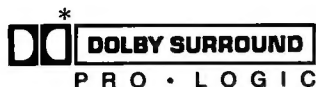


# Service Manual

Stereo Integrated Amplifier

Amplifier

SU-G95

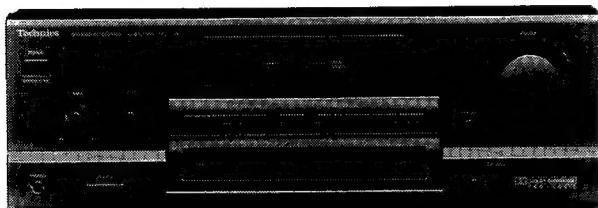


Colour

(K)... Black Type

Area

| Suffix for Model No. | Area               | Colour |
|----------------------|--------------------|--------|
| (PP)                 | U.S.A. and Canada. | (K)    |



• System No.: SC-S3500, SC-S4505  
SC-S3550, SC-S4550 } Refer to  
SC-S4500 } page 3.

\* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canada numbers 1,004,603 and 1,037,877.

"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

## SPECIFICATIONS (IHF '78)

### ■ MAIN AMPLIFIER SECTION

Rated minimum sine wave RMS power  
output 20 Hz–20 kHz both channels  
driven 0.9% total harmonic distortion  
130 W per channel (8 Ω)

1 kHz continuous power output both channels driven  
0.9% total harmonic distortion 135 W per channel (8 Ω)

Total harmonic distortion  
rated power at 20 Hz–20 kHz 0.9% (8 Ω)  
half power at 1 kHz 0.05% (8 Ω)

Power output at the Dolby Pro Logic operation  
0.9% at 1 kHz Front 2 × 70 W (8 Ω)  
Center 70 W (8 Ω)  
Rear 70 W (4 Ω)

SMPTE intermodulation distortion 0.5% (8 Ω)

Dynamic headroom 2.0 dB (8 Ω)

Low frequency damping factor 30 (8 Ω)

Load impedance  
A or B 8 Ω  
Center 8 Ω  
Rear 4 Ω

### ■ PRE AMPLIFIER SECTION

Input sensitivity/Impedance  
PHONO 0.3 mV (2.5 mV, IHF '66)/47 kΩ  
TUNER, CD, TAPE/DCC, VCR 1, EQ/VCR 2  
15 mV (150 mV, IHF '66)/22 kΩ

S/N (IHF, A)

PHONO 70 dB (78 dB, IHF '66)

TUNER, CD, TAPE/DCC, VCR 1, EQ/VCR 2  
75 dB (90 dB, IHF '66)

Frequency response

PHONO RIAA standard curve ±0.8 dB

TUNER, CD, TAPE/DCC, VCR 1, EQ/VCR 2  
10 Hz–70 kHz, ±3 dB

Tone controls

BASS 50 Hz, +10 dB to –10 dB

TREBLE 20 kHz, +10 dB to –10 dB

Super bass

80 Hz, +6 dB/oct

### ■ GENERAL

Power consumption 270 W, 360 VA

Power supply AC 120 V, 60 Hz

Dimensions (W × H × D) 430 × 158 × 352 mm

(16-15/16" × 6-7/32" × 13-27/32")

Weight 9.4 kg (20.7 lb.)

### Notes:

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

# Technics

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**Note:** Refer to the placement, Equipment connections and Remote control operation of Service manual for Model No. ST-K55 (PP), Order No. AD9401001C1.

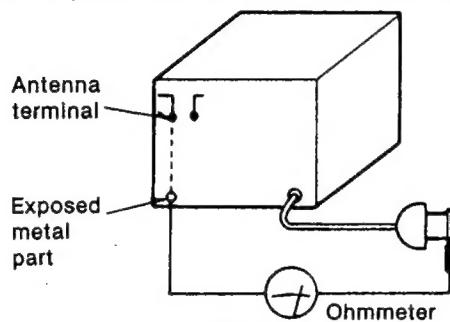
## SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

### • INSULATION RESISTANCE TEST

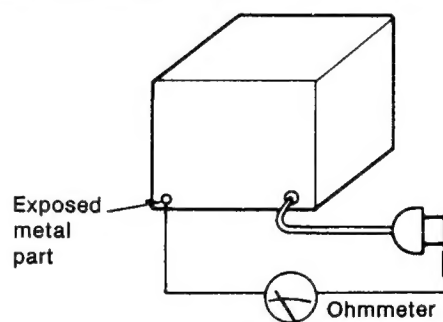
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads, antenna control shafts, handle brackets, etc. Equipment with antenna terminals should read between  $3\text{M}\Omega$  and  $5.2\text{M}\Omega$  to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

**Note:** Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance =  $3\text{M}\Omega - 5.2\text{M}\Omega$



(Fig. B)

Resistance = Approx.  $\infty$

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

## PROTECTION CIRCUITRY

The protection circuitry 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 outlines below:

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

### **Note:**

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

## BEFORE REPAIR AND ADJUSTMENT

Disconnect AC power, Discharge both Power Supply Capacitors C703 and C704 (80V 1200 $\mu\text{F}$ ), C705 and C706 (63V 2200 $\mu\text{F}$ ) through a 10 $\Omega$ , 5W resistor to ground. DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at 120V, 60Hz in NO SIGNAL mode should be 410~810mA.

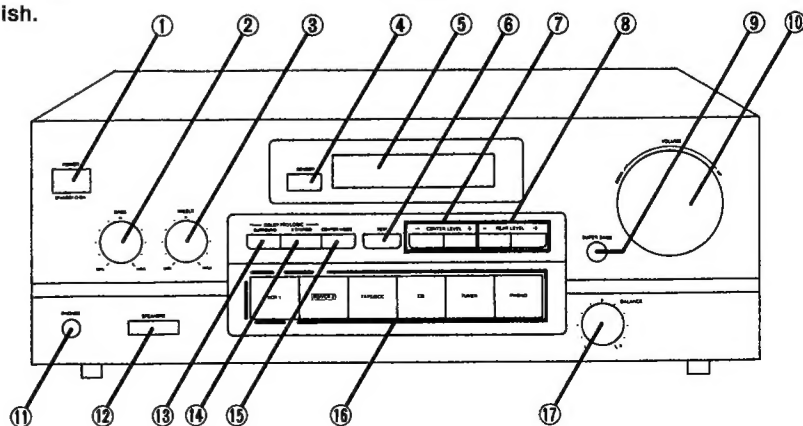
## LINE-UP OF COMPONENTS

| System Name               | Unit                                   |
|---------------------------|----------------------------------------|
| *SC-S2500<br>(for Canada) | ST-K55 (PP) : Tuner                    |
|                           | SU-G95 (PP) : Amplifier                |
|                           | — : Graphic equalizer                  |
|                           | RS-TR170 (PP) : Cassette deck          |
|                           | SL-PD665 (PP) : CD changer             |
|                           | SB-A35 (PC) : Speakers (Made in MEP)   |
|                           | SH-KS35 (PC) : Rack (Made in MEP)      |
| SC-S2550<br>(for Canada)  | SH-WA52 (PC) : Accessories box         |
|                           | ST-K55 (PP) : Tuner                    |
|                           | SU-G95 (PP) : Amplifier                |
|                           | SH-8017 (PP) : Graphic equalizer       |
|                           | RS-TR170 (PP) : Cassette deck          |
|                           | SL-PD665 (PP) : CD changer             |
|                           | SB-A55 (P) : F. speakers (Made in MEP) |
| *SC-S3500<br>(for U.S.A.) | SB-C55 (P) : C. speakers (Made in MEP) |
|                           | SB-S35 (P) : S. speakers (Made in MEP) |
|                           | SH-KS55 (P) : Rack (Made in MEP)       |
|                           | SH-WA22 (P) : Accessories box          |
|                           | ST-K55 (PP) : Tuner                    |
|                           | SU-G95 (PP) : Amplifier                |
|                           | SH-8017 (PP) : Graphic equalizer       |
| SC-S3550<br>(for U.S.A.)  | RS-TR270 (PP) : Cassette deck          |
|                           | SL-PD665 (PP) : CD changer             |
|                           | SB-A55 (PC) : Speakers (Made in MEP)   |
|                           | SH-KS55 (PC) : Rack (Made in MEP)      |
|                           | SH-WA62 (PC) : Accessories box         |
|                           | ST-K55 (PP) : Tuner                    |
|                           | SU-G95 (PP) : Amplifier                |
| *SC-S4500<br>(for U.S.A.) | SH-GS71 (P1) : Graphic equalizer       |
|                           | RS-TR270 (PP) : Cassette deck          |
|                           | SL-PD665 (PP) : CD changer             |
|                           | SB-A65 (P) : F. speakers (Made in MEP) |
|                           | SB-C55 (P) : C. speakers (Made in MEP) |
|                           | SB-S35 (P) : S. speakers (Made in MEP) |
|                           | SH-KS65 (P) : Rack (Made in MEP)       |
| SC-S4505<br>(for U.S.A.)  | SH-WA32 (P) : Accessories box          |
|                           | ST-K55 (PP) : Tuner                    |
|                           | SU-G95 (PP) : Amplifier                |
|                           | SH-GS91 (P) : D. sound processor       |
|                           | RS-TR270 (PP) : Cassette deck          |
|                           | SL-PD665 (PP) : CD changer             |
|                           | SB-A65 (P) : F. speakers (Made in MEP) |
| SC-S4550<br>(for U.S.A.)  | SB-C55 (P) : C. speakers (Made in MEP) |
|                           | SB-S35 (P) : S. speakers (Made in MEP) |
|                           | SH-KS65 (P) : Rack (Made in MEP)       |
|                           | SH-WA32 (P) : Accessories box          |

**Note:** \* The SB-model speakers and the SH-model rack used with this system have a wood-grain-effect finish.

## FRONT PANEL CONTROLS

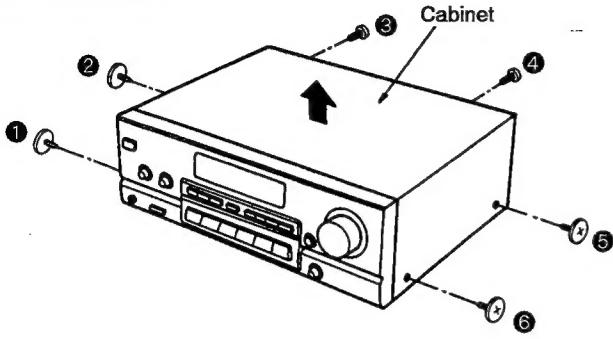
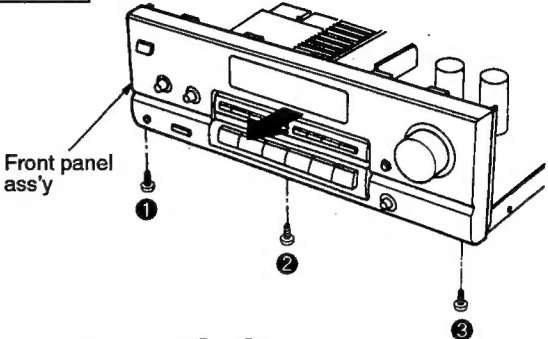
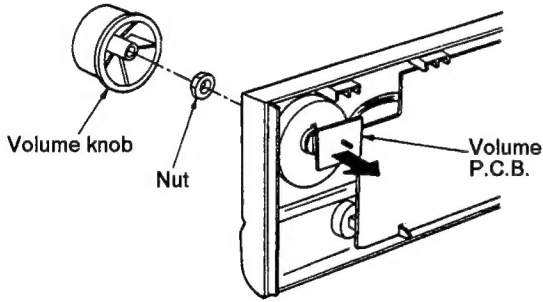
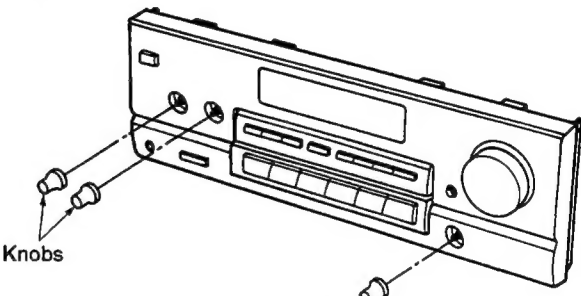
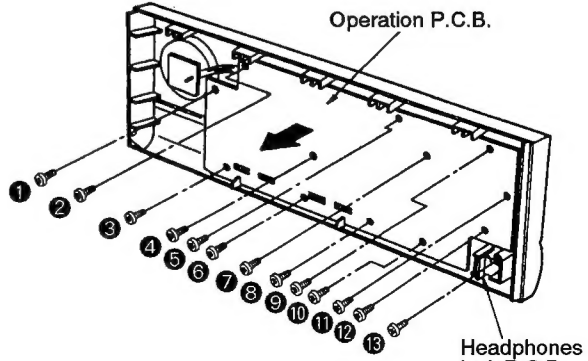
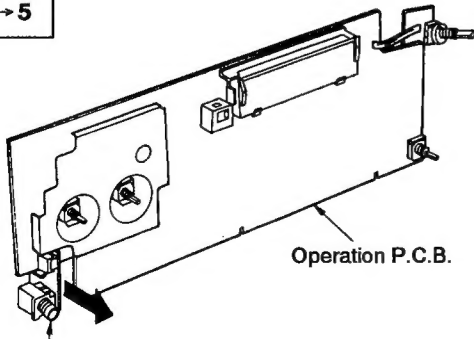
| No. | Name                                                                                                                                                                                                                                                                                                                                                                    |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ①   | <b>Power "STANDBY  /ON" switch (POWER, STANDBY  /ON)</b><br>Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power. |
| ②   | <b>Bass control (BASS)</b>                                                                                                                                                                                                                                                                                                                                              |
| ③   | <b>Treble control (TREBLE)</b>                                                                                                                                                                                                                                                                                                                                          |
| ④   | <b>Remote control signal receptor (SENSOR)</b>                                                                                                                                                                                                                                                                                                                          |
| ⑤   | <b>Display</b>                                                                                                                                                                                                                                                                                                                                                          |
| ⑥   | <b>Test signal ON/OFF button (TEST)</b>                                                                                                                                                                                                                                                                                                                                 |
| ⑦   | <b>Center level adjust button (CENTER LEVEL)</b>                                                                                                                                                                                                                                                                                                                        |
| ⑧   | <b>Rear level adjust button (REAR LEVEL)</b>                                                                                                                                                                                                                                                                                                                            |
| ⑨   | <b>Super bass ON/OFF button</b>                                                                                                                                                                                                                                                                                                                                         |
| ⑩   | <b>Volume control (VOLUME)</b>                                                                                                                                                                                                                                                                                                                                          |
| ⑪   | <b>Headphone jack (PHONES)</b>                                                                                                                                                                                                                                                                                                                                          |
| ⑫   | <b>Speaker ON/OFF button (SPEAKERS)</b>                                                                                                                                                                                                                                                                                                                                 |
| ⑬   | <b>DOLBY PRO LOGIC SURROUND ON/OFF button (SURROUND)</b>                                                                                                                                                                                                                                                                                                                |
| ⑭   | <b>DOLBY PRO LOGIC 3 STEREO ON/OFF button (3 STEREO)</b>                                                                                                                                                                                                                                                                                                                |
| ⑮   | <b>Center mode select button (CENTER MODE)</b>                                                                                                                                                                                                                                                                                                                          |
| ⑯   | <b>Input select buttons</b>                                                                                                                                                                                                                                                                                                                                             |
| ⑰   | <b>Balance control (BALANCE)</b>                                                                                                                                                                                                                                                                                                                                        |

