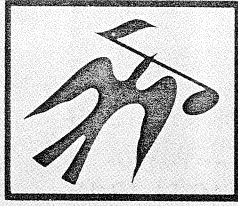


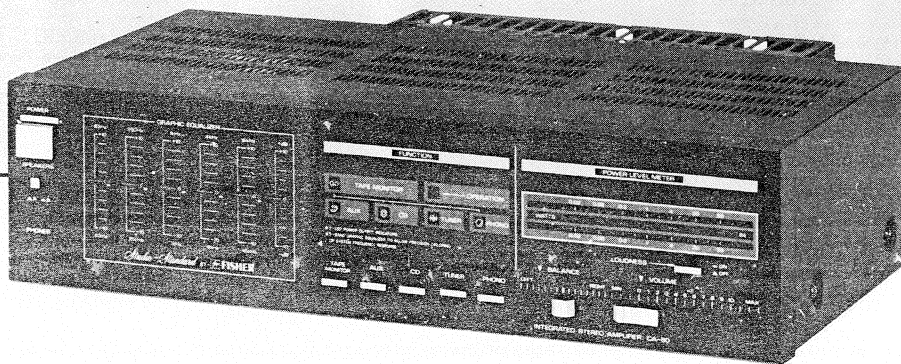
SERVICE MANUAL



FISHER

CA-60

**Integrated
Stereo Amplifier
(EUROPE)**



132 282 44

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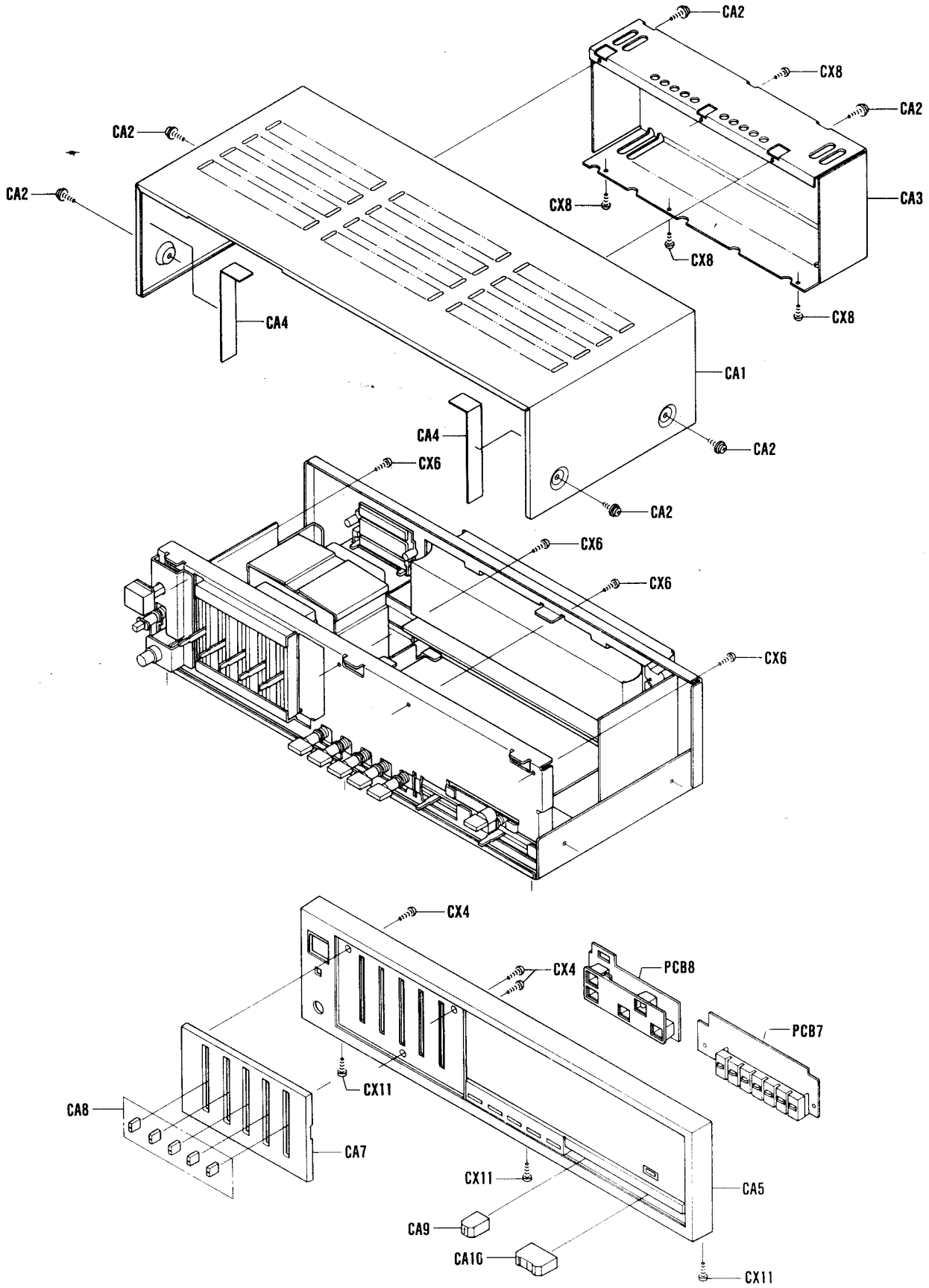
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SPECIFICATIONS

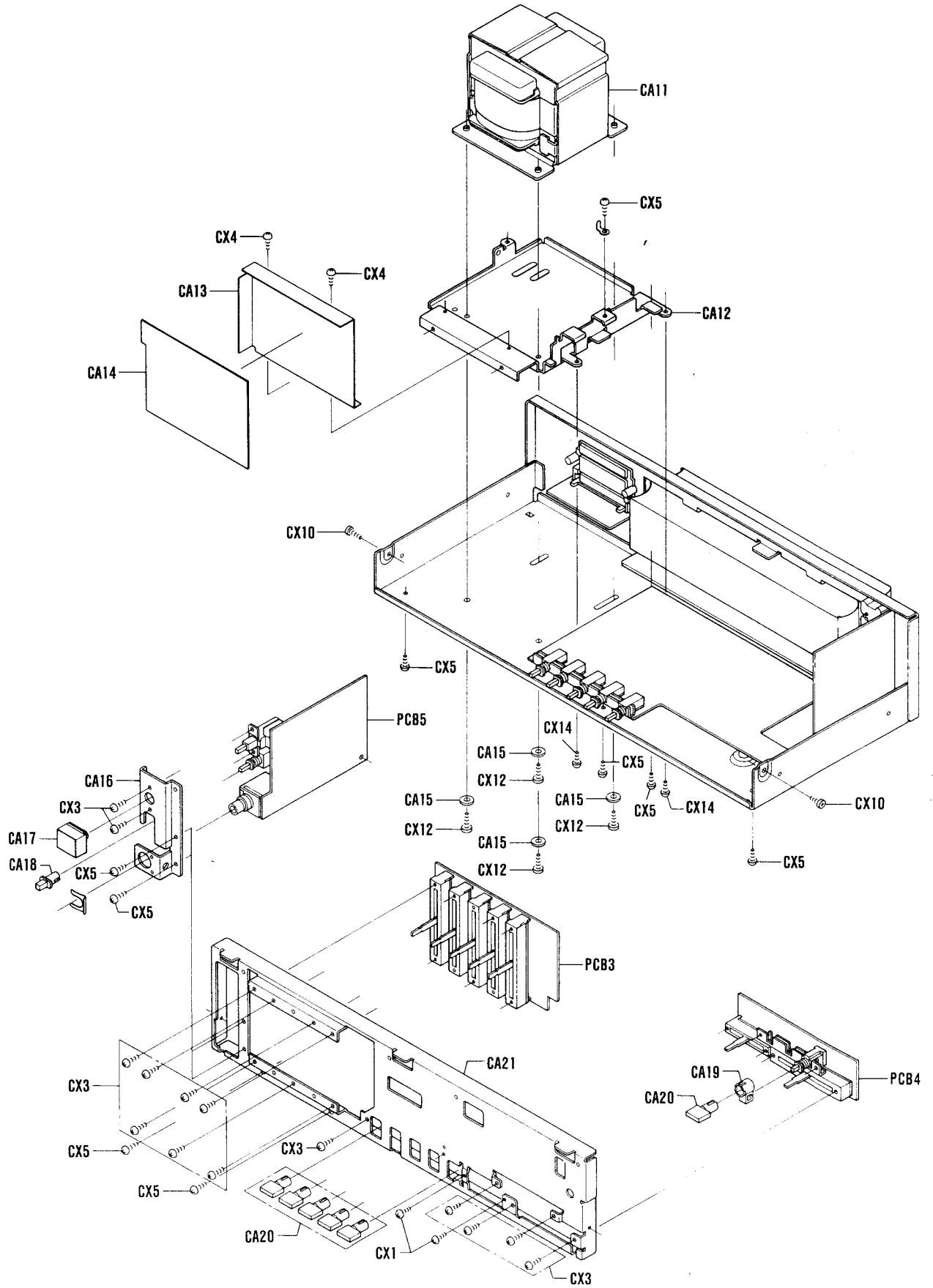
AMPLIFIER	CA-60
POWER AMPLIFIER SECTION Minimum RMS sine wave power per channel no more than stated distortion and with 8-ohm load at 1 kHz (DIN)	50 Watts
Total Harmonic Distortion	0.2 %
I.M. Distortion	0.2 %
Speaker Damping	> 20
PREAMPLIFIER SECTION Frequency Response	
Phono MM (RIAA)	±0.5 dB
Aux (20 Hz – 20 kHz)	±0.5 dB
Input Sensitivity and Impedance	
Phono MM	2.5 mV/50 kΩ
Tape Monitor	150 mV/50 kΩ
Tuner	150 mV/50 kΩ
Auxiliary/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
Hum & Noise (IHF Short Circuit, A Network)	
Phono MM	65 dB
Tape Monitor	85 dB
Tuner	85 dB
Auxiliary/CD	85 dB
GENERAL	
Power Requirements (50 Hz)	110/220 V AC
Power Consumption	260 Watts
Power Supply Socket	1 (FM-60 only)
Dimensions (W x H x D)	400 x 105 x 243 mm
Weight (approx.)	5.4 kg

Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify product designs and specifications without notice and without incurring any obligation.

