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AD9908184C2

Service Manual

Stereo Integrated Amplifier

SU-A707

Colour

(K).....Black Type

Areas

(E).....Europe and Russia.

(EB).....Great Britain.

(EG).....Germany, France and Italy.

Specifications (DIN 45 500)

20 Hz – 20 kHz continuous power output	
both channels driven:	2×45 W (8 Ω)
1 kHz continuous power output	
both channels driven (THD: 1 %):	2×55 W (8 Ω)
	2×70 W (4 Ω)
63 Hz – 12.5 kHz continuous power output	
both channels driven (THD: 0.7 %):	2×50 W (8 Ω)
	2×70 W (4 Ω)
Total harmonic distortion	
rated power at 20 Hz – 20 kHz:	0.03 % (8 Ω)
Intermodulation distortion (50 Hz : 7 kHz = 4 : 1, SMPTE)	
rated power at 1 kHz:	0.007 % (8 Ω)
Residual hum and noise:	1 mV
Damping factor:	60 (8 Ω), 30 (4 Ω)
Headphones output level/impedance:	540 mV/330 Ω
Load impedance:	
A or B, BI-WIRING;	4 Ω – 16 Ω
A and B;	8 Ω – 16 Ω
Input sensitivity/impedance:	

Frequency response:	
PHONO MM;	RIAA standard curve ±1 dB (30 Hz – 15 kHz)
TUNER, CD, DVD, AUX, TAPE 1, TAPE 2/MD;	3 Hz – 100 kHz (+0 dB, –3 dB)
	+0 dB, –0.3 dB (20 Hz – 20 kHz)
Tone controls:	
BASS;	50 Hz, +10 to –10 dB
TREBLE;	20 kHz, +10 to –10 dB
Muting (remote control only):	–∞
Output voltage:	
TAPE 1, TAPE 2/MD REC OUT;	150 mV
Channel balance (AUX, 250 Hz – 6.3 kHz):	±1 dB
Channel separation (AUX, 1 kHz):	50 dB

■ GENERAL

Power supply:	
For (E) and (EG) areas;	AC 50 Hz, 230 V
For (EB) area:	AC 50 Hz, 230 V – 240 V

Input sensitivity/impedance:	
PHONO MM;	2.5 mV/47 kΩ
TUNER, CD, DVD, AUX, TAPE 1, TAPE 2/MD;	150 mV/22 kΩ
Phono maximum input voltage (1 kHz, RMS):	
MM;	150 mV (IHF' 66)
S/N (rated power, 4 Ω):	
PHONO MM;	75 dB (76 dB, IHF' 66)
TUNER, CD, DVD, AUX, TAPE 1, TAPE 2/MD;	102 dB (100 dB, IHF' 66)
	114 dB (S=2 V, IHF A weighting)
S/N at –26 dB power (4 Ω):	
PHONO MM;	74 dB
TUNER, CD, DVD, AUX, TAPE 1, TAPE 2/MD;	87 dB
S/N at 50 mW (4 Ω):	
PHONO MM;	73 dB
TUNER, CD, DVD, AUX, TAPE 1, TAPE 2/MD;	81 dB

For (EB) area;	AC 50 Hz, 230 V – 240 V
Power consumption:	200 W
Standby;	1.5 W
Dimensions (W × H × D):	430 × 136 × 368 mm
Weight:	7.4 kg

Notes:

1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. For (EB) area: The specification values given have been measured while using a 240 V-power supply

Technics

1 Before Repair

TOP PREVIOUS NEXT

1. Turn off the power supply. Using a 10Ω, 10 W resistor, connect both ends of power supply capacitors (C701, C702) in order to discharge the voltage.

2. Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply voltage controller to make sure that the consumed current at 50 Hz in NO SIGNAL mode should be shown below with respectto supply voltage 230/240 V.

Power supply voltage	AC 230 V, 50 Hz	AC 240 V, 50 Hz
Consumed current	70-270 mA	60-260 mA

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TOP PREVIOUS NEXT

2 Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

No sound is heard when the power is switched ON.

Sound stops during a performance.

The functions of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are shorted, or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined bellow:

1. Switch OFF the power.

2. Determine the cause of the problem and correct it.

3. Switch ON the power once again.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and ON again.

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3 Accessories

AC mains lead

(E) and (EG) areas : (RJA0019-X)..... 1 pc.

(EB) area : (RJA0053-2X).....1 pc.

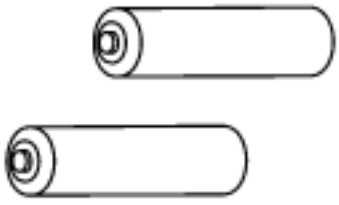
Remote control transmitter

(RAK-SUA11WH).....1 pc.

Batteries

(R6/LR6, AA, UM-3).....2 pcs.

Note: These are available on sales route.



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4 Caution for AC Mains Lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

Remove the connector cover.

How to replace the fuse

The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

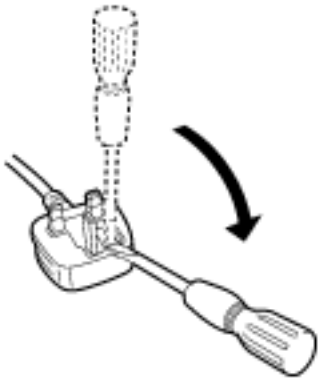
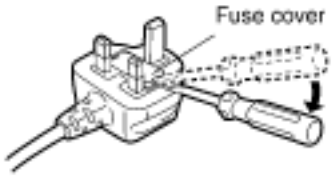


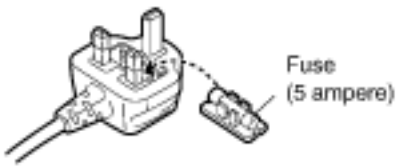
Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

Figure B



5 Operations

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6 Operation Checks and Component Replacement/Procedures

NOTE **1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**

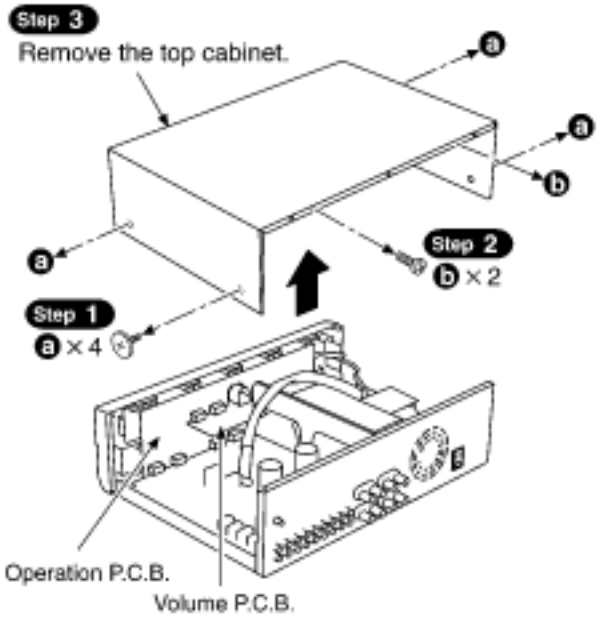
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

3. Select item from the following index when checks or replacement are required.

• Contents

■ Checking Procedures for each P.C.B.

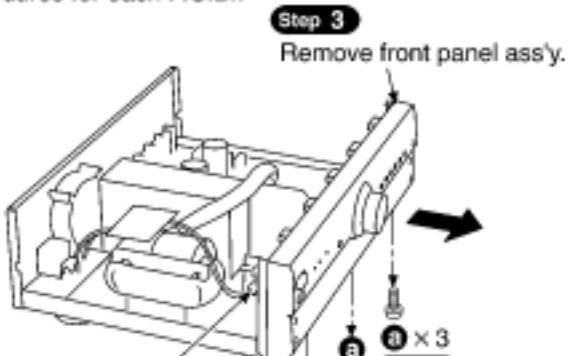
1. Checking for the volume P.C.B. and operation P.C.B.

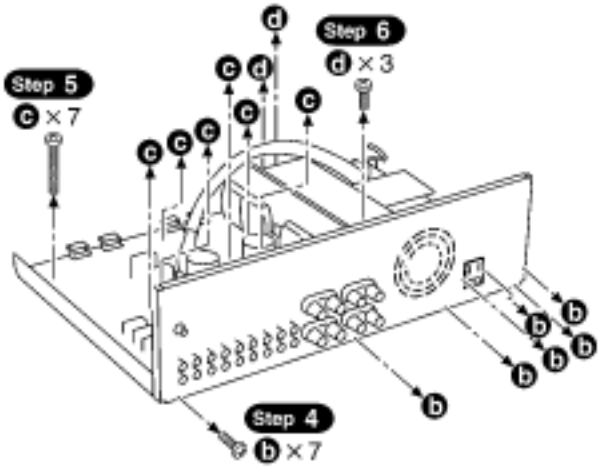


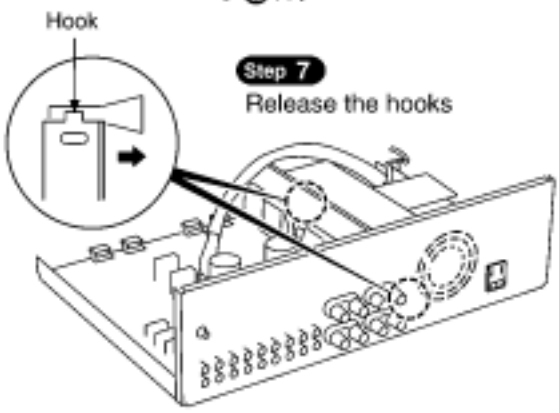
- **Check the volume P.C.B. and operation P.C.B. as shown above.**

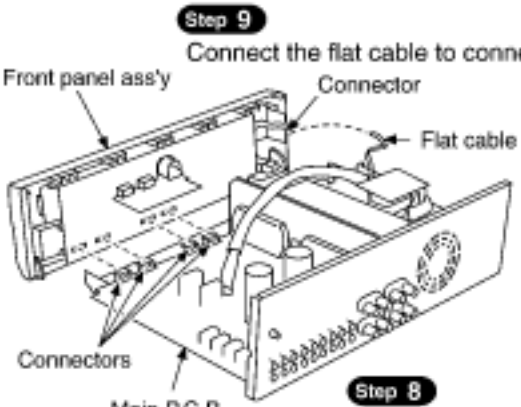
2. Checking for the main P.C.B.

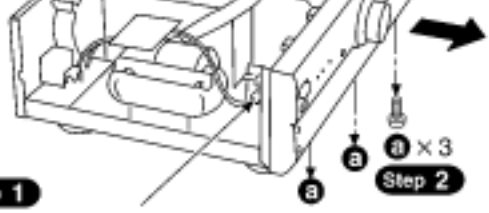
- Follow the Step 1 ~ Step 3 of the item 1 in checking procedures for each P.C.B..



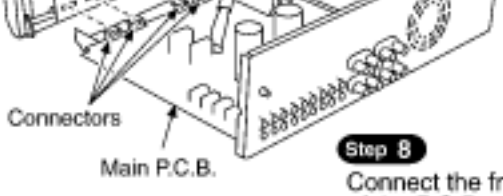






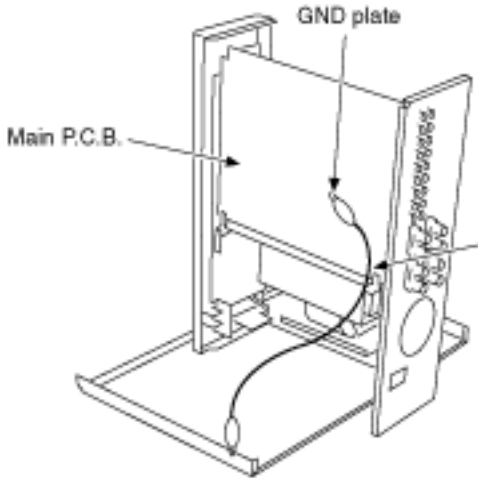


Remove the flat cable from connector.



Connect the front panel ass'y of the P.C.B. connectors to the main P.C.B..

· Check the main P.C.B. as shown below.



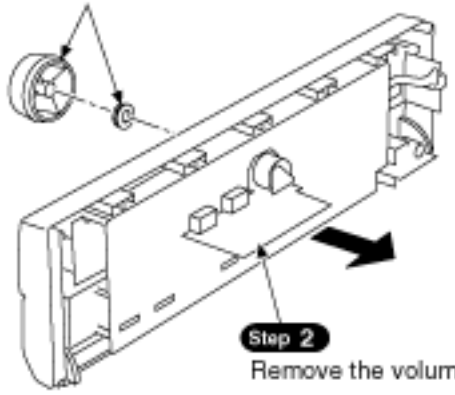
Connect the lead wire.

To remove each P.C.B.

- Follow the **Step 1** ~ **Step 3** of the item 1 in checking procedures for each P.C.B..
- Follow the **Step 1** ~ **Step 3** of the item 2 in checking procedures for each P.C.B..

Step 1

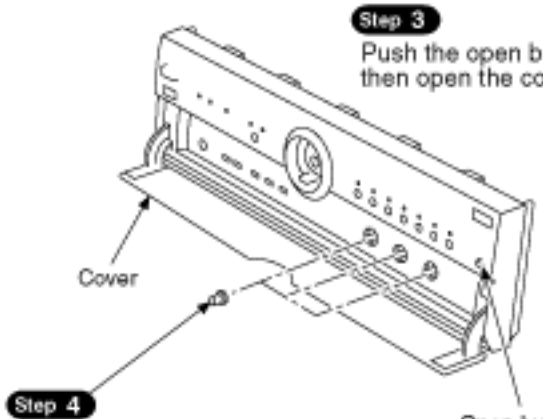
Remove the volume knob and nut.



Remove the volume P.C.B..

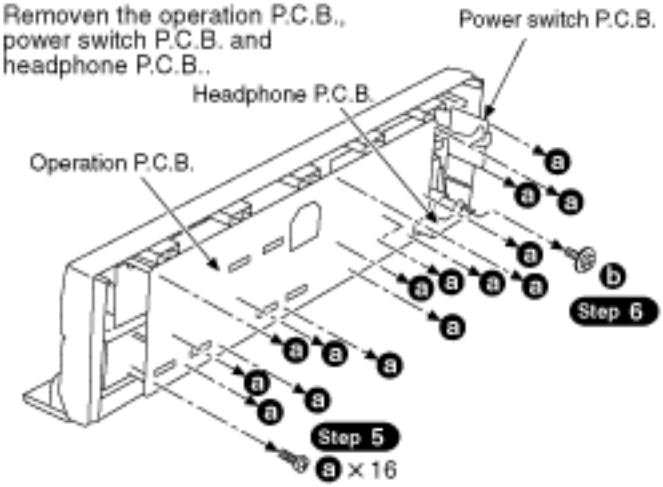
Step 3

Push the open button, and then open the cover.



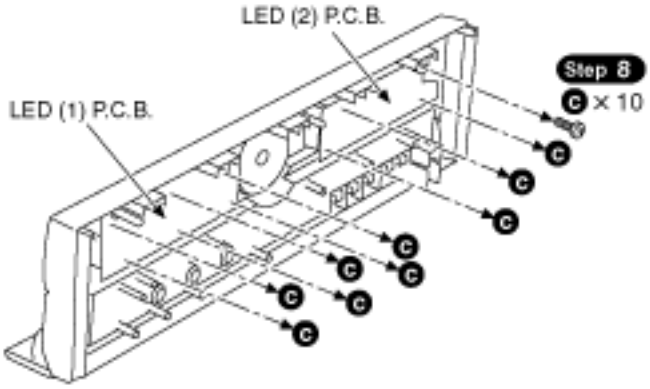
Step 7

Removen the operation P.C.B., power switch P.C.B. and headphone P.C.B..



