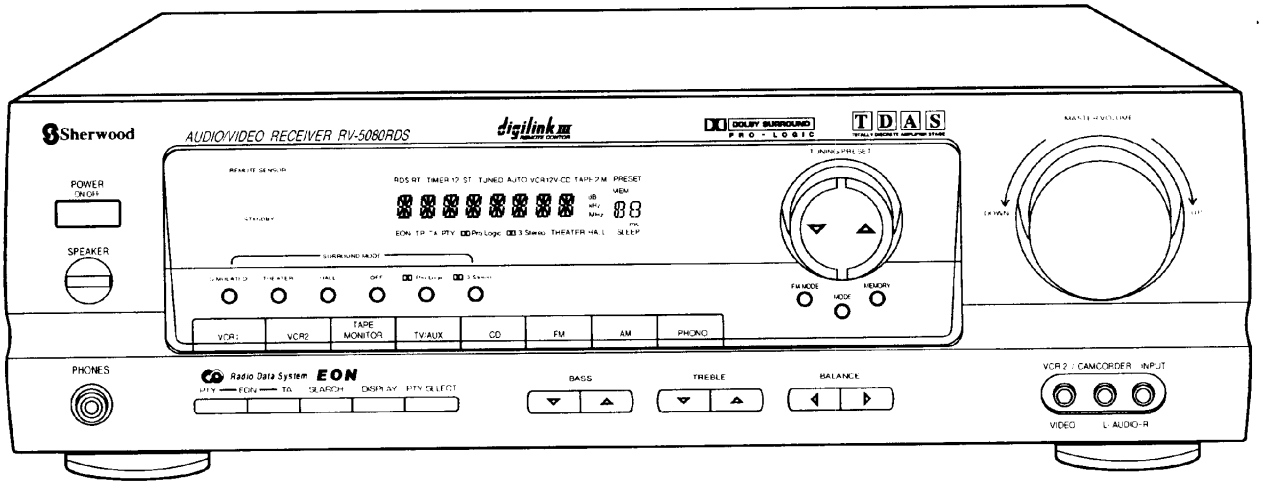
SERVICE MANUAL

RV-5080R / RDS

AUDIO/VIDEO PRO-LOGIC RECEIVE!



■ CONTENTS ■

Sherwood®

SAFETY PRECAUTIONS

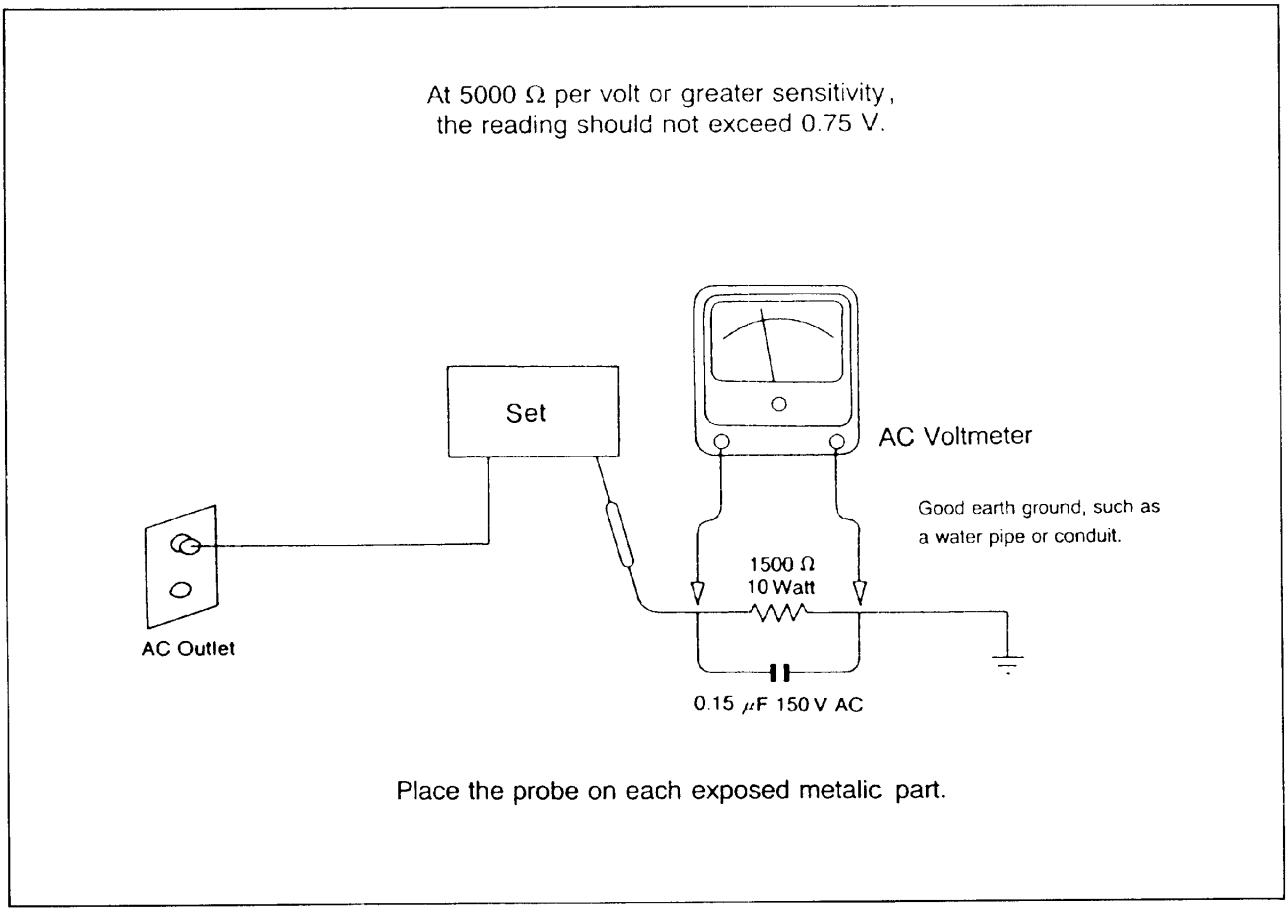
WARNING

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 aforded by them cannot necessarily be obtained by using replacement components rated for higher voltge, 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 ⚠ 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 without danger of electrical shock. Plug the AC line cord directly into a 120 V AC outlet (120 V AC version only).
   (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 μF 150 V AC capacitor, between a known good earth ground (such as a water pipe, or conduit) and the exposed metalic is parts, one at a time, Measure the AC voltage across the combination of a 1500 Ω resistor and a 0.15 μF capacitor. Reverse the AC plug at the AC outlet and repeat AC voltage measurements for each exposed metalic part. Voltage measured must not exceed 0.75V 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

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 : 120V, 60Hz (A) / 230V, 50Hz (D/RDS) / 220, 60Hz (K)
220V / 110, 50Hz / 60Hz (PT INDO)

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	INPUT SENSITIVITY	AUX	1kHz		mV	210±30	210±15
		MM	1kHz		mV	3.3±0.5	3.3±0.3
		MC	1kHz		mV		
		MIC	1kHz		mV		
2	CHANNEL BALANCE	AUX	1kHz	R/O TO −40dB	dB	±3	±2
			1kHz	−40 TO −60dB	dB	±6	±4
3	DAMPING FACTOR	AUX	50Hz				
4	RESIDUAL NOISE	AUX	1kHz	VOL min.	mV	≤1	≤0.8
			1kHz	VOL max.	mV		
5	TOTAL HARMONIC DISTORTION	AUX(500mV)	50Hz	R/O/1W	%	≤0.2	≤0.09
			1kHz	"	%	≤0.2	<0.09
			20kHz	"	%	≤0.2	≤0.09
6	CONTINUOUS AVERAGE POWER at (0.2)% THD	AUX	50Hz	8ohms	W	≥55	≥60
			1kHz	"	W	≥55	≥60
			20kHz	"	W	≥55	≥60
7	IMD(SMPTE)	AUX(500mV)	60Hz=4	R/O	%	≤0.25	≤0.15
			7kHz=1	1W	%	≤0.25	<0.15
8	S/N RATIO, IHF-A FILTER	AUX(500mV)	1kHz	R/O	dB	≥85	≥90
			1kHz	1W	dB	≥70	≥73
		MM(5mV)	1kHz	R/O	dB	≥66	≥70
			1kHz	1W	dB	≥60	≥65
		MC(0.5mV)	1kHz	R/O	dB		
			1kHz	1W	dB		
9	CHANNEL SEPARATION	AUX(500mV)	100Hz	R/O-3dB	dB	≥70	≥75
			1kHz	"	dB	≥60	≥70
			10kHz	"	dB	≥40	≥50
10	FUNCTION CROSSTALK	CD→AUX	1/10kHz	"	dB	≥70/65	≥75/70
		AUX→MM	1/10kHz	"	dB	≥55/50	≥60/55
		MM→AUX	1kHz	"	dB	≥65	≥70
		→		"	dB		
11	FREQUENCY RESPONSE (-3dB)	AUX(500mV)		1W	Hz~kHz	50~40	40~45
12	TONE CONTROL, ±( )dB	AUX	100Hz	1W	dB	+10±2	±10±1
			10kHz	1W	dB	±10±2	±10±1
13	LOUDNESS CONTOUR	AUX	50Hz	R/O-40dB	dB		
			100Hz	"	dB		
			1kHz	"	dB		
			10kHz	"	dB		
14	PHONO EQUALIZATION	PHONO	100Hz	TAPE OUT	dB	+13±2	±13±1
			10kHz	"	dB	±13±2	±13±1
15	INPUT OVERLOAD at 0.5% THD	AUX	1kHz	S/P OUT	mV		
		MM	1kHz	TAPE OUT	mV	≥100	>115
		MC	1kHz	"	mV		
		MIC	1kHz	"	mV		

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
16	HEADPHONE OUTPUT	AUX(500mV)	1kHz	R/O	mV	2.6±0.8	2.6±0.5
	H/P = 64ohms		1kHz	"	mV		
17	FTC POWER 20Hz~20kHz		20Hz	"	W		
	at ( )% THD	AUX	1kHz	"	W		
			20kHz	"	W		
18	DIN POWER at 1% THD	AUX	1kHz	"	W		
19	DYNAMIC POWER OUTPUT						
	20 cycle ON, 480 cycle OFF	AUX	1kHz	( )ohms	W		
20	POWER BANDWIDTH -3dB	AUX		R/O	Hz~kHz		
21	SLEW-RATE	AUX	1kHz	R/O	V/usec		
22	SLEW-FACTOR	AUX(500mV)					
23	SUB WOOFER	AUX(210mV)	1kHz	VOL max.	V/usec	1±0.1	1±0.05
24	PRE OUT	AUX(210mV)	1kHz	VOL max.	V/usec	1±0.1	1±0.05
25	MUTING LEVEL	AUX(500mV)	1kHz	R/O	dB	≥55	≥60

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

● REAR AMP SECTION

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	POWER OUTPUT 0.7% THD	AUX	1kHz	(8)ohms	W	≥55	≥65
2	TOTAL HARMONIC DISTORTION	AUX	1kHz	1 W	%	≤1.0	≤0.7
3	S/N RATIO DOLBY	AUX		R/O	dB	≥65	≥70
	STADIUM	AUX		"	dB		
	THEATER	AUX		"	dB	≥65	≥70
	HALL	AUX		"	dB	≥65	≥70
	SIMULATED	AUX		1W	dB	≥60	≥65
4	FRE RES. (ONLY DOLBY) +3dB	AUX	1kHz	1W	Hz~kHz	100~6	80~7

Measurements conditions : Input level (350)mV, WIDE mode
Center level max, Master volume max.

● CENTER AMP SECTION

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	POWER OUTPUT at 0.3% THD	AUX	1kHz	(8)ohms	W	≥55	≥65
2	TOTAL HARMONIC DISTORTION	AUX	1kHz	1W	%	≤0.3	≤0.09
3	S/N RATIO, IHF-A FILTER	AUX		R/O	dB	≥40	≥50
4	FRE. RESPONSE NORMAL	AUX		1W	Hz~kHz	140~40	120~45
	DOLBY MODE WIDE	AUX		1W	Hz~kHz	50~40	30~45

● VIDEO SECTION

NO	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	OUTPUT LEVEL at 75ohms	VCR1(1Vp-p)	1MHz		Vp-p	1±0.2	1±0.1
2	FREQUENCY RESPONSE	"	1MHz		Hz~MHz	5~6	3~6
3	S/N RATIO	"	1MHz		dB	≥40	≥45
4	CROSSTALK	"	1MHz		dB	≥40	≥45

● FM SECTION

Measuring methods in confirmity with IEC standard 315

Measurements condition FM : Radio frequency = 98.1MHz, Audio frequency = 1kHz
Reference level = 1mV on (75ohms, 300ohms)
Deviation : MONO = ±75kHz, Stereo = ±67.5kHz±7.5kHz (A, K)
MONO = ±40kHz, Stereo = ±40kHz±7.5kHz (D/RDS, PT INDO)
Test Point : TP 1 = 90.0MHz, TP2 = 98.0MHz, TP3 = 106.0MHz (D/RDS, PT INDO)
Test Point : TP 1 = 90.1MHz, TP2 = 98.1MHz, TP3 = 106.1MHz (A, K)
Filter = B. P. F at STEREO

NO	DESCRIPTION		UNIT	LIMIT L/R	NOMINAL L/R	VERSION
1	TUNING COVER RANGE	LOW ~ HIGH	MHz	87.5/108		D/RDS, PT INDO
		LOW ~ HIGH	MHz	87.5/107.9		A, K
	STEP	AUTO/Man.	kHz	100/50		D/RDS, PT INDO
		AUTO/Man.	kHz	200/200		A, K
2	USABLE SENSITIVITY	TP 1	dBf	≤20.2	≤17.2	D/RDS
	S/N = 26 dB	TP 2	dBf	≤20.2	≤17.2	"
		TP 3	dBf	≤20.2	≤17.2	"
	USABLE SENSITIVITY	TP 1	dBf	≤23.2	≤19.2	PT INDO
	S/N = 26 dB	TP 2	dBf	≤23.2	≤19.2	"
		TP 3	dBf	≤23.2	≤19.2	"
	USABLE SENSITIVITY	TP 1	dBf	≤23.2	<19.2	A, K
	S/N = 30 dB	TP 2	dBf	≤23.2	≤19.2	"
		TP 3	dBf	≤23.2	≤19.2	"
3	FULL LIMITING SENSE	OUTPUT = -3dB	dBf	≤17.2	≤15.2	D/RDS
		OUTPUT = -3dB	dBf	≤19.2	≤17.2	A, K, PT INDO
4	AUTO STOP LEVEL		dBf	31.2(±5)	31.2(±3)	D/RDS
			dBf	31.2(±8)	31.2(±6)	A, K, PT INDO
5	AUTO SCAN ERROR		kHz			
6	S/N RATIO	MONO	dB	≥64	≥66	D/RDS
		STEREO	dB	≥60	≥65	"
		MONO	dB	≥57	>62	A, K, PT INDO
		STEREO	dB	≥55	≥60	"
7	TOTAL HARMONIC DISTORTION	MONO	%	≤0.5	≤0.3	D/RDS
		STEREO	%	≤0.8	≤0.5	"
		MONO	%	≤1.5	≤1.0	A, K, PT INDO
		STEREO	%	≤2.0	≤1.5	"
8	46dB QUIETING SENS.	MONO	dBf	≤25.2	≤23.2	D/RDS
		STEREO	dBf	≤48.3	≤45.3	"
	46dB QUIETING SENS.	MONO	dBf	≤29.2	≤25.2	PT INDO
		STEREO	dBf	≤49.2	≤48.2	"
	50dB QUIETING SENS.	MONO	dBf	≤29.2	≤25.2	A, K
		STEREO	dBf	≤49.2	≤48.2	"
9	FREQUENCY RESPONSE at ±3.0dB		Hz	40/12K	20/14K	
10	CHANNEL SEPARATION	100Hz	dB	≥30	≥35	D/RDS
		1kHz	dB	≥35	≥40	"
		10kHZ	dB	≥30	≥35	"
		100Hz	dB	≥25	≥30	A, K, PT INDO
		1kHz	dB	≥25	≥30	"
		10kHZ	dB	≥20	≥25	"
11	SPURIOUS RESPONSE		dB	≥80	≥90	D/RDS
			dB	≥50	≥60	A, K, PT INDO
12	IF REJECTION	TP 1	dB	≥100	≥120	D/RDS
		TP 1	dB	≥70	≥75	A, K, PT INDO
13	IMAGE REJECTION	TP 3	dB	≥70	≥80	D/RDS
		TP 3	dB	≥30	≥35	A, K, PT INDO
14	AM REJECTION RATIO		dB	≥50	≥55	D/RDS
			dB	≥30	≥40	A, K, PT INDO
15	RF INTERMODULATION		dB			
16	CAPTURE RATIO		dB	≤3.0	≤2.5	D/RDS
			dB	≤3.0	≤2.0	A, K, PT INDO

NO	DESCRIPTION		UNIT	LIMIT L/R	NOMINAL L/R	VERSION
17	ALTERNATIVE CH SELECTIVITY	±(400)kHz	dB	≥60	≥65	
18	OUTPUT LEVEL	MONO	mV	500±150	500±100	
19	RESIDUAL 19kHz & 38kHz		dB			
20	RDS SENSITIVITY	RDS VERSION ONLY	dBf	≤40.2	≤38.2	RDS (ONLY)

● AM SECTION

Measuring methods in confirmity 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 = (594)kHz TP2 = (999)kHz TP3 = (1404)kHz (K, D/RDS, PT INDO)

MW TP1 = (600)kHz TP2 = (1000)kHz TP3 = (1400)kHz (A)

LW TP1 = (162)kHz TP2 = (207)kHz TP3 = (252)kHz (D/RDS)

NO	DESCRIPTION		UNIT	LIMIT L/R	NOMINAL L/R	VERSION
1	TUNING COVER RANGE	LOW ~ HIGH MW	kHz	522/1611		K,D/RDS,PT INDO
		MW	kHz	520/1710		A
		LW	kHz	153/279		D/RDS
	STEP	AUTO/Man.	kHz	9/9		K,D/RDS,PT INDO
		AUTO/Man.	kHz	10/10		A
2	USABLE SENSITIVITY	MW TP 1	uV/m	≤1000	≤800	
		TP 2	uV/m	≤1000	≤800	
	S/N = 20dB	TP 3	uV/m	≤1000	≤800	
3	S/N RATIO	MW	dB	≥35	≥40	
		LW	dB			
4	TOTAL HARMONIC DISTORTION		%	≤3	≤2	A,D/RDS,PT INDO
			%	≤2	≤1	K
5	OVER LOAD DISTORTION 5mV 80% MOD.		%	≤15	≤10	
6	FREQUENCY RESPONSE at -6dB	MW	Hz	120/2K	100/2.2K	
		LW	Hz			
7	SELECTIVITY 10kHz/9kHz	MW	dB	≥20	≥25	
		LW	dB			
8	AGC FIGURE OF MERIT		dB	≥40	≥45	
9	WHISTLE MODULATION	2IF	%	≤15	≤10	K,D/RDS,PT INDO
	INPUT = 1mV/m	3IF	%			
		2IF	%	≤20	≤10	A
		3IF	%			
10	IMAGE REJECTION	MW = TP 3	dB	≥25	≥28	
		LW = TP 3	dB			
11	TUNED LEVEL	MW	uV/m			
		LW	uV/m			
12	AUTO STOP LEVEL	MW	uV/m	800±6dB	800±5dB	
		LW	uV/m			
13	OUTPUT LEVEL		mV	160±50	160±30	K
			mV	200±70	200±50	A,D/RDS,PT INDO

● GENERAL

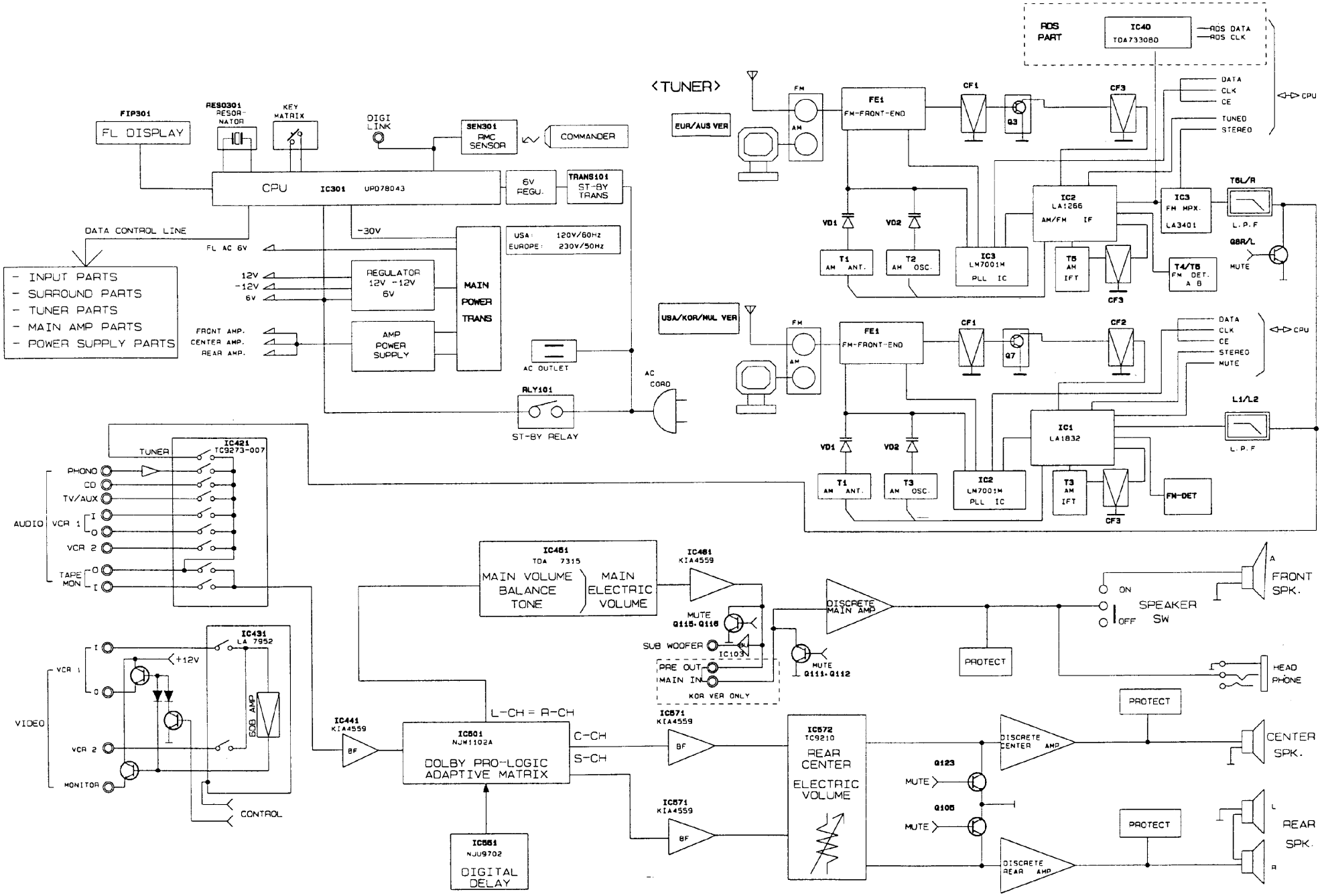
Power Consumption — A : 2.3A, D/RDS/K/PTINDO : 550W, Australia : 450W

Power Supplies — A - Vertion
AC 120V, 60Hz
D/RDS/Australia - Vertion
AC 230V, 50Hz
K - Vertion
AC 220V, 60Hz
PT INDO - Vertion
AC220V/110V, 50Hz/60Hz

