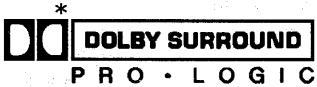
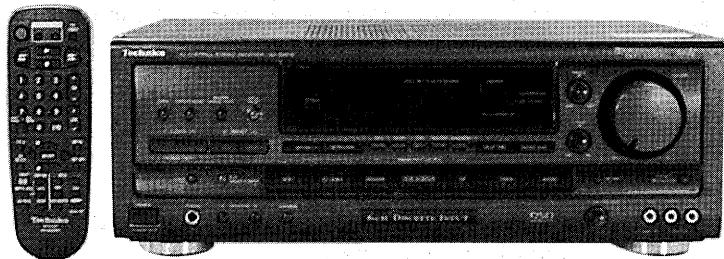


# Service Manual

AV Control Stereo Receiver



Receiver



SA-AX810

Colour

(K) ..... Black Type

## Area

Suffix for Model No.	Area	Colour
(P)	U.S.A.	(K)

\* 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 trade marks of Dolby Laboratories Licensing Corporation.

## ■ Specifications

### ■ FM Tuner Section

Frequency range	87.9 — 107.9MHz
Sensitivity	11.2dBf (2μV, IHF '58)
50dB quieting Sensitivity	
MONO	18.3dBf (4.5μV, IHF '58)
STEREO	38.3dBf (45μV, IHF '58)
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	75dB
STEREO	70dB
Frequency response	20Hz — 15kHz (+1dB, -2dB)
Alternate channel selectivity	65dB
Capture ratio	1dB
Image rejection at 98MHz	44dB
IF rejection at 98MHz	80dB
Spurious response rejection at 98MHz	75dB
AM suppression	50dB
Stereo separation	
1 kHz	40dB
10kHz	30dB
Carrier leak	
19kHz	-35dB
38kHz	-50dB
Antenna terminal(s)	75Ω (unbalanced)

### ■ AM Tuner Section

Frequency range	530 — 1710kHz
Sensitivity	20μV, 330μV/m
Selectivity	55dB
Image rejection at 1000kHz	40dB
IF rejection at 1000kHz	60dB

### ■ Video Section

Output voltage at 1 V input (unbalanced)	1±0.1Vp-p
Maximum input voltage	1.5Vp-p
Input/output impedance	75Ω

### ■ Amplifier Section

Rated minimum sine wave RMS power output	
20 Hz-20 kHz both channels driven	120W per channel (8Ω)
0.05% total harmonic distortion	
1 kHz continuous power output, both channels driven 0.05% total harmonic distortion	125W per channel (8Ω)
Total harmonic distortion	
Rated power at 20 Hz — 20kHz	0.05% (8Ω)
Half power at 1 kHz	0.03% (8Ω)
Power output at the Dolby Pro Logic operation	
0.9% at 1 kHz,	
Front	2X100 W (8Ω)
Center	100 W (8Ω)
Surround	2X100 W (8Ω)
Low frequency damping factor	30 (8Ω)
Load impedance	
Front	
A or B	4-8Ω
A and B	8Ω
Center	
Surround	8Ω
Dynamic headroom	2dB (8Ω)
SMPTE intermodulation distortion	0.3%
Frequency response	
PHONO	RIAA standard curve ± 0.8dB
CD, TAPE, TV/VCR 2, VCR 1, DVD/DSS	7Hz — 70kHz, ± 3dB
Input sensitivity	
PHONO	0.4mV (3mV, IHF '66)
CD, TAPE, TV/VCR 2, VCR 1, DVD/DSS	27mV (200mV, IHF '66)
S/N(IHF A)	
PHONO	70dB (80dB, IHF '66)
CD, TAPE, TV/VCR 2, VCR 1, DVD/DSS	75dB (85dB, IHF '66)
Input impedance	
PHONO	47kΩ
CD, TAPE, TV/VCR 2, VCR 1, DVD/DSS	22kΩ
Tone controls	
BASS	50Hz, +10 to -10dB
TREBLE	20kHz, +10 to -10dB
Subwoofer frequency response	7Hz — 100Hz, ±3dB
Loudness control (volume at -30dB)	50Hz, +9dB

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# Technics®

**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.

**■ General**

<b>Power consumption</b>	290W (In standby condition : 2W)
<b>Power supply</b>	AC 120V, 60Hz
<b>Dimensions (W x H x D)</b>	430 x 158 x 312 mm (16 <sup>15</sup> / <sub>16</sub> " x 6 <sup>7</sup> / <sub>32</sub> " x 12 <sup>9</sup> / <sub>32</sub> ")
<b>Weight</b>	9.5kg (20.9lb.)

**Notes :**

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

**■ Contents**

PAGE	PAGE
• SAFETY PRECAUTION.....	2
• BEFORE REPAIR AND ADJUSTMENT.....	2
• PROTECTION CIRCUITRY.....	2
• OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT	3 ~ 7
• FAN MOTOR TROUBLESHOOTING.....	8
• TROUBLESHOOTING.....	9 ~ 12
• BLOCK DIAGRAM.....	13 ~ 17
• TERMINAL FUNCTIONS OF ICs.....	18
• TERMINAL GUIDE OF ICs, TRANSISTORS & DIODES .....	19
• SCHEMATIC DIAGRAM.....	20 ~ 36
• PRINTED CIRCUIT BOARD .....	37 ~ 43
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• CABINET PARTS LOCATION.....	45
• REPLACEMENT PARTS LIST.....	46 ~ 49
• RESISTORS & CAPACITORS.....	49 ~ 54
• PACKAGING.....	55

**■ Safety Precaution**

( This "Safety Precaution" is applied only in U.S.A.)

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

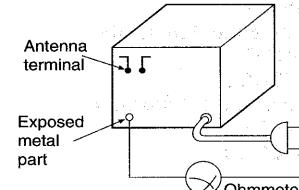


Fig. 1  
Resistance = 3MΩ - 5.2MΩ

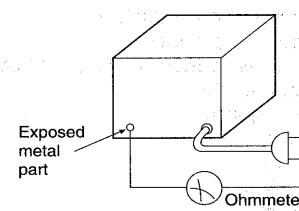


Fig. 2  
Resistance = Approx ∞

**■ INSULATION RESISTANCE TEST**

1. Unplug the power cord and short the two prongs of the plug with a jumper wire .
2. Turn on the power switch .
3. Measure the resistance value with ohmmeter between the jumper AC plug and each exposed metal cabinet part ,such as screwheads, antenna ,control shafts ,handle brackets , etc . Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts\* .(Fig. 1 ) Equipment without antenna terminals should read approximately infinity to all exposed parts . (Fig. 2 )
- \*Note :Some exposed parts may be isolated from the chassis by design. These will read infinity .
4. If the measurement is outside the specified limits ,there is a possibility of a shock hazard .The equipment should be repaired and rechecked before it is returned to the customer .

**■ 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 120 V, 60Hz in NO SIGNAL mode should be 500 ~ 1000 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.

## ■ Operation Checks and Main Component Replacement Procedures

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

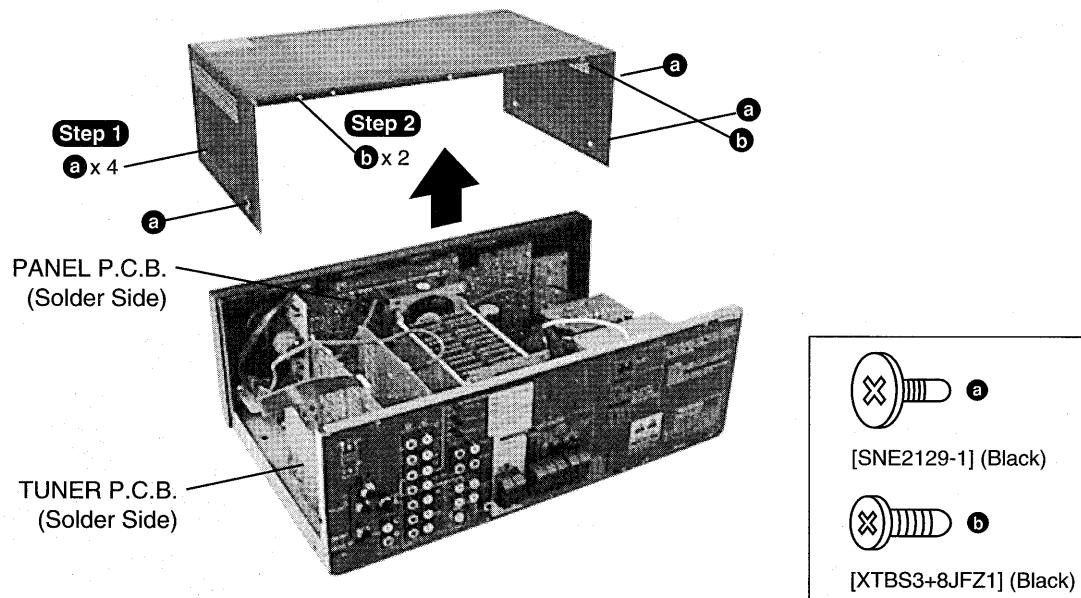
1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.
3. Select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

- **Contents**

• Checking Procedure For Each Major P.C.B. ....	page
• Main Component Replacement Procedures .....	5 ~ 7

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

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



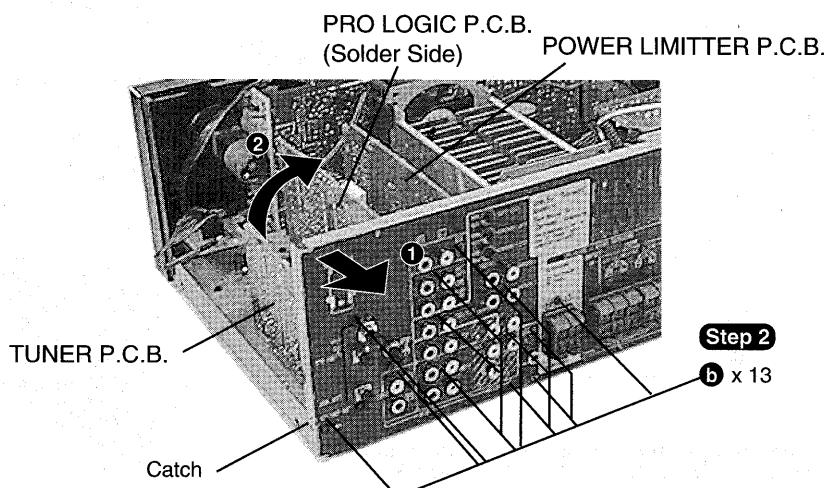
#### 2. Checking of the Pro Logic P.C.B. and Power Limitter P.C.B.

**Step 1**

Remove the top cabinet.

**Step 3**

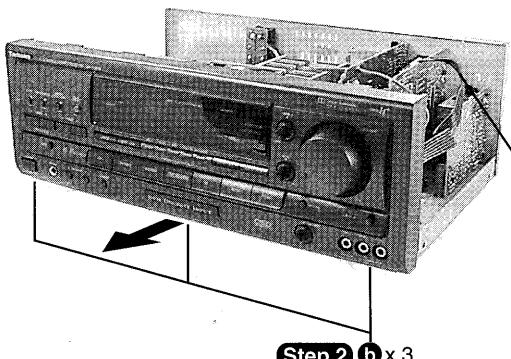
Release the catch, pull the rear panel in the direction of arrow ① and simultaneously remove the tuner P.C.B. in the direction of arrow ②.



**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.

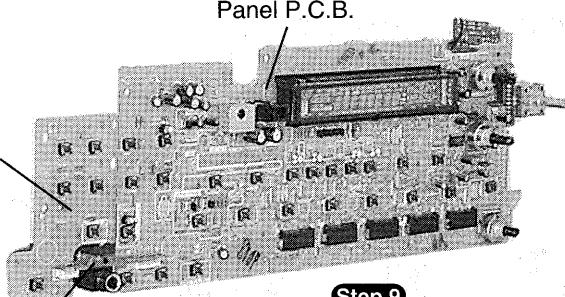
**Step 3**

Remove the connector

CN351.

**Step 4**

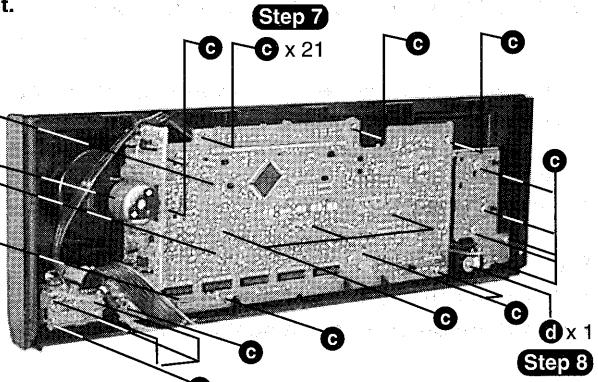
Remove the front panel in P.C.B.  
the direction of arrow.



Headphone Jack P.C.B.

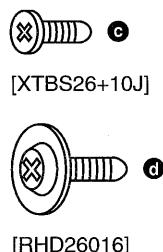
**Step 5**

Remove the Volume Knob and Nut.

**Step 6**

Pull out 3 knobs.

Panel P.C.B.

**Step 9**

Pull out the Headphone Jack P.C.B.

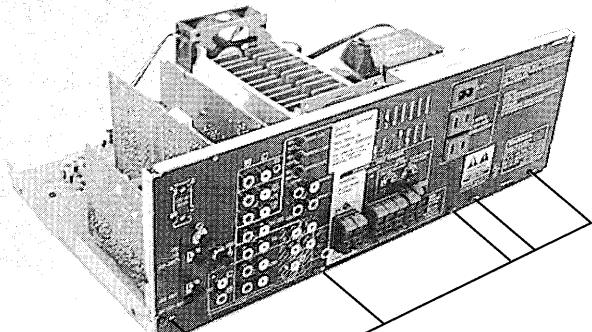
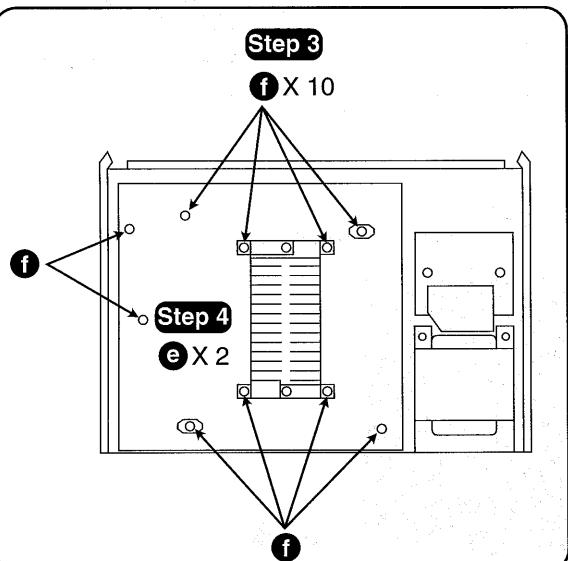
**3. Checking of the MAIN P.C.B.**

**Step 1**

Remove the top cabinet.

**Step 2**

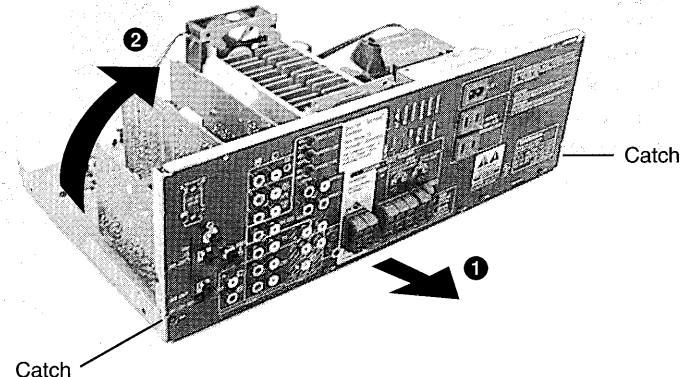
Remove the front panel.

**Step 5**

b x 5

**Step 7**

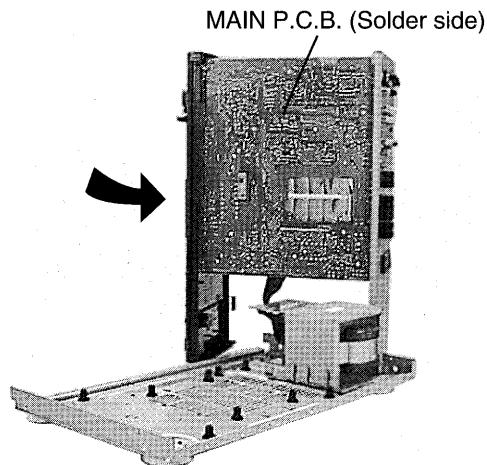
Lift the rear panel in the direction of arrow ②.

**Step 6**

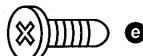
Release 2 catches and pull the rear panel in the direction of arrow ① for about 10mm. (Note : Main, Tuner and Pro Logic P.C.B. are attach to the rear panel)

**Step 8**

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



- Check the Main P.C.B. as shown •



[XTB3+8FFZ] (Black)



[XTB3+20JFZ] (Black)

## ■ Main Component Replacement Procedures

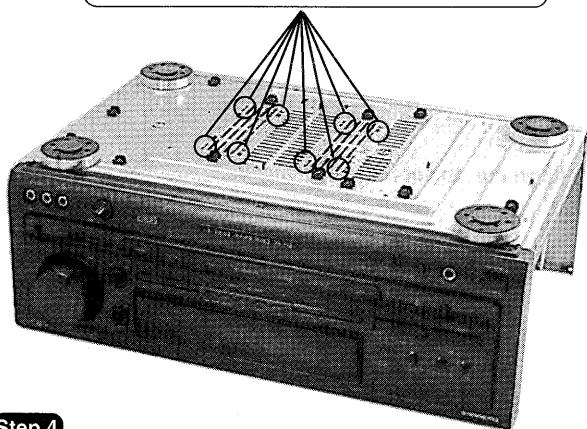
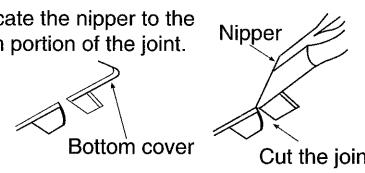
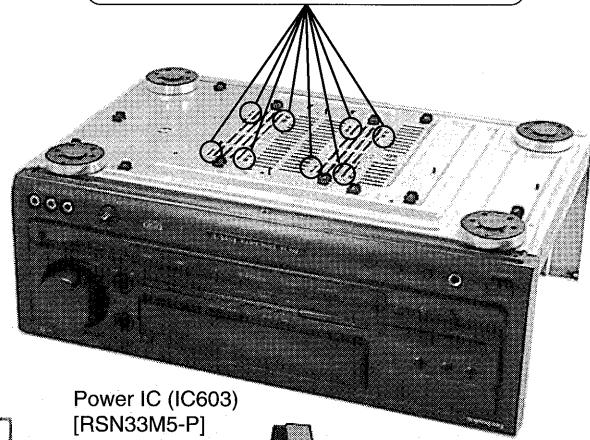
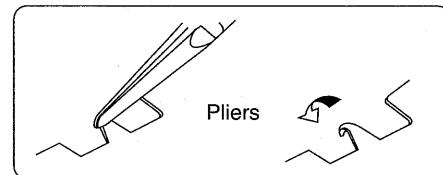
### 1. Replacement of the Power IC and Regulator Transistor

**Step 1**

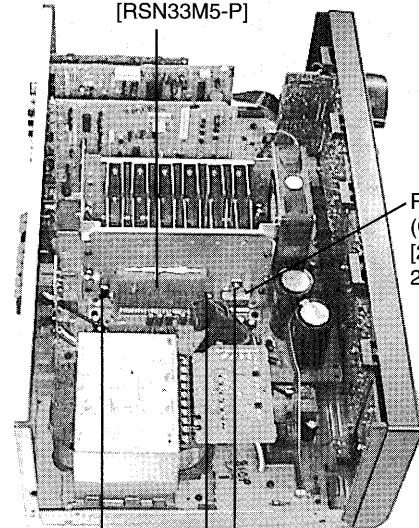
Remove the top cabinet.

**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)**

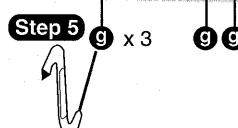
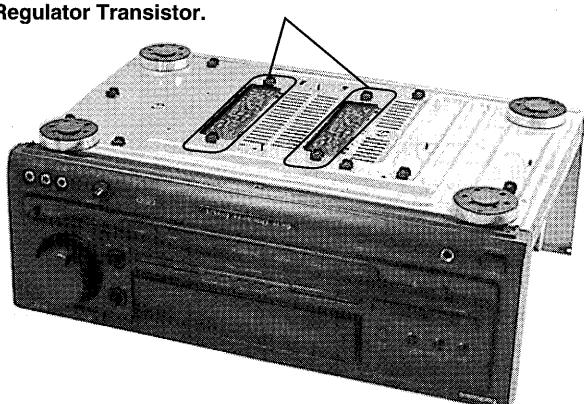
Power IC (IC603)  
[RSN33M5-P]

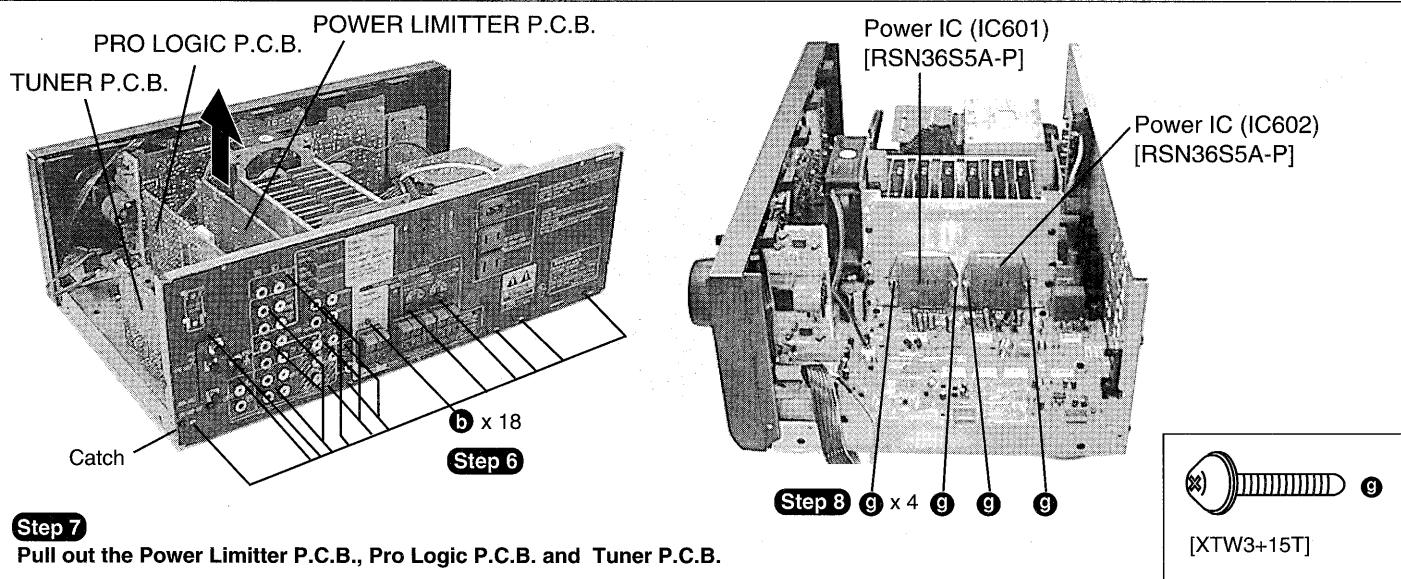


Regulator transistor  
(Q701,Q708)  
[2SD2374PQAU,  
2SB1548PQAU]

**Step 4**

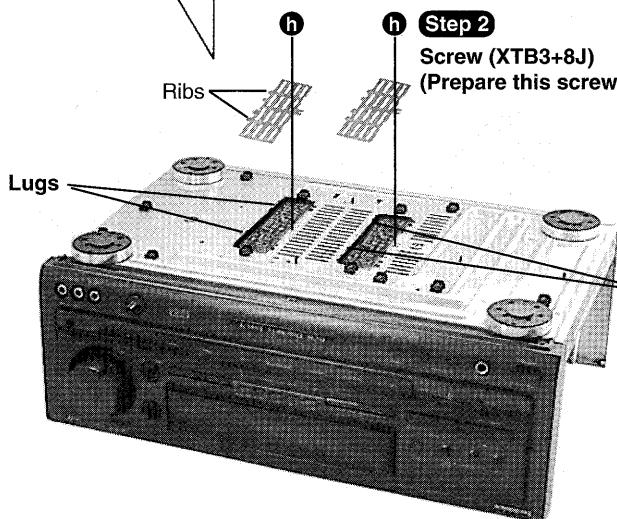
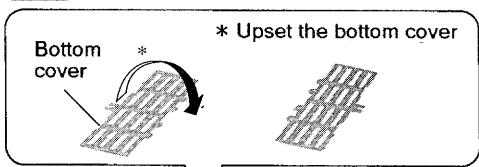
Desolder the terminals of Power IC and Regulator Transistor.



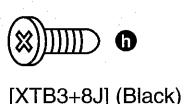
**Step 7**

Pull out the Power Limitter P.C.B., Pro Logic P.C.B. and Tuner P.C.B.

### Installation of the bottom cover after replacement

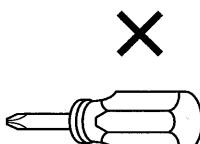
**Step 1****Step 2**

Align the ribs of bottom cover into the lugs.