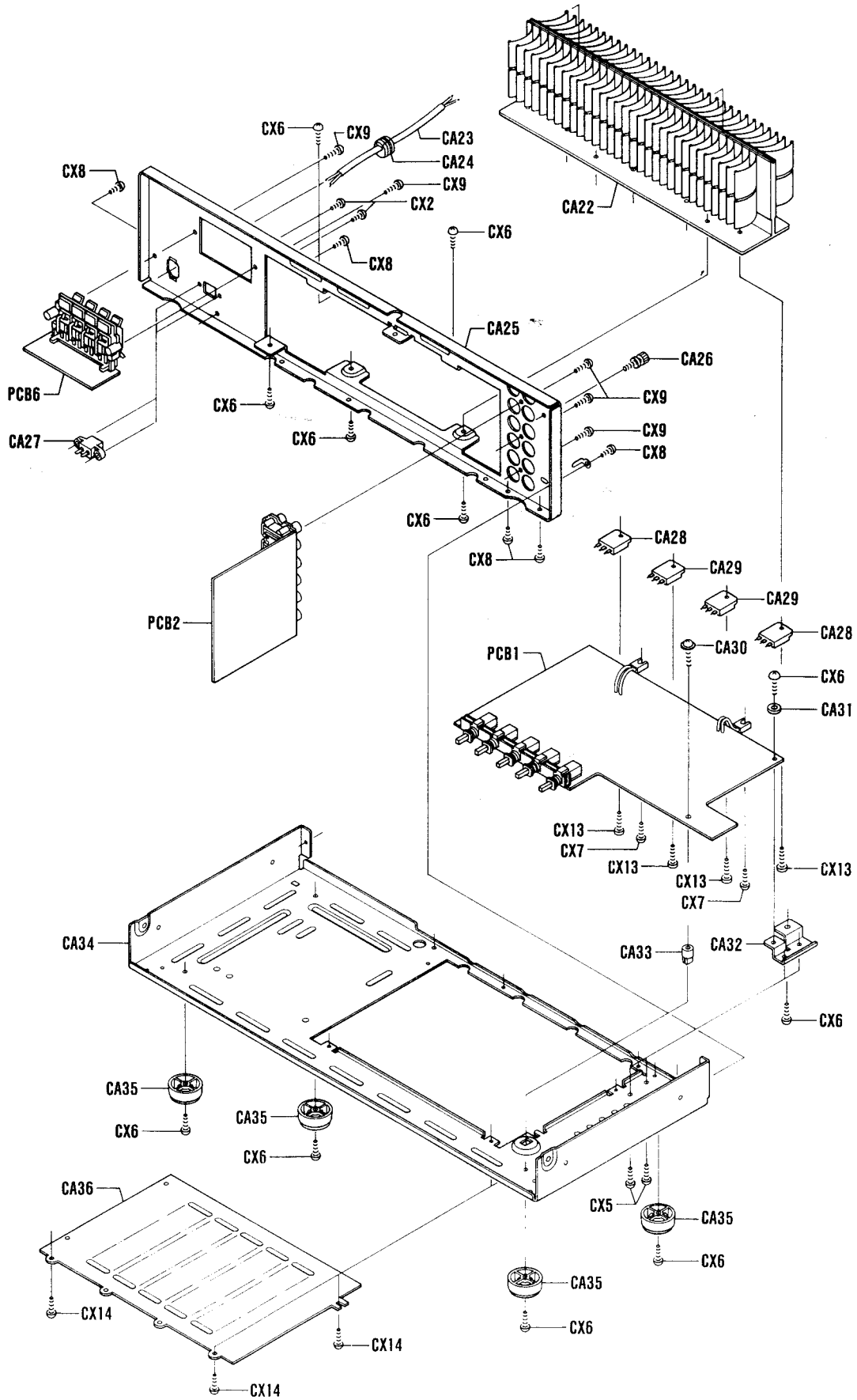
CABINET & CHASSIS EXPLODED VIEW (1)



CABINET & CHASSIS EXPLODED VIEW (2)



CABINET & CHASSIS EXPLODED VIEW (3)



PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
PACKING PARTS LIST				CA26	131-2-4201-17800	Screw Ground	1
	3-9415-10300	Bag Polyethylene	1	CA27	△ 4-2359-74032	2P Socket With/Nut	1
	131-6-1169-15412	Box Corrugate-Exp.	1	CA28	4-2039-71820	Transistor, 2SC 3181 [Q113, Q213]	2
	131-6-2119-02130	Bag Polyethylene-Exp.	1	CA29	4-2039-71830	Transistor, 2SA 1264 [Q114, Q214]	2
	131-6-3009-35400	Pad (Right)	1	CA30	131-2-4201-25204	Screw, Brazier Hd. Tapping-B, +M3.0x12 Sems	1
	131-6-3009-35410	Pad (Left)	1	CA31	131-2-4203-83201	Washer, 3.2x10x0.5 Z	1
	131-6-3069-16350	Patching Sheet	1	CA32	131-2-3101-98100	Metal Mount (Main Amp P.C.B.)	1
	131-6-4559-10900	Manufacturing No.	2	CA33	131-2-3614-22900	Mount P.C.B.	1
ACCESSORIES PARTS LIST				CA34	131-2-3301-31100	Chassis	1
	131-6-2719-10801	Bag Fan	1	CA35	131-2-1801-14100	Leg	4
	131-6-4519-15700	Guarantee Certificate	1	CA36	131-2-1410-32000	Cover (Bottom)	1
	131-6-4559-10900	Manufacturing No.	1	P.C.B. ASSY PARTS LIST			
	142-6-4119-32505	Explanatory Booklet	1	PCB1	141-0-1939-04758	Main Amp. P.C.B. Assy	1
CABINET & CHASSIS PARTS LIST				PCB2	141-0-1939-04760	Phono P.C.B. Assy	1
	4-2379-21520	Terminal Lug	2	PCB3	141-0-1939-04770	Graphic Equalizer P.C.B. Assy	1
CA1	131-2-1410-32201	Cover	1	PCB4	141-0-1939-04781	Volume P.C.B. Assy	1
CA2	141-2-4219-33101	Screw, Brazier Hd. Tapping-B, +M3.0x8 Sems	6	PCB5	141-0-1939-04791	Power Switch P.C.B. Assy	1
CA3	131-2-1410-32117	Cover (Heat Sink)	1	PCB6	141-0-1939-04801	Speaker Terminal P.C.B. Assy	1
CA4	131-2-3202-13400	Metal Reinf	2	PCB7	141-0-1939-04814	Power Meter P.C.B. Assy	1
CA5	131-0-1016-44305	Panel Decorate Assy	1	PCB8	141-0-1939-04824	LED Ind. P.C.B. Assy	1
	131-2-1203-62703	Panel Control	1	SCREW PARTS LIST			
	131-2-1203-62805	Panel Control	1	CX1	101-3-1302-00411	Screw, Pan Hd., +M2.0x4	1
	141-2-1539-16801	Decorate (Power)	1	CX2	101-3-1302-60618	Screw, Pan Hd., +M2.6x6	2
CA7	131-2-1203-62601	Panel Control	1	CX3	101-3-1303-00611	Screw, Pan Hd., +M3.0x6	4
CA8	131-2-1601-71001	Knob (Equalizer)	5	CX4	143-3-1902-60611	Screw, Brazier Hd. Tapping-B, +M2.6x6	5
CA9	131-2-1601-90200	Knob Slide (Balance)	1	CX5	143-3-1903-00611	Screw, Brazier Hd. Tapping-B, +M3.0x6	11
CA10	131-2-1601-90100	Knob Slide (Master Volume)	1	CX6	143-3-1903-00811	Screw, Brazier Hd. Tapping-B, +M3.0x8	5
CA11	△ 4-2512-23222	Power Trans	1	CX7	143-3-1903-01211	Screw, Brazier Hd. Tapping-B, +M3.0x12	2
CA12	131-2-3101-98000	Metal Mount (Trans)	1	CX8	143-3-1903-00618	Screw, Brazier Hd. Tapping-B, +M3.0x6	9
CA13	141-2-3229-48500	Cover Shield	1	CX9	143-3-1903-00818	Screw, Brazier Hd. Tapping-B, +M3.0x8	5
CA14	141-2-4359-37200	Plate Sever	1	CX10	143-3-1703-00611	Screw, Bind Hd. Tapping-B, +M3.0x6	2
CA15	131-2-4203-84200	Washer, 4.2x12x1.0 Z	4	CX11	143-3-1703-00818	Screw, Bind Hd. Tapping-B, +M3.0x8	3
CA16	131-2-3101-98200	Metal Mount (Power Switch P.C.B.)	1	CX12	143-3-1704-00811	Screw, Bind Hd. Tapping-B, +M4.0x8	4
CA17	131-2-1601-86200	Knob (Power Switch)	1	CX13	143-3-1703-01211	Screw, Bind Hd. Tapping-B, +M3.0x12	4
CA18	131-2-1601-69600	Knob (Speaker Selector)	1	CX14	143-3-1903-00511	Screw, Brazier Hd. Tapping-B, +M3.0x5	5
CA19	131-2-4219-19000	Shaft (Loudness)	1	NOTE:			
CA20	131-2-1601-70100	Knob (Function)	6	1. Parts order must contain Model Number, Part Number and Description.			
CA21	131-2-3305-36000	Panel Front	1	2. Ordering quantity of screws and resistors must be multiplied by 10 pcs.			
CA22	141-2-3689-12400	Plate Heat Sink	1				
CA23	△ 4-2432-00140	Line Cord	1				
CA24	131-2-6111-14200	Bushing	1				
CA25	131-2-3306-39704	Panel Rear	1				

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol △ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with △, 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.

RECOMMENDED TEST EQUIPMENTS

The following test equipments are recommended to completely test and align the Amplifier:

- Line Voltage Isolation Transformer
- AC DC Multimeter
- Accurately Calibrated AC Voltmeter
- Oscilloscope (Flat to 100 kHz Minimum)
- Low-Distortion Audio Sine-Wave Generator
- Harmonic Distortion Analyzer
- Two (2) Load Resistors 8-ohms, 250 Watts (Minimum Rating)

HARMONIC DISTORTION TEST

CAUTION: Limit the following tests to no more than ten minutes each. Use 8-ohm resistors, with a minimum power rating of 250 watts when connecting a load across the SPEAKERS terminal.

CONTROL SETTINGS:

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

• GRAPHIC EQUALIZER to center positions.

• POWER switch to OFF

• SPEAKERS switch to SYSTEM-B

FUNCTION switch to AUX

TAPE MONITOR switch to SOURCE

VOLUME control to MINIMUM position

LEFT CHANNEL DRIVEN

ONE CHANNEL DRIVEN:

1) Connect a low distortion audio generator to LEFT AUX IN jack. Set generator frequency to 1 kHz and output to minimum.

2) Connect an 8-ohm load resistor between SPEAKERS SYSTEM-A LEFT and COM terminals. Connect a Harmonic Distortion Analyzer and an AC VTVM in parallel across the 8-ohm load.

3) Connect the AC power cord and set SPEAKERS switch to SYSTEM-A. Turn VOLUME control to MAX.

4) Increase generator output for 50 Watts RMS (20.0 volts across the 8-ohm load). Harmonic Distortion Analyzer should measure 0.2 % distortion or less.

