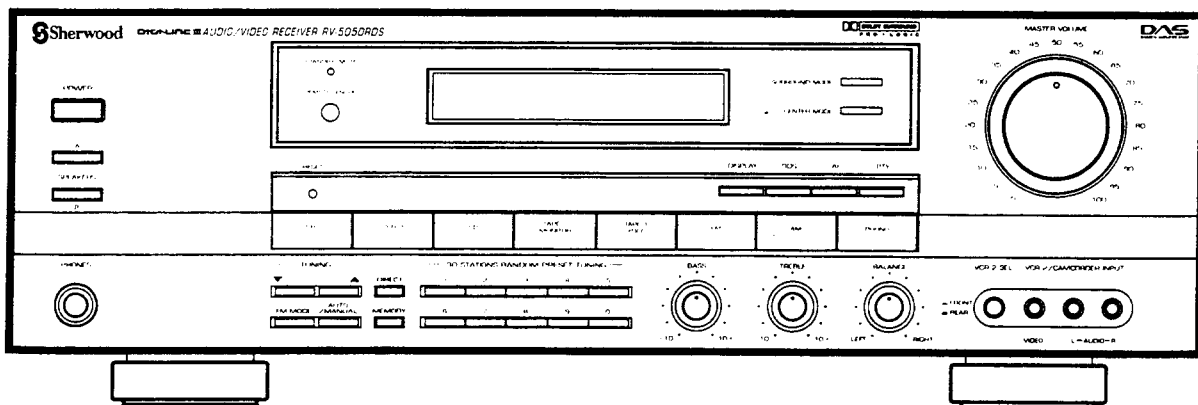


# SERVICE MANUAL

## RV-5050RDS STEREO A/V PRO-LOGIC RECEIVER



### ■ CONTENTS ■

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 **Sherwood**

## SAFETY PRECAUTIONS

### WARNING

Before servicing this unit, familiarize yourself with the following precautions:

1. Many electrical and mechanical parts in this chassis have special safety characteristics that often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components

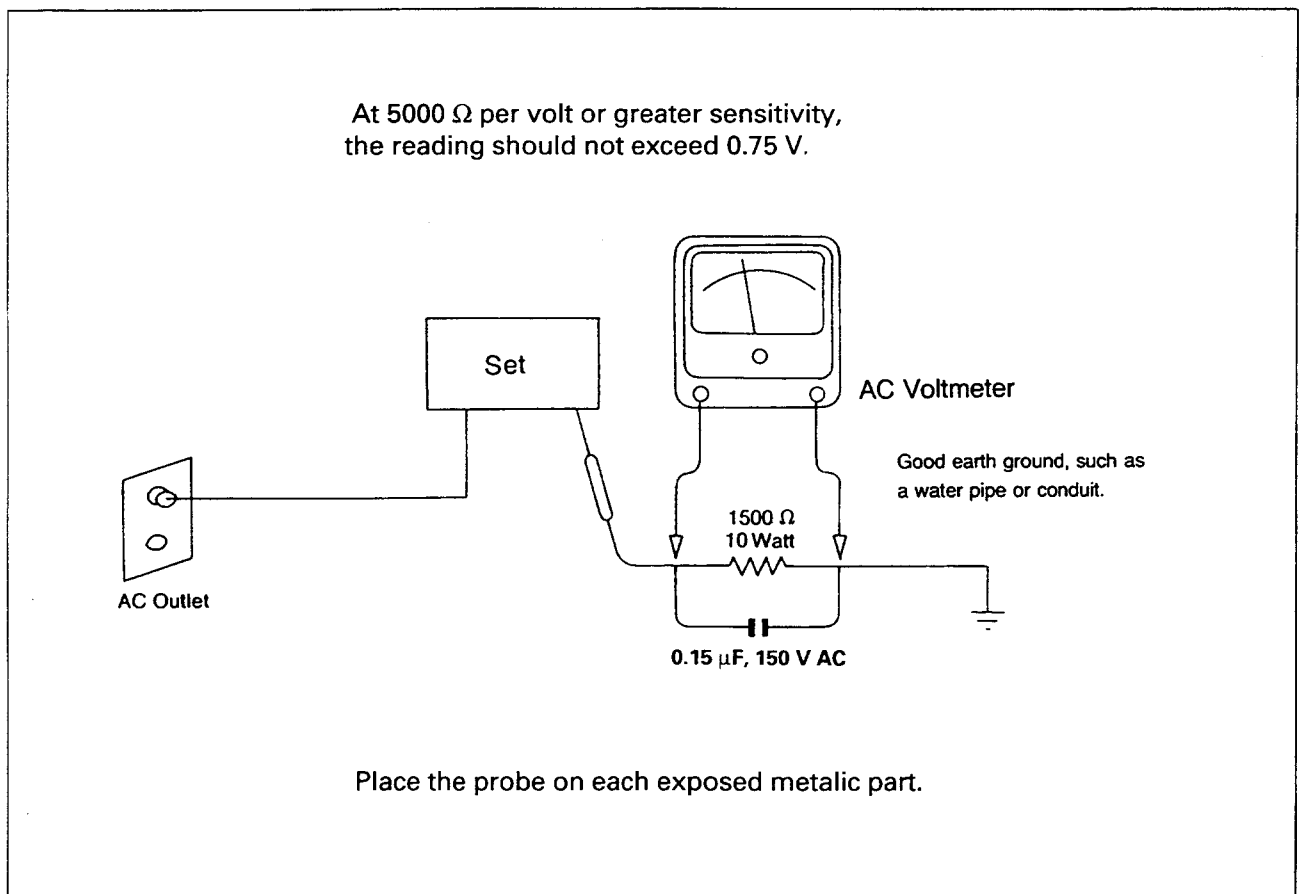
Replacement parts that have these special safety characteristics are identified in this manual and its supplements: electrical components having such features are identified by  in the schematic diagram and the parts list.

Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

2. Before returning the set to the customer, always do an AC leakage current check on the

exposed metal parts of the cabinet, such as terminals, screw heads, and metal overlays, to be sure the set is safe to operate danger of electrical shock. Plug the AC line cord directly into a 230 V AC outlet.

(Do not use a line isolation transformer during this check.) Be sure your AC voltmeter has a sensitivity of  $5000 \Omega$  per volt or greater. Then connect a  $1500 \Omega$  10 watt resistor, paralleled by a  $0.15 \mu\text{F}$  150 V AC capacitor, between a known good earth ground (such as a water pipe, or conduit) and the exposed metallic is parts, one at a time. Measure the AC voltage across the combination of a  $1500 \Omega$  resistor and a  $0.15 \mu\text{F}$  capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 V RMS. This corresponds to 0.2 mA AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



## SPECIFICATIONS

### FRONT AMP SECTION

Condition: DOLBY PROLOGIC off.

No.	Description	Unit	Nominal	Limit	
1	RMS Output Power(mode: STEREO) both channels driven at 40 Hz-20 kHz freq., 0.7% THD, 8 Ω load.	W	≥ 82	≥ 80	
2	Inter Modulation Distortion (60 Hz:7 kHz=4:1 SMPTE) at 8 Ω load, 80 W output.	%	≤ 0.05	≤ 0.08	
3	Input Sensitivity at 1 kHz freq., 47 kΩ Impedance.	PHONO	mV	2.8 ± 0.35	2.8 ± 0.4
		CD, ETC	mV	170 ± 20	170 ± 30
4	PHONO Input Overload at 1 kHz freq., 0.5% THD	mV	≥ 140	≥ 120	
5	Frequency Response; at 8 Ω, 1 W output, 30 - 15000 Hz -----> PHONO at 8 Ω, 80 W output, -3 dB -----> CD, TAPE	dB	RIAA ± 1.0	RIAA ± 1.5	
		Hz	10 - 60000	20 - 50000	
6	Signal to Noise Ratio IHF"A" weighted at 8 Ω, 1 kHz, 80 W output	PHONO	dB	≥ 70	≥ 66
		CD, AUX	dB	≥ 90	≥ 85
7	Tone Control at 8 Ω, 1 W output	BASS: 100 Hz	dB	10 ± 1.8	± 10 ± 2
		TREBLE: 10 kHz	dB	10 ± 1.8	± 10 ± 2
8	Channel Separation at 8 Ω, 80 W output Input shorted, CD, TAPE	100 Hz	dB	≥ 50	≥ 40
		1 kHz	dB	≥ 50	≥ 40
		10 kHz	dB	≥ 45	≥ 35
9	Crosstalk at 8 Ω, 1 kHz freq., 80 W output Input shorted	CD⇒TAPE1	dB	≥ 65	≥ 50
		TAPE⇒CD	dB	≥ 60	≥ 50
10	Sub woofer output at CD, 1 kHz, 170 mV input	mV	900 ± 100	900 ± 150	
11	Headphone output at 1 kHz, 1 W Speaker output	33 Ω Load mV	200 ± 30	200 ± 50	
10	Total Harmonic Distortion at 8 Ω load, 80 W output	40 Hz	%	≤ 0.05	≤ 0.2
		1 kHz	%	≤ 0.05	≤ 0.2
		20 kHz	%	≤ 0.2	≤ 0.3

### REAR AMP SECTION

Condition

Input: CD, Input level: 1 kHz freq. 230 mV, Rear level: Max., Master Volume: adj.

No.	Description	Unit	Nominal	Limit
1	RMS Output Power(1 CH. driven 80 W) at 1 kHz freq., 8 Ω load	%	≤ 0.8	≤ 1
2	Frequency Response at 1 W output, +3 dB, WIDE MODE	Hz	≥ 80 - 7000 (± 500)	≥ 100 - 7000 (± 1000)
3	Signal to Noise Ratio(IHF"A" weighted) Delay time: 20 ms	DOLBY dB	≥ 65	≥ 60

### CENTER AMP SECTION

Condition

Input: CD, Input level: 1 kHz freq. 220 mV, Center level: Max., Master Volume: adj.

No.	Description	Unit	Nominal	Limit	
1	RMS Output Power(1 CH. driven 80 W) at 1 kHz freq., 8 Ω load	%	≤ 0.2	≤ 0.4	
2	Frequency Response at 1 W output, -3 dB, DOLBY	NORMAL	Hz	100 - 17000	150 - 15000
		WIDE	Hz	30 - 17000	50 - 15000
3	Signal to Noise Ratio (IHF"A" weighted)	NORMAL dB	≥ 78	≥ 70	

### VIDEO SECTION

No.	Description	Unit	Nominal	Limit	
1	Input Sensitivity/Impedance	dB	1 Vp-p/75 Ω	± 0.5	
2	Output Level/Impedance	dB	1 Vp-p/75 Ω	± 0.5	
3	Frequency Response	5 Hz -6 MHz	dB	+2	+3
4	Crosstalk	1.0 MHz	dB	≥ 45	≥ 40
5	Signal to Noise Ratio	dB	≥ 45	≥ 40	

## FM SECTION

Antenna Impedance: 75  $\Omega$

No.	Description	Unit	Nominal	Limit
1	Tuning Frequency Range, Step: 50 kHz	MHz	87.5 - 108.0	
2	Usable Sensitivity	dBf	$\leq 17.2$	$\leq 20.7$
3	-46 dB Quieting Sensitivity	MONO	$\leq 3$	$\leq 5$
		STEREO	$\leq 35.8$	$\leq 56.2$
4	Signal to Noise Ratio (IHF "A" weighted)	MONO	$\geq 70$	$\geq 65$
		STEREO	$\geq 65$	$\geq 60$
5	Total Harmonic Distortion at 1 kHz freq.	MONO	$\leq 0.30$	$\leq 0.50$
		STEREO	$\leq 0.60$	$\leq 0.90$
6	Frequency Response at 20 Hz-15 kHz	dB	$\geq \pm 2$	$\geq \pm 3$
7	Image Rejection	dB	$\geq 40$	$\geq 35$
8	Spurious Response	dB	$\geq 70$	$\geq 60$
9	IF Rejection	dB	$\geq 65$	$\geq 60$
10	Alternative Channel Selectivity	dB	$\geq 50$	$\geq 40$
11	AM Suppression Ratio	dB	$\geq 60$	$\geq 50$
12	Stereo Separation	100 Hz	$\geq 40$	$\geq 35$
		1 kHz	$\geq 45$	$\geq 40$
		10 kHz	$\geq 35$	$\geq 30$
13	Auto Stop Error	MONO	$28 \pm 5$	$28 \pm 6$
14	Muting Threshold	dBf	$28 \pm 5$	$28 \pm 6$
15	Output Voltage	MONO	$500 \pm 80$	$500 \pm 150$
16	RDS Sense	@TA ON Level	28.1	35.8

## AM SECTION

No.	Description	Unit	Nominal	Limit
1	Tuning Frequency Range, Step: 9 kHz	kHz	522 - 1611	
2	Usable Sensitivity	$\mu V/m$	$\leq 500$	$\leq 800$
3	Signal to Noise Ratio	dB	$\geq 45$	$\geq 40$
4	Total Harmonic Distortion	%	$\leq 1.0$	$\leq 1.5$
5	Selectivity	dB	$\geq 25$	$\geq 20$
6	Image Rejection	dB	$\geq 33$	$\geq 28$
7	Frequency Response at 400 Hz freq. 0 dB, -6 dB	Hz	80 - 2100	100 - 1800
9	Auto Stop Level	dB/m	$60 \pm 5$	$60 \pm 6$
11	Output Voltage 400 Hz, 30% MOD., @1000 kHz	mV	$200 \pm 40$	$200 \pm 50$

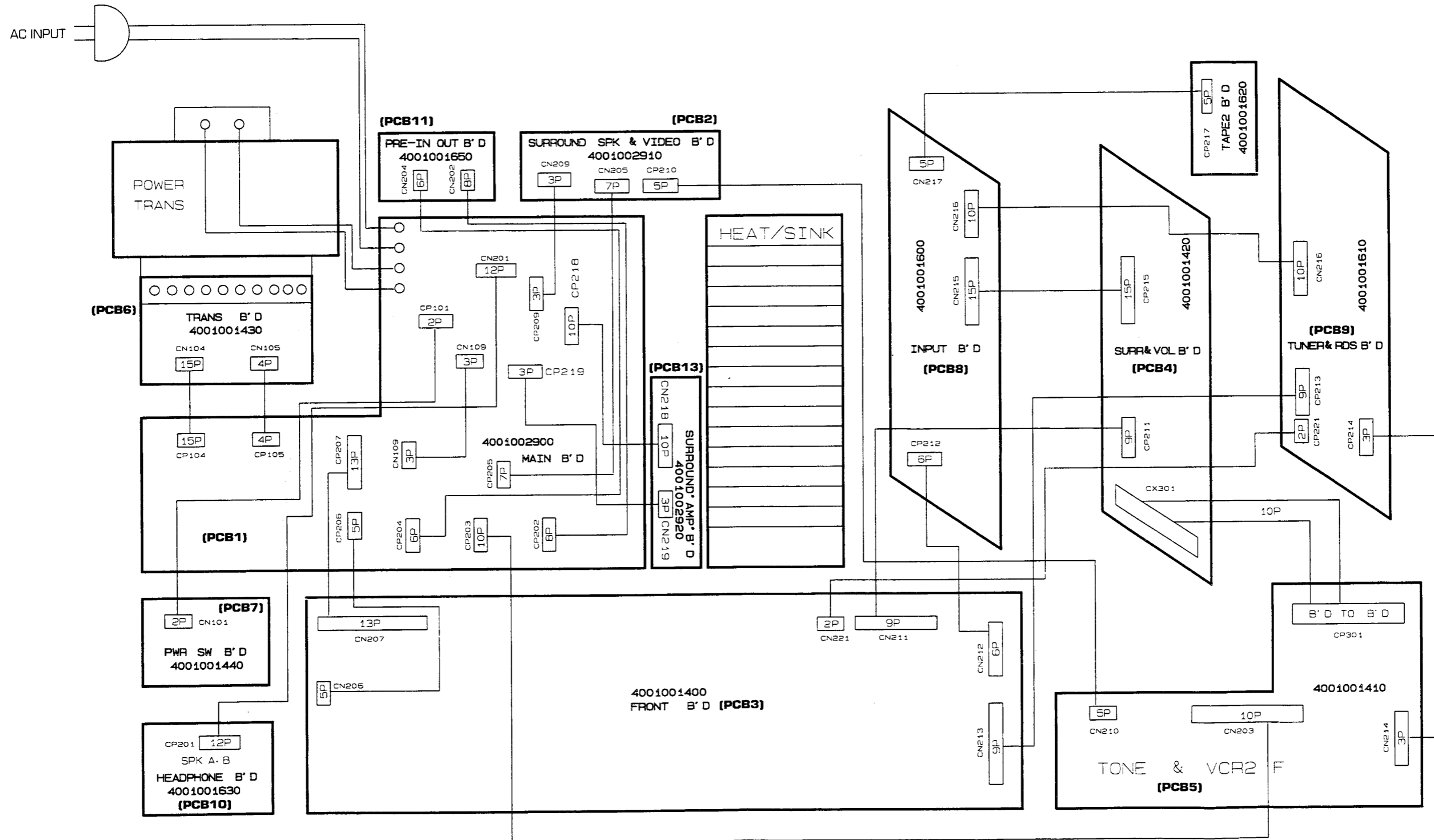
### General

Speaker Load Impedance	-----	8 $\Omega$
Power Consumption	-----	640 W
Dimensions (W x H x D)	-----	440X140X330 mm (17-5/16X5-1/2X13 inch)
Weight (Net)	-----	9.85 kg (21.72 lbs)
Power Supplies	-----	230 V AC, 50 Hz

Specifications and components subject to change without notice  
Overall performance will be maintained or improved.

