

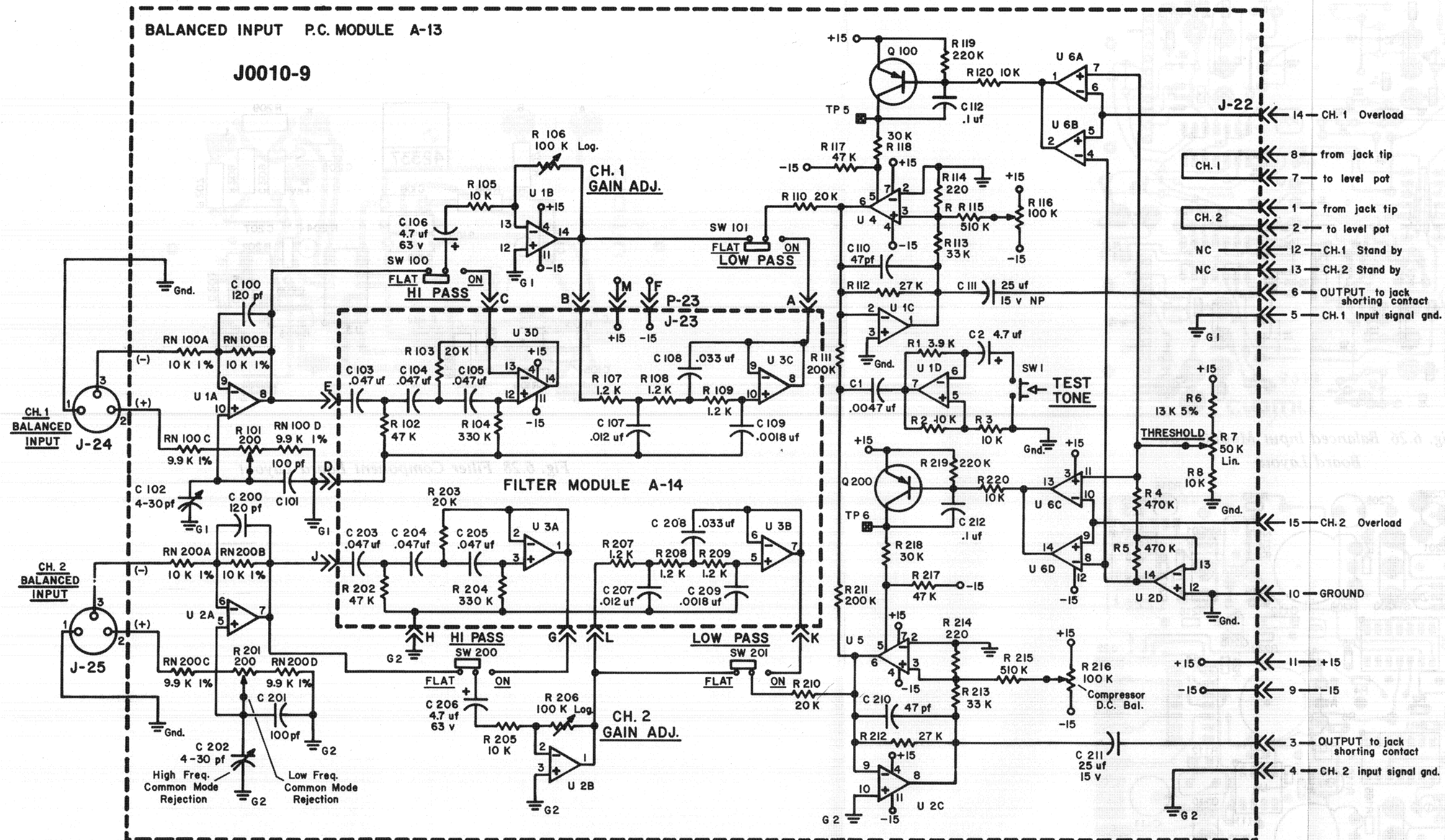


Parts List: SA2 Display Board Module

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
	SA2 Display Module Resistors	M42149-1		
R1, R5, R104, R204 R123, R223	10K ohm .25W 5% CF	C 2631-7	6	
R2	5.1M ohm .25W 5% CF	C 4126-6	1	
R3	3.3K ohm .25W 5% CF	C 2629-1	1	
R4, R125	5.6K ohm .25W 5% CF	C 3220-8	2	
R6	2.2K ohm .5W 5% CF	C 1036-0	1	
R7, R9, R113, R213, R112, R212	15K ohm .25W 5% CF	C 2632-5	6	
R8	120K ohm .25W 5% CF	C 4214-0	1	
R103, R203	2.4M ohm .25W 5% CF	C 4600-0	2	
R105, R205	1.2K ohm .5W 5% CF	C 1045-1	2	
R106, R206, R107, R207, R119, R219	360K ohm .25W 5% CF	C 4223-1	6	
R108, R208, R110, R210	47K ohm .25W 5% CF	C 2880-0	4	
R109, R209	24K ohm .25W 5% CF	C 5217-2	2	
R111, R211	47 ohm .25W 5% CF	C 1011-3	2	
R114, R214, R115, R215	1M ohm .25W 5% CF.	C 3198-6	4	
R116, R216	4.7M ohm .25W 5% CF	C 5216-4	2	
R117, R217	100 ohm .25W 5% CF	C 2872-7	2	
R118, R218	100K ohm .25W 5% CF	C 2883-4	2	
R120, R220	1K ohm .25W 5% CF	C 2627-5	2	
R121, R221	22M ohm .25W 5% Comp	C 5215-6	2	
R122, R222	270K ohm .25W 5% CF	C 2885-9	2	
R124, R224	22K ohm .25W 5% CF	C 3302-4	2	
R126	2.49K ohm .25W 1% MF	C 4852-7	1	
R225, R226	620 ohm .25W 5% CF	C 3872-6	2	
R127	2.67K ohm .25W 1% MF	C 5218-0	1	
R128	2.0K ohm .25W 1% MF	C 4505-1	1	
R10	2.7K ohm .25W 5% CF	C 5168-7	1	
	Capacitors			
C1, C2	27mF 15V Tant	C 3677-9	2	
C3	22mF 40V	C 4248-8	1	
C4	470pF Mica	C 2511-1	1	
C5, C100, C200	0.047mF 250V Polycarb	C 4404-7	3	
C101, C201	.47mF 100V 5% Polycarb	C 4119-1	2	
C102, C202, C103, C203	.01mF 200V Filmatic	C 3161-4	4	
C104, C204	1.0mF 100V 5% Polycarb	C 4472-4	2	
C105, C205	.22mF 100V Filmatic	C 3218-2	2	

Parts List: SA2 Display Board Module (Continued)

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
Transistors				
Q100, Q200	PN4250A PNP	C 3786-8	2	
Q101, Q201, Q102, Q202, Q103, Q203, Q104, Q204	Sel 2N3859A NPN	D 2961-7	8	
Q1	Sel TZ-81 NPN	D 2962-5	1	
Q105, Q205	2N4125 PNP	C 3625-8	2	
Diodes				
D1, D2, D3, D4	1N4004	C 2851-1	4	
D5	MV5153 Amber LED	C 4342-9	1	on/off indicator
D6, D7, D8, D9, D101, D201, D103, D203, D104, D204, D105, D205, D106, D206, D107, D207 D108, D208	1N4148	C 3181-2	18	
D100, D200	MV5353 Yellow LED	C 4431-0	2	Standby indicator
D102, D202	MV5053 Red Led	C 4341-1	2	IOC indicator
D109, D209, D110, D210, D111, D211 D112, D212, D113, D213, D114, D214, D115, D215, D116, D216, D117, D217, D118, D218, D119, D219, D120, D220, D121, D221, D122, D222, D123, D223	TIL232-2 Green Mini LED	C 5098-6	30	Ladder Display
Integrated Circuits				
U1, U4, U6	LM339N Volt Comparator	C 4345-2	3	
U2, U7, U3, U4	TL074	C4696-8	4	
U5	MC14070 Excl or Gate	C 4833-7	1	
U8	MC14013 Flip Flop	C 4831-1	1	
U9	MC14016 Quad Switch	C 4834-5	1	
U10, U11, U12, U13	LM3914 Dot DDP Driver	C 4924-4	4	
Miscellaneous				
	14 Pin DIL IC Socket	C 3450-1	9	
	18 pin DIL IC Socket	C 5118-2	4	
	14 pin Wirewrap IC Socket	C 5119-0	4	