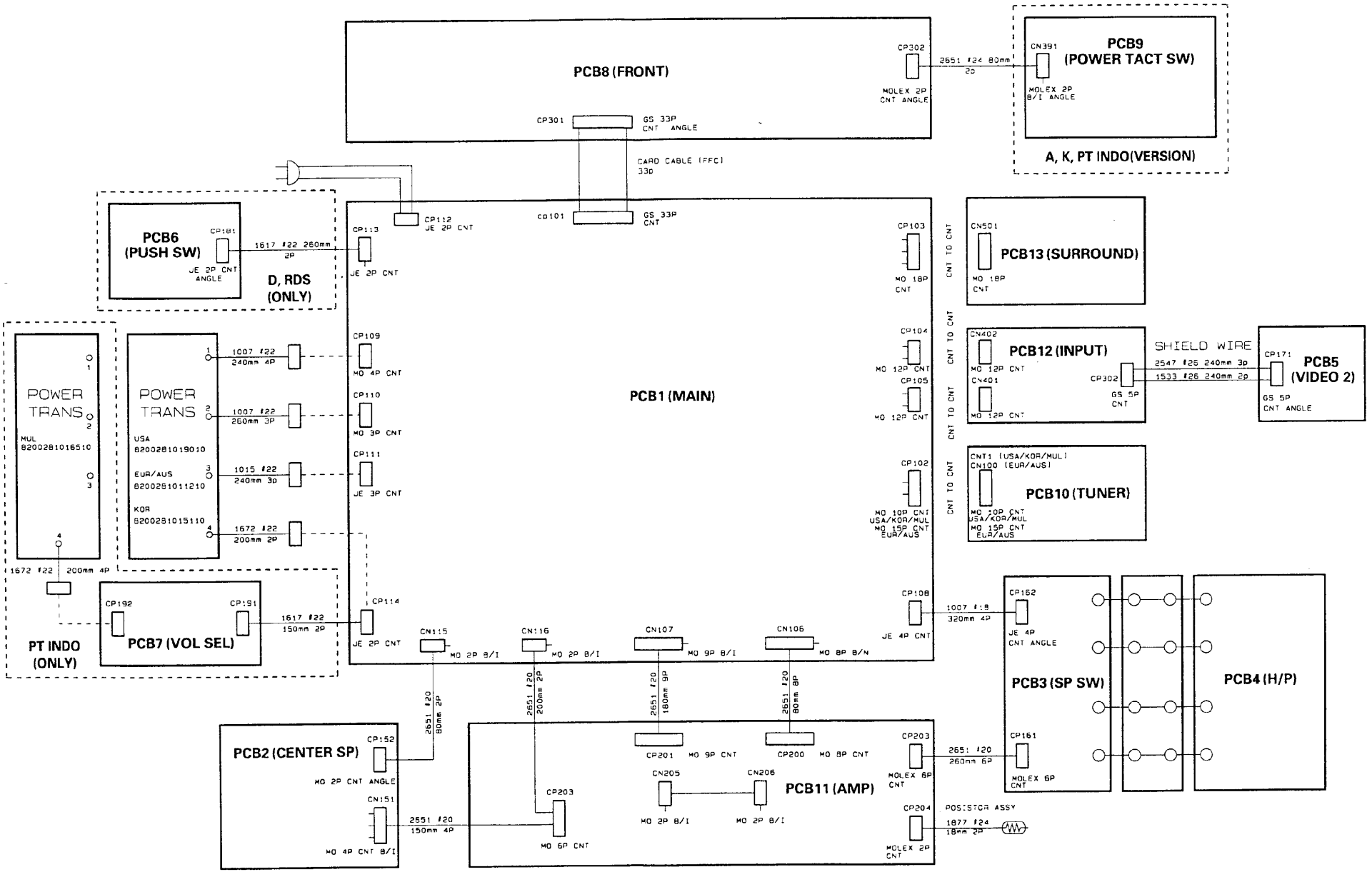
Dimension — 440 × 125 × 300mm
17 – 5/16 × 4 – 15/16 × 11.8Inchs

Weight (Net) — 10.5Kg

BLOCK DIAGRAM



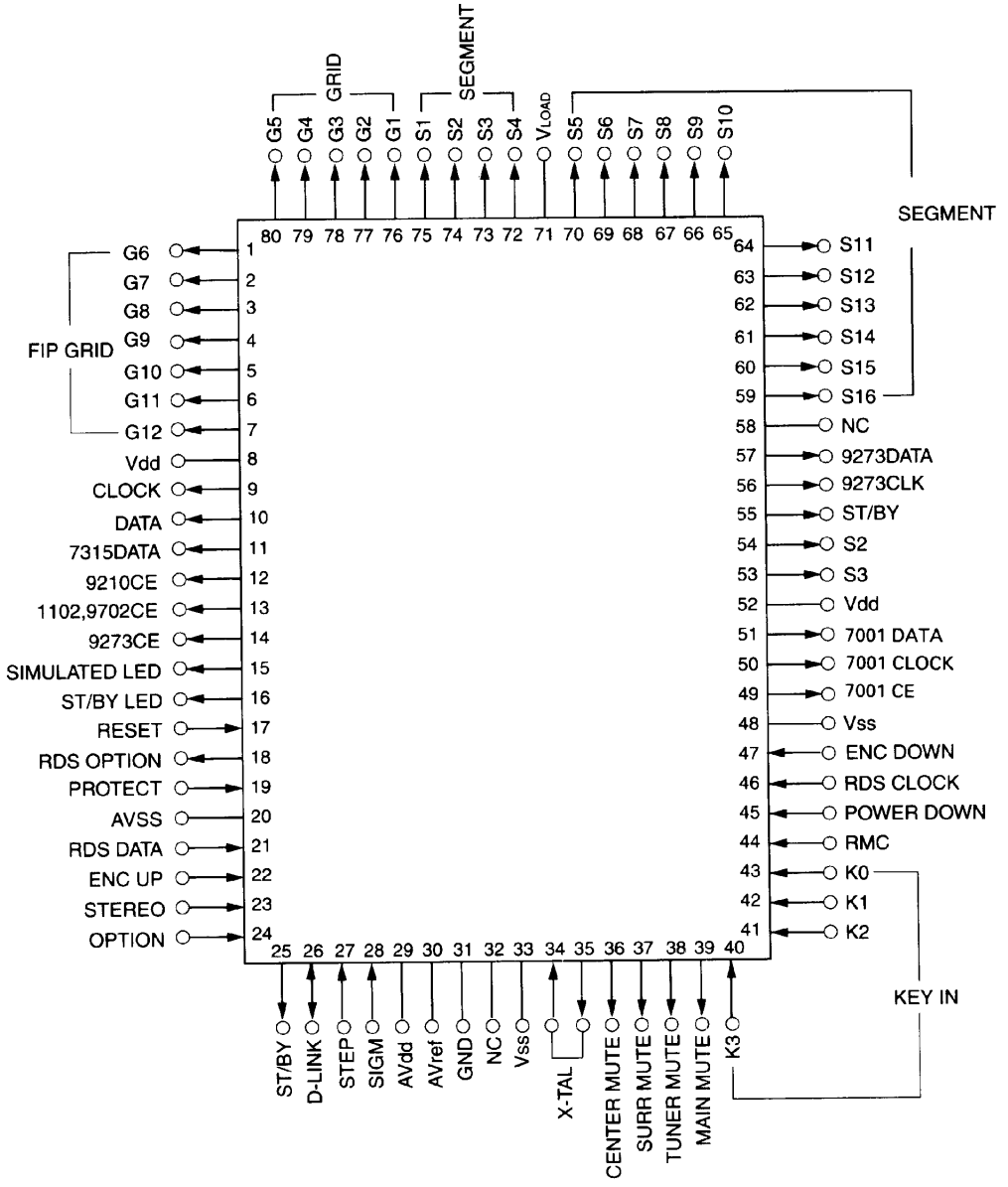
WIRING DIAGRAM



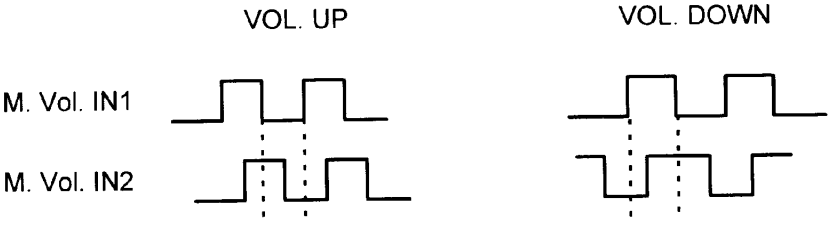
CIRCUIT DESCRIPTION

IC301 : μPD 78043AGF-209 -3B9

1. Pin Description



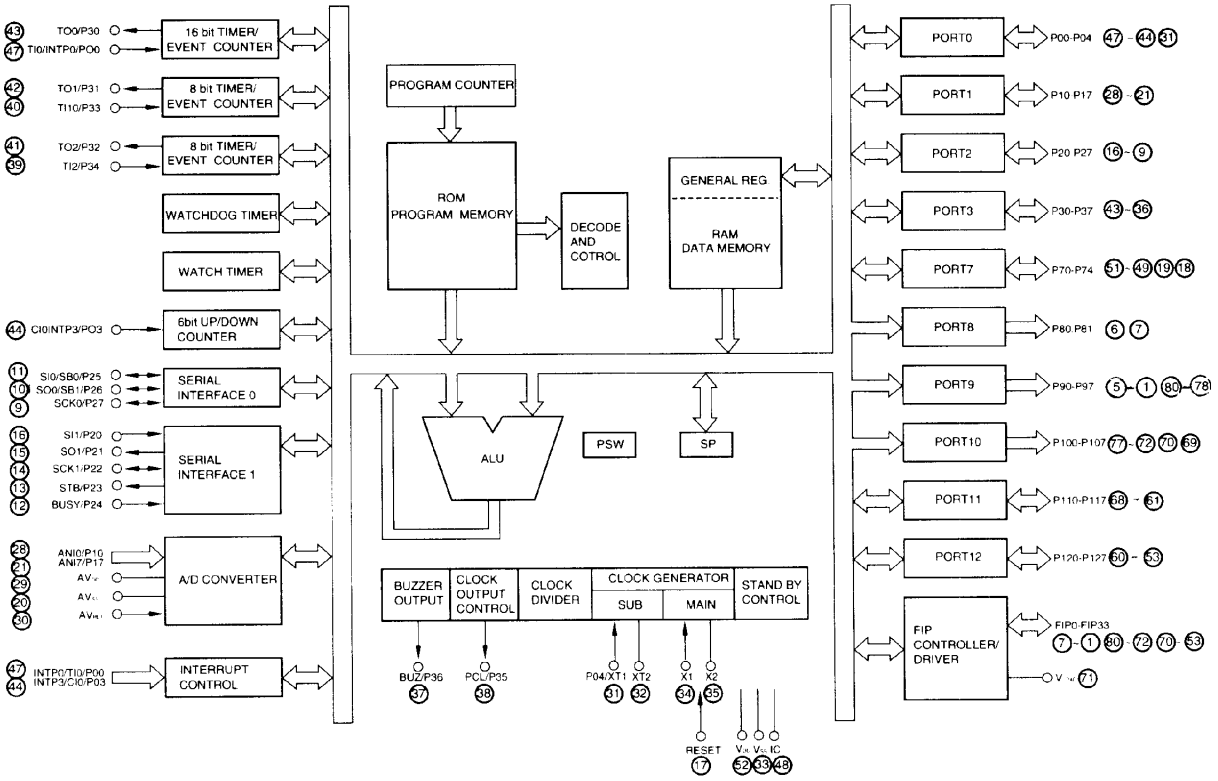
2. Input & Output Terminal Functions

<table>
<tr><th>Pin No.</th><th>Symbol</th><th>Description</th></tr>
<tr><td>1～7</td><td>G6～G12</td><td>Grid signal output for FIP.</td></tr>
<tr><td>8</td><td>Vdd</td><td>+5V power supply.</td></tr>
<tr><td>9</td><td>CLK</td><td>Output, clock signal to TC9273, NJW1102, NJU9702 and TDA7315.</td></tr>
<tr><td>10</td><td>DATA</td><td>Output, data signal to TC9273, NJW1102 and NJU9702.</td></tr>
<tr><td>11</td><td>7315 DATA</td><td>Output, data signal to TDA7315.</td></tr>
<tr><td>12</td><td>9210 CE</td><td>Chip enable output for TC9210.</td></tr>
<tr><td>13</td><td>1102, 9702 CE</td><td>Chip enable output for NJW1102 and NJU9702.</td></tr>
<tr><td>14</td><td>9273 CE</td><td>Chip enable output for TC9273.</td></tr>
<tr><td>15</td><td>SIMULATED LED</td><td>Each time the simulated button is pressed, the "SIMULATED LED" light on or off.</td></tr>
<tr><td>16</td><td>ST/BY LED</td><td>Output for driving STAND BY LED.(At "H", it is active)</td></tr>
<tr><td>17</td><td>RESET</td><td>Input for resetting CPU.(At "H", it is active)</td></tr>
<tr><td>18</td><td>RDS OPTION</td><td>Control output for RDS mode.(This output is used only for R125RDS)</td></tr>
<tr><td>19</td><td>PROTECT</td><td>Signal input for protection.
When "L" is input, it is changed to STAND BY mode.</td></tr>
<tr><td>20</td><td>AVss</td><td>This pin provides the ground potential.</td></tr>
<tr><td>21</td><td>RDS DATA</td><td>RDS data input of TDA7330BD.(This input is used only for R125RDS)</td></tr>
<tr><td>22/47</td><td>ENC UP/DOWN</td><td>Input for main volume up and down.
 
</td></tr>
<tr><td>23</td><td>STEREO</td><td>Input for lighting the "STEREO" indicator.(At "L", it is active)</td></tr>
<tr><td>24</td><td>OPTION</td><td>Input for selecting R125R, R125RDS and RV-5020R mode.</td></tr>
<tr><td>25</td><td>ST/BY</td><td>When the power is on, control data output is "H".
When the power is off, control data output is "L".</td></tr>
<tr><td>26</td><td>D-LINK</td><td>Input/Output for controlling digi-link |||.</td></tr>
<tr><td>27</td><td>STEP</td><td>According to region, input for selecting the frequency bands and steps and FM and AM
Settings are as follows
<table>
<tr><th>REGION</th><th>FREQUENCY BAND</th><th>STEP</th><th>PIN21(IC301)</th></tr>
<tr><td>USA/</td><td>FM: 87.5～107.9 MH</td><td>200 kHz</td><td></td></tr>
<tr><td>CANADA</td><td>AM: 520～1710 kHz</td><td>10 kHz</td><td>5 V</td></tr>
<tr><td>EUROPE</td><td>FM: 87.5～108 MHz</td><td>50 kHz</td><td></td></tr>
<tr><td></td><td>AM: 522～1611 kHz</td><td>9 kHz</td><td>2.5 V</td></tr>
<tr><td>KOREA</td><td>FM: 87.5～107.5 MH</td><td>200 kHz</td><td></td></tr>
<tr><td></td><td>AM: 522～1611 kHz</td><td>9 kHz</td><td>0 V</td></tr>
</table></td></tr>
<tr><td>28</td><td>SIGM</td><td>Input signal of FM.</td></tr>
<tr><td>29</td><td>AVdd</td><td>Power supply of analog A/D converter.</td></tr>
<tr><td>30</td><td>AVref</td><td>Referance voltage of analog A/D converter.</td></tr>
</table>

Pin No.	Symbol	Description
31	GND	Ground
32	NC	Not Used !
33	Vss	This pin provides the ground potential.
34/35	X-TAL	Input/Output for crystal oscilator.
36	CENTER MUTE	Output for center mute. Output is low level under the following conditions. 1. When power is turned on or off. 2. When center mode is on or off. 3. When center mode is switched. 4. When test tone mode is on or off, When the channels is changed the test tone mode. 5. When "L" is inputed to "PROTECTION" of CPU. 6. When "-∞ mute signal" is received from the commander.
37	SURR. MUTE	Output for surround mute. Output is low level under the following conditions. 1. When power is turned on or off. 2. When surround mode is on or off. 3. When test tone mode is on or off, When the channels is changed the test tone mode. 4. When delay time is changed. 5. When "L" is inputed to "PROTECTION" of CPU. 6. When "-∞ mute signal" is received from the commander. 7. When encoder volume or rear volume is minimum level.
38	TUNER MUTE	Output for tuner mute. Output is high level under the following conditions. 1. When power is turned on or off. 2. When tuner band is changed. 3. When tuning up or down button is pressed. 4. When preset button is pressed. 5. When displayed preset number is changed during memory scan. 6. When "L" is inputed to "PROTECTION" of CPU. 7. When "-∞ mute signal" is received from the commander.
39	MAIN MUTE	Output for main mute. Output is low level under the following conditions. 1. When power is turned on or off. 2. When function is changed. 3. When MONO or STEREO is changed. 4. When "L" is inputed to "PROTECTION" of CPU. 5. When "-∞ mute signal" is received from the commander. 6. When encoder volume is minimum level.
40 ~ 43	KEY IN3 ~ 0	Input data of $K_3 \sim K_0$ for key scan.
44	RMC	Input for remote control signal.(At "L", it is active)
45	PWR DN	Input for power down.(At "L", it is active)

<table>
<tr><th>Pin No.</th><th>Symbol</th><th>Description</th></tr>
<tr><td>46</td><td>RDS CLOCK</td><td>RDS clock signal input for TDA7330B.(This input is used only for R125RDS)</td></tr>
<tr><td>48</td><td>Vss</td><td>Ground</td></tr>
<tr><td>49</td><td>7001 CE</td><td>Chip enable output for LM7001.</td></tr>
<tr><td>50/51</td><td>7001 CLK/DATA</td><td>CLOCK/DATA signal output for LM7001.</td></tr>
<tr><td>52</td><td>Vdd</td><td>+5V power supply.</td></tr>
<tr><td>53/54</td><td>S3/S2</td><td>Output to select the video signal VCR1 or VCR2.
Output data for each mode is as follows.
MODE | S2 | S3 | REMARKS
VCR1 | L | H | Initial settings
VCR2 | H | L |
OTHERS | △ | △ | △: Previous state
* Last memory function is available</td></tr>
<tr><td>55</td><td>ST/BY</td><td>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.</td></tr>
<tr><td>56/57</td><td>9273 CLK/DATA</td><td>Output, clock/data signal to TC9273.</td></tr>
<tr><td>58</td><td>NC</td><td>Not Used !</td></tr>
<tr><td>59/60</td><td>SEG 16/15</td><td>Segment signal output for FIP.</td></tr>
<tr><td>61～68</td><td>SEG14～7</td><td>Segment signal output for FIP and key scan.</td></tr>
<tr><td>71</td><td>Vload</td><td>-30V Power supply for FIP.</td></tr>
<tr><td>69～75</td><td>SEG6～1</td><td>Segment signal output for FIP.</td></tr>
<tr><td>76～80</td><td>GRID1～5</td><td>Grid signal output for FIP.</td></tr>
</table>

3. Block Diagram



4. Key Matrix

	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	SIMUL	3STEREO	PROLOGIC	OFF	MEMORY	MODE	FM MODE
KEY IN1 PIN 42	RDS	THEATER	HALL	TV/AUX	BASS (△)	BASS (▽)	BALANCE (△)	BALANCE (▽)
KEY IN2 PIN 41	AF	PHONO	FM	POWER	TREBLE (△)	TREBLE (▽)	TUNNING (△)	TUNNING (▽)
KEY IN3 PIN 40	PTY	AM		TAPE MON	CD		VCR2	VCR1

ALIGNMENT PROCEDURES

TUNER

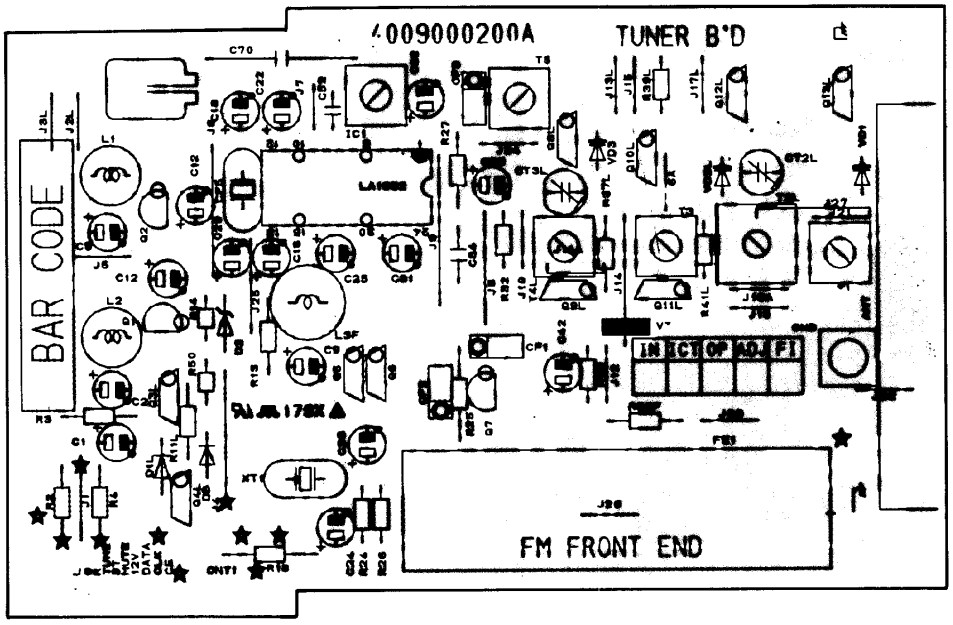
1. Equipment Required

- 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 to speaker terminal of L or R channel	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)	IF genescope to speaker terminal of L or R channel	T5 AM IFT	Symmetrical curve on AM IF genescope

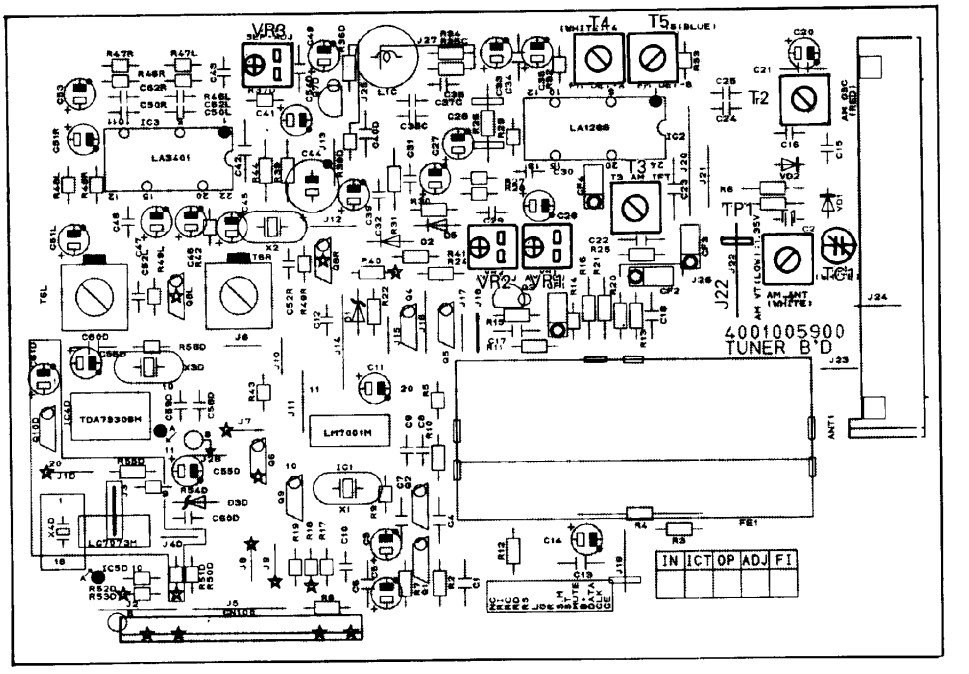
2-3. FM Alignment

- 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 μV/m	98.1 MHz (98.0 MHz)	Distortion meter to speaker terminal of L or R channel	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±0.2V
2	RF Tuning	594 kHz	594 kHz 1)	AC voltmeter and oscilloscope to speaker terminal of L or R channel	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	IF genescope to speaker terminal of L or R channel	T3 AM IFT	Symmetrical curve on AM IF genescope
4	Tuned Level	999kHz 800 μV/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 to TAPE OUT jack of L or R channel	T5	Minimize distortion
3	Tuned Level	98.0 MHz SSG output level : 10 μV/m	98.0 MHz		VR2	"Tuned" flag in the FL display light on

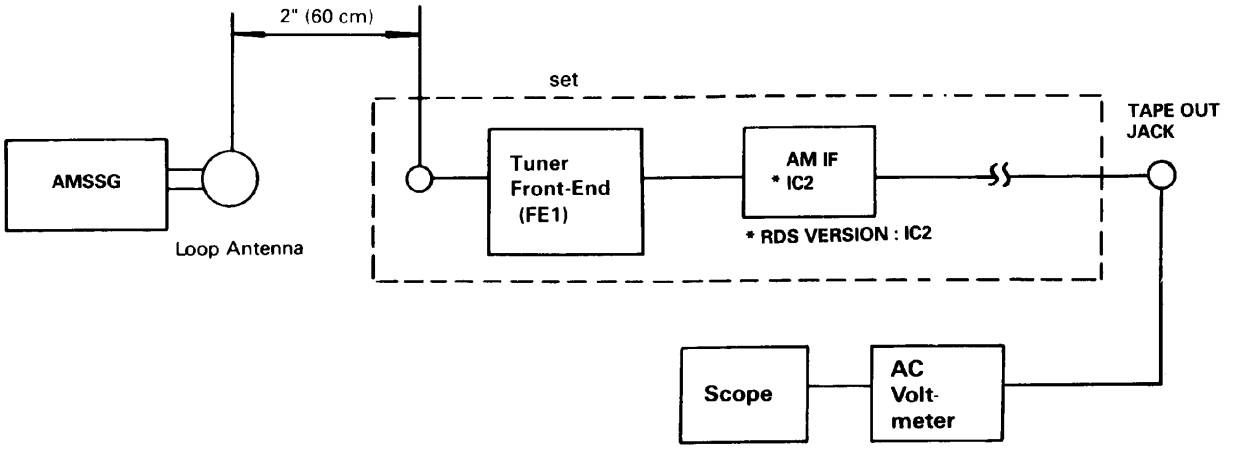
3-5. MPX Alignment

- Signal generator frequency : 98 MHz
- Signal generator deviation : 40 kHz
- RF signal frequency : 1 kHz
- Signal generator output level : 1000 μV/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

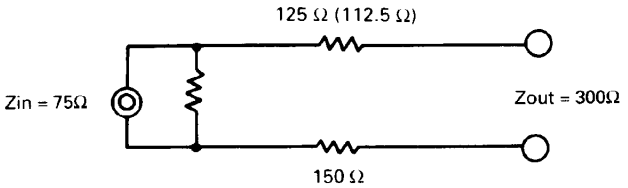
Step	Subject	19 kHz Modulation Level	Signal Generator Setting	Equipment Connection	Adjustment Point	Adjust for
1	Separation R → L	8 % Modulation	Pilot on	AC voltmeter to speaker terminal of R channel	VR3	Set AC voltmeter to 0 dB
				AC voltmeter to speaker terminal of L channel		AC voltmeter reading should be at least 20 dB below
2	Separation L → R	8 % Modulation	Pilot on	AC voltmeter to speaker terminal of L channel	VR3	Set AC voltmeter to 0 dB
				AC voltmeter to speaker terminal of R channel		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 abtain -20 dB readings for both steps 3 and 4. Norminal is -25 dB.						

