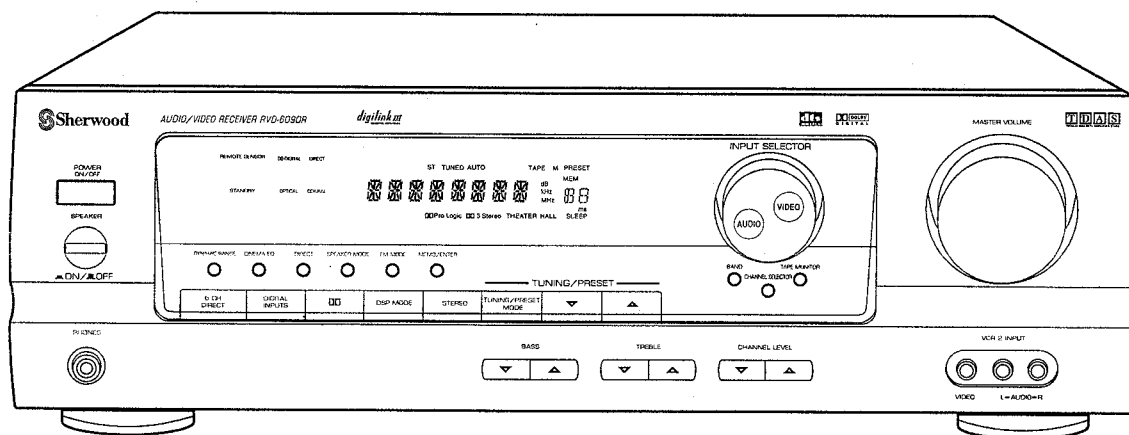


SERVICE MANUAL

RVD-6090R/RDS

AUDIO/VIDEO RECEIVER



■ CONTENTS ■

SPECIFICATIONS	2	EXPLODED VIEW	26
BLOCK DIAGRAM	8	ELECTRICAL PARTS LIST	28
WIRING DIAGRAM.....	10	PRINTED CIRCUIT BOARDS	42
CIRCUIT DESCRIPTION.....	12	IC'S FUNCTIONAL BLOCK DIAGRAM	49
ALIGNMENT PROCEDURES.....	17	SCHEMATIC DIAGRAMS (I), (II), (III), (IV).....	55
TROUBLESHOOTING.....	21	SCHEMATIC DIAGRAMS (V), (VI), (VII), (VIII)	63
MECHANICAL PARTS LIST	24		

 **Sherwood®**

SAFETY PRECAUTIONS

WARNING

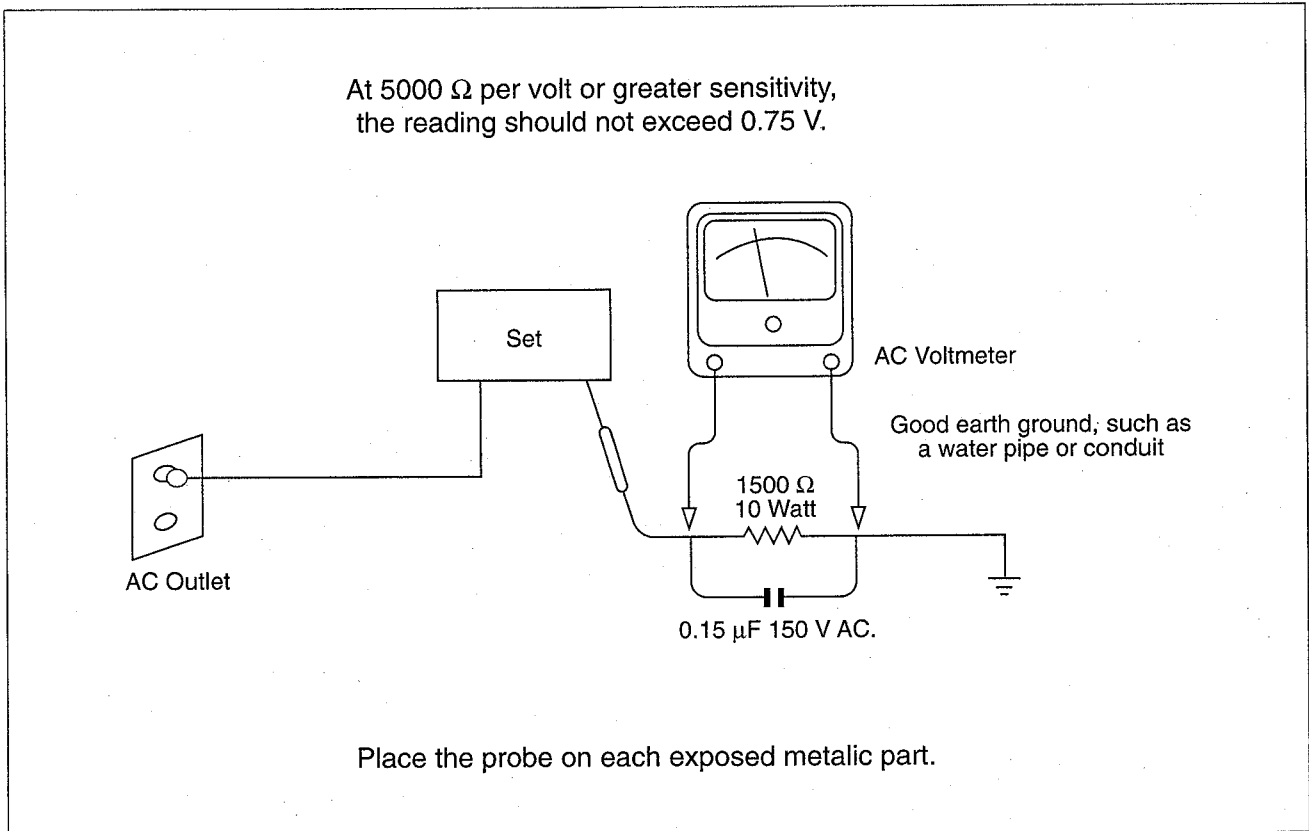
Before servicing this unit, familiarize yourself with the following precautions:

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 rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements: electrical components having such features are identified by \triangle 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. Plug the AC line cord directly into a 120 V AC outlet(USA Version) or 230 V AC outlet(EU Version). (Do not use a line isolation transformer during this check.) Be sure your AC voltmeter has a sensitivity of 5000 Ω per volt or greater. Then connect a 1500 Ω 10 watt resistor, paralleled by a 0.15 μ 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 Ω resistor and a 0.15 μ 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

Measuring methods are based on IHF and IEC standard 268-3

Measurements conditions, unless otherwise noted :

Output resistive load = (8) ohms / Both channel driven

Tone(Bass, Treble), Balance, EQ control : Center Position , Other SW's : OFF

Nominal input level : 5mV for MM, 0.5mV for MC, 500mV for general purpose inputs

Power figures should be kept minimum 10min. between 15 and 35°C

Terminator : 100ohm for MC, 1kohm for MM and general purpose inputs

Filter : IHF-A filter

R/O = Rated Output

Power supply A: 120V/60Hz , D: 230V/50Hz

● FRONT AMP SECTION

* SUB-WOOFER SPKR:NO *SPKR LEVEL:ALL 0dB

* SOURCE DIRECT ON

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	INPUT SENSITIVITY	CD	1kHz		mV	200±40	200±30
		MM	1kHz		mV		
		MC	1kHz		mV		
		MIC	1kHz		mV		
2	CHANNEL BALANCE	CD	1kHz	R/O TO -40dB	dB	±3	±2
			1kHz				
3	DAMPING FACTOR	CD	1kHz				
4	RESIDUAL NOISE	CD	1kHz	VOL min.	mV	≤1.2	≤1.0
			1kHz	VOL max.	mV		
5	TOTAL HARMONIC DISTORTION	CD(500mV)	(40)Hz	R/O / 1W	%	≤0.2	≤0.09
			1kHz	"	%	≤0.2	≤0.09
			(20)KHz	"	%	≤0.3	≤0.2
6	CONTINUOUS AVERAGE POWER at (0.2)% THD	CD	(40)Hz	(8)ohms	W	50	52
			1kHz	"	W	50	52
			(20)KHz	"	W	50	52
7	IMD(SMPTE)	CD(500mV)	60Hz=4	R/O	%	≤0.1	≤0.07
			7kHz=1	1W	%	≤0.1	≤0.07
8	S/N RATIO, IHF-A FILTER	CD(500mV)	1kHz	R/O	dB	≥90	≥92
			1kHz	1W	dB		
9	CHANNEL SEPARATION	CD(500mV)	100Hz	R/O-3dB	dB	≥45	≥55
			1kHz	"	dB	≥45	≥55
			10kHz	"	dB	≥40	≥45
10	FUNCTION CROSSTALK	CD→TAPE IN	1/10 kHz	"	dB	≥60/50	≥65/55
11	FREQUENCY RESPONSE (-3dB)	CD(500mV)		1W	Hz~kHz	20~50	10~55
12	TONE CONTROL , ±(8)dB	CD	100Hz	1W	dB	±10±2	±10±1
			10kHz	"	dB	±10±2	±10±1
13	SUBWOOFER OUT (1ch input)	CD(200mV)	30Hz	VOLmax, SW YES	V	1.2±0.4	1.2±0.3
14	PHONO EQUALIZATION	PHONO	100Hz	TAPE OUT	dB		
			10KHz	"	dB		
15	HEADPHONE OUTPUT H/P = 64ohms	CD	1kHz	R/O	V	2.4±0.4	2.4±0.2
		(500)mV	1kHz	R/O	V		
16	DIN POWER at 1% THD	CD	1kHz	"	W		

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
17	POWER BANDWIDTH -3dB	CD		R/O	Hz~kHz		
18	DYNAMIC POWER OUTPUT 20 cycle ON,480 cycle OFF	CD	1kHz	()ohms	W		
19	SLEW RATE	CD	1kHz	R/O	V/usec		
20	SLEW-FACTOR	CD(500mV)					
21	PRE OUTPUT LEVEL	6-CH(200mV)	1kHz	VOL max.	V	1±0.1	1±0.08
22	CINEMA EQ	CD	1kHz	VOL max.	dB	-2±1.0	-2±0.5
		CD	10kHz	VOL max.	dB	-5.5±1.5	-5.5±1
23	DC OFFSET VOLTAGE	CD		VOL min.	mV	70	50

● REAR AMP SECTION

Measurements conditions : Input level (350)Mv
Rear level max., Master volume adj.Delay time 20ms

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	POWER OUTPUT 0.7% THD	CD	1kHz	(8)ohms	W	≥50	≥55
2	TOTAL HARMONIC DISTORTION	CD	1kHz	1W	%	≤1	≤0.7
3	S/N RATIO DOLBY IHF-A FILTER, THEATER HALL1 HALL2	CD		R/O	dB	≥55	≥63
		CD		"	dB		
		CD		"	dB		
		CD		"	dB		
4	FRE RES.(ONLY DOLBY) ±3dB	CD	1kHz	1W	Hz~kHz	100~6	80~7
5	DC OFFSET VOLTAGE	CD		VOL min.	mV	70	50

● CENTER AMP SECTION

Measurements conditions : Input level (350)mV SPKR : LARGE
Center level max., Master volume adj.

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT	NOMINAL
1	POWER OUTPUT at 0.3% THD	CD	1kHz	(8)ohms	W	≥50	≥55
2	TOTAL HARMONIC DISTORTION	CD	1kHz	1W	%	≤0.3	≤0.2
3	S/N RATIO,IHF-A FILTER	CD		R/O	dB	≥55	≥60
4	FRE. RESPONSE LARGE DOLBY MODE SMALL	CD		1W	Hz~kHz	35~18K	30~20K
		CD		1W	Hz~kHz	135~18K	120~20K
5	CINEMA EQ	CD	1kHz	VOL max.	dB	-2±1.0	-2±0.5
		CD	10kHz	VOL max.	dB	-5.5±1.5	-5.5±1
6	DC OFFSET VOLTAGE	CD		VOL min.	mV	70	50

● VIDEO SECTION

	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT	NOMINAL
1	OUTPUT LEVEL at 75ohms	VCR1(1Vp-p)	1MHz		Vp-p	1±0.2	1±0.1
2	FREQUENCY RESPONSE	"	1MHz		Hz~MHz	DC~6	DC~6,3
3	S/N RATIO	"	1MHz		dB	40	45
4	CROSSTALK	"	1MHz		dB	40	45

AC-3 SECTION

NO	DESCRIPTION				CONTENTS-TEST TONE						CHAP	F	C	R	SW
1	OUTPUT LEVEL				1KHz 0dBFS L/C/R/LS/RS						38	L	L	L	Y
	LIMIT	0.95±0.2	NOMINAL	0.95±0.1	L	C	R	LS	RS	SW	UNIT		V		
	OUTPUT LEVEL				30KHz 0dBFS L/C/R/LS/RS						18	L	L	L	Y
	LIMIT	0.95±0.2	NOMINAL	0.95±0.1	L	C	R	LS	RS	SW	UNIT		V		
2	OUTPUT LEVEL MAIN VOL. : MIN				1KHz 0dBFS L/C/R/LS/RS						38	L	L	L	Y
	LIMIT	≤0.3	NOMINAL	≤0.25	L	C	R	LS	RS	SW	UNIT		mV		
	OUTPUT LEVEL MAIN VOL. : MIN				30KHz 0dBFS L/C/R/LS/RS						18	L	L	L	Y
	LIMIT	≤0.3	NOMINAL	≤0.25	L	C	R	LS	RS	SW	UNIT		mV		
3	S/N	PRE-OUT:100mV "A" WEIGHT			1KHz -20dBFS L/C/R/LS/RS						6	L	L	L	Y
	LIMIT	≥60	NOMINAL	≥65	L	C	R	LS	RS	SW	UNIT		mV		
	S/N	PRE-OUT:100V "A" UNWEIGHT			30Hz 0dBFS LFE						18	L	L	L	Y
	LIMIT	≥60	NOMINAL	≥65	L	C	R	LS	RS	SW	UNIT		mV		
4	T.H.D	PRE-OUT : 100mV			1KHz -20dBFS L/C/R/LS/RS						6	L	L	L	Y
	LIMIT	≤0.5	NOMINAL	≤0.3	L	C	R	LS	RS	SW	UNIT		mV		
	T.H.D	PRE-OUT : 1V			30Hz 0dBFS LFE						18	L	L	L	Y
	LIMIT	≤0.3	NOMINAL	≤0.25	L	C	R	LS	RS	SW	UNIT		mV		
5	CHANNEL SEPARATION				REF : 1KHz 0dBFS L						8(REF)	L	L	L	Y
	LIMIT / NOMINAL		OTHER CHANNEL		L	C	R	LS	RS	SW	UNIT		dB		
	CHANNEL SEPARATION				REF : 1KHz 0dBFS C						10(REF)	L	L	L	Y
	LIMIT	≥60	NOMINAL	≥65	L	C	R	LS	RS	SW	UNIT		dB		
	CHANNEL SEPARATION				REF : 1KHz 0dBFS R						12(REF)	L	L	L	Y
	LIMIT / NOMINAL		L ↔ R		L	C	R	LS	RS	SW	UNIT		dB		
	CHANNEL SEPARATION				REF : 1KHz 0dBFS LS						14(REF)	L	L	L	Y
	LIMIT	≥60	NOMINAL	≥65	L	C	R	LS	RS	SW	UNIT		dB		
	CHANNEL SEPARATION				REF : 1KHz 0dBFS RS						16(REF)	L	L	L	Y
	LIMIT / NOMINAL		ALL ↔ SW		L	C	R	LS	RS	SW	UNIT		dB		
	CHANNEL SEPARATION				REF : 1KHz 0dBFS LFE						18(REF)	L	L	L	Y
	LIMIT	≥45	NOMINAL	≥50	L	C	R	LS	RS	SW	UNIT		dB		
6	DYNAMIC RANGE				1KHz 0dBFS L/C/R/LS/RS						38	L	L	L	Y
	LIMIT	-11±2	NOMINAL	-11±1	L	C	R	LS	RS	SW	UNIT		mV		
	DYNAMIC RANGE				30Hz 0dBFS LFE						18	L	L	L	Y
	LIMIT	-0±2	NOMINAL	-0±1	L	C	R	LS	RS	SW	UNIT		mV		

NO	DESCRIPTION				CONTENTS-TEST TONE						CHAP	F	C	R	SW
7	DIALOG NOMALIZATION				1KHz -20dBFS L/C/R/LS/RS						43	L	L	L	Y
	LIMIT	-10±1	NOMINAL	-10±0.5	L	C	R	LS	RS	SW	UNIT		mV		
	DIALOG NORMALIZATION				30Hz -20dBFS LFE						43	L	L	L	Y
	LIMIT	-10±1	NOMINAL	-10±0.5	L	C	R	LS	RS	SW	UNIT		mV		
8	OUTPUT CONFIGURATION1 TEST				REF : 1KHz 0dBFS L						8(REF)	S	S	S	Y
	LIMIT	10±2	NOMINAL	10±1	L	C	R	LS	RS	SW	UNIT		dB		
	OUTPUT CONFIGURATION1 TEST				30Hz 0dBFS LFE						18	S	S	S	Y
	LIMIT	10±2	NOMINAL	10±1	L	C	R	LS	RS	SW	UNIT		dB		
	OUTPUT CONFIGURATION1 TEST				REF : 30Hz 0dBFS LFE						18(REF)	S	S	S	Y
	LIMIT	6.5±2	NOMINAL	6.5±1	L	C	R	LS	RS	SW	UNIT		dB		
	OUTPUT CONFIGURATION1 TEST				30Hz 0dBFS L/C/R/LS/RS/LFE						22	S	S	S	Y
	LIMIT	6.5±2	NOMINAL	6.5±1	L	C	R	LS	RS	SW	UNIT		dB		
	OUTPUT CONFIGURATION1 TEST				REF : 1KHz 0dBFS L/C/R/LS/RS						38(REF)	S	S	S	Y
	LIMIT	19.5±3	NOMINAL	19.5±2	L	C	R	LS	RS	SW	UNIT		dB		
9	OUTPUT CONFIGURATION2 TEST				REF : 1KHz 0dBFS L/C/R/LS/RS						38(REF)	L	S	S	N
	LIMIT	5.5±2	NOMINAL	5.5±1	L	C	R	LS	RS	SW	UNIT		dB		
	OUTPUT CONFIGURATION2 TEST				30Hz 0dBFS LFE						18	L	S	S	N
	LIMIT	5.5±2	NOMINAL	5.5±1	L	C	R	LS	RS	SW	UNIT		dB		
	OUTPUT CONFIGURATION2 TEST				REF : 1KHz 0dBFS L/C/R/LS/RS						38(REF)	L	S	S	N
	LIMIT	11±2	NOMINAL	11±1	L	C	R	LS	RS	SW	UNIT		dB		
10	DOWNMIXING TEST				REF : 1KHz 0dBFS C -> CENTER : NO						10(REF)	L	S	S	Y
	LIMIT	-3.0±1	NOMINAL	-3.0±0.5	L	C	R	LS	RS	SW	UNIT		dB		
	DOWNMIXING TEST				REF : 1KHz 0dBFS LS -> LS : NO						14(REF)	L	S	S	Y
	LIMIT	-3.0±1	NOMINAL	-3.0±0.5	L	C	R	LS	RS	SW	UNIT		dB		
	DOWNMIXING TEST				REF : 1KHz 0dBFS RS -> RS : NO						16(REF)	L	S	S	Y
	LIMIT	-3.0±1	NOMINAL	-3.0±0.5	L	C	R	LS	RS	SW	UNIT		dB		
	DOWNMIXING TEST				REF : 1KHz -20dBFS L/C/R/LS/RS -> ST : NO						6(REF)	L	S	S	Y
	LIMIT	7.5±2	NOMINAL	7.5±1	L	C	R	LS	RS	SW	UNIT		dB		
DOWNMIXING TEST / USING VER 2.0				REF : 30Hz -3dBFS L/C/R/LS/RS/LFE -> ST : NO						7(REF)	L	S	S	Y	
LIMIT	0±2	NOMINAL	0±1	L	C	R	LS	RS	SW	UNIT		dB			
DOWNMIXING TEST / USING VER 2.0				REF : 30Hz -3dBFS L/C/R/LS/RS/LFE ST ON -> SW : MO						7(REF)	L	S	S	Y	
LIMIT	0±2	NOMINAL	0±1	L	C	R	LS	RS	SW	UNIT		dB			

TUNER SECTION

Measuring methods in conformity with IEC standard 315

Measurements condition FM : Radio frequency = 98.1MHz, Audio frequency = 1kHz

Reference level = 1mV on (75ohms , 300ohms)

Deviation : MONO = $\pm 75\text{kHz}$, Stereo = $\pm 67.5\text{kHz} \pm 7.5\text{kHz}$

