

SERVICE MANUAL

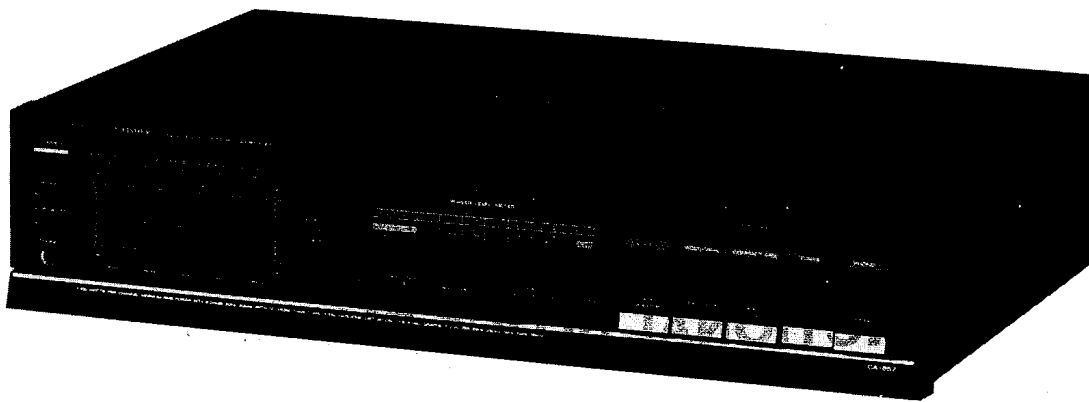


FISHER®

INTEGRATED STEREO AMPLIFIER

CA-857

(U.S.A.)



132 311 22

SPECIFICATIONS

POWER AMPLIFIER SECTION

Minimum RMS sine wave power per channel within stated bandwidth at no more than stated distortion and with 8-ohm load	100 Watts
Power Bandwidth	20 Hz – 20 kHz
Total Harmonic Distortion	0.09 %
I.M. Distortion	0.09 %
Speaker Damping	> 20

PREAMPLIFIER SECTION

Frequency Response	
Phono (RIAA)	±1 dB
Video/Aux (20 Hz – 20 kHz)	+1 dB
Input Sensitivity and Impedance	
Phono	2.5 mV/50 kΩ
Tape Monitor	150 mV/50 kΩ
Tuner/Video/Aux/CD	150 mV/50 kΩ
Phono Max. Input Capability	150 mV

Graphic Equalizer

63 Hz	±10 dB
250 Hz	±10 dB
1 kHz	±10 dB
4 kHz	±10 dB
16 kHz	±10 dB

Loudness Contour (100 Hz/10 kHz) +8 dB/+4 dB
Hum & Noise (IHF Short Circuit, A Network)

Phono	65 dB
Tape Monitor	85 dB
Tuner/Video/Aux/CD	85 dB

GENERAL

Power Requirements (50/60 Hz)	120 VAC ±10 %
Power Consumption	470 Watts
AC Outlets	1
Dimensions (W x H x D)	17.33" x 4.25" x 12.4"
Weight (approx.)	16.5 lbs.

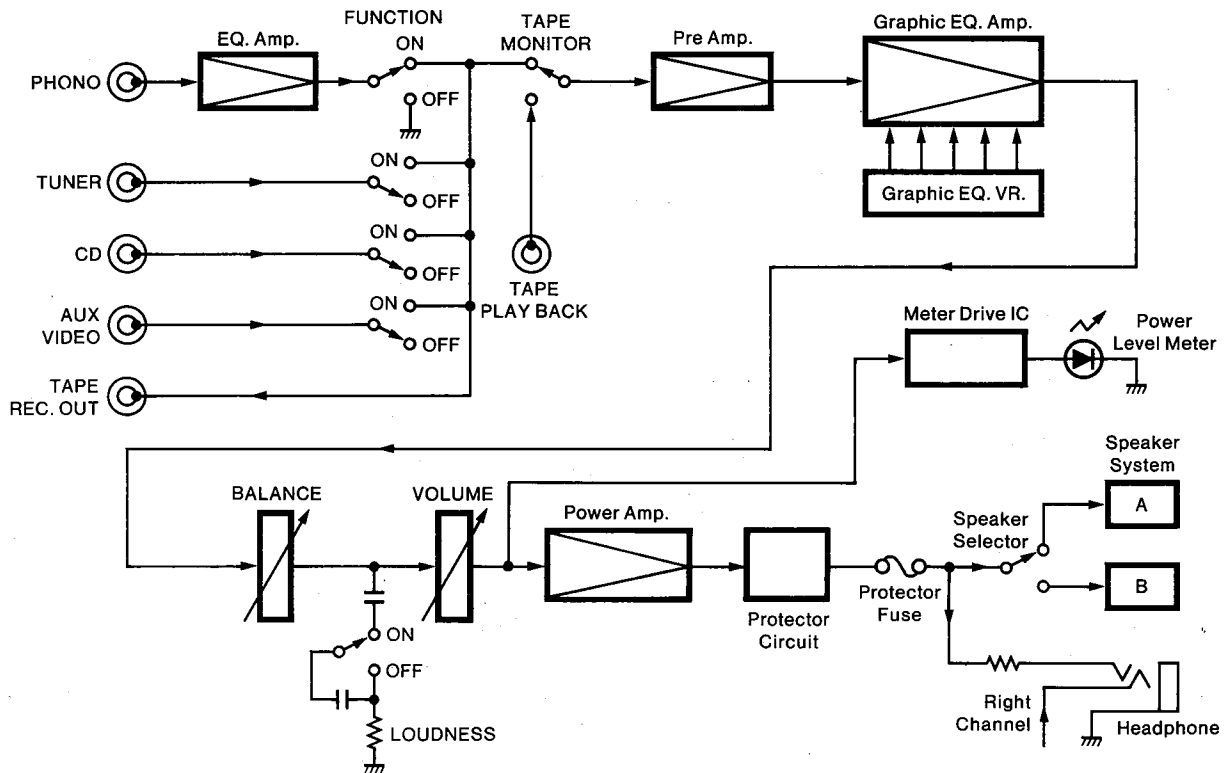
— Specifications are subject to change without notice.—

