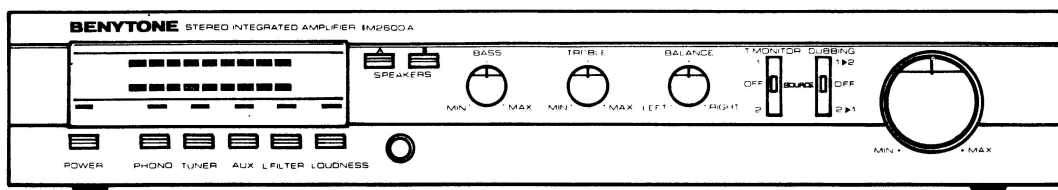


# SERVICE MANUAL

# BENY TONE

## M-2600A

### Stereo Amplifier



## SPECIFICATIONS

### POWER OUTPUT

- Music power at 1 kHz 10% THD into 4 ohms 100 watts + 100 watts
- Peak music power 170 watts + 170 watts

Total Harmonic Distortion	0.15% at 1 watts into 8 ohms (1 kHz)
Intermodulation Distortion (70 Hz : 7 kHz = 4 : 1)	Less than 1.0% at 25 watts into 8 ohms
Power Bandwidth	50 Hz – 20 kHz
Residual Noise	1.5 mV
Damping Factor	30 at 8 ohms
Input Sensitivity/Impedance	
Phono	2.5 mV/47 k ohms
Tuner	150 mV/47 k ohms
AUX	150 mV/47 k ohms
Tape Monitor	150 mV/47 k ohms
Maximum Input Level	
Phono	100 mV
Signal-to-Noise Ratio (IHF, A)	
Phono	77 dB
Tuner, AUX, Tape	87 dB
Frequency Response	
Phono	RIAA standard curve +1 dB
Tuner, AUX, Tape	50 Hz – 20 kHz, ± 1 dB

### Tone Control

Bass	±8 dB at 100 Hz
Treble	±8 dB at 10 kHz
Loudness Control	+8 dB at 100 Hz, +6 dB at 10 kHz
Output Level	
Tape Rec	150 mV
Headphones	350 mV
Speaker Impedance	4 – 16 ohms

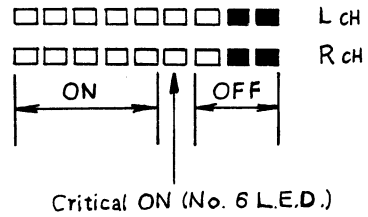
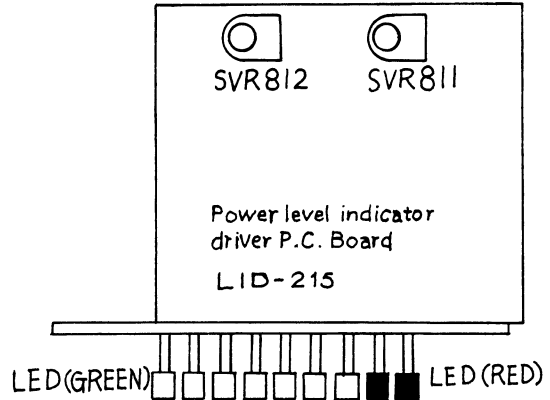
### GENERAL

Power Consumption	210 watts
Power Supply	AC 220V (110V) 50 Hz
Dimensions	422 (W) x 302 (D) x 77.5 (H) mm
Weight (Net)	5.8 kg (12.8 lbs.)

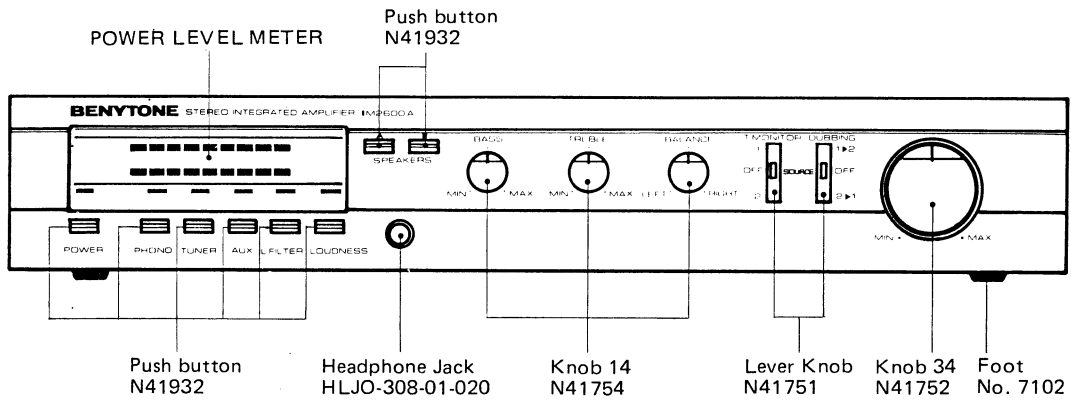
Specifications and design are subject to change without notice.

