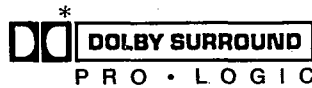


# Service Manual

AV Control Stereo Receiver

Receiver



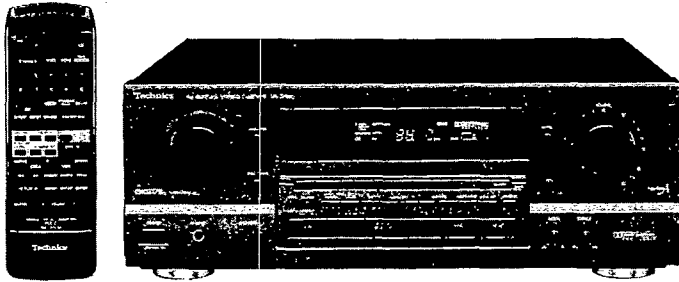
## SA-GX550

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(K)
(EB)	Great Britain.	
(EG)	Germany.	
(G)	Asia, Latin America, Middle Near East and Africa.	
(GN)	Oceania.	



### SPECIFICATIONS (DIN 45 500)

#### ■ AMPLIFIER SECTION

<b>Power output (at 240V)</b>	
DIN 1kHz (T.H.D. 1%)	2 × 100W (4Ω)
20Hz–20kHz continuous power output both channels driven	2 × 65W (8Ω)
<b>Total harmonic distortion</b>	
rated power at 20Hz–20kHz	0.05% (8Ω)
half power at 1kHz	0.03% (8Ω)
<b>Power output at the Dolby Pro Logic operation</b>	
DIN 1kHz (T.H.D. 1%)	
Front	2 × 60W (4Ω)
Center	60W (4Ω)
Rear	20W (4Ω)
<b>Intermodulation distortion</b>	
rated power at 60Hz: 7kHz=4: 1, SMPTE	0.5% (8Ω)
<b>Power bandwidth</b>	
both channels driven, –3dB	10Hz–40kHz (8Ω)
Damping factor	40 (8Ω)
<b>Input sensitivity and impedance</b>	
PHONO	3mV/47kΩ
CD, VCR 1, VCR 2, TAPE/DCC	200mV/22kΩ
<b>S/N at rated power (8Ω)</b>	
PHONO	70dB (IHF, A: 80dB)
CD, VCR 1, VCR 2, TAPE/DCC	75dB (IHF, A: 88dB)
<b>Frequency response</b>	
PHONO	RIAA standard curve (30Hz–15kHz) ±0.8dB
CD, VCR 1, VCR 2, TAPE/DCC	10Hz–40kHz, ±3dB
<b>Tone controls</b>	
BASS	50Hz, +10 to –10dB
TREBLE	20kHz, +10 to –10dB
Loudness control (volume at –30dB)	50Hz, +9dB

\* 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; Canadian numbers 1,004,603 and 1,037,877.

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

#### Output voltage

VCR 1 OUT, TAPE/DCC REC (OUT)	200mV
Channel balance (250Hz–6.3kHz)	±1dB
Channel separation	55dB
Headphones output level and impedance	430mV/330Ω
Load impedance	
A or B	4–16Ω
A and B	8–16Ω

#### ■ FM TUNER SECTION

Frequency range	87.50–108.00MHz
<b>Sensitivity</b>	
S/N 30dB	1.5μV/75Ω
S/N 26dB	1.3μV/75Ω
S/N 20dB	1.2μV/75Ω
IHF usable sensitivity (IHF '58)	1.5μV/75Ω
IHF 46dB stereo quieting sensitivity	22μV/75Ω
<b>Total harmonic distortion</b>	
MONO	0.2%
STEREO	0.3%
<b>S/N</b>	
MONO	60dB (75dB, IHF)
STEREO	58dB (71dB, IHF)
<b>Frequency response</b>	20Hz–15kHz, +1dB, –2dB
<b>Alternate channel selectivity</b>	
±400kHz	65dB
<b>Capture ratio</b>	1.0dB
<b>Image rejection at 98MHz</b>	40dB
<b>IF rejection at 98MHz</b>	70dB
<b>Spurious response rejection at 98MHz</b>	70dB

# Technics

AM suppression	50 dB
Stereo separation	
1 kHz	40 dB
Carrier leak	
19 kHz	-30 dB (-35 dB, IHF)
38 kHz	-50 dB (-55 dB, IHF)
Channel balance (250 Hz-6.3 kHz)	±1.5 dB
Limiting point	1.2 μV
Bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz
Antenna terminal(s)	75 Ω (unbalanced)

**AM TUNER SECTION**

- For (E, EB, G, GN) areas.

Frequency range	
MW [For (E, EB) areas.]	522-1611 kHz (9 kHz steps)
	530-1620 kHz (10 kHz steps)
[For (G, GN) areas.]	531-1602 kHz (9 kHz steps)
	530-1600 kHz (10 kHz steps)
LW [For (E, EB) areas.]	144-288 kHz
[For (G, GN) areas.]	153-279 kHz

Sensitivity (S/N 20 dB)	
MW	20 μV, 330 μV/m
LW	45 μV
Selectivity	
MW (at 999 kHz)	55 dB
LW (at 252 kHz)	55 dB
Image rejection	
MW (at 999 kHz)	40 dB
LW (at 252 kHz)	40 dB
IF rejection	
MW (at 999 kHz)	55 dB
LW (at 252 kHz)	55 dB
• For (EG) area.	
Frequency range	522 kHz~1611 kHz (9-kHz steps)
	530 kHz~1620 kHz (10-kHz steps)

Selectivity (S/N 20 dB)	20 μV, 330 μV/m
Selectivity at 999 kHz	55 dB
Image rejection at 999 kHz	40 dB
If rejection at 999 kHz	55 dB

**VIDEO SECTION**

Output voltage at 1 V input (unbalanced)	1 ± 0.1 Vp-p
Maximum input voltage	1.5 Vp-p

**GENERAL**

Power consumption	
For (E, EB, EG, GN) areas.	280 W
For (G) area.	300 W
Power supply	

For (E, EB, GN) areas.	AC 50 Hz/60 Hz, 230 V-240 V
For (EG) area.	AC 50/60 Hz, 230 V
For (G) area.	AC 50 Hz/60 Hz, 110-127 V/220-240 V
Dimensions (W × H × D)	430 × 158 × 352 mm
Weight	10.8 kg

**REMOTE CONTROL TRANSMITTER**

Control keys	
For (E, EB, EG) areas.	53 keys
For (G, GN) areas.	55 keys
Dimensions (W × H × D)	70 × 28 × 215 mm
	(2-3/4" × 1-3/32" × 8-15/32")
Weight	160 g (5.6 oz)
Power source	two "AAA", (UM-4/R03)

**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.

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## ■ CAUTION FOR AC MAINS LEAD

### [For (EB) area.]

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

### CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

### IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:


Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

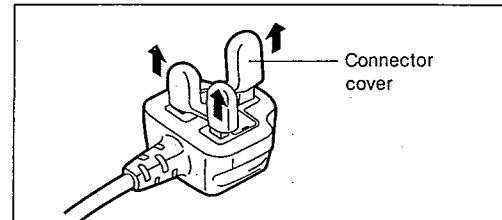
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol .

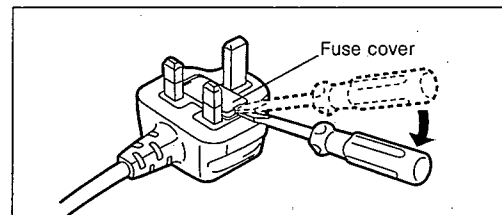
### Before use

Remove the connector cover as follows.

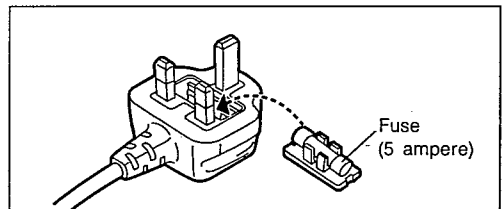


### How to replace the fuse

1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover

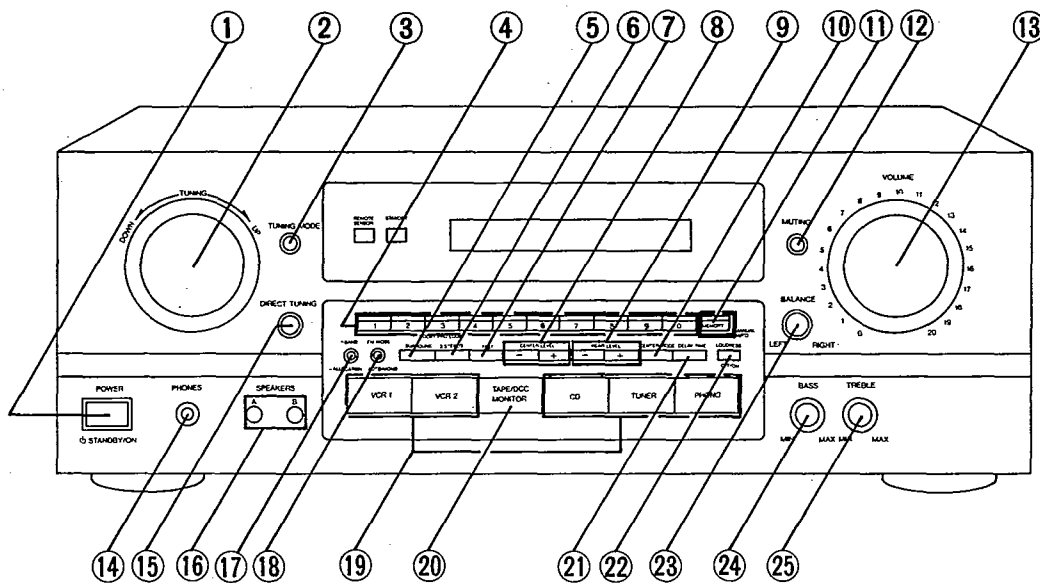


### [For (GN) area.]

THIS TUNER/RECEIVER IS CAPABLE OF RECEIVING THE NEW AM STEREO BROADCASTS FROM THE AM BAND RADIO STATIONS. HOWEVER LIKE MANY TUNERS AND RECEIVERS CURRENTLY AVAILABLE ON THE MARKET IT WILL REPRODUCE THIS AM STEREO SIGNAL ONLY IN AM MONO, WHICH, IN EFFECT, IS OF NO LESSER QUALITY THAN YOUR EXISTING AM MONO TUNER/RECEIVER.

## FRONT PANEL CONTROLS

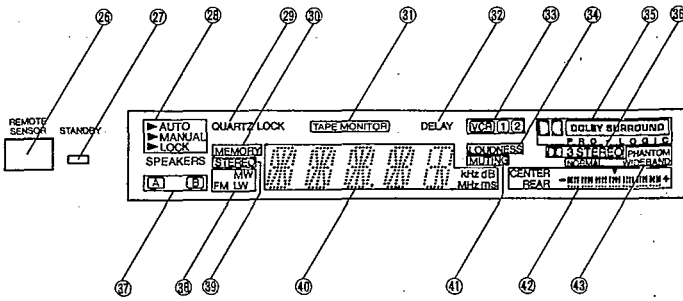
### Control section



No.	Name
①	Power "⏻ STANDBY/ON" switch (POWER, ⏻ STANDBY/ON) Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
②	Tuning control (TUNING)
③	Tuning mode select button (TUNING MODE)
④	Numeric buttons (1-0)
⑤	DOLBY PRO LOGIC SURROUND ON/OFF button (SURROUND)
⑥	DOLBY PRO LOGIC 3 STEREO ON/OFF button (3 STEREO)
⑦	Test signal ON/OFF button (TEST)
⑧	Center level adjust button (CENTER LEVEL)
⑨	Rear level adjust button (REAR LEVEL)
⑩	Center mode select button (CENTER MODE)

No.	Name
⑪	Memory button (MEMORY)
⑫	Muting button (MUTING)
⑬	Volume control (VOLUME)
⑭	Headphone jack (PHONES)
⑮	Direct tuning button (DIRECT TUNING)
⑯	Speaker select buttons (SPEAKERS)
⑰	Band select button (BAND)
⑱	FM mode select button (FM MODE)
⑲	Input select buttons
⑳	Tape/DCC monitor button (TAPE/DCC [MONITOR])
㉑	Delay time adjust button (DELAY TIME)
㉒	Loudness ON/OFF button (LOUDNESS)
㉓	Balance control (BALANCE)
㉔	Bass control (BASS)
㉕	Treble control (TREBLE)

## Display section

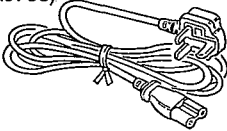


No.	Name
26	Remote control signal receptor
27	"STANDBY" indicator When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
28	Tuning-mode indicators
29	Quartz lock indicator
30	Memory indicator
31	Tape monitor indicator

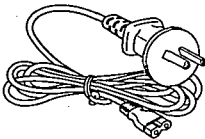
No.	Name
32	Delay time indicator
33	VCR select indicator
34	Loudness indicator
35	DOLBY PRO LOGIC SURROUND indicator
36	DOLBY PRO LOGIC 3 STEREO indicator
37	Speaker select indicators
38	Band indicators
39	FM stereo indicator
40	Input selector/frequency display
41	Muting indicator
42	Center/rear level display
43	Center mode indicators

## ACCESSORIES

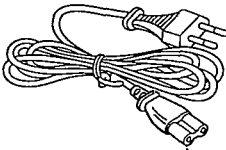
- AC power supply cord..... 1 pc.  
For (EB) area.  
(VJA0733)



- For (GN) area.  
(RJA0036-K)



- For (E, EG, G) areas.  
(RJA0019-2K)

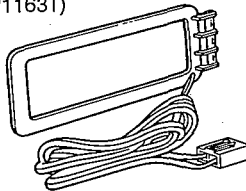


- Batteries "AAA" (R03/UM-4)  
for remote control transmitter..... 2 pcs.



Note: These are available on sale route.

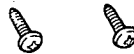
- AM loop antenna set..... 1 pc.  
(SJP1163T)



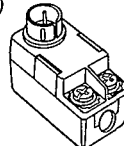
- AM antenna holder ..... 1 pc.  
(SMA233-1M)



- Screw ..... 2 pcs.  
(XTN3+10AFZ)

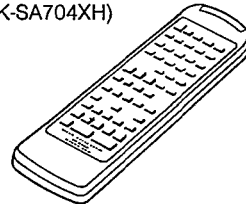


- Antenna plug..... 1 pc.  
For (G, GN) areas.  
(RFE0014)

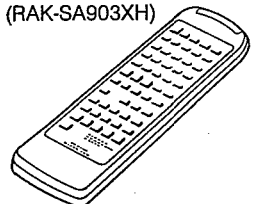


- Remote control transmitter ..... 1 pc.

- For (E, EB, EG) areas.  
(RAK-SA704XH)



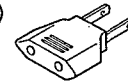
- For (G, GN) areas.  
(RAK-SA903XH)



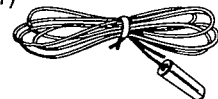
- Attachment plug..... 1 pc.  
For (EB) area.  
(SJP9009)



- Power plug adaptor..... 1 pc.  
For (G) area.  
(SJP5213-2)



- FM indoor antenna ..... 1 pc.  
(RSA0007)



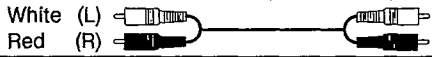
- Seal for remote control transmitter ..... 1 pc.  
Not supplied for (G, GN) areas.



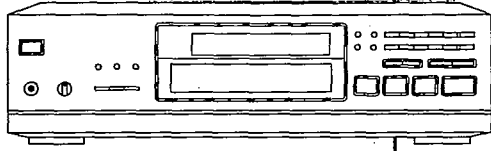
# EQUIPMENT CONNECTIONS

## Connecting audio equipment

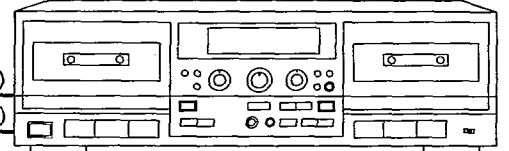
**Stereo connection cable (not included)**



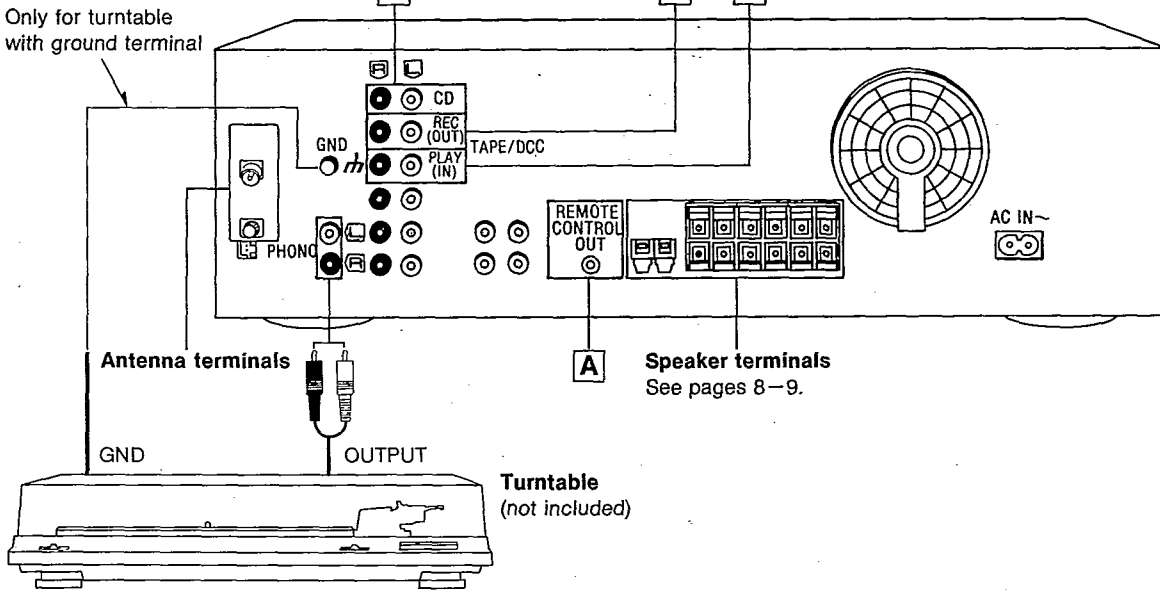
**CD player (or CD changer)**  
(not included)



**Tape deck or digital compact cassette deck (DCC)** (not included)



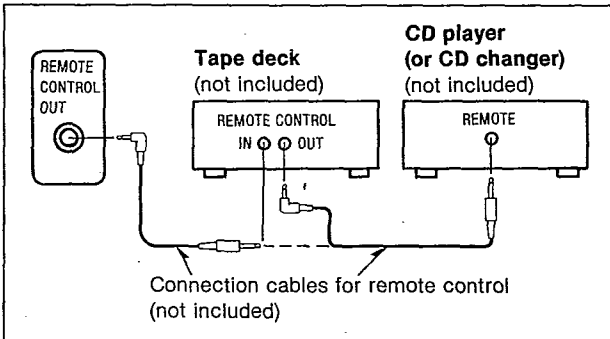
Only for turntable with ground terminal



**Speaker terminals**  
See pages 8-9.

### A "REMOTE CONTROL OUT" terminal

Connect the connection cable for the remote control to a Technics tape deck and/or CD player (or CD changer) which has the appropriate remote control terminal as shown below. If a tape deck is not being used, the CD player (or CD changer) can be connected directly (dotted line).



For a CD player (or CD changer) with a remote control sensor the above connection is not necessary.

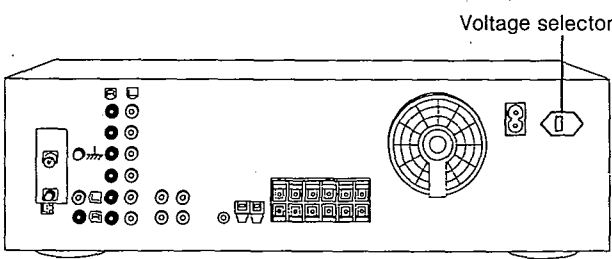
### To set the power voltage

[For (G) area.]

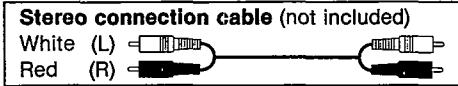
Set the voltage selector to the voltage setting for the area in which the unit will be used.

**Note**

Note that this unit will be seriously damaged if this setting is not made correctly.

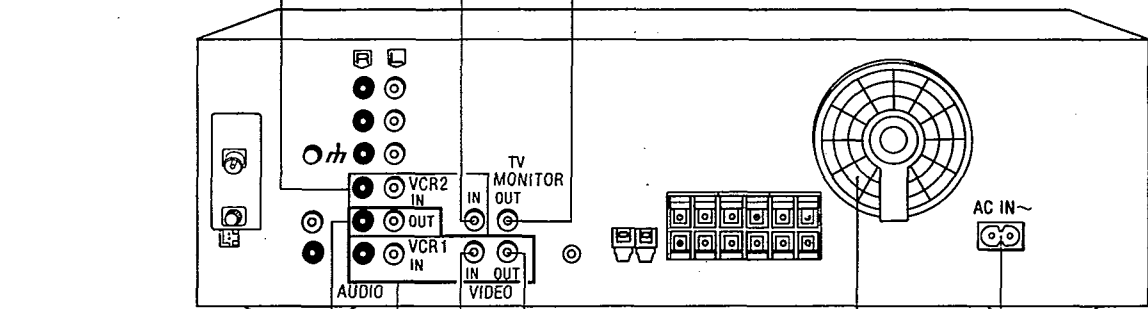
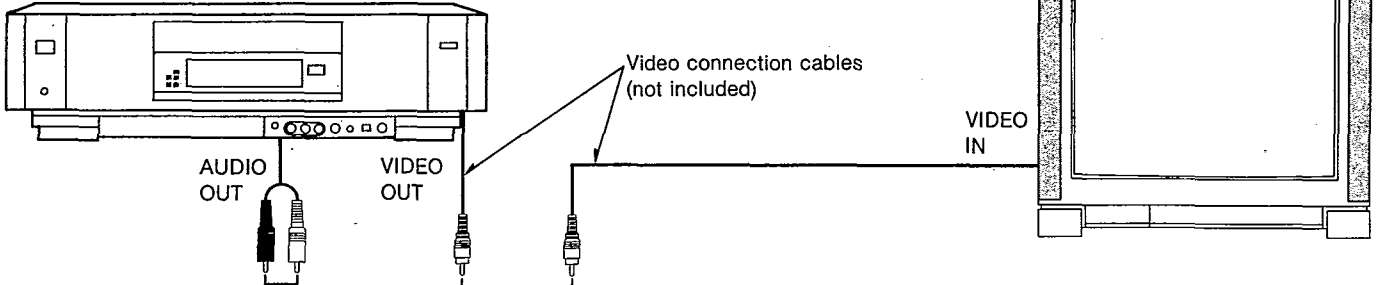


# Connecting video equipment

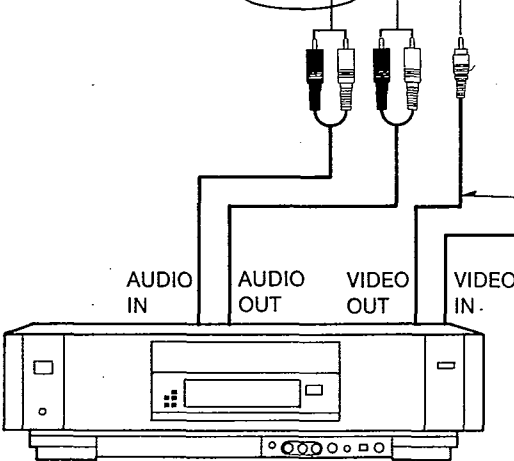


**Second VCR (for playback only)**  
 (not included)

**Monitor TV**  
 (not included)



**Cooling fan**  
 The cooling fan operates at high power output levels only.



**VCR**  
 (not included)

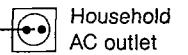
**[For (E, EB, EG, G) areas.]**

Connector  
 Approx. 6 mm  
 Appliance inlet

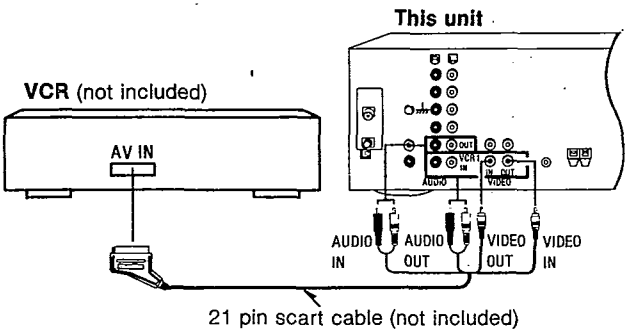
Even when the connector is perfectly inserted, the front part of the connector jut out as shown in the drawing. However there is no problem using the unit.

AC power supply cord (included)

Connect this cord after all other cables and cords are connected.



**To connect a video deck with 21 pin scart terminal.**



**(For (EB) area only.)**  
 BE SURE TO READ THE CAUTION FOR THE AC POWER SUPPLY CORD ON PAGE 2 BEFORE CONNECTION.

**[For (G) area.]**  
 If the power plug will not fit your socket, use the power plug adaptor (included).

## ■ SPEAKER CONNECTIONS

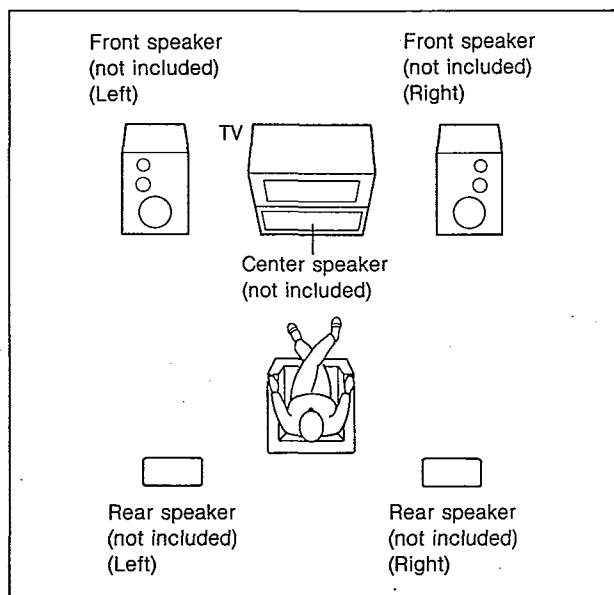
### Placement of speakers

As well as enjoying normal stereo reproduction with both the left and right front speakers connected, a center speaker and rear speakers can also be connected to the main unit in order to enjoy playback using the Dolby Pro-Logic Systems.

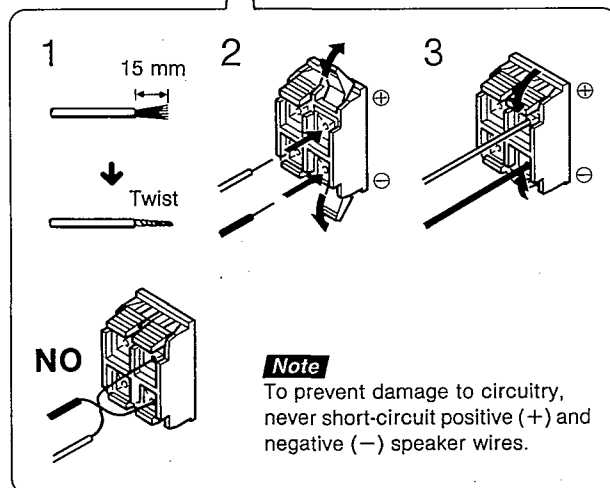
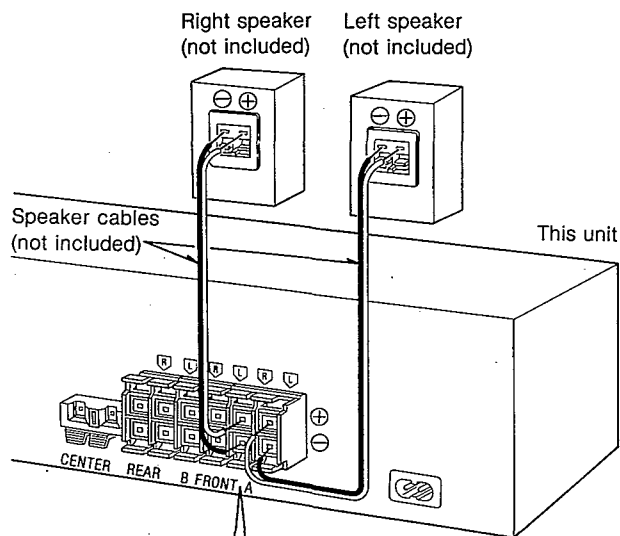
The illustration below shows where to place the speakers when enjoying sound with Dolby Pro-Logic systems.

