

POWERED SPEAKER

DS60-112

SERVICE MANUAL



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This document is printed on chlorine free (ECF) paper with soy ink.

IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING : Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT : This presentation or sale of this manual to any individual or firm does not constitute authorization certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING : Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus.)

IMPORTANT : Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (Where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT. The wires in this mains lead are coloured in accordance with the following code:

GREEN-AND-YELLOW	: EARTH
BLUE	: NEUTRAL
BROWN	: LIVE


As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol or colored GREEN or GREEN-and-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

■ WARNING

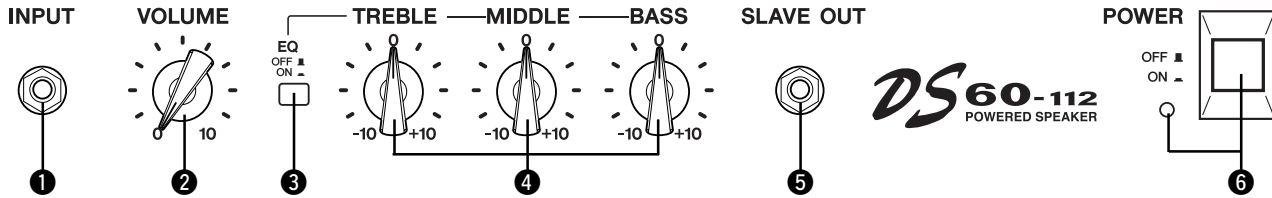
Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

■ SPECIFICATIONS

Output Power	60 Wrms
Speaker	30 cm x 1 (Celestion SEVENTY 80)
Controller/Switch	VOLUME, TREBLE, MIDDLE, BASS, EQ ON/OFF, POWER
Connection Jacks	INPUT : Standard Phone Mono Jack SLAVE OUT : Standard Phone Mono Jack
Input Level/Impedance	INPUT : 0 dBm / 100 k Ω
Output Level/Impedance	SLAVE OUT : 0 dBm / 1 k Ω
Power Requirements	U.S. and Canadian models : 120 V, 60 Hz General model : 230 V, 50 Hz
Power Consumption	70 W
Dimensions (W x H x D)	513 x 491 x 291 mm (20.2" x 19.3" x 101.5")
Weight	16.0 kg (35 lbs 4 oz)