BALANCED INPUT MODULE

- THREE SEPARATE GROUNDS JOIN AT BOARD.
- FOR STEREO TRACKING COMPRESSOR, ADD JUMPER TP5 TO TP6.
- UNDERLINED CAPTIONS DENOTE REAR PANEL MARKINGS.
- USED WITH;
- MODEL PSA-2(X) SN9989 AND ABOVE
- MODEL PSA-2DX SN226 AND ABOVE

- HIGH PASS FILTER SHOWN IN FLAT POSITION.
- LOW PASS FILTER SHOWN IN FLAT POSITION.
- TEST TONE GENERATOR SHOWN INACTIVE.

Fig. 6.25 PSA-2 Balanced Input Module/
Filter Board Schematic

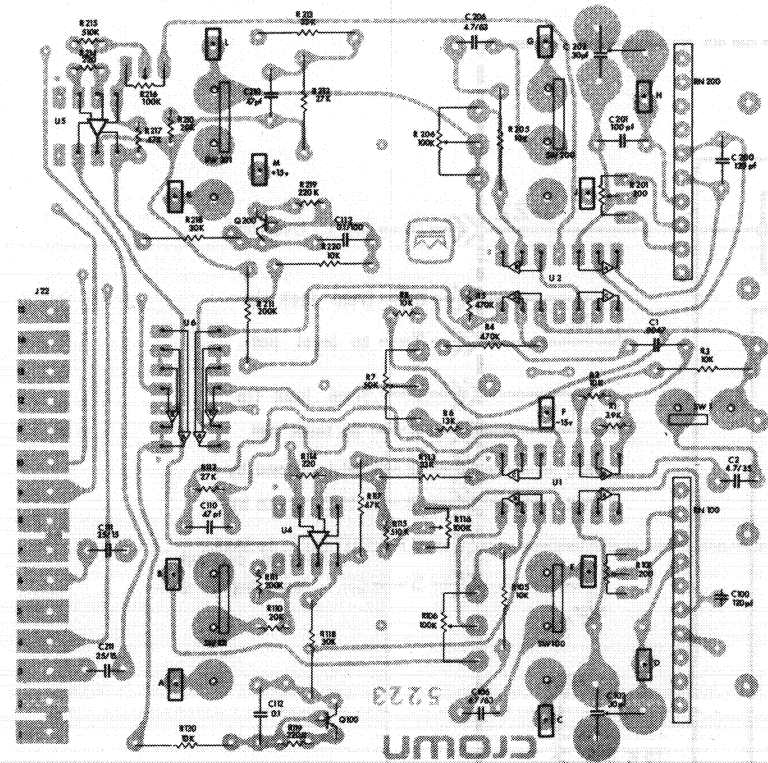


Fig. 6.26 Balanced Input Module Foil Board Layout

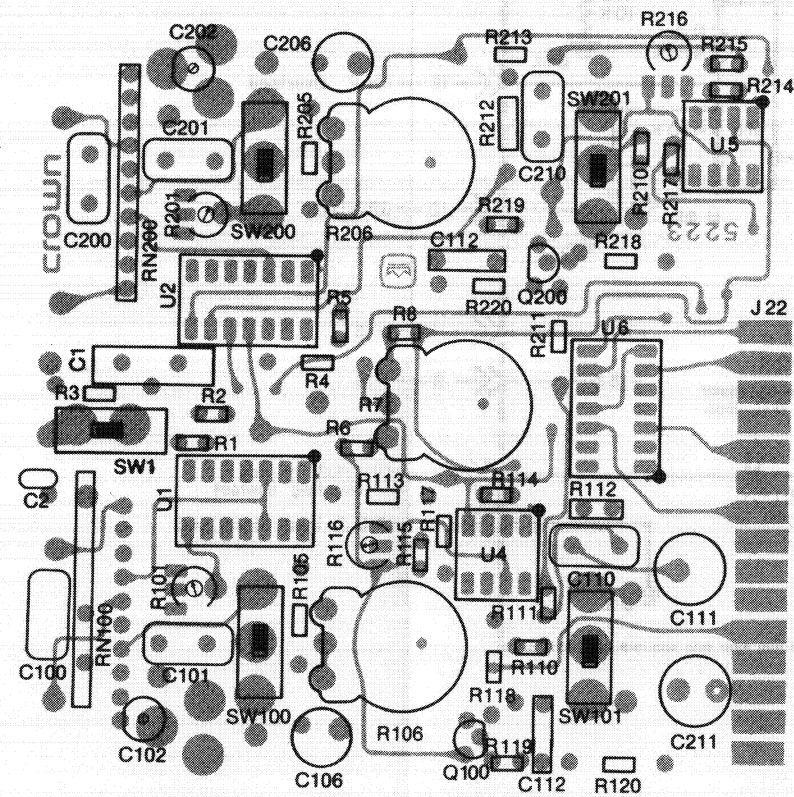


Fig. 6.27 Balanced Input Module Component Board Layout

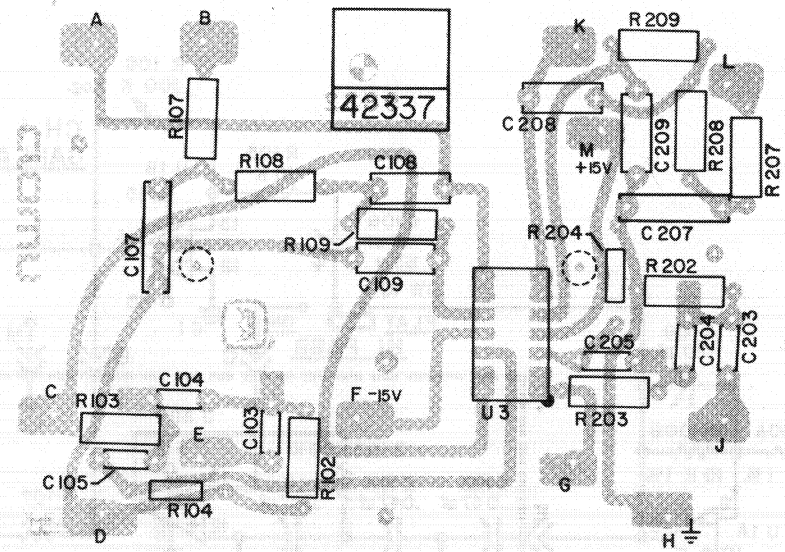


Fig. 6.28 Filter Component Board Layout

Parts List: PSA-2 Balanced Input Module (PSA-2 MOD)