4. Equipment Connection

4-1. AM Alignment Connection

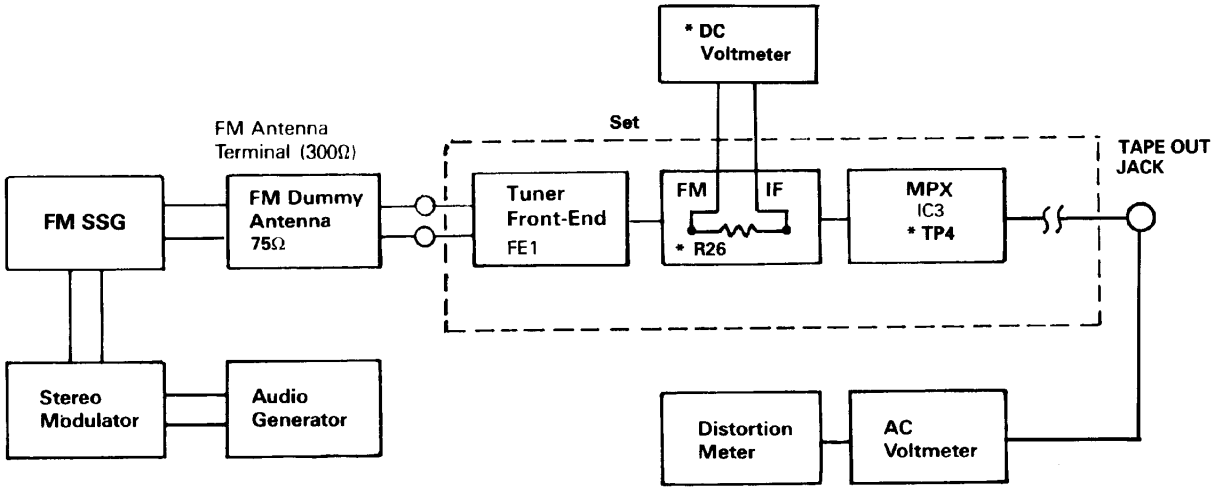


4-2. FM Dummy Antenna



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) Faulty AC power cord. Replace. B) Defective the power switch. Replace. C) Broken wire in the power transformer. Replace the power transformer. 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 D120 or damaged transistor Q109. Replace the defective component(s). D) Short circuit in the amplifier circuit. Replace the shorted component(s) in the amplifier circuit.
Power indicator lights but no sound from both channels.	A) Defect in transistor Q210 L/R, Q205L/R on the Amp Board. Replace the defective component(s).
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) Defect in transistors Q210 L/R, Q205 L/R on the Main Amp Board Locate and correct the defect. B) Break in copper foil of printed circuit board. Repair the trace. C) Short in speaker output terminal. Repair or replace.
Speaker works normally but headphones inoperative.	A) Headphone plug does not mate with jack. Replace the jack. B) Defective resistor R161L/R. Replace.
FM inoperative	A) Defective front-end (FE). Replace. B) Defective FM switch. Replace the switch. C) Defective transistor Q3 and ICS (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 filters CFI,CF3 defective. Replace the defective ceramic filter(s). G) Defective controller circuit component. Replace.

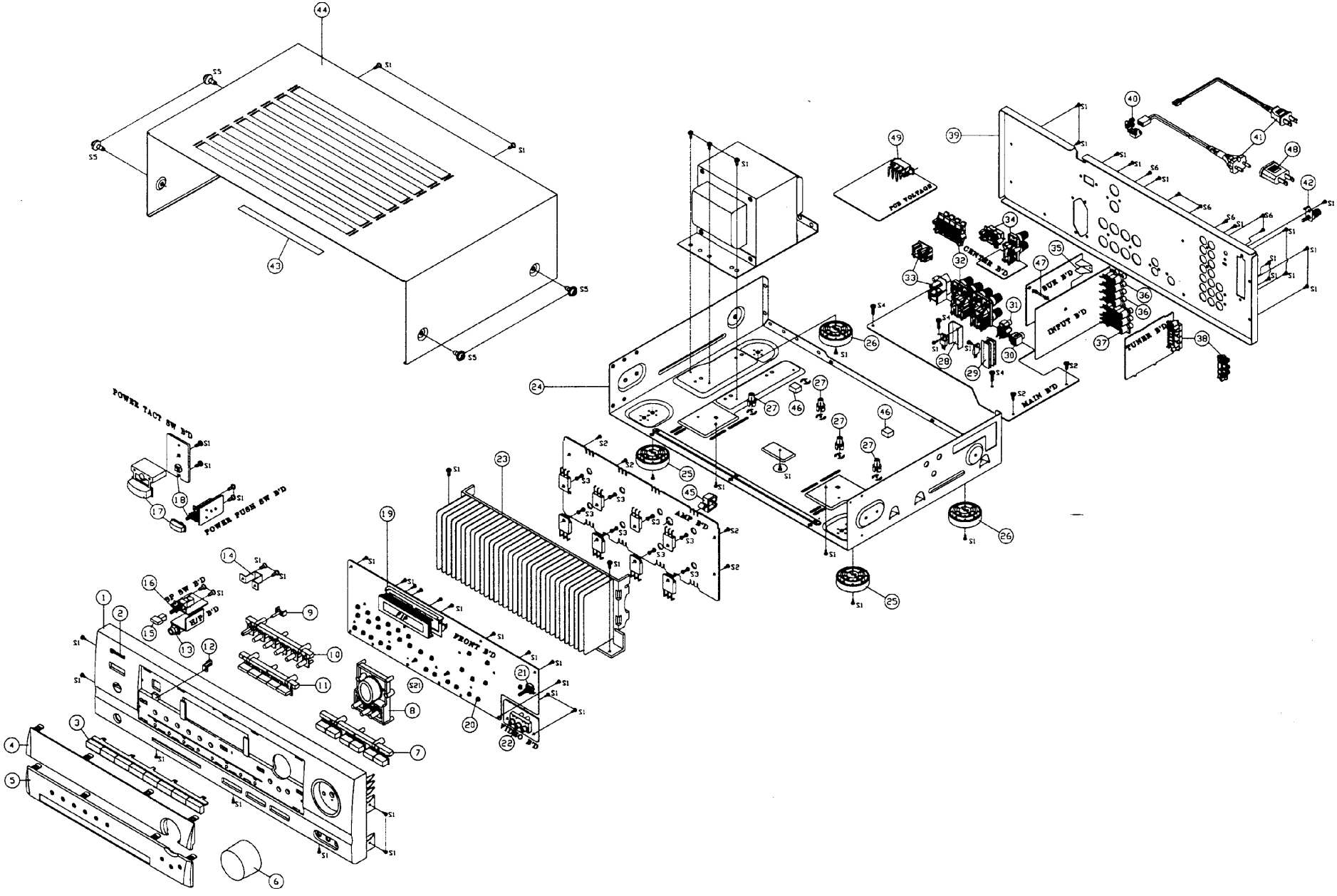
Symptom	Cause and Remedy
Poor multiplex separation.	A) Improper adjustment. Readjust VR3. (Refer to MPX Alignment.) B) IC3 defective. Replace. C) Variable resistor VR3 defective. Replace the variable resistor.
STEREO indicator does not light.	A) Defective indicator in FL. Replace. B) Improper adjustment of VR2 of tuner board. Make readjustment. C) Defective IC2. Replace the defective component.
FM volume insufficient.	A) If volume from both L and R channels is not loud enough : Front end section defective. Faulty IC2, Coil T4,T5. Defective C838 of Tuner Board. If sound of one channel is not loud enough: Defective VR3.
FM Mono has no effect.	A) Defective FM MODE switch. Replace.
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 AM switch. Replace. D) Defective varicap diodes VD1 Replace varicap diods(s). E) Damaged AM loop antenna. Repair or replace. F) Defective controller circuit component. Replace.
Bass control has no effect	A) Variable resistor BASS defective. Replace. B) Defective IC451. Replace the defective component(s).

Symptom	Cause and Remedy
Treble control has no effect.	A) Variable resistor TREBLE defective. B) Defective IC451. Replace the defective components(s).
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.
Manual tune inoperative. (UP/DOWN) (AM or FM)	A) Poor contact in Up/Down key. Replace. B) Defective IC301. Replace.
Memory setting inoperative.	A) Poor contact in memory keys 1-10. Replace. B) Defective IC301. Replace the defective component.
FL inoperative.	A) FL defective. Replace. B) Defective IC301. Replace C) Defective X-TAL301. Replace.
Noisy volume control.	A) Defective encoder volume. Replace. B) Defective capacitors C303 or C304 Replace the defective capacitor(s).
Remote Control Unit inoperative.	A) Weak battery. Replace. B) Defective. Replace. C) Defective IC301 (CPU Board) Replace.

MECHANICAL PARTS LIST

*Parts without Parts No are not supplied.
*Parts with blank version are available in common.

Ref.No	Description	Part No.	Q'ty	Vertion
	PACKAGE			
	BOX CARTON	6017041790030	1	K (ONLY)
	BOX CARTON	6017041790050	1	
	POLY BAG	6330040092010	1	
	FLIM SOFT PE	6320040022011	1	
	CUSHION POLY	6230043764010	1	
	ACCESSORIES			
	ANTENNA AM LOOP STAND TYPE	E605010090000	1	A,K,PT INDO
	ANTENNA AM LOOP STAND TYPE	E601010000000	1	D,RDS
	JUMPER PLUG	L063040750000	1	
	ANTENNA WIRE	E605010020000	1	A,K,PT INDO
	ANTENNA WIRE	E605010010000	1	D,RDS
	MATCHING TRANS	L109284007200	1	D,RDS
	COMMANDER ASS'Y	830004025T060	1	K (ONLY)
	COMMANDER ASS'Y	830004025T050	1	
	BATTERY 1.5V AA (R6M)	G670001R50010	2	
	ADAPTER AC PLUG	L109283004100	1	PT INDO (ONLY)
	WARRANTY CARD	5727041570010	1	A, K
	WARRANTY CARD	5727040060010	1	PT INDO
	WARRANTY CARD	5727041620020	1	D,RDS
	INSTRUCTION MANUAL	5707046890020	1	K
	INSTRUCTION MANUAL	5707046890040	1	PT INDO
	INSTRUCTION MANUAL	5707046890010	1	D,RDS
	CABINET & CHASSIS			
1	PANEL FRONT	3067046321020	1	RDS (ONLY)
(1)	PANEL FRONT	3067046321010	1	
2	BADGE	5637040371010	1	
(2)	BADGE	5637040501010	1	K (ONLY)
3	BUTTON FUNCTION	5097089881010	1	
4	WINDOW DISPLAY	5077045083010	1	
5	CAP DECORATION	5127041061010	1	
6	MAIN KNOB	5080041521010	1	
7	BUTTON UP DOWN	5097089901010	1	
8	BUTTON TUNING	5097089891010	1	
9	INDICATOR LED	5160041101010	1	
10	BUTTON SURROUND	5090089861010	1	
11	BUTTON RDS	5090089971010	1	D,RDS (ONLY)
12	INDICATOR STAND-BY	5160040643010	1	
13	HEADPHONE JACK	G402040161330	1	
14	BRACKET PHONE JACK	4010051456010	1	
15	BUTTON SPEAKER	5090089911010	1	
16	SW PUSH (SPKR)	G000040890000	1	
17	BUTTON POWER (PUSH)	509005399101A	1	D (ONLY)
(17)	BUTTON POWER (TACT)	5090059071010	1	
18	SW PUSH (POWER)	G000041590000	1	D (ONLY)
(18)	SW TACT (H : 5)	G180000270010	1	
19	HOLDER FL	432004078101A	1	
20	SW TACT	G180000270010	26	
21	VR ROTARY ENCODER	C49004106001A	1	
22	VCR JACK (3P)	G606040310000	1	
23	HEATSINK POWER	2120040877010	1	
24	CHASSIS MAIN	3200044776020	1	
25	FOOT PL (H/S)	4007040201010	2	
26	FOOT PL	4000040201010	2	
27	SPACER KNOB	4300040561010	4	
28	HEATSINK REG TR	2120044808010	1	
29	HEATSINK REG TR	2120044308010	1	
30	RCA JACK (1P)	G600101260010	1	
31	RCA JACK (2P)	G601200430040	1	
32	SPEAKER TERMINAL PUSH TYPE (8P)	G598041680010	1	
(32)	SPEAKER TERMINAL SCREW TYPE (8P)	G614081036000	1	D (ONLY)
33	AC OUTLET	G435000160010	1	K
(33)	AC OUTLET	G435040140000	1	A
(33)	AC OUTLET	G435040110000	1	D,PT INDO
34	SPEAKER TERMINAL PUSH TYPE (2P)	G592040270000	1	
(34)	SPEAKER TERMINAL SCREW TYPE (2P)	G611040310000	1	D (ONLY)
35	BRACKET INSERT	3070045586010	1	
36	RCA JACK (4P)	G602400450020	2	
37	RCA JACK (9P)	G607901500020	1	
38	ANT TERMINAL (SCREW)	G59004046000A	1	
(38)	ANT TERMINAL (PUSH)	G594040530000	1	
39	CHASSIS BACK	3270053466010	1	K
(39)	CHASSIS BACK	3270053466020	1	D
(39)	CHASSIS BACK	3270053466030	1	A
(39)	CHASSIS BACK	3270053466040	1	RDS
(39)	CHASSIS BACK	3270053466050	1	PT INDO
(39)	CHASSIS BACK	3270053466060	1	E
40	STOPPER CORD	4380040162010	1	
41	ASS'Y CORD POWER	L061040401030	1	
42	GND TERMINAL	G610040070010	1	
43	FELT STRIP	2690040057010	1	
44	COVER TOP	3000044756020	1	
45	CLAMP MICRO WIRE SADDLE	4330040623010	1	
46	SPONGE	4050044345010	2	
47	FASTENER	4420040253010	1	
48	ADAPTER	L109283004100	1	
49	VOLTAGE SELECTER (6P)	G060040540010	1	PT INDO (ONLY)
	HARDWARE KIT			
S1	SCREW, #B BTT 3 × 8B	B020030083B11	75	A,K
(S1)	SCREW, #B BTT 3 × 8B	B020030083B11	72	D
(S1)	SCREW, #B BTT 3 × 8B	B020030083B11	77	PT INDO
S2	SCREW, #B WPTT 3 × 6Y	B020030061W10	6	
S3	SCREW, HEAT SINK	1507041146010	8	
S4	SCREW, #B WPTT 3 × 18Y	B020030181X10	3	
S5	SCREW, #B BSAM 4 × 8B	B020940083B10	4	
S6	SCREW, GND	1507040996010	3	
(S6)	SCREW, GND	1507040996010	6	D (ONLY)


POWER TACT SW B'D
POWER PUSH SW B'D
MP SW B'D
KEY B'D
FRONT B'D
VOLTAGE
CENTER B'D
SUB B'D
INPUT B'D
TUNER B'D
MAIN B'D
AMP B'D

ELECTRICAL PARTS LIST

*Parts without Parts No are not supplied.
*Parts with blank vertion are available in common.

Ref. No	Description						Part No.	Q'ty	Version
PCB1	**ASSEMBLY P.C.BOARD MAIN**						**7028041218600**		**K**
PCB1	**ASSEMBLY P.C.BOARD MAIN**						**7028040941900**		**A**
PCB1	**ASSEMBLY P.C.BOARD MAIN**						**7028040944600**		**PT INDO**
PCB1	**ASSEMBLY P.C.BOARD MAIN**						**7028040945210**		**E**
PCB1	**ASSEMBLY P.C.BOARD MAIN**						**7028040946200**		**D,RDS**
	CAPACITORS								
C101/102	ELECTROLYTIC SG	6800	μF	63 V	V		D040682088360	2	
C103-105	MYLAR	0.047	μF	100 V	J		D02047306C060	3	
C106/107	ELECTROLYTIC SG	1000	μF	35 V	M		D040102085200	2	
C108/109	ELECTROLYTIC SG	10	μF	50 V	M		D040100087050	2	
C110	ELECTROLYTIC SG	47	μF	50 V	M		D040470087100	1	
C111-113	MYLAR	0.01	μF	400 V	K		D02010306K080	3	
C114	ELECTROLYTIC SG	220	μF	35 V	M		D040221085100	1	
C115	ELECTROLYTIC SG	10	μF	50 V	M		D040100087050	1	
C116	ELECTROLYTIC SD	220	μF	50 V	M		D040221087130	1	PT INDO
C117	CERAMIC AC(SAFETY)	0.0047	μF	250 V	V		D00847208K03D	1	
C118/119	MYLAR	0.047	μF	100 V	J		D02047306C060	2	
C120L/R	ELECTROLYTIC SG	1	μF	50 V	M		D040010087050	2	
C121	CERAMIC TUBULAR	0.0047	μF	16 V	X		D005472773530	1	D
C122	CERAMIC DISC	0.0047	μF	50 V	Z		D00447209706O	1	D
C123	MYLAR	0.047	μF	100 V	J		D02047306C060	1	
C124	CERAMIC DISC	0.0047	μF	50 V	Z		D00447209706O	1	D
C125L/R	CERAMIC TUBULAR	100	pF	50 V	B		D001101077530	2	K
C126L/R	CERAMIC TUBULAR	100	pF	50 V	B		D001101077530	2	K
C127	CERAMIC DISC	0.1	μF	275 V	M		D02010408H210	1	
C128/129	ELECTROLYTIC SG	4.7	μF	50 V	M		D0404R7087100	2	
C130	ELECTROLYTIC SG	1	μF	50 V	M		D040010087050	1	
C131L/R	CERAMIC DISC	0.0047	μF	50 V	Z		D00447209706O	2	D
C132L/R	CERAMIC TUBULAR	0.0047	μF	16 V	X		D005472773530	2	D
C133	ELECTROLYTIC SG	47	μF	35 V	M		D040470085100	1	
C134	CERAMIC DISC	270	pF	50 V	J		D005271077530	1	
C135	ELECTROLYTIC SG	22	μF	16 V	M		D040220083100	1	
C136	CERAMIC TUBULAR	100	pF	50 V	B		D001101077530	1	
C137/138	ELECTROLYTIC SG	47	μF	16 V	M		D040470083100	2	
	CONNECTORS								
CP101	FPC, 33P, 1.25MM						L131120330010	1	
CP102	WAFER, 15P, 2.5MM						L102532911910	1	
CP103	WAFER, 18P, 2.0MM						L101353361810	1	
CP104/105	WAFER, 12P, 2.0MM						L101353361210	2	
CP108	PLUG JE202A1T4 ST4P						L104202000400	1	
CP109	WAFER, 4P, 2.5MM						L102526704010	1	
CP110	WAFER, 3P, 2.5MM						L102526703010	1	
CP111	PLUG JE202A1T4 ST3P						L104202000300	1	
CP112	PLUG AC GSCS-1301 AC7A						L104020020000	1	K,D,PT INDO
CP112	PLUG AC GSCS-1302 AC7A						L104020040000	1	A
CP113	PLUG JE202B1T2 ST2P						L108202000220	1	D
CP114	PLUG AC S-2 2P						L103020000000	1	
	DIODES								
D101-104	1N4003						K040400300520	4	
D106-109	1N4003						K040400300520	4	
D110	ZENER, UZ18V						K060180024520	1	
D111	RECTIFIER D5SBA60						K047056000010	1	
D112/113	1N4148						K000414801520	2	
D114	1N4003						K040400300520	1	
D115	1N4148						K000414801520	1	
D116	ZENER, UZ9.1V						K06609R124520	1	
D117	ZENER, UZ30V						K060300034520	1	
D118	ZENER, UZ12V						K060120034520	1	
D119	ZENER, UZ5.1V						K06005R114520	1	
D121/122	1N4148						K000414801520	2	
D123	ZENER, UZ5.1V						K06005R114520	1	
D125	ZENER, UZ6.2V						K06006R214520	1	
	FUSES								
F101	SB 5A/125V						G650502121150	1	A
F101	TL 3.15A/250V						G650312251160	1	D,PT INDO
F101	SB 3.15A/250V						G650312251140	1	K
F102	SB 2A/125V						G650202121150	1	A
F102	TL 1A/250V						G650102251160	1	D
F103	NB 250mA/125V						G650251121160	1	A
F103	TL 160mA/250V						G650161251160	1	D,PT INDO
F103	SB 160mA/250V						G650161251140	1	K
F104/105	NB 1A/125V						G650102121160	2	A
F104/105	TL 630mA/250V						G650631251160	2	D,PT INDO
F104/105	SB 1A/250V						G650102251140	2	K