WM-17782

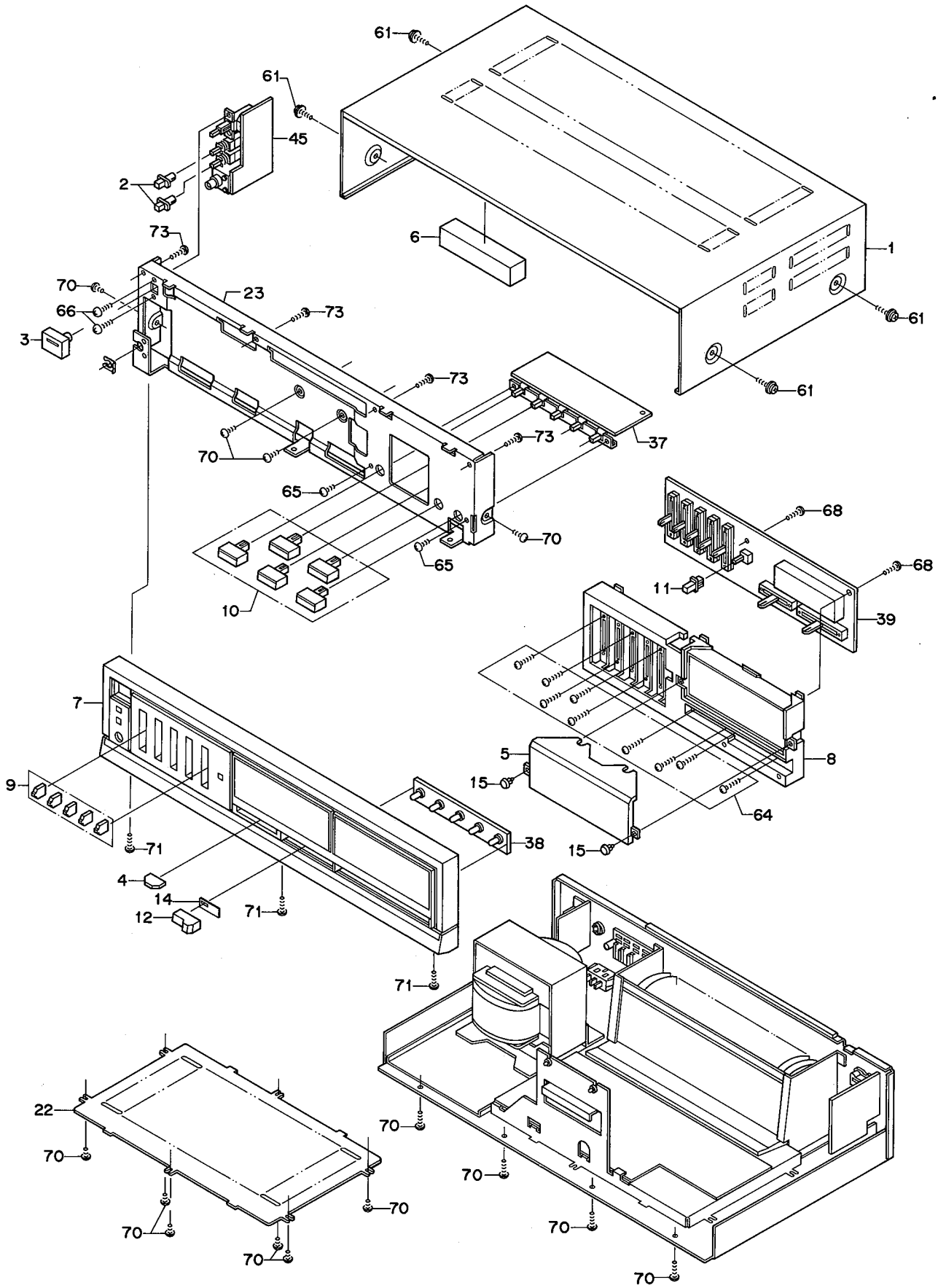
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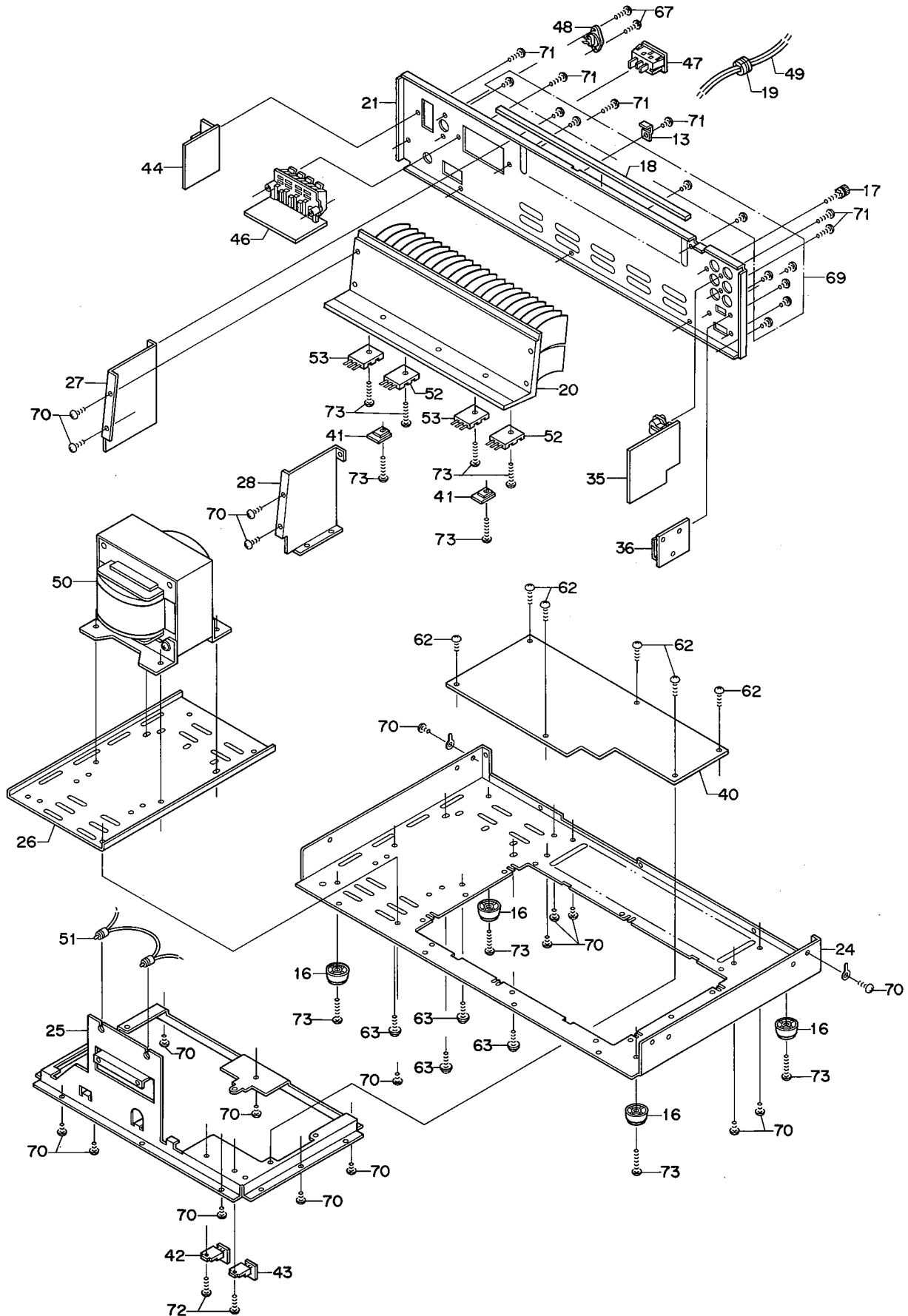
FUNCTIONAL BLOCK DIAGRAM



CABINET & CHASSIS EXPLODED VIEW (1)



CABINET & CHASSIS EXPLODED VIEW (2)



CABINET & CHASSIS PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
PACKING PARTS LIST				25	141-2-3129-06500	Sub Chassis	1
	131-6-3009-36332	Pad (Sleeve)	1	26	141-2-3159-05200	Metal Reinforce	1
	131-6-3069-16350	Patching Sheet	1	27	141-2-3889-05400	Bracket Mount Heat Sink (Left)	1
	141-6-1469-04000	Case Styrofoam (Left)	1	28	141-2-3889-05401	Bracket Mount Heat Sink (Right)	1
	141-6-1469-04001	Case Styrofoam (Right)	1				
	141-6-2519-22290	Sheet Polyethylene	1				
ACCESSORIES PARTS LIST				ELECTRICAL PARTS LIST			
	4-2442-00030	Antenna FM	1	35	141-0-1939-18360	Phono EQ. P.C.B. Assy	1
	131-2-7103-40808	Label (100W)	1	36	141-0-1939-18370	Input P.C.B. Assy	1
	131-6-2719-10401	Bag Fan	1	37	141-0-1939-18380	Function P.C.B. Assy	1
	131-6-4159-31000	Note	1	38	141-0-1939-18390	Function LED P.C.B. Assy	1
	131-6-4159-34100	Notes	1	39	141-0-1939-18352	Pre Amp. P.C.B. Assy	1
	131-6-4159-40600	Catalog (VTR)	1	40	141-0-1939-18402	Main P.C.B. Assy	1
	131-6-4319-10802	Service Station List	1	41	141-0-1939-18410	Bias P.C.B. Assy	2
	131-6-4519-14400	Warranty Card	1	42	141-0-1939-18420	Transistor + P.C.B. Assy	1
	131-6-4939-00200	Customer Card	1	43	141-0-1939-18430	Transistor - P.C.B. Assy	1
	141-2-1729-00500	Holder Antenna	1	44	141-0-1939-18440	Terminal P.C.B. Assy	1
	141-6-4419-23822	Label Bar Code	1	45	141-0-1939-18450	Power Switch P.C.B. Assy	1
	142-6-4119-33120	Explanatory Booklet	1	46	141-0-1939-18460	Speaker Out P.C.B. Assy	1
				47	△ 4-2352-01320	AC Socket W/polarity (AC Outlet)	1
				48	△ 4-2352-01550	DIN Socket 2P (Power Supply)	1
				49	△ 4-2432-00363	Power Cord	1
				50	△ 4-2512-24700	Power Trans	1
				51	4-6129-70660	Lamp	1
				52	✓ 4-2039-72111	Transistor, 2SC 3280 [Q1, Q2]	2
				or	4-2039-72772	Transistor, 2SD 1717 [Q1, Q2]	2
				53	✓ 4-2039-72121	Transistor, 2SA 1301 [Q3, Q4]	2
				or	4-2039-72762	Transistor, 2SB 1162 [Q3, Q4]	2
CABINET & CHASSIS PARTS LIST				SCREW PARTS LIST			
	4-2379-21520	Terminal Lug	2	61	141-2-4219-38400	Screw, Bind Hd. Tapping-B, +M4.0x8 Sems	4
	4-2379-21522	Terminal Lug	1	62	131-2-4201-25201	Screw, Brazier Hd. Tapping-B, +M3.0x8 Sems	6
	131-2-7103-26100	Label	1	63	141-2-4219-43300	Screw, Bind Hd. Tapping-C, +M4.0x10 Sems	4
	131-2-7103-46700	Label (UL Caution)	1	64	101-3-1302-00418	Screw, Pan Hd., +M2.0x4	9
	141-2-4729-04200	Lug	1	65	101-3-1303-00611	Screw, Pan Hd., +M3.0x6	2
1	131-2-1410-35400	Cover	1	66	131-3-1303-00611	Screw, Pan Hd. C SW, +M3.0x6	2
2	131-2-1601-69601	Knob (Speaker Selector)	2	67	143-3-1303-00818	Screw, Pan Hd. Tapping-B, +M3.0x8	2
3	131-2-1601-93300	Knob (Power)	1	68	143-3-1902-60811	Screw, Brazier Hd. Tapping-B, +M2.6x8	2
4	131-2-1601-93400	Knob (Balance)	1	69	143-3-1903-00618	Screw, Brazier Hd. Tapping-B, +M3.0x6	10
5	131-2-3608-16404	Filter	1	70	143-3-1903-00611	Screw, Brazier Hd. Tapping-B, +M3.0x6	33
6	131-2-5205-35100	Cushion	1	71	143-3-1903-00818	Screw, Brazier Hd. Tapping-B, +M3.0x8	9
7	141-0-1129-25000	Cabinet Front Assy	1	72	143-3-1903-00811	Screw, Brazier Hd. Tapping-B, +M3.0x8	2
	131-2-6113-53300	Shelter	1	73	143-3-1903-01011	Screw, Brazier Hd. Tapping-B, +M3.0x10	14
	141-2-1129-52000	Cabinet Front	1				
	141-2-1319-52300	Window	1				
	141-2-1449-61251	Plate Front	1				
	141-2-1449-65007	Plate Decorate	1				
	141-2-2449-58400	Shelter Slide Volume	1				
8	141-0-3519-26401	Mount P.C.B. Assy	1				
	141-2-1449-65107	Screen LED	1				
	141-2-3519-83100	Mount P.C.B.	1				
9	141-2-1659-35901	Knob Slide (EQ.)	5	R601	402 013 8903	SOLID 3.9M K- 1/2W	1
10	141-2-1659-63400	Knob Push (Function)	5	R602	402 013 8903	SOLID 3.9M K- 1/2W	1
11	141-2-1659-63500	Knob Push (Loudness)	1				
12	141-2-1659-63601	Knob Slide (Volume)	1				
13	141-2-3159-03300	Bracket Cover	1				
14	141-2-4469-55500	Cushion	1				
15	131-2-4221-00600	Rivet	2				
16	131-2-1801-14100	Leg	4				
17	131-2-4201-17800	Screw Ground	1				
18	131-2-5205-15800	Cushion	1				
19	131-2-6111-11300	Bushing (3p-4)	1				
20	131-2-6201-37900	Heat Sink	1				
21	141-2-1219-39402	Panel Rear	1				
22	141-2-1259-10700	Bottom Cover	1				
23	141-2-2149-30200	Panel Front	1				
24	141-2-3119-30100	Chassis	1				