Step 9

Remove the LED (1) P.C.B. and LED (2) P.C.B..



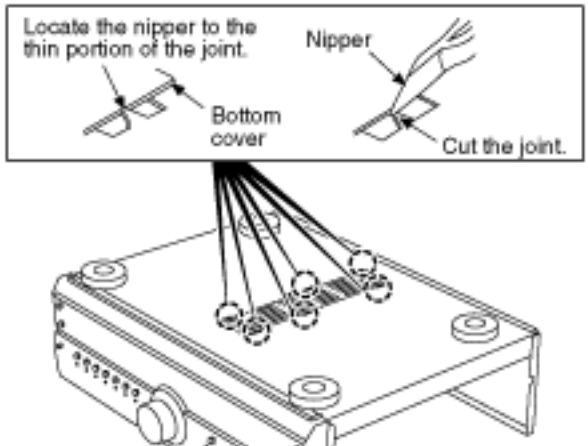
■ Main Component Replacement Procedures

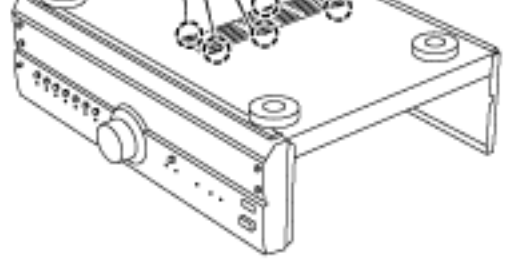
1. Replacement for the power IC and regulator transistor

· Follow the **Step 1** ~ **Step 3** of the item 1 in checking procedures for each P.C.B..

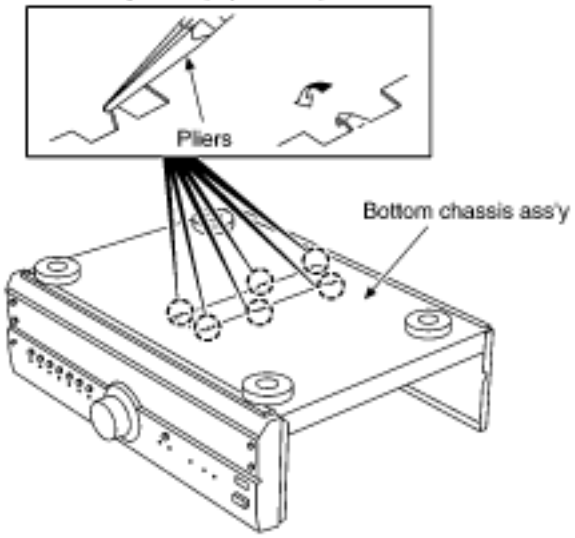
Step 1

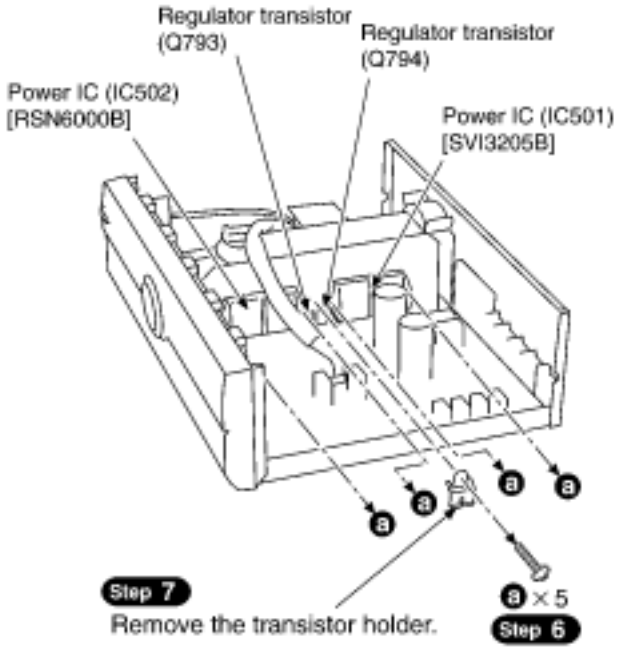
Cut the joints as shown below. (6 portions)





Step 2
Fold the joints. (6 portions)

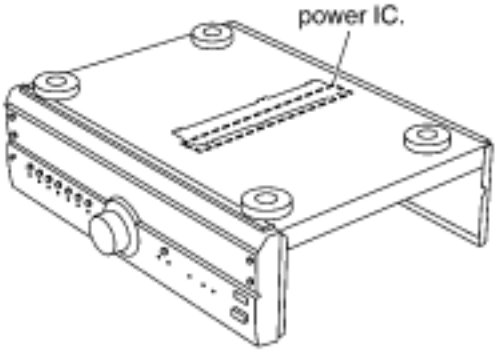




NOTE

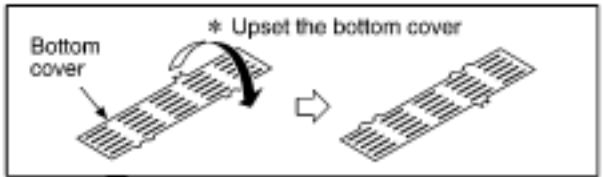
1. After replacing the power IC or regulator transistor, apply a sufficient quantity of compound grease (RFKX0002) between the heat sink and the power IC or regulator transistor (Radiation of power IC or regulator transistor).
2. Tighten enough the screws (ⓐ) after replacing the power IC. Otherwise, the heat radiation works little.

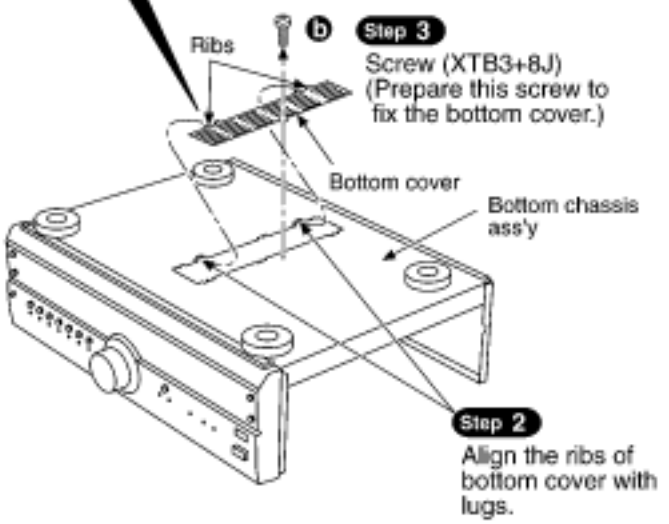
Step 3
Unsolder the terminals of power IC.



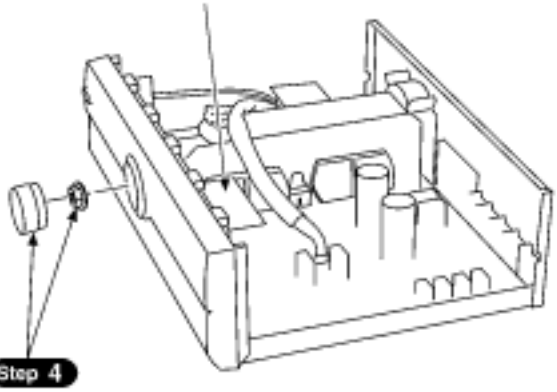
Installation of the bottom cover after replacement

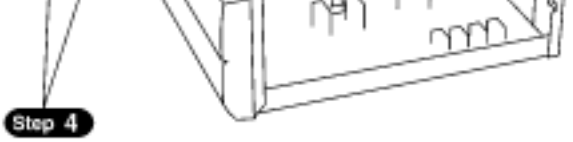
Step 1



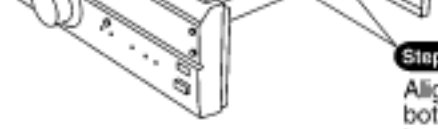


Step 5
Remove the volume P.C.B..





Step 4
Remove the volume knob and nut.



Step 2
Align the ribs of bottom cover with lugs.

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7 About the+/- 15 V Line Abnormality Detect Function

1. This model features the function that shuts down the main power source when it check the± 15 V line with the IC801 (microcomputer) and find the different voltage. (After power is turned on, the unit enters the stand-by mode.)

2. When the unit enters stand-by mode with abnormality detected, check the circuits around the± 15 V line. (Specially check the abnormality of the stabilizing power source circuit.)

3. To clear this stand-by mode, short-circuit the TP801 land on the circuit board. However, clearance of the stand-by mode and turn on the electricity when the repair is not completed may lead to another trouble. Therefore, be especially carefulto do so. (Do not turn on the electricity for a long time.)

4. When the repair is completed, leave the TP801 open.

7.1 About the abnormality detect function with the operation LED turned off

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7.1 About the abnormality detect function with the operation LED turned off

1. If the operation LED is turned off, there are possibilities of the following abnormalities in addition to the LED itself malfunctioning:

2. Power amplifier´s malfunction by the speaker terminal short-circuit.

3. Malfunction of cooling fan.

   The unit features the function that detects above abnormalities.

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8 Schematic Diagram

TOP PREVIOUS NEXT

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TOP PREVIOUS NEXT

8.1 Schematic Diagram Notes

This schematic diagram may be modified at any time with the development of new technology.

Notes:

S204:

Unit on/off switch (/I)

S801:

Input select switch (TAPE 1)

S802:

Input select switch (TAPE 2/MD)

S803:

Input select switch (AUX)

S804:

Input select switch (DVD)

S805:

Input select switch (CD)

S806:

Input select switch (TUNER)

S807:

Input select switch (PHONO)

S808:

VGCA switch ()

S809:

Tape monitor (SOURCE) switch (TAPE MONITOR)

S810:

Tape monitor (TAPE 2/MD) switch (TAPE MONITOR)

S811:

Tape monitor (TAPE 1) switch (TAPE MONITOR)

S812:

Speaker select switch (SPEAKER B)

S813:

Speaker select switch (SPEAKER A)

VR201:

Volume control VR (VOLUME)

VR202:

Balance control VR (BALANCE)

VR203:

Output voltage adjustment VR (L ch)

VR204:

Output voltage adjustment VR (R ch)

VR301:

Tone control VR (BASS)

VR302:

Tone control VR (TREBLE)

Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on theinternal impedance of the DC circuit tester.

No mark : Power ON

Important safety notice:

Components identified by⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturers specified parts shown in the parts list.

Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

Cover the parts boxes made of plastics with aluminum foil.

Ground the soldering iron.

Put a conductive mat on the work table.

Do not touch the legs of IC or LSI with the fingers directly.

Voltage and signal line

: Positive voltage line

: Negative voltage line

: Phono signal line

: Tape rec signal line

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8.2 Schematic Diagram

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9 Printed Circuit Board Diagram

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10 Wiring Connection Diagram

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11 Type Illustration of ICs, Transistors and Diodes

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12 Block Diagram

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13 Measurements and Adjustments

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TOP PREVIOUS NEXT

13.1 Measuring Instruments and Special Tools

AC electronic voltmeter (AC EVM)

AF oscillator

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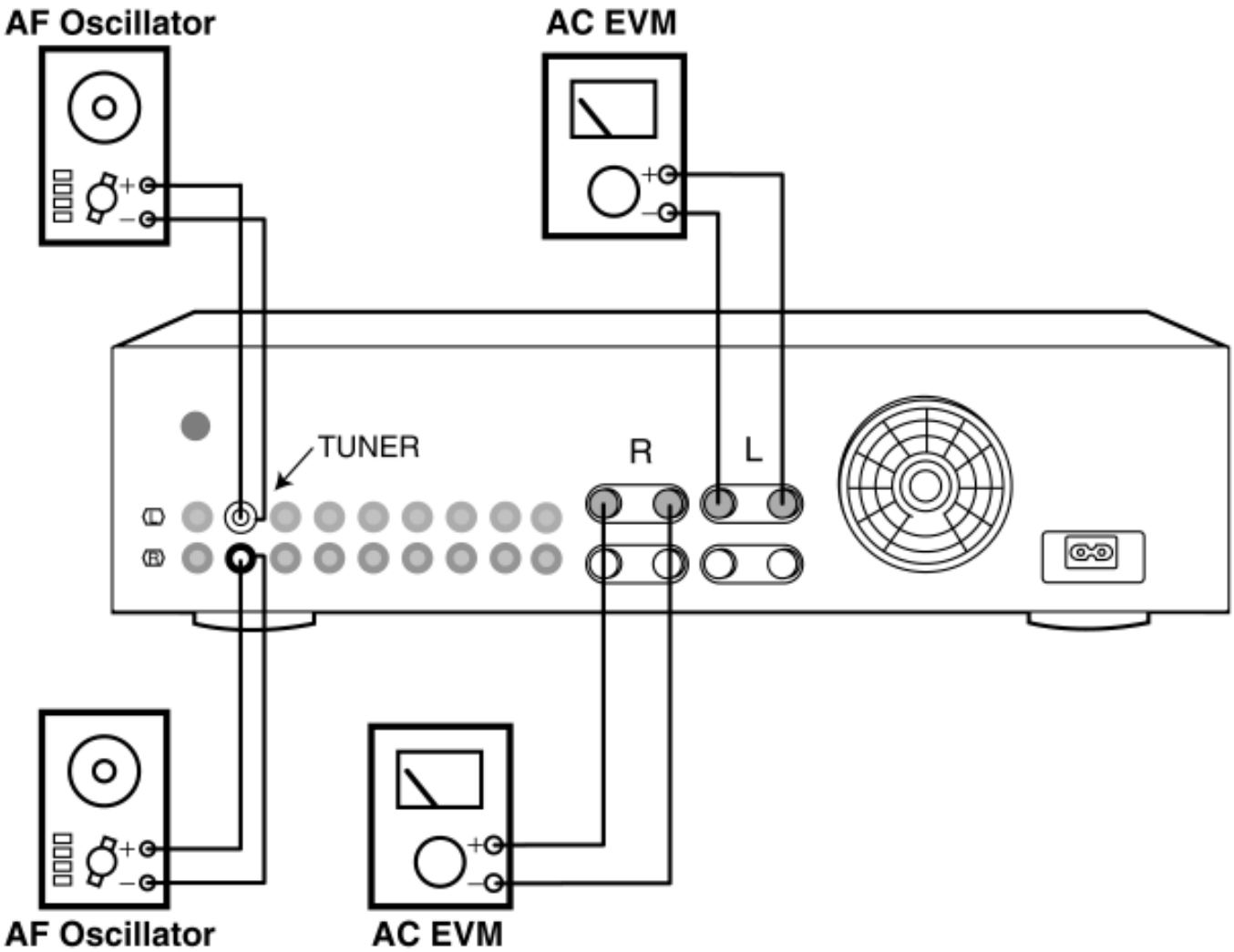
13.2 Output Voltage Adjustment

