

# Goodmans

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**GMS880**

**Service Manual - GMS880**

CAUTION: Before servicing the chassis, read the " important service safety information" section on page 2 of this manual.

## PORTABLE RADIO CASSETTE WITH CD PLAYER

### SPECIFICATIONS

#### AM/FM TUNER SECTION

ANTENNA SYSTEM AM: FERRITE BAR  
FM: LEAD WIRE AND 75 OHM JACK  
TUNING RANGE AM: 540 - 1600 kHz  
FM: 88 - 108 MHz

#### AUDIO SECTION

SPEAKER IMPEDANCE : 4 OHM  
GENERAL : 2W x 2  
POWER INPUT : ~ AC 230V-50Hz

#### AC POWER CONSUMPTION

MAIN DIM : 154(L)x218(W)x 221(H)mm  
SPEAKER DIM : 138(L) x186(W) x221(H)mm  
WEIGHT : 4.0Kg

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## SERVICE PUBLICATION

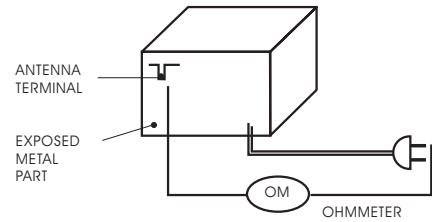
NOTE: All the specifications and features are subject to change without notice.

# IMPORTANT SERVICE SAFETY INFORMATION

## 1. SAFETY PRECAUTIONS

Before returning a unit to the customer, always make a safety check of the entire unit, including, but not limited to the following items:

- a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing.
  - (1) protective shields are provided to protect both the technician and the customer. Correctly replace all missing protective shields including any removed for servicing convenience.
  - (2) when reinstalling the chassis and/or other assemblies in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields and isolating resistor/capacitor networks. Do not operate this or permit it to be operated Without all protective devices correctly installed and functioning .
- b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, excessively wide cabinet ventilation slots, and an improperly fitted and/or incorrectly secured cabinet back cover.
- c. Leakage current hot check - with the unit completely reassembled ,plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National standards Institute (ANSI) C101.1 "Leakage Current for Appliances " and Underwriters Laboratories(UL) 1410 (50.7). WITH THE UNIT AC switch first in the ON position And then in the OFF position, measure from a known earth ground (metal water pipe, conduit, etc.) To all exposed metal parts of the Unit (antennas, handle bracket, metal cabinet, screw heads , metallic overlays, control shaft, etc.) Especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp, reverse the unit power cord plug in the outlet and repeat test .  
**ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HERENING INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED RETURNING THE UNIT TO THE CUSTOMER.**



## 2. PRODUCT SAFETY NOTICE

some electrical and mechanical parts have special safety related characteristics which are often not evident from visual inspection. Nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage , wattage, etc. Parts that have special safety characteristics are identified by a  $\Delta$  on schematic and parts list. Use of a substitute replacement that dose not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. Product safety is under review continuously and new instructions are issued whenever Appropriate.

## 3. Servicing precautions

**CAUTION:** before servicing the unit covered by this service by this service manual and its supplements. Read and follow the SAFETY PRECAUTIONS on this page.

**NOTE:** if unforeseen circumstances create a conflict between the following servicing precautions and any of the Safety precautions, always follow the safety precautions. Remember: safety first.

General servicing precautions.

- a. Always unplug the unit ' s AC power cord from the AC power source Before:
  - (1) removing or reinstalling any component, circuit board, module or any other unit assembly.
  - (2) disconnecting or reconnecting any unit electrical plug or other Electrical connection.
  - (3) connecting a test substitute in parallel with an electrical capacitor caution: a wrong part substitution or incorrect polarity installation Of electrolytic capacitors may result in an explosion hazard
- b. Do not defeat any plug/socket b+ voltage interlocks with which the unit covered by this service manual might be equipped.
- c. Do not apply AC power to this unit and/or any its electrical assemblies unless all solid-state device heat sinks are correctly installed.
- d. Always connect a test unit instrument ' s ground lead to the unit ' s chassis ground before connecting the test instrument ' s positive lead always remove the test instrument ' s ground lead last.

## 4. Laser precautions

**Warning!**

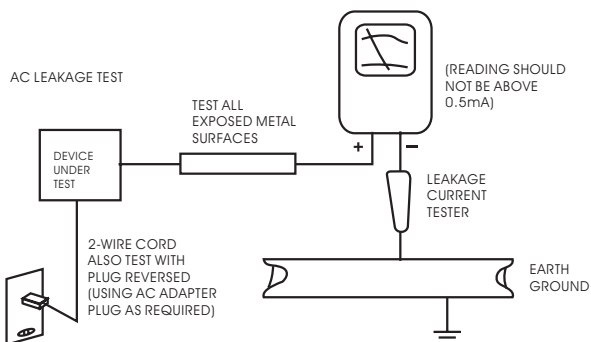
- (1) When servicing. (In case it is necessary to confirm laser Beam emission ) be sure not to place your eyes any closer than 1 or 30cm from the surface of the objective lens on the optical pickup block.

**HANDLING THE LASER PICKUP**

- (2) Laser Diodes are Extremely Susceptible to damage from static electricity even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly. When replacing the pickup, use a conductive mat on the floor and desk and wear a wrist band connected to ground through a 1Mohm resistor to protect the laser diode from static damage. If the lens should get dusty, blow off the dust carefully from the object.
- (3) There are no adjustable parts in the pickup assembly. If it is defective, replace the whole pickup assembly.

**CAUTION:** USE OF CONTROLS, ADJUSTMENTS OR PERFORMANCE OF PROCEDURES HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

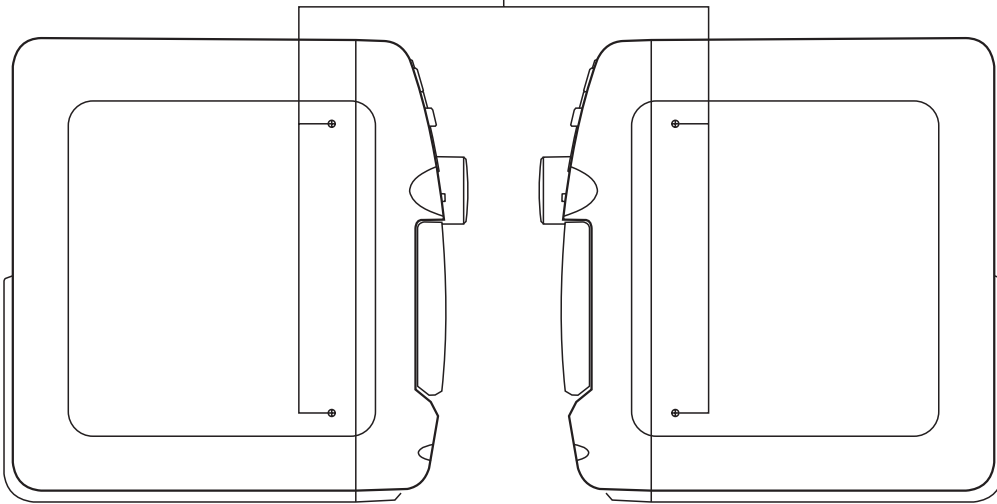
**DANGER:** IF INTERLOCK FAILS OR IS DEFEATED, THE LASER LIGHT IS ABLE TO FUNCTION. THE LASER IS INVISIBLE, AVOID DIRECT EXPOSURE TO BEAM.



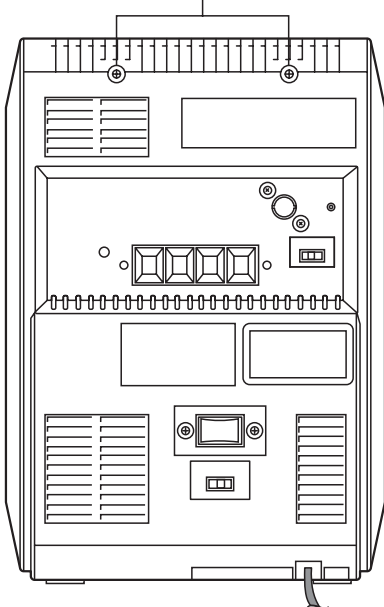
- d. Insulation resistance test cold check: unplug the power supply cord and connect a jumper wire between the two prongs of the plug . Turn on the power switch of the unit. Measure the resistance with an ohmmeter between jumpered AC PLUG AND EACH Exposed metallic cabinet part on the unit, such as screw heads, antenna, control shafts, handle brackets, etc. When the exposed metallic part has a return path to the chassis , the reading should be between 1 and 5.2 megohms. When there is no return path to the chassis, the reading must be " infinite" . If it is not within the limits specified, there is the possibility of a shock hazard, and the unit must be repaired and rechecked before it is returned to the customer.