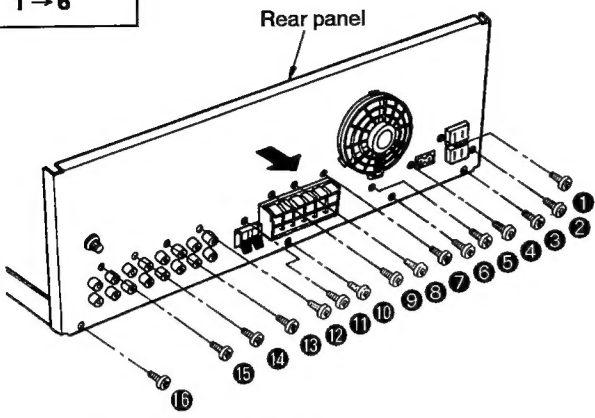
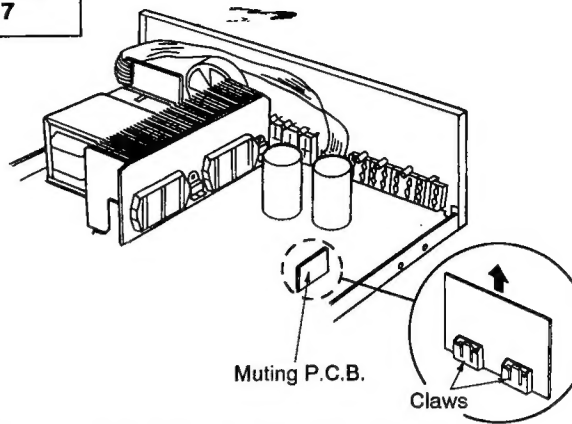
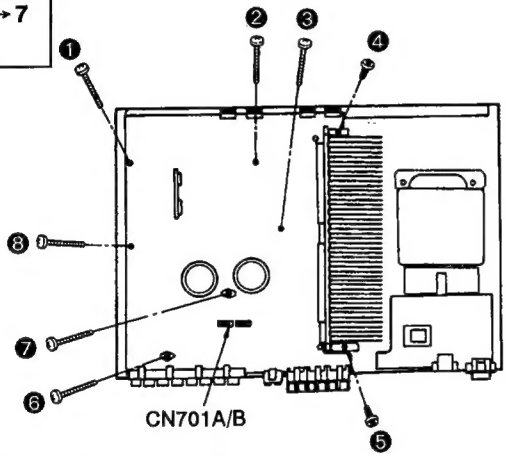
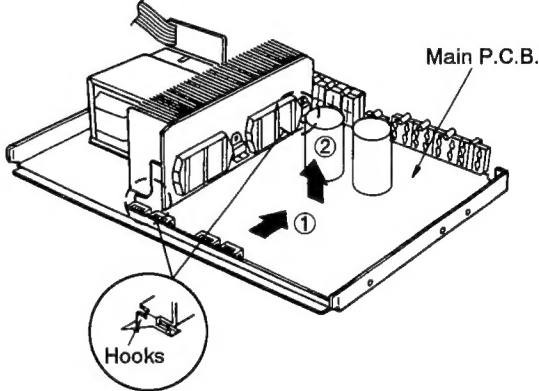
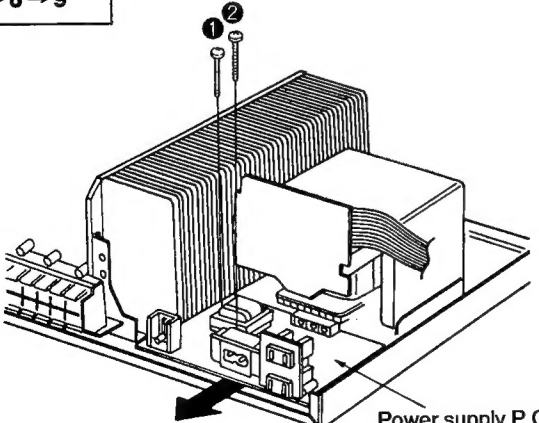
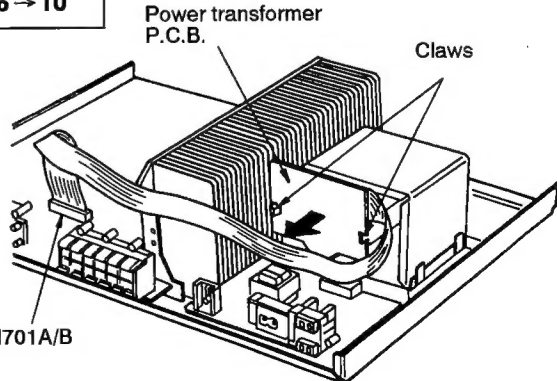


## DISASSEMBLY INSTRUCTIONS

### "ATTENTION SERVICER"

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

| Ref.No.<br>1               | Removal of the cabinet                                                                                                                                                                                    | Ref.No.<br>2                                                                                                                 | Removal of the front panel ass'y                                                                                                                                                                  |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Procedure<br>1             |  <p>• Remove the 6 screws (① ~ ⑥).</p>                                                                                   | Procedure<br>1 → 2                                                                                                           |  <p>1. Remove the 3 screws (① ~ ③).<br/>2. Remove the front panel ass'y in the direction of arrow.</p>          |
| Ref.No.<br>3               | Removal of the volume P.C.B.                                                                                                                                                                              | Ref.No.<br>4                                                                                                                 | Removal of the operation P.C.B.                                                                                                                                                                   |
| Procedure<br>1 → 2 → 3     |  <p>1. Pull out the volume knob.<br/>2. Remove the nut.<br/>3. Remove the volume P.C.B. in the direction of arrow.</p> | Procedure<br>1 → 2 → 4                                                                                                       |  <p>※ Pull out the knobs with using adhesive tape when removing the knobs.</p> <p>1. Pull out the 3 knobs.</p> |
| Ref.No.<br>5               | Removal of the headphones jack P.C.B.                                                                                                                                                                     |  <p>2. Remove the 13 screws (① ~ ⑬).</p> |                                                                                                                                                                                                   |
| Procedure<br>1 → 2 → 4 → 5 |  <p>• Pull out the headphones jack P.C.B. in the direction of arrow.</p>                                               |                                                                                                                              |                                                                                                                                                                                                   |

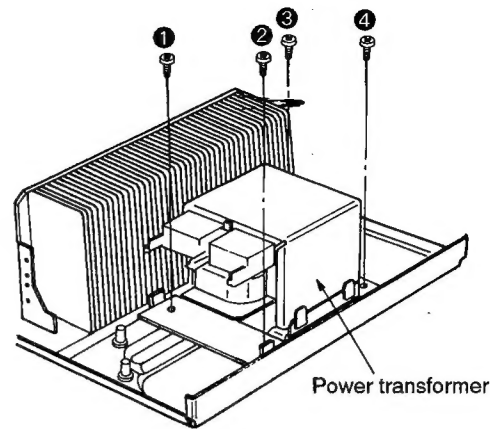
|                                       |                                                                                                                                                                                              |                                |                                                                                                                                                                                                                                           |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ref.No.</b><br>6                   | <b>Removal of the rear panel</b>                                                                                                                                                             | <b>Ref.No.</b><br>7            | <b>Removal of the muting P.C.B.</b>                                                                                                                                                                                                       |
| <b>Procedure</b><br>1 → 6             |  <p>1. Remove the 16 screws (① ~ ⑯).</p> <p>2. Remove the rear panel in the direction of arrow.</p>         | <b>Procedure</b><br>1 → 7      |  <p>• Release the 2 claws and then remove the muting P.C.B. in the direction of arrow.</p>                                                              |
| <b>Ref.No.</b><br>8                   | <b>Removal of the main P.C.B.</b>                                                                                                                                                            |                                |                                                                                                                                                                                                                                           |
| <b>Procedure</b><br>1 → 2 → 6 → 7 → 8 |  <p>1. Remove the 1 flat cable(CN701A/B).</p> <p>2. Remove the 8 screws(① ~ ⑧).</p>                        |                                |  <p>3. Release the 2 hooks by sliding the main P.C.B. in the direction of arrow ①, and then remove the main P.C.B. in the direction of arrow ②.</p>    |
| <b>Ref.No.</b><br>9                   | <b>Removal of the power supply P.C.B.</b>                                                                                                                                                    | <b>Ref.No.</b><br>10           | <b>Removal of the power transformer P.C.B.</b>                                                                                                                                                                                            |
| <b>Procedure</b><br>1 → 6 → 9         |  <p>1. Remove the 2 screws(①, ②).</p> <p>2. Remove the power supply P.C.B. in the direction of arrow.</p> | <b>Procedure</b><br>1 → 6 → 10 |  <p>1. Remove the 1 flat cable(CN701A/B).</p> <p>2. Release the 2 claws.</p> <p>3. Remove the power transformer P.C.B. in the direction of arrow.</p> |

Ref.No.  
11

## Removal of the power transformer

Procedure  
1 → 6 → 9 → 10  
→ 11

- Remove the 4 screws (① ~ ④).

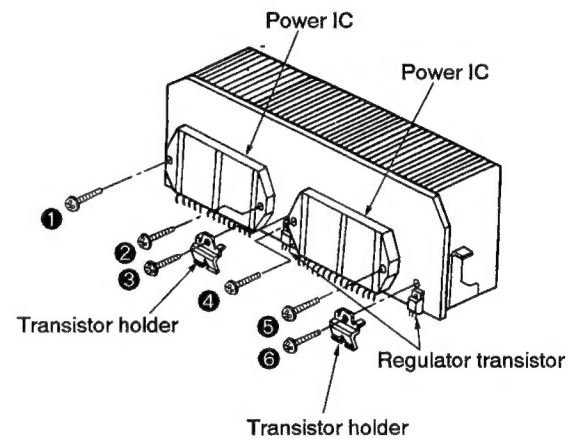
Ref.No.  
12

## Removal of the power IC and regulator transistor

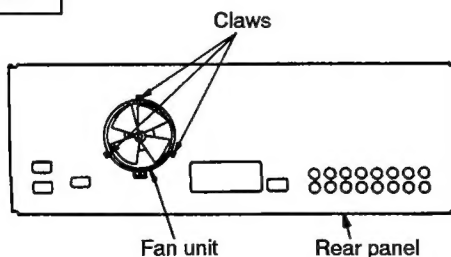
Procedure  
1 → 2 → 6 → 7  
→ 8 → 12

1. Unsolder the power IC or regulator transistor.
2. Remove the 6 screws (① ~ ⑥).
3. Remove the 2 transistor holders.

- When mounting the power IC or regulator transistor.  
Apply silicone compound(RFKX0002) to the rear side of power IC or regulator transistor.

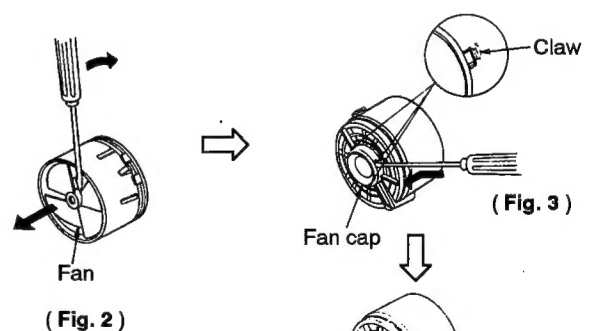
Ref.No.  
13

## Removal of the cooling fan motor

Procedure  
1 → 6 → 13

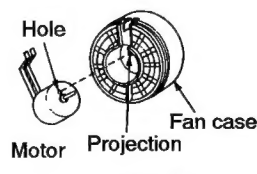
( Fig. 1 )

1. Release the 3 claws. (See Fig. 1)
2. Insert a screwdriver at the foot of the fan.  
Force it out of the motor shaft. (See Fig. 2)
3. Remove the fan cap by used ⊖ screwdriver. (See Fig. 3)
4. Remove the fan terminal cap in the direction of arrow.  
(See Fig. 4)
5. Remove the motor from the fan case. (See Fig. 5)
6. When mounting the motor, align the fan casing's projection  
with the hole of the motor. (See Fig. 6)

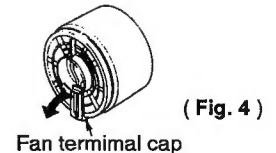


( Fig. 2 )

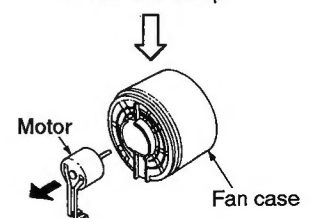
( Fig. 3 )



( Fig. 6 )



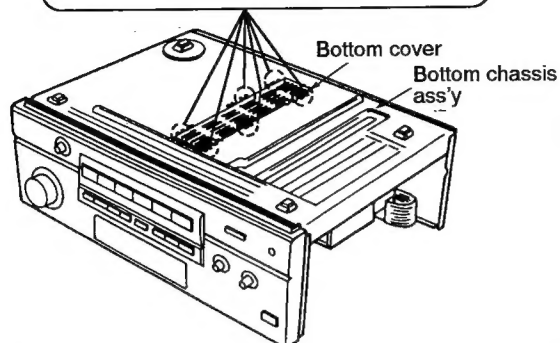
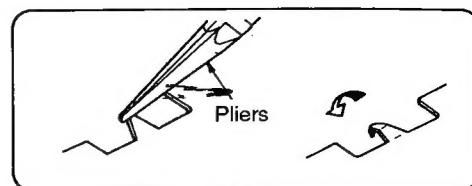
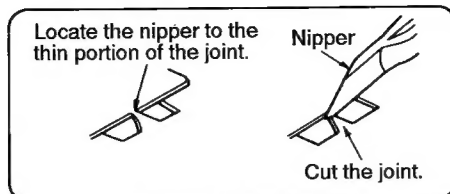
( Fig. 4 )



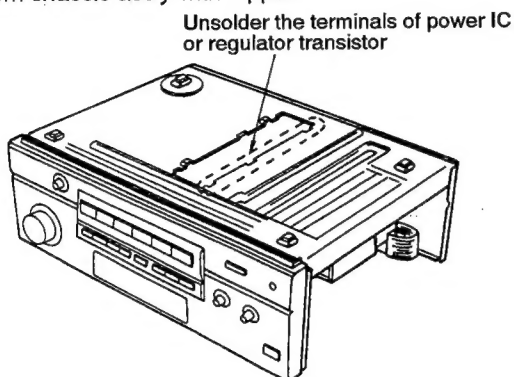
( Fig. 5 )



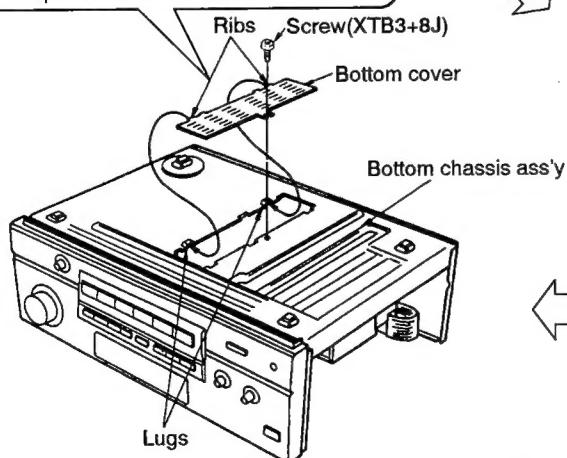
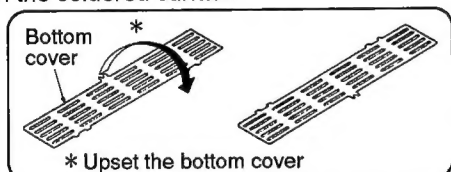
# HOW TO REPLACEMENT THE POWER IC AND REGULATOR TRANSISTOR



1. Cut the joints(6 portions) between bottom cover and bottom chassis ass'y with nipper.



3. When replacing the power IC or regulator transistor, unsolder the terminals of power IC or regulator transistor on the soldered surface.

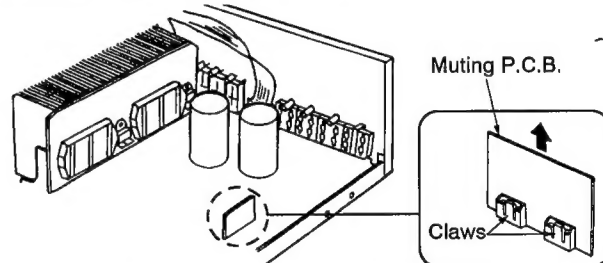


5. After replacing the power IC or regulator transistor, upset the bottom cover and align the ribs of the bottom cover to the lugs on the bottom chassis ass'y.
6. After mounting the bottom cover on the bottom chassis ass'y, fix it with a screw(XTB3+8J).

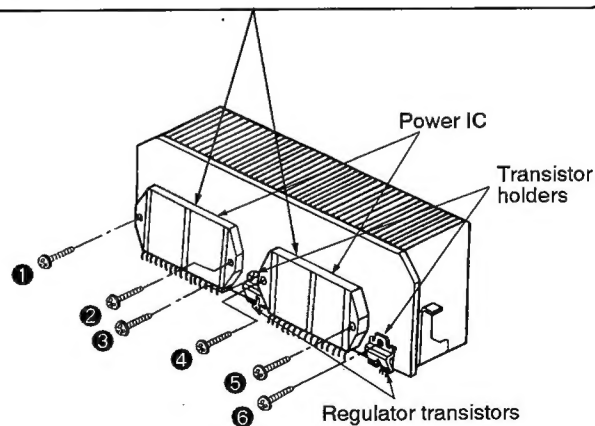
2. After cutting the joints(6 portions), bend the portions of the bottom chassis ass'y in the direction of arrow with pliers.

