JBL Incorporated, 8500 Balboa Boulevard, P.O. Box 2200, Northridge, California 91329 U.S.A.

Technical Manual

JBL MPA1100

SPECIFICATIONS

	4 ohm/ch	8 ohm/ch	8 ohm/Br	4 ohm Br
Rated Power:	1100 W	720 W	2200 W	2600 W
Midband Power:	1200 W	800 W	2400 W	2800 W

Rated Power: is minimum continuous sine wave output per channel, with both channels driving their rated load over a power bandwidth of 20 Hz to 15 kHz, as the amplifier's output protective circuitry prevents full power output above 15 kHz. THD = 0.1%.

Midband Power: is maximum output power per channel @ 1 kHz, with both channels driven to the onset of clipping. THD > 1%.

Distortion: SMPTE-1M, less than 0.05%

Frequency Response: 20 Hz to 20 kHz, ± 0.1 dB
8 Hz to 100 kHz, +0/-3 dB

Damping Factor: Greater than 200

Dynamic Headroom: 3 dB at 4 ohms

Noise: 100 dB below rated output (20 Hz to 20 kHz)

Sensitivity: 1 Vrms for rated power (8 ohms)

Voltage Gain: 80 (38 dB)

Input Impedance: Line: 10 kilohms unbalanced, 20 kilohms balanced

Controls: Front: AC switch, Ch. 1 & Ch. 2 Gain (2 dB detents)
Rear: Mode select switch (Bridge, Parallel, Stereo)

Indicators: Power, Signal Present (2), -20 dB (2), -10 dB (2), Clip (2), Protect (2)

Connectors: Input: Barrier Strip & XLR connectors
Output: 5-Way Binding Posts & Neutrik Speakons

Cooling: Continuously variable speed fan, rear-to-front air flow

Amplifier Protection: Full short circuit, open circuit, ultrasonic, and RF protection; thermal limiting/muting; stable into reactive or mismatched loads

Load Protection: On/Off muting, clip limiting, DC-fault load-grounding relay with internal fault fuses

Output Circuit Type: Complementary 3-step linear high efficiency outputs

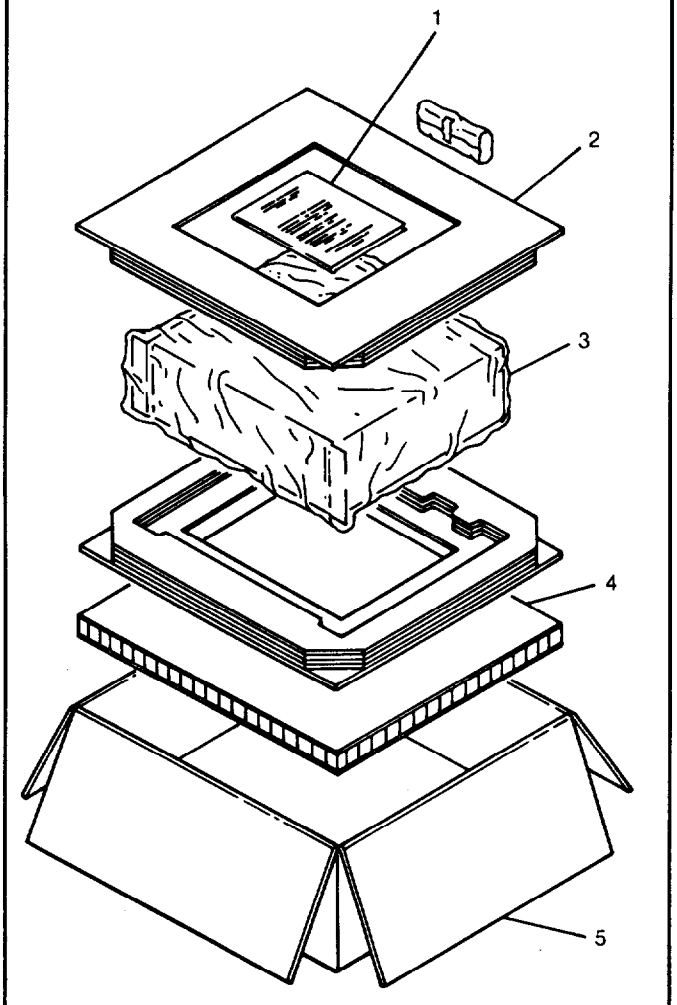
Power Requirements: 100, 120, 220-240 VAC, 50-60 Hz

