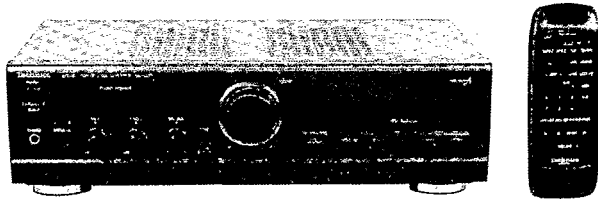


Service Manual

Stereo Integrated Amplifier

Amplifier

SU-V620



Colour

(K) : Black

Areas

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Britain	
(EG)	Germany and Italy	
(GC)	Asia, Latin America, Middle East and Africa	
(GN)	Oceania	

Specifications (DIN 45 500)

20 Hz – 20 kHz continuous power output both channels driven	2 × 70 W (8 Ω)
1 kHz continuous power output both channels driven (THD: 1%)	2 × 80 W (8 Ω) 2 × 100 W (4 Ω)
63 Hz – 12.5 kHz continuous power output both channels driven (THD: 1%)	2 × 75 W (8 Ω) 2 × 95 W (4 Ω)
Total harmonic distortion rated power at 20 Hz – 20 kHz	0.1% (8 Ω)
Intermodulation distortion (50 Hz: 7 kHz = 4:1, SMPTE) rated power	0.1% (8 Ω)
Residual hum and noise	1 mV
Damping factor	100 (8 Ω) 50 (4 Ω)
Headphones output level/impedance	540 mV/47 Ω (Ø 6.3)
Load impedance	
A or B	4 Ω – 16 Ω
A and B	8 Ω – 16 Ω
Input sensitivity/impedance	
PHONO MM	2.5 mV/47 kΩ
TUNER, CD, AUX, TAPE 1, TAPE 2/DCC	150 mV/22 kΩ
Phono maximum input voltage (1 kHz, RMS)	
MM	150 mV (IHF '66)
S/N (rated power, 4 Ω)	
PHONO MM	76 dB (77 dB, IHF '66)
TUNER, CD, AUX, TAPE 1, TAPE 2/DCC	92 dB (95 dB, IHF '66)
S/N at – 26 dB power (4 Ω)	
PHONO MM	67 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DCC	70 dB

S/N at 50 mW (4 Ω)

PHONO MM	63 dB
TUNER, CD, AUX, TAPE 1, TAPE 2/DCC	63 dB

Frequency response

PHONO MM	RIAA standard curve ± 1 dB (30 Hz – 15 kHz)
TUNER, CD, AUX, TAPE 1, TAPE 2/DCC	3 Hz – 60 kHz (+0, – 3 dB) +0 dB, – 0.3 dB (20 Hz – 20 kHz)

Tone controls

BASS	50 Hz, +10 dB to – 10 dB
TREBLE	20 kHz, +10 dB to – 10 dB

Output voltage

TAPE 1, TAPE 2/DCC REC OUT	150 mV
Channel balance (AUX 250 Hz – 6.3 kHz)	± 1 dB
Channel separation (AUX 1 kHz)	50 dB

■ GENERAL

Power consumption	190 W
Power supply	
For (E) and (EG) areas	50 Hz/60 Hz AC, 230 V
For (EB), (GN) areas	50 Hz/60 Hz AC, 230 V – 240 V
For (GC) area only	50 Hz/60 Hz AC, 110 V – 127 V / 220 V – 240 V
Dimensions (W × H × D)	430 × 125 × 310 mm
Weight	6.8 kg

Notes:

- Design and specifications are subject to change without notice. Weight and dimensions are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Before Repair

- (1) Turn off the power supply. Using a 10 Ω, 10 W resistor, connect both ends of power supply capacitors (C703, C704, C705, 706) 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 respect to supply voltage 230 V/240 V/110V – 127 V/220V – 240V.

Power supply voltage	AC 230 V	AC 240 V	AC 110V – 127 V	AC 220V – 240V
Consumed current 50 Hz	70 ~ 220 mA	65 ~ 215 mA	130 ~ 410 mA	65 ~ 215 mA

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 function 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.

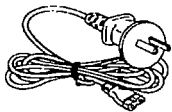
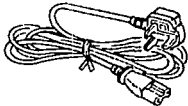
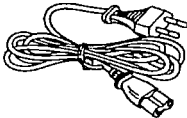
If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

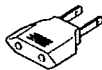
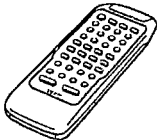
Note:
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

Accessories

- AC power supply cord
(E, EG, GC) areas : (RJA0019-2K) 1 (EB) area : (VJA0733) 1 (GN) area : (RJA0036-K) 1



- Remote control transmitter (RAK-SU129WH) 1
 - Batteries (UM-4, “AAA”, R03) 2
 - Power plug adaptor [for (GC) area only] (SJP5213-2) 1
- Note:** These are available on sales route.



■ Caution for AC Main Lead

[(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 the colours of the wires in the mains lead of this appliance 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 in the plug which is marked with the letter N or coloured BLACK.

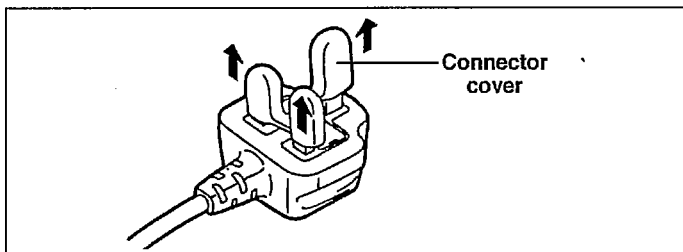
This apparatus was produced to BS 800.

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

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol .

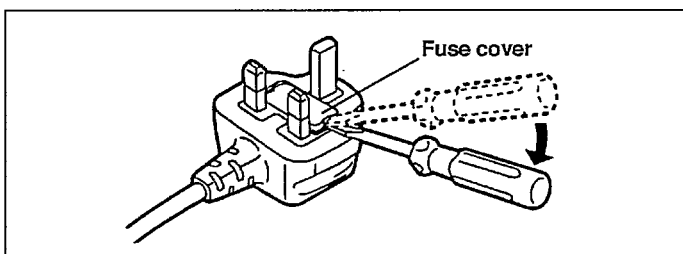
Before use

Remove the connector cover as follows.

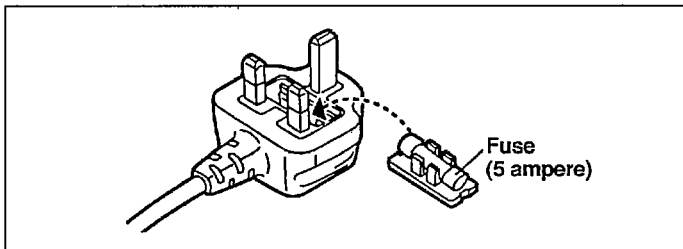


How to replace the fuse

1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.

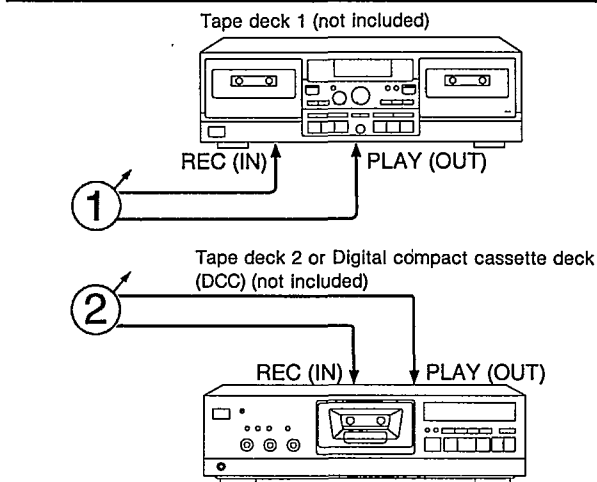
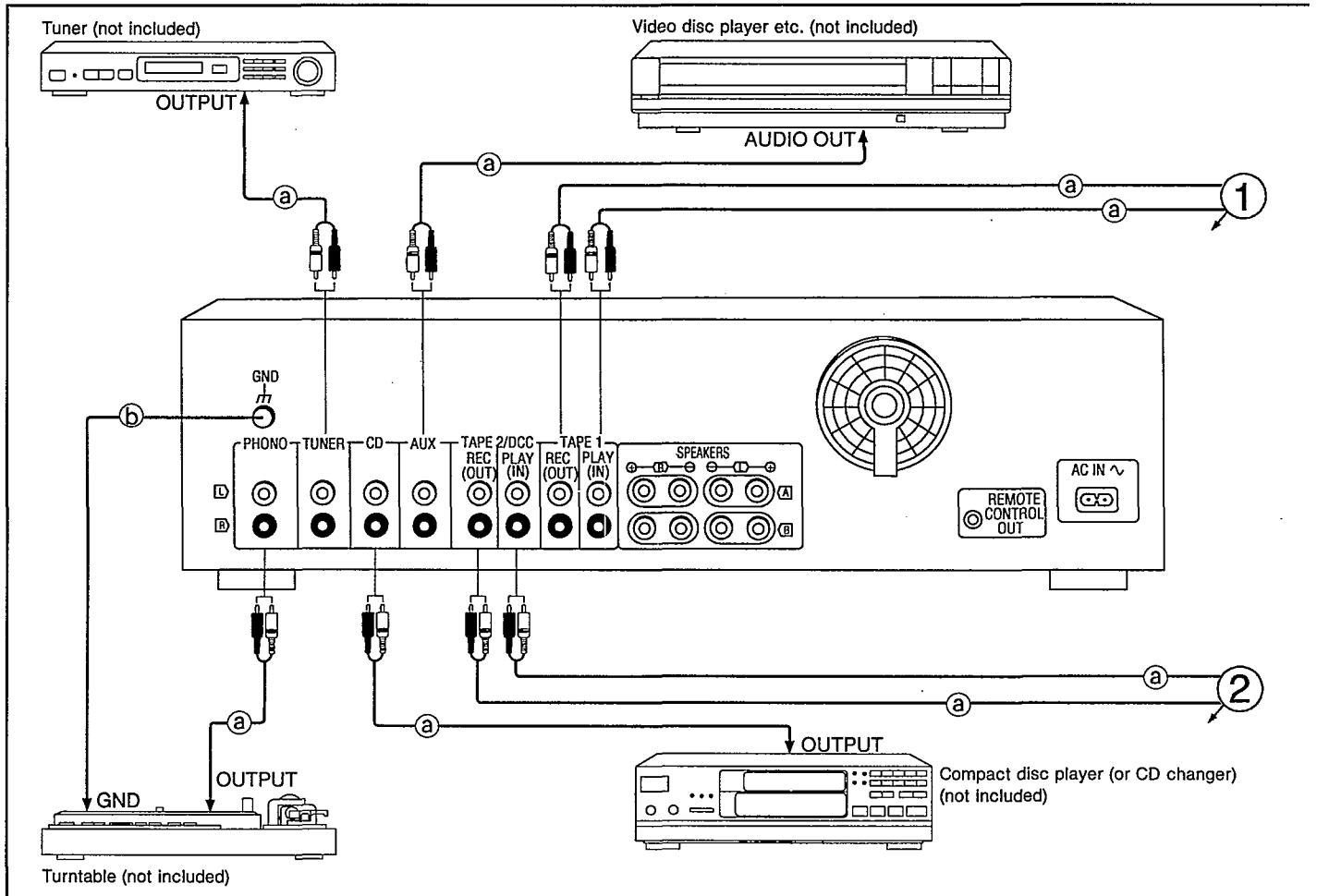


■Connecting the Audio Components

Make connections to each component in the system by using stereo connection cables (not included).

Stereo connection cable

White (L)  Red (R) 



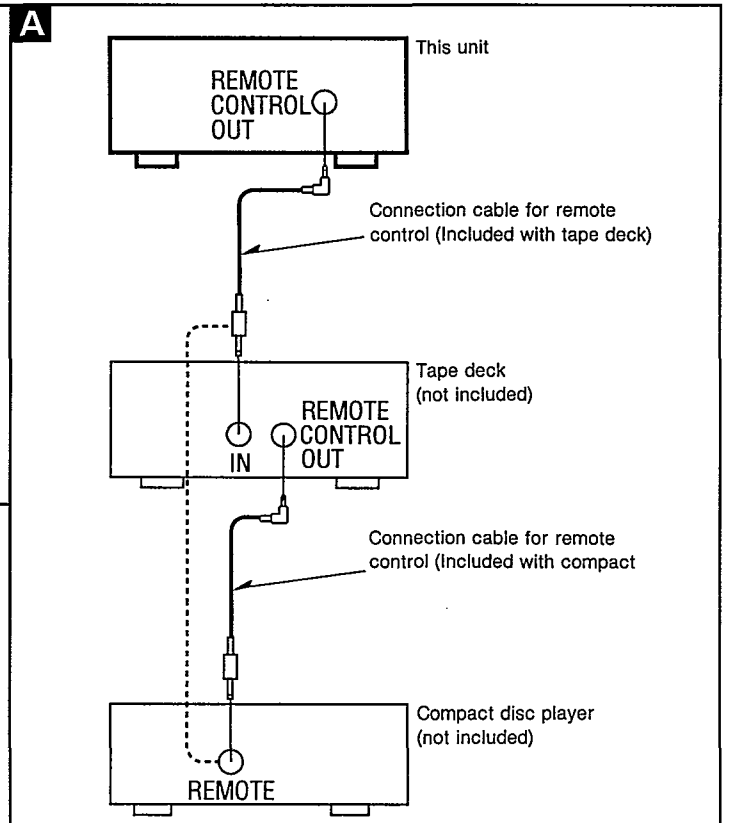
- ① Stereo connection cables (not included)
② Ground wire (not included)

“REMOTE CONTROL OUT” terminal **A**

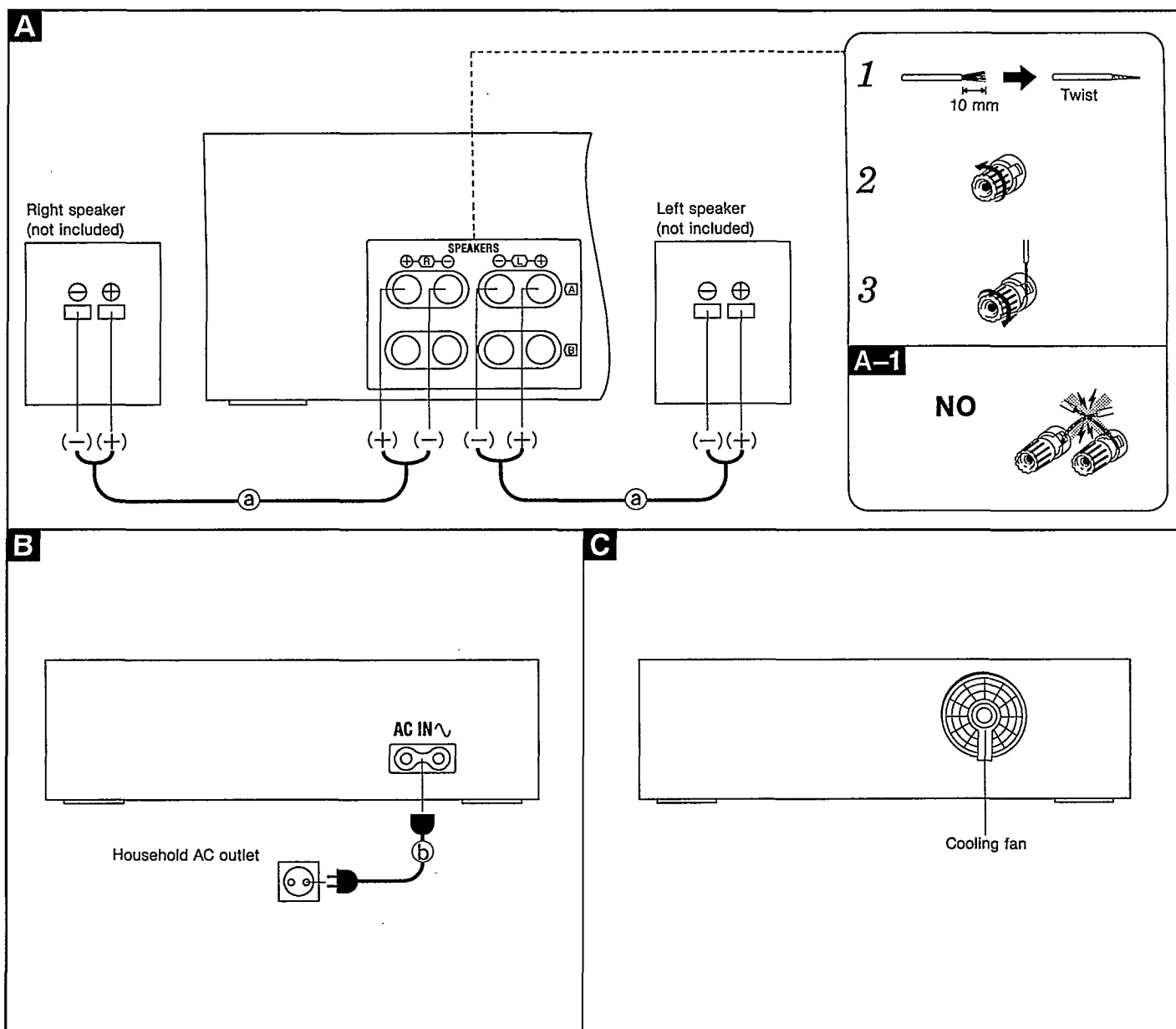
Connect the connection cable for the remote control to a Technics tape deck and/or CD player (or CD changer) which has the appropriate remote control terminal as shown at the right. If a tape deck is not being used, the CD player (or CD changer) can be connected directly (dotted line).

