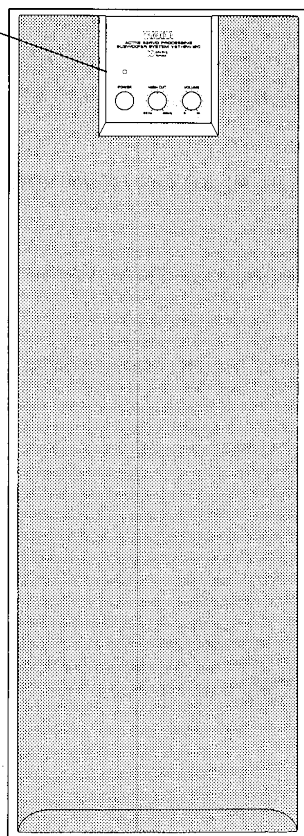
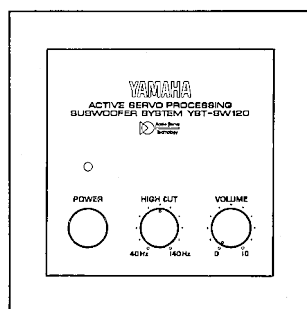


ACTIVE SERVO PROCESSING SUBWOOFER SYSTEM YST-SW120

SERVICE MANUAL

YST-SW120



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 any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-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 specifications 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 buss in the unit (heavy gauge black wires connect to this buss).

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

■ CONTENTS

TO SERVICE PERSONNEL	1
REAR PANELS	1
SPECIFICATIONS	2
BLOCK DIAGRAM	2
INTERNAL VIEW	3
DISASSEMBLY PROCEDURES	3

PRINTED CIRCUIT BOARD	4~6
ADJUSTMENTS	7
IC BLOCKS	7
SCHEMATIC DIAGRAM	8
PARTS LIST	9~15

100493

Copyright 2004 YAMAHA CORPORATION
This manual is copyrighted by YAMAHA and may not be copied or redistributed either in print or electronically without permission.

YAMAHA
YAMAHA CORPORATION
P.O. Box 1, Hamamatsu, Japan

3.16K-801 ☐ Ⓢ Printed in Japan '94.4

■ TO SERVICE PERSONNEL

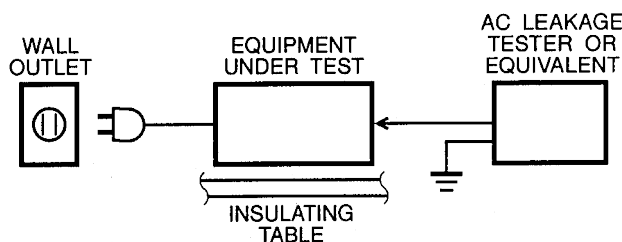
1. Critical Components Information.

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

2. Leakage Current Measurement (For 120V Models Only).

When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.



WARNING: CHEMICAL CONTENT NOTICE!

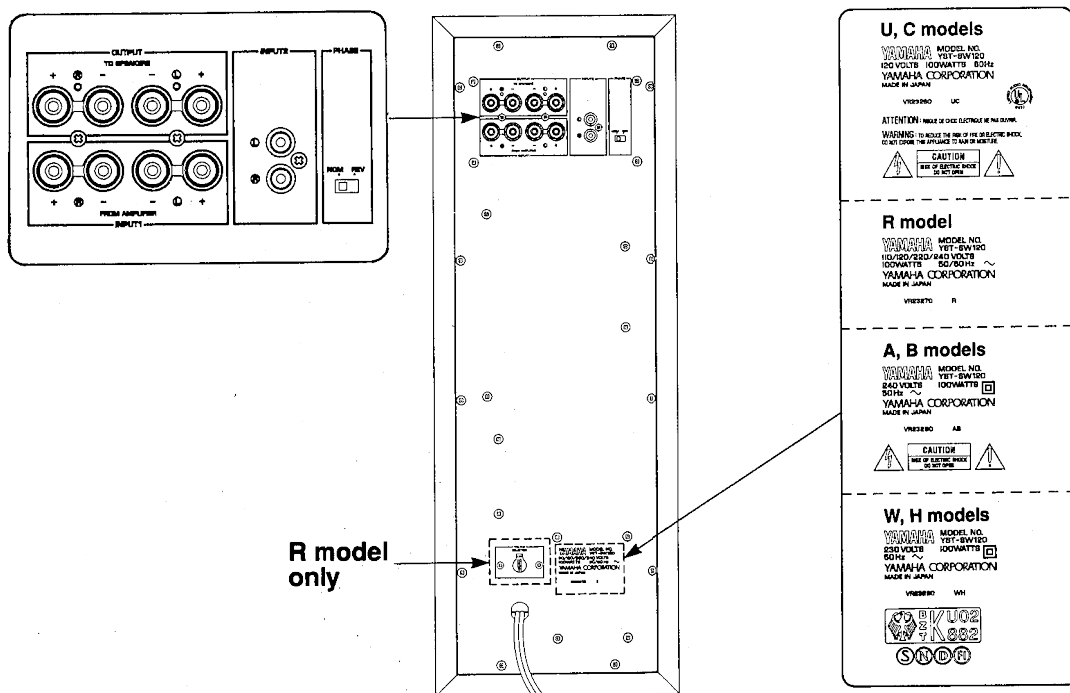
The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects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

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

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.

