

# Service Manual

Stereo Control Amplifier

## SU-C1000M2

Amplifier

**Colour**  
(K).....Black Type

**Areas**  
(E) ..... Europe.  
(EB) ..... Great Britain.  
(EG)..... Germany.



### Specifications (DIN 45 500)

**Total harmonic distortion**  
rated power at 20 Hz – 20 kHz 0.01 % (VOL. Max.)

**Input sensitivity/impedance**  
PHONO "MM" 2.5 mV/47 k $\Omega$   
"MC" 170  $\mu$ V/220  $\Omega$

TUNER, CD, AUX, TAPE 1, TAPE 2 200 mV/22 k $\Omega$

**Phono maximum input voltage (1 kHz, RMS)**  
"MM" 130 mV (IHF '66)  
"MC" 10 mV (IHF '66)

**S/N**  
PHONO "MM" 78 dB (85 dB, IHF '66)  
"MC" 64 dB (S = 250  $\mu$ V, 66 dB, IHF '66)

TUNER, CD, AUX, TAPE 1, TAPE 2 91 dB (100 dB, IHF '66)

**Frequency response**  
PHONO "MM" RIAA standard curve  $\pm$ 0.8 dB  
(30 Hz – 15 kHz)

TUNER, CD, AUX, TAPE 1, TAPE 2 3 Hz – 80 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

**Muting** –  $\infty$   
**Output voltage**  
TAPE 1, TAPE 2 REC OUT 200 mV  
PRE OUT 1, 2 1 V  
**Channel balance (AUX, 250 Hz – 6.3 kHz)**  $\pm$ 1 dB  
**Channel separation (AUX, 1 kHz)** 50 dB

**GENERAL**  
**Power consumption** 10 W  
**Power supply** AC 50 Hz, 230 V – 240 V  
**Dimensions (W  $\times$  H  $\times$  D)** 430  $\times$  69.3  $\times$  307 mm  
**Weight** 3.3 kg

#### Notes:

- 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 (C651) 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.

Power supply voltage	AC 230 V, 50 Hz	AC 240 V, 50 Hz
Consumed current	8 ~ 30 mA	8 ~ 30 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:

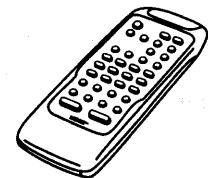
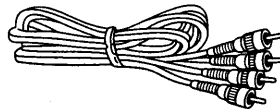
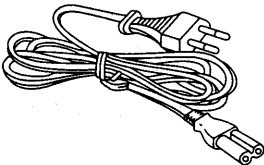
1. Switch OFF the power.
2. Determine the cause of the cause of the problem and correct it.
3. Switch ON the power once again.

### Note:

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

## ■ Accessories

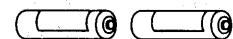
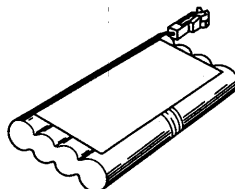
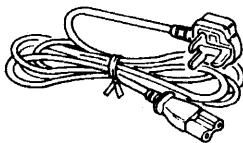
- AC power supply cord  
(E) and (EG) areas : (RJA0019-2K) .... 1
- Stereo connection cable  
(SJP2276) ..... 1
- Remote control transmitter  
(RAK-SU228WH) ..... 1



(EB) area : (RJA0049-K) ..... 1

• Rechargeable battery\* ..... 1

• Batteries for remote control transmitter\*  
(UM-4, "AAA", R03) ..... 2



Note: \*These are available on sales route.

## ■ Caution for AC Mains Lead


[for (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.

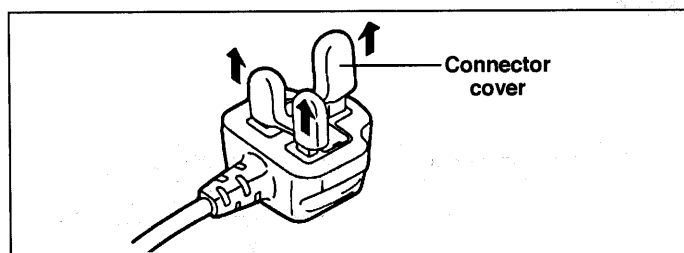
This apparatus was produced to BS 800.

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 .

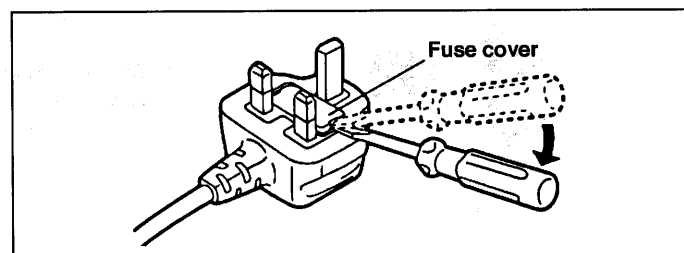
### Before use

Removal the connector cover as follows.

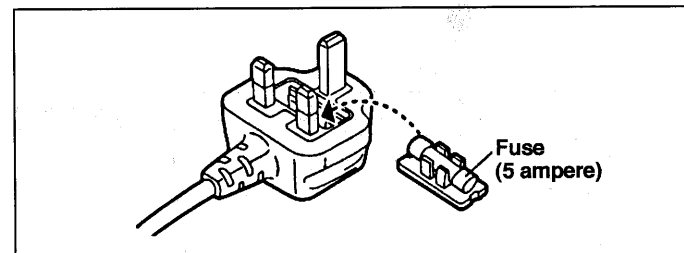


### How to replace the fuse

1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.



## Connections

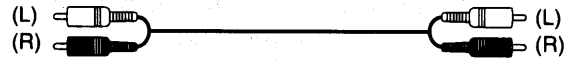
- Make sure that the power supply for all components has been turned off before making any connections.
- Connect the power cord to the amplifier only after all other connections between components have been made.

**Note**

Do not place this unit on top of another piece of equipment that radiates heat (such as a power amplifier).

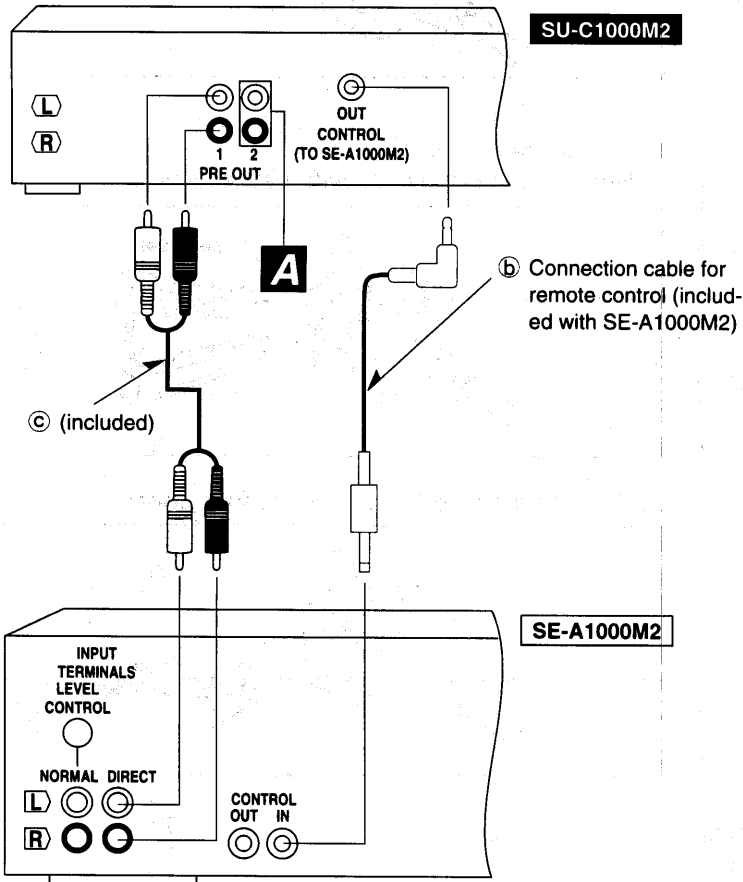
**Stereo connection cable**

White (L)  
Red (R)

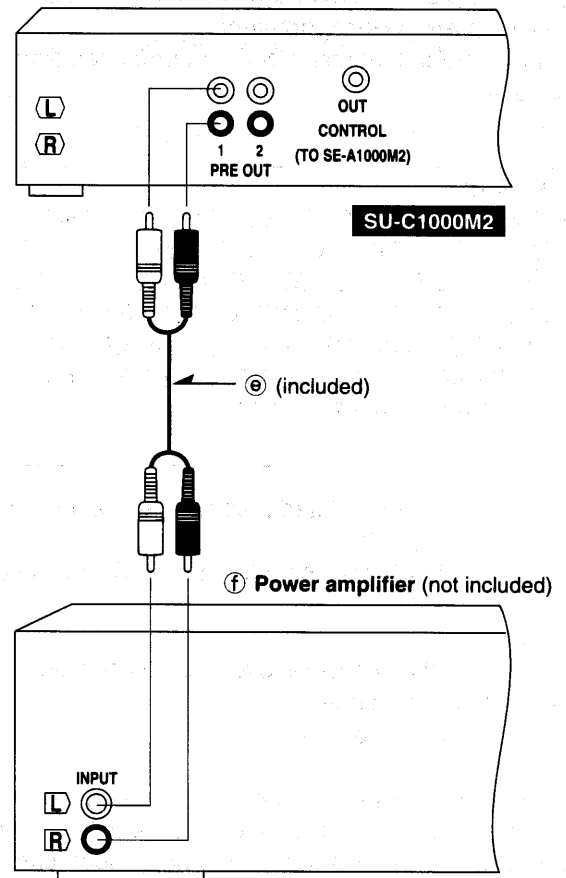


**1** Connect the power amplifier. (not included)

**a** When connecting to the Technics SE-A1000M2



**d** When connecting to a different power amplifier

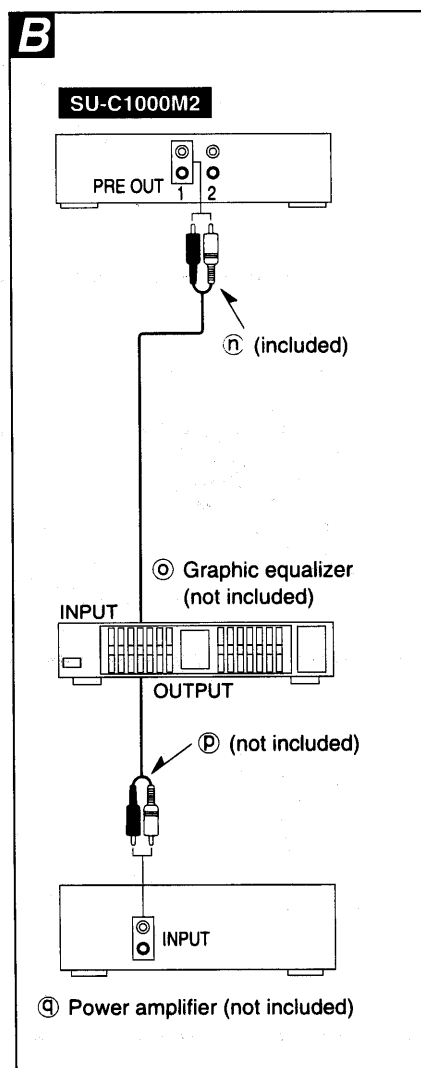
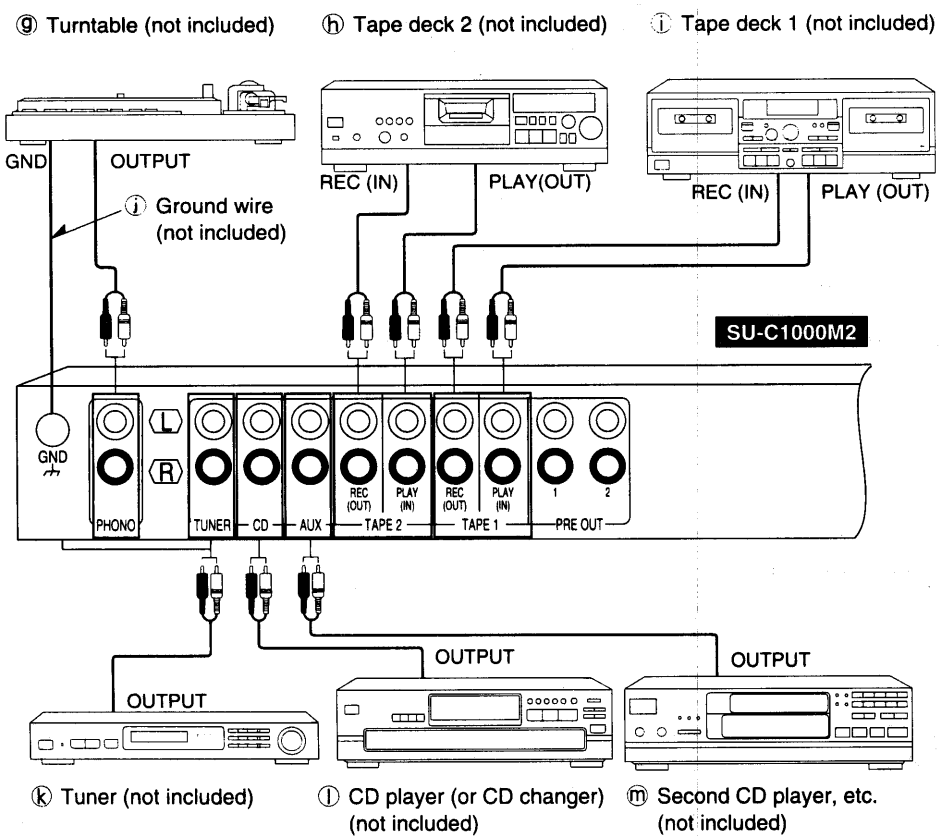


**A** "PRE OUT 2" terminals: For connecting the second power amplifier. To improve the sound quality, connect two Technics SE-A1000M2 power amplifiers to this unit. For details, see SE-A1000M2 Operating Instructions.

