

JVC

SERVICE MANUAL

MODEL
JA-S77

STEREO INTEGRATED AMPLIFIER



No. 2440
JAN. 1978

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Warning:

When replacing the parts marked with \triangle , be sure to use the designated parts to ensure safety.

Power Specifications

Areas	Line Voltage & Frequency	Power Consumption
U.S.A.	AC 120 V, 60 Hz	305 W
CANADA	AC 120 V, 60 Hz	385 VA
EUROPE	AC 220 V \sim , 50 Hz	515 W
U.K. & AUSTRALIA	AC 240 V \sim , 50 Hz	515 W
OTHER AREAS	AC 100/120/220/240 V \sim Selectable, 50/60 Hz	515 W

1. Specifications

Power Amplifier Section

Output Power (both channels driven)	:	65 watts per channel, min. RMS into 8 ohms from 20 Hz – 20 kHz with no more than 0.02 % total harmonic distortion
Total Harmonic Distortion (at 65 W)	:	0.005 % at 1 kHz
Intermodulation Distortion (at 65 W)	:	0.01 %
Frequency Response	:	DC–100 kHz $\begin{matrix} +0 \\ -1 \end{matrix}$ dB
Input Sensitivity/Impedance	:	1.5 V/50 k Ω
Load Impedance	:	4 Ω – 16 Ω (SYSTEM-1 or 2) 8 Ω – 16 Ω (SYSTEM-1 +2)
Damping Factor	:	50 at 8 Ω (20 Hz – 20 kHz)
Signal to Noise Ratio	:	115 dB (IHF, A network, short circuit)

Pre-Amplifier Section

Input Sensitivity/Impedance	:	PHONO-1, 2: 2.5 mV/33 k Ω , 47 k Ω , 100 k Ω Selectable TUNER: 200 mV/50 k Ω AUX: 200 mV/50 k Ω TAPE PLAY-1, 2: 200 mV/50 k Ω TAPE REC-1, 2: 200 mV/150 Ω PRE OUT: 1.5 V/560 Ω
Output Sensitivity/Impedance	:	PHONO: \pm 0.2 dB from RIAA Curve 280 mV (RMS)/790 mV (P-P) at 1 kHz
Phono Equalizer Deviation	:	\pm 0.2 dB from RIAA Curve
Phono Overload	:	280 mV (RMS)/790 mV (P-P) at 1 kHz
Signal to Noise Ratio	:	PHONO: 81 dB (IHF, A network, short circuit) TUNER, AUX, TAPE PLAY: 105 dB (IHF A network, short circuit)
Frequency Response	:	TUNER, AUX, TAPE PLAY, 3 Hz – 100 kHz $\begin{matrix} +0 \\ -1 \end{matrix}$ dB
Loudness Control (at -30 dB Vo. Control)	:	+6 dB at 100 Hz, +4 dB at 10 kHz
Tone Control	:	BASS: \pm 8 dB (100 Hz) TREBLE: \pm 8 dB (10 kHz)
Filters	:	Subsonic: 6 dB/Oct. at 18 Hz
Muting	:	-20 dB
Power Source and Power Consumption	:	See Page 1
Dimensions	:	6-1/4"(H) x 17-3/4"(W) x 13-1/4"(D) (15.8 cm x 45.0 cm x 33.8 cm)
Weight	:	25.3 lbs. (11.5 kg)

Design and specifications subject to change without notice.

2. Block Diagram

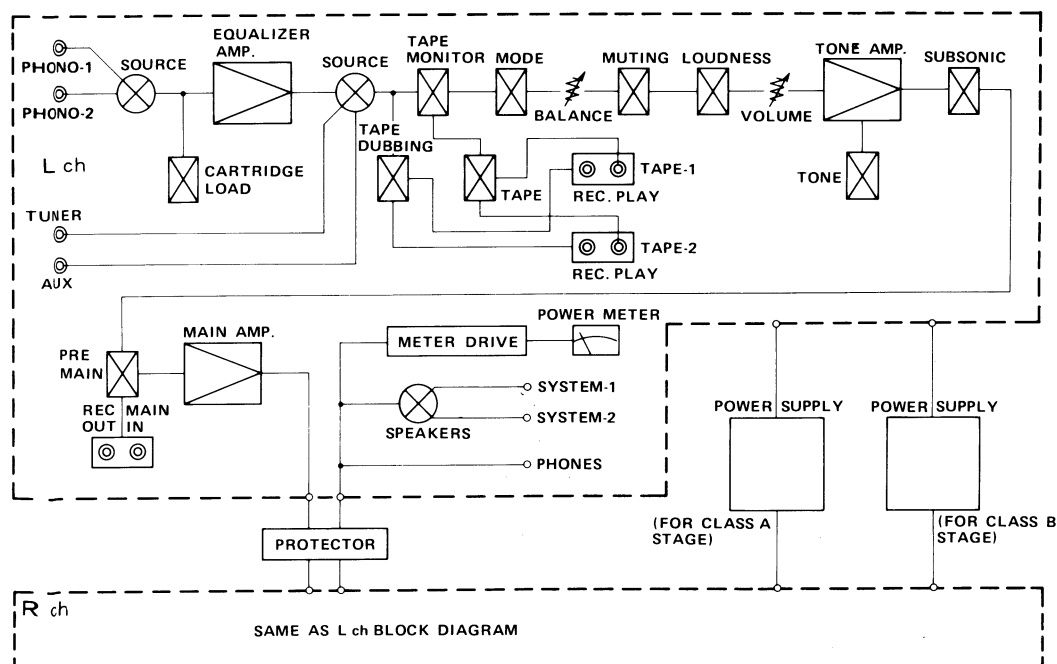


Fig. 1

3. Removal of Top Cover and Bottom Plate

Procedure (Top Cover)

1. Remove 6 screws (Item No. 1) from the top cover (Item No. 2).
2. Remove 2 screws (Item No. 3) from the rear panel back of top cover.

Procedure (Bottom Plate)

1. Remove 6 screws (Item No. 4) from the bottom plate (Item No. 5).

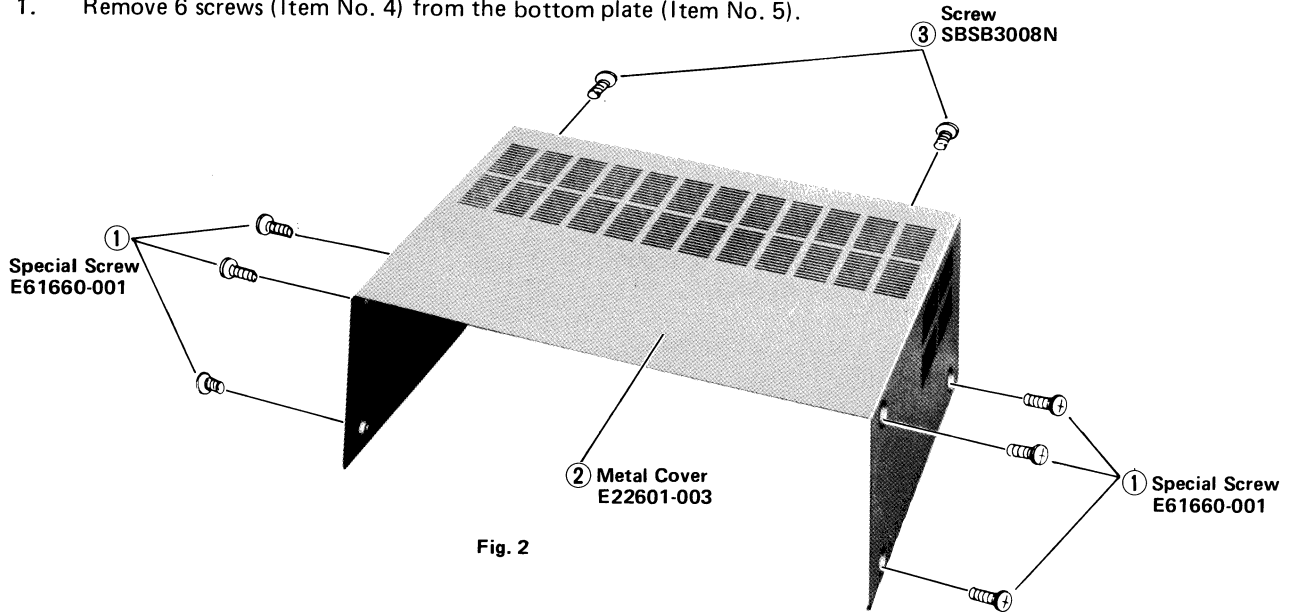


Fig. 2

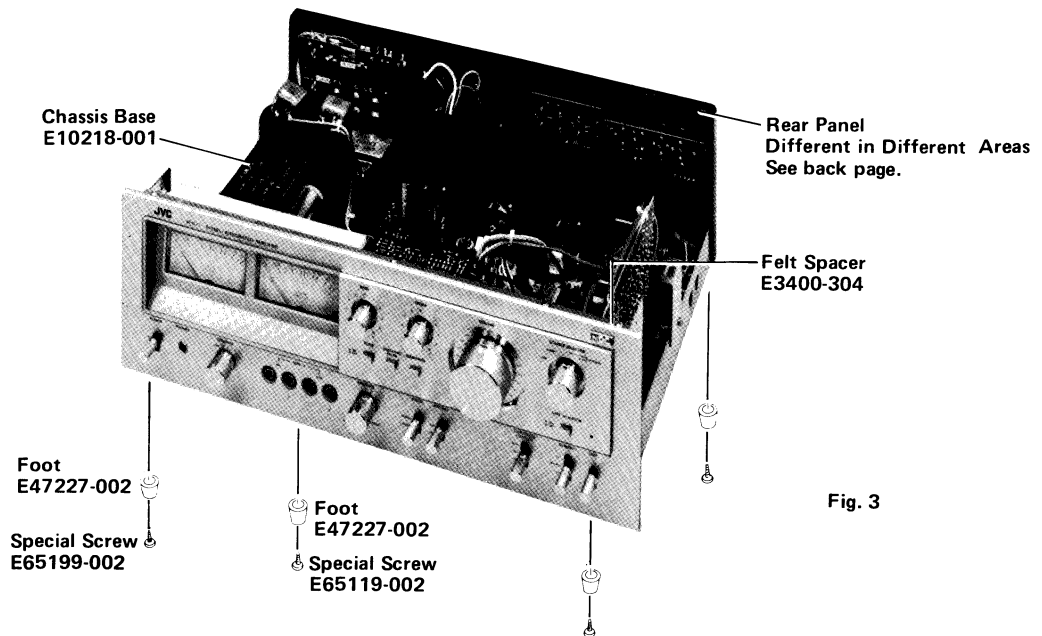


Fig. 3

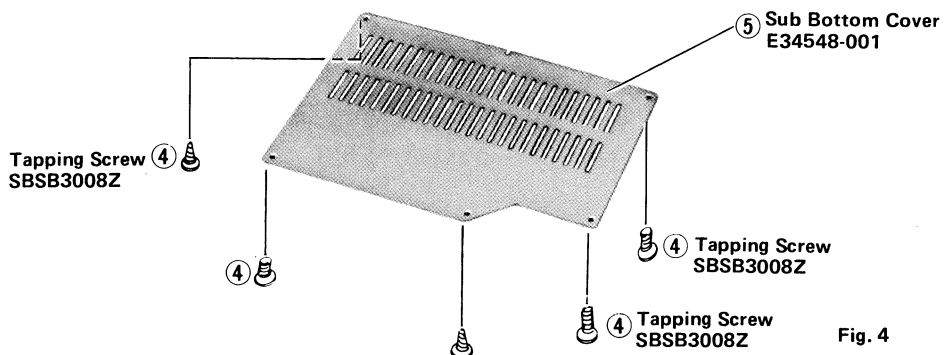


Fig. 4

4. Main Parts Location and Part Numbers

Top View

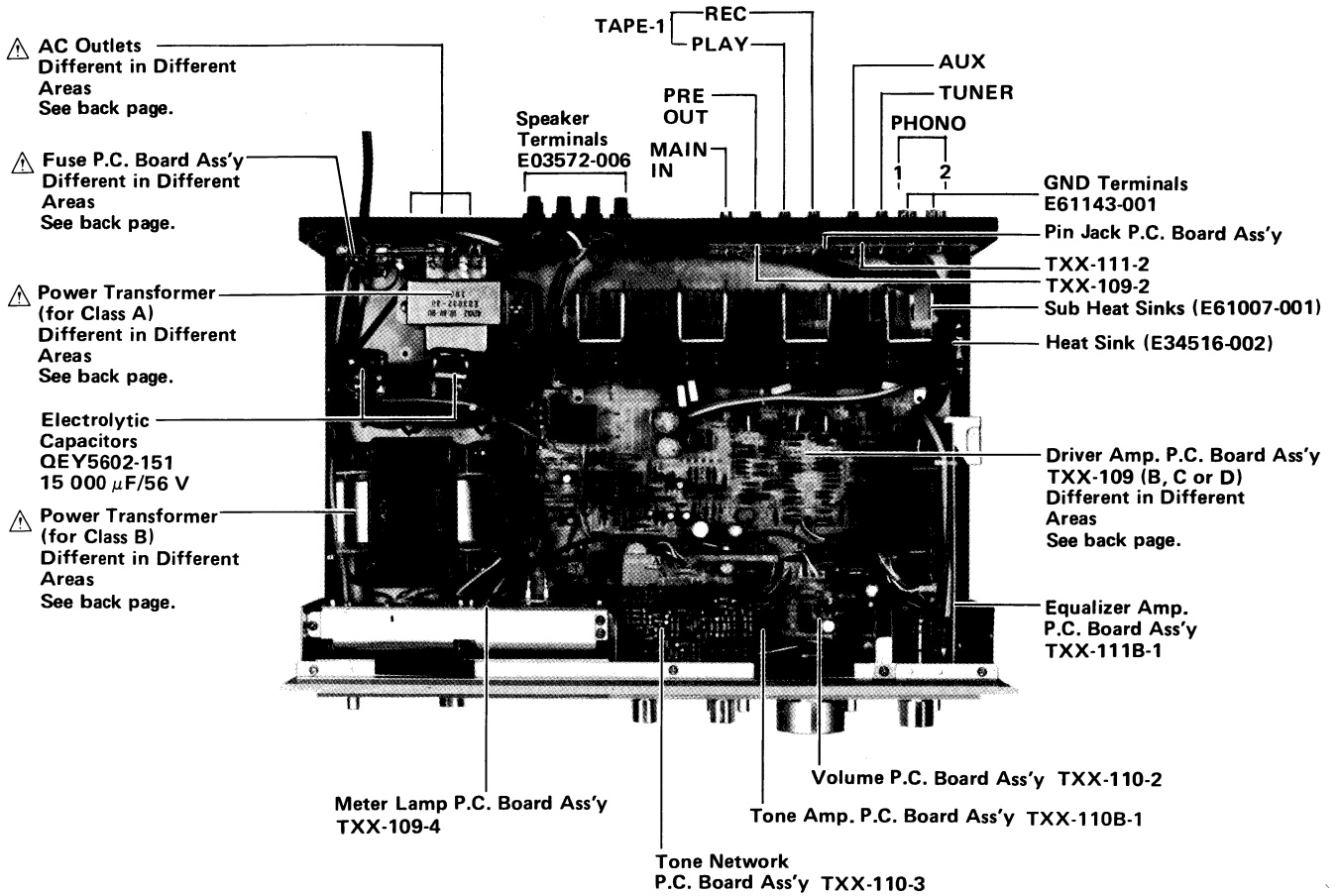


Fig. 5

Warning:

47.5 V (\pm B) is applied directly to the sub heat sink. Disconnect AC power when replacing TXX-109 or the rear panel to prevent blown fuses.

