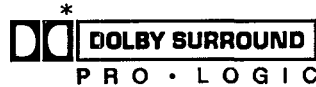


# Service Manual

AV Control Stereo Receiver

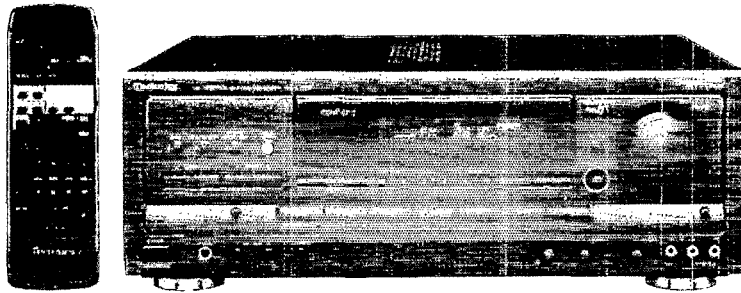


Receiver

## SA-EX700

Colour

(K) . . . . . Black Type



Area

Suffix for Model No.	Area	Colour
(E)	Continental Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	

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## Specifications

### FM Tuner Section

Frequency range	87.50 – 108.00 MHz
Sensitivity	
S/N 30 dB	1.5 $\mu$ V/75 $\Omega$
S/N 26 dB	1.3 $\mu$ V/75 $\Omega$
S/N 20 dB	1.2 $\mu$ V/75 $\Omega$
IHF usable sensitivity	1.5 $\mu$ V/75 $\Omega$ (IHF '58)
IHF 46 dB stereo quieting sensitivity	22 $\mu$ V/75 $\Omega$
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	
$\pm$ 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
Carrier leak	
19 kHz	-30 dB (-35 dB, IHF)
38 kHz	-50 dB (-55 dB, IHF)
Channel balance (250 Hz — 6.3 kHz)	$\pm$ 1.5 dB
Limiting point	1.2 $\mu$ V
Bandwidth	
IF amplifier	180 kHz
FM demodulator	1000 kHz
Antenna terminal(s)	75 $\Omega$ (unbalanced)

### Video Section

Output voltage at 1 V input (unbalanced)	1 $\pm$ 0.1 Vp-p
Maximum input voltage	1.5 Vp-p
Input/output impedance	75 $\Omega$ (unbalanced)

### AM Tuner Section

Frequency range	
MW	522 – 1611 kHz (9 kHz steps) 530 – 1620 kHz (10 kHz steps)
LW	144 – 288 kHz
Sensitivity	
MW	20 $\mu$ V, 330 $\mu$ V/m
LW	45 $\mu$ V
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

### Amplifier Section

Power output (at 240 V)	
DIN 1 kHz (T.H.D. 1%)	2 X 100 W (4 $\Omega$ )
20 Hz – 20 kHz continuous power output both channels driven	2 X 65 W (8 $\Omega$ )
Total harmonic distortion	
rated power at 20 Hz – 20 kHz	0.05% (8 $\Omega$ )
half power at 1 kHz	0.03% (8 $\Omega$ )
Power output at the Dolby Pro Logic operation	
DIN 1 kHz (T.H.D. 1%)	
Front	2 X 60 W (8 $\Omega$ )
Center	60 W (8 $\Omega$ )
Surround	60 W (8 $\Omega$ )
Subwoofer	60 W (4 $\Omega$ )
Intermodulation distortion	
rated power at 60 Hz: 7 kHz=4:1; SMPTE	0.5 W (8 $\Omega$ )
Power bandwidth	
both channels driven, -3 dB	10 Hz – 40 kHz (8 $\Omega$ )
Damping factor	30 (8 $\Omega$ )

# Technics®

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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.

**Load impedance**

<b>Front</b>	
<b>A or B</b>	4 – 16 Ω
<b>A and B</b>	8 – 16 Ω
<b>Center</b>	8 – 16 Ω
<b>Surround</b>	4 – 16 Ω
<b>Subwoofer</b>	4 – 16 Ω

**Frequency response**

<b>PHONO</b>	RIAA standard curve
<b>CD, TAPE, VDP, TV, VCR 1, VCR 2</b>	(30 Hz – 15 kHz) ±0.8 dB
	10 Hz – 40 kHz, ±3 dB

**Input sensitivity and impedance**

<b>PHONO</b>	3 mV/47 kΩ
<b>CD, TAPE, VDP, TV, VCR 1, VCR 2</b>	200 mV/22 kΩ

**S/N at rated power (8 Ω)**

<b>PHONO</b>	70 dB (IHF, A: 80 dB)
<b>CD, TAPE, VDP, TV, VCR 1, VCR 2</b>	75 dB (IHF, A: 85 dB)

**Tone controls**

<b>BASS</b>	50 Hz, +10 to –10 dB
<b>TREBLE</b>	20 kHz, +10 to –10 dB

**Loudness control (volume at –30 dB)**

50 Hz, +9 dB

**Output voltage**

VCR 1 OUT, TAPE REC (OUT) 200 mV

Channel balance (250 Hz – 6.3 kHz) ±1 dB

Channel separation 55 dB

Headphones output level and impedance 430 mV/330 Ω

Subwoofer frequency response 7 Hz – 100 Hz

**■ General****Power supply**

AC 50 Hz, 230 V (EG)

AC 50 Hz, 230 – 240 V (E, EB)

**Power consumption**

250 W

**Dimensions (W x H x D)**

430 x 158 x 358 mm

**Weight**

10.3 kg

**Notes :**

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

**■ Contents****PAGE**

• BEFORE REPAIR AND ADJUSTMENT.....	2
• PROTECTION CIRCUITRY.....	2
• CAUTION FOR AC MAINS LEAD.....	3
• OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT	4 ~ 8
• FAN MOTOR TROUBLESHOOTING.....	9
• TROUBLESHOOTING.....	10 ~ 13
• BLOCK DIAGRAM.....	14 ~ 17
• TERMINAL FUNCTIONS OF ICs.....	18
• TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES.....	19

**PAGE**

• WIRING CONNECTION DIAGRAM.....	20
• SCHEMATIC DIAGRAM.....	21 ~ 40
• PRINTED CIRCUIT BOARD .....	41 ~ 49
• CABINET PARTS LOCATION.....	50
• REPLACEMENT PARTS LIST.....	51 ~ 53
• RESISTORS & CAPACITORS.....	54 ~ 58
• PACKING MATERIALS & ACCESSORIES.....	59
• PACKAGING.....	59

**■ Before Repair and Adjustment**

Disconnect AC power, discharge 4 Power Supply Capacitors C703, C704, C705 and C706 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 AC 230 V, 50 Hz in NO SIGNAL mode should be 120 ~ 350 mA.

Current consumption at AC 240 V, 50 Hz in NO SIGNAL mode should be 130 ~ 380 mA.

**■ Protection Circuitry**

The protection circuitry may have operated if either of the following conditions are 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.

## ■ 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 OFF 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 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:

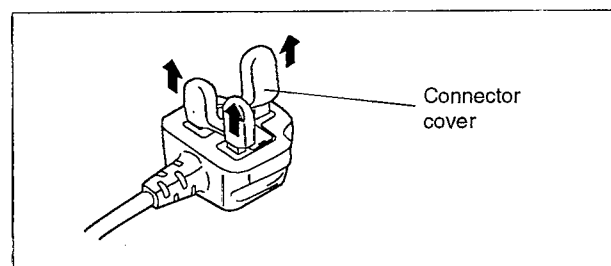
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

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 or these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth symbol  $\perp$ .

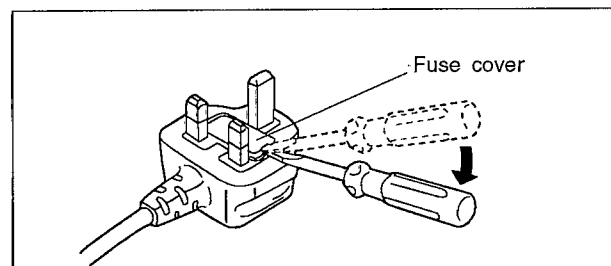
### Before use

Remove the connector cover as follows.

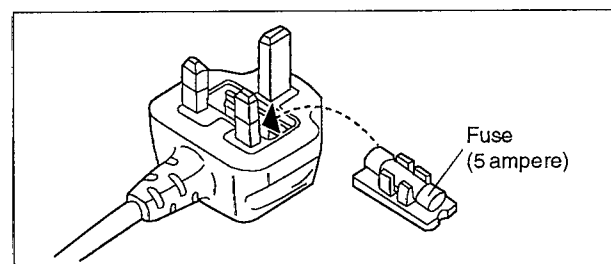


### How to replace the fuse

1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.



## ■ Operation Checks and Main Component Replacement Procedures

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

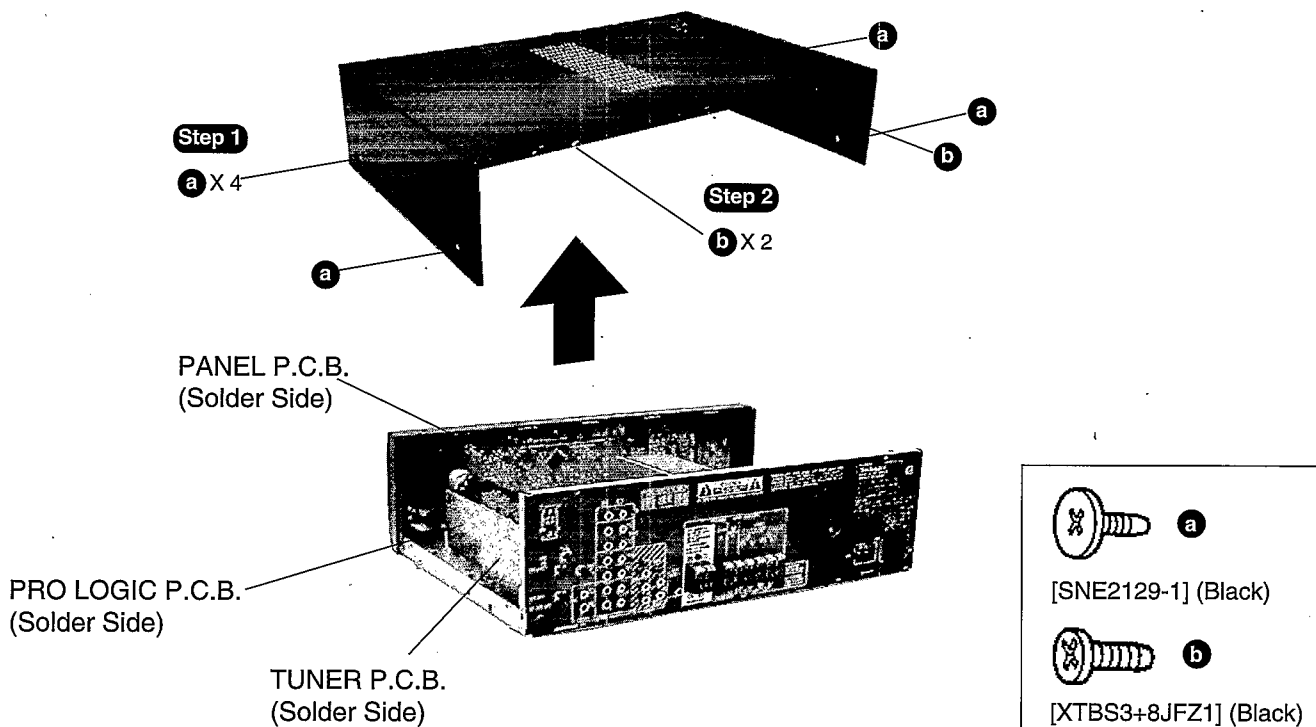
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.

### • Contents

	page
• Checking Procedure For Each Major P.C.B. ....	4 ~ 6
• Main Component Replacement Procedures .....	6 ~ 8

## ■ Checking Procedure For Each Major P.C.B.

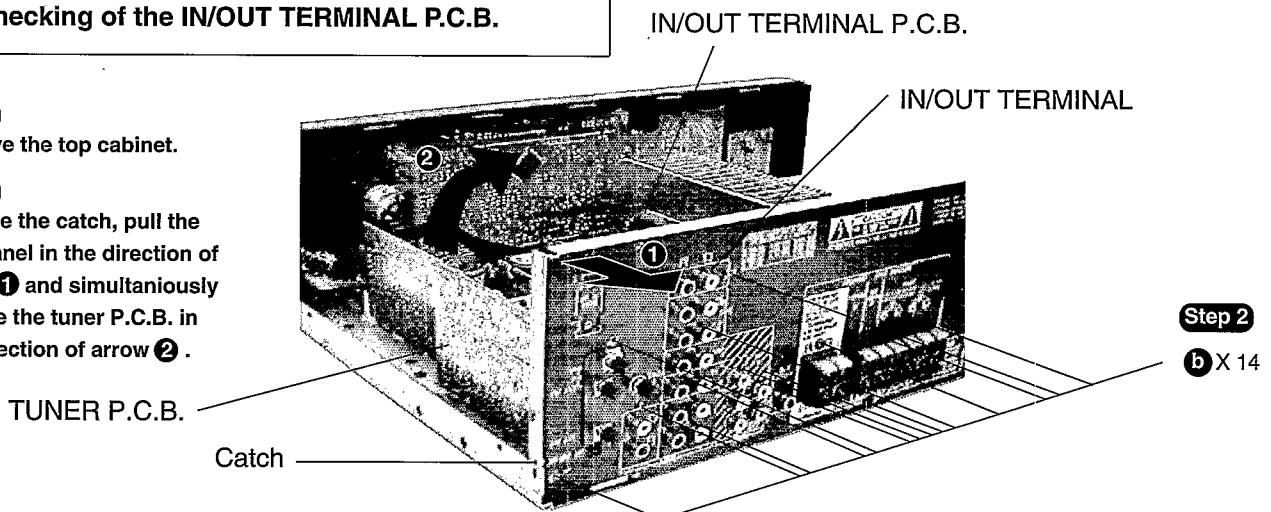
### 1. Checking of the Panel P.C.B., Pro Logic P.C.B. and Tuner P.C.B.



### 2. Checking of the IN/OUT TERMINAL P.C.B.

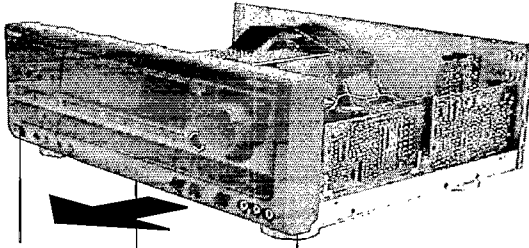
**Step 1**  
Remove the top cabinet.

**Step 3**  
Release the catch, pull the rear panel in the direction of arrow ① and simultaneously remove the tuner P.C.B. in the direction of arrow ②.



**To Remove Front Panel, Panel P.C.B., Power Switch P.C.B. and Headphone Jack P.C.B.**

**Step 1**  
Remove the top cabinet.



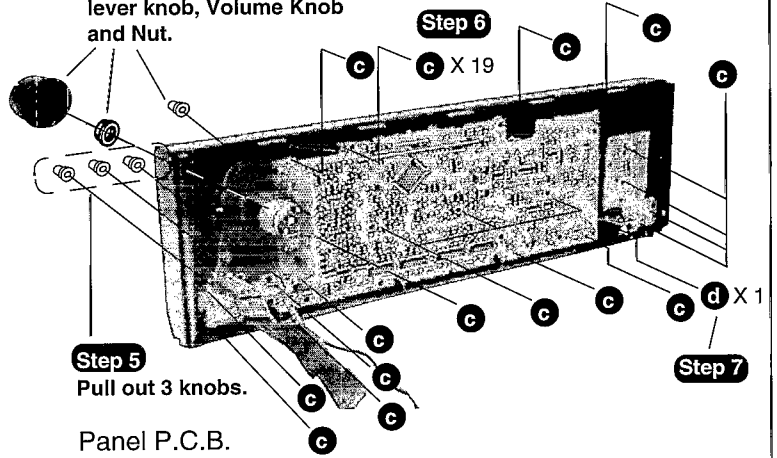
**b** X 3  
**Step 2**

**Step 3**  
Remove the front panel in the direction of arrow.

Power Switch P.C.B.

Headphone Jack P.C.B.

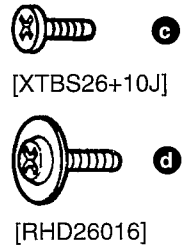
**Step 4**  
Remove the Sub-Woofer lever knob, Volume Knob and Nut.



**Step 5**  
Pull out 3 knobs.

Panel P.C.B.

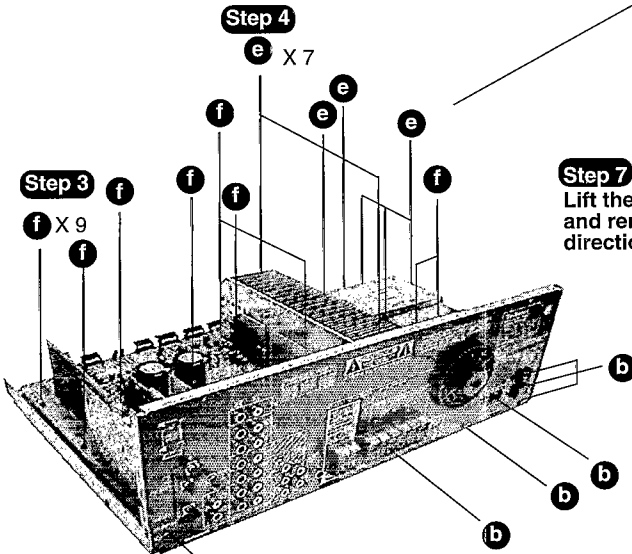
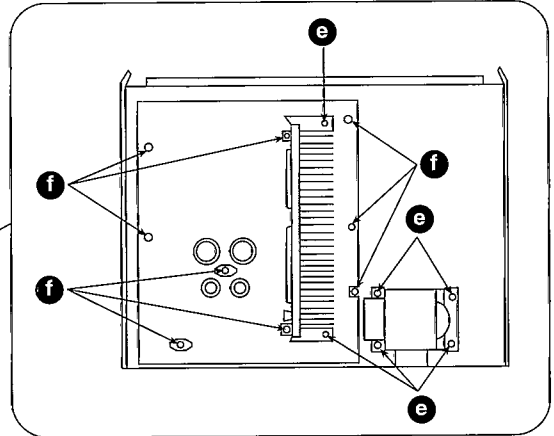
**Step 8**  
Pull out the Headphone Jack P.C.B.



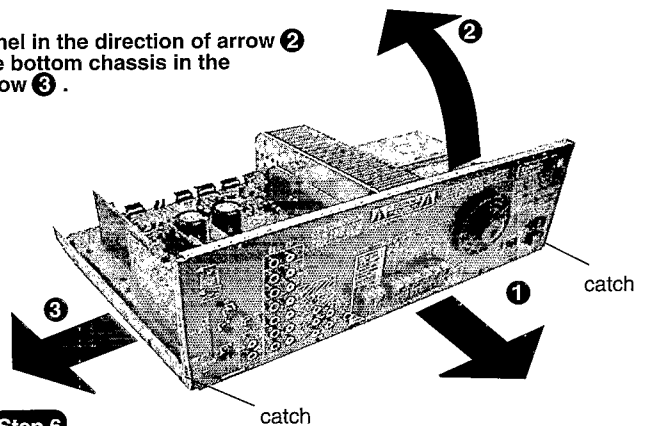
**3. Checking of the MAIN P.C.B.**

**Step 1**  
Remove the top cabinet.

**Step 2**  
Remove the front panel.



**Step 7**  
Lift the rear panel in the direction of arrow ② and remove the bottom chassis in the direction of arrow ③.



**Step 5** **b** X 7

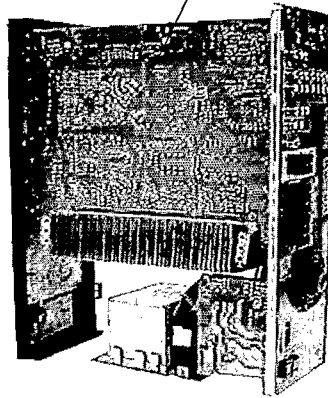
**Step 6**  
Release 2 catches and pull the rear panel in the direction of arrow ① for about 10mm.  
(Note : All P.C.B. and a transformer are attach to the rear panel)

**Step 8**

Connect the front panel to the main P.C.B. as shown.



MAIN P.C.B. (Solder Side)



• Check the Main P.C.B. as shown on the right.



e

[XTB3+8FFZ] (Black)



f

[XTB3+20JFZ] (Black)

**■ Main Component Replacement Procedures**

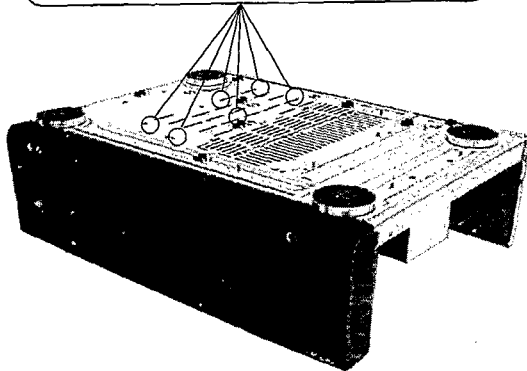
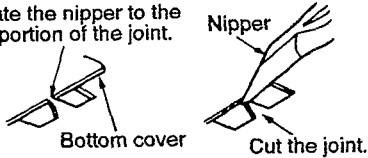
**1. Replacement of the Power IC and Regulator Transistor**

**Step 1**

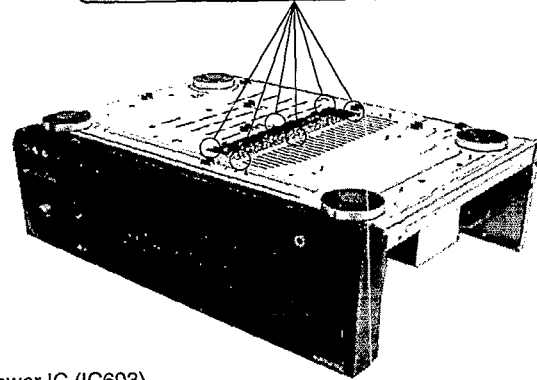
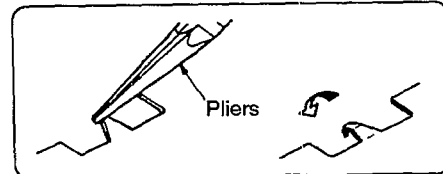
Remove the top cabinet.

**Step 2** Cut the joints as shown below. (6 joints)

Locate the nipper to the thin portion of the joint.



**Step 3** Fold the joints. (6 joints)



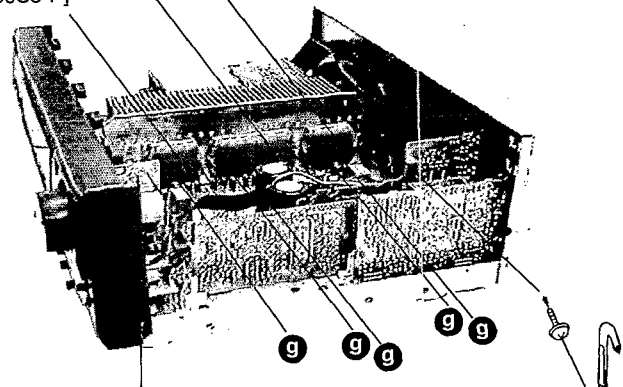
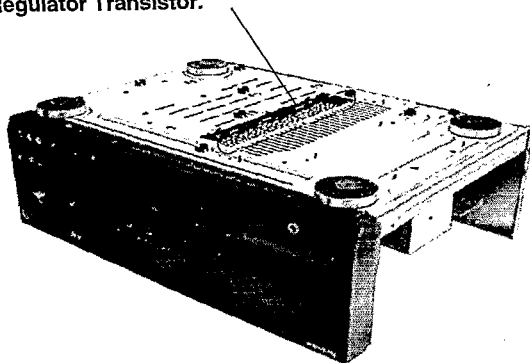
Power IC (IC603)  
[RSN33M5-P]

Power IC (IC602)  
[RSN36S5-P]

Power IC (IC601)  
[RSN36S5-P]

**Step 4**

Desolder the terminals of Power IC and Regulator Transistor.

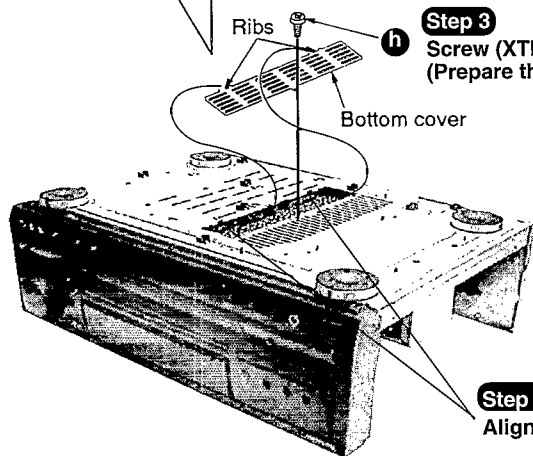
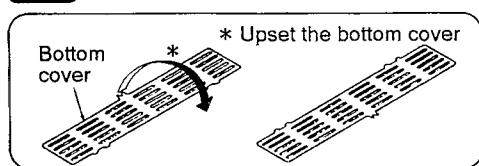


Regulator transistor  
(Q701, Q708)  
[2SD2374PQAU, 2SB1548PQAU]

**Step 5** g X 7

## Installation of the bottom cover after replacement

### Step 1



### Step 3

Screw (XTB3+8J)  
(Prepare this screw to fix the bottom cover.)

### Step 2

Align the ribs of bottom cover with lugs.



[XTW3+15T]

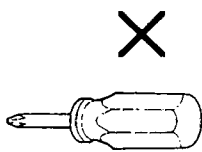


[XTB3+8J] (Black)

## CAUTION

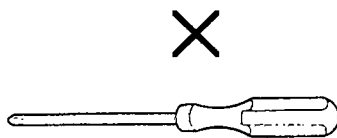
1. After replacing the power IC or regulator transistor, apply a sufficient quantity of compound grease (RFKX0002/SZZ0L15) between the heat sink and the power IC or regulator transistor (Radiation of power IC).
2. Tighten enough the screws (g) after replacing the power IC and regulator transistor. Otherwise, the heat radiation 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 removing or mounting the screws since its long grip interferes with the neighbouring 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

Fig.2



A short straight screwdriver

Fig.1

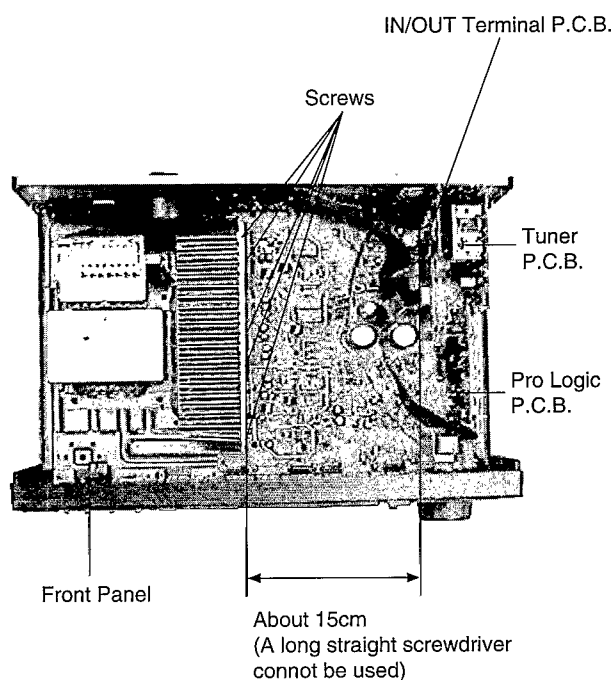
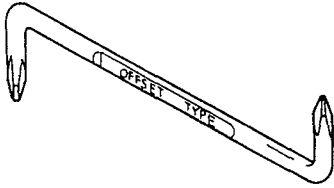


Fig.1

- Insufficient tightening will cause poor heat dissipation from the power IC and regulator transistor and, in the worst case, may lead to their thermal breakdown.

—OFFSET SCREWDRIVER—

•The PROTO offset screwdriver No.34-<sup>1</sup>/<sub>4</sub> is recommended for use in the application above.



No.		
34 <sup>1</sup> / <sub>4</sub>	1 & 2	4 <sup>3</sup> / <sub>4</sub> "

•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

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

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South Pacific  
Stanley-Proto Industrial Tools  
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400 Whitehorse Road  
Nunweding 3131  
Victoria, Australia  
Fax: 61-3-894-1173  
Phone: 61-3-878-9244

Thailand  
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1017 Moo 13 Bangkaew  
Amphur Bangplee  
Samutprakarn, Thailand  
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Phone: 66-2-316-8655

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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

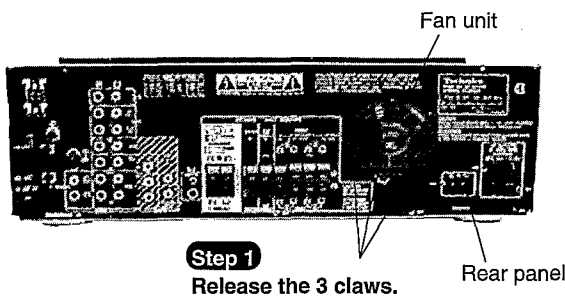
South & Central America,  
Puerto Rico, The Caribbean  
Stanley Inter-America  
2101 N.W. 84th Ave.  
Miami, Florida 33122  
Fax: 305-594-4261  
Phone: 305-591-3828

Europe  
Stanley-Proto Europe  
Woodside, Sheffield  
539PD  
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

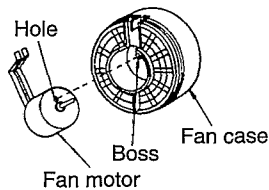
Middel East, Mediterranean  
& Africa  
Stanley-MEMA  
Cory House The Ring  
Bracknell Berkshire  
RG 12 1A2  
England  
Fax: 44-344-485-526  
Phone: 44-344-51813

**2. Replacement of the fan motor**

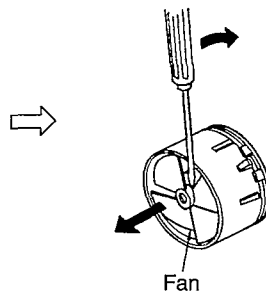


**NOTE**

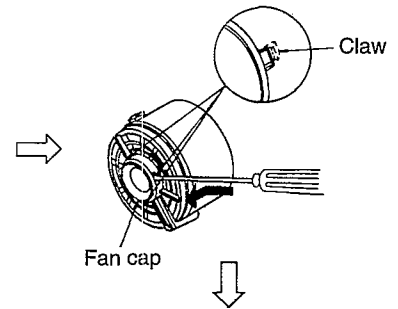
When replacing the fan motor, align the boss of the fan case with the hole of the fan motor.