■ REAR PANELS



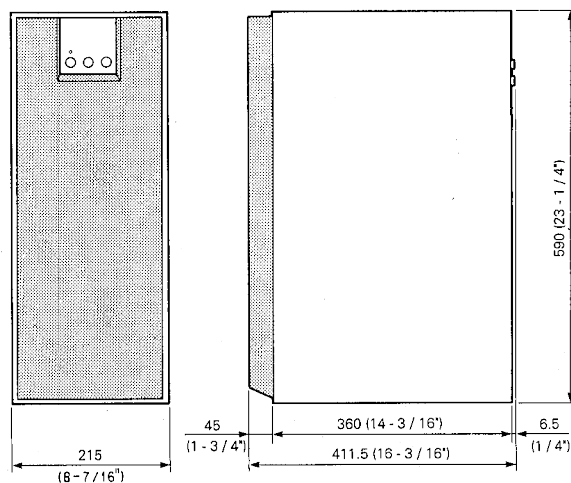
SPECIFICATIONS

Speaker Unit	18cm (7") woofer (JA1821) magnetic-shielded type x 2
Amplifier Output	70W/5 ohms (THD 0.1%, 100Hz)
High-Cut Filter	40Hz—140Hz (−24dB/oct), variable
Frequency Response	21Hz—160Hz (−10dB)
Power Supply	
U.S.A and Canadian models	AC120V, 60Hz
German and European models	AC230V, 50Hz
British and Australian models	AC240V, 50Hz
General model	AC110/120/220/240V, 50/60Hz
Power Consumption	100W
Dimensions (W x H x D)	215mm x 590mm x 411.5mm (8-7/16" x 23-1/4" x 16-3/16")
Weight	15.5kg (34 lbs. 2oz)

* Specifications subject to change without notice.

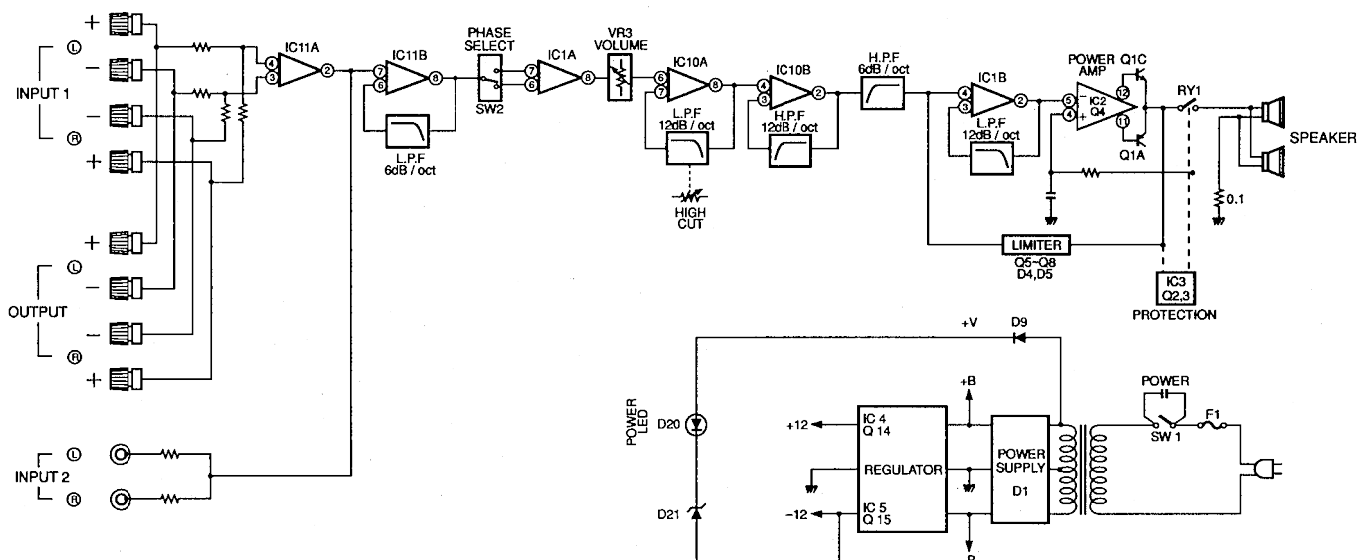
U U.S.A. model H European model
 C Canadian model W German model
 A Australian model R General model
 B British model

DIMENSIONS

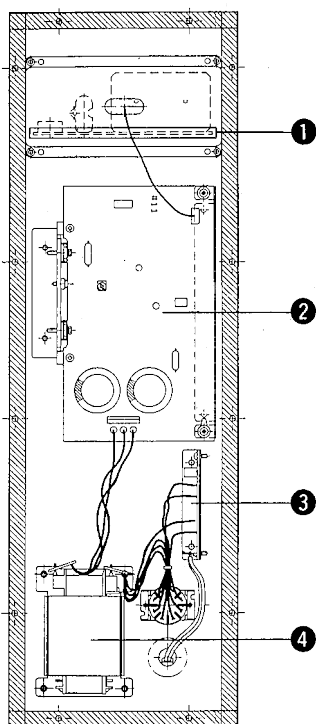


Units : mm (inch)

BLOCK DIAGRAM



INTERNAL VIEW



- ① P.C.B. MAIN (3)
- ② P.C.B. MAIN (1)
- ③ P.C.B. MAIN (2)
- ④ POWER TRANSFORMER

DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)

1. Removal of Front Grille

The front grille is fixed to the main unit with dowels at 6 locations.

* As a screwdriver (for slotted head screw) is used for removal, use special care not to cause damage to the main unit.

- a. Using the screwdriver inserted in the gap between the front grille and the main unit (bottom side first), push up the front grille.
- b. Remove the front grille by lifting it up.

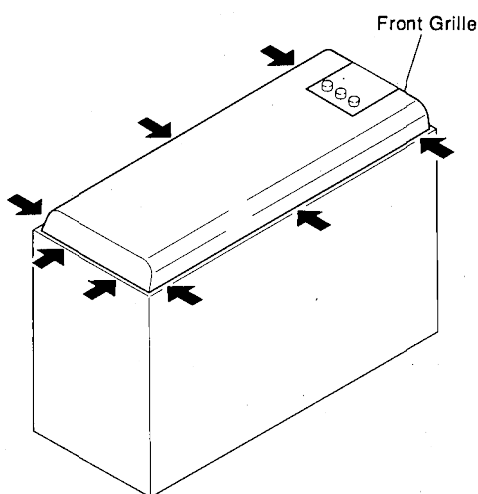


Fig. 1

2. Removal of Speakers

- a. Remove 4 screws (①) in Fig. 2.
- b. Remove the cable cord.

3. Removal of Front Panel

- a. Remove 4 screws (②) in Fig. 2, and remove the Front Panel with the P.C.B. Main (4), (5) and (8).
- b. Remove 2 connectors. (#13, #14)

4. Removal of Rear Panel

Remove 12 screws (③) in Fig. 2.