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
	PSA-2 Balanced Input Module	M42195-4		
	Resistors			
R1	3.9K ohm .25W 5% CF	C 2630-9	1	
R2, R3, R8, R105, R205 R120, R220	10K ohm .25W 5% CF	C 2631-7	7	
R4, R5	470K ohm .25W 5% CF	C 4225-6	2	
R6	13K ohm .25W 5% CF	C 4300-7	1	
R101, R201	200 ohm helipot trim	C 3683-7	2	Low frequency common mode rejection
R106, R206	100K ohm audio	D 5052-2	2	Gain adjust
R110, R210	20K ohm .25W 5% CF	C 5046-5	2	
R111, R211	200K ohm .25W 5% CF	C 3622-5	2	
R112, R212	27K ohm .5W 5% CF	C 1056-8	2	
R113, R213	33K ohm .25W 5% CF	C 4346-0	2	
R114, R214	220 ohm .25W 5% CF	C 5047-3	2	
R115, R215	510K ohm .25W 5% CF	C 4226-4	2	
R116, R216	100K ohm cermet trim pot	C 4843-6	2	Compressor DC Bal
R117, R217	47K ohm .25W 5% CF	C 2880-0	2	
R118, R218	30K ohm .25W 5% CF	C 5270-1	2	
R119, R219	220K ohm .25W 5% CF	C 4219-9	2	
R7	50K ohm linear	D 5051-4	1	Threshold
	Resistor Networks			
RN100, RN200	Resistor Network-K	D 4280-0	2	
	Capacitors			
C1	.0047mF 200V 5 Polycarb	C 3996-3	1	
C2	4.7mF 35V Tant	C 4019-3	1	
C100, C200	120pF Mica	C 3290-1	2	
C101, C201	100pF Mica	C 3410-5	2	
C102, C202	30pF PC MNT Trimmer	C 5058-0	2	High freq. common mode rejection
C106, C206	4.7mF 63V Vertical	C 4253-8	2	
C110, C210	47pF Mica	C 3409-7	2	
C111, C211	22mF 50V N-P Vertical	C 5311-3	2	
C112, C212	0.1mF 100V Polycarb	C 4892-3	2	
	Transistors			
Q100, Q200	PN4250A PNP	C 3786-8	2	
	Integrated Cricuits			
U1, U2	TL074 Quad Op Amp	C 4696-8	2	
U4, U5	LM3080N Transcon Amp	C 5071-3	2	
U6	LM339N Volt Comparator	C 4345-2	1	

Parts List: PSA-2 Balanced Input Module (Continued)

Schematic Designation	Description	Crown Part No.	Qty.	Other Information
Switches				
SW1	SPST Spring Return	D 5019-1	1	Test tone switch
SW100, SW200, SW101, SW201	SPDT 31/64 PC Mount	D 5018-3	4	Hi/Low pass switch
Miscellaneous				
J24, J25	XLR3-31 Panel F	C 4902-0	2	
	14 Pin DIL IC Socket	C 3450-1	3	Socket for U1, U2, U6
	8 Pin DIL IC Socket	C 3451-9	2	Socket for U4, U5
J22	Amp Mod 1 PC RCPT	C 3846-0	15	
	PSA-2 Shield Board	M42211-9		
PSA-2 Filter Board Module		M42337-2		
Resistors				
R102, R202	47K ohm .5W 5% CF	C 1058-4	2	
R103, R203	20K ohm .5W 5% CF	C 5057-2	2	
R104, R204	330K ohm .25W 5% CF	C 4222-3	2	
R107, R207, R108, R208, R109, R209	1.2K ohm .5W 5% CF	C 1045-1	6	
Capacitors				
C103, C203, C104, C204 C105, C205	0.047mF 250V 5 Polycarb	C 4404-7	6	
C107, C207	0.012mF 200V Filmatic	C 3219-0	2	
C108, C208	0.033mF 100V Filmatic	C 5063-0	2	
C109, C209	1830pF 63V 2.5 STYR	D 4286-7	2	
Integrated Circuits				
U3	TLO74 Quad Op Amp	C 4696-8	1	
Miscellaneous				
	14 Pin DIL IC Socket	C 3450-1	1	Socket for U3
J23	Ampmod 1 PC RCPT	C 3846-0	12	