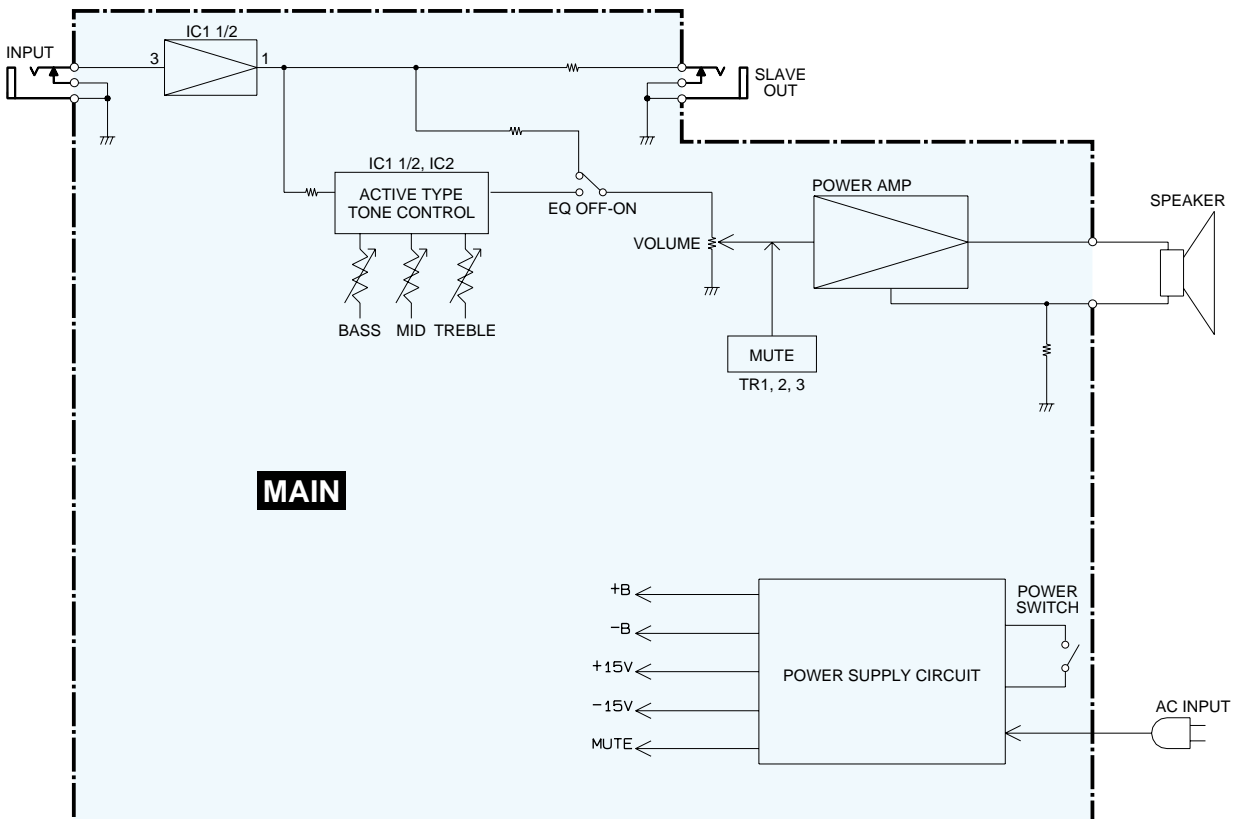
■ PANEL LAYOUT

•Control Panel

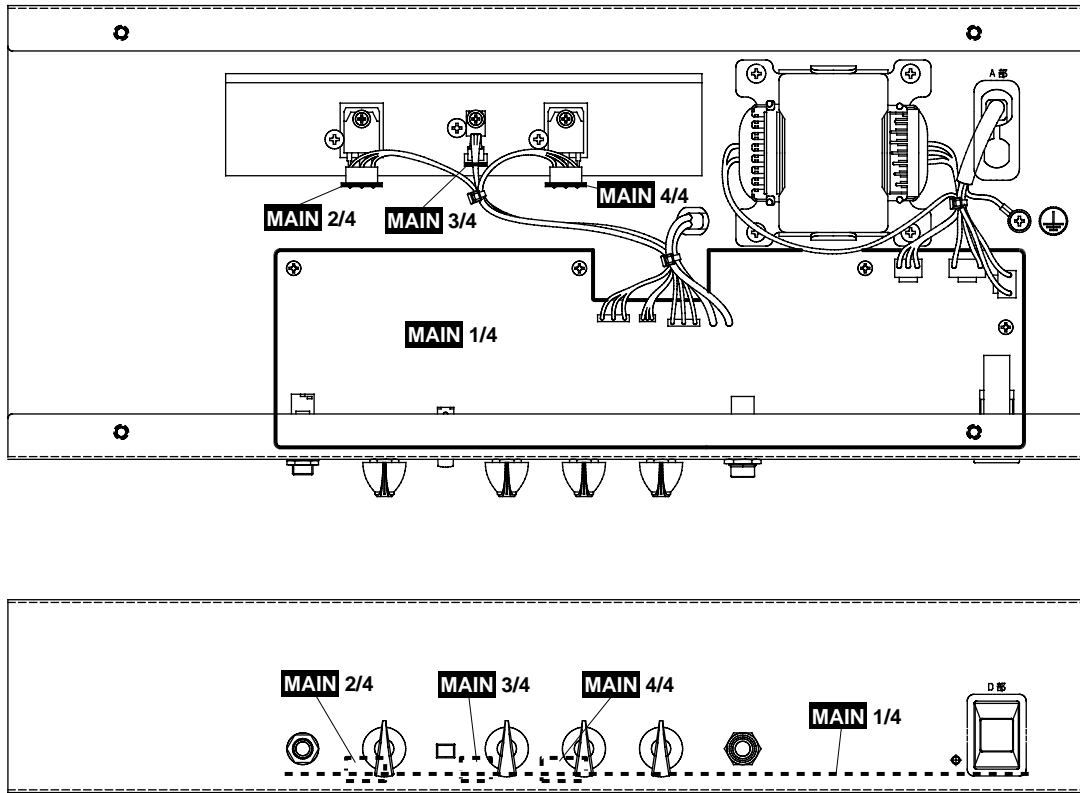


- ❶ INPUT Jack (INPUT)
- ❷ Volume Control (VOLUME)
- ❸ Equalizer Switch (EQ ON/OFF)
- ❹ Equalizer Controls (TREBLE, MIDDLE, BASS)
- ❺ Expansion Output Jack (SLAVE OUT)
- ❻ Power Switch & Lamp (POWER)

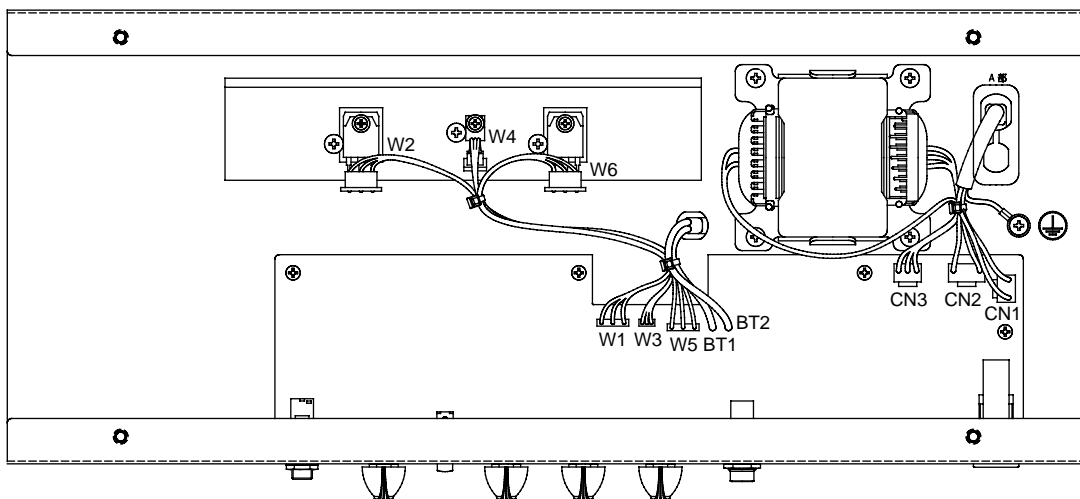
■ BLOCK DIAGRAM



CIRCUIT BOARD LAYOUT



WIRING



DISASSEMBLY PROCEDURE

A. External fittings

1. Handle assembly

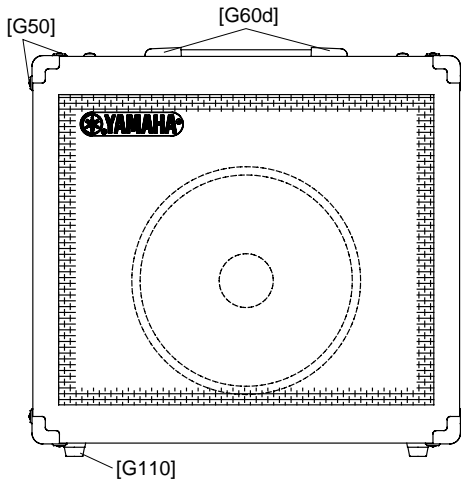
- 1-1. Remove the two (2) screws marked [G60d] and remove the handle.

2. Corner metal fixture

- 2-1. Remove the two (2) screws marked [G50] and remove the corner metal fixture. (Fig. 1)

3. Leg

- 3-1. Remove the one (1) screw marked [G110] and remove the leg. (Fig. 1)



- [G50]: Oval Head Tapping Screw-1 3.5X16 MFN133 (V3833600)
- [G60d]: Oval Flat Head Screw 5.0X25 FNM3-2B (V3743700)
- [G110]: Truss Head Tapping Screw-1 4.0X20 MFZN2BL (O3747290)

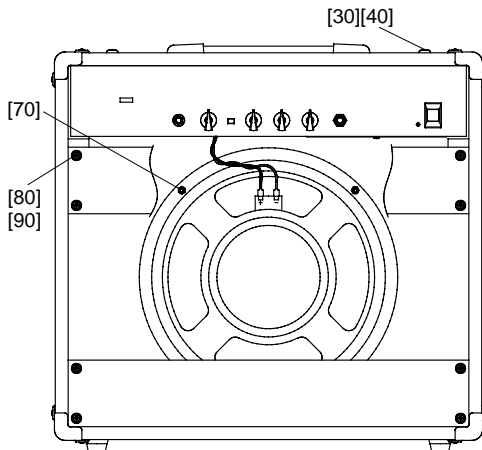
Fig.1

4. Amplifier Unit

- 4-1. Remove the four (4) screws marked [80] and four (4) angle washers marked [90] from the rear panel. (Fig. 2)
- 4-2. Remove the four (4) screws marked [30] and four (4) angle washers marked [40] from the top panel. (fig. 2)

5. Speaker

- 5-1. Remove the four (4) screws marked [80] and four (4) angle washers marked [90] from the rear panel. (Fig. 2)
- 5-2. Remove the four (4) screws marked [70]. The speaker can then be removed. (Fig. 2)



