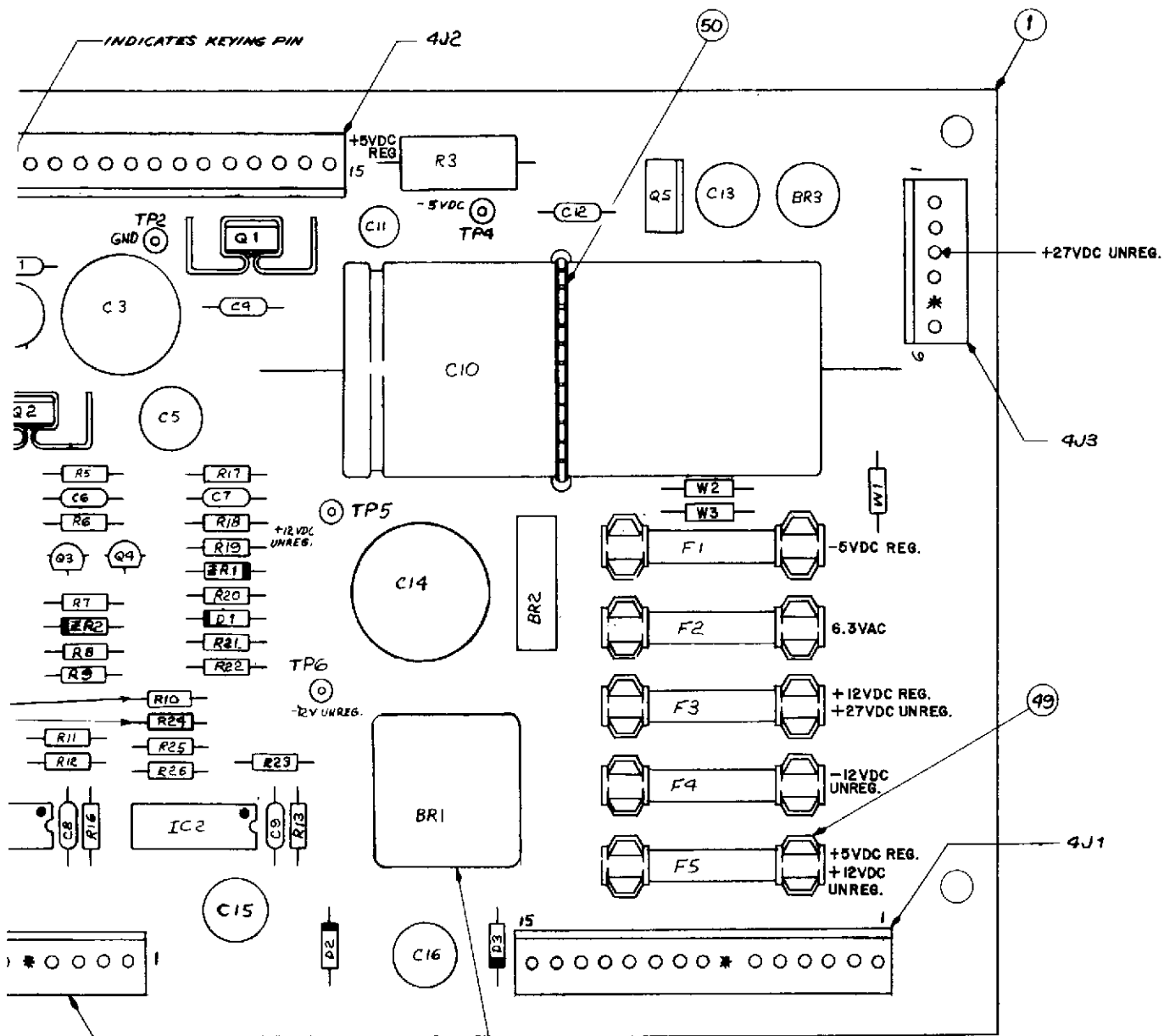


**NOTES:**

1. REMOVE R24 IF +5VDC IS GREATER THEN 5.25 VDC, REMOVE R10 IF +5VDC IS LESS THAN 4.75 VDC.
2. BR1 MUST BE MOUNTED 1/8" ABOVE SURFACE OF BOARD.
3. FOR SCHEMATIC REFER TO 16-8811.