Note

For a tape deck and/or CD player (or CD changer) with a remote control sensor, this connection is not necessary.



■ Connecting the Speakers and Power Supply



Connecting the speakers **A**

- Ⓐ Speaker cables (not included)
Be sure to only connect positive (+) wires to positive (+) terminals, and negative (−) wires to negative (−) terminals.

“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 ohms
- When both the “A” and the “B” terminals are used simultaneously: 8–16 ohms

CAUTION **A-1**

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

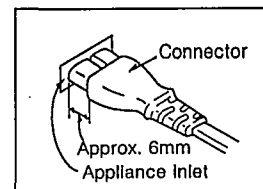
Connecting the AC power supply cord **B**

Connect the AC power supply cord only after all other connections have been made.

- Ⓑ AC power supply cord (included)

Insertion of Connector

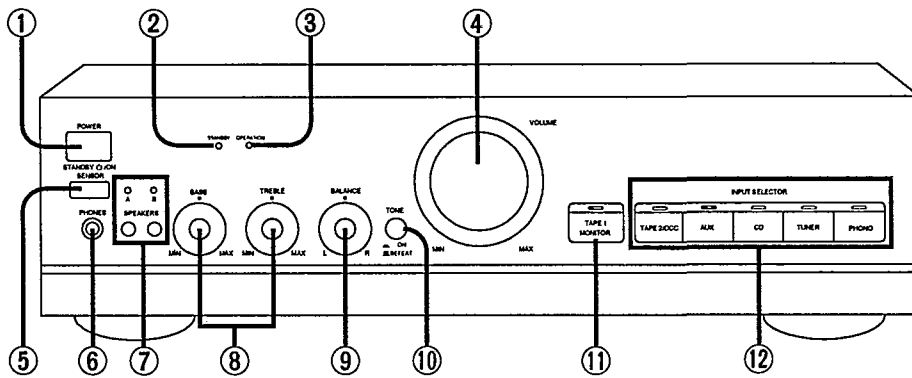
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing. However there is no problem using the unit.



Cooling fan **C**

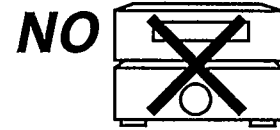
The cooling fan operates at high power output levels only.

■Front Panel Controls



CAUTION

Do not place a tape deck or CD player on top of this unit. Heat radiated from the top of this unit may cause damage to the tape or CD software.



① Power "STANDBY /ON" switch (POWER, STANDBY /ON)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

② "STANDBY" indicator (STANDBY)

When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

③ Operation indicator (OPERATION)

When the power is switched ON, this indicator illuminates after about 2 seconds when the unit is in the operating condition.

If an abnormal condition in the circuitry is detected, such as a short-circuit of the positive (+) and negative (-) wires from the speaker terminals, the protection circuit functions and this indicator will not illuminate.

④ Volume control (VOLUME)

⑤ Remote control signal sensor (SENSOR)

Receives the signals from the remote control.

⑥ Headphones jack (PHONES) (ϕ 6.3, 47 Ω)

⑦ Speaker select buttons/indicators (SPEAKERS)

⑧ Tone controls (BASS/TREBLE)

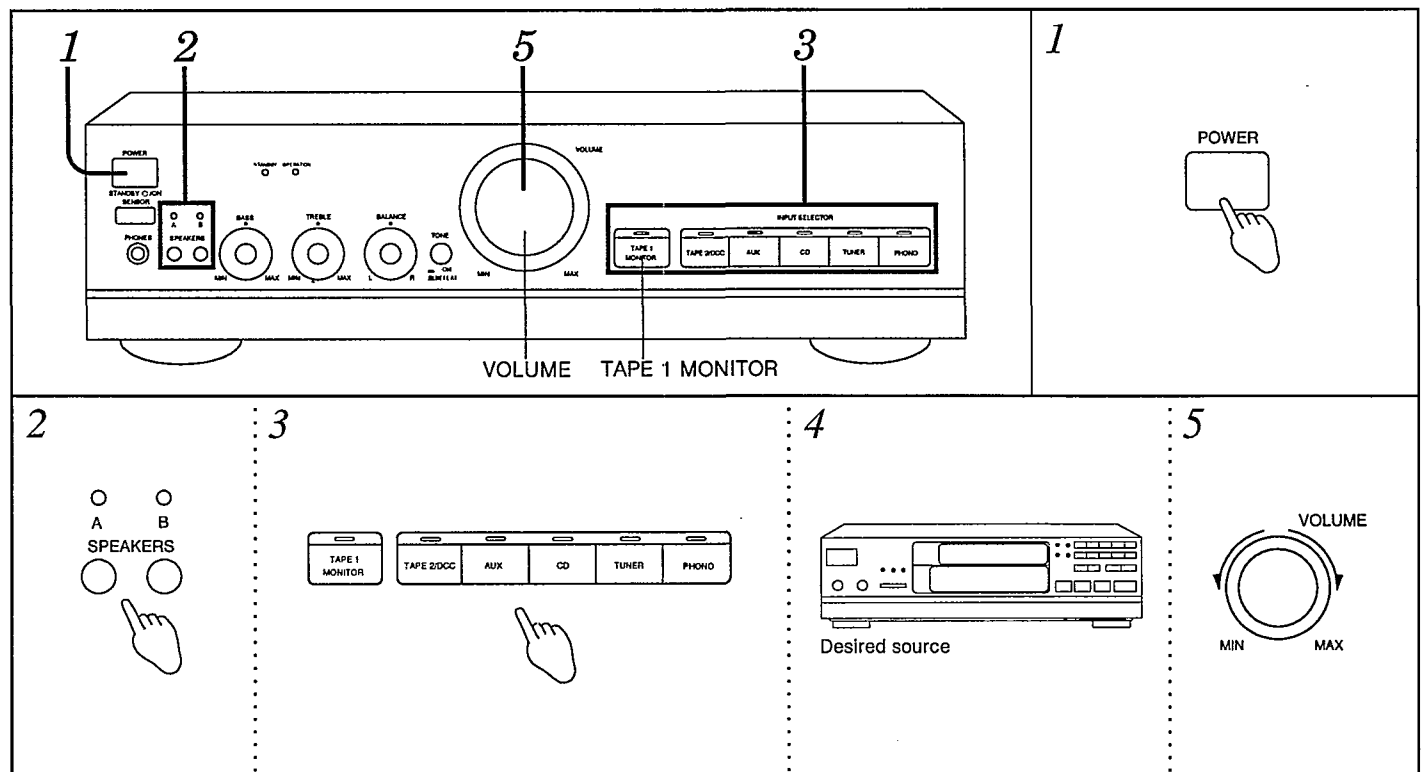
⑨ Balance control (BALANCE)

⑩ Tone control button (TONE)

⑪ TAPE 1 MONITOR button/indicator (TAPE 1 MONITOR)

⑫ Input select buttons/indicators (INPUT SELECTOR)

■Listening to Sound



Before operation, set VOLUME to the "MIN" position.

- 1 Press POWER to switch on the power.**
- 2 Press A and/or B to select the speaker system(s) to be used.**
The corresponding indicator(s) will illuminate.
- 3 Press to select the desired source.**
The corresponding indicator above will illuminate to indicate which button is selected.
TAPE 1 MONITOR: To listen to tape (TAPE 1). The tape monitor indicator will illuminate. (See below.)
TAPE 2/DCC: To listen to tape (TAPE 2) or digital compact cassette (DCC).
AUX: To listen to equipment connected to the "AUX" terminals.
CD: To listen to compact discs.
TUNER: To listen to radio broadcasts.
PHONO: To listen to phono discs.

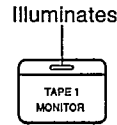
- 4 Start the desired source.**
(Refer to the appropriate operating instructions for details.)

- 5 Turn VOLUME to adjust the volume level.**

After listening is finished

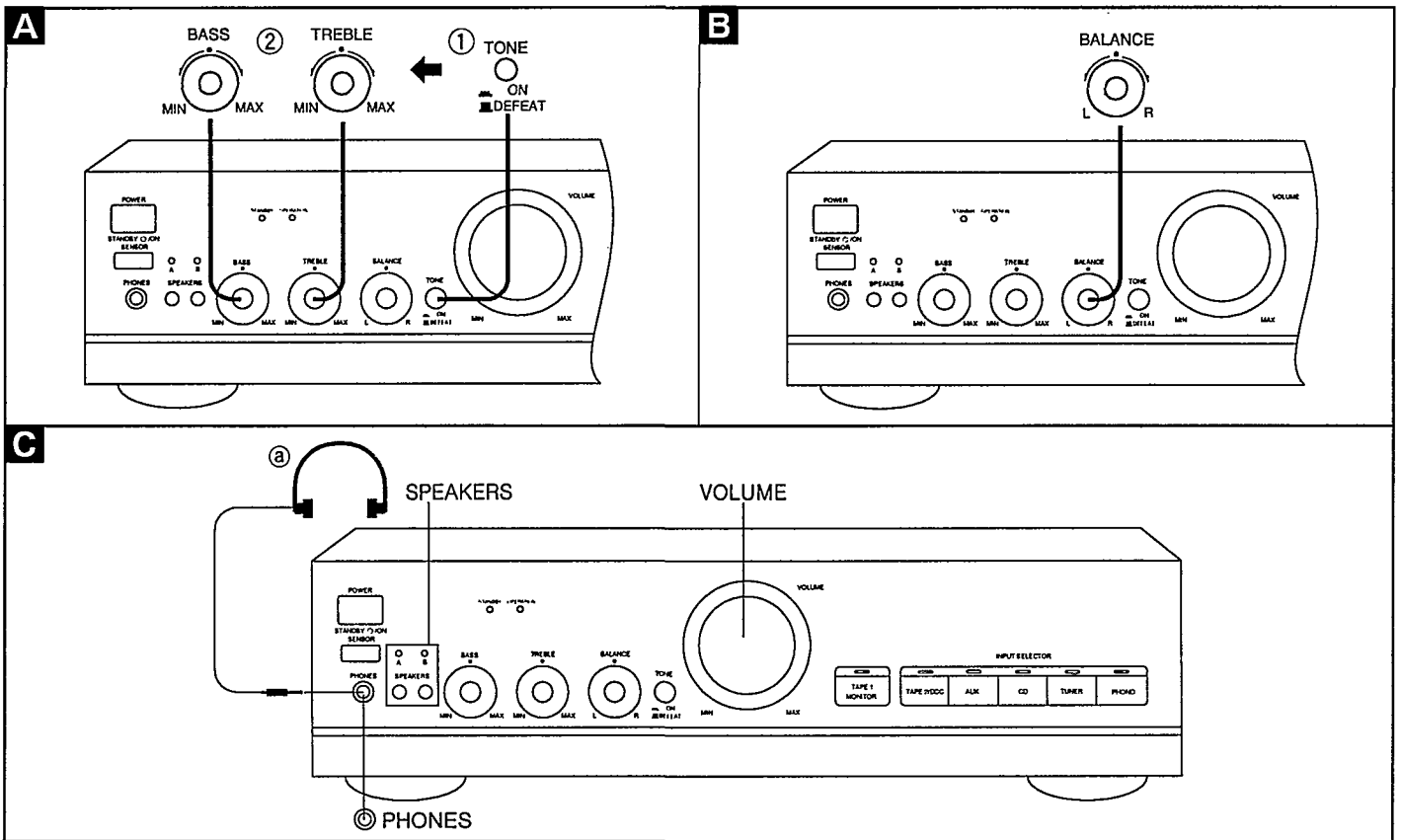
Be sure to reduce the volume level, and turn the unit off by pressing POWER.

When tape 1 monitor indicator illuminates



This indicates that the tape monitor function of this unit is ON.

To listen to sources other than a tape (TAPE 1), be sure to turn off the indicator by pressing TAPES 1 MONITOR.



To adjust the tone quality **A**

- ① Set TONE to the "ON" position.**
- ② Turn BASS to adjust the low-frequency sound.**
Turn TREBLE to adjust the high-frequency sound.

If listening without adjusting the tone quality, press TONE so that it is at the "DEFEAT" position.

To adjust the sound balance **B**

Turn BALANCE to adjust the left/right sound balance.

To listen through headphones **C**

Use VOLUME to reduce the volume level, and connect the headphones.

- ③ Headphones (not included)**
Plug type: 6.3 mm phone plug stereo type

If sound from speakers is not wanted, press SPEAKERS (A) and/or (B) to turn off the speaker select indicators.

Note

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

■Recording

To record from compact discs, etc.

It is possible to record from units which are connected to the rear "AUX", "CD", "TUNER" or "PHONO" terminals to cassette tape decks or DCC decks which are connected to the "TAPE 1" or "TAPE 2/DCC" terminals.

Refer to the operating instructions for the tape deck or DCC for detailed adjustment of the recording level, etc..

1 Select the desired source to be recorded.

AUX: To record from equipment connected to the "AUX" terminals.

CD: To record from compact discs.

TUNER: To record from radio broadcasts.

PHONO: To record from phono discs.

2 Begin recording on tape deck.

3 Begin the source to be recorded.

To check the sound recorded while recording is being made **A**

If a cassette tape deck with 3 heads is connected to the "TAPE 1" terminals, it is possible to check the sound being recorded onto the tape.

Press TAPE 1 MONITOR (indicator will illuminate) on this unit and set the monitor button on the tape deck to "TAPE".

Press TAPE 1 MONITOR once again to turn it off.

Note

If recording to both decks simultaneously, do not press TAPE 1 MONITOR. (If this button is pressed, it will not be possible to record to the deck which is connected to the "TAPE 2/DCC" terminals.)

Tape-to-tape recording

It is possible to record from tape deck 2 (the cassette tape deck or DCC deck which is connected to the "TAPE 2/DCC" terminals) to tape deck 1 (the cassette tape deck which is connected to the "TAPE 1" terminals).

Refer to the operating instructions for the tape deck for detailed adjustment of the recording level, etc..

Tape deck 1: For recording **Tape deck 2:** For playback.

1 Press TAPE 2/DCC.

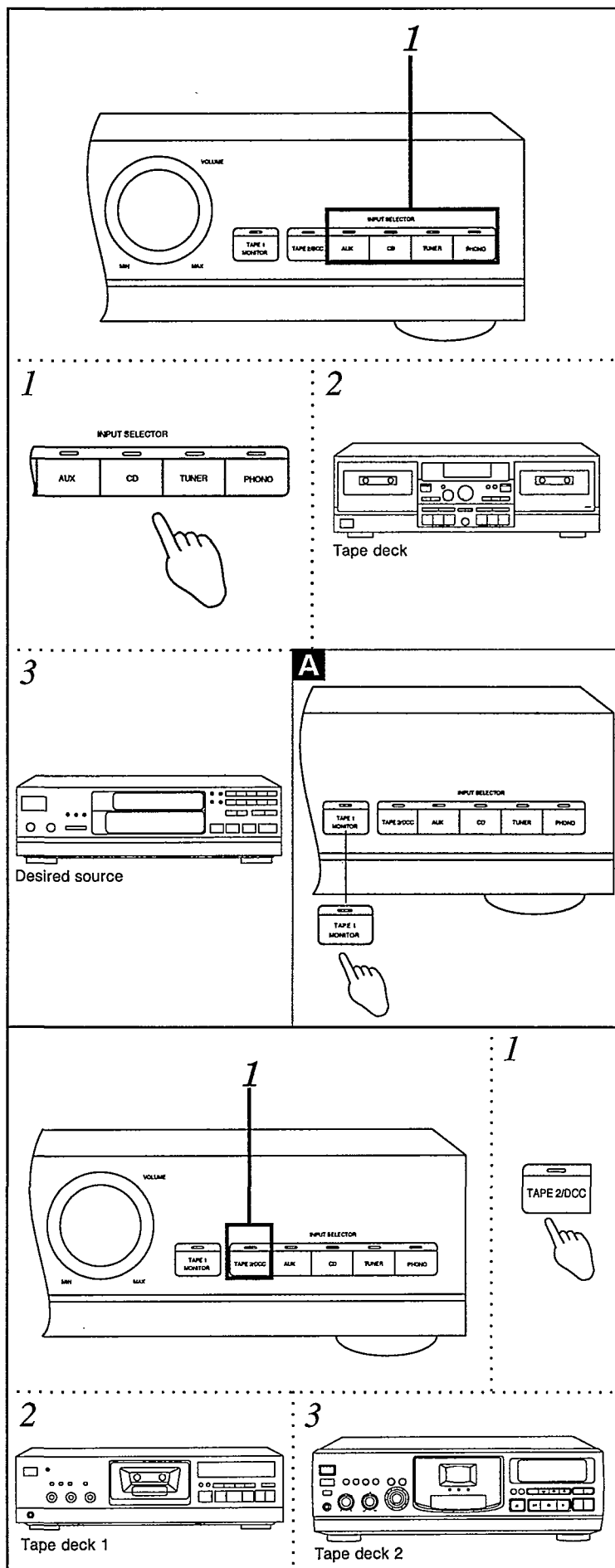
2 Begin recording on tape deck 1.

