JVC

SERVICE MANUAL

MODEL JA-S310

STEREO AMPLIFIER

No. 2355
MARCH 1975

Features

* All-stage Direct-coupled Pure Complementary OCL Circuit gives undistorted amplification with sufficient negative feedback from direct current up to over 100kHz.
* Regulated plus-minus dual power supply system and differential equalizer with class A operation to get wide dynamic range and low distortion.
* Direct phono terminal-to-equalizer circuit connection avoiding shielded wiring in the high impedance Phono input circuit improves high frequency sound quality giving clear and transparent highs.
* Impact Noise Killer to eliminate impact noise which may damage the speakers when the power switch turns on and off.
* High Cut Filter to eliminate tape hiss and record scratch noise.
* Recording & Play-back through Microphone Mixing Circuit.

Specifications

DIMENSIONS

High: 4-3/4 (12.1cm) Width: 15-3/4(40.0cm) Depth: 11-3/8 (28.9cm)

WEIGHT

Net: 14.5 lbs. (6.6 kg) Gross: 16.5 lbs. (7.5 kg)

Transistor	:	31
Diode	:	7
Input Terminal	:	PHONO, TUNER, AUX, TAPE PLAY, MIC
Output Terminal	:	SPEAKER SYSTEM 1 & 2 HEADPHONE JACK TAPE REC
DIN Terminal	:	TAPE
Output Power		
Music Power (IHF)	:	100W (50W + 50W) 4Ω 80W (40W + 40W) 8Ω
Continuous Power (one channel driven) 1kHz 0.8%	:	70W (35W + 35W) 4Ω 64W (32W + 32W) 8Ω
Continuous Power (both channel driven) 1kHz 0.8%	:	50W (25W + 25W) 4Ω 50W (25W + 25W) 8Ω
Power Band Width	:	10Hz~40kHz 8Ω IHF.
Total Hamonic Distortion (output power 22W)	:	0.06% 1kHz
Intermodulation Distortion	:	Max. 0.8% at rated output power Max. 0.1% (1W)

Damping Factor	:	Min. 50 (8Ω, 1kHz)
Load Impedance	:	4~16Ω
Frequency Response	:	20Hz~30kHz ±0.5dB
Tone Control Bass	:	100Hz ±10dB
Treble	:	10kHz ±10dB
Input Sensitivity (input impedance)	:	Phono 2.5mV (47kΩ) Mic 5mV (10kΩ) Tuner, Aux 165mV (50kΩ) Tape Play 165mV (50kΩ)
Signal to Noise Ratio	:	Phono 63dB (RMS) Aux 80dB (RMS)
Phono Over Load Level	:	380mV (P-P) 135mV (RMS, 1kHz)
Recording Output Level	:	Tape Rec. 160mV DIN 30mV
Filter	:	High 9kHz, -6dB/oct.
Loudness Control	:	50Hz +11.5dB
Volume at -30dB Position from Max.	:	1kHz +1.5dB 10kHz +4.5dB

POWER SUPPLY	:	"U" Type – 100,120,200,240V (Selectable) 50/60Hz
	:	"E" Type – 220V 50Hz
	:	"A" Type – 240V 50Hz
POWER CONSUMPTION	:	66W

Caution

1. JA-S310 models of intended different areas.
   There are four models that have specific voltages to different areas; these are:

Type	Area	Line Voltage
E	Sweden	220V 50Hz only
E	Switzerland	220V 50Hz only
A	England, Australia	240V 50Hz only
U	Others	100/120/220/240V, selectable, 50/60Hz

   This amplifier has been pre-set to the line voltage in the area where it is to be sold. See page 8 to fuse replacement and to voltage selection.
2. Use this amplifier within ±10% of the stated power.
3. Be careful to provide good ventilation while using it, continuously, with a high output power.
4. Turn off the power before connecting any components as the click noise could damage the speakers.
5. Connect the speaker and input terminals, correctly. Wrong polarity or shorting will result in unstable sound because of the phase inversion or cause the protective fuse to be blown. A poor ground connection of the pin plug, in the input jack, may result in a hum so that the saturated output will damage the speaker.
6. Do not operate the switches and controls about 7 or 8 seconds after the power is switched on, for this may produce an unusual impact noise. Wait until after the set becomes stable. This impact noise is not the fault of the machine.
7. When one pair of speaker terminals, SYSTEM-1 or SYSTEM-2, are used, speakers with an impedance of 4 ohms to 16 ohms can be used.
   When you use the 1 + 2 position of the speaker selector, the speakers must have an impedance of 8 ohms or higher. If the overall impedance is less than 4 ohms, the set is overstrained. Follow the instructions given on the rear panel.
8. The components connected to the AC outlets, should be of less than 300W in total. AC outlets are provided only on the "U" type sets.
9. The TAPE terminals and DIN socket are connected in parallel, so they cannot be used at the same time. Use one or the other, but not both.
10. If you are using a microphone with no components connected to the TUNER, AUX or TAPE PLAY terminals, turn down the MIC MIXING control before operating the SELECT or TAPE MON controls. If you fail to do this, the sudden rise of mike sound will cause damage to the speaker.

Main Parts Arrangement

Dwg. No.	Parts No.	Parts Name	Description
1	E49645-003	Knob	BASS
2	〃	〃	TREBLE
3	〃	〃	SPEAKER
4	〃	〃	BALANCE
5	E49642-003	Push Knob	HI-FILTER
6	〃	〃	MODE
7	E49643-006	Knob	VOLUME
8	E49642-003	Push Knob	LOUDNESS
9	〃	〃	TAPE MONITOR
10	E49645-003	Knob	MIC MIXING
11	〃	〃	SELECT
12	QMS6301-001	Jack Ass'y	PHONES
13	QMS6313-001	〃	MIC
14	QSU1120-006	Lever Switch	POWER "U" Type
14	QSL2235-101	〃	〃 "E","A" Type
15	E03075-28B	Power Trans	
16	E33912-001	Heat Sink	
17	E21666-004	Front Panel	

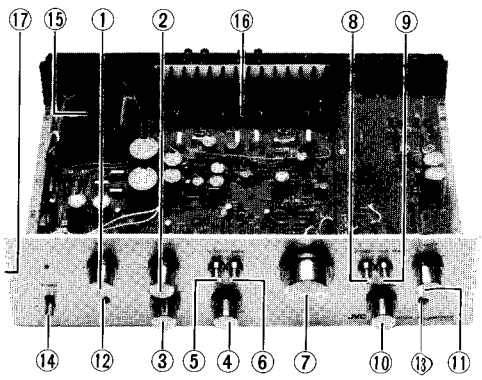


Fig. 1

Dwg. No.	Parts No.	Parts Name	Description
1	TAE-108	EQ. C.B. Ass'y	
2	TXX-7	Main & Tone C.B.	"U","A" Type
2	TXX-7B	"	"E" Type
3	E21665-002	Rear Panel	
4	E03621-001	Pin Jack Ass'y	
5	QMC0589-001	DIN Socket Ass'y	
6	E47268-001	Knob Screw	
7	E03572-101	Terminal Ass'y	System 1
8	"	"	System 2
9	E49877-001	Label	
10	E48992-001	Speaker Label	
11	E47330-161	Rating Label	"U" Type only
11	E47330-162	"	"E" Type only
11	E47330-163	"	"A" Type only

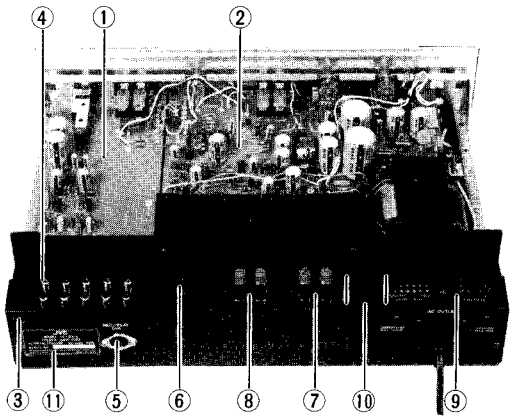


Fig. 2

Disassembly Instructions

TO REMOVE TOP COVER

Remove four screws from both sides of top cover, and remove cover in the direction of top (see Fig. 3).

