



Parts List: Main Board Module #2 (Continued)

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
<b>Diodes</b>				
D1, D2, D3, D4, D104, D204, D105, D205, D111, D211, D112, D212, D114, D214, D116, D216, D117, D217, D118, D218	1N4148	C 3181-2	20	
D102, D202, D103, D203	1N270	C 3447-7	4	
D5	1N970 24V Zener	C 3824-7	1	
D113, D213, D115, D215	1N4004	C 2851-1	4	
<b>Integrated Circuits</b>				
U1	LM339N Volt comparator	C 4345-2	1	
U101, U201	TL074 Quad Op Amp	C 4696-8	2	
U100, U200	TL071 CP Bi Fet Op Amp	C 5069-7	2	
<b>Miscellaneous</b>				
	8 pin DIL IC Socket	C 3451-9	4	Used with U100, U200, Q101, Q201
	14 pin DIL IC Socket	C 3450-1	3	Used with U1, U101, U201
J9	Amptod 1 PC Rcpt	C 3846-0	30	
P6	Mod 2 4 Pin 318 Header	C 5007-7	1	

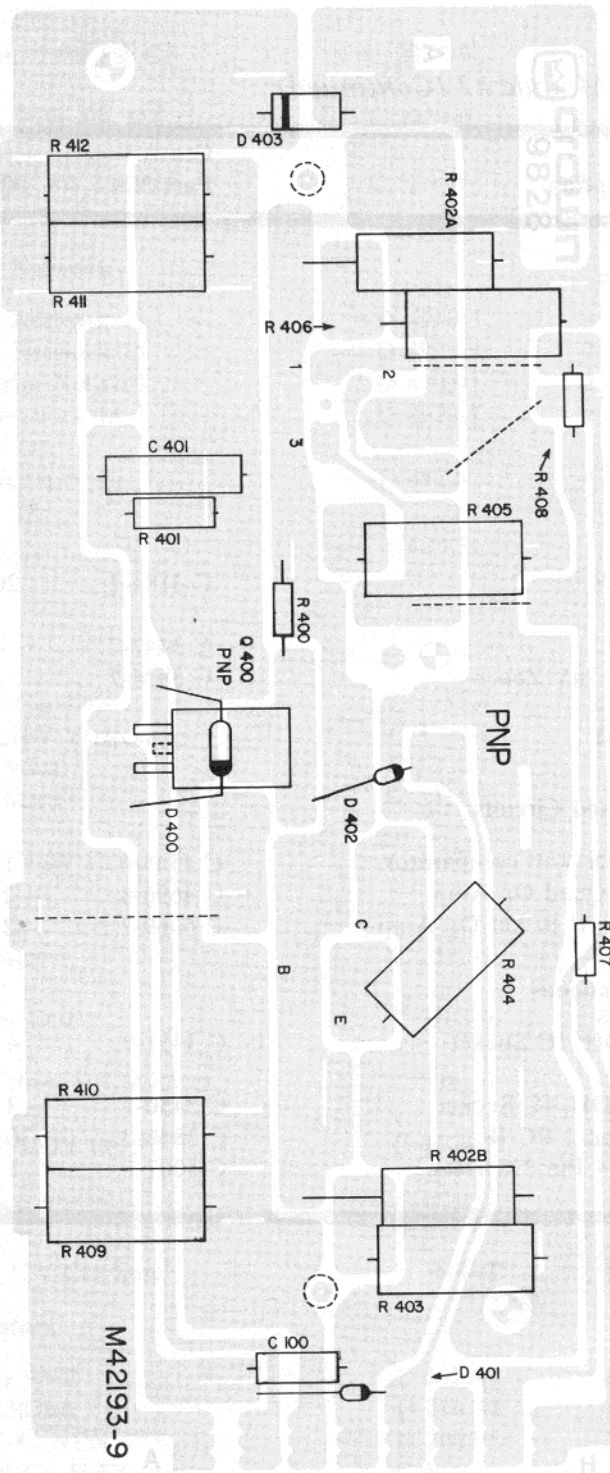


Fig. 6.11 PNP Output Module Component Board Layout

Parts List: PNP Output Module

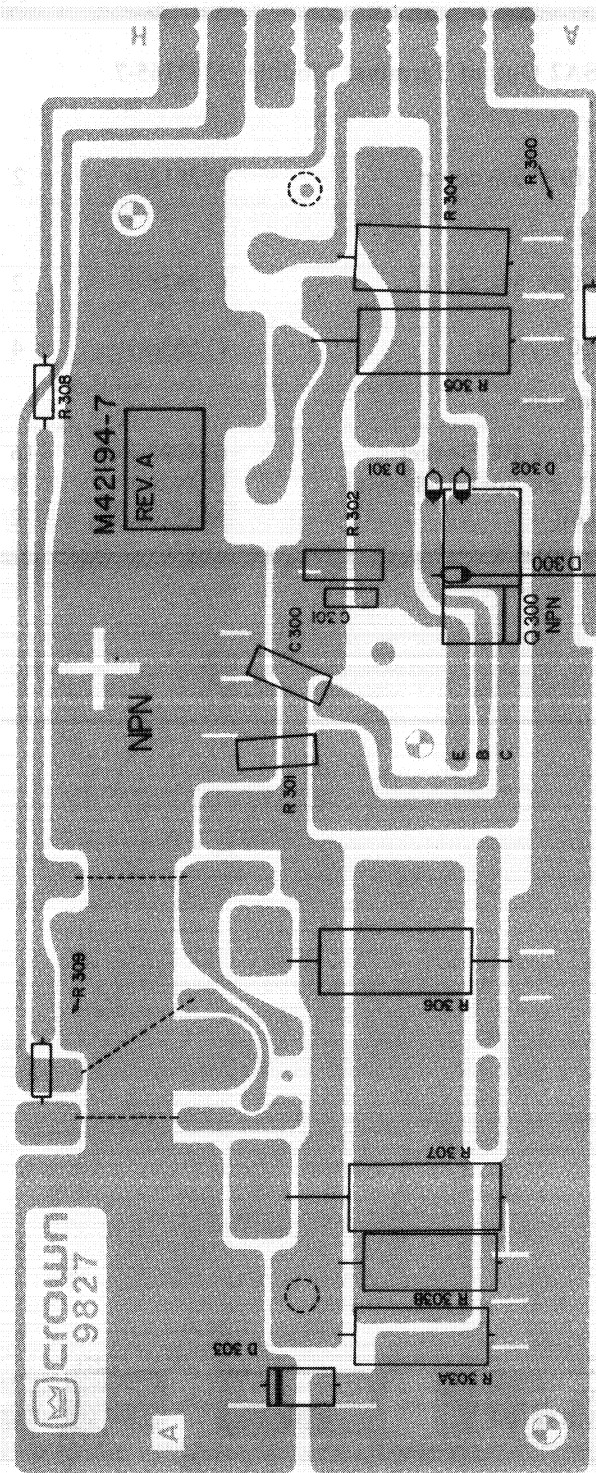


Fig. 6.12 NPN Output Module Component Board Layout

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
<b>PSA-2/SA2 PNP Output Module</b>		<b>M42193-9</b>		
<b>Resistors</b>				
R400	56 .25W 5% CF	C 3511-0	1	
R401	5.6 ohm .5W 5% CF	C 3299-2	1	
R402	12 ohm 2W 10% Comp	C 3931-0	1	
R403, R404, R405, R406, R409, R410, R411, R412	.33 ohm 5W 5% Wire	C 3583-9	8	
R407	5.6K ohm .25W 5% CF	C 3220-8	1	
R408	218 ohm .25W 1% MF 5344	C 5344-4	1	If U400 is yellow
R408	227 ohm .25W 1% MF	C 5343-6	1	If U400 is green
R408	236 ohm .25W 1% MF	C 5342-8	1	If U400 is blue
<b>Capacitors</b>				
C400	200pF Mica	C 3411-3	1	
C401	0.1mF 200V Filmatic	C 2938-6	1	
<b>Transistors</b>				
Q400	PNP Predriver T05	2923 Sel	1	Model SA2; used with SN112491 and below Model PSA-2(X); used with SN11233 and below Model PSA-2DX; used with SN275 and below
Q400	PNP Predriver T0220	C 5453-3	1	Model SA2; used with SN112492 and above Model PSA-2(X); used with SN11234 and above Model PSA-2DX; used with SN276 and above
Q401	Driver Power NPN	C 5402-0	1	
Q402, Q403, Q404, Q405	Output Power NPN	C 4718-0	4	
<b>Diodes</b>				
D400	1N270	C 3447-7	1	
D401, D402	1N4938 or 1N3070	C 5061-4	2	
D403	1N5402	C 2941-0	1	
<b>Integrated Circuits</b>				
U400	LM334H Thermal Sense	C 5067-1	1	
<b>Miscellaneous</b>				
J13	Ampmod 1 PC Mnt Rcpt	C 4731-3	8	
P17	Mate-N-Lock 4P Header	C 5000-2	1	
	Z5 Silicon Comp Clear	S 2422-4		For D400
	Type 340 Heat-S Comp	S 2162-6		For Q401
	T03 Plastic Film Ins.	C 3180-4	1	Mounts Q401
	.5x.5x.002 Insulator	D 5064-8	2	Mounts U400



Parts List: NPN Output Module