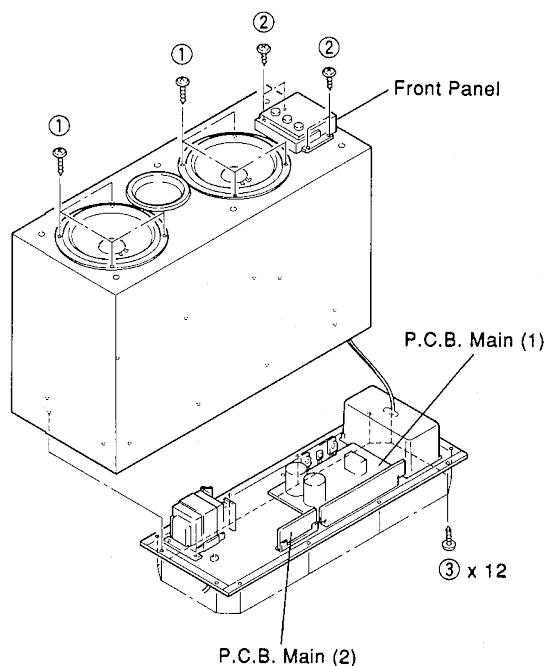


Fig. 2

A

B

C

D

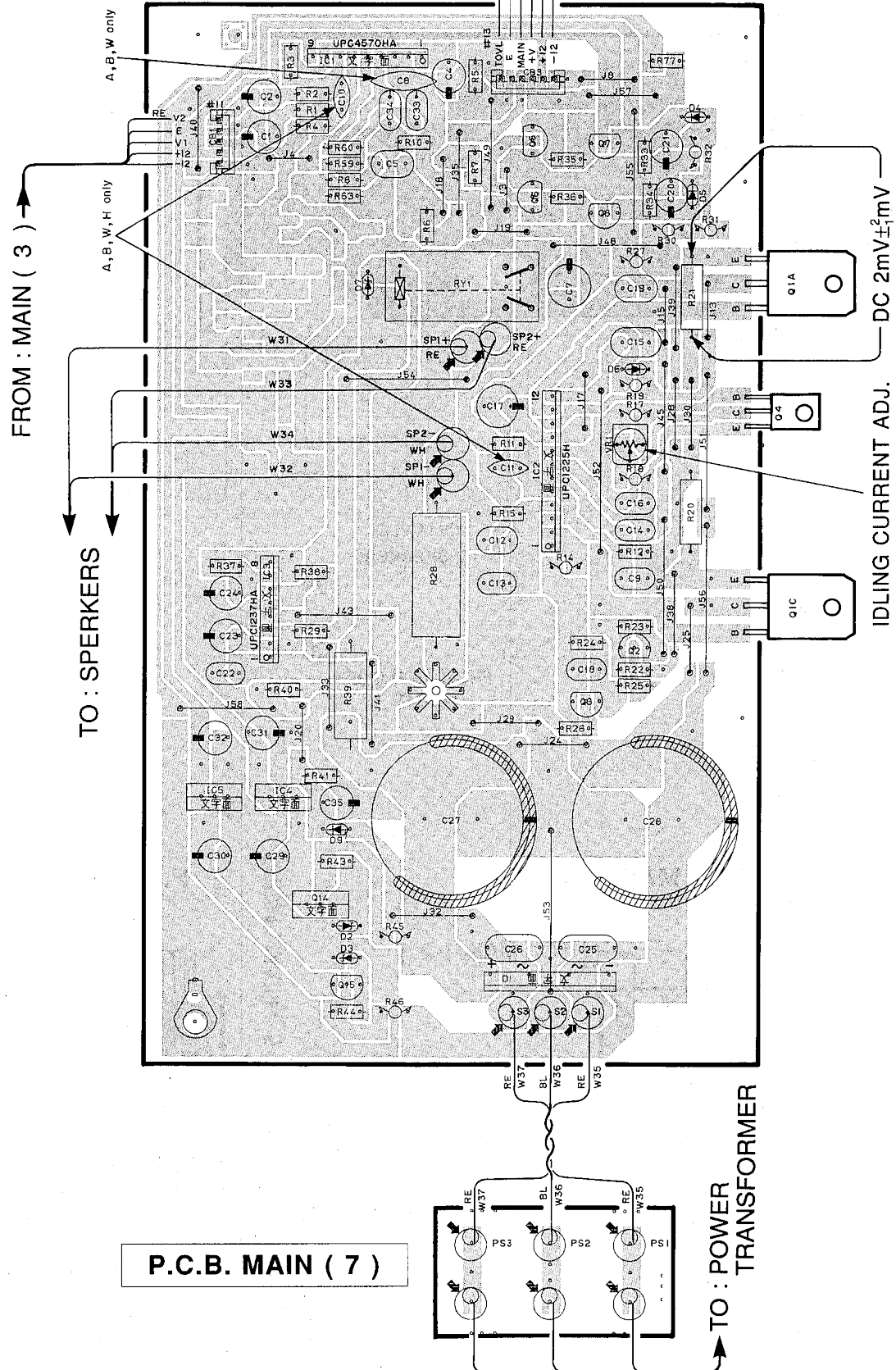
E

YST-SW120

PRINTED CIRCUIT BOARD (Foil Side)

P.C.B. MAIN (1)

FROM : MAIN (4)



P.C.B. MAIN (7)

YST-SW120

A

B

C

D

E

YST-SW120

■ PRINTED CIRCUIT BOARD (Foil Side)

P.C.B. MAIN (3)

P.C.B. MAIN (5)

POWER

TO : MAIN (4)

PHASE
REV NOM

INPUT 2

(L)
(R)OUTPUT
TO SPEAKERSFROM AMPLIFIER
INPUT 1

P.C.B. MAIN (8)

TO : MAIN (2)

POWER

P.C.B. MAIN (4)

TO : MAIN (1)