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

POWER AMPLIFIER ADJUSTMENTS

BEFORE ADJUSTMENT

Unplug the AC power cord and set the front panel controls as follows:

- Power switch to OFF position
- Set the SPEAKERS switch to the OFF position.
- Turn the MASTER VOLUME control to the position marked 0 (minimum).
- IDLING CURRENT ADJUSTMENT VR401/VR402 (on the Main P.C.Board) setting to mechanical center position.
- Connect the AC power cord and Power Switch to the ON position.

IDLING CURRENT ADJUSTMENT

This adjustment is very sensitive to changes in ambient temperature. Allow set to operate for 5 minutes before attempting this adjustment.

LEFT AMPLIFIER

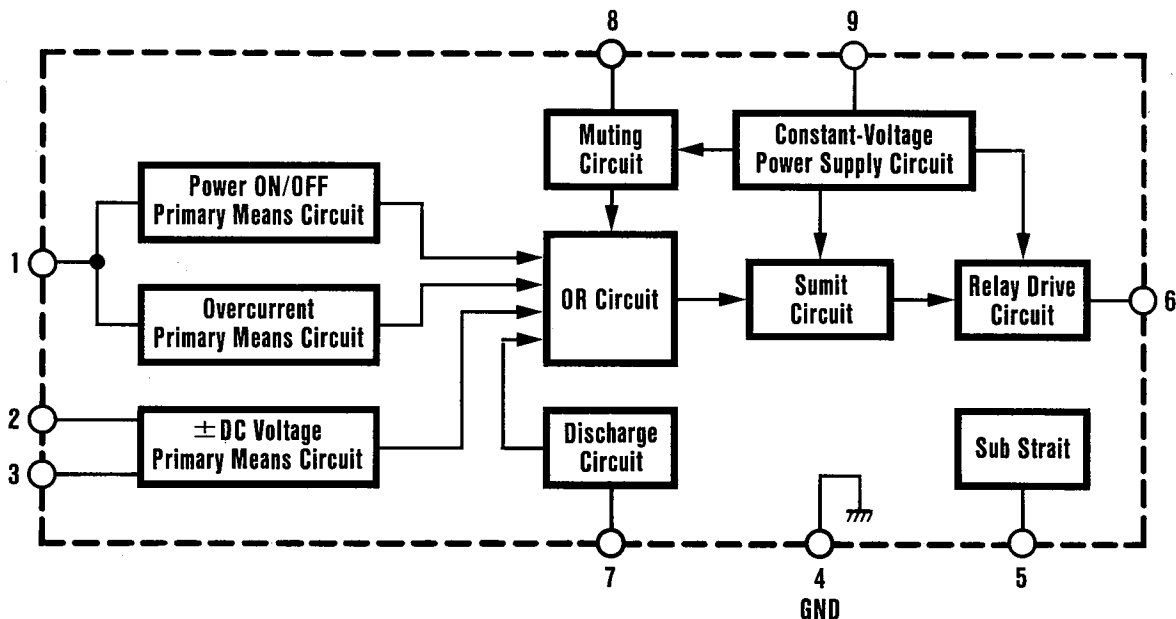
- 1) Connect the DC Voltmeter between Pins T413 and T415 on the Main P.C.Board.
- 2) Adjust the VR401 for an indication of 7mV on the DC Voltmeter.

RIGHT AMPLIFIER

- 1) Connect the DC Voltmeter between Pins T414 and T416 on the Main P.C.Board.
- 2) Adjust the VR402 for an indication of 7mV on the DC Voltmeter.

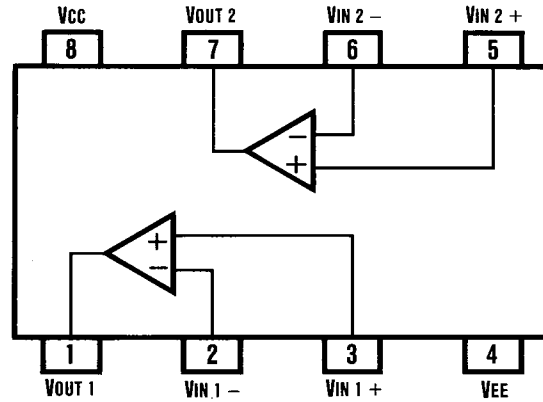
INTEGRATED CIRCUIT BLOCK DIAGRAM

RELAY DRIVING IC TA 7317 P

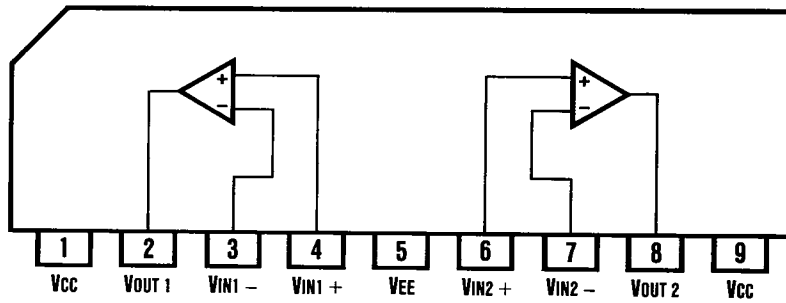


INTEGRATED CIRCUIT BLOCK DIAGRAM (Continued)

