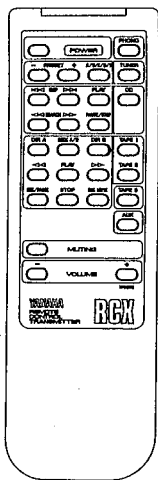
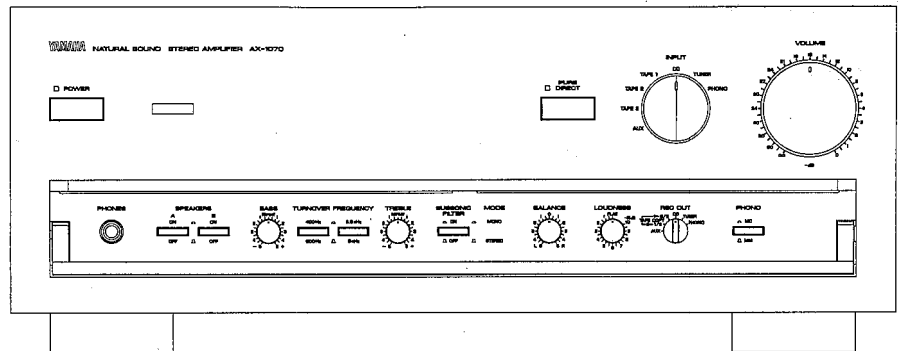


STEREO INTEGRATED AMPLIFIER AX-1070

SERVICE MANUAL

AX-1070



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
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DISASSEMBLY PROCEDURES	4

ADJUSTMENTS	5
PRINTED CIRCUIT BOARD	6~16
μ-COM DATA	17
SCHEMATIC DIAGRAM	18~19
REMOTE CONTROL TRANSMITTER	20
PARTS LIST	21~33

100433

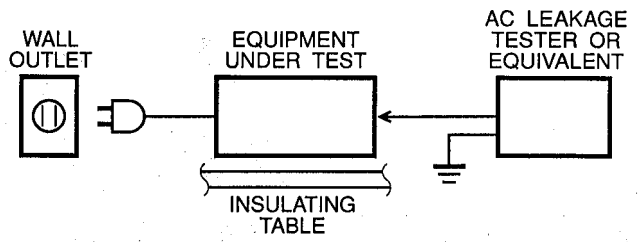
YAMAHA

YAMAHA CORPORATION
P.O.Box1, Hamamatsu, Japan

I.56K-143 Printed in Japan '93.4

TO SERVICE PERSONNEL

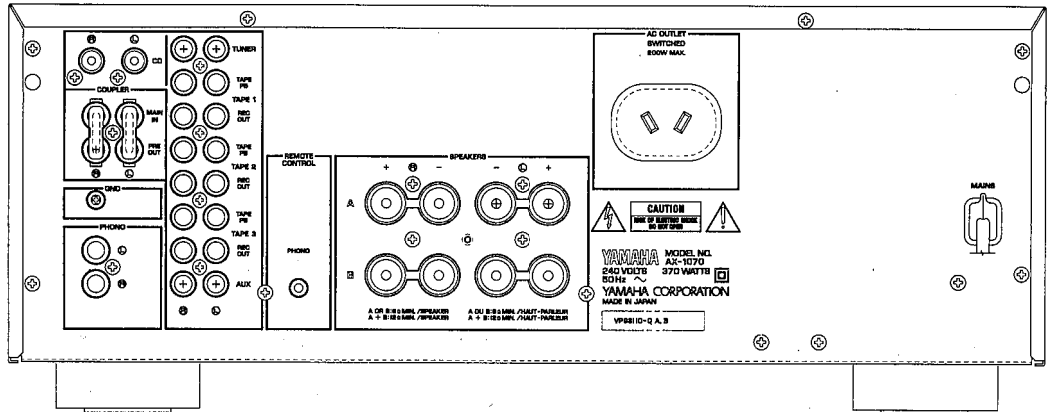
1. Critical Components Information.
Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.



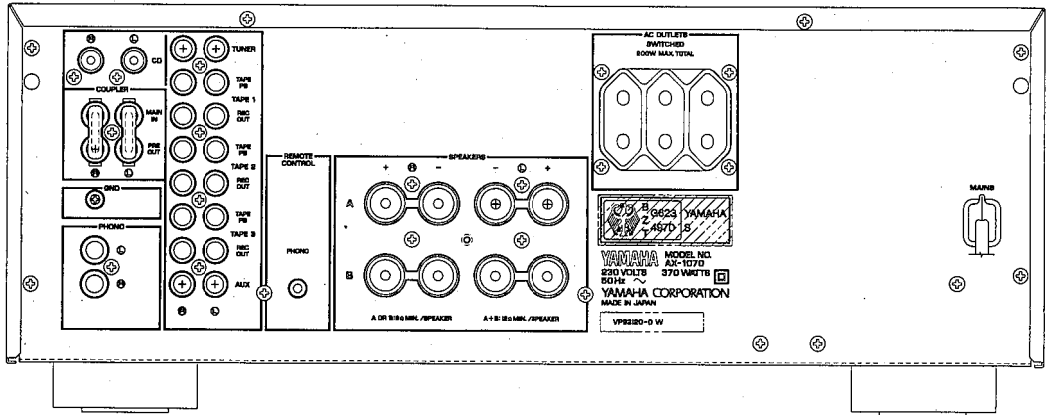
AX-1070

REAR PANELS

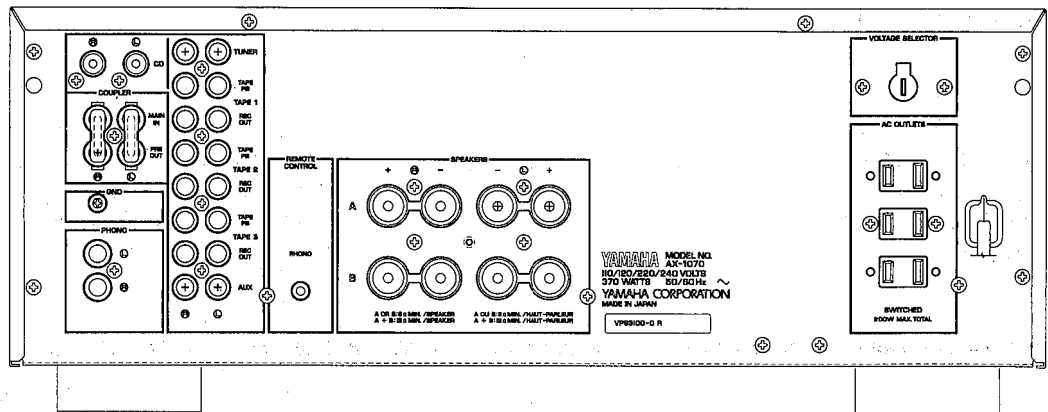
▼ A model



▼ W model



▼ R model



SPECIFICATIONS

AUDIO SECTION

Minimum RMS Output Power per Channel	
8Ω, 20Hz to 20kHz, 0.01% THD	145W
6Ω, 20Hz to 20kHz, 0.02% THD	185W
Dynamic Power per Channel (IHF)	
8/6/4/2Ω	220/290/360/460W
DIN Standard Output Power Channel	
1kHz, 0.7% THD, 4Ω (W model)	250W
Dynamic Headroom	
8/4Ω (R model)	1.81/1.95dB
IEC Power	
1kHz, 0.01% THD, 8Ω (W model)	170W
Power Band Width	
8Ω, 72.5W, 0.03% THD	10Hz to 50kHz
Damping Factor	
8Ω, 20Hz to 20kHz	350 or more
Input Sensitivity/Impedance	
PHONO MC	160μV/220Ω
PHONO MM	2.5mV/47kΩ
CD etc	150mV/47kΩ
MAIN IN	1V/47kΩ
Maximum Input Signal Level (1kHz, 0.01% THD)	
PHONO MC	13.5mV
PHONO MM	170mV
Output Level/Impedance	
REC OUT	150mV/2.2kΩ
PRE OUT	1V/1.8kΩ
Maximum Voltage Output	
20Hz to 20kHz, 0.02% THD	6.5V
Headphone Jack Rated Output/Impedance	
0.015% THD, RL= 8Ω	1.05V/220Ω
Frequency Response (20Hz to 20kHz)	
CD etc	±0.5dB
MAIN IN	±0.5dB
RIAA Equalization Deviation (20Hz to 20kHz)	
PHONO MC	±0.5dB
PHONO MM	±0.3dB
Total Harmonic Distortion (20Hz to 20kHz)	
PHONO MC to REC OUT (3V)	0.007%
PHONO MM to REC OUT (3V)	0.003%
CD etc to PRE OUT (1V)	0.004%
CD etc to SP OUT (72.5W/8Ω)	0.007%
MAIN IN to SP OUT (72.5W/8Ω)	0.005%
Signal-to-Noise Ratio (IHF-A Network) (Pure Direct SW ON)	
PHONO MC (500μV Input Shorted)	75dB
PHONO MM (5mV Input Shorted)	92dB
CD etc (Shorted)	110dB
Residual Noise (IHF-A Network) (Pure Direct SW ON)	
	35μV
Channel Separation (Vol. -30dB)	
PHONO MM•MC (Input Shorted) 1kHz/10kHz	70dB/55dB
CD etc 1kHz/10kHz (Input 5.1kΩ Terminated)	65dB/50dB
Tone Control Characteristics	
BASS : Boost/cut	±10dB (20Hz)
Turnover Frequency	200Hz, 400Hz
TREBLE : Boost/cut	±10dB (20kHz)
Turnover Frequency	2.5kHz, 5kHz

Filter Characteristics

Subsonic	15Hz, -18dB/oct
Continuous Loudness Control	-40dB (1kHz) (Level related equalization)
Audio Muting	-20dB
Gain tracking error (0dB to -60dB)	2dB

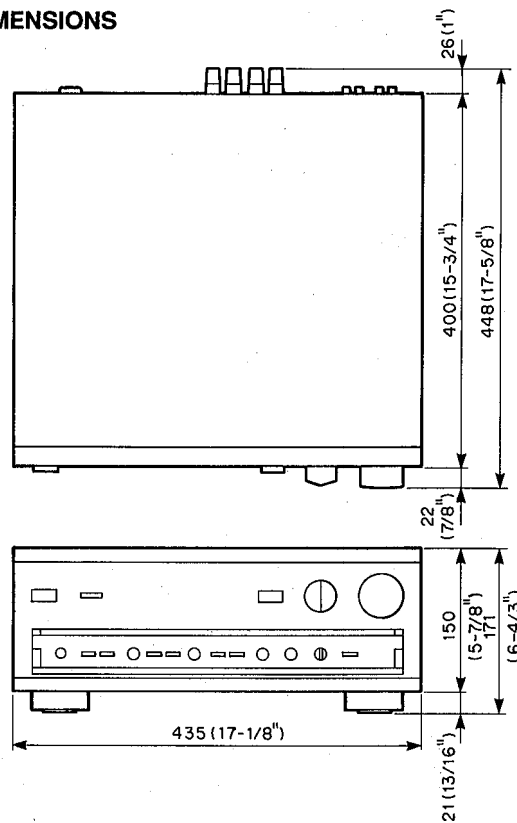
GENERAL

Power Supply	
W model	AC 230V, 50Hz
A model	AC 240V, 50Hz
R model	AC 110/120/220/240V, 60/50Hz
Power Consumption	370W
AC Outlets	
Switched x 3	
W, R models	200W max. (Total)
Switched x 1	
A model	200W max.
Dimensions (W x H x D)	435 x 171 x 448mm (17-1/8" x 6-3/4" x 17-5/8")
Weight	18.3 Kg (40 lbs 5 oz)
Accessories	Remote Control Transmitter x 1 Battery (size "AA", R06) x 2

* Specifications subject to change without notice.