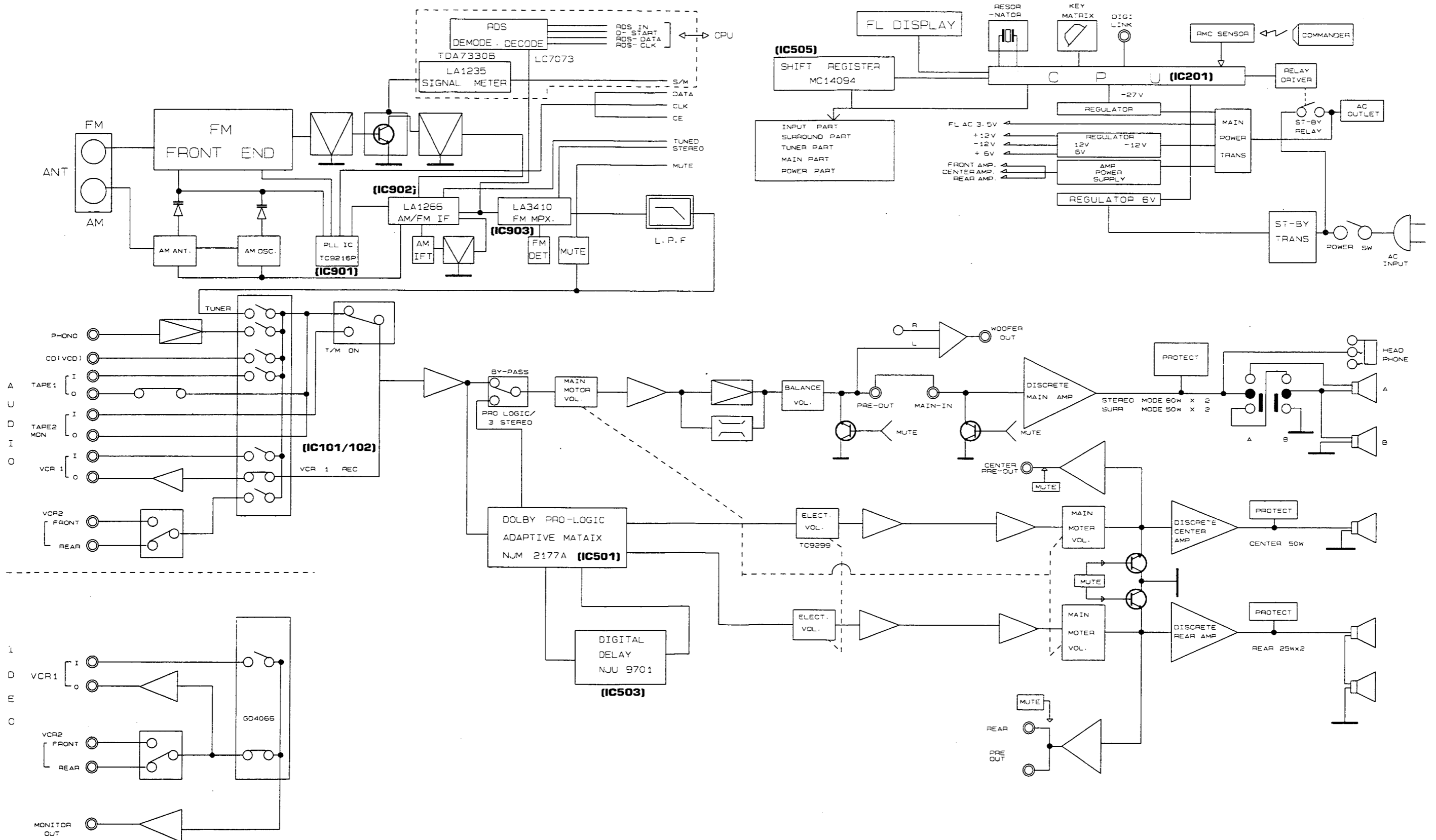
# WIRING DIAGRAM

Model No. : RV-5050RDS



# BLOCK DIAGRAM

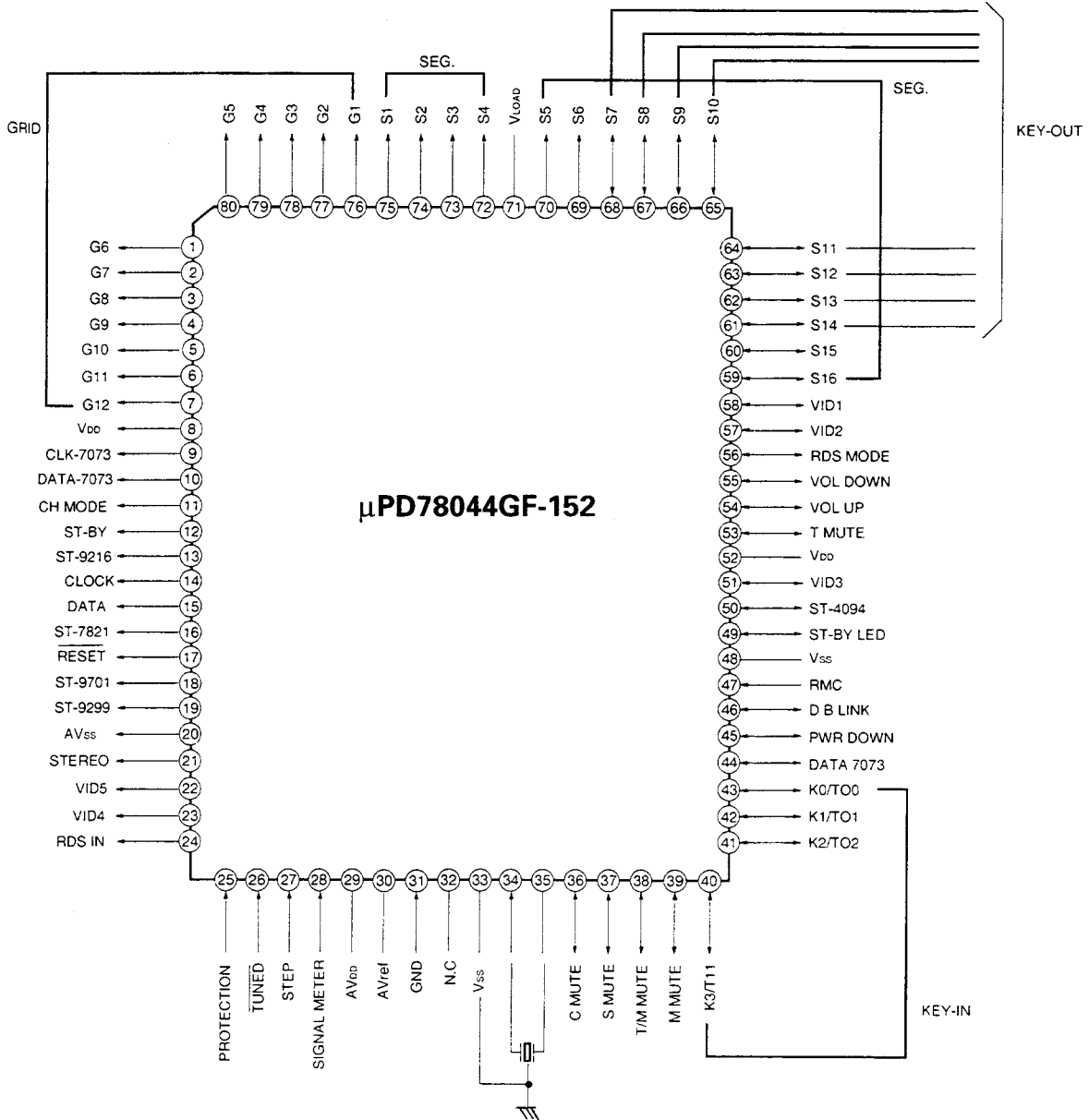
Model No. : RV-5050RDS



# CIRCUIT DESCRIPTION

IC201 :  $\mu$ PD78044AGF-152 (8bit CMOS Microprocessor)

## 1. Pin Configuration



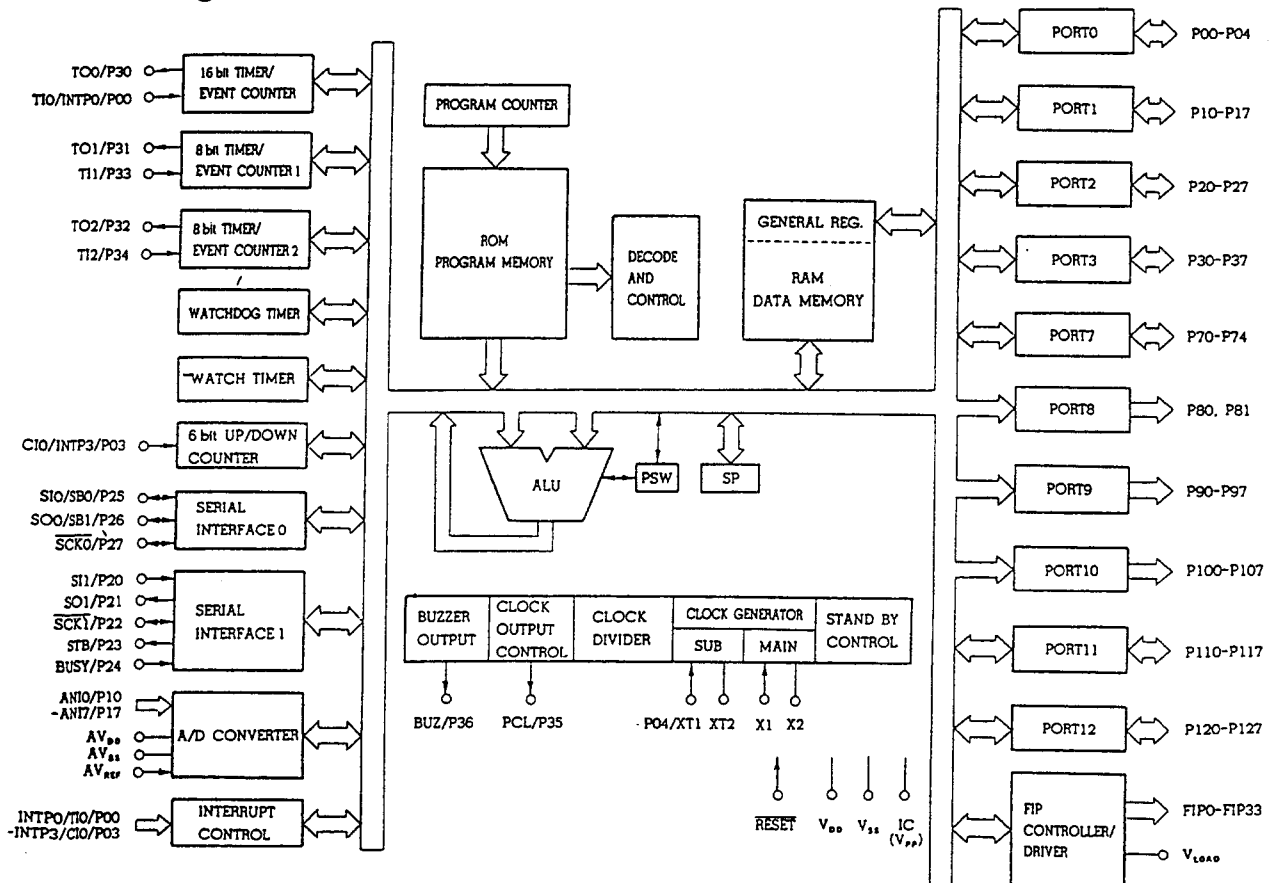
## 2. Pin Functions

Pin No.	Symbol	Description	Active Logic																						
1-7	GRID 6 - 12	Grid signal output for FIP.																							
8	VDD	+5 V power supply.																							
9	CLK-7073	Clock port of LC7073.																							
10	DATA-7073	Data port of LC7073.																							
11	CH-MODE	Control port for Dolby Pro-Logic Channel.	H																						
12	ST-BY	When the power is on, control data output is "H". When the power is off, control data output is "L" and last memory is activated.																							
13	ST-9216	Strobe port of TC-9216.																							
14	CLOCK	Clock output.																							
15	DATA	Data output.																							
16	ST-7821	Strobe port of LC-7821.																							
17	RESET	Input for resetting CPU.																							
18	ST-9701	Strobe port of NJU-9701.																							
19	ST-9299	Strobe port of TC-9299A.																							
20	AV <sub>SS</sub>	Ground																							
21	STEREO	Input for detecting FM STEREO.	H/M/L																						
22	VID5	Control port of VCR2 front and rear.																							
23	VID4	Control port of VCD.																							
24	RDS IN	Strobe port of TDA-7330B RDS input.	L																						
25	PROTECTION	Signal input for protection.																							
26	TUNED	Input for detecting the station during tuning.	L																						
27	STEP	According to the region, input for selecting the frequency bands and steps of FM and AM.  Settings are as follows.																							
		<table border="1"> <thead> <tr> <th>REGION</th> <th>FREQUENCY</th> <th>STEP</th> <th>PIN 27</th> </tr> </thead> <tbody> <tr> <td rowspan="2">AMERICA</td> <td>FM: 87.5 - 107.9 MHz</td> <td>200 KHz</td> <td rowspan="2">5 V</td> </tr> <tr> <td>AM: 520 - 1710 KHz</td> <td>10 KHz</td> </tr> <tr> <td rowspan="2">EUROPE</td> <td>FM: 87.5 - 108 MHz</td> <td>50 KHz</td> <td rowspan="2">2.5 V</td> </tr> <tr> <td>AM: 522 - 1611 KHz</td> <td>9 KHz</td> </tr> <tr> <td rowspan="2">KOREA</td> <td>FM: 87.5 - 107.5 MHz</td> <td>200 KHz</td> <td rowspan="2">0 V</td> </tr> <tr> <td>AM: 522 - 1611 KHz</td> <td>9 KHz</td> </tr> </tbody> </table>	REGION	FREQUENCY	STEP	PIN 27	AMERICA	FM: 87.5 - 107.9 MHz	200 KHz	5 V	AM: 520 - 1710 KHz	10 KHz	EUROPE	FM: 87.5 - 108 MHz	50 KHz	2.5 V	AM: 522 - 1611 KHz	9 KHz	KOREA	FM: 87.5 - 107.5 MHz	200 KHz	0 V	AM: 522 - 1611 KHz	9 KHz	
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KOREA	FM: 87.5 - 107.5 MHz	200 KHz	0 V																						
	AM: 522 - 1611 KHz	9 KHz																							
28	SIGNAL METER	Input port of FM Signal.	H/L																						
29	AV <sub>dd</sub>	Power supply of Analog A/D Converter.																							
30	AV <sub>ref</sub>	Ref. Voltage of Analog A/D Converter.	L																						
31	GND	Ground.																							
32	N.C	Not used !																							
33	V <sub>SS</sub>	Ground.																							
34	X-TAL IN	Input for crystal oscillator.																							
35	X-TAL OUT	Output for crystal oscillator.																							
36	C.MUTE	Control port for Center Signal mute.	H/L																						
37	S.MUTE	Control port for Surround Signal mute.	H/L																						
38	T/M MUTE	Control port for Tape Monitor Signal mute.																							
39	M.MUTE	Control port for Main Signal mute.	H																						



Pin No.	Symbol	Description	Active Logic
40 - 43	K3 - K0	Data input for key scan.	H
44	DATA - 7073	Data start of LC-7073.	
45	PWR-DOWN	Input for detecting power down.	L
46	D-LINK	Input/Output for controlling DIGI-LINK.	H
47	RMC	Input for remote control data.	
48	V <sub>SS</sub>	Ground.	
49	ST-BY LED	Output for driving stand-by LED.	H
50	ST-4094	Strobe port of M-14094.	H
51	VID3	Control port for VIDEO-3.	
52	V <sub>DD</sub>	+5V power supply.	
53	T.MUTE	Control port for Tuner Signal mute.	H
54	VOL.UP	Output to drive volume motor for increasing volume level.	H
55	VOL.DOWN	Output to drive volume motor for decreasing volume level.	H
56	RDS MODE	Control port for RDS mode.	H
57	VID2	Control port for VCR2	
58	VID1	Control port for VCR1.	
59 - 70	SEG 16 - 5	Segment signal output for FIP.	
71	Vload	-30 V power supply for FIP.	
72-75	SEG 4 - 1	Segment signal output for FIP.	
76 - 80	GRID 1 - 5	Grid signal output for FIP.	

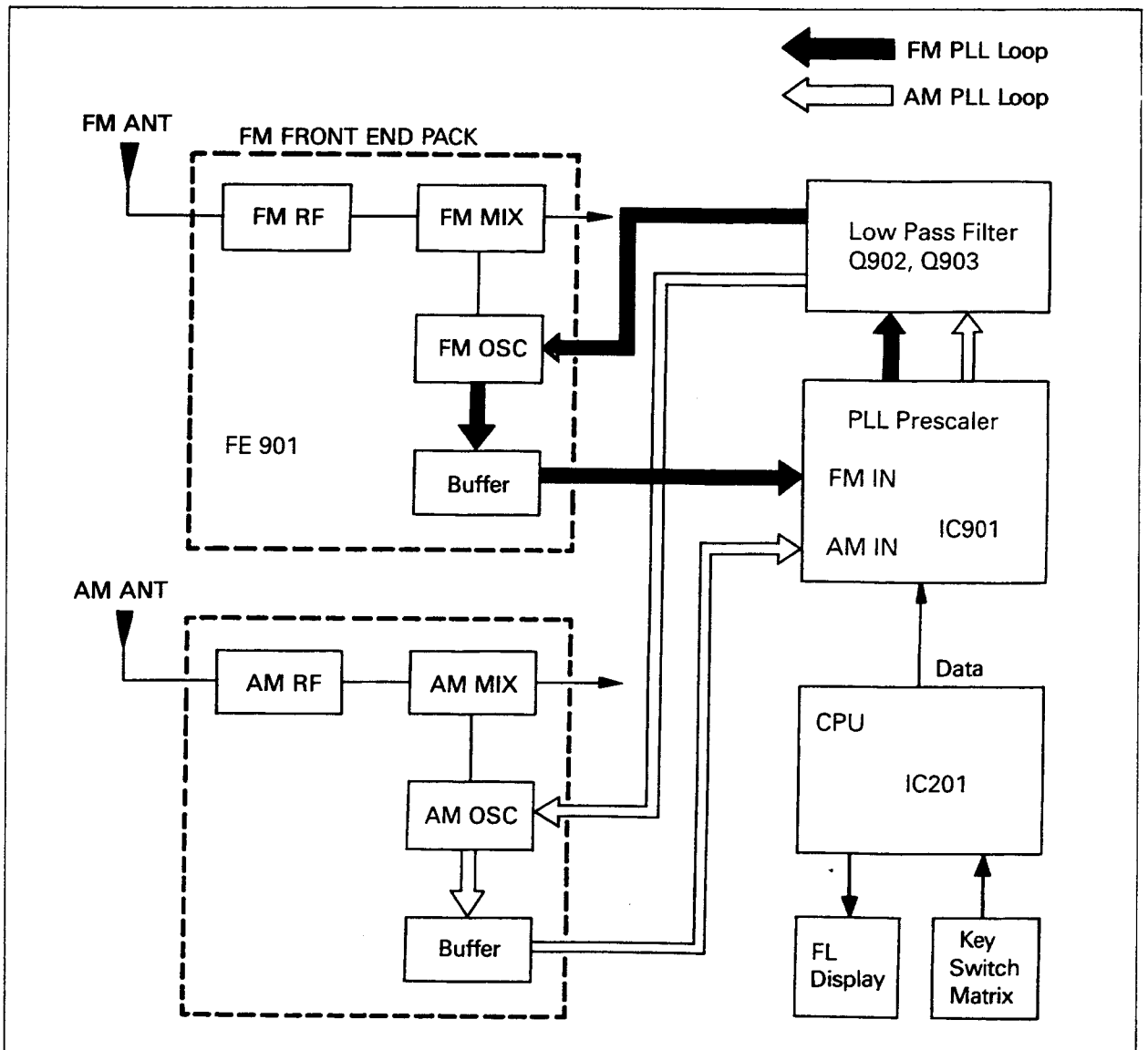
### 3. Block Diagram



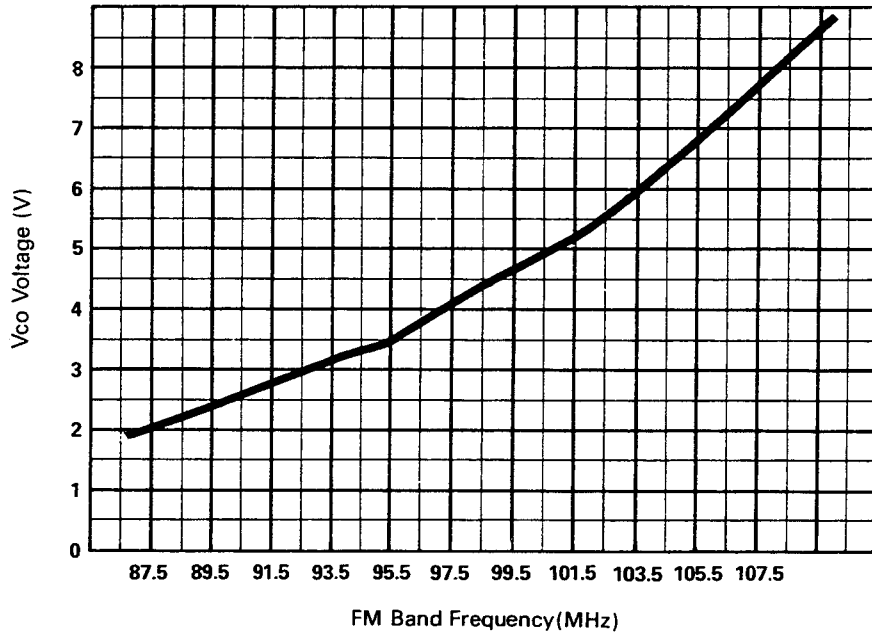
#### 4. Key Matrix

OUT IN	KSCAN0 PIN 61	KSCAN1 PIN 62	KSCAN2 PIN 63	KSCAN3 PIN 64	KSCAN4 PIN 65	KSCAN5 PIN 66	KSCAN6 PIN 67	KSCAN7 PIN 68
KEY IN0 PIN 43	DISPLAY	AM	TAPE 1 /DCC	TAPE 2 MON.	CD	1	VCR 2	VCR 1
KEY IN1 PIN 42	RDS	PHONO	FM	4	2	DIRECT	△	▽
KEY IN2 PIN 41	AF	CENTER MODE	5	9	3	6		
KEY IN3 PIN 40	DTY	SURROUND MODE	0	8	7	MEMORY	AUTO /MANU	FM MODE

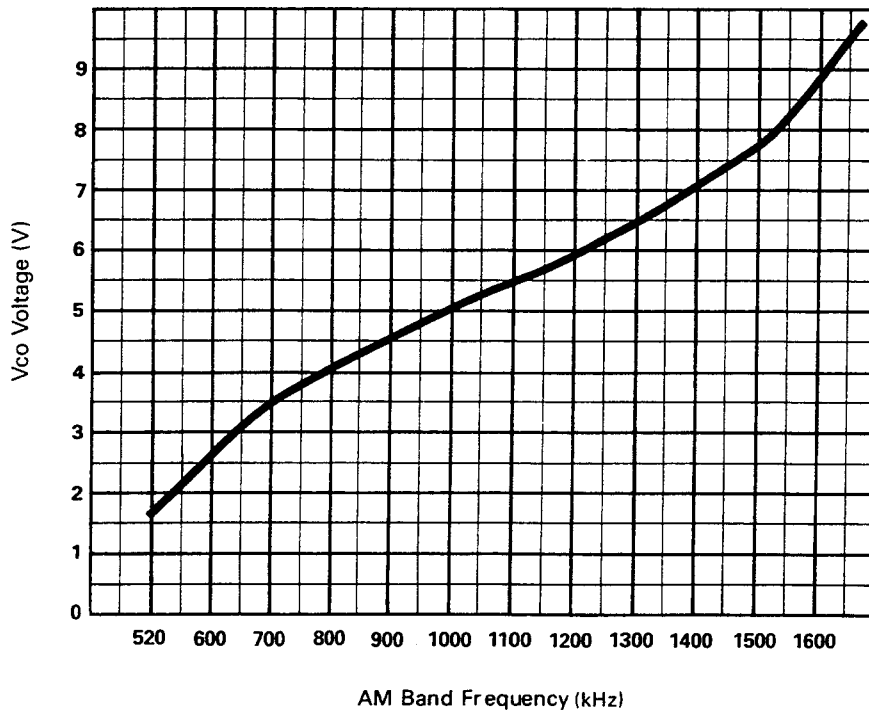
#### 5. Digital Tuning System Description