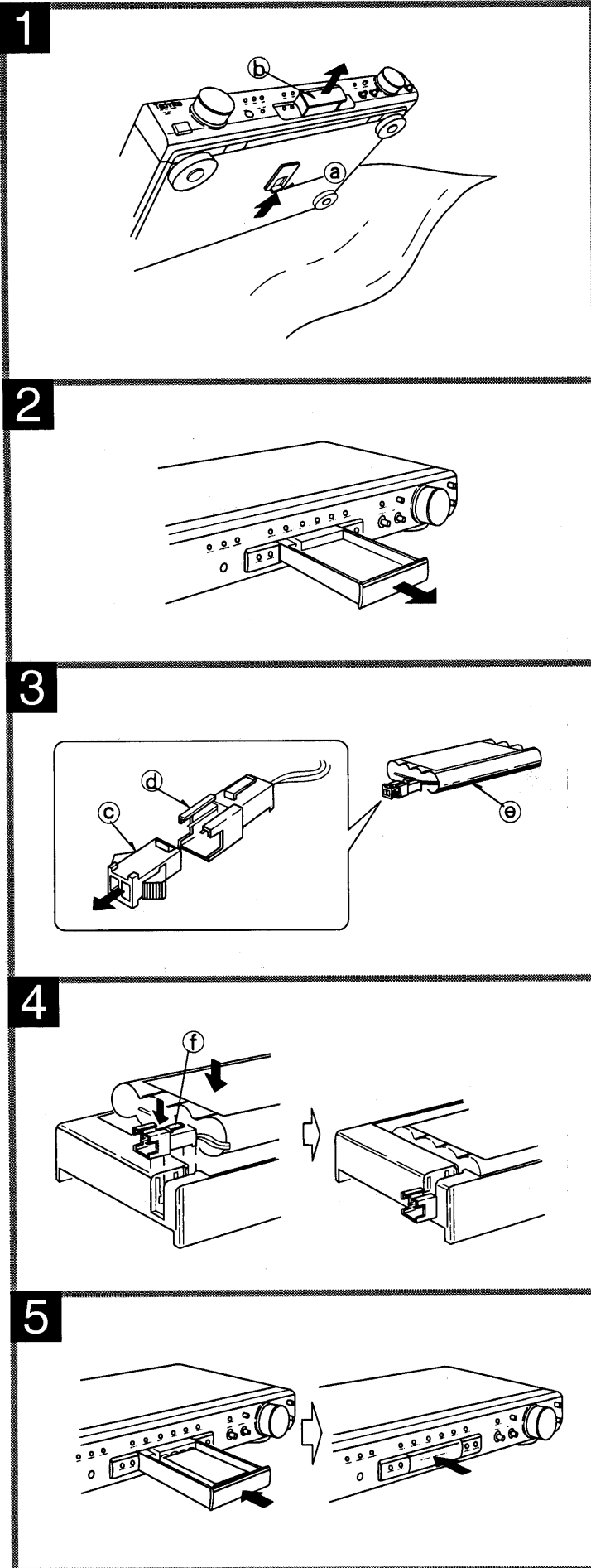
**If connecting a graphic equalizer**

Connect it between the PRE OUT terminals of this unit and the INPUT terminals of the power amplifier.

**2** Connect the other audio components.



## ■ Inserting the Rechargeable battery



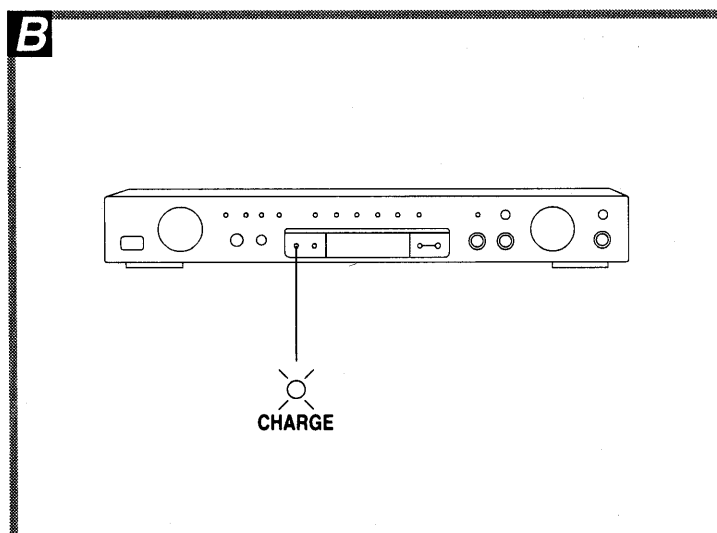
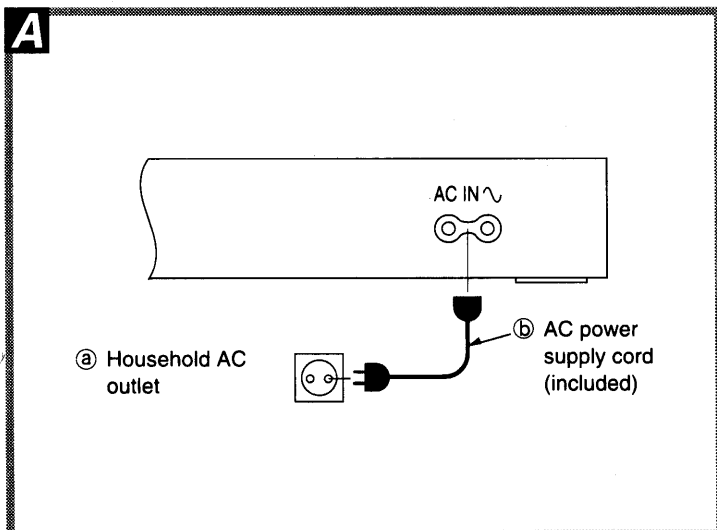
Place the unit on top of a soft cloth to protect it from damage.

- 1** Pull the lever (a) at the bottom of the unit toward you.  
The battery case (b) will spring up by 1-2 cm.
- 2** Remove the battery case.
- 3** Remove the protective cap (c) from the connector (d) of the rechargeable battery (e) which is supplied as an accessory.
- 4** Hold the connector so that the pawl (f) is facing upward, then securely insert the connector into the battery case groove until it snaps into place.
- 5** Insert the battery case into the main unit.

**Note**

- Do not insert anything other than the rechargeable battery into the battery compartment.

## Power Supply



### Power supply system

Once the unit has been connected to an AC power source and turned on, you can then select whether to continue to run it from an AC power supply or from battery power (using the rechargeable battery). Because the noise that is generated by AC power supplies is eliminated when running the unit from battery power, you can enjoy an even clearer playback sound.

The unit can be used continuously for approximately 15 hours from a fully-charged battery. After the battery has been used for a cumulative total of 8 hours, automatic recharging starts as soon as the amplifier is turned off. Therefore, it is not necessary to take any special steps to ensure that the battery remains charged.

### Replacing the rechargeable battery

The operation life of the rechargeable battery is approximately two years. However, this will vary depending on the conditions of use.

For information about replacing the battery, please contact your dealer or the nearest Technics Service Center.

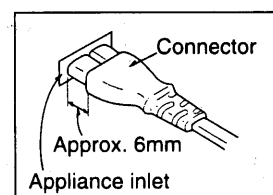
### Connecting the power supply

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

### Insertion of Connector

Even when the connector is perfectly inserted, the front part of the connector juts out as shown in the drawing.

However there is no problem using the unit.



### Initial charging

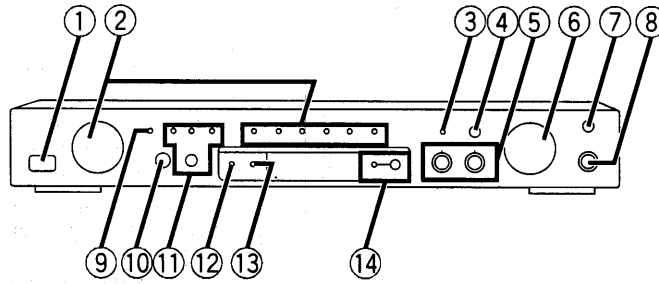
When the amplifier is connected to the AC power supply cord, initial charging starts straight away and the "CHARGE" indicator on the front of the amplifier illuminates. In the case of initial charging, it takes approximately 10 hours for charging to be completed, and the unit cannot be run from the battery during this time. Please wait until the "CHARGE" indicator switches off before using the battery. (In the case of automatic recharging mentioned above, the battery can be used even while recharging is taking place.)

#### Note

Initial charging of the battery will also be carried out at the following times in order to help preserve the battery.

1. When the battery case is removed and replaced;
2. When the battery is used continuously for a long period of time and the battery voltage has dropped to a constant level.

## ■ Front Panel Controls



**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 Input selector/indicators (SELECTOR)**

**③ Muting indicator (MUTING)**

**④ Tone control button (TONE)**

**⑤ Tone controls (BASS, TREBLE)**

**⑥ Volume control (VOLUME)**

**⑦ Phono cartridge select button (PHONO SELECTOR)**

**⑧ Balance control (BALANCE)**

**⑨ "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.

**⑩ Remote control signal sensor (SENSOR)**

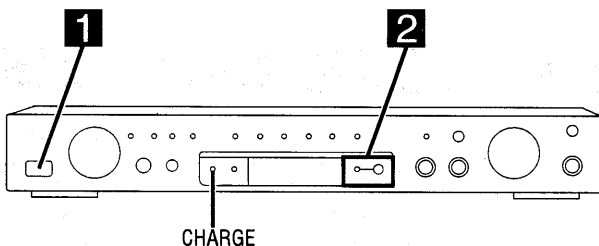
**⑪ Tape-monitor button/indicators (TAPE MONITOR)**

**⑫ Charge indicator (CHARGE)**

**⑬ Battery condition indicator (LEVEL)**

**⑭ Battery operation button/indicator (BATT OPERATION)**

## ■ Using Battery Power



- Make sure you first read the "Power supply" section on page 10.
- If the unit is carrying out initial charging of the battery, carry out the following steps after the "CHARGE" indicator switches off.

**1 Press POWER to switch on the power.**

**2 Press BATT OPERATION.**

The indicator next to the button will illuminate and the power supply will switch from AC power to battery power.

After this, carry out the steps on the following pages.

### When turning the amplifier off

When POWER is pressed, both the amplifier and the battery power supply will be switched off simultaneously. When POWER is then pressed again to turn the power back on, the battery power supply will also be turned back on.

### Switching to AC power

After the amplifier has been switched on, press BATT OPERATION. The battery operation indicator will switch off.

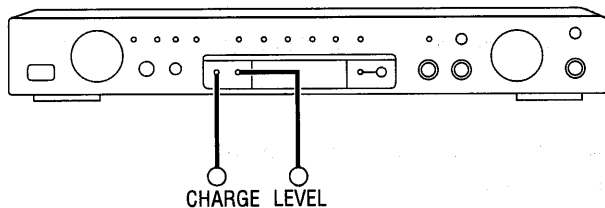
If the amplifier has started automatic recharging of the battery because the battery voltage has dropped to a constant level, the power supply at this time will automatically be switched to AC power. (Operations such as playback and recording will continue without a break while this happens.)

### If the "LEVEL" indicator is flashing (approximately every 5 seconds)

If this starts to happen when BATT OPERATION is pressed, it means that an initial charge of the battery is being carried out, and is to let you know that the battery cannot currently be used.



## ■ Checking the Battery Condition

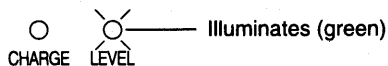


You can check the current battery level and whether it is charging by means of the "LEVEL" indicator and the "CHARGE" indicator.

### Basic operation of the indicators

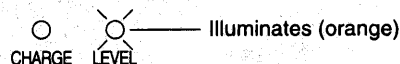
When battery power is being used, each indicator changes as shown below (① → ② → ③) during normal operation.

- ① When total battery operation time after the battery has been fully charged is less than 8 hours



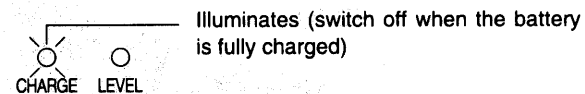
Charging is not carried out at this time even if the amplifier is turned off.

- ② When total battery operation time after the battery has been fully charged is 8 hours or more



If the amplifier is turned off during this time, battery recharging will be carried out. (The "CHARGE" indicator will illuminate.)

- ③ During battery charging



The time taken for the battery to charge is approximately half of the usage time.

You can switch over to battery power while the battery is charging, even if charging is not yet complete. (Battery charging stops as soon as battery-powered operation starts.)

