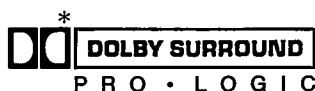


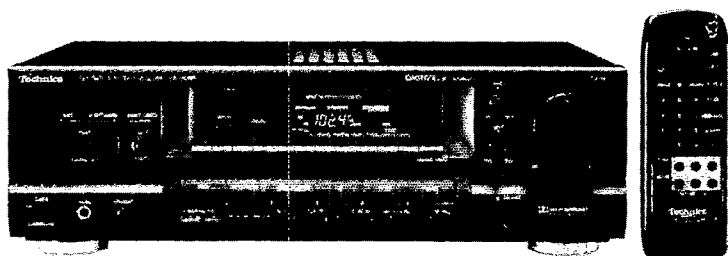
Service Manual

AV Control Stereo Receiver



Receiver

SA-GX390



Colour

(K) ... Black Type

Areas

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

SPECIFICATIONS (DIN 45 500)

■ AMPLIFIER SECTION

Power output (at 240 V)	
DIN 1 kHz (T.H.D. 1%)	
[For (E, EB, EG) areas.]	2 × 50 W (4 Ω)
[For (G, GN) areas.]	2 × 60 W (8 Ω)
40 Hz–20 kHz continuous power output both channels driven	
[For (E, EB, EG) areas.]	2 × 30 W (8 Ω)
[For (G, GN) areas.]	2 × 40 W (8 Ω)
Total harmonic distortion	
rated power at 40 Hz–20 kHz	0.5% (8 Ω)
half power at 1 kHz	0.03% (8 Ω)
Power output at the Dolby Pro Logic operation	
DIN 1 kHz (T.H.D. 1%)	
Front [For (E, EB, EG) areas.]	2 × 40 W (4 Ω)
[For (G, GN) areas.]	2 × 40 W (8 Ω)
Center	40 W (8 Ω)
Surround	40 W (8 Ω)
Intermodulation distortion	
rated power at 60 Hz: 7 kHz=4:1, SMPTE	0.5% (8 Ω)
Power bandwidth	
both channels driven, -3 dB	10 Hz–40 kHz (8 Ω)
Damping factor	30 (8 Ω)
Input sensitivity and impedance	
PHONO	3 mV/47 kΩ
CD, VCR 1, VCR 2/VIDEO CD, TAPE	200 mV/22 kΩ
S/N at rated power (8 Ω)	
PHONO	70 dB (IHF, A: 80 dB)
CD, VCR 1, VCR 2/VIDEO CD, TAPE	75 dB (IHF, A: 88 dB)
Frequency response	
PHONO	RIAA standard curve
	(30 Hz–15 kHz) ± 0.8 dB
CD, VCR 1, VCR 2/VIDEO CD, TAPE	10 Hz–40 kHz, ± 3 dB
Tone controls	
BASS	50 Hz, +10 to -10 dB
TREBLE	20 kHz, +10 to -10 dB
Output voltage	
VCR 1 OUT, TAPE REC (OUT)	200 mV

* 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.

Channel balance (250 Hz–6.3 kHz)	± 1 dB
Channel separation	55 dB
Headphones output level and impedance	430 mV/330 Ω
Load impedance	
Front [For (E, EB, EG) areas.]	4–16 Ω
[For (G, GN) areas.]	8–16 Ω
Center	8–16 Ω
Surround	4–16 Ω

■ FM TUNER SECTION

Frequency range	87.50–108.00 MHz
Sensitivity	
S/N 30 dB	1.5 μV/75 Ω
S/N 26 dB	1.3 μV/75 Ω
S/N 20 dB	1.2 μV/75 Ω
IHF usable sensitivity	(IHF '58) 1.5 μV/75 Ω
IHF 46 dB stereo quieting sensitivity	22 μV/75 Ω
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	60 dB (75 dB, IHF)
STEREO	58 dB (71 dB, IHF)
Frequency response	20 Hz–15 kHz, +1 dB, -2 dB
Alternate channel selectivity	
± 400 kHz	65 dB
Capture ratio	1 dB
Image rejection at 98 MHz	40 dB
IF rejection at 98 MHz	70 dB
Spurious response rejection at 98 MHz	70 dB
AM suppression	50 dB
Stereo separation	
1 kHz	40 dB

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△ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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) areas.

Frequency range	
MW	522-1611 kHz (9 kHz steps) 530-1620 kHz (10 kHz steps)
LW	144-288 kHz

Sensitivity	
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, G, GN) areas.

Frequency range	522-1611 kHz (9 kHz steps) 530-1620 kHz (10 kHz steps)
Selectivity	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
Input/output impedance	75 Ω (unbalanced)

■ GENERAL

Power consumption	
[For (E, EB, EG) areas.]	220 W
[For (G, GN) areas.]	190 W

Power supply	
[For (E, EB, EG, GN) areas.]	AC 50/60 Hz, 230-240 V
[For (G) area.]	AC 50/60 Hz, 110-127 V/220-240 V

Dimensions (W × H × D)	430 × 136 × 352 mm
Weight	7.8 kg

■ REMOTE CONTROL TRANSMITTER

Control keys	38 keys
Dimensions (W × H × D)	62 × 24.5 × 176 mm
Weight (including batteries)	106 g (3.2 oz)
Power source	Two UM-4/AAA (Panasonic R03/LR03 or equivalent)

Notes:

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

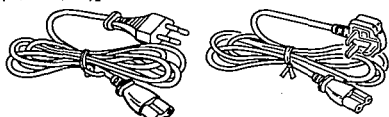
■ CONTENTS

	Page
ACCESSORIES	2
CAUTIONS FOR AC MAINS LEAD	3
PROTECTION CIRCUITRY	3
FRONT PANEL CONTROLS	4
BEFORE REPAIR AND ADJUSTMENT	4
EQUIPMENT CONNECTIONS	5, 6
REMOTE CONTROL OPERATION	7, 8
OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURE	9~14
FAN MOTOR TROUBLESHOOTING	15
TROUBLESHOOTING	16~19

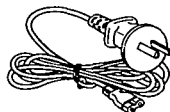
	Page
OVERLOAD DETECTION FUNCTION	19
BLOCK DIAGRAM	20~24
TERMINAL GUIDE	25
TERMINAL GUIDE OF IC'S TRANSISTORS AND DIODES	26
SCHEMATIC DIAGRAM	27~40
PRINTED CIRCUIT BOARDS	41~46
WIRING CONNECTION DIAGRAM	47
CABINET PARTS LOCATION	48, 49
REPLACEMENT PARTS LIST	50~52, 56
RESISTORS AND CAPACITORS	53~55
PACKAGING	56

■ ACCESSORIES

AC power supply cord 1 pc.
[RJA0019-2K [VJA0733 (EB)]
(E, EG, G)]



[RJA0036-K (GN)]



FM indoor antenna 1 pc.
(RSA0007)

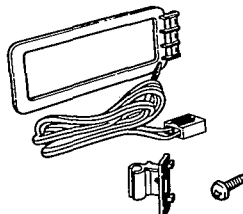


Attachment plug 1 pc.
[SJP9009 (EB)]



AM loop antenna set 1 pc.
(RSA0010)

- AM antenna holder 1 pc.
(RMN0244)
- Screw 1 pc.
(XTN3+12AFZ)



Power plug adaptor 1 pc.
[SJP5213-2 (G)]



Remote control transmitter 1 pc.
(RAK-SA179XH)

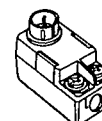


Batteries for remote control transmitter 2 pcs.
("AAA", R03)



Note: These are available on sale route.

Antenna plug 1 pc.
[RFE0014 (G, GN)]



CAUTIONS FOR AC MAINS LEAD



("EB" area code model only)

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 these colours 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 which is marked with the letter N or coloured Black or Blue.

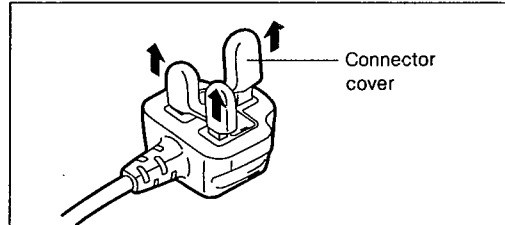
The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

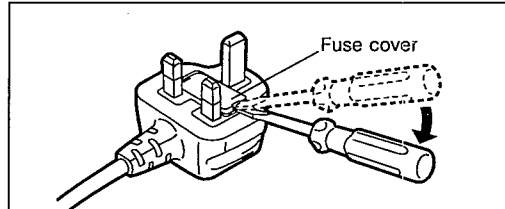
Before use

Remove the connector cover as follows.

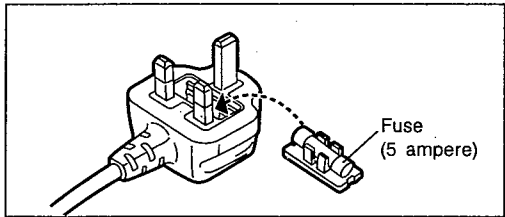


How to replace the fuse

1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover



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.

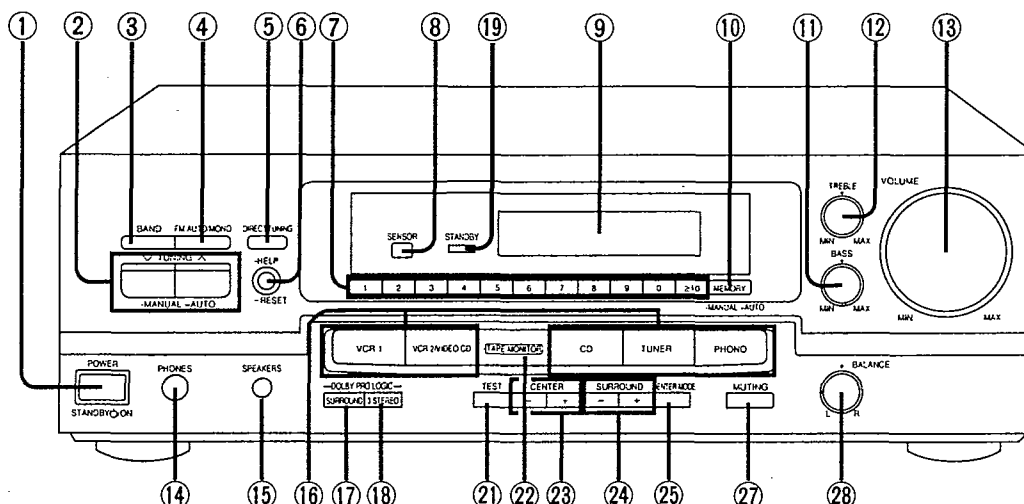
If this occurs, follow the procedure outlines below:

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.

FRONT PANEL CONTROLS



No.	Name
①	Power switch (POWER)
②	Tuning control (TUNING)
③	Band select button (BAND)
④	FM mode select button (FM AUTO/MONO)
⑤	Direct tuning button (DIRECT TUNING)
⑥	Help/reset button (-HELP - RESET)
⑦	Numeric buttons (1-0, ≥10)
⑧	Remote control signal receptor
⑨	Display
⑩	Memory button (MEMORY)
⑪	Bass control (BASS)
⑫	Treble control (TREBLE)
⑬	Volume control (VOLUME)
⑭	Headphone jack (PHONES)
⑮	Speaker ON/OFF button (SPEAKERS)
⑯	Input select buttons

No.	Name
⑰	Surround ON/OFF button (SURROUND)
⑱	3 stereo ON/OFF button (3 STEREO) DOLBY PRO LOGIC mode select button (PRO LOGIC)
⑲	"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.
⑳	Test signal ON/OFF button (TEST)
㉑	Tape monitor button (TAPE MONITOR)
㉒	Center level adjust button (CENTER)
㉓	Surround level adjust button (SURROUND)
㉔	Center mode select button (CENTER MODE)
㉕	Center mode select button (CENTER MODE)
㉖	Muting button (MUTING)
㉗	Muting button (MUTING)
㉘	Balance control (BALANCE)

BEFORE REPAIR AND ADJUSTMENT

Disconnect AC power, Discharge both Power Supply Capacitors C703 and C704 (56V 6800 μ F) through a 10 Ω , 5W resistor to ground.

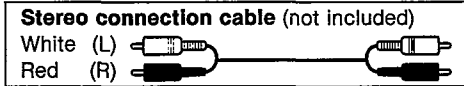
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices. After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at 50Hz/60Hz in NO SIGNAL mode should be shown below with respect to supply voltage AC 230V/240V.

Power supply voltage	AC 230V		AC 240V		AC 110-127V		AC 220-240V	
Consumed current 50/60Hz	50Hz	140~420mA	50Hz	150~450mA	50Hz	300~800mA	50Hz	150~450mA
	60Hz	112~336mA	60Hz	120~360mA	60Hz	240~640mA	60Hz	120~360mA

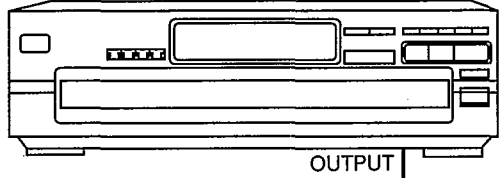
EQUIPMENT CONNECTIONS

Connecting audio equipment

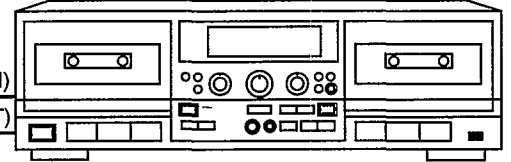


Note
 Do not place books, etc., on top of this unit or block the heat radiation vents in any way.

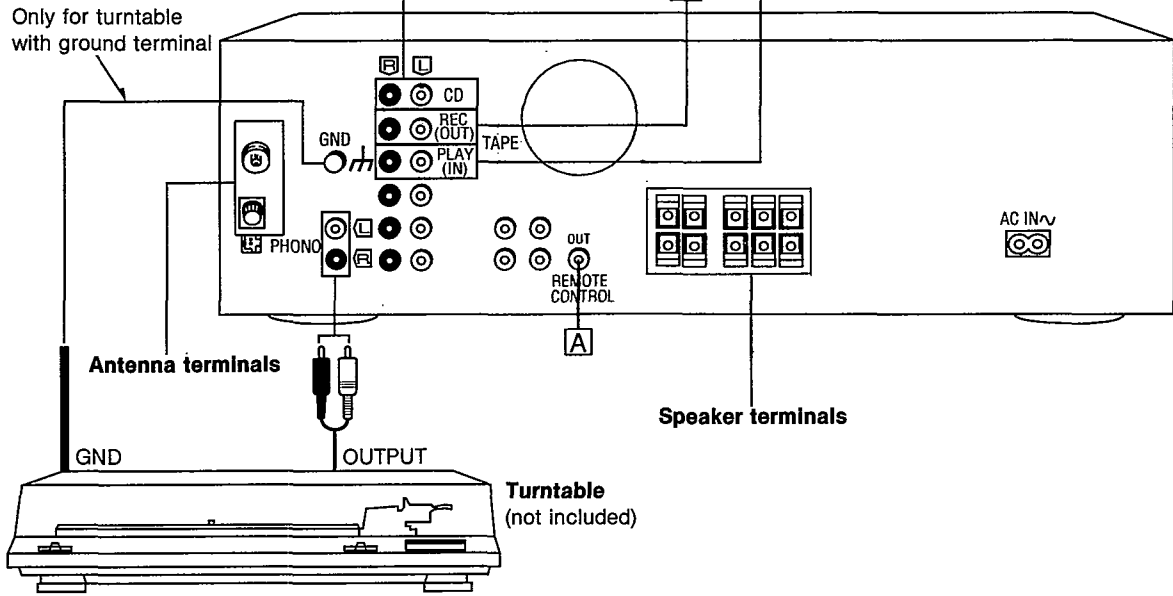
CD changer (or CD player)
 (not included)



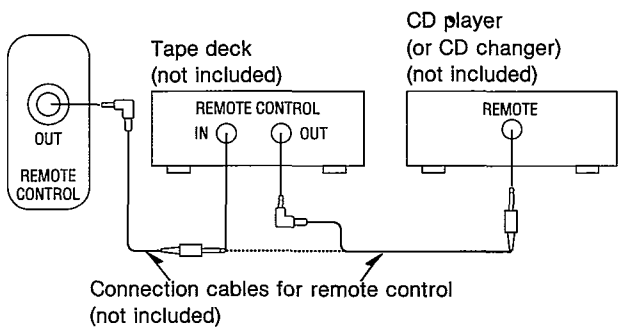
Tape deck (not included)



Only for turntable with ground terminal



A "REMOTE CONTROL OUT" terminal



Connect the connection cable for remote control to a Technics tape deck and/or CD changer (or CD player) which has the appropriate remote control terminal as shown above.

If a tape deck is not being used, the CD changer (or CD player) can be connected directly (dotted line).

Note

For a tape deck and/or CD changer (or CD player) with a remote control sensor, this connection is not necessary.

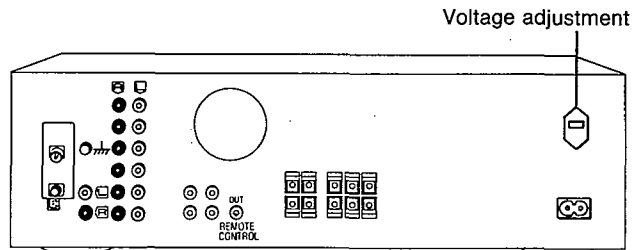
To set the power voltage

[For (G) area only.]



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

Note

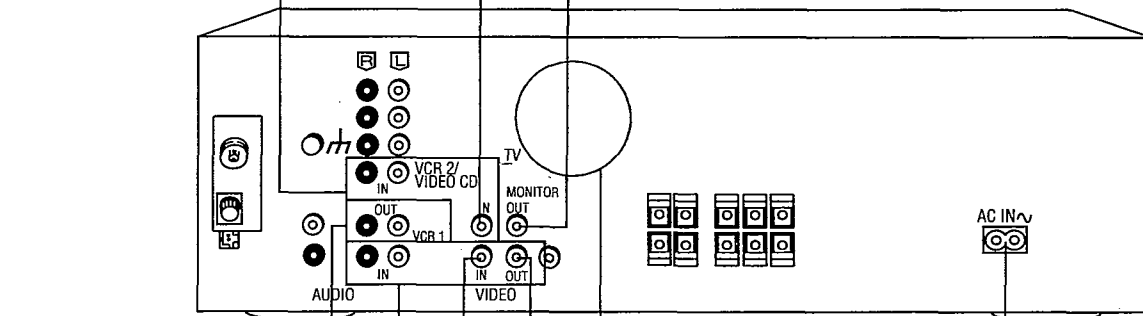
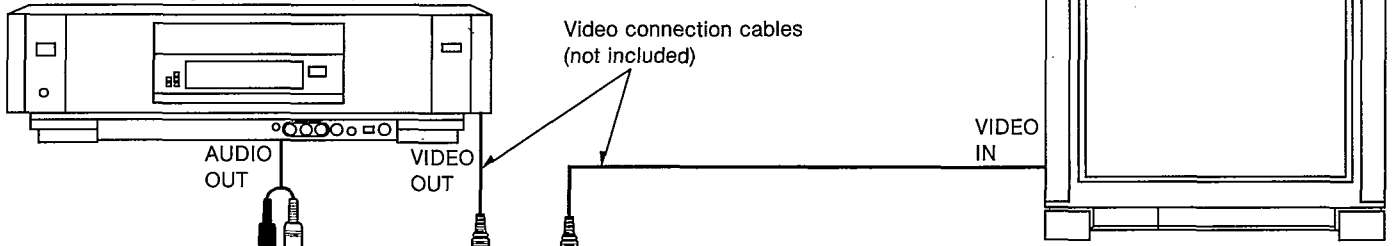
Note that this unit will be seriously damaged if this setting is not made correctly.



Connecting video equipment

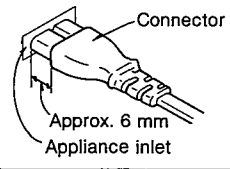
Stereo connection cable (not included)
 White (L) 
 Red (R) 

Second VCR (for playback only) or video CD changer (not included)



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

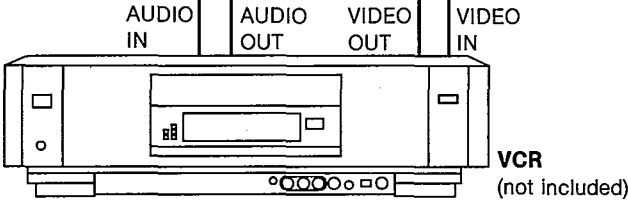
[For (EB) area only.]



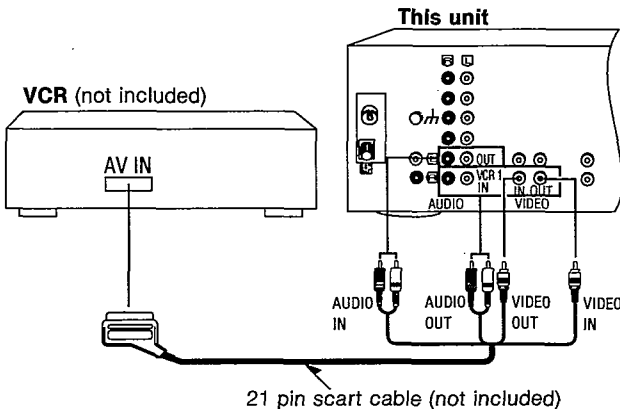
Connector
 Approx. 6 mm
 Appliance inlet

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.

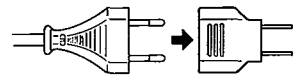


To connect a video deck with 21 pin scart terminal



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

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



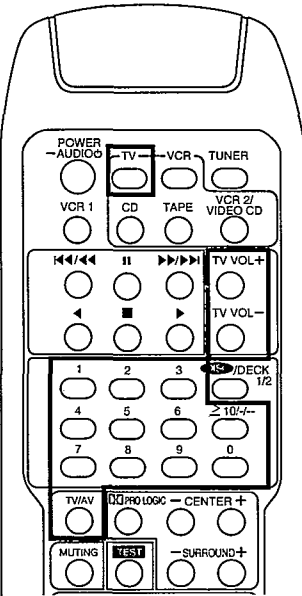


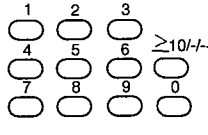
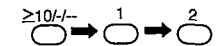


REMOTE CONTROL OPERATION

This remote control transmitter can be used to operate other units manufactured by this company in addition to this receiver, including TVs and VCRs manufactured since 1985, CD players (or CD changers), tape decks and video CD changers.

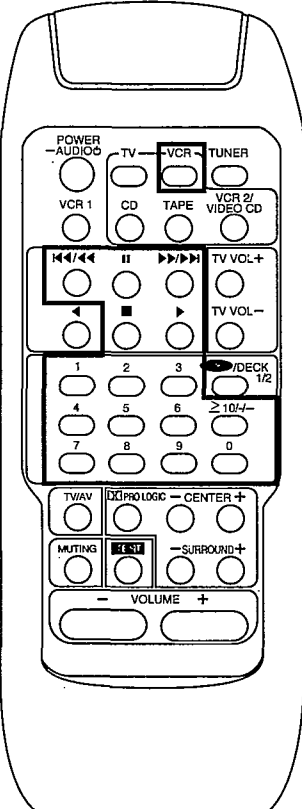


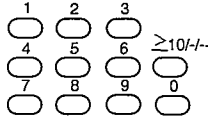
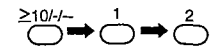




- For detailed information concerning operation steps, etc., please refer to the appropriate page for each unit and the respective operating instructions.
- Make sure that the power of each unit is set to the "ON" position before beginning the operations.

To operate the receiver

	To turn the unit ON/OFF	(Touch only)	
	To select an input source	<p>Note</p> <ul style="list-style-type: none"> • PHONO can not be selected with this remote control. • Selecting TAPE turns ON the tape monitor function. Pressing it again or another input select button turns the function OFF. 	
	To select the Dolby Pro Logic mode	Changes as follows each time the button is pressed. → SURROUND → 3 STEREO → (OFF)	
	To output a test signal	When the 3 STEREO or SURROUND mode is ON Press once more to stop the test signal.	
	To adjust the output level of the center speaker	When the 3 STEREO or SURROUND mode is ON Note Output level cannot be changed when the surround mode is ON and the center mode is on PHANTOM.	
	To adjust the output level of the surround speakers	When the SURROUND mode is ON 	
	To mute the sound level	Press once more to return to the original volume.	
	To adjust the volume level		
	If your unit is equipped with the New Technics Remote Control System (see below)		
	To turn the system OFF	Press for approx. 2 seconds.	
To listen to radio broadcasts			
Specify the preset channel using the numeric button(s). (Example: Channel 9)			
TUNER →		(Example: Channel 9) (Example: Channel 12) → →	

	To switch the remote control to TV operation mode	 <p>The TV can be turned on and off by pressing this button for approximately 2 seconds.</p>
	To select the TV/VIDEO mode	 <p>The TV screen will change each time the button is pressed.</p>
	To select the desired channel	<p>(Example: Channel 9)</p>  <p>(Example: Channel 12)</p> 
	To adjust the volume level	 

To operate a VCR

	To switch the remote control to VCR operation mode	 <p>The VCR can be turned on and off by pressing this button for approximately 2 seconds.</p>
	To start play	
	To select the desired channel.	<p>(Example: Channel 9)</p>  <p>(Example: Channel 12)</p> 
	To fast-forward or rewind the tape	<p>In the stop mode</p>  
	To stop play temporarily	 <p>Press once again to resume play.</p>
	To stop play	

OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURE

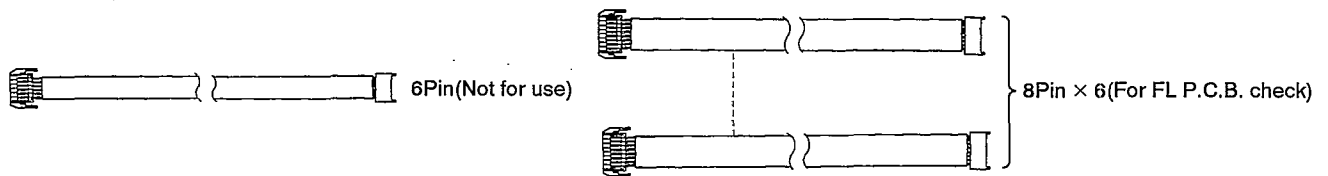
- NOTE**
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
 2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
 3. Select items from the following index when checks or replacement are required.
 4. Illustrated screws are equivalent to actual size.
 5. Refer the parts No. on the page of "Main component Replacement Procedures", if necessary.