W German model
A Australian model
R General model

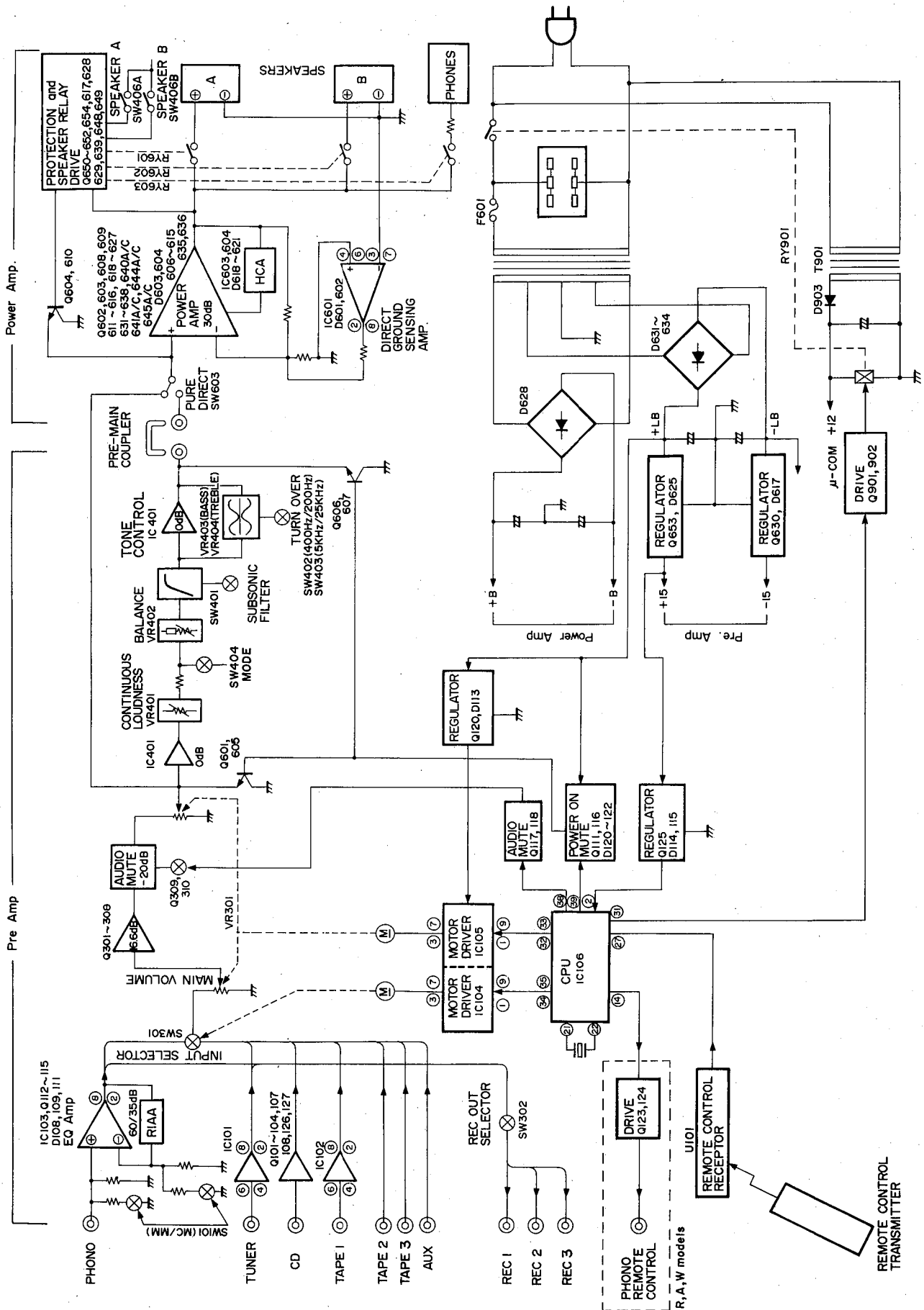
DIMENSIONS



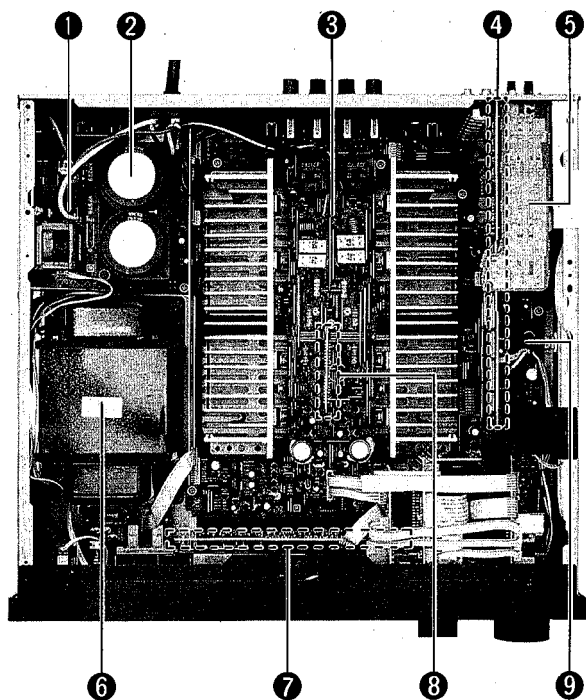
Units : mm (Inch)

■ BLOCK DIAGRAM

AX-1070



INTERNAL VIEW



- ① SUB TRANS P.C.B. ASS'Y (1)
- ② MAIN P.C.B. ASS'Y (2)
- ③ MAIN P.C.B. ASS'Y (1)
- ④ FUNCTION P.C.B. ASS'Y (1)
- ⑤ FUNCTION P.C.B. ASS'Y (2)
- ⑥ POWER TRANSFORMER
- ⑦ TONE-CON P.C.B. ASS'Y(1)
- ⑧ MAIN P.C.B. ASS'Y (5)
- ⑨ FUNCTION P.C.B. ASS'Y (3)

DISASSEMBLY PROCEDURES

(Remove parts in the order as numbered.)

1. Removal of Top Cover

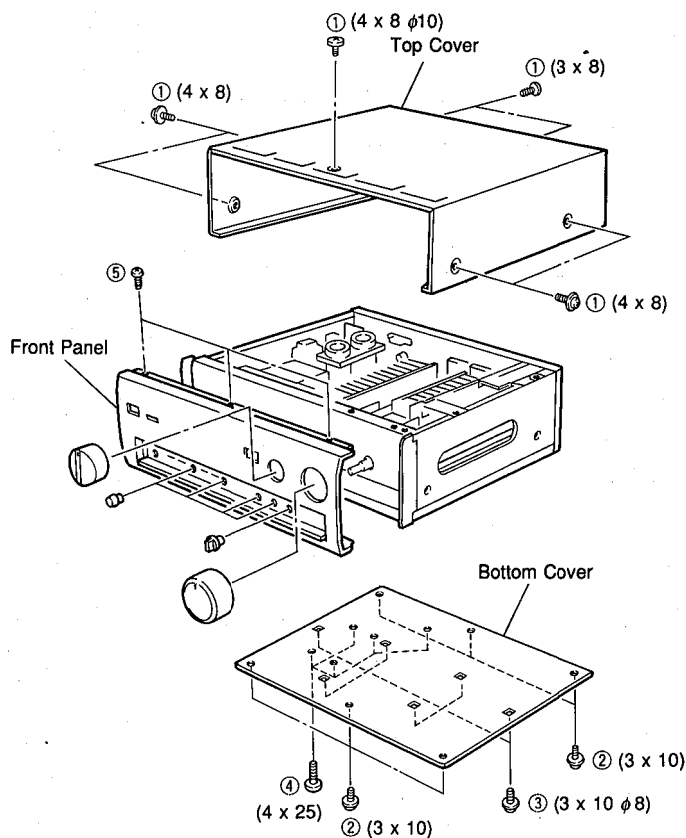
Remove 7 screws (①) in Fig. 1.

2. Removal of Bottom Cover

- a. Remove 6 screws (②) in Fig. 1.
- b. Remove 6 screws (③) in Fig. 1.
- c. Remove 5 screws (④) in Fig. 1.

3. Removal of Front Panel

- a. Remove 7 knobs in Fig. 1.
- b. Remove 3 screws (⑤) in Fig. 1.



CAUTION-USE ONLY COPPER COLORED SCREWS (3X10 ø8) FOR SQUARE HOLES ON BOTTOM COVER.



Fig. 1

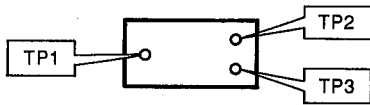
ADJUSTMENTS

● IDLING CURRENT ADJUSTMENT

- When replacing the power and drive transistors, adjust idling current.
- After the power has been turned on, age about 10 minutes in non loaded condition.
- Adjust VR601 (Lch) and VR602 (Rch) so that the voltage across the terminals of R683 and R697 comes to $10\text{mV} \pm 4\text{mV DC}$.

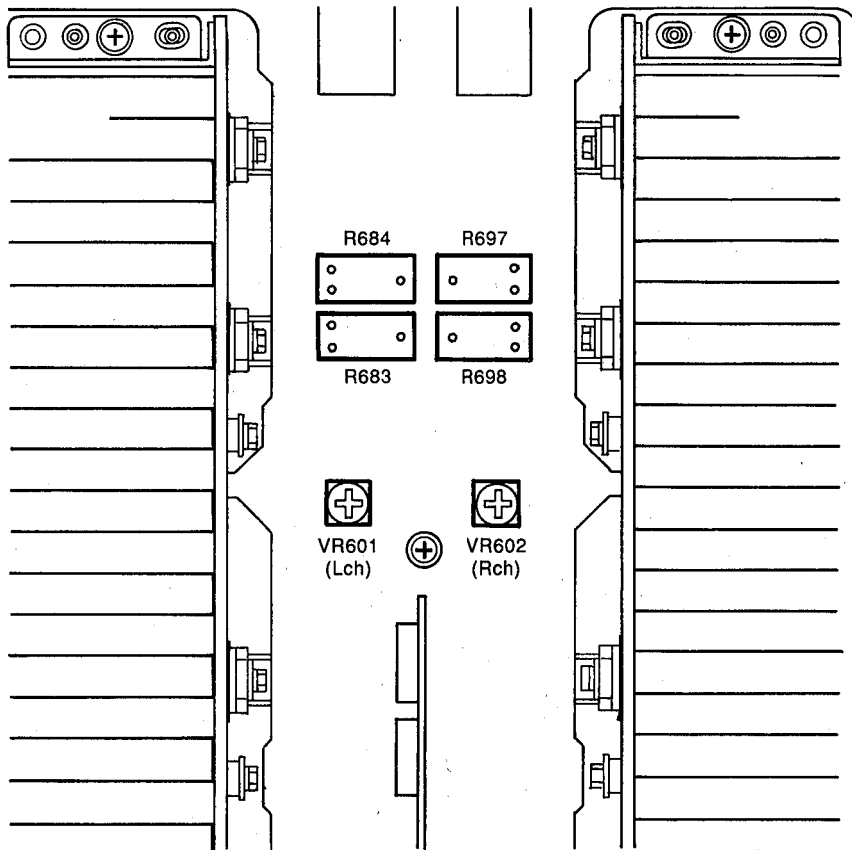
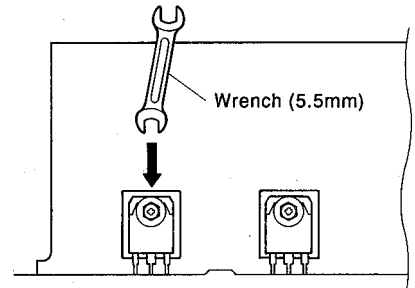
	Test Points	Adjustment Points	Rating
Lch	Across the terminals of R683 or R684 (TP1 ↔ TP2 or TP1 ↔ TP3)	VR601	$10\text{mV} \pm 4\text{mV DC}$
Rch	Across the terminals of R697 or R698 (TP1 ↔ TP2 or TP1 ↔ TP3)	VR602	$10\text{mV} \pm 4\text{mV DC}$

(R683, R684, R697, R698)

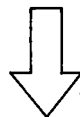


● Removal of Power Transistor

- Use a 5.5mm wrench or a small size adjustable wrench.
- Using the above tool, remove the screw fixing the Power Transistor.

