ORDER NO. AD9002032C2

Service Manual

Digital Integrated Amplifier

Amplifier

SU-X901

Color

(K) .... Black Type

Area

Country Code	Area	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	(K)
(EG)	F.R. Germany & Italy	(K)

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

DIN power output	
1 kHz THD: 1 %	2 × 100 W (8 Ω)
Total harmonic distortion	
rated power at 1 kHz	1 % (8 Ω)
Harmonic distortion	
half power at 1 kHz	0.007 % (8 Ω)
Residual hum and noise	0.2 mV
Damping factor	30 (8 Ω)
Input sensitivity and impedance	
PHONO	3 mV/47 kΩ
TUNER, AUX, TAPE 1, TAPE 2	150 mV/22 kΩ
CD	200 mV/22 kΩ
Maximum input voltage (1 kHz, RMS)	
PHONO	100 mV
S/N (rated power 8 Ω)	
PHONO	75 dB (IHF, A: 79 dB)
TUNER, CD, AUX, TAPE 1, TAPE 2	82 dB (IHF, A: 83 dB)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB (30 Hz~15 kHz)
TUNER, CD, AUX, TAPE 1, TAPE 2	15 Hz~60 kHz (−3 dB)
CD, DAT, AUX (digital section)	15 Hz~20 kHz (−0.5 dB)
Tone controls	
BASS	50 Hz, +10 dB~−10 dB
TREBLE	20 kHz, +10 dB~−10 dB
Muting	−20 dB
Super bass	70 Hz, +10 dB
Output voltage	
TAPE 1, TAPE 2, REC OUT	150 mV
Channel balance, AUX 250 Hz~6,300 Hz	±1.0 dB
Channel separation, (TUNER, 1 kHz) (A SPEAKER)	60 dB
Headphones output level and impedance	660 mV/330 Ω
Load impedance	
A or B, A and B	8 Ω~16 Ω
SURROUND	8 Ω~16 Ω

■ GENERAL

Power consumption	460 W
Power supply	
For Great Britain	AC 50 Hz/60 Hz, 240 V
For others	AC 50 Hz/60 Hz, 220 V
Dimensions (W × H × D)	360 × 128 × 300 mm (14-3/16″ × 5-1/32″ × 11-13/16″)
Weight	7.9 kg (17.4 lb.)

Notes:

1. Specifications are subject to change without notice.
2. Weight and dimensions are approximate.
3. Total harmonic distortion is measured by the digital spectrum analyzer.

Technics

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

■ CONTENTS

	Page
BEFORE REPAIR	2
PROTECTION CIRCUITRY	2
ACCESSORY	2
LOCATION OF CONTROLS	3
CONNECTIONS	4~6
DIGITALIZATION OF AUDIO SIGNALS	7
DISASSEMBLY INSTRUCTIONS	8~11
MEASUREMENTS AND ADJUSTMENTS	12
SCHEMATIC DIAGRAM	13~22
PRINTED CIRCUIT BOARDS	23~26
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES	27
WIRING CONNECTION DIAGRAM	27, 28
BLOCK DIAGRAM	28~30
DESCRIPTION OF FL PANEL	31
FUNCTIONS OF IC TERMINALS	31, 32
REPLACEMENT PARTS LIST	33~36, 39~41
EXPLODED VIEW	37, 38

■ BEFORE REPAIR

(1)Turn off the power supply. Using a 10Ω, 5W resistor connect both ends of power supply capacitors (C711, C712, 6800 µF) 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 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 220V/240V.

Power supply voltage	AC220V	AC240V
Consumed current 50Hz	200~500 mA	180~450 mA
Consumed current 60Hz	200~500 mA	180~450 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.

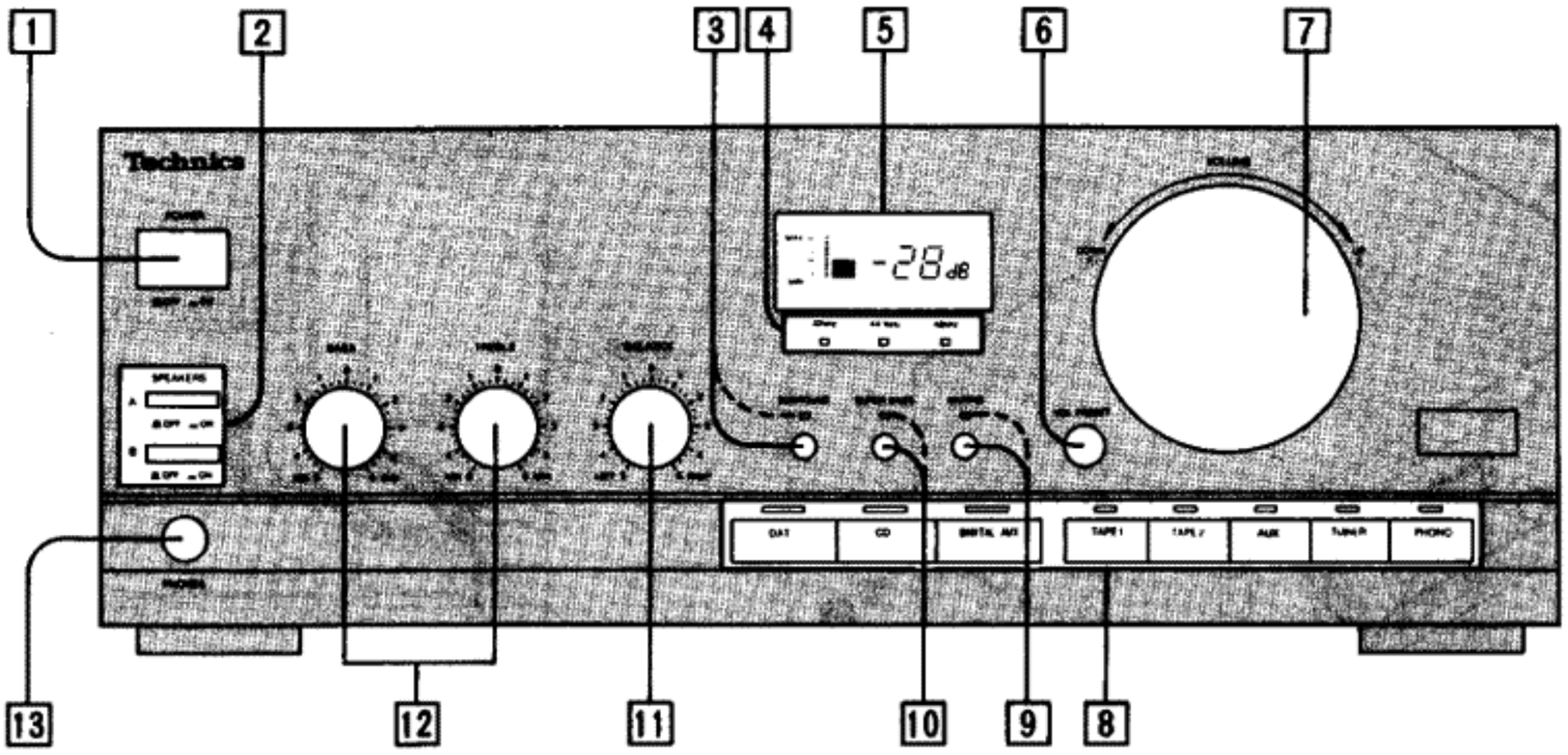
■ ACCESSORY

• AC power supply cord.....1
Configuration of AC power supply cord differs according to area.

SJA188 .....For (EB) area only.
SFDAC05E03 ....For others.

■ LOCATION OF CONTROLS

•Front panel



[1] Power switch (POWER)

[2] Speaker selector (SPEAKERS)

[3] Surround-sound switch/indicator (SURROUND)

[4] Sampling frequency indicators

32 kHz: For digital signals with the 32 kHz mode sampling frequency

44.1 kHz: CD and others

48 kHz: For digital signals with the 48 kHz mode sampling frequency

[5] Volume-level indicator

[6] Volume preset button (VOL PRESET)

[7] Volume control (VOLUME)

[8] Input selectors/indicators

[9] Audio muting switch/indicator (MUTING)

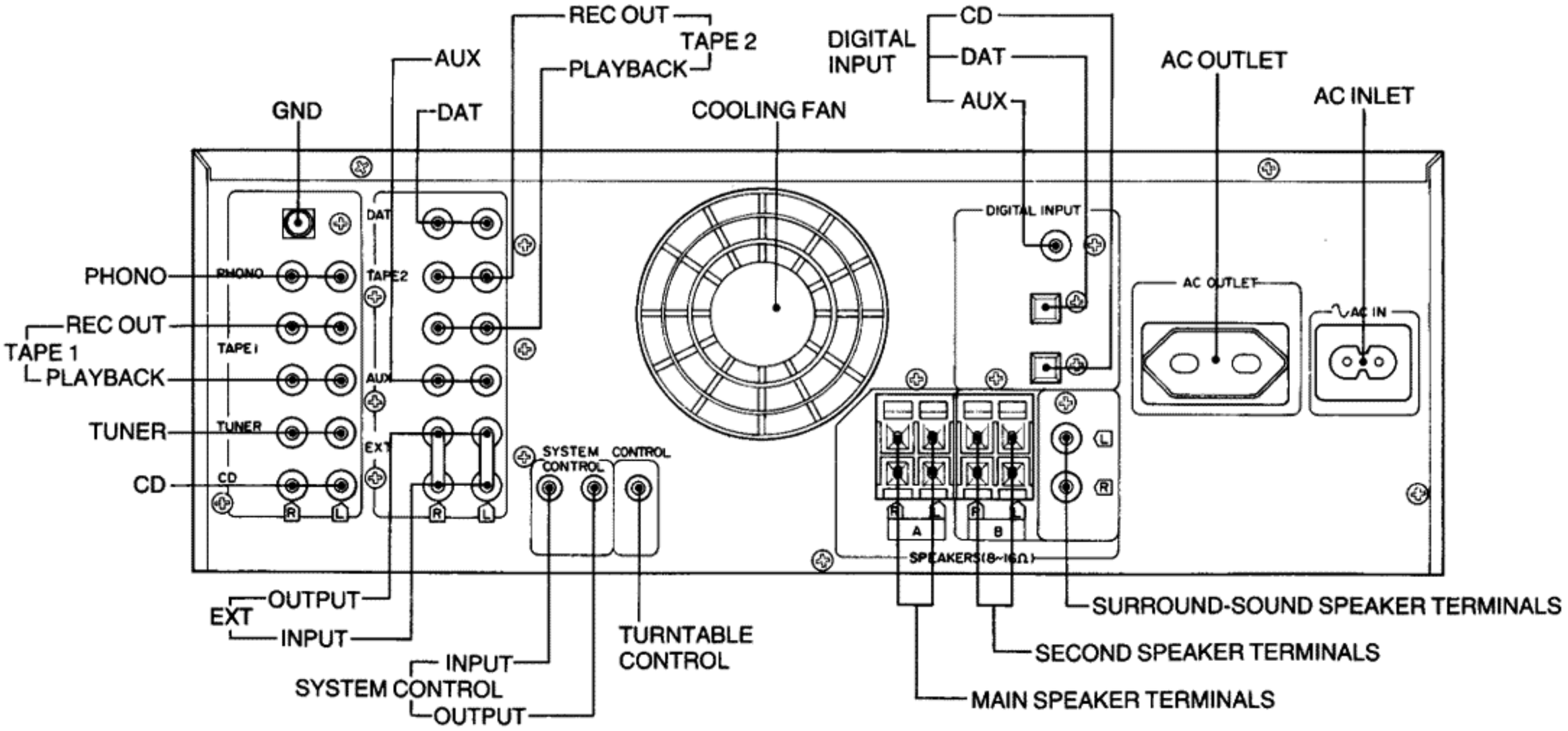
[10] Super bass switch/indicator (SUPER BASS)

[11] Balance control (BALANCE)

[12] Tone controls (BASS/TREBLE)

[13] Headphones jack (PHONES)

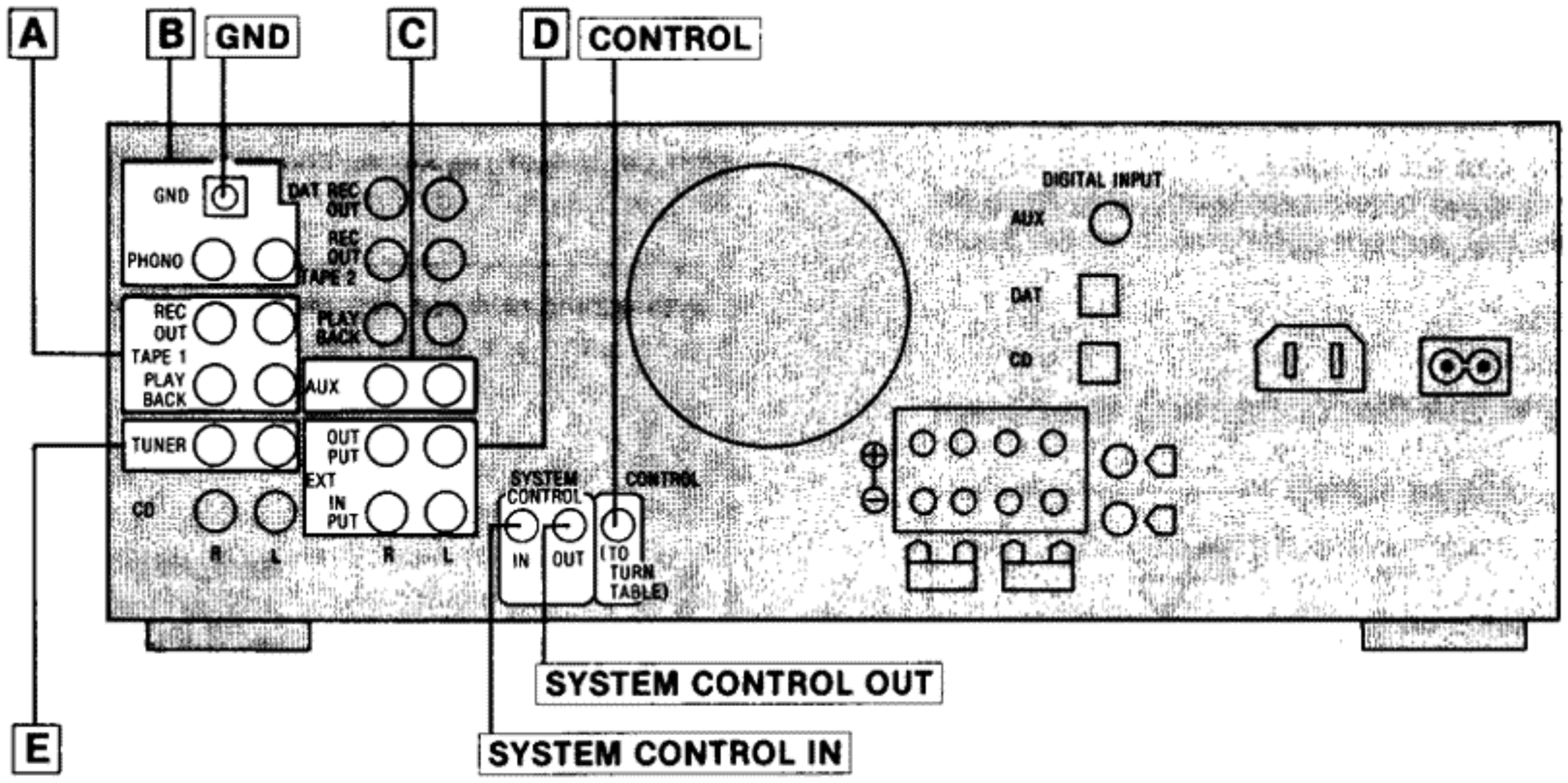
•Rear panel



***Phono input capacitance is about 270 pF for EG area (about 100 pF for other areas).**

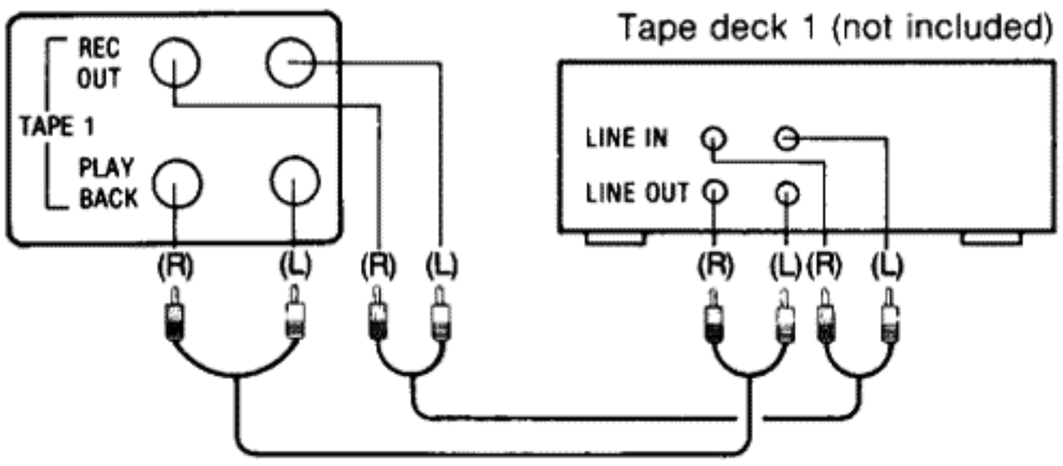
■ CONNECTIONS

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



A "TAPE 1" terminals

Connect a first tape deck.

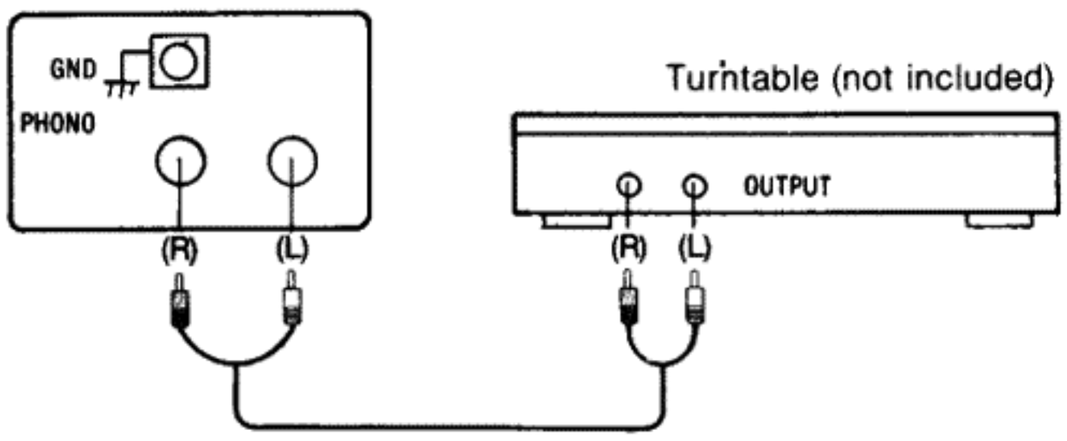


■ "SYSTEM CONTROL OUT" terminal

This terminal is used to connect a Technics tape deck with the control terminal.

B "PHONO" terminals

Connect a turntable.



■ "GND" terminal

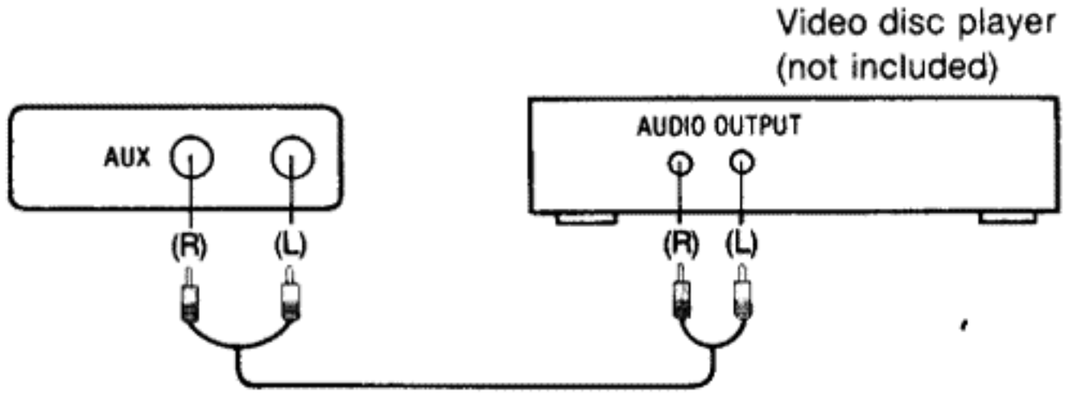
This terminal is for use with a turntable which has a ground wire.

■ "CONTROL" terminal

This terminal is used to connect a Technics turntable with the remote-control terminal.

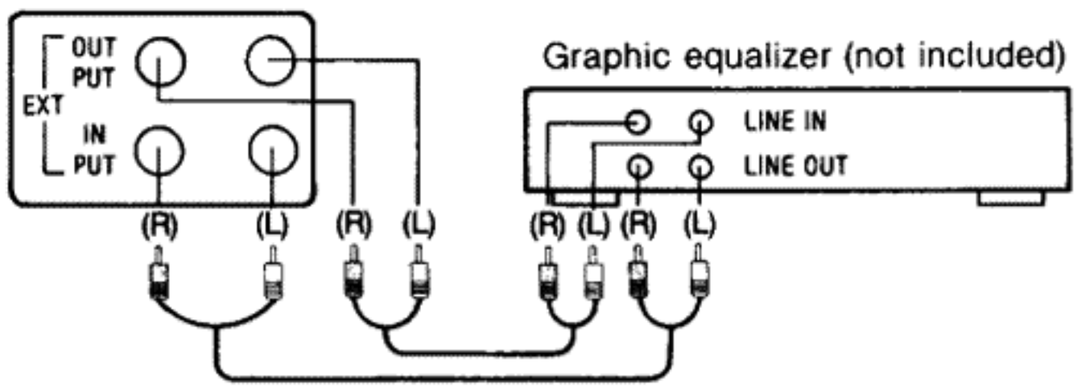
C "AUX" terminals

Connect a video disc player (Only the audio is connectable), etc.

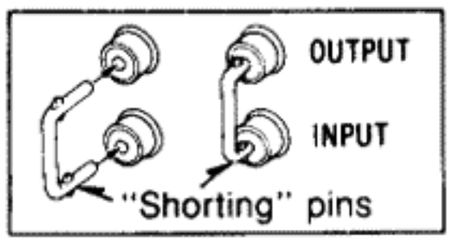


D "EXT" terminals

Connect a graphic equalizer.

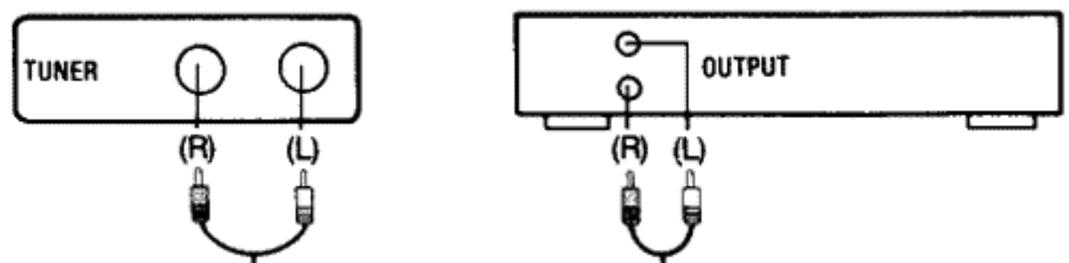


Note:
When these terminals are not in use, be sure to insert the "shorting" pins (included).



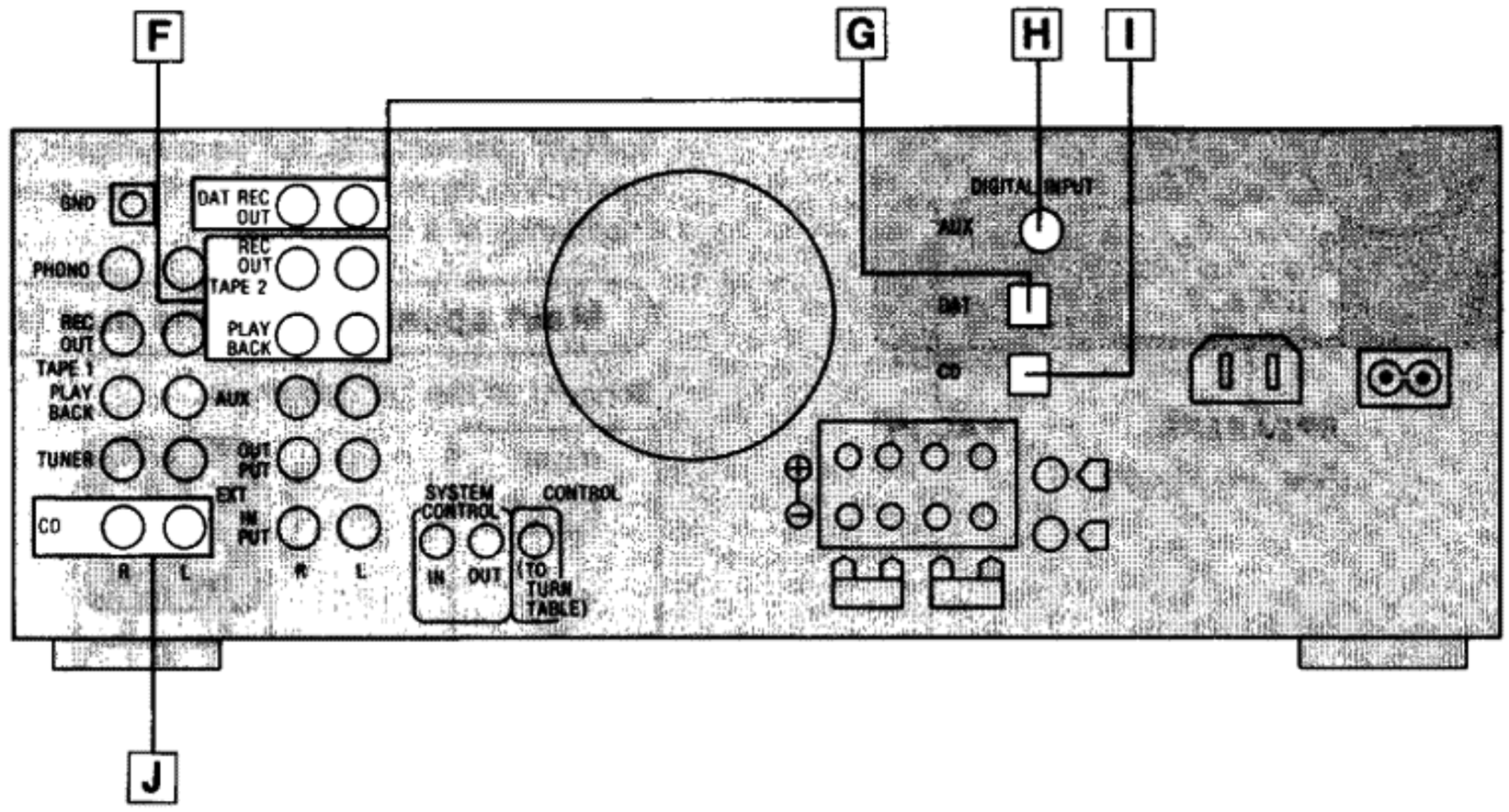
E "TUNER" terminals

Connect a tuner.



