

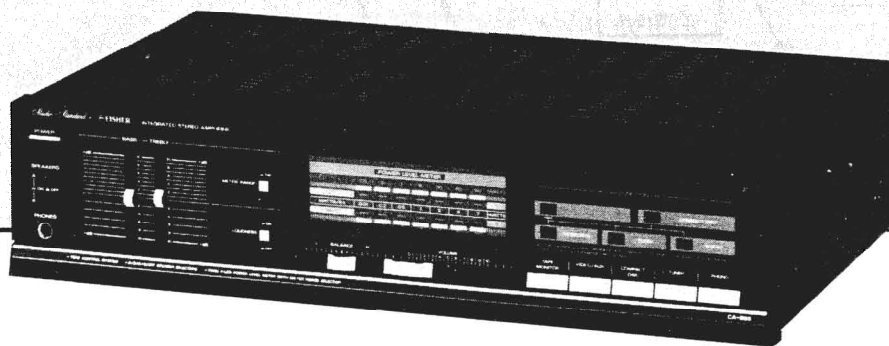
**SERVICE MANUAL**



**FISHER**

**CA-866**

**Integrated  
Stereo Amplifier  
(EUROPE)**



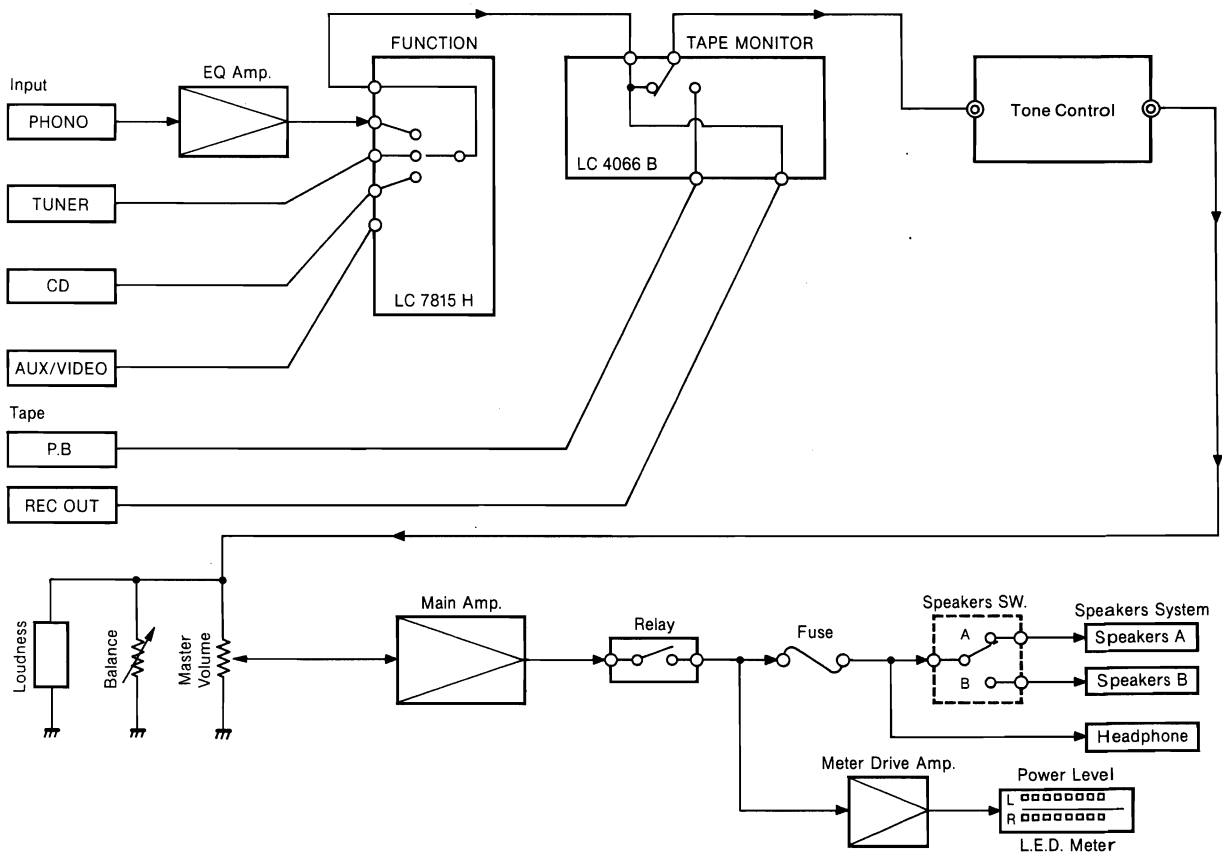
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WM-16839