The listening position at which the effect is the greatest is a position slightly to the rear of a center position of five-speaker systems.

However the position should be adjusted to your personal preference, because the effect varies to some degree depending upon the type of music and the music source.



### Connection of front speakers



#### ■ "B" terminals

For connection to a second pair of speakers.

#### ■ Speaker impedance

**When only the "A" or only the "B" speakers are connected:**

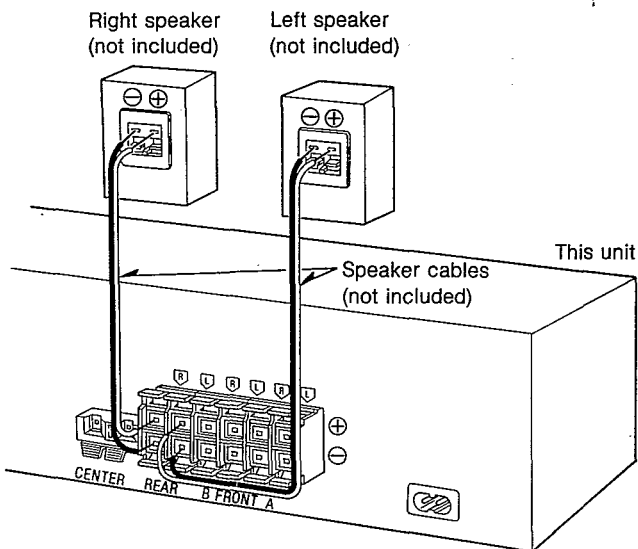
The impedance of the speaker used with this unit must be 4–16 Ω.

**When both the "A" and the "B" speakers are connected simultaneously:**

The impedance of the speaker used with this unit must be 8–16 Ω.



## Connection of rear speakers



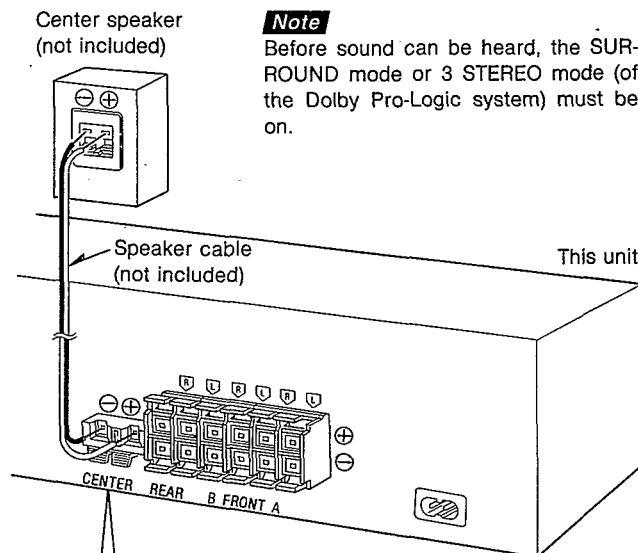
### Note

Before sound can be heard, the SURROUND mode (of the Dolby Pro-Logic system) must be on and both rear speakers must be connected.

### Speaker impedance

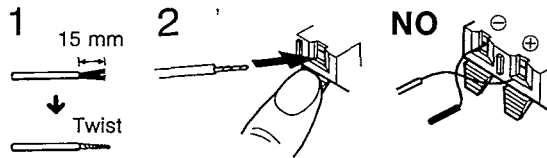
The impedance of any speaker used with this unit must be 4–16  $\Omega$ .

## Connection of center speaker



### Note

Before sound can be heard, the SURROUND mode or 3 STEREO mode (of the Dolby Pro-Logic system) must be on.



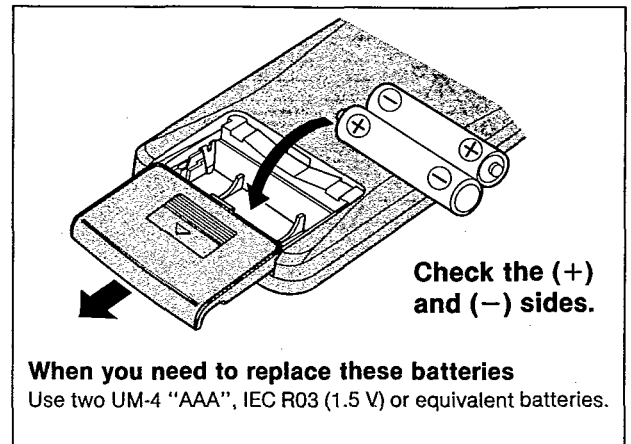
### Speaker impedance

The impedance of any speaker used with this unit must be 4–16  $\Omega$ .

## HOW TO USE THE REMOTE CONTROL TRANSMITTER

### Battery installation

Insert the batteries included with this unit as shown below.



## Use of batteries

Do not mix old and new batteries, or batteries of different types (carbon and alkaline, etc.).

Always remove old, weak or worn-out batteries promptly and dispose of them properly.

The battery life is about one year.

Although the battery life varies depending on how often the device is used, the batteries should be replaced about once every year on the average.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when transmitter is held close to the front panel.

Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.

If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.

If a battery leaks, remove all batteries and dispose of them properly. Thoroughly clean the battery compartment before inserting new batteries.

If the electrolyte comes into contact with skin or clothes, flush with water immediately.

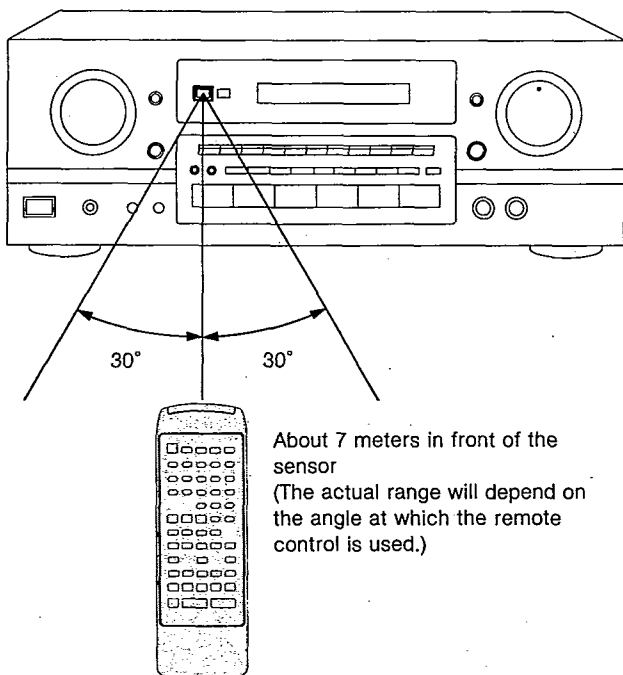
Keep batteries out of reach of children.

Do not use rechargeable (nickel-cadmium) type batteries.

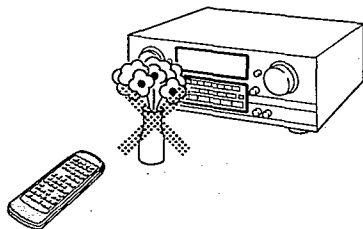
Do not attempt to recharge alkaline or carbon batteries.

## • Method for use

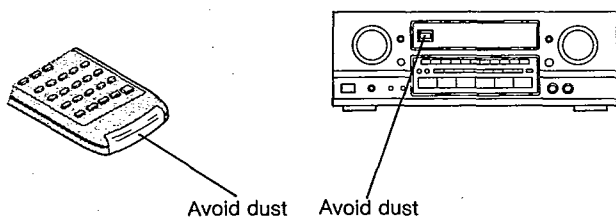
Use the remote control within 60 degrees and within 7 meters facing directly toward the receiver's remote control signal receptor.



## Operation notes



Aim the remote control's transmission window toward the unit's sensor. Avoid any obstacles.



Be sure the transmission window and the unit's sensor are free from dust. Excessive dust might affect performance.

The operation may not be correct if direct sunlight or another strong light source strikes the receiving sensor of this unit. If there is a problem, place the unit away from the light source.

When operating a TV, VCR or a CD player (or CD changer) with a remote control sensor, face this remote control toward the remote control sensor of the unit to be operated.

## • Before use

This remote control transmitter can be used to operate units manufactured by this company other than this receiver unit, including CD players (or CD changers), tape decks and also TVs and VCRs.

### Preparations before use

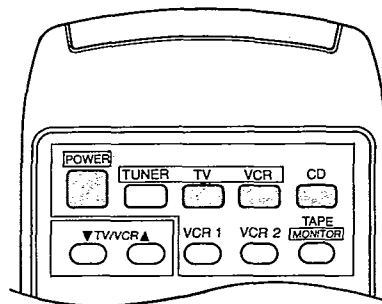
- Check the appropriate connection of the power cords and connection cables for the remote control in order to operate CD players (or CD changers) and tape decks correctly. (See page 6 of the operating instructions for the main unit.)
- Make sure that the power of each unit is set to the "ON" position, before beginning the operations.

### Note

If you operate a TV, VCR or CD player (or CD changer) using this remote control, the unit may fail to operate due to the differing nature of the remote control signal.

### If the remote control fails to operate:

It is necessary to reprogram the signal within the remote control by following this simple procedure.



### For CD player (or CD changer) operation

**POWER** **CD** Press POWER and CD simultaneously, hold for 2 seconds.

### For TV operation

**POWER** **TV** Press POWER and TV simultaneously, hold for 2 seconds.

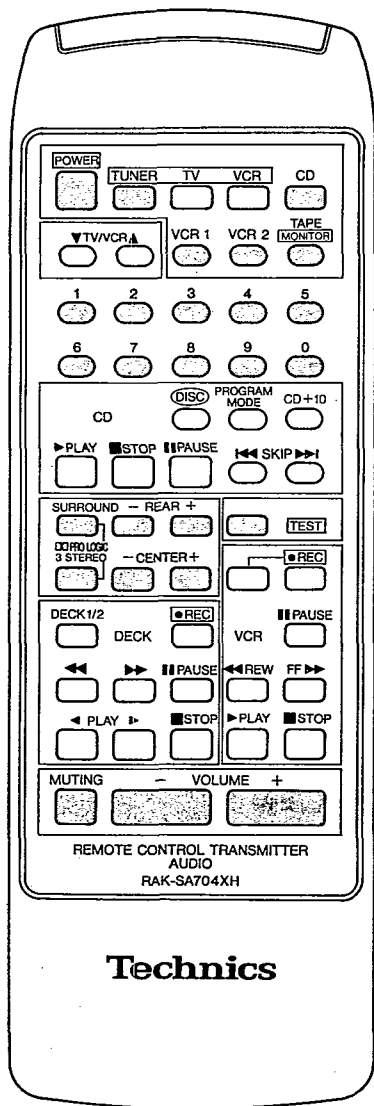
### For VCR operation

**POWER** **VCR** Press POWER and VCR simultaneously, hold for 2 seconds.

To restore the previous memory contents, carry out the same operations one more time.

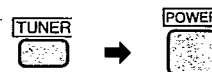
Depending on the model, there may be cases where operation is still not possible even if the remote control signal is switched over due to differences in frequency range characteristics.

- Operating the receiver
- For (E, EB, EG) areas.



**Basic operations**

To turn the unit ON/OFF



Once the unit has been set to ON, it can be turned ON and OFF simply by pressing POWER. (See **Note** below.)

To turn the tape monitor function ON/OFF



To listen to sources other than a tape or DCC, be sure to turn off the tape monitor indicator on the main unit.

To select an input source



To turn the Dolby Pro Logic SURROUND mode ON/OFF



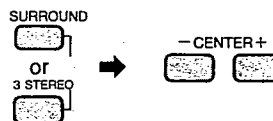
To turn the Dolby Pro Logic 3 STEREO mode ON/OFF



To adjust the output level of the rear speakers



To adjust the output level of the center speaker



To output a test signal



Press once more to stop a test signal.

To mute the sound level



Press once more to return to the original volume.

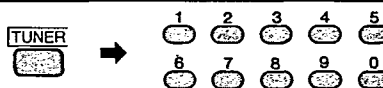
To adjust the volume level



**Note**

After carrying out the operation for turning the TV or VCR ON or OFF, always press TUNER before pressing POWER when turning the receiver ON and OFF.

**To listen to radio broadcasts**



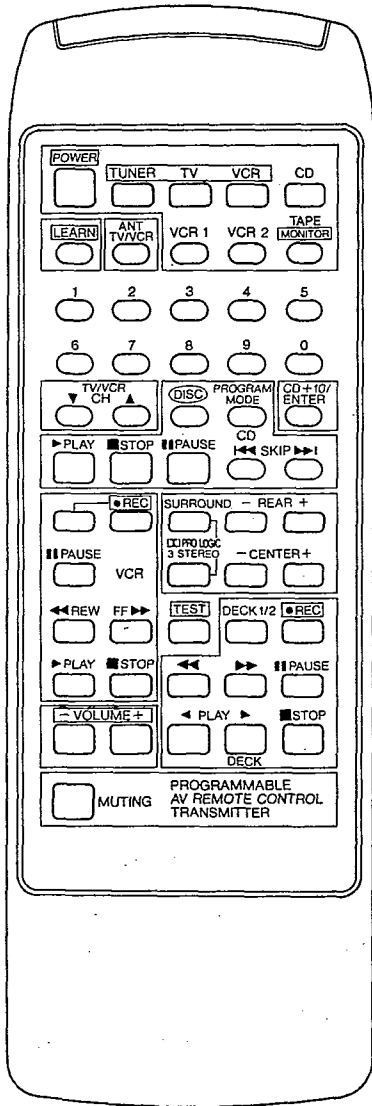
Specify the preset channel using the numeric button(s).

(Example: Channel 12)

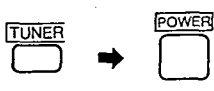

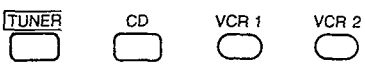


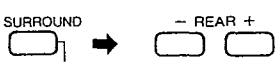
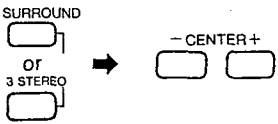





(Within 2 sec.)

- Operating the receiver
- For (G, GN) areas.

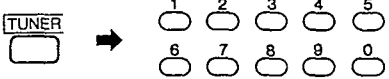


**Basic operations**

<p><b>To turn the power supply ON/OFF</b></p>	 <p>Once the power has been set to ON, it can be turned ON and OFF simply by pressing POWER. (See <b>Note</b> below.)</p>
<p><b>To turn the tape monitor function ON/OFF</b></p>	 <p>To listen to sources other than a tape or DCC, be sure to turn off the tape monitor indicator on the main unit.</p>
<p><b>To select an input source</b></p>	
<p><b>To turn the Dolby Pro Logic SURROUND mode ON/OFF</b></p>	
<p><b>To turn the Dolby Pro Logic 3 STEREO mode ON/OFF</b></p>	
<p><b>To adjust the output level of the rear speakers</b></p>	
<p><b>To adjust the output level of the center speaker</b></p>	
<p><b>To output a test signal</b></p>	 <p>Press once more to stop a test signal.</p>
<p><b>To mute the sound level</b></p>	 <p>Press once more to return to the original volume.</p>
<p><b>To adjust the volume level</b></p>	

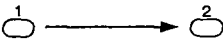
**Note**  
 After carrying out the operation for turning the power of the TV or VCR ON or OFF, always press TUNER before pressing POWER when turning the power of the receiver ON and OFF.

**To listen to radio broadcasts**



**Specify the preset channel using the numeric button(s).**

(Example: Channel 12)

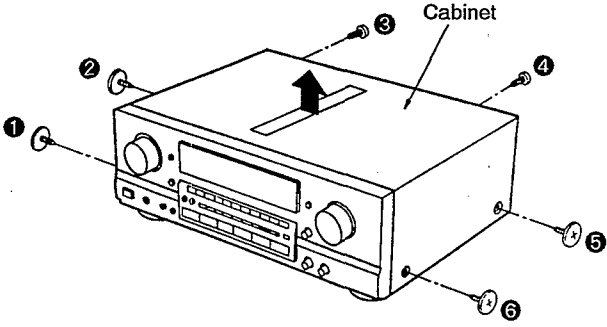
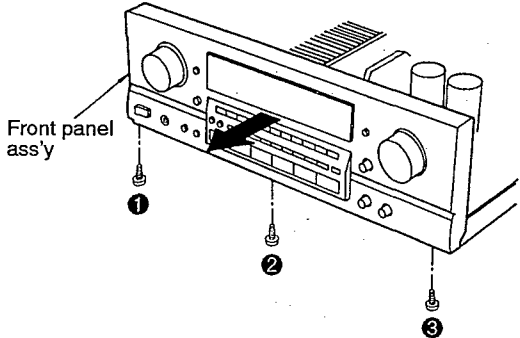
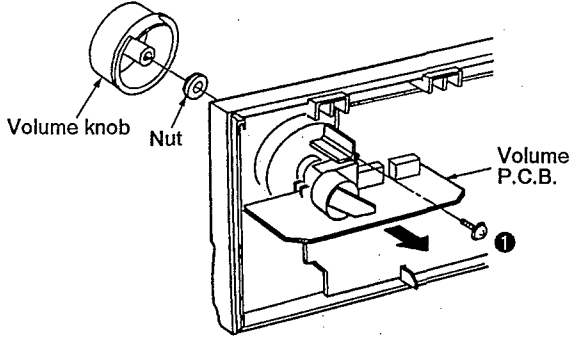
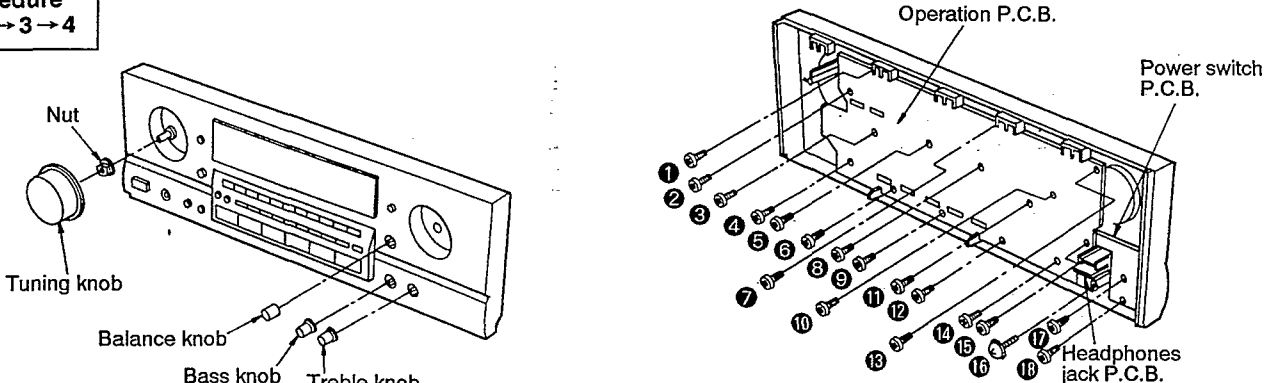


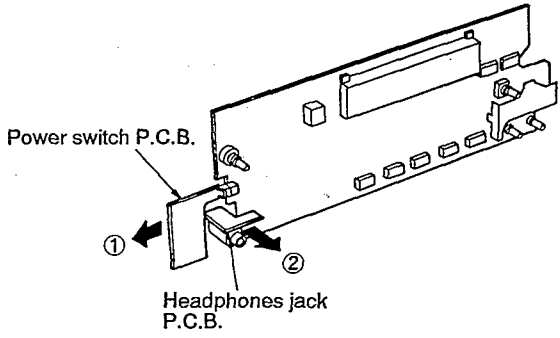
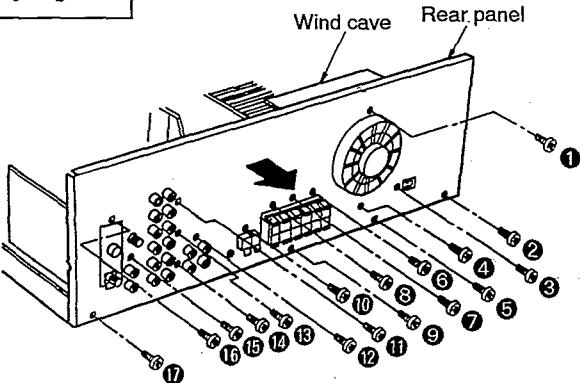
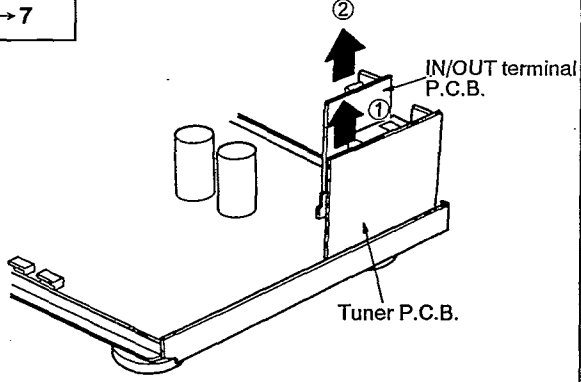
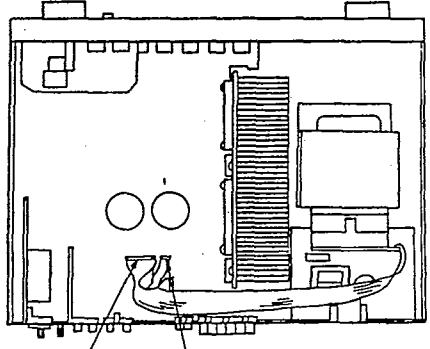
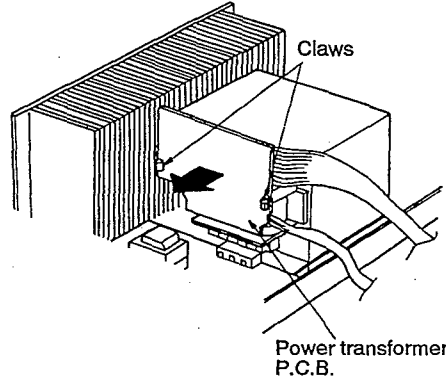
(Within 2 sec.)

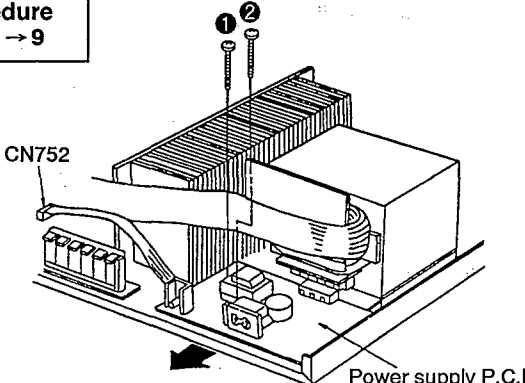
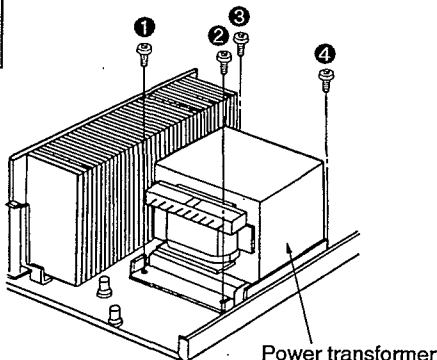
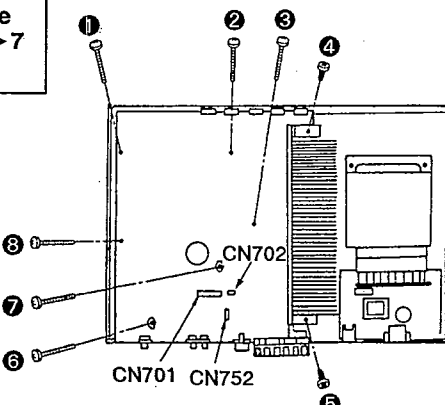
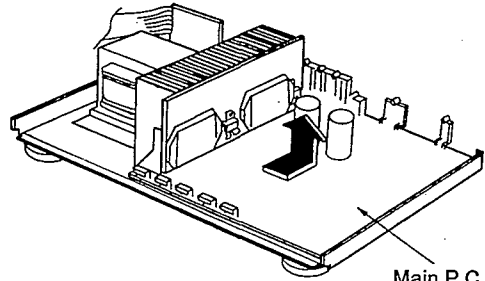
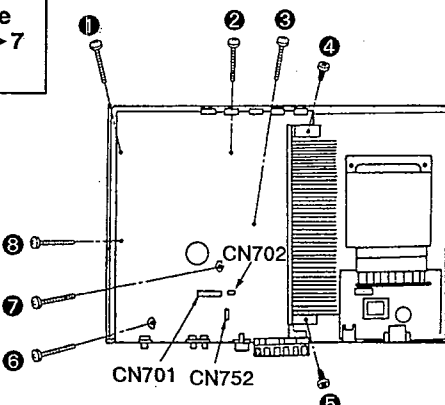
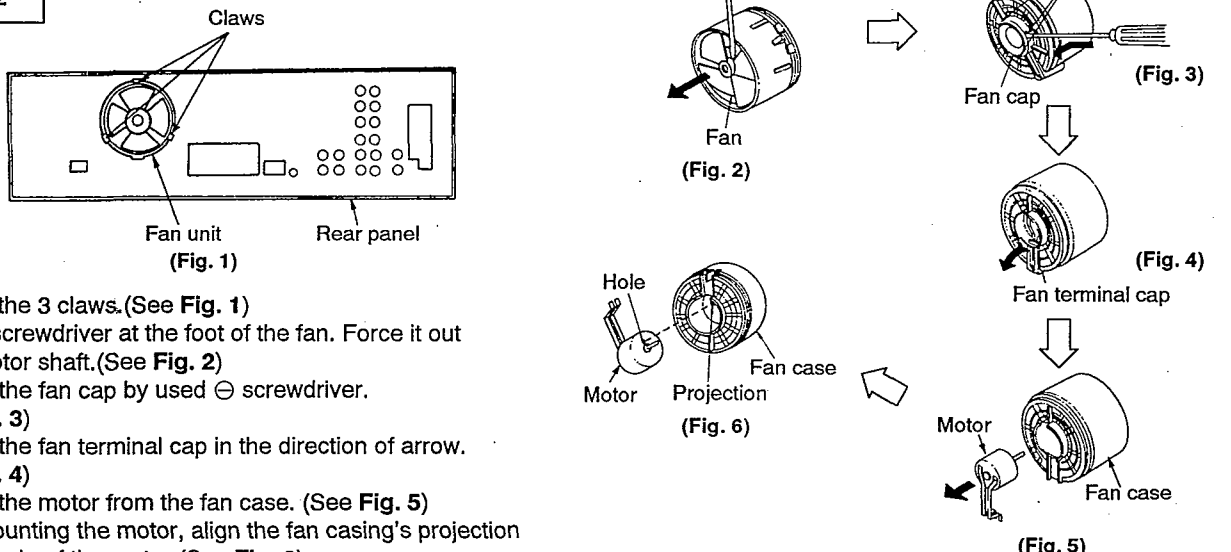
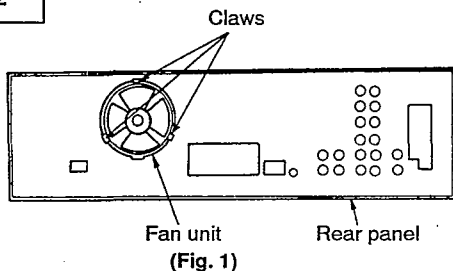
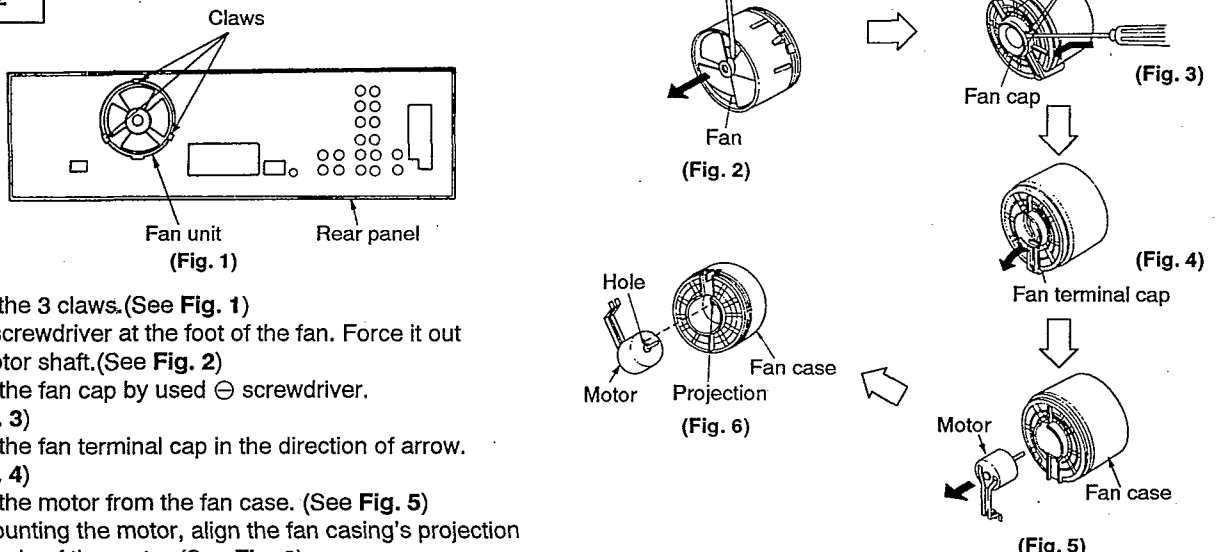
## DISASSEMBLY INSTRUCTIONS