### Other indicator operations

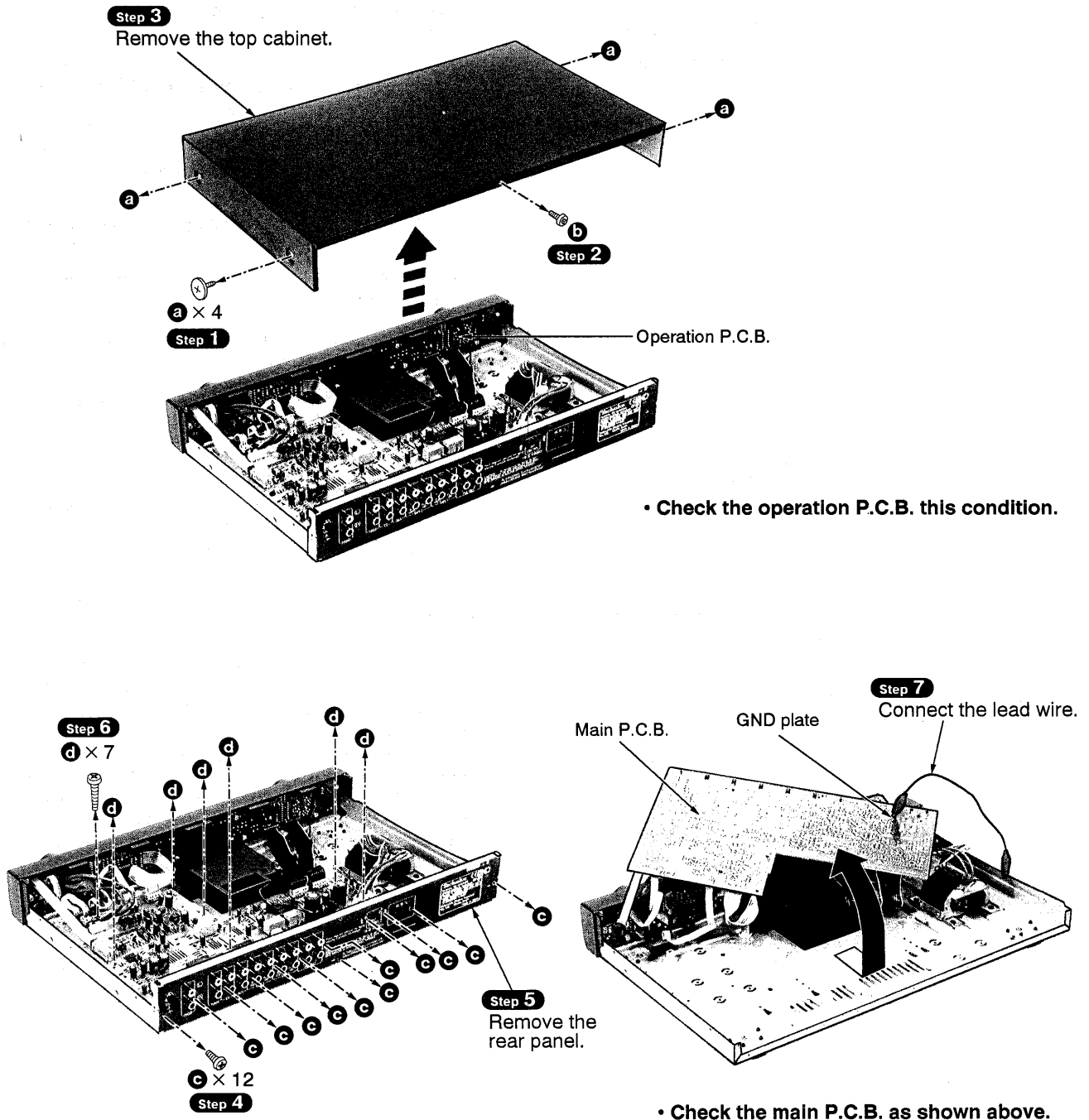
- If the "LEVEL" indicator illuminates in orange instead of green even when the battery is fully charged, it means that the performance of the rechargeable battery is deteriorating. Battery-powered operation is still possible.
- If the "LEVEL" indicator is flashing and the "CHARGE" indicator is still illuminated even after the normal amount of time required for recharging has passed, the battery is at the end of its usable life.
- If the "CHARGE" indicator is switched off and the "LEVEL" indicator is flashing, the battery has not been installed, or there is a malfunction of the battery or the amplifier.

## ■ Operation Check and Main 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.

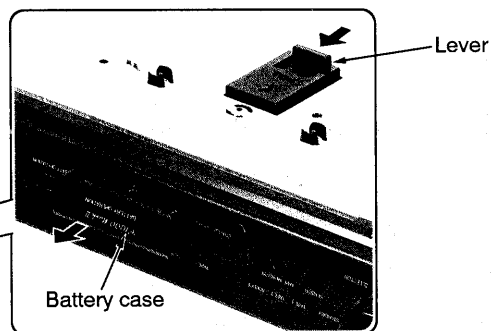
### 1. Checking for the operation P.C.B. and main P.C.B.



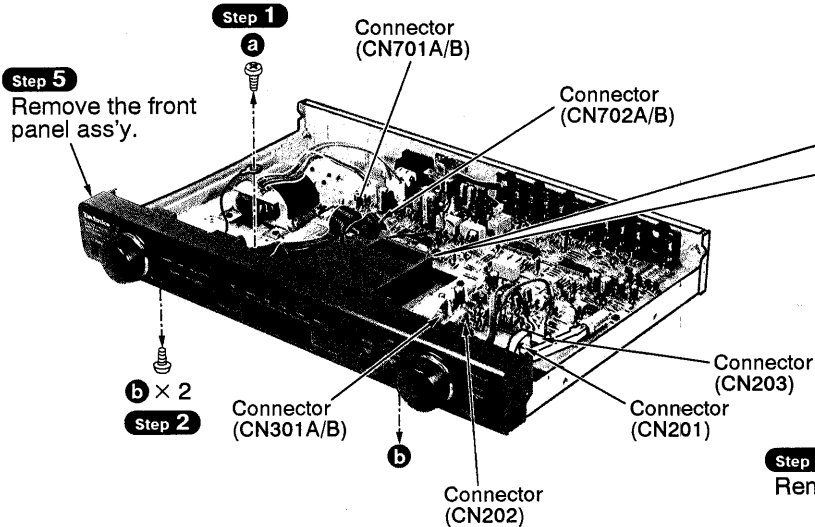
**To remove each P.C.B.**

• Follow the **Step 1** ~ **Step 3** in item 1 on page 10.

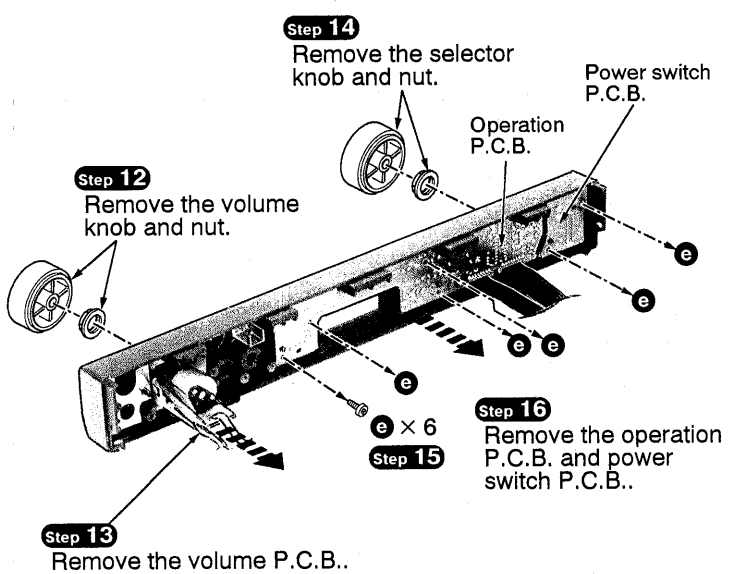
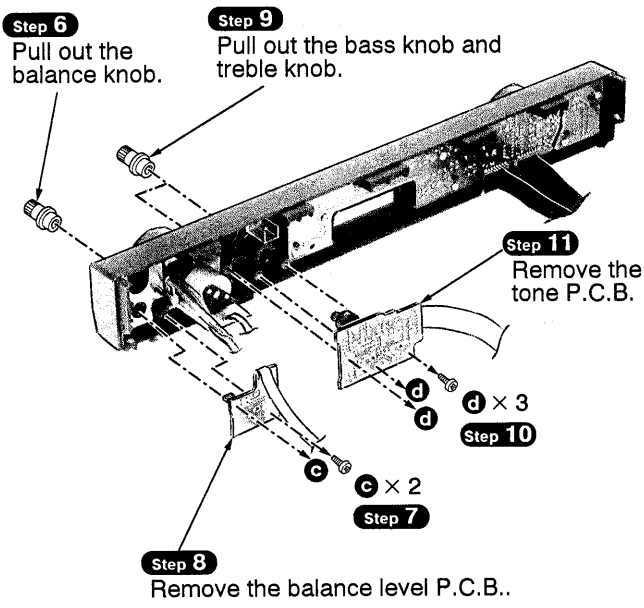
(Bottom side)



**Step 3**  
Push the lever and then pull out the battery case.



**Step 4**  
Remove the 6 connectors.



## ■ Schematic Diagram

	Page
<b>A</b> MAIN CIRCUIT .....	13 – 17
<b>B</b> TONE CIRCUIT .....	14, 15
<b>C</b> BALANCE LEVEL CIRCUIT .....	14
<b>D</b> VOLUME CIRCUIT .....	14
<b>E</b> POWER SWITCH CIRCUIT .....	14
<b>F</b> OPERATION CIRCUIT .....	15
<b>G</b> CONTROL JACK CIRCUIT .....	17

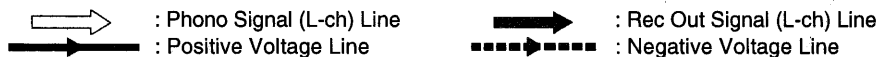
- This schematic diagram may be modified at any time with the development of new technology.

### Notes:

- **S103** : Phono cartridge select switch (PHONO SELECTOR)
- **S301** : Tone control switch (TONE **■**:DEFEAT, **■**:ON)
- **S801** : Power "STANDBY  $\phi$  /ON" switch (POWER, STANDBY  $\phi$  /ON)
- **S802** : Tape monitor switch (TAPE MONITOR)
- **S803** : Battery operation switch (BATT OPERATION)
- **S804** : Input select switch (SELECTOR)
- **VR201** : Volume control VR (VOLUME)
- **VR202** : Balance control VR (BALANCE)
- **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 the internal impedance of the DC circuit tester.

No mark: Power ON

- Voltage and signal line

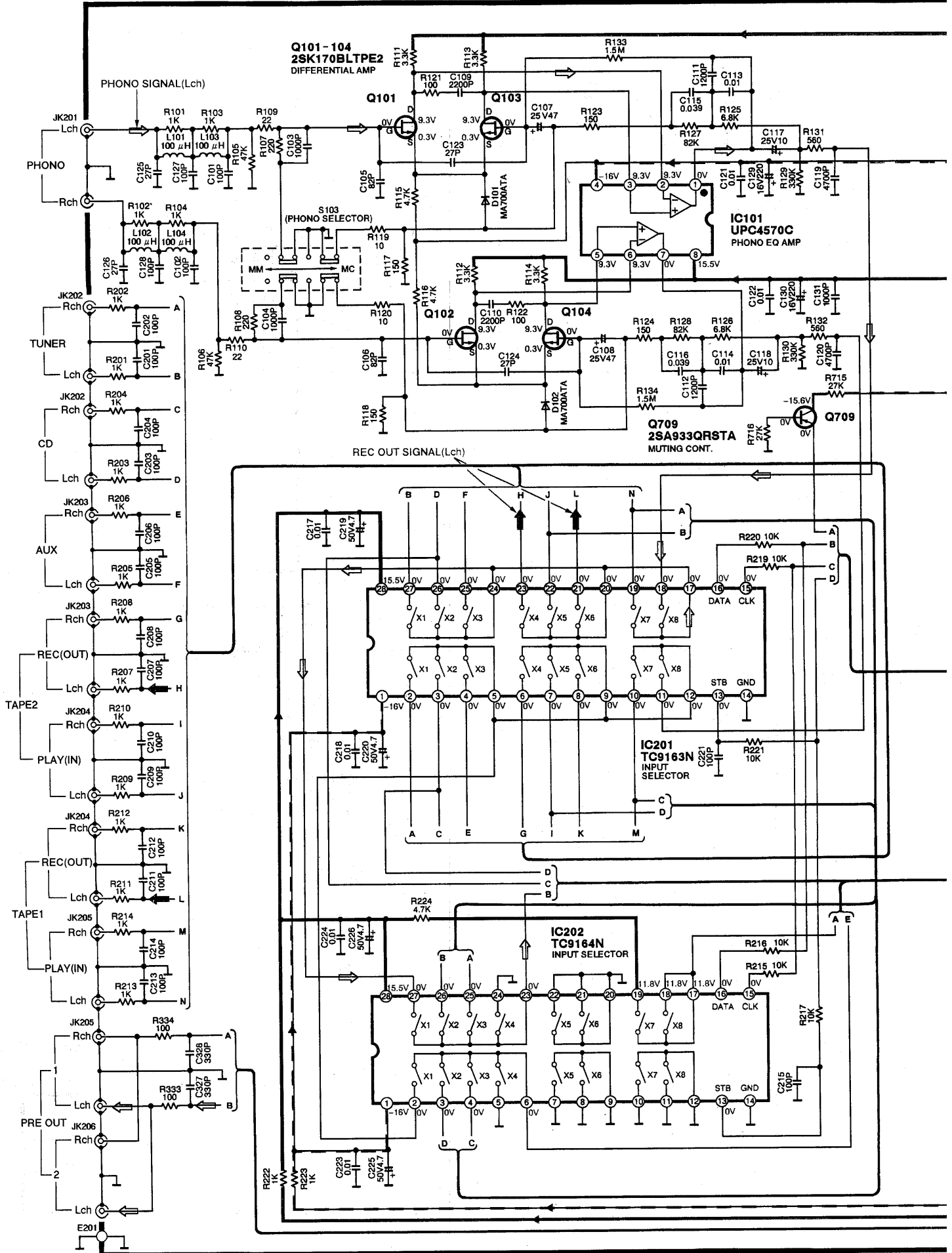


- Important safety notice:  
Components identified by  $\triangle$  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, 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.