5) Repeat steps 1 through 4 for RIGHT CHANNEL.

BOTH CHANNELS DRIVEN

Connect 8-ohm load resistors across LEFT and RIGHT SPEAKERS SYSTEM-A terminals. Adjust generator output and "VOLUME" control for 50 watts at Left and Right Channels (20.0 volts across the 8-ohm loads). Harmonic Distortion Analyzer should measure 0.2 % distortion or less at each channel.

CAUTION: This precision high-fidelity instrument should be serviced only by qualified personnel, trained in the repair of transistor equipment and printed circuitry.

POWER AMPLIFIER ADJUSTMENT

BEFORE ADJUSTMENT

This adjustment is very sensitive to changes in ambient temperature. Allow set to operate for 10 minutes before attempting this adjustment.

IDLING CURRENT ADJUSTMENT

1. Set the SPEAKER switch to off position.
2. Turn VOLUME control to minimum.
3. Connect DC VTVM between R151 left leg and R152 right leg on the Power Amplifier P.C.Board.
4. Adjust VR101 for an indication of 15–25 mV on the DC VTVM.
5. Connect DC VTVM between R252 left leg and R251 right leg on the Power Amplifier P.C.Board.
6. Adjust VR201 for an indication of 15–25 mV on the DC VTVM.

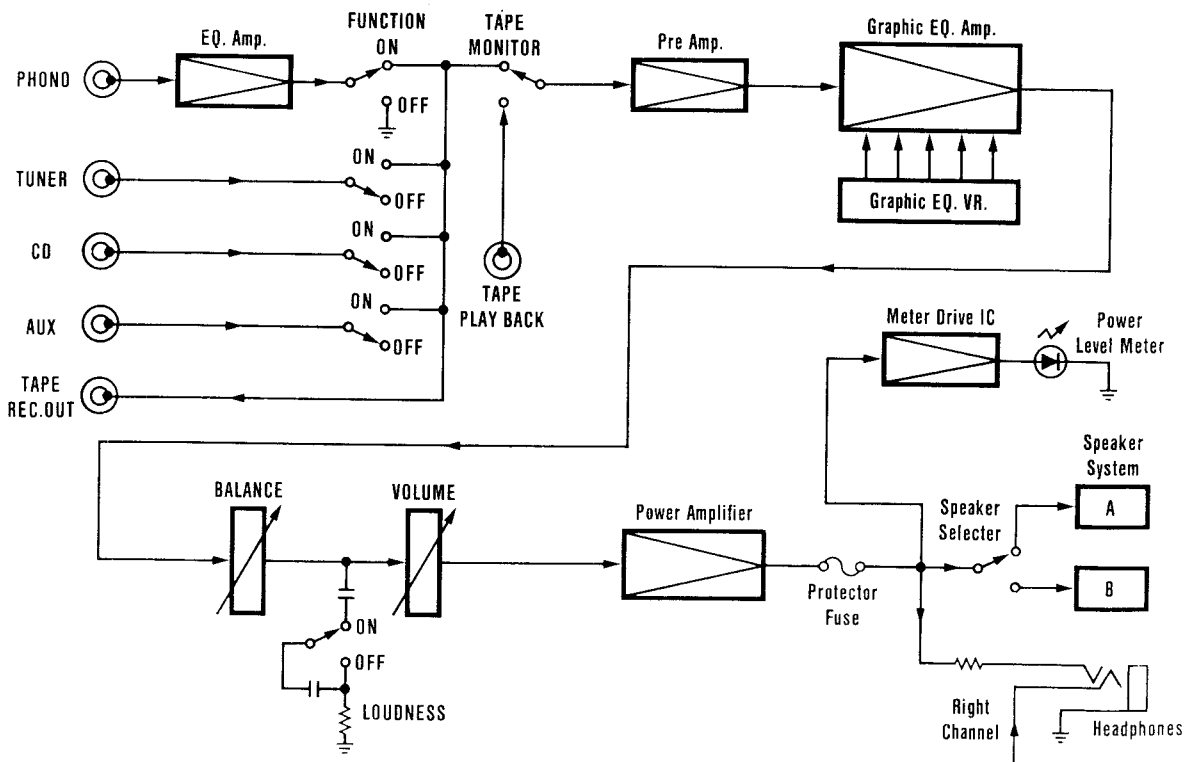
IMPORTANT NOTE

The amplifier has been Factory-adjusted for operation on 220V AC. The voltage can be changed for operation on 110V AC by making the following changes on the amplifier inside.

1. Remove the AC plug from the wall outlet.
2. Remove the screws securing the cover.
3. Disconnect Gray lead from Power switch P.C.Board Terminal No.T15, and then connect it to Power switch P.C.Board Terminal No.T13.
4. Disconnect Yellow lead from Power switch P.C.Board Terminal No.T15, and then connect it to Power switch P.C.Board Terminal No.T14.

The amplifier is now ready 110V operation. DO NOT attempt to operate the amplifier on 220V. Damage will result !

FUNCTIONAL BLOCK DIAGRAM



P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty					
MAIN AMPLIFIER P.C.B. ASSY												
PCB1	141-0-1939-04758	Main Amplifier P.C.B. Assy	1	D01	202-5-2810-44210	Diode, DS 442	1					
	4-2262-19030	Main Amplifier P.C.B.	1	Q01	4-2039-72100	Transistor, 2SD 947	1					
	4-2319-77200	Switch Push 5Key (Phono/Tuner/CD/Aux/Tape)	1	D201	205-5-9020-43010	Diode, DS 430	1					
	△ 4-2349-20380	Fuse T1.0A	1	D202	202-5-3210-22012	Zener Diode, GZA 22 Y	1					
	△ 4-2349-20580	Fuse T3.15A	2	D203	202-5-1400-00120	Diode, GMA 01	1					
	4-2352-00200	Fuse Holder	6	D204	202-5-1400-00120	Diode, GMA 01	1					
	111-2-6220-11100	Wire Wrap Terminal	8	D205	DAA---STV--3H- -0	Diode, STV 3 H	1					
	131-2-6201-21500	Plate Heat Sink	1	or	141-0-1939-08790	Bias P.C.B. Assy	1					
	131-2-7103-40400	Label T1.0A 4x13	8		4-2262-20970	Bias P.C.B.	1					
	141-2-1439-14300	Label (Fuse)	1	D01	202-5-2810-44210	Diode, DS 442	1					
L101	4-2532-00420	RF Coil (5μH)	1	Q01	4-2039-72100	Transistor, 2SD 947	1					
L201	4-2532-00420	RF Coil (5μH)	1	D301	△ 202-5-2620-03010	Bridge Diode, DBA 30 C	1					
VR101	4-2222-01450	Potentiometer 200Ω-B	1	D302	202-5-3210-20012	Zener Diode, GZA 20 Y	1					
VR201	4-2222-01450	Potentiometer 200Ω-B	1	D303	202-5-3210-20012	Zener Diode, GZA 20 Y	1					
CAPACITORS												
C128	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	D312	202-5-2500-13541	Diode, DS 135	1			
C129	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	D313	202-5-1400-00120	Diode, GMA 01	1			
C131	CD1-0-6160-0001V	Electrolytic	10μF	16V	1	D314	202-5-3210-12012	Zener Diode, GZA 12 Y	1			
C133	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	D401	202-5-3210-06212	Zener Diode, GZA 6.2 Y	1			
C134	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	D402	202-5-1400-00120	Diode, GMA 01	1			
C135	CC4-7-0500-KD00C	Ceramic	47pF	50V ±10%	1	D403	202-5-1400-00120	Diode, GMA 01	1			
C136	CD2-2-7500-0001V	Electrolytic	220μF	50V ±10%	1	D404	202-5-3200-02090	Zener Diode, GZA 2.0 Z	1			
C137	CD1-0-5500-0001V	Electrolytic	1μF	50V	1	D405	202-5-1400-00120	Diode, GMA 01	1			
C138	CD1-0-763A-0001V	Electrolytic	100μF	6.3V	1	Q106	203-5-5000-53661	Transistor, 2SC 536	1			
C139	CD1-0-6500-0001V	Electrolytic	10μF	50V	1	Q107	203-5-5000-53661	Transistor, 2SC 536	1			
C140	CC4-7-3500-ZG00C	Ceramic	0.047μF	50V +80,-20%	1	Q108	203-5-7230-60860	Transistor, 2SA 608	1			
C228	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	Q109	203-5-4561-01760	Transistor, 2SA 1017	1			
C229	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	Q110	203-5-4542-36360	Transistor, 2SC 2363	1			
C231	CD1-0-6160-0001V	Electrolytic	10μF	16V	1	Q111	203-5-1743-41650	Transistor, 2SC 3416	1			
C233	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	Q112	203-5-1711-35250	Transistor, 2SA 1352	1			
C234	CC2-2-1500-KD00C	Ceramic	220pF	50V ±10%	1	Q115	203-5-4921-01260	Transistor, 2SD 1012	1			
C235	CC4-7-0500-KD00C	Ceramic	47pF	50V ±10%	1	Q116	203-5-4921-01260	Transistor, 2SD 1012	1			
C236	CD2-2-7500-0001V	Electrolytic	220μF	50V	1	Q206	203-5-5000-53661	Transistor, 2SC 536	1			
C237	CD1-0-5500-0001V	Electrolytic	1μF	50V	1	Q207	203-5-5000-53661	Transistor, 2SC 536	1			
C238	CD1-0-763A-0001V	Electrolytic	100μF	6.3V	1	Q208	203-5-7230-60860	Transistor, 2SA 608	1			
C239	CD1-0-6500-0001V	Electrolytic	10μF	50V	1	Q209	203-5-4561-01760	Transistor, 2SA 1017	1			
C240	CC4-7-3500-ZG00C	Ceramic	0.047μF	50V +80,-20%	1	Q210	203-5-4542-36360	Transistor, 2SC 2363	1			
C302	CK4-7-3251-K000V	Metallized Mylar	0.047μF	250V ±10%	1	Q211	203-5-1743-41650	Transistor, 2SC 3416	1			
C303	CK4-7-3251-K000V	Metallized Mylar	0.047μF	250V ±10%	1	Q212	203-5-1711-35250	Transistor, 2SA 1352	1			
C304	CK4-7-3251-K000V	Metallized Mylar	0.047μF	250V ±10%	1	Q215	203-5-4921-01260	Transistor, 2SD 1012	1			
C305	CK4-7-3251-K000V	Metallized Mylar	0.047μF	250V ±10%	1	Q216	203-5-4921-01260	Transistor, 2SD 1012	1			
C306	CD3-3-8500-0005V	Electrolytic	3300μF	50V	1	Q301	203-5-8620-32550	Transistor, 2SD 325	1			
C307	CD3-3-8500-0005V	Electrolytic	3300μF	50V	1	Q302	203-5-6840-56050	Transistor, 2SB 560	1			
G308	CD4-7-6350-0001V	Electrolytic	47μF	35V	1	Q401	203-5-5000-53660	Transistor, 2SC 536	1			
C309	CD4-7-6350-0001V	Electrolytic	47μF	35V	1	Q402	203-5-5000-53660	Transistor, 2SC 536	1			
C310	CD1-0-5500-0001V	Electrolytic	1μF	50V	1	RESISTORS						
C311	CD1-0-5500-0001V	Electrolytic	1μF	50V	1	R136	RD1-0-2161-JH000	Carbon	1kΩ	1/6W	±5%	1
C321	CD3-3-6500-0001V	Electrolytic	33μF	50V	1	R137	RD5-6-3161-JH000	Carbon	56kΩ	1/6W	±5%	1
C401	CD3-3-7250-0001V	Electrolytic	330μF	25V	1	R138	RD5-6-1161-JH000	Carbon	560Ω	1/6W	±5%	1
C402	CD4-7-6100-0001V	Electrolytic	47μF	10V	1	R139	RD5-6-1161-JH000	Carbon	560Ω	1/6W	±5%	1
C403	CD4-7-6100-0001V	Electrolytic	47μF	10V	1	R140	RF8-2-0251-JK000	Fuse	82Ω	1/4W	±5%	1
C404	CC4-7-3500-ZG00C	Ceramic	0.047μF	50V +80,-20%	1	R141	RF3-3-0501-KH000	Fuse	33Ω	1/2W	±10%	1
C405	CD1-0-5500-0001V	Electrolytic	1μF	50V	1	R143	RD2-2-3161-JH000	Carbon	22kΩ	1/6W	±5%	1
SEMICONDUCTORS												
D101	205-5-9020-43010	Diode, DS 430	1	R144	RD3-9-2251-JM000	Carbon	3.9kΩ	1/4W	±5%	1		
D102	202-5-3210-22012	Zener Diode, GZA 22 Y	1	R145	RD2-7-1161-JH000	Carbon	270Ω	1/6W	±5%	1		
D103	202-5-1400-00120	Diode, GMA 01	1	R146	RD5-6-3161-JH000	Carbon	56kΩ	1/6W	±5%	1		
D104	202-5-1400-00120	Diode, GMA 01	1	R147	RD3-3-3161-JH000	Carbon	33kΩ	1/6W	±5%	1		
D105	DAA---STV--3H- -0	Diode, STV 3 H	1	R148	RF8-2-0251-JH000	Fuse	82Ω	1/4W	±5%	1		
or	141-0-1939-08790	Bias P.C.B. Assy	1	R149	RF3-3-0251-JK000	Fuse	33Ω	1/4W	±5%	1		
	4-2262-20970	Bias P.C.B.	1	R150	RF3-3-1251-JK000	Fuse	330Ω	1/4W	±5%	1		
				R151	RH2-2-B202-JH003	Metal	0.22Ω	2W	±5%	1		
				R152	RH2-2-B202-JH003	Metal	0.22Ω	2W	±5%	1		
				R153	RH1-0-0102-JZ003	Metal	10Ω	1W	±5%	1		