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
	<b>PSA-2/SA2 NPN Output Module</b>	<b>M42194-7</b>		
	<b>Resistors</b>			
R300	75 ohm .25W 5% CF	C 3798-3	1	
R301	36 .5W 5% CF	C 2988-1	1	
R302	5.6 ohm .5W 5% CF	C 3299-2	1	
R303	12 ohm 2W 10% comp	C 3931-0	1	
R304, R305, R306, R307	0.33 ohm 5W 5% Wire	C 3583-9	4	
R308	5.6K ohm .25W 5% CF	C 3220-8	1	
R309	218 ohm .25 W 1% MF	C 5344-4	1	used if U300 is yellow
R309	227 ohm .25W 1% MF	C 5343-6	1	Used if U300 us green
R309	236 ohm .25W 1% MF	C 5342-8	1	Used if U300 is blue
	<b>Capacitors</b>			
C300	200pF mica	C 3411-3	1	
C301	.047mF 250V Polycarb	C 4404-7	1	
	<b>Transistors</b>			
Q300	D40P3 Power NPN	C 5065-5	1	
Q301	Driver PNP	C 5463-2	1	
Q301	Driver PNP	C 4580-4	1	Model SA2; used with SNI12616 and below Model PSA-2(X); used with SNI1453 and below Model PSA-2DX; used with SN305 and below
Q302, Q303, Q304, Q305	Output Power NPN	C 4718-0	4	
	<b>Diodes</b>			
D300	1N4148	C 3181-2	1	
D301, D302	1N4938 or 1N3070	C 5061-4	2	
D303	1N5402	C 2941-0	1	
	<b>Integrated Circuits</b>			
U300	LM334H Thermal Sense	C 5067-1	1	
	<b>Miscellaneous</b>			
J12	Ampmod 1 PC Mnt Rept	C 4731-3	8	
P16	Mate-N-Lock Header	C 5000-2	1	
	Z5 Silicon Comp Clear	S 2422-4		Used for D300
	Type 340 Heat-S Comp	S 2162-6		Used for Q301
	T03 Plastic Film INS	C 3180-4	1	Mounts Q301
	.5x.5x.022 Insulator	D 5064-8	2	Mounts U300

Parts List: Output Terminal Module

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
	<b>PSA-2/SA2 Output Terminal Module</b>	<b>M42165-7</b>		
	<b>Resistors</b>			
R125, R225	2.7 ohm 10W 5% comp	C 3813-0	2	
	<b>Capacitors</b>			
C119, C219	.047mF 200V 5% Mylar	C 3978-1	2	
C120, C220, C121, C221	4.7mF 100V Axial	C 5050-7	4	
	<b>Miscellaneous</b>			
J16, J17	Mate-N-Lock PC Socket	C 4998-8	16	
J18, J19	Mate-N-Lock Socket Housing	C 4999-6	4	
L100, L200	Output coil	M42163-2	2	

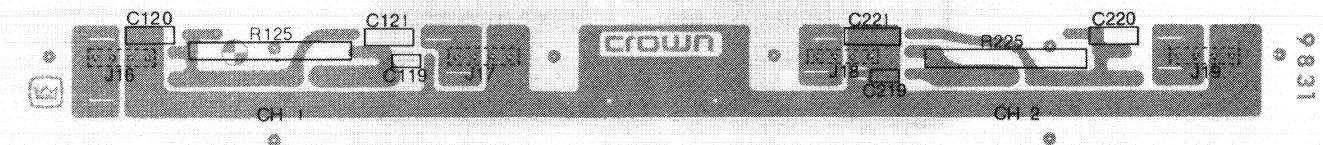
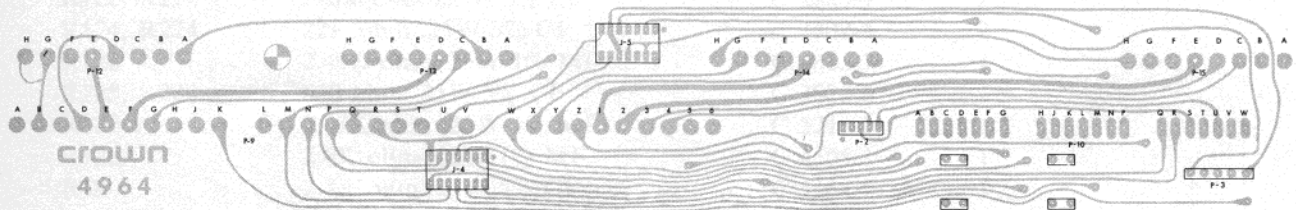


Fig. 6.13 Output Terminal Module Component Board Layout



*Parts List: Mother Board Module*

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
	<b>PSA-2/SA2 Mother Board Module</b>	<b>M42166-5</b>		
	<b>Miscellaneous</b>			
J4, J5	14 pin DIL IC Socket	C 3450-1	2	
P3	Amp Mod 1-5 pin Header	C 5002-8	1	
P2	MOD 2-5 pin 318 Header	C 5008-5	1	
P12, P13, P14, P15	8 pin Header	C 5003-6	4	
P9	10 pin Header	C 5006-9	3	
P10	7 pin Header	C 3851-0	3	
P12, P13, P14, P15	Amp Mod 1 8 Pin Header	C 5003-6	4	
P9	Amp Mod Snap-in Header	C 5006-9	3	
P10	Amp Mod PC Chassis 7 Pin	C 3851-0	3	