3 Begin tape playback on tape deck 2.

For your reference

When recording from tape deck 1 to tape deck 2, press TAPE 1 MONITOR in step 1 above, and then start recording on tape 2 and begin playback on tape 1.

At this time, make sure that the input selector is set to a position other than "TAPE 2/DCC". (This is because monitoring of the unit connected to the "TAPE 2/DCC" terminals is not possible.)



■ Operation Check and Main Component Replacement Procedure

- 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 items from the following index when checks or replacement are required.
 4. Illustrated screws are equivalent to actual size.
 5. Refer the parts No. on the page of "Main Component Replacement Procedures", if necessary.

● Contents

•Checking Procedure for each P.C.B.

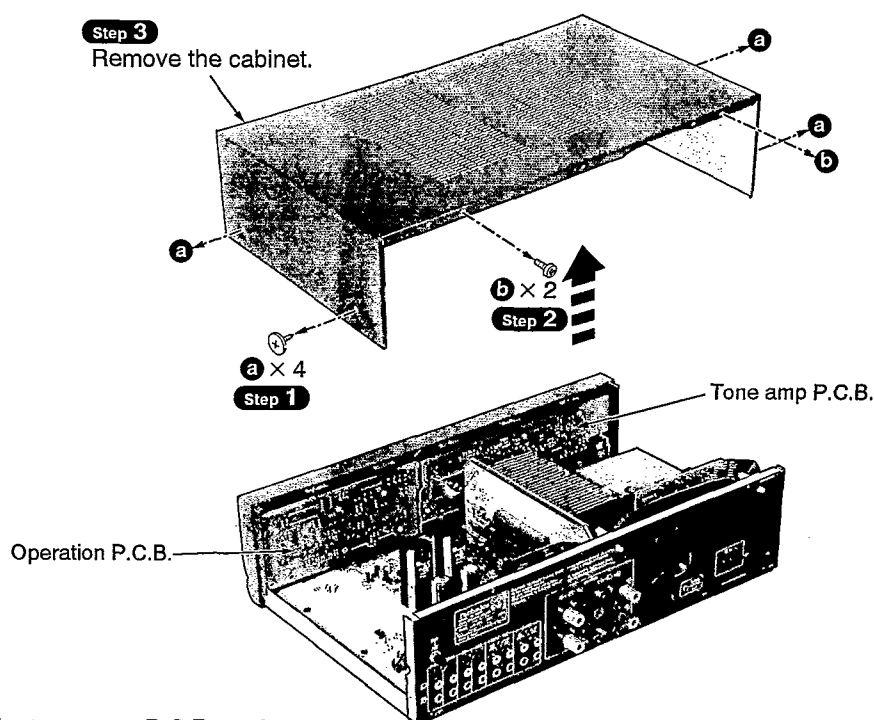
	Page.
1.Checking for the tone amp P.C.B. and operation P.C.B.,	9,10.
2.Checking for the main P.C.B.,	10,11.

•Main Component Replacement Procedures

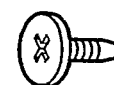
1.Replacement for the foot,	12.
2.Replacement for the power IC and regulator transistor,	12,13.
3.Replacement for the fan motor,	13.

■ Checking Procedure for each P.C.B.

1. Checking for the tone amp P.C.B. and operation P.C.B.



- Check the tone amp P.C.B. and operation P.C.B. as shown above.



a

[SNE2129-3] (Black)



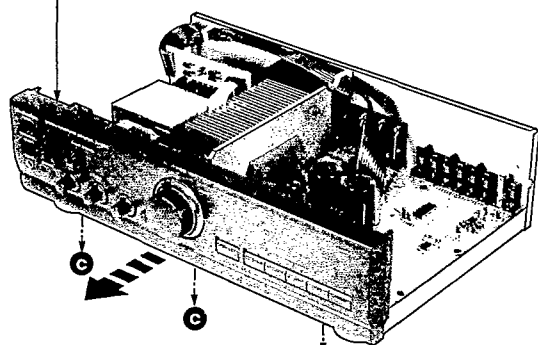
b

[XTBS3+8JFZ1] (Black)

To remove each P.C.B.

Step 5

Pull out the front panel ass'y.

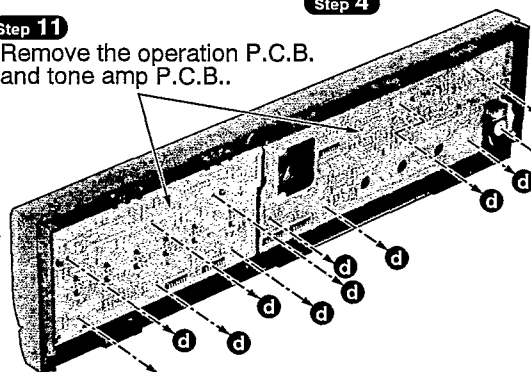


c × 3

Step 4

Step 11

Remove the operation P.C.B. and tone amp P.C.B..

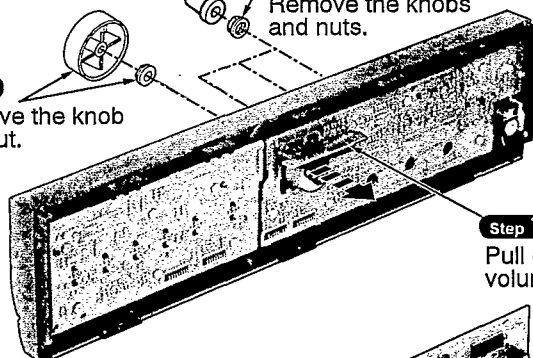


d × 11

Step 9

Step 6

Remove the knob and nut.



Step 8

Remove the knobs and nuts.

Step 7

Pull out the volume P.C.B..

Step 12

Pull out the headphones jack P.C.B..

[XTBS3+8JFZ1](Black)

d
[RHD26017]

e
[RHD26018]

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

Step 1

a × 4

Step 3

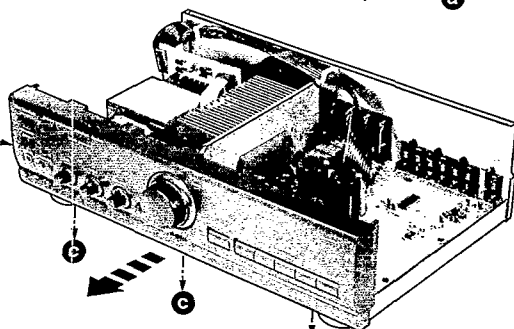
Remove the cabinet.

Step 2

b × 2

Step 5

Pull out the front panel ass'y.



c × 3

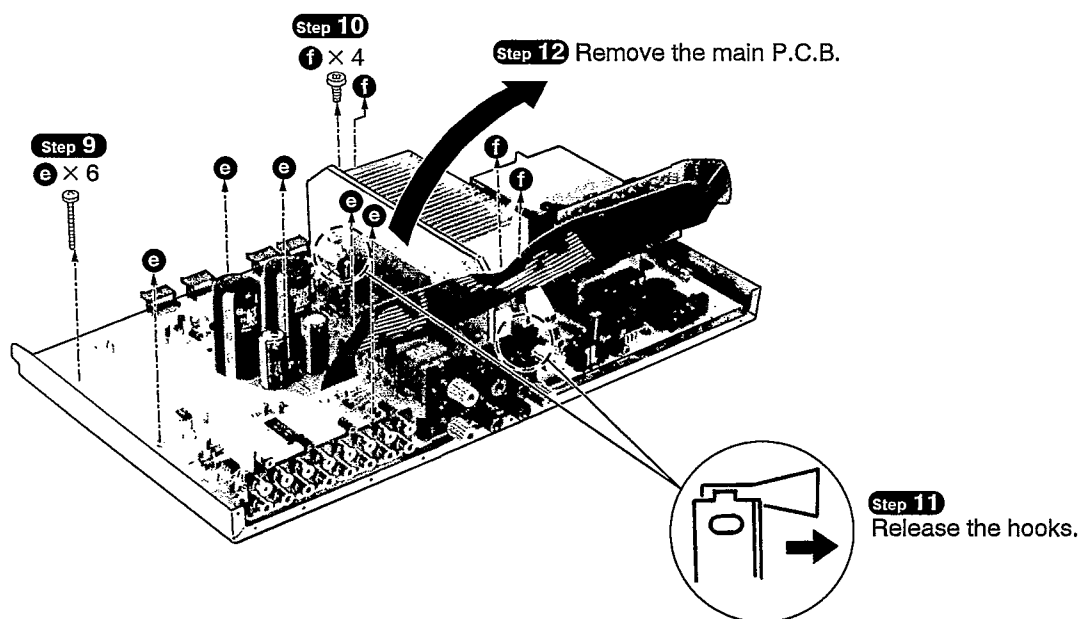
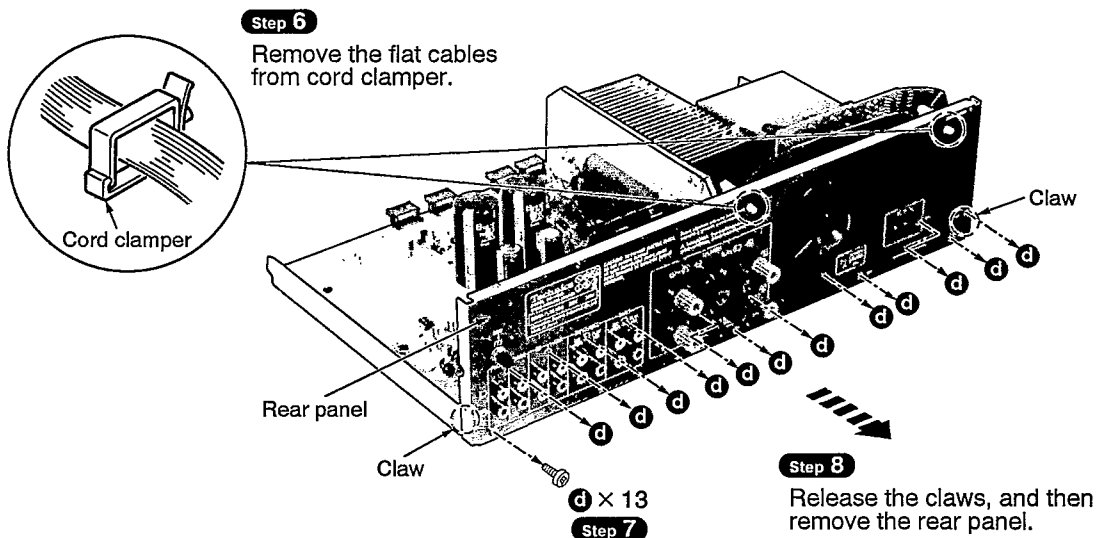
Step 4



[SNE2129-3](Black)



[XTBS3+8JFZ1](Black)



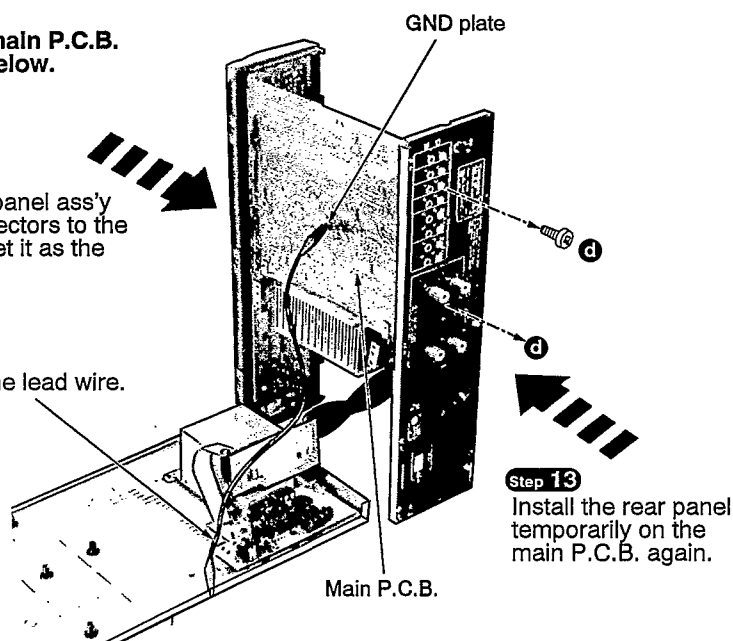
• Check the main P.C.B. as shown below.

Step 14

Connect the front panel ass'y of the P.C.B. connectors to the main P.C.B. and set it as the illustration right.

Step 15

Connect the lead wire.



-  **d**
[XTBS3+8JFZ1](Black)
-  **e**
[XTB3+20JFZ](Black)
-  **f**
[XTB3+8JFZ](Black)

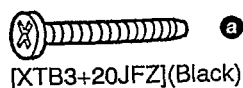
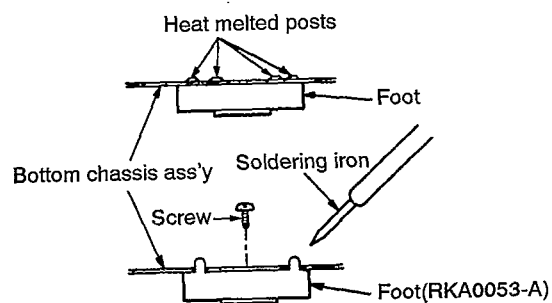
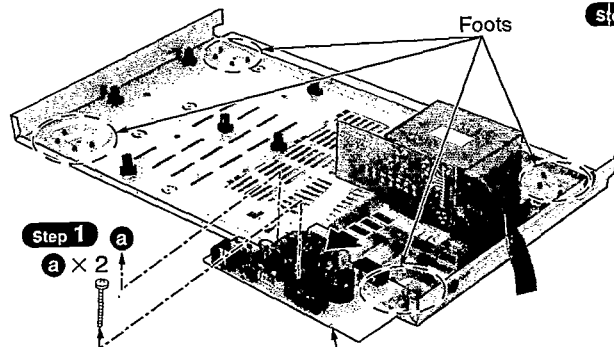
■ Main Component Replacement Procedures

1. Replacement for the foot

• Follow the **Step 1** ~ **Step 12** in item 2 on checking procedure for each P.C.B. on pages 10 and 11.

Step 3 Remove the 4 heat melted posts on the bottom chassis ass'y with a pair of nippers or similar tool.

Step 4 To replace the foot(RKA0053-A) on the bottom chassis ass'y melt the 4 posts with a soldering iron or install it with a screw (XTB3+6J)



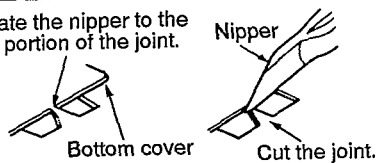
Step 2 Remove the power supply P.C.B.

2. Replacement for the power IC and regulator transistor

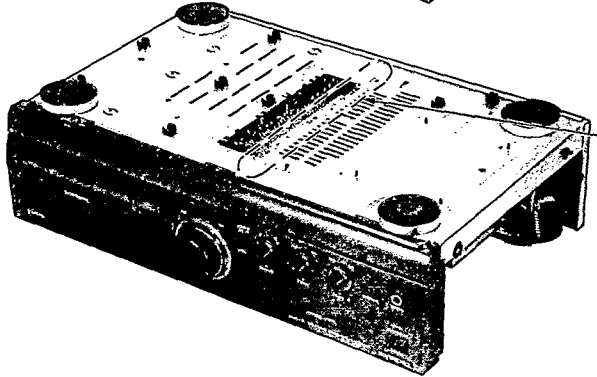
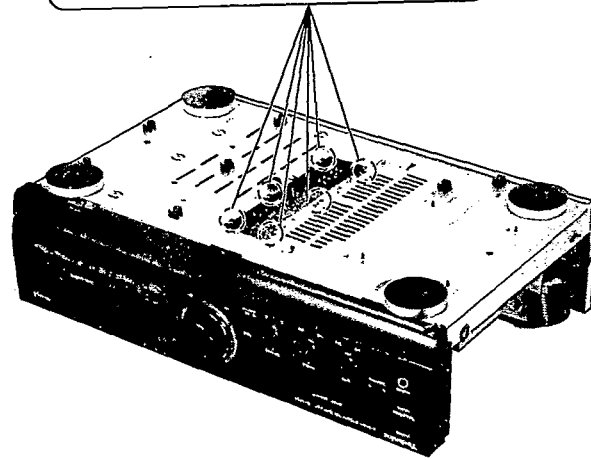
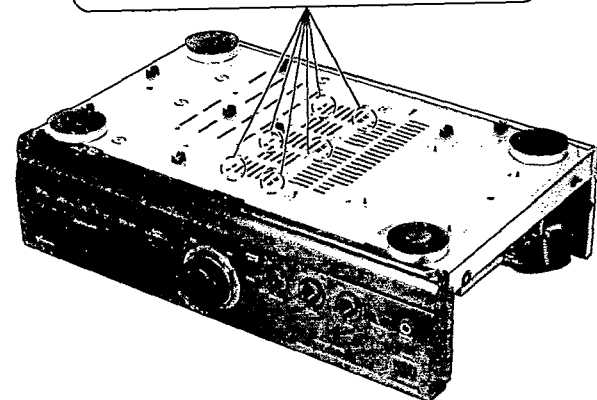
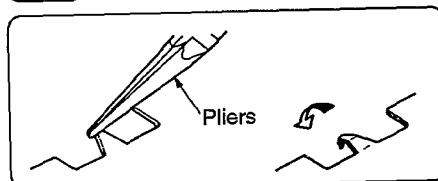
• Follow the **Step 1** ~ **Step 3** in item 1 on checking procedure for each P.C.B. on page 9.