# DISASSEMBLY INSTRUCTIONS

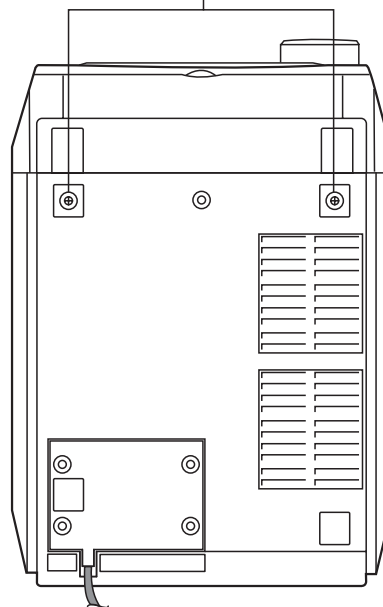
SCREW 3 x10 KA



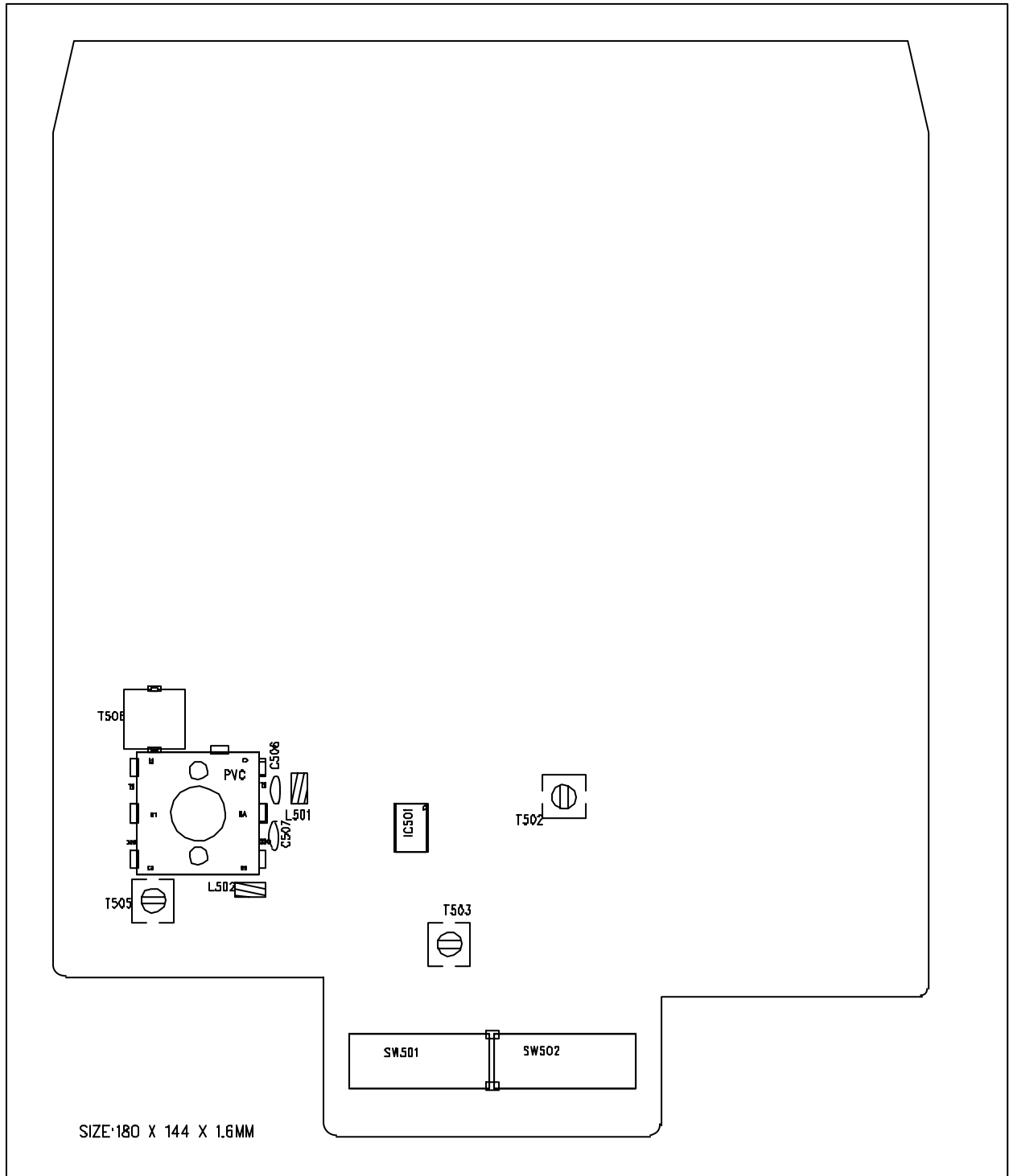
SCREW 3 x12 KM



SCREW 3 x10 PA



# ADJUSTMENT LOCATIONS



# ALIGNMENT PROCEDURES

## — FM AND AM RF ALIGNMENT CHART IF

Step	Item	Input Circuit Setup	Output Circuit Setup	Tuner setting	Adj - Point	Adjustment
Unless otherwise specified set switches as follows: FM      Function: FM Adjust generator frequency to a center of the FM band where no FM broadcast exists						
1	IF Adjustment	Connect FM IF sweep output terminal to IC501	Connect C519 and GND IF-OUT terminal to IF sweep input terminal	FM in band end	T201 T503	Adjust for straight and symmetrical S-curve Adjust with max.amplitude.
2	FM Band		Headphone jack or speaker terminal	87.5 MHz	L502	Adjust for max output
				108.5MHz	PVC201-FC1	Adjust for max output
3	Tracking (1)	FM SG ANT. Terminal 90 MHz, 1kHz,+22.5kHz dev	Headphone jack or speaker terminal	90 MHz MONO	L501	Adjust for max.output and best waveform
4	Tracking (2)	106 MHz,1 kHz +-22.5 MHz dev	Headphone jack or speaker terminal	106MHz	PVC201-FC2	Same as above.
5	Repeat steps 3 and 4.					
AM						
1	IF Adjustment	Connect standard loop antenna to output terminal of genescope	Connect input terminal genescope to detector output	AM in band end	T502	Adjust tor max. amplitude with symmetrical 455kHz.
2	AM Band		Headphone jack or speaker terminal	520 kHz	T505	Adjust for max output
				1630 kHz	PVC201-C2	Adjust for max output
3	Tracking (1)	600 kHz 400 kHz, 3% mod	Headphone jack or speaker terminal	600 kHz	L506	Adjust for max.output and best waveform
4	Tracking (2)	1400kHz 400 kHz, 3% mod	Headphone jack or speaker terminal	1400 kHz	PVC201-C1	Same as above.

# ALIGNMENT PROCEDURES

## FM RECEIVER PERFORMANCE DATA

2000mW NORMAL

Band:	FM		
Supply Voltage:	DC 12V /AC:	_____	Measured By: _____
Standard Output:	50	mw	
Dummy Load:	4	ohm	Approved By: _____
Modulation:	1 KHz 22.5 KHZ DEV		

Measuring Items		Unite	Norm	Limit	Sample1	Sample2
Max. Sensitivity	90 MHz	db				
	98 MHz	db				
	106 MHz	db				
30db Quieting Sensitivity	90 MHz	db	20	26		
	98 MHz	db	20	26		
	106 MHz	db	20	26		
Image Rejection	AT 106 MHz	db	25	20		
IF Rejection	AT 90 MHz	db	50	42		
AFC Holding 1mv I/p Range-3db	+Side	KHz	200	400		
	-Side	KHz	200	400		
-3db Limiting Sens .	1mv I/P	db	18	22		
AM Suppression	1mv I/P	db	35	30		
S/N	1mv I/P	db	45	40		
Stereo Sens		db	15	22		
Stereo Lamp On Sens.		db	20	24		
Separation R/L		db	28	22		
Audio Freq. Response -3db	Low	Hz	80	100		
	High	KHz	6	5		
Modulation Hum	1 mv I/P	db	42	36		
Hum & Noise(min.vol.)		mv	1	3		
THD10% Output Power		mW		≥ 1800		
Max. Output(40KHz DEV)		mW		≥ 1800		
Total Harmonic Distortion	1 mv I/P	%	1	3		
OSC Drop Out	1 mv I/P	V	160	180		
Current Consumption	No signal	mA				
	Max	mA				
Frequency Range	Low	MHz	87.35	+/-0.4		
	High	MHz	108.35	+0.5 -0.2		
IF Frequency		MHz	10.7	+/-0.1		

# ALIGNMENT PROCEDURES

## MW RECEIVER PERFORMANCE DATA

2000mW (NORMAL)

Band:	MW		
Supply Voltage:	DC12V/AC:	Measured By:	_____
Standard Output:	50	mw	
Dummy Load:	4	ohm	Approved By: _____
Modulation:	1 KHz 30%		
EQ OR Tone AT Center Place			

Measuring Items		Unite	Norm	Limit	Sample1	Sample2
Max. Sensitivity	600 KHz	db				
	1000 KHz	db				
	1400 KHz	db				
20db Quieting Sensitivity	600 KHz	db	84	89		
	1000 KHz	db	84	89		
	1400 KHz	db	84	89		
S/N	5mv/M	db	35	30		
ACA	+10 KHz	db	15	12		
	-10 KHz	db	15	12		
Image Rejection	AT 1400 KHz	db	35	30		
IF Rejection	AT 600 KHz	db	50	45		
Band Width -6db	+Side	KHz	3	10		
	-Side	KHz	3	10		
Tweet	50mv/M	2IF	%	5	10	
AGC FOM - 10db	100mv/M	db	35	30		
Audio Freq. Response -3db	Low	Hz	100	100		
	High	KHz	2.5	2.2		
Modulation Hum	100 mv /M	db	30	25		
Hum Volume At Min		mv	1	3		
THD10% Output Power		mW		≥ 1800		
Max. Output	60% MOD	mW		≥ 1800		
Total Harmonic Distortion	5 mv /M	%	1	3		
Current Consumption	No Signal	mA				
	Max	mA				
Frequency Range	Low	KHz	520	+/-10		
	High	KHz	1630	+30 -20		
IF Frequency		KHz	455	+/-5		



# ALIGNMENT PROCEDURES

## CASSETTE PLAYBACK PERFORMANCE DATA

2000mW NORMAL

Supply Voltage: DC12V/AC:

Standard Output: 50 mw

Measured By: \_\_\_\_\_

Dummy Load: 4 Ohm

Approved By: \_\_\_\_\_

0 DB = 1V Tone : Center

Tape Speed 4.76cm/sec.1 7/8 in

Eq. at center PT.