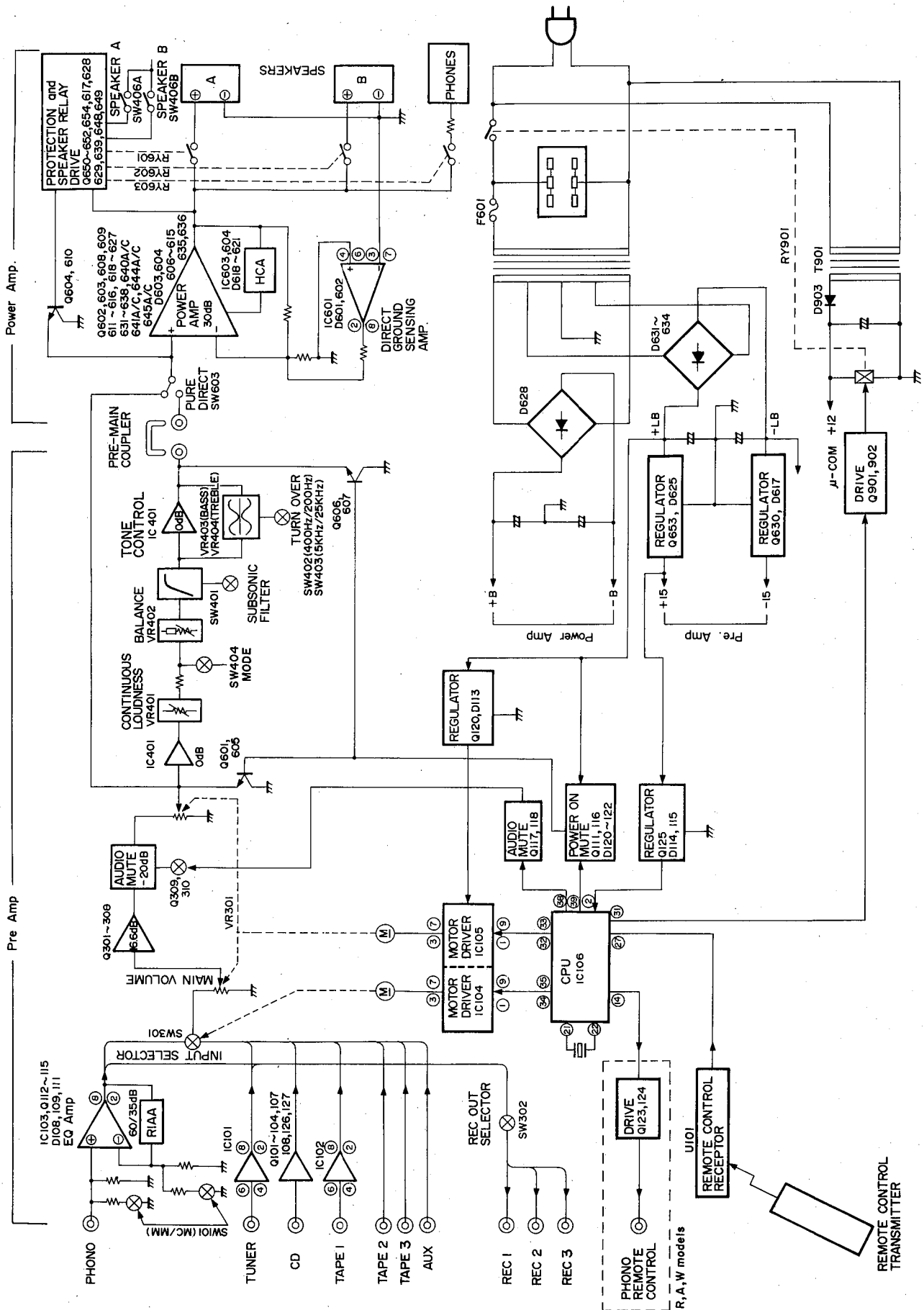


FRONT
PANEL

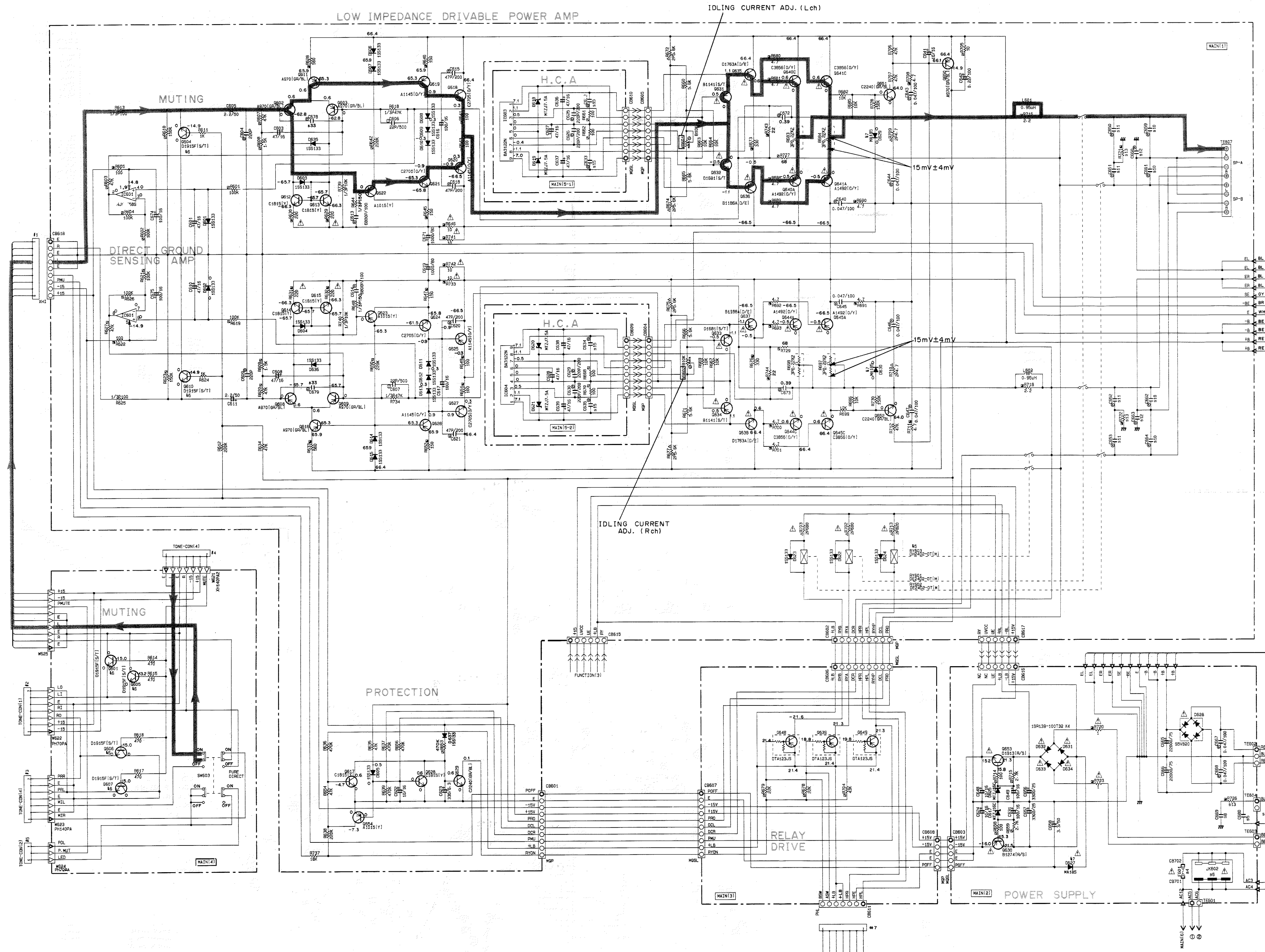


■ BLOCK DIAGRAM

AX-1070



SCHEMATIC DIAGRAM (MAIN & SUB-TRANS)



MAIN					SUB-TRN				
Part No.	Part Name	QTY	Remarks	Part No.	Part Name	QTY	Remarks		
R1	F652	X	5.0A250V	X	X				
R2	CB703-CB704	X	LS50188	X	X				
R3	SW652	X	VA56183	X	X				
R4	FD01	10A250V	10A250V	S T1.0A250V	S T1.0A250V				
R5	CB80	X	X	X	X	0.01			
R6	JK502	Y132750	Y132750	X	X				
R7	CB69	X	X	X	X	0.02			
R8	TE524	X	X	X	X	470/25	470/25		
R9	CB59	501-502-504	X	X	X	0.01/100			
R10	CB50-503	X	X	X	X	300/2/100			
R11	CB55	X	X	X	X	0.02/100			
R12	CB56-563	X	X	X	X	2.2			
R13	R721-722-726	X	X	X	X				
R14	CB39-635	V28220	V171810	V171810	V171810	330P			
R15	CB39-635	V28220	V171810	V171810	V171810	330P			

RESISTOR

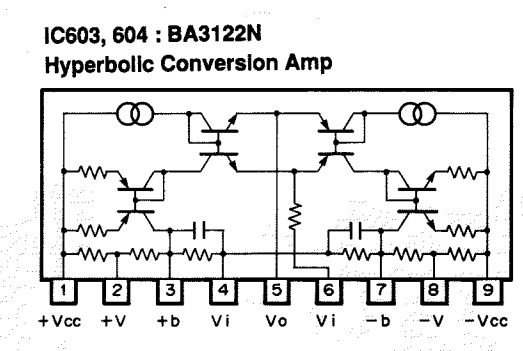
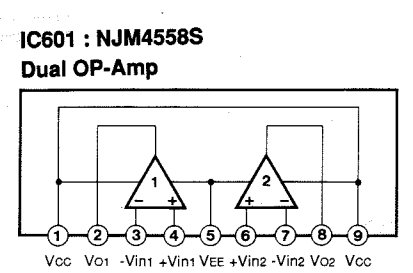
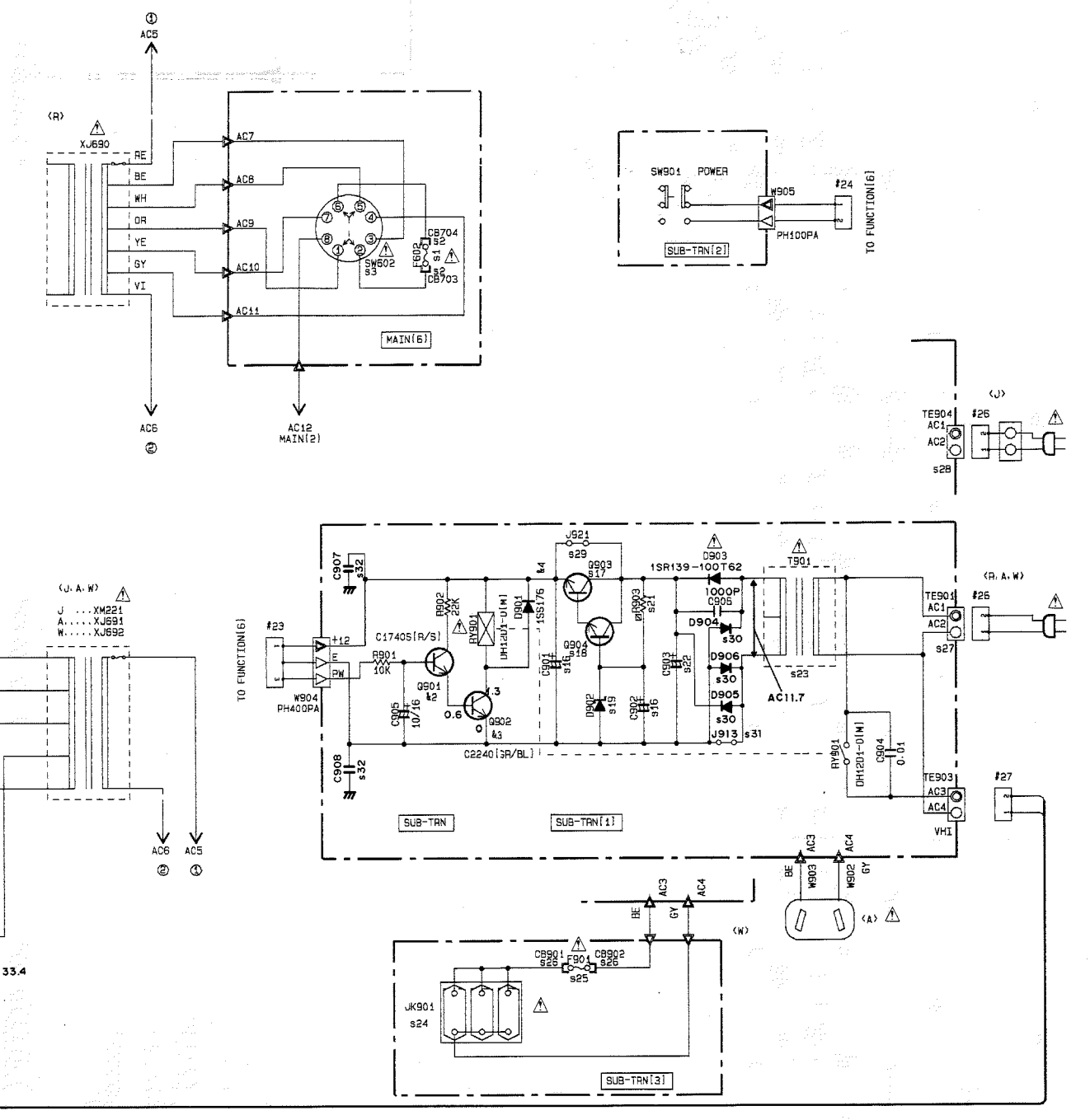
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (1/2W)
△	CARBON FILM RESISTOR (1/4W)
□	METAL OXIDE FILM RESISTOR
○	METAL FILM RESISTOR
◇	METAL PLATE RESISTOR
●	FINE PROF CARBON FILM RESISTOR
○	CEMENT WOUND RESISTOR
○	SEMI-VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
○	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
○	AXIAL LEAD CERAMIC CAPACITOR
○	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
○	MICA CAPACITOR
○	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

Interchangeable Parts at Manufacture Stage

Mark	Interchange Parts Number	Parts Name
R1	0901	28C1740516/91
R2	0902	28C29016/91
R3	0902	28C29016/91
R4	0901	155133
R5	0903	D9C402-01M111
R6	0901-004-007-810	28D19516/91
R7	0907-006-030	PA195



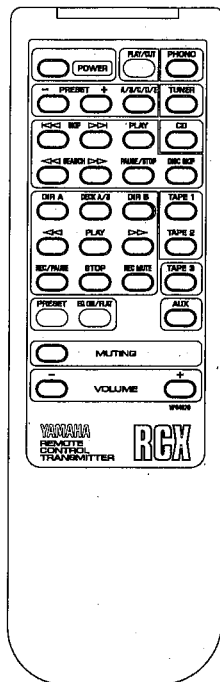
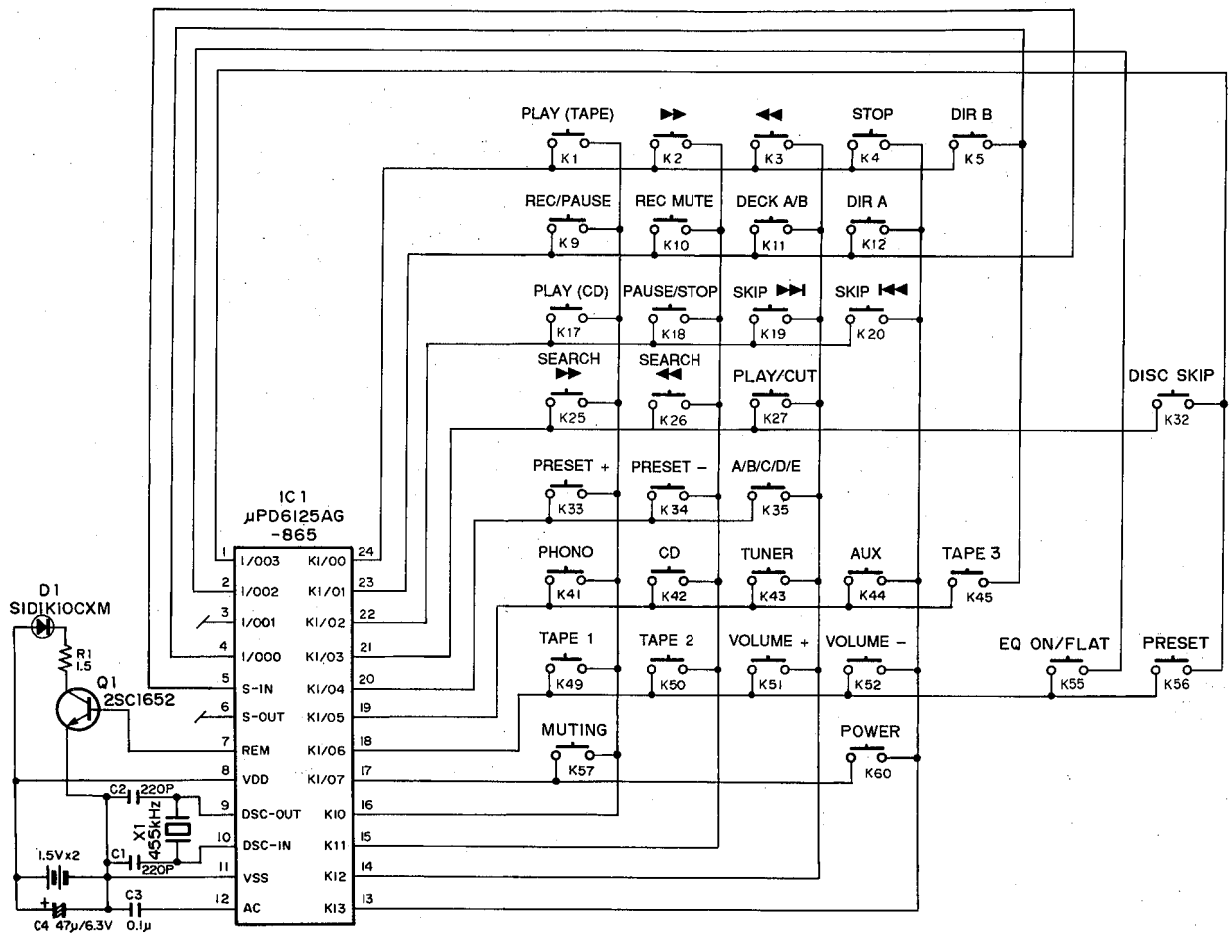
PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.

2SC1745B(R,S) 2SC2605(E,F) 2SC331A(Q,R,S) 2SD1915(B,T) 2SC2878(A,B) DTA123LS	2SC2246(GR,BL) 2SC2206(S,T) 2SA970(GR,BL) 2SA1101(S,V) 2SA1145(O,Y) 2SC1815(V,Y) 2SC2726(O,Y)	2SC2577(O,P,Y) 2SA1492(O,Y) 2SC3856(O,Y)	2SB1274(R,S) 2SB1186(A,D,E) MA105 2SD1913(R,S) 2SD1763(A,D,E)	2SB1141(S,T) 2SD1681(S,T)	ISS176 ISS133 ISR139-100 MA105 ISS146 MTZ17.5A MTZ17.5A MTZ16.0C	5SV620	NJM4558S	BA3122N
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All voltage are measured with a 10MΩ/V DC electric volt meter.
Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
Schematic diagram is subject to change without notice.

REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM



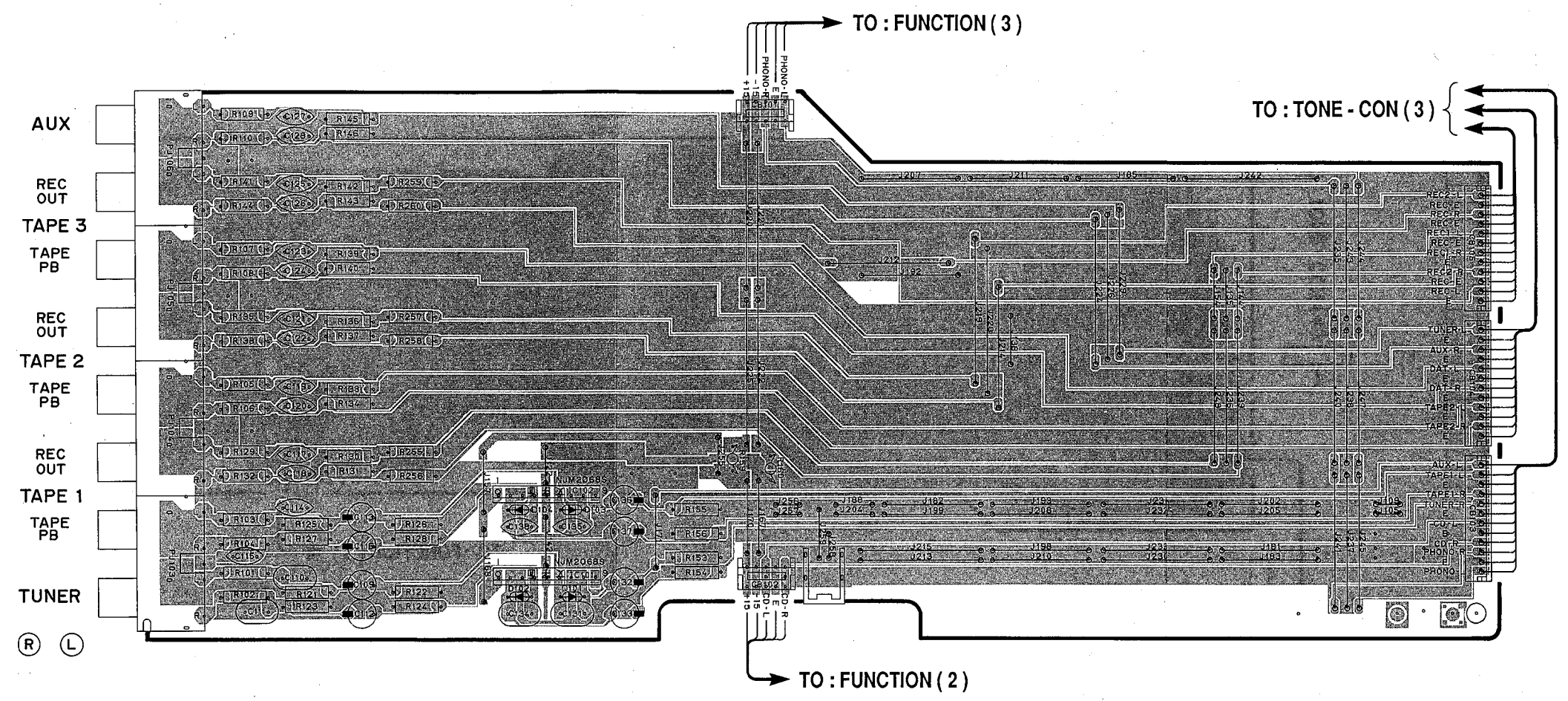
Key No.	CUSTOM (HEX)	DATA (HEX)	FUNCTION	Key No.	CUSTOM (HEX)	DATA (HEX)	FUNCTION
1	7A	00	PLAY (TAPE)	33	7A	10	PRESET + (TUNER)
2	7A	01	◀ (TAPE)	34	7A	11	PRESET - (TUNER)
3	7A	02	▶ (TAPE)	35	7A	12	A/B/C/D/E (TUNER)
4	7A	03	STOP (TAPE)	41	7A	14	PHONO (INPUT)
5	7A	40	DIR B (TAPE)	42	7A	15	CD (INPUT)
9	7A	04	REC/PAUSE (TAPE)	43	7A	16	TUNER (INPUT)
10	7A	05	REC MUTE (TAPE)	44	7A	17	AUX (INPUT)
11	7A	06	DECK A/B (TAPE)	45	7A	54	TAPE 3 (INPUT)
12	7A	07	DIR A (TAPE)	49	7A	18	TAPE 1 (INPUT)
17	7A	08	PLAY (CD)	50	7A	19	TAPE 2 (INPUT)
18	7A	09	PAUSE/STOP (CD)	51	7A	1A	VOLUME +
19	7A	0A	SKIP ▶▶ (CD)	52	7A	1B	VOLUME -
20	7A	0B	SKIP ◀◀ (CD)	55	7A	5A	EQ ON/FLAT (EQ)
25	7A	0C	SEARCH ▶▶ (CD)	56	7A	5B	PRESET (EQ)
26	7A	0D	SEARCH ◀◀ (CD)	57	7A	1C	MUTING
27	7A	0E	PLAY/CUT (PHONO)	60	7A	1F	POWER
32	7A	4F	DISC SKIP (CD)				

PRINTED CIRCUIT BOARD (Foil side)

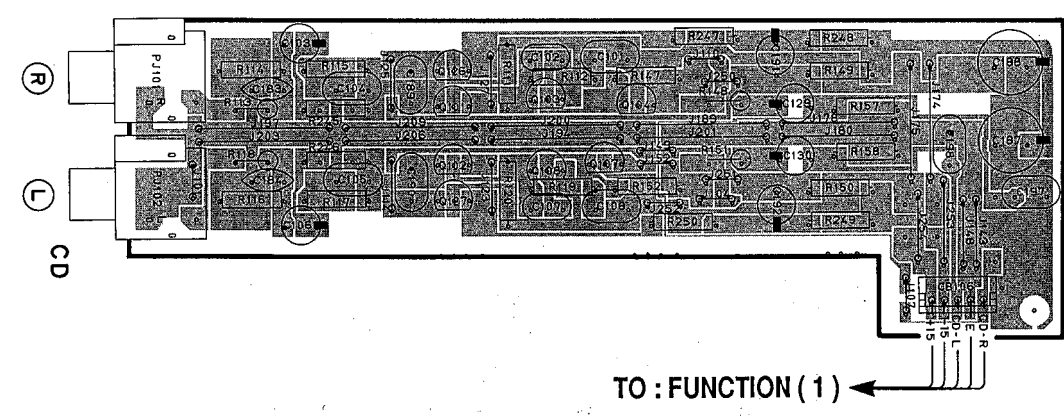
Semiconductor Location

Ref. No.	Location
D 101	D3
D 102	D3
D 103	D3
D 104	D3
IC 101	D3
IC 102	D3
Q 101	B5
Q 102	B5
Q 103	B5
Q 104	C5
Q 107	C5
Q 108	B5
Q 126	B5
Q 127	B5

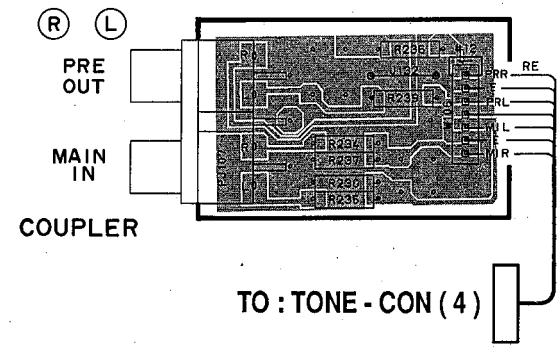
FUNCTION P. C. B. (1)



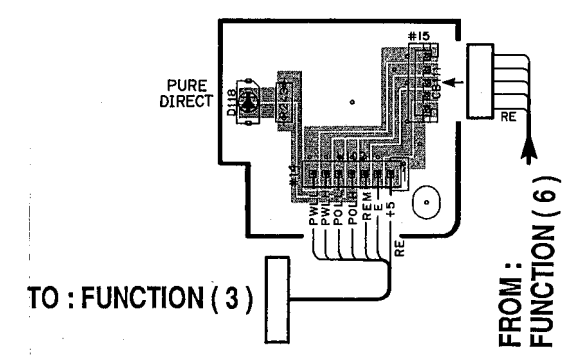
FUNCTION P. C. B. (2)



FUNCTION P. C. B. (4)



FUNCTION P. C. B. (5)



AX-1070

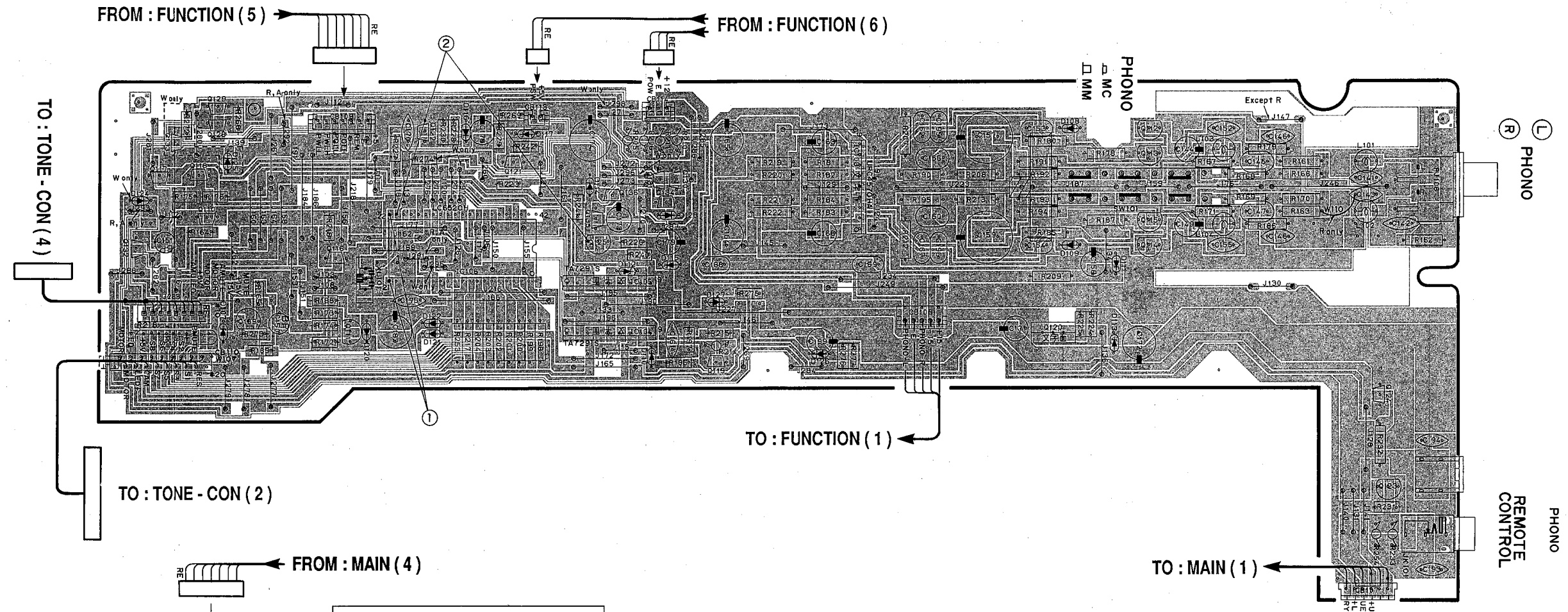
PRINTED CIRCUIT BOARD (Foil side)

① and ② : WAVEFORMS TEST POINT (See page 18)

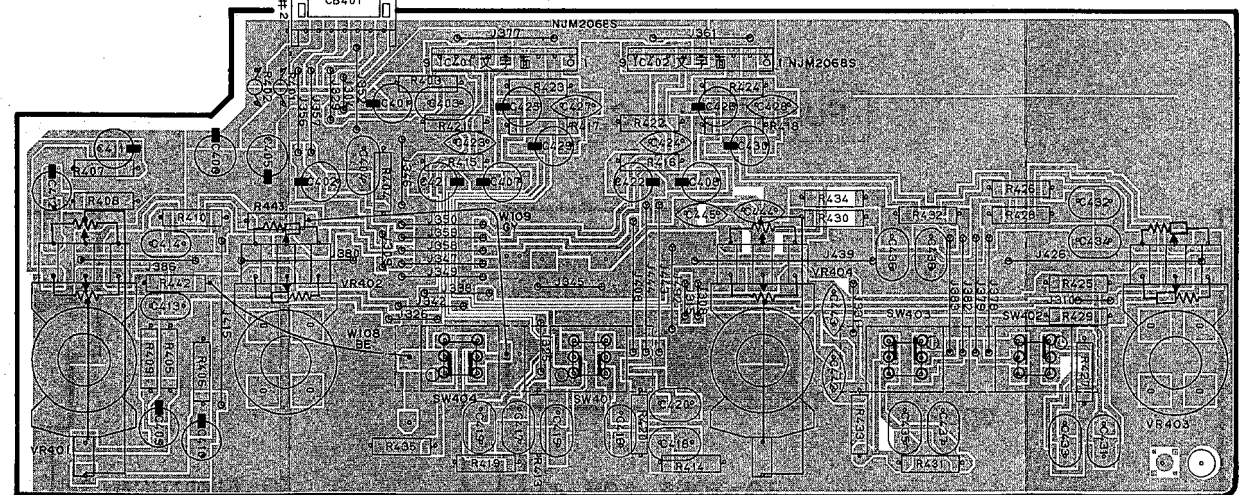
Semiconductor Location

Ref. No.	Location
D 107	C3
D 108	F2
D 109	F2
D 110	D3
D 111	F2
D 112	D2
D 113	F3
D 114	D2
D 115	E2
D 116	D2
D 117	D2
D 118	F2
D 119	F2
D 120	C3
D 121	D3
D 122	D3
D 124	B2
D 125	C2
D 126	E3
D 127	E3
D 128	E2
IC 103	E2
IC 104	D3
IC 105	D3
IC 106	D2
IC 401	C4
IC 402	D4
Q 109	C3
Q 110	C2
Q 111	B3
Q 112	G2
Q 113	G2
Q 114	G2
Q 115	G2
Q 116	C2
Q 117	B2
Q 118	C2
Q 119	E3
Q 120	F3
Q 121	D2
Q 122	D2
Q 123	H3
Q 124	G3
Q 125	D2
Q 128	C2
Q 129	C2
Q 130	E2
Q 131	D2
Q 132	B2
Q 133	B2
Q 134	E2
Q 135	D2
Q 136	D2

FUNCTION P. C. B. (3)



TONE - CON P. C. B. (1)