### "ATTENTION SERVICER"

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

Ref.No. 1	Removal of the cabinet	Ref.No. 2	Removal of the front panel ass'y
Procedure 1	 <p>• Remove the 6 screws (1 ~ 6).</p>	Procedure 1 → 2	 <ol style="list-style-type: none"> <li>1. Remove the 3 screws (1 ~ 3).</li> <li>2. Remove the front panel ass'y in the direction of arrow.</li> </ol>
Ref.No. 3	Removal of the volume P.C.B.	 <ol style="list-style-type: none"> <li>1. Pull out the volume knob.</li> <li>2. Remove the nut.</li> <li>3. Remove the 1 screw (1).</li> <li>4. Remove the volume P.C.B. in the direction of arrow.</li> </ol>	
Procedure 1 → 2 → 3			
Ref.No. 4	Removal of the operation P.C.B.	 <ol style="list-style-type: none"> <li>1. Pull out the tuning knob, balance knob, bass knob and treble knob.</li> <li>2. Remove the nut.</li> <li>3. Remove the 18 screws (1 ~ 18).</li> </ol>	
Procedure 1 → 2 → 3 → 4			

<p>Ref.No. 5</p>	<p>Removal of the power switch P.C.B. and headphones jack P.C.B.</p>	 <p>Power switch P.C.B.</p> <p>Headphones jack P.C.B.</p>	
<p>Procedure 1 → 2 → 3 → 4 → 5</p>	<p>■ <b>POWER SWITCH P.C.B.</b></p> <ul style="list-style-type: none"> <li>• Remove the power switch P.C.B. in the direction of arrow ①.</li> </ul> <p>■ <b>HEADPHONES JACK P.C.B.</b></p> <ul style="list-style-type: none"> <li>• Remove the headphones jack P.C.B. in the direction of arrow ②.</li> </ul>		
<p>Ref.No. 6</p>	<p>Removal of the rear panel</p>	<p>Ref.No. 7</p>	<p>Removal of the tuner P.C.B. and IN/OUT terminal P.C.B.</p>
<p>Procedure 1 → 6</p>	 <p>Wind cave</p> <p>Rear panel</p>		<p>Procedure 1 → 6 → 7</p>  <p>IN/OUT terminal P.C.B.</p> <p>Tuner P.C.B.</p> <p>■ <b>TUNER P.C.B.</b></p> <ul style="list-style-type: none"> <li>• Remove the tuner P.C.B. in the direction of arrow ①.</li> </ul> <p>■ <b>IN/OUT TERMINAL P.C.B.</b></p> <ul style="list-style-type: none"> <li>• Remove the IN/OUT terminal P.C.B. in the direction of arrow ②.</li> </ul>
<p>Ref.No. 8</p>	<p>Removal of the power transformer P.C.B.</p>		
<p>Procedure 1 → 6 → 8</p>	 <p>CN701</p> <p>CN702</p> <p>1. Remove the 2 flat cables(CN701, CN702).</p>		 <p>Claws</p> <p>Power transformer P.C.B.</p> <p>2. Remove the 2 claws.</p> <p>3. Remove the power transformer P.C.B. in the direction of arrow.</p>

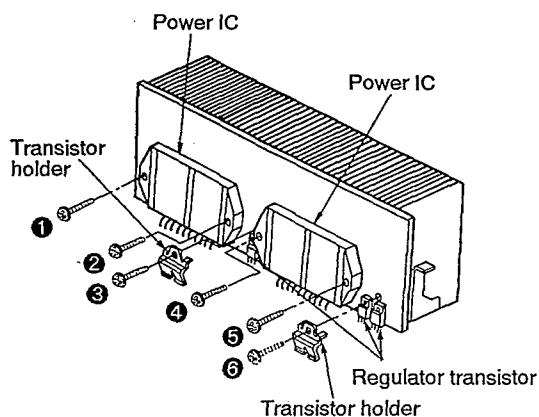
Ref.No. 9	Removal of the power supply P.C.B.	Ref.No. 10	Removal of the power transformer
Procedure 1 → 6 → 9	 <p>1. Remove the 1 flat cable(CN752). 2. Remove the 2 screws(①, ②). 3. Remove the power supply P.C.B. in the direction of arrow.</p>	Procedure 1 → 6 → 8 → 9 → 10	 <p>• Remove the 4 screws(① ~ ④).</p>
Ref.No. 11	Removal of the main P.C.B.	 <p>1. Remove the 3 flat cables(CN701, CN702, CN752). 2. Remove the 8 screws(① ~ ⑧).</p>	
Procedure 1 → 2 → 6 → 7 → 11	 <p>3. Remove the main P.C.B. in the direction of arrow.</p>	 <p>3. Remove the main P.C.B. in the direction of arrow.</p>	
Ref.No. 12	Removal of the cooling fan motor	 <p>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)</p>	
Procedure 1 → 6 → 12	 <p>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)</p>	 <p>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)</p>	

Ref.No. 13	Removal of the power IC and regulator transistor
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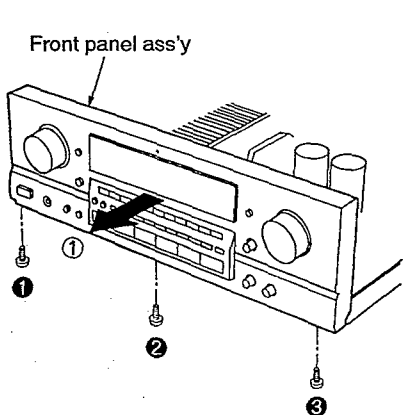
Procedure 1 → 2 → 6 → 7 → 11 → 13
---

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

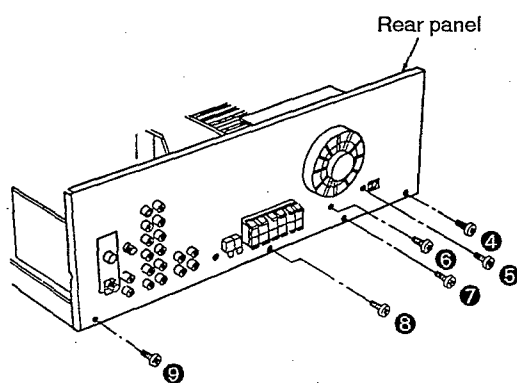
• When mounting the power IC or regulator transistor.  
Apply silicone compound (RFKX0002) to the rear side of power IC or regulator transistor.



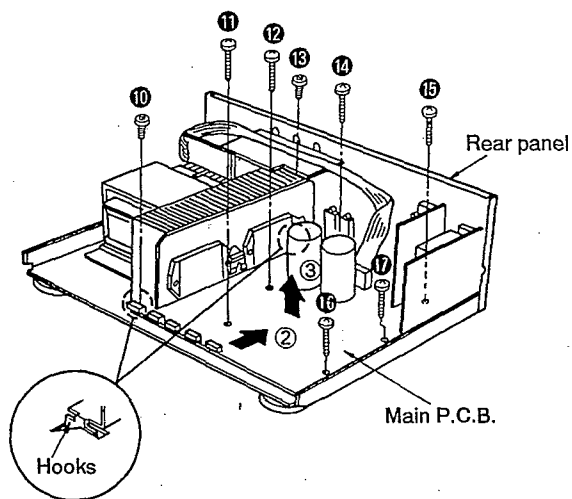
### ■ HOW TO CHECK THE MAIN P.C.B.



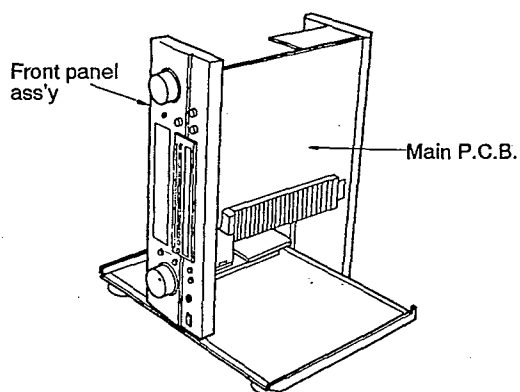
1. Remove the 3 screws (① ~ ③).
2. Remove the front panel ass'y in the direction of arrow ①.



3. Remove the 6 screws (④ ~ ⑨).



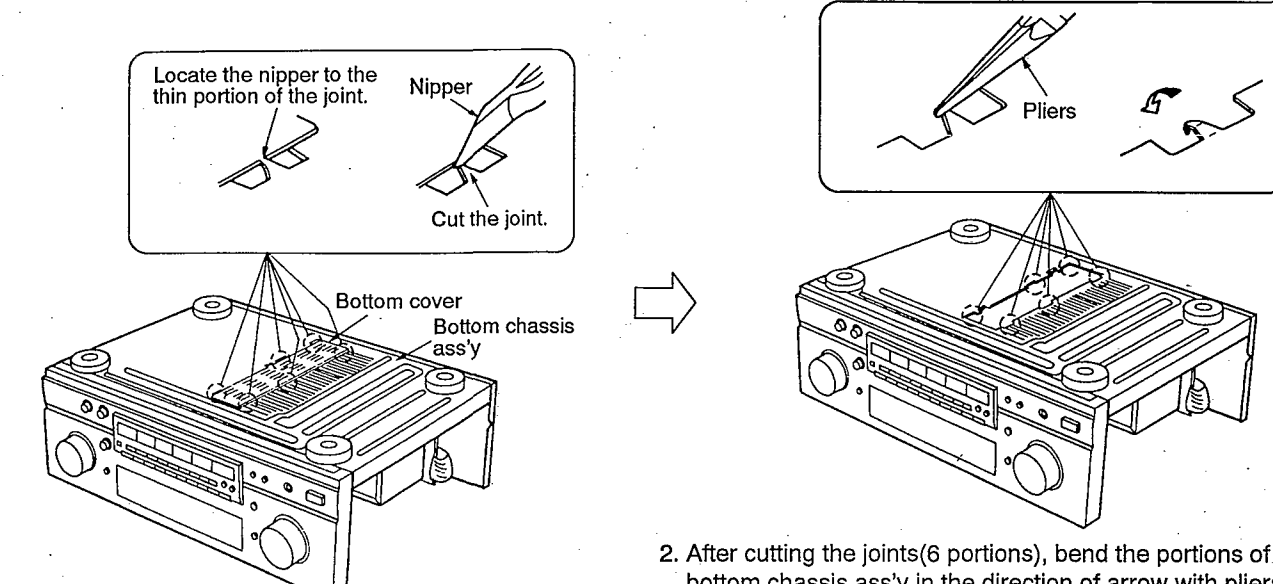
4. Remove the 8 screws (⑩ ~ ⑰).
5. Release the 2 hooks by sliding the main P.C.B. in the direction of arrow ②, and then remove the main P.C.B. equipped with rear panel in the direction of arrow ③.



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

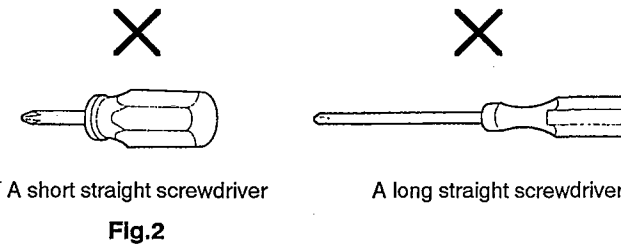


## ■ HOW TO REPLACEMENT THE POWER IC AND REGULATOR

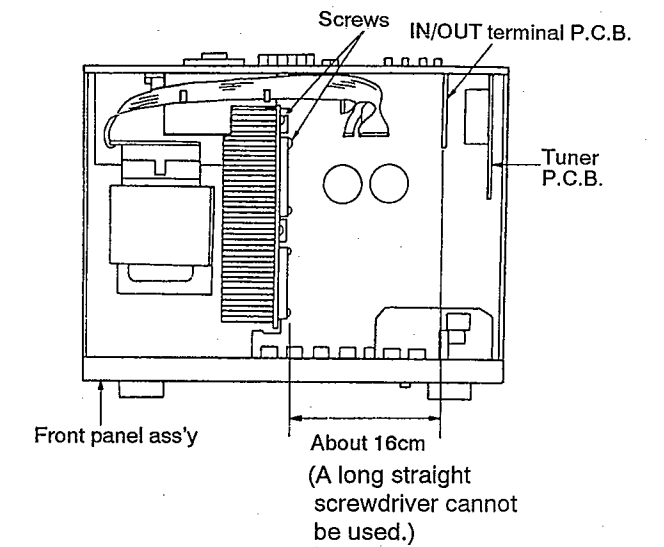
- 
1. Cut the joints(6 portions) between bottom cover and bottom chassis ass'y with nipper.
2. After cutting the joints(6 portions), bend the portions of the bottom chassis ass'y in the direction of arrow with pliers.
3. When checking the soldered surface of power IC, perform as shown above.
4. When installing or removing the power IC or regulator transistor, be sure to use an offset screwdriver.
5. After checking the power IC, 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).
- 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)

### CAUTION:

1. A long straight screwdriver cannot be used for removal or mounting since its long grip interferes with the neighboring P.C.B.(See Fig.1)
2. A short straight screwdriver may be used for removal, but cannot be used for mounting because the limited space in the unit will not allow sufficient tightening torque. (See Fig.2)

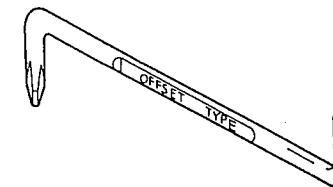


3. Insufficient tightening will cause poor heat dissipation from the power IC and regulator transistor and, in the worst case, may lead their thermal breakdown. (See Fig.2)



### — OFFSET SCREWDRIVER —

- The PROTO offset screwdriver No.34- 1/4 is recommended for use in the application above.



No.	+	L
34 1/4	1 & 2	4 3/4"

- The address of PROTO International Sales is as follows.

**PROTO**

#### International Sales

International Sales Office  
Stanley-Proto Industrial Tools  
14117 Industrial Park Blvd.  
Covington, GA 30209 U.S.A.  
Fax: 706-786-4387  
Phone: 706-787-3800

Singapore, Indonesia, Philippines, Korea, Hong Kong, Malaysia, China.  
Stanley-Proto Asia Pacific  
12 Gul Drive  
Singapore 2262  
Fax: 65-861-3206  
Phone: 65-862-0883

Australia, New Zealand & South Pacific  
Stanley-Proto Industrial Tools  
P.O.Box 10  
400 Whitehorse Road  
Nunawading 3131  
Victoria, Australia  
Fax: 61-3-894-1173  
Phone: 61-3-878-9244

Thailand  
Stanley-Proto Thailand Ltd.  
1017 Moo 13 Bangnatrad Highway, Tambol Bankaew Amphur Bangplee Samutprakarn, Thailand.  
Fax: 66-2-316-6071  
Phone: 66-2-316-8655

Mexico  
Herramientas Stanley S.A.  
DE C.V.  
Apartado Postal 675  
72030 Puebla, Pue, Mexico  
Fax: 52-22-494-4880  
Phone: 52-22-495-300

South & Central America, Puerto Rico, The Caribbean  
Stanley Inter-America  
2101 N.W. 84th Ave.  
Miami, Florida 33122  
Fax: 305-594-4261  
Phone: 305-591-3828

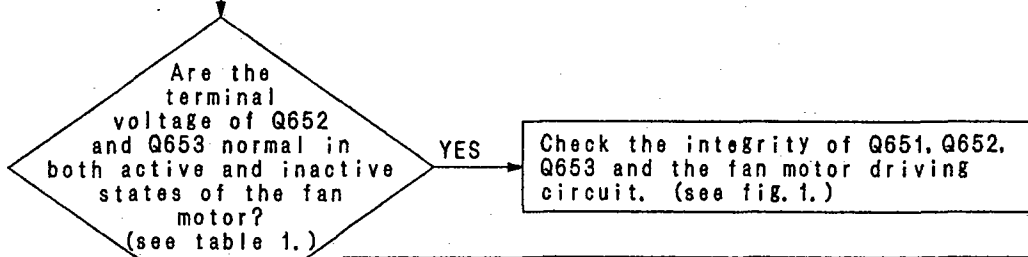
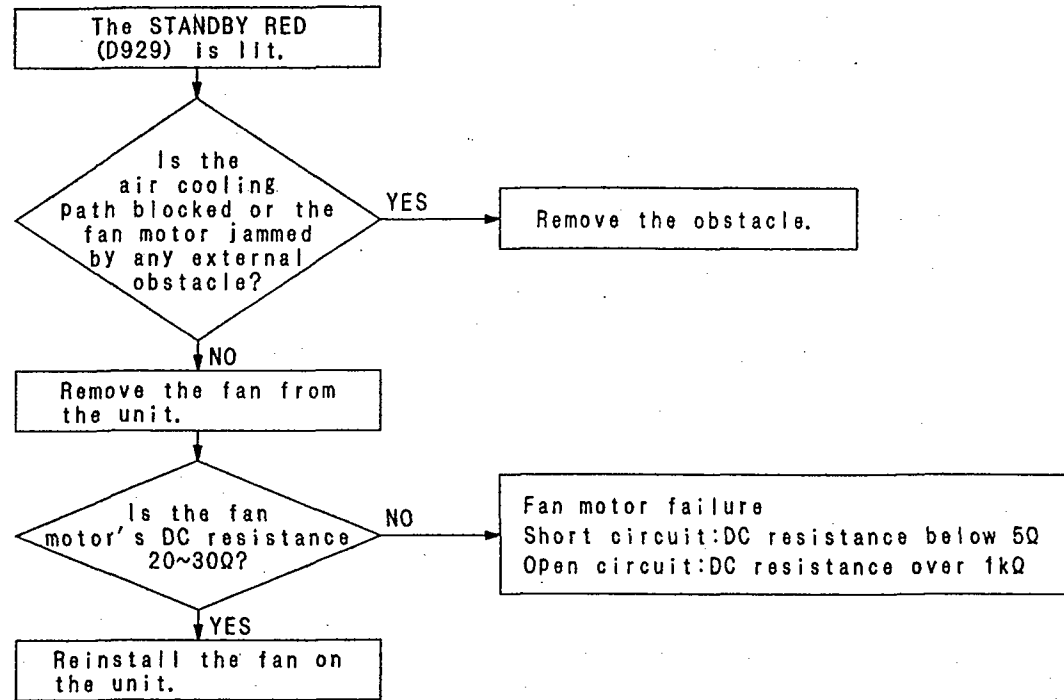
Europe  
Stanley-Proto Europe  
Woodside, Sheffield  
S39 7PD  
England  
Fax: 44-742-739-038  
Phone: 44-742-768-888

Canada  
Stanley-Proto Canada  
1100 Corporate Drive  
Burlington, Ontario  
Canada, L7L 5R6  
Fax: 416-335-0075  
Phone: 416-335-0075

Middle East, Mediterranean & Africa  
Stanley-MEMA  
Cory House The Ring  
Bracknell Berkshire  
RG 12 1A2  
England  
Fax: 44-344-485-526  
Phone: 44-344-51813

## FAN MOTOR TROUBLESHOOTING GUIDE

The Models SA-GX350/GX550/GX650 employ fan motor error sensing electronics.  
 If the cooling fan is not operation and its STANDBY light (D929) is on, check the fan motor and its STANDBY light (D929) is on, check the fan motor and its driving circuit.



(Voltage table)

	fan. off	fan. on
Q651	E 0V	0V
	C -0.65V	-0.1V
	B 0V	-0.65V
Q652	E 0V	0V
	C -0.1V	-8.2V
	B -0.65V	-0.1V
Q653	E 0V	-7.5V
	C -14V	-12.5V
	B -0.1V	-8.2V

(Table (1))

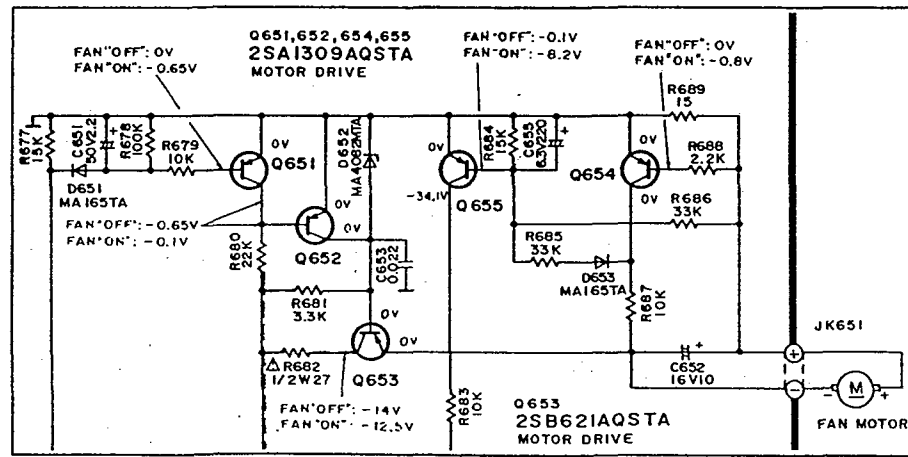
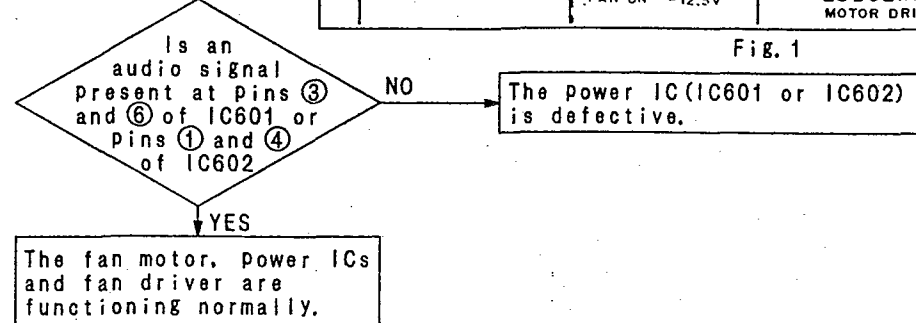


