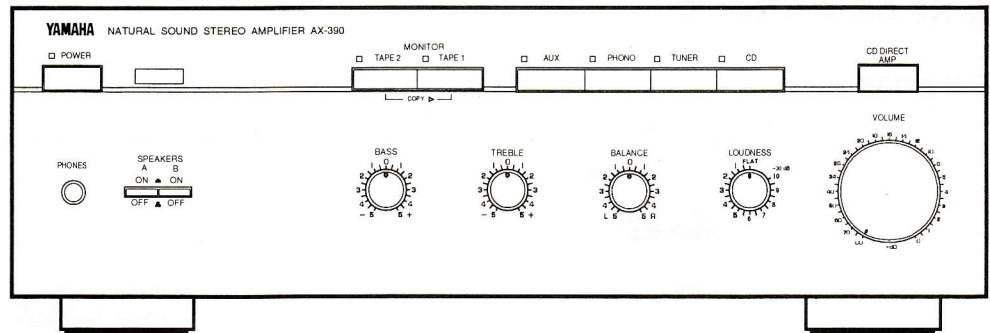
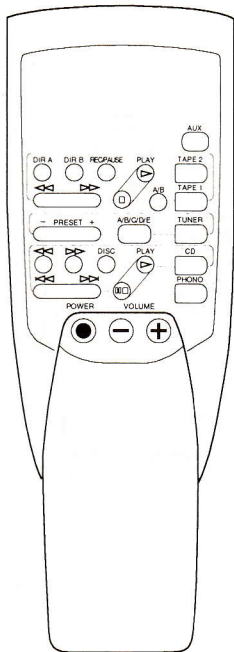


STEREO AMPLIFIER AX-390

SERVICE MANUAL



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	PIN CONNECTION DIAGRAM	5
REAR PANELS	1	PRINTED CIRCUIT BOARD	6~11
SPECIFICATIONS	2	BLOCK DIAGRAM	12~13
INTERNAL VIEW	2	IC BLOCKS	12~13
DISASSEMBLY PROCEDURES	3	SCHEMATIC DIAGRAM	14~15
ADJUSTMENTS	3	PARTS LIST	16~23
μ-COM DATA	4	REMOTE CONTROL TRANSMITTER	24
TEST POINT WAVEFORMS	5		

100545

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

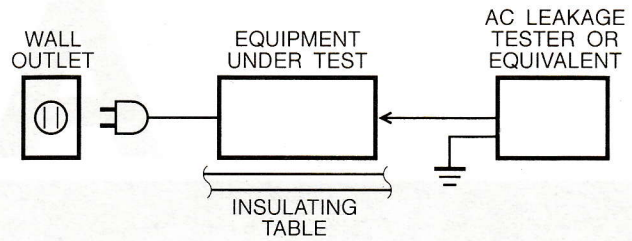
1.7K-134 Printed in Japan '96.5

AX-390

■ TO SERVICE PERSONNEL

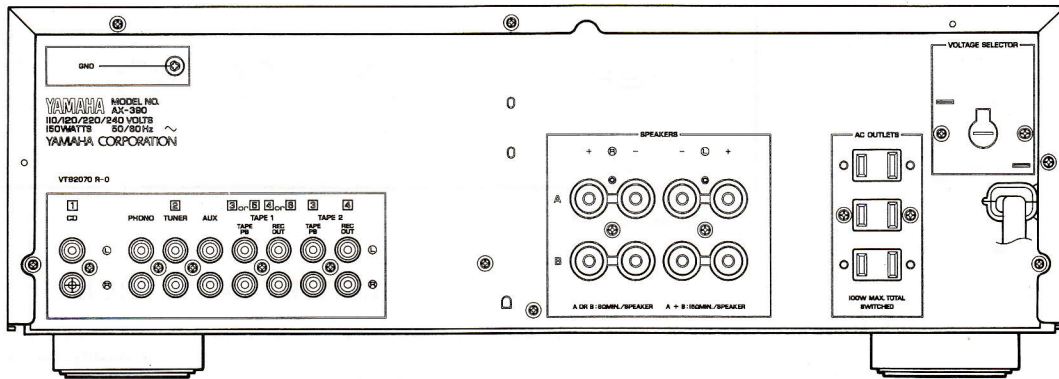
Critical Components Information.

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

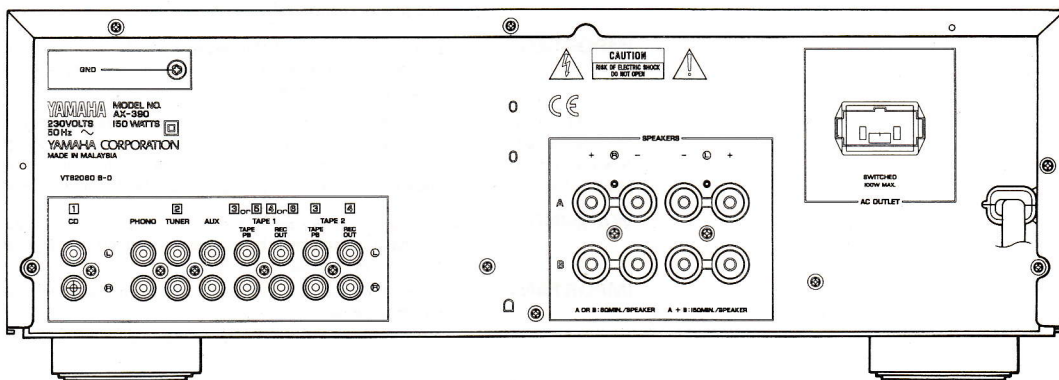


■ REAR PANELS

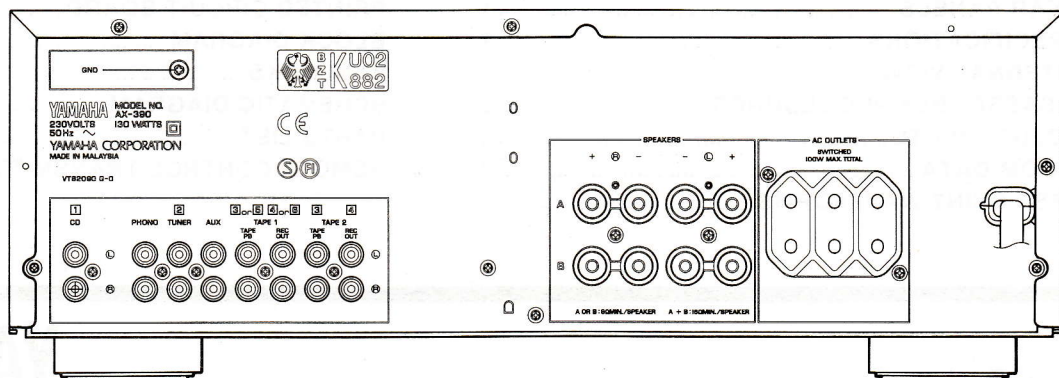
▼ R model



▼ B model



▼ G model



AX-390

SPECIFICATIONS

AUDIO SECTION

Minimum RMS Output Power Per Channel		
8Ω, 20Hz to 20kHz, 0.04% THD	60W	
6Ω, 20Hz to 20kHz, 0.04% THD	65W	
Maximum Power EIAJ		
1kHz, 10% THD, 6Ω (R model)	95W	
Dynamic Power Per Channel (IHF)		
8/6/4/2Ω	80/95/115/125W	
DIN Standard Output Power Per Channel		
1kHz, 0.7% THD, 4Ω (G model)	90W	
IEC Power		
1kHz, 0.04% THD, 8Ω (G model)	75W	
Power Band Width		
8Ω, 25W, 0.08% THD	10Hz to 40kHz	
Damping Factor		
8Ω, 20Hz to 20kHz	100 or more	
Input Sensitivity/Impedance		
PHONO MM	2.5mV/47kΩ	
CD etc	150mV/47kΩ	
Maximum Input Signal Level (1kHz, 0.04% THD)		
PHONO MM	90mV	
Output Level/Impedance		
REC OUT	150mV/600Ω	
Headphone Jack Rated Output/Impedance		
0.04% THD, RL = 8Ω	0.42V/390Ω	
Frequency Response (20Hz to 20kHz)		
CD etc	0±0.5dB	
RIAA Equalization Deviation (20Hz to 20kHz)		
PHONO MM	0±0.5dB	
Total Harmonic Distortion (20Hz to 20kHz)		
PHONO MM to REC OUT (1V)	0.02%	
CD etc to SP OUT (30W/8Ω)	0.02%	
Signal-to-Noise Ratio (IHF-A Network)		
PHONO MM (5mV Input Shorted)	82dB	
CD (Shorted), CD Direct SW ON/OFF	108/102dB	
Residual Noise (IHF-A Network)		
CD Direct SW ON/OFF	50/140μV	
Channel Separation (Vol. -30dB)		
PHONO MM (Input Shorted) 1kHz	65dB	
CD etc 1kHz (Input 5.1kΩ Terminated)	60dB	
Tone Control Characteristics		
BASS : Boost/cut	±10dB (20Hz)	
Turnover Frequency	350Hz	
TREBLE : Boost/cut	±10dB (20kHz)	
Turnover Frequency	3.5kHz	
Continuous Loudness Control		-30dB (1kHz)
(Level related equalization)		

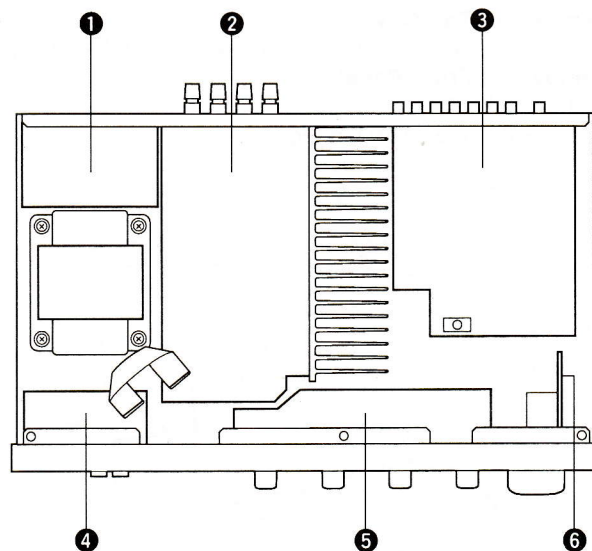
GENERAL

Power Supply		
G, B models	AC 230V, 50Hz	
R model	AC 110/120/220/240V, 60/50Hz	
Power Consumption		
G model	130W	
R, B models	150W	
AC Outlets		
Switched x 3		
G, R models	100W max. (Total)	
Switched x 1		
B model	100W max.	
Dimensions (W x H x D)		435 x 146 x 308.5mm
(17-1/8" x 5-3/4" x 12-1/8")		
Weight		7.3kg (16 lbs 1 oz)
Accessories		Remote Control Transmitter x 1
		Battery (size "AA", R06) x 2

* Specifications subject to change without notice.

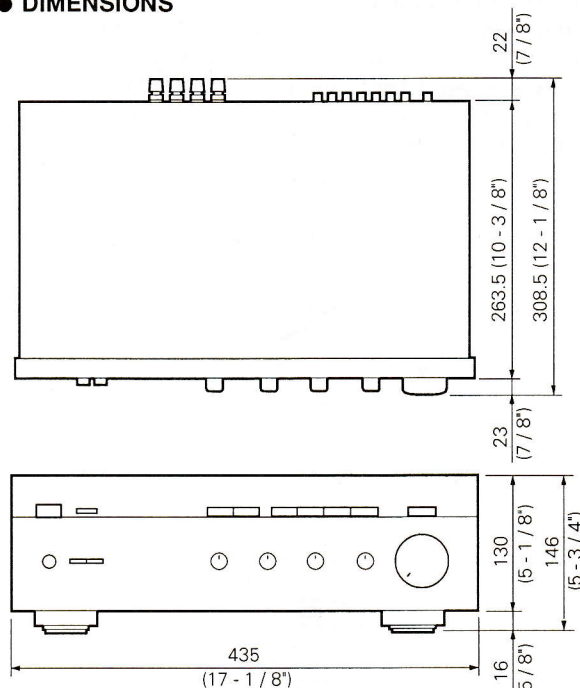
G European model
 B British model
 R General model

INTERNAL VIEW



- ① P.C.B. MAIN (2)
- ② P.C.B. MAIN (1)
- ③ P.C.B. OPERATION (1)
- ④ P.C.B. MAIN (3)
- ⑤ P.C.B. OPERATION (3)
- ⑥ P.C.B. OPERATION (2)

DIMENSIONS



Units : mm (inch)

DISASSEMBLY PROCEDURES (Remove parts in the order as numbered.)

1. Removal of Top Cover

Remove 4 screws (①) and 3 screws (②) in Fig. 1.

2. Removal of Front Panel

- Remove 5 knobs.
- Remove 6 screws (③) in Fig. 1.

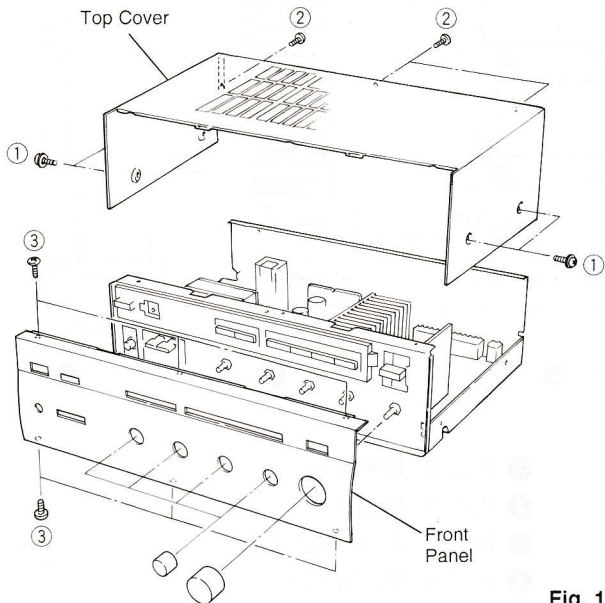


Fig. 1

3. Checking and Parts Replacement of P.C.B. MAIN (1)

- Disconnect the power cord from the AC outlet.
- Remove 3 screws (④) fixing the Speaker terminal and Heat Sink in Fig. 2.
- Remove 3 screws (⑤) fixing the Main Unit in Fig. 3.
- Detach connector terminal (CB104) in Fig. 3.
- Operating checks can be taken by shorting between following test points in Fig. 3.

Short Point
TP101 and TP102
TP103 and TP104
TP105 and TP106

- Place the Main Unit on its side as shown in Fig. 4.
- Connect the power cord and turn ON the POWER switch.

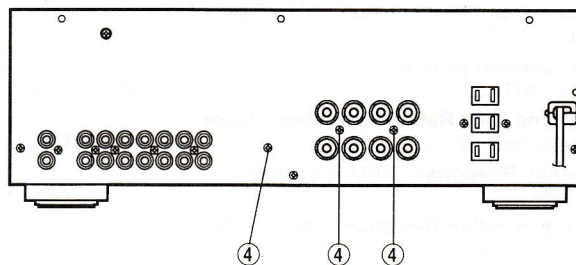


Fig. 2

ADJUSTMENTS

Confirmation of idling current.

After Power is turned on.

Confirm that the voltages across R137 (L ch), R138 (R ch) are between 0.1~3mV in Fig. 3.

If they exceed 3.1mV, open (cut off) R131 (L ch) and R132 (R ch), and reconfirm voltage is between 0.1~3mV.