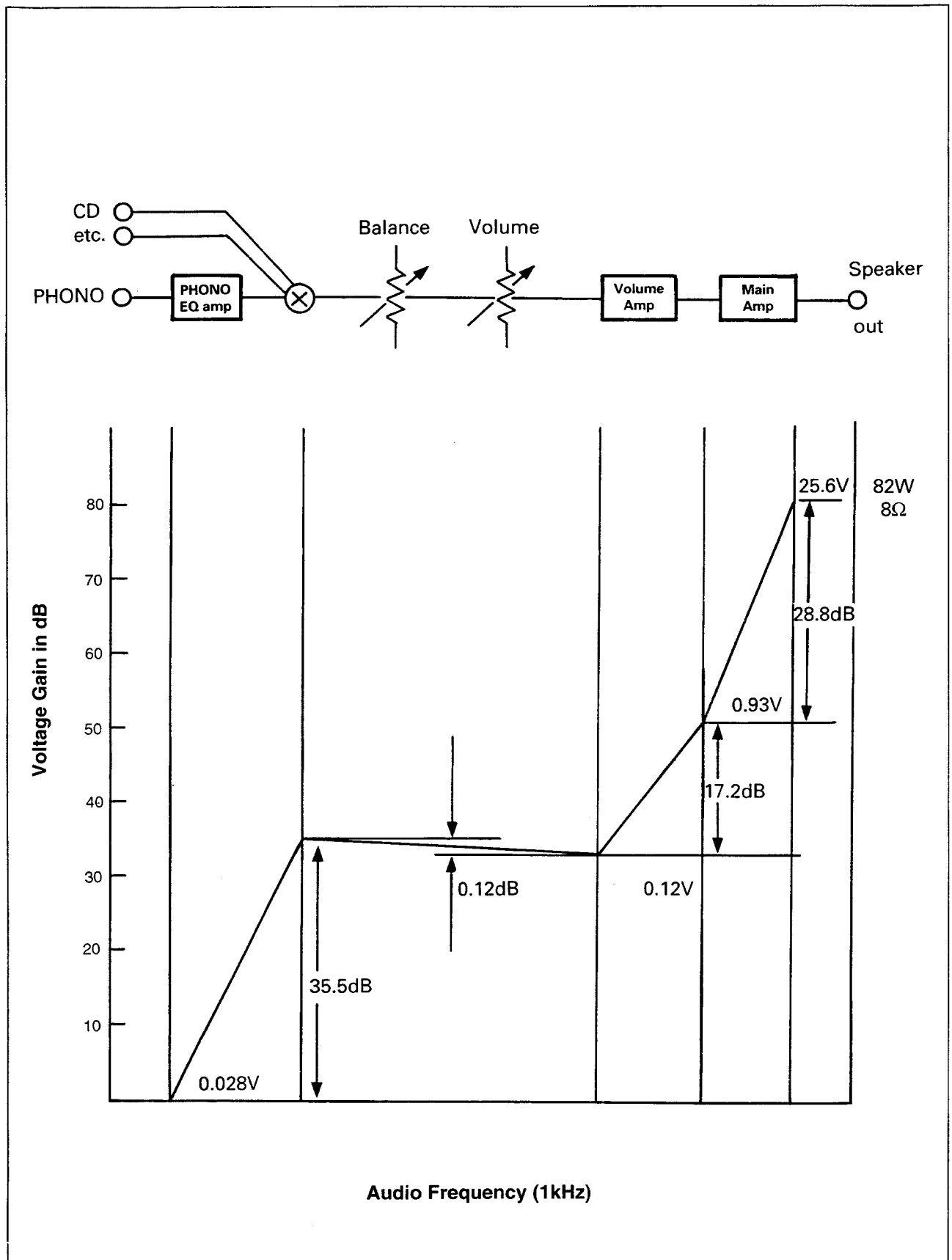
• Vco vs. FM Band Frequency Curve



• Vco vs. AM Band Frequency Curve



## 6. Level Diagram

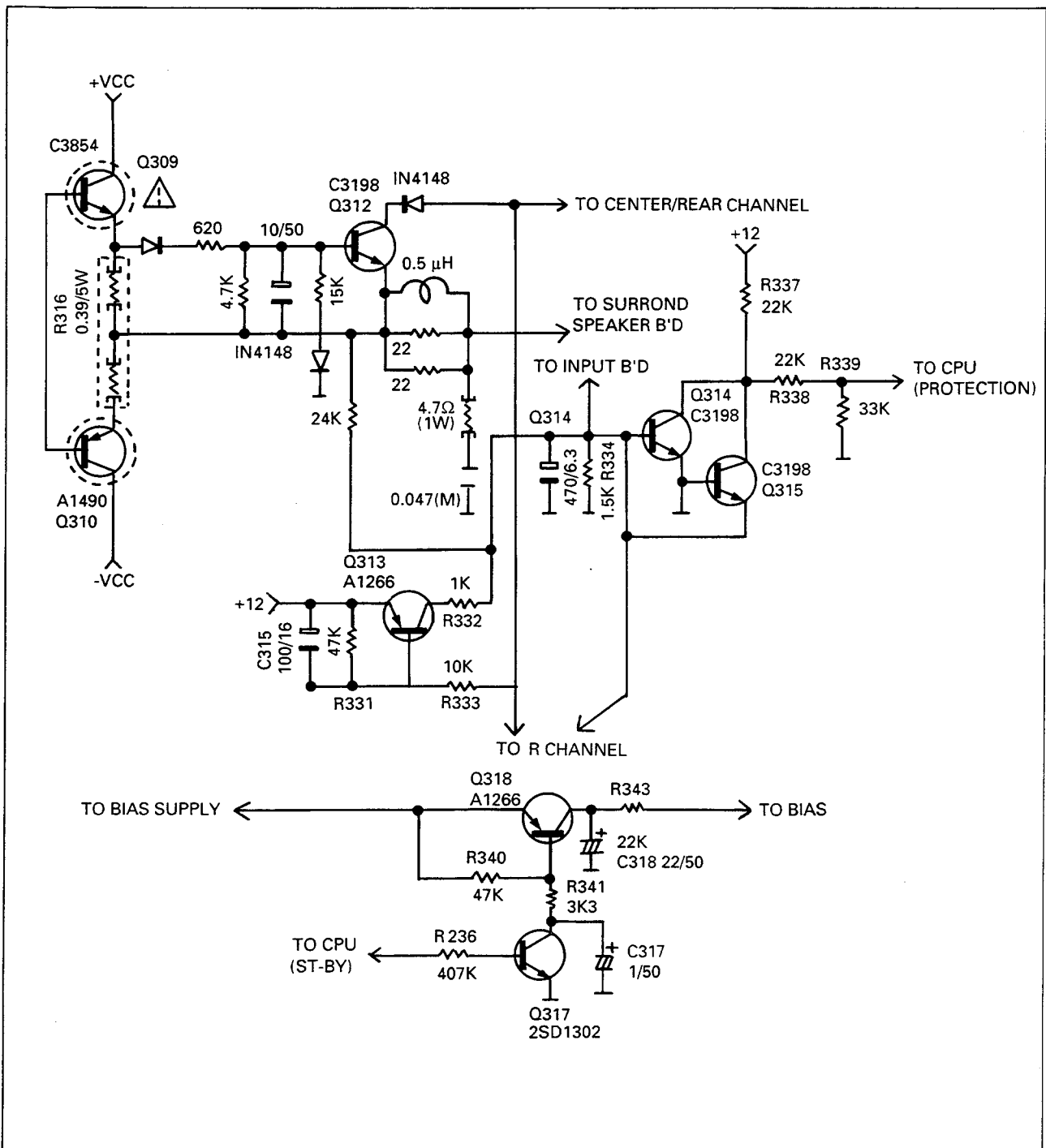


## 7. Protection Circuits

### • Speaker Protection Circuits

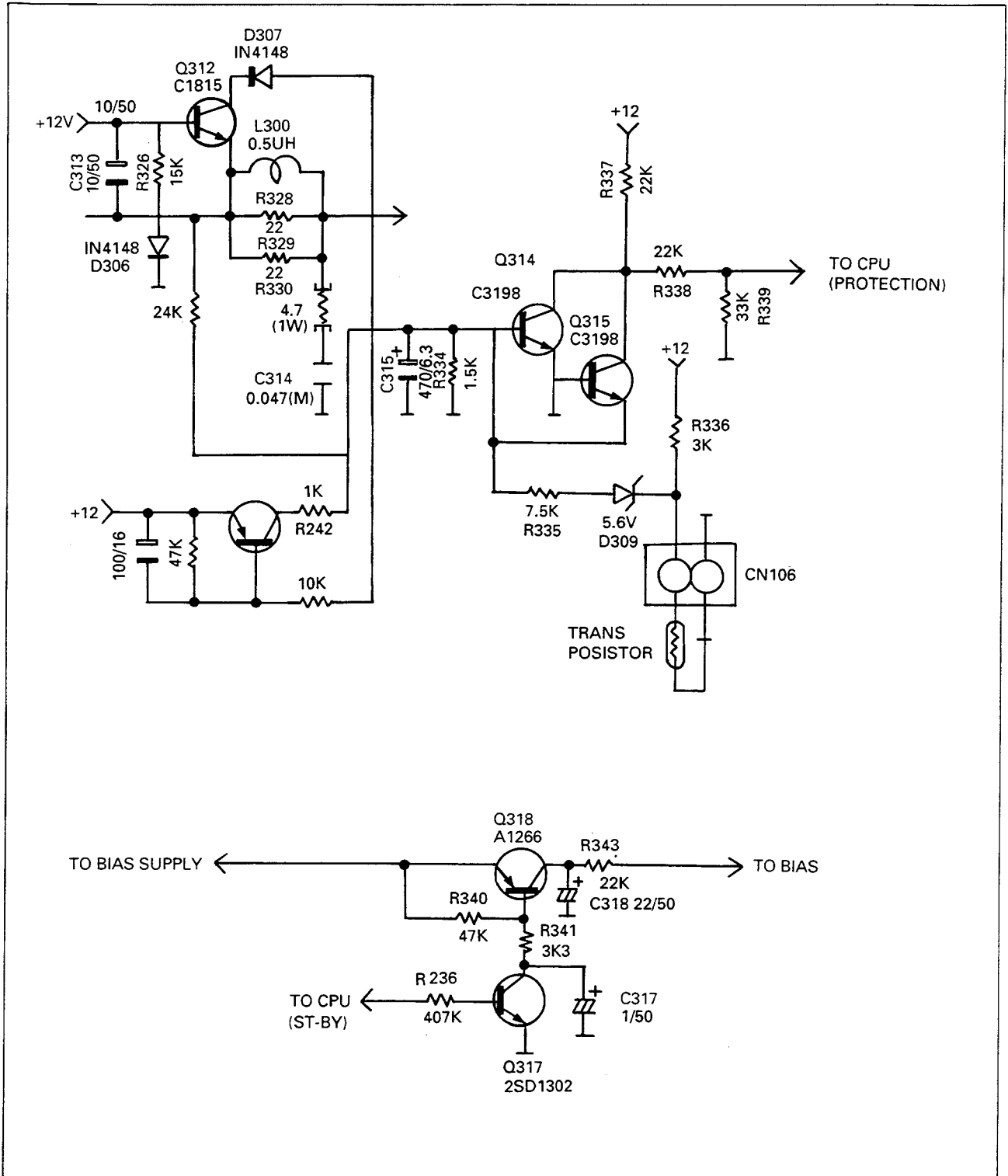
The CPU protects both this unit and the speakers when an abnormally high current flows in Q309 L/R/C/S and Q310 L/R/C/S due to excessive input drive, too low of a load impedance, or short of the speaker terminals.

If current increase is excessive the voltage across R316 L/R/C/S turns on Q312 L/R/C/S, then Q313 turns on and Q314. It makes the protection port of the CPU to low state, and the CPU turns off Q317 and Q316. Then this unit goes to stand-by mode.



• Thermal Protection Circuits

This receiver has a overload thermal protection circuits to guard against abnormal operation. When the temperature of TRANS POSISTOR installed with the main transformer rises abnormally, the resistance of the posistor becomes larger and Q314 is turned on. It makes the protection port of the CPU to Low state, and the CPU turns off Q317 and Q313. Then this unit goes to stand-by Mode.





Before adjustments, refer to "Adjustments and Test Points" on Page 17.

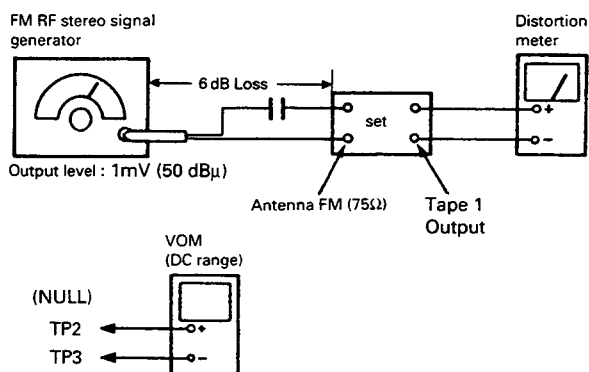
**Note:** As a front-end (FE901) is difficult to repair if faulty, replace it with new one.

**FM SECTION**

- Standard Setting of FM stereo RF Signal Generator.

STEREO STANDARD SIGNAL	MONAURAL STANDARD SIGNAL
Carrier frequency : 98.0 MHz	98.0 MHz
Modulation : Audio 1 kHz, 40 kHz deviation. Pilot 19 kHz, 7.5 kHz deviation	1 kHz, 45 kHz deviation

**FM Discriminator Adjustment.**  
(NULL and MONO Distortion)

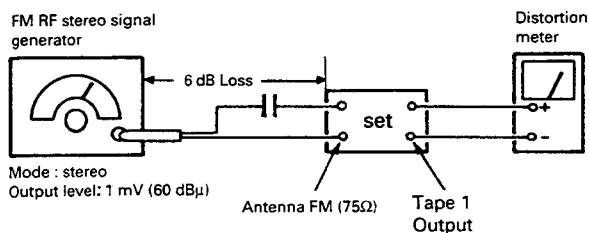


Procedure :

1. Tune the set to 98.0 MHz.
2. Adjust L903 for 0 V reading on the VOM.  
...NULL
3. Adjust L904 for a minimum reading on the distortion meter. ....MONO Distortion
4. Repeat the adjustments of 2 and 3 several times.

**Note :** When replacing the ceramic filter, perform this alignment.

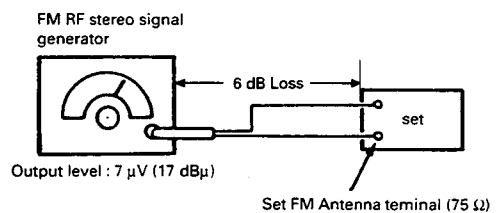
**FM Stereo Distortion Adjustment**



Procedure :

1. Tune the set to 98.0 MHz.  
Set SSG. output level to 1 mV (60 dBμ)
2. Adjust IFT in FE 901 for a minimum reading on the distortion meter.

**FM Tuned Indication Lighting Level Adjustment**

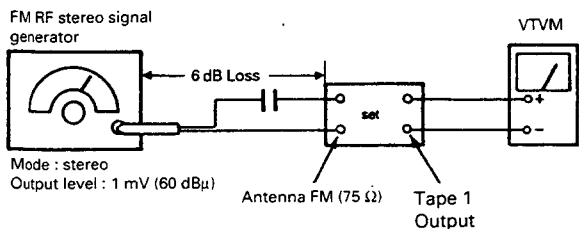


Procedure :

1. Tune the set to 98.0 MHz.  
Set SSG output level to 17 dBμ.
2. Adjust VR 902 to the place where "TUNED" indicator lights.



### FM Stereo Separation Adjustment



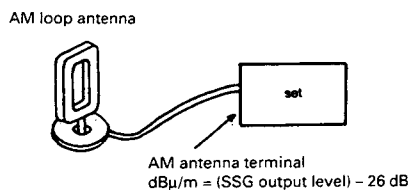
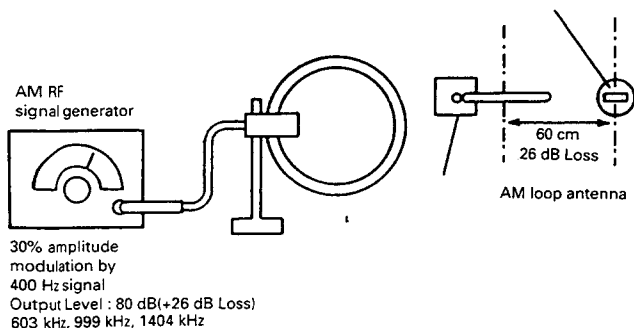
Procedure :

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH.	L-CH.	Ⓐ
R-CH.	L-CH.	Ⓑ Adjust VR903 minimum reading.
R-CH.	R-CH.	Ⓒ
L-CH.	R-CH.	Ⓓ Adjust VR903 for minimum reading.

L-CH. Stereo separation : Ⓐ - Ⓑ  
R-CH. Stereo separation : Ⓒ - Ⓓ

The separation of both channels should be equal.

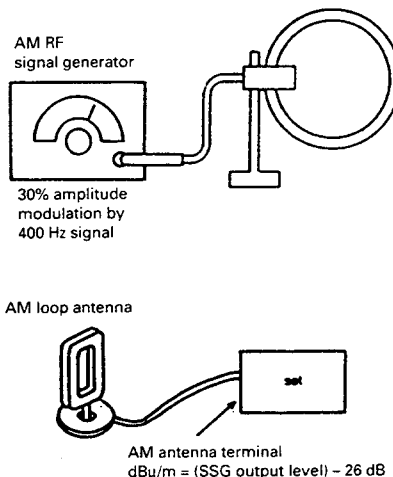
### AM SECTION



### AM V<sub>T</sub>(Tuning Voltage) Adjustment

1. Set to AM 522 kHz and adjust L902 so that voltage of TP1 becomes  $1.1V \pm 0.05V$
2. Set to AM 1611 kHz and adjust TC902 so that voltage of TP1 becomes  $8.4 \pm 0.05V$
3. Repeat the above adjustments 1 and 2.

### AM Tracking Adjustment



1. Set to AM 603 kHz and adjust L901 to maximize AUDIO output level.
2. Set to AM 1404 kHz and adjust TC901 to maximize AUDIO output level.
3. Set to AM 999 kHz and adjust L905 to maximize AUDIO output level.
4. Repeat the above adjustments 1, 2 and 3.

### AM TUNED Level Adjustment

Procedure :

1. Set SSG output level so that antenna input level of the set becomes  $630 \mu V$  (56 dBμ/m).
2. Adjust VR901 to the place where "TUNED" indicator lights.

## TROUBLESHOOTING

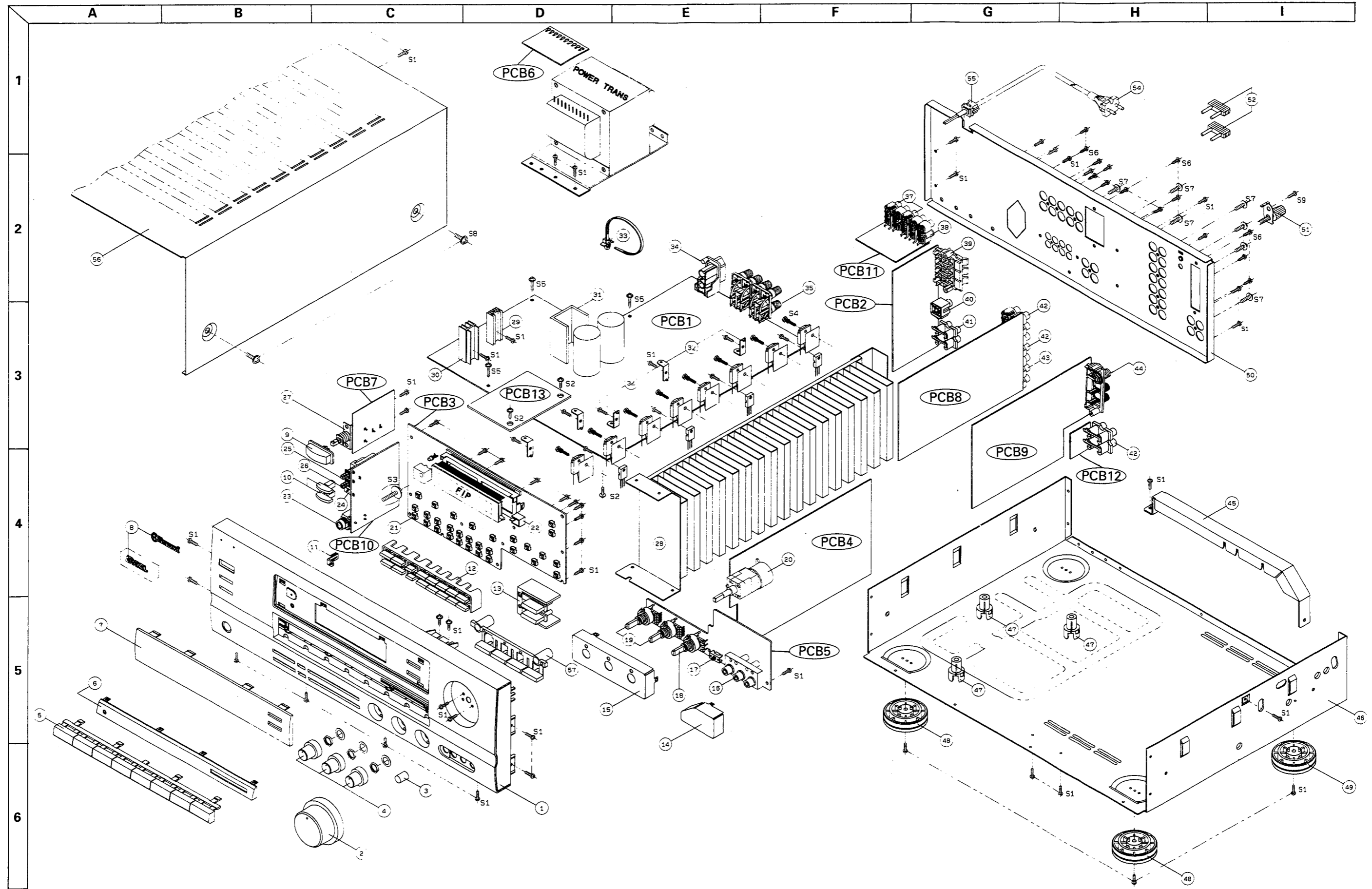
Symptom	Cause and Remedy
Receiver inoperative (FL indicator does not light)	<ul style="list-style-type: none"> <li>A) Faulty AC power cord. Replace.</li> <li>B) Defect in the power switch. Replace.</li> <li>C) Broken wire in the power transformer. Replace the power transformer.</li> <li>D) Blown fuse. Replace the fuse.</li> </ul>
Fuse blows when power is turned on.	<ul style="list-style-type: none"> <li>A) Defective power transformer. Replace.</li> <li>B) Short in the primary or secondary of the transformer circuitry. Repair the short.</li> <li>C) Damaged rectifier D361. Replace the defective component(s).</li> <li>D) Short circuit in the rectifier circuit. Repair the short.</li> </ul>
Power indicator lights but no sound from both channels	<ul style="list-style-type: none"> <li>A) Speaker switch A or B defective. Replace the defective switch(es).</li> <li>B) Defect in transistor Q309 L/R, Q310 L/R on the Main Board. Replace the defective component(s).</li> </ul>
Speaker A inoperative	<ul style="list-style-type: none"> <li>A) Speaker switch A defective. Replace.</li> </ul>
Speaker B inoperative	<ul style="list-style-type: none"> <li>A) Speaker switch B defective. Replace.</li> </ul>
One channel does not work when volume is at maximum with a test signal applied to the center terminal of volume control VR5 of the dead channel.	<ul style="list-style-type: none"> <li>A) Defect in transistor Q309 L/R, Q310 L/R on the Main Board. Locate and correct the defect.</li> <li>B) Break in copper foil of printed circuit board. Repair the short.</li> <li>C) Short in speaker output terminal. Repair or replace.</li> </ul>
Speaker works normally but headphones inoperative.	<ul style="list-style-type: none"> <li>A) Headphone plug does not mate with jack. Replace the plug.</li> <li>B) Defective resistors R601 L/R. Replace.</li> </ul>
PHONO input inoperative	<ul style="list-style-type: none"> <li>A) Poor contact in phono input jack. Repair or replace the jack.</li> <li>B) Defective phono switch or IC 106. Replace.</li> </ul>
FM inoperative	<ul style="list-style-type: none"> <li>A) Defective front-end. (FE407-G60) Replace.</li> <li>B) Defective FM switch Replace the switch.</li> </ul>

Symptom	Cause and Remedy
FM inoperative	C) Defective transistor Q902, Q904, Q908 L/R Q907, and IC901, IC902. Replace the defective transistor(s) or IC(s). D) Defective coil L903 or L904 Replace the coil(s). E) Defective lead-in. Repair or replace the lead-in. F) Ceramic filter CF1, CF2, defective. Replace the defective ceramic filter(s). G) Defective controller circuit component. Replace.
Poor multiplex separation	A) Improper adjustment. Readjust VR903. (Refer to stereo separation adjustment) B) IC903 defective. Replace. C) Variable resistor VR903. Replace the variable resistor(s).
STEREO indicator does not light	A) Defective indicator in FL. Replace. B) Improper adjustment of VR903 of tuner board. Make readjustment. C) Defective IC903 Replace the defective component.
FM volume not sufficient	A) If volume from both L and R channels is not loud enough : Front-end Section defective Faulty IC902, Coil L903. If sound of one channel is not loud enough : Defective L906 L/R
FM Mono has no effect	A) Defective FM MODE switch. Replace.
AM inoperative	A) Damaged IC902 of tuner board. Replace. B) Defective L901, L902, L905 or CF4 of tuner board. Replace the defective component(s). C) Resistor R915, R916 Replace the defective component(s). D) Capacitor C906, C926, C914 defective. Replace the defective capacitor(s). E) Defective AM switch. Replace. F) Defective varicap diode VD901. Replace varicap diode(s). G) Damaged AM loop antenna. Repair or replace. H) Defective controller circuit component. Replace.
Bass control has no effect	A) Variable resistor VR201 defective. Replace. B) Defective R236L/R, R237L/R, C212L/R, C213L/R. Replace the defective component(s).