Contents

•Checking Procedure for each P.C.B.		Page.
1. Checking for the FL P.C.B., tuner P.C.B. and IN/OUT terminal P.C.B.		9,10.
2. Checking for the main P.C.B.		10,11.
•Main Component Replacement Procedures		
1. Replacement for the foot.		12.
2. Replacement for the power IC and regulator transistor.		12~14.
3. Replacement for the fan motor.		14.

The following extension cable kits is necessary to check the unit's P.C.B.

- RFKZ0013(Set of 7 extension cables)



Checking Procedure for each P.C.B.

1. Checking for the FL P.C.B., tuner P.C.B. and IN/OUT terminal P.C.B.

Step 1 $a \times 4$

Step 2 $b \times 2$

Step 3 Remove the cabinet.

Step 4 $c \times 3$

Step 5 Release the claws.

Step 6 Pull out the front panel ass'y.

• Check the tuner P.C.B. and IN/OUT terminal P.C.B. as shown left.

Tuner P.C.B. (Solder side)

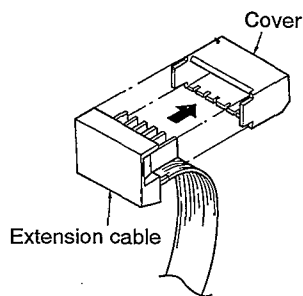
IN/OUT terminal P.C.B. (Component side)

a
[SNE2129-3] (Black)

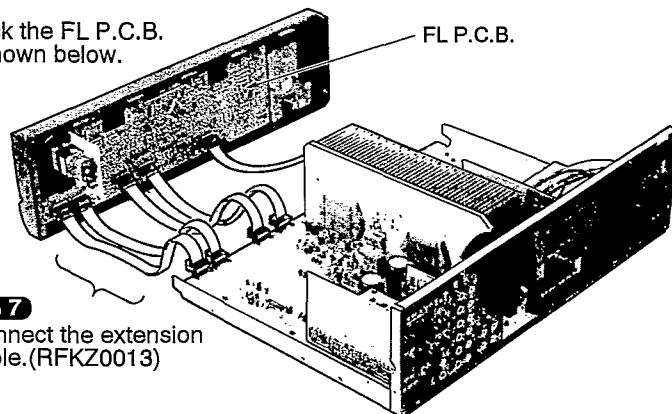
b, c
[XTBS3+8JFZ1] (Black)

NOTE

Remove the cover of extension cable.

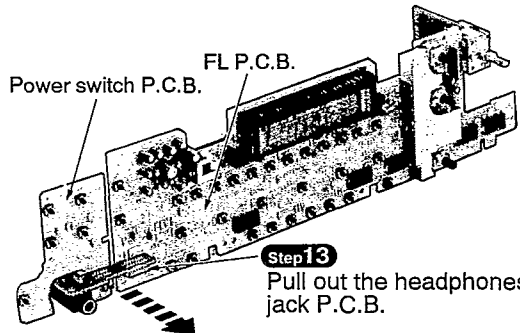
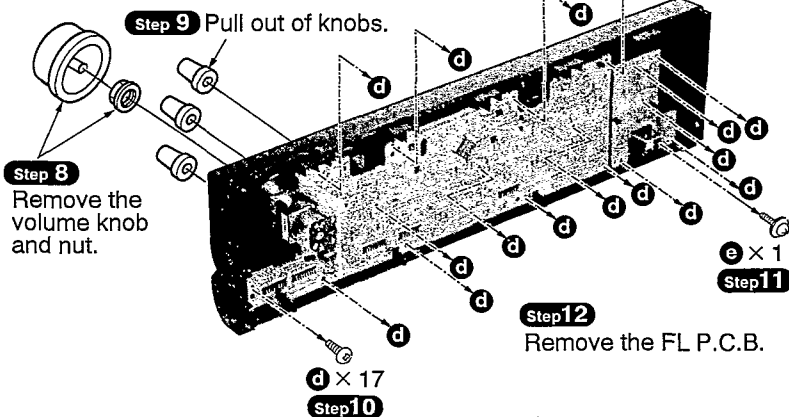


• Check the FL P.C.B. as shown below.



Step 7
Connect the extension cable.(RFKZ0013)

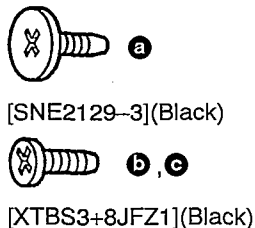
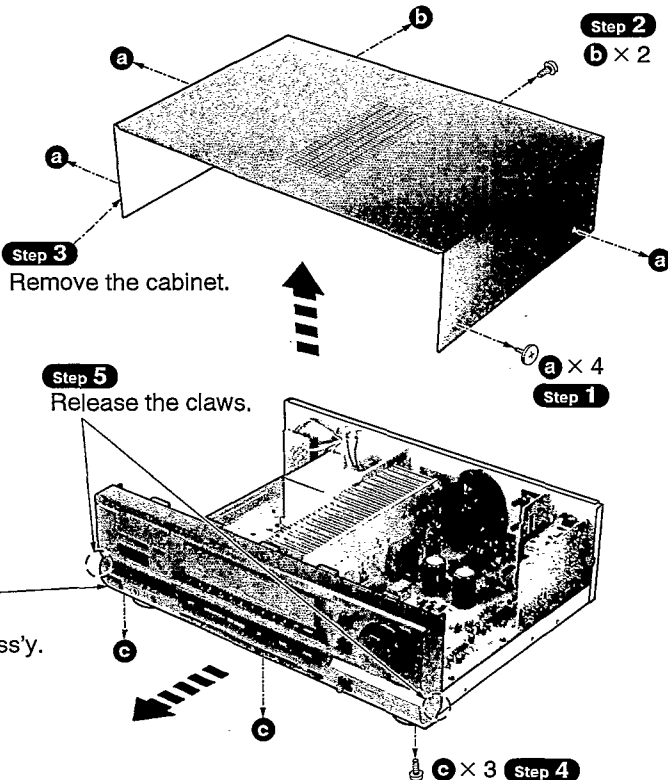
To remove each P.C.B.

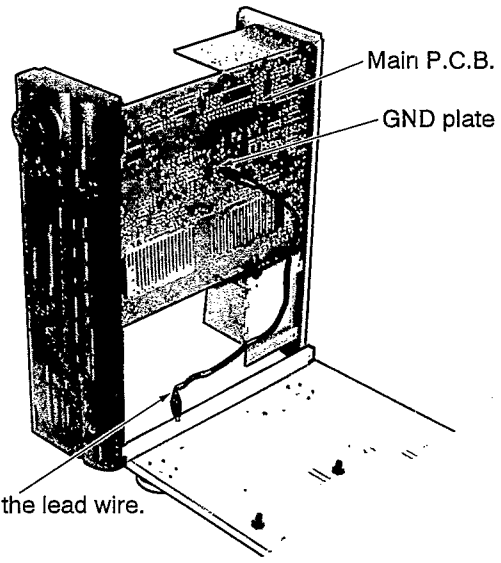
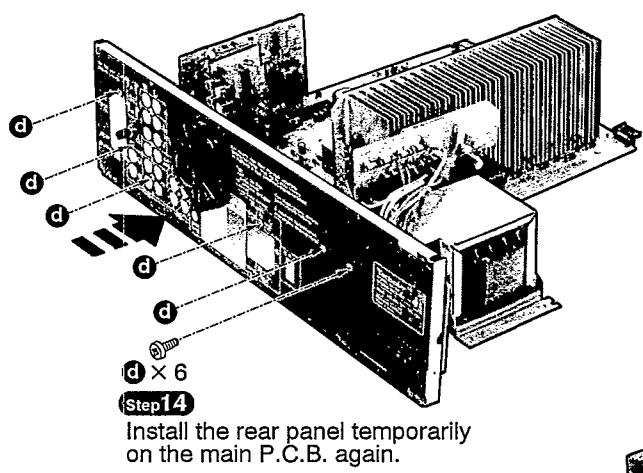
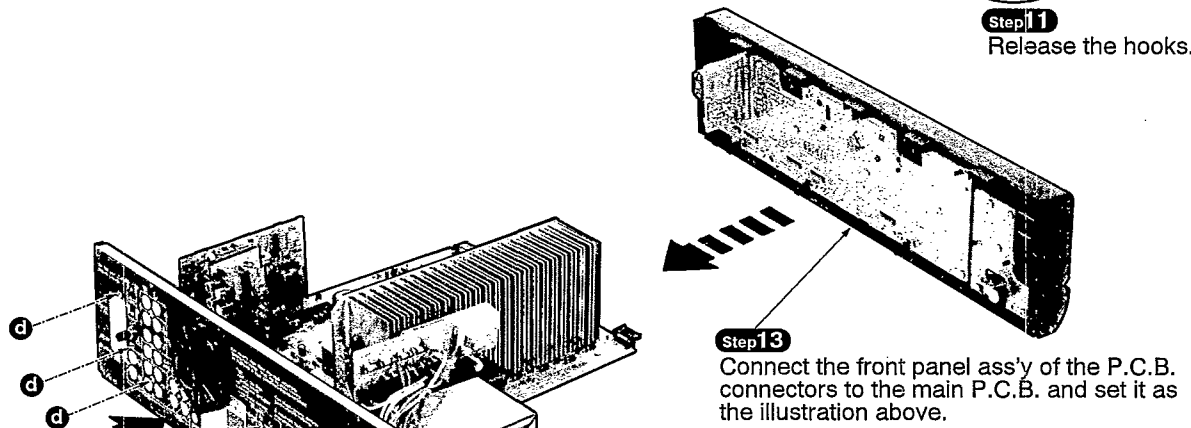
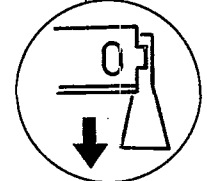
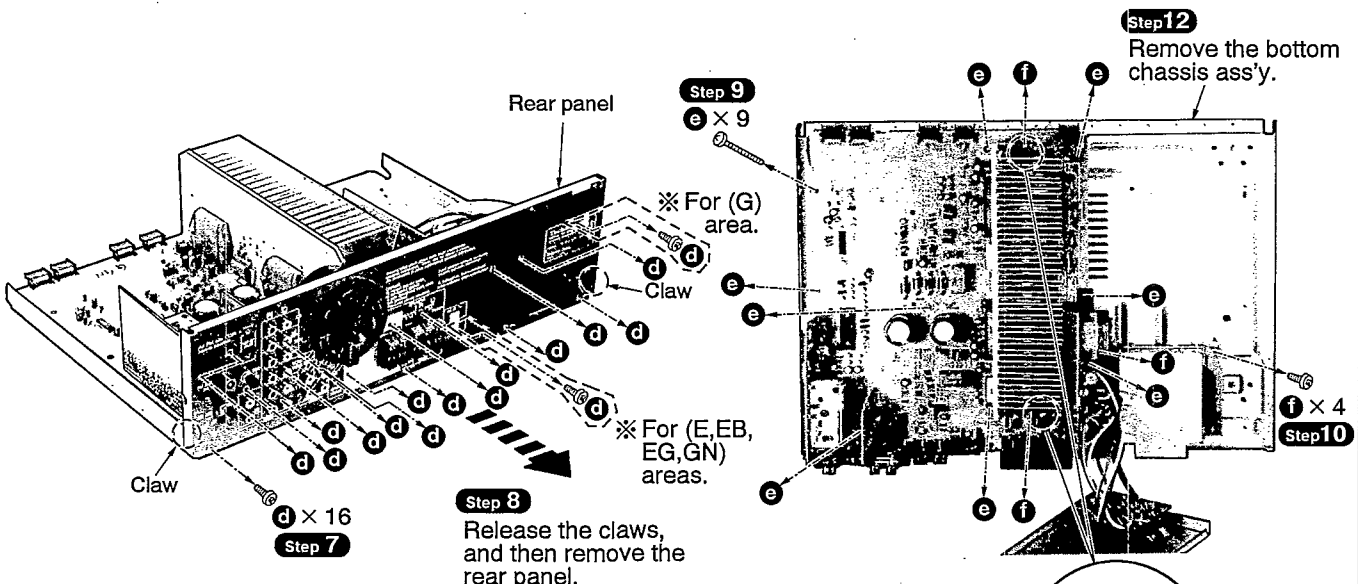


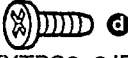
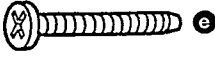
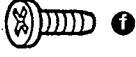
Step 13
Pull out the headphones jack P.C.B.



2. Checking for the main P.C.B.





-  d
[XTBS3+8JFZ1](Black)
-  e
[XTB3+20JFZ](Black)
-  f
[XTB3+8JFZ](Black)

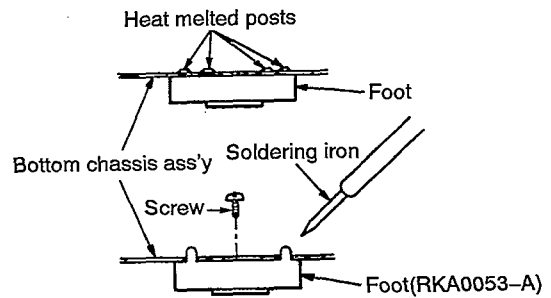
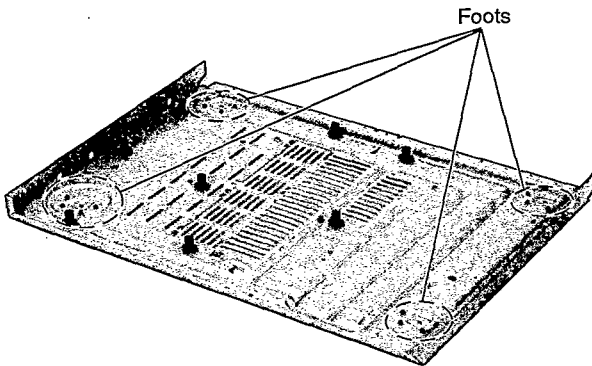
Main Component Replacement Procedures

1. Replacement of the foot

• Follow the **Step 1** ~ **Step 11** in item 2 on checking procedure for each P.C.B. on pages 10 and 11.

Step 1 Remove the 4 heat melted posts on the Bottom chassis ass'y with a pair of nippers or similar tool.

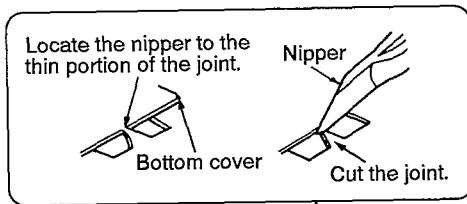
Step 2 To replace the foot(RKA0053-A) on the Bottom chassis ass'y melt the 4 posts with a soldering iron or install it with a screw (XTB3+6J).



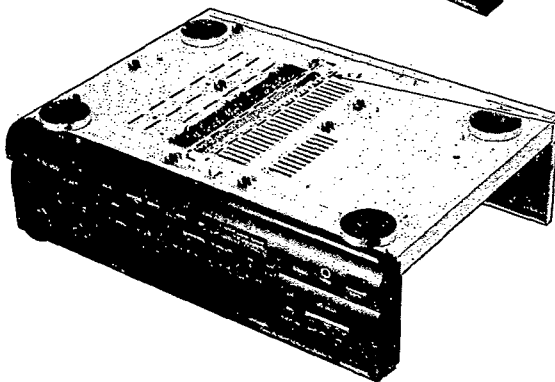
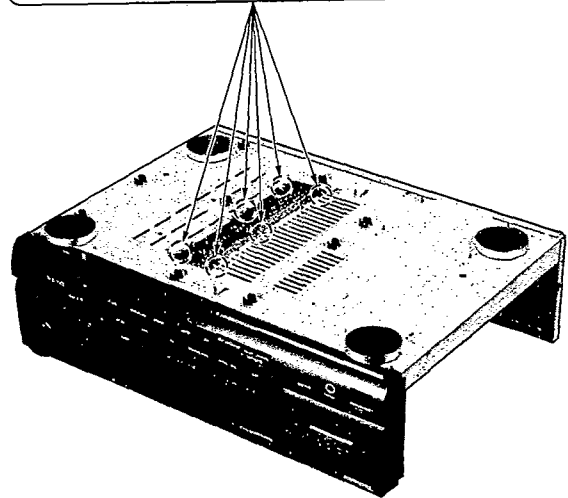
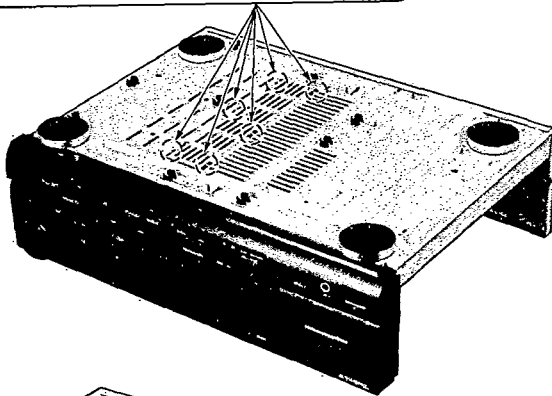
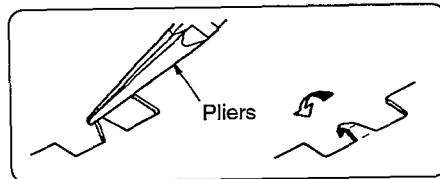
2. Replacement for the power IC and regulator transistor

• Follow the **Step 1** ~ **Step 3** in item 1 on checking procedure for each P.C.B. on page 9.

Step 1 Cut the joints as shown below.(6 portions)

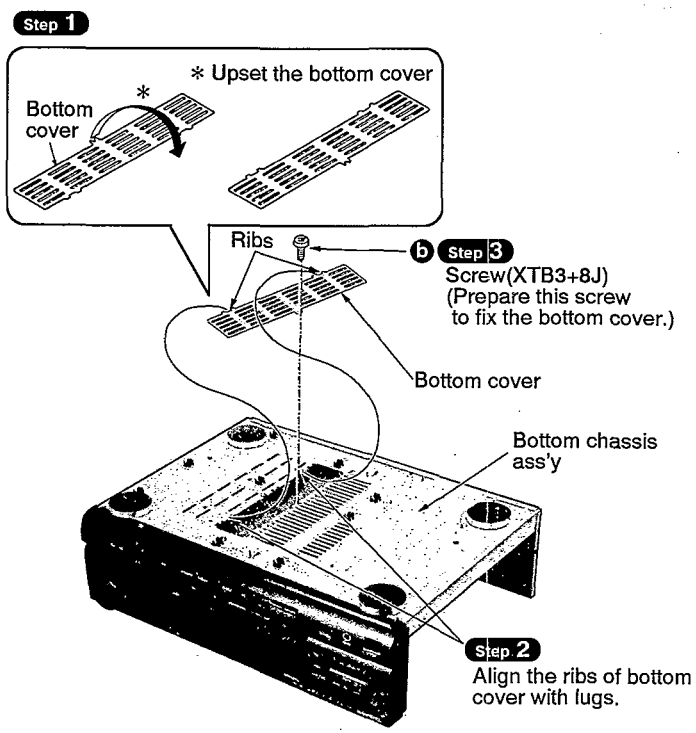
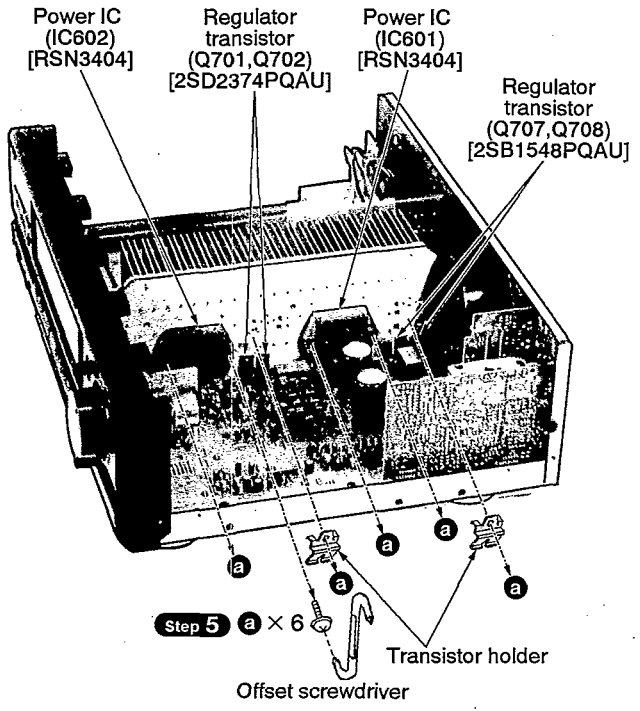


Step 2 Fold the joints.(6 portions)



Step 3 Unsolder the terminals of power IC and regulator transistor.

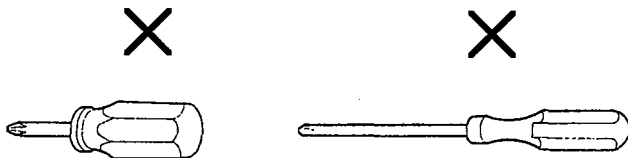
Installation of the bottom cover after replacement



CAUTION

1. After replceing 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).
2. Tighten enough the screws (a) after replacing the power IC and regulator transisitor. Otherwise, the heat rabiation works little.
3. When installing or removing the power IC or transistor holder, be sure to use an offset screwdriver.

- A long straight screwdriver cannot be used for removal or mounting since its long grip interferences wiht the neighboring P.C.B. (See Fig.1)
- 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)



A short straight screwdriver A long straight screwdriver

Fig.2

- 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)

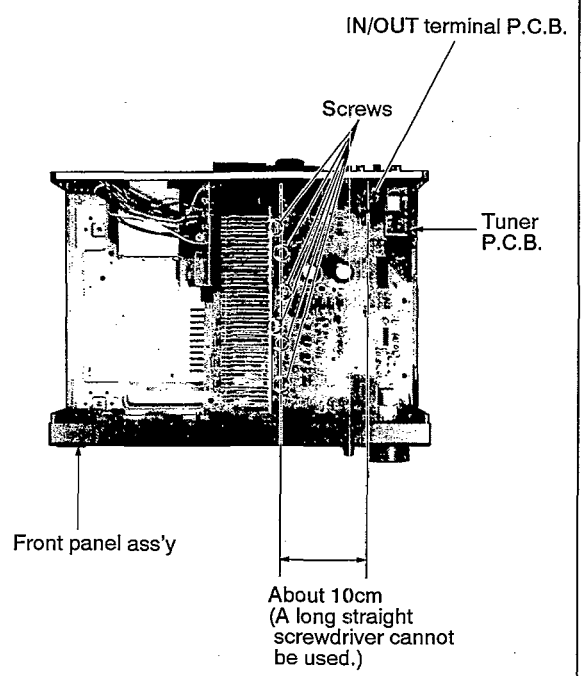
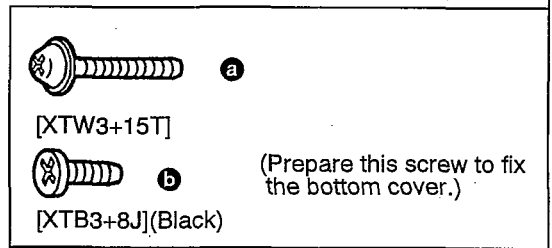
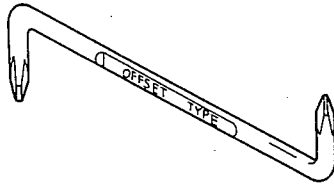


Fig.1

—OFFSET SCREWDRIVER—

• The PROTO offset screwdriver No.34- ¼ is recommended for use in the application above.



No.		
34 ¼	1 & 2	4 ¾"

• The address of PROTO International Sales is as follows.



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

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

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

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

Japan
 Stanley Works Japan
 2-7-16 Hyakunin-Cho
 Shinjuku-ku
 Tokyo 160 Japan
 Fax: 81-3-3360-8456
 Phone: 81-3-3360-8458

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

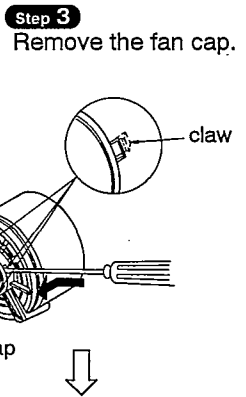
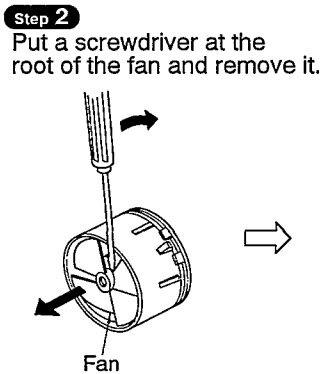
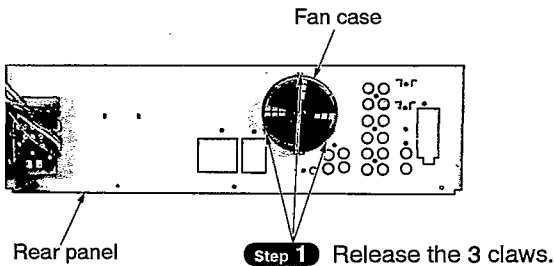
Europe
 Stanley-Proto Europe
 Woodside, Sheffield
 S39PD
 England
 Fax: 44-742-739-038
 Phone: 44-742-768-888

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

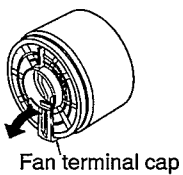
Middle East, Mediterranean & Africa
 Stanley-MEMA
 Cory House The Ring
 Bracknell Berkshire
 RG 12 1A2
 England
 Fax: 44-344-485-526
 Phone: 44-344-51813

3. Replacement for the fan motor

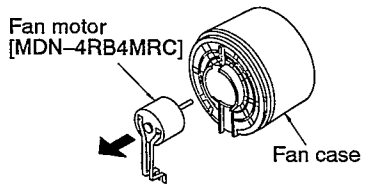
• Follow the **Step 1** ~ **Step 8** in item 2 on checking procedure for each P.C.B. on pages 10 and 11.



Step 4 Remove the fan terminal cap.

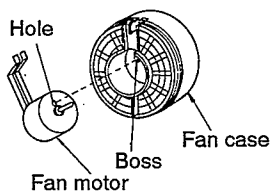


Step 5 Remove the fan motor.