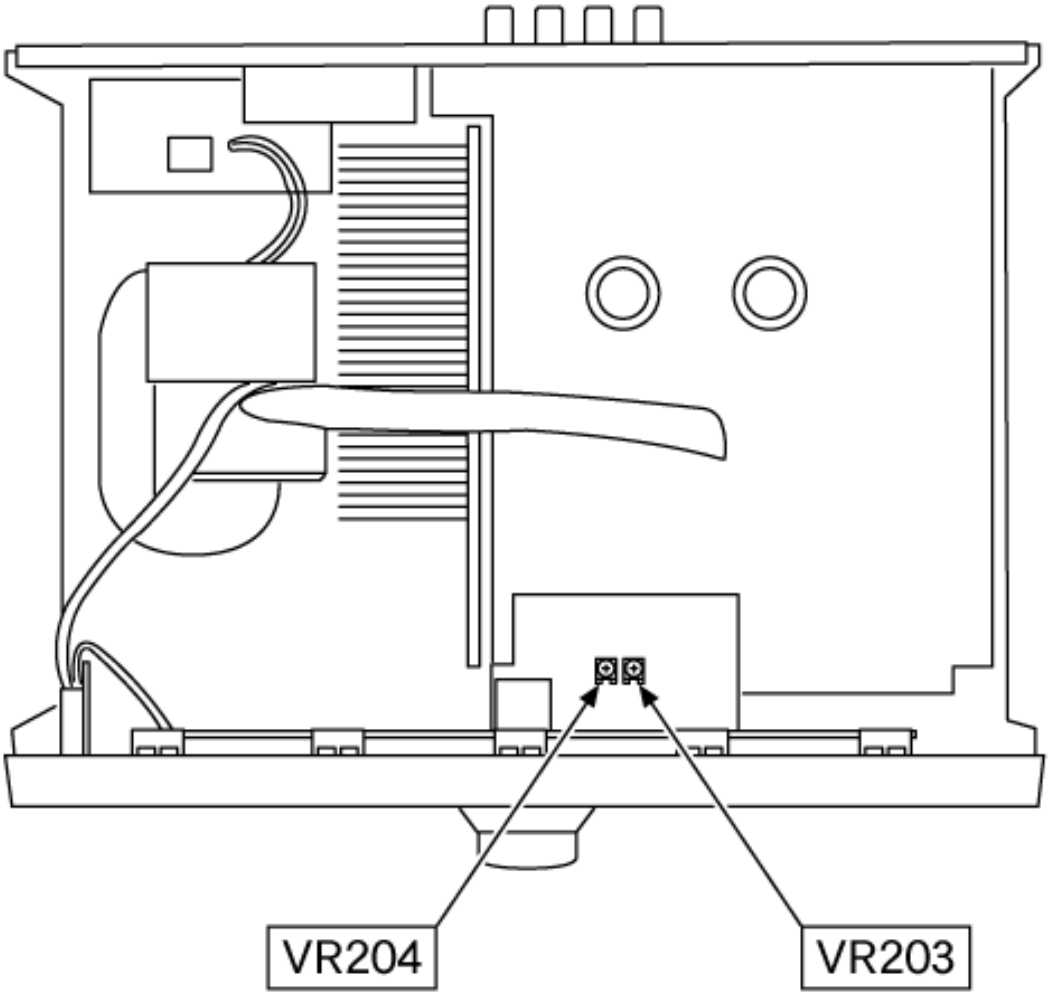
1. Turn on the power.
2. Select the input source to TUNER.
3. Connect the measuring instrument as shown Fig.1
4. Apply 1 kHz, 100 mV to TUNER terminal.
5. Adjust the VOLUME to maximum.
6. Adjust VR203 (L ch) and VR204 (R ch) so that the output voltage to AC 14.0± 0.2 V. Shown in Fig.2

Fig.1



Adjustment point

Fig.2



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TOP PREVIOUS NEXT

14 Terminal Function of ICs

TOP PREVIOUS NEXT

14.1 IC801 (M38503M2405F) : System Control

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TOP PREVIOUS NEXT

14.1 IC801 (M38503M2405F) : System Control

Pin No.	Name	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Reference voltage input
3	AGND	-	GND terminal
4	MUTE LED	O	LED drive signal output (Mute)
5	STBY LED	O	LED drive signal output (Stand by)
6	REMCON	I	Remote control signal input
7	BACKUP	I	Power failure detect signal input
8	NC	-	Not used, connected to GND
9	SEL DATA	O	Data signal output for input select IC (IC201)
10	SEL CLK	O	Clock signal output for input select IC (IC201)
11	SEL STB	O	Strobe signal output for input select IC (IC201)
12	POWER SW	I	Power switch (S204) detect signal input
13	LED O	-	Not used, open
14	LED C	O	Input select LED drive signal output
15	CNVSS	-	Connected to GND
16	LED B	O	Input select LED drive signal output
17	LED A	O	Input select LED drive signal output
18	RESET	I	System reset signal input
19	X IN	I	Connected to the ceramic oscillator (8 MHz)
20	X OUT	O	Connected to the ceramic oscillator (8 MHz)
21	GND	-	GND terminal
22	TAPE2 LED	O	LED drive signal output (Tape 2)
23	TAPE1 LED	O	LED drive signal output (Tape 1)
24	SOURCE LED	O	LED drive signal output (Source)

25	SP B LED	O	LED drive signal output (Speaker B)
26	SP A LED	O	LED drive signal output (Speaker A)
27	VRDOWN	O	Motor drive signal output (Volume down)
28	VRUP	O	Motor drive signal output (Volume up)
29	S MUTE	O	Audio muting control signal output
30	POWER	O	Power relay control signal output
31	SP B RLY	O	Speaker B relay control signal output
32	SP A RLY	O	Speaker A relay control signal output
33	VGCA RLY	O	VGCA mode relay control signal output
34	TAPE1 RLY	O	Tape 1 relay control signal output
35	DVD RLY	O	DVD relay control signal output
36	CD RLY	O	CD relay control signal output
37	MON RLY	O	Monitor relay control signal output
38	VGCA LED	O	LED drive signal output (VGCA mode)
39	VIA LED	O	LED drive signal output (VIA mode)
40	REG MON	I	Regulation monitor signal input
41	KEY AD2	I	Operation key signal input
42	KEY AD1	I	Operation key signal input

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TOP PREVIOUS NEXT

15 Replacement Parts List

TOP PREVIOUS NEXT

Notes:

Important safety notice:

Components identified by⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

The<IA> <IB> <IC> <ID> marks in Remarks indicate language of instruction manual.

<IA> : English, Spanish, Swedish, Russian, Polish, Czech

<IB> : English

<IC> : German, Italian, French

<ID> : Netherlandish, Danish

The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

The marking (RTL) indicates that Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availabilityis dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

All parts are supplied by MESA.

Ref. No.	Part No.	Part Name& Description	Pcs.	Remarks
1	RKM0219F-K	TOP CABINET	1	
2	RHD30035-K1	SCREW	4	

3	RMR1110-K	SP TERMINAL COVER	8	(EB)
4	XTBS3+8JFZ1	SCREW	2	
5	RDG0438	GEAR	1	
6	REM0072-3	FAN	1	
7	RHD30070	SCREW	1	
8	XTB3+6G	SCREW	4	
9	XTB3+6JFZ	SCREW	4	
10	RKA0053-A	FOOT	4	
10-1	RMG0270-K	RUBBER	4	
11	RMG0332-K	RUBBER	2	
12	XTB3+8JFZ	SCREW	2	
13	RGK1111-K	NUT	4	
14	RHD26033	SCREW	4	
15	RKF0596-Q	DOOR	1	
16	RMR1252-K	ARM(L)	1	
17	RMR1253-K	ARM(R)	1	
18	RGB0031-A	TECHNICS BADGE	1	
19	RGB0112-N	VGCA BADGE	1	
20	RGH0155B-K	PANEL SHEET	1	
21	RGK1182-N	BUTTON ORNAMENT	1	
22	RGK1184-S	VOLUME RING	1	
23	RGL0453-Q	PANEL LIGHT 1	1	
24	RGL0456-Q	PANEL LIGHT 2	1	
25	RGL0457-Q	PANEL LIGHT 3	1	
26	RGP0746B-K	PANEL	1	
27	RGU0890-1K	BUTTON,POWER	1	
28	RGU1712-K	BUTTON,OPEN	1	
29	RGU1782-K	BUTTON,SELECTOR	1	
30	RGU1784-S	BUTTON,SPEAKER	1	
31	RGW0285-S	KNOB,TONE	3	
32	RGW0325-K	KNOB,VOLUME	1	
33	RHD26016	SCREW	2	
34	RHD26034	SCREW	1	
35	RHN90001	NUT	1	

36	RKG0009	MAGNET	1	
37	RKW0273A-K	FILTER	1	
38	RME0284	SPRING	1	
39	RMR1254-K	LEVER	1	
40	RMR1261-K	HOLDER	1	
41	XTBS26+8J	SCREW	26	
42	XTBS3+8JFZ1	SCREW	22	
43	XTW3+15T	SCREW	5	
44	XTB3+20JFZ	SCREW	8	
A1	RAK-SUA11WH	REMOTE CONT.TRANSMITTER	1	
A1-1	RKK0123-K	BATTERY COVER	1	
A2	RJA0019-X	AC POWER SUPPLY CORD	1	(E,EG)/⚠
A2	RJA0053-2X	AC POWER SUPPLY CORD	1	(EB)/⚠
A3	RQA0117	WARRANTY CARD	1	
A4	RQCB0169	SERVICE CENTER LIST	1	
A5	RQT5113-E	OPERATING INSTRUCTIONS	1	(E)/<IA>
A6	RQT5116-B	OPERATING INSTRUCTIONS	1	(EB)/<IB>
A7	RQT5114-D	OPERATING INSTRUCTIONS	1	(EG)/<IC>
A8	RQT5115-H	OPERATING INSTRUCTIONS	1	(EG)/<ID>
C103,04	ECBT1H181KB5	50V 180P	2	
C107,08	ECEA1CKS101	16V 100U	2	
C109,10	ECBT1H391KB5	50V 390P	2	
C113,14	ECQB1H223JF3	50V 0.022U	2	
C115,16	ECQB1H562JF3	50V 5600P	2	
C117,18	RCE1HKA4R7BG	50V 4.7U	2	
C119,20	ECQB1H472JF3	50V 4700P	2	
C121,22	ECBT1E103ZF	25V 0.01U	2	
C123,24	RCE1HKA3R3BG	50V 3.3U	2	
C201-16	ECCR1H101K5	50V 100P	16	
C251,52	ECEA0JKS101	6.3V 100U	2	
C253,54	ECQV1H104JM3	50V 0.1U	2	
C301,02	RCE1HKA3R3BG	50V 3.3U	2	
C303,04	ECCR1H101K5	50V 100P	2	
C305,06	ECBT1H820KB5	50V 82P	2	

C307,08	RCE1HKA4R7BG	50V 4.7U	2	
C309,10	ECBT1H390J5	50V 39P	2	
C311,12	RCE1CKA100BG	16V 10U	2	
C313,14	ECQV1H823JZ	50V 0.082U	2	
C315,16	ECQB1H153JF3	50V 0.015U	2	
C317,18	ECQB1H183JF3	50V 0.018U	2	
C319,20	ECQB1H222JF	50V 2200P	2	
C321,22	ECBT1E223ZF	25V 0.022U	2	
C323,24	ECBT1H121KB5	50V 120P	2	
C351,52	ECA1EPXS100B	25V 10U	2	
C353,54	ECBT1H101KB5	50V 100P	2	
C355,56	ECA1APXS470B	10V 47U	2	
C357,58	ECBT1H820KB5	50V 82P	2	
C359,60	ECBT1H180J5	50V 18P	2	
C361-64	ECA1EPXS100B	25V 10U	4	
C367,68	ECA1CPXS330B	16V 33U	2	
C369,70	ECA1EPXS100B	25V 10U	2	
C401,02	ECA1CPXS470B	16V 47U	2	
C403,04	ECKR1H121KB5	50V 120P	2	
C405,06	ECA1APXS101B	10V 100U	2	
C407,08	ECBT1H820KB5	50V 82P	2	
C409,10	ECCR2H330J5	500V 33P	2	
C413,14	ECCV2H070D	500V 7P	2	
C415,16	ECBT1H102KB5	50V 1000P	2	
C426	ECBT1H102KB5	50V 1000P	1	
C427	ECBT1E223ZF	25V 0.022U	1	
C428	ECKR1H103ZF5	50V 0.01U	1	
C451,52	ECKR1H333ZF5	50V 0.033U	2	
C453-56	ECCV2H680K	500V 68P	4	
C457-60	RCE1HKA3R3BG	50V 3.3U	4	
C461,62	ECBA1H681KB5	50V 680P	2	
C501-04	ECA1APXS101B	10V 100U	4	
C505,06	ECQV1H473JM3	50V 0.047U	2	
C507	ECEA1CKS101	16V 100U	1	
C508	ECA1HM470	50V 47U	1	
C509	ECEA1HN100SB	50V 10U	1	
C511,12	ECBT1H680J5	50V 68P	2	

C513-18	ECQV1H473JM3	50V 0.047U	6	
C519-22	ECQB1H223JF3	50V 0.022U	4	
C523,24	ECBT1H102KB5	50V 1000P	2	
C525,26	ECQB1H152JF3	50V 1500P	2	
C531,32	ECBT1C332KR5	16V 3300P	2	
C601,02	RCE1CKA100BG	16V 10U	2	
C603	ECEA0JKS101	6.3V 100U	1	
C604	ECEA1HSN010	50V 1U	1	
C605	ECEA0JKS331	6.3V 330U	1	
C701,02	ECESX1H822UM	50V 8200U	2	⚠
C705	ECBT1H104KB5	50V 0.1U	1	
C707,08	ECA1HPXS100B	50V 10U	2	
C709,10	ECKR2H103ZU	500V 0.01U	2	
C711	ECQE2104KF3	250V 0.1U	1	
C712	ECBT1E103ZF	25V 0.01U	1	
C714	ECA1CM471	16V 470U	1	
C715	ECBT1E103ZF	25V 0.01U	1	
C716	RCE1CM102BV	16V 1000U	1	
C751,52	ECA1EPXS470B	25V 47U	2	
C787,88	ECKR1H103ZF5	50V 0.01U	2	
C793,94	ECEA1EKA470B	25V 47U	2	
C801-03	ECBT1E103ZF	25V 0.01U	3	
C804	ECA0JM102	6.3V 1000U	1	
C805	RCE1HKAR47BG	50V 0.47U	1	
C806	ECEA1HKS2R2	50V 2.2U	1	
C807	ECBT1H102KB5	50V 1000P	1	
C808	ECBT1E103ZF	25V 0.01U	1	
C809,10	RCE1AKA470BG	10V 47U	2	
C811	ECBT1H101KB5	50V 100P	1	
C812,13	ECKR1H103ZF5	50V 0.01U	2	
C814,15	ECA1CPXS100B	16V 10U	2	
C816	RCE1CKA100BG	16V 10U	1	
C817	RCE1AKA470BG	10V 47U	1	
C820	ECQV1H224JM3	50V 0.22U	1	
CN201	RJU003K010M1	CONNECTOR(10P)	1	
CN202	RJU003K008M1	CONNECTOR(8P)	1	

CN301 ,02	RJU003K008M1	CONNECTOR(8P)	2	
CN401	RJU057W004	CONNECTOR(4P)	1	
CN601	SJT3213	CONNECTOR(2P)	1	
CN702	RJS1A6607T1	CONNECTOR(7P)	1	
CN703	RJS1A6603	CONNECTOR(3P)	1	
CN704-11	RJS1A1101T1	CONNECTOR(1P)	8	
CN801, 02	RJU003K008M1	CONNECTOR(8P)	2	
CN803	RJU071H11M	CONNECTOR(11P)	1	
CN805	RJU071H11M	CONNECTOR(11P)	1	
CP201	RJT003K010-1	CONNECTOR(10P)	1	
CP202	RJT003K008-1	CONNECTOR(8P)	1	
CP301 ,02	RJT003K008-1	CONNECTOR(8P)	2	
CP401	RJT057W004-1	CONNECTOR(4P)	1	
CP801 ,02	RJT003K008-1	CONNECTOR(8P)	2	
CP803	RJT071K11	CONNECTOR(11P)	1	
CP805	RJT071K11	CONNECTOR(11P)	1	
D351	MA165	DIODE	1	
D401,02	MA167	DIODE	2	
D403,04	MA4036M	DIODE	2	
D405,06	MA165	DIODE	2	
D451	MA165	DIODE	1	
D452	MA4056M	DIODE	1	
D453	MA29WA	DIODE	1	
D501,02	MA165	DIODE	2	
D503,04	MA4160M	DIODE	2	
D505	MA165	DIODE	1	
D506	1SS291TA	DIODE	1	
D507	MA165	DIODE	1	
D605	MA4091M	DIODE	1	
D606	MA165	DIODE	1	
D608-10	MA165	DIODE	3	
D611,12	MA167	DIODE	2	
D613	MA700	DIODE	1	
D701-04	P300DLF	DIODE	4	⚠
D705	1SR35200TB	DIODE	1	