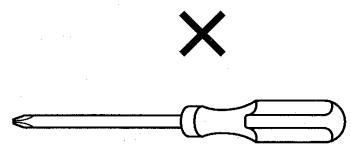


### CAUTION

- 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).
  - Tighten enough the screws (g) after replacing the power IC and regulator transistor. Otherwise, the heat radiation works little.
  - 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. and transformer.(See Fig.1 & 3)
  - A short straight screwdriver may be used for removal, but cannot be used for mounting because the limited space in the unit will not allow sufficient tightening torque.(See Fig.2 & 3)



**Fig.2**



**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.

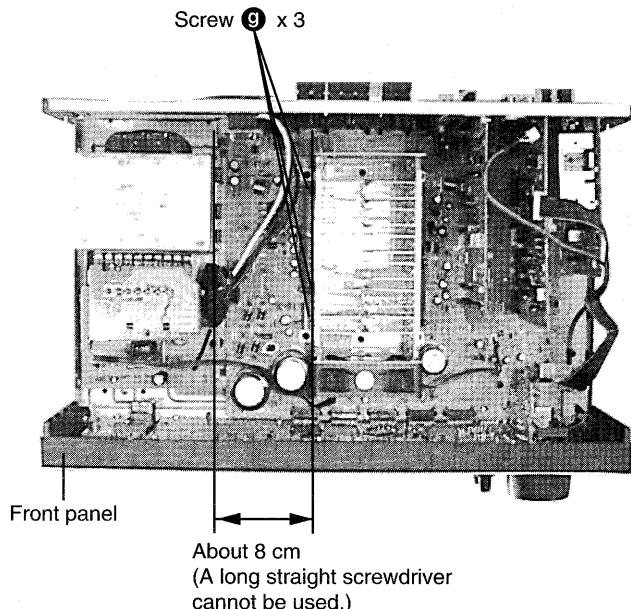
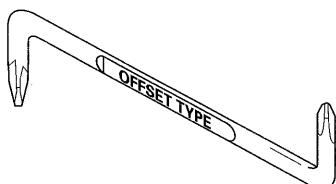


Fig.3

**—OFFSET SCREWDRIVER—**

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



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

- 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  
Nunweddin 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 Bangkaew  
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  
539PD  
England  
Fax: 44-742-739-038  
Phone: 44-742-768-888

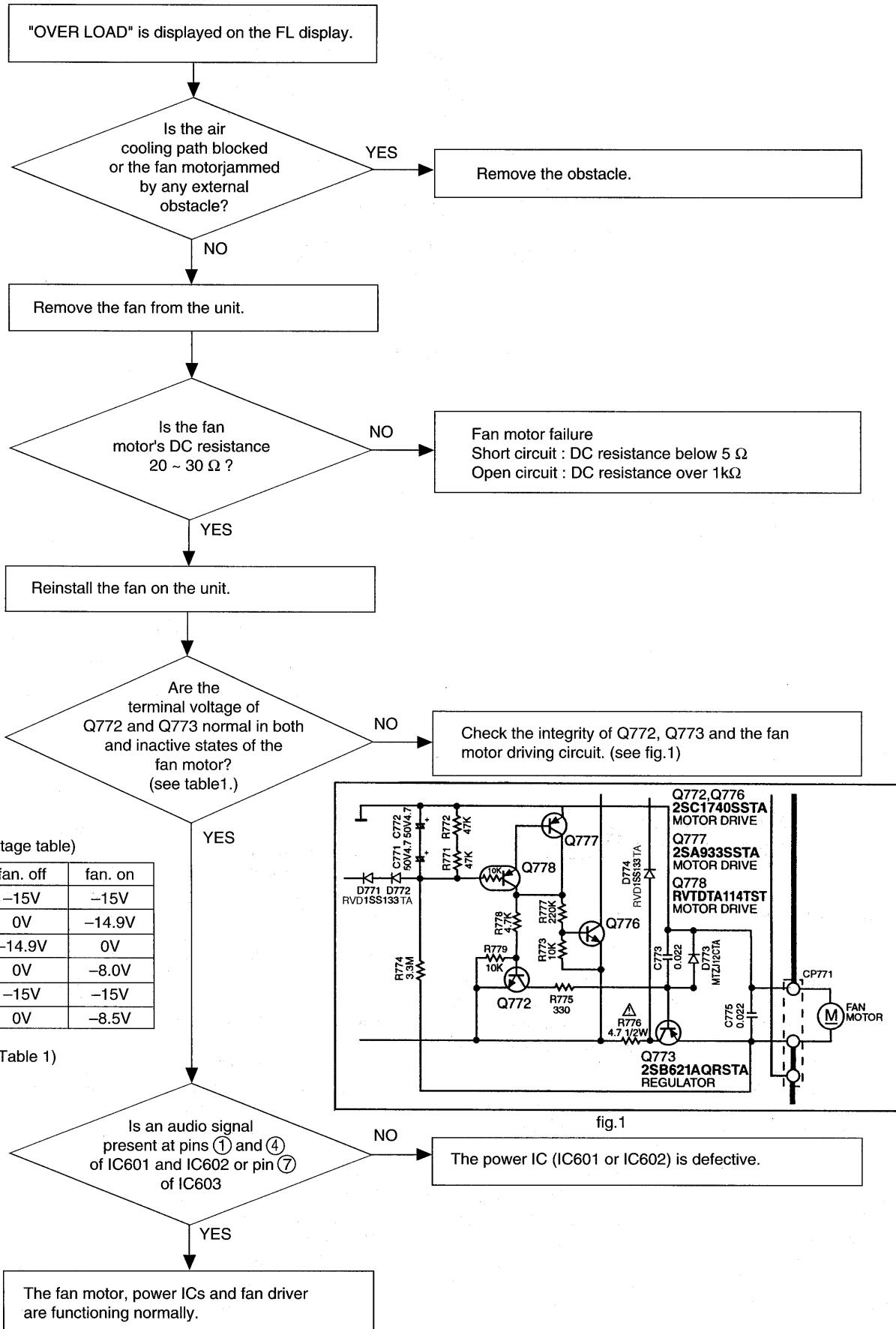
Canada  
Stanley-Proto Canada  
1100 Corporate Drive  
Burlington, Ontario  
Canada, L7L 5R6  
Fax: 416-335-0075  
Phone: 416-335-0075

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

## ■ Fan Motor Troubleshooting

The Model SA-AX810 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.

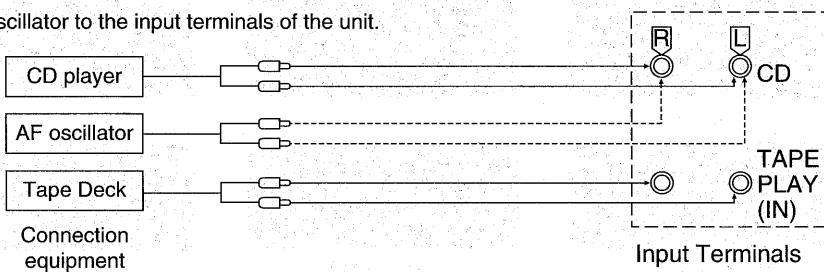


## ■ Troubleshooting

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

### CONNECTION

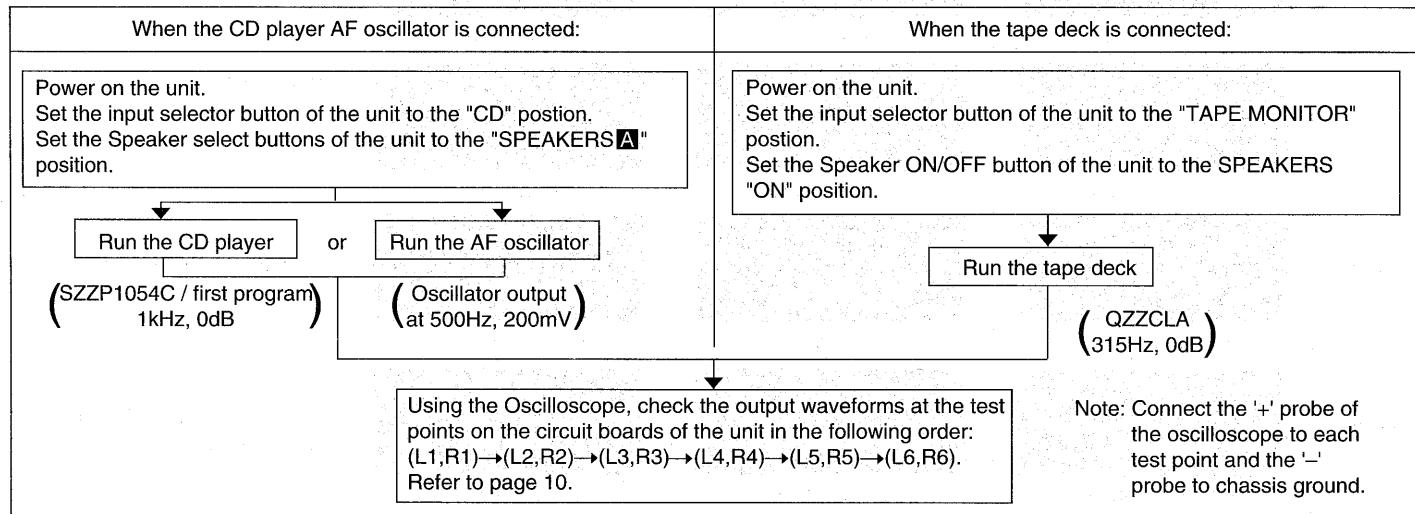
Connect either a CD player, tape deck or AF oscillator to the input terminals of the unit.



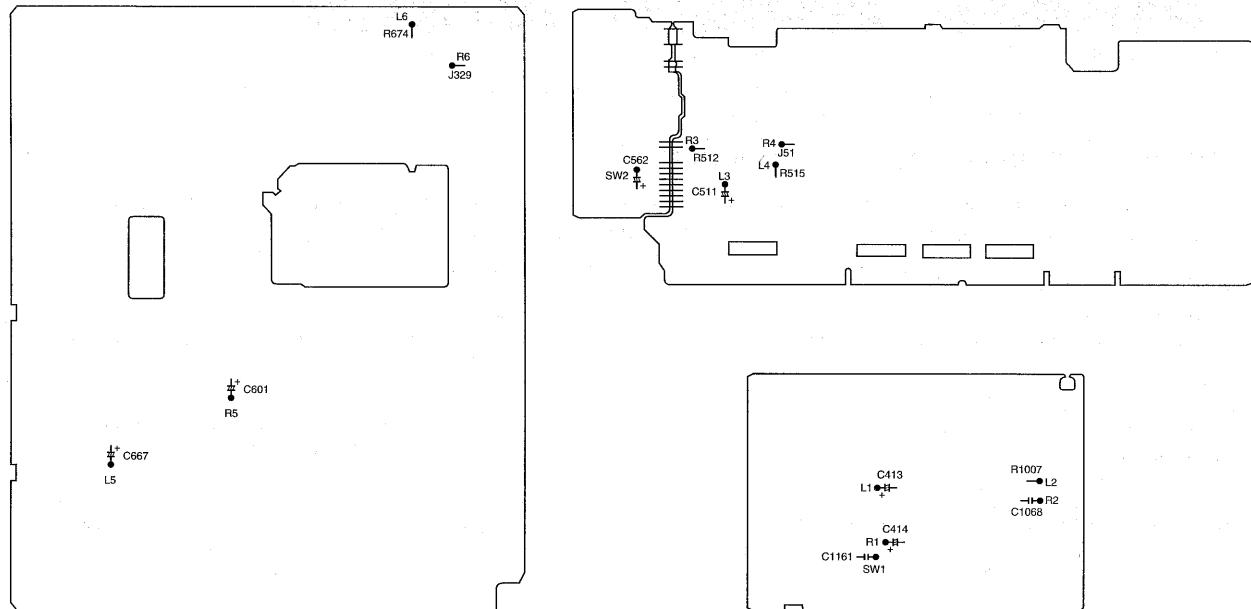
### REQUIRED ITEMS

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

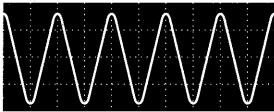
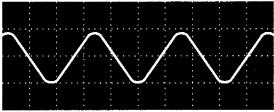
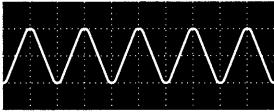
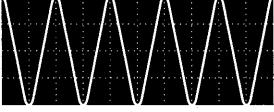
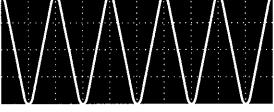
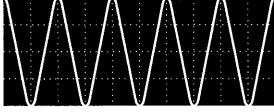
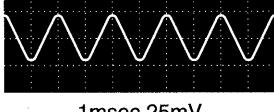
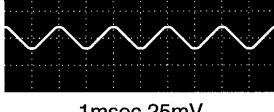
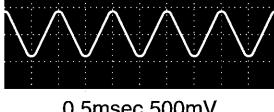
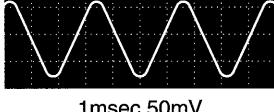
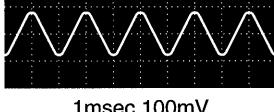
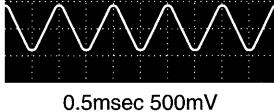
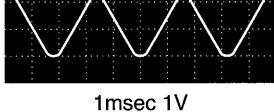
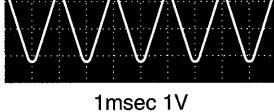
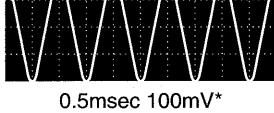
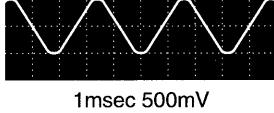
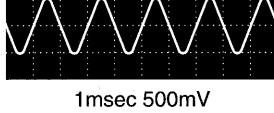
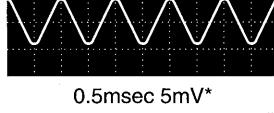
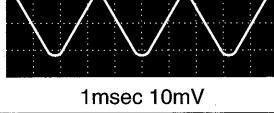
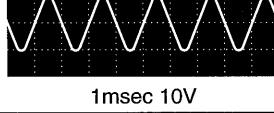
### TEST PROCEDURE FOR AMPLIFIER CIRCUIT



### TEST POINTS POSITIONS OF AMPLIFIER CIRCUIT



## NORMAL WAVEFORMS OF AMPLIFIER CIRCUIT AND LIKELY FAULTY BLOCKS

TP	CD	TAPE	AF oscillator	Likely faulty block if the normal waveform shown at the left is not present.
L1/R1	 0.5msec 2V	 1msec 500mV	 1msec 500mV	Input selector block IC401 & area
SW1	 0.5msec 0.1V	 1msec 20mV	 1msec 20mV	Sub-Woofe amplifier IC1151 & area
L2/R2	 0.5msec 2V	 1msec 500mV	 1msec 500mV	Dolby pro logic block IC1001 and IC1002 & area
SW2	 1msec 25V	 1msec 25mV	 1msec 25mV	Master volume block VR501 & area
L3/R3	 0.5msec 500mV	 1msec 50mV	 1msec 100mV	Master volume block VR501 & area
L4/R4	 0.5msec 500mV	 1msec 1V	 1msec 1V	Tone control block IC511 & area
L5/R5	 0.5msec 100mV*	 1msec 500mV	 1msec 500mV	Power limiter block Q581 to Q584 & area
L6/R6	 0.5msec 5mV*	 1msec 10mV	 1msec 10V	Main amplifier block IC601 & area

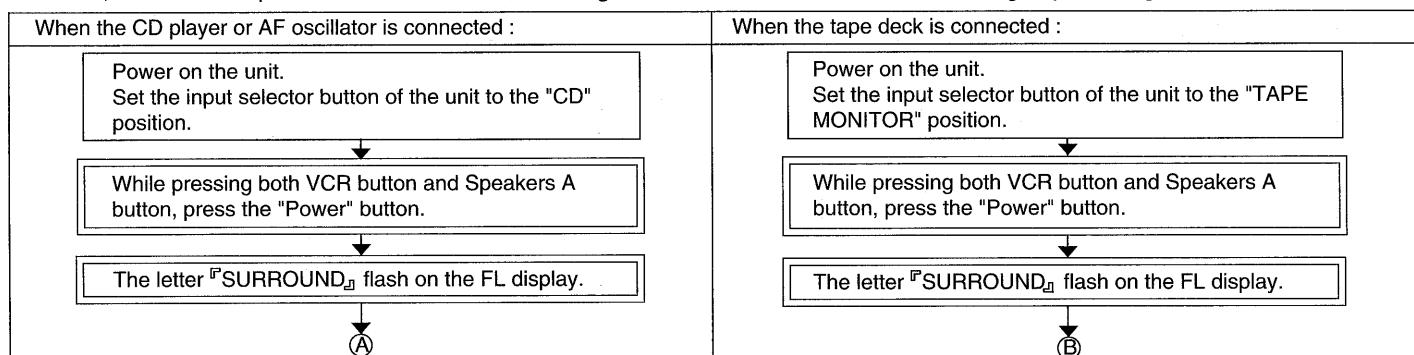
Measurement conditions. Volume control (VR501), Treble control (VR512) and Bass control (VR511) positions :

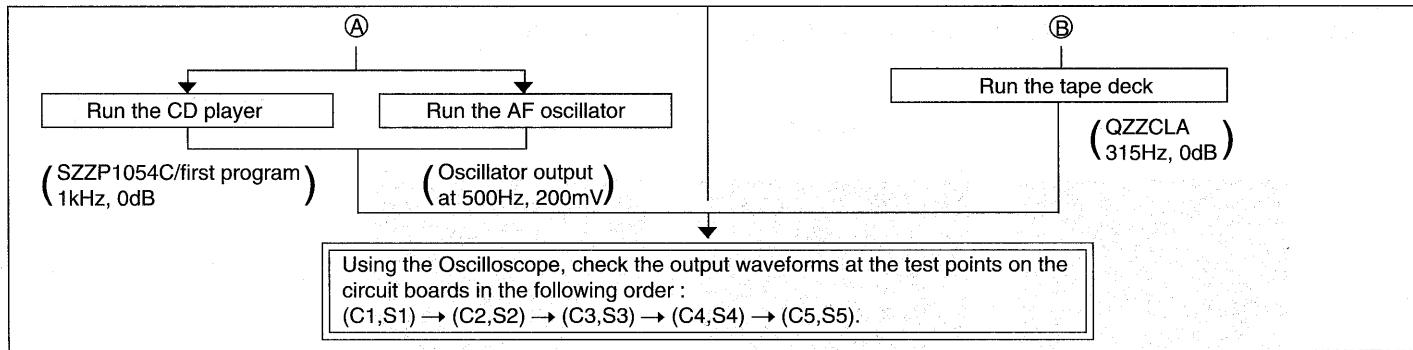
\*Volume control position (VR501) for these test



## CHECKING PROCEDURE FOR SURROUND CIRCUIT

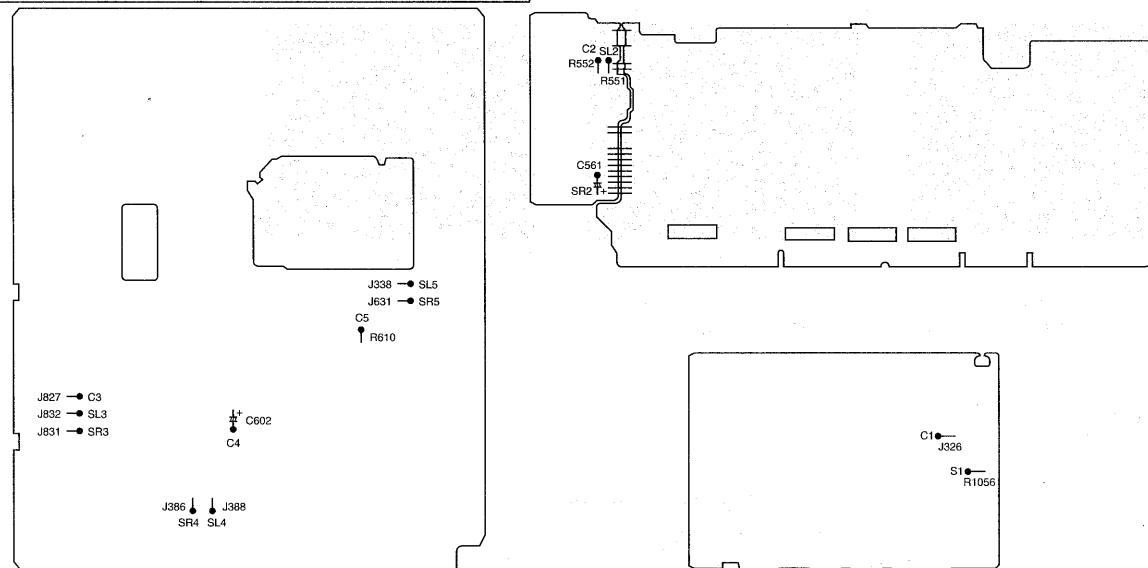
Outputting surround signal normally requires that opposite phase signals be applied to both the left and right channels. However, this unit incorporates a service mode, allowing the surround circuit to be tested using in-phase signals.





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

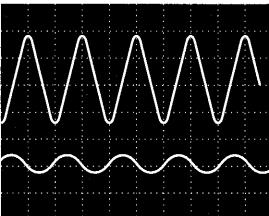
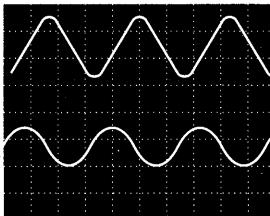
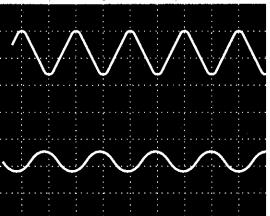
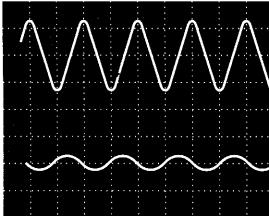
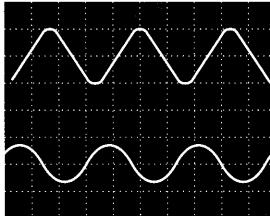
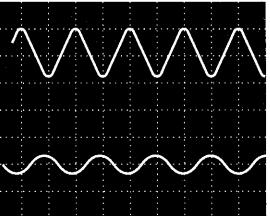
#### TEST POINTS POSITIONS OF SURROUND CIRCUIT



#### 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				
0.5msec 1V	1msec 100mV	1msec 200mV		
C2				Master volume block VR501 & area
SL2/SR2				
0.5msec 200mV	1msec 20mV	1msec 50mV		
C3				Tone control block IC551 & area
SL3/SR3				
0.5msec 200mV*	1msec 500mV	1msec 1V		

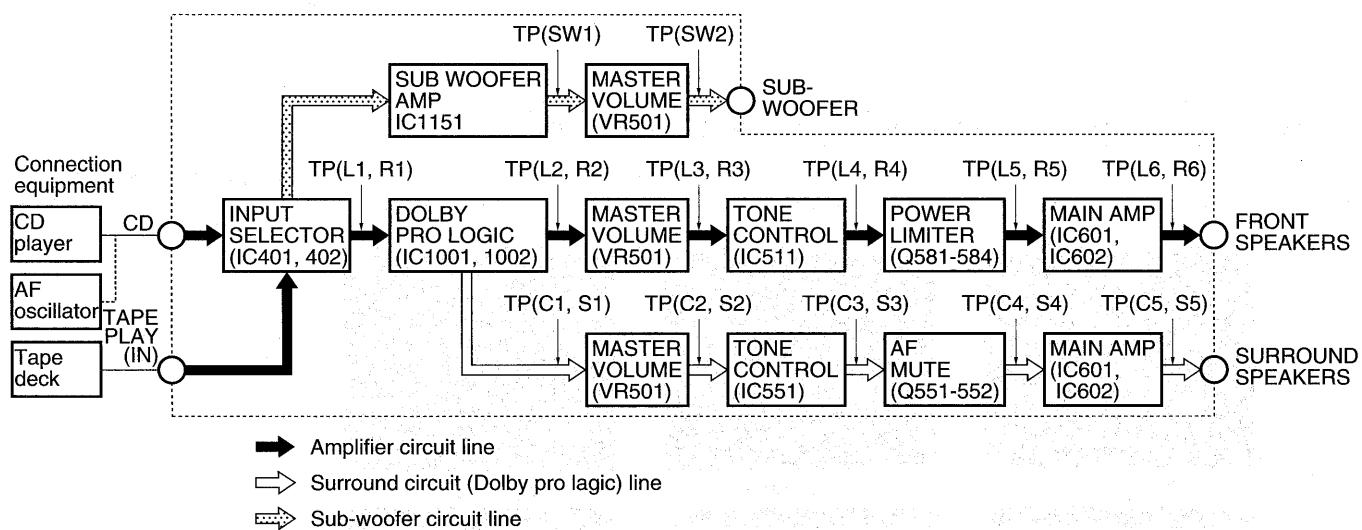
## NORMAL WAVEFORMS OF AMPLIFIER CIRCUIT AND LIKELY FAULTY BLOCKS

TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at the left is not present.
C4 SL4/SR4	 0.5msec 200mV*	 1msec 500mV	 1msec 1V	Power limiter block Q551 to Q552 & area
C5 SL5/SR5	 0.5msec 5V*	 1msec 10V	 1msec 1V*	Main amplifier block IC601, IC602 & area

Measurement conditions. Volume control (VR501), Tremble control (VR512) and Bass control (VR511) positions: 

