

# Service Manual

Amplifier

Stereo Integrated Amplifier

SU-X101/SU-X301

Color

(K)...Black Type



## Area

Country Code	Area	Color
(E)	Continental Europe	(K)
(EB)	Great Britain	(K)
(EG)	F.R.Germany & Italy	(K)
(GC)	Asia, Latin America, Middle Near East and Africa	(K)
(GN)	Oceania	(K)

## SPECIFICATIONS

(DIN 45 500)

### ■ AMPLIFIER SECTION

DIN power output 2×40 W (8Ω) (SU-X101)  
1 kHz THD: 1 % 2×50 W (8Ω) (SU-X301)

Total harmonic distortion  
rated power at 1 kHz 1 % (8 Ω)  
Harmonic distortion  
half power at 1 kHz 0.03 % (8Ω)  
Residual hum and noise 0.5 mV  
Damping factor 30 (8 Ω)

### Input sensitivity and impedance

PHONO 3 mV/47 kΩ  
TUNER, AUX, TAPE 200 mV/22 kΩ  
CD 300 mV/15 kΩ

### Maximum input voltage (1 kHz, RMS)

PHONO 120 mV

### S/N (rated power 8 Ω)

PHONO 73 dB (IHF, A: 79 dB)  
TUNER, CD, AUX, TAPE 84 dB (IHF, A: 83 dB)

### Frequency response

PHONO RIAA standard curve  
±0.8 dB (30 Hz~15 kHz)  
15 Hz~50 kHz (−3 dB)

### TUNER, CD, AUX, TAPE

### Tone controls

BASS 50 Hz, +10 dB~−10 dB  
TREBLE 20 kHz, +10 dB~−10 dB

Muting −20 dB  
Super bass 70 Hz, 0~+10 dB

### Output voltage

TAPE REC OUT 200 mV  
Channel balance, AUX 250 Hz~6,300 Hz ±1.0 dB  
Channel separation, AUX 1 kHz 55 dB  
Headphones output level and impedance 473 mV/330 Ω  
Load impedance  
MAIN 8 Ω~16 Ω  
SURROUND 8 Ω~16 Ω

### ■ GENERAL

Power consumption 330 W

### Power supply

For Great Britain and Oceania: AC 50 Hz/60 Hz, 240 V  
For continental Europe, F.R. Germany and Italy:  
AC 50 Hz/60 Hz, 220 V

For others: AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V

### Dimensions (W × H × D)

360 × 106.2 × 304 mm  
(14-3/16" × 4-3/16" × 12")

### Weight

5.3 kg (11.7 lb.)

### Note:

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		Page
BEFORE REPAIR .....	2	PRINTED CIRCUIT BOARDS .....	17~21
PROTECTION CIRCUITRY .....	2	TERMINAL GUIDE OF IC'S,	
ACCESSORIES .....	2	TRANSISTORS AND DIODES .....	21
LOCATION OF CONTROLS .....	3	WIRING CONNECTION DIAGRAM .....	22
CONNECTIONS .....	4, 5	DESCRIPTION OF FL PANEL .....	23
DISASSEMBLY INSTRUCTIONS .....	6~8	FUNCTIONS OF IC TERMINALS .....	23, 24
SCHEMATIC DIAGRAM .....	9~14	REPLACEMENT PARTS LIST	
BLOCK DIAGRAM .....	15, 16	(for SU-X101) .....	25, 26, 29~31
		EXPLODED VIEW .....	27, 28
		REPLACEMENT PARTS LIST (for SU-X301) .....	32~36

## ■ BEFORE REPAIR

- (1) Turn off the power supply. Using a 10Ω, 5 W resistor connect both ends of power supply capacitors (C711, C712, 3300 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 50 Hz/60 Hz in NO SIGNAL mode should be shown below with respect to supply voltage 110 V/127 V/220 V/240 V.

Power supply voltage	AC 110 V	AC 127 V	AC 220 V	AC 240 V
Consumed current 50 Hz	100~500 mA	70~470 mA	50~250 mA	40~240 mA
Consumed current 60 Hz	97~476 mA	68~457 mA	49~244 mA	39~236 mA

## ■ PROTECTION CIRCUITRY

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

\*No sound is heard when the power is switched ON.

\*Sound stops during a performance.

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

If this occurs, follow the procedure outlined below:

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

**Note:**

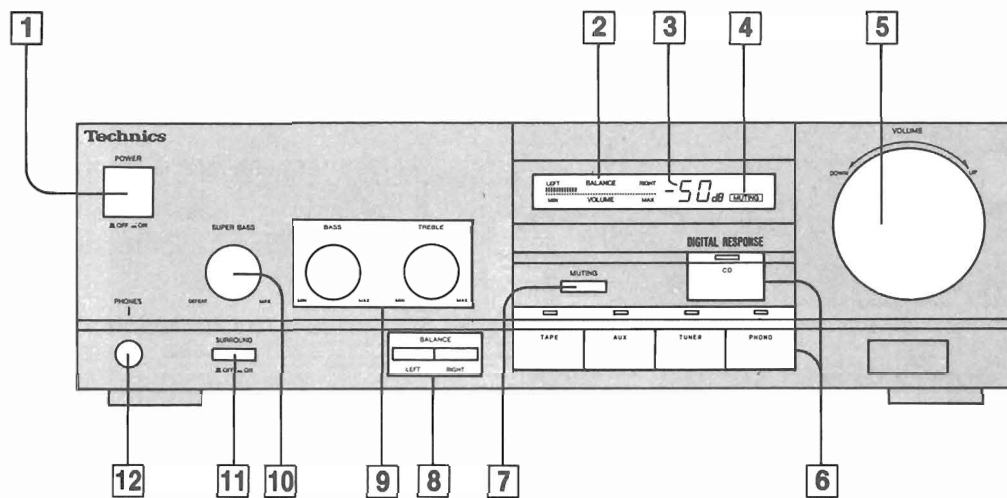
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

## ■ ACCESSORIES

●AC power supply cord .....	1	●Attachment AC plug .....	1
Configuration of AC power supply cord differs according to area.			
SJA173 .....	For (GN) area only.	SJP9215...	For (GC) area only
SJA188 .....	For (EB) area only.		
RJA0004 .....	For (GC) area only.		
SFDAC05E03 .....	For others.		

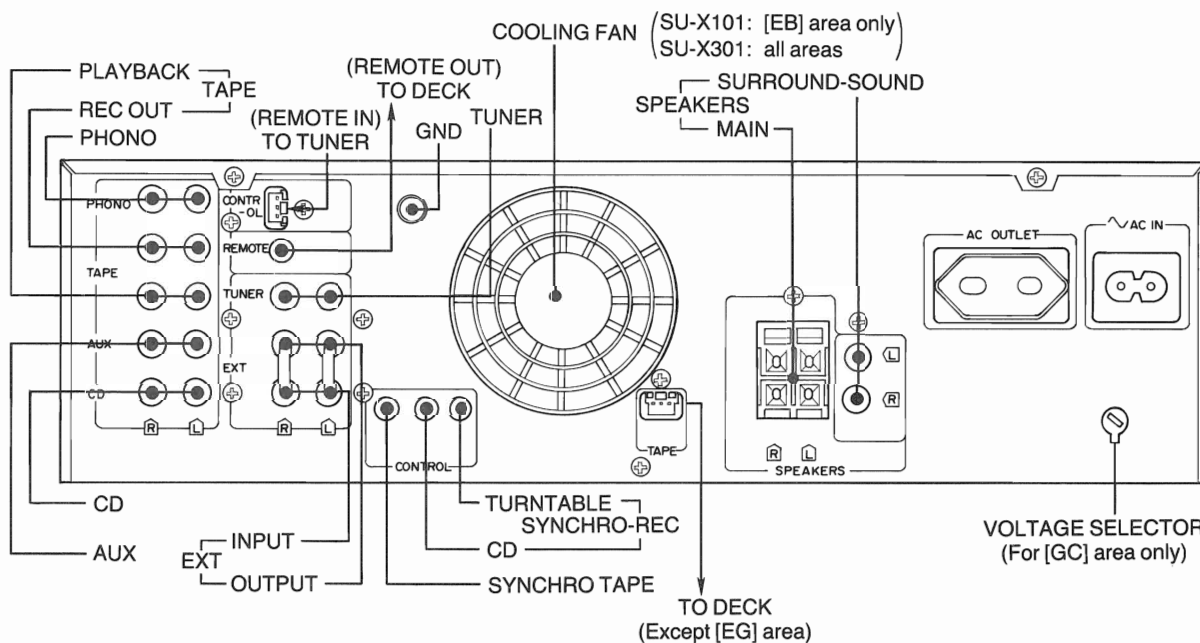
# LOCATION OF CONTROLS

## •Front panel



- |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>1 Power switch (POWER)</li> <li>2 Volume level/balance indicator (BALANCE/VOLUME)</li> <li>3 Volume-level indicator</li> <li>4 Muting indicator (MUTING)</li> <li>5 Volume control (VOLUME)</li> <li>6 Input selectors/indicators</li> </ul> | <ul style="list-style-type: none"> <li>7 Audio muting switch (MUTING)</li> <li>8 Balance controls (BALANCE)</li> <li>9 Tone controls (BASS/TREBLE)</li> <li>10 Super bass control (SUPER BASS)</li> <li>11 Surround-sound switch (SURROUND)</li> <li>12 Headphones jack (PHONES)</li> </ul> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

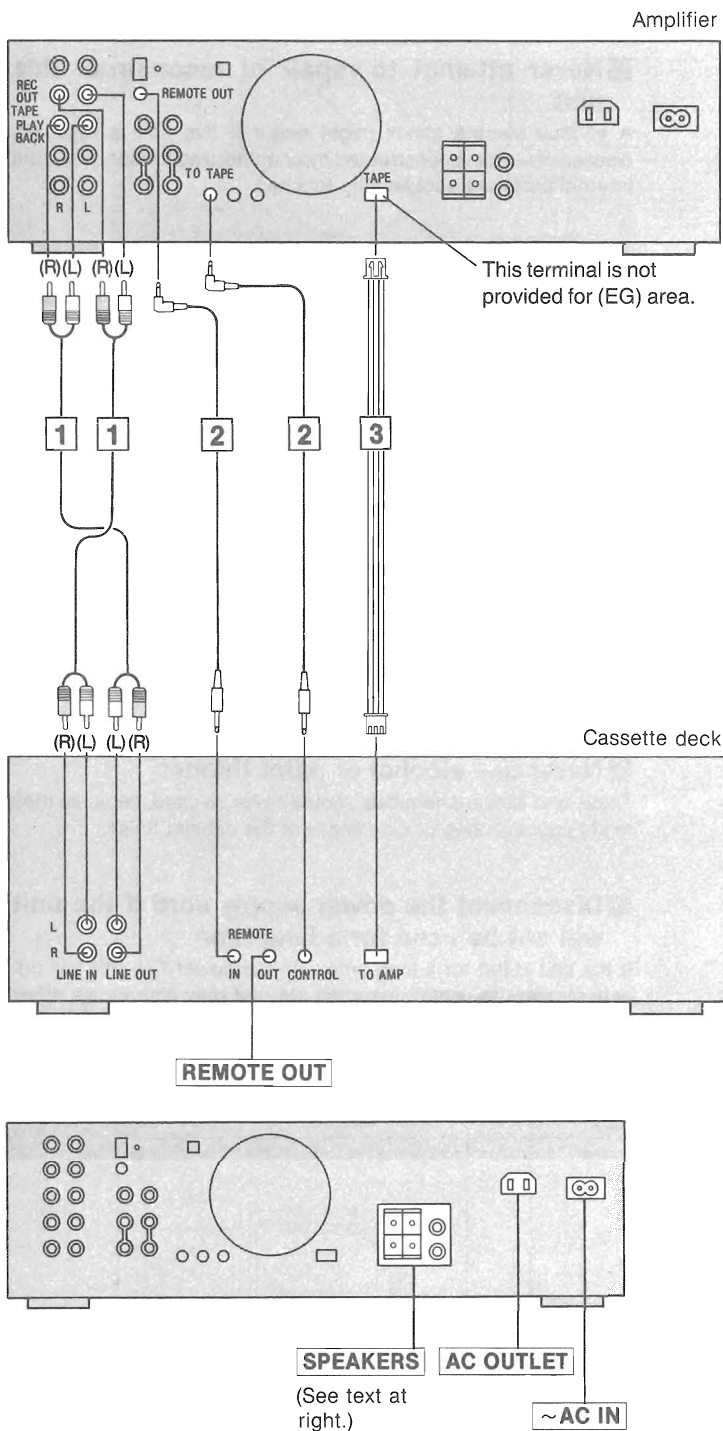
## •Rear panel



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

# CONNECTIONS

## To connect the amplifier with the cassette deck



Make connections in the numbered sequence by using the included cables.

**1** Connect the stereo connection cables.

**2** Connect the L-type cables.

**3** Connect the flat cable.

### REMOTE OUT

Connect the L-type cable (not included) to the "REMOTE INPUT" terminal of the graphic equalizer.

### Note:

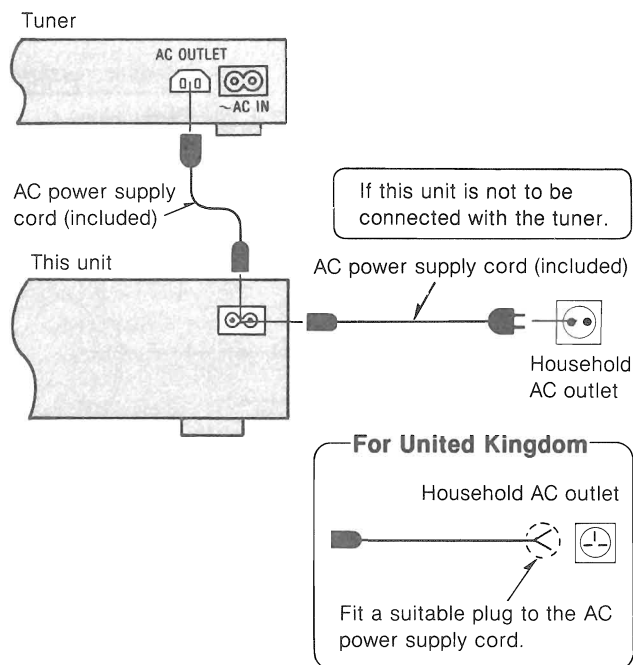
If the unit is not to be connected with the graphic equalizer, connect the L-type cable (included with the compact disc player) to the "REMOTE IN" terminal of the compact disc player.

## AC power supply cord

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

### Note:

Configuration of the AC outlet and AC power supply cord differ according to area.



## 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.

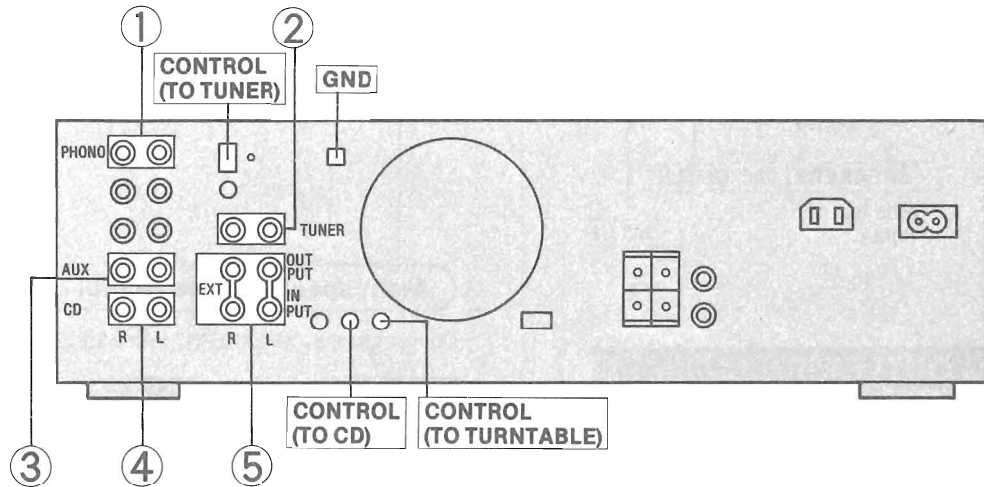
### "SWITCHED" outlet:

Power is controlled by the power switch. Audio equipment rated up to 60 W can be connected here.