### ● Forced Switching to Battery Power for Testing and Maintenance

When the rechargeable battery is replaced or reinstalled, it remains in a state of charging for approximately 10 hours. While it is in this state, the power supply cannot be switched over to battery power by pressing the Battery Operation button.  
To forcibly switch to battery power, turn off the unit (with the Standby indicator on) and then back on again while holding down the Battery Operation button. The unit will switch to battery power and the Battery Operation indicator will light up.  
If the Battery Operation indicator does not light, there is a malfunction in the rechargeable battery or a circuit in the battery system.

**A** MAIN CIRCUIT (P.C.Board: on page 19)



**B** TONE CIRCUIT  
(P.C.Board: on page 18)

**Q305**  
**2SK301PQTA**  
STABILIZER

**IC301**  
**NJM4580DD**  
TONE AMP

**Q351, 352**  
**2SC3327ABTP**  
MUTING

**Q301, 302**  
**2SK389BG**  
DIFFERENTIAL AMP

**Q201**  
**DTC124ESTP**  
RELAY DRIVE

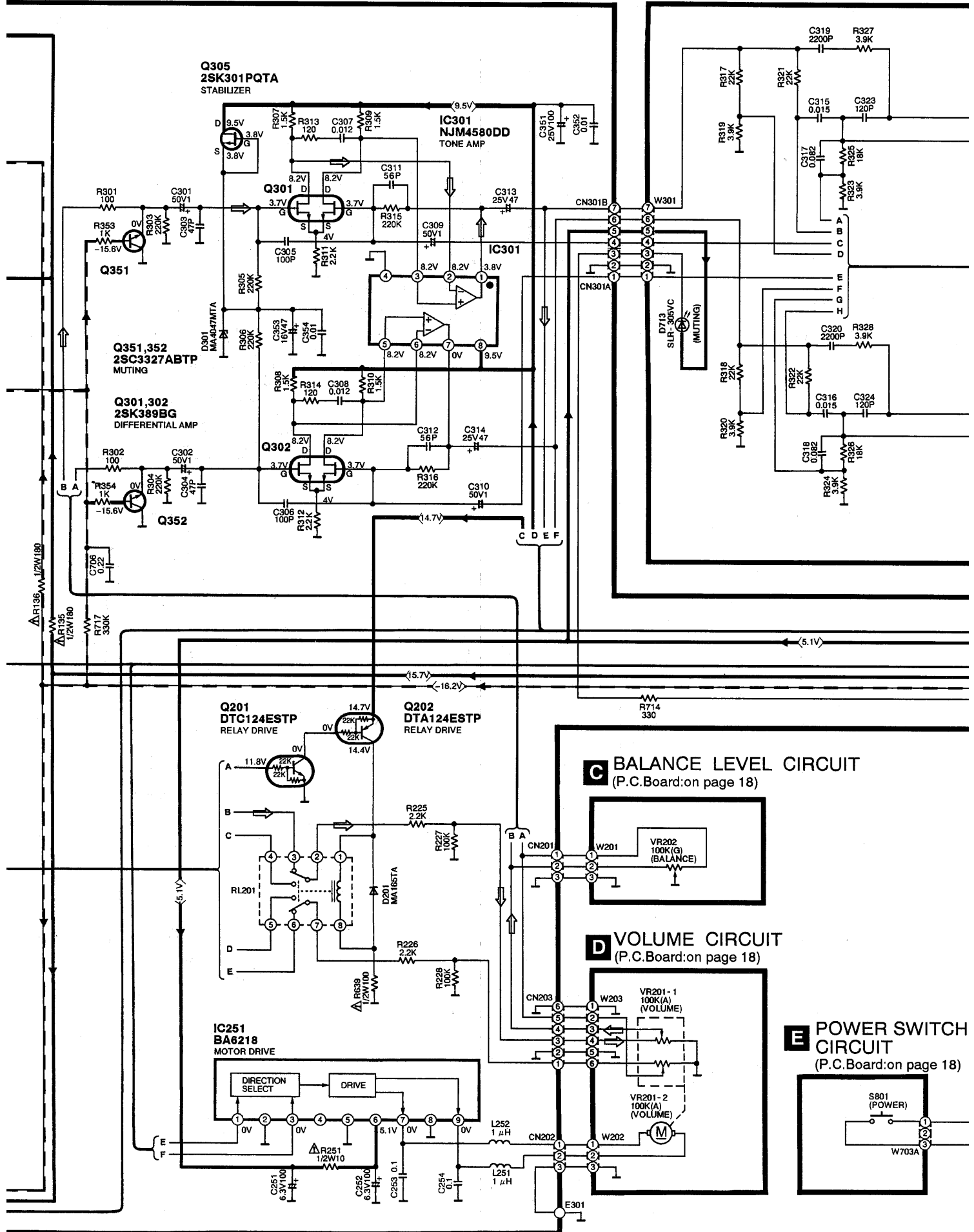
**Q202**  
**DTA124ESTP**  
RELAY DRIVE

**IC251**  
**BA6218**  
MOTOR DRIVE

**C** BALANCE LEVEL CIRCUIT  
(P.C.Board: on page 18)

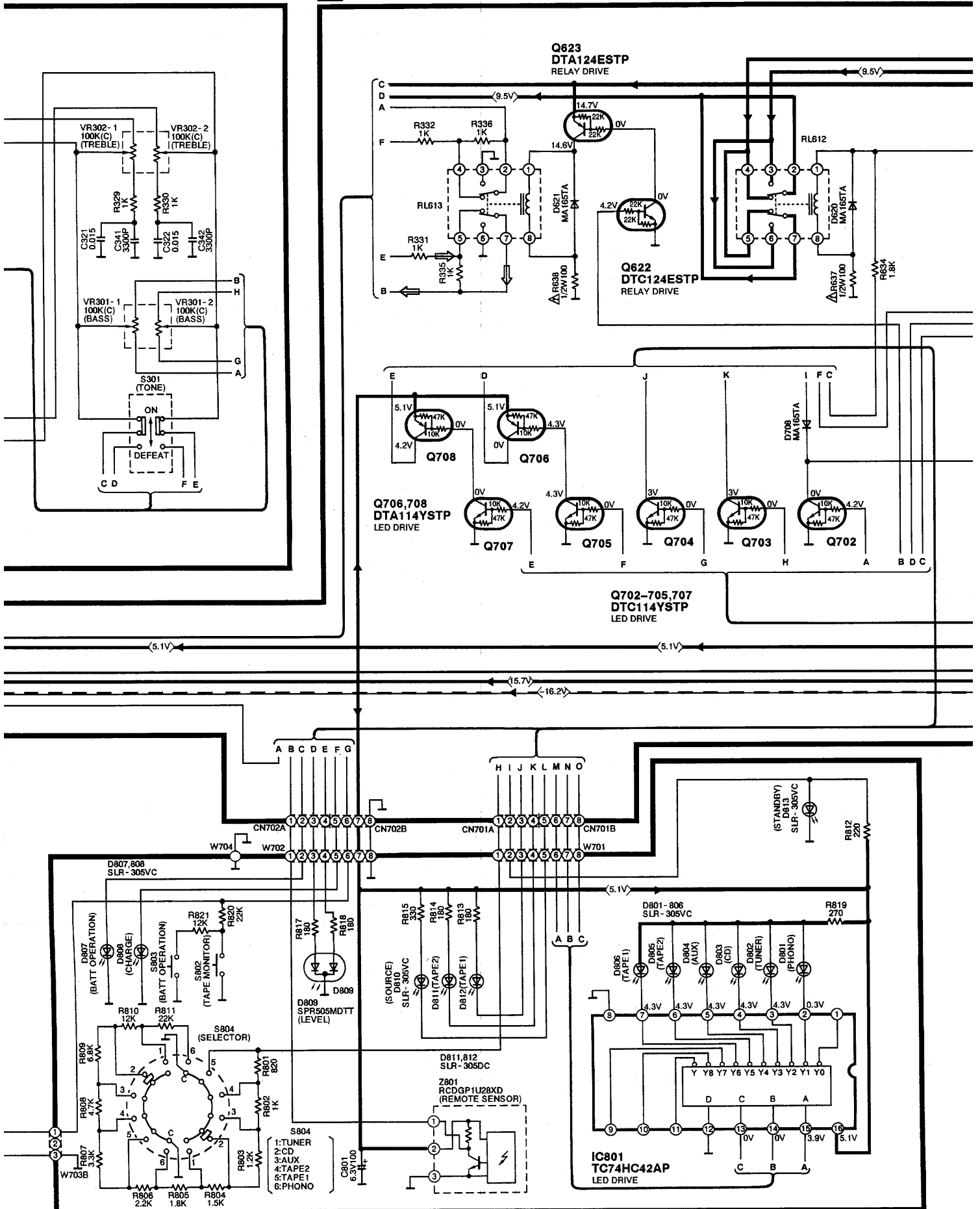
**D** VOLUME CIRCUIT  
(P.C.Board: on page 18)