- [30]: Oval Head Screw 5.0X35 MFV2BL (V3749300)
- [40]: Washer 5S MFC2BL (EW300020)
- [70]: Hexagonal Nut 4.0 MFZN2Y (O3760900)
- [80]: Oval Head Tapping Screw-1 4.0X30 MFC2BL (V3749400)
- [90]: Washer 4S MFC2BL (VB890200)

Fig.2

B. Amplifier Unit

6. MAIN circuit board 1/4

- 6-1. Remove the amplifier unit (See Item 4 above.)
- 6-2. Remove the four (4) screws marked [30], four (4) knobs of Rotary variable resistors, four (4) hexagonal nuts and one (1) each of INPUT and SLAVE OUT hexagonal nuts. The MAIN circuit board 1/4 can then be removed. (Fig. 3)

7. MAIN Circuit Boards 2/4, 3/4, 4/4

- 7-1. Remove the amplifier unit. (See Item 4 above.)
- 7-2. Remove the one (1) screw marked [210] from each circuit board, which can then be removed. (Fig. 3)

8. Power Transformer

- 8-1. Remove the amplifier unit. (See Item 4 above.)
- 8-2. Remove the four (4) screws marked [190A]. The power transformer can then be removed. (Fig. 3)

9. Heat Sink

- 9-1. Remove the amplifier unit. (See Item 4 above.)
- 9-2. Remove MAIN circuit boards 2/4, 3/4 and 4/4. (See Item 7 above)
- 9-3. Remove the three (3) screws marked [190B]. The heat sink can then be removed. (Fig. 3)

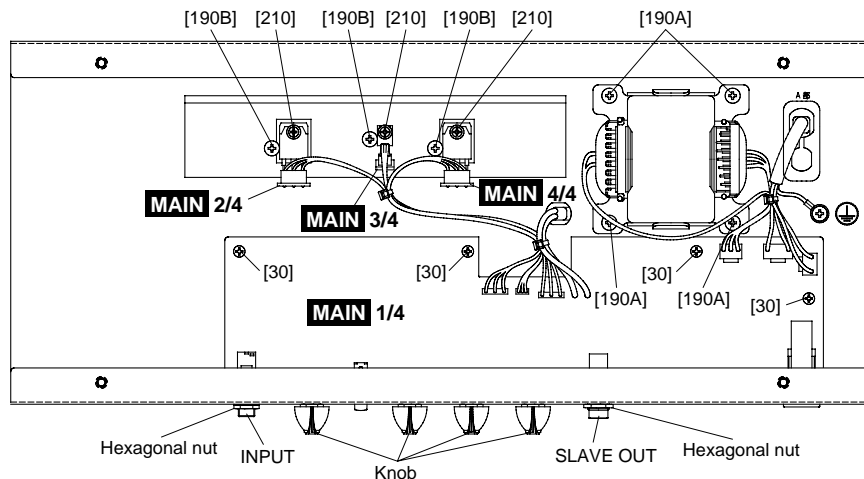
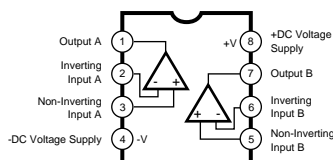


Fig.3

- [30]: Bind Head Tapping Screw-B 3.0X8 MFZN2BL (EP600190)
- [190]: Bind Head Tapping Screw-C 4.0X8 MFZN2BL (VC688900)
- [210]: Bind Head Screw SP3.0X12 MFZN2Y (VB763800)

IC BLOCK DIAGRAM

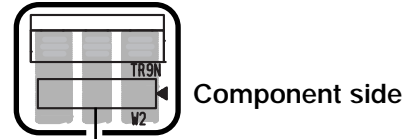
- RC4558D-V (IG001390)
- IC1, IC2
- OP AMP