## ADJUSTMENT OF METER RANGE

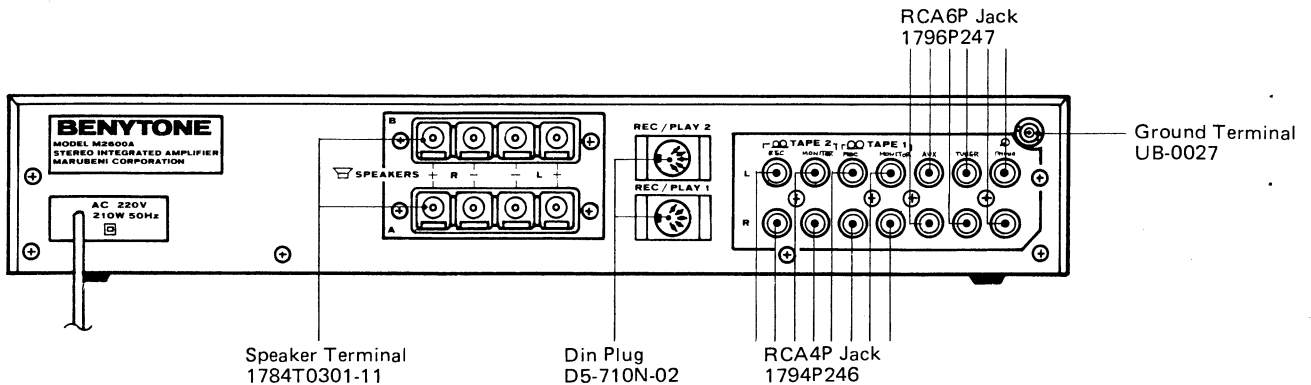
1. Connect an 8 ohms dummy resistor and a V.M to the SPEAKER terminals.
2. Connect an audio generator to the AUX input jacks and apply 1 KHz signals.
3. Turn the VOLUME control to fully clockwise and then adjust the input level of audio generator in order to V.M indicates about 1W. (2.8 volts)
4. Adjust carbon trimmers SRV811, 812 to the Digital Power meter indicates 1W. (No. 6 LED of Digital Power meter should be critical ON.)