D706	MA165	DIODE	1	
D709	MA4056-LTA	DIODE	1	
D710-13	1SR35200TB	DIODE	4	⚠
D795,96	MA4160M	DIODE	2	⚠
D801	MA4068L	DIODE	1	⚠
D802	1SS291TA	DIODE	1	
D803-07	MA165	DIODE	5	
D808	1SS291TA	DIODE	1	
D809,10	MA165	DIODE	2	
D825-28	MA165	DIODE	4	
D829	MA700	DIODE	1	
D851-57	SLR325VCT31	LED	7	
D858	SLR325DCT31	LED	1	
D859-65	SLR325VCT31	LED	7	
D866,67	SLR325DCT31	LED	2	
F1	XBA2C20TB0	FUSE	1	⚠
IC101	AN6558F	IC	1	
IC201	NJU7312AL	IC	1	
IC251	BA6218	IC	1	
IC301	UPC4570C	IC	1	
IC351,52	NJM4580DD	IC	2	
IC401	AN7062N	IC	1	
IC501	SVI3205B	IC	1	⚠
IC502	RSN6000B	IC	1	
IC601	M5218AP	IC	1	
IC801	M38503M2405F	IC	1	
IC803	TC74HC42AP	IC	1	
JK1	SJS9236	JACK,AC INLET	1	⚠
JK201-04	SJF3069N	JACK,IN/OUT	4	
JK205	SJF3068-7N	JACK,TAPE1 PLAY(IN)	1	
JK501	RJH4801M-1	JACK,SPEAKERS	1	(E,EG)
JK501	RJH4801M-2	JACK,SPEAKERS	1	(EB)
JK502	RJJ63TA01	JACK,PHONES	1	

L1	RLQZ271M	COIL,CHOKE	1	⚠
L201-04	ELEXT470KA9	COIL	4	
L251,52	ELEXT1R0KA9	COIL	2	
L501-04	SLQY18G-10	COIL,CHOKE	4	
L801	ELEXT101KA9	COIL	1	
P1	RPQ0164	PAD	1	
P2	RPF0139	PROTECTION COVER	1	
P3	RPG4559	PACKING CASE	1	(E)
P3	RPG4560	PACKING CASE	1	(EB,EG)
P4	RPN1221	PAD	1	
P5	RPH0032	MIRROR SHEET	1	(EB)
P6	SPP730	SHEET	1	
PCB1	REP2865D-M	MAIN PCB	1	(E,EG)/(RTL)
PCB1	REP2865E-M	MAIN PCB	1	(EB)/(RTL)
PCB2	REP2866D-S	SUB PCB	1	(E,EG)/(RTL)
PCB2	REP2866E-S	SUB PCB	1	(EB)/(RTL)
Q401,02	2SA992F	TRANSISTOR	2	
Q451,52	2SC1845F	TRANSISTOR	2	
Q453,54	2SC3311AR	TRANSISTOR	2	
Q455,56	2SA1309AR	TRANSISTOR	2	
Q501-03	2SA992F	TRANSISTOR	3	
Q601	2SD893AR	TRANSISTOR	1	
Q602-04	2SA1048GR	TRANSISTOR	3	
Q605,06	2SC3311AR	TRANSISTOR	2	
Q607	UN4113	TRANSISTOR	1	
Q608	UN4213	TRANSISTOR	1	
Q701	2SB621A-R	TRANSISTOR	1	
Q793	2SD2374PQAU	TRANSISTOR	1	⚠
Q794	2SB1548PQAU	TRANSISTOR	1	⚠
Q801	UN4211	TRANSISTOR	1	
Q802	UN4111	TRANSISTOR	1	
Q803	UN4211	TRANSISTOR	1	
Q804	UN4111	TRANSISTOR	1	

Q805	UN4211	TRANSISTOR	1	
Q806	UN4111	TRANSISTOR	1	
Q807	UN4211	TRANSISTOR	1	
Q808-10	UN4111	TRANSISTOR	3	
Q811	UN4211	TRANSISTOR	1	
Q812	UN4111	TRANSISTOR	1	
Q813-18	UN4211	TRANSISTOR	6	
Q819	2SD2037DEFTA	TRANSISTOR	1	⚠
Q820	2SK2880BCTA	TRANSISTOR	1	
Q824,25	2SK301QRS	TRANSISTOR	2	
Q826	2SA1048GR	TRANSISTOR	1	
R101,02	ERDS2FJ152	1/4W 1.5K	2	
R105,06	ERDS2FJ224	1/4W 220K	2	
R109,10	ERDS2FJ101	1/4W 100	2	
R113,14	ERDS2FJ563	1/4W 56K	2	
R117,18	ERDS2FJ271	1/4W 270	2	
R123,24	ERDS2FJ680	1/4W 68	2	
R125,26	ERDS2FJ184	1/4W 180K	2	
R127,28	ERDS2FJ123	1/4W 12K	2	
R129,30	ERDS2FJ563	1/4W 56K	2	
R131,32	ERDS2FJ102	1/4W 1K	2	
R201,02	ERDS2FJ102	1/4W 1K	2	
R205-16	ERDS2FJ102	1/4W 1K	12	
R217,18	ERDS2FJ334	1/4W 330K	2	
R219-21	ERDS2FJ103	1/4W 10K	3	
R223,24	ERDS2FJ393	1/4W 39K	2	
R251	ERDS1FJ100	1/2W 10	1	⚠
R301,02	ERDS2FJ563	1/4W 56K	2	
R303,04	ERDS2FJ123	1/4W 12K	2	
R305-08	ERDS2FJ224	1/4W 220K	4	
R309,10	ERDS2FJ392	1/4W 3.9K	2	
R311,12	ERDS2FJ102	1/4W 1K	2	
R313,14	ERDS2FJ223	1/4W 22K	2	
R315,16	ERDS2FJ392	1/4W 3.9K	2	
R317,18	ERDS2FJ183	1/4W 18K	2	
R351,52	ERDS2FJ102	1/4W 1K	2	

R353,54	ERDS2FJ473	1/4W 47K	2	
R355,56	ERDS2FJ102	1/4W 1K	2	
R357,58	ERDS2FJ224	1/4W 220K	2	
R361,62	ERDS2FJ183	1/4W 18K	2	
R365,66	ERDPS2VF102T	1/4W 1K	2	
R367,68	ERDS2FJ392	1/4W 3.9K	2	
R401,02	ERDS2FJ272	1/4W 2.7K	2	
R403,04	ERDS2FJ393	1/4W 39K	2	
R405,06	ERDS2FJ272	1/4W 2.7K	2	
R407,08	ERDS2FJ393	1/4W 39K	2	
R411,12	RREKFJ470VM	1/4W 47	2	
R437	ERDS2FJ473	1/4W 47K	1	
R457	ERDS2FJ153	1/4W 15K	1	
R459,60	RREKFJ101VM	1/4W 100	2	
R461-64	ERDS2FJ333	1/4W 33K	4	
R465-68	RREKFJ101VM	1/4W 100	4	
R469	ERDS2FJ103	1/4W 10K	1	
R470	ERDS2FJ102	1/4W 1K	1	
R471,72	ERDS2FJ561	1/4W 560	2	
R501,02	ERDS2FJ362	1/4W 3.6K	2	
R503,04	RREKFJ121VM	1/4W 120	2	
R505,06	ERDS2FJ392	1/4W 3.9K	2	
R507,08	RREKFJ121VM	1/4W 120	2	
R513-16	RREKFJ100VM	1/4W 10	4	
R517-20	ERDS1FJ6R8	1/2W 6.8	4	⚠
R521,22	ERDS1FJ100	1/2W 10	2	⚠
R527	ERDS2FJ223	1/4W 22K	1	
R528	ERDS2FJ824	1/4W 820K	1	
R529	ERDS2FJ124	1/4W 120K	1	
R530	ERDS1FJ272	1/2W 2.7K	1	
R531,32	ERDS1FJ100	1/2W 10	2	⚠
R533,34	ERDS2FJ182	1/4W 1.8K	2	
R535	ERDS2FJ562	1/4W 5.6K	1	
R536,37	ERDS2FJ103	1/4W 10K	2	
R550,51	ERDS2FJ222	1/4W 2.2K	2	
R555	ERG1SJ681	1W 680	1	
R556	ERG1SJ561	1W 560	1	

R557	ERG1SJ681	1W 680	1	
R558	ERG1SJ561	1W 560	1	
R559,60	ERDS1FJ122	1/2W 1.2K	2	⚠
R561,62	ERG1SJ151	1W 150	2	
R563,64	ERG1SJ181	1W 180	2	
R565-70	ERDS2FJ223	1/4W 22K	6	
R611-14	ERDS2FJ223	1/4W 22K	4	
R615-18	ERDS2FJ103	1/4W 10K	4	
R619	ERDS2FJ151	1/4W 150	1	
R620	ERDS2FJ153	1/4W 15K	1	
R621,22	ERDS2FJ223	1/4W 22K	2	
R624	ERDS2FJ333	1/4W 33K	1	
R625	ERDS2FJ223	1/4W 22K	1	
R626	ERDS2FJ103	1/4W 10K	1	
R628	ERDS2FJ564	1/4W 560K	1	
R629	ERDS2FJ473	1/4W 47K	1	
R630	ERDS2FJ150	1/4W 15	1	
R632	ERDS2FJ222	1/4W 2.2K	1	
R633	ERDS2FJ563	1/4W 56K	1	
R634	ERDS2FJ223	1/4W 22K	1	
R637	ERDS2FJ222	1/4W 2.2K	1	
R707,08	RREKFJ6R8VM	1/4W 6.8	2	
R709,10	RREKFJ470VM	1/4W 47	2	
R711	ERDS2FJ221	1/4W 220	1	
R712	RREKFJ2R2VM	1/4W 2.2	1	
R713	ERDS2FJ223	1/4W 22K	1	
R714	ERDS2FJ222	1/4W 2.2K	1	
R715	ERDS2FJ221	1/4W 220	1	
R793,94	ERDS2FJ103	1/4W 10K	2	
R801	ERDS2FJ821	1/4W 820	1	
R802	ERDS2FJ102	1/4W 1K	1	
R803	ERDS2FJ122	1/4W 1.2K	1	
R804	ERDS2FJ152	1/4W 1.5K	1	
R805	ERDS2FJ182	1/4W 1.8K	1	
R806	ERDS2FJ103	1/4W 10K	1	
R807	ERDS2FJ821	1/4W 820	1	
R808	ERDS2FJ102	1/4W 1K	1	

R809	ERDS2FJ122	1/4W 1.2K	1	
R810	ERDS2FJ152	1/4W 1.5K	1	
R811	ERDS2FJ182	1/4W 1.8K	1	
R812	ERDS2FJ222	1/4W 2.2K	1	
R813	ERDS2FJ103	1/4W 10K	1	
R814	ERDS2FJ1R0	1/4W 1	1	
R815	ERDS2FJ104	1/4W 100K	1	
R816-18	ERDS2FJ102	1/4W 1K	3	
R819	ERDS2FJ104	1/4W 100K	1	
R820	ERDS2FJ102	1/4W 1K	1	
R821,22	ERDS2FJ103	1/4W 10K	2	
R823	ERDS2FJ102	1/4W 1K	1	
R824	ERDS2FJ472	1/4W 4.7K	1	
R825-27	ERDS2FJ104	1/4W 100K	3	
R828	ERDS2FJ102	1/4W 1K	1	
R829	ERDS2FJ103	1/4W 10K	1	
R830	ERDS2FJ223	1/4W 22K	1	
R831	ERDS2FJ333	1/4W 33K	1	
R832,33	ERDS2FJ104	1/4W 100K	2	
R834	ERD2FCJ4R7	1/4W 4.7	1	⚠
R835	ERDS2FJ105	1/4W 1M	1	
R845	ERDS2FJ334	1/4W 330K	1	
R851	ERDS2FJ331	1/4W 330	1	
R852	ERDS2FJ271	1/4W 270	1	
R853,54	ERDS2FJ331	1/4W 330	2	
R855	ERDS2FJ271	1/4W 270	1	
R857-61	ERDS2FJ331	1/4W 330	5	
R862	ERDS1FJ471	1/2W 470	1	⚠
RL201-04	RSY0020M-R	RELAY	4	
RL351	RSY0020M-R	RELAY	1	
RL501 ,02	RSY0013M-0	RELAY	2	⚠
RL503	RSY0020M-R	RELAY	1	
RL701 ,02	RSY0019M-0	RELAY	2	⚠
S204	RSP2B023-A	SW,UNIT ON/OFF	1	
S801-13	EVQ21405R	SW,PUSH	13	

T1	RTP7K5E009AW	POWER TRANSFORMER	1	(E,EG)/⚠
T1	RTP7K5B005AW	POWER TRANSFORMER	1	(EB)/⚠
TH201 ,02	ERTD2ZHL104T	THERMISTOR	2	
VR201	EUWMRUF25461	VR,VOLUME	1	
VR202	EVJ02SFA5G15	VR,BALANCE	1	
VR203 ,04	EVNDXAA00B23	VR,OUTPUT VOL.ADJ.	2	
VR301 ,02	EVJYA1FA5C15	VR,BASS/TREBLE	2	
X801	RSXY8M00D01T	OSCILLATOR	1	
Z801	RCDGP1U27XD	REMOTE SENSOR	1	