Bottom View

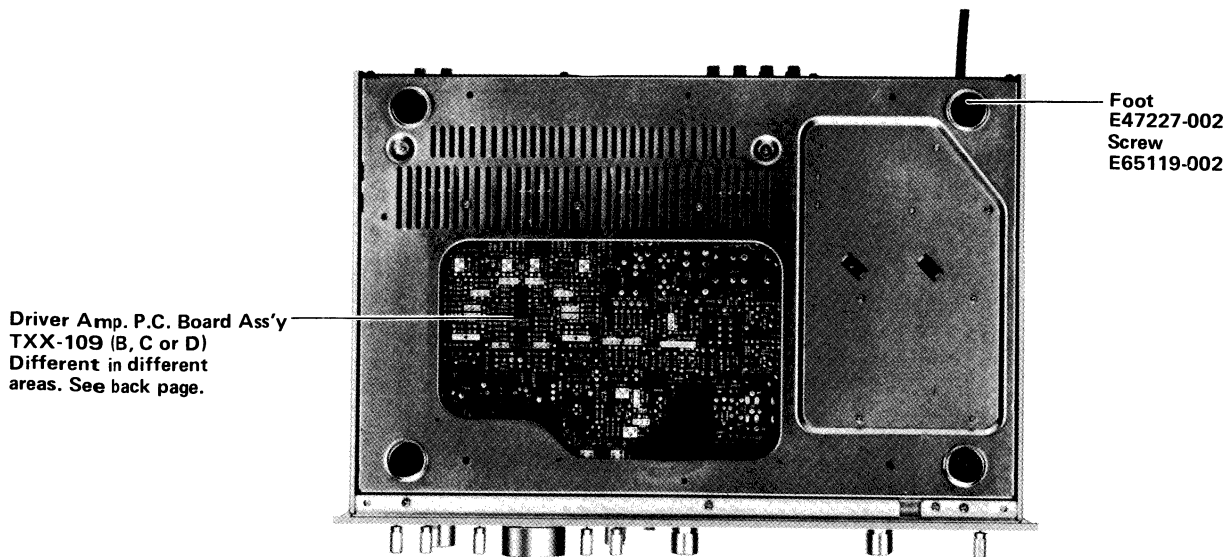


Fig. 6

NOTE: ▲ SAFETY PARTS

5-(2) Rear Panel

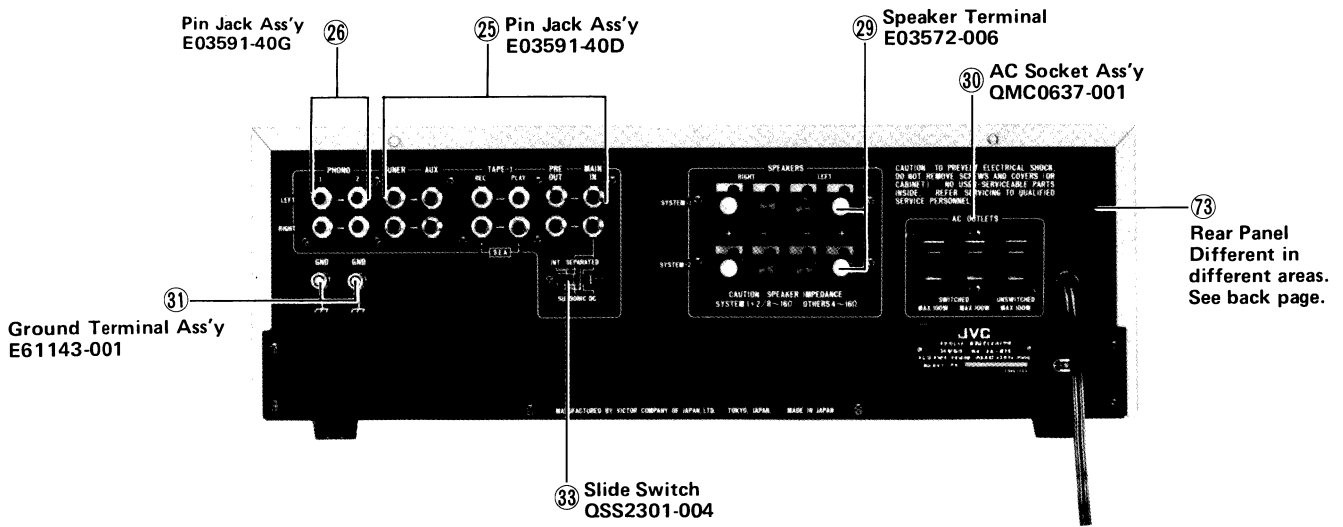


Fig. 9

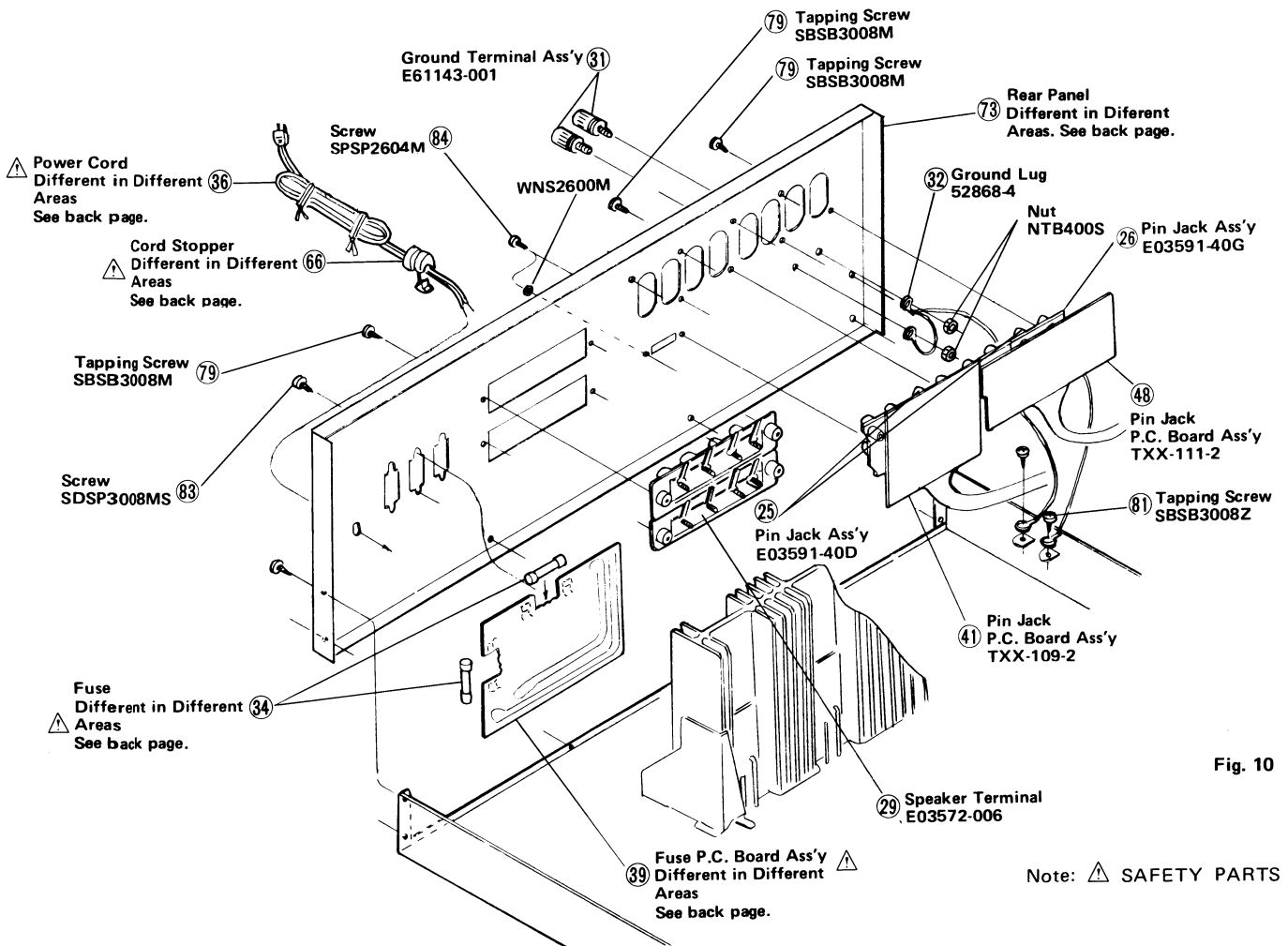


Fig. 10

Note: ⚠ SAFETY PARTS

Warning:
47.5 V (\pm B) is applied directly to the sub heat sink. Disconnect AC power when replacing TXX-109 or the rear panel to prevent blown fuses.

5-(3) Heat Sink and Power Transistors

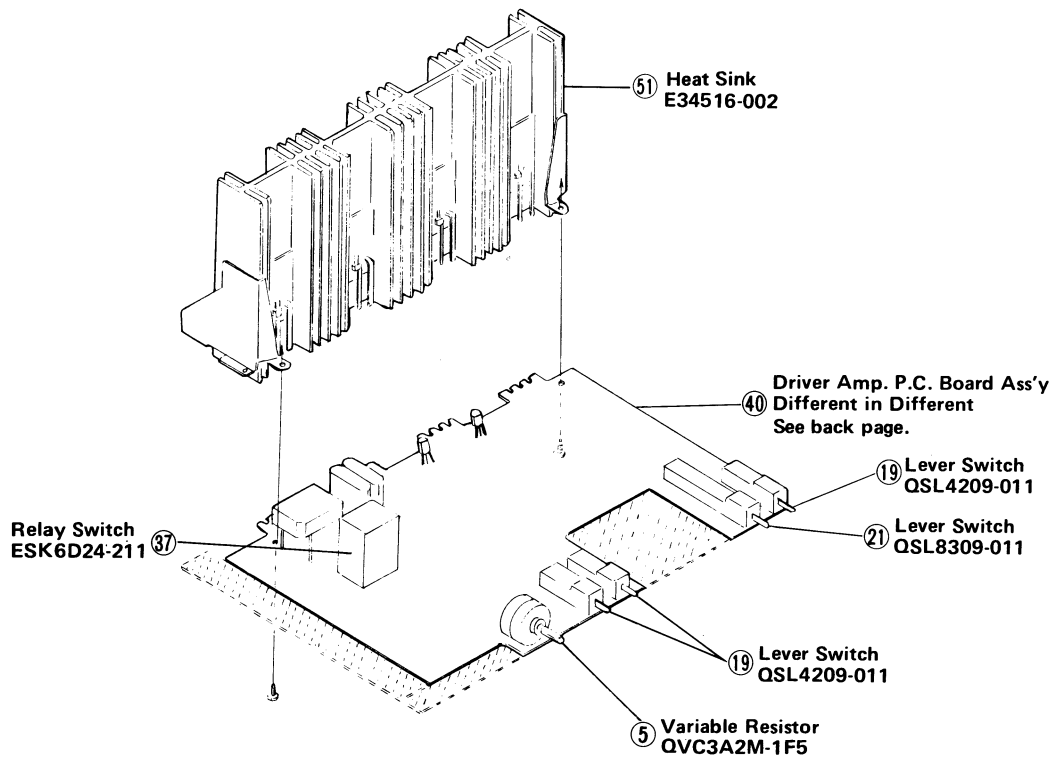


Fig. 11

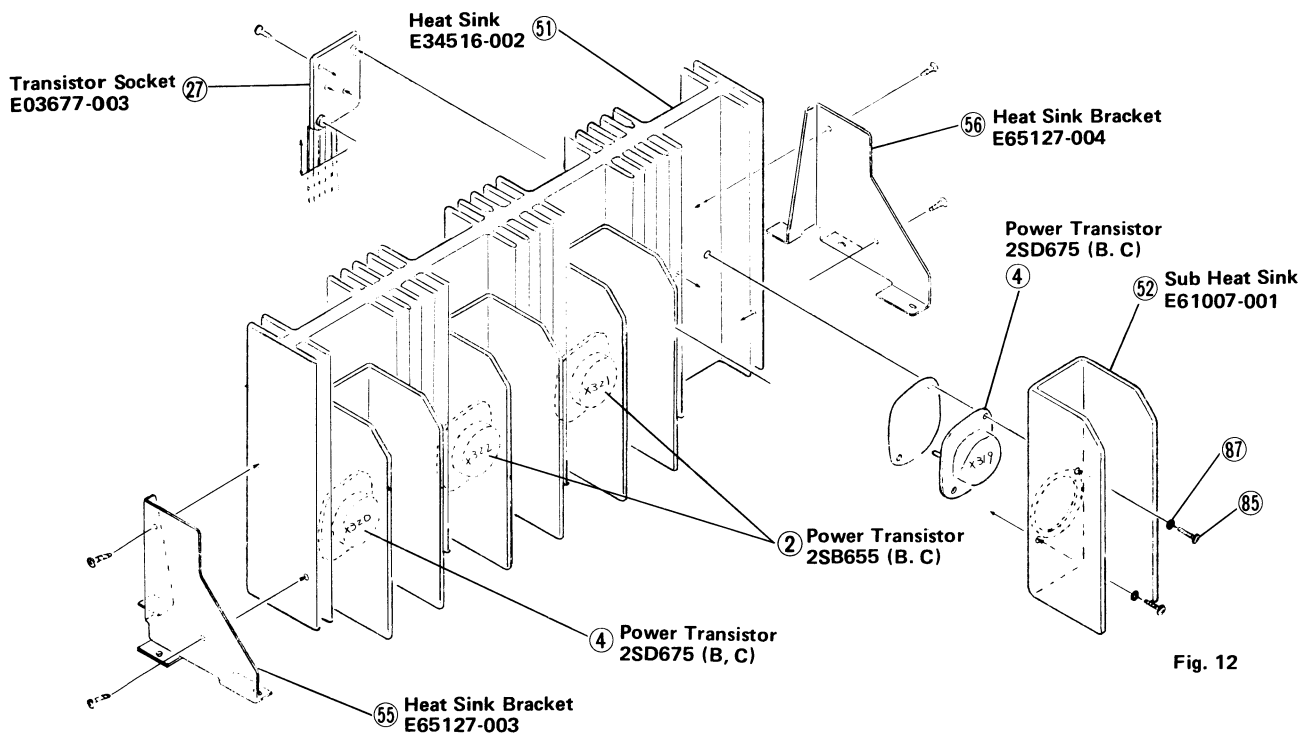


Fig. 12

Warning:

47.5 V (\pm B) is applied directly to the sub heat sink. Disconnect AC power when replacing TXX-109 or the rear panel to prevent blown fuses.

6. Adjustment Procedures

6-(1) Main Amp. Center Voltage

1. Set the semi-fixed resistors R315 (L channel) and R316 (R channel) located on the driver amp. P.C. Board (TXX-109A-1) to center position before pressing the power switch ON.
2. The measurement points for center voltage exist at test points (T.P.) 40 and 42 on the left channel and at 44 and 42 on the right channel. However in the event that relay is normally set to ON, it is possible to measure the center voltage at the speaker terminals.
3. Adjust R315 and R316 so that the voltage reading at the measurement points of the above-mentioned is within ± 10 mV. (In the event of the employment of a tester with which it is difficult to read values under 10 mV, adjust them to about 0 V.)

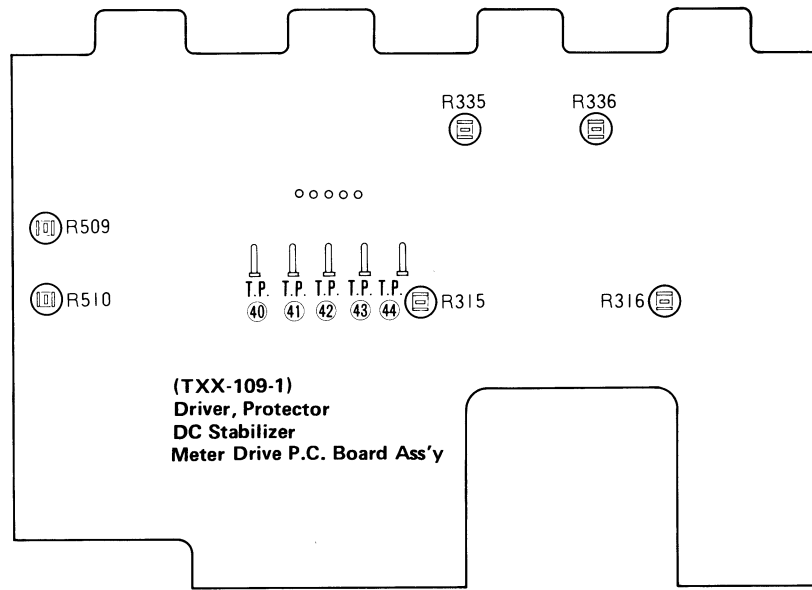


Fig. 13

6-(2) Main Amp. Idling Current

- In the event of the employment of a tester with which it is possible to read the values in mV, adjust the idling current in the following manner:
 1. Turn fully counterclockwise the semi-fixed resistors R335 (L channel) and R336 (R channel) located on the driver amp. P.C. Board (TXX-109-1) before pressing the power switch ON.
 2. The measurement points of idling current exist at test points (T.P.) 40 (-) and 41 (+) on the left channel and at 43 (+) and 44 (-) on the right channel.
 3. Adjust R335 and R336 so that the voltage reading at the measurement points of the above-mentioned is 4.4 mV (20 mA) within 5 or 6 minutes after pressing the power switch ON.
 4. After the adjustment, verify the first adjusted channel. If the values drift off 4.4 mV (20 mA) readjust. (These adjustments with 2 or 3 repetitions will confirm the correct setting.)
 5. From a practical point of view, values between 3 and 7 mV (14 and 32 mA) are negligible.

Adjustment item	Measurement point and adjustment point (TXX-109-1)	Adjustment voltage
Power amplifier center voltage adjustment	L channel T.P. 40 - 21 R315 R channel T.P. 44 - 42 R316	0 mV (within ± 10 mV)
Power amplifier idling current adjustment	L channel T.P. 40 (-) - 41 (+) R335 R channel T.P. 43 (+) - 44 (-) R336	4.4 mV (20 mA)

- In the event of using a tester with which it is impossible to read the values in mV, adjust the idling current in the following manner:
 1. First remove only one lead on the side on the emitter resistor to be adjusted among the emitter resistors (R357 - R360) connected to the power transistors and after connecting a tester in series, adjust the idling current for a reading of 20 mA on the current scale.
 2. For more details, refer to "Idling current adjustment" above.

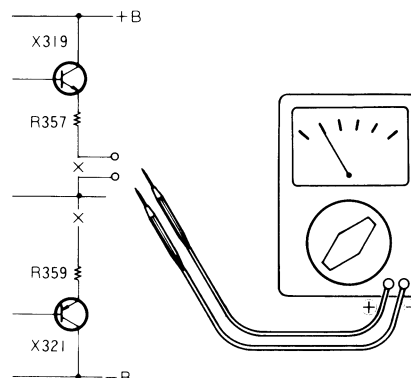


Fig. 14

6-(3) Power Meter

Power Meter Sensitivity Adjustment

For shipment from the factory, sensitivity is adjusted to the most suitable condition. However in the event of a meter replacement or of a severely drifted meter indication, readjust it by the following means:

1. Adjust the transmitter output voltage so that the reading is 23.66 V (70 W/8 Ω) when injecting a sine wave input of 1 kHz from the terminals AUX or MAIN IN.
2. Align the power meter indicator on a value of 70 W (0 dB) by adjusting the semi-fixed resistors R509 (L channel) and R510 (R channel) located on the driver amp. P.C. Board (TXX-109-1).

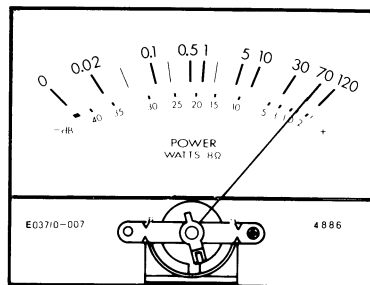


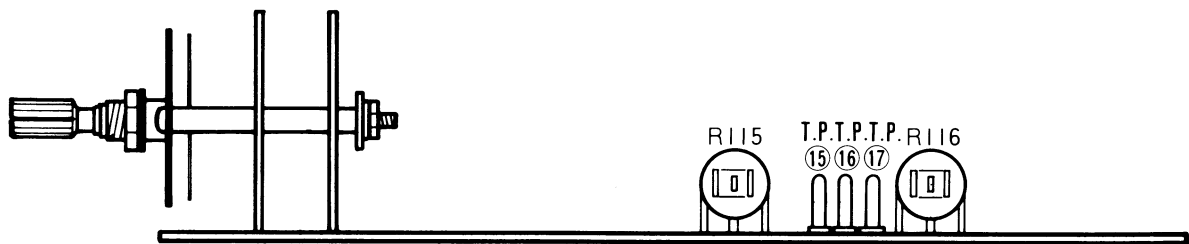
Fig. 15

6-(4) Equalizer Amp. Center Voltage

Equalizer Amplifier Center Voltage Adjustment

This equalizer amplifier consists of a DC amplifier. Severe deviation from the center voltage will result in a deteriorated tone quality such as a drop in dynamic range, increased distortion etc. Every time a change in the pair of F.E.T. 2SK106W(C) in the first stage is made, adjust this center voltage. (In the event of changing a pair of F.E.T., in order not to wind directly the F.E.T. leads install a pair of F.E.T. so that the F.E.T.'s surface is positioned low and the silicon tube is flush with the P.C. Board.)

1. Set the semi-fixed resistors R115 (L channel) and R116 (R channel) located on the equalizer amp. P.C. Board TXX-111-1) to center position before pressing the power switch ON.
2. The measurement points of center voltage exist at the test points (T.P.) 15 and 16 on the left channel and at 17 and 16 on the right channel.
3. Pay attention to the fact the this adjustment is more or less critical but not unusual because of the high DC gains and of the clear appearance of the variance between the two F.E.T.'s caused by this adjustment.
4. Adjust R115 and R116 so that the voltage reading at the measurement points of the above-mentioned is within ± 1 V.



Equalizer Amp. P.C. Board Ass'y (TXX-111-1)

Fig. 16

Adjustment item	Measurement point and adjustment point (TXX-111-1)	Adjustment voltage
Equalizer amplifier center voltage adjustment	L channel T.P. 15 - 16 R115 R channel T.P. 16 - 17 R116	0 V (within ± 1 V)

7. Printed Circuit Board Ass'y and Parts List

7-(1) TPS-59D AC Fuse P. C. Board Ass'y

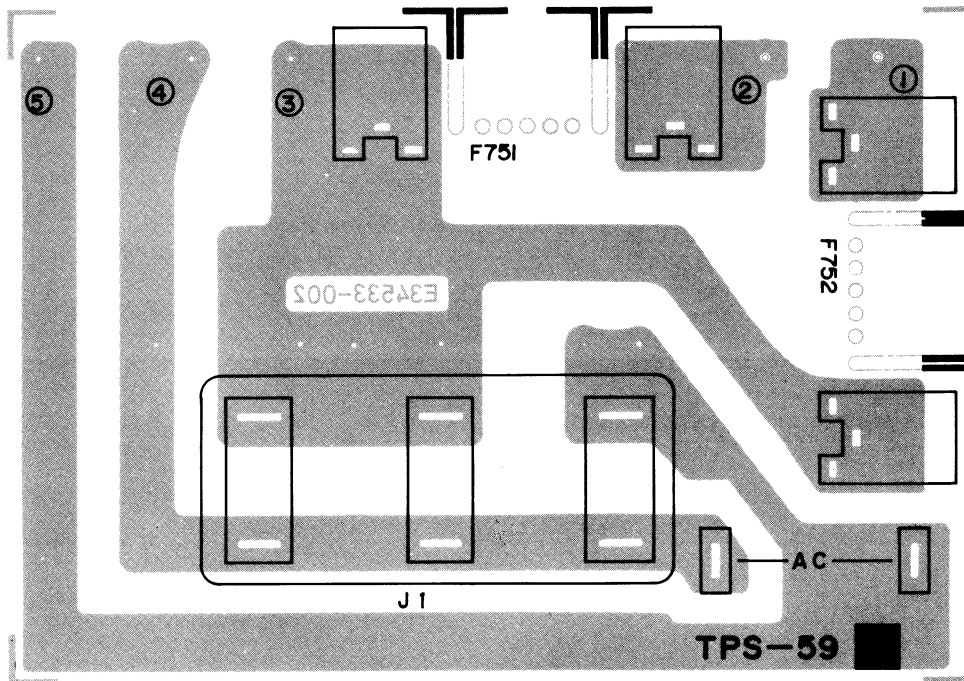


Fig. 17

Different assemblies are used for different areas.
Make sure of where the unit was sold.
Refer to the back page.