Parts List: Front Panel Assembly

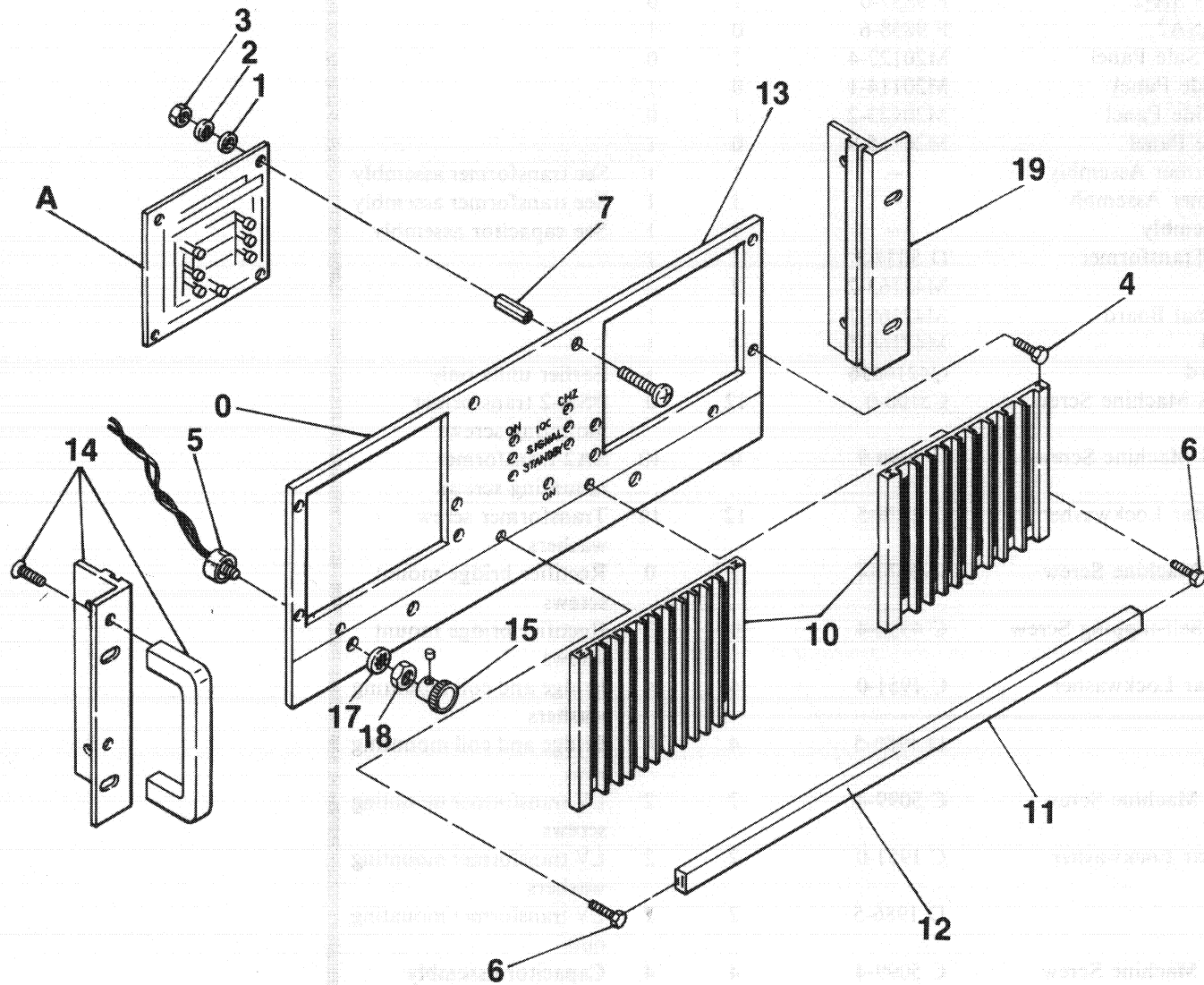


Fig. 6.29 Front Panel Assembly

Index No.	Schematic Designation	Description	Crown Part No.	PSA-2 Qty.	SA2 Qty.	Other Information
Front Panel Assembly						
0		Front Panel	PSA - F9846J0	1	0	
0		Front Panel	SA - F9850J2	0	1	
1		375x141x031 Fiber Washer	C 1296-0	4	4	Used with Display board
2		#6 Internal Star Lockwasher	C-1823-1	12	8	
3		6-32 Hex Nut	C 1889-2	12	12	
4		6-32x.50 Machine Screw	C 3917-9	8	8	
5		Pot Assembly	M42170-7	2	2	Input level pots
6		6-32 1.0 Machine Screw	C 4333-8	4	4	
7		PSA-2 6-32 Hex Spacer	D 3251-2	4	0	Used with Display board
7		SA2 Brass Spacer	D 5231-2	0	4	Used with Display board
10		Vertical Panel Extrusion	D 4265-1	2	2	
11		Logo Rail Extrusion	D-4266-9	1	1	
12		Crown Logo Insert, PSA-2	D 5073-8	1	0	
12		Crown Logo Insert, SA2	D 4640-5	0	1	
13		Front Panel Overlay	D 5132-2	1	1	
14		PSA-2 DSHMB-7R Handle Asmby	M41888-5	1	0	
14		PSA-2 DSHMB-7L Handle Asmby	M41939-6	1	0	
15		.880 Black Knob	D 4949-0	3	3	Volume, power knob
16		.375 Internal Star Lockwasher	C 2188-8	4	4	Used with power, (not shown)
17		.507x .391 Internal Star Lockwasher	C 4822-0	3	3	Used with power, volume controls
18		.375 Bright Nut	C 1288N7	3	3	Used with power, volume controls
19		SA2 Rack Mount Angle	D 4267-7	0	2	
A		Display board SA2	M42149-1	0	1	
		Display board PSA-2	M42199-6	1	0	
E		Rotary Power Switch	D 3492-2	1	1	Power pot; cover C4028-4 (not shown)
F		Adhesive Fishpaper	D 3894-9	0	1	

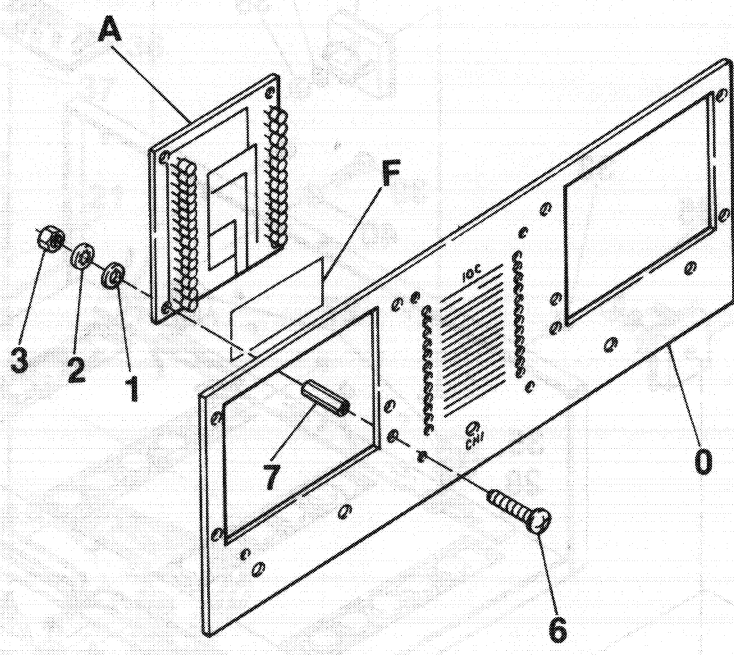
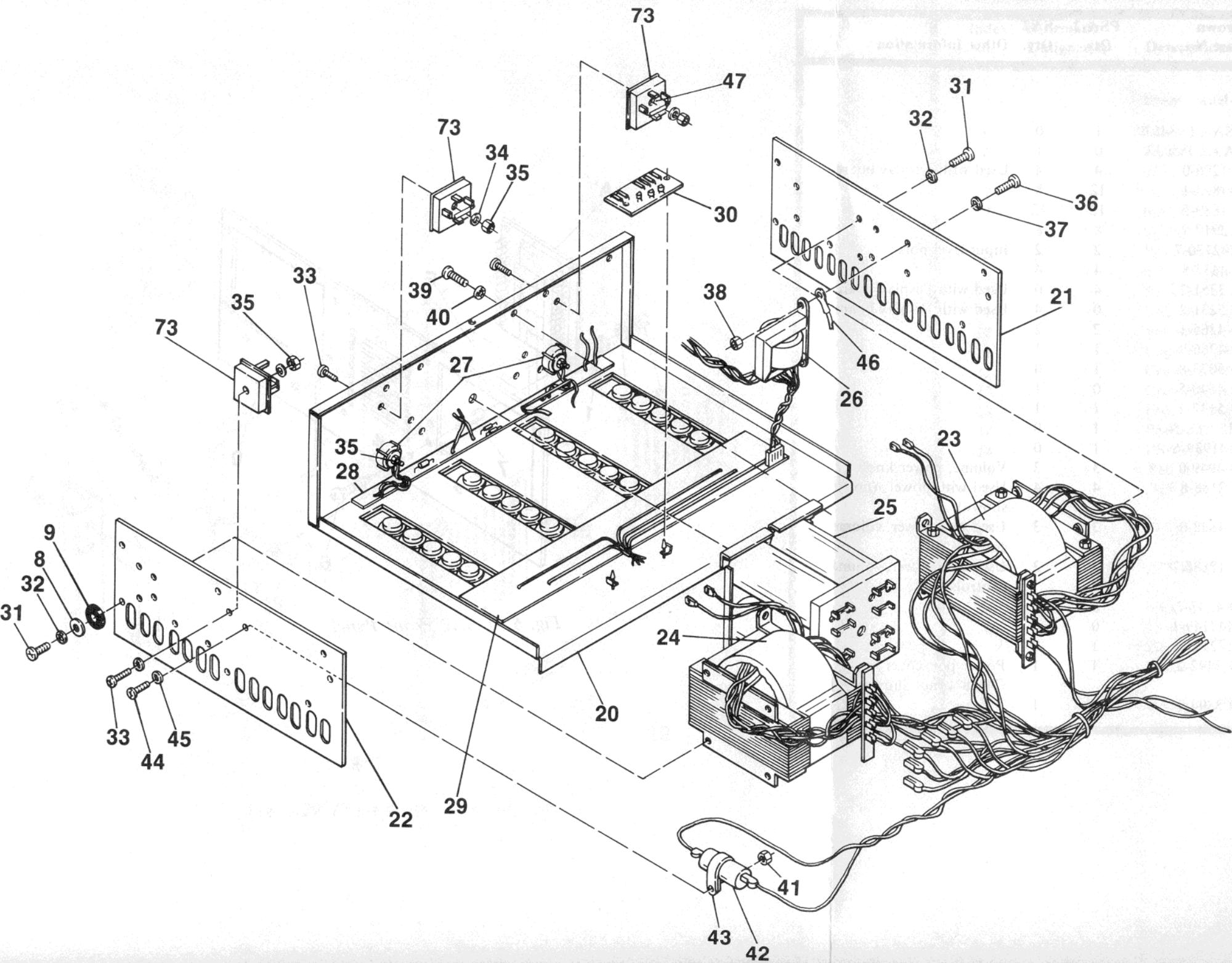