Power Consumption: Please refer to chart in MPA Series Owner's Manual

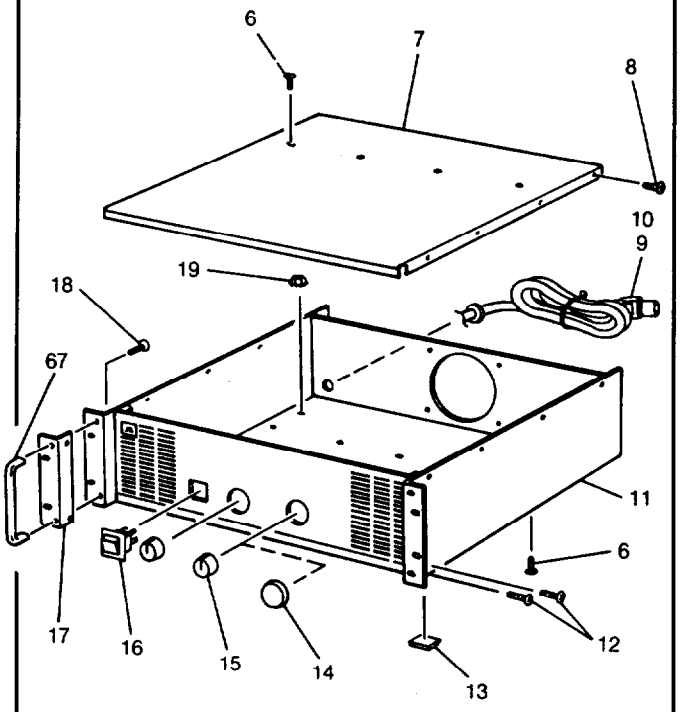
Dimensions: 48.3 cm (19") rack mounting
45.5 cm (17.9") deep (rear support ears)
13.3 cm (5.25") high (3 spaces)