### Note:

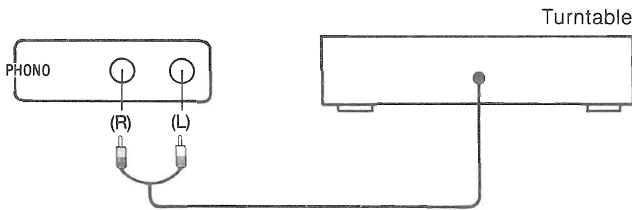
The configuration of the AC outlet differs according to area.

**To connect the amplifier with other units**



**1 "PHONO" terminals**

Connect a turntable.



**"GND" terminal of the amplifier**

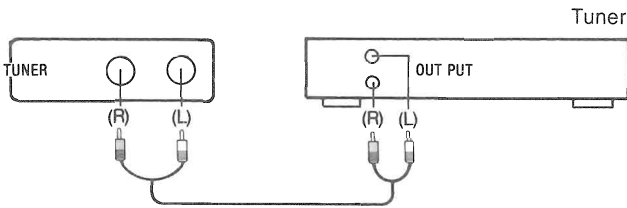
This terminal is for use with a turntable which has a ground wire.

**"CONTROL (TO TURNTABLE)" terminal**

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

**2 "TUNER" terminals**

Connect a tuner.

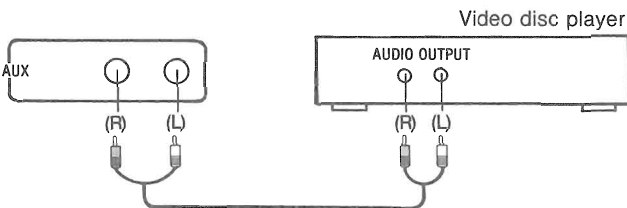


**"CONTROL (TO TUNER)" terminal**

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

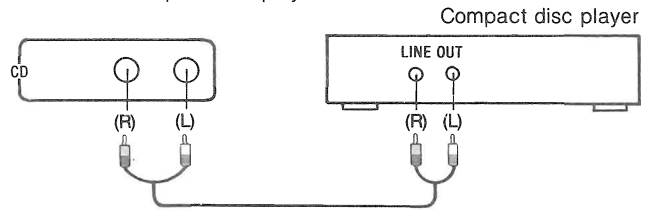
**3 "AUX" terminals**

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



**4 "CD" terminals**

Connect a compact disc player.

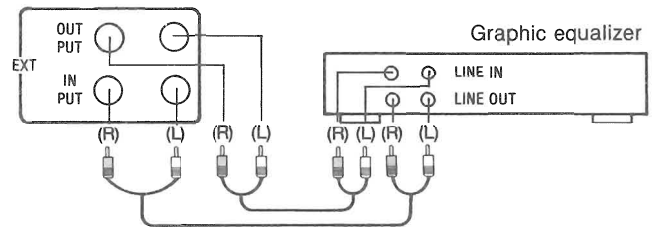


**"CONTROL (TO CD)" terminal**

This terminal is used to connect a Technics compact disc player with the control terminal.

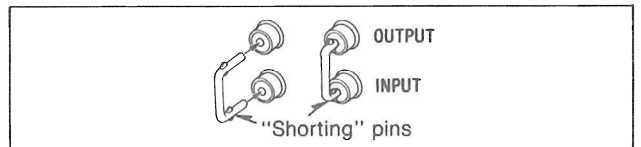
**5 "EXT" terminals**

Connect a graphic equalizer.



**Note:**

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



# DISASSEMBLY INSTRUCTIONS

**Ref. No. 1**      **Removal of the Cabinet**

**Procedure 1**

● Remove the 6 screws (1~6).

**Ref. No. 2**      **Removal of the Front Panel**

**Procedure 1→2**

(Bottom Side)

1. Remove the 3 screws (1~3).
2. Remove the flat cable (J501).
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. 3**      **Removal of the Power Switch P.C.B.**

**Procedure 1→2→3**

Power Switch P.C.B.      Power Switch Knob

1. Remove the power switch knob by pushing it from behind the front panel.
2. Remove the 2 screws (1, 2).

**Ref. No. 4**      **Removal of the FL Drive/Tone Amp P.C.B. and Volume P.C.B.**

**Procedure 1→2→4**

**Removal of the FL P.C.B.**

1. Remove the 3 knobs (1~3).
2. Remove the 3 nuts (4~6).
3. Remove the 5 screws (7~11).

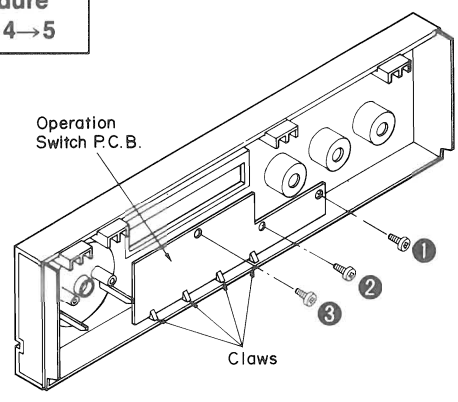
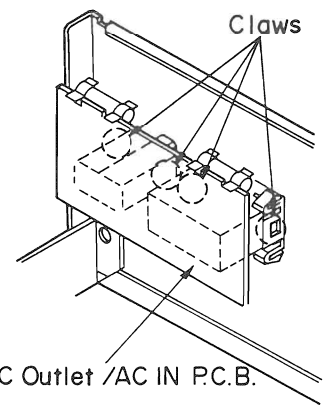
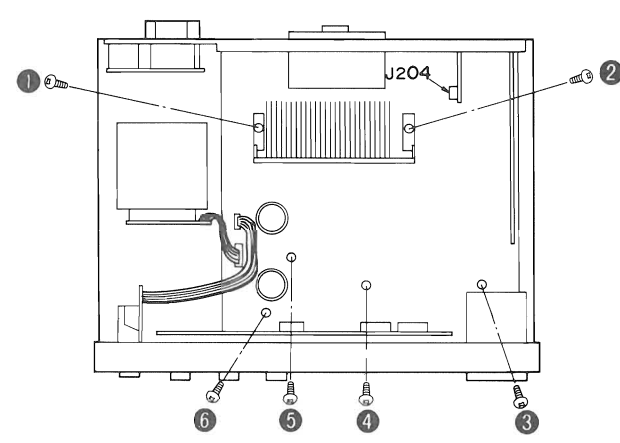
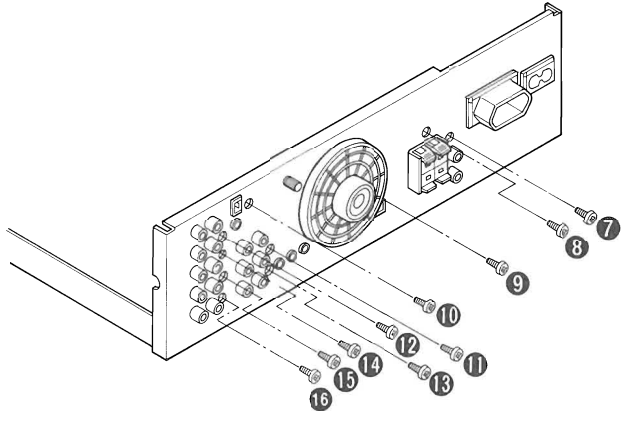
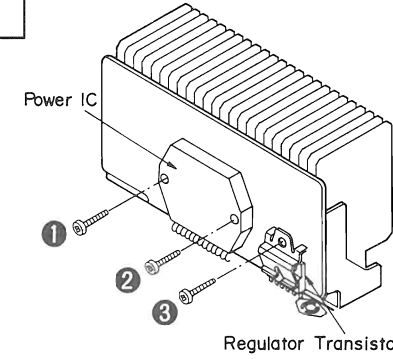
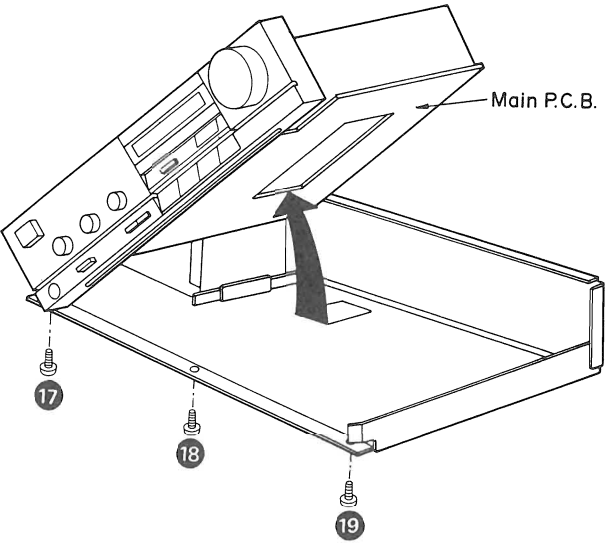
A: 11 mm  
B: 16 mm  
C: longer than 22 mm

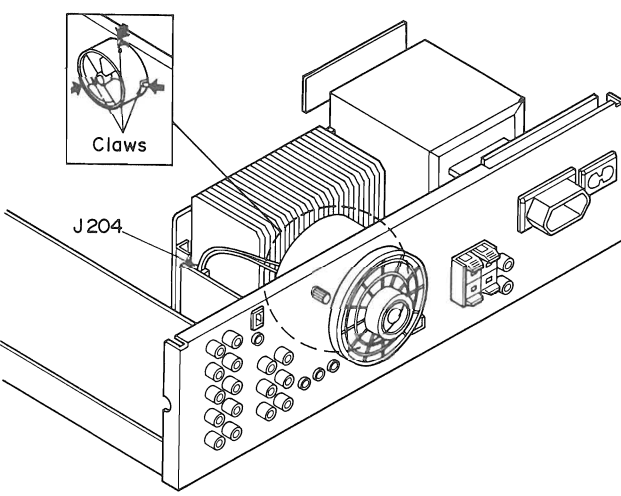
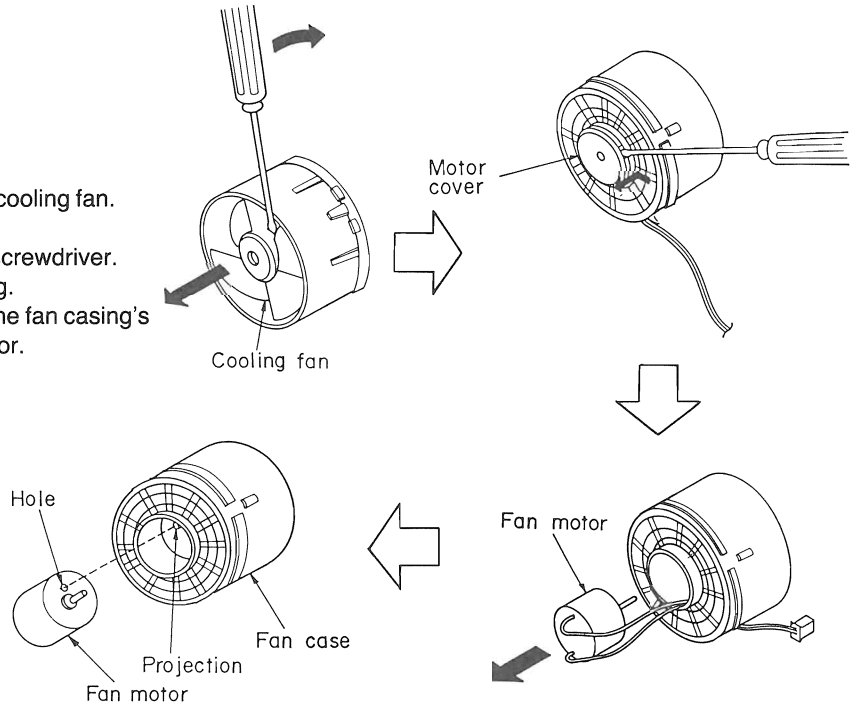
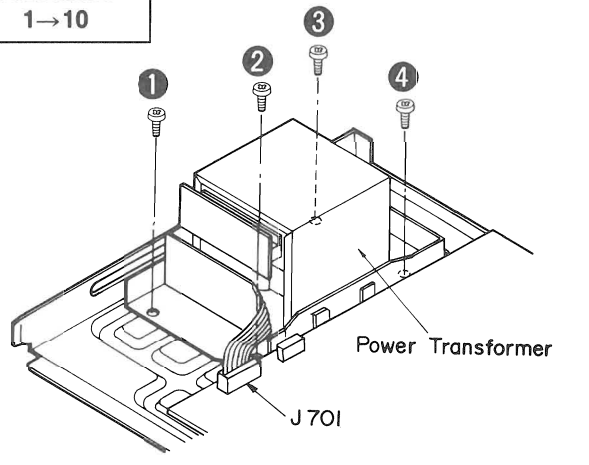
● Use a wrench of the dimensions shown in the illustration above to remove nuts.

**Removal of the Volume P.C.B.**

1. Remove the 1 knob (12).
2. Remove the 1 nut (13).

FL Drive / Tone Amp P.C.B.      Volume P.C.B.

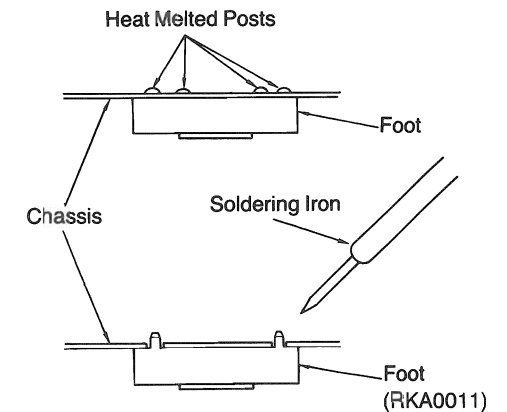
<p><b>Ref. No. 5</b> <b>Removal of the Operation Switch P.C.B.</b></p>	<p><b>Ref. No. 6</b> <b>Removal of the AC Outlet/AC IN P.C.B.</b></p>
<p><b>Procedure 1→2→4→5</b></p>  <p>1. Remove the 3 screws (1~3). 2. Release the 4 claws.</p>	<p><b>Procedure 1→6</b></p>  <p>●Release the 4 claws.</p>
<p><b>Ref. No. 7</b> <b>Removal of the Main P.C.B.</b></p>	
<p><b>Procedure 1→7</b></p>  <p>1. Remove the 6 screws (1~6). 2. Remove the 1 connector (J204).</p>	 <p>3. Remove the 10 screws (7~16).</p>
<p><b>Ref. No. 8</b> <b>Remove of the Power IC and Regulator Transistor</b></p>	
<p><b>Procedure 1→7→8</b></p>  <p>1. Unsolder the power IC or regulator transistor. 2. Remove the 3 screws (1~3). ●When mounting the power IC or regulator transistor. Apply silicone compound (SZZOL15) to the rear side of power IC or regulator transistor.</p>	 <p>4. Remove the 3 screws (17~19). 5. Remove the main P.C.B. in the direction of the arrow.</p>

<p><b>Ref. No. 9</b> <b>Removal of the Fan Motor</b></p>	<p><b>Ref. No. 10</b> <b>Removal of the Power Transformer</b></p>
<p><b>Procedure 1→9</b> (SU-X101: [EB] area only) (SU-X301: all areas)</p>  <p>1. Pull out the 1 connector (J204). 2. Release the 3 claws. 3. Insert a screwdriver at the root of the cooling fan. Force it out of the motor shaft. 4. Remove the motor cover by used ⊖ screwdriver. 5. Remove the motor from the fan casing. 6. When mounting the motor fan, align the fan casing's projection with the hole of the fan motor.</p> 	<p><b>Procedure 1→10</b></p>  <p>1. Remove the 1 flat cable (J701). 2. Remove the 4 screws (1~4).</p>