VOLUME HIGH CUT

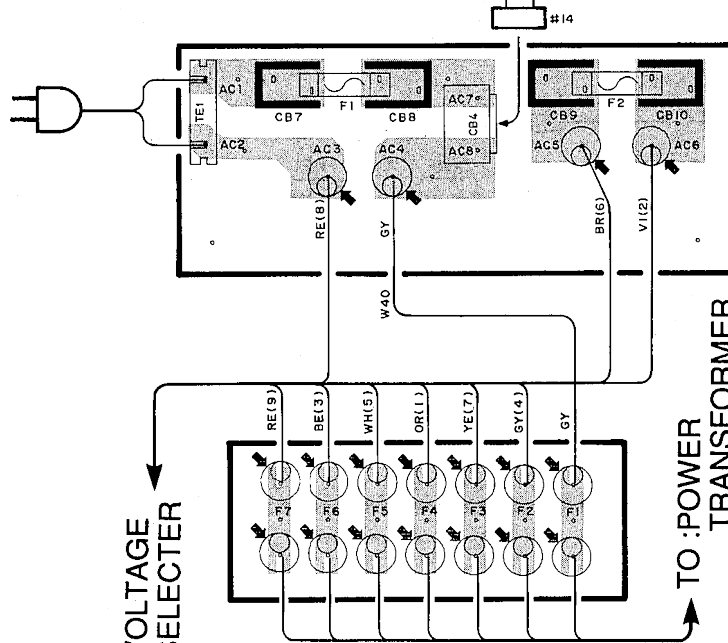
FROM : MAIN (5)

PRINTED CIRCUIT BOARD (Foil Side)

● R model

P.C.B. MAIN (2)

FROM : MAIN (8) →



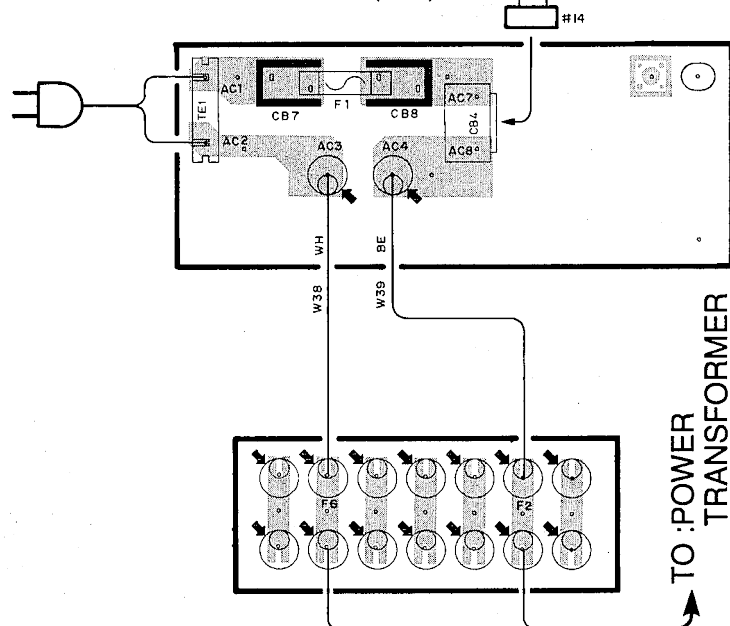
P.C.B. MAIN (6)

240V	1-2/5-6
220V	2-3/6-7
110V	3-4/7-8
120V	4-5/8-1

● Except R model

P.C.B. MAIN (2)

FROM : MAIN (8) →



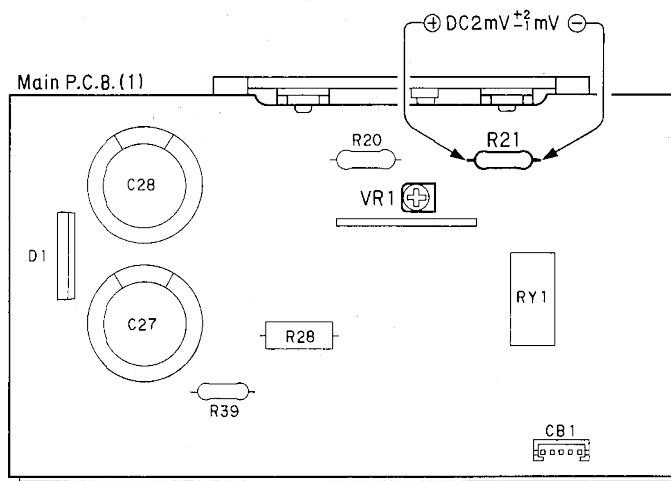
P.C.B. MAIN (6)

ADJUSTMENTS

● Idling Adjustment

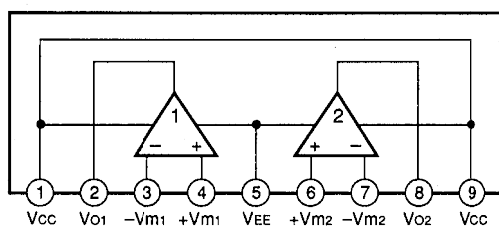
To stabilize operation of the amplifier, turn ON the power in the no-signal state and wait for 1 or 2 minutes before the adjustment.

Adjust VR1 so that the voltage at both ends of R21 (0.1Ω) becomes DC 2mV ± 1 mV.

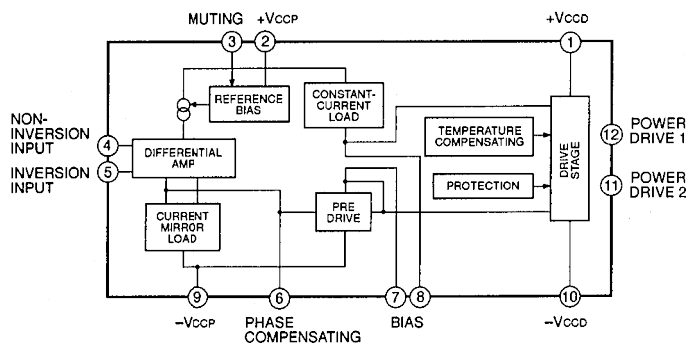


IC BLOCKS

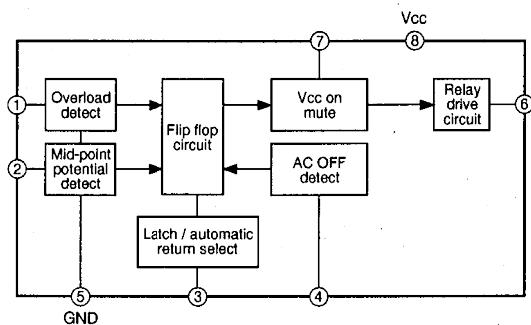
IC1,10,11 : μ PC4570HA
Dual OP-Amp



IC2 : μ PC1225H
30~50W Power Amplifier Driver



IC3 : μ PC1237HA
Protector IC for Power Amplifier



PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

Components having special characteristics are marked $\triangle$ and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS List. For the parts No. of the carbon resistors, refer to last page.