Weight: 29 kg. (64 lbs.) net, 31.8 kg. (70 lbs.) shipping

PACKAGE



CABINET COMPONENTS



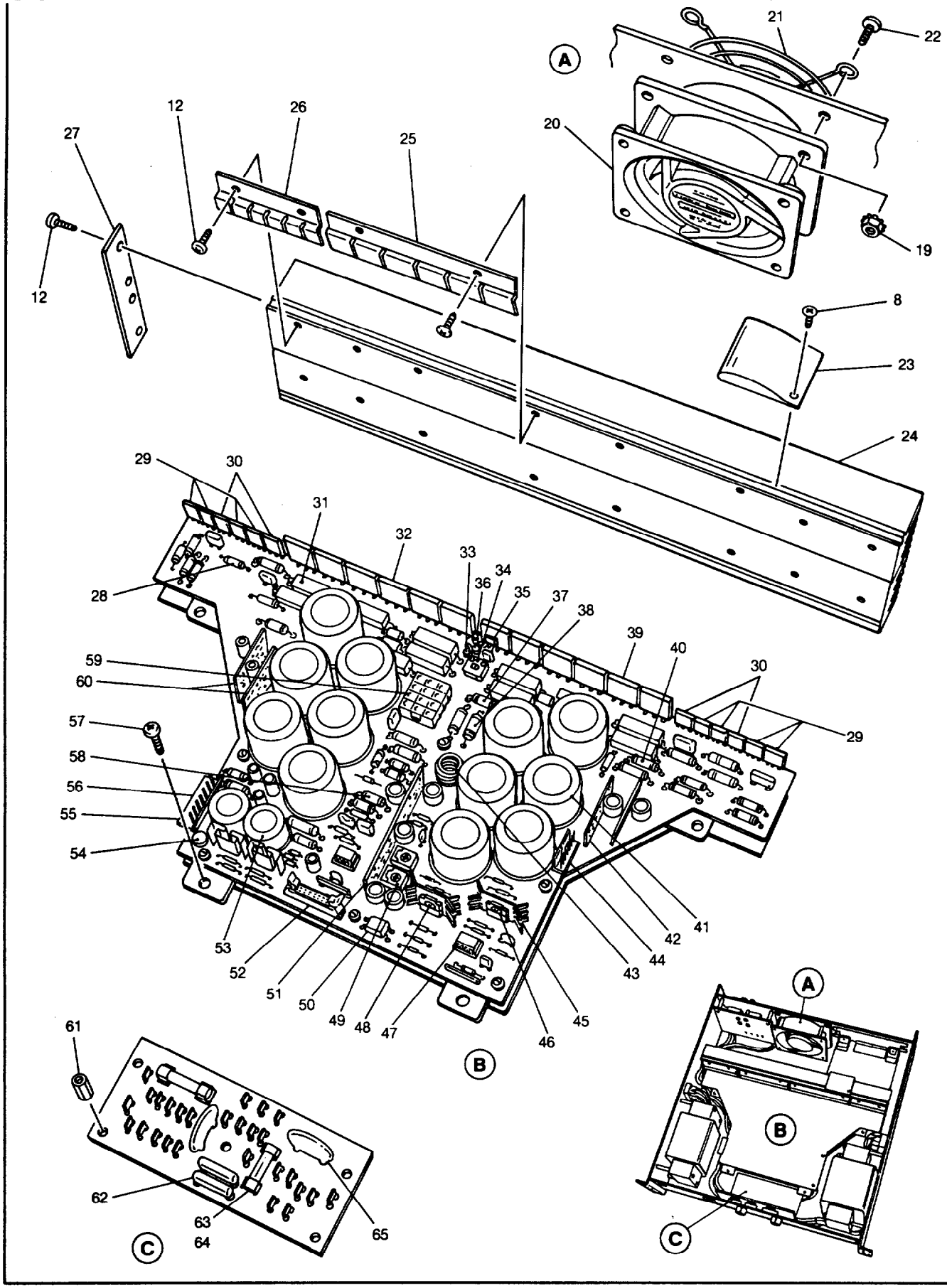
COMPONENT PARTS LIST

Item	Part No.	Qty.	Description	Ref. Des.
			COMPLETE ASSEMBLIES	
B	FG-004202-00	2	Main PCB Ass'y, MPA 1100	
C	WP-004006-00	1	AC PCB Ass'y, MPA 3 spc	
D	WP-004008-00	1	Output PCB Ass'y, MPA 3 spc	
E	WP-004005-01	1	Std. Input PCB Ass'y, MPA Series	
G	WP-002753-00	1	Display PCB Ass'y, MPA Series	