**E** POWER SWITCH CIRCUIT  
(P.C.Board: on page 18)



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

**A MAIN CIRCUIT (P.C.Board: on page 19)**



**F OPERATION CIRCUIT (P.C.Board: on page 18)**

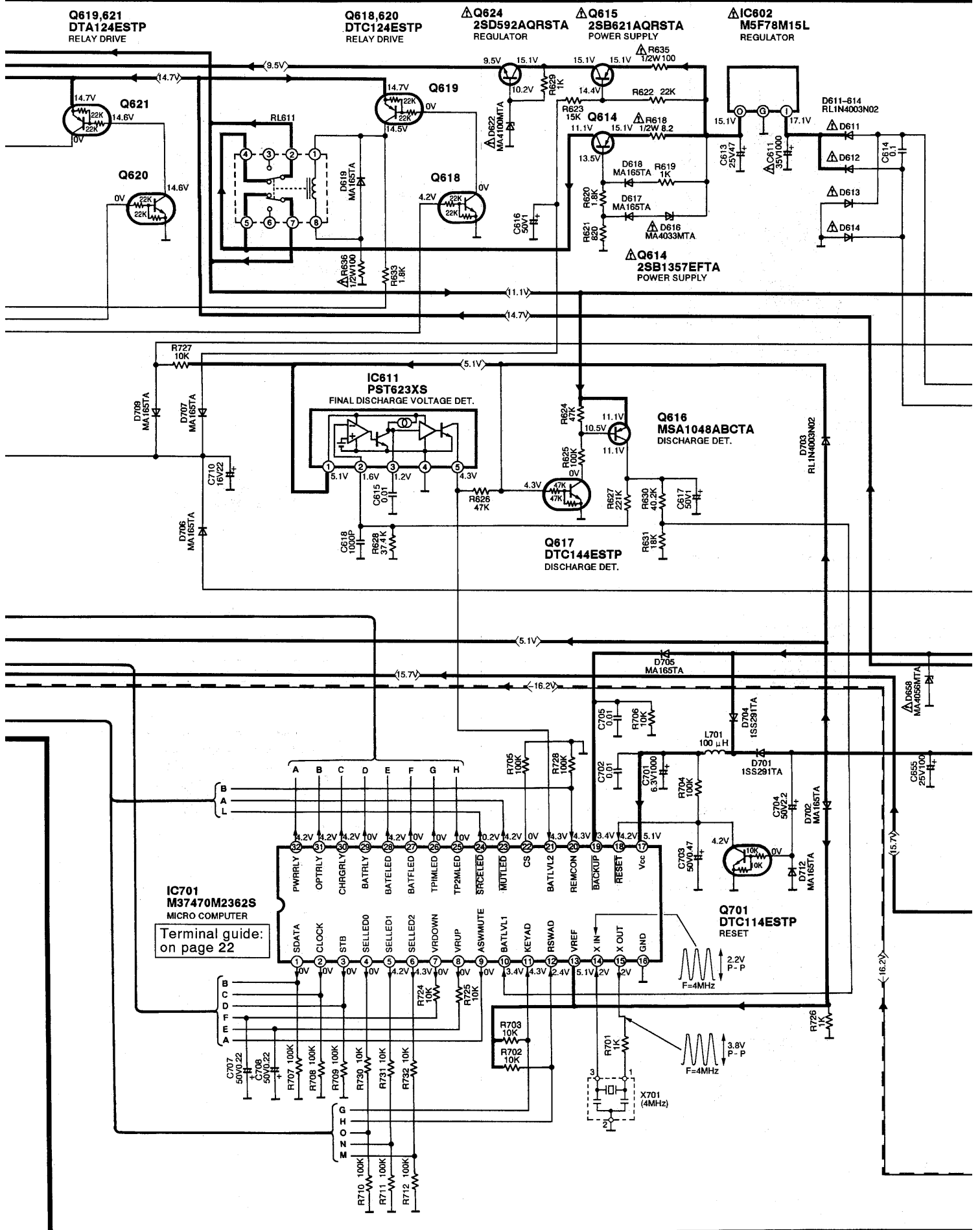
# SU-C1000M2

→ : Phono Signal (L-ch) Line

→ : Rec Out Signal (L-ch) Line

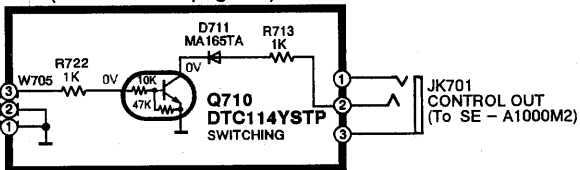
→ : Positive Voltage Line

--- : Negative Voltage Line

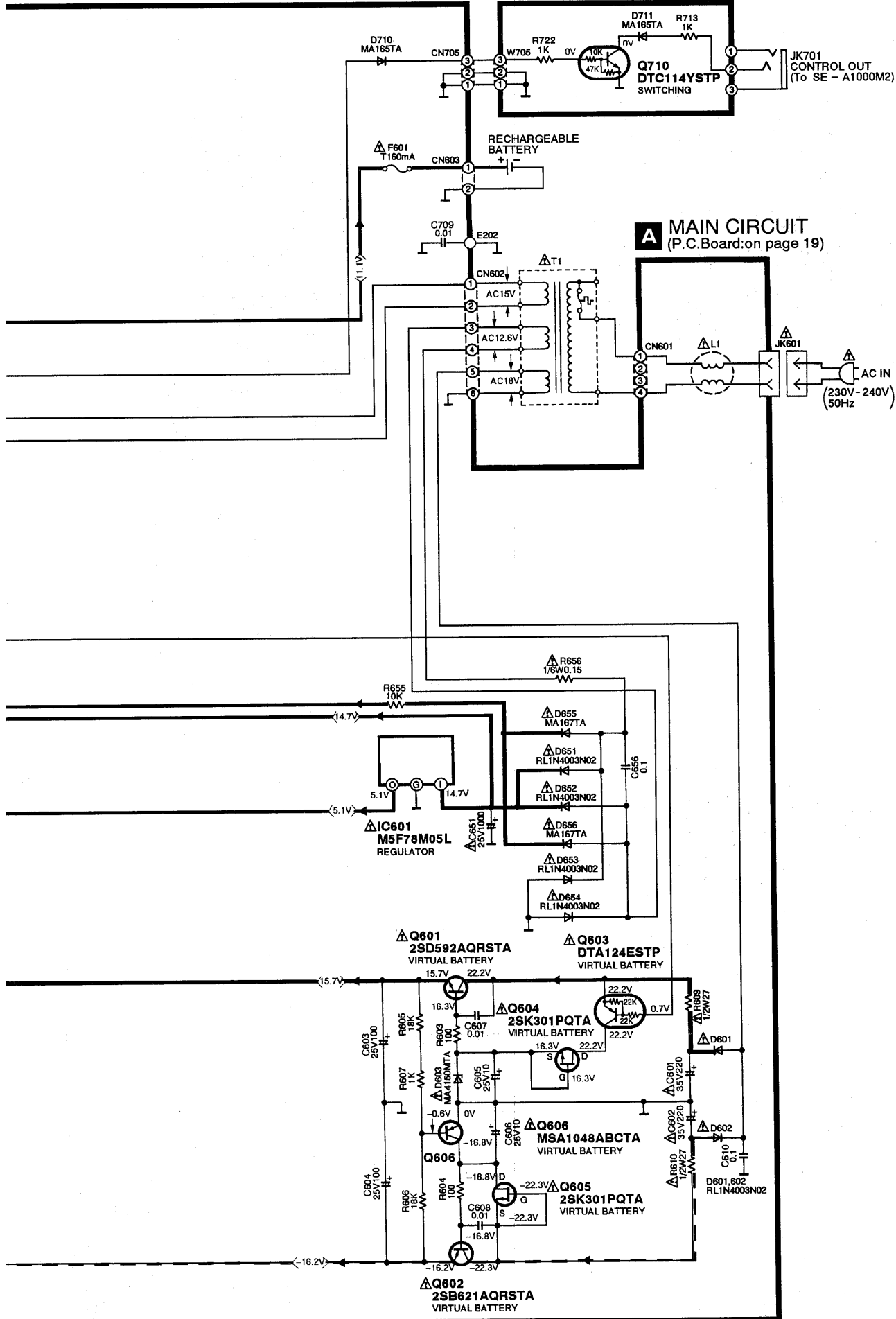




**G** CONTROL JACK CIRCUIT  
(P.C.Board: on page 18)



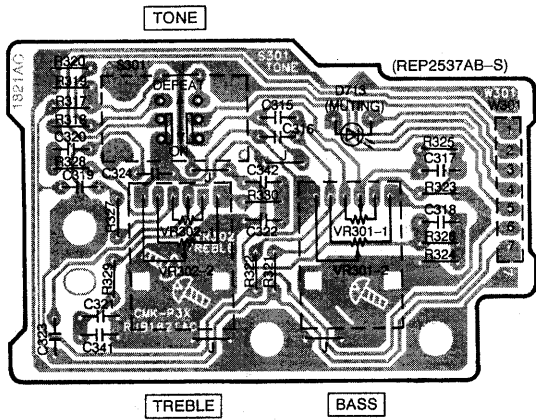
**A** MAIN CIRCUIT  
(P.C.Board: on page 19)



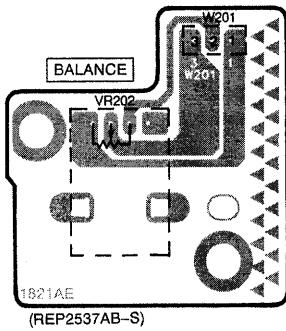
# Printed Circuit Board Diagram

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

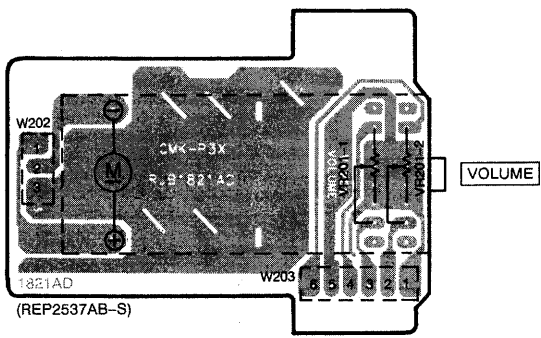
**B** TONE P.C.B.



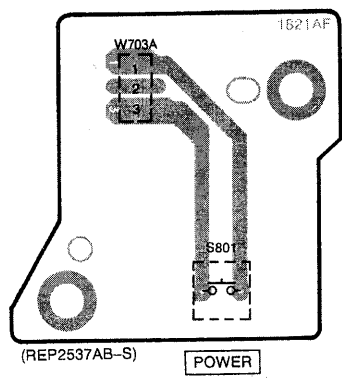
**C** BALANCE LEVEL P.C.B.



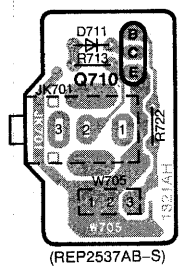
**D** VOLUME P.C.B.



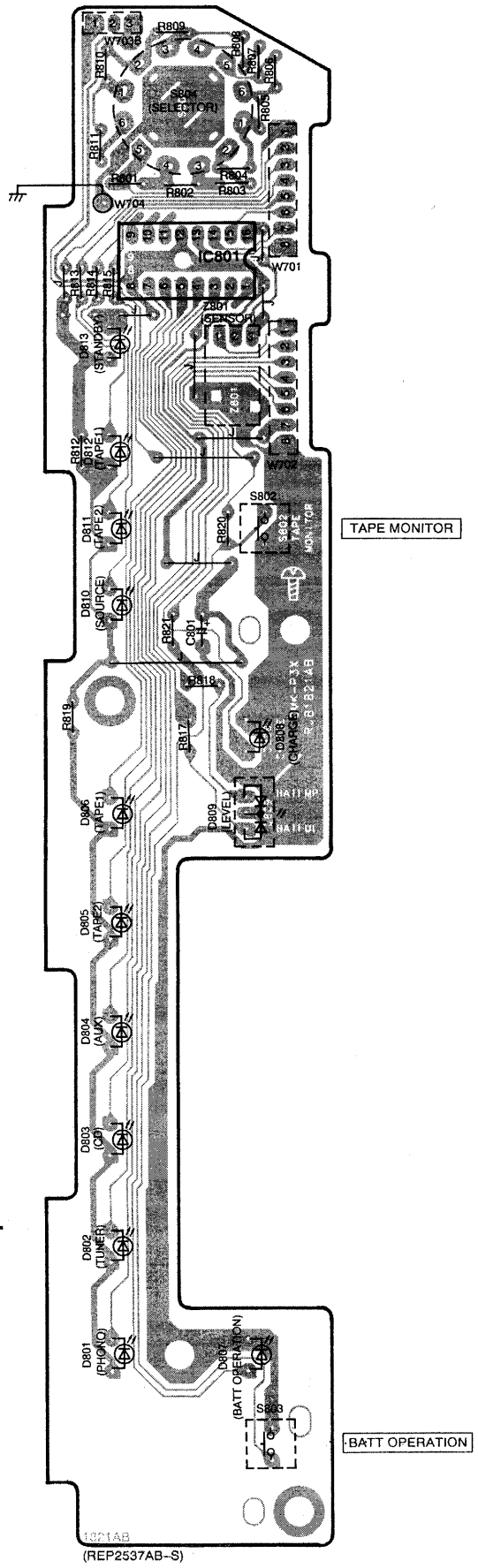
**E** POWER SWITCH P.C.B.



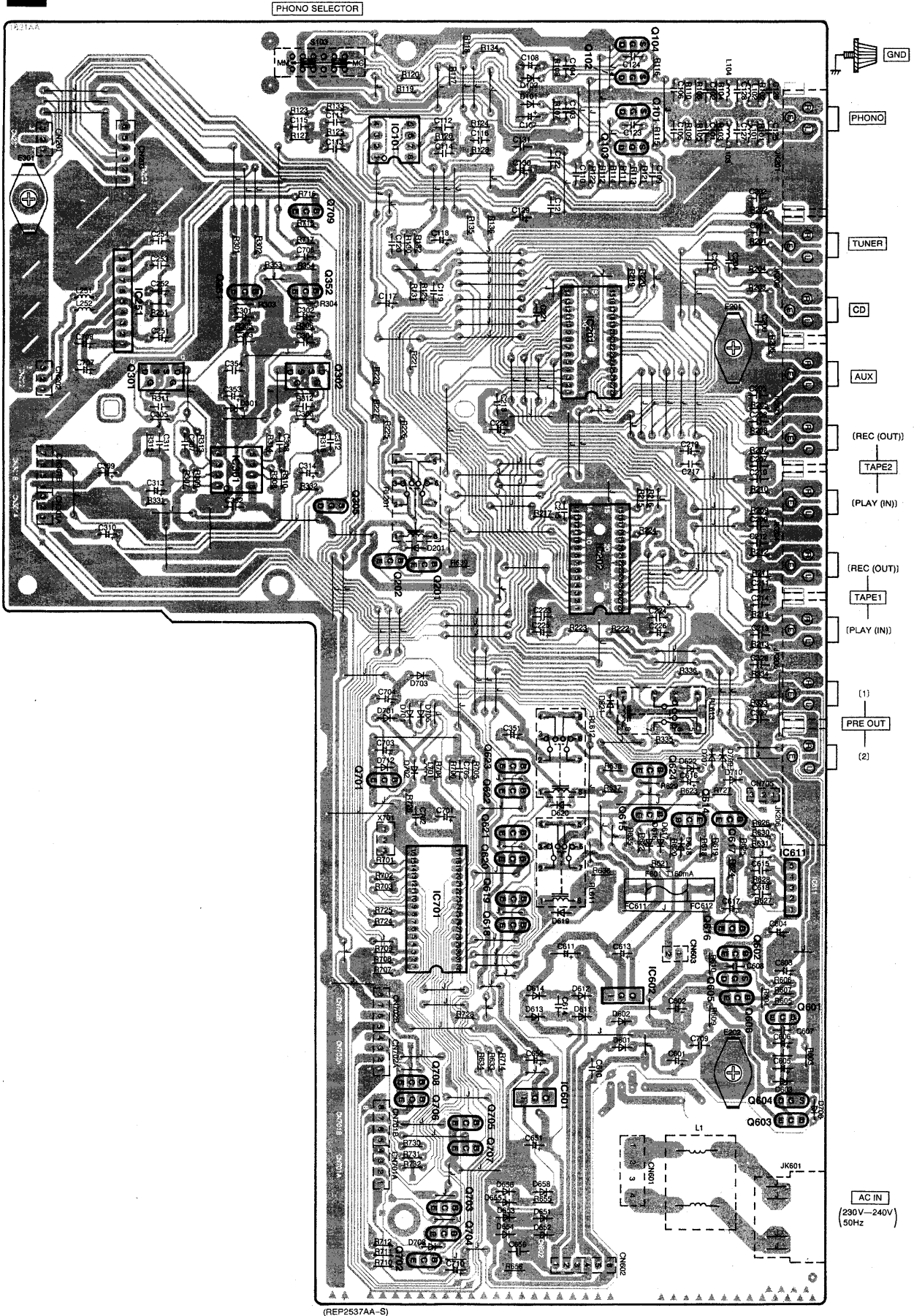
**G** CONTROL JACK P.C.B.