NOTE

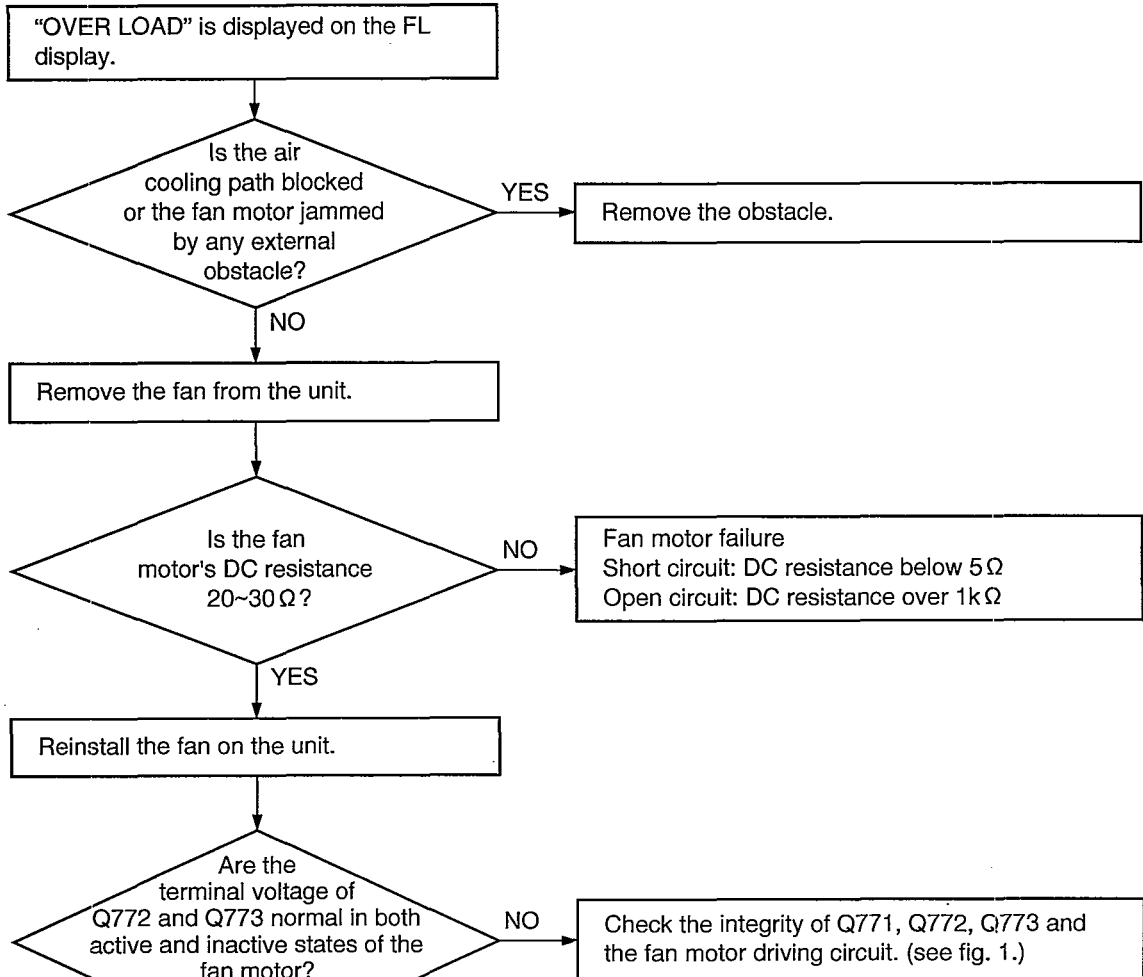
When replacing the fan motor, align the boss of the fan case with the hole of the fan motor.



FAN MOTOR TROUBLESHOOTING

The Model SA-GX390 employ fan motor error sensing electronics.

If the cooling fan is not operation and "OVER LOAD" is displayed on the FL display, check the fan motor and its driving circuit.



(Voltage table)

		fan. off	fan. on
Q771	E	0V	0V
	C	-0.7V	0V
	B	0V	-0.6V
Q772	E	0V	0V
	C	0V	-8.2V
	B	-0.7V	0V
Q773	E	0V	-7.0V
	C	-21.6V	-21.6V
	B	0V	-7.6V

(Table 1)

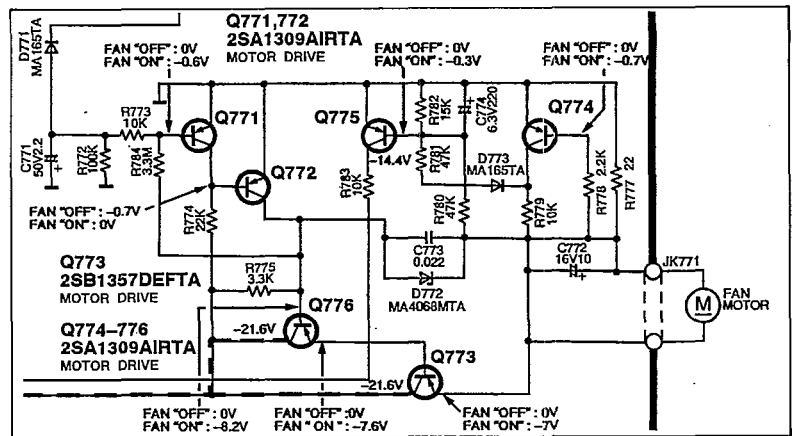
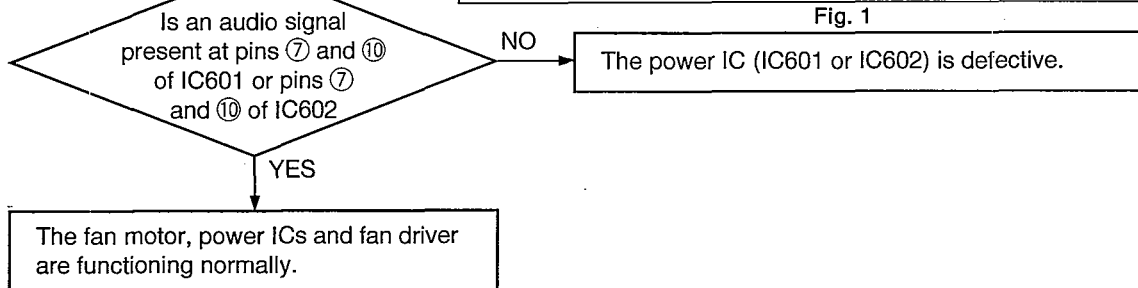
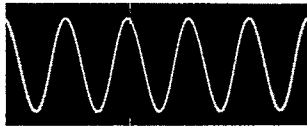
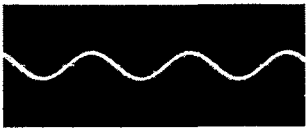
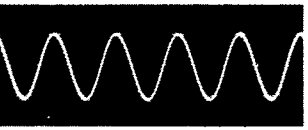
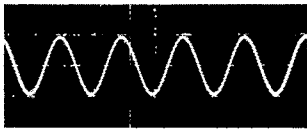
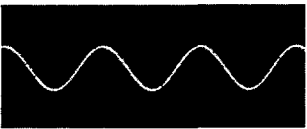
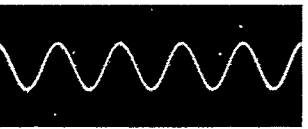
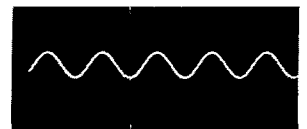
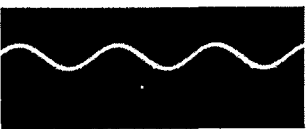
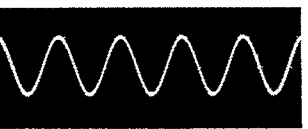
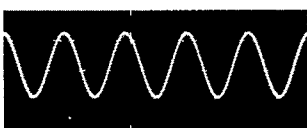
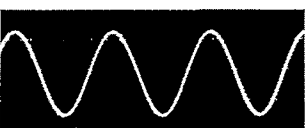
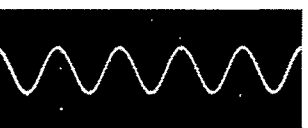
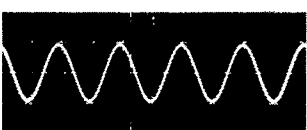
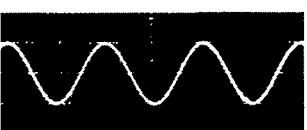
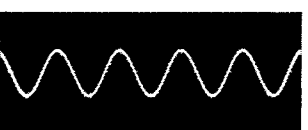


Fig. 1



NORMAL WAVEFORMS OF AMPLIFIER CIRCUIT AND LIKELY FAULY BLOCKS

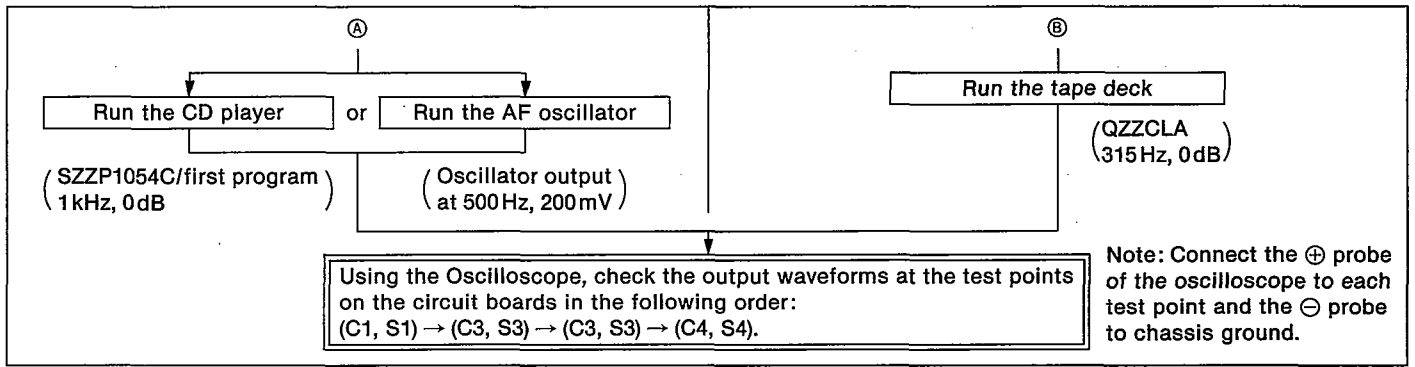
No.	TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at left is not present.
①	L1/R1	 0.5msec 2V	 1msec 1V	 1msec 500mV	Input selector block IC402 & area
②	L2/R2	 0.5msec 200mV	 1msec 500mV	 1msec 500mV	Dolby pro logic block IC1001 and IC1002 & area
③	L3/R3	 0.5msec 50mV	 1msec 100mV	 1msec 50mV	Master volume block VR501 & area
④	L4/R4	 0.5msec 500mV	 1msec 500mV	 1msec 1V	Tone control block IC511 & area
⑤	L5/R5	 0.5msec 5V	 1msec 500mV*	 1msec 1V*	Main amplifier block IC601 & area

Measurement conditions. Volume control (VR501), Treble control (VR512) and Bass control (VR511) positions: \odot
 * Volume control position (VR501) for these test : \odot

CHECKING PROCEDURE FOR SURROUND CIRCUIT

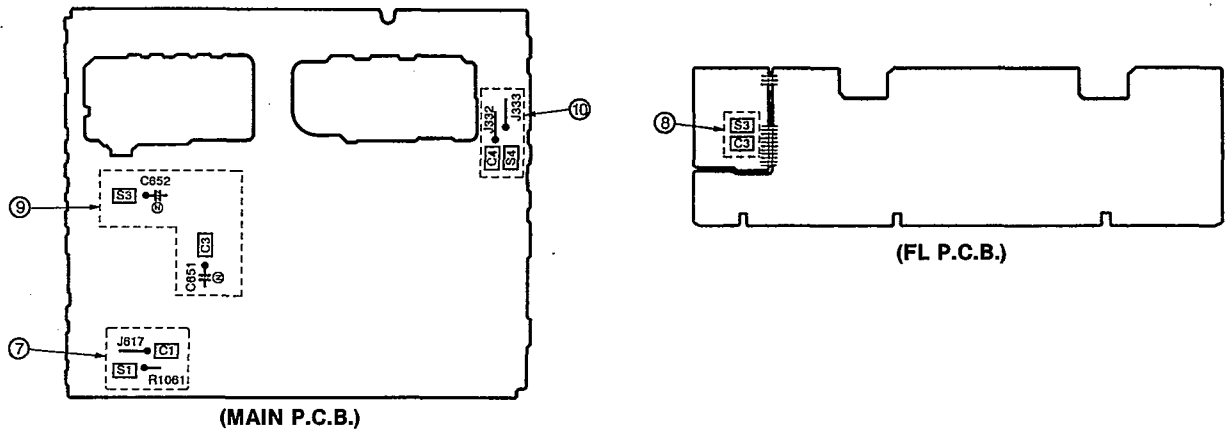
Outputting surround signals normally requires that opposite phase signals be applied to both the left and right channels. However, this unit incorporates a service mode, allowing the surround circuit to be tested using in-phase signals.

When the CD player or AF oscillator is connected:	When the tape deck is connected:
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Power on the unit. Set the input selector button of the unit to the "CD" position.</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">While pressing both the "+" and "-" of the surround level adjustment button "SURROUND", press the "Power" button.</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">The letters 『SURR』 flash on the FL display.</div> <div style="text-align: center;">↓</div> <div style="text-align: center;">A</div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Power on the unit. Set the input selector button of the unit to the "TAPE MONITOR" position.</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">While pressing both the "+" and "-" of the surround level adjustment button "SURROUND" press the "POWER" button.</div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">The letters 『SURR』 flash on the FL display.</div> <div style="text-align: center;">↓</div> <div style="text-align: center;">B</div>



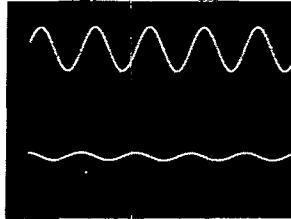
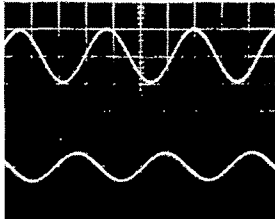
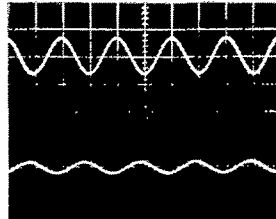



• To Exit the service mode, power off the unit.

TEST POINTS POSITIONS OF SURROUND CIRCUIT



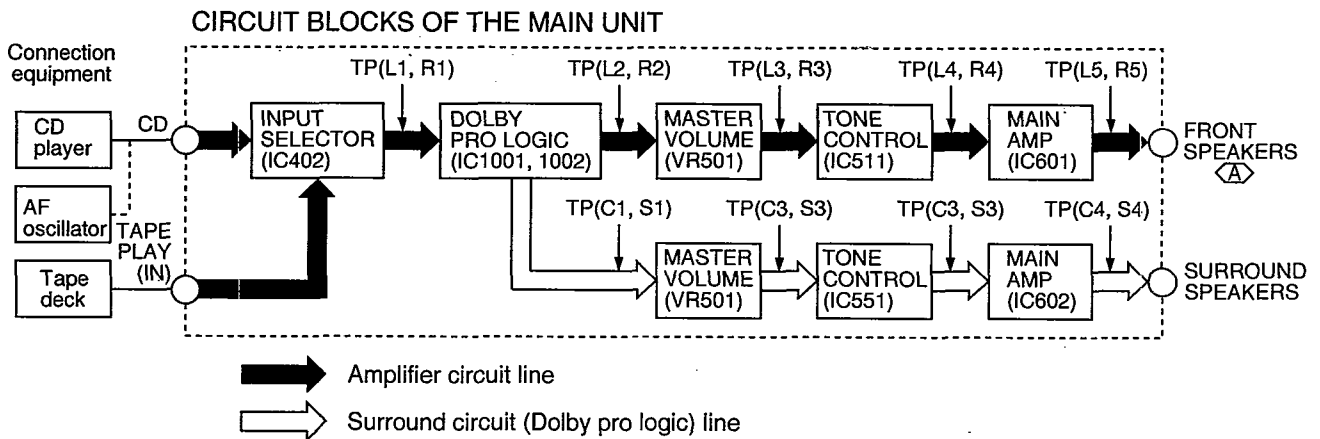
NORMAL WAVEFORMS OF SURROUND CIRCUIT AND LIKELY FAULTY BLOCKS

No.	TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at left is not present.
⑦	C1				Dolby pro logic block IC1001 and IC1002 & area
	S1				
⑧	C3				Master volume block VR501 & area
	S3				
⑨	C3				Tone control block & power limiter block IC551
	S3				

No.	TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at left is not present.
⑩	C4				Main amplifier block IC602 & area
	S4				

Measurement conditions. Volume control (VR501), Treble control (VR512) and Bass control (VR511) positions: ○
 * Volume control (VR501) position for these test : ○

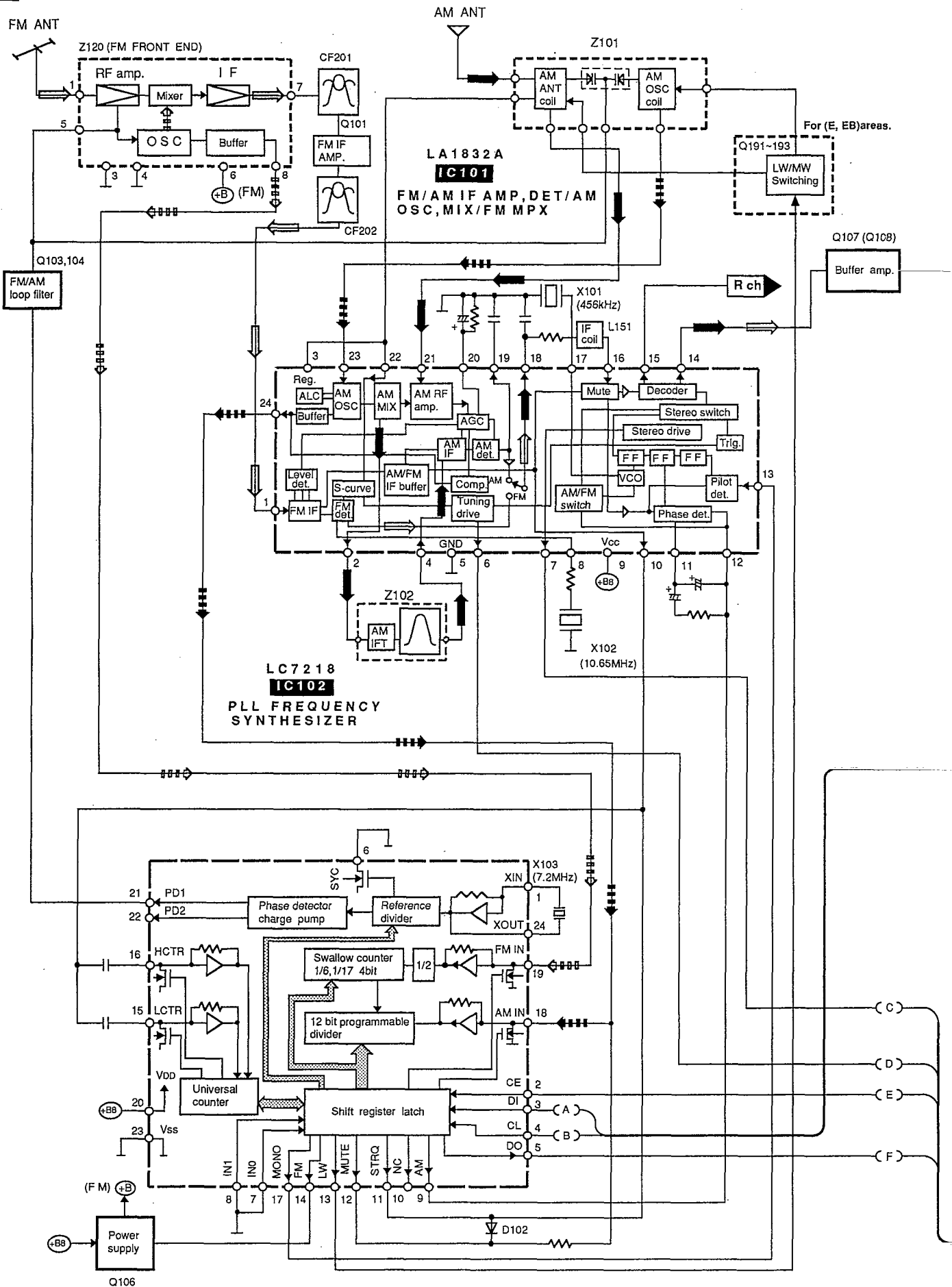
CIRCUIT BLOCKS

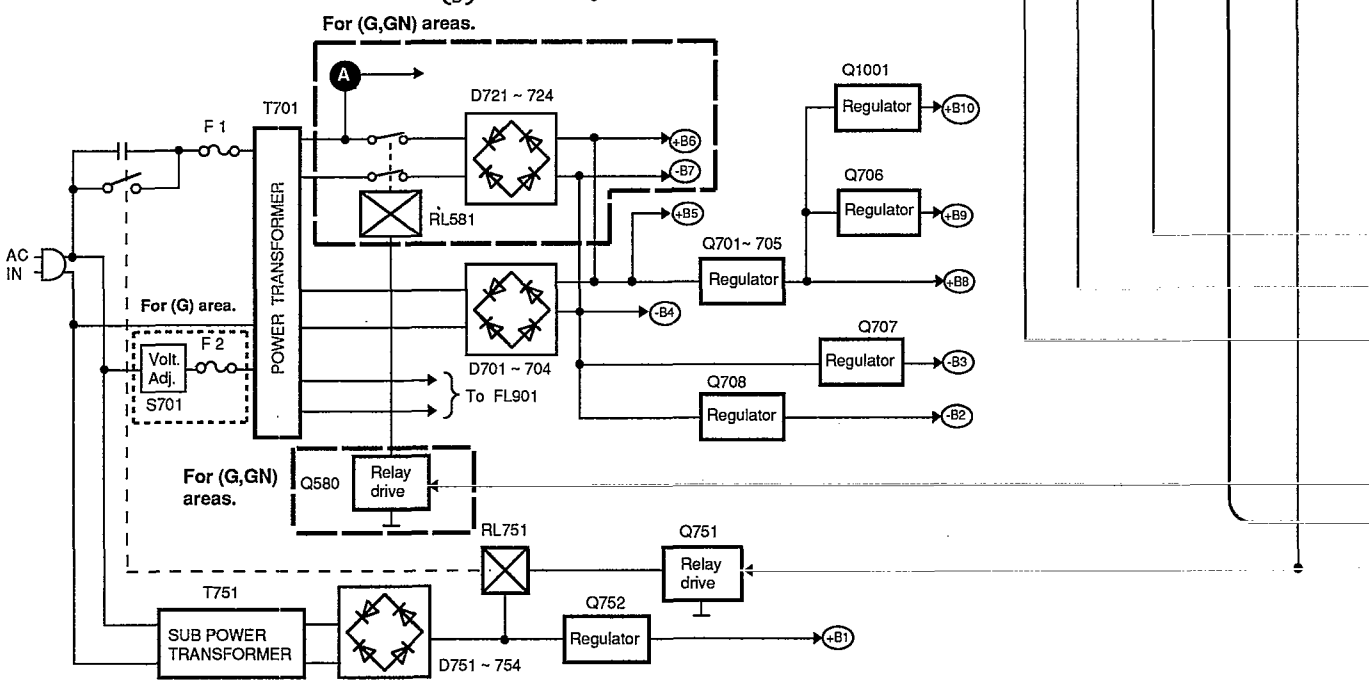
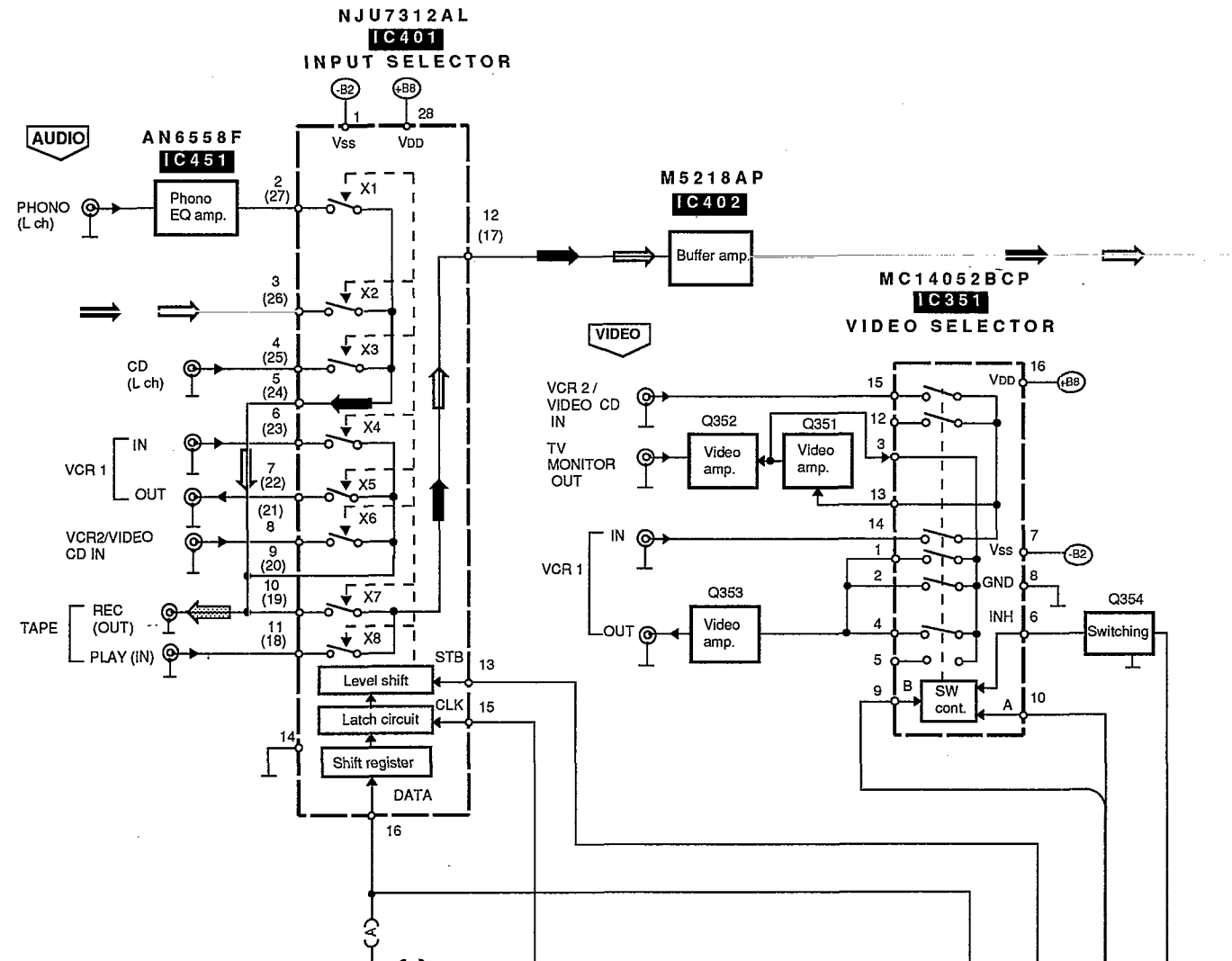