\*Volume control position (VR501) for these test 

## CIRCUIT BLOCKS



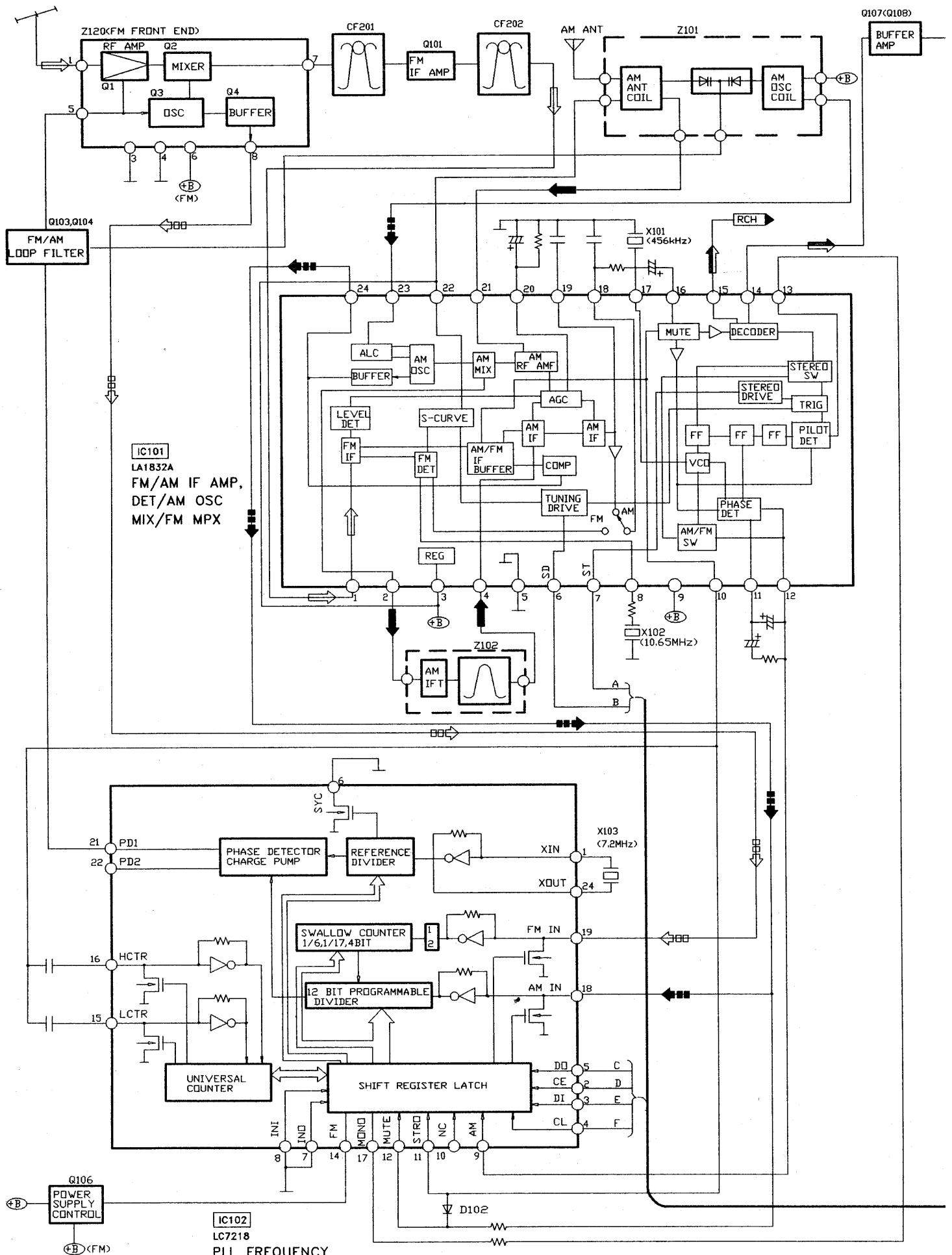
## ■ OVERLOAD DETECTION FUNCTION

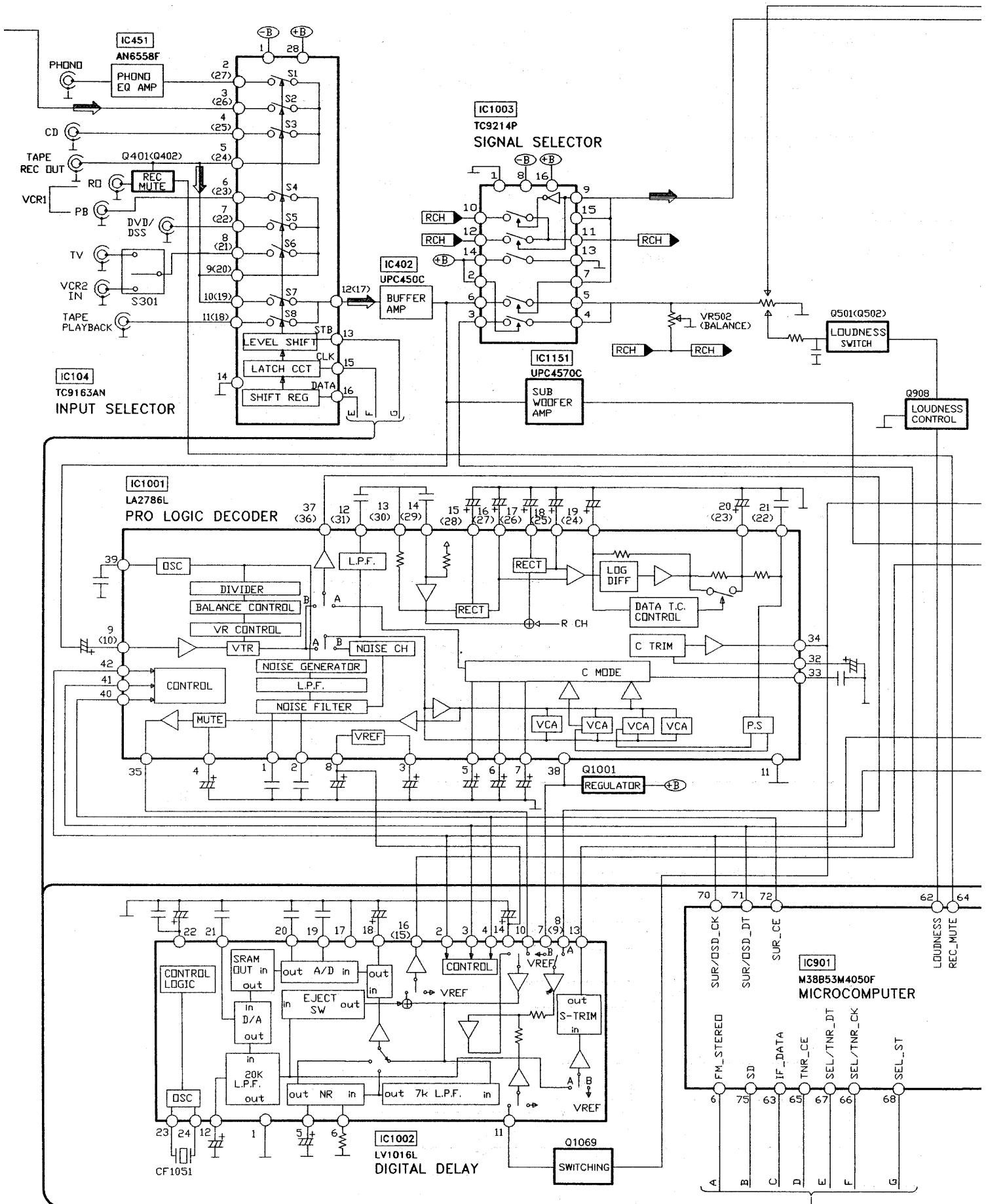
The HIC protection circuit functions if any cord at a speaker terminal is short-circuited or if the unit overheats because of improper operation. At the same time, "OVERLOAD" scrolls across the FL display.

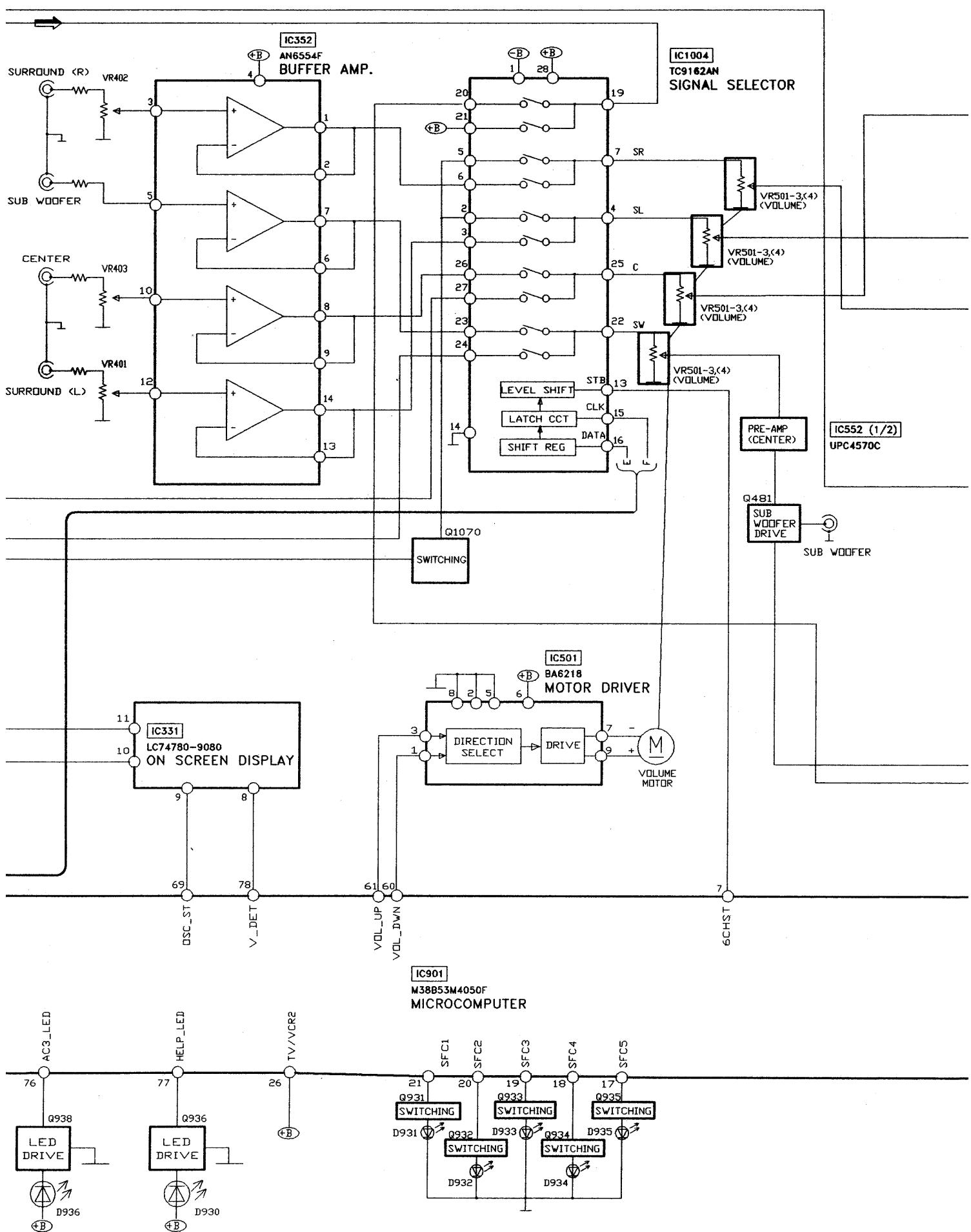
In this state, all keys remain in operative; if any key is pressed, "SWITCH OFF POWER" scrolls across the FL display.

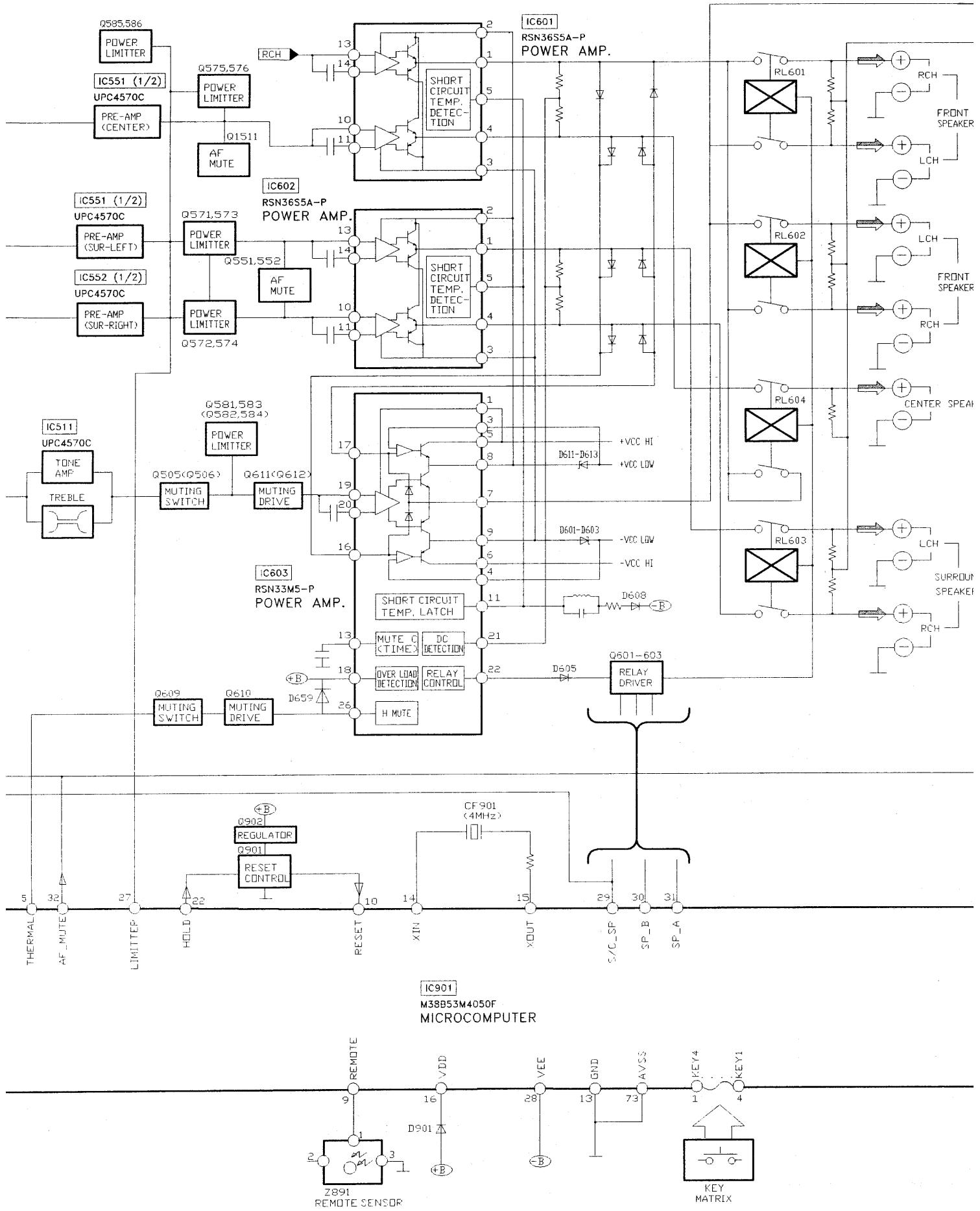
If an overload occurs, immediately power off the unit and check the speaker connection, venting holes and cooling fans. After fixing any faults, power on the unit again and check for proper operation.

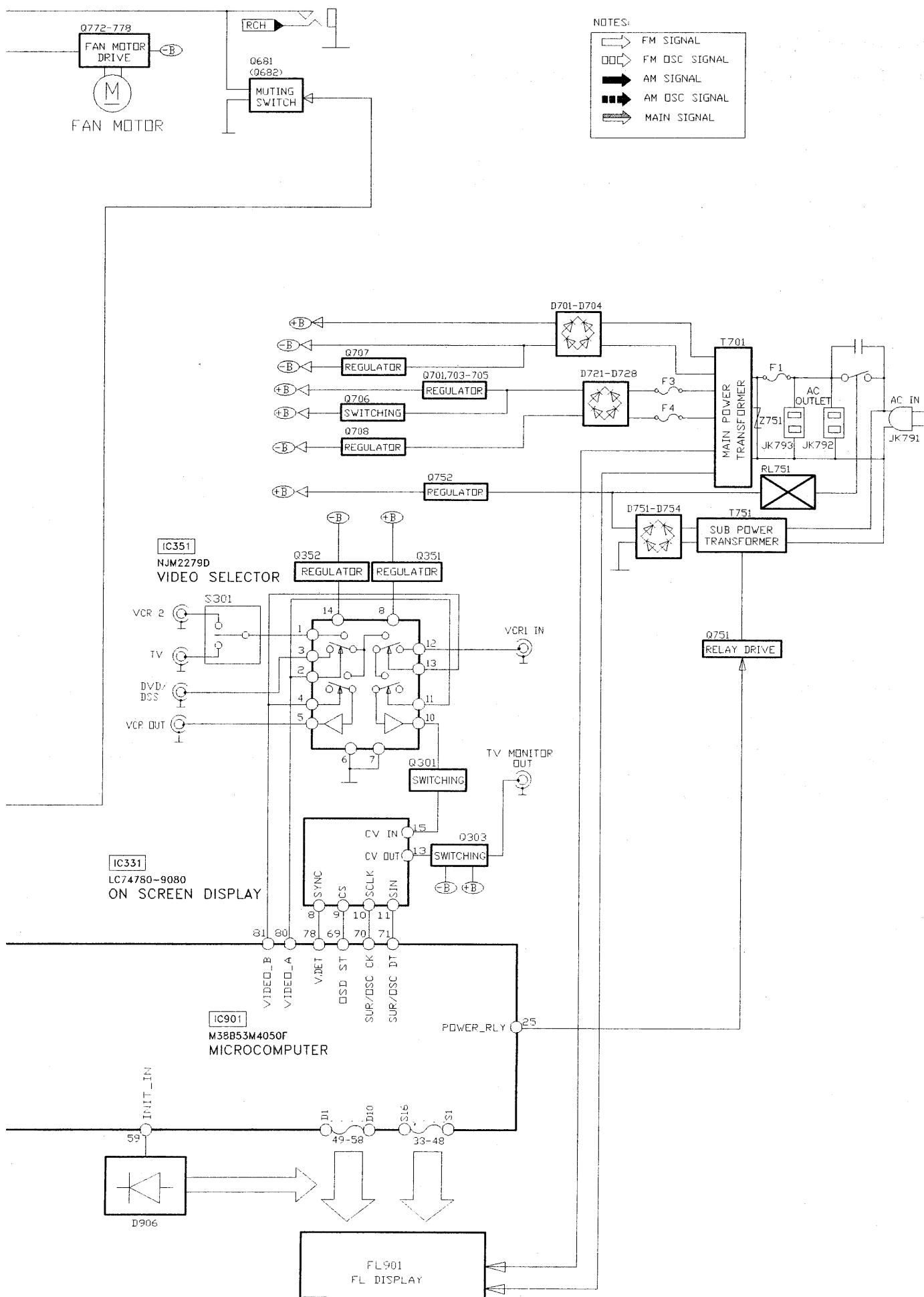
If no defects are found, or if the unit remains overload after it is power on again, check the circuit for faults.











## ■ Terminal Functions Of ICs

### • IC901 (M38B53M4050F) System Microprocessor

Pin No.	Mark	I/O	Function
1~4	KEY4~KEY1	I	Key matrix detect terminal
5	THERM/OVLD	I	Thermal/Over load detect terminal
6	FM_ST	I	Stereo signal detect terminal
7	6CH_ST	O	6 CH discrete signal output
8	RDS_ST	-	Not used
9	REMOTE	I	Remote control terminal
10	RESET	I	Reset detect terminal
11	RDS_CK	-	Not used
12	RDS_DT	-	Not used
13	GND	-	GND terminal
14	XIN	I	Crystal oscillator terminal
15	XOUT	O	(4 MHz)
16	VDD	I	Power supply terminal
17~21	SFC5-SFC1	O	SFC LED indicator output
22	HOLD	I	Power trip detection input
23	STANDEY_LED	-	Not used
24	FAN_STOP	-	Not used
25	RLY	O	Power relay control output
26	TV/DVD	I	TV/DVD select control input
27	LIMITTER	O	Power limitter control output
28	VEE	I	FL driver pull down voltage
29	S/C_SP	O	Surround/center speaker control output
30	SP_B	O	Speaker B control output
31	SP_A	O	Speaker A control output
32	AF_MUTE	O	Muting control output

Pin No.	Mark	I/O	Function
33~48	SEG16~SEG1	O	FL segment signal output
49~58	DEG1~DEG10	O	FL digit signal output
59	INIT_IN	I	Diode input
60	VOL_DOWN	O	Rotate control terminal of volume motor
61	VOL_UP	O	
62	LOUDNESS	O	Loudness control output
63	IF_DATA	I	Serial data signal
64	REC_MUTE	O	Record mute control output
65	TNR_CE	O	Chip enable signal
66	SEL/TNR_CK	O	Senal clock signal
67	SEL/TNR_DT	O	Serial data signal
68	SEL_ST	O	Level shift control terminal
69	OSD_ST	O	OSD control terminal
70	SURR/OSD_CK	O	Serial clock signal
71	SURR/OSD_DT	O	Serial data signal
72	SURR_CE	O	Chip enable signal
73	AVSS	-	GND for A-D conveter
74	VREF	I	Reference voltage for A-D convertion
75	SD	I	SD signal detect input
76	AC3_LED	O	LED drive signal (AC3)
77	HELP_LED	O	LED drive signal (HELP)
78	VIDEO_DET	O	Video selector control output
79	VIDEO_B	O	Video selector control output B
80	VIDEO_A	O	Video selector control output A

## ■ Terminal Guide Of ICs, Transistors and Diodes

LA1832A LC7218	NJM2279D	TC9163AN 28Pin AN6554F 14Pin TC9162AN 28Pin	TC9214P	AN6558-F UPC4570C	BA6218
RSN33M5-P	M38B53M4050F (80Pin)	LA2786L (42Pin)	LV1016L LC74780-9080	RSN36S5A-P	2SK544F-AC
2SB1548PQAU 2SD2374PQAU	2SD592AQSTA 2SB621AQSTA 2SA1534AQRTA 2SC3940AQSTA 2SB621AQRSTA	2SA933SSTA 2SC1740SSTA	RVTDTA113ZST RVTDTC114EST RVTDTA114EST RVTDTC143XST RVTDTA114TST RVTDTC114YST RVTDTA114YST		2SC2786MTA 2SC2787FL1TA 2SC2787LTA 2SC2785FETA UN411FTA 2SC3311ARTA 2SD1915FTA 2SC3311AQSTA
2SJ40CTA 2SK381CTA	SB360L6508 P300DLF	SVC211SPA-AL		RVD1SS133TA 1SR35200TB 1SS291TA MA167ATA MA700ATA	SLR342MC SLR342DC SLR342DCTB
MTZJ5R1BTA MTZJ5R6BTA MTZJ7R5CTA	MTZJ3R0ATA MTZJ6R2BTA MTZJ15CTA MTZJ6R8BTA MTZJ4R7BTA MTZJ3R9ATA MTZJ10CTA MTZJ27DTA MTZJ12CTA				

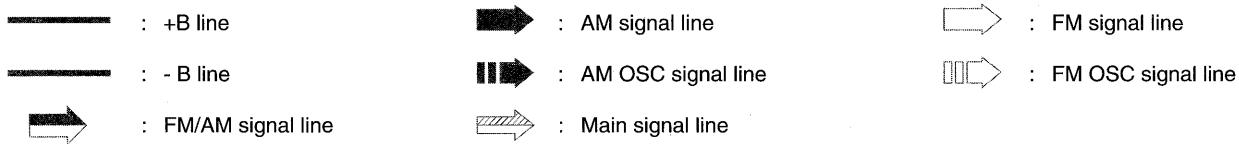
## ■ Schematic Diagram

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

**Note:**

• S301	:	TV/VCR2 select switch	• S975	:	DVD select switch
• S946	:	Power switch	• S976	:	Delay time switch
• S948	:	Muting switch	• S980	:	Speakers A switch
• S950	:	FM Auto/ Mono switch	• S981	:	Speakers B switch
• S951	:	Band select switch	• S982	:	Loudness switch
• S952	:	Tuning decrease switch	• S983	:	Dolby Pro Logic/SFC off on switch
• S953	:	Tuning increase switch	• S984	:	Dolby Pro Logic mode select switch
• S954	:	Sleep switch	• S985	:	Center mode select switch
• S955	:	Memory manual/auto switch	• S991	:	Phono select switch
• S956	:	Preset decrease switch	• S992	:	Tuner select switch
• S957	:	Preset increase switch	• S993	:	CD select switch
• S958	:	Help switch	• S994	:	Tape select switch
• S965	:	6CH discrete switch	• S995	:	TV/VCR2 select switch
• S970	:	Simulated switch	• S996	:	VCR1 select switch
• S971	:	Theater switch	• VR501-1 ~ VR501-6	:	Volume control
• S972	:	Live switch	• VR502	:	Balance control
• S973	:	Club switch	• VR511-1 ~ VR511-2	:	Bass control
• S974	:	Hall switch	• VR512-1 ~ VR512-2	:	Treble control

• Signal 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.