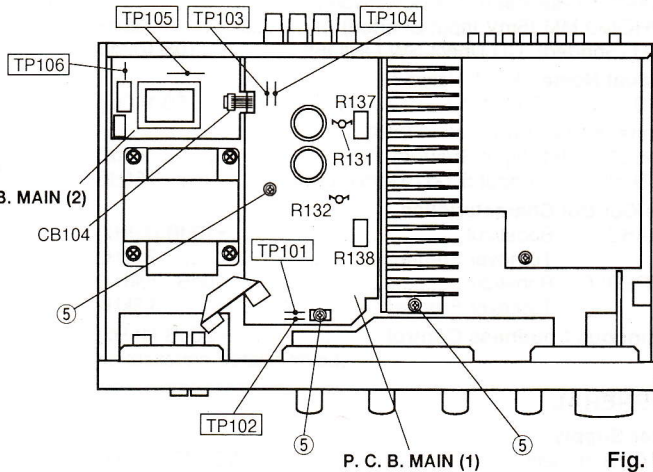
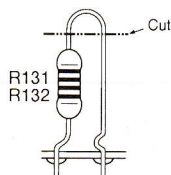
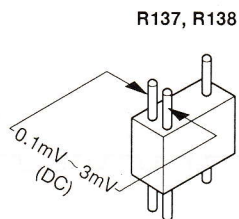


Fig. 3

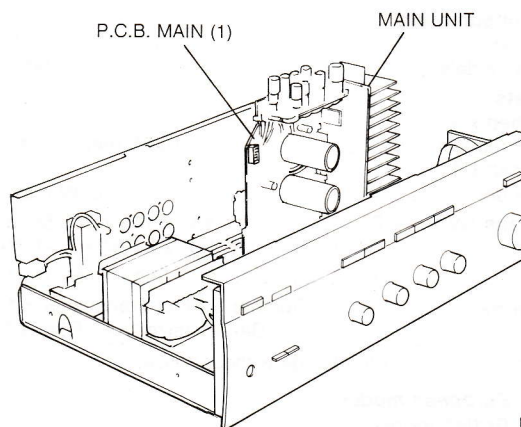
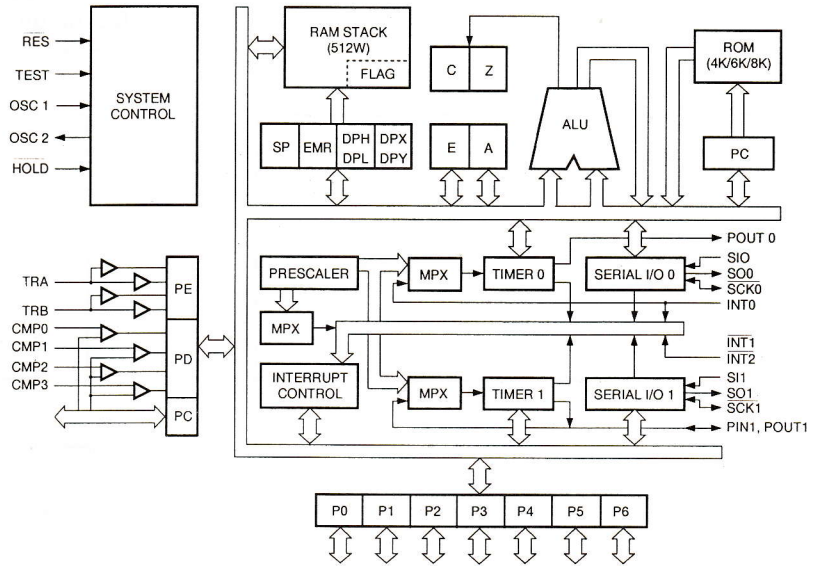
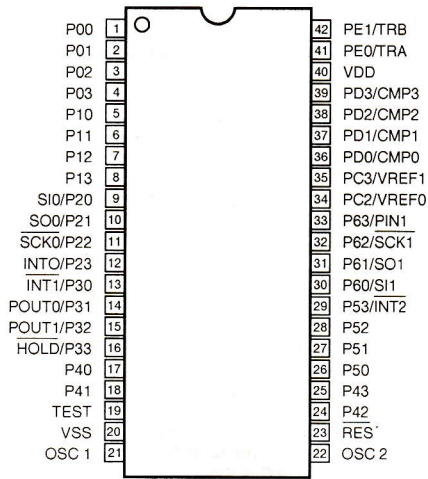


Fig. 4

■ **μ-COM DATA**

IC401 : LC66304A
4bit μ-COM



No.	Port	I/O	Name	Function
1	P00		—	N. C.
2	P01	I	IPSEL	Model Detect
3	P02	O	MUTE	Mute
4	P03		—	N. C.
5	P10	O	PRY	Power Relay
6	P11	O	VM+	Main Volume Up
7	P12	O	VM-	
8	P13		—	N. C.
9	SI0/P20	O	4052B	Input Selector
10	SO0/P21	O	4052A	
11	SCK0/P22		—	N. C.
12	INT0/P23		—	
13	INT1/P30	I	REM	Remote Control
14	POUT0/P31	O	TMON1	Tape 1 Monitor
15	POUT1/P32	O	TMON2	Tape 2 Monitor
16	HOLD/P33	I	HOLD	Hold
17	P40	O	PLED	Power LED
18	P41	O	STBY	Standby LED
19	TEST		TEST	GND
20	Vss		Vss	
21	OSC1	I	OSC1	Clock (4MHz)

No.	Port	I/O	Name	Function
22	OSC2	O	OSC2	Clock (4MHz)
23	RES	I	RES	Reset Input
24	P42		—	N. C.
25	P43		—	
26	P50	O	PHLED	Input LED drive
27	P51	O	CDLED	
28	P52	O	TULED	
29	P53/INT2	O	AUXLED	
30	P60/SI1	O	T1LED	
31	P61/SO1	O	T2LED	
32	P62/SCK1	I	PRT	Protection
33	P63/PIN1	I	PSW	Power Switch
34	PC2/VREF0	O	D1	Key Digit
35	PC3/VREF1	O	D2	
36	PD0/CMP0	I	K1	Key Input
37	PD1/CMP1	I	K2	
38	PD2/CMP2	I	K3	
39	PD3/CMP3	I	K4	
40	VDD		VDD	+5V
41	PE0/TRA	I	G/NOTG	Market Detect (H : B, G / L : R)
42	PE1/TRB			Model Detect

AX-390

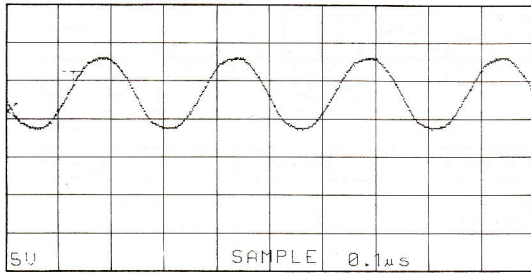
TEST POINT WAVEFORMS

Point ①

(Pin 21 of IC401)

V : 5V/div H : 0.1μsec/div

DC range 1 : 1 probe



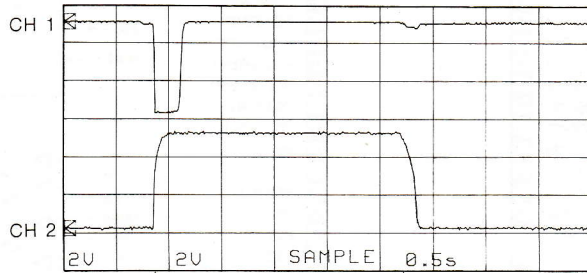
Point ②

(CH1 : Pin 23 of IC401) V : 2V/div (CH1)
 (CH2 : Collector of Q403) V : 5V/div (CH2)

H : 0.5sec/div

DC range 1 : 1 probe

(This waveform is not available by pushing the power switch ON and OFF.)

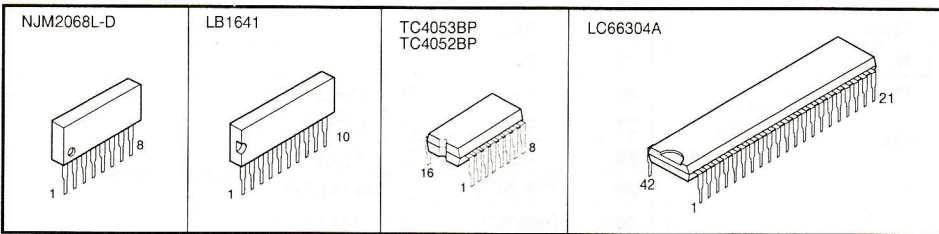


With the POWER ON, disconnect the A/C power cord. Reconnect the A/C power cord and the above waveforms will start.

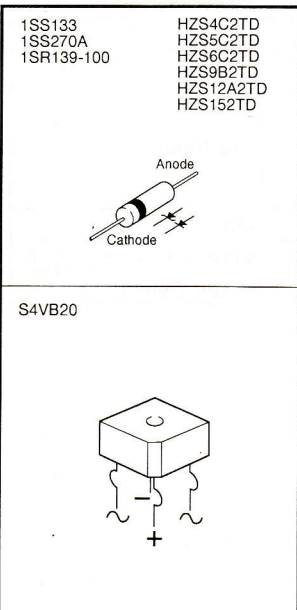
Disconnect the power cord from the AC outlet.

PIN CONNECTION DIAGRAM

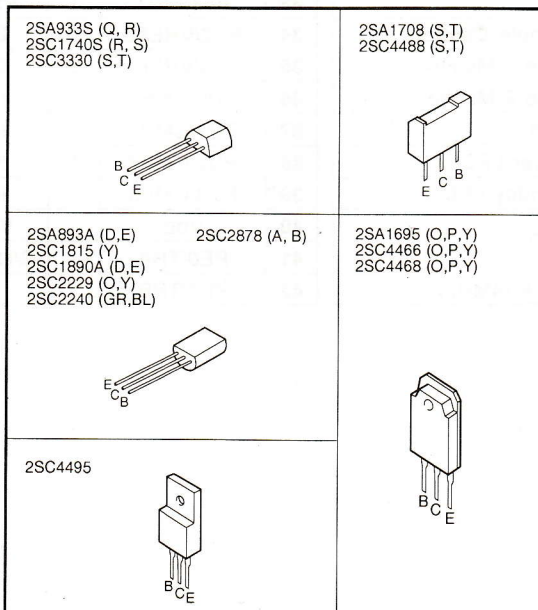
● ICs



● Diodes



● Transistors



PRINTED CIRCUIT BOARD (Foil side) / シート図(パターン側)

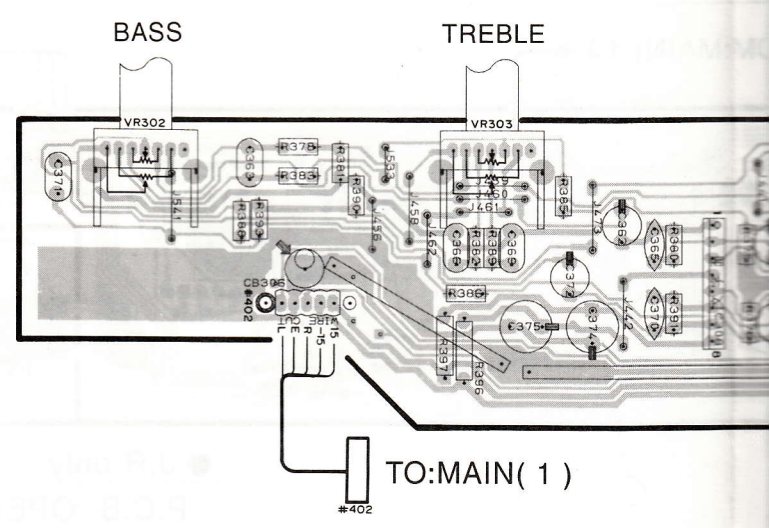
1

● Semiconductor Locations

Ref. No.	Location	Ref. No.	Location
IC301	C5	Q 301	D5
IC302	C5	Q 302	D5
IC303	D4	Q 303	E2
IC304	D4	Q 304	E2
IC305	D3		
IC306	D4		
IC307	F4		
IC308	D2		

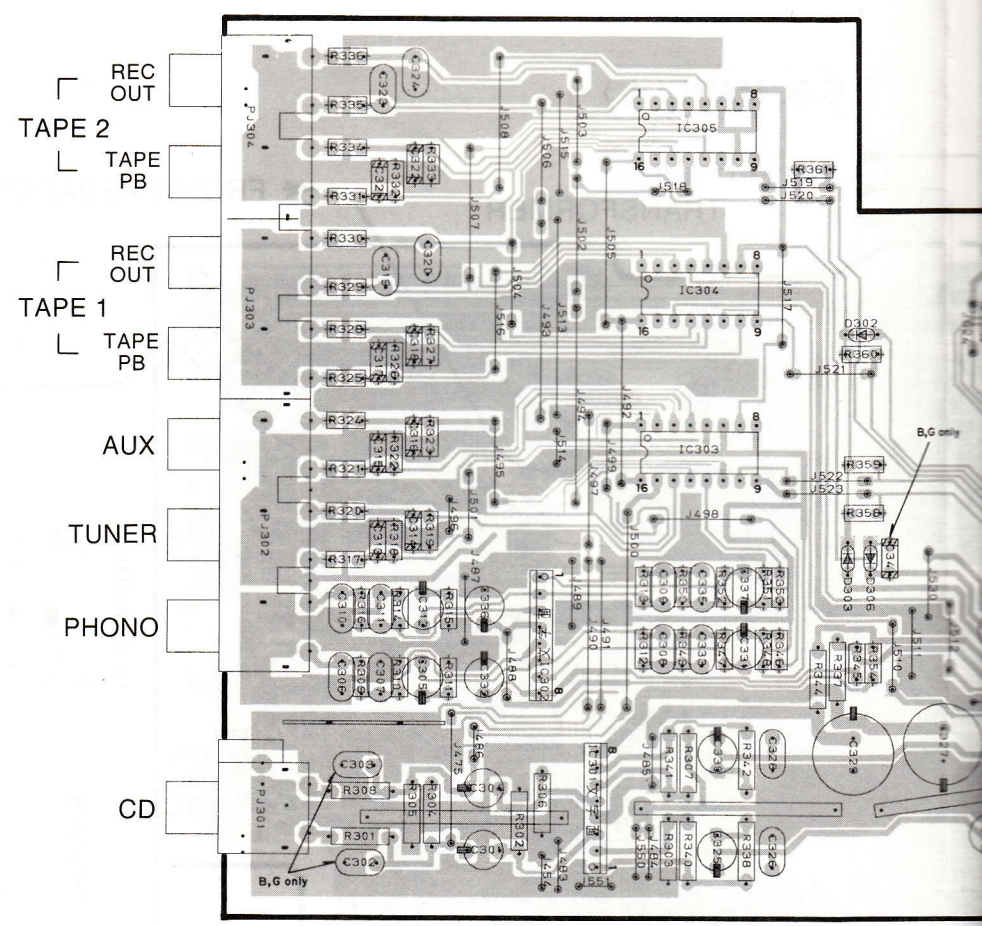
P.C.B. OPERATION

2



3

P.C.B. OPERATION (1)



4

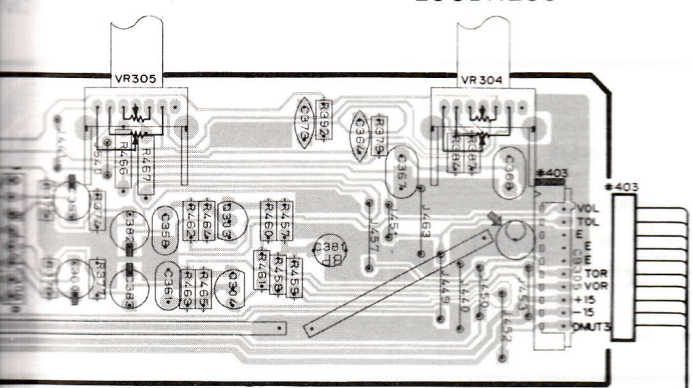
5

6

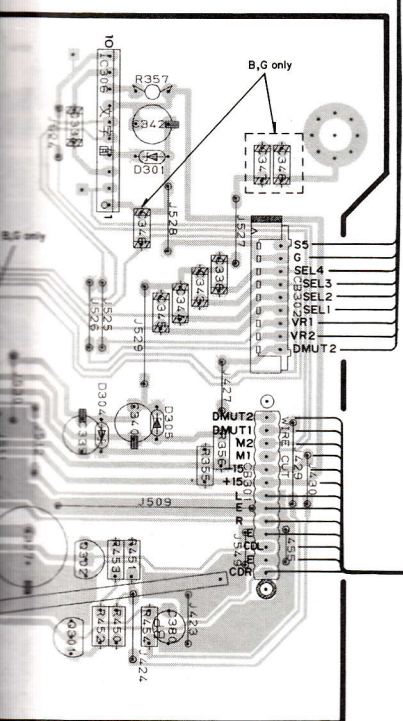
TION (3)

BALANCE

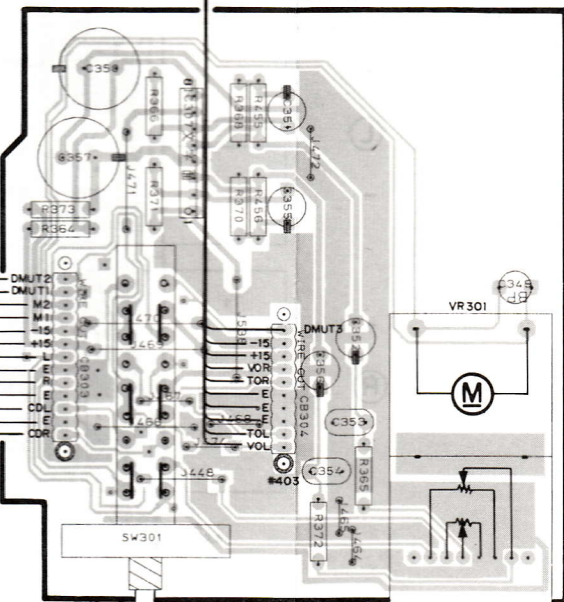
LOUDNESS



FROM: OPERATION (4)



P.C.B. OPERATION (2)



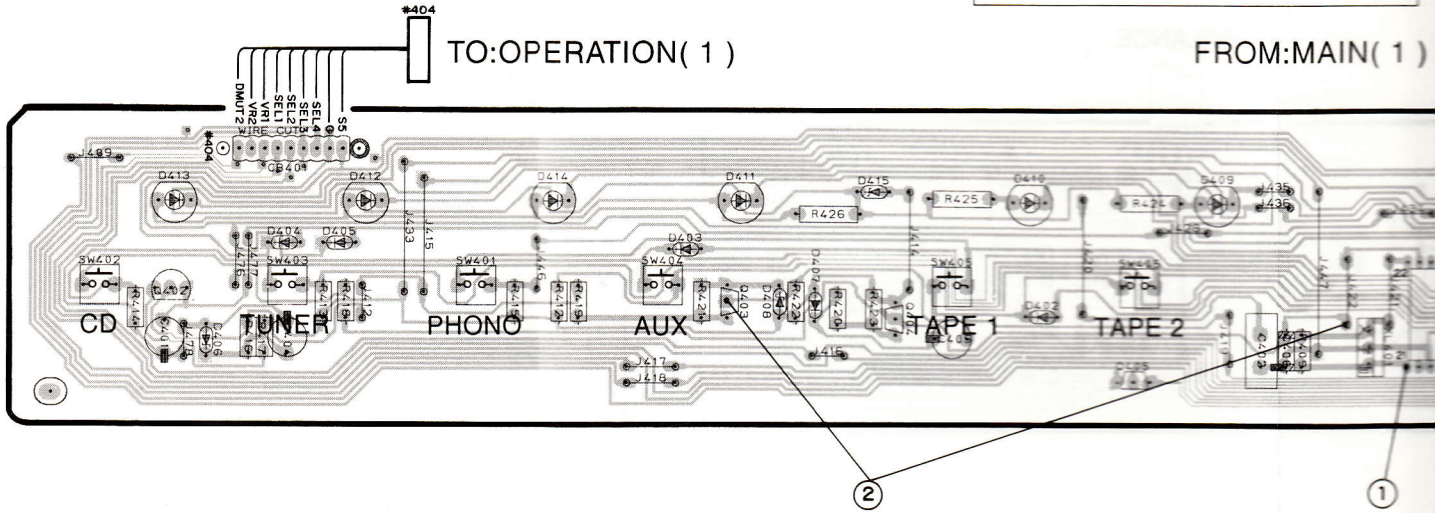
CD DIRECT AMP

VOLUME

PRINTED CIRCUIT BOARD (Foil side) / シート図(パターン側)