## CAUTION

- After replacing the power IC or regulator transistor, apply a sufficient quantity of compound grease (RFKX0002) between the heat sink and the power IC or regulator transistor. (Radiation of power IC & transistor)
- Tighten enough the screws (① ~ ⑥) after replacing the power IC or regulator transistor. Otherwise, the heat radiation works little.



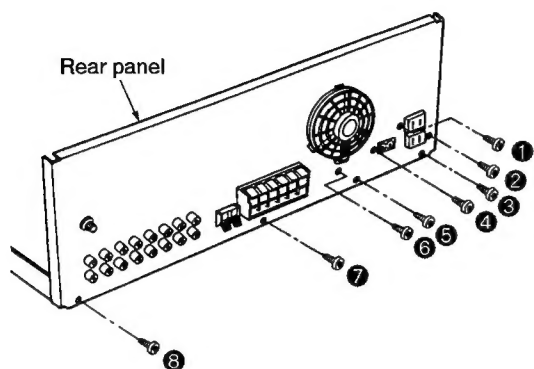
- Release the 2 claws of muting P.C.B. and remove it because of using the long screwdriver to tighten the screw firmly.



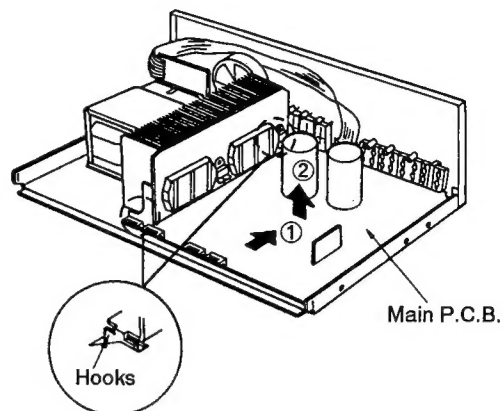
4. Then remove the 6 screws (① ~ ⑥) fixed to the power IC or transistor holders.

## ■ HOW TO CHECK THE MAIN P.C.B.

1. Remove the cabinet according to the disassembly instructions, procedure 1 "Removal of the cabinet" on page 4.
2. Remove the front panel ass'y according to the disassembly instructions, procedure 2 "Removal of the front panel ass'y" on page 4.

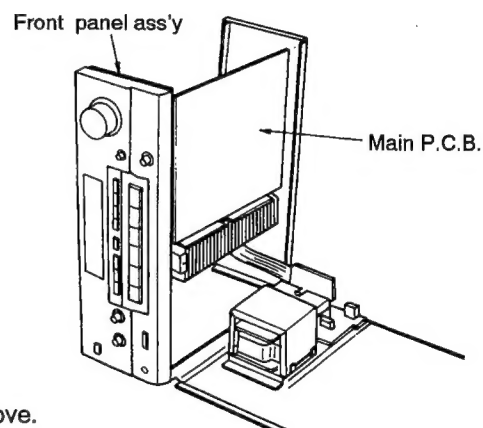


3. Remove the 8 screws (① ~ ⑧).



4. Release the 2 hooks by sliding the main P.C.B. in the direction of arrow ①, and then remove the main P.C.B. equipped with rear panel in the direction of arrow ②.

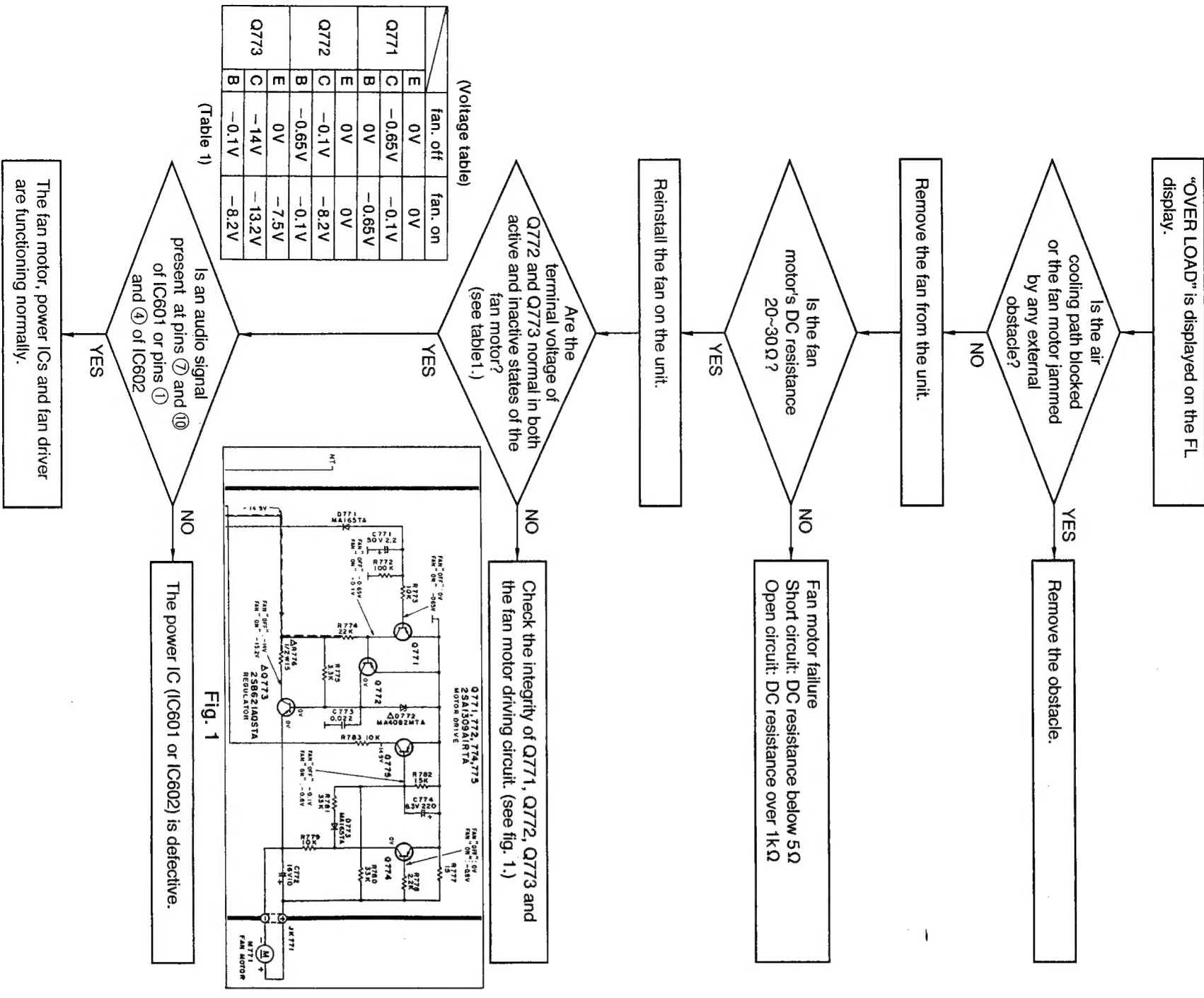
5. Reinstall the front panel ass'y to the main P.C.B.
6. When checking the soldered surface of the main P.C.B. and replacing the parts, do as shown in above.



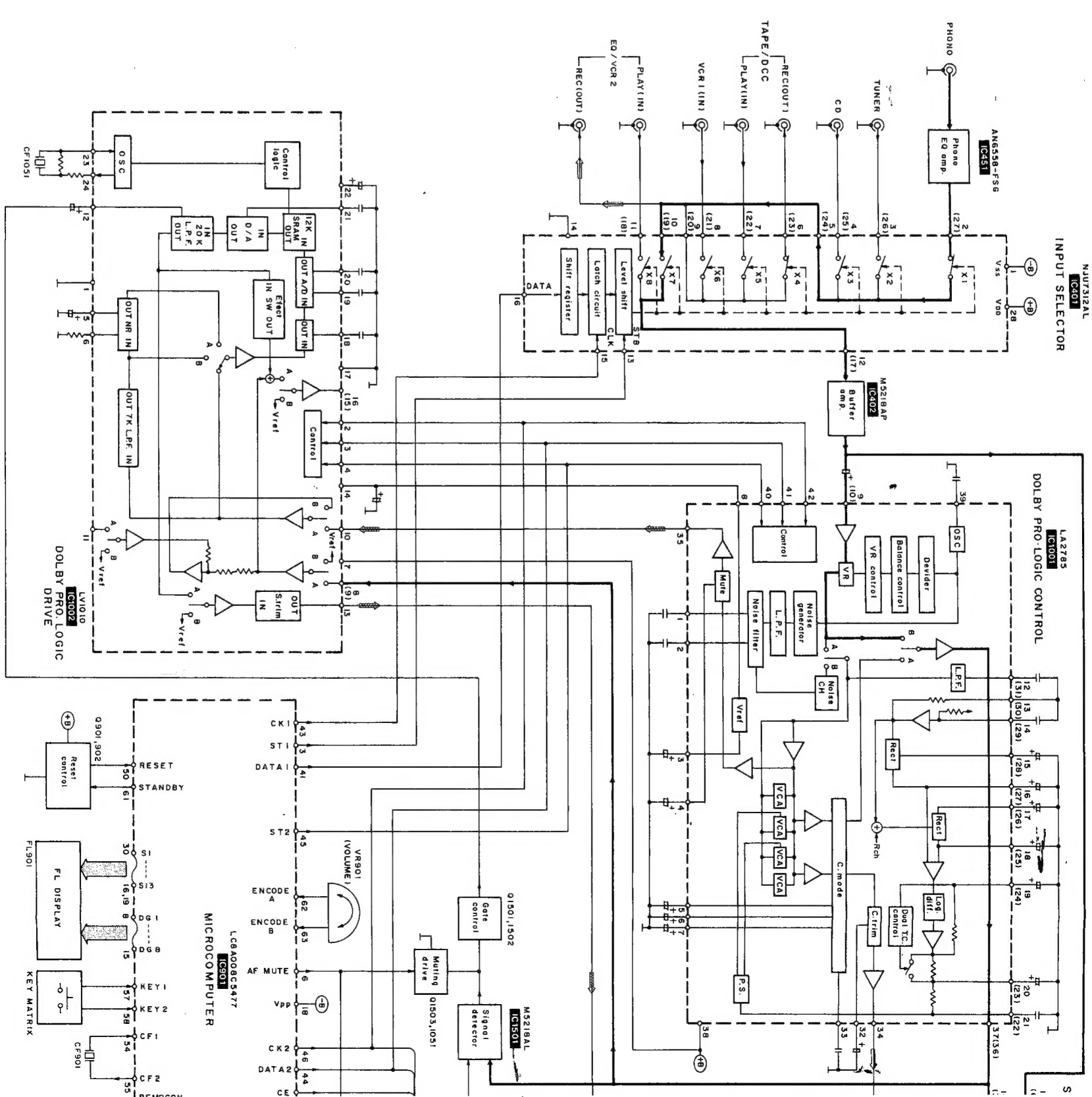


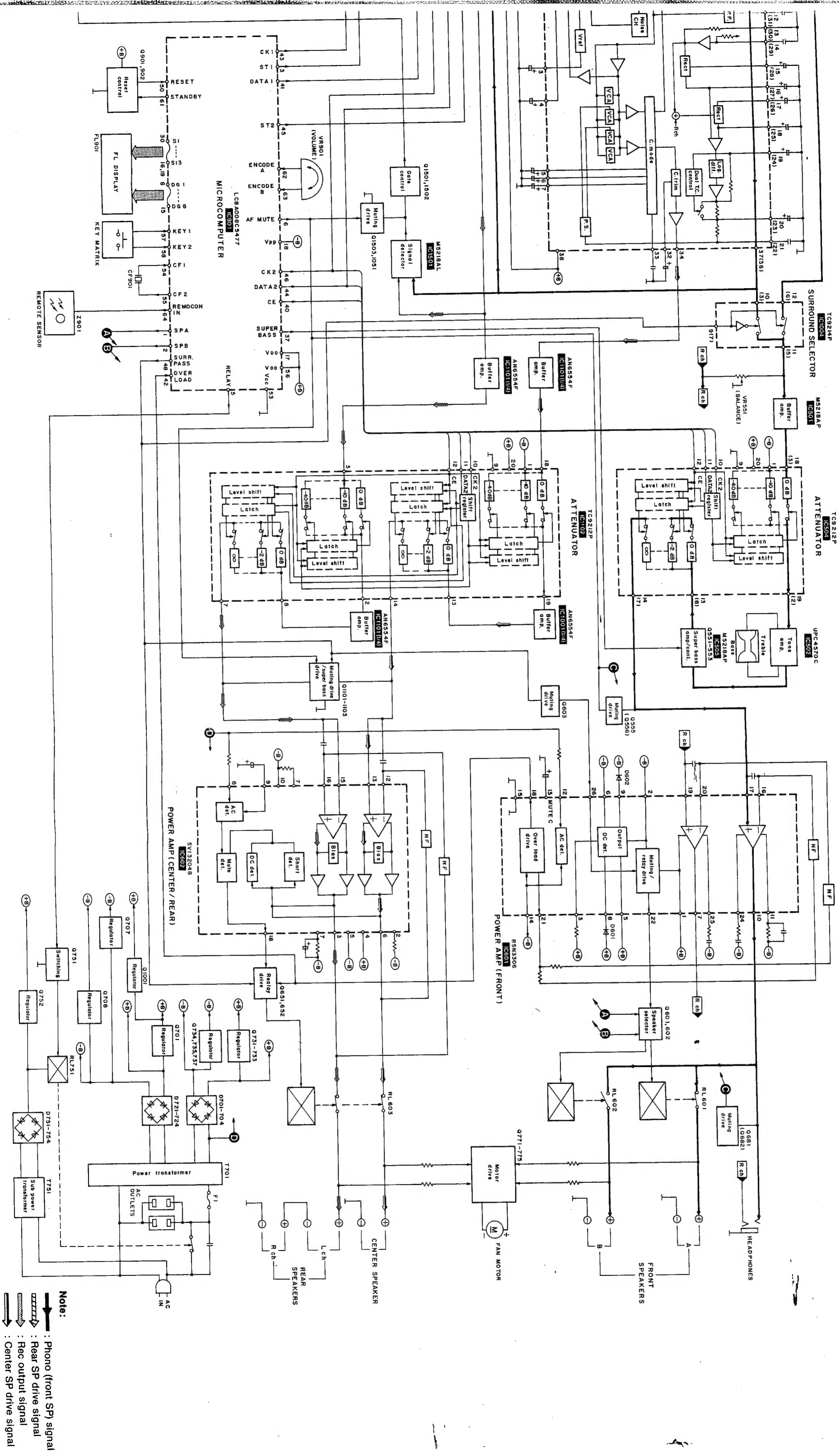
FAN MOTOR TROUBLESHOOTING GUIDE

The Models SU-G75/G95 employ fan motor error sensing electronics. If the cooling fan is not operation and "OVER LOAD" is displayed on the FL display, check the fan motor and its driving circuit.



BLOCK DIAGRAM





Note:

- : Phono (front SP) signal
- : Rear SP drive signal
- : Rec output signal
- : Center SP drive signal

**■ SCHEMATIC DIAGRAM (Parts list on pages 33~37.)**

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

**Note 1:**

- S901 : Speaker ON/OFF (SPEAKERS) switch.
- S902~907:

Input select switches.

[ S902: VCR1, S903: EQ/VCR 2,  
S904: TAPE/DCC, S905: CD,  
S906: TUNER, S907: PHONO ]

- S908 : Rear level adjust (REAR LEVEL (-)) switch.
- S909 : Center level adjust (CENTER LEVEL (-)) switch.
- S910 : Power "STANDBY  $\phi$  ION" (POWER, STANDBY  $\phi$  /ION) switch.
- S913 : Dolby pro logic surround ON/OFF (SURROUND) switch.
- S914 : Dolby pro logic 3 stereo ON/OFF (3 STEREO) switch.
- S915 : Center mode (CENTER MODE) select switch.
- S916 : Test signal ON/OFF (TEST) switch.
- S917 : Rear level adjust (REAR LEVEL (+)) switch.
- S918 : Center level adjust (CENTER LEVEL (+)) switch.
- S919 : Super bass ON/OFF (SUPER BASS) switch.