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
R154	RH1-0-0501-JZ003	Metal	10Ω 1/2W ±5%	1			
R155	RD1-5-3161-JH000	Carbon	15kΩ 1/6W ±5%	1	C147	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R156	RD4-7-2251-JM000	Carbon	4.7kΩ 1/4W ±5%	1	C148	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R157	RD4-7-2161-JH000	Carbon	4.7kΩ 1/6W ±5%	1	C149	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R171	RF2-2-A251-JK000	Fuse	2.2Ω 1/4W ±5%	1	C150	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R172	RF2-2-A251-JK000	Fuse	2.2Ω 1/4W ±5%	1	C151	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R236	RD1-0-2161-JH000	Carbon	1kΩ 1/6W ±5%	1	C201	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R237	RD5-6-3161-JH000	Carbon	56kΩ 1/6W ±5%	1	C202	CD4-7-5250-0001V Electrolytic	4.7μF 25V
R238	RD5-6-1161-JH000	Carbon	560Ω 1/6W ±5%	1	C203	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R239	RD5-6-1161-JH000	Carbon	560Ω 1/6W ±5%	1	C204	CD4-7-663A-0001V Electrolytic	47μF 6.3V
R240	RF8-2-0251-JK000	Fuse	82Ω 1/4W ±5%	1	C205	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R241	RF3-3-0501-KH000	Fuse	33Ω 1/2W ±10%	1	C206	CM1-8-3500-K00SV Mylar	0.018μF 50V ±10%
R243	RD2-2-3161-JH000	Carbon	22kΩ 1/6W ±5%	1	C207	CM4-7-2500-K00SV Mylar	0.0047μF 50V ±10%
R244	RD3-9-2251-JM000	Carbon	3.9kΩ 1/4W ±5%	1	C208	CD1-0-5500-0001V Electrolytic	1μF 50V
R245	RD2-7-1161-JH000	Carbon	270Ω 1/6W ±5%	1	C209	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R246	RD5-6-3161-JH000	Carbon	56kΩ 1/6W ±5%	1	C246	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R247	RD3-3-3161-JH000	Carbon	33kΩ 1/6W ±5%	1	C247	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R248	RF8-2-0251-JK000	Fuse	82Ω 1/4W ±5%	1	C248	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R249	RF3-3-0251-JK000	Fuse	33Ω 1/4W ±5%	1	C249	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R250	RF3-3-1251-JK000	Fuse	330Ω 1/4W ±5%	1	C250	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R251	RH2-2-B202-JH003	Metal	0.22Ω 2W ±5%	1	C251	CC2-2-1500-KD00C Ceramic	220pF 50V ±10%
R252	RH2-2-B202-JH003	Metal	0.22Ω 2W ±5%	1	C316	CD4-7-6250-0001V Electrolytic	47μF 25V
R253	RH1-0-0102-JZ003	Metal	10Ω 1W ±5%	1	C317	CD4-7-6250-0001V Electrolytic	47μF 25V
R254	RH1-0-0501-JZ003	Metal	10Ω 1/2W ±5%	1	C318	CC4-7-3500-ZG00C Ceramic	0.047μF 50V +80,-20%
R255	RD1-5-3161-JH000	Carbon	15kΩ 1/6W ±5%	1	C319	CC4-7-3500-ZG00C Ceramic	0.047μF 50V +80,-20%
R256	RD4-7-2251-JM000	Carbon	4.7kΩ 1/4W ±5%	1	C403	CC4-7-3500-ZG00C Ceramic	0.047μF 50V +80,-20%
R257	RD4-7-2161-JH000	Carbon	4.7kΩ 1/6W ±5%	1			
R271	RF2-2-A251-JK000	Fuse	2.2Ω 1/4W ±5%	1			
R272	RF2-2-A251-JK000	Fuse	2.2Ω 1/4W ±5%	1			
R302	RH6-8-0102-JZ003	Metal	68Ω 1W ±5%	1			
R303	RH4-7-1102-JZ003	Metal	470Ω 1W ±5%	1			
R304	RF1-0-2251-JH000	Fuse	1kΩ 1/4W ±5%	1			
R305	RD5-6-1251-JS000	Carbon	560Ω 1/4W ±5%	1			
R306	RD1-0-2251-JS000	Carbon	1kΩ 1/4W ±5%	1			
R307	RD4-7-1251-JS000	Carbon	470Ω 1/4W ±5%	1			
R308	RF1-0-1251-JH000	Fuse	100Ω 1/4W ±5%	1			
R309	RD1-0-1251-JS000	Carbon	100Ω 1/4W ±5%	1			
R401	RD2-2-3161-JH000	Carbon	22kΩ 1/6W ±5%	1			
R402	RD1-0-3161-JH000	Carbon	10kΩ 1/6W ±5%	1			
R403	RD4-7-2251-JM000	Carbon	4.7kΩ 1/4W ±5%	1			
R404	RD3-9-2161-JH000	Carbon	3.9kΩ 1/6W ±5%	1			
R405	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R406	RD2-2-3161-JH000	Carbon	22kΩ 1/6W ±5%	1			
R407	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R408	RD1-0-3161-JH000	Carbon	10kΩ 1/6W ±5%	1			
R409	RD1-0-2161-JH000	Carbon	1kΩ 1/6W ±5%	1			
	PHONO P.C.B. ASSY						
PCB2	141-0-1939-04760	Phono P.C.B. Assy	1				
	4-2262-19040	Phono P.C.B.	1				
	4-2352-01650	Pin Jack 4P (Phono, Tuner, CD/Aux, Tape)	3				
	CAPACITORS						
C101	CC2-2-1500-KD00C	Ceramic	220pF 50V ±10%	1			
C102	CD4-7-5250-0001V	Electrolytic	4.7μF 25V	1			
C103	CC2-2-1500-KD00C	Ceramic	220pF 50V ±10%	1			
C104	CD4-7-663A-0001V	Electrolytic	47μF 6.3V	1			
C105	CC2-2-1500-KD00C	Ceramic	220pF 50V ±10%	1			
C106	CM1-8-3500-K00SV	Mylar	0.018μF 50V ±10%	1			
C107	CM4-7-2500-K00SV	Mylar	0.0047μF 50V ±10%	1			
C108	CD1-0-5500-0001V	Electrolytic	1μF 50V	1			
C109	CC2-2-1500-KD00C	Ceramic	220pF 50V ±10%	1			
C146	CC2-2-1500-KD00C	Ceramic	220pF 50V ±10%	1			
	SEMICONDUCTOR						
	IC401	IJJ---NJM0-72D-E	IC, NJM 072D E	1			
	RESISTORS						
R101	RD1-5-2161-JH000	Carbon	1.5kΩ 1/6W ±5%	1			
R102	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R103	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R104	RD2-7-1161-JH000	Carbon	270Ω 1/6W ±5%	1			
R105	RD2-2-4161-JH000	Carbon	220kΩ 1/6W ±5%	1			
R106	RD1-5-3161-JH000	Carbon	15kΩ 1/6W ±5%	1			
R107	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R108	RD2-2-2161-JH000	Carbon	2.2kΩ 1/6W ±5%	1			
R201	RD1-5-2161-JH000	Carbon	1.5kΩ 1/6W ±5%	1			
R202	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R203	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R204	RD2-7-1161-JH000	Carbon	270Ω 1/6W ±5%	1			
R205	RD2-2-4161-JH000	Carbon	220kΩ 1/6W ±5%	1			
R206	RD1-5-3161-JH000	Carbon	15kΩ 1/6W ±5%	1			
R207	RD1-0-4161-JH000	Carbon	100kΩ 1/6W ±5%	1			
R208	RD2-2-2161-JH000	Carbon	2.2kΩ 1/6W ±5%	1			
R310	RD1-0-2251-JS000	Carbon	1kΩ 1/4W ±5%	1			
R311	RD1-0-2251-JS000	Carbon	1kΩ 1/4W ±5%	1			
	GRAPHIC EQUALIZER P.C.B. ASSY						
PCB3	141-0-1939-04770	Graphic Equalizer P.C.B. Assy	1				
	4-2262-19050	Graphic Equalizer P.C.B.	1				
VR403	4-2229-75140	Slide Volume 250kΩ-Wx2 (63Hz)	1				
VR404	4-2229-75140	Slide Volume 250kΩ-Wx2 (250Hz)	1				
VR405	4-2229-75140	Slide Volume 250kΩ-Wx2 (1kHz)	1				
VR406	4-2229-75140	Slide Volume 250kΩ-Wx2 (4kHz)	1				
VR407	4-2229-75140	Slide Volume 250kΩ-Wx2 (16kHz)	1				
	CAPACITORS						
C110	CD1-0-5500-0001V	Electrolytic	1μF 50V	1			
C111	CC1-0-1500-KD00C	Ceramic	100pF 50V ±10%	1			
C112	CC6-8-0500-KD00C	Ceramic	68pF 50V ±10%	1			
C113	CC1-0-0500-DD00C	Ceramic	10pF 50V ±0.5%	1			