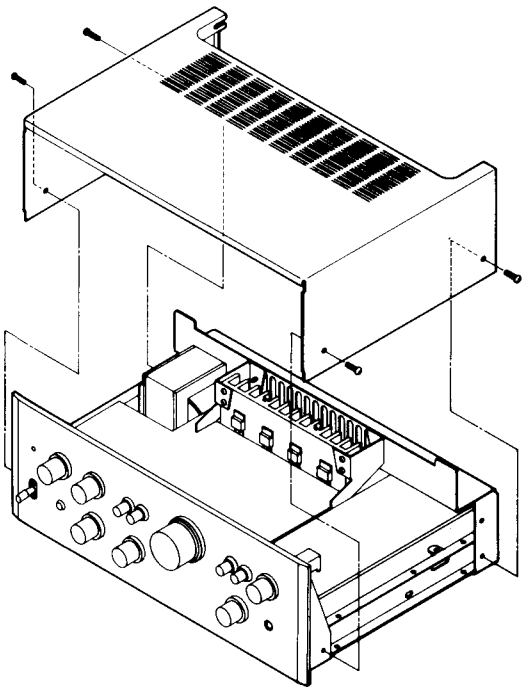


Fig. 3

TO REMOVE BOTTOM BOARD

Remove six screws from bottom board.
Remove bottom board from chassis (see Fig. 4).

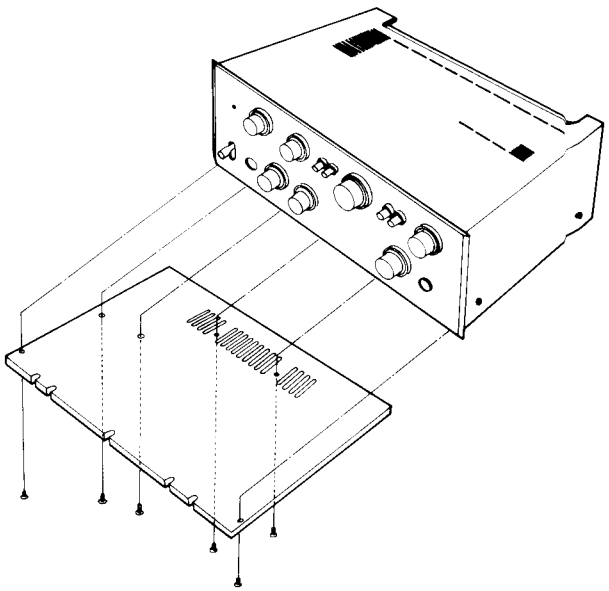


Fig. 4

TO REMOVE FRONT PANEL

1. Remove top cover.
2. Remove following knobs.
   (Speaker select, Bass, Treble, Balance, Volume, Select and Mic Mixing)
3. Remove two screws as shown in Fig. 5, and remove front panel from chassis, with care to avoid damage.

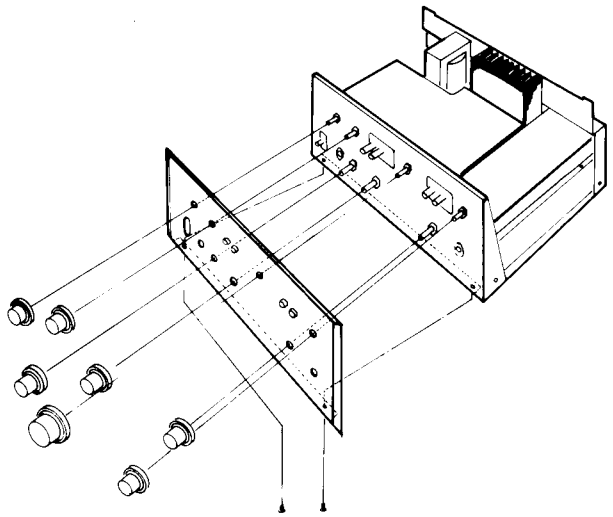


Fig. 5

How to Replace Main Parts (I)

1. Use the provided illustration to remove the front panel, bottom plate and top cover. Then the lever switch, headphone jack, speaker switch, balance control and microphone circuit board assembly, can simply be replaced as shown in Fig. 6.
2. To remove TAE-108 and TAP-245A ("E" type: TAP-245B), loosen the screws A, B and C and nuts (D) shown in Fig. 6. Remove the bottom plate, too.
3. To replace the power transformer, loosen the screws E and install a new one as shown in Fig. 6.
4. The "U" type:
   To replace the selectable voltage socket, first remove the bottom plate and loosen the screws F as shown in Fig. 6.

TXX-7 : TAP-245A + TAC-349
TXX-7B : TAP-245B + TAC-349

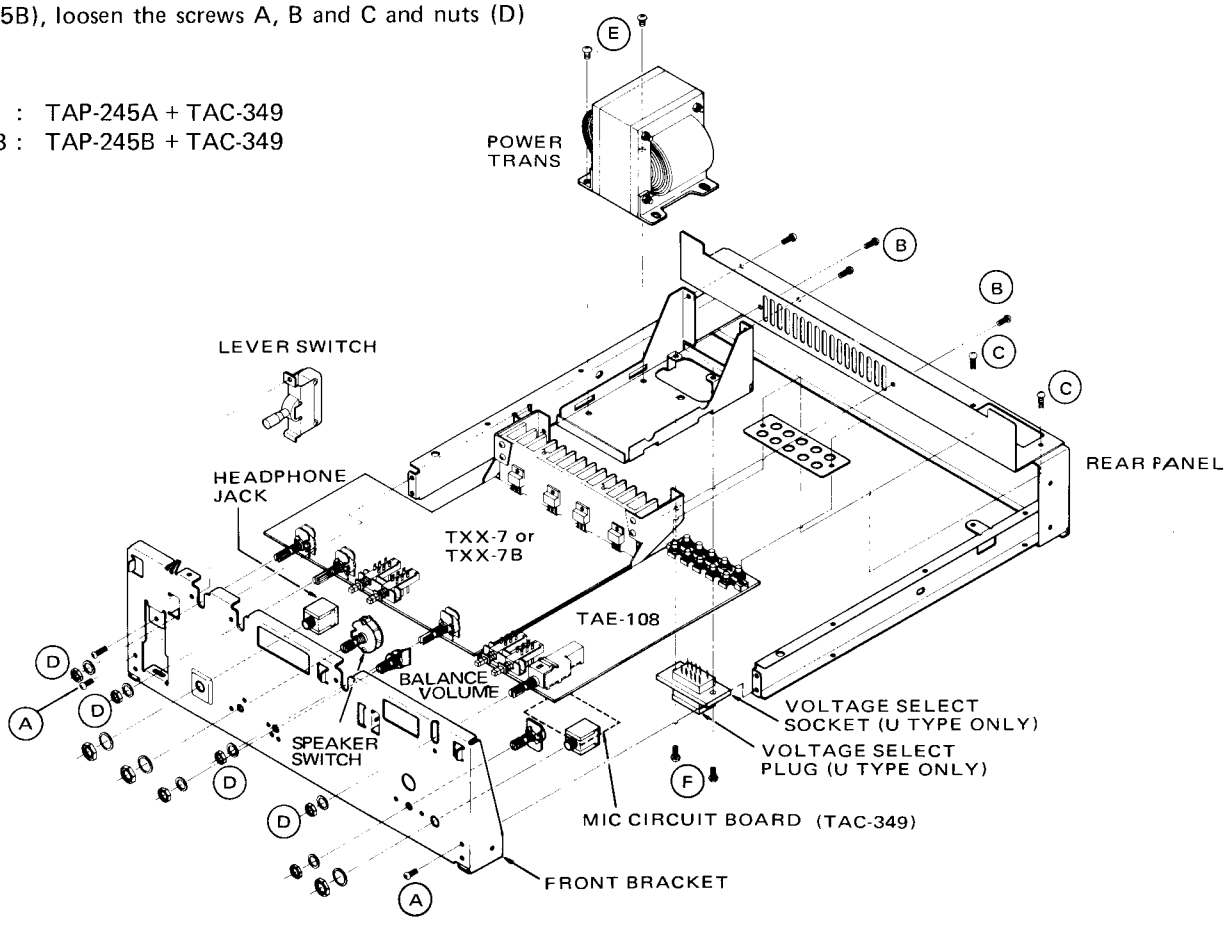


Fig. 6

How to Replace Main Parts (II)

1. First remove the top cover and bottom plate as shown in Fig. 7.
2. To replace the DIN socket and speaker terminals, remove the screws A and the plastic rivets B as shown in Fig. 7.
3. To replace the socket assembly, cord stopper and power cord, loosen the screws C and remove the transformer bracket. Then, loosen the screws D.
4. To replace the rear panel, remove the screws A,D,E, plastic rivets B and the parts thereto. Then, loosen the screws F and C.
5. The plastic rivets can be removed as illustrated in Fig. 8.