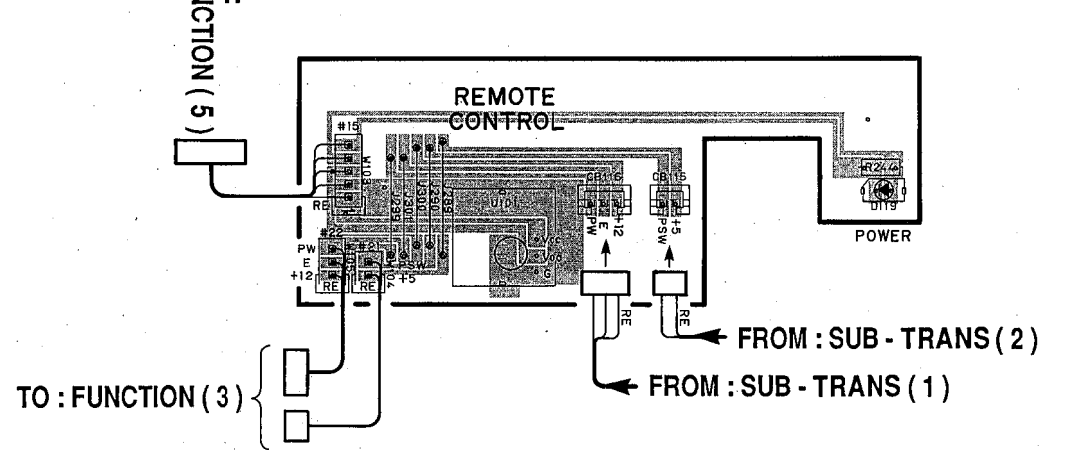


LOUDNESS BALANCE MODE SUBSONIC FILTER TREBLE TURNOVER FREQUENCY BASS

MONO ON 2.5 kHz 400Hz

STEREO OFF 5kHz 200Hz

FUNCTION P. C. B. (6)



1

2

3

4

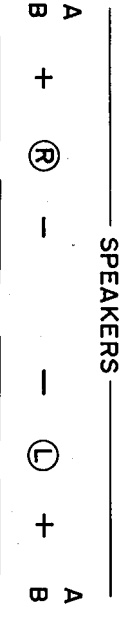
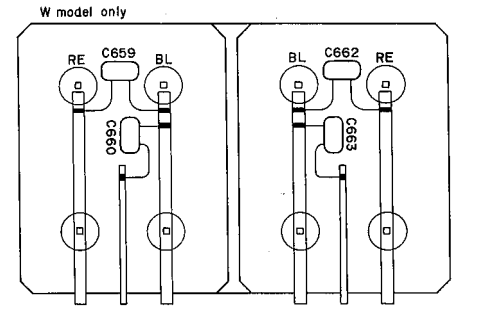
5

6

8

PRINTED CIRCUIT BOARD (Foil side)

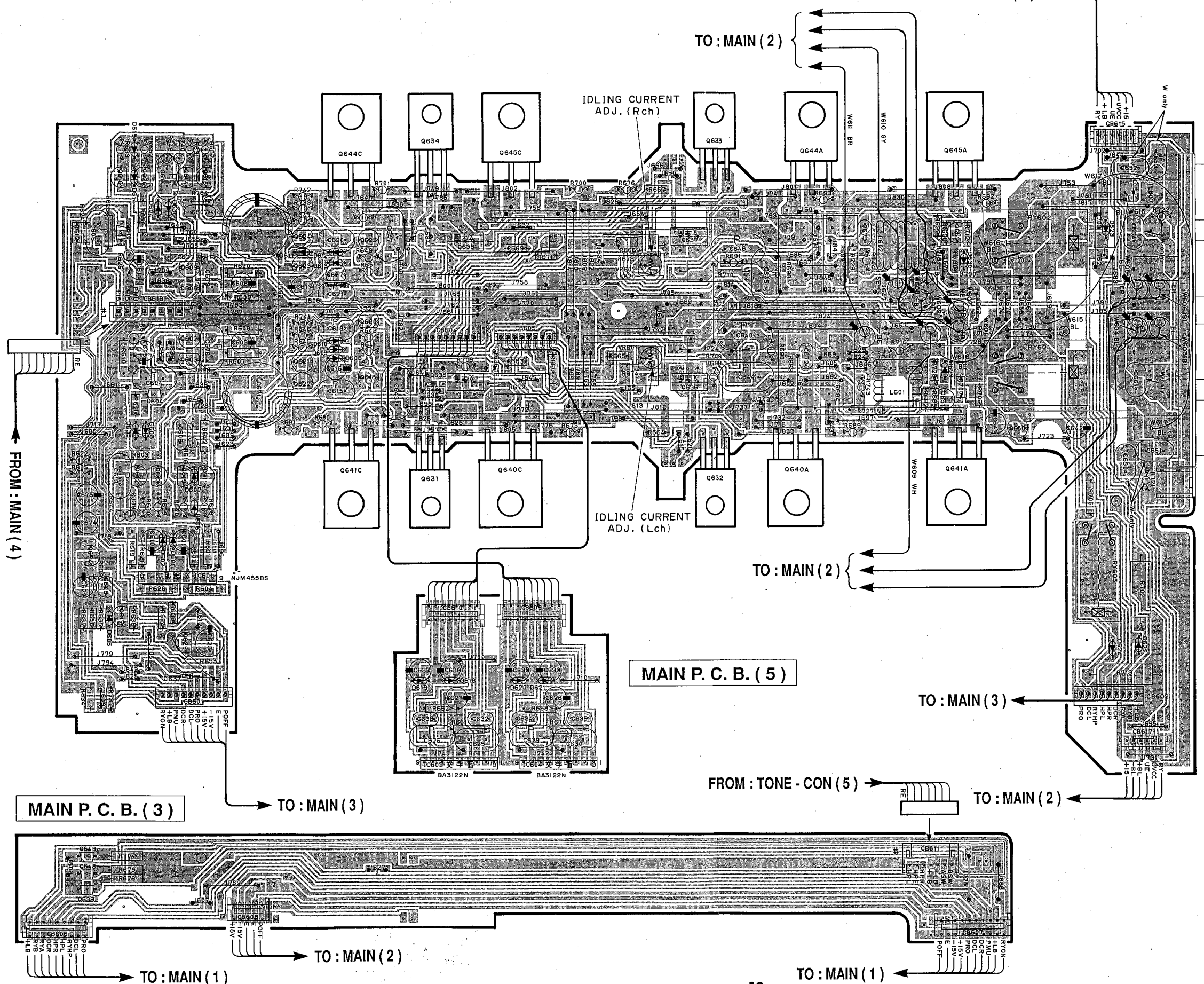
MAIN P. C. B. (1)



Ref. No.	Location
Q 602	B3
Q 603	B3
Q 604	B3
Q 608	B2
Q 609	B2
Q 610	A2
Q 611	B3
Q 612	B3
Q 613	B3
Q 614	B2
Q 615	B2
Q 616	A2
Q 617	A4
Q 618	C3
Q 619	B3
Q 620	C3
Q 621	B3
Q 622	B3
Q 623	B2
Q 624	B2
Q 625	C2
Q 626	B2
Q 627	B2
Q 628	A4
Q 629	B4
Q 631	C3
Q 632	D3
Q 633	D2
Q 634	C2
Q 635	C3
Q 636	D3
Q 637	D2
Q 638	C2
Q 639	A5
Q 640A	E3
Q 640C	C3
Q 641A	F3
Q 641C	C3
Q 644A	E2
Q 644C	C2
Q 645A	F2
Q 645C	C2
Q 648	A5
Q 649	A5
Q 650	F3
Q 651	F3
Q 652	F2
Q 654	A4

● Semiconductor Location

Ref. No.	Location
D 601	B4
D 602	B4
D 603	B3
D 604	B2
D 605	A4
D 606	B4
D 607	B3
D 608	B3
D 609	B3
D 610	B3
D 611	B2
D 612	B2
D 613	B2
D 614	B2
D 615	B2
D 618	C4
D 619	C4
D 620	C4
D 621	D4
D 622	G4
D 623	F2
D 624	F4
D 629	F3
D 630	F2
D 635	B3
D 636	B2
IC 601	B4
IC 603	C5
IC 604	D5



MAIN P. C. B. (5)

MAIN P. C. B. (3)

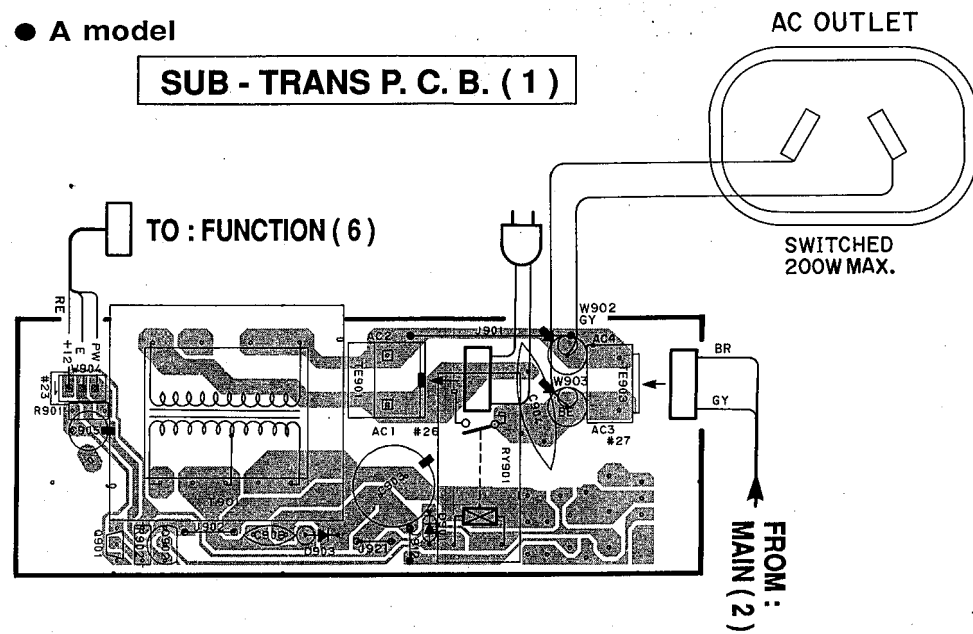
1
2
3
4
5
6

AX-1070

PRINTED CIRCUIT BOARD (Foil side)

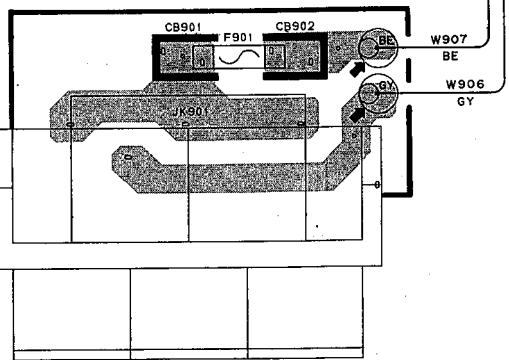
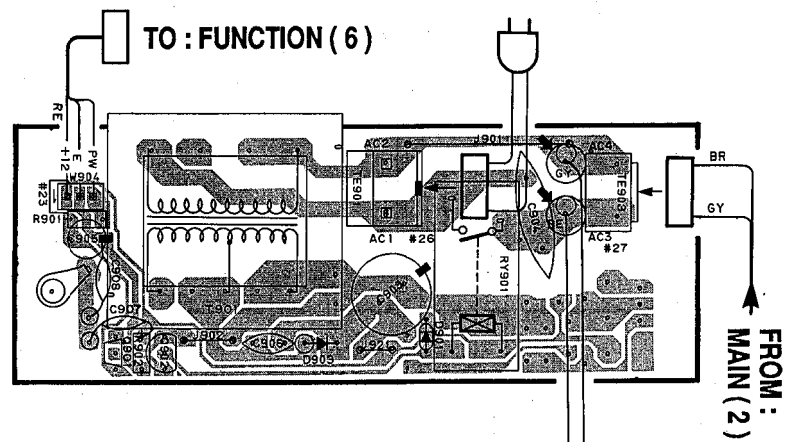
● A model

SUB - TRANS P. C. B. (1)



● W model

SUB - TRANS P. C. B. (1)

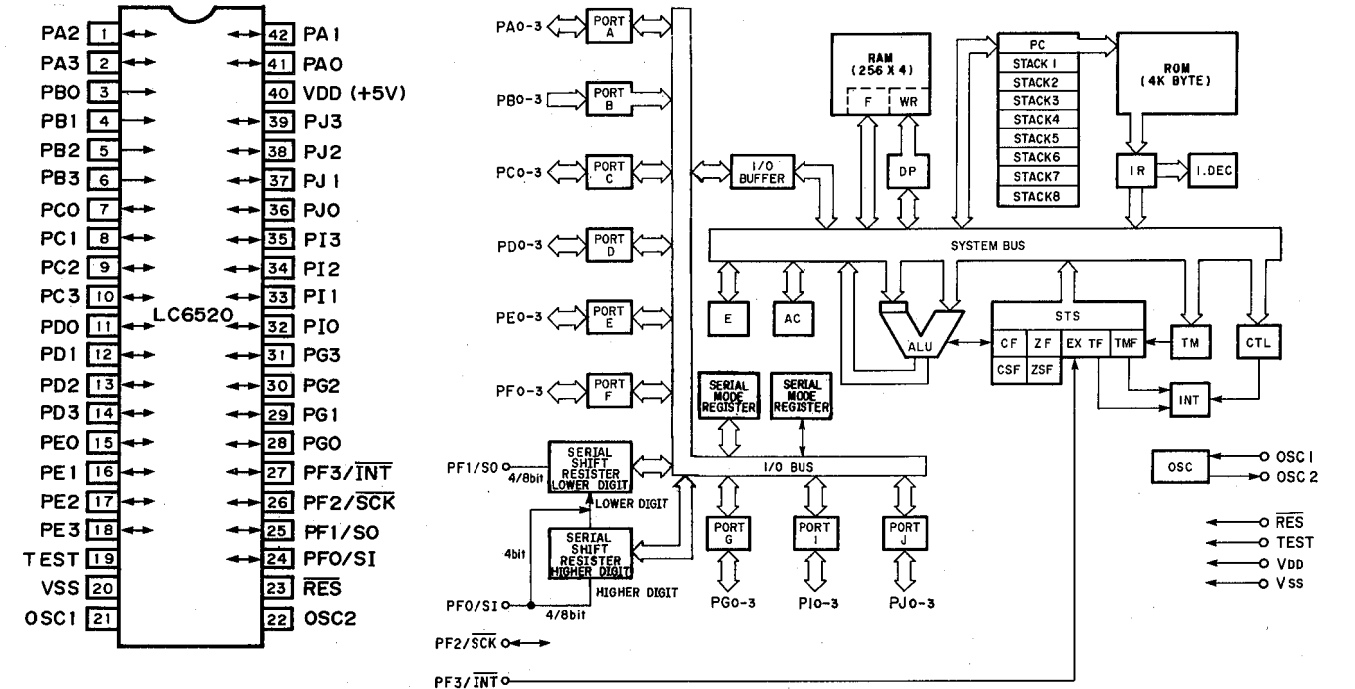


AC OUTLETS
SWITCHED
200W MAX. TOTAL

SUB - TRANS P. C. B. (3)