TPS-59D Fuse P.C. Board Ass'y

Item No.	Part Number	Rating	Description
F751	E03675-003		Fuse Clip
	QMC0637-001		AC Socket Ass'y
F752	E61380-012		Fuse Label
	E61380-008		"
	E40130		Tab

TPS-195A Fuse P.C. Board Ass'y

Item No.	Part Number	Rating	Description
F751	E03675-003		Fuse Clip
	QMC0637-001		AC Socket Ass'y
F752	E61379-017		Fuse Label
	E61380-008		Fuse Label
	E40130		Tab

TPS-196A Fuse P.C. Board Ass'y

Item No.	Part Number	Rating	Description
	E48965-002		Fuse Clip

7-(2) TXX-109B,C or D Driver Amp. P. C. Board Ass'y

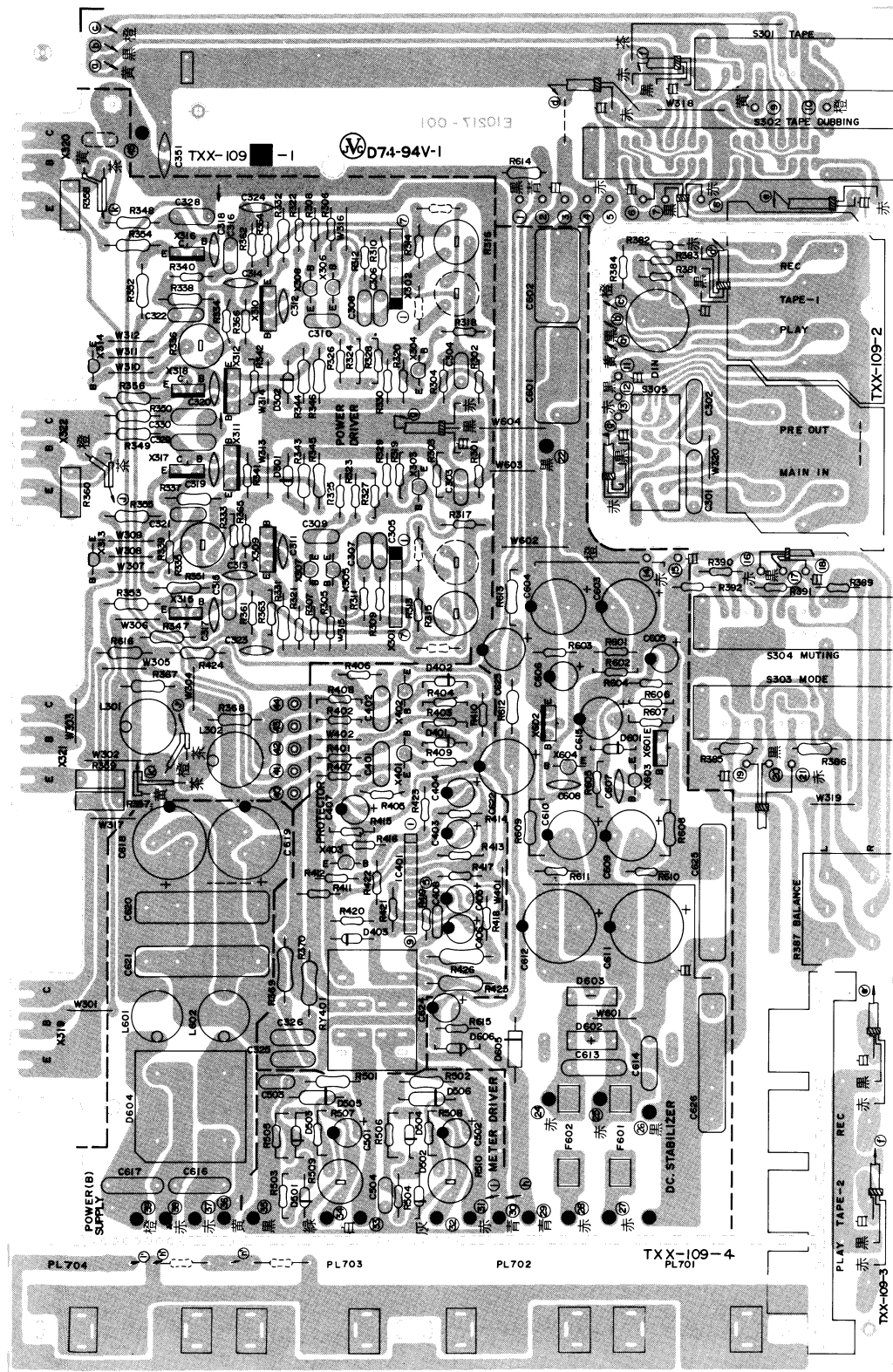
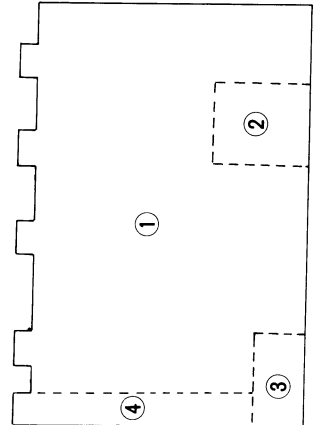


Fig. 18

Note:

The number of TXX-109 Driver Amp. P.C. Board Ass'y varies according to the area employed. See back page.



- ① TXX-109-1 : Driver Amp. P.C. Board Ass'y
- ② TXX-109-2 : Pin Jack P.C. Board Ass'y
- ③ TXX-109-3 : TAPE-2 Pin Jack P.C. Board Ass'y
- ④ TXX-109-4 : Meter Lamps P.C. Board Ass'y

Note:

In should be indicated B, C or D according to the table right when placing an order.

Designated Area	P.C. Board Ass'y
For U.S.A. and Canada	TXX-109 <input type="checkbox"/> -1 (or 2)
U.S. Military Market and Other Countries	TXX-109 <input type="checkbox"/> -1 (or 2)
For U.K., Australia and Europe	TXX-109 <input type="checkbox"/> -1 (or 2)

P.C. Board Ass'y	Item No.	Part Number	Rating		Description
TXX-109B TXX-109C	R381	QRD141J-334S	300 k Ω	1/4 W	Carbon
	R382	"	"	"	"
	R383	QRD141J-104S	100 k Ω	"	"
	R384	"	"	"	"
		EO3623-002			DIN
TXX-109D	R381	QRD141J-334S	330 k Ω	1/4 W	Carbon
	R382	"	"	"	"
	R383	QRD141J-104S	100 k Ω	"	"
	R384	"	"	"	"
		EO3623-002			DIN
		E48965-002			Fuse Clip

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X301	MPA63H (1)	0.25 W/unit		Silicon	NEC
X302	MPA63H (1)	"		"	"
X303	2SC1775AV (E, F)	0.3 W	200 MHz	"	Hitachi
X304	2SC1775AV (E, F)	"	"	"	"
X305	2SC1775AV (E, F)	"	"	"	"
X306	2SC1775AV (E, F)	"	"	"	"
X307	2SC1775AV (E, F)	"	"	"	"
X308	2SC1775AV (E, F)	"	"	"	"
X309	2SA899 (B, V)	1 W	100 MHz	"	Fujitsu
X310	2SA899 (B, V)	"	"	"	"
X311	2SC1904 (B, V)	"	130 MHz	"	"
X312	2SC1904 (B, V)	"	"	"	"
X313	2SC458 (C)	0.2 W	230 MHz	"	Hitachi
X314	2SC458 (C)	"	"	"	"
X315	2SD381 (L, M)	20 W	45 MHz	"	NEC
X316	2SD381 (L, M)	"	"	"	"
X317	2SB536 (L, M)	20 W	40 MHz	"	"
X318	2SB536 (L, M)	"	"	"	"
X401	2SC1775AV (E, F)	0.3 W	200 MHz	"	Hitachi
X402	2SC1775AV (E, F)	"	"	"	"
X403	2SA872AV (D, E)	"	120 MHz	"	"
X601	2SD313V (D, E)	30 W	8 MHz	"	Sanyo
X602	2SB507V (D, E)	"	"	"	"
X603	2SC1775AV (E, F)	0.3 W	200 MHz	"	Hitachi
X604	2SA872AV (D, E)	"	120 MHz	"	"

Integrated Circuits

Item No.	Part Number	Rating	Description	Maker
		Pc		
IC401	TA7317P	0.5 W	I.C.	Toshiba

Diodes

Item No.	Part Number	Rating	Description	Maker
D301	1S2076-31		Silicon	Hitachi
D302	1S2076-31		"	"
D401	1S2076-31		"	"
D402	1S2076-31		"	"
D403	1S2076-31		"	"
D501	1S2473F		"	Toyo Dengu
D502	1S2473F		"	"
D503	1S2473F		"	"
D504	1S2473F		"	"
D505	1S188FM		Germanium	Sanyo
D506	1S188FM		"	"
D601	XZ-132		Silicon	JRC
D602	S2VC20		"	Shindengen
D603	S2VC20R		"	"
D604	S5VB20		"	"
D605	SIB01-02		"	Kyodo Denki
D606	1S2076-31		"	Hitachi

Coils

Item No.	Part Number	Rating	Description
L301	E04059-1R2	1.2 μ H	Choke Coil
L302	E04059-1R2	"	"
L601	E04059-2R7	2.7 μ H	"
L602	E04059-2R7	"	"

Capacitors

Item No.	Part Number	Rating	Description
C301	QFH42EK-154	0.15 μ F	250 V Metallized Mylar
C302	QFH42EK-154	"	"
C303	QFP31HJ-101	100 pF	50 V Polypropylene
C304	QFP31HJ-101	"	"
C305	QFM31HK-332	3 300 pF	" Mylar
C306	QFM31HK-332	"	"
C307	QFP31HJ-181	180 pF	" Polypropylene
C308	QFP31HJ-181	"	"
C311	QFP31HJ-101	100 pF	"
C312	QFP31HJ-101	"	"
C321	QFM31HK-473	0.047 μ F	" Mylar
C322	QFM31HK-473	"	"
C323	QCS31HJ-470	47 pF	" Ceramic
C324	QCS31HJ-470	"	"
C325	QFM31HK-473	0.047 μ F	" Mylar
C326	QFM31HK-473	"	"
C328	QFM31HK-104	0.1 μ F	"
C329	QFM31HK-104	"	"
C330	QFM31HK-104	"	"
C351	QCC31EM-473	0.047 μ F	25 V Ceramic
C401	QFM31HK-104	0.1 μ F	50 V Mylar
C402	QFM31HK-104	"	"
C403	QEW51AA-476	47 μ F	10 V Electrolytic
C404	QEW51AA-476	"	"
C405	QEW51HA-474	0.47 μ F	50 V
C406	QEW51CA-226	22 μ F	16 V
C407	QEW51CA-226	"	"
C408	QFM31HK-153	0.015 μ F	50 V Mylar
C501	QEW51AA-476	47 μ F	10 V Electrolytic

Capacitors

Item No.	Part Number	Rating		Description
C502	QEW51AA-476	47 μ F	10 V	Electrolytic
C503	QFM31HK-223	0.022 μ F	50 V	Mylar
C504	QFM31HK-223	"	"	"
C603	QEW51HA-107	100 μ F	"	Electrolytic
C604	QEW51HA-107	"	"	"
C605	QEW51HA-475	4.7 μ F	"	"
C606	QEW51HA-475	"	"	"
C609	QEW51HA-476	47 μ F	"	"
C610	QEW51HA-476	"	"	"
C611	QEW51JA-477	470 μ F	63 V	"
C612	QEW51JA-477	"	"	"
C613	QCF12HP-103	0.01 μ F	500 V	Ceramic
C615	QEW51CA-476	47 μ F	16 V	Electrolytic
C616	QCF12HP-103	0.01 μ F	500 V	Ceramic
C617	QCF12HP-103	"	"	Ceramic
C618	QEW51JA-107	100 μ F	63 V	Electrolytic
C619	QEW51JA-107	"	"	"
C622	QEW51EA-227	220 μ F	25 V	"
C623	QEW51CA-107	100 μ F	16 V	"
C624	QEW51EA-475	4.7 μ F	25 V	"

Resistors

Item No.	Part Number	Rating		Description
R301	QRD141J-152S	1.5 k Ω	1/4 W	Carbon
R302	QRD141J-152S	"	"	"
R303	QRD141J-563S	56 k Ω	"	"
R304	QRD141J-563S	"	"	"
R305	QRD141J-303S	30 k Ω	"	"
R306	QRD141J-303S	"	"	"
R307	QRD141J-303S	"	"	"
R308	QRD141J-303S	"	"	"
R309	QRD141J-153S	15 k Ω	"	"
R310	QRD141J-153S	"	"	"
R311	QRD141J-471S	470 Ω	"	"
R312	QRD141J-471S	"	"	"
R313	QRD141J-560S	56 Ω	"	"
R314	QRD141J-560S	"	"	"
R315	QVP4AOB-221	220 Ω	0.15 W	Variable (Carbon)
R316	QVP4AOB-221	"	"	"
E317	QRD141J-101S	100 Ω	1/4 W	Carbon
R318	QRD141J-101S	"	"	"
R319	QRD141J-153S	15 k Ω	"	"
R320	QRD141J-153S	"	"	"
R321	QRD141J-561S	560 Ω	"	"
R322	QRD141J-561S	"	"	"
R323	QRD141J-101S	100 Ω	"	"
R324	QRD141J-101S	"	"	"
R325	QRD141J-101S	"	"	"
R326	QRD141J-101S	"	"	"
R327	QRD141J-133S	13 k Ω	"	"
R328	QRD141J-133S	"	"	"
R329	QRD141J-133S	"	"	"
E330	QRD141J-133S	"	"	"
R331	QRD126J-100	10 Ω	1/2 W	"
R332	QRD126J-100	"	"	"
R333	QRD141J-912S	9.1 k Ω	1/4 W	"
R334	QRD141J-912S	"	"	"
R335	QVZ3501-102	1 k Ω	0.15 W	Variable (Metal)

Resistors

Item No.	Part Number	Rating		Description
R336	QVZ3501-102	1 kΩ	0.15 W	Variable (Metal)
R337	QRD126J-392	3.9 kΩ	1/2 W	Carbon
R338	QRD126J-392	"	"	"
R341	QRD141J-223S	22 kΩ	1/4 W	"
R342	QRD141J-223S	"	"	"
R343	QRD126J-331	330 Ω	1/2 W	"
R344	QRD126J-331	"	"	"
R345	QRD126J-181	180 Ω	"	"
R346	QRD126J-181	"	"	"
R347	QRX129J-100	10 Ω	"	Oxide Metal Film
R348	QRX129J-100	"	"	"
R349	QRX129J-100	"	"	"
R350	QRX129J-100	"	"	"
E351	QRG129J-271	270 Ω	"	"
R352	QRG129J-271	"	"	"
R353	QRX129J-5R6	5.6 Ω	1/2 W	Oxide Metal Film
E354	QRX129J-5R6	"	"	"
R355	QRX129J-5R6	"	"	"
R356	QRX129J-5R6	"	"	"
R357	QRM054K-R22	0.22 Ω	5 W	Metal Plate
R358	ORM054K-R22	"	"	"
R359	QRM054K-R22	"	"	"
R360	QRM054K-R22	"	"	"
R361	QRD141J-153S	15 kΩ	1/4 W	Carbon
R362	QRD141J-153S	"	"	"
R363	QRD141J-271S	270 Ω	1/4 W	Carbon
R364	QRD141J-271S	"	"	"
R365	QRD141J-911S	910 Ω	"	"
R366	QRD141J-911S	"	"	"
R367	QRX129J-4R7	4.7 Ω	1/2 W	Oxide Metal Film
R368	QRX129J-4R7	"	"	"
R369	QRX017J-100S	10 Ω	1 W	"
R370	QRX017J-100S	"	"	"
R385	QRD141J-562S	5.6 kΩ	"	"
R386	QRD141J-562S	"	"	"
R387	QVC3A2M-1F5V	250 kΩ	1/2 W	Variable
R389	QRD141J-823S	82 kΩ	1/4 W	Carbon
R390	QRD141J-823S	"	"	"
R391	QRD141J-103S	10 kΩ	"	"
R392	QRD141J-103S	"	"	"
R401	QRD141J-681S	680 Ω	"	"
R402	QRD141J-681S	"	"	"
R403	QRD141J-562S	5.6 kΩ	"	"
R404	QRD141J-562S	"	"	"
R405	QRD141J-101S	100 Ω	"	"
R406	QRD141J-101S	"	"	"
R407	QRD141J-471S	470 Ω	"	"
R408	QRD141J-471S	"	"	"
R409	QRD141J-123S	12 kΩ	"	"
R410	QRD141J-123S	"	"	"
R411	QRD141J-563S	56 kΩ	"	"
R412	QRD141J-563S	"	"	"
R413	QRD141J-273S	27 kΩ	"	"
R414	QRD141J-273S	"	"	"
R415	QRD141J-103S	10 kΩ	"	"
R416	QRD141J-473S	47 kΩ	"	"
R417	QRD141J-332S	3.3 kΩ	"	"
R418	QRD141J-563S	56 kΩ	1/4 W	"
R419	QRD141J-333S	33 kΩ	"	"
R420	QRD141J-183S	18 kΩ	"	"
R421	QRD141J-204S	200 kΩ	"	"