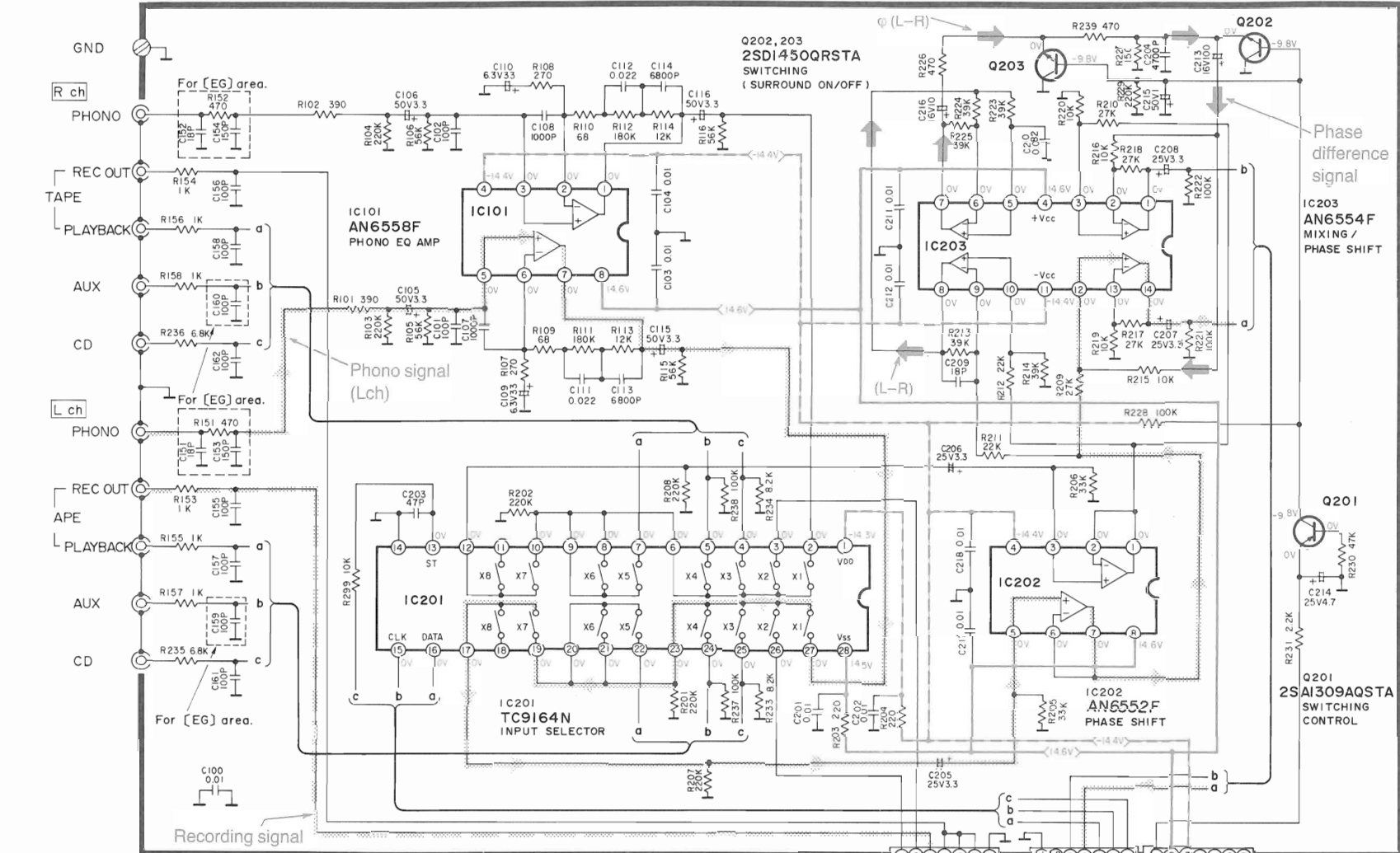
**“ATTENTION SERVICER”**  
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

**●Replacement of the Foot.**

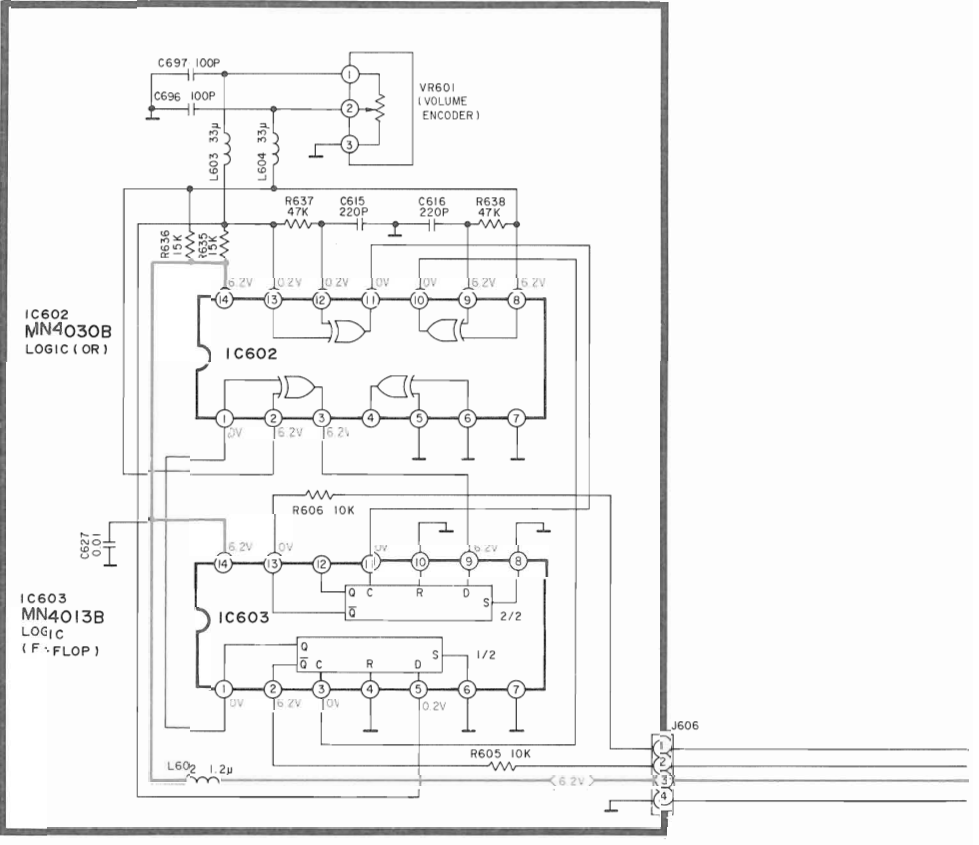
1. Remove the 4 heat melted posts on the chassis with a pair of nippers or similar tool.
2. To replace the foot (RKA0011) on the chassis, melt the 4 posts with a soldering iron.



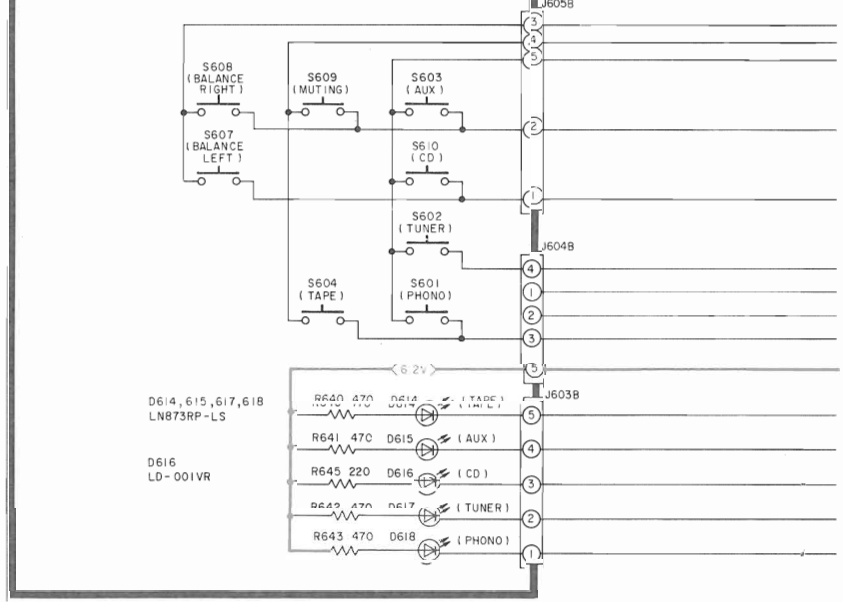
**A** PHONO EQ AMP / INPUT SELECTOR CIRCUIT



