

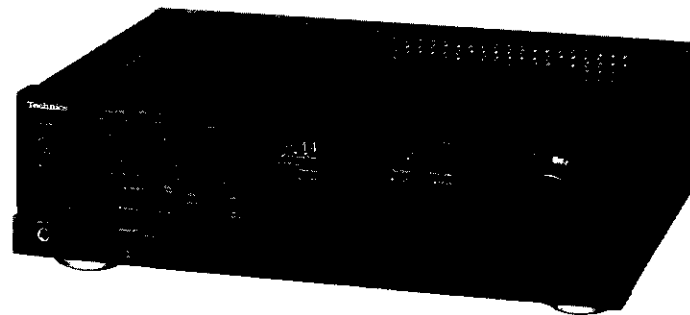
Service Manual

Stereo Integrated Amplifier

SU-V550

Color

(S)Silver Type
(K)Black Type



SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

20 Hz ~ 20 kHz continuous power output both channels driven	2 x 65 W (8Ω)
1 kHz continuous power output both channels driven	2 x 105 W (4Ω) 2 x 75 W (8Ω)

Total harmonic distortion	
rated power at 20 Hz ~ 20 kHz	0.002% (8Ω)
rated power at 1 kHz	0.005% (4Ω) 0.0009% (8Ω)
half power at 20 Hz ~ 20 kHz	0.002% (8Ω)
half power at 1 kHz	0.002% (4Ω) 0.0008% (8Ω)

Intermodulation distortion	
rated power at 50 Hz:7 kHz = 4:1, SMPTE, 8Ω	0.005%

Power bandwidth	5 Hz ~ 50 kHz (8Ω, 0.03%)
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Residual hum and noise	0.8 mV
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Damping factor	30 (4Ω), 60 (8Ω)
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Input sensitivity and impedance	
PHONO MM	2.5mV/47 kΩ
MC	170 μV/220 Ω

TUNER, CD, AUX, TAPE 1/DAT	
TAPE 2/EXT	150mV/22 kΩ

PHONO maximum input voltage (IHF'66 1 kHz, RMS)	
MM	160 mV
MC	12 mV

S/N	
rated power (4Ω)	
PHONO MM	77 dB (83 dB: IHF'66)
PHONO MC	64 dB (65 dB: IHF'66)

TUNER, CD, AUX,	
TAPE 1/DAT, TAPE 2/EXT	91 dB (100 dB: IHF'66)

-26 dB power (4Ω)	
PHONO MM	68 dB
MC	62 dB

TUNER, CD, AUX,	
TAPE 1/DAT, TAPE 2/EXT	70 dB

50 mW power (4Ω)	62 dB
PHONO MM	61 dB
MC	
TUNER, CD, AUX,	
TAPE 1/DAT, TAPE 2/EXT	62 dB

Frequency response	RIAA standard curve ± 0.8dB (30 Hz ~ 15 kHz)
PHONO	
TUNER, CD, AUX,	3 Hz ~ 100 kHz (-3 dB)
TAPE 1/DAT, TAPE 2/EXT	+0, -0.2 dB (20 Hz ~ 20 kHz)

Tone controls	
BASS	50 Hz, +10 dB ~ -10 dB
TREBLE	20 kHz, +10 dB ~ -10 dB
Subsonic filter	20 Hz, -6 dB/oct.
Loudness control (volume at -30 dB)	50 Hz, +9 dB

Output voltage	150 mV
TAPE 1/DAT, TAPE 2/EXT REC OUT	±1 dB
Channel balance, AUX 250 Hz ~ 6,300 Hz	50dB
Channel separation, AUX 1 kHz	

Headphones output level	540 mV/330 Ω
and impedance	

Load impedance	4 Ω ~ 16 Ω
MAIN or REMOTE	8 Ω ~ 16 Ω
MAIN and REMOTE	

■ GENERAL

Power consumption	520 W
Power supply	
For United Kingdom and Australia	AC 50 Hz/60 Hz, 240 V

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

Dimensions (W x H x D)	430 x 126 x 311 mm (16-15/16" x 4-15/16" x 12-7/32")
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Weight	7.9 kg (17.4 lb.)
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Notes:
1. Specifications are subject to change without notice.
Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

SU-V550

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■ BEFORE REPAIR AND ADJUSTMENT

(1) Turn off the power supply. Using a 10Ω, 10W resistor, shortcircuit both ends of power supply capacitors (C705, C706) in order to discharge the voltage.

(2) Before turning on the power switch of the unit.

A. Connect the voltage controller to the primary side.

B. Connect the AC ampere meter to the primary side or connect the DC voltage meter to the "±B" circuit of the secondary side.

C. Turn the VR of ICQ (VR401 and VR402) to minimum (counterclockwise).

D. After setting the output to zero of the voltage controller, turn on the power switch of the unit.

And increase the output of voltage controller gradually.

Then, check carefully whether the current value of primary side become more than following value or whether the DC voltage of secondary side is increasing slowly.

E. If the value of current is increasing unusually or the DC voltage is not increasing, lower the output level of voltage controller immediately.

● The current value of the primary side at no signal. (Confirm the power supply voltage of each area and provided voltage of the unit.)

Power supply voltage	AC110V	AC127V	AC220V	AC240V
Consumed current 50/60Hz	280 ~ 560mA	260 ~ 520mA	140 ~ 280mA	130 ~ 260mA

■ PROTECTION CIRCUITRY

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

- No sound is heard when the power is turned 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 the amplifier are used.

If this occurs, follow the procedure outlined below:

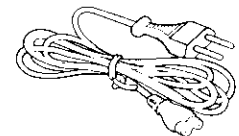
1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ ACCESSORY

● AC power supply cord	1
(SJA168)	For (XA) area only.
(SJA173)	For (XL) area only.
(SJA193)	For (EK) area only.
(SFDAC05E03)	For others.



Technics

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

LOCATION OF CONTROLS

● Safety operation indicator (amplifier operation monitor)

This indicator illuminates to indicate the operating condition of this unit.

voltage control:

When the power is switched ON, this indicator illuminates when the unit is in the operation condition.

current drive:

When the power is switched ON, this indicator illuminates after about 4 seconds when the unit is in the operation condition.

If an abnormal condition in the circuitry is detected, such as DC voltage appearing in the output, or a short-circuit of the positive (+) and negative (-) wires from the speaker terminals, the protection circuit functions and this indicator does not illuminate. If this occurs, switch the power OFF, find the cause of the trouble and correct it, and then switch the power ON once again.

● Balance control (balance)

This control is used to adjust left/right volume balance.

● Subsonic filter switch (subsonic filter)

off (): Set to this position for ordinary use.

20 Hz (): Set to this position to eliminate ultra-low-frequency noise such as motor "rumble" and unusual vibration of the woofer cone caused by a warped disc, etc.

● Tone controls (bass/treble)

The bass control is for the low-frequency sound range, and the treble control is for the high-frequency sound range.

● Power switch (power)

● Tone switch (tone control)

This switch is used to switch the tone control circuit (bass, treble) ON or OFF.

deaf ():

Set to this position to turn the bass/treble tone control circuit off. Regardless of the positions of the bass/treble tone controls, the characteristics will remain flat.

on ():

Set to this position to adjust the tone quality by using the tone controls.

● Headphones jack (phones)

● Speaker selectors (speakers)

These selectors are used to switch the speaker systems ON and OFF.

main on ():

Sound can be heard from the speakers connected to the "MAIN" terminals.

remote on ():

Sound can be heard from the speakers connected to the "REMOTE" terminals.

● Recording-mode selector (rec selector)

This selector is used to select the signal to be recorded by the connected tape deck.

tape 1 2:

Set to this position to record from tape deck 1 to tape deck 2.

tape 2 1:

Set to this position to record from tape deck 2 to tape deck 1.

aux:

Set to this position to record the signals from equipment connected to the "AUX" terminals.

CD:

Set to this position to record from a compact disc.

tuner:

Set to this position to record from phono discs

phono:

Set to this position to record from radio broadcasts.

● Loudness switch (loudness)

Set to the "on" position when listening to music at a low volume. Auditory perception of sound in the low frequency range falls off at low volume, but when the switch is in this position, this deficiency is compensated for, so that the full impact of the musical performance can be enjoyed.

● Phono cartridge selector (phono selector)

This selector should be set to the position which corresponds to the type of cartridge used on the turntable.

MM ():

Set to this position when using a moving-magnet type cartridge or high-output moving-coil cartridge (1 mV or more).

MC ():

Set to this position when using a moving-coil type cartridge (less than 1 mV).

● Compact disc direct-through switch (CD direct)

Even better tone quality of the very high quality signals from a compact disc can be obtained by routing these signals directly to the volume level adjustment, without passing them through an input selector.

When this switch is set to the "on" position, the sound source selected by the input selectors cannot be heard.

● Volume control (volume)

This control is used to adjust the volume level.

Be absolutely sure to set this control to a low position ("0" → "1") before switching the power ON. After the power is switched ON, please wait several seconds before increasing the volume level.

● Input selectors/indicators (input selector)

Press to select the sound source to be listened.

The corresponding indicator illuminates during operation to indicate the selected sound source.

tape 1/DAT:

Press this button to playback or monitor the sound of a tape deck or other equipment connected to the "TAPE 1/DAT" terminals on the rear panel.

tape 2/ext:

Press this button to playback or monitor the sound from a tape deck connected to the "TAPE 2/EXT" terminals on the rear panel.

aux:

Press this button to listen to sound from a video disc player or other equipment connected to the "AUX" terminals on the rear panel.

CD:

Press this button to listen to a compact disc.

tuner:

Press this button to listen to radio broadcasts.

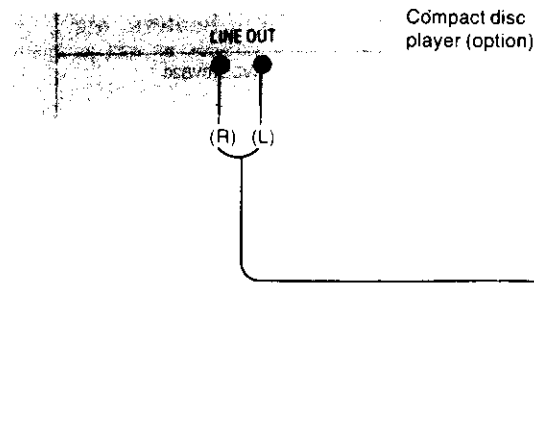
phono:

Press this button to listen to phono discs.

■ CONNECTIONS

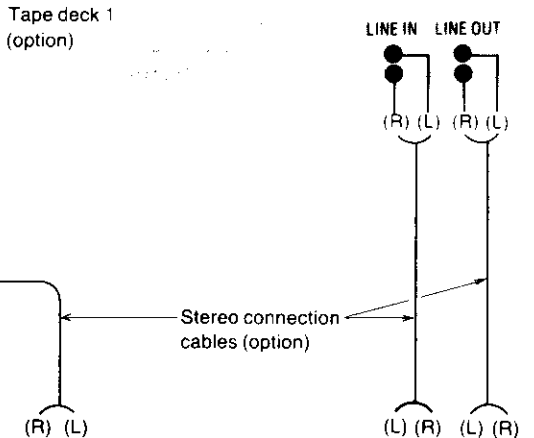
“CD” terminals

Connect a compact disc player.



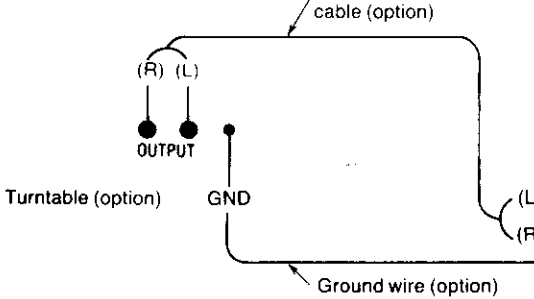
“TAPE 1/DAT” terminals

In addition to a tape deck, the analog terminals of a digital audio tape deck (DAT) can be connected here. If the digital audio tape deck is connected, connect the tape deck to the “TAPE 2/EXT” terminals.



“PHONO” terminals

Connect a turntable.



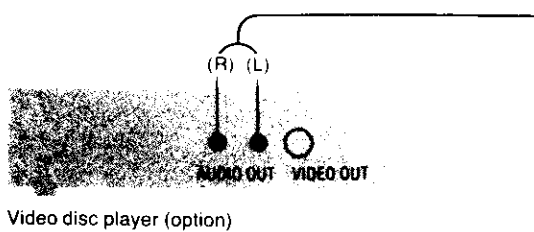
“TUNER” terminals

Connect a tuner.