55	5010-02682-00
56	5010-09324-00
ITEM NO.	PART NO.





F +5VDC IS GREATER THEN 5.25 VDC,  
 F +5VDC IS LESS THAN 4.75 VDC.  
 MOUNTED 1/8" ABOVE SURFACE OF  
 REFER TO 16-8811.

SEE NOTE 2

45	5731-09432-00	F4 & F5	FUSE, TA.S.B.	
46	5731-06314-00	F3	FUSE, 4A, S.B., 250V	
47	5731-06569-00	F1	FUSE, 1A, S.B. 250V	
48	5731-09651-00	F2	FUSE, 5A, S.B. 250V	
49	5732-09178-00		FUSE HOLDER,	
50	03-7520		TIE WRAP	
51	5731-09074-00	4J1 & 4J2	HEADER, 15 PIN 09-65-1051	
52	5731-09038-00	4J3	HEADER, 6 PIN 09-65-1061	
53	5731-09497-00	4J4	HEADER, 7 PIN 09-65-1071	
54	5705-09663-00		HEAT SINK	
	5705-09688-00		HEAT SINK	
55	5010-09682-00	R10	RESISTOR, C.F. 51K ± 5% 1/4W	
56	5010-09324-00	R24	RESISTOR, C.F. 27K ± 5% 1/4W	
ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D NO