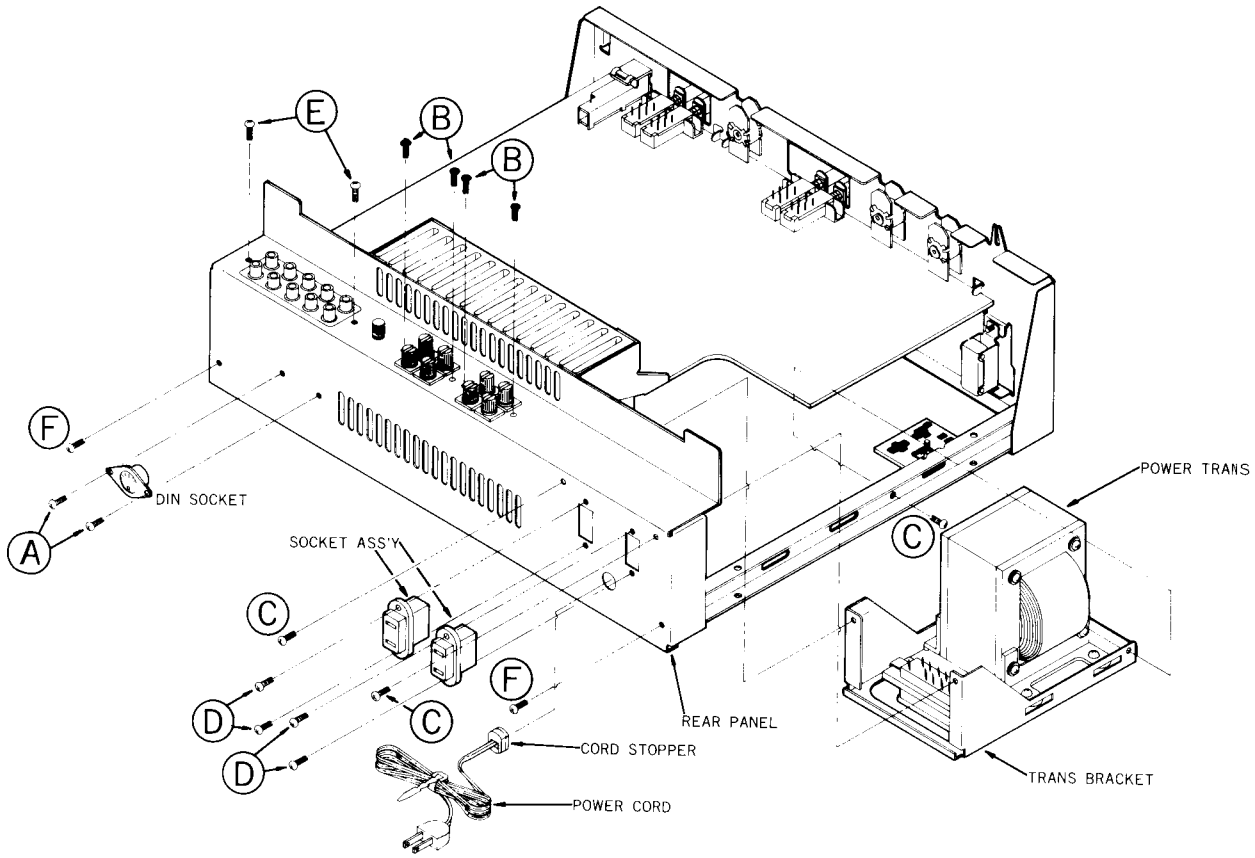


Fig. 7

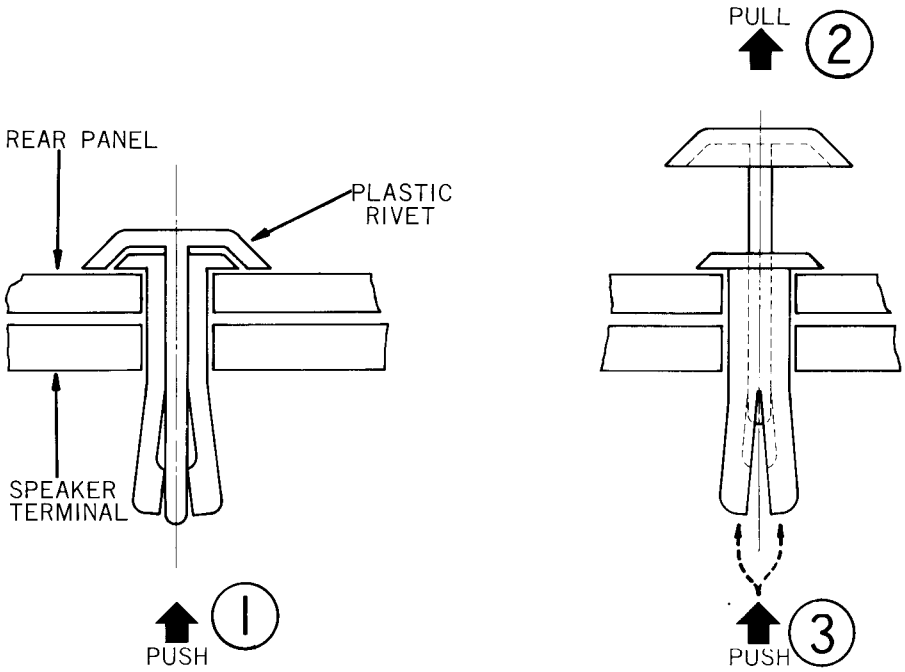


Fig. 8

Alignment

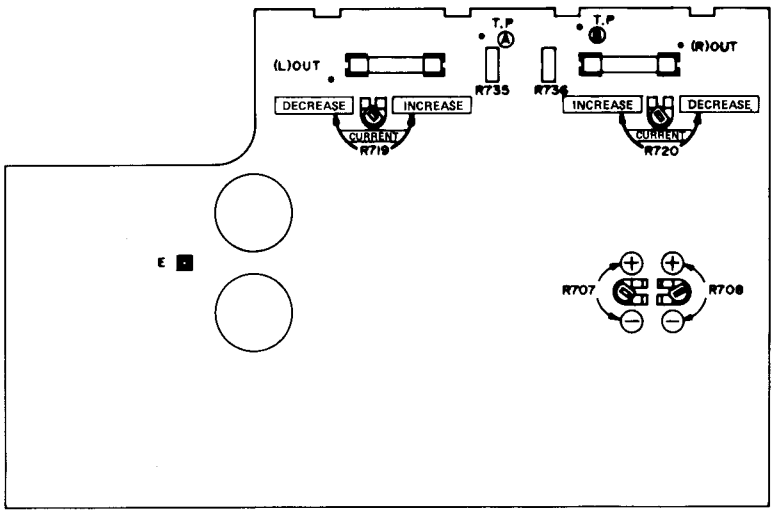


Fig. 9

1. **Adjustment of the center voltage of the power amplifier (see Fig. 9).**

   Adjustment sequence and method:

   * Adjust R707 and R708 to medium before switching the power on.
   * Connect the negative lead of a high sensitivity voltmeter (which can show correct values below 10mV) to E and its positive lead to (L) OUT (of the left channel) or (R) OUT (of the right channel) and switch the power on. Gently turn R707 or R708 little by little until the voltmeter indicates 0V.

   Notes:

   * Leave it about 3 to 5 minutes and check it again. If the needle moves from alignment, repeat the same procedural adjustment.
   * If the voltage deviates by more than 100mV, it adversely affects the distortion. Much care as possible should be used to this adjustment.
   * The voltmeter can, also, be connected to the speaker terminals.
   * The voltmeter may deflect in either direction. Be careful, especially, of the deflection toward the minus (–) side.

2. **Adjustment of the idling current of the power amplifier (see Fig. 9).**

   Adjustment sequence and method:

   * Turn R719 and R720 fully, in the direction of DECREASE.
   * Connect the same high sensitivity voltmeter, used in the adjustment of the center voltage, to (L) OUT and TP (A). (When adjusting for the right channel, connect it to (R) OUT and TP (B)).
   * Two or 3 minutes after the power is switched on, turn R719 (R720 for right channel) very slowly in the direction of INCREASE until the voltmeter shows a value of 10mA (approx. 20mA for right channel).
   * After completion of the adjustment to both channels, check, again, the channel which was first adjusted. If the reading is out of alignment, repeat the adjustment. (Two or three times of repeated adjustments will give a correct and reliable result.)