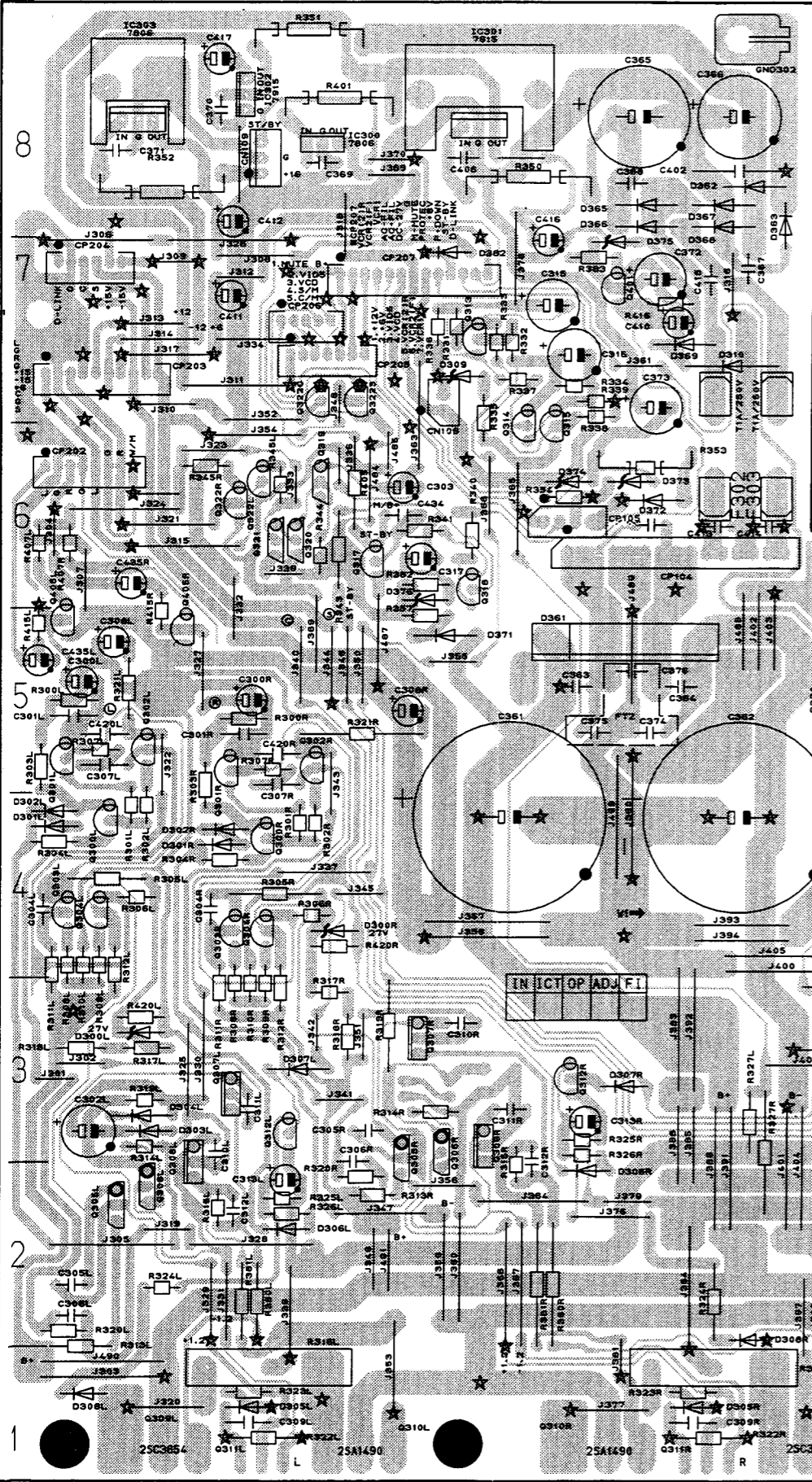
<b>Symptom</b>	<b>Cause and Remedy</b>
Treble control has no effect	A) Variable resistor VR202 defective. B) Defective R238 L/R, R239 L/R, C214 L/R, C215 L/R Replace the defective component(s).
Auto tune inoperative (UP/DOWN)	A) Poor contact in UP/Down key. Repair replace. B) Defective IC201 Replace. C) Defective FL Display. Replace. D) Defective tuner circuit component. Replace. E) In case of FM only, improper adjustment of FM fron-end. Replace.
Manual tune inoperative(UP/DOWN) (AM or FM)	A) Poor contact in Up/Down key. Replace. B) Defective IC201. Replace.
Memory setting(keys 1-10) inoperative	A) Poor contact in memory keys 1-10. Replace. B) Poor contact in memory set key. Replace. C) Defective IC201. Replace the defective component.
FL inoperative	A) FL defective. Replace. B) Defective IC201. Replace. C) Defective RESO201. Replace.
Noise Volume control	A) Defective IC504 Replace. B) Defective capacitor C574 or C575. Replace the defective capacitor(s).
Remote Control Unit inoperative	A) Weak Battery. Replace. B) Defective. Replace. C) Defective IC201(CPU Board) or IC1. Replace.

# EXPLODED VIEW

Model No. : RV-5050RDS



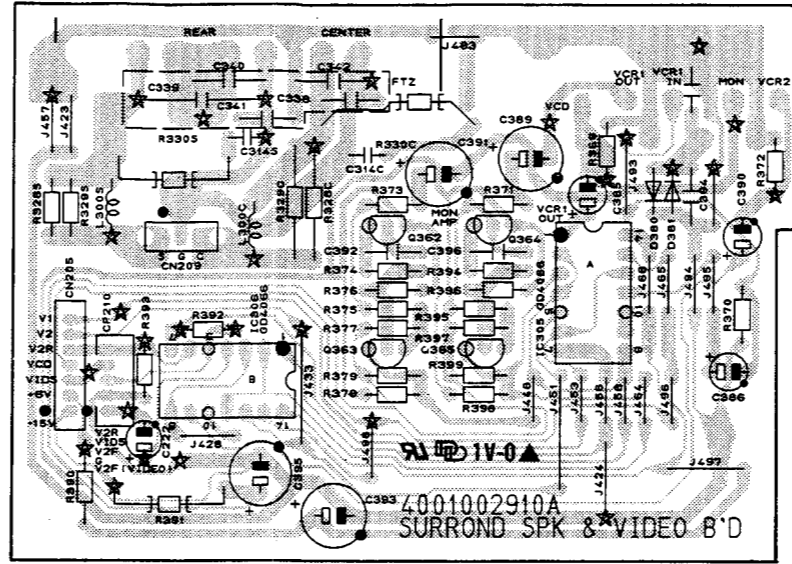
PCB1 (MAIN)



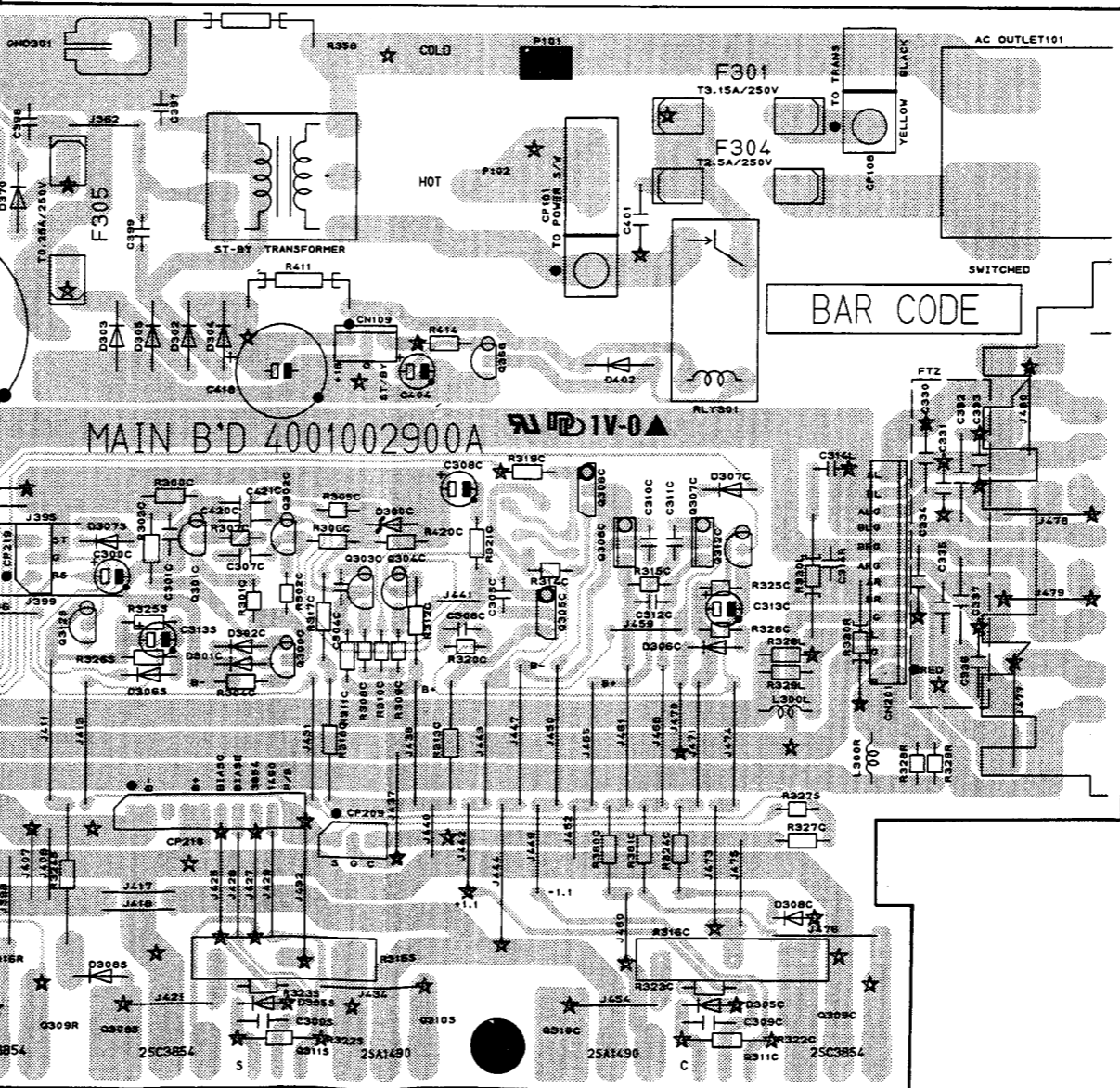
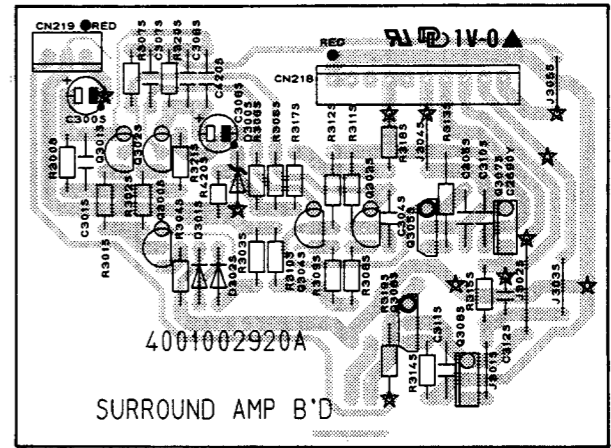
PRINTED CIRCUIT BOARDS

Model No. : RV-5050RDS

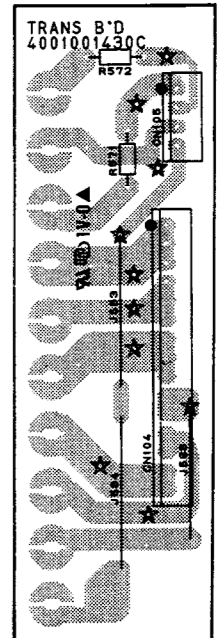
PCB2 (SURROUND SPEAKER)



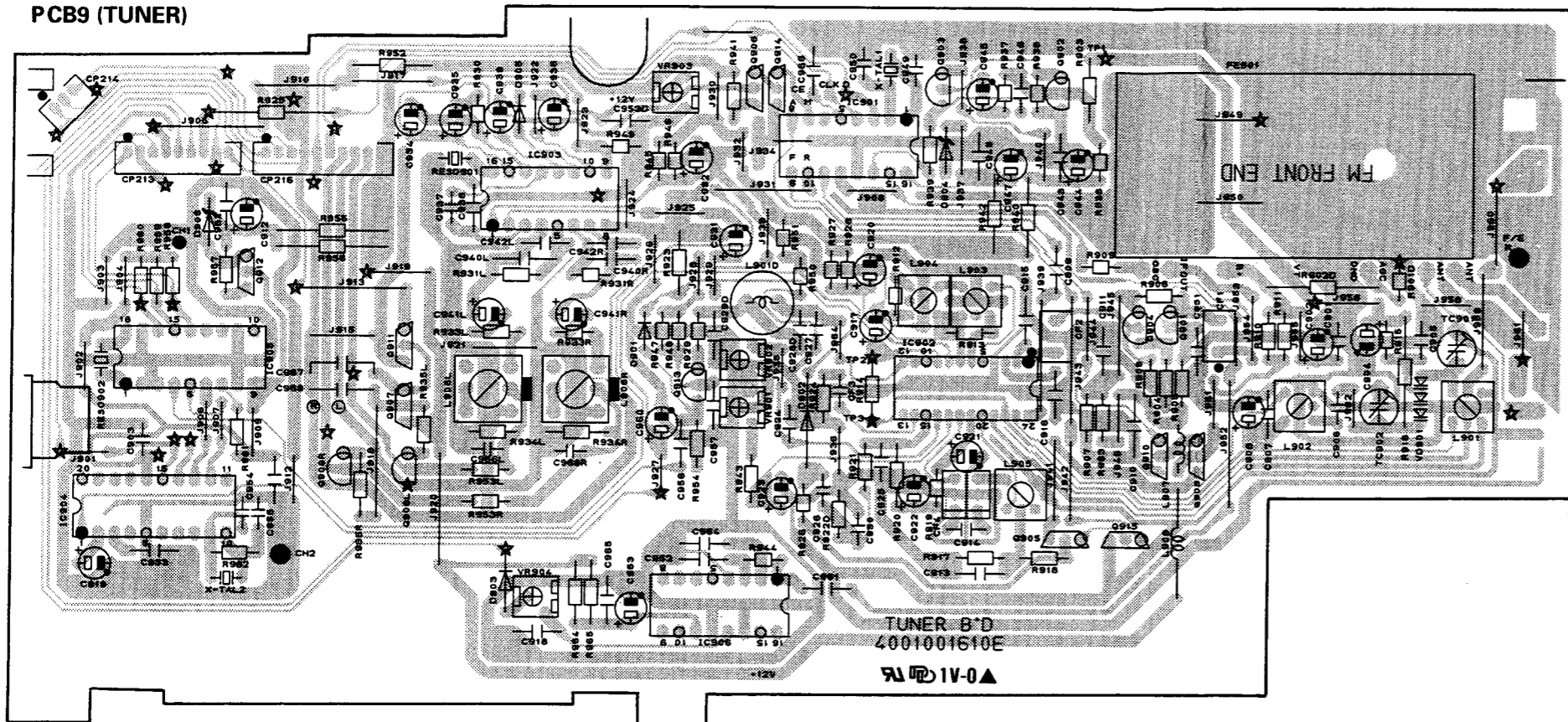
PCB13 (SURROUND AMP)



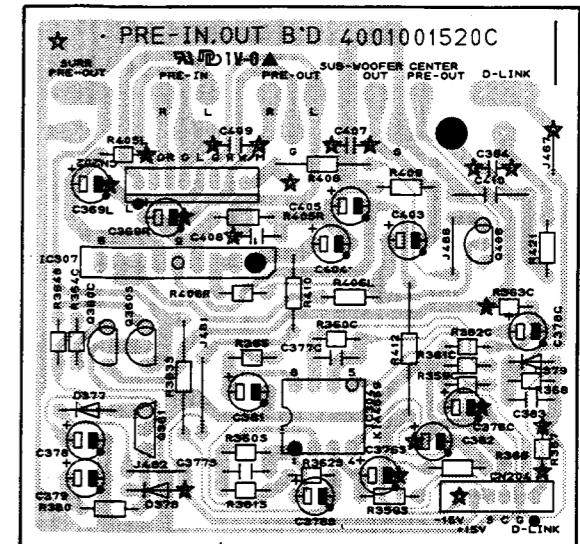
PCB6 (TRANS)



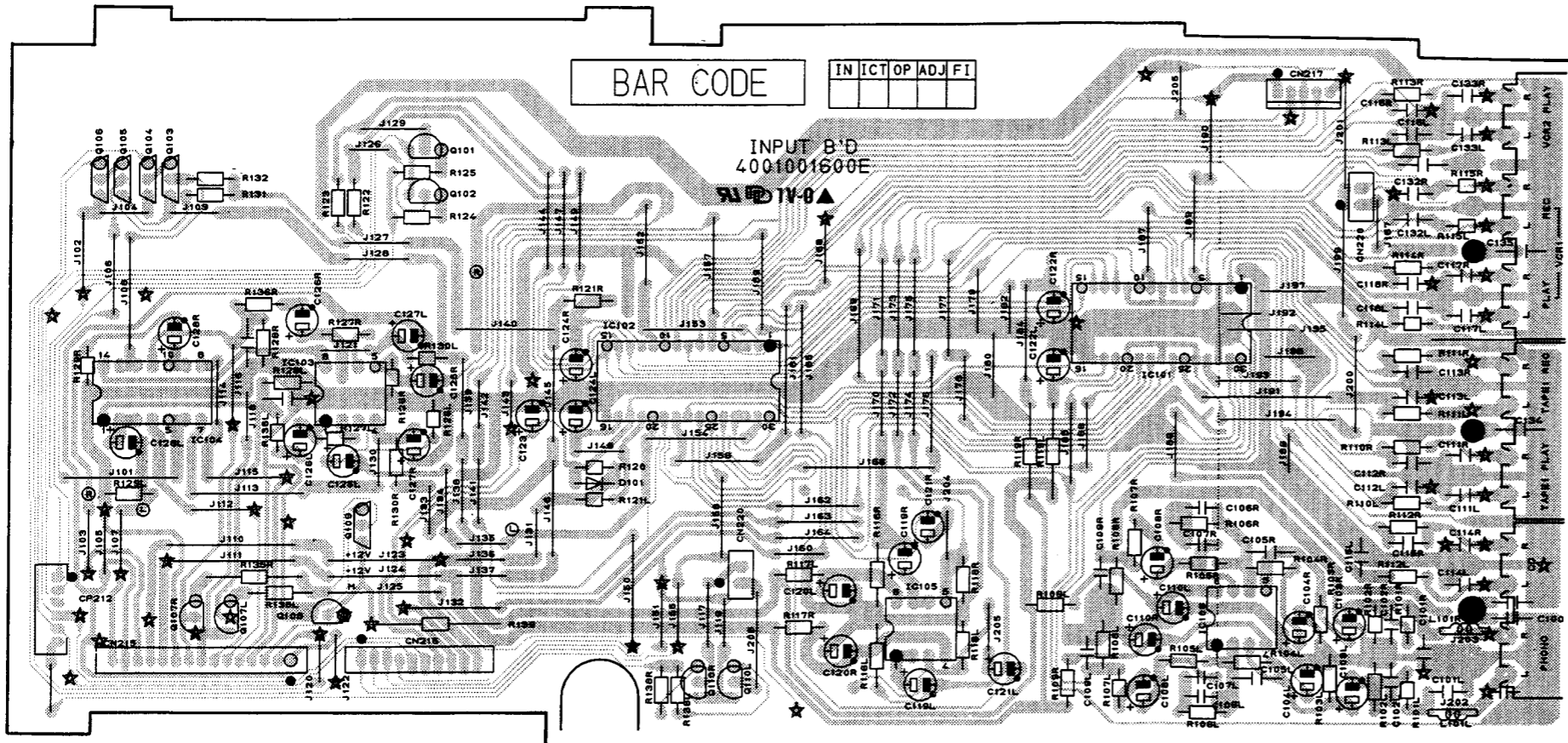
PCB9 (TUNER)