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## FUNCTIONAL BLOCK DIAGRAM

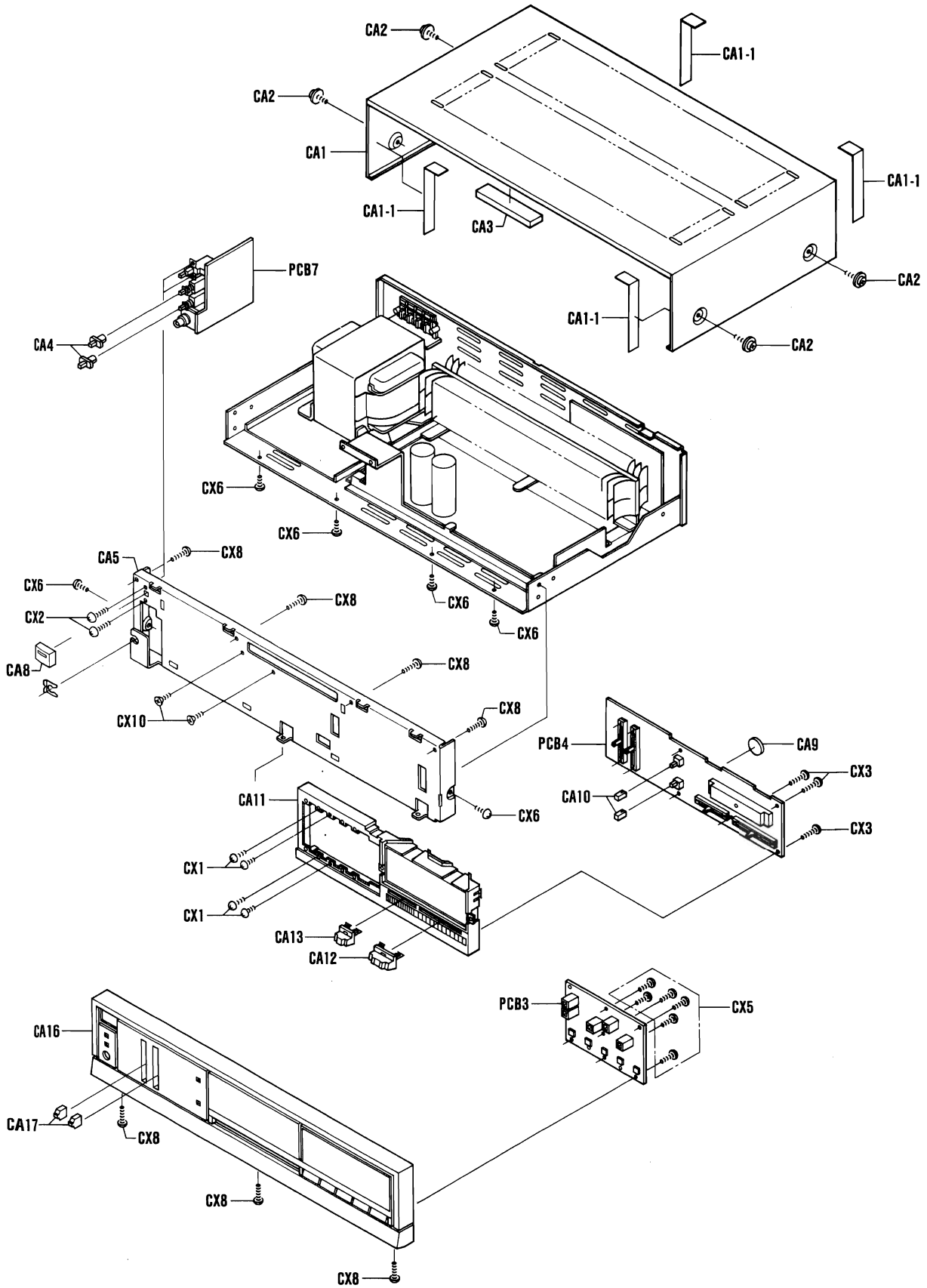


# SPECIFICATIONS

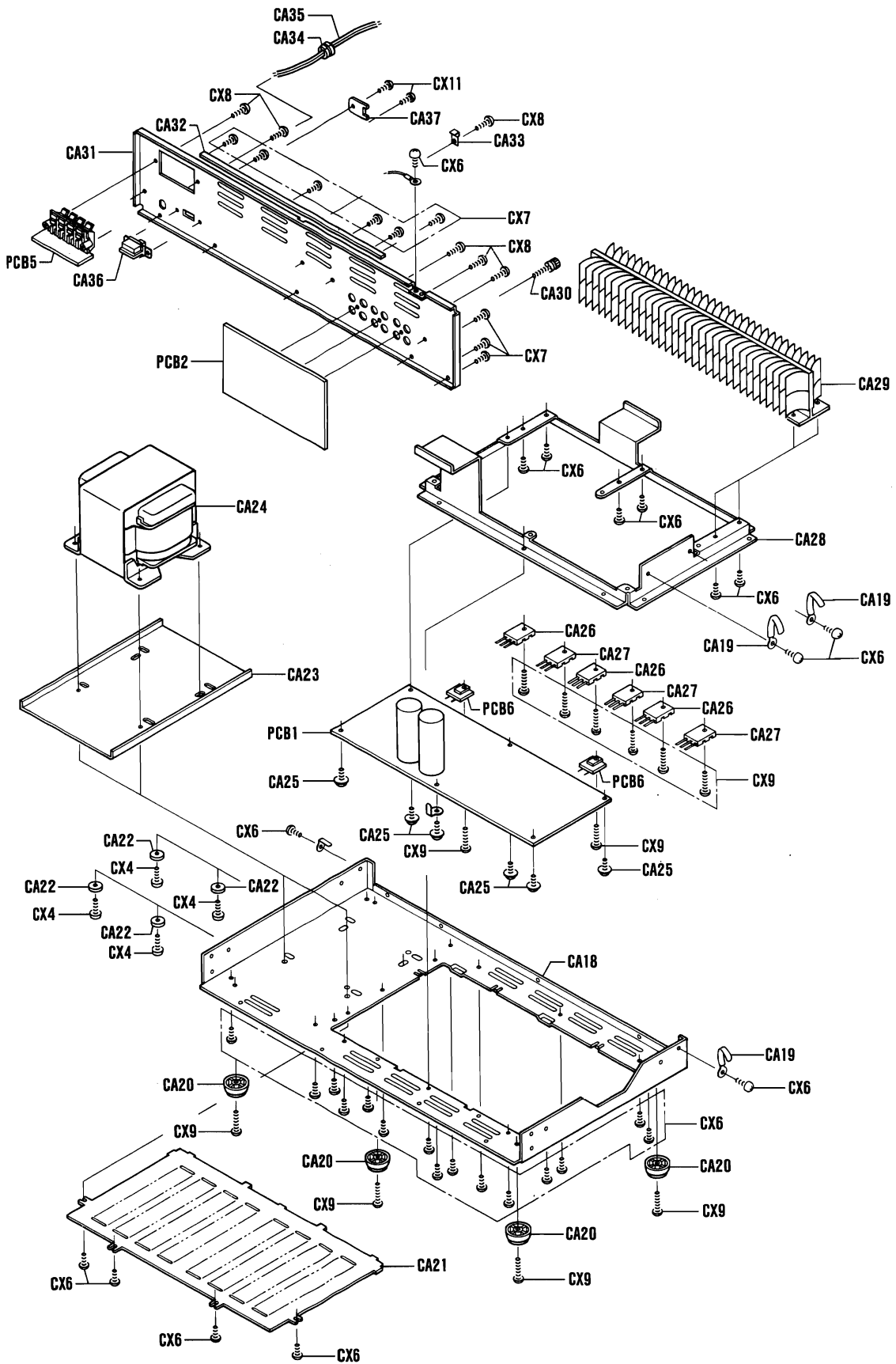
AMPLIFIER	CA-866
<b>POWER AMPLIFIER SECTION</b> Minimum RMS sine wave power per channel within stated bandwidth at no more than stated distortion and with 8-ohm load	100 Watts
<b>Power Bandwidth</b>	20 Hz – 20 kHz
<b>Total Harmonic Distortion</b>	0.05 %
I.M. Distortion	0.05 %
<b>Speaker Damping</b>	> 20
<b>PREAMPLIFIER SECTION</b> Frequency Response	
Phono (RIAA)	±1 dB
Aux (20 Hz – 20 kHz)	±1 dB
<b>Input Sensitivity and Impedance</b>	
Phono	2.5 mV/50 kΩ
Tape Monitor	150 mV/50 kΩ
Tuner/Auxiliary	150 mV/50 kΩ
<b>Phono Max. Input Capability</b>	
Phono	125 mV
<b>Tone Controls</b>	
Bass (100 Hz)	±10 dB
Treble (10 kHz)	±10 dB
<b>Loudness Contour (100 Hz/10 kHz)</b>	+8 dB/+4 dB
<b>Hum &amp; Noise (IHF Short Circuit, A Network)</b>	
Phono	70 dB
Tape Monitor	90 dB
Tuner/Auxiliary	90 dB
<b>GENERAL</b>	
Power Requirements (50 Hz)	110 / 220 V AC
Power Consumption	480 Watts
Dimensions (W x D x H)	440 x 270 x 110 mm
Weight (approx.)	8.4 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)



# PARTS LIST

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
<b>PACKING PARTS LIST</b>							
	3-9415-10300	Bag Polyethylene	1	CA31	141-2-1219-34803	Panel Rear	1
	131-6-3069-16350	Patching Sheet	1	CA32	241-2-5205-15800	Cushion	1
	131-6-9459-00300	Rubber Band	1	CA33	141-2-3159-03301	Bracket Cover	1
	141-6-1139-86236	Outer Cor Carton	1	CA34	131-2-6111-14200	Bushing (Power Cord)	1
	141-6-1469-00400	Pad Top	1	CA35	△ 4-2432-00200	Power Cord	1
	141-6-1469-04000	Case Styrofoam (Left)	1	CA36	△ 4-2312-01020	Switch Slide (AC Selector) [SW411]	1
	141-6-1469-04001	Case Styrofoam (Right)	1	CA37	131-2-7104-00500	Plate Pad Switch	1
	141-6-2519-22290	Sheet Polyethylene	1	<b>P.C.B. ASSY PARTS LIST</b>			
	141-6-4559-03300	Serial No. Sheet	1	PCB1	141-0-1939-09162	Main P.C.B. Assy	1
<b>ACCESSORIES PARTS LIST</b>				PCB2	141-0-1939-09131	Input P.C.B. Assy	1
	131-6-2719-10401	Bag Fan	1	PCB3	141-0-1939-09140	Function P.C.B. Assy	1
	142-6-4119-32895	Explanatory Booklet	1	PCB4	141-0-1939-09151	Tone Control P.C.B. Assy	1
<b>CABINET &amp; CHASSIS PARTS LIST</b>				PCB5	141-0-1939-09172	Speaker Terminal P.C.B. Assy	1
	4-2379-21520	Terminal Lug	2	PCB6	141-0-1939-09180	Transistor P.C.B. Assy	2
	141-2-1219-03300	Serial No. Sheet	1	PCB7	141-0-1939-09193	Switch P.C.B. Assy	1
CA1	131-2-1410-33100	Cover	1	<b>SCREW PARTS LIST</b>			
CA1-1	131-2-3202-13400	Metal Reinf	4	CX1	101-3-1302-00311	Screw, Pan Hd. +M2.0x3	4
CA2	141-2-4219-38400	Screw, Bind Hd. Tapping-B Sems +M4.0x8	4	CX2	101-3-1303-00611	Screw, Pan Hd. +M3.0x6	2
CA3	131-2-5205-33300	Cushion	1	CX3	143-3-1302-60611	Screw, Pan Hd. Tapping-B, +M2.6x6	3
CA4	131-2-1601-69601	Knob (Speaker Selector)	2	CX4	143-3-1704-00811	Screw, Bind Hd. Tapping-B, +M4.0x8	4
CA5	141-2-2149-24300	Panel Front	1	CX5	143-3-1902-60611	Screw, Brazier Hd. Tapping-B, +M2.6x6	6
CA8	131-2-1601-91600	Knob Power	1	CX6	143-3-1903-00611	Screw, Brazier Hd. Tapping-B, +M3.0x6	36
CA9	131-2-5205-33500	Cushion	1	CX7	143-3-1903-00618	Screw, Brazier Hd. Tapping-B, +M3.0x6	9
CA10	131-2-1601-91700	Knob Push	2	CX8	143-3-1903-00818	Screw, Brazier Hd. Tapping-B, +M3.0x8	13
CA11	141-0-3519-24401	Mount P.C.B. Assy	1	CX9	143-3-1903-01011	Screw, Brazier Hd. Tapping-B, +M3.0x10	12
	141-2-3519-74300	Mount P.C.B.	1	CX10	143-3-1203-00611	Screw, Flat Hd. Tapping-B, +M3.0x6	2
	141-2-1449-65105	Screen LED	1	CX11	101-3-1303-00618	Screw, Pan Hd., +M3.0x6	2
CA12	131-2-1701-91900	Knob Volume	1	<b>NOTES:</b>			
CA13	131-2-1601-92000	Knob Balance	1	1. Parts order must contain Model Number, Part Number and Description.			
CA16	131-0-1016-44502	Panel Decorate Assy	1	2. Ordering quantity of screws and resistors must be multiple of 10 pcs.			
	131-2-1205-28800	Decorate Plate Dial	1	<b>PRODUCT SAFETY NOTICE</b> 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.			
	131-2-1601-91800	Knob Function	1				
	141-2-1129-15801	Cabinet Front	1				
	141-2-1449-61243	Plate Front	1				
	141-2-1449-65006	Plate Decorate	1				
	141-2-2899-43500	Adhesive Film	2				
	141-2-2899-43600	Adhesive Film	2				
CA17	141-2-1659-35900	Knob Slide	5				
CA18	141-2-3119-25400	Chassis	1				
CA19	131-0-3016-10400	Cramp Wire Assy	3				
CA20	131-2-1801-14100	Leg	4				
CA21	141-2-1259-08100	Plate Bottom	1				
CA22	131-2-4203-84200	Washer, 4.2x12x1.0 Z	4				
CA23	131-2-3101-99900	Metal Mount Trans	1				
CA24	△ 4-2512-24121	Power Trans	1				
CA25	131-2-4201-25201	Screw, Brazier Hd. Tapping-B, Sems +M3.0x8	6				
CA26	4-2039-71961	Transistor, 2SA 1302 [Q115, Q215, Q505]	3				
or	4-2039-72121	Transistor, 2SA 1301 [Q115, Q215, Q505]	3				
CA27	4-2039-71971	Transistor, 2SC 3281 [Q114, Q214, Q506]	3				
or	4-2039-72111	Transistor, 2SC 3280 [Q114, Q214, Q506]	3				
CA28	141-2-3129-05800	Sub Chassis	1				
CA29	141-2-3689-14300	Plate Heat Sink	1				
CA30	131-2-4201-17800	Screw Ground	1				

# 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:

- TONE control to center position.
- BALANCE control to center position.
- POWER switch to OFF
- SPEAKERS switch to OFF
- FUNCTION switch to AUX/VIDEO
- LOUDNESS switch to OFF
- 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 ON position. Turn VOLUME control to MAX.
- 4) Increase generator output for 100 Watts RMS (28.2 volts across the 8-ohm load). Harmonic Distortion Analyzer should measure 0.05 % 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 100 watts at Left and Right Channels (28.2 volts across the 8-ohm loads). Harmonic Distortion Analyzer should measure 0.05 % 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

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

- Power switch to the OFF position.
- Set the SPEAKERS switch to the OFF position.
- Turn the MASTER VOLUME control to the position marked 0 (minimum).
- IDLING CURRENT ADJUSTMENT VR101/VR201 (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