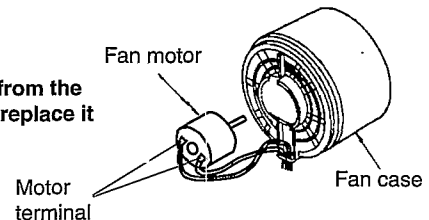
**Step 2**  
Put a screwdriver at the root of the fan and remove it.



**Step 3**  
Remove the fan cap.



**Step 4**  
Desolder the wires from the motor terminal and replace it with a new one.

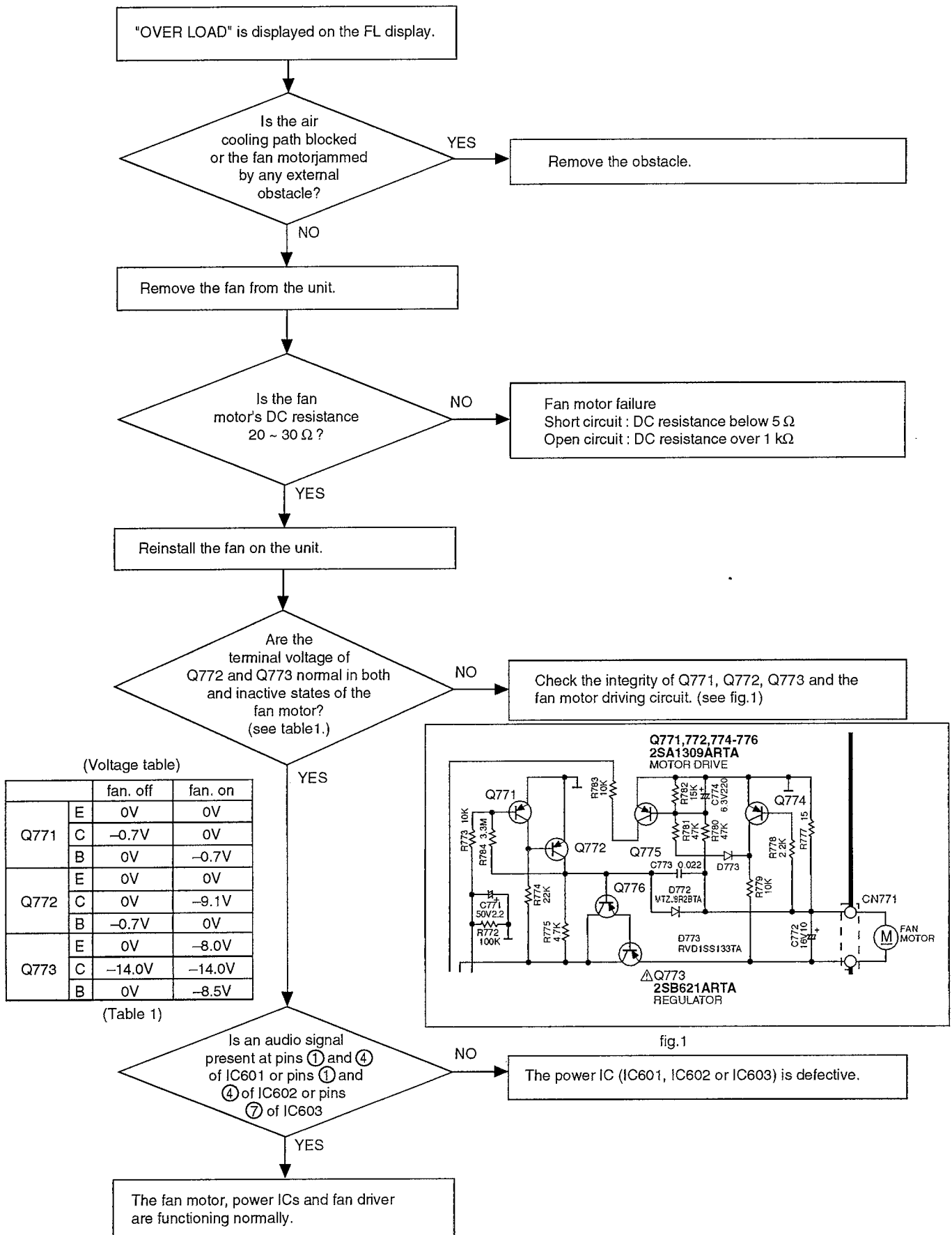




## Fan Motor Troubleshooting

The Model SA-EX700 employ fan motor error sensing electronics.

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

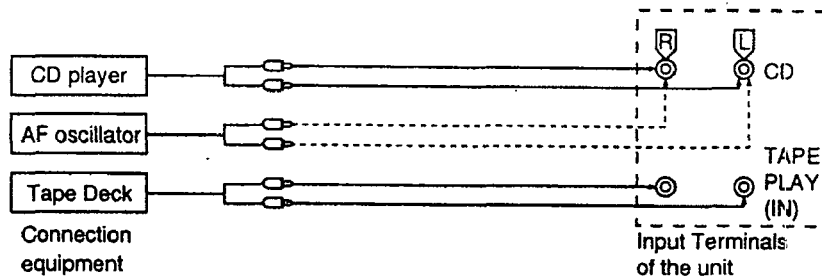


## Troubleshooting

This unit has test points on each circuit board block for use in troubleshooting.

### CONNECTION

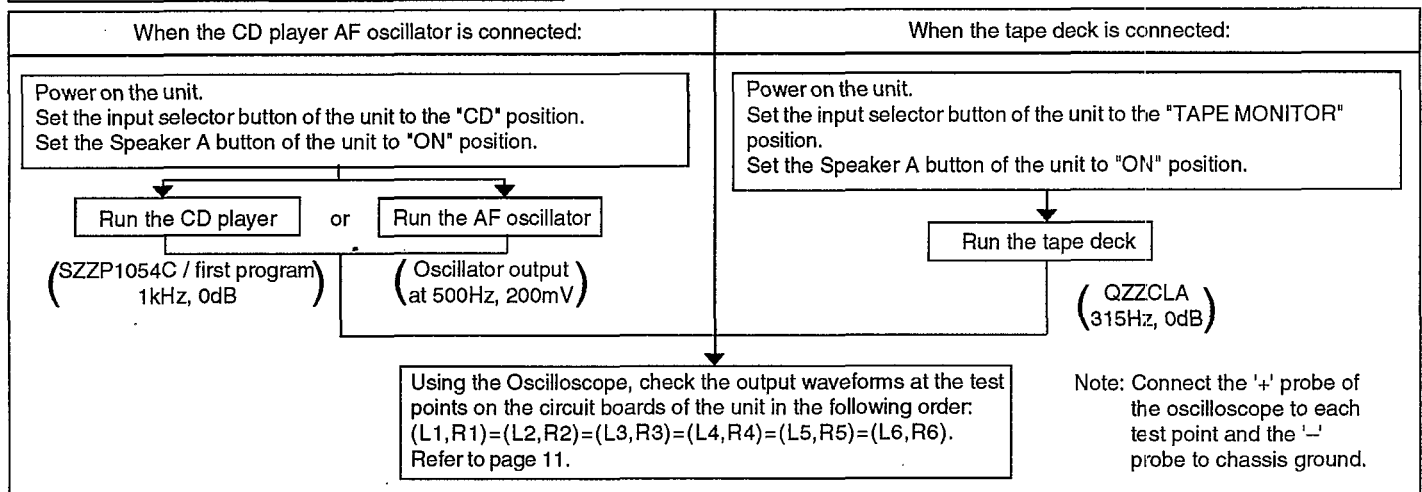
Connect either a CD player, tape deck or AF oscillator to the input terminals of the unit.



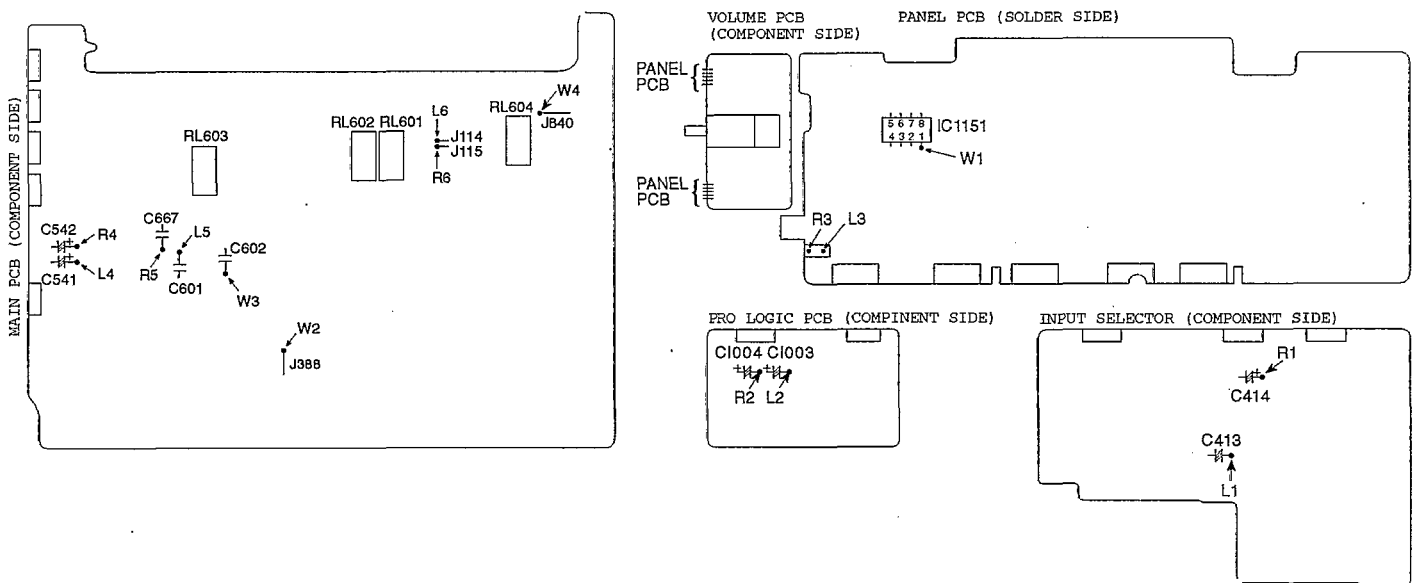
### REQUIRED ITEMS

- Testing with a CD player ——— Test disc (SZZP1054C / first program, 1kHz, 0dB)
- Testing with a tape deck ——— Test tape (QZZCLA / 315Hz, 0dB)
- Testing with a AF oscillator ——— Set the output at 500Hz, 200mV
- Oscilloscope (min. 10MHz) - - - - - To measure the output waveform at the test points.

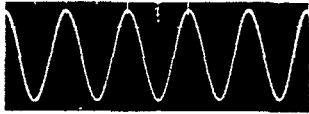
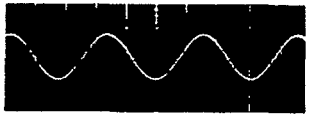

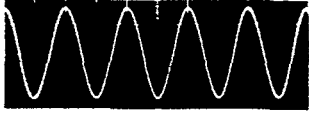
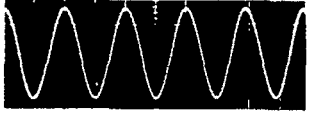
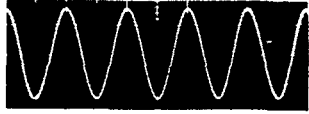
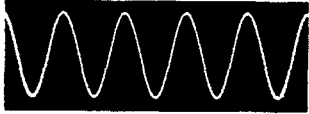
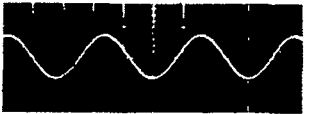
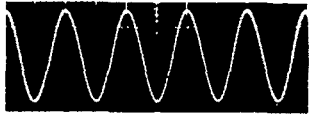
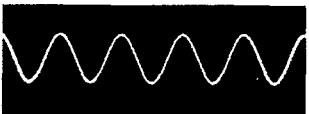
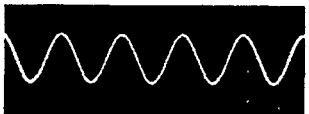

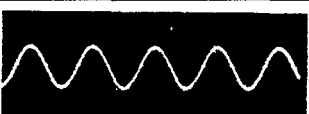
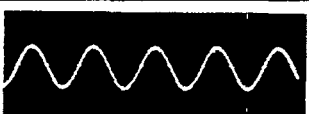
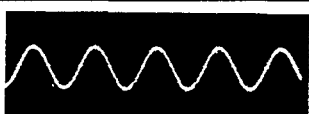
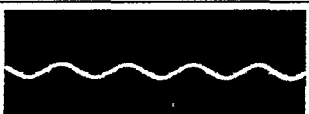
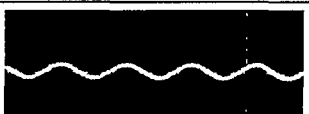

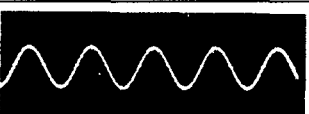
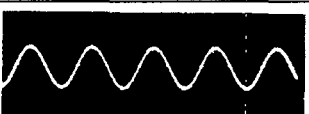
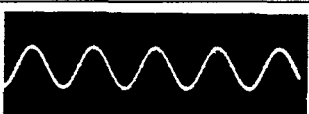

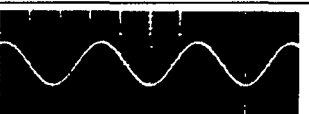
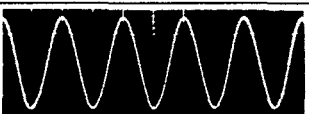
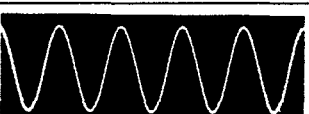
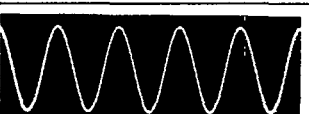
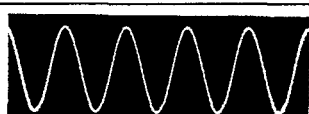
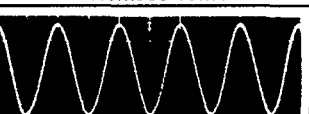
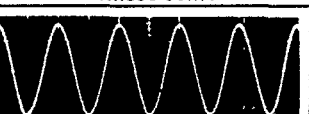
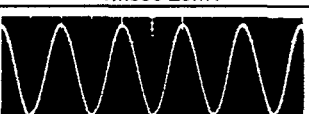
### TEST PROCEDURE FOR AMPLIFIER CIRCUIT






### TEST POINTS POSITIONS OF AMPLIFIER CIRCUIT



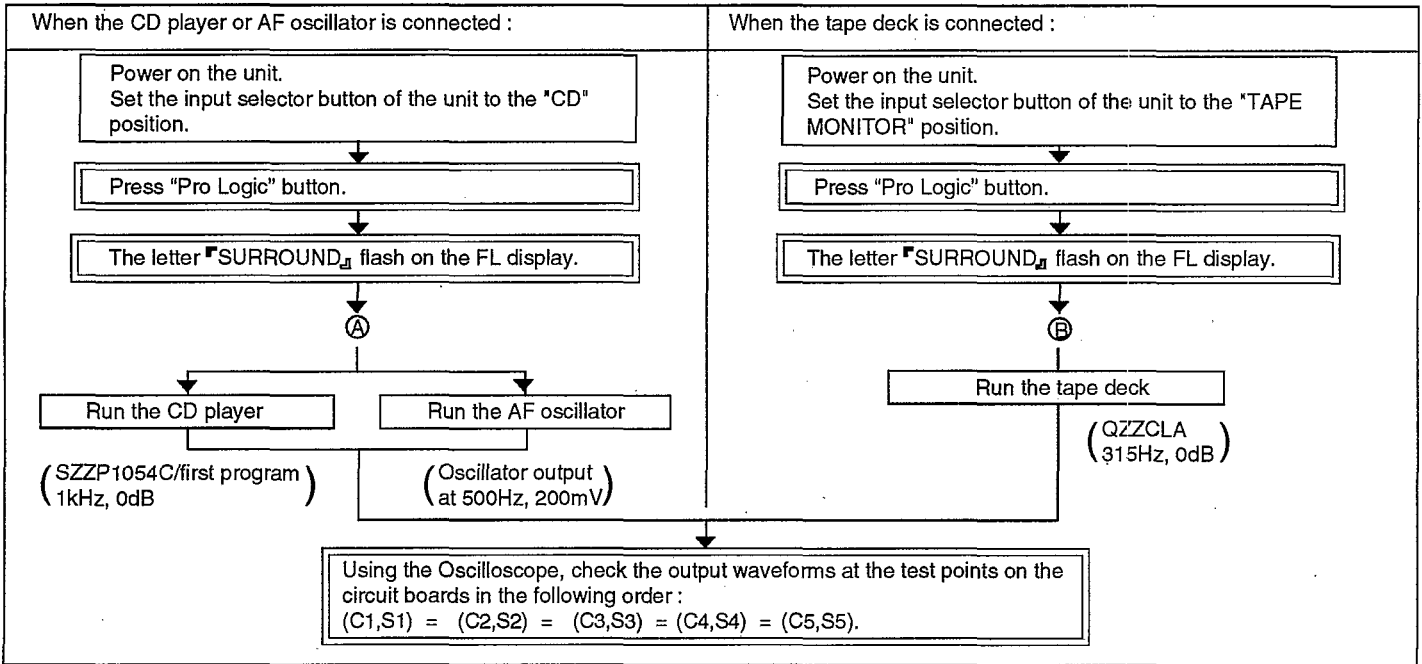
## NORMAL WAVEFORMS OF AMPLIFIER CIRCUIT AND LIKELY FAULTY BLOCKS

TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at the left is not present.
L1/R1	 0.5msec 0.2V	 1msec 50mV	 1msec 20mV	Input selector block IC401 & area
W1	 0.5msec 0.1V	 1msec 20mV	 1msec 20mV	Sub-Woofer amplifier & area
L2/R2	 0.5msec 0.2V	 1msec 50mV	 1msec 20mV	Dolby pro logic block IC1001 and IC1002 & area
W2	 1msec 25V	 1msec 25mV	 1msec 25mV	Sub-Woofer lever block VR1150 & area
L3/R3	 0.5msec 5mV	 2msec 50mV	 1msec 25mV	Master volume block VR501 & area
W3	 1msec 25mV	 2msec 25mV	 1msec 25mV	Power limiter block Q575, Q576 & area
L4/R4	 0.5msec 5mV	 2msec 25mV	 1msec 25mV	Tone control block IC511 & area
W4	 0.5msec 50mV	 1msec 5mV	 1msec 25mV	Main amplifier block IC601 & area
L5/R5	 0.5msec 10mV	 1msec 50mV	 1msec 25mV	Power limiter block Q581 to Q584 & area
L6/R6	 0.5msec 0.2mV	 2msec 50mV	 1msec 50V	Main amplifier block IC601, IC603 & area

Measurement conditions. Sub-Woofer Control (VR1150) Volume control (VR501), Treble control (VR512) and Bass control (VR511) positions :    
\*Volume control position (VR501) for these test 

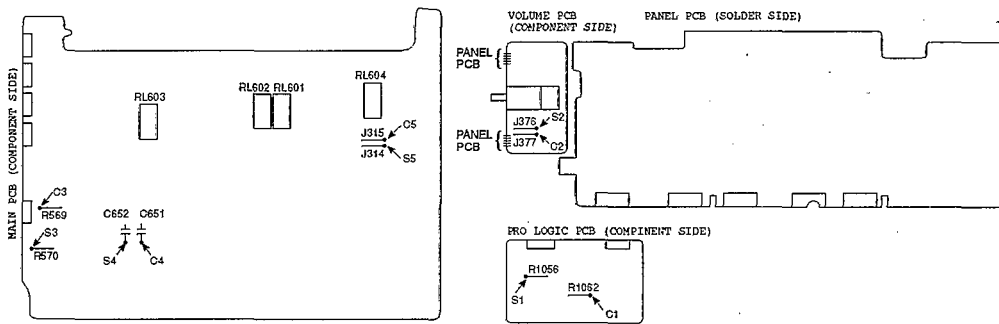
**CHECKING PROCEDURE FOR SURROUND CIRCUIT**

Outputting surround signal 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.



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

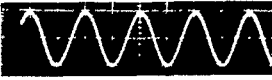
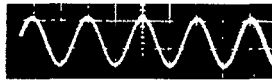




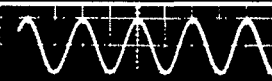
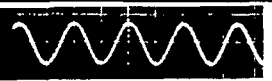
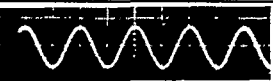



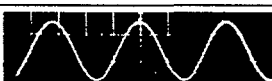

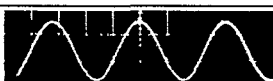
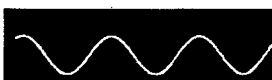


**TEST POINTS POSITIONS OF SOURROUND CIRCUIT**



**NORMAL WAVEFORMS OF AMPLIFIER CIRCUIT AND LIKELY FAULTY BLOCKS**

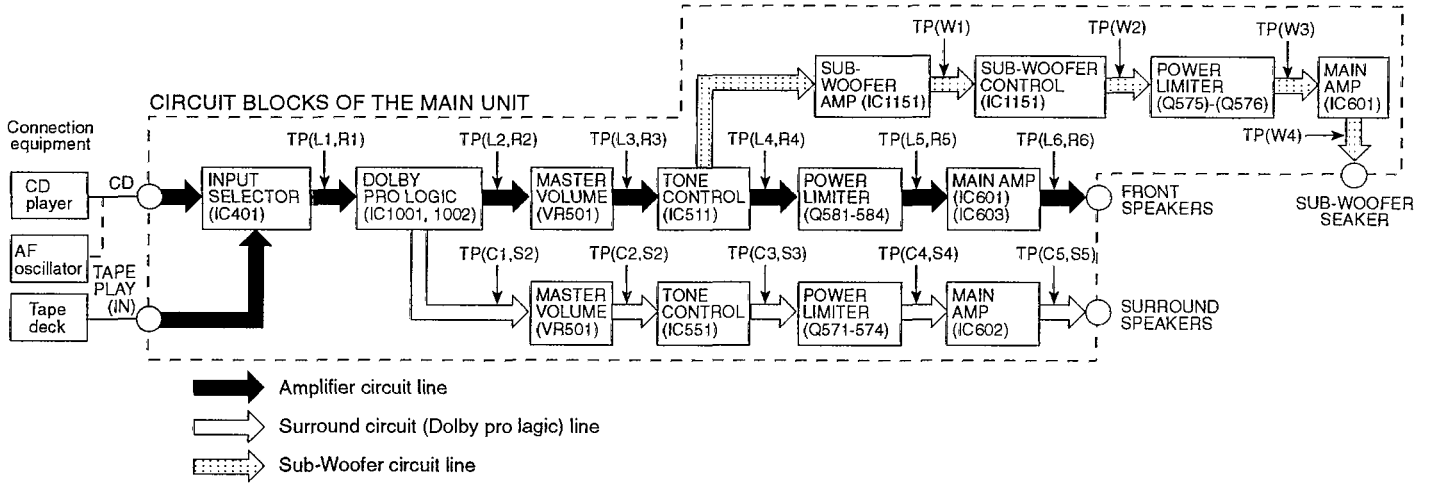
TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at the left is not present.
C1				Dolby pro logic block IC1001 and IC1002 & area
	S1			
C2				Master volume block VR501 & area
	S2			

**NORMAL WAVEFORMS OF AMPLIFIER CIRCUIT AND LIKELY FAULTY BLOCKS**

TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at the left is not present.
C3	 0.5msec 10mV	 2msec 50V	 1msec 50V	Power limiter block Q571 to Q574 & area
S3	 2msec 25mV	 5msec 25mV	 4msec 25mV	
C4	 0.5msec 5V	 2msec 25V	 1msec 10V	Power limiter block Q571 to Q574 & area
S4	 2msec 25mV	 5msec 25mV	 5msec 25mV	
C5	 0.5msec 0.2mV	 2msec 20mV	 1msec 20mV	Main amplifier block IC602 & area
S5	 1msec 25mV	 2msec 25mV	 2msec 25mV	

Measurement conditions. Sub-Woofer Control (VR1150), Volume control (VR501), Tremble control (VR512) and Bass control (VR511) positions : ●  
 \*Volume control position (VR501) for these test : ○