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TOP PREVIOUS NEXT

16 Cabinet Parts Location

•@

17 Packaging

TOP PREVIOUS

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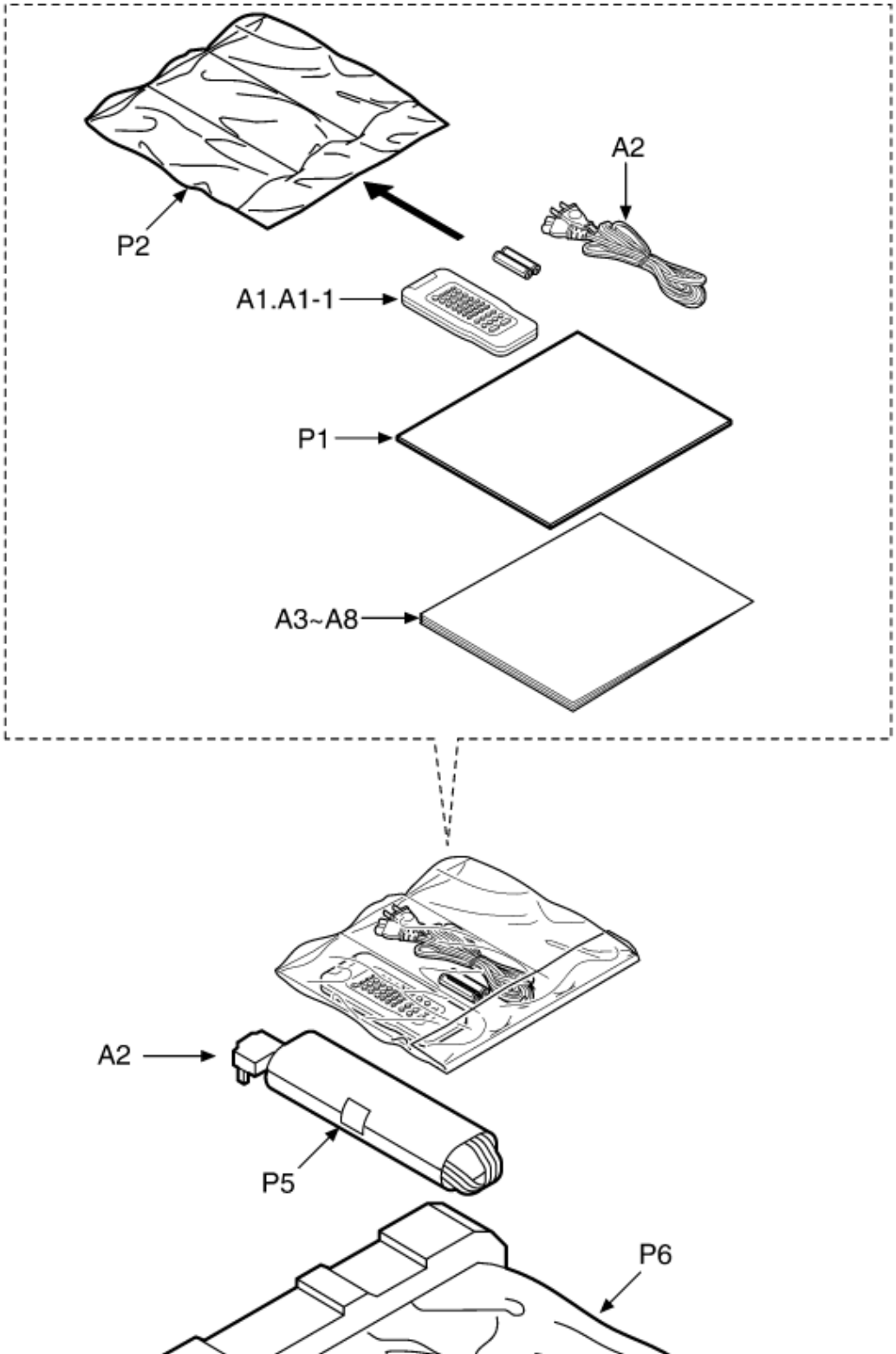
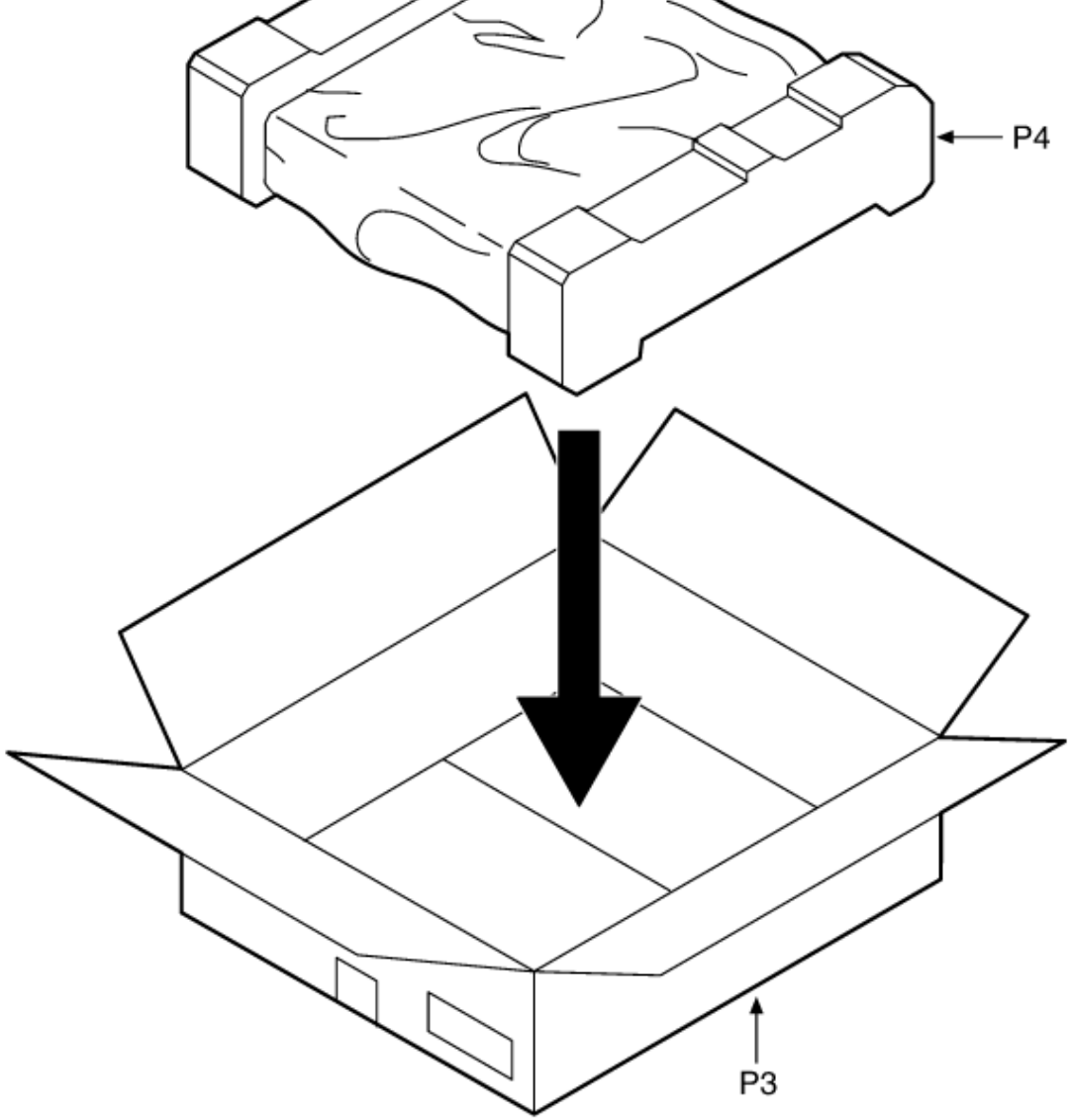
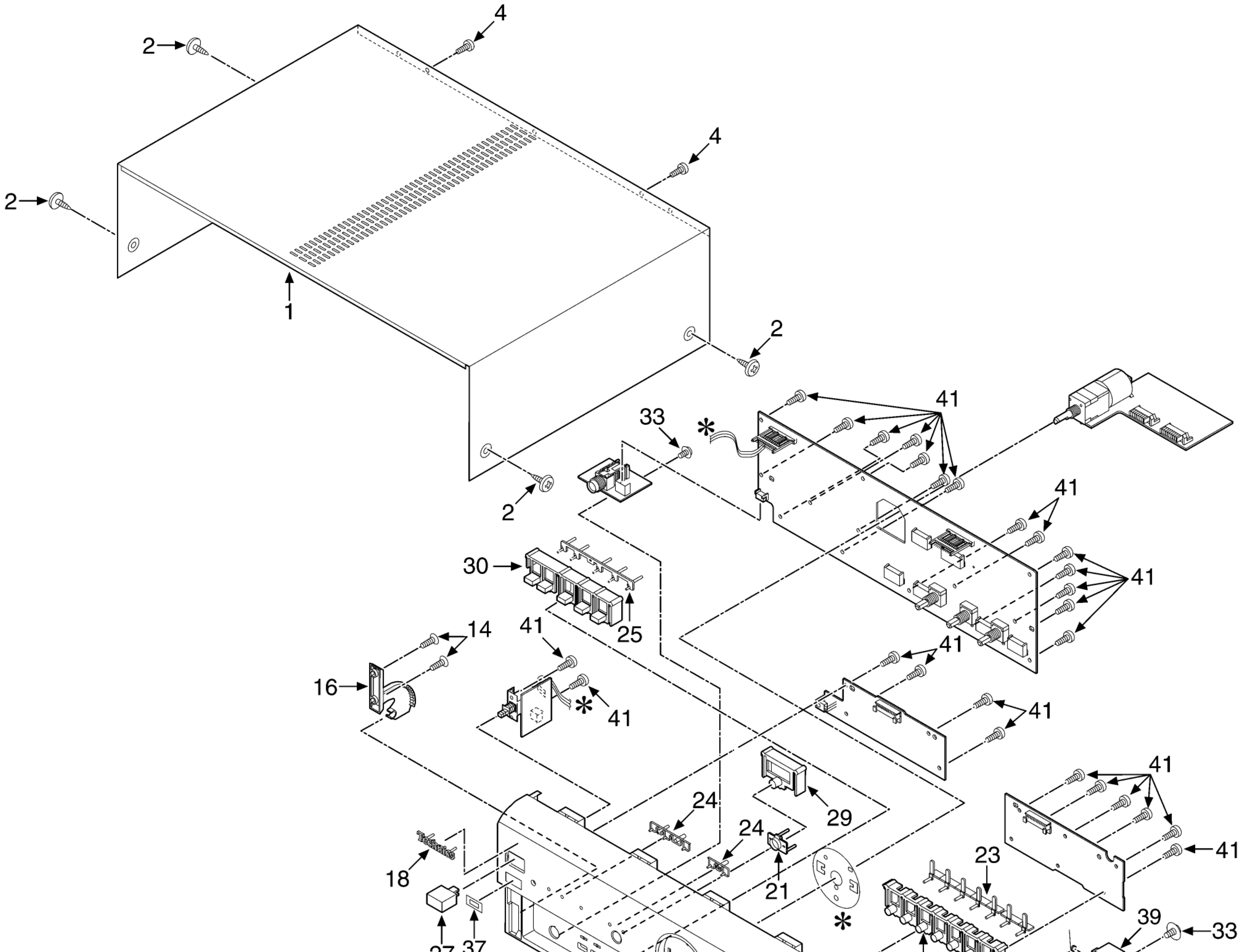
TOP PREVIOUS


P2
A2
A1.A1-1
P1
A3~A8
A2
P5
P6


P4
P3



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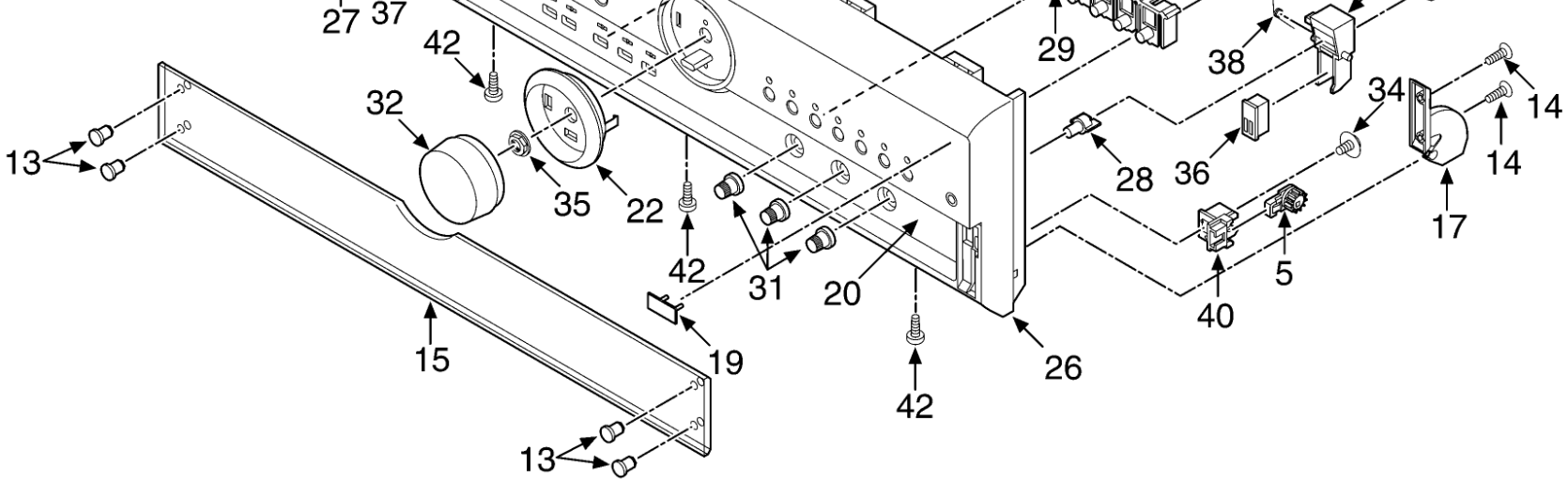
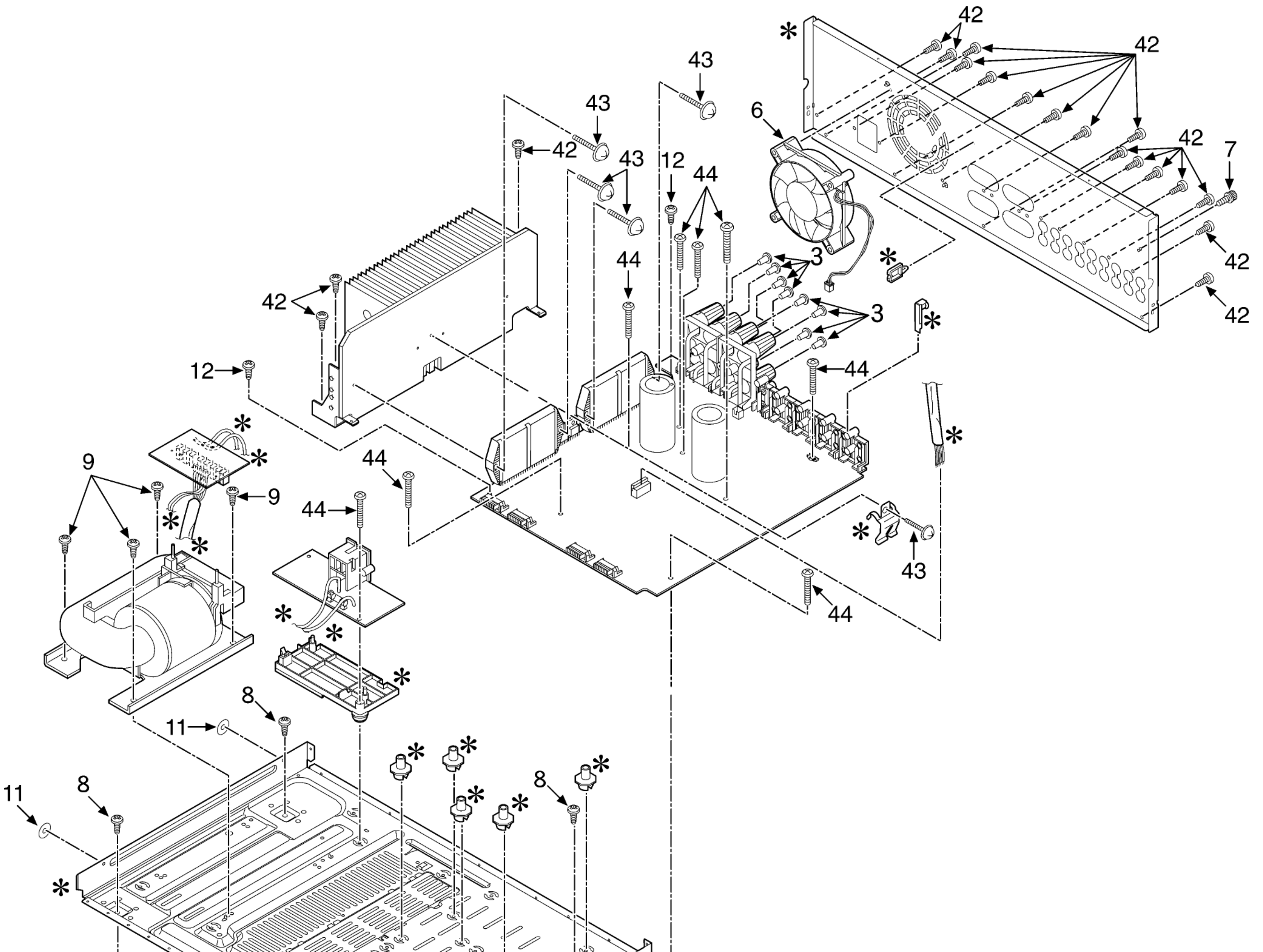


Note : We do not supply those items of parts marked ✻.