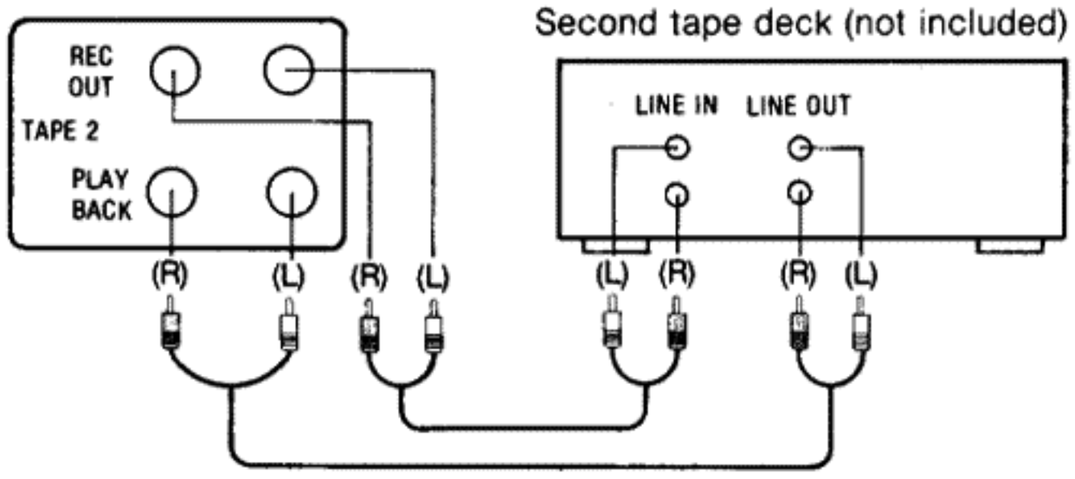
■ "SYSTEM CONTROL IN" terminal

This terminal is used to connect a Technics tuner with the control terminal.



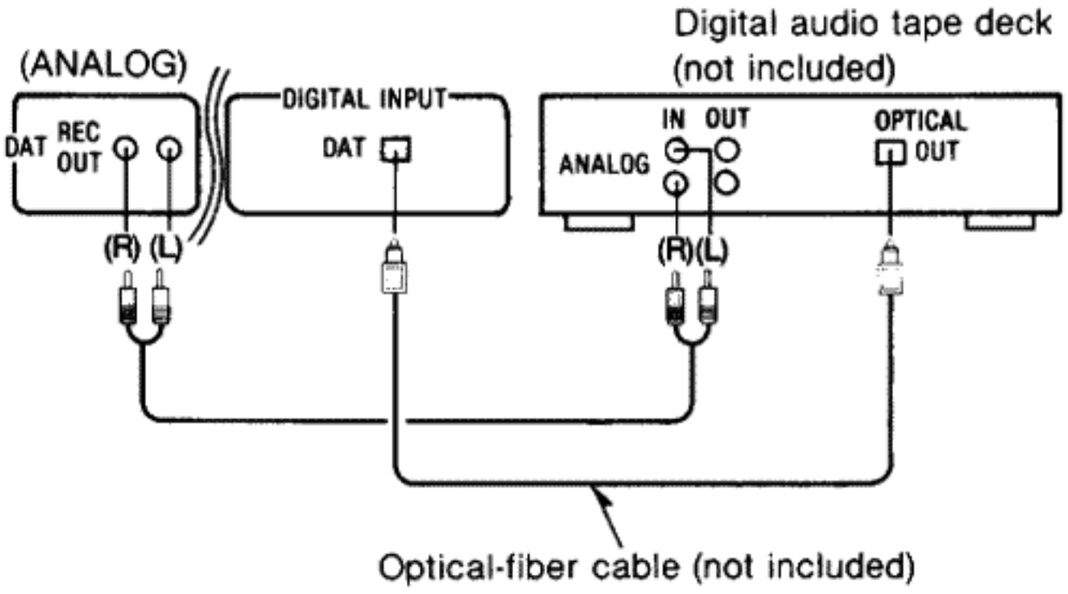
F "TAPE 2" terminals

Connect a video cassette recorder (for audio only) or a second tape deck.



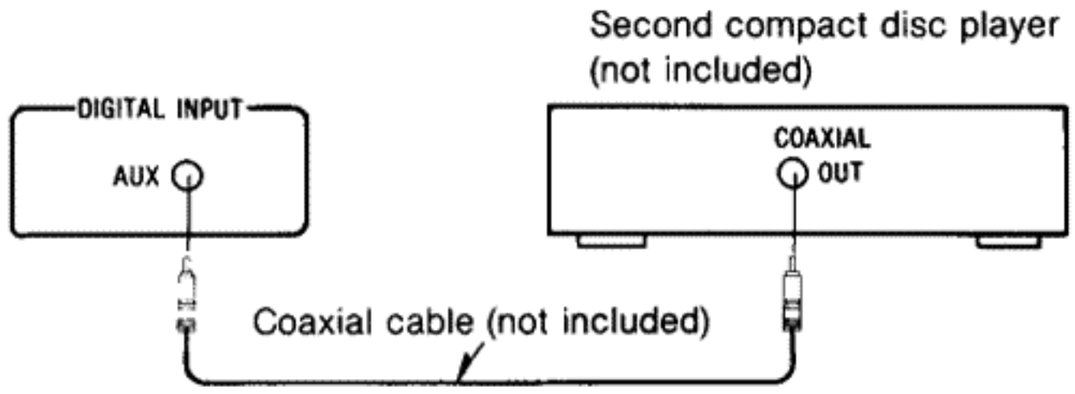
G "DAT" terminals (DIGITAL)

Connect a digital audio tape deck.
Recordings can be made to the digital audio tape deck.



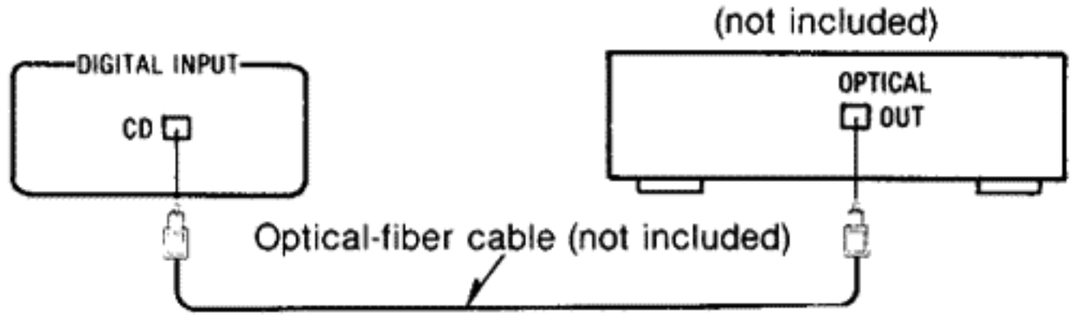
H "AUX" terminal (DIGITAL)

Connect a second compact disc player, etc.



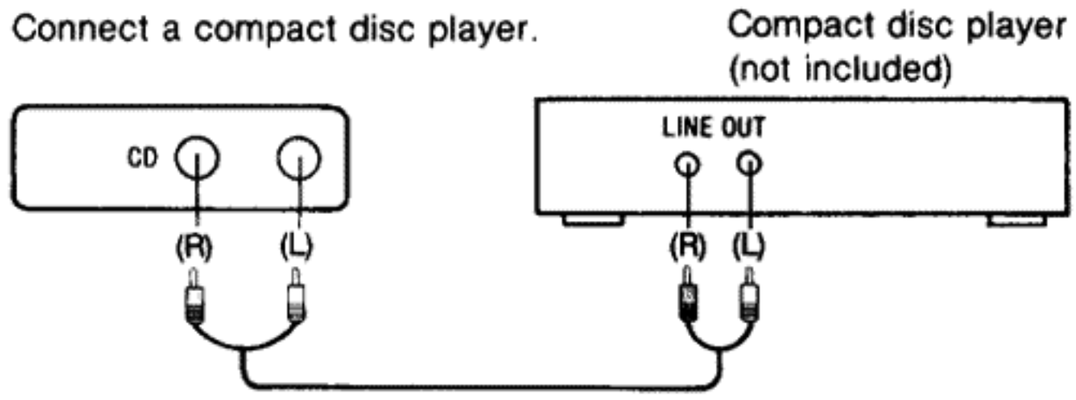
I "CD" terminal (DIGITAL)

Connect a compact disc player.



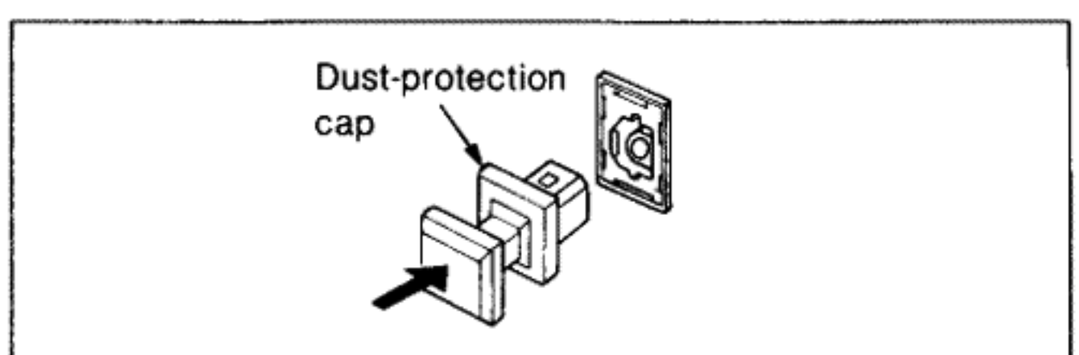
J "CD" terminals (ANALOG)

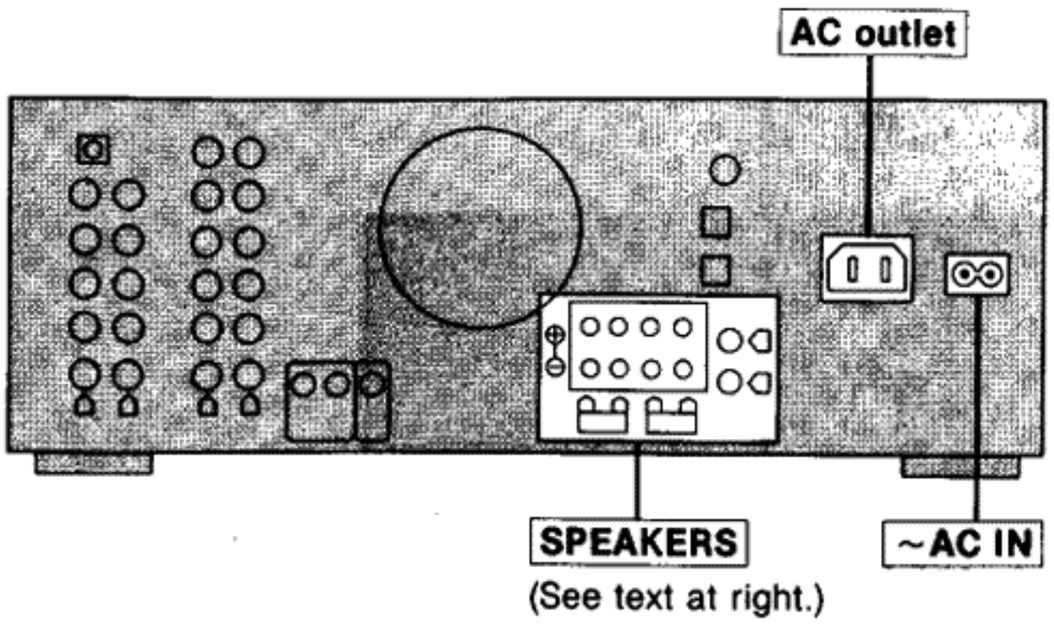
Connect a compact disc player.



■ "DIGITAL INPUT" (DAT, CD) terminals of this unit

These terminals are protected by dust-protection caps to avoid damage by dust, etc.
Remove the caps only when the "DIGITAL INPUT" terminals are to be used.
When these terminals are not being used, attach the caps as shown in the illustration at the right.





(See text at right.)

AC outlet ("AC OUTLET")

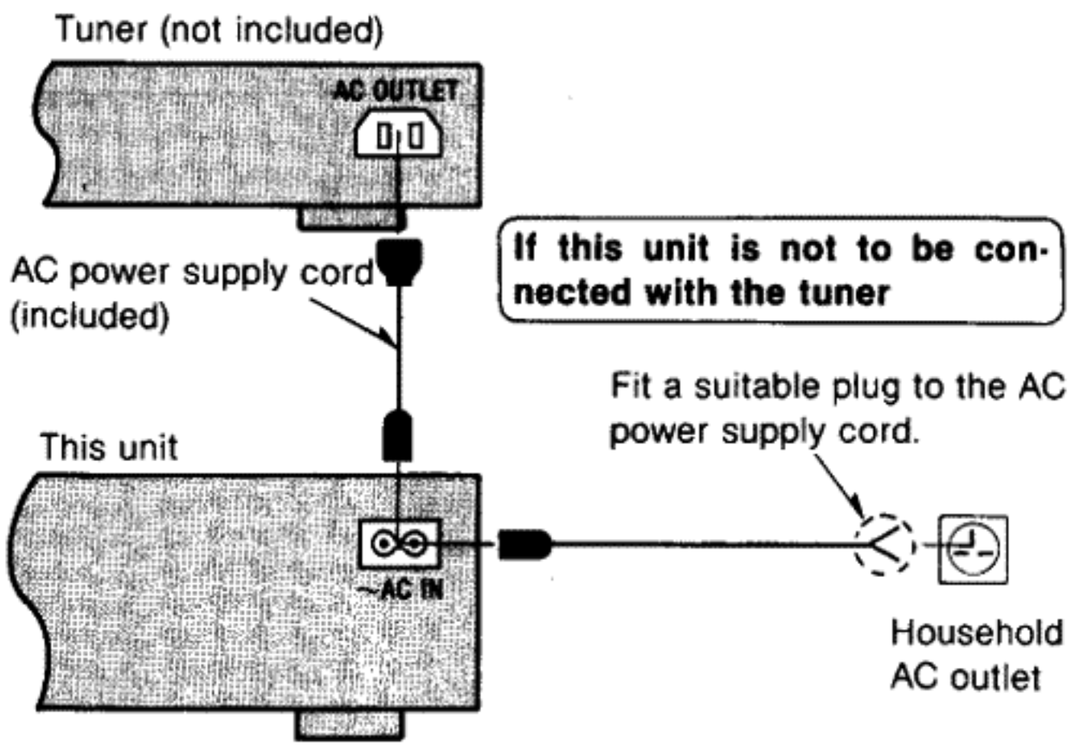
Do not connect video equipment (such as a TV, etc.) to the AC outlet of this unit. (This outlet is intended for audio equipment.) Do not exceed the indicated power ratings when connecting to this outlet.

"UNSWITCHED" outlet:

Power is always available, regardless of power switch.
Audio equipment rated up to 60 W can be connected here.

AC power supply cord

Connect the AC power supply cord (included) after all other cables and cords are connected.

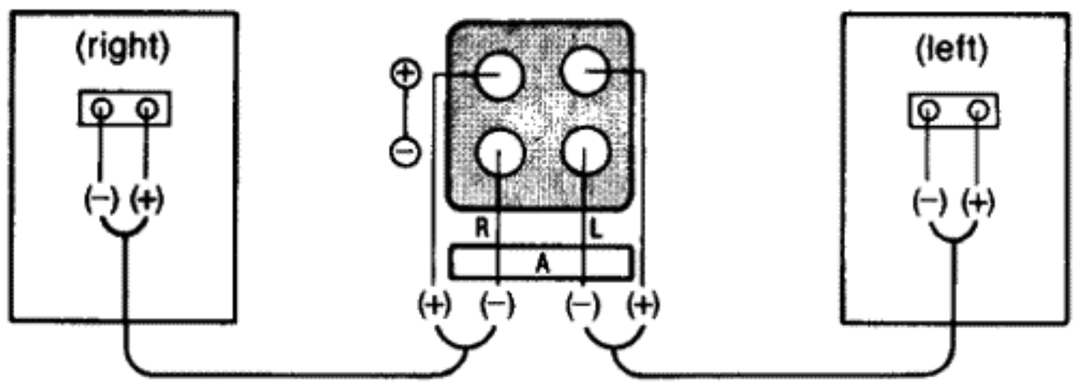


Connection of speaker systems

Three pairs of speaker systems (main, second, surround-sound) can be connected to this unit.
Speaker systems that can be connected (to any of the speaker connection terminals of this unit) are speaker systems with an impedance of 8 to 16 ohms.

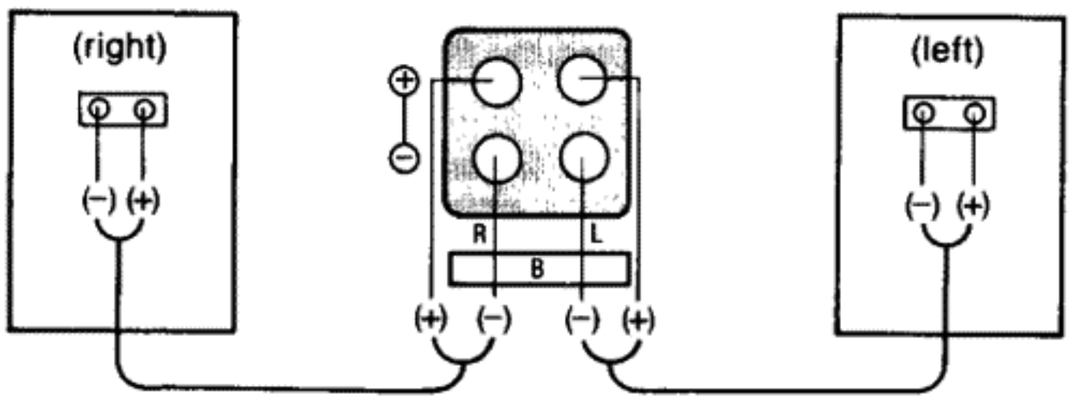
Main speaker systems (not included)

Connect to the "A" terminals.



Second speaker systems (not included)

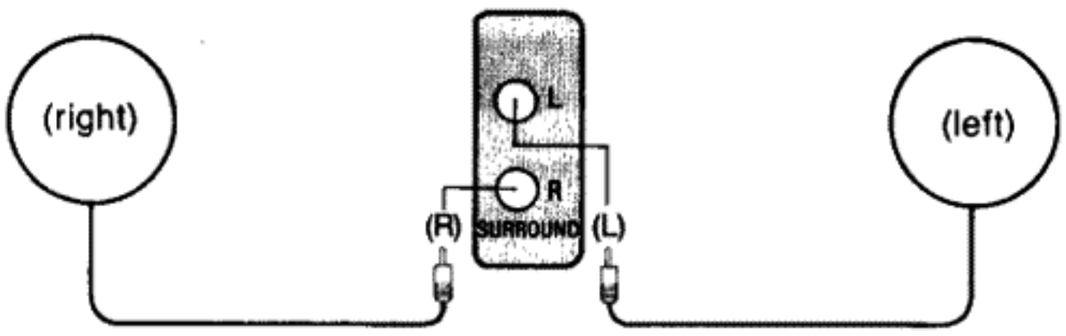
Connect to the "B" terminals.



Surround-sound speaker systems (not included)

Connect to the "SURROUND" terminals.

- Be sure to connect both speaker systems. If only one side is connected, no sound will be heard.

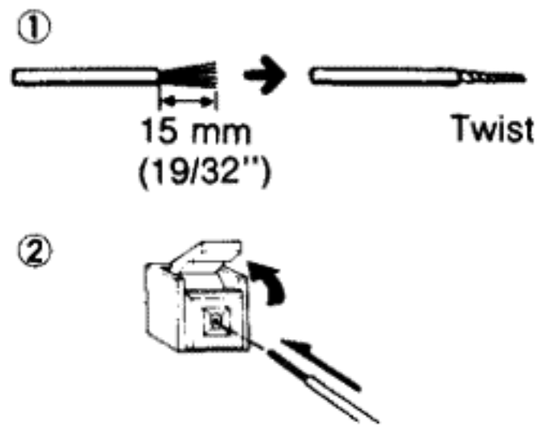


To connect cords to terminals

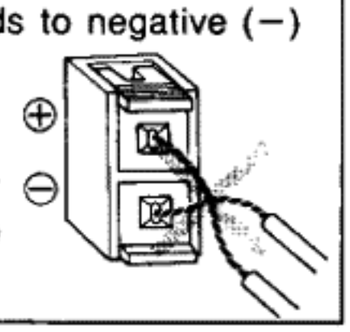
① Strip off the outer covering, and twist the center conductor.

② Tilt the lever back and insert the cord.

③ Close the lever and pull the cord gently to be sure that it is secure.



Note:
Be sure to only connect positive (+) cords to positive (+) terminals, and negative (–) cords to negative (–) terminals.



Note:
To prevent damage to circuitry, never short-circuit the plus (+) and minus (–) speaker cords.

■ DIGITALIZATION OF AUDIO SIGNALS

■ Why digitize?

- Audio signals are analog signals with a continuous form.
- When these audio signals are subjected to repeated electronic processing (recording, playback, etc.), they become noisy and distortion occurs, thus resulting in deterioration of the sound quality.
- If these signals are digitized before processing, they have the following advantages that prevent deterioration of the sound quality:
  ① Resistance to noise
  ② Extremely low distortion
  ③ Flat, even frequency response

Analog signals

Original sound → Deteriorated signal

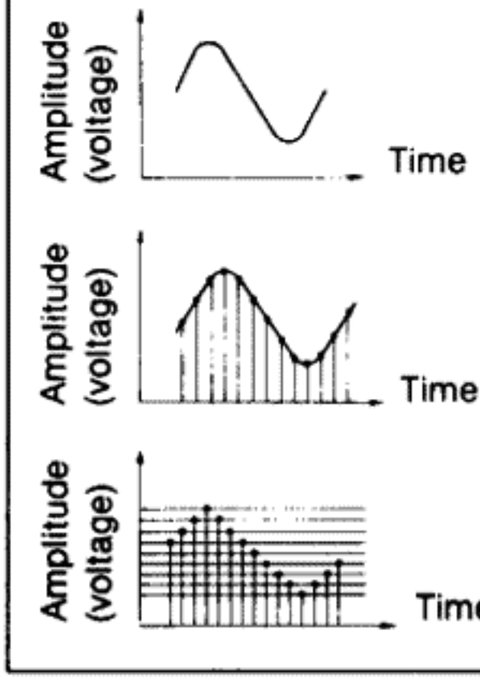
Digital signals

Original sound → Even if noise occurs → Processed as uniform series of 0s and 1s, without distortion.

■ How signals are digitized

If it is known to what degree of minuteness the human ear can distinguish sounds, it is then possible, by using that data as the standard reference, to digitize signals by dividing analog signals into minute pieces, after which they can be transmitted with a high degree of precision, and thereafter recorded and played back in the digitized format.

Analog signals are sampled, quantified and encoded.

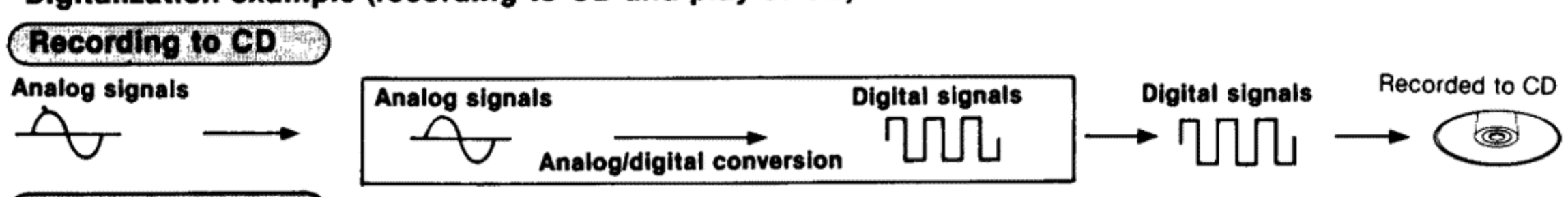


Sampling:
Analog signals are minutely sub-divided on the lateral axis.

Quantification:
Sampled signals are minutely sub-divided on the vertical axis.

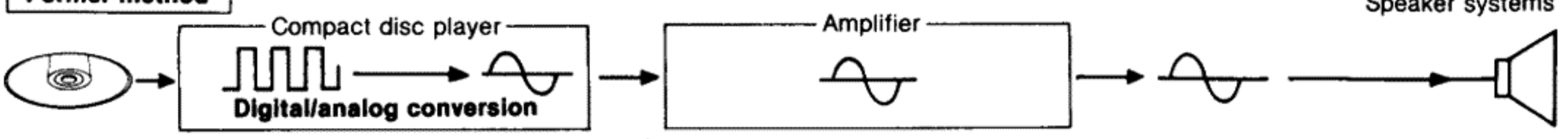
Digitalization example (recording to CD and play of CD)

Recording to CD



CD play

Former method



Sound deterioration may easily occur because analog signals are sent to the amplifier through stereo connection cables.

This method

Sound deterioration does not easily occur because digital signals are sent to the amplifier through optical-fiber cable.

What the sampling frequencey is

The sampling frequency expresses the degree of minuteness to which signals can be sub-divided, relative to a certain specified time interval, during sampling.
For compact disc sound:
Analog signals are sub-divided 44,100 times (i.e., 44.1 kHz) during one second.
This 44.1 kHz is, therefore, the sampling frequency for compact disc sound.