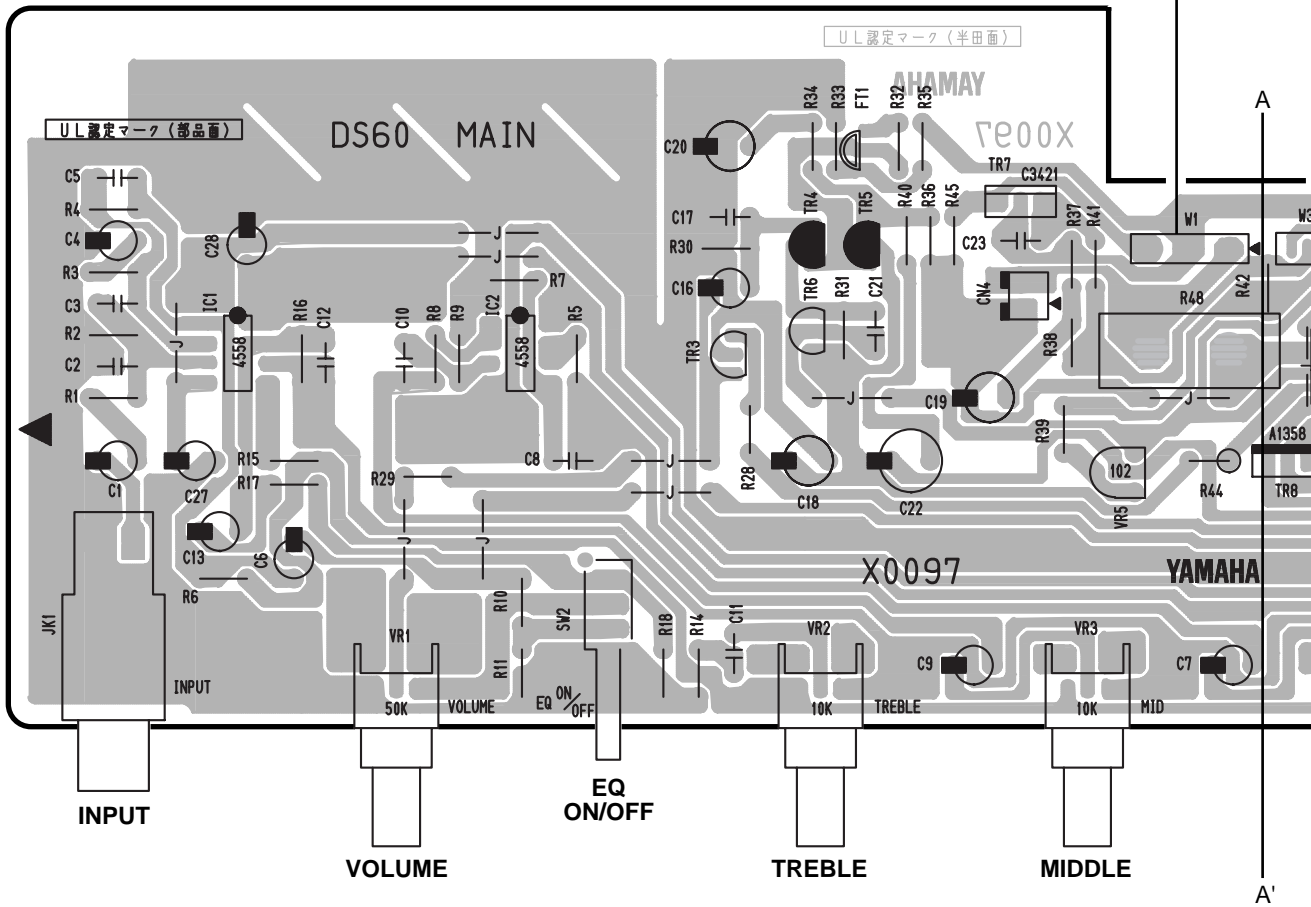
■ CIRCUIT BOARDS

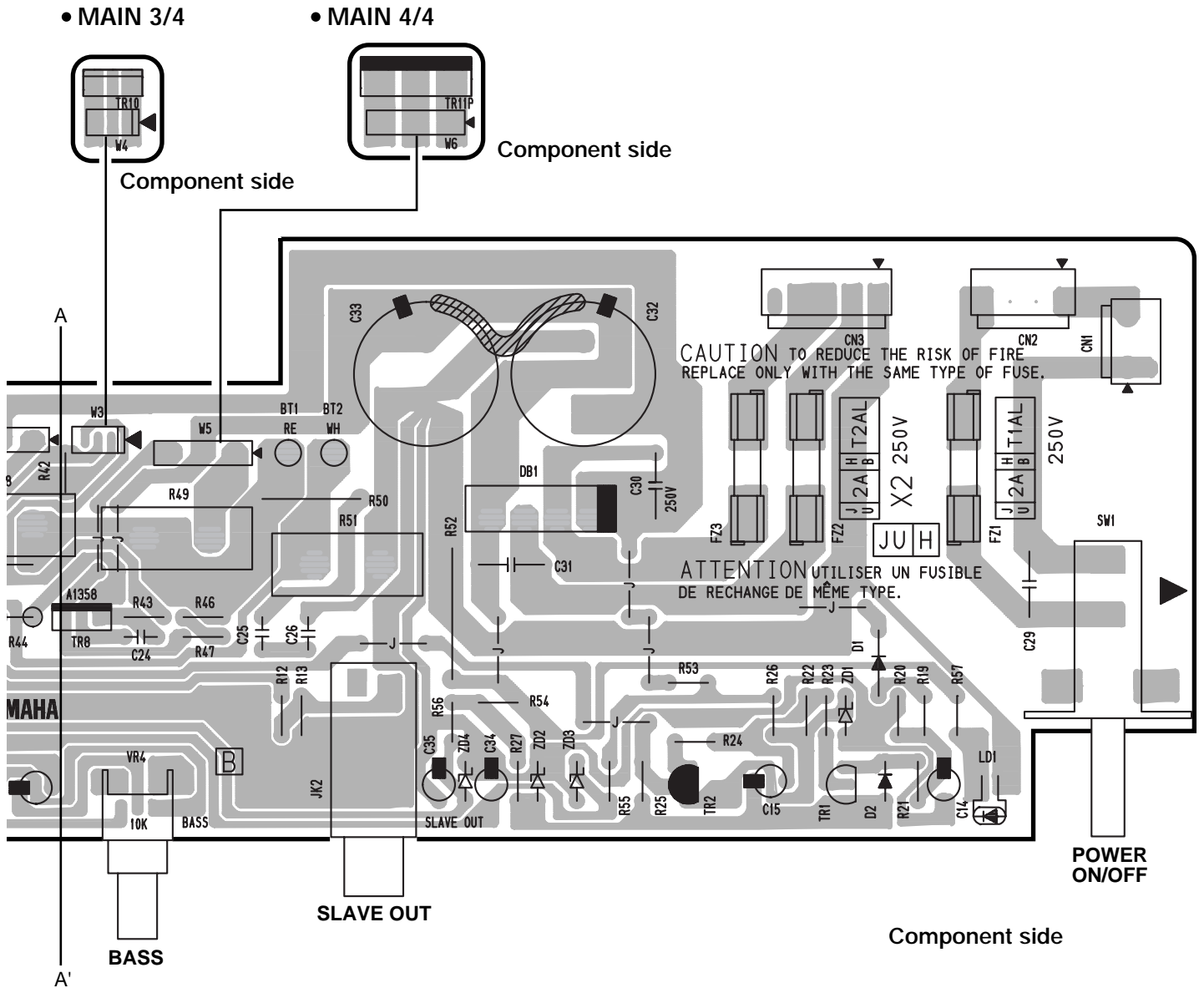
• MAIN Circuit Board

• MAIN 2/4



• MAIN 1/4



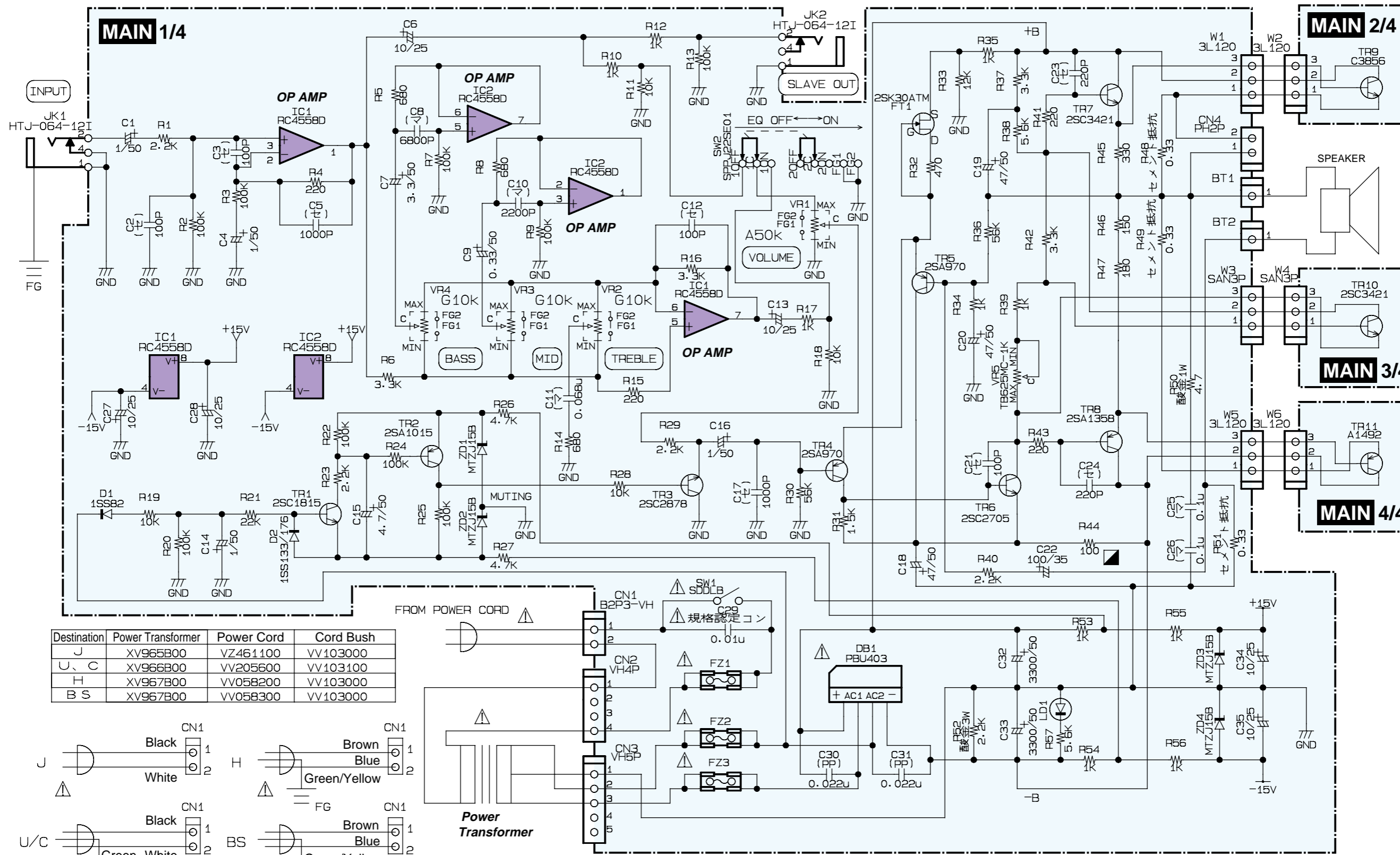


■ IDLING ADJUSTMENT

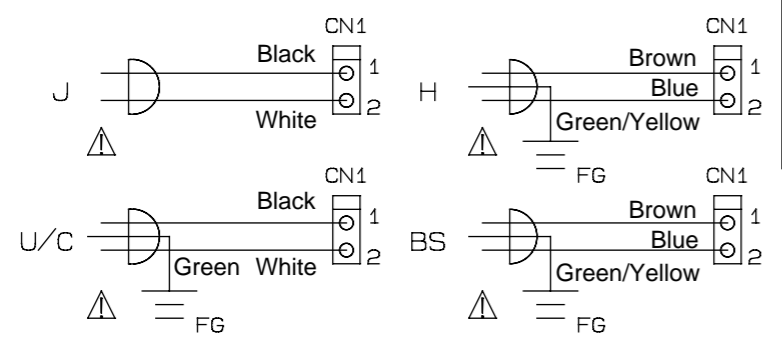
1. Turn the idling adjustment volume (VR5) counterclockwise fully.
2. Adjust the VR5 so that the DC voltage between the terminals of the CN4 is 3mV.

DS60-112 OVERALL CIRCUIT DIAGRAM

DS60-112



Destination	Power Transformer	Power Cord	Cord Bush
J	XV965B00	VZ461100	VV103000
U, C	XV966B00	VV205600	VV103100
H	XV967B00	VV058200	VV103000
B S	XV967B00	VV058300	VV103000