“AUX” terminals

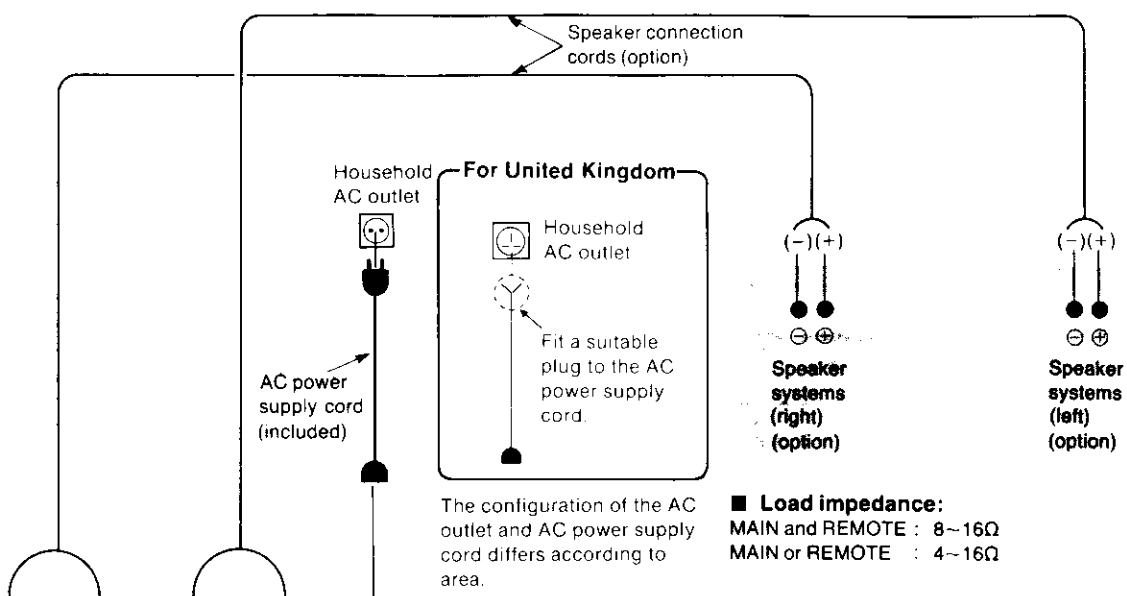
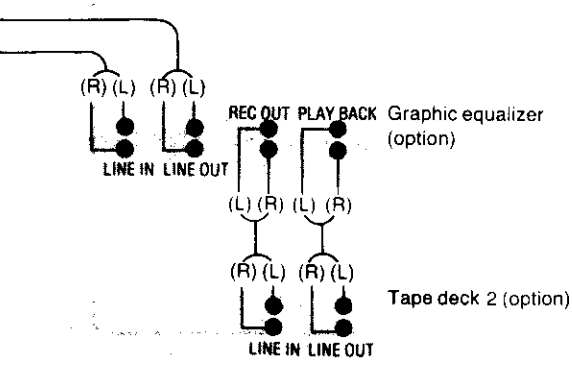
Connect a video disc player etc. These terminals are audio playback only.



*Phono input capacitance is about 100 pF.

“TAPE 2/EXT” terminals

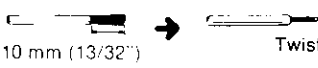
Connect a graphic equalizer or a second tape deck, etc.



“SPEAKERS” terminals

■ Connection of speaker wires

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



2. Turn 5 or 6 times.



3. Insert wire and tighten screw completely. Pull the wire to assure a proper connection.



Notes:

1. To prevent damage to circuitry, never short plus (+) and minus (-) speaker terminals.

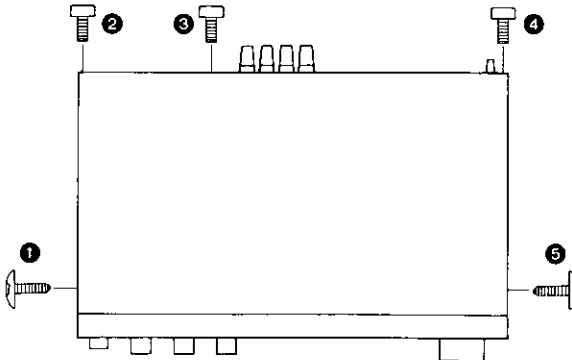
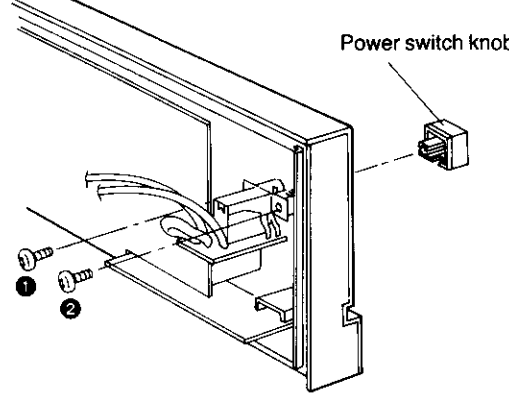
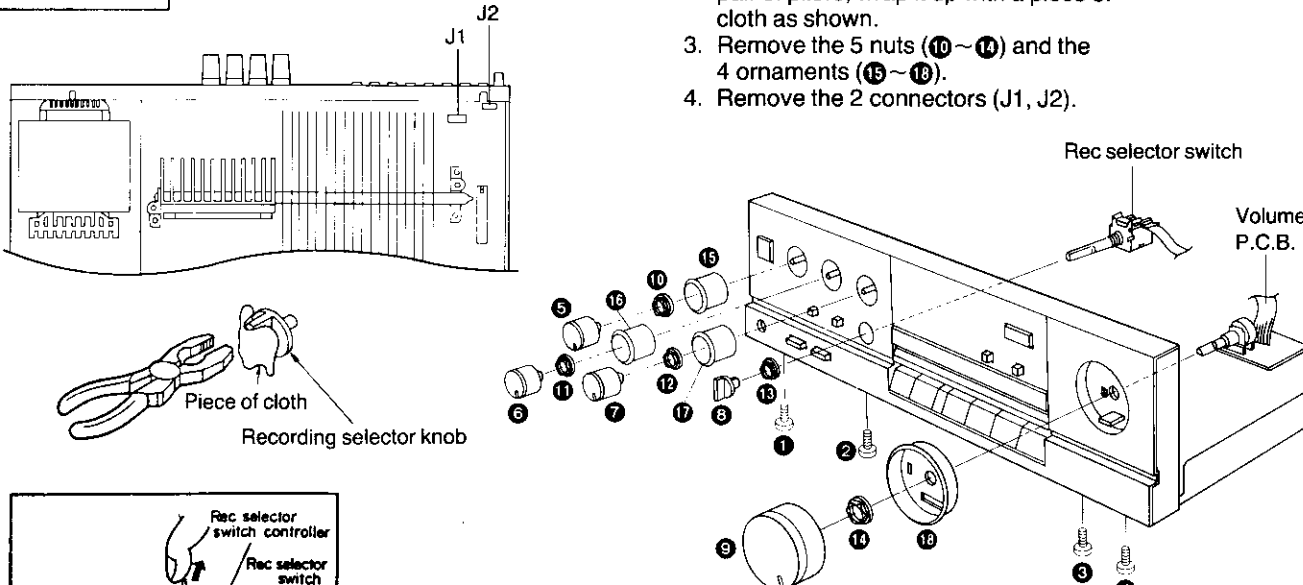
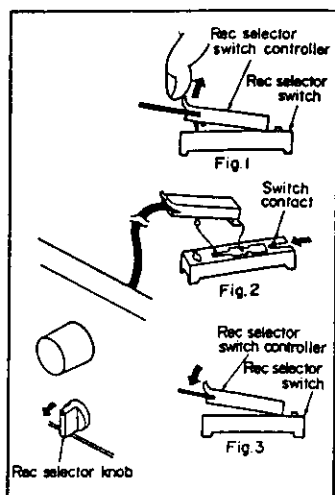


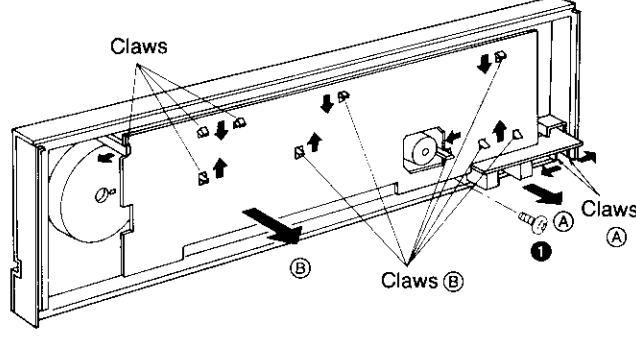
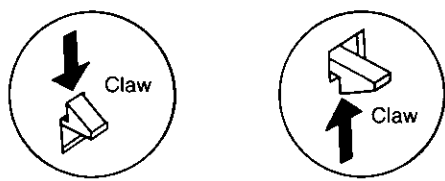
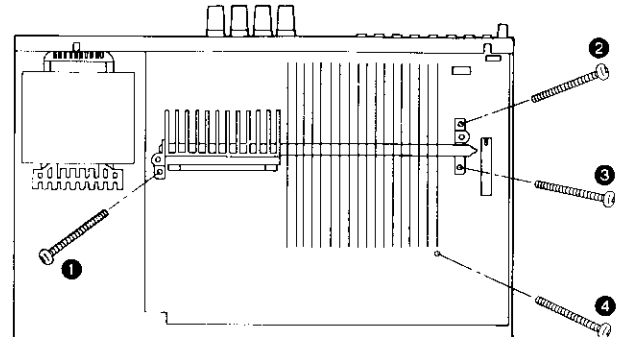
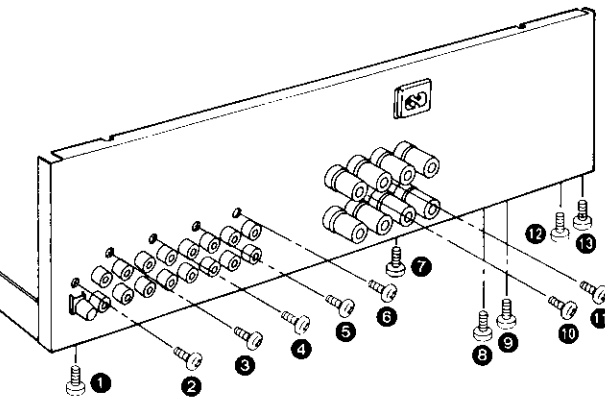
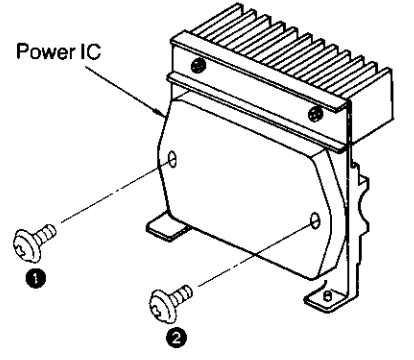
2. Be sure to only connect positive (+) cords to positive (+) terminals, and negative (-) cords to negative (-) terminals.

■ “REMOTE” terminals

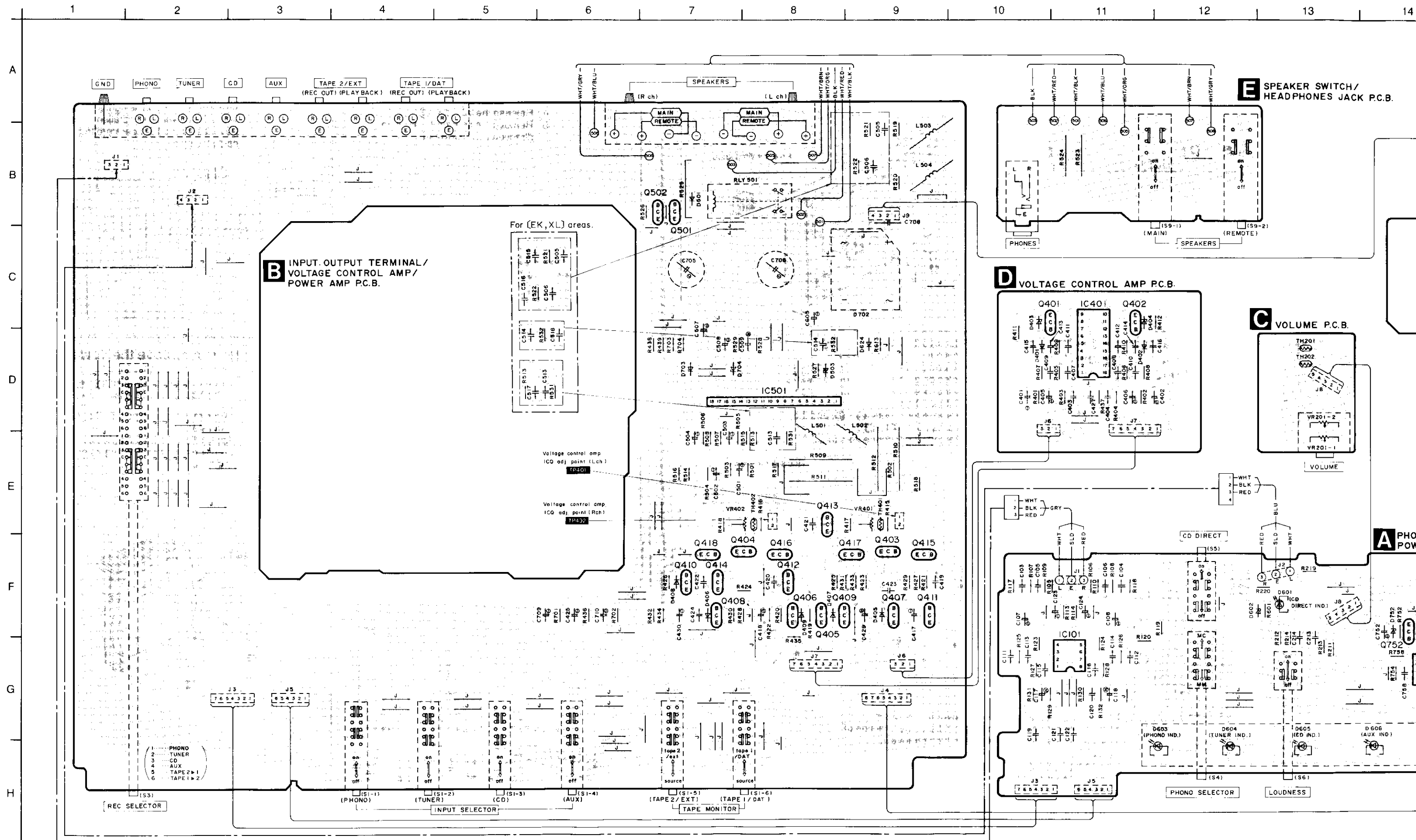
Connection to second pair of speakers.