What analog/digital conversion is

Audio signals (analog signals) are taken out (sampled) at certain fixed time intervals. The points at which this sampling frequency occurs are digitally encoded and converted to digital signals.

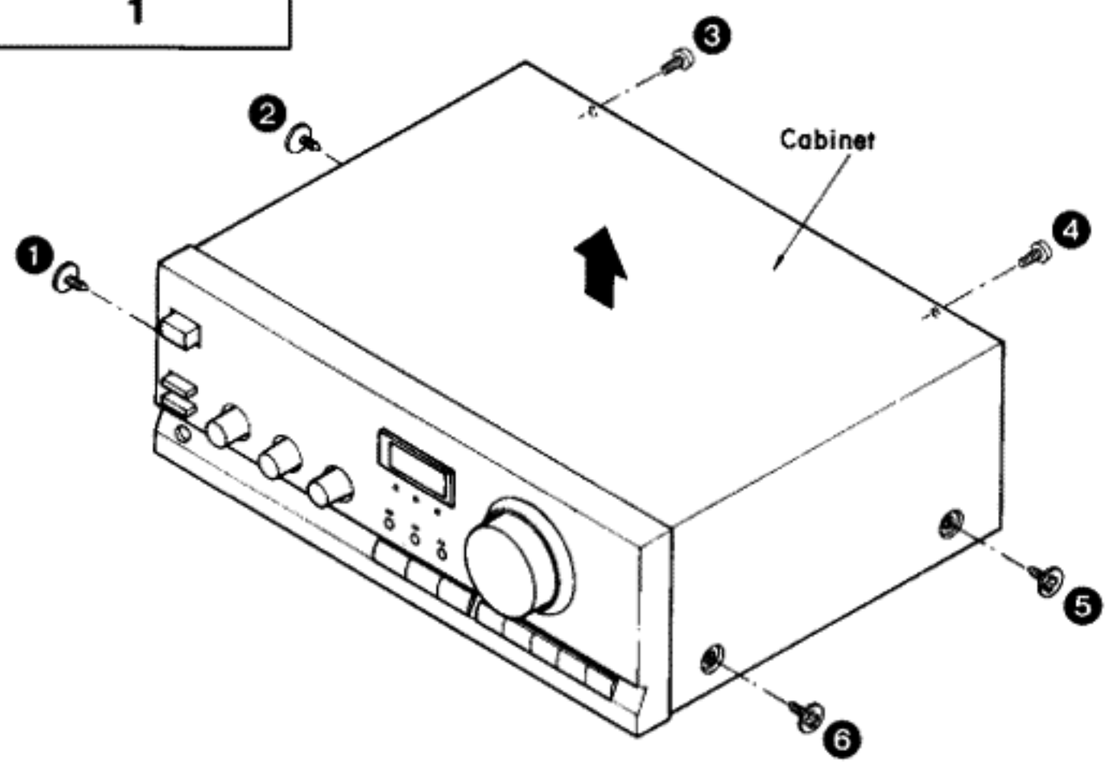
What digital/analog conversion is

Each sampling frequency point is returned (converted) to voltage, thus converting digital signals to the analog signals that we can hear.

■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	Removal of the Cabinet

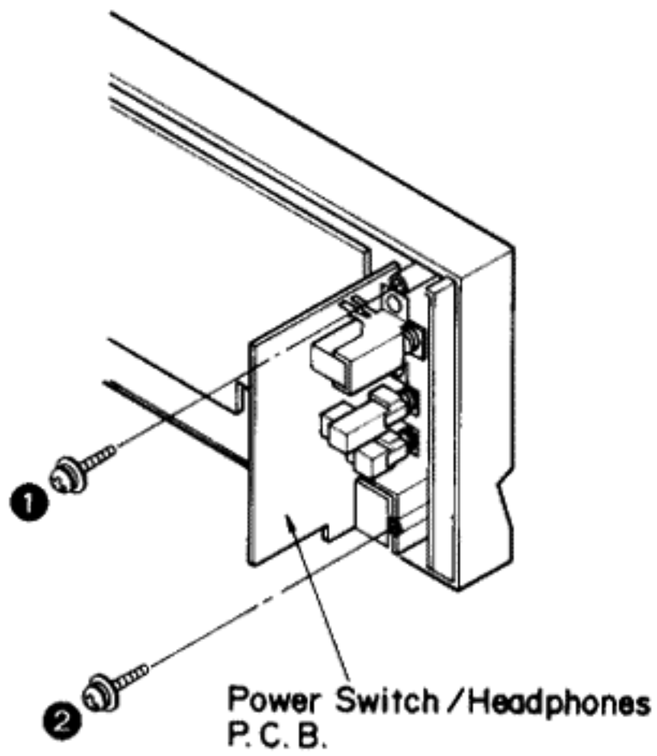
Procedure 1



●Remove the 6 screws (❶~❻).

Ref. No. 3	Removal of the Power Switch/ Headphones P.C.B.

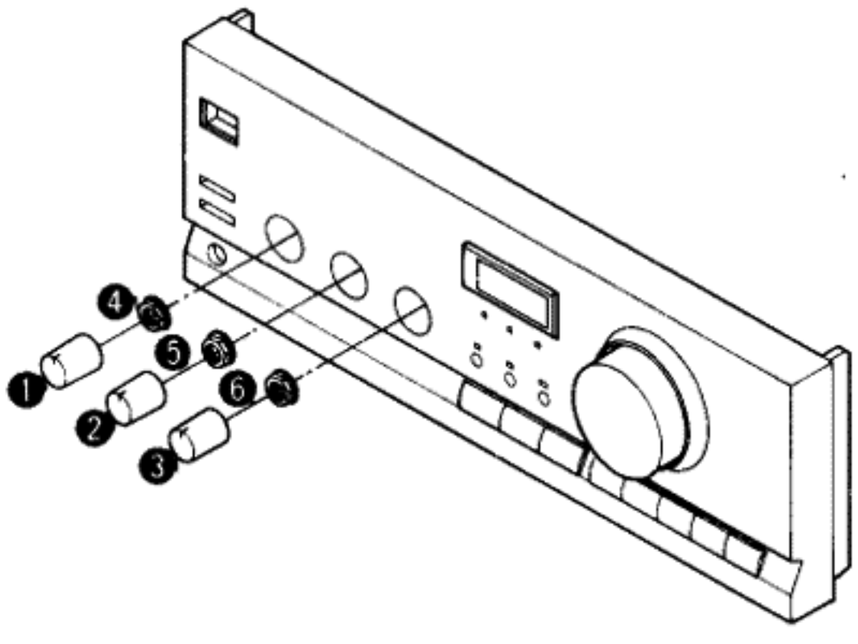
Procedure 1→2→3

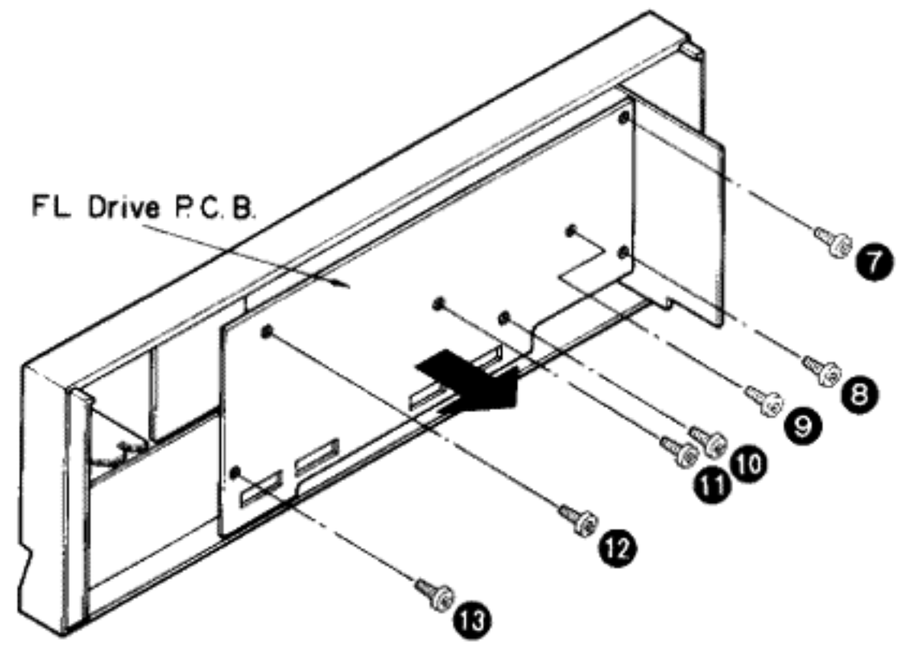


●Remove the 2 screws (❶, ❷).

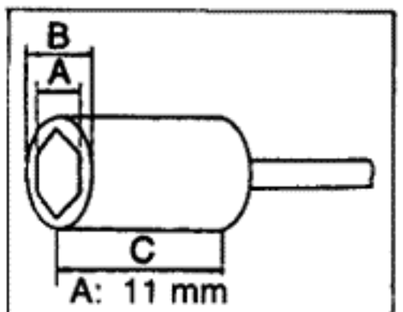
Ref. No. 4	Removal of the FL Drive P.C.B.

Procedure 1→2→4





1. Pull out the 3 knobs (❶~❸).
2. Remove the 3 nuts (❹~❻).



A: 11 mm
B: 16 mm
C: longer than 22 mm

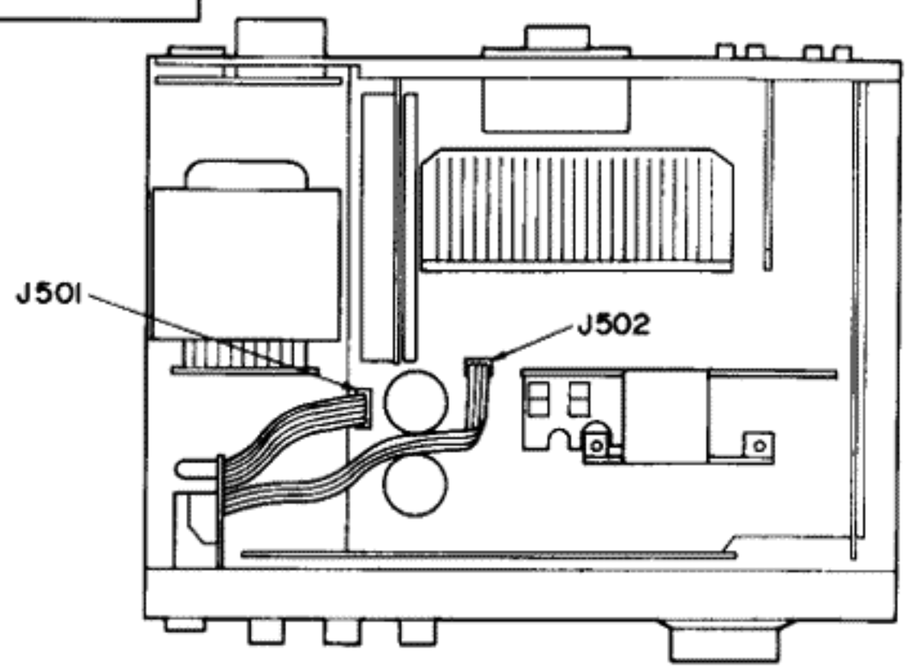
●Use a wrench of the dimensions shown in the illustration above to remove nuts.

3. Remove the 7 screws (❼~⓭).

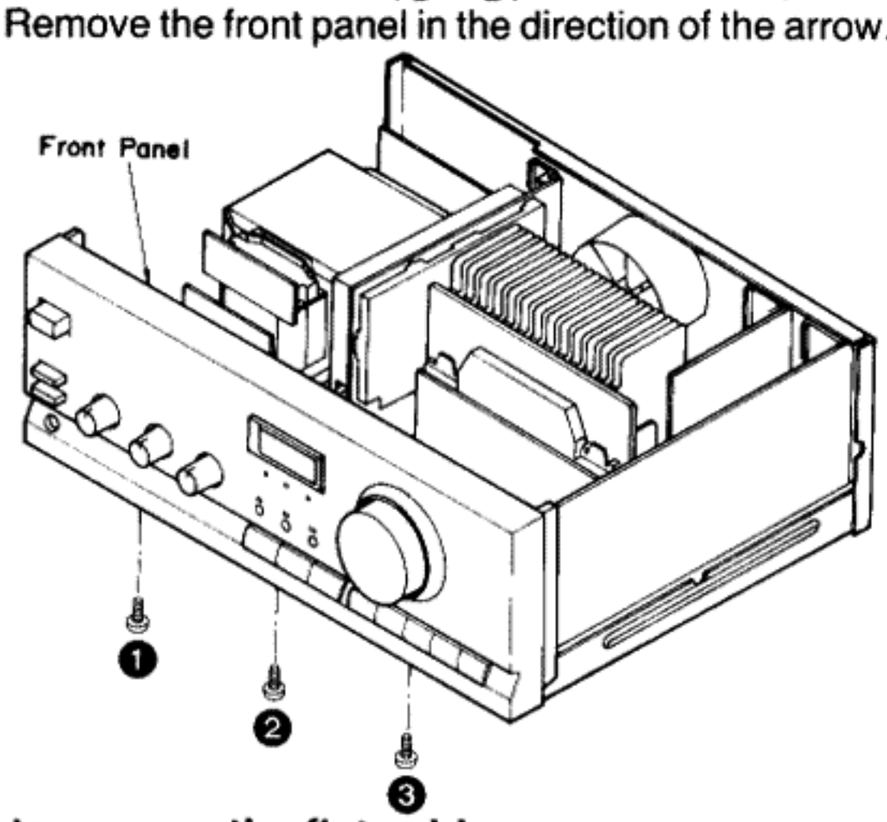
Ref. No. 2	Removal of the Front Panel

Procedure 1→2

1. Remove the flat cables (J501, J502).

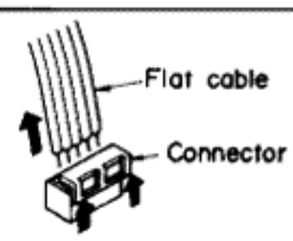


2. Remove the 3 screws (❶~❸).
3. Remove the front panel in the direction of the arrow.



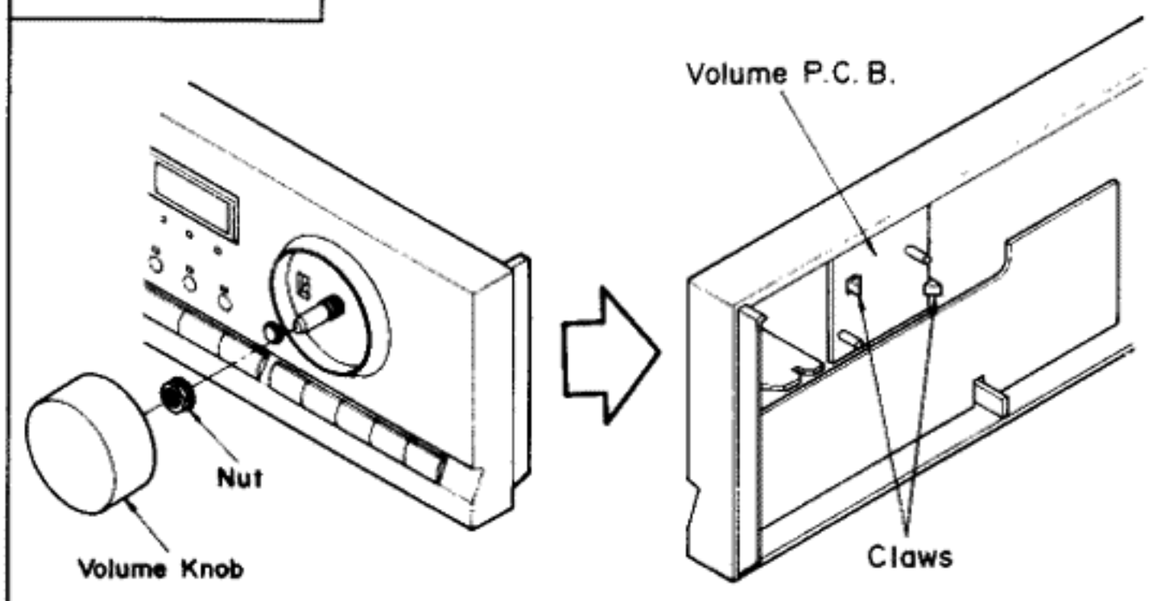
How to remove the flat cable

1. Lift the connector.
2. Pull out the flat cable.



Ref. No. 5 — Removal of the Volume P.C.B.

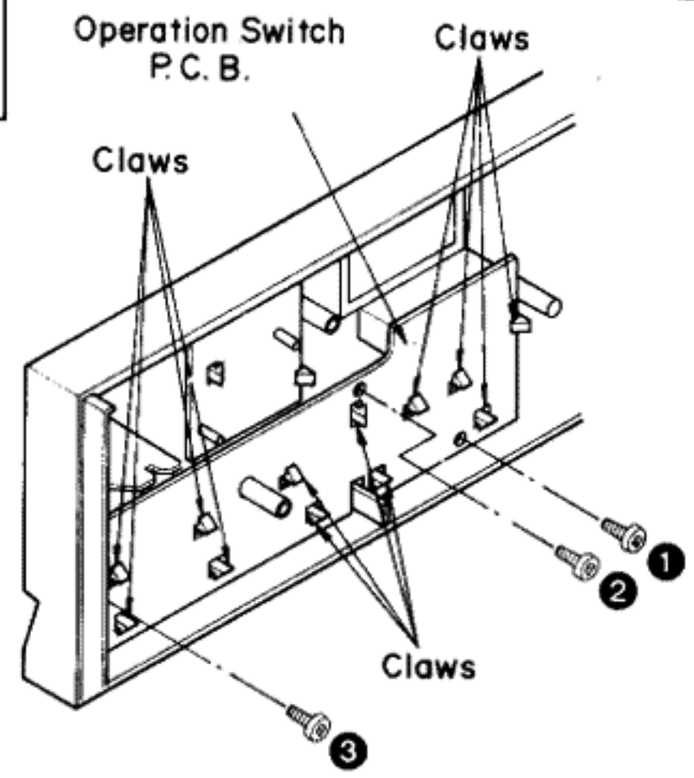
Procedure
1→2→4→5



1. Pull out the volume knob.
2. Remove the 1 nut.
3. Release the 2 claws.

Ref. No. 6 — Removal of the Operation Switch P.C.B.

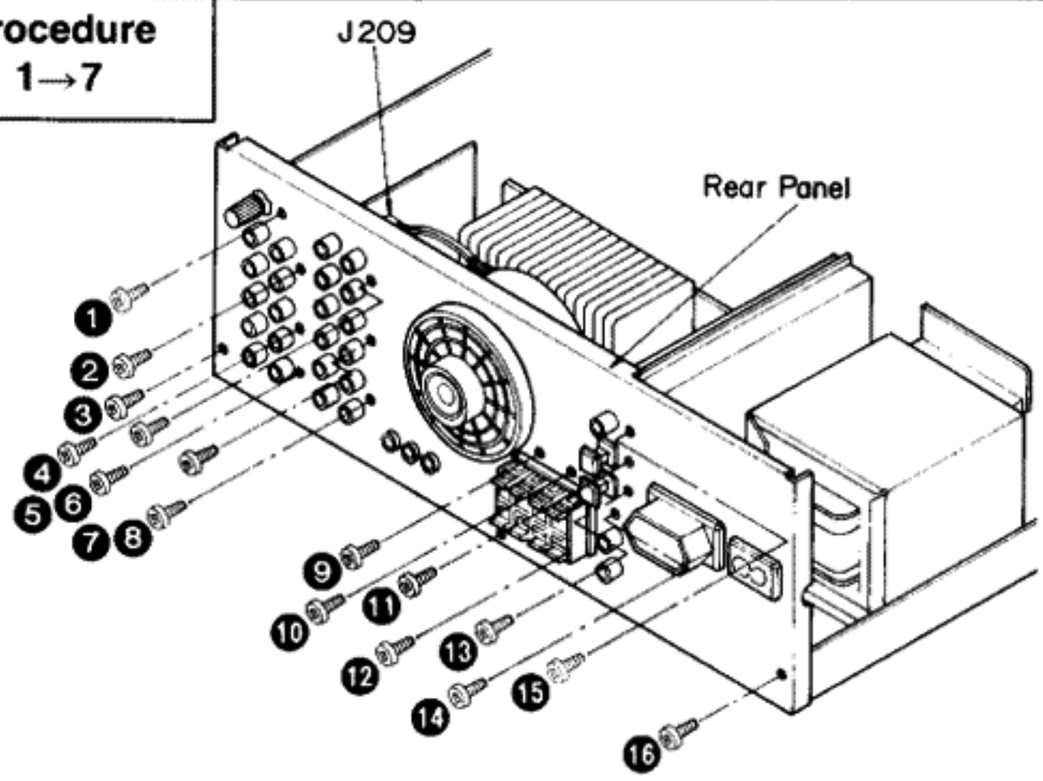
Procedure
1→2→4→6



1. Remove the 3 screws (❶~❸).
2. Release the 12 claws.

Ref. No. 7 — Removal of the Rear Panel

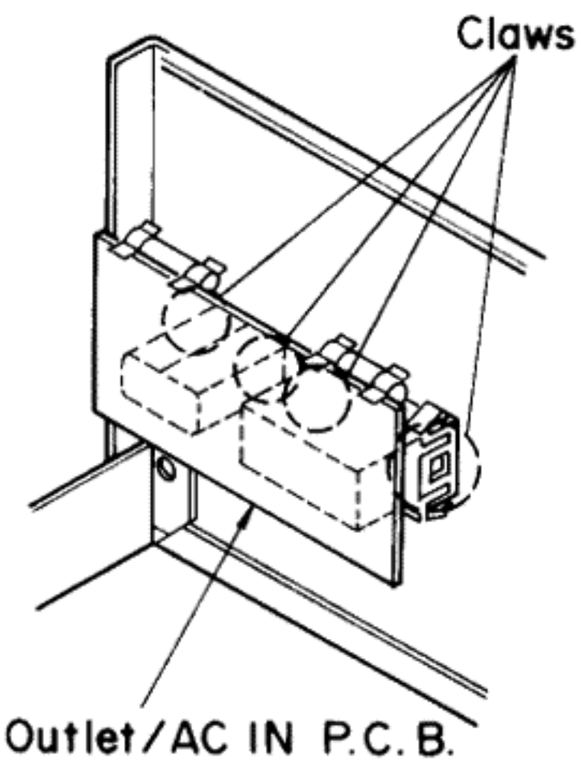
Procedure
1→7



1. Remove the 1 connector (J209).
2. Remove the 16 screws (❶~⑯).

Ref. No. 8 — Removal of the AC OUTLET/ AC IN P.C.B.

Procedure
1→7→8



●Release the 4 claws.

Ref. No. 9 — Removal of the D/A Converter P.C.B., PHONO/TAPE/TUNER/CD Terminal P.C.B. and INPUT/ OUTPUT Terminal P.C.B.

Procedure
1→7→9

■ Removal of the D/A Converter P.C.B.

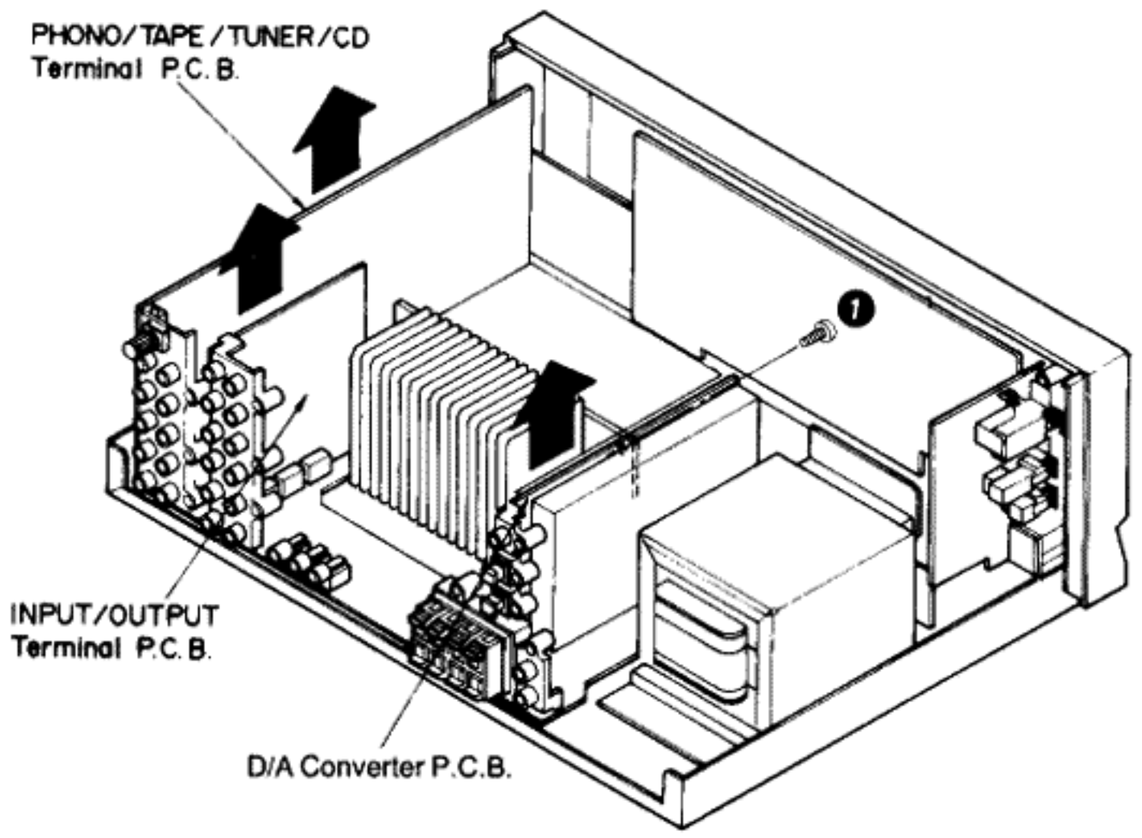
1. Remove the 1 screw (❶).
2. Remove the D/A Converter P.C.B. in the direction of the arrow.

■ Removal of the PHONO/TAPE/TUNER/CD Terminal P.C.B.