3. **Standard Gain**

Input Terminal	100Hz	1kHz	10kHz	Description
PHONO	89.2±2dB	76±2dB	62.6±2dB	
	+13.2dB	0	–13.8dB	1kHz: 0dB
MIC	72±2dB	70±1.5dB	67±2dB	MIC MIXING: MAX VOLUME: MAX SELECT SW: PHONO
TUNER	39±2dB	39±1.5dB	39±2dB	
AUX	38±2dB	38±1.5dB	38±2dB	

Speaker Terminal: 8Ω Resistor

Voltage Changeover

1. Remove the six screws from the Bottom Board. (see Fig. 10)

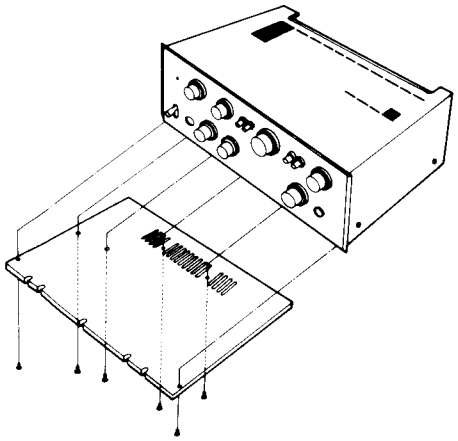


Fig. 10

AC LINE VOLTAGE	FUSE PARTS NO.		
	"U" Type	"E" Type	"A" Type
100 – 120V	QMF60R1-2R3	———	———
200 – 240V	QMF60R1-1R2	QMF51A2-1R25	QMF60R1-1R2

2. Remove the Bottom Board from the chassis.
3. The voltage select plug is located at the conner of the chassis. Remove this select plug and change the position of it so that the arrow points to the required voltage. (see Fig. 11)
4. Replace the safety fuse as well as with one of appropriate capacity.