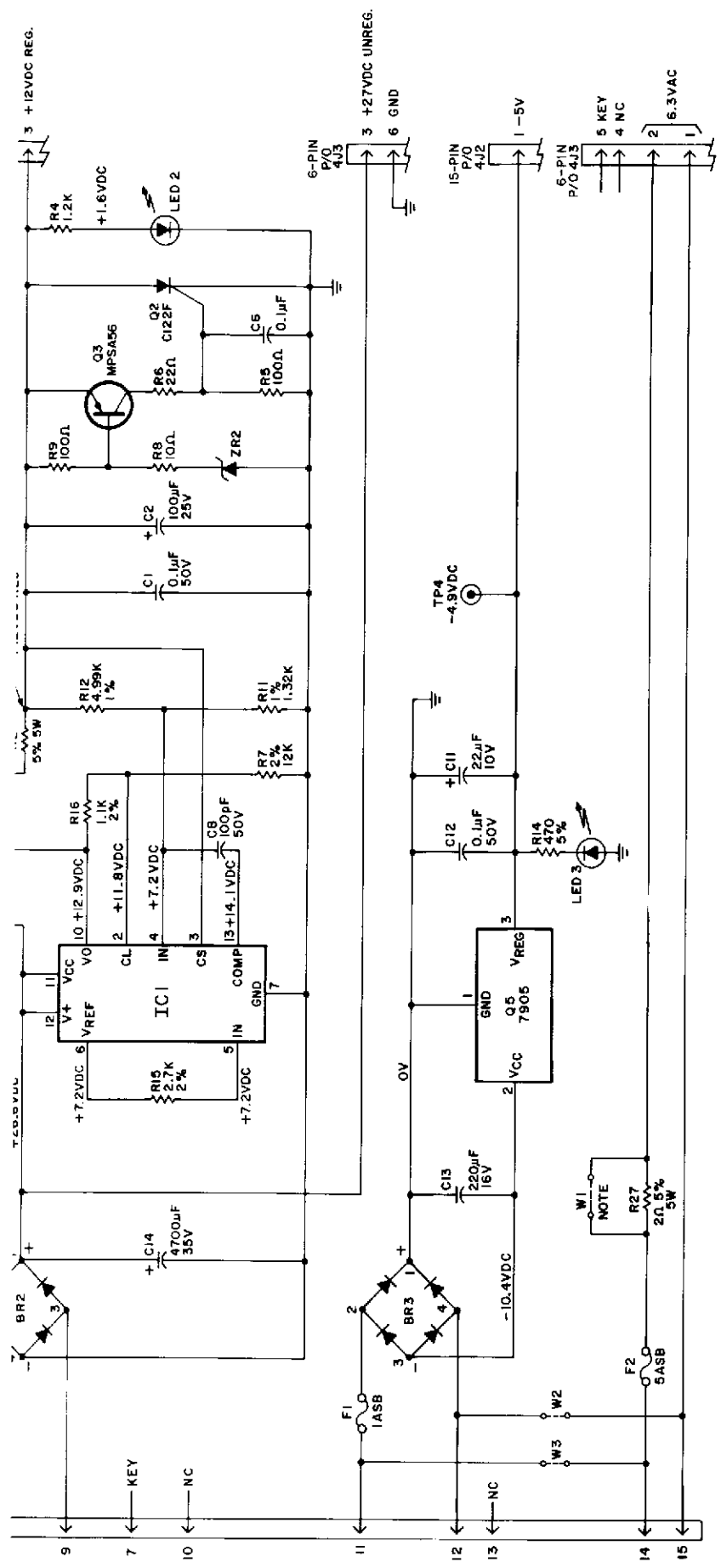
## BILL OF MATERIAL

ITEM NO.	PART NO.	PART DESIGNATION	DESCRIPTION	REQ'D NO.
1	5773-09679-00		BARE P.C. BOARD	1
2	5010-09085-00	R23	RESISTOR, 1.5K 5%, 1/4W	1
3	5010-09441-00	R13, R15	RESISTOR, 2.7K 2%, 1/4W	2
4	5010-09508-00	R21	RESISTOR, 270Ω 2%, 1/4W	1
5	5010-09428-00	R20	RESISTOR, 1.5K 2%, 1/4W	1
6	5010-09509-00	R16	RESISTOR, 1.1K 2%, 1/4W	1
7	5010-09510-00	R7	RESISTOR, 12K 2%, 1/4W	1
8	5010-09314-00	R4	RESISTOR, 1.2K 5%, 1/4W	1
9	5010-09416-00	R1, R14	RESISTOR, 470Ω 5%, 1/4W	2
10	5013-09542-00	R11	RESISTOR, 7.32K 1%, 1/4W	1
11	5013-09427-00	R12	RESISTOR, 9.99K 1%, 1/4W	1
12	5013-09426-00	R25	RESISTOR, 2.15K 1%, 1/4W	1
13	5012-09429-00	R3	RESISTOR, .12Ω 5%, 5W	1
14	5012-09512-00	R2	RESISTOR, .27Ω 5%, 5W	1
15				
16	5013-09665-00	R26	RESISTOR, 5.11K 1%, 1/4W	1
17	5010-09434-00	R6, R18	RESISTOR, C.R. 22Ω ±5%, 1/4W	2
18	5010-09036-00	R5, R9, R17, R22	RESISTOR, C.F. 100Ω ±5%, 1/4W	4
19	5010-09039-00	R8, R19	RESISTOR, C.F. 10Ω ±5%, 1/4W	2
20	5010-09534-00	W1	RESISTOR, 0Ω	1
21	5043-08986-00	C6, C7	CAPACITOR, 0.1μF CERAMIC +80% -20% 50V	2
22	5040-09421-00	C2, C16	CAPACITOR, 100MFD, 25V RADIAL +50% -10%	2