*Fig. 6.14 Mother Board Module Component Board Layout*

Item No.	Description	Amount	Other Information
1	Allocation	14,000.00	
2	1st Qtr. 1st	1,000.00	
3	1st Qtr. 2nd	1,000.00	
4	1st Qtr. 3rd	1,000.00	
5	1st Qtr. 4th	1,000.00	
6	1st Qtr. 5th	1,000.00	
7	1st Qtr. 6th	1,000.00	
8	1st Qtr. 7th	1,000.00	
9	1st Qtr. 8th	1,000.00	
10	1st Qtr. 9th	1,000.00	
11	1st Qtr. 10th	1,000.00	
12	1st Qtr. 11th	1,000.00	
13	1st Qtr. 12th	1,000.00	
14	1st Qtr. 13th	1,000.00	
15	1st Qtr. 14th	1,000.00	
16	1st Qtr. 15th	1,000.00	
17	1st Qtr. 16th	1,000.00	
18	1st Qtr. 17th	1,000.00	
19	1st Qtr. 18th	1,000.00	
20	1st Qtr. 19th	1,000.00	
21	1st Qtr. 20th	1,000.00	
22	1st Qtr. 21st	1,000.00	
23	1st Qtr. 22nd	1,000.00	
24	1st Qtr. 23rd	1,000.00	
25	1st Qtr. 24th	1,000.00	
26	1st Qtr. 25th	1,000.00	
27	1st Qtr. 26th	1,000.00	
28	1st Qtr. 27th	1,000.00	
29	1st Qtr. 28th	1,000.00	
30	1st Qtr. 29th	1,000.00	
31	1st Qtr. 30th	1,000.00	
32	1st Qtr. 31st	1,000.00	

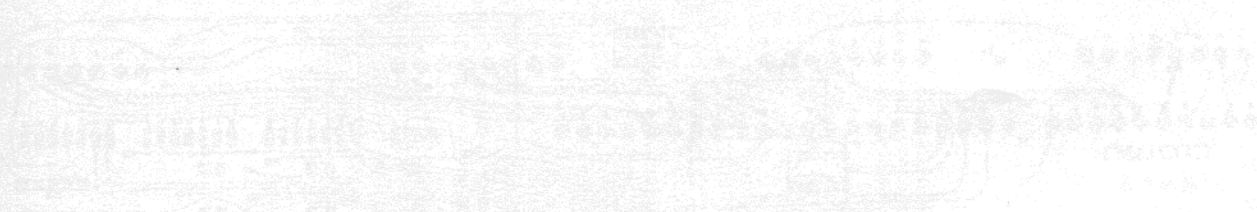
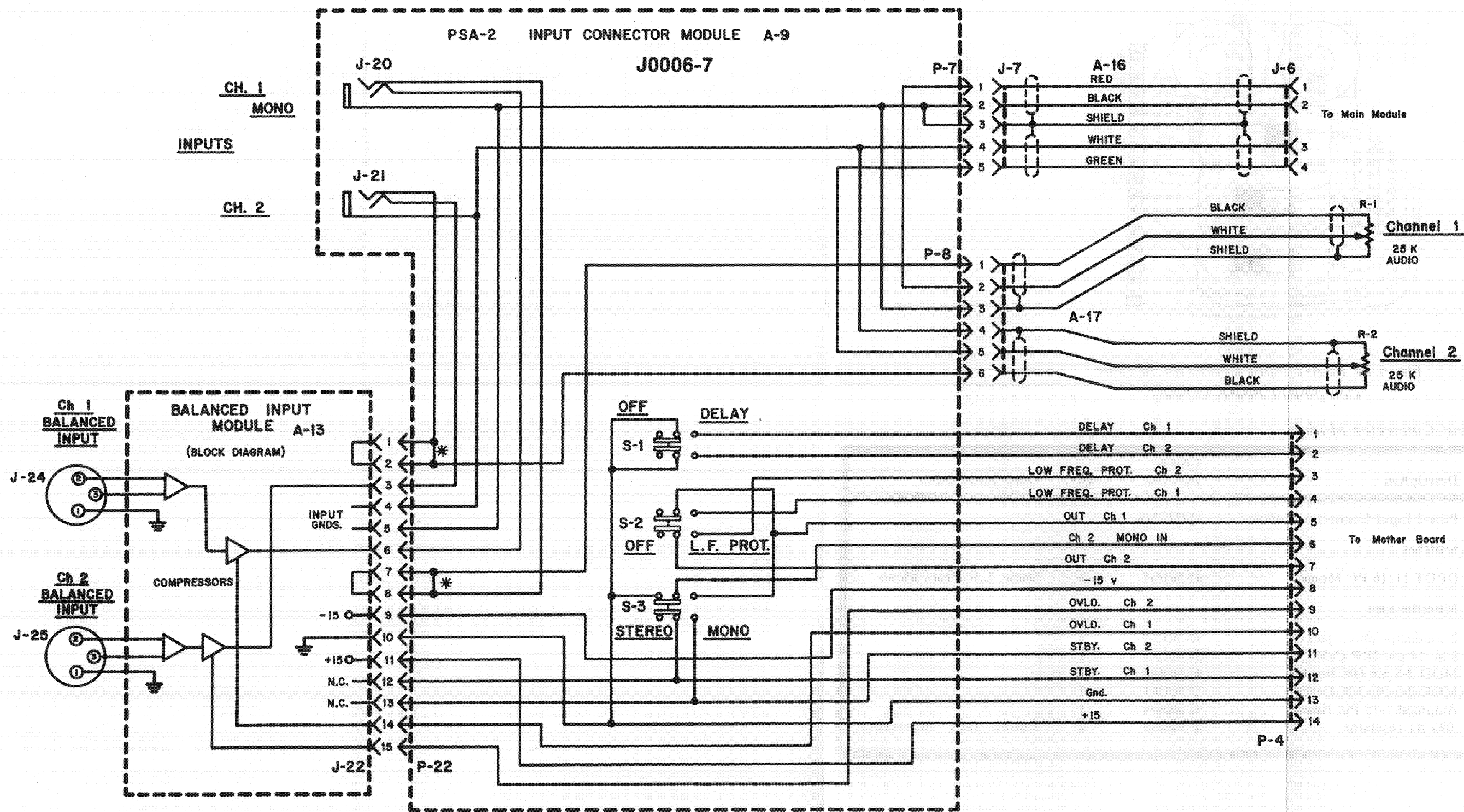


Fig. 6-1: FNP Output Monthly Component



**INPUT CONNECTOR MODULE**

- DELAY, LOW FREQUENCY PROTECT AND STEREO-MONO SWITCH SHOWN INACTIVE.

**USED WITH;**

- MODEL PSA-2(X) SN9989 AND ABOVE
- MODEL PSA-2DX SN226 AND ABOVE

Fig. 6.15 PSA-2 Input Connector Module Schematic



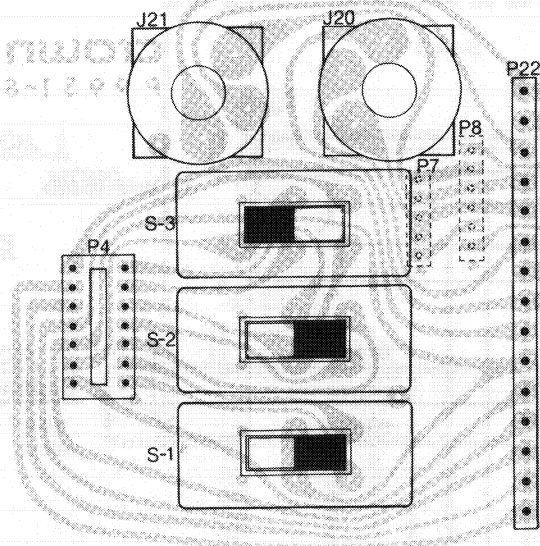


Fig. 6.16 PSA-2 Input Connector Module  
Component Board Layout

Parts List: PSA-2 Input Connector Module

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
	<b>PSA-2 Input Connector Module</b>	<b>Q42173J6</b>		
	<b>Switches</b>			
S1, S2, S3	DPDT 11/16 PC Mount	D 5016-7	3	Delay, L.F. Prot., Mono
	<b>Miscellaneous</b>			
J20, J21	2 conductor phone jacks	D 5015-9	2	
P4	8 in. 14 pin DIP Cable	D 4615-7	1	
P7	MOD 2-5 pin 608 Header	C 5009-3	1	
P8	MOD 2-6 Pin 608 Header	C 5010-1	1	
P22	Ampmod 1-15 Pin Header	C 5004-4	1	
	.093 X1 Insulator	F 9960-0	2	Phone jack insulators

**INPUT CONNECTOR MODULE**

USED WITH;

- MODEL SA2 SN111947 AND ABOVE

- DELAY, LOW FREQUENCY PROTECT AND STEREO-MONO SWITCH SHOWN INACTIVE.