Destination	FZ1	FZ2	FZ3
J, U, C	250V2A VV070600	250V2A VV070600	
H, BS	250VT1A VV071200	250VT2A VV071500	

(マ): Mylar Capacitor
 セメント抵抗: Wire Wound Resistor
 酸金: Metal Oxide Film Resistor

DS60-112

KEC-54236

DS60-112

POWERED SPEAKER

DS 60-112

PARTS LIST


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Notes : DESTINATION ABBREVIATIONS

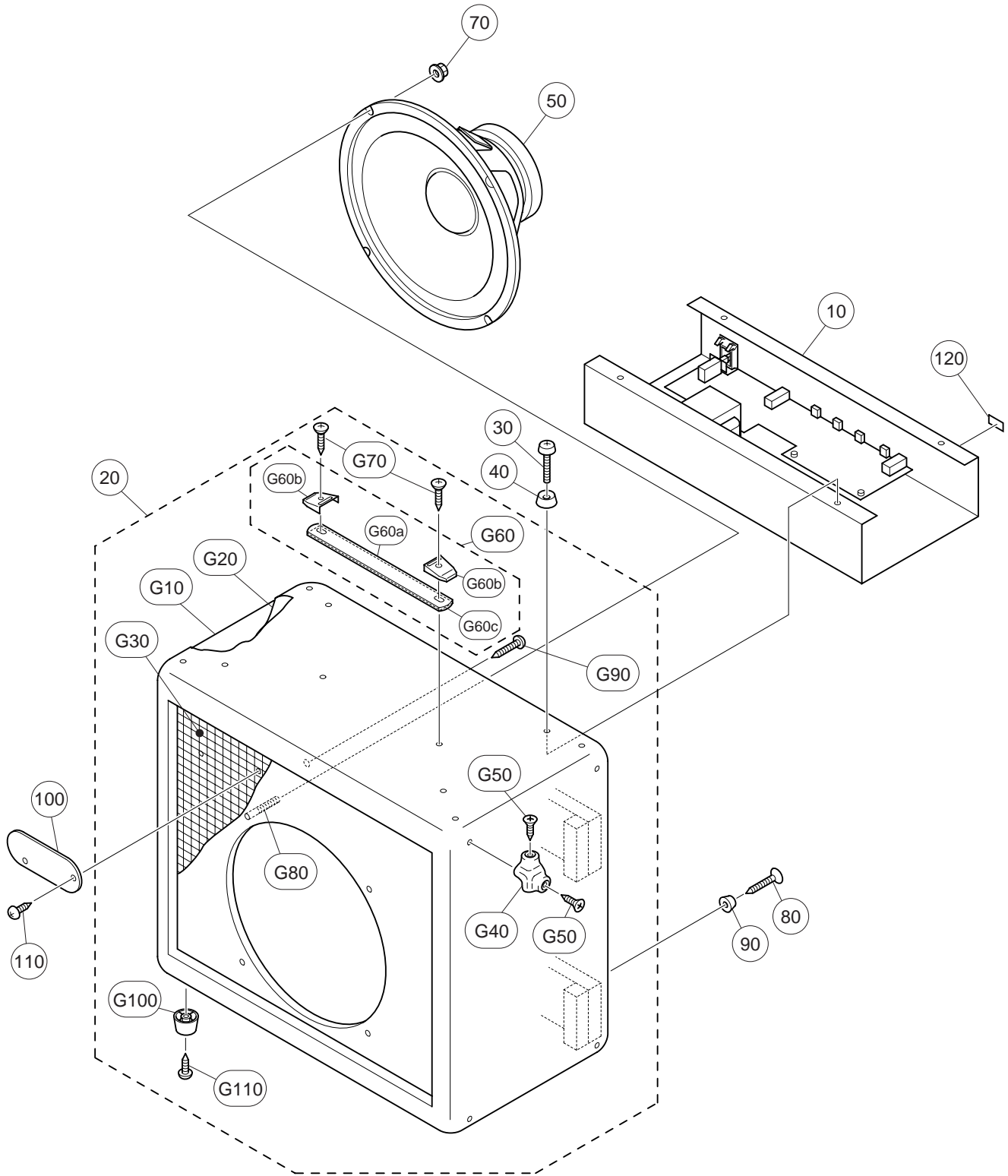
A : Australian model	M: South African model
B : British model	O : Chinese model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220)
I : Indonesian model	N,X : General export model
J : Japanese model	Y : Export model