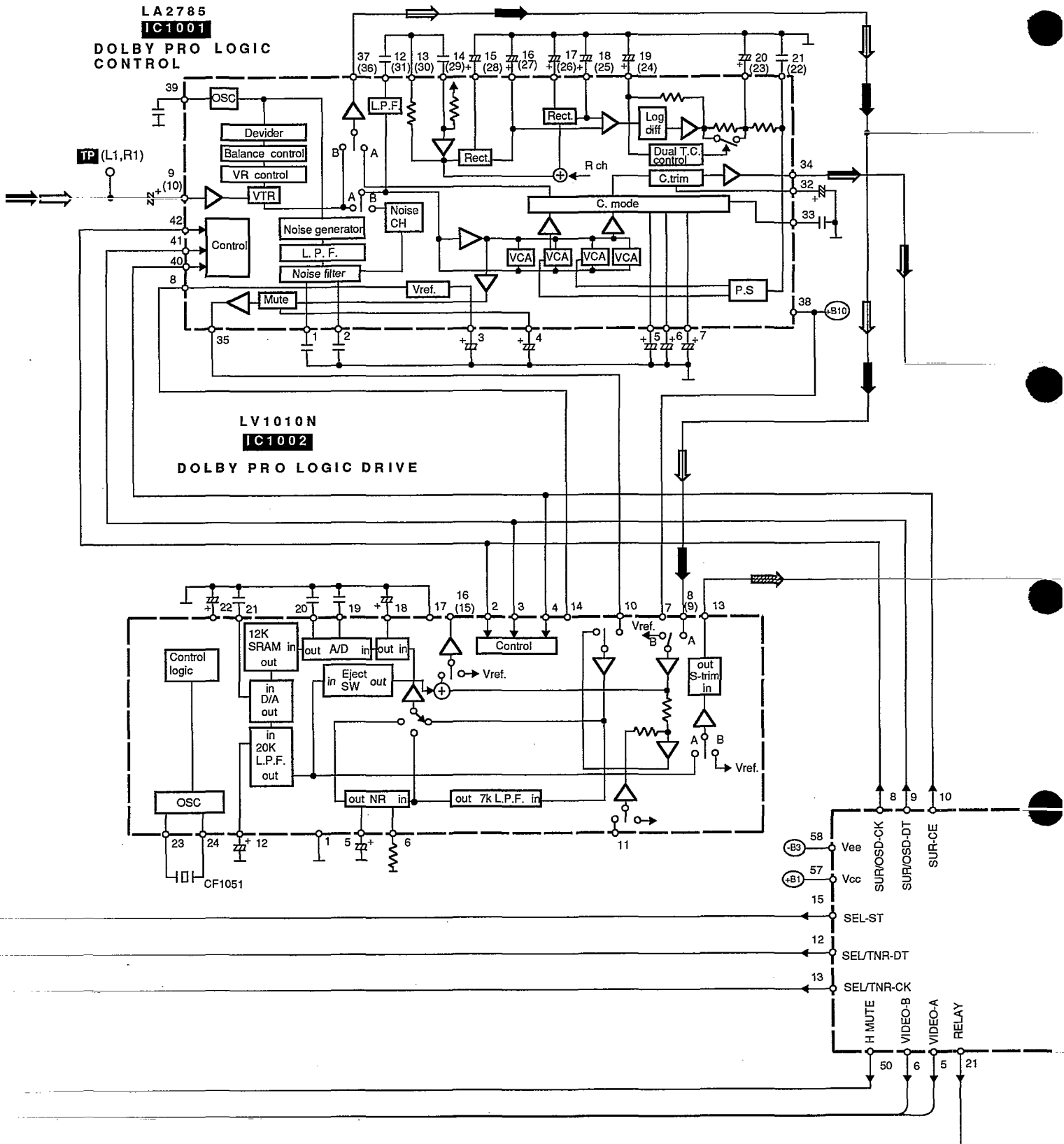
OVERLOAD DETECTION FUNCTION

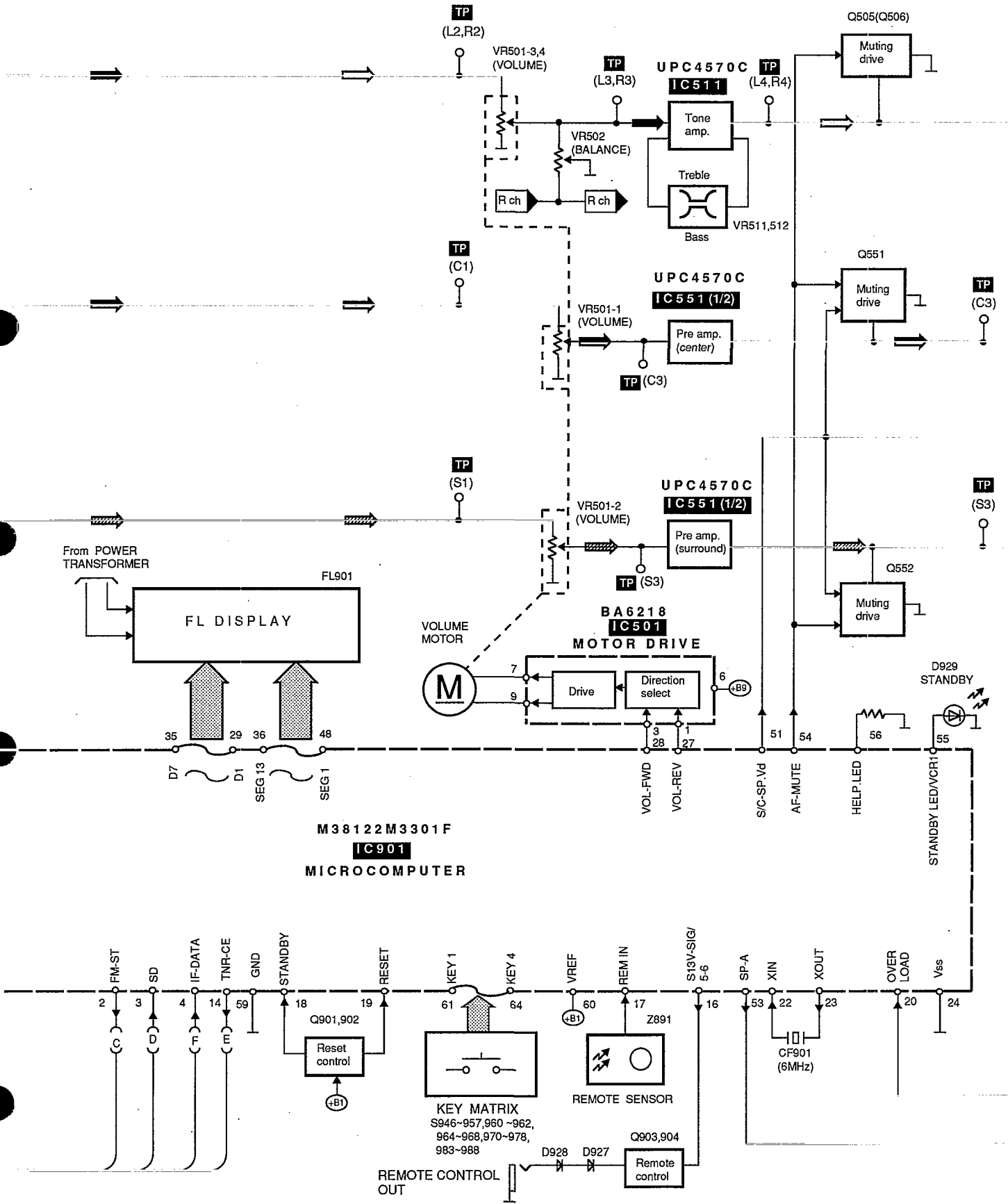
The HIC protection circuit functions if any cord at a speaker terminal is short-circuited or if the unit overheats because of improper operation. At the same time, 『OVERLOAD』 scrolls across the FL display. In this state, all keys remain inoperative; if any key is pressed, 『SWITCH OFF POWER』 scrolls across the FL display. If an overload occurs, immediately power off the unit and check the speaker connections, venting holes and cooling fans. After fixing any faults, power on the unit again and check for proper operation. If no defects are found, or if the unit remains overloaded after it is power on again, check the circuit for faults.

BLOCK DIAGRAM



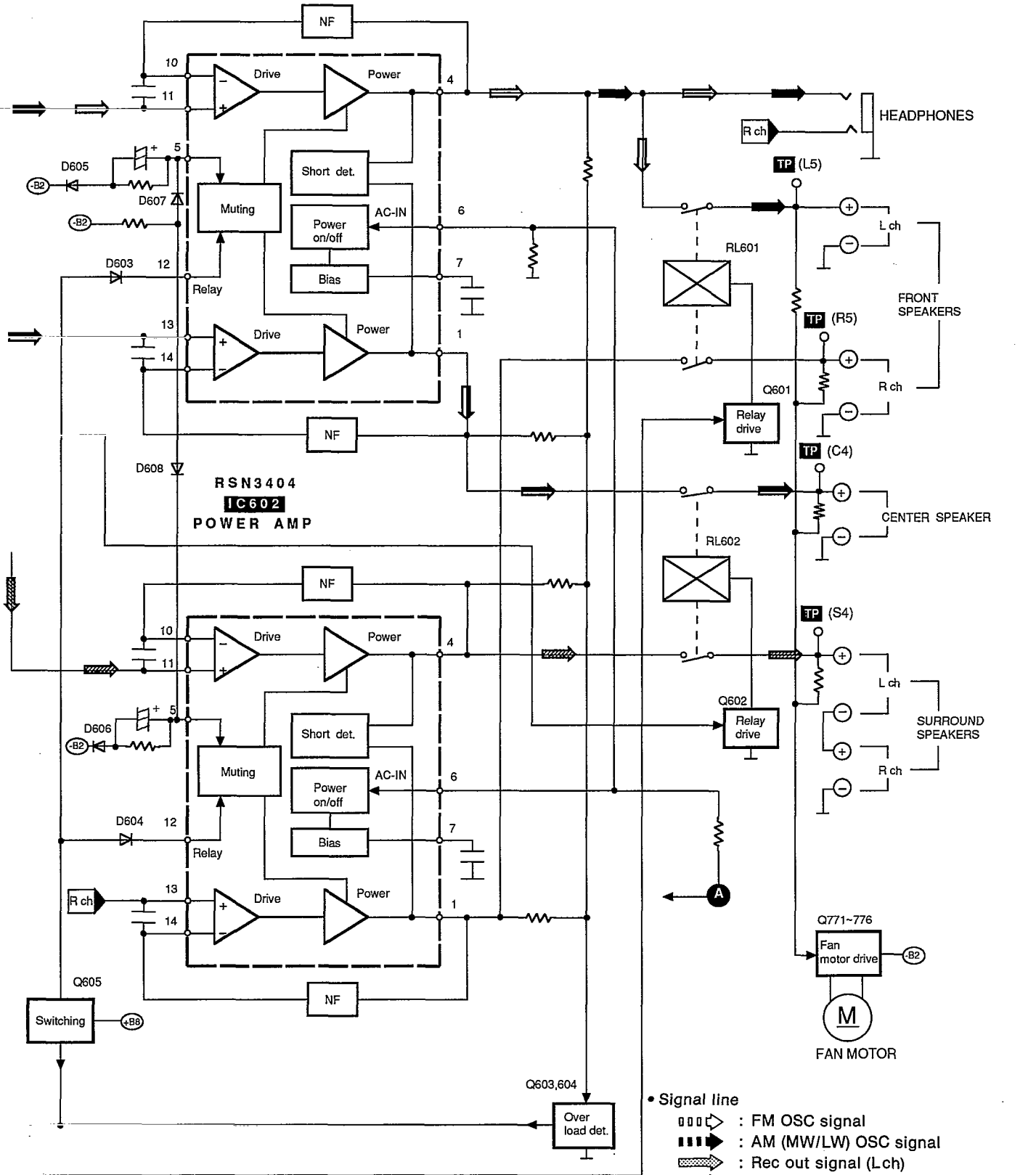






RSN3404
IC601
POWER AMP

RSN3404
IC602
POWER AMP



• Signal line

- : FM OSC signal
- ▣▣▣▣ : AM (MW/LW) OSC signal
- ▨▨▨▨ : Rec out signal (Lch)
- ▧▧▧▧ : Surround speaker drive signal (Lch)
- ▩▩▩▩ : FM signal
- ▬▬▬▬ : AM (MW/LW) signal
- ▨▨▨▨ : Center speaker drive signal (Lch)

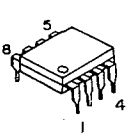
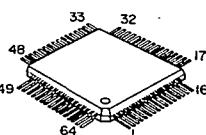
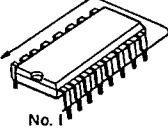
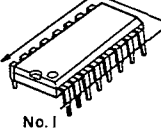
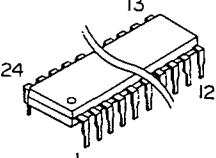
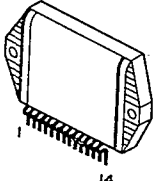
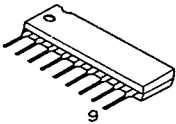
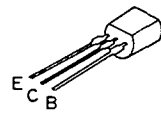
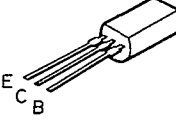
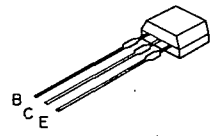
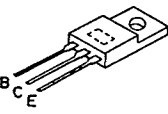

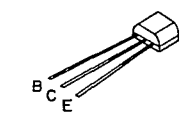
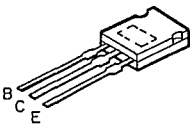
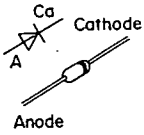
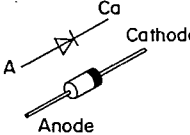
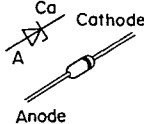
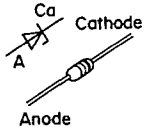
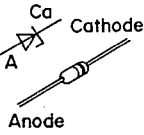
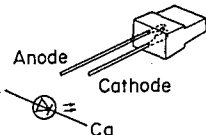
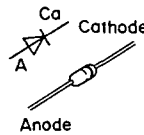
■ TERMINAL GUIDE

• IC901 (M38122M3301F): MICROCOMPUTER

Pin No.	Mark	I/O Division	Function
1	LOUDNESS	—	Not used, open
2	FM_ST	I	Stereo signal detect terminal
3	SD	I	Received signal detect terminal
4	IF_DATA	I	Serial data signal
5	VIDEO_A	O	Video selector control terminal
6	VIDEO_B		
7	SFC_SW	—	Not used, open
8	SUR/ OSD_CK	O	Serial clock signal
9	SUR/ OSD_DT	O	Serial data signal
10	SUR_CE	O	Chip enable signal
11	OSD_ST	—	Not used, open
12	SEL/ TNR_DT	O	Serial data signal
13	SEL/ TNR_CK	O	Serial clock signal
14	TNR_CE	O	Chip enable signal
15	SEL_ST	O	Level shift control terminal
16	S13V_SIG /5-6	O	Remote control out terminal
17	REM_IN	I	Remote control terminal
18	STANDBY	I	Power detect terminal
19	RESET	I	Reset detect terminal
20	OVERLOAD	I	Over load detect terminal
21	RELAY	O	Relay control terminal
22	Xin	I	Crystal oscillator terminal (6MHz)
23	Xout	O	

Pin No.	Mark	I/O Division	Function
24	Vss	—	GND terminal
25	L/R_LIMITER	O	Muting drive control
26	NC	—	Not used, connected to resistor
27	VOL_REV	O	Rotation control terminal of volume motor
28	VOL_FWD		
29 } 35	D1 } D7	O	Digit signal of FL display
36 } 48	Seg13 } Seg1	O	Segment signal of FL display
49	INIT_IN	I	Not used, connected to resistor
50	H_MUTE	O	Muting control terminal
51	S/C_SP. Vd	O	Surround and speaker select control terminal
52	SP_B	O	Speaker select control terminal
53	SP_A		
54	AF_MUTE	O	Muting control terminal
55	STANDBY_ LED/VCR1	O	LED drive signal (STANDBY)
56	HELP_LED	O	LED drive signal (HELP)
57	Vcc	I	Power supply terminal
58	Vee	I	Power supply terminal
59	GND	—	GND terminal
60	Vref	I	Power supply terminal
61 } 64	KEY1 } KEY4	I	Key matrix detect terminal










■ TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

<p>M5218AP</p> 	<p>M38122M3301F</p> 	<table border="1"> <tr> <td>AN6558F</td> <td>8 Pin</td> </tr> <tr> <td>LA2785</td> <td>42 Pin</td> </tr> </table> 	AN6558F	8 Pin	LA2785	42 Pin	<table border="1"> <tr> <td>UPC4570C</td> <td>8 Pin</td> </tr> <tr> <td>MC14052BCP</td> <td>16 Pin</td> </tr> <tr> <td>NJU7312AL</td> <td>28 Pin</td> </tr> </table> 	UPC4570C	8 Pin	MC14052BCP	16 Pin	NJU7312AL	28 Pin
AN6558F	8 Pin												
LA2785	42 Pin												
UPC4570C	8 Pin												
MC14052BCP	16 Pin												
NJU7312AL	28 Pin												
	<p>LA1832A LC7218 LV1010N</p>	<p>RSN3404</p> 	<p>BA6218</p> 	<p>2SC2631QRSTA</p> 	<p>2SC3940AQSTA</p> 								
	<p>2SA933SSTA DTA144ESTP DTC114YSTP</p>	<p>2SD2374PQAU 2SB1548PQAU</p> 		<p>2SA1309AIRTA 2SC2785FETA 2SC2787LTA 2SC3311AIRTA 2SC3311ARSTA 2SD1915FTA</p>	<p>UN411FTA UN421FTA UN4213AITA</p>								
<p>2SC3327ABTP</p> 	<p>2SB1357DEFTA</p> 	<p>MA165TA 1SR35200TB RVD1SS133TA</p> 	<p>P300D5002T</p> 	<p>MTZJ3R9ATA MTZJ4R7BTA</p> 									
	<p>MA4051MTA MA4056MTA MA4062MTA MA4068MTA MA4068LTA MA4075MTA</p>		<p>MA4100MTA MA4150MTA MA4220MTA</p>	<p>LN846RPH</p> 	<p>1SS291TA</p> 								

■ SCHEMATIC DIAGRAM (Parts list on pages 50~55.)

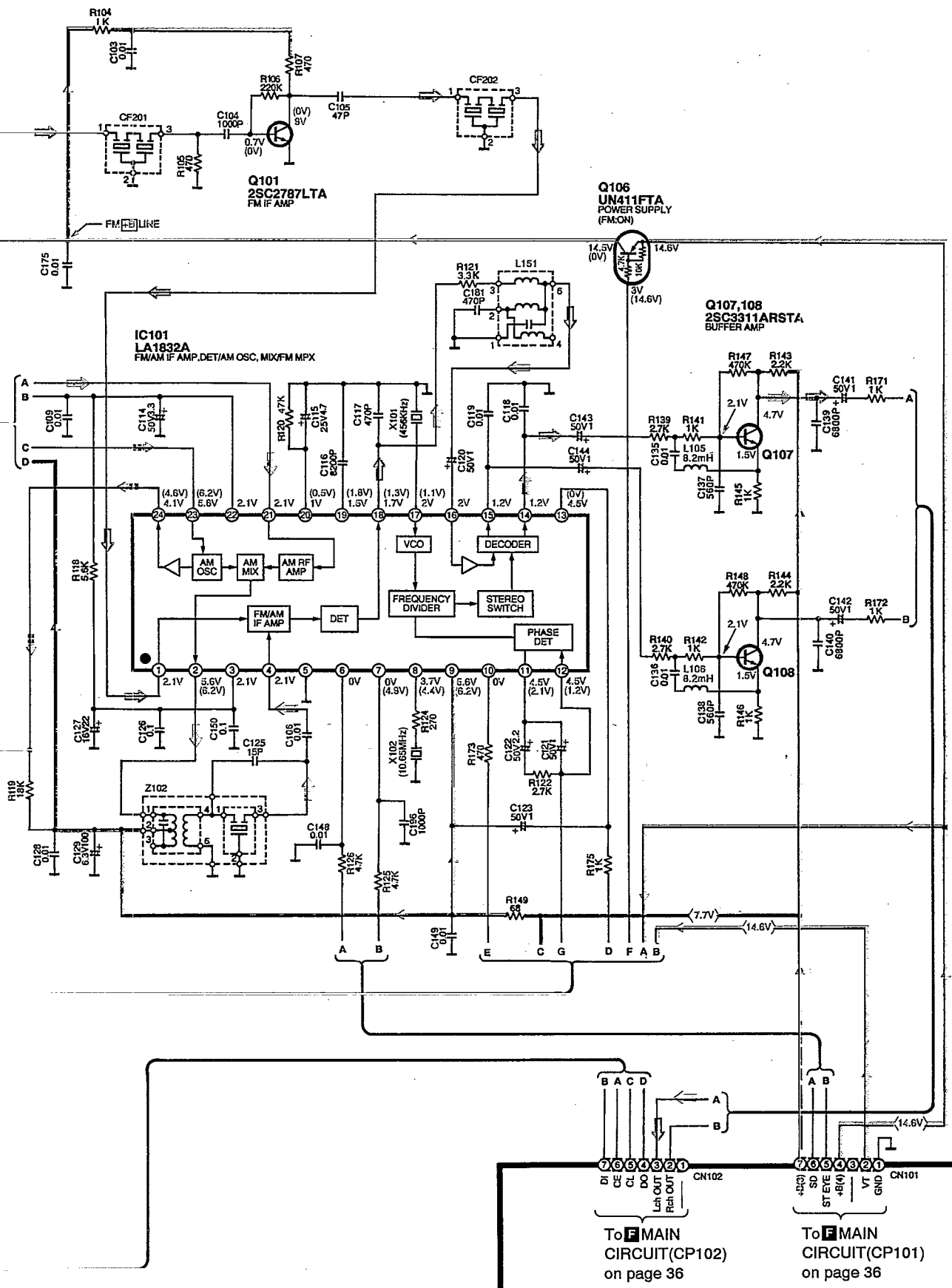
(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

- **S701** : Voltage adjustment switch in "240V" position.
(110V ↔ 127V ↔ 220V ↔ 240V)
[For (G) area only.]
 - **S946** : Numeric (5) switch.
 - **S947** : Center level adjust (CENTER (-)) switch.
 - **S948** : Test signal ON/OFF (TEST) switch.
 - **S949** : Numeric (4) switch.
 - **S950** : Numeric (6) switch.
 - **S951** : Center level adjust (CENTER (+)) switch.
 - **S952** : Numeric (7) switch.
 - **S953** : Surround select (SURROUND (-)) switch.
 - **S954** : Input select (CD) switch.
 - **S955** : Input select (TUNER) switch.
 - **S956** : Center mode select (CENTER MODE) switch.
 - **S957** : Numeric (9) switch.
 - **S960** : Surround select (SURROUND (+)) switch.
 - **S961** : Numeric (8) switch.
 - **S962** : Numeric (0) switch.
 - **S964** : Input select (PHONO) switch.
 - **S965** : Muting (MUTING) switch.
 - **S966** : Memory (MEMORY) switch.
 - **S967** : Help/reset (-HELP/-RESET) switch.
 - **S968** : Numeric (≥ 10) switch.
 - **S970** : Tape monitor (TAPE MONITOR) switch.
 - **S971** : Input select (VCR 2/VIDEO CD) switch.
 - **S972** : Input select (VCR 1) switch.
 - **S973** : Speaker ON/OFF (SPEAKERS) switch.
 - **S974** : Tuning control (TUNING ^) switch.
 - **S975** : Tuning control (TUNING v) switch.
 - **S976** : Band select (BAND) switch.
 - **S977** : FM mode select (FM AUTO/MONO) switch.
 - **S978** : Power (POWER) switch.
 - **S983** : 3 stereo ON/OFF (3 STEREO) switch.
 - **S984** : Surround ON/OFF (SURROUND) switch.
 - **S985** : Numeric (3) switch.
 - **S986** : Numeric (2) switch.
 - **S987** : Numeric (1) switch.
 - **S988** : Direct tuning (DIRECT TUNING) switch.
- **Signal line**
-  : FM OSC signal
 -  : AM (MW/LW) OSC signal
 -  : Rec out signal (Lch)
 -  : Surround speaker drive signal (Lch)
 -  : Positive voltage lines
 -  : Negative voltage lines
 -  : FM signal
 -  : AM (MW/LW) signal
 -  : Center speaker drive signal (Lch)

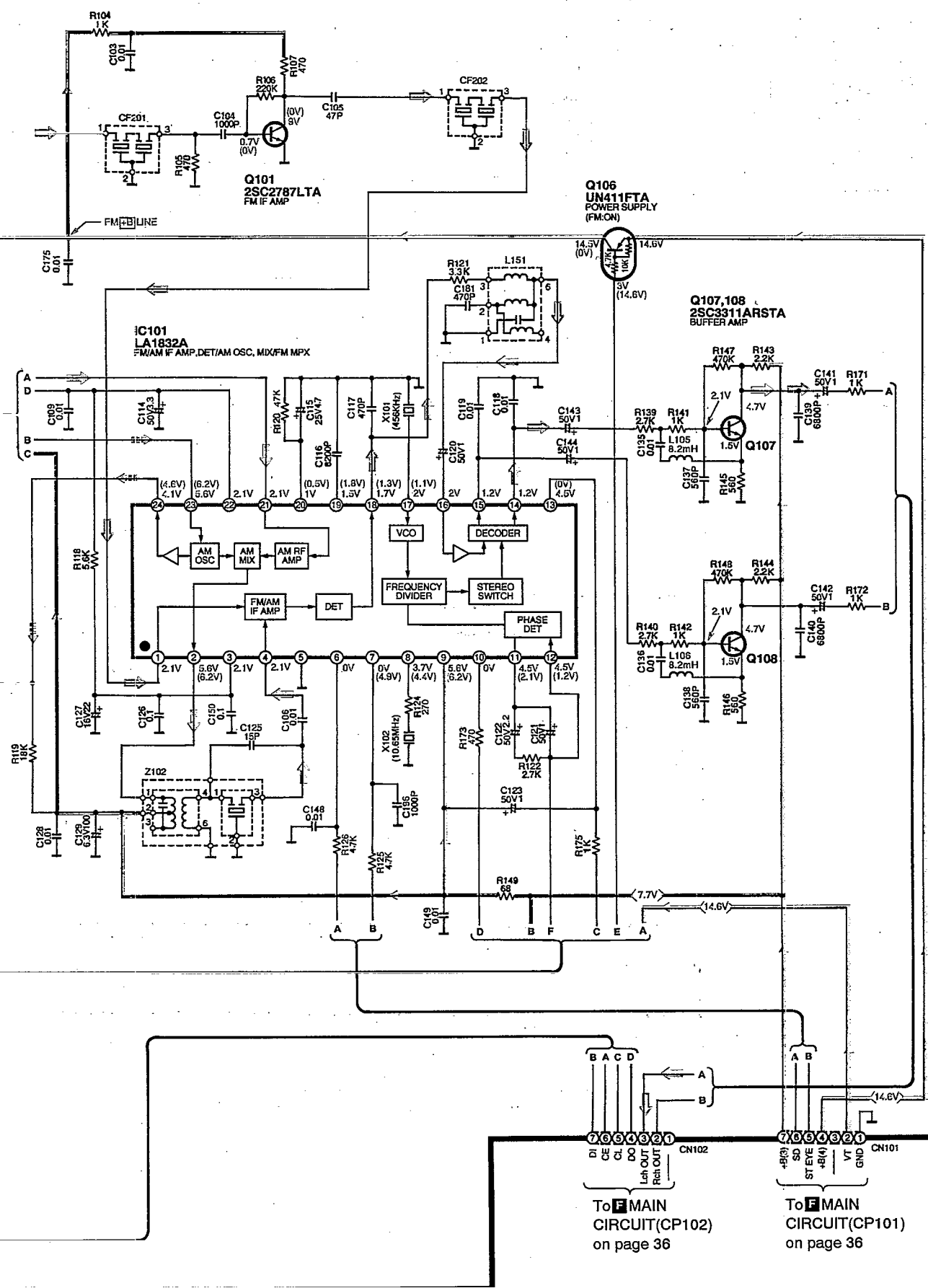
- **Important safety notice**
Components identified by \triangle mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used as occasion calls. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- The supply part number is described alone in the replacement parts.
- 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) signal reception mode.
- * Figures in < > stand for DC-voltage in LW signal reception mode.
- L1~L5, R1~R5, C1, C3, C4, S1, S3, and S4 in the schematic diagram show the test points.
For detail, please refer to p. 16~p. 19.