Measuring Items		Unite	Norm	Limit	Sample1	Sample2
Tape Speed Error		Hz	3000	+90/-60		
WOW & Flutter		%	0.25	0.35		
Play Freq Response  HEAD:KS-211	at Hz	db				
	at 125 Hz	db	+/-3	+/-6		
	at 1 KHz	db	0	0		
	at 10 KHz	db	+/-3	+/-6		
	at KHz	db				
P/B S/N 1KHZ 0dB	DC Opetation	db				
	AC Optetaion	db	45	40		
Min Vol Hum & Noise	AC Optetaion	mv	1	3		
Max Vol Hum & Noise	AC Optetaion	mv	30	50		
THD10% Output Power		RMS		≥ 1800		
Max Output		RMS		≥ 1800		
THD	at Hz	%				
	at Hz	%				
	at 1 KHz	%	2	3		
	at KHz	%				
	at KHz	%				
Track Crosstalk		db	40	35		
Channel Separation	R - L	db	30	25		
	L - R	db	30	25		
Channel Balance		db	1	3		
No Signal Current Min. Vol. Blank Tape		mA				
Max Output Max. Vol		A				
Play Torque		g/cm		30-80		
F.F Torque		g/cm		45-125		
Rew Torque		g/cm		45-125		
Time for Play		Min				
Time for F.F		Sec		<180		
Time for Rew		Sec		<180		
Play Level Tape 112 =0db Ref		db	0	0		
Radio Fm 1KHz IN AT 40KHz		db	+/-2	+/-4		
CD Play 1 KHz -10db		db	+/-2	+/-4		

# ALIGNMENT PROCEDURES

## CASSETTE REC/PLAY PERFORMANCE DATA

2000mW **DC BIAS** NORMAL

Supply Voltage: DC12V/AC:

Standard Output: 50 mw  
 Dummy Load: 4 Ohm

Measured By: \_\_\_\_\_

0 DB = 1V Tone:Center

Approved By: \_\_\_\_\_

Tape Speed 4.76cm/sec.1 7/8 in

Measuring Items		Unite	Norm	Limit	Sample1	Sample2
Rec Bias System	AC	KHZ				
Erasing System			TC 230			
Erasing Ratio		db	28	23		
ALC Compresion for 30db		db				
Stansatding up time for -20db at 90%		Sec				
Recovery time for -20db at 90%		Sec				
R/P Frep Response  HEAD:KS-211	at Hz	db				
	at 100 Hz	db	+/-3	+/-6		
	at 1 KHz	db	0	0		
	at 8 KHz	db	+/-3	+/-6		
	at KHz	db				
R/P SN	Built Mic	db				
	FM 1mv/in	db	26	23		
R/P THD	at 1KHz	%	6	11		
Built in Mic Sens		db				
Ext Mic Sens		db				
Line in Sens		db				
R/P Channal Separation	L - R	db	26	22		
	R - L	db	26	22		
Play Level	Tape 118 =0db Ref	db	0	0		
CD Play	1 khz -20db	db	+/-2	+/-4		
Radio	Fm 1khz 12.5khz	db	+/-2	+/-4		

### ***BASS***

at100Hz	ON	dB	+7	+/-1		
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# VOLTAGE CHARTS

## IC VOLTAGE TABLE

{DC12V,NO SIGNAL INPUT (EXCEPT FM STEREO BAND),VOLUME MINMUN}

AC 230V 50HZ

TC94A29F-400

TA2157FN & MM1469

TA2180&TA8227P&PT2253&KA22241

<b>U103 MM1469</b>	<b>PINS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
	<b>MOTOR</b>	3.4	3.4	2.1	2.1	0	1.7	7.8	0	2.1	2.1	3.4	3.4	0	7	0.8	1.2
	<b>PINS</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>				
	<b>MOTOR</b>	2.6	4.3	2.4	2.1	7.8	7.8	2.1	2.1	2.1	3.4	3.4	0				

<b>U102 TA2157FN</b>	<b>PINS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
	<b>CD</b>	3.28	1.62	1.64	1.63	1.63	0	2.6	0	1.58	1.64	1.64	1.04	2.8	1.64	1.64	1.64
	<b>PINS</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>		
	<b>CD</b>	0.1	1.63	1.18	1.74	2.37	0.76	1.64	0								

<b>U101 TC94A29F-400</b>	<b>PINS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
	<b>standby</b>	0	0	3.2	3.52	0	0	3.1	3.2	0	1.5	0	0	0	3.78	0	0.29
	<b>CD</b>	2.95	2.93	2.95	3.32	0	0	3.1	2.95	0	1.37	0	0	2.93	3.68	0	0
	<b>PINS</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>
	<b>standby</b>	0.04	0.03	0.03	0.03	0	0	0	0	0	0	0	0	0	0	0	0
	<b>CD</b>	1.62	0	1.49	3.32	0.97	0	1.53	1.63	3.28	1.64	1.63	0.72	1.64	1.04	1.64	1.63
	<b>PINS</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>
	<b>standby</b>	0	0	0	0	0	0	0	3.2	3.2	0.2	0	0	0	0	0	0
	<b>CD</b>	1.64	1.64	1.74	1.58	0.01	1.64	1.64	2.95	1.32	1.3	0	3.2	1.6	0	1.6	1.6
	<b>PINS</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>
	<b>standby</b>	3.19	0.86	1.7	1.59	1.59	1.59	1.59	1.6	1.6	1.6	1.59	1.6	1.6	1.6	1.6	1.6
	<b>CD</b>	2.95	0.7	1.57	1.46	1.46	1.46	1.46	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47	1.47
	<b>PINS</b>																
	<b>standby</b>																
	<b>CD</b>																
	<b>PINS</b>																
	<b>standby</b>																
	<b>CD</b>																
	<b>PINS</b>																
	<b>standby</b>																
	<b>CD</b>																

# VOLTAGE CHARTS

<b>IC305</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
<b>PT2253</b>		0	3.3	3.3	3.3	3.3	3.3	6.8	6.8	6.8	6.8	3.3	3.3	3.3	3.3	3.3	6.8

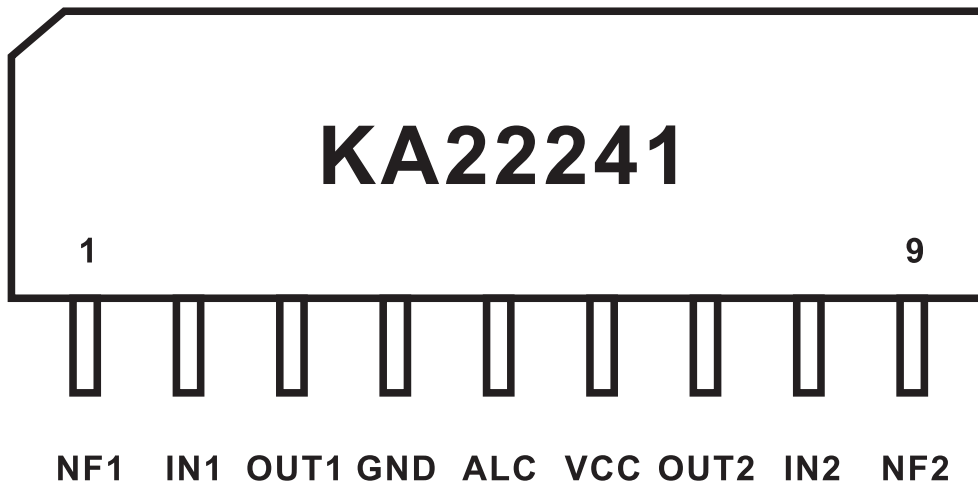
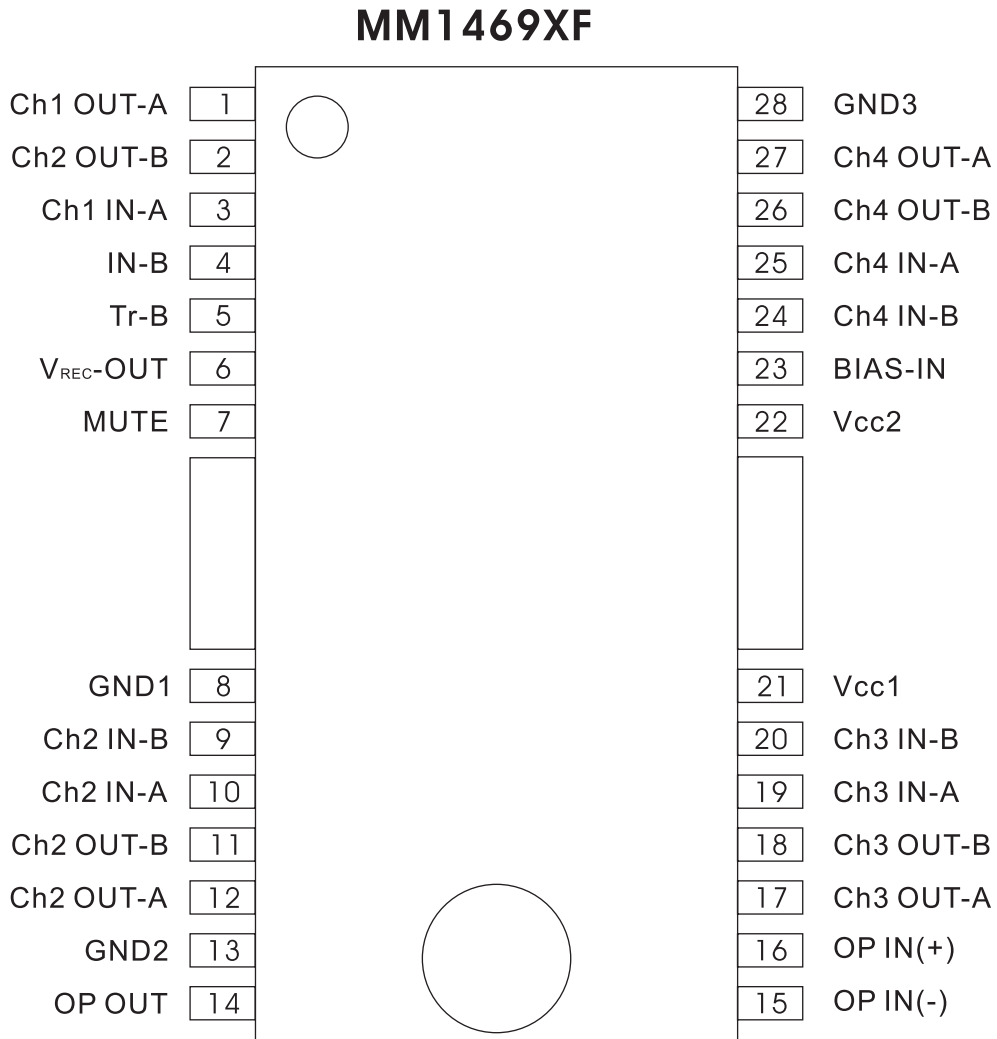
<b>IC201</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>							
<b>KA22241</b>		1.9	0	1.9	0	0	6.5	1.92	0	1.9							