Ref. No	Description						Part No.	Q'ty	Version
	INTEGRATED CIRCUITS								
IC101	KA7812						J126781200120	1	
IC102	KA7912						J126791200050	1	
IC103	KIA4559						J121455900010	1	
	COIL								
L101	INDUCTOR, 10uH						D330100700520	1	
	TRANSISTORS								
Q101	KTC3227, NPN						J5033227Y0050	1	A,D,K
Q101	KTD2059, NPN						J5032059Y0000	1	PT INDO
Q102	BKTC3199, NPN						J5023199Y0050	1	
Q103	DTC114YS, NPN						J6020114Y0050	1	
Q105	DTC323TS, NPN						J602323TS0050	1	
Q106/107	DTA114YS, PNP						J6000114Y0010	2	
Q108	2SC1740S, NPN						J5021740S0010	1	
Q109	DTC114YS, NPN						J6020114Y0050	1	
Q111/112	DTC323TS, NPN						J602323TS0050	2	
Q113	DTA114YS, PNP						J6000114Y0010	1	
Q114	DTC114YS, NPN						J6020114Y0050	1	
Q115/116	DTC323TS, NPN						J602323TS0050	2	K
Q121	DTC114YS, NPN						J6020114Y0050	1	
Q122	DTA114YS, NPN						J6000114Y0010	1	
Q123	DTC323TS, NPN						J602323TS0050	1	
	RESISTORS								
R101/102	METAL FILM	15	ohm	1 W	J		C060015065520	2	
R103	CARBON FILM	5.6	kohm	1/5 W	J		C00005629P520	1	
R104	METAL FILM	2.2	kohm	1 W	J		C060022655520	1	A,D,K
R104	METAL FILM	2.2	kohm	2 W	J		C060010266520	1	PT INDO
R105	METAL FILM	2.2	ohm	1/5 W	J		C0602R206P520	1	
R106	METAL FILM	1.5	kohm	1/5 W	J		C0601526P520	1	
R107	METAL FILM	3.3	kohm	1/5 W	J		C060033574530	1	A
R108	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R109	CARBON FILM	22	kohm	1/5 W	J		C00002236P520	1	
R110	METAL FILM	2.2	ohm	1/5 W	J		C0602R206P520	1	
R111	CARBON FILM	15	kohm	1/5 W	J		C00001536P520	1	
R112	METAL FILM	68	kohm	1/5 W	J		C06006806P520	1	
R113	CARBON FILM	10	kohm	1/4 W	J		C000010063520	1	
R114	CARBON FILM	22	kohm	1/5 W	J		C00002236P520	1	
R115	CARBON FILM	470	kohm	1/5 W	J		C00004746P520	1	
R116L/R	METAL FILM	470	ohm	1/5 W	J		C06004716P520	2	K
R117L/R	METAL FILM	470	ohm	1/5 W	J		C06004716P520	2	K
R118L/R	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	2	
R119	METAL FILM	1	kohm	1/5 W	J		C06001026P520	1	
R120L/R	METAL FILM	1	kohm	1/5 W	J		C06001026P520	2	
R121	METAL FILM	1	kohm	1/5 W	J		C06001026P520	1	
R122	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	
R123	METAL FILM	1	kohm	1/5 W	J		C06001026P520	1	
R124	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	
R125	METAL FILM	4.7	kohm	1/5 W	J		C06004726P520	1	
R126	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	
R127	CARBON FILM	47	kohm	1/5 W	J		C00004736P520	1	
R128	METAL FILM	4.7	kohm	1/5 W	J		C06004726P520	1	
R129	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R130/131	CARBON FILM	33	kohm	1/5 W	J		C00003336P520	2	
R132	METAL FILM	470	ohm	1/5 W	J		C06004716P520	1	
R133	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	
R136	METAL FILM	470	ohm	1/5 W	J		C06004716P520	1	
R138	METAL FILM	1	kohm	2 W	J		C060010266520	1	PT INDO
	MISCELLANEOUS								
TRANS101	POWER TRANS						8200281019010	1	A
TRANS101	POWER TRANS						8200281011210	1	D
TRANS101	POWER TRANS						8200281015110	1	K
TRANS101	POWER TRANS						8200281016510	1	PT INDO
TRANS102	ST/BY TRANS						8200280960010	1	A
TRANS102	ST/BY TRANS						8201280000010	1	D,K
TRANS102	ST/BY TRANS						8200281011010	1	PT INDO
RL101	RELAY CR-7DC 12V						G680125020010	1	A,D,K
RL101	RELAY SDT-SS-112DM						G680125030010	1	PT INDO
G101-103	TERMINAL GND						379004069601O	3	
SW181	ESB-8236V						G000041590000	1	D
SW191	SDJL4SBKP001						G060040540010	1	PT INDO
PCB2	**ASSEMBLY P.C.BOARD CENTER SP**								
	CAPACITORS								
C151	MYLAR	0.047	μF	100 V	J		D02047306C060	1	

Ref. No	Description						Part No.	Q'ty	Version
C152	CERAMIC DISC	0.0047	μF	50 V	Z		D00447209706O	1	D
C153	CERAMIC TUBULAR	0.0047	μF	16 V	X		D005472773530	1	D
	RESISTORS								
R151	CARBON FILM	10	ohm	1/4 W	J		C000010063520	1	
	CONNECTOR								
CP152	WAFER, 2P, 2.5MM, ANGLE						L102526802010	1	
PCB3	**ASSEMBLY P.C.BOARD SP SW**								
	CONNECTORS								
CP161	WAFER, 6P, 2.5MM, ANGLE						L102526806010	1	
CP162	PLUG, 4P, ANGLE						L104202000410	1	
	MISCELLANEOUS								
SW161	PUSH BLOCK TR2112						G000040890000	1	
PCB4	**ASSEMBLY P.C.BOARD H/P**								
	CAPACITORS								
C161L/R	CERAMIC DISC	560	pF	50 V	J		D005561077530	2	D
C162L/R	MYLAR	0.047	μF	100 V	J		D02047306C060	2	
	RESISTORS								
R161L/R	METAL FILM	10	ohm	1 W	J		C060010065520	2	
R162L/R	METAL FILM	470	ohm	2 W	J		C060047166520	2	
R163L/R	CARBON FILM	15	kohm	1/5 W	J		C00001536P520	2	D
PCB5	**ASSEMBLY P.C.BOARD VIDEO2**								
	CAPACITORS								
C171L/R	CERAMIC TUBULAR	100	pF	50 V	B		D001101077530	2	D
C172L/R	CERAMIC TUBULAR	100	pF	50 V	B		D001101077530	2	D
C173	ELECTROLYTIC SG	47	μF	16 V	M		D040470083100	1	
	RESISTORS								
R171L/R	METAL FILM	1	kohm	1/5 W	J		C06001026P520	2	
R172	METAL FILM	75	ohm	1/5 W	J		C06007506P520	1	
	CONNECTOR								
CP171	WAFER, 5P, 2.0MM, ANGLE						L101220050010	1	
PCB6	**ASSEMBLY P.C.BOARD PUSH SW**								**D,RDS(ONLY)**
	CONNECTOR								
CP181	PLUG, 2P, ANGLE						L108202000230	1	
PCB7	**ASSEMBLY P.C.BOARD VOL SEL**								**PT INDO(ONLY)**
	CONNECTORS								
CP191	PLUG, 2P						L108202000220	1	
CP192	PLUG, 4P						L108202000420	1	
F106	TL 3.15A/250V						G650312251160	1	
PCB8	**ASSEMBLY P.C.BOARD FRONT**						**7028041218800**		**K**
PCB8	**ASSEMBLY P.C.BOARD FRONT**						**7028040942100**		**A**
PCB8	**ASSEMBLY P.C.BOARD FRONT**						**7028040944800**		**PT INDO**
PCB8	**ASSEMBLY P.C.BOARD FRONT**						**7028040946200**		**D,E**
PCB8	**ASSEMBLY P.C.BOARD FRONT**						**7028040945400**		**RDS**
	CAPACITORS								
C301	ELECTRONIC SG	0.047	μF	5.5 V	V		D090473704010	1	
C302	ELECTROLYTIC SG	47	μF	16 V	M		D040470083100	1	
C303	ELECTROLYTIC SG	2.2	μF	50 V	M		D0402R2087100	1	
C304	CERAMIC DISC	0.1	μF	50 V	Z		D005104097530	1	
C305	ELECTROLYTIC SG	10	μF	50 V	M		D040100087100	1	
C306/307	CERAMIC DISC	0.1	μF	50 V	Z		D005104097530	2	
C308/309	CERAMIC DISC	0.047	μF	50 V	Z		D005473097530	2	
C310/311	CERAMIC DISC	0.1	μF	50 V	Z		D005104097530	2	
	CONNECTORS								
CP301	FPC, 33P, 1.25MM, ANGLE						L131120330020	1	
CP302	WAFER 2.0MM						L101530150210	1	A,K,PT INDO
	DIODES								
D301-312	1N4148, Switching						K000414801520	2	
	INTEGRATED CIRCUITS								
IC301	UPD78044AGF						J020780442090	1	
	LEDS								
LED301/302	SLR-34YCN49						K500034101240	2	
LED302	SLR-34URCN49						K500032101240	1	

Ref. No	Description						Part No.	Q'ty	Version
	TRANSISTORS								
Q301-303	DTC114YS, NPN						J6020114Y0050	3	
Q304	DTC114TS, NPN						J600114TS0050	1	A,K,PT INDO
	RESISTORS								
R301-310	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	10	
R311-314	METAL FILM	4.7	kohm	1/5 W	J		C06004726P520	4	
R315	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	
R316	CARBON FILM	7.5	kohm	1/5 W	J		C00007526P520	1	
R317	CARBON FILM	22	kohm	1/5 W	J		C00002236P520	1	
R318/319	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	2	
R320/321	CARBON FILM	68	kohm	1/5 W	J		C00006836P520	2	
R322	METAL FILM	100	ohm	1/5 W	J		C06001016P520	1	
R323/324	METAL FILM	4.7	kohm	1/5 W	J		C06004726P520	2	A,K,PT INDO
R325	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	D,K,PT INDO
R326	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	A,D,PT INDO
R327	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R328	CARBON FILM	51	kohm	1/5 W	J		C00005136P520	1	
R329	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R330/331	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	2	RDS
R332	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R333	METAL FILM	150	ohm	1/5 W	J		C06001516P520	1	
R334	METAL FILM	270	ohm	1/5 W	J		C06002716P520	1	
R335	CARBON FILM	47	kohm	1/5 W	J		C00004736P520	1	A,K,PT INDO
R336	METAL FILM	100	ohm	1/5 W	J		C06001016P520	1	
	MISCELLANEOUS								
RESO301	CST4.19MGW						E830419000060	1	
SEN301	RMC MODULE CRV1G342						E940342210000	1	
SW301-310	SKHV10910D01						G180040500010	10	
SW311	SKHV10910D01						G180040500010	1	RDS
SW312-318	SKHV10910D01						G180040500010	7	
SW319-322	SKHV10910D01						G180040500010	4	RDS
SW323-330	SKHV10910D01						G180040500010	8	
FIP301	DISPLAY						K530000360010	1	
VR301	ROTARY ENCODER EVQ VER						C490041060001A	1	
PCB9	**ASSEMBLY P.C.BOARD POWER TACT SW**								**A,K,PT INDO**
	MISCELLANEOUS								
SW391	SKHV10910D01						G180040500010	1	
PCB10	**ASSEMBLY P.C.BOARD TUNER**						**7028040946400**		**D,E**
PCB10	**ASSEMBLY P.C.BOARD TUNER**						**7028040945600**		**RDS**
	CAPACITORS								
C1	CERAMIC TUBULAR	0.022	μF	25 V	F		D005223574530	1	
C2	CERAMIC DISC	0.047	μF	50 V	Z		D004473097060	1	
C3	ELECTROLYTIC SG	3.3	μF	50 V	M		D0403R3087100	1	
C4	CERAMIC TUBULAR	0.001	μF	16 V	B		D005102077530	1	
C5	ELECTROLYTIC SG	47	μF	16 V	M		D0404708310O	1	
C6	CERAMIC TUBULAR	0.022	μF	25 V	F		D005223574530	1	
C7	CERAMIC TUBULAR	0.01	μF	16 V	Y		D005103773530	1	
C8/9	CERAMIC DISC	18	pF	50 V	CH		D000180167070	2	
C10	CERAMIC DISC	100	pF	50 V	J		D004101067060	1	
C11	ELECTROLYTIC SG	47	μF	16 V	M		D0404708310O	1	
C12	CERAMIC DISC	0.022	μF	50 V	Z		D004223097060	1	
C13	CERAMIC TUBULAR	0.022	μF	25 V	F		D005223574530	1	
C14	ELECTROLYTIC SG	100	μF	16 V	M		D0401010831O0	1	
C15	POLY	470	pF	50 V	J		D022471067050	1	
C16	CERAMIC DISC CH	15	pF	50 V	J		D000150167070	1	
C17/18	CERAMIC TUBULAR	0.022	μF	25 V	F		D005223574530	2	
C20	ELECTROLYTIC SG	10	μF	35 V	V		D0401000851O0	1	
C21/22	CERAMIC TUBULAR	0.022	μF	25 V	F		D005223574530	2	
C23	CERAMIC TUBULAR	0.01	μF	16 V	Y		D005103773530	1	
C24/25	CERAMIC DISC	0.022	μF	50 V	Z		D004223097060	2	
C26	ELECTROLYTIC SG	4.7	μF	50 V	M		D0404R7087100	1	
C27	ELECTROLYTIC SG	3.3	μF	50 V	M		D0403R3087100	1	
C28	ELECTROLYTIC SG	4.7	μF	50 V	M		D0404R7087100	1	
C29/30	CERAMIC DISC	0.022	μF	50 V	Z		D004223097060	2	
C31	MYLAR	0.0033	μF	100V	J		D02033206C060	1	
C32	MYLAR	0.039	μF	100 V	J		D02039306C060	1	
C33	ELECTROLYTIC SG	0.47	μF	50 V	V		D040R4708710O	1	
C34	CERAMIC TUBULAR	0.022	μF	25 V	F		D005223574530	1	
C35	ELECTROLYTIC SG	100	μF	16 V	M		D0401010831O0	1	
C36	CERAMIC DISC	330	pF	50 V	J		D004331067060	1	
C37C	CERAMIC DISC	82	pF	50 V	J		D000820067060	1	
C38C	CERAMIC DISC	100	pF	50 V	J		D004101067060	1	
C39	ELECTROLYTIC SG	10	μF	35 V	M		D0401000851O0	1	
C40D	CERAMIC TUBULAR	0.022	μF	25 V	F		D005223574530	1	RDS

Ref. No	Description						Part No.	Q'ty	Version
C41	ELECTROLYTIC SG	4.7	μF	50 V	M		D0404R7087100	1	
C42	CERAMIC TUBULAR	0.047	μF	50 V	V		D005473097530	1	
C43	CERAMIC DISC	680	pF	50 V	J		D004681067060	1	
C44	ELECTROLYTIC SG	100	μF	16 V	M		D0401010831O0	1	
C45	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C46	ELECTROLYTIC SG	0.22	μF	50 V	M		D040R22087100	1	
C47	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C48	CERAMIC DISC	0.022	μF	50 V	Z		D004223097060	1	
C49	ELECTROLYTIC SG	10	μF	35 V	M		D0401000851O0	1	
C50L/R	CERAMIC DISC	220	pF	50 V	J		D004221067060	2	
C51L/R	ELECTROLYTIC SG	10	μF	35 V	M		D0401000851O0	2	
C53	ELECTROLYTIC SG	10	μF	35 V	M		D0401000851O0	1	
C54D	CERAMIC TUBULAR	270	pF	50 V	B		D005271077530	1	RDS
C55D	ELECTROLYTIC SG	47	μF	16 V	M		D0404708310O	1	RDS
C56D	ELECTROLYTIC SG	10	μF	35 V	M		D0401000851O0	1	RDS
C57D	CERAMIC TUBULAR	0.1	μF	50 V	Z		D005104497350	1	RDS
C58D	CERAMIC DISC	27	nF	50 V	CH		D000270167070	1	RDS
C59D	CERAMIC DISC	27	nF	50 V	CH		D000270167070	1	RDS
C60D	CERAMIC DISC	0.1	μF	50 V	Z		D004104097060	1	RDS
C62L/R	CERAMIC DISC	68	nF	50 V	J		D000680067060	2	
	CONNECTOR								
CN100	PLUG(52419-1090)						L112524199000	1	
	CERAMIC FILTERS								
CF1/3	SFE10.7MS3GH-ATF21						E430107000150	2	
CF4	SFM2-450BL						E431450000120	1	
	DIODES								
D1	ZENER, UZ 5.1 BSB						K06005R114520	1	
D2	1N4148M, Switching						K000414801520	1	
D3D	ZENER, UZ 5.1 BSB						K06005R114520	1	RDS
VD1/2	SVC321SPA-C						K080032100520	2	
	INTEGRATED CIRCUITS								
IC1	LM7001M						J124700100010	1	
IC2	LA1266G						J124126600000	1	
IC3	LA3401						J124340100000	1	
IC4D	TDA7330BD						J020733000010	1	
	TRANSISTORS								
Q1/2	2SC1740S, NPN						J5021740Y0050	2	
Q3	KTC1923Y/KTC3194Y, NPN						J5023194Y0050	1	
Q4/6	KRA107M/DTA114YS, PNP						J601107M00050	2	
Q7D	2SC1740S, NPN						J5021740Y0050	1	RDS
Q8L/R	DTC323TS, NPN						J602323TS0050	2	
Q9	KRA107M/DTA114YS, PNP						J601107M00050	1	
	RESISTORS								
R1	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R2	CARBON FILM	5.6	kohm	1/5 W	J		C00005626P520	1	
R3	CARBON FILM	22	kohm	1/5 W	J		C00002236P520	1	
R4	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R5	METAL FILM	470	ohm	1/5 W	J		C06004716P520	1	
R6	CARBON FILM	100	kohm	1/5 W	J		C00001046P520	1	
R7	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	
R8	METAL FILM	270	ohm	1/5 W	J		C06002716P520	1	
R9	METAL FILM	560	ohm	1/5 W	J		C06005616P520	1	
R10	METAL FILM	1	kohm	1/5 W	J		C06001026P520	1	
R11	METAL FILM	180	ohm	1/5 W	J		C06001816P520	1	
R12	METAL FILM	560	ohm	1/5 W	J		C06005616P520	1	
R13	METAL FILM	3.3	kohm	1/5 W	J		C06003326P520	1	
R14	METAL FILM	560	ohm	1/5 W	J		C06005616P520	1	
R15	METAL FILM	470	ohm	1/5 W	J		C06004716P520	1	
R16	METAL FILM	100	ohm	1/5 W	J		C06001016P520	1	
R17-19	METAL FILM	1	kohm	1/5 W	J		C06001026P520	3	
R20	METAL FILM	330	ohm	1/5 W	J		C06003316P520	1	
R21	METAL FILM	270	ohm	1/5 W	J		C06002716P520	1	
R22	METAL FILM	330	ohm	1/5 W	J		C06003316P520	1	
R24	METAL FILM	4.7	kohm	1/5 W	J		C06004726P520	1	
R25	CARBON FILM	68	kohm	1/5 W	J		C00006836P520	1	
R26	CARBON FILM	47	kohm	1/5 W	J		C00006836P520	1	
R27	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	
R28	CARBON FILM	22	kohm	1/5 W	J		C00002236P520	1	
R29	METAL FILM	22	ohm	1/5 W	J		C06002206P520	1	
R30	METAL FILM	4.7	kohm	1/5 W	J		C06004726P520	1	
R31	METAL FILM	2.7	kohm	1/5 W	J		C06002726P520	1	
R32	CARBON FILM	5.6	kohm	1/5 W	J		C00005626P520	1	
R33	METAL FILM	3.3	kohm	1/5 W	J		C06003326P520	1	

Ref. No	Description						Part No.	Q'ty	Version
R34	METAL FILM	68	ohm	1/5 W	J		C06006806P520	1	
R35C	METAL FILM	1.8	kohm	1/5 W	J		C06001826P520	1	
R36D	CARBON FILM	47	kohm	1/5 W	J		C00004736P520	1	RDS
R37D	METAL FILM	22	ohm	1/5 W	J		C06002206P520	1	RDS
R38D	METAL FILM	1	kohm	1/5 W	J		C06001026P520	1	RDS
R39	METAL FILM	68	ohm	1/5 W	J		C06006806P520	1	
R40	CARBON FILM	47	kohm	1/5 W	J		C00004736P520	1	
R41	CARBON FILM	22	kohm	1/5 W	J		C00002236P520	1	
R42	METAL FILM	3.3	kohm	1/5 W	J		C06003326P520	1	
R43	CARBON FILM	22	kohm	1/5 W	J		C00002236P520	1	
R44	CARBON FILM	47	kohm	1/5 W	J		C00004736P520	1	
R46L/R	CARBON FILM	220	kohm	1/5 W	J		C00002246P520	2	
R47L/R	CARBON FILM	270	kohm	1/5 W	J		C00002746P520	2	
R48L/R	METAL FILM	2.7	kohm	1/5 W	J		C06002726P520	2	
R49L/R	METAL FILM	3.3	kohm	1/5 W	J		C06003326P520	2	
R50D	METAL FILM	470	ohm	1/5 W	J		C06004716P520	1	RDS
R52D	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	RDS
R53D	CARBON FILM	10	kohm	1/5 W	J		C00001036P520	1	RDS
R56D	CARBON FILM	2.2	kohm	1/5 W	J		C06002226P520	1	RDS
	COILS								
T1	AM-ANT						D304010000000	1	
T2	AM-OSC						D940110010000	1	
T3	AM-IFT P-7SB						D950010050000	1	
T4	FM-DET-A						D970010040000	1	
T5	FM-DET-B						D970010060000	1	
T6L/R	MPX(19/38KHz)						E401010010000	2	
L1C	20.8mH						D330208001120	1	
	SEMI FIXED VAREAABLE RESISTOR								
VR1	5K(B)-H						C541502115000	1	
VR2	50K(B)-H						C541503115000	1	
VR3	200K(B)-H						C541204115000	1	
	MISCELLANEOUS								
TC1	TRIMMER, 10pF						D110100901100	1	
X1	7.2MHz						E800720000080	1	
X2	CSB456F						E830456000050	1	
X3D	X3M332						E800433200050	1	
FE1	FTA4-460H						E900455600100	1	
ANT1	TERMINAL						G5900404600A	1	
PCB10	**ASSEMBLY P.C BOARD TUNER**						**7028041219000**		**K**
PCB10	**ASSEMBLY P.C BOARD TUNER**						**7028040942300**		**A**
PCB10	**ASSEMBLY P.C BOARD TUNER**						**7028040945000**		**PT INDO**
	CAPACITORS								
C1	ELECTROLYTIC SG	47	μF	25 V	M		D0404708310O	1	
C2	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C3/4	CERAMIC CHIP	0.0082	μF	50 V	B		D011822177210	2	A,K
C3/4	CERAMIC CHIP	0.0039	μF	50 V	B		D011392177210	2	PT INDO
C5	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C6/7	CERAMIC CHIP	220	pF	50 V	CH		D010221167210	2	A,K
C6/7	CERAMIC CHIP	330	pF	50 V	CH		D010331167210	2	PT INDO
C8	CERAMIC CHIP	0.012	μF	50 V	B		D011123177210	1	
C9	ELECTROLYTIC SG	47	μF	25 V	M		D0404708410O	1	
C10	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C11	CERAMIC CHIP	0.012	μF	50 V	B		D011123177210	1	
C12	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C13/14	CERAMIC CHIP	0.012	μF	50 V	B		D011123177210	2	A,K
C13/14	CERAMIC CHIP	0.0082	μF	50 V	B		D011822177210	2	PT INDO
C15	CERAMIC CHIP	0.01	μF	50 V	B		D011103177210	1	
C16	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C17	CERAMIC CHIP	0.001	μF	50 V	B		D011102177210	1	
C18	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C19/20	CERAMIC CHIP	18	pF	50 V	CH		D010180167210	2	
C21	CERAMIC CHIP	100	pF	50 V	CH		D010101167210	1	
C22	ELECTROLYTIC SG	2.2	μF	50 V	M		D0402R2087100	1	
C23	ELECTROLYTIC SG	100	μF	50 V	M		D0401010821O0	1	
C24	CERAMIC CHIP	0.01	μF	50 V	B		D011103177210	1	
C25	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	
C26	ELECTROLYTIC SG	47	μF	25 V	M		D0404708410O	1	
C28	ELECTROLYTIC SG	3.3	μF	50 V	M		D0403R3087100	1	
C29	CERAMIC CHIP	0.0082	μF	50 V	B		D011822177210	1	
C30	CERAMIC CHIP	0.01	μF	50 V	B		D011103177210	1	
C31	ELECTROLYTIC SG	4.7	μF	50 V	M		D0404R7087100	1	
C32	ELECTROLYTIC SG	22	μF	50 V	M		D040220087100	1	
C33	CERAMIC CHIP	0.01	μF	50 V	B		D011103177210	1	
C34	CERAMIC TUBULAR	0.01	μF	16 V	Z		D005103773530	1	
C36	ELECTROLYTIC SG	1	μF	50 V	M		D040010087100	1	