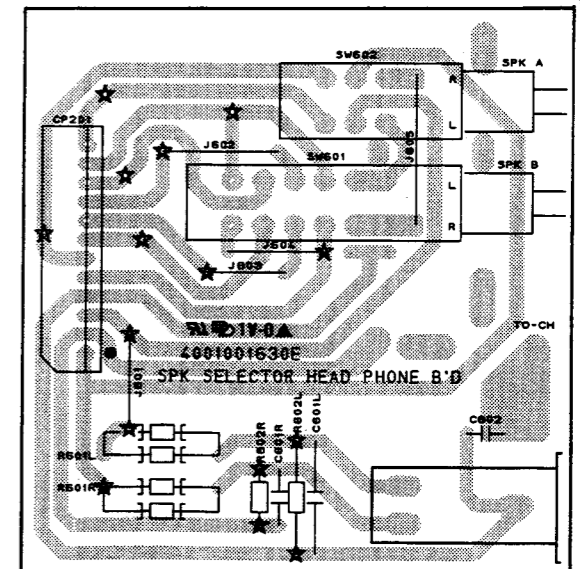
PCB11 (PRE IN/OUT)



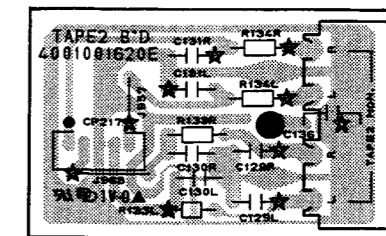
PCB8 (INPUT)



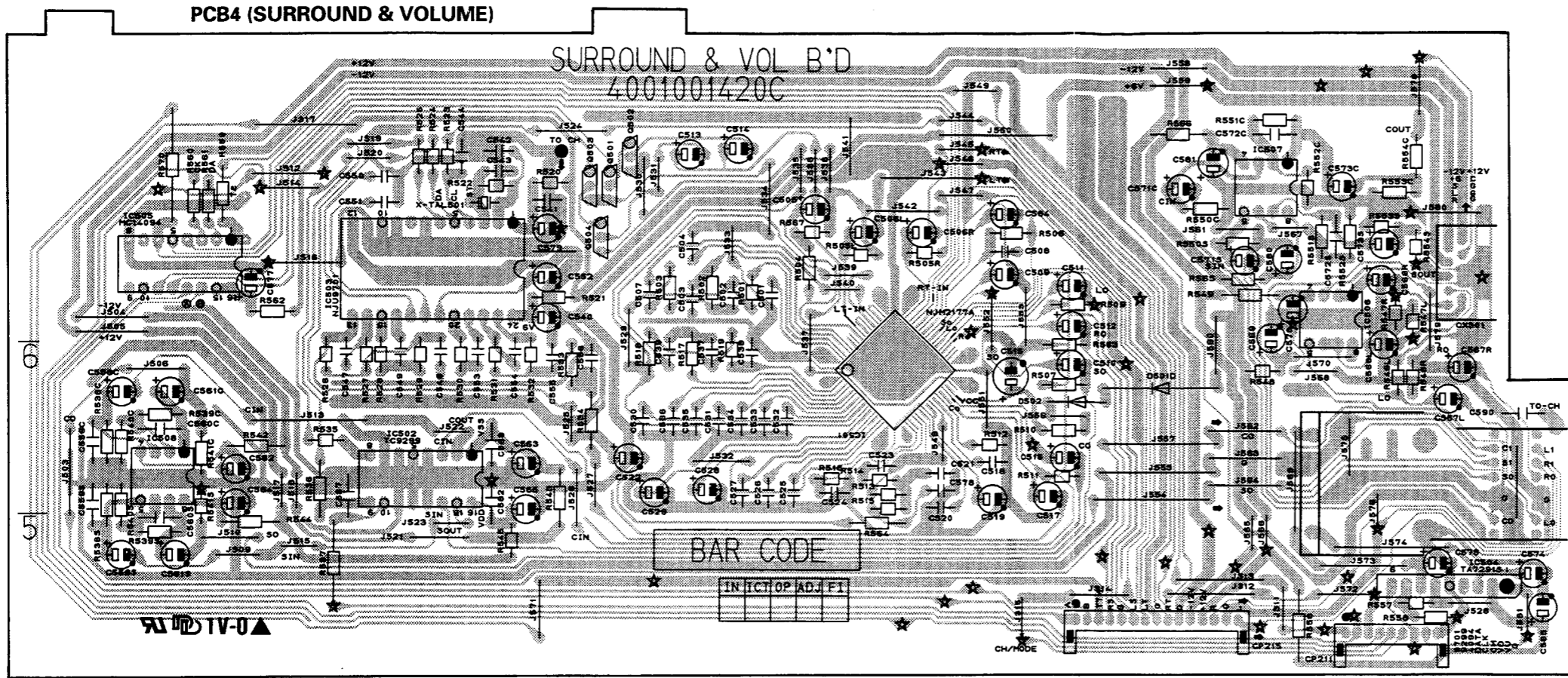
PCB10 (SPEAKER SELECTOR & HEADPHONE)



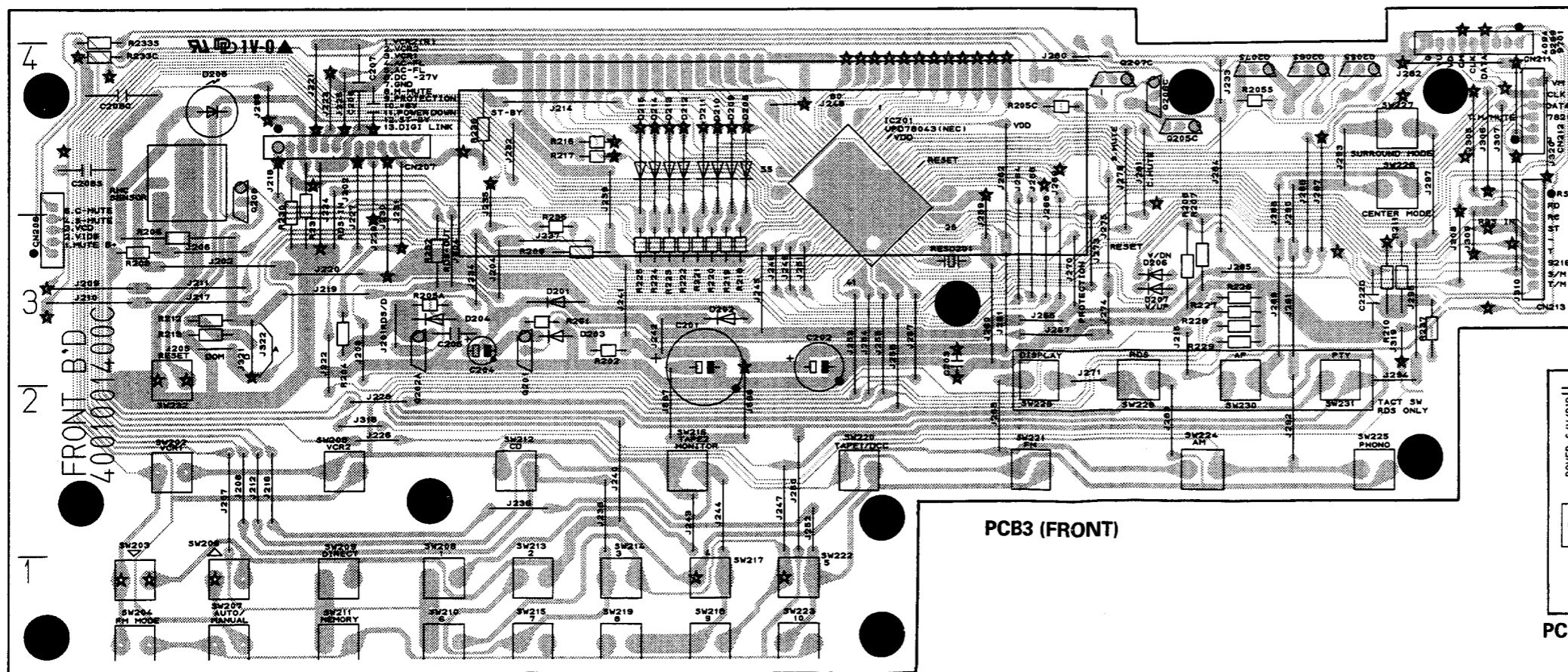
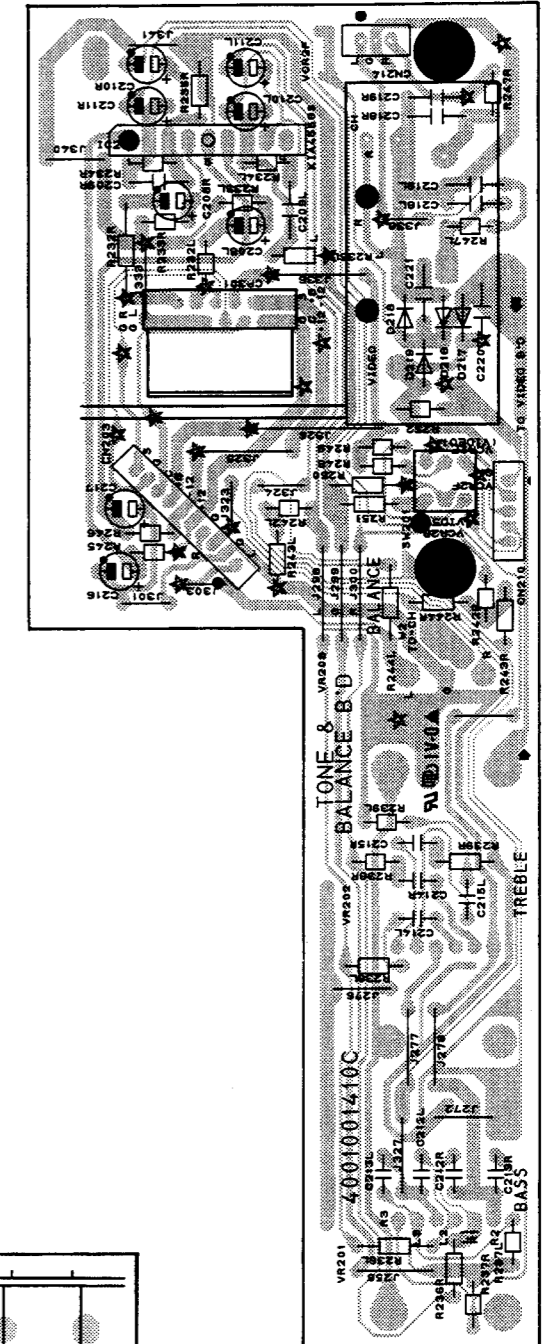
PCB12 (TAPE2)



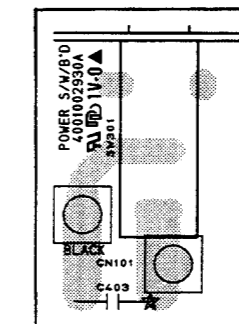
PCB4 (SURROUND & VOLUME)



PCB5 (TONE & BALANCE)



PCB3 (FRONT)



PCB7 (POWER SWITCH)





# MECHANICAL PARTS LIST

Ref. No.	Description	Mfr. Part No.	Q'ty	Ref. No.	Description	Mfr. Part No.	Q'ty
	<b>PACKAGE</b>			PCB9	P.C.Board Tuner	4001001610	1
	Poly Bag	9705001520	1	PCB8	P.C.Board Input	4001001600	1
	Box Carton	049604124173	1	PCB10	P.C.Board SPK SEL. & Headphone	4001001630	1
	Cushion Poly	9722026710	1	PCB12	P.C.Board Tape2	4001001620	1
	Film Soft PE	9715000510	1	PCB13	P.C.Board Surround Amp	4001002920	1
	<b>ACCESSORIES</b>						
	Cord, Antenna	4348001110	1				
	Assembly Commander	5418001021	1				
	Manual Instruction	9007018222	1				
	Antenna, AM Loop Stand Strip Wire	2608207360	1				
	<b>CABINET &amp; CHASSIS</b>						
1	Panel, Front	048501035321	1				
2	Knob, Rotary, MAIN	048543064011	1				
3	Button, Push	8545129610	1				
4	Knob, Rotary, TONE	048545126111	1				
5	Button, 8 key	048543065911	1				
6	Decoration Dummy	8523013320	1				
7	Window Display	048555051211	1				
8	Badge, SHERWOOD	048535042011	1				
9	Button, Power	8545126010	1				
10	Button, Speaker	8545126210	2				
11	indicator, Stand by LED	8555050310	1				
12	Button, 16 key	8543063410	1				
13	Button, 2 key	8545129510	1				
14	Shield Fence, CDS	6165150910	1				
15	Shield Fence, TONE	6165150810	1				
16	Jack 3P, VIDEO "A"	4438109810	1				
17	Switch, Push, VCR2 Sel.	4628054410	1				
18	Volume, 100 kohm, BALANCE	3208052010	1				
19	Volume, 100 kohmX2, TONE/BASS	3208049510	2				
20	Volume, 50 kohm X4, MAIN	3228020110	1				
21	Switch, tact	46580003710	31				
22	Holder, F/L Guide	6043010210	1				
23	Jack, PHONE	44380005010	1				
24	Bracket, Speaker	6165149810	1				
25	Switch, Push, 2/2	4628043810	1				
26	Switch, Push, 4/2	4628049210	1				
27	Switch, Power	4628056110	1				
28	Heatsink, Power	7502008810	1				
29	Heatsink, Regulator TR.	7505206120	1				
30	Heatsink, Regulator TR.	7505206220	1				
31	Heatsink, Regulator TR.	7505210510	1				
32	Bracket, PCB	6505117210	4				
33	Locking Tie	6528002810	1				
34	△ Outlet, AC, 1P	4448103610	1				
35	Terminal, Speaker, 8P, Screw Type	4408105810	1				
36	Not Used !						
37	Jack, RCA, 6P	4438103210	1				
38	Jack, RCA, 4P	4438108140	1				
39	Terminal, Speaker, 6P, Push Type	4408107410	1				
40	Not Used !						
41	Jack, RCA, 4P, GND	4438108120	1				
42	Jack, RCA, 4P, GND	4438108110	3				
43	Jack, RCA, 6P, GND	4438108010	1				
44	terminal, Antenna, Screw Type	4408108210	1				
45	Bracket, Guide PCB	6503031610	1				
46	Chassis, Main	6121614410	1				
47	Spacer	6705024310	3				
48	Foot, Hot Stamping	046033102511	2				
49	Foot, Hot Stamping	046033102511	2				
50	Chassis, Back	046102043351	1				
51	Terminal, Ground	4408103720	1				
52	Plug, Jumper	4328204210	2				
53	Not Used !						
54	△ Cord, AC Power	4308002310	1				
55	Stopper holder	6518002310	1				
56	Cover, Top	046122021231	1				
57	Button, 4key	8543065810	1				
	<b>HARDWARE KIT</b>						
S1	Screw, #2BTC 3X8B	8109230083	55				
S2	Screw, #2WPTC 3X8Y	8159230081	7				
S3	Screw, Mecha	8155001210	1				
S4	Screw, Heatsink	8159000310	8				
S5	Screw, #B WPTT 3X18Y	8179230181	3				
S6	Screw, #1PT 3X10B	8119130103	9				
S7	Screw, Ground	8155000710	8				
S8	Screw, BSAM 4X8B	8109230083	4				
	<b>MISCELLANEOUS</b>						
	△ Power Transformer, 230 V, 50 Hz	2828100801	1				
	Ass'y Posistor, 280 mm	052438000283	1				
	Ass'y Posistor, 200 mm	052438012201	1				
	P.C.Board Main	4001002900	1				
PCB1	P.C.Board Surround Speaker	4001002910	1				
PCB2	P.C.Board Pre IN/OUT	4001001520	1				
PCB11	P.C.Board Surround & Volume	4001001420	1				
PCB4	P.C.Board Front	4001001400	1				
PCB3	P.C.Board Tone & Balance	4001001410	1				
PCB5	P.C.Board Power Switch	4001001440	1				
PCB7	P.C.Board Trans	4001001430	1				
PCB6							

### PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol △ in the part list are of special significance to safety. When replacing a component identified with △, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.