Resistors

Item No.	Part Number	Rating		Description
R422	QRD141J-683S	68 k Ω	1/4 W	Carbon
R423	QRD141J-124S	120 k Ω	"	"
R424	QRG129J-270	27 Ω	1/2 W	Oxide Metal Film
R425	QRG017J-331S	330 Ω	1 W	"
R426	QRG017J-331S	"	"	"
R501	QRD126J-821	820 Ω	1/2 W	Carbon
R502	QRD126J-821	"	"	"
R503	QRD141J-220S	22 Ω	1/4 W	"
R504	QRD141J-220S	"	"	"
R505	QRD141J-100S	10 Ω	"	"
R506	QRD141J-100S	"	"	"
R507	QRD141J-272S	2.7 k Ω	"	"
R508	QRD141J-272S	"	"	"
R509	QVP4A0B-103	10 k Ω	0.15 W	Variable (Carbon)
R510	QVP4A0B-103	"	"	"
R601	QRD141J-563S	56 k Ω	1/4 W	Carbon
R602	QRD141J-364S	360 k Ω	"	"
R603	QRD141J-473S	47 k Ω	"	"
R604	QRD141J-333S	33 k Ω	"	"
R605	QRD141J-153S	15 k Ω	"	"
R606	QRD141J-334S	330 k Ω	"	"
R607	QRD141J-822S	8.2 k Ω	"	"
R608	QRD126J-471	470 Ω	1/2 W	"
R609	QRD126J-471	"	"	"
R610	QRD141J-392S	3.9 k Ω	1/4 W	"
R611	QRD141J-392S	3.9 k Ω	"	Carbon
R612	QRG129J-271	270 Ω	1/2 W	Oxide Metal Film
R615	QRD141J-223S	22 k Ω	1/4 W	Carbon
R616	QRG129J-473	47 k Ω	1/2 W	Oxide Metal Film
R701	QRX129J-2R2	2.2 Ω	"	"
R702	QRX129J-2R2	"	"	"

Others

Item No.	Part Number	Rating		Description
	E03728-3-15-1			P.L.L. Wire
	E03728-4-22-1			"
	E03733-0301			Socket Wire Ass'y
	E03733-0602			"
	E03733-1201			"
S301	QSL4209-011			Lever Switch
S302	QSL8309-011			"
S303	QSL4209-011			"
S304	QSL4209-011			"
S305	QSS2301-004			Slide Switch
PR-MA	E03591-40D			Pin Jack Ass'y
TAPE1	E03591-40D			"
TAPE2	E03043-40CW			"
	E49784-002			Connect Pin
	E03606-001			Male Contact Plug
RY401	ESK6D24-211			Relay Switch

7-(3) TXX-110B Tone Control P. C. Board Ass'y

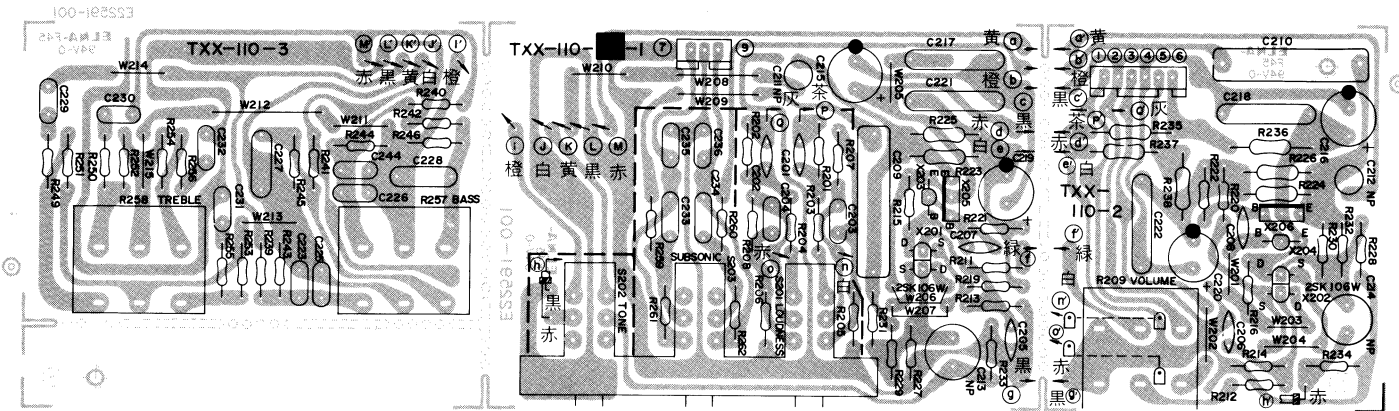
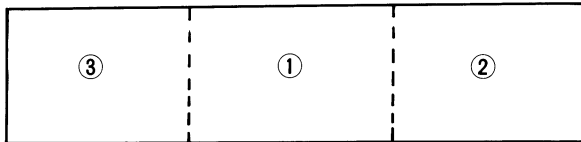


Fig. 19



Locations

- ① TXX-110B-1 Tone Control Amp. P.C. Board Ass'y
- ② TXX-110-2 Volume Control P.C. Board Ass'y
- ③ TXX-110-3 Tone Control Network P.C. Board Ass'y

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	ft		
X201	2SK106W (C)	0.3 W		Silicon	Hitachi
X202	2SK106W (C)	"		"	"
X203	2SA872AV (D, E)	"	120 MHz	"	"
X204	2SA872AV (D, E)	"	"	"	"
X205	2SC1904 (B, V)	1 W	130 MHz	"	Fujitsu
X206	2SC1904 (B, V)	"	"	"	"

Capacitors

Item No.	Part Number	Rating		Description
C201	QCS31HJ-331	330 pF	50 V	Ceramic
C202	QCS31HJ-331	"	"	"
C203	QFM31HJ-273	0.027 μF	"	Mylar
C204	QFM31HJ-273	"	"	"
C205	QCS31HJ-390	39 pF	"	Ceramic
C206	QCS31HJ-390	"	"	"
C207	QCS31HJ-390	"	"	"
C208	QCS31HJ-390	"	"	"
C209	QFZ0076-225	2.2 μF	250 V	Film
C210	QFZ0076-225	"	"	"
C211	QEZ0046-225	"	50 V	Electrolytic (Non Pole)
C212	QEZ0046-225	"	"	"
C213	QEZ0046-226	22 μF	50 V	"
C214	QEZ0046-226	"	"	"
C215	QEW51VA-107	100 μF	35 V	"
C216	QEW51VA-107	"	"	"
C219	QEW51VA-107	"	"	"
C220	QEW51VA-107	"	"	"
C223	QFM31HJ-563	0.056 μF	50 V	Mylar
C224	QFM31HJ-563	"	"	"
C225	QFM31HJ-822	8200 pF	"	"
C226	QFM31HJ-822	"	"	"

Capacitors

Item No.	Part Number	Rating		Description
C227	QFM31HJ-474	0.47 μ F	50 V	Mylar
C228	QFM31HJ-474	"	"	"
C229	QFM31HJ-153	0.015 μ F	"	"
C230	QFM31HJ-153	"	"	"
C231	QFM31HJ-104	0.1 μ F	"	"
C232	QFM31HJ-104	"	"	"
C233	QFM31HJ-154	0.15 μ F	"	"
C234	QFM31HJ-154	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R201	QRD141J-105S	1 M Ω	1/4 W	Carbon
R202	QRD141J-105S	"	"	"
R203	QRD141J-333S	33 k Ω	"	"
R204	QRD141J-333S	"	"	"
R205	QRD141J-203S	20 k Ω	"	"
R206	QRD141J-203S	"	"	"
R209	QVZ1221-001	100 k Ω	1/2 W	Variable (Carbon)
R211	QRD141J-151S	150 Ω	1/4 W	Carbon
R212	QRD141J-151S	"	"	"
R213	QRD141J-225S	2.2 M Ω	"	"
R214	QRD141J-225S	"	"	"
R215	QRD141J-821S	820 Ω	"	"
R216	QRD141J-821S	"	"	"
R219	QRD141J-183S	18 k Ω	"	"
R220	QRD141J-183S	"	"	"
R221	QRD141J-153S	15 k Ω	"	"
R222	QRD141J-153S	"	"	"
R223	QRD126J-682	6.8 k Ω	1/2 W	"
R224	QRD126J-682	"	"	"
R225	QRD126J-682	"	"	"
R226	QRD126J-682	"	"	"
R227	QRD141J-272S	2.7 k Ω	1/4 W	"
R228	QRD141J-272S	"	"	"
R229	QRD141J-274S	270 k Ω	"	"
R230	QRD141J-274S	"	"	"
R231	QRD141J-183S	18 k Ω	"	"
R232	QRD141J-183S	"	"	"
R233	QRD141J-333S	33 k Ω	"	"
R234	QRD141J-333S	"	"	"
R235	QRG017J-222S	2.2 k Ω	1 W	Oxide Metal Film
R236	QRG017J-222S	"	"	"
R237	QRG129J-821	820 Ω	1/2 W	"
R238	QRG129J-821	"	"	"
R239	QRD141J-562S	5.6 k Ω	1/4 W	Carbon
R240	QRD141J-562S	"	"	"
R241	QRD141J-821S	820 Ω	"	"
R242	QRD141J-821S	"	"	"
R245	QRD141J-823S	82 k Ω	"	"
R246	QRD141J-823S	"	"	"
R249	QRD141J-152S	1.5 k Ω	"	"
R250	QRD141J-152S	"	"	"
R251	QRD141J-224S	220 k Ω	"	"
R252	QRD141J-224S	"	"	"
R225	QRD141J-271S	270 Ω	"	"
R256	QRD141J-271S	"	"	"
R257	QVZ1220-003	100 k Ω	1/2 W	Variable (Carbon)
R258	QVA1220-004	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R259	QRD141J-561S	560 Ω	1/4 W	Carbon
R260	QRD141J-561S	"	"	"
R261	QRD141J-105S	1 MΩ	"	"
R262	QRD141J-105S	1 MΩ	"	"

Others

Item No.	Part Number	Rating		Description
	E03732-006A			Plug (6 Pin)
	E03732-003A			Plug (3 Pin)
	QSP0231-101			Push Switch

7-(4) TXX-111B Equalizer Amp. P. C. Board Ass'y

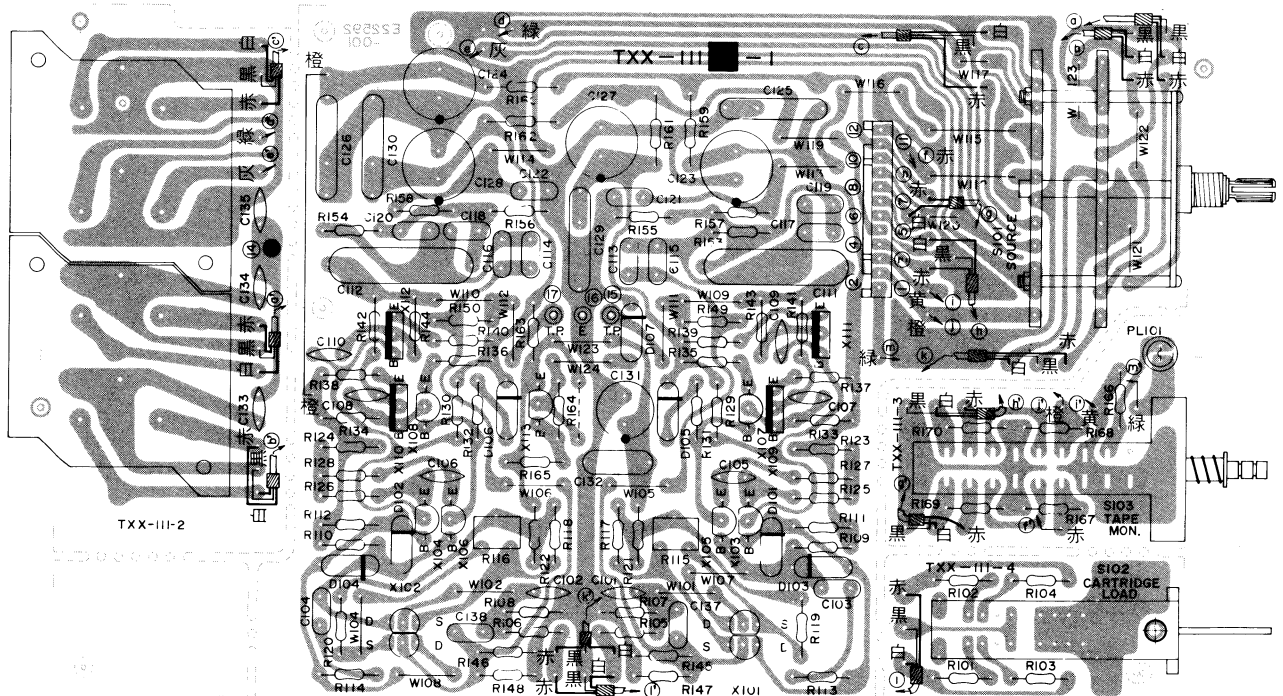
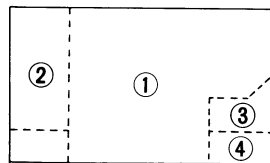