MONO = $\pm 40\text{kHz}$, Stereo = $\pm 40\text{kHz} \pm 7.5\text{kHz}$

Test Point : TP 1 = 90.1MHz, TP 2 = 98.1MHz, TP 3 = 106.1MHz

Filter = B.P.F at STEREO

● FM SECTION

Power supply : 120V ,60Hz

NO	DESCRIPTION	UNIT	LIMIT L/R	NOMINAL L/R
1	TUNING RANGE	LOW ~ HIGH	87.5~108	
	STEP (A)	AUTO/Man.	100/100	
	STEP (D/RDS)	AUTO/Man.	100/50	
2	USABLE SENSITIVITY S/N = 30dB (A) S/N = 26dB (D/RDS)	TP 1	≤ 23.2	≤ 20.2
		TP 2	≤ 23.2	≤ 20.2
		TP 3	≤ 23.2	≤ 20.2
3	FULL LIMITING SENSE (A) (D/RDS)	OUTPUT = -3dB	≤ 15.2	≤ 12.2
		OUTPUT = -3dB	≤ 23.2	≤ 20.2
4	AUTO STOP LEVEL		31.2 \pm 5	31.2 \pm 3
5	AUTO SCAN ERROR (A) (D/RDS)		± 20	± 25
			± 15	± 20
6	S/N RATIO IHF-A FILTER	MONO	≥ 65	≥ 70
		STEREO	≥ 60	≥ 65
7	TOTAL HARMONIC DISTORTION	MONO	≤ 0.5	≤ 0.3
		STEREO	≤ 0.8	≤ 0.5
8	50dB QUIETING SENS. (A) 46dB QUIETING SENS. (D/RDS)	MONO	≤ 27.2	≤ 23.2
		STEREO	≤ 48.3	≤ 45.3
9	CHANNEL SEPARATION (A)	100Hz	≥ 35	≥ 38
		1kHz	≥ 40	≥ 45
		10kHz	≥ 30	≥ 35
	CHANNEL SEPARATION (D/RDS)	100Hz	≥ 32	≥ 37
		1kHz	≥ 37	≥ 42
		10kHz	≥ 27	≥ 32
10	FREQUENCY RESPONSE AT $\pm 1.5\text{dB}$	Hz	20~12.5K	10~14K
11	SPURIOUS RESPONSE (A) (D/RDS)		≥ 65	≥ 70
			≥ 80	≥ 90
12	IF REJECTION	TP 1	≥ 70	≥ 80
13	IMAGE REJECTION (A) (D/RDS)	TP 3	≥ 35	≥ 40
			≥ 70	≥ 80
14	AM REJECTION RATIO (A)		≥ 47	≥ 52
15	RF INTERMODULATION			
16	CAPTURE RATIO			
17	ALTERNATIVE CH SELECTIVITY (A) (D/RDS)	$\pm 400\text{kHz}$		
		$\pm 300\text{kHz}$	≥ 42	≥ 47
18	OUTPUT LEVEL MONO	TAPE REC OUT	500 \pm 150	500 \pm 100
19	RDS SENSITIVITY (D/RDS)		≤ 40.2	≤ 38.2

● AM SECTION

Measuring methods in conformity with IEC standard 315

Measurements condition AM - MW : Radio frequency = 1000/999kHz, Audio frequency = 400Hz

LW : Radio frequency = 207kHz, Audio frequency = 400Hz

Reference level = 5mV/m, 10mV/m on 50ohms Modulation = 30%

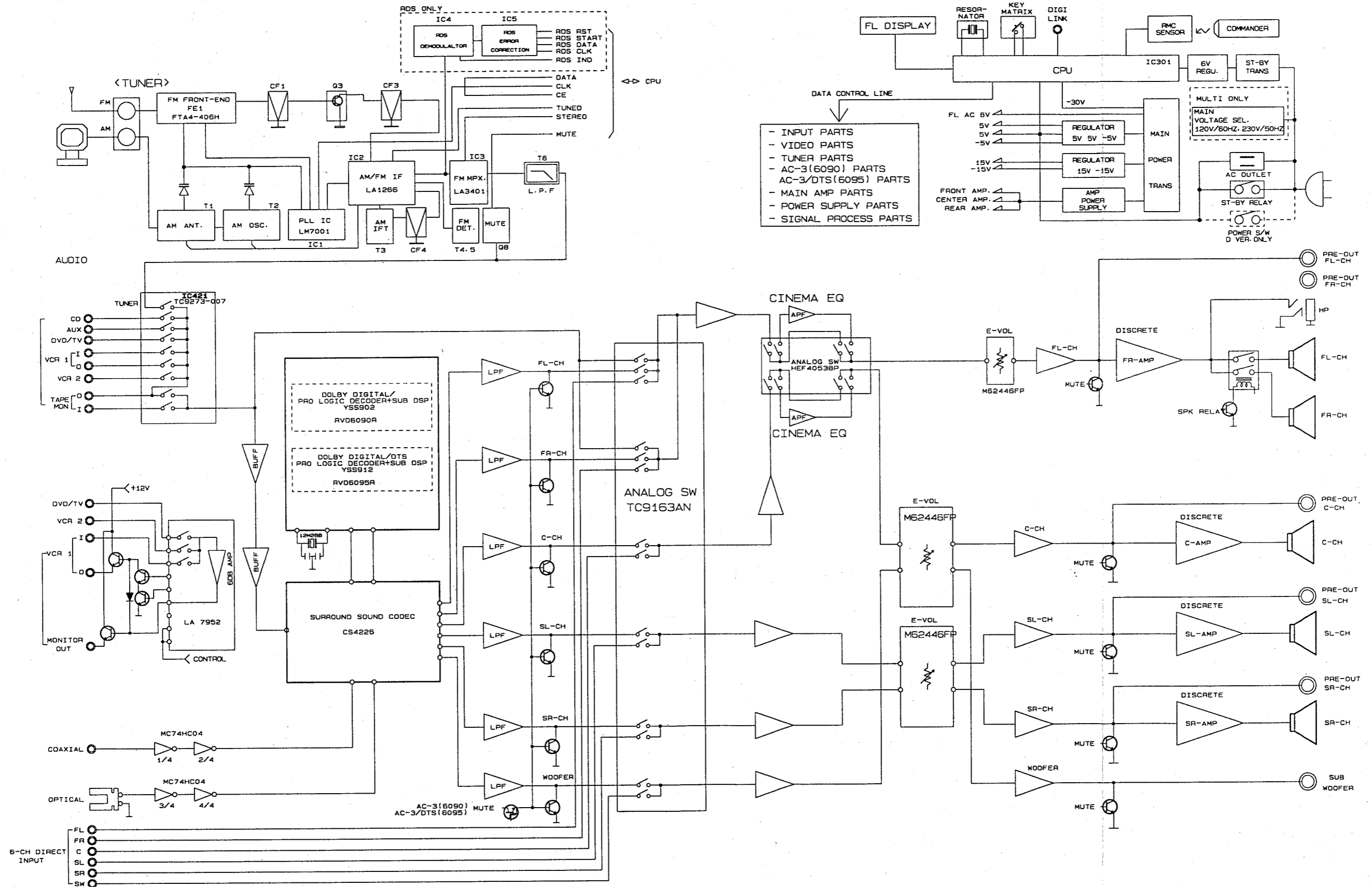
Test Point : MW TP1 = (600)kHz TP2 = (1000)kHz TP3 = (1400)kHz

LW TP1 = 162kHz, TP2 = 207kHz, TP3 = 252kHz

NO	DESCRIPTION	UNIT	LIMIT L/R	NOMINAL L/R	
1	TUNING COVER RANGE (A) (D/RDS)	LOW ~ HIGH MW	kHz		
			520~1710		
	STEP (A) (D/RDS)	AUTO/Man.	kHz		
			10/10		
		9			
2	USABLE SENSITIVITY S/N = 20dB	MW TP 1 TP 2 TP 3	uV/m		
			≤ 800		
			≤ 500		
			LW TP 1 TP 2 TP 3	uV/m	
3	S/N RATIO	MW LW	dB		
			≥ 35		
		≥ 40			
4	TOTAL HARMONIC DISTORTION (A) (D/RDS)			%	
				≤ 2	
				≤ 1.0	
				≤ 1.5	
				≤ 1.0	
5	OVER LOAD DISTORTION 5mV 80% MOD			%	
				≤ 10	
				≤ 5	
6	FREQUENCY RESPONSE at -6dB	MW LW	Hz		
			100~2K		
				80~2.2K	
7	SELECTIVITY 10kHz/9kHz	MW LW	dB		
			≥ 20		
				≥ 25	
8	AGC FIGURE OF MERIT Input=100mV, -10dB			dB	
				≥ 50	
				≥ 55	
9	IMAGE REJECTION (A) (D/RDS)	MW = TP 3 MW = TP 3 LW = TP 3	dB		
			≥ 30		
			≥ 33		
				≥ 30	
				≥ 35	
10	WHISTLE MODULATION INPUT = 1mV/m	2IF 3IF	%		
			≤ 15		
				≤ 10	
11	AUTO STOP LEVEL	MW LW	uV/m		
			800(±6dB)		
				800(±5dB)	
12	TUNED LEVEL	MW LW	uV/m		
			800(±6dB)		
				800(±5dB)	
13	OUTPUT LEVEL (A) (D/RDS)	TAPE REC OUT	mV		
			120±50		
				120±30	
				150±50	
				150±30	

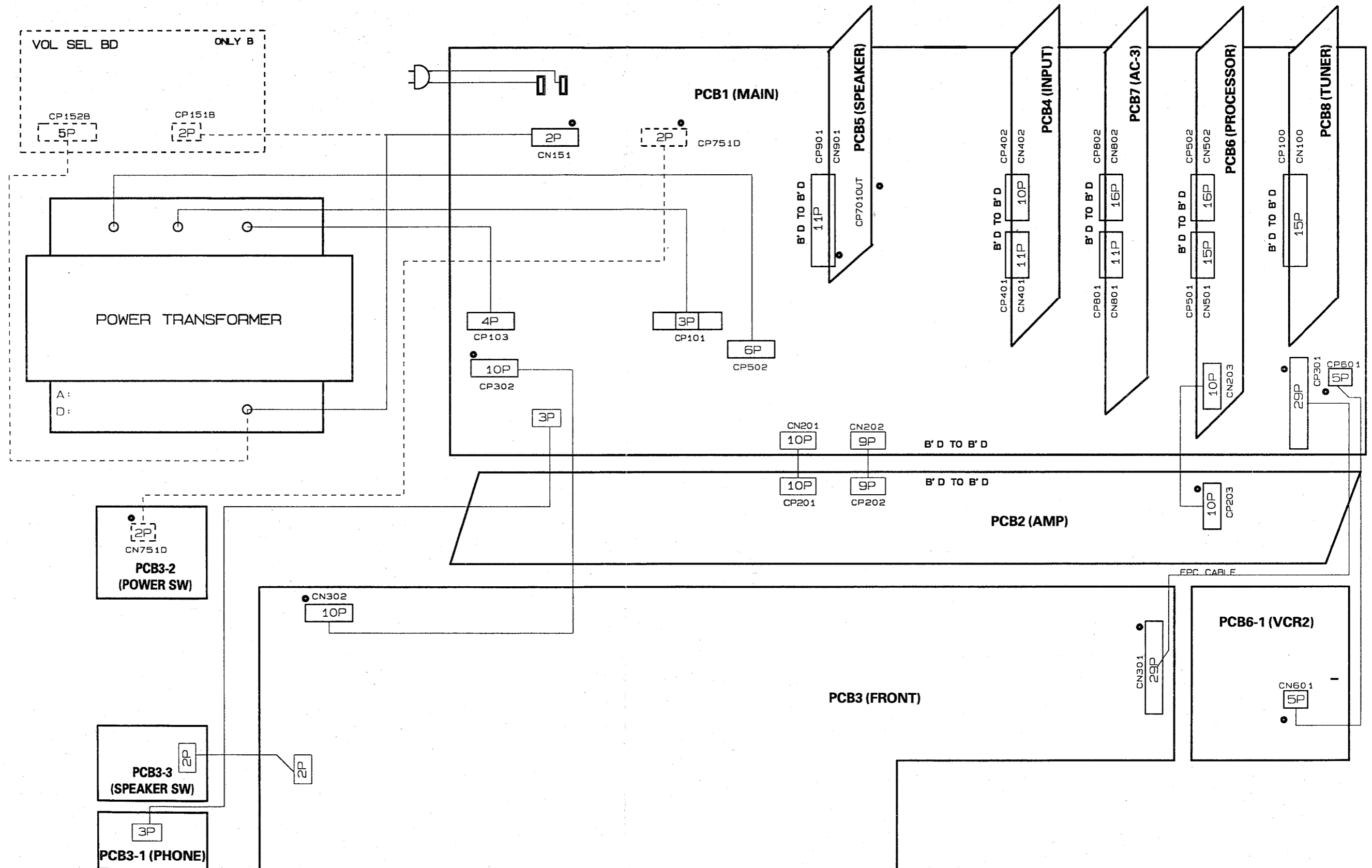
BLOCK DIAGRAM

Model No. : RVD-6090R/RDS



WIRING DIAGRAM

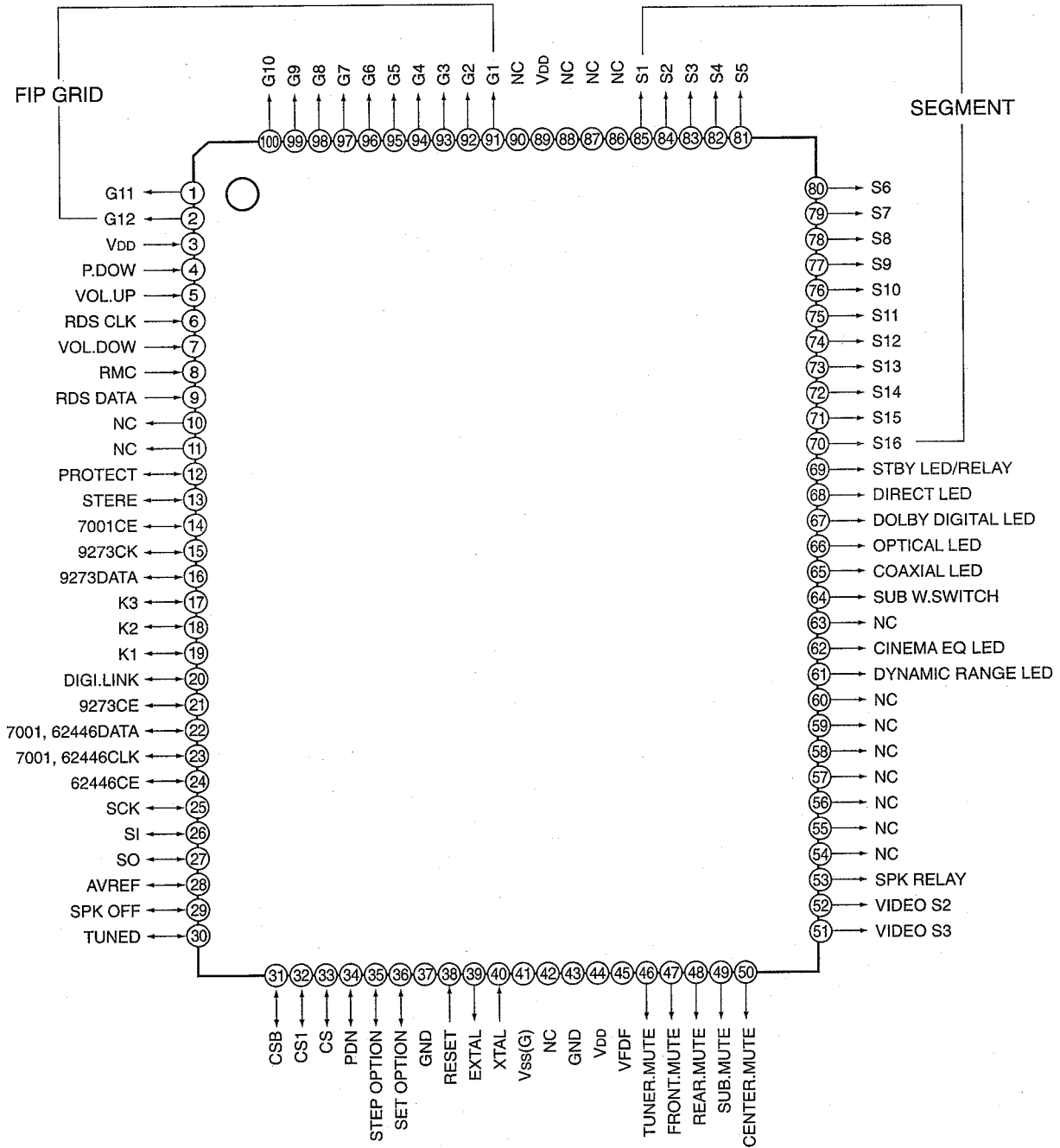
Model No. : RVD-6090R/RDS



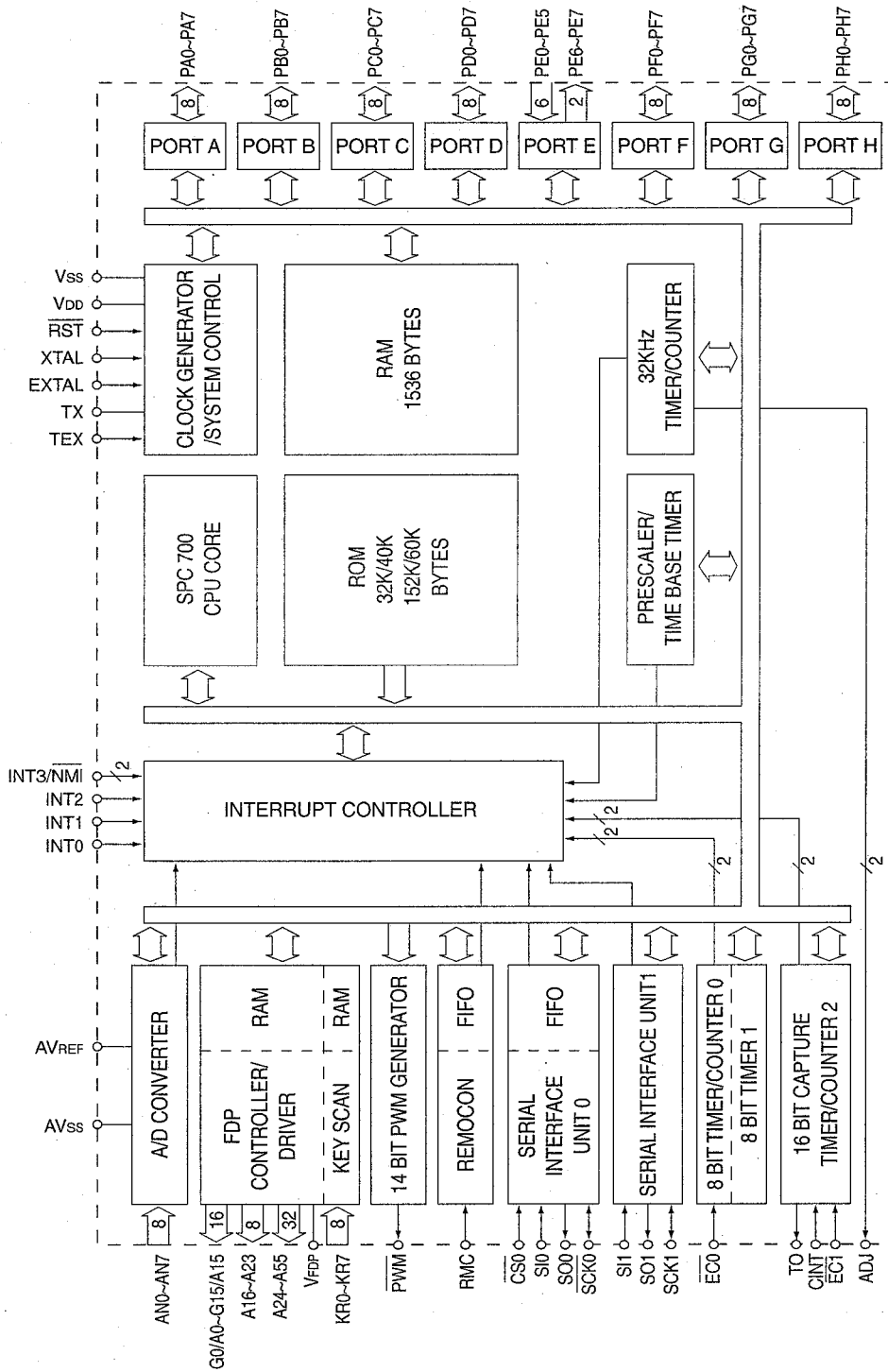
CIRCUIT DESCRIPTION

CXP82852 - 152Q : IC301

1. Pin Description



2. Block Diagram



3. CPU Pin Function

Pin No.	Symbol	Description
1~2	11G~12G	Grid signal output for FIP.
3	VDD	+5V power supply.
4	P/D	Input for power down.
5	VOL.UP	Input for main volume up.
6	RDS CLK	Clock signal output for TDA7330.
7	VOL.DOWN	Input for main volume down.
8	RMC	Input for remocon data.
9	RDS DATA	Input for RDS data of TDA7330.
10	NC	Not Used!
11	NC	Not Used!
12	PROTECT	Input for detecting "Protection" condition.
13	STEREO	Input for detecting "Stereo" condition.
14	7001CE	Chip enable signal output to LM7001.
15	9273CLK	Clock signal output for TC9273.
16	9273DATA	Data signal output for TC9273.
17~19	KEY IN1~3	Data input for key scan.
20	DIGILINK	Input/Output for controlling digi-link.
21	9273CE	Chip enable signal output to TC9273.
22	7001/62446DATA	Data signal output for LM7001,M62446.
23	7001CLK/62446CLK	Clock signal output for LM7001,M62446.
24	62446CE	Chip enable signal output to M62446.
25	SCK	Clock signal output to YSS902 and CS4226.
26	SI	Serial data output to YSS902and CS4226
27	SO	Serial data input from YSS902 and CS4226
28	AVREF	Reference voltage. (Connected to +5V,Not VDD.)
29	SPK OFF	Input for detecting "Speaker Switch is Off" condition.
30	TUNED	Input for detecting "Tuned" condition. (At "L",it is active.)
31	CSB	Sub DSP chip select data output for YSS902
32	CS1	Chip enable signal output to YSS902
33	CS	Chip enable data output for CS4226
34	PDN	Initial clear data output for YSS902 and CS4226
35	STEP OPTION	According to region, input for selecting the frequency bands and steps and FM and AM.