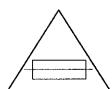
**Caution !**

IC, LSI and VLSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

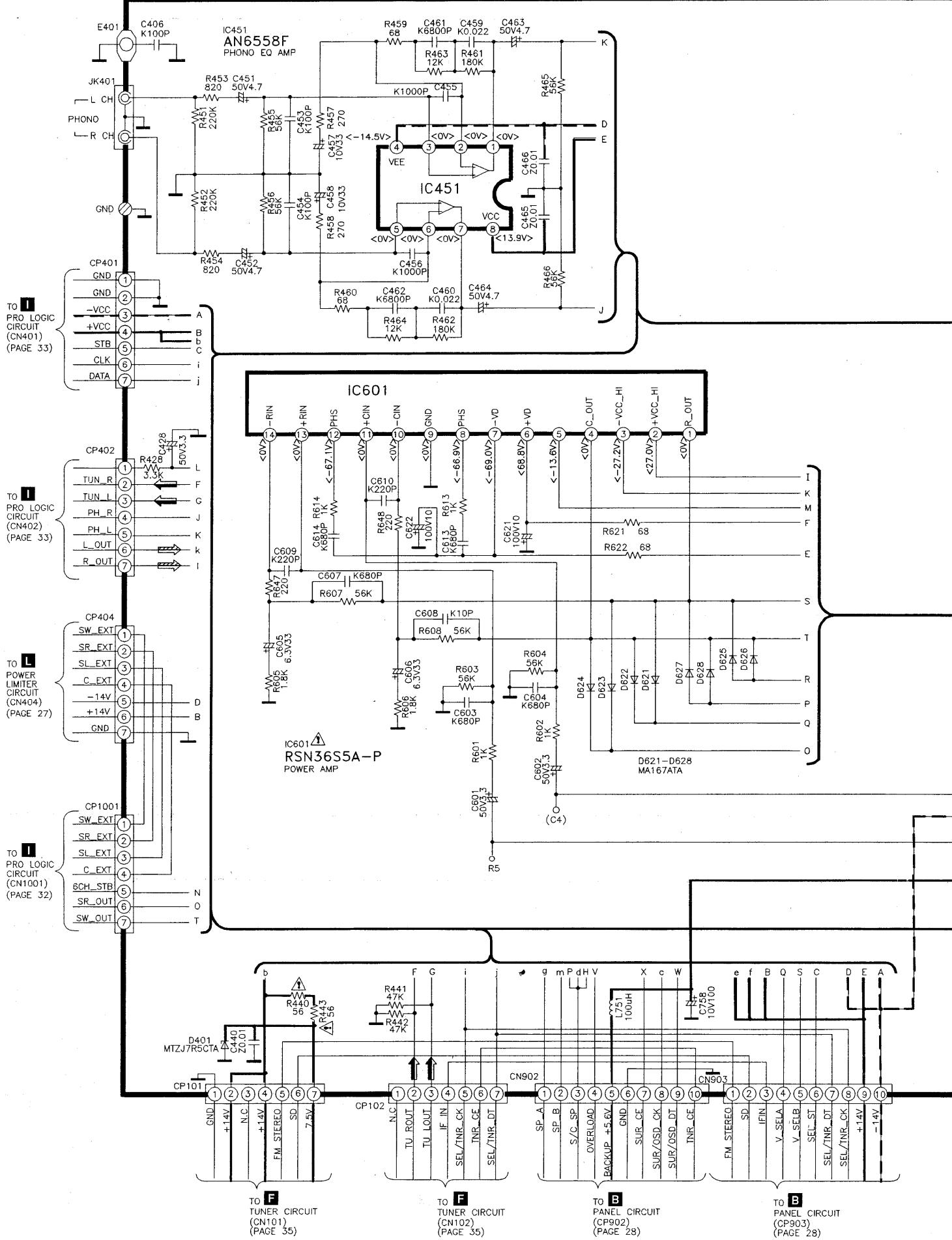
- Cover the parts boxes made of plastics with aluminium foil.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.
- Put a conductive mat on the work table.

**CAUTION: FOR CONTINUED PROTECTION  
AGAINST FIRE HAZARD, REPLACE ONLY WITH  
SAME TYPE F1, F3 & F4 8A 125V FUSE.**



RISK OF FIRE-REPLACE FUSE AS MARKED.

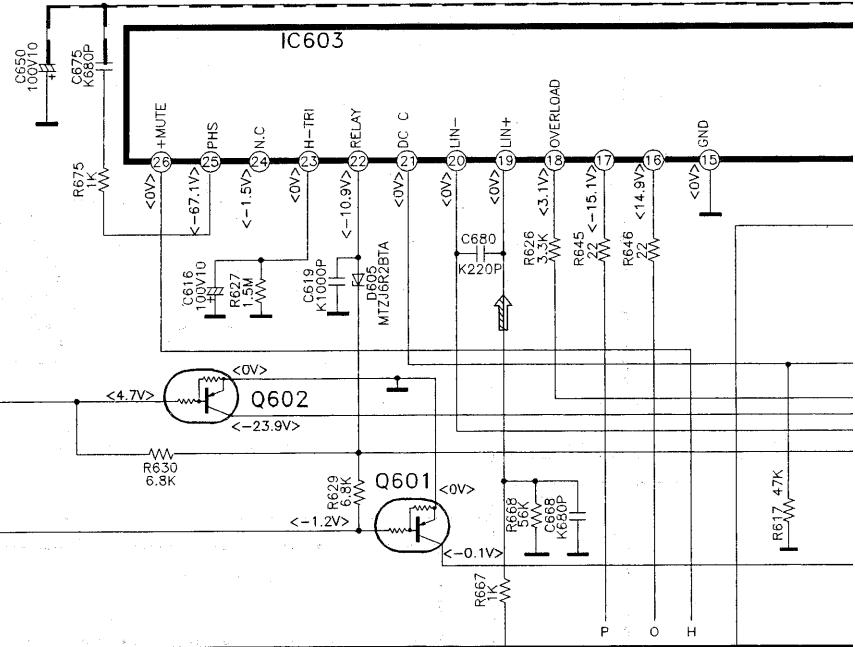
## A MAIN CIRCUIT



IC603  
RSN33M5-P  
POWER AMP

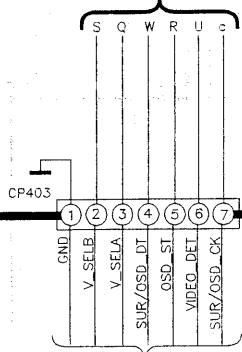
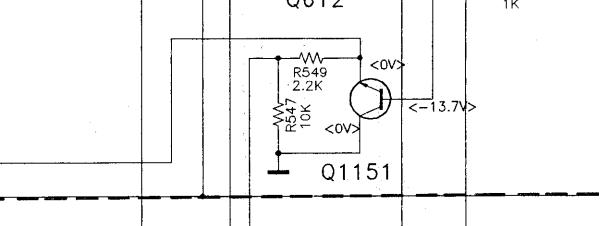
Q601  
RVTDTA113ZST  
RELAY DRIVE

Q602  
RVTDTA113ZST  
RELAY DRIVE

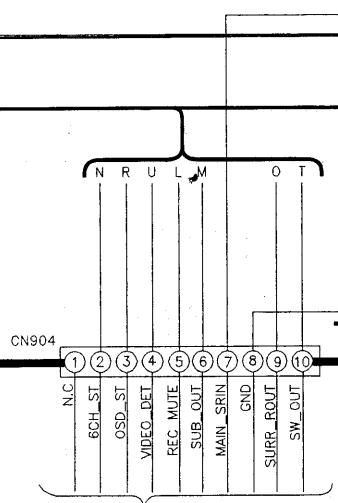


Q611, Q612  
2SC1740SSTA  
MUTING DRIVE

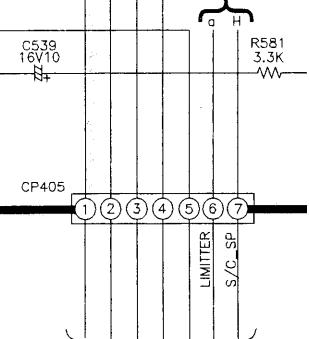
Q1151  
2SD1915FTA  
AF MUTE



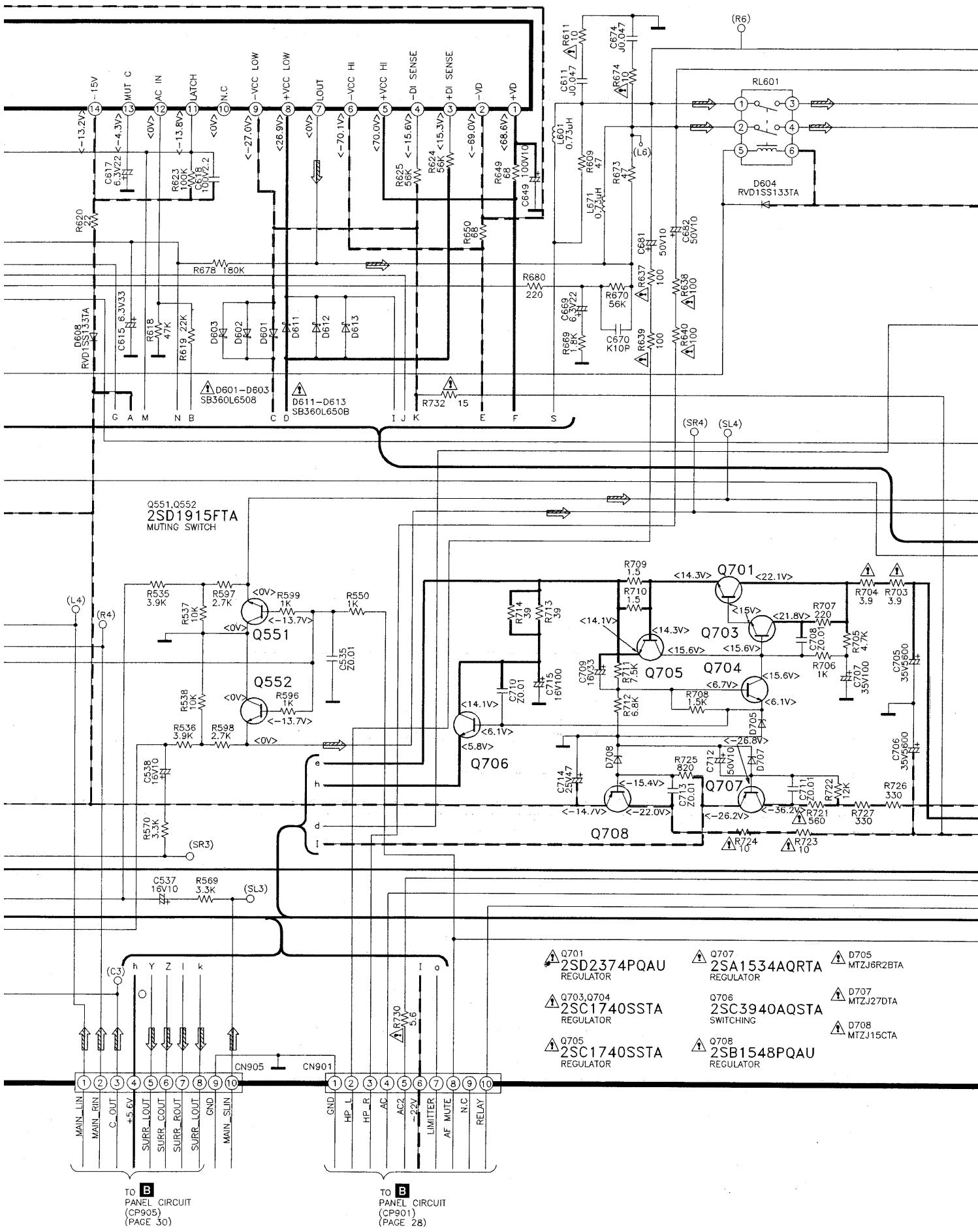
TO L  
POWER LIMITER CIRCUIT  
(CN403)  
(PAGE 27)

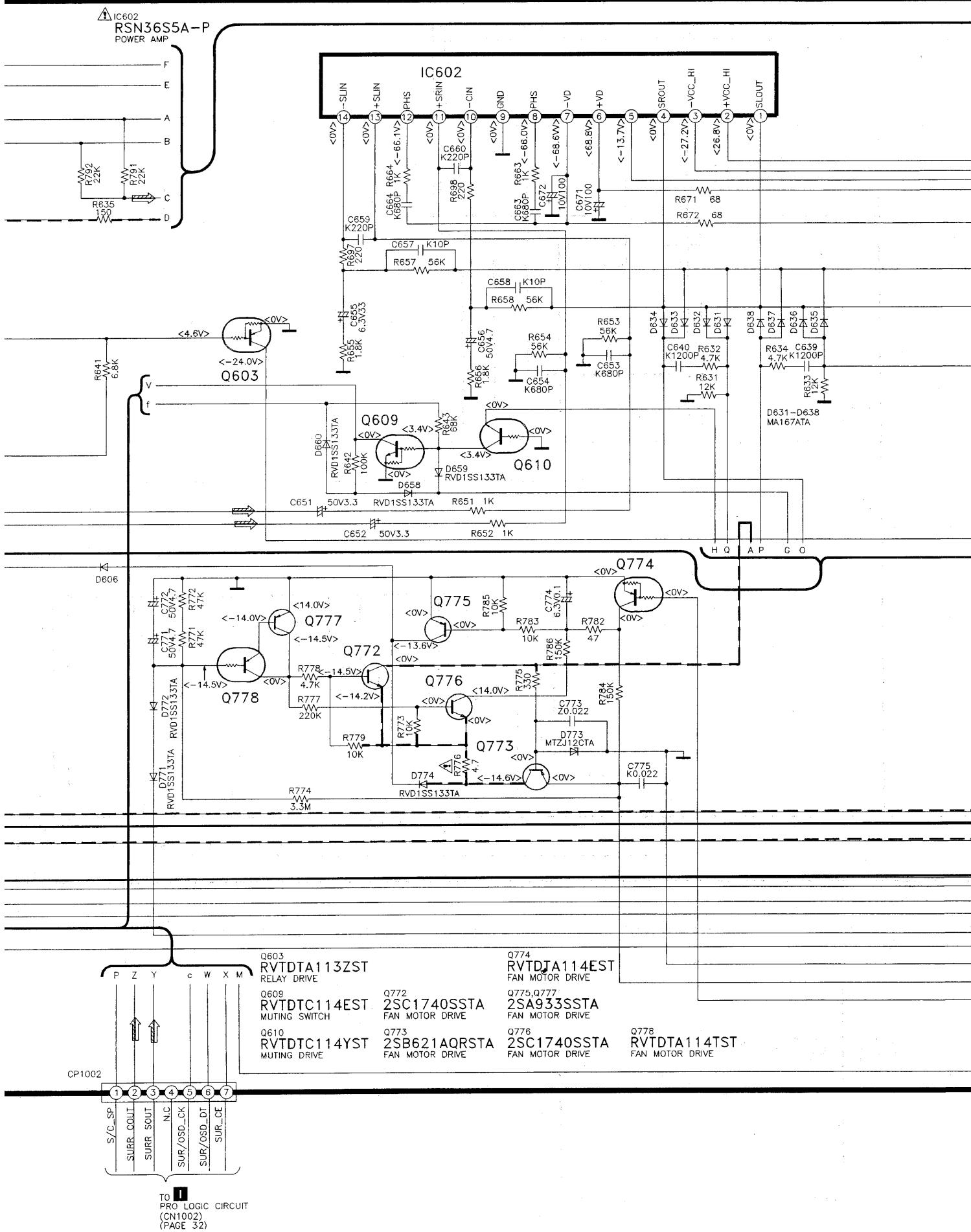


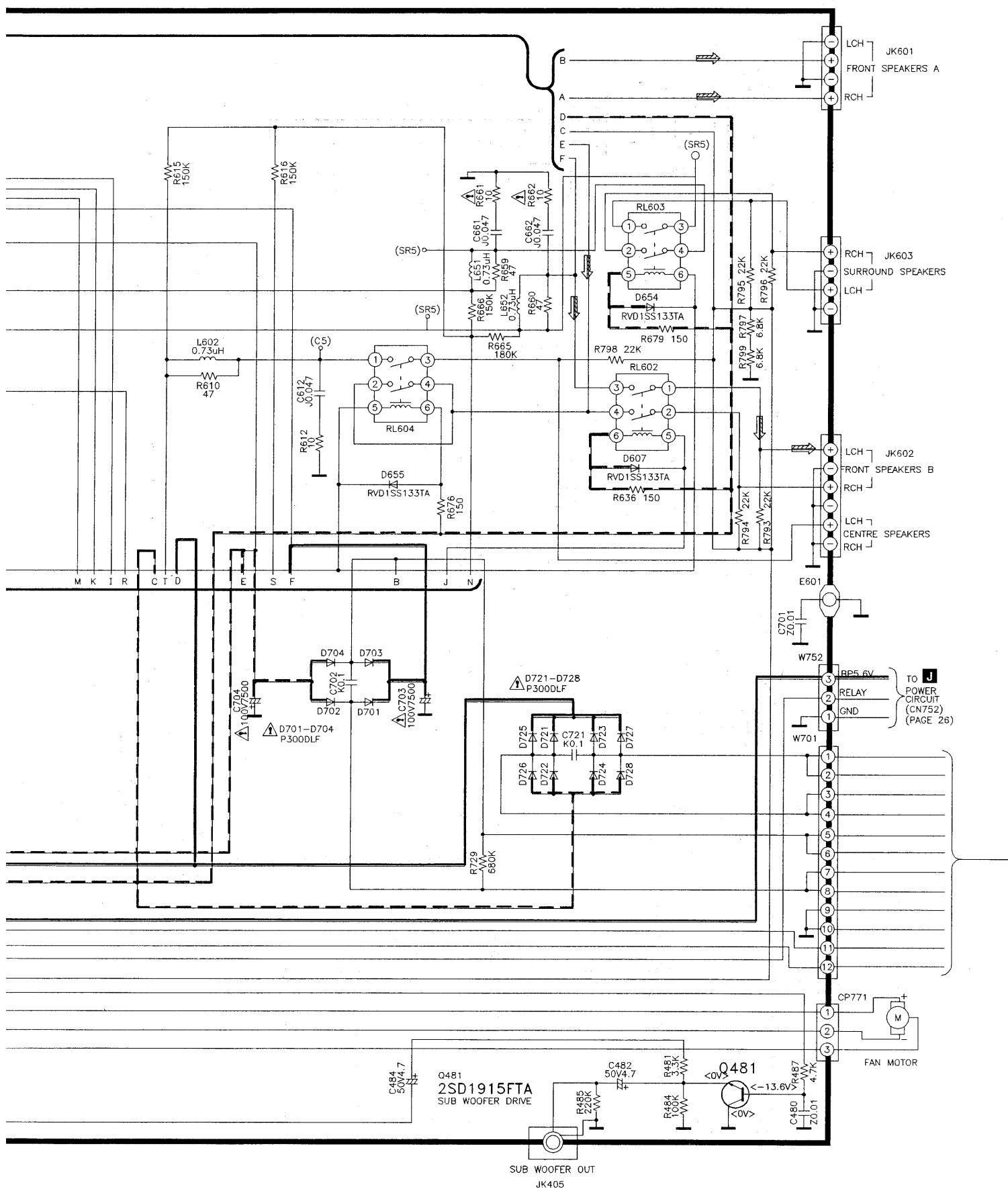
TO B  
PANEL CIRCUIT  
(CP904)  
(PAGE 29)



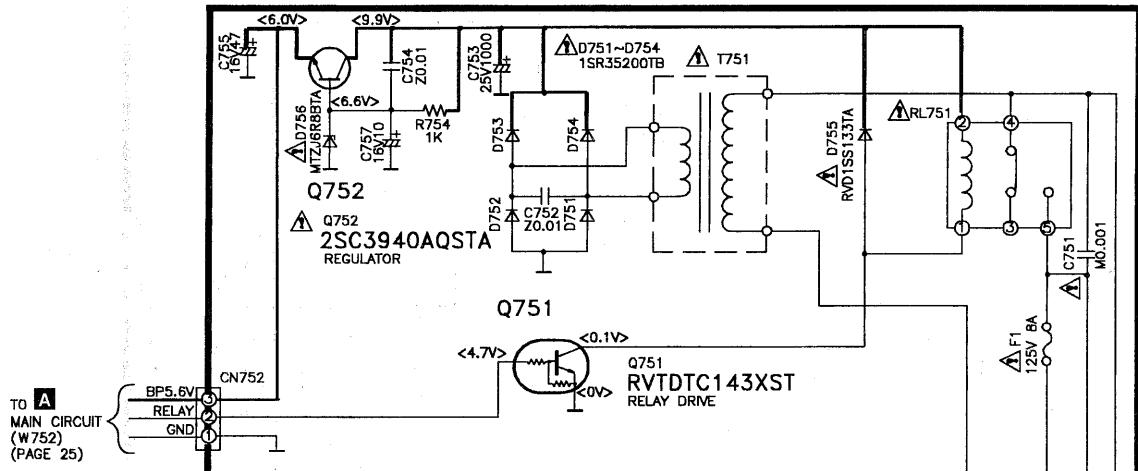
TO L  
POWER LIMITER CIRCUIT  
(CN405)  
(PAGE 27)



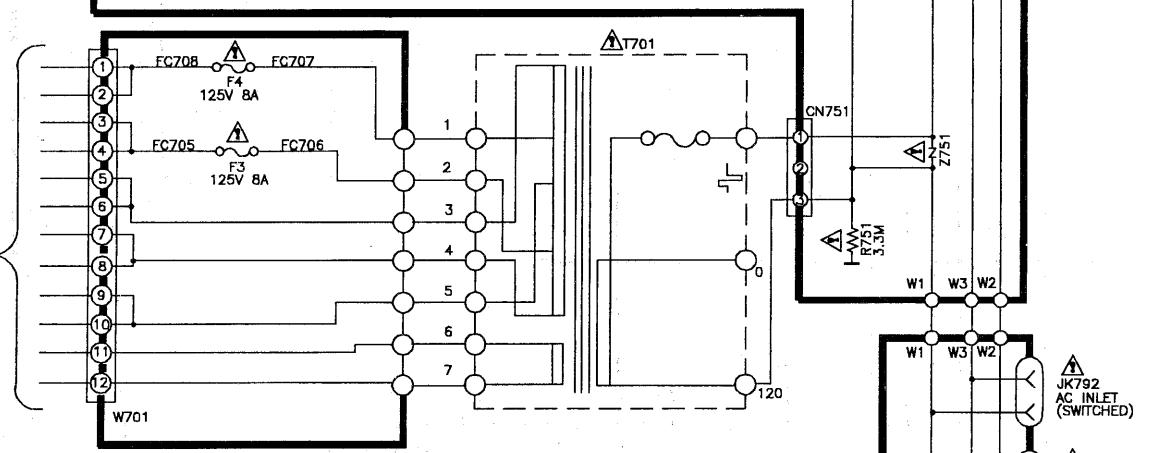




### J POWER CIRCUIT

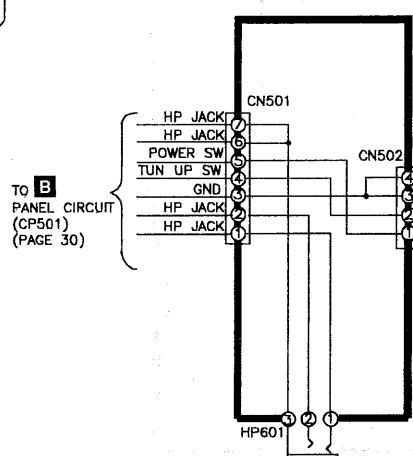


TO A  
MAIN CIRCUIT  
(W752)  
(PAGE 25)



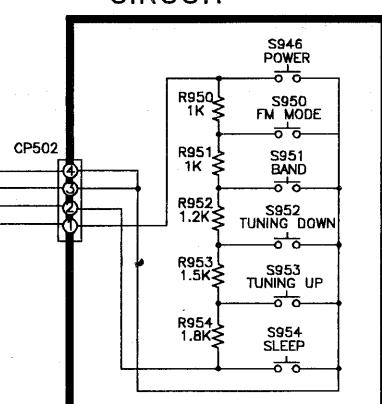
### H TRANSFORMER CIRCUIT

### E HEADPHONE JACK CIRCUIT



TO B  
PANEL CIRCUIT  
(CP501)  
(PAGE 30)