AC LINE VOLTAGE	FUSE
100 – 120V 200 – 240V	2.3A 1.2A

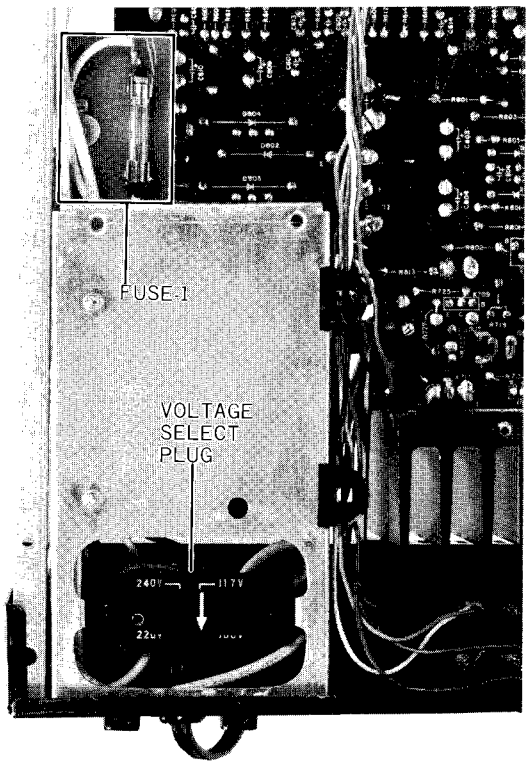


Fig. 11

Exploded View

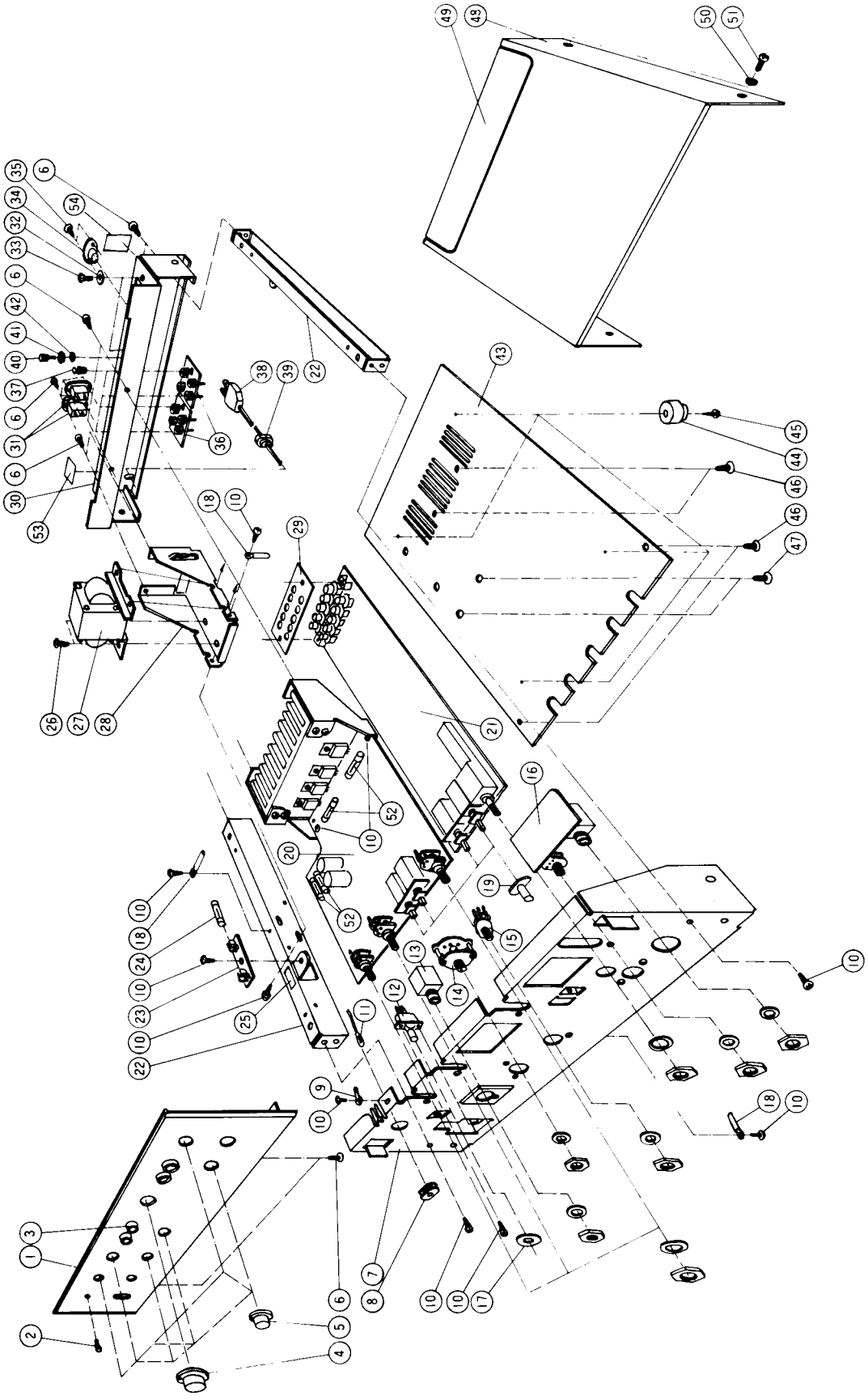


Fig. 12

List of Main Parts

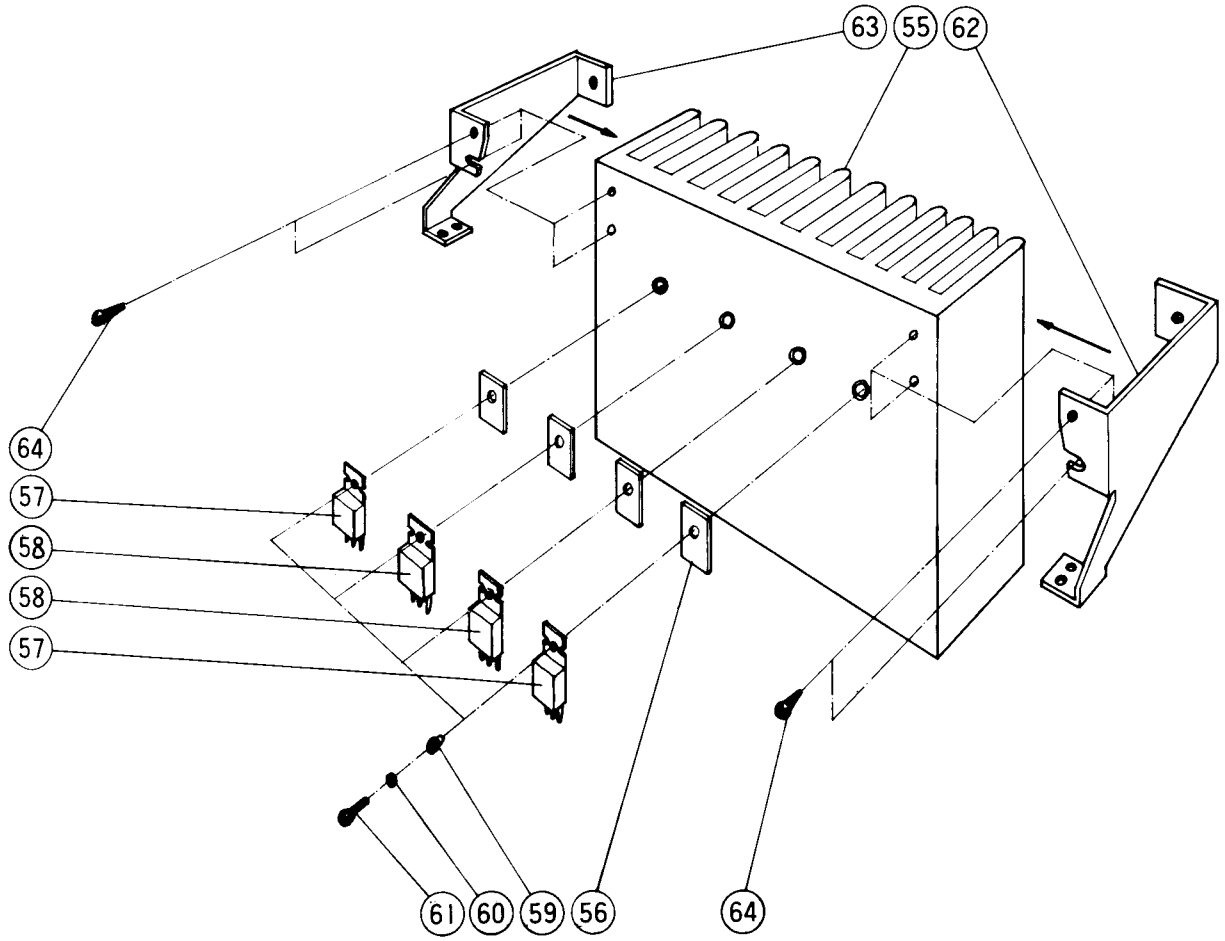


Fig. 13

Ref. No.	Parts No.	Parts Name	Description
1	E21666-004	Front Panel	
2	E46673-003	Rabbit Eye	
3	E49640-003	Escutcheon	
4	E49643-006	Knob	VOLUME
5	E49645-003	Knob	BASS,TREBLE,SPEAKERS,BALANCE, SELECT,MIC MIXING
6	SBSB3008M	Screw	
7	E21671-001	Front Bracket	
8	E43603-004	R. Bushing	
9	52868-3	Terminal	
10	SBSB3008Z	Screw	
11	QLP3104-101	Lamp Ass'y	
12	QSU1120-006	Power Switch	"U" Type
12	QSL2235-101	Lever Switch	"E" Type, "A" Type
13	QMS6301-001	Jack Ass'y	Headphone
14	QSR0060-001	Rotary Switch	SPEAKERS
15	QVF1A2W-615	V. Resistor	BALANCE
16	TXX-7	Circuit Board Ass'y (Mic. Amp)	"U" Type, "A" Type (TAC-349)
16	TXX-7B	"	"E" Type (TAC-349)
17	E45979-012	Spacer	POWER
18	E50670-003	Wire Clamp	
19	E49642-003	Push Knob	HI-FILTER, MODE, LOUDNESS, TAPE MONITOR
20	TXX-7	Circuit Board Ass'y (Main Amp)	"U" Type, "A" Type (TAP-245A)
20	TXX-7B	"	"E" Type (TAP-245B)
21	TAE-108	Circuit B. Ass'y	
22	E33910-002	Support Bracket	

Ref. No.	Parts No.	Parts Name	Description
23	QMG1121-001	Fuse Board	"U" Type
23	E34066-001	Fuse C. Board	"E" Type, "A" Type
24	QMF60R1-2R3	Fuse	"U" Type 100V-120V
24	QMF60R1-1R2	"	"U" Type 200V-240V
24	QMF51A2-1R25	"	"E" Type
24	QMF60R1-1R2	"	"A" Type
25	E45926-006	Fuse Label	"U" Type (1.2A or 2.3A)
25	E46264-005	"	"E" Type (1.25AT)
25	E43716-004	"	"A" Type (1.2A)
26	SBSB4008Z	Screw	
27	E03075-28B	Power Trans	
28	E34068-001	Trans Bracket	
29	E49689-001	Pin Jack Cover	
30	E21665-002	Rear Panel	
31	QMC0231-001	Socket Ass'y	"U" Type only
32	WNS3000M	Washer	(Black)
33	LPSP3008MS	Ass'y Screw	(Black)
34	QMC0589-001	DIN Socket	
35	SBSB3008N	Screw	
36	E03572-101	Terminal Ass'y	
37	E48729-001	Plastic Rivet	
38	QMP1200-244	Power Cord	"U" Type
38	E03329-001	P. Cord (Conti)	"U" Type
38	E03544-001	P. Cord (SEMKO)	"E" Type
38	QMP3800-240	Power Cord Ass'y (SEV)	"E" Type
38	E03551-002	P. Cord W/Plug	"A" Type
39	QHS3876-162	Cord Stopper	"U" Type, "E" Type
39	QHS6374-252	"	"A" Type
40	E47268-001	Knob Screw	GND
41	WBS3000N	Washer	
42	WNS3000N	"	
43	E21668-003	Bottom Board	
44	QZF2112-001	Foot	
45	SBSA3012Z	Screw	
46	SBSB3012M	Screw	(Black)
47	SBSB4012M	Screw	(Black)
48	E21669-002	Top Cover	
49	E21670-002	Terminal Cover	
50	WAS4000N	Washer	
51	SDSP4008RS	Screw	
52	QMF60S1-3R3	Fuse	Fuse 2~5 "U" Type, "A" Type
52	QMF51A2-3R15	"	2~5 "E" Type
53	E48992-001	Speaker Label	
54	E47330-161	Rating Label	"U" Type
54	E47330-162	"	"E" Type
54	E47330-163	"	"A" Type
55	E33912-001	Heat Sink	
56		Insulator Film	X713~716 Accessory
57	2SD313V (E)	Transistor	X713, X714
58	2SB507V (E)	"	X715, X716
59	E41541-19	Bushing	
60	WSS3000N	Washer	
61	LPSP3008ZS	Screw	
62	E33976-001	Bracket	
63	E33976-002	"	
64	SBSB3008Z	Screw	