■ DISASSEMBLY INSTRUCTIONS

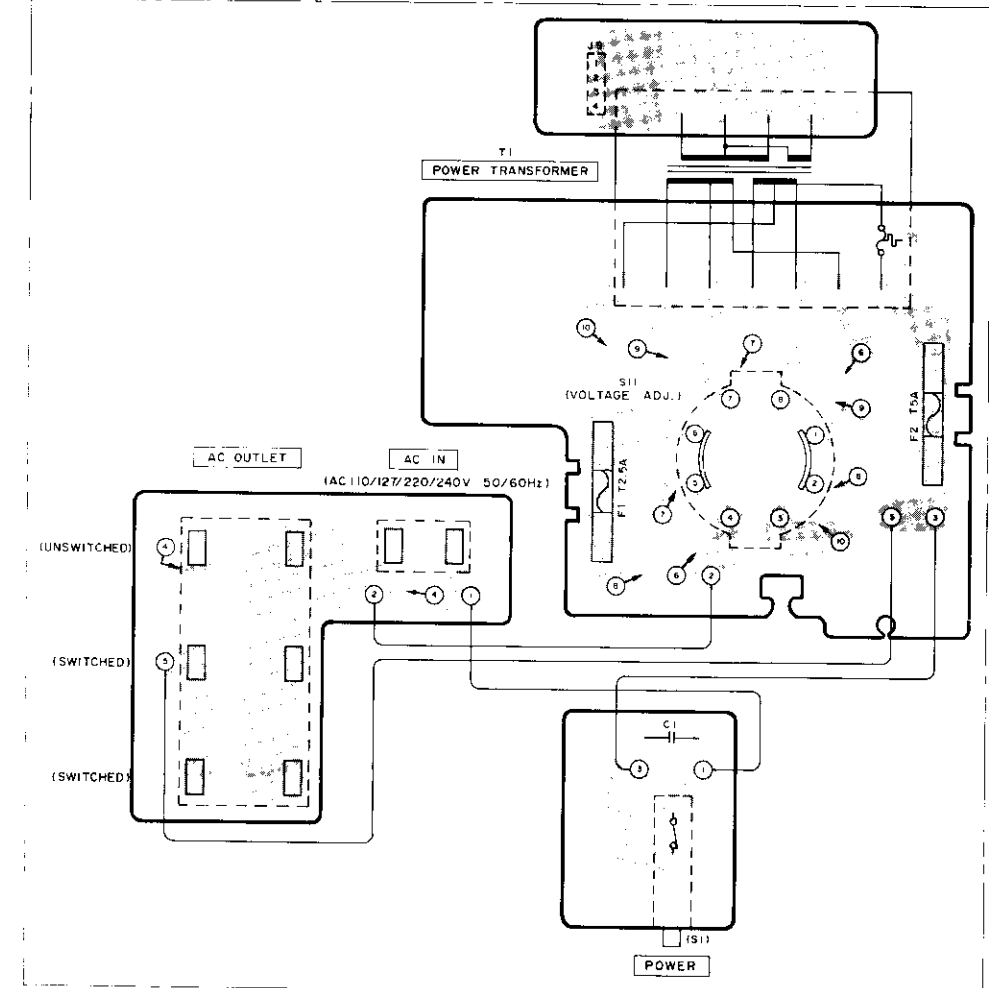
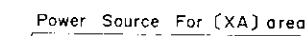
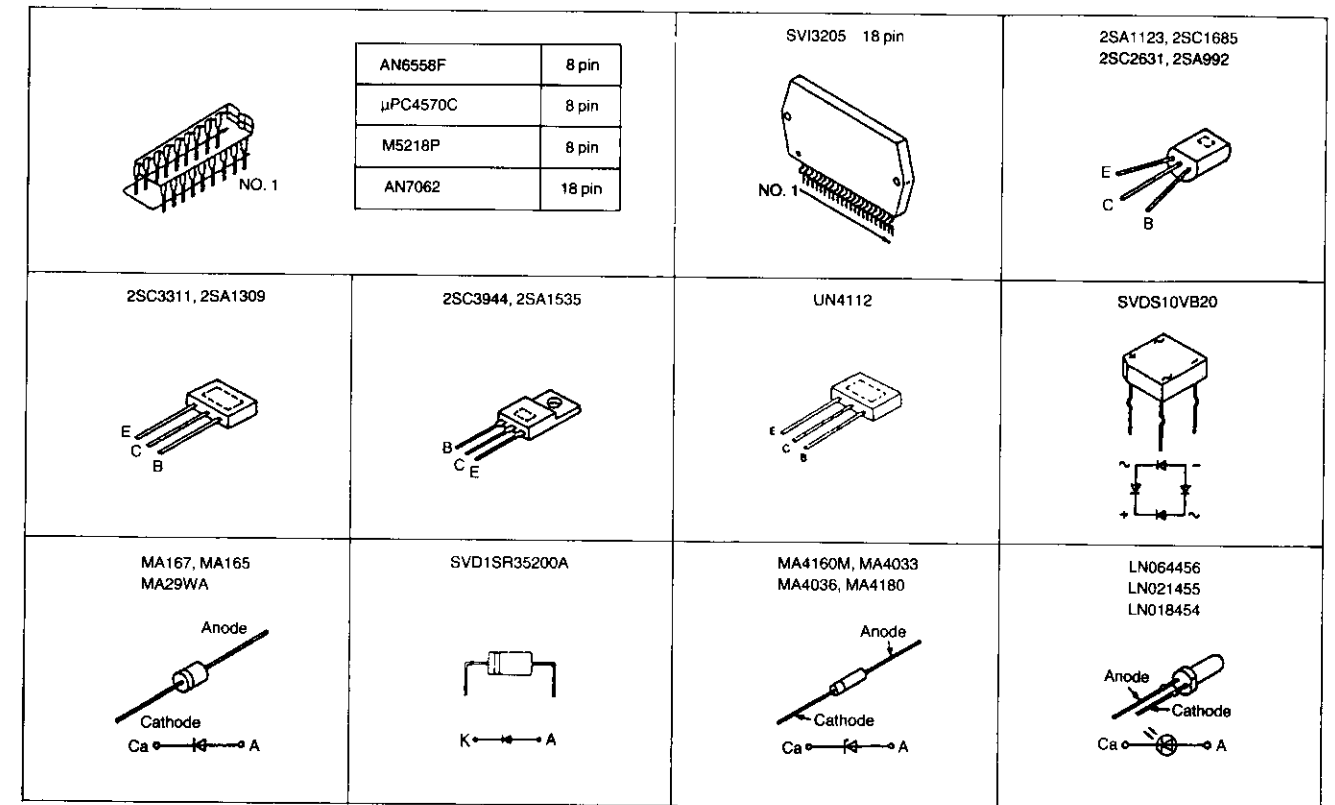
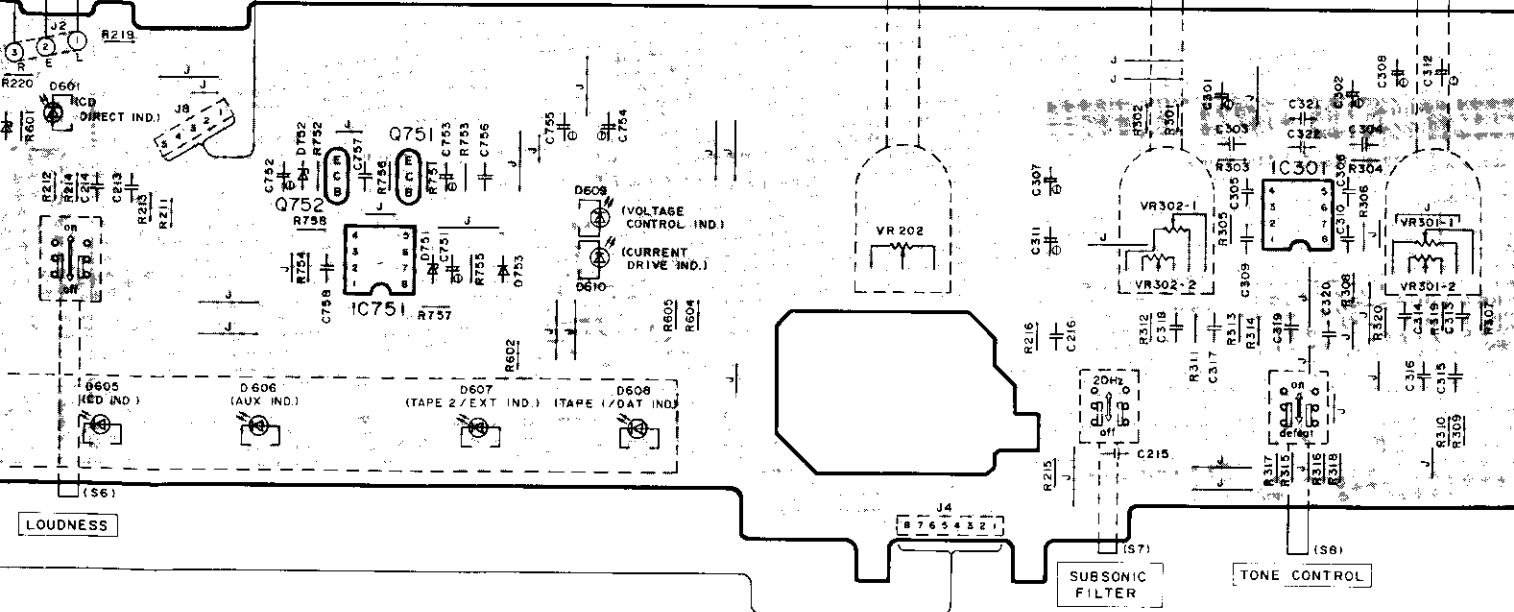
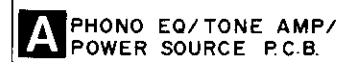
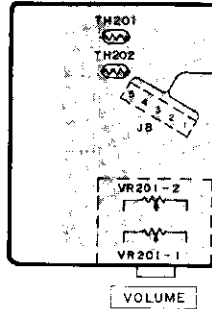
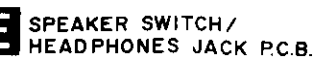
Ref. No. 1	How to remove the cabinet	Ref. No. 2	How to remove the power switch P.C.B.
Procedure 1	• Remove the 5 screws (①~⑤). 	Procedure 1→2	1. Remove the power switch knob by pushing it from behind the front panel. 2. Remove the 2 screws (①, ②). 
Ref. No. 3	How to remove the front panel, the rec selector and the volume P.C.B.	1. Remove the 4 screws (①~④). 2. Pull out the 5 knobs (⑤~⑨). To prevent damage to the recording selector knob when removing it with a pair of pliers, wrap it up with a piece of cloth as shown. 3. Remove the 5 nuts (⑩~⑭) and the 4 ornaments (⑮~⑯). 4. Remove the 2 connectors (J1, J2). 	
Procedure 1→3	  How to remove the rec selector switch controller • Pull up the rec selector switch controller in the direction of the arrow as shown in figure 1 and then remove it. (See Fig. 1) How to replace the rec selector switch controller 1. Push the switch contact in the direction of the arrow. (See Fig. 2) 2. Rotate the rec selector knob counterclockwise. (See Fig. 2) 3. Install the rec selector switch controller in the rec selector switch. (See Fig. 3)		

Ref. No. 4	How to remove the control, the phones and speaker P.C.B.	Ref. No. 6	How to remove the main P.C.B.
Procedure 1→2→4	- Remove the screw (①). - Release the 2 claws (A). - Remove the phones and speaker P.C.B., in the direction of the arrow (A). - Release the 10 claws (B). - Remove the control P.C.B., in the direction of the arrow (B).  	Procedure 1→2→5→6	Remove the 4 screws (①~④). Note: To check the unit for continuity when it is turned on, place it on its right side panel where the power IC is installed. This will prevent abnormal temperature from rising inside the unit. 
Ref. No. 5	How to remove the rear panel	Ref. No. 7	How to remove the power IC
Procedure 1→2→5	Remove the 13 screws (①~⑬). 	Procedure 1→2→5→6→7	- Remove the 2 screws (①, ②). - Unsolder the terminals of the power IC. •When mounting the power IC or regulator transistor. Apply silicone compound (SZZ0L15) to the rear side of power IC or regulator transistor. 

CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

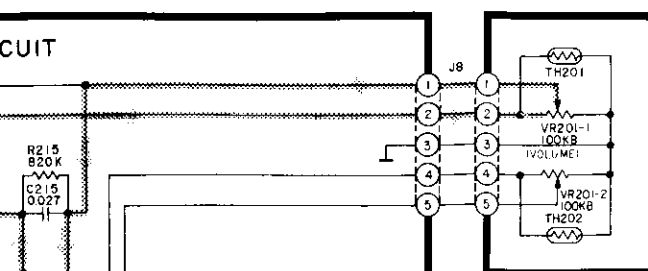


■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

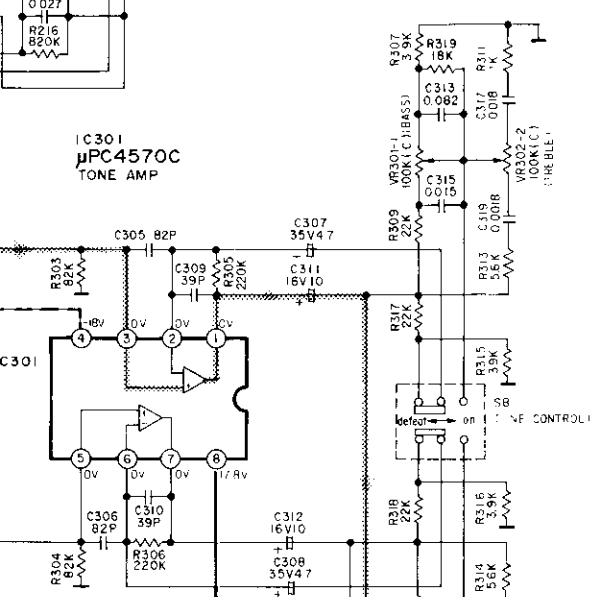




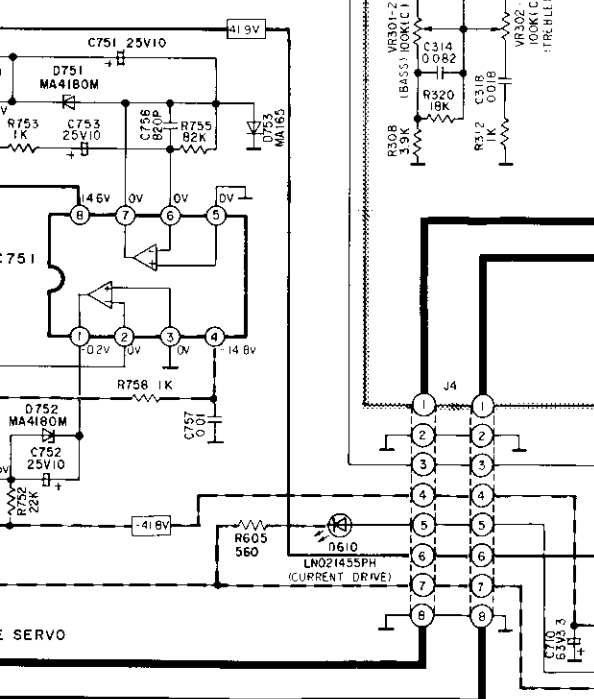
CUT



C
VOLUME
CIRCUIT

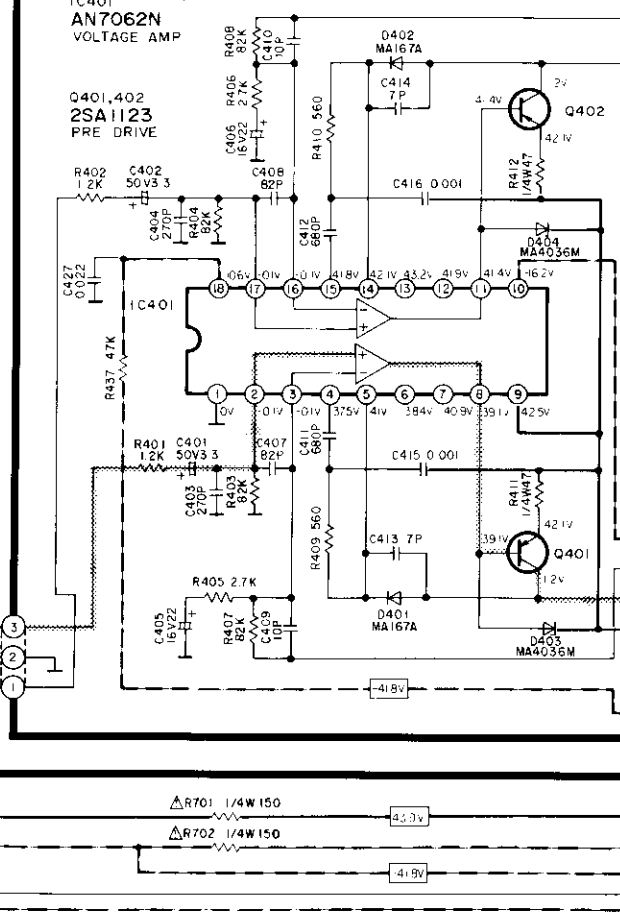


POWER SOURCE CIRCUIT

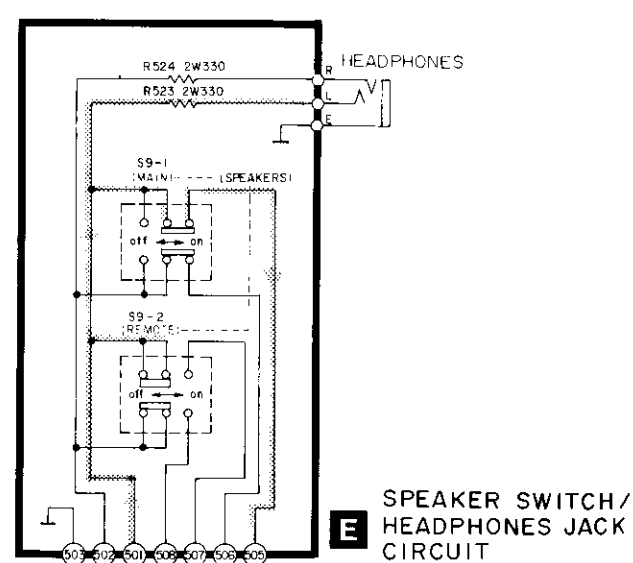
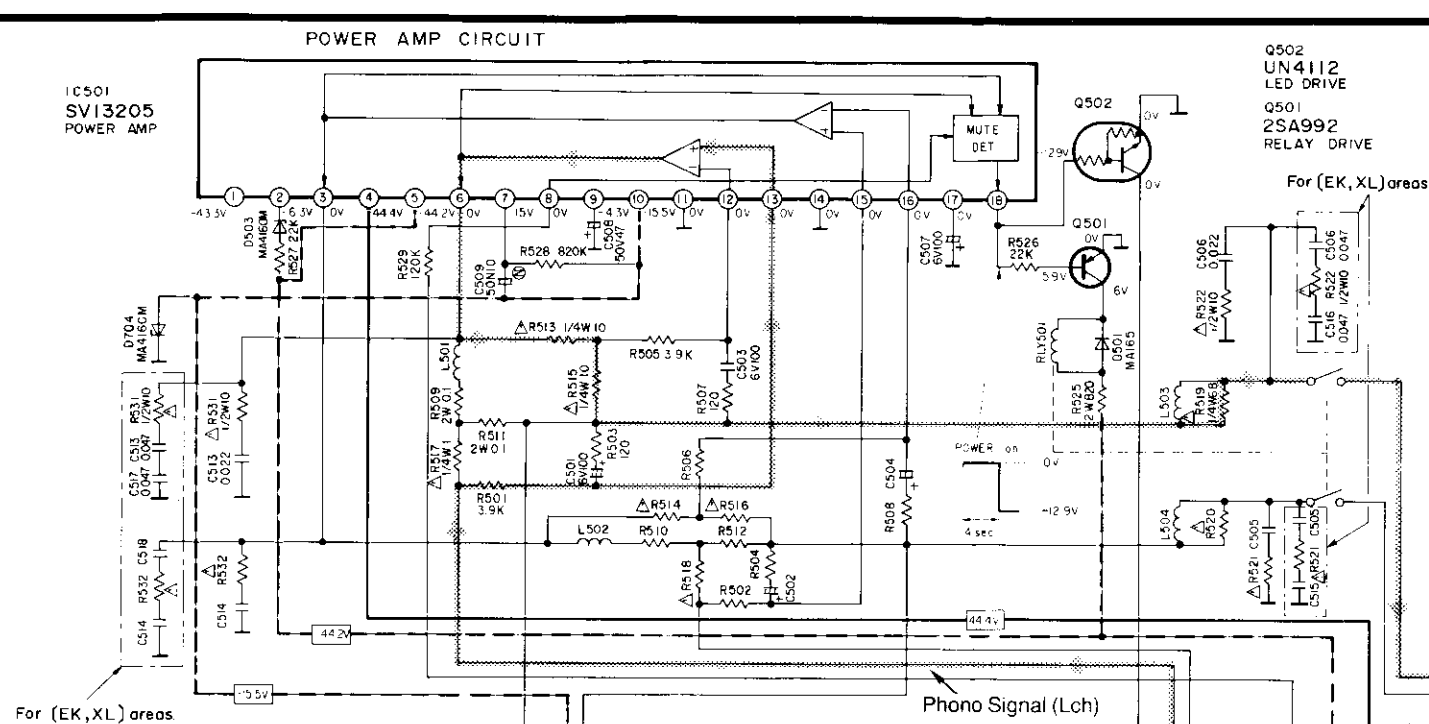


SERVO

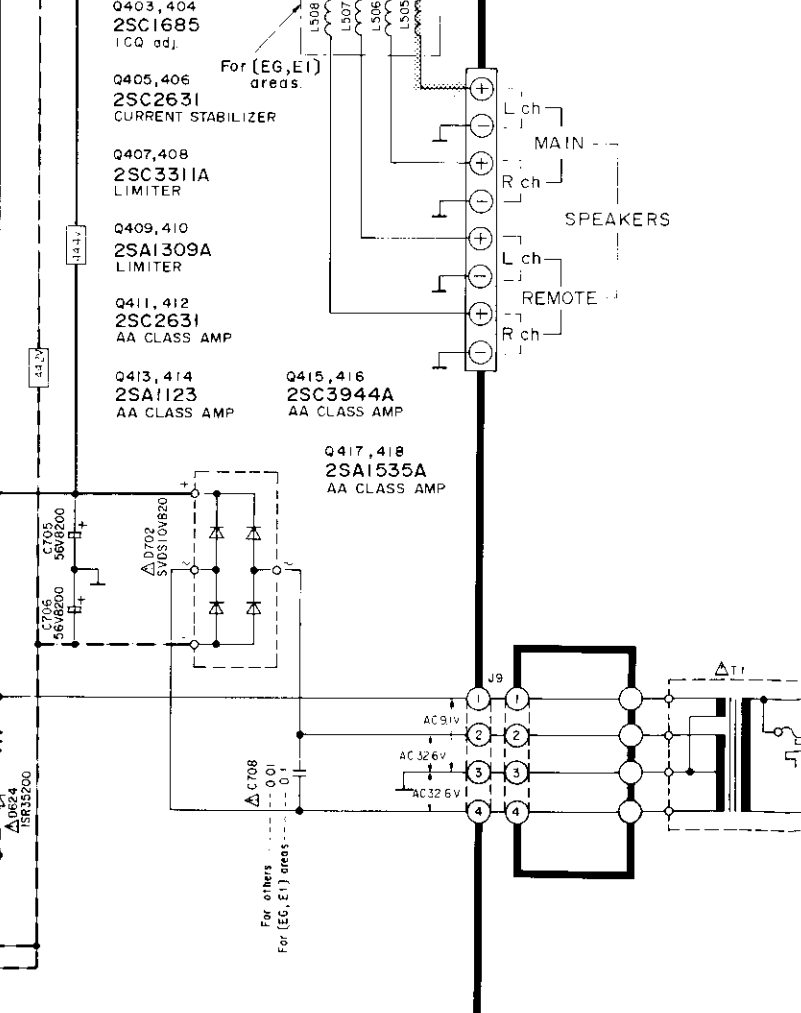
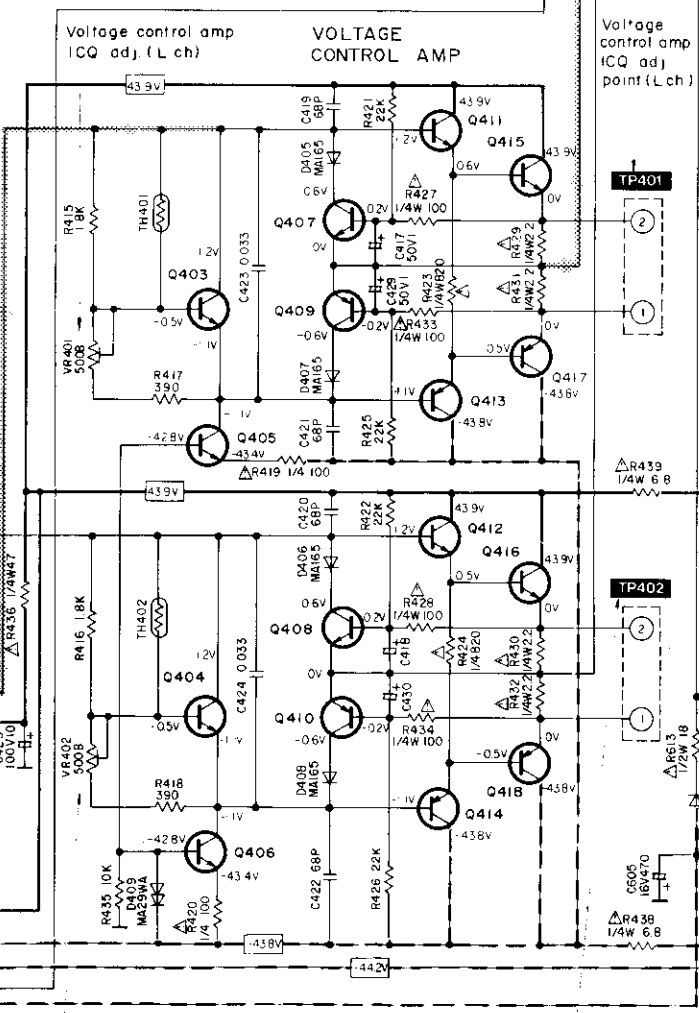
D VOLTAGE CONTROL AMP CIRCUIT