Pin No.	Symbol	Description
36	SET OPTION	Input for selecting set. (5V: RDS Receiver, 0V: Receiver)
37	VSS(GND)	This pin provides the ground potential.
38	RESET	Input for resetting the CPU. (At "L", it is active.)
39	EXTAL	Input for 10MHz crystal oscillator.
40	XTAL	Output for 10MHz crystal oscillator.
41	Vss(G)	Ground.
42	NC	Not Used!
43	G	Ground.
44	VDD	+5V power supply.
45	VDFD	-30V power supply for FIP.
46	T.MUTE	Output for tuner mute. (At "L", it is active.)
47	F.MUTE	Output for front channel mute. (At "L", it is active.)
48	S.MUTE	Output for surround channel mute. (At "L", it is active.)
49	W.MUTE	Output for subwoofer mute. (At "L", it is active.)
50	C.MUTE	Output for center channel mute. (At "L", it is active.)
51	VIDEO S3	Output to select the video signal.
52	VIDEO S2	Output to select the video signal.
53	SPK RELAY	Output to drive speaker relay.
54~60	NC	Not Used!
61	DYNAMIC RANGE LED	Output to drive Dynamic range. (At "H" it is active.)
62	CINEMA EQ LED	Output to drive CINEMA EQ. (At "H" it is active.)
63	NC	Not Used!
64	SUB.W	Output to drive subwoofer. (At "L" it is active.)
65	LED-COAXIAL	Output to drive COAXIAL LED. (At "H" it is active.)
66	LED-OPTICAL	Output to drive OPTICAL LED. (At "H" it is active.)
67	LED-DIGITAL	Output to drive DIGITAL LED. (At "H" it is active.)
68	LED-DIRECT	Output to drive DIRECT LED. (At "H" it is active.)
69	STAND BY-LED,RELAY	Output to drive STAND BY LED. (At "L" it is active.)
70~85	1S~16S	Segment signal output for FIP
86~88	NC	Not Used!
89	VDD	+5V power supply.
90	NC	Not Used!
91~100	1G~10G	Grid signal output for FIP

4. Key Matrix Table

	KEY IN3 PIN 17	KEY IN2 PIN 18	KEY IN1 PIN 19
KSCAN0 PIN 70	CINEMA EQ	DYNAMIC RANGE	
KSCAN1 PIN 71	TONE DIRECT	DIGITAL INPUT	6CH DIRECT
KSCAN2 PIN 72	SPEAKER -MODE	DOLBY	DSP MODE
KSCAN3 PIN 73	FM MODE	TA	PTY
KSCAN4 PIN 74	SEARCH	DISPLAY	PTY SEL
KSCAN5 PIN 75	BASS (▼)	BASS (▲)	TREBLE (▼)
KSCAN6 PIN 76	TREBLE (▲)	CH LEVEL (▼)	CH LEVEL (▲)
KSCAN7 PIN 77	TAPE MON.		
KSCAN8 PIN 78	CH SEL	AUDIO	VIDEO
KSCAN9 PIN 79	TUN/PRE (▼)	TUN/PRE (▲)	BAND
KSCAN10 PIN 80	MEMORY	STEREO MODE	T/P MODE

ALIGNMENT PROCEDURES

TUNER

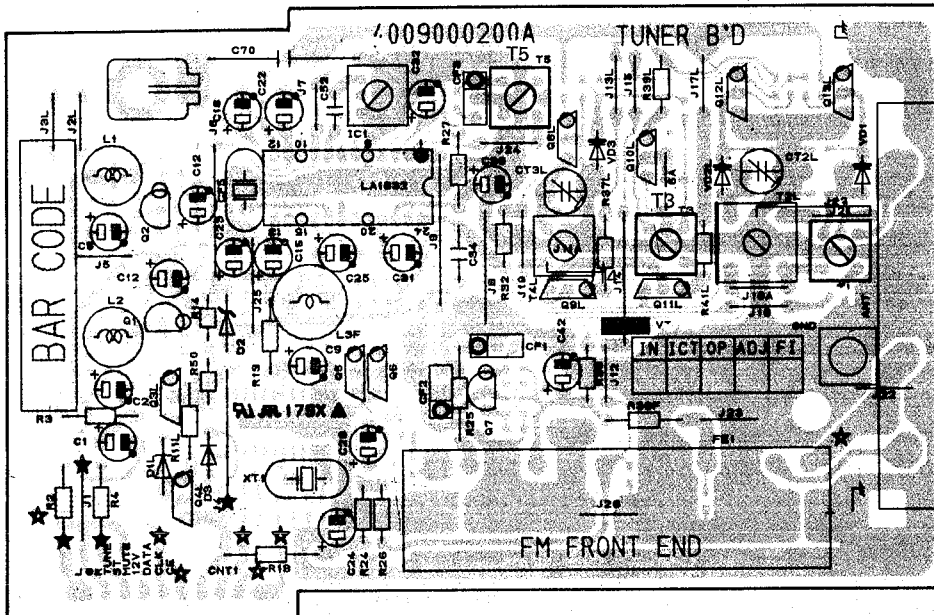
1. Equipment Required

- AM Standard Signal Generator (AM SSG)
- Oscilloscope
- AC Voltmeter
- FM Standard Signal Generator (FM SSG)
- Stereo Modulator
- Audio Generator
- Distortion Meter
- DC Voltmeter
- Frequency Counter

Note : Disconnect external FM antenna prior to alignment.

2. Non RDS Version Alignment

2-1. Alignment and Test Point



2-2. AM Alignment

- Output of signal generator should not be greater than necessary to obtain an optimum output reading.
- Signal generator modulation : 30 %
- RF signal frequency : 400 Hz
- Switch : Press the BAND button to AM

Step	Subject	Signal Generator Frequency	Set Frequency Setting	Equipment Connection	Adjustment Point	Adjust for
1	Tuning Voltage	520 kHz (522 kHz)	520 kHz (522 kHz)	DC Volt meter to J14	T3 AM OSC(R)	DC 1 ± 0.2 V
2	RF Tuning	600 kHz (603 kHz)	600 kHz (603 kHz)	AC voltmeter and oscilloscope to tape monitor output L/R	T1 MW ANT(W)	Maximize audio output
* Feed signal should be fed to loop antenna through the test loop antenna 60 cm distant from the appliance.						
3	IF	1000 kHz (999 kHz)	1000 kHz (999 kHz)	AC voltmeter and oscilloscope to tape monitor output L/R	T5 AM IFT	Symmetrical curve on AM IF signal generator

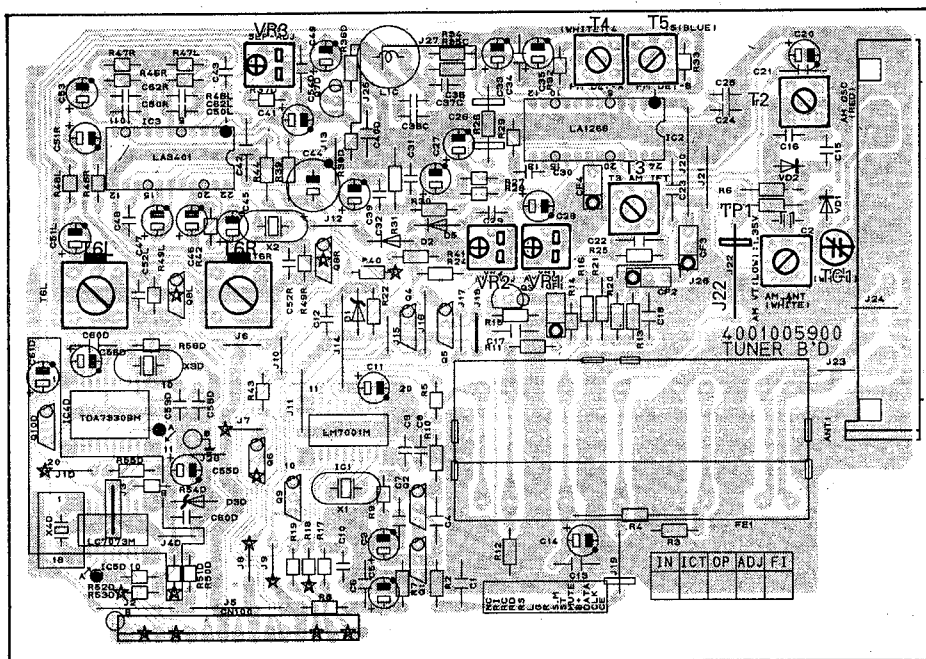
2-3. FM Alignment

- Output of signal generator should not be greater than necessary to obtain an optimum output reading.
- RF signal frequency : 1 kHz
- Signal generator deviation : 75 kHz
- Switch : Press the BAND button to FM

Step	Subject	Signal Generator Frequency	Set Frequency Setting	Equipment Connection	Adjustment Point	Adjust for
1	THD (Mono)	98.1 MHz (98.0 MHz) 1000 μ V/m	98.1 MHz (98.0 MHz)	Distortion meter and oscilloscope to tape monitor output L/R	T6 FM-DET	Minimize distortion

3. RDS Version Alignment

3-1. Alignment and Test Point



3-2. AM Alignment

- Output of signal generator should not be greater than necessary to obtain an optimum output reading.
- Signal generator modulation : 30 %
- RF signal frequency : 400 Hz
- Switch : Press the BAND button to AM

Step	Subject	Signal Generator Frequency	Set Frequency Setting	Equipment Connection	Adjustment Point	Adjust for
1	Tuning Voltage	522kHz	522kHz 1)	DC Volt meter to J22 (TP1)	T2 AM OSC(R)	DC1.2V \pm 0.2V
2	RF Tuning	594 kHz	594 kHz 1)	AC voltmeter and oscilloscope to tape monitor output L/R	T1 MW ANT(W)	Maximize audio output
		1404 kHz	1404 kHz 2)		TC1	
* Feed signal should be fed to loop antenna through the test loop antenna 60 cm distant from the appliance. * Repeat the step 1) and 2) until no further improvement occurs.						

3	IF	999kHz	999kHz	AC voltmeter and oscilloscope to tape monitor output L/R	T3 AM IFT	Symmetrical curve on AM IF genescope
4	Tuned Level	999kHz 800 $\mu\text{V}/\text{m}$	999kHz		VR1	"Tuned" flag in the FL display light on

3-4. FM Alignment

- Output of signal generator should not be greater than necessary to obtain an optimum output reading.
- Signal generator deviation : 40 kHz
- RF signal frequency : 1 kHz
- Switch : Press the BAND button to FM and the FM MODE button to MONO

Step	Subject	Signal Generator Frequency	Set Frequency Setting	Equipment Connection	Adjustment Point	Adjust for
1	Tuning Band Widt	98.0 MHz	98.0 MHz	DC Volt meter to R26(PCB1)	T4	Zero reading on DC Volt meter
2	THD	98.0 MHz	98.0 MHz	Distortion meter and oscilloscope to tape monitor output L/R	T5	Minimize distortion
3	Tuned Level	98.0 MHz SSG output level : 10 $\mu\text{V}/\text{m}$	98.0 MHz		VR2	"Tuned" flag in the FL display light on

3-5. MPX Alignment

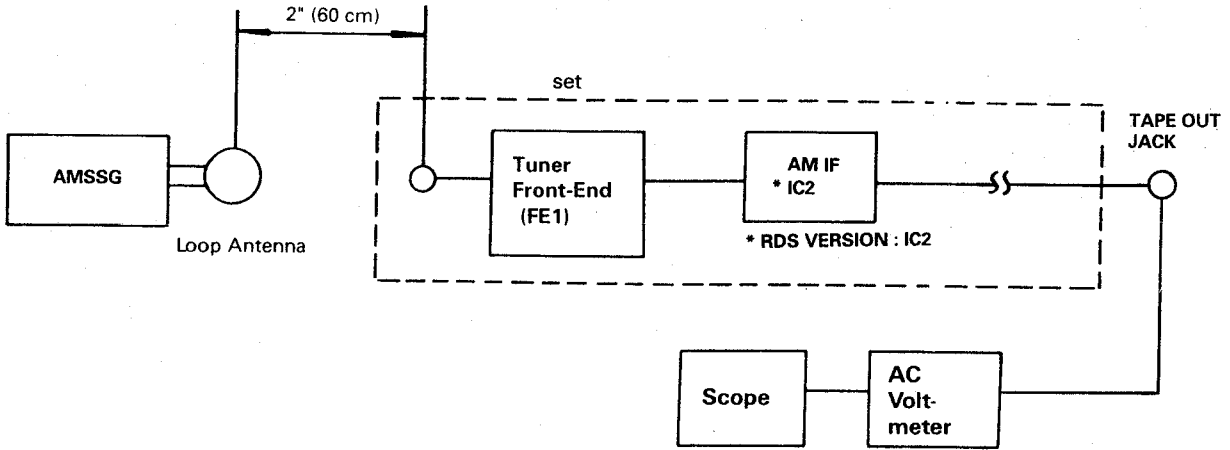
- Signal generator frequency : 98 MHz
- Signal generator deviation : 40 kHz
- RF signal frequency : 1 kHz
- Signal generator output level : 1000 $\mu\text{V}/\text{m}$
- Connect signal generator to FM antenna terminal through FM dummy antenna (75 Ω)
- Switch : Press the BAND button to FM and the FM MODE button to STEREO

Step	Subject	19 kHz Modulation Level	Signal Generator Setting	Equipment Connection	Adjustment Point	Adjust for
1	Separation R \rightarrow L	8 % Modulation	Pilot on	AC voltmeter and oscilloscope to tape monitor output L/R	VR3	Set AC voltmeter to 0 dB
				AC voltmeter and oscilloscope to tape monitor output L/R		AC voltmeter reading should be at least 20 dB below
2	Separation L \rightarrow R	8 % Modulation	Pilot on	AC voltmeter and oscilloscope to tape monitor output L/R	VR3	Set AC voltmeter to 0 dB
				AC voltmeter and oscilloscope to tape monitor output L/R		AC voltmeter reading should be at least 20 dB below

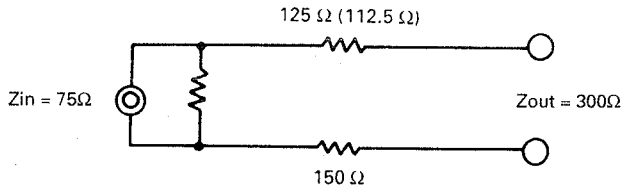
If you could not obtain -20 dB readings in steps 1 and 2, readjust VR3 until you obtain -20 dB readings for both steps 3 and 4. Norminal is -25 dB.

4. Equipment Connection

4-1. AM Alignment Connection

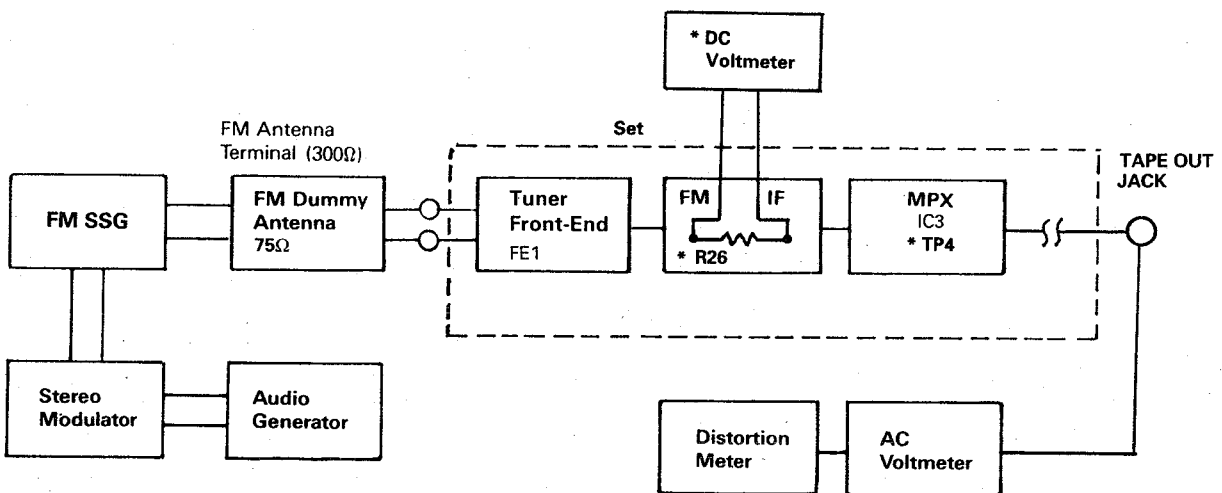


4-2. FM Dummy Antenna



FM Dummy Antenna to 300Ω Antenna terminal of system.

4-3. FM RF/IF and MPX Alignment Connection



TROUBLESHOOTING

SYMPTOM	CAUSE AND REMEDY
Receiver inoperative (FL indicator does not light.)	A) Poor AC power cord. B) Defective the power switch. Replace. C) Broken wire in the power transformer. Replace. D) Blown fuse. Replace the fuse.
Fuse blows when power is turned on	A) Defective power transformer. Replace. B) Short on the primary or secondary of the transformer circuitry. Repair the short. C) Damaged rectifier D102~D105,D121~D124,and D116 or damaged transistor Q213L/R/C/SL/SR. Q214L/R/C/SL/SR. D) Short circuit in the amplifier circuit. Repair the shorted component(s) in the amplifier circuit.
Power indicator lights but no sound from both channels.	A) Defective in transistor Q213L/R,Q214L/R the AMP B'D B) Pulled out of correct speaker switch.
One channel does not work when volume is at maximum with a test signal applied to the center terminal of volume control of the dead channel.	A) Defective in transistor Q213L/R/C/SL/SR or Q214L/R/C/SL/SR on the AMP B'D. Replace the defective. B) Break in copper foil of printed circuit board. Repair the defect. C) Short in speaker output terminal. Repair or replace.
Speaker works normally but head- phones inoperative.	A) Headphone plug does not match with jack. Replace the jack. B) Defective resistor R703,704. Replace.
FM volume is insufficient.	A) If volume from both L and R channels is not loud enough: Front-end section defective. faulty IC2,Coil T4,T5. If sound of one channel is not loud enough:Defective VR3.

SYMPTOM	CAUSE AND REMEDY
FM inoperative.	A) Defective front-end(FE) Replace. B) Defective FM switch. Replace the switch. C) Defective transistor Q3 and IC's (IC2,IC3) Replace the defective transistor or IC(S) D) Defective coil T4,T5. Replace the coil(s) E) Defective lead-in. Repair or replace the lead-in. F) Ceramic filter CF1,CF3 defective. Replace the defective ceramic filter(s).
Poor multiplex separation.	A) Improper adjustment. Readjust VR3. B) IC3 defective. Replace. C) Variable resistor VR3 defective. Replace the variable resistor.
Stereo indicator does not light.	A) Defective indicator in FIP. Replace. B) Improper adjustment of VR2 of Tuner Board. Make readjustment. C) Defective IC2. Replace the defective component.
AM inoperative	A) Damaged IC2 of Tuner Board. Replace. B) Defective T1,T2,T3 or CF4 of Tuner Board. Replace the defective component(s). C) Defective varicap diodes VD1 or VD2. Replace varicap diodes(s). D) Damaged AM loop Antenna. Repair or replace.
Bass control has no effect.	A) Variable resistor Bass defective. Replace.
Treble control has no effect.	A) Variable resistor Treble defective. Replace.