- **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.



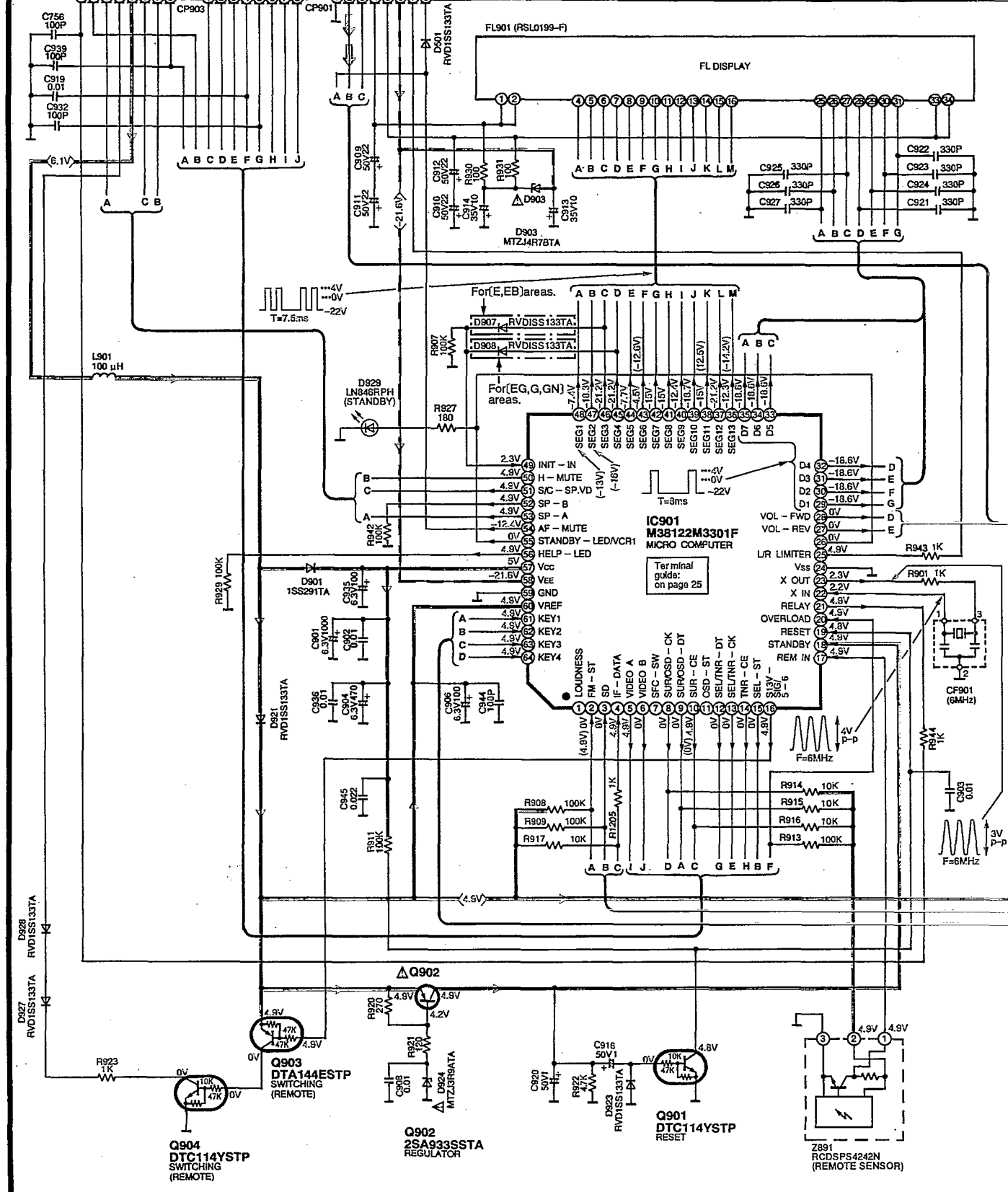
To MAIN
CIRCUIT(CP102)
on page 36

To MAIN
CIRCUIT(CP101)
on page 36

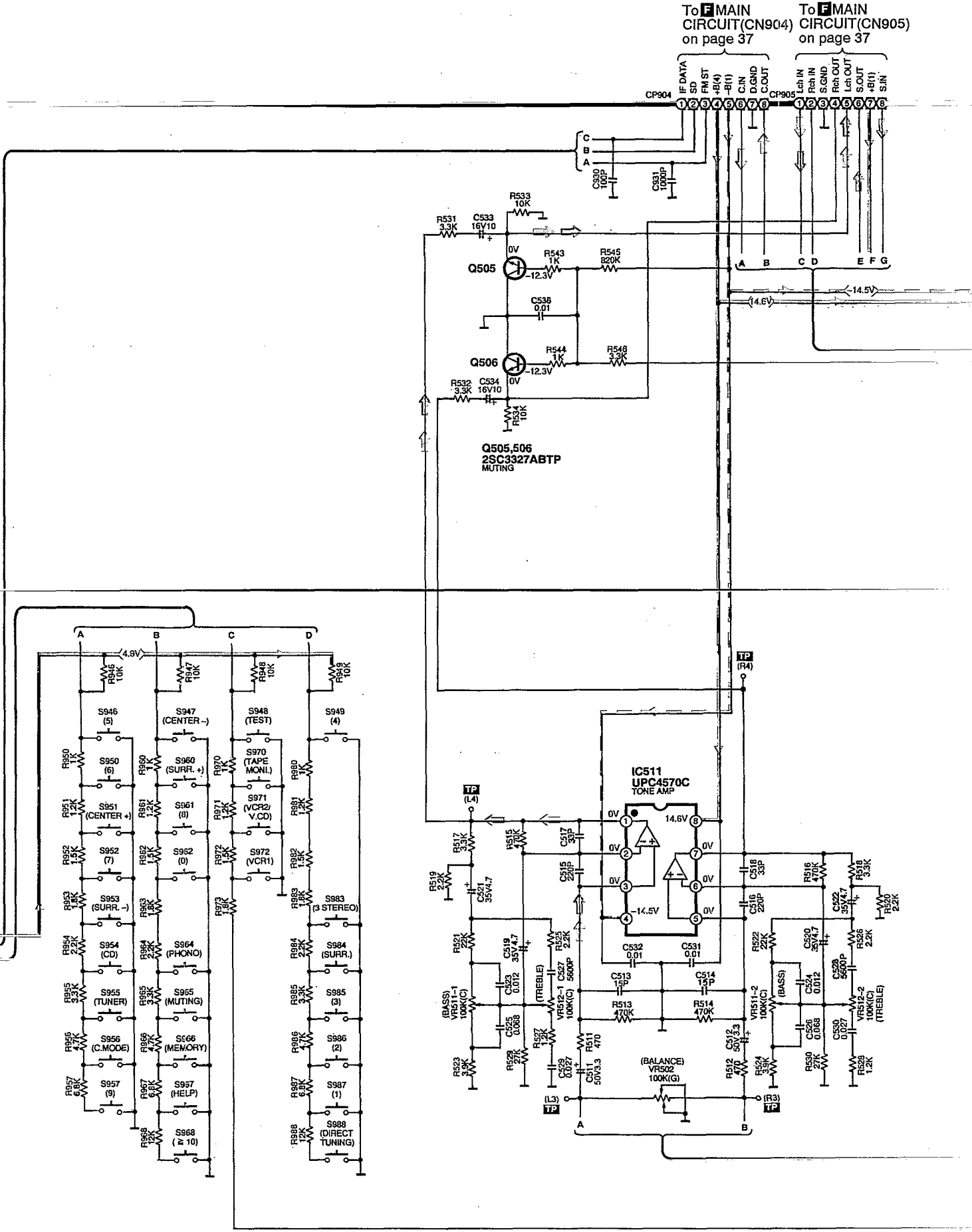


To MAIN CIRCUIT (CN902) on page 36
 To MAIN CIRCUIT (CN903) on page 36
 To MAIN CIRCUIT (CN901) on page 36

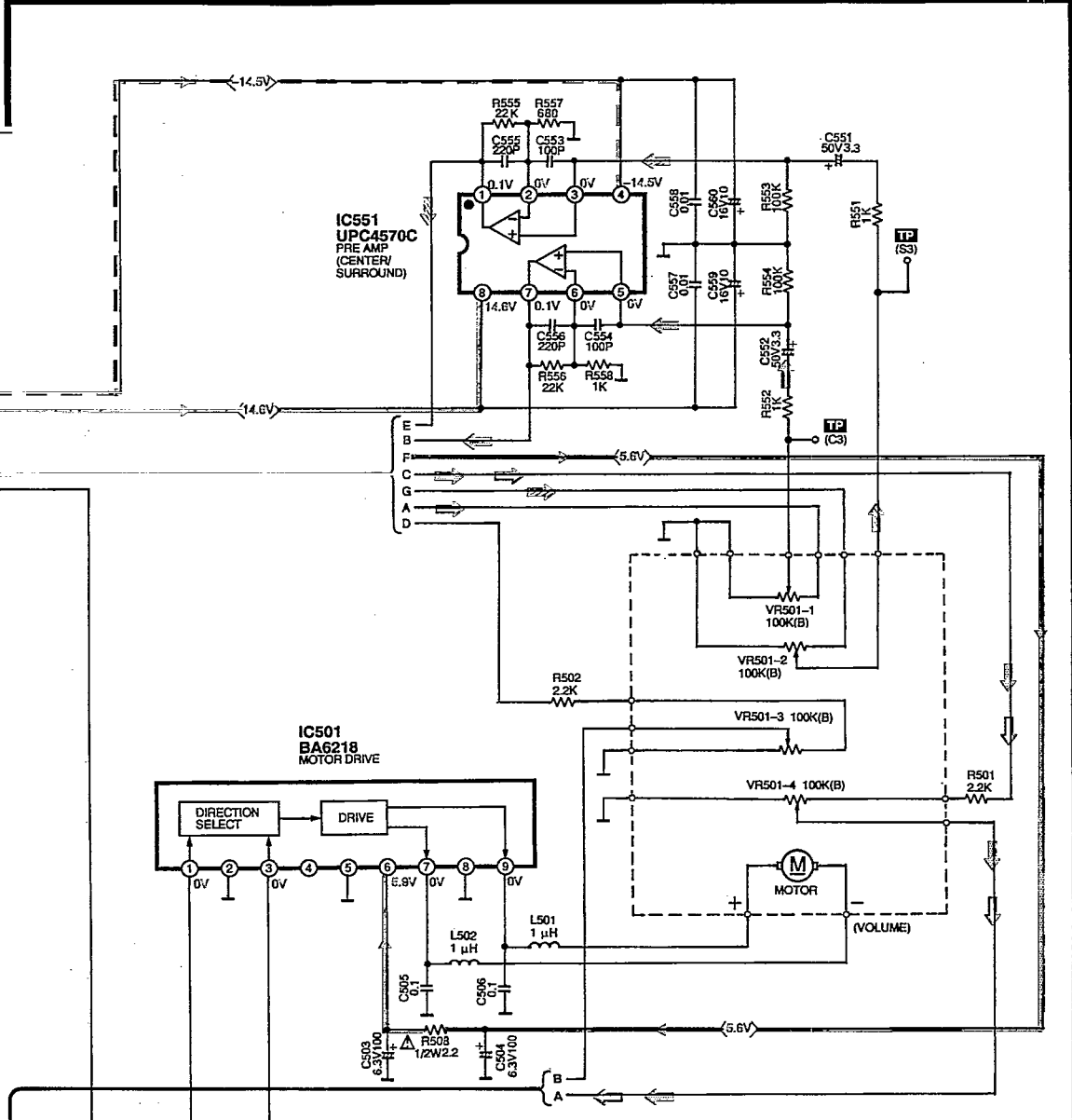
B FL CIRCUIT (P.C.Board : on page 44,45)



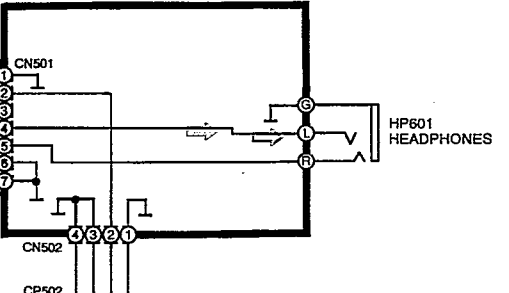
To MAIN CIRCUIT(CN904) on page 37
To MAIN CIRCUIT(CN905) on page 37



B FL CIRCUIT (P.C. Board: on page 44,45)



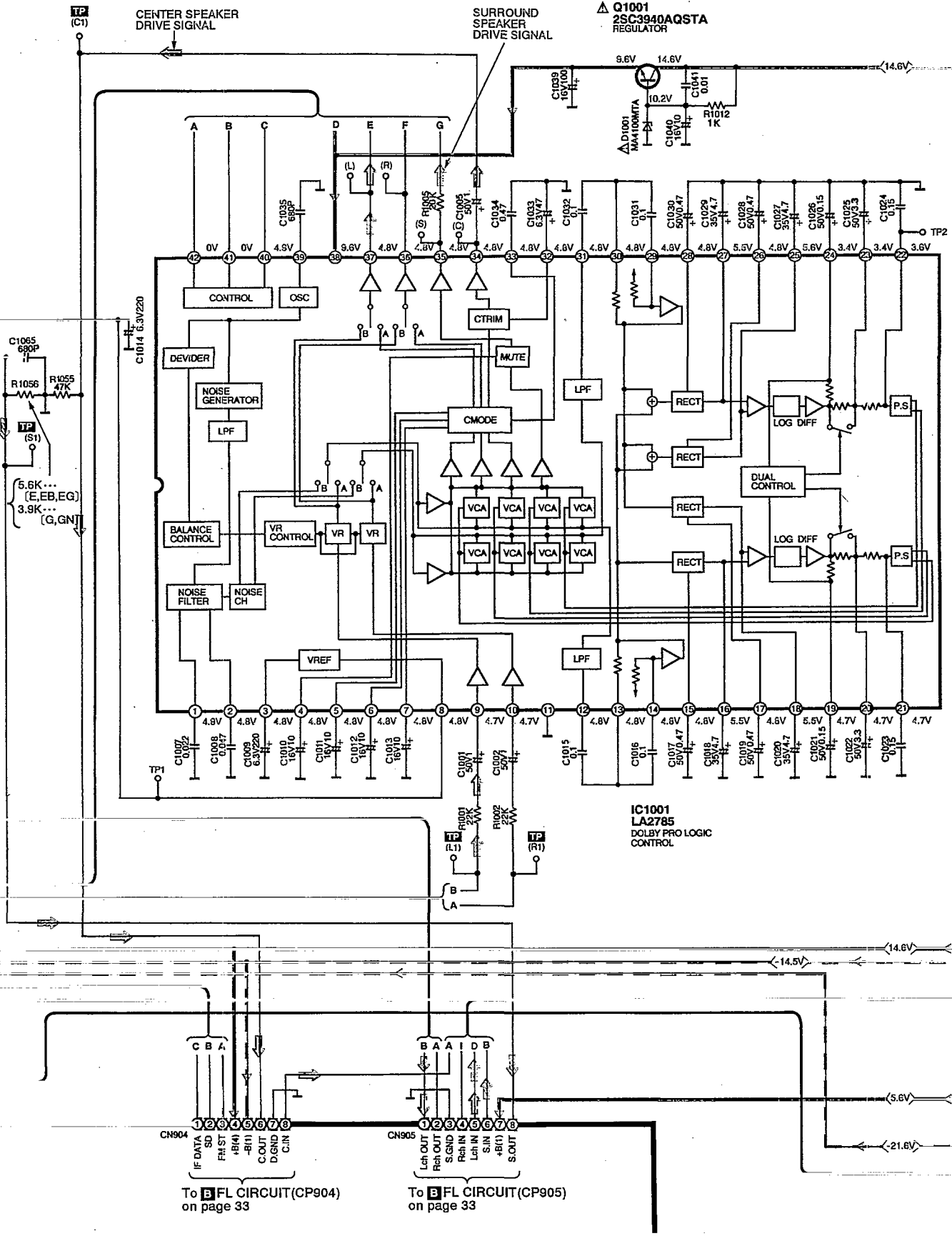
C HEADPHONES JACK CIRCUIT (P.C. Board: on page 43)

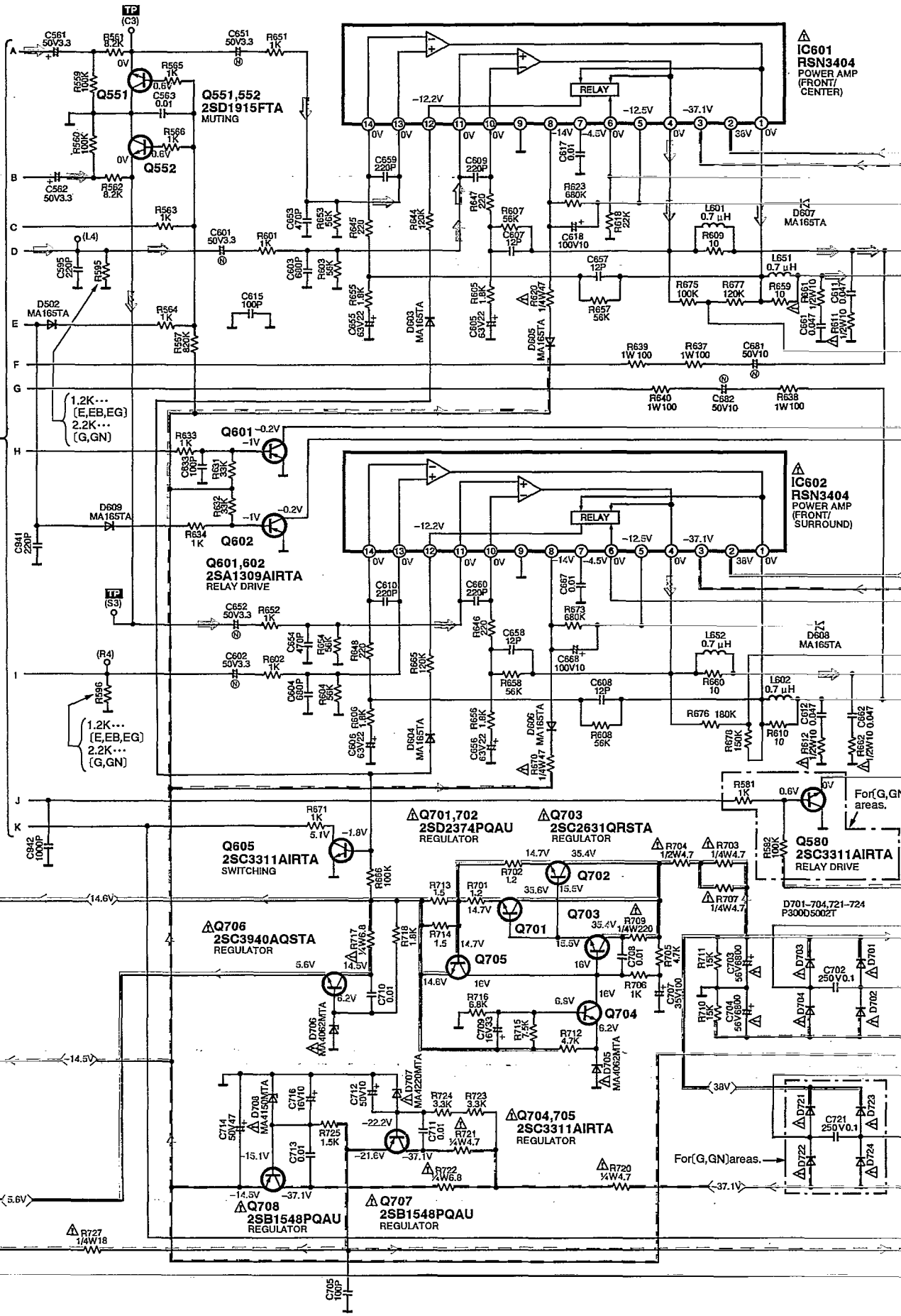


D POWER SWITCH CIRCUIT (P.C. Board: on page 44)

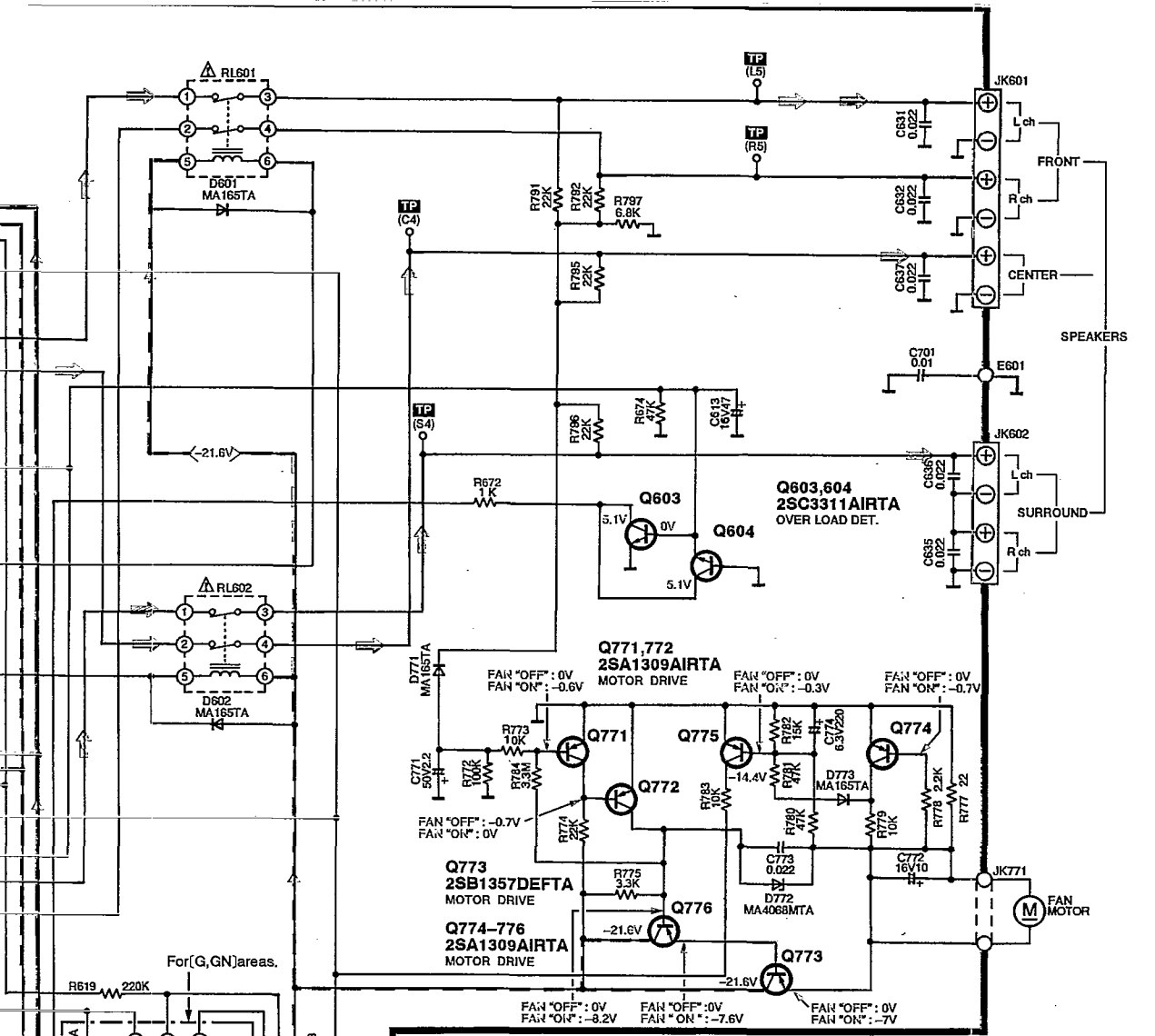


F MAIN CIRCUIT (P.C. Board: on pages 42,43)