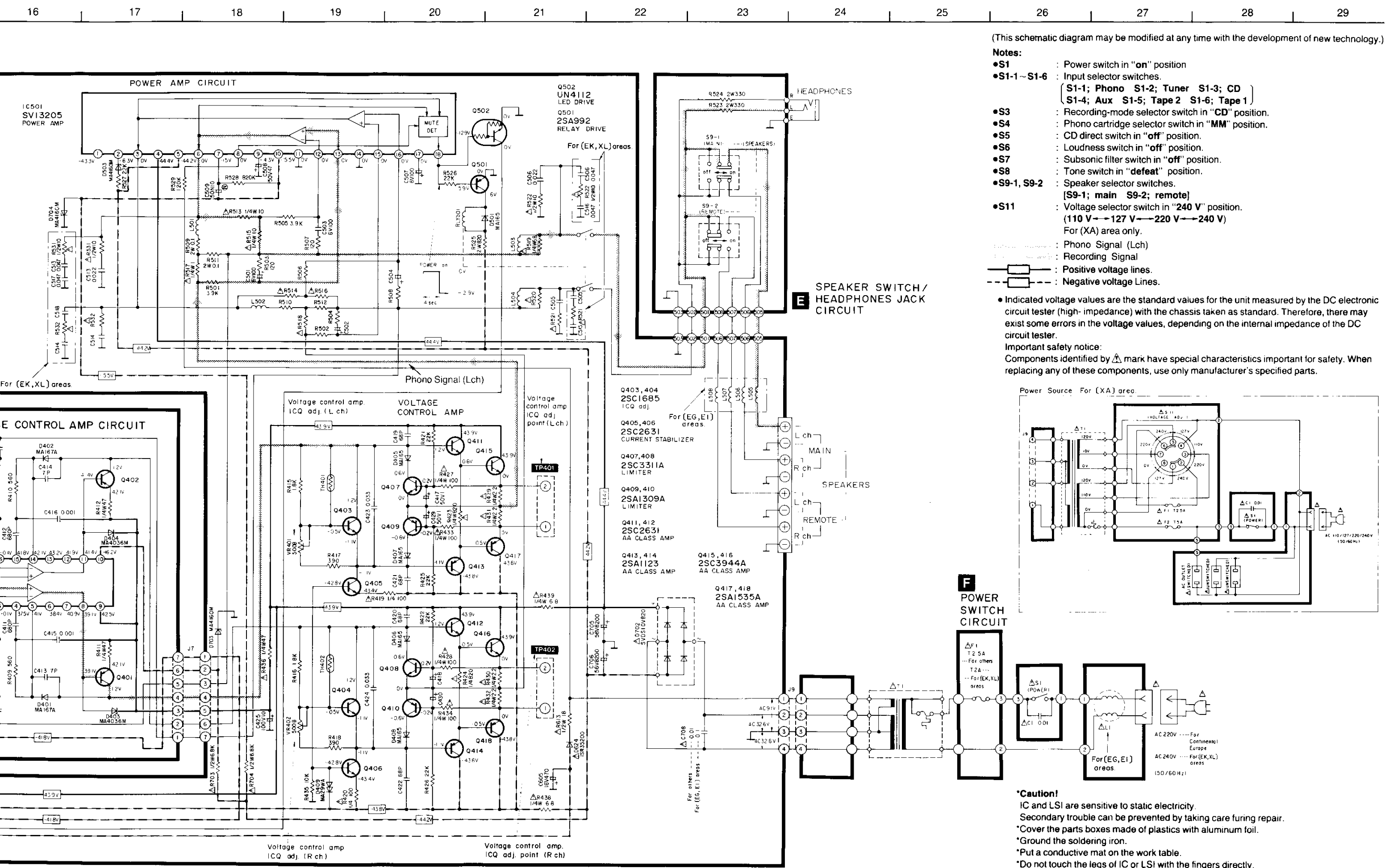
POWER AMP CIRCUIT



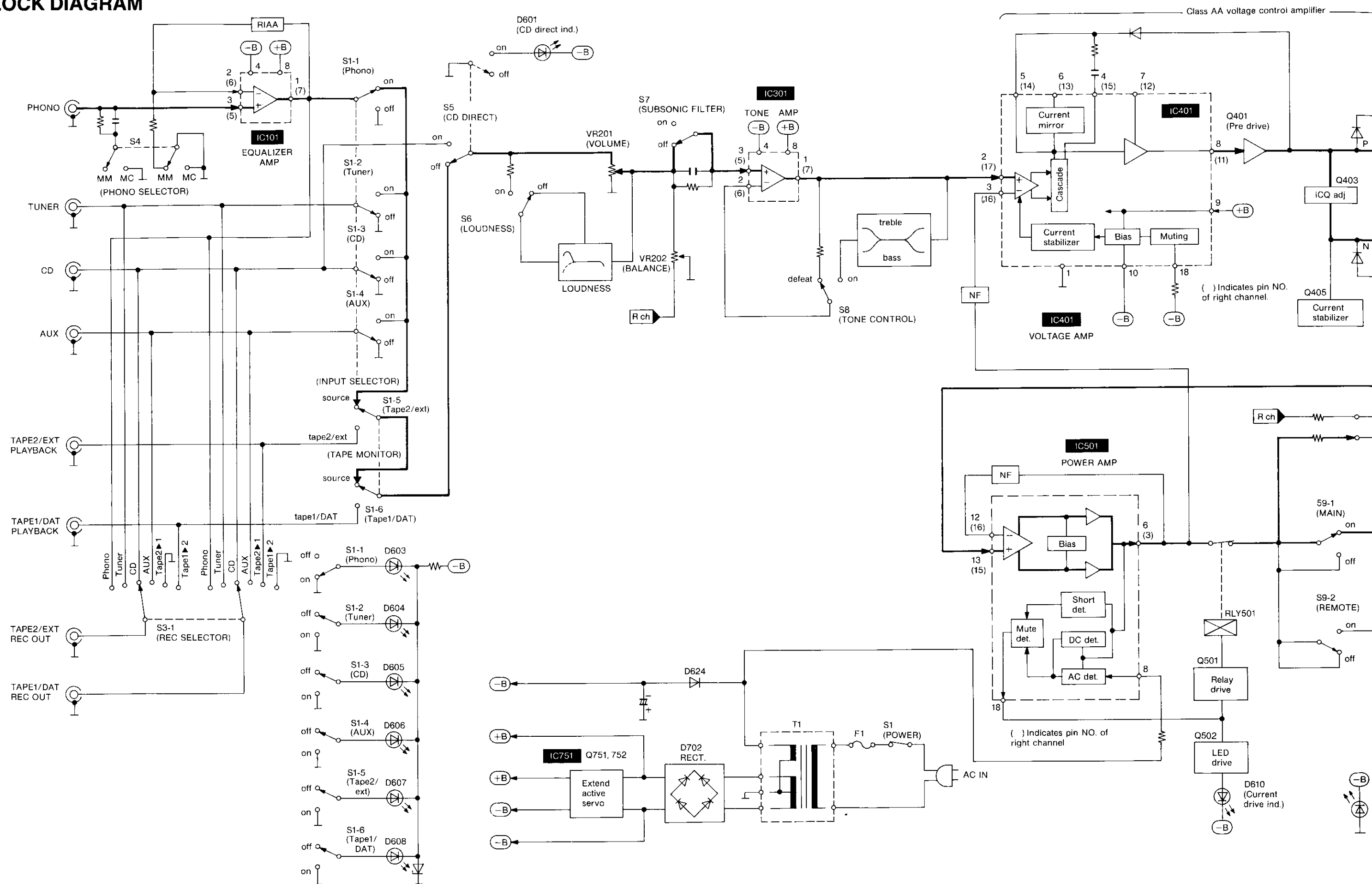
E SPEAKER SWITCH/
HEADPHONES JACK
CIRCUIT

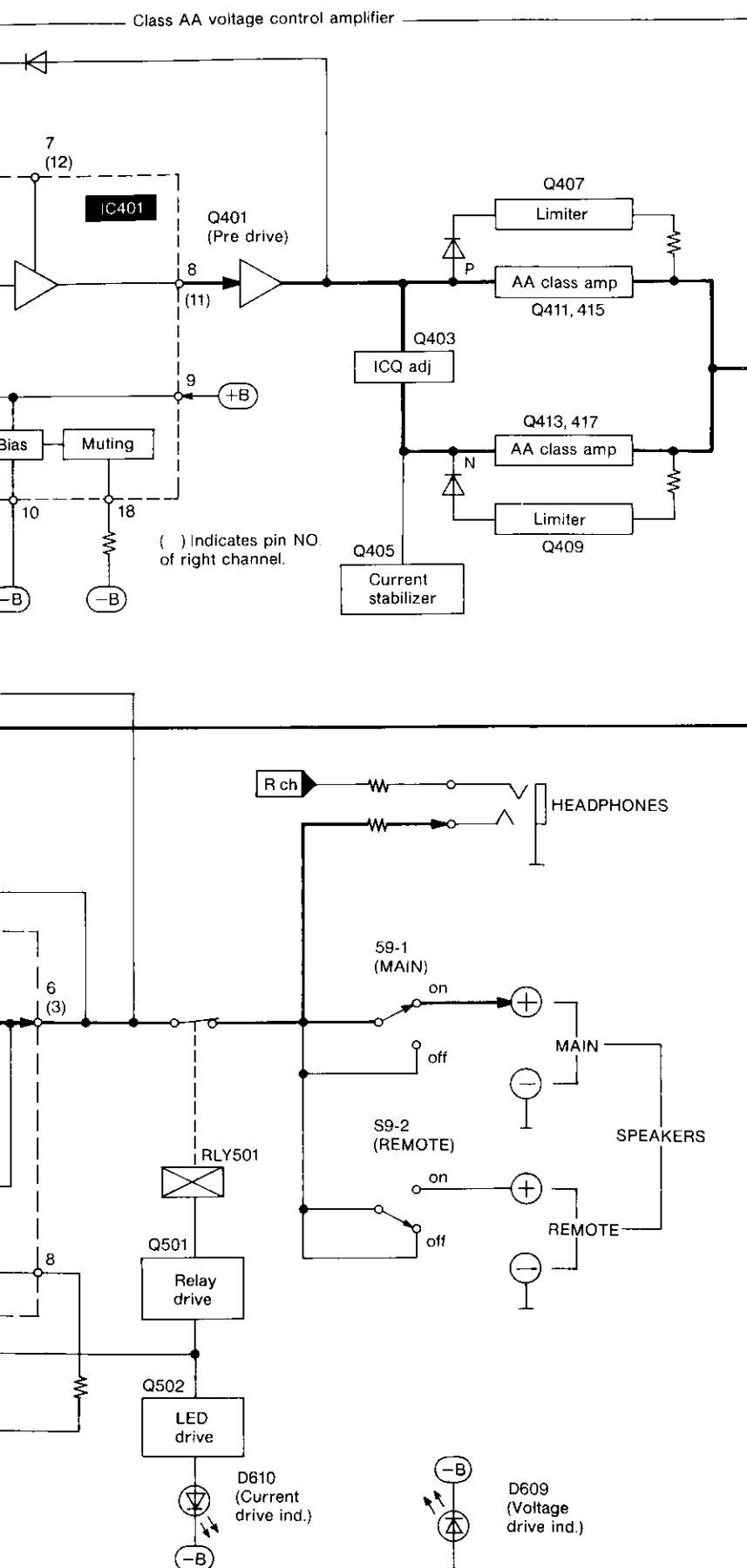






BLOCK DIAGRAM





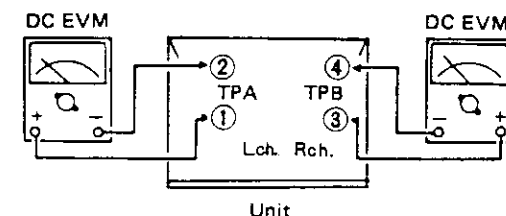
MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

- Volume knob.....∞ (Minimum)
- Main speaker selector.....off
- Remote speaker selector.....off
- DC electronic voltmeter(EVM)

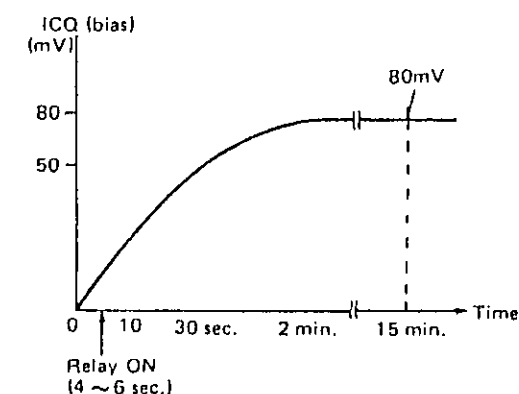
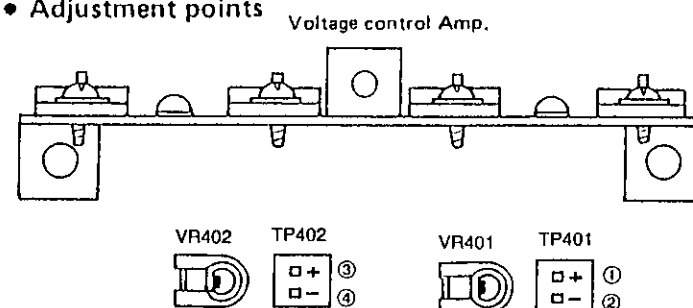
VOLTAGE CONTROL(V)AMP.IDLING(ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. (Connect the DC EVM on both channels.)
2. Completely turn the (V) amp. adjusting volumes (VR401, VR402) counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust VR401 and VR402 so that the voltage is 50mV. Also, check that the voltage is 60 ~ 85mV (standard : 80mV) after lapse of 10 - 15 minutes. (Below 85mV after lapse of 60 min.)