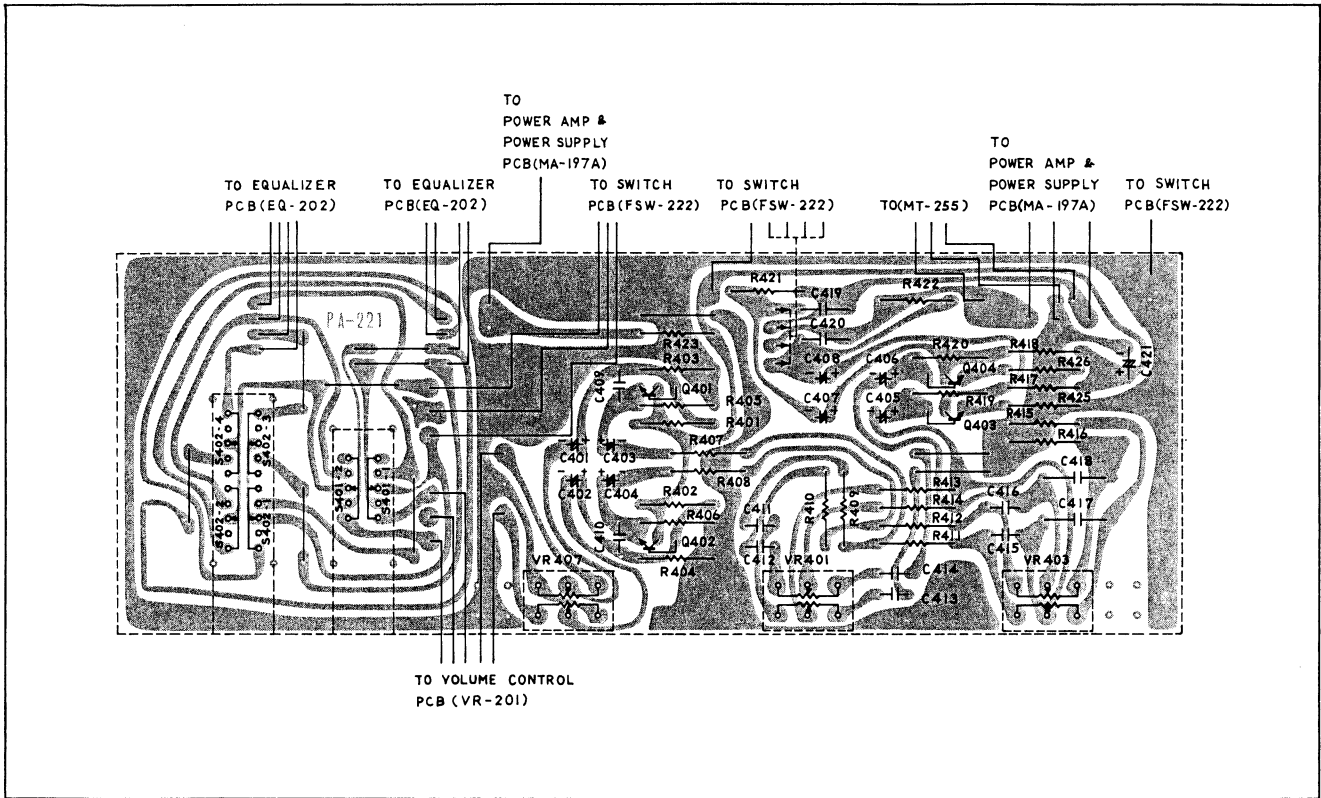
## FRONT VIEW



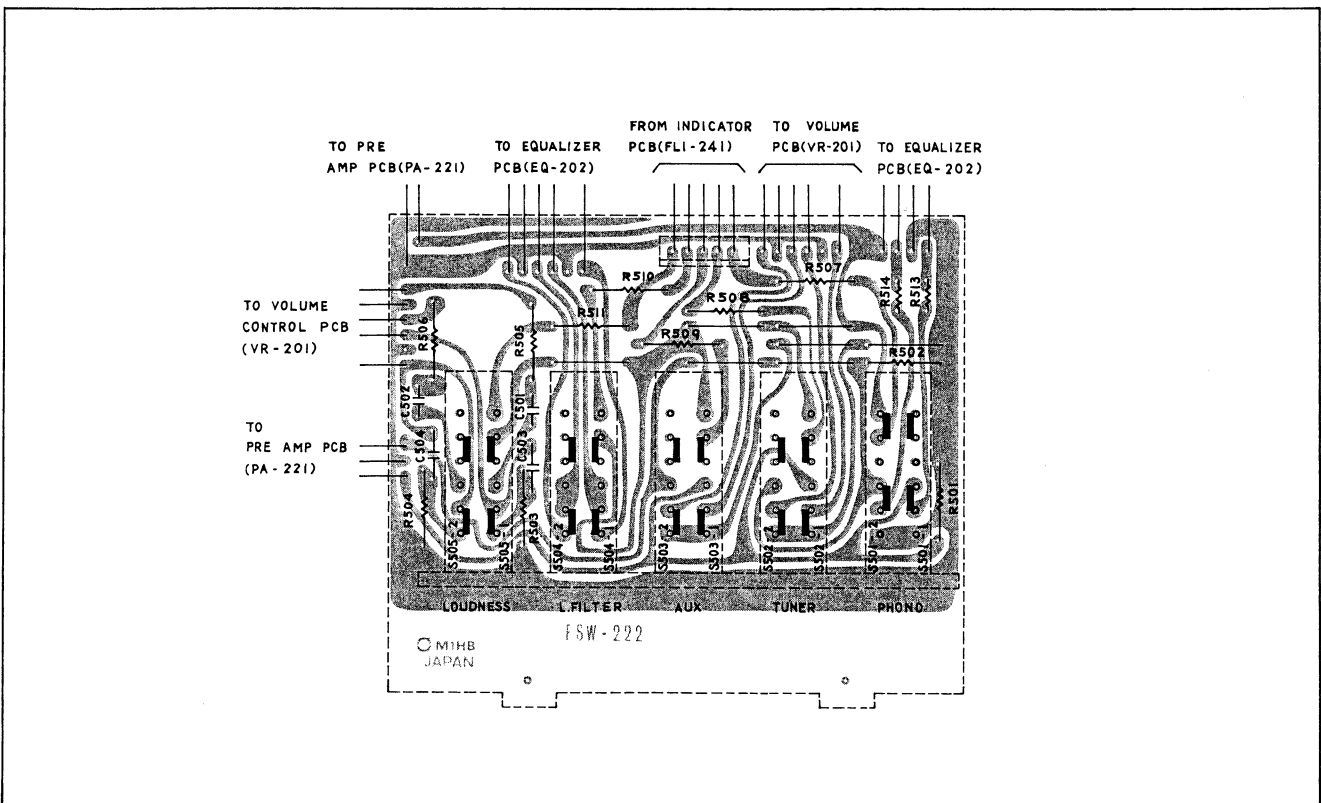