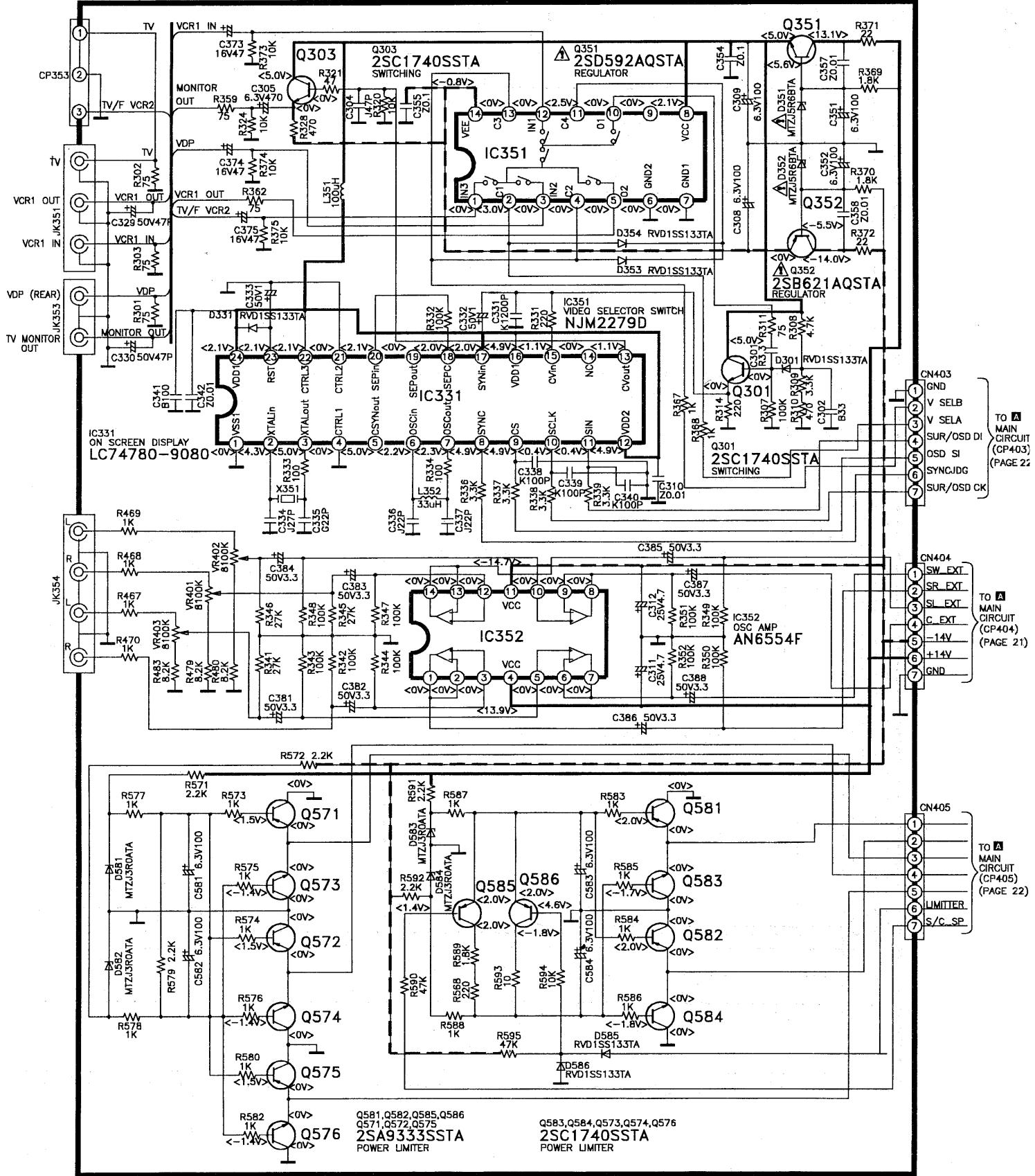
### D OPERATION CIRCUIT

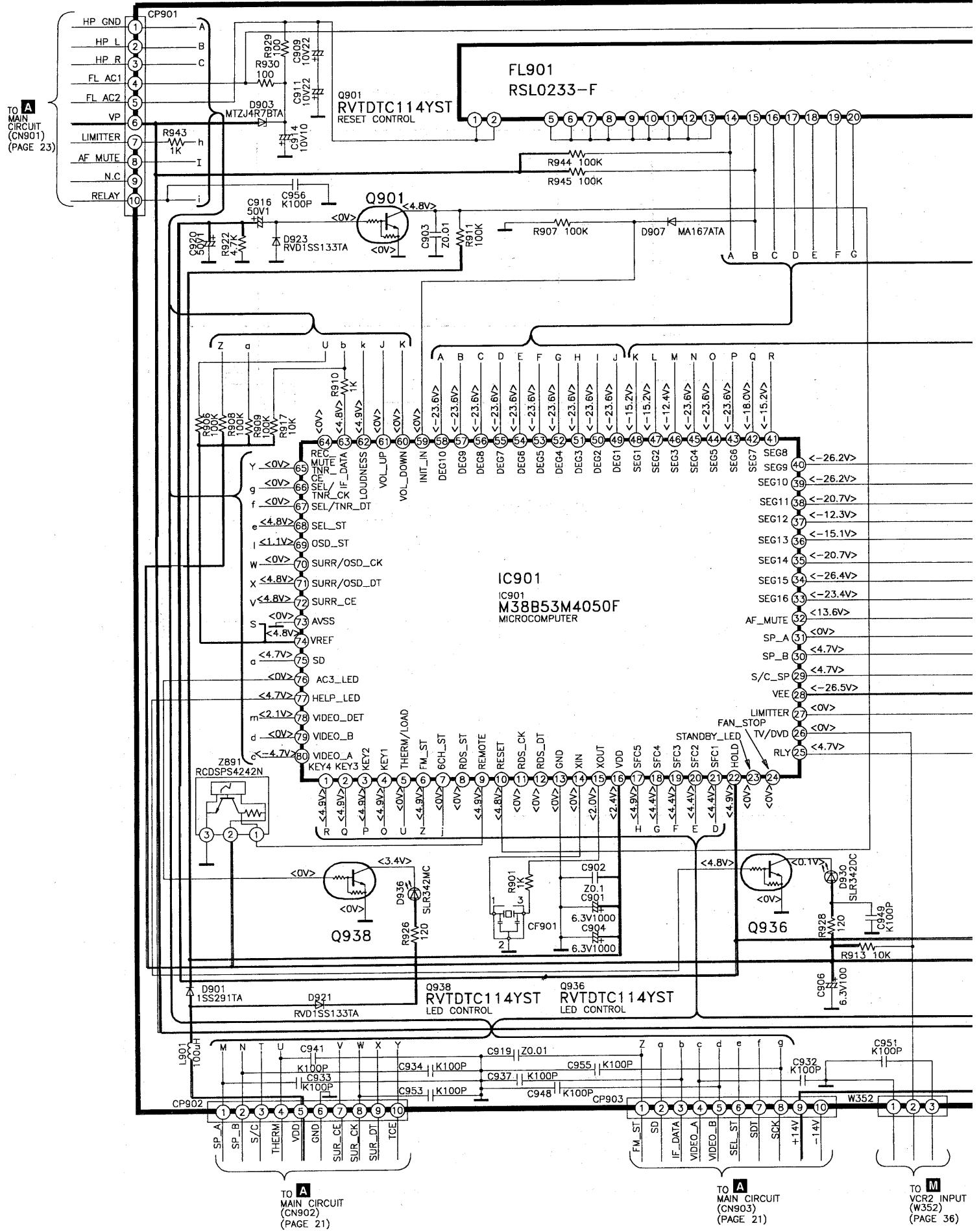


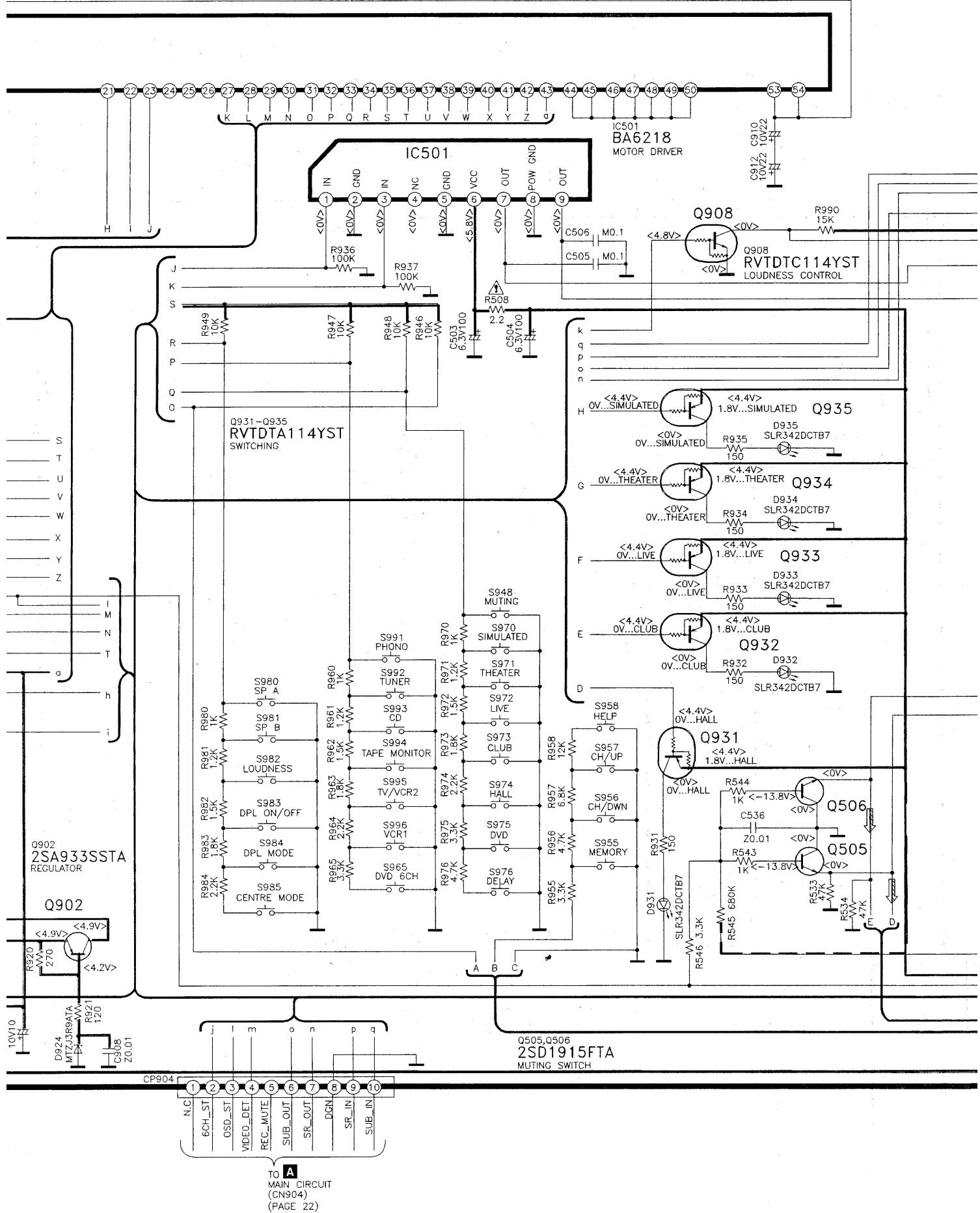
### K POWER SUPPLY CIRCUIT

JK791  
AC IN 120V 60Hz

## L POWER LIMITER CIRCUIT

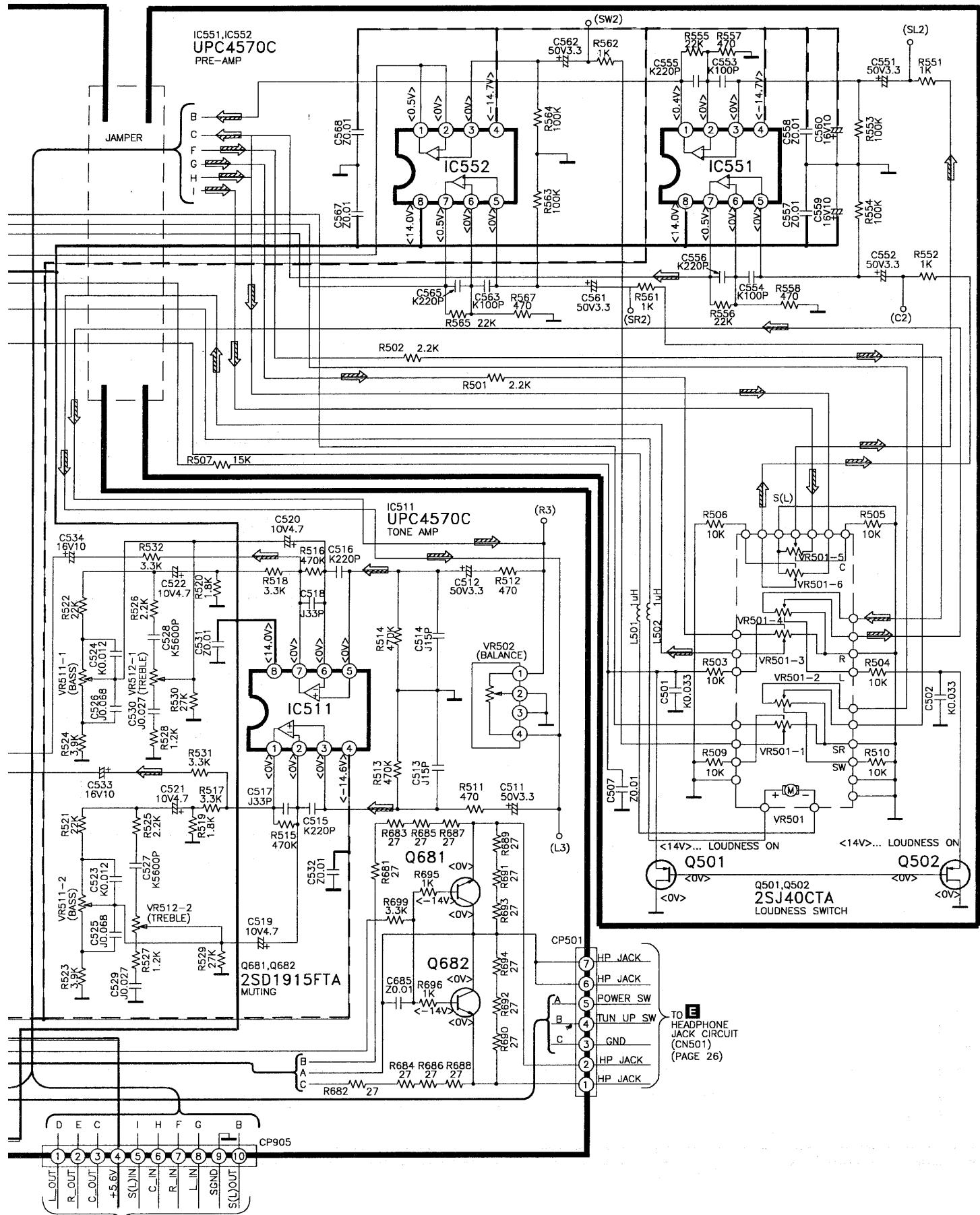


**B** PANEL CIRCUIT

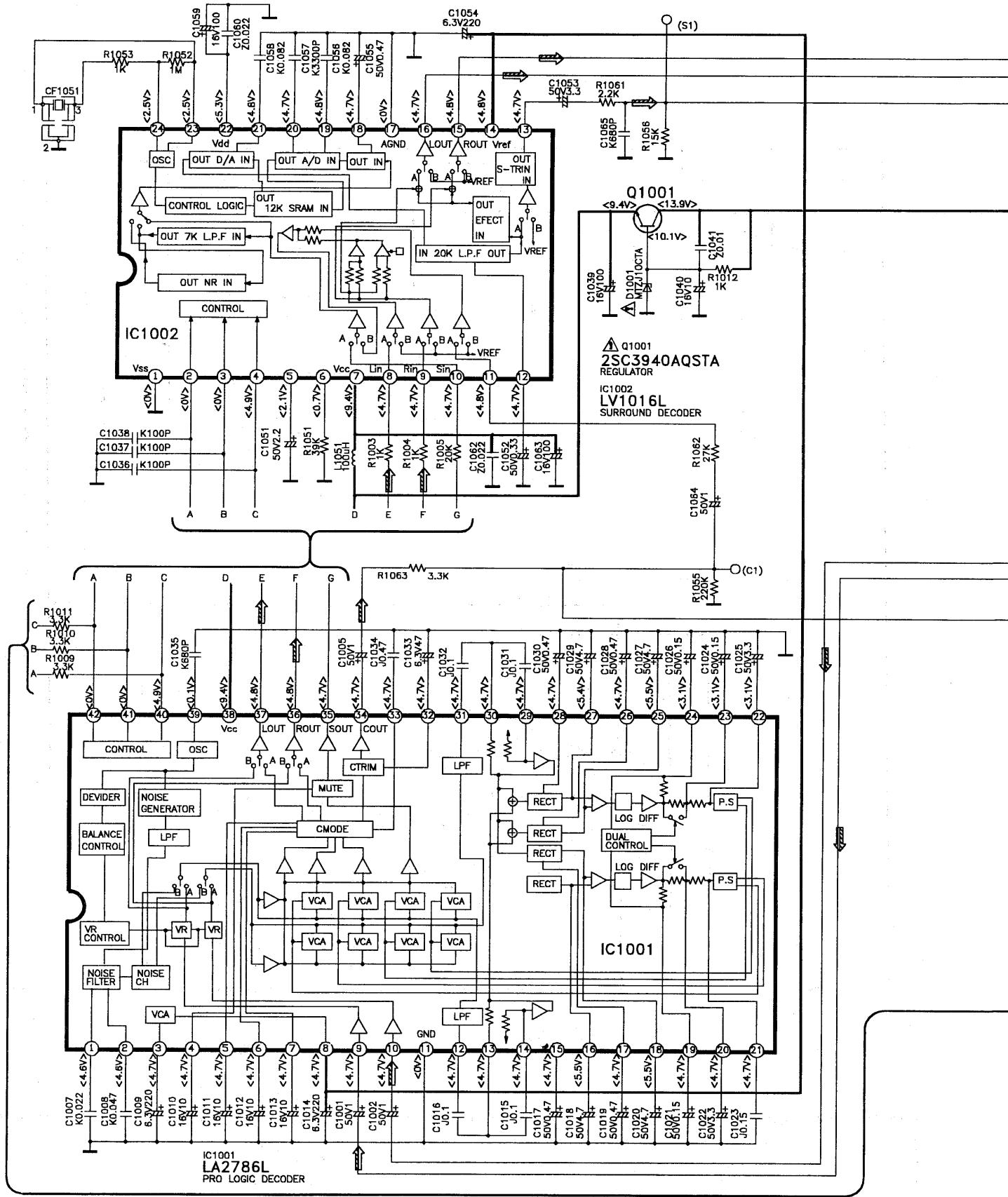


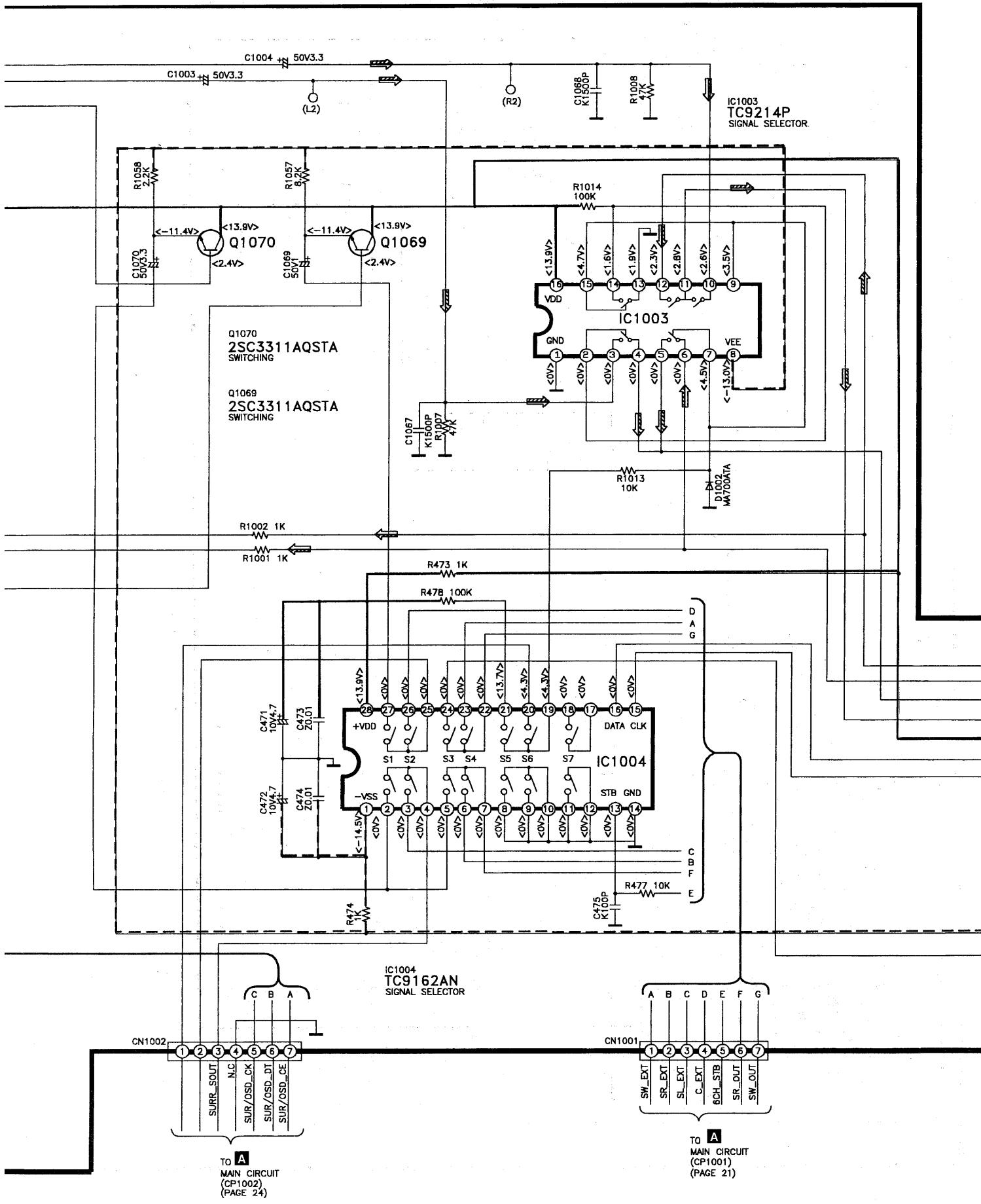
TO A  
MAIN CIRCUIT  
(CN904)  
(PAGE 22)

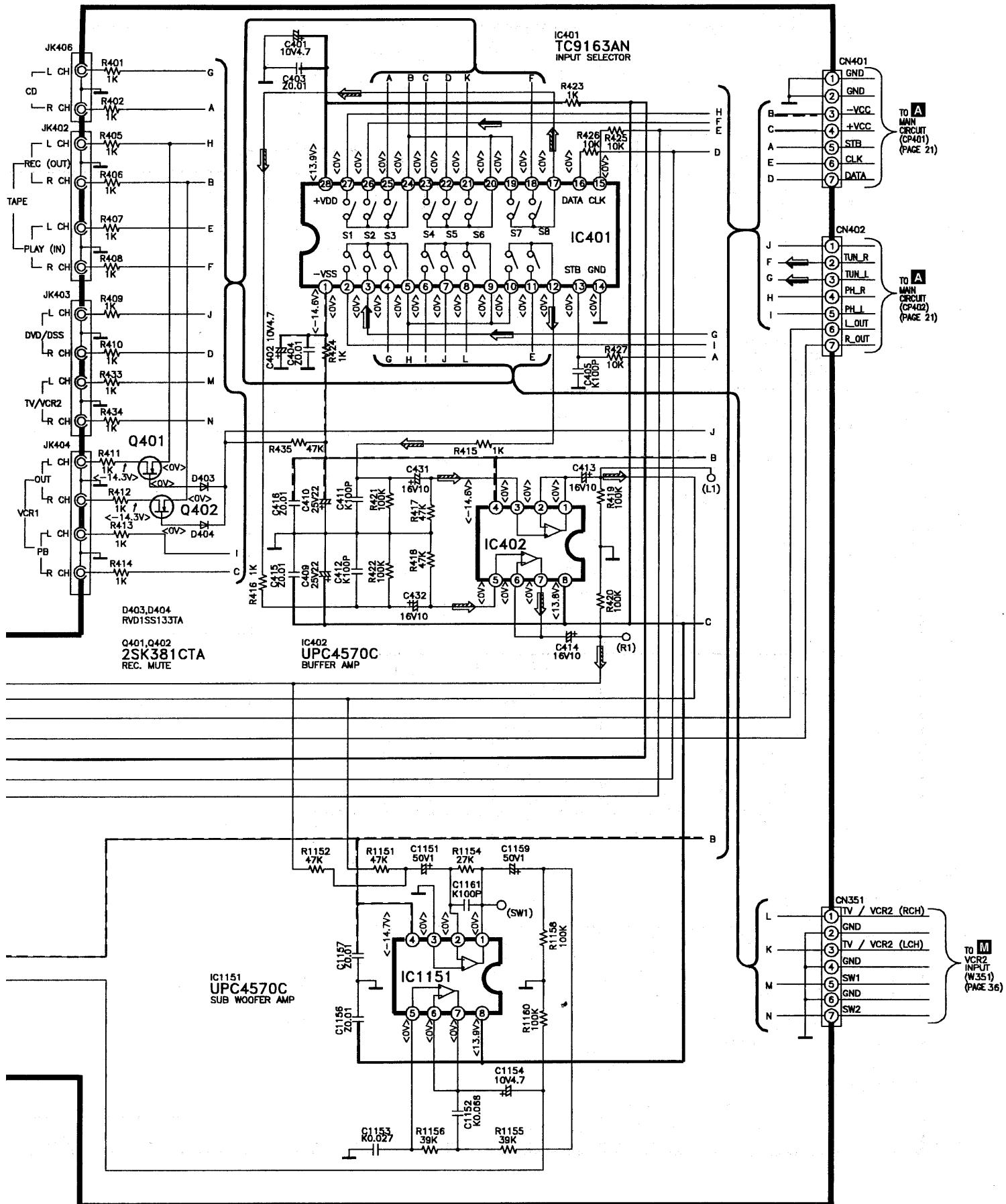
## C VOLUME CIRCUIT

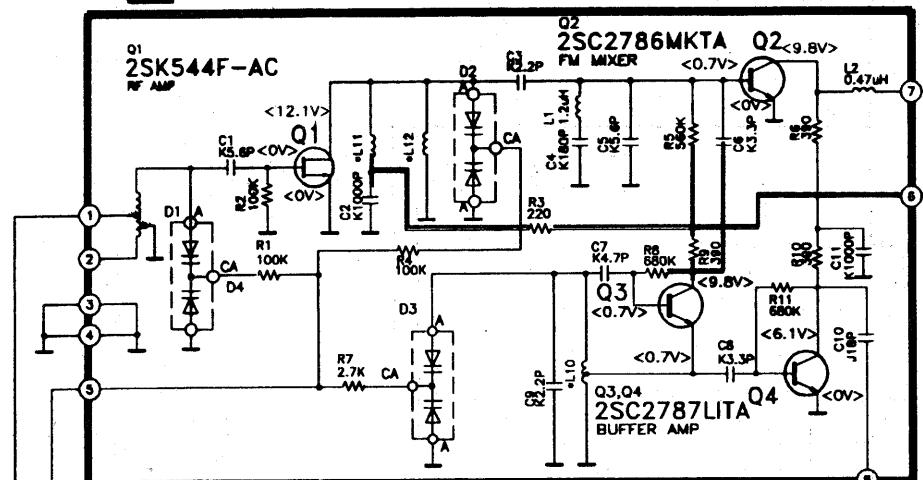
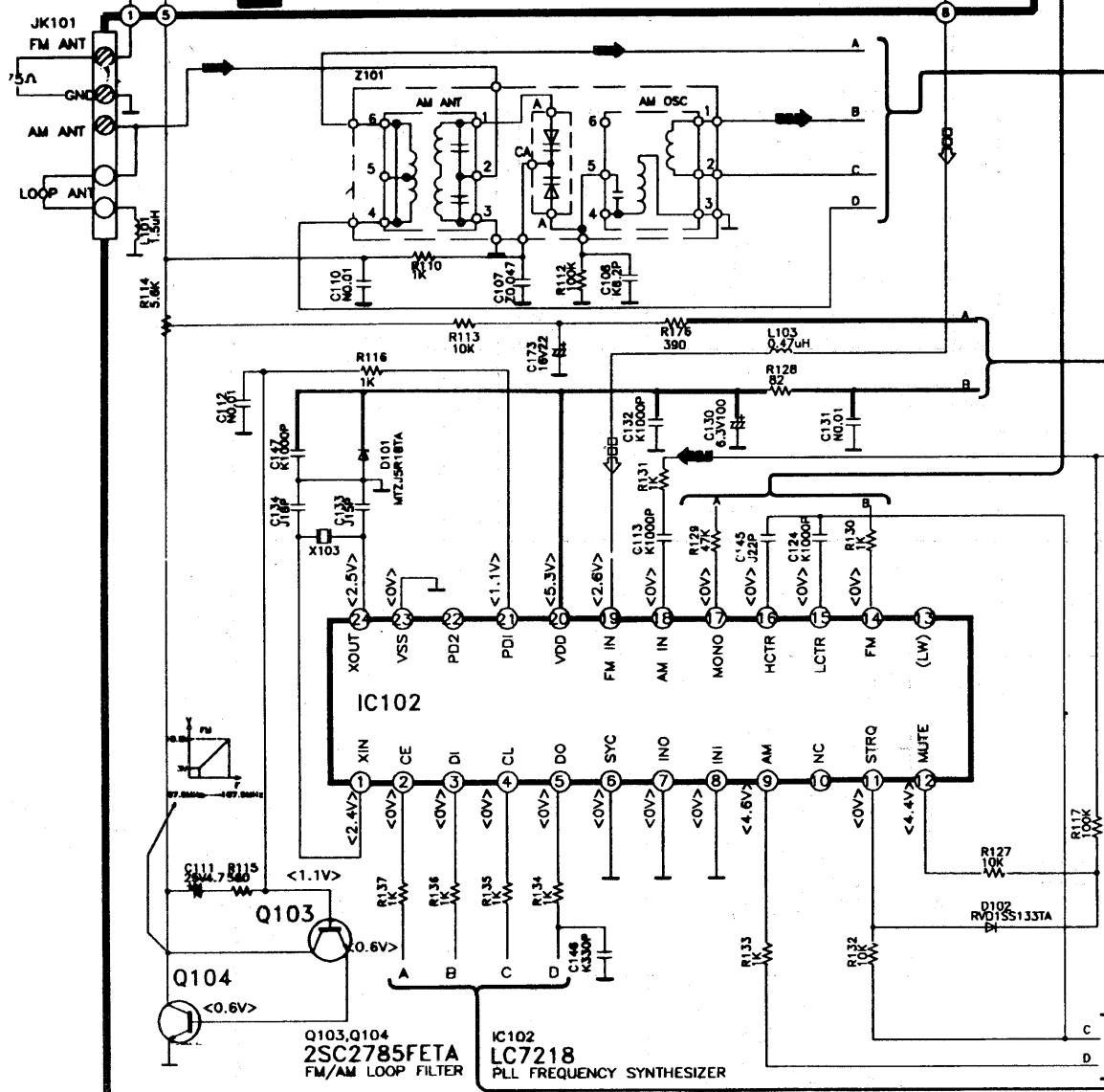