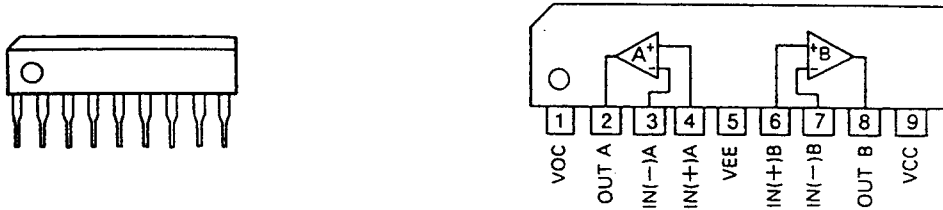
Ref. No.	Description	Mfr. Part No.	Q'ty	Ref. No.	Description	Mfr. Part No.	Q'ty
R562	Metal Film	470 ohm 1/5 W J	3029471970 1	C111L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
R563	Carbon Film	100 kohm 1/5 W J	3069104970 1	C112L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
R564	Carbon Film	8.2 kohm 1/5 W J	3069822970 1	C113L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
R565/566	Metal Film	100 ohm 1/5 W J	3029101970 2	C114L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
R567	Carbon Film	3.3 ohm 1/5 W J	3069335970 1	C115L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
R570	Metal Film	1 kohm 1/5 W J	3029102970 1	C116L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
<b>MISCELLANEOUS</b>				C117L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
X-TAL501	CSA2.00MG-TF01		3938124001 1	C118L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
20	Volume, 50 kohm X4, MAIN		3228020110 1	C119L/R	Electrolytic SG	4.7 uF 50 V M	3479347971 2
	Wire, HI-WRAP, #24, Black, 180 mm, 1P		152624101858 1	C120L/R	Electrolytic SG	47 uF 25 V M	3479347041 2
<b>PCB5 ASSEMBLY P.C. BOARD TONE/BALANCE 054002009067</b>				C121L/R	Electrolytic SG	4.7 uF 50 V M	3479347971 2
<b>CAPACITORS</b>				C122L/R	Electrolytic SG	47 uF 25 V M	3479347041 2
C208L/R	Electrolytic SG	4.7 uF 50 V M	3479347971 2	C123	Electrolytic SG	1 uF 50 V M	3479310971 1
C209L/R	Ceramic Tubular	39 pF 50 V J	3519390935 2	C124L/R	Electrolytic SG	47 uF 25 V M	3479347041 2
C210L/R	Electrolytic SG	4.7 uF 50 V M	3479347971 2	C125L/R	Electrolytic SG	10 uF 50 V M	3479310071 2
C211L/R	Electrolytic SG	10 uF 50 V M	3479310071 2	C126L/R	Electrolytic SG	10 uF 35 V M	3479310061 2
C212L/R	Mylar	0.018 uF 63 V K	3679183297 2	C127L/R	Electrolytic SG	47 uF 25 V M	3479347041 2
C213L/R	Mylar	0.082 uF 100 V J	3679823297 2	C128L/R	Electrolytic SG	10 uF 35 V M	3479310061 2
C214L/R	Mylar	0.0033 uF 100 V J	3679332120 2	C132L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
C215L/R	Mylar	0.018 uF 63 V K	3679183297 2	C133L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2
C216/217	Electrolytic SG	47 uF 25 V M	3479347041 2	C134/135	Ceramic Tubular	0.1 uF 50 V Z	3519104935 2
C218L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2	<b>CONNECTORS</b>			
C219L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2	CN215	Lead Ass'y, 15P, 160mm		436215163332 1
C220/221	Ceramic Tubular	0.1 uF 50 V Z	3519104935 2	CN216	Lead Ass'y, 10P, 280mm		436210283332 1
<b>CONNECTORS</b>				CN217	Wafer, 5P		4428516410 1
CN203	Lead Ass'y, 10P, 350mm, Shield Wire		435210358832 1	CN220	Lead Ass'y, 2P, 140mm		436402143231 1
CN214	Lead Ass'y, 3P, 180mm		436203183332 1	CP212	Wafer, 6P		4428516510 1
CP301	Wafer,		4428850010 1	<b>DIODE</b>			
CN210	Lead Ass'y, 5P, 450mm		436205453332 1	D101	1N4148, Switching		2058322101 1
<b>INTEGRATED CIRCUIT</b>				<b>INTEGRATED CIRCUITS</b>			
IC202	KIA4559S/KIA75559S, OP AMP		2168206103 1	IC101/102	LC7821A, B		2168017132 2
<b>RESISTORS</b>				IC103	KIA75559P/KIA75559P, OP AMP		2168206104 1
R232L/R	Metal Film	1 kohm 1/5 W J	3029102970 2	IC104	LC4966		2138017108 1
R233L/R	Carbon Film	100 kohm 1/5 W J	3069104970 2	IC105/106	KIA75559P/KIA75559P, OP AMP		2168206104 2
R234L/R	Carbon Film	1 ohm 1/5 W J	3069105970 2	<b>COILS</b>			
R235L/R	Carbon Film	47 kohm 1/5 W J	3069473970 2	L101L/R	Inductor, 47 uH		2648647082 2
R236L/R	Carbon Film	22 kohm 1/5 W J	3069223970 2	<b>TRANSISTORS</b>			
R237L/R	Carbon Film	3.9 kohm 1/5 W J	3069392970 2	Q101/102	BKTC3198Y/KTC1815Y, NPN		2208606104 2
R238L/R	Metal Film	2.2 kohm 1/5 W J	3029222970 2	Q103	DTA114YS/KRA107M		2238006103 1
R239L/R	Metal Film	560 ohm 1/5 W J	3029561970 2	Q104	DTC114YS		2208622106 1
R242L/R	Metal Film	1 kohm 1/5 W J	3029102970 2	Q105	DTA114YS/KRA107M		2238006103 1
R243L/R	Carbon Film	100 kohm 1/5 W J	3069104970 2	Q106	DTC114YS		2208622106 1
R244L/R	Carbon Film	1.2 kohm 1/5 W J	3069122970 2	Q107L/R	2SD1302, NPN		2208606112 2
R245/246	Metal Film	47 ohm 1/5 W J	3029470970 2	Q108	2SD1302, NPN		2208606112 1
R247L/R	Metal Film	1 kohm 1/5 W J	3029102970 2	Q109	BKTA1266Y/KTA1015Y, PNP		2208206105 1
R248/249	Carbon Film	22 kohm 1/5 W J	3069223970 2	Q110L/R	2SD1302, NPN		2208606112 2
R250	Carbon Film	100 kohm 1/5 W J	3069104970 1	<b>RESISTORS</b>			
R251	Carbon Film	10 kohm 1/5 W J	3069103970 1	R101L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
R252	Metal Film	75 ohm 1/5 W J	3029750970 1	R102L/R	Carbon Film	91 kohm 1/5 W J	3069913970 2
<b>MISCELLANEOUS</b>				R103L/R	Carbon Film	91 kohm 1/5 W J	3069913970 2
14	Shield Fence, CDS		6165150910 1	R104L/R	Metal Film	820 ohm 1/5 W J	3029821970 2
15	Shield Fence, TONE		6165150810 1	R105L/R	Carbon Film	560 kohm 1/5 W J	3069564970 2
16	Jack 3P, VIDEO "A"		4438109810 1	R106L/R	Carbon Film	43 kohm 1/5 W J	3069433970 2
17	Switch, Push, VCR2 Sel.		4628054410 1	R107L/R	Metal Film	470 ohm 1/5 W J	3029471970 2
18	Volume, 100 kohm, BALANCE		3208052010 1	R108L/R	Carbon Film	100 kohm 1/5 W J	3069104970 2
19	Volume, 100 kohmX2, TONE/BASS		3208049510 2	R109L/R	Metal Film	47 ohm 1/5 W J	3029470970 2
	Wire, HI-WP, #24, Black, 100 mm, 1P		152624101044 1	R110L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
	Wire, HI-WRAP, #24, Black, 180 mm, 1P		152624101858 1	R111L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
<b>PCB6 ASSEMBLY P.C. BOARD TRANS 054002009069</b>				R112L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
CN104	Lead Ass'y, 15P, 240mm		436115243701 1	R113L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
CN105	Lead Ass'y, 4P, 240mm		436104243701 1	R114L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
R571/572	Metal Film	1 ohm 1/5 W J	3029109970 2	R115L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
<b>PCB7 ASSEMBLY P.C. BOARD POWER SWITCH 05400209071</b>				R116L/R	Carbon Film	47 kohm 1/5 W J	3069473970 2
CN101	Lead Ass'y, 2P, 350mm		435402355559 1	R117L/R	Metal Film	470 ohm 1/5 W J	3029471970 2
C403	Ceramic Disc	0.0047 uF 400 V Z	3549472107 1	R118L/R	Carbon Film	100 kohm 1/5 W J	3069104970 2
27	Switch, Power		4628056110 1	R119L/R	Metal Film	470 ohm 1/5 W J	3029471970 2
	Clip Fuse		4255001010 2	R120	Carbon Film	100 kohm 1/5 W J	3069104970 1
<b>PCB8 ASSEMBLY P.C. BOARD INPUT 054002009074</b>				R121L/R	Metal Film	470 ohm 1/5 W J	3029471970 2
<b>CAPACITORS</b>				R122-125	Metal Film	1 kohm 1/5 W J	3029102970 4
C-100	Ceramic Tubular	0.047 uF 50 V Z	3519473935 1	R126L/R	Carbon Film	220 kohm 1/5 W J	3069224970 2
C101L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2	R127L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
C102L/R	Ceramic Tubular	100 pF 50 V J	3519101935 2	R128L/R	Carbon Film	100 kohm 1/5 W J	3069104970 2
C103L/R	Electrolytic SG	1 uF 50 V M	3479310971 2	R129L/R	Carbon Film	100 kohm 1/5 W J	3069104970 2
C104L/R	Electrolytic SG	33 uF 25 V M	3479333041 2	R130L/R	Metal Film	100 ohm 1/5 W J	3029101970 2
C105L/R	Ceramic Tubular	2200 pF 10 V K	3519222915 2	R131/132	Carbon Film	150 kohm 1/5 W J	3069154970 2
C106L/R	Mylar	0.0018 uF 100 V J	3679182120 2	R135L/R	Metal Film	3.3 kohm 1/5 W J	3029332970 2
C107L/R	Mylar	0.0056 uF 100 V J	3679562120 2	R136L/R	Metal Film	1 kohm 1/5 W J	3029102970 2
C108L/R	Electrolytic SG	1 uF 50 V M	3479310971 2	R138L/R	Metal Film	3.3 kohm 1/5 W J	3029332970 2
C109L/R	Mylar	0.0018 uF 100 V J	3679182120 2	R139	Carbon Film	10 kohm 1/5 W J	3069103970 1
C110L/R	Electrolytic SG	47 uF 25 V M	3479347041 2	<b>MISCELLANEOUS</b>			
				42	Jack, RCA, 4P, GND		4438108110 2
				43	Jack, RCA, 6P, GND		4438108010 1



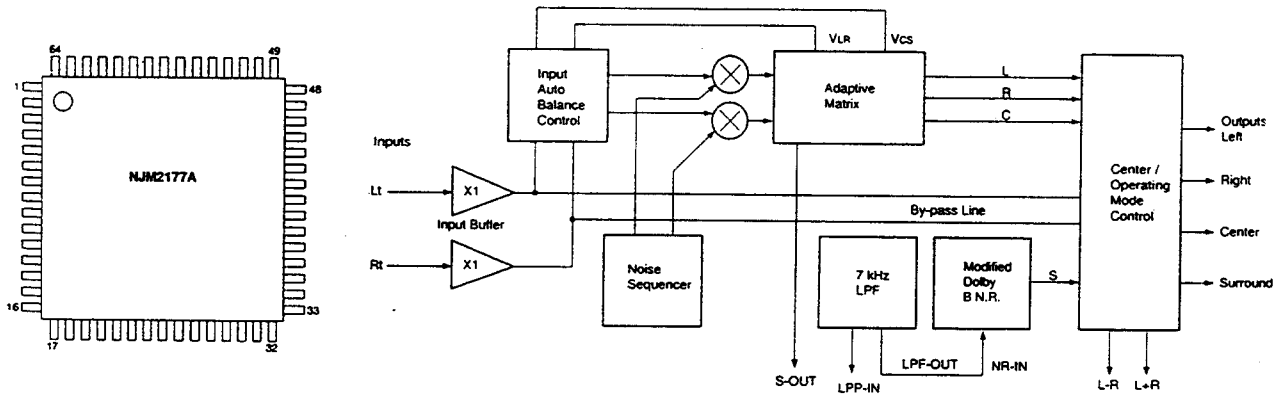
Ref. No.	Description	Mfr. Part No.	Q'ty	Ref. No.	Description	Mfr. Part No.	Q'ty
C404/405	Electrolytic SG	47 uF 25 V M	3479347041	2	<b>RESISTORS</b>		
C407-409	Ceramic Tubular	100 pF 50 V J	3519101935	3	R300S	Carbon Film	47 kohm 1/5 W J 3069473970 1
C410	Ceramic Tubular	0.1 uF 50 V Z	3519104935	1	R301S	Metal Film	33 ohm 1/5 W J 3029330970 1
<b>CONNECTORS</b>					R302S	Metal Film	33 ohm 1/5 W J 3029330970 1
CN202	Lead Ass'y, 8P, 340mm		435208348832	1	R303S	Carbon Film	62 kohm 1/5 W J 3069623970 1
CN204	Lead Ass'y, 6P, 350mm		436206353332	1	R304S	Carbon Film	2.2 kohm 1/5 W J 3069222970 1
<b>DIODES</b>					R305S	Carbon Film	1.2 kohm 1/5 W J 3069122970 1
D377-379	1N4148, Switching		2058322101	3	R306S	Carbon Film	1.2 kohm 1/5 W J 3069122970 1
<b>INTEGRATED CIRCUITS</b>					R307S	Metal Film	330 ohm 1/5 W J 3029331970 1
IC304/307	KIA75559P/KIA75559P, OP AMP		2168206104	2	R308S	Metal Film	33 ohm 1/5 W J 3029330970 1
<b>TRANSISTORS</b>					R309S	Metal Film	33 ohm 1/5 W J 3029330970 1
Q360C/S	BKTC3198Y/KTC1815Y, NPN		2208606104	2	R310S	Carbon Film	12 kohm 1/5 W J 3069123970 1
Q361	DTA114YS/KRA107M		2238006103	1	R311S	Metal Film	1 kohm 1/5 W J 3029102970 1
Q406	2SD1302, NPN		2208606112	1	R312S	Metal Film	1 kohm 1/5 W J 3029102970 1
<b>RESISTORS</b>					R313S	Metal Film	100 ohm 1/5 W J 3029101970 1
R359C/S	Carbon Film	100 kohm 1/5 W J	3069104970	2	R314S	Metal Film	100 ohm 1/5 W J 3029101970 1
R360C/S	Carbon Film	12 kohm 1/5 W J	3069123970	2	R315S	Metal Film	220 ohm 1/5 W J 3029221970 1
R361C/S	Carbon Film	2 kohm 1/5 W J	3069202970	2	R317S	Metal Film	1 kohm 1/5 W J 3029102970 1
R362C/S	Carbon Film	100 kohm 1/5 W J	3069104970	2	R318S	Metal Film	1.5 kohm 1/5 W J 3029152970 1
R363C/S	Metal Film	470 ohm 1/5 W J	3029471970	2	R320S	Carbon Film	20 kohm 1/5 W J 3069203970 1
R364C/S	Carbon Film	3.3 kohm 1/5 W J	3069332970	2	R321S	Metal Film	1 kohm 1/5 W J 3029102970 1
R365/366	Metal Film	470 ohm 1/5 W J	3029471970	2	R420S	Carbon Film	10 kohm 1/5 W J 3069103970 1
R367	Carbon Film	220 kohm 1/5 W J	3069224970	1			
R368	Carbon Film	22 kohm 1/5 W J	3069223970	1			
R380	Carbon Film	2.2 kohm 1/5 W J	3069222970	1			
R405L/R	Carbon Film	100 kohm 1/5 W J	3069104970	2			
R406L/R	Metal Film	1 kohm 1/5 W J	3029102970	2			
R408	Metal Film	4.7 kohm 1/5 W J	3029472970	1			
R409	Carbon Film	100 kohm 1/5 W J	3069104970	1			
R410	Metal Film	470 ohm 1/5 W J	3029471970	1			
R412	Metal Film	470 ohm 1/5 W J	3029471970	1			
R421	Metal Film	100 ohm 1/5 W J	3029101970	1			
<b>MISCELLANEOUS</b>							
37	Jack, RCA, 6P		4438103210	1			
38	Jack, RCA, 4P		4438108140	1			
<b>PCB12 ASSEMBLY P.C. BOARD TAPE2 054002009080</b>							
<b>CAPACITORS</b>							
C129L/R	Ceramic Tubular	100 pF 50 V J	3519101935	2			
C130L/R	Ceramic Tubular	100 pF 50 V J	3519101935	2			
C131L/R	Ceramic Tubular	100 pF 50 V J	3519101935	2			
C136	Ceramic Tubular	0.1 uF 50 V Z	3519104935	1			
CN217	Lead Ass'y, 5P, 200mm		436205203132	1			
R133L/R	Metal Film	1 kohm 1/5 W J	3029102970	2			
R134L/R	Metal Film	1 kohm 1/5 W J	3029102970	2			
42	Jack, RCA, 4P, GND		4438108110	1			
<b>PCB13 ASSEMBLY P.C. BOARD SURR. AMP 054002009082</b>							
<b>CAPACITORS</b>							
C300S	Electrolytic SG	4.7 uF 50 V M	3479347971	1			
C301S	Ceramic Tubular	220 pF 50 V J	3519221935	1			
C304S	Ceramic Disc	18 pF 50 V J	3579180130	1			
C305S	Ceramic Disc	18 pF 50 V J	3579180130	1			
C306S	Ceramic Disc	47 pF 50 V K	3579470130	1			
C307S	Ceramic Disc	330 pF 50 V J	3579331130	1			
C308S	Electrolytic SG	47 uF 16 V M	3479347031	1			
C310S	Ceramic Disc	150 pF 50 V J	3579151130	1			
C311S	Ceramic Disc	220 pF 50 V J	3579221130	1			
C312S	Mylar	0.047 uF 100 V J	3679473120	1			
C318S	Ceramic Tubular	10 pF 50 V J	3519100935	1			
C420S	Ceramic Tubular	1000 pF 50 V J	3519102935	1			
<b>CONNECTORS</b>							
CN218	Lead Ass'y, 10P, 220mm		436110223701	1			
CN219	Lead Ass'y, 3P, 220mm		436103223701	1			
<b>DIODES</b>							
D300S	Zener, UZ 27.0BSC		2258599115	1			
D301S	1N4148, Switching		2058322101	1			
D302S	1N4148, Switching		2058322101	1			
<b>TRANSISTORS</b>							
Q300S	KTC2240BL/BKTC3200, NPN		2208606108	1			
Q301S	KTC2240BL/BKTC3200, NPN		2208606108	1			
Q302S	KTC2240BL/BKTC3200, NPN		2208606108	1			
Q303S	BKTC3198Y/KTC1815Y, NPN		2208606104	1			
Q304S	BKTC3198Y/KTC1815Y, NPN		2208606104	1			
Q305S	KTA1024Y, PNP		2208206115	1			
Q306S	KTC3206Y, NPN		2208606118	1			
Q307S	KSC2690Y, NPN		2008602102	1			
Q308S	KSA1220AY		2008202101	1			

# SEMICONDUCTOR LEAD IDENTIFICATION & INTERNAL DIAGRAM

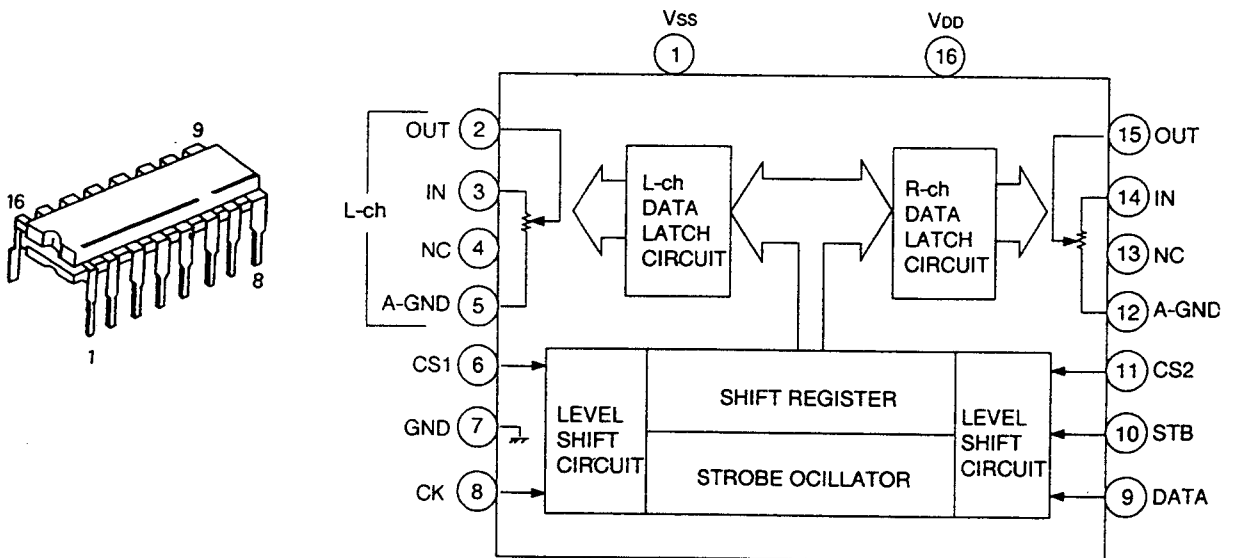
**KIA4559S : IC202  
(KIA75559S)**



**NJM2177A : IC501**

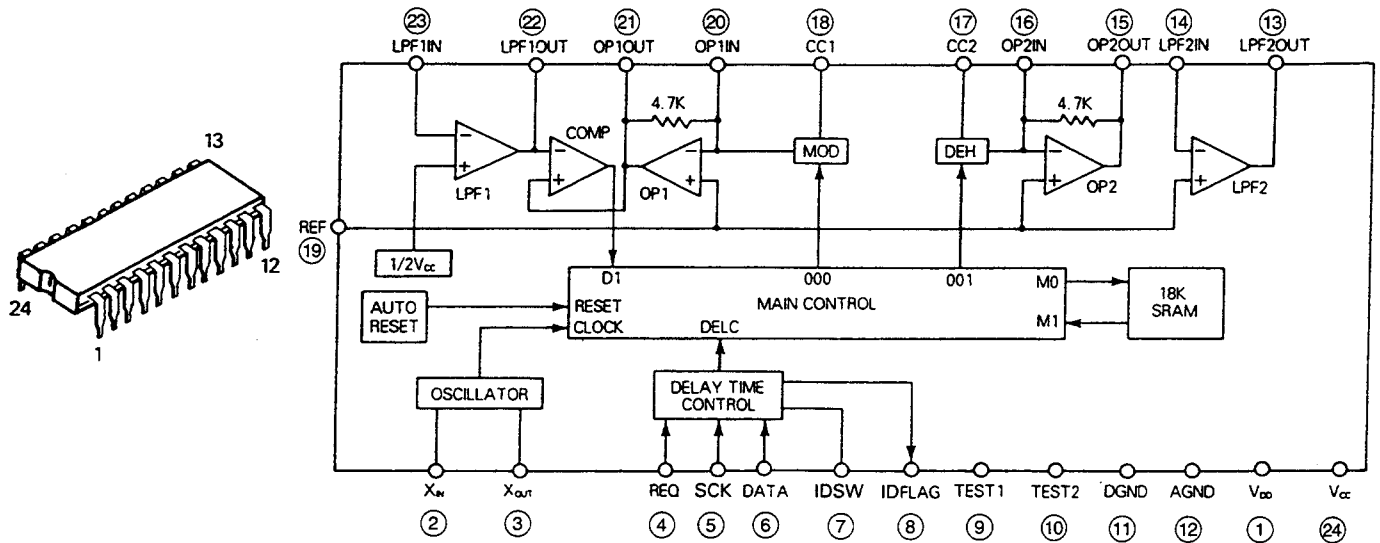


**TC9299 : IC502**

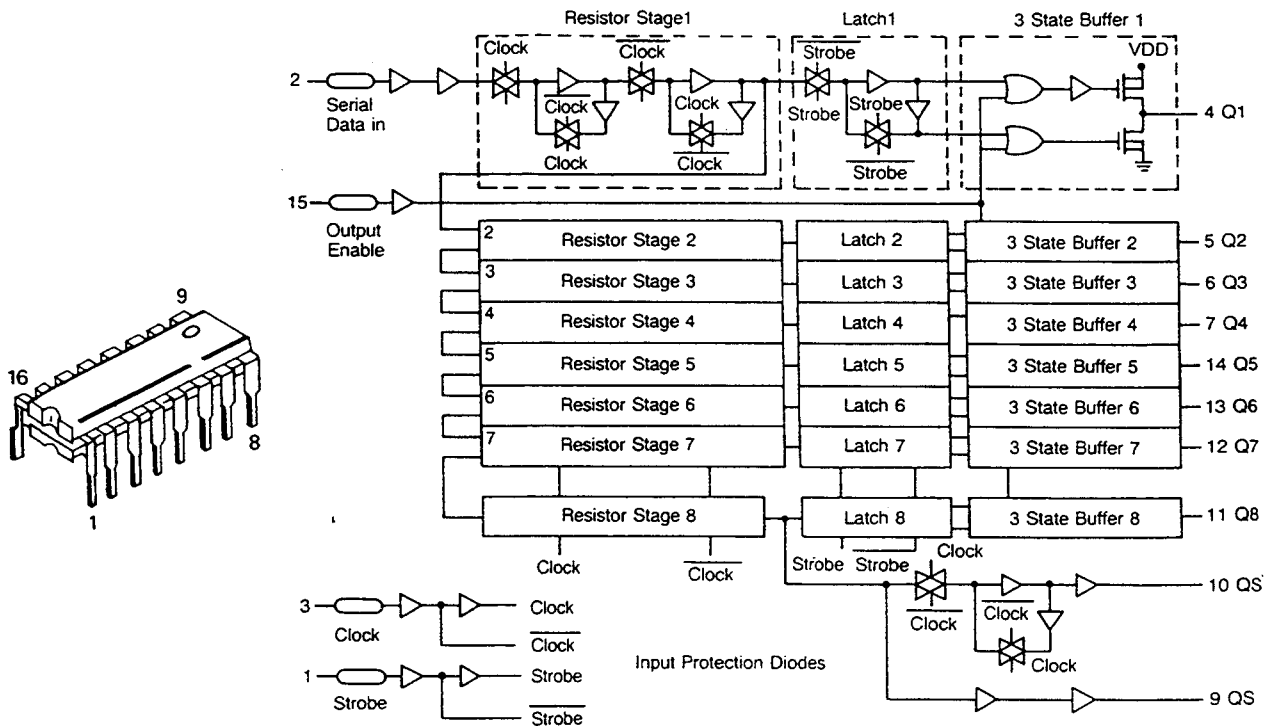




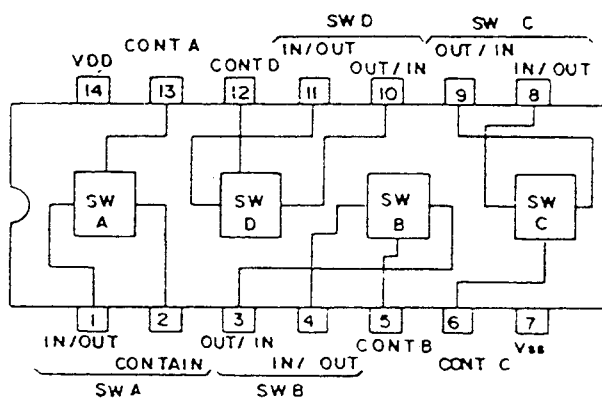
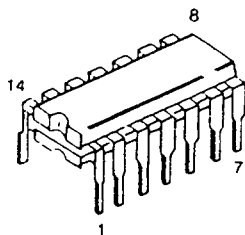
**NJU9701 : IC503**