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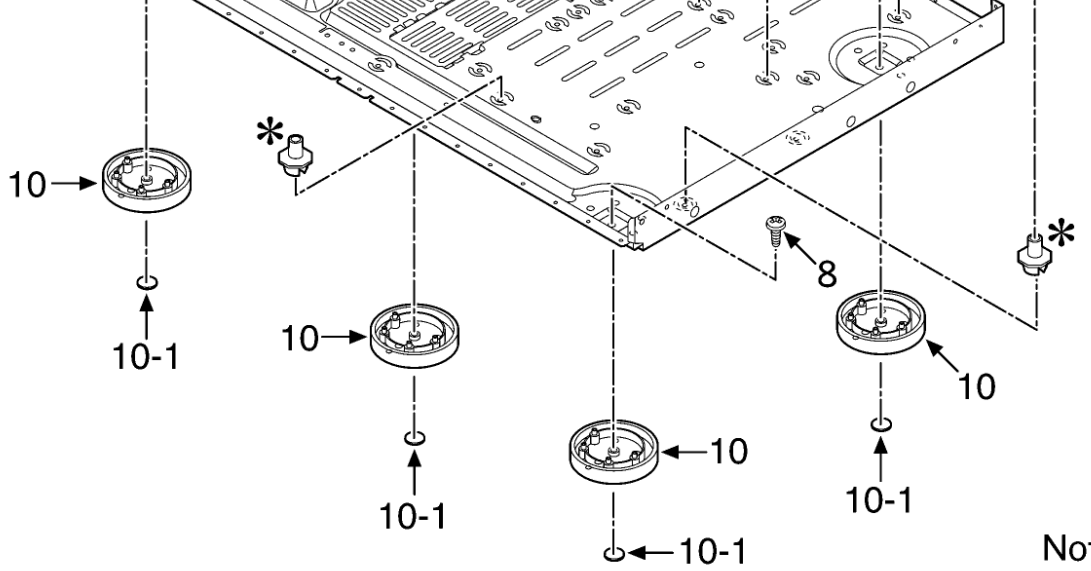
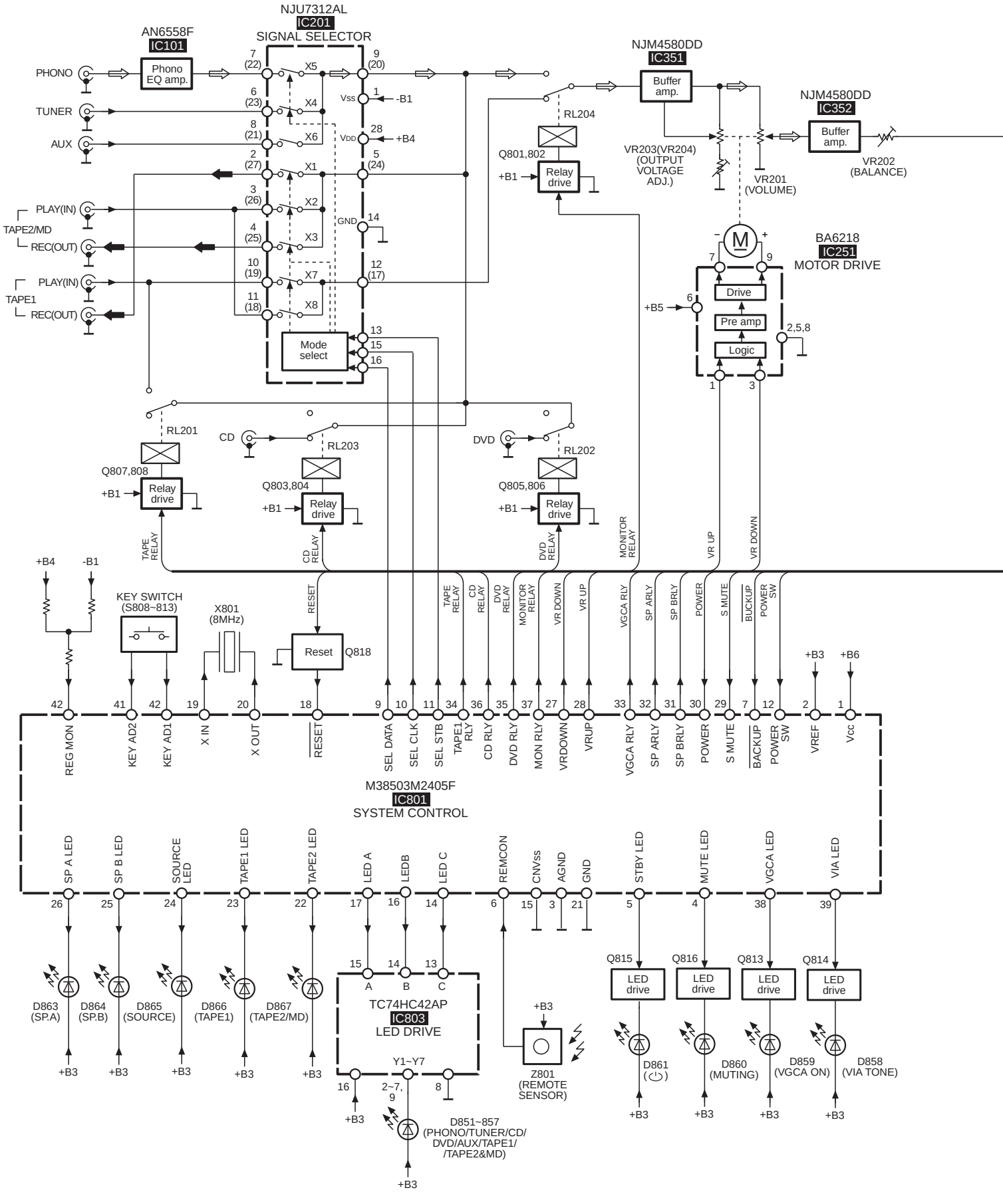
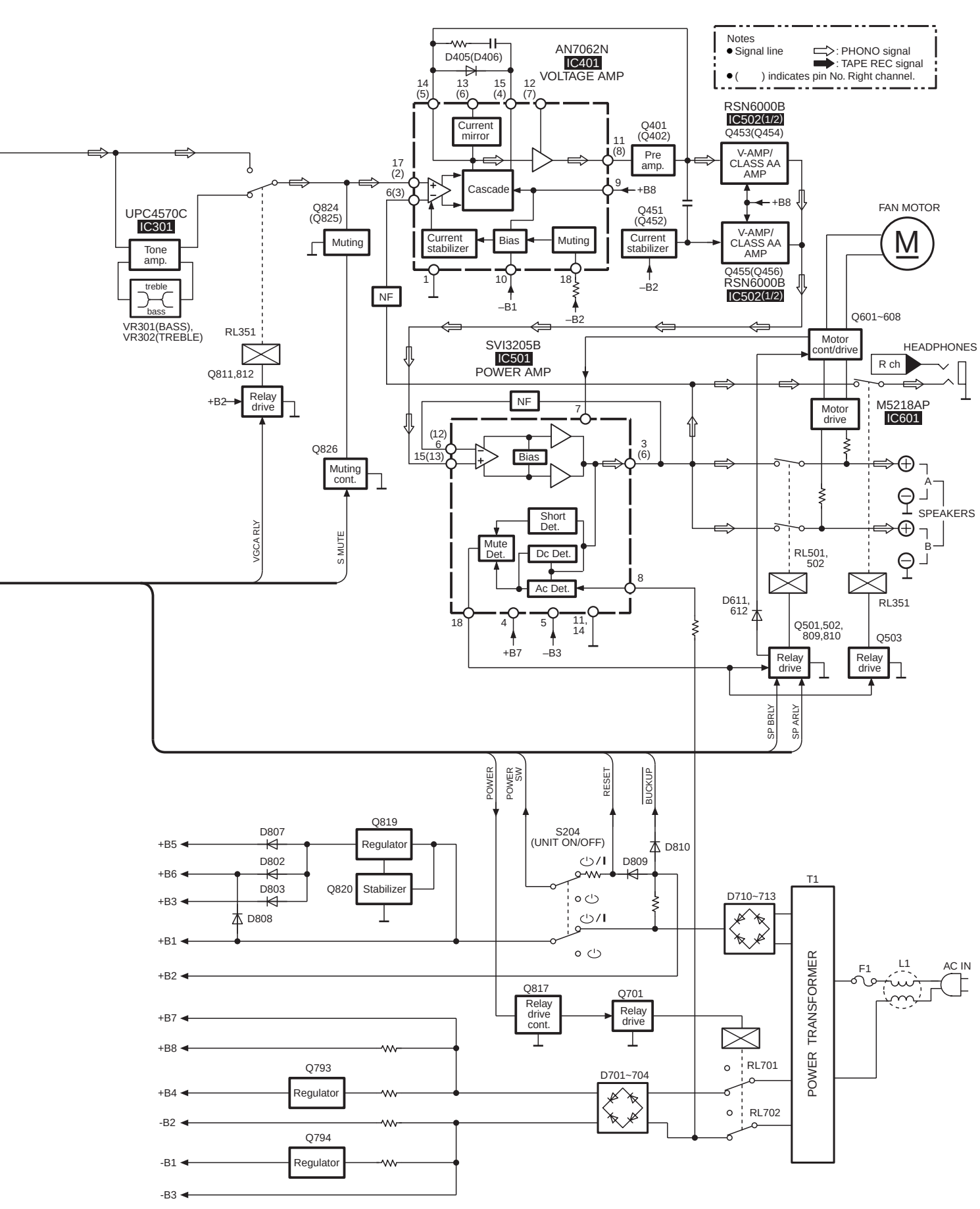
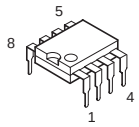


Note : We do not supply those items of parts marked ✻.

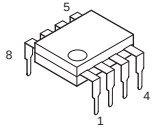

NJU7312AL
IC201
SIGNAL SELECTOR
AN6558F
IC101
Phono EQ amp.
PHONO
TUNER
AUX
PLAY(IN)
TAPE2/MD
REC(OUT)
PLAY(IN)
TAPE1
REC(OUT)
X1
X2
X3
X4
X5
X6
X7
X8
Vss
-B1
VDD
+B4
GND
Mode select
NJM4580DD
IC351
Buffer amp.
NJM4580DD
IC352
Buffer amp.
RL204
Q801,802
Relay drive
+B1
VR203(VR204)
(OUTPUT VOLTAGE ADJ.)
VR201
(VOLUME)
VR202
(BALANCE)
BA6218
IC251
MOTOR DRIVE
Drive
Pre amp
Logic
+B5
2,5,8
RL201
Q807,808
Relay drive
CD
RL203
Q803,804
Relay drive
DVD
RL202
Q805,806
Relay drive
TAPE RELAY
CD RELAY
DVD RELAY
MONITOR RELAY
VR UP
VR DOWN
+B4
-B1
KEY SWITCH
(S808~813)
X801
(8MHz)
Reset
Q818
RESET
REG MON
KEY AD2
KEY AD1
X IN
X OUT
RESET
SEL DATA
SEL CLK
SEL STB
TAPE1 RLY
CD RLY
DVD RLY
MON RLY
VRDOWN
VRUP
VGCA RLY
SP ARLY
SP BRLY
POWER
S MUTE
BUCKUP
POWER SW
VREF
Vcc
+B3
+B6
M38503M2405F
IC801
SYSTEM CONTROL
SP A LED
SP B LED
SOURCE LED
TAPE1 LED
TAPE2 LED
LED A
LEDB
LED C
REMCON
CNVss
AGND
GND
STBY LED
MUTE LED
VGCA LED
VIA LED
D863 (SP.A)
D864 (SP.B)
D865 (SOURCE)
D866 (TAPE1)
D867 (TAPE2/MD)
TC74HC42AP
IC803
LED DRIVE
Y1~Y7
D851~857
(PHONO/TUNER/CD/
DVD/AUX/TAPE1/
/TAPE2&MD)
Z801
(REMOTE SENSOR)
Q815
Q816
Q813
Q814
LED drive
D861
D860 (MUTING)
D859 (VGCA ON)
D858 (VIA TONE)


Notes
● Signal line
: PHONO signal
: TAPE REC signal
● ( ) indicates pin No. Right channel.
AN7062N
IC401
VOLTAGE AMP
D405(D406)
Current mirror
Cascade
Current stabilizer
Bias
Muting
Pre amp.
Q401 (Q402)
Q451 (Q452)
RSN6000B
IC502(1/2)
Q453(Q454)
V-AMP/ CLASS AA AMP
Q455(Q456)
+B8
–B1
–B2
–B7
–B3
+B7
UPC4570C
IC301
Tone amp.
treble
bass
VR301(BASS), VR302(TREBLE)
Q824 (Q825)
Muting
NF
RL351
Q811,812
Relay drive
+B2
VGCA RLY
S MUTE
Q826
Muting cont.
SVI3205B
IC501
POWER AMP
Short Det.
Mute Det.
Dc Det.
Ac Det.
Q601~608
Motor cont/drive
Motor drive
M5218AP
IC601
FAN MOTOR
HEADPHONES
R ch
SPEAKERS
A
B
RL501, 502
D611, 612
Q501,502, 809,810
Q503
SP BRLY
SP ARLY
POWER
POWER SW
RESET
BUCKUP
S204
(UNIT ON/OFF)
D807
D802
D803
D808
D809
D810
Q819
Regulator
Q820
Stabilizer
+B5
+B6
+B3
+B1
+B2
D710~713
T1
POWER TRANSFORMER
F1
L1
AC IN
Q817
Relay drive cont.
Q701
Relay drive
RL701
RL702
D701~704
+B7
+B8
+B4
-B2
-B1
-B3
Q793
Regulator
Q794
Regulator