<b>IC306</b>	<b>PINS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>
<b>TA8227</b>		10	5.3	9.7	0	0	0.6	0	0	0.5	5.5	0	9.7	5.3	11.5

<b>IC501</b>	<b>PINS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
	<b>AM</b>	0	0	1.07	3.6	3.6	2.95	3.63	0	0.22	3.06	1.22	1.25
	<b>PINS</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
	<b>AM</b>	0	0.72	0.71	1.06	0.9	0.07	2.9	3.62	3.62	3.62	3.62	3.62
	<b>PINS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
	<b>FM</b>	0	0.77	0.01	3.2	3.4	2.8	3.3	0	0	2.6	1.2	1.2
	<b>PINS</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
	<b>FM</b>	2.5	2.77	0.7	1.01	0.9	0.1	2.6	3.3	3.3	3.3	3.3	3.3

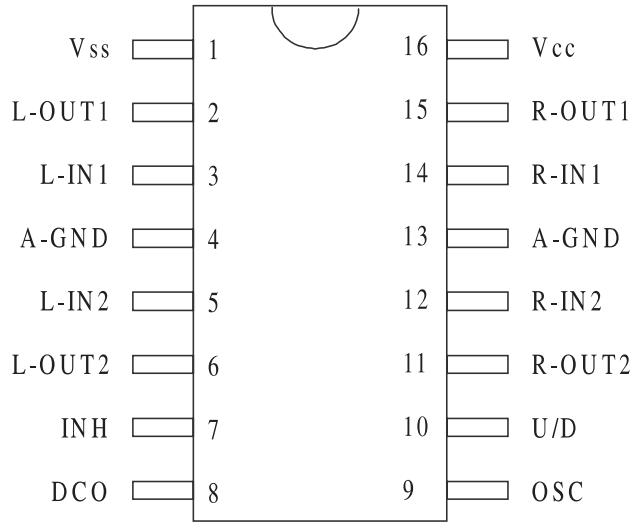