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
C14	CD2-2-6250-0001V	Electrolytic 22 μ F 25V	1	R128	RD1-5-4161-JH000	Carbon 150k Ω 1/6W \pm 5%	1
C15	CM1-8-3500-K00SV	Mylar 0.018 μ F 50V \pm 10%	1	R129	RD1-0-4161-JH000	Carbon 100k Ω 1/6W \pm 5%	1
C16	CM8-2-2500-K00SV	Mylar 0.0082 μ F 50V \pm 10%	1	R130	RD3-9-3161-JH000	Carbon 39k Ω 1/6W \pm 5%	1
C17	CM4-7-2500-K00SV	Mylar 0.0047 μ F 50V \pm 10%	1	R131	RD3-3-3161-JH000	Carbon 33k Ω 1/6W \pm 5%	1
C18	CM1-5-2500-K00SV	Mylar 0.0015 μ F 50V \pm 10%	1	R132	RD2-2-3161-JH000	Carbon 22k Ω 1/6W \pm 5%	1
C19	CC6-8-1500-KE00C	Ceramic 680pF 50V \pm 10%	1	R209	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
C20	CD2-2-5500-0001V	Electrolytic 2.2 μ F 50V	1	R210	RD5-6-3161-JH000	Carbon 56k Ω 1/6W \pm 5%	1
C21	CD3-3-4500-0001V	Electrolytic 0.33 μ F 50V	1	R211	RD4-7-2161-JH000	Carbon 4.7k Ω 1/6W \pm 5%	1
C22	CM8-2-3500-J00TV	Mylar 0.082 μ F 50V \pm 5%	1	R212	RD5-6-2161-JH000	Carbon 5.6k Ω 1/6W \pm 5%	1
C23	CM2-2-3500-K00SV	Mylar 0.022 μ F 50V \pm 10%	1	R213	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
C24	CM4-7-2500-K00SV	Mylar 0.0047 μ F 50V \pm 10%	1	R214	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
C210	CD1-0-5500-0001V	Electrolytic 1 μ F 50V	1	R215	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
C211	CC1-0-1500-KD00C	Ceramic 100pF 50V \pm 10%	1	R216	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
C212	CC6-8-0500-KD00C	Ceramic 68pF 50V \pm 10%	1	R217	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
C213	CC1-0-0500-DD00C	Ceramic 10pF 50V \pm 0.5%	1	R218	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
C214	CD2-2-6250-0001V	Electrolytic 22 μ F 25V	1	R219	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
C215	CM1-8-3500-K00SV	Mylar 0.018 μ F 50V \pm 10%	1	R220	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
C216	CM8-2-2500-K00SV	Mylar 0.0082 μ F 50V \pm 10%	1	R221	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
C217	CM4-7-2500-K00SV	Mylar 0.0047 μ F 50V \pm 10%	1	R222	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
C218	CM1-5-2500-K00SV	Mylar 0.0015 μ F 50V \pm 10%	1	R223	RD1-2-2161-JH000	Carbon 1.2k Ω 1/6W \pm 5%	1
C219	CC6-8-1500-KE00C	Ceramic 680pF 50V \pm 10%	1	R224	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
C220	CD2-2-5500-0001V	Electrolytic 2.2 μ F 50V	1	R225	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
C221	CD3-3-4500-0001V	Electrolytic 0.33 μ F 50V	1	R226	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
C222	CM8-2-3500-J00TV	Mylar 0.082 μ F 50V \pm 5%	1	R227	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
C223	CM2-2-3500-K00SV	Mylar 0.022 μ F 50V \pm 10%	1	R228	RD1-5-4161-JH000	Carbon 150k Ω 1/6W \pm 5%	1
C224	CM4-7-2500-K00SV	Mylar 0.0047 μ F 50V \pm 10%	1	R229	RD1-0-4161-JH000	Carbon 100k Ω 1/6W \pm 5%	1
C312	CD4-7-6250-0001V	Electrolytic 47 μ F 25V	1	R230	RD3-9-3161-JH000	Carbon 39k Ω 1/6W \pm 5%	1
C313	CD4-7-6250-0001V	Electrolytic 47 μ F 25V	1	R231	RD3-3-3161-JH000	Carbon 33k Ω 1/6W \pm 5%	1
C314	CC4-7-3500-ZG00C	Ceramic 0.047 μ F 50V \pm 80,-20%	1	R232	RD2-2-3161-JH000	Carbon 22k Ω 1/6W \pm 5%	1
C315	CC4-7-3500-ZG00C	Ceramic 0.047 μ F 50V \pm 80,-20%	1				

SEMICONDUCTORS

IC402	206-5-1696-45810	IC, LA 6458 S	1
Q101	203-5-5000-53660	Transistor, 2SC 536	1
Q102	203-5-5000-53660	Transistor, 2SC 536	1
Q103	203-5-5000-53660	Transistor, 2SC 536	1
Q104	203-5-5000-53660	Transistor, 2SC 536	1
Q105	203-5-5000-53660	Transistor, 2SC 536	1
Q201	203-5-5000-53660	Transistor, 2SC 536	1
Q202	203-5-5000-53660	Transistor, 2SC 536	1
Q203	203-5-5000-53660	Transistor, 2SC 536	1
Q204	203-5-5000-53660	Transistor, 2SC 536	1
Q205	203-5-5000-53660	Transistor, 2SC 536	1

RESISTORS

R109	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
R110	RD5-6-3161-JH000	Carbon 56k Ω 1/6W \pm 5%	1
R111	RD4-7-2161-JH000	Carbon 4.7k Ω 1/6W \pm 5%	1
R112	RD5-6-2161-JH000	Carbon 5.6k Ω 1/6W \pm 5%	1
R113	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
R114	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
R115	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
R116	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
R117	RD3-9-1161-JH000	Carbon 390 Ω 1/6W \pm 5%	1
R118	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
R119	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
R120	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
R121	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
R122	RD1-5-3161-JH000	Carbon 15k Ω 1/6W \pm 5%	1
R123	RD1-2-2161-JH000	Carbon 1.2k Ω 1/6W \pm 5%	1
R124	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
R125	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
R126	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1
R127	RD1-5-2161-JH000	Carbon 1.5k Ω 1/6W \pm 5%	1

VOLUME P.C.B. ASSY

PCB4	141-0-1939-04781	Volume P.C.B. Assy	1
	4-2262-19060	Volume P.C.B.	1
	4-2319-77170	Switch Push 1Key (Loudness)	1
VR401	4-2229-75150	Slide Volume 250k Ω -W (Balance)	1
VR402	4-2229-75160	Slide Volume 100k Ω -Ax2 (Volume)	1

CAPACITORS

C126	CM3-9-3500-K00SV	Mylar 0.039 μ F 50V \pm 10%	1
C127	CC2-7-1500-KE00R	Ceramic 270pF 50V \pm 10%	1
C226	CM3-9-3500-K00SV	Mylar 0.039 μ F 50V \pm 10%	1
C227	CC2-7-1500-KE00R	Ceramic 270pF 50V \pm 10%	1

RESISTORS

R133	RD4-7-2161-JH000	Carbon 4.7k Ω 1/6W \pm 5%	1
R134	RD6-8-2251-JM000	Carbon 6.8k Ω 1/4W \pm 5%	1
R233	RD4-7-2161-JH000	Carbon 4.7k Ω 1/6W \pm 5%	1
R234	RD6-8-2251-JM000	Carbon 6.8k Ω 1/4W \pm 5%	1

POWER SWITCH P.C.B. ASSY

PCB5	141-0-1939-04791	Power Switch P.C.B. Assy	1
	4-2262-19070	Power Switch P.C.B.	1
	△ 4-2312-05710	Switch Push Power (Power)	1
	4-2319-77180	Switch Push 1Key (Speakers)	1
	△ 4-2349-20570	Fuse T2.5A	2
	4-2352-00200	Fuse Holder	4
	4-2352-00920	Jack 7P (Headphones)	1
J08	4-2362-00440	Plug 3P	1
J10	4-2439-72191	Wire 4 Parallel	1
	4-2372-00830	EC Terminal 1P	2
	111-2-6220-11100	Wire Wrap Terminal	4
	131-2-6114-01400	Cover Safty	1
	141-2-1439-14200	Label (Fuse)	1

P.C.BOARD PARTS LIST(Continued)