■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark "}" in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded (■) part number is O, not zero.
- The second letter of the shaded (■) part number is I, not one.

OVERALL ASSEMBLY

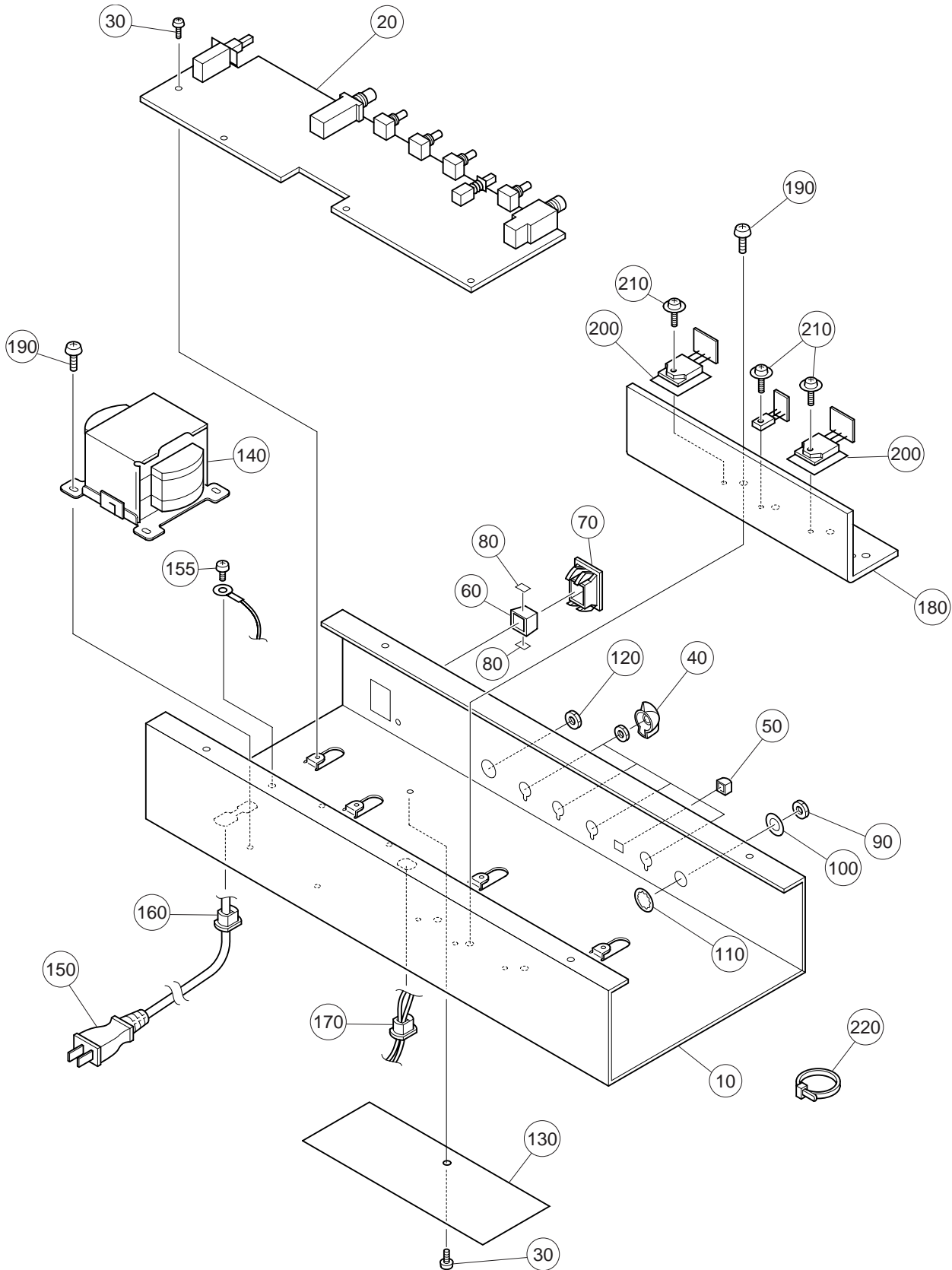


REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	OVERALL ASSEMBLY		DS60-112		
	--	Overall Assembly		J (V750350)		
	--	Overall Assembly		U,C (V750360)		
	--	Overall Assembly		H (V750370)		
	--	Overall Assembly		B (V750380)		
* 10	--	Amplifier Unit		J (V750430)		
* 10	--	Amplifier Unit		H (V750450)		
* 10	--	Amplifier Unit		U,C (V750440)		
* 10	--	Amplifier Unit		B (V750460)		
* 20	--	Overall Assembly		(V750470)		
* G10	--	Cabinet Assembly		(V750480)		
* G20	--	Vinyl Leather	PVC#507	(V369430)		
G30	--	Saran Net	#1059	(V369860)		
G40	V3694400	Conner Protector			8	03
G50	V3833600	Oval Head Tapping Screw-1	3.5X16 MFNI33		16	01
G60	V3630300	Handle Assembly			06	
* G60a	--	Handle	GA/BA	(V362340)		
* G60b	--	Handle Plate	GA/BA	(V362350)	2	
* G60c	--	Handle Angle	GA/BA	(V363020)		
G70	V3743700	Oval Head Screw	5.0X25 FNM3-2B		2	01
G80	V3749500	Screw	4.0X40 MFC2BL		4	
G90	03747400	Truss Head Tapping Screw-1	4.0X30 MFZN2Y		6	01
G100	VV085600	Leg			4	01
G110	03747290	Truss Head Tapping Screw-1	4.0X20 MFZN2BL		4	01
30	V3749300	Oval Head Screw	5.0X35 MFC2BL		4	
40	EW300020	Washer	5S MFC2BL		4	01
* 50	X0338A00	Speaker	SEVENTY 80			
70	03760900	Hexagonal Nut	4.0 MFZN2Y		4	01
80	V3749400	Oval Head Tapping Screw-1	4.0X30 MFC2BL		8	
90	VB890200	Washer	4S MFC2BL		8	01
100	V3624100	Name Plate	GA/BA			
110	V3623800	Truss Head Tapping Screw-1	3.0X10 FCM3-BL		2	
120	--	Label		U,C (VA03930)		03