**REMARK: ALL THE DATA IN THE TABLE  
ARE FOR REFERENCE ONLY**  
FOR FM ST BAND,  
**FM STEREO INDICATOR MUST BE ON.**

# IC BLOCK DIAGRAM

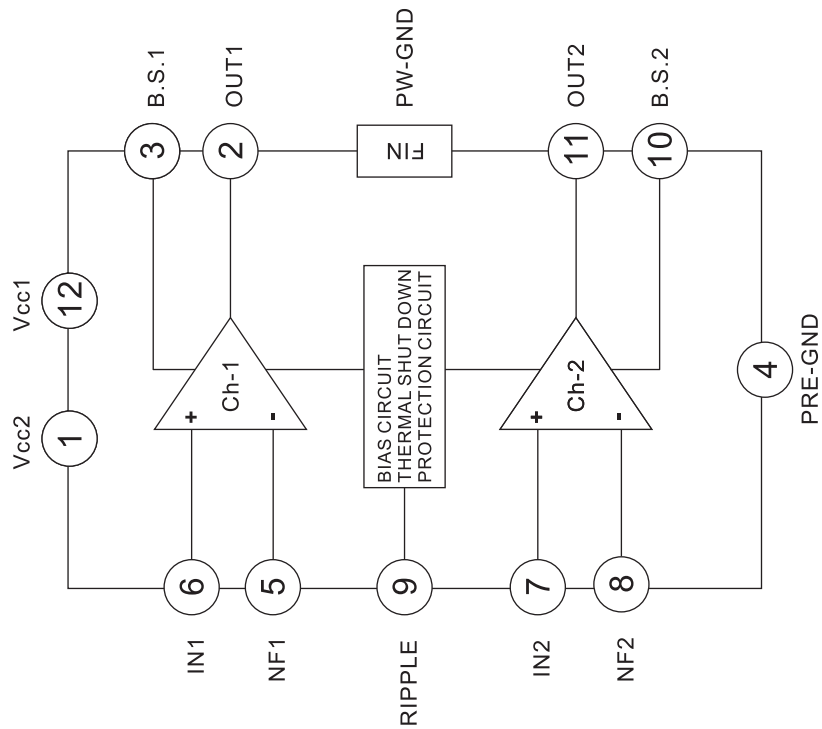


# IC BLOCK DIAGRAM

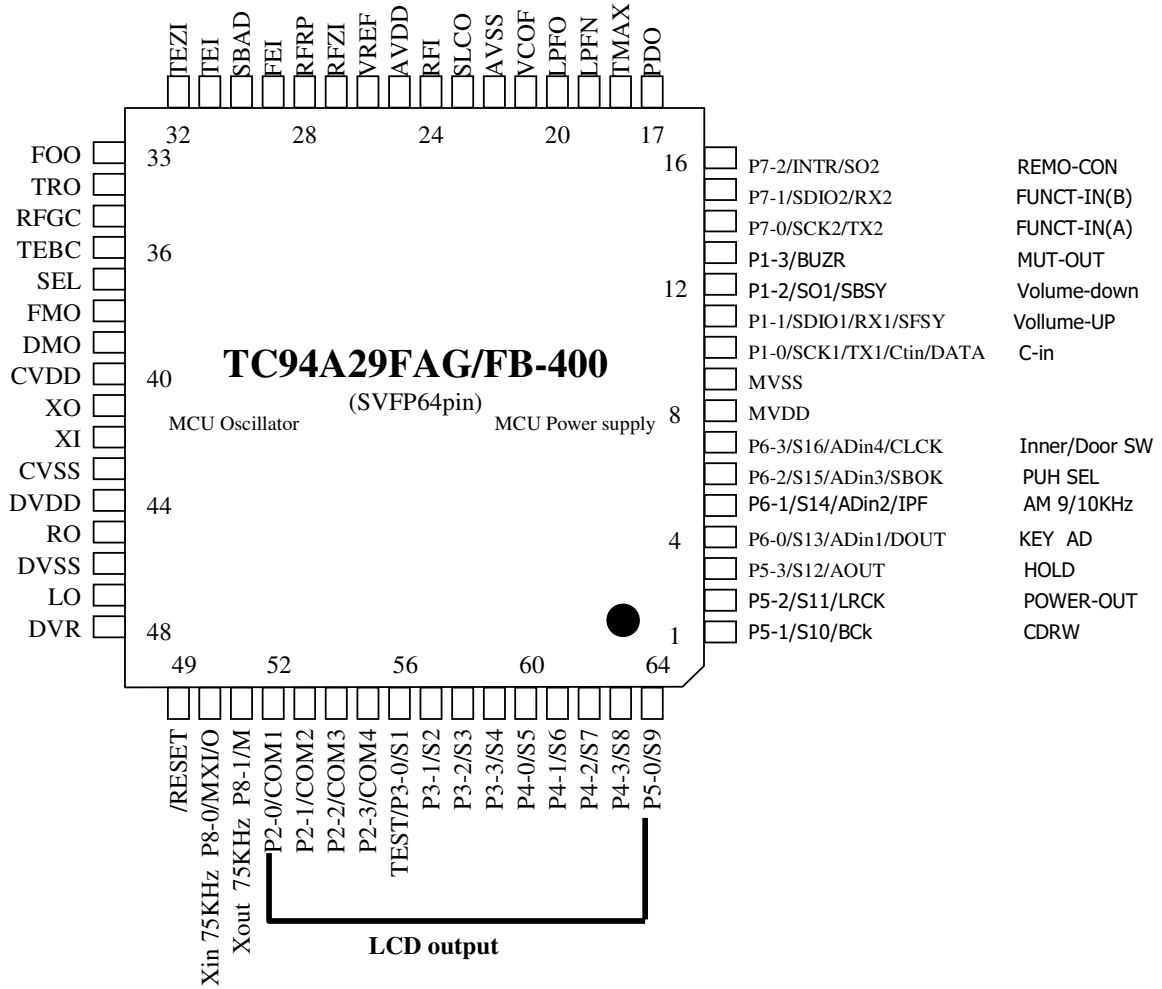
## PT2253A



## TA8227P



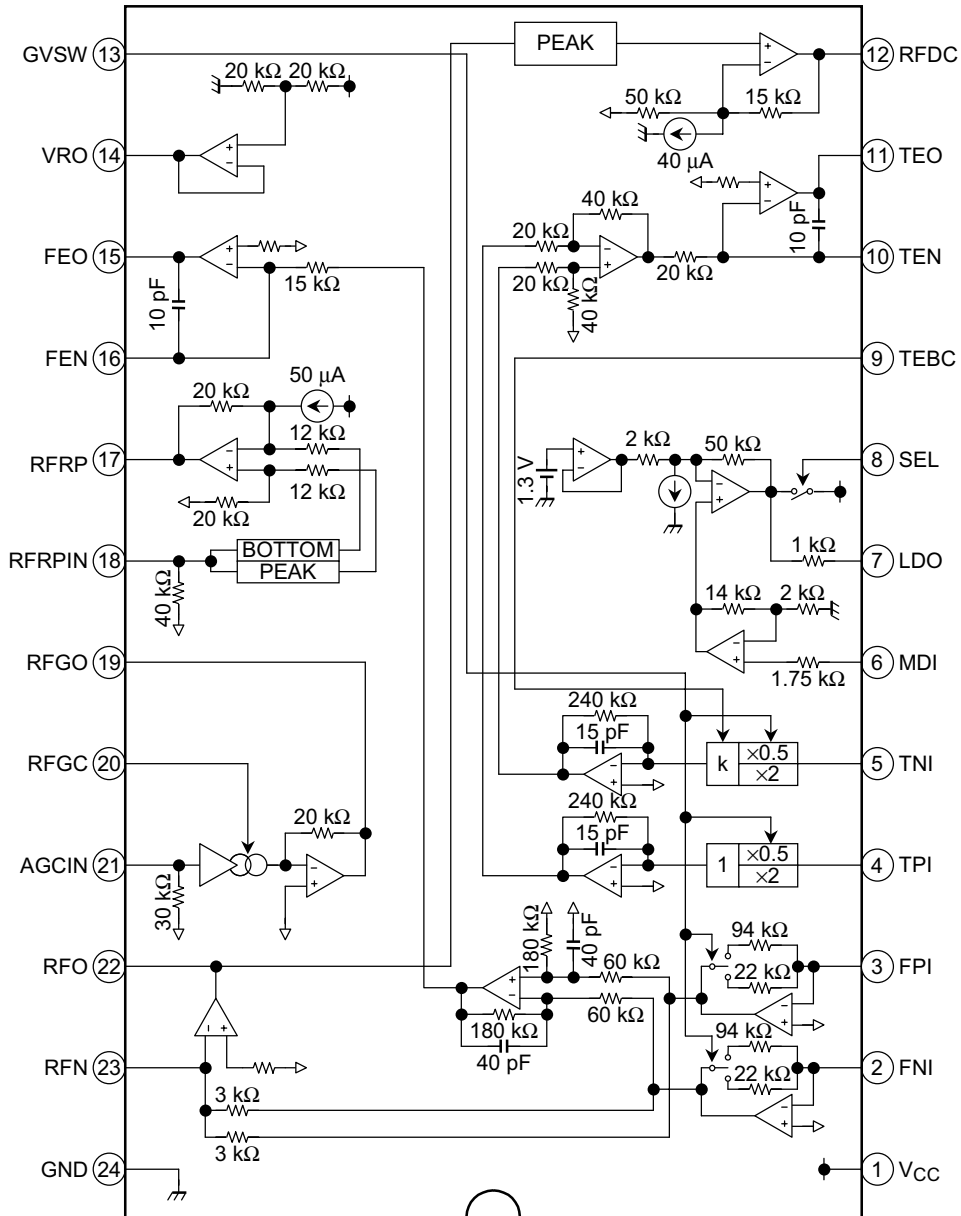
# IC BLOCK DIAGRAM





# IC BLOCK DIAGRAM

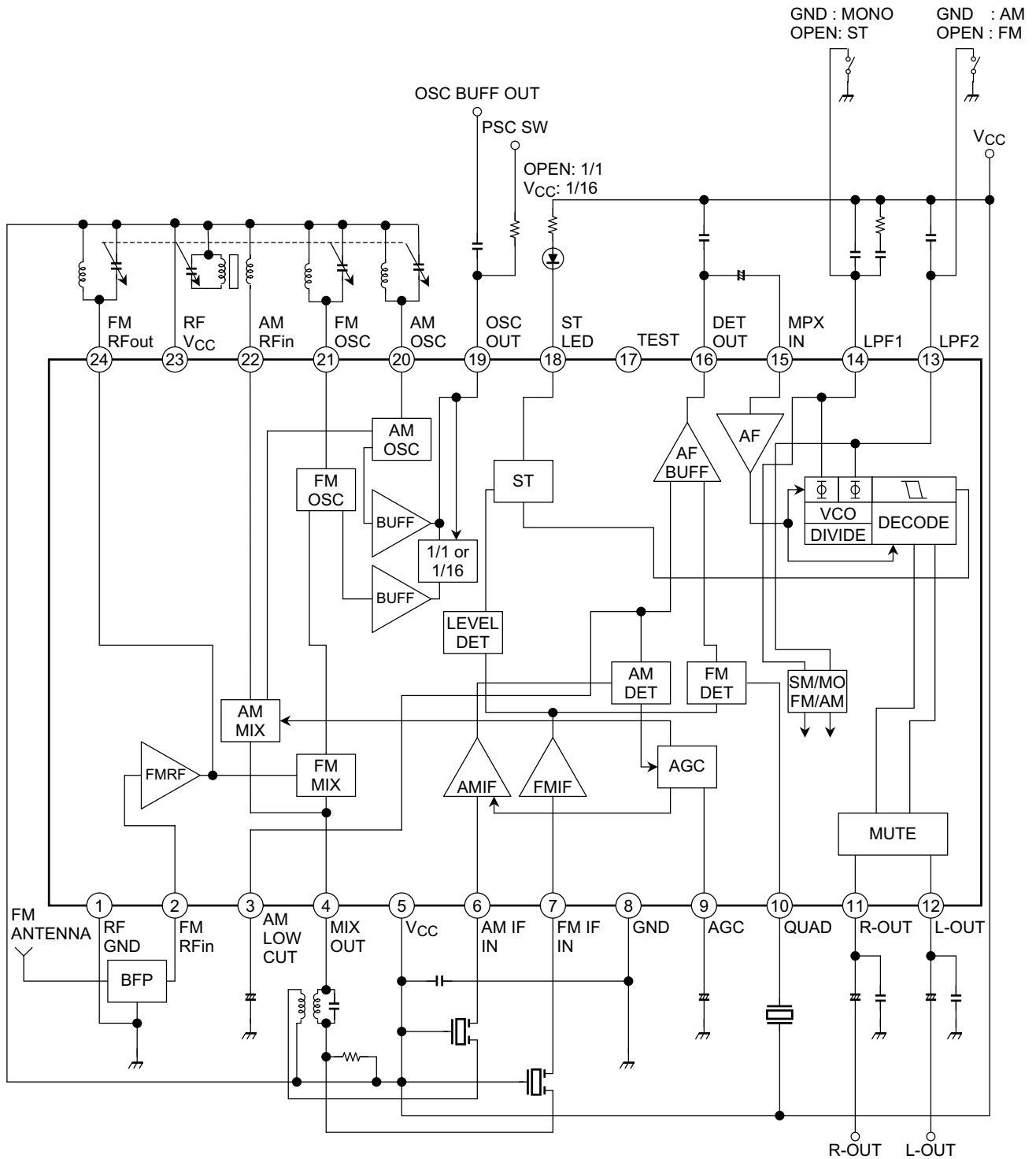
## TA2157F/FN



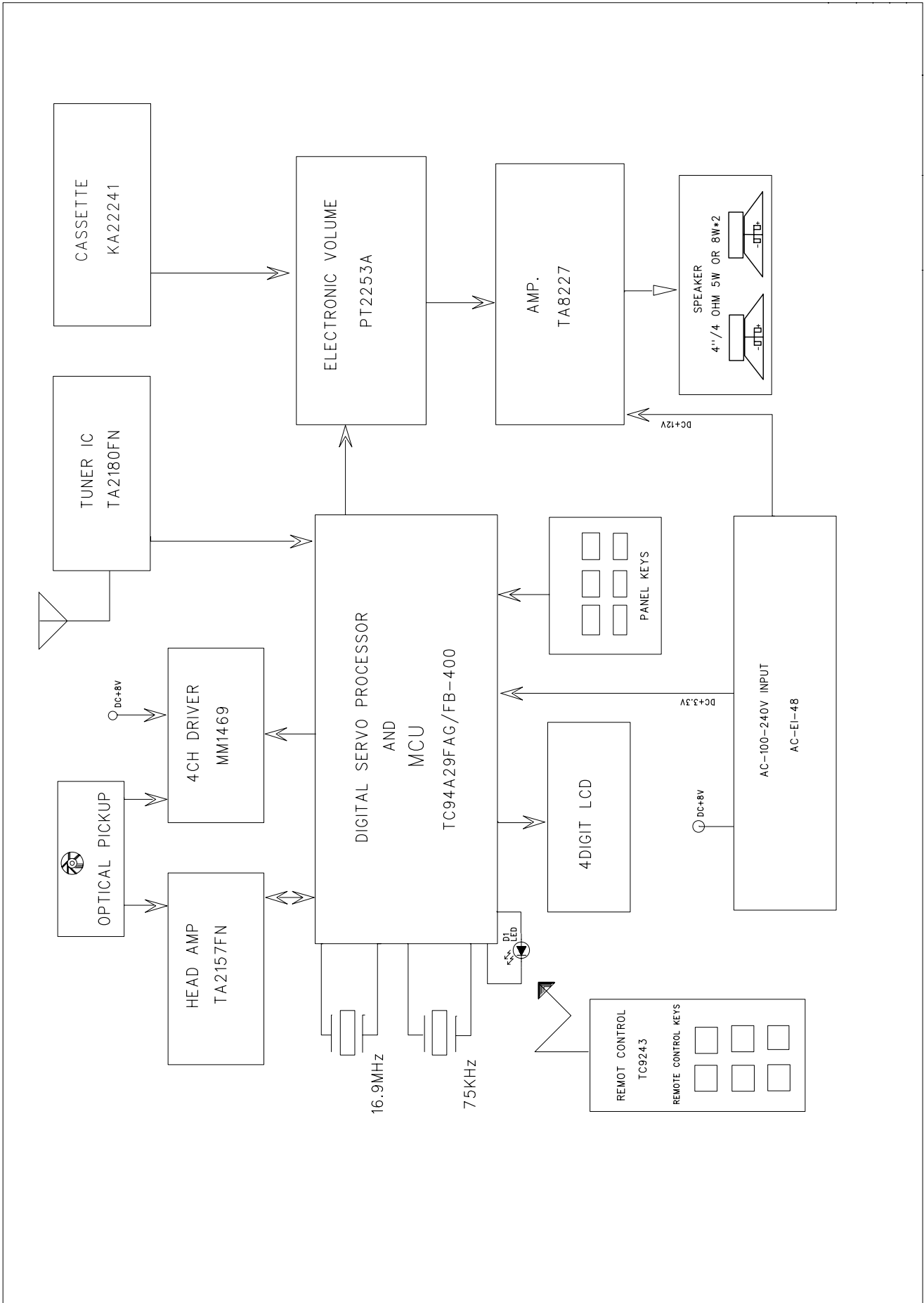
PIN V <sub>CTRL</sub>	SEL (APC SW)	TEB (TE BAL)	RFGC (AGC Gain)	GVS
V <sub>CC</sub>	APC ON	-50%	+12dB	Normal mode (0dB)
HiZ	APC ON	0%	+6dB	Normal mode (0dB)
GND	APC OFF (LDO = H)	+50%	0dB	CD-RW mode (+12dB)