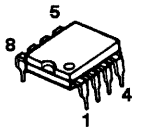
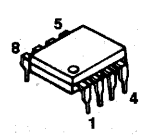
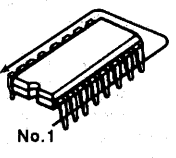
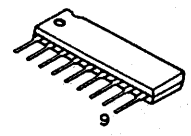
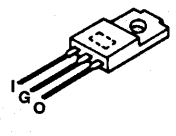
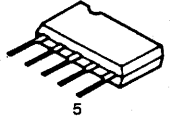
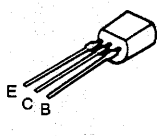
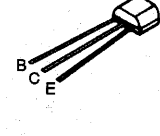
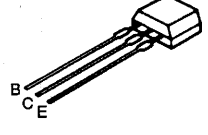
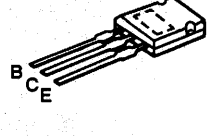
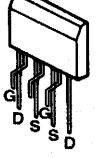
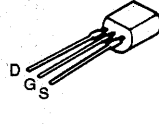
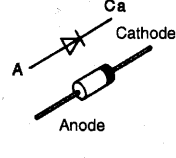
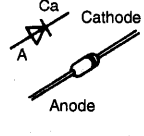
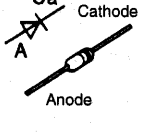
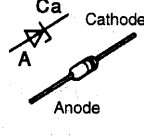
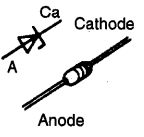
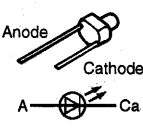
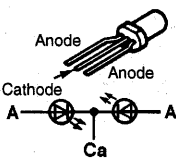
**F** OPERATION P.C.B.



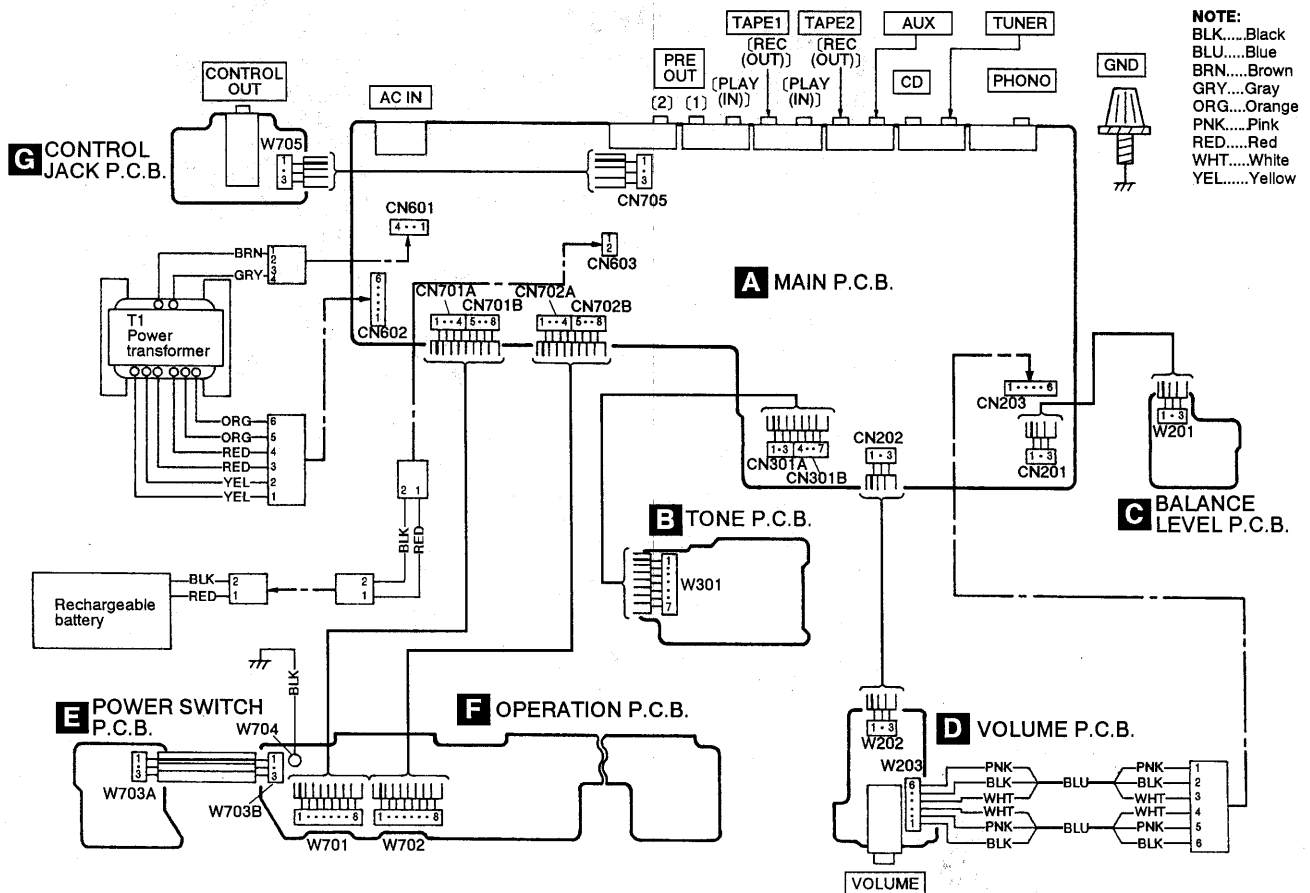
**A** MAIN P.C.B.



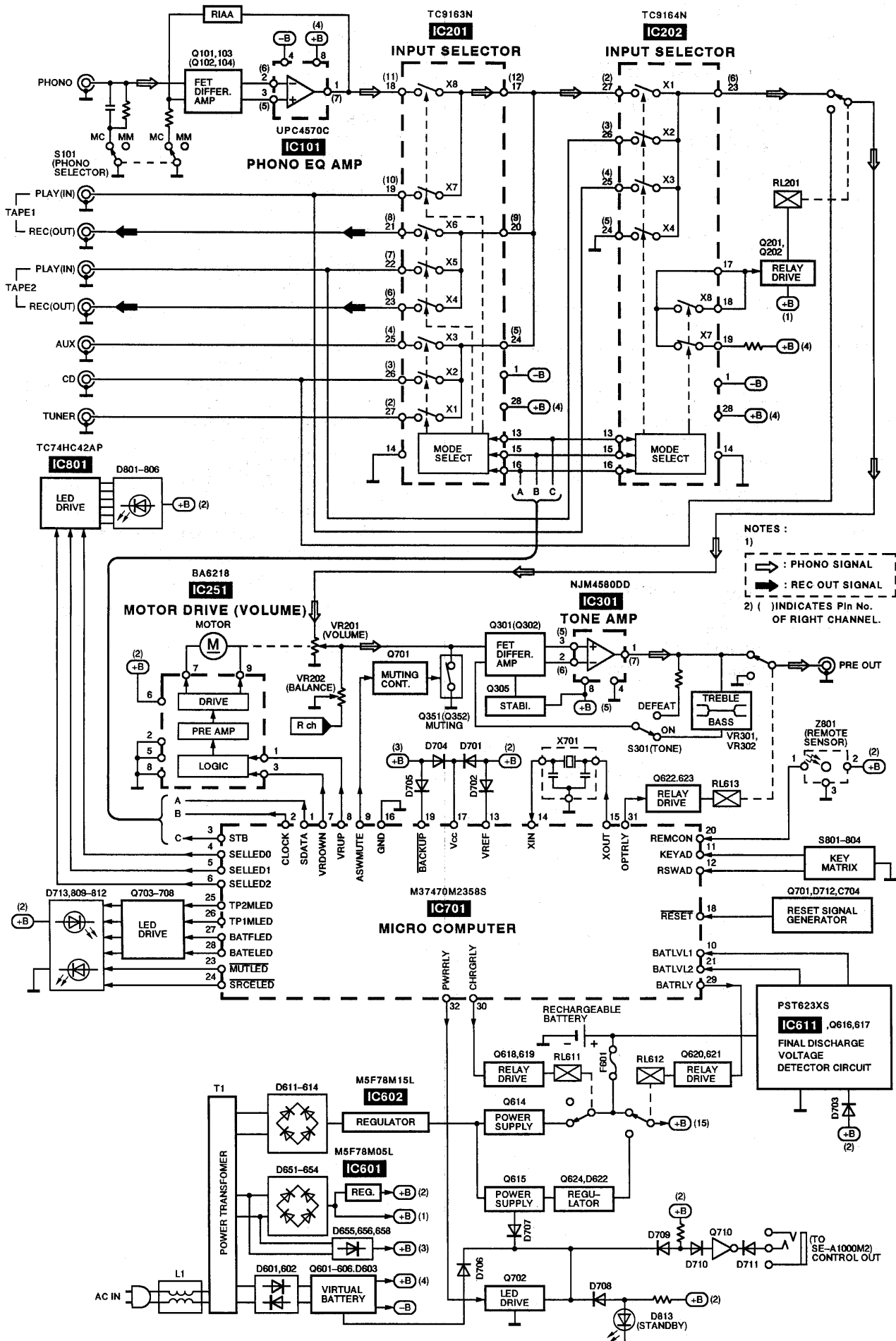
## ■ Type Illustration of IC's, Transistors and Diodes

<p>UPC4570C</p> 	<p>NJM4580DD</p> 	 <table border="1"> <tr> <td>TC74HC42AP</td> <td>16Pin</td> </tr> <tr> <td>TC9163N</td> <td>28Pin</td> </tr> <tr> <td>TC9164N</td> <td>28Pin</td> </tr> <tr> <td>M37470M2362S</td> <td>32Pin</td> </tr> </table>	TC74HC42AP	16Pin	TC9163N	28Pin	TC9164N	28Pin	M37470M2362S	32Pin	<p>BA6218</p> 	<p>M5F78M05L</p> 
TC74HC42AP	16Pin											
TC9163N	28Pin											
TC9164N	28Pin											
M37470M2362S	32Pin											
<p>PST623XS</p> 	<p>2SA933QRSTA 2SB621A-R 2SD592ANCQ</p> 	<p>2SC3327-A MSA1048ABCTA</p> 	<p>DTA114YSTP DTC114ESTP DTC114YSTP DTA124ESTP DTC124EST DTC144ESTP</p> 	<p>2SB1357EFTA</p> 								
<p>2SK389BG</p> 	<p>2SK170BLTPE2 2SK301PQTA</p> 	<p>RL1N4003N02</p> 	<p>MA165 MA167</p> 	<p>1SS291TA MA700</p> 	<p>MA4100MTA MA4150M</p> 							
<p>MA4033TA MA4047MTA MA4056MTA</p> 	<p>SLR-305DC SLR-305VC</p> 	<p>SPR505MDTT</p> 										

## ■ Wiring Connection Diagram



# Block Diagram



## ■ Terminal Function of IC's

### ● IC701 (M37470M2362S)

Pin No.	Terminal Name	I/O	Function
1	SDATA	O	Data signal output for input select IC (IC201 and IC202)
2	CLOCK	O	Clock signal output for input select IC (IC201 and IC202)
3	STB	O	Strobe signal output for input select IC (IC201 and IC202)
4	SELLED0	O	Input select LED drive signal output
5	SELLED1		
6	SELLED2		
7	VRDOWN	O	Motor drive signal output (Volume down)
8	VRUP	O	Motor drive signal output (Volume up)
9	ASWMUTE	O	Audio signal muting signal output
10	BATLVL1	I	Battery voltage detection (1) signal input
11	KEYAD	I	Power switch and Tape monitor switch signal
12	RSWAD	I	Input selector switch (S804) signal input
13	VREF	I	Reference voltage input
14	XIN	I	Connect to the ceramic oscillator
15	XOUT	O	
16	GND	—	Connect to GND

Pin No.	Terminal Name	I/O	Function
17	VCC	I	Power supply (+5V)
18	RESET	I	System reset signal input
19	BACKUP	I	Power failure detect signal input
20	REMCON	I	Remote control signal input
21	BATLVL2	I	Battery voltage detection (2) signal input
22	CS	I	Chip select signal input (Connect to GND)
23	MUTLED	O	Muting LED (D713) drive signal output
24	SRCELED	O	Source LED (D810) drive signal output
25	TP2MLED	O	Tape 2 LED (D811) drive signal output
26	TP1MLED	O	Tape 1 LED (D812) drive signal output
27	BATFLED	O	Battery level (full) LED (D809) drive signal output
28	BATELED	O	Battery level (empty) LED (D809) drive signal output
29	BATRLY	O	Battery-drive relay (RL612) drive signal output
30	CHRGRLY	O	Battery-charge relay (RL611) drive signal output
31	OPTRLY	O	Output relay (RL613) drive signal output
32	PWRRLY	O	Power control signal output