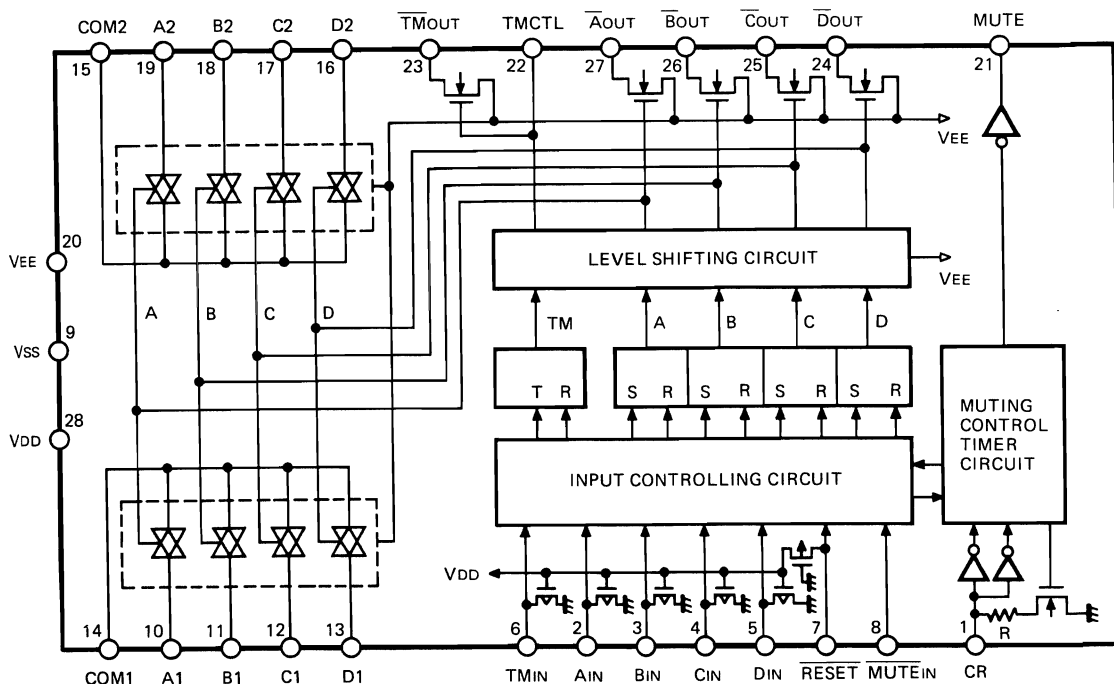
- 1) Connect the DC VTVM between Pins No.21 and No.22 on the Main P.C.Board.
- 2) Adjust the VR101 for an indication of 7mV on the DC VTVM.

### RIGHT AMPLIFIER

- 1) Connect the DC VTVM between Pins No.23 and No.24 on the Main P.C.Board.
- 2) Adjust the VR201 for an indication of 7mV on the DC VTVM.

# INTEGRATED CIRCUIT BLOCK DIAGRAM

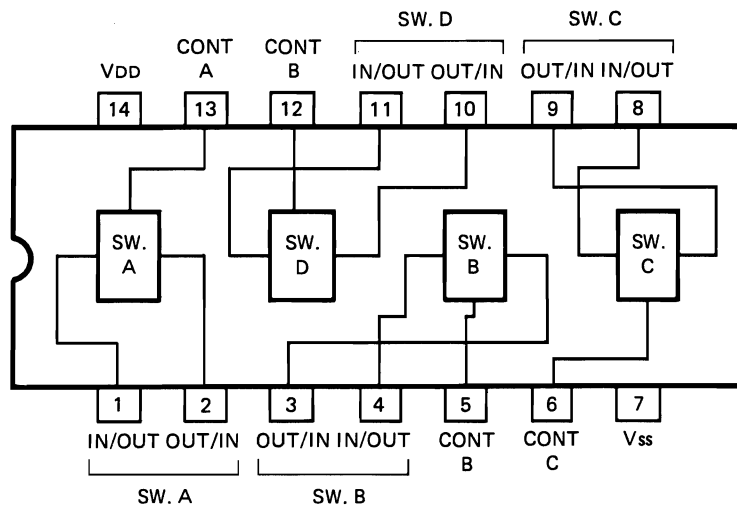
## FUNCTION ANALOG SWITCH IC LC 7815 H



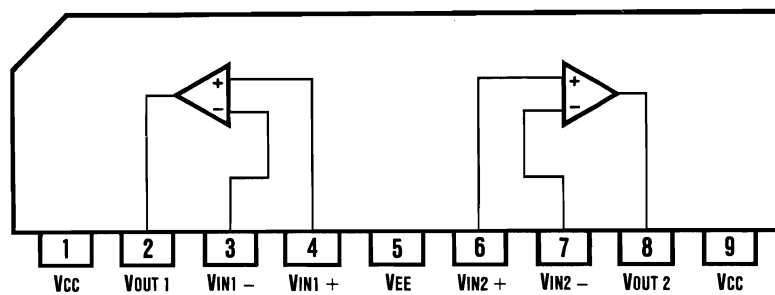


# INTEGRATED CIRCUIT BLOCK DIAGRAM (Continued)

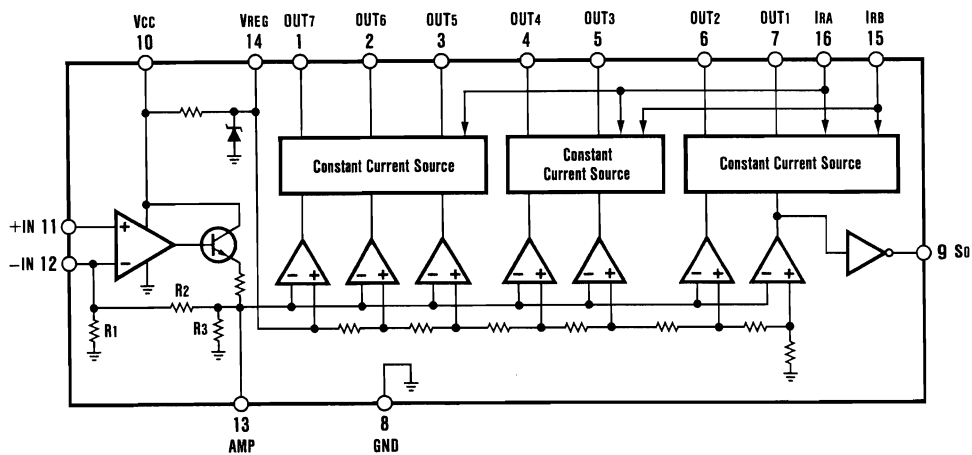
## TAPE INPUT ANALOG SWITCH IC LC 4066 B