# IC BLOCK DIAGRAM

## TA2180FN



# BLOCK DIAGRAM

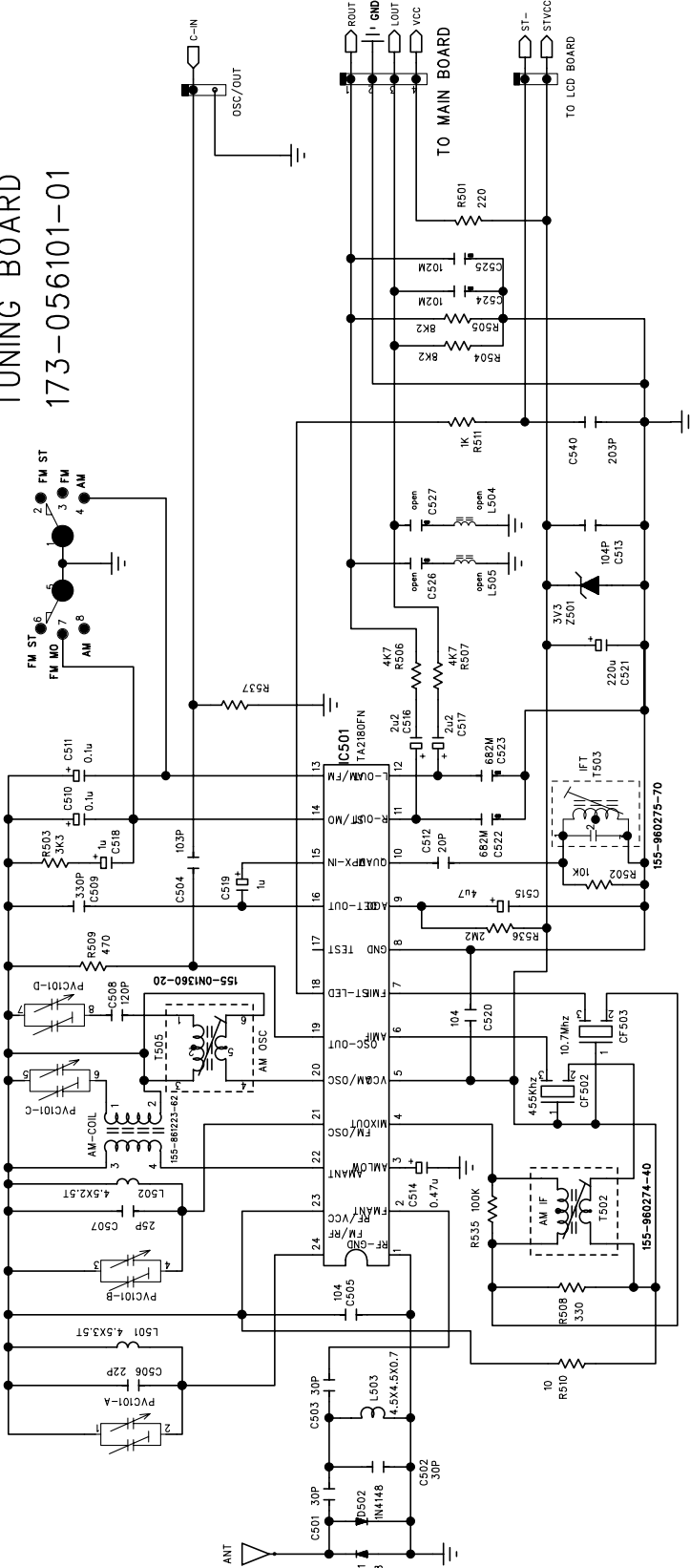




# SCHEMATIC DIAGRAMS

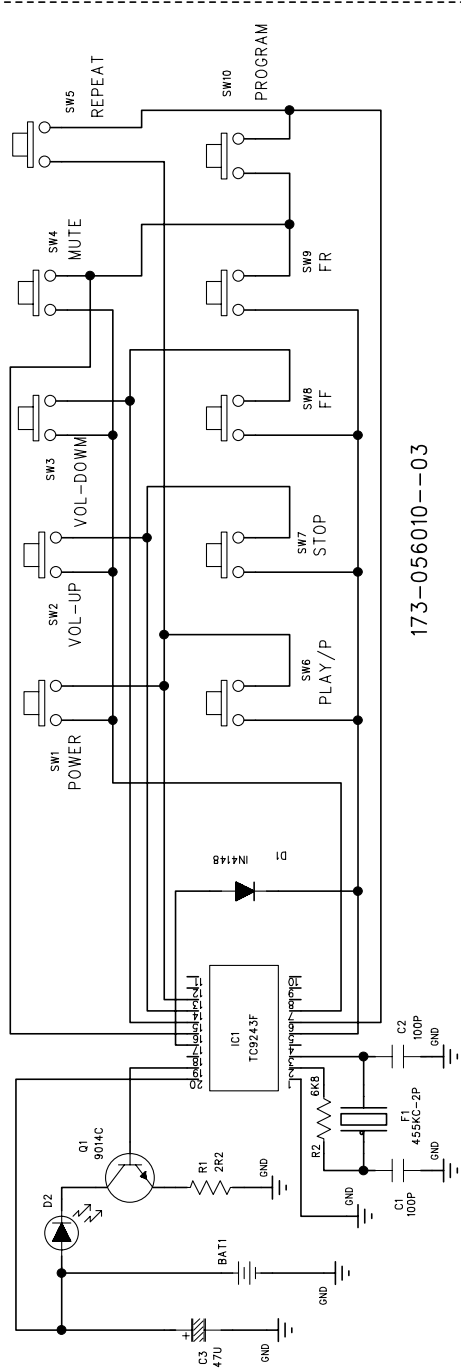
## TUNING BOARD 173-056101-01

SW501-B-B-B SW501-B-B-A



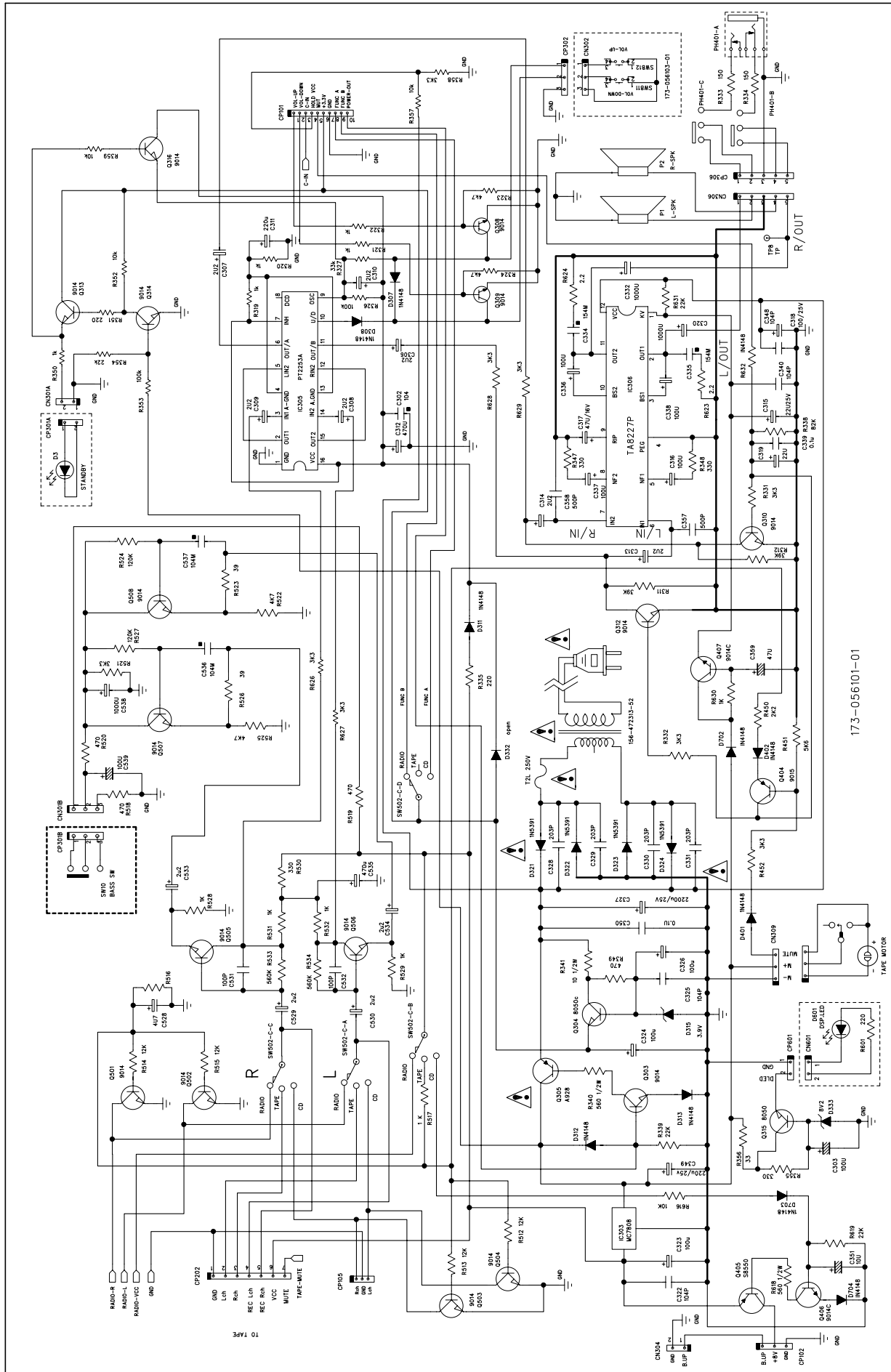