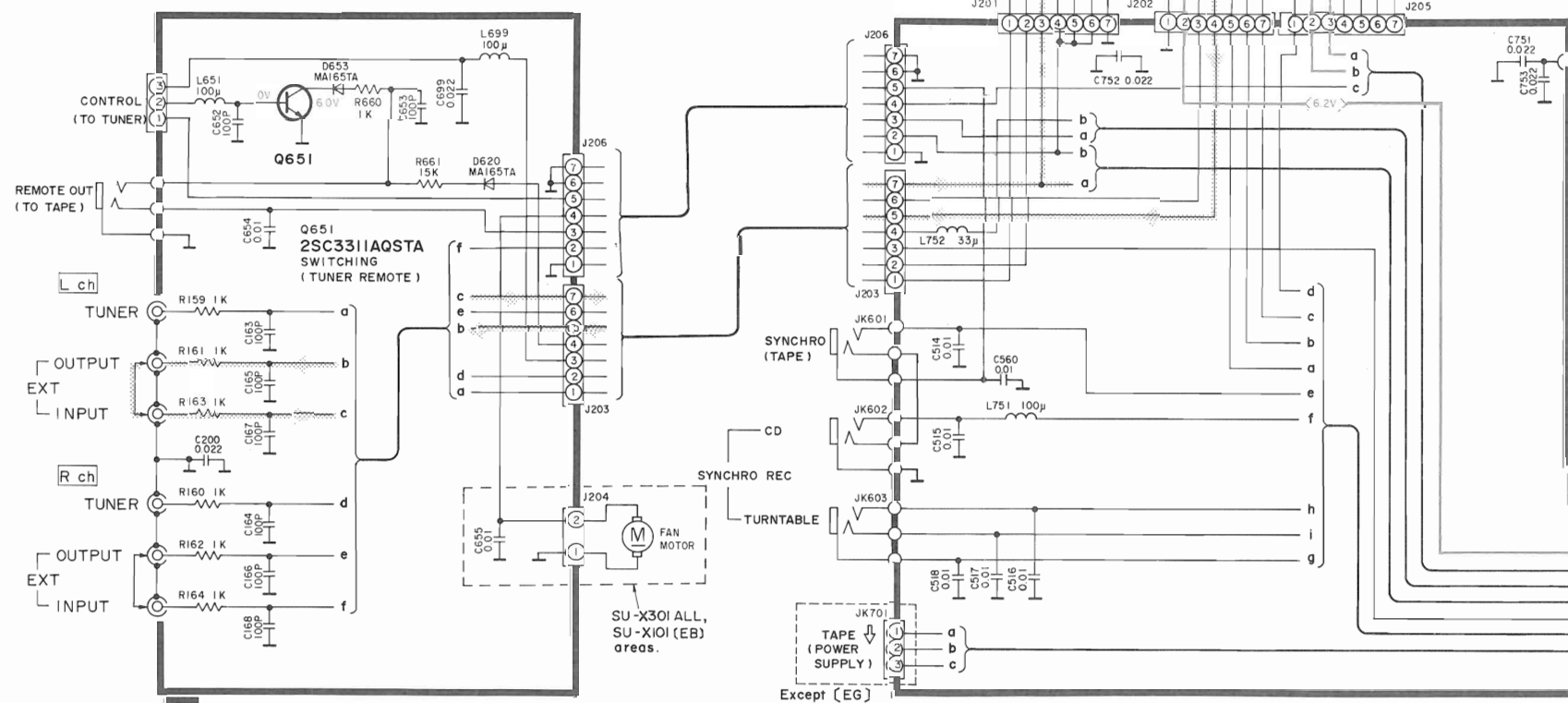
**C** VOLUME CIRCUIT



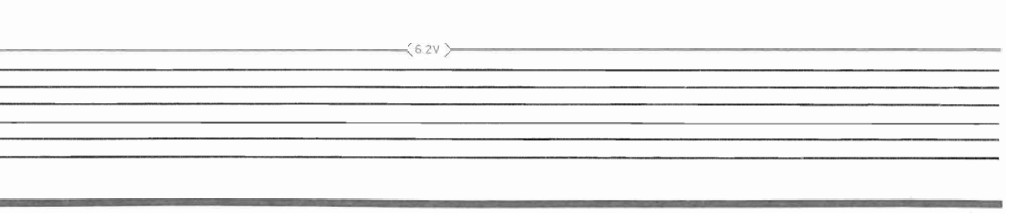
**D** LED/INPUT SELECT SWITCH CIRCUIT



**B** INPUT/OUTPUT TERMINAL CIRCUIT

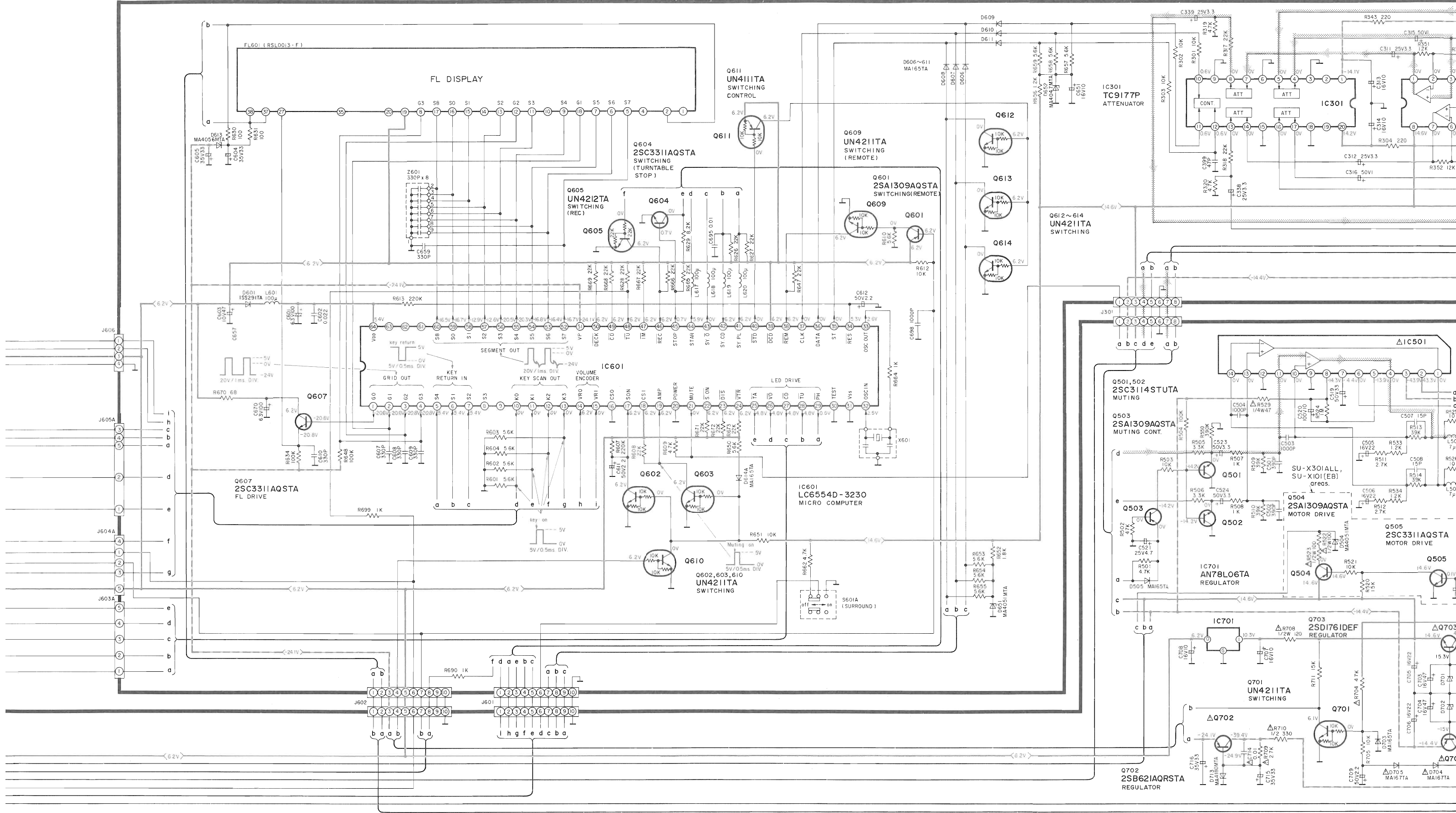


**E** MAIN CIRCUIT





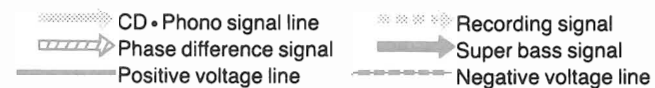
F FL DRIVE / TONE AMP CIRCUIT



# SCHEMATIC DIAGRAM

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

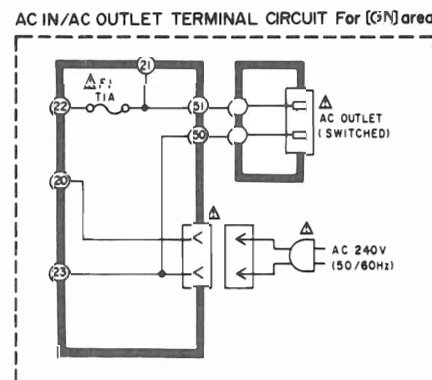
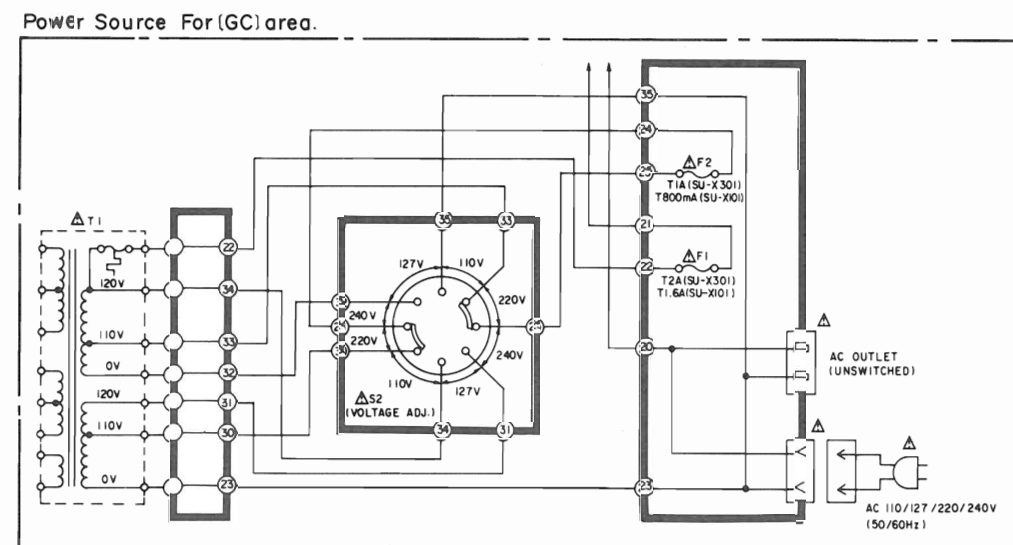
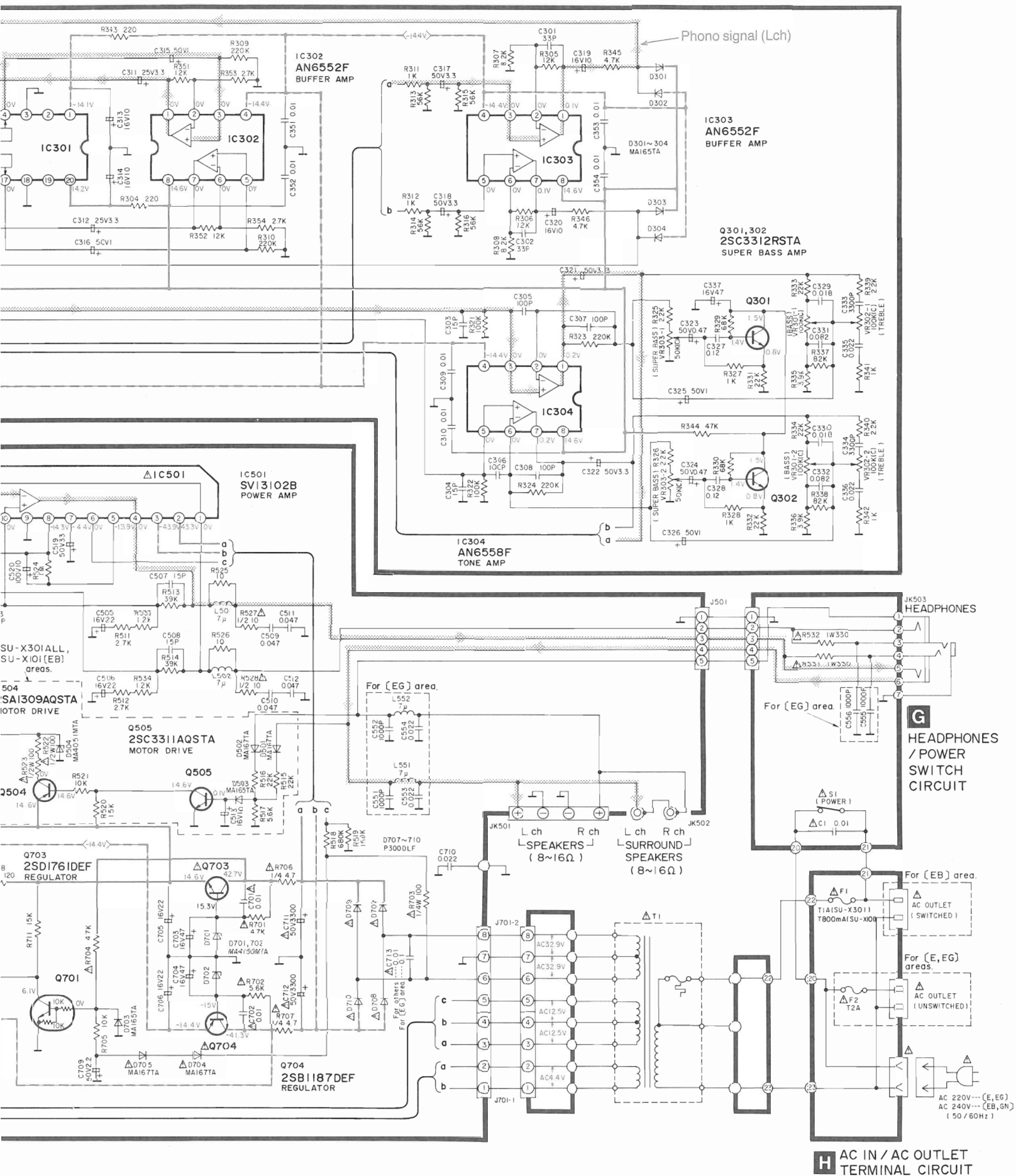
- Notes:**
- S1: Power switch.
  - S2: Voltage selector switch in "220 V" position.  
(110 V/127 V/220 V/240 V)  
For (GC) area only.
  - S601A: Surround-sound switch.
  - S601~604: Input selector switches.  
(S601: PHONO, S602: TUNER, S603: AUX)  
(S604: TAPE, S610: CD)
  - S607, 608: Balance control switches.  
(S607: Lch, S608: Rch)
  - S609: Audio muting switch.



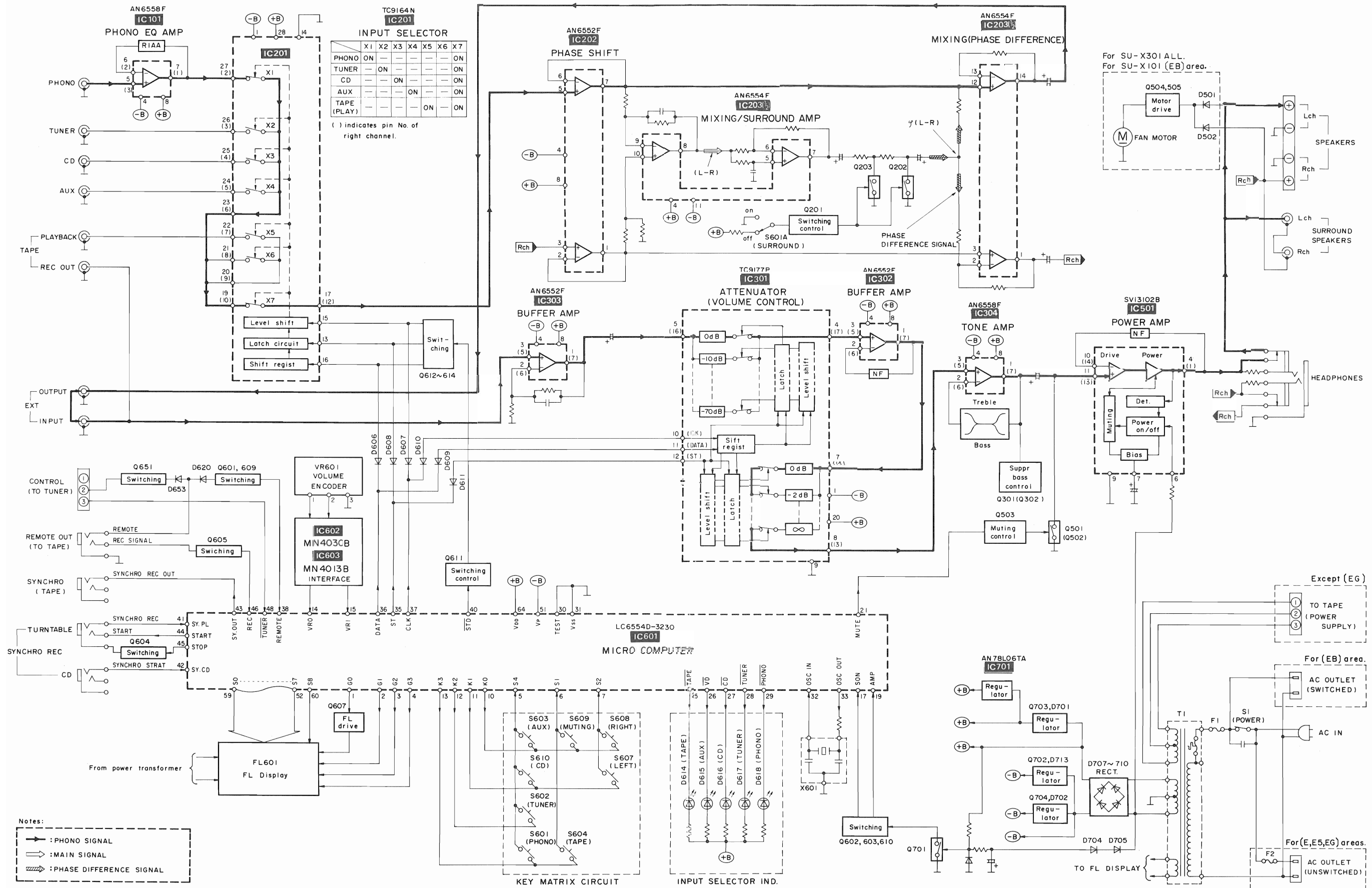
●Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

●Important safety notice:  
Components identified by  $\Delta$  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.



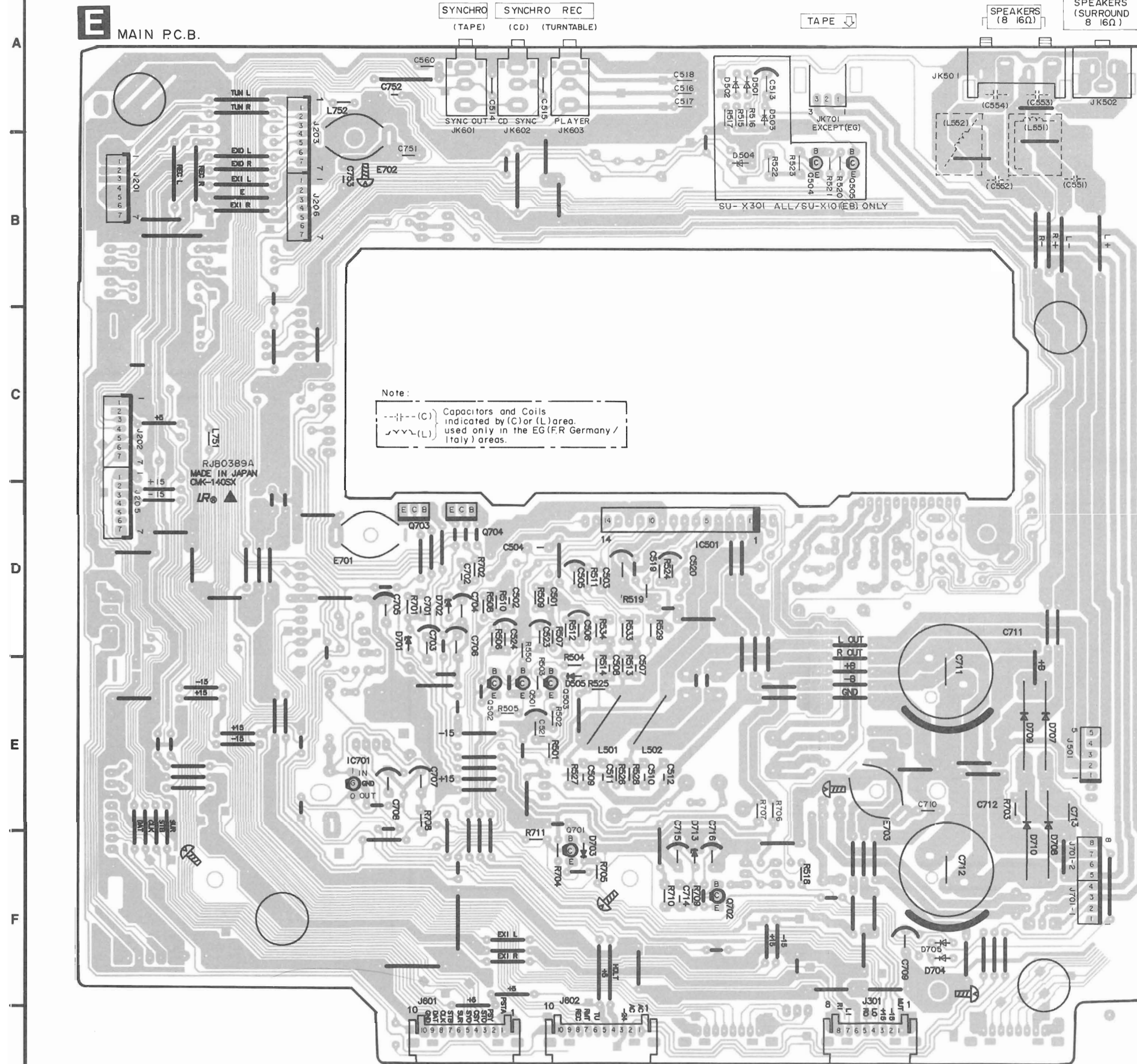
■ BLOCK DIAGRAM



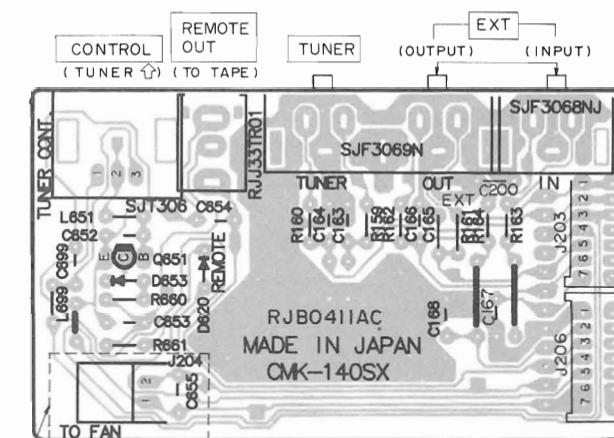
Notes:  
 — : PHONO SIGNAL  
 — : MAIN SIGNAL  
 — : PHASE DIFFERENCE SIGNAL