## PHONO / GRAPHIC EQUALIZER AMP IC LA 6458 S



## LED METER DRIVE AMP IC IR 2E19





# P.C. BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
or	4-2039-72212	Transistor, 2SA 1115	1	R303	RH2-2-0102-JZ003	Metal 22Ω 1W ±5%	1
Q402	203-5-7230-60870	Transistor, 2SA 608	1	R304	RH2-2-0102-JZ003	Metal 22Ω 1W ±5%	1
or	4-2039-72212	Transistor, 2SA 1115	1	R305	RD1-0-2251-JM000	Carbon 1kΩ 1/4W ±5%	1
Q501	4-2039-72202	Transistor, 2SC 2603	1	R306	RD1-0-2251-JM000	Carbon 1kΩ 1/4W ±5%	1
or	203-5-7252-27460	Transistor, 2SC 2274	1	R307	RD3-3-1251-JM000	Carbon 330Ω 1/4W ±5%	1
Q502	4-2039-72212	Transistor, 2SA 1115	1	R308	RD3-3-1251-JM000	Carbon 330Ω 1/4W ±5%	1
or	203-5-6820-98460	Transistor, 2SA 984	1	R309	RF2-2-0251-JK000	Fuse 22Ω 1/4W ±5%	1
Q503	203-5-4910-63160	Transistor, 2SB 631	1	R310	RF2-2-0251-JK000	Fuse 22Ω 1/4W ±5%	1
Q504	203-5-4900-60060	Transistor, 2SD 600	1	R311	RF2-7-0501-JZ000	Fuse 27Ω 1/2W ±5%	1
<b>RESISTORS</b>				R325	RD2-2-3251-JM000	Carbon 22kΩ 1/4W ±5%	1
R146	RD1-2-2251-JM000	Carbon 1.2kΩ 1/4W ±5%	1	R328	RD4-7-2251-JM000	Carbon 4.7kΩ 1/4W ±5%	1
R147	RD3-3-2251-JM000	Carbon 3.3kΩ 1/4W ±5%	1	R405	RD6-8-1251-JM000	Carbon 680Ω 1/4W ±5%	1
R148	RD6-8-3251-JM000	Carbon 68kΩ 1/4W ±5%	1	R406	RD4-7-4251-JM000	Carbon 470kΩ 1/4W ±5%	1
R149	RD8-2-2251-JM000	Carbon 8.2kΩ 1/4W ±5%	1	R407	RD2-2-3251-JM000	Carbon 22kΩ 1/4W ±5%	1
R150	RD2-7-3251-JM000	Carbon 27kΩ 1/4W ±5%	1	R409	RF3-9-1501-JZ000	Fuse 390Ω 1/2W ±5%	1
R151	RD1-2-2251-JM000	Carbon 1.2kΩ 1/4W ±5%	1	R501	RD1-0-3251-JM000	Carbon 10kΩ 1/4W ±5%	1
R152	RF1-2-2251-JK000	Fuse 1.2kΩ 1/4W ±5%	1	R502	RD1-0-3251-JM000	Carbon 10kΩ 1/4W ±5%	1
R153	RD2-7-3251-JM000	Carbon 27kΩ 1/4W ±5%	1	R503	RD4-7-4251-JM000	Carbon 470kΩ 1/4W ±5%	1
R154	RD1-0-2251-JM000	Carbon 1kΩ 1/4W ±5%	1	R504	RD4-7-4251-JM000	Carbon 470kΩ 1/4W ±5%	1
R155	RD1-5-3251-JM000	Carbon 15kΩ 1/4W ±5%	1	R505	RD6-8-1251-JM000	Carbon 680Ω 1/4W ±5%	1
R156	RF8-2-0251-JK000	Fuse 82Ω 1/4W ±5%	1	R506	RD6-8-1251-JM000	Carbon 680Ω 1/4W ±5%	1
R157	RF4-7-0251-JK000	Fuse 47Ω 1/4W ±5%	1	R507	RD1-2-2251-JM000	Carbon 1.2kΩ 1/4W ±5%	1
R158	RF4-7-0251-JK000	Fuse 47Ω 1/4W ±5%	1	R508	RD1-2-2251-JM000	Carbon 1.2kΩ 1/4W ±5%	1
R159	RD6-8-3251-JM000	Carbon 68kΩ 1/4W ±5%	1	R509	RD1-8-2251-JM000	Carbon 1.8kΩ 1/4W ±5%	1
R160	RD4-7-1251-JM000	Carbon 470Ω 1/4W ±5%	1	R510	RD1-8-2251-JM000	Carbon 1.8kΩ 1/4W ±5%	1
R161	RD4-7-0251-JM000	Carbon 47Ω 1/4W ±5%	1	R511	RD5-6-2251-JM000	Carbon 5.6kΩ 1/4W ±5%	1
R162	RD3-3-3251-JM000	Carbon 33kΩ 1/4W ±5%	1	R512	RD5-6-2251-JM000	Carbon 5.6kΩ 1/4W ±5%	1
R163	RD8-2-0251-JM000	Carbon 82Ω 1/4W ±5%	1	R513	RH2-2-0102-JZ003	Metal 22Ω 1W ±5%	1
R164	RF1-0-0251-JK000	Fuse 10Ω 1/4W ±5%	1	R514	RH2-2-0102-JZ003	Metal 22Ω 1W ±5%	1
R165	RF2-2-A251-JK000	Fuse 2.2Ω 1/4W ±5%	1	<b>INPUT P.C.B. ASSY</b>			
R166	RF3-3-1501-JZ000	Fuse 330Ω 1/2W ±5%	1	PCB2	141-0-1939-09131	Input P.C.B. Assy	1
R167	RF2-2-A251-JK000	Fuse 2.2Ω 1/4W ±5%	1		4-2262-22040	Input P.C.B.	1
R168	4-2219-70370	Cement 0.22Ωx2 5W ±10%	1		4-2359-78190	Pin Jack 4P (Tape)	1
R169	RD4-7-A251-JM000	Carbon 4.7Ω 1/4W ±5%	1		4-2359-78190	Pin Jack 4P (AUX/Video, CD)	1
R170	RH1-0-0102-JZ003	Metal 10Ω 1W ±5%	1		4-2359-78190	Pin Jack 4P (Tuner, Phono)	1
R171	RD1-5-4251-JM000	Carbon 150kΩ 1/4W ±5%	1	A	4-2369-73675	Plug 6P	1
R246	RD1-2-2251-JM000	Carbon 1.2kΩ 1/4W ±5%	1	B	4-2369-73674	Plug 5P	1
R247	RD3-3-2251-JM000	Carbon 3.3kΩ 1/4W ±5%	1	C	4-2369-73675	Plug 6P	1
R248	RD6-8-3251-JM000	Carbon 68kΩ 1/4W ±5%	1	<b>CAPACITORS</b>			
R249	RD8-2-2251-JM000	Carbon 8.2kΩ 1/4W ±5%	1	C101	CC3-3-1500-KD00C	Ceramic 330pF 50V ±10%	1
R250	RD2-7-3251-JM000	Carbon 27kΩ 1/4W ±5%	1	C102	CC3-3-1500-KD00C	Ceramic 330pF 50V ±10%	1
R251	RD1-2-2251-JM000	Carbon 1.2kΩ 1/4W ±5%	1	C103	CD4-7-5250-0001V	Electrolytic 4.7μF 25V	1
R252	RF1-2-2251-JK000	Fuse 1.2kΩ 1/4W ±5%	1	C105	CC3-3-1500-KD00C	Ceramic 330pF 50V ±10%	1
R253	RD2-7-3251-JM000	Carbon 27kΩ 1/4W ±5%	1	C106	CD4-7-6160-0001V	Electrolytic 47μF 16V	1
R254	RD1-0-2251-JM000	Carbon 1kΩ 1/4W ±5%	1	C107	CM1-8-3500-K00SV	Mylar 0.018μF 50V ±10%	1
R255	RD1-5-3251-JM000	Carbon 15kΩ 1/4W ±5%	1	C108	CM4-7-2500-K00SV	Mylar 0.0047μF 50V ±10%	1
R256	RF8-2-0251-JK000	Fuse 82Ω 1/4W ±5%	1	C109	CD4-7-5250-0001V	Electrolytic 4.7μF 25V	1
R257	RF4-7-0251-JK000	Fuse 47Ω 1/4W ±5%	1	C110	CC2-2-1500-KE01R	Ceramic 220pF 50V ±10%	1
R258	RF4-7-0251-JK000	Fuse 47Ω 1/4W ±5%	1	C201	CC3-3-1500-KD00C	Ceramic 330pF 50V ±10%	1
R259	RD6-8-3251-JM000	Carbon 68kΩ 1/4W ±5%	1	C202	CC3-3-1500-KD00C	Ceramic 330pF 50V ±10%	1
R260	RD4-7-1251-JM000	Carbon 470Ω 1/4W ±5%	1	C203	CD4-7-5250-0001V	Electrolytic 4.7μF 25V	1
R261	RD4-7-0251-JM000	Carbon 47Ω 1/4W ±5%	1	C205	CC3-3-1500-KD00C	Ceramic 330pF 50V ±10%	1
R262	RD3-3-3251-JM000	Carbon 33kΩ 1/4W ±5%	1	C206	CD4-7-6160-0001V	Electrolytic 47μF 16V	1
R263	RD8-2-0251-JM000	Carbon 82Ω 1/4W ±5%	1	C207	CM1-8-3500-K00SV	Mylar 0.018μF 50V ±10%	1
R264	RF1-0-0251-JK000	Fuse 10Ω 1/4W ±5%	1	C208	CM4-7-2500-K00SV	Mylar 0.0047μF 50V ±10%	1
R265	RF2-2-A251-JK000	Fuse 2.2Ω 1/4W ±5%	1	C209	CD4-7-5250-0001V	Electrolytic 4.7μF 25V	1
R266	RF3-3-1501-JZ000	Fuse 330Ω 1/2W ±5%	1	C210	CC2-2-1500-KE01R	Ceramic 220pF 50V ±10%	1
R267	RF2-2-A251-JK000	Fuse 2.2Ω 1/4W ±5%	1	C321	CD4-7-6160-0001V	Electrolytic 47μF 16V	1
R268	4-2219-70370	Cement 0.22Ωx2 5W ±10%	1	C322	CD4-7-6160-0001V	Electrolytic 47μF 16V	1
R269	RD4-7-A251-JM000	Carbon 4.7Ω 1/4W ±5%	1	C323	CD4-7-6250-0006V	Electrolytic 47μF 25V	1
R270	RH1-0-0102-JZ003	Metal 10Ω 1W ±5%	1	C324	CD4-7-6250-0006V	Electrolytic 47μF 25V	1
R271	RD1-5-4251-JM000	Carbon 150kΩ 1/4W ±5%	1				
R302	RH4-7-2102-JZ003	Metal 4.7kΩ 1W ±5%	1				