①~② : TEST POINT WAVEFORMS (See page 5) / 波形ポイント (5ページ参照)

P.C.B. OPERATION (4)

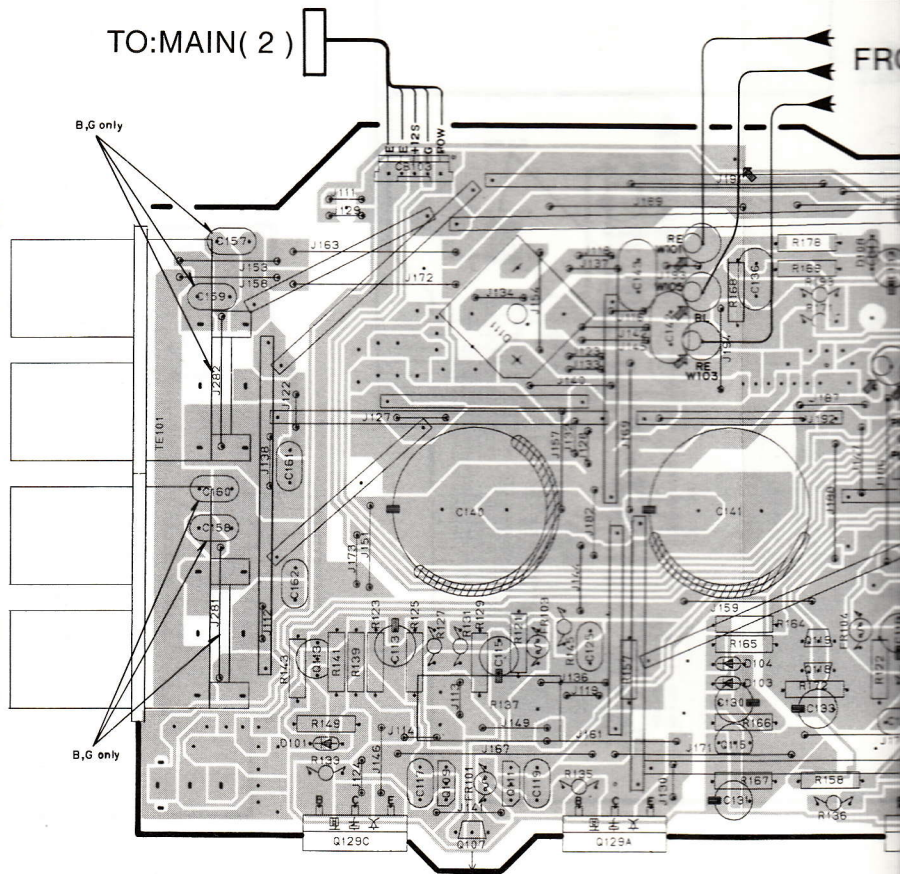


P.C.B.

● Semiconductor Locations

Ref. No.	Location
IC 401	E2
Q 101	F5
Q 102	F5
Q 103	F5
Q 104	F5
Q 105	F4
Q 106	F5
Q 107	D5
Q 108	E5
Q 109	D5
Q 110	E5
Q 111	D5
Q 112	E5
Q 113	C5
Q 114	E5
Q 115	E5
Q 116	E4
Q 117	E4
Q 118	E5
Q 119	E5
Q 121	F5
Q129A	D5
Q129C	C5
Q130A	E5
Q130C	F5
Q 131	F4
Q 132	F5
Q 133	E4
Q 134	F5
Q 401	E2
Q 402	A2
Q 403	C2
Q 404	C2
Q 405	D2
Q 406	F2

SPEAKERS

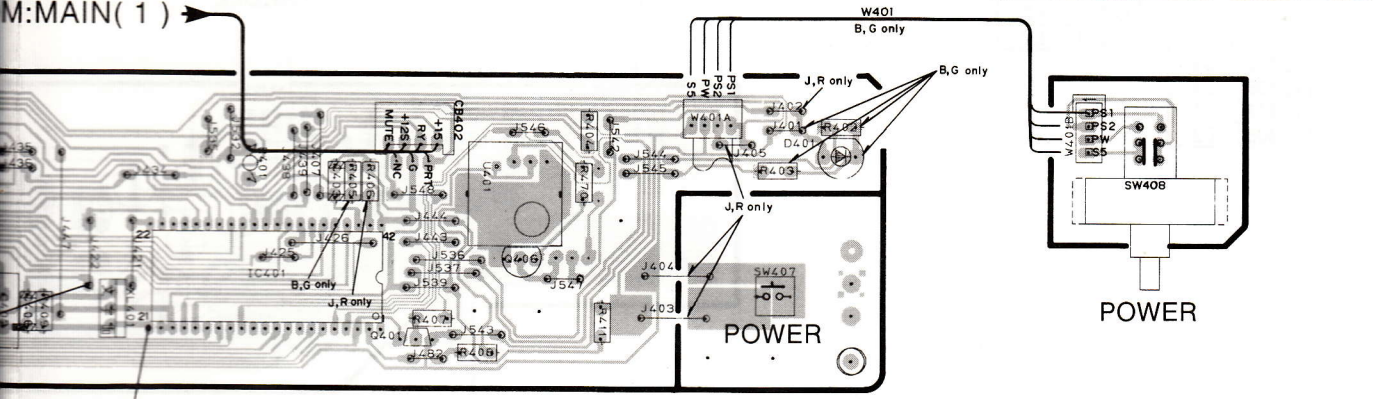


ON (4)

M:MAIN(1)

● B,G only

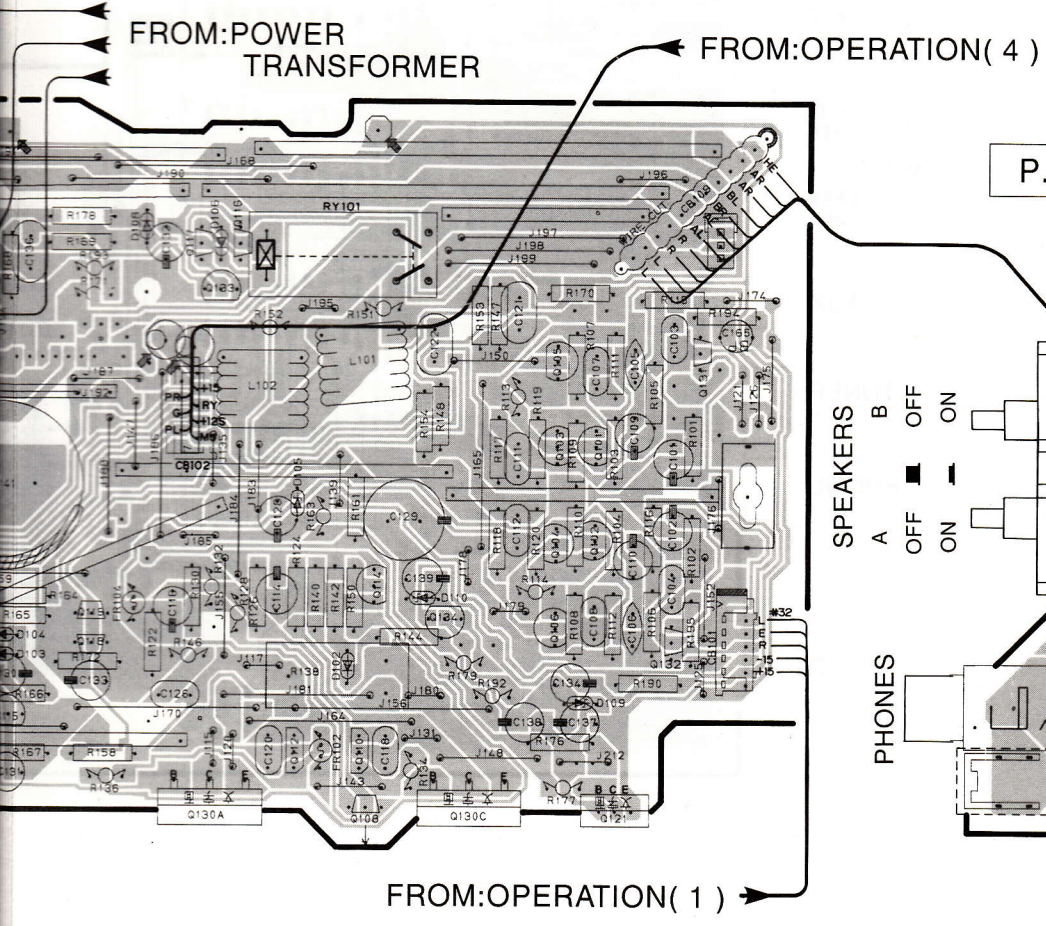
P.C.B. OPERATION (5)



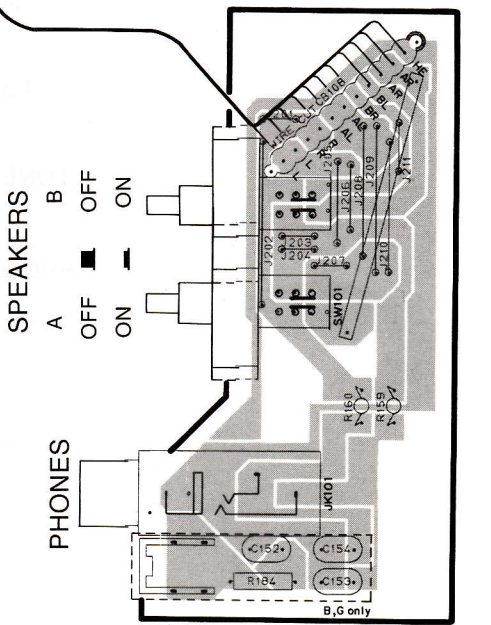
● J,R only

P.C.B. OPERATION (6)

P.C.B. MAIN (1)



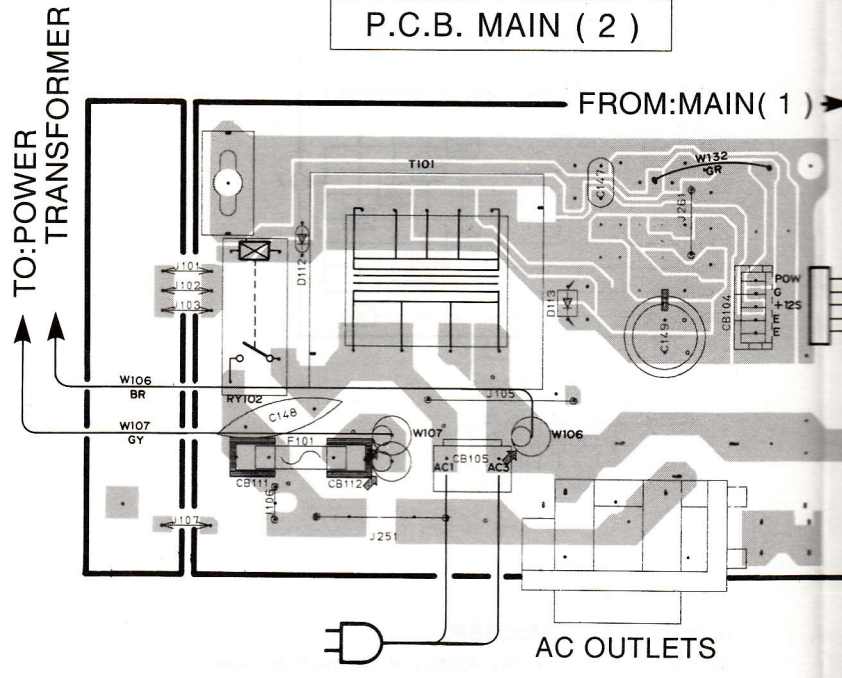
P.C.B. MAIN (3)



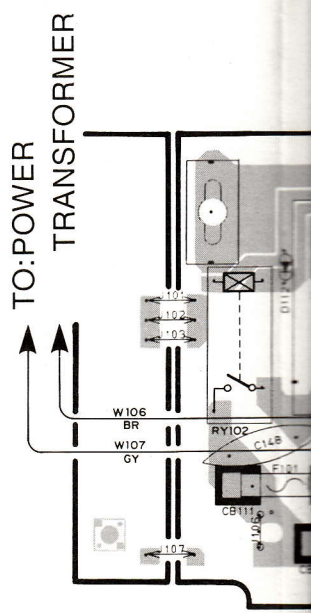
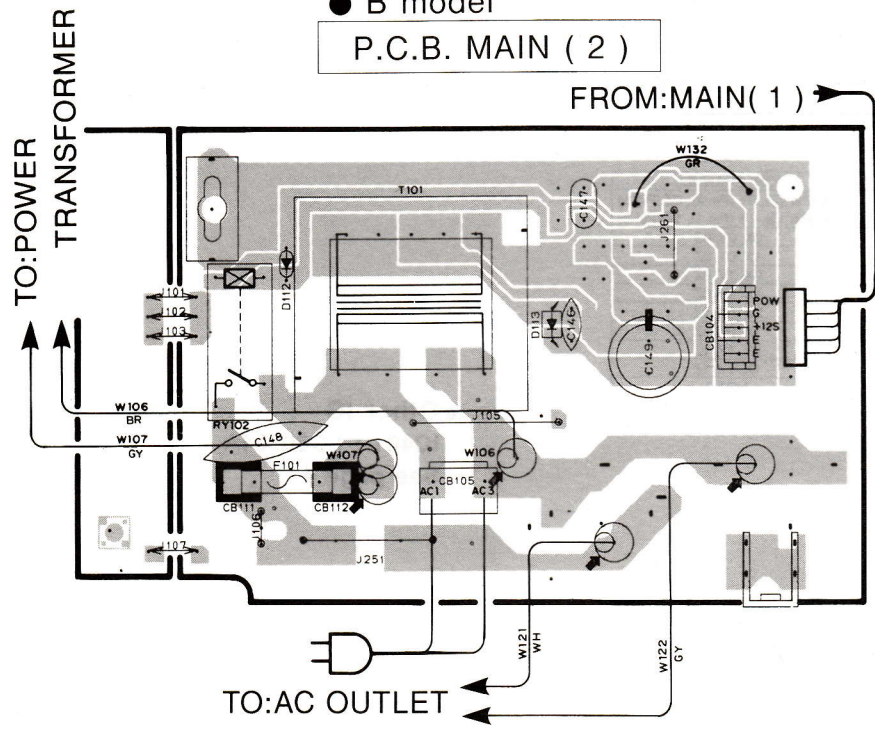
PRINTED CIRCUIT BOARD (Foil side) / シート図(パターン側)

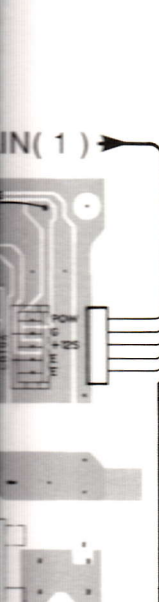
1
2
3
4
5
6

● J model
P.C.B. MAIN (2)

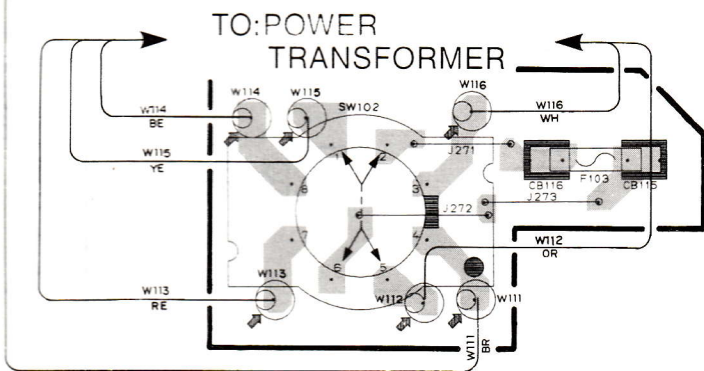
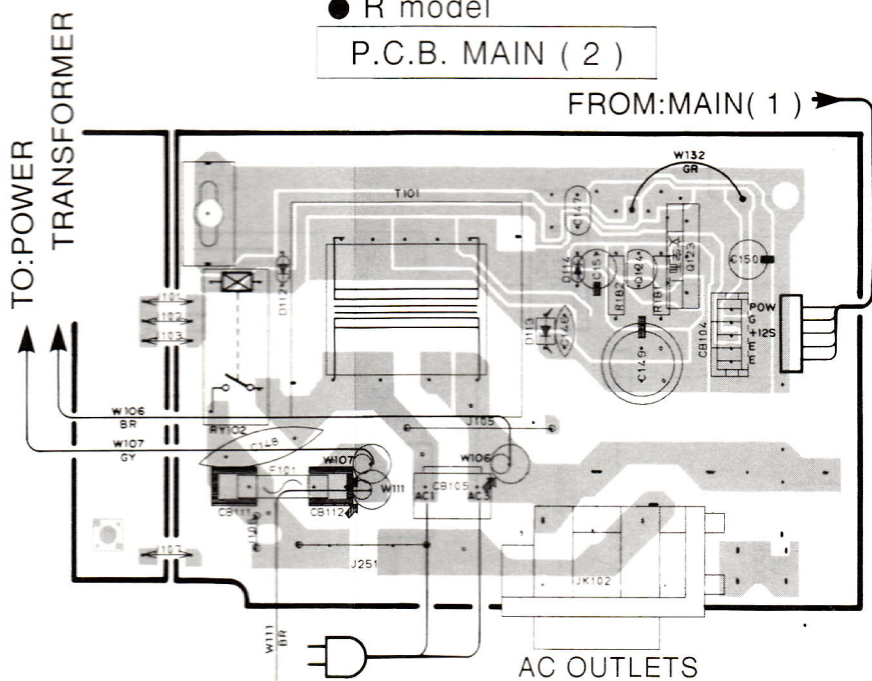