Fig. 1

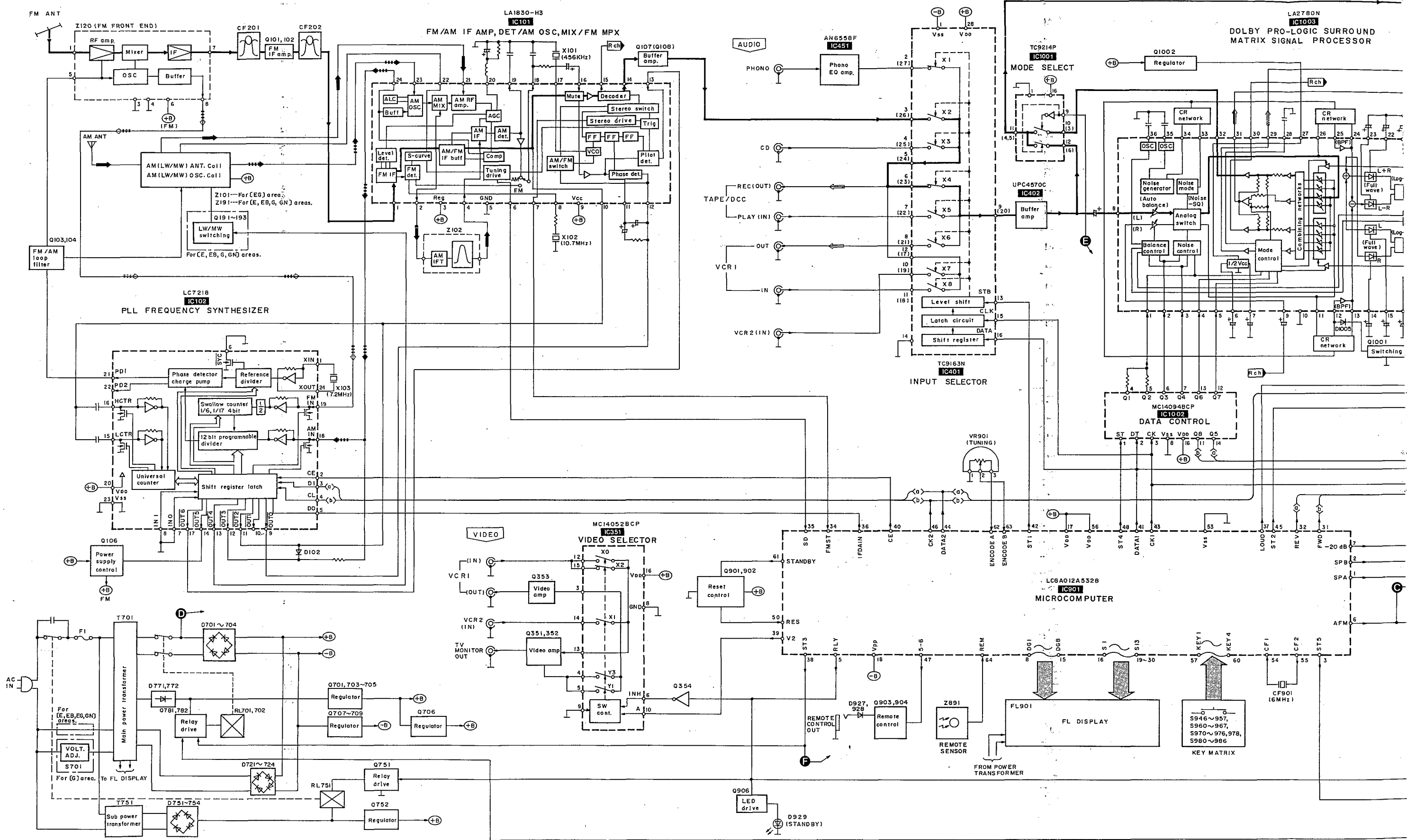


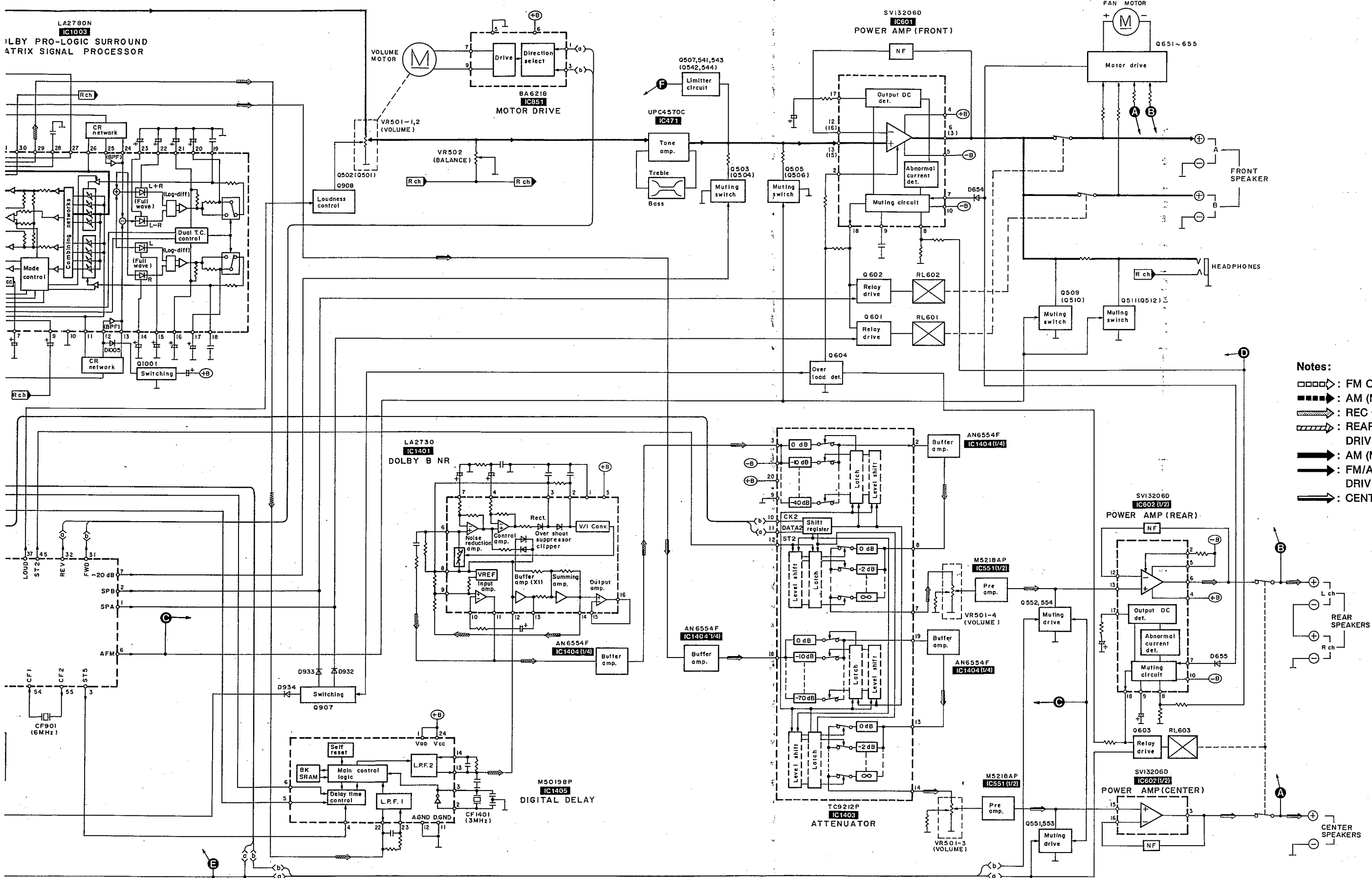
## TERMINAL FUNCTION OF IC

• IC901 (LC8A012A5328): Microcomputer

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	SPA	O	Speaker select control terminal	41	DATA1	O	Serial data signal
2	SPB	O	Speaker select control terminal	42	ST1	O	Level shift control terminal
3	ST5	O	Level shift control terminal	43	CK1	O	Serial clock signal
4	RFM	—	Not used, open	44	DATA2	O	Serial data signal
5	RLY	O	Relay control terminal	45	ST2	O	Level shift control terminal
6	AFM	O	Muting control terminal	46	CK2	O	Serial clock Serial clock signal
7	-20dB	O	Muting control (-20dB) terminal	47	5-6	O	Remote control terminal
8	DG1	O	Digit signal of FL display	48	ST4	O	Level shift control terminal
15	DG8	O	Digit signal of FL display	49	TEST1	—	Test terminal
16	S13	O	Segment signal of FL display	50	RES	I	Reset detect terminal
17	VDD	I	Power supply terminal	51	XT1	—	Not used, connected to power supply
18	VPP	I	Power supply terminal of FL display	52	XT2	—	Not used, open
19	S12	O	Segment signal of FL display	53	VSS	—	GND terminal
30	S1	O	Segment signal of FL display	54	CF1	I	Crystal oscillator
31	FWD	O	Rotation control terminal of volume motor	55	CF2	O	Terminal (6MHz)
32	REV	O	Rotation control terminal of volume motor	56	VDD	I	Power supply terminal
33	INI	—	Not used, connected to resistor	57	KEY1	I	Key matrix detect terminal
34	FMST	I	Stereo signal detect terminal	60	KEY4	I	
35	SD	I	Received signal detect terminal	61	STANDBY	O	Power detect terminal
36	IFDAIN	O	Serial data signal	62	ENCODE A	I	Not used, connected to power supply
37	LOUD	O	Not used, open	63	ENCODE B	I	
38	ST3	O	Level shift control terminal	64	REM	I	Remote control terminal
39	V2	O	Video selector control terminal				
40	CE	O	Chip enable terminal				

**BLOCK DIAGRAM**





- Notes:**
- : FM OSC SIGNAL
  - ▬▬▬▬ : AM (MW/LW) OSC SIGNAL
  - ▬▬▬▬ : REC OUT SIGNAL (Lch)
  - ▬▬▬▬ : REAR SPEAKER DRIVE SIGNAL (Lch)
  - ▬▬▬▬ : AM (MW/LW) SIGNAL
  - ▬▬▬▬ : FM/AF (FRONT SPEAKER DRIVE) SIGNAL (Lch)
  - ▬▬▬▬ : CENTER OUT SIGNAL

## 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 through a 10Ω, 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 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage 230V/240V/110-127V/220-240V.

Power supply voltage	AC 230V		AC 240V		AC 120V (AC 110-127V)		AC 240V (AC 220-240V)	
	50Hz	200~500mA	50Hz	220~540mA	50Hz	400~1000mA	50Hz	200~500mA
Consumed current 50/60Hz	60Hz	160~400mA	60Hz	176~432mA	60Hz	320~800mA	60Hz	160~400mA

## TERMINAL GUIDE OF IC'S TRANSISTORS AND DIODES

<p>LC8A012A5328</p>	<p>M50198P</p>	<table border="1"> <tr><td>M5218AP</td><td>8 Pin</td></tr> <tr><td>LA1830-H3</td><td>24 Pin</td></tr> <tr><td>LC7218</td><td>24 Pin</td></tr> </table>	M5218AP	8 Pin	LA1830-H3	24 Pin	LC7218	24 Pin	<table border="1"> <tr><td>AN6654F.</td><td>14 Pin</td></tr> <tr><td>LA2730</td><td>16 Pin</td></tr> </table>	AN6654F.	14 Pin	LA2730	16 Pin						
M5218AP	8 Pin																		
LA1830-H3	24 Pin																		
LC7218	24 Pin																		
AN6654F.	14 Pin																		
LA2730	16 Pin																		
<table border="1"> <tr><td>AN6558-FSG</td><td>8 Pin</td></tr> <tr><td>UPC4570C</td><td>8 Pin</td></tr> <tr><td>MC14052BCP</td><td>16 Pin</td></tr> <tr><td>MC14094BCP</td><td>16 Pin</td></tr> <tr><td>LA2780N</td><td>36 Pin</td></tr> </table>	AN6558-FSG	8 Pin	UPC4570C	8 Pin	MC14052BCP	16 Pin	MC14094BCP	16 Pin	LA2780N	36 Pin	<table border="1"> <tr><td>TC9214P</td><td>16 Pin</td></tr> <tr><td>TC9212P</td><td>20 Pin</td></tr> <tr><td>TC9163N</td><td>28 Pin</td></tr> </table>	TC9214P	16 Pin	TC9212P	20 Pin	TC9163N	28 Pin	<p>SVI3206D</p>	<p>BA6218</p>
AN6558-FSG	8 Pin																		
UPC4570C	8 Pin																		
MC14052BCP	16 Pin																		
MC14094BCP	16 Pin																		
LA2780N	36 Pin																		
TC9214P	16 Pin																		
TC9212P	20 Pin																		
TC9163N	28 Pin																		
<p>2SB621AQSTA 2SC2631QRSTA</p>	<p>2SC3940AQSTA</p>		<p>UN4214TA</p>																
<p>2SB1187DEF 2SD1761DEF</p>	<p>2SJ40CDTA</p>	<p>P300DLF</p>	<p>LN018304P</p>																
<table border="1"> <tr><td>MA4030MTA</td></tr> <tr><td>MA4039MTA</td></tr> <tr><td>MA4047MTA</td></tr> <tr><td>MA4051MTA</td></tr> <tr><td>MA4056MTA</td></tr> <tr><td>MA4062MTA</td></tr> <tr><td>MA4068MTA</td></tr> <tr><td>MA4075MTA</td></tr> </table>	MA4030MTA	MA4039MTA	MA4047MTA	MA4051MTA	MA4056MTA	MA4062MTA	MA4068MTA	MA4075MTA	<table border="1"> <tr><td>MA4150MTA</td></tr> <tr><td>MA4220MTA</td></tr> <tr><td>MA4240MTA</td></tr> </table>	MA4150MTA	MA4220MTA	MA4240MTA	<p>MA165TA MA700ATA 1SS291TA 1SR35200TB</p>						
MA4030MTA																			
MA4039MTA																			
MA4047MTA																			
MA4051MTA																			
MA4056MTA																			
MA4062MTA																			
MA4068MTA																			
MA4075MTA																			
MA4150MTA																			
MA4220MTA																			
MA4240MTA																			

## ■ SCHEMATIC DIAGRAM (Parts list on pages 52~58.)

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

### Note 1:

- **S701** : Voltage adjustment switch in "220-240V" position.
- **S946** : Numeric (5) switch.
- **S947** : Center level adjust (CENTER LEVEL -) switch.
- **S948** : Test signal ON/OFF (TEST) switch.
- **S949** : Numeric (4) switch.
- **S950** : Numeric (6) switch.
- **S951** : Center level adjust (CENTER LEVEL +) switch.
- **S952** : Numeric (7) switch.
- **S953** : Rear level adjust (REAR LEVEL -) switch.
- **S954, 955** : Input select switches.  
[S954: CD, S955: TUNER]
- **S956** : Center mode select (CENTER MODE) switch.
- **S957** : Numeric (9) switch.
- **S960** : Rear level adjust (REAR LEVEL +) switch.
- **S961** : Numeric (8) switch.
- **S962** : Numeric (0) switch.
- **S963** : Delay time (DELAY TIME) adjustment.
- **S964** : Input select (PHONO) switch.
- **S965** : Loudness (LOUDNESS) ON/OFF switch.
- **S966** : Memory (MEMORY) switch.
- **S967** : Muting (MUTING) switch.
- **S970** : Tape/DCC monitor (TAPE/DCC MONITOR) switch.
- **S971** : Input select (VCR2) switch.
- **S972** : Input select (VCR1) switch.
- **S973** : Speaker select (B) switch.
- **S974** : FM mode select (FM MODE) switch.
- **S975** : Band select (BAND) switch.
- **S976** : Direct tuning (DIRECT TUNING) switch.
- **S978** : Power (POWER) switch.
- **S980** : Dolby pro logic 3 STEREO ON/OFF (3 STEREO) switch.
- **S981** : Speaker select (A) switch.
- **S982** : Dolby pro logic surround ON/OFF (SURROUND) switch.
- **S983** : Numeric (3) switch.
- **S984** : Numeric (2) switch.
- **S985** : Numeric (1) switch.
- **S986** : Tuning mode (TUNING MODE) switch.

### • Signal line

-  : FM OSC signal
-  : AM (MW/LW) OSC signal
-  : Rec out signal (Lch)
-  : Rear speaker drive signal (Lch)
-  : Positive voltage lines
-  : Negative voltage lines
-  : FM signal
-  : AM (MW/LW) signal
-  : AF signal (Lch)
-  : Center speaker drive signal

### • Important safety notice

Components identified by  $\triangle$  mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used 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.
Z891	RCDHC-278-E	RCDHC-278

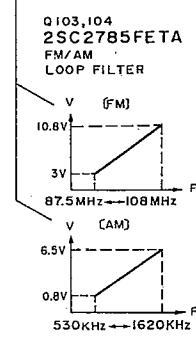
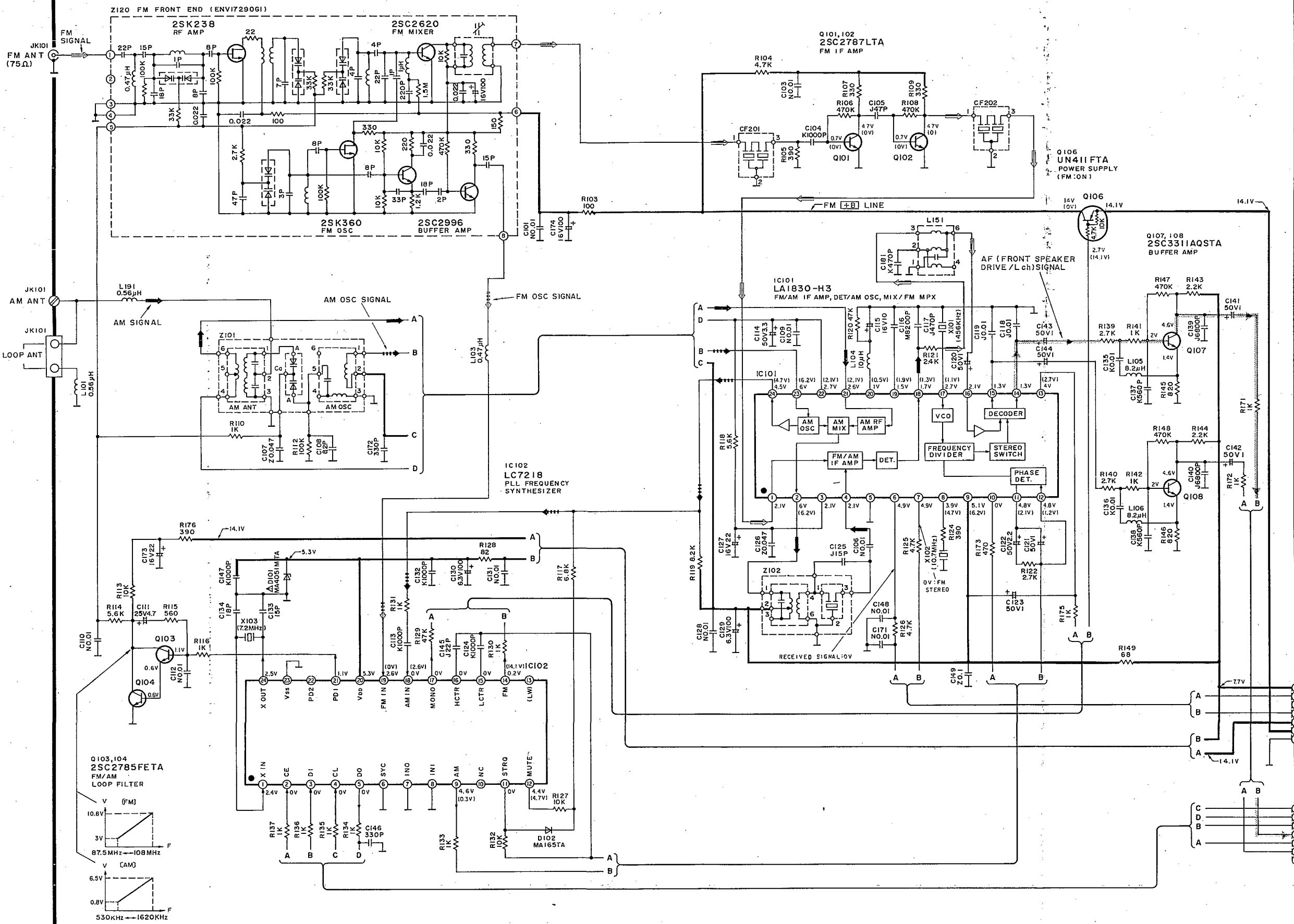
- All voltage values shown in circuitry are DC voltage in FM signal (Stereo signal) reception mode.
- \* Figures in ( ) stand for DC-voltage in AM (MW/LW) signal reception mode.
- \* Figures in [ ] stand for DC-voltage in LW signal reception mode.

### • 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.

**A** TUNER CIRCUIT For [EG] area.

A  
B  
C  
D  
E  
F  
G

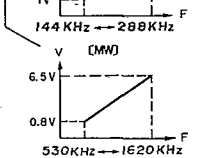
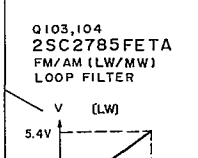
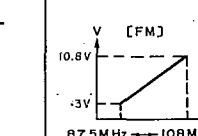
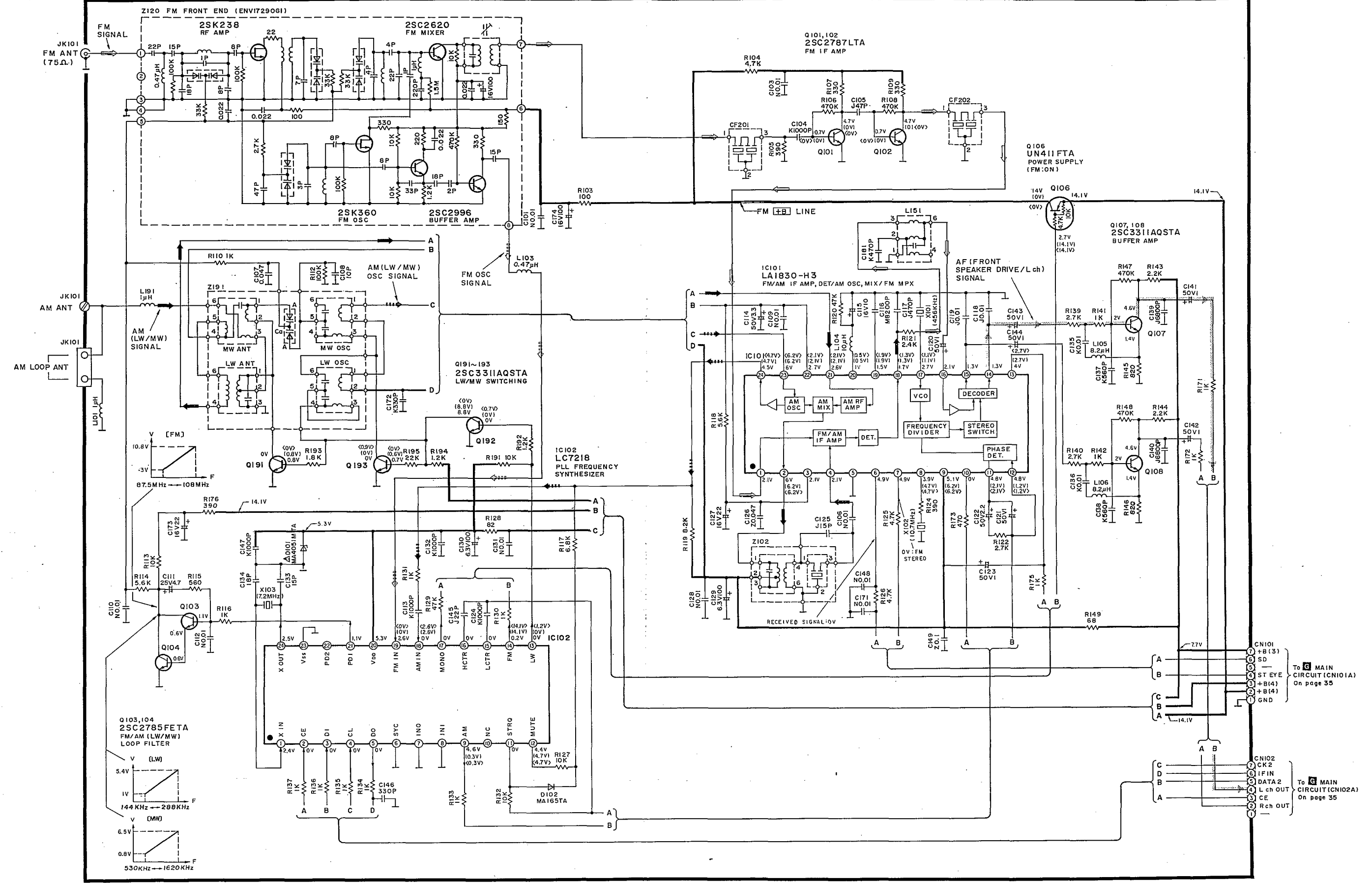