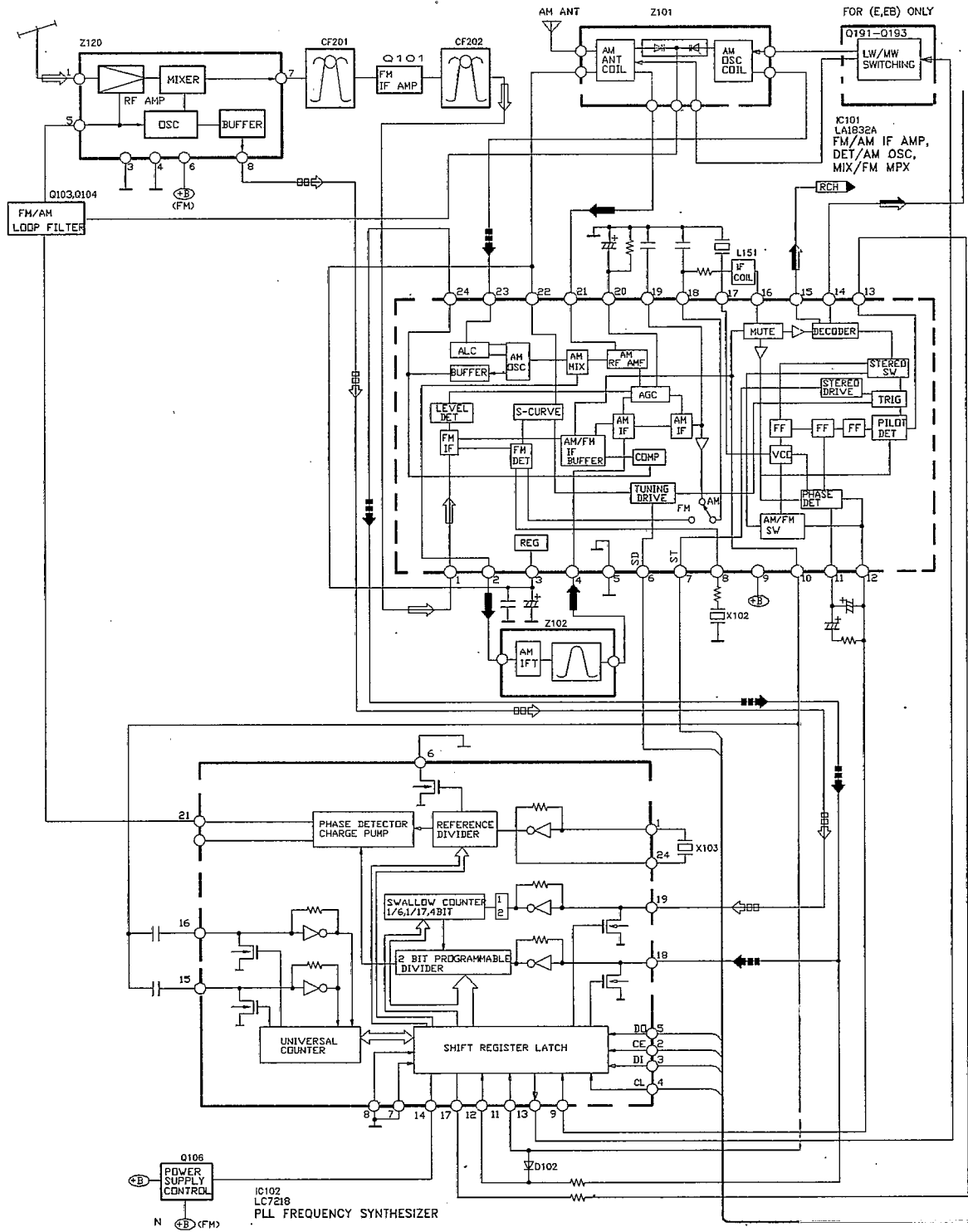
**CIRCUIT BLOCKS**

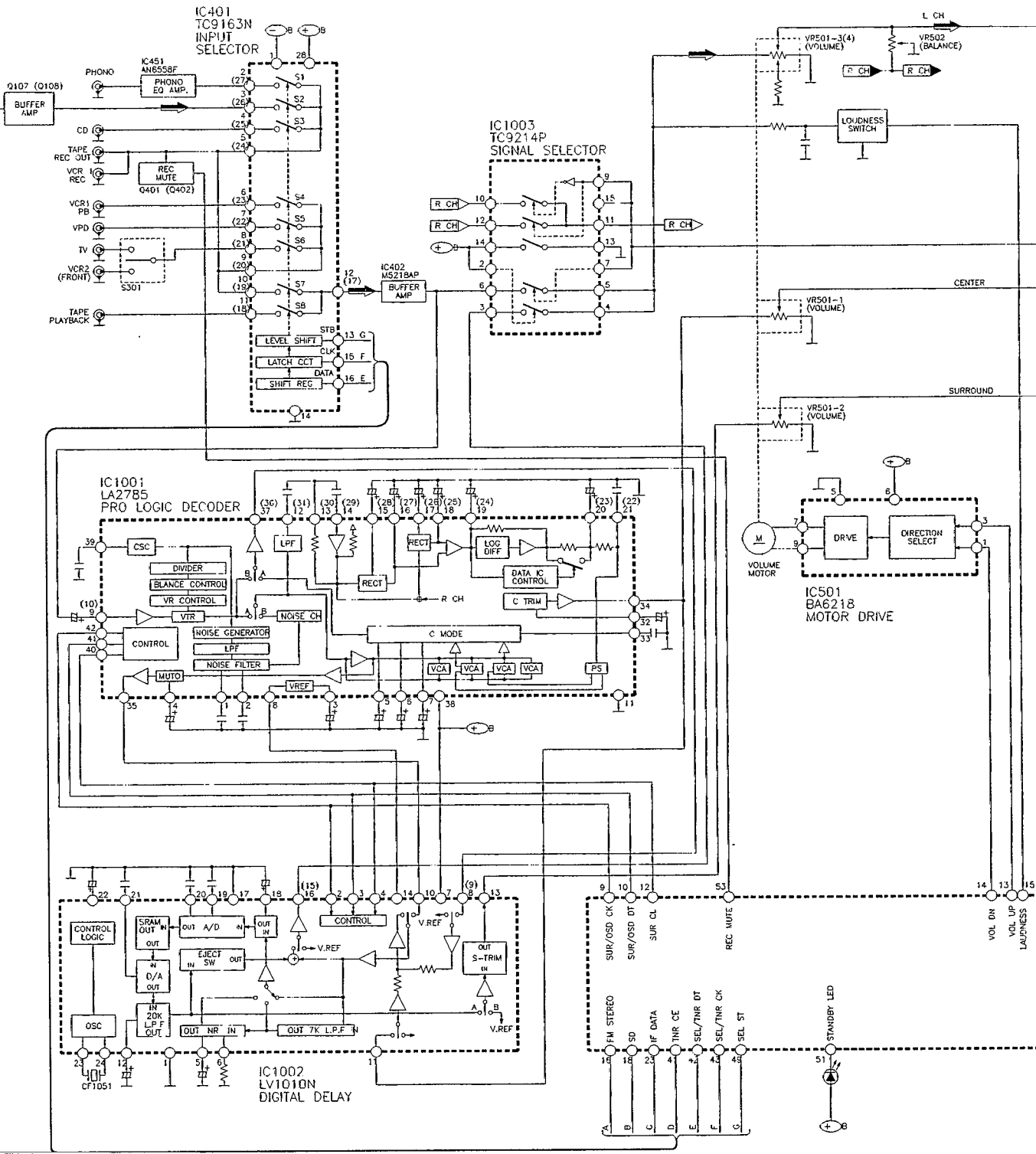


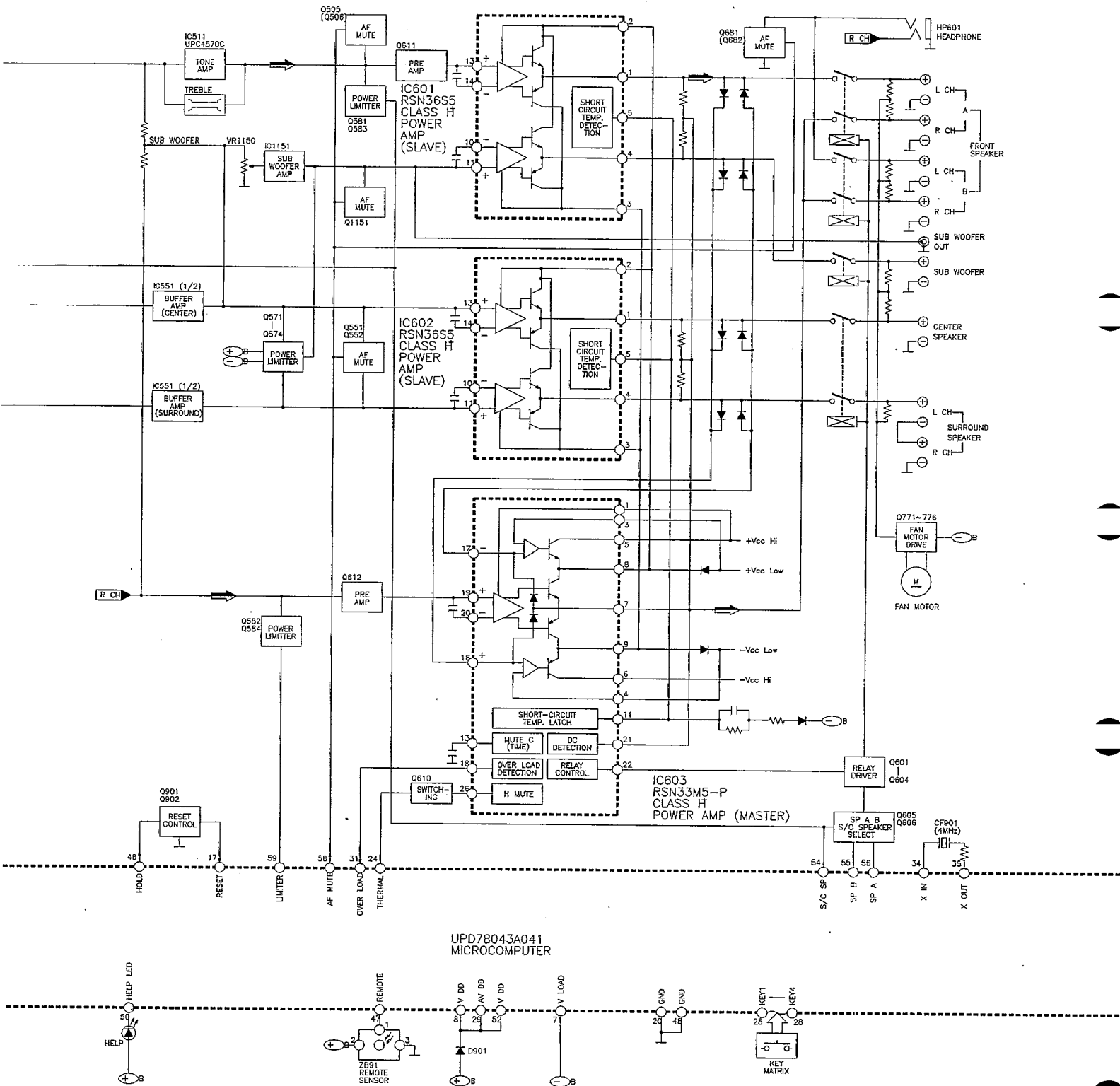
**OVERLOAD DETECTION FUNCTION**

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 in operative; 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 connection, 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 overload after it is power on again, check the circuit for faults.

Block Diagram

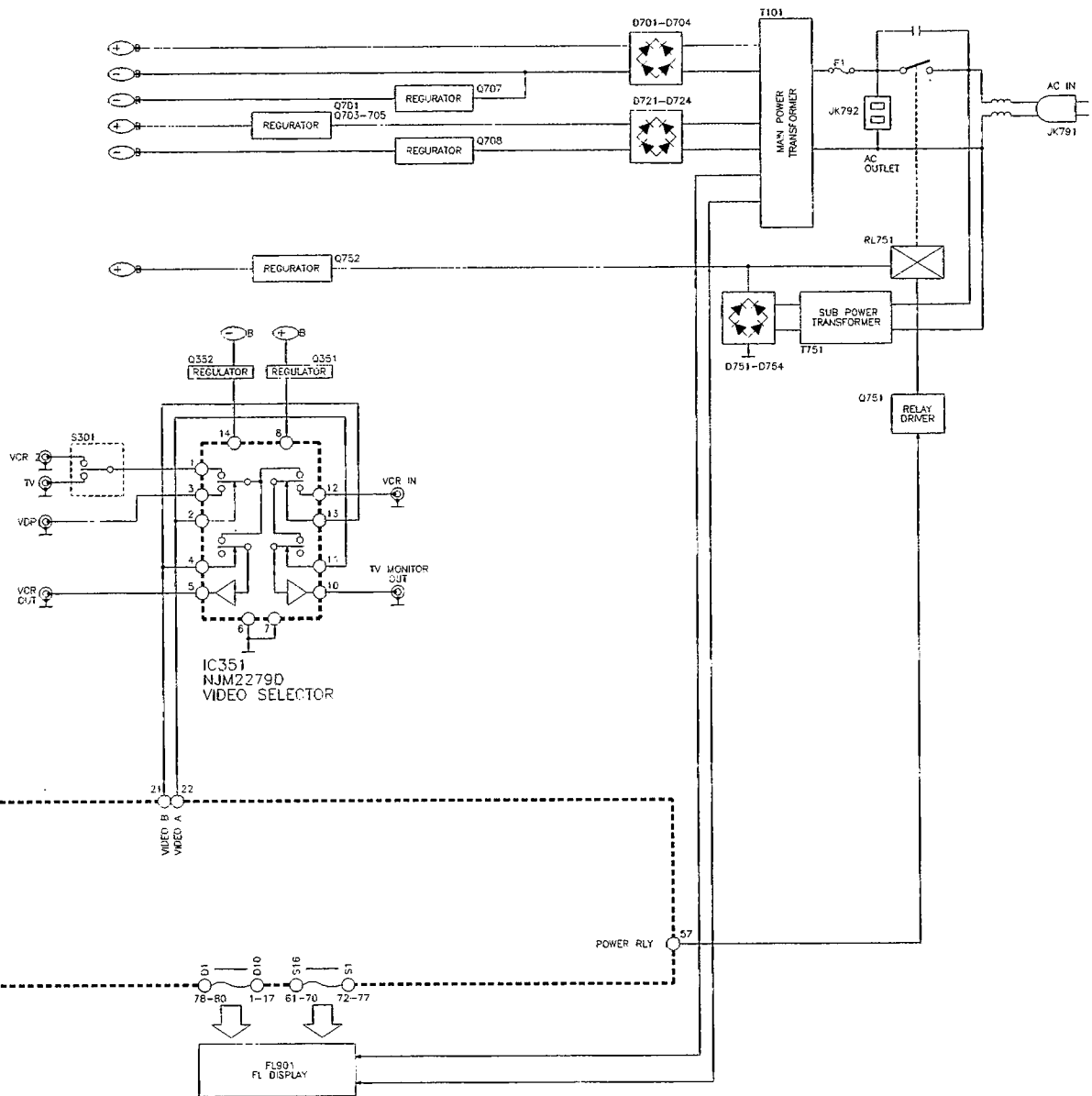
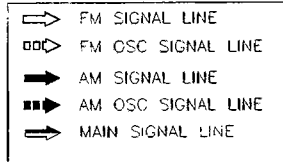








KEY

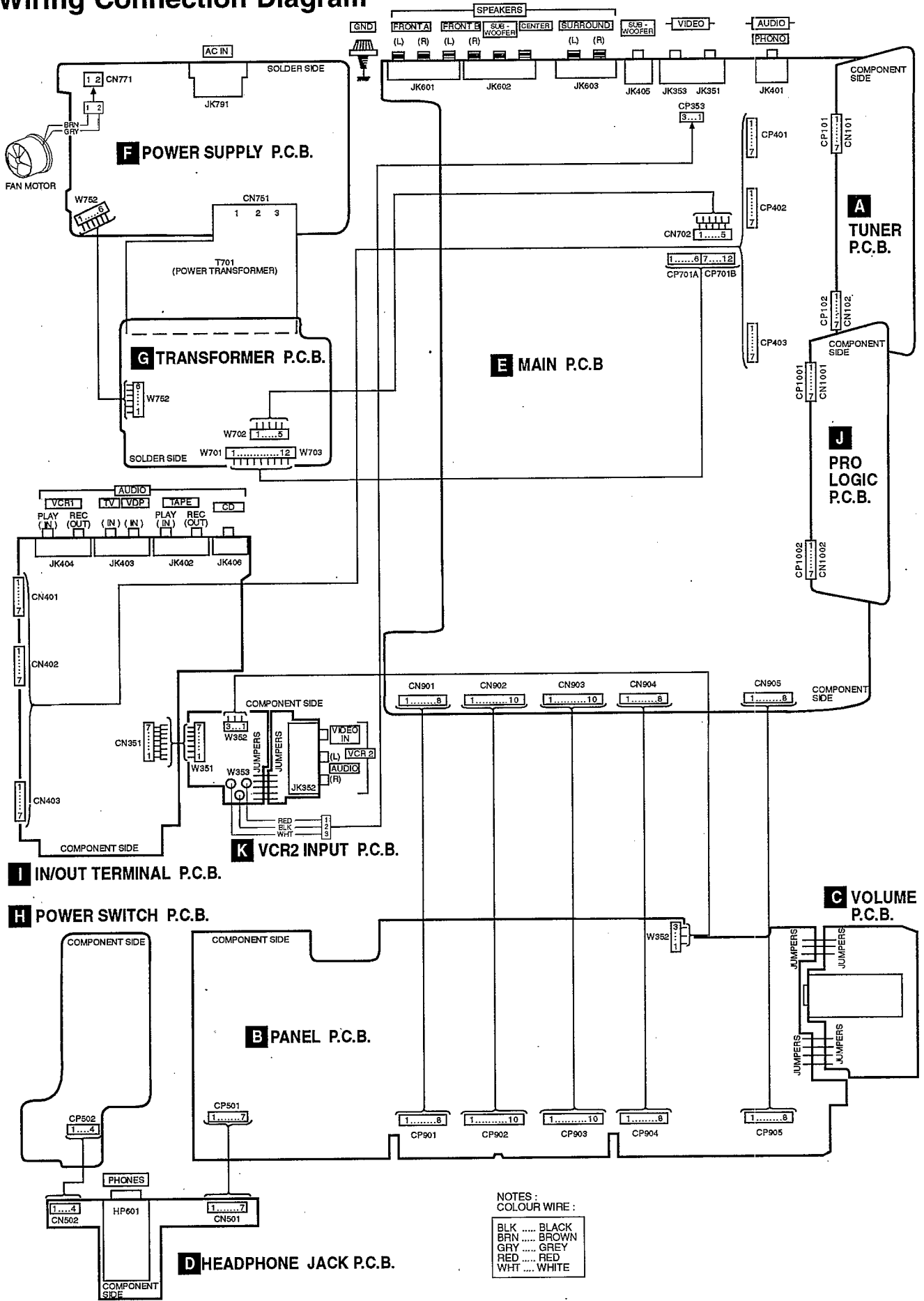




# Terminal Guide of ICs, Transistors and Diodes

<p>LA1832A LC7218</p>	<p>AN6558-F UPC4570C</p>	<p>BA6218</p>	<p>LV1010N</p>	<p>LA2785 (42 PIN)</p>	<p>UPD78043A047 (80 PIN)</p>
<p>M5218AP</p>	<p>RSN33M5-P</p>	<p>STK311-010</p>	<p>RSN36S5-P</p>	<p>TC9214P</p>	<p>NJM2279D</p>
<p>TC9163N</p>	<p>2SC3311ARTA</p>	<p>2SB621ARTA</p>	<p>2SA1309ARTA 2SC2785FETA 2SC2787LTA 2SD1915FTA UN4119TA UN411FTA UN421FTA</p>		<p>2SC3940AQSTA 2SD592AQSTA</p>
<p>2SB1548PQAU 2SD2374PQAU</p>	<p>2SJ40CDTA 2SK381CTA</p>	<p>2SA933SSTA RVTDTA114EST RVTDTC114EST RVTDTC114YST</p>		<p>1SR35200TB 1SS291TA MA165TA MA167TA MA700ATA MA723TA RVD1SS133TA</p>	<p>Anode</p>
<p>LN41YCPHL</p>	<p>LN846RPH</p>	<p>1N5402BM21</p>	<p>P300DLF SB360L6508</p>	<p>MTZJ10CTA MTZJ15CTA MTZJ24DTA MTZJ3R0ATA MTZJ3R9ATA MTZJ4R7BTA MTZJ5R1BTA MTZJ5R6BTA MTZJ6R2BTA</p>	<p>MTZJ6R8BTA MTZJ7R5CTA MTZJ8R2BTA</p>

# Wiring Connection Diagram



NOTES:  
COLOUR WIRE:  
BLK .... BLACK  
BRN .... BROWN  
GRY .... GREY  
RED .... RED  
WHT .... WHITE







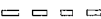
## ■ Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)

### Note :

- S301 : TV/VCR2 select switch
- S946 : Power switch
- S947 : Phono select switch
- S948 : Muting switch
- S950 : FM Auto/ Mono switch
- S951 : Band select switch
- S952 : Tuning decrease switch
- S953 : Tuning increase switch
- S954 : Memory manual/auto switch
- S955 : Sleep switch
- S956 : Preset decrease switch
- S957 : Preset increase switch
- S958 : Help switch
- S960 : Tuner select switch
- S961 : CD select switch
- S962 : Tape select switch
- S963 : TV/VCR2 select switch
- S964 : VCR1 select switch
- S970 : PTY search switch
- S971 : EON ON/OFF switch
- S972 : PTY select up switch
- S973 : PTY select down switch
- S974 : RDS display mode select switch
- S975 : VDP switch
- S976 : Delay time switch
- S980 : Speakers A switch
- S981 : Speakers B switch
- S982 : Loudness switch
- S983 : Dolby Pro Logic surround off/on switch
- S984 : Dolby Pro Logic 3 stereo mode select switch
- S985 : Center mode select switch
- VR501-1 ~ VR501-4 : Volume control
- VR502 : Balance control
- VR511-1 ~ VR511-2 : Bass control
- VR512-1 ~ VR512-2 : Treble control
- VR1150 : Sub-Woofer control

### • Signal line

- |   |                    |   |                      |   |                      |
|---|--------------------|---|----------------------|---|----------------------|
|  | : +B line          |  | : AM signal line     |  | : FM signal line     |
|  | : Main signal line |  | : AM OSC signal line |  | : FM OSC signal line |
|  | : -B line          |   |                      |   |                      |


•The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.

Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

( ) ..... AM

< > ..... FM

### •Importance safety notice:

Components identified by  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.

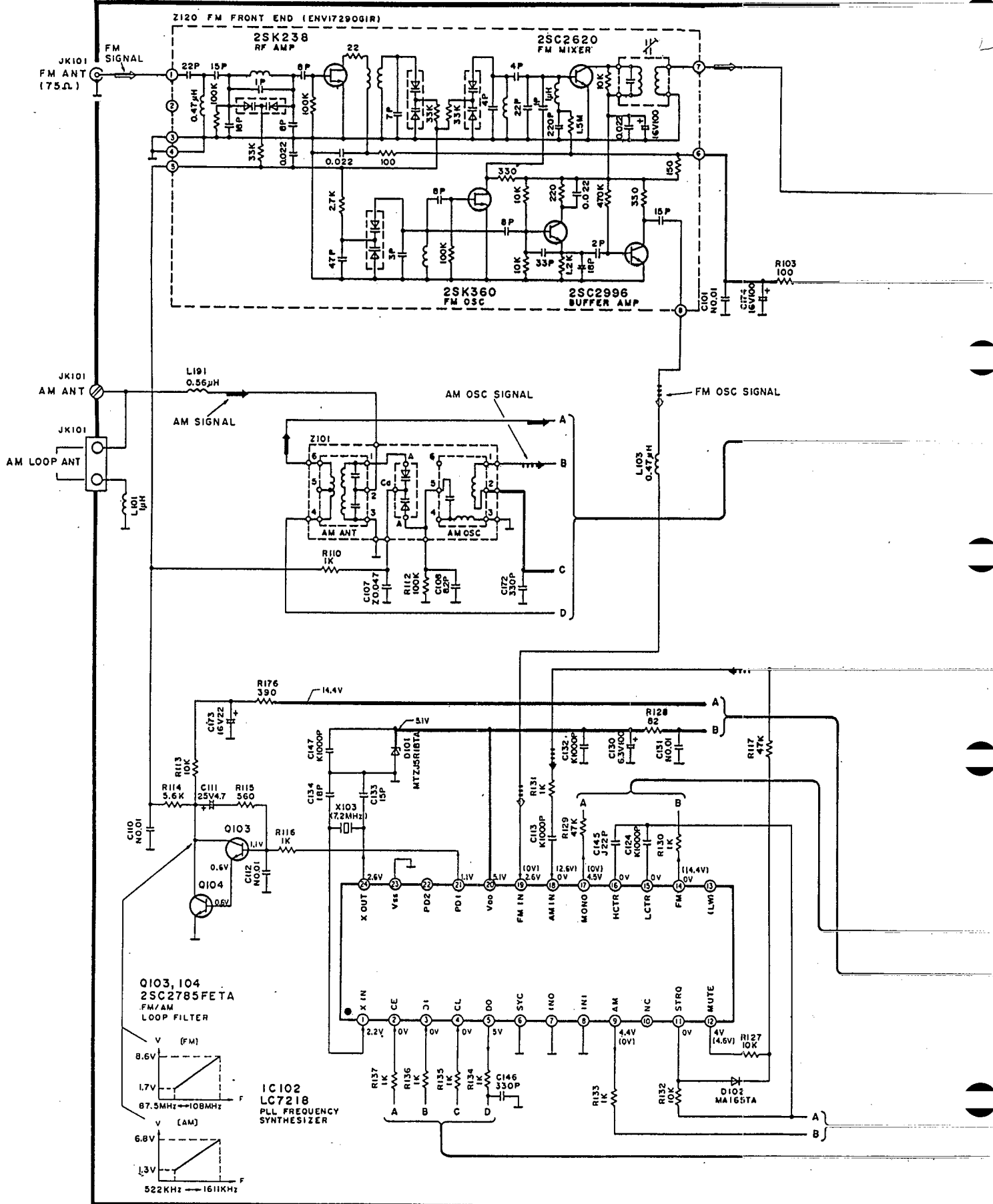
### Caution !

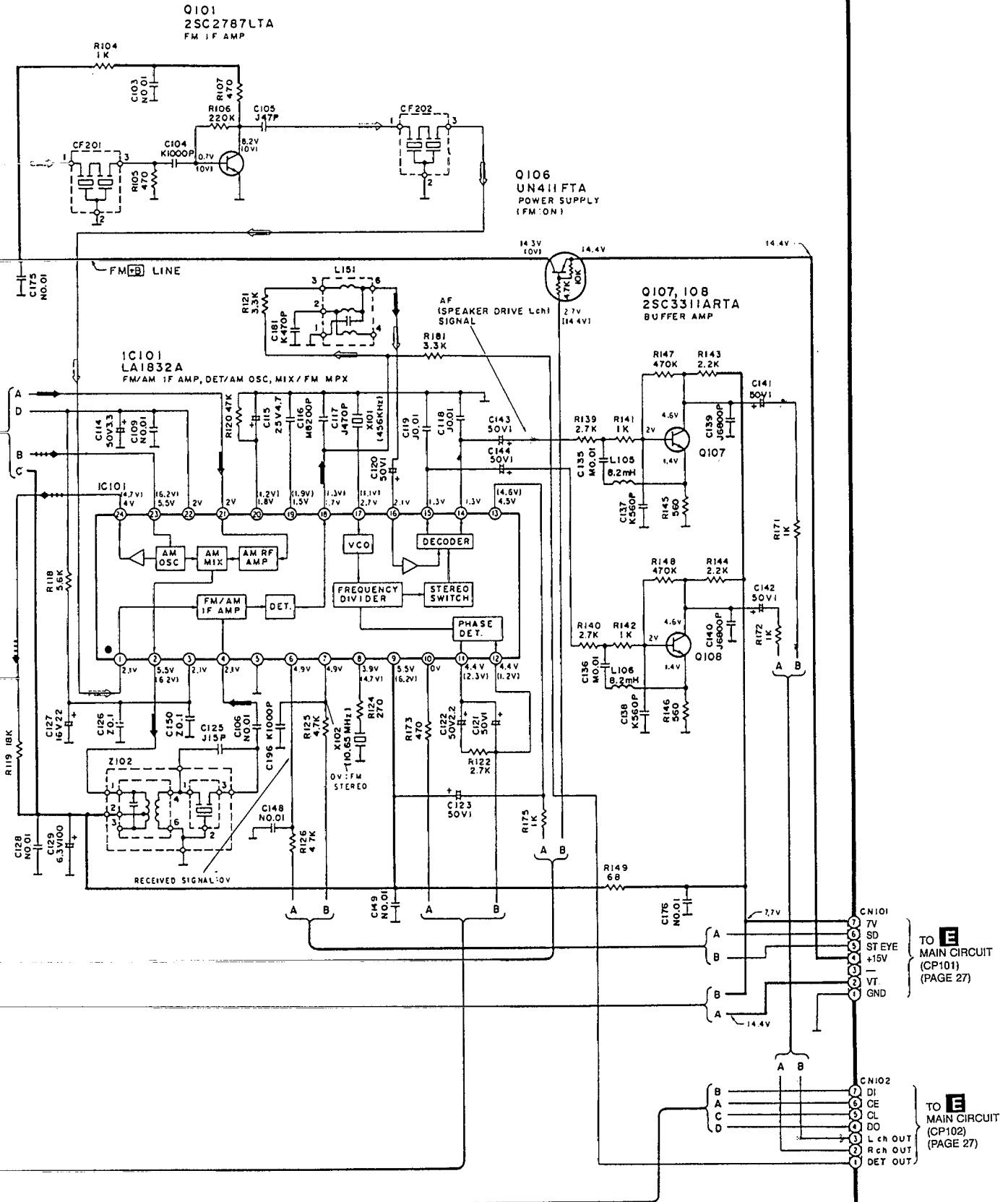
IC, LSI and VLSI are sensitive to static electricity.  
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.
- Put a conductive mat on the work table.