Fig. 20



Locations

- ① TXX-111B-1 Equalizer Amp. P.C. Board Ass'y
- ② TXX-111-2 Pin Jack P.C. Board Ass'y
- ③ TXX-111-3 Tape Monitor P.C. Board Ass'y
- ④ TXX-111-4 Cartridge Load P.C. Board Ass'y

Transistors

Item No.	Part Number	Rating		Description	Maker
		Pc	fT		
X101	2SK106W (C)	0.3 W		Silicon	Hitachi
X102	2SK106W (C)	"		"	"
X103	2SA872AV (D, E)	"	120 MHz	"	"
X104	2SA872AV (D, E)	"	"	"	"
X105	2SA872AV (D, E)	"	"	"	"
X106	2SA872AV (D, E)	"	"	"	"
X107	2SC1775AV (E, F)	"	200 MHz	"	"
X108	2SC1775AV (E, F)	"	"	"	"
X109	2SA899 (B, V)	1 W	100 MHz	"	Fujitsu
X110	2SA899 (B, V)	"	"	"	"
X111	2SC1904 (B, V)	"	130 MHz	"	"
X112	2SC1904 (B, V)	"	"	"	"
X113	2SC458 (D)	0.2 W	230 MHz	"	Hitachi

Diodes

Item No.	Part Number	Rating		Description	Maker
D101	1S2473			Silicon	Toyo Dengu
D102	1S2473			"	"
D103	1S2473			"	"
D104	1S2473			"	"
D105	1S2473			"	"
D106	1S2473			"	"
D107	WZ-150A			"	JRC

Coils & Transformers

Item No.	Part Number	Rating	Description
L101	QLP3201-005	6V, 35 mA	Pilot Lamp

Capacitors

Item No.	Part Number	Rating		Description
C101	QCS31HJ-470	47 pF	50 V	Ceramic
C102	QCS31HJ-470	"	"	"
C103	QFP31HJ-101	100 pF	"	Polypropylene
C104	QFP31HJ-101	"	"	"
C107	QCS31HJ-220	22 pF	"	Ceramic
C108	QCS31HJ-220	"	"	"
C109	QCS31HJ-180	18 pF	"	"
C110	QCS31HJ-180	"	"	"
C111	QFZ0076-225	2.2 μ F	250 V	Film
C112	QFZ0076-225	"	"	"
C113	QFP31HJ-432	4300 pF	50 V	Polypropylene
C114	QFP31HJ-432	"	"	"
C115	QFP31HJ-622	6200 pF	"	"
C116	QFP31HJ-622	"	"	"
C117	QFP31HJ-272	2700 pF	"	"
C118	QFP31HJ-272	"	"	"
C119	QFP31HJ-102	1000 pF	"	"
C120	QFP31HJ-102	"	"	"
C123	QEW51VA-227	220 μ F	35 V	Electrolytic
C124	QEW51VA-227	"	"	"
C127	QEW51VA-227	"	"	"
C128	QEW51VA-227	"	"	"
C131	QEW51EA-476	47 μ F	25 V	"
C133	QCC31EM-473	0.047 μ F	"	Ceramic
C134	QCC31EM-473	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R101	QRD141J-473SL	47 k Ω	1/4 W	Carbon
R102	QRD141J-473SL	"	"	"
R103	QRD141J-104SL	100 k Ω	"	"
R104	QRD141J-104SL	"	"	"
R105	QRD141J-560S	56 Ω	"	"
R106	QRD141J-560S	"	"	"
R107	QRD141J-104SL	100 k Ω	"	"
R108	QRD141J-104SL	"	"	"
R109	QRD141J-123SL	12 k Ω	"	"
R110	QRD141J-123SL	"	"	"
R111	QRD141J-123SL	"	"	"
R112	QRD141J-123SL	"	"	"
R113	QRD141J-391S	390 Ω	"	"
R114	QRD141J-391S	"	"	"

Resistors

Item No.	Part Number	Rating		Description
R115	QVP9A0B-101	100 Ω	0.15 W	Variable
R116	QVP9A0B-101	"	"	"
R117	QRD141J-101S	"	1/4 W	Carbon
R118	QRD141J-101S	"	"	"
R119	QRD141J-101S	"	"	"
R120	QRD141J-101S	"	"	"
R121	QRD141J-822SL	8.2 k Ω	"	"
R122	QRD141J-822SL	"	"	"
R123	QRD141J-682S	6.8 k Ω	"	"
R124	QRD141J-682S	"	"	"
R125	QRD141J-181S	180 Ω	"	"
R126	QRD141J-181S	"	"	"
R127	QRD141J-181S	"	"	"
R128	QRD141J-181S	"	"	"
R129	QRD141J-122S	1.2 k Ω	"	"
R130	QRD141J-122S	"	"	"
R131	QRD141J-122S	"	"	"
R132	QRD141J-122S	"	"	"
R133	QRD141J-122S	"	"	"
R134	QRD141J-122S	"	"	"
R135	QRD141J-122S	"	"	"
R136	QRD141J-122S	"	"	"
R137	QRD141J-820S	82 Ω	"	"
R138	QRD141J-820S	"	"	"
R139	QRD141J-820S	"	"	"
R140	QRD141J-820S	"	"	"
R145	QRD141J-361S	360 Ω	"	"
R146	QRD141J-361S	"	"	"
R149	QRD141J-274SL	270 k Ω	"	"
R150	QRD141J-274SL	"	"	"
R151	QRD141J-682S	6.8 k Ω	"	"
R152	QRD141J-682S	"	"	"
R153	QRD141J-223SL	22 k Ω	"	"
R154	QRD141J-223SL	"	"	"
R155	QRD141J-104S	100 k Ω	"	"
R156	QRD141J-104S	"	"	"
R157	QRD141J-151S	150 Ω	1/4 W	Carbon
R158	QRD141J-151S	"	"	"
R159	QRD126J-681	680 Ω	1/2 W	"
R160	QRD126J-681	"	"	"
R161	QRD126J-821	820 Ω	"	"
R162	QRD126J-471	470 Ω	"	"
R163	QRD141J-122S	1.2 k Ω	1/4 W	"
R164	QRD141J-562S	5.6 k Ω	"	"
R165	QRD141J-681S	680 Ω	"	"
R166	QRD141J-681S	"	"	"
R167	QRD141J-105S	1 M Ω	"	"
R168	QRD141J-105S	"	"	"
R169	QRD141J-105S	"	"	"
R170	QRD141J-105S	"	"	"

Others

Item No.	Part Number	Rating	Description
	E03606-001		Male Contact Plug
	E04291-001		Silicon Tube
	E60956-001		Lamp Holder
	52868-4		Ground Lug
S101	QSR0069-003		Rotary Switch
S102	QSL4309-011		Lever Switch
S103	QSP0210-101		Push Switch
Phono	E03591-40DG		Pin Jack Ass'y
TU, AU	E03591-40D		"
12Pin	E03732-012A		Plug (12 Pin)

8. Packing Materials and Part Numbers

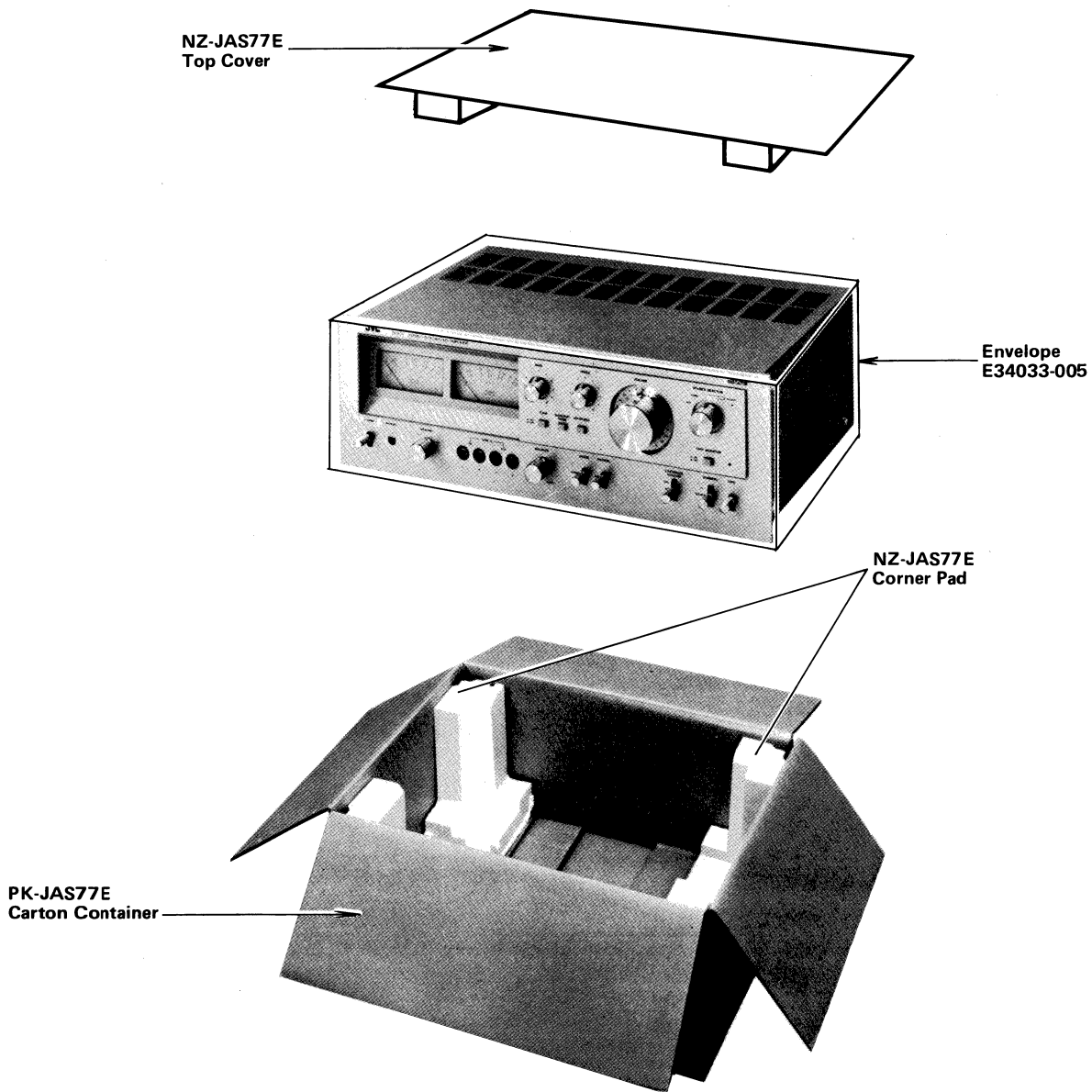


Fig. 23

9. Accessories List

Item No.	Part Number	Description	Q'ty
1	E30580-679A	Instruction Book	1
2	See table below.	Warranty Card	1
3	E64207-002	Envelope for Instruction Book and Warranty Card	1
4	BT20024B	"Do It Better" (for U.S.A. only)	1
5	BT20023	Service Procedures (for U.S.A. only)	1
6	QMF60R1-6R0	Fuse (for U.S. Military Market and Others) Δ	1
7	QMF60R1-3R3	Fuse (for U.S. Military Market and Others) Δ	1
8	E64208-001	Envelope for Fuses (for U.S. Military Market and Others)	1
9	E7958-V	Fuse Label (for U.S. Military Market and Others)	1
10	E64216-002	Caution Tag (with Power Cord for Military Market only)	1

Warranty Card

U.S.A.	Canada	U.S. Military Market	Europe	Australia	U.K.
BT20032	BT20025B	BT20032	—	BT20029	BT20013B