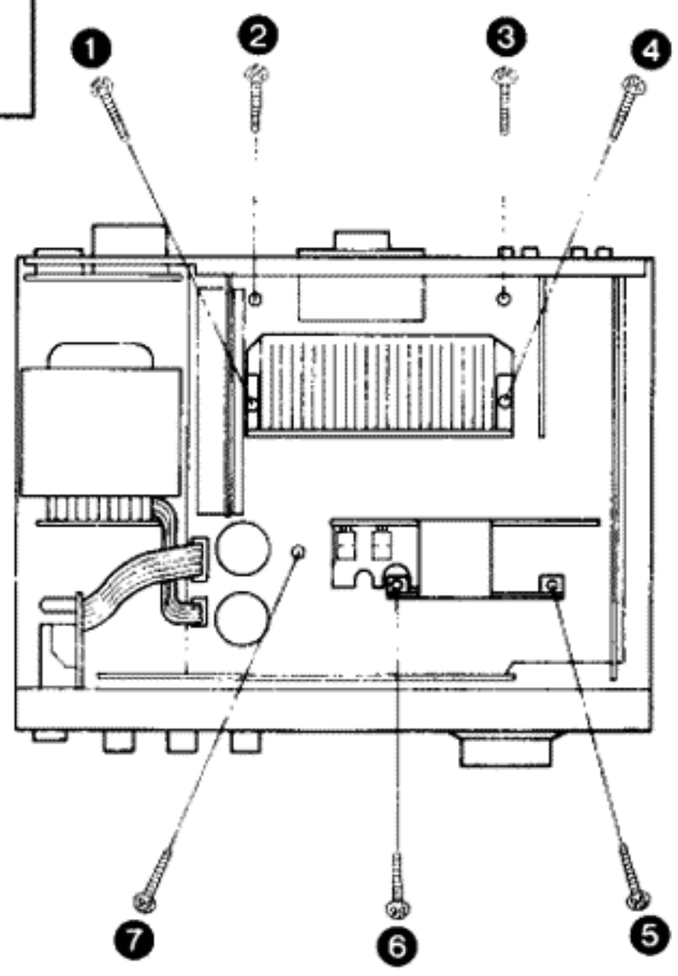
●Remove the PHONO/TAPE/TUNER/CD Terminal P.C.B. in the direction of the arrow.

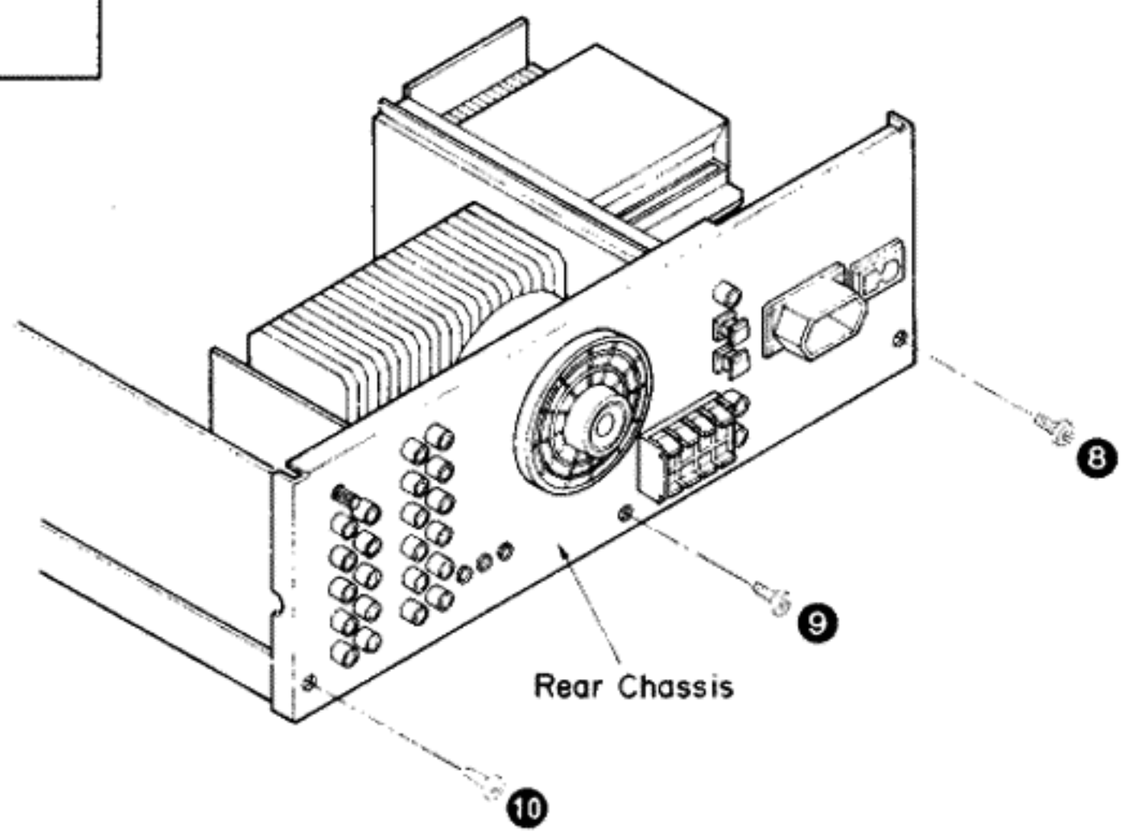
■ Removal of the INPUT/OUTPUT Terminal P.C.B.

●Remove the INPUT/OUTPUT Terminal P.C.B. in the direction of the arrow.

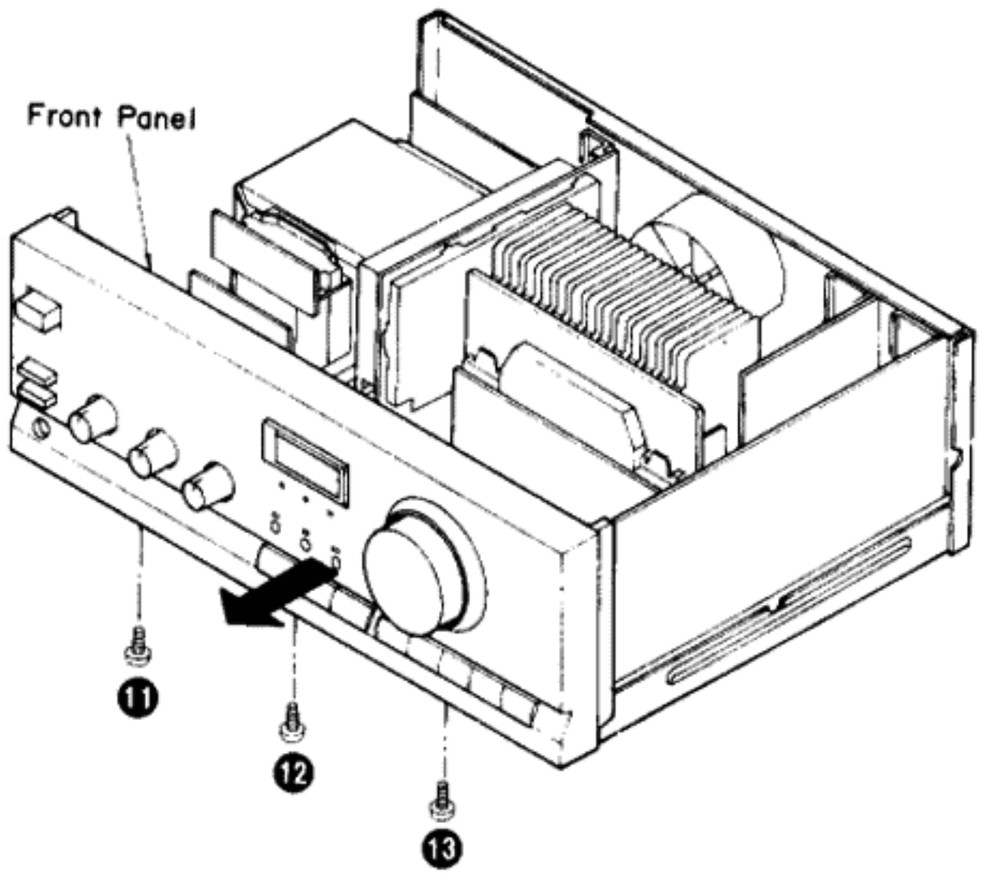


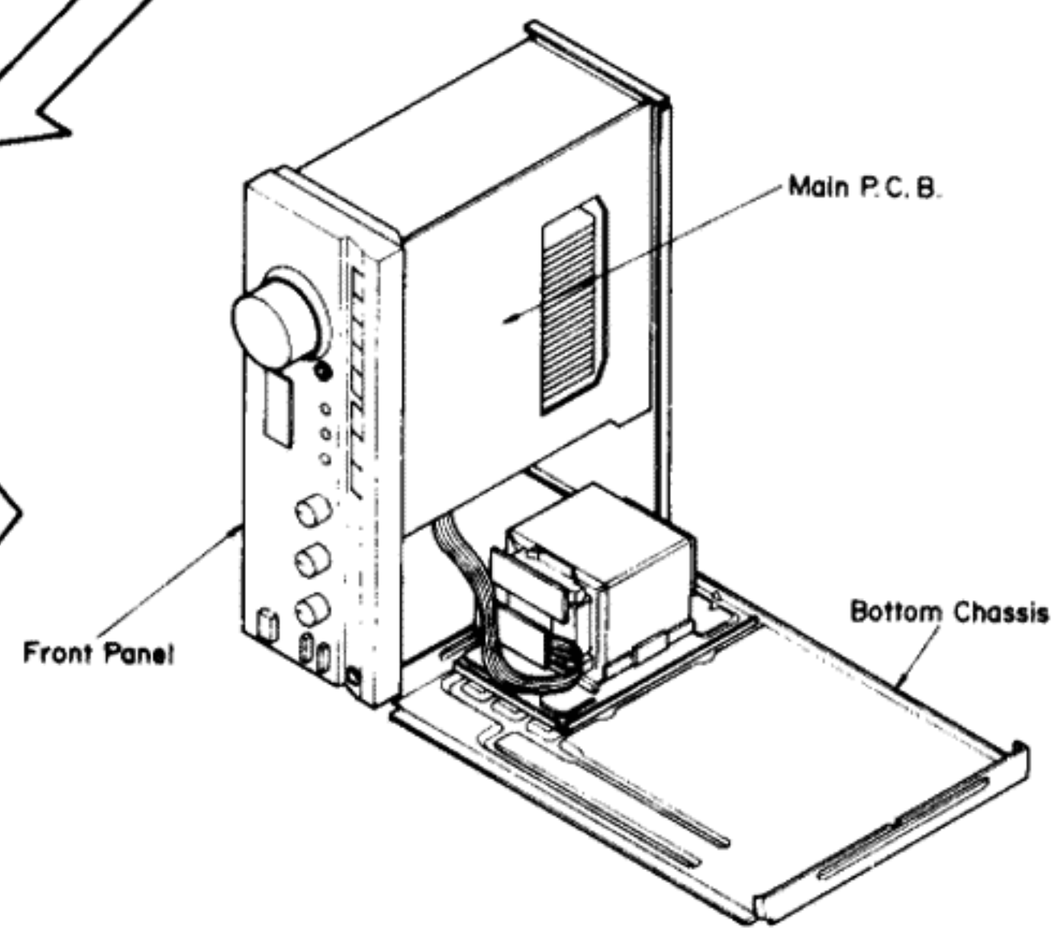
Ref. No. 10	Check of the main P.C.B.
Procedure 1→10	





1. Remove the 7 screws (❶~❼).
2. Remove the 3 screws (❽~❿).

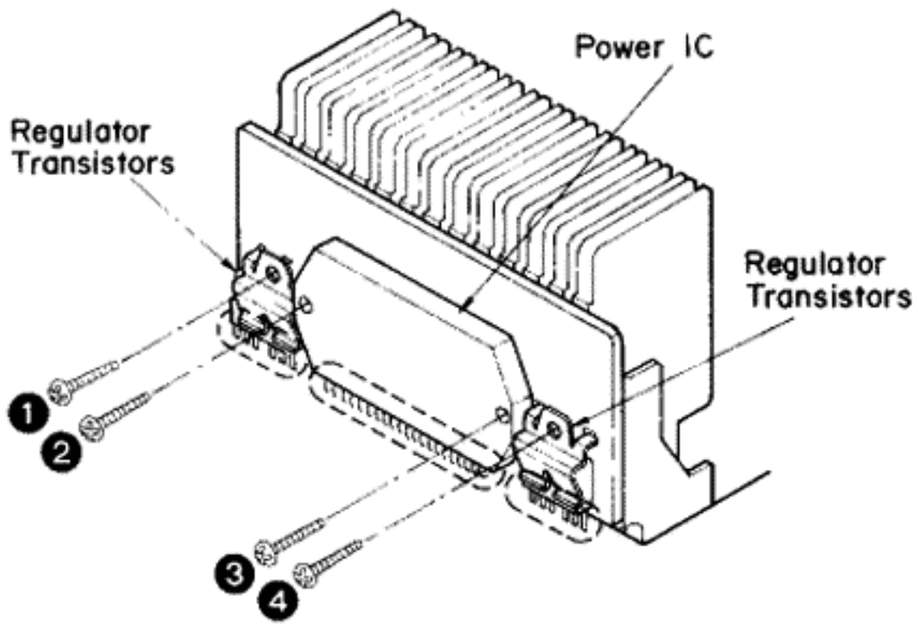




3. Remove the 3 screws (⓫~⓭).
4. Remove the front panel in the direction of the arrow.
   ※Connect 2 flat cables (J501, J502).
5. Remove the bottom chassis.
6. Reinstall the front panel to the main P.C.B.

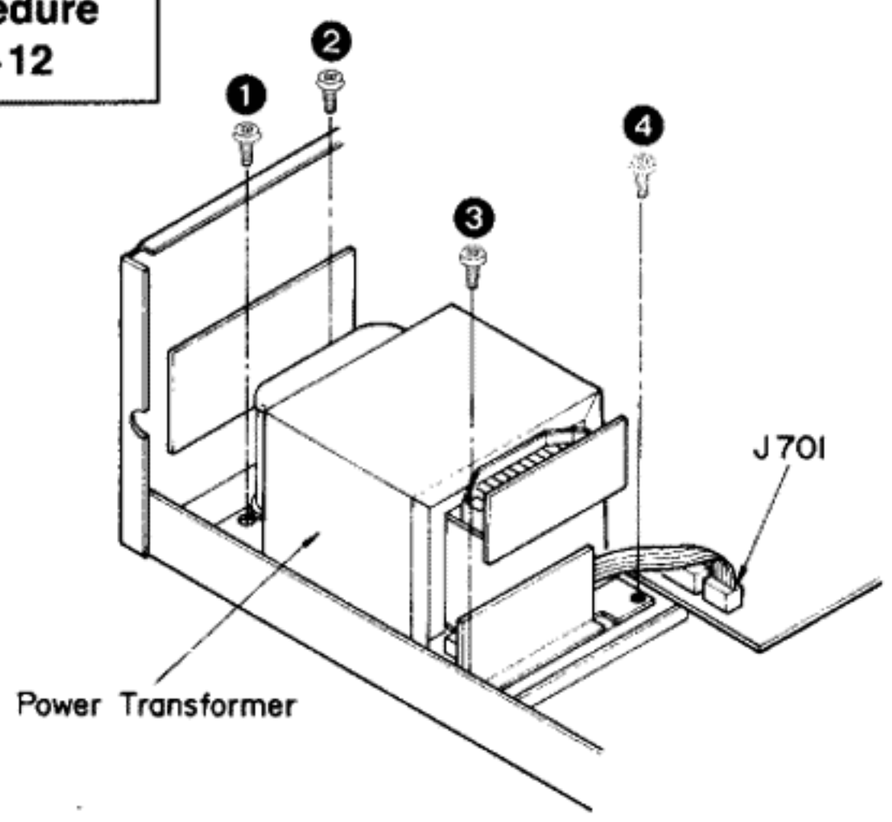
Ref. No. 11	Removal of the Power IC and Regulator Transistor
Procedure 1→10→11	

1. Unsolder the power IC or regulator transistor.
2. Remove the 4 screws (❶~❹).



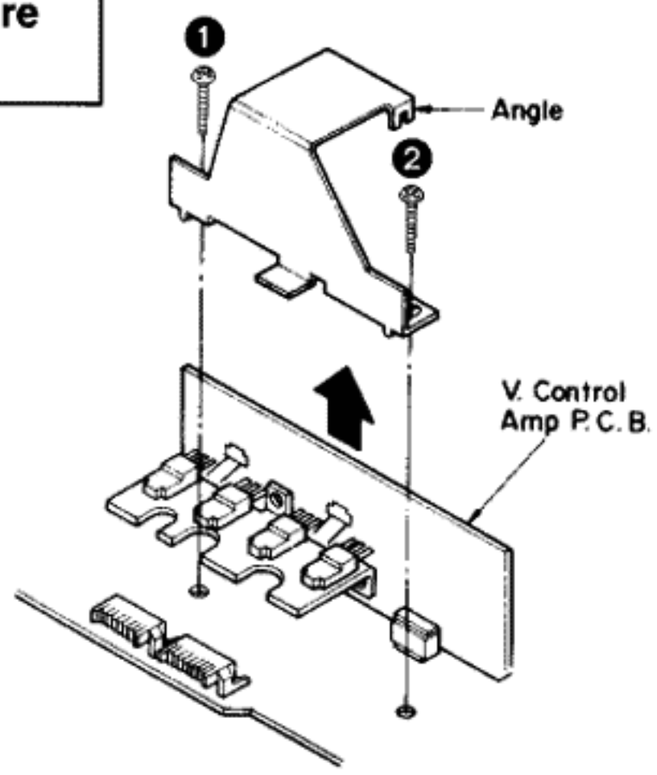
Note: When mounting the power IC, or regulator transistor apply silicon terminal compound (SZZ0L15) to the rear of the power IC or regulator transistor.

Ref. No. 12	Removal of the Power Transformer
Procedure 1→12	

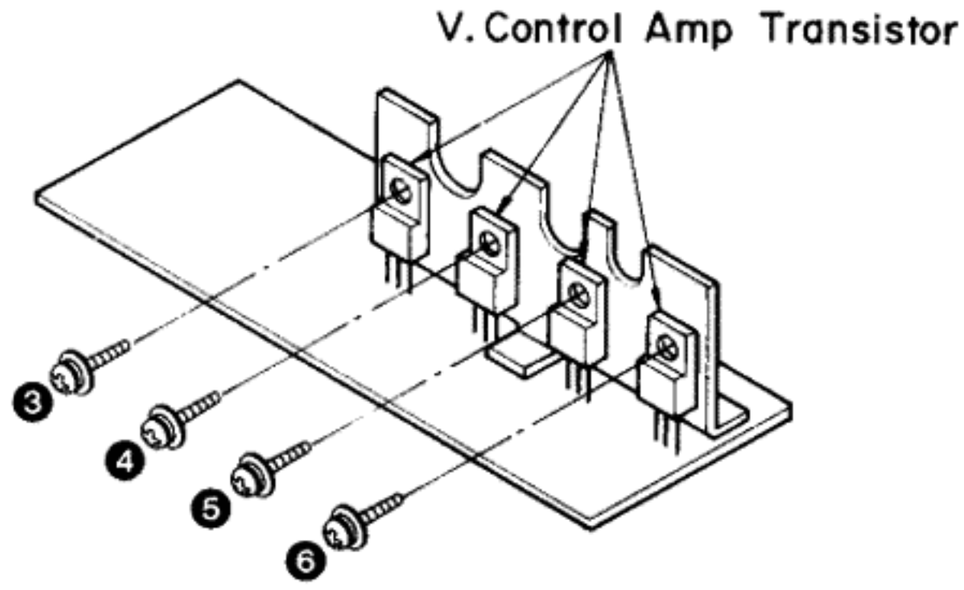


1. Remove the 1 flat cable (J701).
2. Remove the 4 screws (❶~❹).

Ref. No. 13	Removal of the V. Control Amp P.C.B. and V. Control Amp Transistor
Procedure 1→13	



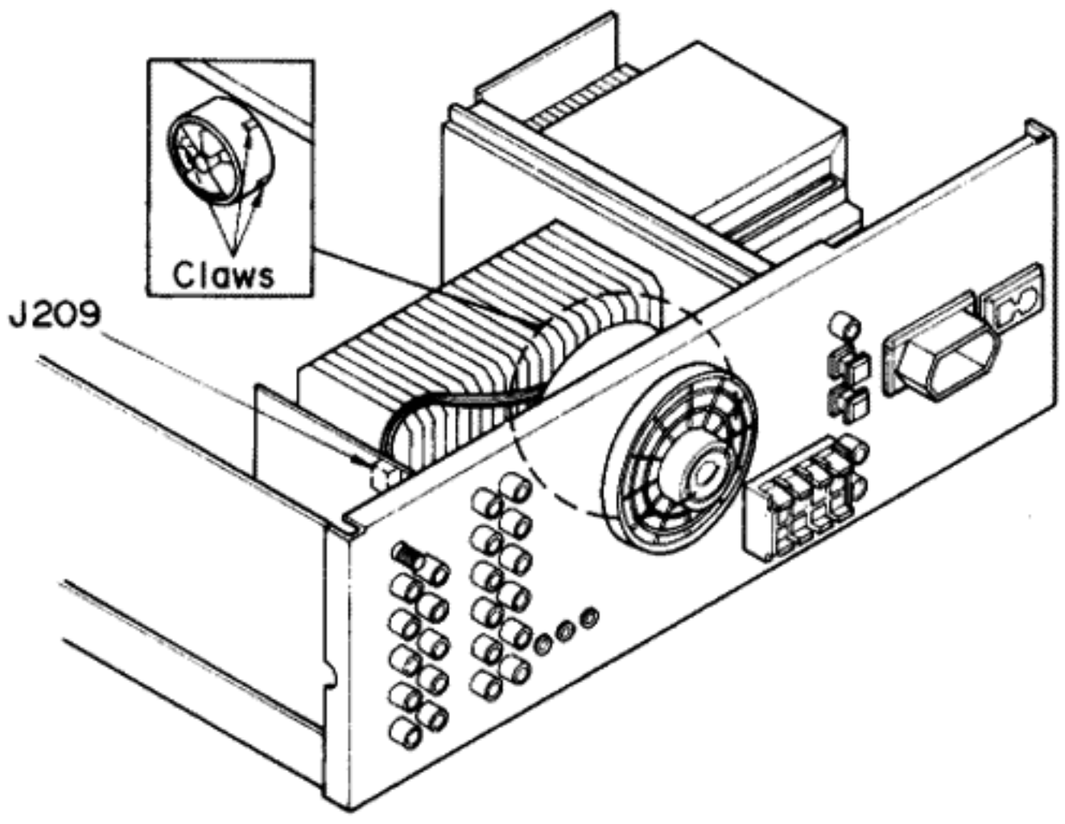
1. Remove the 2 screws (❶, ❷).
2. Remove the V. Control Amp P.C.B. in the direction of the arrow.



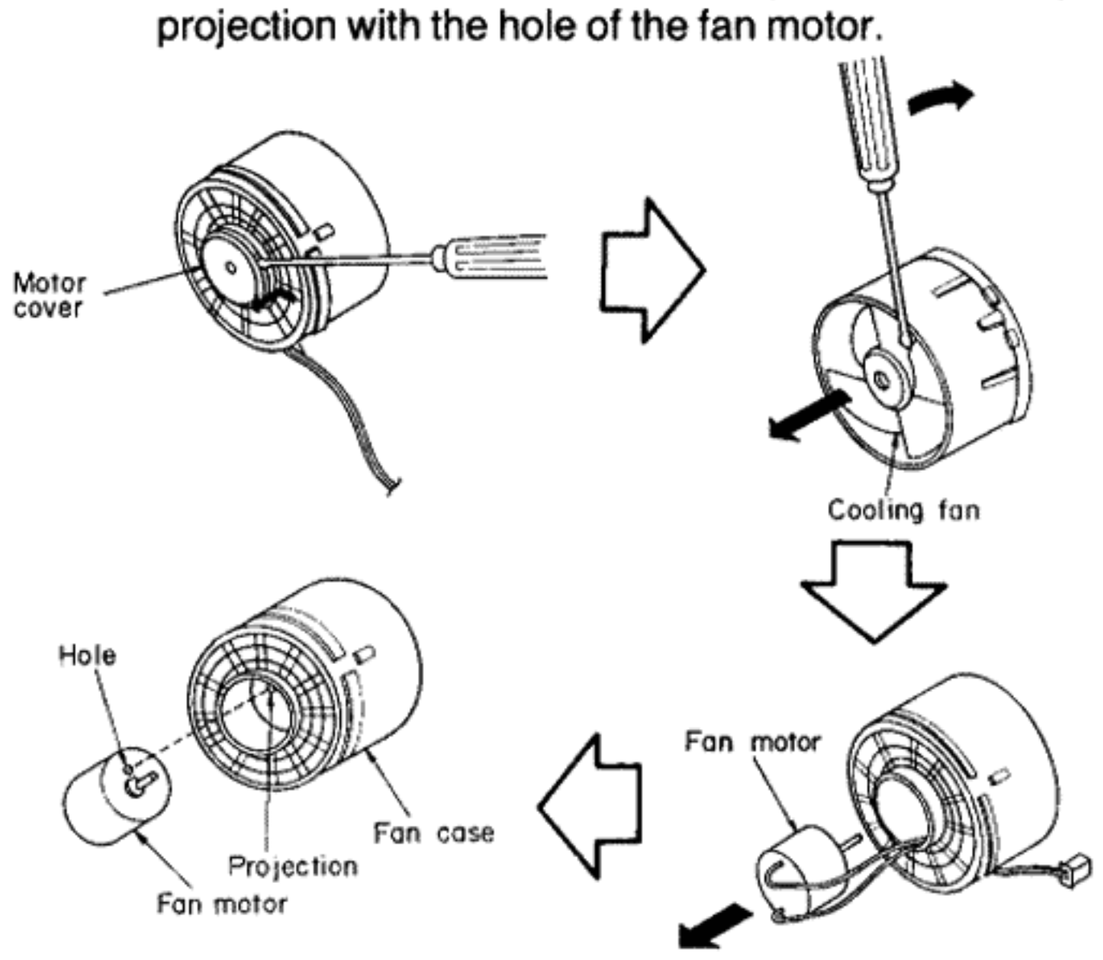
3. Unsolder the V. Control Amp transistor.
4. Remove the 4 screws (❸~❻).

Note: When mounting the transistor, apply silicon terminal compound (SZZ0L15) to the rear of the transistor.