# P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty		
C325	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F 25V	1	<b>FUNCTION P.C.B. ASSY</b>				
C326	CD2-2-5500-0001V	Electrolytic	2.2 $\mu$ F 50V	1	PCB3	141-0-1939-09140	Function P.C.B. Assy	1	
C401	CD1-0-8160-0001V	Electrolytic	1000 $\mu$ F 16V	1		4-2262-22050	Function P.C.B.	1	
C402	CD1-0-4500-0001V	Electrolytic	0.1 $\mu$ F 50V	1		141-2-2419-33000	Reflector	5	
C409	CC4-7-3500-ZG00C	Ceramic	0.047 $\mu$ F 50V +80,-20%	1	SW401	4-2312-05300	Keyboard Switch 6mm (Phono)	1	
<b>SEMICONDUCTORS</b>					SW402	4-2312-05300	Keyboard Switch 6mm (Tuner)	1	
D401	202-5-3160-00110	Diode, GMA 01		1	SW403	4-2312-05300	Keyboard Switch 6mm (Compact Disc)	1	
D402	202-5-3160-00110	Diode, GMA 01		1	SW404	4-2312-05300	Keyboard Switch 6mm (AUX/Video)	1	
D403	202-5-3160-00110	Diode, GMA 01		1	SW405	4-2312-05300	Keyboard Switch 6mm (Tape Monitor)	1	
D404	202-5-3160-00110	Diode, GMA 01		1	B	4-2359-77807	Connector 5P Assy	1	
IC401	4-2069-74450	IC, M 5218 L-R		1	C	4-2359-77808	Connector 6P Assy	1	
IC402	206-5-8897-81520	IC, LC 7815 H		1	<b>CAPACITORS</b>				
IC403	206-5-8144-06610	IC, LC 4066 BH		1	C403	CI1-0-3250-MF00R	Boundary	0.01 $\mu$ F 25V $\pm$ 20%	1
<b>RESISTORS</b>					C404	CI1-0-3250-MF00R	Boundary	0.01 $\mu$ F 25V $\pm$ 20%	1
R101	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	C405	CI1-0-3250-MF00R	Boundary	0.01 $\mu$ F 25V $\pm$ 20%	1
R102	RD1-0-4161-JH000	Carbon	100k $\Omega$ 1/6W $\pm$ 5%	1	C406	CI1-0-3250-MF00R	Boundary	0.01 $\mu$ F 25V $\pm$ 20%	1
R103	RD1-0-4161-JH000	Carbon	100k $\Omega$ 1/6W $\pm$ 5%	1	C407	CI1-0-3250-MF00R	Boundary	0.01 $\mu$ F 25V $\pm$ 20%	1
R104	RD3-3-1161-JH000	Carbon	330 $\Omega$ 1/6W $\pm$ 5%	1	<b>SEMICONDUCTORS</b>				
R105	RD2-2-4161-JH000	Carbon	220k $\Omega$ 1/6W $\pm$ 5%	1	D311	202-5-3210-10011	Zener Diode, GZA 10 X		1
R106	RD1-5-3161-JH000	Carbon	15k $\Omega$ 1/6W $\pm$ 5%	1	D312	202-5-3210-10011	Zener Diode, GZA 10 X		1
R107	RD1-0-4161-JH000	Carbon	100k $\Omega$ 1/6W $\pm$ 5%	1	D405	4-2029-73860	L.E.D., SEL 1413 E (Phono)		1
R108	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	D406	4-2029-73860	L.E.D., SEL 1413 E (Tuner)		1
R109	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	D407	4-2029-73860	L.E.D., SEL 1413 E (Compact Disc)		1
R110	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1	D408	4-2029-73860	L.E.D., SEL 1413 E (AUX/Video)		1
R111	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	D409	4-2029-73850	L.E.D., SEL 1213 C (Tape Monitor)		1
R112	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1	<b>RESISTORS</b>				
R113	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	R322	RD5-6-1251-JM000	Carbon	560 $\Omega$ 1/4W $\pm$ 5%	1
R114	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1	R323	RD1-2-2251-JM000	Carbon	1.2k $\Omega$ 1/4W $\pm$ 5%	1
R115	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	R324	RD1-0-3251-JM000	Carbon	10k $\Omega$ 1/4W $\pm$ 5%	1
R116	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1	<b>TONE CONTROL P.C.B. ASSY</b>				
R117	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	PCB4	141-0-1939-09151	Tone Control P.C.B. Assy		1
R118	RD8-2-3161-JH000	Carbon	82k $\Omega$ 1/6W $\pm$ 5%	1		4-2262-22060	Tone Control P.C.B.		1
R201	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	SW406	4-2319-77780	Swich Push 1 Key (Meter Lange)		1
R202	RD1-0-4161-JH000	Carbon	100k $\Omega$ 1/6W $\pm$ 5%	1	SW407	4-2319-77780	Swich Push 1 Key (Loudness)		1
R203	RD1-0-4161-JH000	Carbon	100k $\Omega$ 1/6W $\pm$ 5%	1	VR402	4-2229-75600	Slide Volume (W-250k $\Omega$ x2, Bass)		1
R204	RD3-3-1161-JH000	Carbon	330 $\Omega$ 1/6W $\pm$ 5%	1	VR403	4-2229-75600	Slide Volume (W-250k $\Omega$ x2, Treble)		1
R205	RD2-2-4161-JH000	Carbon	220k $\Omega$ 1/6W $\pm$ 5%	1	VR406	4-2229-75590	Slide Volume (W-200k $\Omega$ , Balance)		1
R206	RD1-5-3161-JH000	Carbon	15k $\Omega$ 1/6W $\pm$ 5%	1	VR407	4-2229-75610	Slide Volume (A-100k $\Omega$ x2, Volume)		1
R207	RD1-0-4161-JH000	Carbon	100k $\Omega$ 1/6W $\pm$ 5%	1		141-2-2419-33100	Mount LED		1
R208	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1		141-2-3769-17800	Spacer LED		1
R209	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	A	4-2359-77809	Connector 6P Assy		1
R210	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1	D	131-0-4006-31418	Cord Assy		1
R211	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	E	131-0-4006-31423	Cord Assy		1
R212	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1		4-2379-21120	Terminal		2
R213	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	<b>CAPACITORS</b>				
R214	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1	C121	CD4-7-5250-0001V	Electrolytic	4.7 $\mu$ F 25V	1
R215	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	C122	CC1-0-1500-KE01R	Ceramic	100pF 50V $\pm$ 10%	1
R216	RD1-8-4161-JH000	Carbon	180k $\Omega$ 1/6W $\pm$ 5%	1	C123	CC6-8-0500-KD00C	Ceramic	68pF 50V $\pm$ 10%	1
R217	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1	C124	CC1-0-0500-DD00C	Ceramic	10pF 50V $\pm$ 0.5%	1
R218	RD8-2-3161-JH000	Carbon	82k $\Omega$ 1/6W $\pm$ 5%	1	C125	CD1-0-6160-0002V	Electrolytic	10 $\mu$ F 16V	1
R315	RD1-0-2251-JM000	Carbon	1k $\Omega$ 1/4W $\pm$ 5%	1	C126	CD4-7-5250-0002V	Electrolytic	4.7 $\mu$ F 25V	1
R316	RD1-0-2251-JM000	Carbon	1k $\Omega$ 1/4W $\pm$ 5%	1	C127	CC2-2-1500-KE01R	Ceramic	220pF 50V $\pm$ 10%	1
R317	RD2-2-1251-JM000	Carbon	220 $\Omega$ 1/4W $\pm$ 5%	1	C129	CD1-0-6160-0002V	Electrolytic	10 $\mu$ F 16V	1
R318	RD2-7-1251-JM000	Carbon	270 $\Omega$ 1/4W $\pm$ 5%	1	C130	CM1-0-3500-J00TV	Mylar	0.01 $\mu$ F 50V $\pm$ 5%	1
R319	RD2-7-2161-JH000	Carbon	2.7k $\Omega$ 1/6W $\pm$ 5%	1	C134	CM2-2-3500-J00BV	Mylar	0.022 $\mu$ F 50V $\pm$ 5%	1
R320	RD2-2-4161-JH000	Carbon	220k $\Omega$ 1/6W $\pm$ 5%	1	C135	CC2-7-1500-KD00C	Ceramic	270pF 50V $\pm$ 10%	1
R321	RD1-0-3161-JH000	Carbon	10k $\Omega$ 1/6W $\pm$ 5%	1	C138	CC2-2-1500-KE01R	Ceramic	220pF 50V $\pm$ 10%	1
R401	RD4-7-2251-JM000	Carbon	4.7k $\Omega$ 1/4W $\pm$ 5%	1	C139	CM4-7-3500-J00TV	Mylar	0.047 $\mu$ F 50V $\pm$ 5%	1
R402	RD1-0-3161-JH000	Carbon	10k $\Omega$ 1/6W $\pm$ 5%	1					
R403	RD1-0-2161-JH000	Carbon	1k $\Omega$ 1/6W $\pm$ 5%	1					
R404	RD5-6-3161-JH000	Carbon	56k $\Omega$ 1/6W $\pm$ 5%	1					