TPA = ①TP401(+), TPB = ③TP402(+)
②TP401(-) ④TP402(-)

Adjustment points



REPLACEMENT PARTS LIST

Notes : * Important safety notice :

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)
Parts without these indications can be used for all areas.

PACKING PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
PACKING MATERIAL					
P1	SPG6390	PACKING CASE	A1	SQF13390	INSTRUCTION BOOK
(E, EG, EK, EH)			(E, EF, EH, EB)		
(EB, EI, XL)			A1	SQF13391	INSTRUCTION BOOK
(XA)			(EG)		
P1	SPG6391	PACKING CASE	A1	SQF13392	INSTRUCTION BOOK
(EF)			(EK, XL)		
P1	SPG6392	PACKING CASE	A1	SQF13393	INSTRUCTION BOOK
(E, EG, EK, EH)			(XA)		
(EB, EI, XL)			A1	SQF13394	INSTRUCTION BOOK
(XA)			(EI)		
P1	SPG6393	PACKING CASE	A2	RJP120ZBS-H	AC PLUG ADAPTOR
(EF)			(XA)		
P2	SPS5255	PAD, FRONT	A3	SFDAC05E03	POWER CORD
P3	SPS5256	PAD, REAR	(E, EG, EF, EH)		
P4	SPS5185	PAD	(EB, EI)		
P5	SPP723	PROTECTION COVER	A3	SJA168	POWER CORD
P5	SPP723	PROTECTION COVER	(XA)		
ACCESSORIES					
			A3	SJA173	POWER CORD
			(XA)		
			A3	SJA193	POWER CORD
			(EK)		

CABINET PARTS LIST

Ref. No.	Part No.	Description
CABINET AND CHASSIS		
1	SGPUV550-KE	REAR PANEL
(EF, EH, EB)		
(EI)		
1	SGP7430-1C	REAR PANEL
(XA)		
1	SGP7430E	REAR PANEL
(E)		
1	SGP7430F	REAR PANEL
(EG)		
1	SGP7430G	REAR PANEL
(EK)		
1	SGP7430H	REAR PANEL
(XL)		
3	SJS9231A	AC INLET COVER
(E, EG, EK, EF)		
(EH, EB, EI)		
(XA)		
3	SJS9234A	AC INLET COVER
(XL)		
4	SJS9238A	AC OUTLET COVER
(XA)		
5	SKU11280-3	BOTTOM BOARD
(XA)		
5	SKU11280-4	BOTTOM BOARD
(E, EG, EK, EF)		
(EH, EB, EI)		
(XL)		
6	SBC666-5	BUTTON, POWER
6	SBC666	BUTTON, POWER
7	SUB254	ROD
8	SKL308	SET FOOT(L)
9	SKL309	SET FOOT(R)
10	SHE187-2	HOLDER, P.C.B.
11	SHE237	HOLDER, P.C.B.
(XA)		
12	SMC1255-1	SHIELD PLATE
13	SBC439-2	BUTTON, SPEAKER
13	SBC439	BUTTON, SPEAKER
14	SBC719-1	BUTTON, TONE/SUB/LOUD
14	SBC719	BUTTON, TONE/SUB/LOUD
15	SBC820	BUTTON, CD
15	SBC820-1	BUTTON, CD
16	SGX7982-2	HOLDER, M.VOL
16	SGX7982-3	HOLDER, M.VOL
17	SGX8007	ORNAMENT, TONE VOL
17	SGX8007-1	ORNAMENT, TONE VOL
18	SHW82S25A	WASHER
19	XTB3+8FFZ	SCREW
20	XTB3+10G	SCREW
21	SMC6407-1	SHIELD COVER
22	XTB3+10JFZ1	TAPPING SCREW
23	XTB3+20J	SCREW
24	XYN3+F14	TAPPING SCREW
25	XTW3+10T	SCREW
26	XTB3+30J	SCREW
(XA)		
27	SNE4021-1	NUT

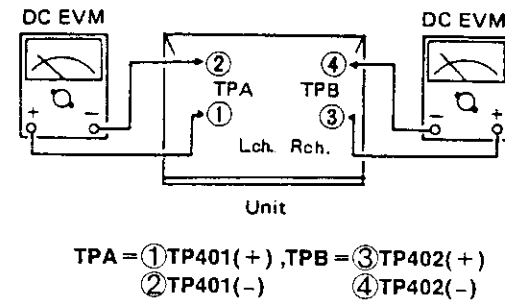
MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

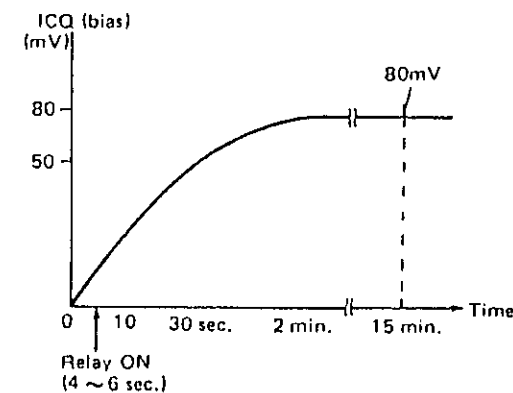
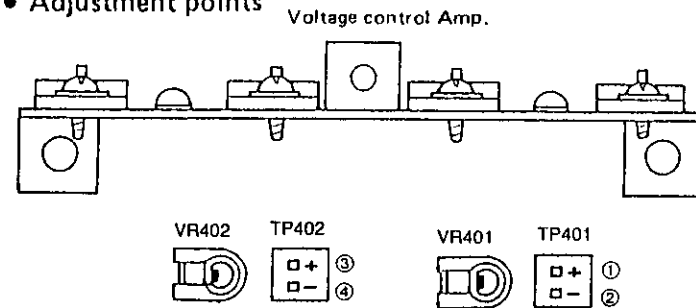
- Volume knob.....∞ (Minimum)
- Main speaker selector.....off
- Remote speaker selector.....off
- DC electronic voltmeter(EVM)

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 (VR401, VR402) counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust VR401 and VR402 so that the voltage is 50mV. Also, check that the voltage is 60 ~ 85mV (standard : 80mV) after lapse of 10 ~ 15 minutes. (Below 85mV after lapse of 60 min.)



Adjustment points



REPLACEMENT PARTS LIST

Notes : * Important safety notice :

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.) Parts without these indications can be used for all areas.

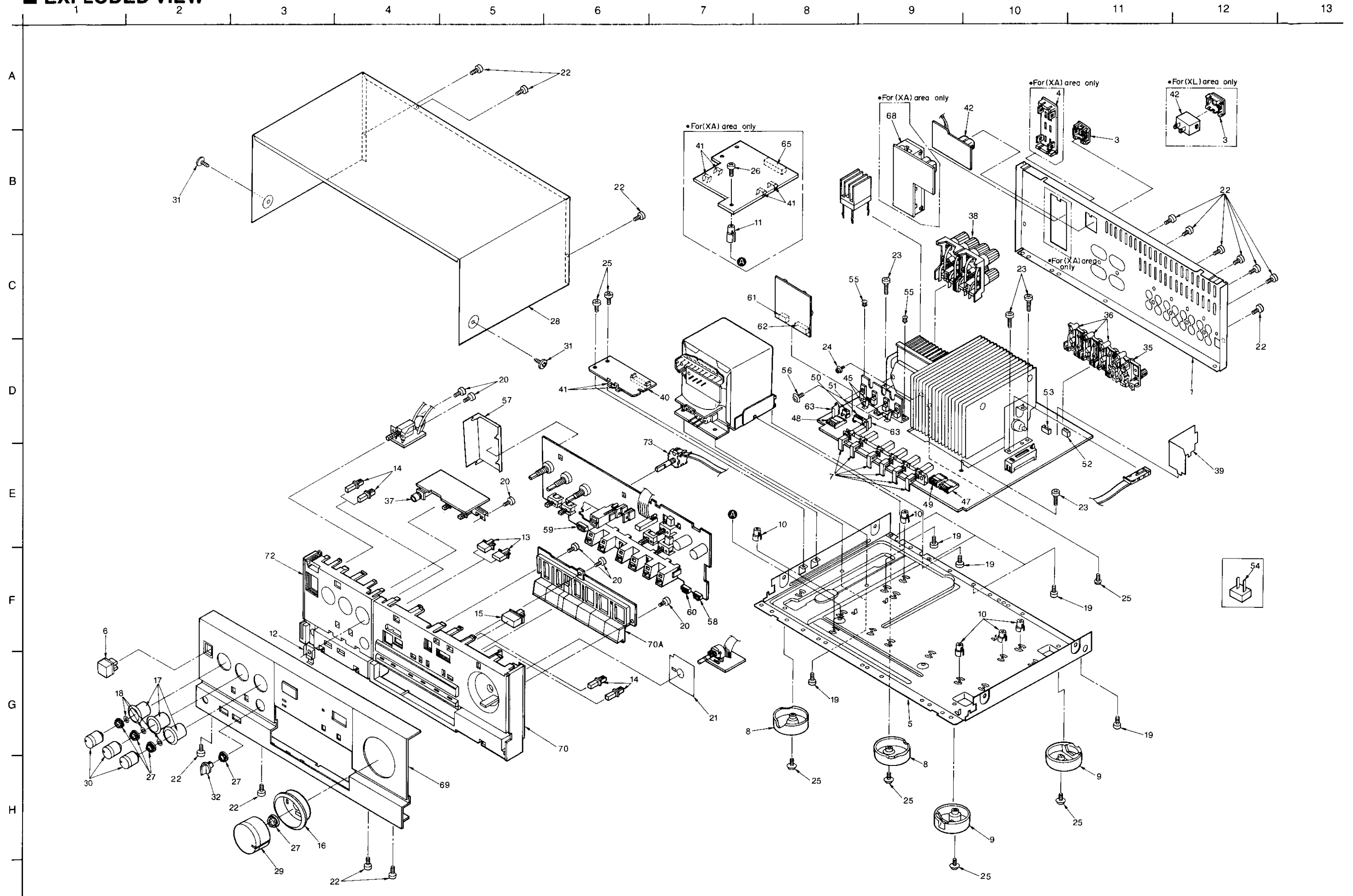
PACKING PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
PACKING MATERIAL					
P1	SPG6390	PACKING CASE	A1	SQF13390	INSTRUCTION BOOK
(E, EG, EK, EH)			(E, EF, EH, EB)		
(EB, EI, XL)			A1	SQF13391	INSTRUCTION BOOK
(XA)			(EG)		
P1	SPG6391	PACKING CASE	A1	SQF13392	INSTRUCTION BOOK
(EF)			(EK, XL)		
P1	SPG6392	PACKING CASE	A1	SQF13393	INSTRUCTION BOOK
(E, EG, EK, EH)			(XA)		
(EB, EI, XL)			A1	SQF13394	INSTRUCTION BOOK
(XA)			(EI)		
P1	SPG6393	PACKING CASE	A2	RJP120ZBS-H	AC PLUG ADAPTOR
(EF)			(XA)		
P2	SPS5255	PAD, FRONT	A3	SFDA05E03	POWER CORD
P3	SPS5256	PAD, REAR	(E, EG, EF, EH)		
P4	SPS5185	PAD	(EB, EI)		
P5	SPP723	PROTECTION COVER	A3	SJA168	POWER CORD
P5	SPP723	PROTECTION COVER	(XA)		
ACCESSORIES					
			A3	SJA173	POWER CORD
			(XA)		
			A3	SJA193	POWER CORD
			(EK)		