FM 40KHZ DEV  
AM 60% DEV

FM 75KHZ DEV  
AM 80% DEV  
R506,507=18K  
R536=OPEN



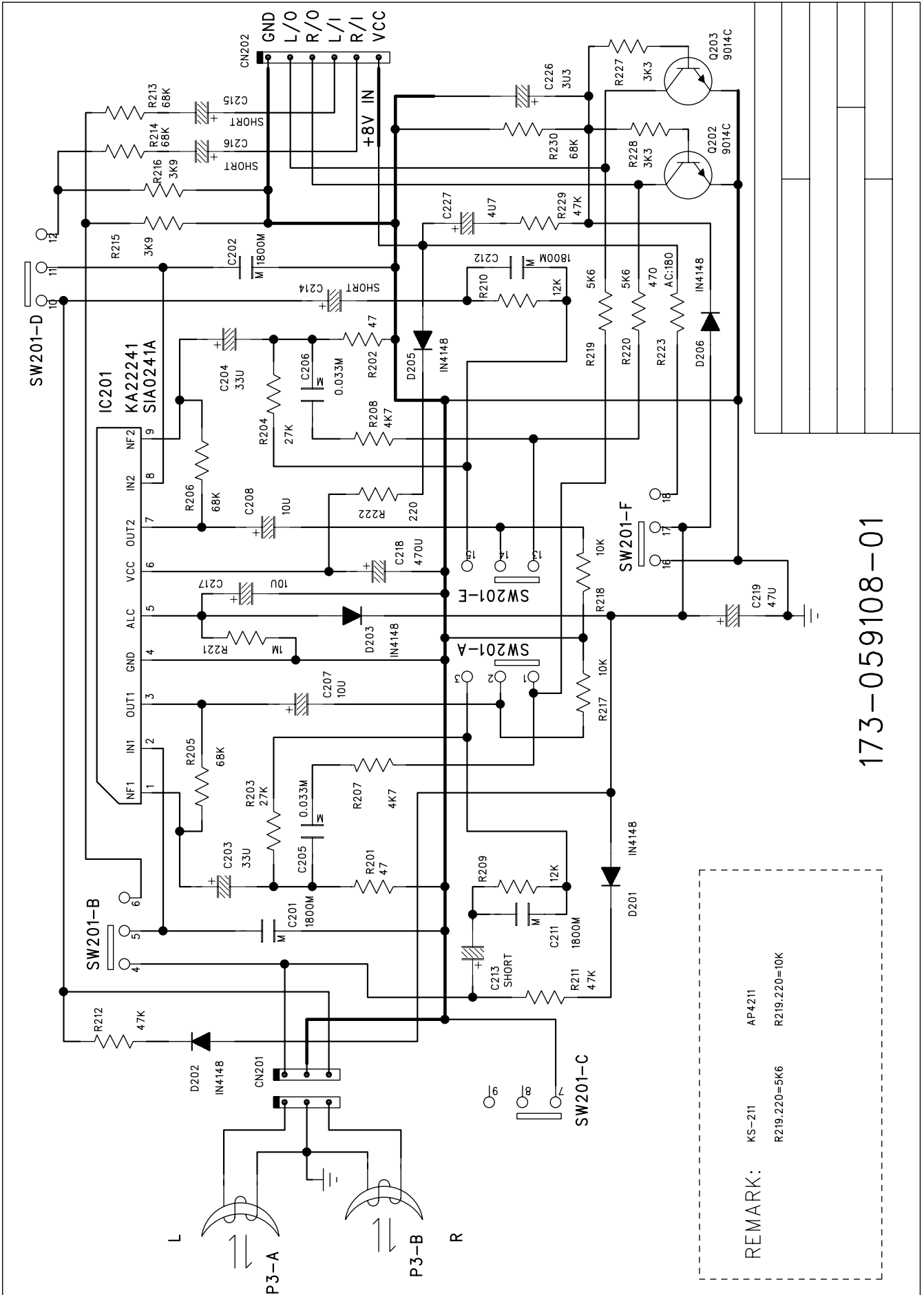
173-056010--03

# SCHEMATIC DIAGRAMS





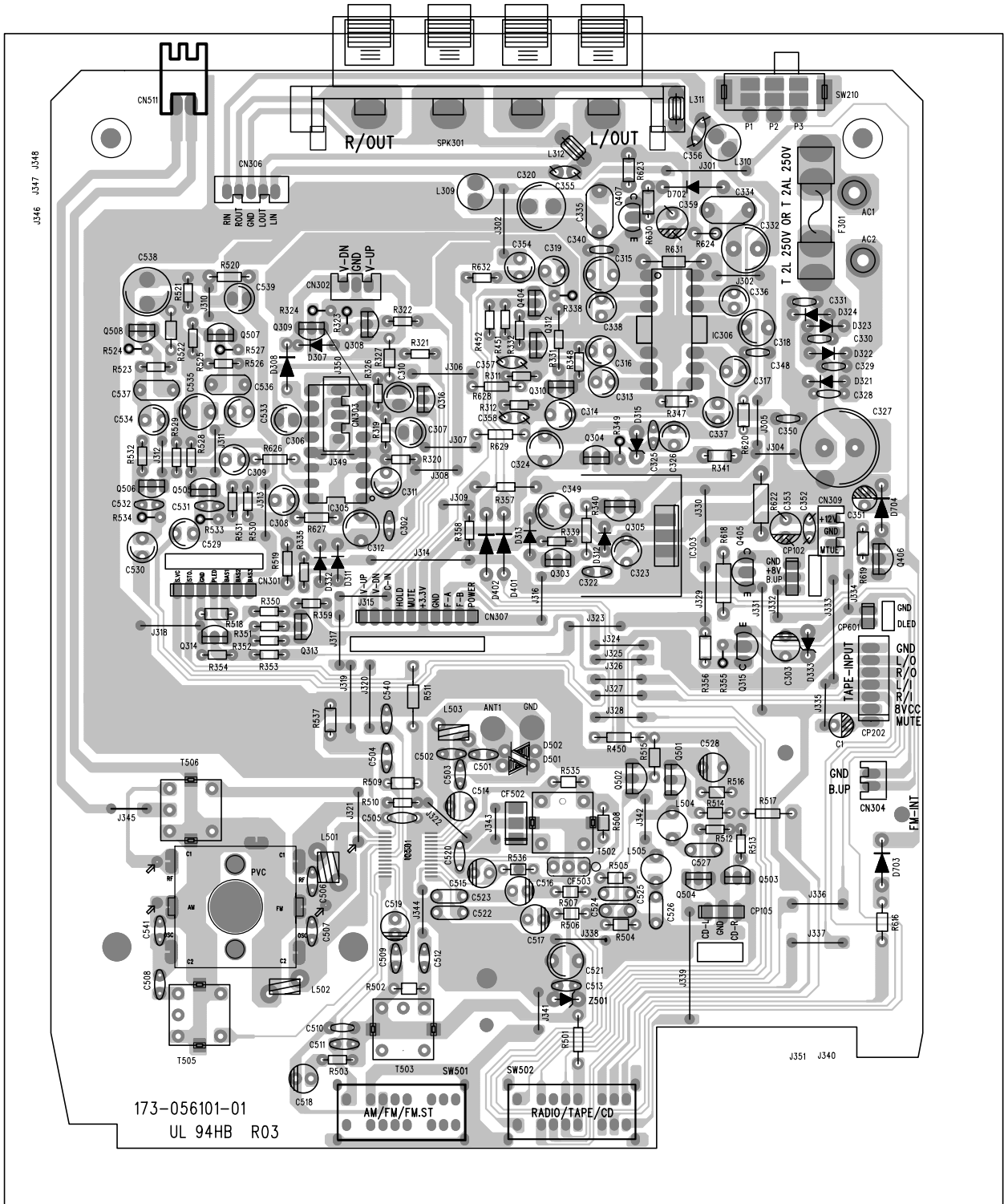
# SCHEMATIC DIAGRAMS



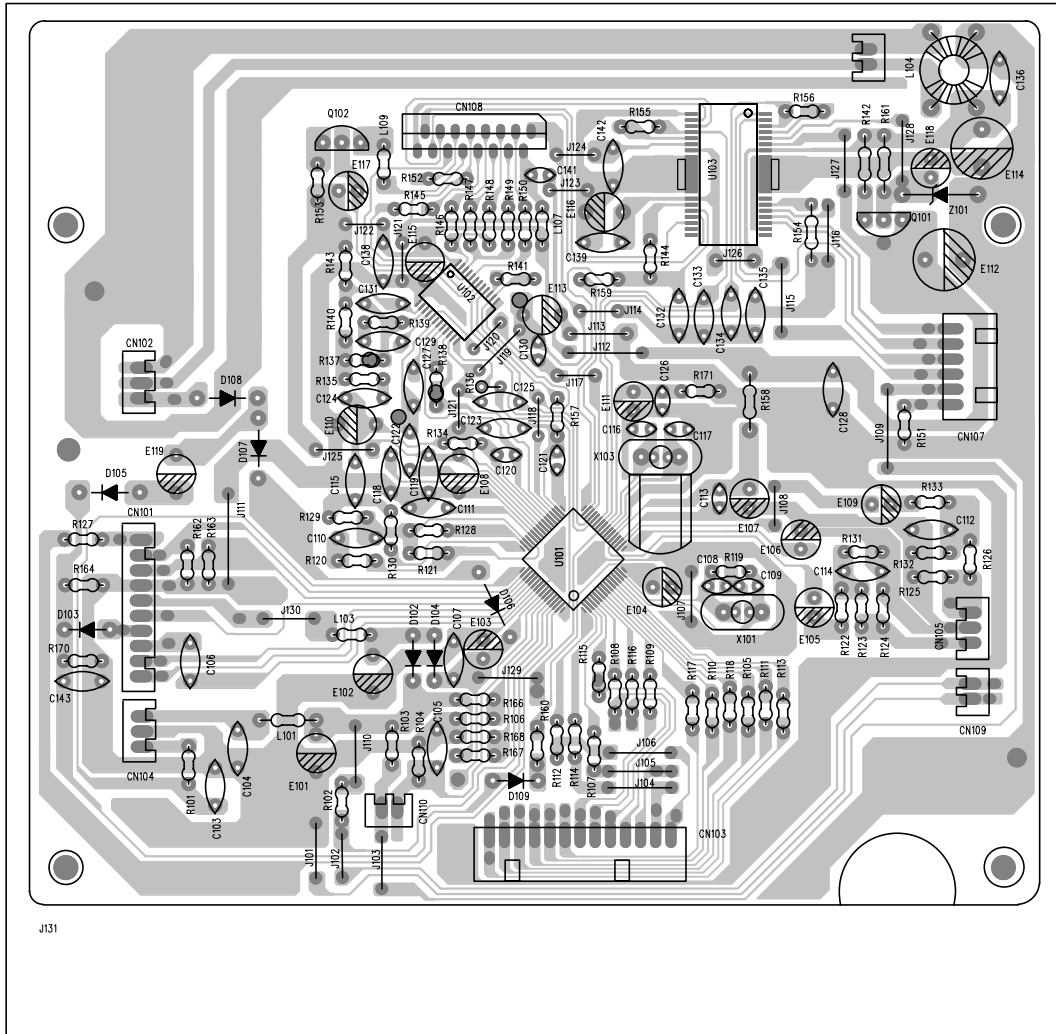