## ■ Replacement Parts List (Electrical)

**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 manufacturer'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.  
 \* [M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
						DIODE (S)	
		INTEGRATED CIRCUIT (S)					
IC101	UPC4570C	IC	[M]	D101, 102	MA700	DIODE	[M]
IC201	TC9163N	IC	[M]	D201	MA165	DIODE	[M]
IC202	TC9164N	IC	[M]	D301	MA4047MTA	DIODE	[M]
IC251	BA6218	IC	[M]	D601, 602	RL1N4003N02	DIODE	[M] Δ
IC301	NJM4580DD	IC	[M]	D603	MA4150M	DIODE	[M] Δ
IC601	M5F78M05L	IC	[M] Δ	D611-614	RL1N4003N02	DIODE	[M] Δ
IC602	M5F78M15L	IC	[M] Δ	D616	MA4033TA	DIODE	[M] Δ
IC611	PST623XS	IC	[M]	D617-621	MA165	DIODE	[M]
IC701	M37470M2362S	IC	[M]	D622	MA4100MTA	DIODE	[M] Δ
IC801	TC74HC42AP	IC	[M]	D651-654	RL1N4003N02	DIODE	[M] Δ
				D655, 656	MA167	DIODE	[M] Δ
		TRANSISTOR (S)		D658	MA4056MTA	DIODE	[M] Δ
				D701	1SS291TA	DIODE	[M]
Q101-104	2SK170BLTPE2	TRANSISTOR	[M]	D702	MA165	DIODE	[M]
Q201	DTC124EST	TRANSISTOR	[M]	D703	RL1N4003N02	DIODE	[M]
Q202	DTA124ESTP	TRANSISTOR	[M]	D704	1SS291TA	DIODE	[M]
Q301, 302	2SK389BG	TRANSISTOR	[M]	D705-712	MA165	DIODE	[M]
Q305	2SK301PQTA	TRANSISTOR	[M]	D713	SLR-305VC	LED	[M]
Q351, 352	2SC3327-A	TRANSISTOR	[M]	D801-808	SLR-305VC	LED	[M]
Q601	2SD592ANCQ	TRANSISTOR	[M] Δ	D809	SPR505MDTT	LED	[M]
Q602	2SB621A-R	TRANSISTOR	[M] Δ	D810	SLR-305VC	LED	[M]
Q603	DTA124ESTP	TRANSISTOR	[M] Δ	D811, 812	SLR-305DC	LED	[M]
Q604, 605	2SK301PQTA	TRANSISTOR	[M] Δ	D813	SLR-305VC	LED	[M]
Q606	MSA1048ABCTA	TRANSISTOR	[M] Δ			VARIABLE RESISTOR (S)	
Q614	2SB1357EFTA	TRANSISTOR	[M] Δ				
Q615	2SB621A-R	TRANSISTOR	[M] Δ	VR201	EUWMREF20A15	V. R	[M]
Q616	MSA1048ABCTA	TRANSISTOR	[M]	VR202	EVJ02QF02G15	V. R	[M]
Q617	DTC144ESTP	TRANSISTOR	[M]	VR301, 302	EVJYA1F02C15	V. R	[M]
Q618	DTC124EST	TRANSISTOR	[M]				
Q619	DTA124ESTP	TRANSISTOR	[M]			COMPONENT COMBINATION (S)	
Q620	DTC124EST	TRANSISTOR	[M]				
Q621	DTA124ESTP	TRANSISTOR	[M]	Z801	RCDGP1U28XD	REMOTE SENSOR	[M]
Q622	DTC124EST	TRANSISTOR	[M]				
Q623	DTA124ESTP	TRANSISTOR	[M]			COIL (S)	
Q624	2SD592ANCQ	TRANSISTOR	[M] Δ				
Q701	DTC114ESTP	TRANSISTOR	[M]	L1	RLQZ271M	COIL	[M] Δ
Q702-705	DTC114YSTP	TRANSISTOR	[M]	L101-104	ELEXT101KA9	COIL	[M]
Q706	DTA114YSTP	TRANSISTOR	[M]	L251, 252	ELEXT1ROKA9	COIL	[M]
Q707	DTC114YSTP	TRANSISTOR	[M]	L701	ELEXT101KA9	COIL	[M]
Q708	DTA114YSTP	TRANSISTOR	[M]				
Q709	2SA933QRSTA	TRANSISTOR	[M]			POWER TRANSFORMER (S)	
Q710	DTC114YSTP	TRANSISTOR	[M]				
				T1	RTP7B5B001-W	POWER TRANSFORMER	[M] Δ

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		OSCILLATOR(S)		JK206	SJF3069-11A	TERMINAL, PRE OUT2	[M]
				JK601	SJS9236-1	JACK, AC INLET	[M]△
X701	EFOGC4004A4	OSCILLATOR	[M]△	JK701	RJJ33T01	JACK, CONTROL OUT	[M]
		FUSE(S)					
F601	XBA2C016TBOS	FUSE	[M]△				
		SWITCH(ES)					
S103	RSP2D010-J	SW	[M]				
S301	ESB68047	SW	[M]				
S801-803	EVQPTD05Q	SW	[M]				
S804	RSR9A001-A	SW	[M]				
		CONNECTOR(S)					
CN201, 202	RJS1A6603	CONNECTOR (3P)	[M]				
CN203	SJT3611	CONNECTOR (6P)	[M]				
CN601	RJP1A4204-1	CONNECTOR (4P)	[M]				
CN602	SJT3611	CONNECTOR (6P)	[M]				
CN603	SJT3213	CONNECTOR (2P)	[M]				
CN705	RJS1A6603	CONNECTOR (3P)	[M]				
CN301A	RJS1A6603	CONNECTOR (3P)	[M]				
CN701A	RJS1A6604	CONNECTOR (4P)	[M]				
CN702A	RJS1A6604	CONNECTOR (4P)	[M]				
CN301B	RJS1A6604	CONNECTOR (4P)	[M]				
CN701B	RJS1A6604	CONNECTOR (4P)	[M]				
CN702B	RJS1A6604	CONNECTOR (4P)	[M]				
		EARTH TERMINAL(S)					
E201, 202	SNE1004-2	EARTH TERMINAL	[M]				
E301	SNE1004-2	EARTH TERMINAL	[M]				
		FUSE HOLDER					
FC611, 612	EYF52BC	FUSE HOLDER	[M]				
		RELAY(S)					
RL201	RSY0020M-R	RELAY	[M]				
RL611-613	RSY0020M-R	RELAY	[M]				
		JACK(S)					
JK201	SJF3069-11A	TERMINAL, PHONO	[M]				
JK202	SJF3069A	TERMINAL, TUNER/CD	[M]				
JK203	SJF3069A	TERMINAL, AUX/TAPE2	[M]				
JK204	SJF3069A	TERMINAL, TAPE2/TAPE1	[M]				
JK205	SJF3069A	TERMINAL, TAPE1/PRE OUT1	[M]				



## ■ Replacement Parts List (Resistors and Capacitors)

Notes : \* Capacity value 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	R620	ERDS2FJ182	1/4W 1.8K [M]			CAPACITORS
			R621	ERDS2FJ821	1/4W 820 [M]			
			R622	ERDS2FJ223	1/4W 22K [M]			
R101-104	ERDS2FJ102	1/4W 1K [M]	R623	ERDS2FJ153	1/4W 15K [M]	C101, 102	ECBT1H101KB5	50V 100P [M]
R105, 106	ERDS2FJ473	1/4W 47K [M]	R624	ERDS2FJ473	1/4W 47K [M]	C103, 104	ECBT1H102KB5	50V 1000P [M]
R107, 108	ERDS2FJ221	1/4W 220 [M]	R625	ERDS2FJ104	1/4W 100K [M]	C105, 106	ECBT1H820KB5	50V 82P [M]
R109, 110	ERDS2FJ220	1/4W 22 [M]	R626	ERDS2FJ473	1/4W 47K [M]	C107, 108	ECA1EPXS470B	25V 47U [M]
R111-114	ERDS2FJ332	1/4W 3.3K [M]	R627	ERDS2TKF2213	1/4W 221K [M]	C109, 110	ECQB1H222JF3	50V 2200P [M]
R115, 116	ERDS2FJ472	1/4W 4.7K [M]	R628	ERDS2TKF3742	1/4W 37.4K [M]	C111, 112	ECQB1H122JF3	50V 1200P [M]
R117, 118	ERDS2FJ151	1/4W 150 [M]	R629	ERDS2FJ102	1/4W 1K [M]	C113, 114	ECQB1H103JF3	50V 0.01U [M]
R119, 120	ERDS2FJ100	1/4W 10 [M]	R630	ERDS2TKF4022	1/4W 40.2K [M]	C115, 116	ECQV1H393JM3	50V 0.039U [M]
R121, 122	ERDS2FJ101	1/4W 100 [M]	R631	ERDS2TKF1802	1/4W 18K [M]	C117, 118	ECA1EPXS100B	25V 10U [M]
R123, 124	ERDS2FJ151	1/4W 150 [M]	R633, 634	ERDS2FJ182	1/4W 1.8K [M]	C119, 120	ECQB1H472JF3	50V 4700P [M]
R125, 126	ERDS2FJ682	1/4W 6.8K [M]	R635-639△	ERDS1FJ101	1/2W 100 [M]	C121, 122	ECKR1H103ZF5	50V 0.01U [M]
R127, 128	ERDS2FJ823	1/4W 82K [M]	R655	ERDS2FJ103	1/4W 10K [M]	C123-126	ECBT1H270J5	50V 27P [M]
R129, 130	ERDS2FJ334	1/4W 330K [M]	R656△	ERQ16NKWR15E	1/6W 0.15 [M]	C127, 128	ECBT1H101KB5	50V 100P [M]
R131, 132	ERDS2FJ561	1/4W 560 [M]	R701	ERDS2FJ102	1/4W 1K [M]	C129, 130	ECA1CPXS221B	16V 220U [M]
R133, 134	ERDS2TJ155	1/4W 1.5M [M]	R702, 703	ERDS2FJ103	1/4W 10K [M]	C131	ECBT1H102KB5	50V 1000P [M]
R135, 136△	ERDS1FJ181	1/2W 180 [M]	R704, 705	ERDS2FJ104	1/4W 100K [M]	C201, 202	ECBT1H101KB5	50V 100P [M]
R201-214	ERDS2FJ102	1/4W 1K [M]	R706	ERDS2FJ103	1/4W 10K [M]	C203, 204	ECKT1H101KB	50V 100P [M]
R215-217	ERDS2FJ103	1/4W 10K [M]	R707-712	ERDS2FJ104	1/4W 100K [M]	C205-208	ECBT1H101KB5	50V 100P [M]
R219-221	ERDS2FJ103	1/4W 10K [M]	R713	ERDS2FJ102	1/4W 1K [M]	C209, 210	ECKT1H101KB	50V 100P [M]
R222, 223	ERDS2FJ102	1/4W 1K [M]	R714	ERDS2FJ331	1/4W 330 [M]	C211, 212	ECBT1H101KB5	50V 100P [M]
R224	ERDS2FJ472	1/4W 4.7K [M]	R715, 716	ERDS2FJ273	1/4W 27K [M]	C213, 214	ECKT1H101KB	50V 100P [M]
R225, 226	ERDS2FJ222	1/4W 2.2K [M]	R717	ERDS2FJ334	1/4W 330K [M]	C215	ECBT1H101KB5	50V 100P [M]
R227, 228	ERDS2FJ104	1/4W 100K [M]	R722	ERDS2FJ102	1/4W 1K [M]	C217, 218	ECBT1C103NS5	16V 0.01U [M]
R251△	ERDS1FJ100	1/2W 10 [M]	R724, 725	ERDS2FJ103	1/4W 10K [M]	C219, 220	ECA1HPXS4R7B	50V 4.7U [M]
R301, 302	ERDS2FJ101	1/4W 100 [M]	R726	ERDS2FJ102	1/4W 1K [M]	C221	ECBT1H101KB5	50V 100P [M]
R303-306	ERDS2FJ224	1/4W 220K [M]	R727	ERDS2FJ103	1/4W 10K [M]	C223, 224	ECBT1C103NS5	16V 0.01U [M]
R307-310	ERDS2FJ152	1/4W 1.5K [M]	R728	ERDS2FJ104	1/4W 100K [M]	C225, 226	ECA1HPXS4R7B	50V 4.7U [M]
R311, 312	ERDS2FJ222	1/4W 2.2K [M]	R730-732	ERDS2FJ103	1/4W 10K [M]	C251, 252	ECEAOJKA101B	6.3V 100U [M]
R313, 314	ERDS2FJ121	1/4W 120 [M]	R801	ERDS2FJ821	1/4W 820 [M]	C253, 254	ECQV1H104JM3	50V 0.1U [M]
R315, 316	ERDS2FJ224	1/4W 220K [M]	R802	ERDS2FJ102	1/4W 1K [M]	C301, 302	ECA1HPXS010B	50V 1U [M]
R317, 318	ERDS2FJ223	1/4W 22K [M]	R803	ERDS2FJ122	1/4W 1.2K [M]	C303, 304	ECCR1H470JC5	50V 47P [M]
R319, 320	ERDS2FJ392	1/4W 3.9K [M]	R804	ERDS2FJ152	1/4W 1.5K [M]	C305, 306	ECCR1H101J5	50V 100P [M]
R321, 322	ERDS2FJ223	1/4W 22K [M]	R805	ERDS2FJ182	1/4W 1.8K [M]	C307, 308	ECQB1H123JF3	50V 0.012U [M]
R323, 324	ERDS2FJ392	1/4W 3.9K [M]	R806	ERDS2FJ222	1/4W 2.2K [M]	C309, 310	ECA1HPXS010B	50V 1U [M]
R325, 326	ERDS2FJ183	1/4W 18K [M]	R807	ERDS2FJ332	1/4W 3.3K [M]	C311, 312	ECCR1H560JC5	50V 56P [M]
R327, 328	ERDS2FJ392	1/4W 3.9K [M]	R808	ERDS2FJ472	1/4W 4.7K [M]	C313, 314	RCE1EAS470B	25V 47U [M]
R329-332	ERDS2FJ102	1/4W 1K [M]	R809	ERDS2FJ682	1/4W 6.8K [M]	C315, 316	ECBT0J153MS5	6.3V 0.015U [M]
R333, 334	ERDS2FJ101	1/4W 100 [M]	R810	ERDS2FJ123	1/4W 12K [M]	C317, 318	ECQV1H823JM3	50V 0.082U [M]
R335, 336	ERDS2FJ102	1/4W 1K [M]	R811	ERDS2FJ223	1/4W 22K [M]	C319, 320	ECBT1C222KR5	16V 2200P [M]
R353, 354	ERDS2FJ102	1/4W 1K [M]	R812	ERDS2FJ221	1/4W 220 [M]	C321, 322	ECBT0J153MS5	6.3V 0.015U [M]
R603, 604	ERDS2FJ101	1/4W 100 [M]	R813, 814	ERDS2FJ181	1/4W 180 [M]	C323, 324	ECBT1H121KB5	50V 120P [M]
R605, 606	ERDS2FJ183	1/4W 18K [M]	R815	ERDS2FJ331	1/4W 330 [M]	C327, 328	ECKR1H331KB5	50V 330P [M]
R607	ERDS2FJ102	1/4W 1K [M]	R817, 818	ERDS2FJ181	1/4W 180 [M]	C341, 342	ECBT1C332KR5	16V 3300P [M]
R609, 610△	ERDS1FJ270	1/2W 27 [M]	R819	ERDS2FJ271	1/4W 270 [M]	C351	ECA1EPX101TB	25V 100U [M]
R618△	ERDS1FJ8R2	1/2W 8.2 [M]	R820	ERDS2FJ223	1/4W 22K [M]	C352	ECHR1H103JZ3	50V 0.01U [M]
R619	ERDS2FJ102	1/4W 1K [M]	R821	ERDS2FJ123	1/4W 12K [M]	C353	ECA1CPXS470B	16V 47U [M]