SYMPTOM	CAUSE AND REMEDY
Manual tune inoperative.(Up/Down) (AM or FM)	A) Poor contact in Up/Down key. B) Defective IC301. Replace.
FM Mode has no effect.	A) Defective FM Mode switch. Replace.
Auto tune inoperative.(Up/Down)	A) Poor contact in Up/Down key. Repair or replace. B) Defective IC301. Replace. C) Defective Tuner Circuit components. Replace. D) In case of FM only,improper adjustment of FM front-end. Readjust.
Memory setting inoperative.	A) Poor contact in tuning/preset up and down keys. Replace the defective component. B) Defective IC301. Replace the defective component.
FIP inoperative.	A) FIP defective. Replace. B) Defective IC301. Replace. C) Defective X-TAL 301. Replace.
Noisy volume control.	A) Defective volume. Replace.
Remote Control Unit inoperative.	A) Weak battery. Replace. B) Defective. Replace. C) Defective IC301(Front Board) Replace.

MECHANICAL PARTS LIST

★ Parts without Parts No are not supplied.

NO	DESCRIPTION	PARTS NO.	Q'TY	VER.
PACKAGE				
	ANTENNA, AM	E601010000000	1	
	ANTENNA,WIRE	E605010010000	1	
	BATTERY, DRY	G670001R50010	1	
	CARTON BOX	6017040120570	1	
	CUSHION, SNOW	6230043714010	1	
	FILM SOFT PE	6320040052010	1	
	INSTRUCTION MANUAL	5707047070010	1	A
	INSTRUCTION MANUAL	5707047070021	1	D/RDS
	INSTRUCTION MANUAL	5707047070040	1	E
	MATCHING TRANS	L109284007100	1	A
	MATCHING TRANS	L109284007200	1	D/E/RDS
	MATCHING TRANS	L109284007200	1	D/RDS
	POLY BAG (330*240*0.05)	6330040062010	1	
	REMOCON	8300012300060	1	D
	SAFETY SHEET	5777040850010	1	A
	WARRANTY CARD	5727040060010	1	A
	WARRANTY CARD	5727040540020	1	E
	WARRANTY CARD	5727041620020	1	D/RDS
	WARRANTY CARD,NORSAT	5727041040020	1	A
CABINET&CHASSIS				
1	TOP CABINET	3007041236060	1	
2	BUFFER CUSHION	4050045669010	2	
3	WINDOW DISPLAY	5077045083020	1	
4	CAP DECORATION	5127041061020	1	
5	MAIN KNOB	5080041521010	1	
6	BUTTON FUNCTION	5097089881020	1	
7	FRONT PANEL	3067046321220	1	
	FRONT PANEL	3067046321320	1	RDS
8	BADGE, SHERWOOD	5637040371010	1	
	BADGE, INKEL	5637040501010	1	
	BADGE, NEW CASTLE	5637040591010	1	
9	BUTTON UP-DOWN	5097089901020	1	
10	BUTTON INPUT	5097200131010	1	
11	BUTTON RDS	5090089871010	1	RDS
12	INDICATOR, STAND-BY	5160040643010	5	
13	BUTTON SURROUND	5090200121010	1	
14	INDICATOR LED	5160041101010	2	
15	BUTTON SPEAKER	5090089911010	1	
16	SW PUSH (SPKR)	G000040890000	1	

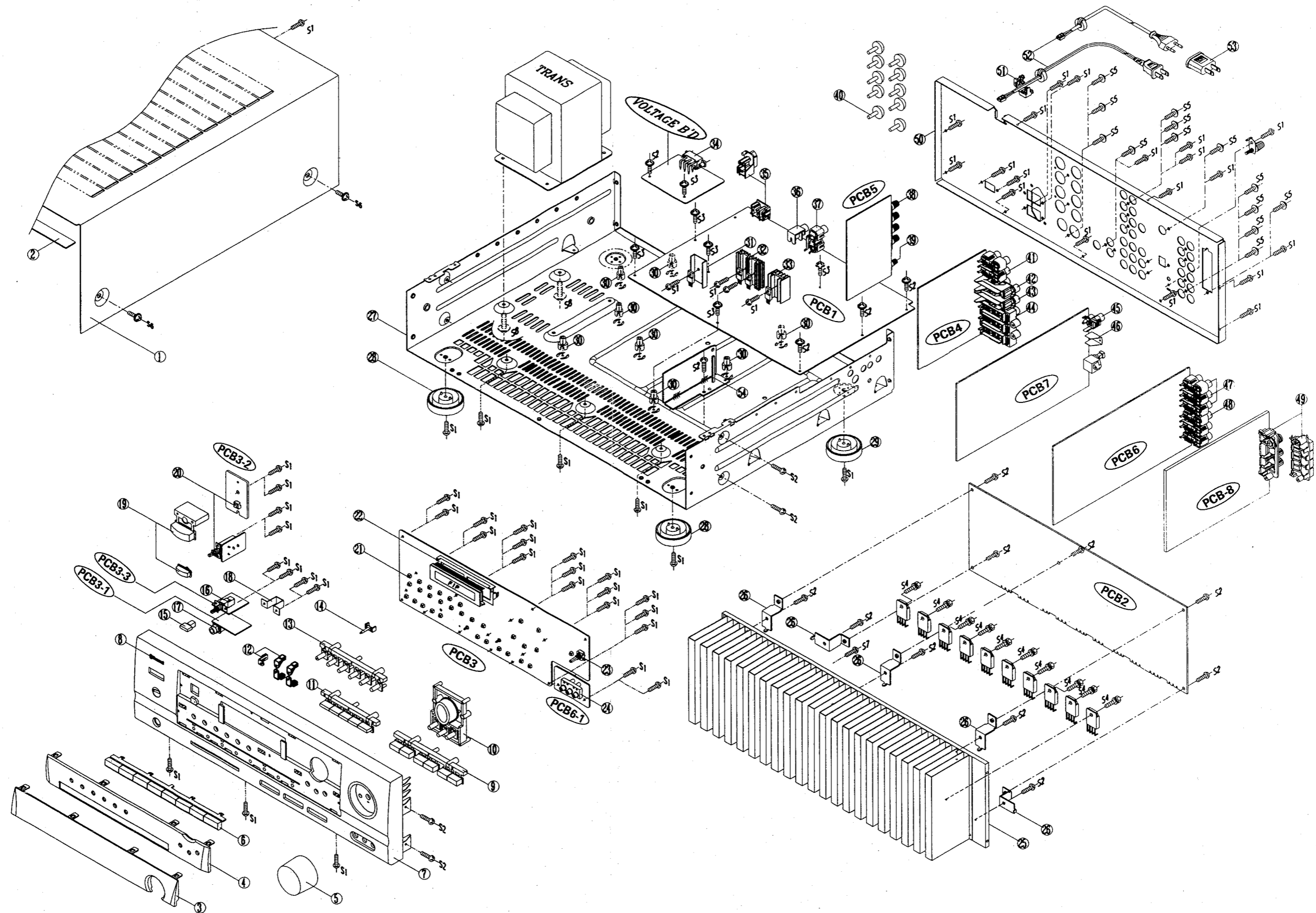
NO	DESCRIPTION	PARTS NO.	Q'TY	VER.
17	HEADPHONE JACK	G402040161330	1	
18	BRACKET PHONE JACK	4010051456010	1	
19	BUTTON POWER	509005399101A	1	
20	SW PUSH (POWER)	G000122006030	1	
21	TACT SW	G180000270010	26	
22	HOLDER FL	432004078101A	1	
23	VCR JACK (3P)	G606040300000	1	
24	VR ROTARY ENCODER	G121162430400	1	
25	HEATSINK POWER	2120200048010	1	
26	BRACKET HEATSINK	4010056906010	5	
27	CHASSIS MAIN (1.2T)	3200200026010	2	
28	FOOT PL (H.S)	4007040201010	2	
29	FOOT PL	4000040201010	2	
30	SPACER KNOB	4300040561010	6	
31	HEATSINK REG TR (W:34,H:50)	2120043418020	1	
32	HEATSINK REG TR (W:35.2,H:60)	2120043538030	1	
33	HEATSINK REG TR (W:24,H:60)	2120044308010	1	
34	VOLTAGE SELECTER (6P)	G060040540010	1	PT
35	AC OUTLET	G435000160010	1	K
35	AC OUTLET	G435040110000	1	D
35	AC OUTLET	G435040140000	1	A
37	RCA JACK (2P)	G601200430040	1	
38	SPEAKER TER PUSH (8P)	G598041680010	1	
	SPEAKER TER SCREW (8P)	G61408103600A	1	D
39	SPEAKER TER PUSH (2P)	G592040490010	1	
	SPEAKER TER SCREW (2P)	G511021078110	1	D
40	BUSHING TERMINAL	2410040353010	1	D/RDS
41	RCA JACK (4P)	G602040045000	1	
42	RCA JACK (3P)	G606300390010	1	
43	RCA JACK (2P)	G601200900010	1	
44	RCA JACK (9P)	G607901220060	1	
45	RCA JACK (1P)	G600210009000	1	
46	BRACKET INSERT	3070045526010	1	
47	RCA JACK (6P)	G603060046040	1	
48	RCA JACK (6P)	G603060046040	1	
49	ANT TERMINAL (PUSH)	G594040530000	1	
	ANT TERMINAL (SCREW)	G59004046000A	1	D
50	BACK CHASSIS	3207200036010	1	A
	BACK CHASSIS	3207200036050	1	RDS
	BACK CHASSIS	3207200036070	1	D
	BACK CHASSIS	3207200036080	1	E
51	STOPER CORD	4380040162010	1	

NO	DESCRIPTION	PARTS NO.	Q'TY	VER.
52	POWER CORD (7A/125V)	L068020030080	1	A
	POWER CORD (7A/250V)	L068040090010	1	D
	POWER CORD (7A/250V)	L068040210000	1	K
53	ADAPTER AC PLUG	L10928300310A	1	
54	CLAMP WIRE	4330040213010	1	
SCREWS				
S1	SCREW,+2S 3*8 B-TYPE BK/BH	B020030083B10	57	
S2	SCREW,#B WPTT3X6Y	B020030061W10	29	
S3	SCREW,#BWPTT 3X18Y	B020030181X10	5	
S4	SCREW,+2S 3*16 P+S-WASHER ZNY/HH	1507041146010	10	
S5	SCREW GND	1507040996010	1	
S6	SCREW,+3S 4*6/BH	B020940063B10	4	
S7	SCREW GUIDE	1507041456010	1	
S8	SCREW,+3S 4*8 P+S-WASHER ZNY/BH	B028940081B10	4	
MISCELLANEOUS				
	CN,WIRE 5P	L000281050010	1	
	CABLE,FLAT CARD (25P)	L301241250010	1	
	POWER TRANS	8200856630110	1	A
	POWER TRANS	8200856630120	1	D/E/RDS
	RIVET SNAP	1560040036010	3	
	SHIELD PLATE	3070046716020	1	

♣ A -> US (120V/60Hz) E -> UK & AU (240V/50Hz)
D -> EU (230V/50Hz) RDS -> RDS (230V/50Hz)

EXPLODED VIEW

Model No. : RVD-6090R/RDS



ELECTRICAL PARTS LIST

* Parts without version mentioned are common ones.

♣ A -> US (120V/60Hz) E -> UK & AU (240V/50Hz) D -> EU (230V/50Hz) RDS -> RDS (230V/50Hz)

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
PCB1	ASSEMBLY P.C.BOARD MAIN		7025HK9804012	A
PCB1	ASSEMBLY P.C.BOARD MAIN		7025HK9804031	D
PCB1	ASSEMBLY P.C.BOARD MAIN		7025HK9804022	RDS
PCB1	ASSEMBLY P.C.BOARD MAIN		7025HK9804042	E

CAPACITORS

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
C101	CERAMIC AC(SAFETY),DE7150-487F 472MVAI	1	D00847208K03D	
C102-C104	FILM POLYESTER 0.047 uF 100V J 3	3	D02047306C060	
C106	ELECT GE 85C 47 uF 50V M 1	1	D040470087060	
C107	ELECT GE 85C 470 uF 16V M 1	1	D040471083020	
C108	CERAMIC SEMI DISC 0.1 uF 50V Z 1	1	D006104597050	
C109	ELECT GE 85C 1 uF 50V M 1	1	D040010087050	
C110	ELECT GE 85C 100 uF 35V M 1	1	D040101085100	
C111/C112	ELECT GE 85C 6800 uF 63V M 2	2	D040682088360	
C115	FILM POLYESTER 0.1 uF 250V K 1	1	D02010407H080	
C117/C118	FILM POLYESTER 0.1 uF 250V K 2	2	D02010407H080	
C127-C129	FILM POLYESTER 0.047 uF 100V J 3	3	D02047306C060	
C130/C131	ELECT GE 85C 2200 uF 25V M 2	2	D040222084200	
C132	ELECT GE 85C 1 uF 50V M 1	1	D040010087050	
C133	CERAMIC SEMI DISC 0.1 uF 50V Z 1	1	D006104597050	
C134	ELECT GE 85C 1 uF 50V M 1	1	D040010087050	
C135	CERAMIC SEMI DISC 0.1 uF 50V Z 1	1	D006104597050	
C136-C138	FILM POLYESTER 0.047 uF 100V J 3	3	D02047306C060	
C139	ELECT GE 85C 2200 uF 16V M 1	1	D040222083080	
C141	ELECT GE 85C 1 uF 50V M 1	1	D040010087050	
C142	CERAMIC SEMI DISC 0.1 uF 50V Z 1	1	D006104597050	
C151	ELECT GE 85C 1 uF 50V M 1	1	D040010087050	
C152	ELECT AH 85C 470 uF 6.3V M 1	1	D046471081100	
C160/C161	FILM POLYESTER 0.1 uF 250V K 2	2	D02010407H080	
C166-C168	CERAMIC HIK AXIAL 0.1 uF 50V Z 3	3	D005104597530	
C181	ELECT GE 85C 1 uF 50V M 1	1	D040010087050	
C182L/C182R	ELECT GE 85C 10 uF 50V M 2	2	D040100087050	
C183L/C183R	ELECT GE 85C 10 uF 50V M 2	2	D040100087050	
C184L/C184R	CERAMIC T.C AXIAL 47 pF 50V J 2	2	D001470067520	
C185L/C185R	CERAMIC T.C AXIAL 47 pF 50V J 2	2	D001470067520	
C186L/C186R	ELECT GE 85C 10 uF 50V M 2	2	D040100087050	
C187/C188	ELECT GE 85C 47 uF 16V M 2	2	D040470083100	
C191	CERAMIC HIK AXIAL 100 pF 50V K 1	1	D005101177520	
C901L/C901R	FILM POLYESTER 0.1 uF 63V K 2	2	D020104078060	
C904L/C904R	FILM POLYESTER 0.1 uF 63V K 2	2	D020104078060	

CONNECTORS

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
CN151	CN.WAFER 3.96MM	1	L104353280200	
CP100	CN.WAFER 2.5MM	1	L102532911910	
CP101	CN.WAFER 3.96MM	1	L104353280300	
CP102	CN.WAFER 2.5MM (6P)	1	L102526700600	
CP103	CN.WAFER 2.5MM (4P)	1	L102526700400	
CP111	CN.WAFER 7.92MM (2P)	1	L108039602010	
CP201	CN.WAFER 2.5MM (10P)	1	L102526701000	
CP202	CN.WAFER 2.5MM (9P)	1	L102526700900	
CP301	CN.FPC 1.25MM (29P)	1	L131520452910	
CP302	CN.WAFER 2.0MM (10P)	1	L101220100000	
CP401	CN.WAFER 2.0MM (11P)	1	L101353361110	
CP402	CN.WAFER 2.0MM (10P)	1	L101353361010	
CP501/CP802	CN.WAFER 2.0MM (16P)	2	L101353361610	
CP502	CN.WAFER 2.0MM (15P)	1	L101353361510	
CP601	CN.WAFER 2.0MM (5P)	1	L101220050000	
CP701	CN.WAFER 2.5MM (4P)	1	L102526700400	

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
CP751	CN.WAFER 3.96MM	1	L104353280200	
CP801	CN.WAFER 2.0MM (11P)	1	L101353361110	
CP901	CN.WAFER 2.5MM (11P)	1	L102534211110	
DIODES				
D101	1SS133T,SWITCHING	1	K000013300520	
D102-D105	1N4003,RECTIFIER	4	K040400300520	
D106	1SS133T,SWITCHING	1	K000013300520	
D107	MTZJ4.3B,ZENER	1	K06004R344520	
D110/D111	MTZJ9.1B,ZENER	2	K06009R144520	
D112	MTZJ12B,ZENER	1	K06012R044520	
D113	MTZJ11B,ZENER	1	K06011R044520	
D116	BRIDGE,GBJ604/2.5-6.0A	1	K047604000010	
D119	1N4003,RECTIFIER	1	K040400300520	
D121-D124	1N4003,RECTIFIER	4	K040400300520	
D127/D128	1N4003,RECTIFIER	2	K040400300520	
D134	1SS133T,SWITCHING	1	K000013300520	
D191	1SS133T,SWITCHING	1	K000013300520	
D193	1SS133T,SWITCHING	1	K000013300520	
FUSES				
F101	FUSE,250V-T2.5A	1	G650252251160	
F102	FUSE,250V-T2A	1	G650202251160	
F104-F107	FUSE,250V-T1A	4	G650102251160	
INTEGRATED CIRCUITS				
IC101	KA7815/L7815CV,REGULATOR	1	J126781500020	
IC102	KIA7915PI,REGULATOR	1	J126791500030	
IC103	KA7805,REGULATOR	1	J126780500270	
IC104	KA7806,REGULATOR	1	J126780600120	
IC181L/C181R	KIA75559P(KIA4559P),OP	2	J121455900010	
TRANSISTORS				
Q106	DTC114YS,NPN	1	J6020114Y0050	
Q141	KTA1267Y,PNP	1	J5001267Y0050	
Q142/Q143	2SC1740SR,NPN	2	J5021740S0010	
Q145	DTC114YS,NPN	1	J6020114Y0050	
Q181	DTC114TS,NPN	1	J6020114T0010	
Q182	DTA114YS,PNP	1	J6000114Y0010	
Q183L/Q183R	2SK117Y,FET	2	J5441170Y0050	
RESISTORS				
R102	CARBON FILM 470 ohm 1/5W J 1	1	C00004716P520	
R106	MEATAL FILM 10 ohm 2W J 1	1	C060010066520	
R107	CARBON FILM 15 kohm 1/5W J 1	1	C00001536P520	
R108	MEATAL FILM 330 ohm 1W 1	1	C060033165520	
R111-R113	MEATAL FILM 3.3 ohm 2W 3	3	C0603R3066520	
R142SL	CARBON FILM 22 kohm 1/5W J 1	1	C00002236P520	
R142SR	CARBON FILM 22 kohm 1/5W J 1	1	C00002236P520	
R143	CARBON FILM 22 kohm 1/5W J 1	1	C00002236P520	
R145	CARBON FILM 100 kohm 1/5W J 1	1	C00001046P520	
R146	CARBON FILM 68 kohm 1/5W J 1	1	C00006836P520	
R147	CARBON FILM 3.3 kohm 1/5W J 1	1	C00003326P520	
R148	CARBON FILM 1.5 kohm 1/5W J 1	1	C00001526P520	
R150	MEATAL FILM 10 ohm 1W 1	1	C060010065520	
R151	CARBON FILM 1 kohm 1/5W J 1	1	C00001026P520	
R154/R155	CARBON FILM 560 ohm 1/5W J 2	2	C00005616P520	
R181	CARBON FILM 100 kohm 1/5W J 1	1	C00001046P520	
R183L/R183R	CARBON FILM 3.3 Mohm 1/5W J 2	2	C00003356P520	

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
R186L	CARBON FILM 100 kohm 1/5W J 1	1	C00001046P520	
R186R	CARBON FILM 100 kohm 1/5W J 1	1	C00001046P520	
R187L/R187R	CARBON FILM 220 kohm 1/5W J 2	2	C00002246P520	
R188L/R188R	CARBON FILM 8.2 kohm 1/5W J 2	2	C00008226P520	
R189L/R189R	CARBON FILM 3.6 kohm 1/5W J 2	2	C00003626P520	
R190L/R190R	CARBON FILM 10 kohm 1/5W J 2	2	C00001036P520	
R191	CARBON FILM 1 kohm 1/5W J 1	1	C00001026P520	
R191	CARBON FILM 220 kohm 1/5W J 1	1	C00002246P520	
R191L/R191R	CARBON FILM 10 kohm 1/5W J 2	2	C00001036P520	
R192	CARBON FILM 22 kohm 1/5W J 1	1	C00002236P520	
R192L/R192R	CARBON FILM 10 kohm 1/5W J 2	2	C00001036P520	
R193L	CARBON FILM 1 kohm 1/5W J 1	1	C00001026P520	
R193R	CARBON FILM 1 kohm 1/5W J 1	1	C00001026P520	
R194	CARBON FILM 1.8 kohm 1/5W J 1	1	C00001826P520	
R194L	CARBON FILM 100 kohm 1/5W J 1	1	C00001046P520	
R194R	CARBON FILM 100 kohm 1/5W J 1	1	C00001046P520	
R196/R197	CARBON FILM 220 ohm 1/5W J 2	2	C00002216P520	
R901L/R901R	MEATAL FILM 10 ohm 2W J 2	2	C060010066520	
RLY101	RELAY,DG12D1-O(M)	1	G68000130020	
RLY102	RELAY,DC24V 3A	1	G680242000000	