• Signal line

• Phono signal line

• Rear SP drive signal

• Positive voltage line

• Recording signal

• Center SP drive signal

• Negative voltage line

- Important safety notice

Components identified by  $\Delta$  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used as occasion calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply parts number is described alone in the replacement parts.

| Part No. | Original Part No. | Supply Part No. |
|----------|-------------------|-----------------|
| IC1501   | M5218AL           | M5218L          |

**• Caution!**

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

**Note 2:**

**CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 6.3A 125V FUSE.**

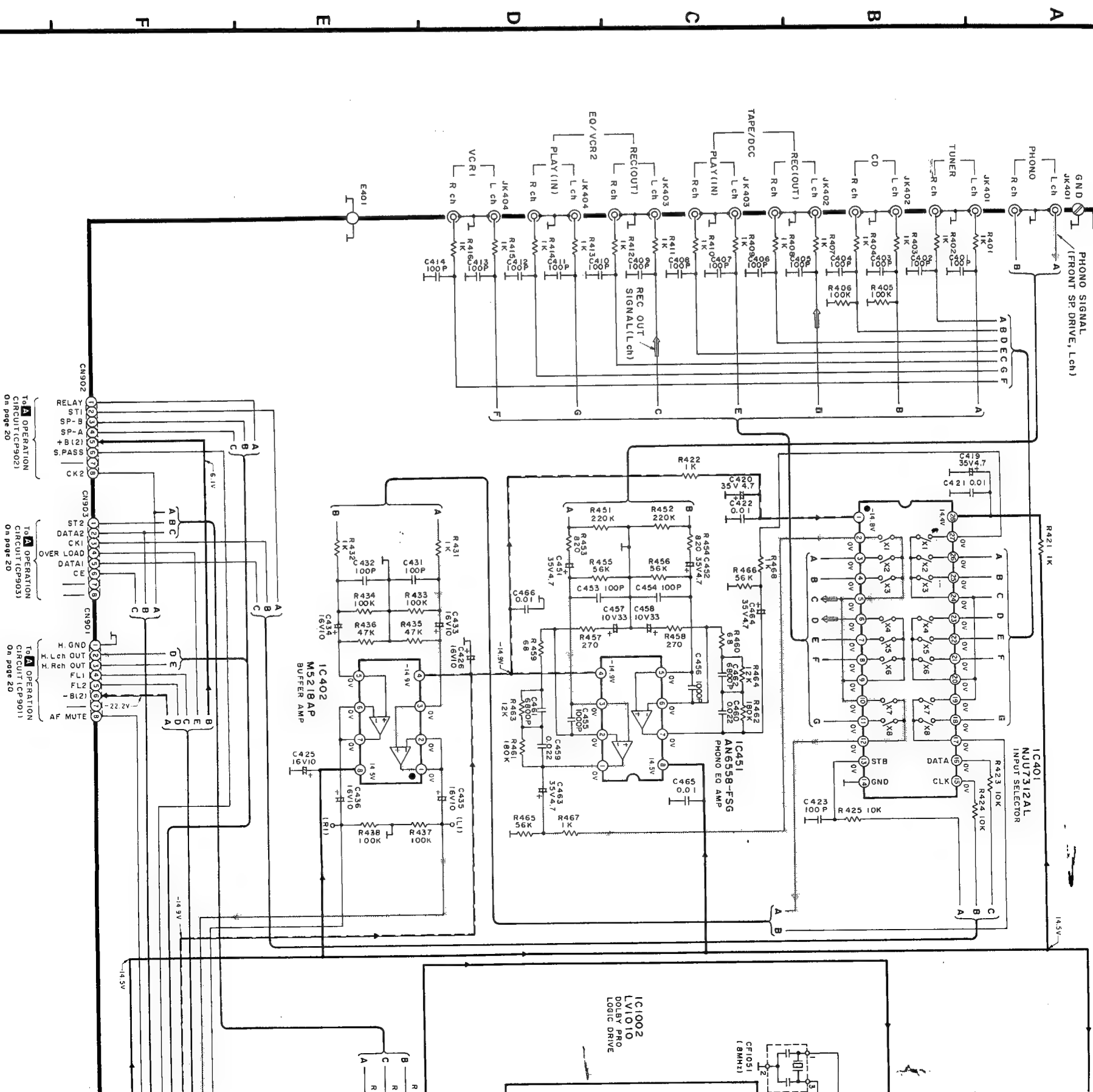


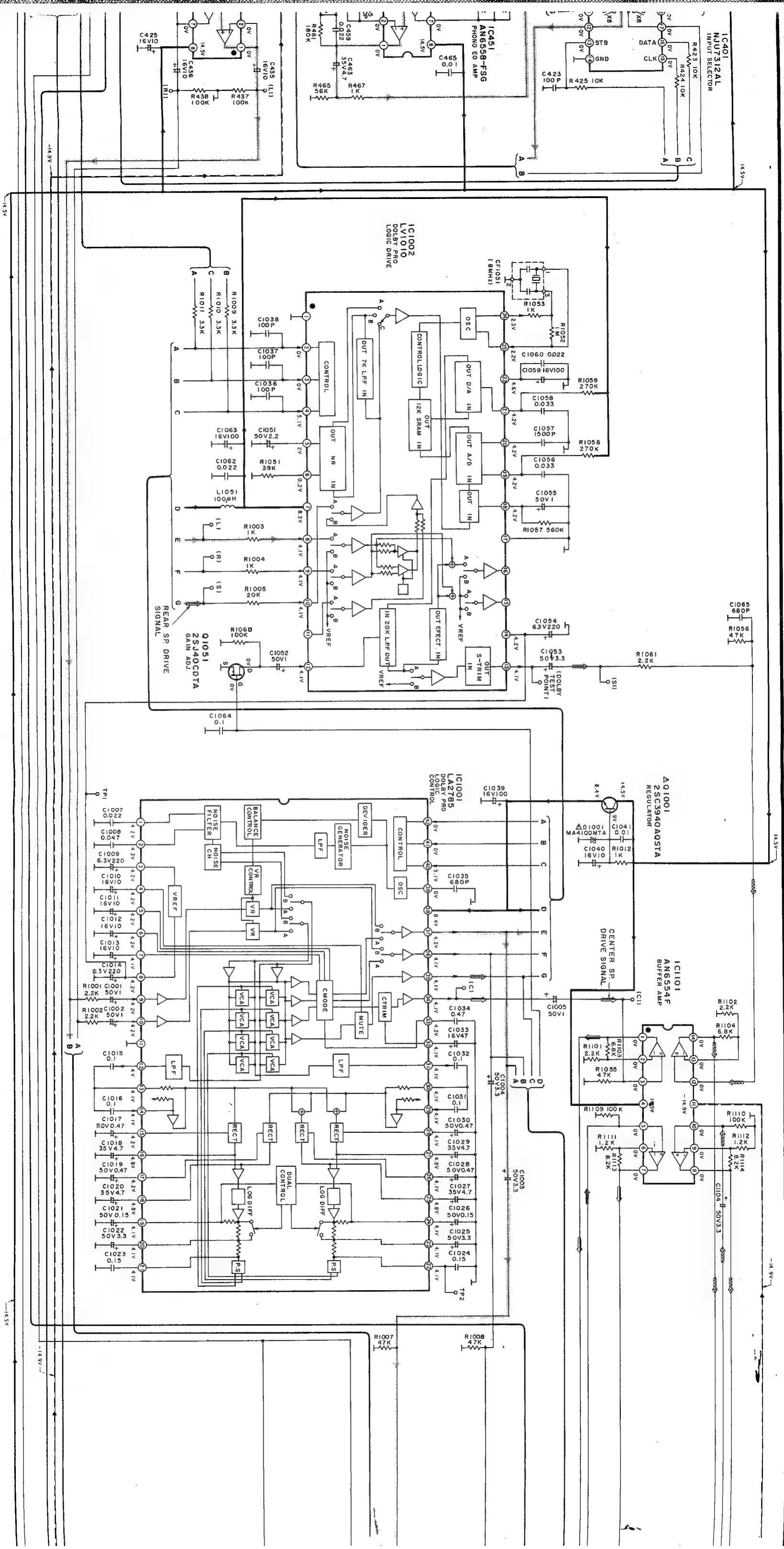
**RISK OF FIRE-REPLACE FUSE AS MARKED.**

**FUSE CAUTION**

$\text{[FUSE SYMBOL]}$  This symbol located near the fuse indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

$\text{[FUSE SYMBOL]}$  Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n'utiliser que des fusibles de même type. Ce dernier est indiqué là où le présent symbole est apposé.

**D MAIN CIRCUIT (INPUT SELECTOR / PHONO EQ AMP / DOLBY PRO LOGIC / BUFFER AMP / ATTENUATOR / REGULATOR /**







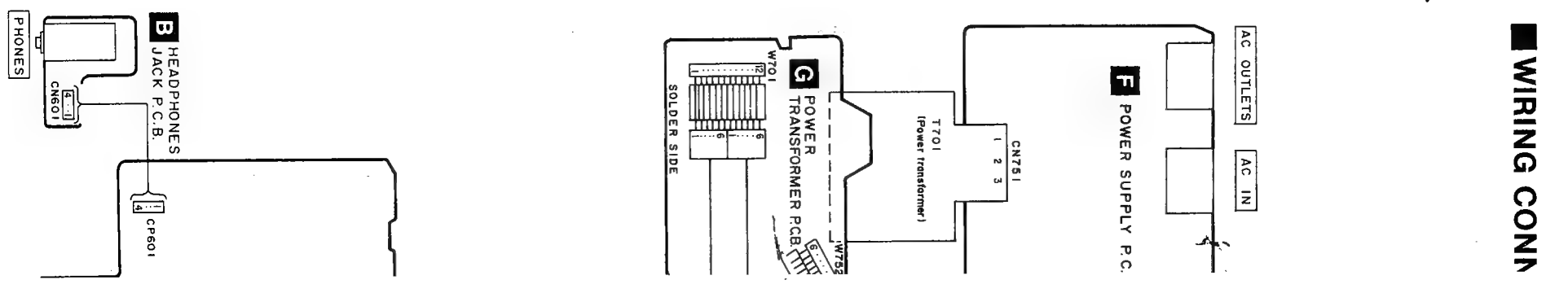
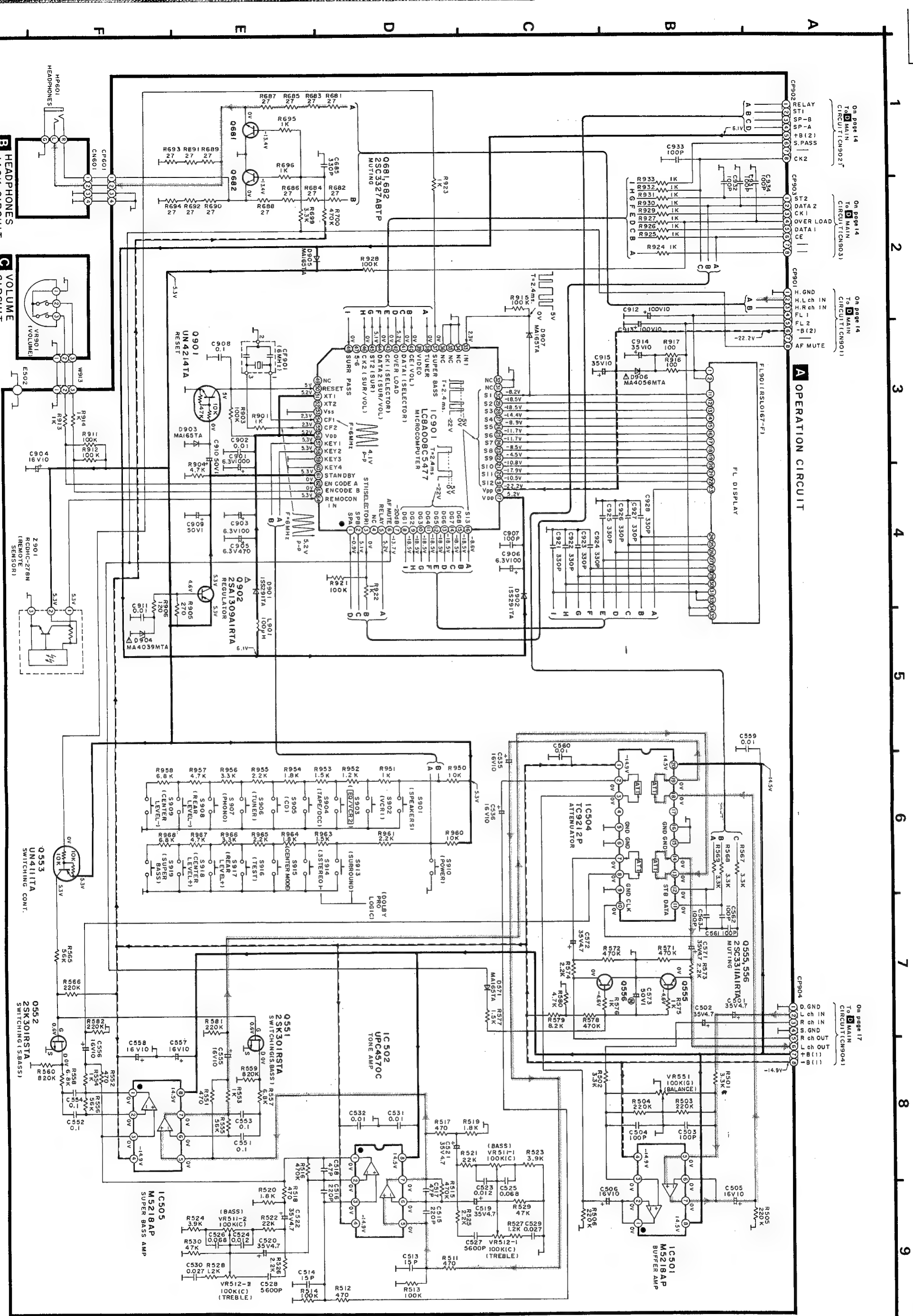