## ■ Replacement Parts List (Cabinet, Packing and Accessories)

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS					
1	RKM0032-K	TOP CABINET	[M]	P1	RPG3545	PACKING CASE	[M] (E)
2	RHD30035-K1	SCREW	[M]	P1	RPG3547	PACKING CASE	[M] (EB)
3	XTBS3+8JFZ1	SCREW	[M]	P1	RPG3546	PACKING CASE	[M] (EG)
4	RGQ0179A-K	BATTERY TRAY	[M]	P2	RPF0139	SHEET	[M]
5	RGR0224F-AA	REAR PANEL	[M] (E/EG)	P3	RPN0917	PAD	[M] (E/EG)
5	RGR0224F-BA	REAR PANEL	[M] (EB)	P3	RPN0919	PAD	[M] (EB)
6	RGU1207-K	BUTTON, TONE	[M]	P4	RPQ0164	PAD	[M]
7	RGW0229-K	KNOB, SELECTOR	[M]	P5	SPP756	SHEET	[M]
8	RGW0230-K	KNOB, VOLUME	[M]	P6	RPH0032	MIRROR SHEET	[M] (EB)
9	RHD26016	SCREW	[M]			ACCESSORIES	
10	RKA0053-A	FOOT	[M]	A1	RAK-SU228WH	REMOTE CONT. TRANSMITTER	[M]
11	RKQ0089-2	P. C. B. SUPPORT	[M]	A1-1	RKK0057-K	BATTERY COVER	[M]
12	RME0190	SPRING	[M]	A2	RQA0117	WARRANTY CORD	[M]
13	RMK0035A	CHASSIS	[M]	A3	RQCB0169	SERVICE CENTER LIST	[M]
14	RMM0144	SHAFT	[M]	A4<IA>	RQT4021-E	INSTRUCTION MANUAL	[M] (E)
15	RMRO904-K	BATTERY BASE	[M]	A4<IB>	RQT4024-R	INSTRUCTION MANUAL	[M] (E)
16	RMRO905-K	LEVER	[M]	A4<IC>	RQT4020-B	INSTRUCTION MANUAL	[M] (EB)
17	RMRO910-K	LOCK ARM	[M]	A4<ID>	RQT4022-D	INSTRUCTION MANUAL	[M] (EG)
18	RMRO911-K	BATTERY COVER	[M]	A4<IE>	RQT4023-H	INSTRUCTION MANUAL	[M] (EG)
19	RGU1207-K	BUTTON, TONE	[M]	A5	RJA0019-2K	AC POWER SUPPLY CORD	[M] (E/EG)
20	XTB3+6JFZ	SCREW	[M]	A5	RJA0049-K	AC POWER SUPPLY CORD	[M] (EB)
21	SNE2123	SCREW	[M]	A6	SJP2276	STEREO CONNECTION CABLE	[M]
22	XTBS26+8J	SCREW	[M]				
23	XTBS3+8JFZ1	SCREW	[M]				
24	XTB3+20JFZ	SCREW	[M]				
25	XTB3+6G	SCREW	[M]				
26	RGK0747-N	RING	[M]				
27	RGL0296-Q	PANEL LIGHT A	[M]				
28	RGL0297-Q	PANEL LIGHT B	[M]				
29	RGL0298-Q	PANEL LIGHT C	[M]				
30	RGL0299-Q	PANEL LIGHT D	[M]				
31	RGL0300-Q	PANEL LIGHT E	[M]				
32	RGU0882-K	BUTTON, POWER	[M]				
33	XTB3+8JFZ	SCREW	[M]				
34	RGU1271-K	BUTTON, MONITOR	[M]				
35	RGU1295-K	BUTTON, CHARGE	[M]				
36	RGW0205-K	KNOB, BALANCE	[M]				
37	RHD26017	SCREW	[M]				
38	RHN90001	NUT	[M]				
40	RFKGC1000ME	FRONT PANEL ASS'Y	[M]				
41	RWJ1808220KX	FLAT CABLE (8P) (W701/702)	[M]				
42	REZ1007	FLAT CABLE (3P) (W705)	[M]				
43	REX0758	WIRE ASS'Y (2P)	[M]				
44	RWJ1803040KK	FLAT CABLE (3P) (W703)	[M]				
45	RWJ3903170KQ	FLAT CABLE (3P) (W201/W202)	[M]				
46	RWJ3907170KQ	FLAT CABLE (7P) (W301)	[M]				
47	REX0759	WIRE ASS'Y (6P)	[M]				
		PACKING MATERIALS					

NOTE: The "<IA>, <IB>, <IC>, <ID>, <IE>" marks in Remarks indicate language of instruction manual.

<IA> : English, Spanish, Swedish

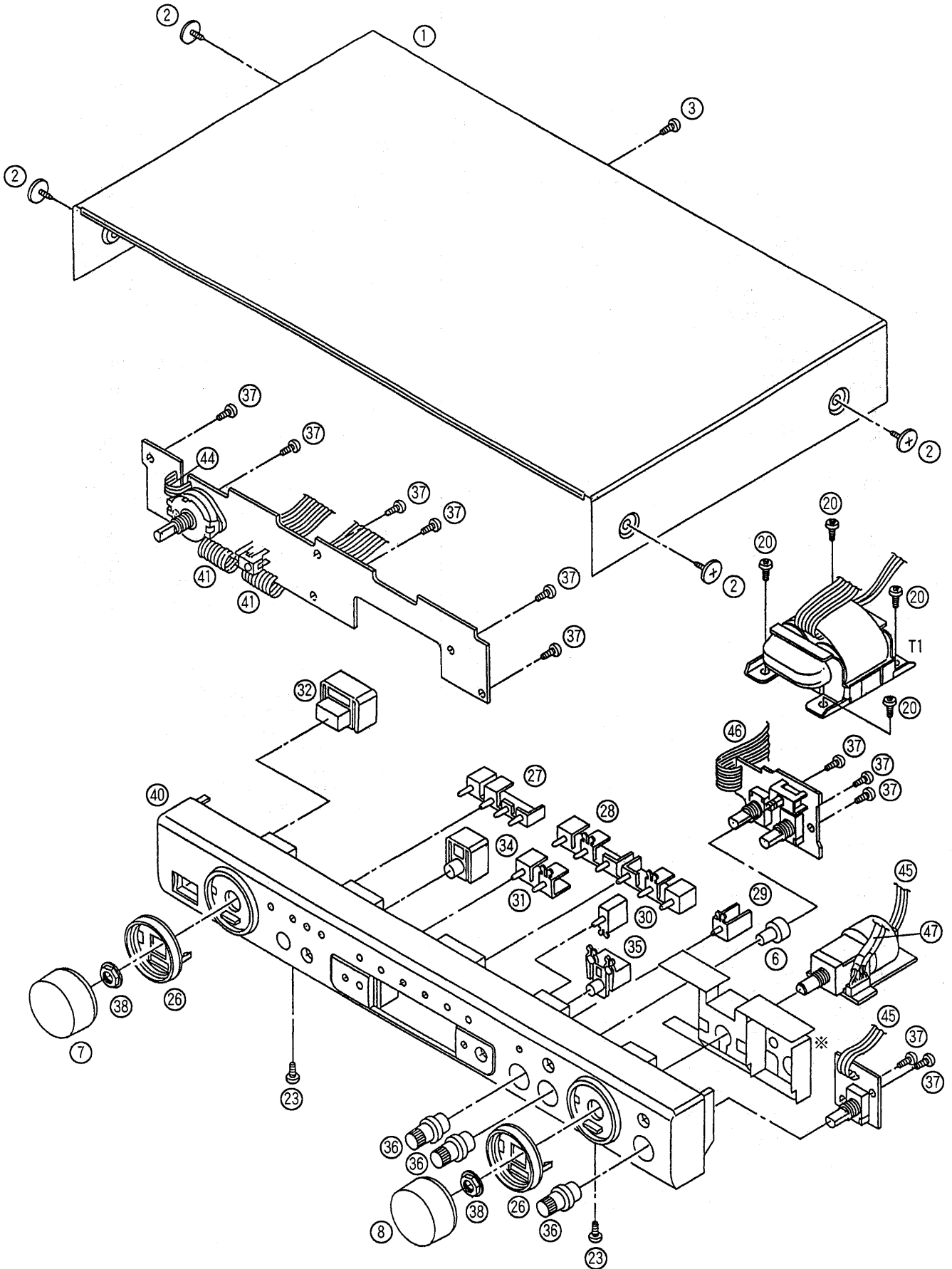
<IB> : Russian, Polish, Czech

<IC> : English

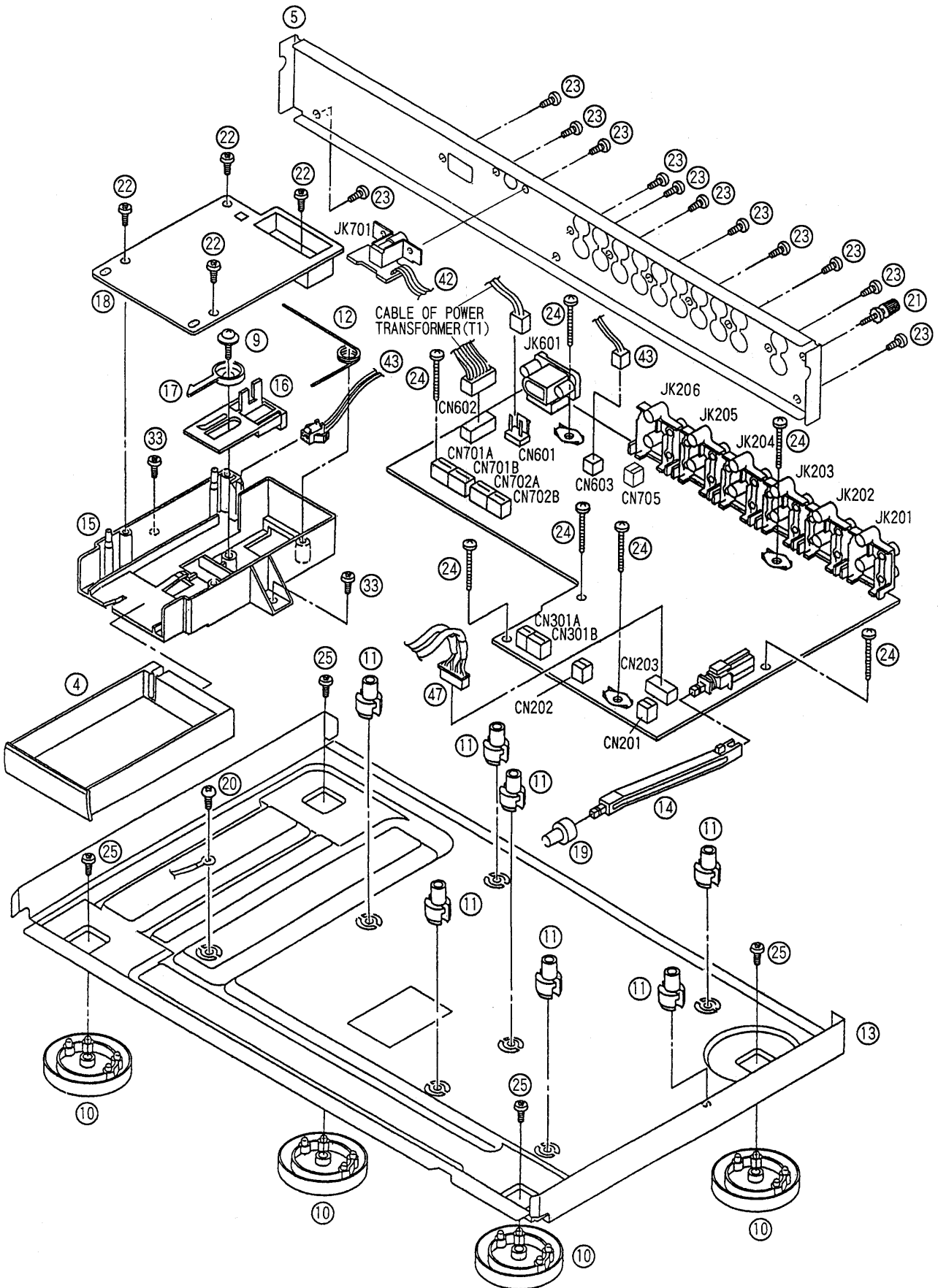
<ID> : German, Italian, French

<IE> : Dutch, Danish

## ■ Cabinet Parts Location



We do not supply the item of the part marked \*.



## ■ Packaging