MICELLANEOUS

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
GND101-GND106	TERMINAL	6	3790040876010	
JK102	AC OUTLET,YKE31-0090	1	G435040110000	
L101/L102	INDUCTOR COIL,10UH	2	D330100700520	
	FUSE CLIP	1	G645000050010	
	FUSE,250V-T160MA	1	G650161251160	
	HEAT SINK	1	2120043418020	
	HEAT SINK	1	2120043538020	
	HEAT SINK (24X60)	1	2120044308010	
	JUMPER (0.6/52MM)	1	L045084006040	
	SCREW,+2S 3*8 B-TYPE BK/BH	1	B020030083B10	
	ST/BY TRANS,230V/50Hz	1	8201280000010	
	TER,RCA 2PIN	1	G601200430040	

PCB2 ASSEMBLY P.C.BOARD AMP 7025HK9804017

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
CAPACITORS				
C201C	ELECT GE 85C 4.7 uF 50V M 1	1	D0404R7087100	
C201L	ELECT GE 85C 4.7 uF 50V M 1	1	D0404R7087100	
C201R	ELECT GE 85C 4.7 uF 50V M 1	1	D0404R7087100	
C201SL	ELECT GE 85C 4.7 uF 50V M 1	1	D0404R7087100	
C201SR	ELECT GE 85C 4.7 uF 50V M 1	1	D0404R7087100	
C202C	CERAMIC HIK AXIAL 330 pF 50V K 1	1	D005331177520	
C202L	CERAMIC HIK AXIAL 330 pF 50V K 1	1	D005331177520	
C202R	CERAMIC HIK AXIAL 330 pF 50V K 1	1	D005331177520	
C202SL	CERAMIC HIK AXIAL 330 pF 50V K 1	1	D005331177520	
C202SR	CERAMIC HIK AXIAL 330 pF 50V K 1	1	D005331177520	
C203C	CERAMIC HIK AXIAL 0.001 uF 50V K 1	1	D005102177530	
C203L	CERAMIC HIK AXIAL 0.001 uF 50V K 1	1	D005102177530	
C203R	CERAMIC HIK AXIAL 0.001 uF 50V K 1	1	D005102177530	
C203SL	CERAMIC HIK AXIAL 0.001 uF 50V K 1	1	D005102177530	
C203SR	CERAMIC HIK AXIAL 0.001 uF 50V K 1	1	D005102177530	
C204C	ELECT GE 85C 22 uF 50V M 1	1	D040220087100	
C204L	ELECT GE 85C 22 uF 50V M 1	1	D040220087100	
C204R	ELECT GE 85C 22 uF 50V M 1	1	D040220087100	
C204SL	ELECT GE 85C 22 uF 50V M 1	1	D040220087100	
C204SR	ELECT GE 85C 22 uF 50V M 1	1	D040220087100	
C205C	ELECT GE 85C 22 uF 50V M 1	1	D040220087100	
C205L	ELECT GE 85C 22 uF 50V M 1	1	D040220087100	

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
C205R	ELECT GE 85C	22 uF	50V M	1 D040220087100
C205SL	ELECT GE 85C	22 uF	50V M	1 D040220087100
C205SR	ELECT GE 85C	22 uF	50V M	1 D040220087100
C206C	ELECT GE 85C	220 uF	10V M	1 D040221082050
C206L	ELECT GE 85C	220 uF	10V M	1 D040221082050
C206R	ELECT GE 85C	220 uF	10V M	1 D040221082050
C206SL	ELECT GE 85C	220 uF	10V M	1 D040221082050
C206SR	ELECT GE 85C	220 uF	10V M	1 D040221082050
C209C	ELECT GE 85C	10 uF	50V M	1 D040100087050
C209L	ELECT GE 85C	10 uF	50V M	1 D040100087050
C209R	ELECT GE 85C	10 uF	50V M	1 D040100087050
C209SL	ELECT GE 85C	10 uF	50V M	1 D040100087050
C209SR	ELECT GE 85C	10 uF	50V M	1 D040100087050
C210C	ELECT GE 85C	47 uF	50V M	1 D040470087060
C210L	ELECT GE 85C	47 uF	50V M	1 D040470087060
C210R	ELECT GE 85C	47 uF	50V M	1 D040470087060
C210SL	ELECT GE 85C	47 uF	50V M	1 D040470087060
C210SR	ELECT GE 85C	47 uF	50V M	1 D040470087060
C211C	ELECT GE 85C	47 uF	50V M	1 D040470087060
C211L	ELECT GE 85C	47 uF	50V M	1 D040470087060
C211R	ELECT GE 85C	47 uF	50V M	1 D040470087060
C211SL	ELECT GE 85C	47 uF	50V M	1 D040470087060
C211SR	ELECT GE 85C	47 uF	50V M	1 D040470087060
C212C	ELECT GE 85C	10 uF	50V M	1 D040100087050
C212L	ELECT GE 85C	10 uF	50V M	1 D040100087050
C212R	ELECT GE 85C	10 uF	50V M	1 D040100087050
C212SL	ELECT GE 85C	10 uF	50V M	1 D040100087050
C212SR	ELECT GE 85C	10 uF	50V M	1 D040100087050
C214C	CERAMIC T.C AXIAL	1 pF	50V K	1 D001010077530
C214L	CERAMIC T.C AXIAL	1 pF	50V K	1 D001010077530
C214R	CERAMIC T.C AXIAL	1 pF	50V K	1 D001010077530
C214SL	CERAMIC T.C AXIAL	1 pF	50V K	1 D001010077530
C214SR	CERAMIC T.C AXIAL	1 pF	50V K	1 D001010077530
C215C	CERAMIC HIK AXIAL	180 pF	50V K	1 D005181177520
C215L	CERAMIC HIK AXIAL	180 pF	50V K	1 D005181177520
C215R	CERAMIC HIK AXIAL	180 pF	50V K	1 D005181177520
C215SL	CERAMIC HIK AXIAL	180 pF	50V K	1 D005181177520
C215SR	CERAMIC HIK AXIAL	180 pF	50V K	1 D005181177520
CONNECTOR				
CN201	CN.WAFER 2.0MM (10P)	1	L101220100000	
DIODES				
D201C	1SS133T,SWITCHING	1	K000013300520	
D201L	1SS133T,SWITCHING	1	K000013300520	
D201R	1SS133T,SWITCHING	1	K000013300520	
D201SL	1SS133T,SWITCHING	1	K000013300520	
D201SR	1SS133T,SWITCHING	1	K000013300520	
D202C	1SS133T,SWITCHING	1	K000013300520	
D202L	1SS133T,SWITCHING	1	K000013300520	
D202R	1SS133T,SWITCHING	1	K000013300520	
D202SL	1SS133T,SWITCHING	1	K000013300520	
D202SR	1SS133T,SWITCHING	1	K000013300520	
COILS				
L201C	INDUCTOR COIL,J9000031	1	D330900001320	
L201L	INDUCTOR COIL,J9000031	1	D330900001320	
L201R	INDUCTOR COIL,J9000031	1	D330900001320	

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
TRANSISTORS				
Q201C	KSA992F,PNP	1	J5000992F0050	
Q201L	KSA992F,PNP	1	J5000992F0050	
Q201R	KSA992F,PNP	1	J5000992F0050	
Q201SL	KSA992F,PNP	1	J5000992F0050	
Q201SR	KSA992F,PNP	1	J5000992F0050	
Q202C	KSA992F,PNP	1	J5000992F0050	
Q202L	KSA992F,PNP	1	J5000992F0050	
Q202R	KSA992F,PNP	1	J5000992F0050	
Q202SL	KSA992F,PNP	1	J5000992F0050	
Q202SR	KSA992F,PNP	1	J5000992F0050	
Q203C	KSA992F,PNP	1	J5000992F0050	
Q203L	KSA992F,PNP	1	J5000992F0050	
Q203R	KSA992F,PNP	1	J5000992F0050	
Q203SL	KSA992F,PNP	1	J5000992F0050	
Q203SR	KSA992F,PNP	1	J5000992F0050	
Q204C	KSA992F,PNP	1	J5000992F0050	
Q204L	KSA992F,PNP	1	J5000992F0050	
Q204R	KSA992F,PNP	1	J5000992F0050	
Q204SL	KSA992F,PNP	1	J5000992F0050	
Q204SR	KSA992F,PNP	1	J5000992F0050	
Q205C	KSC1845F,NPN	1	J5021845F0000	
Q205L	KSC1845F,NPN	1	J5021845F0000	
Q205R	KSC1845F,NPN	1	J5021845F0000	
Q205SL	KSC1845F,NPN	1	J5021845F0000	
Q205SR	KSC1845F,NPN	1	J5021845F0000	
Q206C	KSC1845F,NPN	1	J5021845F0000	
Q206L	KSC1845F,NPN	1	J5021845F0000	
Q206R	KSC1845F,NPN	1	J5021845F0000	
Q206SL	KSC1845F,NPN	1	J5021845F0000	
Q206SR	KSC1845F,NPN	1	J5021845F0000	
Q207C	KSA992F,PNP	1	J5000992F0050	
Q207L	KSA992F,PNP	1	J5000992F0050	
Q207R	KSA992F,PNP	1	J5000992F0050	
Q207SL	KSA992F,PNP	1	J5000992F0050	
Q207SR	KSA992F,PNP	1	J5000992F0050	
Q208C	KTA1024Y,PNP	1	J5001024Y0050	
Q208L	KTA1024Y,PNP	1	J5001024Y0050	
Q208R	KTA1024Y,PNP	1	J5001024Y0050	
Q208SL	KTA1024Y,PNP	1	J5001024Y0050	
Q208SR	KTA1024Y,PNP	1	J5001024Y0050	
Q209C	KTC3206Y,NPN	1	J5023206Y0050	
Q209L	KTC3206Y,NPN	1	J5023206Y0050	
Q209R	KTC3206Y,NPN	1	J5023206Y0050	
Q209SL	KTC3206Y,NPN	1	J5023206Y0050	
Q209SR	KTC3206Y,NPN	1	J5023206Y0050	
Q213C	SAP08P,PNP	1	J500080000010	
Q213L	SAP08P,PNP	1	J500080000010	
Q213R	SAP08P,PNP	1	J500080000010	
Q213SL	SAP08P,PNP	1	J500080000010	
Q213SR	SAP08P,PNP	1	J500080000010	
Q214C	SAP08N,NPN	1	J502080000010	
Q214L	SAP08N,NPN	1	J502080000010	
Q214R	SAP08N,NPN	1	J502080000010	
Q214SL	SAP08N,NPN	1	J502080000010	
Q214SR	SAP08N,NPN	1	J502080000010	
Q215C	KSC1845F,NPN	1	J5021845F0000	
Q215L	KSC1845F,NPN	1	J5021845F0000	
Q215R	KSC1845F,NPN	1	J5021845F0000	
Q215SL	KSC1845F,NPN	1	J5021845F0000	
Q215SR	KSC1845F,NPN	1	J5021845F0000	

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
Q215SL	KSC1845F,NPN	1	J5021845F0000	
Q215SR	KSC1845F,NPN	1	J5021845F0000	
RESISTORS				
R201C	CARBON FILM	1 kohm	1/5W J	1 C00001026P520
R201L	CARBON FILM	1 kohm	1/5W J	1 C00001026P520
R201R	CARBON FILM	1 kohm	1/5W J	1 C00001026P520
R201SL	CARBON FILM	1 kohm	1/5W J	1 C00001026P520
R201SR	CARBON FILM	1 kohm	1/5W J	1 C00001026P520
R202C	CARBON FILM	33 kohm	1/5W J	1 C00003336P520
R202L	CARBON FILM	33 kohm	1/5W J	1 C00003336P520
R202R	CARBON FILM	33 kohm	1/5W J	1 C00003336P520
R202SL	CARBON FILM	33 kohm	1/5W J	1 C00003336P520
R202SR	CARBON FILM	33 kohm	1/5W J	1 C00003336P520
R203C	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R203L	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R203R	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R203SL	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R203SR	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R204C	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R204L	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R204R	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R204SL	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R204SR	CARBON FILM	15 kohm	1/5W J	1 C00001506P520
R205C	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R205L	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R205R	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R205SL	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R205SR	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R206C	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R206L	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R206R	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R206SL	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R206SR	CARBON FILM	750 ohm	1/5W J	1 C00007516P520
R207C	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R207L	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R207R	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R207SL	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R207SR	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R208C	CARBON FILM	68 ohm	1/5W J	1 C00006806P520
R208L	CARBON FILM	68 ohm	1/5W J	1 C00006806P520
R208R	CARBON FILM	68 ohm	1/5W J	1 C00006806P520
R208SL	CARBON FILM	68 ohm	1/5W J	1 C00006806P520
R208SR	CARBON FILM	68 ohm	1/5W J	1 C00006806P520
R209C	CARBON FILM	150 kohm	1/5W J	1 C00001516P520
R209L	CARBON FILM	150 kohm	1/5W J	1 C00001516P520
R209R	CARBON FILM	150 kohm	1/5W J	1 C00001516P520
R209SL	CARBON FILM	150 kohm	1/5W J	1 C00001516P520
R209SR	CARBON FILM	150 kohm	1/5W J	1 C00001516P520
R210C	CARBON FILM	10 kohm	1/5W J	1 C00001036P520
R210L	CARBON FILM	10 kohm	1/5W J	1 C00001036P520
R210R	CARBON FILM	10 kohm	1/5W J	1 C00001036P520
R210SL	CARBON FILM	10 kohm	1/5W J	1 C00001036P520
R210SR	CARBON FILM	10 kohm	1/5W J	1 C00001036P520
R211C	CARBON FILM	43 kohm	1/5W J	1 C00004336P520
R211L	CARBON FILM	43 kohm	1/5W J	1 C00004336P520
R211R	CARBON FILM	43 kohm	1/5W J	1 C00004336P520
R211SL	CARBON FILM	43 kohm	1/5W J	1 C00004336P520
R211SR	CARBON FILM	43 kohm	1/5W J	1 C00004336P520

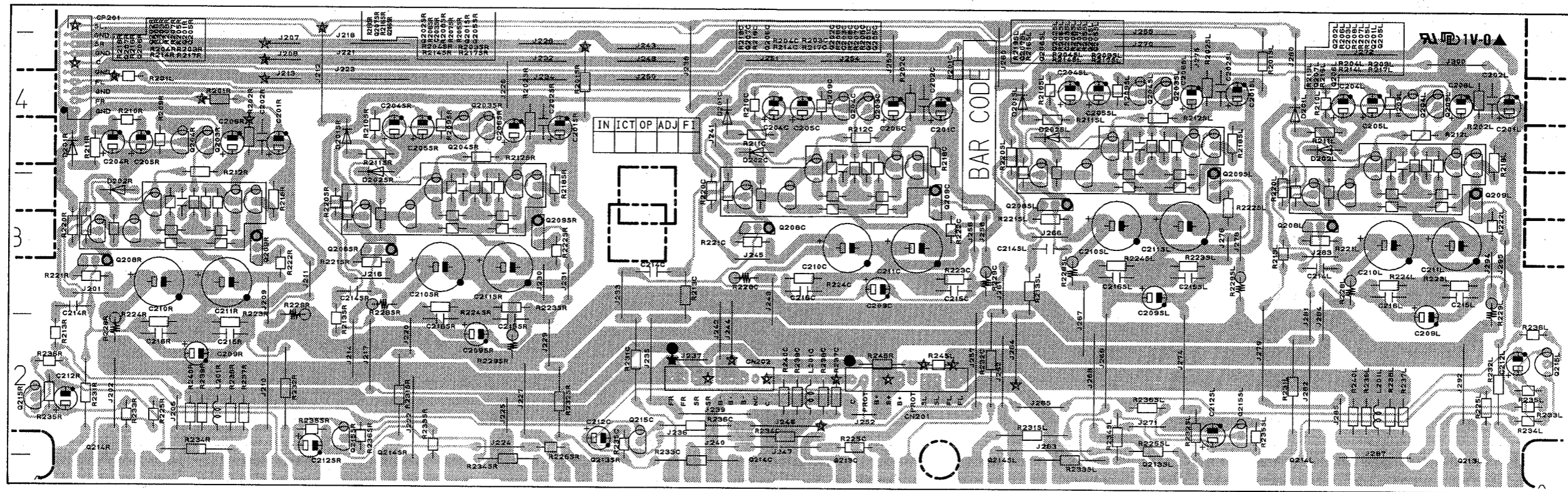
REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
R358	CARBON FILM	100 kohm	1/5W J	1 C00001046P520
R359/R360	CARBON FILM	47 kohm	1/5W J	2 C00004736P520
R361	CARBON FILM	10 kohm	1/5W J	1 C00001036P520 D/E/RDS
R363	CARBON FILM	470 kohm	1/5W J	1 C00004746P520
R364	CARBON FILM	4.7 kohm	1/5W J	1 C00004726P520
R366	CARBON FILM	10 kohm	1/5W J	1 C00001036P520
R367	CARBON FILM	100 kohm	1/5W J	1 C00001046P520
R371	CARBON FILM	100 kohm	1/5W J	1 C00001046P520 A
R372	CARBON FILM	10 kohm	1/5W J	1 C00001036P520
R375/R376	CARBON FILM	100 kohm	1/5W J	2 C00001046P520 D/E/RDS
MISCELLANEOUS				
FIP301	FLT,CM1477C(NORI)	1		K530000360010
SEN301	PNA4602M00HA,REMOCON	1		E940460200010
SW302-SW332	SKHV10920A,TACT SW	31		G180000270010
VR301	EC16B24304,SW ENCODER	1		G121162430400
XTAL301	CST10.0MTW,RESONATOR	1		E830100000050
	CARBON FILM	51 kohm	1/5W J	1 C00005136P520
	FL HOLDER	1		432004078101A
	JUMPER (0.6/52MM)	1		L045084006040
PCB3-1 ASSEMBLY P.C.BOARD PHONE				
C701/C702	CERAMIC HIK AXIAL	560 pF	50V K	2 D005561277520
C703	CERAMIC HIK AXIAL	0.1 uF	50V Z	1 D005104597530
CN701	CN,WIRE 4P	1		L000351040030
J701	JUMPER (0.6/52MM)	1		L045084006040
JACK701	JACK,D6.5	1		G402040161330
R701/R702	CARBON FILM	15 kohm	1/5W J	2 C00001536P520
R703/R704	MEATAL FILM	470 ohm	2W J	2 C060047166520
PCB3-2 ASSEMBLY P.C.BOARE POWER SW				
CN752	CN,WIRE 2P	1		L000451020010
SW752	SW,PUSH (SDDL-005-S)	1		G000122006030
PCB3-3 ASSEMBLY P.C.BOARD SPEAKER SW				
CN752	CN,WAFER 2.0MM (2P)	1		L101220020000
SW751	SW,PUSH	1		G000040890000
PCB4 ASSEMBLY P.C.BOARD INPUT				
PCB4	ASSEMBLY P.C.BOARD INPUT			7025HK9803023 D/E/RDS
PCB4	ASSEMBLY P.C.BOARD INPUT			7025HK9803013 A
CAPACITORS				
C401LD/C401RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C402LD/C402RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C403LD/C403RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C404LD/C404RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C405LD/C405RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C406LD/C406RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C407LD/C407RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C408LD/C408RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C409LD/C409RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C410LD/C410RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C411LD/C411RD	CERAMIC HIK AXIAL	100 pF	50V K	2 D005101177520 D/E/RDS
C412/C413	ELECT GE 85C	47 uF	16V M	2 D040470083100
C414/C415	ELECT GE 85C	470 uF	10V M	2 D040471082060
C417/C418	ELECT GE 85C	47 uF	25V M	2 D040470084100
C419-C421	CERAMIC HIK AXIAL	100 pF	50V K	4 D005101177520
C422-C424	ELECT GE 85C	4.7 uF	50V M	3 D0404R7087100
C425/C426	ELECT GE 85C	47 uF	16V M	2 D040470083100
C427	ELECT GE 85C	4.7 uF	50V M	1 D0404R7087100