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS :

C.A.EL.CHP	: CHIP ALUMI. ELECTROLYTIC CAP	L.EMIT	: LIGHT EMITTING MODULE
C.CE	: CERAMIC CAP	LED.DSPLY	: LED DISPLAY
C.CE.ARRAY	: CERAMIC CAP ARRAY	LED.INFRD	: LED, INFRARED
C.CE.CHP	: CHIP CERAMIC CAP	MODUL.RF	: MODULATOR, RF
C.CE.ML	: MULTILAYER CERAMIC CAP	PHOT.CPL	: PHOTO COUPLER
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP	PHOT.INTR	: PHOTO INTERRUPTER
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP	PHOT.RFLCT	: PHOTO REFLECTOR
C.CE.TUBLR	: CERAMIC TUBULAR CAP	PIN.TEST	: PIN, TEST POINT
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP	PLST.RIVET	: PLASTIC RIVET
C.EL	: ELECTROLYTIC CAP	R.ARRAY	: RESISTOR ARRAY
C.MICA	: MICA CAP	R.CAR	: CARBON RESISTOR
C.ML.FLM	: MULTILAYER FILM CAP	R.CAR.CHP	: CHIP RESISTOR
C.MP	: METALLIZED PAPER CAP	R.CAR.FP	: FLAME PROOF CARBON RESISTOR
C.MYLAR	: MYLAR FILM CAP	R.FUS	: FUSABLE RESISTOR
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP	R.MTL.CHP	: CHIP METAL FILM RESISTOR
C.PAPER	: PAPER CAPACITOR	R.MTL.FLM	: METAL FILM RESISTOR
C.PLS	: POLYSTYRENE FILM CAP	R.MTL.OXD	: METAL OXIDE FILM RESISTOR
C.POL	: POLYESTER FILM CAP	R.MTL.PLAT	: METAL PLATE RESISTOR
C.POLY	: POLYETHYLENE FILM CAP	RSNR.CE	: CERAMIC RESONATOR
C.PP	: POLYPROPYLENE FILM CAP	RSNR.CRYS	: CRYSTAL RESONATOR
C.TNTL	: TANTALUM CAP	R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
C.TNTL.CHP	: CHIP TANTALUM CAP	R.WW	: WIRE WOUND RESISTOR
C.TRIM	: TRIMMER CAP	SCR.BND.HD	: BIND HEAD B-TITE SCREW
CN	: CONNECTOR	SCR.BW.HD	: BW HEAD TAPPING SCREW
CN.BS.PIN	: CONNECTOR, BASE PIN	SCR.CUP	: CUP TITE SCREW
CN.CANNON	: CONNECTOR, CANNON	SCR.TERM	: SCREW TERMINAL
CN.DIN	: CONNECTOR, DIN	SCR.TR	: SCREW, TRANSISTOR
CN.FLAT	: CONNECTOR, FLAT CABLE	SUPRT.PCB	: SUPPORT, P.C.B.
CN.POST	: CONNECTOR, BASE POST	SURG.PRTCT	: SURGE PROTECTOR
COIL.MX.AM	: COIL, AM MIX	SW.TACT	: TACT SWITCH
COIL.AT.FM	: COIL, FM ANTENNA	SW.LEAF	: LEAF SWITCH
COIL.DT.FM	: COIL, FM DETECT	SW.LEVER	: LEVER SWITCH
COIL.MX.FM	: COIL, FM MIX	SW.MICRO	: MICRO SWITCH
COIL.OUTPT	: OUTPUT COIL	SW.PUSH	: PUSH SWITCH
DIOD.ARRAY	: DIODE ARRAY	SW.RT.ENC	: ROTARY ENCODER
DIODE.BRG	: DIODE BRIDGE	SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
DIODE.CHP	: CHIP DIODE	SW.RT	: ROTARY SWITCH
DIODE.VAR	: VARACTOR DIODE	SW.SLIDE	: SLIDE SWITCH
DIOD.Z.CHP	: CHIP ZENER DIODE	TERM.SP	: SPEAKER TERMINAL
DIODE.ZENR	: ZENER DIODE	TERM.WRAP	: WRAPPING TERMINAL
DSCR.CE	: CERAMIC DISCRIMINATOR	THRMST.CHP	: CHIP THERMISTOR
FER.BEAD	: FERRITE BEADS	TR.CHP	: CHIP TRANSISTOR
FER.CORE	: FERRITE CORE	TR.DGT	: DIGITAL TRANSISTOR
FET.CHP	: CHIP FET	TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
FL.DSPLY	: FLUORESCENT DISPLAY	TRANS	: TRANSFORMER
FLTR.CE	: CERAMIC FILTER	TRANS.PULS	: PULSE TRANSFORMER
FLTR.COMB	: COMB FILTER MODULE	TRANS.PWR	: POWER TRANSFORMER ASS'y
FLTR.LC.RF	: LC FILTER ,EMI	TUNER.AM	: TUNER PACK, AM
GND.MTL	: GROUND PLATE	TUNER.FM	: TUNER PACK, FM
GND.TERM	: GROUND TERMINAL	TUNER.PK	: FRONT-END TUNER PACK
HOLDER.FUS	: FUSE HOLDER	VR	: ROTARY POTENTIOMETER
IC.PRTCT	: IC PROTECTOR	VR.MTR	: POTENTIOMETER WITH MOTOR
JUMPER.CN	: JUMPER CONNECTOR	VR.SW	: POTENTIOMETER WITH ROTARY SW
JUMPER.TST	: JUMPER, TEST POINT	VR.SLIDE	: SLIDE POTENTIOMETER
L.DTCT	: LIGHT DETECTING MODULE	VR.TRIM	: TRIMMER POTENTIOMETER

Note) Those parts marked with “#” are not included in the P.C.B. ass'y.