TXX-7 Circuit Board Ass'y

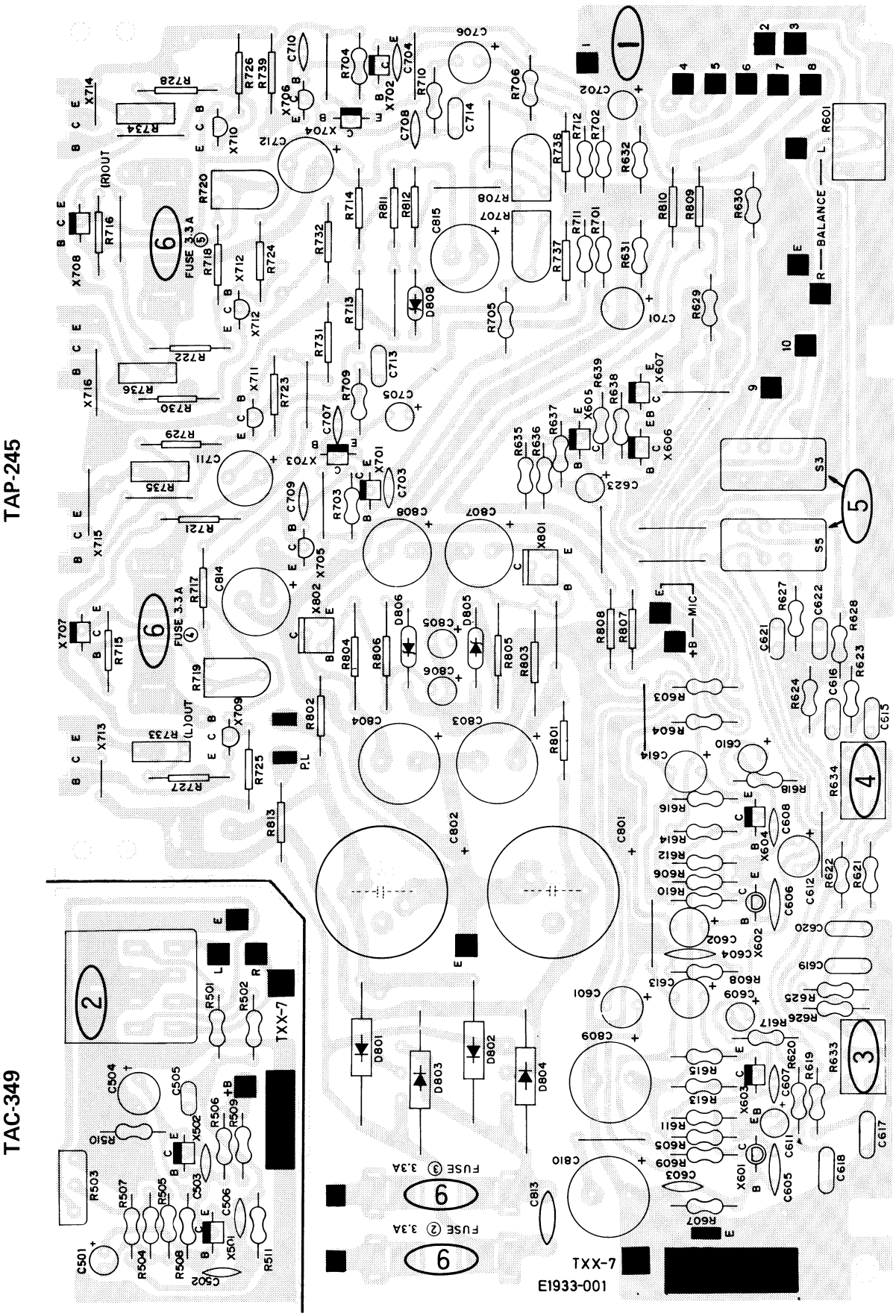


Fig. 14

Transistors

Ref. No.	Parts No.	Description	Pc	Ft
X501	2SC458LG(C)	Silicon Hitachi	200mW	230MHz
X502	〃	〃 〃	〃	〃
X601	2SA493(GR)	〃 Toshiba	200mW	80MHz
X602	〃	〃 〃	〃	〃
X603	2SC1345(D)V	〃 Hitachi	〃	230MHz
X604	〃	〃 〃	〃	〃
X605	2SC458(C)	〃 〃	〃	〃
X606	〃	〃 〃	〃	〃
X607	〃	〃 〃	〃	〃
X701	2SC1345(D)V	〃 〃	〃	〃
X702	〃	〃 〃	〃	〃
X703	〃	〃 〃	〃	〃
X704	〃	〃 〃	〃	〃
X705	2SA697(C)	〃 Mitsubishi	500mW	130MHz
X706	〃	〃 〃	〃	〃
X707	2SC458(C)	〃 Hitachi	200mW	230MHz
X708	〃	〃 〃	〃	〃
X709	2SC1211(D)	〃 Mitsubishi	500mW	130MHz
X710	〃	〃 〃	〃	〃
X711	2SA697(D)	〃 〃	〃	〃
X712	〃	〃 〃	〃	〃
X713	2SD313V(E)	〃 Sanyo	30W	8MHz
X714	〃	〃 〃	〃	〃
X715	2SB507V(E)	〃 〃	〃	〃
X716	〃	〃 〃	〃	〃
X801	2SD313V(E)	〃 〃	〃	〃
X802	2SB507V(E)	〃 〃	〃	〃

X501~502 : 2SC458LG(C) or 2SC1344(D)
X605~607,707~708 : 2SC458(C) or 2SC1344(D)

Diodes

Ref. No.	Parts No.	Parts Name	Description	Pc
D801	DSIP	S. Diode	Silicon Fuji	1A
D802	〃	〃	〃 〃	〃
D803	〃	〃	〃 〃	〃
D804	〃	〃	〃 〃	〃
D805	E0771-19	Z. Diode	Zener JRC	0.5W
D806	〃	〃	〃 〃	〃
D808	E0771-10	〃	〃 〃	〃

Other Parts

Ref. No.	Parts No.	Parts Name	Description
1	E1933-001	Circuit Board	
2	QMS6313-001	Jack Ass'y	Mic.
3	QVD7A2W-715	V. Resistor	R633 BASS
4	〃	〃	R643 TREBLE
5	QSP0229-101	Push Switch	S3, S5 MODE, HI-FILTER
6	E48965-002	Fuse Clip	"E" Type
6	E45524-001	〃	"U" Type, "A" Type
7	QMF51A2-3R15	Fuse	"E" Type
7	QMF60S1-3R3	〃	"U" Type, "A" Type

Resistors

Ref. No.	Parts No.	Parts Name	Description
R501	QRD141J-473	Carbon Resistor	47kΩ ¼W
R502	" -473	"	" "
R503	QVG4A2W-515	Variable Resistor	100kΩ (W) 0.05W
R504	QRD141J-102	Carbon Resistor	1kΩ ¼W
R505	" -333	"	33kΩ "
R506	QRZ0019-274	"	270kΩ "
R507	" -221	"	220Ω "
R508	QRD141J-154	"	150kΩ "
R509	" -682	"	6.8kΩ "
R510	" -391	"	390Ω "
R511	" -823	"	82kΩ "
R601	QVD8A2B-5F5	Variable Resistor	250kΩ (B) 0.1W
R603	QRD141J-102	Carbon Resistor	1kΩ ¼W
R604	" -102	"	" "
R605	" -154	"	150kΩ "
R606	" -154	"	" "
R607	" -184	"	180kΩ "
R608	" -184	"	" "
R609	" -473	"	47kΩ "
R610	" -473	"	" "
R611	" -823	"	82kΩ "
R612	" -823	"	" "
R613	" -103	"	1kΩ "
R614	" -103	"	" "
R615	" -152	"	1.5kΩ "
R616	" -152	"	" "
R617	" -223	"	22kΩ "
R618	" -223	"	" "
R619	" -332	"	3.3kΩ "
R620	" -332	"	" "
R621	" -332	"	" "
R622	" -332	"	" "
R623	" -821	"	820Ω "
R624	" -821	"	" "
R625	" -183	"	18kΩ "
R626	" -183	"	" "
R627	" -124	"	120kΩ "
R628	" -124	"	" "
R629	" -222	"	2.2kΩ "
R630	" -222	"	" "
R631	" -124	"	120kΩ "
R632	" -124	"	" "
R635	" -274	"	270kΩ "
R636	" -273	"	27kΩ "
R637	" -223	"	22kΩ "
R638	" -103	"	10kΩ "
R639	" -103	"	" "
R701	" -823	"	82kΩ "
R702	" -823	"	" "
R703	" -152	"	1.5kΩ "
R704	" -152	"	" "
R705	" -562	"	5.6kΩ "
R706	" -562	"	" "
R707	QVP8A0B-014	Variable Resistor	10kΩ 0.1W
R708	" -014	"	" "

Ref. No.	Parts No.	Parts Name	Description
R709	QRD141J-823	Carbon Resistor	82kΩ ¼W
R710	" -823	"	" "
R711	" -182	"	1.8kΩ "
R712	" -182	"	" "
R713	QRC121K-122	Composition Resistor	1.2kΩ ½W
R714	" -122	"	" "
R715	" -222	"	2.2kΩ "
R716	" -222	"	" "
R717	" -681	"	680Ω "
R718	" -681	"	" "
R719	QVP8A0B-052	Variable Resistor	500Ω 0.1W
R720	" -052	"	" "
R721	QRC121K-3R3	Composition Resistor	3.3Ω ½W
R722	" -3R3	"	" "
R723	" -392	"	3.9kΩ "
R724	" -392	"	" "
R725	" -220	"	22Ω "
R726	" -220	"	" "
R727	" -151	"	150Ω "
R728	" -151	"	" "
R729	" -151	"	" "
R730	" -151	"	" "
R731	" -220	"	22Ω "
R732	" -220	"	" "
R733	QRM015K-R47	Metal Plate Resistor	0.47Ω 1W
R734	"	"	" "
R735	"	"	" "
R736	"	"	" "
R737	QRC121K-100	Composition Resistor	10Ω ½W
R738	" -100	"	" "
R739	" -470	"	47Ω "
R801	QRD126J-121	Unflamable Resistor	120Ω ½W
R802	" -121	"	" "
R803	QRG011K-152	Oxide Metal Resistor	1.5kΩ 1W
R804	" -152	"	" "
R805	" -331	"	330Ω "
R806	" -331	"	" "
R807	QRC121K-471	Composition Resistor	470Ω ½W
R808	" -681	"	680Ω "
R809	" -391	"	390Ω "
R810	" -391	"	" "
R811	" -470	"	47Ω "
R812	QRG011K-152	Oxide Metal Resistor	1.5kΩ 1W
R813	" -821	"	820Ω "