11. Parts List with Specified Numbers for Designated Areas

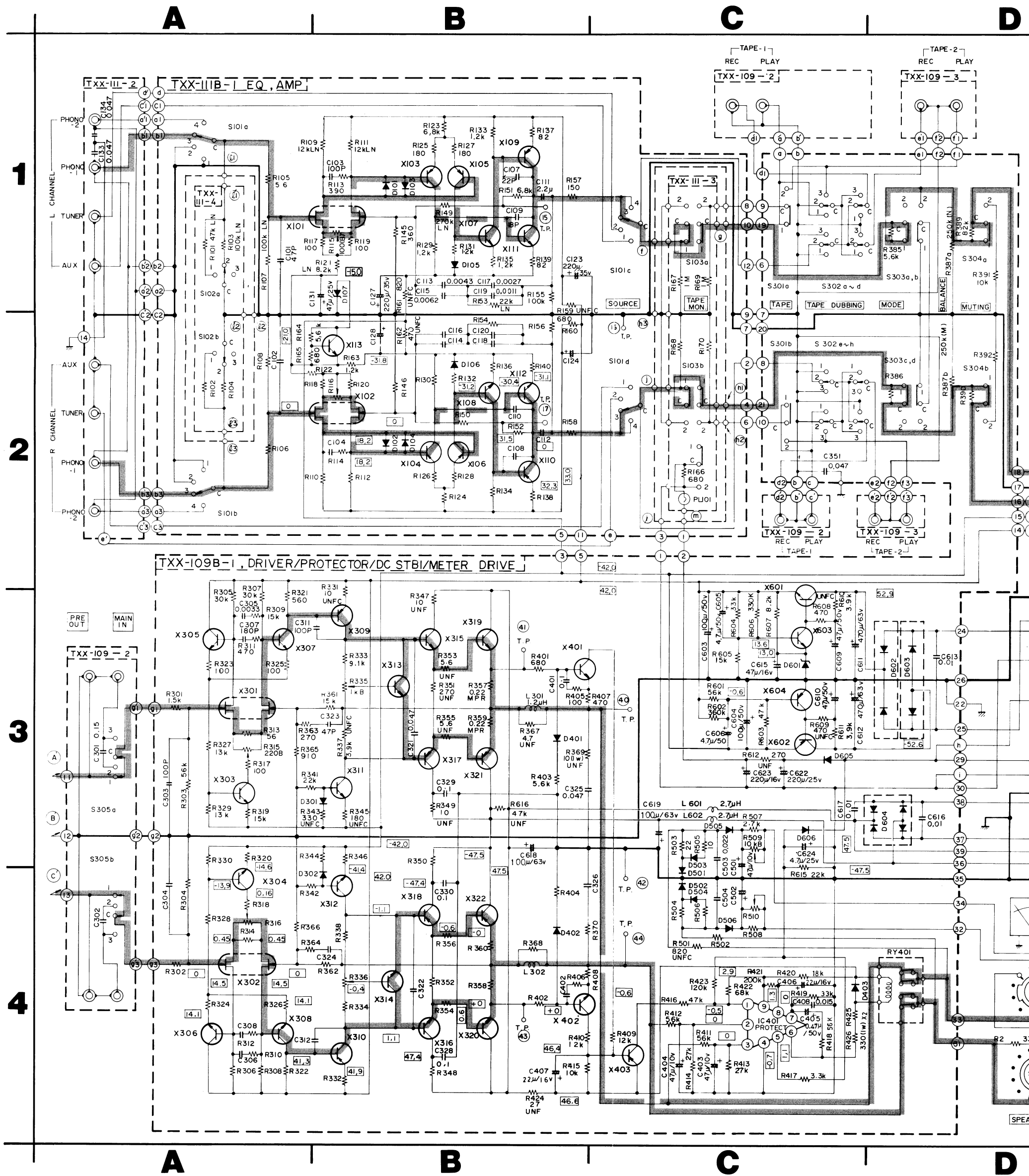
Page	Item No.	Description	U.S.A.	Canada	U.S. Military Market & Other Countries	Europe	Australia	U.K.
6		Power Switch \triangle	QSL2214-002	QSL2214-002	QSL2214-002	QSL2214-003	QSL2214-003	QSL2214-003BS
6		Power Cord \triangle	QMP1200-244	QMP1200-244	QMP1200-244	QMP4220-200 QMP4310-200 (Switzerland)	QMP2490-200	QMP9020-004BS
6		Cord Stopper \triangle	QHS3876-162	QHS3876-162	QHS3876-162	QHS6374-252	QHS6374-162	QHS6374-162BS
4		Power Transformer (for Class B) \triangle	E03077-24B	E03077-24B	E03077-24C	E03077-24C	E03077-24C	E03077-24CBS
4		Power Transformer (for Class A) \triangle	E03032-30B	E03032-30B	E03032-30C	E03032-30C	E03032-30C	E03032-30CBS
6		Fuse \triangle (Primary)	QMF61UI-5R0	QMF60RI-5R0	QMF60RI-6R0 QMF60RI-3R3	QMF51A2-3R15	QMF51A2-3R15	QMF51A2-3R15BS
		(Primary)	QMF61UI-R25 (0.25A)	QMF60SI-R25 (0.25A)	QMF60SI-R25 (0.25A)	QMF51A2-R25 (250 mA)	QMF51A2-R25 (250 mA)	QMF51A2-R25BS (250 mA)
		(Secondary)	-	-	-	QMF51A2-8R0 (8AT)	QMF51A2-8R0 (8AT)	QMF51A2-8R0BS (8AT)
		(Secondary)	-	-	-	QMF51A2-R125 (125 mA)	QMF51A2-R125 (125 mA)	QMF51A2-R125BS (125 mA)
		(Secondary)	-	-	-	QMF51A2-1R0 (1AT)	QMF51A2-1R0 (1AT)	QMF51A2-1R0BS (1AT)
4		AC Outlet \triangle Voltage Selector \triangle (Plug)	QMC0637-001	QMC0637-001	QMC0637-001	-	-	-
		(Socket)	-	-	E03676-001	-	-	-
6		Rear Panel	E22594-001	E22594-001	E22594-002	E22594-002	E22594-002	E22594-002
4		Fuse P.C. Board Ass'y \triangle	TPS-59D	TPS-59D	TPS-195A	TPS-196A	TPS-196A	TPS-196A
4		Driver Amp. P.C. Board Ass'y	TXX-109B	TXX-109B	TXX-109C	TXX-109D	TXX-109D	TXX-109D
12	R381, R382	Carbon Resistor	-	-	QRD141J-334S (330 k Ω , 1/4 W)	QRD141J-334S (330 k Ω , 1/4 W)	QRD141J-334S (330 k Ω , 1/4 W)	QRD141J-334S (330 k Ω , 1/4 W)
12	R383, R384	Carbon Resistor	-	-	QRD141J-104S (100 k Ω , 1/4 W)	QRD141J-104S (100 k Ω , 1/4 W)	QRD141J-104S (100 k Ω , 1/4 W)	QRD141J-104S (100 k Ω , 1/4 W)
12		DIN	-	-	E03623-002	E03623-002	E03623-002	E03623-002
12		Fuse Clip	-	-	-	E48965-002	E48965-002	E48965-002

NOTE: \triangle SAFETY PARTS

JVC

VICTOR COMPANY OF JAPAN, LIMITED, TOKYO, JAPAN

10. JA-S77 Schematic Diagram (for U.S.A and Canada)



Printed Circuit Board Ass'y LOfations

P.C. Board Ass'y	Description	Page
TPS-59D	AC Fuse P.C. Board Ass'y	10
TXX-109A	Driver Amp. P.C. Board Ass'y	11
TXX-110B	Tone Control P.C. Board Ass'y	17
TXX-111B	Equalizer Amp. P.C. Board Ass'y	19

- A K
- A K
- 1S2473
- 1S2473(F), 1S2076-31
- 1S188FM
- WZ-150A, XZ-132

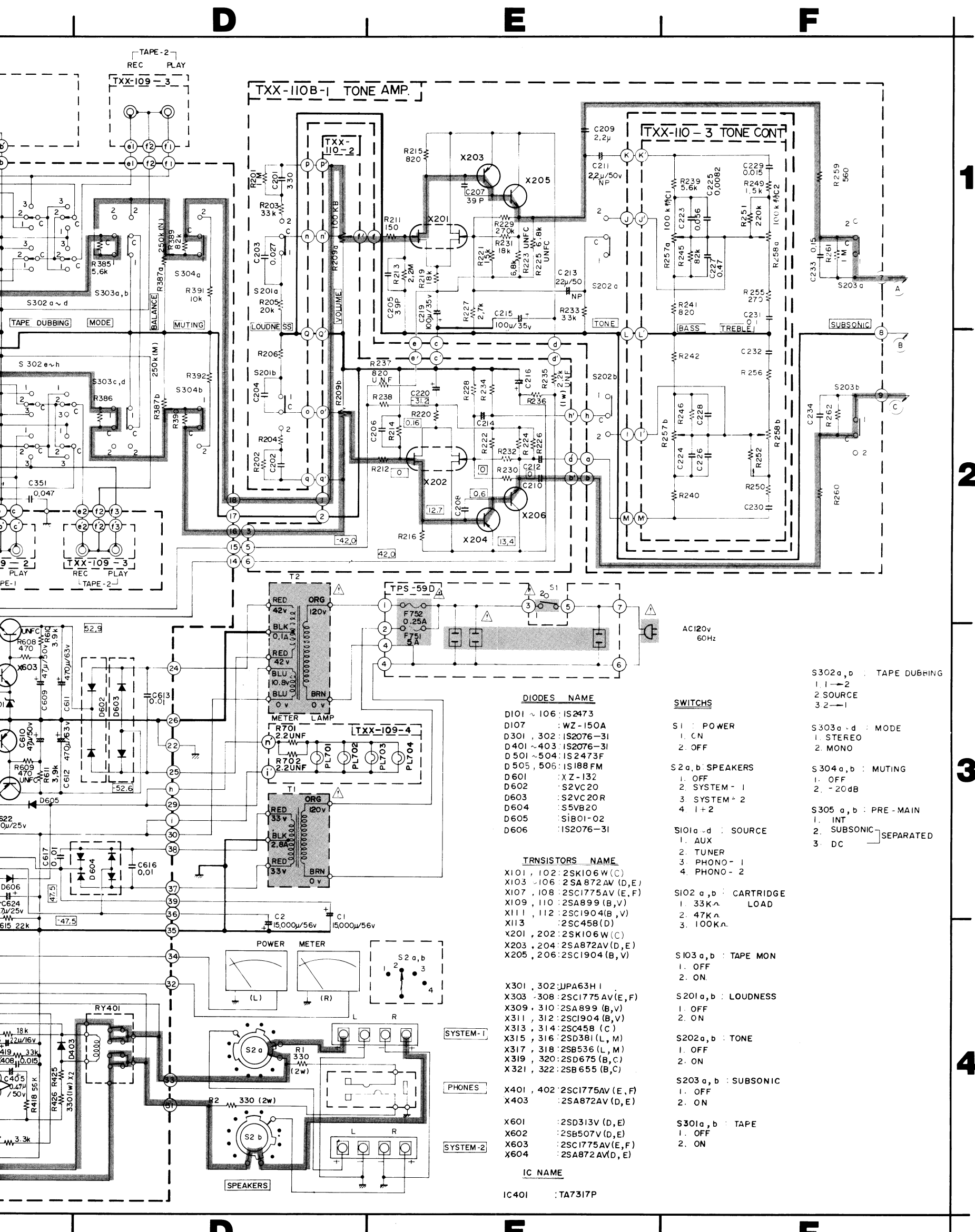
-
- S2VC20
- S2VC20R

-
- S5VB20

-
- E C
- 2SC1775AV (E, F)
- 2SA872AV (D, E)
- 2SC458 (C, D)

-
- G1 S DS G2
- 2SK106W (C)

-
- E C
- 2SC1904
- 2SA899 (E)



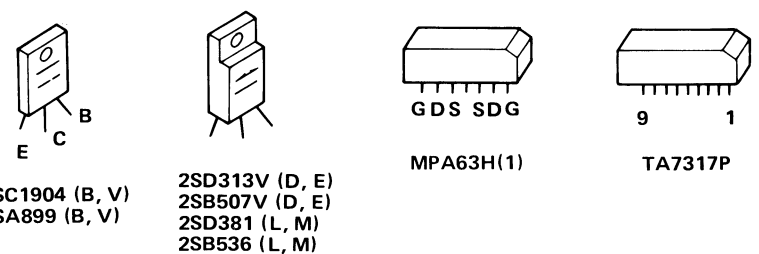
- DIODES NAME**
- D101 ~ 106 : IS2473
 - D107 : WZ-150A
 - D301 , 302 : IS2076-31
 - D401 ~ 403 : IS2076-31
 - D501 ~ 504 : IS2473F
 - D505 , 506 : IS188 FM
 - D601 : XZ-132
 - D602 : S2VC20
 - D603 : S2VC20R
 - D604 : S5VB20
 - D605 : S1B01-02
 - D606 : IS2076-31

- TRANSISTORS NAME**
- X101 , 102 : 2SK106W (C)
 - X103 ~ 106 : 2SA872AV (D, E)
 - X107 , 108 : 2SC1775AV (E, F)
 - X109 , 110 : 2SA899 (B, V)
 - X111 , 112 : 2SC1904 (B, V)
 - X113 : 2SC458 (D)
 - X201 , 202 : 2SK106W (C)
 - X203 , 204 : 2SA872AV (D, E)
 - X205 , 206 : 2SC1904 (B, V)

- IC NAME**
- IC401 : TA7317P

- SWITCHES**
- S1 : POWER
 - 1. ON
 - 2. OFF
 - S2 a, b : SPEAKERS
 - 1. OFF
 - 2. SYSTEM - 1
 - 3. SYSTEM + 2
 - 4. 1 + 2
 - S101 a - d : SOURCE
 - 1. AUX
 - 2. TUNER
 - 3. PHONO - 1
 - 4. PHONO - 2
 - S102 a, b : CARTRIDGE
 - 1. 33K Ω LOAD
 - 2. 47K Ω
 - 3. 100K Ω
 - S103 a, b : TAPE MON
 - 1. OFF
 - 2. ON
 - S201 a, b : LOUDNESS
 - 1. OFF
 - 2. ON
 - S202 a, b : TONE
 - 1. OFF
 - 2. ON
 - S203 a, b : SUBSONIC
 - 1. OFF
 - 2. ON
 - S301 a, b : TAPE
 - 1. OFF
 - 2. ON

- S302 a, b : TAPE DUBBING**
- 1 1 → 2
 - 2 SOURCE
 - 3 2 → 1
- S303 a, d : MODE**
- 1. STEREO
 - 2. MONO
- S304 a, b : MUTING**
- 1. OFF
 - 2. -20dB
- S305 a, b : PRE-MAIN**
- 1. INT
 - 2. SUBSONIC
 - 3. DC



75AV (E, F)
2AV (D, E)
8 (C, D)

2SK106W (C)

2SC1904 (B, V)
2SA899 (B, V)

2SD313V (D, E)
2SB507V (D, E)
2SD381 (L, M)
2SB536 (L, M)