● B model
P.C.B. MAIN (2)





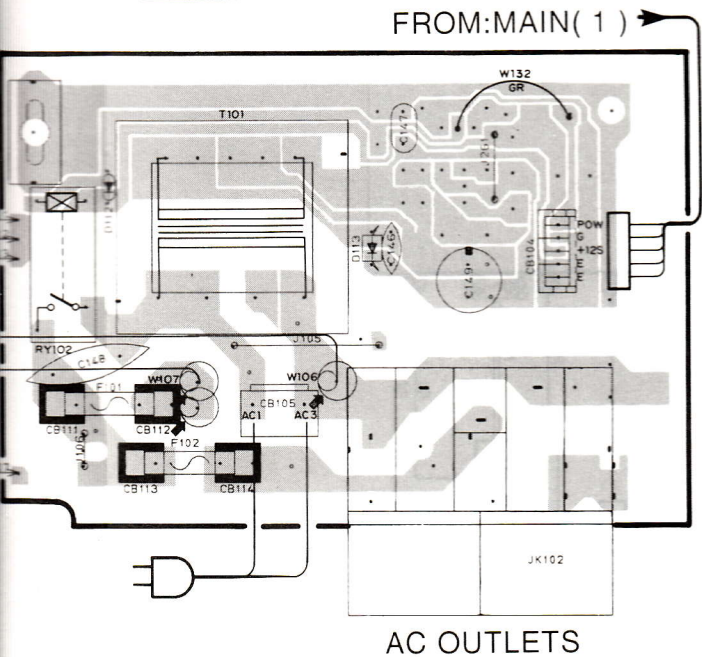
● R model
P.C.B. MAIN (2)



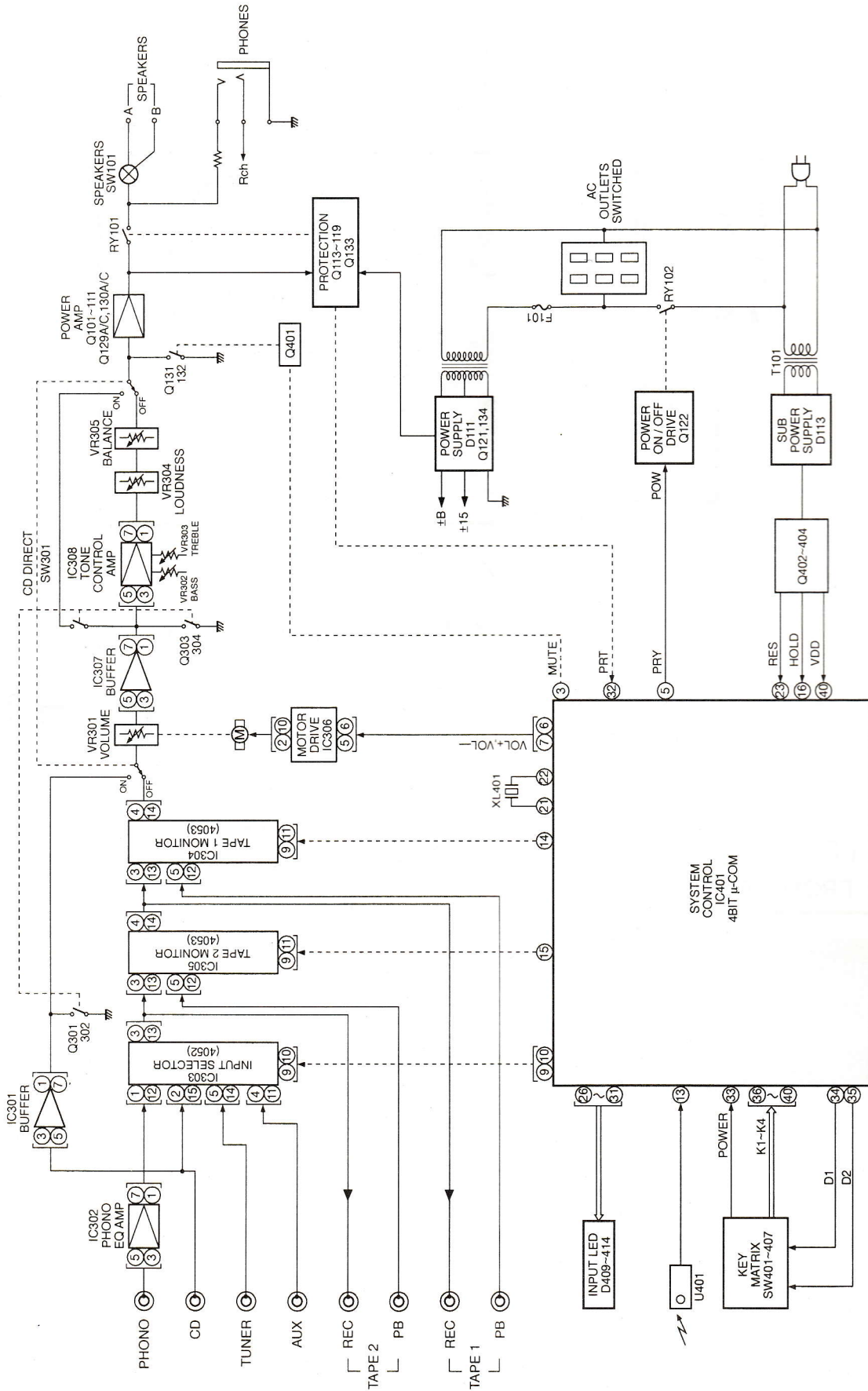
● R model
P.C.B. MAIN (4)

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

● G model
P.C.B. MAIN (2)

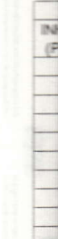


■ BLOCK DIAGRAM / ブロックダイアグラム



IC303
Dual

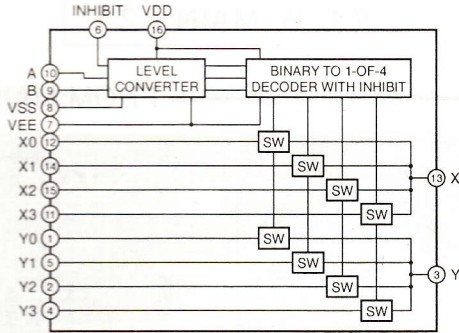
IC304
Triple



■ IC BLOCKS / ICブロック

IC303 : TC4052BP

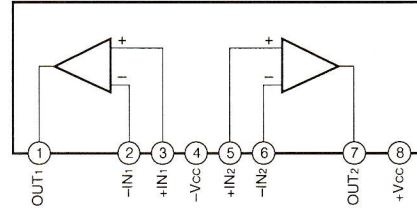
Dual 4 Channel Analog Multiplexers/Demultiplexers



INHIBIT	B	A	
0	0	0	0x, 0y
0	0	1	1x, 1y
0	1	0	2x, 2y
0	1	1	3x, 3y
1	X	X	NONE

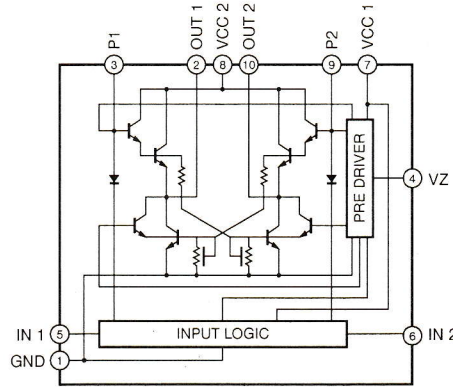
IC301, 302, 307, 308 : NJM2068L-D

Dual OP-Amp



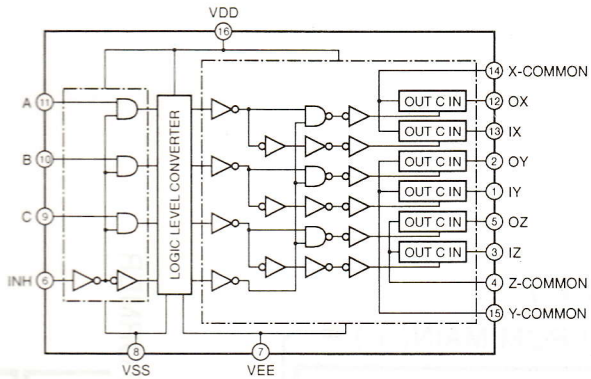
IC306 : LB1641

Motor Driver



IC304, 305 : TC4053BP

Triple 2-Channel Multiplexer/Demultiplexer



CONTROL INPUTS				"ON" CHANNEL
INHIBIT (Pin 6)	C (Pin 9)	B (Pin 10)	A (Pin 11)	0X (Pin 12), 0Y (Pin 2), 0Z (Pin 5) 1X (Pin 13), 1Y (Pin 1), 1Z (Pin 3)
L	L	L	L	0X, 0Y, 0Z
L	L	L	H	1X, 0Y, 0Z
L	L	H	L	0X, 1Y, 0Z
L	L	H	H	1X, 1Y, 0Z
L	H	L	L	0X, 0Y, 1Z
L	H	L	H	1X, 0Y, 1Z
L	H	H	L	0X, 1Y, 1Z
L	H	H	H	1X, 1Y, 1Z
H	.	.	.	NOTE

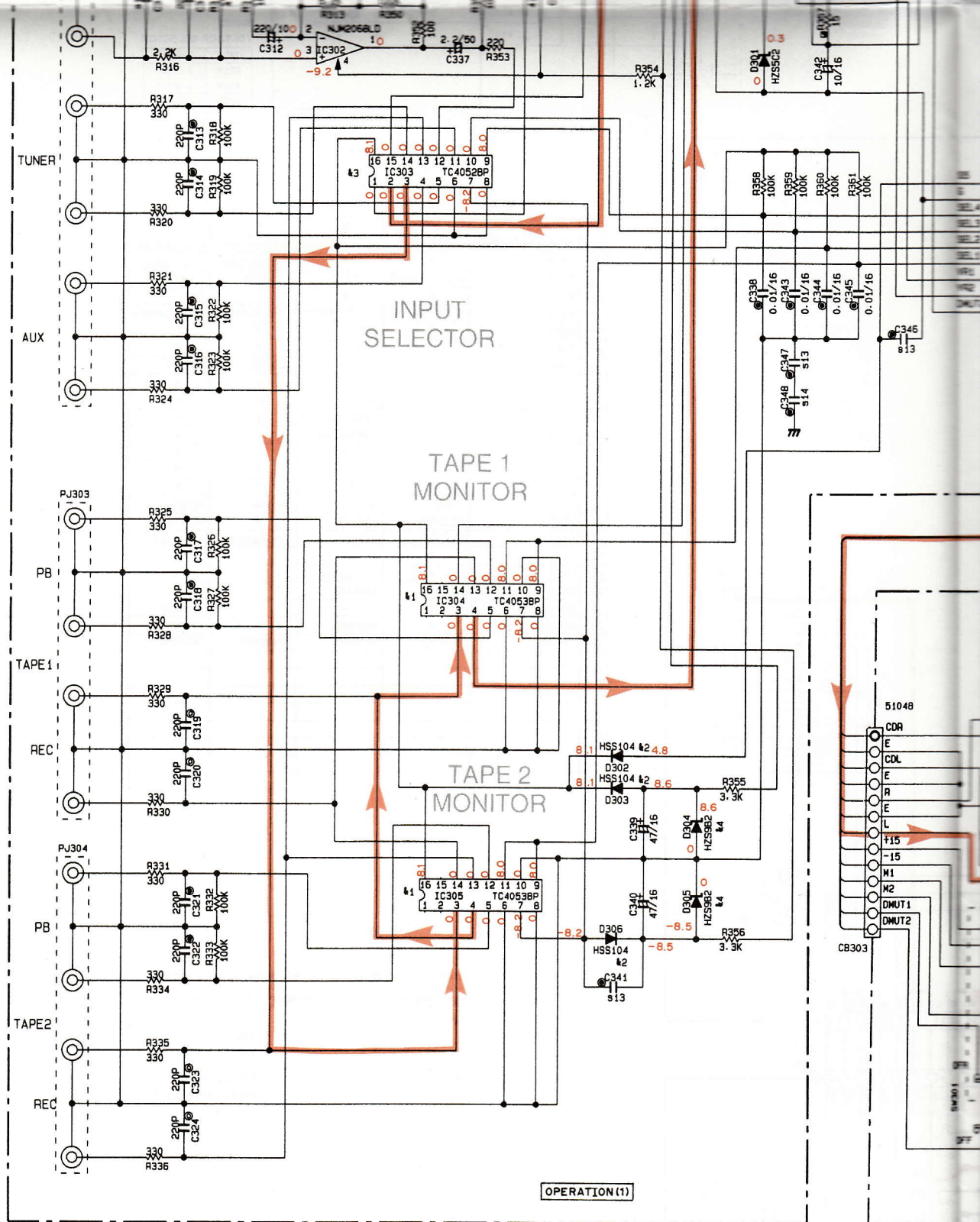
* Don't Care

● Other IC

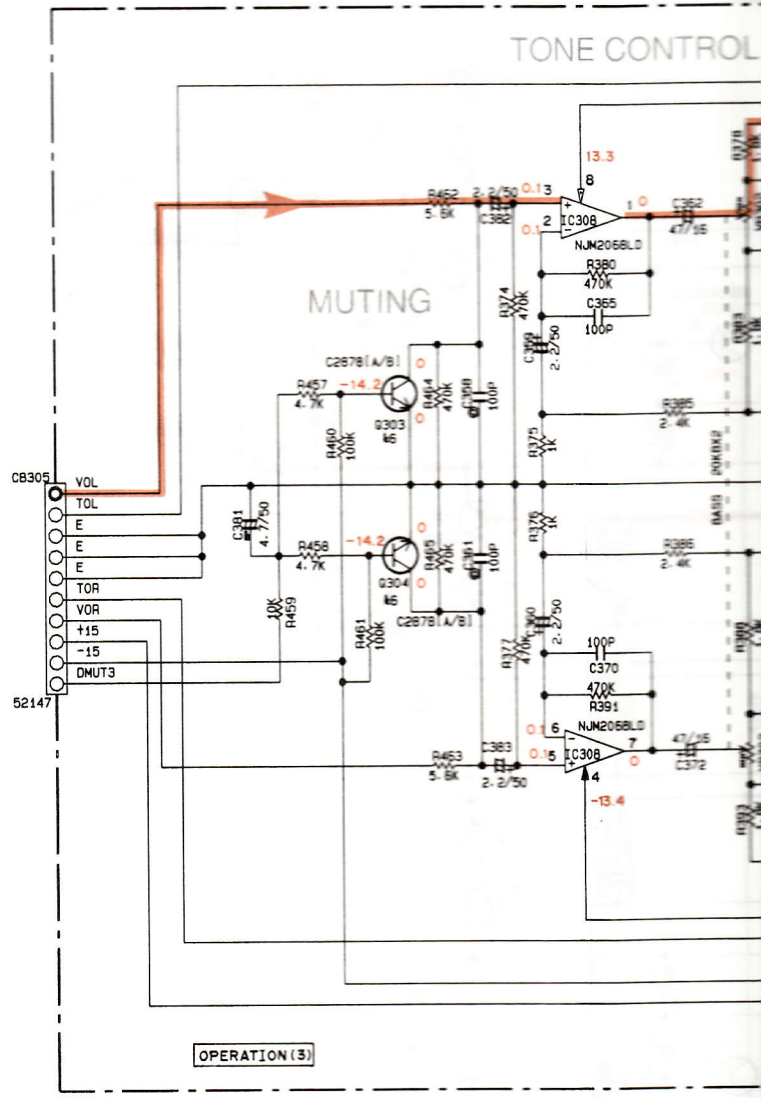
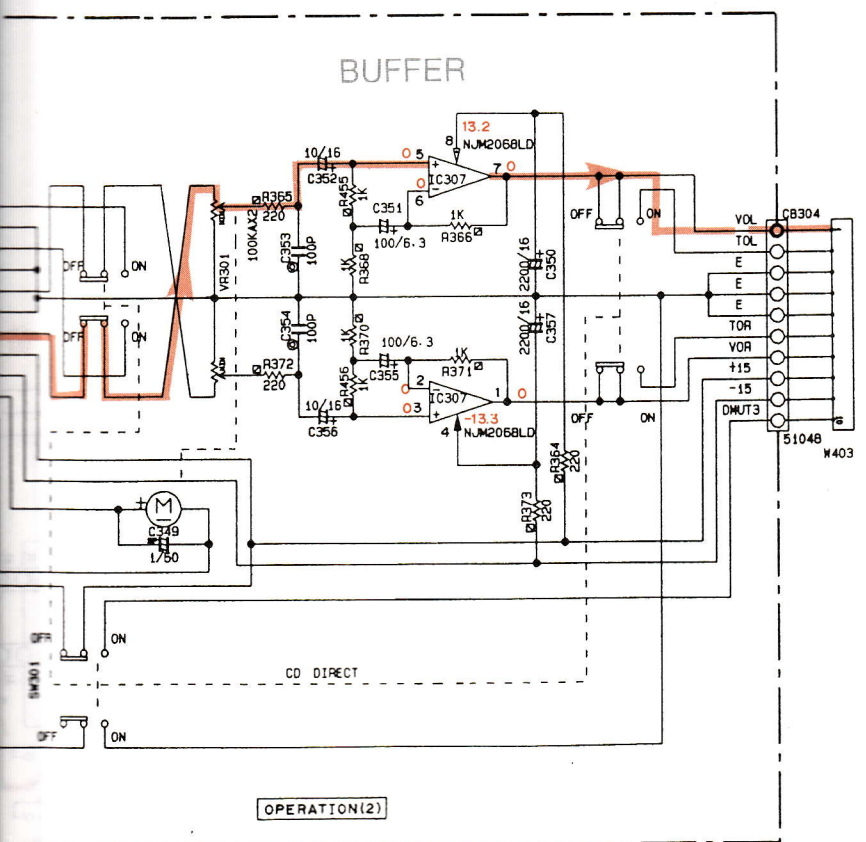
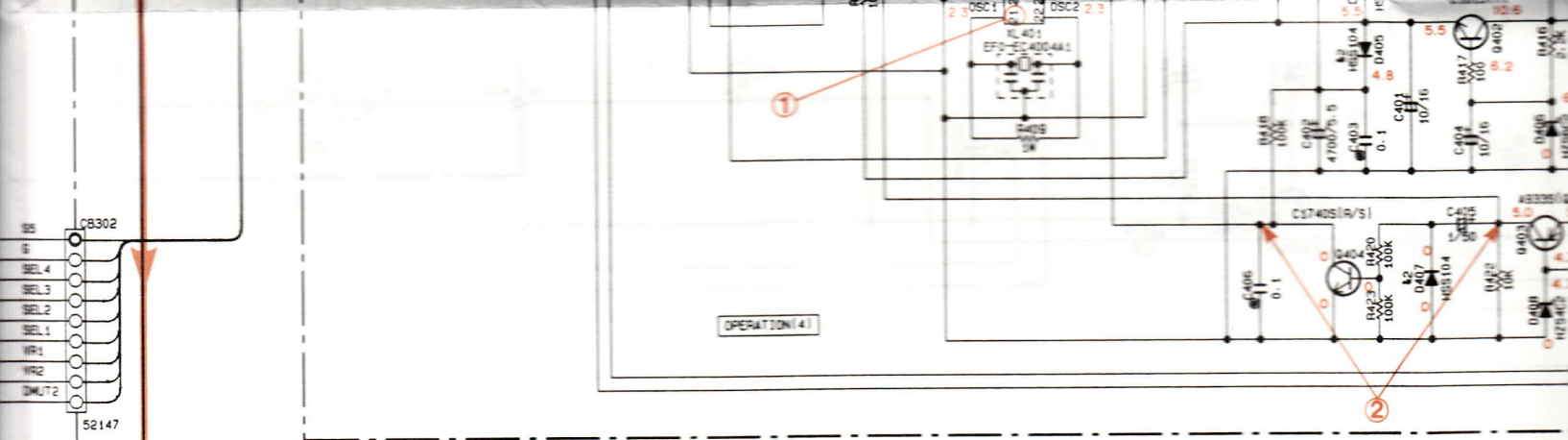
IC401 : LC66304A