μ-COM DATA

IC106 : LC6520H
4bit μ-COM



Pin No.	Pin. Name	I/O	Function	Pin No.	Pin. Name	I/O	Function
1	PA2	I/O	Not used	22	OSC2	I	4MHz
2	PA3	I/O	Not used (H)	23	RESET	I	Reset input
3	PB0	I	S1 : Selector position data	24	PF0	—	Not used
4	PB1	I	S2 : Selector position data	25	PF1	—	Not used
5	PB2	I	S3 : Selector position data	26	PF2	I	Power Remote (H : ON, L : OFF)
6	PB3	I	S4 : Selector position data	27	PF3	I	Remote control Data input
7	PC0	I	S5 : Selector position data	28	PG0	I	Power SW ON/OFF
8	PC1	I	S6 : Selector position data	29	PG1	I	Power control (H : ON, L : OFF)
9	PC2	I	S7 : Selector position data	30	PG2	O	Power out
10	PC3	I	S8 : Selector position data	31	PG3	O	STBY out
11	PD0	I	CAM : Cam position data	32	PI0	O	Volume control signal 2 (UP : H)
12	PD1	I	Input (channel) set (H : 7ch set)	33	PI1	O	Volume control signal 1 (DOWN : L)
13	PD2	I	Not used (GND)	34	PI2	O	Selector control signal 2
14	PD3	O	PLAY/CUT (Player control)	35	PI3	O	Selector control signal 1
15	PE0	I	Market (H : G model)	36	PJ0	I	Power on → A. Mute (H : ON, L : OFF)
16	PE1	I	Power down (Back up mode)	37	PJ1	O	Audio muting LED control
17	PE2	—	Not used	38	PJ2	O	Audio muting control signal (H : ON)
18	PE3	I	Input selector operation mode (L:STOP, H:NONSTOP)	39	PJ3	O	Muting control signal
19	TEST	—	GND	40	VDD	—	+5V
20	VSS	—	GND	41	PA0	—	Not used
21	OSC1	I	4MHz	42	PA1	—	Not used

* When in the BACK-UP mode. (i.e., when the AC plug has been unplugged), the state before unplugging the AC plug (POWER ON/OFF, AUDIO MUTE (-20dB) ON/OFF) is kept in memory.

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.GEM	: 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.

FUNCTION P. C. B.

Schm Ref.	PART NO.	Description		
*	VP957700	P.C.B.	FUNCTION (R)	
*	VP957800	P.C.B.	FUNCTION (W)	
*	VQ592100	P.C.B.	FUNCTION (A)	
CB103	VA252400	CN	MQ	12P
CB104	VA252400	CN	MQ	12P
CB105	VA252400	CN	MQ	12P
CB106	VA252300	CN	MQ	5P
CB108	VA252300	CN	MQ	5P
CB109	VD005000	CN.BS.PIN	PH i-TYPE	7P TE
CB110	VL023700	CN	5062	17P TE
CB111	VD004800	CN.BS.PIN	PH i-TYPE	5P TE
CB113	VD004500	CN.BS.PIN	PH i-TYPE	2P TE
CB114	VD004600	CN.BS.PIN	PH i-TYPE	3P TE
CB115	VD004500	CN.BS.PIN	PH i-TYPE	2P TE
CB116	VD004600	CN.BS.PIN	PH i-TYPE	3P TE
C101	VL884000	C.PP	3300pF	100V
C102	VQ282400	C.PP	5pF	630V
C103	VE742700	C.EL	10uF	50V
C104	VK533900	C.PP	100pF	200V
C105	VK533900	C.PP	100pF	200V
C106	VE742700	C.EL	10uF	50V
C107	VQ282400	C.PP	5pF	630V
C108	VL884000	C.PP	3300pF	100V
C109	VG290900	C.EL	10uF	50V
C110	VK534000	C.PP	220pF	200V
C111	VK534000	C.PP	220pF	200V
C112	VG290900	C.EL	10uF	50V
C113	VG290900	C.EL	10uF	50V
C114	FG212220	C.CE	220pF	50V
C115	FG212220	C.CE	220pF	50V
C116	VG290900	C.EL	10uF	50V
C117	FG212220	C.CE	220pF	50V
C118	FG212220	C.CE	220pF	50V
C119	FG212220	C.CE	220pF	50V
C120	FG212220	C.CE	220pF	50V
C121	FG212220	C.CE	220pF	50V
C122	FG212220	C.CE	220pF	50V
C123	FG212220	C.CE	220pF	50V
C124	FG212220	C.CE	220pF	50V (W)
C125	FG212220	C.CE	220pF	50V (W)
C126	FG212220	C.CE	220pF	50V
C127	FG212220	C.CE	220pF	50V
C128	FG212220	C.CE	220pF	50V
C129	V1536300	C.EL	10uF	50V
C130	V1536300	C.EL	10uF	50V
C131	VK534000	C.PP	220pF	200V
C132	VG290900	C.EL	10uF	50V
C133	VG290900	C.EL	10uF	50V
C134	VK534000	C.PP	220pF	200V
C135	FG212220	C.CE	220pF	50V
C136	VG290900	C.EL	10uF	50V
C137	VG290900	C.EL	10uF	50V
C138	FG212220	C.CE	220pF	50V

* New Parts

Schm Ref.	PART NO.	Description		
C141	FG212220	C.CE	220pF	50V
C142	VD930900	C.CE.SMI	0.1uF	25V
C143	FG212220	C.CE	220pF	50V
C144	VG290900	C.EL	10uF	50V
C145	UA654100	C.MYLAR	0.01uF	50V
C146	FG212330	C.CE	330pF	50V
C147	UA654100	C.MYLAR	0.01uF	50V
C148	FG212330	C.CE	330pF	50V
C149	VG290900	C.EL	10uF	50V
C150	VG722100	C.EL	1uF	50V
C151	VG722100	C.EL	1uF	50V
C152	VE551900	C.CE	100pF	50V
C153	UA653270	C.MYLAR	2700pF	50V
C154	UA653270	C.MYLAR	2700pF	50V
C155	VE551900	C.CE	100pF	50V
C156	UA654330	C.MYLAR	0.033uF	50V
C157	Vi460900	C.EL	2200uF	6.3V
C158	VG288900	C.EL	100uF	25V
C159	Vi460900	C.EL	2200uF	6.3V
C160	UA654330	C.MYLAR	0.033uF	50V
C161	VD930900	C.CE.SMI	0.1uF	25V
C162	UA653680	C.MYLAR	6800pF	50V
C163	VG291000	C.EL	22uF	50V
C164	VG287800	C.EL	330uF	16V
C165	VG287800	C.EL	330uF	16V
C166	VG291000	C.EL	22uF	50V
C167	UA653680	C.MYLAR	6800pF	50V
C168	UA653330	C.MYLAR	3300pF	50V
C169	UA653330	C.MYLAR	3300pF	50V
C170	VD930900	C.CE.SMI	0.1uF	25V
C171	VG290900	C.EL	10uF	50V
C172	VG287800	C.EL	330uF	16V
C173	VG290900	C.EL	10uF	50V
C174	VF992600	C.EL	4700uF	5.5V
C175	VD930900	C.CE.SMI	0.1uF	25V
C176	VG290500	C.EL	1uF	50V
C179	VG290900	C.EL	10uF	50V
C182	VM758800	C.EL	330uF	25V
C183	VK534000	C.PP	220pF	200V
C184	VK534000	C.PP	220pF	200V
C187	UJ638470	C.EL	470uF	16V
C188	UJ638470	C.EL	470uF	16V
C189	VL972900	C.PP	330pF	200V
C190	VL972900	C.PP	330pF	200V
C191	VG291100	C.EL	33uF	50V
C192	VG291100	C.EL	33uF	50V
C193	UG444100	C.CE	0.01uF	50V
C194	UG444100	C.CE	0.01uF	50V
C195	UA653240	C.MYLAR	2400pF	50V
C196	UA653240	C.MYLAR	2400pF	50V
C197	VK534000	C.PP	220pF	200V
C198	VK534000	C.PP	220pF	200V
C199	VG287800	C.EL	330uF	16V

* New Parts

FUNCTION & TONE CONTROL P. C. B.

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Schm Ref.	PART NO.	Description
D101	iF004600	DIODE 1SS133
D102	iF004600	DIODE 1SS133
D103	iF004600	DIODE 1SS133
D104	iF004600	DIODE 1SS133
D107	VG435800	DIODE.ZENR MTZJ3.0A 3.0V
D108	iF004600	DIODE 1SS133
D109	iF004600	DIODE 1SS133
D110	VG437000	DIODE.ZENR MTZJ4.7A 4.7V
D111	VG438000	DIODE.ZENR MTZJ6.2B 6.2V
D112	VG437500	DIODE.ZENR MTZJ5.1C 5.1V
D113	VG440300	DIODE.ZENR MTZJ12C 12V
D114	iF004600	DIODE 1SS133
D115	VG438000	DIODE.ZENR MTZJ6.2B 6.2V
D116	iF004600	DIODE 1SS133
D117	VG436800	DIODE.ZENR MTZJ4.3B 4.3V
D118	VF402500	LED (or) SLR-34DC3H3
D119	Vi013600	LED (re) SLR-34VC3H3
D120	iF004600	DIODE 1SS133
D121	iF004600	DIODE 1SS133
D122	iF004600	DIODE 1SS133
D124	iF004600	DIODE 1SS133 (W)
D125	iF004600	DIODE 1SS133 (W)
D126	iF004600	DIODE 1SS133
D127	iF004600	DIODE 1SS133
D128	iF004600	DIODE 1SS133
IC101	XA956A00	IC NJM2068S
IC102	XA956A00	IC NJM2068S
IC103	XB247301	IC uPC4570HA
IC104	XF557A00	IC TA7291S
IC105	XF557A00	IC TA7291S
IC106	XJ577A00	IC LC6520H-4690
JK101	VJ726800	JACK.MNI
L101	VF541100	COIL 15uH
L102	VF541100	COIL 15uH
L103	VB056900	COIL 220uH
L104	VB056900	COIL 220uH
PJ101	VL552500	JACK.PIN 1P
PJ102	VL552500	JACK.PIN 1P
PJ103	VJ249500	JACK.PIN 4P
PJ104	VJ249500	JACK.PIN 4P
PJ105	VJ249500	JACK.PIN 4P
PJ106	VJ249500	JACK.PIN 4P
PJ107	LB401030	JACK.PIN 4P
PJ108	VE642400	JACK.PIN 2P
Q101	iC224030	TR 2SC2240 GR,BL
Q102	iC224030	TR 2SC2240 GR,BL
Q103	iA101521	TR 2SA1015 Y
Q104	iC1815C0	TR 2SC1815 Y
Q107	iC1815C0	TR 2SC1815 Y
Q108	iA101521	TR 2SA1015 Y
Q109	iA101521	TR 2SA1015 Y
Q110	VD678700	TR.DGT DTC114ES
Q111	iA101521	TR 2SA1015 Y

* New Parts

Schm Ref.	PART NO.	Description
Q112	iA097000	TR 2SA970 GR,BL
Q113	iA097000	TR 2SA970 GR,BL
Q114	iA097000	TR 2SA970 GR,BL
Q115	iA097000	TR 2SA970 GR,BL
Q116	VG722000	TR.DGT DTC144ES
Q117	VG722000	TR.DGT DTC144ES
Q118	VD678500	TR.DGT DTA114ES
Q119	iA111510	TR 2SA1115 E,F
Q120	VC938500	TR 2SC3852
Q121	iA111510	TR 2SA1115 E,F
Q122	iC174020	TR 2SC1740S R,S
Q123	iB056020	TR 2SB560 E,F
Q124	VF331200	TR.DGT DTC124ES
Q125	iC206010	TR 2SC2060 P,Q,R
Q126	iC224030	TR 2SC2240 GR,BL
Q127	iC224030	TR 2SC2240 GR,BL
Q128	VD678700	TR.DGT DTC114ES
Q129	VD678700	TR.DGT DTC114ES
Q130	VD678700	TR.DGT DTC114ES
Q131	VD678700	TR.DGT DTC114ES (W)
Q132	VH257100	TR.DGT DTA124ES
Q133	VD678700	TR.DGT DTC114ES (W)
Q134	VD678500	TR.DGT DTA114ES
Q135	VD678500	TR.DGT DTA114ES
Q136	VD678700	TR.DGT DTC114ES
R112	HU574560	R.MTL.FLM 56 Ω 1/4W
R119	HU574560	R.MTL.FLM 56 Ω 1/4W
R159	HV455100	R.CAR.FP 100 Ω 1/4W
R160	HV455100	R.CAR.FP 100 Ω 1/4W
R205	HV455100	R.CAR.FP 100 Ω 1/4W
R206	HV455100	R.CAR.FP 100 Ω 1/4W
R210	HV455100	R.CAR.FP 100 Ω 1/4W
R211	HV455100	R.CAR.FP 100 Ω 1/4W
R214	HV454100	R.CAR.FP 10 Ω 1/4W
R218	VL948600	R.ARRAY 47K Ωx9
R233	HV454390	R.CAR.FP 39 Ω 1/4W
R245	HU594220	R.MTL.FLM 22 Ω 1/4W
R246	HU594220	R.MTL.FLM 22 Ω 1/4W
R254	HV454390	R.CAR.FP 39 Ω 1/4W
SW101	VK333500	SW.PUSH SPUN19 6-2
U101	VF926500	L.DTCT GP1U501X
XL101	VB759100	RSNR.CE 4MHz
	VM573200	CN.FLAT 17P 140mm
	VB966900	CN IMSA-6024
	BB071360	SCR.TERM 8.3x13
	VP958000	P.C.B. TONE CONTROL
CB301	LB919030	CN.BS.PIN XH L-TYPE 3P SE
CB302	LB919070	CN.BS.PIN XH 7P SE
CB303	VB858700	CN.BS.PIN PH 8P SE
CB304	VB858600	CN.BS.PIN PH L-TYPE 7P SE
CB305	VD005000	CN.BS.PIN PH i-TYPE 7P TE
CB306	Vi009100	CN.BS.PIN FPC i-TYPE 17P TE

* New Parts

MAIN P. C. B.