PR  
 E  
 A  
 B  
 C  
 D  
 E  
 F

PRINTED CIRCUIT BOARDS

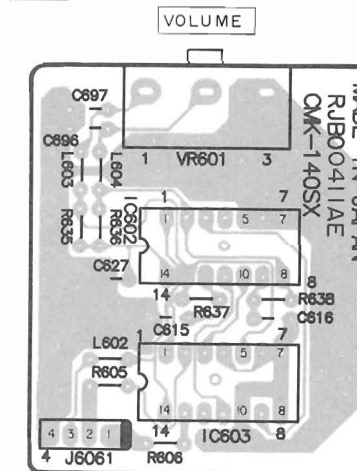


**B INPUT/OUTPUT TERMINAL P.C.B.**

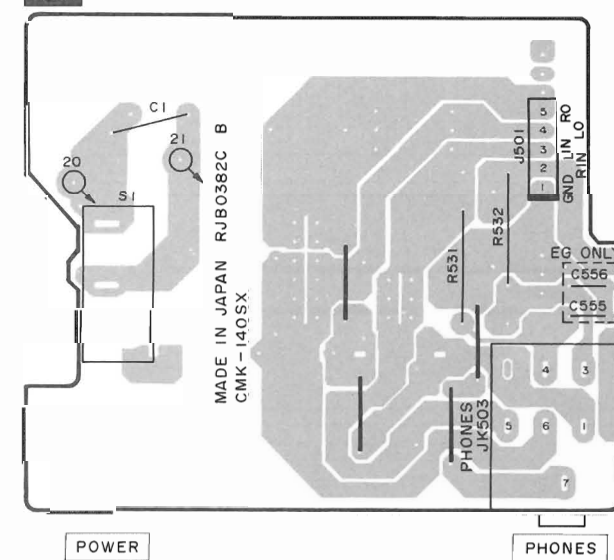


For SU-X301 ALL/SU-X101(EG) areas.

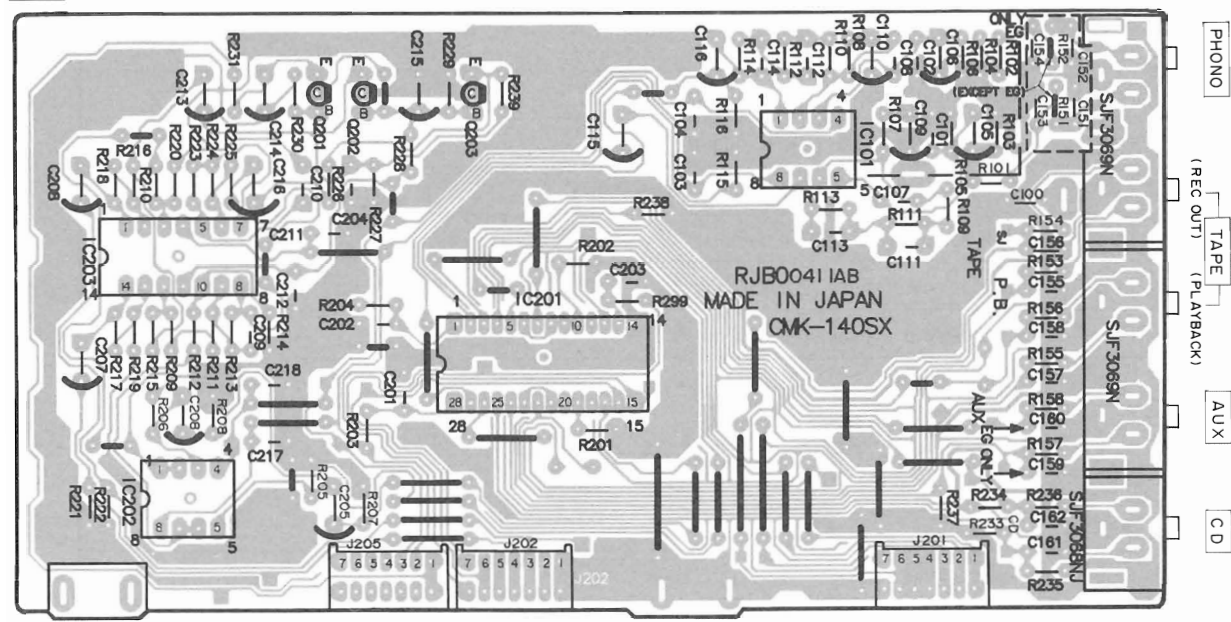
**C VOLUME P.C.B.**



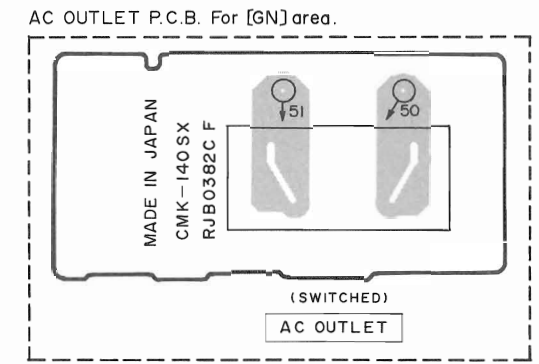
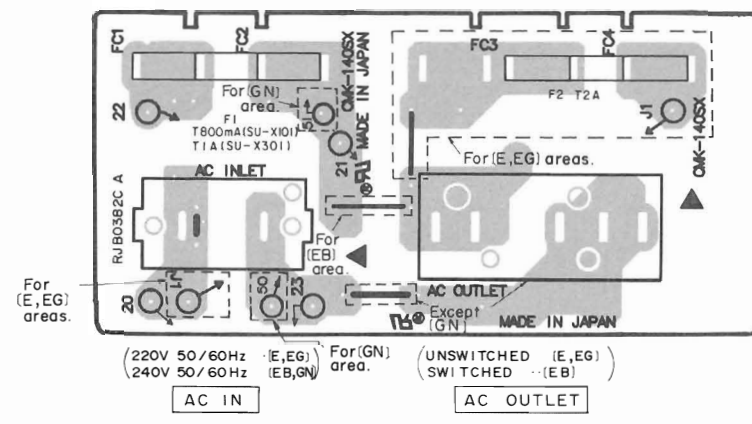
**G HEADPHONES/POWER SWITCH P.C.B.**



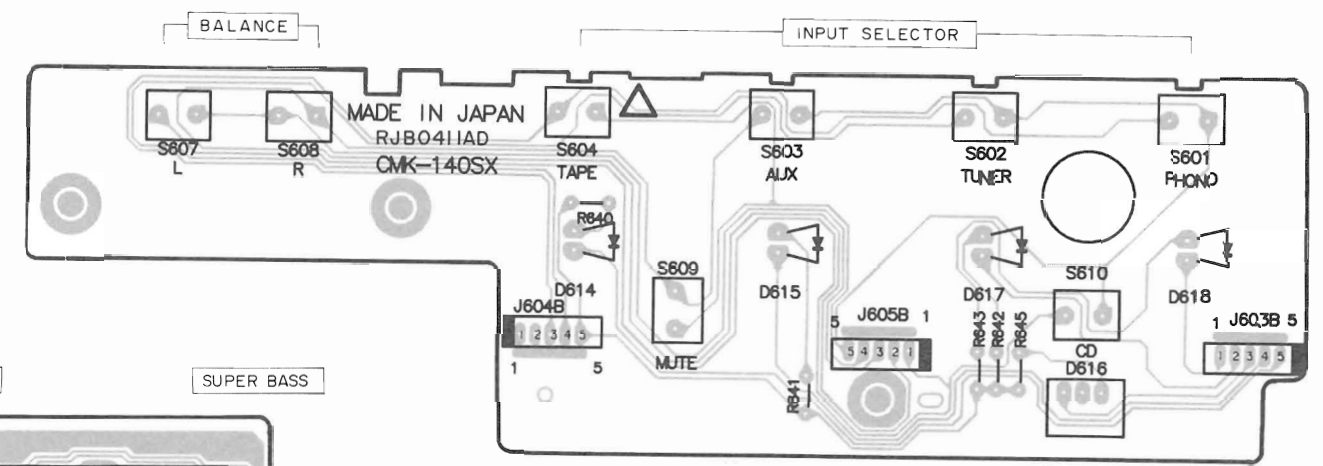
**A** PHONO EQ AMP/INPUT SELECTOR P.C.B.



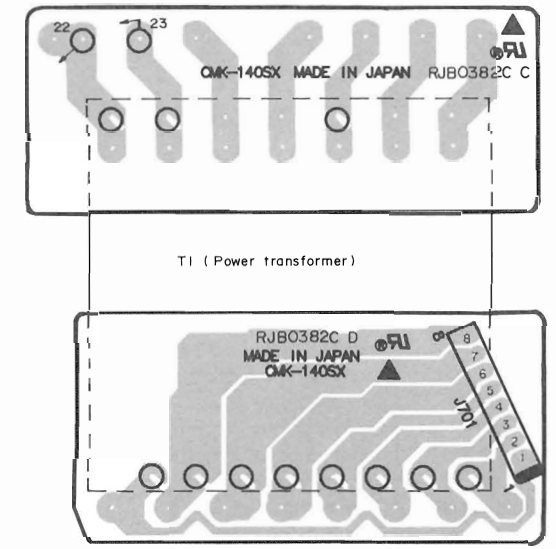
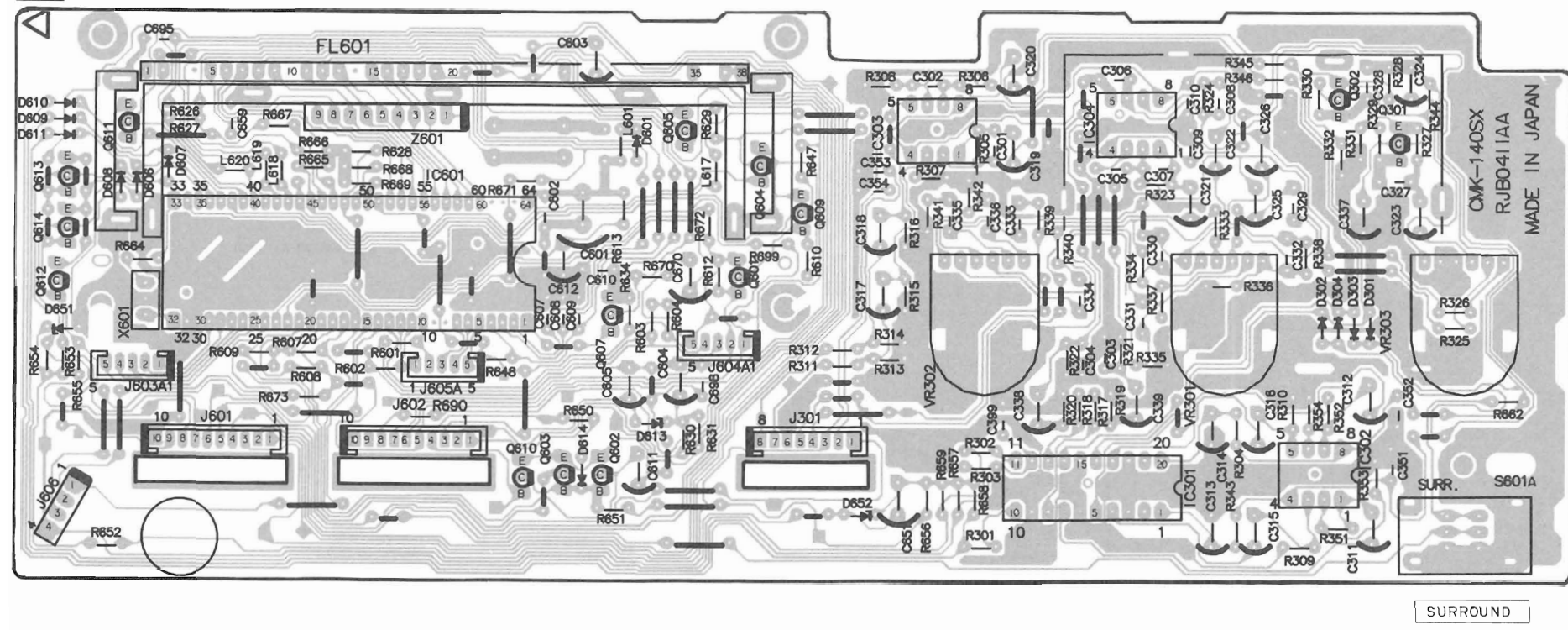
**H** AC IN/AC OUTLET TERMINAL P.C.B.



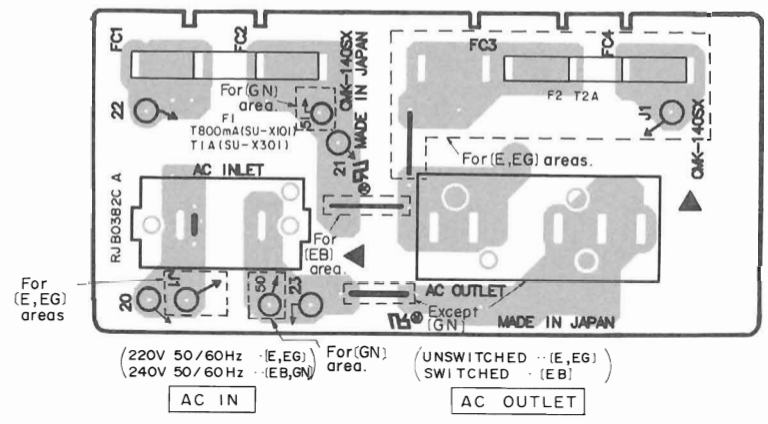
**D** LED/INPUT SELECT SWITCH P.C.B.



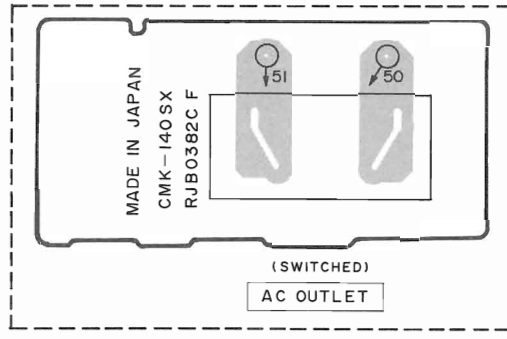
**F** FL DRIVE / TONE AMP P.C.B.