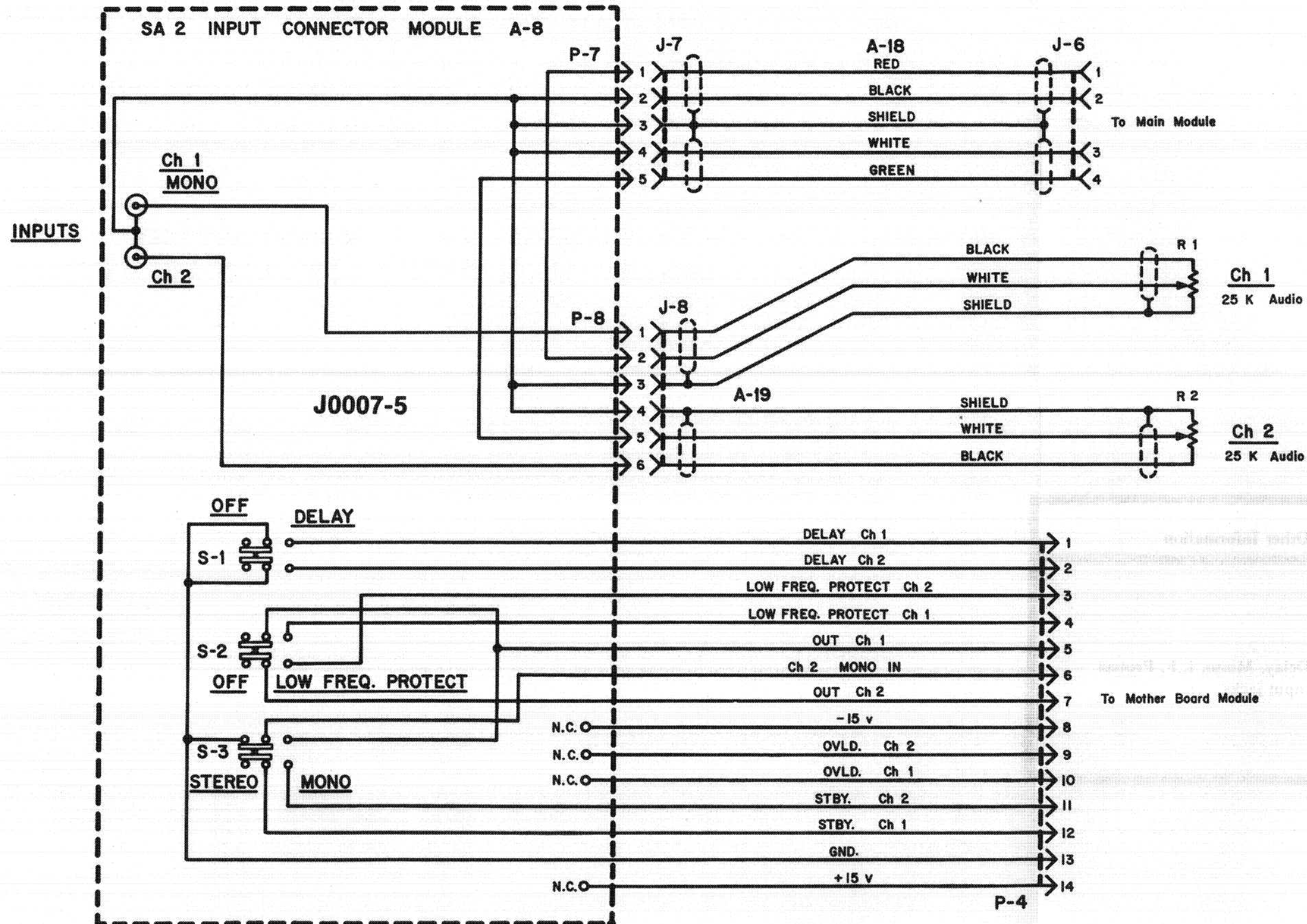


Fig. 6.17 SA2 Input Connector Module Schematic

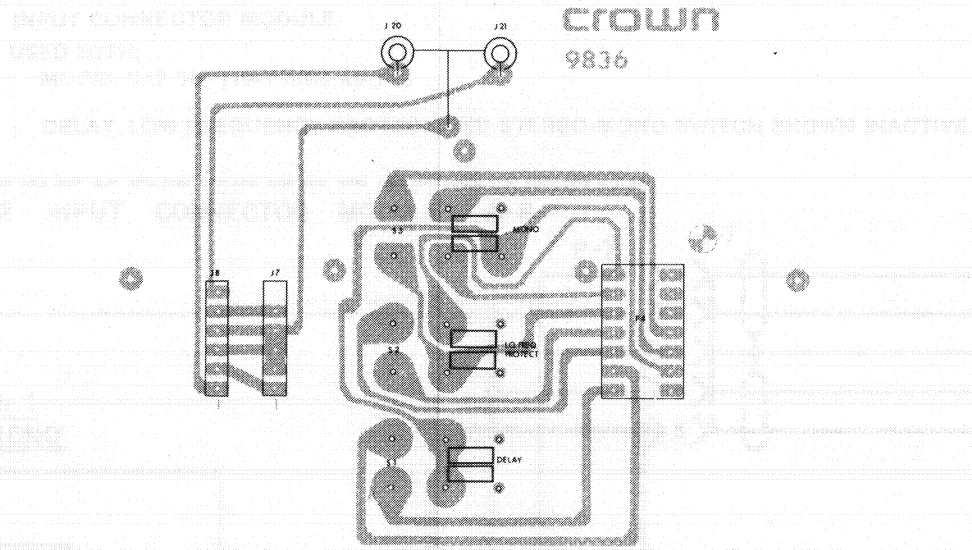


Fig. 6.18 SA2 Input Connector Module  
Component Board Layout

Parts List: SA2 Input Connector Module

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
	<b>SA2 Input Connector Module</b>	<b>Q42125J6</b>		
	<b>Miscellaneous</b>			
S1, S2, S3	DPDT 13/64 PC Mount 2 way Phono Jackplate	D 5017-5 C 4933-5	3 1	Delay, Mono, L.F. Protect Input jacks
P7	MOD 2-5 Pin 608 Header	C 5009-3	1	
P8	MOD 2-6 Pin 608 Header 8 in 14 pin DIP Cable	C 5010-1 D 4615-7	1 1	



**DISPLAY**

- CONNECTIONS THROUGH J11. PIN NUMBERS ARE SHOWN.
- D113 AND D213 OMITTED FROM EARLY UNITS -- MAY BE RETROFITTED TO PREVENT SIGNAL FROM FALSE TRIGGERING IOC.