See page 4

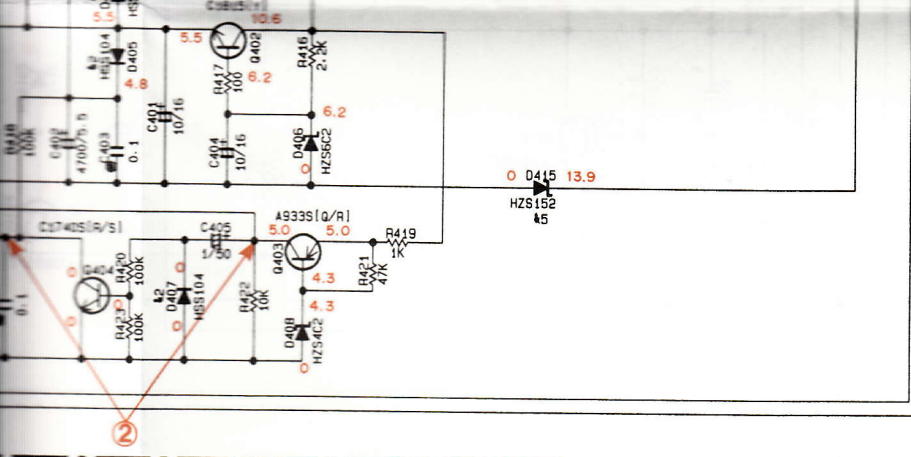
4
5
6
7
8



OPERATION (1)

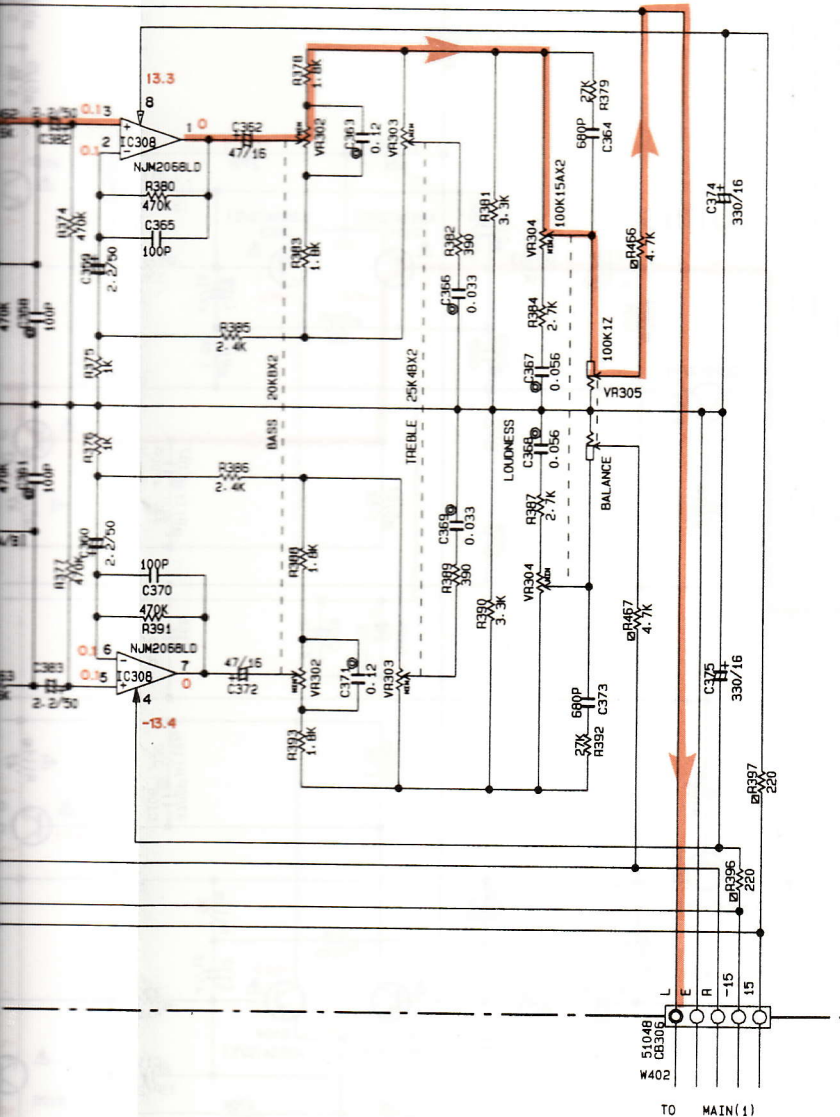


- 電圧は、内部抵抗10MΩの電圧計で
- △印のある部品は、安全性確保部品
パーツリストに記載されている部品
- 本回路図は標準回路図です。改良の



IC303	TC4052BP	UPD4052BC
D304-305	HZS9B2	MTZJ9.1B
D415	HZS152	MTZJ15C
Q301-304	2SC2878(A/B)	2SD1915F(S/T)

tone control



	J-R	B-G
1	R402	X 680
2	R403	1.2K 680
3	R405	X 100K
4	R406	100K X
5	J401	X 0
6	J402-405	0 X
7	SW408	X VT98540
8	SW407	VG39290 X
9		
10	W401	X VU39190
11		
12	C306-310	X 220P
13	C341, 346, 347	X 0.1
14	C348	X 100P
15		

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	//
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	
⊙	CERAMIC TUBULAR CAPACITOR	
⊚	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⊖	MICA CAPACITOR	
⊙	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

RESISTOR

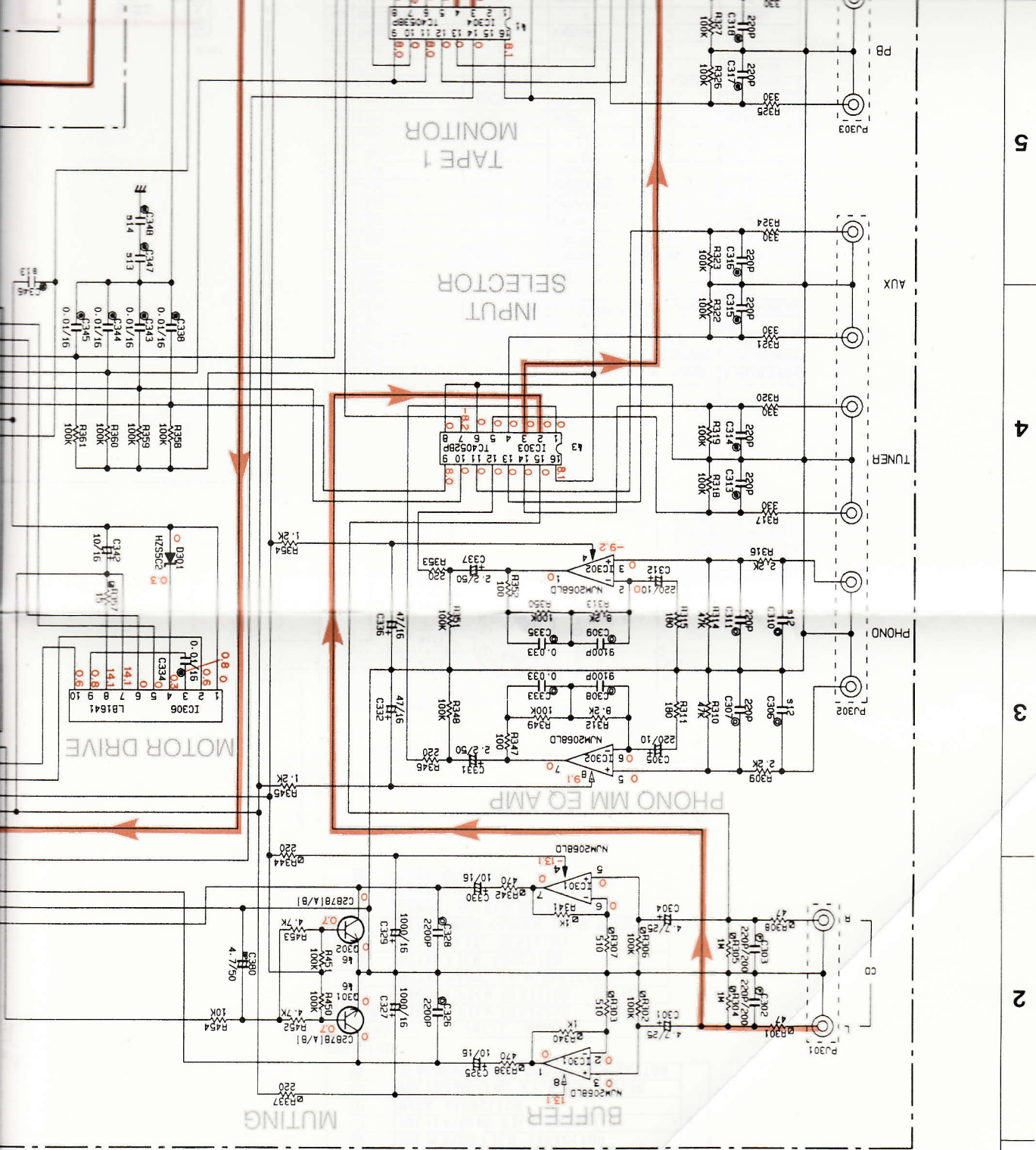
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
▣	METAL PLATE RESISTOR
▤	FIRE PROOF CARBON FILM RESISTOR
▥	CEMENT MOLDED RESISTOR
▦	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

- 電圧は、内部抵抗10MΩの電圧計で測定したものです。
- △印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- 本回路図は標準回路図です。改良のため予告なく変更することがございます。

- 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.

SCHEMATIC DIAGRAM (OPERATION) / 総回路図 (オプレーション)

①~② : TEST POINT WAVEFORMS (See page 5) / 波形ポイント (5ページ参照)



1

2

3

4

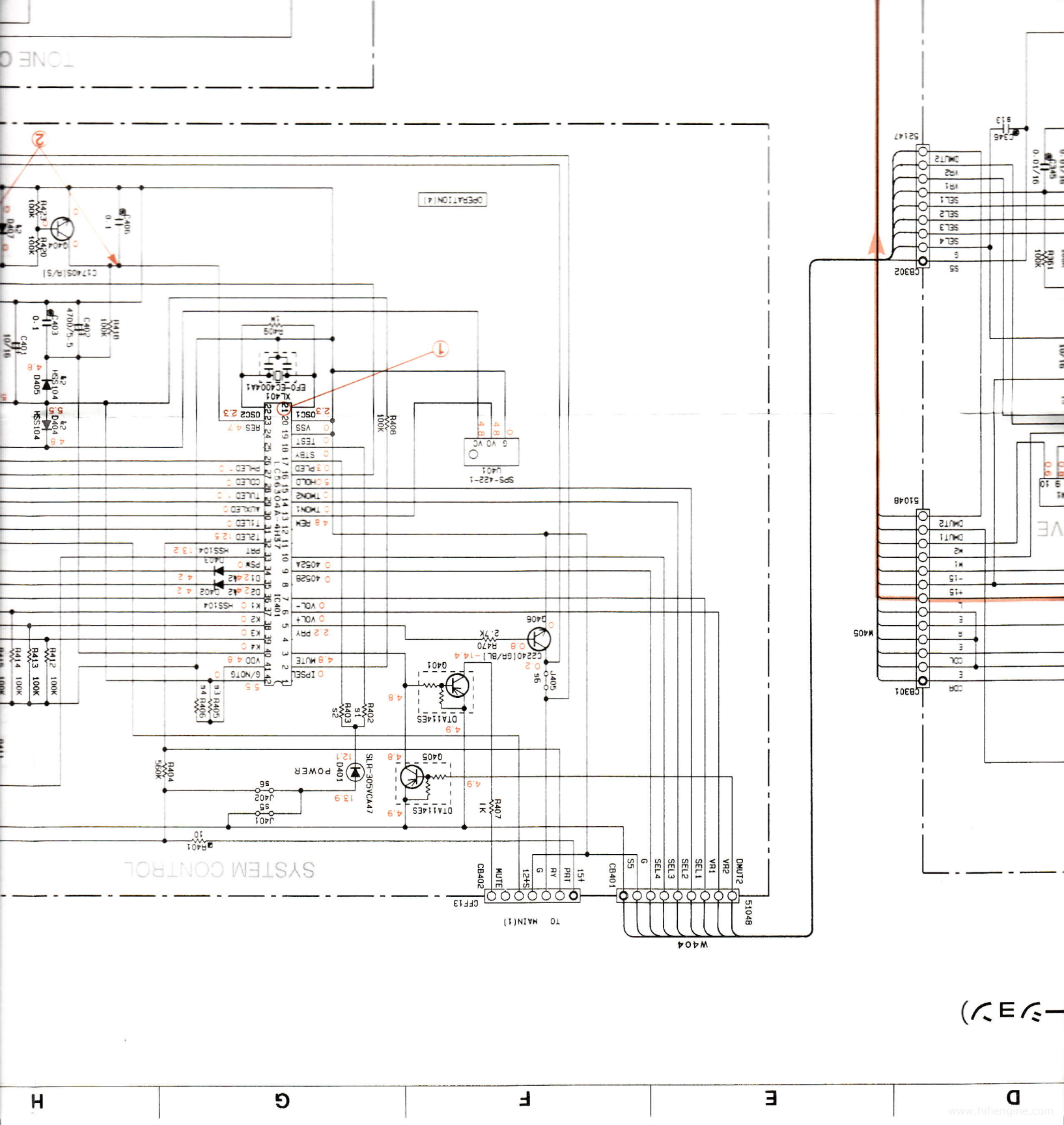
5

D

C

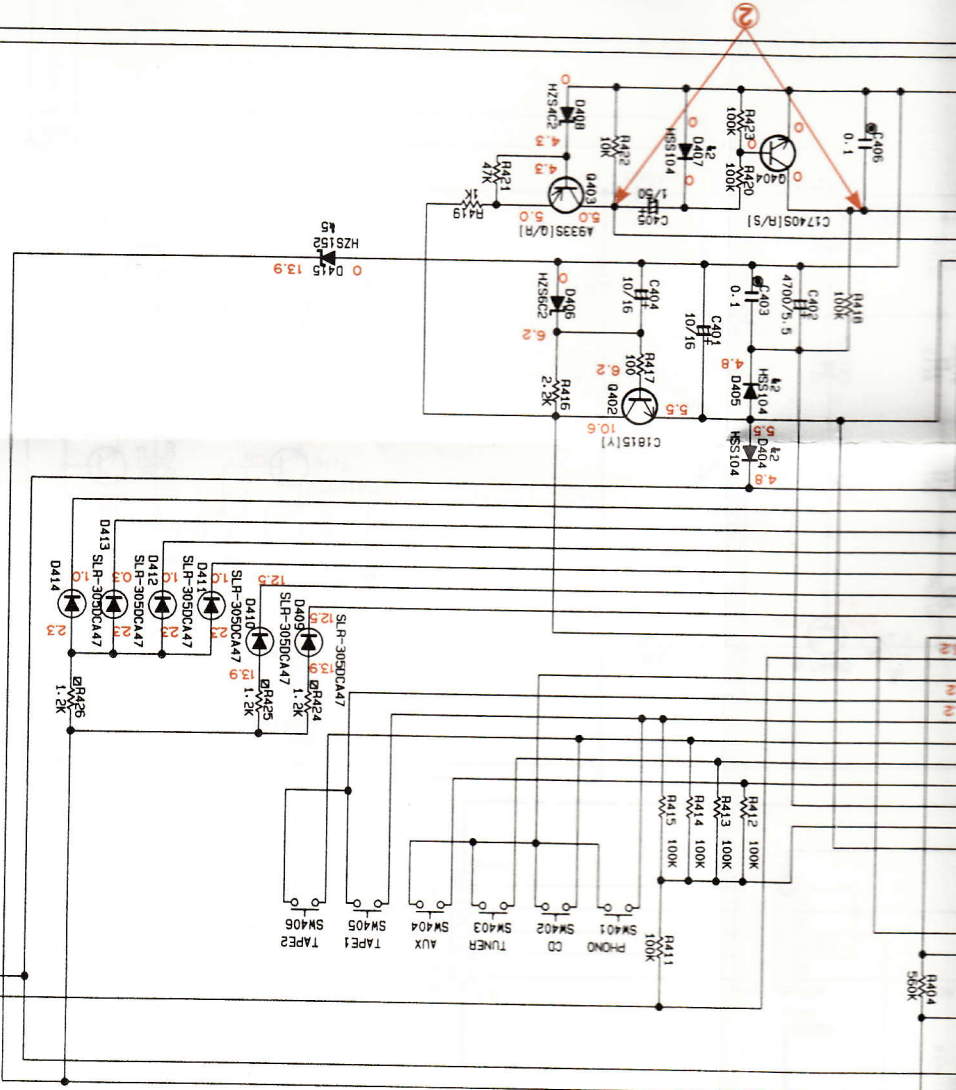
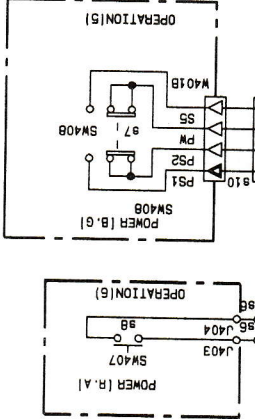
B