Step 1 Cut the joints as shown below.(6 portions)

Locate the nipper to the thin portion of the joint.

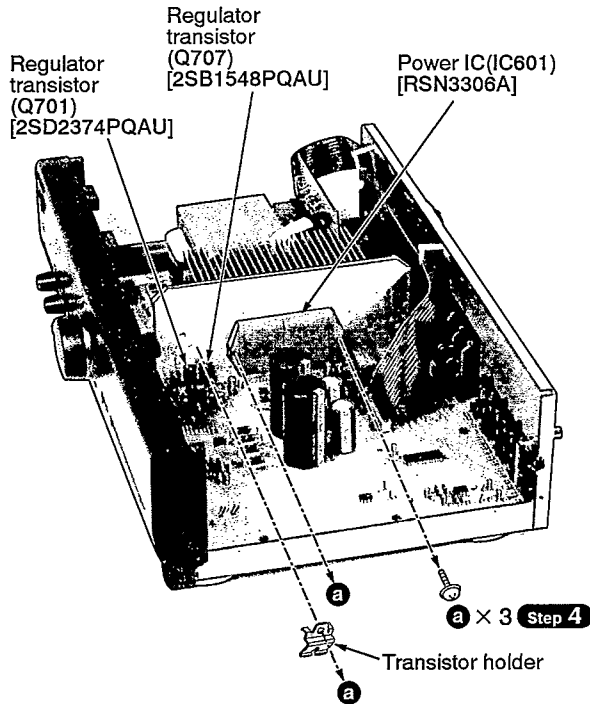


Step 2 Fold the joints.(6 portions)



Step 3

Unsolder the terminals of power IC and regulator transistor.

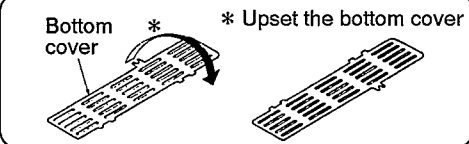


CAUTION

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).
2. Tighten enough the screws (a) after replacing the power IC and regulator transistor. Otherwise, the heat radiation works little.

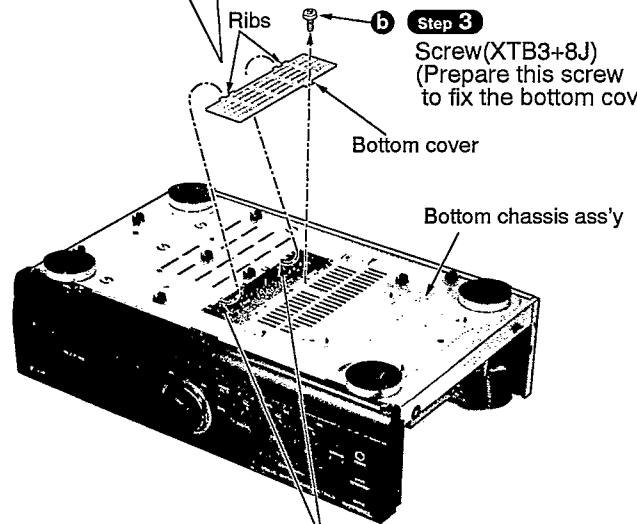
Installation of the bottom cover after replacement

Step 1



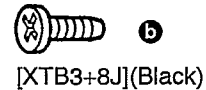
Step 3

Screw (XTB3+8J)
(Prepare this screw to fix the bottom cover.)



Step 2

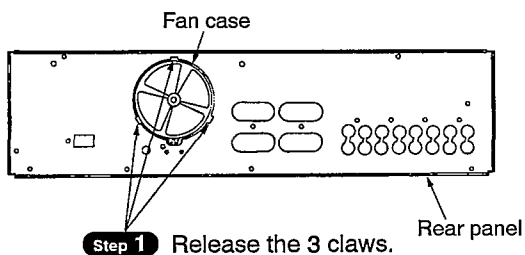
Align the ribs of bottom cover with lugs.



(Prepare this screw to fix the bottom cover.)

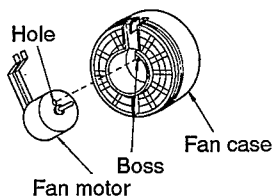
3. Replacement for the fan motor

- Follow the Step 1 ~ Step 8 in item 2 on checking procedure for each P.C.B. on pages 10 and 11.



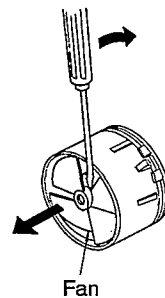
NOTE

When replacing the fan motor, align the boss of the fan case with the hole of the fan motor.



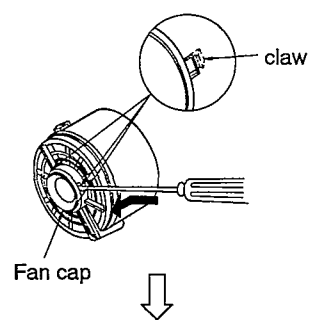
Step 2

Put a screwdriver at the root of the fan and remove it.



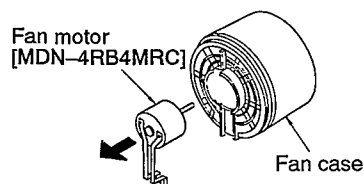
Step 3

Remove the fan cap.



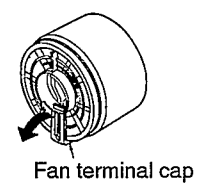
Step 5

Remove the fan motor.



Step 4

Remove the fan terminal cap.



■ Schematic Diagram

	Page
A OPERATION CIRCUIT	15
B VOLUME CIRCUIT	15
C TONE AMP CIRCUIT	16
D HEADPHONES JACK CIRCUIT	16
E MAIN CIRCUIT	17~19
F POWER SUPPLY CIRCUIT	19, 20
G POWER TRANSFORMER CIRCUIT	19, 20
H AC IN CIRCUIT [for (GC) area only]	20

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

Notes:

- **S401** : TONE control switch (ON/DEFEAT)
- **S701** : Voltage adjustment switch in "220V-240V" position [for (GC) area only]
- **S801** : Input selector switch (PHONO)
- **S802** : Input selector switch (TUNER)
- **S803** : Input selector switch (CD)
- **S804** : Input selector switch (AUX)
- **S805** : Input selector switch (TAPE 2/DCC)
- **S806** : TAPE 1 MONITOR switch
- **S807** : Power "STANDBY ϕ /ON" switch (POWER, STANDBY ϕ /ON)
- **S808** : Speaker select switch (SPEAKER A)
- **S809** : Speaker select switch (SPEAKER B)
- **VR471** : Tone control (BASS)
- **VR472** : Tone control (TREBLE)
- **VR501** : Volume control (VOLUME)
- **VR502** : Balance control (BALANCE)

- 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 the internal impedance of the DC circuit tester.
No mark: Power ON

● Voltage and signal line

-  : Phono Signal (L-ch) Line
-  : Rec Out Signal (L-ch) Line
-  : Positive Voltage Line
-  : Negative Voltage Line

● Important safety notice:

Components identified by $\triangle$ 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 manufacturer's 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.

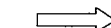
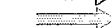
Cover the parts boxes made of plastics with aluminum foil.

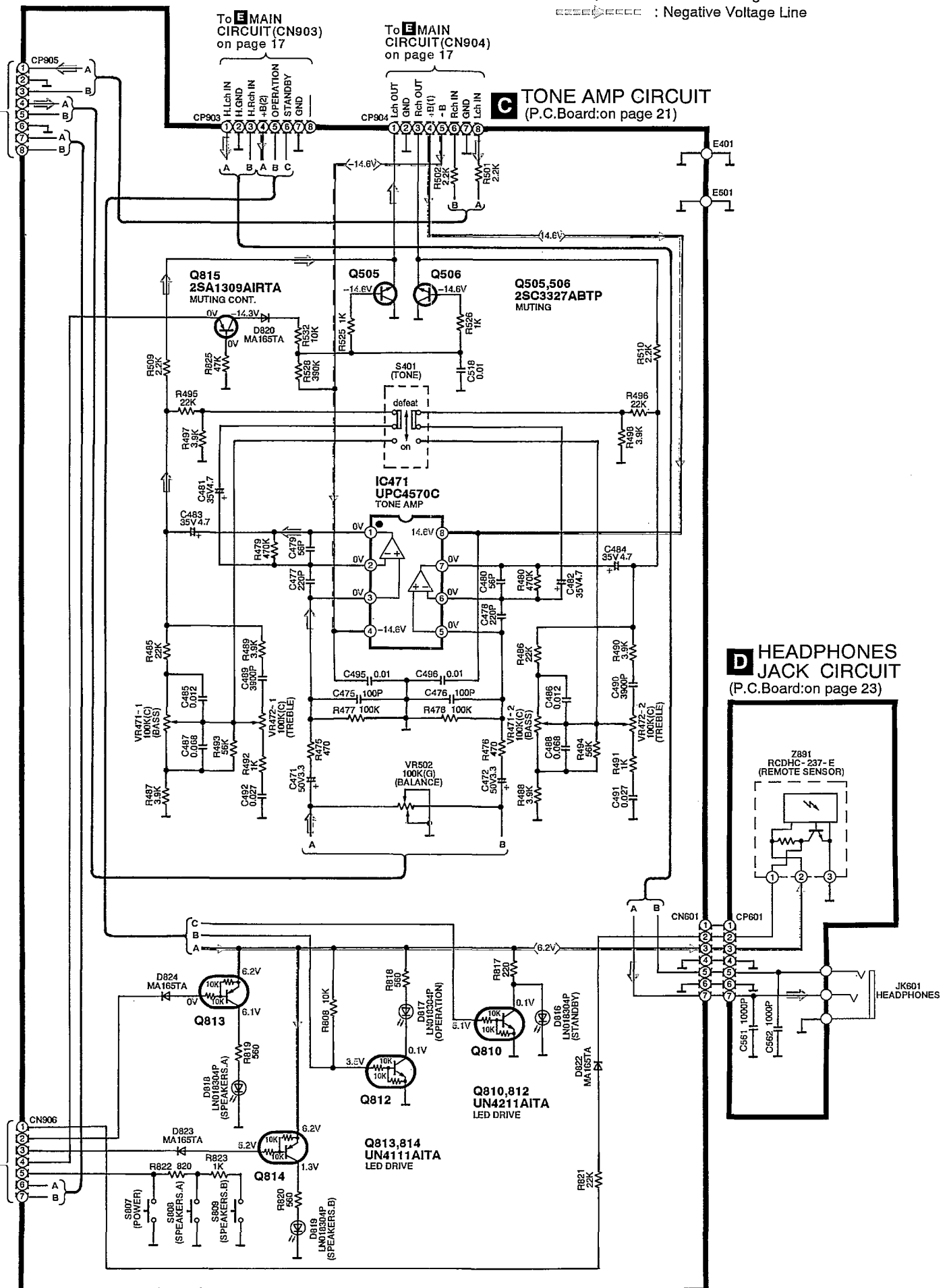
Ground the soldering iron.

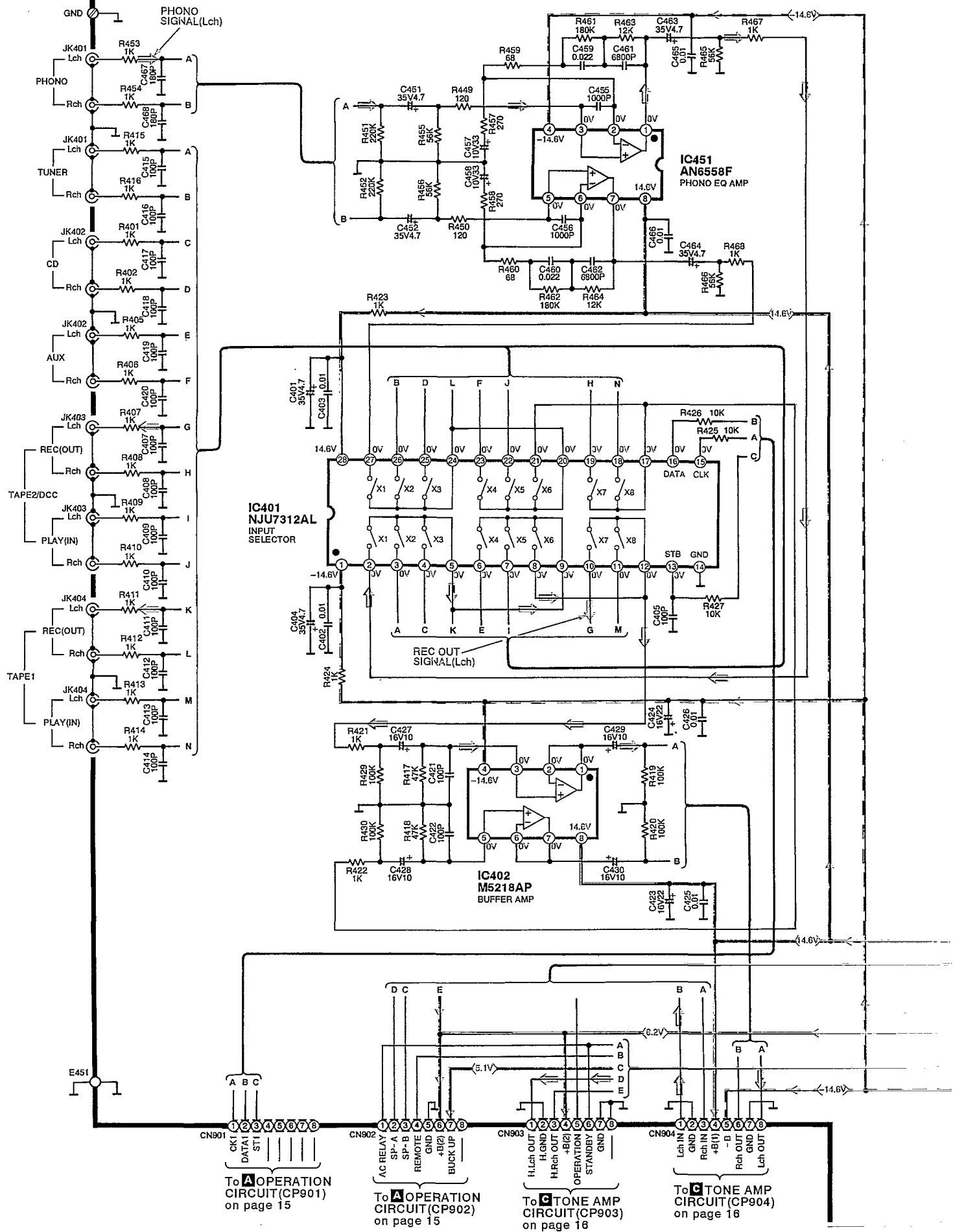
Put a conductive mat on the work table.