23	5040-09422-00	C15	CAPACITOR, 47MFD, 50V RADIAL +50% -10%	1
24	5040-09420-00	C3	CAPACITOR, 1000MFD, 25V RADIAL +75% -10%	1
25	5040-09419-00	C10	CAPACITOR, 18,000MFD 20V AXIAL +75% -10%	1
26	5040-09423-00	C5	CAPACITOR, 330MFD 10V RADIAL +50% -10%	1
27	5040-09504-00	C14	CAPACITOR 4700MFD 35V RADIAL +50% -10%	1
28	5043-09446-00	C1, C4 & C12	CAPACITOR .1MFD, 50V AXIAL 25V -20 +80%	3
29	5043-08065-00	C9	CAPACITOR 470PFD 50V AXIAL XTR ±10%	1
30	5043-09492-00	C8	CAPACITOR 100PFD 50V AXIAL 52L ±5%	1
31	5040-09506-00	C13	CAPACITOR 220MFD 16V RADIAL +50% -10%	1
32	5040-09493-00	C11	CAPACITOR 22MFD 10V RADIAL +50% -10%	1
33	5070-06258-00	D1, D2 & D3	DIODE, 1N4001	3
34	5075-09406-00	ZR1	ZENER, 1N5234 ±5% (6.2V)	1
35	5075-09662-00	ZR2	ZENER 1N5244 ±5% (14V)	1
36	5190-09430-00	Q3, Q4	TRANSISTOR, MPS A55	2
37	5130-09661-00	Q1, Q2	SCR 8 AMP, 100V	2
38	5250-09515-00	Q5	VOLTAGE REGULATOR, 7905	1
39	5440-09424-00	IC1, IC2	VOLTAGE REGULATOR, 723	2
40	5700-09400-00	BR1	BRIDGE RECTIFIER, 35 AMP, 200V	1
41	5100-09513-00	BR2	BRIDGE RECTIFIER, 4.0A, 50V	1
42	5100-09514-00	BR3	BRIDGE RECTIFIER, 1.0A, 50V	1
43	5671-09018-00	LED1, LED2, LED3	LED, RED	3
44	5824-09298-00	TP1 - TP6	TERMINAL #1502-1 (TEST POINT)	4