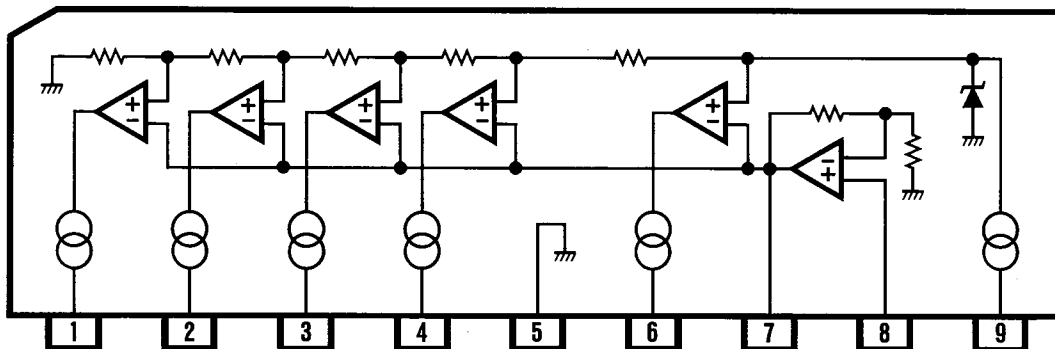
PHONO EQUALIZER AMP IC LA 6458 DS



PRE AMPLIFIER IC LA 6458 S



LED METER DRIVE AMP IC LB 1403 N



P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
PHONO EQ. P.C.B. ASSY				CN201	4-2369-76010	Plug 5P	1
35	141-0-1939-18360	Phono EQ. P.C.B. Assy	1	CAPACITORS			
	4-2262-30000	Phono EQ. P.C.B.	1	C201	CD1-0-5500-0001V	Electrolytic 1 μ F 50V	1
	4-2352-01780	Pin Jack 6P (Phono, CD, Video/Aux)	1	C202	CD1-0-5500-0001V	Electrolytic 1 μ F 50V	1
CAPACITORS				C203	CD1-0-5500-0001V	Electrolytic 1 μ F 50V	1
C101	CD4-7-5250-0001V	Electrolytic 4.7 μ F 25V	1	C204	CD1-0-5500-0001V	Electrolytic 1 μ F 50V	1
C102	CD4-7-5250-0001V	Electrolytic 4.7 μ F 25V	1	RESISTORS			
C103	CC2-2-1500-KD00C	Ceramic 220pF 50V \pm 10%	1	R201	401 024 7707	CARBON 100K JA 1/6W	1
C104	CC2-2-1500-KD00C	Ceramic 220pF 50V \pm 10%	1	R202	401 024 7707	CARBON 100K JA 1/6W	1
C105	CC1-0-1500-KD00C	Ceramic 100pF 50V \pm 10%	1	R203	401 016 3809	CARBON 2.2K JA 1/4W	1
C106	CC1-0-1500-KD00C	Ceramic 100pF 50V \pm 10%	1	R204	401 025 7805	CARBON 2.2K JA 1/6W	1
C107	CD4-7-663A-0001V	Electrolytic 47 μ F 6.3V	1	R205	401 023 1706	CARBON 820 JA 1/4W	1
C108	CD4-7-663A-0001V	Electrolytic 47 μ F 6.3V	1	R206	401 025 1605	CARBON 1.5K JA 1/6W	1
C109	CM4-7-2500-K00SV	Mylar 0.0047 μ F 50V \pm 10%	1	R207	401 026 9600	CARBON 470 JA 1/6W	1
C110	CM4-7-2500-K00SV	Mylar 0.0047 μ F 50V \pm 10%	1	R208	401 020 0801	CARBON 470 JA 1/4W	1
C111	CM1-8-3500-K00SV	Mylar 0.018 μ F 50V \pm 10%	1	FUNCTION LED P.C.B. ASSY			
C112	CM1-8-3500-K00SV	Mylar 0.018 μ F 50V \pm 10%	1	38	141-0-1939-18390	Function LED P.C.B. Assy	1
C113	CC2-2-3500-ZG00C	Ceramic 0.022 μ F 50V +80,-20%	1		4-2262-30030	Function LED P.C.B.	1
C114	CC2-2-3500-ZG00C	Ceramic 0.022 μ F 50V +80,-20%	1		131-2-4208-28000	Spacer	5
C115	CD4-7-6160-0001V	Electrolytic 47 μ F 16V	1	SEMICONDUCTORS			
C116	CD4-7-6160-0001V	Electrolytic 47 μ F 16V	1	D201	DYY--SLR-54VT-	L.E.D., SLR 54 VT (Tape Monitor)	1
C117	CC2-2-3500-ZG00C	Ceramic 0.022 μ F 50V +80,-20%	1	D202	DYY--SLR-54PT-	L.E.D., SLR 54 PT (Video/Aux)	1
C118	CC2-2-3500-ZG00C	Ceramic 0.022 μ F 50V +80,-20%	1	D203	DYY--SLR-54PT-	L.E.D., SLR 54 PT (CD)	1
C119	CC2-2-3500-ZG00C	Ceramic 0.022 μ F 50V +80,-20%	1	D204	DYY--SLR-54PT-	L.E.D., SLR 54 PT (Tuner)	1
SEMICONDUCTOR				D205	DYY--SLR-54PT-	L.E.D., SLR 54 PT (Phono)	1
IC101	206-5-2726-45810	IC, LA 6458 DS	1	PRE AMP. P.C.B. ASSY			
RESISTORS				39	141-0-1939-18352	Pre Amp. P.C.B. Assy	1
R101	401 024 7004	CARBON 1K JA 1/6W	1		4-2262-29990	Pre Amp. P.C.B.	1
R102	401 024 7004	CARBON 1K JA 1/6W	1	VR301	4-2229-76930	Slide Volume (SW-250k Ω x2, 63Hz)	1
R103	401 024 7707	CARBON 100K JA 1/6W	1	VR302	4-2229-76930	Slide Volume (SW-250k Ω x2, 250Hz)	1
R104	401 024 7707	CARBON 100K JA 1/6W	1	VR303	4-2229-76930	Slide Volume (SW-250k Ω x2, 1kHz)	1
R105	401 024 7707	CARBON 100K JA 1/6W	1	VR304	4-2229-76930	Slide Volume (SW-250k Ω x2, 4kHz)	1
R106	401 024 7707	CARBON 100K JA 1/6W	1	VR305	4-2229-76930	Slide Volume (SW-250k Ω x2, 16kHz)	1
R107	401 026 0607	CARBON 270 JA 1/6W	1	VR306	4-2229-75980	Slide Volume (W-200k Ω , Blance)	1
R108	401 026 0607	CARBON 270 JA 1/6W	1	VR307	4-2229-76220	Slide Volume (A-100k Ω x2, Volume)	1
R109	401 025 1902	CARBON 15K JA 1/6W	1	SW301	4-2319-77780	Switch Push 1Key (Loudness)	1
R110	401 025 1902	CARBON 15K JA 1/6W	1	CA301	4-2352-02030	Connector 7P Assy	1
R111	401 025 8703	CARBON 220K JA 1/6W	1	CA302	4-2359-75984	Connector 5P Assy	1
R112	401 025 8703	CARBON 220K JA 1/6W	1		141-2-2419-34300	Mount LED	1
R113	401 025 7805	CARBON 2.2K JA 1/6W	1		141-2-3769-18600	Spacer LED	1
R114	401 025 7805	CARBON 2.2K JA 1/6W	1	CAPACITORS			
R115	401 012 4107	CARBON 100 JA 1/4W	1	C301	CC3-3-1500-KD00C	Ceramic 330pF 50V \pm 10%	1
R116	401 012 4107	CARBON 100 JA 1/4W	1	C302	CC3-3-1500-KD00C	Ceramic 330pF 50V \pm 10%	1
INPUT P.C.B. ASSY				C303	CC6-8-0500-KD00C	Ceramic 68pF 50V \pm 10%	1
36	141-0-1939-18370	Input P.C.B. Assy	1	C304	CC6-8-0500-KD00C	Ceramic 68pF 50V \pm 10%	1
	4-2262-30010	Input P.C.B.	1	C305	CC1-0-0500-DD00C	Ceramic 10pF 50V \pm 0.5pF	1
CN101	4-2369-73970	Plug 3P (Tuner Socket)	1	C306	CC1-0-0500-DD00C	Ceramic 10pF 50V \pm 0.5pF	1
CN103	4-2369-75580	Plug 5P (Deck Socket)	1	C307	CD1-0-6160-0001V	Electrolytic 10 μ F 16V	1
	141-2-3889-05300	Bracket Connect P.C.B.	1	C308	CD1-0-6160-0001V	Electrolytic 10 μ F 16V	1
CAPACITORS				C309	CD4-7-5250-0001V	Electrolytic 4.7 μ F 25V	1
C120	CI1-0-3250-MF00R	Boundary 0.01 μ F 25V \pm 20%	1	C310	CD4-7-5250-0001V	Electrolytic 4.7 μ F 25V	1
C121	CI1-0-3250-MF00R	Boundary 0.01 μ F 25V \pm 20%	1	C311	CM1-8-3500-J00BV	Mylar 0.018 μ F 50V \pm 5%	1
FUNCTION P.C.B. ASSY				C312	CM1-8-3500-J00BV	Mylar 0.018 μ F 50V \pm 5%	1
37	141-0-1939-18380	Function P.C.B. Assy	1	C313	CD2-2-5500-0001V	Electrolytic 2.2 μ F 50V	1
	4-2262-30020	Function P.C.B.	1	C314	CD2-2-5500-0001V	Electrolytic 2.2 μ F 50V	1
SW201	4-2319-79660	Push Switch 5Key (Function/Tape Monitor)	1	C315	CM8-2-2500-J00BV	Mylar 0.0082 μ F 50V \pm 5%	1