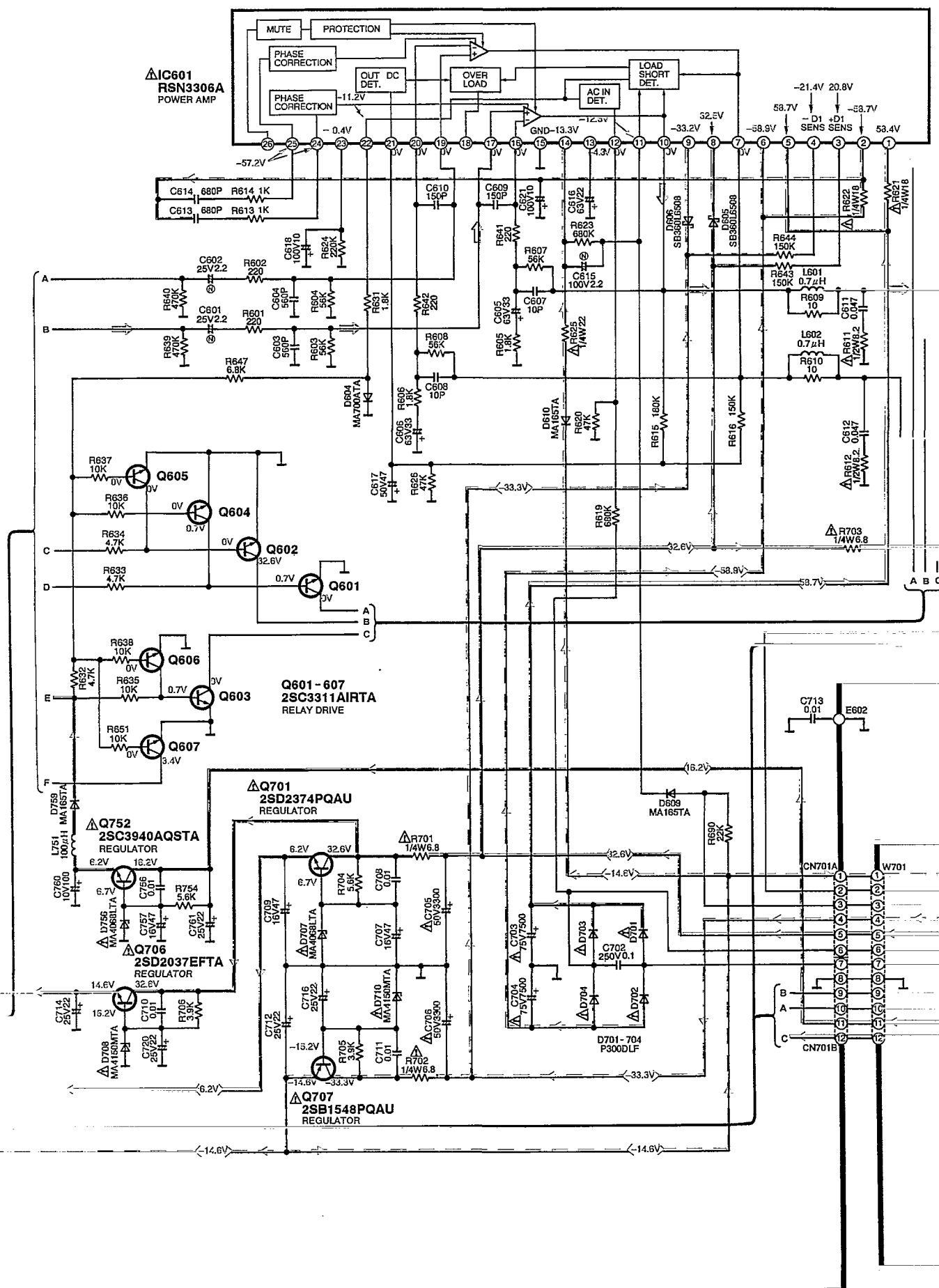
Do not touch the legs of IC or LSI with the fingers directly.

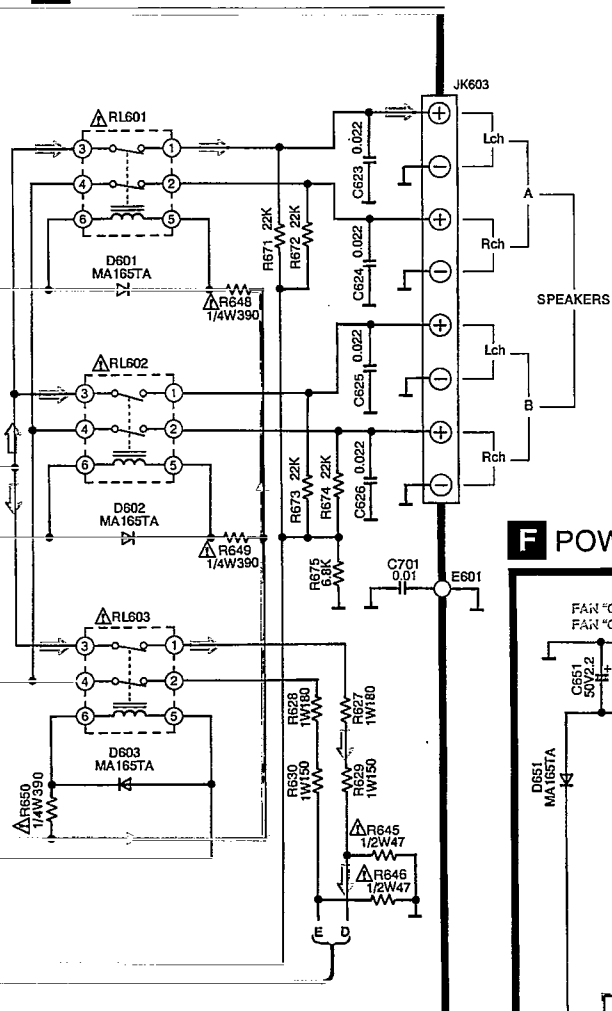


-  : Phono Signal (L-ch) Line
 : Rec Out Signal (L-ch) Line
 : Positive Voltage Line
 : Negative Voltage Line



E MAIN CIRCUIT (P.C.Board: on pages 22,23)





**Q651, 652, 654 - 656
2SA1309Airta
MOTOR DRIVE**

FAN "OFF": 0V
FAN "ON": -0.5V

FAN "OFF": -0.5V
FAN "ON": 0V

FAN "OFF": 0V
FAN "ON": -0.4V

FAN "OFF": 0V
FAN "ON": -0.6V

G651 50V2.2

R691 100K

R692 10K

R694 3.3M

R693 22K

R695 33K

R696 33K

R697 10K

R698 25K

R699 27K

Q651

Q652

Q654

Q655

D652 MA4058MTA

D653 MA165TA

C653 0.022

C652 16V/10

Q653 2SB621AQSTA
REGULATOR

JK651

M651
FAN MOTOR

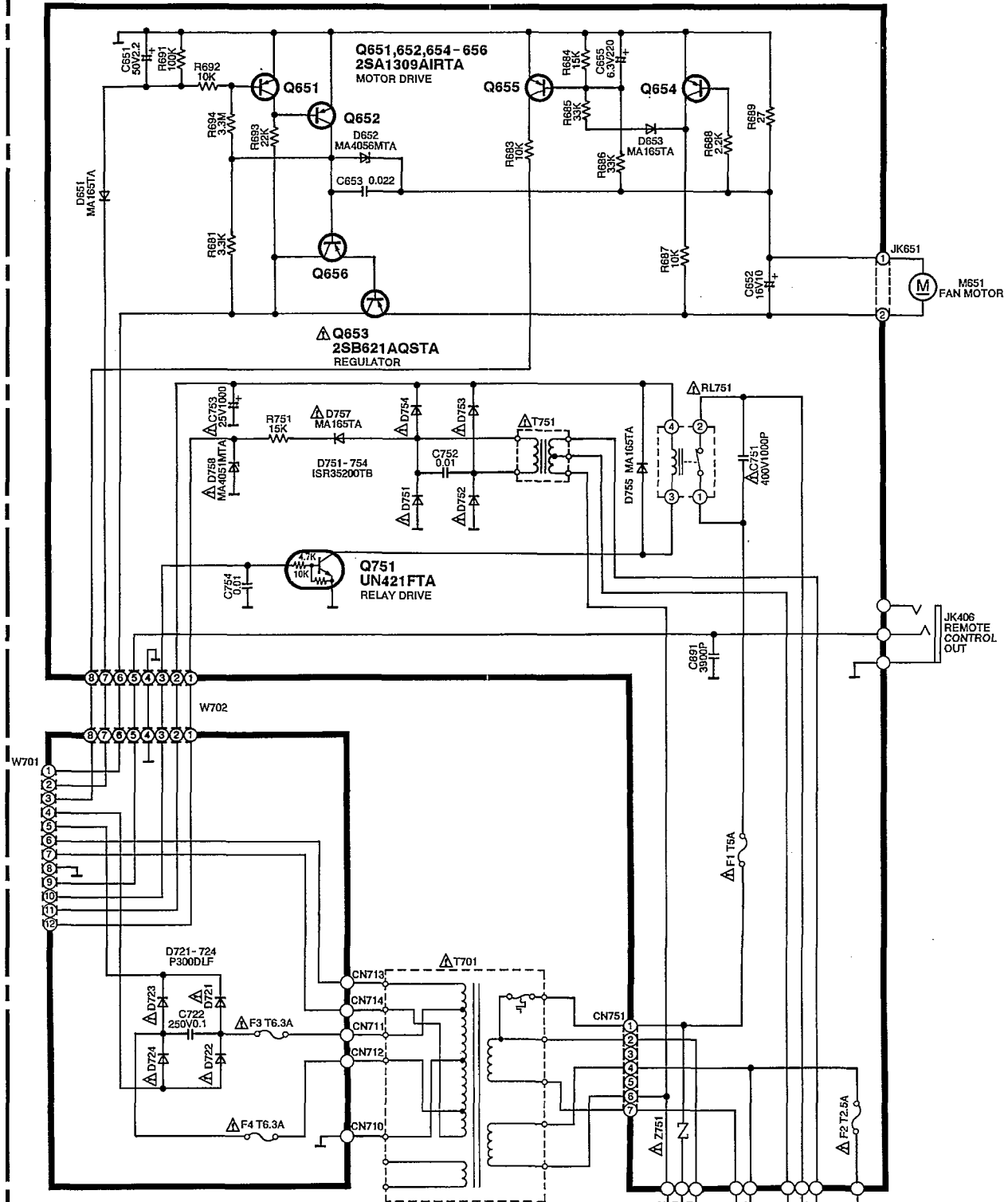
-14.6V

-14.6V

-14.6V

-14.6V

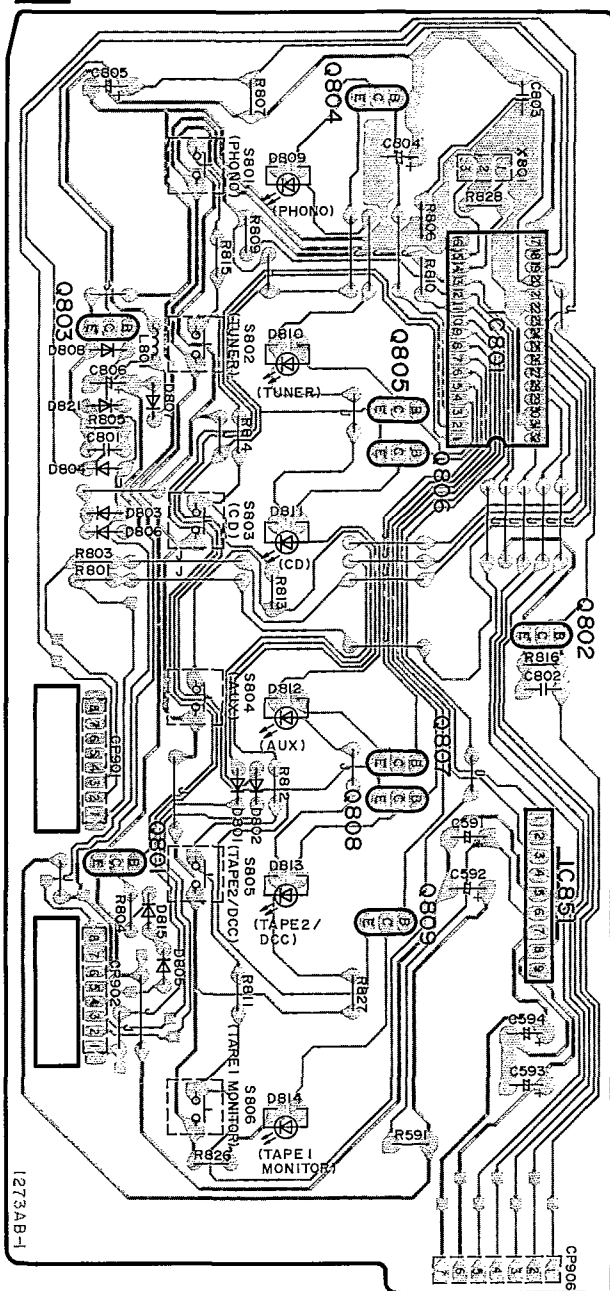
Power Source Circuit For[GC]area. (P.C.Board: on page 25)

F POWER SUPPLY CIRCUIT**G** POWER TRANSFORMER CIRCUIT**H** AC IN CIRCUIT

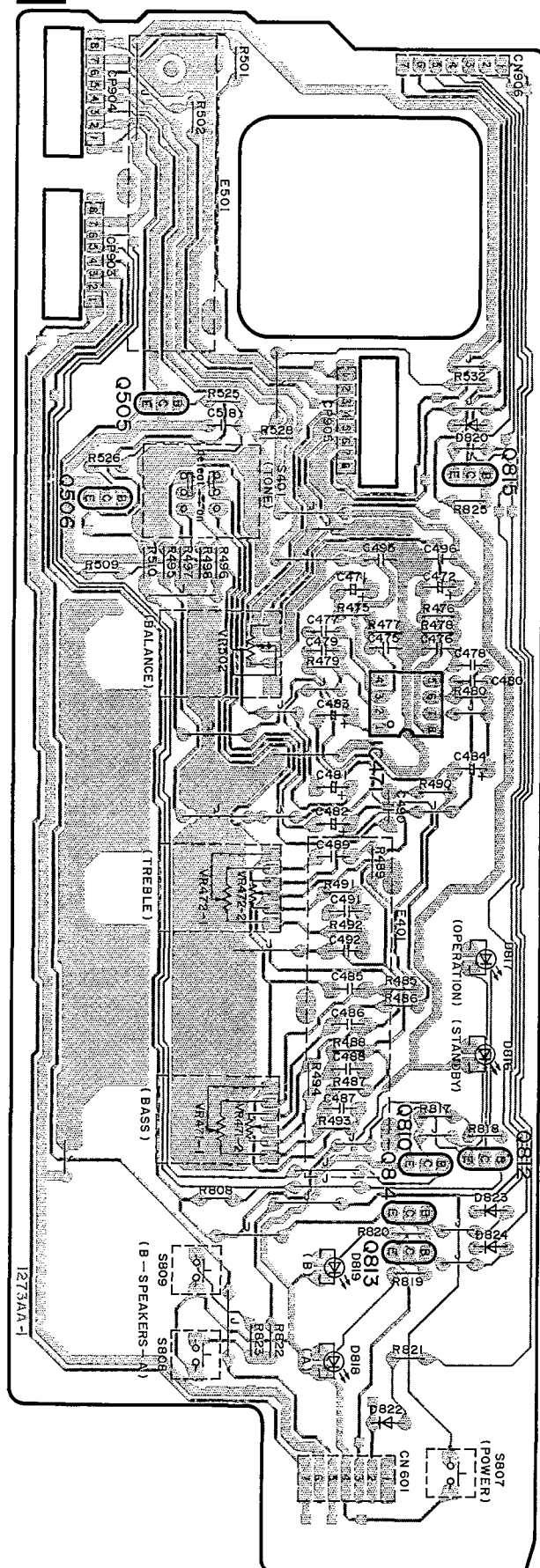
Printed Circuit Board Diagram

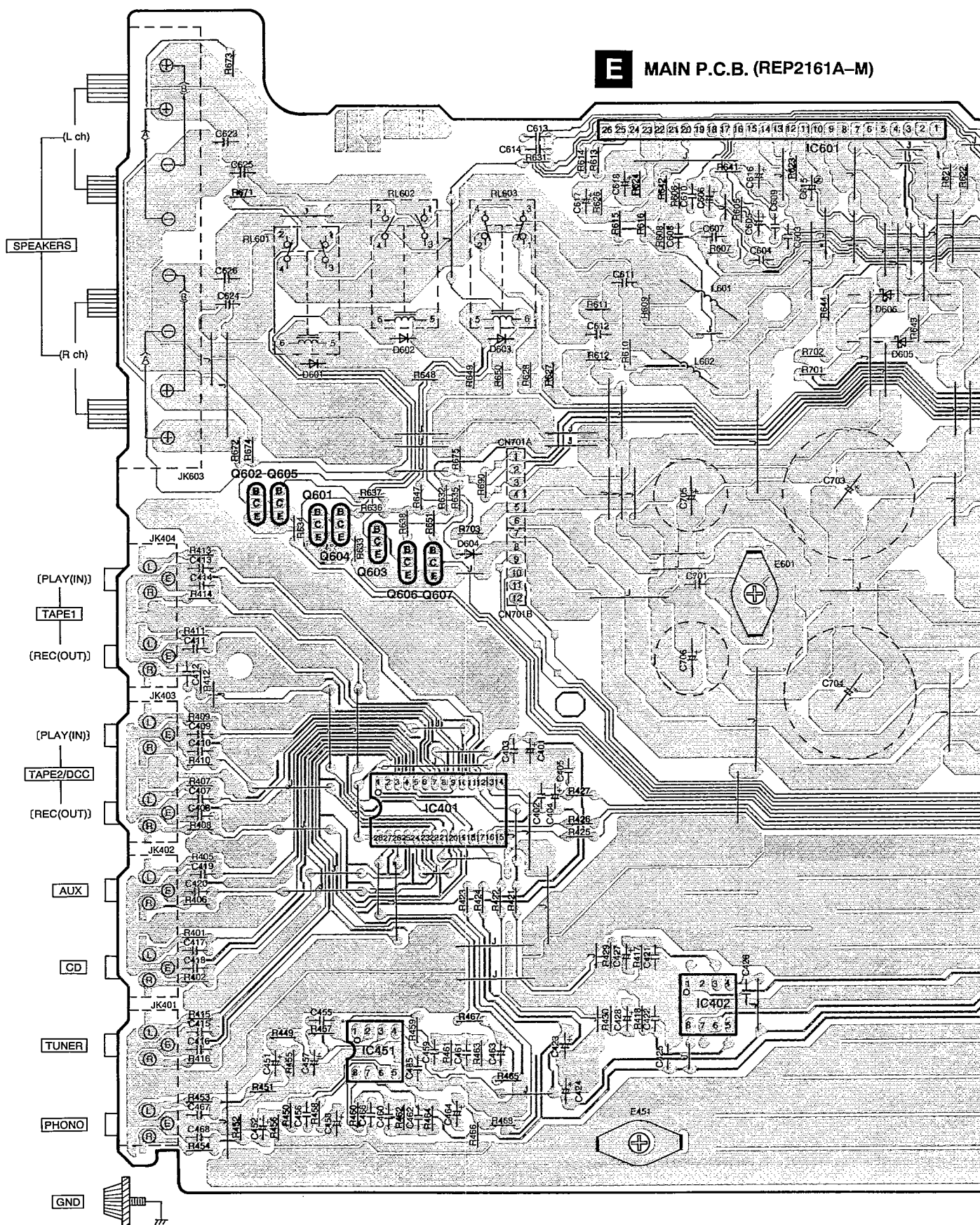
- This circuit board diagram may be modified at any time with the development of new technology.