A



Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
K1	IC304.305	TC4053BP
K2	D302.303.306	HSS104
	402-405.407	SS133
		SS176
K3	IC303	TC4052BP
		UPD4052BC
K4	D304.305	HZS982
		WTZJ9.1B
K5	D415	HZS152
		WTZJ15C
K6	D301-304	2SC2078(A/B)
		2SD1915F(S/T)



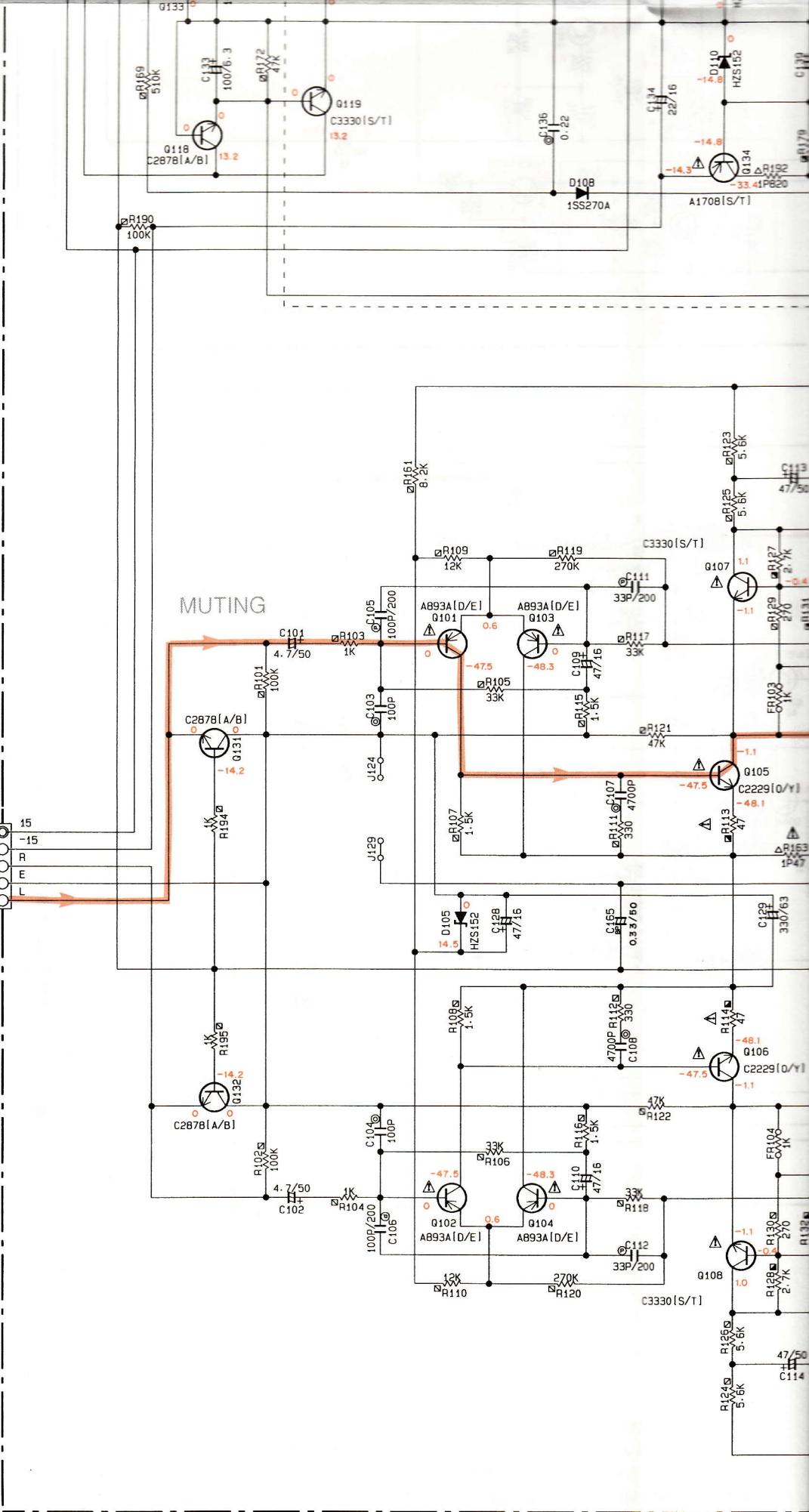
3	PA05	X	1.2K	5B0	100K
2	PA03	X	1.2K	5B0	
1	PA02	X		5B0	
9	J.R			B.5	

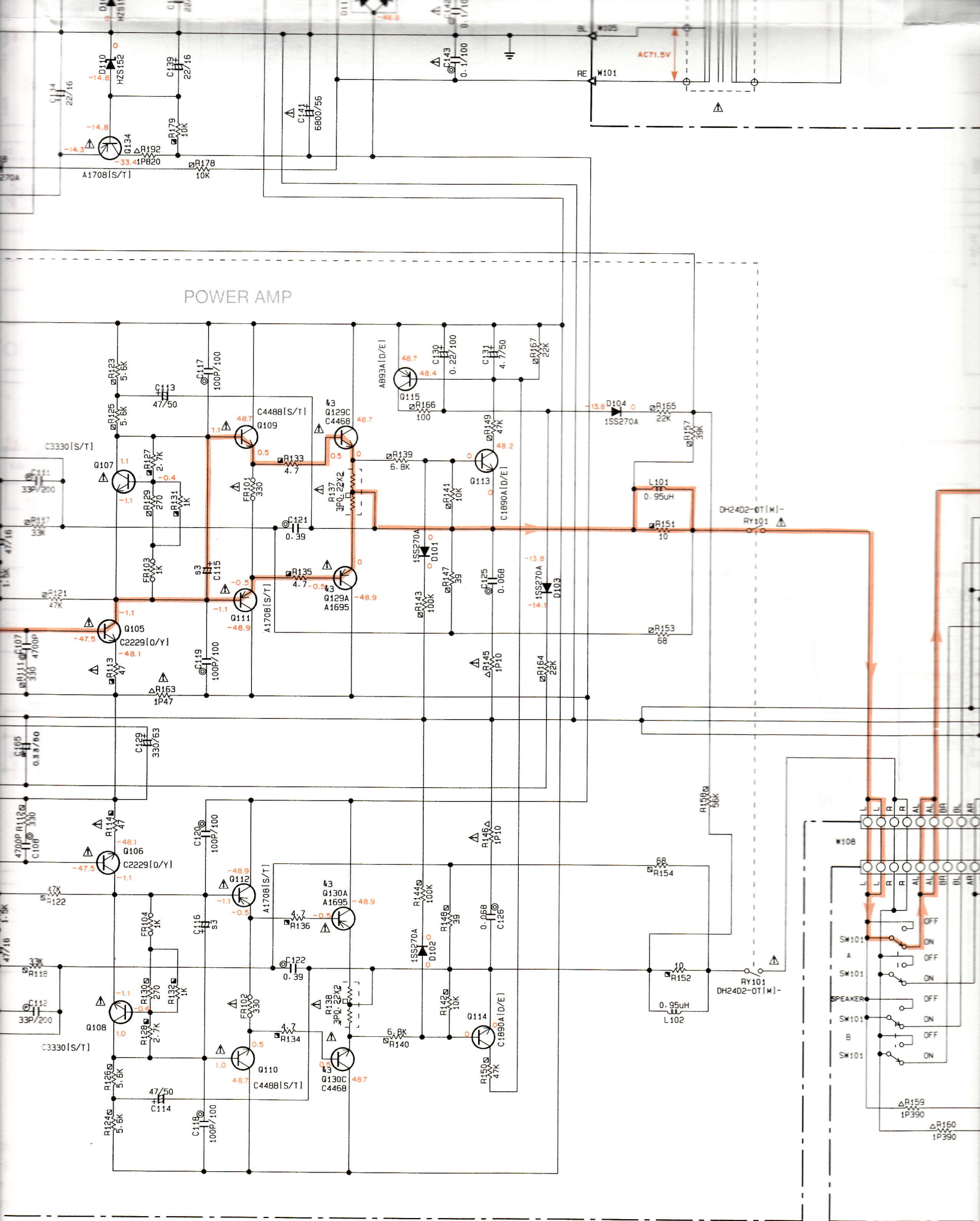
TONE CONTROL

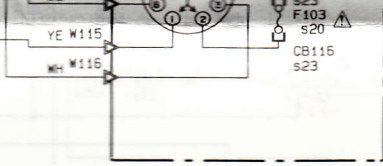
NTROL

4
5
6
7
8

TO OPERATION(3)
CB101
15
-15
P
E
L
52147

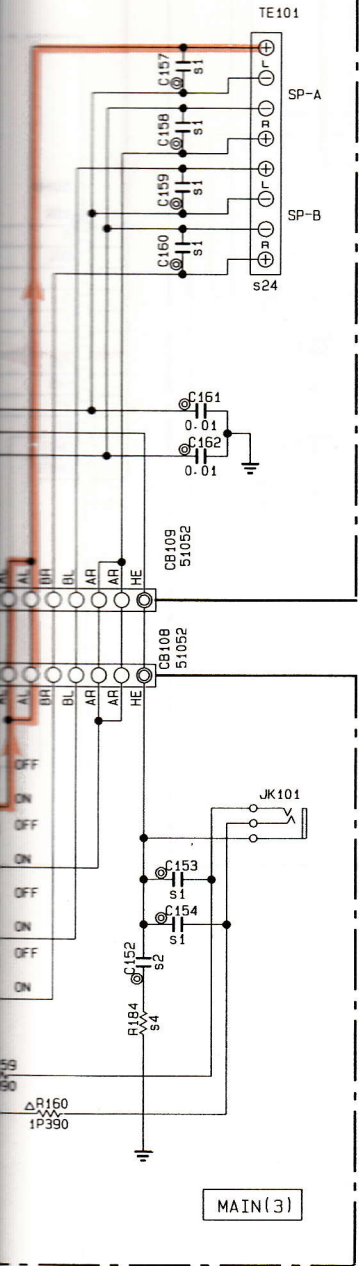






SW102 VOLTAGE SELECTOR	
240V	1-2/5-6
220V	2-3/6-7
110V	3-4/7-8
120V	4-5/8-1

		J	R	B	G
s1	C153-154-157-160	X	X	0.01(VE32480)	0.01(VE32480)
s2	C152	X	X	0.01(UA35410)	0.01(UA35410)
s3	C115-116	0.1(VI55060)	47/16	47/16	47/16
s4	R184	X	X	2-2	2-2
s5	C148	0.01(FI41410)	0.01(FI41410)	0.01(VU46630)	0.01(VU46630)
s6	R182	X	18K	X	X
s7	R181	X	100	X	X
s8	C149	330/25	330/63	330/25	330/25
s9	C150	X	100/16	X	X
s10	C151	X	10/16	X	X
s11	Q123	X	C4466[O/P/Y]	X	X
s12	Q124	X	C1890A[D/E]	X	X
s13	D114	X	HZS12A2	X	X
s14	J251	0	X	0	0
s15	J251	0	0	0	X
s16	T101	XC542	XC082	XC084	XC084
s17	JK102	VI32750	VI32750	X	VP72860
s18	F101	5A125V	4A125V	T1.6A250V	T1.6A250V
s19	F102	X	X	X	T2.5A250V
s20	F103	X	T1.6A250V	X	X
s21	SW102	X	VA96180	X	X
s22	CB113-114	X	X	X	VP20650
s23	CB115-116	X	VP20650	X	X
s24	TE101	VC31370	VC31370	VK50620	VK50620



Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
△2	D106-112	HSS104 1SS133 1SS176
△3	Q129-130	A1695/C4466[O/P/Y] A1633/C4278[D/E/F]

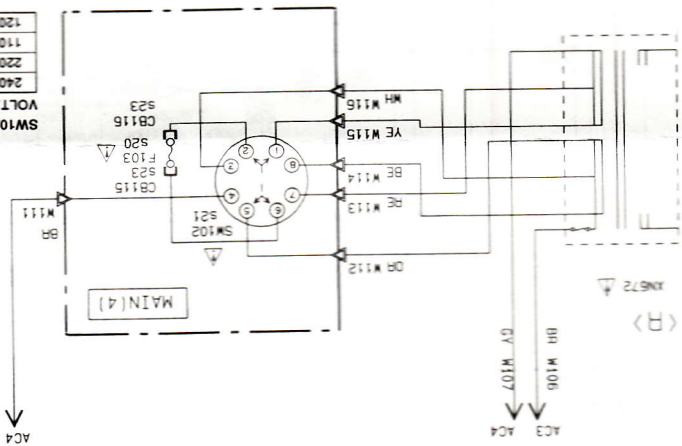
- 電圧は、内部抵抗10MΩの電圧計で測定したものです。
- △印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- 本回路図は標準回路図です。改良のため予告なく変更することがございます。

- * 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.

51	CR52-154-157-160	X	X	J	B	S
52	CR52	X	X			
53	CR54-195	X	X			
54	CR54	X	X			
55	CR48	0.01(F144410)	0.01(F144410)	0.01(V46330)	0.01(V46330)	X
56	CR52	X	X			

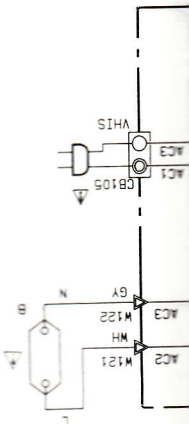
240V	1-25-6
220V	2-36-7
110V	3-47-8
120V	4-58-1

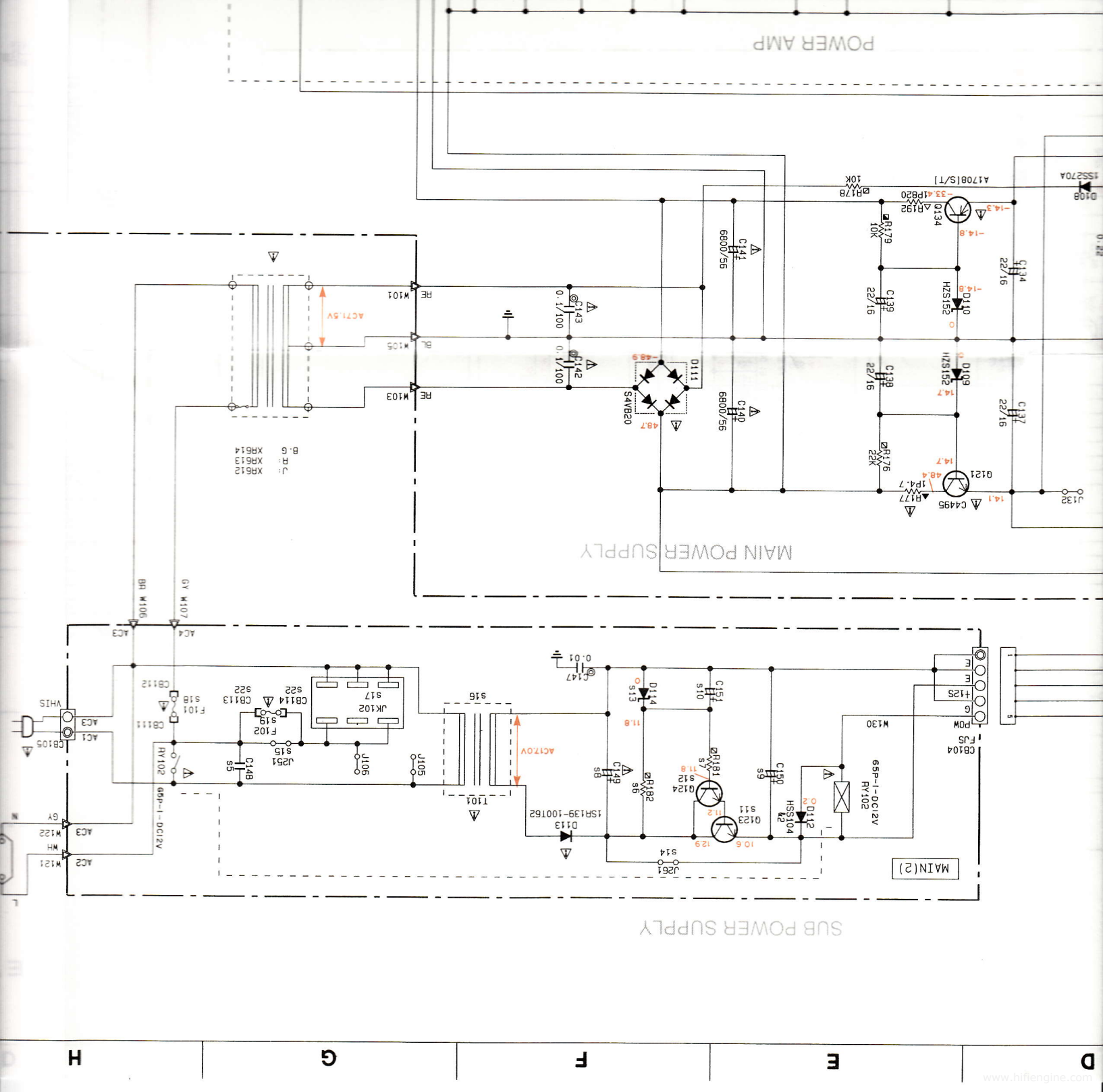
VOLTAGE SELECTOR
SW102



REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
NO MARK	CARBON FILM RESISTOR (P=10)
▽	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
⊗	METAL PLATE RESISTOR
⊠	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊙	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
●	CERAMIC TUBULAR CAPACITOR
⊙	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
①	MICA CAPACITOR
⊖	POLYPROPYLENE FILM CAPACITOR
⊕	SEMICONDUCTIVE CERAMIC CAPACITOR





SUB POWER SUPPLY

MAIN POWER SUPPLY

POWER AMP

U: XR612
B: G: XR614
P: XR613

ACT 7.5V

MAIN(2)

AX-390

■ SCHEMATIC DIAGRAM (MAIN) / 総回路図 (メイン)

1

2

3

4

5

A B C D

www.hifisengine.com

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.GE	: 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.