Capacitors

Ref. No.	Parts No.	Parts Name	Description
C501	QEB41EM-105	L.L.C. Electrolic Capacitor	1μF/25V
C502	QCS11HJ-681	Ceramic Capacitor	680pF/50V
C503	" -470	"	47pF/50V
C504	QEB41EM-106	L.L.C. Electrolic Capacitor	10μF/25V
C505	QEB41HM-474	"	0.047μF/50V
C506	QCS11HJ-101	Ceramic Capacitor	100pF/50V
C601	QEB41HM-105	L.L.C. Electrolic Capacitor	1μF/50V
C602	" -105	"	"
C603	QCS11HJ-220	Ceramic Capacitor	22pF/50V
C604	" -220	"	"
C605	" -331	"	330pF/50V
C606	" -331	"	"
C607	" -220	"	22pF/50V
C608	" -220	"	"
C609	QEW41HA-475	Electrolic Capacitor	0.47μF/50V
C610	" -475	"	"
C611	QEW41CA-106	"	10μF/16V
C612	" -106	"	"
C613	QEW41EA-106	"	10μF/25V
C614	" -106	"	"
C615	QFM41HK-223	Mylar Capacitor	0.022μF/50V
C616	" -223	"	"
C617	" -104	"	0.1μF/50V
C618	" -104	"	"
C619	" -104	"	"
C620	" -104	"	"
C621	" -682	"	0.0068μF/50V
C622	" -682	"	"
C623	QEB41EM-106	L.L.C. Electrolic Capacitor	10μF/25V
C625	QFM41HK-223	Mylar Capacitor	0.022μF/50V
C626	" -223	"	"
C701	QEB41HM-105	L.L.C. Electrolic Capacitor	1μF/50V
C702	" -105	"	"
C703	QCS11HJ-471	Ceramic Capacitor	470pF/50V
C704	" -471	"	"
C705	QEW41CA-476	Electrolic Capacitor	47μF/16V
C706	" -476	"	"
C709	QCS11HJ-220	Ceramic Capacitor	22pF/50V
C710	" -220	"	"
C711	QEW41HA-476	Electrolic Capacitor	47μF/50V
C712	" -476	"	"
C713	QFM41HK-473	Mylar Capacitor	0.047μF/50V
C714	" -473	"	"
C801	QEW81VA-338	Electrolic Capacitor	3300μF/35V
C802	" -338	"	"
C803	QEW41VA-477	"	470μF/35V
C804	" -477	"	"
C805	QEW41EA-476	"	47μF/25V
C806	QEW41HA-105	"	1μF/50V
C807	QEW41EA-227	"	220μF/25V
C808	" -227	"	"
C809	" -477	"	470μF/25V
C810	" -477	"	"
C813	QCF12HP-103	Ceramic Capacitor	0.01μF/500V
C814	QEW41HA-107	Electrolic Capacitor	100μF/50V
C815	QEW41VA-227	"	220μF/35V

TAE-108 Circuit Board Ass'y

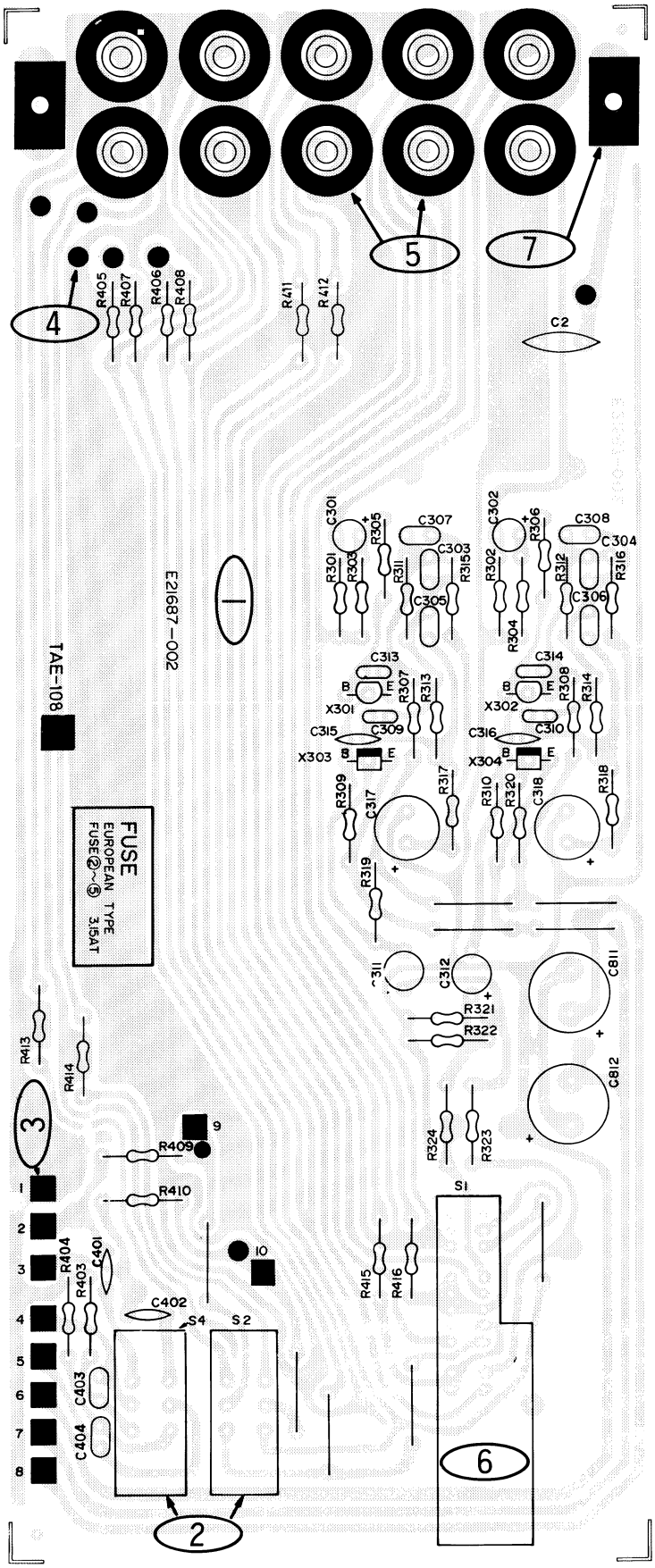


Fig. 15

Transistors

Ref. No.	Parts No.	Description	Pc	Ft
X301	2SA493(GR)	Silicon Toshiba	200mW	80MHz
X302	〃	〃 〃	〃	〃
X303	2SC1345(D)V	〃 Hitachi	〃	230MHz
X304	〃	〃 〃	〃	〃

Resistors

Ref. No.	Parts No.	Parts Name	Description
R301	QRD141J-104	Carbon Resistor	100kΩ ¼W
R302	〃 -104	〃	〃 〃
R303	〃 -104	〃	〃 〃
R304	〃 -104	〃	〃 〃
R305	〃 -102	〃	1kΩ 〃
R306	〃 -102	〃	〃 〃
R307	QRZ0019-104	〃	100kΩ 〃
R308	〃 -104	〃	〃 〃
R309	〃 -682	〃	6.8kΩ 〃
R310	〃 -682	〃	〃 〃
R311	QRD141J-824	〃	820kΩ 〃
R312	〃 -824	〃	〃 〃
R313	〃 -333	〃	33kΩ 〃
R314	〃 -333	〃	〃 〃
R315	〃 -561	〃	560Ω 〃
R316	〃 -561	〃	〃 〃
R317	〃 -683	〃	68kΩ 〃
R318	〃 -683	〃	〃 〃
R319	〃 -472	〃	4.7kΩ 〃
R320	〃 -472	〃	〃 〃
R321	〃 -104	〃	100kΩ 〃
R322	〃 -104	〃	〃 〃
R323	〃 -682	〃	6.8kΩ 〃
R324	〃 -682	〃	〃 〃
R403	〃 -223	〃	22kΩ 〃
R404	〃 -223	〃	〃 〃
R405	〃 -334	〃	330kΩ 〃
R406	〃 -334	〃	〃 〃
R407	〃 -823	〃	82kΩ 〃
R408	〃 -823	〃	〃 〃
R409	〃 -103	〃	10kΩ 〃
R410	〃 -103	〃	〃 〃
R411	〃 -472	〃	4.7kΩ 〃
R412	〃 -472	〃	〃 〃
R413	〃 -472	〃	〃 〃
R414	〃 -472	〃	〃 〃
R415	〃 -472	〃	〃 〃
R416	〃 -472	〃	〃 〃

Capacitors

Ref. No.	Parts No.	Parts Name	Description
C301	QEB41HM-105	L.L.C. Electrolic Capacitor	1μF/50V
C302	" -105	"	"
C303	QFM41HJ-102	Mylar Capacitor	0.001μF/50V
C304	" -102	"	"
C305	" -122	"	0.0012μF/50V
C306	" -122	"	"
C307	" -682	"	0.0068μF/50V
C308	" -682	"	"
C309	" -122	"	0.0012μF/50V
C310	" -122	"	"
C311	QEB41HM-105	L.L.C. Electrolic Capacitor	1μF/50V
C312	" -105	"	"
C313	QFM41HK-182	Mylar Capacitor	0.0018μF/50V
C314	" -182	"	"
C317	QEW41CA-227	Electrolic Capacitor	220μF/16V
C318	" -227	"	"
C401	QCS11HJ-181	Ceramic Capacitor	180pF/50V
C402	" -181	"	"
C403	QFM41HK-103	Mylar Capacitor	0.01μF/50V
C404	" -103	"	"
C811	QEW41EA-108	Electrolic Capacitor	1000μF/25V
C812	" -108	"	"