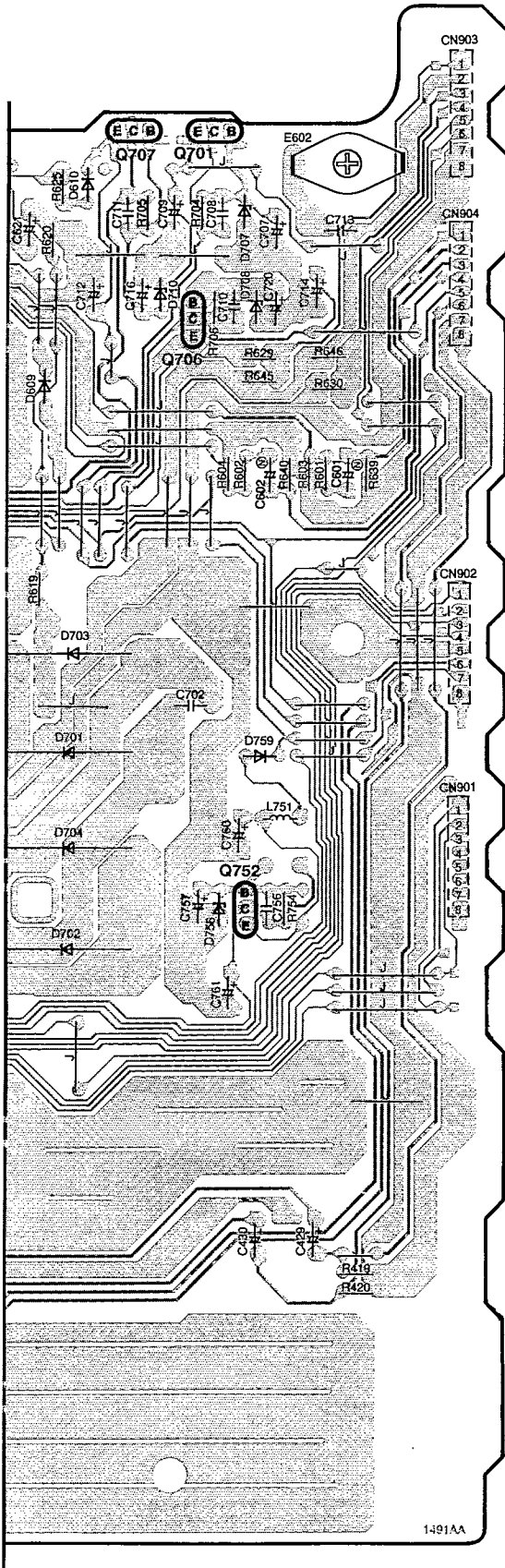
A OPERATION P.C.B. (REP2162A-S)



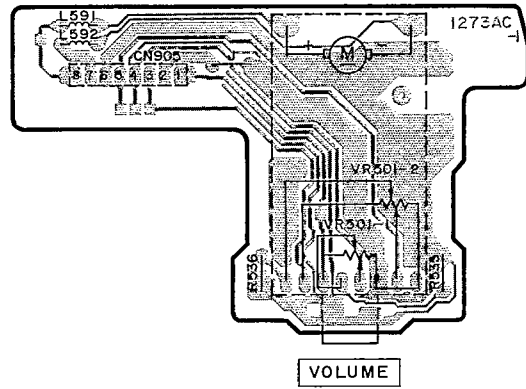
C TONE AMP P.C.B. (REP2162A-S)



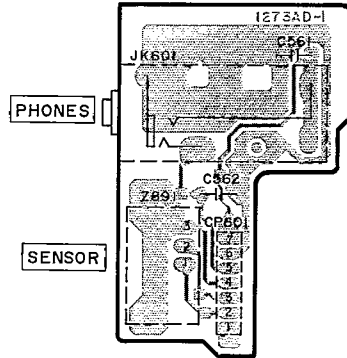
E MAIN P.C.B. (REP2161A-M)




B VOLUME P.C.B. (REP2162A-S)

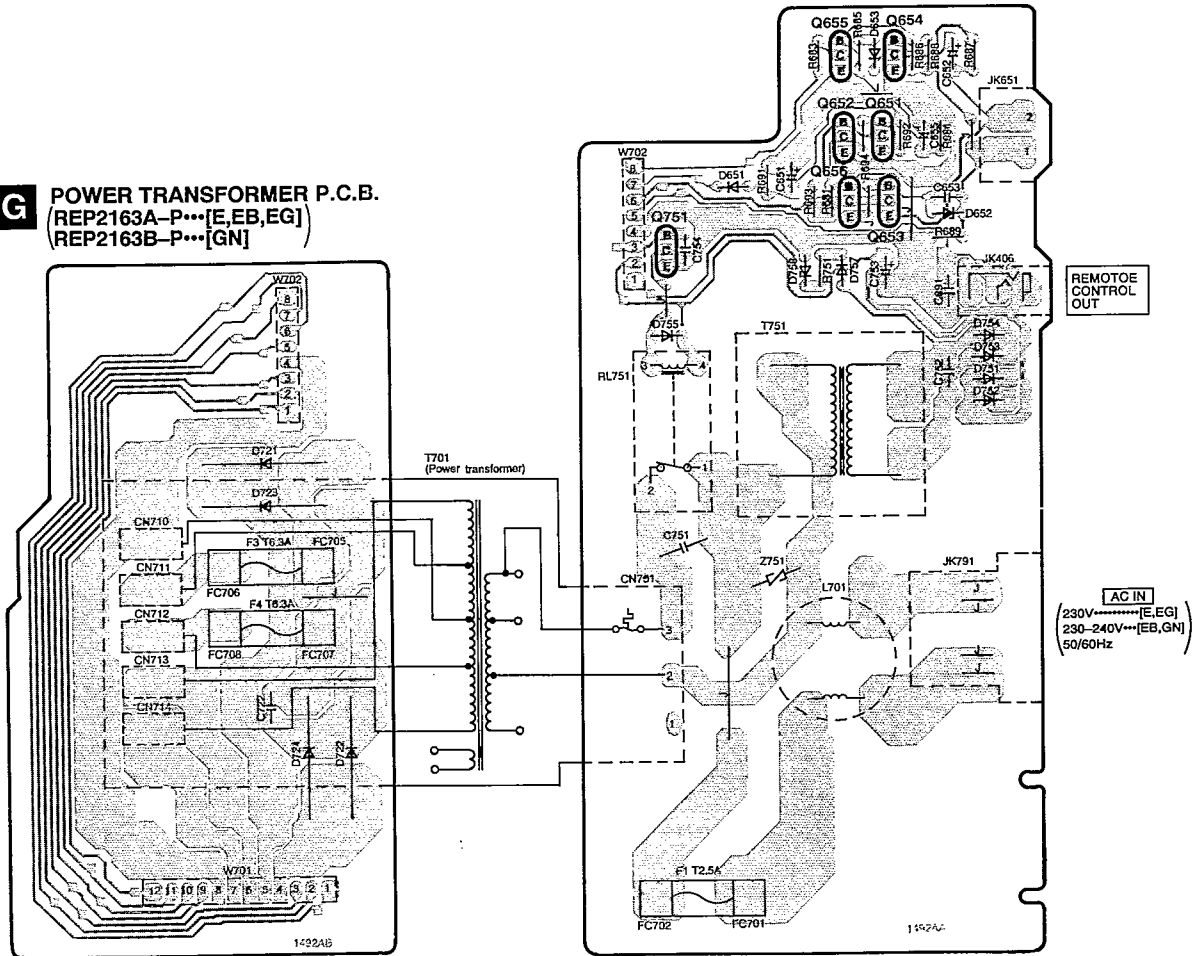


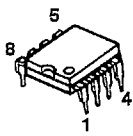
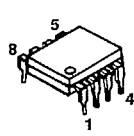
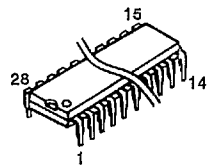
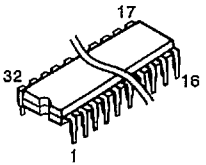
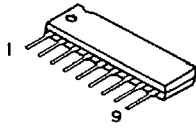
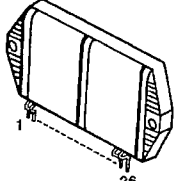
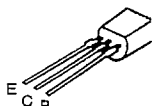
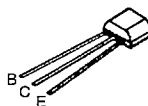
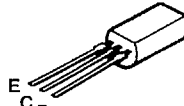
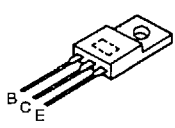
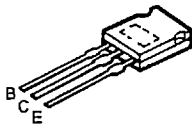
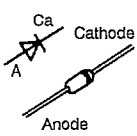
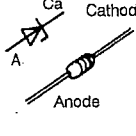
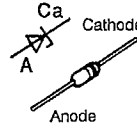
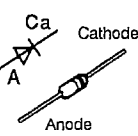
D HEADPHONES JACK P.C.B. (REP2162A-S)



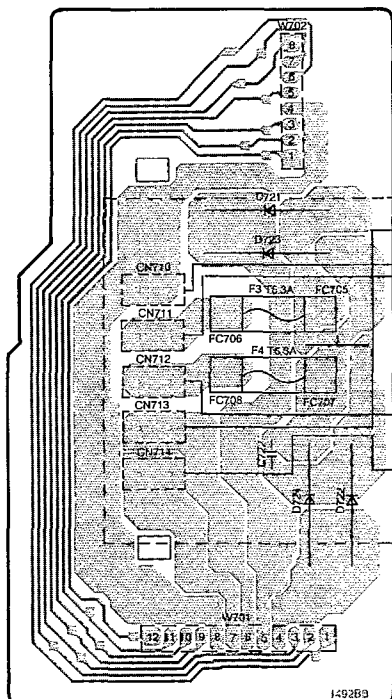
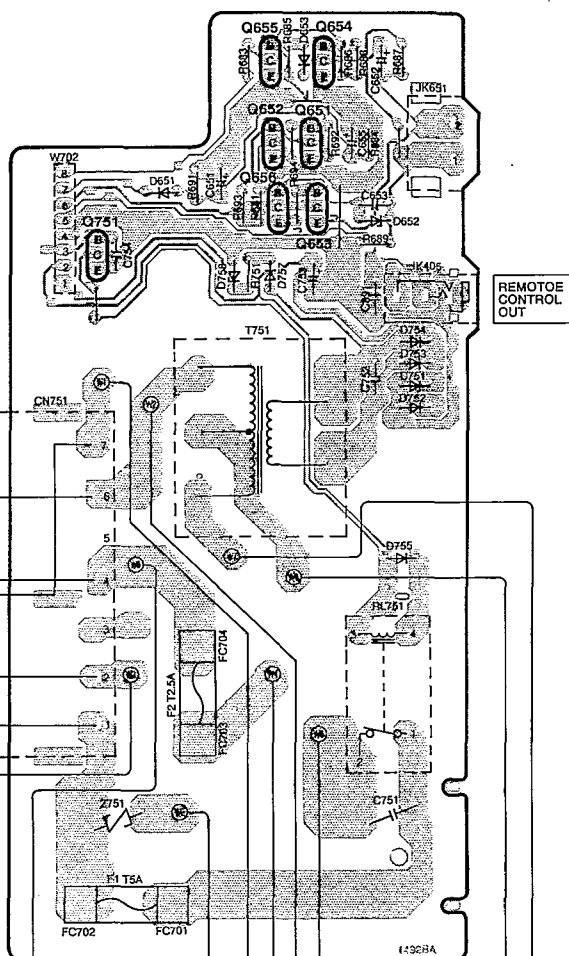
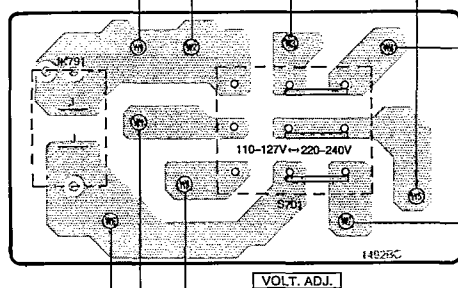
F POWER SUPPLY P.C.B.
(REP2163A-P...[E,EB,EG])
(REP2163B-P...[GN])

G POWER TRANSFORMER P.C.B.
(REP2163A-P...[E,EB,EG])
(REP2163B-P...[GN])



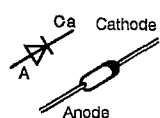
AN6558F UPC4570C 	M5218AP 	NJU7312AL 	M37470M2242S 	BA6218 	RSN3306A 
 UN421FTA UN4111 UN4211 2SA1309A-R 2SA1309AIRTA 2SC3311AIRTA	2SB621AQSTA 	2SC3327-A 	2SC3940AQSTA 	2SB1548PQAU 2SD2374PQAU 	
2SD2037EFTA 	MA165 	MA4051MTA MA4056MTA MA4068L 	MA4150M 	MA700 1SS291TA 	

Power Source P.C.B. For [GC] area.

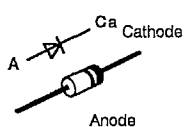
G POWER TRANSFORMER P.C.B.
(REP2163C-P)**F** POWER SUPPLY P.C.B.
(REP2163C-P)**H** AC IN P.C.B.
(REP2163C-P)AC IN
(110V-127V/220V-240V)
50/60Hz

VOLT. ADJ.