Ref. No. 14	Removal of the Fan Motor
Procedure 1→14	1. Remove the 1 connector (J209). 2. Release the 3 claws.



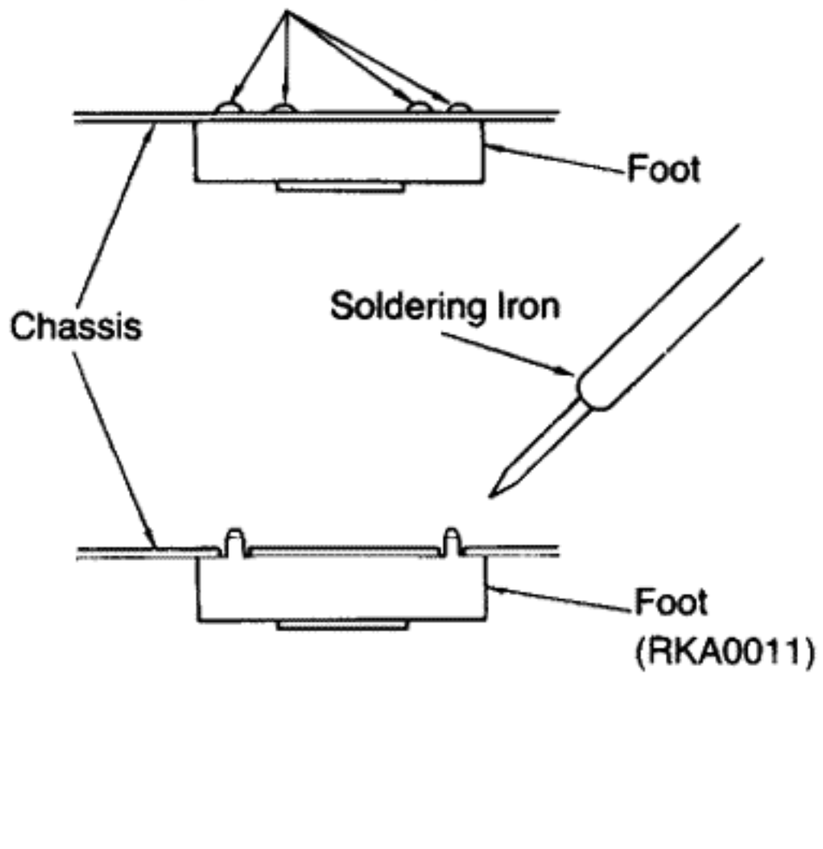
4. Insert a screwdriver at the root of the cooling fan. Force it out of the motor shaft.
5. Remove the motor cover by used ⊖ screwdriver.
6. Remove the motor from the fan casing.
7. When mounting the motor fan, align the fan casing's projection with the hole of the fan motor.



"ATTENTION SERVICER"
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

●Replacement of the Foot.

1. Remove the 4 heat melted posts on the chassis with a pair of nippers or similar tool.
2. To replace the foot (RKA0011) on the chassis, melt the 4 posts with a soldering iron.



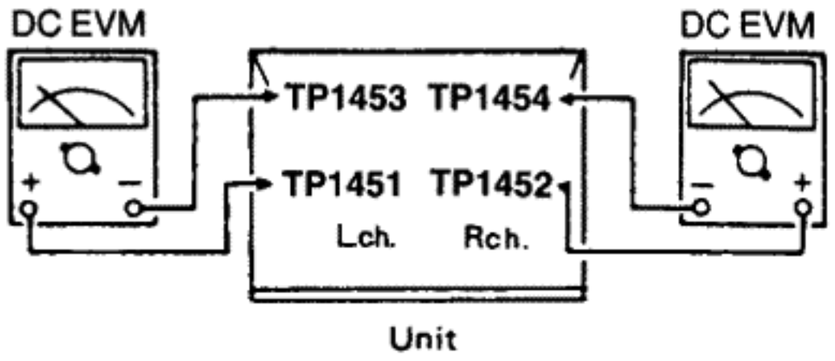
■ MEASUREMENTS AND ADJUSTMENTS

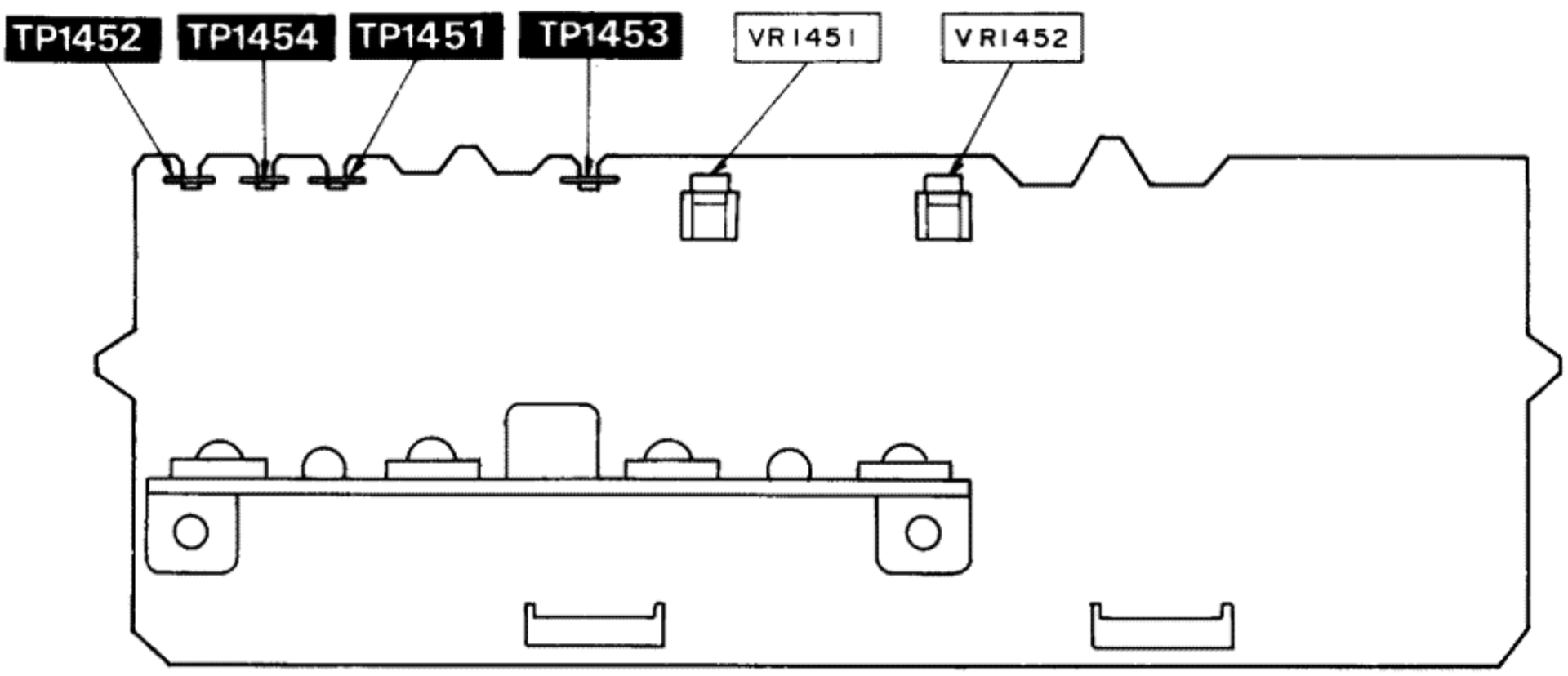
Control positions and equipment used.

- Volume knob . . . . . ∞ (Minimum)
- Speaker selector (A) . . . . . off
- Speaker selector (B) . . . . . off
- DC electronic voltmeter (EVM) 2

VOLTAGE CONTROL(V)AMP. IDLING (ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (V) amp. Adjusting volumes **(VR1451, VR1452)** counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust **VR1451** and **VR1452** so that the voltage is **40 mV**.
   Also, check that the voltage is **30~65 mV** (standard: **35 mV**) after lapse of **10–15 minutes**. (Below **35 mV** after lapse of **60 min.**)



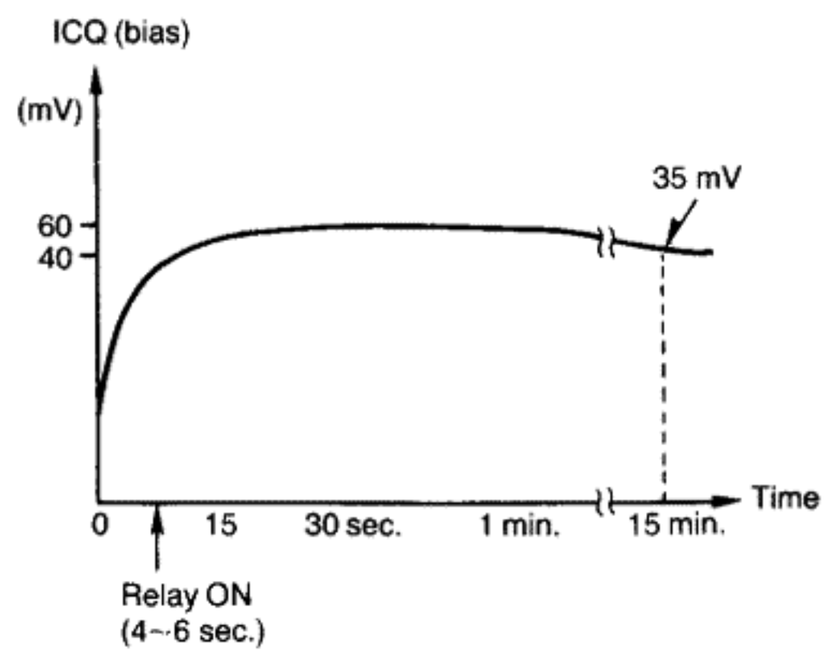


●Test point

TP1451...L ch ⊕ Voltage control amp Icq adj.
TP1453...L ch ⊖ Voltage control amp Icq adj.
TP1452...R ch ⊕ Voltage control amp Icq adj.
TP1454...R ch ⊖ Voltage control amp Icq adj.

●Adjustment VR

VR1451...L ch Voltage control amp Icq adj.
VR1452...R ch Voltage control amp Icq adj.



■ SCHEMATIC DIAGRAM

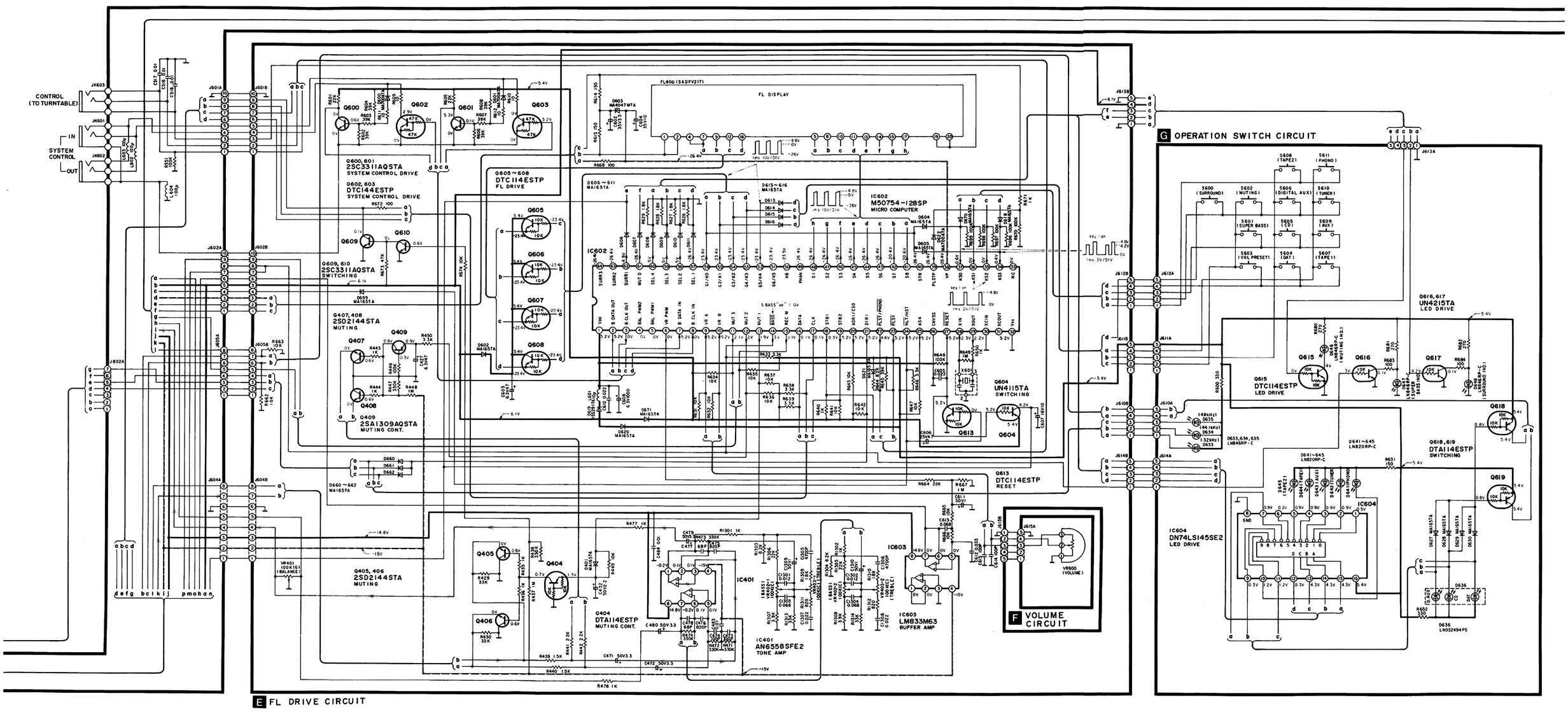
(Parts list on pages 33~35, 39~41)

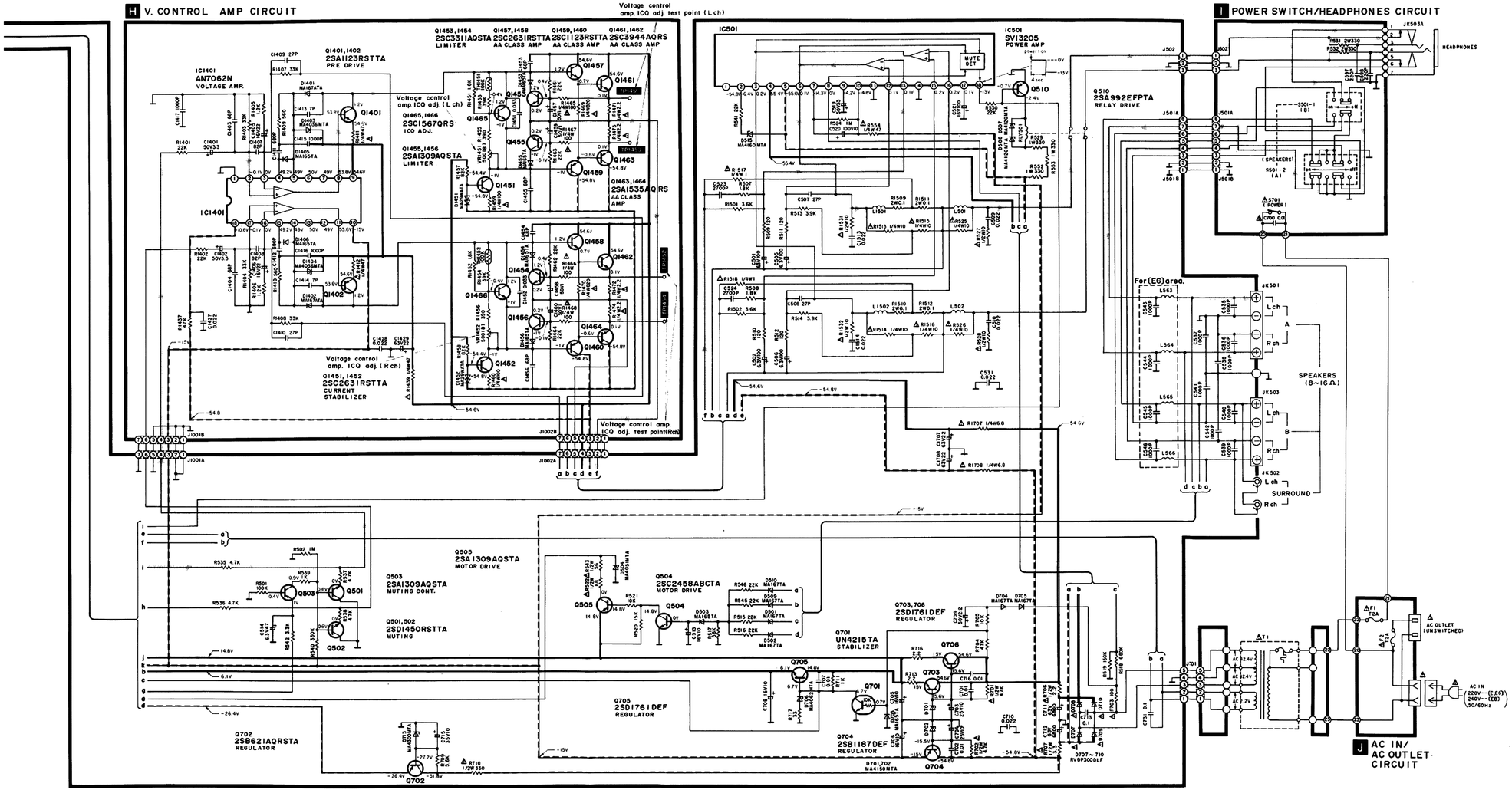
A D/A CONVERTER CIRCUIT

B PHONO/TAPE/TUNER/CD TERMINAL CIRCUIT

C INPUT OUTPUT TERMINAL CIRCUIT

D MAIN CIRCUIT


22
23
24
25
26
27
28
29
30
31
32
33
34
CONTROL (TO TURNTABLE)
SYSTEM CONTROL
IN
OUT
JK603
JK601
JK602
Q600, 601 2SC3311AQSTA SYSTEM CONTROL DRIVE
Q602, 603 DTC114ESTP SYSTEM CONTROL DRIVE
Q605~608 DTC114ESTP FL DRIVE
FL600 (SAFFV217)
FL DISPLAY
IC602 M50754-128SP MICRO COMPUTER
Q609, 610 2SC3311AQSTA SWITCHING
Q407, 408 2SD2144STA MUTING
Q409 2SA1309AQSTA MUTING CONT.
Q405, 406 2SD2144STA MUTING
Q404 DTA114ESTP MUTING CONT.
IC401 AN6558SFE2 TONE AMP
IC603 LM833M63 BUFFER AMP
Q613 DTC114ESTP RESET
Q604 UN4115TA SWITCHING
VR401 (100K(G) BALANCE)
VR600 (VOLUME)
F VOLUME CIRCUIT
E FL DRIVE CIRCUIT
G OPERATION SWITCH CIRCUIT
Q615, 616, 617 UN4215TA LED DRIVE
Q618, 619 DTA114ESTP SWITCHING
IC604 DN74LS145SE2 LED DRIVE



Notes:

- ●S501-1 : Speaker B selector switch in **"OFF"** position.
- ●S501-2 : Speaker A selector switch in **"ON"** position.
- ●S600 : Surround-sound switch in **"OFF"** position.
- ●S601 : Super bass switch in **"OFF"** position.
- ●S602 : Audio muting switch in **"OFF"** position.
- ●S603 : Volume preset switch in **"OFF"** position.
- ●S604~S611 : Input selector switches.
  S604: DAT, S605: CD, S606: DIGITAL AUX
  S607: TAPE1, S608: TAPE 2, S609: AUX
  S610: TUNER, S611: PHONO
- ●S701 : Power switch in **"ON"** position.

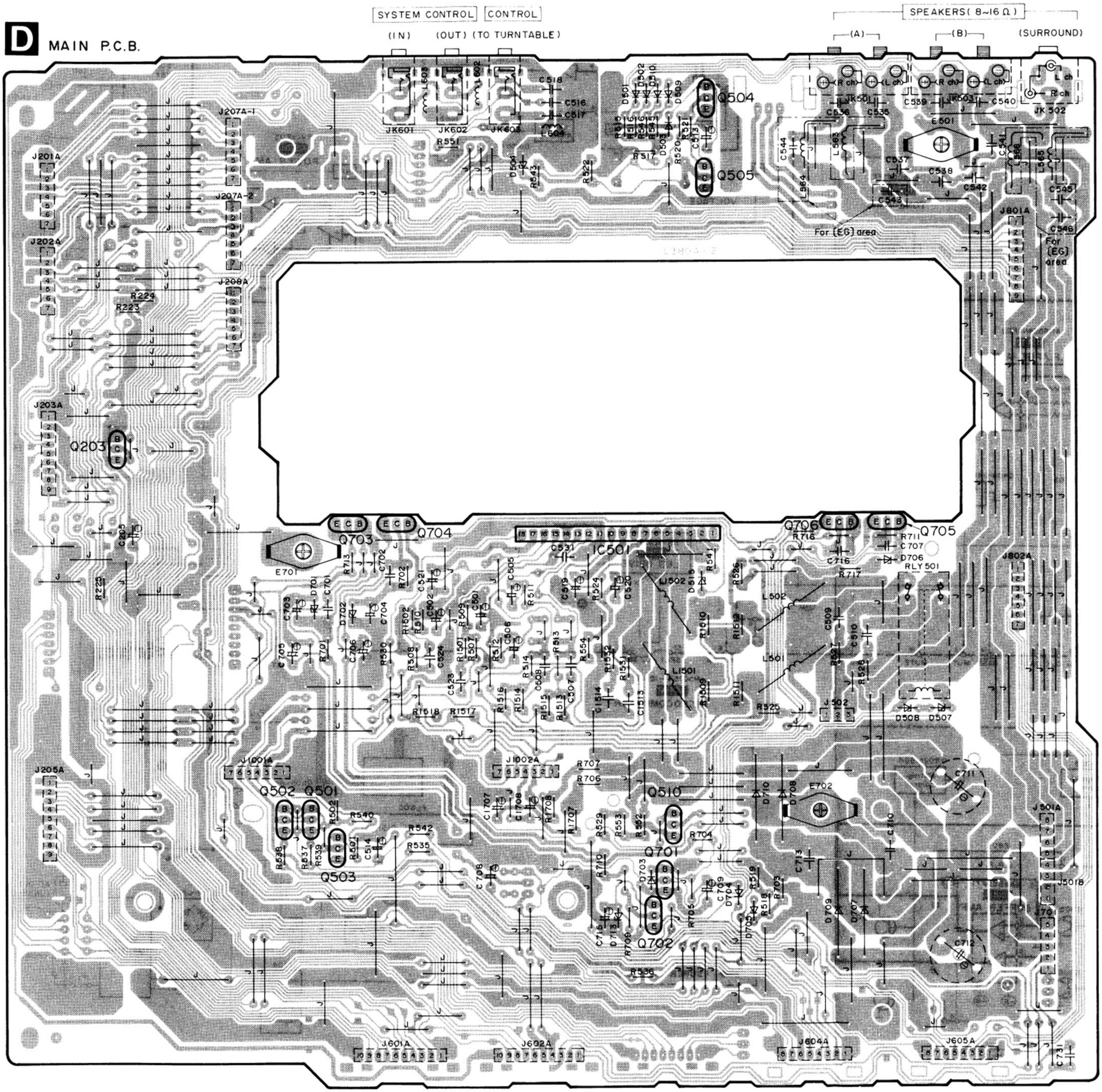
CD signal (Lch), Phono signal (Lch)
Positive voltage lines (+)
Negative voltage lines (−)
Super bass signal
Phase difference signal
Recording signal

- ●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.
- ●Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

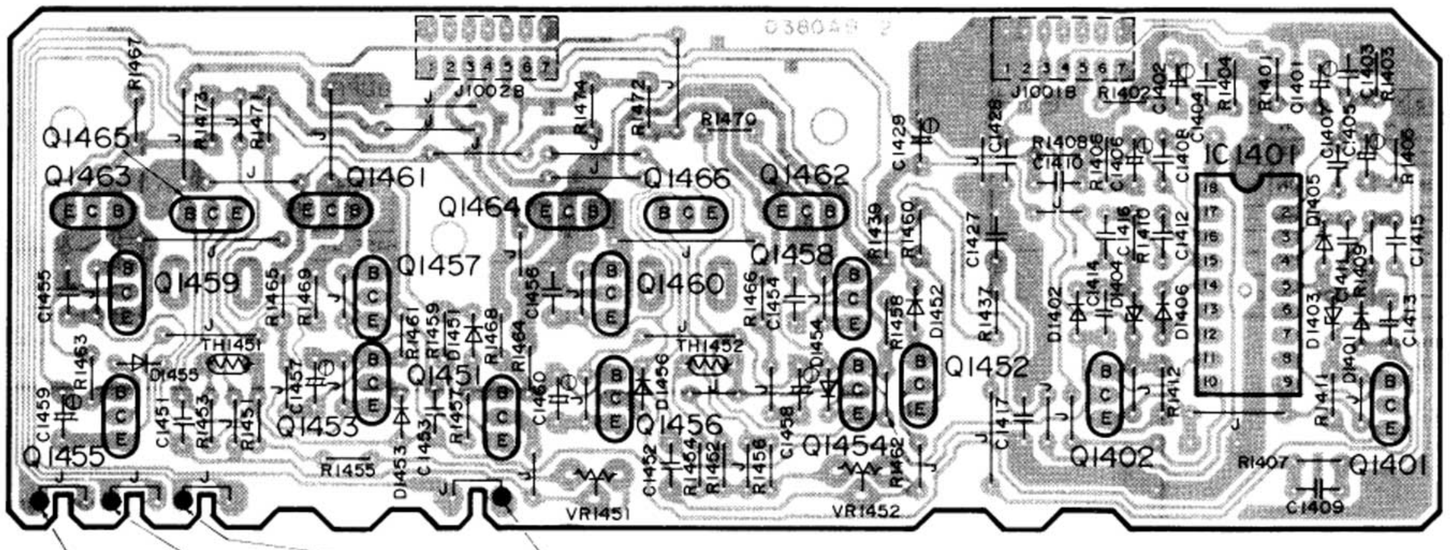
***Caution!**
IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care furing repair.
*Cover the parts boxes made of plastics with aluminum foil.
*Ground the soldering iron.
*Put a conductive mat on the work table.
*Do not touch the legs of IC or LSI with the fingers directly.