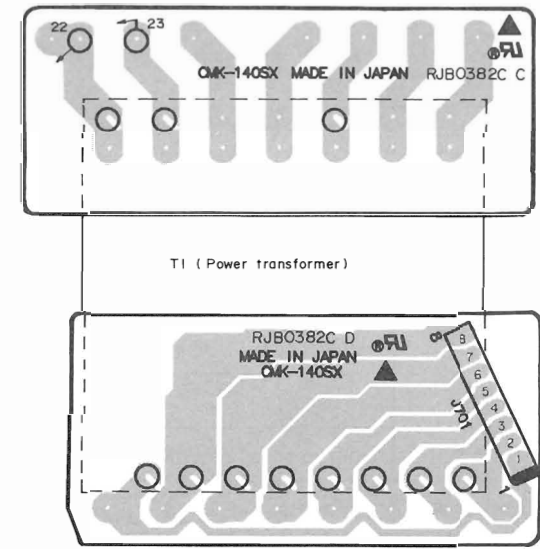
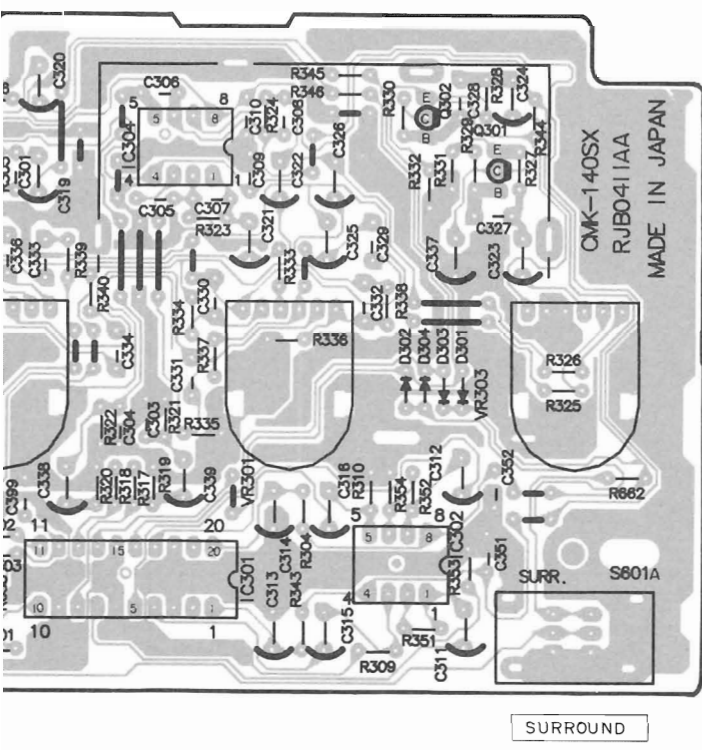
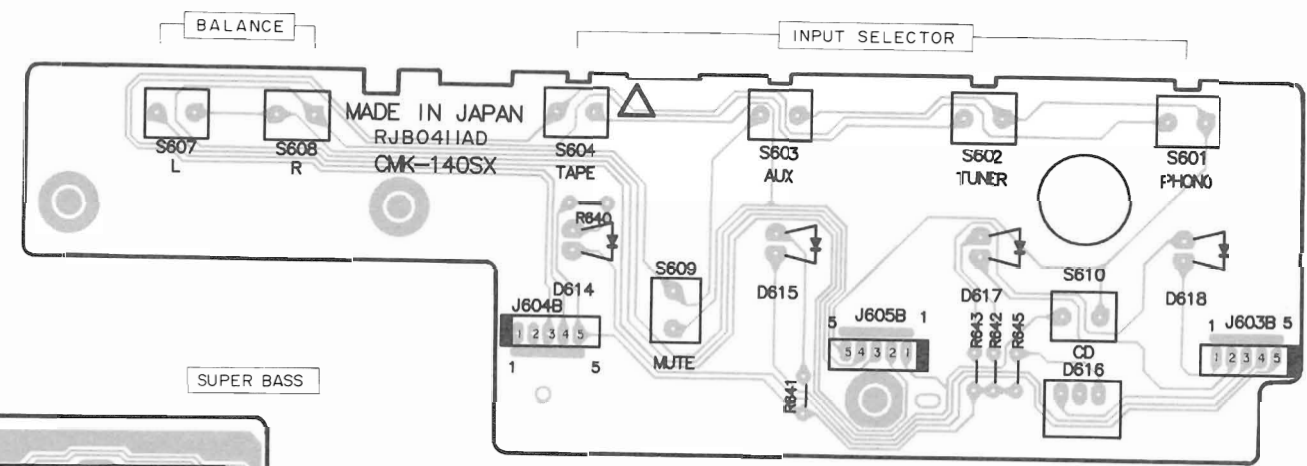
**H** AC IN / AC OUTLET TERMINAL P.C.B.



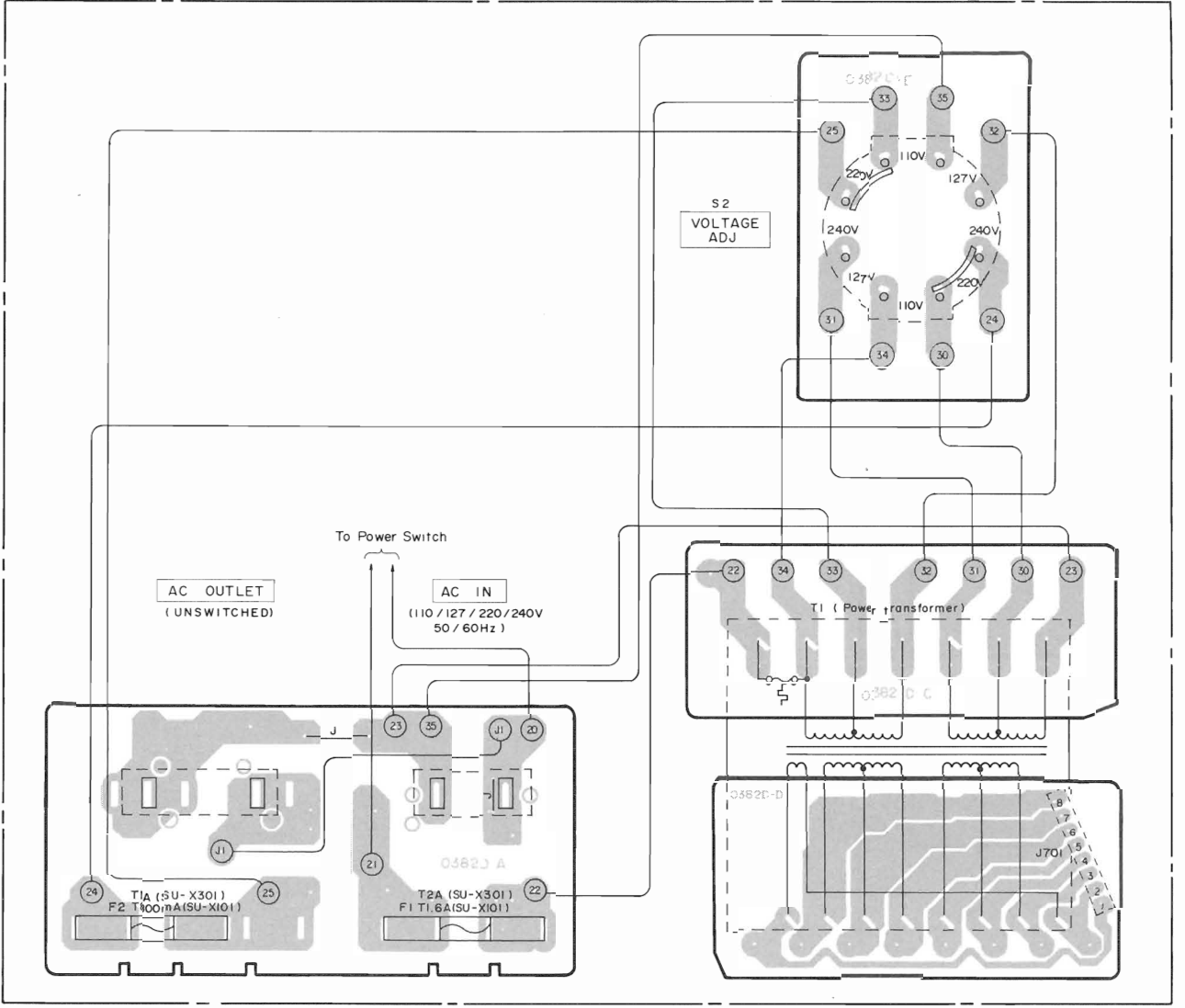
AC OUTLET P.C.B. For [GN] area.



**D** LED/INPUT SELECT SWITCH P.C.B.



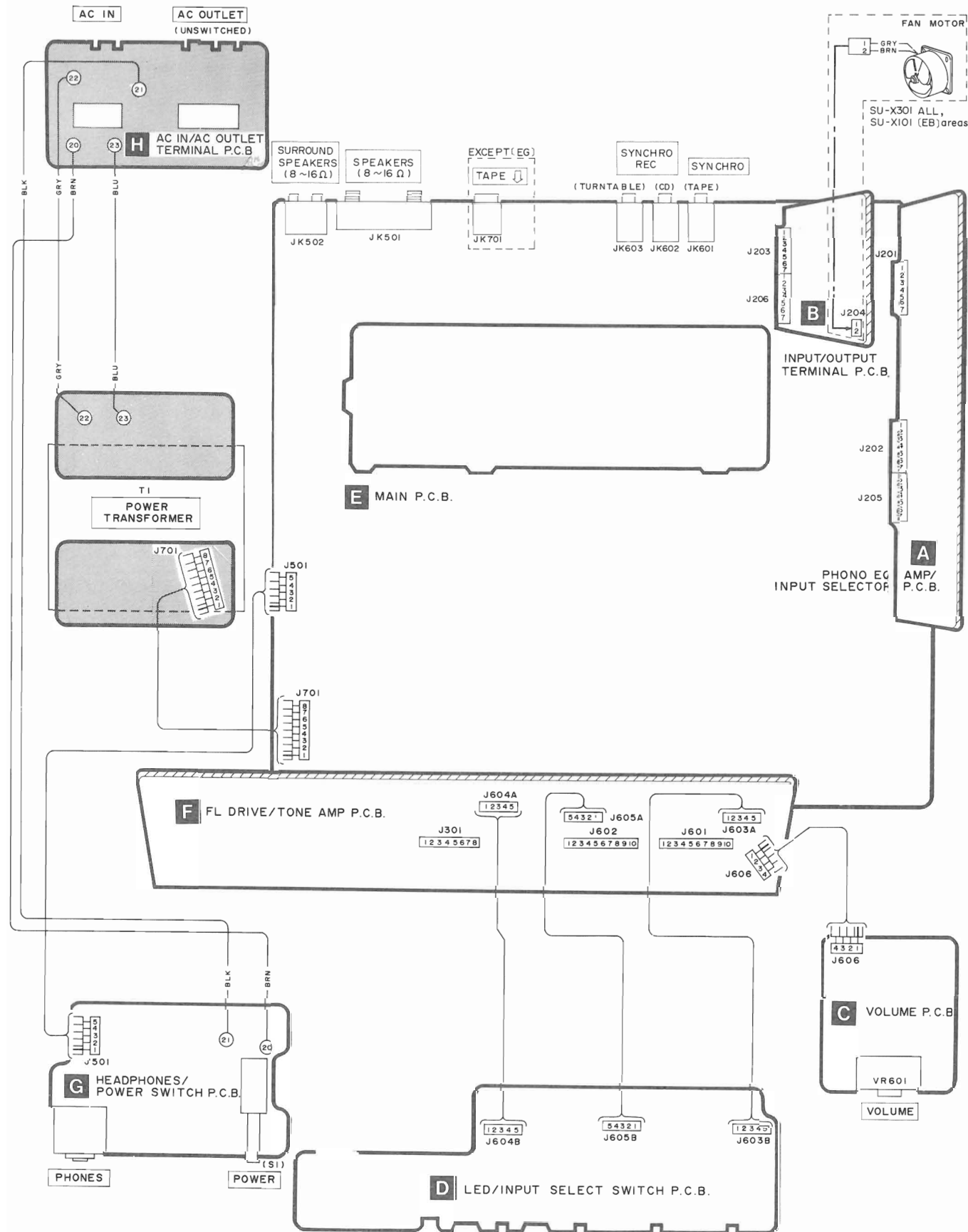
Power Source For (GC) area.



**■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES**

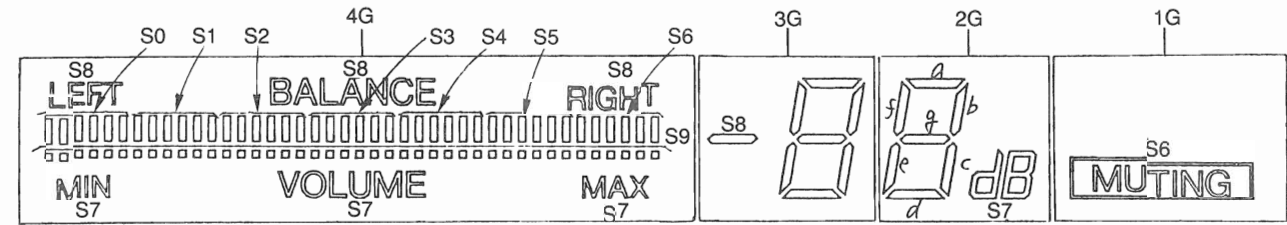
<p>AN6552F AN6558F</p>	<p>MN4013B MN4030B AN6554F</p>	<p>TC9177P</p>	<p>TC9164N</p>	<p>LC6554D-3230</p>	<p>SV13102B</p>
<p>AN78L06TA</p>	<p>2SB621AQRSTA 2SC3114STUTA</p>	<p>2SA1309AQSTA 2SC3311AQSTA 2SC3312RSTA 2SD1450QRSTA UN4111TA UN4211TA UN4212TA</p>	<p>2SB1187DEF 2SD1761DEF</p>	<p>MA165TA MA167TA 1SS291TA</p>	<p>MA4150MTA MA4180MTA</p>
<p>MA4047MTA MA4051MTA MA4056MTA</p>	<p>P300DLF</p>	<p>LD-001VR</p>	<p>LN873RP-LS</p>		

■ WIRING CONNECTION DIAGRAM



■ DESCRIPTION OF FL PANEL

● GRID ASSIGNMENT



● PIN CONNECTION

PIN NO.	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F	F	N	4	N	N	N	N	N	N	4	N	N	N	N	N	N	4	S	3	S	S	S	3	S	2	S	2	S	1	S	S	S	1	N	F	F	1

● ANODE CONNECTION

	4G	3G	2G	1G		4G	3G	2G	1G
S0		a	a	-	S5		f	f	-
S1		b	b	-	S6		g	g	MUTING
S2		c	c	-	S7	MIN VOLUME MAX	-	dB	-
S3		d	d	-	S8	LEFT BALANCE RIGHT	-	-	-
S4		e	e	-	S9	"-----" (x7)	-	-	-

■ FUNCTIONS OF IC TERMINALS

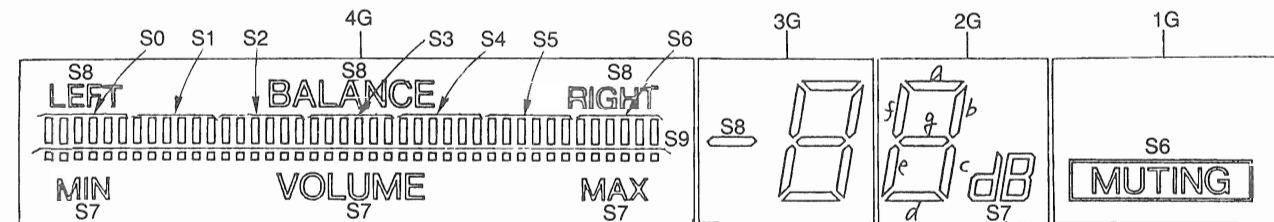
● IC601 (LC6554D-3230) Micro Computer

Pin No.	Symbol	Function Description
1 }	G0 }	Grid drive output for digital multidisplay (FL).
4	G3	
5 }	S0 }	Key matrix output.
7	S2	
10 }	K0 }	Key matrix input.
13	K3	
8	S3	Not used.
9	POWER ON	Not used.
14	VR0	Rotary encoder input of volume control (VR601).
15	VR1	
16	CS0	Grounding.
17	HALT	Input for power detection.
18	CS1	Not used.
19	AMP	Input for power detection.
20	AMP POWER	Grounding.