Other Parts

Ref. No.	Parts No.	Parts Name	Description
1	E21687-002	Circuit Board	
2	QSP0229-101	Push Switch	LOUDNESS TAPE, MON.
3	E43727-002	Tab	
4	E46687-001	"	
5	E03621-001	Pin Jack Ass'y	Input Terminal
6	QSR6043-200	Slide Rotary Sw.	SELECT
7	E49690-001	Stay Bracket	

Connections

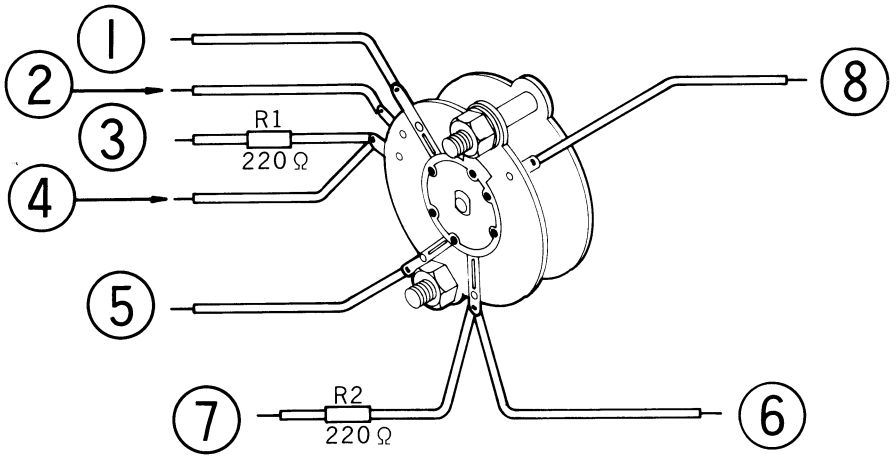


Fig. 16

Dwg. No.	WIRE'S COLOUR	CONNECTED TO
1	BLU	SPEAKER TERMINAL SYSTEM-2 R
2	WHT	" -1 L
3	BLK	H.PHONE JACK (Left)
4	BRW	TAP-245 (L-OUT)
5	RED	SPEAKER TERMINAL SYSTEM-1 R
6	GRY	TAP-245 (R-OUT)
7		H.PHONE JACK (Right)
8	GRN	SPEAKER TERMINAL SYSTEM-2 L

Packing Instructions

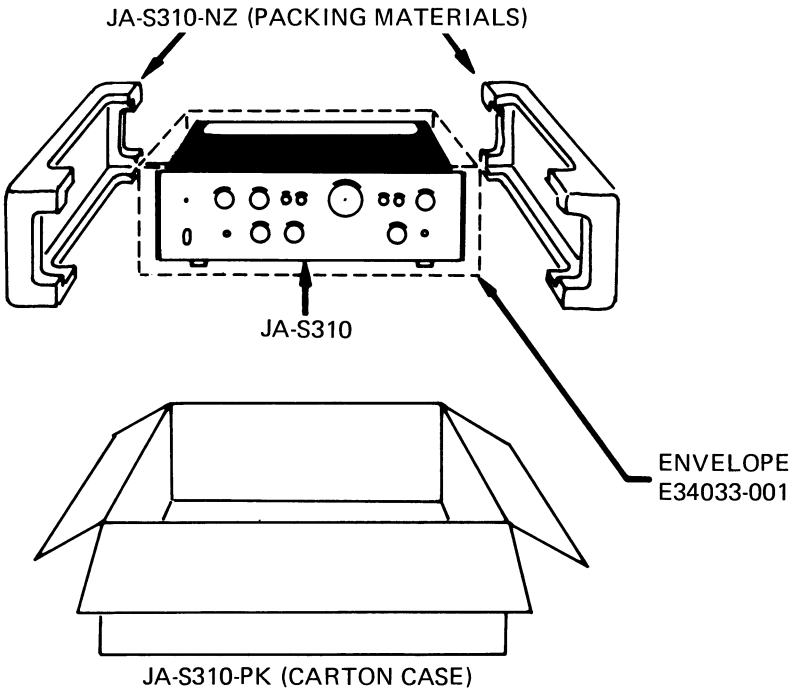
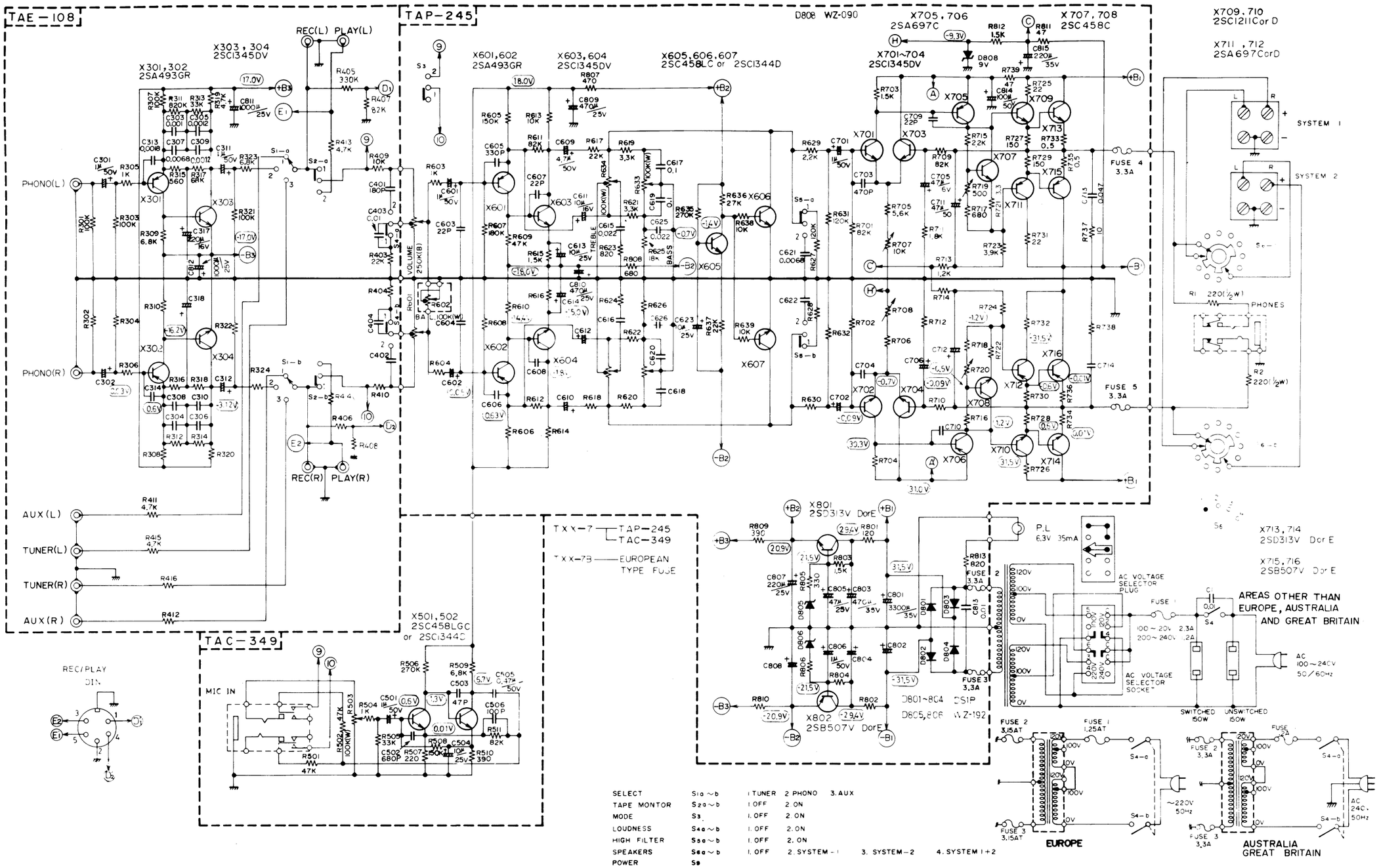


Fig. 17

Schematic Diagram of Model JA-S310



Accessories

Parts Name	Parts No.		
	JA-S310U	JA-S310E	JA-S310A
JA-S310 Instruction Book	E30580-487A	E30580-487A	E30580-487A
Envelope	E64207-001	E64207-001	E64207-001
Fuse	QMF60R1-2R3	———	———
"	QMF60R1-1R2	———	———
Label	E7958-A	———	———
Envelope	E64208-001	———	———
C. Tag	E41457	———	———
Siemens Plug	E04056	———	———

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STEREO DIVISION

Printed in Japan
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