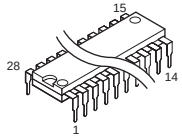
UPC4570C
AN6558F



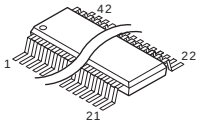
NJM4580DD
M5218AP



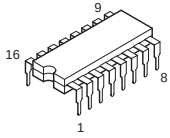
NJU7312AL



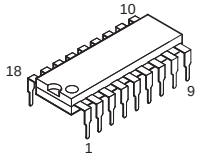
M38503M2405F



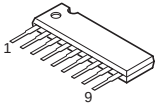
TC74HC42AP



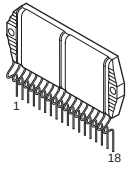
AN7062N

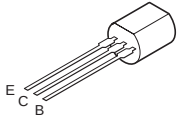


BA6218



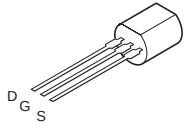
RSN6000B
SVI3205B



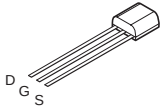


2SA992EFPTA
2SA933QRSTA
2SA1123RSTTA
2SB621AQRSTA
2SC2631RSTTA
2SD893RTA

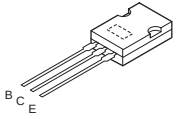
2SK301QRSTA



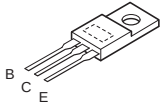
2SK2880BCTA

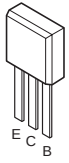


2SD2037DEFTA



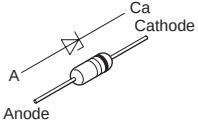
2SD2374PQAU
2SB1548PQAU



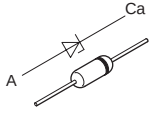


2SA1309ATA
2SC3311ATA
UN4111TA
UN4113TA
UN4211TA
UN4213TA

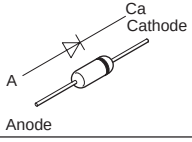
MA4036MTA
MA4056MTA
MA4068LTA



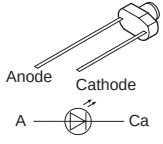
MA4091MTA
MA4056LTA



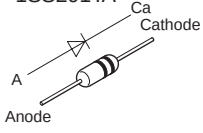
MA165TA
MA29WATA



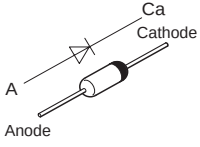
SLR325DCT31
SLR325VCT31



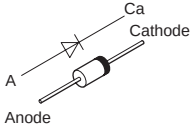
MA167ATA
MA700ATA
1SS291TA



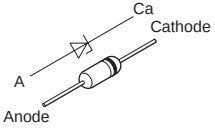
1SR35200TB

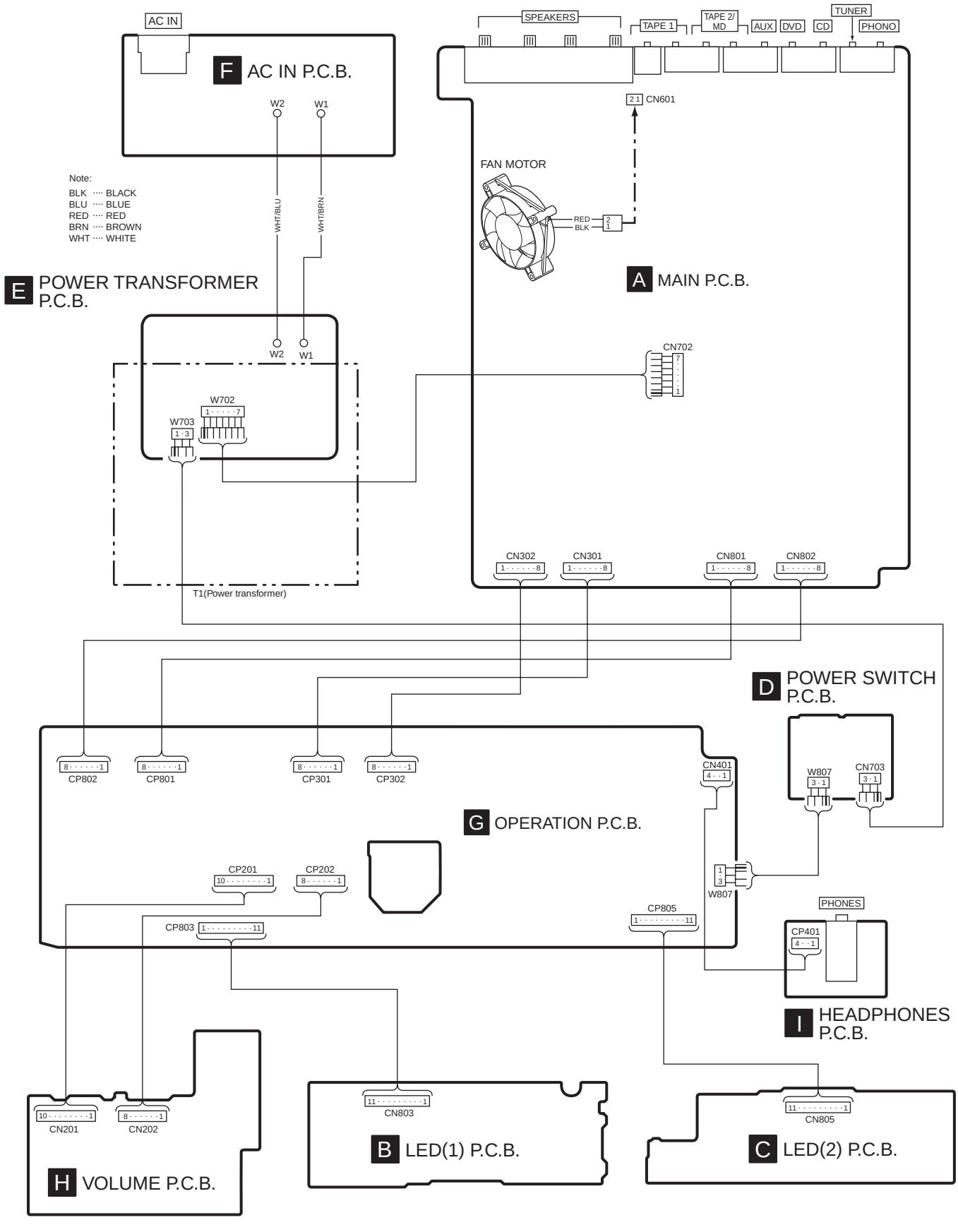


P300DLF

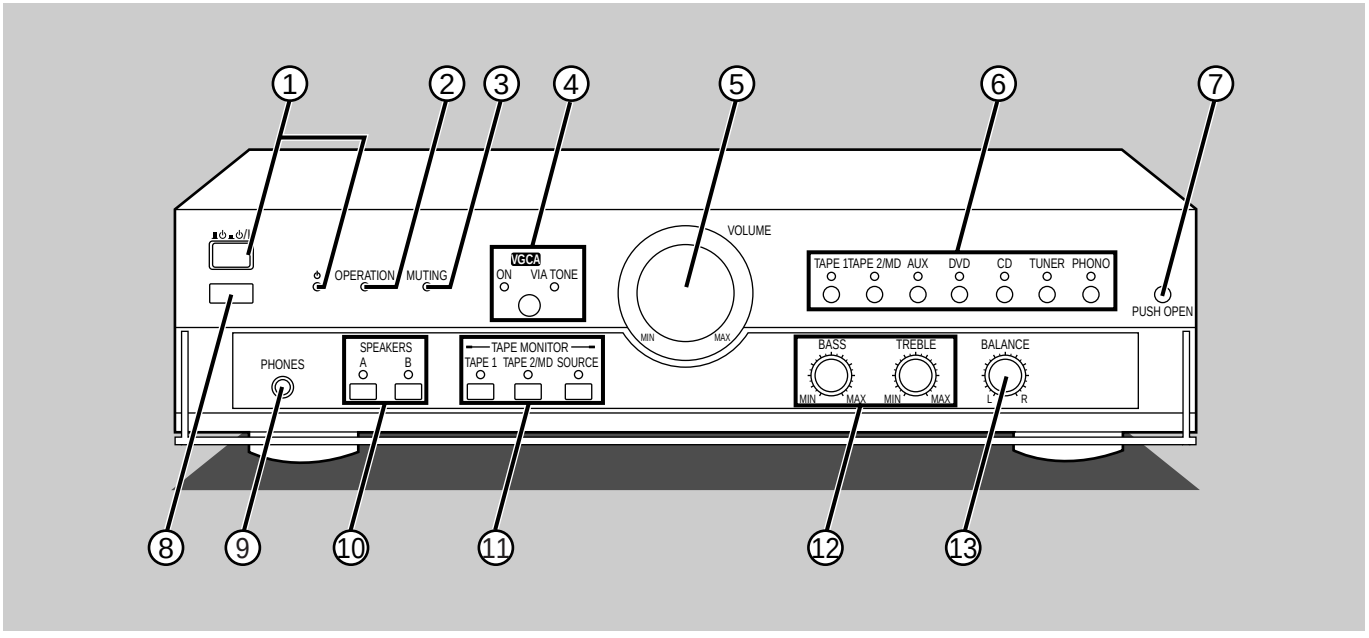


MA4160MTA




AC IN
F AC IN P.C.B.
W2
W1
Note:
BLK ···· BLACK
BLU ···· BLUE
RED ···· RED
BRN ···· BROWN
WHT ···· WHITE
WHT/BLU
WHT/BRN
E POWER TRANSFORMER P.C.B.
W2
W1
W702
1 · · · · · 7
W703
1 · 3
T1(Power transformer)
SPEAKERS
TAPE 1
TAPE 2/ MD
AUX
DVD
CD
TUNER
PHONO
2 1 CN601
FAN MOTOR
RED
BLK
2
1
A MAIN P.C.B.
CN702
7 · · · · · 1
CN302
1 · · · · · · 8
CN301
1 · · · · · · 8
CN801
1 · · · · · · 8
CN802
1 · · · · · · 8
D POWER SWITCH P.C.B.
8 · · · · · · 1
CP802
8 · · · · · · 1
CP801
8 · · · · · · 1
CP301
8 · · · · · · 1
CP302
CN401
4 · · 1
W807
3 · 1
CN703
3 · 1
G OPERATION P.C.B.
CP201
10 · · · · · · · · 1
CP202
8 · · · · · · 1
CP803
1 · · · · · · · · · · 11
CP805
1 · · · · · · · · · · 11
1
3
W807
PHONES
CP401
4 · · 1
I HEADPHONES P.C.B.
10 · · · · · · · · 1
CN201
8 · · · · · · 1
CN202
H VOLUME P.C.B.
11 · · · · · · · · · 1
CN803
B LED(1) P.C.B.
11 · · · · · · · · · 1
CN805
C LED(2) P.C.B.

■ Front Panel Controls



Main unit

No. **Name**

① **Unit on/off button (⏻ /I) and remote standby indicator (⏻)**
Use this button to turn the unit on and off.
■ (off): The unit is in standby mode.
▬ (on): The unit is on. The unit can be turned on and off with the remote control. When the unit is turned off with the remote control it is in remote standby and the indicator lights.
The unit is still using a small amount of power in the standby and remote standby conditions. Standby uses less power.

② **Operation indicator (OPERATION)**

③ **Muting indicator (MUTING)**

④ **VGCA button/indicators (VGCA)**

No. **Name**

⑤ **Volume control (VOLUME)**

⑥ **Input select buttons/indicators**

⑦ **Panel button (PUSH OPEN)**
Press to open the clear panel.
Close by hand.

⑧ **Remote control signal sensor**

⑨ **Headphone jack (PHONES)**

⑩ **Speaker select buttons/indicators (SPEAKERS A, B)**

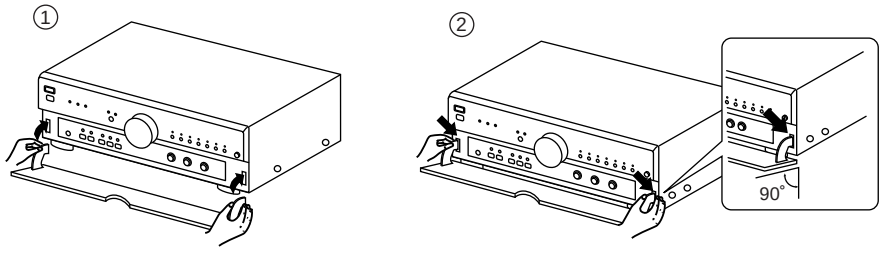
⑪ **Tape monitor buttons/indicators (TAPE MONITOR)**

⑫ **Tone contols (BASS, TREBLE)**

⑬ **Balance control (BALANCE)**

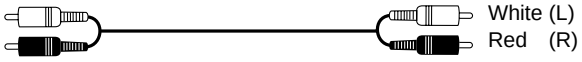
If the clear panel comes off

① **Insert the panel as shown in the illustration.**
② **Ensure the panel is parallel to the unit, then press firmly down and in on the levers until they click into place.**
③ **Check that the panel now moves correctly.**
If it does not, remove it and repeat the above procedure.

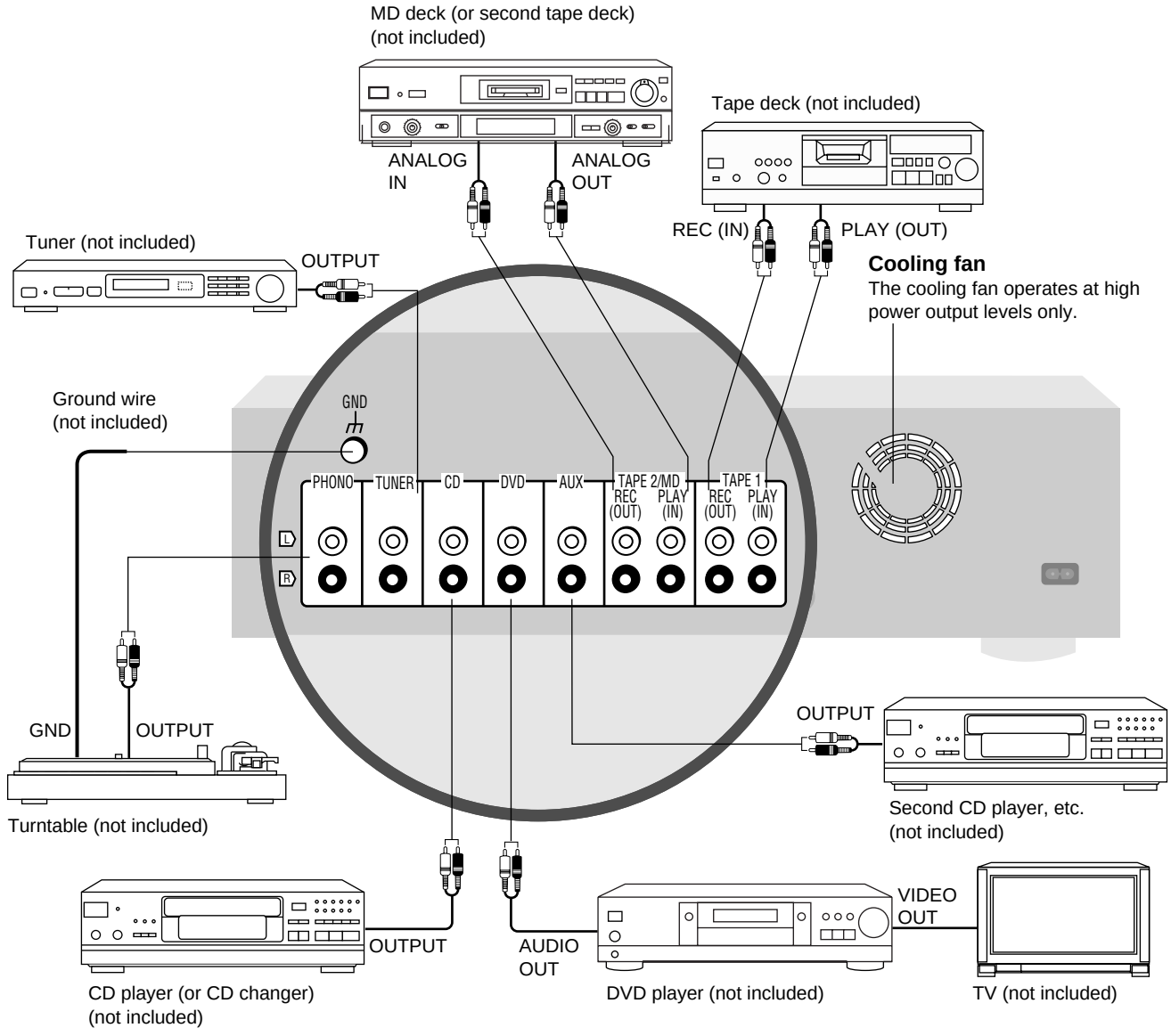


■ Connections

Stereo phono cable (not included)