Input	Output	5	6	7
10	S603	AUX	S609	MUTING
11	S610	CD	-	S608
12	S602	TUNER	-	S607
13	S601	PHONO	S604	TAPE1

## DESCRIPTION OF FL PANEL

### GRID ASSIGNMENT



### PIN CONNECTION

PIN NO.	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	F	F	N	4	N	N	N	N	N	N	4	N	N	N	N	N	N	4	S	3	S	S	3	S	2	S	2	S	1	S	S	S	1	N	F	F		

### ANODE CONNECTION

	4G	3G	2G	1G		4G	3G	2G	1G
S0		a	a	-	S5		f	f	-
S1		b	b	-	S6		g	g	MUTING
S2		c	c	-	S7	MIN VOLUME MAX	-	dB	-
S3		d	d	-	S8	LEFT BALANCE RIGHT	—	-	-
S4		e	e	-	S9	----- (x7)	-	-	-

## FUNCTIONS OF IC TERMINALS

### IC601 (LC6554D-3230) Micro Computer

Pin No.	Symbol	Function Description
1 }	G0 }	Grid drive output for digital multidisplay (FL).
4	G3	
5 }	S0 }	Key matrix output.
7	S2	
10 }	K0 }	Key matrix input.
13	K3	
8	S3	Not used.
9	POWER ON	Not used.
14	VR0	Rotary encoder input of volume control (VR601).
15	VR1	
16	CS0	Grounding.
17	HALT	Input for power detection.
18	CS1	Not used.
19	AMP	Input for power detection.
20	AMP POWER	Grounding.

Output	5	6	7
10	S603 AUX	S609 MUTING	S608 BALANCE(R)
11	S610 CD	—	S607 BALANCE(L)
12	S602 TUNER	—	—
13	S601 PHONO	S604 TAPE1	—

Pin No.	Symbol	Function Description	
21	CUT	Input selector noise cut muting output.	
22	S.ON	Not used.	
23	DTS	Not Used.	
24	LVTR	LED selector display (VTR) output.	
25	LTA	LED selector display (TAPE) output.	
26	LVD	LED selector display (VIDEO DISC/AUX) output.	
27	LCD	LED selector display (CD) output.	
28	LTU	LED selector display (TUNER) output.	
29	LPH	LED selector display (PHONO) output.	
30	TEST	Grounding.	
31	V <sub>SS</sub>	Grounding.	
32	OSC1	Clock oscillation input/output.	
33	OSC2		
34	RES	Reset signal input.	
35	ST	ST signal control output.	
36	DATA	DATA signal control output.	
37	CK	CK signal control output.	
38	REM	Remote control data input.	
39	DCD	Deck control output.	
40	SID	ST, CK and DATA signal control.	
41	SYPH	Player synchronized recording input.	
42	SYCD	CD synchronized recording input.	
43	SY OUT	Deck synchronized recording output.	
44	START	Player STOP/START signal output.	
45	STOP		
46	REC	Deck onrecording signal input.	
47	PH	Input selection by phono unit signal.	Direct operation input.
48	TU	Input selection by tuner unit signal.	
49	CD	Input selection by CD unit signal.	
50	DECK	Input selection by tape unit signal.	
51	V <sub>P</sub>	Power supply.	
52 }	S0 }	Digital multidisplay (FL) output.	
60	S8		
61	S music	Not used.	
62	S movie		
63	S mono		
64	V <sub>DD</sub>	Power supply.	



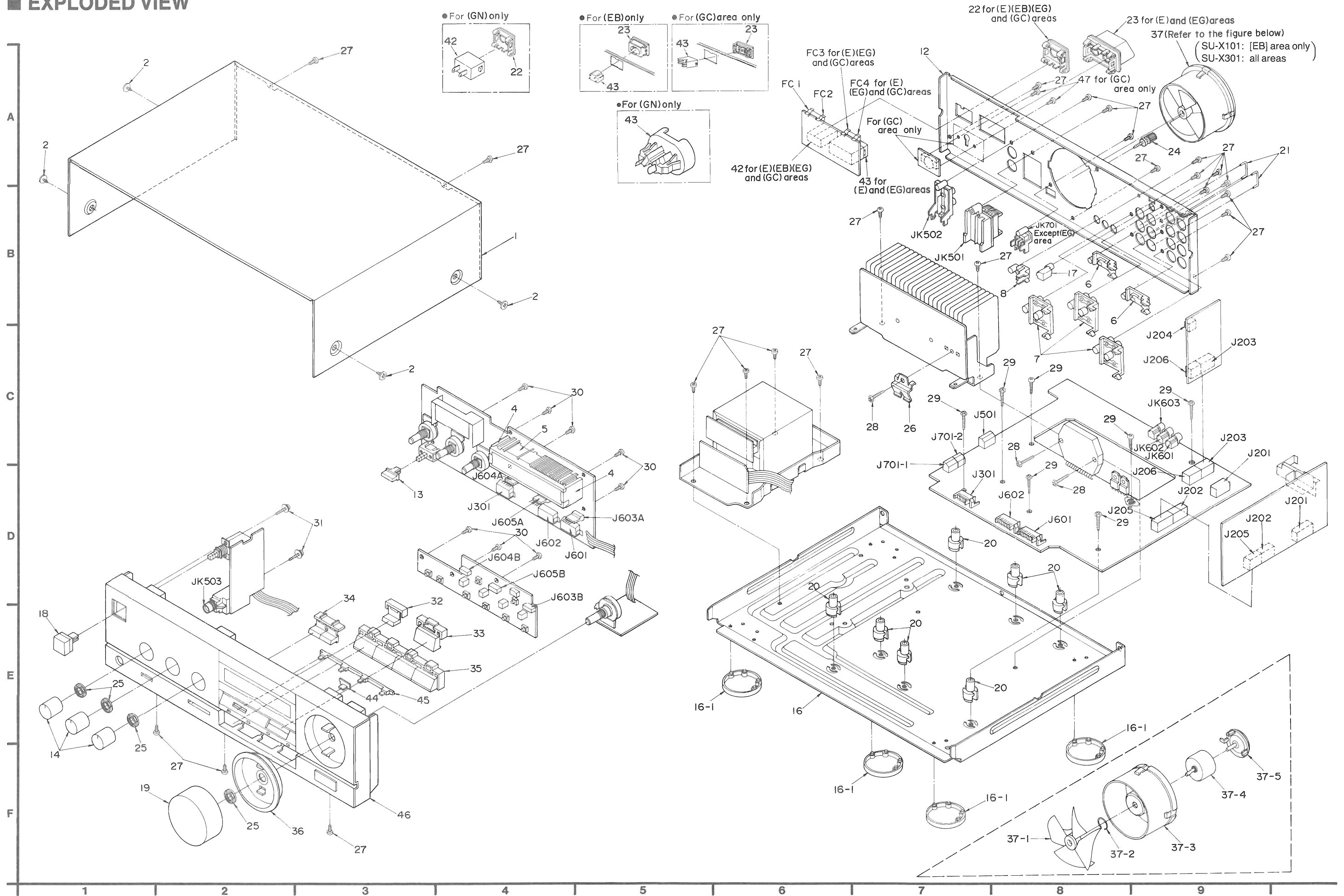
## REPLACEMENT PARTS LIST (for SU-X101)

Notes : \* Important safety notice:  
 Components identified by  $\Delta$  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.

SU-X101				SU-X101			
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		D601	1SS291TA	DIODE	
IC101	AN6558F	IC, EQ AMP		D606-611	MA165TA	DIODE	
IC201	TC9164N	IC, INPUT SELECTOR		D613	MA4056MTA	DIODE	
IC202	AN6552F	IC, PHASE SHIFT		D614	LN873RP-LS	DIODE	
IC203	AN6554F	IC, SURROUND AMP		D614A	MA165TA	DIODE	
IC301	TC9177P	IC, ELECTRONIC VOLUME		D615	LN873RP-LS	DIODE	
IC302, 303	AN6552F	IC, BUFFER AMP		D616	LD-001VR	DIODE	
IC304	AN6558F	IC, TONE AMP		D617, 618	LN873RP-LS	DIODE	
IC501	SV13102B	IC, POWER AMP	$\Delta$	D620	MA165TA	DIODE	
IC601	LC6554D-3230	IC, MICRO COMPUTER		D651	MA4051MTA	DIODE	
IC602	MN4030B	IC, LOGIC		D652	MA4047MTA	DIODE	
IC603	MN4013B	IC, LOGIC		D653	MA165TA	DIODE	
IC701	AN78L06	IC, REGULATOR		D701, 702	MA4150MTA	DIODE	
		TRANSISTOR(S)		D703	MA165TA	DIODE	
Q201	2SA1309AQSTA	TRANSISTOR		D704, 705	MA167TA	DIODE	
Q202, 203	2SD1450QRSTA	TRANSISTOR		D707-710	P300DLF	DIODE	$\Delta$
Q301, 302	2SC3312RSTA	TRANSISTOR		D713	MA4180MTA	DIODE	$\Delta$
Q501	2SC3114STUTA	TRANSISTOR	(E, EB, GC, GN)			VARIABLE RESISTOR(S)	
Q502	2SC3114STUTA	TRANSISTOR		VR301	EW2XAF25C15	V. R, BASS	
Q503	2SA1309AQSTA	TRANSISTOR		VR302	EW2XAF25C15	V. R, TREBLE	
Q504	2SA1309AQSTA	TRANSISTOR	(EB)	VR303	EW2Y6AF25C54	V. R, SUPER BASS	
Q505	2SC3311AQSTA	TRANSISTOR	(EB)	VR601	EVQMX2F2045B	V. R, MAIN VOLUME	
Q601	2SA1309AQSTA	TRANSISTOR				COMPONENT COMBINATION(S)	
Q602, 603	UN4211TA	TRANSISTOR		Z601	EXFP8331MW	COMPONENT COMBINATION	
Q604	2SC3311AQSTA	TRANSISTOR				COIL(S)	
Q605	UN4212TA	TRANSISTOR		L501, 502	SLQY07G-40	COIL	
Q607	2SC3311AQSTA	TRANSISTOR		L551, 552	SLQY07G-40	COIL	(EG)
Q609, 610	UN4211TA	TRANSISTOR		L601	RLQZP101KT-Y	COIL	
Q611	UN4111TA	TRANSISTOR		L602	RLQZP1R2KT-Y	COIL	
Q612-614	UN4211TA	TRANSISTOR		L603, 604	ELEXT330KA9	COIL	
Q651	2SC3311AQSTA	TRANSISTOR		L617-620	RLQZP101KT-Y	COIL	
Q701	UN4211TA	TRANSISTOR		L651	RLQZP101KT-Y	COIL	
Q702	2SB621AQRSTA	TRANSISTOR	$\Delta$	L699	RLQZP101KT-Y	COIL	
Q703	2SD1761DEF	TRANSISTOR	$\Delta$	L751	RLQZP101KT-Y	COIL	
Q704	2SB1187DEF	TRANSISTOR	$\Delta$	L752	ELEXT330KA9	COIL	
		DIODE(S)				OSCILLATOR(S)	
D301-304	MA165TA	DIODE		X601	EFOGC3004T4	OSCILLATOR	
D501, 502	MA167TA	DIODE	(EB)			DISPLAY TUBE	
D503	MA165TA	DIODE	(EB)				
D504	MA4051MTA	DIODE	(EB)				
D505	MA165TA	DIODE					

SU-X101				SU-X101			
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
						FUSE HOLDER(S)	
FL601	RSL0013-F	DISPLAY TUBE		FC1, 2	SJT388	FUSE HOLDER	$\Delta$
		SWITCH(ES)		FC3, 4	SJT388	FUSE HOLDER	$\Delta$ (E, EG, GC)
S1	ESB8249V	POWER	$\Delta$			FUSE(S)	
S2	ESE37263	VOLTAGE SELECTOR	$\Delta$ (GC)	F1	XBA2C08TBO	FUSE 250V T0.8A	$\Delta$ (E, EB, EG, GN)
S601A	SSH1198	SURROUND		F1	XBA2C16TBO	FUSE 250V T1.6A	$\Delta$ (GC)
S601	EVQ21405R	INPUT SELECTOR, PHONO		F2	XBA2C20TBO	FUSE 250V T2.0A	$\Delta$ (E, EG)
S602	EVQ21405R	INPUT SELECTOR, TUNER		F2	XBA2C08TBO	FUSE 250V T0.8A	$\Delta$ (GC)
S603	EVQ21405R	INPUT SELECTOR, AUX				TRANSFORMER(S)	
S604	EVQ21405R	INPUT SELECTOR, TAPE		T1	RTP1M5E002-V	POWER TRANSFORMER	$\Delta$ (E, EG)
S607	EVQ21405R	BALANCE, L		T1	RTP1M5B002-V	POWER TRANSFORMER	$\Delta$ (EB, GN)
S608	EVQ21405R	BALANCE, R		T1	RTP1M5G002-V	POWER TRANSFORMER	$\Delta$ (GC)
S609	EVQ21405R	MUTING					
S610	EVQ21405R	INPUT SELECTOR, CD					
		JACK(S)					
J201	RJT057W007	CONNECTOR(7P) MAIN P. C. B.					
J201	RJU057W007	SOCKET(7P)					
J202	RJT057W007	CONNECTOR(7P) MAIN P. C. B.					
J202	RJU057W007	SOCKET(7P)					
J203	RJT057W007	CONNECTOR(7P) MAIN P. C. B.					
J203	RJU057W007	SOCKET(7P)					
J204	SJT3215	CONNECTOR(2P)	(EB)				
J205	RJT057W007	CONNECTOR(7P) MAIN P. C. B.					
J205	RJU057W007	SOCKET(7P)					
J206	RJT057W007	CONNECTOR(7P) MAIN P. C. B.					
J206	RJU057W007	SOCKET(7P)					
J301	RJT003K008M1	CONNECTOR(8P)					
J301	RJU003K008M1	SOCKET(8P) MAIN P. C. B.					
J501	RJS1A1705	CONNECTOR(5P)					
J601	RJT003K010M1	CONNECTOR(10P)					
J601	RJU003K010M1	SOCKET(10P) MAIN P. C. B.					
J602	RJT003K010M1	CONNECTOR(10P)					
J602	RJU003K010M1	SOCKET(10P) MAIN P. C. B.					
J701-1, 2	RJS1A1704	CONNECTOR(4P)					
J603A	SJT30549BB	CONNECTOR(5P)					
J604A	SJT30549BB	CONNECTOR(5P)					
J605A	SJT30549BB	CONNECTOR(5P)					
J603B	SJS50581BB	SOCKET(5P)					
J604B	SJS50581BB	SOCKET(5P)					
J605B	SJS50581BB	SOCKET(5P)					
JK501	RJR0054	SP TERMINAL					
JK502	SJF3068-4N	SURROUND SP TERMINAL					
JK503	RJJ67TS02	H P JACK					
JK601	RJJ33T01	SYNCHRO, TAPE					
JK602	RJJ33T01	SYNCHRO, CD					
JK603	RJJ33T01	SYNCHRO, TURN TABLE					
JK701	RJS1A0203-0	CONNECTOR(3P), TO DECK	(E, EB, GC, GN)				

EXPLODED VIEW





REPLACEMENT PARTS LIST (for SU-X301)