Ref. No	Description	Part No.	Q'ty	Version
C37/38	CERAMIC CHIP 0.01 μF 50 V B	D011103177210	2	
C40	CERAMIC CHIP 0.01 μF 50 V B	D011103177210	1	
C42	ELECTROLYTIC SG 220 μF 35 V V	D040221085100	1	
C43	CERAMIC CHIP 0.01 μF 50 V B	D011103177210	1	
C44	CERAMIC CHIP 8 pF 50 V CH	D010080117210	1	
C45	CERAMIC CHIP 470 pF 50 V CH	D010471167210	1	
C48	CERAMIC CHIP 10 pF 50 V CH	D011100567210	1	
C50	CERAMIC CHIP 0.047 μF 50 V F	D011473597210	1	
C52	CERAMIC DISC 33 pF 50 V CH	D000330167070	1	
	FILTERS			
CF1/2	SFE10.7MA8-AT21	E430107000140	2	A,K
CF1/2	SFE10.7MS3GH-ATF21	E430107000150	2	PT INDO
CF3	CFM2-450BL	E431450000120	1	
	CONNECTOR			
CNT1	PLUG(35238-1010)	L12252419100A	1	
	DIODES			
D2	ZENER, UZ 6.2V BSB	K06006R214520	1	
VD1/3	SVC321SPA-C	K080032100520	2	
	INTEGRATED CIRCUITS			
IC1	LA1832, IF MPX	J124183200010	1	
IC2	LM7001M, PLL	J124700100010	1	
	COILS			
L1/2	INDUCTOR, 8.2mH	D330822001290	2	
T1	AM-ANT	D304564300000	1	
T3	AM-OSC	D940111027000	1	
T5	AM-IFT	D950010050000	1	
T6	FM-DET	D970010090000	1	
	TRANSISTORS			
Q1/2	KTC3198/KTC1815, NPN	J5023198B0050	2	
Q5/6	2SC3199Y, NPN	J5023199Y0050	2	
Q7	KTC1923Y/C3194Y, NPN	J5023194Y0050	1	
	RESISTORS			
R1	METAL FILM 1.8 kohm 1/5 W J	C06001826P520	1	A,K
R1	METAL FILM 2.7 kohm 1/5 W J	C06002726P520	1	PT INDO
R2	METAL FILM 1 kohm 1/5 W J	C06001026P520	1	
R3	METAL FILM 1.8 kohm 1/5 W J	C06001826P520	1	A,K
R3	METAL FILM 2.7 kohm 1/5 W J	C06002726P520	1	PT INDO
R4	METAL FILM 1 kohm 1/5 W J	C06001026P520	1	
R5/6	CHIP 330 kohm 1/10 W J	C200033460200	2	
R7/8	CHIP 1 kohm 1/10 W J	C200010260200	2	A,K
R7/8	CHIP 820 ohm 1/10 W J	C200082060200	2	PT INDO
R9	CHIP 2 kohm 1/10 W J	C200020260200	1	
R10/12	CHIP 1.8 kohm 1/10 W J	C200082260200	2	
R13	METAL FILM 68 ohm 1/5 W J	C06006806P520	1	
R14	METAL FILM 47 ohm 1/5 W J	C06004706P520	1	
R15-17	CHIP 1 kohm 1/10 W J	C200010260200	3	
R18	METAL FILM 330 ohm 1/5 W J	C06003316P520	1	
R19/20	CHIP 1 kohm 1/10 W J	C200010260200	2	
R21	CHIP 3.3 kohm 1/10 W J	C200033260200	1	
R22	CHIP 560 ohm 1/10 W J	C200056160200	1	
R24	CARBON FILM 10 kohm 1/5 W J	C00001036P520	1	
R25	METAL FILM 47 ohm 1/5 W J	C06004706P520	1	
R26	CARBON FILM 5.6 kohm 1/5 W J	C00005626P520	1	
R27	CARBON FILM 12 kohm 1/5 W J	C00001236P520	1	A,K
R27	CARBON FILM 33 kohm 1/5 W J	C00003336P520	1	PT INDO
R28	CHIP 470 ohm 1/10 W J	C200047160200	1	
R29	CHIP 330 ohm 1/10 W J	C200033160200	1	
R30	CHIP 2 kohm 1/10 W J	C200020260200	1	
R31	CHIP 330 ohm 1/10 W J	C200033160200	1	
R32	CARBON FILM 8.2 kohm 1/5 W J	C00008226P520	1	
R33	METAL FILM 82 ohm 1/5 W J	C06008206P520	1	
R36	CHIP 100 kohm 1/10 W J	C200010460200	1	
R45	CHIP 100 kohm 1/10 W J	C200010460200	1	
R46	CHIP 47 kohm 1/10 W J	C200047360200	1	
R47	CHIP 1 kohm 1/10 W J	C200010260200	1	A,K
R47	CHIP 470 ohm 1/10 W J	C200047060200	1	PT INDO
R48L	CHIP 0 ohm 1/10 W J	C200000060200	1	
R50	CHIP 56 ohm 1/10 W J	C200056060200	1	
	MISCELLANEOUS			
XT1	7.2MHz	E800720000080	1	
FE1	FM FRENT END	7028041219900	1	

Ref. No	Description	Part No.	Q'ty	Version
ANT	TERMINAL	G594040530000	1	
CF5	CSB 456F	E830456000050	1	
PCB11	**ASSEMBLY P.C.BOARD AMP**	**7028041219600**		**K,PT INDO**
PCB11	**ASSEMBLY P.C.BOARD AMP**	**7028040942900**		**A**
PCB11	**ASSEMBLY P.C.BOARD AMP**	**7028040945000**		**D,E,RDS**
	CAPACITORS			
C200L/R	ELECTROLYTIC SG 4.7 μF 50 V M	D0404R7087100	2	
C200C/S	ELECTROLYTIC SG 4.7 μF 50 V M	D0404R7087100	2	
C201L/R	CERAMIC TUBULAR 100 pF 50 V B	D001101077530	2	
C201C/S	CERAMIC TUBULAR 100 pF 50 V B	D001101077530	2	
C202L/R	CERAMIC DISC 330 pF 50 V J	D004331067060	2	A,K,PT INDO
C202C/S	CERAMIC TUBULAR 330 pF 50 V SL	D005331077530	2	A,K,PT INDO
C202L/R	CERAMIC DISC 680 pF 50 V J	D004681067060	2	D
C202C/S	CERAMIC TUBULAR 680 pF 50 V SL	D005681077530	2	D
C203L/R	CERAMIC DISC 12 pF 50 V J	D009791201300	2	
C203C/S	CERAMIC DISC 12 pF 50 V J	D009791201300	2	
C204L/R	ELECTROLYTIC SG 100 μF 10 V M	D040101082100	2	
C204C/S	ELECTROLYTIC SG 47 μF 25 V M	D040470084100	2	
C206L/R	CERAMIC TUBULAR 3.3 pF 50 V SL	D0013R3077530	2	A,K,PT INDO
C206L/R	CERAMIC TUBULAR 3.3 pF 50 V SL	D0013R3077530	2	A,K,PT INDO
C206L/R	CERAMIC TUBULAR 8.2 pF 50 V SL	D0018R2077530	2	D
C206C/S	CERAMIC TUBULAR 8.2 pF 50 V SL	D0018R2077530	2	D
C207L/R	CERAMIC DISC 220 pF 50 V J	D004221067060	2	
C207C/S	CERAMIC DISC 220 pF 50 V J	D004221067060	2	
C208L/R	MYLAR 0.047 μF 100 V J	D02047306C060	2	
C208C/S	MYLAR 0.047 μF 100 V J	D02047306C060	2	
C209L/R	ELECTROLYTIC SG 10 μF 50 V M	D040100087100	2	
C209C/S	ELECTROLYTIC SG 10 μF 50 V M	D040100087100	2	
C210L/R	CERAMIC DISC 220 pF 50 V J	D004221067060	2	
C210C/S	CERAMIC DISC 220 pF 50 V J	D004221067060	2	
C211	ELECTROLYTIC SG 10 μF 50 V M	D040100087100	2	
C212	ELECTROLYTIC SG 470 μF 6.3 V M	D040471081100	2	
C213/214	ELECTROLYTIC SG 10 μF 50 V M	D040100087100	2	
C214L/R	CERAMIC DISC 18 pF 50 V J	D001180067060	2	
C214C/S	CERAMIC DISC 18 pF 50 V J	D001180067060	2	
C215/216	ELECTROLYTIC SG 1 μF 100 V M	D040010086100	2	
C216L/R	ELECTROLYTIC SG 10 μF 50 V M	D040100087100	2	
C216C/S	ELECTROLYTIC SG 10 μF 50 V M	D040100087100	2	
C217	ELECTROLYTIC SG 22 μF 50 V M	D040220087100	1	
C217L/S	CERAMIC TUBULAR 8.2 pF 50 V SL	D0018R2077530	2	A,K,PT INDO
C217C/S	CERAMIC TUBULAR 8.2 pF 50 V SL	D0018R2077530	2	A,K,PT INDO
	CONNECTORS			
CNT204	WAFER, 2P, 2.5MM	L102526702010	1	
CP200	WAFER, 8P, 2.5MM	L102526708010	1	
CP201	WAFER, 9P, 2.5MM	L102526709010	1	
CP202/203	WAFER, 6P, 2.5MM	L102526706010	2	
	DIODES			
D200C/S	1N4148, Switching	K000414801520	2	
D200L/R	1N4148, Switching	K000414801520	2	
D201C/S	1N4148, Switching	K000414801520	2	
D201L/R	1N4148, Switching	K000414801520	2	
D202C/S	1N4148, Switching	K000414801520	2	
D202L/R	1N4148, Switching	K000414801520	2	
D203/204	ZENER, UZ27V	K060270024520	2	
D205/206	1N4148, Switching	K000414801520	2	
D207	ZENER, UZ7.5V	K06007R524520	1	
D207L/R	1N4148, Switching	K000414801520	2	
D208L/R	1N4148, Switching	K000414801520	2	
	COILS			
L200C/S	INDUCTOR, 0.5uH	D330900001320	2	
L200L/R	INDUCTOR, 0.5uH	D330900001320	2	
	TRANSISTORS			
Q200C/S	KTC3200, NPN	J5023200B0050	2	
Q200L/R	KTC3200, NPN	J5023200B0050	2	
Q201C/S	KTC3200, NPN	J5023200B0050	2	
Q201L/R	KTC3200, NPN	J5023200B0050	2	
Q202C/S	2SC1740S, NPN	J5021740S0010	2	
Q202L/R	2SC1740S, NPN	J5021740S0010	2	
Q203C/S	2SC1740S, NPN	J5021740S0010	2	
Q203L/R	2SC1740S, NPN	J5021740S0010	2	
Q204C/S	KTA1024, PNP	J5001024Y0050	2	
Q204L/R	KTA1024, PNP	J5001024Y0050	2	
Q205C/S	2SC1740S, NPN	J5021740S0010	2	
Q205L/R	2SC1740S, NPN	J5021740S0010	2	

Ref. No	Description	Part No.	Q'ty	Version
Q206C/S	2SC1740S, NPN	J5023206Y0050	2	
Q206L/R	2SC1740S, NPN	J5023206Y0050	2	
Q207L/R	2SC1740S, NPN	J5021740S0010	2	
Q208C/S	2SC1740S, NPN	J5022690Y0000	2	
Q208L/R	2SC1740S, NPN	J5022690Y0000	2	
Q209C/S	KSA1220, PNP	J5001220Y0000	2	
Q209L/R	KSA1220, PNP	J5001220Y0000	2	
Q210C/S	2SC3854, NPN	J5023854Y0000	2	
Q210L/R	2SC3854, NPN	J5023855Y0000	2	
Q211C/S	2SA1490, PNP	J5001490Y0000	2	
Q211L/R	2SA1490, PNP	J5001491Y0000	2	
Q212C/S	2SC1740S, NPN	J5021740S0010	2	
Q212L/R	2SC1740S, NPN	J5021740S0010	2	
Q213	BKTA1267, PNP	J5001267Y0050	1	
Q214/215	2SC1740S, NPN	J5021740S0010	2	
	RESISTORS			
R200C/S/L/R	CARBON FILM 33 kohm 1/5 W J	C00003336P520	4	
R201C/S/L/R	METAL FILM 330 ohm 1/5 W J	C06003316P520	4	A,K,PT INDO
R201C/S	METAL FILM 680 ohm 1/5 W J	C06006816P520	2	D
R201L/R	METAL FILM 680 ohm 1/5 W J	C06006816P520	2	D
R202C/S	METAL FILM 910 ohm 1/5 W J	C06009116P520	2	
R202L/R	METAL FILM 820 ohm 1/5 W J	C06008216P520	2	
R203C/S	METAL FILM 910 ohm 1/5 W J	C06009116P520	2	
R203L/R	METAL FILM 820 ohm 1/5 W J	C06008216P520	2	
R204/205	CARBON FILM 2 kohm 1/5 W J	C00002026P520	2	
R206C/S/L/R	METAL FILM 1 kohm 1/5 W J	C06001026P520	4	
R207L/R	CARBON FILM 1.5 kohm 1/5 W J	C00001536P520	2	
R208L/R	METAL FILM 1.5 kohm 1/5 W J	C06001526P520	2	
R209C/S/L/R	METAL FILM 1.5 kohm 1/5 W J	C06001526P520	4	
R210C/S/L/R	CARBON FILM 10 kohm 1/5 W J	C00001036P520	4	
R211C/S/L/R	METAL FILM 1 kohm 1/5 W J	C06001026P520	4	
R212C/S/L/R	METAL FILM 82 ohm 1/5 W J	C06008206P520	4	
R213C/S/L/R	METAL FILM 560 ohm 1/5 W J	C06005616P520	4	
R214C/S/L/R	METAL FILM 2.2 kohm 1/5 W J	C06002226P520	4	
R215C/S/L/R	METAL FILM 1.2 kohm 1/5 W J	C06001226P520	4	
R216C/S/L/R	CARBON FILM 33 kohm 1/5 W J	C00003336P520	4	
R217C/S/L/R	METAL FILM 330 ohm 1/5 W J	C06003316P520	4	
R218C/S/L/R	METAL FILM 82 ohm 1/5 W J	C06008206P520	4	
R219C/S/L/R	METAL FILM 220 ohm 1/5 W J	C06002216P520	4	
R220C/S/L/R	METAL FILM 330 ohm 1/5 W J	C06003316P520	4	
R221C/S/L/R	METAL FILM 4.7 kohm 1/5 W J	C06004726P520	4	
R222C/S/L/R	CARBON FILM 15 kohm 1/5 W J	C00001536P520	4	
R223C/S/L/R	METAL FILM 22 ohm 1/5 W J	C06002206P520	4	
R224C/S/L/R	METAL FILM 22 ohm 1/5 W J	C06002206P520	4	
R225C/S	CARBON FILM 12 kohm 1/5 W J	C00001236P520	2	
R225L/R	CARBON FILM 12 kohm 1/5 W J	C00001236P520	2	
R226C/S	CARBON FILM 68 kohm 1/5 W J	C00006836P520	2	
R227/228	CARBON FILM 2 kohm 1/5 W J	C00002026P520	2	
R229	CARBON FILM 10 kohm 1/5 W J	C00001036P520	1	
R230	CARBON FILM 100 kohm 1/5 W J	C00001046P520	1	
R231	METAL FILM 1 kohm 1/5 W J	C06001026P520	1	
R232	METAL FILM 1.5 kohm 1/5 W J	C06001526P520	1	
R233	CARBON FILM 47 kohm 1/5 W J	C00004736P520	1	
R234	CARBON FILM 68 kohm 1/5 W J	C00006836P520	1	
R235	CARBON FILM 7.5 kohm 1/5 W J	C00007526P520	1	
R236	CARBON FILM 3.9 kohm 1/5 W J	C00007526P520	1	
R237C/S/L/R	METAL FILM 1 kohm 1/5 W J	C06001026P520	4	
R238/239	CARBON FILM 10 kohm 1/5 W J	C00001036P520	2	
R240C/S/L/R	RES CEMENT MPR 0.27 ohm 5 W	C144R27069300	4	
R241C/S/L/R	NTC5D-302KPC 3 kohm 1/5 W J	F340530200000	4	
R242	METAL FILM 3.3 kohm 1/5 W J	C06003326P520	1	
R243C/S/L/R	METAL FILM 3.3 ohm 1/5 W J	C06003396P520	4	
R244C/S/L/R	METAL FILM 3.3 ohm 1/5 W J	C06003396P520	4	
	MISCELLANEOUS			
POS-1	POSISTOR	F328380001830	1	
PCB12	**ASSEMBLY P.C.BOARD INPUT**	**7028041219200**		**K**
PCB12	**ASSEMBLY P.C.BOARD INPUT**	**7028040942500**		**A,PT INDO**
PCB12	**ASSEMBLY P.C.BOARD INPUT**	**7028040945800**		**D,E,RDS**
	CAPACITORS			
C402L/R	CERAMIC TUBULAR 100 pF 50 V B	D001101077530	2	D
C403L/R	CERAMIC TUBULAR 100 pF 50 V B	D001101077530	2	D
C404L/R	ELECTROLYTIC SG 4.7 μF 50 V M	D0404R7087100	2	
C405L/R	ELECTROLYTIC SG 47 μF 16 V M	D040470083100	2	
C406L/R	CERAMIC TUBULAR 0.0022 μF 16 V X	D005222773530	2	D
C407L/R	MYLAR 0.0018 μF 100 V J	D02018206C060	2	

Ref. No	Description						Part No.	Q'ty	Version
C408L/R	MYLAR	0.0056	uF	5%	100 V	J	D02056206C060	2	
C411L/R	ELECTROLYTIC SG	1	uF	5%	50 V	M	D040010087100	2	
C412L/R	ELECTROLYTIC SG	47	uF	5%	16 V	M	D040470083100	2	
C413L/R	MYLAR	0.0018	uF	5%	100 V	J	D02018206C060	2	
C414	CERAMIC TUBULAR	100	pF	1%	50 V	B	D001101077530	1	
C415L/R	ELECTROLYTIC SG	4.7	uF	5%	50 V	M	D0404R7087100	2	
C416	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	1	
C417	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	1	
C418L/R	ELECTROLYTIC SG	47	uF	5%	16 V	M	D040470083100	2	
C421L/R	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	2	D
C422L/R	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	2	D
C423L/R	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	2	D
C424L/R	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	2	D
C425L/R	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	2	D
C426L/R	CERAMIC TUBULAR	100	pF	1%	50 V	B	D001101077530	2	D
C427L/R	CERAMIC TUBULAR	100	pF	1%	50 V	B	D001101077530	2	D
C428L/R	CERAMIC TUBULAR	100	pF	1%	50 V	B	D001101077530	2	D
C429L/R	CERAMIC TUBULAR	100	pF	5%	50 V	B	D001101077530	2	D
C432	ELECTROLYTIC SG	47	uF	1%	16 V	M	D040470083100	1	
C433	ELECTROLYTIC SG	100	uF	5%	16 V	M	D040101083100	1	
C434/435	ELECTROLYTIC SG	470	uF	10%	10 V	M	D040471082100	2	
C441L/R	ELECTROLYTIC SG	4.7	uF	6.5%	50 V	M	D0404R7087100	2	
C442L/R	ELECTROLYTIC SG	47	uF	6.1%	16 V	M	D040470083100	2	
C443L/R	ELECTROLYTIC SG	1	uF	1%	50 V	M	D040010087100	2	
C445L/R	MYLAR	2.2	uF	1%	100 V	J	D02022206C060	2	
C446L/R	MYLAR	0.1	uF	5%	63 V	J	D020104068050	2	
C447L/R	MYLAR	0.1	uF	5%	63 V	J	D020104068050	2	
C448	ELECTROLYTIC SG	47	uF	5%	16 V	M	D040470083100	1	
C451	ELECTROLYTIC SG	22	uF	5%	16 V	M	D040220083100	1	
C451L/R	ELECTROLYTIC SG	1	uF	1%	50 V	M	D040010087100	2	
C462L/R	CERAMIC DISC	820	pF	5%	50 V	J	D005821077530	2	
C463L/R	CERAMIC TUBULAR	100	pF		50 V	B	D001101077530	2	
C464L/R	ELECTROLYTIC SG	4.7	uF		50 V	M	D0404R7087100	2	
C465L/R	ELECTROLYTIC SG	47	uF		16 V	M	D040470083100	2	
C471L/R	CERAMIC DISC	150	pF		50 V	J	D005151077530	2	
	CONNECTORS								
CN401/402	WAFER, 12P, 2.0MM						L101352371210	2	
CP302	WAFER, 5P, 2.0MM						L101220050000	1	
	DIODES								
D431	1N4148, Switching						K000414801520	1	
D451	ZENER UZ9.1V						K06009R124520	1	
	INTEGRATED CIRCUITS								
IC401	KIA4559						J121455900010	1	
IC421	TC9273						J080927300000	1	
IC431	LA7952						J171795200000	1	
IC441	KIA4559						J121455900010	1	
IC451	TDA7315						J084731500000	1	
IC461	KIA4559						J121455900010	1	
	COILS								
L401L/R	INDUCTOR, 47uH						D330470001020	2	D
	TRANSISTORS								
Q431	DTC114YS, NPN				1/		J6020114Y0050	1	
Q432/433	2SC1740S, NPN				1/		J5023199Y0050	2	
	RESISTORS								
R401L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R402L/R	CARBON FILM	91	kohm	1%	1/5 W	J	C00009136P520	2	
R403L/R	CARBON FILM	91	kohm	1%	1/5 W	J	C00009136P520	2	
R404L/R	METAL FILM	820	ohm	1%	1/5 W	J	C06008216P520	2	
R405L/R	CARBON FILM	43	kohm	1%	1/5 W	J	C00004336P520	2	
R406L/R	CARBON FILM	560	kohm	1%	1/5 W	J	C00005646P520	2	
R407L/R	METAL FILM	560	ohm	1%	1/5 W	J	C06005616P520	2	
R408L/R	CARBON FILM	100	kohm	1%	1/5 W	J	C00001046P520	2	
R409L/R	METAL FILM	100	ohm	1%	1/5 W	J	C06001016P520	2	
R412-415	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	4	
R421L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R422L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R423L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R424L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R425L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R426L/R	METAL FILM	100	ohm	1%	1/5 W	J	C06001016P520	2	
R431L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R432	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	1	
R433/434	METAL FILM	75	ohm	1%	1/5 W	J	C06007506P520	2	

Ref. No	Description						Part No.	Q'ty	Version
R435	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	1	
R436	METAL FILM	75	ohm	1%	1/5 W	J	C06007506P520	1	
R437	METAL FILM	390	ohm	1%	1/5 W	J	C06003916P520	1	
R438	METAL FILM	3.3	kohm	1%	1/5 W	J	C06003326P520	1	
R439	METAL FILM	390	ohm	1%	1/5 W	J	C06003916P520	1	
R441L/R	METAL FILM	470	ohm	1%	1/5 W	J	C06004716P520	2	
R442L/R	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	2	
R443L/R	METAL FILM	100	ohm	1%	1/5 W	J	C06001016P520	2	
R444L/R	METAL FILM	470	ohm	1%	1/5 W	J	C06004716P520	2	
R445L/R	CARBON FILM	100	kohm	1%	1/5 W	J	C00001046P520	2	
R446/447	CARBON FILM	6.8	kohm	1%	1/5 W	J	C00006826P520	2	
R448	METAL FILM	330	ohm	1%	1/5 W	J	C06003316P520	1	
R451	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	1	
R461L/R	METAL FILM	470	ohm	1%	1/5 W	J	C06004716P520	2	
R462L/R	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	2	
R463L/R	METAL FILM	3.3	kohm	1%	1/5 W	J	C06003326P520	2	
R464L/R	METAL FILM	100	ohm	1%	1/5 W	J	C06001016P520	2	
R465L/R	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R466L/R	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	2	
R467L/R	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	2	
R471L/R	CARBON FILM	15	kohm	1%	1/5 W	J	C00001536P520	2	
PCB13	**ASSEMBLY P.C.BOARD SURROUND**						**7028041219400**		**K (ONLY)**
PCB13	**ASSEMBLY P.C.BOARD SURROUND**						**7028040942700**		
	CAPACITORS								
C501	POLY	680	pF		50 V	J	D022681067050	1	
C502	MYLAR, BOX TYPE	0.1	uF		63 V	J	D020104068050	1	
C503	POLY	680	pF		50 V	J	D022681067050	1	
C504-506	MYLAR, BOX TYPE	0.1	uF		63 V	J	D020104068050	3	
C507L/R	ELECTROLYTIC SG	10	uF		50 V	M	D040100087100	2	
C508	ELECTROLYTIC SG	22	uF		16 V	M	D040220083100	1	
C510	CERAMIC DISC	0.1	uF		50 V	F	D005104097530	1	
C511	ELECTROLYTIC SG	220	uF		16 V	M	D040221083100	1	
C512	ELECTROLYTIC SG	47	uF		16 V	M	D040470083100	1	
C513	MYLAR	0.0047	uF		100 V	J	D02047206C060	1	
C514	ELECTROLYTIC SG	22	uF		16 V	M	D040220083100	1	
C515	ELECTROLYTIC SG	220	uF		10 V	M	D040221082100	1	
C516L/R	ELECTROLYTIC SG	10	uF		50 V	M	D040100087100	2	
C517	MYLAR, BOX TYPE	0.1	uF		63 V	J	D020104068050	1	
C518	ELECTROLYTIC SG	220	uF		16 V	M	D040221083100	1	
C519	CERAMIC DISC	470	pF		50 V	SL	D005471077530	1	
C521	MYLAR	0.001	uF		100 V	J	D02010206C060	1	
C522	MYLAR	0.0056	uF		100 V	J	D02056206C060	1	
C523	MYLAR	0.047	uF		100 V	J	D02047306C060	1	
C524	MYLAR	0.68	uF		63 V	K	D020684078060	1	
C525/526	MYLAR	0.22	uF		63 V	K	D020224078060	2	
C527	ELECTROLYTIC SG	4.7	uF		50 V	M	D0404R7087100	1	
C528	MYLAR	0.22	uF		63 V	K	D020224078060	1	
C529	ELECTROLYTIC SG	4.7	uF		50 V	M	D0404R7087100	1	
C531	MYLAR	0.22	uF		63 V	K	D020224078060	1	
C532	MYLAR, BOX TYPE	0.1	uF		63 V	J	D020104068050	1	
C533/534	MYLAR	0.047	uF		100 V	J	D02047306C060	2	
C535/536	MYLAR, BOX TYPE	0.1	uF		63 V	J	D020104068050	2	
C537/538	MYLAR	0.22	uF		63 V	K	D02022306C060	2	
C541	MYLAR, BOX TYPE	0.1	uF		63 V	J	D020104068050	1	
C544	ELECTROLYTIC SG	47	uF		16 V	M	D040470083100	1	
C545	CERAMIC DISC	560	pF		50 V	B	D005561077530	1	
C551	ELECTROLYTIC SG	220	uF		10 V	M	D040221082100	1	
C552/553	CERAMIC DISC	220	pF		50 V	B	D005221077530	2	
C554	MYLAR	0.0056	uF		100 V	J	D02056206C060	1	
C555/556	MYLAR, BOX TYPE	0.1	uF		63 V	J	D020104068050	2	
C557/558	MYLAR	0.047	uF		100 V	J	D02047306C060	2	
C561	ELECTROLYTIC SG	4.7	uF		50 V	M	D0404R7087100	1	
C562	CERAMIC DISC	560	pF		50 V	B	D005561077530	1	
C563	MYLAR	2.2	uF		100 V	J	D02022206C060	1	
C565	ELECTROLYTIC SG	10	uF		50 V	M	D040100087100	1	
C566	CERAMIC DISC	22	uF		100 V	J	D005223574530	1	
C571C/S	ELECTROLYTIC SG	1	uF		50 V	M	D040010087100	2	
C572C/S	ELECTROLYTIC SG	47	uF		16 V	M	D040470083100	2	
C573C/S	CERAMIC DISC	560	pF		50 V	B	D005561077530	2	
C574C/S	ELECTROLYTIC SG	1	uF		50 V	M	D040010087100	2	
C576C/S	ELECTROLYTIC SG	47	uF		16 V	M	D040470083100	2	
C577C/S	ELECTROLYTIC SG	1	uF		50 V	M	D040010087100	2	
C581-584	CERAMIC TUBULAR	100	pF		50 V	B	D001101077530	4	
	CONNECTOR								
CN501	WAFER, 18P, 2.0MM						L101352371810	1	
	DIODES								