# P.C. BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty	Ref. No.	Part No.	Description	Q'ty
C159	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F	25V	1		
C160	CC1-0-2500-KE01R	Ceramic	0.001 $\mu$ F	50V $\pm$ 10%	1		
C161	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F	25V	1		
C162	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F	25V	1		
C221	CD4-7-5250-0001V	Electrolytic	4.7 $\mu$ F	25V	1		
C222	CC1-0-1500-KE01R	Ceramic	100pF	50V $\pm$ 10%	1		
C223	CC6-8-0500-KD00C	Ceramic	68pF	50V $\pm$ 10%	1		
C224	CC1-0-0500-DD00C	Ceramic	10pF	50V $\pm$ 0.5%	1		
C225	CD1-0-6160-0002V	Electrolytic	10 $\mu$ F	16V	1		
C226	CD4-7-5250-0002V	Electrolytic	4.7 $\mu$ F	25V	1		
C227	CC2-2-1500-KE01R	Ceramic	220pF	50V $\pm$ 10%	1		
C229	CD1-0-6160-0002V	Electrolytic	10 $\mu$ F	16V	1		
C230	CM1-0-3500-J00TV	Mylar	0.01 $\mu$ F	50V $\pm$ 5%	1		
C234	CM2-2-3500-J00BV	Mylar	0.022 $\mu$ F	50V $\pm$ 5%	1		
C235	CC2-7-1500-KD00C	Ceramic	270pF	50V $\pm$ 10%	1		
C238	CC2-2-1500-KE01R	Ceramic	220pF	50V $\pm$ 10%	1		
C239	CM4-7-3500-J00TV	Mylar	0.047 $\mu$ F	50V $\pm$ 5%	1		
C259	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F	25V	1		
C260	CC1-0-2500-KE01R	Ceramic	0.001 $\mu$ F	50V $\pm$ 10%	1		
C261	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F	25V	1		
C262	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F	25V	1		
C319	CD1-0-7250-0006V	Electrolytic	100 $\mu$ F	25V	1		
C320	CD1-0-7250-0006V	Electrolytic	100 $\mu$ F	25V	1		
C327	CD1-0-6250-0001V	Electrolytic	10 $\mu$ F	25V	1		
<b>SEMICONDUCTORS</b>							
D104	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D105	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D106	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D107	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D108	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D109	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D110	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D204	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D205	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D206	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D207	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D208	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D209	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
D210	D00---SLP--273B-	L.E.D., SLP 273 B (Power Level Meter)			1		
IC101	4-2069-73670	IC, IR 2 E 19			1		
IC201	4-2069-73670	IC, IR 2 E 19			1		
IC404	206-5-3266-45810	IC, LA 6458 SS			1		
Q102	203-5-5000-53660	Transistor, 2SC 536			1		
or	4-2039-72201	Transistor, 2SC 2603			1		
Q103	203-5-5000-53660	Transistor, 2SC 536			1		
or	4-2039-72201	Transistor, 2SC 2603			1		
Q202	203-5-5000-53660	Transistor, 2SC 536			1		
or	4-2039-72201	Transistor, 2SC 2603			1		
Q203	203-5-5000-53660	Transistor, 2SC 536			1		
or	4-2039-72201	Transistor, 2SC 2603			1		
<b>RESISTORS</b>							
R119	RD1-5-4161-JH000	Carbon	150k $\Omega$	1/6W $\pm$ 5%	1		
R120	RD2-7-2161-JH000	Carbon	2.7k $\Omega$	1/6W $\pm$ 5%	1		
R121	RD4-7-2161-JH000	Carbon	4.7k $\Omega$	1/6W $\pm$ 5%	1		
R122	RD3-3-2161-JH000	Carbon	3.3k $\Omega$	1/6W $\pm$ 5%	1		
R123	RD4-7-2161-JH000	Carbon	4.7k $\Omega$	1/6W $\pm$ 5%	1		
R124	RD2-2-2161-JH000	Carbon	2.2k $\Omega$	1/6W $\pm$ 5%	1		
R126	RD8-2-1161-JH000	Carbon	820 $\Omega$	1/6W $\pm$ 5%	1		
R127	RD8-2-1161-JH000	Carbon	820 $\Omega$	1/6W $\pm$ 5%	1		
R131	RD1-0-5161-JH000	Carbon	150k $\Omega$	1/6W $\pm$ 5%	1		
R132	RD2-2-3161-JH000	Carbon	22k $\Omega$	1/6W $\pm$ 5%	1		
R136	RD3-9-1161-JH000	Carbon	390 $\Omega$	1/6W $\pm$ 5%	1		
R137	RD3-9-1161-JH000	Carbon	390 $\Omega$	1/6W $\pm$ 5%	1		
R141	RD5-6-2161-JH000	Carbon	5.6k $\Omega$	1/6W $\pm$ 5%	1		
R142	RD5-6-2161-JH000	Carbon	5.6k $\Omega$	1/6W $\pm$ 5%	1		
R145	RD5-6-2161-JH000	Carbon	5.6k $\Omega$	1/6W $\pm$ 5%	1		
R172	RD1-5-2161-JH000	Carbon	1.5k $\Omega$	1/6W $\pm$ 5%	1		
R173	RD3-9-2161-JH000	Carbon	3.9k $\Omega$	1/6W $\pm$ 5%	1		
R174	RD3-3-2161-JH000	Carbon	3.3k $\Omega$	1/6W $\pm$ 5%	1		
R219	RD1-5-4161-JH000	Carbon	150k $\Omega$	1/6W $\pm$ 5%	1		
R220	RD2-7-2161-JH000	Carbon	2.7k $\Omega$	1/6W $\pm$ 5%	1		
R221	RD4-7-2161-JH000	Carbon	4.7k $\Omega$	1/6W $\pm$ 5%	1		
R222	RD3-3-2161-JH000	Carbon	3.3k $\Omega$	1/6W $\pm$ 5%	1		
R223	RD4-7-2161-JH000	Carbon	4.7k $\Omega$	1/6W $\pm$ 5%	1		
R224	RD2-2-2161-JH000	Carbon	2.2k $\Omega$	1/6W $\pm$ 5%	1		
R226	RD8-2-1161-JH000	Carbon	820 $\Omega$	1/6W $\pm$ 5%	1		
R227	RD8-2-1161-JH000	Carbon	820 $\Omega$	1/6W $\pm$ 5%	1		
R231	RD1-5-4161-JH000	Carbon	150k $\Omega$	1/6W $\pm$ 5%	1		
R232	RD2-2-3161-JH000	Carbon	22k $\Omega$	1/6W $\pm$ 5%	1		
R236	RD3-9-1161-JH000	Carbon	390 $\Omega$	1/6W $\pm$ 5%	1		
R237	RD3-9-1161-JH000	Carbon	390 $\Omega$	1/6W $\pm$ 5%	1		
R241	RD5-6-2161-JH000	Carbon	5.6k $\Omega$	1/6W $\pm$ 5%	1		
R242	RD5-6-2161-JH000	Carbon	5.6k $\Omega$	1/6W $\pm$ 5%	1		
R245	RD5-6-2161-JH000	Carbon	5.6k $\Omega$	1/6W $\pm$ 5%	1		
R272	RD1-5-2161-JH000	Carbon	1.5k $\Omega$	1/6W $\pm$ 5%	1		
R273	RD3-9-2161-JH000	Carbon	3.9k $\Omega$	1/6W $\pm$ 5%	1		
R274	RD3-3-2161-JH000	Carbon	3.3k $\Omega$	1/6W $\pm$ 5%	1		
R313	RD5-6-A161-JH000	Carbon	5.6 $\Omega$	1/6W $\pm$ 5%	1		
R314	RD5-6-A161-JH000	Carbon	5.6 $\Omega$	1/6W $\pm$ 5%	1		
<b>SPEAKER TERMINAL P.C.B. ASSY</b>							
PCB5	141-0-1939-09172	Speaker Terminal P.C.B. Assy			1		
	4-2262-22080	Speaker Terminal P.C.B.			1		
	4-2372-01160	Speaker 8P Terminal (Speaker)			1		
	111-2-6220-11100	Wire Wrap Terminal			6		
<b>CAPACITORS</b>							
C507	CC4-7-1500-KE00C	Ceramic	470pF	50V $\pm$ 10%	1		
C508	CC4-7-1500-KE00C	Ceramic	470pF	50V $\pm$ 10%	1		
C509	CC4-7-1500-KE00C	Ceramic	470pF	50V $\pm$ 10%	1		
C510	CC4-7-1500-KE00C	Ceramic	470pF	50V $\pm$ 10%	1		
<b>TRANSISTOR P.C.B. ASSY</b>							
PCB6	141-0-1939-09180	Transistor P.C.B. Assy			2		
	4-2262-22090	Transistor P.C.B.			1		
<b>SEMICONDUCTORS</b>							
D412	205-5-9040-44210	Diode, DS 442			1		
Q403	4-2039-72100	Transistor, 2SD 947			1		
<b>SWITCH P.C.B. ASSY</b>							
PCB7	141-0-1939-09193	Switch P.C.B. Assy			1		
	4-2262-22100	Switch P.C.B.			1		
S408	△ 4-2319-76340	Switch Push Power (Power)			1		
S409	4-2319-77340	Switch Push 1 Key (Speaker A)			1		
S410	4-2319-77340	Switch Push 1 Key (Speaker B)			1		
	4-2352-00970	Headphone Jack 3P (Headphones)			1		
	111-2-6220-11100	Wire Wrap Terminal			2		
	131-2-6114-00200	Cover Safety			1		
	4-2372-00830	EC Terminal 1P			2		
	4-2439-72192	Wire 6 Parallel			1		
	4-2439-72193	Wire 2 Parallel			1		

# P.C. BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
<b>CAPACITOR</b>			
C301 $\Delta$	4-2239-70970	Capacitor	1
<b>RESISTORS</b>			
R175	RH5-6-1202-JZ000	Metal	1
R176	RD2-2-1251-JM000	Carbon	1
R177	RD2-7-1251-JM000	Carbon	1
R275	RH5-6-1202-JZ000	Metal	1
R276	RD2-2-1251-JM000	Carbon	1
R277	RD2-7-1251-JM000	Carbon	1

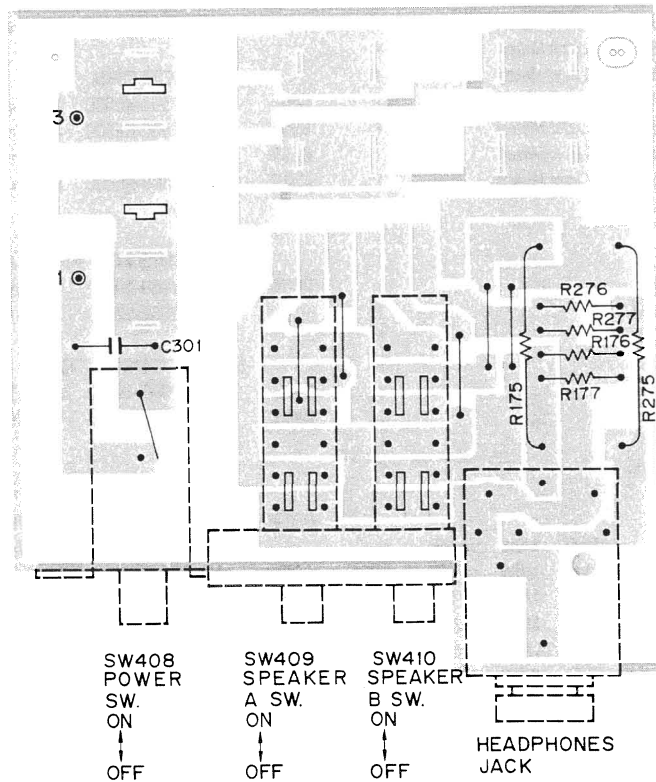
**NOTES:**

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

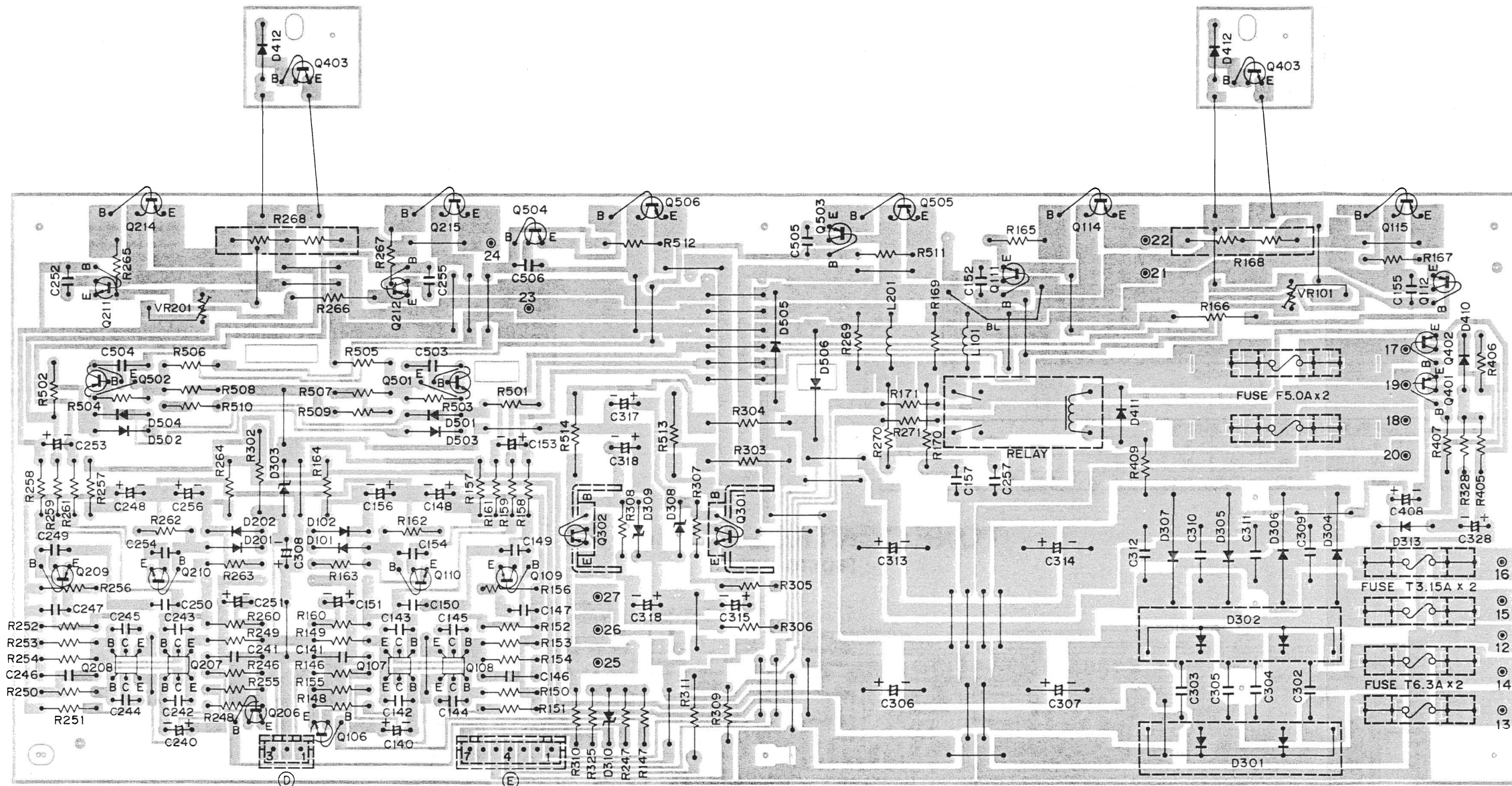
**PRODUCT SAFETY NOTICE**

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

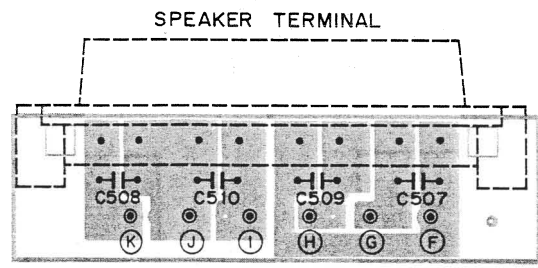
## SWITCH P.C. BOARD (BOTTOM VIEW)