SU-X101			SU-X101			SU-X101		
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks			
C204	ECFR1E472KR	25V 4700P	C615, 616	ECBT1H221KB5	50V 220P			
C205-208	ECEA1EK3R3B	25V 3.3U	C627	ECBT1E103ZF5	25V 0.01U			
C209	ECBT1H180J5	50V 18P	C651	ECEA1CK100B	16V 10U			
C210	ECFR1E823KR	25V 0.082U	C652, 653	ECBT1H101KB5	50V 100P			
C211, 212	ECBT1E103ZF5	25V 0.01U	C654, 655	ECBT1E103ZF5	25V 0.01U			
C213	ECEA1CU101B	16V 100U	C659	ECBT1H331KB5	50V 330P			
C214	ECEA1EK4R7B	25V 4.7U	C670	ECEA0JK101B	6.3V 100U			
C215	ECEA1HK010B	50V 1U	C695	ECBT1E103ZF5	25V 0.01U			
C216	ECEA1CK100B	16V 10U	C696, 697	ECBT1H101KB5	50V 100P			
C217, 218	ECBT1E103ZF5	25V 0.01U	C698	ECBT1H102KB5	50V 1000P			
C301, 302	ECBT1H330J5	50V 33P	C699	ECBT1E223ZF5	25V 0.022U			
C303, 304	ECBT1H150J5	50V 15P	C701, 702	ECKR1H103ZF5	50V 0.01U Δ			
C305-308	ECBT1H101KB5	50V 100P	C703, 704	ECEA1CU470B	16V 47U			
C309, 310	ECBT1E103ZF5	25V 0.01U	C705, 706	ECEA1CK220B	16V 22U			
C311, 312	ECEA1EK3R3B	25V 3.3U	C707, 708	ECEA1CK100B	16V 10U			
C313, 314	ECEA1CK100B	16V 10U	C709	ECEA1HK2R2B	50V 2.2U			
C315, 316	ECEA1HPS010B	50V 1U	C710	ECBT1E223ZF5	25V 0.022U			
C317, 318	ECEA1HK3R3B	50V 3.3U	C711, 712	ECEA1HU332UE	50V 3300U Δ			
C319, 320	ECEA1CPS100B	16V 10U	C713	ECKR2H103ZU	500V 0.01U Δ (E, EB)			
C321, 322	ECEA1HPS3R3B	50V 3.3U			(GC, GN)			
C323, 324	ECEA1HCR47B	50V 0.47U	C713	ECQE1104KF3	100V 0.1U Δ (EG)			
C325, 326	ECEA1HPS010B	50V 1U	C714	ECKR1H103ZF5	50V 0.01U Δ			
C327, 328	ECQV1H124JZ3	50V 0.12U	C715, 716	ECEA1VU330B	35V 33U			
C329, 330	ECFR1E183KR	25V 0.018U	C751-753	ECBT1E223ZF5	25V 0.022U			
C331, 332	ECFR1E823KR	25V 0.082U						
C333, 334	ECFR1E332KR	25V 3300P						
C335, 336	ECFR1E223KR	25V 0.022U						
C337	ECEA1CU470B	16V 47U						
C338, 339	ECEA1EK3R3B	25V 3.3U						
C351-354	ECBT1E103ZF5	25V 0.01U						
C399	ECBT1H470J5	50V 47P						
C501, 502	ECKR1H391KB5	50V 390P						
C503, 504	ECKR1H102KB5	50V 1000P						
C505, 506	ECEA1CPS220B	16V 22U						
C507, 508	ECCR1H150K5	50V 15P						
C509-512	ECKR1H473ZF5	50V 0.047U						
C513	ECEA1CK100B	16V 10U (EB)						
C514-518	ECBT1E103ZF5	25V 0.01U						
C519	ECEA1HU330B	50V 33U						
C520	ECEA2AU100B	100V 10U						
C521	ECEA1EK4R7B	25V 4.7U						
C523, 524	ECEA1HPS3R3B	50V 3.3U						
C551, 552	ECKR1H102ZF5	50V 1000P (EG)						
C553, 554	ECBT1E223ZF5	25V 0.022U (EG)						
C555, 556	ECBT1H102KB5	50V 1000P (EG)						
C560	ECBT1E103ZF5	25V 0.01U						
C601	ECEA0JU102E	6.3V 1000U						
C602	ECBT1E223ZF5	25V 0.022U						
C603	ECEA1AU470B	10V 47U						
C604, 605	ECEA1VK330B	35V 33U						
C607-610	ECBT1H331KB5	50V 330P						
C611, 612	ECEA1HK2R2B	50V 2.2U						

Notes : \* Important safety notice:  
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 \* 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.

SU-X301				SU-X301			
Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		D613	MA4056MTA	DIODE	
				D614	LN873RP-LS	LED	
				D614A	MA165TA	DIODE	
				D615	LN873RP-LS	LED	
				D616	LD-001VR	LED	
				D617, 618	LN873RP-LS	LED	
				D620	MA165TA	DIODE	
				D651	MA4051MTA	DIODE	
				D652	MA4047MTA	DIODE	
				D653	MA165TA	DIODE	
				D701, 702	MA4150MTA	DIODE	
				D703	MA165TA	DIODE	
				D704, 705	MA167TA	DIODE	Δ
				D707-710	P300DLF	DIODE	Δ
				D713	MA4180MTA	DIODE	
		TRANSISTOR(S)				VARIABLE RESISTOR(S)	
Q201	2SA1309AQSTA	TRANSISTOR		VR301	EW2XAF25C15	V. R, BASS	
Q202, 203	2SD1450QRSTA	TRANSISTOR		VR302	EW2XAF25C15	V. R, TREBLE	
Q301, 302	2SC3312RSTA	TRANSISTOR		VR303	EWY6AF25C54	V. R, SUPER BASS	
Q501, 502	2SC3114STUTA	TRANSISTOR		VR601	EVQWX2F2045B	V. R, MAIN VOLUME	
Q503, 504	2SA1309AQSTA	TRANSISTOR				COMPONENT COMBINATION(S)	
Q505	2SC3311AQSTA	TRANSISTOR					
Q601	2SA1309AQSTA	TRANSISTOR					
Q602, 603	UN4211TA	TRANSISTOR		Z601	EXFP8331MW	COMPONENT COMBINATION	
Q604	2SC3311AQSTA	TRANSISTOR				COIL(S)	
Q605	UN4212TA	TRANSISTOR					
Q607	2SC3311AQSTA	TRANSISTOR		L501, 502	SLQY07G-40	COIL	
Q609, 610	UN4211TA	TRANSISTOR		L551, 552	SLQY07G-40	COIL	(EG)
Q611	UN4111TA	TRANSISTOR		L601	RLQZP101KT-Y	COIL	
Q612-614	UN4211TA	TRANSISTOR		L602	RLQZP1R2KT-Y	COIL	
Q651	2SC3311AQSTA	TRANSISTOR		L603, 604	ELEXT330KA9	COIL	
Q701	UN4211TA	TRANSISTOR		L617-620	RLQZP101KT-Y	COIL	
Q702	2SB621AQRSTA	TRANSISTOR	Δ	L651	RLQZP101KT-Y	COIL	
Q703	2SD1761DEF	TRANSISTOR	Δ	L699	RLQZP101KT-Y	COIL	
Q704	2SB1187DEF	TRANSISTOR	Δ	L751	RLQZP101KT-Y	COIL	
				L752	ELEXT330KA9	COIL	
		DIODE(S)				OSCILLATOR(S)	
D301-304	MA165TA	DIODE					
D501, 502	MA167TA	DIODE					
D503	MA165TA	DIODE		X601	EF0GC3004T4	OSCILLATOR	
D504	MA4051MTA	DIODE				DISPLAY TUBE	
D505	MA165TA	DIODE					
D601	1SS291TA	DIODE					
D606-611	MA165TA	DIODE		FL601	RSL0013-F	DISPLAY TUBE	

SU-X301

Ref. No.	Part No.	Part Name & Description	Remarks
		SWITCH(ES)	
S1	ESB8249V	POWER	△
S2	ESE37263	VOLTAGE SELECTOR	△ (GC)
S601A	SSH1198	SURROUND	
S601	EVQ21405R	INPUT SELECTOR, PHONO	
S602	EVQ21405R	INPUT SELECTOR, TUNER	
S603	EVQ21405R	INPUT SELECTOR, AUX	
S604	EVQ21405R	INPUT SELECTOR, TAPE	
S607	EVQ21405R	BALANCE, L	
S608	EVQ21405R	BALANCE, R	
S609	EVQ21405R	MUTING	
S610	EVQ21405R	INPUT SELECTOR, CD	
		JACK(S)	
J201	RJT057W007	CONNECTOR (7P)	
J201	RJU057W007	SOCKET (7P) MAIN P. C. B.	
J202	RJT057W007	CONNECTOR (7P)	
J202	RJU057W007	SOCKET (7P) MAIN P. C. B.	
J203	RJT057W007	CONNECTOR (7P)	
J203	RJU057W007	SOCKET (7P) MAIN P. C. B.	
J204	SJT3215	CONNECTOR (2P)	
J205	RJT057W007	CONNECTOR (7P)	
J205	RJU057W007	SOCKET (7P) MAIN P. C. B.	
J206	RJT057W007	CONNECTOR (7P)	
J206	RJU057W007	SOCKET (7P) MAIN P. C. B.	
J301	RJT003K008M1	CONNECTOR (8P) MAIN P. C. B.	
J301	RJU003K008M1	SOCKET (8P)	
J501	RJS1A1705	CONNECTOR (5P)	
J601	RJT003K010M1	CONNECTOR (10P) MAIN P. C. B.	
J601	RJU003K010M1	SOCKET (10P)	
J602	RJT003K010M1	CONNECTOR (10P) MAIN P. C. B.	
J602	RJU003K010M1	SOCKET (10P)	
J701-1, 2	RJS1A1704	CONNECTOR (4P)	
J603A	SJT30549BB	CONNECTOR (5P)	
J604A	SJT30549BB	CONNECTOR (5P)	
J605A	SJT30549BB	CONNECTOR (5P)	
J603B	SJS50581BB	SOCKET (5P)	
J604B	SJS50581BB	SOCKET (5P)	
J605B	SJS50581BB	SOCKET (5P)	
JK501	RJR0054	SP TERMINAL	
JK502	SJF3068-4N	SURROUND SP TERMINAL	
JK503	RJJ67TS02	H. P. JACK	
JK601	RJJ33T01	SYNCHRO, TAPE	
JK602	RJJ33T01	SYNCHRO, CD	
JK603	RJJ33T01	SYNCHRO, TURNTABLE	
JK701	RJS1A0203-0	CONNECTOR (3P), TO DECK	(E, EB, GC, GN)
		FUSE HOLDER(S)	

SU-X301

Ref. No.	Part No.	Part Name & Description	Remarks
FC1, 2	SJT388	FUSE HOLDER	△
FC3, 4	SJT388	FUSE HOLDER	△ (E, EG, GC)
		FUSE(S)	
F1	XBA2C10TB0	FUSE 250V T1. 0A	△ (E, EG, EB, GN)
F1	XBA2C20TB0	FUSE 250V T2. 0A	△ (GC)
F2	XBA2C20TB0	FUSE 250V T2. 0A	△ (E, EG)
F2	XBA2C10TB0	FUSE 250V T1. 0A	△ (GC)
		TRANSFORMER(S)	
T1	RTP1M5E001-V	POWER TRANSFORMER	△ (E, EG)
T1	RTP1M5B001-V	POWER TRANSFORMER	△ (EB, GN)
T1	RTP1M5G001-V	POWER TRANSFORMER	△ (GC)

SU-X301

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS	
(Exploded view on pages 27, 28.)			
1	RKM0020A-1K	CABINET	
2	RHD30007	SCREW	
4	RMN0015	FL HOLDER	
5	RMN0016	FL HOLDER	
6	SJF3068NJ	TERMINAL BOARD (2P)	
7	SJF3069N	TERMINAL BOARD (4P)	
8	RJS1A0203-0	SOCKET (3P) TO TUNER	
12	RGRO085F-A	REAR PANEL	(E)
12	RGRO085A-B	REAR PANEL	(EB)
12	RGRO085G-A	REAR PANEL	(EG)
12	RGRO085H-A	REAR PANEL	(GC)
12	RGRO085J-A	REAR PANEL	(GN)
13	RGU0080	SURROUND BUTTON	
14	RGW0028-1K	STONE KNOB	
16	RFKJUX301E-K	CHASSIS ASS'Y	
16-1	RKA0011	FOOT	
17	RJJ33TR01	REMOTE OUT	
18	SBC666-1	POWER BUTTON	
19	RGW0076	MAIN VOL KNOB	
20	SHE187-2	HOLDER	
21	SJP9205-2Y	SHORTING PIN	
22	SJS9231A	AC INLET COVER	(E, EB, EG, GC)
22	SJS9234A	AC INLET COVER	(GN)
23	SJS9333A	AC OUTLET COVER	(E, EG)
23	SJS9332A	AC OUTLET COVER	(EB)
23	SJS9233A	AC OUTLET COVER	(GC)
24	SNE2123	GND SCREW	
25	SNE4021-1	NUT	
26	SJS894-1	SPRING	
27	XTBS3+8JFZ1	SCREW	
28	XTB3+16JFZ	SCREW	
29	XTB3+20JFZ	SCREW	
30	XTB3+8JFZ	SCREW	
31	XTWS3+8T	SCREW	
32	RGU0081	MUTING BUTTON	
33	RGU0091A	CD-DIRECT BUTTON	
34	RGU0092	BALANCE BUTTON	
35	RGU0106A	SELECTOR BUTTON	
36	SGX9036	VOLUME ORNAMENT	
37	SYE1128-3	FAN ASS'Y	
37-1	SHE232	FAN	
37-2	SUS271	SPRING	
37-3	SHE233	FAN CASE	
37-4	M0N-4RB4MRC	MOTOR	
37-5	SHE234	CAP	
42	SJS9231-1B	AC INLET	△ (E, EB, EG, GC)
42	SJS9234B	AC INLET	△ (GN)
43	SJS9333B	AC OUTLET	△ (E, EG)
43	SJS9332B	AC OUTLET	△ (EB)

SU-X301

Ref. No.	Part No.	Part Name & Description	Remarks
43	SJS9233B	AC OUTLET	△ (GC)
43	RJS1A4602	AC OUTLET	△ (GN)
44	RGLO044	PANEL LIGHT	
45	RGLO045	PANEL LIGHT	
46	RFKJUX301E-K	FRONT PANEL	
47	XYN3+C6FZ	SCREW	(GC)
		PACKING MATERIAL	
P1	RPG0467	CARTON BOX	
P2	RPN0331	PAD	
P3	SPSD152	ACCESSORIES BOX	
P4	XZB52X60A01Z	PROTECTION COVER	
P5	RPG0588	CARTON BOX (SYSTEM)	(EB)
		ACCESSORIES	
A1	RQF0582	INSTRUCTIONS MANUAL ASS'Y	(E)
A1	RQF0581	INSTRUCTIONS MANUAL ASS'Y	(EB)
A1	RQF0583	INSTRUCTIONS MANUAL ASS'Y	(EG)
A1	RQF0584	INSTRUCTIONS MANUAL ASS'Y	(GC)
A1	RQF0585	INSTRUCTIONS MANUAL ASS'Y	(GN)
A1-1	RQA0013	WARRANTY CARD	(E, EG)
A1-1	SQX7186	WARRANTY CARD	(GN)
A1-2	RQCB0169	SERVICENTOR LIST	(E, EG, GC, GN)
A1-3	RFKSUX301E-K	INSTRUCTIONS MANUAL	(E)
A1-3	RQT0472-B	INSTRUCTIONS MANUAL	(EB, GN)
A1-3	RQT0475-D	INSTRUCTIONS MANUAL	(EG)
A1-3	RQT0473-G	INSTRUCTIONS MANUAL	(GC)
A1-4	RQCS0009	CAUTION NOTE FOR FTZ	(EG)
A2	SFDAC05E03	AC CORD	△ (E, EG)
A2	SJA188	AC CORD	△ (EB)
A2	RJA0004	AC CORD	△ (GC)
A2	SJA173	AC CORD	△ (GN)
A3	SJP9215	AC PLUG	△ (GC)