*: New Parts

RANK: Japan only

AMPLIFIER UNIT



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	Amplifier Unit		J (V750430)		
	--	Amplifier Unit		U,C (V750440)		
	--	Amplifier Unit		H (V750450)		
	--	Amplifier Unit		B (V750460)		
* 10	V7504900	Chassis		J		
* 10	V7505000	Chassis		U,C		
* 10	V7505100	Chassis		H		
* 20	V7550900	Circuit Board		J,U		
* 20	V7551000	Circuit Board		H		
	EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL		5	01
	V3694100	Knob (CH)		VOLUME,TREBLE,MIDDLE,BASS	4	02
	VZ429100	Button (S)	GRAY	EQ ON/OFF		01
	VU859000	Power Switch Knob		POWER ON/OFF		01
	VU859100	Escutcheon, Power Switch				02
	V4126900	Film, Power Switch	13X8X0.15		2	
	LX200060	Hexagonal Nut	9.0 12X2 MFNI33			01
	VL802300	Flat Washer	9X14 0.5 FNM3			01
	ET800150	Toothed Lock Washer-A	9.0 MFZN2Y			01
	VD794100	Hexagonal Nut	12.0 14X2 MFC2BL			01
	V3755700	Insulation Sheet				
⚠ *	X0239B00	Power Transformer	J	J		
⚠ *	X0240B00	Power Transformer	UC	U,C		
⚠ *	X0241B00	Power Transformer	E	E,B		
⚠	VV058200	Power Cord	E H05VV-F3X0.75 6A	H		06
⚠	VV058300	Power Cord	BS H05VV-F3X0.75	B		08
⚠	VV205600	Power Cord	UC SJT 3X#18 10A	U,C		06
⚠	VZ461100	Power Cord	J VCTF 2X0.75 7A	J		05
	VP156800	Bind Head Screw	4.0X8 MFZN2BL	U,C,H,B		01
	VV103000	Cord Stopper	SR-5R1	J,H,B		01
	VV103100	Cord Stopper	SR-6P1	U,C		01
	CB072750	Cord Stopper	SR-4N-4			01
	--	Heat Sink		(V612570)		
	VC688900	Bind Head Tapping Screw-C	4.0X8 MFZN2BL		7	01
	V3637600	Insulation Sheet	UNISHEET T=0.15		2	
	VB763800	Bind Head Screw	SP 3.0X12 MFZN2Y		3	01
	VV104600	Cord Holder			3	01

*: New Parts

RANK: Japan only

ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
		ELECTRICAL PARTS			
*	V7550900	Circuit Board	MAIN	J,U	MAIN1/4-4/4(X0097A0)
*	V7551000	Circuit Board	MAIN	H	MAIN1/4-4/4(X0097A0)
	--	Jumper Wire	0.60		(VV29140)
	VV319600	Fuse Holder	CQ-05CT	17	01
				6	01
BT1	V3632400	Wire Assembly	#18 2P L 300		
C01	UR866100	Electrolytic Cap.	1.00 50.0V		01
C02	VZ353500	Ceramic Capacitor-SL	100P 50V J		01
C03	VZ353500	Ceramic Capacitor-SL	100P 50V J		01
C04	UR866100	Electrolytic Cap.	1.00 50.0V		01
C05	VZ353900	Ceramic Capacitor-B	1000P 50V K		01
C06	UR847100	Electrolytic Cap.	10.00 25.0V		01
C07	UR866330	Electrolytic Cap.	3.30 50.0V		01
C08	VV061200	Mylar Capacitor	6800P 50V J		01
C09	UR865330	Electrolytic Cap.	0.33 50.0V		
C10	VV060300	Mylar Capacitor	2200P 50V J		01
C11	VV062600	Mylar Capacitor	0.068 50V J		01
C12	VZ353500	Ceramic Capacitor-SL	100P 50V J		01
C13	UR847100	Electrolytic Cap.	10.00 25.0V		01
C14	UR866100	Electrolytic Cap.	1.00 50.0V		01
C15	UR866470	Electrolytic Cap.	4.70 50.0V		01
C16	UR866100	Electrolytic Cap.	1.00 50.0V		01
C17	VZ353900	Ceramic Capacitor-B	1000P 50V K		01
C18	UR867470	Electrolytic Cap.	47.00 50.0V		01
-20	UR867470	Electrolytic Cap.	47.00 50.0V		01
C21	VZ353500	Ceramic Capacitor-SL	100P 50V J		01
C22	UR858100	Electrolytic Cap.	100.00 35.0V		01
C23	VZ353600	Ceramic Capacitor-B	220P 50V K		01
C24	VZ353600	Ceramic Capacitor-B	220P 50V K		01
C25	VV062800	Mylar Capacitor	0.1 50V J		01
C26	VV062800	Mylar Capacitor	0.1 50V J		01
C27	UR847100	Electrolytic Cap.	10.00 25.0V		01
C28	UR847100	Electrolytic Cap.	10.00 25.0V		01
C29	VV520600	Capacitor	0.01 400V J.U.C.S		02
C30	V3632700	Polypropylene Capacitor	0.022U/250V		
C31	V3632700	Polypropylene Capacitor	0.022U/250V		
C32	V3632800	Electrolytic Cap.-LP	3300U 50V SNAP IN		01
C33	V3632800	Electrolytic Cap.-LP	3300U 50V SNAP IN		01
C34	UR847100	Electrolytic Cap.	10.00 25.0V		01
C35	UR847100	Electrolytic Cap.	10.00 25.0V		01
CN1	VG879900	Base Post	2P TE		01
CN2	LB932040	Base Post	4P TE		01
CN3	LB932050	Base Post	5P TE		01
CN4	VV066200	Base Post	2P TE		01
D01	IF005560	Diode	1SS82TD		01
D02	VD631600	Diode	1SS133,176,HSS104		01
DB1	VV518200	Diode Stack	PBU403 4.0A 200V		03
FT1	IE000010	Fuse	2SK30ATM-Y Y		03
FZ1	VV070600	Fuse	TDS 2A 250V J/U/C	J,U,C	01
FZ1	VV071200	Fuse	TSD 1A 250V SEMKO	H,B	01
FZ2	VV070600	Fuse	TDS 2A 250V J/U/C	J,U,C	01
FZ2	VV071500	Fuse	TDS 2A 250V SEMKO	H,B	01
FZ3	VV070600	Fuse	TDS 2A 250V J/U/C	J,U,C	01
FZ3	VV071500	Fuse	TDS 2A 250V SEMKO	H,B	01
IC1	IG001390	IC	RC4558D-V	OP AMP	03
IC2	IG001390	IC	RC4558D-V	OP AMP	03
JK1	V3633400	Phone Jack	HTJ-064-12I	INPUT	01
JK2	V6176400	Phone Jack	HTJ-064-11I	SLAVE OUT	01
LD1	V3091800	LED	LT311G41BAC		01
R01	HF456220	Carbon Resistor	2.2K 1/4 J		01
R02	HF458100	Carbon Resistor	100.0K 1/4 J		01
R03	HF458100	Carbon Resistor	100.0K 1/4 J		01
R04	HF455220	Carbon Resistor	220.0 1/4 J		01
R05	HF455680	Carbon Resistor	680.0 1/4 J		01
R06	HF456330	Carbon Resistor	3.3K 1/4 J		01
R07	HF458100	Carbon Resistor	100.0K 1/4 J		01
R08	HF455680	Carbon Resistor	680.0 1/4 J		01
R09	HF458100	Carbon Resistor	100.0K 1/4 J		01
R10	HF456100	Carbon Resistor	1.0K 1/4 J		01
R11	HF457100	Carbon Resistor	10.0K 1/4 J		01