P.C.B. MAIN

AX-390

Schm Ref.	PART NO.	Description
* VU314100	P. C. B.	MAIN(R)
* VU314200	P. C. B.	MAIN(B)
* VU314300	P. C. B.	MAIN(G)
CB101	VK024900	CN. BS. PIN 5P
CB102	VR357800	CN. BS. PIN 7P
CB103	VP768100	CN. BS. PIN 5P
* CB104	VP768200	CN 5P
CB105	VG879900	CN. BS. PIN 2P
CB108	VQ585300	CN. BS. PIN 11P
CB109	VQ585300	CN. BS. PIN 11P
CB111	VP206500	HOLDER. FUS EYF-52BC
CB112	VP206500	HOLDER. FUS EYF-52BC
CB113	VP206500	HOLDER. FUS EYF-52BC(G)
CB114	VP206500	HOLDER. FUS EYF-52BC(G)
CB115	VP206500	HOLDER. FUS EYF-52BC(R)
CB116	VP206500	HOLDER. FUS EYF-52BC(R)
C101	Vi377400	C. EL 4.7uF 63V
C102	Vi377400	C. EL 4.7uF 63V
C103	UA652100	C. MYLAR 100pF 50V
C104	UA652100	C. MYLAR 100pF 50V
C105	VK533900	C. PP 100pF 200V
C106	VK533900	C. PP 100pF 200V
C107	UA253470	C. MYLAR 4700pF 50V
C108	UA253470	C. MYLAR 4700pF 50V
C109	VG291200	C. EL 47uF 50V
C110	VG291200	C. EL 47uF 50V
C111	VQ245400	C. PP 33pF 200V
C112	VQ245400	C. PP 33pF 200V
C113	VG291200	C. EL 47uF 50V
C114	VG291200	C. EL 47uF 50V
C115	VE742600	C. EL 47uF 25V(RBG)
C115	VE742600	C. EL 47uF 25V(RG)
C116	VE742600	C. EL 47uF 25V(RG)
C116	VE742600	C. EL 47uF 25V(RBG)
C117	VR325000	C. MYLAR 100pF 100V
C118	VR325000	C. MYLAR 100pF 100V
C119	VR325000	C. MYLAR 100pF 100V
C120	VR325000	C. MYLAR 100pF 100V
C121	VK399200	C. MYLAR. ML 0.39uF 50V
C122	VK399200	C. MYLAR. ML 0.39uF 50V
C125	UA254680	C. MYLAR 0.068uF 50V
C126	UA254680	C. MYLAR 0.068uF 50V
C128	VG291200	C. EL 47uF 50V
C129	VK699400	C. EL 330uF 63V
C130	UJ895220	C. EL 0.22uF 100V
C131	Vi377400	C. EL 4.7uF 63V
C132	VF760000	C. EL 100uF 10V
C133	VF760000	C. EL 100uF 10V
C134	VG291000	C. EL 22uF 50V
C136	UA655220	C. MYLAR 0.22uF 50V
C137	VG291000	C. EL 22uF 50V
C138	VG291000	C. EL 22uF 50V
C139	VG291000	C. EL 22uF 50V

* New Parts

Schm Ref.	PART NO.	Description
△ C140	VR024000	C. EL 6800uF 56V
△ C141	VR024000	C. EL 6800uF 56V
△ C142	VR325400	C. MYLAR 0.1uF 100V
△ C143	VR325400	C. MYLAR 0.1uF 100V
C147	UA254100	C. MYLAR 0.01uF 50V
C148	Fi414100	C. CE. SAFTY 0.01uF VA-1(R)
* C148	VU466300	C. CE. SAFTY 0.01uF 400V(BG)
* C148	VU466300	C. CE. SAFTY 0.01uF 400V(G)
△ C149	VG289100	C. EL 330uF 25V(BG)
△ C149	VG289100	C. EL 330uF 25V(G)
C149	VK699400	C. EL 330uF 63V(R)
C150	VG288900	C. EL 100uF 25V(R)
C151	VG290900	C. EL 10uF 50V(R)
C152	UA254100	C. MYLAR 0.01uF 50V(BG)
C153	VE324800	C. MYLAR. ML 0.01uF 50V(BG)
C154	VE324800	C. MYLAR. ML 0.01uF 50V(BG)
C157	VE324800	C. MYLAR. ML 0.01uF 50V(BG)
C158	VE324800	C. MYLAR. ML 0.01uF 50V(BG)
C159	VE324800	C. MYLAR. ML 0.01uF 50V(BG)
C160	VE324800	C. MYLAR. ML 0.01uF 50V(BG)
C161	UA254100	C. MYLAR 0.01uF 50V
C162	UA254100	C. MYLAR 0.01uF 50V
C165	VS949300	C. EL 0.33uF 50V
D101	VN008700	DIODE 1SS270A
D102	VN008700	DIODE 1SS270A
D103	VN008700	DIODE 1SS270A
D104	VN008700	DIODE 1SS270A
D105	VM975800	DIODE. ZENR HZS152TD 15V
D106	VD631600	DIODE 1SS133, 176, HSS104
D108	VN008700	DIODE 1SS270A
D109	VM975800	DIODE. ZENR HZS152TD 15V
D110	VM975800	DIODE. ZENR HZS152TD 15V
△ D111	iH001090	DIODE. BRG S4VB20 2.6A 200V
D112	VD631600	DIODE 1SS133, 176, HSS104
△ D113	VH801600	DIODE 1SR139-100
D114	VM975500	DIODE. ZENR HZS12A2TD 12V(R)
△ F101	KB003060	FUSE TL1.6A 250V(BG)
△ F101	KB003620	FUSE T4.0A 125V(R)
△ F102	KB000690	FUSE T2.5A 250V(G)
△ F103	KB003060	FUSE TL1.6A 250V(R)
△ FR101	VK188400	R. FUS 330 Ω 1/4W
△ FR102	VK188400	R. FUS 330 Ω 1/4W
FR103	VK189000	R. FUS 1K Ω 1/4W
FR104	VK189000	R. FUS 1K Ω 1/4W
JK101	LB301720	JACK. PHONE
△ JK102	Vi327500	OUTLET. AC 3P(R)
△ JK102	VP728600	OUTLET. AC 3P(G)
L101	VR906600	COIL 0.95uH
L102	VR906600	COIL 0.95uH
△ Q101	VP883000	TR 2SA893A D, E
△ Q102	VP883000	TR 2SA893A D, E
△ Q103	VP883000	TR 2SA893A D, E
△ Q104	VP883000	TR 2SA893A D, E

* New Parts

P.C.B. MAIN & OPERATION

Schm Ref.	PART NO.	Description	
△	Q105	VR325600	TR 2SC2229 O, Y
△	Q106	VR325600	TR 2SC2229 O, Y
△	Q107	VC218900	TR 2SC3330 R, S, T
△	Q108	VC218900	TR 2SC3330 R, S, T
△	Q109	VP872700	TR 2SC4488 S, T
△	Q110	VP872700	TR 2SC4488 S, T
△	Q111	VP872600	TR 2SA1708 S, T
△	Q112	VP872600	TR 2SA1708 S, T
	Q113	VP883100	TR 2SC1890A D, E
	Q114	VP883100	TR 2SC1890A D, E
	Q115	VP883000	TR 2SA893A D, E
	Q116	VC218900	TR 2SC3330 R, S, T
	Q117	VC218900	TR 2SC3330 R, S, T
	Q118	iC287820	TR 2SC2878 A, B
	Q119	VC218900	TR 2SC3330 R, S, T
△	Q121	VN996900	TR 2SC4495
	Q123	VP768300	TR 2SC4466 O, P, Y(R)
	Q124	VP883100	TR 2SC1890A D, E(R)
△	Q129A	iX630850	TR 2SA1695 O, P, Y
△	Q129C	iX630860	TR 2SC4468 O, P, Y
△	Q130A	iX630850	TR 2SA1695 O, P, Y
△	Q130C	iX630860	TR 2SC4468 O, P, Y
	Q131	iC287820	TR 2SC2878 A, B
	Q132	iC287820	TR 2SC2878 A, B
	Q133	iC287820	TR 2SC2878 A, B
△	Q134	VP872600	TR 2SA1708 S, T
△	R113	HV454470	R. CAR. FP 47 Ω 1/4W
△	R114	HV454470	R. CAR. FP 47 Ω 1/4W
	R127	HV456270	R. CAR. FP 2.7K Ω 1/4W
	R128	HV456270	R. CAR. FP 2.7K Ω 1/4W
	R131	HV456100	R. CAR. FP 1K Ω 1/4W
	R132	HV456100	R. CAR. FP 1K Ω 1/4W
	R133	HV453470	R. CAR. FP 4.7 Ω 1/4W
	R134	HV453470	R. CAR. FP 4.7 Ω 1/4W
	R135	HV453470	R. CAR. FP 4.7 Ω 1/4W
	R136	HV453470	R. CAR. FP 4.7 Ω 1/4W
△	R137	VJ695400	R. WW 0.22 Ω x2 3W
△	R138	VJ695400	R. WW 0.22 Ω x2 3W
△	R145	HL314100	R. MIL. OXD 10 Ω 1W
△	R146	HL314100	R. MIL. OXD 10 Ω 1W
	R151	HV454100	R. CAR. FP 10 Ω 1/4W
	R152	HV454100	R. CAR. FP 10 Ω 1/4W
	R159	VP944500	R. MIL. OXD 390 Ω 1W
	R160	VP944500	R. MIL. OXD 390 Ω 1W
△	R163	HL314470	R. MIL. OXD 47 Ω 1W
△	R171	HL315560	R. MIL. OXD 560 Ω 1W
	R177	VP939700	R. MIL. FILM 4.7 Ω 1W
	R179	HV457100	R. CAR. FP 10K Ω 1/4W
	R192	HL315820	R. MIL. OXD 820 Ω 1W
△	R193	HL315560	R. MIL. OXD 560 Ω 1W
△	RY101	VK438300	RELAY DH24D2-OTM-
△	RY102	VH230800	RELAY G5P-1-DC12V
	SW101	VJ850200	SW. PUSH PSE021A2KP 2

* New Parts

Schm Ref.	PART NO.	Description	
△	SW102	VA961800	VOLT. SELCT ESE-37247-F(R)
△	T101	XC082A00	TRANS. PWR (R)
△	T101	XC084A00	TRANS. PWR (BG)
	TE101	VC313700	TERM. SP 8P(R)
	TE101	VK506200	TERM. SP 8P(BG)
		VJ828000	PIN IMSA-6024-03E
		BB071360	SCR. TERM 8.3x13
		VR264300	PLATE. GND
*		VU314400	P. C. B. OPERATION(R)
*		VU314500	P. C. B. OPERATION(BG)
	CB301	Vi879100	CN. BS. PIN 13P
	CB302	VK025300	CN. BS. PIN 9P
	CB303	Vi879100	CN. BS. PIN 13P
	CB304	Vi878800	CN. BS. PIN 10P
	CB305	VF728200	CN. BS. PIN 10P
	CB306	Vi878300	CN. BS. PIN 5P
	CB401	Vi878700	CN. BS. PIN 9P
	CB402	VR361400	CN. BS. PIN 7P
	C301	UM416470	C. EL 4.7uF 50V
	C302	VK534000	C. PP 220pF 200V
	C303	VK534000	C. PP 220pF 200V
	C304	UM416470	C. EL 4.7uF 50V
	C305	VG286900	C. EL 220uF 10V
	C306	UA652220	C. MYLAR 220pF 50V(BG)
	C307	UA652220	C. MYLAR 220pF 50V
	C308	UA653910	C. MYLAR 9100pF 50V
	C309	UA653910	C. MYLAR 9100pF 50V
	C310	UA652220	C. MYLAR 220pF 50V(BG)
	C311	UA652220	C. MYLAR 220pF 50V
	C312	VG286900	C. EL 220uF 10V
	C313	VG278400	C. CE. TUBLR 220pF 50V
	C314	VG278400	C. CE. TUBLR 220pF 50V
	C315	VG278400	C. CE. TUBLR 220pF 50V
	C316	VG278400	C. CE. TUBLR 220pF 50V
	C317	VG278400	C. CE. TUBLR 220pF 50V
	C318	VG278400	C. CE. TUBLR 220pF 50V
	C319	UA652220	C. MYLAR 220pF 50V
	C320	UA652220	C. MYLAR 220pF 50V
	C321	VG278400	C. CE. TUBLR 220pF 50V
	C322	VG278400	C. CE. TUBLR 220pF 50V
	C323	UA652220	C. MYLAR 220pF 50V
	C324	UA652220	C. MYLAR 220pF 50V
	C325	VE742700	C. EL 10uF 50V
	C326	Vi715900	C. MYLAR 2200pF 50V
	C327	VG288000	C. EL 1000uF 16V
	C328	Vi715900	C. MYLAR 2200pF 50V
	C329	VG288000	C. EL 1000uF 16V
	C330	VE742700	C. EL 10uF 50V
	C331	VG290600	C. EL 2.2uF 50V
	C332	VJ837200	C. EL 47uF 16V

* New Parts

AX-390

P.C.B. OPERATION

Schm Ref.	PART NO.	Description
C333	UA654330	C. MYLAR 0.033uF 50V
C334	VF467300	C. CE. TUBLR 0.01uF 16V
C335	UA654330	C. MYLAR 0.033uF 50V
C336	VJ837200	C. EL 47uF 16V
C337	VG290600	C. EL 2.2uF 50V
C338	VF467300	C. CE. TUBLR 0.01uF 16V
C339	VG291200	C. EL 47uF 50V
C340	VG291200	C. EL 47uF 50V
C341	VH053100	C. CE. TUBLR 0.1uF 50V(BG)
C342	VG290900	C. EL 10uF 50V
C343	VF467300	C. CE. TUBLR 0.01uF 16V
C344	VF467300	C. CE. TUBLR 0.01uF 16V
C345	VF467300	C. CE. TUBLR 0.01uF 16V
C346	VH053100	C. CE. TUBLR 0.1uF 50V(BG)
C347	VH053100	C. CE. TUBLR 0.1uF 50V(BG)
C348	VF466800	C. CE. TUBLR 100pF 50V(BG)
C349	VG722100	C. EL 1uF 50V
C350	VG288100	C. EL 2200uF 16V
C351	VF760000	C. EL 100uF 10V
C352	VG290900	C. EL 10uF 50V
C353	UA652100	C. MYLAR 100pF 50V
C354	UA652100	C. MYLAR 100pF 50V
C355	VF760000	C. EL 100uF 10V
C356	VG290900	C. EL 10uF 50V
C357	VG288100	C. EL 2200uF 16V
C358	UA652100	C. MYLAR 100pF 50V
C359	VG290600	C. EL 2.2uF 50V
C360	VG290600	C. EL 2.2uF 50V
C361	UA652100	C. MYLAR 100pF 50V
C362	VG291200	C. EL 47uF 50V
* C363	VR168400	C. MYLAR. ML ECQ-V1H124JL3
C364	FG212680	C. CE 680pF 50V
C365	FG212100	C. CE 100pF 50V
C366	UA654330	C. MYLAR 0.033uF 50V
C367	UA654560	C. MYLAR 0.056uF 50V
C368	UA654560	C. MYLAR 0.056uF 50V
C369	UA654330	C. MYLAR 0.033uF 50V
C370	FG212100	C. CE 100pF 50V
* C371	VR168400	C. MYLAR. ML ECQ-V1H124JL3
C372	VG291200	C. EL 47uF 50V
C373	FG212680	C. CE 680pF 50V
C374	VG287800	C. EL 330uF 16V
C375	VG287800	C. EL 330uF 16V
C380	UN866470	C. EL 4.7uF 50V
C381	UN866470	C. EL 4.7uF 50V
C382	VJ839200	C. EL 2.2uF 50V
C383	VJ839200	C. EL 2.2uF 50V
C401	VJ836900	C. EL 10uF 16V
* C402	VT740700	C. EL 4700uF 5.5V
C403	VH053100	C. CE. TUBLR 0.1uF 50V
C404	VJ836900	C. EL 10uF 16V
C405	VJ839100	C. EL 1uF 50V
C406	VH053100	C. CE. TUBLR 0.1uF 50V