Fig. 6.30 SA2 Front Panel



Parts List: Main Chassis Assembly

Index No.	Schematic Designation	Description	Crown Part No.	PSA-2 Qty.	SA2 Qty.	Other Information
Main Chassis Assembly						
8		SA2 Transformer Isolation Washer	C 5249-5	0	10	Transformer mounting hardware
9		SA2 Isolation Spacers	D 5250-2	0	10	Transformer mounting hardware
20		Main Chassis PSA-2	F 9837-0	1	0	
20		Main Chassis SA2	F 9858-6	0	1	
21		PSA-2, Right Side Panel	M20122-4	1	0	
21		SA2, Right Side Panel	M20114-1	0	1	
22		PSA-2, Left Side Panel	M20123-2	1	0	
22		SA2, Left Side Panel	M20115-8	0	1	
23		Right Transformer Assembly	--	1	1	See transformer assembly
24		Left Transformer Assembly	--	1	1	See transformer assembly
25		Capacitor Assembly	--	1	1	See capacitor assembly
26		Low Voltage Transformer	D 5037-3	1	1	
27		Output Coil	M42163-2	2	2	
28		Output Terminal Board	M42165-7	1	1	
29		Mother Board	M42166-5	1	1	
30		Anti-pop Board	Q42168J6	1	1	Earlier units only
31		R10 32 .62 BS Machine Screw	C5100-0	12	0	PSA-2 transformer mounting screws
31		T10 32 .75 BS Machine Screw	C 5290-9	0	10	SA2 transformer mounting screws
32		#10 Internal Star Lockwasher	C 2279-5	12	10	Transformer screw washers
33		T8 32 .75 AS Machine Screw	C 2270-4	2	0	Rectifier bridge mount screws
33		SW8 P .75 B Self-tapping Screw	C 4330-4	0	2	Rectifier bridge mount screws
34		#8 Internal Star Lockwasher	C 1951-0	4	4	Bridge and coil mounting washers
35		8-32 Hex Nut	D 1986-5	4	4	Bridge and coil mounting nuts
36		R8 32 .37 BS Machine Screw	C 5099-4	2	2	LV transformer mounting screws
37		#8 Internal Star Lockwasher	C 1951-0	2	2	LV transformer mounting washers
38		8-32 Hex Nut	D 1986-5	2	2	LV transformer mounting nuts
39		R8 32 .37 BS Machine Screw	C 5099-4	4	4	Capacitor assembly mounting screws
40		#8 Internal Star Lockwasher	C 1951-0	4	4	Capacitor assembly mounting washers
41		8-32 Hex Nut	D 1986-5	1	1	Fan capacitor mounting nut
42	C4	7.5mF 220V rms 60Hz	C 4991-3	1	1	Fan capacitor
43		1.0in. clamp	C 5056-4	1	1	Capacitor clamp
44		SW 8 P .75 B Self-tapping Screw	C 4330-4	1	1	Fan capacitor mounting screw
45		#8 Internal Star Lockwasher	C 1951-0	1	1	Fan capacitor mounting washer
46		SA2 505 Solder Lug #8 Hole	D 2935-1	2	2	LV Transformer ground lug
47	C100	0.1mF 200V Filmatic	C 2938-6	2	2	On bridge rectifier block
73	BRDG-1	Bridge Rectifier Block	C 4305-6	2	2	

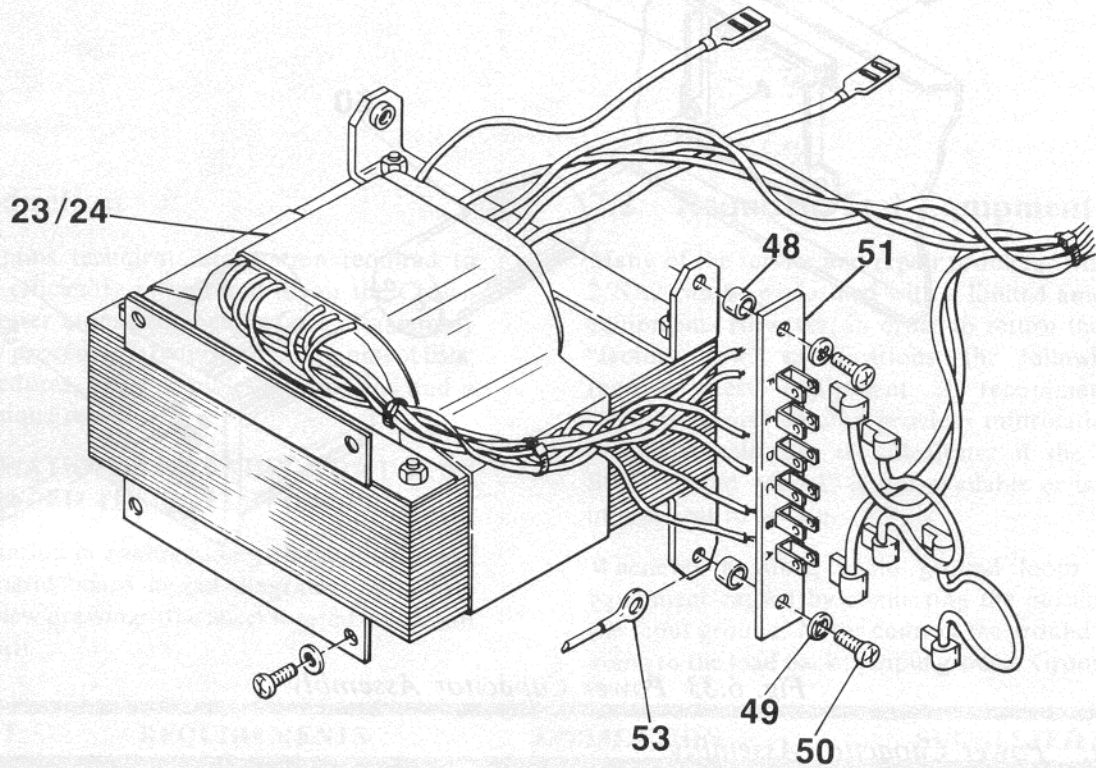


Fig. 6.32 Transformer Assembly

Parts List: Transformer Assembly

Index No.	Schematic Designation	Description	Crown Part No.	PSA-2 Qty.	SA2 Qty.	Other Information
Transformer Assembly (Left Transformer Shown)						
48		375x187x250 Nylon Spacer	C 2762-0	2	2	
49		#10 Internal Star Lockwasher	C 2279-5	2	2	
50		R10 32 .62 BS Machine Screw	C 5100-0	2	2	
51		6 Post Terminal Board	D 4925-0	1	1	
23		Right Transformer Assembly	M42329-9	1	1	Transformer & hardware
24		Left Transformer Assembly	M42333-1	1	1	Transformer & hardware
53		SA2 806 Solder Lug	D 3312-2	0	1	Ground lug