USED WITH;  
 MODEL PSA-2(X) SN9989 AND ABOVE  
 MODEL PSA-2DX SN226 AND ABOVE

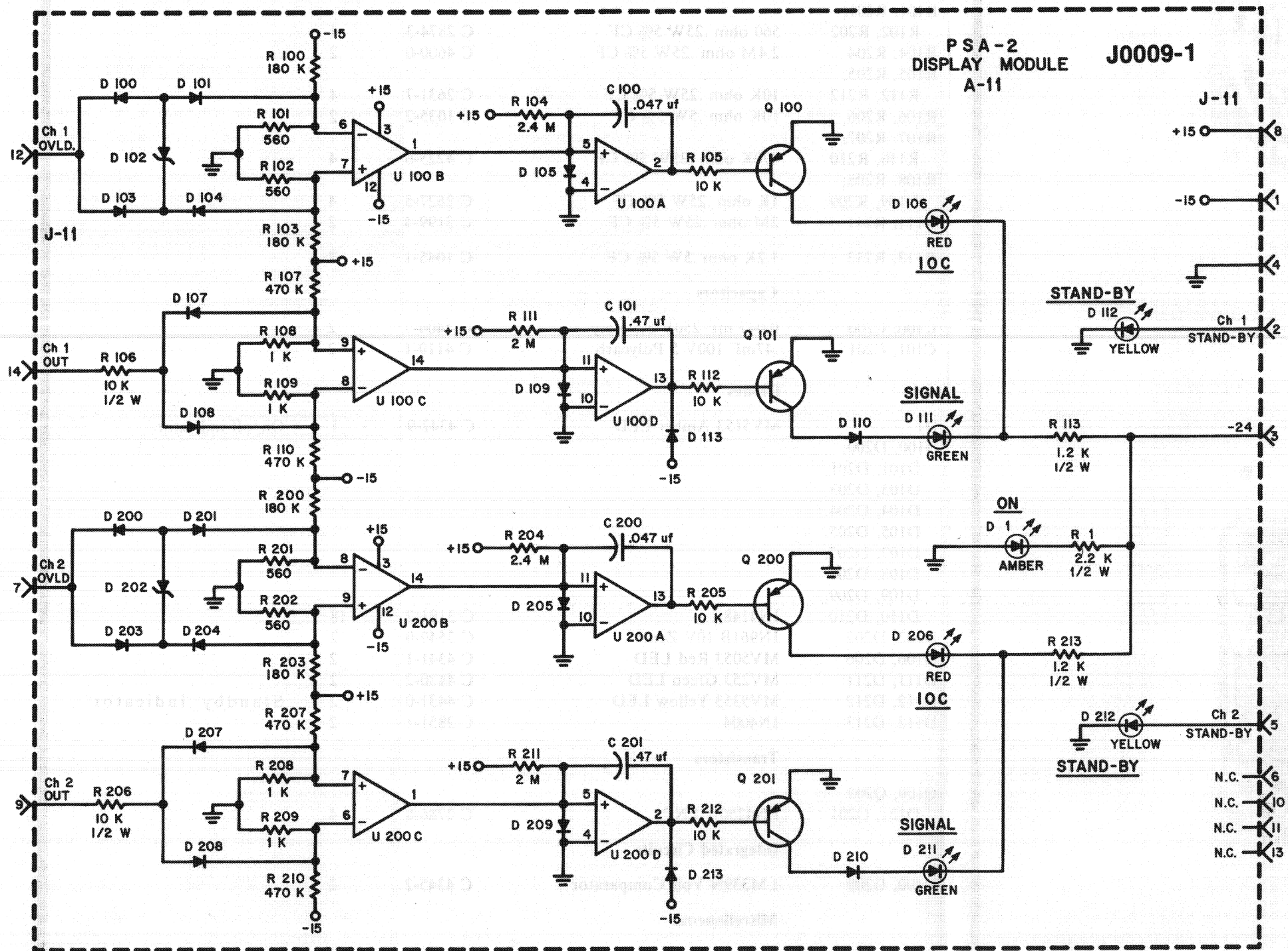


Fig. 6.19 PSA-2 Display Module Schematic

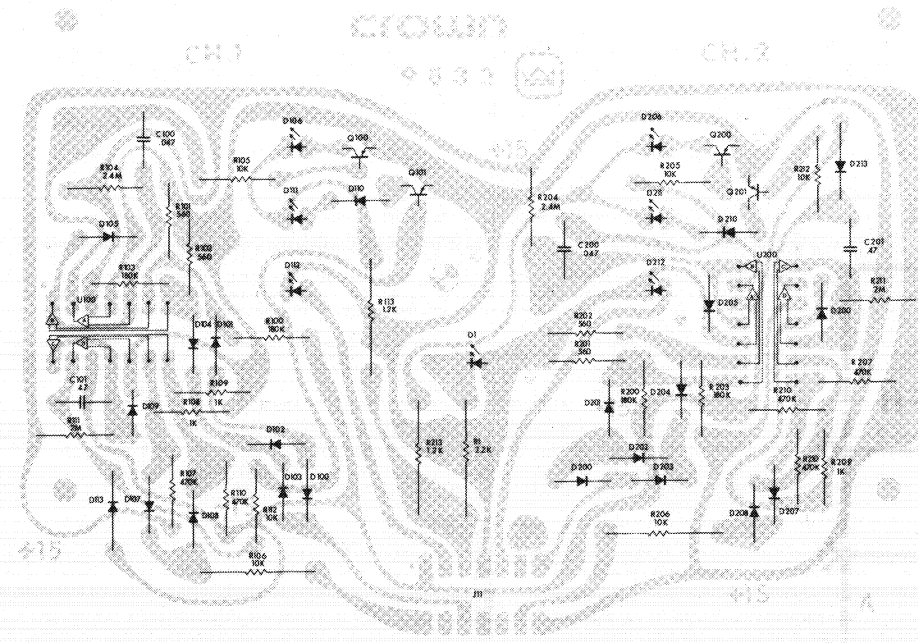


Fig. 6.20 PSA-2 Display Module Foil Board Layout

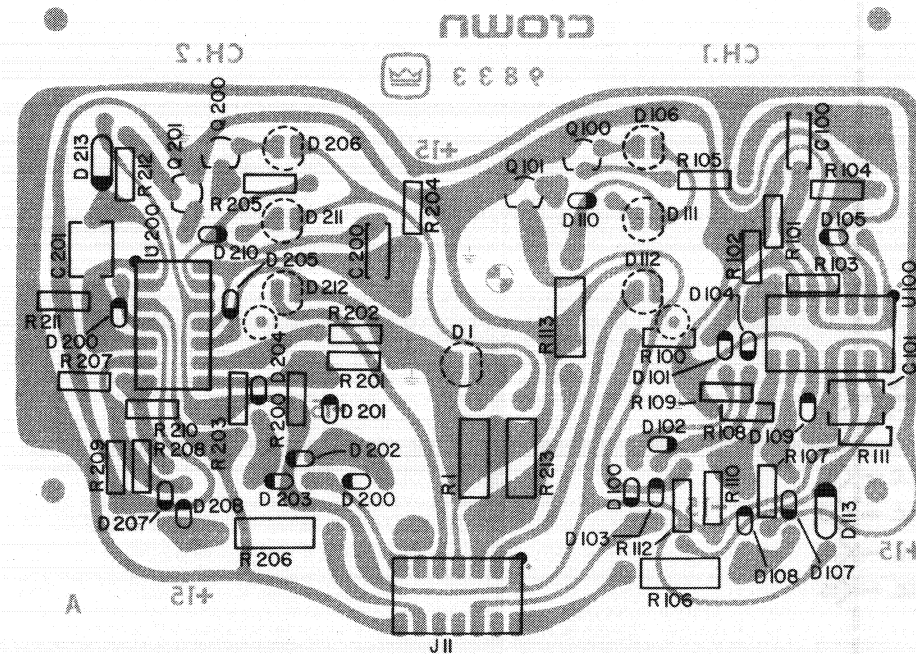
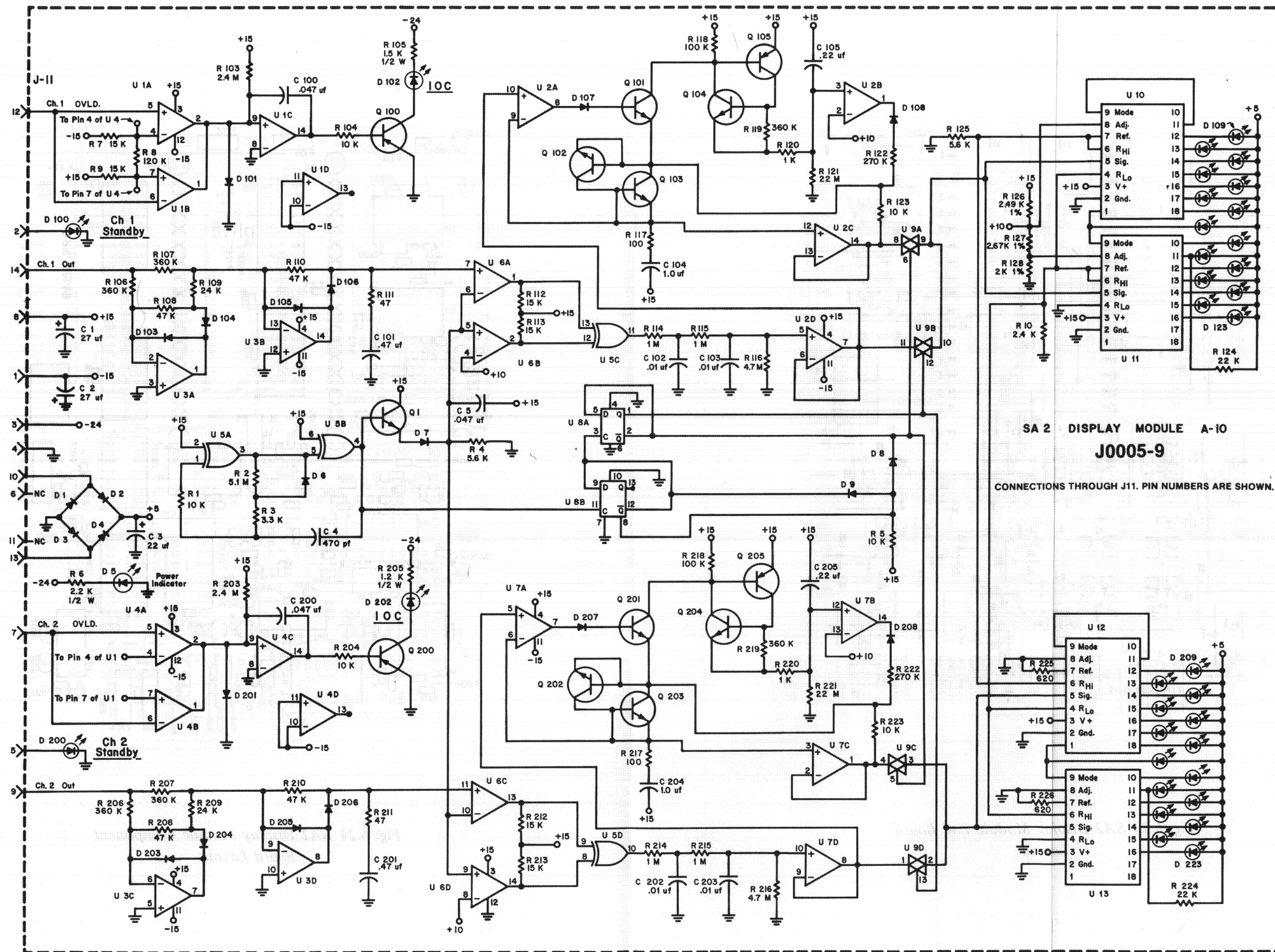


Fig. 6.21 PSA-2 Display Module Component Board Layout

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
<b>PSA-2 Display Board Module M42199-6</b>				
<b>Resistors</b>				
R1	2.2K ohm .5W 5% CF	C 1036-0	1	
R100, R200, R103, R203	180K ohm .25W 5% CF	C 4218-1	4	
R101, R201, R102, R202	560 ohm .25W 5% CF	C 2874-3	4	
R104, R204	2.4M ohm .25W 5% CF	C 4600-0	2	
R105, R205, R112, R212	10K ohm .25W 5% CF	C 2631-7	4	
R106, R206	10K ohm .5W 5% CF	C 1035-2	2	
R107, R207, R110, R210	470K ohm .25W 5% CF	C 4225-6	4	