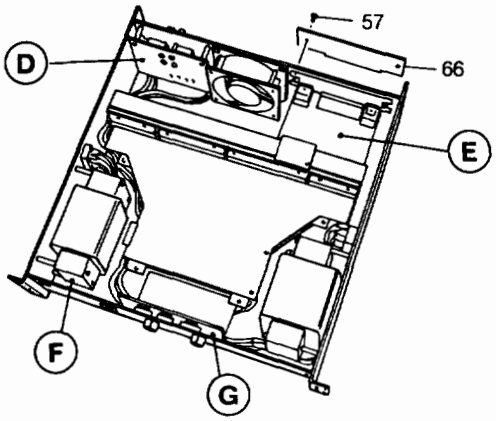
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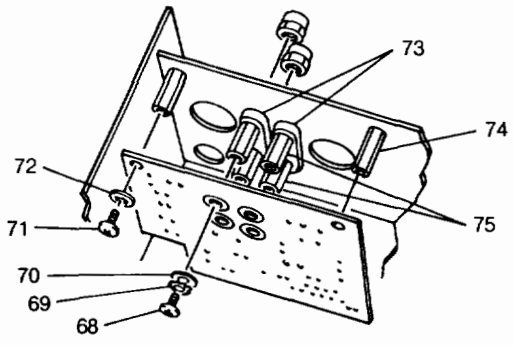
Item	Part No.	Qty.	Description	Ref. Des.
			INDIVIDUAL ASSEMBLIES	
0	MPA-MPA SVC	1	MPA Service Manual	
1	TD-007500-00	1	Owner's Manual, MPA Series	
2	PM-004003-00	2	Shipping Insert	
3	PM-004000-00	1	Shipping Bag	
4	PM-004001-00	1	Shipping Pad	
5	PM-007500-00	1	Shipping Carton, MPA 3 spc	
6	SC-082051-PL	10	Scrw, Tap, PHP, 8 x 5/16", Blk	
7	CH-002750-00	1	Top Cover	
8	SC-083061-PF	9	Scrw, #8 x 3/8", FHP, Blk	
9	WC-003053-00	1	AC Cord (100/120V)	
10	WC003069-00	1	AC Cord (230V)	
11	CH-007500-00	1	Chassis, MPA 3 spc	
12	SC-081101-SP	32	Scrw, 8-18 x 5/8", P/P, Blk	
13	PL-000000-AF	4	Adhesive Foot	
14	PL-002753-00	2	Security Cover	
15	PL-002752-00	2	Knob, MPA Series	
16	SW-002750-00	1	Power Switch	
17	CH-007503-00	2	Rack Ear, MPA 3 spc	
18	SC-000001-00	4	Scrw, PHP, 10-32 x 3/4"	
19	NW-080500-KP	11	8-32 Keps Nut	
20	MS-000049-MP	1	24V DC Fan, MPA Series	
21	MS-000072-00	1	Fan Guard, MPA 3 spc	
22	SC-080121-PP	4	Scrw, 8-32 x 3/4", PHP, Blk	
23	PL-000006-00	1	Insulator, Ribbon Cable, MPA 3 spc	
24	CH-400008-00	2	Heatsink, MPA 3spc	
25	CH-400003-00	4	Clamp, TO-220	
26	CH-000624-AX	4	Clamp, T03, 6 Finger	
27	CH-400007-00	2	Heatsink Bracket	
28	RE-.27005-EM	8	Res., MF, 2.7, 5%, 2W	R903, R910, R958, R961
29	QD-000031-QD	16	FET, NCHAN, TO220, 60V, 50A	Q901, Q902, Q903, Q904, Q917, Q918, Q919, Q920
30	QD-000014-QD	8	Diode, TO220, 100V, 15A	D901, D902, D905, D906
31	RE-.02205-FW	24	Res., WW, 0.22, 10%, 3W	R924, R925, R926, R928, R929, R930, R949, R950, R951, R952, R953, R954
32	QD-001302-PN	12	Xstr, PNP, TO-3P, 200V, 15A	Q905, Q906, Q907, Q908, Q909, Q910
33	RE-000050-NR	2	Thermistor, NTC, 50 ohm	R931
34	PT-110000-AT	2	Var. Res., 100, 20%, 0.15W	VR901
35	RE-000006-VP	2	Res., PTC, 60C, 0.1K max cold	R1007
36	QD-004004-VP	4	Diode, D041, 400V, 1A	D903, D904
37	RE-.39005-EM	2	Res., MOFP, 3.9, 5%, 2W	R932
38	RE-001005-EM	8	Res., MOFP, 10, 5%, 2W	R933, R934, R935, R936
39	QD-003281-NP	12	Xstr, NPN, TO-3P, 200V, 15A	Q911, Q912, Q913, Q914, Q915, Q916
40	RE-130005-EM	6	Res., MOFP, 3K, 5%, 2W	R956, R962, R976
41	CA-915050-AE	24	Cap, EL, 15000μF 50V	C929, C930, C931, C932, C933, C934, C935, C936, C937, C938, C939, C940
42	IC-000009-00	4	SMT Module, Neg. Step Driver	U908, 909
43	XF-200014-CR	1	Inductor, 2μH	L901
44	CO-000074-00	2	Header, 8p	J905
45	MS-000054-MS	4	Heatsink, TO-220 (high power)	
46	QD-000019-QD	2	Xstr, PNP TO-220, 230V, 1A	Q934