## REAR VIEW



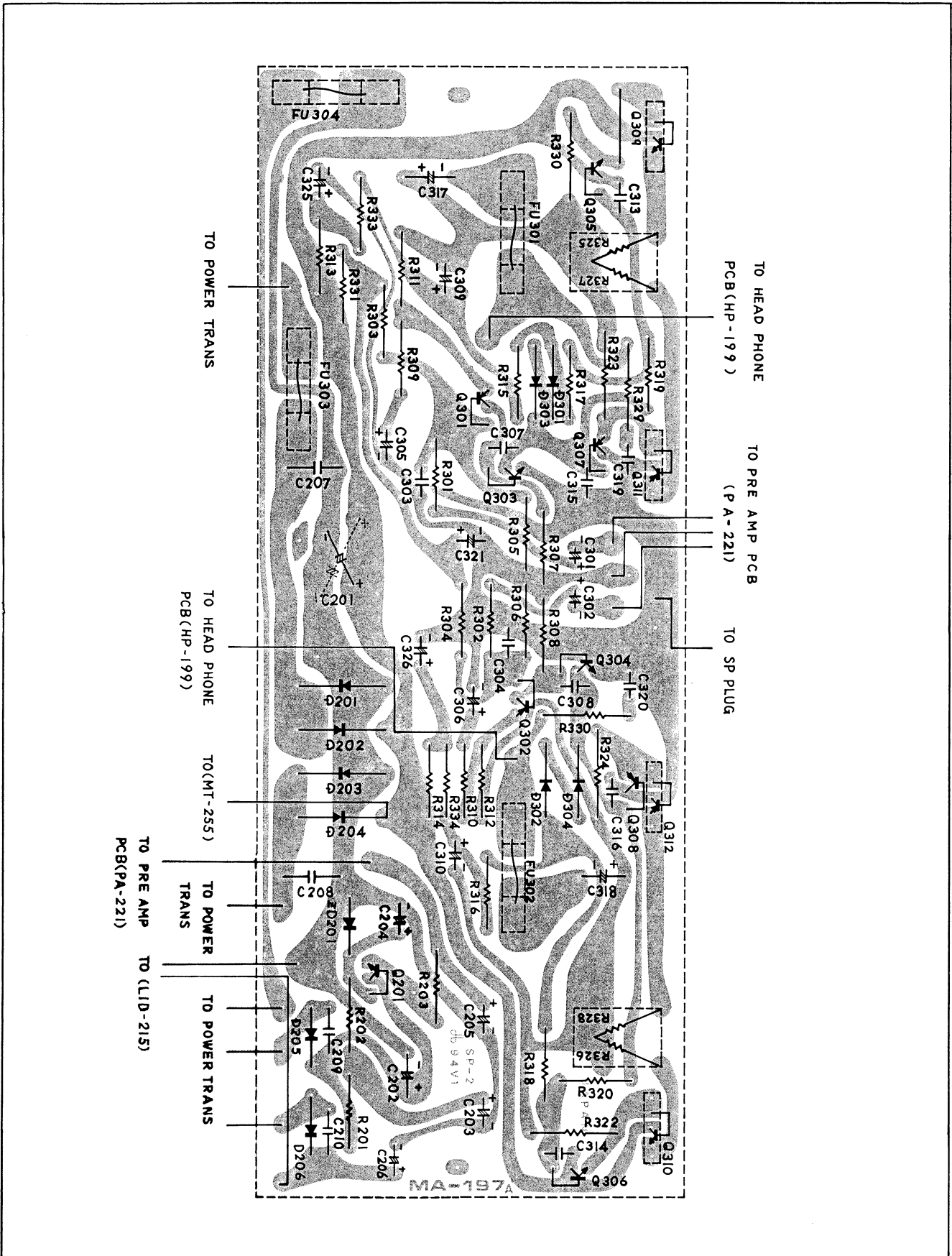
## PREAMP BOARD (PA-221)