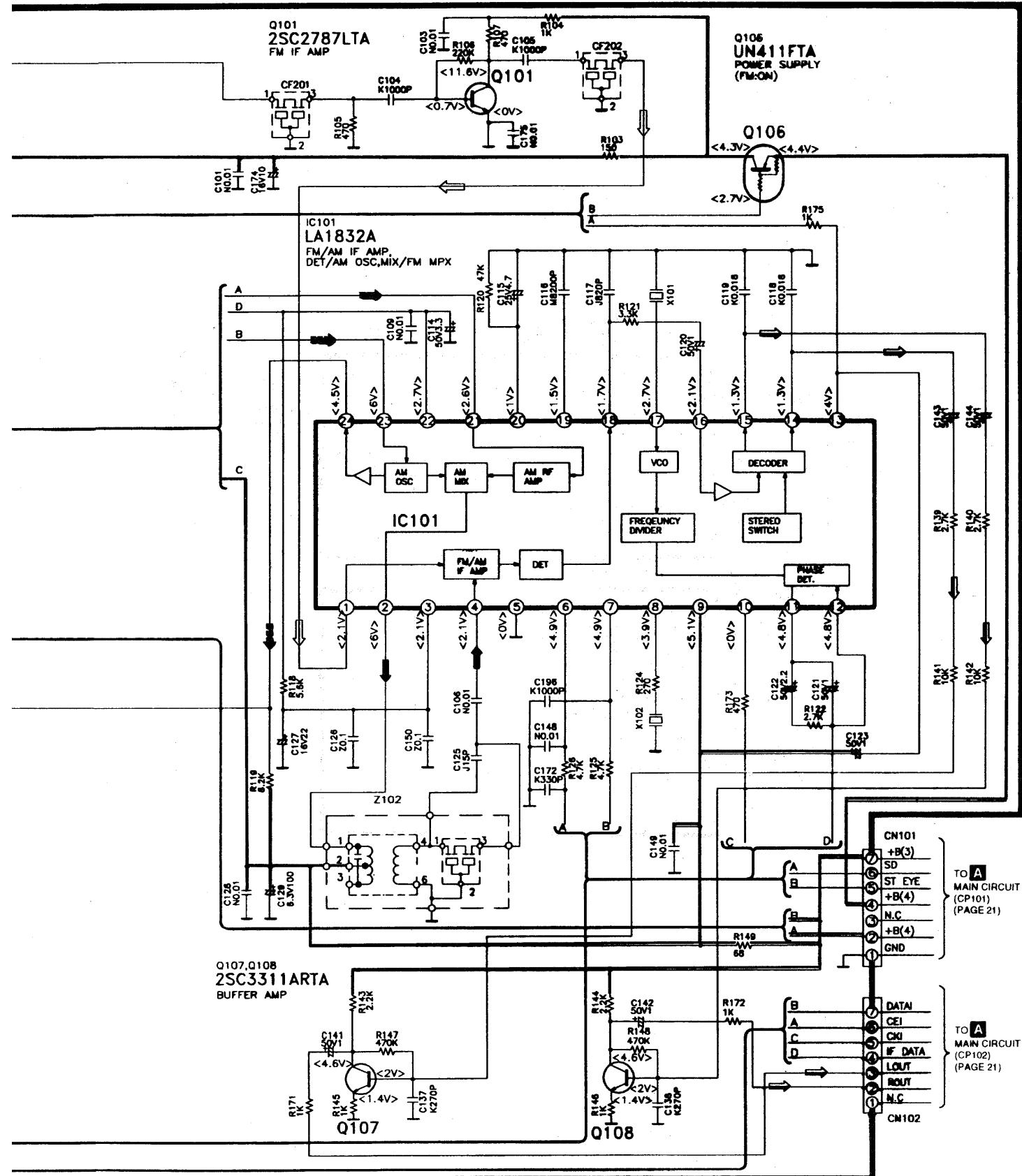
# I PRO LOGIC CIRCUIT

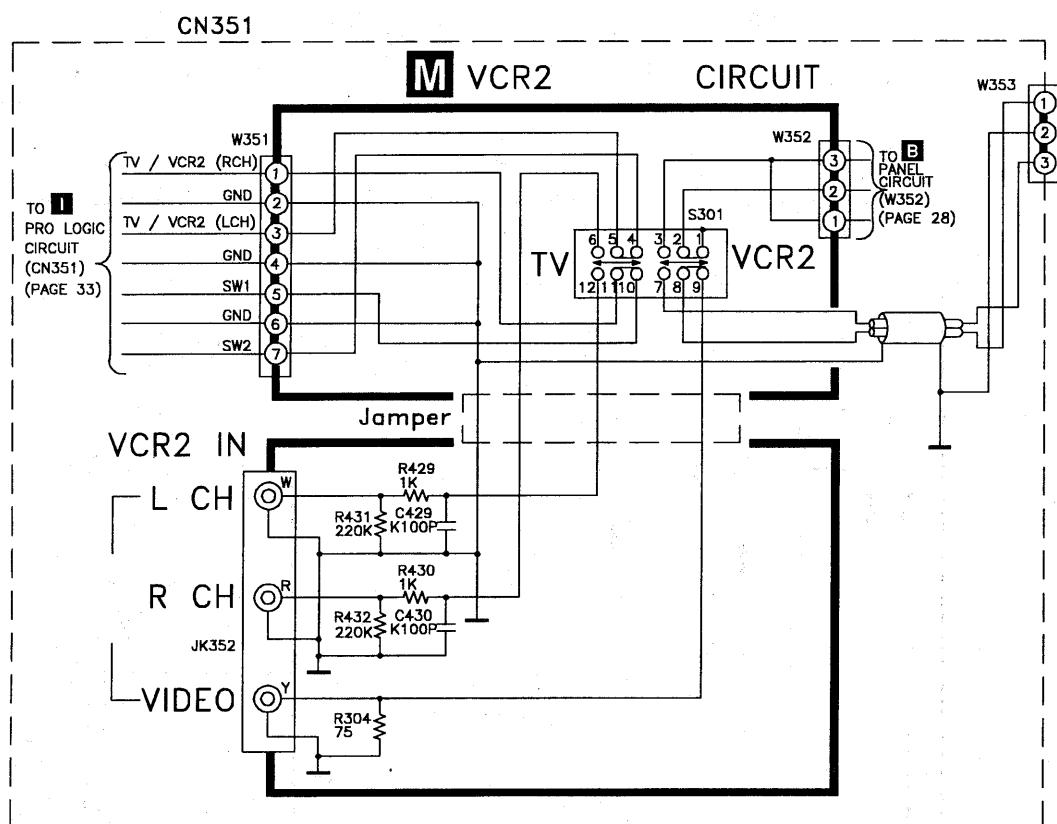






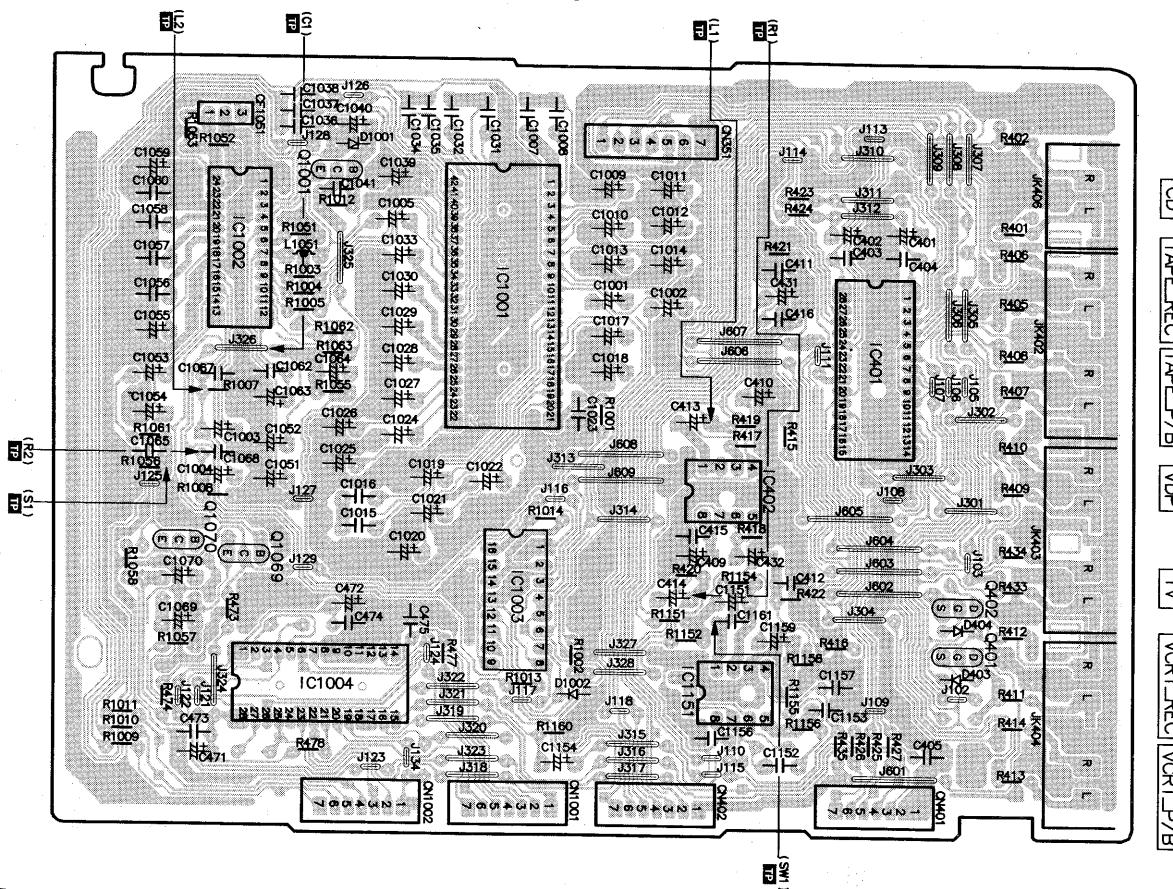
**G TUNER PACK CIRCUIT****F TUNER CIRCUIT**



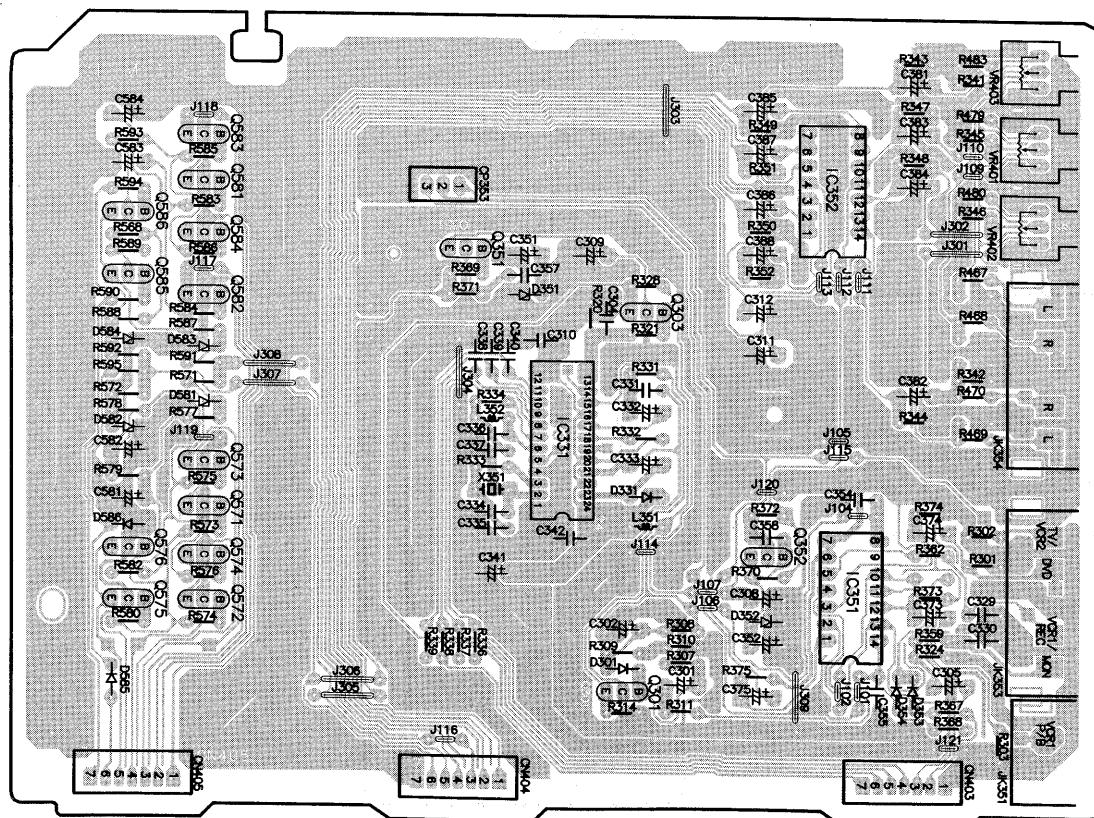


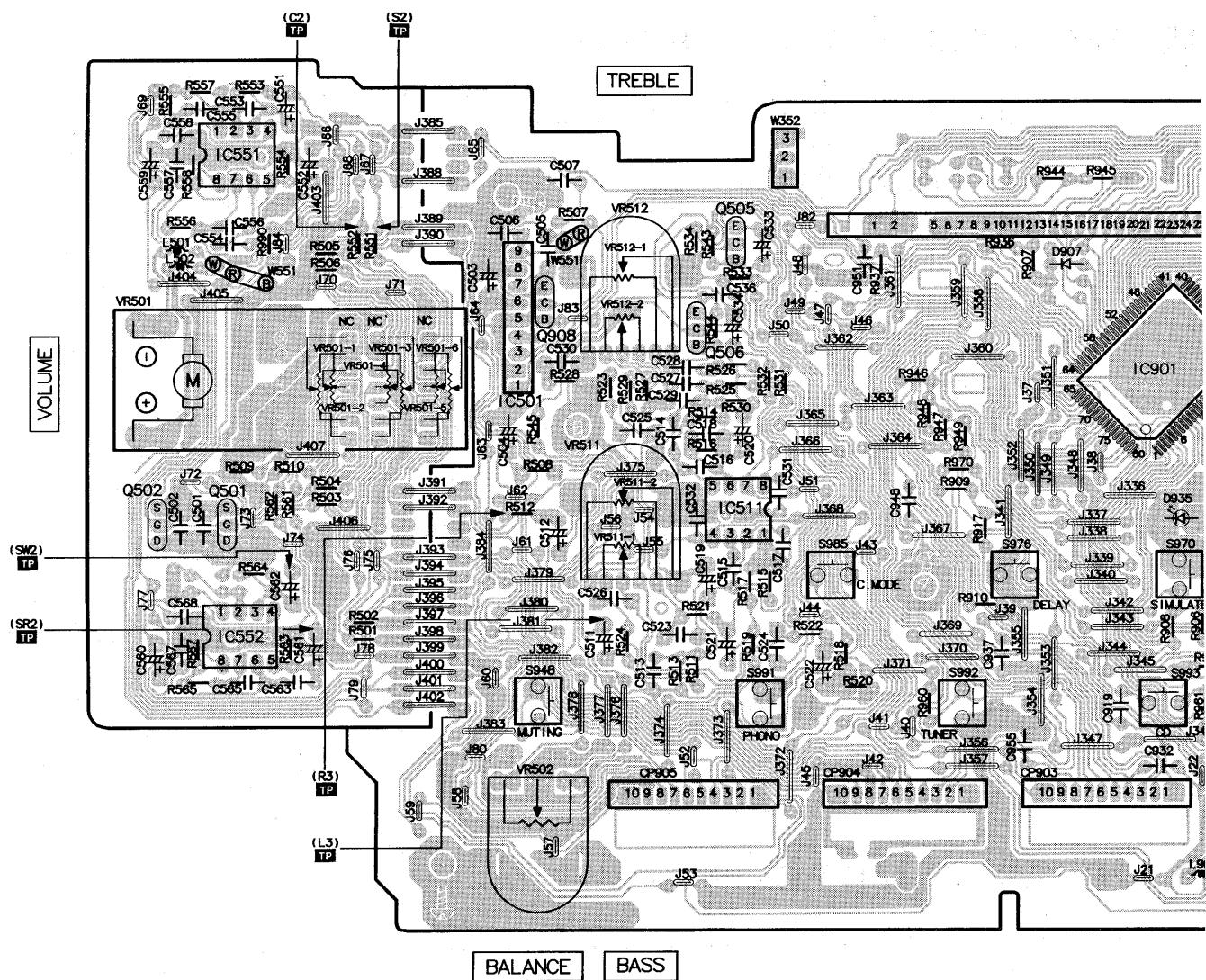
## ■ Printed Circuit Board

### I PRO LOGIC P.C.B. (REP2443E-P)

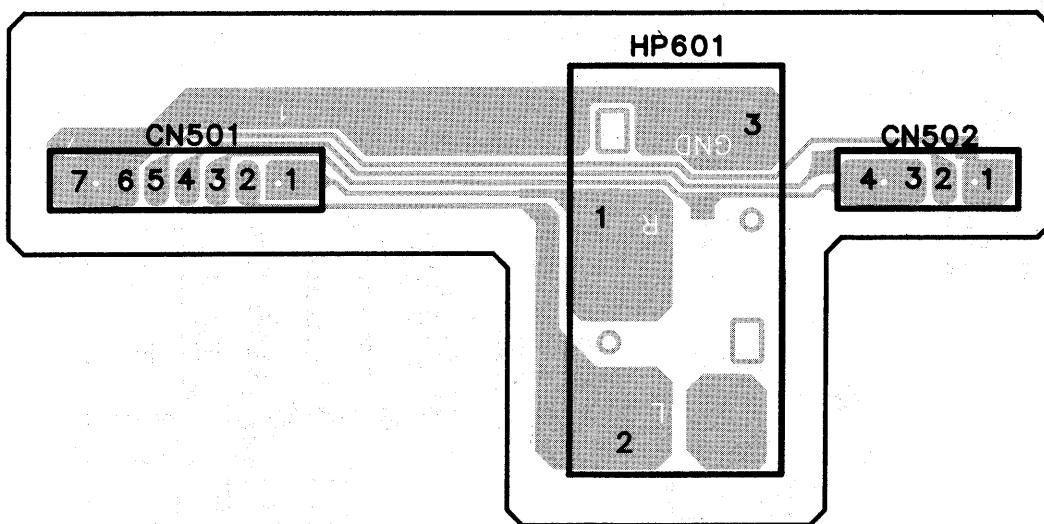


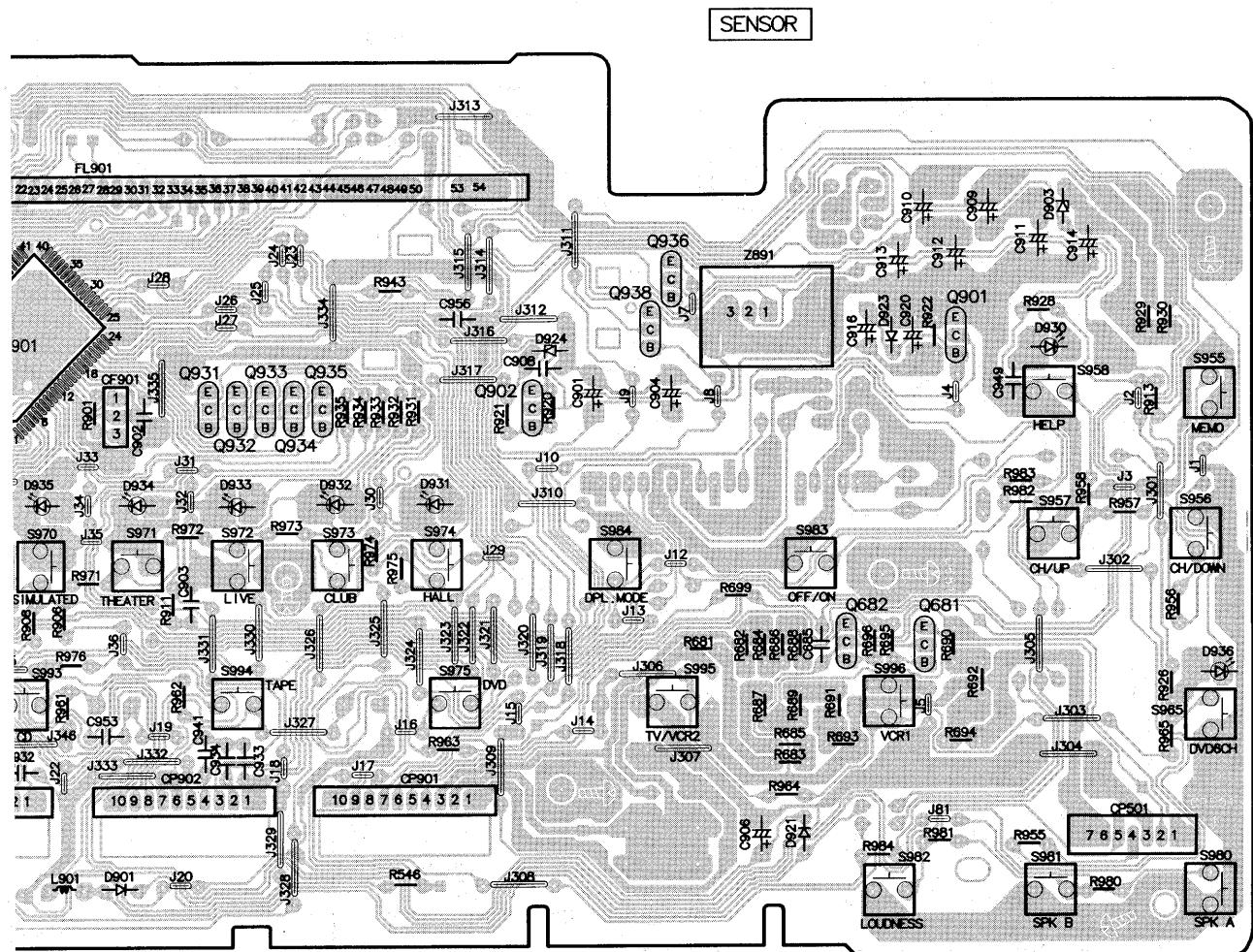
### L POWER LIMITER P.C.B. (REP2466A-T)