# MAIN PRINTED CIRCUIT BOARD (BOTTOM VIEW)



## SP TERMINAL P.C. BOARD (BOTTOM VIEW)

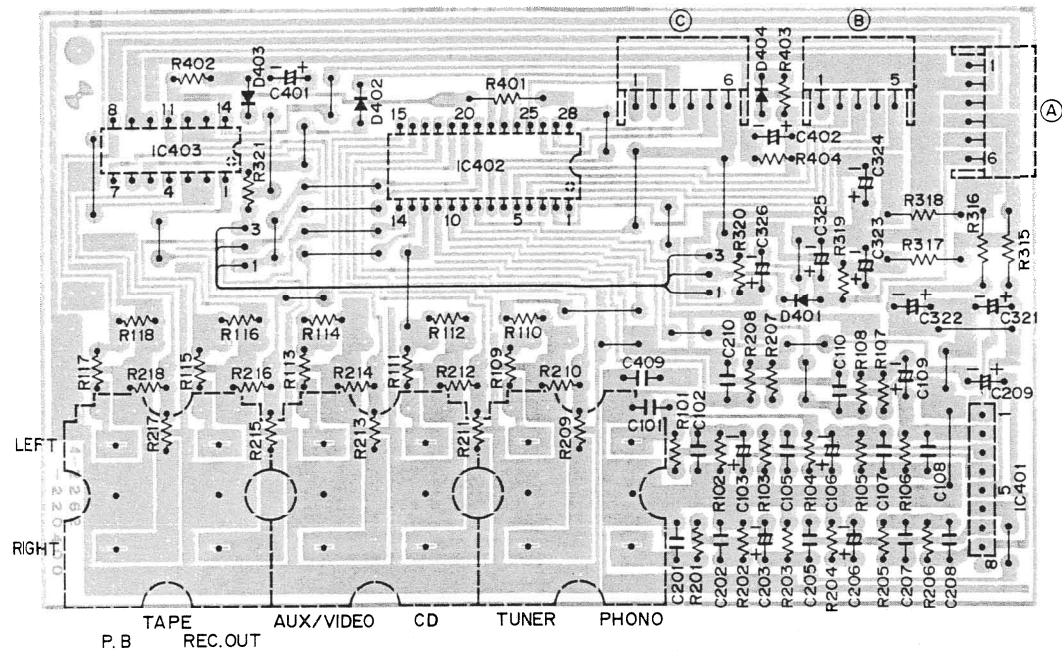


### TRANSISTOR DC VOLTAGES

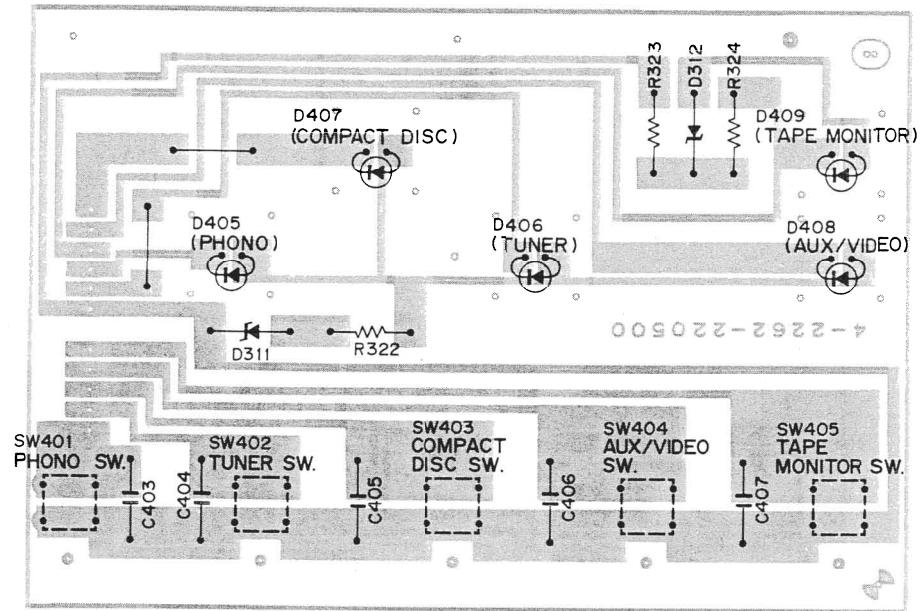
SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q106,206	2SD1012	-2.8V	0V	0V	Q302	2SB632	-18.0V	-26.0V	-17.4V
Q107,207	2SC3065	-0.2V	34.0V	-0.8V	Q401	2SA608	-1.4V	-0.8V	-0.8V
Q108,208	2SC3064	34.0V	60.5V	33.3V	Q402	2SA608	-0.8V	0.1V	0V
Q109,209	2SA1209	60.8V	1.5V	61.0V	Q501	2SC2603	24.6V	64.1V	25.9V
Q110,210	2SC2911	-60.5V	-1.5V	-61.0V	Q502	2SA1115	-24.6V	-63.9V	-25.8V
Q111,211	2SC3117	1.1V	61.5V	-1.1V	Q503	2SB631	64.3V	31.8V	64.0V
Q112,212	2SA1249	-0.6V	-61.5V	-1.1V	Q504	2SD600	-64.2V	-31.8V	-63.9V
Q114,214	2SC3281	0.6V	61.5V	0V	Q505	2SA1302	64.0V	31.8V	64.0V
Q115,215	2SA1302	-0.6V	-61.5V	0V	Q506	2SC3281	-63.9V	-31.8V	-64.3V
Q301	2SD612	18.4V	28.2V	17.8V					



## INPUT P.C. BOARD (BOTTOM VIEW)

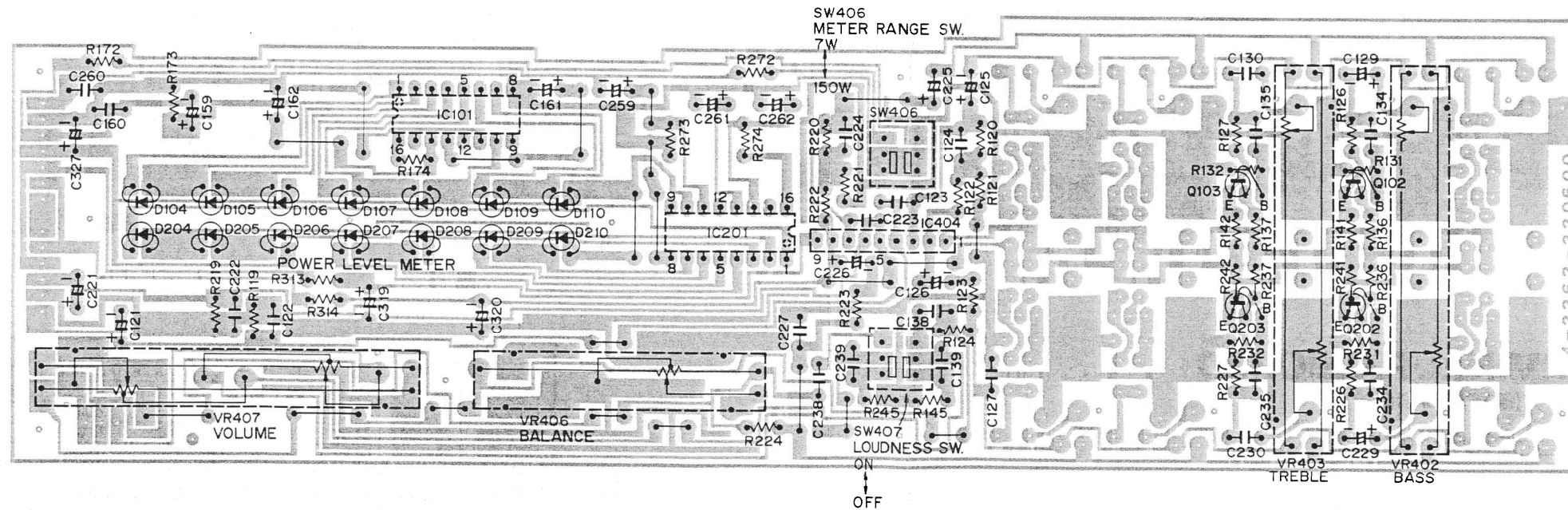


## FUNCTION P.C. BOARD (BOTTOM VIEW)



IC PIN NUMBERS DC VOLTAGES															
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14
IC401	M5218L	11.8V	0V	0V	0V	-11.6V	0V	0V	0V						
IC403	LC4066	0V	0V	0V	0V	-9.1V	-9.1V	-11.0V	0V	0V	0V	0V	11.5V	11.5V	11.5V