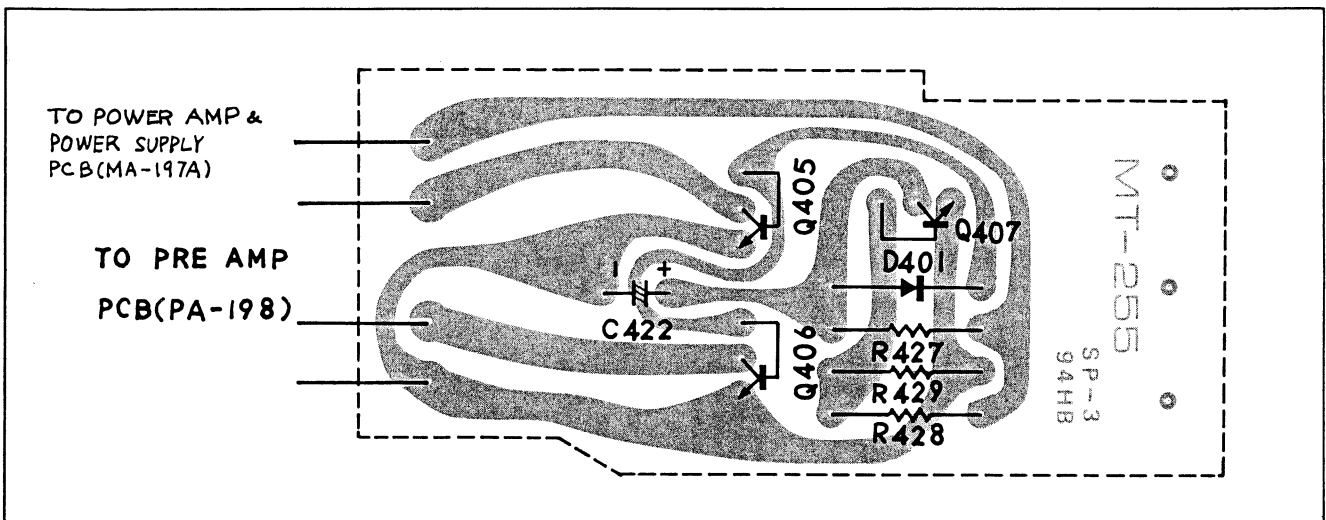
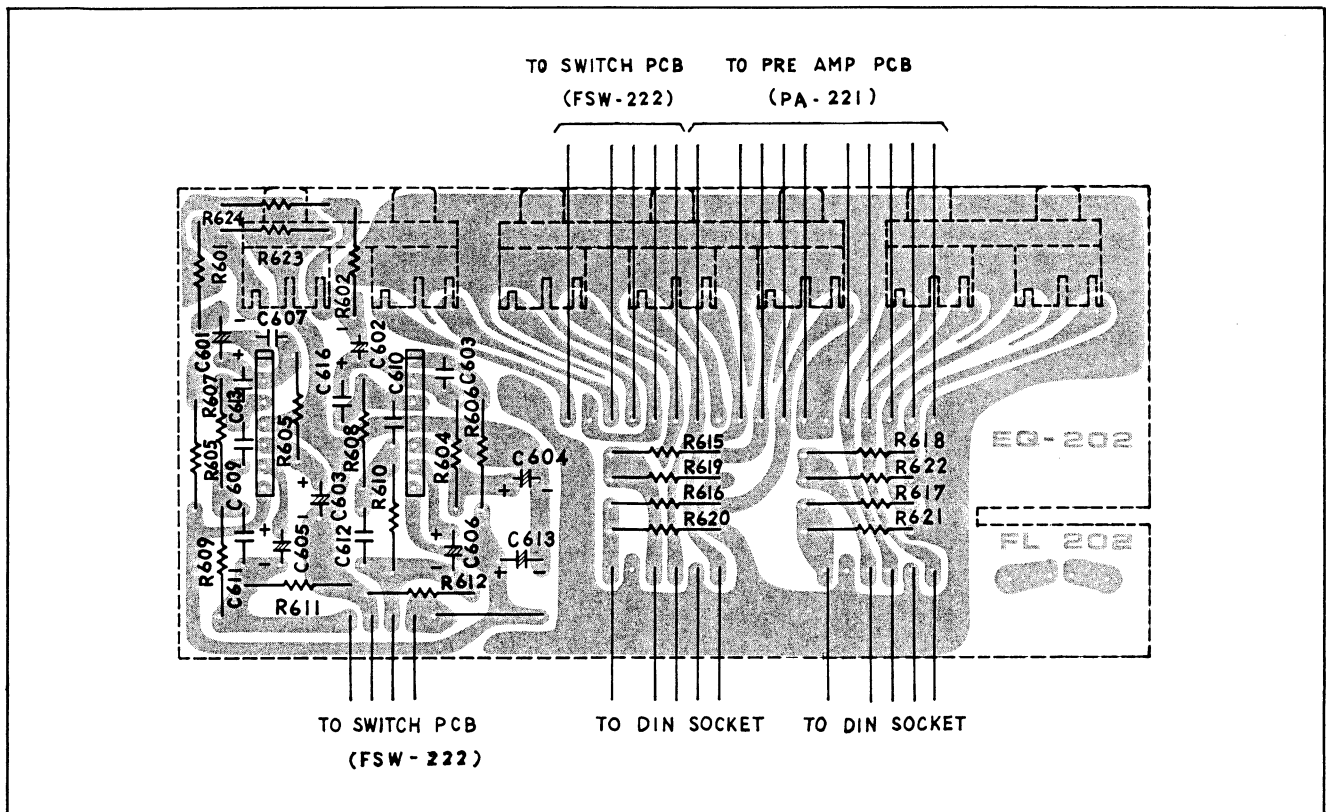
## SWITCH BOARD (FSW-222)



# POWER AMP & POWER SPPLY BOARD (MA-197A)



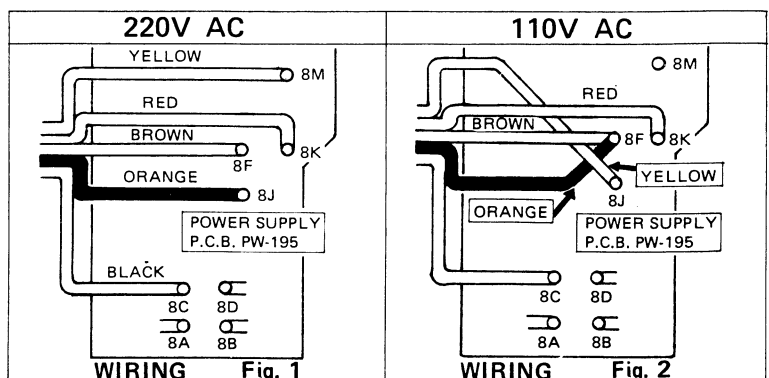
# EQUALIZER BOARD (EQ-202)