## POWER TRANSFORMER CIRCUIT

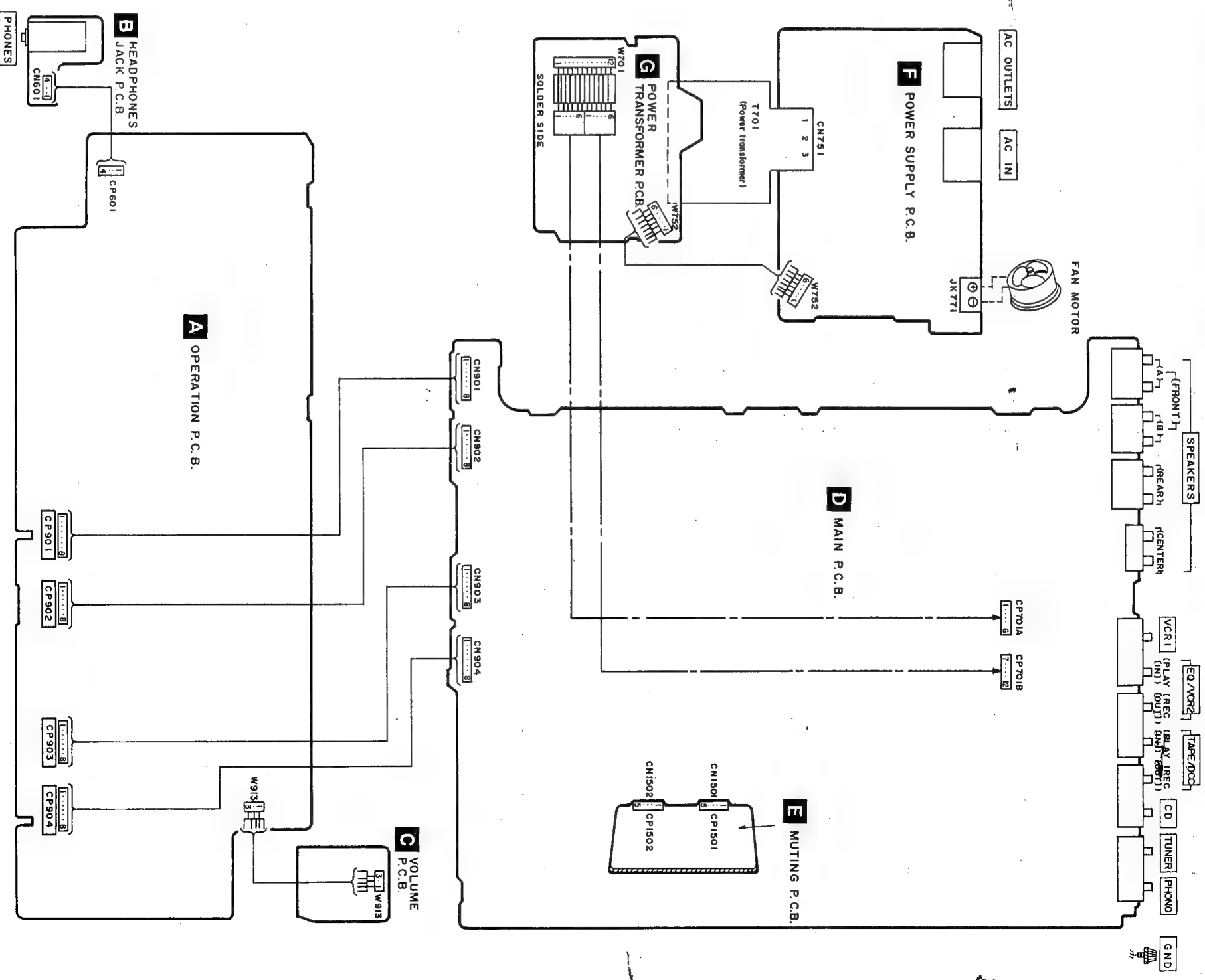
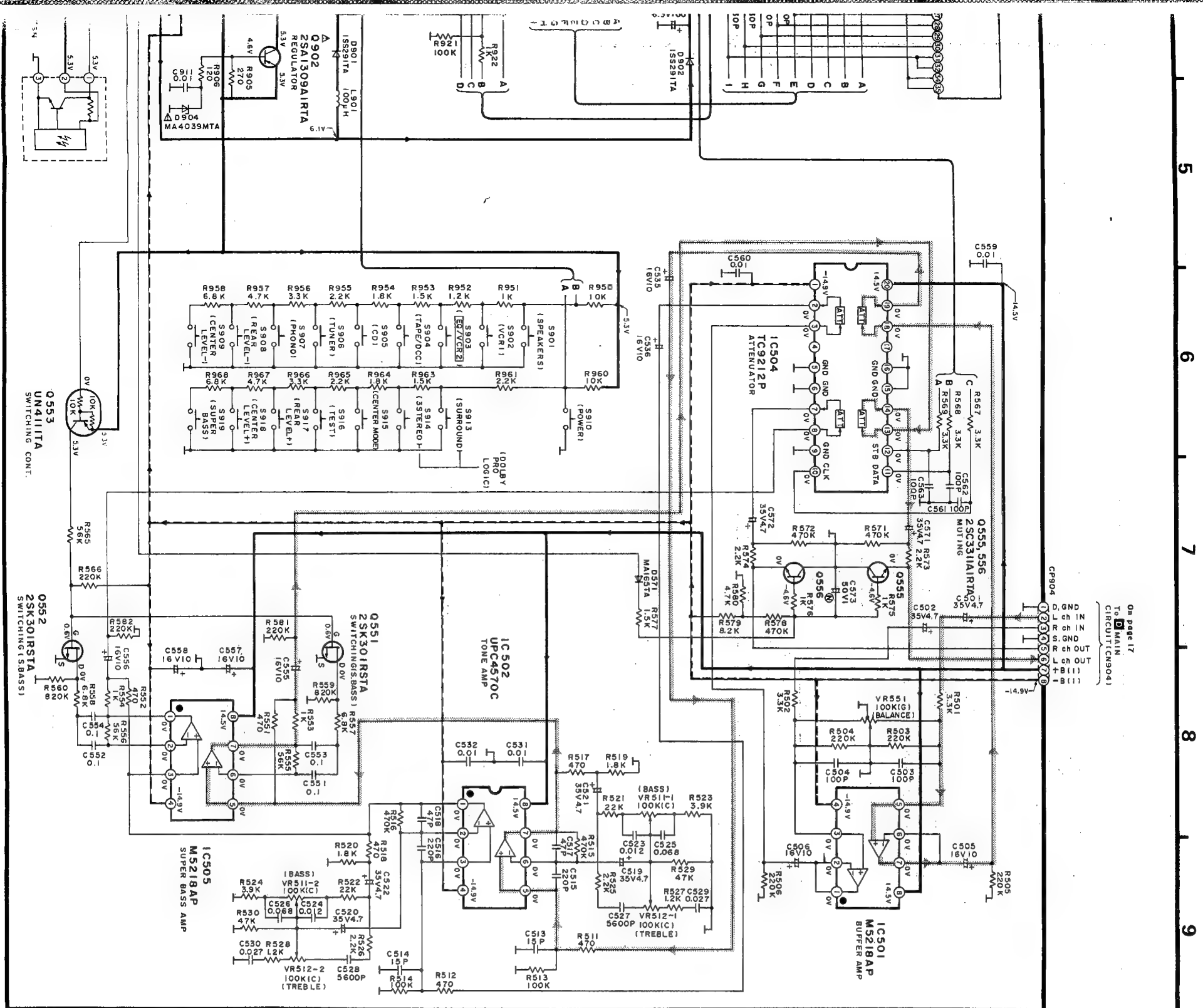




WIRING CONN



# WIRING CONNECTION DIAGRAM

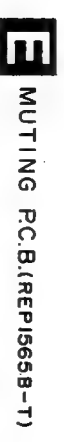
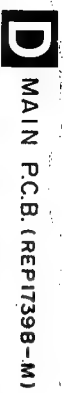




A vertical number line with tick marks and labels 1 through 10.

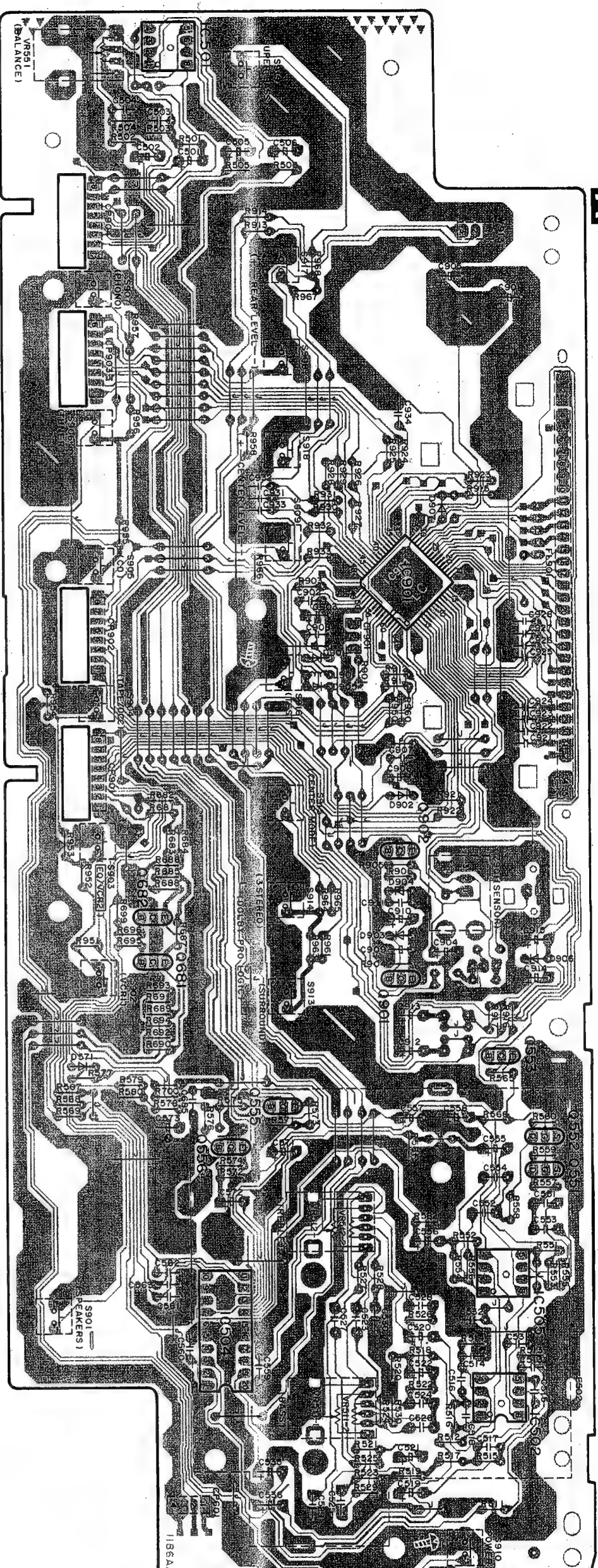
T701  
(Power transformer)



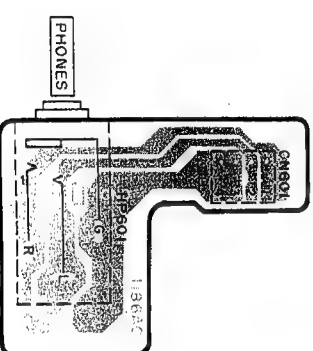




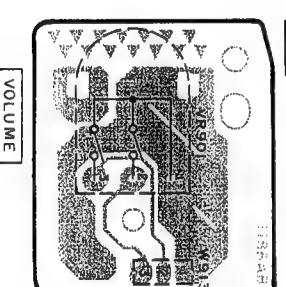
**A** OPERATION P.C.B.(REP17408-S)



**B** HEADPHONES  
JACK P.C.B.  
(REP1740B-S)



**C**  
VOLUME P.C.B.  
(REP1740B-S)

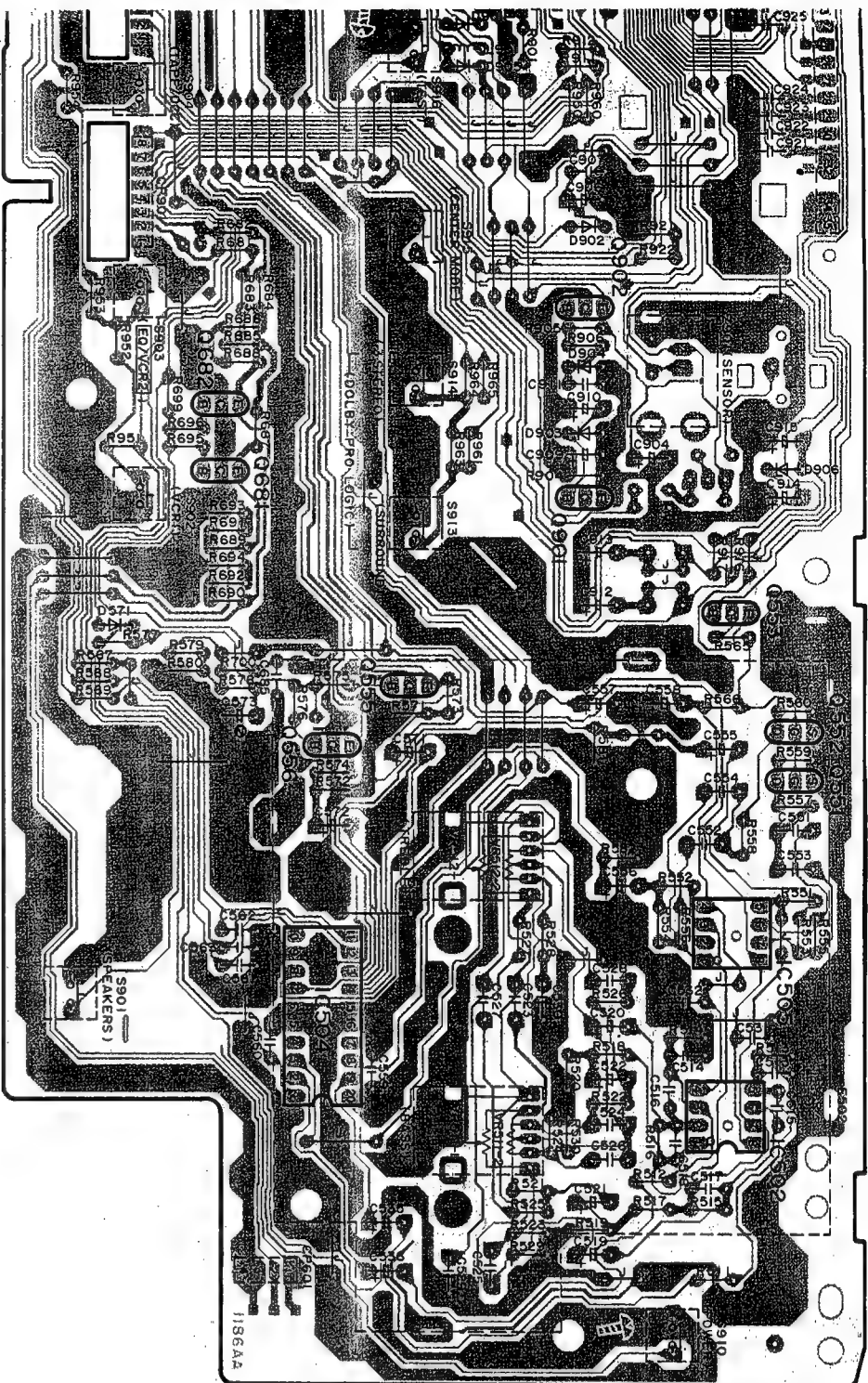


|                                                                                                                                                                |                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <p>LC8A00805/477</p>                                                      | <p>AN1</p>     |
| <p>AN6558-FS<br/>LA2/7B5</p>                                              | <p>2SC394</p>  |
| <p>2SB992EPTA<br/>2SB621AOSTA</p>                                         | <p>2SC394</p>  |
| <p>2SB1357DEFTA<br/>2SD2037DEFTA</p>                                      | <p>2S141</p>   |
| <p>MAA033M<br/>MAA039M<br/>MAA047M<br/>MAA056M<br/>MAA068M<br/>MAA082M</p>  | <p>MAA033M<br/>MAA039M<br/>MAA047M<br/>MAA056M<br/>MAA068M<br/>MAA082M</p>                          |

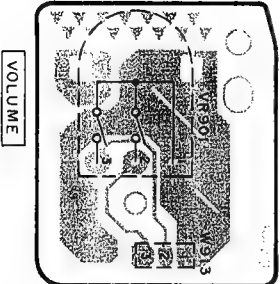


■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

|                                           |                                                                                |                                                                                    |                                                    |                                                     |
|-------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------|
| <br>LC8A00905477                          | <br>AN6554F                                                                    | <br>M5218AP<br>LV1010<br>8Pin<br>24Pin                                             | <br>RSN3306                                        | <br>M5218AL<br>TC9214P<br>TC9212P<br>16Pin<br>20Pin |
| <br>AN6558-FSG<br>LA2785<br>8Pin<br>42Pin | <br>2SC3940AQSTA                                                               | <br>2SA1309A1RSTA<br>2SC3311A1RSTA<br>UN4111TA<br>UN4211TA<br>UN4211TA<br>UN4214TA | <br>2SC3327ABTP                                    | <br>2SB1187DEF<br>2SD1761DEF                        |
| <br>2SA992EFTPA<br>2SB621AQSTA            | <br>2SJ40CDTA                                                                  | <br>2SK301RSTA                                                                     | <br>MA165TA<br>MA700A1TA<br>1SS291TA<br>1SR35200TB | <br>P300DLF<br>P300DS002T<br>SB3606501T             |
| <br>2SB1357DEFTA<br>2SD2037DEFTA          | <br>MA4033MTA<br>MA4039MTA<br>MA4047MTA<br>MA4056MTA<br>MA4068MTA<br>MA4082MTA | <br>MA4100MTA<br>MA4150MTA<br>MA4220MTA<br>MA4360MTA                               | <br>Cd<br>Cathode<br>Anode                         | <br>Cd<br>Cathode<br>Anode                          |