To MAIN CIRCUIT (CN101A) On page 35

To MAIN CIRCUIT (CN102A) On page 35

**A** TUNER CIRCUIT For [E,EB,G,GN] areas.

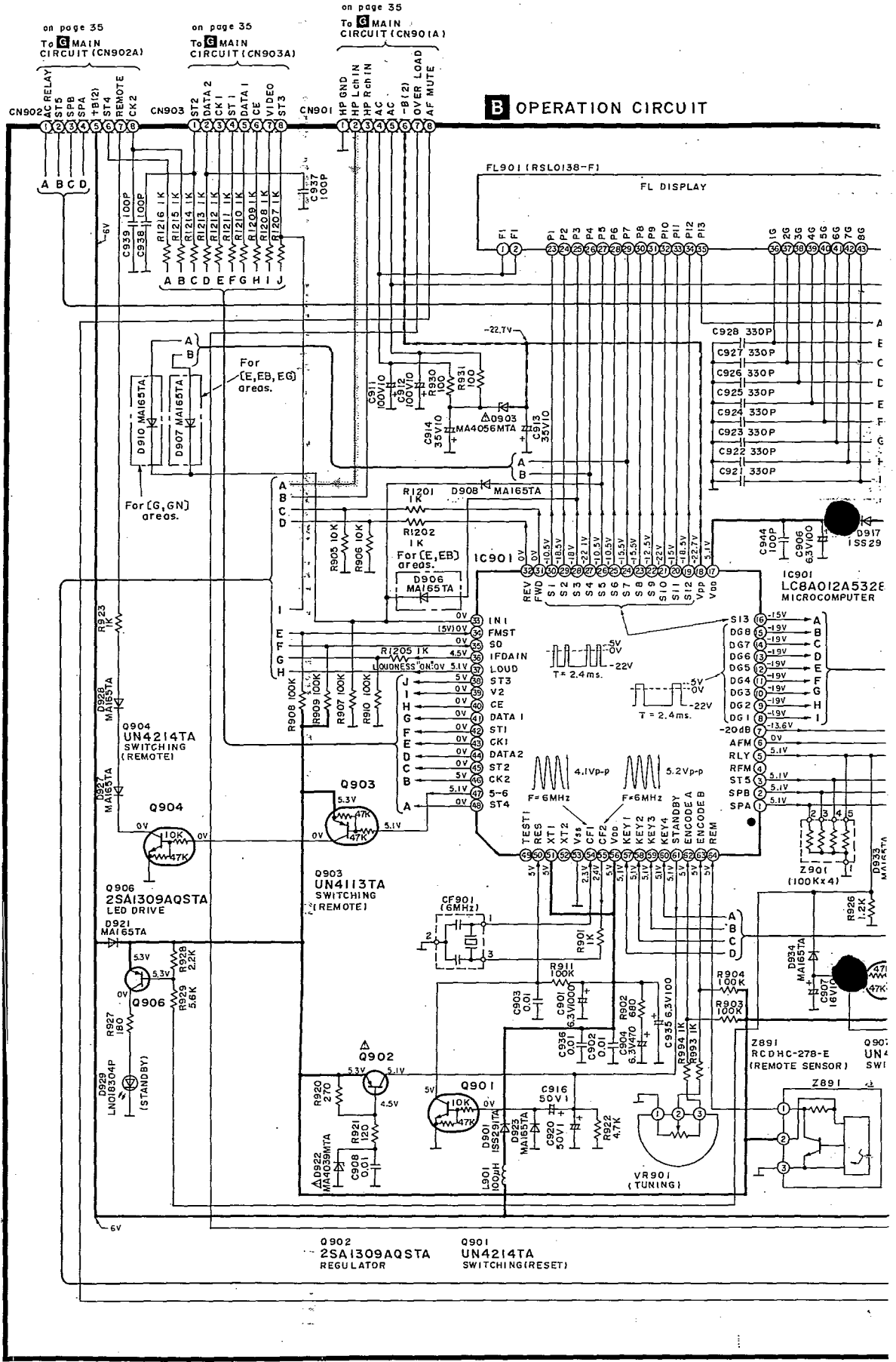
A  
B  
C  
D  
E  
F



To **G** MAIN CIRCUIT (CN101A) On page 35

To **G** MAIN CIRCUIT (CN102A) On page 35





10

11

12

13

14

15

16

17

18

19

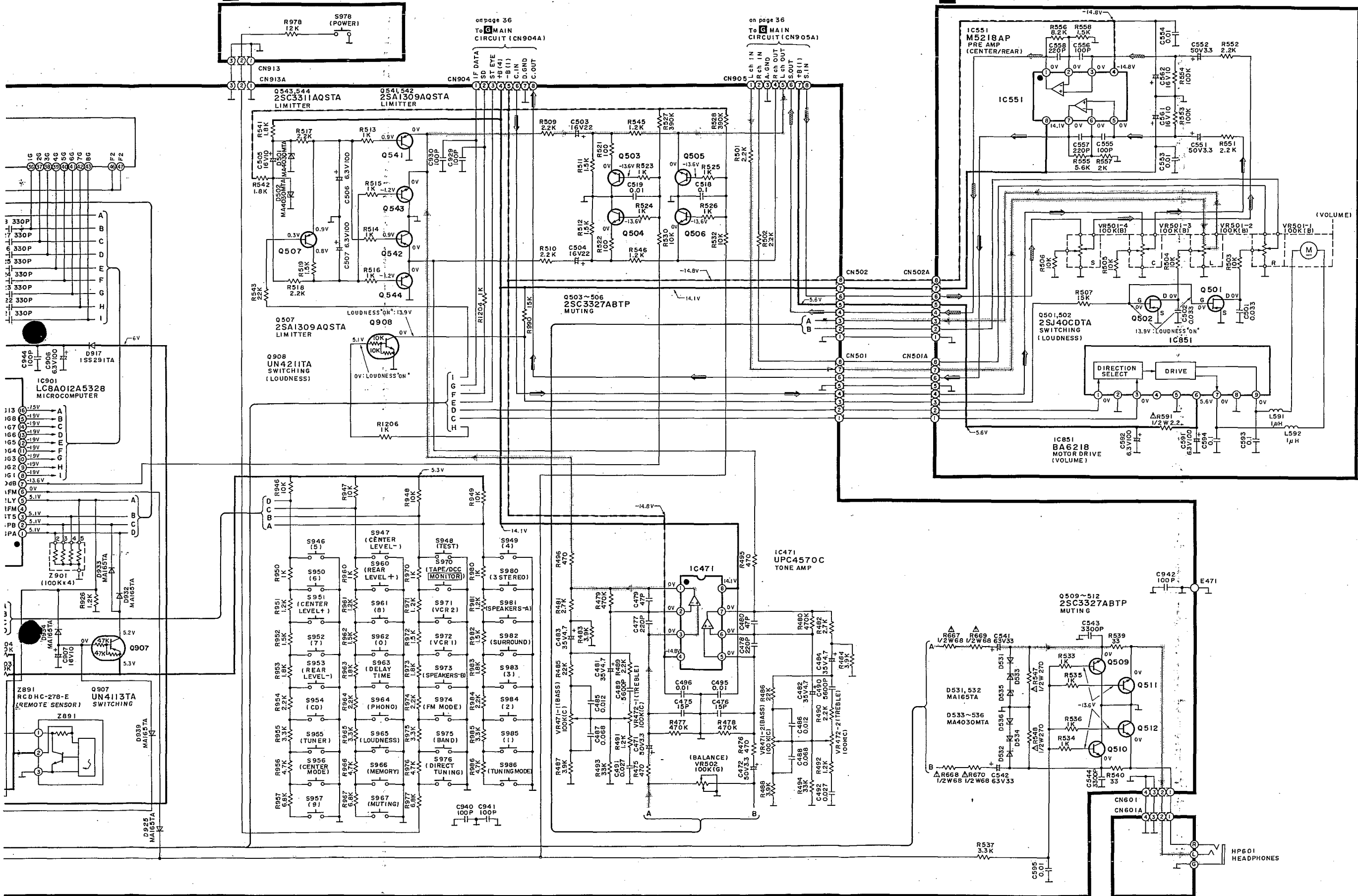
20

21

22

C POWER SWITCH CIRCUIT

D VOLUME CIRCUIT

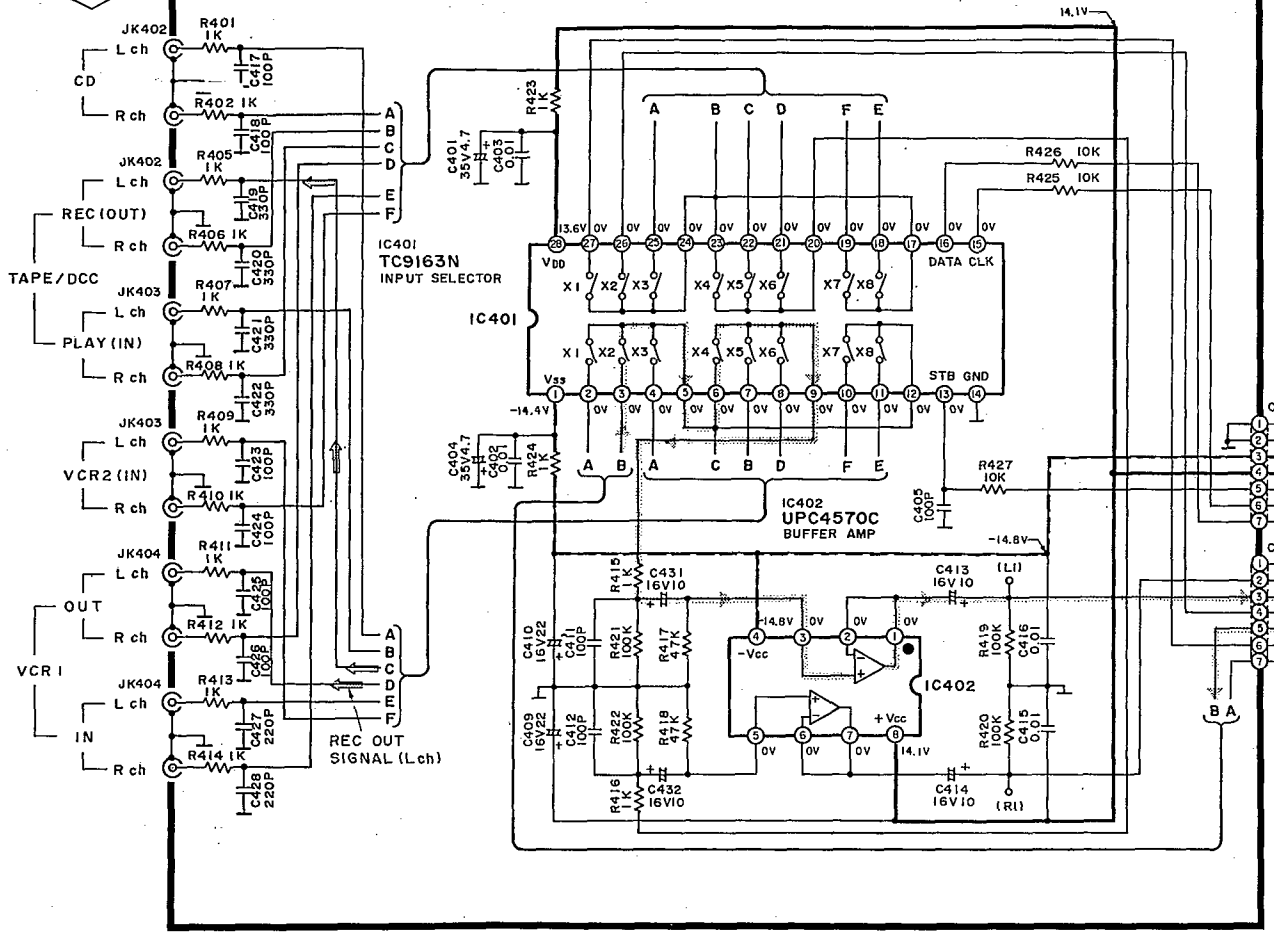


E HEADPHONES JACK CIRCUIT

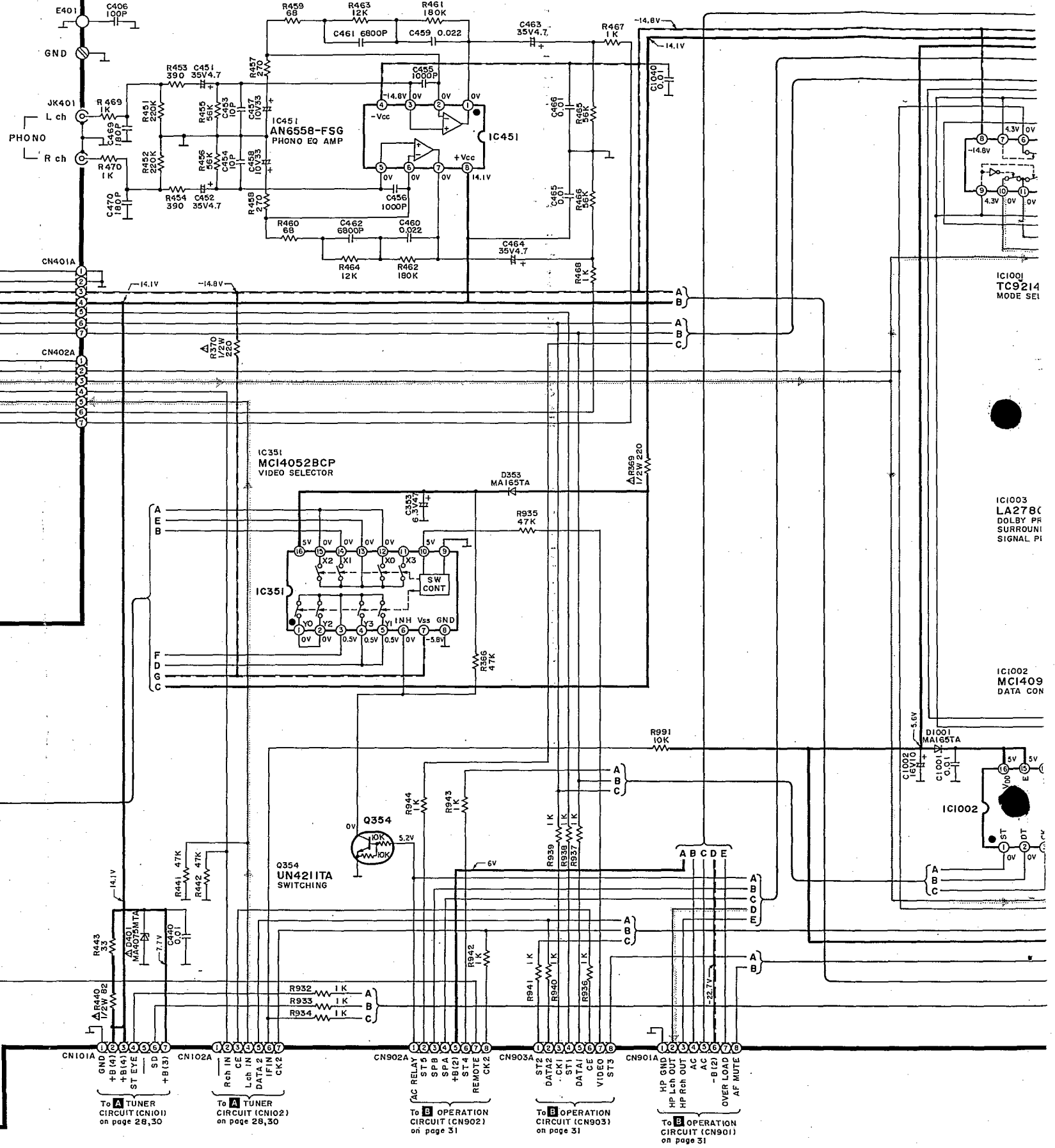
1 2 3 4 5 6 7 8 9 10

A B C D E F

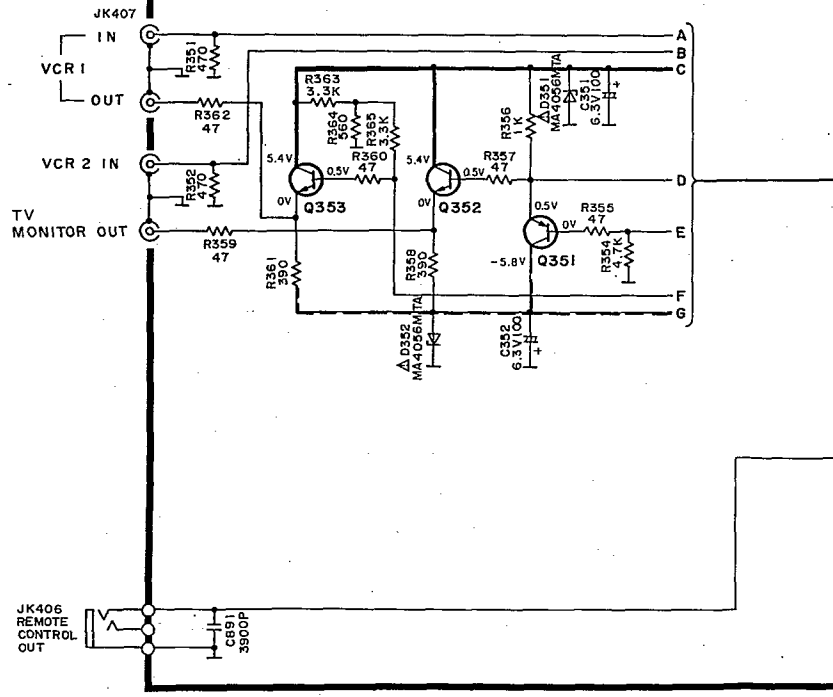
**F** IN/OUT TERMINAL CIRCUIT



**G** MAIN CIRCUIT (PHONO EQ/VIDEO SELECTOR/DOLBY PRO LOGIC/CENTER, REAR VOLUME/POWER AMP/REGULATOR)

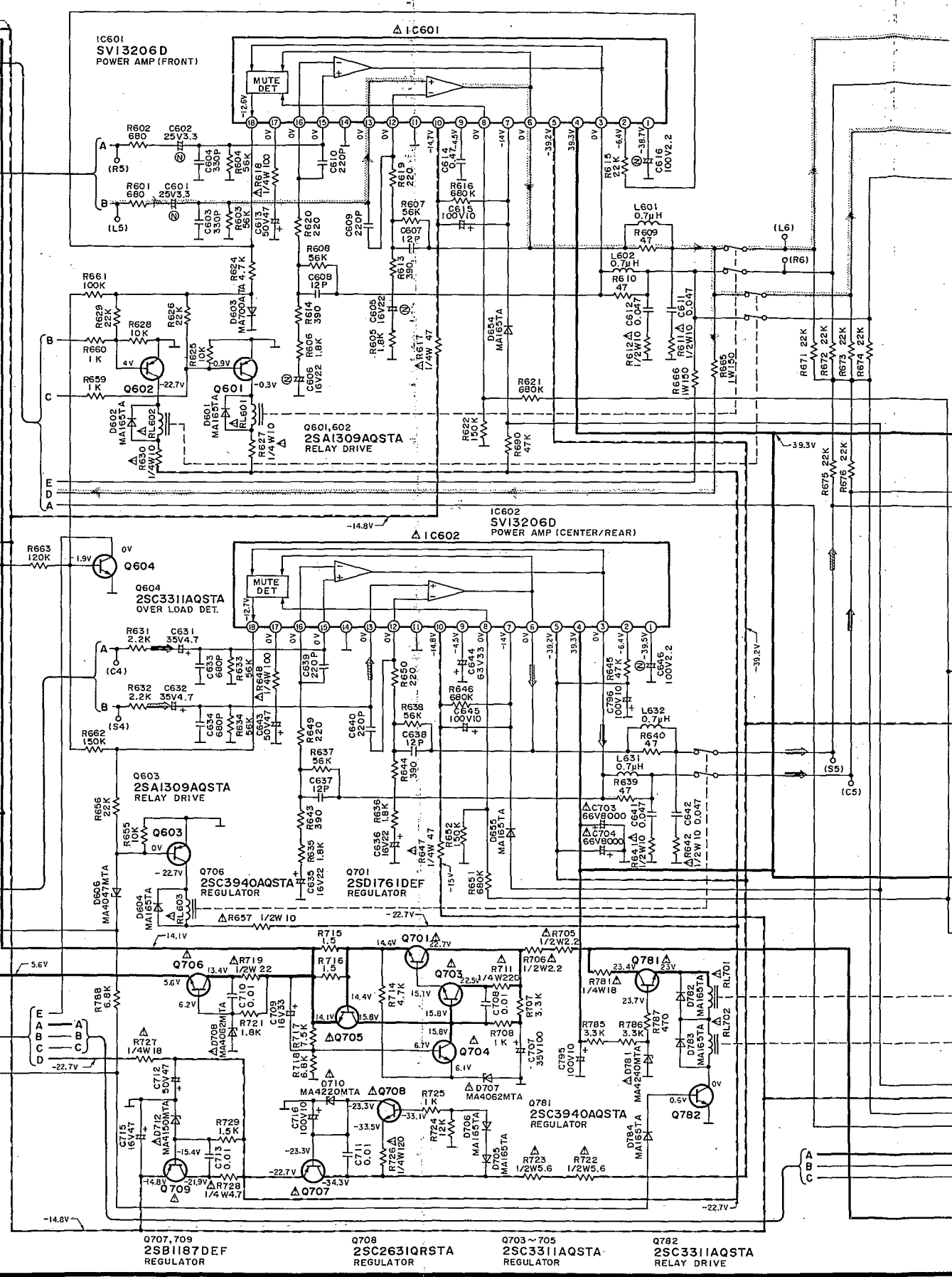
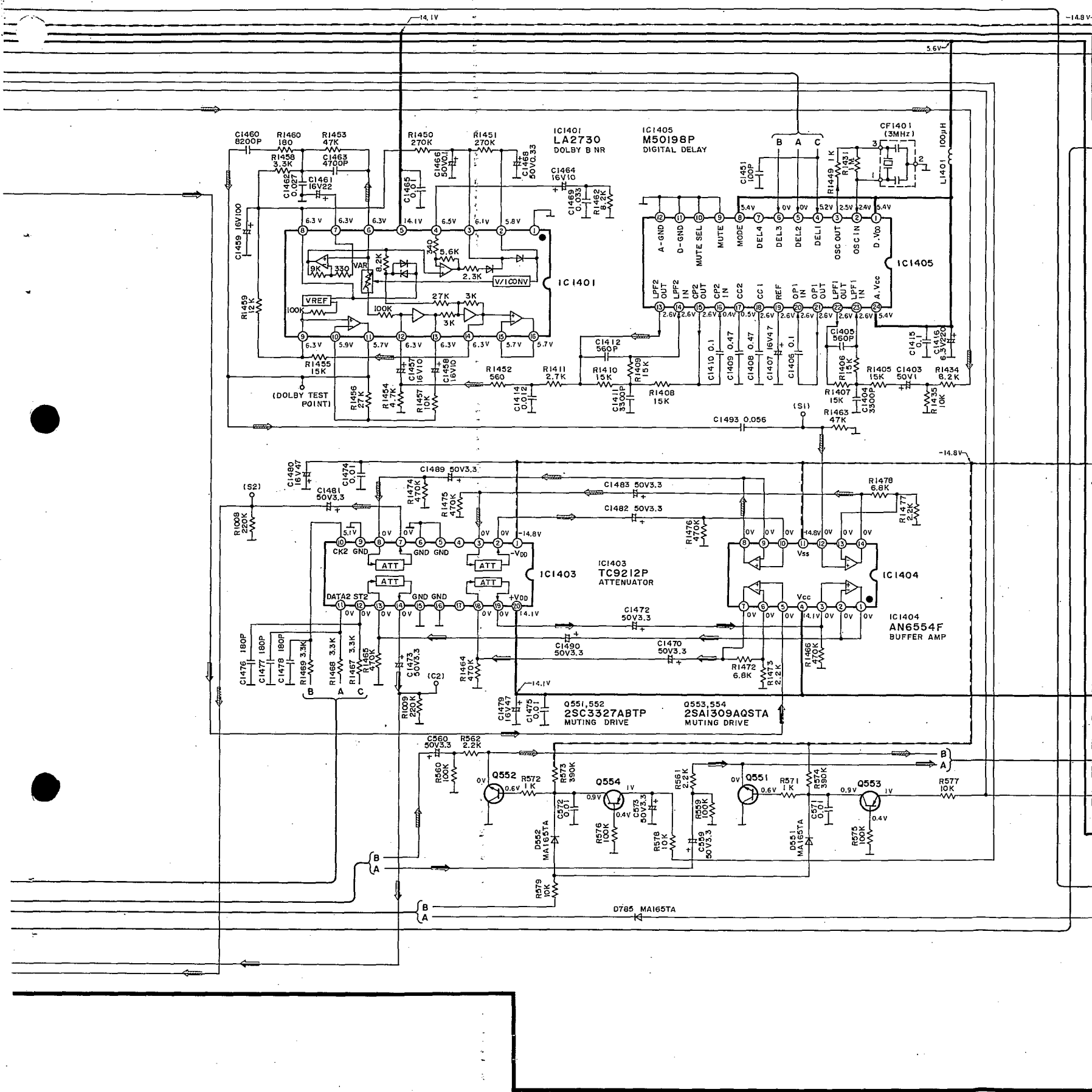


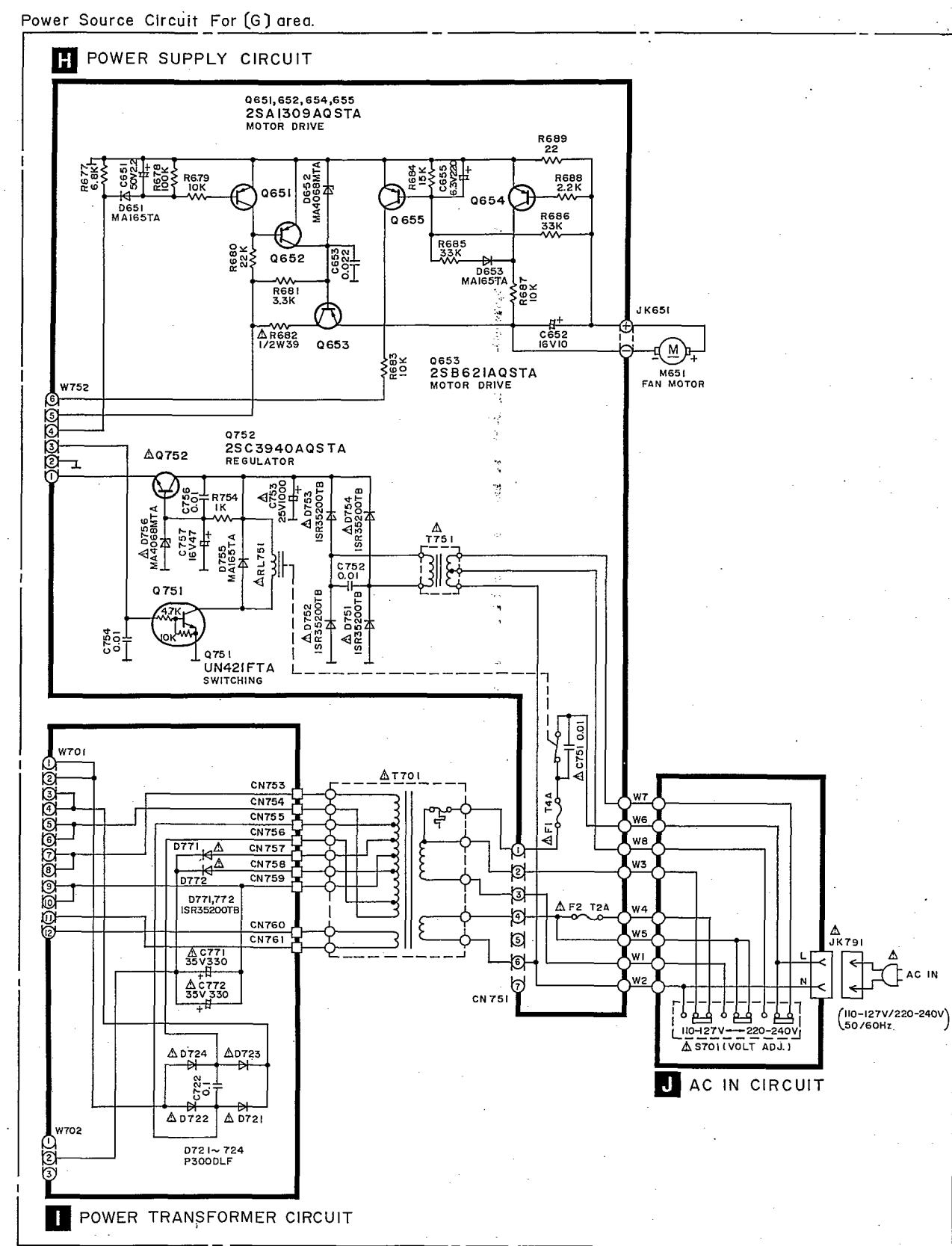
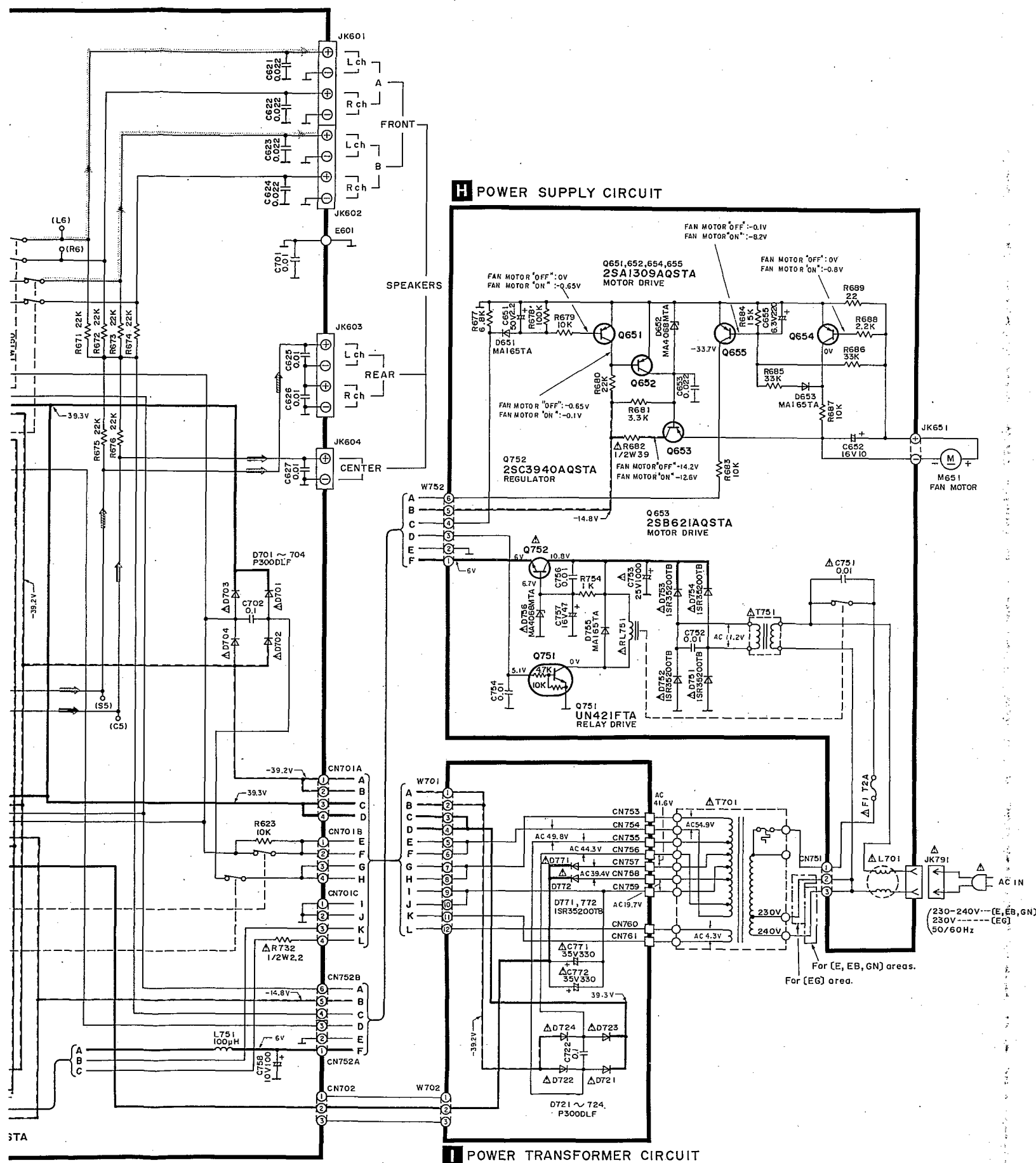
**VIDEO**