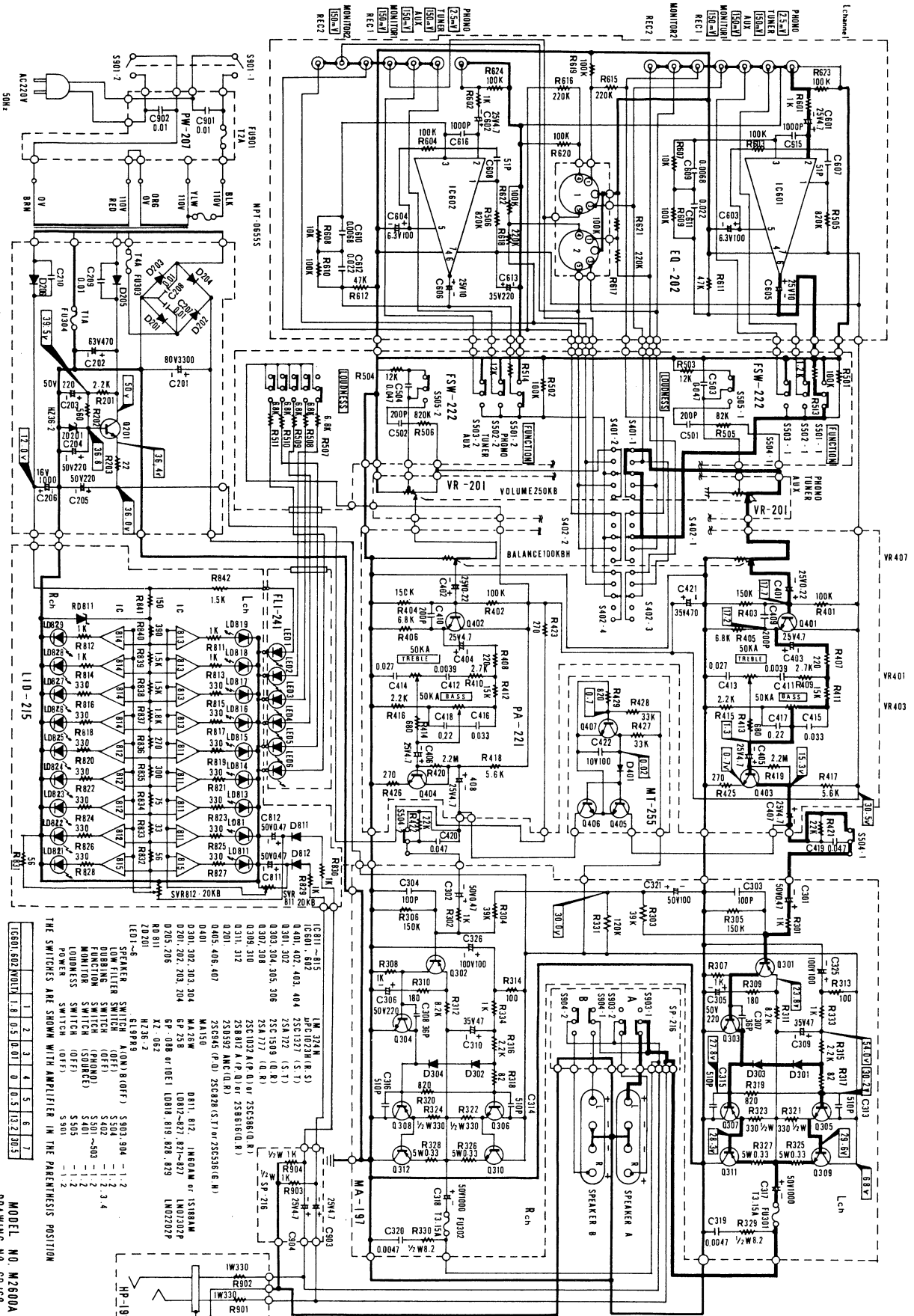
## VOLTAGE CONVERSION

220V AC → 110V AC

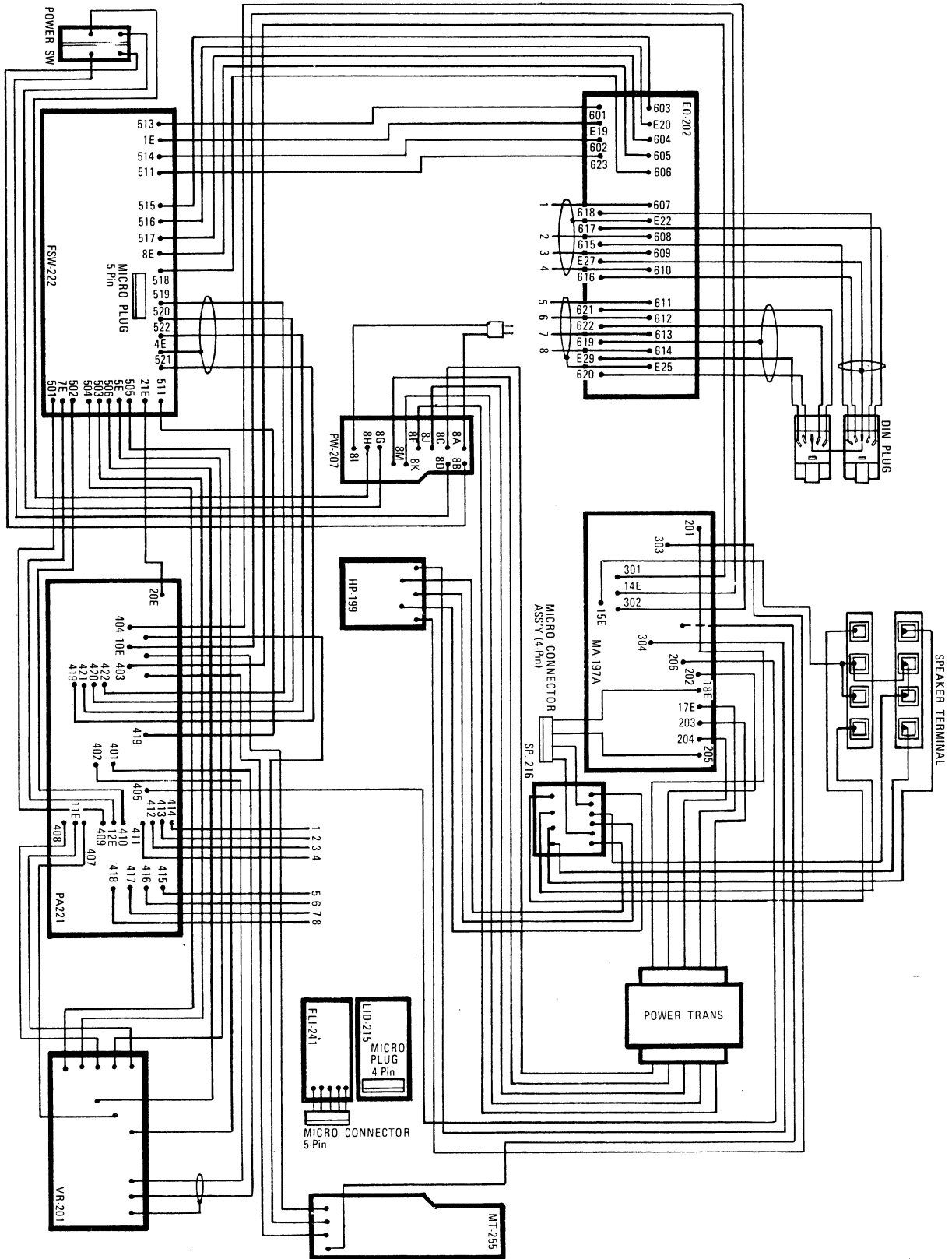
1. Disconnect the ORANGE and YELLOW wires from the holes 8J and 8M on POWER SUPPLY P.C.B. PW-195 as shown in Fig. 1.
2. Connect the wires as shown in Fig. 2.
3. Replace the fuse (2A) by the one (3.15A).