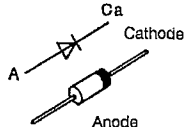
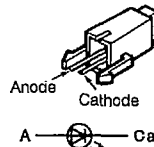
1SR35200TB



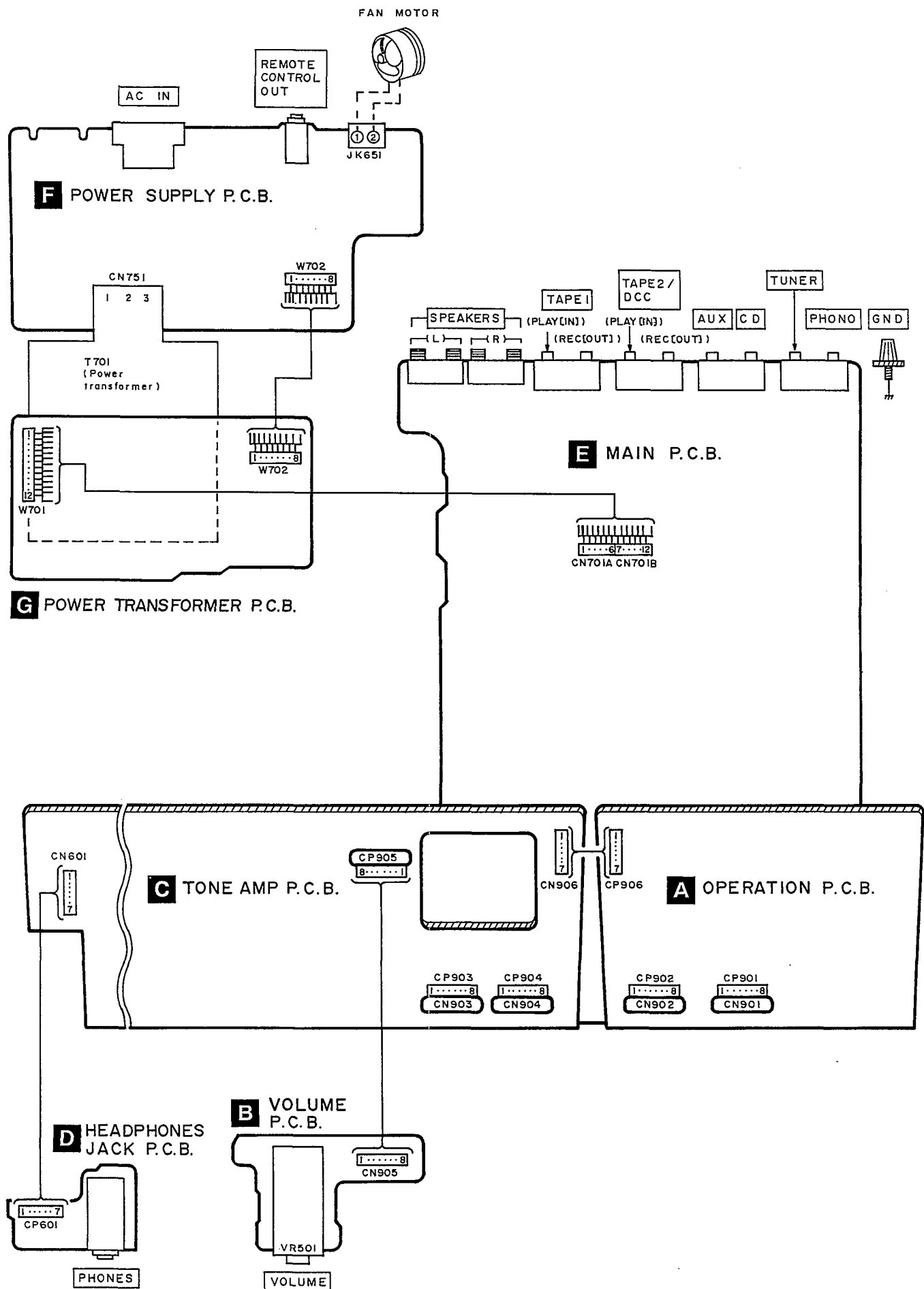
SB360L6508



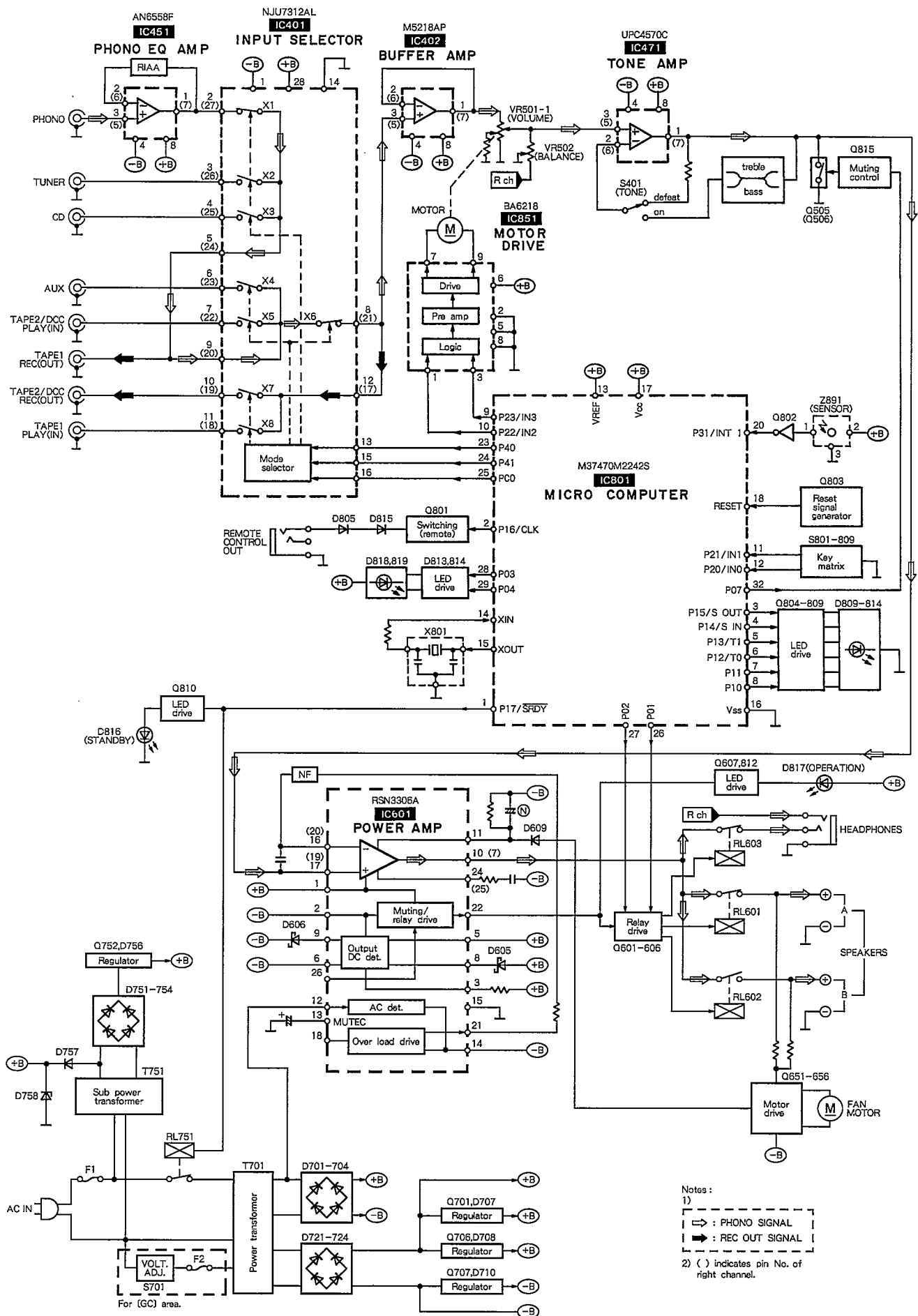
P300DLF

LN014304P
LN018304P

■ Wiring Connection Diagram



Block Diagram



■ Function of IC Terminals

● IC801 (M37470M2242S)

Pin No.	Terminal Name	I/O	Function
1	P17/SRDY	O	Relay (Power SW) drive and LED (STANDBY) drive signal output.
2	P16/CLK	O	Remote control signal output.
3	P15/SOUT	O	LED (PHONO) drive signal output.
4	P14/SIN	O	LED (TUNER) drive signal output.
5	P13/TI	O	LED (CD) drive signal output.
6	P12/TO	O	LED (AUX) drive signal output.
7	P11	O	LED (TAPE 2/DCC) drive signal output.
8	P10	O	LED (TAPE 1 MONITOR) drive signal output.
9	P23/IN3	O	Motor (volume control) drive signal output.
10	P22/IN2	O	
11	P21/IN1	I	Input select switch signal input.
12	P20/IN0	I	Switch (POWER, SPEAKER A/B) signal input.
13	VREF	I	Reference voltage input.
14	XIN	I	Oscillator signal I/O terminal. (4 MHz)
15	XOUT	O	
16	VSS	—	GND terminal.

Pin No.	Terminal Name	I/O	Function
17	VCC	I	Power supply (+5V).
18	RESET	I	System reset signal input.
19	P30/INT0	I	Back-up detect signal input.
20	P31/INT1	I	Remote control receive signal input.
21	P32/CNRO	—	No used. Connected to GND.
22	P33/CNRI	—	No used. Connected to GND.
23	P40	O	Strobe signal input for Input Selector IC (IC401).
24	P41	O	Clock signal input for Input Selector IC (IC401).
25	P00	O	Data signal input for Input Selector IC (IC401).
26	P01	O	SPEAKER A select signal output.
27	P02	O	SPEAKER B select signal output.
28	P03	O	LED (SPEAKER A) drive signal output.
29	P04	O	LED (SPEAKER B) drive signal output.
30	P05	—	No used. Connected to GND.
31	P06	—	No used. Connected to GND.
32	P07	O	Audio muting control signal output.

Replacement Parts List

Notes: *Important safety notice:

 Components identified by Δ 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 manufacture's specified parts shown in the parts list.

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

Parts without these indications can be used for all areas.

*Remote Control Ass'y: Supply period for three years from termination of production.

*The "(SF)" mark denotes the standard part.

*<VRD>: indicates parts that are supplied by Video Recorder Division.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		D751-754	1SR35200TB	DIODE	Δ
				D755	MA165	DIODE	
				D756	MA4068L	DIODE	Δ
				D757	MA165	DIODE	Δ
				D758	MA4051MTA	DIODE	Δ
IC401	NJU7312AL	I. C, INPUT SELECTOR		D759	MA165	DIODE	
IC402	M5218AP	I. C, BUFFER AMP.		D801-806	MA165	DIODE	
IC451	AN6558F	I. C, PHONO EQ AMP.		D807	1SS291TA	DIODE	
IC471	UPC4570C	I. C, TONE AMP.		D808	MA165	DIODE	
IC601	RSN3306A	I. C, POWER AMP.	Δ	D809-813	LN018304P	L. E. D.	
IC801	M37470M2242S	I. C, MICRO COMPUTER		D814	LN014304P	L. E. D.	
IC851	BA6218	I. C, MOTOR DRIVE		D815	MA165	DIODE	
		TRANSISTOR(S)		D816-819	LN018304P	L. E. D.	
				D820	MA165	DIODE	
Q505, 506	2SC3327-A	TRANSISTOR		D821	1SS291TA	DIODE	
Q601-607	2SC3311AIRTA	TRANSISTOR		D822-824	MA165	DIODE	
Q651, 652	2SA1309AIRTA	TRANSISTOR				VARIABLE RESISTOR(S)	
Q653	2SB621AQSTA	TRANSISTOR	Δ				
Q654-656	2SA1309AIRTA	TRANSISTOR		VR471	EVJYA1F04C15	V. R, BASS	
Q701	2SD2374PQAU	TRANSISTOR	Δ	VR472	EVJYA1F04C15	V. R, TREBLE	
Q706	2SD2037EFTA	TRANSISTOR	Δ	VR501	EUWVG2020B15	V. R, VOLUME	
Q707	2SB1548PQAU	TRANSISTOR	Δ	VR502	EVJ02QF04G15	V. R, BALANCE	
Q751	UN421FTA	TRANSISTOR				COMPONENT COMBINATION(S)	
Q752	2SC3940AQSTA	TRANSISTOR	Δ				
Q801	UN4211	TRANSISTOR					
Q802	2SA1309A-R	TRANSISTOR					
Q803	UN4211	TRANSISTOR					
Q804-809	UN4111	TRANSISTOR		Z751	ERZV10V511CS	SURGE ABSORBER	Δ
Q810	UN4211	TRANSISTOR		Z891	RCDHC-237	REMOTE SENSOR	
Q812	UN4211	TRANSISTOR				COIL(S)	
Q813, 814	UN4111	TRANSISTOR					
Q815	2SA1309AIRTA	TRANSISTOR					
		DIODE(S)		L591, 592	ELESN101KA	COIL	
				L601, 602	SLQY07G-40	COIL	
D601-603	MA165	DIODE		L701	SLQZ650MH49	COIL	Δ (E, EB, EG, GN)
D604	MA700	DIODE		L751	ELESN101KA	COIL	
D605, 606	SB360L6508	DIODE		L801	ELEXT101KA9	COIL	
D609, 610	MA165	DIODE				TRANSFORMER(S)	
D651	MA165	DIODE					
D652	MA4056MTA	DIODE		T701	RTP1N5E022-W	POWER TRANSFORMER (MAIN)	Δ (E, EG)
D653	MA165	DIODE		T701	RTP1N5B020-W	POWER TRANSFORMER (MAIN)	Δ (EB, GN)
D701-704	P300DLF	DIODE	Δ	T701	RTP1N5E023-W	POWER TRANSFORMER (MAIN)	Δ (GC)
D707	MA4068L	DIODE	Δ	T751	RTP1I5E003-V	POWER TRANSFORMER (SUB)	Δ (E, EB, EG, GN)
D708	MA4150M	DIODE	Δ	T751	RTP1I5E005-V	POWER TRANSFORMER (SUB)	Δ (GC)
D710	MA4150M	DIODE	Δ			OSCILLATOR(S)	
D721-724	P300DLF	DIODE	Δ				

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
X801	EFOEC4004T4	OSCILLATOR(4 MHz)		RL601-603	RSY0013M-0	RELAY	△
		FUSE (S)		RL751	RSY0019M-0	RELAY	△
F1	XBA2C25TB0	FUSE, 250V, T2. 5A	△ (E, EB, EG, GN)			JACK(S)	
F1	XBA2C50TB0	FUSE, 250V, T5A	△ (GC)	JK401-404	SJF3069N	PHONO, TUNER, etc TERMINAL	
F2	XBA2C25TB0	FUSE, 250V, T2. 5A	△ (GC)	JK406	RJJ33TR01	REMOTE CONT. OUT	
F3, 4	XBA2C63TB0	FUSE, 250V, T6. 3A	△	JK601	RJJ63TA01	HEADPHONES	
		SWITCH(ES)		JK603	RJH4801M-1	SP TERMINAL	
S401	ESB68047	SW, TONE ON/DEFEAT		JK651	RJS1A7002-1	FAN MOTOR	
S701	ESD26840A	SW, VOLTAGE ADJ	△ (GC)	JK791	SJS9236	AC INLET	△ (E, EB, EG)
S801	EVQ21405R	SW, PHONO		JK791	SJS9231-1B	AC INLET	△ (GC)
S802	EVQ21405R	SW, TUNER		JK791	SJSD16	AC INLET	△ (GN)
S803	EVQ21405R	SW, CD					
S804	EVQ21405R	SW, AUX					
S805	EVQ21405R	SW, TAPE2/DCC					
S806	EVQ21405R	SW, TAPE1 MONITOR					
S807	EVQ21405R	SW, POWER					
S808	EVQ21405R	SW, SPEAKERS (A)					
S809	EVQ21405R	SW, SPEAKERS (B)					
		CONNECTOR (S)					
CN601	RJU057W007	CONNECTOR (7P)					
CN710-714	RJS1A1101T1	CONNECTOR (1P)					
CN751	SJS305-1	CONNECTOR (3P)	(E, EB, EG, GN)				
CN751	SJS702-2	CONNECTOR (7P)	(GC)				
CN901-905	RJU003K008M1	CONNECTOR (8P)					
CN906	SJS50782JQH	CONNECTOR (7P)					
CN701A	RJS1A6606	CONNECTOR (6P)					
CN701B	RJS1A6606	CONNECTOR (6P)					
CP601	RJT057W007-1	CONNECTOR (7P)					
CP901-905	RJT003K008-1	CONNECTOR (8P)					
CP906	SJT30745JQ	CONNECTOR (7P)					
		GND PLATE (S)					
E401	RSC0377	GND PLATE					
E451	SNE1004-2	GND PLATE					
E501	RSC0377	GND PLATE					
E601, 602	SNE1004-2	GND PLATE					
		FUSE HOLDER (S)					
FC701, 702	EYF52BC	FUSE HOLDER					
FC703, 704	EYF52BC	FUSE HOLDER	(GC)				
FC705-708	EYF52BC	FUSE HOLDER					
		RELAY(S)					

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
 * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