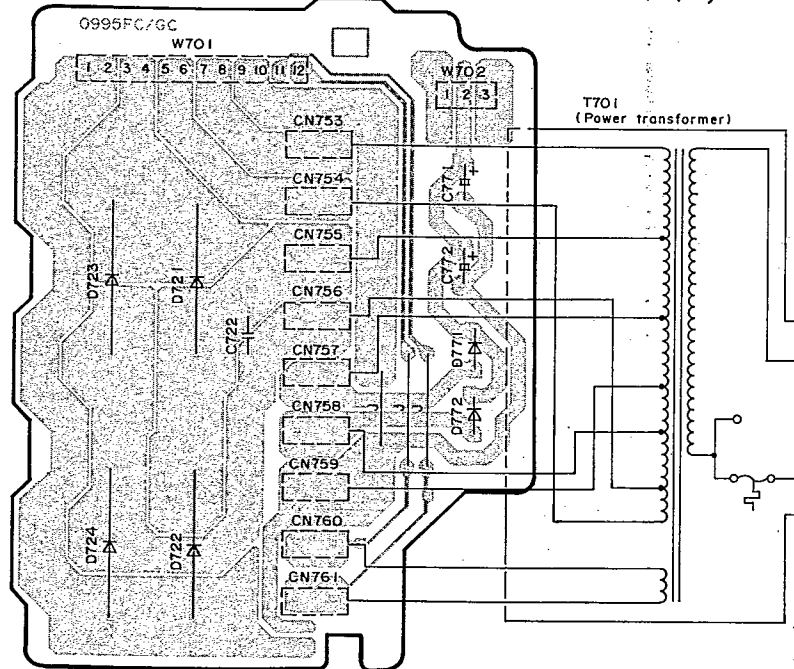


PRINTED CIRCUIT BOARDS

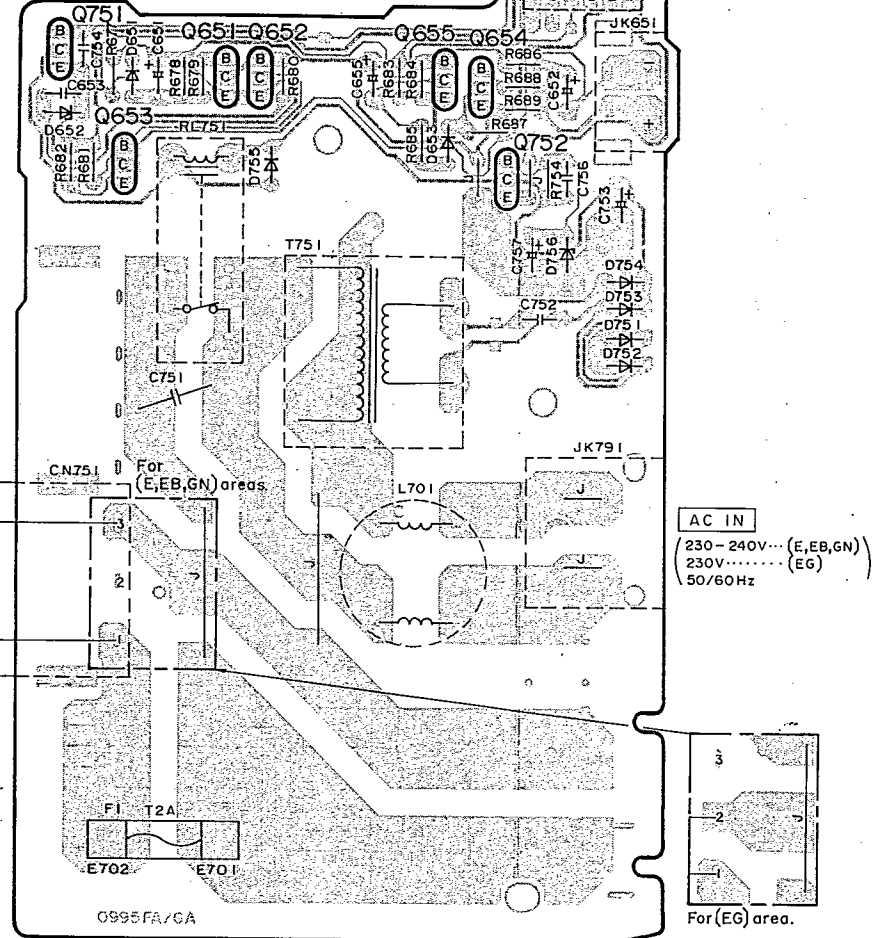
A  
B  
C  
D  
E  
F

1 2 3 4 5 6 7 8 9 10

**I** POWER TRANSFORMER P.C.B. (REP I596B-P... (E,EB)  
REP I596C-P... (EG)  
REP I596E-P... (GN)

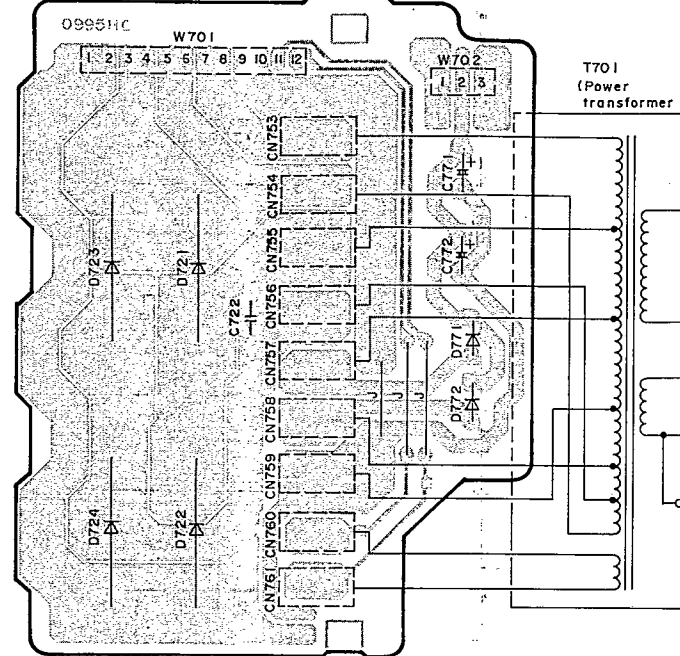


**H** POWER SUPPLY P.C.B. (REP I596B-P... (E,EB)  
REP I596C-P... (EG)  
REP I596E-P... (GN)

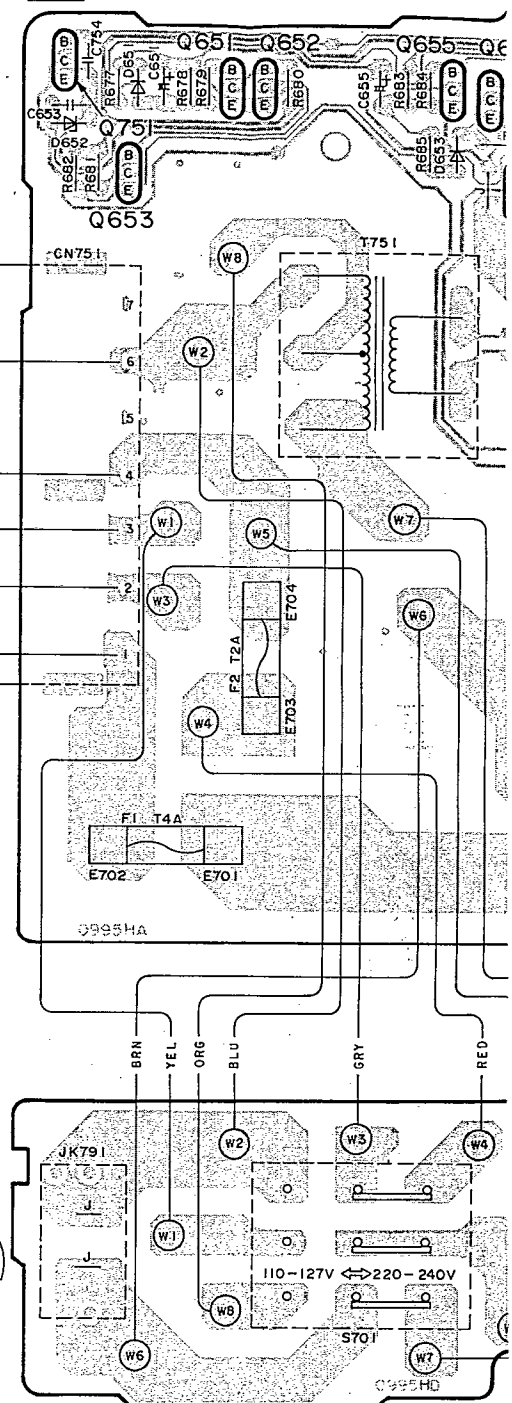


Power Source P.C.B. For (G) area.

**I** POWER TRANSFORMER P.C.B. (REP I596D-P)

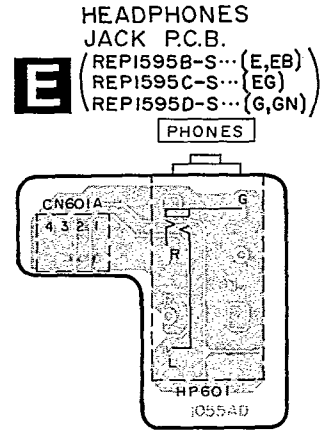
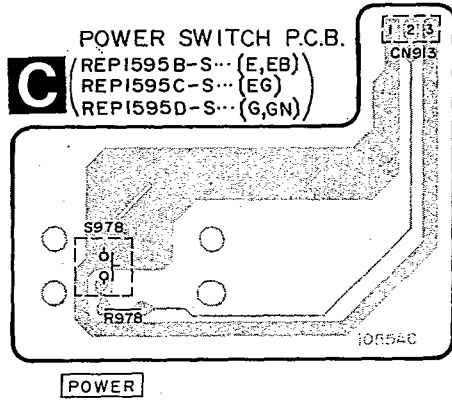


**H** POWER SUPPLY P.C.B. (REP I596D-P)

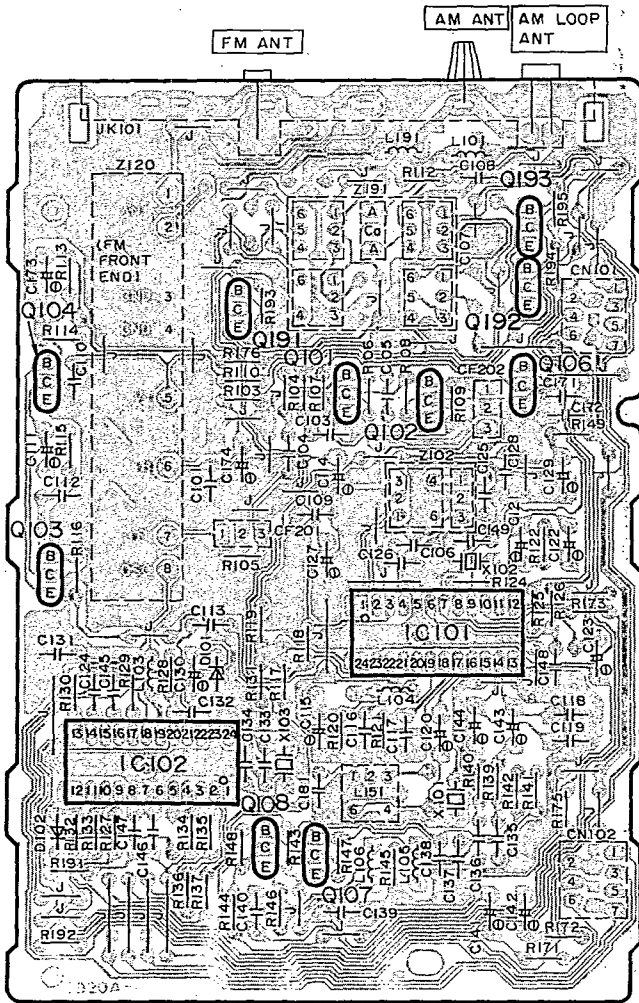


**J** AC IN P.C.B. (REP I596D-P)

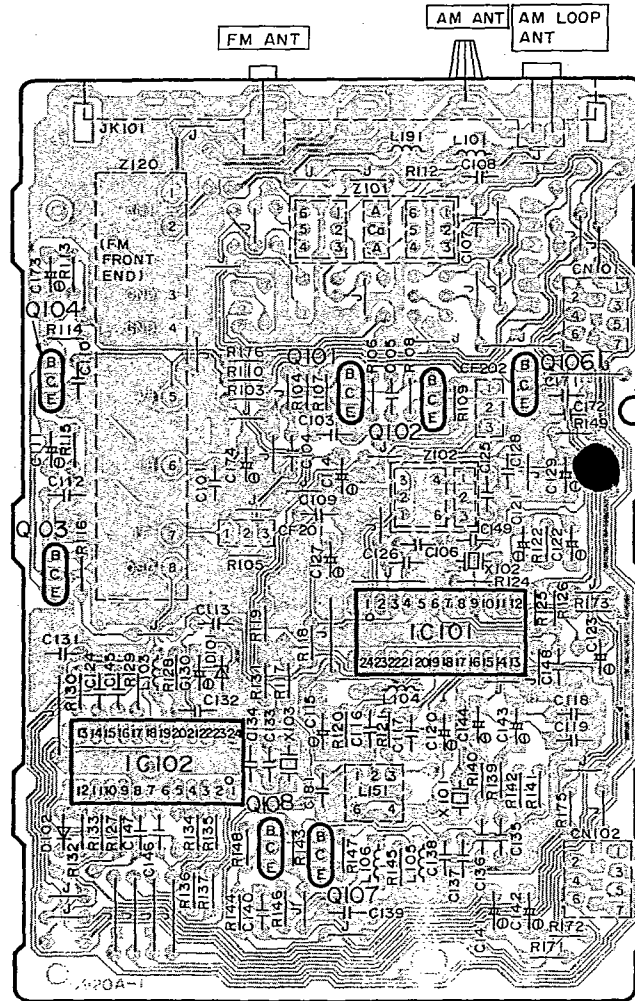




**A** TUNER P.C.B. For (E,EB,G,GN) areas.  
 (REPI452H-T)

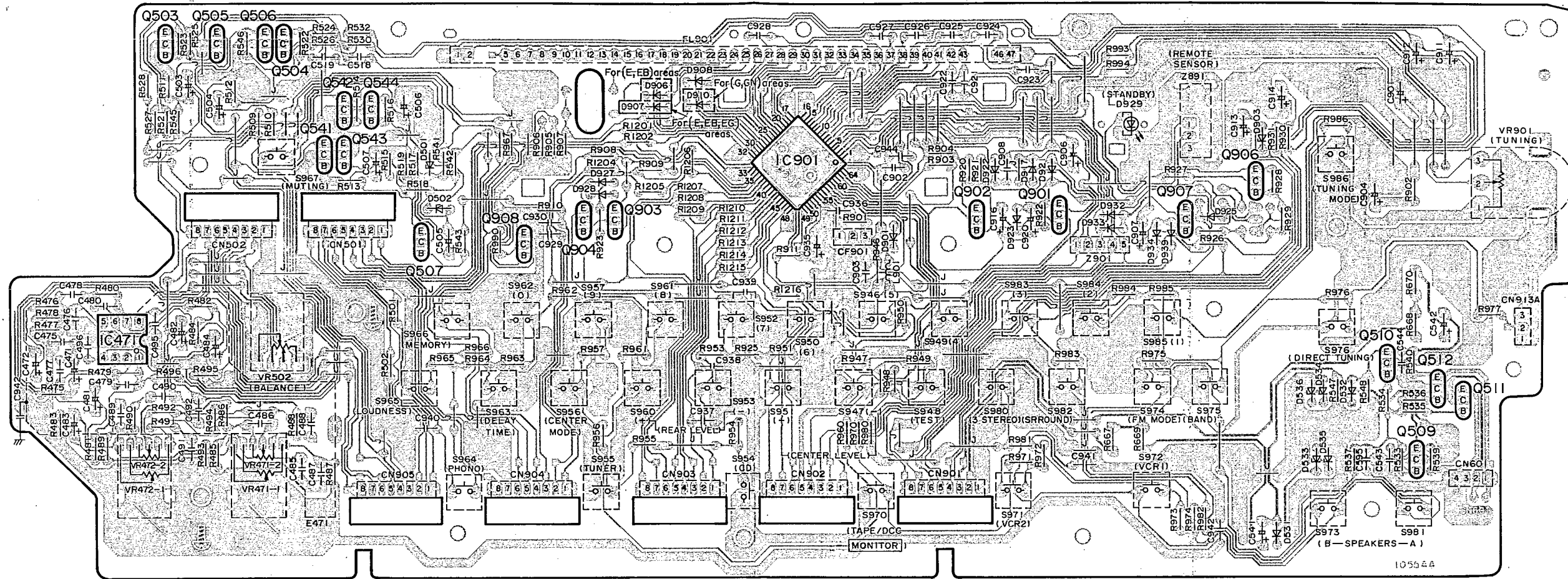


**A** TUNER P.C.B. For (EG) area.  
 (REPI452G-T)



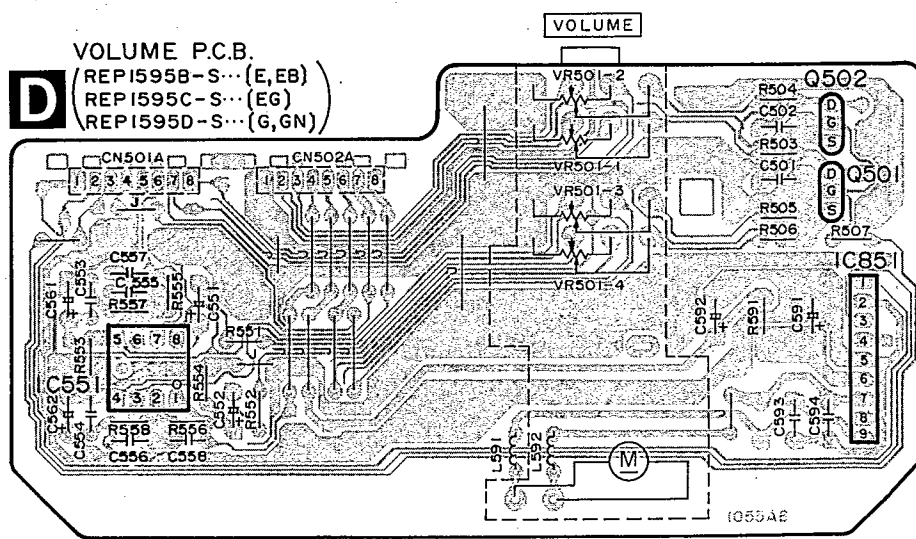
1950-1951

**B** OPERATION P.C.B. (REPI595B-S... (E, EB)  
REPI595C-S... (EG)  
REPI595D-S... (G, GN)



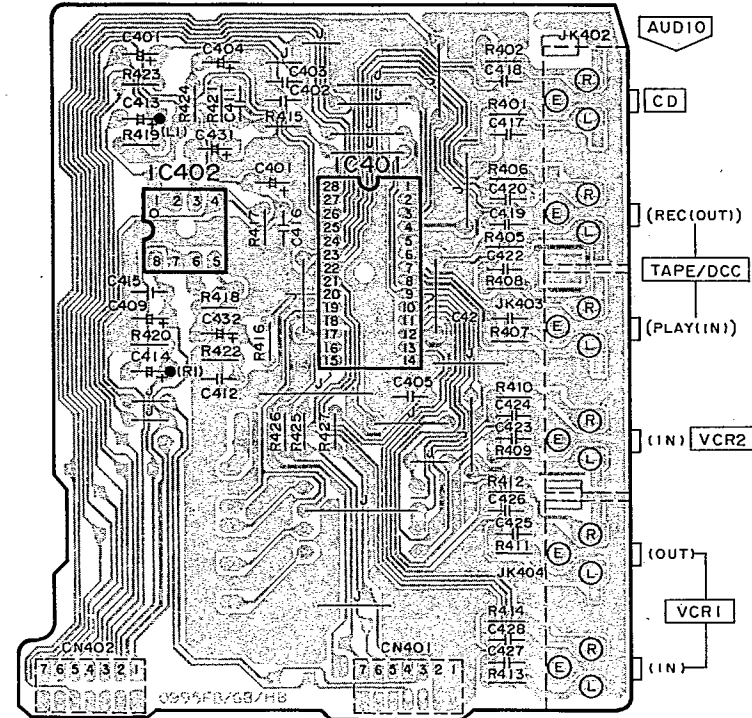
TREBLE BASS

**D** VOLUME P.C.B. (REPI595B-S... (E, EB)  
REPI595C-S... (EG)  
REPI595D-S... (G, GN)

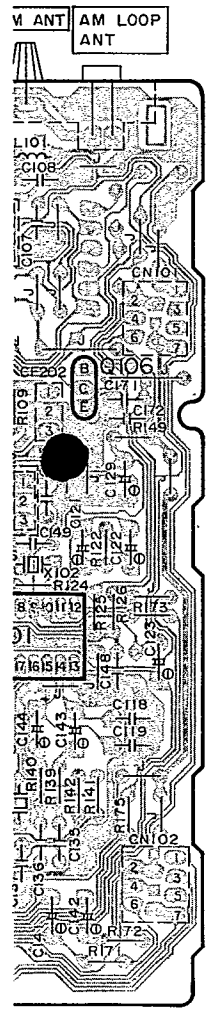


10554E

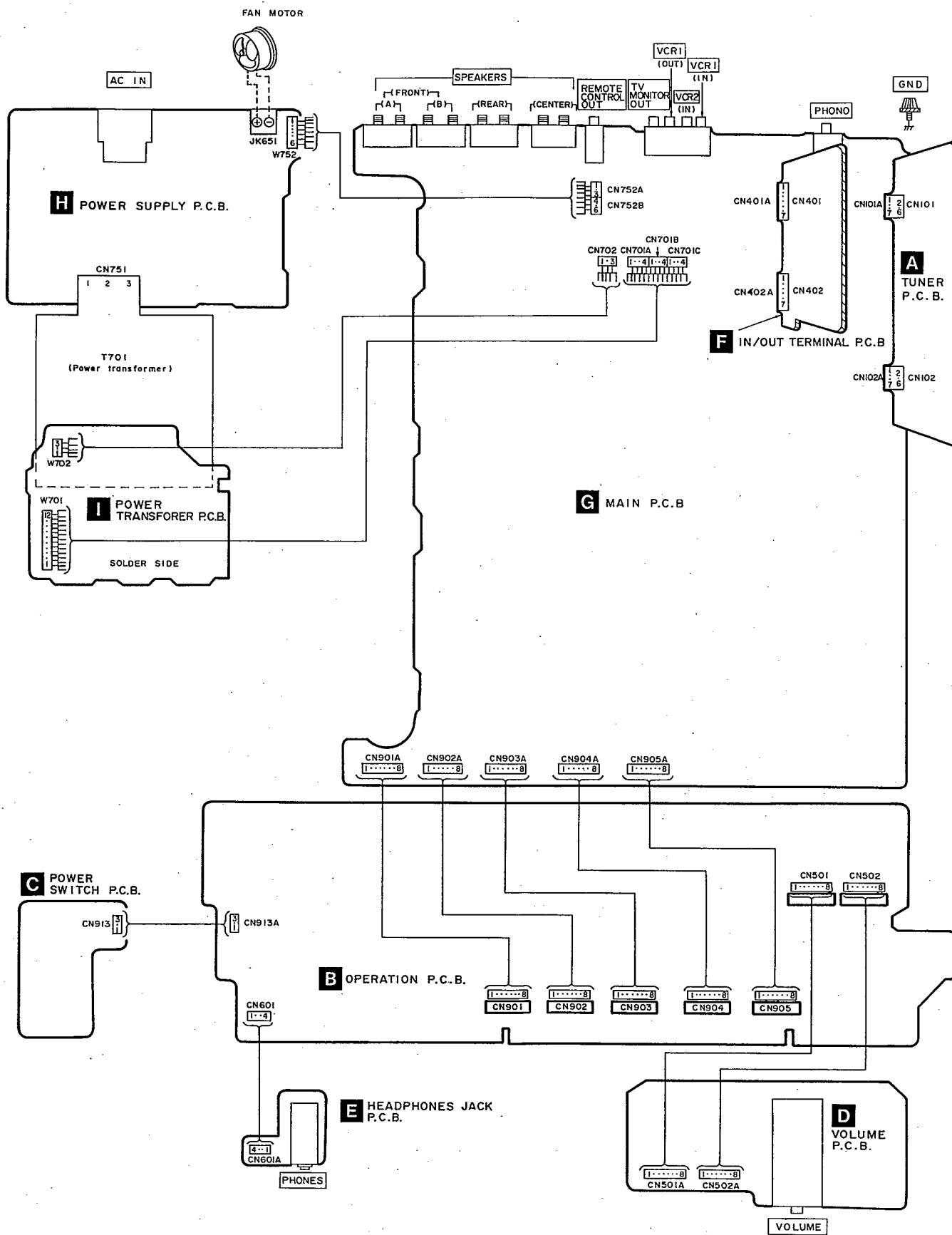
**F** IN/OUT TERMINAL P.C.B. (REPI596B-P... (E, EB)  
REPI596C-P... (EG)  
REPI596D-P... (G)  
REPI596E-P... (GN)