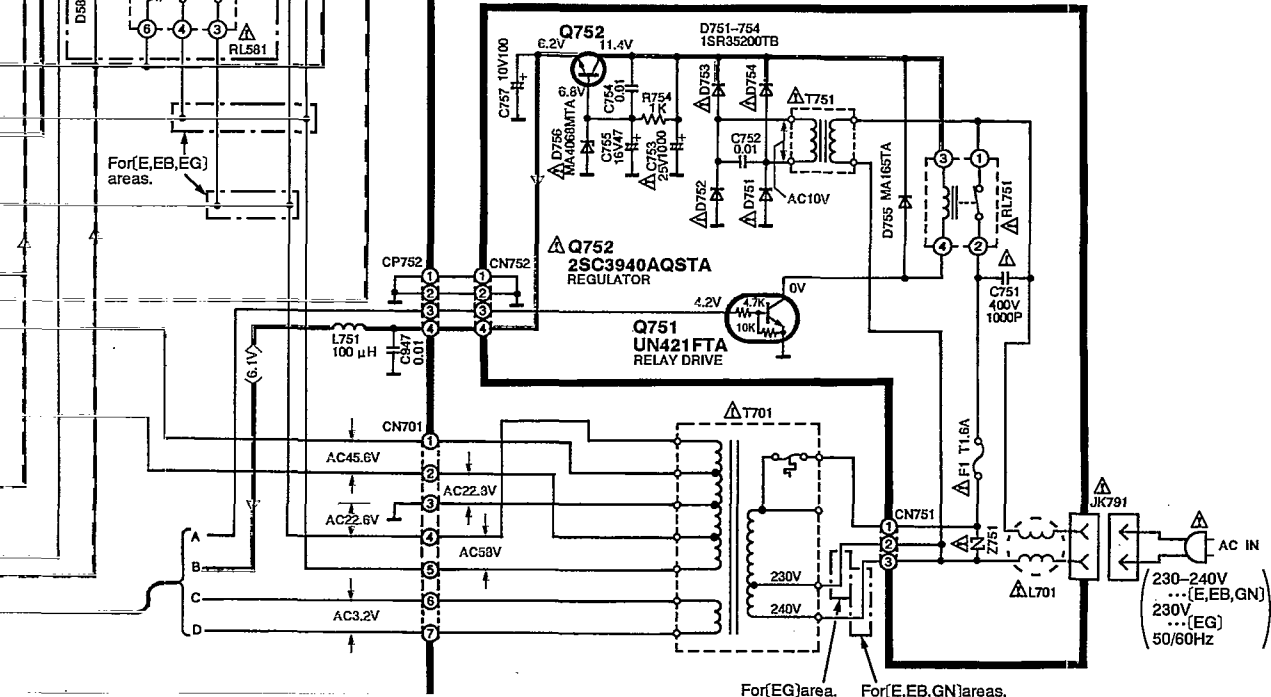




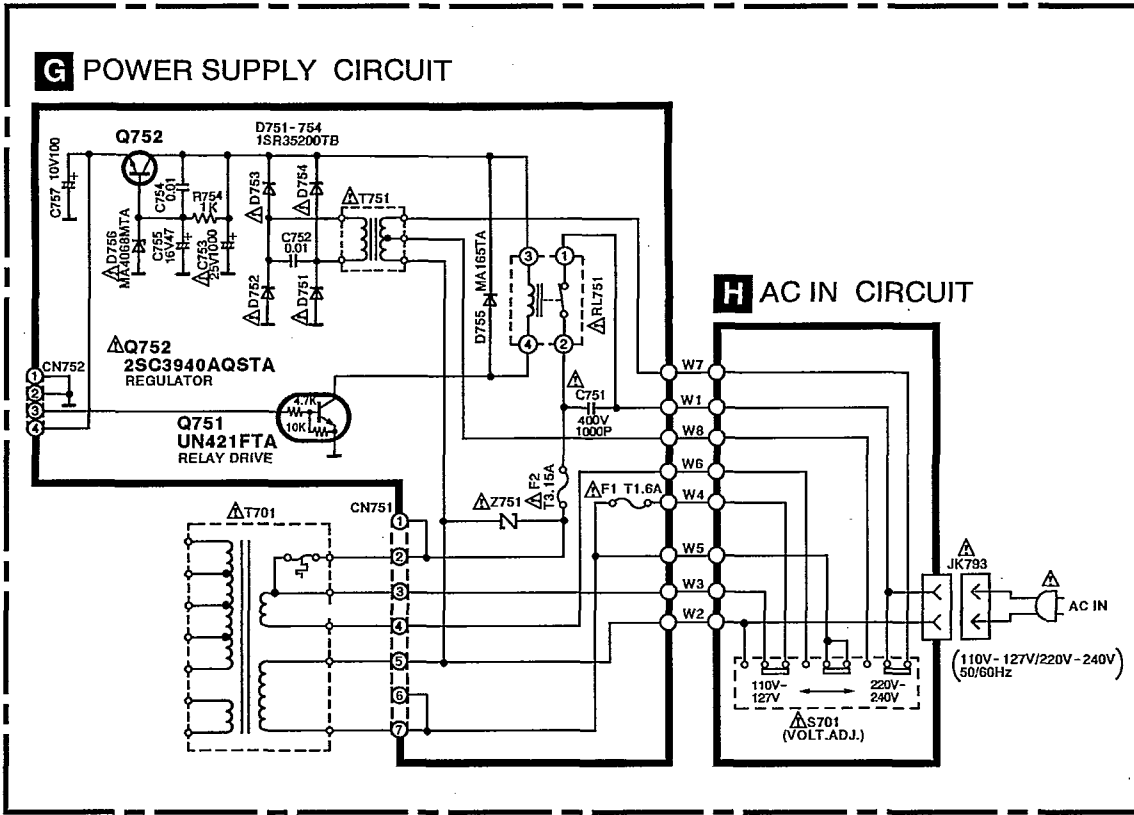
F MAIN CIRCUIT (P.C. Board: on pages 42,43)



G POWER SUPPLY CIRCUIT (P.C. Board: on page 41)

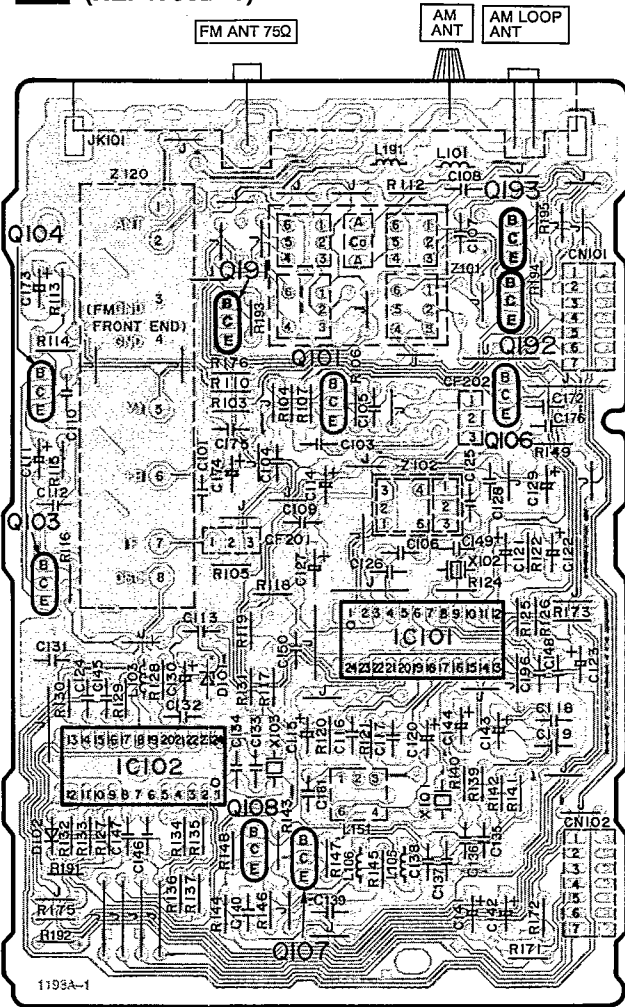


Power Source Circuit For [G] area. (P.C.Board: on page 46)



PRINTED CIRCUIT BOARDS

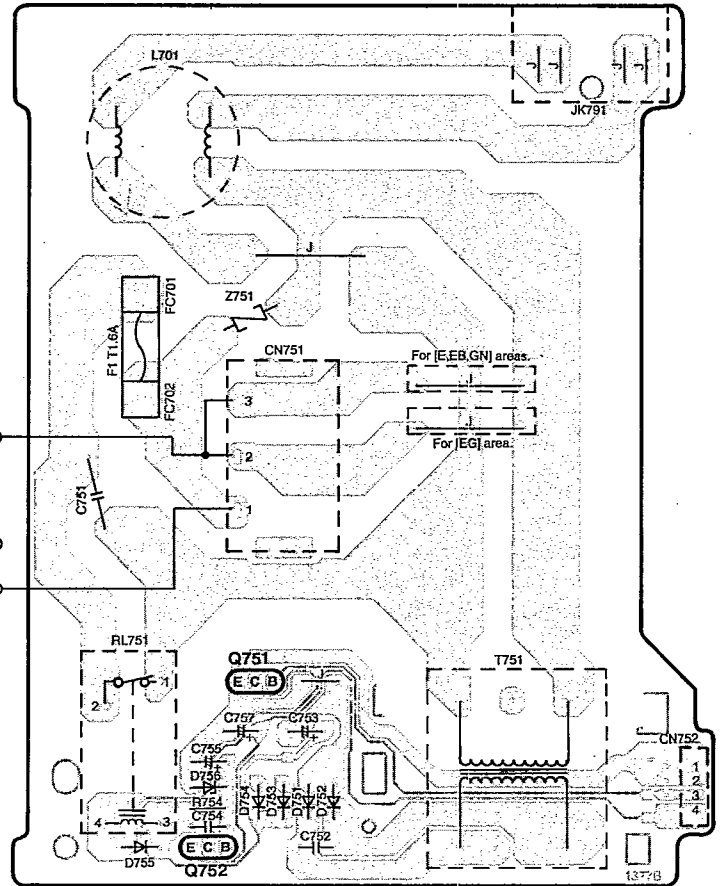
A TUNER P.C.B. For [E,EB] areas.
(REP1750B-T)



- This circuit board diagram may be modified at any time with the development of new technology.
- L1~L6, R1~R6, C1, C3, C4, C5, S1, S3, S4 and S5 in the circuit board diagram show the test points. For detail, please refer to p. 16~p. 19.

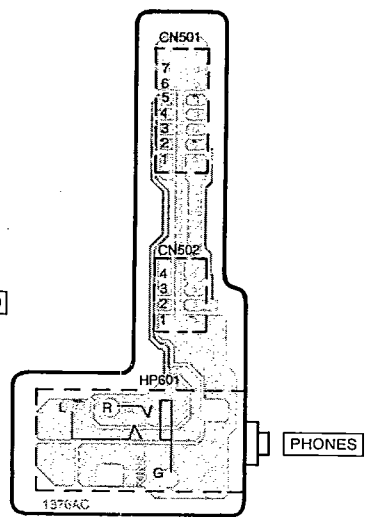
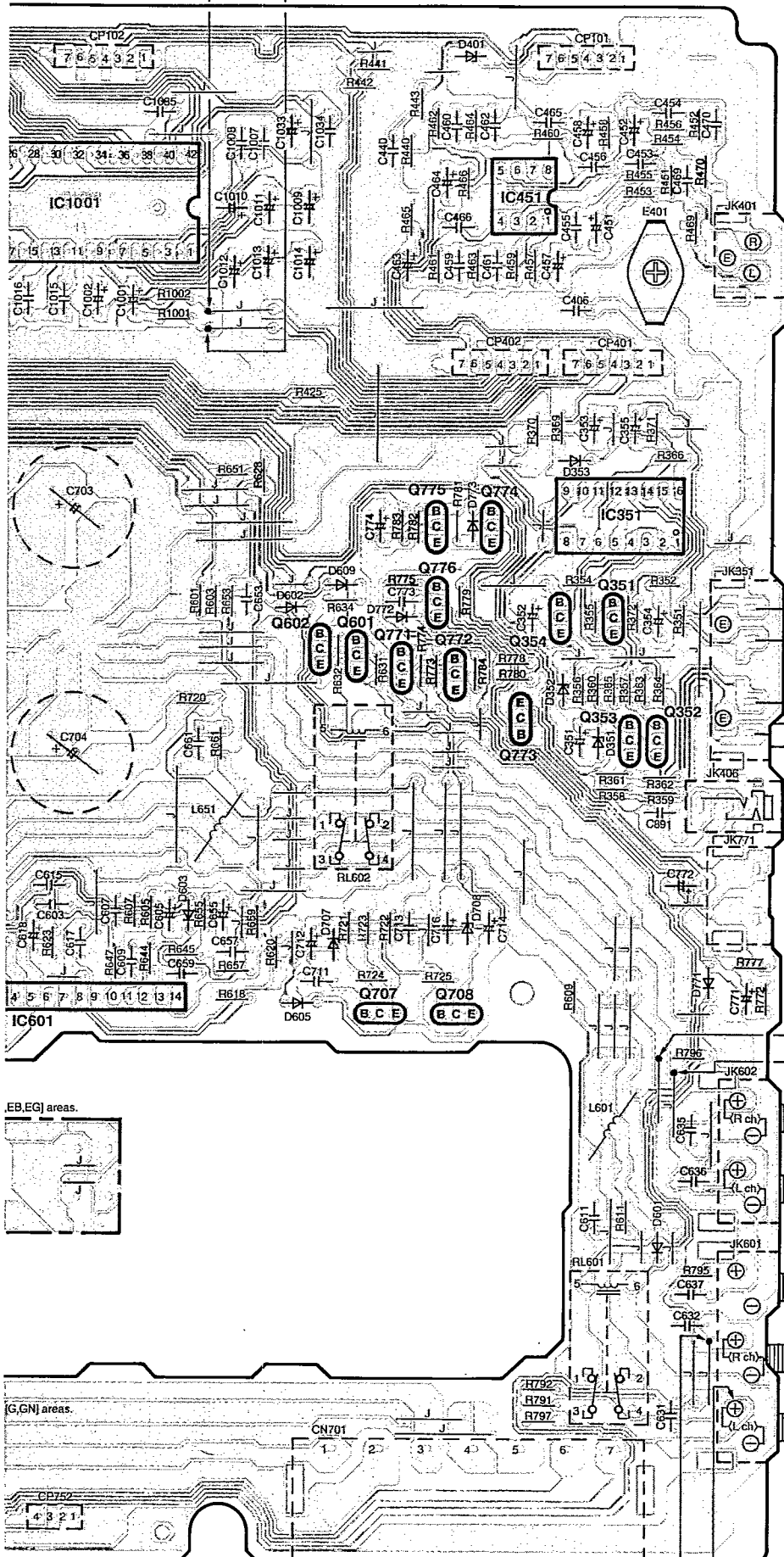
G POWER SUPPLY P.C.B.
(REP2016B-P...[E,EB])
(REP2016C-P...[EG])
(REP2016E-P...[GN])

AC IN
230~240V...[E,EB,GN]
230V...[EG]
50/60Hz



TP (R1) TP (L1)

C HEADPHONES JACK P.C.B.
(REP2015B-S...[E,EB]
(REP2015C-S...[EG,G,GN])



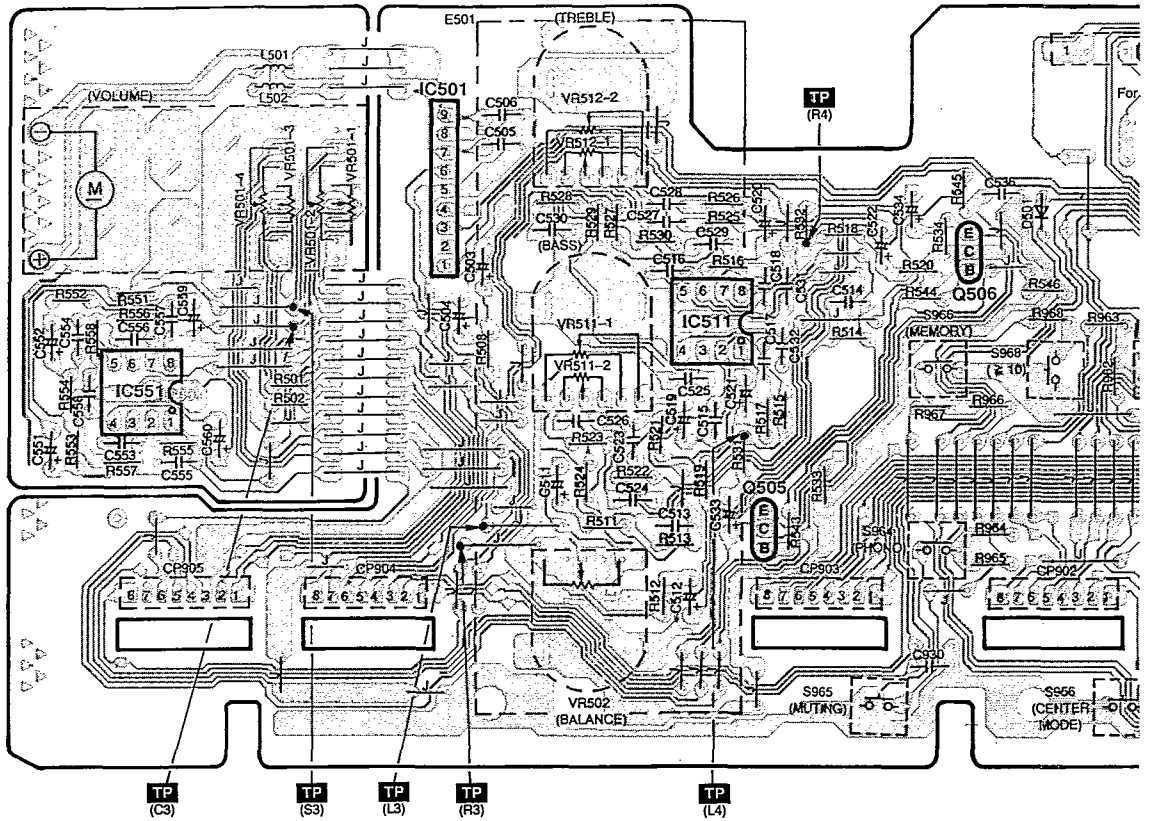
EB,EG] areas.

[G,GN] areas.

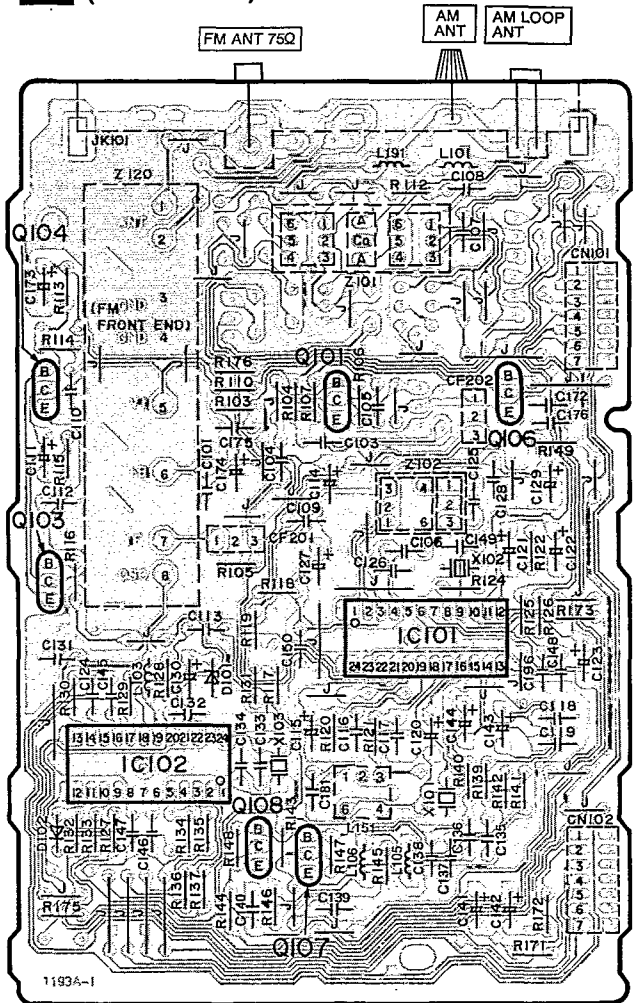
TP (R5) TP (L5)

1 2 3 4 5

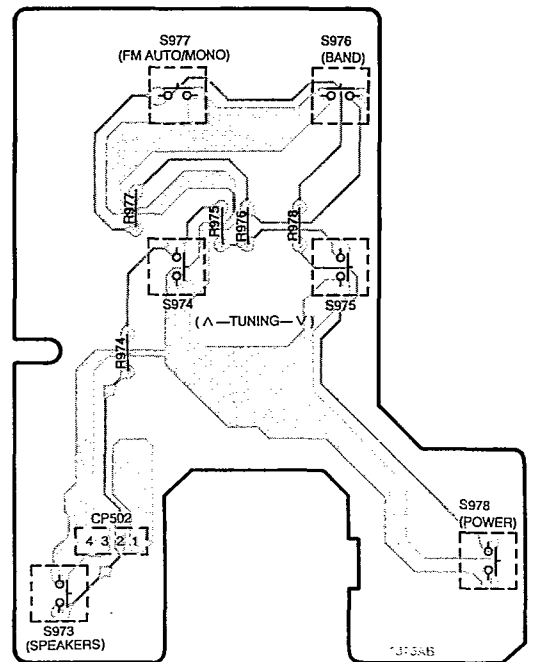
B FL P.C.B. (REP2015B-S...[E,EB]
REP2015C-S...[EG,G,GN])



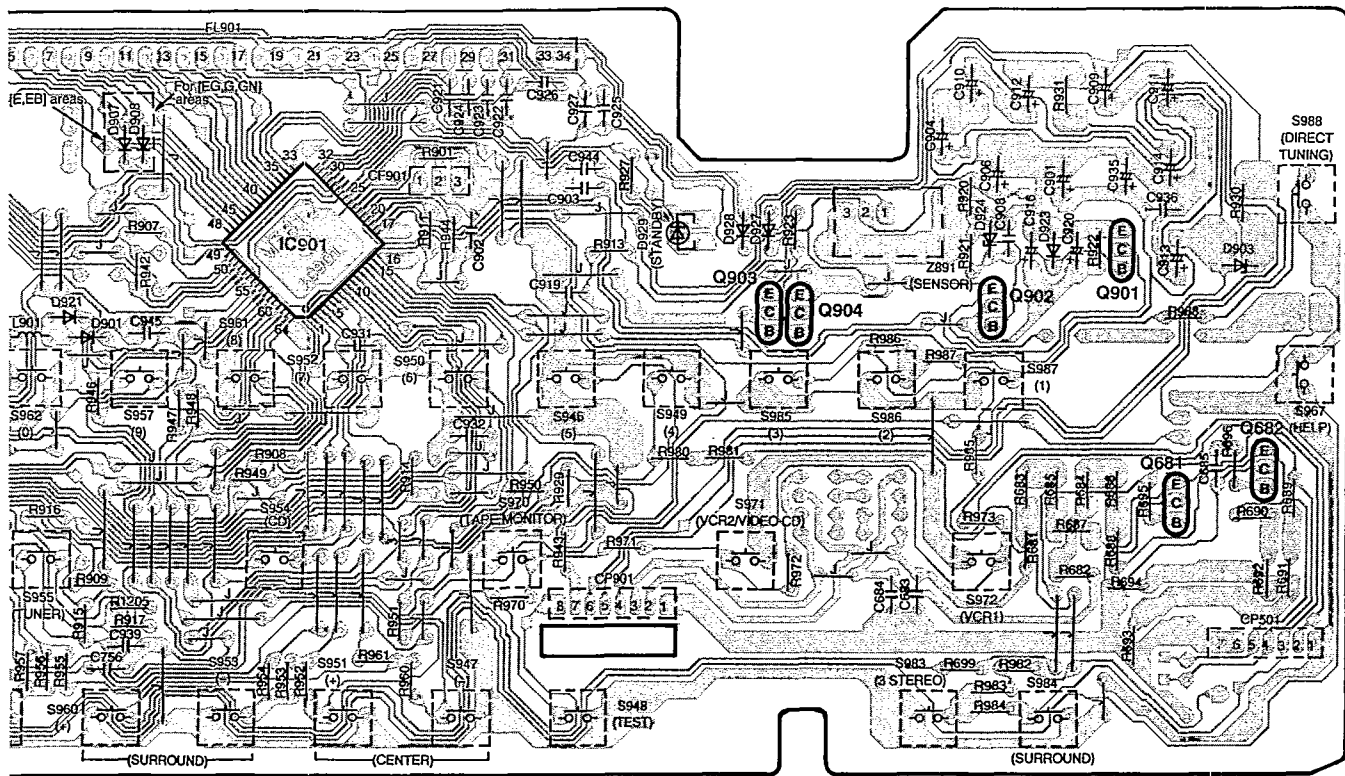
A TUNER P.C.B. For [EG,G,GN] areas.
(REP1750C-T)



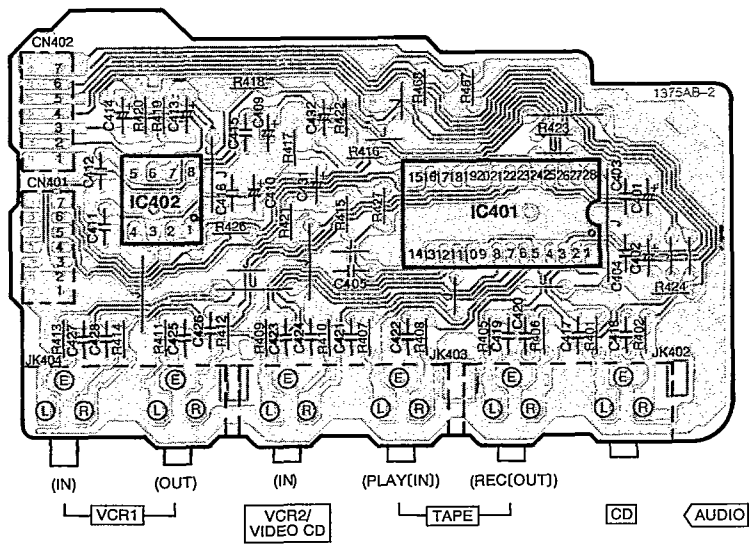
D POWER SWITCH P.C.B.
(REP2015B-S...[E,EB]
REP2015C-S...[EG,G,GN])