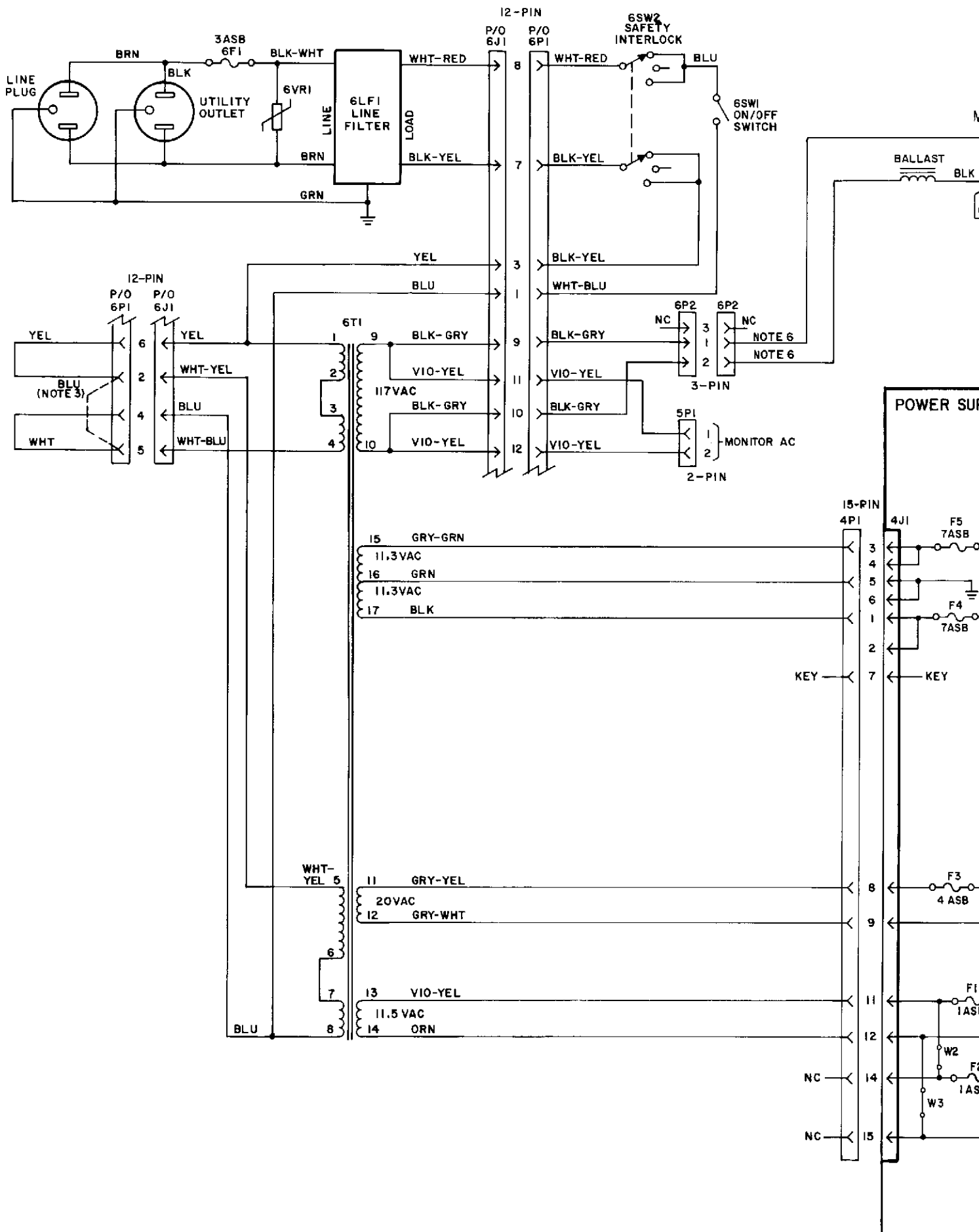
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