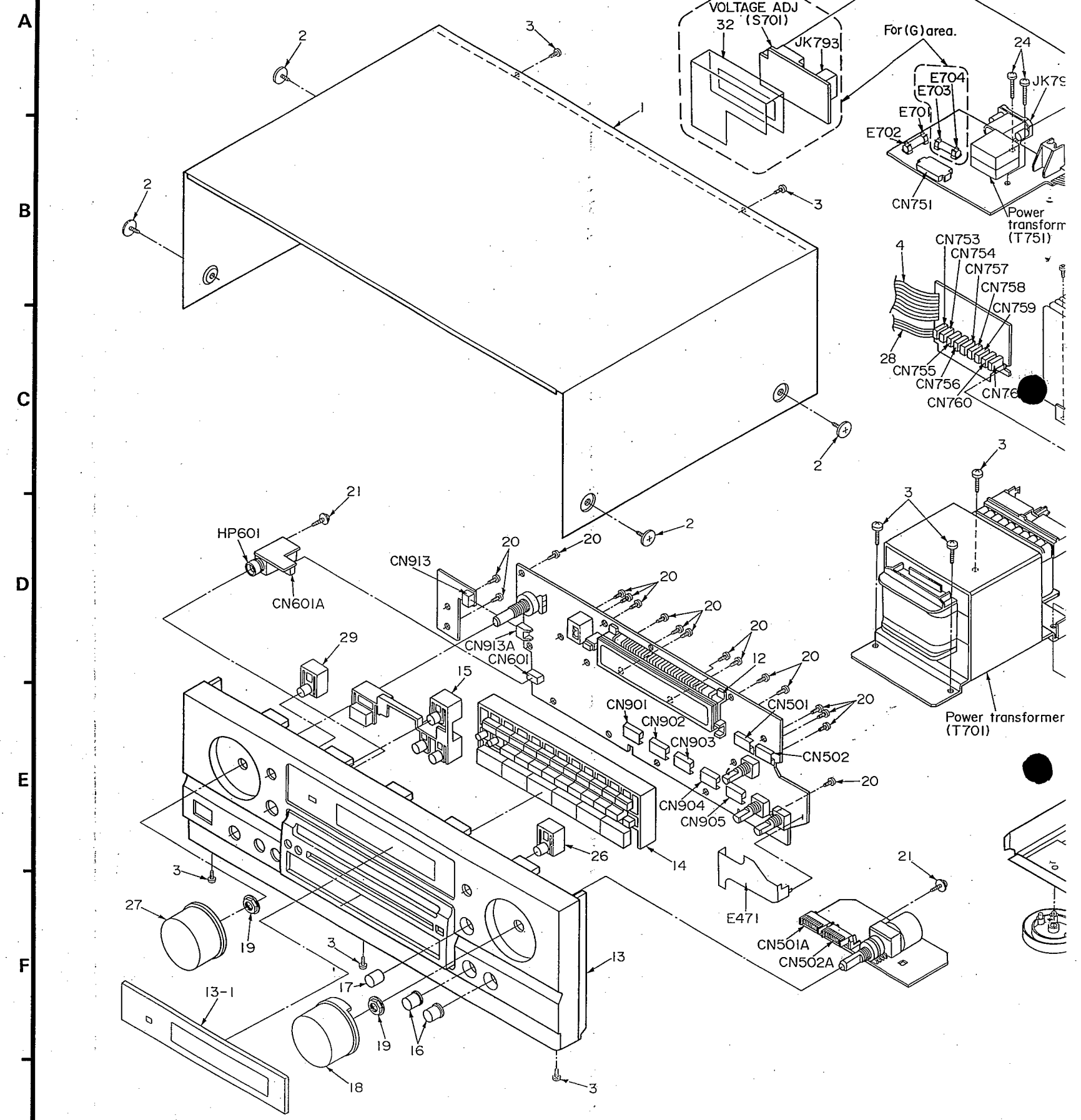
10554F

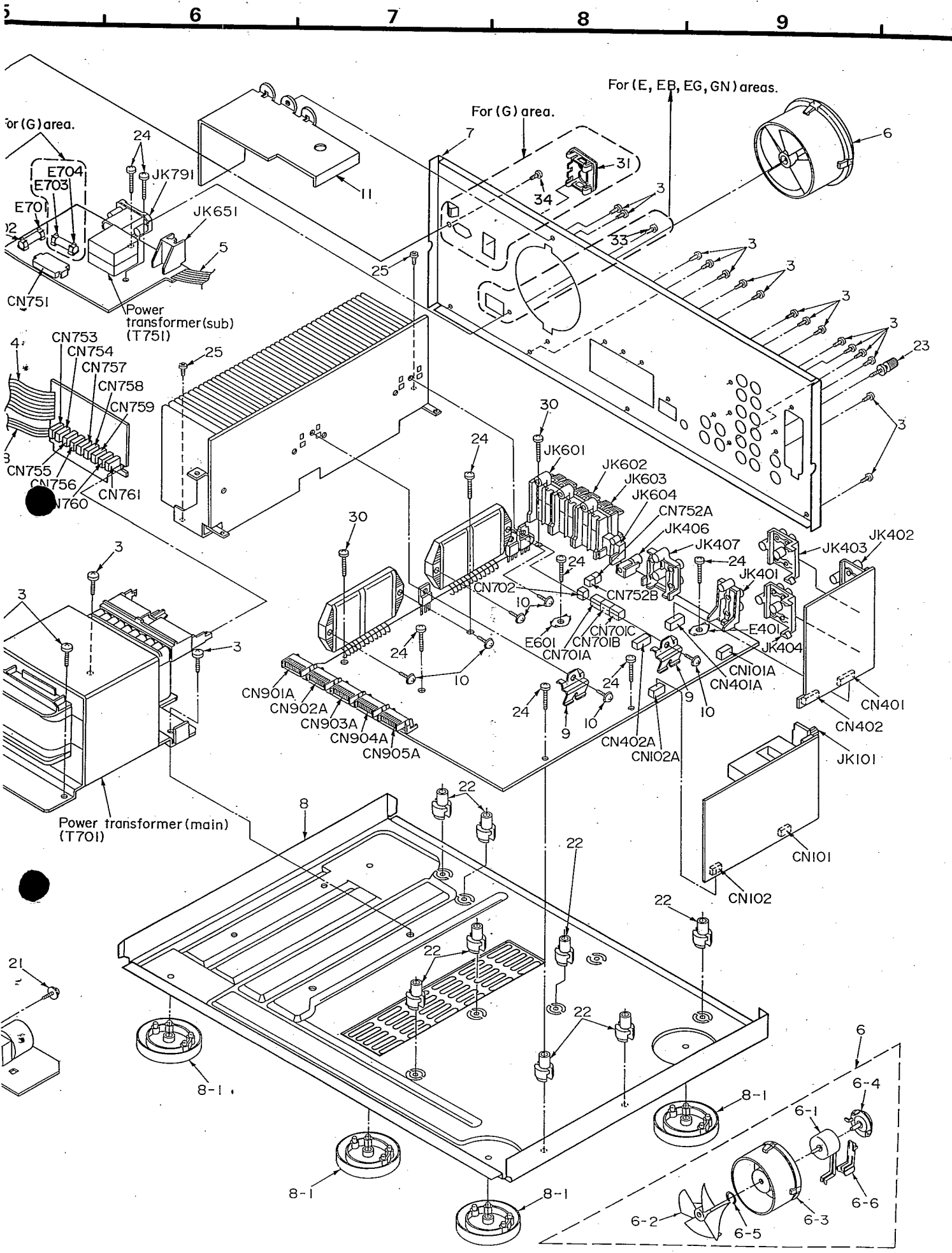


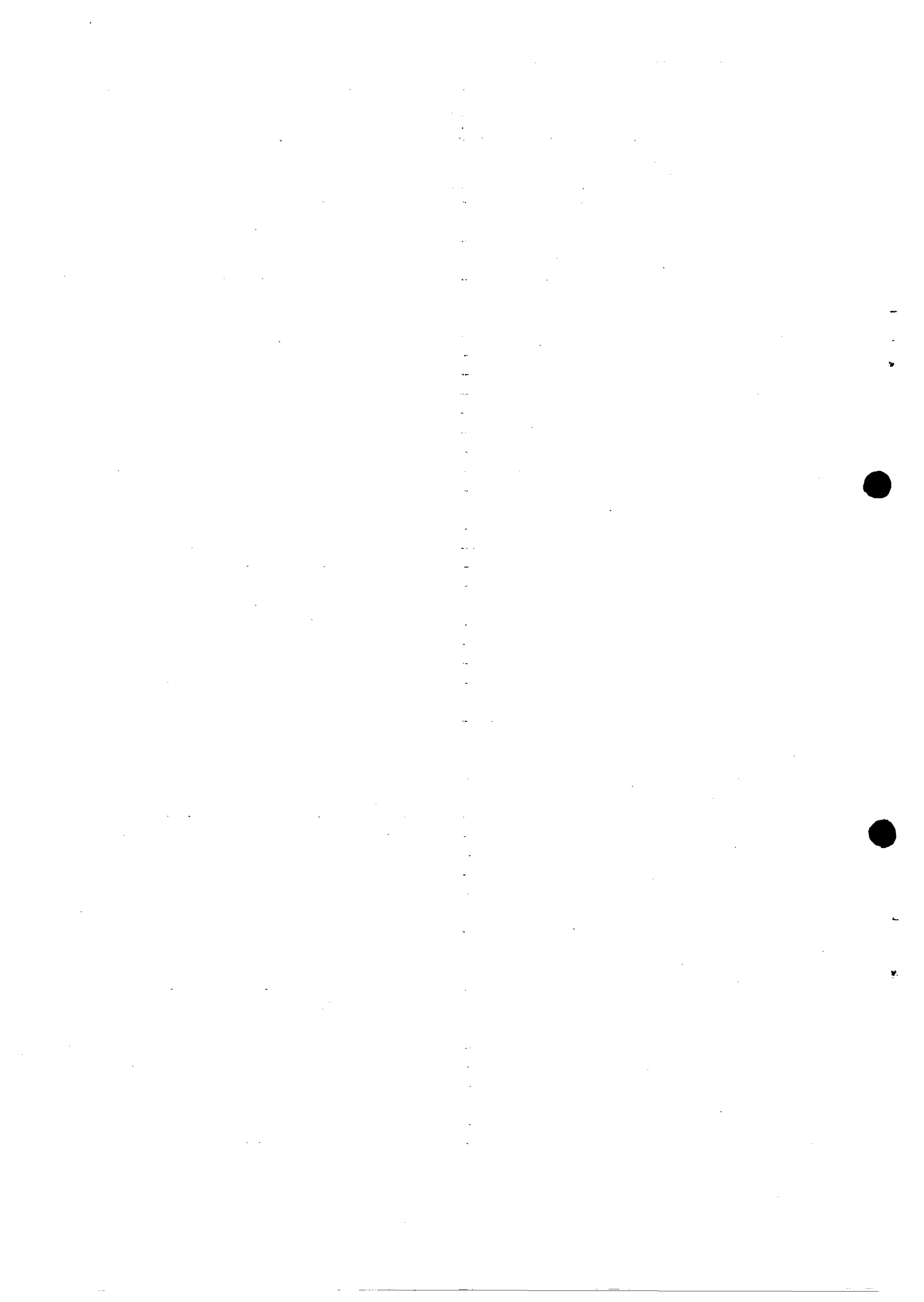
WIRING CONNECTION DIAGRAM



CABINET PARTS LOCATION









# 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 parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indications can be used for all areas.

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

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		34	XTBS3+8JFZ1	SCREW	(G)
						PACKING MATERIAL	
1	RKM0041A-K	CABINET		P1	RPG1670	PACKING CASE	(E, G, GN)
2	SNE2129-3	SCREW		P1	RPG1671-1	PACKING CASE	(EB)
3	XTBS3+8JFZ1	SCREW		P1	RPG1672	PACKING CASE	(EG)
4	RWJ1812440QK	FLAT CABLE (W701) (12P)		P2	RPN0682	CUSHION	
5	RWJ1806300QK	FLAT CABLE (W752) (6P)		P3	RPQ0164	PAD (ACCESSORIES)	(EB, EG, G, GN)
6	REMO020-1	FAN UNIT		P4	RPH0032	MIRROR SHEET	(EB, GN)
6-1	MDN-4RB4MRC	MOTOR		P5	XZB60X65A01Z	PROTECTION BAG (UNIT)	
6-2	SHE232-1	FAN				ACCESSORIES	
6-3	RMQ0209-K	FAN CASE		A1	RFSAGX550E	INSTRUCTION MANUAL ASS'Y	(E)
6-4	RMQ0208-K	FAN CAP		A1	RFSAGX550EB	INSTRUCTION MANUAL ASS'Y	(EB)
6-5	SUS271	SPRING		A1	RFSAGX550EG	INSTRUCTION MANUAL ASS'Y	(EG)
6-6	RMQ0212-K	FAN TERMINAL CAP		A1	RFSAGX550G	INSTRUCTION MANUAL ASS'Y	(G)
7	RGR0168C-B	REAR PANEL	(EB, GN)	A1	RFSAGX550GN	INSTRUCTION MANUAL ASS'Y	(GN)
7	RGR0168C-C	REAR PANEL	(EG)	A2	RJA0019-2K	AC POWER SUPPLY CORD	(E, EG, G) $\Delta$ (SF)
7	RGR0168D-A	REAR PANEL	(G)	A2	VJA0733	AC POWER SUPPLY CORD	(EB) $\Delta$ (SF)
7	RGR0168C-A	REAR PANEL	(E)	A2	RJA0036-K	AC POWER SUPPLY CORD	(GN) $\Delta$ (SF)
8	RFKJAGX350PK	BOTTOM CHASSIS ASS'Y		A3	RSAD007	FM INDOOR ANTENNA	
8-1	RKA0053-A	FOOT		A4	SPB1163T	AM LOOP ANTENNA SET	
9	RMCO158	TRANSISTOR HOLDER		A4-1	SMA233-1M	AM ANTENNA HOLDER	
10	XTW3+15T	SCREW		A4-2	XTN3+10AFZ	SCREW	
11	RMA0692	WIND CAVE		A5	RQCB0169	SERVICENTER LIST	
12	RMNO205	FL HOLDER		A6	RQA0013	WARRANTY CARD	(E, EB, EG)
13	RFKGAGX550EK	FRONT PANEL ASS'Y		A6	RQX7433ZA	WARRANTY CARD	(GN)
13-1	RKWO268A-Q	TRANSPARENT PLATE		A7	RAK-SA704XH	REMOTE CONTROL TRANSMITTER	(E, EB, EG)
14	RGU0837B-K	SELECTOR BUTTON		A7	RAK-SA903XH	REMOTE CONTROL TRANSMITTER	(G, GN)
15	RFKNAGX550PA	MODE BUTTON ASS'Y		A7-1	RKK0020-K	BATTERY COVER	
16	RGW012-K1	BASS/TREBLE KNOB		A8	RQCA0259	R. C. CAUTION LABEL	(G, GN)
17	RGW0020	BALANCE KNOB		A9	SJP9009	ATTACHMENT PLUG	(EB) $\Delta$
18	RGW0163-K	VOLUME KNOB		A10	RFE0014	ANTENNA PLUG	(G, GN)
19	RHN90001	NUT		A11	RQLA0134	VOLTAGE CAUTION LABEL	(G)
20	XTBS26+8J	SCREW		A12	SJP5213-2	POWER PLUG ADAPTOR	(G) $\Delta$
21	XTWS3+10T	SCREW		A13	SQX40022	AM STEREO CAUTION LABEL	(GN)
22	SHE187-2	P. C. B SUPPORT					
23	SNE2123	GND TERMINAL					
24	XTB3+20JFZ	SCREW					
25	XTB3+8JFZ	SCREW					
26	RFKNAGX350PB	MUTING BUTTON ASS'Y					
27	RGW0171-K	TUNING KNOB					
28	RWJ1803440QK	FLAT CABLE (W702) (3P)					
29	RFKNAGX550PB	TUNING MODE ASS'Y					
30	XTWS3+8T	SCREW					
31	SJS9231B	AC INLET COVER	(G)				
32	RMZ0243	BARRIER	(G)				
33	XTBS3+8JFZ1	SCREW	(E, EB, EG, GN)				

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)		Q752	2SC3940AQSTA	TRANSISTOR	△
				Q781	2SC3940AQSTA	TRANSISTOR	△
				Q782	2SC3311A-Q	TRANSISTOR	
IC101	LA1830-H3	FM/AM IF AMP. /AM OSC		Q901	UN4214TA	TRANSISTOR	
IC102	LC7218	PLL FREQ. SYNTHESIZER		Q902	2SA1309A-R	TRANSISTOR	△
IC351	MC14052BCP	VIDEO SELECTOR		Q903	UN4113TA	TRANSISTOR	
IC401	TC9163N	INPUT SELECTOR		Q904	UN4214TA	TRANSISTOR	
IC402	UPC4570C	BEFFER AMP		Q906	2SA1309A-R	TRANSISTOR	
IC451	AN6558-FSG	PHONO EQ AMP		Q907	UN4113TA	TRANSISTOR	
IC471	UPC4570C	TONE AMP		Q908	UN4211	TRANSISTOR	
IC551	M5218AP	PRE AMP		Q1001	UN4213	TRANSISTOR	
IC601, 602	SV13206D	POWER AMP	△	Q1002	2SC3940AQSTA	TRANSISTOR	
IC851	BA6218	VOLUME MOTOR DRIVE				DIODE(S)	
IC901	LC8A012A5328	MICROCOMPUTER					
IC1001	TC9214P	MODE SELECT		D101	MA4051MTA	DIODE	△
IC1002	MC14094BCP	DATA CONTROL		D102	MA165	DIODE	
IC1003	LA2780N	DOLBY PRO-LOGIC		D351, 352	MA4056MTA	DIODE	△
IC1401	LA2730	DOLBY B NR		D353	MA165	DIODE	
IC1403	TC9212P	ATTENUATOR		D401	MA4075MTA	DIODE	△
IC1404	AN6554F	BUFFER AMP		D501, 502	MA4030MTA	DIODE	
IC1405	M50198P	DIGITAL DELAY		D531, 532	MA165	DIODE	
		TRANSISTOR(S)		D533-536	MA4030MTA	DIODE	
				D551, 552	MA165	DIODE	
Q101, 102	2SC2787L	TRANSISTOR		D601, 602	MA165	DIODE	
Q103, 104	2SC2785FE	TRANSISTOR		D603	MA700	DIODE	
Q106	UN411FTA	TRANSISTOR		D604	MA165	DIODE	
Q107, 108	2SC3311A-Q	TRANSISTOR		D606	MA4047MTA	DIODE	
Q191-193	2SC3311A-Q	TRANSISTOR	(E, EB, G, GN)	D651	MA165	DIODE	
Q351	2SA1309A-R	TRANSISTOR		D652	MA4068M	DIODE	
Q352, 353	2SC3311A-Q	TRANSISTOR		D653-655	MA165	DIODE	
Q354	UN4211	TRANSISTOR		D701-704	P300DLF	DIODE	△
Q501, 502	2SJ40CDTA	TRANSISTOR		D705, 706	MA165	DIODE	
Q503-506	2SC3327-A	TRANSISTOR		D707, 708	MA4062MTA	DIODE	△
Q507	2SA1309A-R	TRANSISTOR		D710	MA4220MTA	DIODE	△
Q509-512	2SC3327-A	TRANSISTOR		D712	MA4150M	DIODE	△
Q541, 542	2SA1309A-R	TRANSISTOR		D721-724	P300DLF	DIODE	△
Q543, 544	2SC3311A-Q	TRANSISTOR		D751-754	1SR35200TB	DIODE	△
Q551, 552	2SC3327-A	TRANSISTOR		D755	MA165	DIODE	
Q553, 554	2SA1309A-R	TRANSISTOR		D756	MA4068M	DIODE	△
Q601-603	2SA1309A-R	TRANSISTOR		D771, 772	1SR35200TB	DIODE	△
Q604	2SC3311A-Q	TRANSISTOR		D781	MA4240H	DIODE	△
Q651, 652	2SA1309A-R	TRANSISTOR		D782-785	MA165	DIODE	
Q653	2SB621AQSTA	TRANSISTOR		D901	1SS291TA	DIODE	
Q654, 655	2SA1309A-R	TRANSISTOR		D903	MA4056MTA	DIODE	△
Q701	2SD1761DEF	TRANSISTOR	△	D906	MA165	DIODE	(E, EB)
Q703-705	2SC3311A-Q	TRANSISTOR	△	D907	MA165	DIODE	(E, EB, EG)
Q706	2SC3940AQSTA	TRANSISTOR	△	D908	MA165	DIODE	
Q707	2SB1187DEF	TRANSISTOR	△	D910	MA165	DIODE	(G, GN)
Q708	2SC2631QRSTA	TRANSISTOR	△	D917	1SS291TA	DIODE	
Q709	2SB1187DEF	TRANSISTOR	△	D921	MA165	DIODE	
Q751	UN421FTA	TRANSISTOR		D922	MA4039MTA	DIODE	△

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
D923	MA165	DIODE		CF201	RLFFETNGD01L	FILTER	
D925	MA165	DIODE		CF202	RLFFETMGD01L	FILTER	
D927, 928	MA165	DIODE		CF901	EFOEG6004T4	OSCILLATOR (6MHz)	
D929	LN018304P	L. E. D.		CF1401	EFOGC3004T4	OSCILLATOR (3MHz)	
D932-934	MA165	DIODE		X101	RSXZ456KM07M	OSCILLATOR (456KHz)	
D939	MA165	DIODE		X102	RLFDFTD03M2	OSCILLATOR (10.7MHz)	
D1001	MA165	DIODE		X103	SVQ49U722-S	OSCILLATOR (7.2MHz)	
D1004, 1005	MA165	DIODE				DISPLAY TUBE (S)	
		VARIABLE RESISTOR(S)					
VR471, 472	EVJYA1FA5C15	BASS/TREBLE		FL901	RSL0138-F	DISPLAY TUBE	
VR501	EUWMK3002B15	VOLUME CONTROL				FUSE (S)	
VR502	EVJ02QF02G15	BALANCE CONTROL					
VR901	EVQWPOF2024B	TUNING CONTROL		F1	XBA2C20TBO	FUSE 250V, T2A	(E, EB, EG, GN) Δ
		COMPONENT COMBINATION (S)		F1	XBA2C40TBO	FUSE 250V, T4A	(G) Δ
				F2	XBA2C20TBO	FUSE 250V, T2A	(G) Δ
Z101	RLA2Z002M-T	COMPONENT COMBINATION	(EG)			SWITCH(ES)	
Z102	RLI2Z006M-T	COMPONENT COMBINATION		S701	ESD26840A	VOLTAGE ADJ.	(G) Δ
Z120	ENV17290G1	FM FRONT END		S946	EVQ21405R	NUMERIC (5)	
Z191	RLA6Z005M-T	COMPONENT COMBINATION	(E, EB, G, GN)	S947	EVQ21405R	CENTER LEVEL (-)	
Z891	RCDHC-278	REMOTE SENSOR		S948	EVQ21405R	TEST	
Z901	EXBF5E104J	COMPONENT COMBINATION		S949	EVQ21405R	NUMERIC (4)	
		COIL (S)		S950	EVQ21405R	NUMERIC (6)	
				S951	EVQ21405R	CENTER LEVEL (+)	
L101	ELESN1ROMA	COIL	(E, EB, G, GN)	S952	EVQ21405R	NUMERIC (7)	
L101	ELESNR56MA	COIL	(EG)	S953	EVQ21405R	REAR LEVEL (-)	
L103	ELEXTR47MA9	COIL		S954	EVQ21405R	CD	
L104	ELEXT100KA9	COIL		S955	EVQ21405R	TUNER	
L105, 106	RLQZB822KT-D	COIL		S956	EVQ21405R	CENTER MODE	
L151	SLM1B10M-1M	COIL		S957	EVQ21405R	NUMERIC (9)	
L191	ELESN1ROMA	COIL	(E, EB, G, GN)	S960	EVQ21405R	REAR LEVEL (+)	
L191	ELESNR56MA	COIL	(EG)	S961	EVQ21405R	NUMERIC (8)	
L591, 592	RLQZP1R0KT-Y	COIL		S962	EVQ21405R	NUMERIC (0)	
L601, 602	SLQY07G-40	COIL		S963	EVQ21405R	DELAY TIME	
L631, 632	SLQY07G-40	COIL		S964	EVQ21405R	PHONO	
L701	SLQZ650MH49	COIL	(E, EB, EG, GN) Δ	S965	EVQ21405R	LOUDNESS	
L751	ELEPK101KA	COIL		S966	EVQ21405R	MEMORY	
L901	RLQZP101KT-Y	COIL		S967	EVQ21405R	MUTING	
L1401	ELEPK101KA	COIL		S970	EVQ21405R	TAPE/DCC	
		TRANSFORMER (S)		S971	EVQ21405R	VCR2	
				S972	EVQ21405R	VCR1	
T701	RTP1Q5E009-V	POWER TRANSFORMER (MAIN)	(E, EB, EG, GN) Δ	S973	EVQ21405R	SPEAKERS-B	
T701	RTP1Q5E010-V	POWER TRANSFORMER (MAIN)	(G) Δ	S974	EVQ21405R	FM MODE	
T751	RTP1I5E003-V	POWER TRANSFORMER (SUB)	(E, EB, EG, GN) Δ	S975	EVQ21405R	BAND	
T751	RTP1I5E005-V	POWER TRANSFORMER (SUB)	(G) Δ	S976	EVQ21405R	DIRECT TUNING	
		FILTER(S) AND OSCILLATOR		S978	EVQ21405R	POWER	
				S980	EVQ21405R	3 STEREO	
				S981	EVQ21405R	SPEAKERS-A	
				S982	EVQ21405R	SURROUND	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
S983	EVQ21405R	NUMERIC (3)		CN902A	RJU003K008M1	SOCKET (8P)	
S984	EVQ21405R	NUMERIC (2)		CN903A	RJU003K008M1	SOCKET (8P)	
S985	EVQ21405R	NUMERIC (1)		CN904A	RJU003K008M1	SOCKET (8P)	
S986	EVQ21405R	TUNING MODE		CN905A	RJU003K008M1	SOCKET (8P)	
		RELAY (S)		CN913A	SJS50382JQH	CONNECTOR (3P)	
				CN701B	RJS1A1704	CONNECTOR (4P)	
RL601-603	RSY0013M-0	RELAY	△	CN752B	RJS1A1703	CONNECTOR (3P)	
RL701, 702	RSY0012-0	RELAY	△	CN701C	RJS1A1704	CONNECTOR (4P)	
RL751	RSY0012-0	RELAY	△			GND PLATE	
		JACK (S) AND TERMINALS		E401	SNE1004-1	GND PLATE	
HP601	RJJ63TA01	HEADPHONES JACK		E471	RSC0319	GND PLATE	
JK101	RJH4202M	ANT TERMINAL		E601	SNE1004-1	GND PLATE	
JK401	SJF3068N	PHONO TERMINAL		E701, 702	EYF52BC	FUSE HOLDER	
JK402	SJF3069N	CD IN/REC OUT TERMINAL		E703, 704	EYF52BC	FUSE HOLDER	(G)
JK403	SJF3069N	PLAY IN/VCR2 IN TERMINAL					
JK404	SJF3069N	VCRI OUT/VCRI IN TERMINAL					
JK406	RJJ33TR01	REMOTE CONTROL OUT TERMINAL					
JK407	SJF3069-3N	TV MONITOR OUT/VCRI/VCR2					
JK601	RJR0054	FRONT SPEAKER (A) TERMINAL					
JK602	RJR0054	FRONT SPEAKER (B) TERMINAL					
JK603	RJR0054	REAR SPEAKER TERMINAL					
JK604	SJF5201-1	CENTER SPEAKER TERMINAL					
JK651	RJS1A7402-1	FAN JACK					
JK791	SJS9236	AC INLET	(E, EB, EG) △				
JK791	SJSD16	AC INLET	(GN) △				
JK791	SJS9231-1B	AC INLET	(G) △				
		CONNECTOR (S) AND SOCKET (S)					
CN101, 102	RJU063W07T	SOCKET (7P)					
CN401, 402	RJU057W007	SOCKET (7P)					
CN501, 502	RJT003K008-1	CONNECTOR (8P)					
CN601	RJT057W004-1	CONNECTOR (4P)					
CN702	RJS1A1703	CONNECTOR (3P)					
CN751	SJS305-1	CONNECTOR (3P)	(E, EB, EG, GN)				
CN751	SJS702-1	CONNECTOR (7P)	(G)				
CN753-761	RJS1A1101T1	CONNECTOR (1P)					
CN901-905	RJT003K008-1	CONNECTOR (8P)					
CN913	SJT30345JQ	CONNECTOR (3P)					
CN101A	RJT063W07T	CONNECTOR (7P)					
CN102A	RJT063W07T	CONNECTOR (7P)					
CN401A	RJT057W007-1	CONNECTOR (7P)					
CN402A	RJT057W007-1	CONNECTOR (7P)					
CN501A	RJU003K008M1	SOCKET (8P)					
CN502A	RJU003K008M1	SOCKET (8P)					
CN601A	RJU057W004	SOCKET (4P)					
CN701A	RJS1A1704	CONNECTOR (4P)					
CN752A	RJS1A1703	CONNECTOR (3P)					
CN901A	RJU003K008M1	SOCKET (8P)					

# RESISTORS AND CAPACITORS

Notes : \* Capacity values are in microfarads ( $\mu\text{F}$ ) 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)