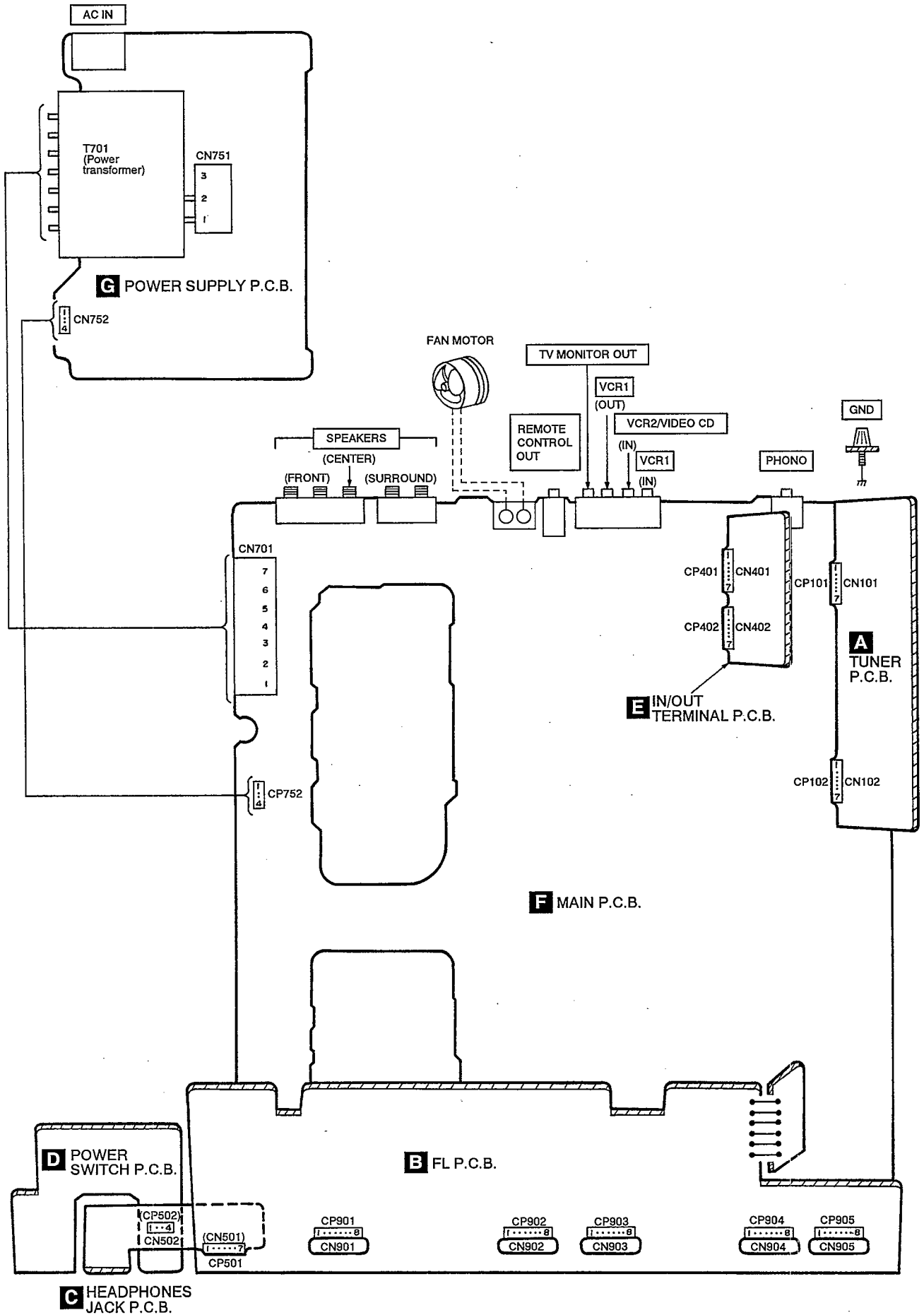
1193A-1



E IN/OUT TERMINAL P.C.B.
 (REP2014B-M...[E,EB,EG])
 (REP2014C-M...[G,GN])



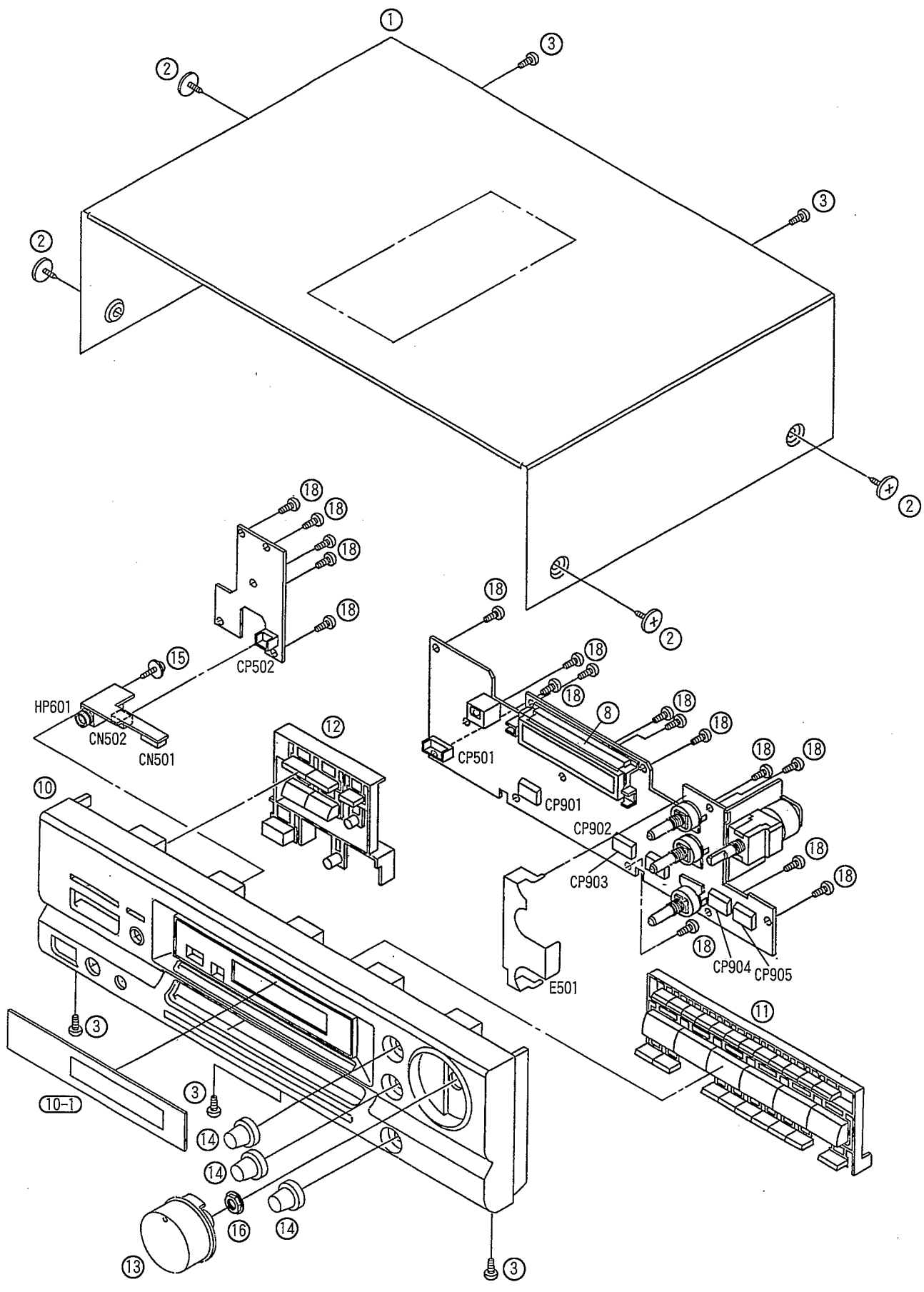
WIRING CONNECTION DIAGRAM



1 2 3 4 5

■ CABINET PARTS LOCATION

A
B
C
D
E
F
G



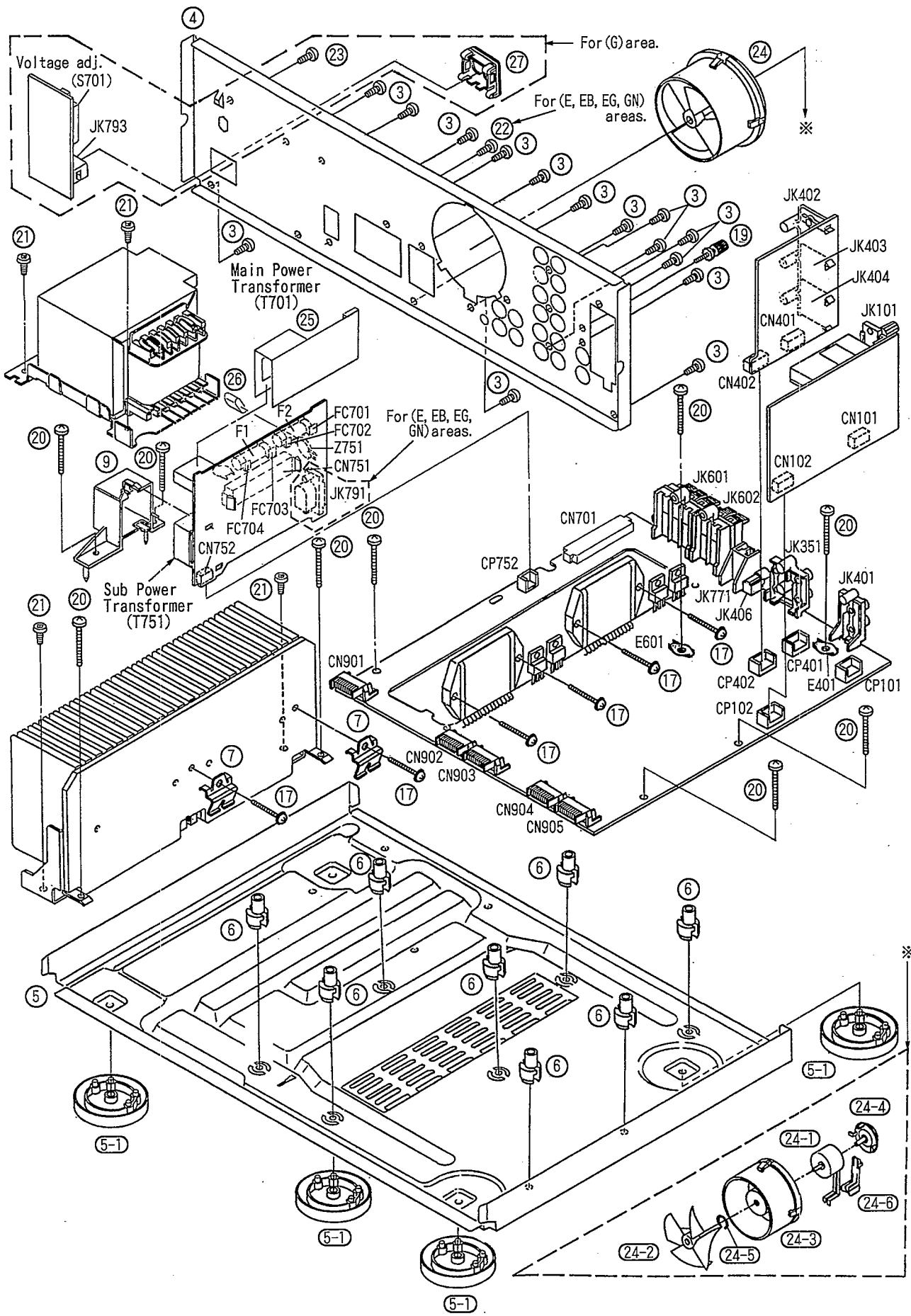
6

7

8

9

10



REPLACEMENT PARTS LIST

Notes: *Important safety notice:

 Components identified by Δ 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.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS				INTEGRATED CIRCUIT(S)	
1	RKMD219E-K	CABINET		IC101	LA1832A	FM/AM IF AMP. /AM OSC	
2	SNE2129-3	SCREW		IC102	LC7218	PLL FREQ SYNTHESIZER	
3	XTBS3+8JFZ1	SCREW		IC351	MC14052BCP	VIDEO SELECTOR	
4	RGR0213B-A	REAR PANEL	(E)	IC401	NJU7312AL	INPUT SELECTOR	
4	RGR0213B-B	REAR PANEL	(EB)	IC402	M5218AP	BUFFER AMP	
4	RGR0213B-C	REAR PANEL	(EG)	IC451	AN6558F	PHONO EQ AMP	
4	RGR0213C-A	REAR PANEL	(G)	IC501	BA6218	MOTOR DRIVE	
4	RGR0213B-D	REAR PANEL	(GN)	IC511	UPC4570C	TONE AMP	
5	RFKJAGX290PK	BOTTOM CHASSIS ASS'Y		IC551	UPC4570C	PRE AMP	
5-1	RKAD053-A	FOOT		IC601	RSN3404	POWER AMP (FRONT/CENTER)	Δ
6	RKQ0089	P. C. B. SUPPORT		IC602	RSN3404	POWER AMP (FRONT/SURROUND)	Δ
7	RMCO158	TRANSISTOR HOLDER		IC901	M38122M3301F	MICROCOMPUTER	
8	RMNO304	FL HOLDER		IC1001	LA2785	DOLBY PRO LOGIC CONTROL	
9	RMNO338	TRANS HOLDER		IC1002	LV1010N	DOLBY PRO LOGIC DRIVE	
10	RFKAGX390EK	FRONT PANEL ASS'Y				TRANSISTOR(S)	
10-1	RKWD371A-Q	TRANSPARENT PLATE		Q101	2SC2787L	TRANSISTOR	
11	RGU1172-K	SELECTOR BUTTON		Q103, 104	2SC2785FE	TRANSISTOR	
12	RGU1173A-K	MODE BUTTON		Q106	UN411FTA	TRANSISTOR	
13	RGWD145-1KJ	VOLUME KNOB		Q107, 108	2SC3311ARSTA	TRANSISTOR	
14	RGWD216-K	BALANCE/BASS/TREBLE KNOB		Q191-193	2SC3311ARSTA	TRANSISTOR	(E, EB)
15	RHD26016	SCREW		Q351	2SC3311AIRTA	TRANSISTOR	
16	RHN90001	NUT		Q352, 353	2SA1309AIRTA	TRANSISTOR	
17	XTW3+15T	SCREW		Q354	UN4213AITA	TRANSISTOR	
18	XTBS26+8J	SCREW		Q505, 506	2SC3327-A	TRANSISTOR	
19	SNE2123	GND TERMINAL		Q551, 552	2SD1915FTA	TRANSISTOR	
20	XTB3+20JFZ	SCREW		Q580	2SC3311AIRTA	TRANSISTOR	(G, GN)
21	XTB3+8JFZ	SCREW		Q601, 602	2SA1309AIRTA	TRANSISTOR	
22	XTBS3+8JFZ1	SCREW	(E, EB, EG, GN)	Q603-605	2SC3311AIRTA	TRANSISTOR	
23	XTBS3+8JFZ1	SCREW	(G)	Q681, 682	2SC3327-A	TRANSISTOR	
24	REMD020-1	FAN MOTOR UNIT		Q701, 702	2SD2374PQAU	TRANSISTOR	Δ
24-1	MDN-4RB4MRC	FAN MOTOR		Q703	2SC2631QRSTA	TRANSISTOR	Δ
24-2	SHE232-1	FAN		Q704, 705	2SC3311AIRTA	TRANSISTOR	Δ
24-3	RMQ0209-K	FAN CASE		Q706	2SC3940AQSTA	TRANSISTOR	Δ
24-4	RMQ0208-K	FAN CAP		Q707, 708	2SB1548PQAU	TRANSISTOR	Δ
24-5	SJS271	SPRING		Q751	UN421FTA	TRANSISTOR	
24-6	RMQ0212-K	FAN TERMINAL CAP		Q752	2SC3940AQSTA	TRANSISTOR	Δ
25	RMV0099	BARRIER		Q771, 772	2SA1309AIRTA	TRANSISTOR	
26	RMZ0339	SURGE ABSORBER COVER		Q773	2SB1357DEFTA	TRANSISTOR	
27	SJS9231A	AC INLET COVER	(G)	Q774-776	2SA1309AIRTA	TRANSISTOR	
				Q901	DTC114YSTP	TRANSISTOR	
				Q902	2SA933SSTA	TRANSISTOR	Δ

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
Q903	DTA144ESTP	TRANSISTOR		L501, 502	RLQZP1R0KT-Y	COIL	
Q904	DTC114YSTP	TRANSISTOR		L601, 602	RLQYR73M	COIL	
Q1001	2SC3940AQSTA	TRANSISTOR	△	L651, 652	RLQYR73M	COIL	
		DIODE (S)		L701	SLQZ650MH49	COIL	(E, EB, EG, GN) △
D101	MA4051MTA	DIODE	△	L751	ELESN101KA	COIL	
D102	MA165	DIODE		L901	RLQB101KTA-Y	COIL	
D351, 352	MA4056MTA	DIODE	△	L1051	ELESN101KA	COIL	
D353	MA165	DIODE				TRANSFORMER (S)	
D401	MA4075MTA	DIODE	△	T701	RTP1N5E018-V	POWER TRANSFORMER (MAIN)	(E, EB, EG) △
D501	RVD1SS133TA	DIODE		T701	RTP1N5E019-V	POWER TRANSFORMER (MAIN)	(GN) △
D502	MA165	DIODE		T701	RTP1N5E020-V	POWER TRANSFORMER (MAIN)	(G) △
D580	MA165	DIODE	(G, GN)	T751	RTP1I5E006	POWER TRANSFORMER (SUB)	(E, EB, EG, GN) △
D601-609	MA165	DIODE		T751	RTP1I5E007	POWER TRANSFORMER (SUB)	(G) △
D701-704	P300D5002T	DIODE	△			COMPONENT COMBINATION (S)	
D705, 706	MA4062MTA	DIODE	△	Z101	RLA6Z005M-T	COMPONENT COMBINATION	(E, EB)
D707	MA4220MTA	DIODE	△	Z101	RLA2Z002M-T	COMPONENT COMBINATION	(EG, G, GN)
D708	MA4150M	DIODE	△	Z102	RLI2Z006M-T	COMPONENT COMBINATION	
D721-724	P300D5002T	DIODE	(G, GN) △	Z751	ERZV10V511CS	SURGE ABSORBER	△
D751-754	1SR35200TB	DIODE	△	Z891	RCDSPS4242N	REMOTE SENSOR	
D755	MA165	DIODE				FILTER (S) AND OSCILLATOR (S)	
D756	MA4068M	DIODE	△	CF201	RLFFETNGD01L	FILTER	
D771	MA165	DIODE		CF202	RLFFETMGD01L	FILTER	
D772	MA4068M	DIODE		CF901	RSXY6M00M03T	OSCILLATOR (6MHz)	
D773	MA165	DIODE		CF1051	EFOEC8004T4	OSCILLATOR (8MHz)	
D901	1SS291TA	DIODE		X101	RSX2456RMO7M	OSCILLATOR (456KHz)	
D903	MTZJ4R7BTA	DIODE	△	X102	RLFDGTD01I	OSCILLATOR (10.65MHz)	
D907	RVD1SS133TA	DIODE	(E, EB)	X103	RSXC7M20S05T	OSCILLATOR (7.2MHz)	
D908	RVD1SS133TA	DIODE	(EG, G, GN)			DISPLAY TUBE (S)	
D921	RVD1SS133TA	DIODE		FL901	RSL0199-F	DISPLAY TUBE	
D923	RVD1SS133TA	DIODE				FM FRONT END PACK ASS'Y (S)	
D924	MTZJ3R9ATA	DIODE	△	Z120	ENV17290G1Y	FM FRONT END	
D927, 928	RVD1SS133TA	DIODE				FUSE (S)	
D929	LN846RPH	L. E. D.		F1	XBA2C16TB0	FUSE 250V T1.6A	△
D1001	MA4100MTA	DIODE	△	F2	XBA2C31TB0	FUSE 250V T3.15A	(G) △
		VARIABLE RESISTOR (S)				SWITCH (ES)	
VR501	RRV24B02B15A	VOLUME CONTROL		S701	ESD26840A	VOLTAGE ADJ.	(G) △
VR502	EWCOYAF15G15	BALANCE CONTROL		S946	EVQ21405R	NUMERIC (5)	
VR511, 512	EW1XA016C15	TONE CONTROL		S947	EVQ21405R	CENTER DOWN	
		COIL (S)					
L101	ELESNR68MA	COIL	(E, EB)				
L101	ELESN1R0MA	COIL	(EG, G, GN)				
L103	ELEXTR47MA9	COIL					
L105, 106	RLQZB822KT-D	COIL					
L151	SLM1B10M-1M	COIL					
L191	ELESNR68MA	COIL	(E, EB)				
L191	ELESNR56MA	COIL	(EG, G, GN)				

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
S948	EVQ21405R	TEST		CP401, 402	RJT057W007-1	CONNECTOR (7P)	
S949	EVQ21405R	NUMERIC (4)		CP501	RJT057W007-1	CONNECTOR (7P)	
S950	EVQ21405R	NUMERIC (6)		CP502	RJT057W004-1	CONNECTOR (4P)	
S951	EVQ21405R	CENTER UP		CP752	RJT057W004-1	CONNECTOR (4P)	
S952	EVQ21405R	NUMERIC (7)		CP901-905	RJT003K008-1	CONNECTOR (8P)	
S953	EVQ21405R	SURROUND OFF					
S954	EVQ21405R	CD				JACK(S) AND TERMINAL(S)	
S955	EVQ21405R	TUNER					
S956	EVQ21405R	CENTER MODE		JK101	RJH4202M	ANT TERMINAL	
S957	EVQ21405R	NUMERIC (9)		JK351	SJF3069-3N	TV MONITOR OUT/VIDEO	
S960	EVQ21405R	SOURROUND ON		JK401	SJF3068-7N	PHONO TERMINAL	
S961	EVQ21405R	NUMERIC (8)		JK402	SJF3069N	CD IN/REC OUT TERMINAL	
S962	EVQ21405R	NUMERIC (0)		JK403	SJF3069N	PLAY IN/VCR2 IN TERMINAL	
S964	EVQ21405R	PHONO		JK404	SJF3069N	VCR1 OUT/VCR1 IN TERMINAL	
S965	EVQ21405R	MUTING		JK406	RJ333TR01	REMOTE CONTROL OUT TERMINAL	
S966	EVQ21405R	MEMORY		JK601	RJH5601	FRONT SPEAKER TERMINAL	
S967	EVQ21405R	HELP/-RESET		JK602	RJR0054	SURROUND SPEAKER TERMINAL	
S968	EVQ21405R	NUMERIC (>10)		JK771	RJS1A7402-1	FAN MOTOR TERMINAL	
S970	EVQ21405R	TAPE MONITOR		JK791	SJS9236	AC INLET	(E, EB, EG) Δ
S971	EVQ21405R	VCR2/VIDEO CD		JK791	SJS9237	AC INLET	(GN) Δ
S972	EVQ21405R	VCR1		JK793	SJS9231-1B	AC INLET	(G) Δ
S973	EVQ21405R	SPEAKERS		HP601	RJ63TS01	HEADPHONES JACK	
S974	EVQ21405R	TUNING UP					
S975	EVQ21405R	TUNING DOWN				GND PLATE(S)	
S976	EVQ21405R	BAND					
S977	EVQ21405R	FM AUTO/MONO		E401	SNE1004-2	GND PLATE	
S978	EVQ21405R	POWER		E501	RSC0412	GND PLATE	
S983	EVQ21405R	3 STEREO		E601	SNE1004-2	GND PLATE	
S984	EVQ21405R	SURROUND					
S985	EVQ21405R	NUMERIC (3)				FUSE HOLDER(S)	
S986	EVQ21405R	NUMERIC (2)					
S987	EVQ21405R	NUMERIC (1)		FC701, 702	EYF52BC	FUSE HOLDER	
S988	EVQ21405R	DIRECT TUNING		FC703, 704	EYF52BC	FUSE HOLDER	(G)
		RELAY(S)					
RL581	RSY0015M-0	RELAY	(G, GN) Δ				
RL601, 602	RSY0013M-0	RELAY	Δ				
RL751	RSY0019M-0	RELAY	Δ				
		CONNECTOR(S) AND SOCKET(S)					
CN101, 102	RJU057W007	SOCKET (7P)					
CN401, 402	RJU057W007	SOCKET (7P)					
CN501	RJU057W007	SOCKET (7P)					
CN502	RJU057W004	SOCKET (4P)					
CN701	SJS702-2	CONNECTOR (7P)					
CN751	SJS305-1	CONNECTOR (3P)	(E, EB, EG, GN)				
CN751	SJS702-2	CONNECTOR (7P)	(G)				
CN752	RJU057W004	SOCKET (4P)					
CN901-905	RJU003K008M1	SOCKET (8P)					
CP101, 102	RJT057W007-1	CONNECTOR (7P)					