R108, R208, R109, R209	1K ohm .25W 5% CF	C 2627-5	4	
R111, R211	2M ohm .25W 5% CF	C 3199-4	2	
R113, R213	1.2K ohm .5W 5% CF	C 1045-1	2	
<b>Capacitors</b>				
C100, C200	0.047 mF 250V 5% Poly	C 4404-7	2	
C101, C201	.47mF 100V 5 Polycarb	C 4119-1	2	
<b>Diodes</b>				
D1	MV5153 Amber LED	C 4342-9	1	On/off indicator
D100, D200, D101, D201, D103, D203, D104, D204, D105, D205, D107, D207, D108, D208, D109, D209, D110, D210	1N4148	C 3181-2	18	
D102, D202	1N961B 10V Zener	C 3549-0	2	
D106, D206	MV5053 Red LED	C 4341-1	2	
D111, D211	MV253 Green LED	C 4430-2	2	
D112, D212	MV5353 Yellow LED	C 4431-0	2	Standby indicator
D113, D213	1N4004	C 2851-1	2	
<b>Transistors</b>				
Q100, Q200 Q101, Q201	PN4250A PNP	C 3786-8	4	
<b>Integrated Circuits</b>				
U100, U200	LM339N Volt Comparator	C 4345-2	2	
<b>Miscellaneous</b>				
	14 Pin DIL IC Socket	C 3450-1	3	
	Fishpaper	D 5083-7	-	