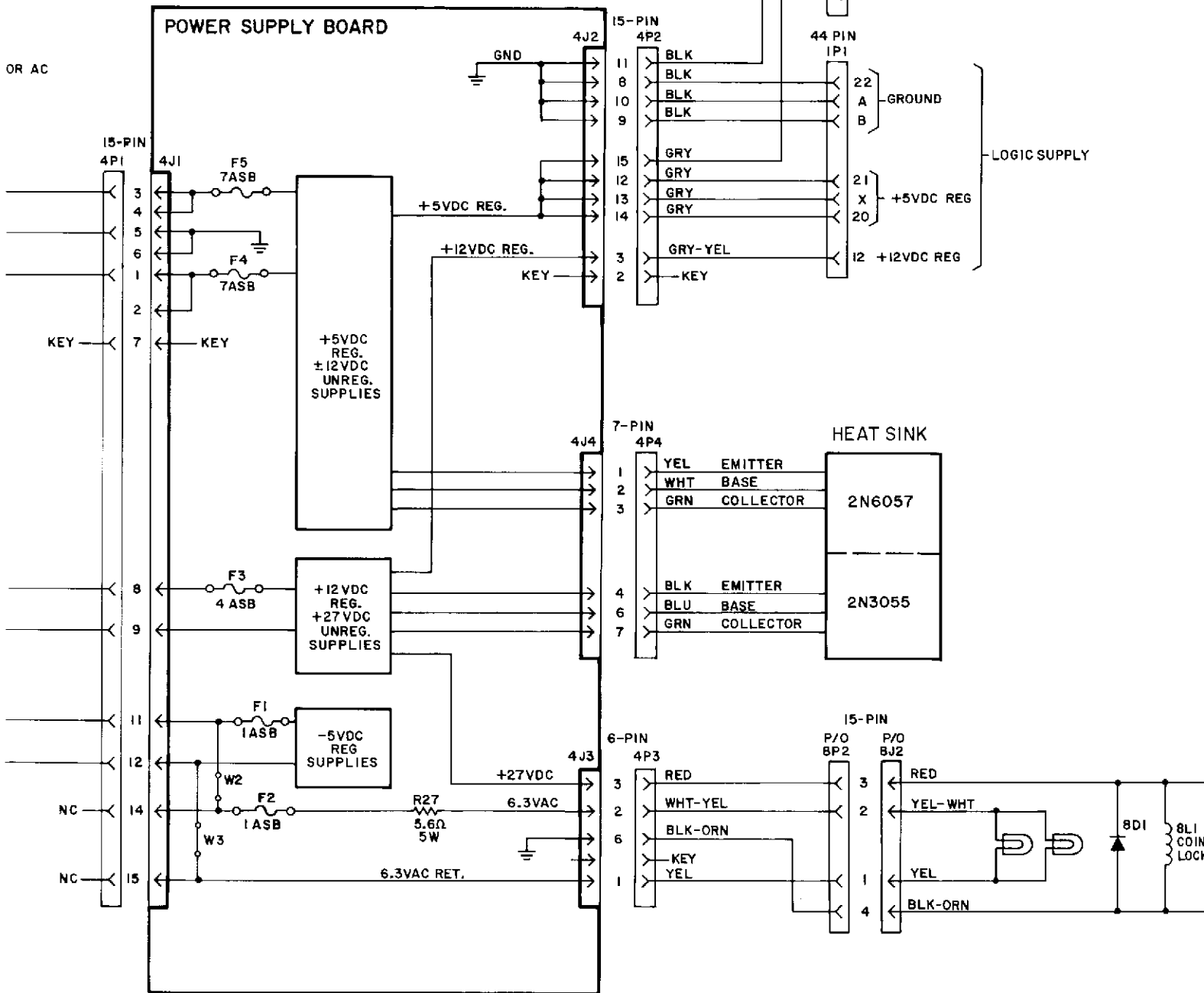
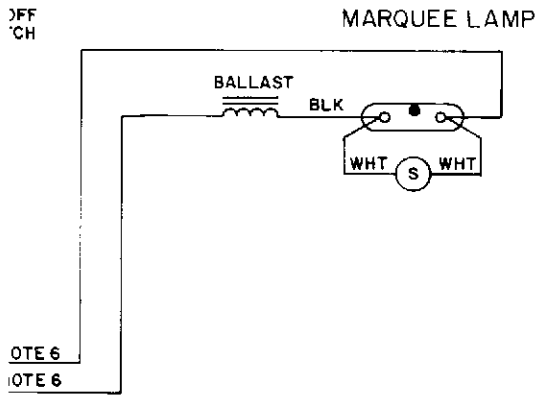