Ref. No	Description						Part No.	Q'ty	Version
D501	ZENER, UZ5.1V						K06005R114520	1	
D502	1N4148, Switching						K000414801520	1	
	INTEGRATED CIRCUITS								
IC501	NJW1102A						J081110200000	1	
IC551	NJU9702						J120970200010	1	
IC571	KIA4559						J121455900010	1	
IC572	TC9210P						J084921000010	1	
	RESISTORS								
R501	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	1	
R502/503	CARBON FILM	15	kohm	1%	1/5 W	J	C00001536P520	2	
R504	CARBON FILM	7.5	kohm	1%	1/5 W	J	C00007526P520	1	
R505	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	1	
R506	CARBON FILM	7.5	kohm	1%	1/5 W	J	C00007526P520	1	
R507L/R	CARBON FILM	22	kohm	1%	1/5 W	J	C00002236P520	2	
R508	CARBON FILM	4.7	Mohm	1%	1/5 W	J	C00004756P520	1	
R511	CARBON FILM	100	kohm	1%	1/5 W	J	C00001046P520	1	
R512	METAL FILM	33	ohm	1%	1/5 W	J	C06003306P520	1	
R513	METAL FILM	270	ohm	1%	1/5 W	J	C06002716P520	1	
R514	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	1	
R515/516	CARBON FILM	10	kohm	1%	1/5 W	J	C00001036P520	2	
R517	METAL FILM	4.7	kohm	1%	1/5 W	J	C06004726P520	1	
R518	CARBON FILM	100	kohm	1%	1/5 W	J	C00001046P520	1	
R521	CARBON FILM	15	kohm	1%	1/5 W	J	C00001536P520	1	
R522	CARBON FILM	330	kohm	1%	1/5 W	J	C00003346P520	1	
R523	CARBON FILM	22	kohm	1%	1/5 W	J	C00002236P520	1	
R541	CARBON FILM	15	kohm	1%	1/5 W	J	C00001536P520	1	
R552	CARBON FILM	10	kohm	1%	1/5 W	J	C00001036P520	1	
R553/554	CARBON FILM	15	kohm	1%	1/5 W	J	C00001536P520	2	
R555	METAL FILM	22	ohm	1%	1/5 W	J	C06002206P520	1	
R556	CARBON FILM	15	kohm	1%	1/5 W	J	C00001536P520	1	
R557	CARBON FILM	10	kohm	1%	1/5 W	J	C00001036P520	1	
R558	CARBON FILM	43	kohm	1%	1/5 W	J	C00004336P520	1	
R559	METAL FILM	22	ohm	1%	1/5 W	J	C06002206P520	1	
R560	CARBON FILM	1	Mohm	1%	1/5 W	J	C00001056P520	1	
R571C/S	METAL FILM	470	ohm	1%	1/5 W	J	C06004716P520	2	
R574C/S	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	2	
R575C/S	CARBON FILM	5.6	kohm	1%	1/5 W	J	C00005629P520	2	
R576C/S	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	2	
R577C/S	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	2	
R578C/S	METAL FILM	2.4	kohm	1%	1/5 W	J	C06002426P520	2	
R581C/S	METAL FILM	100	ohm	1%	1/5 W	J	C06001016P520	2	
R582C/S	METAL FILM	100	ohm	1%	1/5 W	J	C06001016P520	2	
R583	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	1	
R583C/S	CARBON FILM	47	kohm	1%	1/5 W	J	C00004736P520	2	
R584-586	METAL FILM	1	kohm	1%	1/5 W	J	C06001026P520	3	
	MISCELLANEOUS								
XT551	CST2M						E830419000060	1	

▶ THE ASS'Y PCB MAIN(PCB1) INCLUDE BELOWS.

① THE ASS'Y PCB CENTER SP(PCB2).

② THE ASS'Y PCB SP SW(PCB3).

③ THE ASS'Y PCB H/P(PCB4).

④ THE ASS'Y PCB VIDEO2(PCB5).

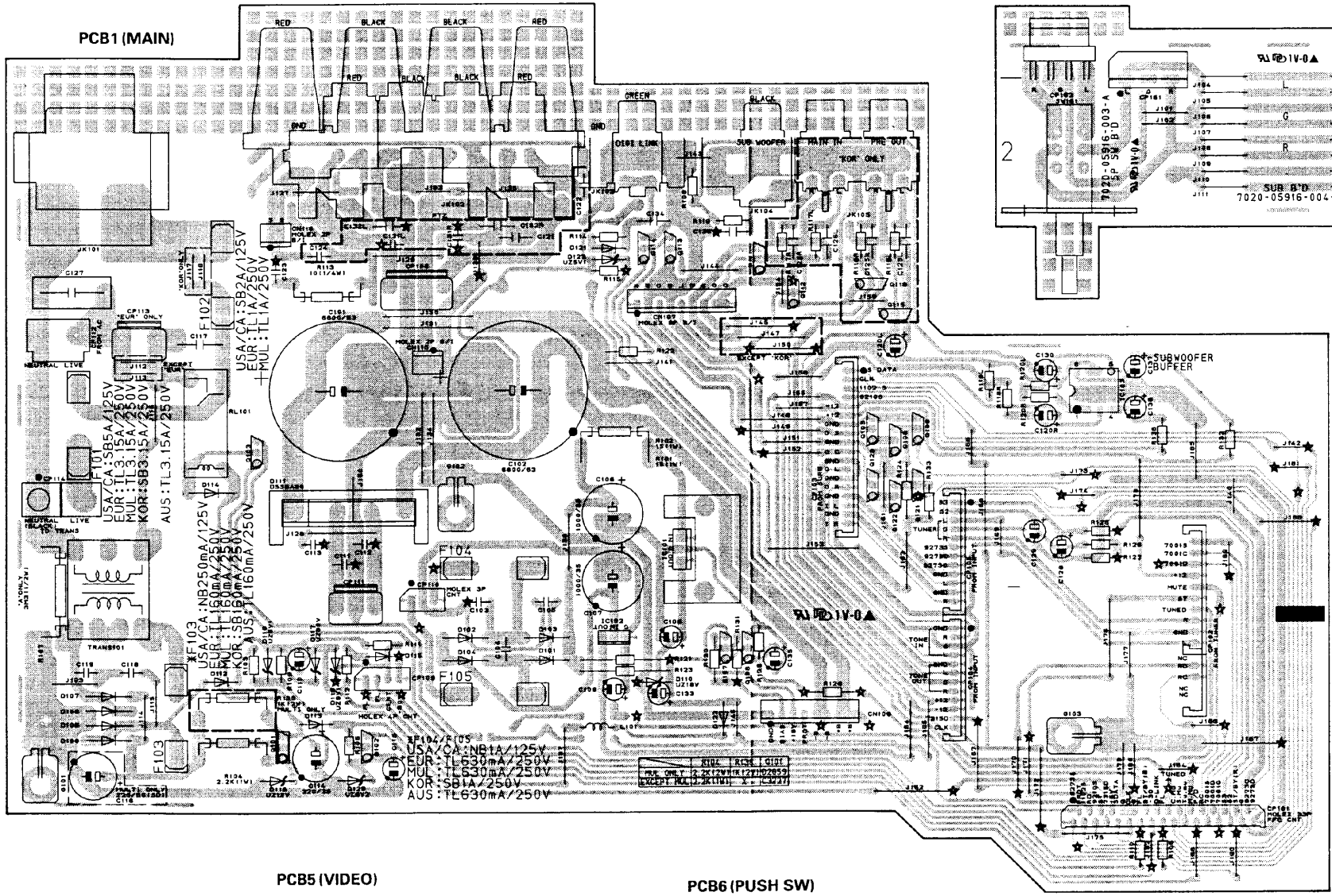
⑤ THE ASS'Y PCB PUSH SW(PCB6).

⑥ THE ASS'Y PCB VOL SEL(PCB7).

▶ THE ASS'Y PCB FRONT(PCB8) INCLUDE BELOWS.

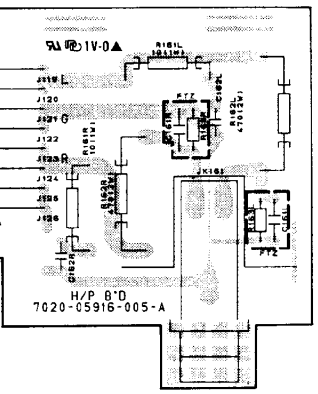
① THE ASS'Y PCB POWER TACT SW(PCB9).

PCB1 (MAIN)

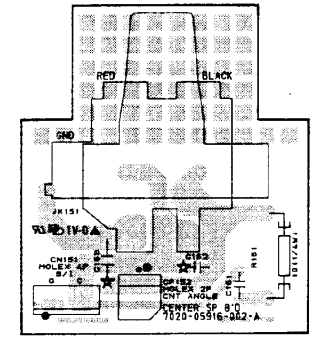


PCB3 (SP SW)

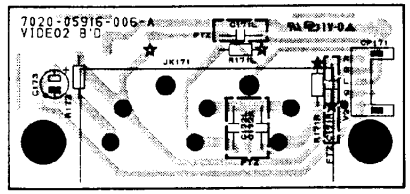
PCB4 (H/P)



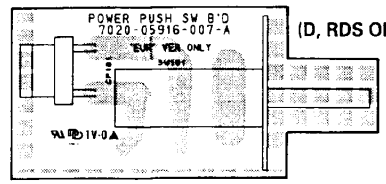
PCB2 (ENTER SP)



PCB5 (VIDEO)

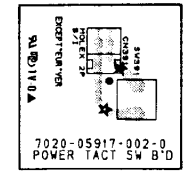


PCB6 (PUSH SW)

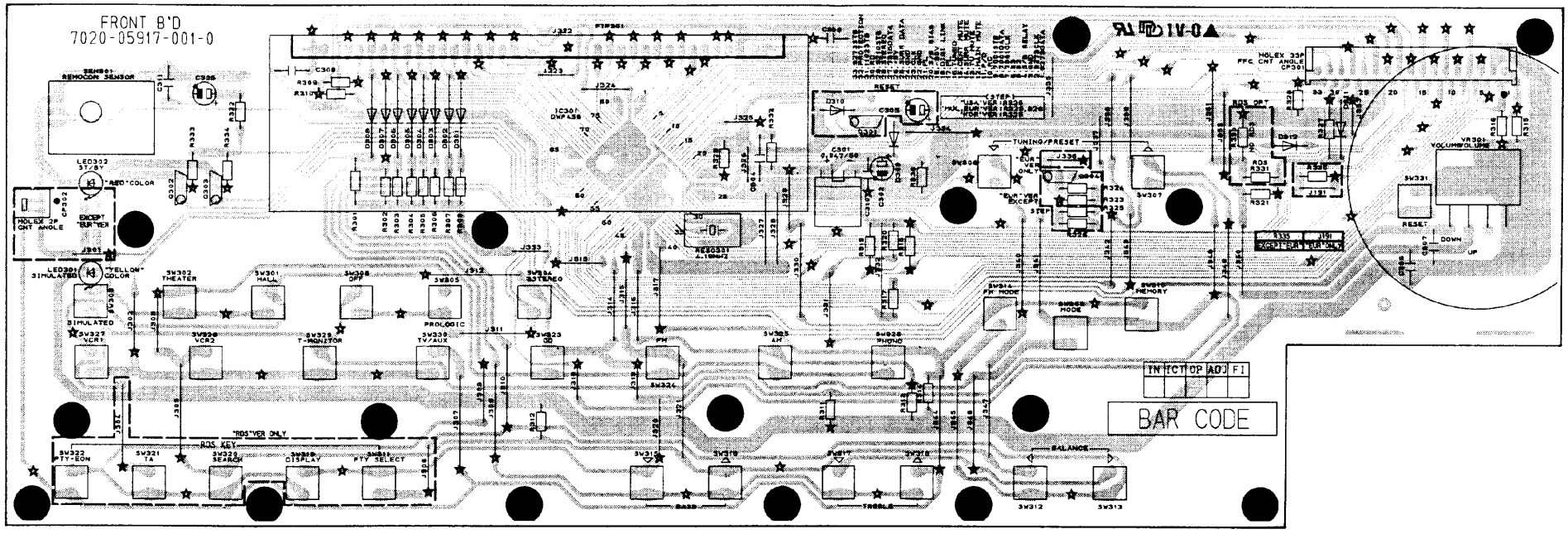


(D, RDS ONLY)

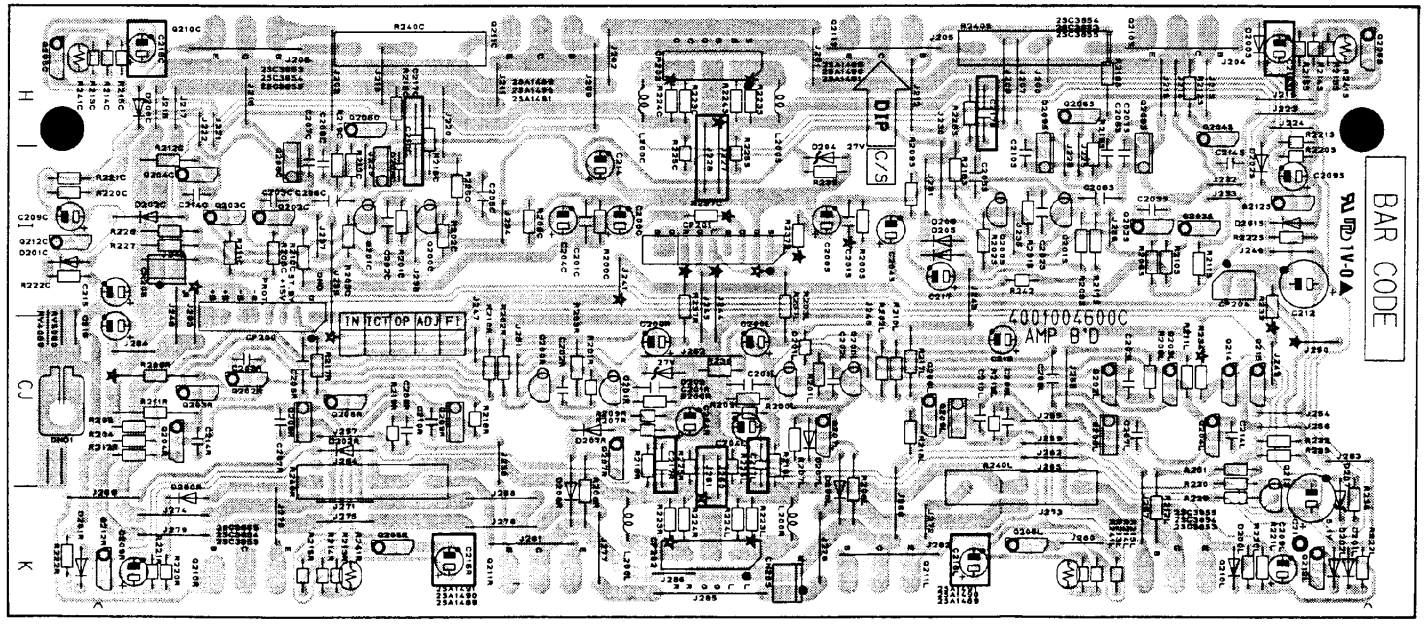
PCB9 (TACT SW)



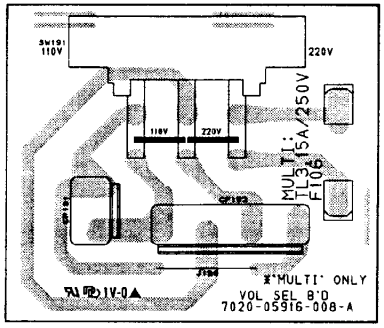
PCB8 (FRONT)



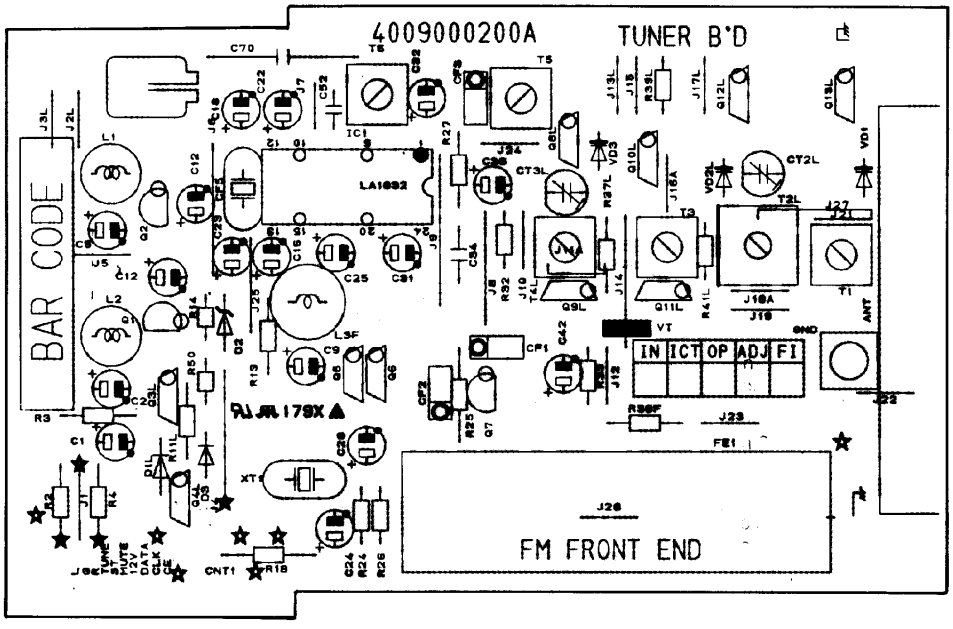
PCB11 (AMP)



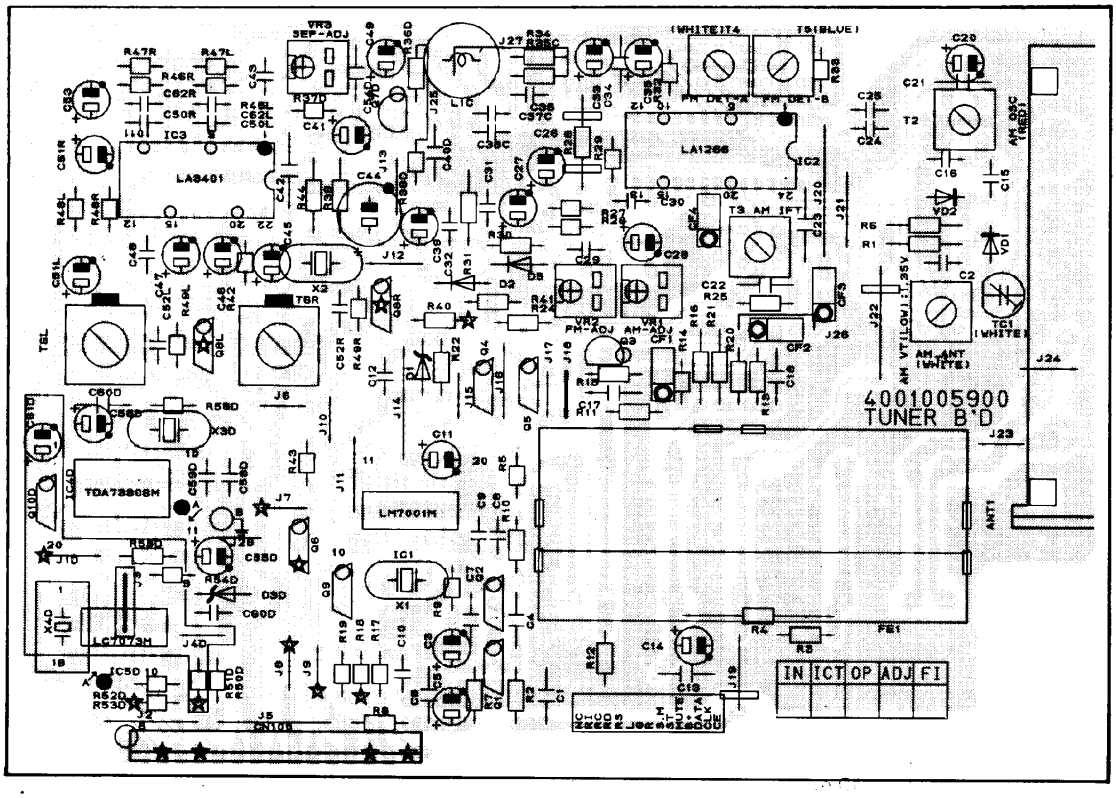
PCB7 (VOL SEL) (PT INDO ONLY)