USED WITH MODEL SA2 SN111947 AND ABOVE

Fig. 6.22 SA2 Display Module Schematic



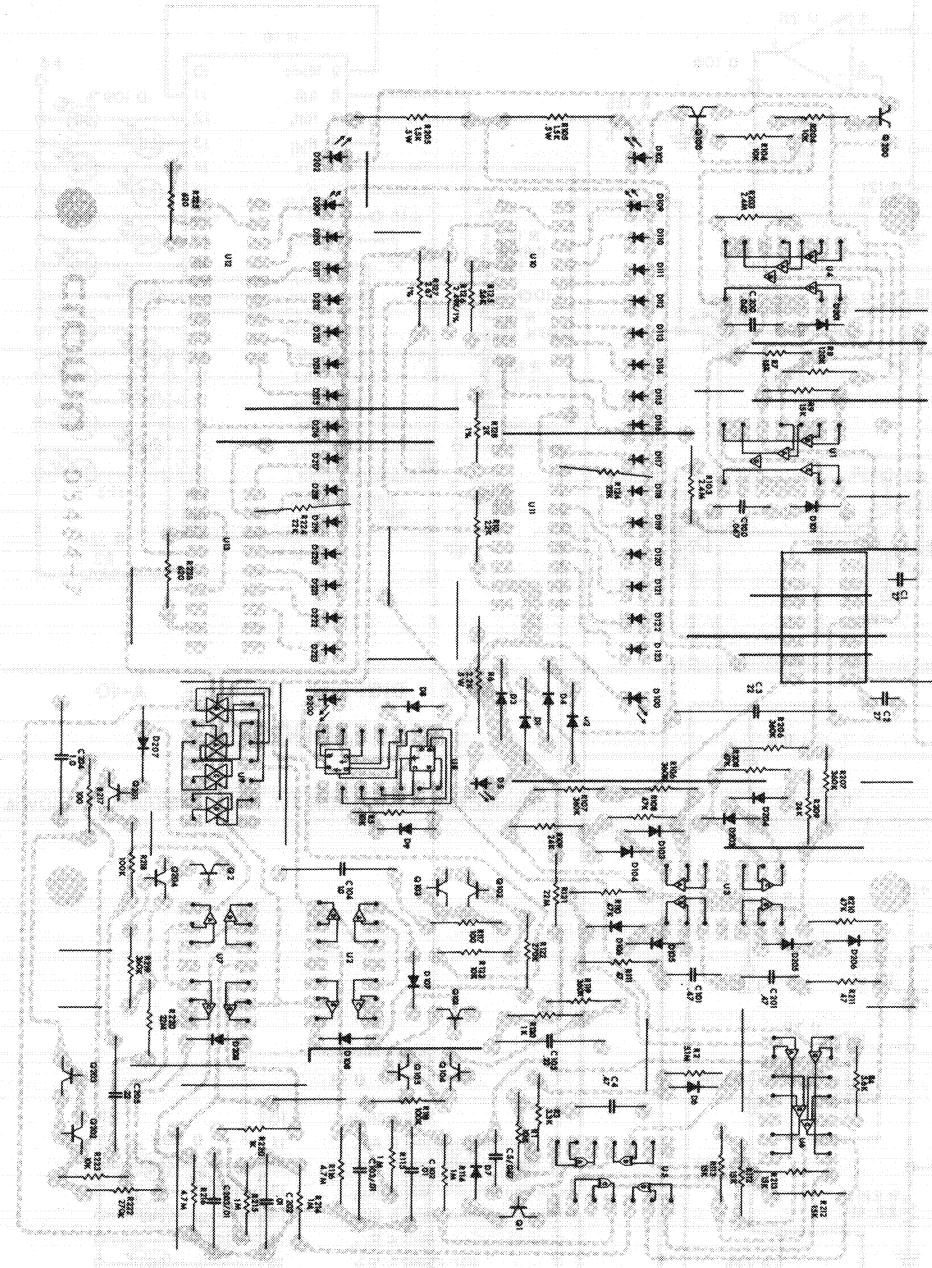


Fig. 6.23 SA2 Display Module Foil Board Layout

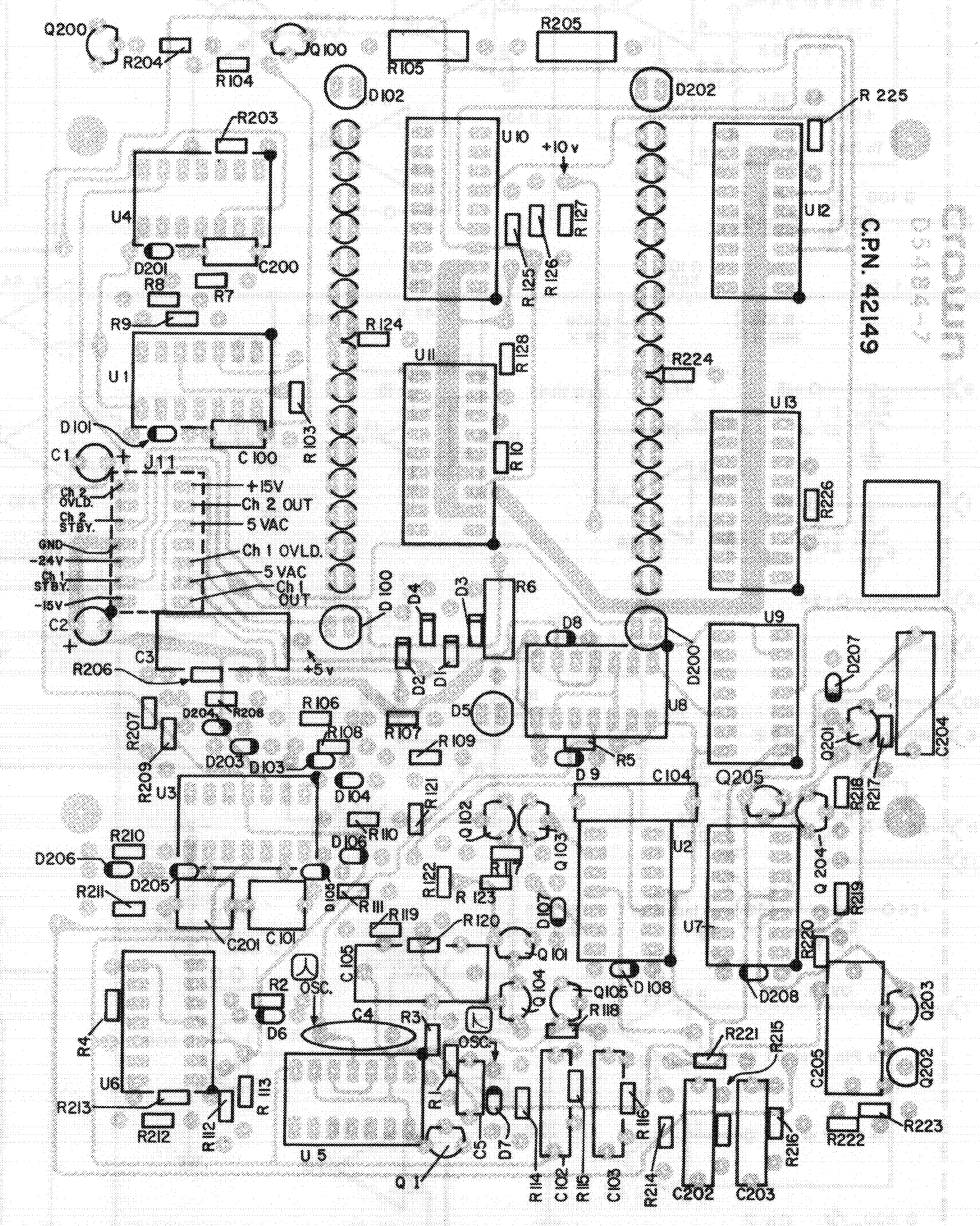
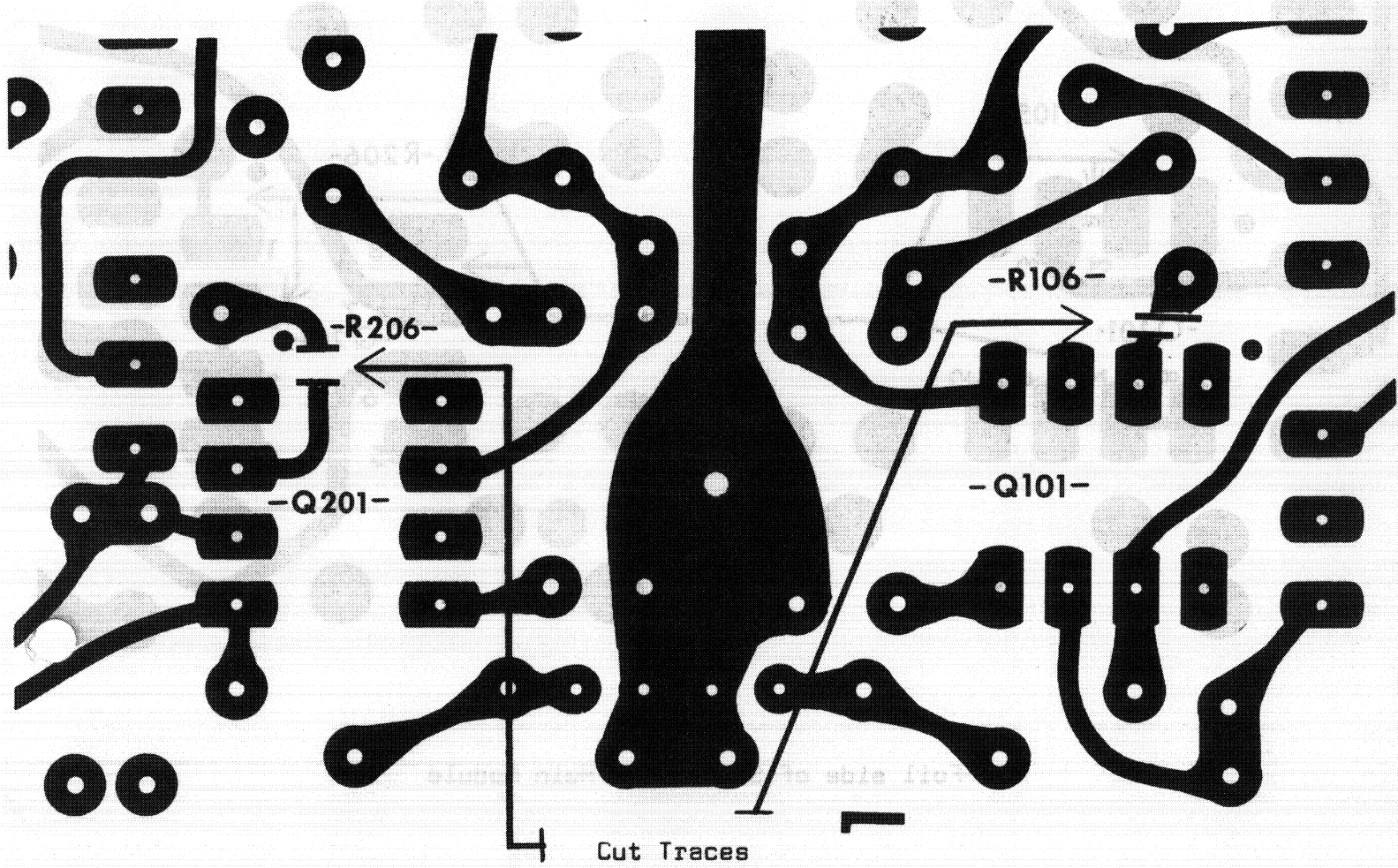
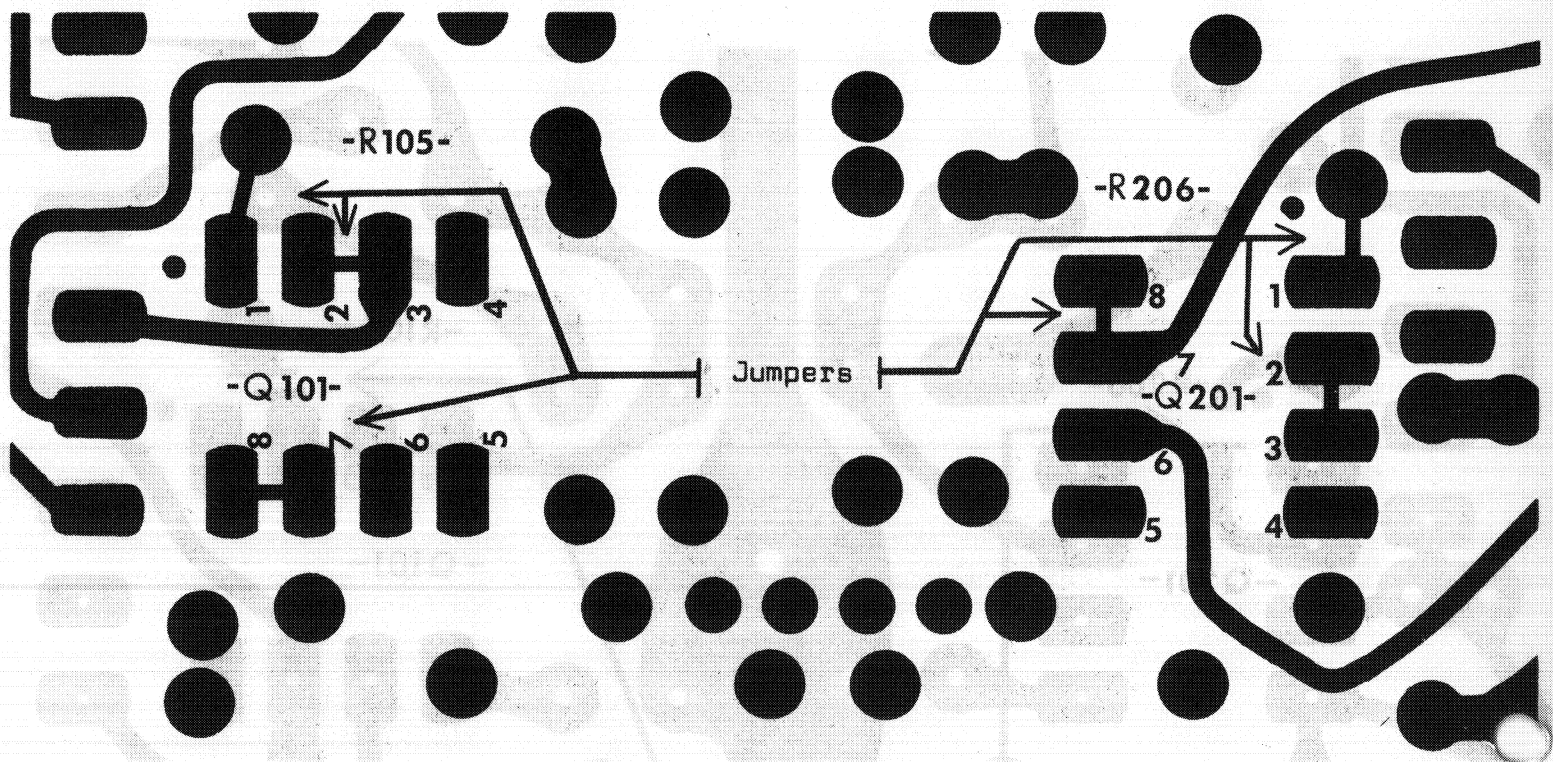


Fig. 6.24 SA2 Display Module Component Board Layout



Component side of SA-2/PSA-2 Main Module

Figure-1



Foil side of SA-2/PSA-2 Main Module

Solder six jumper wires on the foil side at these locations:

- Q101 pin 1 to R105
- Q101 pin 2 to pin 3
- Q101 pin 7 to pin 8
- Q201 pin 1 to R206
- Q201 pin 2 to pin 3
- Q201 pin 7 to pin 8

Figure-2

Figure 4