**C** VOLUME P.C.B.  
(REP1740B-S)



VOLUME

# **■ TERMINAL FUNCTION OF IC**

## **• IC901 (LC8A008C5477): Microcomputer**

| Pin No.       | Mark            | I/O Division | Function                            |
|---------------|-----------------|--------------|-------------------------------------|
| 1<br>•<br>2   | SPA<br>•<br>SPB | O            | Speaker select control terminal     |
| 3             | ST1             | O            | Level shift control terminal        |
| 4             | NC              | —            | Not used, open                      |
| 5             | RELAY           | O            | Relay control terminal              |
| 6             | AF MUTE         | O            | Muting control terminal             |
| 7             | −20dB           | O            | Muting control (−20dB) terminal     |
| 8<br>}<br>15  | DG1<br>}<br>DG8 | O            | Digit signal of FL display          |
| 16            | S13             | O            | Segment signal of FL display        |
| 17            | VDD             | I            | Power supply terminal               |
| 18            | VPP             | I            | Power supply terminal of FL display |
| 19<br>}<br>30 | S12<br>}<br>S1  | O            | Segment signal of FL display        |
| 31<br>•<br>32 | NC              | O            | No connection                       |
| 33            | INI             | —            | Not used, connected to resistor     |
| 34            | NC              | I            | No connection                       |
| 35            | NC              | I            | No connection                       |
| 36            | NC              | I            | No connection                       |
| 37            | SUPER<br>BASS   | —            | Super bass control terminal         |
| 38            | TUNER           | O            | Not used, open                      |
| 39            | VIDEO           | O            | Not used, open                      |
| 40            | CE              | O            | Chip enable terminal                |

| Pin No.       | Mark                      | I/O Division | Function                            |
|---------------|---------------------------|--------------|-------------------------------------|
| 41            | DATA1                     | O            | Serial data signal                  |
| 42            | OVER<br>LOAD              | I            | Over load detect terminal           |
| 43            | CK1                       | O            | Serial clock signal                 |
| 44            | DATA2                     | O            | Serial data signal                  |
| 45            | ST2                       | O            | Level shift control terminal        |
| 46            | CK2                       | O            | Serial clock signal                 |
| 47            | 5−6                       | O            | Remote control terminal             |
| 48            | SURR<br>BASS              | O            | Surround selector terminal          |
| 49            | NC                        | —            | No connection                       |
| 50            | RESET                     | I            | Reset detect terminal               |
| 51            | XT1                       | —            | Not used, connected to power supply |
| 52            | XT2                       | —            | Not used, open                      |
| 53            | VSS                       | —            | GND terminal                        |
| 54            | CF1                       | I            | Crystal oscillator                  |
| 55            | CF2                       | O            | Terminal (6MHz)                     |
| 56            | VDD                       | I            | Power supply terminal               |
| 57<br>}<br>60 | KEY1<br>}<br>KEY4         | I            | Key matrix detect terminal          |
| 61            | STANDBY                   | O            | Power detect terminal               |
| 62<br>•<br>63 | ENCODE A<br>•<br>ENCODE B | —            | Not used, connected to power supply |
| 64            | REMOCON<br>IN             | I            | Remote control terminal             |

# REPLACEMENT PARTS LIST

**Notes:** \*Important safety notice:

 Components identified by  $\Delta$  mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

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

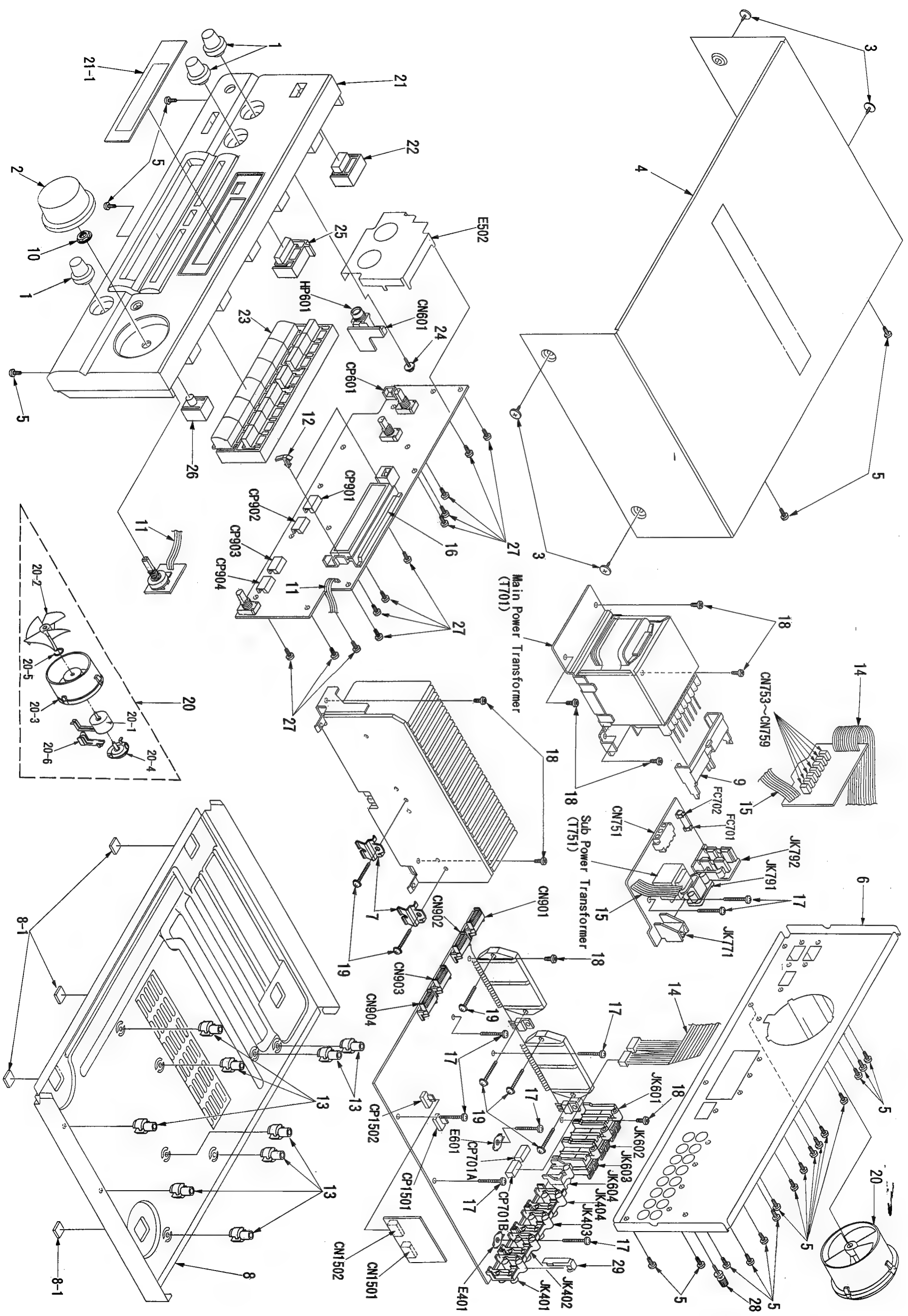
| Ref. No. | Part No.     | Part Name & Description      | Remarks |
|----------|--------------|------------------------------|---------|
|          |              | CABINET AND CHASSIS          |         |
| 1        | RGW0197-K    | BASS/TREBLE/BALANCE KNOB     |         |
| 2        | RGW0199-K    | VOLUME KNOB                  |         |
| 3        | RHD30035-K   | SCREW                        |         |
| 4        | RKM0041A-K   | CABINET                      |         |
| 5        | XTBS3+8JFZ1  | SCREW                        |         |
| 6        | RGR0186B-A   | REAR PANEL                   |         |
| 7        | RMC0158      | TRANSISTOR HOLDER            |         |
| 8        | RFKJUG75PP-K | BOTTOM CHASSIS ASS'Y         |         |
| 8-1      | SKL293       | RUBBER FOOT                  |         |
| 9        | RMN0217-1    | P. C. B. HOLDER              |         |
| 10       | SNE4021-1    | NUT                          |         |
| 11       | REZ0645      | FLAT CABLE (W913) (3P)       |         |
| 12       | RMN0195      | FL HOLDER PIECE              |         |
| 13       | SHE187-2     | P. C. B. SUPPORT             |         |
| 14       | RFKEUG75PP-K | CONNECTOR ASS'Y (W701) (12P) |         |
| 15       | RWJ1806110KK | FLAT CABLE (W752) (6P)       |         |
| 16       | RMN0260      | FL HOLDER                    |         |
| 17       | XTB3+20JFZ   | SCREW                        |         |
| 18       | XTB3+8JFZ    | SCREW                        |         |
| 19       | XTW3+15T     | SCREW                        |         |
| 20       | REMO020-1    | FAN UNIT                     |         |
| 20-1     | MDN-4RB4MRC  | MOTOR                        |         |
| 20-2     | SHE232-1     | FAN                          |         |
| 20-3     | RMQ0209-K    | FAN CASE                     |         |
| 20-4     | RMQ0208-K    | FAN CAP                      |         |
| 20-5     | SUS271       | SPRING                       |         |
| 20-6     | RMQ0212-K    | FAN TERMINAL CAP             |         |
| 21       | RFKGUG95PP-K | FRONT PANEL ASS'Y            |         |
| 21-1     | RKWO327-K    | TRANSPARENT PLATE            |         |
| 22       | RGU0882-K    | POWER BUTTON                 |         |
| 23       | RGU1027-K    | SELECTOR/PRO. LOGIC BUTTON   |         |
| 24       | RHD26016     | SCREW                        |         |
| 25       | RFKNUG75PPAK | SPEAKERS BUTTON ASS'Y        |         |
| 26       | RFKNUG75PPBK | SUPER BASS BUTTON ASS'Y      |         |
| 27       | XTBS26+8J    | SCREW                        |         |
| 28       | SNE2123      | GND TERMINAL                 |         |
| 29       | RSC0105-2    | SHIELD PLATE                 |         |
|          |              | PACKING MATERIAL             |         |
| P1       | RPG1948      | PACKING CASE                 |         |
| P2       | RPN0682-2    | CUSHION                      |         |
| P3       | XZB60X65A01Z | PROTECTION BAG               |         |

| Ref. No. | Part No.     | Part Name & Description    | Remarks                                              |
|----------|--------------|----------------------------|------------------------------------------------------|
|          |              | ACCESSORIES                |                                                      |
| A1 *     | RFKSHWA22P-K | INSTRUCTION MANUAL ASS'Y   | SC-S3500/S3550<br>for U. S. A.                       |
| A1 *     | RFKSHWA32P-K | INSTRUCTION MANUAL ASS'Y   | SC-S4500/S4505/S4550<br>for U. S. A.                 |
| A1 *     | RFKSHWA42PCK | INSTRUCTION MANUAL ASS'Y   | SC-S2500/S2550<br>for CANADA.                        |
| A1 *     | RFKSHWA62PCK | INSTRUCTION MANUAL ASS'Y   | SC-S3500/S3550<br>for CANADA.                        |
| A2 *     | RQA0085      | WARRANTY CARD              | for U. S. A.                                         |
| A2 *     | SQX7183      | WARRANTY CARD              | for CANADA.                                          |
| A3 *     | RQCB0391     | SERVICENTER LIST           | for U. S. A.                                         |
| A3 *     | SQX9131      | SERVICENTER LIST           | for CANADA.                                          |
| A4 *     | RAK-SA112MH  | REMOTE CONTROL TRANSMITTER | SC-S2500/S2550<br>for CANADA.                        |
| A4 *     | RAK-SA723MH  | REMOTE CONTROL TRANSMITTER | SC-S3500/S3550/S4500/<br>S4505/S4550<br>for U. S. A. |
|          |              |                            | SC-S3500/S3550<br>for CANADA.                        |
| A4-1 *   | RKK0057-K    | BATTERY COVER              | SC-S2500/S2550<br>for CANADA.                        |
| A4-1 *   | RKK0020-K    | BATTERY COVER              | SC-S3500/S3550/S4500/<br>S4505/S4550<br>for U. S. A. |
|          |              |                            | SC-S3500/S3550<br>for CANADA.                        |
| A5 *     | RSA0006      | FM INDOOR ANTENNA          | for TUNER                                            |
| A6 *     | RSA0010      | AM LOOP ANTENNA SET        | for TUNER                                            |
| A6-1 *   | RMN0244      | AM ANTENNA HOLDER          | for TUNER                                            |
| A6-2 *   | XTN3+10AFZ   | SCREW                      | for TUNER                                            |
| A7 *     | SJA172       | AC POWER SUPPLY CORD       | $\Delta$ (SF)                                        |
| A8 *     | SJPK2203-2   | STEREO CONNECTION CABLE    | (40cm)                                               |
| A9 *     | SJP2249-3    | STEREO CONNECTION CABLE    | (80cm)                                               |

**Note:** • Parts identified by the "\*" mark are contained in the carton (accessories box) of SH-WA22 (P), SH-WA32 (P), SH-WA52 (PC) or SH-WA62 (PC) listed in the table "LINE-UP OF COMPONENTS" on the page 3.

Refer to the packaging on page 3, 4 of the Technical Information for Model No. SH-WA12/SH-WA22/SH-WA32/SH-WA42/SH-WA52/SH-WA62, Order No. AD9401009T1.

■ CABINET PARTS LOCATION





## REPLACEMENT PARTS LIST

**\*Important safety notice:**  
Components identified by  $\Delta$  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

| Part No.     | Part Name & Description  | Remarks |
|--------------|--------------------------|---------|
|              | INTEGRATED CIRCUIT(S)    |         |
|              |                          |         |
| NJ07312AL    | INPUT SELECTOR           |         |
| M6218AP      | BUFFER AMP               |         |
| AN6558-FSG   | PHONO EQ. AMP            |         |
| M6218AP      | BUFFER AMP               |         |
| UPC4579C     | TONE AMP                 |         |
| TC9212P      | ATTENUATOR               |         |
| M6218AP      | SUPER BASS AMP           |         |
| RSN3306      | POWER AMP (FRONT)        | Δ       |
| SV1320AB     | POWER AMP (CENTER/REAR)  | Δ       |
| LC8A00SC477  | MICROCOMPUTER            |         |
| LA2785       | DOLBY PRO. LOGIC CONTROL |         |
| LV1010       | DOLBY PRO. LOGIC DRIVE   |         |
| TC9214P      | SURROUND SELECTOR        |         |
| AN6554F      | BUFFER AMP               |         |
| TC9212P      | ATTENUATOR               |         |
| M6218L       | SIGNAL DETECTOR          |         |
|              |                          |         |
|              | TRANSISTOR(S)            |         |
|              |                          |         |
|              |                          |         |
| 2SK301RSTA   | TRANSISTOR               |         |
| UN4111       | TRANSISTOR               |         |
| 2SC3311AIRTA | TRANSISTOR               |         |
| 2SA1309AIRTA | TRANSISTOR               |         |
| UN4111       | TRANSISTOR               |         |
| 2SA1309AIRTA | TRANSISTOR               |         |
| 2SC3311AIRTA | TRANSISTOR               |         |
| 2SC3327-A    | TRANSISTOR               |         |
| 2SD176IDEF   | TRANSISTOR               | Δ       |
| 2SB621AQSTA  | TRANSISTOR               | Δ       |
| 2SB1187DEF   | TRANSISTOR               | Δ       |
| 2SB1357DEFTA | TRANSISTOR               | Δ       |
| 2SC3311AIRTA | TRANSISTOR               | Δ       |
| 2SD2037DEFTA | TRANSISTOR               | Δ       |
| 2SA992EFPTA  | TRANSISTOR               | Δ       |
| 2SA992EFPTA  | TRANSISTOR               | Δ       |
| UN421FTA     | TRANSISTOR               |         |
| 2SC3940AQSTA | TRANSISTOR               | Δ       |
| 2SA1309AIRTA | TRANSISTOR               |         |
| 2SB621AQSTA  | TRANSISTOR               | Δ       |
| 2SA1309AIRTA | TRANSISTOR               |         |
| UN4214TA     | TRANSISTOR               |         |
| 2SA1309AIRTA | TRANSISTOR               | Δ       |
| 2SC3940AQSTA | TRANSISTOR               | Δ       |
| 2SC3940AQSTA | TRANSISTOR               | Δ       |
| 2S440CCTA    | TRANSISTOR               |         |