P.C. BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty	
C406	CC1-0-1500-KD00C	Ceramic	100pF 50V ±10%	1	or	4-2029-73870	Diode, 11E 2	1
C407	CC1-0-1500-KD00C	Ceramic	100pF 50V ±10%	1	D417	202-5-0220-01010	Diode, DSF 10 C	1
C408	CC1-0-1500-KD00C	Ceramic	100pF 50V ±10%	1	or	4-2029-73870	Diode, 11E 2	1
C409	CD2-2-763A-0001V	Electrolytic	220µF 6.3V	1	D418	202-5-0220-01010	Diode, DSF 10 C	1
C410	CD2-2-763A-0001V	Electrolytic	220µF 6.3V	1	or	4-2029-73870	Diode, 11E 2	1
C411	CM1-0-4500-J00TV	Mylar	0.1µF 50V ±5%	1	D419	202-5-0220-01010	Diode, DSF 10 C	1
C412	CM1-0-4500-J00TV	Mylar	0.1µF 50V ±5%	1	or	4-2029-73870	Diode, 11E 2	1
C413	4-2239-71190	Capacitor	27pF 500V ±10%	1	D420	202-5-0220-01010	Diode, DSF 10 C	1
C414	4-2239-71190	Capacitor	27pF 500V ±10%	1	or	4-2029-73870	Diode, 11E 2	1
C415	4-2239-72020	Ceramic	3pF 500V ±0.5pF	1	D421	202-5-3210-16011	Zener Diode, GZA 16X	1
C416	4-2239-72020	Ceramic	3pF 500V ±0.5pF	1	D422	202-5-3210-16011	Zener Diode, GZA 16X	1
C417	4-2239-71120	Capacitor	18pF 500V ±10%	1	IC401	4-2069-73810	IC, TA 7317 P	1
C418	4-2239-71120	Capacitor	18pF 500V ±10%	1	Q401	203-5-7230-60860	Transistor, 2SA 608	1
C419	CD1-0-5500-0001V	Electrolytic	1µF 50V	1	Q402	203-5-7230-60860	Transistor, 2SA 608	1
C420	CD1-0-5500-0001V	Electrolytic	1µF 50V	1	Q403	203-5-5251-57060	Transistor, 2SC 1570	1
C421	4-2239-72120	Ceramic	220pF 500V ±10%	1	Q404	203-5-5251-57060	Transistor, 2SC 1570	1
C422	4-2239-72120	Ceramic	220pF 500V ±10%	1	Q405	203-5-5251-57060	Transistor, 2SC 1570	1
C423	4-2239-72120	Ceramic	220pF 500V ±10%	1	Q406	203-5-5251-57060	Transistor, 2SC 1570	1
C424	4-2239-72120	Ceramic	220pF 500V ±10%	1	Q407	TMM- --2SC1-583-F	Transistor, 2SC 1583	1
C425	CD4-7-6101-0001V	Electrolytic	47µF 100V	1	Q408	TMM- --2SC1-583-F	Transistor, 2SC 1583	1
C426	CD4-7-6101-0001V	Electrolytic	47µF 100V	1	Q409	203-5-6931-20980	Transistor, 2SA 1209	1
C427	CD4-7-6101-0001V	Electrolytic	47µF 100V	1	Q410	203-5-6931-20980	Transistor, 2SA 1209	1
C428	CD4-7-6101-0001V	Electrolytic	47µF 100V	1	Q411	203-5-5632-91180	Transistor, 2SC 2911	1
C429	CD1-0-6250-0001V	Electrolytic	10µF 25V	1	Q412	203-5-5632-91180	Transistor, 2SC 2911	1
C431	CM3-9-3500-K00SV	Mylar	0.039µF 50V ±10%	1	Q413	203-5-5143-11780	Transistor, 2SC 3117	1
C432	CM3-9-3500-K00SV	Mylar	0.039µF 50V ±10%	1	Q414	203-5-5143-11780	Transistor, 2SC 3117	1
C441	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1	Q415	203-5-4711-24980	Transistor, 2SA 1249	1
C442	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1	Q416	203-5-4711-24980	Transistor, 2SA 1249	1
C443	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1				
C444	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1				
C445	4-2239-72420	Electrolytic	6800µF 73V	1				
C446	4-2239-72420	Electrolytic	6800µF 73V	1				
C447	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1				
C448	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1				
C449	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1				
C450	CC1-0-3501-YEY0C	Ceramic	0.01µF 500V +100,-0%	1				
C451	CD1-0-8350-0001V	Electrolytic	1000µF 35V	1				
C452	CD1-0-8350-0001V	Electrolytic	1000µF 35V	1				
C453	CD1-0-7250-0001V	Electrolytic	100µF 25V	1				
C454	CD1-0-7250-0001V	Electrolytic	100µF 25V	1				
C455	CD1-0-6250-0001V	Electrolytic	10µF 25V	1				
C456	CD1-0-6250-0001V	Electrolytic	10µF 25V	1				
C457	CD1-0-5500-0001V	Electrolytic	1µF 50V	1				
C458	CB1-0-7160-0000V	None-polar	100µF 16V	1				
C460	CD2-2-6160-0001V	Electrolytic	22µF 16V	1				
C461	CD4-7-4500-0001V	Electrolytic	0.47µF 50V	1				
	SEMICONDUCTORS							
D401	202-5-9040-44210	Diode, DS 442		1				
D402	202-5-9040-44210	Diode, DS 442		1				
D403	202-5-9040-44210	Diode, DS 442		1				
D404	202-5-9040-44210	Diode, DS 442		1				
D405	202-5-9040-44210	Diode, DS 442		1				
D406	202-5-9040-44210	Diode, DS 442		1				
D407	202-5-1410-00110	Diode, GMA 01		1				
D408	202-5-1410-00110	Diode, GMA 01		1				
D410	202-5-3210-18011	Zener Diode, GZA 18X		1				
D411	4-2029-73840	Diode, 30D 2		1				
D412	4-2029-73840	Diode, 30D 2		1				
D413	4-2029-73840	Diode, 30D 2		1				
D414	4-2029-73840	Diode, 30D 2		1				
D415	202-5-0220-01010	Diode, DSF 10 C		1				
or	4-2029-73870	Diode, 11E 2		1				
D416	202-5-0220-01010	Diode, DSF 10 C		1				
	RESISTORS							
					R401	401 024 7004	CARBON 1K JA 1/6W	1
					R402	401 024 7004	CARBON 1K JA 1/6W	1
					R403	401 024 7707	CARBON 100K JA 1/6W	1
					R404	401 024 7707	CARBON 100K JA 1/6W	1
					R405	401 021 0701	CARBON 56 JA 1/4W	1
					R406	401 021 0701	CARBON 56 JA 1/4W	1
					R407	401 013 6407	CARBON 12K JA 1/4W	1
					R408	401 013 6407	CARBON 12K JA 1/4W	1
					R409	401 023 2802	CARBON 8.2K JA 1/4W	1
					R410	401 023 2802	CARBON 8.2K JA 1/4W	1
					R411	401 021 0701	CARBON 56 JA 1/4W	1
					R412	401 021 0701	CARBON 56 JA 1/4W	1
					R413	401 023 2802	CARBON 8.2K JA 1/4W	1
					R414	401 023 2802	CARBON 8.2K JA 1/4W	1
					R415	402 015 5603	FUSIBLE RES 82 J- 1/4W	1
					R416	402 015 5603	FUSIBLE RES 82 J- 1/4W	1
					R417	402 015 4705	FUSIBLE RES 47 J- 1/4W	1
					R418	402 015 4705	FUSIBLE RES 47 J- 1/4W	1
					R419	401 019 9600	CARBON 47 JA 1/4W	1
					R420	401 019 9600	CARBON 47 JA 1/4W	1
					R421	401 022 4104	CARBON 68K JA 1/4W	1
					R422	401 022 4104	CARBON 68K JA 1/4W	1
					R423	401 018 4903	CARBON 33K JA 1/4W	1
					R424	401 018 4903	CARBON 33K JA 1/4W	1
					R425	401 023 0709	CARBON 82 JA 1/4W	1
					R426	401 023 0709	CARBON 82 JA 1/4W	1
					R427	402 016 5107	FUSIBLE RES 330 J- 1/2W	1
					R428	402 016 5107	FUSIBLE RES 330 J- 1/2W	1
					R429	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
					R430	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
					R431	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
					R432	402 015 3708	FUSIBLE RES 2.2 J- 1/4W	1
					R433	4-2219-70370	Cement 0.22X2 5W	1
					R434	4-2219-70370	Cement 0.22X2 5W	1