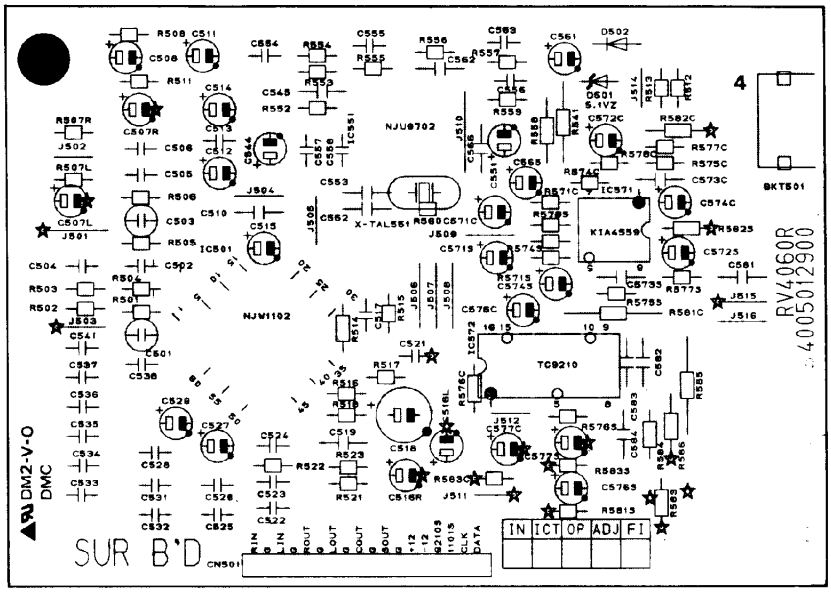
PCB10 (TUNER) : USA/Canada Version



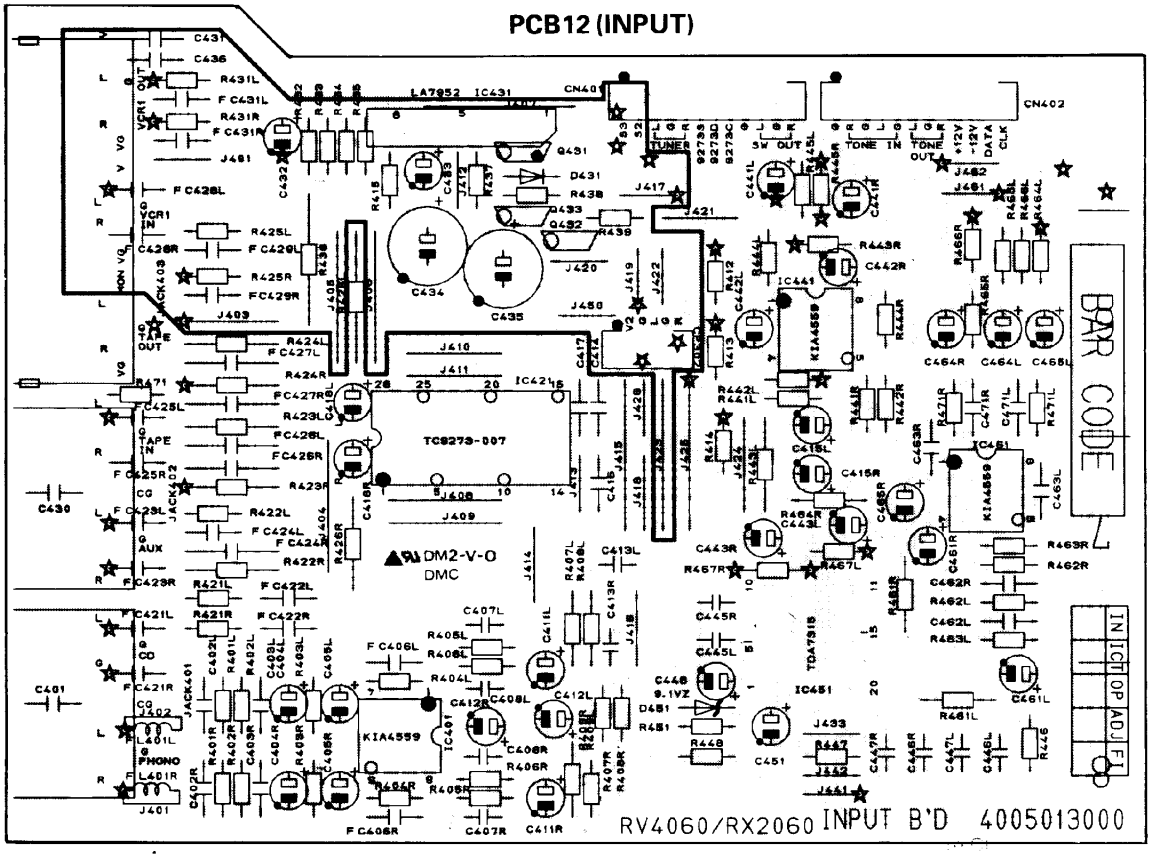
PCB10 (TUNER) : Europe Version



PCB13 (SURROUND)

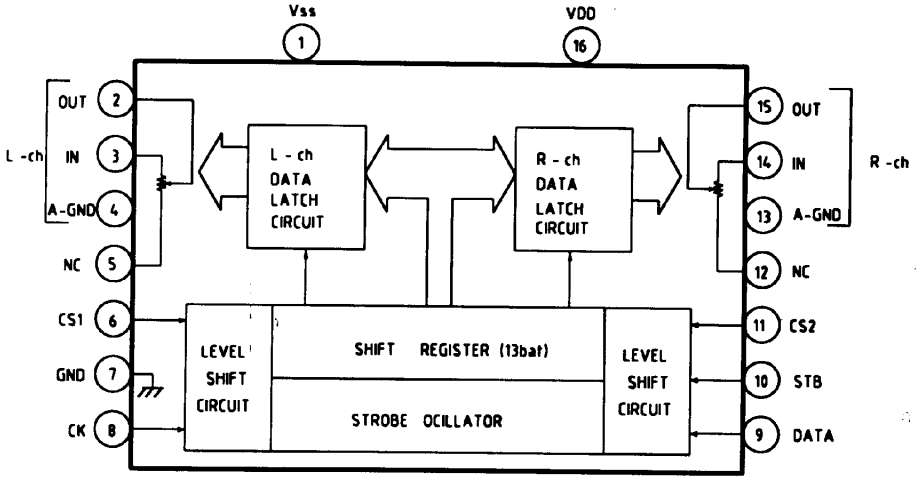


PCB12 (INPUT)

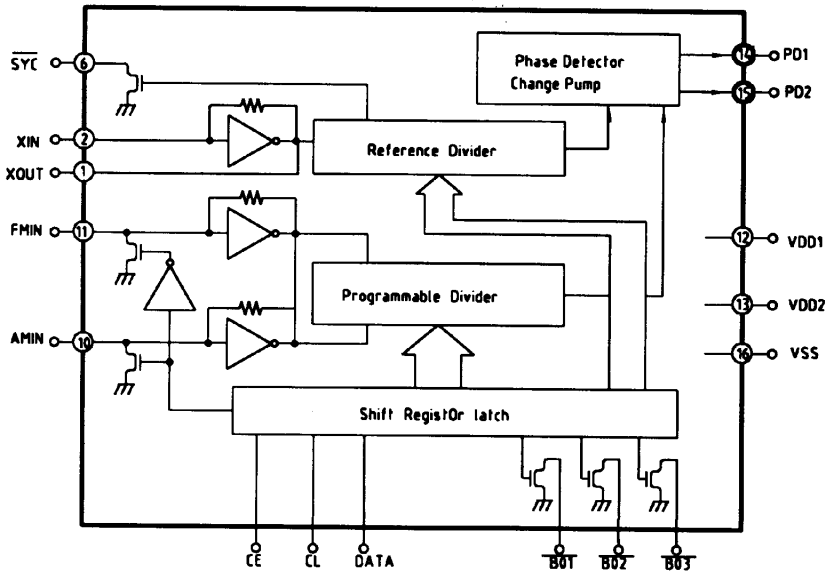


IC FUNCTIONAL BLOCK DIAGRAM

IC 572 : TC 9210P



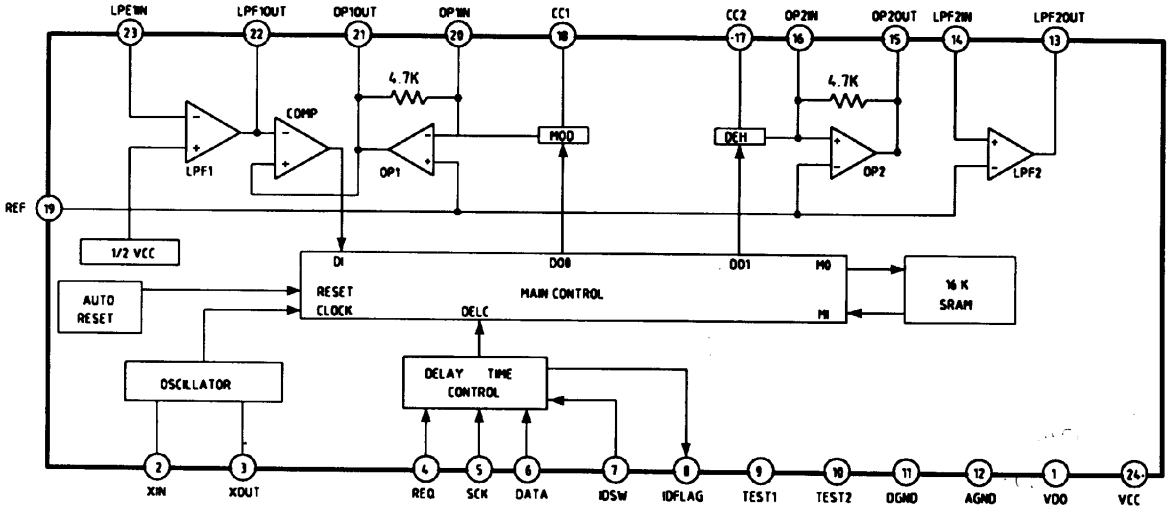
IC 1 : LM 7001M



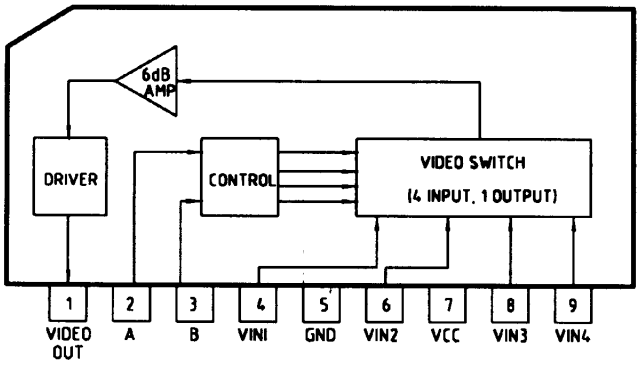
Pin Name

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		PD1
19		PD2
20		VSS

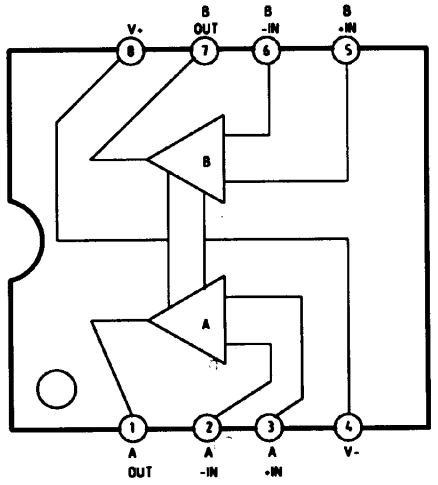
IC 551 : NJU9702G



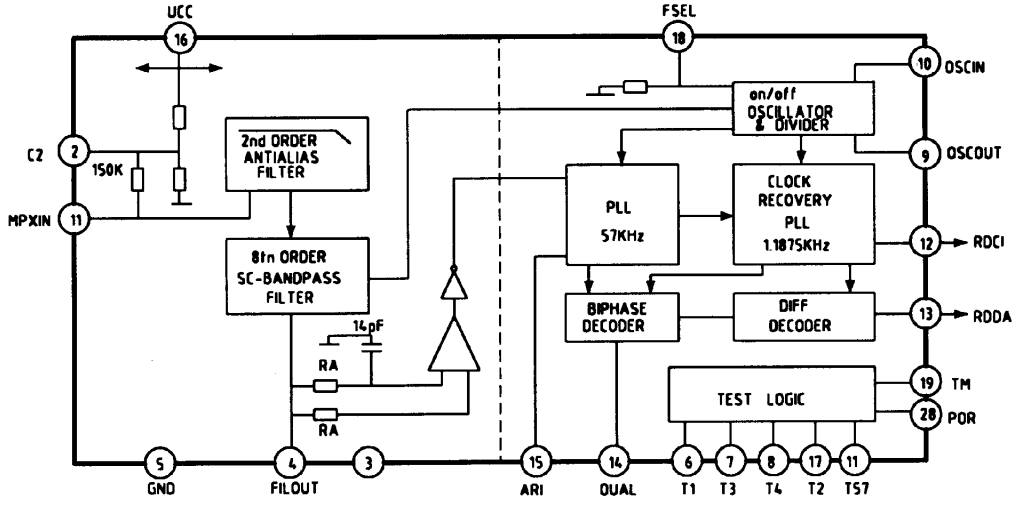
IC 431 : LA 7952



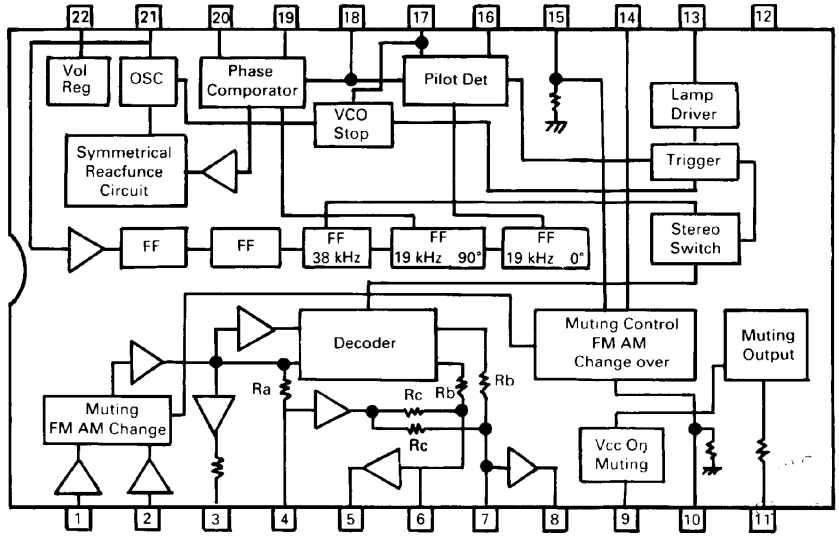
IC 401/IC441/IC461/IC571 : KIA4559P, KIA7559P



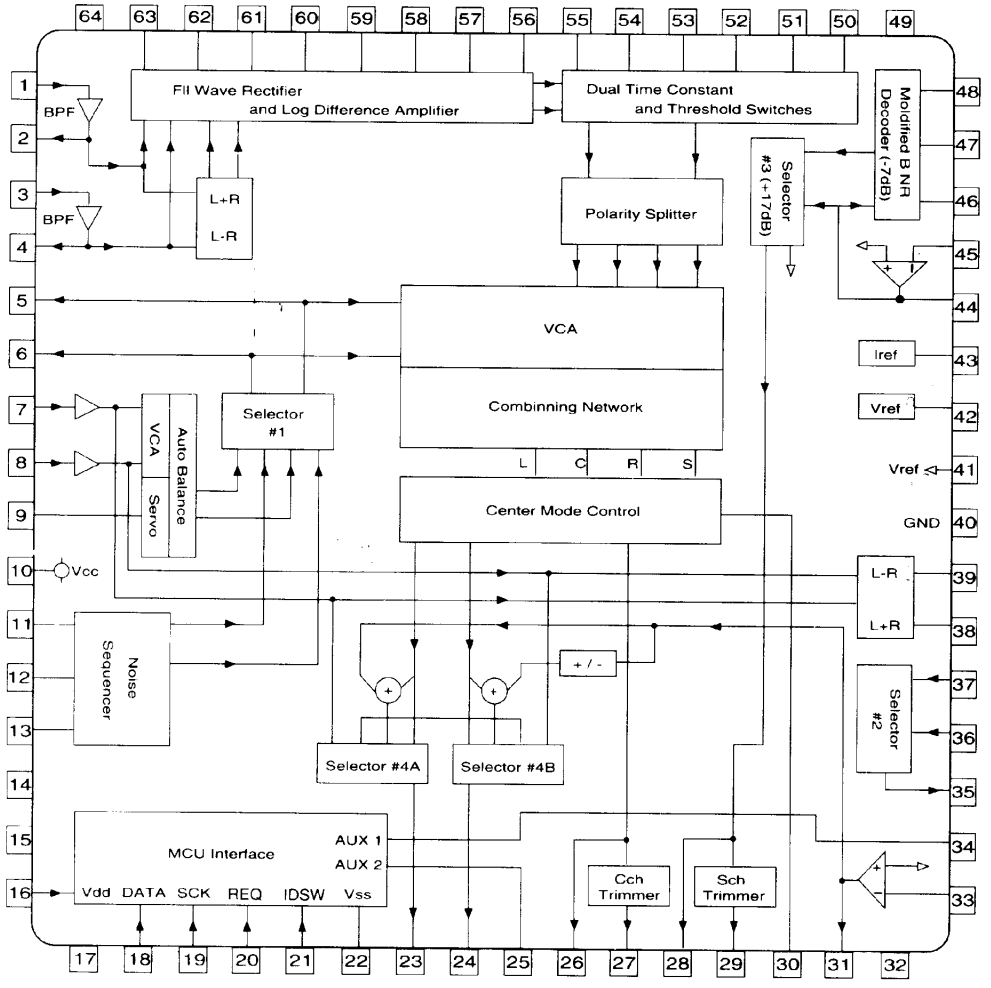
IC 4D : TDA7330BD



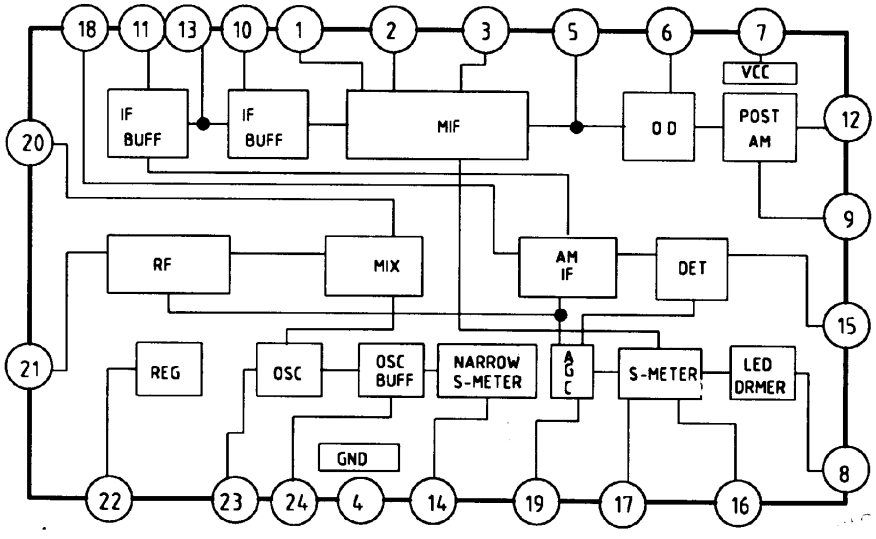
IC 3 : LA3401



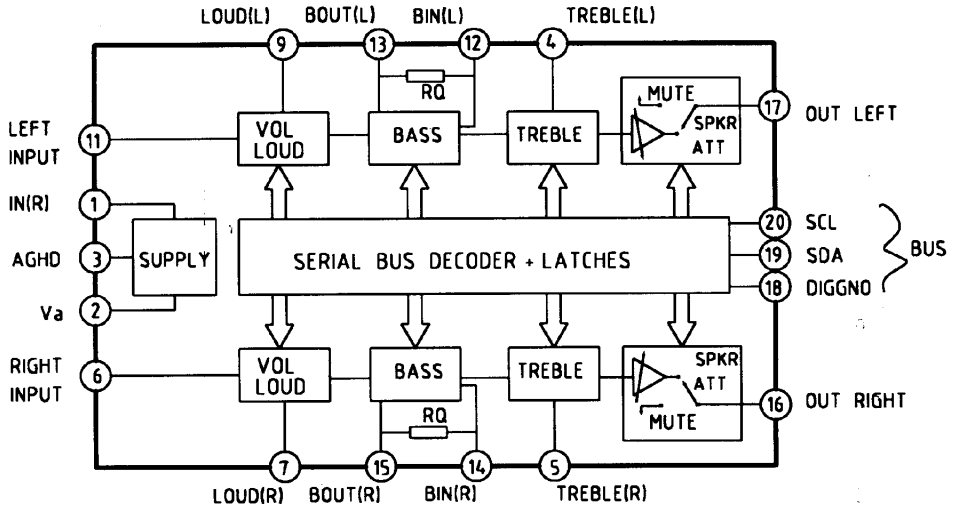
IC 501 : NJW1102AFG1



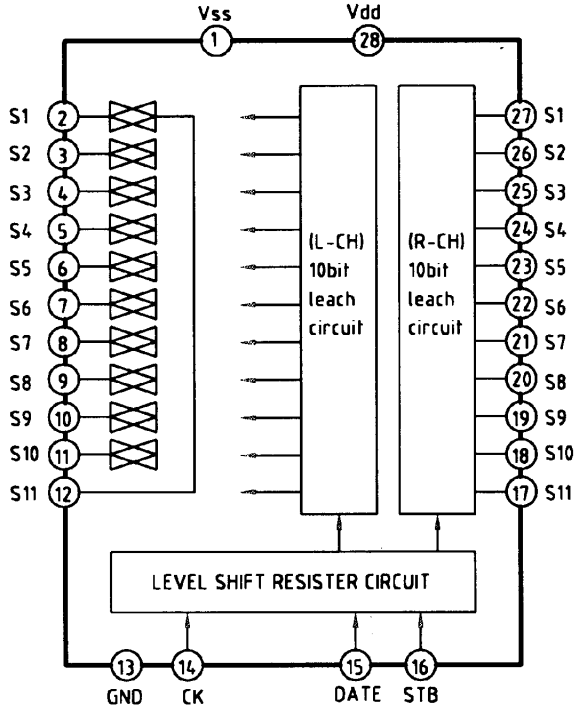
IC 2 : LA1266G



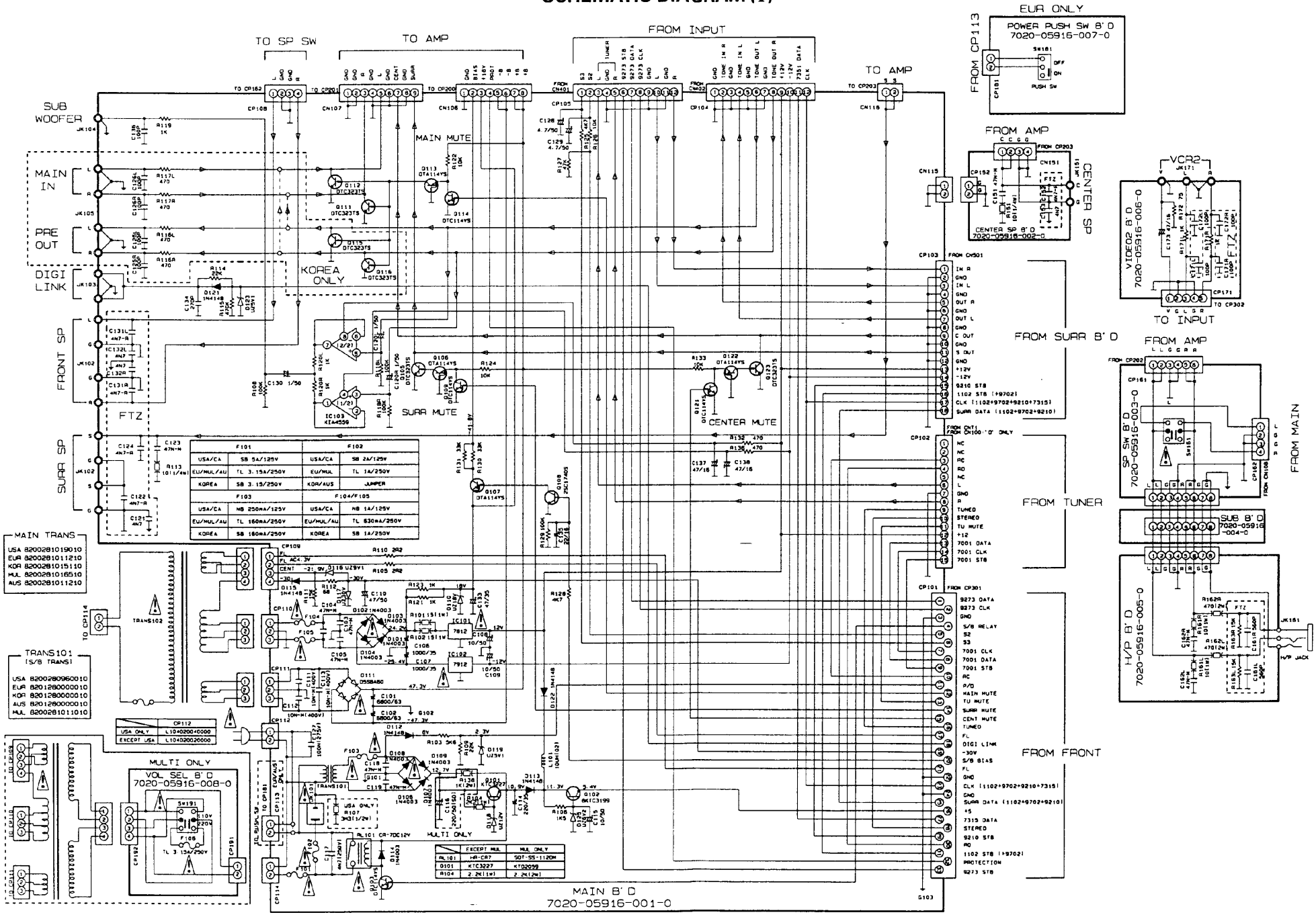
IC 451 : TDA7315D



IC 421 : TC9273N-007



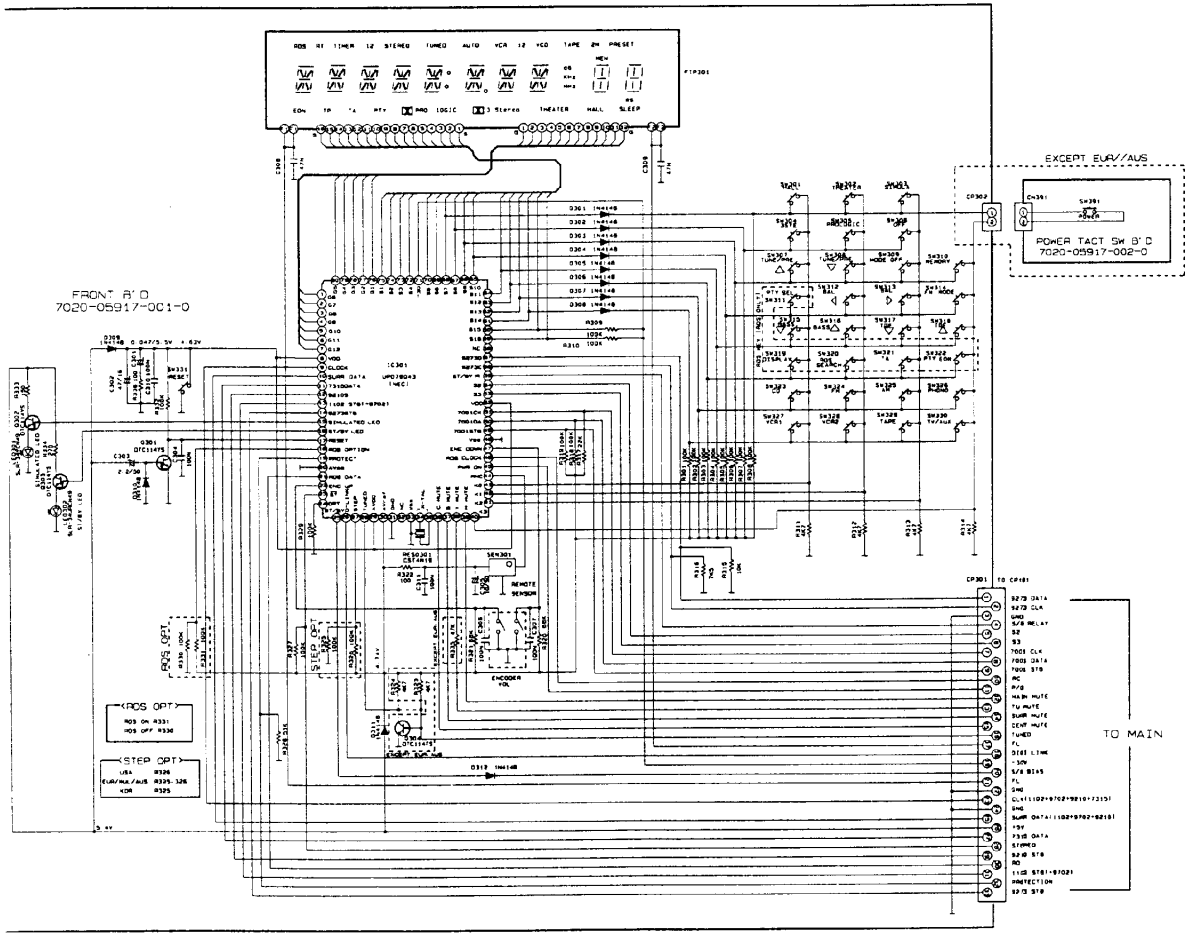
SCHEMATIC DIAGRAM (I)