## TONE CONTROL P.C. BOARD (BOTTOM VIEW)

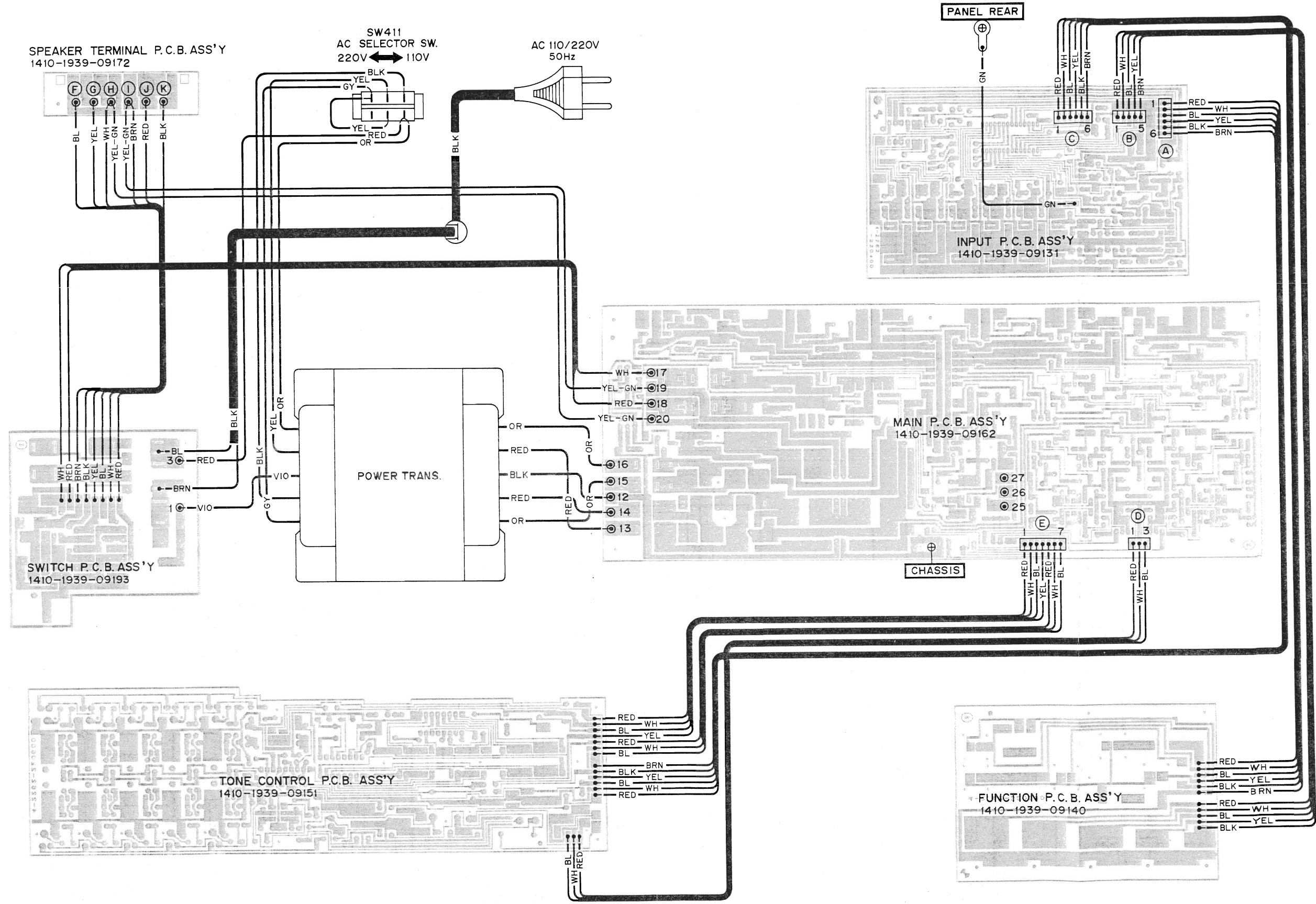


IC PIN NUMBERS DC VOLTAGES																	
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC101,102	IR2E19	12.4V	13.9V	15.4V	13.9V	15.4V	13.9V	15.4V	0V	0.3V	16.9V	0V	0V	0V	2.7V	0V	0.9V
IC404	LA6458	15.9V	0V	0V	0V	-15.8V	0V	0V	0V	15.9V							

TRANSISTOR DC VOLTAGES				
SYMBOL No.	DEVICE	B	C	E
Q102,202	2SC536	-0.5V	15.1V	-1.1V
Q103,203	2SC536	-0.3V	15.1V	-0.9V

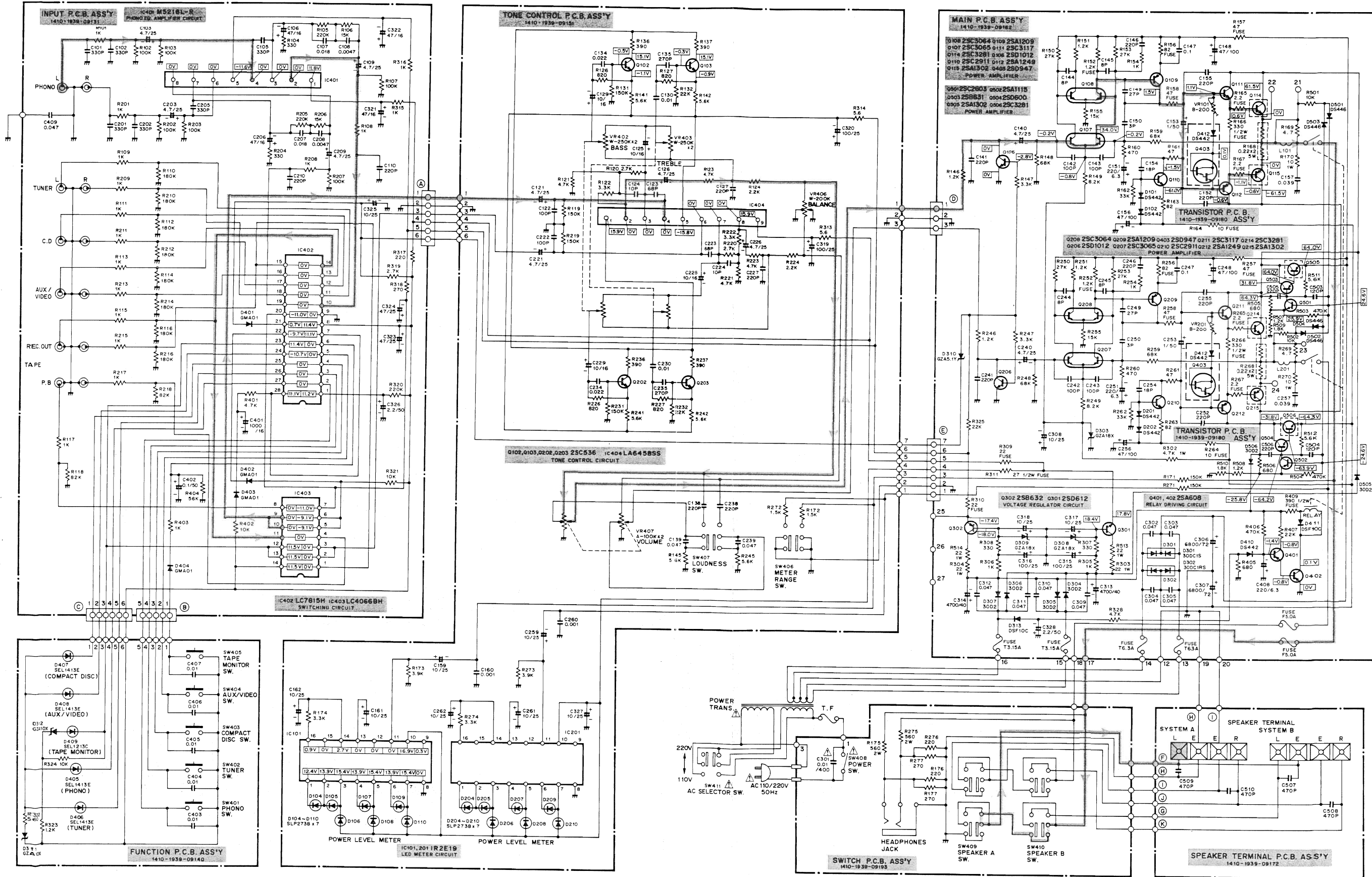


# POINT TO POINT WIRING DIAGRAM



No.	Name	Position	No.	Name	Position
SW401	PHONO Switch	OFF	SW407	LOUDNESS Switch	OFF
SW402	TUNER Switch	OFF	SW408	POWER Switch	OFF
SW403	COMPACT DISC Switch	OFF	SW409	SPEAKER A Switch	OFF
SW404	AUX/VIDEO Switch	OFF	SW410	SPEAKER B Switch	OFF
SW405	TAPE MONITOR Switch	OFF	SW411	AC SELECTOR Switch	220V
SW406	METER RANGE Switch	150W			

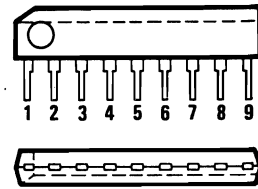
# SCHEMATIC DIAGRAM



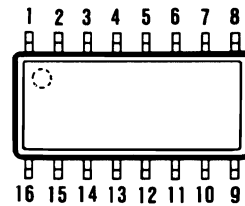
# SEMICONDUCTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SC536 2SA608 2SA1115 2SC2603		
2SA1209 2SA1249 2SC2911 2SC3117 2SB631 2SB632 2SD600 2SD612		
2SA1302 2SC3281		
2SD1012		
2SC3064 2SC3065		
<b>TERMINAL NAME</b>		
B → BASE C → COLLECTOR E → EMITTER		

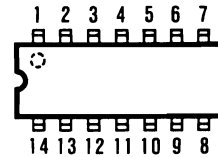
## LA6458S FRONT / BOTTOM VIEWS



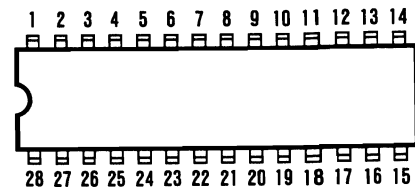
## IR2E19 BOTTOM VIEW





## LC4066B BOTTOM VIEW



## LC7815 BOTTOM VIEW



### 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.

#### NOTES:

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

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

- 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.



# FISHER

## CORRECTION NOTICE

Date: December, 10, 1986

Please add this notice to the Service Manuals listed below

<p><b>INTEGRATED STEREO AMPLIFIER</b></p> <p><b>CA-866</b></p> <p>(EUROPE) <span style="margin-left: 200px;">REF:WM-16839</span> <span style="float: right;">Issue Number 1</span></p>
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The following items were misprinted. Please make the necessary revision as indicated in the Service Manual Listed above.

No.	Page or Section		Ref. No.	Parts No.	Description	Q'ty	Remarks
1	Parts List Page 6	from	CA12	131-2-1701-91900	Knob Volume	1	
		to	CA12	131-2-1601-91900	Knob Volume	1	