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
C428	ELECT GE 85C	100 uF	16V M	1 D040101083100
C499/C500	CERAMIC HIK AXIAL	0.1 uF	50V Z	2 D005104597530
C450	CERAMIC HIK DISC	0.1 uF	25V Z	1 D004104594050 A
CONNECTORS				
CN401	CN,WAFER 2.0MM (11P)	1		L101352371110
CN402	CN,WAFER 2.0MM (10P)	1		L101352371010
DIODE				
D401	1SS133T,SWITCHING	1		K000013300520
D404	1SS133T,SWITCHING	1		K000013300520 A
INTEGRATED CIRCUITS				
IC401	TC9273N,ANALOG	1		J080927300000
IC402	KIA75559P(KIA4559P),OP	1		J121455900010
IC403	LA7952,VIDEO SAW	1		J171795200000
TRANSISTORS				
Q401/Q402	2SC3199Y,NPN	2		J5023199Y0050
Q403/Q404	DTC114YS,NPN	2		J6020114Y0050
R401L/R401R	CARBON FILM	1 kohm	1/5W J	2 C00001026P520
R402L/R402R	CARBON FILM	1 kohm	1/5W J	2 C00001026P520
R403L/R403R	CARBON FILM	1 kohm	1/5W J	2 C00001026P520
R404L/R404R	CARBON FILM	1 kohm	1/5W J	2 C00001026P520
R405L/R405R	CARBON FILM	1 kohm	1/5W J	2 C00001026P520
R406L/R406R	CARBON FILM	1 kohm	1/5W J	2 C00001026P520
R407L/R407R	CARBON FILM	1 kohm	1/5W J	2 C00001026P520
R408/R409	CARBON FILM	75 ohm	1/5W J	2 C00007506P520
R410	CARBON FILM	68 ohm	1/5W J	1 C00006806P520
R411	CARBON FILM	47 kohm	1/5W J	1 C00004736P520
R412	CARBON FILM	390 ohm	1/5W J	1 C00003916P520
R413	CARBON FILM	68 ohm	1/5W J	1 C00006806P520
R414	CARBON FILM	47 kohm	1/5W J	1 C00004736P520
R415	CARBON FILM	390 ohm	1/5W J	1 C00003916P520
R417	CARBON FILM	3.3 kohm	1/5W J	1 C00003326P520
R418/R419	CARBON FILM	100 ohm	1/5W J	2 C00001016P520
R420-R422	CARBON FILM	1 kohm	1/5W J	3 C00001026P520
R423	CARBON FILM	100 ohm	1/5W J	1 C00001016P520
R424	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R425	CARBON FILM	47 kohm	1/5W J	1 C00004736P520
R426	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R427	CARBON FILM	47 kohm	1/5W J	1 C00004736P520
R428	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R429	CARBON FILM	100 kohm	1/5W J	1 C00001046P520
R430	CARBON FILM	100 ohm	1/5W J	1 C00001016P520
R431	CARBON FILM	470 ohm	1/5W J	1 C00004716P520
R432	CARBON FILM	100 kohm	1/5W J	1 C00001046P520
R433	CARBON FILM	75 ohm	1/5W J	1 C00007506P520
ZD401	MTZJ12B,ZENER	1		K08012R044520 D/E/RDS
MISCELLANEOUS				
	JUMPER (0.6/52MM)	1		L045084006040
	TER,RCA 2PIN	1		G601200900010
	TER,RCA 3PIN	1		G606300390010
	TER,RCA 4PIN	1		G602040045000
	TER,RCA 9PIN	1		G607901220060
PCB5 ASSEMBLY P.C.BOARD SPEAKER				
PCB5	ASSEMBLY P.C.BOARD SPEAKER			7025HK9803016 A
PCB5	ASSEMBLY P.C.BOARD SPEAKER			7025HK9804025 D/RDS

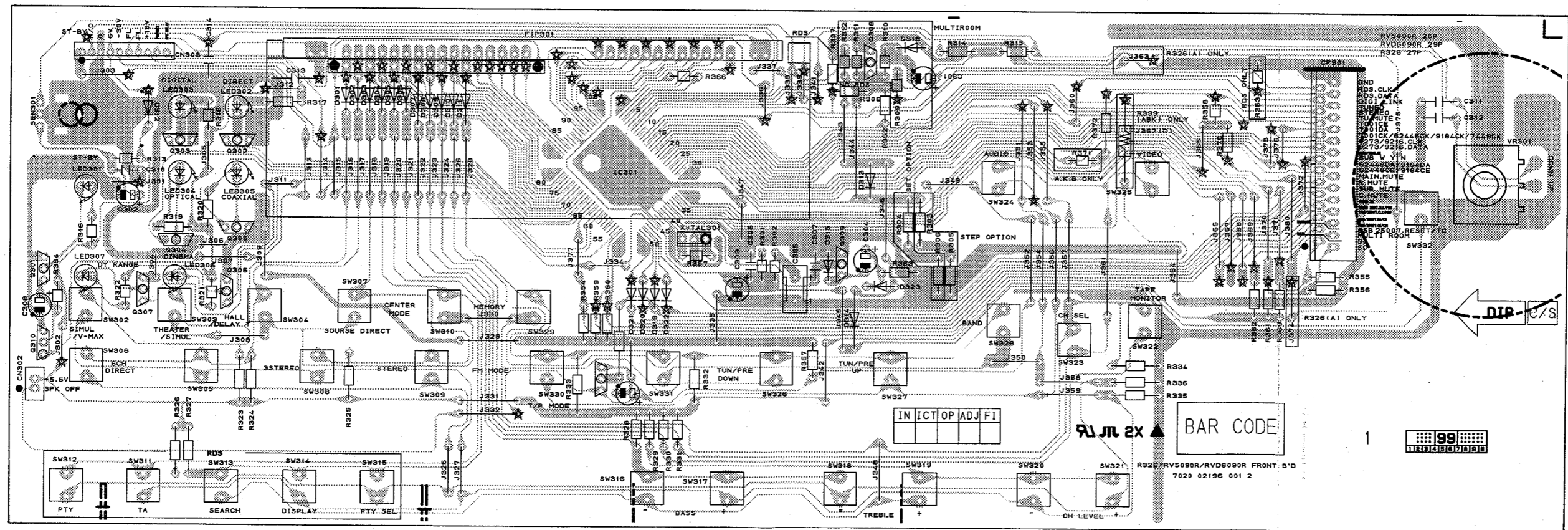
REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION
PCB5 ASSEMBLY P.C.BOARD SPEAKER				
7025HK9804034 E				
CAPACITORS				
C901C	FILM POLYESTER	0.1 uF	63V K	1 D020104078060
C901C	FILM POLYESTER	0.005 uF	100V J	1 D02047206C060 D/E/RDS
C901SL	FILM POLYESTER	0.1 uF	63V K	1 D020104078060
C901SR	FILM POLYESTER	0.1 uF	63V K	1 D020104078060
C902CD	FILM POLYESTER	0.005 uF	100V J	1 D02047206C060 D/E/RDS
C902SRD	FILM POLYESTER	0.005 uF	100V J	1 D02047206C060 D/E/RDS
C903CD	CERAMIC HIK AXIAL	0.005 uF	16V K	1 D005472773530 D/E/RDS
C903LD	CERAMIC HIK AXIAL	0.005 uF	16V K	1 D005472773530 D/E/RDS
C903LD	FILM POLYESTER	0.005 uF	100V J	1 D02047206C060 D/E/RDS
C903RD	CERAMIC HIK AXIAL	0.005 uF	16V K	1 D005472773530 D/E/RDS
C903RD	FILM POLYESTER	0.005 uF	100V J	1 D02047206C060 D/E/RDS
C903SLD	CERAMIC HIK AXIAL	0.005 uF	16V K	1 D005472773530 D/E/RDS
C903SLD	FILM POLYESTER	0.005 uF	100V J	1 D02047206C060 D/E/RDS
C903SRD	CERAMIC HIK AXIAL	0.005 uF	16V K	1 D005472773530 D/E/RDS
C904C	FILM POLYESTER	0.1 uF	63V K	1 D020104078060 D/E/RDS
C904C	FILM POLYESTER	0.005 uF	100V J	1 D02047206C060 D/E/RDS
C904SL	FILM POLYESTER	0.1 uF	63V K	1 D020104078060
C904SR	FILM POLYESTER	0.1 uF	63V K	1 D020104078060
CONNECTOR				
CN901	CN,WAFER 2.5MM(11P)	1		L102526681110
RESISTORS				
R901C	MEATAL FILM	10 ohm	2W J	1 C060010066520
R901SL	MEATAL FILM	10 ohm	2W J	1 C060010066520
R901SR	MEATAL FILM	10 ohm	2W J	1 C060010066520
R902SL/R902SR	MEATAL FILM	10 ohm	1W	2 C060010066520
MISCELLANEOUS				
J901-J934	JUMPER (0.6/52MM)	34		L045084006040
JACK901	BOARD SCREW,8P	1		G61408103600A
JACK902	BOARD SCREW,2P	1		G611021078110
L901SL/L901SR	J9000031,INDUCTOR COIL	2		D330900001320
PCB6 ASSEMBLY P.C.BOARD PROCESSOR				
7025HK9804013 A/D/RDS				
PCB6 ASSEMBLY P.C.BOARD PROCESSOR				
7025HK9804032 E				
CAPACITORS				
C501-C512	CERAMIC CHIP T.C	100 pF	50V J	12 D010101167200
C513/C514	ELECT GE 85C	10 uF	50V M	2 D040100087050
C515/C516	CERAMIC CHIP HIK	0.1 uF	50V Z	2 D011104597200
C517/C518	ELECT GE 85C	10 uF	50V M	2 D040100087050
C519/C520	CERAMIC CHIP T.C	470 pF	50V J	2 D010471167200
C521/C522	CERAMIC CHIP T.C	100 pF	50V J	2 D010101167200
C523/C524	ELECT GE 85C	10 uF	50V M	2 D040100087050
C525/C526	CERAMIC CHIP T.C	560 pF	50V J	2 D010561167200
C527	CERAMIC CHIP T.C	100 pF	50V J	1 D010101167200
C528	CERAMIC CHIP HIK	0.001 uF	50V K	1 D011122777200
C529	CERAMIC CHIP T.C	560 pF	50V J	1 D010561167200
C530	CERAMIC CHIP HIK	0.001 uF	50V K	1 D011122777200
C531/C532	ELECT GE 85C	10 uF	50V M	2 D040100087050
C533	CERAMIC CHIP HIK	0.01 uF	50V K	1 D011103777200
C534-C536	ELECT GE 85C	10 uF	50V M	3 D040100087050
C537-C540	CERAMIC CHIP HIK	0.001 uF	50V K	4 D011122777200
C541/C542	ELECT GE 85C	10 uF	50V M	2 D040100087050
C543/C544	CERAMIC CHIP HIK	0.002 uF	50V K	2 D011122777200
C547/C548	ELECT GE 85C	0.33 uF	50V M	2 D040R33087100
C549/C550	CERAMIC CHIP HIK	0.015 uF	50V K	2 D011153777200

REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION	REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION	REF NO.	DESCRIPTION	Q'TY	PARTS NO.	VERSION	
C17/C18	CERAMIC TUBULAR	0.022 uF	25 V	2	D005223574530					R42	METAL FILM	3.3 kohm	1/5 W J	1	C06003236P520
C2	CERAMIC DISC	0.047 uF	50 V Z	1	D004473097060	D1	ZENER, UZ 5.1V BSB	1	K06005R114520	R43	CARBON FILM	22 kohm	1/5 W J	1	C00002236P520
C20	ELECTROLYTIC SG	10 uF	35 V M	1	D040100085100	D2	1N4148, SWITCHING	1	K000414801520	R44	CARBON FILM	47 kohm	1/5 W J	1	C00004736P520
C21/C22	CERAMIC TUBULAR	0.022 uF	25 V	2	D005223574530	D3D	ZENER, UZ 5.1V BSB	1	K06005R114520	R46L/R	CARBON FILM	120 kohm	1/5 W J	2	C00001246P520
C23	CERAMIC TUBULAR	0.01 uF	16 V	1	D005103773530	VD1/VD2	VARACTOR, SVC321 SPA-C	2	K080032100520	R46L/R	CARBON FILM	220 kohm	1/5 W J	2	C06002216P520
C24/C25	CERAMIC DISC	0.022 uF	50 V Z	2	D004223097060					R47L/R	CARBON FILM	180 kohm	1/5 W J	2	C00001846P520
C26	ELECTROLYTIC SG	4.7 uF	50 V M	1	D0404R7087100					R47L/R	CARBON FILM	270 kohm	1/5 W J	2	C00002746P520
C27	ELECTROLYTIC SG	3.3 uF	50 V M	1	D0403R3087100	IC1	LM7001M, PLL	1	J124700100010	R48L/R	METAL FILM	2.7 kohm	1/5 W J	2	C06002726P520
C28	ELECTROLYTIC SG	4.7 uF	50 V Z	1	D0404R7087100	IC2	LA1266G, AM/FM IF	1	J124126600010	R49L/R	METAL FILM	3.3 kohm	1/5 W J	2	C06003236P520
C29	CERAMIC DISC	0.022 uF	50 V Z	1	D004223097060	IC3	LA3401, MPX	1	J124340100010	R5	METAL FILM	470 ohm	1/5 W J	1	C06004716P520
C3	ELECTROLYTIC SG	3.3 uF	50 V M	1	D0403R3087100	IC4D	TDA7330BD, RDS DECODER	1	J020733000010	R50D	METAL FILM	680 ohm	1/5 W J	1	C06006816P520
C30	MYLAR	0.022 uF	100 V J	1	D02022306C060	IC5D	LC7073M, ERROR CORRECTION	1	J124707300010	R51D-R54D	CARBON FILM	10 kohm	1/5 W J	4	C00001036P520
C31	MYLAR	0.003 uF	100 V J	1	D02033206C060					R55D	METAL FILM	1 kohm	1/5 W J	1	C06001026P520
C32	MYLAR	0.039 uF	100 V J	1	D02039306C060					R56D	CARBON FILM	2.2 Mohm	1/5 W J	1	C00002256P520
C33	ELECTROLYTIC SG	1 uF	50 V M	1	D040010087010	Q1/Q2	2SC1740S, NPN	2	J5021740Y0050	R57L/R	METAL FILM	1.5 kohm	1/5 W J	2	C06001526P520
C34	CERAMIC TUBULAR	0.022 uF	25 V	1	D005223574530	Q10D	DTC114YS, NPN	1	J6020114Y0050	R6	CARBON FILM	100 kohm	1/5 W J	1	C00001046P520
C35	ELECTROLYTIC SG	100 uF	16 V M	1	D040101083100	Q3	KTC1923Y/BKTC3194Y, NPN	1	J5023194Y0050	R7	CARBON FILM	10 kohm	1/5 W J	1	C00001036P520
C36	CERAMIC DISC	330 pF	50 V J	1	D004331067060	Q4-Q6	KRA107M/DTA114YS, PNP	3	J601107M00050	R8	METAL FILM	270 ohm	1/5 W J	1	C06002716P520
C37C	CERAMIC DISC	82 pF	50 V J	1	D000820067060	Q7D	2SC1740S, NPN	1	J5021740Y0050	R9	METAL FILM	560 ohm	1/5 W J	1	C06005616P520
C38C	CERAMIC DISC	100 pF	50 V J	1	D004101067060	Q8L/R	DTC323TS, NPN	2	J602323TS0050						
C39	ELECTROLYTIC SG	10 uF	35 V M	1	D040100085100	Q9	KRA107M/DTA114YS, PNP	1	J601107M00050						
C4	CERAMIC TUBULAR	0.01 uF	16 V	1	D005103773530										
C40D	CERAMIC TUBULAR	0.022 uF	25 V	1	D005223574530										
C41	ELECTROLYTIC SG	4.7 uF	50 V M	1	D0404R7087100	R1	CARBON FILM	100 kohm	1/5 W J	1	C00001046P520				
C42	CERAMIC TUBULAR	0.047 uF	50 V	1	D005473097530	R10	METAL FILM	1 kohm	1/5 W J	1	C06001026P520				
C43	CERAMIC DISC	680 pF	50 V J	1	D004681067060	R11	METAL FILM	180 ohm	1/5 W J	1	C06001816P520				
C44	ELECTROLYTIC SG	100 uF	16 V M	1	D040101083100	R11	METAL FILM	100 ohm	1/5 W J	1	C06001016P520				
C45	ELECTROLYTIC SG	1 uF	50 V M	1	D040010087100	R12	METAL FILM	560 ohm	1/5 W J	1	C06005616P520				
C46	ELECTROLYTIC SG	0.22 uF	50 V M	1	D040R22087100	R13	METAL FILM	3.3 kohm	1/5 W J	1	C06003326P520				
C47	ELECTROLYTIC SG	1 uF	50 V M	1	D040010087050	R14	METAL FILM	560 ohm	1/5 W J	1	C06005616P520				
C48	CERAMIC DISC	0.022 uF	50 V Z	1	D004223097060	R15	METAL FILM	470 ohm	1/5 W J	1	C06004716P520				
C49	ELECTROLYTIC SG	10 uF	35 V M	1	D040100085100	R16	METAL FILM	100 ohm	1/5 W J	1	C06001016P520				
C5	ELECTROLYTIC SG	47 uF	16 V M	1	D040470083100	R17-R19	METAL FILM	1 kohm	1/5 W J	3	C06001026P520				
C50L/R	CERAMIC DISC	220 pF	50 V J	2	D004221067060	R2	CARBON FILM	5.6 kohm	1/5 W J	1	C00005626P520				
C50L/R	CERAMIC DISC	560 pF	50 V J	2	D004561067060	R20	METAL FILM	330 ohm	1/5 W J	1	C06003316P520				
C51L/R	ELECTROLYTIC SG	10 uF	35 V M	2	D040100085100	R21	METAL FILM	270 ohm	1/5 W J	1	C06002716P520				
C53	ELECTROLYTIC SG	10 uF	35 V M	1	D040100085100	R22	METAL FILM	470 ohm	1/5 W J	1	C06004716P520				
C54D	CERAMIC TUBULAR	270 pF	50 V	1	D005271077530	R24	METAL FILM	4.7 kohm	1/5 W J	1	C06004726P520				
C55D	ELECTROLYTIC SG	47 uF	16 V M	1	D040470083100	R25	CARBON FILM	68 kohm	1/5 W J	1	C00006836P520				
C56D	ELECTROLYTIC SG	10 uF	35 V M	1	D040100085100	R26	CARBON FILM	18 kohm	1/5 W J	1	C00001836P520				
C57D	CERAMIC TUBULAR	0.1 uF	50 V	1	D005104097530	R26	CARBON FILM	39 kohm	1/5 W J	1	C00003936P520				
C58D/C59D	CERAMIC DISC	27 pF	50 V J	1	D004270067060	R27	CARBON FILM	10 kohm	1/5 W J	1	C00001036P520				
C6	CERAMIC TUBULAR	0.022 uF	25 V	1	D005223574530	R28	CARBON FILM	22 kohm	1/5 W J	1	C00002236P520				
C60D	ELECTROLYTIC SG	0.1 uF	50 V Z	1	D004104097060	R29	METAL FILM	22 ohm	1/5 W J	1	C06002206P520				
C62L/R	CERAMIC DISC	10 pF	50 V J	2	D000100067060	R3	CARBON FILM	22 kohm	1/5 W J	1	C00002236P520				
C62L/R	CERAMIC DISC	68 pF	50 V J	2	D000680067060	R30	METAL FILM	4.7 kohm	1/5 W J	1	C06004726P520				
C7	CERAMIC TUBULAR	0.01 uF	16 V	1	D005103773530	R31	CARBON FILM	10 kohm	1/5 W J	1	C00001036P520				
C8/C9	CERAMIC DISC CH	18 pF	50 V B	2	D000180167070	R31	METAL FILM	2.7 kohm	1/5 W J	1	C06002726P520				
	CONNECTOR					R32	CARBON FILM	5.6 kohm	1/5 W J	1	C00005626P520				
CN100	PLUG, 15P			1	L112524191900	R33	METAL FILM	3.3 kohm	1/5 W J	1	C06003326P520				
	CERAMIC FILTERS					R34	METAL FILM	100 ohm	1/5 W J	1	C06001016P520				
CF1	10.7MA8-A-TF21			1	E430107000140	R35C	METAL FILM	1.8 kohm	1/5 W J	1	C06001826P520				
CF1	10.7MS3GH-ATF21			1	E430107000150	R36D	CARBON FILM	47 kohm	1/5 W J	1	C00004736P520				
CF3	10.7MA8-A-TF21			1	E430107000140	R37D	METAL FILM	22 kohm	1/5 W J	1	C06002206P520				
CF3	10.7MS3GH-ATF21			1	E430107000150	R38D	METAL FILM	1 kohm	1/5 W J	1	C06001026P520				
CF4	CFM2-450BL			1	E431450000120	R39	METAL FILM	100 ohm	1/5 W J	1	C06001016P520				
						R4	CARBON FILM	100 kohm	1/5 W J	1	C00001046P520				
						R40	CARBON FILM	47 kohm	1/5 W J	1	C00004736P520				
						R41	CARBON FILM	22 kohm	1/5 W J	1	C00002236P520				

PCB2 (AMP)

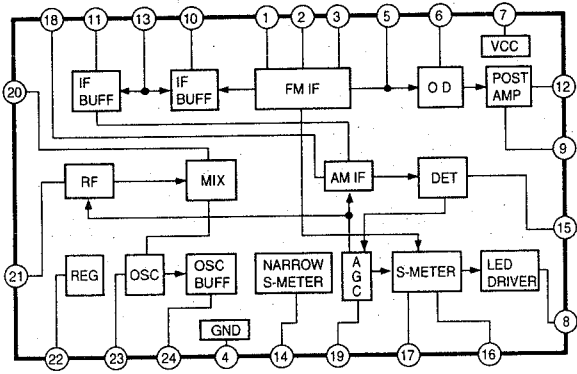


PCB3 (FRONT)