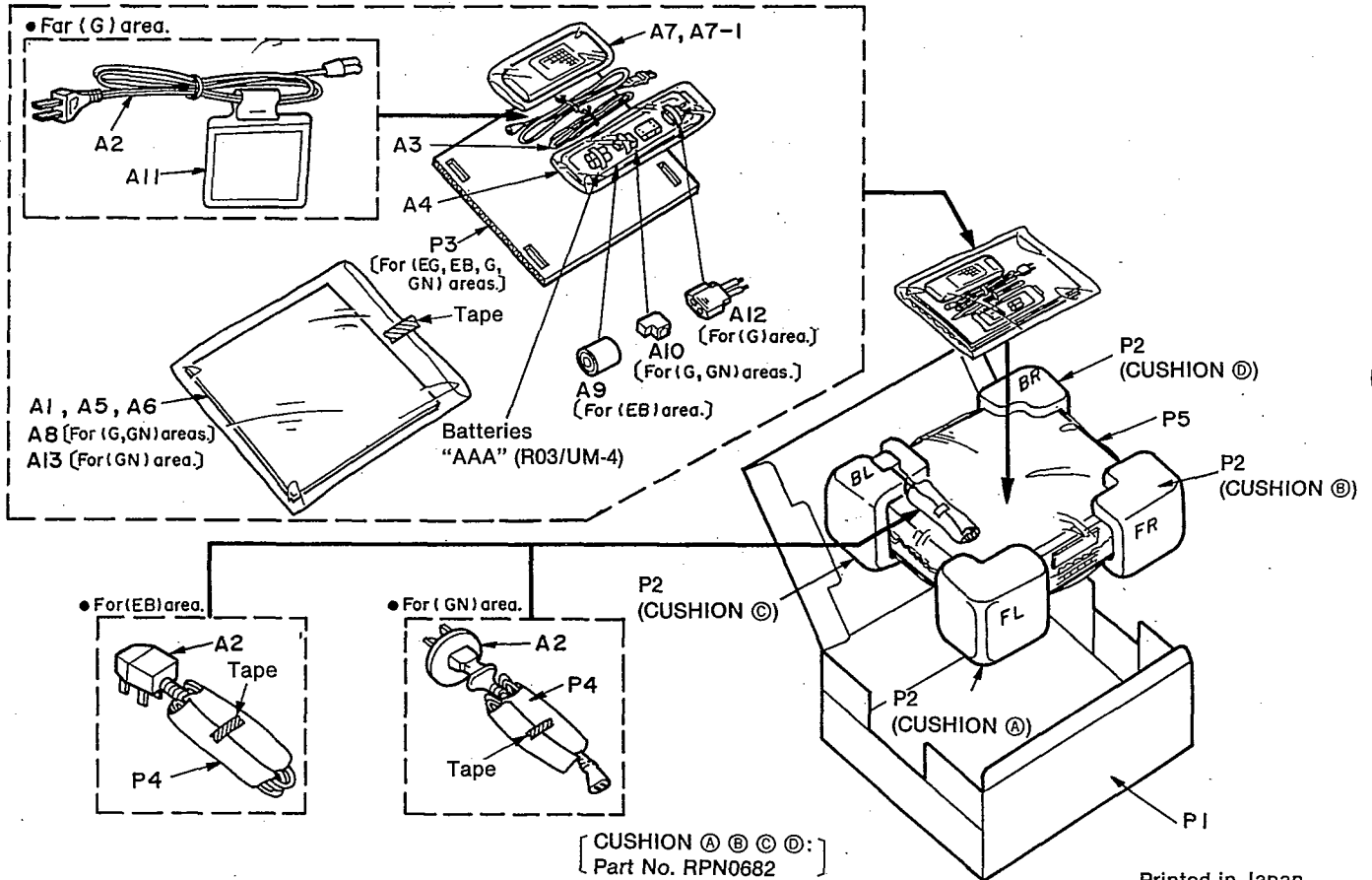
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R357	ERDS2TJ470	1/4W 47	R530	ERDS2TJ103	1/4W 10K
			R358	ERDS2TJ391	1/4W 390	R532	ERDS2TJ103	1/4W 10K
			R359, 360	ERDS2TJ470	1/4W 47	R533-536	ERDS2TJ102	1/4W 1K
R103	ERDS2TJ101	1/4W 100	R361	ERDS2TJ391	1/4W 390	R537	ERDS2TJ332	1/4W 3.3K
R104	ERDS2TJ472	1/4W 4.7K	R362	ERDS2TJ470	1/4W 47	R539, 540	ERDS2TJ330	1/4W 33
R105	ERDS2TJ391	1/4W 390	R363	ERDS2TJ332	1/4W 3.3K	R541, 542	ERDS2TJ182	1/4W 1.8K
R106	ERDS2TJ474	1/4W 470K	R364	ERDS2TJ561	1/4W 560	R543	ERDS2TJ223	1/4W 22K
R107	ERDS2TJ331	1/4W 330	R365	ERDS2TJ332	1/4W 3.3K	R545, 546	ERDS2TJ122	1/4W 1.2K
R108	ERDS2TJ474	1/4W 470K	R366	ERDS2TJ473	1/4W 47K	R547, 548	ERDS1FVJ271T	1/2W 270 $\Delta$
R109	ERDS2TJ331	1/4W 330	R369, 370	ERDS1FVJ221T	1/2W 220 $\Delta$	R551, 552	ERDS2TJ222	1/4W 2.2K
R110	ERDS2TJ102	1/4W 1K	R401, 402	ERDS2TJ102	1/4W 1K	R553, 554	ERDS2TJ104	1/4W 100K
R112	ERDS2TJ104	1/4W 100K	R405-416	ERDS2TJ102	1/4W 1K	R555	ERDS2TJ562	1/4W 5.6K
R113	ERDS2TJ103	1/4W 10K	R417, 418	ERDS2TJ473	1/4W 47K	R556	ERDS2TJ822	1/4W 8.2K
R114	ERDS2TJ562	1/4W 5.6K	R419-422	ERDS2TJ104	1/4W 100K	R557	ERDS2TJ202T	1/4W 2K
R115	ERDS2TJ561	1/4W 560	R423, 424	ERDS2TJ102	1/4W 1K	R558	ERDS2TJ152	1/4W 1.5K
R116	ERDS2TJ102	1/4W 1K	R425-427	ERDS2TJ103	1/4W 10K	R559, 560	ERDS2TJ104	1/4W 100K
R117	ERDS2TJ682T	1/4W 6.8K	R440	ERDS1FVJ820T	1/2W 82 $\Delta$	R561, 562	ERDS2TJ222	1/4W 2.2K
R118	ERDS2TJ562	1/4W 5.6K	R441, 442	ERDS2TJ473	1/4W 47K	R571, 572	ERDS2TJ102	1/4W 1K
R119	ERDS2TJ822	1/4W 8.2K	R443	ERDS2TJ330	1/4W 33	R573, 574	ERDS2TJ394	1/4W 390K
R120	ERDS2TJ473	1/4W 47K	R451, 452	ERDS2TJ224T	1/4W 220K	R575, 576	ERDS2TJ104	1/4W 100K
R121	ERDS2TJ242	1/4W 2.4K	R453, 454	ERDS2TJ391	1/4W 390	R577-579	ERDS2TJ103	1/4W 10K
R122	ERDS2TJ272T	1/4W 2.7K	R455, 456	ERDS2TJ563	1/4W 56K	R591	ERDS1FVJ2R2T	1/2W 2.2 $\Delta$
R124	ERDS2TJ391	1/4W 390	R457, 458	ERDS2TJ271	1/4W 270	R601, 602	ERDS2TJ681	1/4W 680
R125, 126	ERDS2TJ472	1/4W 4.7K	R459, 460	ERDS2TJ680T	1/4W 68	R603, 604	ERDS2TJ563	1/4W 56K
R127	ERDS2TJ103	1/4W 10K	R461, 462	ERDS2TJ184T	1/4W 180K	R605, 606	ERDS2TJ182	1/4W 1.8K
R128	ERDS2TJ820	1/4W 82	R463, 464	ERDS2TJ123	1/4W 12K	R607, 608	ERDS2TJ563	1/4W 56K
R129	ERDS2TJ473	1/4W 47K	R465, 466	ERDS2TJ563	1/4W 56K	R609, 610	ERDS2TJ470	1/4W 47
R130, 131	ERDS2TJ102	1/4W 1K	R467-470	ERDS2TJ102	1/4W 1K	R611, 612	ERDS1FVJ100T	1/2W 10 $\Delta$
R132	ERDS2TJ103	1/4W 10K	R475, 476	ERDS2TJ471	1/4W 470	R613, 614	ERDS2TJ391	1/4W 390
R133-137	ERDS2TJ102	1/4W 1K	R477-480	ERDS2TJ474	1/4W 470K	R615	ERDS2TJ223	1/4W 22K
R139, 140	ERDS2TJ272T	1/4W 2.7K	R481, 482	ERDS2TJ272T	1/4W 2.7K	R616	ERDS2TJ684	1/4W 680K
R141, 142	ERDS2TJ102	1/4W 1K	R483, 484	ERDS2TJ392T	1/4W 3.9K	R617	ERD2FCVG470T	1/4W 47 $\Delta$
R143, 144	ERDS2TJ222	1/4W 2.2K	R485, 486	ERDS2TJ223	1/4W 22K	R618	ERD25FJ101	1/4W 100 $\Delta$
R145, 146	ERDS2TJ821	1/4W 820	R487, 488	ERDS2TJ392T	1/4W 3.9K	R619, 620	ERDS2TJ221	1/4W 220
R147, 148	ERDS2TJ474	1/4W 470K	R489, 490	ERDS2TJ222	1/4W 2.2K	R621	ERDS2TJ684	1/4W 680K
R149	ERDS2TJ680T	1/4W 68	R491, 492	ERDS2TJ122	1/4W 1.2K	R622	ERDS2TJ154	1/4W 150K
R171, 172	ERDS2TJ102	1/4W 1K	R493, 494	ERDS2TJ333	1/4W 33K	R623	ERDS2TJ103	1/4W 10K
R173	ERDS2TJ471	1/4W 470	R495, 496	ERDS2TJ471	1/4W 470	R624	ERDS2TJ472	1/4W 4.7K
R175	ERDS2TJ102	1/4W 1K	R501, 502	ERDS2TJ222	1/4W 2.2K	R625	ERDS2TJ103	1/4W 10K
R176	ERDS2TJ391	1/4W 390	R503-506	ERDS2TJ103	1/4W 10K	R626	ERDS2TJ223	1/4W 22K
R191	ERDS2TJ103	1/4W 10K E, EB, G, GN	R507	ERDS2TJ153	1/4W 15K	R627	ERD25FVJ100T	1/4W 10 $\Delta$
R192	ERDS2TJ122	1/4W 1.2K E, EB, G, GN	R509, 510	ERDS2TJ222	1/4W 2.2K	R628	ERDS2TJ103	1/4W 10K
R193	ERDS2TJ182	1/4W 1.8K E, EB, G, GN	R511, 512	ERDS2TJ152	1/4W 1.5K	R629	ERDS2TJ223	1/4W 22K
R194	ERDS2TJ122	1/4W 1.2K E, EB, G, GN	R513-516	ERDS2TJ102	1/4W 1K	R630	ERD25FVJ100T	1/4W 10 $\Delta$
R195	ERDS2TJ223	1/4W 22K E, EB, G, GN	R517, 518	ERDS2TJ222	1/4W 2.2K	R631, 632	ERDS2TJ222	1/4W 2.2K
R351, 352	ERDS2TJ471	1/4W 470	R519	ERDS2TJ152	1/4W 1.5K	R633, 634	ERDS2TJ563	1/4W 56K
R354	ERDS2TJ472	1/4W 4.7K	R521, 522	ERDS2TJ101	1/4W 100	R635, 636	ERDS2TJ182	1/4W 1.8K
R355	ERDS2TJ470	1/4W 47	R523-526	ERDS2TJ102	1/4W 1K	R637, 638	ERDS2TJ563	1/4W 56K
R356	ERDS2TJ102	1/4W 1K	R527, 528	ERDS2TJ394	1/4W 390K	R639, 640	ERDS2TJ470	1/4W 47

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R641, 642	ERDS1FVJ100T	1/2W 10 $\Delta$	R785, 786	ERDS2TJ332	1/4W 3. 3K	R986	ERDS2TJ472	1/4W 4. 7K
R643, 644	ERDS2TJ391	1/4W 390	R787	ERDS2TJ471	1/4W 470	R990	ERDS2TJ153	1/4W 15K
R645	ERDS2TJ473	1/4W 47K	R788	ERDS2TJ682T	1/4W 6. 8K	R991	ERDS2TJ103	1/4W 10K
R646	ERDS2TJ684	1/4W 680K	R901	ERDS2TJ102	1/4W 1K	R993, 994	ERDS2TJ102	1/4W 1K
R647	ERD2FCVG470T	1/4W 47 $\Delta$	R902	ERDS2TJ681	1/4W 680	R1004, 1005	ERDS2TJ472	1/4W 4. 7K
R648	ERD25FVJ101	1/4W 100 $\Delta$	R903, 904	ERDS2TJ104	1/4W 100K	R1006	ERDS2TJ104	1/4W 100K
R649, 650	ERDS2TJ221	1/4W 220	R905, 906	ERDS2TJ103	1/4W 10K	R1008, 1009	ERDS2TJ224T	1/4W 220K
R651	ERDS2TJ684	1/4W 680K	R907-911	ERDS2TJ104	1/4W 100K	R1010	ERDS2TJ471	1/4W 470
R652	ERDS2TJ154	1/4W 150K	R920	ERDS2TJ271	1/4W 270	R1011-1013	ERDS2TJ473	1/4W 47K
R655	ERDS2TJ103	1/4W 10K	R921	ERDS2EJ121	1/4W 120	R1014, 1015	ERDS2TJ223	1/4W 22K
R656	ERDS2TJ223	1/4W 22K	R922	ERDS2TJ472	1/4W 4. 7K	R1016	ERDS2TJ752T	1/4W 7. 5K
R657	ERDS1FVJ100T	1/2W 10 $\Delta$	R923	ERDS2TJ102	1/4W 1K	R1017	ERDS2TJ153	1/4W 15K
R659, 660	ERDS2TJ102	1/4W 1K	R926	ERDS2TJ122	1/4W 1. 2K	R1018	ERDS2TJ202T	1/4W 2K
R661	ERDS2TJ104	1/4W 100K	R927	ERDS2TJ181T	1/4W 180	R1019, 1020	ERDS2TJ473	1/4W 47K
R662	ERDS2TJ154	1/4W 150K	R928	ERDS2TJ222	1/4W 2. 2K	R1021	ERDS2TJ153	1/4W 15K
R663	ERDS2TJ124T	1/4W 120K	R929	ERDS2TJ562	1/4W 5. 6K	R1022	ERDS2TJ752T	1/4W 7. 5K
R665, 666	ERGS1SJ151E	1W 150	R930, 931	ERDS2TJ101	1/4W 100	R1023	ERDS2TJ202T	1/4W 2K
R667-670	ERDS1FVJ680T	1/2W 68 $\Delta$	R932-934	ERDS2TJ102	1/4W 1K	R1025, 1026	ERDS2TJ222	1/4W 2. 2K
R671-676	ERDS2TJ223	1/4W 22K	R935	ERDS2TJ473	1/4W 47K	R1201, 1202	ERDS2TJ102	1/4W 1K
R677	ERDS2TJ682T	1/4W 6. 8K	R936-944	ERDS2TJ102	1/4W 1K	R1204-1216	ERDS2TJ102	1/4W 1K
R678	ERDS2TJ104	1/4W 100K	R946-949	ERDS2TJ103	1/4W 10K	R1405-1410	ERDS2TJ153	1/4W 15K
R679	ERDS2TJ103	1/4W 10K	R950	ERDS2TJ102	1/4W 1K	R1411	ERDS2TJ272T	1/4W 2. 7K
R680	ERDS2TJ223	1/4W 22K	R951	ERDS2TJ122	1/4W 1. 2K	R1431	ERDS2TJ105T	1/4W 1M
R681	ERDS2TJ332	1/4W 3. 3K	R952	ERDS2TJ152	1/4W 1. 5K	R1434	ERDS2TJ822	1/4W 8. 2K
R682	ERDS1FVJ390T	1/2W 39 $\Delta$	R953	ERDS2TJ182	1/4W 1. 8K	R1435	ERDS2TJ103	1/4W 10K
R683	ERDS2TJ103	1/4W 10K	R954	ERDS2TJ222	1/4W 2. 2K	R1449	ERDS2TJ102	1/4W 1K
R684	ERDS2TJ153	1/4W 15K	R955	ERDS2TJ332	1/4W 3. 3K	R1450, 1451	ERDS2TJ274	1/4W 270K
R685, 686	ERDS2TJ333	1/4W 33K	R956	ERDS2TJ472	1/4W 4. 7K	R1452	ERDS2TJ561	1/4W 560
R687	ERDS2TJ103	1/4W 10K	R957	ERDS2TJ682T	1/4W 6. 8K	R1453	ERDS2TJ473	1/4W 47K
R688	ERDS2TJ222	1/4W 2. 2K	R960	ERDS2TJ102	1/4W 1K	R1454	ERDS2TJ472	1/4W 4. 7K
R689	ERDS2TJ220T	1/4W 22	R961	ERDS2TJ122	1/4W 1. 2K	R1455	ERDS2TJ153	1/4W 15K
R690	ERDS2TJ473	1/4W 47K	R962	ERDS2TJ152	1/4W 1. 5K	R1456	ERDS2TJ273	1/4W 27K
R705, 706	ERDS1FVJ2R2T	1/2W 2. 2 $\Delta$	R963	ERDS2TJ182	1/4W 1. 8K	R1457	ERDS2TJ103	1/4W 10K
R707	ERDS2TJ332	1/4W 3. 3K	R964	ERDS2TJ222	1/4W 2. 2K	R1458	ERDS2TJ332	1/4W 3. 3K
R708	ERDS2TJ102	1/4W 1K	R965	ERDS2TJ332	1/4W 3. 3K	R1459	ERDS2TJ123	1/4W 12K
R711	ERD25FVJ221T	1/4W 220 $\Delta$	R966	ERDS2TJ472	1/4W 4. 7K	R1460	ERDS2TJ181T	1/4W 180
R714	ERDS2TJ472	1/4W 4. 7K	R967	ERDS2TJ682T	1/4W 6. 8K	R1462	ERDS2TJ822	1/4W 8. 2K
R715, 716	ERDS2TJ1R5T	1/4W 1. 5	R970	ERDS2TJ102	1/4W 1K	R1463	ERDS2TJ473	1/4W 47K
R717	ERDS2TJ752T	1/4W 7. 5K	R971	ERDS2TJ122	1/4W 1. 2K	R1464-1466	ERDS2TJ474	1/4W 470K
R718	ERDS2TJ682T	1/4W 6. 8K	R972	ERDS2TJ152	1/4W 1. 5K	R1467-1469	ERDS2TJ332	1/4W 3. 3K
R719	ERDS1FVJ220T	1/2W 22 $\Delta$	R973	ERDS2TJ182	1/4W 1. 8K	R1472	ERDS2TJ682T	1/4W 6. 8K
R721	ERDS2TJ182	1/4W 1. 8K	R974	ERDS2TJ222	1/4W 2. 2K	R1473	ERDS2TJ222	1/4W 2. 2K
R722, 723	ERDS1FVJ5R6T	1/2W 5. 6 $\Delta$	R975	ERDS2TJ332	1/4W 3. 3K	R1474-1476	ERDS2TJ474	1/4W 470K
R724	ERDS2TJ123	1/4W 12K	R976	ERDS2TJ472	1/4W 4. 7K	R1477	ERDS2TJ222	1/4W 2. 2K
R725	ERDS2TJ102	1/4W 1K	R977	ERDS2TJ682T	1/4W 6. 8K	R1478	ERDS2TJ682T	1/4W 6. 8K
R726	ERD25FVJ121T	1/4W 120 $\Delta$	R978	ERDS2TJ123	1/4W 12K			
R727	ERD25FVJ180T	1/4W 18 $\Delta$	R980	ERDS2TJ102	1/4W 1K			CAPACITORS
R728	ERD2FCVJ4R7T	1/4W 4. 7 $\Delta$	R981	ERDS2TJ122	1/4W 1. 2K	C101	ECBT1C103NS5	16V 0. 01U
R729	ERDS2TJ152	1/4W 1. 5K	R982	ERDS2TJ152	1/4W 1. 5K	C103	ECBT1C103NS5	16V 0. 01U
R732	ERDS1FVJ2R2T	1/2W 2. 2 $\Delta$	R983	ERDS2TJ182	1/4W 1. 8K	C104	ECBT1HI02KB5	50V 1000P
R754	ERDS2TJ102	1/4W 1K	R984	ERDS2TJ222	1/4W 2. 2K	C105	ECBT1H470J5	50V 47P
R781	ERD25FVJ180T	1/4W 18 $\Delta$	R985	ERDS2TJ332	1/4W 3. 3K			

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C106	ECBT1C103NS5	16V 0.01U	C423-426	ECBT1H101KB5	50V 100P	C621-624	ECKT1H223ZF	50V 0.022U
C107	ECBT1H473ZF5	50V 0.047U	C427, 428	ECBT1H221KB5	50V 220P	C625-627	ECKR1H103ZF5	50V 0.01U
C108	ECBT1H100JC5	50V 10P E, EB, G, GN	C431, 432	ECEA1CKA100B	16V 10U	C631, 632	ECEA1VKA4R7B	35V 4.7U
C108	ECBT1H8R2KC5	50V 8.2P EG	C440	ECBT1E103ZF	25V 0.01U	C633, 634	ECBA1H681KB5	50V 680P
C109, 110	ECBT1C103NS5	16V 0.01U	C451, 452	ECEA1VKA4R7B	35V 4.7U	C635, 636	ECEA1CKA220B	16V 22U
C111	ECEA1EKA4R7B	25V 4.7U	C453, 454	ECBT1H100JC5	50V 10P	C637, 638	ECCR1H120K5	50V 12P
C112	ECBT1C103NS5	16V 0.01U	C455, 456	ECBT1H102KB5	50V 1000P	C639, 640	ECBT1H221KB5	50V 220P
C113	ECBT1H102KB5	50V 1000P	C457, 458	ECEA1AKA330B	10V 33U	C641, 642	ECQV1H473JM3	50V 0.047U
C114	ECEA1HKA3R3B	50V 3.3U	C459, 460	ECFR1E223KR	25V 0.022U	C643	ECA1HM470B	50V 47U
C115	ECEA1CKA100B	16V 10U	C461, 462	ECFR1E682KR	25V 6800P	C644	ECA1JM330B	63V 33U
C116	ECBT1C822MS5	16V 8200P	C463, 464	ECEA1VKA4R7B	35V 4.7U	C645	ECEA2AU100	100V 10U
C117	ECQP2A471JZT	100V 470P	C465, 466	ECBT1E103ZF	25V 0.01U	C646	ECEA2AN2R2SB	100V 2.2U
C118, 119	ECQB1H103JF3	50V 0.01U	C469, 470	ECBT1H181KB5	50V 180P	C651	ECEA1HKA2R2B	50V 2.2U
C120, 121	ECEA1HKA010B	50V 1U	C471, 472	ECEA1HKA3R3B	50V 3.3U	C652	ECEA1CKA100B	16V 10U
C122	ECEA1HKA2R2B	50V 2.2U	C475, 476	ECBT1H150J5	50V 15P	C653	ECBT1E223ZF	25V 0.022U
C123	ECEA1HKA010B	50V 1U	C477, 478	ECBT1H221KB5	50V 220P	C655	ECEA0JKA221B	6.3V 220U
C124	ECBT1H102KB5	50V 1000P	C479, 480	ECBT1H470J5	50V 47P	C701	ECBT1E103ZF	25V 0.01U
C125	ECBT1H150JC5	50V 15P	C481-484	ECEA1VKA4R7B	35V 4.7U	C702	ECQE2104KF3	250V 0.1U
C126	ECBT1H473ZF5	50V 0.047U	C485, 486	ECFR1E123KR	25V 0.012U	C703, 704	ECES66V802UZ	66V 8000U Δ
C127	ECEA1CKA220B	16V 22U	C487, 488	ECQV1H683JM3	50V 0.068U	C707	ECA1VM101B	35V 100U
C128	ECBT1C103NS5	16V 0.01U	C489, 490	ECFR1E562KR	25V 5600P	C708	ECKR1H103ZF5	50V 0.01U
C129, 130	ECEA0JKA101B	6.3V 100U	C491, 492	ECFR1E273KR	25V 0.027U	C709	ECEA1CKA330B	16V 33U
C131	ECBT1C103NS5	16V 0.01U	C495, 496	ECBT1E103ZF	25V 0.01U	C710	ECBT1E103ZF	25V 0.01U
C132	ECBT1H102KB5	50V 1000P	C501, 502	ECFR1E333KR	25V 0.033U	C711	ECKR1H103ZF5	50V 0.01U
C133	ECBT1H150JC5	50V 15P	C503, 504	ECEA1CKA220B	16V 22U	C712	ECA1HM470B	50V 47U
C134	ECBT1H180JC5	50V 18P	C505	ECEA1CKA100B	16V 10U	C713	ECKR1H103ZF5	50V 0.01U
C135, 136	ECBT1C103KS5	16V 0.01U	C506, 507	ECEA0JKA101B	6.3V 100U	C715	ECEA1CKA470B	16V 47U
C137, 138	ECBT1H561KB5	50V 560P	C518	ECBT1H104ZF5	50V 0.1U	C716	ECEA2AU100	100V 10U
C139, 140	ECQB1H682JF3	50V 6800P	C519	ECBT1E103ZF	25V 0.01U	C722	ECQE2104KF3	250V 0.1U
C141-144	ECEA1HKA010B	50V 1U	C541, 542	ECA1JM330B	63V 33U	C751	ECKWNS103ZVS	500V 0.01U Δ
C145	ECBT1H220JC5	50V 22P	C543, 544	ECBT1C332KR5	16V 3300P	C752	ECKR1H103ZF5	50V 0.01U
C146	ECBT1H331KB5	50V 330P	C551, 552	ECEA1HKA3R3B	50V 3.3U	C753	ECA1EM102B	25V 1000U Δ
C147	ECBT1H102KB5	50V 1000P	C553, 554	ECBT1E103ZF	25V 0.01U	C754	ECBT1E103ZF	25V 0.01U
C148	ECBT1C103NS5	16V 0.01U	C555, 556	ECBT1H101KB5	50V 100P	C756	ECBT1E103ZF	25V 0.01U
C149	ECBT1H104ZF5	50V 0.1U	C557, 558	ECBT1H221KB5	50V 220P	C757	ECEA1CKA470B	16V 47U
C171	ECBT1C103NS5	16V 0.01U	C559, 560	ECEA1HKA3R3B	50V 3.3U	C758	ECEA1AKA101B	10V 100U
C172	ECBT1H331KB5	50V 330P	C561, 562	ECEA1CKA100B	16V 10U	C771, 772	ECA1VM331B	35V 330U Δ
C173	ECEA1CKA220B	16V 22U	C571, 572	ECBT1E103ZF	25V 0.01U	C795, 796	ECEA2AU100	100V 10U
C174	ECEA1CKA101B	16V 100U	C573	ECEA1HKA3R3B	50V 3.3U	C891	ECFR1E392KR	25V 3900P
C181	ECBT1H471KB5	50V 470P	C591, 592	ECEA0JKA101B	6.3V 100U	C901	ECA0JM102B	6.3V 1000U
C351, 352	ECEA0JKA101B	6.3V 100U	C593, 594	ECFR1E104KR	25V 0.1U	C902, 903	ECBT1E103ZF	25V 0.01U
C353	ECEA0JKA470B	6.3V 47U	C595	ECBT1E103ZF	25V 0.01U	C904	ECA0JM471B	6.3V 470U
C401	ECEA1VKA4R7B	35V 4.7U	C601, 602	ECEA1EKN3R3B	25V 3.3U	C906	ECEA0JKA101B	6.3V 100U
C402, 403	ECBT1E103ZF	25V 0.01U	C603, 604	ECBT1H331KB5	50V 330P	C907	ECEA1CKA100B	16V 10U
C404	ECEA1VKA4R7B	35V 4.7U	C605, 606	ECEA1CKN220B	16V 22U	C908	ECBT1E103ZF	25V 0.01U
C405, 406	ECBT1H101KB5	50V 100P	C607, 608	ECCR1H120K5	50V 12P	C911, 912	ECEA2AU100	100V 10U
C409, 410	ECEA1CKA220B	16V 22U	C609, 610	ECBT1H221KB5	50V 220P	C913, 914	ECEA1VKA100B	35V 10U
C411, 412	ECBT1H101KB5	50V 100P	C611, 612	ECQV1H473JM3	50V 0.047U	C916	ECEA1HKA010B	50V 1U
C413, 414	ECEA1CKA100B	16V 10U	C613	ECA1HM470B	50V 47U	C920	ECEA1HKA010B	50V 1U
C415, 416	ECBT1E103ZF	25V 0.01U	C614	ECQV1H474JM3	50V 0.47U	C921-928	ECBT1H331KB5	50V 330P
C417, 418	ECBT1H101KB5	50V 100P	C615	ECEA2AU100	100V 10U	C929, 930	ECBT1H101KB5	50V 100P
C419-422	ECBT1H331KB5	50V 330P	C616	ECEA2AN2R2SB	100V 2.2U	C935	ECEA0JKA101B	6.3V 100U

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C936	ECBT1E103ZF	25V 0.01U	C1028	ECBA1H681KB5	50V 680P	C1457, 1458	ECEA1CKA100B	16V 10U
C937-942	ECBT1H101KB5	50V 100P	C1029, 1030	ECEA1VKAAR7B	35V 4.7U	C1459	ECEA1CKA101B	16V 100U
C944	ECBT1H101KB5	50V 100P	C1031	ECEA1HKARI5B	50V 0.15U	C1460	ECFR1E822KR	25V 8200P
C1001	ECBT1E103ZF	25V 0.01U	C1032	ECEA1HKA3R3B	50V 3.3U	C1461	ECEA1CKA220B	16V 22U
C1002	ECEA1CKA100B	16V 10U	C1033	ECQV1H154JM3	50V 0.15U	C1462	ECFR1E273KR	25V 0.027U
C1003-1005	ECEA1HKA010B	50V 1U	C1035	ECQV1H474JM3	50V 0.47U	C1463	ECFR1E472KR	25V 4700P
C1006	ECEA1HKA3R3B	50V 3.3U	C1036	ECBT1E103ZF	25V 0.01U	C1464	ECEA1CKA100B	16V 10U
C1007	ECFR1E153KR	25V 0.015U	C1037, 1038	ECEA1CKA101B	16V 100U	C1465	ECBT1E103ZF	25V 0.01U
C1008	ECFR1E103KR	25V 0.01U	C1039, 1040	ECBT1E103ZF	25V 0.01U	C1466	ECEA1HKA0R1B	50V 0.1U
C1009	ECBA1H681KB5	50V 680P	C1403	ECEA1HKA010B	50V 1U	C1468	ECEA1HKAR33B	50V 0.33U
C1010	ECQV1H104JM3	50V 0.1U	C1404	ECFR1E332KR	25V 3300P	C1469	ECFR1E333KR	25V 0.033U
C1012, 1013	ECQV1H104JM3	50V 0.1U	C1405	ECBT1H561KB5	50V 560P	C1470	ECEA1HKA3R3B	50V 3.3U
C1014	ECEA1HKAR33B	50V 0.33U	C1406	ECQV1H104JM3	50V 0.1U	C1472, 1473	ECEA1HKA3R3B	50V 3.3U
C1015	ECBA1H681KB5	50V 680P	C1407	ECEA1CKA470B	16V 47U	C1474, 1475	ECBT1E103ZF	25V 0.01U
C1016, 1017	ECEA1VKAAR7B	35V 4.7U	C1408, 1409	ECQV1H474JM3	50V 0.47U	C1476-1478	ECBT1H181KB5	50V 180P
C1018	ECEA1HKARI5B	50V 0.15U	C1410	ECQV1H104JM3	50V 0.1U	C1479, 1480	ECEA1CKA470B	16V 47U
C1019	ECEA1HKA3R3B	50V 3.3U	C1411	ECFR1E332KR	25V 3300P	C1481-1483	ECEA1HKA3R3B	50V 3.3U
C1020	ECQV1H154JM3	50V 0.15U	C1412	ECBT1H561KB5	50V 560P	C1489, 1490	ECEA1HKA3R3B	50V 3.3U
C1021, 1022	ECEA1CKA470B	16V 47U	C1414	ECFR1E123KR	25V 0.012U	C1493	ECQV1H563JM3	50V 0.056U
C1023, 1024	ECEA1HKA3R3B	50V 3.3U	C1415	ECBT1H104ZF5	50V 0.1U	C1494	ECEA1CKA100B	16V 10U
C1025	ECEA1HKAR33B	50V 0.33U	C1416	ECEA0JKA221B	6.3V 220U			
C1026, 1027	ECQV1H104JM3	50V 0.1U	C1451	ECBT1H101KB5	50V 100P			

## PACKAGING



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