Schm Ref.	PART NO.	Description
* VR203400	P. C. B.	MAIN (UC)
* VR203500	P. C. B.	MAIN (R)
* VR203600	P. C. B.	MAIN (ABW)
* VR203700	P. C. B.	MAIN (H)
CB1	VD004800	CN. BS. PIN 5P
CB3	VD004900	CN. BS. PIN 6P
CB4	VG879900	CN. BS. PIN 2P
CB5	VD004500	CN. BS. PIN 2P
CB7	LE201880	HOLDER. FUS PC-FH1
CB8	LE201880	HOLDER. FUS PC-FH1
CB9	LE201880	HOLDER. FUS PC-FH1 (R)
CB10	LE201880	HOLDER. FUS PC-FH1 (R)
C1	VG290900	C. EL 10uF 50V
C2	VG290900	C. EL 10uF 50V
C4	VG291200	C. EL 47uF 50V
C5	UA655470	C. MYLAR 0.47uF 50V
C7	VG287800	C. EL 330uF 16V
C8	VA777700	C. CE 220pF 50V (ABW)
C9	UA653470	C. MYLAR 4700pF 50V (ABWH)
C10	VA761000	C. CE 22pF 50V (ABWH)
C11	UA653100	C. MYLAR 1000pF 50V
C12	UA655470	C. MYLAR 0.47uF 50V
C13	UA655100	C. MYLAR 0.1uF 50V
C14	UA653100	C. MYLAR 1000pF 50V
C15	UA655150	C. MYLAR 0.15uF 50V
C16	UA654220	C. MYLAR 0.022uF 50V
C17	UJ668100	C. EL 100uF 50V
C18	UA655100	C. MYLAR 0.1uF 50V
C19	UA654100	C. MYLAR 0.01uF 50V
C20	VG290900	C. EL 10uF 50V
C21	VG290900	C. EL 10uF 50V
C22	UA655100	C. MYLAR 0.1uF 50V
C23	VG286900	C. EL 220uF 10V
C24	VG288900	C. EL 100uF 25V
C25	FC255100	C. MYLAR 0.1uF 250V
C26	FC255100	C. MYLAR 0.1uF 250V
C27	VK574700	C. EL 6800uF 56V
C28	VK574700	C. EL 6800uF 56V
C29	VG291000	C. EL 22uF 50V
C30	VG291000	C. EL 22uF 50V
C31	VG291000	C. EL 22uF 50V
C32	VG291000	C. EL 22uF 50V
C33	UA654680	C. MYLAR 0.068uF 50V
C34	UA654560	C. MYLAR 0.056uF 50V
C35	VG290900	C. EL 10uF 50V
C41	Fi383470	C. CE. SAFTY 4700pF 400V (ABWH)
C41	Fi414100	C. CE. SAFTY 0.01uF VA-1 (UCR)
C61	UA655470	C. MYLAR 0.47uF 50V
C62	UA655220	C. MYLAR 0.22uF 50V
C63	UA655220	C. MYLAR 0.22uF 50V
C64	UA655220	C. MYLAR 0.22uF 50V
C65	VG290900	C. EL 10uF 50V
C66	VG290900	C. EL 10uF 50V

* New Parts

Schm Ref.	PART NO.	Description
C67	VA777700	C. CE 220pF 50V
C68	VG290900	C. EL 10uF 50V
C69	UA654560	C. MYLAR 0.056uF 50V
C70	VG291200	C. EL 47uF 50V
C71	VA777700	C. CE 220pF 50V
△ D1	VC971500	DIODE. BRG RBV-402 4.0A 200V
D2	VG442500	DIODE. ZENR MTZJ24B 24V
D3	VG442500	DIODE. ZENR MTZJ24B 24V
D4	iF004600	DIODE 1SS133
D5	iF004600	DIODE 1SS133
△ D6	iF004600	DIODE 1SS133
D7	VG442500	DIODE. ZENR MTZJ24B 24V
D9	VH770800	DIODE 1SR139-100
D20	Vi013600	LED (re) SLR-34VC3H3
D21	VG440200	DIODE. ZENR MTZJ12B 12V
△ F1	KB000720	FUSE T0.8A 250V (ABWH)
△ * F1	KB003600	FUSE TL3.15A 250V (UCR)
△ F2	KB000680	FUSE 1.25A 250V (R)
△ IC1	XB247301	IC uPC4570HA
△ IC2	iG067100	IC uPC1225H
IC3	XF663A00	IC uPC1237HA
IC4	XJ602A00	IC NJM78M12FA
IC5	XD343A00	IC NJM79M12FA
IC10	XB247301	IC uPC4570HA
IC11	XB247301	IC uPC4570HA
PJ1	LB202270	JACK. PIN 2P
△ # Q1A	iX620970	TR 2SA1491 O, P, Y
△ # Q1C	iX620980	TR 2SC3855 O, P, Y
Q2	iC224030	TR 2SC2240 GR, BL
Q3	iA097000	TR 2SA970 GR, BL
# Q4	VC398100	TR 2SC1846 S
Q5	iC224030	TR 2SC2240 GR, BL
Q6	iA097000	TR 2SA970 GR, BL
Q7	iC224030	TR 2SC2240 GR, BL
Q8	iA097000	TR 2SA970 GR, BL
Q14	VC407900	TR 2SD1913 R, S
Q15	iB056020	TR 2SB560 E, F
* R11	HU576360	R. MTL. FLM 3.6K Ω 1/4W
R12	HU578100	R. MTL. FLM 100K Ω 1/4W
△ R14	HV453220	R. CAR. FP 2.2 Ω 1/4W
R17	HV456220	R. CAR. FP 2.2K Ω 1/4W
R18	HV456120	R. CAR. FP 1.2K Ω 1/4W
R19	HV454330	R. CAR. FP 33 Ω 1/4W
R20	VE869300	R. MTL. OXD 0.1 Ω 2W
R21	VE869300	R. MTL. OXD 0.1 Ω 2W
R27	HV454100	R. CAR. FP 10 Ω 1/4W
R28	VH930000	R. WW 0.1 Ω 3W
R30	HV455820	R. CAR. FP 820 Ω 1/4W
R31	HV456100	R. CAR. FP 1K Ω 1/4W
R32	HV455100	R. CAR. FP 100 Ω 1/4W
R39	HL325560	R. MTL. OXD 560 Ω 2W
R45	HV453100	R. CAR. FP 1 Ω 1/4W
R46	HV453100	R. CAR. FP 1 Ω 1/4W