47	IC-005532-0P	4	IC, Dual OpAmp, NE5532	U901, U902
48	QD-000018-QD	2	Xstr, NPN TO-220, 230V, 1A	Q933
49	PT-250000-AT	4	Var. Res., 5K, 20%, 0.15W	VR902, VR903
50	QD-000009-VT	2	Vactrol VTL5C4	U903
51	IC-000010-00	2	SMT Module, Housekeeping	U910
52	CO-000055-CO	2	14p Header/Locking Std.	J903
53	CA-822035-AE	4	Cap, EL, 2200μF 35V	C945, C946
54	QD-1.5200-BX	2	Bridge Rectifier, 200V, 1.5A	B901
55	CO-000046-CO	2	.156 Header, 5 pin	J904
56	CO-000045-CO	2	.156 Header, 4 pin	J902
57	SC-080051-PS	8	Scrw, 8-32 x 5/16", PHP, SEMS, Blk	
58	RE-210005-EM	6	Res., MF, 10K, 5%, 2W	R988, R994, R1000
59	CO-000041-CO	2	12p Header Ass'y, PC Mt	J901
60	IC-000008-00	4	SMT Module, Pos. Step Driver	U906, 907
61	HW-060000-HW	5	Nylon Standoff, 6-32 x 9/16"	
62	CA-368250-AS	2	Cap, Surge, 0.068μF 250VAC	C501, C601
63	MS-000050-MS	2	Fuse, 20A, 250V (100 & 120V models only)	F501, F601
64	MS-120250-FU	2	Fuse, 12A, 250V (230V models only)	F501, F601
65	RE-000170-NR	2	Thermistor, NTC, 30A Cur. Lim (100 & 120V models only)	R501, R601
65	RE-000160-NR	2	Thermistor, NTC, 15A Cur. Lim (230V models only)	R501, R601
66	CH-400016-00	1	Blank Upper Input Panel	
67	CH-007502-00	2	Handle, MPA 3spc	
68	SC-100000-SC	4	Scrw, 10-32 x 1/4", PPH, Blk	
69	NW-100710-NW	4	#10 Ext. Lockwasher	
70	NW-100700-NW	4	#10 Flat Washer	
71	SC-060042-PP	5	Scrw, 6-32 x 1/4", PHP, SEMS, Blk	
72	NW-060010-IT	2	#6 Int. Lockwasher	
73	CO-000001-DB	2	Dual 5-Way Binding Post	
74	HW-060150-SO	2	Standoff, 6-32 x 29/32"	
75	HW-100001-HW	4	Standoff, 10-32 x 0.7"	
76	MS-000050-MS	2	Fuse, Spkr Prot., 20A, 250V	F701, F801
77	CO-000036-CO	3	Neutrik Speakon, 4p, PC mt	J74, J706, J806
78	SW-000029-SW	2	Relay, SPDT, 24 VDC	RY701, RY801
79	CA-722025-BE	1	Cap, EL, 220μF 25V	C71
80	QD-002763-TU	1	Xstr, PNP, TO-220, 150V, 8A	Q70
81	MS-000220-HS	1	Heatsink, TO-220	
82	RE-012005-EM	1	Res., MOFP, 120, 5%, 2W	R76
83	CA-647010-BN	1	Cap, EL, 47μF 10V	C70
84	CO-641119-AH	1	Header, 8p, .156"	J73
85	CO-000037-CO	2	XLR Recept., Horiz., PC mt	J301, J401
86	NW-04041-NW	4	#4 Flat Washer	
87	SC-030000-SC	4	Scrw, 3mm x 4mm, PHP, Blk	
88	SW-000041-SW	1	DPDT Toggle Sw, Rt Angle, PC mt	SW31
89	CO-000035-CO	1	Barrier Strip, Rt. Angle, PC mt	J31
90	CO-000057-CO	1	26p Header/Locking Std.	J32
91	CO-000049-CO	1	5p Header, 0.1 ctr	J33
92	QD-250400-BX	6	Bridge Rectifier, 400V, 25A	
93	XF-004000-00	2	Xfmr, MPA1100	
94	SC-100061-PS	8	Scrw, 10-32 x 3/8", PHP, SEMS, Blk	
95	NW-100711-NW	8	#10 Flat Washer, Blk	
96	WC-000015-WC	2	14p Ribbon Cable Ass'y	