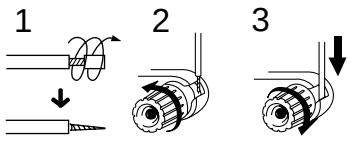


Connections to other equipment



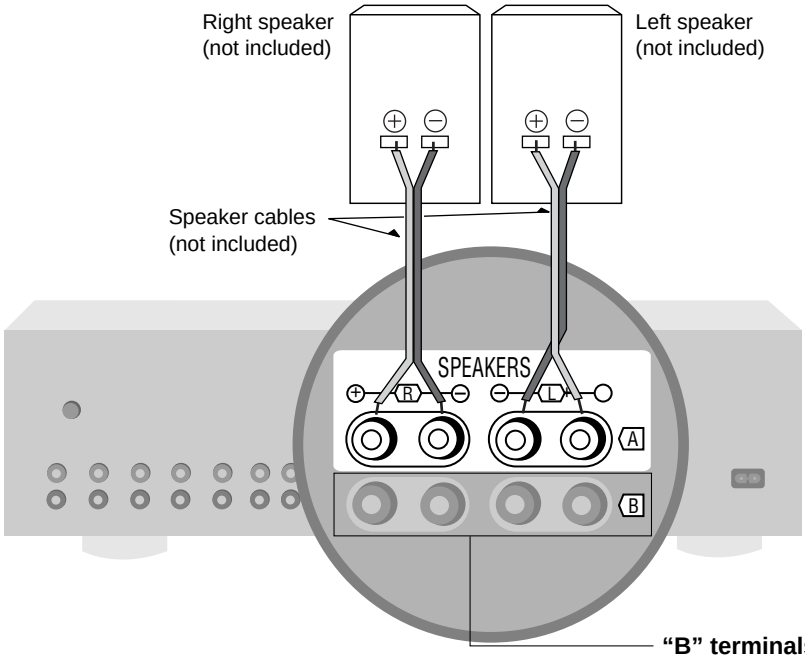
Connecting the speakers

Connecting the speaker cables



NO

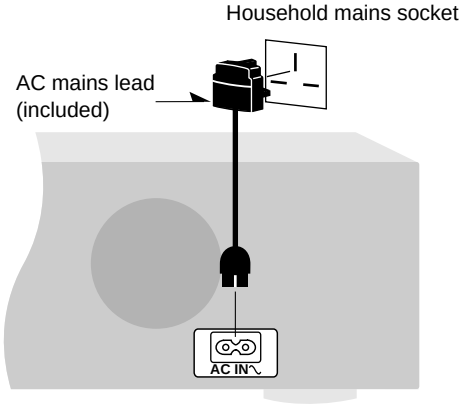
Caution
To prevent damage to circuitry, never short-circuit the positive (+) and negative (–) speaker wires.



"B" terminals
For connection to a second pair of speakers.

Speaker impedance
When only the "A" or only the "B" terminals are used: 4–16 Ω
When the "A" and "B" terminals are used simultaneously: 8–16 Ω

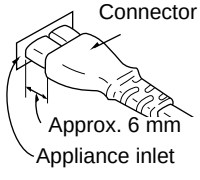
Connecting the power supply



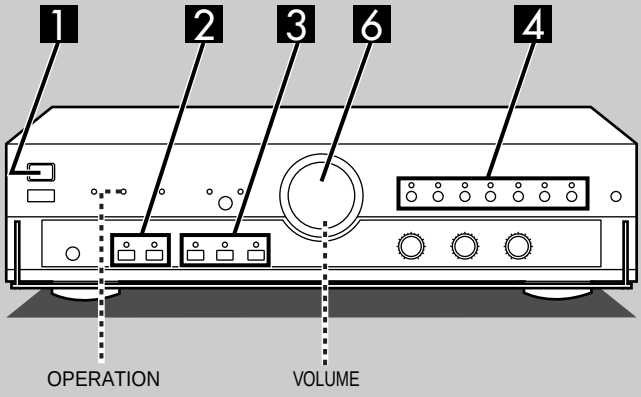
BE SURE TO READ THE CAUTION FOR THE AC MAINS LEAD BEFORE CONNECTION.

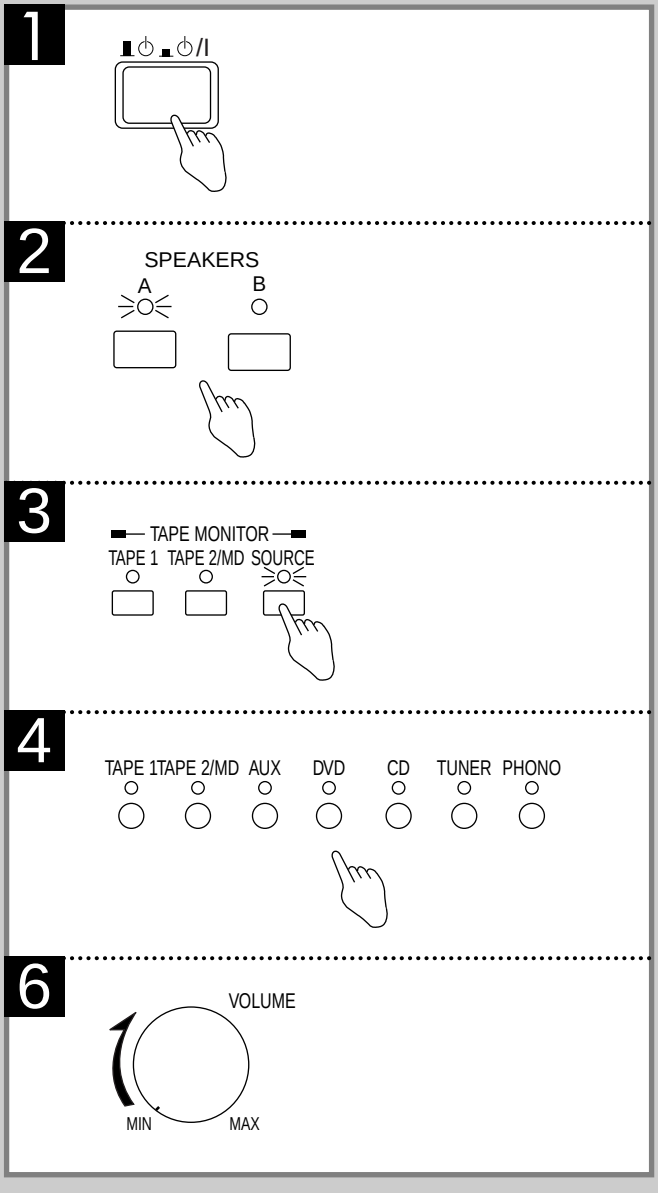
Connect the AC mains lead only after all other connections have been made.

Insertion of connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.



■ Listening





Preparation

Before operation, set [VOLUME] to the “MIN” position.

1 **Press [⏻/I].**

About 4 seconds later, the “OPERATION” indicator will light up.

2 **Select the speakers to be used.**

The corresponding speaker indicator will illuminate.

3 **Press [SOURCE].**

4 **Press input select buttons to select the desired source.**

The corresponding indicator lights.
TAPE 1: Tape deck
TAPE 2/MD: Second tape deck or MD deck
AUX: Component connected to the “AUX” terminals
DVD: DVD player
CD: CD player (or CD changer)
TUNER: Tuner
PHONO: Turntable

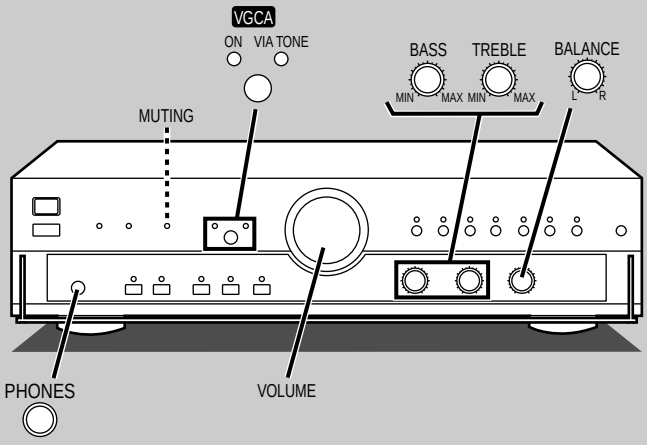
5 **Start the desired source.**

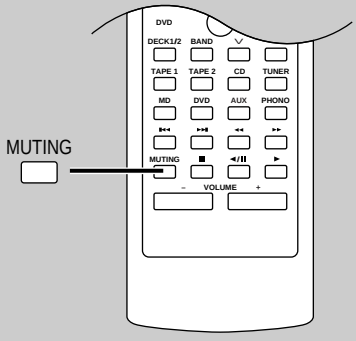
Refer to the appropriate operating instructions for details.

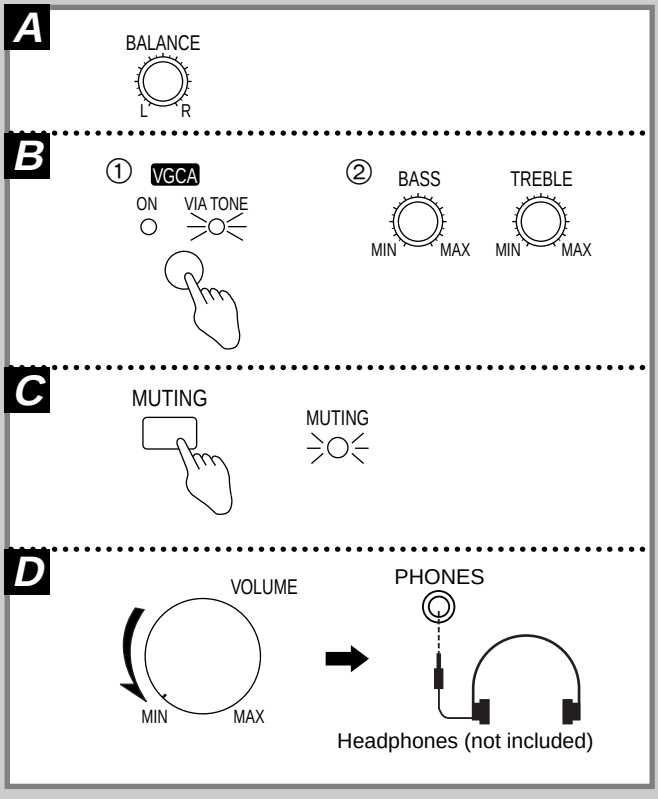
6 **Adjust the volume.**

After listening is finished

Be sure to reduce the volume level, and turn the unit off by pressing the unit on/off button.







To adjust the sound balance

A

Turn [BALANCE] to adjust the left/right sound balance.

The VGCA circuit

This unit features a state-of-the-art variable gain control amplifier (VGCA).
Rather than reducing the volume of the input signal and then amplifying it as was done in the past, this unit uses the VGCA circuit to change the gain of the amplifier itself.
This has resulted in a 10 dB improvement on the S/N ratio of past models.
Leave VGCA on during normal use.
VGCA is switched on at the time of purchase.

To adjust the tone quality

B

① Press [VGCA] to turn the "VIA TONE" indicator on.
② Turn [BASS] to adjust the low-frequency sound. Turn [TREBLE] to adjust the high-frequency sound.

Press again to turn VGCA on again. Sound is heard unadjusted.

To mute the sound level

C

Remote control only

Press [MUTING].
The "MUTING" indicator on this unit will light up.

Press again to restore the volume indicated by the volume control.
The "MUTING" indicator will turn off.

Note
Muting is also canceled when the unit is turned off.

To listen through headphones

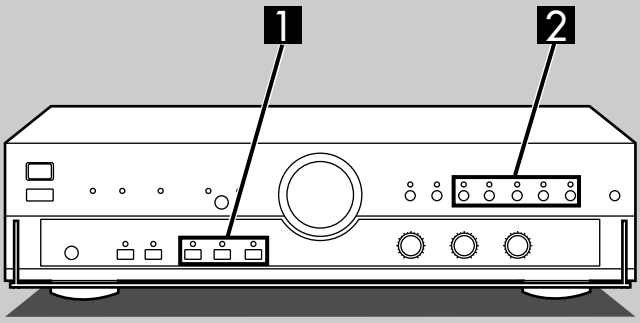
D

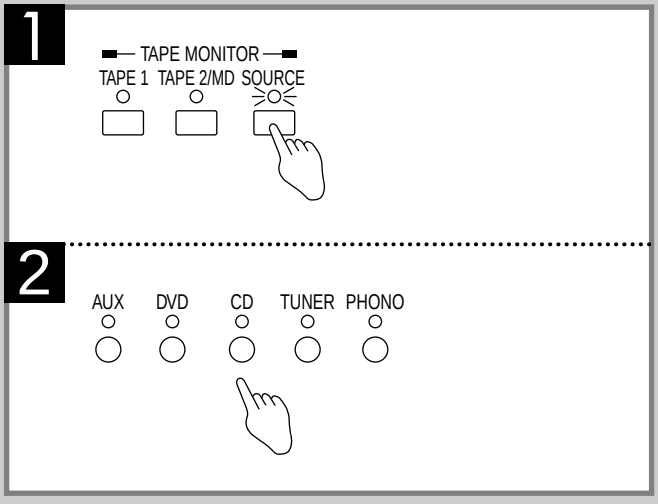
Decrease the volume, and connect the headphones.
Plug type: 6.3 mm stereo

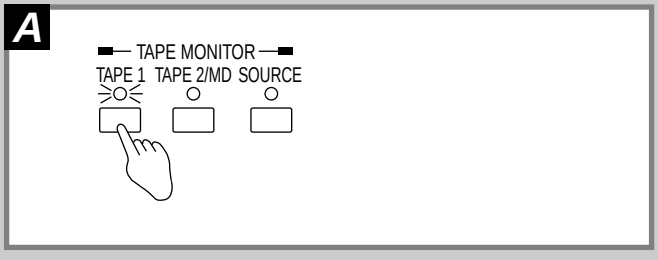
If sound from speakers is not wanted, press SPEAKER [A] and/or [B] to turn off the speaker indicators.

Note
Avoid listening for prolonged periods of time to prevent hearing damage.

■ Recording







Connect the tape deck or MD deck to either of the “REC (OUT) (TAPE 1 or TAPE 2/MD)” terminals on the back of the unit.

1 Press [SOURCE].

2 Press on input select button to select the source to be recorded.
AUX: Equipment connected to the AUX terminal.
DVD: DVD player
CD: CD player (or CD changer)
TUNER: Tuner
PHONO: Turntable

3 Begin recording on tape deck or MD deck.
Follow your equipment’s operating instructions.

4 Begin the source to be recorded.

Note
Some DVD players need special settings before recording. See the DVD player’s operating instructions for details.

Recording between TAPE 1 and TAPE 2/MD

You can record from TAPE 1 to TAPE 2/MD and vice versa.

From TAPE 1 to TAPE 2/MD
① Press [SOURCE].
② Press input select buttons [TAPE 1].
③ Start recording on the recording deck and playback on the playback deck.

From TAPE 2/MD to TAPE 1
In step ②, press input select buttons [TAPE 2/MD].

To check a recording A

With a tape deck with 3 heads, it is possible to monitor the sound recorded.

Press [TAPE MONITOR (TAPE 1 or TAPE 2/MD)] and set the monitor switch on the tape deck to “TAPE”.
TAPE 1: To monitor the deck connected to the TAPE 1 terminals.
TAPE 2/MD: To monitor the deck connected to the TAPE 2/MD terminals.

Note
When finished using the tape monitor, press [SOURCE] again.