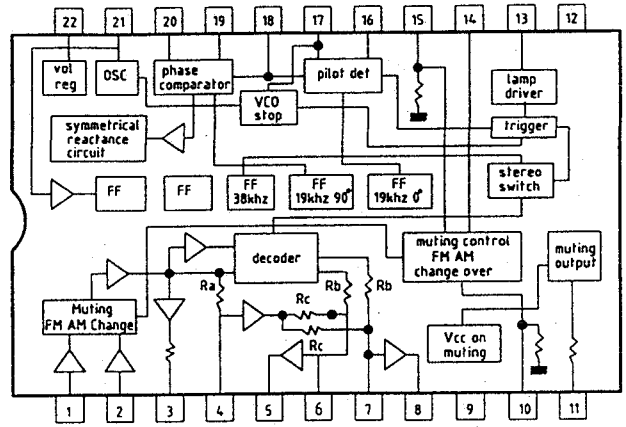


IC'S FUNCTIONAL BLOCK DIAGRAM

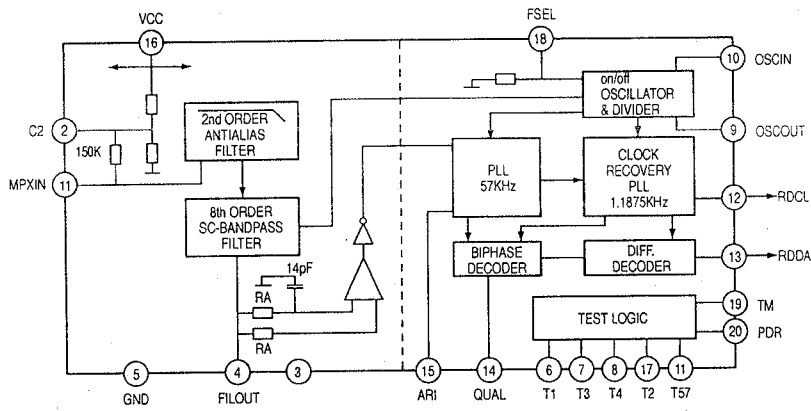
LA1266G : IC2



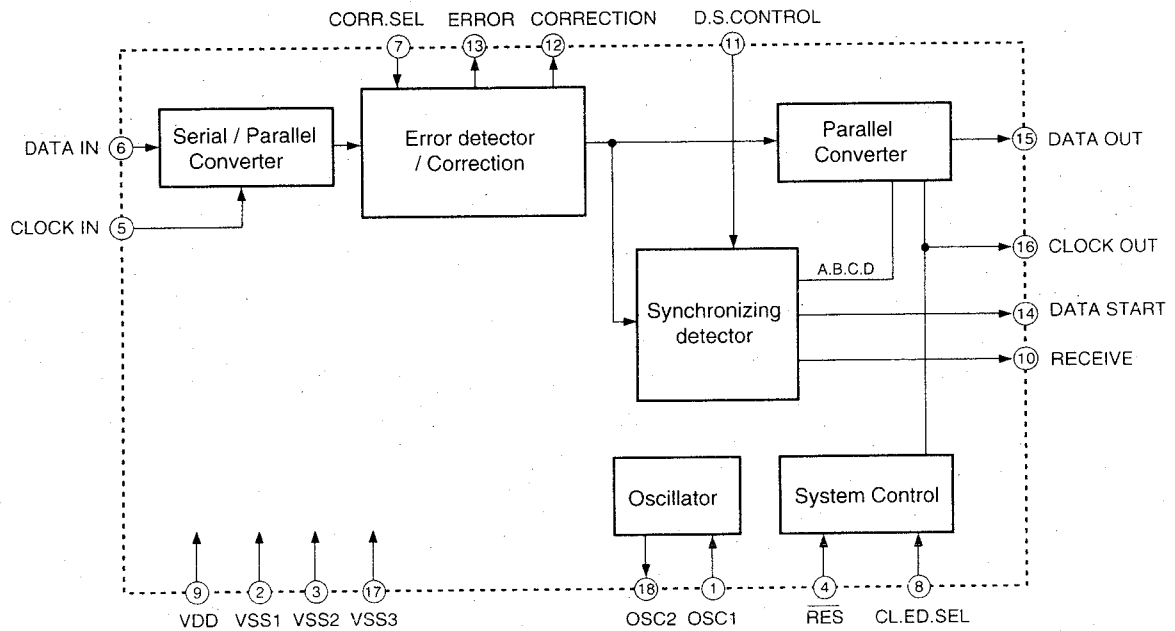
LA3401 : IC3



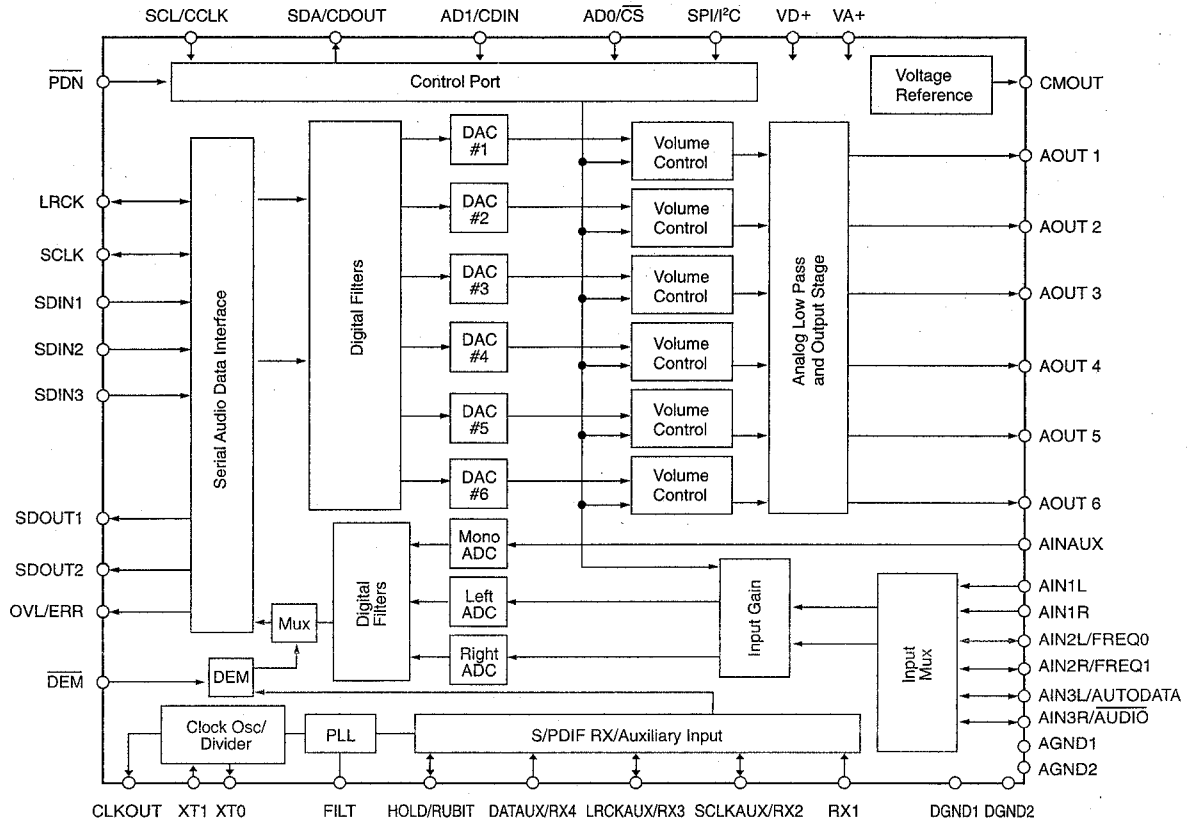
TDA7330BD : IC4D



LC7073M : IC5D

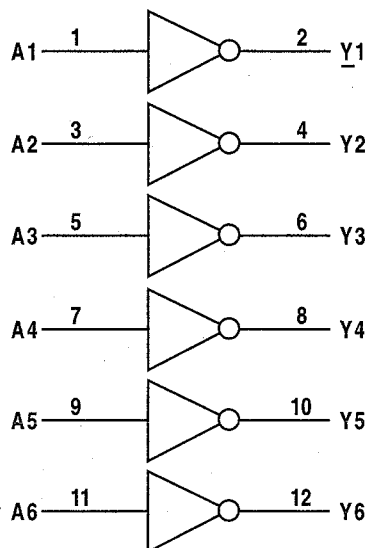


CS4226KQ : IC804

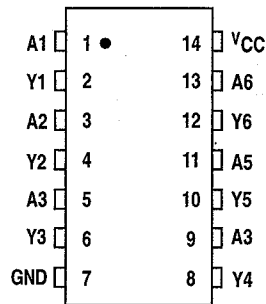


MC74HCU04AD : IC802

LOGIC DIAGRAM



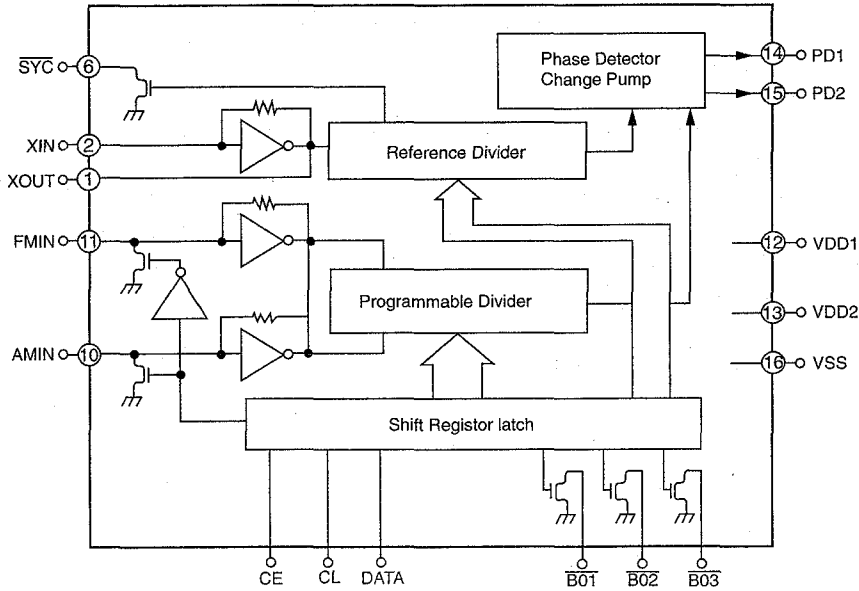
PIN ASSIGNMENT



FUNCTION TABLE

Inputs A	Outputs Y
L	H
H	L

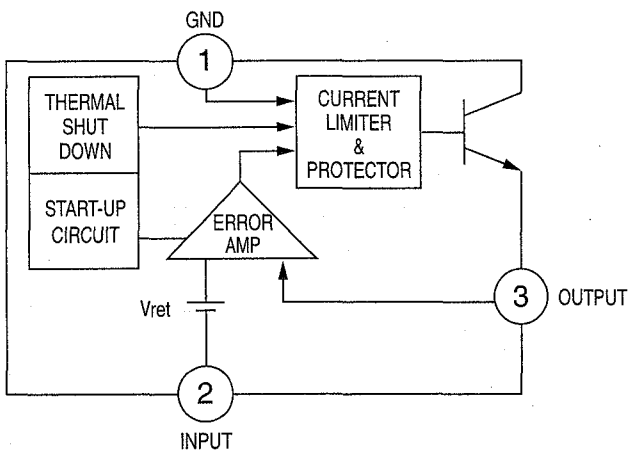
LM7001M : IC 1



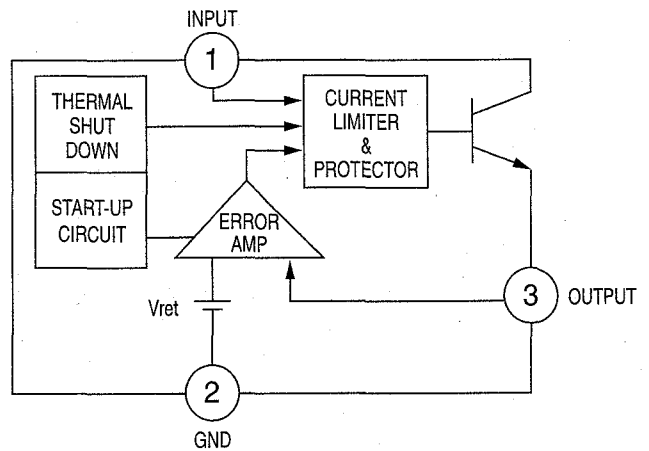
Pin Name

No	LM 7001	LM7001M
1	XOUT	XOUT
2	XIN	XIN
3	CE	NC
4	CL	CE
5	DATA	CL
6	SYC	DATA
7	B01	SYC
8	B02	B01
9	B03	B02
10	AMIN	B03
11	FMIN	NC
12	VDD1	AMIN
13	VDD2	NC
14	PD1	FMIN
15	PD2	NC
16	VSS	VDD1
17		VDD2
18		
19		PD2
20		VSS

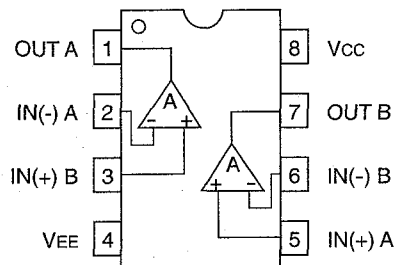
KIA7915 : IC102



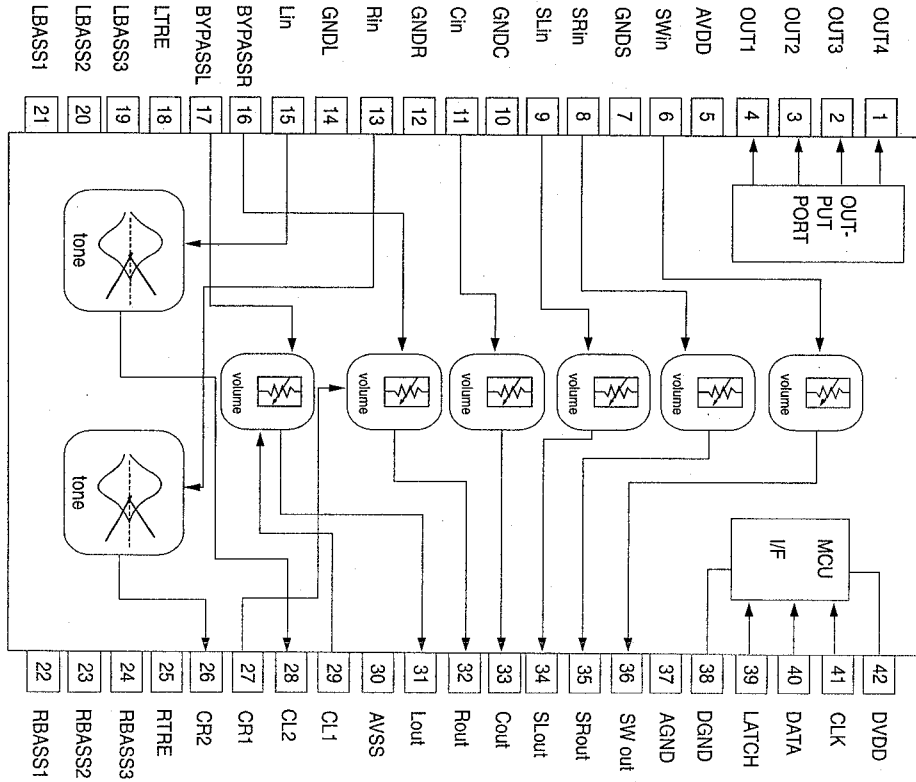
**KA7805 : IC103
KA7806 : IC104
KA7815 : IC101**



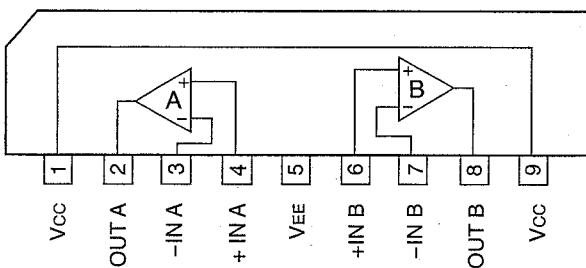
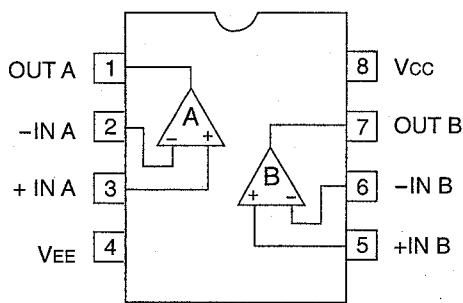
**NJM4565 : IC504, IC505, IC506,
IC507, IC508, IC509,
IC510**



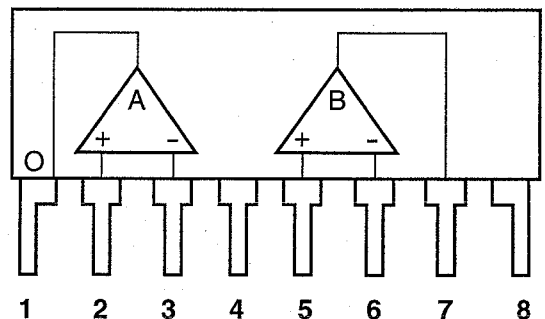
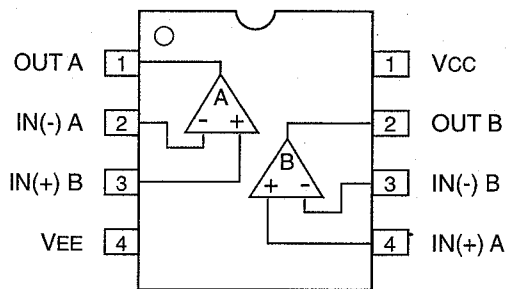
M62446FP : IC501