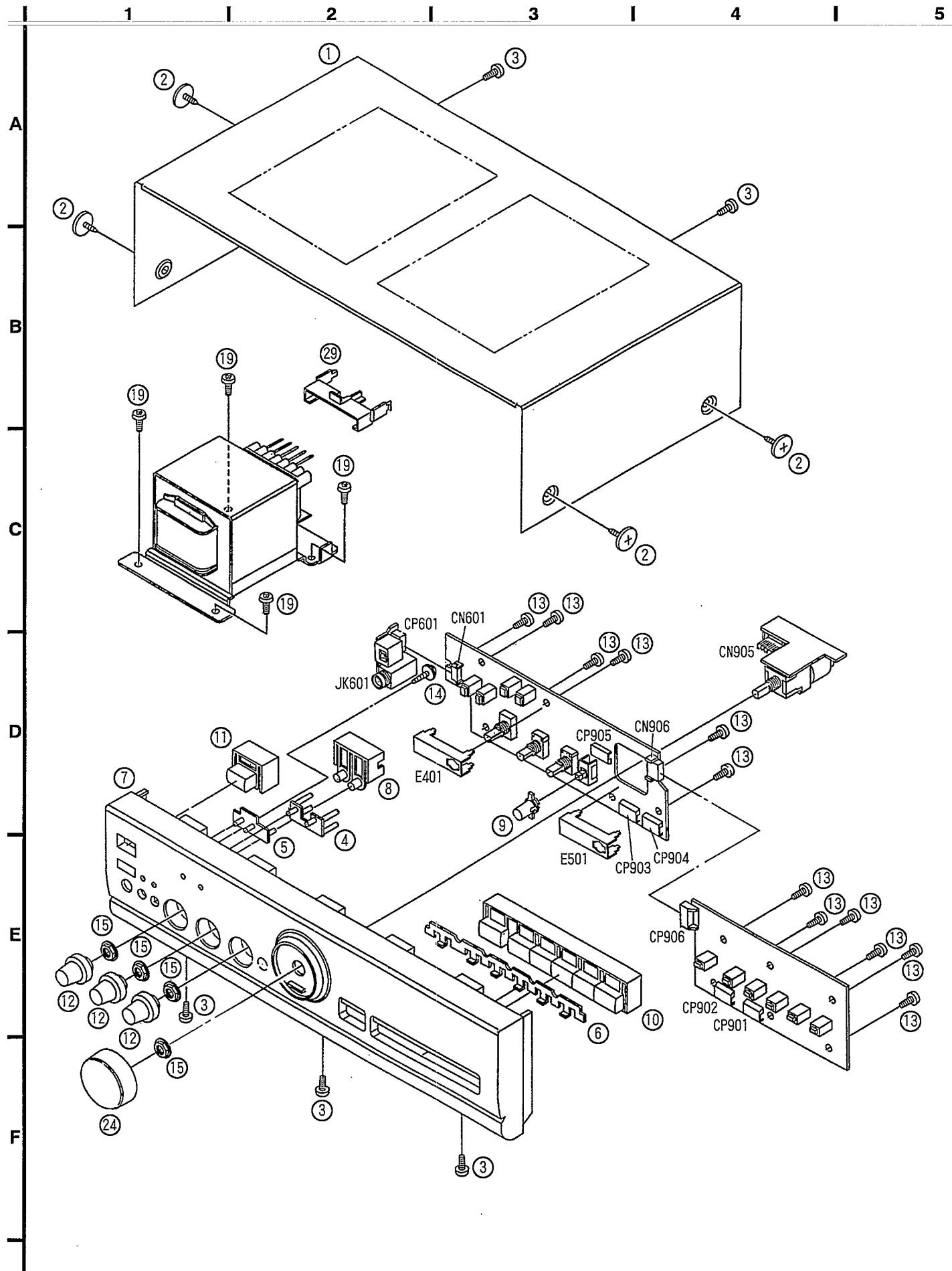
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R624	ERDS2TJ224T	1/4W 220K	R822	ERDS2TJ821	1/4W 820
			R625 Δ	ERD25FJ220	1/4W 22	R823	ERDS2TJ102	1/4W 1K
			R626	ERDS2TJ473	1/4W 47K	R825	ERDS2TJ473	1/4W 47K
R401, 402	ERDS2TJ102	1/4W 1K	R627, 628	ERG1SJ181E	1W 180	R826	ERDS2TJ181T	1/4W 180
R405-416	ERDS2TJ102	1/4W 1K	R629, 630	ERG1SJ151E	1W 150	R827	ERDS2TJ331	1/4W 330
R417, 418	ERDS2TJ473	1/4W 47K	R631	ERDS2TJ182	1/4W 1.8K	R828	ERDS2TJ102	1/4W 1K
R419, 420	ERDS2TJ104	1/4W 100K	R632-634	ERDS2TJ472	1/4W 4.7K			CAPACITORS
R421-424	ERDS2TJ102	1/4W 1K	R635-638	ERDS2TJ103	1/4W 10K			
R425-427	ERDS2TJ103	1/4W 10K	R639, 640	ERDS2TJ474	1/4W 470K			
R429, 430	ERDS2TJ104	1/4W 100K	R641, 642	ERDS2TJ221	1/4W 220	C401	ECEA1VKA4R7B	35V 4.7U
R449, 450	ERDS2EJ121	1/4W 120	R643, 644	ERDS2TJ154	1/4W 150K	C402, 403	ECBT1E103ZF	25V 0.01U
R451, 452	ERDS2TJ224T	1/4W 220K	R645, 646 Δ	ERDS1FVJ470T	1/2W 47	C404	ECEA1VKA4R7B	35V 4.7U
R453, 454	ERDS2TJ102	1/4W 1K	R647	ERDS2TJ682T	1/4W 6.8K	C405	ECBT1H101KB5	50V 100P
R455, 456	ERDS2TJ563	1/4W 56K	R648-650 Δ	ERD25FVJ391T	1/4W 390	C407-422	ECBT1H101KB5	50V 100P
R457, 458	ERDS2TJ271	1/4W 270	R651	ERDS2TJ103	1/4W 10K	C423, 424	RCE1CKA220BG	16V 22U
R459, 460	ERDS2TJ680T	1/4W 68	R671-674	ERDS2TJ223	1/4W 22K	C425, 426	ECBT1E103ZF	25V 0.01U
R461, 462	ERDS2TJ184T	1/4W 180K	R675	ERDS2TJ682T	1/4W 6.8K	C427-430	RCE1CKA100BG	16V 10U
R463, 464	ERDS2TJ123	1/4W 12K	R681	ERDS2TJ332	1/4W 3.3K	C451, 452	ECEA1VKA4R7B	35V 4.7U
R465, 466	ERDS2TJ563	1/4W 56K	R683	ERDS2TJ103	1/4W 10K	C455, 456	ECBT1H102KB5	50V 1000P
R467, 468	ERDS2TJ102	1/4W 1K	R684	ERDS2TJ153	1/4W 15K	C457, 458	RCE1AKA330BG	10V 33U
R475, 476	ERDS2TJ471	1/4W 470	R685, 686	ERDS2TJ333	1/4W 33K	C459, 460	ECQB1H223JF3	50V 0.022U
R477, 478	ERDS2TJ104	1/4W 100K	R687	ERDS2TJ103	1/4W 10K	C461, 462	ECQB1H682JF3	50V 6800P
R479, 480	ERDS2TJ474	1/4W 470K	R688	ERDS2TJ222	1/4W 2.2K	C463, 464	ECEA1VKA4R7B	35V 4.7U
R485, 486	ERDS2TJ223	1/4W 22K	R689	ERDS2TJ270T	1/4W 27	C465, 466	ECBT1E103ZF	25V 0.01U
R487-490	ERDS2TJ392T	1/4W 3.9K	R690	ERDS2TJ223	1/4W 22K	C467, 468	ECBT1H181KB5	50V 180P
R491, 492	ERDS2TJ102	1/4W 1K	R691	ERDS2TJ104	1/4W 100K	C471, 472	RCE1HKA3R3BG	50V 3.3U
R493, 494	ERDS2TJ563	1/4W 56K	R692	ERDS2TJ103	1/4W 10K	C475, 476	ECBT1H101KB5	50V 100P
R495, 496	ERDS2TJ223	1/4W 22K	R693	ERDS2TJ223	1/4W 22K	C477, 478	ECBT1H221KB5	50V 220P
R497, 498	ERDS2TJ392T	1/4W 3.9K	R694	ERDS2TJ335T	1/4W 3.3M	C479, 480	ECBT1H560J5	50V 56P
R501, 502	ERDS2TJ222	1/4W 2.2K	R701-703 Δ	ERD25FJ6R8	1/4W 6.8	C481-484	ECEA1VKA4R7B	35V 4.7U
R509, 510	ERDS2TJ222	1/4W 2.2K	R704	ERDS2TJ562	1/4W 5.6K	C485, 486	ECFR1E123KR	25V 0.012U
R525, 526	ERDS2TJ102	1/4W 1K	R705, 706	ERDS2TJ392T	1/4W 3.9K	C487, 488	ECQV1H683JM3	50V 0.068U
R528	ERDS2TJ394	1/4W 390K	R751	ERDS2TJ153	1/4W 15K	C489, 490	ECQB1H392JF3	50V 3900P
R532	ERDS2TJ103	1/4W 10K	R754	ERDS2TJ562	1/4W 5.6K	C491, 492	ECFR1E273KR	25V 0.027U
R535, 536	ERDS2TJ103	1/4W 10K	R801	ERDS2TJ103	1/4W 10K	C495, 496	ECBT1E103ZF	25V 0.01U
R591 Δ	ERDS1FVJ100T	1/2W 10	R803	ERDS2TJ103	1/4W 10K	C518	ECBT1E103ZF	25V 0.01U
R601, 602	ERDS2TJ221	1/4W 220	R804	ERDS2TJ102	1/4W 1K	C561, 562	ECBT1H102KB5	50V 1000P
R603, 604	ERDS2TJ563	1/4W 56K	R805, 806	ERDS2TJ103	1/4W 10K	C591, 592	RCE0JKA101BV	6.3V 100U
R605, 606	ERDS2TJ182	1/4W 1.8K	R807	ERDS2TJ104	1/4W 100K	C593, 594	ECEA1AKA220B	10V 22U
R607, 608	ERDS2TJ563	1/4W 56K	R808-810	ERDS2TJ103	1/4W 10K	C601, 602	ECEA1EKN2R2B	25V 2.2U
R609, 610	ERDS2TJ100	1/4W 10	R811	ERDS2TJ821	1/4W 820	C603, 604	ECBT1H561KB5	50V 560P
R611, 612 Δ	ERDS1FVJ8R2T	1/2W 8.2	R812	ERDS2TJ102	1/4W 1K	C605, 606	RCE1JM330BV	63V 33U
R613, 614	ERDS2TJ102	1/4W 1K	R813	ERDS2TJ122	1/4W 1.2K	C607, 608	ECCR1H100K5	50V 10P
R615	ERDS2TJ184T	1/4W 180K	R814	ERDS2TJ152	1/4W 1.5K	C609, 610	ECBT1H151KB5	50V 150P
R616	ERDS2TJ154	1/4W 150K	R815	ERDS2TJ182	1/4W 1.8K	C611, 612	ECQV1H473JM3	50V 0.047U
R619	ERDS2TJ684	1/4W 680K	R816	ERDS2TJ473	1/4W 47K	C613, 614	ECBA1H681KB5	50V 680P
R620	ERDS2TJ473	1/4W 47K	R817	ERDS2TJ221	1/4W 220	C615	ECEA2AN2R2SB	100V 2.2U
R621, 622 Δ	ERD25FVJ180T	1/4W 18	R818-820	ERDS2TJ561	1/4W 560	C616	ECEA1JU220	63V 22U
R623	ERDS2TJ684	1/4W 680K	R821	ERDS2TJ223	1/4W 22K	C617	RCE1HM470BV	50V 47U

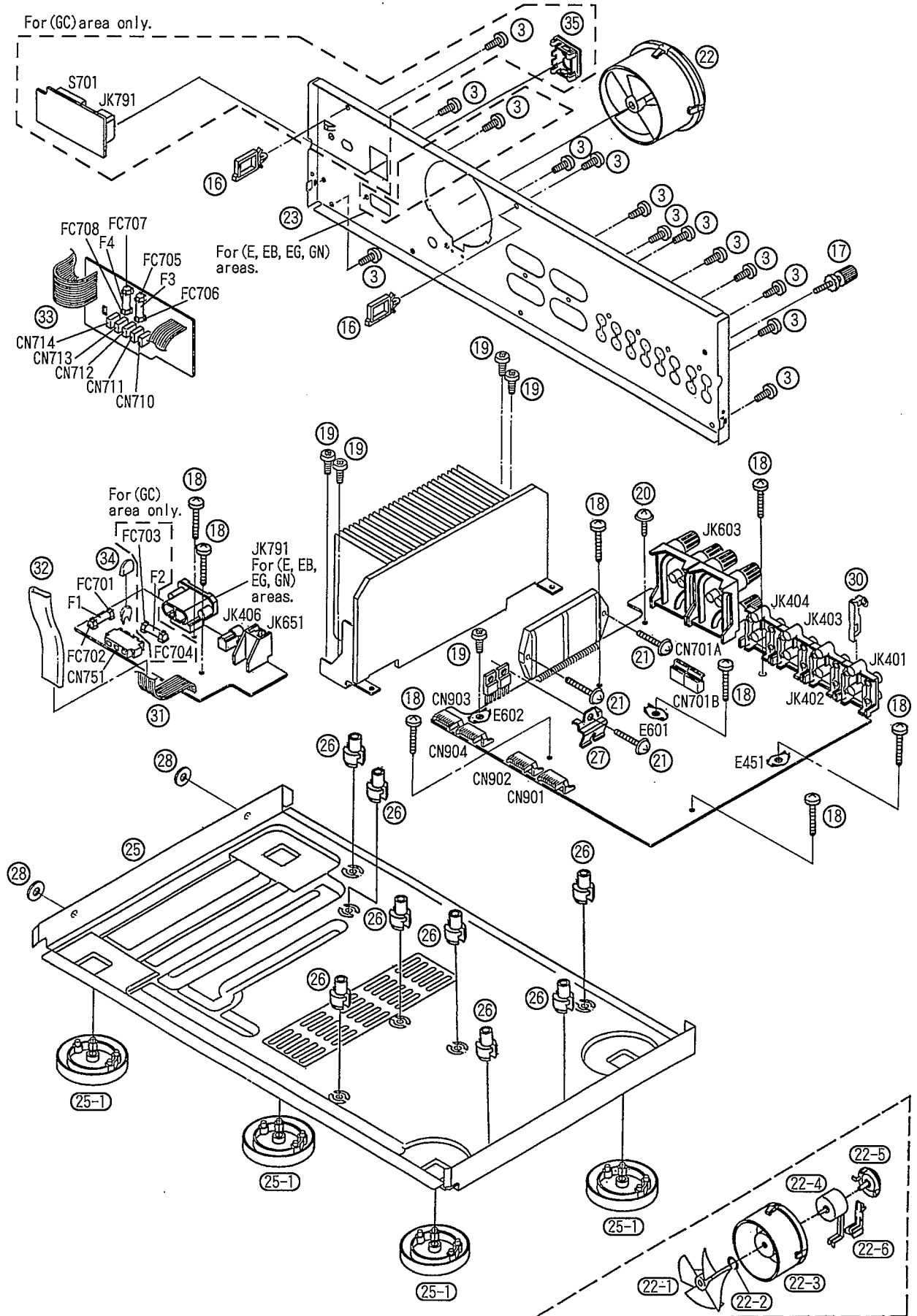
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Note: The reference number SA represent the grease and tool used for this unit.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS				PACKING MATERIALS	
1	RKMD036E-K	CABINET		P1	RPG2636	PACKING CASE	(E, EG, GC, GN)
2	SNE2129-3	SCREW		P1	RPG2637	PACKING CASE	(EB)
3	XTBS3+8JFZ1	SCREW		P2	RPN0684-2	PAD	
4	RGL0184A-Q1	LEADING LIGHT PANEL		P3	RPQ0164	PAD	
5	RGL0185A-Q	LEADING LIGHT PANEL		P4	SPP756	PROTECTION COVER	
6	RGL0229-Q	LEADING LIGHT PANEL		P5	RPF0139	PROTECTION COVER	
7	RFKGUV620E-K	FRONT PANEL ASS'Y		P6	RPH0032	PROTECTION SHEET	(EB, GN)
8	RGU0887A-K1	BUTTON, SP					
9	RGU0889-K	BUTTON, TONE				ACCESSORIES	
10	RGU1038-1K	BUTTON, SELECTOR					
11	RGU1042-K	BUTTON, POWER		A1	RJA0019-2K	AC MAINS LEAD	△ (E, EG, GC) (SF)
12	RGW0177A-K	KNOB, TONE		A1	VJA0733	AC MAINS LEAD	△ (EB) <VRD> (SF)
13	RHD26017	SCREW		A1	RJA0036-K	AC MAINS LEAD	△ (GN)
14	RHD26018	SCREW		A2	RAK-SU129WH	REMOTE CONTROL TRANSMITTER	
15	RHN90001	NUT		A2-1	RKK0057-K	BATTERY COVER	
16	SHR9814	CLUMPER		A3	RQA0013	WARRANTY CARD	(E, EB, EG)
17	SNE2123	GND SCREW		A3	RQX7433ZA	WARRANTY CARD	(GN)
18	XTB3+20JFZ	SCREW		A4	RQCB0169	SERVICE CENTER LIST	
19	XTB3+8JFZ	SCREW		A5	RFKSUV620E-K	INSTRUCTIONS MANUAL	(E)
20	XTWS3+8T	SCREW		A5	RQT3112-B	INSTRUCTIONS MANUAL	(EB, GN)
21	XTW3+15T	SCREW		A5	RQT3110-D	INSTRUCTIONS MANUAL	(EG)
22	REM0020-1	FAN ASS'Y		A5	RQT3151-G	INSTRUCTIONS MANUAL	(GC)
22-1	SHE232-1	FAN		A6	SJP5213-2	POWER PLUG ADAPTOR	△ (GC)
22-2	SJS271	SPRING					
22-3	RMQ0209-K	FAN CASE				GREASE OR JIG/TOOL	
22-4	MDN-4RB4MRC	MOTOR					
22-5	RMQ0208-K	FAN CAP		SA1	RFKX0002	COMPOUND GREASE	
22-6	RMQ0212-K	TERMINAL CAP					
23	RGR0226A-B1	REAR PANEL	(E)				
23	RGR0226B-A1	REAR PANEL	(EB)				
23	RGR0226A-A1	REAR PANEL	(EG)				
23	RGR0226C-A	REAR PANEL	(GC)				
23	RGR0226A-C	REAR PANEL	(GN)				
24	RGW0201-K	KNOB, VOLUME					
25	RFKJAGX170PK	BOTTOM CHASSIS ASS'Y					
25-1	RKA0053-A	FOOT					
26	RKQ0089	SPACER					
27	RMCO158	ANGLE					
28	RMGO332-K	RUBBER					
29	RMNO191	SPACER					
30	RSCO105-2	SHIELD PLATE					
31	RWJ1808120KK	FLAT CABLE (8P) W702					
32	RWZ120UNW090	PROTECT TUBE					
33	RWJ1812430KQ	FLAT CABLE (12P) W701					
34	RMZO339	SHIELD COVER					
35	SJS9231A	AC INLET COVER	(GC)				

Cabinet Parts Location





■ Packaging

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