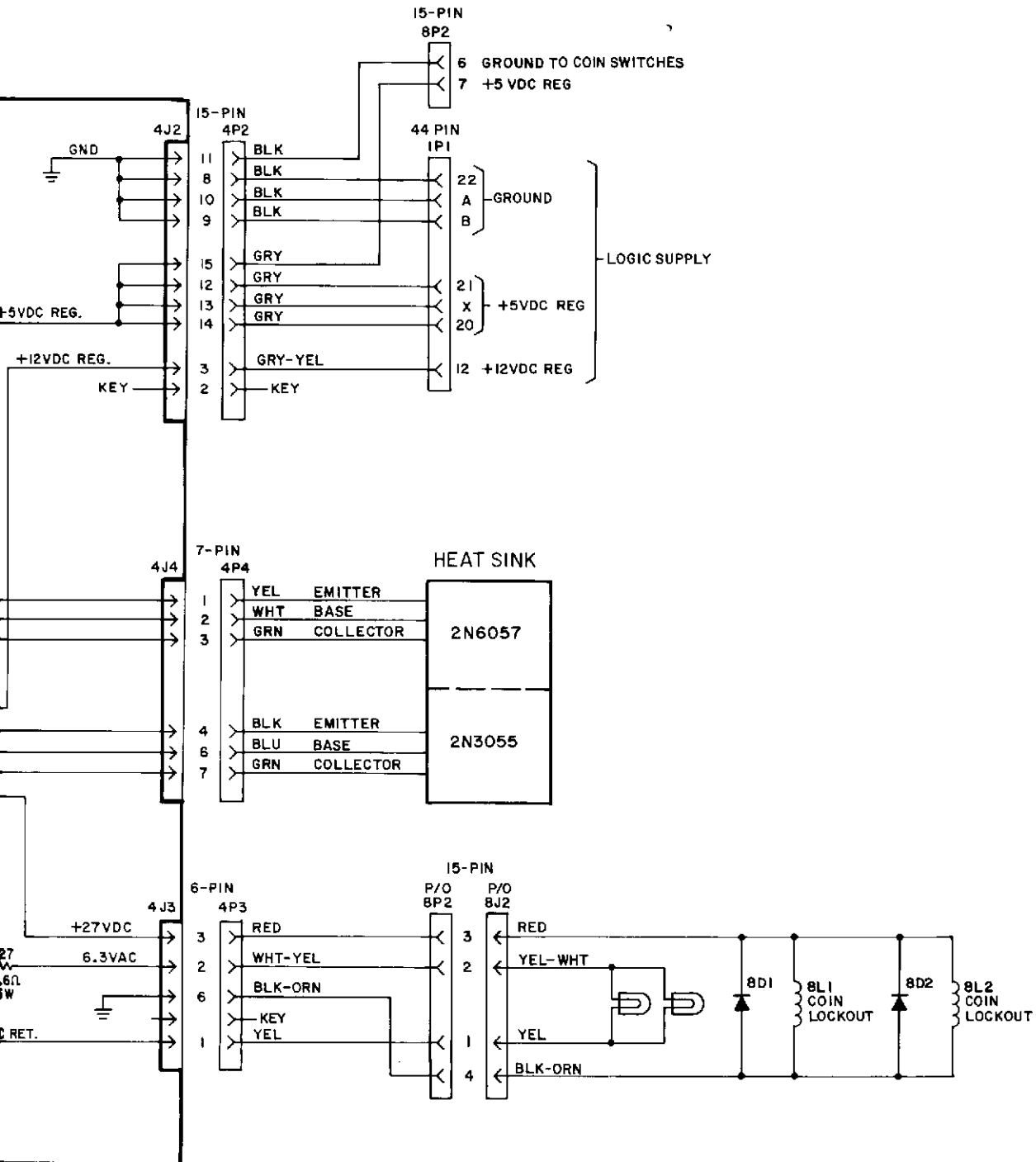




D-8784-3007 Power Supply Board Schematic Diagram

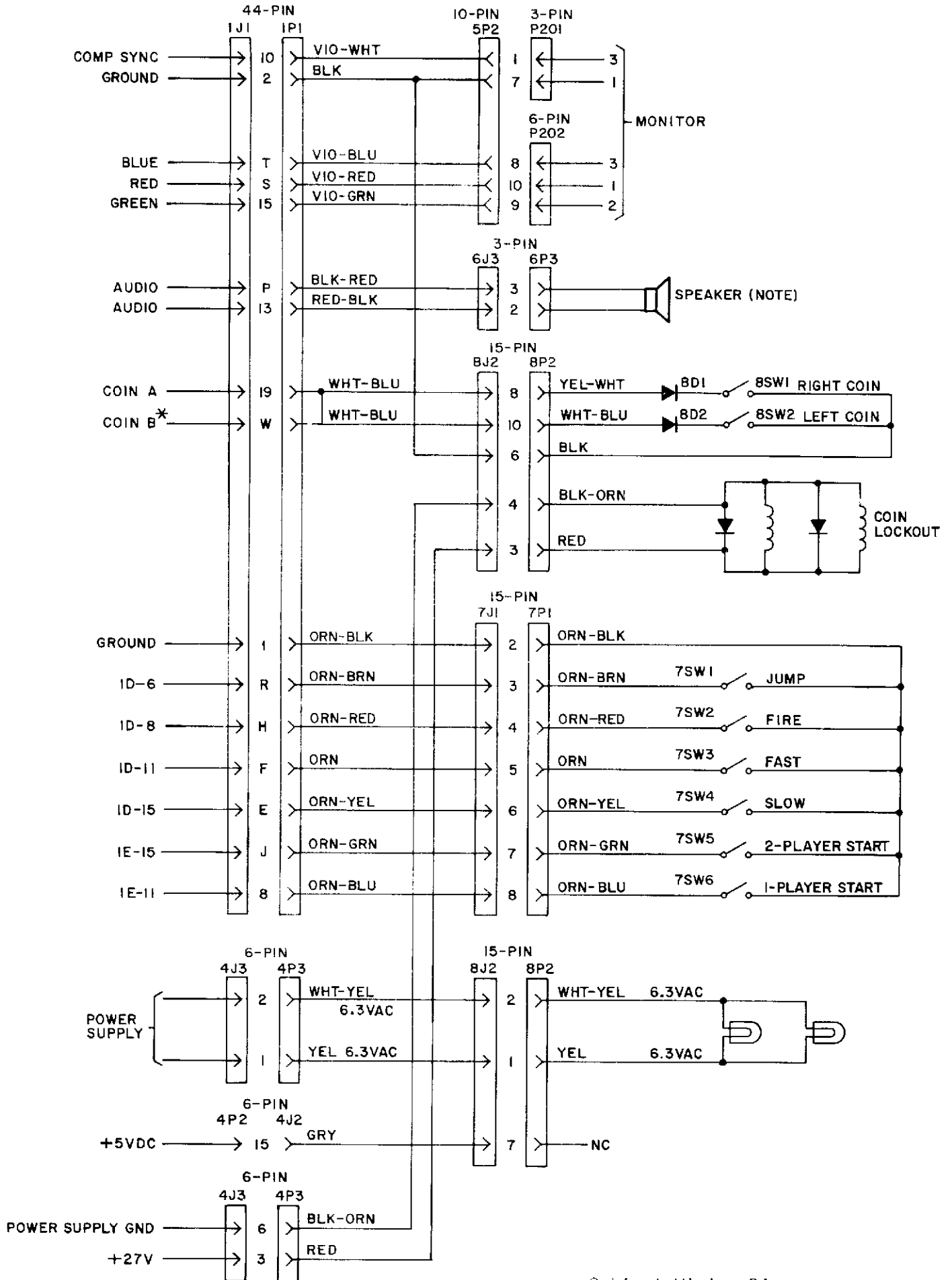






Power Wiring Diagram





Cabinet Wiring Diagram