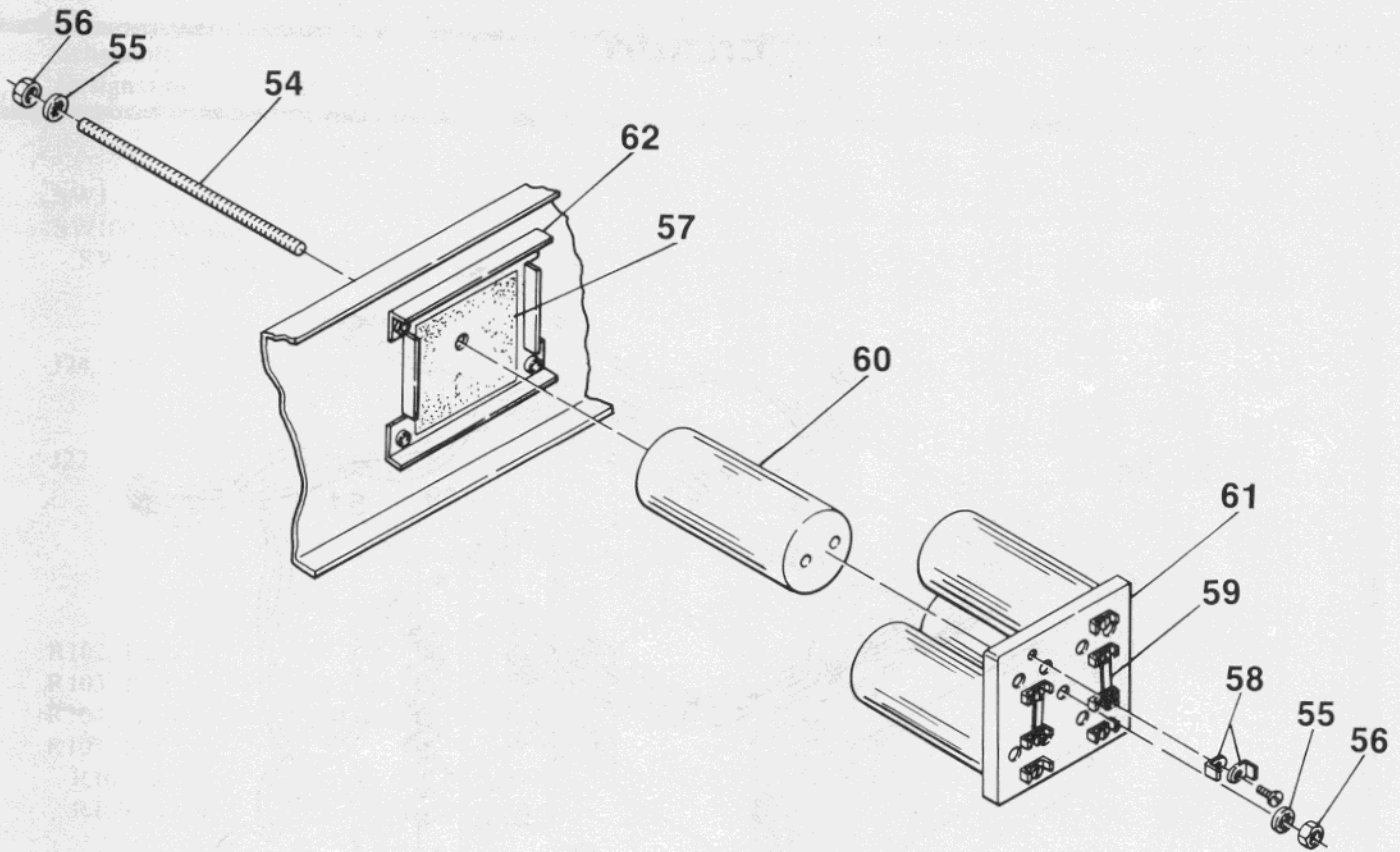


Fig. 6.33 Power Capacitor Assembly

Parts List: Power Capacitor Assembly

Index No.	Schematic Designation	Description	Crown Part No.	PSA-2 Qty.	SA2 Qty.	Other Information
25		Capacitor Assembly	M42167-3			
54		8-32x5.75 Rod	C 5492-1	1	1	
55		#8 Internal Star Lockwasher	C 1951-0	2	2	
56		8-32 Hex Nut	D 1986-5	2	2	
57		Polyfoam Capacitor Gasket	D 5133-0	2	2	
58		389 Solder Lug .218 Hole	D 2934-4	14	14	
59		1.187 Jumper Lug	D 5587-7	2	2	
60	C101, C201, C102, C202	10mF 90V Capacitor and Screws	C 4706-5	4	4	
61		Mounting Bracket - Lug Side	F 9842-0	1	1	
62		Mounting Bracket - Front Side	M20110-9	1	1	

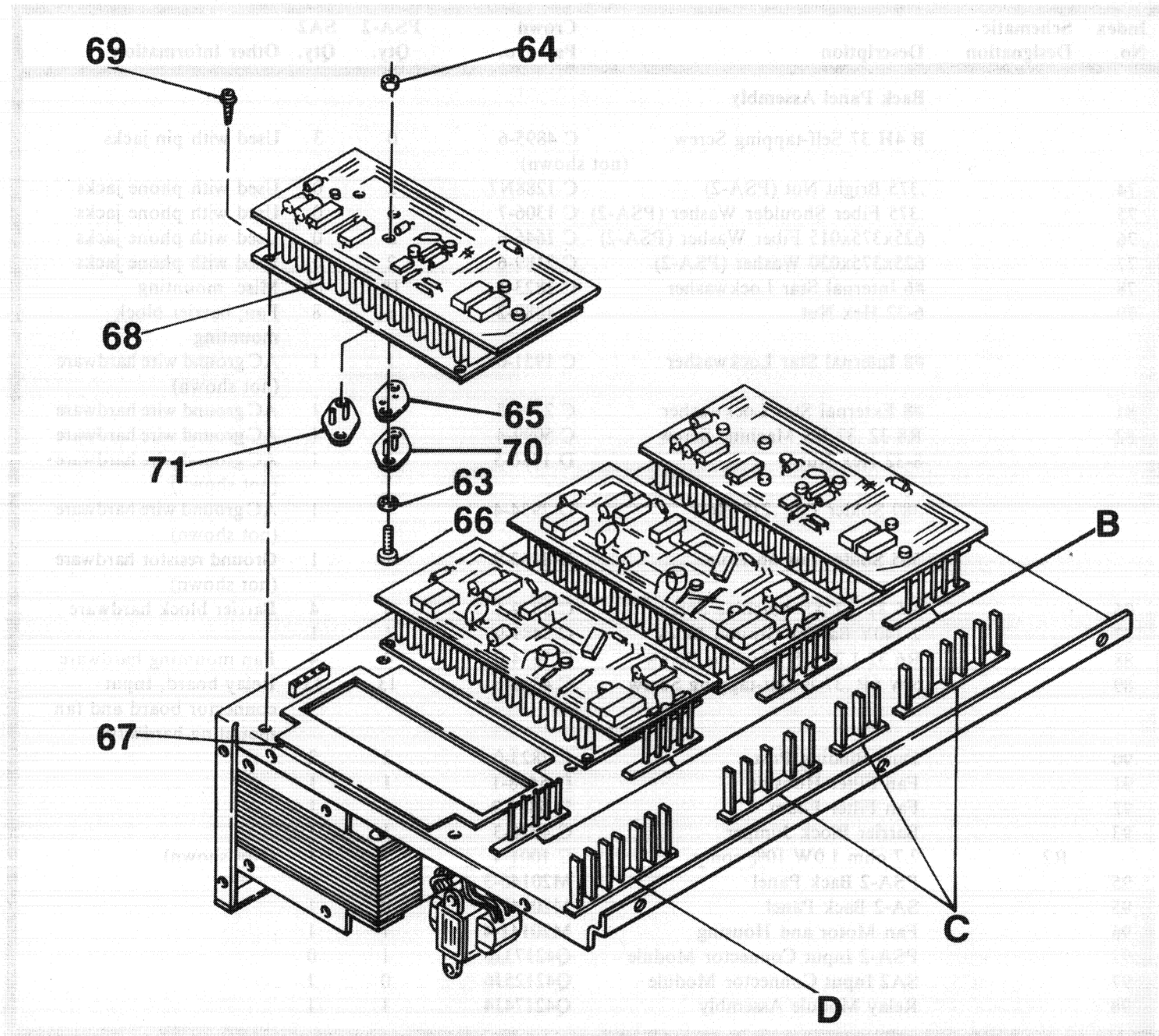


Fig. 6.34 NPN/PNP Output Assembly

Parts List: NPN/PNP Output Assembly

Index No.	Schematic Designation	Description	Crown Part No.	PSA-2 Qty.	SA2 Qty.	Other Information
NPN/PNP Output Assembly						
Note: Quantity pertains to all four assemblies combined.						
63		#6 Internal Star Lockwasher	C 1823-1	80	80	Output device washers
64		6 32 Hex Nut	C 1889-2	40	40	Output device nuts
65		TO3 Plastic Film Insulator	C 3180-4	4	4	
66		R6 32x.62 Machine Screw	C 3879-1	40	40	Output device screws
67		.5x.5x.022 Insulator	C 5064-8	8	8	
68		Cool Pack	M20142-2	4	4	
69		2u .25 Self-tapping Screw	C 5355-0	16	16	Assembly mounting screws
70		Driver Transistor	--	4	4	See board layout for CPN
71		Output Transistor	--	16	16	See board layout for CPN
72		S 6.32x.25 Machine Screw	C 5454-1	2	2	PNP assembly only; predriver mounting screw
B		Amp Mod 1 8 Pin Header	C 5003-6	4	4	
C		Amp Mod Snap-in Header	C 5006-9	3	3	
D		Amp Mod PC Chassis 7 Pin	C 3851-0	3	3	