| Ref. No.    | Part No.     | Part Name & Description | Remarks |
|-------------|--------------|-------------------------|---------|
| Q1101, 1102 | ZSC3311A1RFA | TRANSISTOR              |         |
| Q1103       | ZSA1309A1RFA | TRANSISTOR              |         |
| Q1501, 1502 | ZSC3311A1RFA | TRANSISTOR              |         |
| Q1503       | UM4211       | TRANSISTOR              |         |
|             |              |                         |         |
|             |              | DIODE (S)               |         |
|             |              |                         |         |
| D571        | MA165        | DIODE                   |         |
| D601, 602   | SR3606501T   | DIODE                   |         |
| D603        | MA4082MTA    | DIODE                   |         |
| D604-606    | MA165        | DIODE                   |         |
| D607, 608   | MA4033TA     | DIODE                   |         |
| D609        | MA165        | DIODE                   |         |
| D654, 655   | MA165        | DIODE                   |         |
| D656        | MA4047MTA    | DIODE                   |         |
| D657        | MA165        | DIODE                   |         |
| D701-704    | P300D5002T   | DIODE                   | Δ       |
| D705        | MA4150M      | DIODE                   | Δ       |
| D707        | MA4220MTA    | DIODE                   | Δ       |
| D708        | MA4150M      | DIODE                   | Δ       |
| D721-724    | P300DLF      | DIODE                   | Δ       |
| D731        | MA4360MTA    | DIODE                   | Δ       |
| D732, 733   | MA165        | DIODE                   |         |
| D751-754    | ISR35200TB   | DIODE                   | Δ       |
| D755        | MA165        | DIODE                   |         |
| D756        | MA4068M      | DIODE                   | Δ       |
| D771        | MA165        | DIODE                   |         |
| D772        | MA4082MTA    | DIODE                   | Δ       |
| D773        | MA165        | DIODE                   |         |
| D901, 902   | ISS291TA     | DIODE                   |         |
| D903        | MA165        | DIODE                   |         |
| D904        | MA4039MTA    | DIODE                   | Δ       |
| D905        | MA165        | DIODE                   |         |
| D906        | MA4050MTA    | DIODE                   | Δ       |
| D907        | MA165        | DIODE                   |         |
| D1001       | MA4100MTA    | DIODE                   | Δ       |
| D1101       | MA165        | DIODE                   |         |
| D1501, 1502 | MA4068M      | DIODE                   |         |
| D1503       | MA700        | DIODE                   |         |
| D1504       | MA165        | DIODE                   |         |
|             |              |                         |         |
|             |              | VARIABLE RESISTOR (S)   |         |
|             |              |                         |         |
| VR511, 512  | EVJVA1F02C15 | TONE CONT. BASS/TREBLE  |         |
| VR551       | EVJ02QF02G15 | BALANCE                 |         |
| VR901       | EVQWAF2524B  | VOLUME                  |         |

| Ref. No.  | Part No.     | Part Name & Description   | Remarks |
|-----------|--------------|---------------------------|---------|
|           |              | COIL (S)                  |         |
|           |              |                           |         |
| L601, 602 | RLQYR73M     | COIL                      |         |
| L651, 652 | RLQYR73M     | COIL                      |         |
| L751      | ELPEK101KA   | COIL                      |         |
| L901      | RLQZP101KT-Y | COIL                      |         |
| L1051     | ELPEK101KA   | COIL                      |         |
|           |              | TRANSFORMER (S)           |         |
|           |              |                           |         |
| T701      | RTP1P5C016-V | POWER TRANSFORMER (MAIN)  | Δ       |
| T751      | RTP1H5C001-V | POWER TRANSFORMER (SUB)   | Δ       |
|           |              | COMPONENT COMBINATION (S) |         |
|           |              |                           |         |
| Z901      | RCDH-278N    | REMOTE SENSOR             |         |
|           |              |                           |         |
|           |              | OSCILLATOR (S)            |         |
|           |              |                           |         |
| CF901     | EFOEC6004T4  | OSCILLATOR (6MHz)         |         |
| CF1051    | EFOEC8004T4  | OSCILLATOR (8MHz)         |         |
|           |              | DISPLAY TUBE (S)          |         |
|           |              |                           |         |
| FL901     | BSL0167-F    | DISPLAY TUBE              |         |
|           |              | FUSE (S)                  |         |
|           |              |                           |         |
| F1        | XBA1C63NB4U  | FUSE, 125V 6.3A           | Δ       |
|           |              | SWITCH (ES)               |         |
|           |              |                           |         |
| S901      | EVQ21405R    | SPEAKERS                  |         |
| S902      | EVQ21405R    | VCR1                      |         |
| S903      | EVQ21405R    | EQ/VCR2                   |         |
| S904      | EVQ21405R    | TAPE/DCC                  |         |
| S905      | EVQ21405R    | CD                        |         |
| S906      | EVQ21405R    | TUNER                     |         |
| S907      | EVQ21405R    | PHONO                     |         |
| S908      | EVQ21405R    | REAR LEVEL -              |         |
| S909      | EVQ21405R    | CENTER LEVEL -            |         |
| S910      | EVQ21405R    | POWER                     |         |
| S913      | EVQ21405R    | SURROUND                  |         |
| S914      | EVQ21405R    | 3 STEREO                  |         |
| S915      | EVQ21405R    | CENTER MODE               |         |
| S916      | EVQ21405R    | TEST                      |         |
| S917      | EVQ21405R    | REAR LEVEL +              |         |
| S918      | EVQ21405R    | CENTER LEVEL +            |         |
| S919      | EVQ21405R    | SUPER BASS                |         |
|           |              | RELAY(S)                  |         |
|           |              |                           |         |

| Ref. No.   | Part No.     | Part Name & Description    | Remarks |
|------------|--------------|----------------------------|---------|
| RL601-603  | RSY0013M-0   | RELAY                      | Δ       |
| RL751      | RSY0019M-0   | RELAY                      | Δ       |
|            |              | CONNECTOR(S) AND SOCKET(S) |         |
| CM601      | RLU057M004   | SOCKET(4P)                 |         |
| CM751      | SJS305-1     | CONNECTOR(3P)              |         |
| CM753-759  | RLS1A1101T1  | CONNECTOR(1P)              |         |
| CM901-904  | RLU003K008M1 | SOCKET(8P)                 |         |
| CM1501     | RLU060G05T   | SOCKET(5P)                 |         |
| CM1502     | RLU060G05T   | SOCKET(5P)                 |         |
| CP601      | RLTD57M004-1 | CONNECTOR(4P)              |         |
| CP701A     | RLTD39M06T   | CONNECTOR(6P)              |         |
| CP701B     | RLTD39M06T   | CONNECTOR(6P)              |         |
| CP901-904  | RLTD03K008-1 | CONNECTOR(8P)              |         |
| CP1501     | RLTD60R05    | CONNECTOR(5P)              |         |
| CP1502     | RLTD60R05    | CONNECTOR(5P)              |         |
|            |              | JACK(S) AND TERMINAL(S)    |         |
| HP601      | QJAD4552C    | HEADPHONES JACK            |         |
| JK401      | SJF3069N     | PHONE/TUNER TERMINAL       |         |
| JK402      | SJF3069N     | CD/TAPE/DOC TERMINAL       |         |
| JK403      | SJF3069N     | TAPE/DOC/VCR2 OUT TERMINAL |         |
| JK404      | SJF3069N     | VCR2 IN/VCR1 IN TERMINAL   |         |
| JK601      | RLR0054      | FRONT SPEAKERS A TERMINAL  |         |
| JK602      | RLR0054      | FRONT SPEAKERS B TERMINAL  |         |
| JK603      | RLR0054      | REAR SPEAKERS TERMINAL     |         |
| JK604      | SJFS201M-1   | CENTER SPEAKER TERMINAL    |         |
| JK771      | RLS1A7402-1  | FAN MOTOR TERMINAL         |         |
| JK791      | SJSD16       | AC INLET                   | Δ       |
| JK792      | RLS2A0102-S  | AC OUTLET                  | Δ       |
|            |              | GND PLATE(S)               |         |
| E401       | SNE1004-1    | GND PLATE                  |         |
| E502       | RSOC371      | GND PLATE                  |         |
| E601       | SNE1004-1    | GND PLATE                  |         |
|            |              | FUSE HOLDER(S)             |         |
| FC701, 702 | EYFS2BC      | FUSE HOLDER                |         |

# RESISTORS AND CAPACITORS

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

| Ref. No.  | Part No.    | Values & Remarks | Ref. No.  | Part No.     | Values & Remarks  | Ref. No.  | Part No.     | Values & Remarks  |
|-----------|-------------|------------------|-----------|--------------|-------------------|-----------|--------------|-------------------|
|           |             | RESISTORS        |           |              |                   |           |              |                   |
| R401-404  | ERDS2TJ102  | 1/4W 1K          | R601, 602 | ERDS2TJ102   | 1/4W 1K           | R706      | ERDS2TJ471   | 1/4W 470          |
| R405, 406 | ERDS2TJ104  | 1/4W 100K        | R603, 604 | ERDS2TJ563   | 1/4W 56K          | R721      | ERDS1FVJ6R8T | 1/2W 6.8 $\Delta$ |
| R407-416  | ERDS2TJ102  | 1/4W 1K          | R605, 606 | ERDS2TJ182   | 1/4W 1.8K         | R722      | ERD25FJ101   | 1/4W 100 $\Delta$ |
| R421, 422 | ERDS2TJ102  | 1/4W 1K          | R607, 608 | ERDS2TJ563   | 1/4W 56K          | R723      | ERDS2TJ472   | 1/4W 4.7K         |
| R423-425  | ERDS2TJ103  | 1/4W 10K         | R609, 610 | ERDS2TJ470   | 1/4W 47           | R724      | ERDS1FVJ100T | 1/2W 10 $\Delta$  |
| R431, 432 | ERDS2TJ102  | 1/4W 1K          | R611, 612 | ERDS1FVJ100T | 1/2W 10 $\Delta$  | R725      | ERDS2TJ152   | 1/4W 1.5K         |
| R433, 434 | ERDS2TJ104  | 1/4W 100K        | R613, 614 | ERDS2TJ102   | 1/4W 1K           | R727      | ERD25FVJ5R6T | 1/4W 5.6 $\Delta$ |
| R435, 436 | ERDS2TJ473  | 1/4W 47K         | R615      | ERDS2TJ184T  | 1/4W 180K         | R731      | ERD25FVJ180T | 1/4W 18 $\Delta$  |
| R437, 438 | ERDS2TJ104  | 1/4W 100K        | R616      | ERDS2TJ154   | 1/4W 150K         | R732      | ERDS2TJ153   | 1/4W 15K          |
| R451, 452 | ERDS2TJ224T | 1/4W 220K        | R617, 618 | ERDS2TJ473   | 1/4W 47K          | R733      | ERDS2TJ273   | 1/4W 27K          |
| R453, 454 | ERDS2TJ821  | 1/4W 820         | R619      | ERDS2TJ223   | 1/4W 22K          | R734      | ERDS2TJ223   | 1/4W 22K          |
| R455, 456 | ERDS2TJ563  | 1/4W 56K         | R620      | ERD25FJ220   | 1/4W 22 $\Delta$  | R735      | ERDS2TJ333   | 1/4W 33K          |
| R457, 458 | ERDS2TJ271  | 1/4W 270         | R621      | ERDS2TJ183T  | 1/4W 18K          | R739      | ERD25FVJ180T | 1/4W 18 $\Delta$  |
| R459, 460 | ERDS2TJ680T | 1/4W 68          | R622      | ERDS2TJ124T  | 1/4W 120K         | R740      | ERDS2TJ393   | 1/4W 39K          |
| R461, 462 | ERDS2TJ184T | 1/4W 180K        | R623      | ERDS2TJ684   | 1/4W 680K         | R742      | ERDS2TJ393   | 1/4W 39K          |
| R463, 464 | ERDS2TJ123  | 1/4W 12K         | R624, 625 | ERDS2TJ563   | 1/4W 56K          | R743      | ERDS2TJ183T  | 1/4W 18K          |
| R465, 466 | ERDS2TJ563  | 1/4W 56K         | R628      | ERDS2TJ223   | 1/4W 22K          | R754      | ERDS2TJ102   | 1/4W 1K           |
| R467, 468 | ERDS2TJ102  | 1/4W 1K          | R629, 630 | ERDS2TJ472   | 1/4W 4.7K         | R772      | ERDS2TJ104   | 1/4W 100K         |
| R501, 502 | ERDS2TJ332  | 1/4W 3.3K        | R631, 632 | ERDS2TJ103   | 1/4W 10K          | R773      | ERDS2TJ103   | 1/4W 10K          |
| R503-506  | ERDS2TJ224T | 1/4W 220K        | R633, 634 | ERDS2TJ222   | 1/4W 2.2K         | R774      | ERDS2TJ223   | 1/4W 22K          |
| R511, 512 | ERDS2TJ471  | 1/4W 470         | R635, 636 | ERDS1FVJ821T | 1/2W 820 $\Delta$ | R775      | ERDS2TJ332   | 1/4W 3.3K         |
| R513, 514 | ERDS2TJ104  | 1/4W 100K        | R637-640  | ERG1SJ101E   | 1W 100            | R776      | ERDS1FVJ150T | 1/2W 15 $\Delta$  |
| R515, 516 | ERDS2TJ474  | 1/4W 470K        | R641      | ERDS2TJ684   | 1/4W 680K         | R777      | ERDS2TJ150T  | 1/4W 15           |
| R517, 518 | ERDS2TJ471  | 1/4W 470         | R651, 652 | ERDS2TJ102   | 1/4W 1K           | R778      | ERDS2TJ222   | 1/4W 2.2K         |
| R519, 520 | ERDS2TJ182  | 1/4W 1.8K        | R653, 654 | ERDS2TJ563   | 1/4W 56K          | R779      | ERDS2TJ103   | 1/4W 10K          |
| R521, 522 | ERDS2TJ223  | 1/4W 22K         | R655, 656 | ERDS2TJ182   | 1/4W 1.8K         | R780, 781 | ERDS2TJ333   | 1/4W 33K          |
| R523, 524 | ERDS2TJ392T | 1/4W 3.9K        | R657, 658 | ERDS2TJ563   | 1/4W 56K          | R782      | ERDS2TJ153   | 1/4W 15K          |
| R525, 526 | ERDS2TJ222  | 1/4W 2.2K        | R659, 660 | ERDS2TJ470   | 1/4W 47           | R783      | ERDS2TJ103   | 1/4W 10K          |
| R527, 528 | ERDS2TJ122  | 1/4W 1.2K        | R661, 662 | ERDS1FVJ100T | 1/2W 10 $\Delta$  | R791-796  | ERDS2TJ223   | 1/4W 22K          |
| R529, 530 | ERDS2TJ473  | 1/4W 47K         | R665      | ERDS2TJ563   | 1/4W 56K          | R797      | ERDS2TJ682T  | 1/4W 6.8K         |
| R551, 552 | ERDS2TJ471  | 1/4W 470         | R666      | ERDS2TJ104   | 1/4W 100K         | R901      | ERDS2TJ102   | 1/4W 1K           |
| R553, 554 | ERDS2TJ102  | 1/4W 1K          | R667      | ERD25FJ101   | 1/4W 100 $\Delta$ | R903      | ERDS2TJ104   | 1/4W 100K         |
| R555, 556 | ERDS2TJ563  | 1/4W 56K         | R668      | ERDS2TJ154   | 1/4W 150K         | R904      | ERDS2TJ472   | 1/4W 4.7K         |
| R557, 558 | ERDS2TJ682T | 1/4W 6.8K        | R669      | ERDS2TJ223   | 1/4W 22K          | R905      | ERDS2TJ271   | 1/4W 270          |
| R559, 560 | ERDS2TJ824  | 1/4W 820K        | R670      | ERD25FJ470   | 1/4W 47 $\Delta$  | R906      | ERDS2EJ121   | 1/4W 120          |
| R565      | ERDS2TJ563  | 1/4W 56K         | R671      | ERDS2TJ103   | 1/4W 10K          | R911, 912 | ERDS2TJ104   | 1/4W 100K         |
| R566      | ERDS2TJ224T | 1/4W 220K        | R673      | ERDS2TJ684   | 1/4W 680K         | R913, 914 | ERDS2TJ102   | 1/4W 1K           |
| R567-569  | ERDS2TJ332  | 1/4W 3.3K        | R674      | ERDS2TJ473   | 1/4W 47K          | R915      | ERDS2TJ104   | 1/4W 100K         |
| R571, 572 | ERDS2TJ474  | 1/4W 470K        | R676      | ERDS2TJ223   | 1/4W 22K          | R916, 917 | ERDS2TJ101   | 1/4W 100          |
| R573, 574 | ERDS2TJ222  | 1/4W 2.2K        | R677      | ERDS2TJ103   | 1/4W 10K          | R921      | ERDS2TJ104   | 1/4W 100K         |
| R575, 576 | ERDS2TJ102  | 1/4W 1K          | R678      | ERDS1FVJ821T | 1/2W 820 $\Delta$ | R922-927  | ERDS2TJ102   | 1/4W 1K           |
| R577      | ERDS2TJ152  | 1/4W 1.5K        | R679      | ERDS2TJ222   | 1/4W 2.2K         | R928      | ERDS2TJ104   | 1/4W 100K         |
| R578      | ERDS2TJ474  | 1/4W 470K        | R680      | ERDS2TJ333   | 1/4W 33K          | R929-933  | ERDS2TJ102   | 1/4W 1K           |
| R579      | ERDS2TJ822  | 1/4W 8.2K        | R681-694  | ERDS2TJ270T  | 1/4W 27           | R950      | ERDS2TJ103   | 1/4W 10K          |
| R580      | ERDS2TJ472  | 1/4W 4.7K        | R695, 696 | ERDS2TJ102   | 1/4W 1K           | R951      | ERDS2TJ102   | 1/4W 1K           |
| R581, 582 | ERDS2TJ224T | 1/4W 220K        | R699      | ERDS2TJ332   | 1/4W 3.3K         | R952      | ERDS2TJ122   | 1/4W 1.2K         |
|           |             |                  | R700      | ERDS2TJ474   | 1/4W 470K         | R953      | ERDS2TJ152   | 1/4W 1.5K         |
|           |             |                  | R703, 704 | ERDS1FVJ100T | 1/2W 10 $\Delta$  | R954      | ERDS2TJ182   | 1/4W 1.8K         |
|           |             |                  | R705      | ERDS2TJ472   | 1/4W 4.7K         | R955      | ERDS2TJ222   | 1/4W 2.2K         |