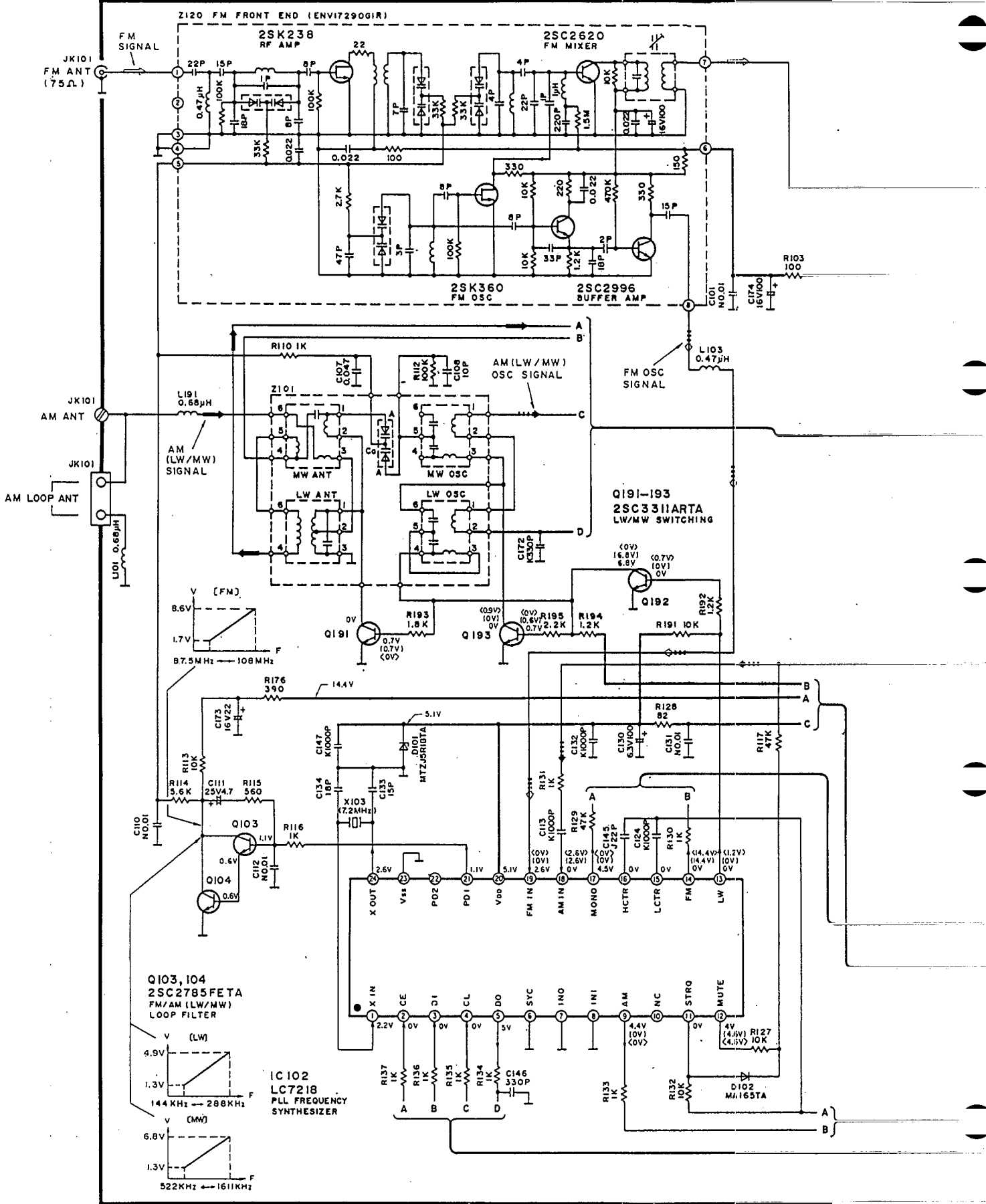
■ Schematic Diagram

**A** TUNER CIRCUIT For (EG) area

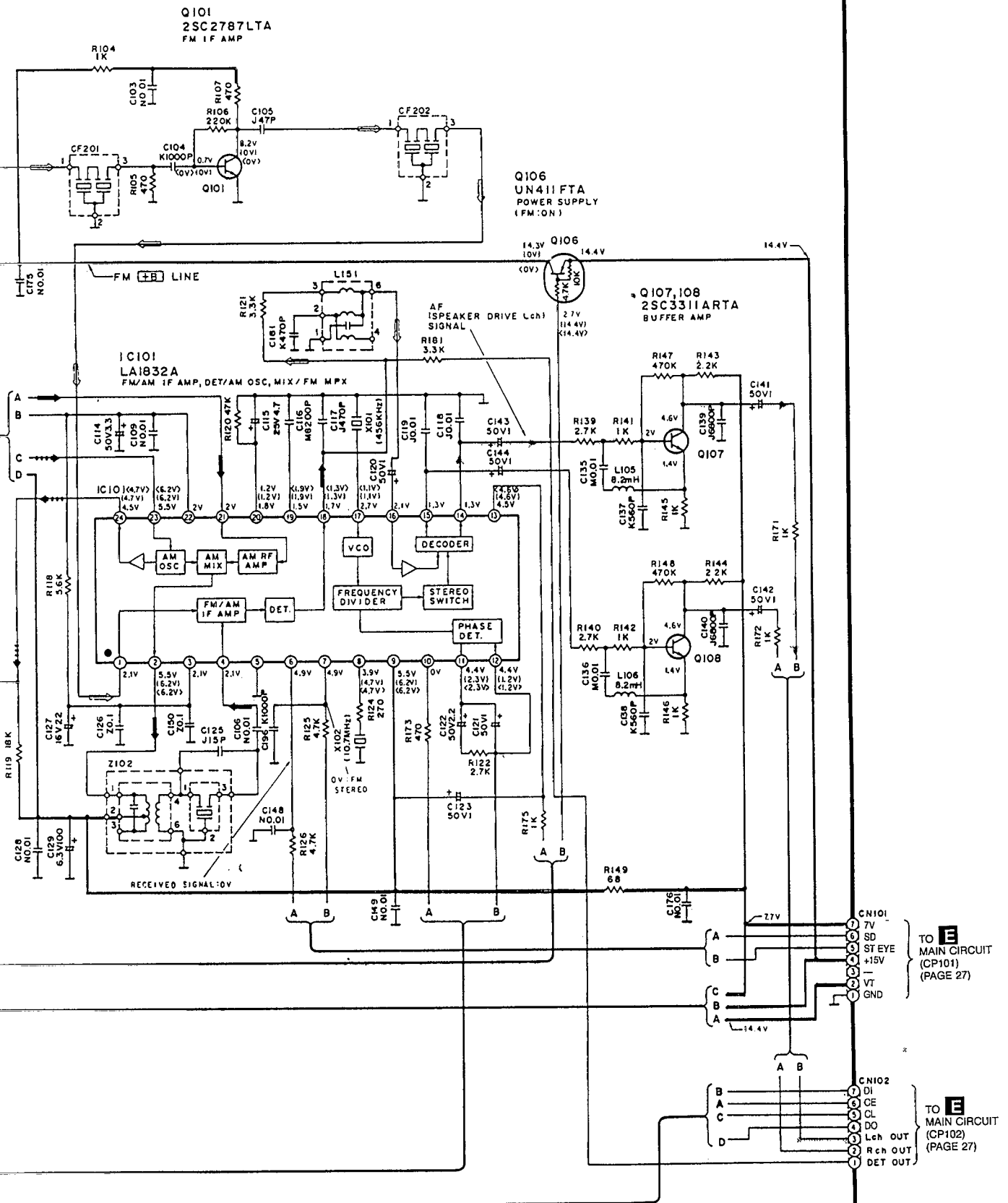




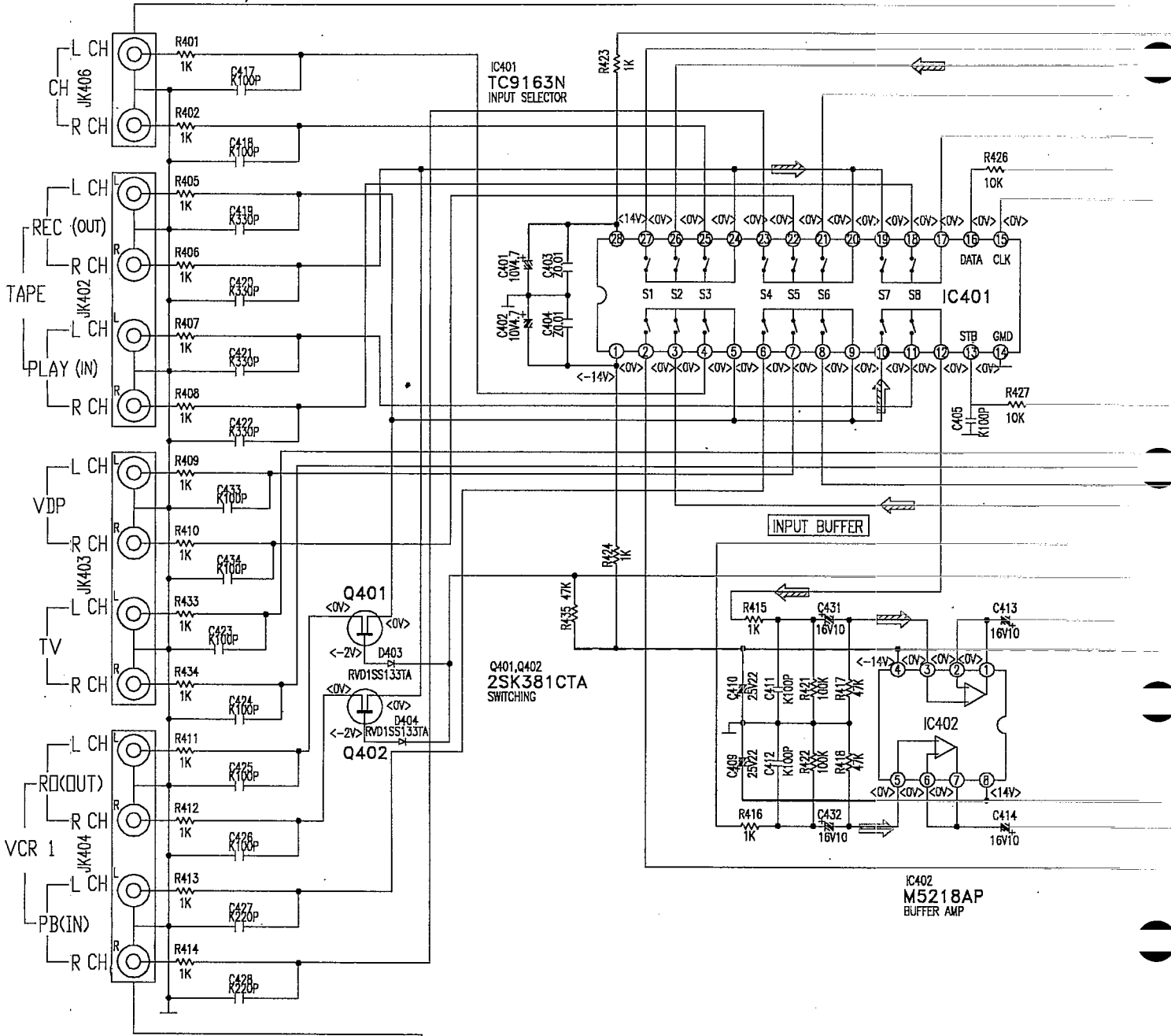
**A** TUNER CIRCUIT For (E) & (EB) areas







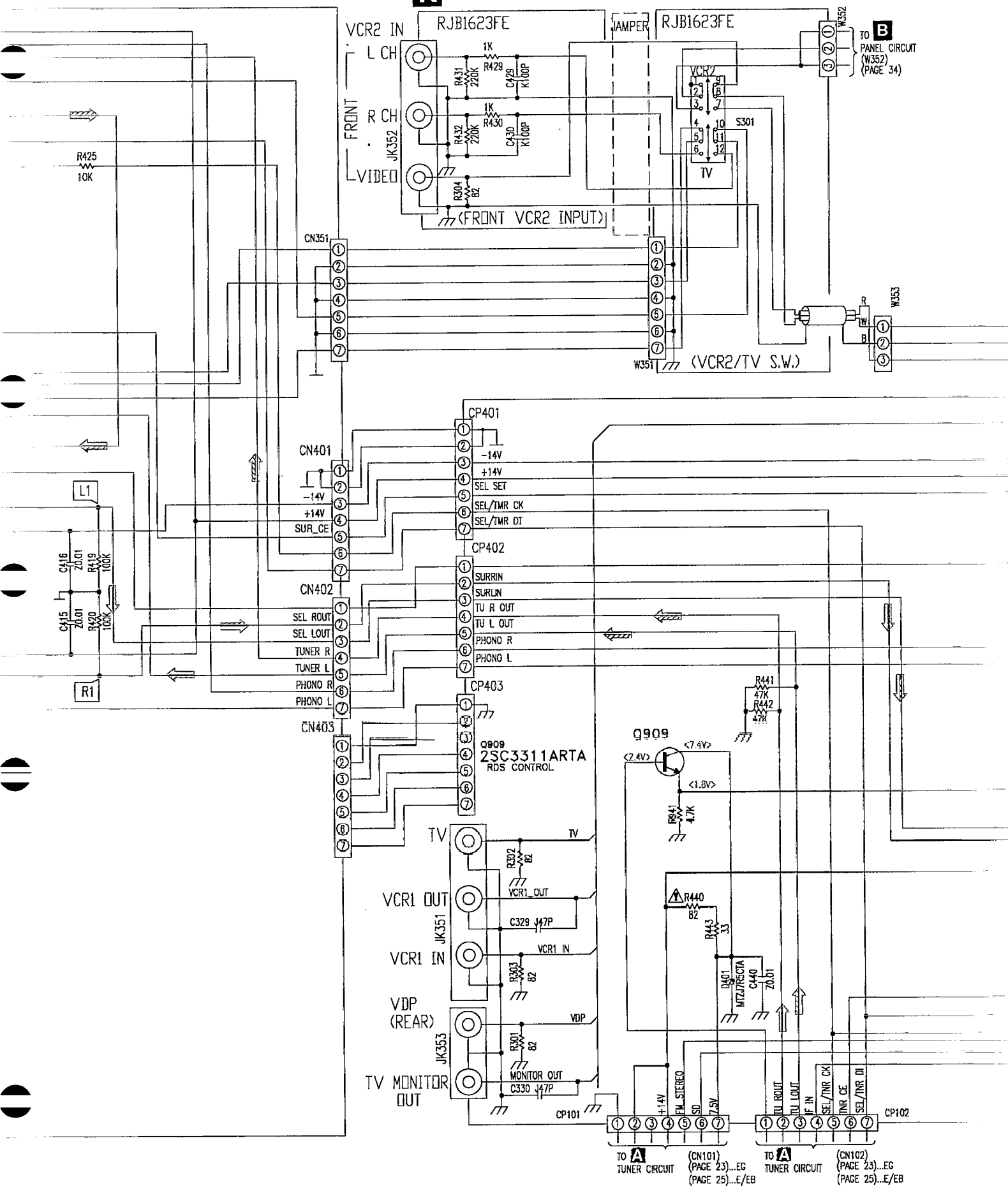
# IN/OUT TERMINAL CIRCUIT



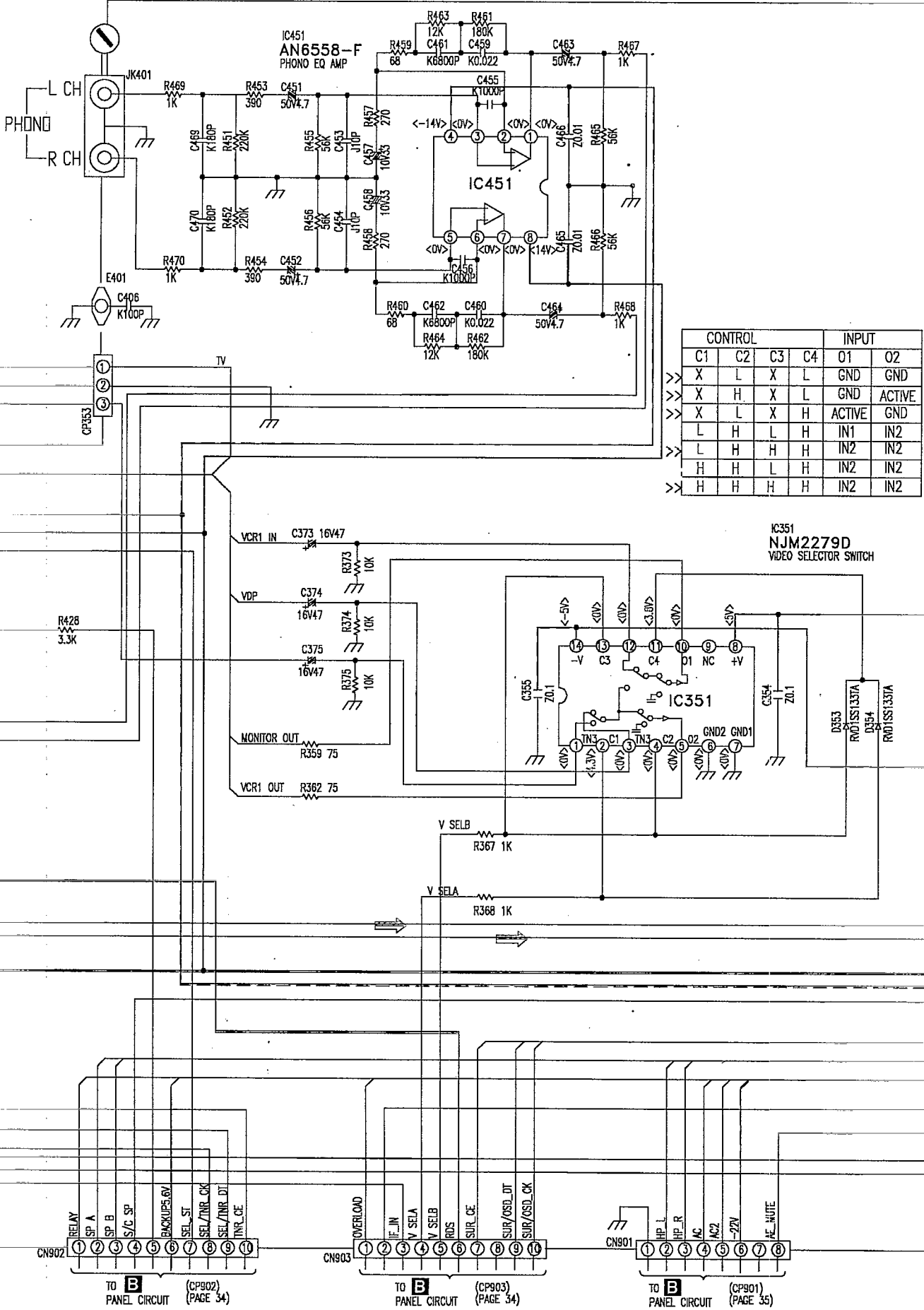
INPUT SELECTOR	NJU7312AL SV							
	S1	S2	S3	S4	S5	S6	S7	S8
PHONO	ON				ON		ON	
TUNER		ON			ON		ON	
C D			ON		ON		ON	
VCR2					ON		ON	
VCR1				ON			ON	
TAPE MONITOR	•	•	•	•	•	•	•	ON

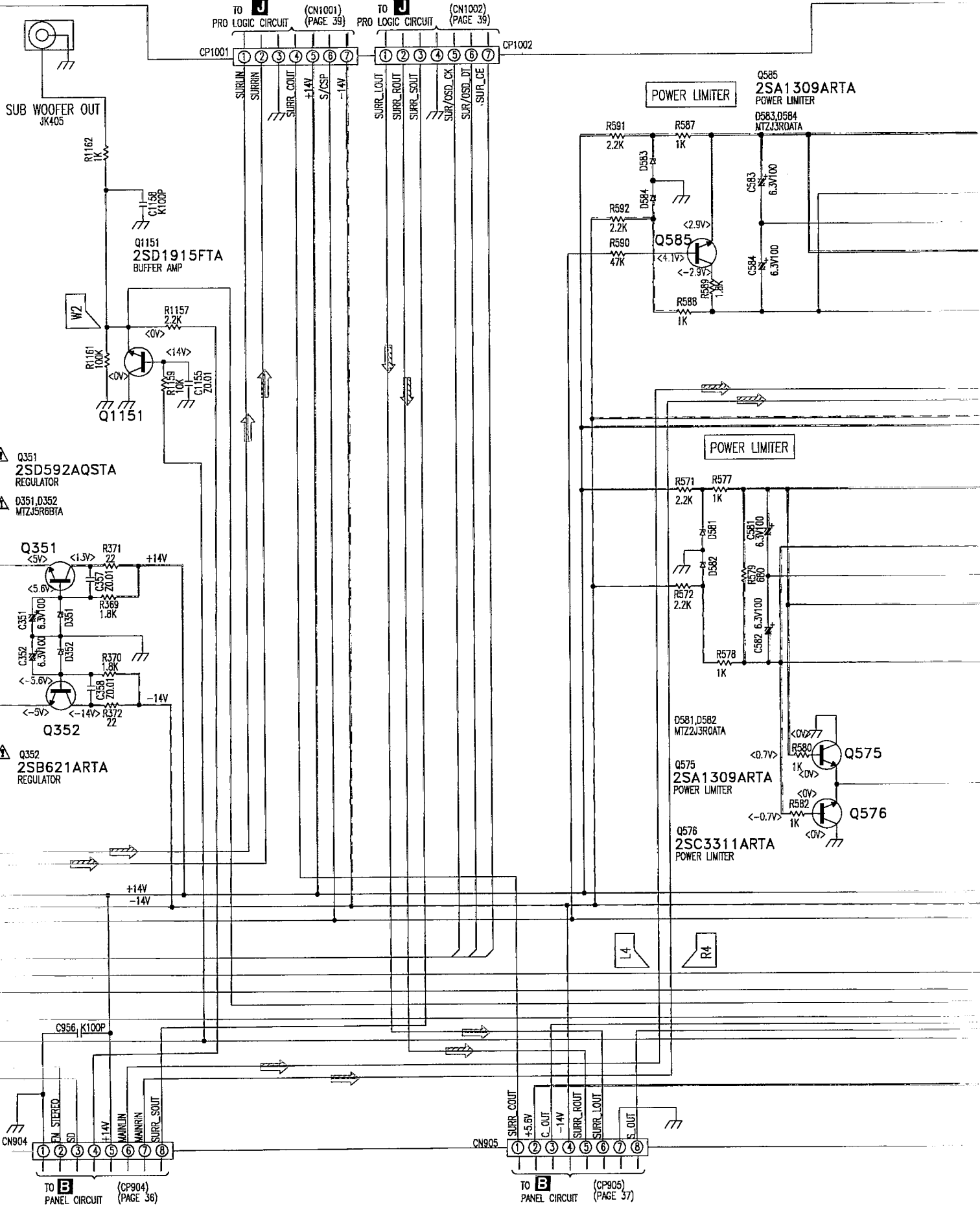
BLANK - OFF  
 • - NOT CHANGE

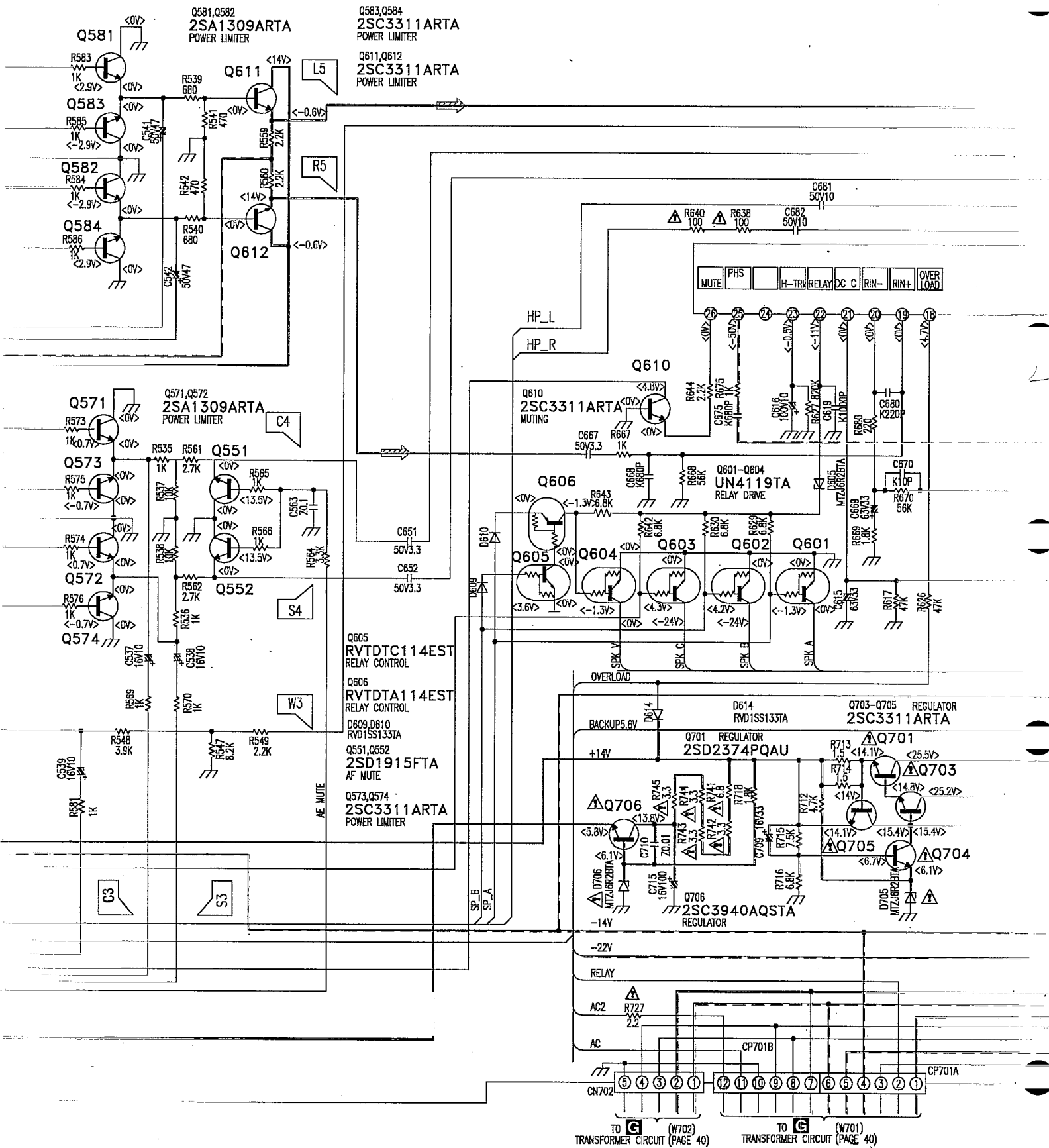
**K** VCR2 INPUT CIRCUIT

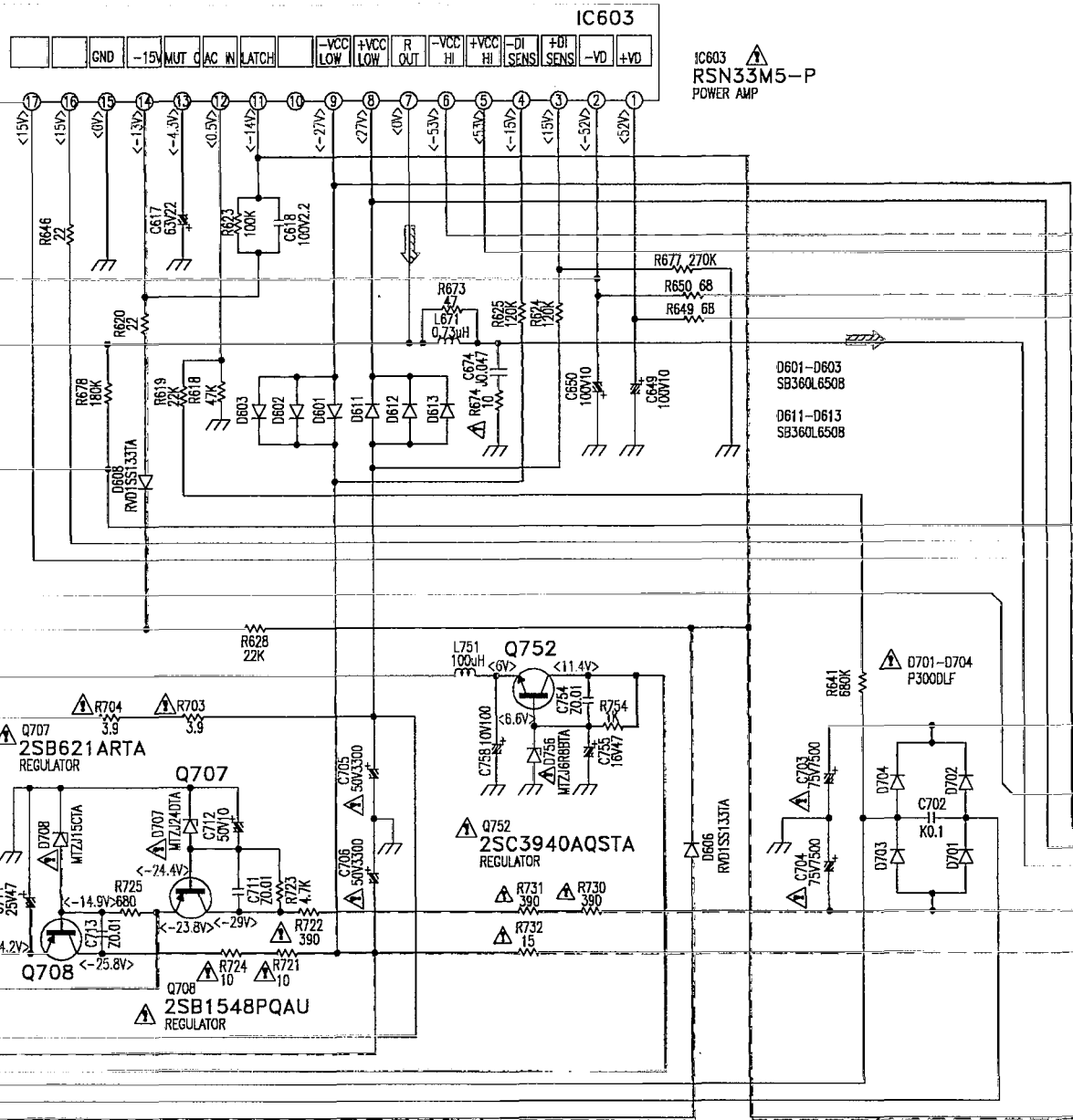


**E** MAIN CIRCUIT

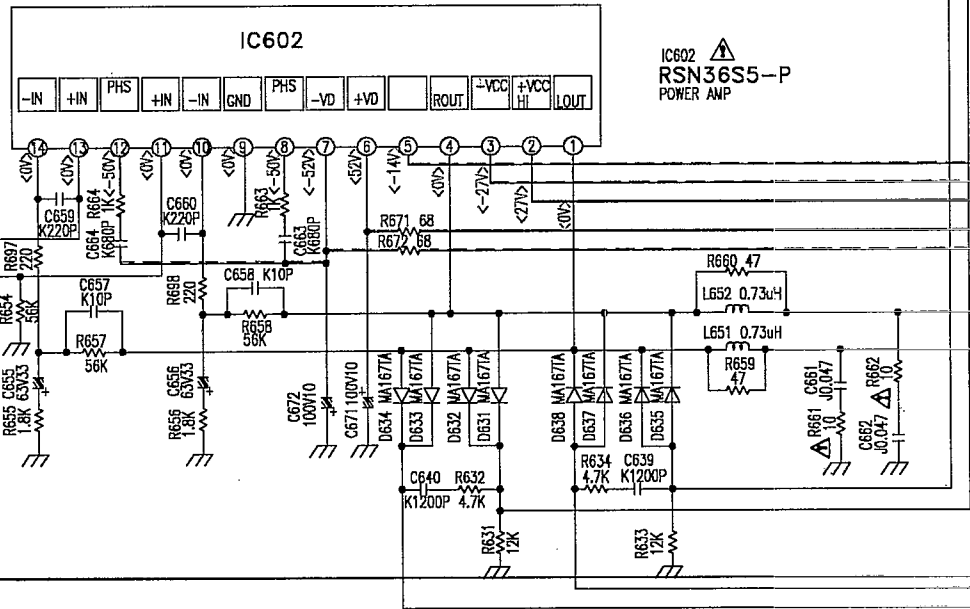
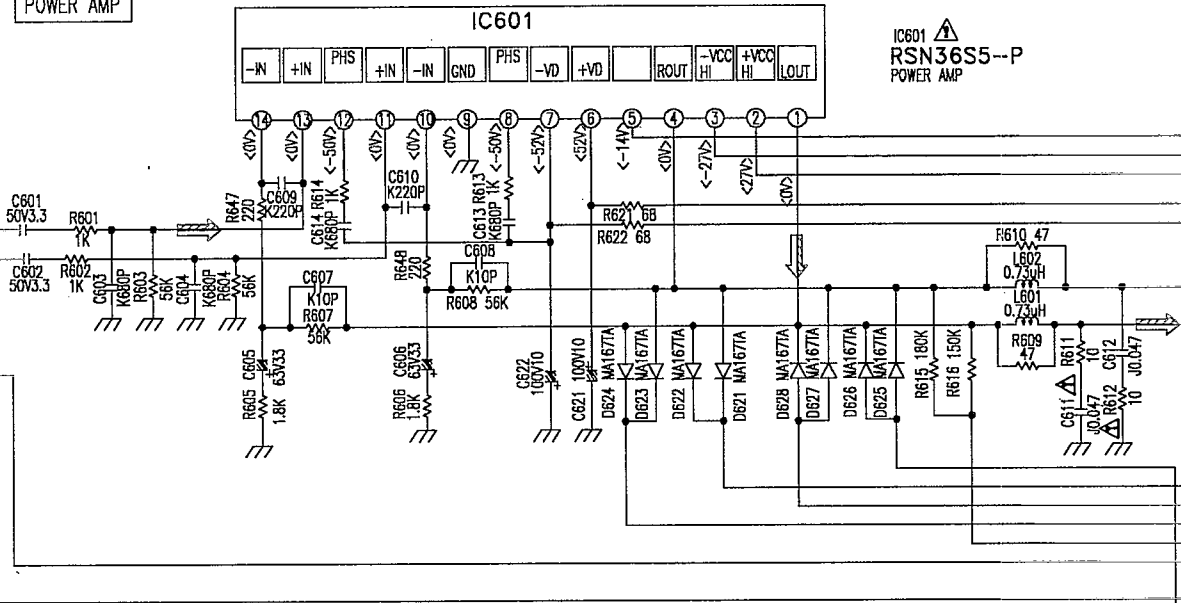