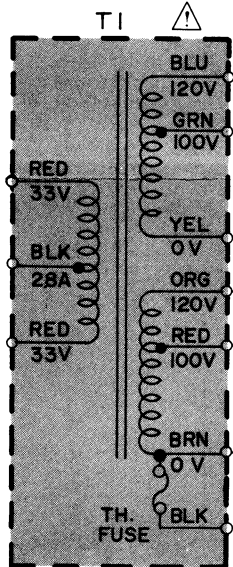
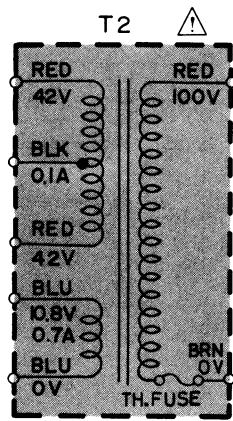
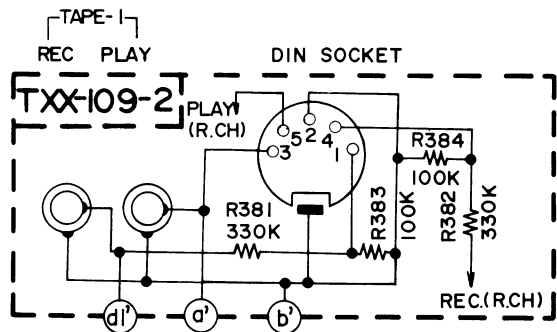
MPA63H(1)

TA7317P

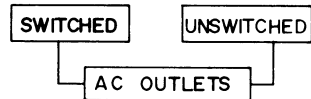
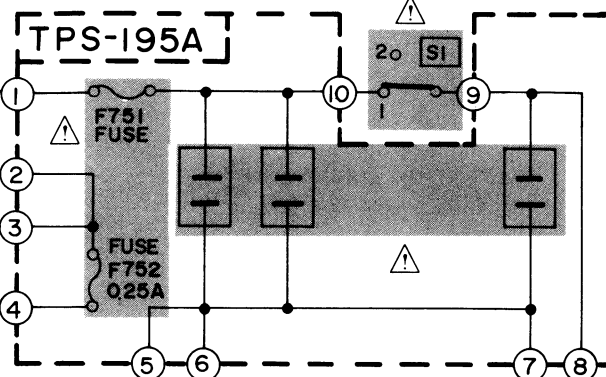
- Notes:**
1. Voltage values in \square and \square are measured with a tester (impedance 20 k Ω /V) without a signal applied to the unit.
 2. Voltage values in \square are positive.
— indicates positive B power supply.
 3. Voltage values in \square are negative.
— indicates negative B power supply.
 4. — indicates signal path.
 5. When replacing the parts in the dark ened area \blacksquare and those marked with \triangle , be sure to use the designated parts to ensure safety.
 6. This is the standard circuit diagram.
The design and contents are subject to change without notice.

[P] FOR PACEX
[U] FOR OTHER COUNTRIES

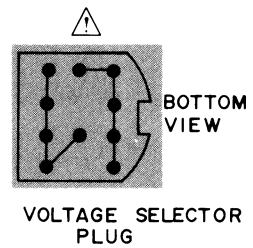
PRIMARY: AC 100, 120, 220, 240V, ~. 50/60Hz
DIN SOCKET IS INSTALLED.



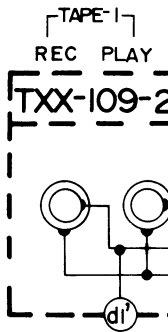
FUSE (F751) AC100, 120V: 6A
AC220, 240V: 3.3A



AC100, 120, 220, 240V, ~
50/60Hz

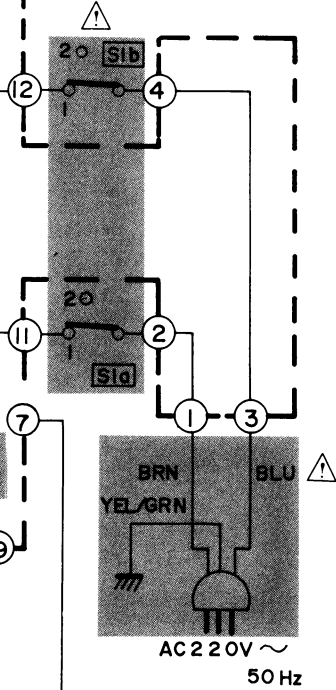
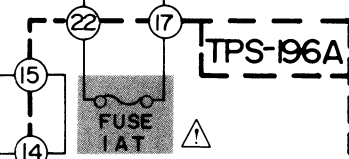
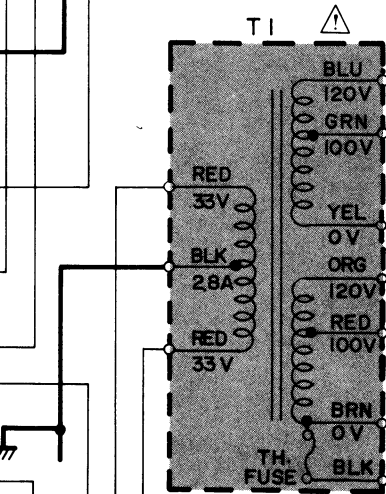
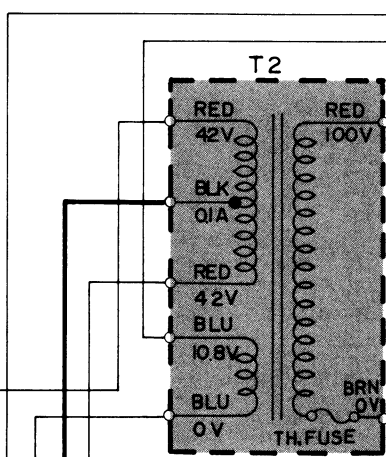
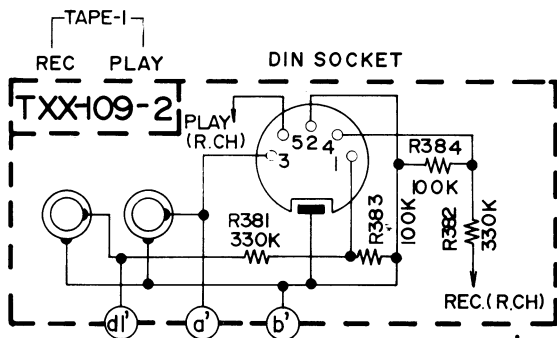


[A]

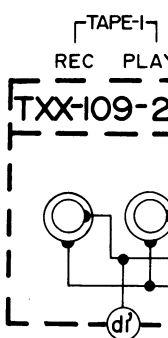


[E] FOR EUROPE

PRIMARY: AC 220V, ~. 50Hz.
DIN SOCKET IS INSTALLED.

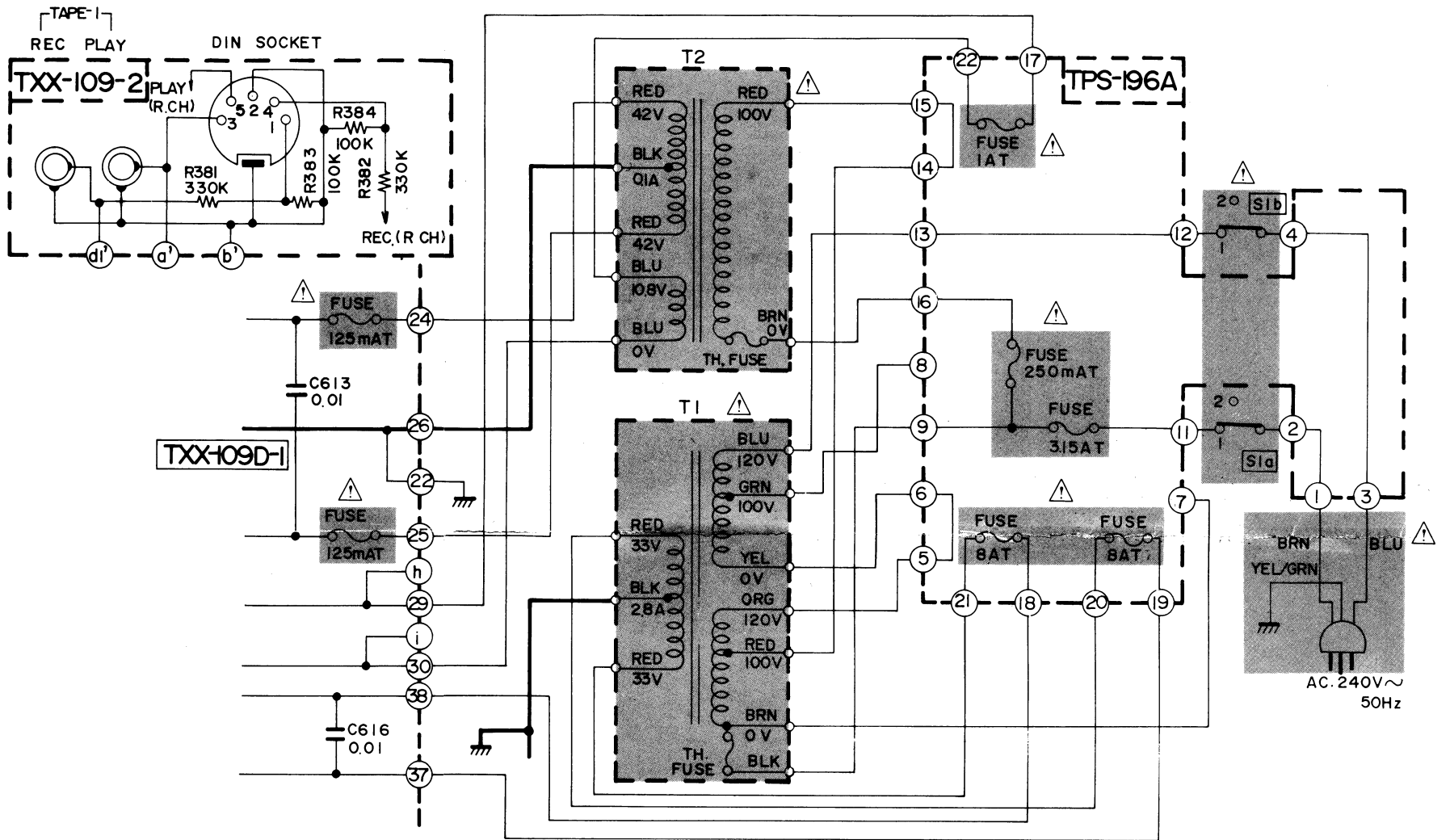


[BS]



[A] FOR AUSTRALIA

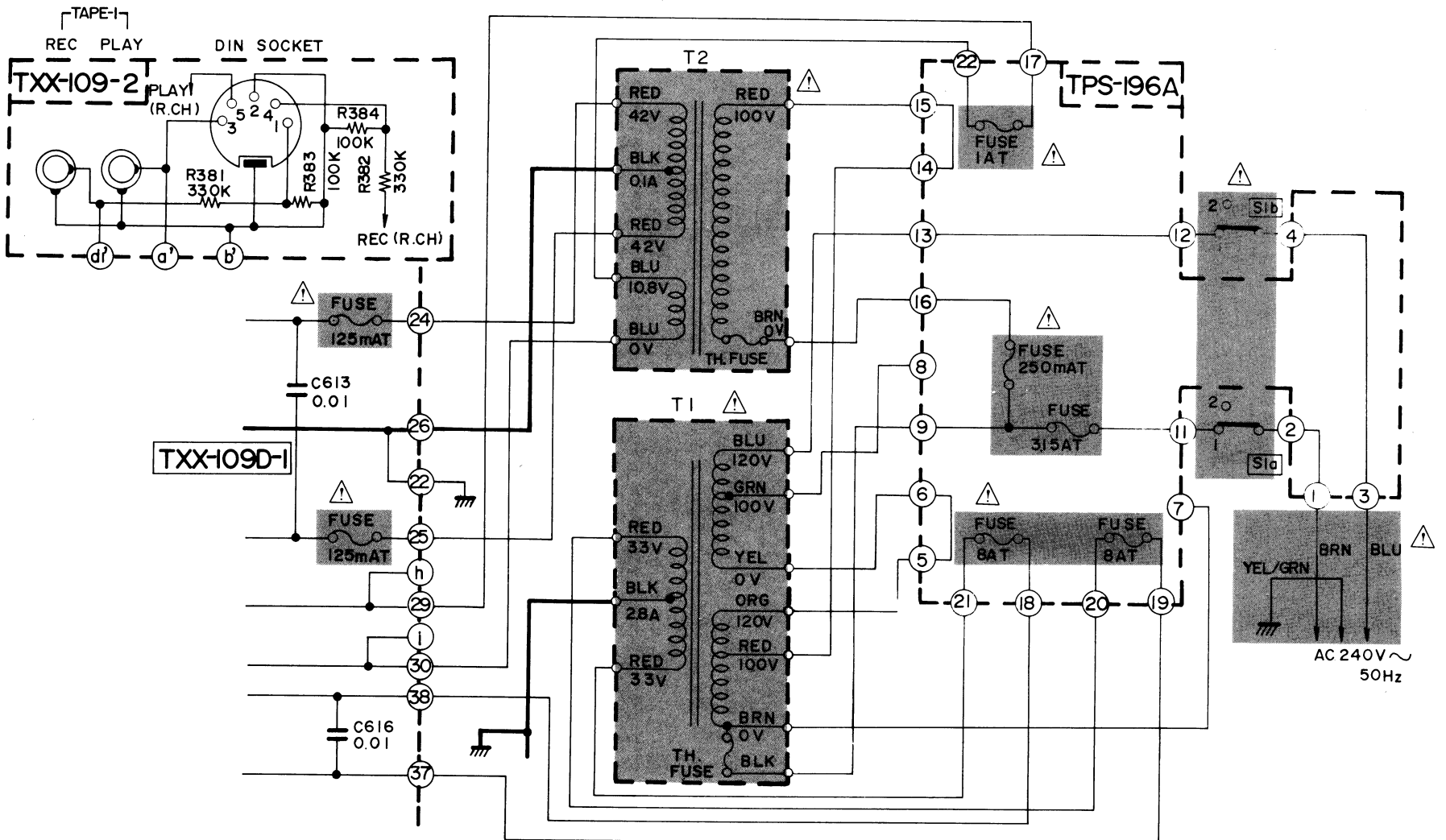
PRIMARY: AC240V ~ 50Hz
DIN SOCKET IS INSTALLED



100, 120, 220, 240V, ~
50/60Hz

[BS] FOR UNITED KINGDOM

PRIMARY: AC 240V ~ 50Hz
DIN SOCKET IS INSTALLED.



AC 220V ~
50 Hz