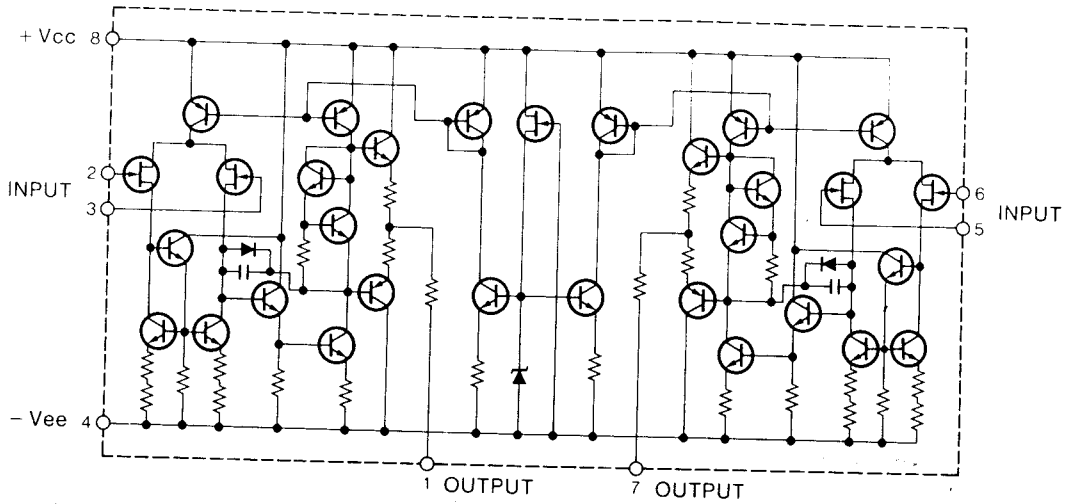
Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
CAPACITOR				SEMICONDUCTORS			
C301	Δ 4-2239-70970	Ceramic	0.01 μ F 400V	1	D501	D00---SLP--173B- L.E.D., SLP 173 B	1
RESISTORS							
R158	RH3-9-1102-JZ000	Metal	390 Ω 1W \pm 5%	1	D502	D00---SLP--173B- L.E.D., SLP 173 B	1
R160	RD2-2-3251-JM000	Carbon	22k Ω 1/4W \pm 5%	1	D503	D00---SLP--173B- L.E.D., SLP 173 B	1
R258	RH3-9-1102-JZ000	Metal	390 Ω 1W \pm 5%	1	D504	D00---SLP--173B- L.E.D., SLP 173 B	1
R260	RD2-2-3251-JM000	Carbon	22k Ω 1/4W \pm 5%	1	D505	D00---SLP--173B- L.E.D., SLP 173 B	1
SPEAKER TERMINAL P.C.B. ASSY							
PCB6	141-0-1939-04801	Speaker Terminal P.C.B. Assy		1	D506	D00---SLP--173B- L.E.D., SLP 173 B	1
	4-2262-19080	Speaker Terminal P.C.B.		1	D507	D00---SLP--173B- L.E.D., SLP 173 B	1
	4-2372-01160	Speaker 8P Terminal (Sperker Terminal)		1	IC101	4-2069-73580 IC, IR 2E29	1
CAPACITORS				RESISTORS			
C144	CC1-0-2500-MF00R	Ceramic	0.001 μ F 50V \pm 20%	1	R161	RD1-0-1161-JH000 Carbon	100 Ω 1/6W \pm 5%
C145	CC1-0-2500-MF00R	Ceramic	0.001 μ F 50V \pm 20%	1	R162	RD1-0-3161-JH000 Carbon	10k Ω 1/6W \pm 5%
C244	CC1-0-2500-MF00R	Ceramic	0.001 μ F 50V \pm 20%	1	LED IND. P.C.B. ASSY		
C245	CC1-0-2500-MF00R	Ceramic	0.001 μ F 50V \pm 20%	1	PCB8	141-0-1939-04824 LED Ind. P.C.B. Assy	1
POWER METER P.C.B. ASSY							
PCB7	141-0-1939-04814	Power Meter P.C.B. Assy		1		4-2262-19100 LED Ind. P.C.B.	1
	4-2262-19090	Power Meter P.C.B.		1		131-2-4208-46000 Spacer (L.E.D.)	1
	131-2-4208-46100	Spacer (L.E.D.)		1	SEMICONDUCTOR		
J08	131-0-4006-33609	Cord Assy		1	D307	DYY---SLR--55URC L.E.D., SLR 55 URC (Power)	1
CAPACITORS				RESISTOR			
C141	CD1-0-4500-0002V	Electrolytic	0.1 μ F 50V	1	R501	RD6-8-1251-JM000 Carbon	680 Ω 1/4W \pm 5%
C142	CD4-7-5350-0002V	Electrolytic	4.7 μ F 35V	1	NOTE:		
C143	CD1-0-5500-0002V	Electrolytic	1 μ F 50V	1	1. Parts order must contain Model Number, Part Number and Description.		
C320	CD1-0-6350-0002V	Electrolytic	10 μ F 35V	1	2. Ordering quantity of screws and resistors must be multiple of 10 pcs.		

PRODUCT SAFETY NOTICE

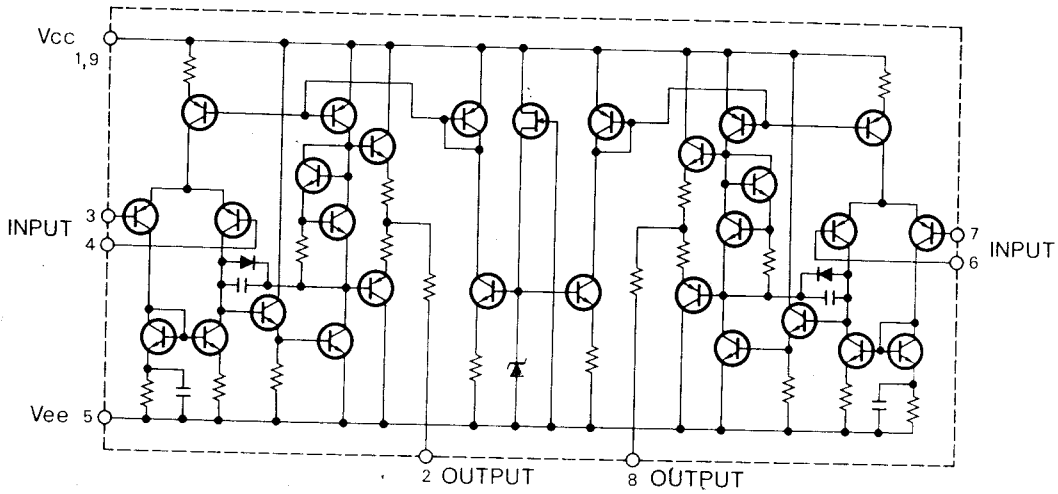
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol Δ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with Δ , use only the replacement parts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

IC EQUIVALENT CIRCUIT & BLOCK DIAGRAM

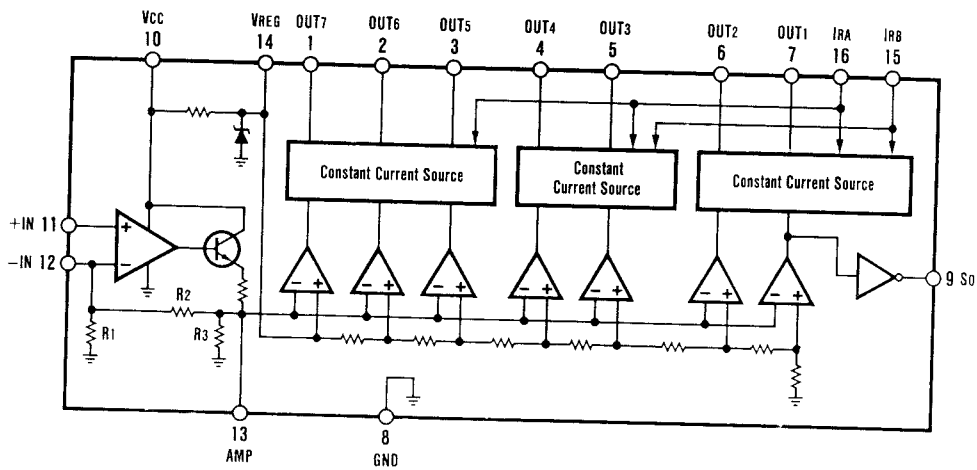
PHONO EQUALIZER AMP IC NJM072D



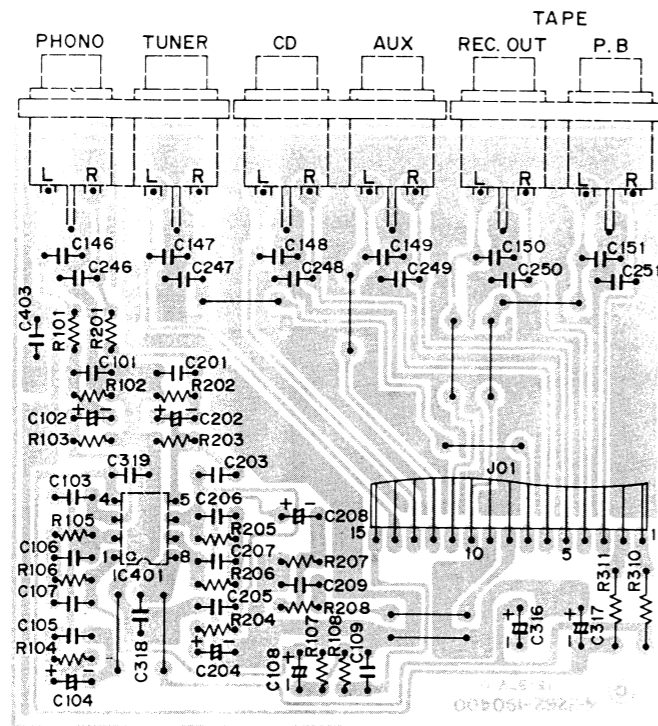
GRAPHIC EQUALIZER AMP IC LA6458S



METER DRIVE AMP IC IR2E29

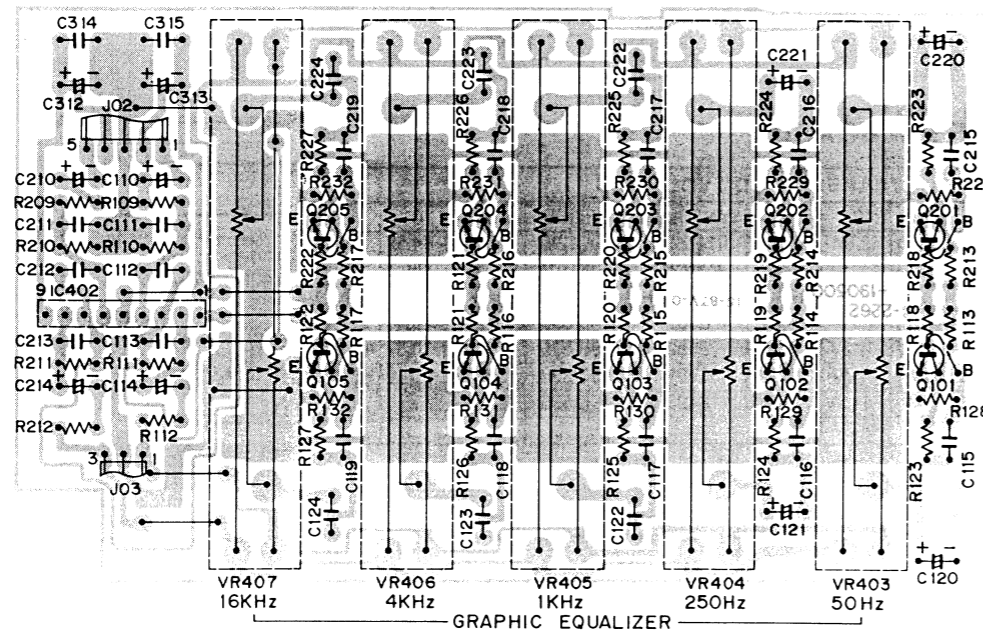


PHONO P.C.BOARD (BOTTOM VIEW)