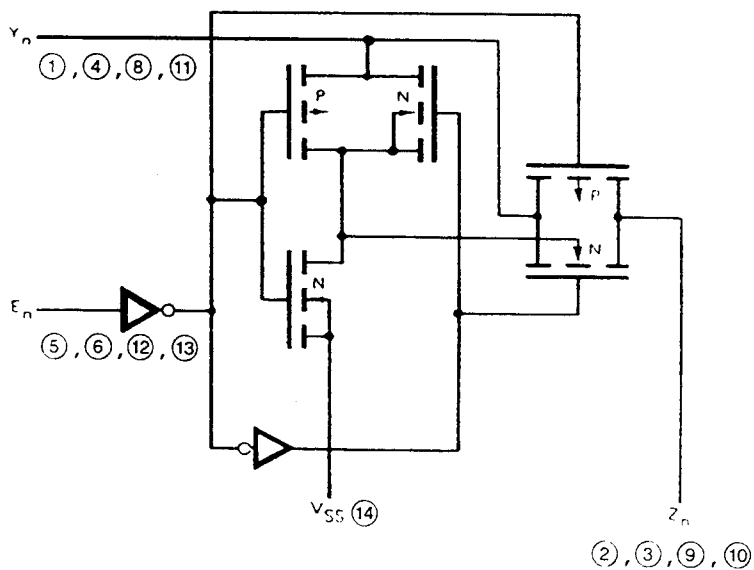
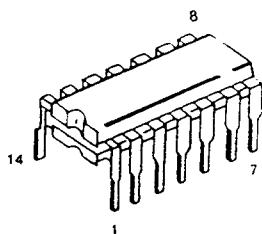
**MC14094 : IC505**



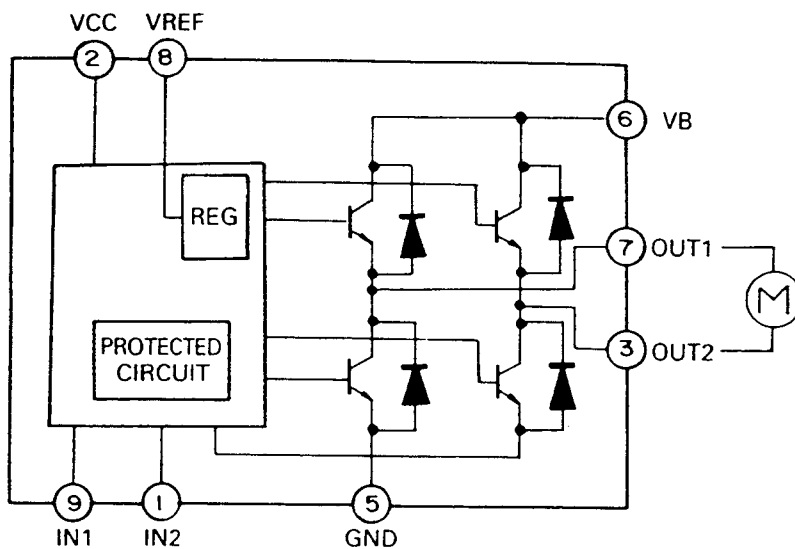
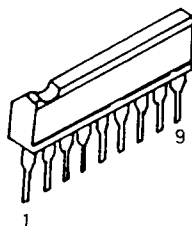
LC4966B : IC104



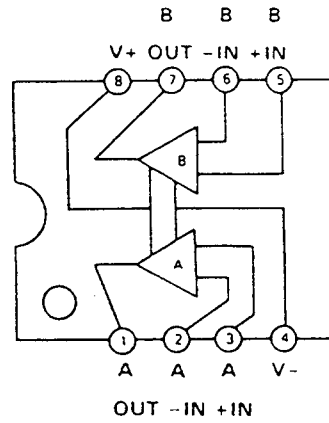
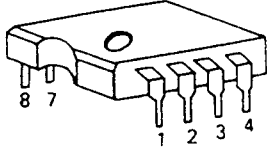
GD4066 : IC305, IC306



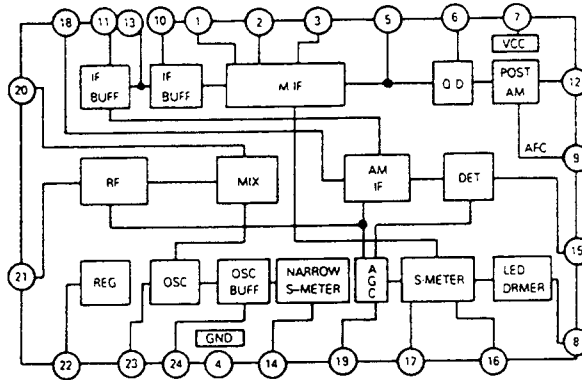
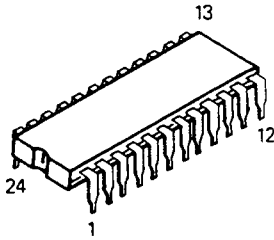
TA7291S : IC504



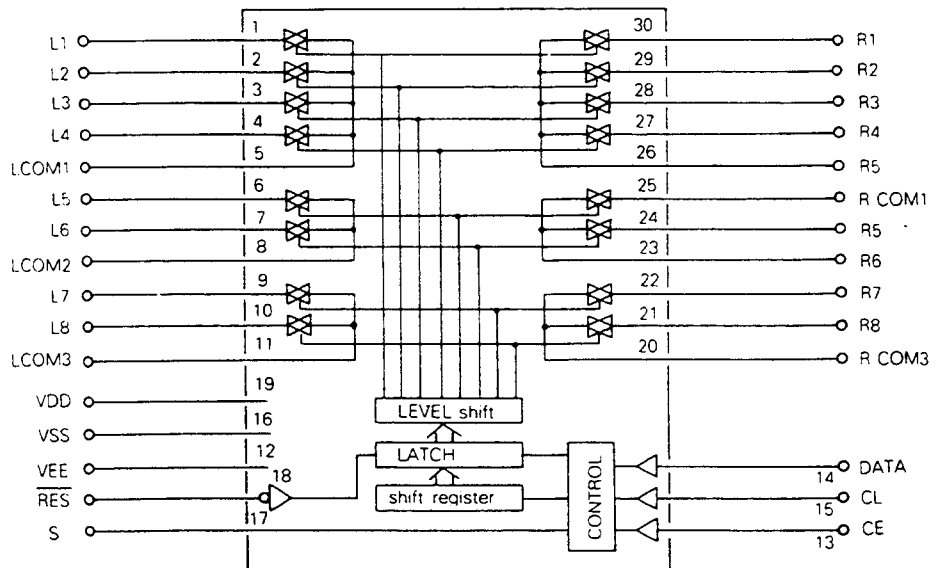
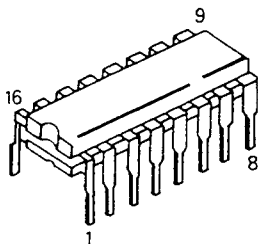
**KIA75559P : IC103, 105, 106, 304, 307, 506, 507, 508  
(KIA 4559P)**



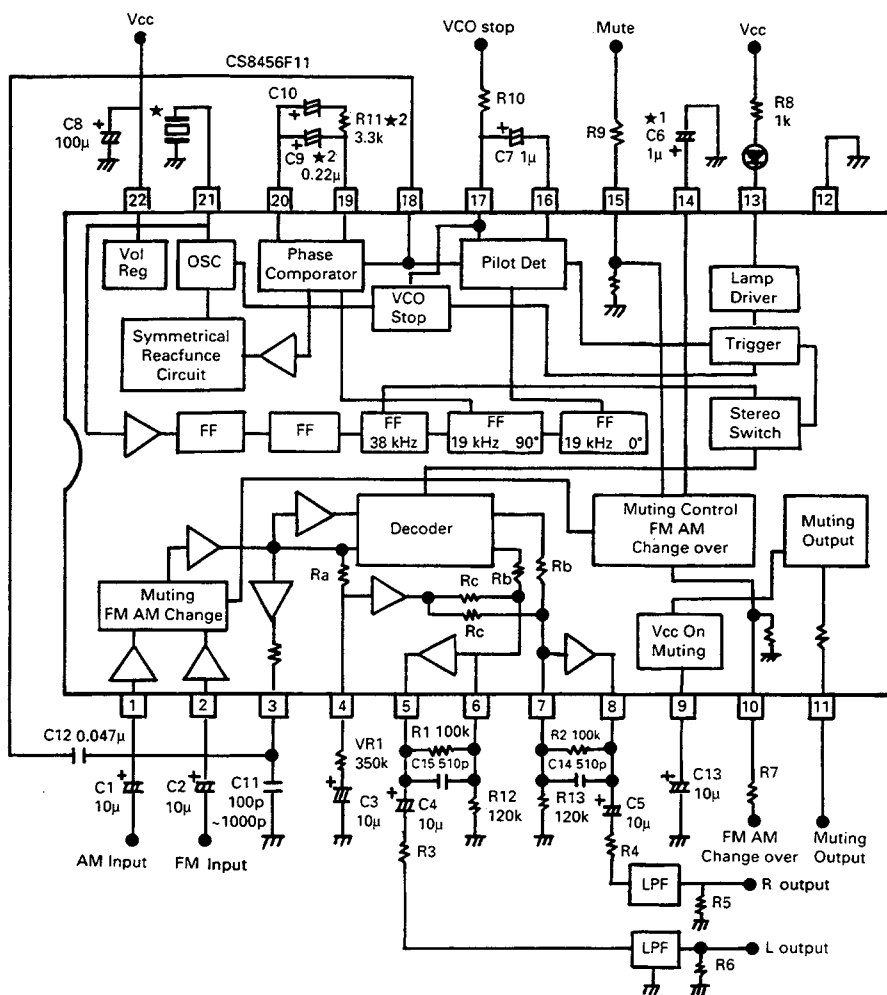
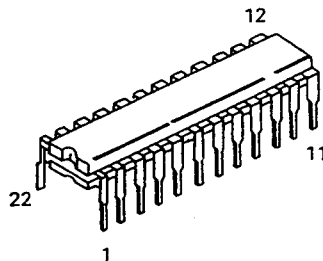
**LA1266 : IC902**



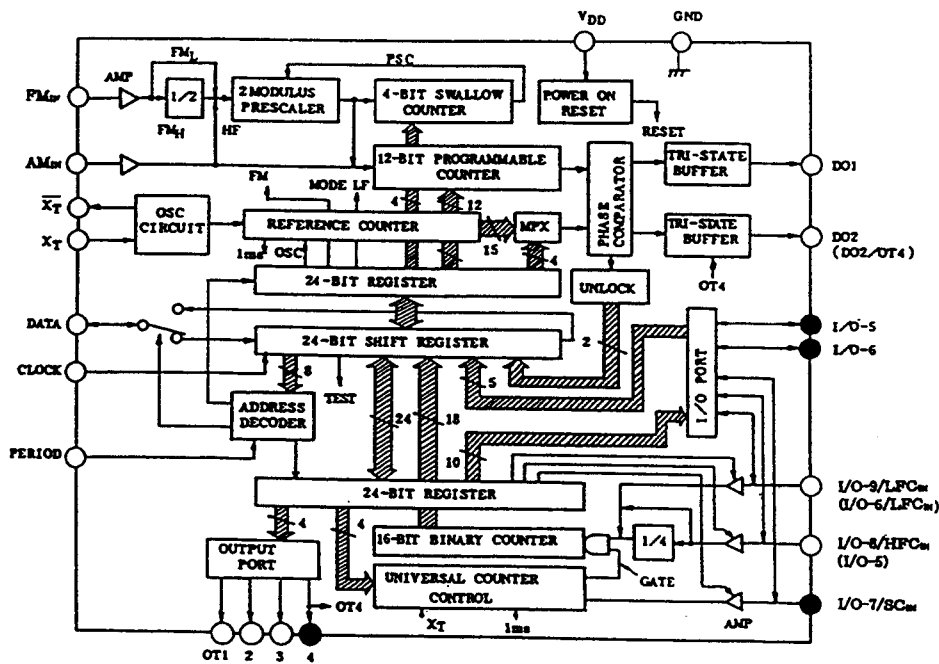
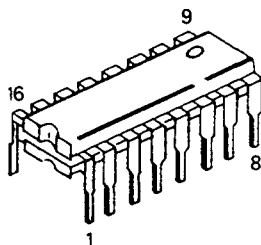
**LC7821 : IC101, IC102**



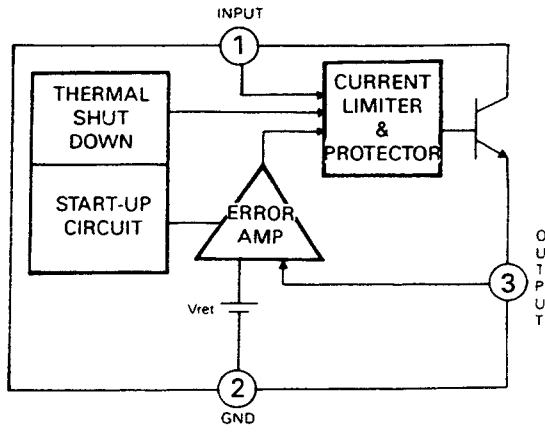
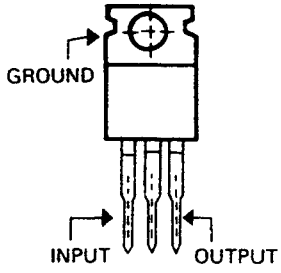
LA3401 : IC703



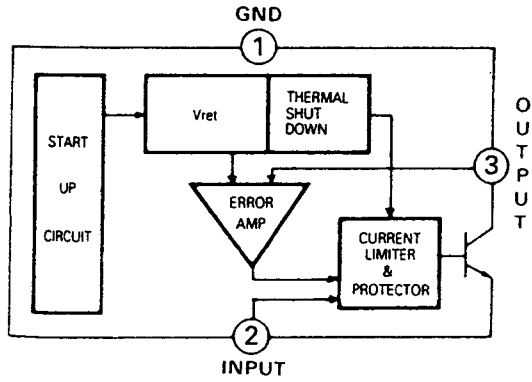
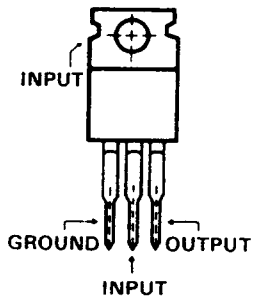
TC9216P : IC901



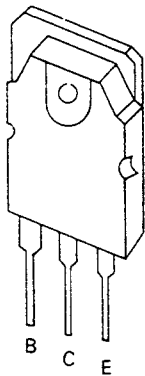
**GD78XX : IC301, IC303**



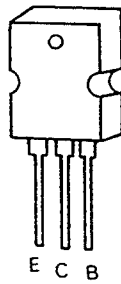
**GD7915 : IC302**



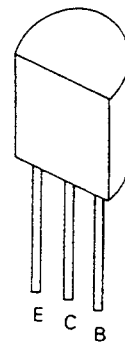
## Transistors



2SC3854 (2SC3181/2SC3182)  
2SA1490 (2SA1264/2SA1265)



2SC4137  
2SC2690Y  
2SA1220AY



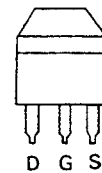
KTD1302S  
KTC3200BL  
KTA1266Y  
KTC3198Y  
KTC3194Y  
KTA1024Y  
KTC3206Y