P.C. BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
R435	402 015 4705	FUSIBLE RES 47 J-1/4W	1				
R436	402 015 4705	FUSIBLE RES 47 J-1/4W	1				
R437	402 015 3005	FUSIBLE RES 10 J-1/4W	1				
R438	402 015 3005	FUSIBLE RES 10 J-1/4W	1				
R439	401 062 2405	OXIDE-MT 4.7K JB 1W	1				
R441	401 019 6203	CARBON 4.7 JA 1/4W	1				
R442	401 019 6203	CARBON 4.7 JA 1/4W	1				
R443	401 058 1207	OXIDE-MT 10 JB 1W	1				
R444	401 058 1207	OXIDE-MT 10 JB 1W	1				
R445	401 021 4105	CARBON 58K JA 1/4W	1				
R446	401 021 4105	CARBON 58K JA 1/4W	1				
R447	401 023 2802	CARBON 8.2K JA 1/4W	1				
R448	401 023 2802	CARBON 8.2K JA 1/4W	1				
R451	401 064 6203	OXIDE-MT 10 JB 2W	1				
R452	401 064 6203	OXIDE-MT 10 JB 2W	1				
R454	401 064 6203	OXIDE-MT 10 JB 2W	1				
R455	401 064 6203	OXIDE-MT 10 JB 2W	1				
R457	401 012 5708	CARBON 1K JA 1/4W	1				
R458	401 012 5708	CARBON 1K JA 1/4W	1				
R459	401 018 2800	CARBON 330 JA 1/4W	1				
R460	401 018 2800	CARBON 330 JA 1/4W	1				
R463	402 016 2205	FUSIBLE RES 27 J-1/2W	1				
R467	401 019 1901	CARBON 3.9K JA 1/4W	1				
R468	401 019 1901	CARBON 3.9K JA 1/4W	1				
R469	402 015 3104	FUSIBLE RES 100 J-1/4W	1				
R470	401 014 5201	CARBON 15K JA 1/4W	1				
R472	401 025 8703	CARBON 220K JA 1/6W	1				
R475	401 020 2904	CARBON 47K JA 1/4W	1				
R476	401 012 8105	CARBON 100K JA 1/4W	1				
R477	401 018 4903	CARBON 33K JA 1/4W	1				
R478	401 021 4105	CARBON 58K JA 1/4W	1				
R479	401 014 5201	CARBON 15K JA 1/4W	1				
R481	401 026 2700	CARBON 300 JA 1/8W	1				
R482	401 026 2700	CARBON 300 JA 1/8W	1				
41	BIAS P.C.B. ASSY		2				
	141-0-1939-18410	Bias P.C.B. Assy	1				
	4-2262-30050	Bias P.C.B.	1				
D409	202-5-9040-44210	Diode, DS 442	1				
0417	4-2039-72100	Transistor, 2SD 947	1				
42	TRANSISTOR + P.C.B. ASSY		1				
	141-0-1939-18420	Transistor + P.C.B. Assy	1				
	4-2262-30060	Transistor + P.C.B.	1				
0418	SEMICONDUCTOR		1				
	4-2039-71441	Transistor, 2SD 1406	1				
43	TRANSISTOR - P.C.B. ASSY		1				
	141-0-1939-18430	Transistor - P.C.B. Assy	1				
	4-2262-30070	Transistor - P.C.B.	1				
0419	SEMICONDUCTOR		1				
	4-2039-72130	Transistor, 2SB 1015	1				
44	TERMINAL P.C.B. ASSY		1				
	141-0-1939-18440	Terminal P.C.B. Assy	1				
	4-2262-30080	Terminal P.C.B.	1				

- NOTES:**
- Parts order must contain Model Number, Part Number and Description.
 - Ordering quantity of screws and resistors must be multiple of 10 pcs.

△ 4-2342-00010 Fuse 1.0A
 4-2359-23000 Fuse Holder
 △ 4-2359-79090 Socket 2P-2 (Power Supply)
 111-2-6220-11100 Wire Wrap Terminal

POWER SWITCH P.C.B. ASSY

141-0-1939-18450 Power Switch P.C.B. Assy
 4-2262-30090 Power Switch P.C.B.
 △ 4-2319-76340 Switch Push Power (Power)
 4-2319-77341 Switch Push 1Key (Speaker A)
 SW503 Switch Push 1Key (Speaker B)
 JS01 Wire 2 Parallel
 JS02 Wire 6 Parallel
 △ 4-2349-20912 Fuse 5.0A
 4-2352-00970 Headphone Jack 3P (Headphones)
 4-2359-23000 Fuse Holder
 111-2-6220-11100 Wire Wrap Terminal
 131-2-6114-00200 Cover Safety

RESISTORS

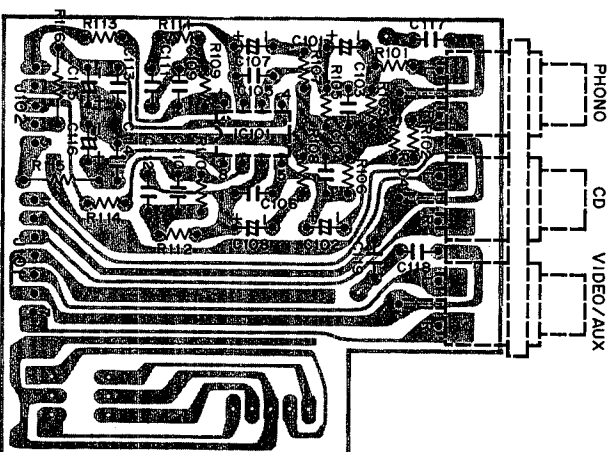
R501 401 068 7701 OXIDE-MT 560 JB 2W
 R502 401 068 7701 OXIDE-MT 560 JB 2W
 R503 401 016 2604 CARBON 220 JA 1/4W
 R504 401 016 2604 CARBON 220 JA 1/4W
 R505 401 017 0807 CARBON 270 JA 1/4W
 R506 401 017 0807 CARBON 270 JA 1/4W

SPEAKER OUT P.C.B. ASSY

141-0-1939-18460 Speaker Out P.C.B. Assy
 4-2262-30100 Speaker Out P.C.B.
 4-2439-73062 Wire 2 Parallel
 4-2372-01160 Speaker 8P Terminal (Speaker)

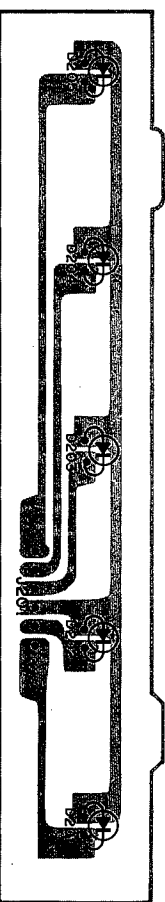
PHONO EQ. P.C. BOARD

(BOTTOM VIEW)



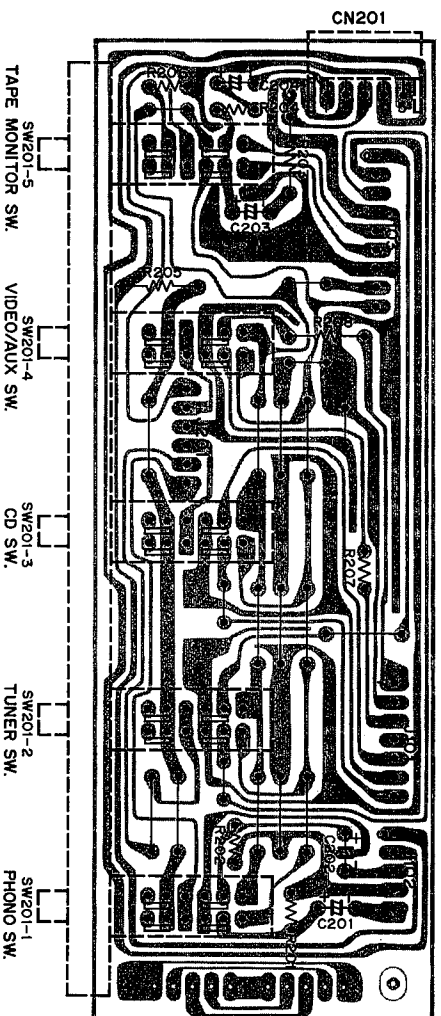
FUNCTION LED P.C. BOARD

(BOTTOM VIEW)