■ PRINTED CIRCUIT BOARDS (Parts list on pages 33~35, 39~41)

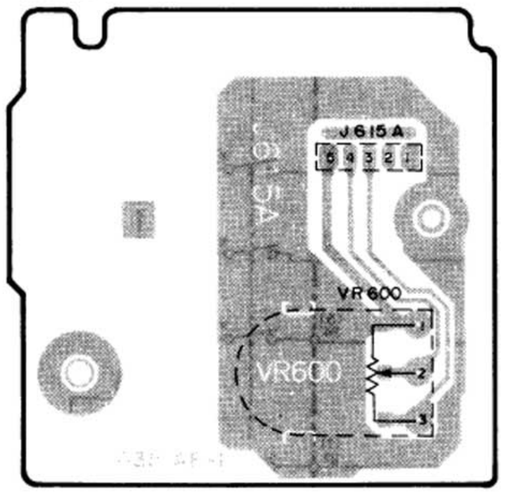
D MAIN P.C.B.



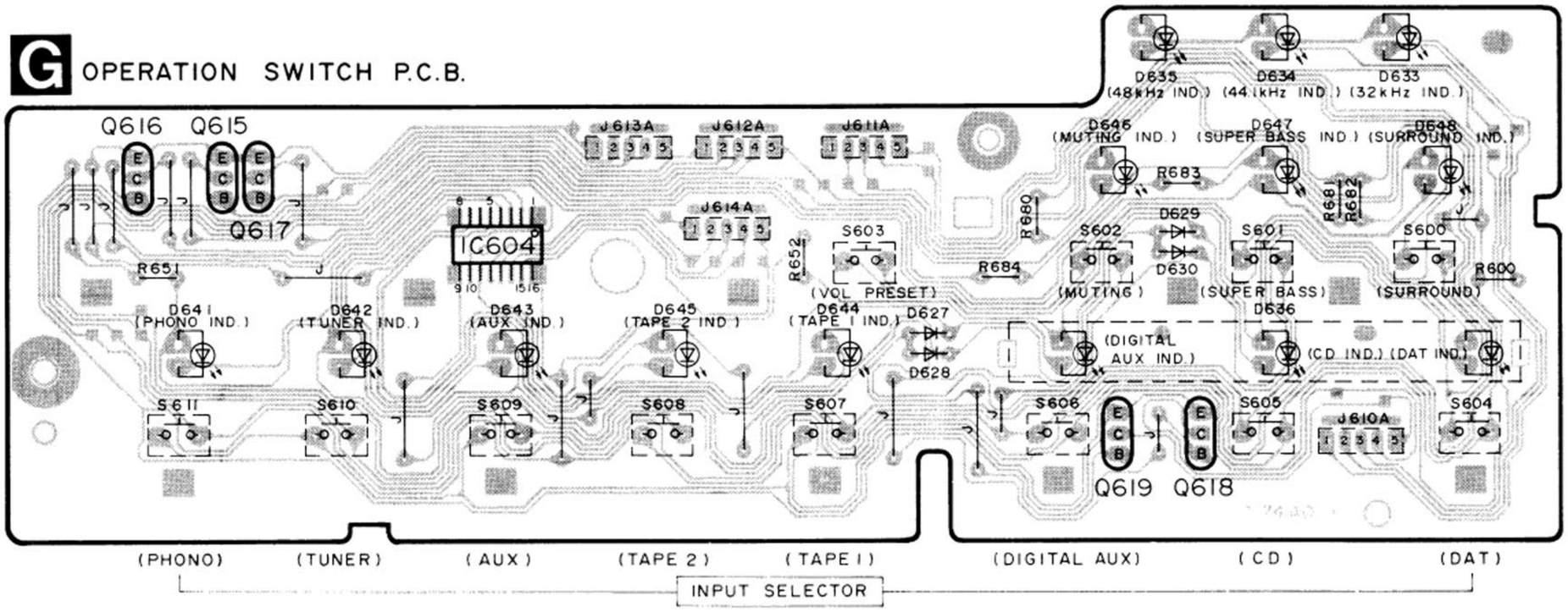
H V. CONTROL AMP P.C.B.



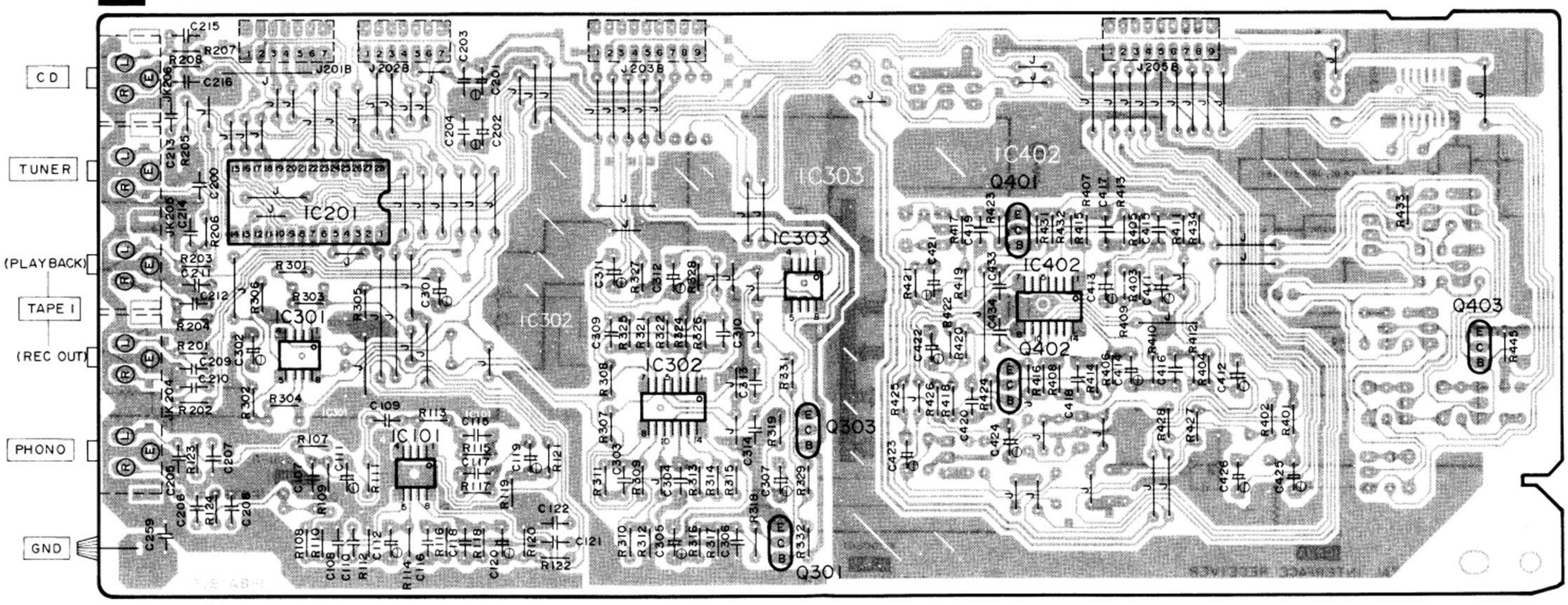
F VOLUME P.C.B.



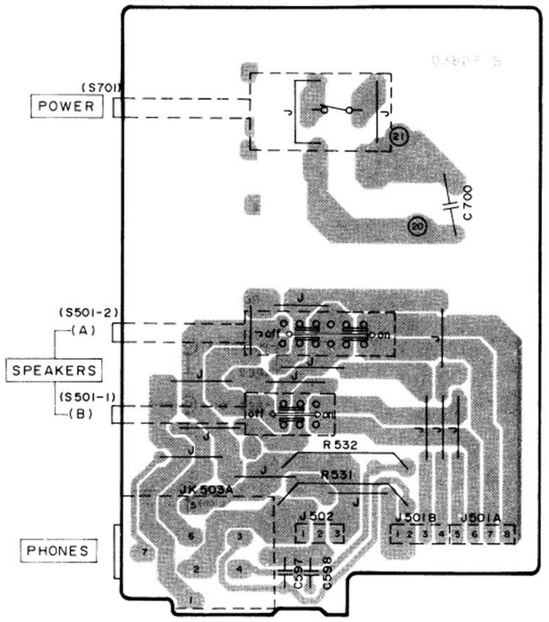
G OPERATION SWITCH P.C.B.



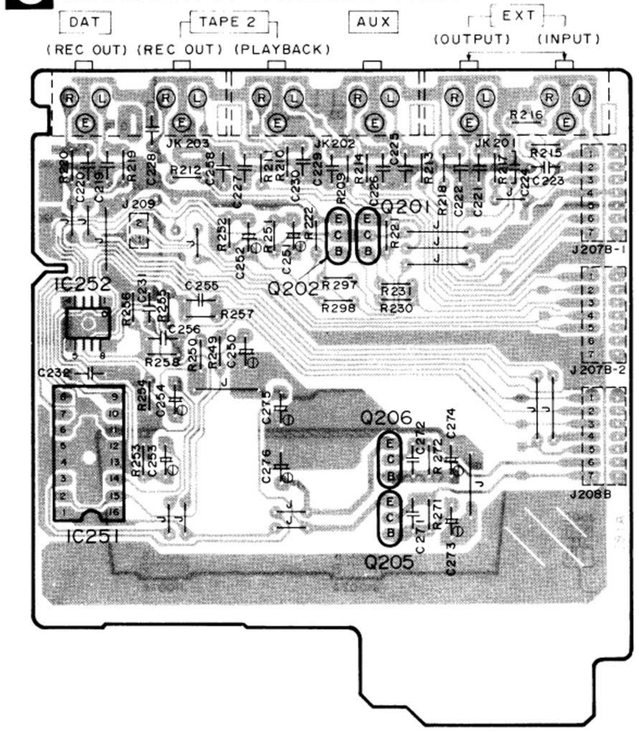
B PHONO / TAPE / TUNER / CD TERMINAL P.C.B.

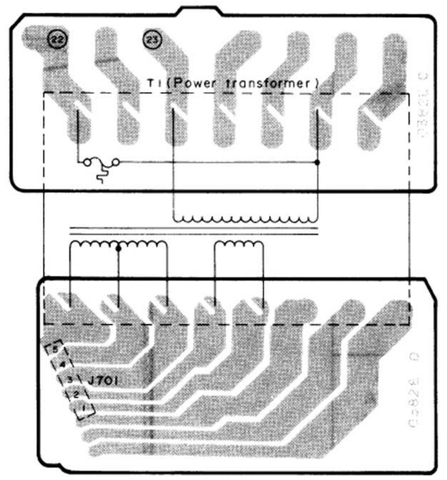


I POWER SWITCH/HEADPHONES P.C.B.

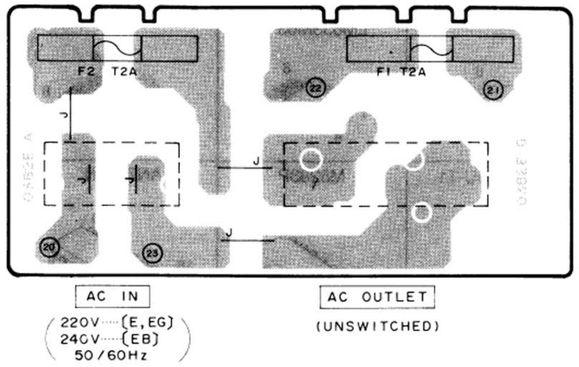


C INPUT/OUTPUT TERMINAL P.C.B.

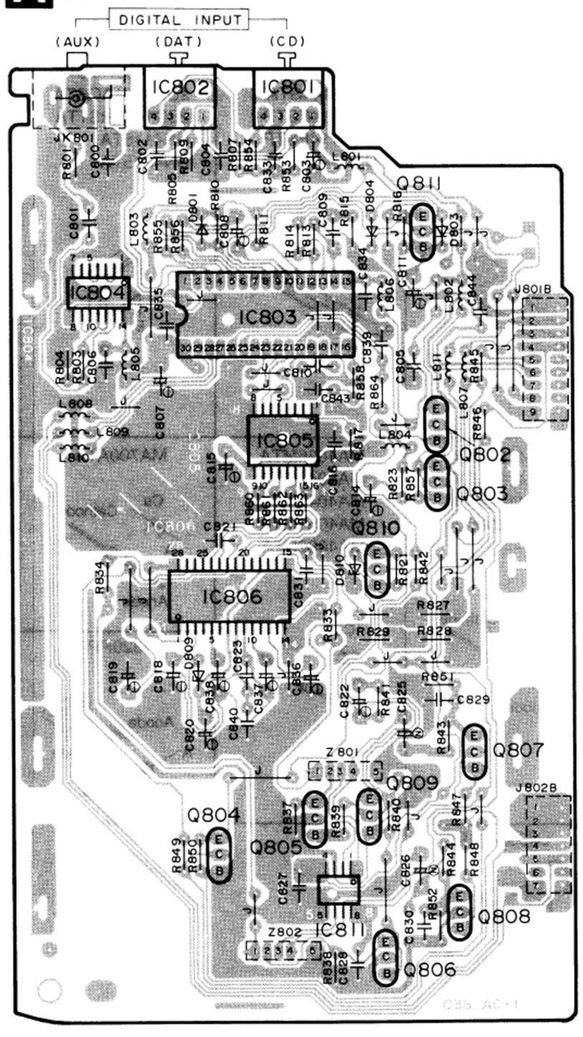




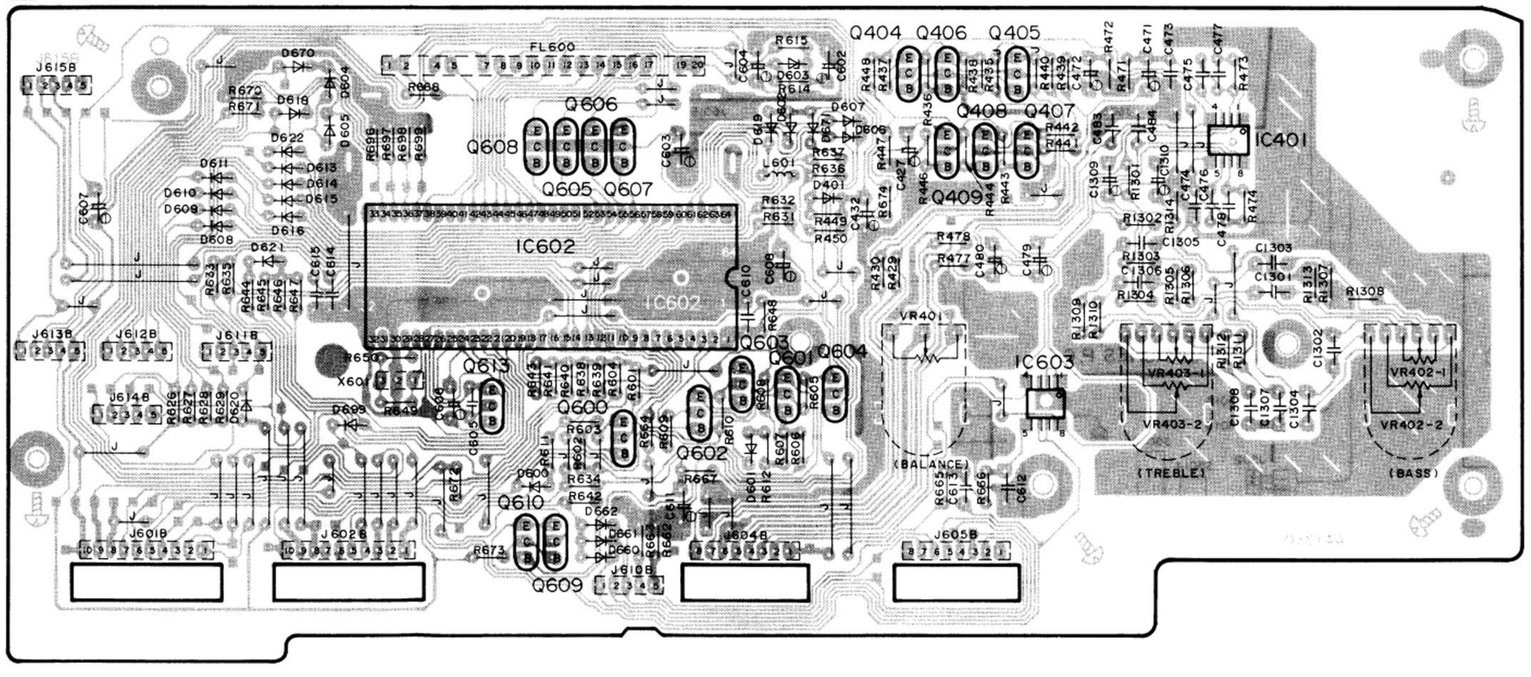
J AC IN/AC OUTLET P.C.B.



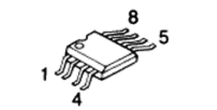
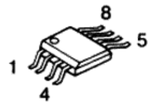
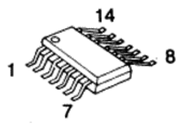
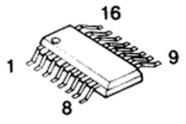
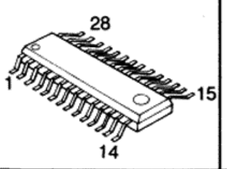
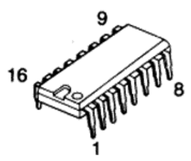
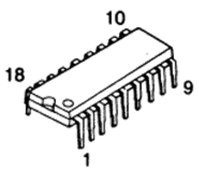
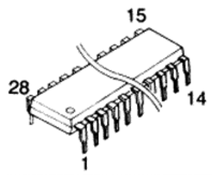
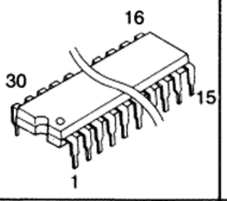
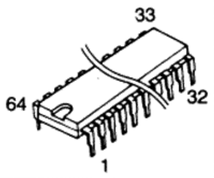
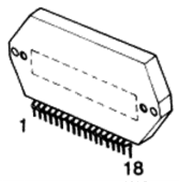
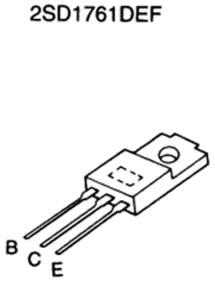
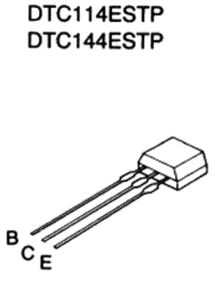
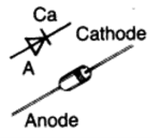
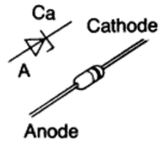
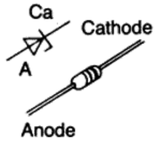
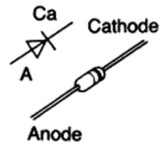
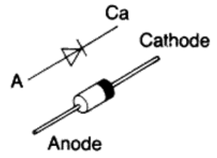
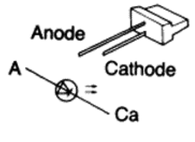
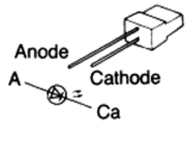
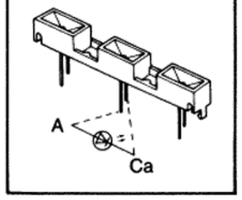
A D/A CONVERTER P.C.B.



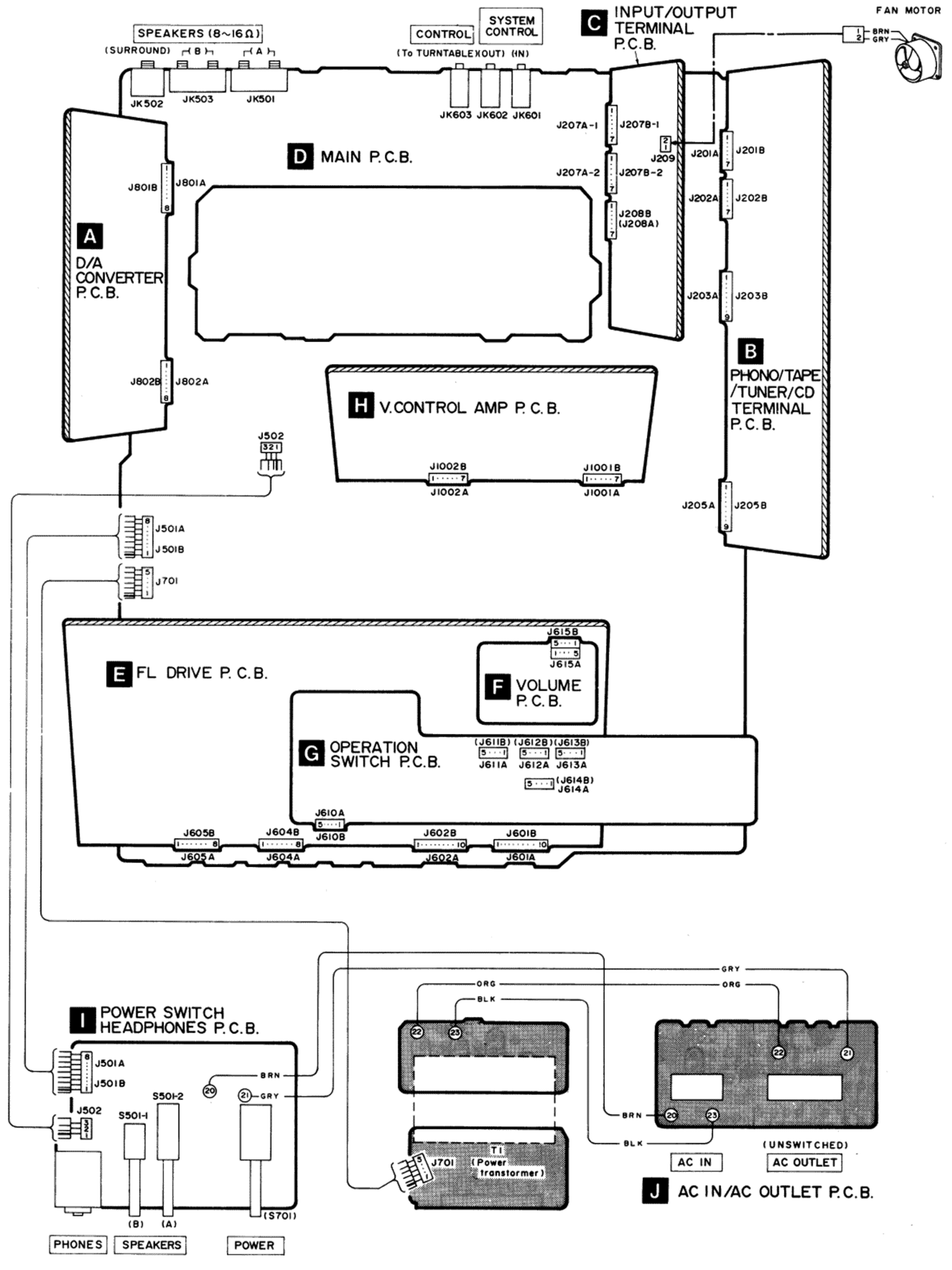
E FL DRIVE P.C.B.