CABINET PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
CABINET AND CHASSIS					
1	SGPUV550-KE	REAR PANEL	28	SKC2220K991	CABINET
(EF, EH, EB)			28	SKC2220S981	CABINET
(EI)			29	SBN1246	KNOB, M.VOL
1	SGP7430-1C	REAR PANEL	29	SBN1246-1	KNOB, M.VOL
(XA)			30	SBN1247	KNOB, TONE VOL
1	SGP7430E	REAR PANEL	30	SBN1248	KNOB, TONE VOL
(E)			31	SNE2129-3	SCREW
1	SGP7430F	REAR PANEL	31	SNE2129-2	ORNAMENT SCREW
(EG)			32	SBN1089-3	KNOB, REC
1	SGP7430G	REAR PANEL	32	SBN1089-4	KNOB, REC
(EK)			35	SJF3070NJ	TERMINAL, PHONO
1	SGP7430H	REAR PANEL	36	SJF3071NJ	TERMINAL, INPUT
(XL)			37	SJJD17B	JACK, HEADPHONES
3	SJS9231A	AC INLET COVER	38	SJF4819	TERMINAL, SP
(E, EG, EK, EF)			39	SMC1299	SHIELD PLATE
(EH, EB, EI)			40	SJS305-1	JACK, P.TRANSFORMER
(XA)			(E, EG, EK, EF)		
3	SJS9234A	AC INLET COVER	(EH, EB, EI)		
(XL)			(XL)		
4	SJS9238A	AC OUTLET COVER	41	SJT388	FUSE HOLDER
(XA)			42	SJS9231-1B	AC INLET
5	SKU11280-3	BOTTOM BOARD	(E, EG, EK, EF)		
(XA)			(EH, EB, EI)		
5	SKU11280-4	BOTTOM BOARD	(XA)		
(E, EG, EK, EF)			42	SJS9234B	AC INLET
(EH, EB, EI)			(XL)		
(XL)			45	SUS227	SPRING
6	SBC666-5	BUTTON, POWER	47	SJS50780WL	CONNECTOR(7P)
6	SBC666	BUTTON, POWER	48	SJS50880WL	CONNECTOR(8P)
7	SUB254	ROD	49	SJS50680WL	CONNECTOR(6P)
8	SKL308	SET FOOT(L)	50	SJS50378JQ	CONNECTOR (3P)
9	SKL309	SET FOOT(R)	51	SJS50778JQ	SOCKET(7P)
10	SHE187-2	HOLDER, P.C.B.	52	SJT3319	CONNECTOR(3P)
11	SHE237	HOLDER, P.C.B.	53	SJT3415	CONNECTOR(4P)
(XA)			54	SJT3209	TERMINAL, TEST POINT
12	SMC1255-1	SHIELD PLATE	55	SHR415	LOCK PIN
13	SBC439-2	BUTTON, SPEAKER	56	XTW3+8T	SCREW
13	SBC439	BUTTON, SPEAKER	57	SMC1300	SHIELD PLATE
14	SBC719-1	BUTTON, TONE/SUB/LOUD	58	SJT30747WL	CONNECTOR(7P)
14	SBC719	BUTTON, TONE/SUB/LOUD	59	SJT30847WL	CONNECTOR(8P)
15	SBC820	BUTTON, CD	60	SJT30647WL	CONNECTOR(6P)
15	SBC820-1	BUTTON, CD	61	SJT30345JQ	TERMINAL (3P)
16	SGX7982-2	HOLDER, M.VOL	62	SJT30745JQ	CONNECTOR(7P)
16	SGX7982-3	HOLDER, M.VOL	63	SME103-4	SHIELD PLATE, P.C.B.
17	SGX8007	ORNAMENT, TONE VOL	65	SJS702-1	JACK, SOCKET, P.TRANSFORMER
17	SGX8007-1	ORNAMENT, TONE VOL	(XA)		
18	SHW82S25A	WASHER	68	SJS92388	SOCKET, OUTLET
19	XTB3+8FFZ	SCREW	(XA)		
20	XTB3+10G	SCREW	69	SGWUV550-KE	FRONT PANEL
21	SMC6407-1	SHIELD COVER	69	SGWUV550-SE	FRONT PANEL
22	XTBS3+10JFZ1	TAPPING SCREW	70	SGXUV550-KE1	FRONT GRILLE (R)
23	XTB3+20J	SCREW	70	SGXUV550-SE1	FRONT GRILLE (R)
24	XYN3+F14	TAPPING SCREW	70A	SBC796-8	BUTTON, INPUT
25	XTW3+10T	SCREW	70A	SBC796-9	BUTTON, INPUT
26	XTB3+30J	SCREW	72	SGXUV450-KE2	FRONT GRILLE(L)
(XA)			72	SGXUV450-SE2	FRONT GRILLE(L)
27	SNE4021-1	NUT	73	ESA3350288	SWITCH, REC SELECTOR

EXPLODED VIEW



● ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
INTEGRATED CIRCUITS			VR402 EVND4AA00B52 V.R. I.C.Q ADJUST		
IC101	AN6558F	I.C. PHONO EQ	THERMISTORS AND VARIATORS		
IC301	UPC4570C	I.C. TONE CONTROL	TH201	ERTD2WHL104S	THERMISTOR
IC401	AN7062N	I.C. V.AMP	TH202	ERTD2WHL104S	THERMISTOR
IC501	SV13205	I.C. P.AMP/C.AMP	TH401	ERTD2WHL104S	THERMISTOR
IC751	MS218P	I.C. ACTIVE SERVO	TH402	ERTD2WHL104S	THERMISTOR
TRANSISTORS			COILS AND TRANSFORMERS		
Q401	2SA1123R	TRANSISTOR	L1	SLQZ650MH49	CHOKE COIL
Q402	2SA1123R	TRANSISTOR	(EG, E1)		
Q403	2SC1685NCQRS	TRANSISTOR	L101	SLM1Z33	MPX COIL
Q404	2SC1685NCQRS	TRANSISTOR	(EG, E1)		
Q405	2SC2631-Q	TRANSISTOR	L102	SLM1Z33	MPX COIL
Q406	2SC2631-Q	TRANSISTOR	(EG, E1)		
Q407	2SC3311A-Q	TRANSISTOR	L501	SLQY07G-50	COIL
Q408	2SC3311A-Q	TRANSISTOR	L502	SLQY07G-50	COIL
Q409	2SA1309Q	TRANSISTOR	L503	SLQY18G-20	COIL
Q410	2SA1309Q	TRANSISTOR	L504	SLQY18G-20	COIL
Q411	2SC2631-Q	TRANSISTOR	L505	SLQY07G-50	COIL
Q412	2SC2631-Q	TRANSISTOR	(EG, E1)		
Q413	2SA1123R	TRANSISTOR	L506	SLQY07G-50	COIL
Q414	2SA1123R	TRANSISTOR	(EG, E1)		
Q415	2SC3944AQRS	TRANSISTOR	L507	SLQY07G-50	COIL
Q416	2SC3944AQRS	TRANSISTOR	(EG, E1)		
Q417	2SA1535AQRS	TRANSISTOR	L508	SLQY07G-50	COIL
Q418	2SA1535AQRS	TRANSISTOR	(EG, E1)		
Q501	2SA992EFP	TRANSISTOR	T1	SLT5P298-W	POWER TRANSFORMER
Q502	UN4112TA	TRANSISTOR	(E, EG, EF, EH)		
Q751	2SC3944AQRS	TRANSISTOR	(EB, E1)		
Q752	2SA1535AQRS	TRANSISTOR	T1	SLT5P298-W	POWER TRANSFORMER
DIODES			(EK, XL)		
D401	MA167	DIODE	T1	SLT5P300-W	POWER TRANSFORMER
D402	MA167	DIODE	(XA)		
D403	MA4036MTA	DIODE	FUSES		
D404	MA4036MTA	DIODE	F1	XBA2C20TB0	FUSE 250V, T2A
D405	MA165	DIODE	(EK, XL)		
D406	MA165	DIODE	F1	XBA2C25TB0	FUSE, T2.5A 250V
D407	MA165	DIODE	(E, EG, EF, EH)		
D408	MA165	DIODE	(EB, E1, XA)		
D409	MA29WA	DIODE	F2	XBA2C50TB0	FUSE, 250 V, T5A
D501	MA165	DIODE	(XA)		
D503	MA4160M	DIODE	SWITCHES		
D601	LN018454PH	DIODE, L.E.D	S1	ESB8249V	SW. POWER
D602	MA4033	DIODE	(E, EG, EK, EF)		
D603	LN064456PH	DIODE, L.E.D	(EH, EB, E1)		
D604	LN064456PH	DIODE, L.E.D	(XL)		
D605	LN064456PH	DIODE, L.E.D	S1	ESB8249V	SW. POWER
D606	LN064456PH	DIODE, L.E.D	(XA)		
D607	LN064456PH	DIODE, L.E.D	S1-1	SSH656	SWITCH, PHONO
D608	LN064456PH	DIODE, L.E.D	S1-2	SSH656	SWITCH, TUNER
D609	LN021455PH	DIODE, L.E.D	S1-3	SSH656	SWITCH, CD
D610	LN021455PH	DIODE, L.E.D	S1-4	SSH656	SWITCH, AUX
D624	SVDS10VB20F	DIODE	S1-5	SSH656	SWITCH, TAPE2/EXT
D702	SVDS10VB20F	DIODE	S1-6	SSH656	SWITCH, TAPE1/EXT
D703	MA4160M	DIODE	S3	ESA2682	SWITCH, REC SELECTOR
D704	MA4160M	DIODE	S4	SSH1239	PUSH SWITCH, PHONO
D751	MA4180-M	DIODE	S5	SSH1215	SWITCH, CD DIRECT
D752	MA4180-M	DIODE	S6	SSH1218	SWITCH, LOUDNESS
D753	MA165	DIODE	S7	SSH1218	SWITCH, SUBSONIC
VARIABLE RESISTORS			S8	SSH1218	SWITCH, TONE CONTROL
VR201	EWJK8A539B15	V.R. MAIN VOL	S9-1	SSH2115	SWITCH, SP MAIN
VR202	EVH0YA015G15	V.R. BALANCE	S9-2	SSH2115	SWITCH, SP REMOTE
VR301	EWCRYA023C15	V.R. TONE	S11	ESE37263	SW. VOLTAGE SELECTOR
VR302	EWCRYA023C15	V.R. TONE	(XA)		
VR401	EVND4AA00B52	V.R. I.C.Q ADJUST	RELAYS		
			RL501	SSY126	RELAY

■ RESISTORS AND CAPACITORS

Notes : * Important safety notice :

Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

* Bracketed indications in Ref. No. columns specify the area. (Refer to the first page for area.)

Parts without these indications can be used for all areas.

Numbering System of Resistor

Example:

ERD	25	F	J	102
Type	Wattage (1/4W)	Shape	Tolerance	Value (1K Ω)
ERX	2	AN	J	471
Type	Wattage (2W)	Shape	Tolerance	Value (470 Ω)

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage (50V)	Value (0.001 μ F)	Tolerance	Peculiarity
ECEA	50	M	330	
Type	Voltage (50V)	Peculiarity	Value (33 μ F)	

● Capacity values are in microfarads (μ F) unless specified otherwise, P = Pico-farads (pF) F = Farads (F).● Resistance values are in ohms (Ω), unless specified otherwise, 1K = 1,000 Ω , 1M = 1,000k Ω

Resistor Type	Wattage	Tolerance	
ERD : Carbon	10 : 1/8W	12 : 1/2W	J : $\pm 5\%$
ERG : Metal Oxide	14 : 1/4W	25 : 1/4W	F : $\pm 1\%$
ERQ : Fuse Type Metal	1A : 1W	18 : 1/8W	G : $\pm 2\%$
ERX : Metal Film	S2 : 1/4W	S1 : 1/2W	J : $\pm 5\%$
ERD L : Carbon (chip)	2F : 1/4W	50 : 1/2W	K : $\pm 10\%$
ERO K : Metal Film (chip)	2A : 2W	3A : 3W	M : $\pm 20\%$
ERC : Solid	6G : 1/10W	8G : 1/8W	
ERF : Incombustible Box-Shaped			
ERM : Wire-Wound			
RRJ : Chip Resistor			
ERJ : Chip Resistor			

Capacitor Type	Voltage	Tolerance	
ECE : Electrolytic	0J : 6.3V	1A : 10V	K : $\pm 10\%$
ECCD : Ceramic	1C : 16V	1E : 25V	M : $\pm 20\%$
ECKD : Ceramic Capacitor	1H : 50V	1V : 35V	Z : $\pm 80\%$
ECQM : Polyester	50 : 50V	05 : 50V	-20
ECQP : Polypropylene	2H : 500V	2A : 100V	J : $\pm 5\%$
ECG : Ceramic	1 : 100V	1J : 63V	G : $\pm 2\%$
ECEA N : Non Polar Electrolytic	KC : 400V AC		F : $\pm 1\%$
QCU : Ceramic (Chip Type)	KC : 125V AC		C : $\pm 0.25\mu\text{F}$
ECUX : Ceramic (Chip Type)	(UL)		D : $\pm 0.5\mu\text{F}$
ECF : Semiconductor			
EECW : Liquid electrolyte double layer capacitor			