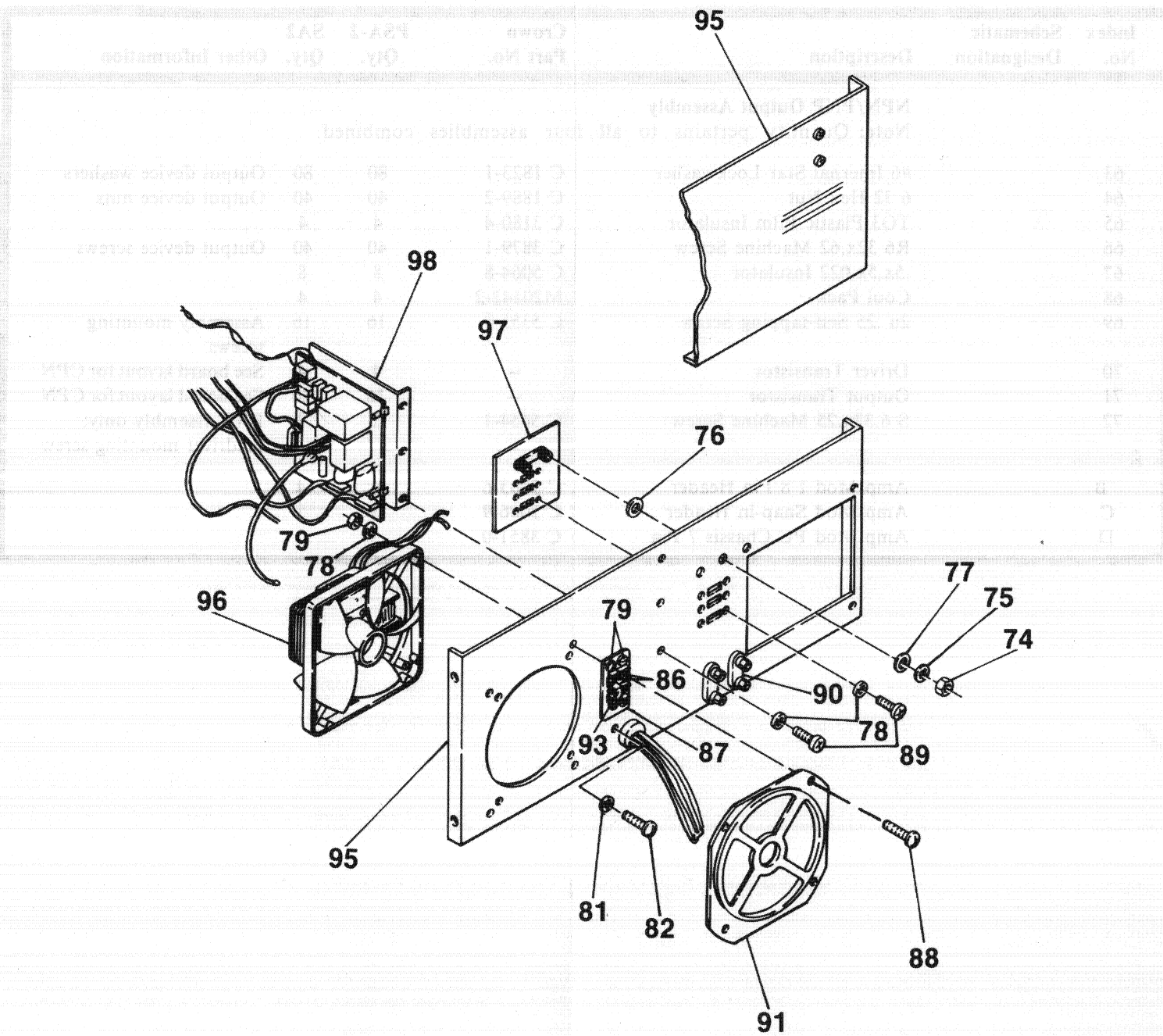


Fig. 6.35 Back Panel Assembly

Parts List: Back Panel Assembly

Index No.	Schematic Designation	Description	Crown Part No.	PSA-2 Qty.	SA2 Qty.	Other Information
Back Panel Assembly						
		B 4H 37 Self-tapping Screw	C 4895-6	0	3	Used with pin jacks
		(not shown)				
74		.375 Bright Nut (PSA-2)	C 1288N7	2	0	Used with phone jacks
75		.375 Fiber Shoulder Washer (PSA-2)	C 1306-7	2	0	Used with phone jacks
76		625x375x015 Fiber Washer (PSA-2)	C 1646-6	2	0	Used with phone jacks
77		625x375x030 Washer (PSA-2)	C 2189-6	2	0	Used with phone jacks
78		#6 Internal Star Lockwasher	C 1823-1	18	14	Misc. mounting
79		6-32 Hex Nut	C 1889-2	8	8	Fan; barrier block mounting
		#8 Internal Star Lockwasher	C 1951-0	1	1	AC ground wire hardware (not shown)
81		#8 External Star Lockwasher	C 2706-7	1	1	AC ground wire hardware
82		R8 32 .37 BS Machine Screw	C 5099-4	1	1	AC ground wire hardware
		8-32 Hex Nut	D 1986-5	1	1	AC ground wire hardware (not shown)
		389 Solder Lug .218 Hole	D 2934-4	1	1	AC ground wire hardware (not shown)
		505 Solder Lug #6 Hole	D 3163-9	1	1	Ground resistor hardware (not shown)
86		R6 32 .62 AS Machine Screw	C 3879-1	4	4	Barrier block hardware
87		2-140Y Barrier Ground Block	C 3489-9	1	1	
88		R6 32 1.25 AS Machine Screw	C 3634-0	4	4	Fan mounting hardware
89		SW 6P .37 B Self-tapping Screw	C 4329-6	13	13	Relay board, Input connector board and fan mounting hardware
90		Dual Binding Post	C 2823-0	2	2	
91		Fan Filter Housing	D 5458-1	1	1	
92		Fan Filter Foam	D 5459-9	1	1	
93		Barrier Block Jumper	C 4726-3	1	1	
R2		2.7 ohm 1.0W 10% comp	C 1001-4	1	1	(Not shown)
95		PSA-2 Back Panel	M20146-3	1	0	
95		SA-2 Back Panel	M20147-1	0	1	
96		Fan Motor and Housing	M20141-4	1	1	
97		PSA-2 Input Connector Module	Q42173J6	1	0	
97		SA2 Input Connector Module	Q42125J6	0	1	
98		Relay Module Assembly	Q42174J4	1	1	