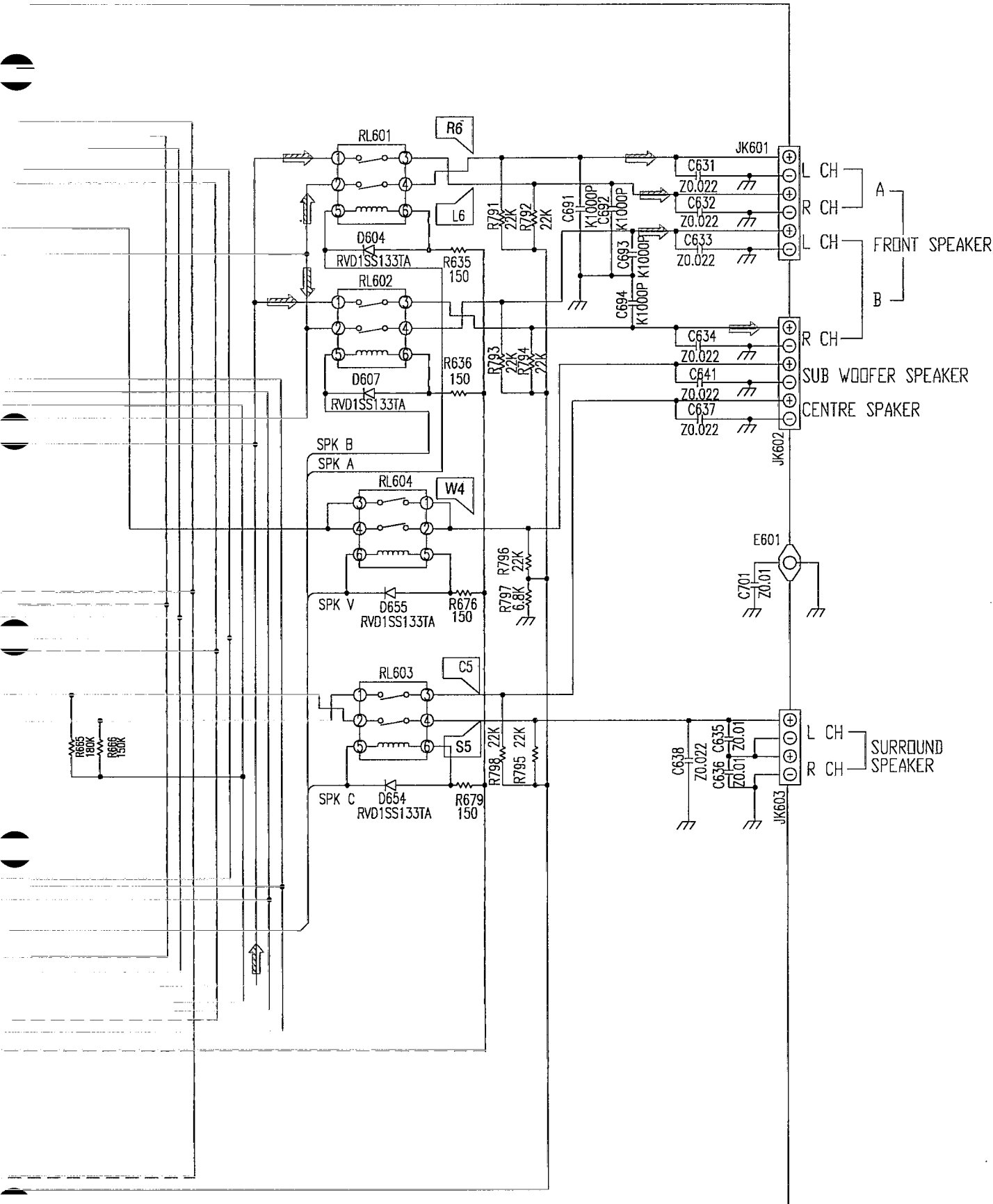




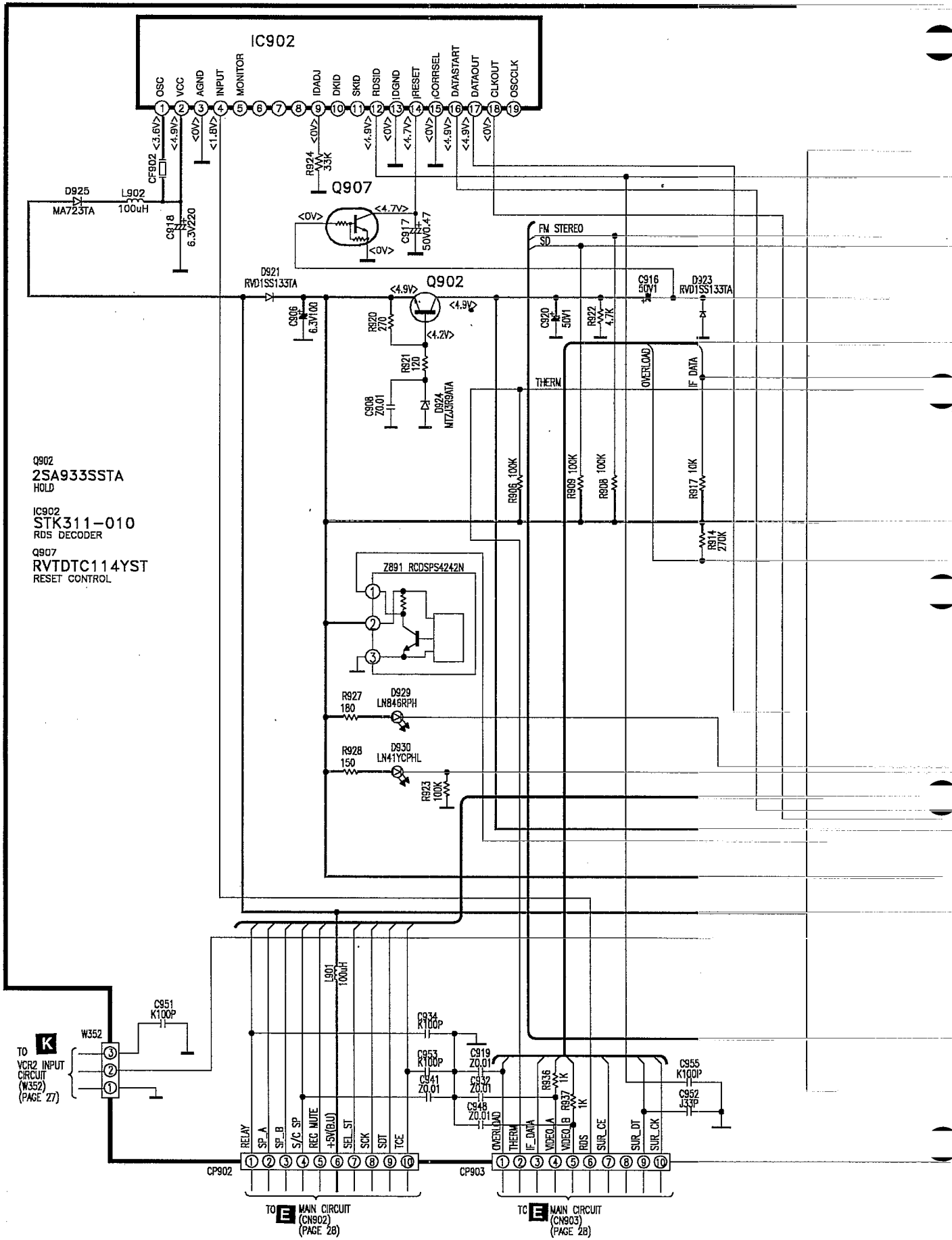
POWER AMP







**B** PANEL CIRCUIT



Q902  
2SA933SSTA  
HOLD

IC902  
STK311-010  
RDS DECODER

Q907  
RVTDTC114YST  
RESET CONTROL

TO **K** VCR2 INPUT CIRCUIT (W352) (PAGE 27)

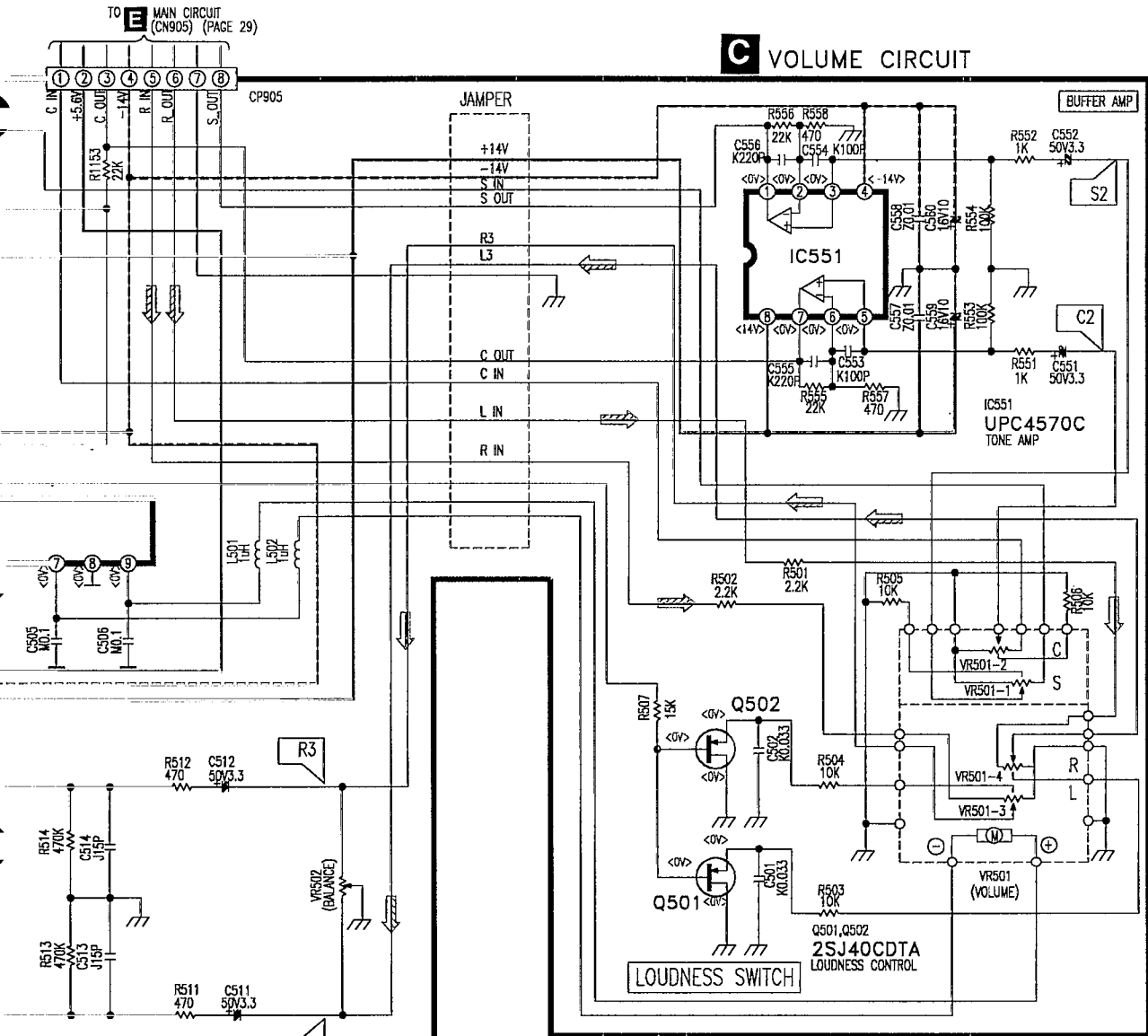
TO **E** MAIN CIRCUIT (CN902) (PAGE 28)

TO **E** MAIN CIRCUIT (CN903) (PAGE 28)





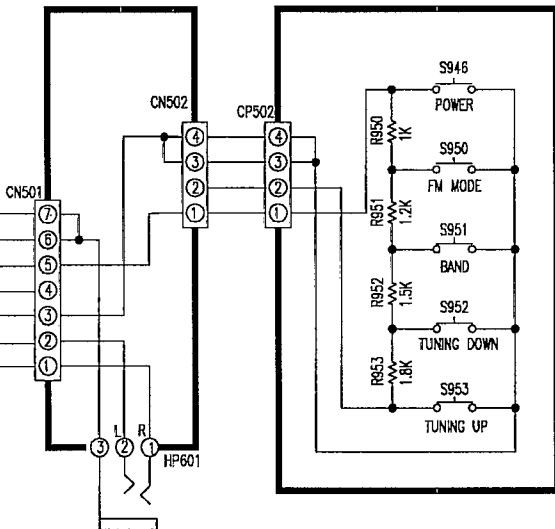
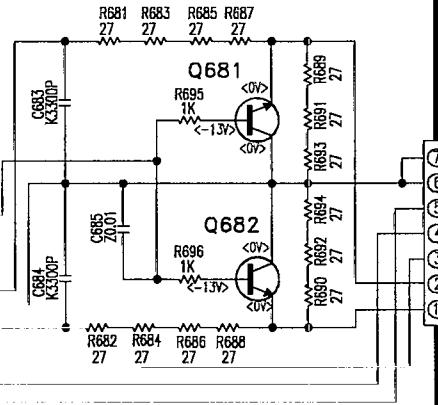
**C** VOLUME CIRCUIT



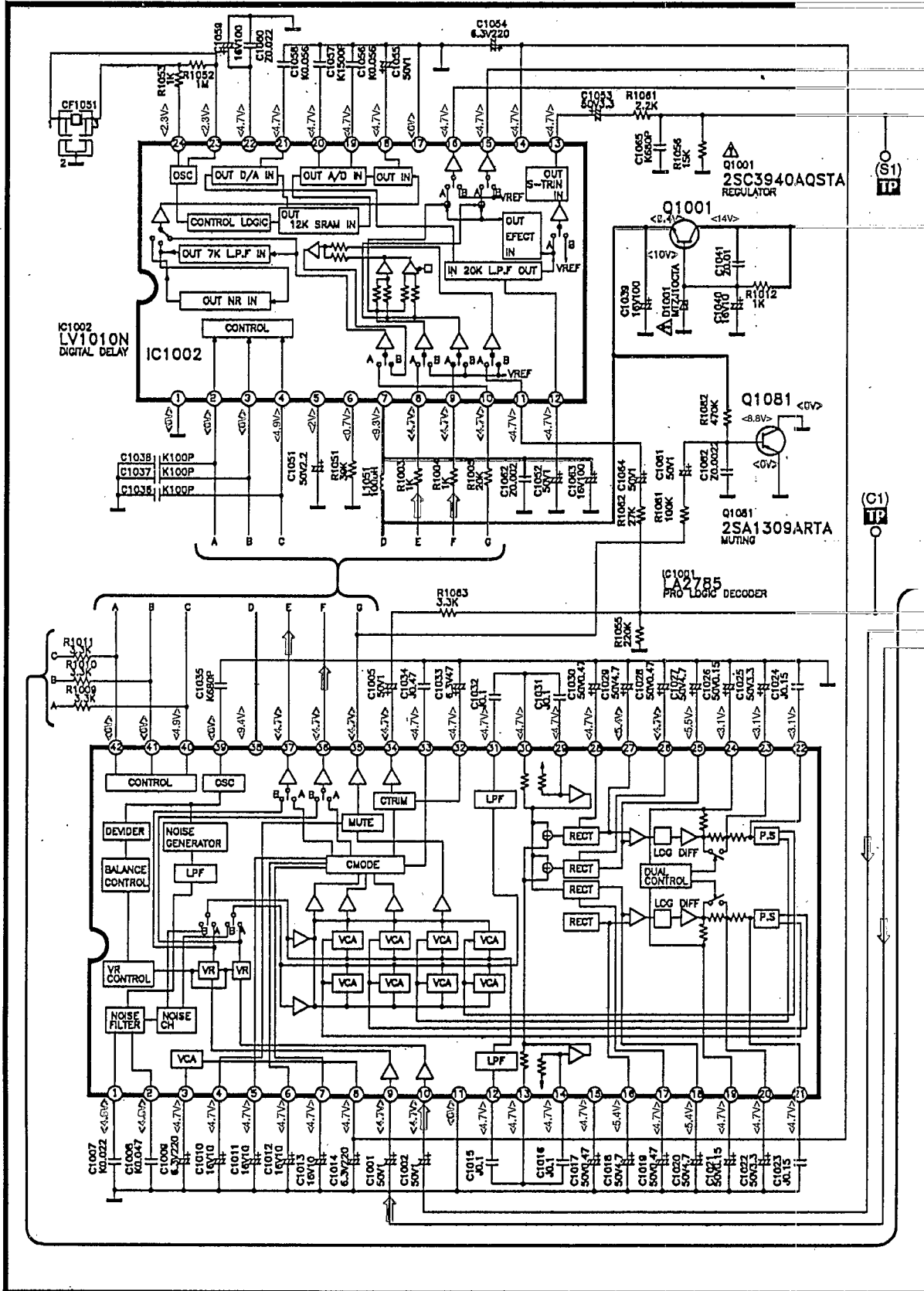
**D** HEADPHONE JACK CIRCUIT

**H** POWER SWITCH CIRCUIT

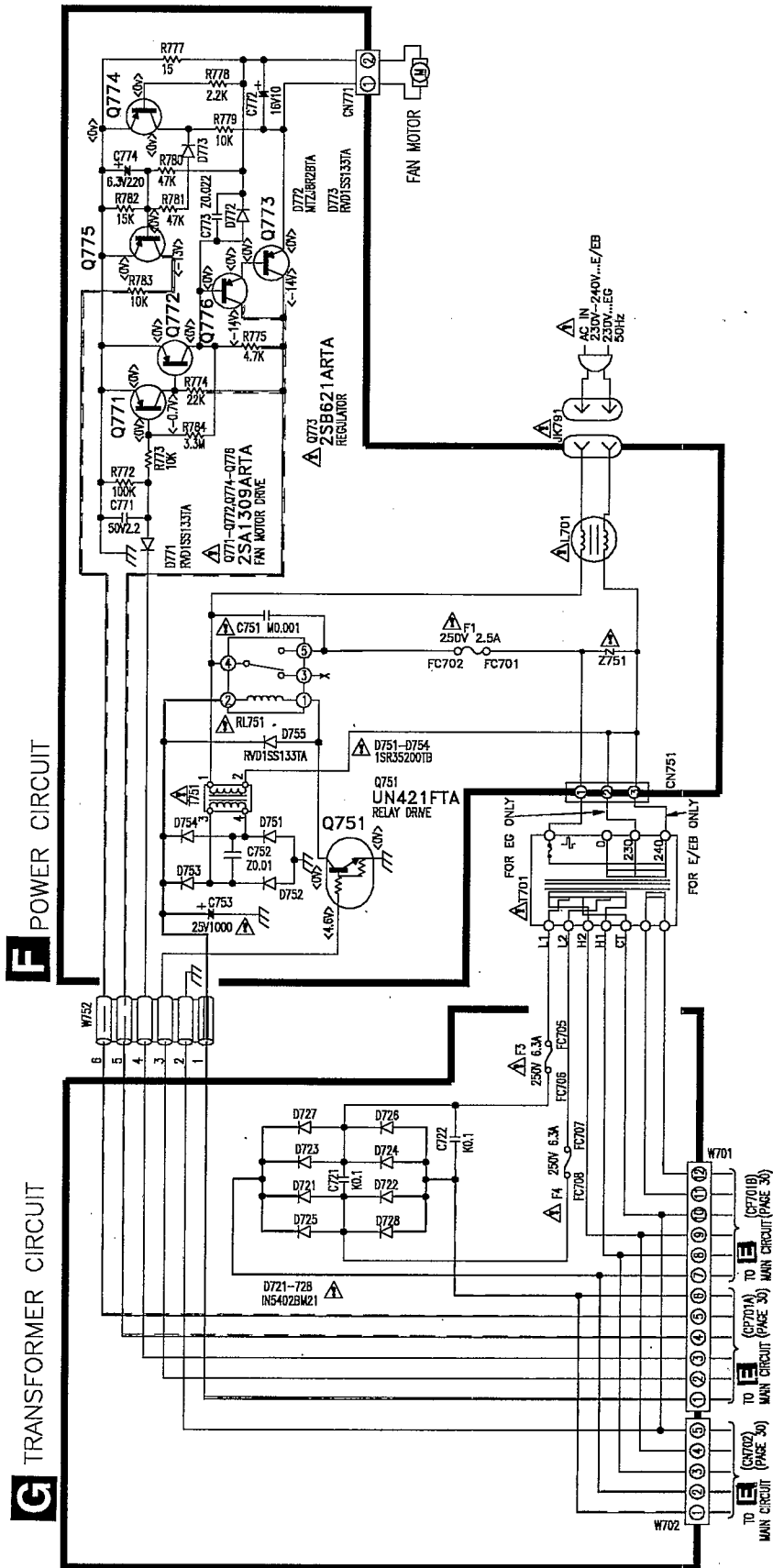
Q681, Q682  
2SD1915FTA  
MUTING



**J** PRO LOGIC CIRCUIT



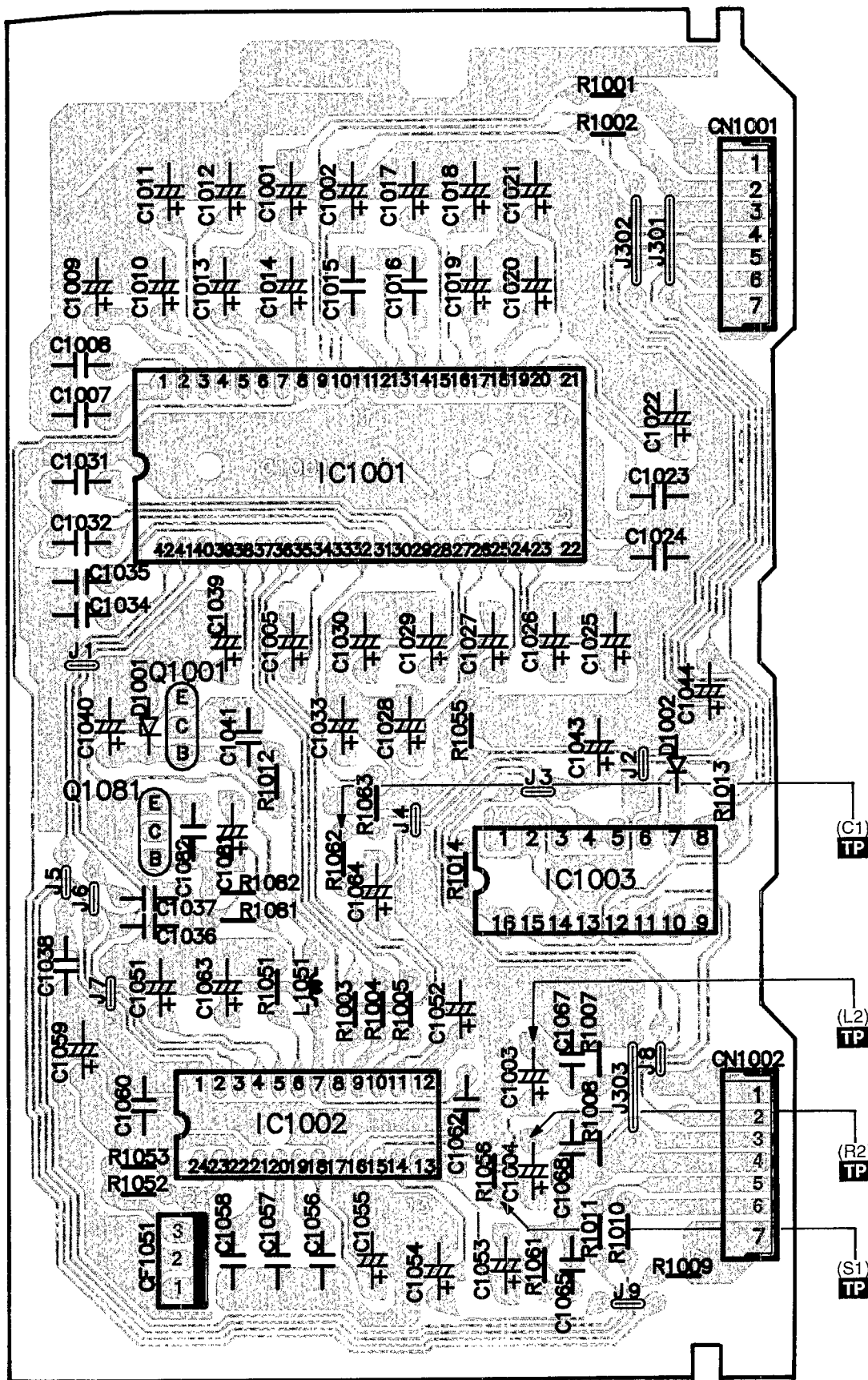




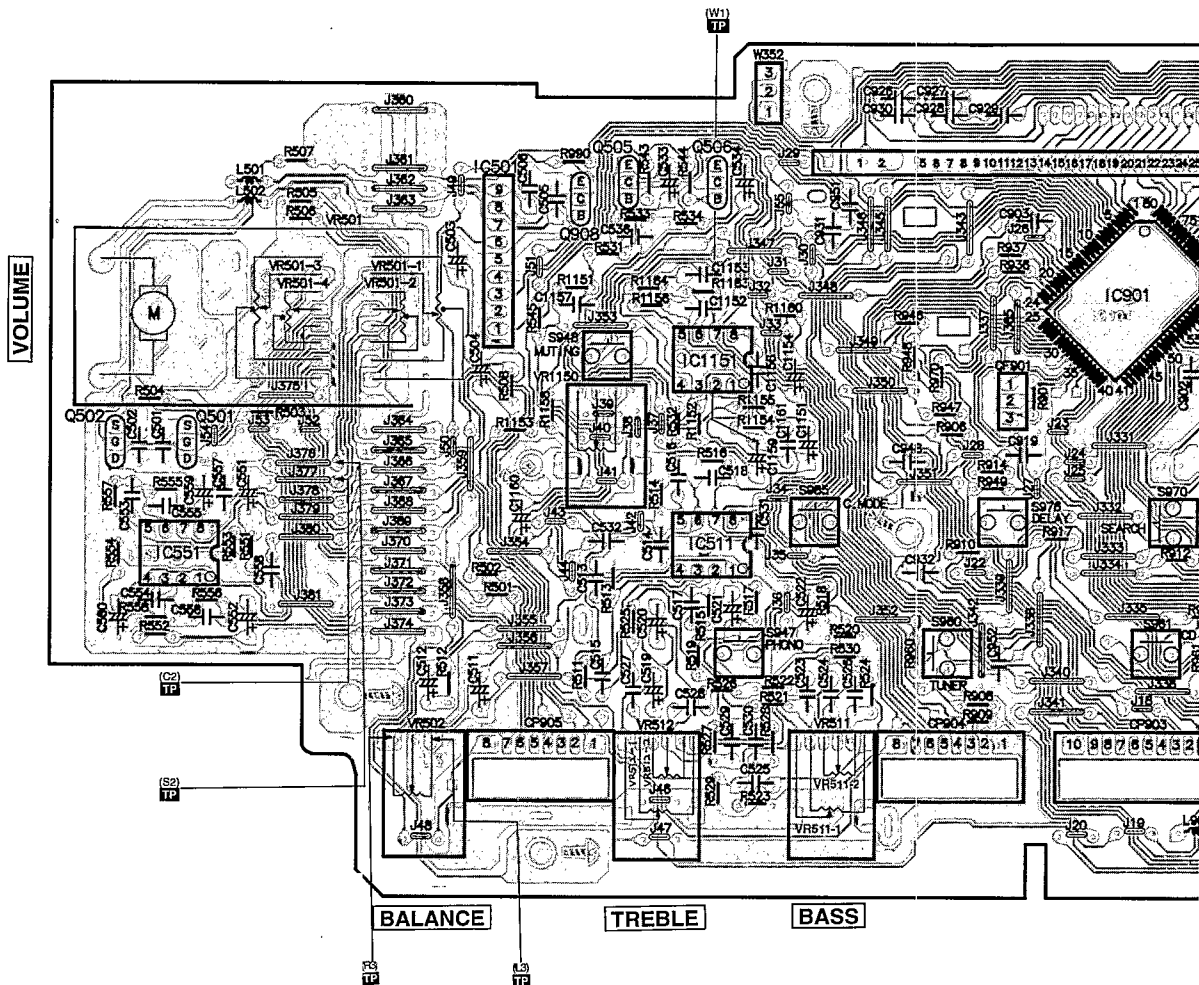


Printed Circuit Board

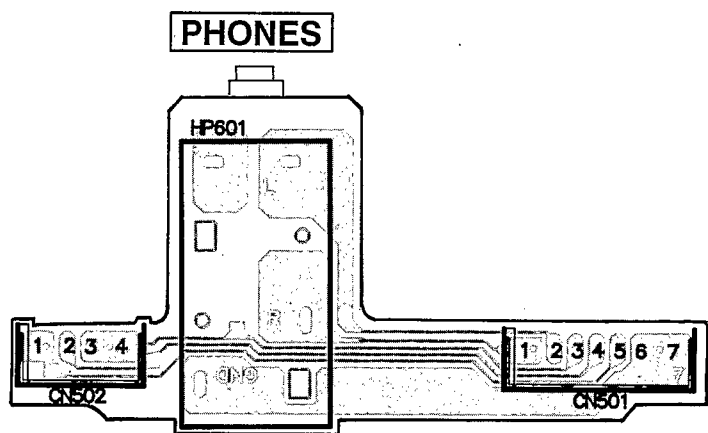
J PRO LOGIC P.C.B. (REP2241A-T)



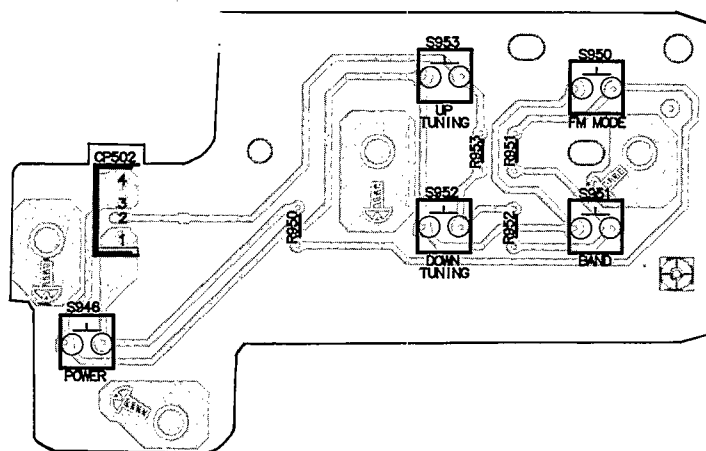
**C** VOLUME P.C.B. (REP2323B-S .. E/EB)  
(REP2323C-S .. EG)



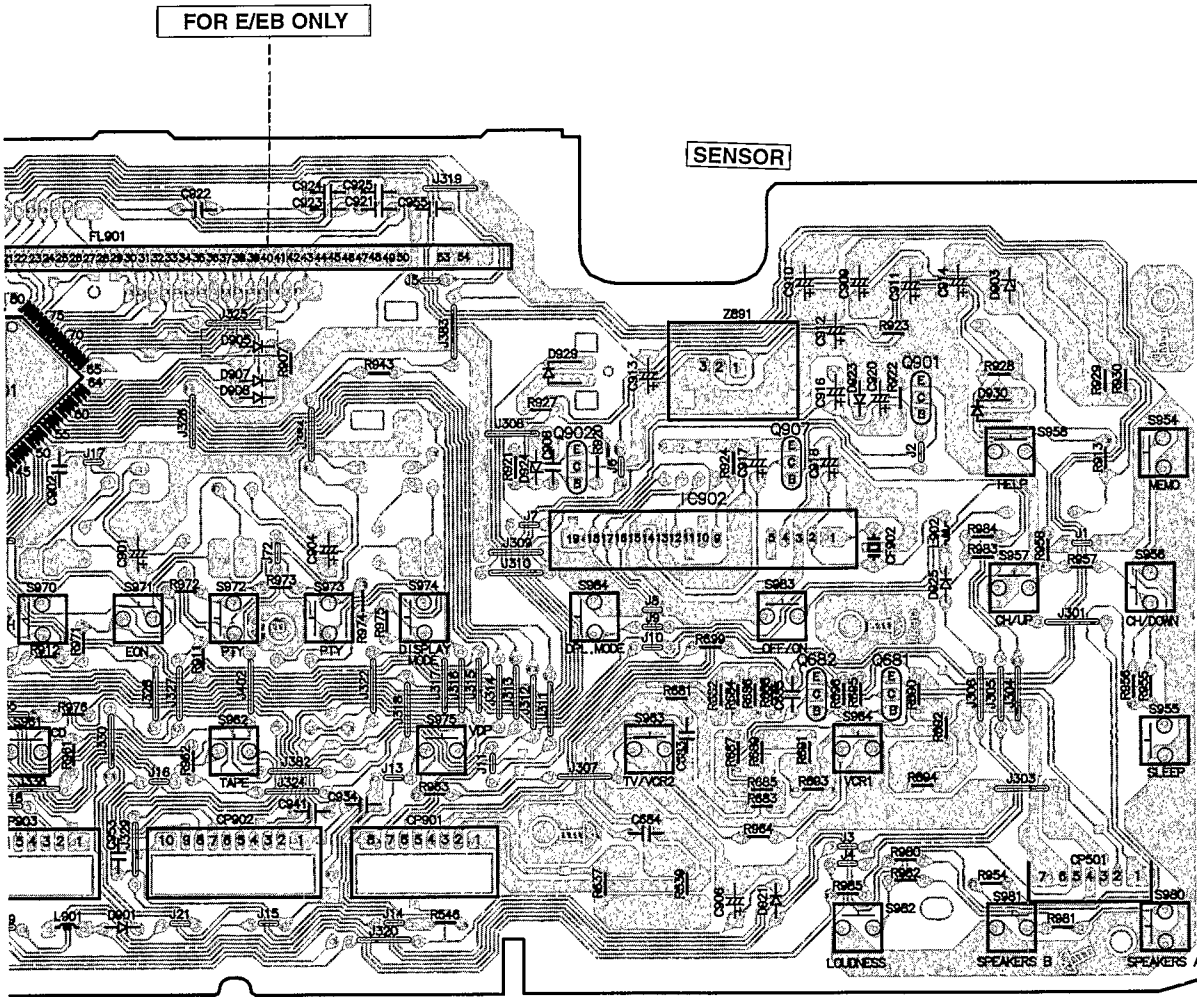
**D** HEADPHONE JACK P.C.B.  
(REP2323B-S .. E/EB)  
(REP2323C-S .. EG)