2SK168D

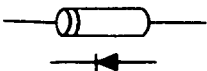


DTC114Y  
DTA107M  
DTC114T

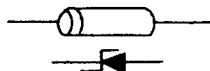


KTC3194

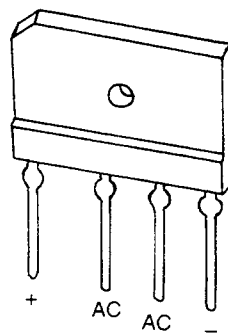
## Diodes



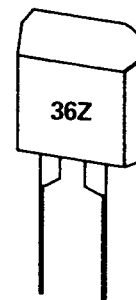
1N4148  
1N4003



ZD 5.1V-B  
ZD 27V-B  
ZD 6.2V-B  
ZD 4.3V-B



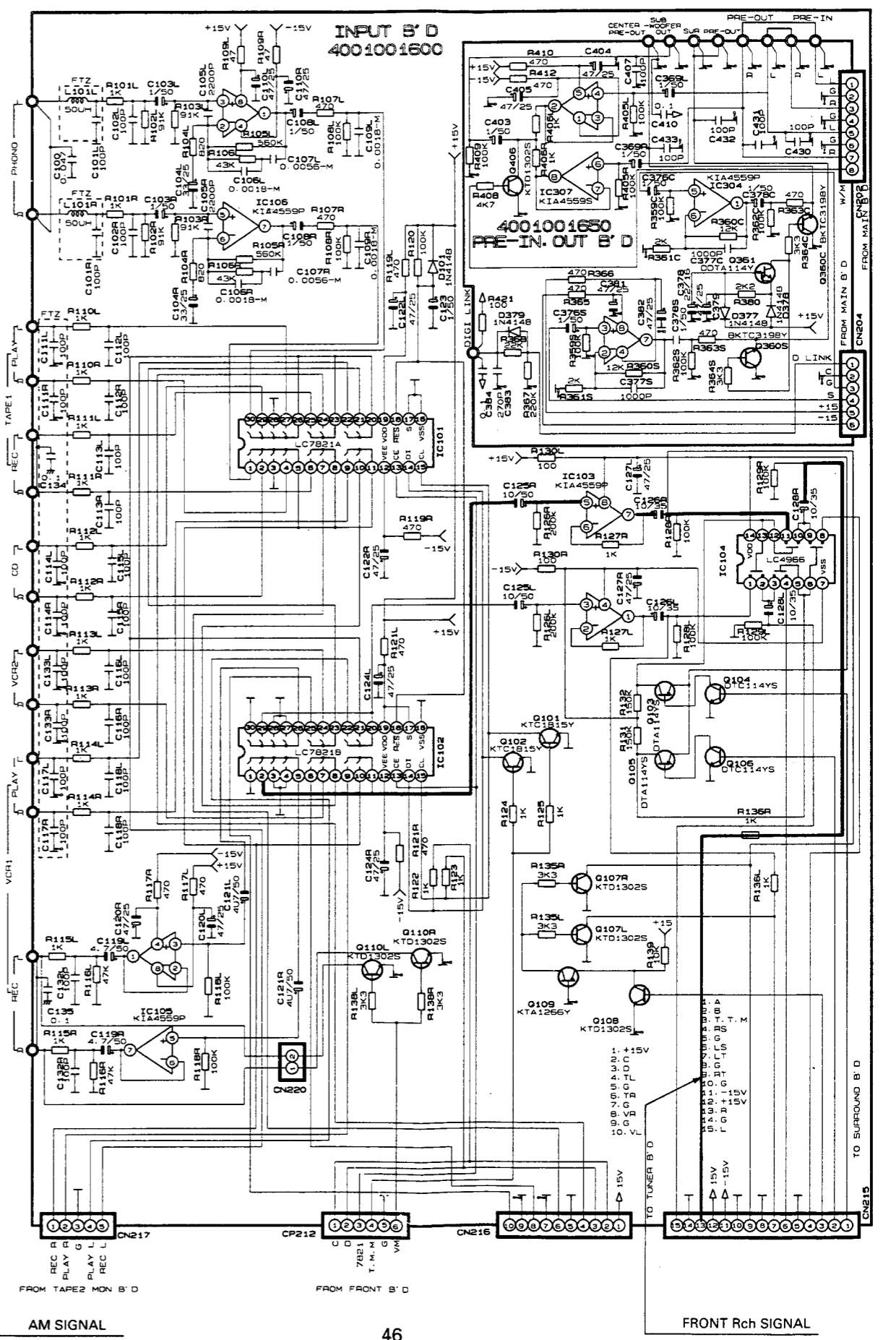
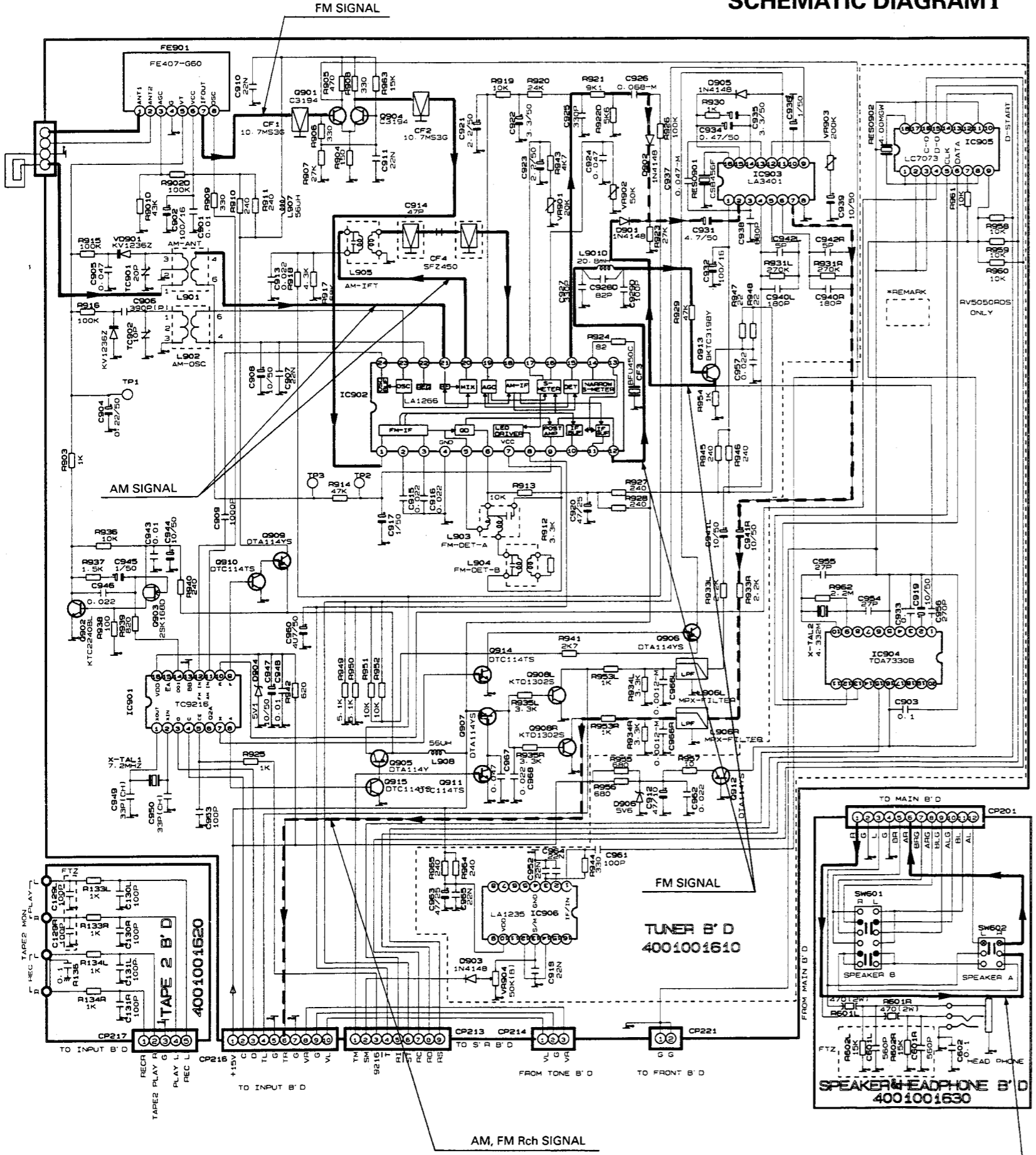
D5SBA60



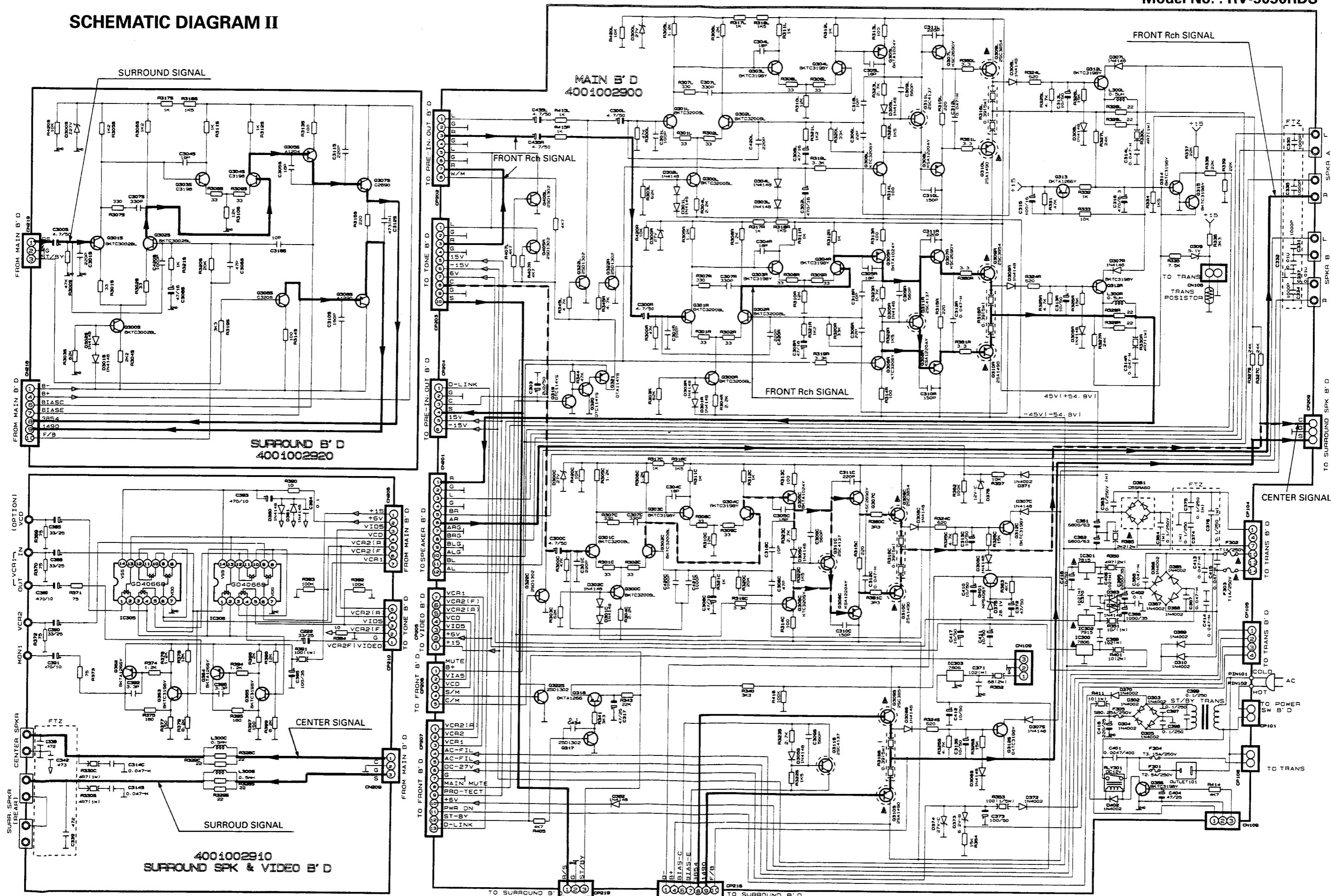
KV1236Z : VD901

# SCHEMATIC DIAGRAM I

Model No. : RV-5050RDS



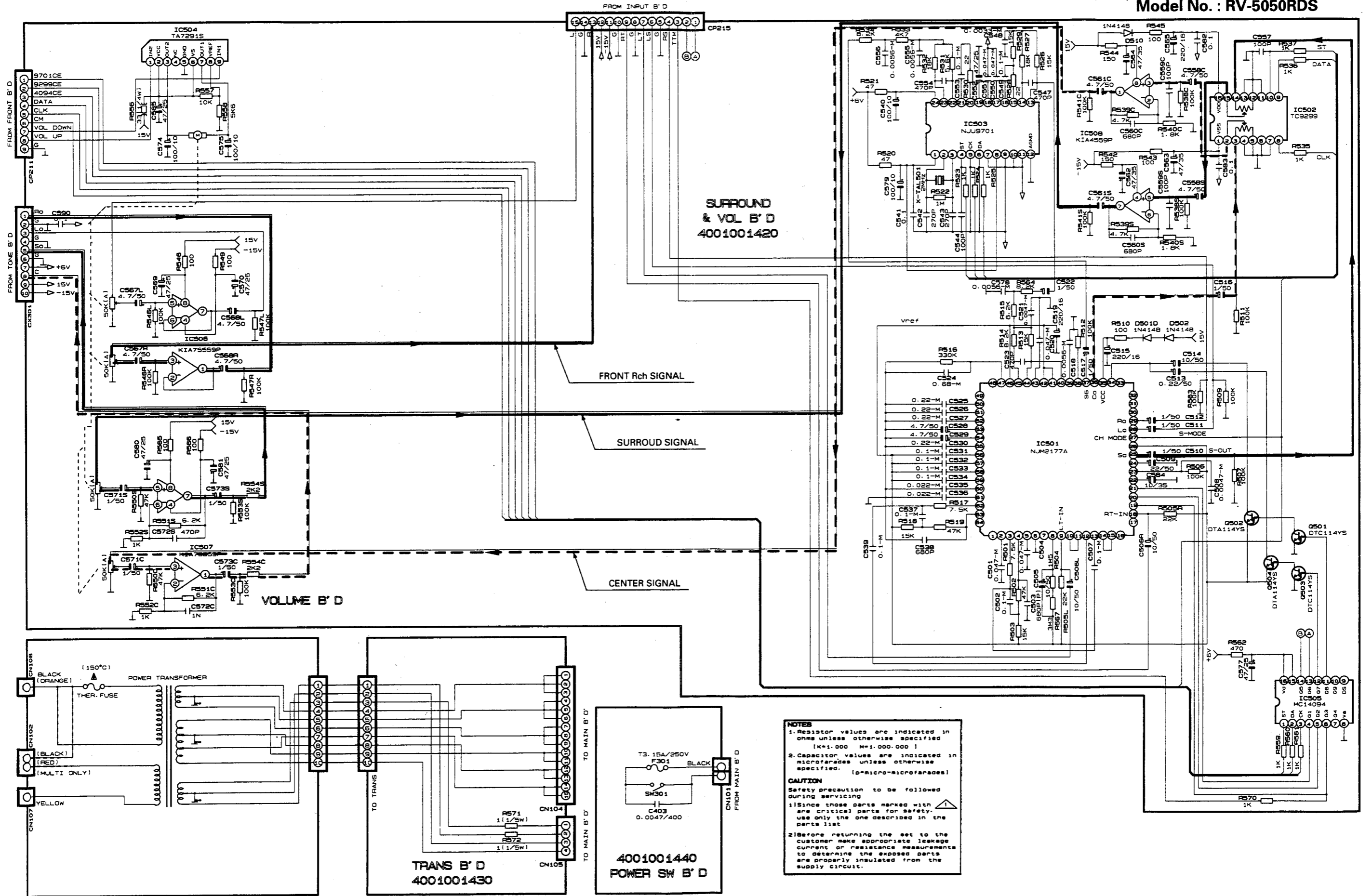
# SCHEMATIC DIAGRAM II





# SCHEMATIC DIAGRAM III

Model No. : RV-5050RDS



**NOTES**

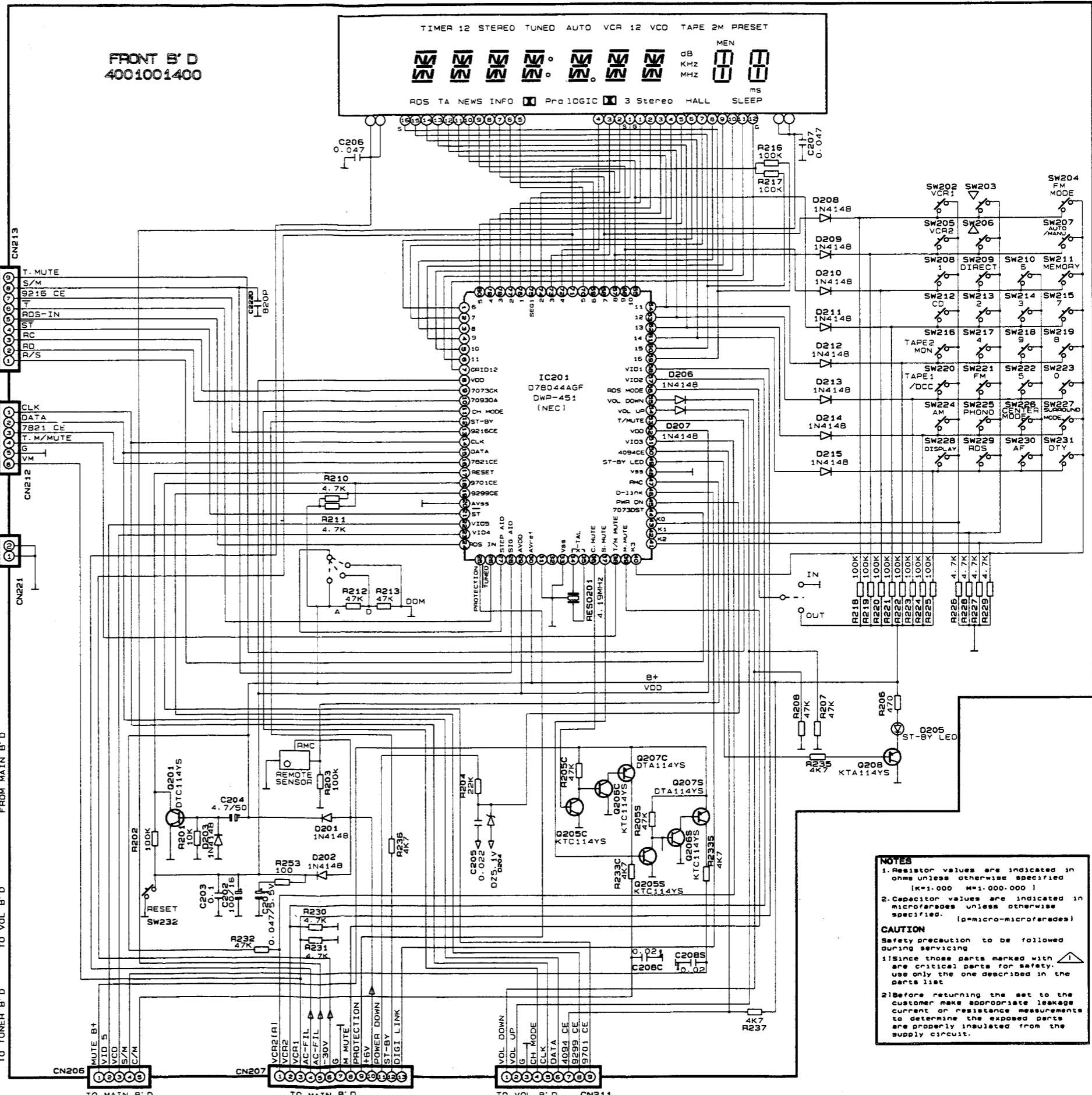
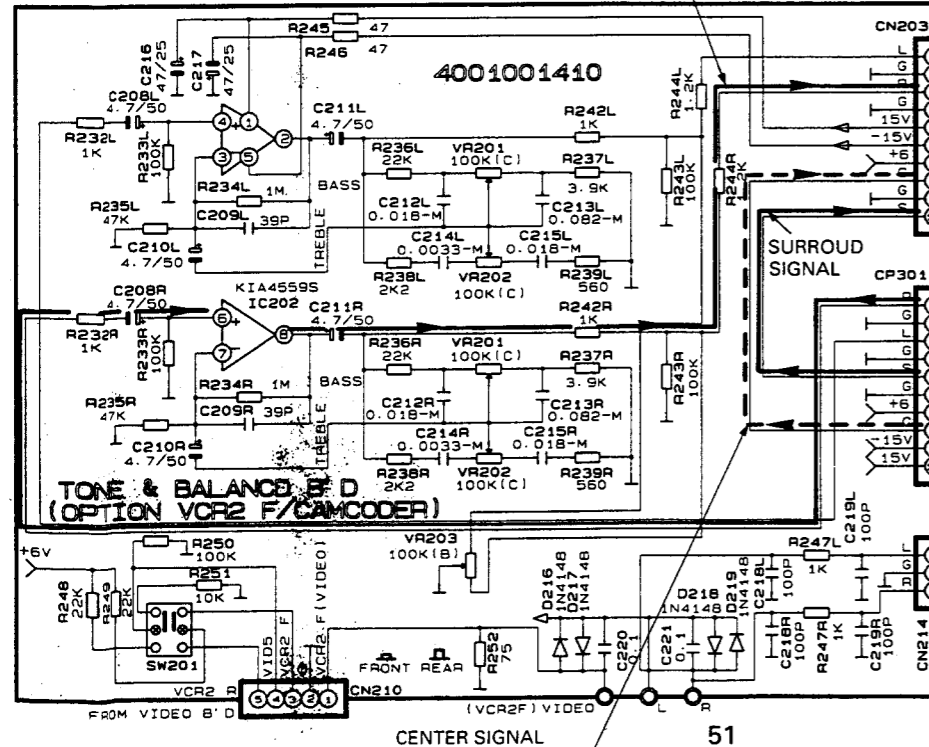
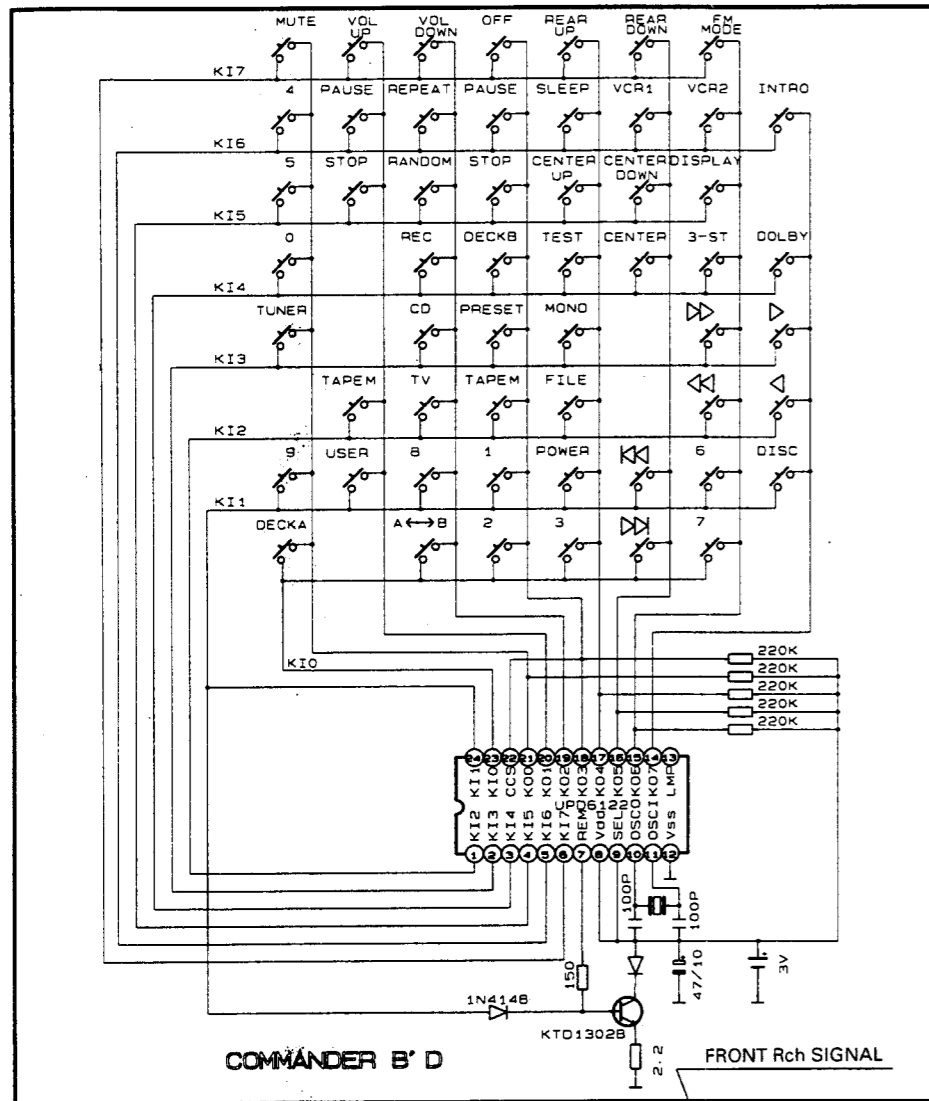
1. Resistor values are indicated in ohms unless otherwise specified. (K=1,000 M=1,000,000)
2. Capacitor values are indicated in microfarads unless otherwise specified. (p=micro-microfarads)

**CAUTION**

Safety precaution to be followed during servicing:

1. Since those parts marked with a lightning bolt symbol are critical parts for safety, use only the one described in the parts list.
2. Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.

**SCHEMATIC DIAGRAM IV**



**NOTES**  
 1. Resistor values are indicated in ohms unless otherwise specified (K=1,000 M=1,000,000)  
 2. Capacitor values are indicated in microfarads unless otherwise specified. (p=micro-microfarads)

**CAUTION**  
 Safety precaution to be followed during servicing  
 1) Since those parts marked with are critical parts for safety use only the one described in the parts list.  
 2) Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.