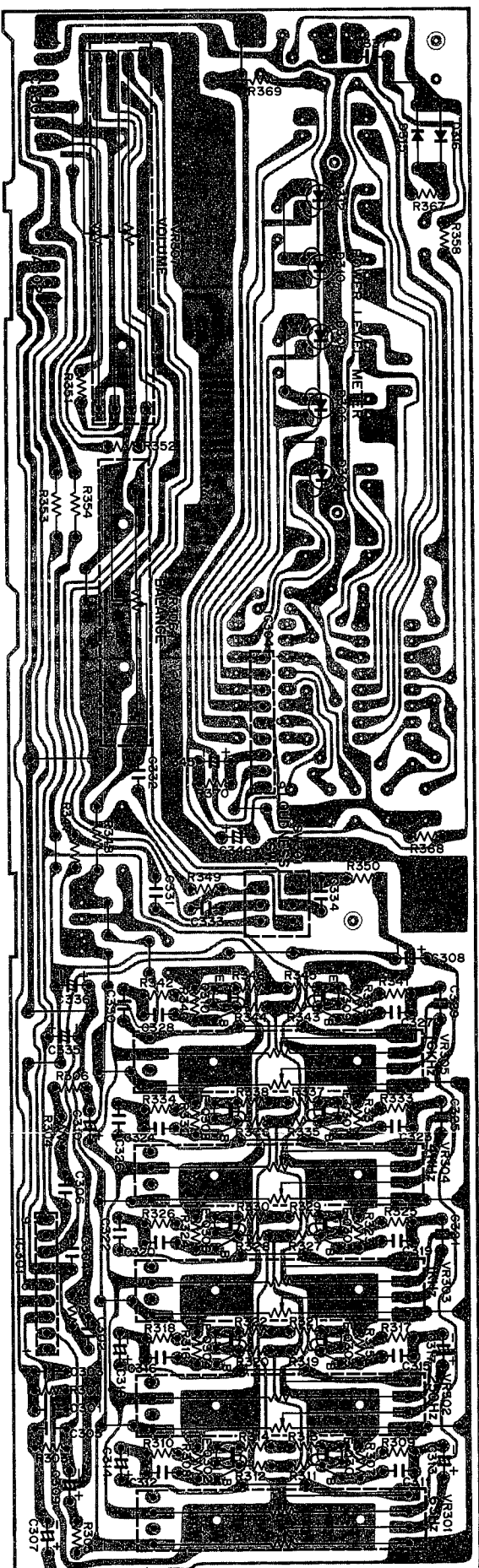


FUNCTION P.C. BOARD

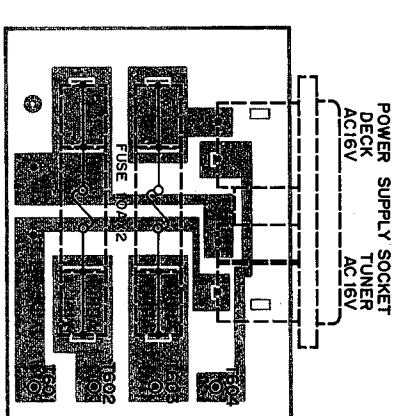
(BOTTOM VIEW)



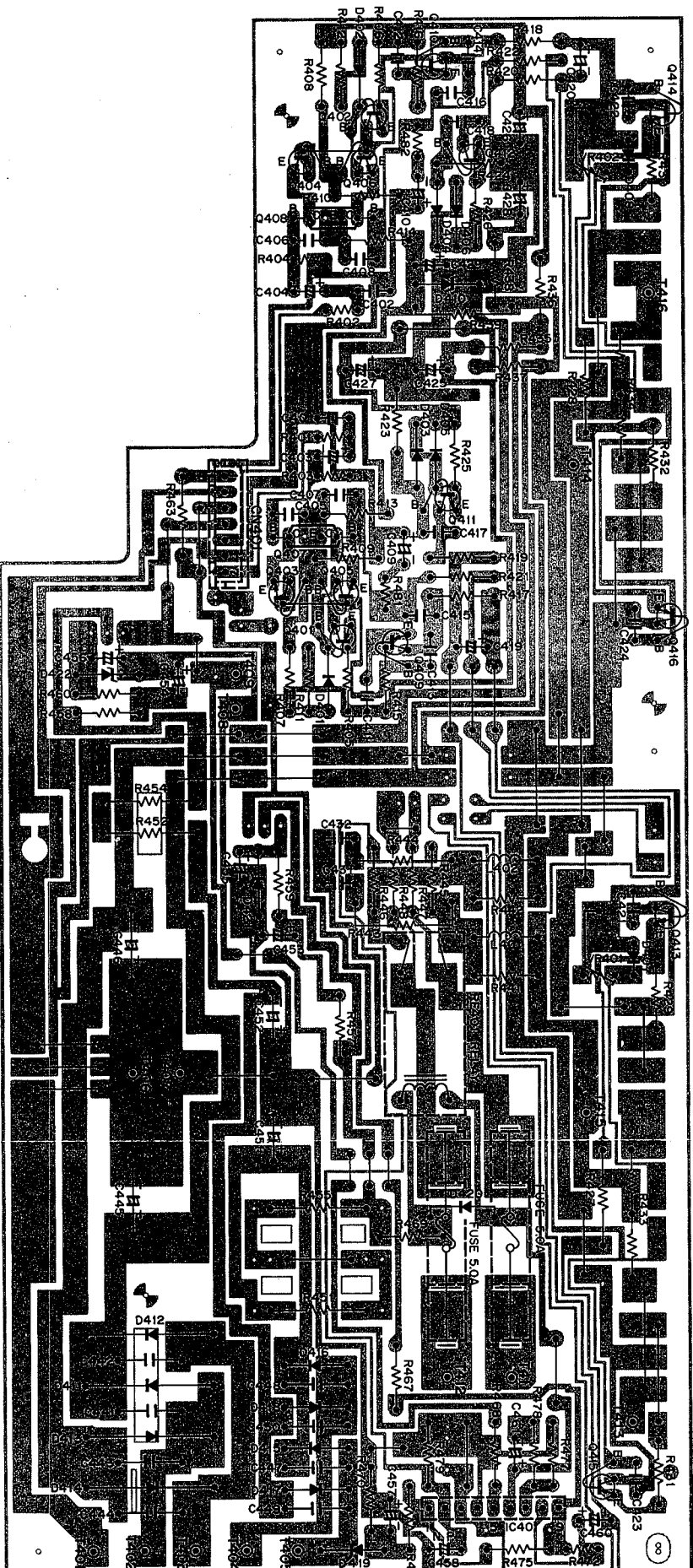
**PRE AMPLIFIER P.C. BOARD
(BOTTOM VIEW)**