* New Parts

Schm Ref.	PART NO.	Description
D301	VM974200	DIODE. ZENR HZS5C2TD 5.0V
D302	VD631600	DIODE 1SS133, 176, HSS104
D303	VD631600	DIODE 1SS133, 176, HSS104
D304	VM975000	DIODE. ZENR HZS9B2TD 9.0V
D305	VM975000	DIODE. ZENR HZS9B2TD 9.0V
D306	VD631600	DIODE 1SS133, 176, HSS104
D401	VS132300	LED (re) SLR-325VCT31
D402	VD631600	DIODE 1SS133, 176, HSS104
D403	VD631600	DIODE 1SS133, 176, HSS104
D404	VD631600	DIODE 1SS133, 176, HSS104
D405	VD631600	DIODE 1SS133, 176, HSS104
D406	VM974500	DIODE. ZENR HZS6C2TD 6.0V
D407	VD631600	DIODE 1SS133, 176, HSS104
D408	VM973900	DIODE. ZENR HZS4C2TD 4.0V
D409	VR711500	LED (or) SLR-325DC
D410	VR711500	LED (or) SLR-325DC
D411	VR711500	LED (or) SLR-325DC
D412	VR711500	LED (or) SLR-325DC
D413	VR711500	LED (or) SLR-325DC
D414	VR711500	LED (or) SLR-325DC
D415	VM975800	DIODE. ZENR HZS152TD 15V
IC301	XM356A00	IC NJM2068LD
IC302	XM356A00	IC NJM2068LD
IC303	XA053A00	IC TC4052BP
IC304	iG055100	IC TC4053BP
IC305	iG055100	IC TC4053BP
IC306	XF494A00	IC LB1641
IC307	XM356A00	IC NJM2068LD
IC308	XM356A00	IC NJM2068LD
IC401	XR937A00	IC LC66304A-4H37
PJ301	VJ695600	JACK. PIN 2P
PJ302	VU857800	JACK. PIN 6P
PJ303	VJ696200	JACK. PIN 4P
PJ304	VJ696200	JACK. PIN 4P
Q301	iC287820	TR 2SC2878 A, B
Q302	iC287820	TR 2SC2878 A, B
Q303	iC287820	TR 2SC2878 A, B
Q304	iC287820	TR 2SC2878 A, B
Q401	VD678500	TR. DGT DTA114ES
Q402	iC1815C0	TR 2SC1815 Y
Q403	iA093320	TR 2SA933S Q, R
Q404	iC174020	TR 2SC1740S R, S
Q405	VD678500	TR. DGT DTA114ES
Q406	iC224030	TR 2SC2240 GR, BL
R357	HV454150	R. CAR. FP 15 Ω 1/4W
R401	HV454100	R. CAR. FP 10 Ω 1/4W
* SW301	VU398600	SW. PUSH WPA18EL-2.5
SW401	VG392900	SW. TACT SKHVAA
SW402	VG392900	SW. TACT SKHVAA
SW403	VG392900	SW. TACT SKHVAA
SW404	VG392900	SW. TACT SKHVAA
SW405	VG392900	SW. TACT SKHVAA
SW406	VG392900	SW. TACT SKHVAA

* New Parts

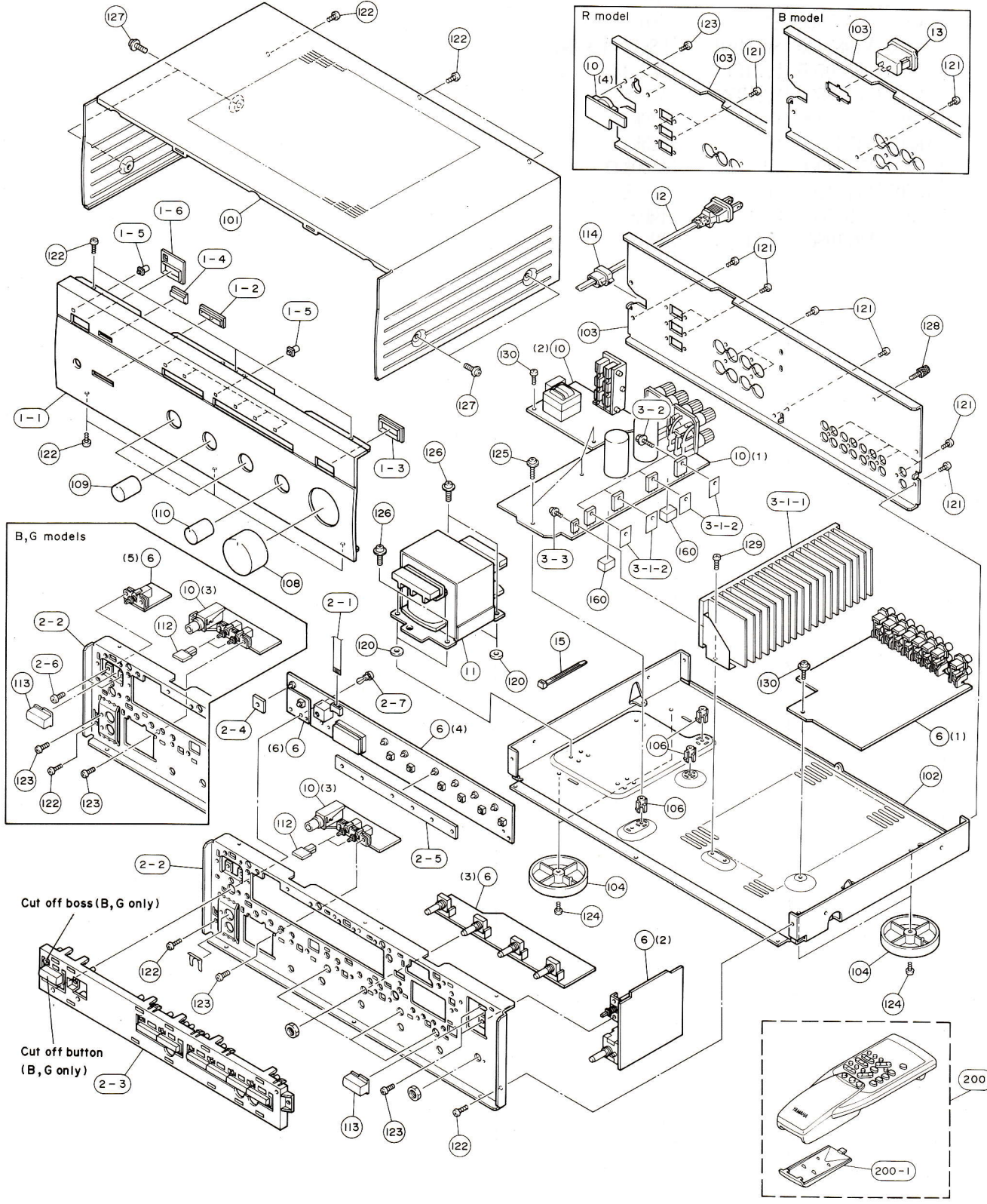
P.C.B. OPERATION

Schm Ref.	PART NO.	Description	
	SW407 VG392900	SW. TACT	SKHVAA (R)
*	SW408 VT985400	SW. PUSH	PSE01-A2K (BG)
	U401 VR860700	L. DTCT	SPS-422-1
	VR301 VR710500	VR. MTR	A100K Ω
	VR302 VT743800	VR	B20K Ω
	VR303 VT743900	VR	B25K Ω
	VR304 VT744000	VR	A100K Ω
	VR305 VT744100	VR	Z100K Ω
	XL401 VD827600	RSNR. CE	4MHz
	VR710800	PLATE	W25

* New Parts

AX-390

EXPLODED VIEW



B, G models

Cut off boss (B, G only)

Cut off button (B, G only)

200

200-1

MECHANICAL PARTS

Ref. No.	PART NO.	Description	Remarks	Markets
* 1-1	VT818700	FRONT PANEL		BL
* 1-1	VT818800	FRONT PANEL		TI
1-2	VQ793400	BUTTON GUIDE	2P	BL
1-2	VQ793500	BUTTON GUIDE	2P	TI
* 1-3	VT754100	BUTTON GUIDE	10x25	BL
* 1-3	VT754200	BUTTON GUIDE	10x25	TI
1-4	VH897500	LENS		
1-5	VH897700	LENS	2. 2Lx2. 2	
1-6	VH816700	BUTTON GUIDE	10x25	BL (BG)
1-6	VH816800	BUTTON GUIDE	10x25	TI (G)
* 2-1	MF107200	FLAT CABLE	7P 200mm	
* 2-2	VT817800	SUB CHASSIS		
* 2-3	VT821400	BUTTON	INPUT	BL
* 2-3	VT821500	BUTTON	INPUT	TI
2-4	VU629200	DAMPER, LED	2x12x12	
2-5	VU806200	DAMPER, LED	2x12x175	
2-6	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	(BG)
2-7	VQ368600	PUSH RIVET	P3555-B	(R)
3-1-1	VQ967700	HEAT SINK ASS'Y		
3-1-2	VK195900	SHEET	19x24	
3-2	VK173200	SCREW, TRANSISTOR	3x15 SP FCM3	
3-3	EK930010	PW HEAD B-TITE SCREW	3x8-8 FCRM3-BL	
* 6	VU314400	P. C. B. ASS'Y	OPERATION	(R)
* 6	VU314500	P. C. B. ASS'Y	OPERATION	(BG)
* 10	VU314100	P. C. B. ASS'Y	MAIN	(R)
* 10	VU314200	P. C. B. ASS'Y	MAIN	(B)
* 10	VU314300	P. C. B. ASS'Y	MAIN	(G)
△ * 11	XR613A00	POWER TRANSFORMER		(R)
△ * 11	XR614A00	POWER TRANSFORMER		(BG)
△ 12	VL238900	POWER CORD ASS'Y		(G)
△ 12	VQ508500	POWER CORD ASS'Y		(R)
△ 12	VS168400	POWER CORD ASS'Y		(G)
△ 12	VS680700	POWER CORD ASS'Y		(B)
△ 13	VJ775000	AC OUTLET	2P	(B)
15	VU590000	BINDING TIE	CBTD001B	(B)
101	VS362100	TOP COVER		BL
101	VS362200	TOP COVER		TI
102	VQ794000	CHASSIS		
* 103	VT820700	REAR PANEL		(R)
* 103	VT820800	REAR PANEL		(B)
* 103	VT820900	REAR PANEL		(G)
104	VQ780300	LEG	D60xH16	
106	VR264400	SPACER	H8	
108	VR021500	KNOB	D42	BL
* 108	VT926200	KNOB	D42	TI
109	VS409600	KNOB	D18	BL
* 109	VU068600	KNOB	D18	TI
110	VS587400	KNOB	D18L	BL
* 110	VU068700	KNOB	D18L	TI
112	VQ779000	BUTTON	3x14	BL
* 112	VU103000	BUTTON	3x14	TI
113	VQ780000	BUTTON	10x25	BL
113	VT990000	BUTTON	10x25	TI

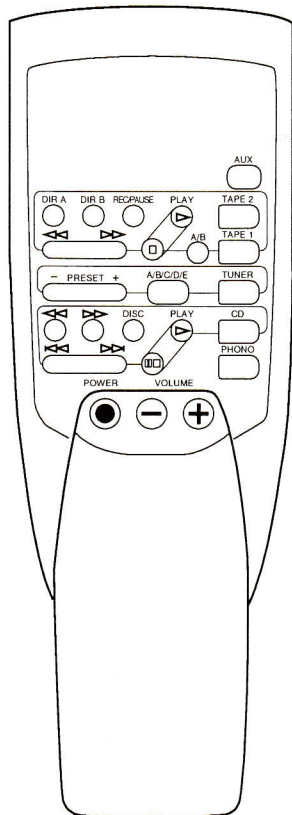
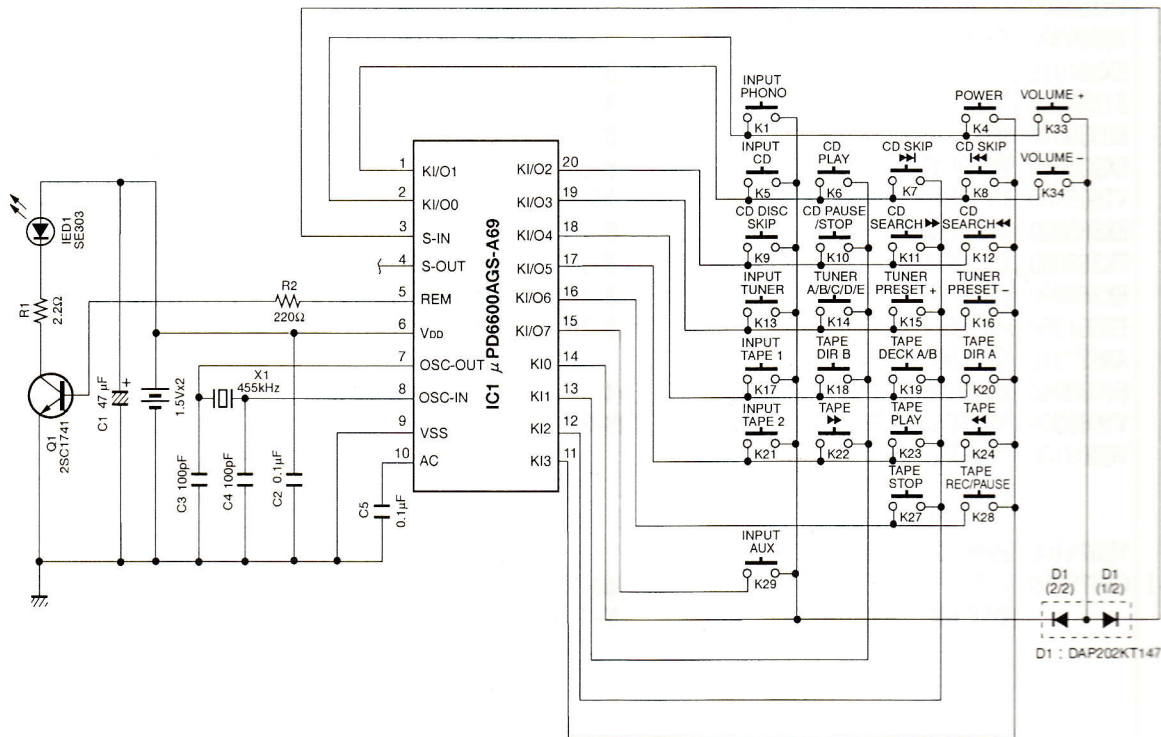
* New Parts

Ref. No.	PART NO.	Description	Remarks	Markets
114	VN158600	CORD STOPPER	No. 2104	
120	VS069500	SPACER, T2		(G)
121	EN301010	BIND HEAD BONDING TAP. SCREW	3x8 FCRM3-BL	
122	Ei330086	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
123	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	
124	EK930010	PW HEAD B-TITE SCREW	3x8-8 FCRM3-BL	
125	VT669400	PW HEAD B-TITE SCREW	3x15-8 MFC2	
126	EK365020	PW HEAD SCREW	4x6 FCRM3-BL	(RB)
126	EK365090	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	(G)
127	EK365090	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	BL
127	EX601150	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	TI
128	AA627310	GROUND TERMINAL		
129	Ei030046	BIND HEAD TAPPING SCREW	3x4 ZMC2-Y	
130	VT669300	PW HEAD B-TITE SCREW	3x8-8 MFC2	
160	VQ366100	DAMPER, PCB		
		ACCESSORIES		
* 200	VU074100	REMOTE CONTROL TRANSMITTER		
200-1	CX679050	LID	74x34BLALPS	
		BATTERY, MANGANESE	SUM-3, AA, R06	

* New Parts

REMOTE CONTROL TRANSMITTER

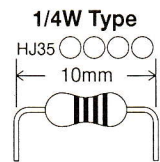
■ SCHEMATIC DIAGRAM



Key No.	Function	HEX	
		CUSTOM	DATA
1	INPUT PHONO	7A	14
4	POWER	7A	1F
5	INPUT CD	7A	15
6	CD PLAY	7A	08
7	CD SKIP ⇨⇨	7A	0A
8	CD SKIP ⇦⇦	7A	0B
9	CD DISC SKIP	7A	4F
10	CD PAUSE/STOP	7A	09
11	CD SEARCH ⇨⇨	7A	0C
12	CD SEARCH ⇦⇦	7A	0D
13	INPUT TUNER	7A	16
14	TUNER A/B/C/D/E	7A	12
15	TUNER PRESET +	7A	10
16	TUNER PRESET -	7A	11
17	INPUT TAPE 1	7A	18
18	TAPE DIR B	7A	40
19	TAPE DECK A/B	7A	06
20	TAPE DIR A	7A	07
21	INPUT TAPE 2	7A	19
22	TAPE ⇨⇨	7A	02
23	TAPE PLAY	7A	00
24	TAPE ⇦⇦	7A	01
27	TAPE STOP	7A	03
28	TAPE REC/PAUSE	7A	04
29	INPUT AUX	7A	17
33	VOLUME +	7A	1A
34	VOLUME -	7A	1B

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			



1/4W Type
HF45 ○○○○

1/6W Type
HF85 ○○○○