* New Parts

Schm Ref.	PART NO.	Description
R81	HV456220	R. CAR. FP 2.2K Ω 1/4W
R82	HV456220	R. CAR. FP 2.2K Ω 1/4W
R86	HV456470	R. CAR. FP 4.7K Ω 1/4W
R87	HV456470	R. CAR. FP 4.7K Ω 1/4W
△ RY1	VK438300	RELAY DH24D2-OTM- II
△ SW1	VD948800	SW. PUSH TV-5 (UCR)
△ SW1	VE454100	SW. PUSH ESB-8273V-F (ABWH)
SW2	VL012000	SW. SLIDE SSSF12
TE1	LA003870	TERM. WRAP 2P L-TYPE P=10
TE2	VC313700	TERM. SP 8P (UCRABW)
TE2	VK506200	TERM. SP 8P (H)
VR1	VJ692700	VR. TRIM B330 Ω
VR2	VQ419100	VR 10K Ω
VR3	VQ419000	VR A5K Ω
△	VA932900	VOLT. SELCT ESE-37226 (R)
	CB095260	COVER. CAP SB-0833 (ABWH)
*	VS244800	CUSHION (UCR)
	BA083130	RADIATOR
	BB070700	GND. MTL
	VN774800	GND. WSHR MEP1866 #11102
	ED330066	SCR. BND. HD 3x6 FCRM3-BL