**H** POWER SWITCH P.C.B.  
(REP2323B-S .. E/EB)  
(REP2323C-S .. EG)

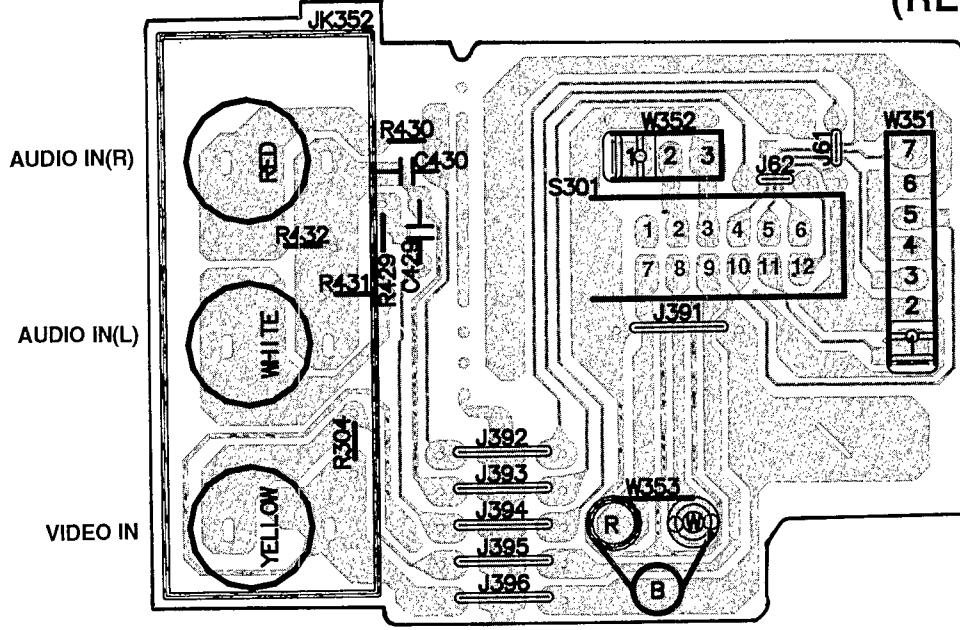


**B** PANEL P.C.B. (REP2323B-S .. E/EB)  
(REP2323C-S .. EG)

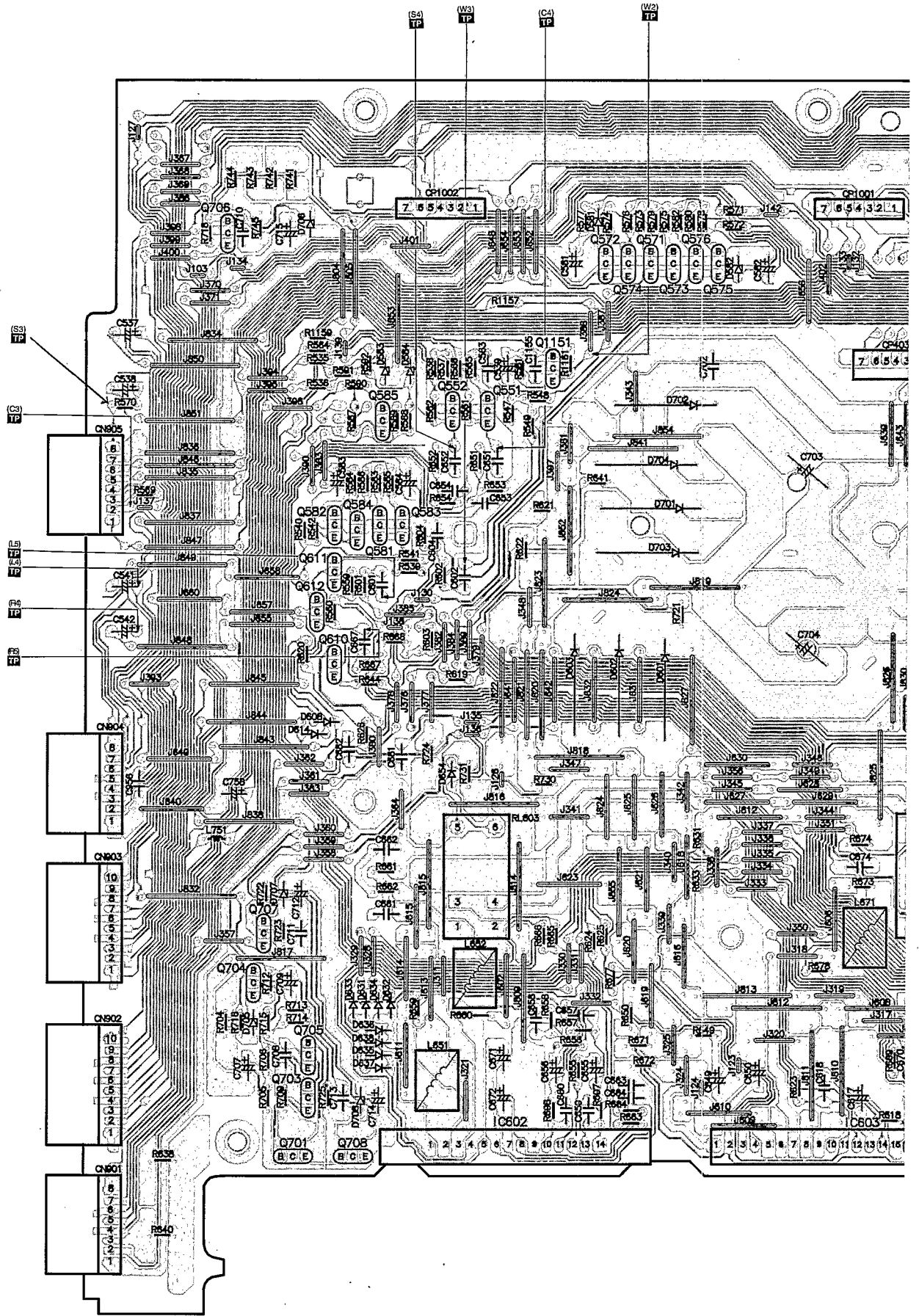


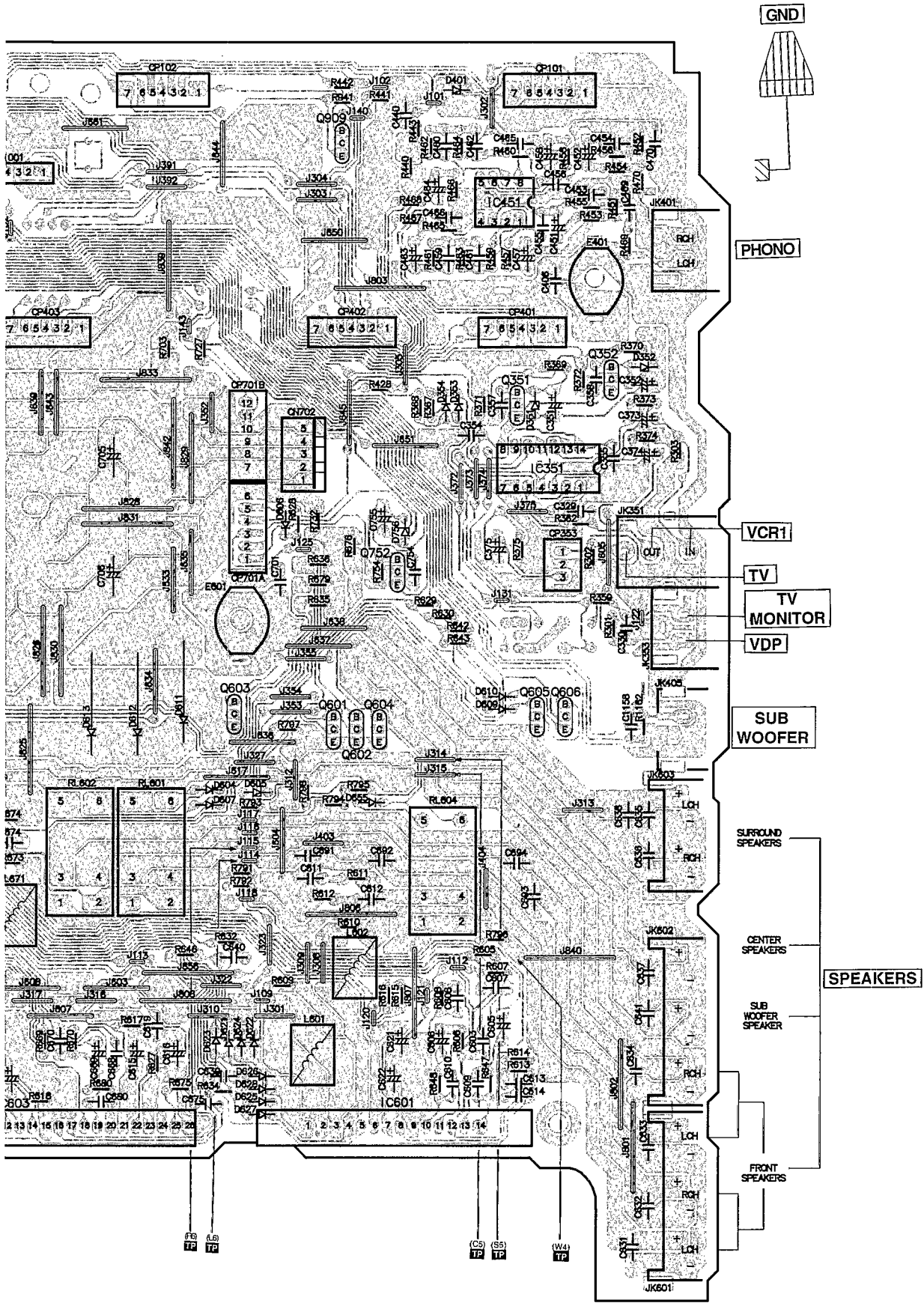
**VCR2**

**K** VCR2 INPUT P.C.B. (REP2323B-S ... E/EB)  
(REP2323C-S ... EG)

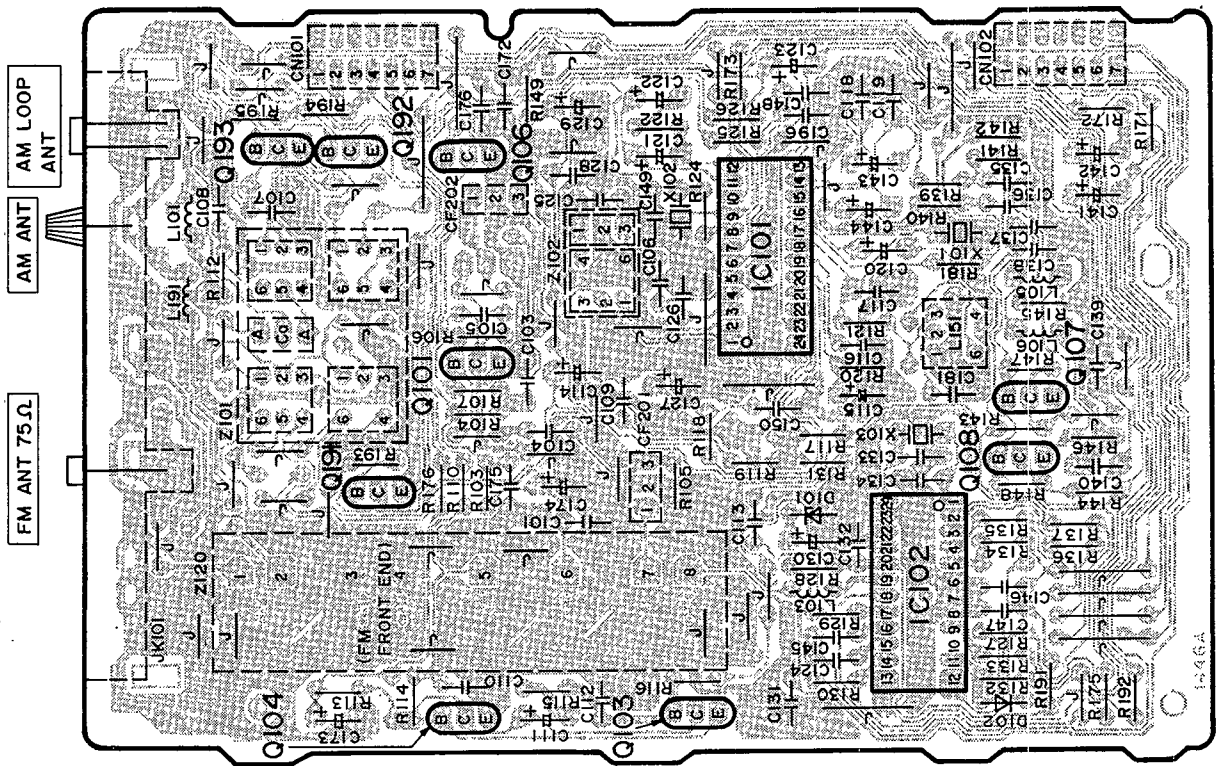


**E** MAIN P.C.B. (REP2322B-M)

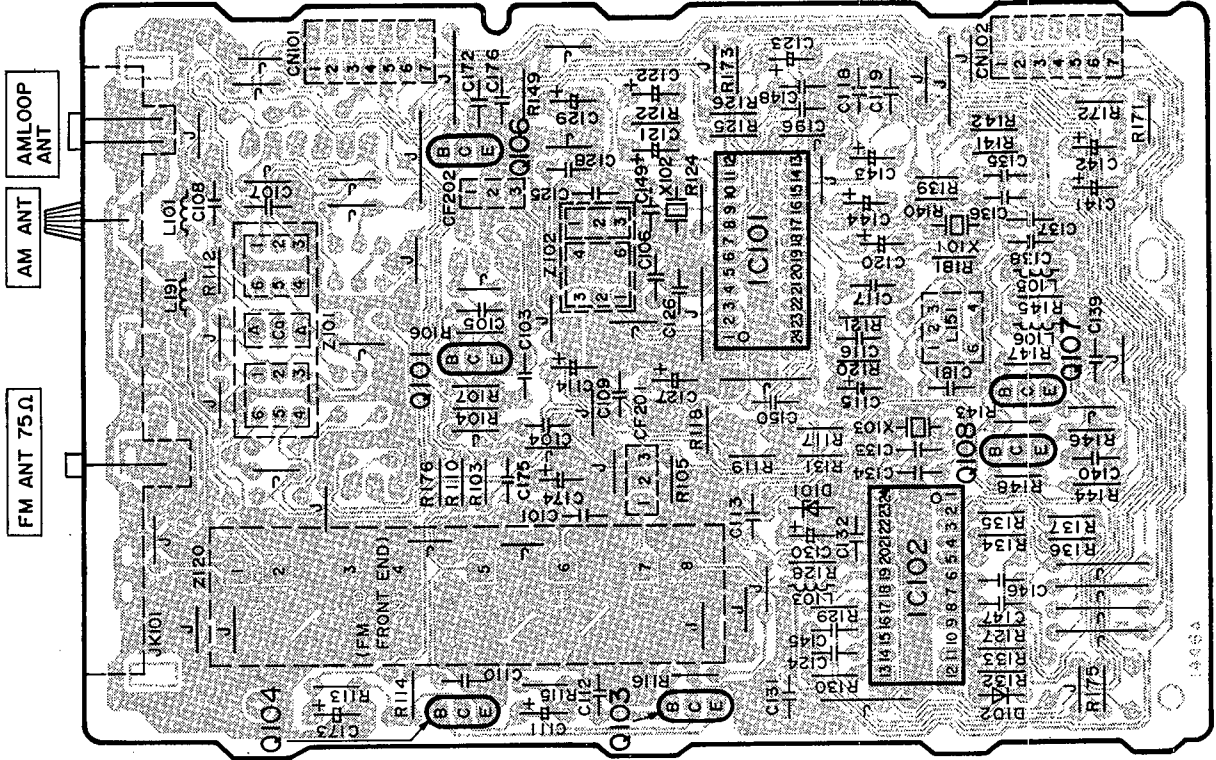




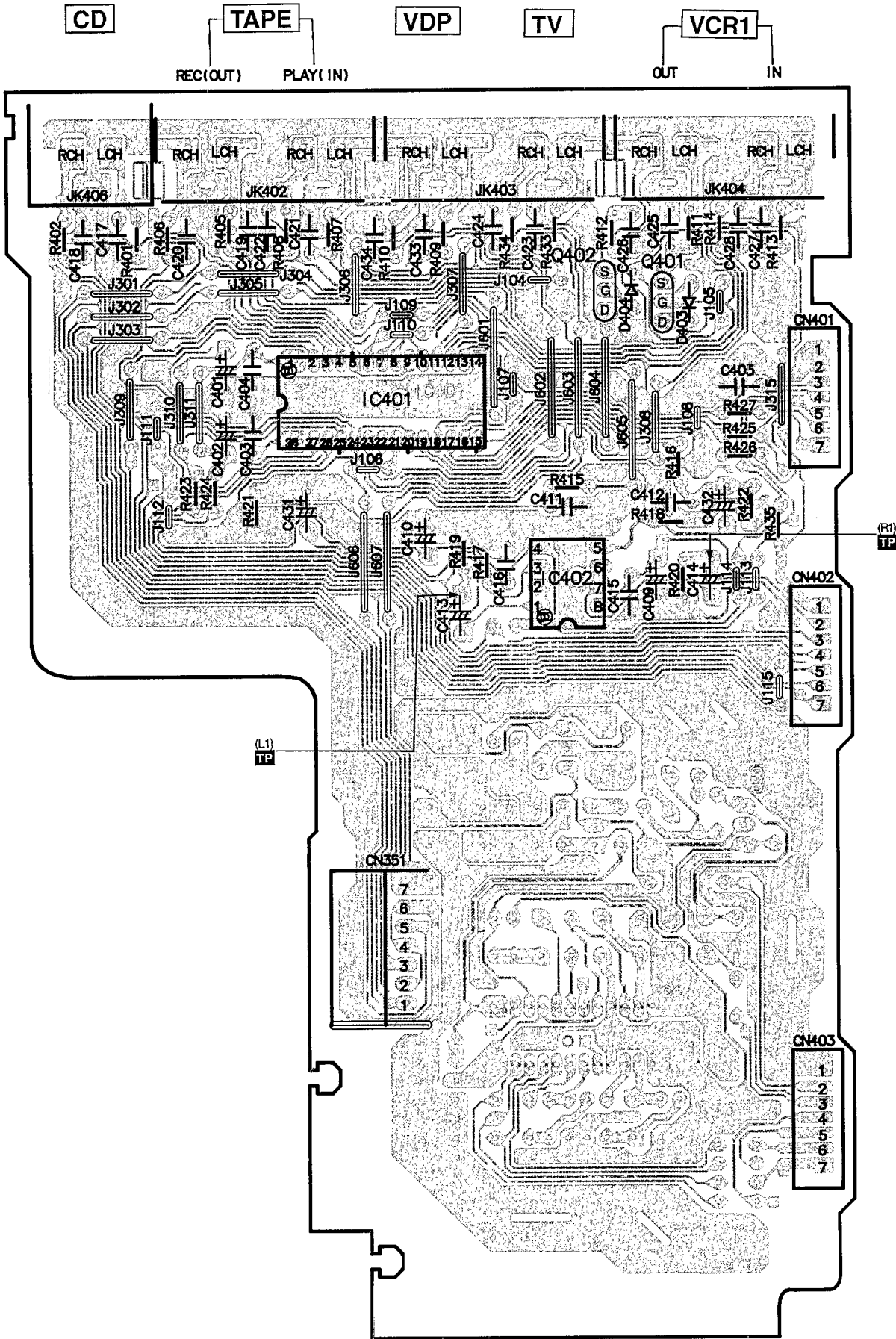
**A TUNER P.C.B. (REP2158B-T .. E1EB)**



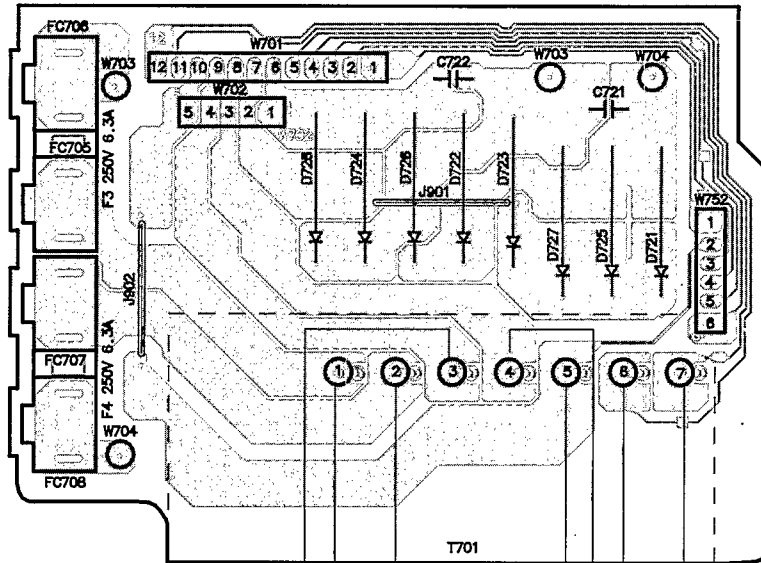
**A TUNER P.C.B. (REP2158A-T .. EG)**



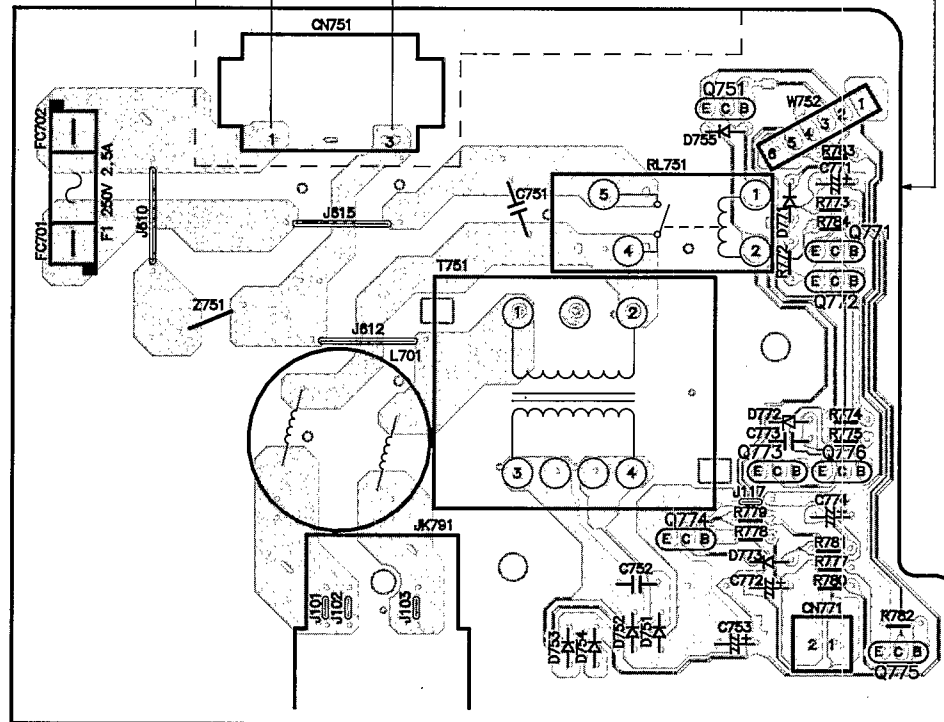
**IN/OUT TERMINAL P.C.B. (REP2378A-P .. E/EB)  
(REP2378B-P .. EG)**



**G** TRANSFORMER P.C.B. (REP2378A-P .. E/EB)



**F** POWER P.C.B. (REP2378A-P .. E/EB)

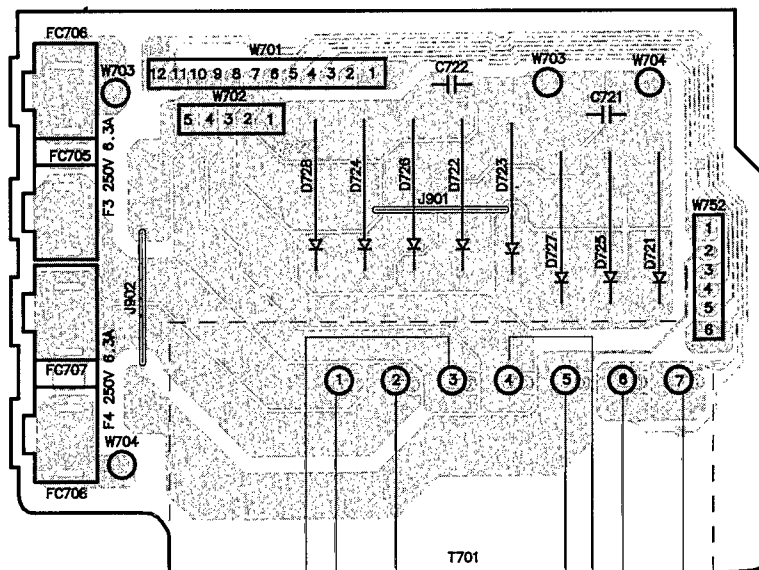


**CAUTION**  
RISK OF ELECTRIC SHOCK  
AC voltage line. Please do not  
touch this pcb.

AC IN ~  
230V~240V  
...E/EB  
50Hz

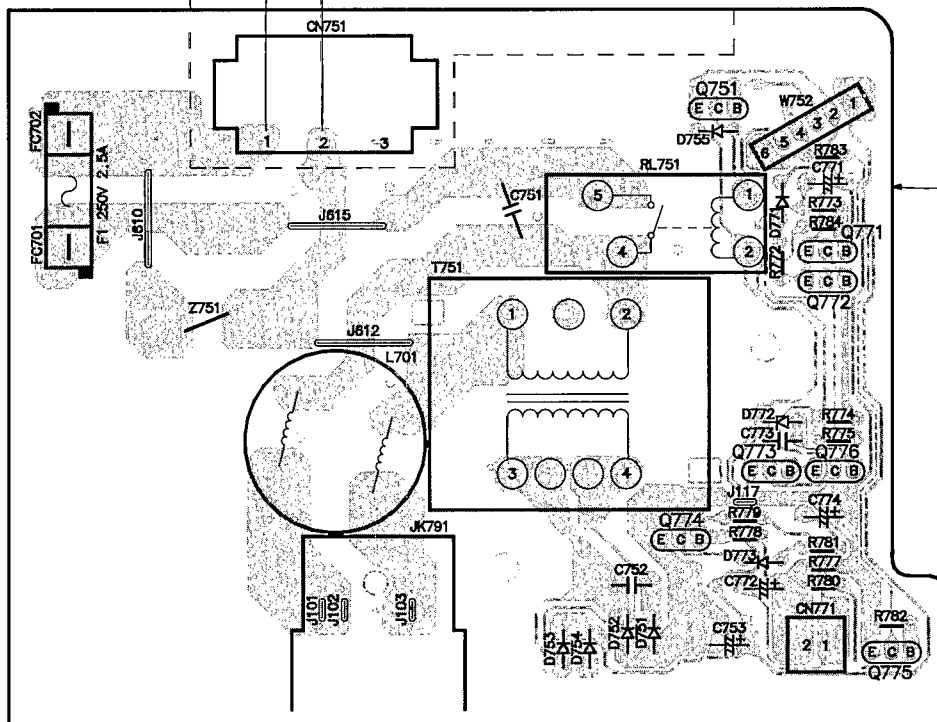


**G** TRANSFORMER P.C.B. (REP2378B-P .. EG)



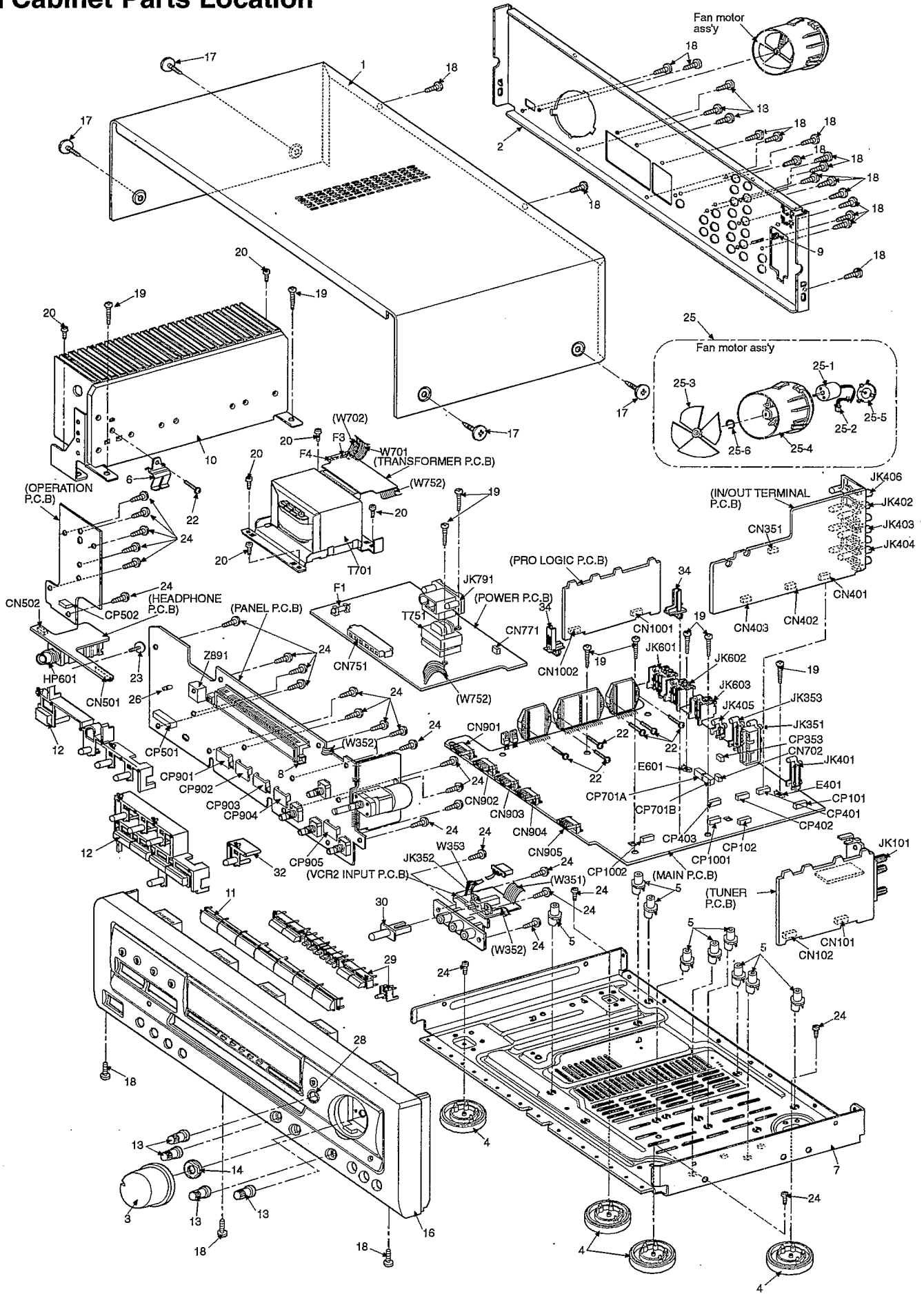
**F** POWER P.C.B. (REP2378B-P .. EG)

**CAUTION**  
RISK OF ELECTRIC SHOCK  
AC voltage line. Please do not touch this pcb.




AC IN ~  
230V  
...EG  
50Hz

# Cabinet Parts Location



## ■ Replacement Parts List

**Notes:** • Important safety notice :

 Components identified by  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 in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indication can be used for all areas.