RESISTORS AND CAPACITORS

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

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R358	ERDS2TJ471	1/4W 470	R557	ERDS2TJ681	1/4W 680
			R359	ERDS2TJ2R2T	1/4W 2.2	R558	ERDS2TJ102	1/4W 1K
			R360	ERDS2TJ470	1/4W 47	R559, 560	ERDS2TJ104	1/4W 100K
R103	ERDS2TJ101	1/4W 100	R361	ERDS2TJ471	1/4W 470	R561, 562	ERDS2TJ822	1/4W 8.2K
R104	ERDS2TJ102	1/4W 1K	R362	ERDS2TJ2R2T	1/4W 2.2	R563-566	ERDS2TJ102	1/4W 1K
R105	ERDS2TJ471	1/4W 470	R363	ERDS2TJ332	1/4W 3.3K	R567	ERDS2TJ824	1/4W 820K
R106	ERDS2TJ224T	1/4W 220K	R364	ERDS2TJ561	1/4W 560	R581	ERDS2TJ102	1/4W 1K (G, GN)
R107	ERDS2TJ471	1/4W 470	R365	ERDS2TJ332	1/4W 3.3K	R582	ERDS2TJ104	1/4W 100K (G, GN)
R110	ERDS2TJ102	1/4W 1K	R366	ERDS2TJ104	1/4W 100K	R595, 596	ERDS2TJ122	1/4W 1.2K (E, EB, EG)
R112	ERDS2TJ104	1/4W 100K	R367, 368	ERDS2TJ103	1/4W 10K	R595, 596	ERDS2TJ222	1/4W 2.2K (G, GN)
R113	ERDS2TJ103	1/4W 10K	R369, 370	ERDS1FVJ271T	1/2W 270 Δ	R601, 602	ERDS2TJ102	1/4W 1K
R114	ERDS2TJ562	1/4W 5.6K	R371, 372	ERDS2TJ103	1/4W 10K	R603, 604	ERDS2TJ563	1/4W 56K
R115	ERDS2TJ561	1/4W 560	R401, 402	ERDS2TJ102	1/4W 1K	R605, 606	ERDS2TJ182	1/4W 1.8K
R116	ERDS2TJ102	1/4W 1K	R405-416	ERDS2TJ102	1/4W 1K	R607, 608	ERDS2TJ563	1/4W 56K
R117	ERDS2TJ473	1/4W 47K	R417, 418	ERDS2TJ473	1/4W 47K	R609, 610	ERDS2TJ100	1/4W 10
R118	ERDS2TJ562	1/4W 5.6K	R419-422	ERDS2TJ104	1/4W 100K	R611, 612	ERDS1FVJ100T	1/2W 10 Δ
R119	ERDS2TJ183T	1/4W 18K	R423, 424	ERDS2TJ102	1/4W 1K	R618	ERDS2TJ223	1/4W 22K
R120	ERDS2TJ473	1/4W 47K	R425-427	ERDS2TJ103	1/4W 10K	R619	ERDS2TJ224T	1/4W 220K
R121	ERDS2TJ332	1/4W 3.3K	R440	ERG1SJ121E	1W 120 Δ	R620	ERD2FCVG470T	1/4W 47 Δ
R122	ERDS2TJ272T	1/4W 2.7K	R441, 442	ERDS2TJ473	1/4W 47K	R623	ERDS2TJ684	1/4W 680K
R124	ERDS2TJ271	1/4W 270	R443	ERDS2TJ150T	1/4W 15	R628	ERDS2TJ223	1/4W 22K
R125, 126	ERDS2TJ472	1/4W 4.7K	R451, 452	ERDS2TJ224T	1/4W 220K	R631, 632	ERDS2TJ333	1/4W 33K
R127	ERDS2TJ103	1/4W 10K	R453, 454	ERDS2TJ391	1/4W 390	R633, 634	ERDS2TJ102	1/4W 1K
R128	ERDS2TJ820	1/4W 82	R455, 456	ERDS2TJ563	1/4W 56K	R637-640	ERG1SJ101E	1W 100
R129	ERDS2TJ473	1/4W 47K	R457, 458	ERDS2TJ271	1/4W 270	R644	ERDS2TJ124T	1/4W 120K
R130, 131	ERDS2TJ102	1/4W 1K	R459, 460	ERDS2TJ680T	1/4W 68	R645-648	ERDS2TJ221	1/4W 220
R132	ERDS2TJ103	1/4W 10K	R461, 462	ERDS2TJ184T	1/4W 180K	R651, 652	ERDS2TJ102	1/4W 1K
R133-137	ERDS2TJ102	1/4W 1K	R463, 464	ERDS2TJ123	1/4W 12K	R653, 654	ERDS2TJ563	1/4W 56K
R139, 140	ERDS2TJ272T	1/4W 2.7K	R465, 466	ERDS2TJ563	1/4W 56K	R655, 656	ERDS2TJ182	1/4W 1.8K
R141, 142	ERDS2TJ102	1/4W 1K	R467-470	ERDS2TJ102	1/4W 1K	R657, 658	ERDS2TJ563	1/4W 56K
R143, 144	ERDS2TJ222	1/4W 2.2K	R501, 502	ERDS2TJ222	1/4W 2.2K	R659, 660	ERDS2TJ100	1/4W 10
R145, 146	ERDS2TJ102	1/4W 1K (E, EB)	R508	ERDS1FVJ2R2T	1/2W 2.2 Δ	R661, 662	ERDS1FVJ100T	1/2W 10 Δ
R145, 146	ERDS2TJ561	1/4W 560 (EG, G, GN)	R511, 512	ERDS2TJ471	1/4W 470	R665	ERDS2TJ124T	1/4W 120K
R147, 148	ERDS2TJ474	1/4W 470K	R513-516	ERDS2TJ474	1/4W 470K	R666	ERDS2TJ104	1/4W 100K
R149	ERDS2TJ680T	1/4W 68	R517, 518	ERDS2TJ332	1/4W 3.3K	R670	ERD2FCVG470T	1/4W 47 Δ
R171, 172	ERDS2TJ102	1/4W 1K	R519, 520	ERDS2TJ222	1/4W 2.2K	R671, 672	ERDS2TJ102	1/4W 1K
R173	ERDS2TJ471	1/4W 470	R521, 522	ERDS2TJ223	1/4W 22K	R673	ERDS2TJ684	1/4W 680K
R175	ERDS2TJ102	1/4W 1K	R523, 524	ERDS2TJ392T	1/4W 3.9K	R674	ERDS2TJ473	1/4W 47K
R176	ERDS2TJ391	1/4W 390	R525, 526	ERDS2TJ222	1/4W 2.2K	R675	ERDS2TJ104	1/4W 100K
R191	ERDS2TJ103	1/4W 10K (E, EB)	R527, 528	ERDS2TJ122	1/4W 1.2K	R676	ERDS2TJ184T	1/4W 180K
R192	ERDS2TJ122	1/4W 1.2K (E, EB)	R529, 530	ERDS2TJ273	1/4W 27K	R677	ERDS2TJ124T	1/4W 120K
R193	ERDS2TJ182	1/4W 1.8K (E, EB)	R531, 532	ERDS2TJ332	1/4W 3.3K	R678	ERDS2TJ154	1/4W 150K
R194	ERDS2TJ122	1/4W 1.2K (E, EB)	R533, 534	ERDS2TJ103	1/4W 10K	R681-694	ERDS2TJ270T	1/4W 27
R195	ERDS2TJ222	1/4W 2.2K (E, EB)	R543, 544	ERDS2TJ102	1/4W 1K	R695, 696	ERDS2TJ102	1/4W 1K
R351, 352	ERDS2TJ101	1/4W 100	R545	ERDS2TJ824	1/4W 820K	R699	ERDS2TJ332	1/4W 3.3K
R354	ERDS2TJ332	1/4W 3.3K	R546	ERDS2TJ332	1/4W 3.3K	R701, 702	ERDS2TJ1R2	1/4W 1.2
R355	ERDS2TJ470	1/4W 47	R551, 552	ERDS2TJ102	1/4W 1K	R703	ERD2FCVJ4R7T	1/4W 4.7 Δ
R356	ERDS2TJ152	1/4W 1.5K	R553, 554	ERDS2TJ104	1/4W 100K	R704	ERDS1FVJ4R7T	1/2W 4.7 Δ
R357	ERDS2TJ470	1/4W 47	R555, 556	ERDS2TJ223	1/4W 22K	R705	ERDS2TJ472	1/4W 4.7K

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R706	ERDS2TJ102	1/4W 1K	R957	ERDS2TJ682T	1/4W 6.8K	C108	ECBT1H8R2KC5	50V 8.2P (EG, G, GN)
R707	ERD2FCVJ4R7T	1/4W 4.7 Δ	R960	ERDS2TJ102	1/4W 1K	C109, 110	ECBT1C103NS5	16V 0.01U
R709	ERD25FVJ221T	1/4W 220 Δ	R961	ERDS2TJ122	1/4W 1.2K	C111	ECEA1EKA4R7B	25V 4.7U
R710, 711	ERDS2TJ153	1/4W 15K	R962	ERDS2TJ152	1/4W 1.5K	C112	ECBT1C103NS5	16V 0.01U
R712	ERDS2TJ472	1/4W 4.7K	R963	ERDS2TJ182	1/4W 1.8K	C113	ECBT1H102KB5	50V 1000P
R713, 714	ERDS2TJ1R5T	1/4W 1.5	R964	ERDS2TJ222	1/4W 2.2K	C114	RCE1HKA3R3BG	50V 3.3U
R715	ERDS2TJ752T	1/4W 7.5K	R965	ERDS2TJ332	1/4W 3.3K	C115	ECEA1EKA4R7B	25V 4.7U
R716	ERDS2TJ682T	1/4W 6.8K	R966	ERDS2TJ472	1/4W 4.7K	C116	ECBT1C822MS5	16V 8200P
R717	ERD2FCVJ6R8T	1/4W 6.8 Δ	R967	ERDS2TJ682T	1/4W 6.8K	C117	ECQB1H471JF3	50V 470P
R718	ERDS2TJ182	1/4W 1.8K	R968	ERDS2TJ123	1/4W 12K	C118, 119	ECQB1H103JF3	50V 0.01U
R720, 721	ERD2FCVJ4R7T	1/4W 4.7 Δ	R970	ERDS2TJ102	1/4W 1K	C120, 121	ECEA1HKA010B	50V 1U
R722	ERD2FCVJ6R8T	1/4W 6.8 Δ	R971	ERDS2TJ122	1/4W 1.2K	C122	ECEA1HKA2R2B	50V 2.2U
R723, 724	ERDS2TJ332	1/4W 3.3K	R972	ERDS2TJ152	1/4W 1.5K	C123	ECEA1HKA010B	50V 1U
R725	ERDS2TJ152	1/4W 1.5K	R973	ERDS2TJ182	1/4W 1.8K	C124	ECBT1H102KB5	50V 1000P
R727	ERD25FVJ180T	1/4W 18 Δ	R974	ERDS2TJ222	1/4W 2.2K	C125	ECBT1H150JC5	50V 15P
R754	ERDS2TJ102	1/4W 1K	R975	ERDS2TJ332	1/4W 3.3K	C126	ECBT1H104ZF5	50V 0.1U
R772	ERDS2TJ104	1/4W 100K	R976	ERDS2TJ472	1/4W 4.7K	C127	RCE1CKA220BG	16V 22U
R773	ERDS2TJ103	1/4W 10K	R977	ERDS2TJ682T	1/4W 6.8K	C128	ECBT1C103NS5	16V 0.01U
R774	ERDS2TJ223	1/4W 22K	R978	ERDS2TJ123	1/4W 12K	C129, 130	RCE0JKA101BV	6.3V 100U
R775	ERDS2TJ332	1/4W 3.3K	R980	ERDS2TJ102	1/4W 1K	C131	ECBT1C103NS5	16V 0.01U
R777	ERDS2TJ220T	1/4W 22	R981	ERDS2TJ122	1/4W 1.2K	C132	ECBT1H102KB5	50V 1000P
R778	ERDS2TJ222	1/4W 2.2K	R982	ERDS2TJ152	1/4W 1.5K	C133, 134	ECBT1H270JU5	50V 27P
R779	ERDS2TJ103	1/4W 10K	R983	ERDS2TJ182	1/4W 1.8K	C135, 136	ECBT1C103KS5	16V 0.01U
R780, 781	ERDS2TJ473	1/4W 47K	R984	ERDS2TJ222	1/4W 2.2K	C137, 138	ECBT1H561KB5	50V 560P
R782	ERDS2TJ153	1/4W 15K	R985	ERDS2TJ332	1/4W 3.3K	C139, 140	ECQB1H682JF3	50V 6800P
R783	ERDS2TJ103	1/4W 10K	R986	ERDS2TJ472	1/4W 4.7K	C141-144	ECEA1HKA010B	50V 1U
R784	ERDS2TJ335T	1/4W 3.3M	R987	ERDS2TJ682T	1/4W 6.8K	C145	ECBT1H220JC5	50V 22P
R791, 792	ERDS2TJ223	1/4W 22K	R988	ERDS2TJ123	1/4W 12K	C146	ECBT1H331KB5	50V 330P
R795, 796	ERDS2TJ223	1/4W 22K	R1001, 1002	ERDS2TJ223	1/4W 22K	C147	ECBT1H102KB5	50V 1000P
R797	ERDS2TJ682T	1/4W 6.8K	R1003, 1004	ERDS2TJ102	1/4W 1K	C148, 149	ECBT1C103NS5	16V 0.01U
R901	ERDS2TJ102	1/4W 1K	R1005	ERDS2TJ203T	1/4W 20K	C150	ECBT1H104ZF5	50V 0.1U
R907-909	ERDS2TJ104	1/4W 100K	R1007, 1008	ERDS2TJ473	1/4W 47K	C172	ECBT1H331KB5	50V 330P
R911	ERDS2TJ104	1/4W 100K	R1009-1011	ERDS2TJ332	1/4W 3.3K	C173	RCE1CKA220BG	16V 22U
R913	ERDS2TJ104	1/4W 100K	R1012	ERDS2TJ102	1/4W 1K	C174	RCE1CKA101BV	16V 100U
R914-917	ERDS2TJ103	1/4W 10K	R1051	ERDS2TJ393	1/4W 39K	C175, 176	ECBT1C103NS5	16V 0.01U
R920	ERDS2TJ271	1/4W 270	R1052	ERDS2TJ105T	1/4W 1M	C181	ECBT1H471KB5	50V 470P
R921	ERDS2EJ121	1/4W 120	R1053	ERDS2TJ102	1/4W 1K	C196	ECBT1H102KB5	50V 1000P
R922	ERDS2TJ472	1/4W 4.7K	R1055	ERDS2TJ473	1/4W 47K	C351, 352	RCE0JKA101BV	6.3V 100U
R923	ERDS2TJ102	1/4W 1K	R1056	ERDS2TJ562	1/4W 5.6K (E, EB, EG)	C353	RCE1CKA100BG	16V 10U
R927	ERDS2TJ181T	1/4W 180	R1056	ERDS2TJ392T	1/4W 3.9K (G, GN)	C354, 355	RCE1CKA470BG	16V 47U
R929	ERDS2TJ104	1/4W 100K	R1061	ERDS2TJ222	1/4W 2.2K	C401, 402	ECEA1VKA4R7B	35V 4.7U
R930, 931	ERDS2TJ101	1/4W 100	R1205	ERDS2TJ102	1/4W 1K	C403, 404	ECBT1E103ZF	25V 0.01U
R942	ERDS2TJ104	1/4W 100K				C405, 406	ECBT1H101KB5	50V 100P
R943, 944	ERDS2TJ102	1/4W 1K			CAPACITORS	C409, 410	ECEA1JU220	63V 22U
R946-949	ERDS2TJ103	1/4W 10K				C411, 412	ECBT1H101KB5	50V 100P
R950	ERDS2TJ102	1/4W 1K	C101	ECBT1C103NS5	16V 0.01U	C413, 414	RCE1CKA100BG	16V 10U
R951	ERDS2TJ122	1/4W 1.2K	C103	ECBT1C103NS5	16V 0.01U	C415, 416	ECBT1E103ZF	25V 0.01U
R952	ERDS2TJ152	1/4W 1.5K	C104	ECBT1H102KB5	50V 1000P	C417, 418	ECBT1H101KB5	50V 100P
R953	ERDS2TJ182	1/4W 1.8K	C105	ECBT1H470J5	50V 47P	C419-422	ECBT1H331KB5	50V 330P
R954	ERDS2TJ222	1/4W 2.2K	C106	ECBT1C103NS5	16V 0.01U	C423-426	ECBT1H101KB5	50V 100P
R955	ERDS2TJ332	1/4W 3.3K	C107	ECBT1H473ZF5	50V 0.047U	C427, 428	ECBT1H221KB5	50V 220P
R956	ERDS2TJ472	1/4W 4.7K	C108	ECBT1H100JC5	50V 10P (E, EB)	C431, 432	RCE1CKA100BG	16V 10U

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C440	ECBT1E103ZF	25V 0.01U	C668	ECEA2AU100	100V 10U	C947	ECBT1E103ZF	25V 0.01U
C451, 452	ECEA1VKA4R7B	35V 4.7U	C681, 682	ECEA1HN100SB	50V 10U	C1001, 1002	ECEA1HKA010B	50V 1U
C453, 454	ECBT1H101KB5	50V 100P	C683, 684	ECBT1C332KR5	16V 3300P	C1003, 1004	RCE1HKA3R3BG	50V 3.3U
C455, 456	ECBT1H102KB5	50V 1000P	C685	ECBT1E103ZF	25V 0.01U	C1005	ECEA1HKA010B	50V 1U
C457, 458	RCE1AKA330BG	10V 33U	C701	ECBT1E103ZF	25V 0.01U	C1007	ECFR1E223KR	25V 0.022U
C459, 460	ECFR1E223KR	25V 0.022U	C702	ECQE2104KF3	250V 0.1U	C1008	ECFR1E473KR	25V 0.047U
C461, 462	ECFR1E682KR	25V 6800P	C703, 704	ECES56682VMG	56V 6800U Δ	C1009	RCE0JKA221BV	6.3V 220U
C463, 464	ECEA1VKA4R7B	35V 4.7U	C705	ECBT1H101KB5	50V 100P	C1010-1013	RCE1CKA100BG	16V 10U
C465, 466	ECBT1E103ZF	25V 0.01U	C707	ECA1VM101B	35V 100U	C1014	RCE0JKA221BV	6.3V 220U
C469, 470	ECBT1H181KB5	50V 180P	C708	ECKR1H103ZF5	50V 0.01U	C1015, 1016	ECQV1H104JM3	50V 0.1U
C503, 504	ECEA0JKA101B	6.3V 100U	C709	ECEA1CKA330B	16V 33U	C1017	RCE1HKA47BG	50V 0.47U
C505, 506	ECFR1C104MR	16V 0.1U	C710	ECBT1E103ZF	25V 0.01U	C1018	ECEA1VKA4R7B	35V 4.7U
C511, 512	ECEA1HKA3R3B	50V 3.3U	C711	ECKR1H103ZF5	50V 0.01U	C1019	RCE1HKA47BG	50V 0.47U
C513, 514	ECBT1H150J5	50V 15P	C712	ECEA1HKA100B	50V 10U	C1020	ECEA1VKA4R7B	35V 4.7U
C515, 516	ECBT1H221KB5	50V 220P	C713	ECKR1H103ZF5	50V 0.01U	C1021	ECEA1HKA15B	50V 0.15U
C517, 518	ECBT1H330J5	50V 33P	C714	ECA1HM470B	50V 47U	C1022	RCE1HKA3R3BG	50V 3.3U
C519-522	ECEA1VKA4R7B	35V 4.7U	C716	RCE1CKA100BG	16V 10U	C1023, 1024	ECQV1H154JM3	50V 0.15U
C523, 524	ECFR1E123KR	25V 0.012U	C721	ECQE2104KF3	250V 0.1U (G, GN)	C1025	RCE1HKA3R3BG	50V 3.3U
C525, 526	ECQV1H683JM3	50V 0.068U	C751	ECKWNS102MBM	400V 1000P Δ	C1026	ECEA1HKA15B	50V 0.15U
C527, 528	ECBT1C562KR5	16V 5600P	C752	ECKR1H103ZF5	50V 0.01U	C1027	ECEA1VKA4R7B	35V 4.7U
C529, 530	ECQB1H273JF3	50V 0.027U	C753	ECA1EM102B	25V 1000U Δ	C1028	RCE1HKA47BG	50V 0.47U
C531, 532	ECBT1E103ZF	25V 0.01U	C754	ECBT1E103ZF	25V 0.01U	C1029	ECEA1VKA4R7B	35V 4.7U
C533, 534	ECEA1CKA100B	16V 10U	C755	RCE1CKA470BG	16V 47U	C1030	RCE1HKA47BG	50V 0.47U
C536	ECBT1E103ZF	25V 0.01U	C756	ECBT1H101KB5	50V 100P	C1031, 1032	ECQV1H104JM3	50V 0.1U
C551, 552	ECEA1HKA3R3B	50V 3.3U	C757	RCE1AKA101BG	10V 100U	C1033	RCE0JKA470BG	6.3V 47U
C553, 554	ECBT1H101KB5	50V 100P	C771	ECEA1HKA2R2B	50V 2.2U	C1034	ECQV1H474JM3	50V 0.47U
C555, 556	ECBT1H221KB5	50V 220P	C772	RCE1CKA100BG	16V 10U	C1035	ECBA1H681KB5	50V 680P
C557, 558	ECBT1E103ZF	25V 0.01U	C773	ECBT1E223ZF	25V 0.022U	C1036-1038	ECBT1H101KB5	50V 100P
C559, 560	ECEA1CKA100B	16V 10U	C774	RCE0JKA221BV	6.3V 220U	C1039	RCE1CKA101BV	16V 100U
C561, 562	RCE1HKA3R3BG	50V 3.3U	C891	ECFR1E392KR	25V 3900P	C1040	RCE1CKA100BG	16V 10U
C563	ECBT1E103ZF	25V 0.01U	C901	ECEA0JU102	6.3V 1000U	C1041	ECBT1E103ZF	25V 0.01U
C595	ECBT1H221KB5	50V 220P	C902, 903	ECBT1E103ZF	25V 0.01U	C1051	ECEA1HKA2R2B	50V 2.2U
C601, 602	ECEA1HKN3R3B	50V 3.3U	C904	ECEA0JU471	6.3V 470U	C1052	ECEA1HKA010B	50V 1U
C603, 604	ECBA1H681KB5	50V 680P	C906	ECEA0JKA101B	6.3V 100U	C1053	RCE1HKA3R3BG	50V 3.3U
C605, 606	ECEA1JU220	63V 22U	C908	ECBT1E103ZF	25V 0.01U	C1054	RCE0JKA221BV	6.3V 220U
C607, 608	ECCR1H120KC5	50V 12P	C909-912	ECEA1HKA220B	50V 22U	C1055	ECEA1HKA010B	50V 1U
C609, 610	ECBT1H221KB5	50V 220P	C913, 914	ECEA1VKA100B	35V 10U	C1056	ECFR1E333KR	25V 0.033U
C611, 612	ECQV1H473JM3	50V 0.047U	C916	ECEA1HKA010B	50V 1U	C1057	ECFR1E152KR	25V 1500P
C613	RCE1CKA470BG	16V 47U	C919	ECBT1E103ZF	25V 0.01U	C1058	ECFR1E333KR	25V 0.033U
C615	ECBT1H101KB5	50V 100P	C920	ECEA1HKA010B	50V 1U	C1059	RCE1CKA101BV	16V 100U
C617	ECKR1H103ZF5	50V 0.01U	C921-927	ECBT1H331KB5	50V 330P	C1060	ECBT1E223ZF	25V 0.022U
C618	ECEA2AU100	100V 10U	C930	ECBT1H101KB5	50V 100P	C1062	ECBT1E223ZF	25V 0.022U
C631, 632	ECKT1H223ZF	50V 0.022U	C931	ECBT1H102KB5	50V 1000P	C1063	RCE1CKA101BV	16V 100U
C633	ECBT1H101KB5	50V 100P	C932	ECBT1H101KB5	50V 100P	C1065	ECBA1H681KB5	50V 680P
C635-637	ECKT1H223ZF	50V 0.022U	C935	ECEA0JKA101B	6.3V 100U	C1067, 1068	ECBT1C152KR5	16V 1500P
C651, 652	ECEA1HKN3R3B	50V 3.3U	C936	ECBT1E103ZF	25V 0.01U			
C653, 654	ECBA1H681KB5	50V 680P	C939, 940	ECBT1H101KB5	50V 100P			
C655, 656	ECEA1JU220	63V 22U	C941	ECBT1H221KB5	50V 220P			
C657, 658	ECCR1H120KC5	50V 12P	C942	ECBT1H102KB5	50V 1000P			
C659, 660	ECBT1H221KB5	50V 220P	C943, 944	ECBT1H101KB5	50V 100P			
C661, 662	ECQV1H473JM3	50V 0.047U	C945	ECBT1E223ZF	25V 0.022U			
C667	ECKR1H103ZF5	50V 0.01U	C946	ECBT1H101KB5	50V 100P			

REPLACEMENT PARTS LIST

Notes: *Important safety notice:
 Components identified by Δ 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.
 *Remote Control Ass'y: Supply period for three years from termination of production.
 *The "(SF)" mark denotes the standard part.
 *[V] indicates in Remarks columns parts that are supplied by Video Recorder Division.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIAL		A6	RQA0013	WARRANTY CARD	(E, EB, EG)
				A6	RQX7433ZA	WARRANTY CARD	(GN)
				A7	RAK-SA179XH	REMOTE CONTROL TRANSMITTER	
P1	RPG2534	PACKING CASE	(E, EG, G, GN)	A7-1	RKK0057-K	BATTERY COVER	FOR R/C TRANSMITTER
P1	RPG2535	PACKING CASE	(EB)	A8	SJP9009	ATTACHMENT PLUG	(EB) Δ
P2	RPND752	CUSHION		A9	RFED014	ANTENNA PLUG	(G, GN)
P3	RPQ0164	PAD (ACCESSORIES)	(EB, EG, G, GN)	A10	RQLA0134	VOLTAGE CAUTION LABEL	(G)
P4	RPF0139	PROTECTION BAG (F. B.)		A11	SJP5213-2	POWER PLUG ADAPTOR	(G) Δ
P5	XZB60X65A01Z	PROTECTION BAG (UNIT)				<GREASE OR JIG/TOOL>	
P6	RPHD032	PROTECTION SHEET	(EB, GN)			GREASE	
		ACCESSORIES		SA1	RFKX0002	COMPOUND GREASE	
A1	RFKSAGX390E	INSTRUCTION MANUAL ASS'Y	(E)			EXTENSION CORD	
A1	RFKSAGX490GN	INSTRUCTION MANUAL ASS'Y	(EB, GN)				
A1	RFKSAGX390EG	INSTRUCTION MANUAL ASS'Y	(EG)				
A1	RFKSAGX490G	INSTRUCTION MANUAL ASS'Y	(G)	SA2	RFKZ0013	EXTENSION CORD ASS'Y	
A2	RJA0019-2K	AC POWER SUPPLY CORD	(E, EG, G) Δ (SF)			TEST DISC	
A2	VJA0733	AC POWER SUPPLY CORD	(EB) Δ (SF) [V]				
A2	RJA0036-K	AC POWER SUPPLY CORD	(GN) Δ	SA3	SZZP1054C	PLAYABILITY TEST DISC	
A3	RSA0007	FM INDOOR ANTENNA				TEST TAPE	
A4	RSA0010	AM LOOP ANTENNA SET					
A4-1	RMND244	AM ANTENNA HOLDER		SA4	QZZCLA	DISTORTION ADJUSTMENT	
A4-2	XTN3+12AFZ	SCREW					
A5	RQCB0169	SERVICENTER LIST					

PACKAGING