* New Parts

A

B

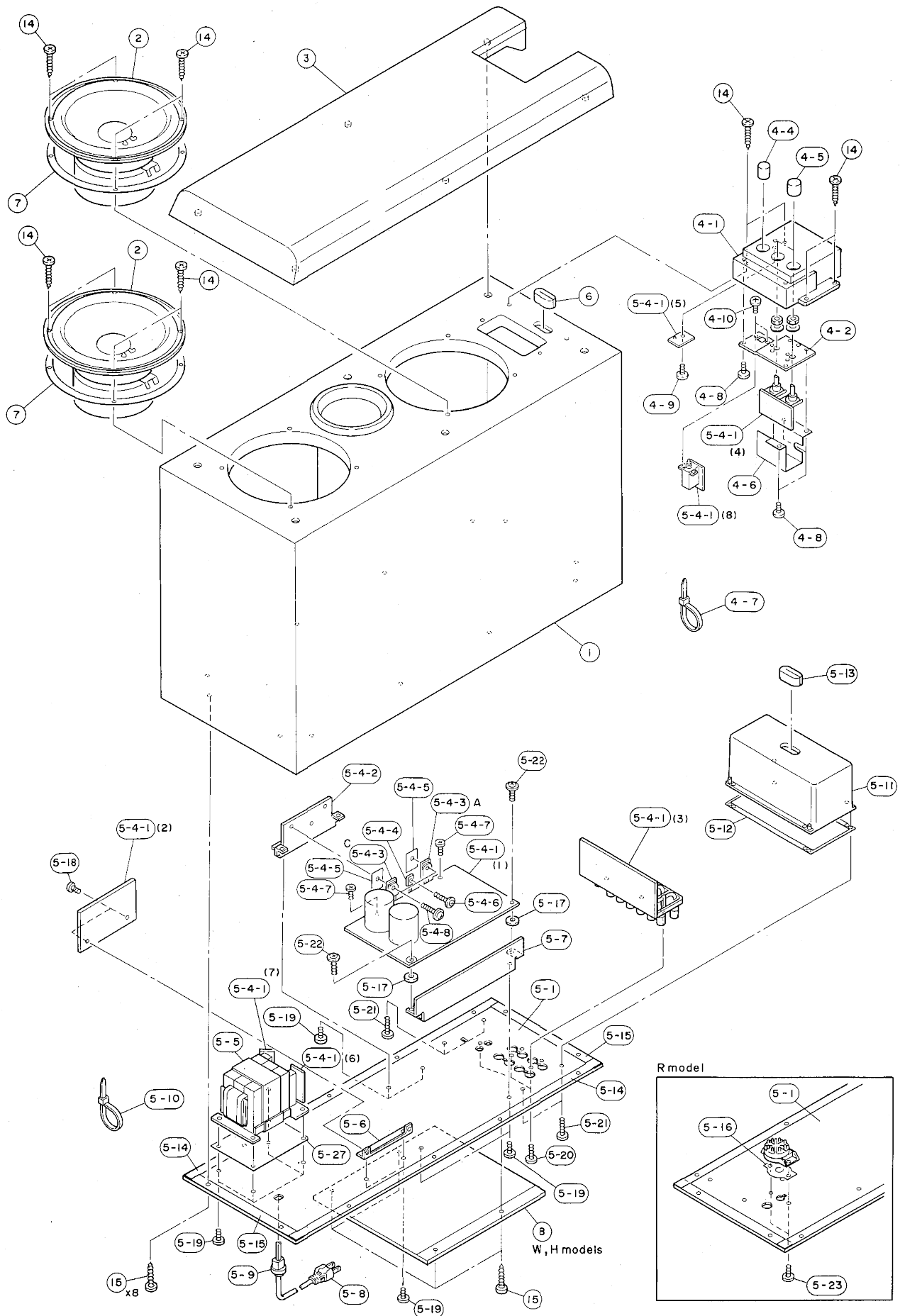
C

D

E

YST-SW120

EXPLODED VIEW



MECHANICAL PARTS

Note) Ø : Diameter

Ref. No.	PART NO.	Description	Remarks	Markets
* 1	VR228800	SPEAKER CABINET		(URAB)
* 1	VR445200	SPEAKER CABINET		(WH)
* 2	XN541400	SPEAKER	JA1821	
* 3	VR229000	FRONT GRILLE ASS'Y		
* 4-1	VR232300	FRONT PANEL		
* 4-2	VR232400	SUB CHASSIS		
4-4	VE284400	KNOB		
4-5	VQ466400	KNOB		
* 4-6	VR232500	SHIELD SHEET		
4-7	CB069250	BINDING TIE	BK-1	
4-8	EP640400	BIND HEAD P-TITE SCREW	4x8 ZMC2-Y	
4-9	EP600290	BIND HEAD P-TITE SCREW	3x6 ZMC2-Y	
4-10	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
* 5-1	VR232600	REAR PANEL		(UC)
* 5-1	VR232700	REAR PANEL		(R)
* 5-1	VR232800	REAR PANEL		(AB)
* 5-1	VR232900	REAR PANEL		(WH)
* 5-4-1	VR203400	P. C. B. ASS'Y	MAIN	(UC)
* 5-4-1	VR203500	P. C. B. ASS'Y	MAIN	(R)
* 5-4-1	VR203600	P. C. B. ASS'Y	MAIN	(ABW)
* 5-4-1	VR203700	P. C. B. ASS'Y	MAIN	(H)
5-4-2	VQ099600	RADIATOR		
5-4-3	IX620970	TRANSISTOR	2SA1491 O,P,Y	Q1A
5-4-3	IX620980	TRANSISTOR	2SC3855 O,P,Y	Q1C
5-4-4	VC398100	TRANSISTOR	2SC1846 S	Q4
5-4-5	VK195900	SHEET	19x24	
5-4-6	EX600250	CUP B-TITE SCREW	3x10 FCRM3-BL	
5-4-7	E1330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
5-4-8	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3	
* 5-5	XN833A00	POWER TRANSFORMER		(UC)
* 5-5	XN834A00	POWER TRANSFORMER		(R)
* 5-5	XN835A00	POWER TRANSFORMER		(AB)
* 5-5	XN836A00	POWER TRANSFORMER		(G)
5-6	VQ099500	PLATE, POWER		
5-7	VH859200	PLATE, AMP		
5-8	M3002220	POWER CORD	10A 125V 2.0m	
5-8	M3002320	POWER CORD	2.5A 250V 2.0m	
5-8	VL948500	POWER CORD	7A 250V 2.0m	
5-8	VP417900	POWER CORD	7.5A 250V 2.0m	
5-8	VQ790000	POWER CORD	5A 2.0m	
5-9	VH903000	CORD STOPPER	KF-41	
5-10	CB069250	BINDING TIE	BK-1	
5-11	VK882100	COVER		
5-12	VH906100	PACKING, C		
5-13	VL121400	PACKING, C2		
5-14	VQ155300	PACKING, U		
5-15	VL035900	PACKING, R2		
5-16	VH908900	PACKING, V		
5-17	VR210800	SPACER		
5-18	E1330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
5-19	E1340806	BIND HEAD B-TITE SCREW	4x8 FCRM3-BL	
5-20	EX601360	BIND HEAD P-TITE SCREW	3x10 FCRM3-BL	
5-21	EX601920	BIND HEAD P-TITE SCREW	4x10 FCRM3-BL	

* New Parts

Ref. No.	PART NO.	Description	Remarks	Markets
5-22	VI924800	BW HEAD TAPPING SCREW	3x10-8 FCM3-CU	
5-23	ED330086	BIND HEAD SCREW	3x8 FCRM3-BL	
* 5-27	VS162900	PACKING, TR		
6	VL121400	PACKING, C2		
7	VH908800	PACKING, U		
8	VL037500	REAR COVER		
14	E1340256	BIND HEAD TAPPING SCREW	4x25 ZMC2-BL	
15	E1340206	BIND HEAD TAPPING SCREW	4x20 ZMC2-BL	

* New Parts

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	10 kΩ	HF45 7100	HF45 7100
1.8 Ω	HJ35 3180	*	11 kΩ	HF45 7110	HF45 7110
2.2 Ω	HJ35 3220	HF85 3220	12 kΩ	HJ35 7120	HF85 7120
3.3 Ω	HJ35 3330	HF85 3330	13 kΩ	HF45 7130	HF45 7130
4.7 Ω	HJ35 3470	HF85 3470	15 kΩ	HF45 7150	HF45 7150
5.6 Ω	HJ35 3560	HF85 3560	18 kΩ	HF45 7180	HF45 7180
10 Ω	HF45 4100	HF45 4100	22 kΩ	HF45 7220	HF45 7220
15 Ω	HJ35 4150	HF85 4150	24 kΩ	HF45 7240	HF45 7240
22 Ω	HF45 4220	HF45 4220	27 kΩ	HJ35 7270	HF85 7270
27 Ω	HJ35 4270	HF85 4270	30 kΩ	HF45 7300	HF45 7300
33 Ω	HF45 4330	HF45 4330	33 kΩ	HF45 7330	HF45 7330
39 Ω	HJ35 4470	HF85 4390	36 kΩ	HF45 7360	HF45 7360
47 Ω	HF45 4470	HF45 4470	39 kΩ	HF45 7390	HF45 7390
56 Ω	HF45 4560	HF45 4560	47 kΩ	HF45 7470	HF45 7470
68 Ω	HF45 4680	HF45 4680	51 kΩ	HF45 7510	HF45 7510
75 Ω	HF45 4750	HF45 4750	56 kΩ	HF45 7560	HF45 7560
82 Ω	HF45 4820	HF45 4820	62 kΩ	HF45 7620	HF45 7620
91 Ω	HF45 4910	HF45 4910	68 kΩ	HF45 7680	HF45 7680
100 Ω	HF45 5100	HF45 5100	82 kΩ	HF45 7820	HF45 7820
110 Ω	HJ35 5110	HF85 5110	91 kΩ	HF45 7910	HF45 7910
120 Ω	HF45 5120	HF45 5120	100 kΩ	HF45 8100	HF45 8100
150 Ω	HF45 5150	HF45 5150	110 kΩ	HF45 8110	HF45 8110
160 Ω	HJ35 5160	*	120 kΩ	HF45 8120	HF45 8120
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	*
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	*
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300			
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			



YST-SW120

YAMAHA