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Schm Ref.	PART NO.	Description		
*	VP957200	P.C.B.	MAIN (R)	
*	VP957300	P.C.B.	MAIN (A)	
*	VP957500	P.C.B.	MAIN (W)	
CB601	Vi378000	CN.BS.PIN	MQ	10P TE
CB602	VB994900	CN	MQ	9P
CB603	VA252300	CN	MQ	5P
CB604	VB994900	CN	MQ	9P
CB605	Vi377800	CN.BS.PIN	MQ	8P TE
CB611	VB858600	CN.BS.PIN	PH L-TYPE	7P SE
CB618	VL845300	CN.BS.PIN	XH	9P TE
CB701	LB201880	HOLDER.FUS	PC-FH1	
CB702	LB201880	HOLDER.FUS	PC-FH1	
CB703	LB201880	HOLDER.FUS	PC-FH1 (R)	
CB704	LB201880	HOLDER.FUS	PC-FH1 (R)	
C601	VE742600	C.EL	47uF	25V
C603	Vi532800	C.EL	47uF	16V
C604	VK984200	C.MYLAR	220pF	50V
C605	Vi536000	C.EL	2.2uF	50V
C606	FU351220	C.MICA	22pF	500V
C607	FU351220	C.MICA	22pF	500V
C608	Vi532800	C.EL	47uF	16V
C609	VK984200	C.MYLAR	220pF	50V
C610	VE742600	C.EL	47uF	25V
C611	Vi536000	C.EL	2.2uF	50V
C613	UT653680	C.PP	6800pF	100V
C614	UT653680	C.PP	6800pF	100V
C615	VK533800	C.PP	47pF	200V
C616	VG288900	C.EL	100uF	25V
C617	VG288900	C.EL	100uF	25V
C618	VK533800	C.PP	47pF	200V
C619	VL862800	C.EL	1000uF	80V
C620	VK533800	C.PP	47pF	200V
C621	VK533800	C.PP	47pF	200V
C622	VG290900	C.EL	10uF	50V
C623	VE016700	C.EL	330uF	6.3V
C624	VG290900	C.EL	10uF	50V
C625	VK534000	C.PP	220pF	200V
C626	VK534000	C.PP	220pF	200V
C627	Vi532800	C.EL	47uF	16V
C628	Vi532800	C.EL	47uF	16V
C629	VK534000	C.PP	220pF	200V
C630	VK534000	C.PP	220pF	200V
C631	VG288900	C.EL	100uF	25V
C632	Vi716100	C.MYLAR	3300pF	50V
C633	Vi716100	C.MYLAR	3300pF	50V
C634	Vi716100	C.MYLAR	3300pF	50V
C635	Vi716100	C.MYLAR	3300pF	50V
C636	VG291200	C.EL	47uF	50V
C637	VG291200	C.EL	47uF	50V
C638	VG291200	C.EL	47uF	50V
C639	VG291200	C.EL	47uF	50V
C640	VK534400	C.PP	0.047uF	100V
C641	VG290900	C.EL	10uF	50V

* New Parts

Schm Ref.	PART NO.	Description		
C642	UJ895220	C.EL	0.22uF	100V
C643	VK534400	C.PP	0.047uF	100V
C644	VK534400	C.PP	0.047uF	100V
C645	VK534400	C.PP	0.047uF	100V
C646	VK534400	C.PP	0.047uF	100V
C647	VK534400	C.PP	0.047uF	100V
C648	VG290900	C.EL	10uF	50V
C649	VG288900	C.EL	100uF	25V
C650	UT453390	C.PP	3900pF	100V (W)
C651	UT453390	C.PP	3900pF	100V (W)
C652	UT453390	C.PP	3900pF	100V (W)
C653	UT453390	C.PP	3900pF	100V (W)
C656	VG289400	C.EL	3300uF	25V
C657	VG289400	C.EL	3300uF	25V
C658	VG290700	C.EL	3.3uF	50V
C659	VM707200	C.PP	0.012uF	100V (W)
C660	VK534200	C.PP	0.022uF	100V (W)
C661	VM707200	C.PP	0.012uF	100V (W)
C662	VM707200	C.PP	0.012uF	100V (W)
C663	VK534200	C.PP	0.022uF	100V (W)
C664	VM707200	C.PP	0.012uF	100V (W)
C667	VK534400	C.PP	0.047uF	100V
C668	VK534400	C.PP	0.047uF	100V
C669	UG444220	C.CE	0.022uF	50V (W)
C671	VL862800	C.EL	1000uF	80V
* C672	VG744500	C.MYLAR.ML	0.39uF	50V
* C673	VG744500	C.MYLAR.ML	0.39uF	50V
C674	VG288900	C.EL	100uF	25V
C675	VG288900	C.EL	100uF	25V
C678	VK533800	C.PP	47pF	200V (RA)
C678	VK534000	C.PP	220pF	200V (W)
C679	VK533800	C.PP	47pF	200V (RA)
C679	VK534000	C.PP	220pF	200V (W)
C680	UG444100	C.CE	0.01uF	50V (W)
D601	iF004600	DIODE	1S133	
D602	iF004600	DIODE	1S133	
D603	iF004600	DIODE	1S133	
D604	iF004600	DIODE	1S133	
D605	iF004600	DIODE	1S133	
D606	iF004600	DIODE	1S133	
D607	iF004600	DIODE	1S133	
D608	iF004600	DIODE	1S133	
D609	iF004600	DIODE	1S133	
D610	iF004600	DIODE	1S133	
D611	iF004600	DIODE	1S133	
D612	iF004600	DIODE	1S133	
D613	iF004600	DIODE	1S133	
D614	iF004600	DIODE	1S133	
D615	iF004600	DIODE	1S133	
D617	VG441200	DIODE.ZENR	MTZJ16C	16V
D618	VG438500	DIODE.ZENR	MTZJ7.5A	7.5V
D619	VG438500	DIODE.ZENR	MTZJ7.5A	7.5V
D620	VG438500	DIODE.ZENR	MTZJ7.5A	7.5V

* New Parts

MAIN P. C. B.

MAIN & SUB TRANS P. C. B.

Schm Ref.	PART NO.	Description
D621	VG438500	DIODE.ZENR MTZJ7.5A 7.5V
D622	iF004600	DIODE 1SS133
D623	iF004600	DIODE 1SS133
D624	iF004600	DIODE 1SS133
D625	VG441200	DIODE.ZENR MTZJ16C 16V
△ D627	VC398400	DIODE MA185
△ D628	VM702000	DIODE.BRG S5VB20 3.5A 200V
D629	VC398400	DIODE MA185
D630	VC398400	DIODE MA185
△ D631	VH770800	DIODE 1SR139-100 T-32
△ D632	VH770800	DIODE 1SR139-100 T-32
△ D633	VH770800	DIODE 1SR139-100 T-32
△ D634	VH770800	DIODE 1SR139-100 T-32
D635	iF004600	DIODE 1SS133
D636	iF004600	DIODE 1SS133
D637	iF004600	DIODE 1SS133
△ F601	KB001490	FUSE 10A 250V(R)
△ F601	KB003240	FUSE T5.0A 250V(AW)
△ F602	KB000400	FUSE T5.0A 250V(R)
IC601	iG076800	IC NJM4558S
IC603	XG609A00	IC BA3122N
IC604	XG609A00	IC BA3122N
△ JK602	Vi327500	OUTLET.AC 3P(R)
L601	VC664100	COIL 0.95uH
L602	VC664100	COIL 0.95uH
Q601	VK432900	TR 2SD1915F S,T
Q602	iA097000	TR 2SA970 GR,BL
Q603	iA097000	TR 2SA970 GR,BL
Q604	VK432900	TR 2SD1915F S,T
Q605	VK432900	TR 2SD1915F S,T
Q606	VK432900	TR 2SD1915F S,T
Q607	VK432900	TR 2SD1915F S,T
Q608	iA097000	TR 2SA970 GR,BL
Q609	iA097000	TR 2SA970 GR,BL
Q610	VK432900	TR 2SD1915F S,T
Q611	iA097000	TR 2SA970 GR,BL
Q612	iC1815C0	TR 2SC1815 Y
Q613	iC1815C0	TR 2SC1815 Y
Q614	iC1815C0	TR 2SC1815 Y
Q615	iC1815C0	TR 2SC1815 Y
Q616	iA097000	TR 2SA970 GR,BL
Q617	iC1815C0	TR 2SC1815 Y
Q618	VE198800	TR 2SC2705 O,Y
Q619	VE198700	TR 2SA1145 O,Y
Q620	VE198700	TR 2SA1145 O,Y
Q621	VE198800	TR 2SC2705 O,Y
Q622	iA101521	TR 2SA1015 Y
Q623	iA101521	TR 2SA1015 Y
Q624	VE198800	TR 2SC2705 O,Y
Q625	VE198700	TR 2SA1145 O,Y
Q626	VE198700	TR 2SA1145 O,Y
Q627	VE198800	TR 2SC2705 O,Y
Q628	iC1815C0	TR 2SC1815 Y

* New Parts

Schm Ref.	PART NO.	Description
Q629	iC224030	TR 2SC2240 GR,BL
△ Q630	VC614000	TR 2SB1274 Q,R,S
△# Q631	VE912800	TR 2SB1141 S,T
△# Q632	VE912900	TR 2SD1681 S,T
△# Q633	VE912900	TR 2SD1681 S,T
△# Q634	VE912800	TR 2SB1141 S,T
Q635	VL582600	TR 2SD1763A D,E
Q636	VL582500	TR 2SB1186A D,E
Q637	VL582500	TR 2SB1186A D,E
Q638	VL582600	TR 2SD1763A D,E
Q639	VL542700	TR.DGT DTA123JS
△# Q640A	iX606460	TR 2SA1492 O,P,Y
△# Q640C	iX606470	TR 2SC3856 O,P,Y
△# Q641A	iX606460	TR 2SA1492 O,P,Y
△# Q641C	iX606470	TR 2SC3856 O,P,Y
△# Q644A	iX606460	TR 2SA1492 O,P,Y
△# Q644C	iX606470	TR 2SC3856 O,P,Y
△# Q645A	iX606460	TR 2SA1492 O,P,Y
△# Q645C	iX606470	TR 2SC3856 O,P,Y
Q648	VL542700	TR.DGT DTA123JS
Q649	VL542700	TR.DGT DTA123JS
Q650	iA097000	TR 2SA970 GR,BL
Q651	iC224030	TR 2SC2240 GR,BL
Q652	iC224030	TR 2SC2240 GR,BL
△ Q653	VC407900	TR 2SD1913 R,S
Q654	iA101521	TR 2SA1015 Y
R605	HV455100	R.CAR.FP 100Ω 1/4W
R622	HV455100	R.CAR.FP 100Ω 1/4W
R628	HV455560	R.CAR.FP 560Ω 1/4W
△ R629	HV455220	R.CAR.FP 220Ω 1/4W
△ R630	HV455220	R.CAR.FP 220Ω 1/4W
△ R631	HV455220	R.CAR.FP 220Ω 1/4W
△ R632	HV455220	R.CAR.FP 220Ω 1/4W
R633	HV455560	R.CAR.FP 560Ω 1/4W
R640	HV455150	R.CAR.FP 150Ω 1/4W
R641	HV455100	R.CAR.FP 100Ω 1/4W
R643	HV455100	R.CAR.FP 100Ω 1/4W
R645	HV455150	R.CAR.FP 150Ω 1/4W
△ R646	HV454100	R.CAR.FP 10Ω 1/4W
R647	HV455150	R.CAR.FP 150Ω 1/4W
R649	HV455100	R.CAR.FP 100Ω 1/4W
R651	HV455100	R.CAR.FP 100Ω 1/4W
R652	HV455150	R.CAR.FP 150Ω 1/4W
R672	HL326560	R.MTL.OXD 5.6KΩ 2W
R673	HV455330	R.CAR.FP 330Ω 1/4W
R674	HL326560	R.MTL.OXD 5.6KΩ 2W
R675	HL326560	R.MTL.OXD 5.6KΩ 2W
R676	HV455330	R.CAR.FP 330Ω 1/4W
R677	HL326560	R.MTL.OXD 5.6KΩ 2W
R680	HV453470	R.CAR.FP 4.7Ω 1/4W
R681	HV453470	R.CAR.FP 4.7Ω 1/4W
R683	VJ695400	R.WW 0.22Ωx2 3W
R684	VJ695400	R.WW 0.22Ωx2 3W

* New Parts

Schm Ref.	PART NO.	Description
R688	HV453470	R.CAR.FP 4.7Ω 1/4W
R689	HV453470	R.CAR.FP 4.7Ω 1/4W
R690	HV453470	R.CAR.FP 4.7Ω 1/4W
R691	HV453470	R.CAR.FP 4.7Ω 1/4W
R692	HV453470	R.CAR.FP 4.7Ω 1/4W
R693	HV453470	R.CAR.FP 4.7Ω 1/4W
R697	VJ695400	R.WW 0.22Ωx2 3W
R698	VJ695400	R.WW 0.22Ωx2 3W
R700	HV453470	R.CAR.FP 4.7Ω 1/4W
R701	HV453470	R.CAR.FP 4.7Ω 1/4W
△ R702	HL325680	R.MTL.OXD 680Ω 2W
△ R703	HL325680	R.MTL.OXD 680Ω 2W
R708	HV453470	R.CAR.FP 4.7Ω 1/4W
R709	HL323470	R.MTL.OXD 4.7Ω 2W
R710	HL323470	R.MTL.OXD 4.7Ω 2W
R711	HV453470	R.CAR.FP 4.7Ω 1/4W
△ R713	HL325820	R.MTL.OXD 820Ω 2W
R716	HV453220	R.CAR.FP 2.2Ω 1/4W
R718	HV453220	R.CAR.FP 2.2Ω 1/4W
△ R720	HV453100	R.CAR.FP 1Ω 1/4W
R721	HV453220	R.CAR.FP 2.2Ω 1/4W(W)
R722	HV453220	R.CAR.FP 2.2Ω 1/4W(W)
△ R723	HV453100	R.CAR.FP 1Ω 1/4W
R726	HV453220	R.CAR.FP 2.2Ω 1/4W(W)
△ R733	HV454100	R.CAR.FP 10Ω 1/4W
△ R741	HV454100	R.CAR.FP 10Ω 1/4W
△ R742	HV454100	R.CAR.FP 10Ω 1/4W
R743	HV454220	R.CAR.FP 22Ω 1/4W
R744	HV454220	R.CAR.FP 22Ω 1/4W
RY601	VK879300	RELAY DE2TU24VDC
RY602	VK879300	RELAY DE2TU24VDC
RY603	KC001940	RELAY DH24D2-OTM
SW602	VA961800	VOLT.SELCT ESE-37247-F(R)
SW603	VL544900	SW.PUSH SPUL 4-2
TE601	LA002140	TERM.WRAP 2P i-TYPE P=10
TE602	LA002320	TERM.WRAP 3P i-TYPE P=7.5
TE603	LA002000	TERM.WRAP 2P i-TYPE P=7.5
TE604	LA002110	TERM.WRAP 2P i-TYPE P=5(W)
TE607	VL920100	TERM.SP 8P
VR601	VJ693600	VR.TRIM B10KΩ
VR602	VJ693600	VR.TRIM B10KΩ
	VB966900	CN IMSA-6024
	BB071360	SCR.TERM 8.3x13
	VE808500	SCR.TERM ø4
	VL890500	HEAT.SINK T220N31-30
	EX602250	SCR.BND.HD 3x12 ZMC2-BL