- [M] in Remarks column indicates parts that are supplied by MESA.

- [MAV] in Remarks column indicates parts that are supplied by MAV.

Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks
<b>CABINET AND CHASSIS</b>				<b>INTEGRATED CIRCUITS</b>							
1	RKM0325A-K	CABINET (3.25U)	[MAV]	IC101	LA1832A	IC, IF/MPX		Q506	2SD1915FTA	TRANSISTOR	
2	RGR0239B-A1	REAR PANEL	[MAV](E)	IC102	LC7218	IC, PLL		Q551	2SD1915FTA	TRANSISTOR	
2	RGR0239B-B	REAR PANEL	[MAV](EG)	IC351	NJM2279D	IC, VIDEO SELECTOR SW		Q552	2SD1915FTA	TRANSISTOR	
2	RGR0239B-C	REAR PANEL	[MAV](EB)	IC401	TC9163N	IC, SELECTOR		Q571	2SA1309ARTA	TRANSISTOR	
3	RGW0243A-K	VOLUME KNOB	[MAV]	IC402	M5218AP	IC, BUFFER AMP		Q572	2SA1309ARTA	TRANSISTOR	
4	RKA0079-A	FOOT	[MAV]	IC451	AN6558-F	IC, PHONO EQ AMP	[M]	Q573	2SC3311ARTA	TRANSISTOR	
5	RKQ0089	PCB HOLDER		IC501	BA6218	IC, MOTOR DRIVER		Q574	2SC3311ARTA	TRANSISTOR	
6	RMC0158-S	TR FIXTURE	[M]	IC511	UPC4570C	IC, TONE CONTROL		Q575	2SA1309ARTA	TRANSISTOR	
7	RMK0320	BOTTOM CHASSIS	[MAV]	IC551	UPC4570C	IC, TONE CONTROL		Q576	2SC3311ARTA	TRANSISTOR	
8	RMN0372	FL HOLDER	[MAV]	IC601	RSN36S5-P	IC, SLAVE HIC	[MAV] 	Q581	2SA1309ARTA	TRANSISTOR	
9	SNE2123	EARTH TERMINAL		IC602	RSN36S5-P	IC, SLAVE HIC	[MAV] 	Q582	2SA1309ARTA	TRANSISTOR	
10	RXX0171	HEAT SINK UNIT	[MAV]	IC603	RSN33M5-P	IC, MASTER HIC	[MAV] 	Q583	2SC3311ARTA	TRANSISTOR	
11	RGU1389-K	SELECTOR BUTTON	[MAV]	IC901	UPD78043A047	IC, MICROPROCESSOR	[MAV]	Q584	2SC3311ARTA	TRANSISTOR	
12	RGU1350C-K	MODE BUTTON		IC902	STK311-010	IC, RDS DECODER	[M]	Q585	2SA1309ARTA	TRANSISTOR	
13	RGW0244-K	BASS TREBLE KNOB	[MAV]	IC1001	LA2785	IC, PRO LOGIC DECODER		Q601	UN4119TA	TRANSISTOR	
14	RHN90001	M9 NUT		IC1002	LV1010N	IC, DIGITAL DELAY		Q602	UN4119TA	TRANSISTOR	
16	RFKGAEX700EK	FRONT PANEL ASSY	[MAV]	IC1003	TC9214P	IC, SELECTOR SWITCH		Q603	UN4119TA	TRANSISTOR	
17	SNE2129-1	SCREW (CABINET)		IC1151	UPC4570C	IC, TONE CONTROL		Q604	UN4119TA	TRANSISTOR	
18	XTBS3+8JFZ1	SCREW (REAR PANEL)						Q605	RVTDC114EST	TRANSISTOR	
19	XTB3+20JFZ	SCREW (MAIN PCB)						Q606	RVTDTA114EST	TRANSISTOR	
20	XTB3+8FFZ	SCREW (TRNFMH. SINK)						Q610	2SC3311ARTA	TRANSISTOR	
22	XTW3+15T	SCREW (HIC/FIXTURE)						Q611	2SC3311ARTA	TRANSISTOR	
23	RHD26016	SCREW (H. PHONES)						Q612	2SC3311ARTA	TRANSISTOR	
24	XTBS26+10J	SCREW (FRONT PANEL)		Q101	2SC2787LTA	TRANSISTOR		Q681	2SD1915FTA	TRANSISTOR	
25	RYQ0173-K	FAN UNIT	[MAV]	Q103	2SC2785FETA	TRANSISTOR		Q682	2SD1915FTA	TRANSISTOR	
25-1	MDN-4RB4MRC	MOTOR		Q104	2SC2785FETA	TRANSISTOR		Q701	2SD2374PQAU	TRANSISTOR	
25-2	REX0811	CONNECTOR UNIT	[MAV]	Q106	UN411FTA	TRANSISTOR		Q703	2SC3311ARTA	TRANSISTOR	
25-3	SHE232	64MM PROPELLER		Q107	2SC3311ARTA	TRANSISTOR		Q704	2SC3311ARTA	TRANSISTOR	
25-4	SHE233-1	FAN CASE		Q108	2SC3311ARTA	TRANSISTOR		Q705	2SC3311ARTA	TRANSISTOR	
25-5	SHE234	FAN CASE COVER		Q191	2SC3311ARTA	TRANSISTOR	(E, EB)	Q706	2SC3940AQSTA	TRANSISTOR	
25-6	SUS271	MOTOR SPRING		Q192	2SC3311ARTA	TRANSISTOR	(E, EB)	Q707	2SB621ARTA	TRANSISTOR	
26	RMN0313	LED SUPPORT		Q193	2SC3311ARTA	TRANSISTOR	(E, EB)	Q708	2SB1548PQAU	TRANSISTOR	
28	RGK0806-N	VOLUME RING	[MAV]	Q351	2SD592AQSTA	TRANSISTOR	[MAV] 	Q751	UN421FTA	TRANSISTOR	
29	RGU1352G-K	DOLBY BUTTON	[MAV]	Q352	2SB621ARTA	TRANSISTOR		Q752	2SC3940AQSTA	TRANSISTOR	
30	RGU1390-K	VCR2 BUTTON	[MAV]	Q401	2SK381CTA	TRANSISTOR		Q771	2SA1309ARTA	TRANSISTOR	
32	RGU1398-Q	HELP BUTTON	[MAV]	Q402	2SK381CTA	TRANSISTOR		Q772	2SA1309ARTA	TRANSISTOR	
34	RMN0203	PCB HOLDER		Q501	2SJ40CDTA	TRANSISTOR		Q773	2SB621ARTA	TRANSISTOR	
				Q502	2SJ40CDTA	TRANSISTOR		Q774	2SA1309ARTA	TRANSISTOR	
				Q505	2SD1915FTA	TRANSISTOR		Q775	2SA1309ARTA	TRANSISTOR	

Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks
Q776	2SA1309ARTA	TRANSISTOR	⚠	D632	MA167TA	DIODE				<b>VARIABLE RESISTORS</b>	
Q901	RVTDT114YST	TRANSISTOR		D633	MA167TA	DIODE					
Q902	2SA933SSTA	TRANSISTOR		D634	MA167TA	DIODE		VR501	EJWMR0026B15	VR, VOLUME	
Q907	RVTDT114YST	TRANSISTOR		D635	MA167TA	DIODE		VR502	EVJ02QF01G15	VR, BALANCE	
Q908	RVTDT114YST	TRANSISTOR		D636	MA167TA	DIODE		VR511	EVJYA1F01C15	VR, BASS	
Q909	2SC3311ARTA	TRANSISTOR		D637	MA167TA	DIODE		VR512	EVJYA1F01C15	VR, TREBLE	
Q1001	2SC3940AQSTA	TRANSISTOR		D638	MA167TA	DIODE		VR1150	EVJ06LF06A15	VR, VAR. RESISTOR	[MAV]
Q1081	2SA1309ARTA	TRANSISTOR		D654	RVD1SS133TA	DIODE				<b>SWITCHES</b>	
Q1151	2SD1915FTA	TRANSISTOR		D655	RVD1SS133TA	DIODE					
				D701	P300DLF	DIODE	⚠				
		<b>DIODES</b>		D702	P300DLF	DIODE	⚠	S301	RSP2D009-J	SW,TV/VCR2 SELECTOR	
				D703	P300DLF	DIODE	⚠	S946	EVQ21405R	SW, POWER	
D101	MTZJ5R1BTA	DIODE		D704	P300DLF	DIODE	⚠	S947	EVQ21405R	SW, PHONO	
D102	MA165TA	DIODE		D705	MTZJ6R2BTA	DIODE	⚠	S948	EVQ21405R	SW, MUTING	
D351	MTZJ5R6BTA	DIODE	⚠	D706	MTZJ6R2BTA	DIODE	⚠	S950	EVQ21405R	SW, FM AUTO/MONO	
D352	MTZJ5R6BTA	DIODE	⚠	D707	MTZJ24DTA	DIODE	⚠	S951	EVQ21405R	SW, BAND	
D353	RVD1SS133TA	DIODE		D708	MTZJ15CTA	DIODE	⚠	S952	EVQ21405R	SW, TUNING DOWN	
D354	RVD1SS133TA	DIODE		D721	1N5402BM21	DIODE	⚠	S953	EVQ21405R	SW, TUNING UP	
D401	MTZJ7R5CTA	DIODE		D722	1N5402BM21	DIODE	⚠	S954	EVQ21405R	SW, MEMO	
D403	RVD1SS133TA	DIODE		D723	1N5402BM21	DIODE	⚠	S955	EVQ21405R	SW, SLEEP	
D404	RVD1SS133TA	DIODE		D724	1N5402BM21	DIODE	⚠	S956	EVQ21405R	SW, PRESET DOWN	
D581	MTZJ3R0ATA	DIODE	[MAV]	D725	1N5402BM21	DIODE	⚠	S957	EVQ21405R	SW, PRESET UP	
D582	MTZJ3R0ATA	DIODE	[MAV]	D726	1N5402BM21	DIODE	⚠	S958	EVQ21405R	SW, HELP	
D583	MTZJ3R0ATA	DIODE	[MAV]	D727	1N5402BM21	DIODE	⚠	S960	EVQ21405R	SW, TUNER	
D584	MTZJ3R0ATA	DIODE	[MAV]	D728	1N5402BM21	DIODE	⚠	S961	EVQ21405R	SW, CD	
D601	SB360L6508	DIODE		D751	1SR35200TB	DIODE	⚠	S962	EVQ21405R	SW, TAPE	
D602	SB360L6508	DIODE		D752	1SR35200TB	DIODE	⚠	S963	EVQ21405R	SW, TV/VCR2	
D603	SB360L6508	DIODE		D753	1SR35200TB	DIODE	⚠	S964	EVQ21405R	SW, VCR1	
D604	RVD1SS133TA	DIODE		D754	1SR35200TB	DIODE	⚠	S970	EVQ21405R	SW, SEARCH	
D605	MTZJ6R2BTA	DIODE		D755	RVD1SS133TA	DIODE		S971	EVQ21405R	SW, EON	
D606	RVD1SS133TA	DIODE		D756	MTZJ6R8BTA	DIODE	⚠	S972	EVQ21405R	SW, PTY SELECT UP	
D607	RVD1SS133TA	DIODE		D771	RVD1SS133TA	DIODE		S973	EVQ21405R	SW, PTY SELECT DOWN	
D608	RVD1SS133TA	DIODE		D772	MTZJ8R2BTA	DIODE	[M]	S974	EVQ21405R	SW, DISPLAY MODE	
D609	RVD1SS133TA	DIODE		D773	RVD1SS133TA	DIODE		S975	EVQ21405R	SW, VDP	
D610	RVD1SS133TA	DIODE		D901	1SS291TA	DIODE		S976	EVQ21405R	SW, DELAY TIME	
D611	SB360L6508	DIODE		D903	MTZJ4R7BTA	DIODE		S980	EVQ21405R	SW, SPEAKERS A	
D612	SB360L6508	DIODE		D905	RVD1SS133TA	DIODE	(E, EB)	S981	EVQ21405R	SW, SPEAKERS B	
D613	SB360L6508	DIODE		D907	RVD1SS133TA	DIODE		S982	EVQ21405R	SW, LOUDNESS	
D614	RVD1SS133TA	DIODE		D908	RVD1SS133TA	DIODE		S983	EVQ21405R	SW, SURROUND OFF/ON	
D621	MA167TA	DIODE		D921	RVD1SS133TA	DIODE		S984	EVQ21405R	SW, 3 STEREO	
D622	MA167TA	DIODE		D923	RVD1SS133TA	DIODE		S985	EVQ21405R	SW, CENTER MODE	
D623	MA167TA	DIODE		D924	MTZJ3R9ATA	DIODE				<b>CONNECTORS</b>	
D624	MA167TA	DIODE		D925	MA723TA	DIODE					
D625	MA167TA	DIODE		D929	LN846RPH	DIODE		CN101	RJU057W007	CONNECTOR (7P)	
D626	MA167TA	DIODE		D930	LN41YCPHL	DIODE		CN102	RJU057W007	CONNECTOR (7P)	
D627	MA167TA	DIODE		D1001	MTZJ10CTA	DIODE		CN351	RJS7T6ZA	7P CONNECTOR	
D628	MA167TA	DIODE		D1002	MA700ATA	DIODE		CN401	RJU100W07	7P CONNECTOR	[MAV]
D631	MA167TA	DIODE									

Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks
CN402	RJU100W07	7P CONNECTOR	[MAV]	L671	RLQYR73M	CHOKE COIL		FC707	SJT388	FUSE CLIP	
CN403	RJU100W07	7P CONNECTOR	[MAV]	L701	SLQZ650MH49	AC LINE COIL	⚠	FC708	SJT388	FUSE CLIP	
CN501	RJU100W07	7P CONNECTOR	[MAV]	L751	RLQB101JTA-Y	CHOKE COIL					
CN502	RJU100W04	SOCKET (4P)	[MAV]	L901	RLQB101KTA-Y	CHOKE COIL				<b>JACKS</b>	
CN702	RJS1A6605	5P TAPING CONNECTOR		L902	RLQZP101KT-Y	AXIAL COIL					
CN751	SJS305-1	CONNECTOR (3P)		L1051	RLQB101KTA-Y	CHOKE COIL		HP601	RJJ63TA01	JK, HP	
CN771	SJT3213	CONNECTOR (FAN)		T701	RTP1Q5E013-V	POWER TRANSFORMER	[MAV] ⚠	JK101	RJH4202	JK, ANT TERMINAL	
CN901	RJU003K008M1	BOARD IN CONNECTOR		T751	RTP1I5E006	POWER TRANSFORMER	⚠	JK351	RJH2304N	JK, RCA TERMINAL	[MAV]
CN902	RJU003K010M1	10P B/B CONNECTOR						JK352	SJFK5-1	JK, VCR IN	
CN903	RJU003K010M1	10P B/B CONNECTOR				<b>COMPONENT COMBINATION</b>		JK353	SJF3068-NJ	JK, RCA TERMINAL	[M]
CN904	RJU003K008M1	BOARD IN CONNECTOR						JK401	SJF3068-7N	JK, RCA TERMINAL	
CN905	RJU003K008M1	BOARD IN CONNECTOR		Z101	RLA2Z002M-T	AM ANT. COIL	(EG)	JK402	SJF3069N	JK, LINE IN	
CN1001	RJU100W07	7P CONNECTOR	[MAV]	Z101	RLA6Z005M-T	AM ANT/OSC	(E, EB)	JK403	SJF3069N	JK, LINE IN	
CN1002	RJU100W07	7P CONNECTOR	[MAV]	Z102	RLI2Z006M-T	AM IFT		JK404	SJF3069N	JK, LINE IN	
CP101	RJT057W007-1	7P CONNECTOR		Z120	ENV17290G1R	FM TUNER PACK		JK405	SJFD7	JK, FM MULTI OUT	
CP102	RJT057W007-1	7P CONNECTOR		Z751	ERZV10V511CS	ZNR	⚠	JK406	SJF3068-7N	JK, RCA TERMINAL	
CP353	RJP3G4YA	3P CONNECTOR		Z891	RCDSPTS4242N	REMOTE SENSOR		JK601	RJH5601	JK, SP TERMINAL	
CP401	RJT100W07	7P CONNECTOR	[MAV]					JK602	RJH5601	JK, SP TERMINAL	
CP402	RJT100W07	7P CONNECTOR	[MAV]			<b>CERAMIC FILTERS</b>		JK603	RJR0054	JK, SPEAKER TERMINAL	
CP403	RJT100W07	7P CONNECTOR	[MAV]					JK791	SJS9236	JK, AC INLET	⚠
CP501	RJT100W07	7P CONNECTOR	[MAV]	CF201	RLFFETNGD01L	CERAMIC FILTER					
CP502	RJT100W04	CONNECTOR (4P)	[MAV]	CF202	RLFFETMGD01L	CERAMIC FILTER				<b>RELAYS</b>	
CP701A	RJT039W06T	CONNECTOR 6P		CF901	RVCBST4R00MT	OSCILLATOR					
CP701B	RJT039W06T	CONNECTOR 6P		CF902	RSXZ456KM07M	CERAMIC OSCILLATOR		RL601	RSY0013M-0	24V RELAY	
CP901	RJT003K008M1	8P CONNECTOR		CF1051	EF0EC8004T4	CERAMIC OSCILLATOR		RL602	RSY0013M-0	24V RELAY	
CP902	RJT003K010M1	10P CONNECTOR						RL603	RSY0013M-0	24V RELAY	
CP903	RJT003K010M1	10P CONNECTOR				<b>OSCILLATORS</b>		RL604	RSY0013M-0	24V RELAY	
CP904	RJT003K008M1	8P CONNECTOR						RL751	RSY0019M-0	12V TV-5 RELAY	⚠
CP905	RJT003K008M1	8P CONNECTOR		X101	RSXZ456KM07M	CERAMIC OSCILLATOR					
CP1001	RJT100W07	7P CONNECTOR	[MAV]	X102	RLFDGTD01I	FM REZONATOR				<b>EARTH TERMINALS</b>	
CP1002	RJT100W07	7P CONNECTOR	[MAV]	X103	SVQ49U722T-S	CRYSTAC OSCILLATOR					
								E401	SNE1004-2	EARTH TERMINAL	
		<b>COILS &amp; TRANSFORMERS</b>				<b>DISPLAY TUBE</b>		E601	SNE1004-2	EARTH TERMINAL	
L101	ELESN1R0MA	CHOKE COIL	(EG)	FL901	RSL0213-F	FL DISPLAY	[MAV]			<b>WIRE</b>	
L101	ELESNR68MA	CHOKE COIL	(E, EB)								
L103	ELEXTR47MA9	CHOKE COIL				<b>FUSES</b>		W353	REX0800	SHIELD WIRE	[MAV]
L105	RLQZB822KT-D	TAPING COIL									
L106	RLQZB822KT-D	TAPING COIL		F1	XBA2C25TB0	FUSE	⚠				
L151	SLM1B10-1M	COIL		F3	XBA2C63TB0	FUSE	⚠				
L191	ELESNR56MA	CHOKE COIL	(EG)	F4	XBA2C63TB0	FUSE	⚠				
L191	ELESNR68MA	CHOKE COIL	(E, EB)								
L501	RLQZP1R0KT-Y	AXIAL COIL				<b>FUSE HOLDERS</b>					
L502	RLQZP1R0KT-Y	AXIAL COIL									
L601	RLQYR73M	CHOKE COIL		FC701	EYF52BC	FUSE HOLDER					
L602	RLQYR73M	CHOKE COIL		FC702	EYF52BC	FUSE HOLDER					
L651	RLQYR73M	CHOKE COIL		FC705	SJT388	FUSE CLIP					
L652	RLQYR73M	CHOKE COIL		FC706	SJT388	FUSE CLIP					

## Resistors & Capacitors

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.

- Capacitor values are in microfarad ( $\mu$ F) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
- Resistors values are in ohms, unless specified otherwise, 1K=1,000(OHM), 1M=1,000K(OHM)
- [M] in Remarks column indicates parts that are supplied by MESA.
- [MAV] in Remarks column indicates parts that are supplied by MAV.

Ref No	Part No.	Values & Remarks	Ref No	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks
	<b>RESISTORS</b>		R146	ERDS2TJ102T	1K 1/4W(E,EB)	R413	ERDS2TJ102T	1K 1/4W	R465	ERDS2TJ563T	56K 1/4W
			R146	ERDS2TJ561T	560 1/4W(EG)	R414	ERDS2TJ102T	1K 1/4W	R466	ERDS2TJ563T	56K 1/4W
R103	ERDS2TJ101T	100 1/4W	R147	ERDS2TJ474T	470K 1/4W	R415	ERDS2TJ102T	1K 1/4W	R467	ERDS2TJ102T	1K 1/4W
R104	ERDS2TJ102T	1K 1/4W	R148	ERDS2TJ474T	470K 1/4W	R416	ERDS2TJ102T	1K 1/4W	R468	ERDS2TJ102T	1K 1/4W
R105	ERDS2TJ471T	470 1/4W	R149	ERDS2TJ680T	68 1/4W	R417	ERDS2TJ473T	47K 1/4W	R469	ERDS2TJ102T	1K 1/4W
R106	ERDS2TJ224T	220K 1/4W	R171	ERDS2TJ102T	1K 1/4W	R418	ERDS2TJ473T	47K 1/4W	R470	ERDS2TJ102T	1K 1/4W
R107	ERDS2TJ471T	470 1/4W	R172	ERDS2TJ102T	1K 1/4W	R419	ERDS2TJ104T	100K 1/4W	R501	ERDS2TJ222T	2.2K 1/4W
R110	ERDS2TJ102T	1K 1/4W	R173	ERDS2TJ471T	470 1/4W	R420	ERDS2TJ104T	100K 1/4W	R502	ERDS2TJ222T	2.2K 1/4W
R112	ERDS2TJ104T	100K 1/4W	R175	ERDS2TJ102T	1K 1/4W	R421	ERDS2TJ104T	100K 1/4W	R503	ERDS2TJ103T	10K 1/4W
R113	ERDS2TJ103T	10K 1/4W	R176	ERDS2TJ391T	390 1/4W	R422	ERDS2TJ104T	100K 1/4W	R504	ERDS2TJ103T	10K 1/4W
R114	ERDS2TJ562T	5.6K 1/4W	R181	ERDS2TJ332T	3.3K 1/4W	R423	ERDS2TJ102T	1K 1/4W	R505	ERDS2TJ103T	10K 1/4W
R115	ERDS2TJ561T	560 1/4W	R191	ERDS2TJ103T	10K 1/4W(E,EB)	R424	ERDS2TJ102T	1K 1/4W	R506	ERDS2TJ103T	10K 1/4W
R116	ERDS2TJ102T	1K 1/4W	R192	ERDS2TJ122T	1.2K 1/4W(E,EB)	R425	ERDS2TJ103T	10K 1/4W	R507	ERDS2TJ153T	15K 1/4W
R117	ERDS2TJ473T	47K 1/4W	R193	ERDS2TJ182T	1.8K 1/4W(E,EB)	R426	ERDS2TJ103T	10K 1/4W	R508	ERDS1FVJ2R2T	2.2 1/2W $\Delta$
R118	ERDS2TJ562T	5.6K 1/4W	R194	ERDS2TJ122T	1.2K 1/4W(E,EB)	R427	ERDS2TJ103T	10K 1/4W	R511	ERDS2TJ471T	470 1/4W
R119	ERDS2TJ183T	18K 1/4W	R195	ERDS2TJ222T	2.2K 1/4W(E,EB)	R428	ERDS2TJ332T	3.3K 1/4W	R512	ERDS2TJ471T	470 1/4W
R120	ERDS2TJ473T	47K 1/4W	R301	ERDS2TJ820T	82 1/4W	R429	ERDS2TJ102T	1K 1/4W	R513	ERDS2TJ474T	470K 1/4W
R121	ERDS2TJ332T	3.3K 1/4W	R302	ERDS2TJ820T	82 1/4W	R430	ERDS2TJ102T	1K 1/4W	R514	ERDS2TJ474T	470K 1/4W
R122	ERDS2TJ272T	2.7K 1/4W	R303	ERDS2TJ820T	82 1/4W	R431	ERDS2TJ224T	220K 1/4W	R515	ERDS2TJ474T	470K 1/4W
R124	ERDS2TJ271T	270 1/4W	R304	ERDS2TJ820T	82 1/4W	R432	ERDS2TJ224T	220K 1/4W	R516	ERDS2TJ474T	470K 1/4W
R125	ERDS2TJ472T	4.7K 1/4W	R359	ERDS2TJ750T	75 1/4W	R433	ERDS2TJ102T	1K 1/4W	R517	ERDS2TJ332T	3.3K 1/4W
R126	ERDS2TJ472T	4.7K 1/4W	R362	ERDS2TJ750T	75 1/4W	R434	ERDS2TJ102T	1K 1/4W	R518	ERDS2TJ332T	3.3K 1/4W
R127	ERDS2TJ103T	10K 1/4W	R367	ERDS2TJ102T	1K 1/4W	R435	ERDS2TJ473T	47K 1/4W	R519	ERDS2TJ182T	1.8K 1/4W
R128	ERDS2TJ820T	82 1/4W	R368	ERDS2TJ102T	1K 1/4W	R440	ERDS1FVJ820T	82 1/2W $\Delta$	R520	ERDS2TJ182T	1.8K 1/4W
R129	ERDS2TJ473T	47K 1/4W	R369	ERDS2TJ182T	1.8K 1/4W	R441	ERDS2TJ473T	47K 1/4W	R521	ERDS2TJ223T	22K 1/4W
R130	ERDS2TJ102T	1K 1/4W	R370	ERDS2TJ182T	1.8K 1/4W	R442	ERDS2TJ473T	47K 1/4W	R522	ERDS2TJ223T	22K 1/4W
R131	ERDS2TJ102T	1K 1/4W	R371	ERD2FCVG220T	22 1/4W	R443	ERDS2TJ330T	33 1/4W	R523	ERDS2TJ392T	3.9K 1/4W
R132	ERDS2TJ103T	10K 1/4W	R372	ERD2FCVG220T	22 1/4W	R451	ERDS2TJ224T	220K 1/4W	R524	ERDS2TJ392T	3.9K 1/4W
R133	ERDS2TJ102T	1K 1/4W	R373	ERDS2TJ103T	10K 1/4W	R452	ERDS2TJ224T	220K 1/4W	R525	ERDS2TJ222T	2.2K 1/4W
R134	ERDS2TJ102T	1K 1/4W	R374	ERDS2TJ103T	10K 1/4W	R453	ERDS2TJ391T	390 1/4W	R526	ERDS2TJ222T	2.2K 1/4W
R135	ERDS2TJ102T	1K 1/4W	R375	ERDS2TJ103T	10K 1/4W	R454	ERDS2TJ391T	390 1/4W	R527	ERDS2TJ122T	1.2K 1/4W
R136	ERDS2TJ102T	1K 1/4W	R401	ERDS2TJ102T	1K 1/4W	R455	ERDS2TJ563T	56K 1/4W	R528	ERDS2TJ122T	1.2K 1/4W
R137	ERDS2TJ102T	1K 1/4W	R402	ERDS2TJ102T	1K 1/4W	R456	ERDS2TJ563T	56K 1/4W	R529	ERDS2TJ273T	27K 1/4W
R139	ERDS2TJ272T	2.7K 1/4W	R405	ERDS2TJ102T	1K 1/4W	R457	ERDS2TJ271T	270 1/4W	R530	ERDS2TJ273T	27K 1/4W
R140	ERDS2TJ272T	2.7K 1/4W	R406	ERDS2TJ102T	1K 1/4W	R458	ERDS2TJ271T	270 1/4W	R531	ERDS2TJ102T	1K 1/4W
R141	ERDS2TJ102T	1K 1/4W	R407	ERDS2TJ102T	1K 1/4W	R459	ERDS2TJ680T	68 1/4W	R532	ERDS2TJ102T	1K 1/4W
R142	ERDS2TJ102T	1K 1/4W	R408	ERDS2TJ102T	1K 1/4W	R460	ERDS2TJ680T	68 1/4W	R533	ERDS2TJ473T	47K 1/4W
R143	ERDS2TJ222T	2.2K 1/4W	R409	ERDS2TJ102T	1K 1/4W	R461	ERDS2TJ184T	180K 1/4W	R534	ERDS2TJ473T	47K 1/4W
R144	ERDS2TJ222T	2.2K 1/4W	R410	ERDS2TJ102T	1K 1/4W	R462	ERDS2TJ184T	180K 1/4W	R535	ERDS2TJ102T	1K 1/4W
R145	ERDS2TJ102T	1K 1/4W(E,EB)	R411	ERDS2TJ102T	1K 1/4W	R463	ERDS2TJ123T	12K 1/4W	R536	ERDS2TJ102T	1K 1/4W
R145	ERDS2TJ561T	560 1/4W(EG)	R412	ERDS2TJ102T	1K 1/4W	R464	ERDS2TJ123T	12K 1/4W	R537	ERDS2TJ103T	10K 1/4W