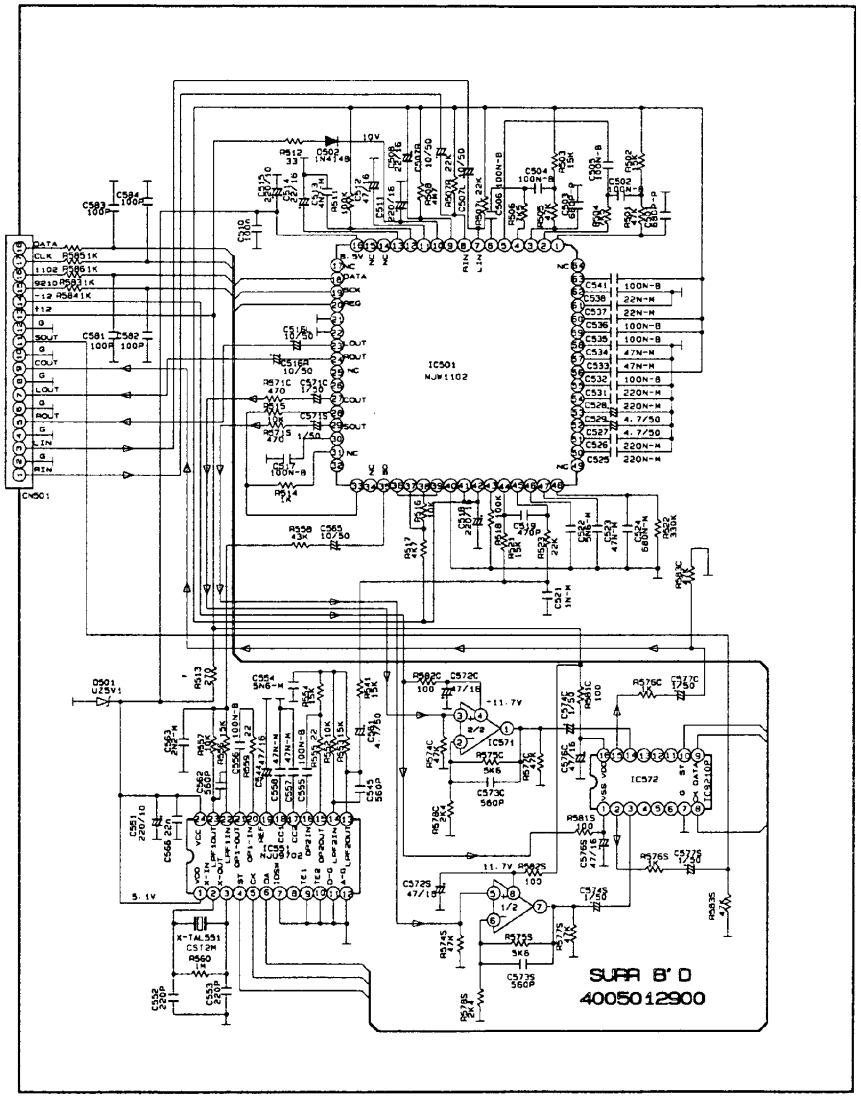


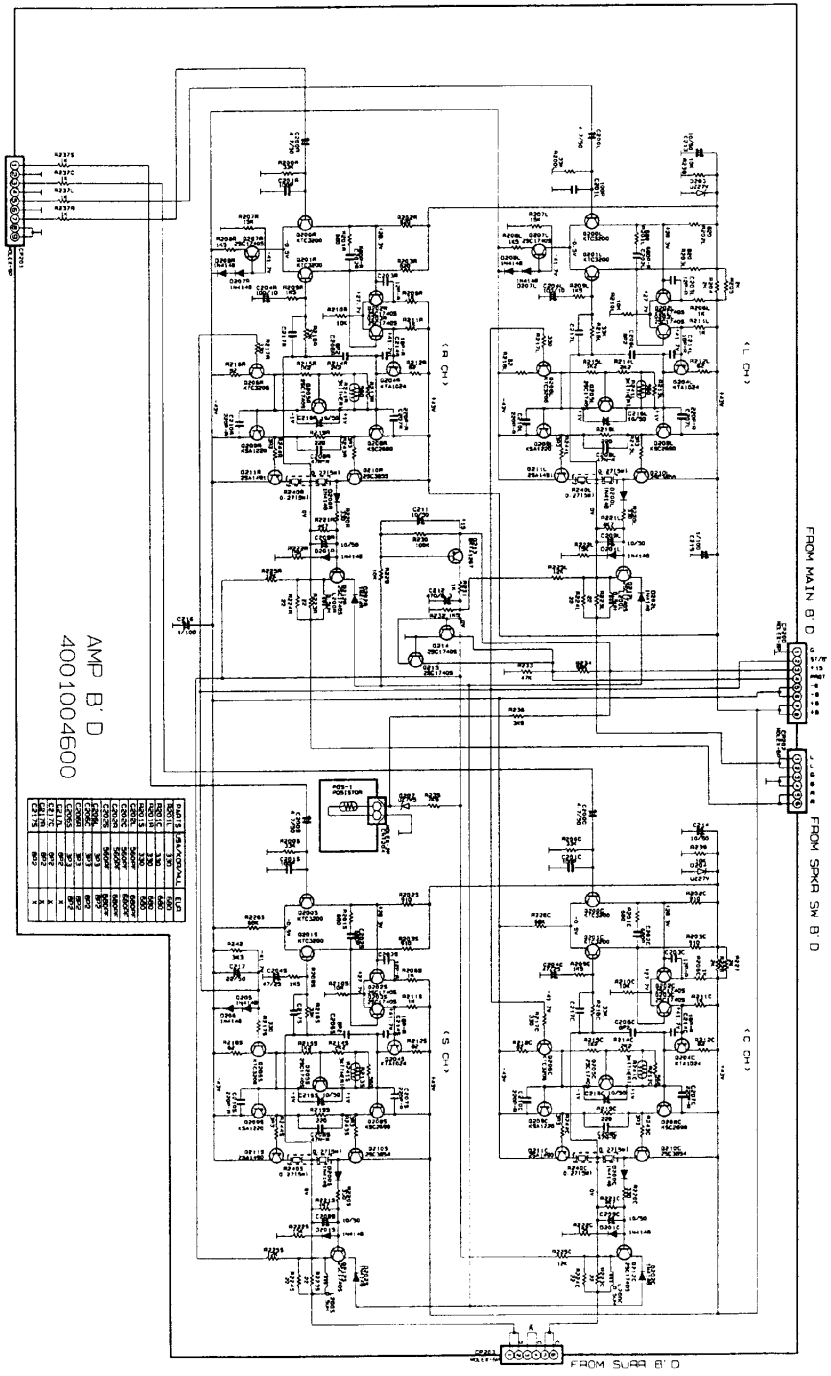
F101		F102	
USA/CA	SB 5A/125V	USA/CA	SB 2A/125V
EU/MUL/AU	TL 3.15A/250V	EU/MUL	TL 1A/250V
KOREA	SB 3.15/250V	KOR/AUS	JUMPER
F103		F104/F105	
USA/CA	NB 250mA/125V	USA/CA	NB 1A/125V
EU/MUL/AU	TL 160mA/250V	EU/MUL/AU	TL 630mA/250V
KOREA	SB 160mA/250V	KOREA	SB 1A/250V

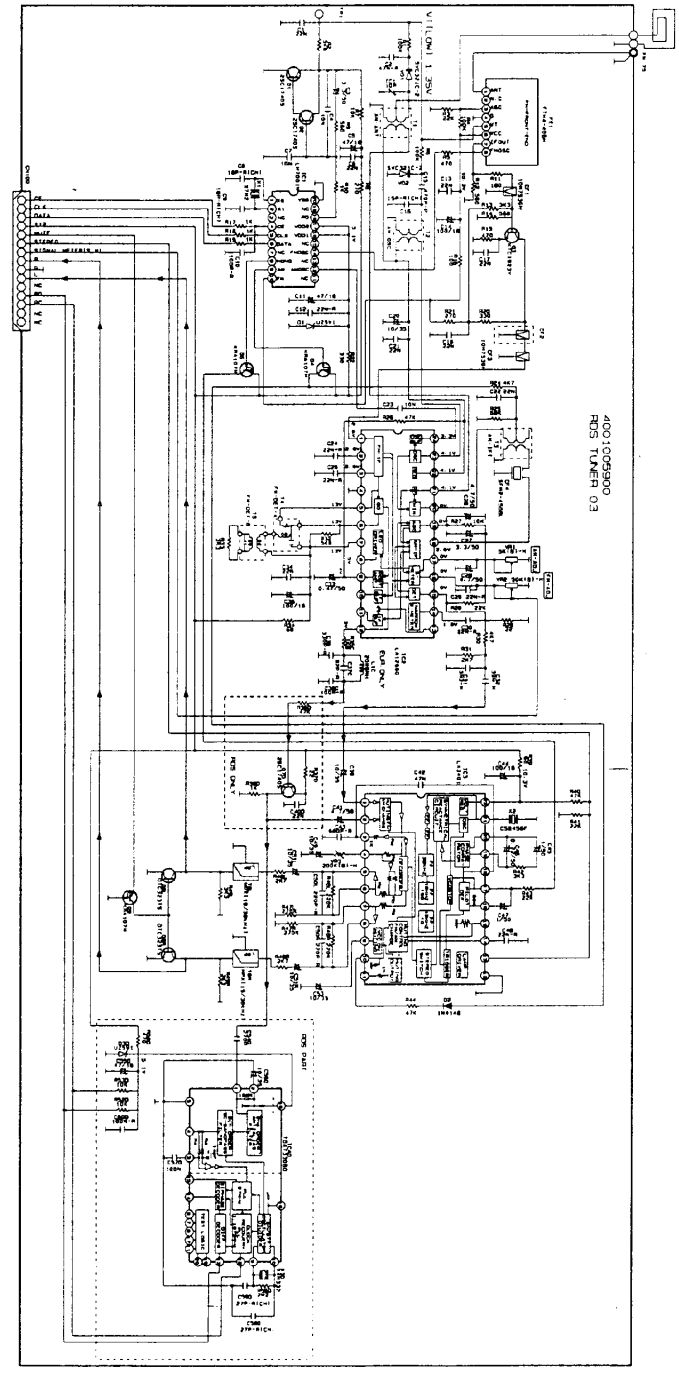
	CP112
USA ONLY	L104020040000
EXCEPT USA	L104020026000

	EXCEPT MUL	MUL ONLY
RL101	HR-CR7	SDT-S5-1120M
Q101	KTC3227	KTC2099
R104	2.2K(1W)	2.2K(2W)


FRONT B'D
7020-05917-001-0
EXCEPT EUR/AUS
POWER TACT SW B'D
7020-05917-002-0
TO MAIN
(RDS OPT)
RDS ON R331
RDS OFF R330
(STEP OPT)


IC501
NJW1102
SUB B'D
4005012900


AMP B' D
4001004600
FROM MAIN B' D
FROM SPKR SW B' D
FROM SUB B' D
(L CH)
(R CH)
(S CH)
(C CH)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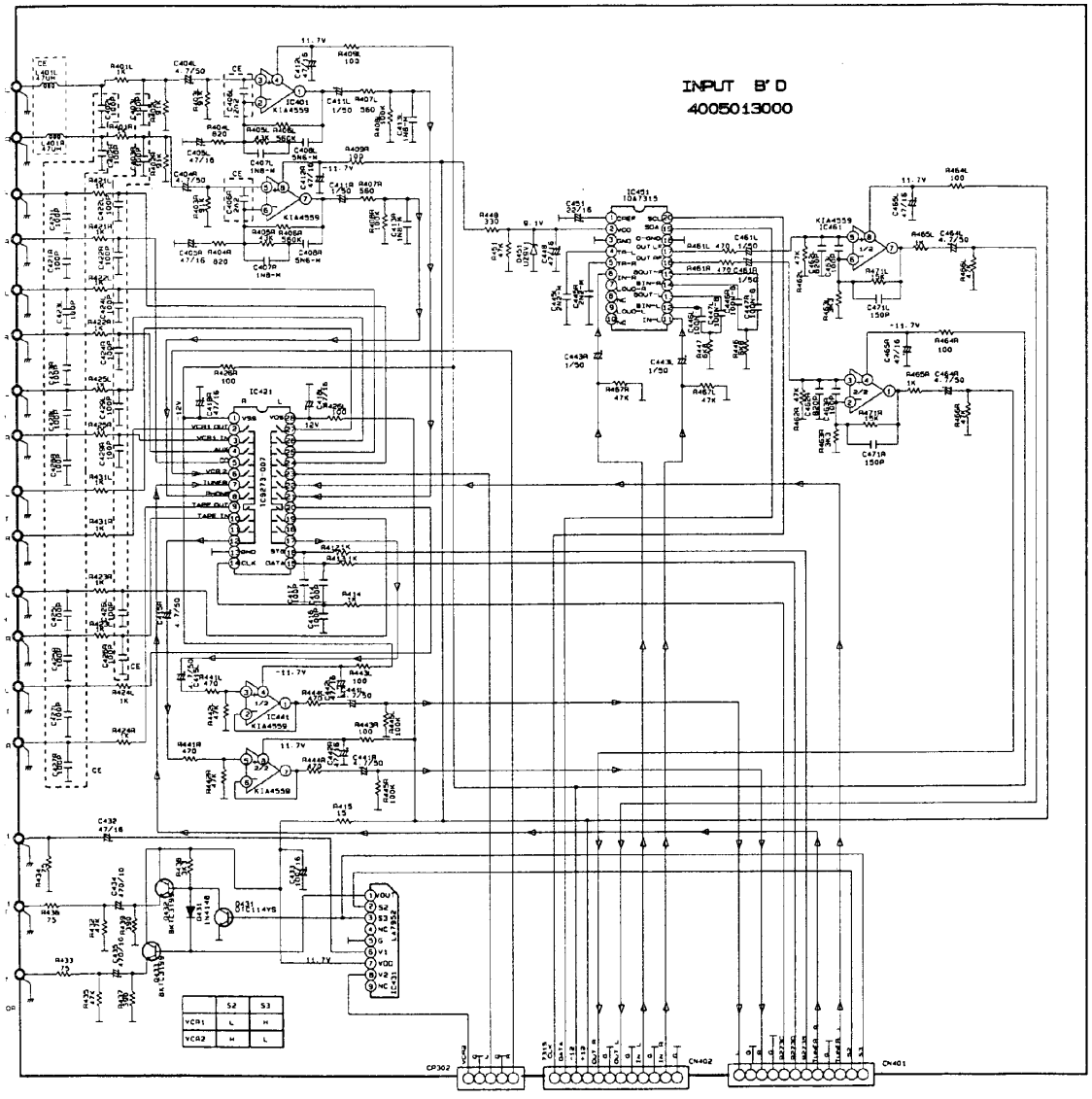
RDS TUNER 03


INPUT B' D
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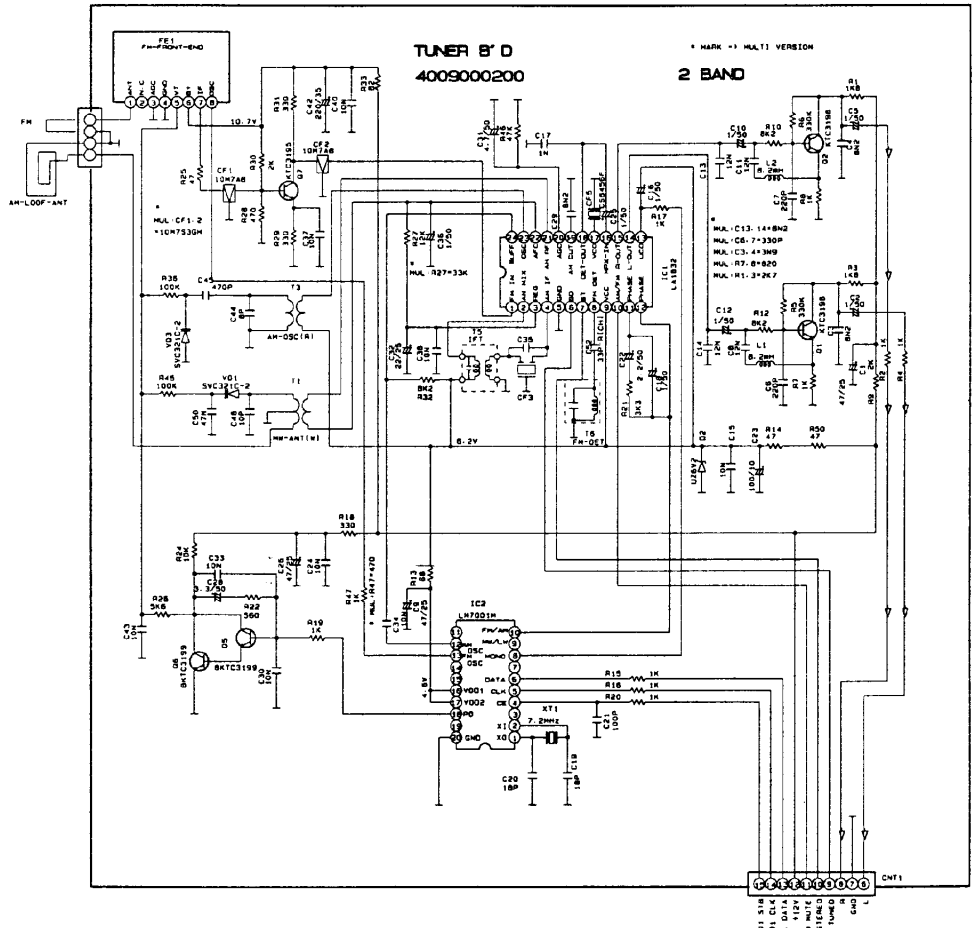
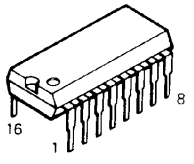
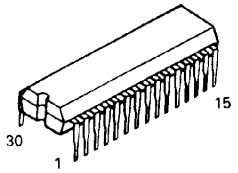

TUNER B' D
4009000200
2 BAND

PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICS

TC9210P



TC9273N-007



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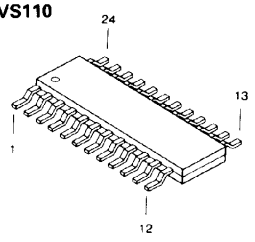
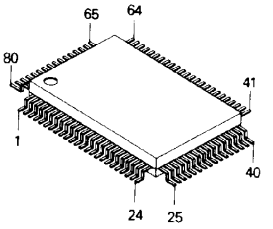
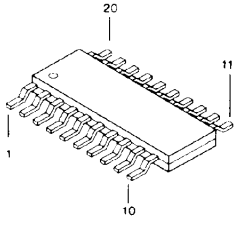
CXA1645N-76
CDVS110



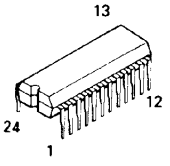
μPD78042
μPD78043AGF



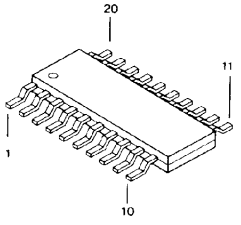
LM7001/M
TDA7330BD



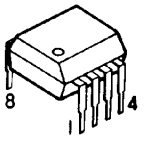
LA3401
LA1266



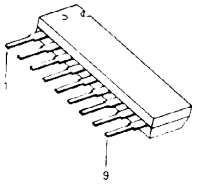
TDA7315D



KIA4559P/KIA7555P



LA7952



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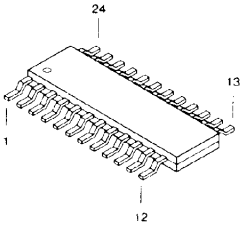
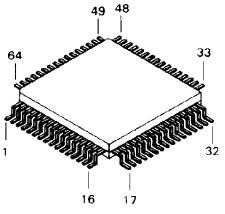
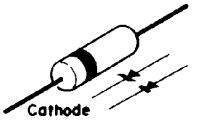


NJW1102AFG1



ZENER
IN4003
IN4148



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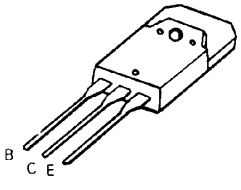

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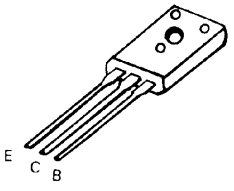
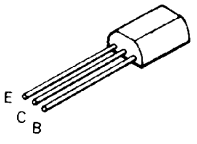


KTC2229/KTC3206
KTA949/KTA1024



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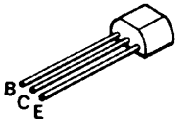
DTC114YS **DTC323TS**
DTC114YS **2SC3199Y**
2SC1740
KTA1267



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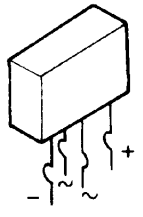

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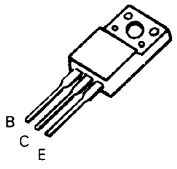

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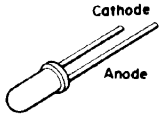

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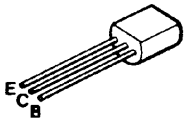
KTC1923Y/KTC3194



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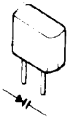

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