* New Parts

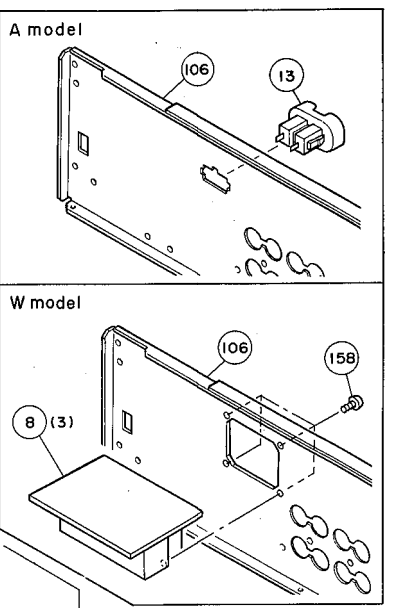
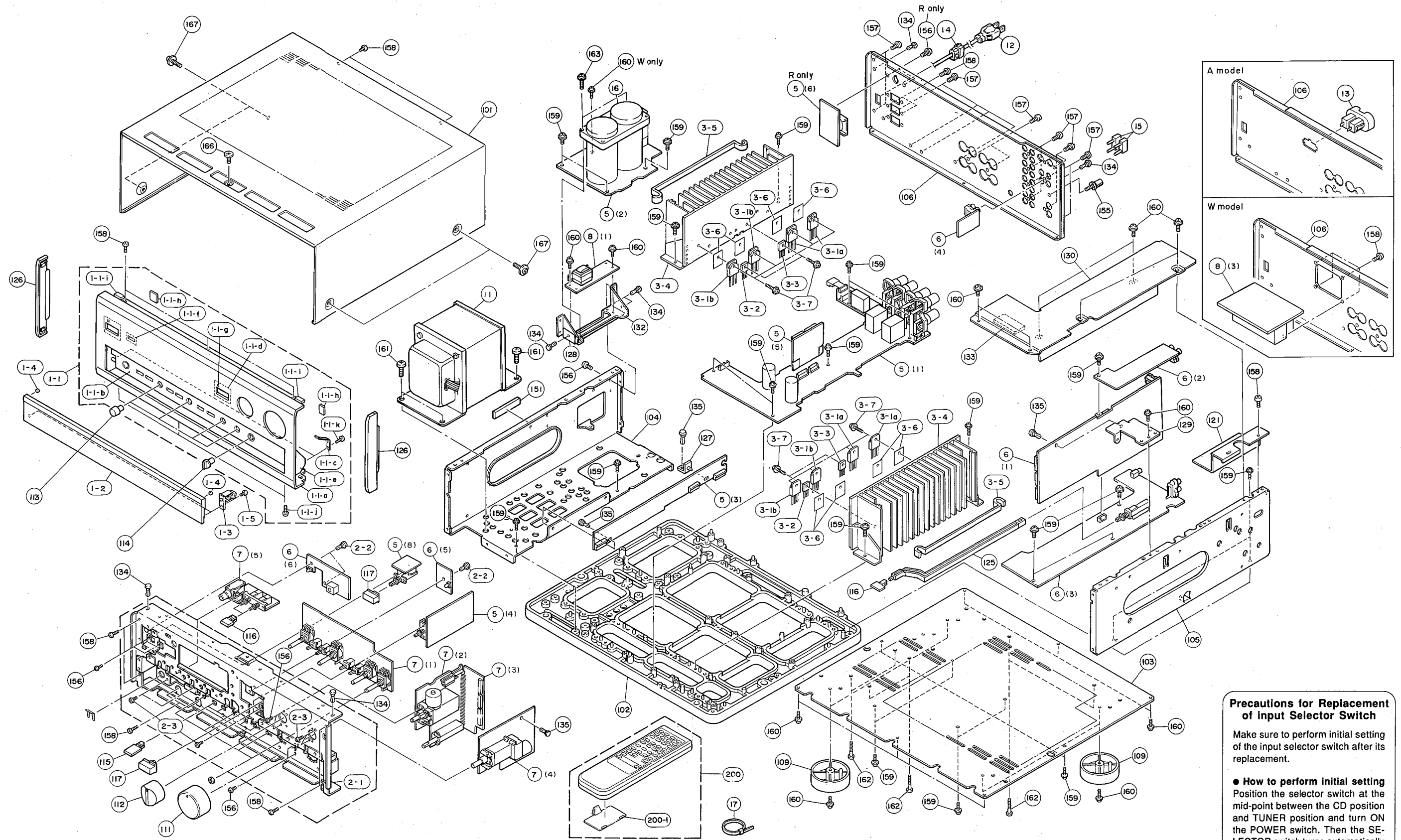
Schm Ref.	PART NO.	Description
* VP978300	P.C.B.	SUB TRANS (R)
* VP978400	P.C.B.	SUB TRANS (A)
* VP978500	P.C.B.	SUB TRANS (W)
CB901	LB201880	HOLDER.FUS PC-FH1 (W)
CB902	LB201880	HOLDER.FUS PC-FH1 (W)
C901	VG290900	C.EL 10uF 50V(R)
C902	VG290900	C.EL 10uF 50V(R)
C903	VG289200	C.EL 470uF 25V(AW)
C903	VK347900	C.EL 470uF 63V(R)
C904	Fi384100	C.CE.SAFTY 0.01uF 400V
C905	VG290900	C.EL 10uF 50V
C906	FG213100	C.CE 1000pF 50V
C907	FZ005880	C.CE.ML 0.1uF 25V(W)
C908	FZ005880	C.CE.ML 0.1uF 25V(W)
D901	VB236300	DIODE 1SS176
D902	VG440400	DIODE.ZENR MTZJ13A 13V(R)
△ D903	VH801600	DIODE 1SR139-100
D904	VH770800	DIODE 1SR139-100 T-32(R)
D905	VH770800	DIODE 1SR139-100 T-32(R)
D906	VH770800	DIODE 1SR139-100 T-32(R)
△ F901	KB000690	FUSE T2.5A 250V(W)
△ JK901	VP728600	OUTLET.AC 3P(W)
Q901	iC174020	TR 2SC1740S R,S
Q902	iC224030	TR 2SC2240 GR,BL
Q903	iC257700	TR 2SC2577 O,P,Y(R)
Q904	iC174020	TR 2SC1740S R,S(R)
△ RY901	VE568900	RELAY DH12D1-OM
SW901	VQ388600	SW.PUSH SPUN12
△ T901	XC082A00	TRANS.PWR (R)
△ T901	XC084A00	TRANS.PWR (AW)
TE901	VE225700	CN.BS.PIN 2P P=7.5
TE903	VG879900	CN.BS.PIN VH 2P TE
	VN985700	MEP10359 (W)

* New Parts

AX-1070

EXPLODED VIEW

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Precautions for Replacement of Input Selector Switch

Make sure to perform initial setting of the input selector switch after its replacement.

● **How to perform initial setting**
Position the selector switch at the mid-point between the CD position and TUNER position and turn ON the POWER switch. Then the SELECTOR switch turns automatically till it stops at the "CD" position finally.

MECHANICAL PARTS Note) Ø : Diameter

Ref. No.	PART NO.	Description	Remarks	Markets
* 1-1	VQ014000	FRONT PANEL ASS'y	BL	
* 1-1	VQ014300	FRONT PANEL ASS'y	TI	
* 1-1-a	VP896600	FRONT PANEL	BL	
* 1-1-a	VP896700	FRONT PANEL	TI	
* 1-1-b	VP931700	PLATE, SEALING	BL	
* 1-1-b	VP931800	PLATE, SEALING	TI	
1-1-c	VJ888200	SPRING		
1-1-d	VH816700	BUTTON GUIDE	10x25	BL
1-1-d	VH816800	BUTTON GUIDE	10x25	TI
* 1-1-e	VL216900	CASE, SUB PANEL	BL	
1-1-e	VL217000	CASE, SUB PANEL	TI	
1-1-f	VH897500	LENS		
1-1-g	VH897700	LENS		
1-1-h	VE798200	CUSHION		
1-1-i	VE222600	CUSHION		
1-1-j	EP600730	BIND HEAD P-TITE SCREW	3x8 FCRM3-BL	
1-1-k	EX601280	BW HEAD P-TITE SCREW	3x8-8 FCRM3-BL	
* 1-2	VP896300	SUB PANEL, LID	BL	
* 1-2	VP896400	SUB PANEL, LID	TI	
1-3	VJ888000	STOPPER	TI	
1-3	VJ888100	STOPPER	BL	
1-4	CB621930	DAMPER	BL	
1-4	VE798100	DAMPER	TI	
1-5	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
2-1	VL213300	SUB CHASSIS		
2-2	CB605620	PLASTIC RIVET	No.1781	
2-3	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
△ 3-1a	IX606460	TRANSISTOR	2SA1492 O,P,Y	Q640A,Q641A, Q644A,Q645A
△ 3-1b	IX606470	TRANSISTOR	2SC3856 O,P,Y	Q640C,Q641C, Q644C,Q645C
△ 3-2	VE912800	TRANSISTOR	2SB1141 S,T	Q631,Q634
△ 3-3	VE912900	TRANSISTOR	2SD1681 S,T	Q632,Q633
3-4	VL212300	RADIATOR ASS'y		
3-5	VK706700	DAMPER	FIN	
3-6	VK195900	SHEET	19x24	
3-7	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3	
* 5	VP957200	P.C.B. ASS'y, MAIN		(R)
* 5	VP957300	P.C.B. ASS'y, MAIN		(A)
* 5	VP957500	P.C.B. ASS'y, MAIN		(W)
* 6	VP957700	P.C.B. ASS'y, FUNCTION		(R)
* 6	VP957800	P.C.B. ASS'y, FUNCTION		(A)
* 6	VQ592100	P.C.B. ASS'y, FUNCTION		(W)
* 7	VP958000	P.C.B. ASS'y, TONE CONTROL		
* 8	VP978300	P.C.B. ASS'y, SUB TRANS.		(R)
* 8	VP978400	P.C.B. ASS'y, SUB TRANS.		(A)
* 8	VP978500	P.C.B. ASS'y, SUB TRANS.		(W)
△ 11	XJ690A00	POWER TRANSFORMER		(R)
△ 11	XJ691A00	POWER TRANSFORMER		(A)
△ 11	XJ692A00	POWER TRANSFORMER		(W)
△ 12	VE222900	POWER CORD ASS'y		(R)
△ 12	VE223200	POWER CORD ASS'y		(W)
△ 12	VP418100	POWER CORD ASS'y		(A)

* New Parts

Ref. No.	PART NO.	Description	Remarks	Markets
△ 13	VP418700	AC OUTLET	2P	(A)
14	VD375900	CORD STOPPER		(W)
15	LB101890	SHORT PLUG		
16	VL715100	ELECTROLYTIC CAP	22000uF 75V	C665, C666
17	CB069250	BINDING TIE	BK-1	
101	VL212800	TOP COVER		BL
101	VL213000	TOP COVER		TI
102	VL213100	CHASSIS, ART BASE		
103	VL213600	BOTTOM COVER		
104	VL213700	FRAME	SIDE L	
105	VL213800	FRAME	SIDE R	
* 106	VP931000	REAR PANEL		(R)
* 106	VP931100	REAR PANEL		(A)
* 106	VP931200	REAR PANEL		(W)
109	VK016500	LEG	ø60/H21	
111	VK015100	KNOB, LED	ø45	BL VOLUME
111	VK015200	KNOB, LED	ø45	TI VOLUME
112	VK219900	KNOB, LED	ø32	BL INPUT
112	VK220000	KNOB, LED	ø32	TI INPUT
113	VG078900	KNOB	ø12	BL LOUDNESS
113	VP559700	KNOB	ø12	TI LOUDNESS
114	VG079100	KNOB	ø12	BL REC OUT
114	VP564400	KNOB	ø12	TI REC OUT
115	VL215200	BUTTON	3x14•L	BL MODE
* 115	VQ025000	BUTTON	3x14•L	TI MODE
116	VH816000	BUTTON	3x14	BL SPEAKERS
* 116	VQ024900	BUTTON	3x14	TI SPEAKERS
* 117	VL819700	BUTTON	10x25	BL POWER
* 117	VQ502700	BUTTON	10x25	TI POWER
* 121	VQ090200	SHIELD PLATE R		
125	VL250600	EXTENSION BAR		
126	VJ833000	SIDE COVER		TI
126	VJ833100	SIDE COVER		BL
127	CB091290	SUPPORT, P.C.B.	No.1645	
128	VQ084800	SHIELD PLATE		
129	VL215000	FRAME	PCB2	
130	VL250300	FRAME	COVER	
132	VQ084700	FRAME, SUB TRANSFORMER		
* 133	VL896600	DAMPER	25x50	
134	CB068880	PLASTIC RIVET	No.1027	
135	CB605620	PLASTIC RIVET	No.1781	
* 151	VQ478100	DAMPER, L		
155	AA627310	GROUND TERMINAL		
156	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
157	EN301010	BIND HEAD BONDING TAP. SCREW	3x8 FCRM3-BL	
158	E1330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
159	VB770200	BW HEAD P-TITE SCREW	3x10-8 FCM3	BL
160	EX602240	BW HEAD TAPPING SCREW	3x10	
161	EN330060	BIND HEAD B-TITE SCREW	4x16 FCRM3-BL	
162	E1340256	BIND HEAD TAPPING SCREW	4x25 ZMC2-BL	
163	EL300600	BW HEAD TAPPING SCREW	3x18-10 FCRM3-BL	
166	EX601850	SPECIAL SCREW S-TITE	4x8-10 FCRM3-BL	BL
166	EX601860	SPECIAL SCREW S-TITE	4x8-10 FNM3-BL	TI

* New Parts

Parts List for Carbon Resistors

Ref. No.	PART NO.	Description	Remarks	Markets
167	EL300470	BW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	BL
167	EX601150	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	TI
* 200	VP849700	ACCESSORIES REMOTE CONTROL TRANSMITTER		
200-1	CX673000	LID BATTERY, MANGANESE	56x33KURON SUM-3,AA,R06	K-PM2-385-1

* New Parts

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			