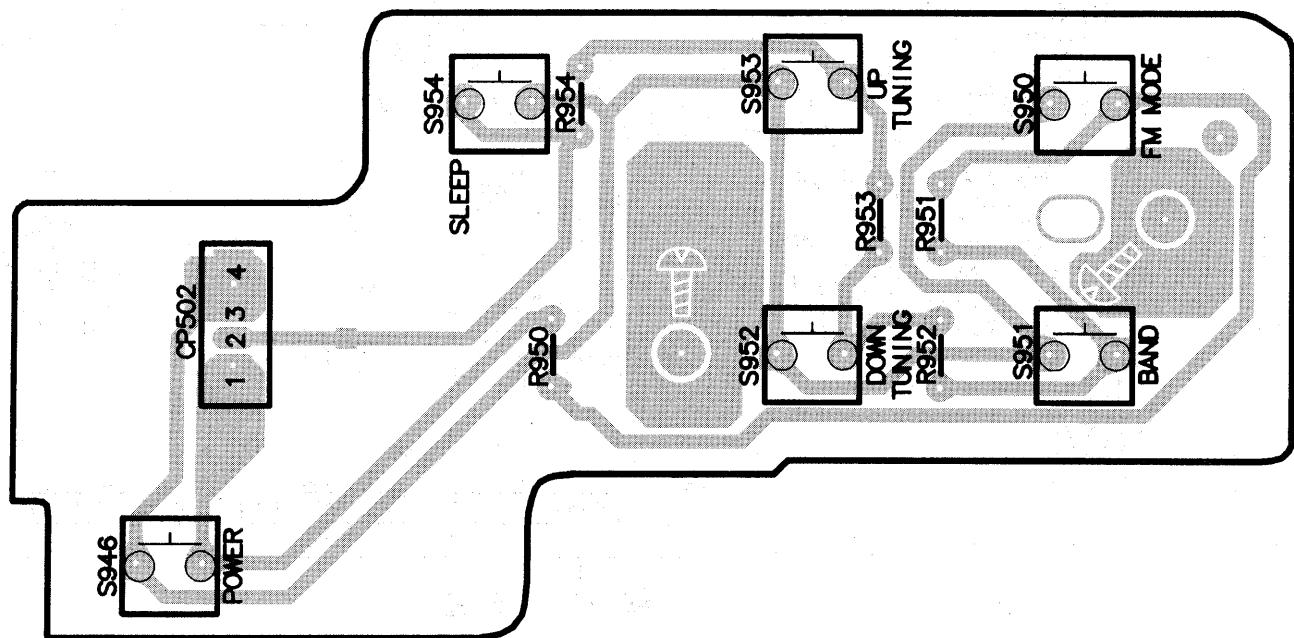
**C VOLUME P.C.B. (REP2442B-S)****B PANEL P.C.B. (REP2442B-S)****E HEADPHONE JACK P.C.B. (REP2442B-S)**

PHONES

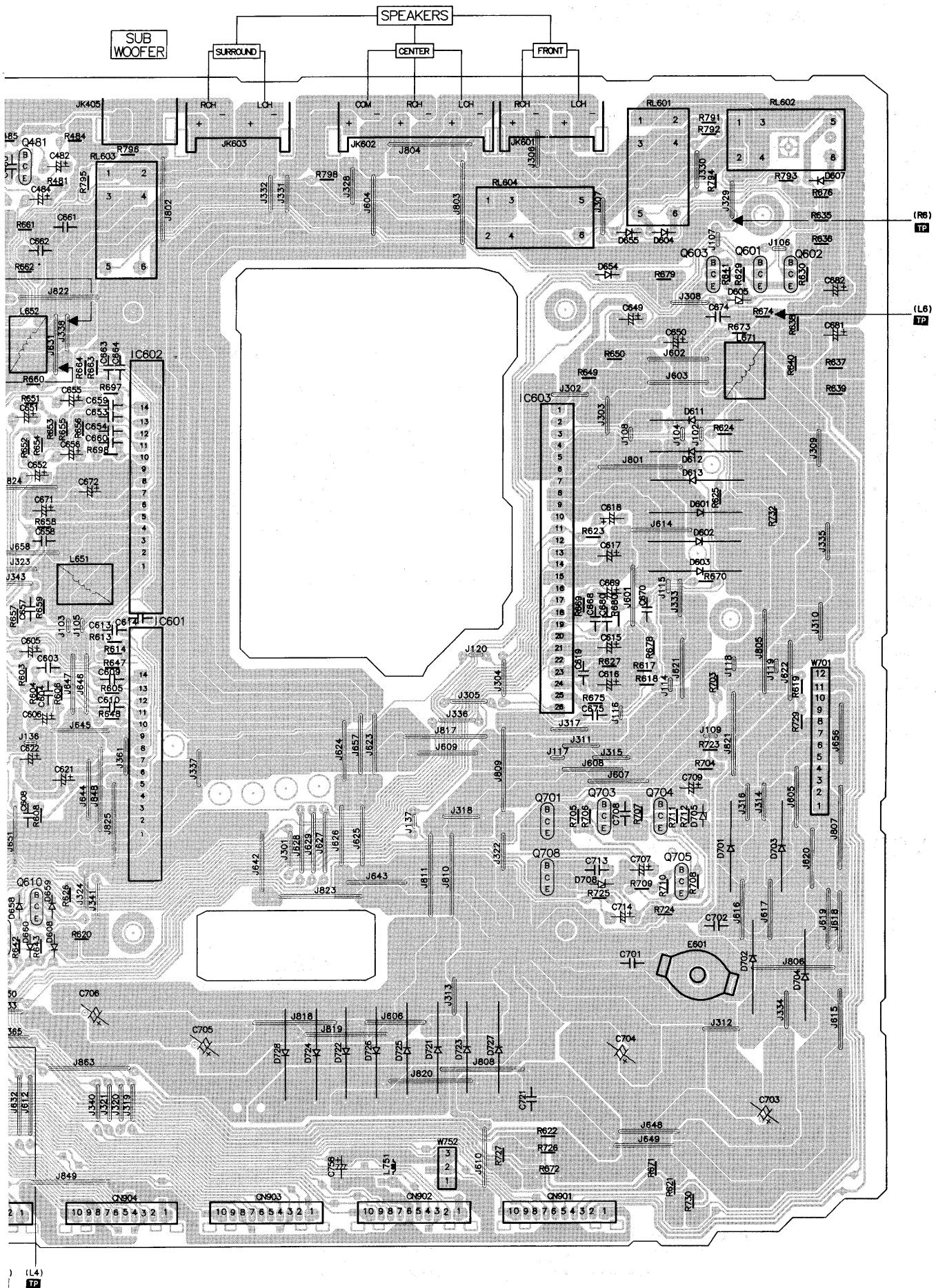


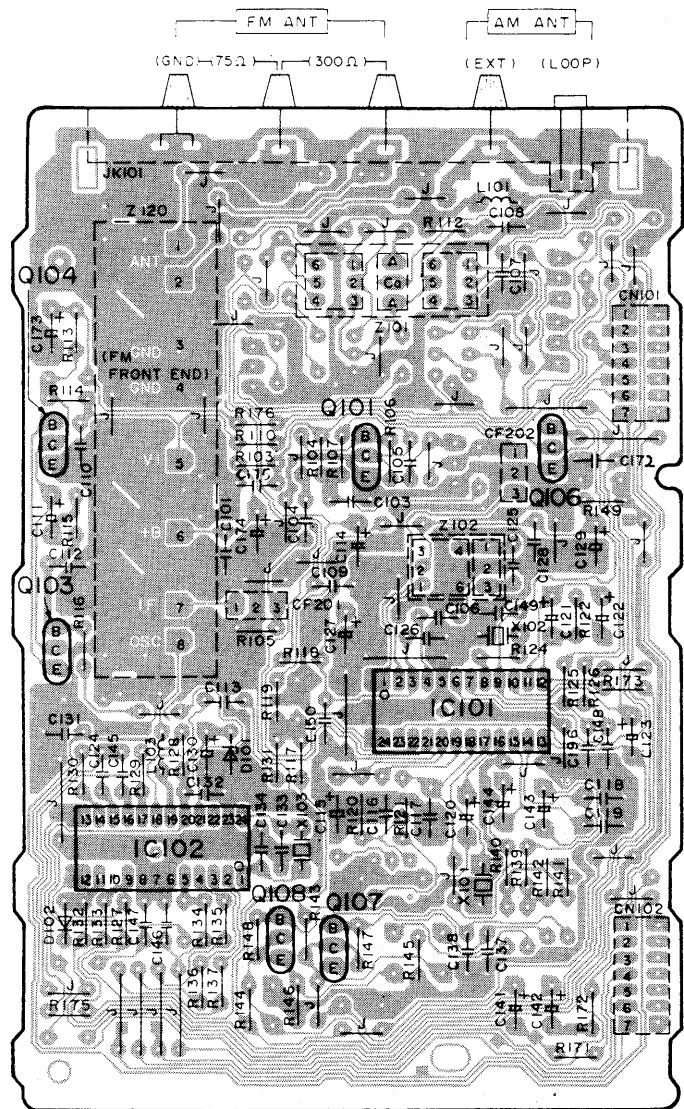
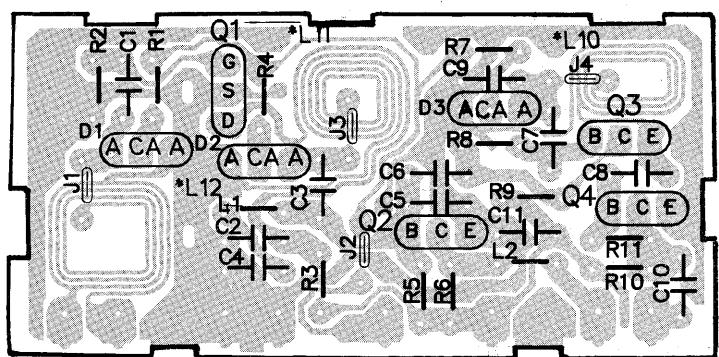