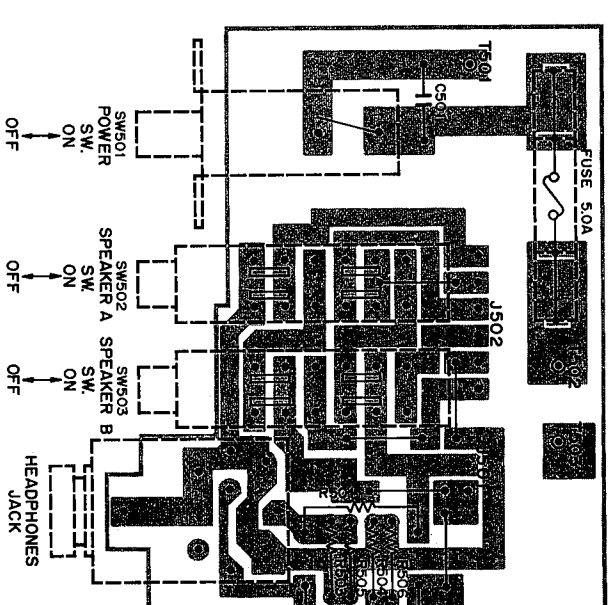
**TERMINAL P.C. BOARD
(BOTTOM VIEW)**



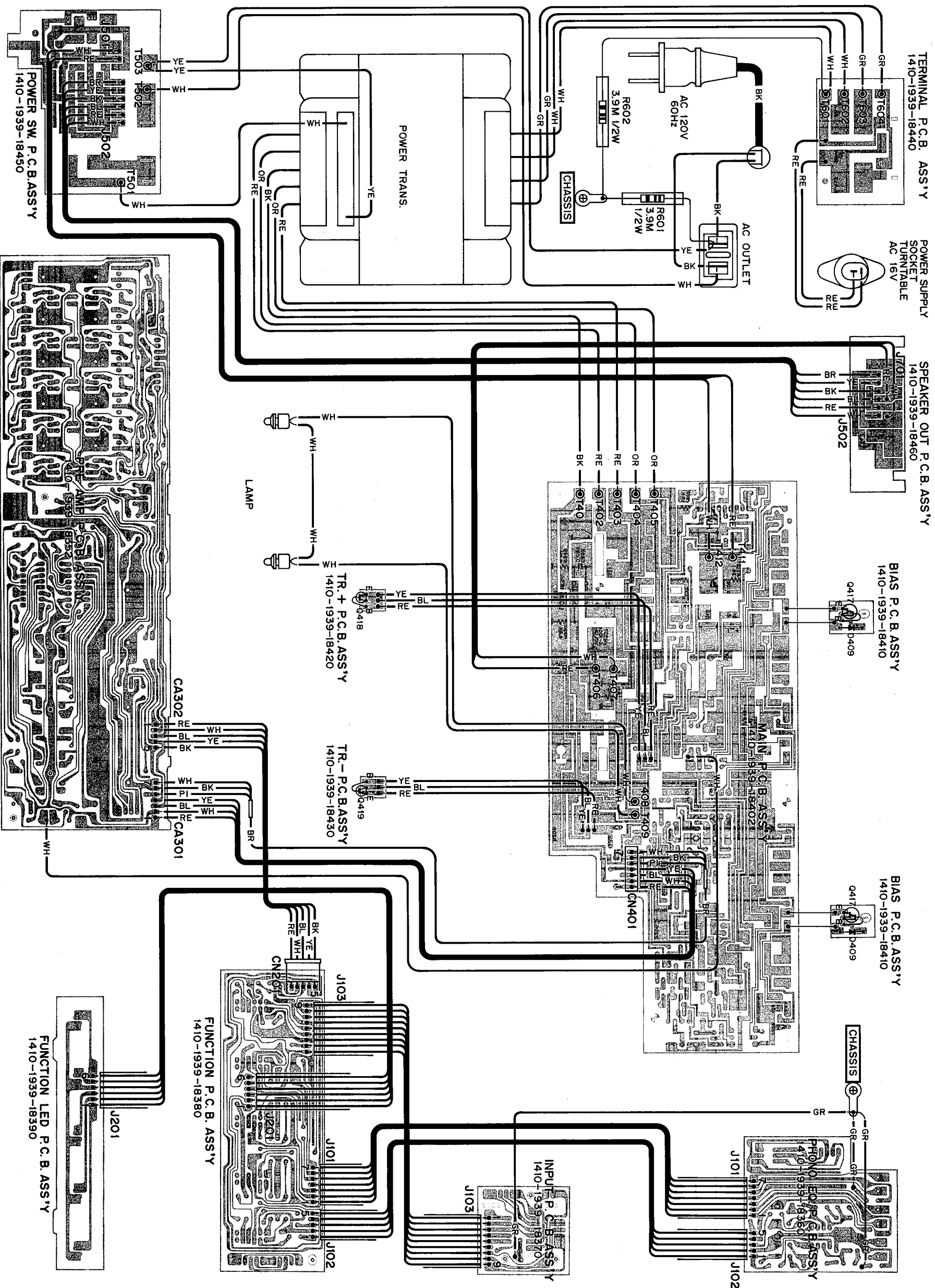
**MAIN PRINTED CIRCUIT BOARD
(BOTTOM VIEW)**



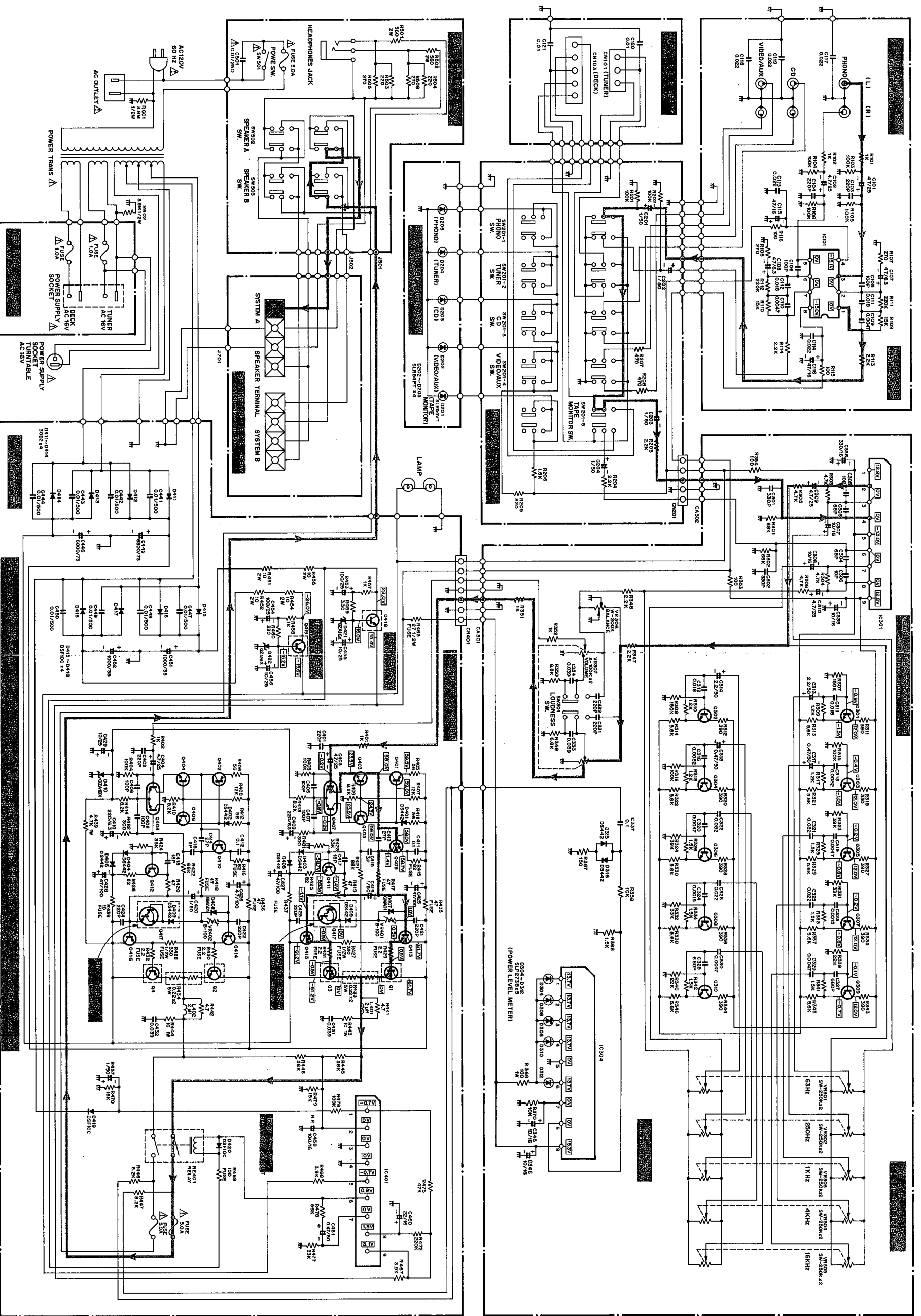
**POWER SWITCH P.C. BOARD
(BOTTOM VIEW)**




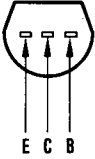








POINT TO POINT WIRING DIAGRAM



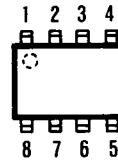
SCHEMATIC DIAGRAM



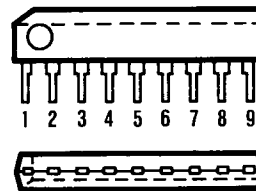
SEMICONDUCTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA 608 2SC 536 2SC 1570		
2SB 1015 2SD 1406		
2SA 1209 2SA 1249 2SC 2911 2SC 3117 2SD 947		
2SC 1583		
2SA 1301 2SC 3280		
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

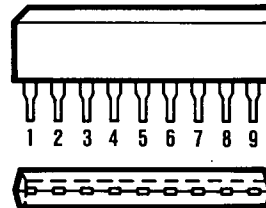
LA 6458 DS BOTTOM VIEW



LA 6458 SS / LB 1403 N FRONT/BOTTOM VIEWS



TA 7317 P FRONT/BOTTOM VIEWS



PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with Δ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.

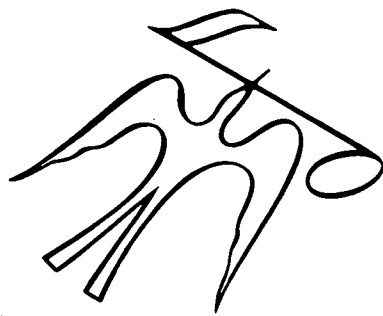
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

NOTES:

1. All resistors values are indicated in "ohm" ($K=10^3$, $M=10^6$).
2. All capacitors values are indicated in " μF " ($P=10^{-12}$).
3. All voltages indicated on the schematics are measured under the following conditions.
 - a. Use a V.T.V.M.

- b. All voltages $\pm 10\%$ with respect to chassis ground.
 - c. No signals at input terminals.
 - d. AC input at 120 volts 60 Hz.
4. This is a basic schematic diagram.

Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.



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