*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
R12	HF456100	Carbon Resistor	1.0K 1/4 J			01
R13	HF458100	Carbon Resistor	100.0K 1/4 J			01
R14	HF455680	Carbon Resistor	680.0 1/4 J			01
R15	HF455220	Carbon Resistor	220.0 1/4 J			01
R16	HF456330	Carbon Resistor	3.3K 1/4 J			01
R17	HF456100	Carbon Resistor	1.0K 1/4 J			01
R18	HF457100	Carbon Resistor	10.0K 1/4 J			01
R19	HF457100	Carbon Resistor	10.0K 1/4 J			01
R20	HF458100	Carbon Resistor	100.0K 1/4 J			01
R21	HF457220	Carbon Resistor	22.0K 1/4 J			01
R22	HF458100	Carbon Resistor	100.0K 1/4 J			01
R23	HF456220	Carbon Resistor	2.2K 1/4 J			01
R24	HF458100	Carbon Resistor	100.0K 1/4 J			01
R25	HF458100	Carbon Resistor	100.0K 1/4 J			01
R26	HF456470	Carbon Resistor	4.7K 1/4 J			01
R27	HF456470	Carbon Resistor	4.7K 1/4 J			01
R28	HF457100	Carbon Resistor	10.0K 1/4 J			01
R29	HF456220	Carbon Resistor	2.2K 1/4 J			01
R30	HF457560	Carbon Resistor	56.0K 1/4 J			01
R31	HF456150	Carbon Resistor	1.5K 1/4 J			01
R32	HF455470	Carbon Resistor	470.0 1/4 J			01
R33	HF457120	Carbon Resistor	12.0K 1/4 J			01
R34	HF456100	Carbon Resistor	1.0K 1/4 J			01
R35	HF456100	Carbon Resistor	1.0K 1/4 J			01
R36	HF457560	Carbon Resistor	56.0K 1/4 J			01
R37	HF456330	Carbon Resistor	3.3K 1/4 J			01
R38	HF456560	Carbon Resistor	5.6K 1/4 J			01
R39	HF456100	Carbon Resistor	1.0K 1/4 J			01
R40	HF456220	Carbon Resistor	2.2K 1/4 J			01
R41	HF455220	Carbon Resistor	220.0 1/4 J			01
R42	HF456330	Carbon Resistor	3.3K 1/4 J			01
R43	HF455220	Carbon Resistor	220.0 1/4 J			01
R44	VV276800	Flame Proof C. Resistor	100 1/4 J			01
R45	HF455330	Carbon Resistor	330.0 1/4 J			01
R46	HF455150	Carbon Resistor	150.0 1/4 J			01
R47	HF455180	Carbon Resistor	180.0 1/4 J			01
R48	V4480100	Wire Wound Resistor	0.33 5W J			01
R49	V4480100	Wire Wound Resistor	0.33 5W J			01
R50	V3632900	Metal Oxide Film Resistor	4.7 1W J			01
R51	V4480100	Wire Wound Resistor	0.33 5W J			01
R52	V3633200	Metal Oxide Film Resistor	2.2K 3W J			01
R53	HF456100	Carbon Resistor	1.0K 1/4 J			01
-56	HF456100	Carbon Resistor	1.0K 1/4 J			01
R57	HF456560	Carbon Resistor	5.6K 1/4 J			01
⚠ SW1	VV059400	Push Switch	SDDL11874-YL			03
SW2	V3633600	Push Switch	SPPJ22SE01			02
TR01	IC1815M0	Transistor	2SC1815 Y,GR			01
TR02	IA101590	Transistor	2SA1015 O,Y			01
TR03	IC287820	Transistor	2SC2878 A,B			01
TR04	IA097030	Transistor	2SA970 GR,BL			01
TR05	IA097030	Transistor	2SA970 GR,BL			01
TR06	VE198800	Transistor	2SC2705 O,Y			01
TR07	IC342100	Transistor	2SC3421 O,Y			02
TR08	IA135800	Transistor	2SA1358 O,Y			02
TR09	VV597200	Pair Transistor	A1492(Z)/C3856(Z)			05
TR10	IC342100	Transistor	2SC3421 O,Y			02
* VR1	V7636900	Rotary Variable Resistor	RK09L1120 50KA	VOLUME		
* VR2	V7636800	Rotary Variable Resistor	RK09L1120 10KB	TREBLE,MID,BASS		
* -4	V7636800	Rotary Variable Resistor	RK09L1120 10KB			
VR5	V3633500	Trimmer Potentiometer	B 1K TB655MC			
* W1W2	--	Connector Assembly	B&B #24 3P L 200	(V363250)		
* W3W4	--	Connector Assembly	B&B #26 3P L 150	(V620410)		
* W5W6	--	Connector Assembly	B&B #24 3P L 200	(V363250)		
ZD1	VG440800	Zener Diode	MTZ J 15.0B 15.0V			01
-4	VG440800	Zener Diode	MTZ J 15.0B 15.0V			01
* X0338A00		Speaker	SEVENTY 80			
⚠ *	X0239B00	Power Transformer	J	J		
⚠ *	X0240B00	Power Transformer	UC	U.C		

*: New Parts

RANK: Japan only