| Ref. No.    | Part No.    | Values & Remarks | Ref. No.  | Part No.     | Values & Remarks | Ref. No.   | Part No.     | Values & Remarks    |
|-------------|-------------|------------------|-----------|--------------|------------------|------------|--------------|---------------------|
| R956        | ERDS2TJ332  | 1/4W 3.3K        | R1510     | ERDS2TJ472   | 1/4W 4.7K        | C617       | ECEA1JU220   | 63V 22U             |
| R957        | ERDS2TJ472  | 1/4W 4.7K        | R1511     | ERDS2TJ104   | 1/4W 100K        | C618       | ECEA2AN2R2SB | 100V 2.2U           |
| R958        | ERDS2TJ682T | 1/4W 6.8K        | R1512     | ERDS2TJ392T  | 1/4W 3.9K        | C621, 622  | ECEA2AU100   | 100V 10U            |
| R960        | ERDS2TJ103  | 1/4W 10K         | R1513     | ERDS2TJ223   | 1/4W 22K         | C651, 652  | ECEA1HKN3R3B | 50V 3.3U            |
| R961        | ERDS2TJ222  | 1/4W 2.2K        | R1514     | ERDS2TJ101   | 1/4W 100         | C653, 654  | ECBA1H681KB5 | 50V 680P            |
| R963        | ERDS2TJ152  | 1/4W 1.5K        | R1515     | ERDS2TJ223   | 1/4W 22K         | C655, 656  | ECEA1CKA220B | 16V 22U             |
| R964        | ERDS2TJ182  | 1/4W 1.8K        |           |              |                  | C657, 658  | ECCR1H100K5  | 50V 10P             |
| R965        | ERDS2TJ222  | 1/4W 2.2K        |           |              | CAPACITORS       | C659, 660  | ECBT1H151KB5 | 50V 150P            |
| R966        | ERDS2TJ332  | 1/4W 3.3K        |           |              |                  | C661, 662  | ECQV1H473JM3 | 50V 0.047U          |
| R967        | ERDS2TJ472  | 1/4W 4.7K        | C401-414  | ECBT1H101KB5 | 50V 100P         | C665       | ECA1HM470B   | 50V 47U             |
| R968        | ERDS2TJ682T | 1/4W 6.8K        | C419, 420 | ECEA1VKA4R7B | 35V 4.7U         | C667       | ECEA1JU220   | 63V 22U             |
| R1001, 1002 | ERDS2TJ222  | 1/4W 2.2K        | C421, 422 | ECBT1E103ZF  | 25V 0.01U        | C668       | ECEA2AU100   | 100V 10U            |
| R1003, 1004 | ERDS2TJ102  | 1/4W 1K          | C423      | ECBT1H101KB5 | 50V 100P         | C669       | ECEA2AN2R2SB | 100V 2.2U           |
| R1005       | ERDS2TJ203T | 1/4W 20K         | C425, 426 | ECEA1CKA100B | 16V 10U          | C681, 682  | ECEA1HN100SB | 50V 10U             |
| R1007, 1008 | ERDS2TJ473  | 1/4W 47K         | C431, 432 | ECBT1H101KB5 | 50V 100P         | C685       | ECBT1H331KB5 | 50V 330P            |
| R1009-1011  | ERDS2TJ332  | 1/4W 3.3K        | C433-436  | ECEA1CKA100B | 16V 10U          | C701       | ECBT1E103ZF  | 25V 0.01U           |
| R1012       | ERDS2TJ102  | 1/4W 1K          | C451, 452 | ECEA1VKA4R7B | 35V 4.7U         | C702       | ECQE2104KF3  | 250V 0.1U           |
| R1013       | ERDS2TJ103  | 1/4W 10K         | C453, 454 | ECBT1H101KB5 | 50V 100P         | C703, 704- | ECET1K123VWX | 80V 12000U $\Delta$ |
| R1014       | ERDS2TJ104  | 1/4W 100K        | C455, 456 | ECBT1H102KB5 | 50V 1000P        | C705, 706  | ECA1JM222B   | 63V 2200U $\Delta$  |
| R1051       | ERDS2TJ393  | 1/4W 39K         | C457, 458 | ECEA1KA330B  | 10V 33U          | C707       | ECA1VM101B   | 35V 100U            |
| R1052       | ERDS2TJ105T | 1/4W 1M          | C459, 460 | ECFR1E223KR  | 25V 0.022U       | C708       | ECKR1H103ZF5 | 50V 0.01U           |
| R1053       | ERDS2TJ102  | 1/4W 1K          | C461, 462 | ECFR1E682KR  | 25V 6800P        | C711       | ECKR1H103ZF5 | 50V 0.01U           |
| R1055, 1056 | ERDS2TJ473  | 1/4W 47K         | C463, 464 | ECEA1VKA4R7B | 35V 4.7U         | C712       | ECEA1HKA100B | 50V 10U             |
| R1057       | ERDS2TJ564  | 1/4W 560K        | C465, 466 | ECBT1E103ZF  | 25V 0.01U        | C713       | ECKR1H103ZF5 | 50V 0.01U           |
| R1058, 1059 | ERDS2TJ274  | 1/4W 270K        | C501, 502 | ECEA1VKA4R7B | 35V 4.7U         | C714       | ECEA1CKA470B | 16V 47U             |
| R1060       | ERDS2TJ104  | 1/4W 100K        | C503, 504 | ECBT1H101KB5 | 50V 100P         | C721       | ECQE2104KF3  | 250V 0.1U           |
| R1061       | ERDS2TJ222  | 1/4W 2.2K        | C505, 506 | ECEA1CKA100B | 16V 10U          | C731, 732  | ECKR1H103ZF5 | 50V 0.01U           |
| R1101, 1102 | ERDS2TJ222  | 1/4W 2.2K        | C513, 514 | ECBT1H150J5  | 50V 15P          | C751       | ECKWNS102MEM | 400V 1000P $\Delta$ |
| R1103, 1104 | ERDS2TJ682T | 1/4W 6.8K        | C515, 516 | ECBT1H221KB5 | 50V 220P         | C752       | ECKR1H103ZF5 | 50V 0.01U           |
| R1105, 1106 | ERDS2TJ474  | 1/4W 470K        | C517, 518 | ECBT1H470J5  | 50V 47P          | C753       | ECA1EM102B   | 25V 1000U $\Delta$  |
| R1107, 1108 | ERDS2TJ102  | 1/4W 1K          | C519-522  | ECEA1VKA4R7B | 35V 4.7U         | C754       | ECBT1E103ZF  | 25V 0.01U           |
| R1109, 1110 | ERDS2TJ104  | 1/4W 100K        | C523, 524 | ECFR1E123KR  | 25V 0.012U       | C755       | ECEA1CKA470B | 16V 47U             |
| R1111, 1112 | ERDS2TJ122  | 1/4W 1.2K        | C525, 526 | ECQV1H683JM3 | 50V 0.068U       | C756       | ECBT1E103ZF  | 25V 0.01U           |
| R1113, 1114 | ERDS2TJ822  | 1/4W 8.2K        | C527, 528 | ECFR1E562KR  | 25V 5600P        | C758       | ECEA1KA101B  | 10V 100U            |
| R1115, 1116 | ERDS2TJ474  | 1/4W 470K        | C529, 530 | ECFR1E273KR  | 25V 0.027U       | C771       | ECEA1HKA2R2B | 50V 2.2U            |
| R1117, 1118 | ERDS2TJ224T | 1/4W 220K        | C531, 532 | ECBT1E103ZF  | 25V 0.01U        | C772       | ECEA1CKA100B | 16V 10U             |
| R1119-1121  | ERDS2TJ332  | 1/4W 3.3K        | C535, 536 | ECEA1CKA100B | 16V 10U          | C773       | ECBT1E223ZF  | 25V 0.022U          |
| R1131, 1132 | ERDS2TJ332  | 1/4W 3.3K        | C551-554  | ECQV1H104JM3 | 50V 0.1U         | C774       | ECEA0JKA221B | 6.3V 220U           |
| R1133, 1134 | ERDS2TJ102  | 1/4W 1K          | C555-558  | ECEA1CKA100B | 16V 10U          | C901       | ECA0JM102B   | 6.3V 1000U          |
| R1135       | ERDS2TJ474  | 1/4W 470K        | C559, 560 | ECBT1E103ZF  | 25V 0.01U        | C902       | ECBT1E103ZF  | 25V 0.01U           |
| R1136       | ERDS2TJ103  | 1/4W 10K         | C561-563  | ECBT1H101KB5 | 50V 100P         | C903       | ECEA0JKA101B | 6.3V 100U           |
| R1137       | ERDS2TJ332  | 1/4W 3.3K        | C571, 572 | ECEA1VKA4R7B | 35V 4.7U         | C904       | ECEA1CKA100B | 16V 10U             |
| R1138       | ERDS2TJ104  | 1/4W 100K        | C573      | ECEA1HKN010B | 50V 1U           | C905       | ECA0JM471B   | 6.3V 470U           |
| R1139       | ERDS2TJ472  | 1/4W 4.7K        | C601, 602 | ECEA1HKN3R3B | 50V 3.3U         | C906       | ECEA0JKA101B | 6.3V 100U           |
| R1140       | ERDS2TJ152  | 1/4W 1.5K        | C603, 604 | ECBT1H471KB5 | 50V 470P         | C907       | ECBT1H101KB5 | 50V 100P            |
| R1501, 1502 | ERDS2TJ223  | 1/4W 22K         | C605, 606 | ECEA1JU220   | 63V 22U          | C908       | ECBT1H104ZF5 | 50V 0.1U            |
| R1503       | ERDS2TJ684  | 1/4W 680K        | C607, 608 | ECCR1H100K5  | 50V 10P          | C909, 910  | ECEA1HKA010B | 50V 1U              |
| R1504       | ERDS2TJ103  | 1/4W 10K         | C609, 610 | ECBT1H151KB5 | 50V 150P         | C911       | ECBT1E103ZF  | 25V 0.01U           |
| R1505       | ERDS2TJ104  | 1/4W 100K        | C611, 612 | ECQV1H473JM3 | 50V 0.047U       | C912, 913  | ECEA2AU100   | 100V 10U            |
| R1506       | ERDS2TJ102  | 1/4W 1K          | C613, 614 | ECBA1H681KB5 | 50V 680P         | C914, 915  | ECEA1VKA100B | 35V 10U             |
| R1507       | ERDS2TJ104  | 1/4W 100K        | C615      | ECA1HM470B   | 50V 47U          | C921-928   | ECBT1H331KB5 | 50V 330P            |
| R1508, 1509 | ERDS2TJ103  | 1/4W 10K         | C616      | ECEA2AU100   | 100V 10U         | C931-934   | ECBT1H101KB5 | 50V 100P            |

| Ref. No.    | Part No.     | Values & Remarks | Ref. No.    | Part No.     | Values & Remarks | Ref. No.    | Part No.     | Values & Remarks |
|-------------|--------------|------------------|-------------|--------------|------------------|-------------|--------------|------------------|
| C1001, 1002 | ECEA1HKA010B | 50V 1U           | C1028       | ECEA1HKA47B  | 50V 0.47U        | C1058       | ECFR1E333KR  | 25V 0.033U       |
| C1003, 1004 | ECEA1HKA3R3B | 50V 3.3U         | C1029       | ECEA1VKA4R7B | 35V 4.7U         | C1059       | ECEA1CKA101B | 16V 100U         |
| C1005       | ECEA1HKA010B | 50V 1U           | C1030       | ECEA1HKA47B  | 50V 0.47U        | C1060       | ECBT1E223ZF  | 25V 0.022U       |
| C1007       | ECFR1E223KR  | 25V 0.022U       | C1031, 1032 | ECQV1H104JM3 | 50V 0.1U         | C1062       | ECBT1E223ZF  | 25V 0.022U       |
| C1008       | ECFR1E473KR  | 25V 0.047U       | C1033       | ECEA1CKA470B | 16V 47U          | C1063       | ECEA1CKA101B | 16V 100U         |
| C1009       | ECEA0JKA221B | 6.3V 220U        | C1034       | ECQV1H474JM3 | 50V 0.47U        | C1064       | ECBT1H104ZF5 | 50V 0.1U         |
| C1010-1013  | ECEA1CKA100B | 16V 10U          | C1035       | ECBA1H681KB5 | 50V 680P         | C1065       | ECBA1H681KB5 | 50V 680P         |
| C1014       | ECEA0JKA221B | 6.3V 220U        | C1036-1038  | ECBT1H101KB5 | 50V 100P         | C1101-1108  | ECEA1HKA3R3B | 50V 3.3U         |
| C1015, 1016 | ECQV1H104JM3 | 50V 0.1U         | C1039       | ECEA1CKA101B | 16V 100U         | C1109-1111  | ECBT1H101KB5 | 50V 100P         |
| C1017       | ECEA1HKA47B  | 50V 0.47U        | C1040       | ECEA1CKA100B | 16V 10U          | C1113, 1114 | ECEA1CKA100B | 16V 10U          |
| C1018       | ECEA1VKA4R7B | 35V 4.7U         | C1041       | ECBT1E103ZF  | 25V 0.01U        | C1115, 1116 | ECBT1E103ZF  | 25V 0.01U        |
| C1019       | ECEA1HKA47B  | 50V 0.47U        | C1043, 1044 | ECBT1E103ZF  | 25V 0.01U        | C1131       | ECEA1HKN010B | 50V 1U           |
| C1020       | ECEA1VKA4R7B | 35V 4.7U         | C1051       | ECEA1HKA2R2B | 50V 2.2U         | C1132       | ECEA1HKA3R3B | 50V 3.3U         |
| C1021       | ECEA1HKA15B  | 50V 0.15U        | C1052       | ECEA1HKA010B | 50V 1U           | C1501       | ECEA1HKA3R3B | 50V 3.3U         |
| C1022       | ECEA1HKA3R3B | 50V 3.3U         | C1053       | ECEA1HKA3R3B | 50V 3.3U         | C1502       | ECEA1HKA010B | 50V 1U           |
| C1023, 1024 | ECQV1H154JM3 | 50V 0.15U        | C1054       | ECEA0JKA221B | 6.3V 220U        | C1503       | ECEA1HKA2R2B | 50V 2.2U         |
| C1025       | ECEA1HKA3R3B | 50V 3.3U         | C1055       | ECEA1HKA010B | 50V 1U           | C1504       | ECEA1HKA010B | 50V 1U           |
| C1026       | ECEA1HKA15B  | 50V 0.15U        | C1056       | ECFR1E333KR  | 25V 0.033U       | C1505, 1506 | ECEA1HKA3R3B | 50V 3.3U         |
| C1027       | ECEA1VKA4R7B | 35V 4.7U         | C1057       | ECFR1E152KR  | 25V 1500P        |             |              |                  |
|             |              |                  |             |              |                  |             |              |                  |

## ■ PACKAGING