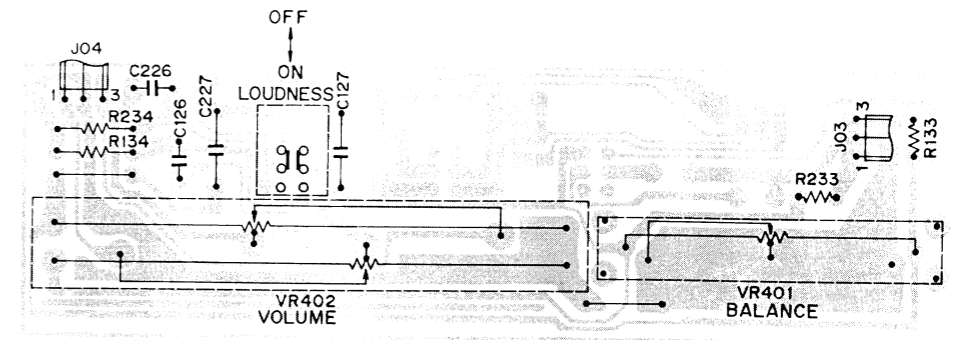
IC PIN NUMBERS DC VOLTAGES									
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8
IC401	NJM072	0V	0V	0.1V	-19.9V	0V	0V	0V	20.5V

GRAPHIC EQUALIZER P.C.BOARD (BOTTOM VIEW)

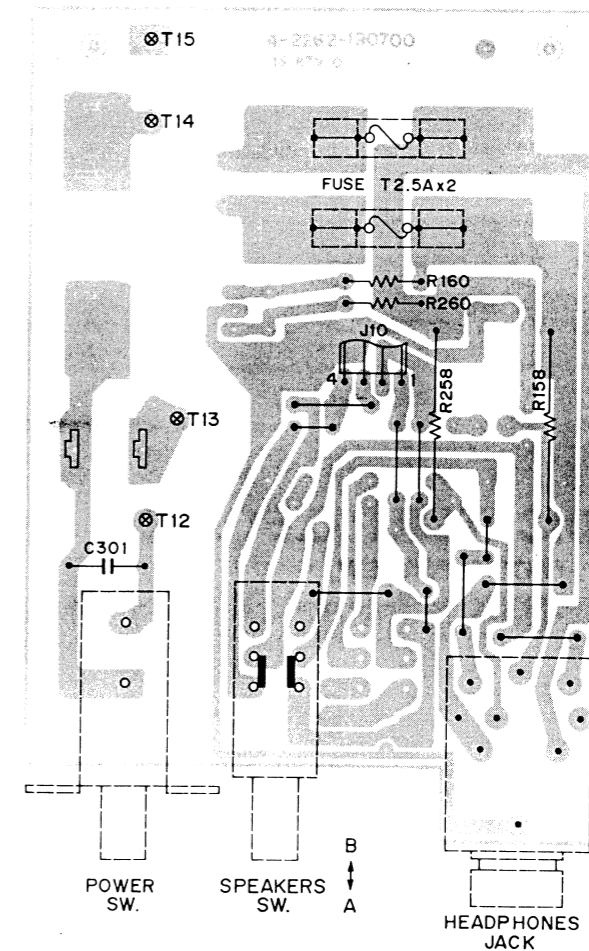


IC PIN NUMBERS DC VOLTAGES										
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9
IC402	LA 6458S	19.6V	0V	0V	0V	-19.0V	0V	0V	0V	19.6V

VOLUME P.C.BOARD (BOTTOM VIEW)

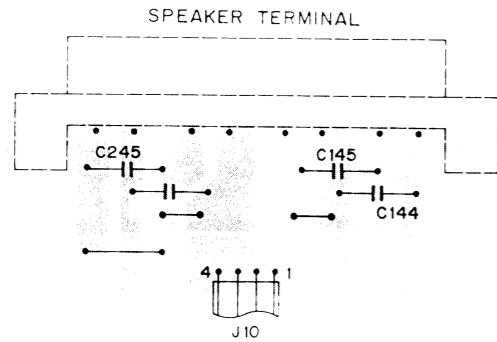


POWER SWITCH P.C.BOARD (BOTTOM VIEW)

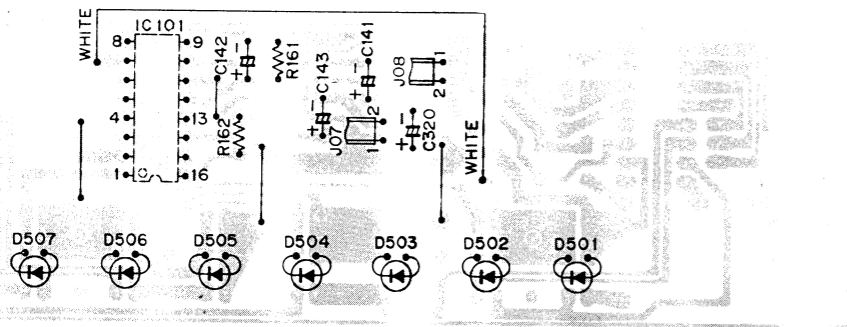


TRANSISTOR DC VOLTAGES				
SYMBOL No.	DEVICE	B	C	E
Q101,201	2SC 536	-0.5V	19.0V	-1.1V
Q102,202	2SC 536	-0.2V	19.0V	-0.9V
Q103,203	2SC 536	-0.1V	19.0V	-0.7V
Q104,204	2SC 536	-0.1V	19.0V	-0.7V
Q105,205	2SC 536	0V	19.0V	-0.7V

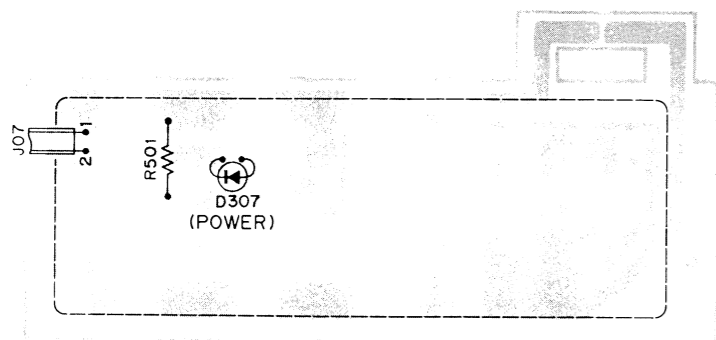
SPEAKER TERMINAL P.C.BOARD (BOTTOM VIEW)



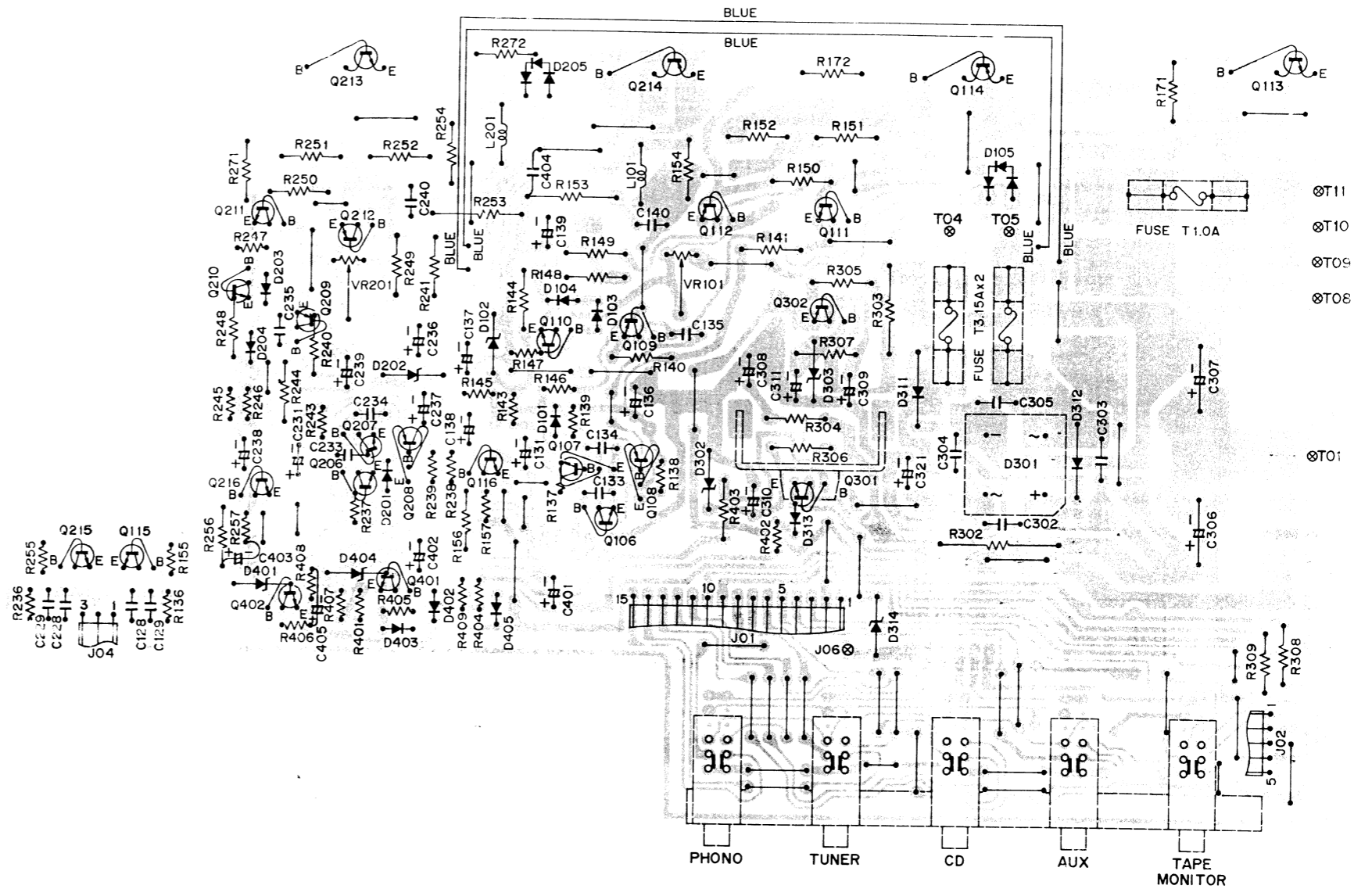
POWER METER P.C.BOARD (BOTTOM VIEW)



LED INDICATOR P.C.BOARD (BOTTOM VIEW)



MAIN AMPLIFIER P.C.BOARD (BOTTOM VIEW)