## D POWER SWITCH P.C.B. (REP2442B-S)

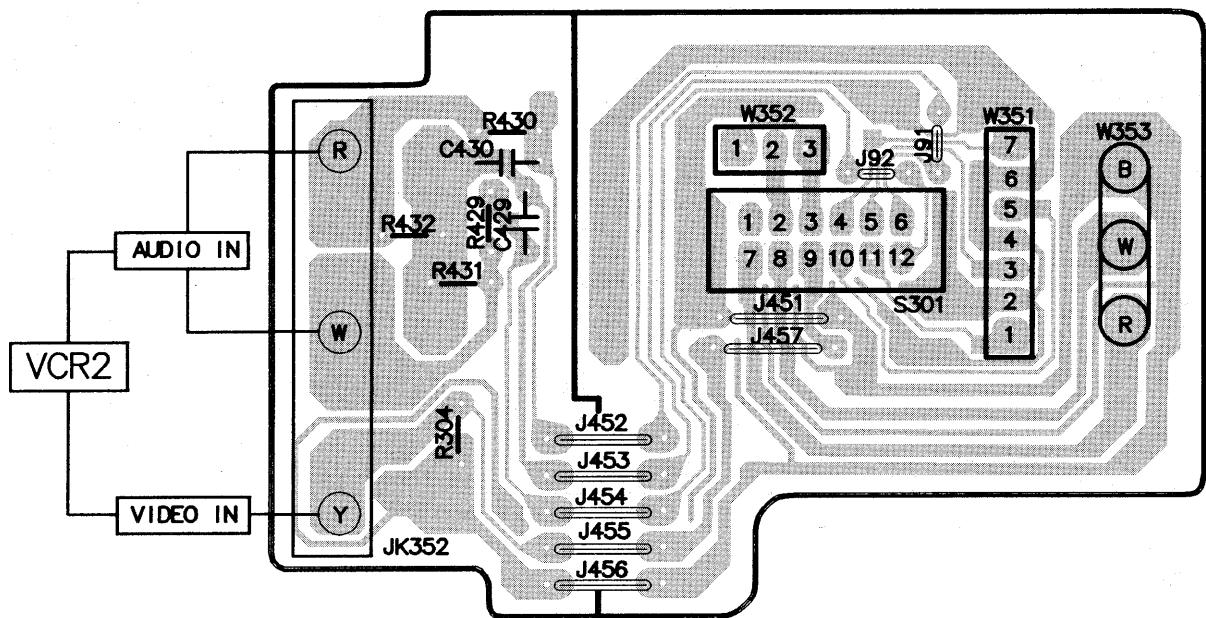




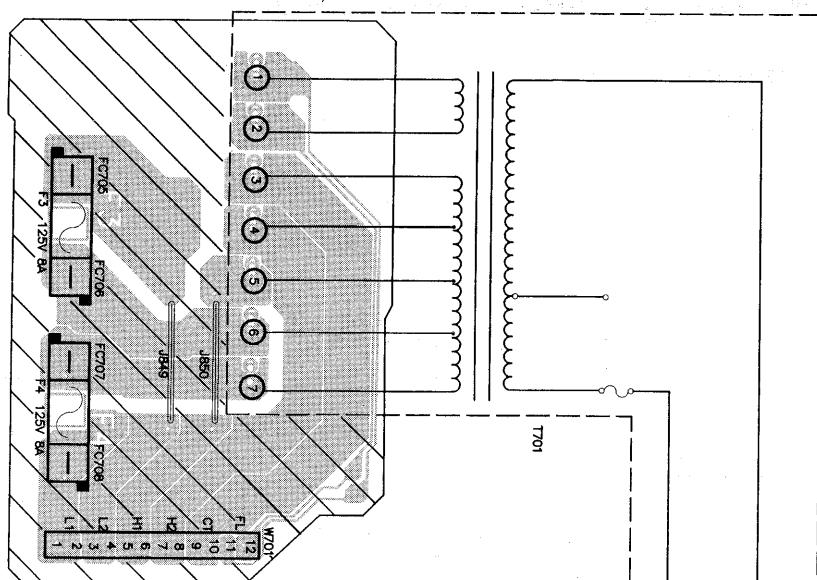


**F TUNER P.C.B. (REP2254A-T)****G TUNER PACK P.C.B. (REP1999B)****M VCR2 P.C.B. (REP2442B-S)**

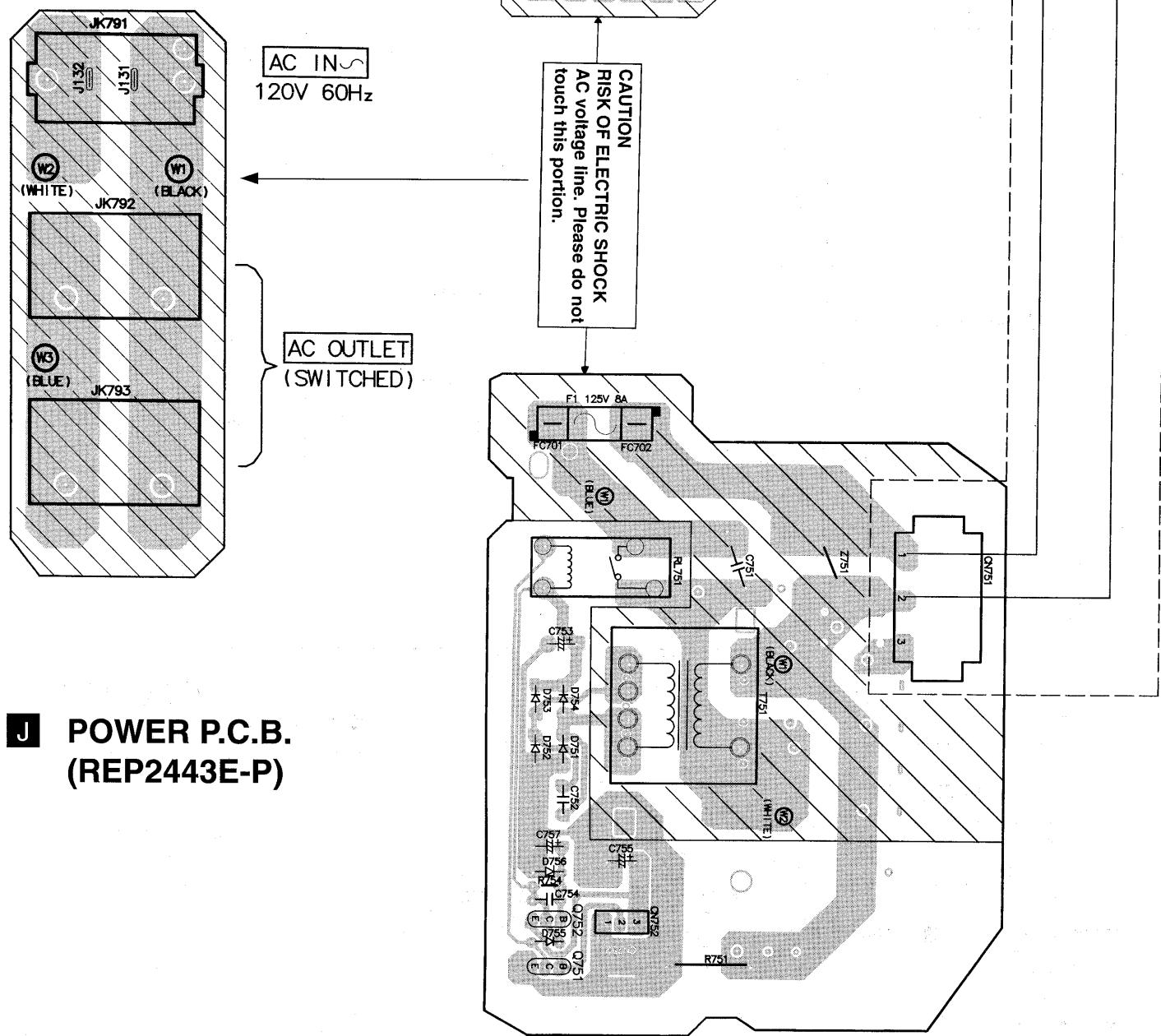
TV/VCR2



**H TRANSFORMER  
P.C.B. (REP2465A-M)**

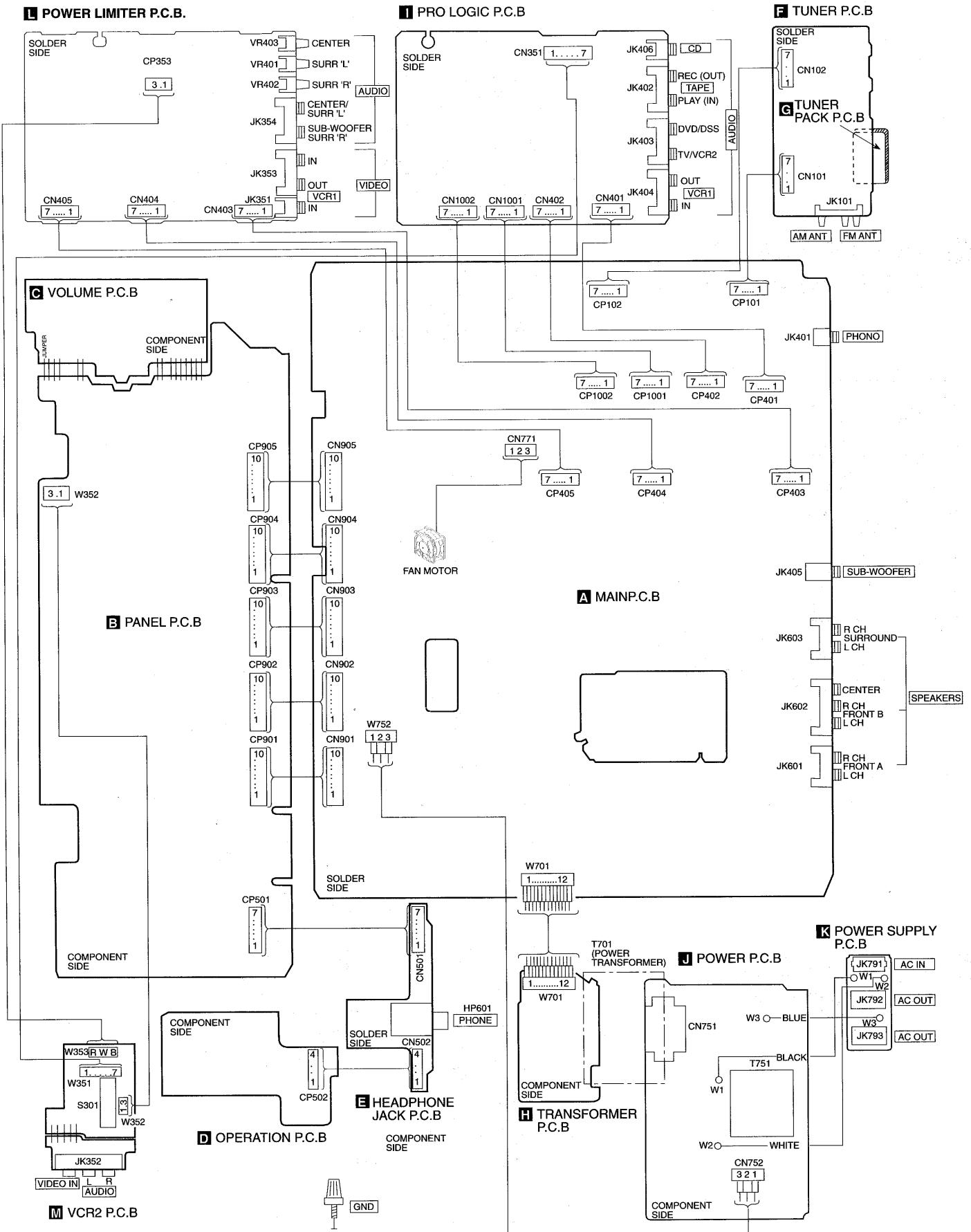


**K POWER SUPPLY  
P.C.B. (REP2443E-P)**

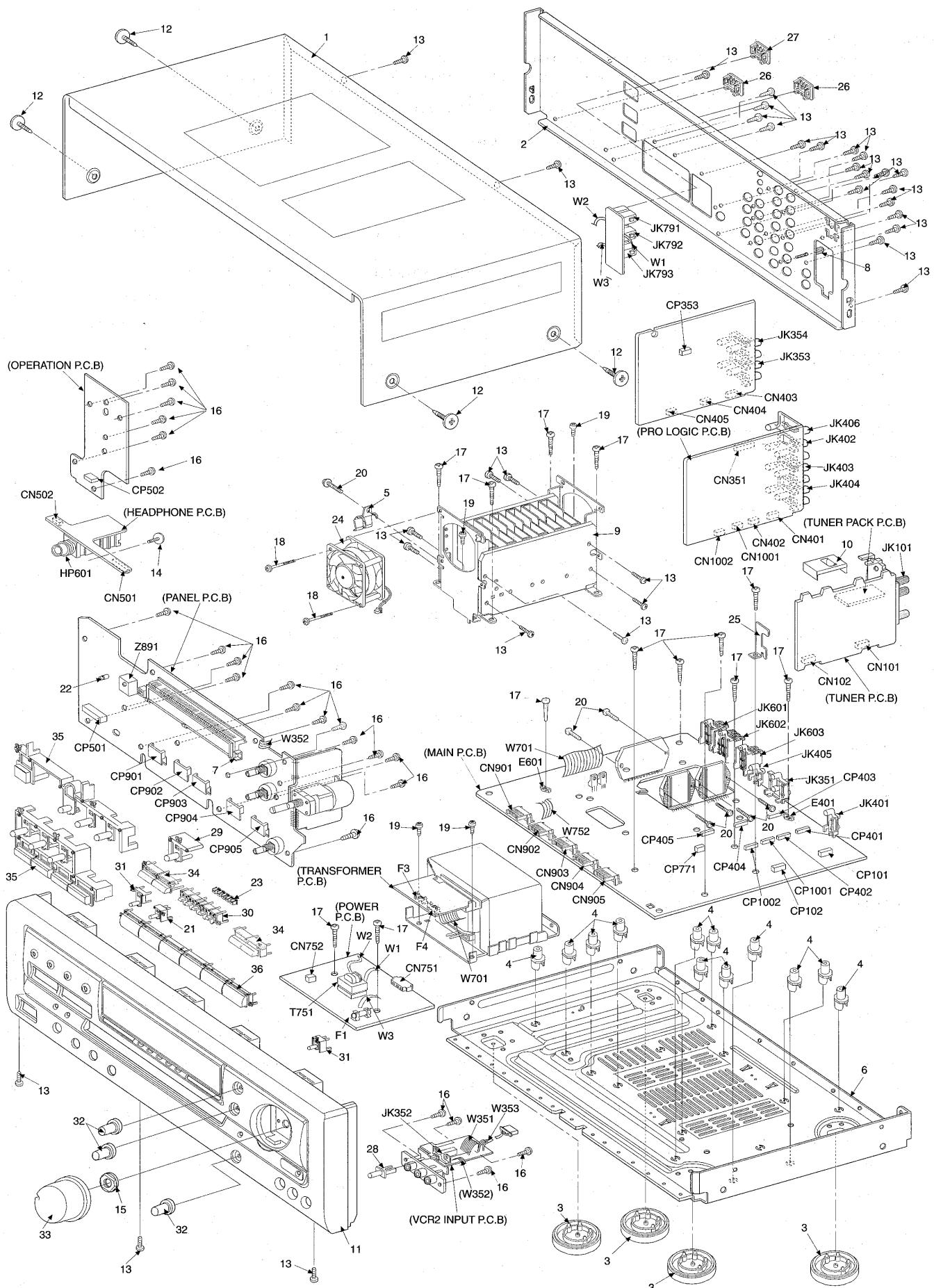


**J POWER P.C.B.  
(REP2443E-P)**

## ■ Wiring Connection Diagram



## ■ 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**.

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

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

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	RKM0342-K	TOP CABINET	[M]	IC101	LA1832A	IF/MPX IC	[M]	Q352	2SB621AQSTA	TRANSISTOR	[M]
2	RGR0252A-E	REAR PANEL	[M]	IC102	LC7218	PLL IC	[M]	Q401	2SK381CTA	TRANSISTOR	[M]
3	RKA0079-A	FOOT	[M]	IC331	LC74780-9080	ON SCREEN DISPLAY IC	[M]	Q402	2SK381CTA	TRANSISTOR	[M]
4	RKQ0089	PCB HOLDER	[M]	IC351	NJM2279D	VIDEO SELECTOR SW IC	[M]	Q481	2SD1915FTA	TRANSISTOR	[M]
5	RMC0158-S	TRANSISTOR HOLDER	[M]	IC352	AN6554F	OSD AMP IC	[M]	Q501	2SJ40CTA	TRANSISTOR	[M]
6	RMK0350	BOTTOM CHASSIS	[M]	IC401	TC9163AN	SELECTOR IC	[M]	Q502	2SJ40CTA	TRANSISTOR	[M]
7	RMN0372	FL HOLDER	[M]	IC402	UPC4570C	TONE CONTROL IC	[M]	Q505	2SD1915FTA	TRANSISTOR	[M]
8	SNE2123	EARTH TERMINAL	[M]	IC451	AN6558F	OP AMP IC	[M]	Q506	2SD1915FTA	TRANSISTOR	[M]
9	RXX0182	HEAT SINK UNIT	[M]	IC501	BA6218	MOTOR DRIVER IC	[M]	Q551	2SD1915FTA	TRANSISTOR	[M]
10	RSC0027-1	SHIELD CASE	[M]	IC511	UPC4570C	TONE CONTROL IC	[M]	Q552	2SD1915FTA	TRANSISTOR	[M]
11	RFKGAA810PK	FRONT CABINET ASS'Y	[M]	IC551	UPC4570C	TONE CONTROL IC	[M]	Q571	2SA933SSTA	TRANSISTOR	[M]
12	SNE2129-1	SCREW (CABINET)	[M]	IC552	UPC4570C	TONE CONTROL IC	[M]	Q572	2SA933SSTA	TRANSISTOR	[M]
13	XTBS3+8JFZ1	SCREW	[M]	IC601	RSN36S5A-P	HIC	[M]	Q573	2SC1740SSTA	TRANSISTOR	[M]
14	RHD26016	SCREW	[M]	IC602	RSN36S5A-P	HIC	[M]	Q574	2SC1740SSTA	TRANSISTOR	[M]
15	RHN90001	M9 NUT	[M]	IC603	RSN33M5-P	HIC	[M]	Q575	2SA933SSTA	TRANSISTOR	[M]
16	XTBS26+10J	SCREW (FRONT)	[M]	IC901	M38B53M4050F	MICROCOMPUTER	[M]	Q576	2SC1740SSTA	TRANSISTOR	[M]
17	XTB3+20JFZ	SCREW	[M]	IC1001	LA2786L	DPL IC	[M]	Q581	2SA933SSTA	TRANSISTOR	[M]
18	XTB3+30J	SCREW	[M]	IC1002	LV1016L	SURR DECODER	[M]	Q582	2SA933SSTA	TRANSISTOR	[M]
19	XTB3+8FFZ	SCREW	[M]	IC1003	TC9214P	SELECTOR IC	[M]	Q583	2SC1740SSTA	TRANSISTOR	[M]
20	XTW3+15T	SCREW	[M]	IC1004	TC9162AN	SELECTOR IC	[M]	Q584	2SC1740SSTA	TRANSISTOR	[M]
21	RGU1491-Q	6CH INPUT BUTTON	[M]	IC1151	UPC4570C	TONE CONTROL IC	[M]	Q585	2SA933SSTA	TRANSISTOR	[M]
22	RMN0313	LED SUPPORT	[M]					Q586	2SA933SSTA	TRANSISTOR	[M]
23	RMN0415	LED COVER	[M]					Q601	RVTDTA113ZST	TRANSISTOR	[M]
24	REM0069	FAN UNIT	[M]					Q602	RVTDTA113ZST	TRANSISTOR	[M]
25	RMQ0709	TUNER PCB BRACKET	[M]					Q603	RVTDTA113ZST	TRANSISTOR	[M]
26	SJS9233A	AC OUTLET COVER	[M]					Q609	RVTDTC114EST	TRANSISTOR	[M]
27	SJS9234A	AC INLET COVER	[M]					Q610	RVTDTC114YST	TRANSISTOR	[M]
28	RGU1390-K	VCR2 BUTTON	[M]					Q611	2SC1740SSTA	TRANSISTOR	[M]
29	RGU1398-Q	HELP BUTTON	[M]					Q612	2SC1740SSTA	TRANSISTOR	[M]
30	RGU1490-Q	SFC (5) BUTTON	[M]					Q681	2SD1915FTA	TRANSISTOR	[M]
31	RGU1492-K	SLEEP/MUTE BUTTON	[M]					Q682	2SD1915FTA	TRANSISTOR	[M]
32	RGW0216-K	TONE KNOB	[M]					Q701	2SD2374PQAU	TRANSISTOR	[M]
33	RGW0243A-K	VOLUME KNOB	[M]					Q703	2SC1740SSTA	TRANSISTOR	[M]
34	RGU1352J-K	DOLBY BUTTON	[M]					Q704	2SC1740SSTA	TRANSISTOR	[M]
35	RGU1350E-K	MODE BUTTON	[M]					Q705	2SC1740SSTA	TRANSISTOR	[M]
36	RGU1399A-K	SELECTOR BUTTON	[M]					Q706	2SC3940AQSTA	TRANSISTOR	[M]
								Q707	2SA1534AQRTA	TRANSISTOR	[M]
								Q708	2SB1548PQAU	TRANSISTOR	[M]
								Q751	RVTDTC143XST	TRANSISTOR	[M]

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
Q752	2SC3940AQSTA	TRANSISTOR	[M] !	D604	RVD1SS133TA	DIODE	[M]	D755	RVD1SS133TA	DIODE	[M] !
Q772	2SC1740SSTA	TRANSISTOR	[M]	D605	MTZJ6R2BTA	DIODE	[M]	D756	MTZJ6R8BTA	DIODE	[M] !
Q773	2SB621AQRSTA	TRANSISTOR	[M]	D606	RVD1SS133TA	DIODE	[M]	D771	RVD1SS133TA	DIODE	[M]
Q774	RVTDTA114EST	TRANSISTOR	[M]	D607	RVD1SS133TA	DIODE	[M]	D772	RVD1SS133TA	DIODE	[M]
Q775	2SA933SSTA	TRANSISTOR	[M]	D608	RVD1SS133TA	DIODE	[M]	D773	MTZJ12CTA	DIODE	[M]
Q776	2SC1740SSTA	TRANSISTOR	[M]	D611	SB360L6508	DIODE	[M] !	D774	RVD1SS133TA	DIODE	[M]
Q777	2SA933SSTA	TRANSISTOR	[M]	D612	SB360L6508	DIODE	[M] !	D901	1SS291TA	DIODE	[M]
Q778	RVTDTA114TST	TRANSISTOR	[M]	D613	SB360L6508	DIODE	[M] !	D903	MTZJ4R7BTA	DIODE	[M]
Q901	RVTDTC114YST	TRANSISTOR	[M]	D621	MA167ATA	DIODE	[M]	D907	MA167ATA	DIODE	[M]
Q902	2SA933SSTA	TRANSISTOR	[M]	D622	MA167ATA	DIODE	[M]	D921	RVD1SS133TA	DIODE	[M]
Q908	RVTDTC114YST	TRANSISTOR	[M]	D623	MA167ATA	DIODE	[M]	D923	RVD1SS133TA	DIODE	[M]
Q931	RVTDTA114YST	TRANSISTOR	[M]	D624	MA167ATA	DIODE	[M]	D924	MTZJ3R9ATA	DIODE	[M]
Q932	RVTDTA114YST	TRANSISTOR	[M]	D625	MA167ATA	DIODE	[M]	D930	SLR342DC	DIODE	[M]
Q933	RVTDTA114YST	TRANSISTOR	[M]	D626	MA167ATA	DIODE	[M]	D931	SLR342DCTB7	DIODE	[M]
Q934	RVTDTA114YST	TRANSISTOR	[M]	D627	MA167ATA	DIODE	[M]	D932	SLR342DCTB7	DIODE	[M]
Q935	RVTDTA114YST	TRANSISTOR	[M]	D628	MA167ATA	DIODE	[M]	D933	SLR342DCTB7	DIODE	[M]
Q936	RVTDTC114YST	TRANSISTOR	[M]	D631	MA167ATA	DIODE	[M]	D934	SLR342DCTB7	DIODE	[M]
Q938	RVTDTC114YST	TRANSISTOR	[M]	D632	MA167ATA	DIODE	[M]	D935	SLR342DCTB7	DIODE	[M]
Q1001	2SC3940AQSTA	TRANSISTOR	[M] !	D633	MA167ATA	DIODE	[M]	D936	SLR342MC	DIODE	[M]
Q1069	2SC3311AQSTA	TRANSISTOR	[M]	D634	MA167ATA	DIODE	[M]	D1001	MTZJ10CTA	DIODE	[M]
Q1070	2SC3311AQSTA	TRANSISTOR	[M]	D635	MA167ATA	DIODE	[M]	D1002	MA700ATA	DIODE	[M]
Q1151	2SD1915FTA	TRANSISTOR	[M]	D636	MA167ATA	DIODE	[M]				
				D637	MA167ATA	DIODE	[M]				VARIABLE RESISTORS
		DIODES		D638	MA167ATA	DIODE	[M]				
D1	SVC211SPA-AL	DIODE	[M]	D654	RVD1SS133TA	DIODE	[M]	VR401	EVUE3AE20B15	VARIABLE RESISTOR	[M]
D2	SVC211SPA-AL	DIODE	[M]	D655	RVD1SS133TA	DIODE	[M]	VR402	EVUE3AE20B15	VARIABLE RESISTOR	[M]
D3	SVC211SPA-AL	DIODE	[M]	D658	RVD1SS133TA	DIODE	[M]	VR403	EVUE3AE20B15	VARIABLE RESISTOR	[M]
D101	MTZJ5R1BTA	DIODE	[M]	D659	RVD1SS133TA	DIODE	[M]	VR501	EUWM6A026B15	MOTOR VOLUME	[M]
D102	RVD1SS133TA	DIODE	[M]	D660	RVD1SS133TA	DIODE	[M]	VR502	EWC0YAF15G15	BALANCE CONTROL VR	[M]
D301	RVD1SS133TA	DIODE	[M]	D701	P300DLF	DIODE	[M] !	VR511	EWC1XA020C15	TONE CONTROL VR	[M]
D331	RVD1SS133TA	DIODE	[M]	D702	P300DLF	DIODE	[M] !	VR512	EWC1XA020C15	TONE CONTROL VR	[M]
D351	MTZJ5R6BTA	DIODE	[M] !	D703	P300DLF	DIODE	[M] !				SWITCHES
D352	MTZJ5R6BTA	DIODE	[M] !	D704	P300DLF	DIODE	[M] !				
D353	RVD1SS133TA	DIODE	[M]	D705	MTZJ6R2BTA	DIODE	[M] !	S301	RSP2D009-J	SWITCH	[M]
D354	RVD1SS133TA	DIODE	[M]	D707	MTZJ27DTA	DIODE	[M] !	S946	EVQ21405R	TACK SWITCH	[M]
D401	MTZJ7R5CTA	DIODE	[M]	D708	MTZJ15CTA	DIODE	[M] !	S948	EVQ21405R	TACK SWITCH	[M]
D403	RVD1SS133TA	DIODE	[M]	D721	P300DLF	DIODE	[M] !	S950	EVQ21405R	TACK SWITCH	[M]
D404	RVD1SS133TA	DIODE	[M]	D722	P300DLF	DIODE	[M] !	S951	EVQ21405R	TACK SWITCH	[M]
D581	MTZJ3R0ATA	DIODE	[M]	D723	P300DLF	DIODE	[M] !	S952	EVQ21405R	TACK SWITCH	[M]
D582	MTZJ3R0ATA	DIODE	[M]	D724	P300DLF	DIODE	[M] !	S953	EVQ21405R	TACK SWITCH	[M]
D583	MTZJ3R0ATA	DIODE	[M]	D725	P300DLF	DIODE	[M] !	S954	EVQ21405R	TACK SWITCH	[M]
D584	MTZJ3R0ATA	DIODE	[M]	D726	P300DLF	DIODE	[M] !	S955	EVQ21405R	TACK SWITCH	[M]
D585	RVD1SS133TA	DIODE	[M]	D727	P300DLF	DIODE	[M] !	S956	EVQ21405R	TACK SWITCH	[M]
D586	RVD1SS133TA	DIODE	[M]	D728	P300DLF	DIODE	[M] !	S957	EVQ21405R	TACK SWITCH	[M]
D601	SB360L6508	DIODE	[M] !	D751	1SR35200TB	DIODE	[M] !	S958	EVQ21405R	TACK SWITCH	[M]
D602	SB360L6508	DIODE	[M] !	D752	1SR35200TB	DIODE	[M] !	S965	EVQ21405R	TACK SWITCH	[M]
D603	SB360L6508	DIODE	[M] !	D753	1SR35200TB	DIODE	[M] !	S970	EVQ21405R	TACK SWITCH	[M]
				D754	1SR35200TB	DIODE	[M] !				

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
S971	EVQ21405R	TACK SWITCH	[M]	CP501	RJT100W07	7P CONNECTOR	[M]			OSCILLATORS	
S972	EVQ21405R	TACK SWITCH	[M]	CP502	RJT100W04	4P CONNECTOR	[M]				
S973	EVQ21405R	TACK SWITCH	[M]	CP771	RJP3G4YA	CONNECTOR	[M]	X101	RSXZ456KM07M	CERAMIC OSCILLATOR	[M]
S974	EVQ21405R	TACK SWITCH	[M]	CP901	RJT003K010M1	10P CONNECTOR	[M]	X102	RLFDGTD01I	FM REZONATOR	[M]
S975	EVQ21405R	TACK SWITCH	[M]	CP902	RJT003K010M1	10P CONNECTOR	[M]	X103	SVQ49U722T-S	CRYSTAL 7.2MHZ	[M]
S976	EVQ21405R	TACK SWITCH	[M]	CP903	RJT003K010M1	10P CONNECTOR	[M]	X351	RSXC14M3S01	X'TAL	[M]
S980	EVQ21405R	TACK SWITCH	[M]	CP904	RJT003K010M1	10P CONNECTOR	[M]			DISPLAY TUBE	
S981	EVQ21405R	TACK SWITCH	[M]	CP905	RJT003K010M1	10P CONNECTOR	[M]			EARTH TERMINAL	
S982	EVQ21405R	TACK SWITCH	[M]	CP1001	RJT100W07	7P CONNECTOR	[M]	E401	SNE1004-2	EARTH TERMINAL	[M]
S983	EVQ21405R	TACK SWITCH	[M]	CP1002	RJT100W07	7P CONNECTOR	[M]	E601	SNE1004-2	EARTH TERMINAL	[M]
S984	EVQ21405R	TACK SWITCH	[M]							RELAYS	
S985	EVQ21405R	TACK SWITCH	[M]	L1	RLQZP1R2JT-Y	RF CHOKE COIL	[M]	RL601	RSY0013M-0	RELAY	[M]
S991	EVQ21405R	TACK SWITCH	[M]	L2	RLQZPR47KT-Y	RF CHOKE COIL	[M]	RL602	RSY0013M-0	RELAY	[M]
S992	EVQ21405R	TACK SWITCH	[M]	L101	ELESN1R5MA	CHOKE COIL	[M]	RL603	RSY0013M-0	RELAY	[M]
S993	EVQ21405R	TACK SWITCH	[M]	L103	ELEXTR47MA9	CHOKE COIL	[M]	RL604	RSY0013M-0	RELAY	[M]
S994	EVQ21405R	TACK SWITCH	[M]	L351	RLQB101KTA-Y	CHOKE COIL	[M]	RL751	RSY0019M-0	12V TV-5 RELAY	[M] !
S995	EVQ21405R	TACK SWITCH	[M]	L352	ELEXTR330KA9	CHOKE COIL	[M]			FUSES	
S996	EVQ21405R	TACK SWITCH	[M]	L501	RLQZP1R0KT-Y	AXIAL COIL	[M]	F1	XBA1C80NBAL	FUSE	[M] !
				L502	RLQZP1R0KT-Y	AXIAL COIL	[M]	F3	XBA1C80NBAL	FUSE	[M] !
				L601	RLQYR73M	CHOKE COIL	[M]	F4	XBA1C80NBAL	FUSE	[M] !
				L602	RLQYR73M	CHOKE COIL	[M]			FUSE CLIPS	
				L651	RLQYR73M	CHOKE COIL	[M]	FC701	EYF52BC	FUSE HOLDER	[M]
				L652	RLQYR73M	CHOKE COIL	[M]	FC702	EYF52BC	FUSE HOLDER	[M]
				L671	RLQYR73M	CHOKE COIL	[M]	FC705	EYF52BC	FUSE HOLDER	[M]
				L751	RLQB101KTA-Y	CHOKE COIL	[M]	FC706	EYF52BC	FUSE HOLDER	[M]
				L901	RLQB101KTA-Y	CHOKE COIL	[M]	FC707	EYF52BC	FUSE HOLDER	[M]
				L1051	RLQB101KTA-Y	CHOKE COIL	[M]	FC708	EYF52BC	FUSE HOLDER	[M]
				T701	RTP1Q5C011-V	TRANSFORMER	[M] !			JACKS	
				T751	RTP1H5C001-V	POWER TRANSFORMER	[M] !				
								JK101	RJH4405	ANT TERMINAL	[M]
								JK351	SJFD7-5	RCA TERMINAL	[M]
								JK352	SJK5-2A	VCR IN	[M]
								JK353	SJF3069-3N	RCA PIN JACK	[M]
								JK354	SJF3069-16N	RCA TERMINAL	[M]
								JK401	SJF3068-7N	RCA TERMINAL	[M]
								JK402	SJF3069N	LINE IN JACK	[M]

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
JK403	SJF3069N	LINE IN JACK	[M]			WIRES				ACCESSORIES	
JK404	SJF3069N	LINE IN JACK	[M]								
JK405	SJFD7	FM MULTI OUT	[M]					A1	RAK-SA925MK	REMOTE CONTROL	[M]
JK406	SJF3068-7N	RCA TERMINAL	[M]					A1-1	RFKNAAX710PK	REMOTE CONTROL COVER	[M]
JK601	RJR0054	SP TERMINAL	[M]					A2	RFKSAAX810PK	INSTR. MANUAL ASS'Y	[M]
JK602	RJH5601	SP TERMINAL	[M]					A3	RSA0006	FM ANTENNA WIRE	[M]
JK603	RJR0054	SP TERMINAL	[M]					A4	RSA0010	LOOP ANT UNIT	[M]
JK791	SJS9234B	AC INLET	[M] 			PACKING MATERIALS		A5	SJA172	AC CORD	[M] (SF) 
JK792	SJS9233B	AC OUTLET	[M] 								
JK793	SJS9233B	AC OUTLET	[M] 								
HP601	RJJ63TA01	HP JACK	[M]								

## ■ Resistors & Capacitors

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.

\* Capacitor values are in microfarad ( $\mu\text{F}$ ) 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)

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>	R119	ERDS2TJ822T	8.2K 1/4W [M]	R147	ERDS2TJ474T	470K 1/4W [M]	R336	ERDS2TJ332T	3.3K 1/4W [M]
R1	ERDS2TJ104T	100K 1/4W [M]	R120	ERDS2TJ473T	47K 1/4W [M]	R148	ERDS2TJ474T	470K 1/4W [M]	R337	ERDS2TJ332T	3.3K 1/4W [M]
R2	ERDS2TJ104T	100K 1/4W [M]	R121	ERDS2TJ332T	3.3K 1/4W [M]	R149	ERDS2TJ680T	68 1/4W [M]	R338	ERDS2TJ332T	3.3K 1/4W [M]
R3	ERDS2TJ221T	220 1/4W [M]	R122	ERDS2TJ272T	2.7K 1/4W [M]	R171	ERDS2TJ102T	1K 1/4W [M]	R339	ERDS2TJ332T	3.3K 1/4W [M]
R4	ERDS2TJ104T	100K 1/4W [M]	R124	ERDS2TJ271T	270 1/4W [M]	R172	ERDS2TJ102T	1K 1/4W [M]	R341	ERDS2TJ273T	27K 1/4W [M]
R5	ERDS2TJ564T	560K 1/4W [M]	R125	ERDS2TJ472T	4.7K 1/4W [M]	R173	ERDS2TJ471T	470 1/4W [M]	R342	ERDS2TJ104T	100K 1/4W [M]
R6	ERDS2TJ391T	390 1/4W [M]	R126	ERDS2TJ472T	4.7K 1/4W [M]	R175	ERDS2TJ102T	1K 1/4W [M]	R343	ERDS2TJ104T	100K 1/4W [M]
R7	ERDS2TJ272T	2.7K 1/4W [M]	R127	ERDS2TJ103T	10K 1/4W [M]	R176	ERDS2TJ391T	390 1/4W [M]	R344	ERDS2TJ104T	100K 1/4W [M]
R8	ERDS2TJ684T	680K 1/4W [M]	R128	ERDS2TJ820T	82 1/4W [M]	R301	ERDS2TJ750T	75 1/4W [M]	R345	ERDS2TJ273T	27K 1/4W [M]
R9	ERDS2TJ391T	390 1/4W [M]	R129	ERDS2TJ473T	47K 1/4W [M]	R302	ERDS2TJ750T	75 1/4W [M]	R346	ERDS2TJ273T	27K 1/4W [M]
R10	ERDS2TJ391T	390 1/4W [M]	R130	ERDS2TJ102T	1K 1/4W [M]	R303	ERDS2TJ750T	75 1/4W [M]	R347	ERDS2TJ104T	100K 1/4W [M]
R11	ERDS2TJ684T	680K 1/4W [M]	R131	ERDS2TJ102T	1K 1/4W [M]	R304	ERDS2TJ750T	75 1/4W [M]	R348	ERDS2TJ104T	100K 1/4W [M]
R103	ERDS2TJ151T	150 1/4W [M]	R132	ERDS2TJ103T	10K 1/4W [M]	R307	ERDS2TJ104T	100K 1/4W [M]	R349	ERDS2TJ104T	100K 1/4W [M]
R104	ERDS2TJ102T	1K 1/4W [M]	R133	ERDS2TJ102T	1K 1/4W [M]	R308	ERDS2TJ472T	4.7K 1/4W [M]	R350	ERDS2TJ104T	100K 1/4W [M]
R105	ERDS2TJ471T	470 1/4W [M]	R134	ERDS2TJ102T	1K 1/4W [M]	R309	ERDS2TJ332T	3.3K 1/4W [M]	R351	ERDS2TJ104T	100K 1/4W [M]
R106	ERDS2TJ224T	220K 1/4W [M]	R135	ERDS2TJ102T	1K 1/4W [M]	R310	ERDS2TJ471T	470 1/4W [M]	R352	ERDS2TJ104T	100K 1/4W [M]
R107	ERDS2TJ471T	470 1/4W [M]	R136	ERDS2TJ102T	1K 1/4W [M]	R311	ERDS2TJ750T	75 1/4W [M]	R359	ERDS2TJ750T	75 1/4W [M]
R110	ERDS2TJ102T	1K 1/4W [M]	R137	ERDS2TJ102T	1K 1/4W [M]	R314	ERDS2TJ221T	220 1/4W [M]	R362	ERDS2TJ750T	75 1/4W [M]
R112	ERDS2TJ104T	100K 1/4W [M]	R139	ERDS2TJ272T	2.7K 1/4W [M]	R320	ERDS2TJ103T	10K 1/4W [M]	R367	ERDS2TJ102T	1K 1/4W [M]
R113	ERDS2TJ103T	10K 1/4W [M]	R140	ERDS2TJ272T	2.7K 1/4W [M]	R321	ERDS2TJ470T	47 1/4W [M]	R368	ERDS2TJ102T	1K 1/4W [M]
R114	ERDS2TJ562T	5.6K 1/4W [M]	R141	ERDS2TJ103T	10K 1/4W [M]	R324	ERDS2TJ103T	10K 1/4W [M]	R369	ERDS2TJ182T	1.8K 1/4W [M]
R115	ERDS2TJ561T	560 1/4W [M]	R142	ERDS2TJ103T	10K 1/4W [M]	R328	ERDS2TJ471T	470 1/4W [M]	R370	ERDS2TJ182T	1.8K 1/4W [M]
R116	ERDS2TJ102T	1K 1/4W [M]	R143	ERDS2TJ222T	2.2K 1/4W [M]	R331	ERDS2TJ221T	220 1/4W [M]	R371	ERD2FCVG220T	22 1/4W [M]
R117	ERDS2TJ104T	100K 1/4W [M]	R144	ERDS2TJ222T	2.2K 1/4W [M]	R332	ERDS2TJ104T	100K 1/4W [M]	R372	ERD2FCVG220T	22 1/4W [M]
R118	ERDS2TJ562T	5.6K 1/4W [M]	R145	ERDS2TJ102T	1K 1/4W [M]	R333	ERDS2TJ101T	100 1/4W [M]	R373	ERDS2TJ103T	10K 1/4W [M]
			R146	ERDS2TJ102T	1K 1/4W [M]	R334	ERDS2TJ101T	100 1/4W [M]	R374	ERDS2TJ103T	10K 1/4W [M]











## ■ Packaging

### ACCESSORY

P1 (SPSD152)	: ACCESSORY BOX
A1 (RAK-SA925MK)	: REMOTE CONTROL UNIT
A2 (RFKSAAX810PK)	: INSTR. MANUAL ASS'Y
A3 (RSA0006)	: FM ANTENNA
A4 (RSA0010)	: AM LOOP ANT
A5 (SJA172)	: AC CORD