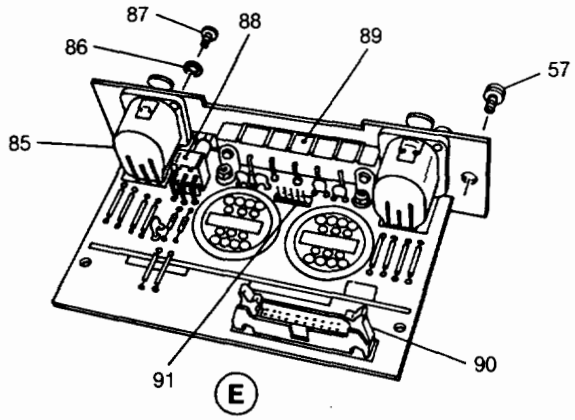
COMPONENT EXPLODED VIEW

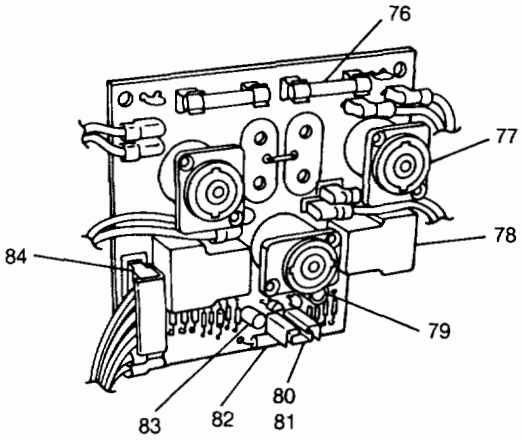


CIRCUIT BOARDS

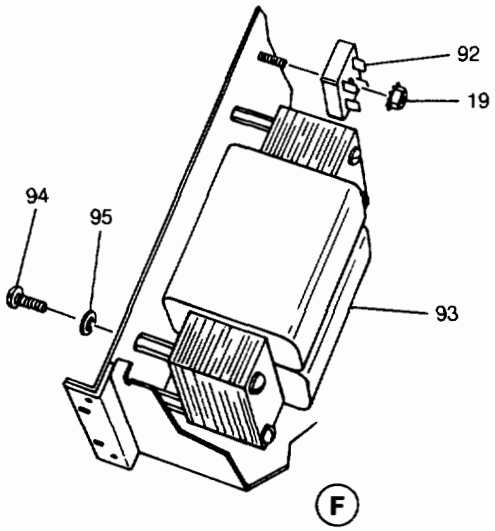


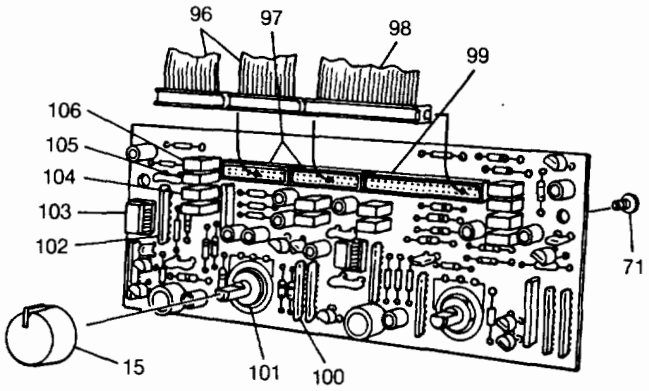






Front and Rear View





COMPONENT PARTS LIST

Item	Part No.	Qty.	Description	Ref. Des.
97	CO-000044-CO	2	Box Header, 14p	J101, J201
98	WC-000026-WC	1	26p Ribbon Cable Ass'y	
99	CO-000043-CO	1	Box Header, 26p	J1
100	RN-110002-BM	4	Res. Ntwk., 8p, SIP, 1K	RN103, RN104, RN203, RN204
101	PT-310000-CR	2	Potentiometer, 10K, 0.2W	VR101, VR201
102	RN-210002-BM	4	Res. Ntwk., 8p, SIP, 10K	RN101, RN102, RN201, RN202

Item	Part No.	Qty.	Description	Ref. Des.
103	IC-000012-00	2	IC, Dual OpAmp, OP275	U101, U201
104	QD-002751-00	6	LED, Green, .125" x .245", Capped	LD102.1, LD102.2, LD103.2, LD202.1, LD202.2, LD203.2
105	QD-002752-00	2	LED, Yellow, .125" x .245", Capped	LD101.2, LD201.2
106	QD-002750-00	4	LED, Red, .125" x .245", Capped	LD101.1, LD103.1, LD201.1, LD203.1