# CIRCUIT DIAGRAM



# WIRING DIAGRAM



# PARTS LIST

Part No.	Description	Symbol No.	Q'ty a set	Part No.	Description	Symbol No.	Q'ty a set
<b>INTEGRATED CIRCUITS &amp; TRANSISTORS</b>				10TW 100μF	Electrolytic	C422	1
μPC1023H (R.S)	IC	IC601, 602	2	16TW 1000μF	Electrolytic	C206	1
LM324N	IC	IC811-815	5	25TW 0.22μF	Electrolytic	C401, 402	2
2SA777 (Q.R)	Transistor	Q307, 308	2	25TW 4.7μF	Electrolytic	C403-408	8
2SA722 (S.T)	Transistor	Q301, 302	2			903, 904	
2SB616 (Q.R)	Transistor	Q311, 312	2	25TW 10μF	Electrolytic	C605, 606	2
or 2SB812A (Q.R)				35TW 47μF	Electrolytic	C309, 310	2
2SC945 (P.Q)	Transistor	Q405,406,407	3	50TW 100μF	Electrolytic	C321	1
or 2SC828 (S.T)				35TW 220μF	Electrolytic	C613	1
or 2SC536 (G.H)				35TW 470μF	Electrolytic	C421	1
2SC1327 (S.T)	Transistor	Q401,402,403	4	50TW 1000μF	Electrolytic	C317, 318	2
		404		50TW 0.47μF	Electrolytic	C301,302,811	4
2SC1509 (Q.R)	Transistor	Q303,304,305	4			812	
		306		50TW 220μF	Electrolytic	C203,204,205	5
2SD586 (Q.R)	Transistor	Q309,310	2			305, 306	
or 2SD1032A (Q.R)				63TW 470μF	Electrolytic	C202	1
2SD592ANC (Q.R)	Transistor	Q201	1	80TW 3300μF	Electrolytic	C201	1
				100TW 100μF	Electrolytic	C325, 326	2
<b>DIODES &amp; VARIABLE CAPACITOR</b>				50V 0.0039 (M)	Mylar	C411, 412	2
HZ-36-2	Zener Diode	ZD201	1	50V 0.0047 (M)	Mylar	C319, 320	2
XZ-062	Zener Diode	RD811	1	50V 0.0068 (M)	Mylar	C609, 610	2
IS188AM or				50V 0.022 (M)	Mylar	C611, 612	2
IN60AM	Germanium Diode	D811, 812	2	50V 0.027 (M)	Mylar	C413, 414	2
MA-150	Silicon Diode	D401	1	50V 0.033 (M)	Mylar	C415, 416	2
GP-25B	Rectifier	D201,202,203	4	50V 0.047 (M)	Mylar	C503, 504	4
or GP-30B		204				C419, 420	
GP-08B or 10E1	Rectifier	D205, 206	2	50V 0.22μ (M)	Mylar	C417, 418	2
MA-26W	Silicon Variable, Capacitor	D301,302,303	4	HE12SJUU511K	Ceramic	C313-316	4
LN07302P	LED	304	2	HE12SJSJL102K	Ceramic	C615, 616	2
LN02202P	LED		2	HE12SJYB103K	Ceramic	C209, 210	2
GL9PR9	LED		6	HE17SJYB103K	Ceramic	C207, 208	2
				HE40SJSJL510K	Ceramic	C607, 608	2
				HE40SJUU360K	Ceramic	C307, 308	2
				HE60SJUU101K	Ceramic	C303, 304	2
				HE70SJSJL201K	Ceramic	C409, 410	4
						501, 502	
				ECQ-E2A103MCS	Metalized Polyester		2
<b>CONTROLS</b>				<b>APPEARANCE PARTS</b>			
EWK-KJA332BF5	Potentiometer (VOL)		1	N20560	Front Panel		1
EWK-G4A332375	Potentiometer (BAL)	VR407	1	N20582-2	Rear Panel		1
EWK-G4A332A54	Potentiometer (TONE)	VR401, 403	2	N20566-S	Case		1
				N41932	Push button		8
<b>TRANSFORMERS</b>				N41820-1	Push Knob Guide		1
NPT-0655S	Power Transformer		1	N41820-2	Push Knob Guide		1
				N41820-5	Push Knob Guide		1
<b>SWITCHES</b>				N41751	Lever Knob		2
ESB-70294	Power Switch		1	N41818	Side Cap, Right		1
SW-1501038	5 Key Switch	S501-505	1	N41819	Side Cap, Left		1
SW-4235019	Lever Switch	SLR523	1	N41752	Knob 34	Volume	1
SW4435020	Lever Switch	SLR543	1	N41754	Knob 14	Audio Cont.	3
				N41932	Push Knob		8
<b>CONNECTORS &amp; TERMINALS</b>				No. 7102	Foot		4
HLJ0-308-01-020	Headphone Jack		1	ACC-010	Line Cord		1
1784T0301-11	Speaker Terminal		2	SR3P-4	Cord Strain Relief		1
UB-0027	Ground Terminal		1	<b>MISCELLANEOUS</b>			
D5-710N-02	DIN Plug		2	N30398	Heat Sink		1
1796P247	RCA 6P Jack		1	No. 18 E or MP-50	Mica		2
1794P246	RCA 4P Jack		2	OM-175-2	Instruction Book		1
S-N5053	Fuse Block		10	<b>PACKING MATERIAL</b>			
or FUH-002				N41886	Poly. Bag	for Unit	1
				N40487	Poly. Bag	for Inst. Book	1
<b>FUSES</b>				N20570	Pad		2
FU-521025T	Fuse, 1A	FU304	1	N41880-2	Carton		1
FU-522025T	Fuse, 2A	FU901	1	<b>RESISTOR</b>			
FU-523125T	Fuse, 3.15A	FU301, 302	2	ERF5GEKR33N	Cement Resistor	R325,326,327	2
FU-524025T	Fuse, 4A	FU303	1	330Ω (1W)	Metalized Resistor	328	2
						R901, 902	2
<b>CAPACITORS</b>							
ECQ-E2A103MCS	Metalized Polyester	C901, 902	2				
ECE-	Electrolytic (MSR)	C601, 602	2				
A25M4R7R4R7							
6.3TW 100μF	Electrolytic	C603, 604	2				

- Note: 1. Part orders must contain Model Number, Part Number and Description.  
 2. Ordering quantity of screws and/or resistors must be of 10 pcs.  
 3. Resistors not detailed in parts list are all carbon type. ¼ watt. With regard to the value, refer to the schematic diagram.