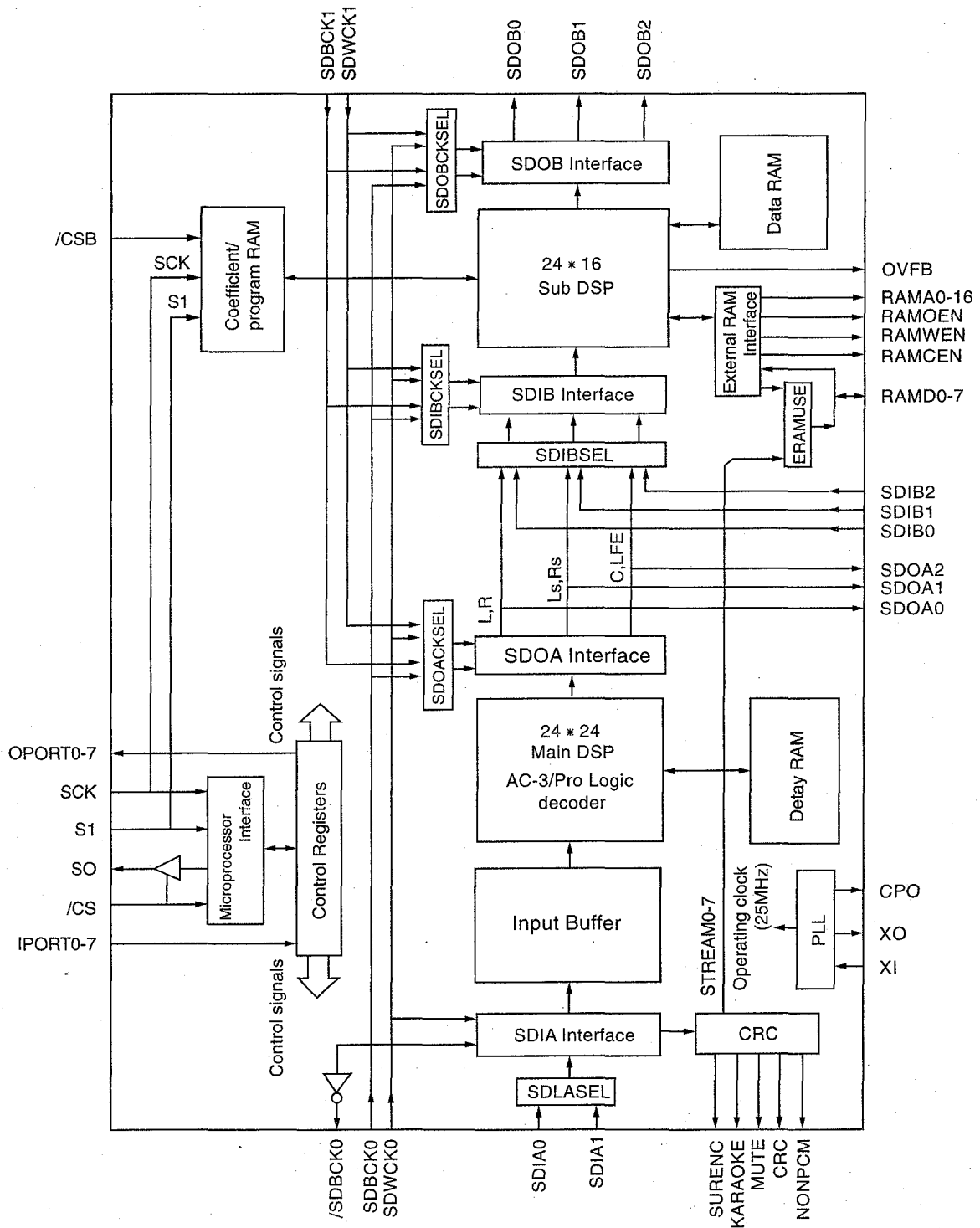
KIA4559 : IC801L/IC801R, IC402



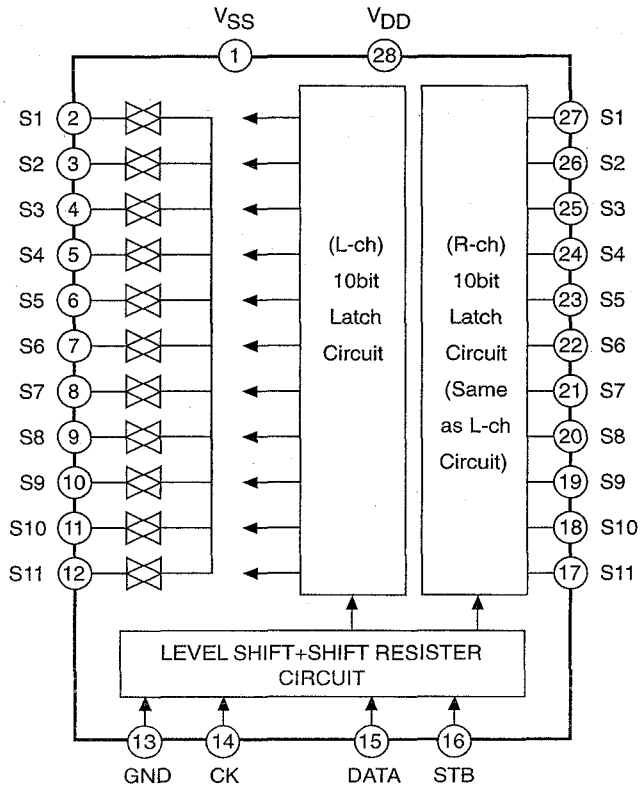
NJM2068 : IC801, IC805, IC806, IC807



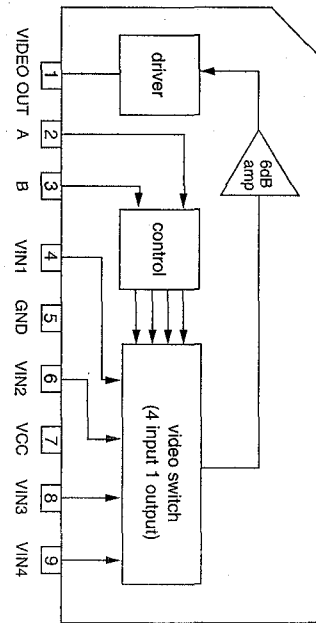
YSS902 : IC803



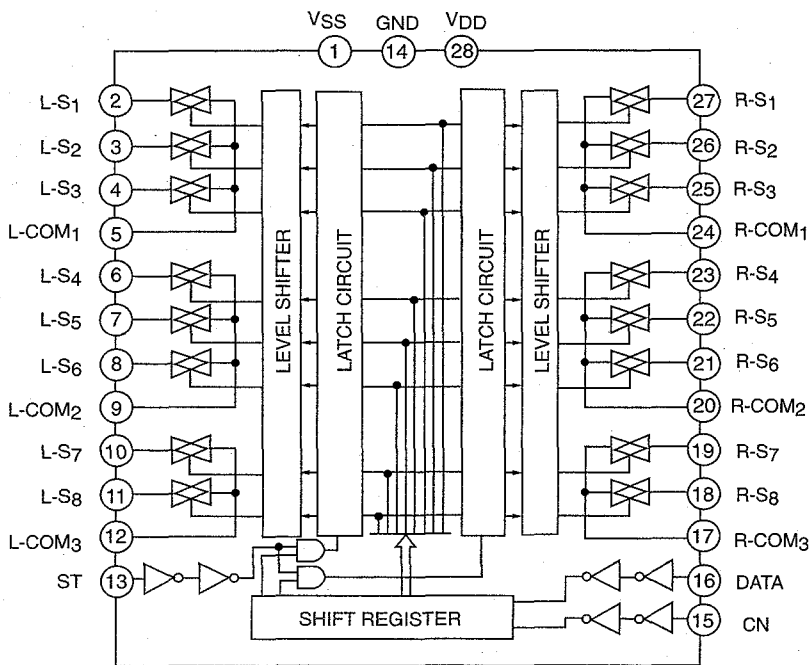
TC9273 : IC401



LA7952 : IC403



KIC9163AN : IC502

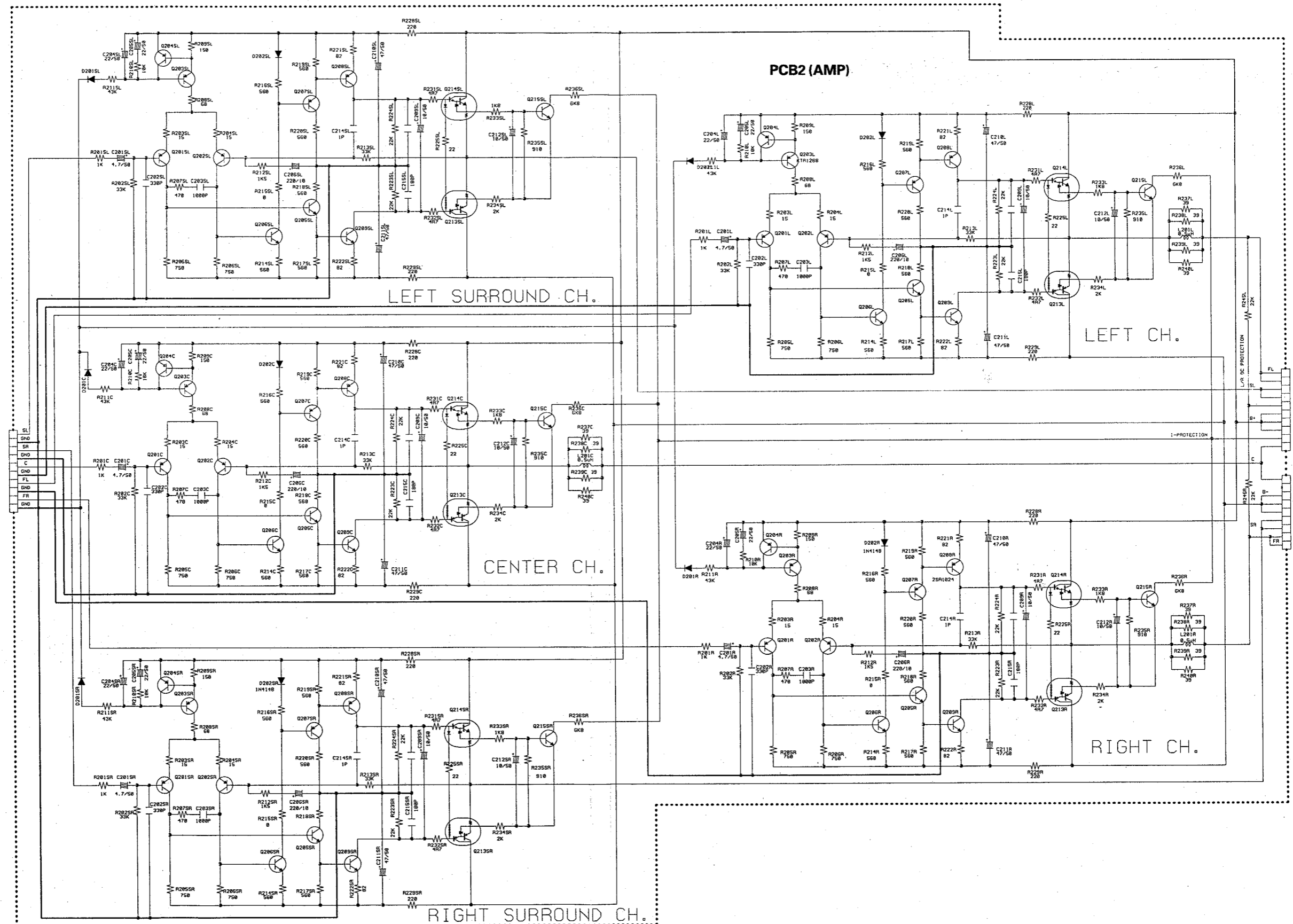


VSS	1	28	VDD
L-S1	2	27	R-S1
L-S2	3	26	R-S2
L-S3	4	25	R-S3
L-COM1	5	24	R-COM1
L-S4	6	23	R-S4
L-S5	7	22	R-S5
L-S6	8	21	R-S6
L-COM2	9	20	R-COM2
L-S7	10	19	R-S7
L-S8	11	18	R-S8
L-COM3	12	17	R-COM3
ST	13	16	DATA
GND	14	15	CK

NOTES

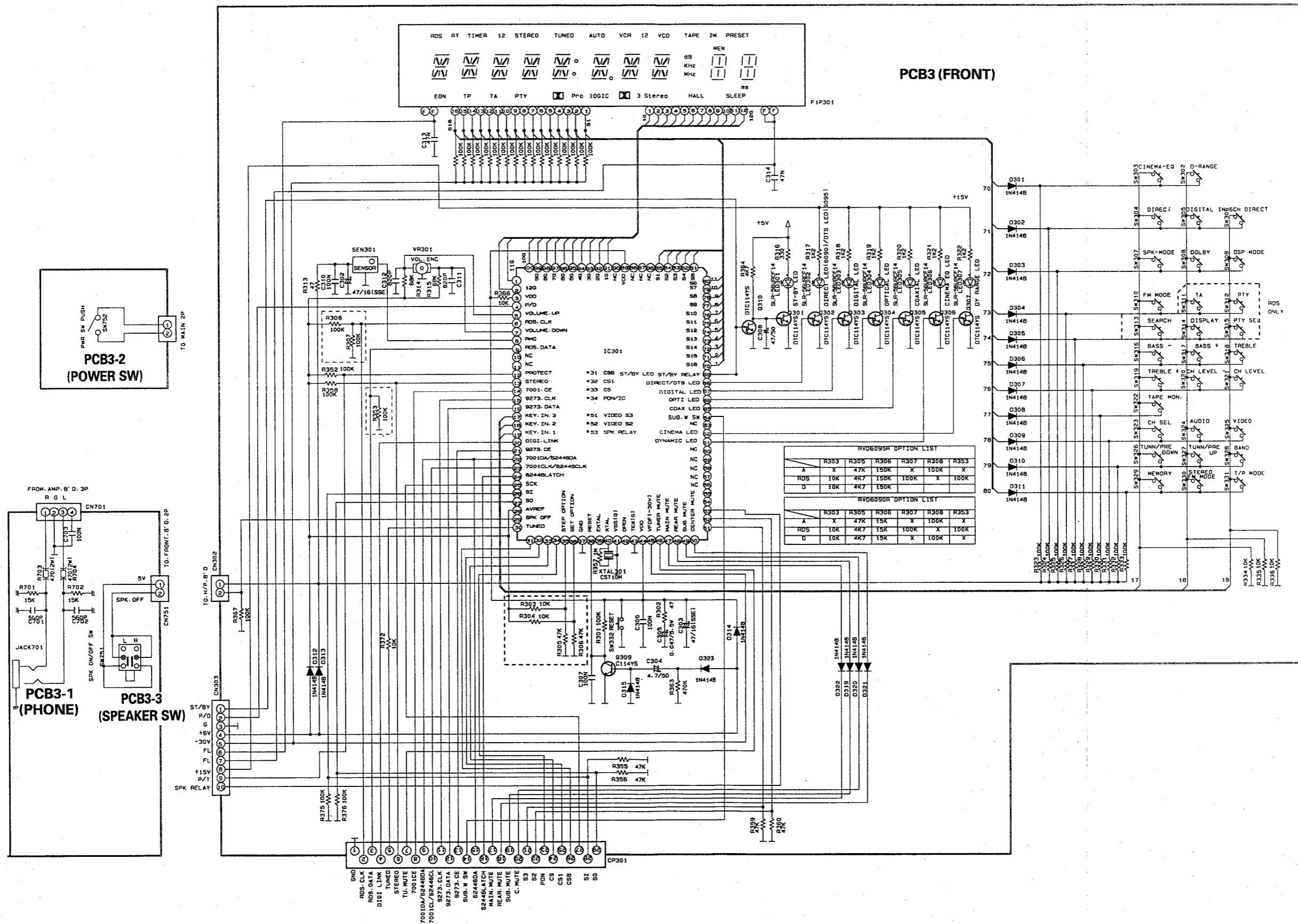
SCHEMATIC DIAGRAM (II)

Model No. : RVD-6090R/RDS



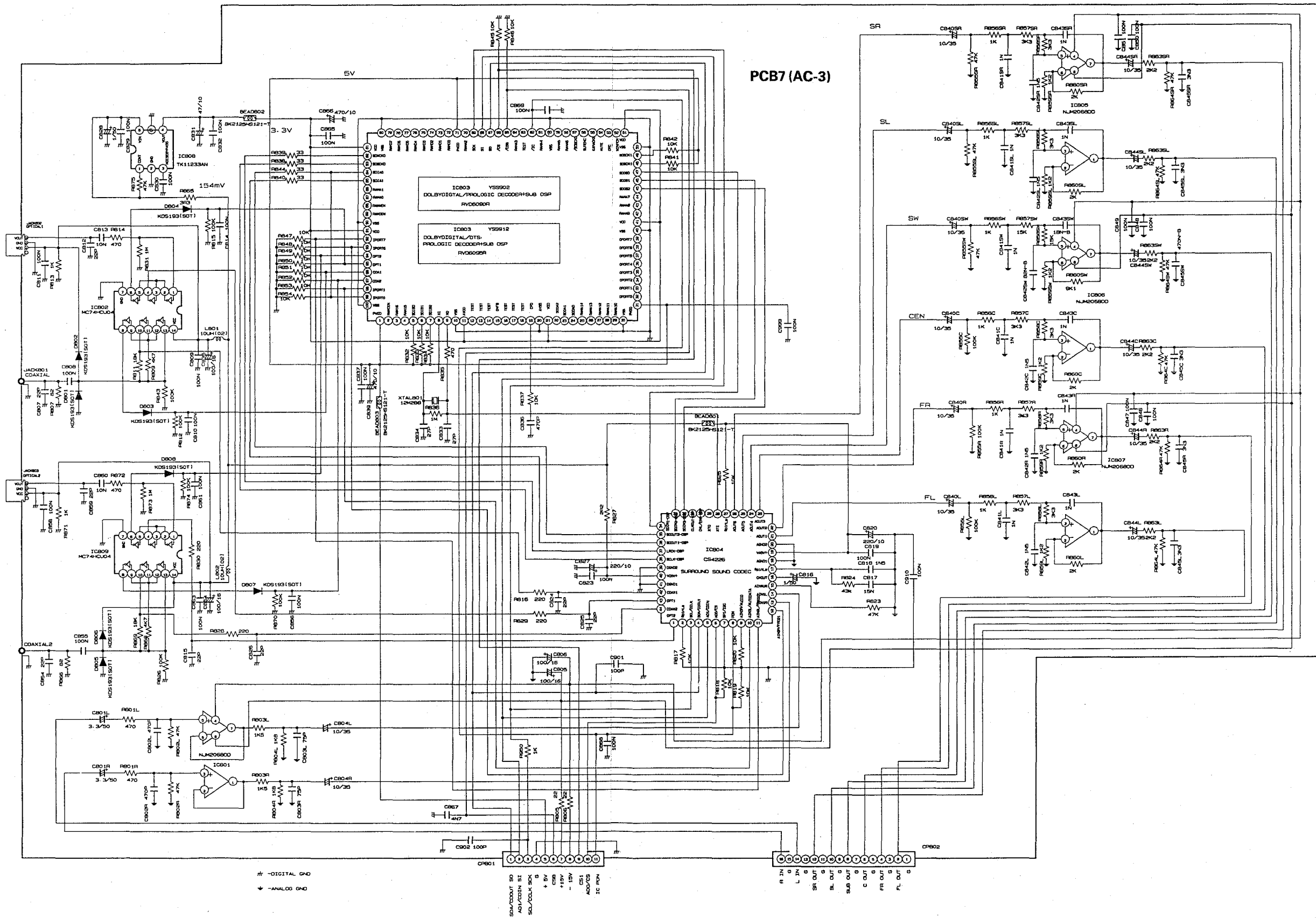
SCHEMATIC DIAGRAM (III)

Model No. : RVD-6090R/RDS



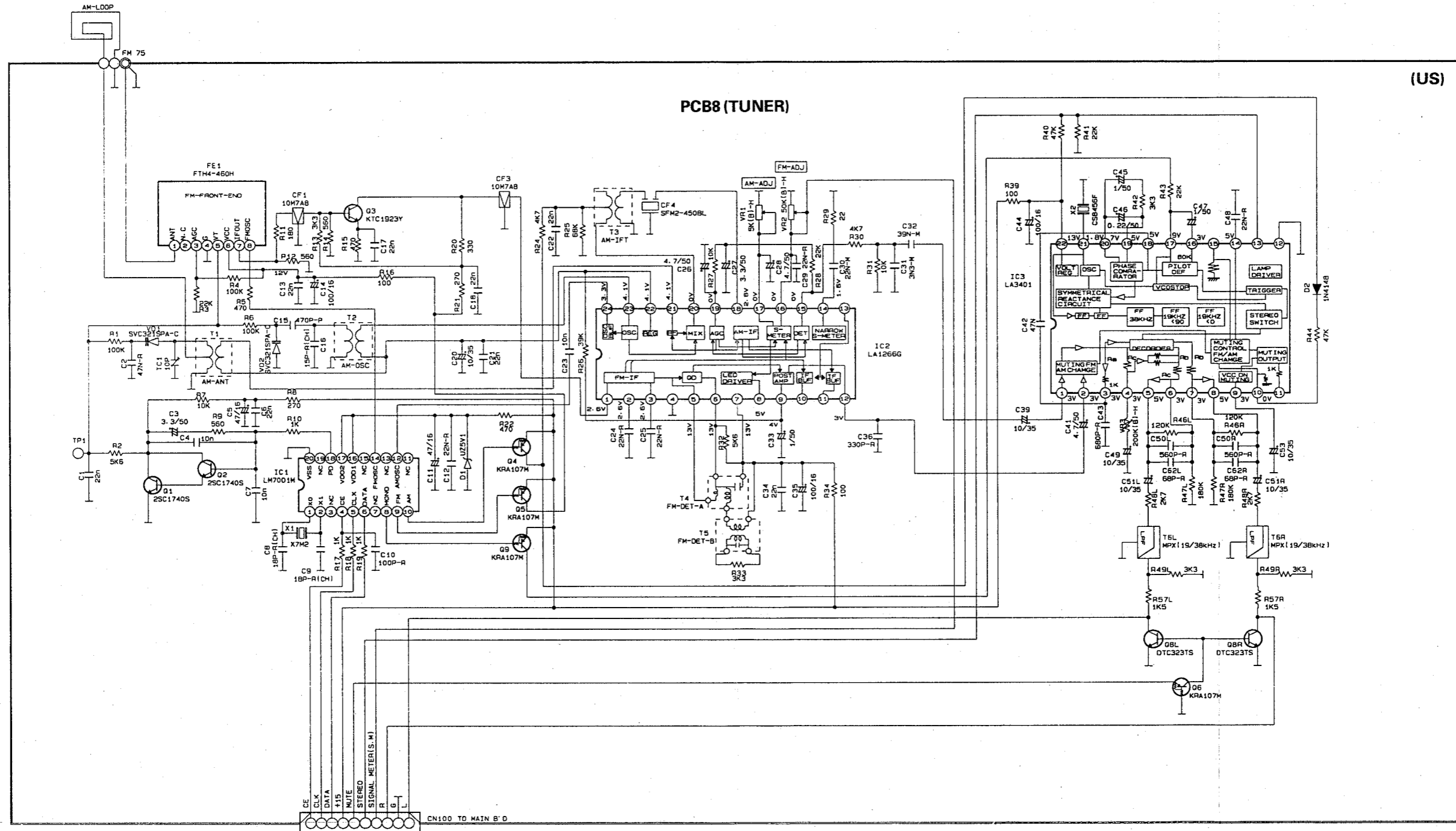
SCHEMATIC DIAGRAM (VI)

Model No. : RVD-6090R/RDS



SCHEMATIC DIAGRAM (VII)

Model No. : RVD-6090R/RDS



SCHEMATIC DIAGRAM (VIII)

Model No. : RVD-6090R/RDS