Ref No	Part No.	Values & Remarks	Ref No	Part No.	Values & Remarks	Ref No	Part No.	Values & Remarks	Ref No	Part No.	Values & Remarks
R538	ERDS2TJ103T	10K 1/4W	R590	ERDS2TJ473T	47K 1/4W	R646	ERD2FCVG220T	22 1/4W	R694	ERDS2TJ270T	27 1/4W
R539	ERDS2TJ681T	680 1/4W	R591	ERDS2TJ222T	2.2K 1/4W	R647	ERDS2TJ221T	220 1/4W	R695	ERDS2TJ102T	1K 1/4W
R540	ERDS2TJ681T	680 1/4W	R592	ERDS2TJ222T	2.2K 1/4W	R648	ERDS2TJ221T	220 1/4W	R696	ERDS2TJ102T	1K 1/4W
R541	ERDS2TJ471T	470 1/4W	R601	ERDS2TJ102T	1K 1/4W	R649	ERD25FVJ680T	68 1/4W	R697	ERDS2TJ221T	220 1/4W
R542	ERDS2TJ471T	470 1/4W	R602	ERDS2TJ102T	1K 1/4W	R650	ERD25FVJ680T	68 1/4W	R698	ERDS2TJ221T	220 1/4W
R543	ERDS2TJ102T	1K 1/4W	R603	ERDS2TJ563T	56K 1/4W	R651	ERDS2TJ102T	1K 1/4W	R699	ERDS2TJ332T	3.3K 1/4W
R544	ERDS2TJ102T	1K 1/4W	R604	ERDS2TJ563T	56K 1/4W	R652	ERDS2TJ102T	1K 1/4W	R703	ERDS1FVJ3R9T	3.9 1/2W $\Delta$
R545	ERDS2TJ684T	680K 1/4W	R605	ERDS2TJ182T	1.8K 1/4W	R653	ERDS2TJ563T	56K 1/4W	R704	ERDS1FVJ3R9T	3.9 1/2W $\Delta$
R546	ERDS2TJ332T	3.3K 1/4W	R606	ERDS2TJ182T	1.8K 1/4W	R654	ERDS2TJ563T	56K 1/4W	R705	ERDS2TJ472T	4.7K 1/4W
R547	ERDS2TJ822T	8.2K 1/4W	R607	ERDS2TJ563T	56K 1/4W	R655	ERDS2TJ182T	1.8K 1/4W	R706	ERDS2TJ102T	1K 1/4W
R548	ERDS2TJ392T	3.9K 1/4W	R608	ERDS2TJ563T	56K 1/4W	R656	ERDS2TJ182T	1.8K 1/4W	R709	ERD25FVJ221T	220 1/4W
R549	ERDS2TJ222T	2.2K 1/4W	R609	ERDS2TJ470T	47 1/4W	R657	ERDS2TJ563T	56K 1/4W	R712	ERDS2TJ472T	4.7K 1/4W
R551	ERDS2TJ102T	1K 1/4W	R610	ERDS2TJ470T	47 1/4W	R658	ERDS2TJ563T	56K 1/4W	R713	ERDS2TJ1R5T	1.5 1/4W
R552	ERDS2TJ102T	1K 1/4W	R611	ERDS1FVJ100T	10 1/2W $\Delta$	R659	ERDS2TJ470T	47 1/4W	R714	ERDS2TJ1R5T	1.5 1/4W
R553	ERDS2TJ104T	100K 1/4W	R612	ERDS1FVJ100T	10 1/2W $\Delta$	R660	ERDS2TJ470T	47 1/4W	R715	ERDS2TJ752T	7.5K 1/4W
R554	ERDS2TJ104T	100K 1/4W	R613	ERDS2TJ102T	1K 1/4W	R661	ERDS1FVJ100T	10 1/2W $\Delta$	R716	ERDS2TJ682T	6.8K 1/4W
R555	ERDS2TJ223T	22K 1/4W	R614	ERDS2TJ102T	1K 1/4W	R662	ERDS1FVJ100T	10 1/2W $\Delta$	R718	ERDS2TJ182T	1.8K 1/4W
R556	ERDS2TJ223T	22K 1/4W	R615	ERDS2TJ184T	180K 1/4W	R663	ERDS2TJ102T	1K 1/4W	R721	ERDS1FVJ100T	10 1/2W $\Delta$
R557	ERDS2TJ471T	470 1/4W	R616	ERDS2TJ154T	150K 1/4W	R664	ERDS2TJ102T	1K 1/4W	R722	ERDS1FVJ391T	390 1/2W $\Delta$
R558	ERDS2TJ471T	470 1/4W	R617	ERDS2TJ473T	47K 1/4W	R665	ERDS2TJ184T	180K 1/4W	R723	ERDS2TJ472T	4.7K 1/4W
R559	ERDS2TJ222T	2.2K 1/4W	R618	ERDS2TJ473T	47K 1/4W	R666	ERDS2TJ154T	150K 1/4W	R724	ERDS1FVJ100T	10 1/2W $\Delta$
R560	ERDS2TJ222T	2.2K 1/4W	R619	ERDS2TJ223T	22K 1/4W	R667	ERDS2TJ102T	1K 1/4W	R725	ERDS2TJ681T	680 1/4W
R561	ERDS2TJ272T	2.7K 1/4W	R620	ERD25FVJ220T	22 1/4W	R668	ERDS2TJ563T	56K 1/4W	R727	ERDS1FVJ2R2T	2.2 1/2W $\Delta$
R562	ERDS2TJ272T	2.7K 1/4W	R621	ERD25FVJ680T	68 1/4W	R669	ERDS2TJ182T	1.8K 1/4W	R730	ERDS1FVJ391T	390 1/2W $\Delta$
R564	ERDS2TJ332T	3.3K 1/4W	R622	ERD25FVJ680T	68 1/4W	R670	ERDS2TJ563T	56K 1/4W	R731	ERDS1FVJ391T	390 1/2W $\Delta$
R565	ERDS2TJ102T	1K 1/4W	R623	ERDS2TJ104T	100K 1/4W	R671	ERD25FVJ680T	68 1/4W	R732	ERDS1FVJ150T	15 1/2W $\Delta$
R566	ERDS2TJ102T	1K 1/4W	R624	ERDS2TJ124T	120K 1/4W	R672	ERD25FVJ680T	68 1/4W	R741	ERDS1FVJ6R8T	6.8 1/2W $\Delta$
R569	ERDS2TJ102T	1K 1/4W	R625	ERDS2TJ124T	120K 1/4W	R673	ERDS2TJ470T	47 1/4W	R742	ERDS1FVJ3R3T	3.3 1/2W $\Delta$
R570	ERDS2TJ102T	1K 1/4W	R626	ERDS2TJ473T	47K 1/4W	R674	ERDS1FVJ100T	10 1/2W $\Delta$	R743	ERDS1FVJ3R3T	3.3 1/2W $\Delta$
R571	ERDS2TJ222T	2.2K 1/4W	R627	ERDS2TJ824T	820K 1/4W	R675	ERDS2TJ102T	1K 1/4W	R744	ERDS1FVJ3R3T	3.3 1/2W $\Delta$
R572	ERDS2TJ222T	2.2K 1/4W	R628	ERDS2TJ223T	22K 1/4W	R676	ERD2FCVG151T	150 1/4W $\Delta$ MAV	R745	ERDS1FVJ3R3T	3.3 1/2W $\Delta$
R573	ERDS2TJ102T	1K 1/4W	R629	ERDS2TJ682T	6.8K 1/4W	R677	ERDS2TJ274T	270K 1/4W	R754	ERDS2TJ102T	1K 1/4W
R574	ERDS2TJ102T	1K 1/4W	R630	ERDS2TJ682T	6.8K 1/4W	R678	ERDS2TJ184T	180K 1/4W	R772	ERDS2TJ104T	100K 1/4W
R575	ERDS2TJ102T	1K 1/4W	R631	ERDS2TJ123T	12K 1/4W	R679	ERD2FCVG151T	150 1/4W $\Delta$ MAV	R773	ERDS2TJ103T	10K 1/4W
R576	ERDS2TJ102T	1K 1/4W	R632	ERDS2TJ472T	4.7K 1/4W	R680	ERDS2TJ221T	220 1/4W	R774	ERDS2TJ223T	22K 1/4W
R577	ERDS2TJ102T	1K 1/4W	R633	ERDS2TJ123T	12K 1/4W	R681	ERDS2TJ270T	27 1/4W	R775	ERDS2TJ472T	4.7K 1/4W
R578	ERDS2TJ102T	1K 1/4W	R634	ERDS2TJ472T	4.7K 1/4W	R682	ERDS2TJ270T	27 1/4W	R777	ERDS2TJ150T	15 1/4W
R579	ERDS2TJ681T	680 1/4W	R635	ERD2FCVG151T	150 1/4W $\Delta$ MAV	R683	ERDS2TJ270T	27 1/4W	R778	ERDS2TJ222T	2.2K 1/4W
R580	ERDS2TJ102T	1K 1/4W	R636	ERD2FCVG151T	150 1/4W $\Delta$ MAV	R684	ERDS2TJ270T	27 1/4W	R779	ERDS2TJ103T	10K 1/4W
R581	ERDS2TJ102T	1K 1/4W	R637	ERG1SJ101E	100 1W $\Delta$	R685	ERDS2TJ270T	27 1/4W	R780	ERDS2TJ473T	47K 1/4W
R582	ERDS2TJ102T	1K 1/4W	R638	ERG1SJ101E	100 1W $\Delta$	R686	ERDS2TJ270T	27 1/4W	R781	ERDS2TJ473T	47K 1/4W
R583	ERDS2TJ102T	1K 1/4W	R639	ERG1SJ101E	100 1W $\Delta$	R687	ERDS2TJ270T	27 1/4W	R782	ERDS2TJ153T	15K 1/4W
R584	ERDS2TJ102T	1K 1/4W	R640	ERG1SJ101E	100 1W $\Delta$	R688	ERDS2TJ270T	27 1/4W	R783	ERDS2TJ103T	10K 1/4W
R585	ERDS2TJ102T	1K 1/4W	R641	ERDS2TJ684T	680K 1/4W	R689	ERDS2TJ270T	27 1/4W	R784	ERDS2TJ335T	3.3M 1/4W
R586	ERDS2TJ102T	1K 1/4W	R642	ERDS2TJ682T	6.8K 1/4W	R690	ERDS2TJ270T	27 1/4W	R791	ERDS2TJ223T	22K 1/4W
R587	ERDS2TJ102T	1K 1/4W	R643	ERDS2TJ682T	6.8K 1/4W	R691	ERDS2TJ270T	27 1/4W	R792	ERDS2TJ223T	22K 1/4W
R588	ERDS2TJ102T	1K 1/4W	R644	ERDS2TJ222T	2.2K 1/4W	R692	ERDS2TJ270T	27 1/4W	R793	ERDS2TJ223T	22K 1/4W
R589	ERDS2TJ182T	1.8K 1/4W	R645	ERD2FCVG220T	22 1/4W	R693	ERDS2TJ270T	27 1/4W	R794	ERDS2TJ223T	22K 1/4W





Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks	Ref No.	Part No.	Values & Remarks
C427	ECBT1H221KB5	220P 50V	C526	ECQV1H683JZ3	0.068 50V	C619	ECBT1H102KB5	1000P 50V	C701	ECBT1E103ZF5	0.01 25V
C428	ECBT1H221KB5	220P 50V	C527	ECBT1C562KR5	5600P 16V	C621	ECEA2AU100B	10 100V	C702	ECQE2104KF3	0.1 250V
C429	ECBT1H101KB5	100P 50V	C528	ECBT1C562KR5	5600P 16V	C622	ECEA2AU100B	10 100V	C703	ECES75V752UX	7500 75V <sup>△</sup>
C430	ECBT1H101KB5	100P 50V	C529	ECQB1H273JF3	0.027 50V	C631	ECKR1H223ZF5	0.022 50V	C704	ECES75V752UX	7500 75V <sup>△</sup>
C431	ECEA1CU100B	10 16V	C530	ECQB1H273JF3	0.027 50V	C632	ECKR1H223ZF5	0.022 50V	C705	ECEA1HM332EV	3300 <sup>△</sup> 50V[M]
C432	ECEA1CU100B	10 16V	C531	ECBT1E103ZF5	0.01 25V	C633	ECKR1H223ZF5	0.022 50V	C706	ECEA1HM332EV	3300 <sup>△</sup> 50V[M]
C433	ECBT1H101KB5	100P 50V	C532	ECBT1E103ZF5	0.01 25V	C634	ECKR1H223ZF5	0.022 50V	C707	ECA1VM101B	100 35V
C434	ECBT1H101KB5	100P 50V	C533	ECEA1CKA220B	22 16V	C635	ECKR1H103ZF5	0.01 50V	C708	ECKR1H103ZF5	0.01 50V
C440	ECBT1E103ZF5	0.01 25V	C534	ECEA1CKA220B	22 16V	C636	ECKR1H103ZF5	0.01 50V	C709	ECEA1CU330B	33 16V
C451	ECEA1HU4R7B	4.7 50V	C536	ECBT1E103ZF5	0.01 25V	C637	ECKR1H223ZF5	0.022 50V	C710	ECBT1E103ZF5	0.01 25V
C452	ECEA1HU4R7B	4.7 50V	C537	ECEA1CU100B	10 16V	C638	ECKR1H223ZF5	0.022 50V	C711	ECKR1H103ZF5	0.01 50V
C453	ECBT1H100JC5	10P 50V	C538	ECEA1CU100B	10 16V	C639	ECKR1H122KB5	1200P 50V	C712	ECEA1HU100B	10 50V
C454	ECBT1H100JC5	10P 50V	C539	ECEA1CU100B	10 16V	C640	ECKR1H122KB5	1200P 50V	C713	ECKR1H103ZF5	0.01 50V
C455	ECBT1H102KB5	1000P 50V	C541	ECEA1HU470B	47 50V	C641	ECKR1H223ZF5	0.022 50V	C714	ECEA1EU470B	47 25V
C456	ECBT1H102KB5	1000P 50V	C542	ECEA1HU470B	47 50V	C649	ECEA2AU100B	10 100V	C715	ECEA1CU101B	100 16V
C457	ECEA1AKA330B	33 10V	C551	ECEA1HKA3R3B	3.3 50V	C650	ECEA2AU100B	10 100V	C721	ECQE2104KF3	0.1 250V
C458	ECEA1AKA330B	33 10V	C552	ECEA1HKA3R3B	3.3 50V	C651	ECEA1HN3R3SB	3.3 50V	C722	ECQE2104KF3	0.1 250V
C459	ECFR1E223KR	0.022 25V	C553	ECBT1H101KB5	100P 50V	C652	ECEA1HN3R3SB	3.3 50V	C751	ECKWRS102MBC	0.001 <sup>△</sup> 400V[MAV]
C460	ECFR1E223KR	0.022 25V	C554	ECBT1H101KB5	100P 50V	C653	ECBT1H681KB5	680P 50V	C752	ECKR1H103ZF5	0.01 50V
C461	ECFR1E682KR	6800P 25V	C555	ECBT1H221KB5	220P 50V	C654	ECBT1H681KB5	680P 50V	C753	ECA1EM102B	1000 25V <sup>△</sup>
C462	ECFR1E682KR	6800P 25V	C556	ECBT1H221KB5	220P 50V	C655	ECEA1JU330	33 63V	C754	ECBT1E103ZF5	0.01 25V
C463	ECEA1HU4R7B	4.7 50V	C557	ECBT1E103ZF5	0.01 25V	C656	ECEA1JU330	33 63V	C755	ECEA1CKA470B	47 16V
C464	ECEA1HU4R7B	4.7 50V	C558	ECBT1E103ZF5	0.01 25V	C657	ECCR1H100K5	10P 50V	C758	ECEA1AU101B	100 10V
C465	ECBT1E103ZF5	0.01 25V	C559	ECEA1CKA100B	10 16V	C658	ECCR1H100K5	10P 50V	C771	ECEA1HKA2R2B	2.2 50V
C466	ECBT1E103ZF5	0.01 25V	C560	ECEA1CKA100B	10 16V	C659	ECBT1H221KB5	220P 50V	C772	ECEA1CU100B	10 16V
C469	ECBT1H181KB5	180P 50V	C563	ECBT1H104ZF5	0.1 50V	C660	ECBT1H221KB5	220P 50V	C773	ECBT1E223ZF5	0.022 25V
C470	ECBT1H181KB5	180P 50V	C581	ECEA0JKA101B	100 6.3V	C661	ECQV1H473JZ3	0.047 50V	C774	ECEA0JU221B	220 6.3V
C501	ECFR1E333KR	0.033 25V	C582	ECEA0JKA101B	100 6.3V	C662	ECQV1H473JZ3	0.047 50V	C901	ECEA0JU102B	1000 6.3V
C502	ECFR1E333KR	0.033 25V	C583	ECEA0JKA101B	100 6.3V	C663	ECBT1H681KB5	680P 50V	C902	ECBT1H104ZF5	0.1 50V
C503	ECEA0JKA101B	100 6.3V	C584	ECEA0JKA101B	100 6.3V	C664	ECBT1H681KB5	680P 50V	C903	ECBT1E103ZF5	0.01 25V
C504	ECEA0JKA101B	100 6.3V	C601	ECEA1HN3R3SB	3.3 50V	C667	ECEA1HN3R3SB	3.3 50V	C904	ECEA0JU102B	1000 6.3V
C505	ECFR1C104MR	0.1 16V	C602	ECEA1HN3R3SB	3.3 50V	C668	ECBT1H681KB5	680P 50V	C906	ECEA0JKA101B	100 6.3V
C506	ECFR1C104MR	0.1 16V	C603	ECBT1H681KB5	680P 50V	C669	ECEA1JU330	33 63V	C908	ECBT1E103ZF5	0.01 25V
C511	ECEA1HKA3R3B	3.3 50V	C604	ECBT1H681KB5	680P 50V	C670	ECCR1H100K5	10P 50V	C909	ECEA1VKA220B	22 10V
C512	ECEA1HKA3R3B	3.3 50V	C605	ECEA1JU330	33 63V	C671	ECEA2AU100B	10 100V	C910	ECEA1VKA220B	22 10V
C513	ECBT1H150J5	15P 50V	C606	ECEA1JU330	33 63V	C672	ECEA2AU100B	10 100V	C911	ECEA1VKA220B	22 10V
C514	ECBT1H150J5	15P 50V	C607	ECCR1H100K5	10P 50V	C674	ECQV1H473JZ3	0.047 50V	C912	ECEA1VKA220B	22 10V
C515	ECBT1H221KB5	220P 50V	C608	ECCR1H100K5	10P 50V	C675	ECBT1H681KB5	680P 50V	C913	ECEA1VKA100B	10 10V
C516	ECBT1H221KB5	220P 50V	C609	ECBT1H221KB5	220P 50V	C680	ECBT1H221KB5	220P 50V	C914	ECEA1VKA100B	10 10V
C517	ECBT1H330J5	33P 50V	C610	ECBT1H221KB5	220P 50V	C681	ECEA1HN100SB	10 50V	C916	ECEA1HKA010B	1 50V
C518	ECBT1H330J5	33P 50V	C611	ECQV1H473JZ3	0.047 50V	C682	ECEA1HN100SB	10 50V	C917	ECEA1HKAR47B	0.47 50V
C519	ECEA1VKA4R7B	4.7 10V	C612	ECQV1H473JZ3	0.047 50V	C683	ECBT1C332KR5	3300P 16V	C918	ECEA0JKA221B	220 6.3V
C520	ECEA1VKA4R7B	4.7 10V	C613	ECBT1H681KB5	680P 50V	C684	ECBT1C332KR5	3300P 16V	C919	ECBT1E103ZF5	0.01 25V
C521	ECEA1VKA4R7B	4.7 10V	C614	ECBT1H681KB5	680P 50V	C685	ECBT1E103ZF5	0.01 25V	C920	ECEA1HKA010B	1 50V
C522	ECEA1VKA4R7B	4.7 10V	C615	ECEA1JU330	33 63V	C691	ECKR1H102KB5	1000P 50V	C921	ECBT1H331KB5	330P 50V
C523	ECFR1E123KR	0.012 25V	C616	ECEA2AU100B	10 100V	C692	ECKR1H102KB5	1000P 50V	C922	ECBT1H331KB5	330P 50V
C524	ECFR1E123KR	0.012 25V	C617	ECEA1JU220B	22 63V	C693	ECKR1H102KB5	1000P 50V	C923	ECBT1H331KB5	330P 50V
C525	ECQV1H683JZ3	0.068 50V	C618	ECEA2AN2R2SB	2.2 100V	C694	ECKR1H102KB5	1000P 50V	C924	ECBT1H331KB5	330P 50V

Ref No	Part No.	Values & Remarks	Ref No	Part No.	Values & Remarks	Ref No	Part No.	Values & Remarks	Ref No	Part No.	Values & Remarks
C925	ECBT1H331KB5	330P 50V	C1034	ECQV1H474JZ3	0.47 50V						
C926	ECBT1H331KB5	330P 50V	C1035	ECBT1H681KB5	680P 50V						
C927	ECBT1H331KB5	330P 50V	C1036	ECBT1H101KB5	100P 50V						
C928	ECBT1H331KB5	330P 50V	C1037	ECBT1H101KB5	100P 50V						
C929	ECBT1H331KB5	330P 50V	C1038	ECBT1H101KB5	100P 50V						
C930	ECBT1H331KB5	330P 50V	C1039	ECEA1CU101B	100 16V						
C931	ECBT1H101KB5	100P 50V	C1040	ECEA1CKA100B	10 16V						
C932	ECBT1E103ZF5	0.01 25V	C1041	ECBT1E103ZF5	0.01 25V						
C934	ECBT1H101KB5	100P 50V	C1043	ECEA1CKA100B	10 16V						
C941	ECBT1E103ZF5	0.01 25V	C1044	ECEA1CKA100B	10 16V						
C948	ECBT1E103ZF5	0.01 25V	C1051	ECEA1HKA2R2B	2.2 50V						
C951	ECBT1H101KB5	100P 50V	C1052	ECEA1HKA010B	1 50V						
C952	ECBT1H330J5	33P 50V	C1053	ECEA1HKA3R3B	3.3 50V						
C953	ECBT1H101KB5	100P 50V	C1054	ECEA0JU221B	220 6.3V						
C955	ECBT1H101KB5	100P 50V	C1055	ECEA1HKA010B	1 50V						
C956	ECBT1H101KB5	100P 50V	C1056	ECFR1E563KR	0.056 25V						
C1001	ECEA1HKA010B	1 50V	C1057	ECFR1E152KR	1500P 25V						
C1002	ECEA1HKA010B	1 50V	C1058	ECFR1E563KR	0.056 25V						
C1003	ECEA1HKA3R3B	3.3 50V	C1059	ECEA1CKA101B	100 16V						
C1004	ECEA1HKA3R3B	3.3 50V	C1060	ECBT1E223ZF5	0.022 25V						
C1005	ECEA1HKA010B	1 50V	C1062	ECBT1E223ZF5	0.022 25V						
C1007	ECFR1E223KR	0.022 25V	C1063	ECEA1CKA101B	100 16V						
C1008	ECFR1E473KR	0.047 25V	C1064	ECEA1HKA010B	1 50V						
C1009	ECEA0JU221B	220 6.3V	C1065	ECBT1H681KB5	680P 50V						
C1010	ECEA1CKA100B	10 16V	C1067	ECBT1C152KR5	1500P 16V						
C1011	ECEA1CKA100B	10 16V	C1068	ECBT1C152KR5	1500P 16V						
C1012	ECEA1CKA100B	10 16V	C1081	ECEA1HKA010B	1 50V						
C1013	ECEA1CKA100B	10 16V	C1082	ECBT1E223ZF5	0.022 25V						
C1014	ECEA0JU221B	220 6.3V	C1151	ECEA1CKA100B	10 16V						
C1015	ECQV1H104JZ3	0.1 50V	C1152	ECFR1C393KR	0.039 16V						
C1016	ECQV1H104JZ3	0.1 50V	C1153	ECFR1C393KR	0.039 16V						
C1017	ECEA1HKAR47B	0.47 50V	C1154	ECEA1CKA220B	22 16V						
C1018	ECEA1HKA4R7B	4.7 50V	C1155	ECBT1E103ZF5	0.01 25V						
C1019	ECEA1HKAR47B	0.47 50V	C1156	ECBT1E103ZF5	0.01 25V						
C1020	ECEA1HKA4R7B	4.7 50V	C1157	ECBT1E103ZF5	0.01 25V						
C1021	ECEA1HKAR15B	0.15 50V	C1158	ECBT1H101KB5	100P 50V						
C1022	ECEA1HKA3R3B	3.3 50V	C1159	ECEA1HKA3R3B	3.3 50V						
C1023	ECQV1H154JZ3	0.15 50V	C1160	ECEA1HKA3R3B	3.3 50V						
C1024	ECQV1H154JZ3	0.15 50V	C1161	ECBT1H101KB5	100P 50V						
C1025	ECEA1HKA3R3B	3.3 50V									
C1026	ECEA1HKAR15B	0.15 50V									
C1027	ECEA1HKA4R7B	4.7 50V									
C1028	ECEA1HKAR47B	0.47 50V									
C1029	ECEA1HKA4R7B	4.7 50V									
C1030	ECEA1HKAR47B	0.47 50V									
C1031	ECQV1H104JZ3	0.1 50V									
C1032	ECQV1H104JZ3	0.1 50V									
C1033	ECEA0JKA470B	47 6.3V									

## Packing Materials & Accessories

**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 in the Remarks columns specify the areas. (Refer to the cover page for area.)

Parts without these indication can be used for all areas.

\* [M] in Remarks column indicates parts that are supplied by MESA.

\* [MAV] in Remarks column indicates parts that are supplied by MAV.

\* Remote Control Unit : Supply period for three years from terminal of production.

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

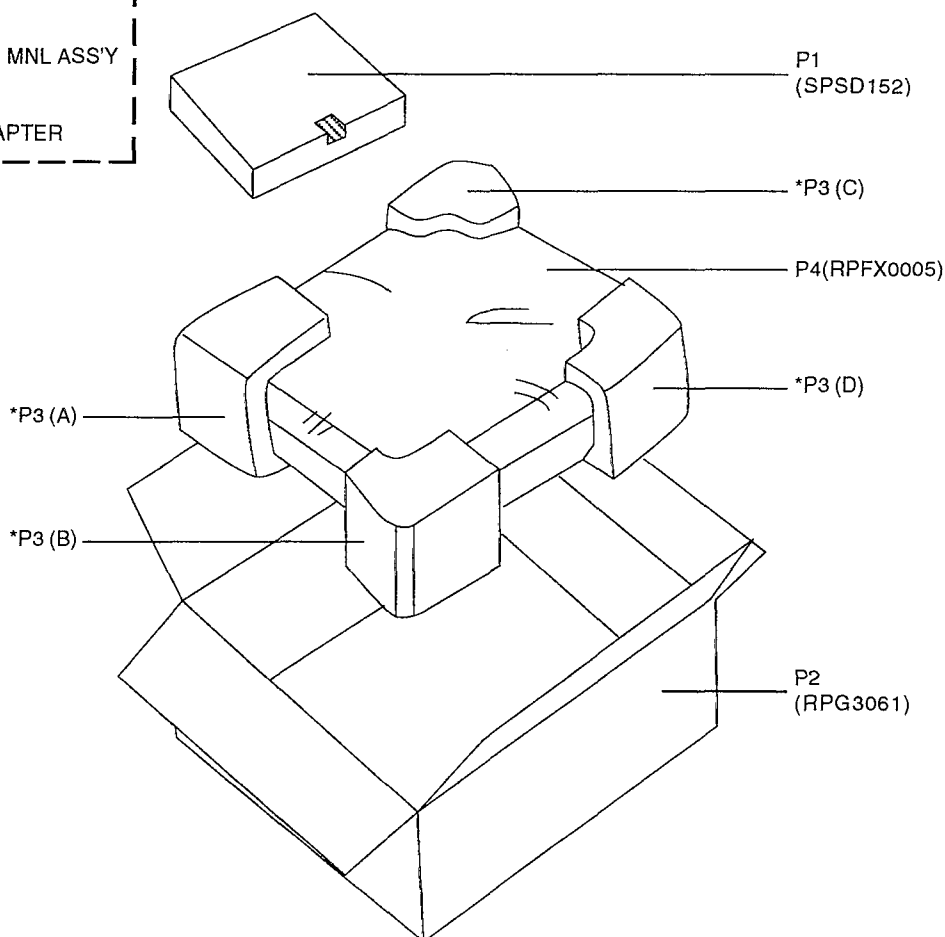
\* [VRD] in Part Name & Description column indicates parts that are supplied by Video Recorder Division.

Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks	Ref No	Part No.	Part Name & Description	Remarks
		<b>PACKING MATERIALS</b>				<b>ACCESSORIES</b>		A3	VJA0733	AC CORD [VRD](SF)(EB) $\Delta$	
P1	SPSD152	ACCESSORY CASE		A1	RAK-SA612WHP	REMOTE CONTROL [MAV]		A4	RSA0007	FM ANTENNA	
P2	RPG3061	PACKING CASE	[MAV]	A1-1	RKK0020	BATTERY COVER(R/C)		A5	RFKSAEX700EB	INST. MANUAL ASS'Y [MAV](EB)	
P3	RPN0966	POLY FOAM	[MAV]	A2	RSA0010	AM LOOP ANT		A5	RFKSAEX700EG	INST. MANUAL ASS'Y [MAV](EG)	
P4	RPFX0005	MIRAMAT SHEET	[M]	A3	RJA0019-2K	AC CORD (SF)(E,EG) $\Delta$		A5	RFKSAEX700EK	INST. MANUAL ASS'Y [MAV](E)	
								A6	SJP9009	ANT ADAPTER (EB) $\Delta$	

## Packaging

P1 (SPSD152) : ACCESSORY BOX

A1 (RAK-SA612WHP)	: REMOTE CONTROL
A2 (RSA0010)	: AM LOOP ANTENNA
A3 (RJA0019-2K... E/EG)	: AC CORD
(VJA0733 ... EB)	
A4 (RSA0007)	: FM ANTENNA
A5 (RFKSAEX700EB ... EB)	: INSTRUCTION MNL ASS'Y
(RFKSAEX700EG ... EG)	
(RFKSAEX700EK ... E)	
A6 (SJP9009 ... EB)	: ANTENNA ADAPTER



P3 (RPN0966)

- \*P3 (A)
- \*P3 (B)
- \*P3 (C)
- \*P3 (D)

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