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
RESISTORS (VALUE, WATTAGE)			(EG, E1)					
R101	ERDS2TJ102	1K 1/4	R207	ERDS2TJ102	1K 1/4	R319	ERDS2TJ183	18K 1/4
(EG, E1)			(EG, E1)			R320	ERDS2TJ183	18K 1/4
R102	ERDS2TJ102	1K 1/4	R208	ERDS2TJ102	1K 1/4	R401	ERDS2TJ122	1.2K 1/4
(EG, E1)			(EG, E1)			R402	ERDS2TJ122	1.2K 1/4
R103	ERDS2TJ102	1K 1/4	R209	ERDS2TJ102	1K 1/4	R403	ERDS2TJ823	82K 1/4
(EG, E1)			(EG, E1)			R404	ERDS2TJ823	82K 1/4
R104	ERDS2TJ102	1K 1/4	R210	ERDS2TJ102	1K 1/4	R405	ERD25FJ272	2.7K 1/4
(EG, E1)			(EG, E1)			R406	ERD25FJ272	2.7K 1/4
R105	ERDS2TJ274	270K 1/4	R211	ERDS2TJ473	47K 1/4	R407	ERD25TJ823	82K 1/4
R106	ERDS2TJ274	270K 1/4	R212	ERDS2TJ473	47K 1/4	R408	ERD25TJ823	82K 1/4
R107	ERDS2TJ221	220 1/4	R213	ERDS2TJ183	18K 1/4	R409	ERDS2TJ561	560 1/4
R108	ERDS2TJ221	220 1/4	R214	ERDS2TJ183	18K 1/4	R410	ERDS2TJ561	560 1/4
R109	ERDS2TJ220	22 1/4	R215	ERDS2TJ824	820K 1/4	R411	ERD25FJ470	47 1/4
R110	ERDS2TJ220	22 1/4	R216	ERDS2TJ824	820K 1/4	R412	ERD25FJ470	47 1/4
R113	ERDS2TJ563	56K 1/4	R219	ERD25FJ272	2.7K 1/4	R415	ERDS2TJ182	1.8K 1/4
R114	ERDS2TJ563	56K 1/4	R220	ERD25FJ272	2.7K 1/4	R416	ERDS2TJ182	1.8K 1/4
R117	ERDS2TJ151	150 1/4	R221	ERDS2TJ471	470 1/4	R417	ERDS2TJ391	390 1/4
R118	ERDS2TJ151	150 1/4	(EG, E1)			R418	ERDS2TJ391	390 1/4
R119	ERDS2TJ100	10 1/4	R222	ERDS2TJ471	470 1/4	R419	ERD25FJ101	100 1/4
R120	ERDS2TJ100	10 1/4	(EG, E1)			R420	ERD25FJ101	100 1/4
R123	ERDS2TJ151	150 1/4	R223	ERDS2TJ471	470 1/4	R421	ERDS2TJ223	22K 1/4
R124	ERDS2TJ151	150 1/4	(EG, E1)			R422	ERDS2TJ223	22K 1/4
R125	ERDS2TJ682	6.8K 1/4	R224	ERDS2TJ471	470 1/4	R423	ERD25FJ821	820 1/4
R126	ERDS2TJ682	6.8K 1/4	(EG, E1)			R424	ERD25FJ821	820 1/4
R127	ERDS2TJ823	82K 1/4	R301	ERD25FJ561	560 1/4	R425	ERDS2TJ223	22K 1/4
R128	ERDS2TJ823	82K 1/4	R302	ERD25FJ561	560 1/4	R426	ERDS2TJ223	22K 1/4
R129	ERDS2TJ334	330K 1/4	R303	ERDS2TJ823	82K 1/4	R427	ERD25FJ101	100 1/4
R130	ERDS2TJ334	330K 1/4	R304	ERDS2TJ823	82K 1/4	R428	ERD25FJ101	100 1/4
R131	ERDS2TJ561	560 1/4	R305	ERDS2TJ224	220K 1/4	R429	ERD25FJ2R2	2.2 1/4
R132	ERDS2TJ561	560 1/4	R306	ERDS2TJ224	220K 1/4	R430	ERD25FJ2R2	2.2 1/4
R201	ERDS2TJ102	1K 1/4	R307	ERDS2TJ392	3.9K 1/4	R431	ERD25FJ2R2	2.2 1/4
(EG, E1)			R308	ERDS2TJ392	3.9K 1/4	R432	ERD25FJ2R2	2.2 1/4
R202	ERDS2TJ102	1K 1/4	R309	ERDS2TJ223	22K 1/4	R433	ERD25FJ101	100 1/4
(EG, E1)			R310	ERDS2TJ223	22K 1/4	R434	ERD25FJ101	100 1/4
R203	ERDS2TJ102	1K 1/4	R311	ERDS2TJ102	1K 1/4	R435	ERDS2TJ103	10K 1/4
(EG, E1)			R312	ERDS2TJ102	1K 1/4	R436	ERD25FJ470	47 1/4
R204	ERDS2TJ102	1K 1/4	R313	ERDS2TJ562	5.6K 1/4	R437	ERDS2TJ473	47K 1/4
(EG, E1)			R314	ERDS2TJ562	5.6K 1/4	R438	ERD25FJ6R8	6.8 1/4
R205	ERDS2TJ102	1K 1/4	R315	ERD25FJ392	3.9K 1/4	R439	ERD25FJ6R8	6.8 1/4
(EG, E1)			R316	ERD25FJ392	3.9K 1/4	R501	ERDS2TJ392	3.9K 1/4
R206	ERDS2TJ102	1K 1/4	R317	ERD25FJ223	22K 1/4	R502	ERDS2TJ392	3.9K 1/4
			R318	ERD25FJ223	22K 1/4	R503	ERDS2TJ121	120 1/4
						R504	ERDS2TJ121	120 1/4

Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.	Ref. No.	Part No.	Value.
R505	ERDS2TJ392	3.9K 1/4	C107	ECEA0JU222	2200 6.3	C405	ECEA1CPS220	22 16
R506	ERDS2TJ392	3.9K 1/4	C108	ECEA0JU222	2200 6.3	C406	ECEA1CPS220	22 16
R507	ERDS2TJ121	120 1/4	C111	ECQM1H122JZ	0.0012 50	C407	RCBS1H820KBY	82P 50
R508	ERDS2TJ121	120 1/4	C112	ECQM1H122JZ	0.0012 50	C408	RCBS1H820KBY	82P 50
R509	ERF2AKR10P	0.1 2	C113	ECQM1H103JZ	0.01 50	C409	ECCD1H100KC	10P 50
R510	ERF2AKR10P	0.1 2	C114	ECQM1H103JZ	0.01 50	C410	ECCD1H100KC	10P 50
R511	ERF2AKR10P	0.1 2	C115	ECQV1H393JZ3	0.039 50	C411	ECKD1H681K	680P 50
R512	ERF2AKR10P	0.1 2	C116	ECQV1H393JZ3	0.039 50	C412	ECKD1H681K	680P 50
R513	ERD25FJ100	10 1/4	C117	ECEA1HKN010B	1 50	C413	ECCD2H070D	7P 500
R514	ERD25FJ100	10 1/4	C118	ECEA1HKN010B	1 50	C414	ECCD2H070D	7P 500
R515	ERD25FJ100	10 1/4	C119	ECQM1H472JZ	0.0047 50	C415	ECQM1H102JZ	0.001 50
R516	ERD25FJ100	10 1/4	C120	ECQM1H472JZ	0.0047 50	C416	ECQM1H102JZ	0.001 50
R517	ERD25FJ1R0	1 1/4	C121	ECKD1H103PF	0.01 50	C417	ECEA1HK010	1 50
R518	ERD25FJ1R0	1 1/4	C122	ECKD1H103PF	0.01 50	C418	ECEA1HK010	1 50
R519	ERD25FJ6R8	6.8 1/4	C123	ECEA1HPS3R3	3.3 50	C419	ECCD2H680K	68P 500
R520	ERD25FJ6R8	6.8 1/4	C124	ECEA1HPS3R3	3.3 50	C420	ECCD2H680K	68P 500
R521	ERDS1FJ100	10 1/2	C125	ECKD1H102KB	0.001 50	C421	ECCD2H680K	68P 500
R522	ERDS1FJ100	10 1/2	(E, E, I)			C422	ECCD2H680K	68P 500
R523	ERG2SJ331H	330 2	C203	RCBC1H101KBY	100P 50	C423	ECKD1H333PF	0.033 50
R524	ERG2SJ331H	330 2	(E, E, I)			C424	ECKD1H333PF	0.033 50
R525	ERG2ANJP821S	820 2	C204	RCBC1H101KBY	100P 50	C425	ECEA2AU100	10 100
R526	ERDS2TJ223	22K 1/4	(E, E, I)			C427	ECKD1H223PF	0.022 50
R527	ERDS2TJ223	22K 1/4	C205	RCBC1H101KBY	100P 50	C429	ECEA1HK010	1 50
R528	ERDS2TJ824	820K 1/4	(E, E, I)			C430	ECEA1HK010	1 50
R529	ERDS2TJ124	120K 1/4	C206	RCBC1H101KBY	100P 50	C501	ECEA0JPS101B	100 6.3
R531	ERDS1FJ100	10 1/2	(E, E, I)			C502	ECEA0JPS101B	100 6.3
R532	ERDS1FJ100	10 1/2	C207	RCBC1H101KBY	100P 50	C503	ECEA0JPS101B	100 6.3
R601	ERDS2TJ561	560 1/4	(E, E, I)			C504	ECEA0JPS101B	100 6.3
R602	ERDS2TJ271	270 1/4	C208	RCBC1H101KBY	100P 50	C505	ECKD1H223PF	0.022 50
R604	ERDS2TJ331	330 1/4	(E, E, I)			(E, E, EG, EF, EH)		
R605	ERDS2TJ561	560 1/4	C209	RCBC1H101KBY	100P 50	(E, E, I, XA)		
R613	ERDS1FJ180	18 1/2	(E, E, I)			C505	ECKD1H473ZF	0.047 50
R701	ERD25FJ151	150 1/4	C210	RCBC1H101KBY	100P 50	(E, E, X, XL)		
R702	ERD25FJ151	150 1/4	(E, E, I)			C506	ECKD1H223PF	0.022 50
R703	ERDS1FJ682	6.8K 1/2	C211	RCBC1H101KBY	100P 50	(E, E, EG, EF, EH)		
R704	ERDS1FJ682	6.8K 1/2	(E, E, I)			(E, E, I, XA)		
R751	ERDS2TJ223	22K 1/4	C212	RCBC1H101KBY	100P 50	C506	ECKD1H473ZF	0.047 50
R752	ERDS2TJ223	22K 1/4	(E, E, I)			(E, E, X, XL)		
R753	ERDS2TJ102	1K 1/4	C213	ECQV1H563JZ3	0.056 50	C507	ECEA0JPS101B	100 6.3
R754	ERDS2TJ153	15K 1/4	C214	ECQV1H563JZ3	0.056 50	C508	ECEA1HU470	47 50
R755	ERDS2TJ823	82K 1/4	C215	ECQM1H273JZ	0.027 50	C509	ECEA1HN100S	10 50
R756	ERDS2TJ153	15K 1/4	C216	ECQM1H273JZ	0.027 50	C513	ECKD1H223PF	0.022 50
R757	ERDS2TJ102	1K 1/4	C221	RCBS1H181KBY	180P 50	(E, E, EG, EF, EH)		
R758	ERDS2TJ102	1K 1/4	(E, E, I)			(E, E, I, XA)		
CAPACITORS (VALUE, VOLTAGE)			C222	RCBS1H181KBY	180P 50	C513	ECKD1H473ZF	0.047 50
C1	△	ECKWNS103ZVS 0.01	(E, E, I)			(E, E, X, XL)		
(E, EG, EK, EF)			C223	RCBS1H181KBY	180P 50	C514	ECKD1H223PF	0.022 50
(EH, EB, E1)			(E, E, I)			(E, E, EG, EF, EH)		
(XL)			C224	RCBS1H181KBY	180P 50	(E, E, I, XA)		
C1	△	ECKWNS103ZVS 0.01	(E, E, I)			C514	ECKD1H473ZF	0.047 50
(XA)			C301	ECEA1HPS3R3	3.3 50	(E, E, X, XL)		
C101	RCBS1H120JLY	12P 50	C302	ECEA1HPS3R3	3.3 50	C515	ECKD1H473ZF	0.047 50
(EG, E1)			C303	RCBC1H101KBY	100P 50	(E, E, X, XL)		
C102	RCBS1H120JLY	12P 50	C304	RCBC1H101KBY	100P 50	C516	ECKD1H473ZF	0.047 50
(EG, E1)			C305	RCBS1H820KBY	82P 50	(E, E, X, XL)		
C103	ECKD1H102KB	0.001 50	C306	RCBS1H820KBY	82P 50	C517	ECKD1H473ZF	0.047 50
(EG, E1)			C307	ECEA1VPS4R7	4.7 35	(E, E, X, XL)		
C103	ECQM1H103JZ	0.01 50	C308	ECEA1VPS4R7	4.7 35	C518	ECKD1H473ZF	0.047 50
(E, EK, EF, EH)			C309	RCBS1H390JLY	39P 50	(E, E, X, XL)		
(EB, XL, XA)			C310	RCBS1H390JLY	39P 50	C605	ECEA1CU471	470 16
C104	ECKD1H102KB	0.001 50	C311	ECEA1CPS100	10 16	C705	ECES56V822UM	8200 56
(EG, E1)			C312	ECEA1CPS100	10 16	C706	ECES56V822UM	8200 56
C104	ECQM1H103JZ	0.01 50	C313	ECQV1H823JZ3	0.082 50	C708	△	
(E, EK, EF, EH)			C314	ECQV1H823JZ3	0.082 50	(E, EK, EF, EH)		
(EB, XL, XA)			C315	ECQM1H153JZ	0.015 50	(EB, XL, XA)		
C105	RCBS1H181KBY	180P 50	C316	ECQM1H153JZ	0.015 50	C708	△	
(E, EK, EF, EH)			C317	ECQM1H183JZ	0.018 50	(EG, E1)		
(EB, XL, XA)			C318	ECQM1H183JZ	0.018 50	C709	ECEA1JPS3R3B	3.3 63
C105	RCBS1H820KBY	82P 50	C319	ECQM1H182JZ	0.0018 50	C710	ECEA1JPS3R3B	3.3 63
(EG, E1)			C320	ECQM1H182JZ	0.0018 50	C751	ECEA1EK100	10 25
C106	RCBS1H181KBY	180P 50	C321	ECKD1H103PF	0.01 50	C752	ECEA1EK100	10 25
(E, EK, EF, EH)			C322	ECKD1H103PF	0.01 50	C753	ECEA1EK100	10 25
(EB, XL, XA)			C401	ECEA1HPS3R3	3.3 50	C754	ECEA1EK3R3B	3.3 25
C106	RCBS1H820KBY	82P 50	C402	ECEA1HPS3R3	3.3 50	C755	ECEA1EK3R3B	3.3 25
(EG, E1)			C403	ECKD1H271KB	270P 50	C756	ECKD1H821KB	820P 50
			C404	ECKD1H271KB	270P 50	C757	ECKD1H103PF	0.01 50
						C758	ECKD1H103PF	0.01 50