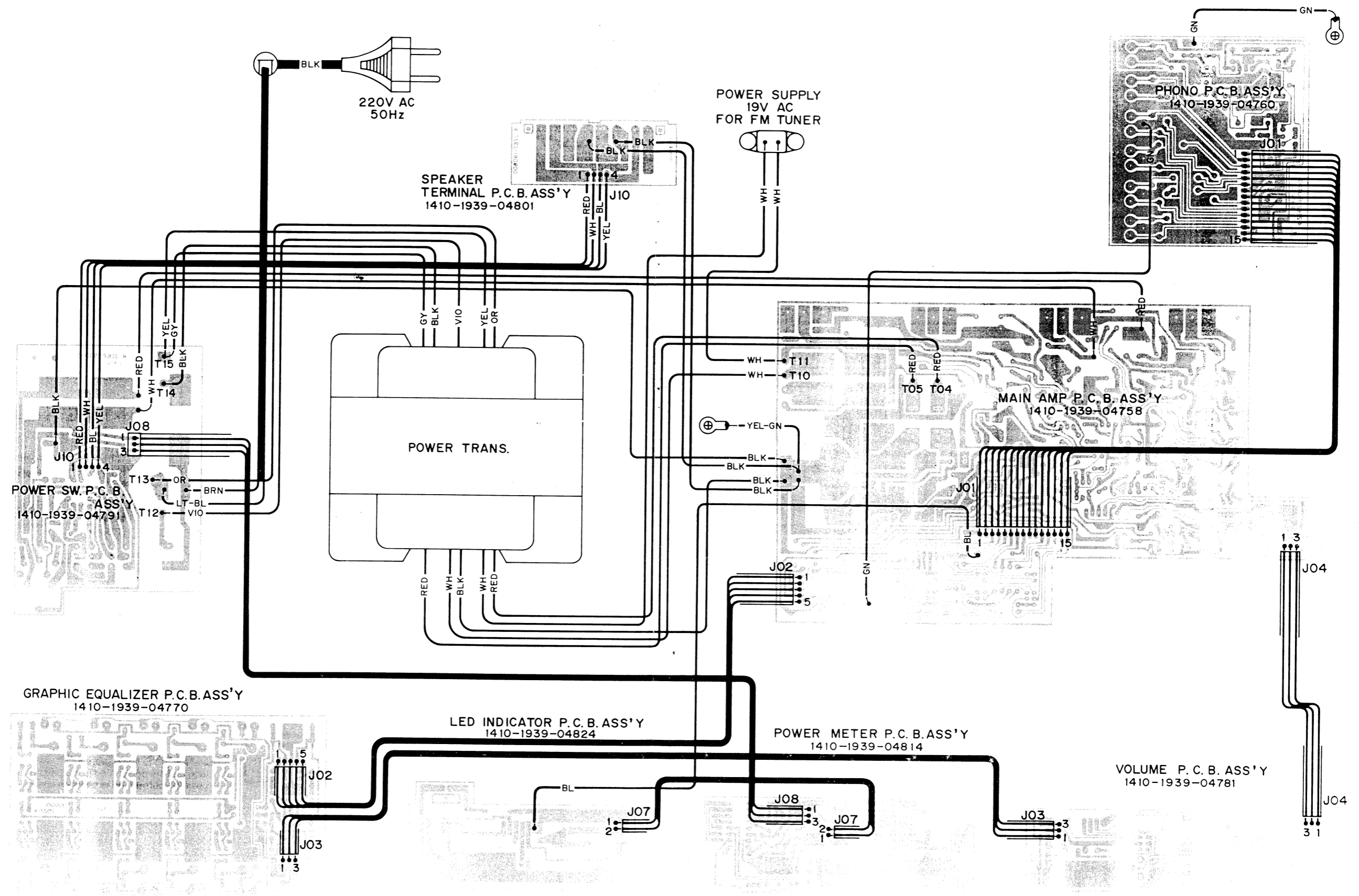
MAIN AMPLIFIER P.C.BOARD

TRANSISTOR DC VOLTAGES									
SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q106,206	2SC 536	-0.1V	42.8V	-0.7V	Q114,214	2SA 1264	-0.6V	-44.5V	0V
Q107,207	2SC 536	-0.1V	43.2V	-0.7V	Q115,215	2SD 1012	0.1V	0V	0V
Q108,208	2SA 608	43.2V	42.8V	43.9V	Q116,216	2SD 1012	0.6V	0V	0V
Q109,209	2SA 1017	42.8V	1.1V	43.8V	Q301	2SD 325	21.1V	41.3V	20.5V
Q110,210	2SC 2363	-43.1V	-1.2V	-43.6V	Q302	2SB 560	-20.8V	-30.5V	-20.2V
Q111,211	2SC 3416	1.1V	44.2V	0.5V	Q401	2SC 536	2.1V	1.5V	1.4V
Q112,212	2SA 1352	-1.2V	-44.5V	-0.6V	Q402	2SC 536	0.1V	2.7V	0V
Q113,213	2SC 3181	0.5V	44.2V	0V					

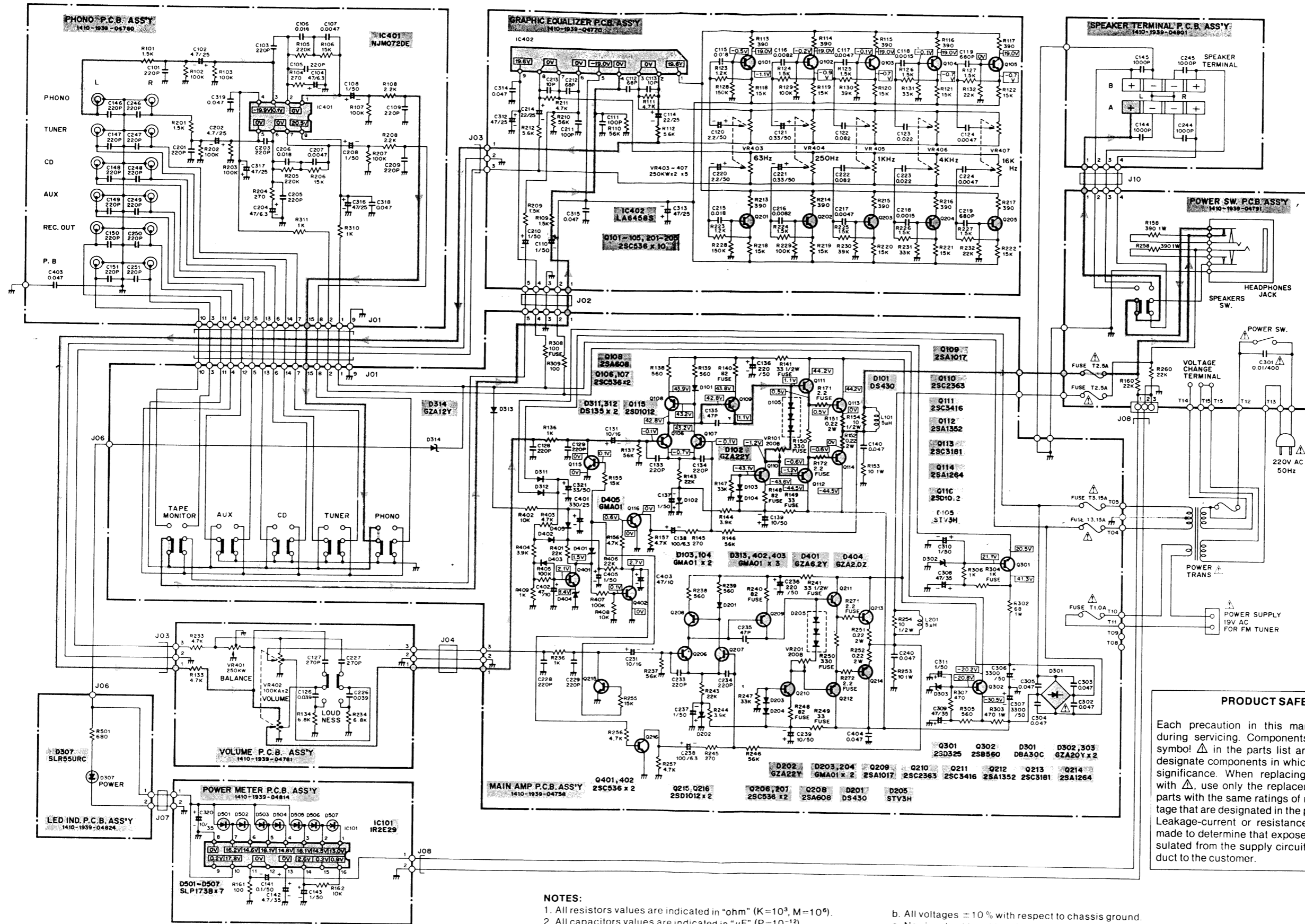
POWER METER P.C.BOARD

IC PIN NUMBERS DC VOLTAGES																	
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC101	IR2E29	13.0V	14.5V	16.1V	14.6V	16.1V	14.6V	16.2V	0V	0.2V	17.8V	0V	0V	0V	2.6V	0.2V	0.9V

POINT TO POINT WIRING DIAGRAM



SCHEMATIC DIAGRAM



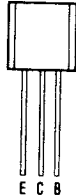
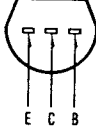
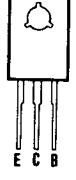

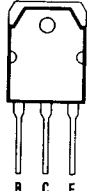

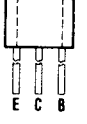

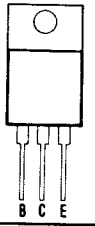

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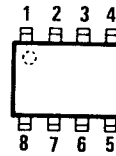
- NOTES:**
1. All resistors values are indicated in "ohm" (K=10³, M=10⁶).
 2. All capacitors values are indicated in "μF" (P=10⁻¹²).
 3. All voltages indicated on the schematics are measured under the following conditions.
 - a. Use a V.T.V.M.
 - b. All voltages ± 10% with respect to chassis ground.
 - c. No signals at input terminals.
 - d. AC input at 220 volts 50 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.

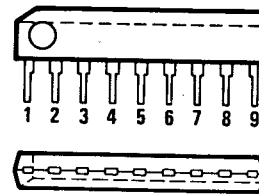
SEMICONDUCTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SA608 2SA1017 2SB560 2SC536 2SC2363		
2SA1352 2SC3416		
2SA1264 2SC3181		
2SD1012		
2SD325		
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

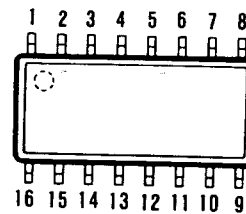
NJM072DE BOTTOM VIEW



LA6458S FRONT/BOTTOM VIEWS



IR2E29 BOTTOM VIEW





FISHER Hi-Fi Europa Vertriebs GmbH

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8000 München 82 Tlx: 524033

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Sie sparen so wertvolle Zeit. Vielen Dank.