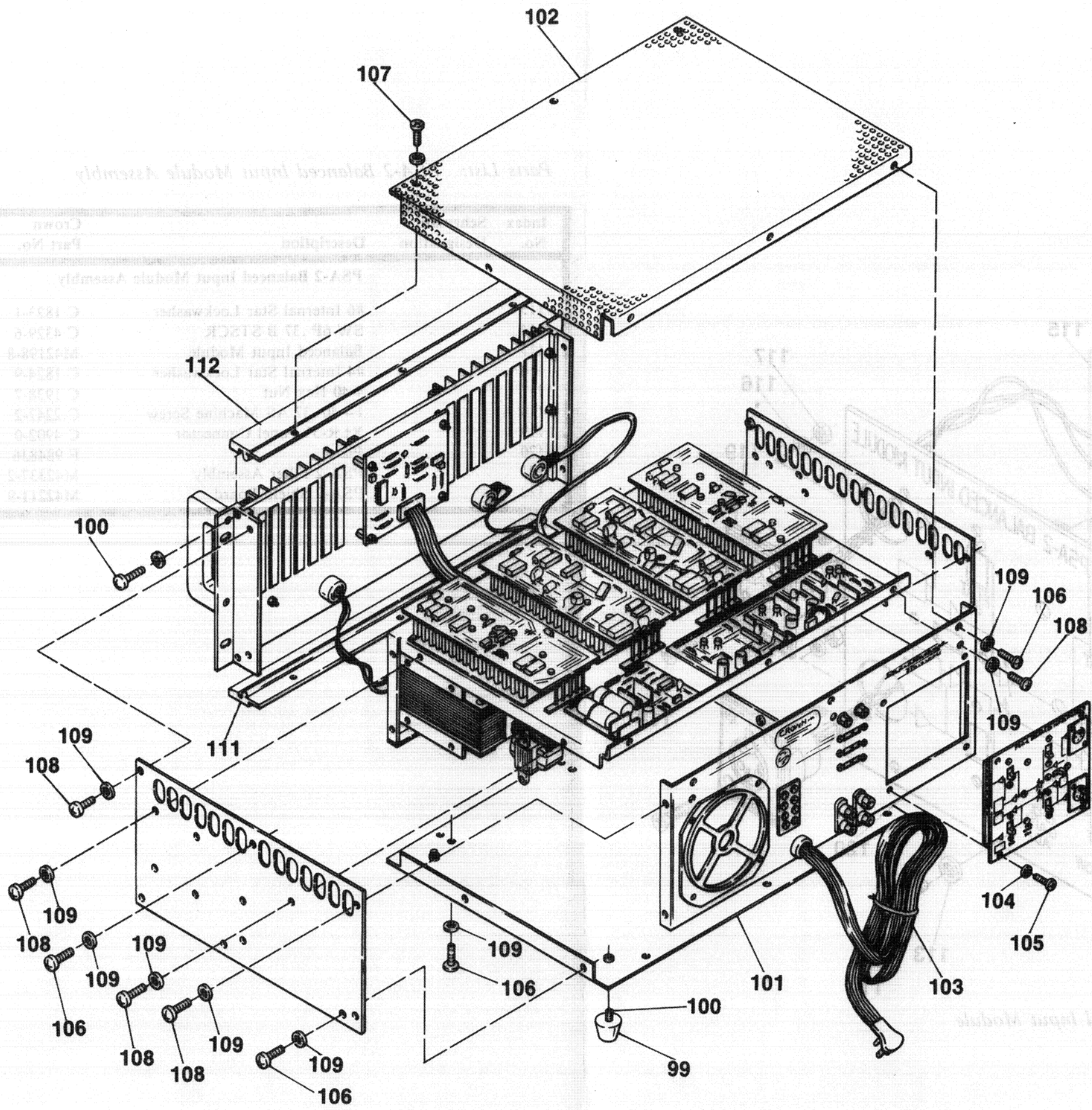


Fig. 6.36 Final Assembly

Parts List: Final Assembly

Index No.	Schematic Designation	Description	Crown Part No.	PSA-2 Qty.	SA2 Qty.	Other Information
		Final Assembly				
99		Feet M195 .75 High	C 2945-1	4	4	
100		SW 8P .75 B Self-tapping Screw	C 4330-4	8	8	Foot screws, rack angle mount screws
101		PSA-2 Bottom Cover	M20124-0	1	0	
101		SA2 Bottom Cover	M20116-6	0	1	
102		PSA-2 Top Cover	M20125-7	1	0	
102		SA2 Top Cover	M20117-4	0	1	
103		AC Power Cord	H42171-1	1	1	
104		#6 Internal Star Lockwashers	C 1823-1	4	0	Balanced input hardware
105		SW 6 P .37 B Self-tapping Screws	C 4329-6	4	0	Balanced input hardware
106		8 32x.37 #7 Truss Phillips	C 5297-4	15	15	Top cover; bottom cover screws
107		SW 6 P .37 B Self-tapping Screws	C 4329-6	6	6	Cover screws
108		R8 32 .37 BS Machine Screw	C 5099-4	15	15	Side position mounting screws
109		#8 Internal Star Lockwasher	C 1951-0	30	30	Side mounting washers
111		Bottom Rail Extrusion	D 4263-6	1	1	
112		Top Rail Extrusion	D 4264-4	1	1	

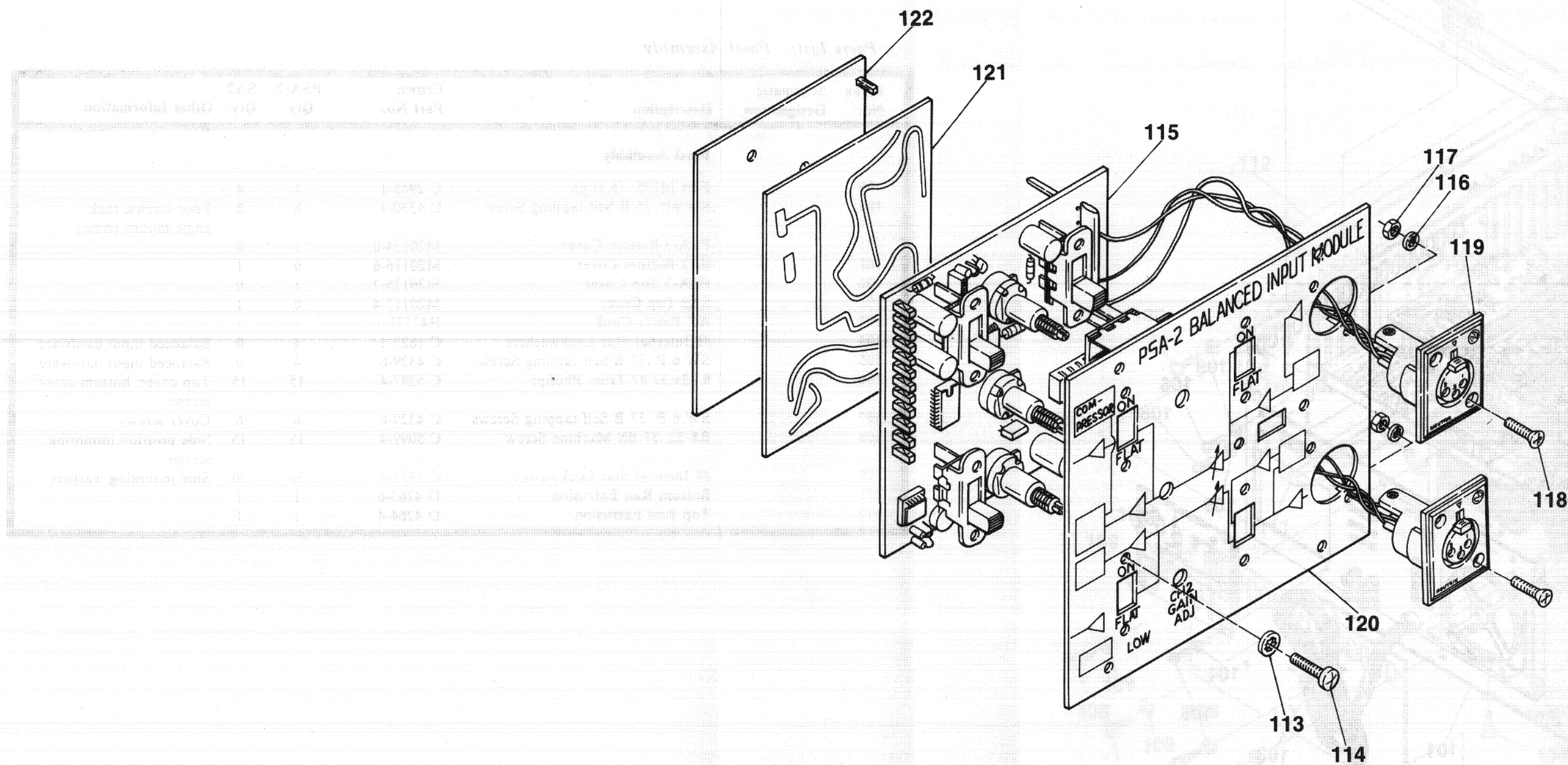


Fig. 6.37 PSA-2 Balanced Input Module Assembly