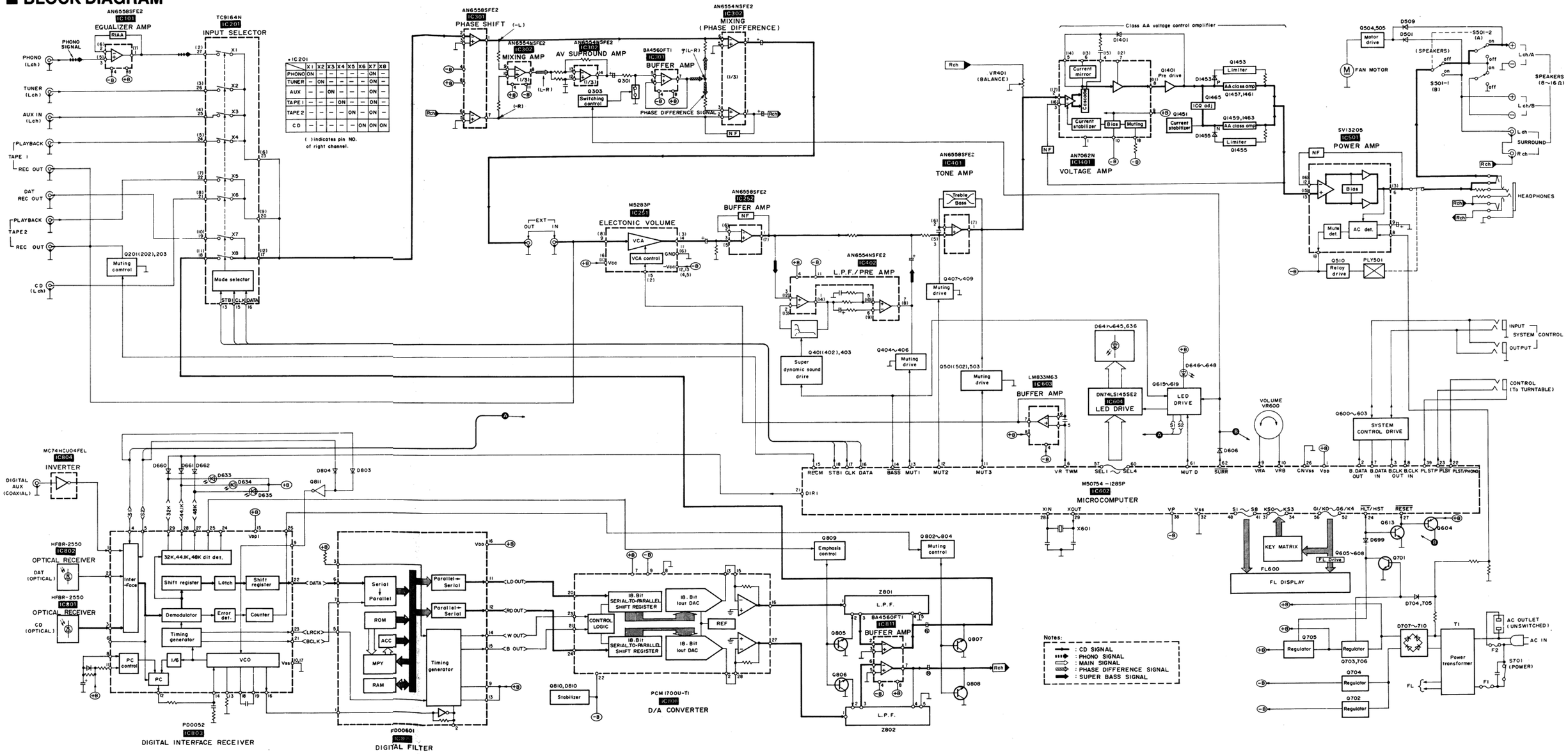
■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

BA4560FT1 	AN6558SFE2 BA4560FT1 LM833M63 	AN6554NSFE2 MC74HCU04FEL 	DN74LS145SE2 PD00601 
PCM1700U-T1 	M5283P 	AN7062N 	TC9164N 
PD0052 	M50754-128SP 	SVI3205 	2SA992EFPTA 2SA1123RSTTA 2SB621AQRSTA 2SC1567QRS 2SC2631RSTTA 2SC3114STUTA 
2SA1535AQRS 2SB1187DEF 2SC3944AQRS 2SD1761DEF 	2SC2458ABCTA 2SD2144STA DTA114ESTP DTC114ESTP DTC144ESTP 	2SA1309AQSTA 2SC3311AQSTA 2SD1450RSTTA UN4115TA UN4215TA 	MA165TA MA167TA MA29WATA 1SS291TA 
MA4120MTA MA4150MTA MA4160MTA MA4300MTA 	MA4036MTA MA4043MTA MA4047MTA MA4051MTA MA4062HTA 	MA700ATA 	RVDP300DLF 
		LN820RP-C 	LN846RP-C 
LN032494PS 			

■ WIRING CONNECTION DIAGRAM

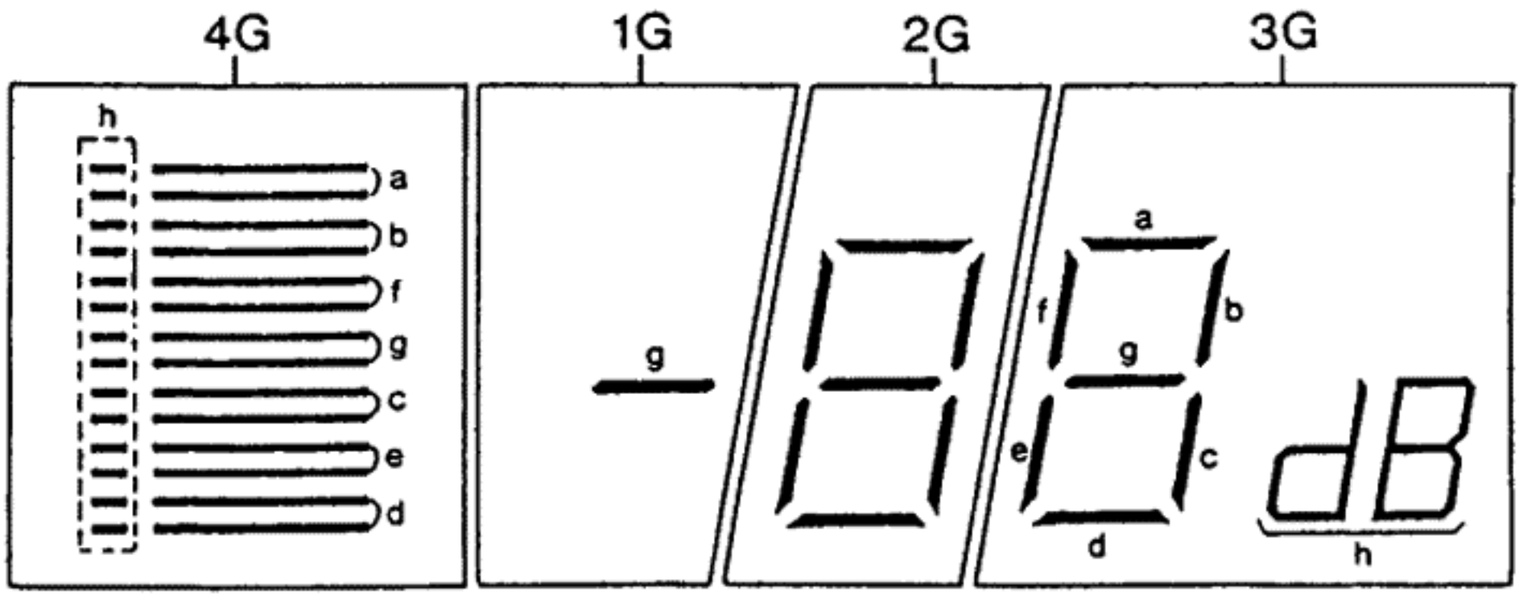


■ BLOCK DIAGRAM



■ DESCRIPTION OF FL PANEL [FL600 (SADFV217)]

• GRID ASSIGNMENT



•PIN CONNECTION

Pin No.	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	F2	F2	NP	a	4G	b	c	d	1G	e	f	2G	g	3G	NP	h	3G	NP	F1	F1

■ FUNCTIONS OF IC TERMINALS

•IC805 (PD00601)

Pin No.	Symbol	I/O	Function Description
1	X IN	I	These are the I/O terminals for the oscillating clock signal.
2	X OUT	O	
3	MODE 1	I	Master clock input terminal.
5	LR CLK	I	LR clock input terminal.
6	DATA	I	Serial data input terminal.
7	BCK	I	Bit clock input terminal.
9 • 13	MODE 2 • MODE 3	I	Select the output data. MODE 3 / MODE 2 / OUTPUT DATA H / H / 18 bit H / L / 16 bit L / — / 20 bit
11	LD OUT	O	Output the signal on the left channel.
12	RD OUT	O	Output the signal on the right channel.
14	W OUT	O	Output the signal for the word clock.
15	B OUT	O	Output the signal for the bit clock.
16	VDD	I	To be connected to a power supply. (+5 V)

•IC602 (M50754–128SP)

Pin No.	Symbol	I/O	Function Description
1	VDD	—	To be connected to a power supply. (+5 V)
2	B. DATA OUT	O	This is the output terminal for the bus data signal.
3	B. CLK OUT	O	This is the output terminal for the bus clock signal.
6	VR PWM	O	This terminal outputs the signal for the control of the volume.
7	B. DATA IN	I	This is the input terminal for the bus data signal.
8	B. CLK IN	I	This is the input terminal for the bus clock signal.
9	VR A	I	These are the terminals for the rotary encoder of the volume of VR600.
10	VR B		
11	MUT 3	O	Outputs the −6 dB signal for control of attenuated muting.
12	MUT 2		
13	MUT 1	O	Output the signal for the control of muting.
14	$\overline{\text{BASS}}$	O	Output the signal for the control of super bass LED.
15	REC M	O	Output the signal for muting the VTR 1 recording.
16	DATA	O	These are output terminal for data and clock signals.
17	CLK		
18	STB 1	O	The serial data inputted into IC201 is latched by the STB pulse and the switch is set to ON according to data.
22	$\overline{\text{PLST}}$/$\overline{\text{PHONO}}$	O	These are the terminals for sync recording on the player.
23	$\overline{\text{PLSY}}$	I	
24	$\overline{\text{HLT}}$/HST	I	This is the terminal for the detection of power supply.
25	KS4	I	This is the key scan terminal.
27	$\overline{\text{RESET}}$	I	This is the input terminal for the reset signal.
28	X IN	I	These are the I/O terminals for the oscillating clock signal.
29	X OUT	O	
34 ~ 37	KS 3 ~ KS 0	I	These are the key scan terminals.
38	VP	I	The signal which pulls down the voltage is inputted into this terminal.
39	PLS TP	O	This is the terminal for sync recording on the player.
41 ~ 48	S8 ~ S1	O	There terminals output signals for the control of the FL display.
52 ~ 56	G5/K4 ~ G1/K0		
57 ~ 60	SEL 1 ~ SEL 4	O	Output the signal for the control of the LED.
61	MUT D		
62	$\overline{\text{SURR}}$		

■ REPLACEMENT PARTS LIST

Notes : • Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
• 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.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101	AN6558SFE2	IC, PHONO EQ AMP.	
IC201	TC9164N	IC, INPUT SELECTOR	
IC251	M5283P	IC, ATTENUATOR	
IC252	AN6558SFE2	IC, BUFFER AMP.	
IC301	AN6558SFE2	IC, PHASE SHIFT	
IC302	AN6554NSFE2	IC, MIXING/PHASE SHIFT	
IC303	BA4560FT1	IC, BUFFER AMP.	
IC401	AN6558SFE2	IC, TONE AMP.	
IC402	AN6554NSFE2	IC, PRE/BUFFER AMP.	
IC501	SVI3205	IC, POWER AMP.	
IC602	M50754-128SP	IC, MICROCOMPUTER	
IC603	LM833M63	IC, BUFFER AMP.	
IC604	DN74LS145SE2	IC, LED DRIVE	
IC801, 802	HFBR-2550	IC, OPTICAL RECEVER	
IC803	PD0052	IC, DIGITAL INTERFACE	
IC804	MC74HCU04FEL	IC, INVERTER	
IC805	PD00601	IC, DIGITAL FILTER	
IC806	PCM1700U-T1	IC, D/A CONVERTER	
IC811	BA4560FT1	IC, BUFFER AMP.	
IC1401	AN7062N	IC, VOLTAGE AMP.	
		TRANSISTOR(S)	
Q201, 202	2SD2144STA	TRANSISTOR	
Q203	DTA114ESTP	TRANSISTOR	
Q205	2SC3311AQSTA	TRANSISTOR	
Q206	2SA1309AQSTA	TRANSISTOR	
Q301	2SD2144STA	TRANSISTOR	
Q303	DTA114ESTP	TRANSISTOR	
Q401, 402	2SD2144STA	TRANSISTOR	
Q403, 404	DTA114ESTP	TRANSISTOR	
Q405-408	2SD2144STA	TRANSISTOR	
Q409	2SA1309AQSTA	TRANSISTOR	
Q501, 502	2SD1450RSTTA	TRANSISTOR	
Q503	2SA1309AQSTA	TRANSISTOR	
Q504	2SC2458ABCTA	TRANSISTOR	
Q505	2SA1309AQSTA	TRANSISTOR	
Q510	2SA992EFPTA	TRANSISTOR	
Q600, 601	2SC3311AQSTA	TRANSISTOR	
Q602, 603	DTC144ESTP	TRANSISTOR	
Q604	UN4115TA	TRANSISTOR	
Q605-608	DTC114ESTP	TRANSISTOR	
Q609, 610	2SC3311AQSTA	TRANSISTOR	
Q613	DTC114ESTP	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks
Q615	DTC114ESTP	TRANSISTOR	
Q616, 617	UN4215TA	TRANSISTOR	
Q618, 619	DTA114ESTP	TRANSISTOR	
Q701	UN4215TA	TRANSISTOR	
Q702	2SB621AQRSTA	TRANSISTOR	
Q703	2SD1761DEF	TRANSISTOR	
Q704	2SB1187DEF	TRANSISTOR	
Q705, 706	2SD1761DEF	TRANSISTOR	
Q802, 803	DTC114ESTP	TRANSISTOR	
Q804	DTA114ESTP	TRANSISTOR	
Q805, 806	2SC3114STUTA	TRANSISTOR	
Q807, 808	2SD2144STA	TRANSISTOR	
Q809	DTA114ESTP	TRANSISTOR	
Q810	2SC3311AQSTA	TRANSISTOR	
Q811	DTC114ESTP	TRANSISTOR	
Q1401, 1402	2SA1123-R	TRANSISTOR	
Q1451, 1452	2SC2631-R	TRANSISTOR	
Q1453, 1454	2SC3311AQSTA	TRANSISTOR	
Q1455, 1456	2SA1309AQSTA	TRANSISTOR	
Q1457, 1458	2SC2631-R	TRANSISTOR	
Q1459, 1460	2SA1123-R	TRANSISTOR	
Q1461, 1462	2SC3944AQRS	TRANSISTOR	
Q1463, 1464	2SA1535AQRS	TRANSISTOR	
Q1465, 1466	2SC1567QRS	TRANSISTOR	
		DIODE (S)	
D401	MA165TA	DIODE	
D501, 502	MA167TA	DIODE	
D503	MA165TA	DIODE	
D504	MA4051MTA	DIODE	
D507, 508	MA4120MTA	DIODE	
D509, 510	MA167TA	DIODE	
D515	MA4160MTA	DIODE	
D600, 601	MA700ATA	DIODE	
D602	MA165TA	DIODE	
D603	MA4047MTA	DIODE	
D604-611	MA165TA	DIODE	
D613-616	MA165TA	DIODE	
D618	MA165TA	DIODE	
D619	1SS291TA	DIODE	
D620, 621	MA165TA	DIODE	
D622	MA700ATA	DIODE	
D627-630	MA165TA	DIODE	
D633-635	LN846RP-C	LED	
D636	LN038494PS	LED	
D641-645	LN820RP-C	LED	

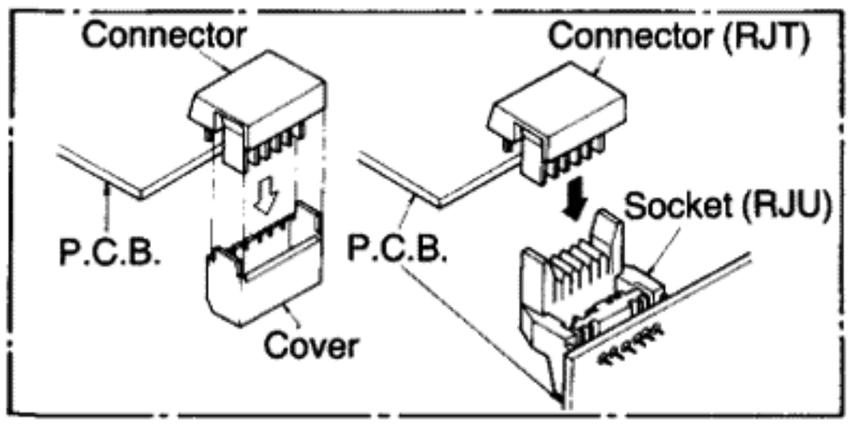
Ref. No.	Part No.	Part Name & Description	Remarks
D646-648	LN846RP-C	LED	
D660-662	MA165TA	DIODE	
D670, 671	MA165TA	DIODE	
D699	MA165TA	DIODE	
D701, 702	MA4150MTA	DIODE	
D703	MA165TA	DIODE	
D704, 705	MA167TA	DIODE	
D706	MA4062HTA	DIODE	
D707-710	RVDP300DLF	DIODE	⚠
D713	MA4300MTA	DIODE	
D801	MA165TA	DIODE	
D803, 804	MA165TA	DIODE	
D809	MA4051LTA	DIODE	
D810	MA4043MTA	DIODE	
D1401, 1402	MA167ATA	DIODE	
D1403, 1404	MA4036MTA	DIODE	
D1405, 1406	MA165TA	DIODE	
D1451, 1452	MA29WATA	DIODE	
D1453-1456	MA165TA	DIODE	
		VARIABLE RESISTOR(S)	
VR401	EWHFDAF25G15	BALANCE CONTROL	
VR402, 403	EWC2XAF25C15	BASS/TREBLE CONTROL	
VR600	EVQWWVF2024B	MAIN VOLUME	
VR1451	EVNDCAA03B52	IDLING(ICQ) ADJUSTMENT	
VR1452	EVNDCAA03B52	IDLING(ICQ) ADJUSTMENT	
		THERMISTOR(S)	
TH1451	ERTD2ZHL104T	THERMISTOR	
TH1452	ERTD2ZHL104T	THERMISTOR	
		COMPONENT COMBINATION(S)	
Z801, 802	H8DN2041B	COMPONENT COMBINATION	
		COIL(S)	
L501, 502	SLQY18G-10	COIL	
L563-566	SLQY07G-40	COIL	(EG)
L601	RLQZP100KT-Y	COIL	
L602-604	RLQZP101KT-Y	COIL	
L801	RLQZP470KT-Y	COIL	
L802	RLQZP101KT-Y	COIL	
L803	RLQZP3R3KT-Y	COIL	
L804	RLQZP1R2KT-Y	COIL	
L805	RLQZP3R3KT-Y	COIL	
L806	RLQZP1R2KT-Y	COIL	
L807	RLQZP3R3KT-Y	COIL	
L808-810	RLQZP1R2KT-Y	COIL	
L811	RLQZP3R3KT-Y	COIL	

Ref. No.	Part No.	Part Name & Description	Remarks
L1501, 1502	SLQY18G-10	COIL	
		OSCILLATOR(S)	
X601	EF0GC6004T4	OSCILLATOR	
		DISPLAY TUBE	
FL600	SADFV217	DISPLAY TUBE	
		FUSE(S)	
F1, 2	XBA2C20TB0	FUSE 250V T2.0A	⚠
		SWITCH(ES)	
S501-1	SSH2128	SW, SP SELECTOR B	
S501-2	SSH2128	SW, SP SELECTOR A	
S600	EVQ21405R	SW, SURROUND SOUND	
S601	EVQ21405R	SW, SUPER BASS	
S602	EVQ21405R	SW, AUDIO MUTING	
S603	EVQ21405R	SW, VOLUME PRESET	
S604	EVQ21405R	SW, INPUT SELECTOR(DAT)	
S605	EVQ21405R	SW, INPUT SELECTOR(CD)	
S606	EVQ21405R	SW, INPUT SELECTOR(D. AUX)	
S607	EVQ21405R	SW, INPUT SELECTOR(TAPE1)	
S608	EVQ21405R	SW, INPUT SELECTOR(TAPE2)	
S609	EVQ21405R	SW, INPUT SELECTOR(AUX)	
S610	EVQ21405R	SW, INPUT SELECTOR(TUNER)	
S611	EVQ21405R	SW, INPUT SELECTOR(PHONO)	
S701	ESB8249V	SW, POWER	⚠
		JACK(S)	
J209	SJT3213	CONNECTOR(2P)	
J502	RJS1A1703	CONNECTOR(3P)	
J701	RJS1A1705	CONNECTOR(5P)	
J201A	RJT057W007	CONNECTOR(7P)	
J202A	RJT057W007	CONNECTOR(7P)	
J203A	RJT057W009	CONNECTOR(9P)	
J205A	RJT057W009	CONNECTOR(9P)	
J208A	RJT057W007	CONNECTOR(7P)	
J501A	RJS1A1704	CONNECTOR(4P)	
J601A	RJU003K010M1	SOCKET(10P)	(Black)
	SJT31054WF	CONNECTOR(10P)	(Ivory)
J602A	RJU003K010M1	SOCKET(10P)	(Black)
	SJT31054WF	CONNECTOR(10P)	(Ivory)
J604A	RJU003K008M1	SOCKET(8P)	(Black)
	SJT30854WF	CONNECTOR(8P)	(Ivory)
J605A	RJU003K008M1	SOCKET(8P)	(Black)
	SJT30854WF	CONNECTOR(8P)	(Ivory)
J610A	SJS50581BB	SOCKET(5P)	

Ref. No.	Part No.	Part Name & Description	Remarks
J611A	SJS50581BB	SOCKET(5P)	
J612A	SJS50581BB	SOCKET(5P)	
J613A	SJS50581BB	SOCKET(5P)	
J614A	SJS50581BB	SOCKET(5P)	
J615A	SJS50581BB	SOCKET(5P)	
J801A	RJT057W009	CONNECTOR(9P)	
J802A	RJT057W007	CONNECTOR(7P)	
J1001A	RJT057W007	CONNECTOR(7P)	
J1002A	RJT057W007	CONNECTOR(7P)	
J207A-1, 2	RJT057W007	CONNECTOR(7P)	
J207B-1, 2	RJU057W007	SOCKET(7P)	
J201B	RJU057W007	SOCKET(7P)	
J202B	RJU057W007	SOCKET(7P)	
J203B	RJU057W009	SOCKET(9P)	
J205B	RJU057W009	SOCKET(9P)	
J208B	RJU057W007	SOCKET(7P)	
J501B	RJS1A1704	CONNECTOR(4P)	
J601B	RJT003K010M1	CONNECTOR(10P)	(Black or Gray)
	SJS51087WF	SOCKET(10P)	(Ivory)
J602B	RJT003K010M1	CONNECTOR(10P)	(Black or Gray)
	SJS51087WF	SOCKET(10P)	(Ivory)
J604B	RJT003K008M1	CONNECTOR(8P)	(Black or Gray)
	SJS50887WF	SOCKET(8P)	(Ivory)
J605B	RJT003K008M1	CONNECTOR(8P)	(Black or Gray)
	SJS50887WF	SOCKET(8P)	(Ivory)
J610B	SJT30549BB1	CONNECTOR(5P)	
J611B	SJT30549BB1	CONNECTOR(5P)	
J612B	SJT30549BB1	CONNECTOR(5P)	
J613B	SJT30549BB1	CONNECTOR(5P)	
J614B	SJT30549BB1	CONNECTOR(5P)	
J615B	SJT30549BB1	CONNECTOR(5P)	

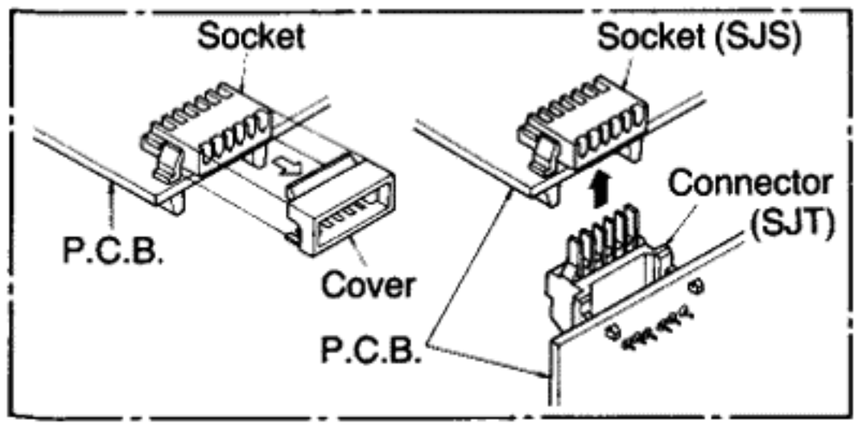
Ref. No.	Part No.	Part Name & Description	Remarks
J801B	RJU057W009	SOCKET(9P)	
J802B	RJU057W007	SOCKET(7P)	
J1001B	RJU057W007	SOCKET(7P)	
J1002B	RJU057W007	SOCKET(7P)	
JK201	SJF3069N	EXT IN/OUT	
JK202	SJF3069N	TAPE2 PB/AUX	
JK203	SJF3069N	DAT/TAPE2 REC OUT	
JK204	SJF3067N	PHONO/TAPE1 REC OUT	
JK205	SJF3069N	TAPE1 PB/TUNER	
JK206	SJF3068N	CD	
JK501	RJR0054	SP A	
JK502	SJF3068-4N	SP SURROUND	
JK503	RJR0054	SP B	
JK503A	RJJ67TS02	H.P JACK	
JK601	RJJ33T01	SYSTEM CONTROL IN	
JK602	RJJ33T01	SYSTEM CONTROL OUT	
JK603	RJJ33T01	TURN TABLE CONTROL	
JK801	SJFD7-2	DIGITAL INPUT	
		FUSE HOLDER(S)	
FC1-4	SJT388	FUSE HOLDER	
		RELAY	
RLY501	SSY134	RELAY	
		TRANJFORMER(S)	
T1	SLT5P289-W	POWER TRANSFORMER	⚠(E, EG)
T1	SLT5P288-W	POWER TRANSFORMER	⚠(EB)

Ⓐ



Pins	Part No.	
8 pin	RJT003K008M1	(Black or Gray)
8 pin	RJU003K008M1	(Black)
10 pin	RJT003K010M1	(Black or Gray)
10 pin	RJU003K010M1	(Black)

Ⓑ



Pins	Part No.	
8 pin	SJS50887WF	(Ivory)
8 pin	SJT30854WF	(Ivory)
10 pin	SJS51087WF	(Ivory)
10 pin	SJT31054WF	(Ivory)

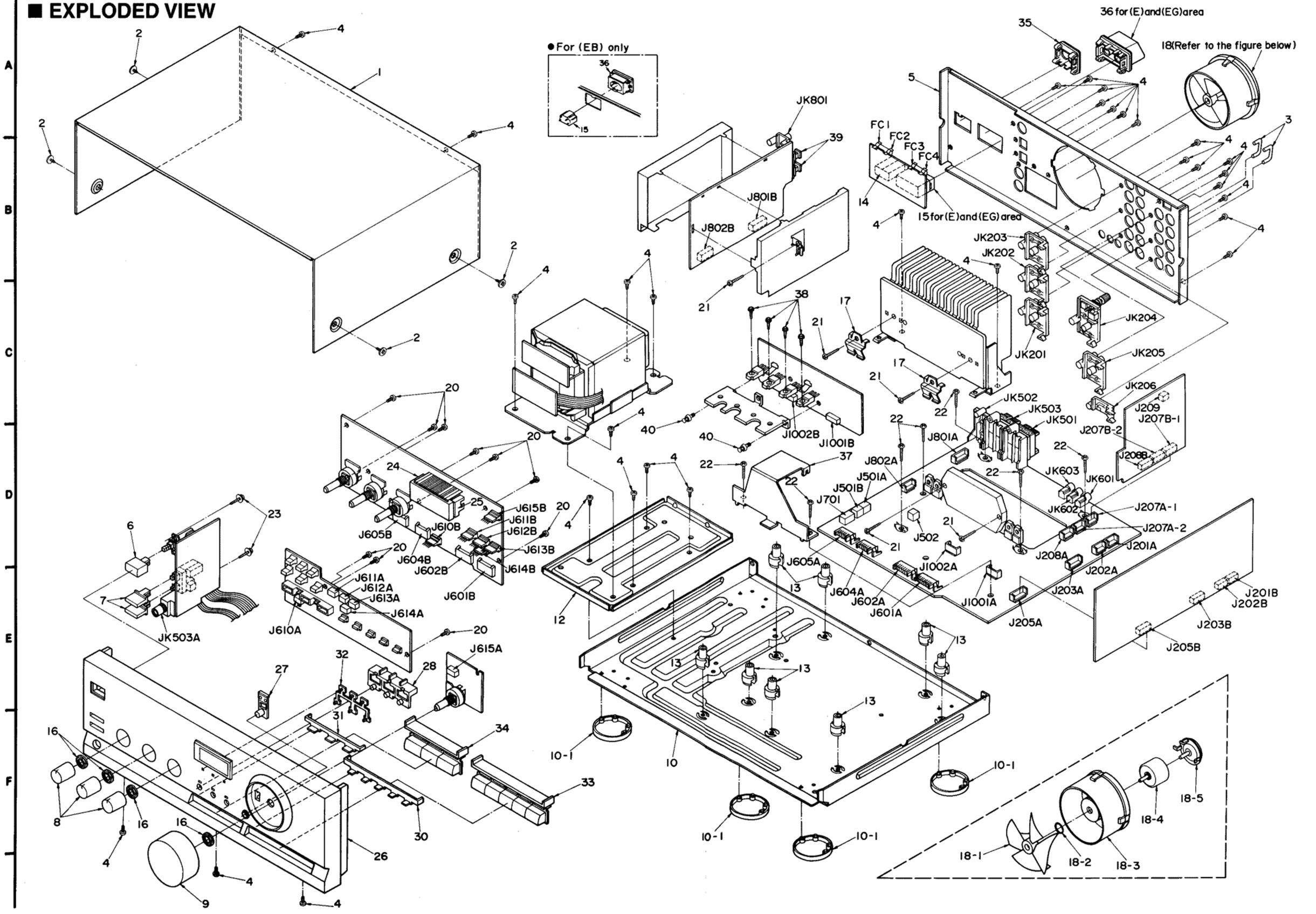
Notes:

- Regarding Ref. No. J601A, J602A, J604A, J605A, J601B, J602B, J604B, J605B, there are two types (Ⓐ and Ⓑ).
- Be sure to order the replacement parts of the desired color by the corresponding part numbers.
- The type-Ⓐ connector and the type-Ⓑ socket are protected with covers when they are supplied. Remove the cover after soldering the connector or socket to P.C.B.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
1	RKM0024A-2K	CABINET	
2	RHD30007	SCREW	
3	SJP9205-2Y	SHORTING PIN	
4	XTBS3+8JFZ1	SCREW	
5	RGR0083B-A	REAR PANEL	(E)
5	RGR0083A-A	REAR PANEL	(EB)
5	RGR0083B-B	REAR PANEL	(EG)
6	RGU0030	POWER BUTTON	
7	RGU0101	SP SELECTOR BUTTON	
8	RGW0028-1K	TONE KNOB	
9	RGW0049	MAIN VOL KNOB	
10	RFKJUX301E-K	CHASSIS ASS'Y	
10-1	RKA0011	FOOT	
12	RMA0138	ANGLE	
13	SHE187-2	HOLDER	
14	SJS9231-1B	AC INLET	⚠
15	SJS9333B	AC OUTLET	⚠(E, EG)
15	SJS9332B	AC OUTLET	⚠(EB)
16	SNE4021-1	NUT	
17	SUS894-1	SPRING	
18	SYE1128-3	FAN ASS'Y	
18-1	SHE232	FAN	
18-2	SUS271	SPRING	
18-3	SHE233	FAN CASE	
18-4	MDN-4RB4MRC	MOTOR	
18-5	SHE234	CAP	
20	XTBS26+8J	SCREW	
21	XTB3+16J	SCREW	
22	XTB3+20JFZ	SCREW	
23	XTWS3+8T	SCREW	
24	SMN2056	FL HOLDER(L)	
25	SMN2056-1	FL HOLDER(R)	
26	RFKGUX901E-K	FRONT PANEL	
27	RFKNUX901EK1	VOL PRESET BUTTON	
28	RFKNUX901EK2	SURROUND(etc) BUTTON	
30	RGL0080-X	PANEL LIGHT	
31	RGL0081-X	PANEL LIGHT	
32	RGL0082-X	PANEL LIGHT	
33	RGU0361-K	INPUT SELECTOR BUTTON	
34	RGU0362-K	DIGITAL SELECTOR BUTTON	
35	SJS9231A	AC INLET COVER	⚠
36	SJS9333A	AC OUTLET COVER	⚠(E, EG)
36	SJS9332A	AC OUTLET COVER	⚠(EB)
37	RMN0072	ANGLE	
38	XTB3+8J	SCREW	
39	RFKNUX901EKA	CAP	
40	SHR415	LATCH	

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIAL	
P1	RPG0469	CARTON BOX	
P2	RPN0332	PAD	
P3	SPSD152	ACCESSORIES BOX	
P4	XZB52X60A01Z	PROTECTION COVER	
		ACCESSORIES	
A1	RQF0574	INSTRUCTIONS MANUAL ASS'Y	(E)
A1	RQF0573	INSTRUCTIONS MANUAL ASS'Y	(EB)
A1	RQF0575	INSTRUCTIONS MANUAL ASS'Y	(EG)
A1-1	RQA0013	WARRANTY CARD	(E, EG)
A1-2	RQCB0169	SERVICENTOR LIST	
A1-3	RFKSUX901E-K	INSTRUCTIONS MANUAL	(E)
A1-3	RQT0486-B	INSTRUCTIONS MANUAL	(EB)
A1-3	RQT0470-D	INSTRUCTIONS MANUAL	(EG)
A1-4	RQCS0009	CAUTION NOTE FOR FTZ	(EG)
A2	SFDAC05E03	AC CORD	⚠(E, EG)
A2	SJA188	AC CORD	⚠(EB)

■ EXPLODED VIEW



Notes : * Capacity valuse 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
		RESISTORS
R107, 108	ERDS2TJ471T	1/4W 470
R109, 110	ERDS2TJ473T	1/4W 47K
R111, 112	ERDS2TJ331T	1/4W 330
R113, 114	ERDS2TJ680T	1/4W 68
R115, 116	ERDS2TJ184T	1/4W 180K
R117, 118	ERDS2TJ123T	1/4W 12K
R119, 120	ERDS2TJ224T	1/4W 220K
R121, 122	ERDS2TJ102T	1/4W 1K
R123, 124	ERDS2TJ471T	1/4W 470
R201, 202	ERDS2TJ472T	1/4W 4.7K
R203-206	ERDS2TJ102T	1/4W 1K
R207, 208	ERDS2TJ822T	1/4W 8.2K
R209, 210	ERDS2TJ102T	1/4W 1K
R211, 212	ERDS2TJ821T	1/4W 820
R213-220	ERDS2TJ102T	1/4W 1K
R221, 222	ERDS2TJ392T	1/4W 3.9K
R223, 224	ERDS2TJ334T	1/4W 330K
R225	ERDS2TJ273T	1/4W 27K
R230, 231	ERDS2TJ102T	1/4W 1K
R249	ERDS2TJ103T	1/4W 10K
R250	ERDS2TJ223T	1/4W 22K
R251, 252	ERDS2TJ473T	1/4W 47K
R253, 254	ERDS2TJ183T	1/4W 18K
R255, 256	ERDS2TJ153T	1/4W 15K
R257, 258	ERDS2TJ473T	1/4W 47K
R271, 272	ERDS2TJ152T	1/4W 1.5K
R297, 298	ERDS2TJ182T	1/4W 1.8K
R301-304	ERDS2TJ223T	1/4W 22K
R305, 306	ERDS2TJ224T	1/4W 220K
R307, 308	ERDS2TJ332T	1/4W 3.3K
R309, 310	ERDS2TJ223T	1/4W 22K
R311, 312	ERDS2TJ393T	1/4W 39K
R313-315	ERDS2TJ223T	1/4W 22K
R316	ERDS2TJ622T	1/4W 6.2K
R317	ERDS2TJ562T	1/4W 5.6K
R318	ERDS2TJ123T	1/4W 12K
R319	ERDS2TJ224T	1/4W 220K
R321, 322	ERDS2TJ332T	1/4W 3.3K
R324	ERDS2TJ332T	1/4W 3.3K
R325, 326	ERDS2TJ392T	1/4W 3.9K
R327, 328	ERDS2TJ104T	1/4W 100K
R329	ERDS2TJ332T	1/4W 3.3K
R331	ERDS2TJ105T	1/4W 1M
R332	ERDS2TJ334T	1/4W 330K
R401, 402	ERDS2TJ153T	1/4W 15K
R403, 404	ERDS2TJ103T	1/4W 10K
R405, 406	ERDS2TJ393T	1/4W 39K
R407, 408	ERDS2TJ333T	1/4W 33K
R409, 410	ERDS2TJ103T	1/4W 10K
R411, 412	ERDS2TJ332T	1/4W 3.3K
R413, 414	ERDS2TJ153T	1/4W 15K
R415, 416	ERDS2TJ222T	1/4W 2.2K
R417, 418	ERDS2TJ221T	1/4W 220
R419, 420	ERDS2TJ273T	1/4W 27K
R421, 422	ERDS2TJ470T	1/4W 47
R423, 424	ERDS2TJ153T	1/4W 15K
R425-428	ERDS2TJ152T	1/4W 1.5K
R429, 430	ERDS2TJ333T	1/4W 33K
R431, 432	ERDS2TJ102T	1/4W 1K
R433	ERDS2TJ105T	1/4W 1M
R434	ERDS2TJ334T	1/4W 330K
R435, 436	ERDS2TJ102T	1/4W 1K
R437	ERDS2TJ105T	1/4W 1M
R438	ERDS2TJ334T	1/4W 330K
R439, 440	ERDS2TJ152T	1/4W 1.5K
R441, 442	ERDS2TJ222T	1/4W 2.2K
R443, 444	ERDS2TJ102T	1/4W 1K
R445	ERDS2TJ222T	1/4W 2.2K
R446	ERDS2TJ104T	1/4W 100K
R447	ERDS2TJ334T	1/4W 330K
R448	ERDS2TJ105T	1/4W 1M
R449	ERDS2TJ103T	1/4W 10K
R450	ERDS2TJ332T	1/4W 3.3K
R471-474	ERDS2TJ334T	1/4W 330K
R477, 478	ERDS2TJ102T	1/4W 1K
R501	ERDS2TJ104T	1/4W 100K
R502	ERDS2TJ105T	1/4W 1M
R507, 508	ERDS2TJ182T	1/4W 1.8K
R509-512	ERDS2TJ121T	1/4W 120
R513, 514	ERDS2TJ392T	1/4W 3.9K
R515, 516	ERDS2TJ223T	1/4W 22K
R517	ERDS2TJ563T	1/4W 56K
R518	ERDS2TJ684T	1/4W 680K
R519	ERDS2TJ154T	1/4W 150K
R520	ERDS2TJ153T	1/4W 15K
R521	ERDS2TJ103T	1/4W 10K
R522	ERDS1FVJ680T	1/2W 68 ⚠
R524	ERDS2TJ105T	1/4W 1M
R525, 526	ERD25FVJ100T	1/4W 10 ⚠
R527, 528	ERDS1FVJ100T	1/2W 10 ⚠
R529	ERG1SJ331E	1W 330
R530	ERDS2TJ223T	1/4W 22K
R531, 532	ERG2ANJP331S	2W 330
R535-538	ERDS2TJ472T	1/4W 4.7K
R539	ERDS2TJ102T	1/4W 1K
R540	ERDS2TJ334T	1/4W 330K
R541	ERDS2TJ223T	1/4W 22K
R542	ERDS2TJ332T	1/4W 3.3K
R543	ERDS1FVJ560T	1/2W 56 ⚠
R545, 546	ERDS2TJ223T	1/4W 22K
R551	ERDS2TJ104T	1/4W 100K
R552, 553	ERG1SJ331E	1W 330
R554	ERD25FVJ470T	1/4W 47 ⚠
R600	ERDS2TJ331T	1/4W 330
R601	ERDS2TJ223T	1/4W 22K
R602-604	ERDS2TJ393T	1/4W 39K
R605	ERDS2TJ223T	1/4W 22K
R606-608	ERDS2TJ393T	1/4W 39K
R609-612	ERDS2TJ100T	1/4W 10
R614, 615	ERDS2TJ151T	1/4W 150
R626-629	ERDS2TJ182T	1/4W 1.8K
R631, 632	ERDS2TJ103T	1/4W 10K
R633	ERDS2TJ332T	1/4W 3.3K
R634-637	ERDS2TJ103T	1/4W 10K
R638, 639	ERDS2TJ332T	1/4W 3.3K
R640	ERDS2TJ102T	1/4W 1K
R641-643	ERDS2TJ103T	1/4W 10K
R644	ERDS2TJ822T	1/4W 8.2K
R645	ERDS2TJ393T	1/4W 39K
R646	ERDS2TJ332T	1/4W 3.3K
R647	ERDS2TJ103T	1/4W 10K
R648	ERDS2TJ104T	1/4W 100K
R649	ERDS2TJ105T	1/4W 1M
R650	ERDS2TJ102T	1/4W 1K
R651	ERDS2TJ151T	1/4W 150
R652	ERDS2TJ331T	1/4W 330
R662, 663	ERDS2TJ103T	1/4W 10K
R664	ERDS2TJ223T	1/4W 22K
R665, 666	ERDS2TJ103T	1/4W 10K
R667	ERDS2TJ105T	1/4W 1M
R668	ERDS2TJ101T	1/4W 100
R670	ERDS2TJ104T	1/4W 100K
R671	ERDS2TJ102T	1/4W 1K
R672	ERDS2TJ101T	1/4W 100
R673	ERDS2TJ473T	1/4W 47K
R674	ERDS2TJ103T	1/4W 10K
R680-682	ERDS2TJ271T	1/4W 270
R683, 684	ERDS2TJ101T	1/4W 100
R696-699	ERDS2TJ104T	1/4W 100K
R701, 702	ERDS1FVJ472T	1/2W 4.7K ⚠
R703	ERD25FVJ101T	1/4W 100 ⚠
R704	ERDS2TJ473T	1/4W 47K
R705	ERDS2TJ103T	1/4W 10K
R706	ERDS1FVJ2R2T	1/2W 2.2 ⚠

Ref. No.	Part No.	Values & Remarks
R707	ERDS1FVJ3R3T	1/2W 3.3 ⚠
R709	ERDS2TJ562T	1/4W 5.6K
R710	ERDS1FVJ331T	1/2W 330 ⚠
R711	ERDS2TJ102T	1/4W 1K
R713	ERDS2TJ2R2T	1/4W 2.2
R716	ERDS2TJ2R2T	1/4W 2.2
R717	ERDS2TJ330T	1/4W 33
R801	ERDS2TJ750T	1/4W 75
R803	ERDS2TJ104T	1/4W 100K
R804	ERDS2TJ182T	1/4W 1.8K
R805	ERDS2TJ122T	1/4W 1.2K
R807	ERDS2TJ100T	1/4W 10
R809	ERDS2TJ122T	1/4W 1.2K
R810	ERDS2TJ103T	1/4W 10K
R811	ERDS2TJ102T	1/4W 1K
R813	ERDS2TJ102T	1/4W 1K
R814	ERDS2TJ103T	1/4W 10K
R815	ERDS2TJ560T	1/4W 56
R816	ERDS2TJ472T	1/4W 4.7K
R817	ERDS2TJ473T	1/4W 47K
R821	ERDS2TJ101T	1/4W 100
R823	ERDS2TJ472T	1/4W 4.7K
R827	ERDS1FVJ271T	1/2W 270 ⚠
R828	ERDS1FVJ680T	1/2W 68 ⚠
R829	ERDS1FVJ820T	1/2W 82 ⚠
R833, 834	ERDS2TJ221T	1/4W 220
R837, 838	ERDS2TJ474T	1/4W 470K
R839, 840	ERDS2TJ102T	1/4W 1K
R841	ERDS2TJ104T	1/4W 100K
R842-844	ERDS2TJ272T	1/4W 2.7K
R845-848	ERDS2TJ471T	1/4W 470
R849	ERDS2TJ105T	1/4W 1M
R850	ERDS2TJ182T	1/4W 1.8K
R851, 852	ERDS2TJ392T	1/4W 3.9K
R853, 854	ERDS2TJ100T	1/4W 10
R855, 856	ERDS2TJ103T	1/4W 10K
R857	ERDS2TJ471T	1/4W 470
R858	ERDS2TJ182T	1/4W 1.8K
R860-864	ERDS2TJ101T	1/4W 100
R1301, 1302	ERDS2TJ102T	1/4W 1K
R1303, 1304	ERDS2TJ822T	1/4W 8.2K
R1305, 1306	ERDS2TJ223T	1/4W 22K
R1307, 1308	ERDS2TJ392T	1/4W 3.9K
R1309, 1310	ERDS2TJ182T	1/4W 1.8K
R1311, 1312	ERDS2TJ821T	1/4W 820
R1313, 1314	ERDS2TJ333T	1/4W 33K
R1401, 1402	ERDS2TJ223T	1/4W 22K
R1403, 1404	ERDS2TJ333T	1/4W 33K
R1405, 1406	ERDS2TJ122T	1/4W 1.2K
R1407, 1408	ERDS2TJ333T	1/4W 33K
R1409, 1410	ERDS2TJ561T	1/4W 560
R1411, 1412	ERD25FVJ470T	1/4W 47 ⚠
R1437	ERDS2TJ473T	1/4W 47K
R1439	ERD25FVJ470T	1/4W 47 ⚠
R1451, 1452	ERDS2TJ182T	1/4W 1.8K
R1453, 1454	ERDS2TJ393T	1/4W 39K
R1455, 1456	ERDS2TJ391T	1/4W 390
R1457, 1458	ERDS2TJ823T	1/4W 82K
R1459, 1460	ERD25FVJ101T	1/4W 100 ⚠
R1461-1464	ERDS2TJ223T	1/4W 22K
R1465-1468	ERD25FVJ101T	1/4W 100 ⚠
R1469, 1470	ERD25FVJ821T	1/4W 820 ⚠
R1471-1474	ERD25FVJ2R2T	1/4W 2.2 ⚠
R1501, 1502	ERDS2TJ362T	1/4W 3.6K
R1509-1512	RREEMKR10VC	2W 0.1
R1513-1516	ERD25FVJ100T	1/4W 10 ⚠
R1517, 1518	ERD25FVJ1R0T	1/4W 1.0 ⚠
R1531, 1532	ERDS1FVJ100T	1/2W 10 ⚠
R1707, 1708	ERD25FVJ6R8T	1/4W 6.8 ⚠
		CAPACITORS
C107, 108	ECBT1H101KB5	50V 100P
C109, 110	ECBT1H102KB5	50V 1000P
C111, 112	ECEA0JPS330B	6.3V 33U
C115, 116	ECFR1E223KR	25V 0.022U
C117, 118	ECFR1E682KR	25V 6800P
C119, 120	ECEA1HPS010B	50V 1U
C121, 122	ECBT1E223ZF5	25V 0.022U
C200	ECBT1E223ZF5	25V 0.022U
C201, 202	ECEA1EK3R3B	25V 3.3U
C203, 204	ECBT1E223ZF5	25V 0.022U
C205	ECBT1H180J5	50V 18P
C205	ECEA1CK100B	16V 10U
C206	ECBT1H180J5	50V 18P
C207, 208	ECBT1H151KB5	50V 150P
C209-216	ECBT1H101KB5	50V 100P
C219-230	ECBT1H101KB5	50V 100P
C231, 232	ECBT1E223ZF5	25V 0.022U
C250	ECEA1CU470B	16V 47U
C251, 252	ECEA1HPS3R3B	50V 3.3U
C253, 254	ECEA1HKR47B	50V 0.47U
C255, 256	ECBT1H180J5	50V 18P
C258, 259	ECBT1E223ZF5	25V 0.022U
C271, 272	ECBT1H101KB5	50V 100P
C273, 274	ECEA1CK220B	16V 22U
C275, 276	ECEA1HK010B	50V 1U
C301, 302	ECEA1HPS3R3B	50V 3.3U
C303	ECBT1H680J5	50V 68P
C304	ECQV1H823JZ3	50V 0.082U
C305	ECEA1EK3R3B	25V 3.3U
C306	ECBT1H221KB5	50V 220P
C307	ECEA1EK3R3B	25V 3.3U
C309, 310	ECBT1H820KB5	50V 82P
C311, 312	ECEA1HPS3R3B	50V 3.3U
C313	ECBT1E103ZF5	25V 0.01U
C314	ECBT1E223ZF5	25V 0.022U
C411, 412	ECEA1HK3R3B	50V 3.3U
C413, 414	ECEA1HK2R2B	50V 2.2U
C415, 416	ECFR1E822KR	25V 8200P
C417, 418	ECFR1E272KR	25V 2700P
C419, 420	ECFR1E473KR	25V 0.047U
C421, 422	ECEA1HK2R2B	50V 2.2U
C423, 424	ECEA1CPS100B	16V 10U
C425, 426	ECEA1CK220B	16V 22U
C427	ECEA0JK470B	6.3V 47U
C432	ECEA1HK2R2B	50V 2.2U
C433, 434	ECBT1E223ZF5	25V 0.022U
C471, 472	ECEA1HPS3R3B	50V 3.3U
C473, 474	ECBT1H101KB5	50V 100P
C475, 476	ECBT1H821KB5	50V 820P
C477, 478	ECBT1H680J5	50V 68P
C479, 480	ECEA1HK3R3B	50V 3.3U
C483, 484	ECBT1E103ZF5	25V 0.01U
C501, 502	ECEA0JPX101B	6.3V 100U
C505, 506	ECEA0JPX101B	6.3V 100U
C507, 508	ECBT1H270J5	50V 27P
C509, 510	ECKR1H223ZF5	50V 0.022U
C513	ECEA1CK100B	16V 10U
C514	ECEA0JK470B	6.3V 47U
C516-518	ECBT1E103ZF5	25V 0.01U
C519	ECEA1HU330B	50V 33U
C520	ECEA2AU100B	100V 10U
C521	ECEA1CU101B	16V 100U
C523, 524	ECQB1H272JZ3	50V 2700P
C531	ECBT1E223ZF5	25V 0.022U
C535, 536	ECKR1H102ZF5	50V 1000P (E, EB)
C535, 536	ECKR1H223ZF5	50V 0.022U (EG)
C537, 538	ECBT1H102KB5	50V 1000P
C539, 540	ECKR1H102ZF5	50V 1000P (E, EB)
C539, 540	ECKR1H223ZF5	50V 0.022U (EG)
C541, 542	ECBT1H102KB5	50V 1000P
C543-546	ECKR1H102ZF5	50V 1000P (EG)
C597, 598	ECBT1H221KB5	50V 220P
C602	ECEA1VK3R3B	35V 3.3U
C603	ECEA0JU470B	6.3V 47U
C604	ECEA1VK100B	35V 10U
C605	ECBT1E223ZF5	25V 0.022U
C606	ECEA1EK4R7B	25V 4.7U
C607	ECEA1CK100B	16V 10U
C608	ECEA0JU102E	6.3V 1000U
C610	ECBT1E223ZF5	25V 0.022U
C611	ECEA1HK010B	50V 1U
C612	ECQV1H333JZ3	50V 0.033U
C613	ECQV1H683JZ3	50V 0.068U
C614, 615	ECBT1H101KB5	50V 100P

Ref. No.	Part No.	Values & Remarks
C700	ECKWKC103PF2	400V 0.01U ⚠
C701, 702	ECKR1H103ZF5	50V 0.01U
C703, 704	ECEA1EU100B	25V 10U
C705, 706	ECEA1CK100B	16V 10U
C707	ECBT1E103ZF5	25V 0.01U
C708	ECEA1CK100B	16V 10U
C709	ECEA1HK2R2B	50V 2.2U
C710	ECBT1E223ZF5	25V 0.022U
C711, 712	ECES1JU682U	63V 6800U
C713	ECQE2104KF3	250V 0.1U
C715	ECEA1VK100B	35V 10U
C716	ECKR1H103ZF5	50V 0.01U
C731	ECFR1E104ZF5	25V 0.1U
C800, 801	ECBT1E223ZF5	25V 0.022U
C802	ECFR1E104ZF5	25V 0.1U
C803	ECEA1CK100B	16V 10U
C804	ECFR1E104ZF5	25V 0.1U
C805	ECBT1H102KB5	50V 1000P
C806	ECFR1E104ZF5	25V 0.1U
C807	ECEA1CK100B	16V 10U
C808	ECEA1HK010B	50V 1U
C809	ECQV1H104JZ3	50V 0.1U
C810	ECBT1H220J5	50V 22P
C811	ECEA0JK101B	6.3V 100U
C814	ECEA0JK101B	6.3V 100U
C815	ECEA1CK100B	16V 10U
C816	ECBT1H102KB5	50V 1000P
C818	ECEA1EK4R7B	25V 4.7U
C819, 820	ECEA0JK101B	6.3V 100U
C821	ECBT1E223ZF5	25V 0.022U
C822	ECEA1EK100B	25V 10U
C823	ECBT1H102KB5	50V 1000P
C825, 826	ECEA1EN100SB	25V 10U
C827, 828	ECBT1C103NS5	16V 0.01U
C829, 830	ECBT1H102KB5	50V 1000P
C831	ECBT1E223ZF5	25V 0.022U
C833	ECQV1H104JZ3	50V 0.1U
C834	ECBT1H102KB5	50V 1000P
C835	ECBT1E223ZF5	25V 0.022U
C836-838	ECEA1EK4R7B	25V 4.7U
C839, 840	ECBT1H331KB5	50V 330P
C843	ECBT1H220J5	50V 22P
C844	ECBT1H102KB5	50V 1000P
C1301, 1302	ECFR1E123KR	25V 0.012U
C1303, 1304	ECFR1E683KR	25V 0.068U
C1305, 1306	ECFR1E472KR	25V 4700P
C1307, 1308	ECFR1E223KR	25V 0.022U
C1309, 1310	ECEA1HPS010B	50V 1U
C1401, 1402	ECEA1HPX3R3B	50V 3.3U
C1403, 1404	ECBT1H680J5	50V 68P
C1405, 1406	ECEA1CPX220B	16V 22U
C1407, 1408	ECBT1H820KB5	50V 82P

Ref. No.	Part No.	Values & Remarks
C1409, 1410	ECBT1H270J5	50V 27P
C1411, 1412	ECBT1H681KB5	50V 680P
C1413, 1414	ECCR2H070D5	500V 7P
C1415-1417	ECBT1H102KB5	50V 1000P
C1427	ECKR1H223ZF5	50V 0.022U
C1428	ECBT1E223ZF5	25V 0.022U
C1429	ECEA1JU220B	63V 22U
C1451, 1452	ECKR1H333ZF5	50V 0.033U
C1453-1456	ECCR2H680K5	500V 68P
C1457-1460	ECEA1HK010B	50V 1U
C1513, 1514	ECKR1H223ZF5	50V 0.022U
C1707, 1708	ECEA1JU220B	63V 22U

Printed in Japan
F900307900 FF/TW/YY