173-059108-01



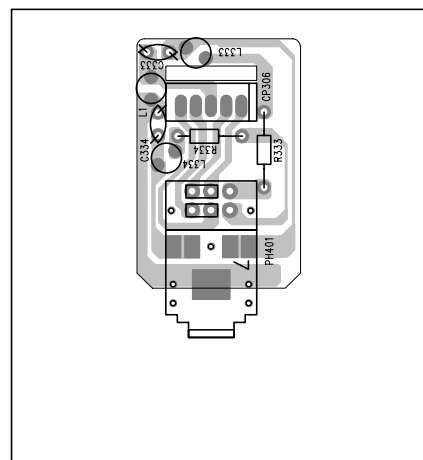
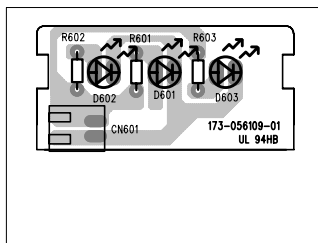
# PRINTED CIRCUIT BOARDS



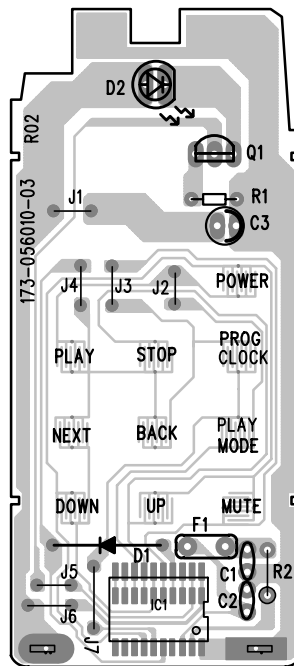
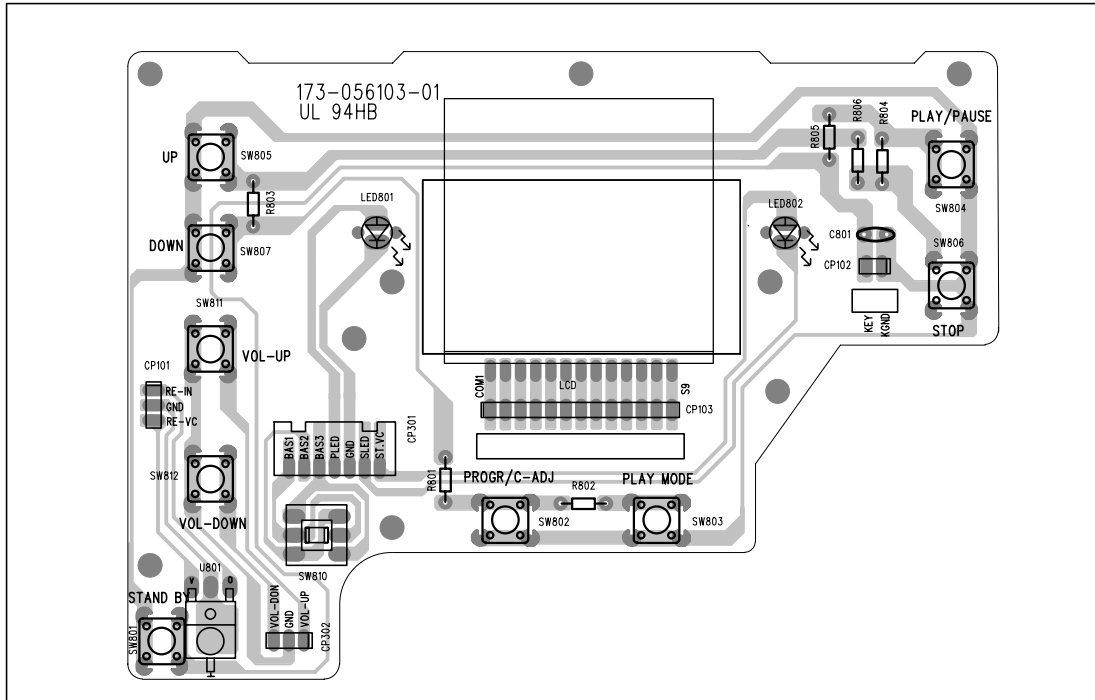
# PRINTED CIRCUIT BOARDS



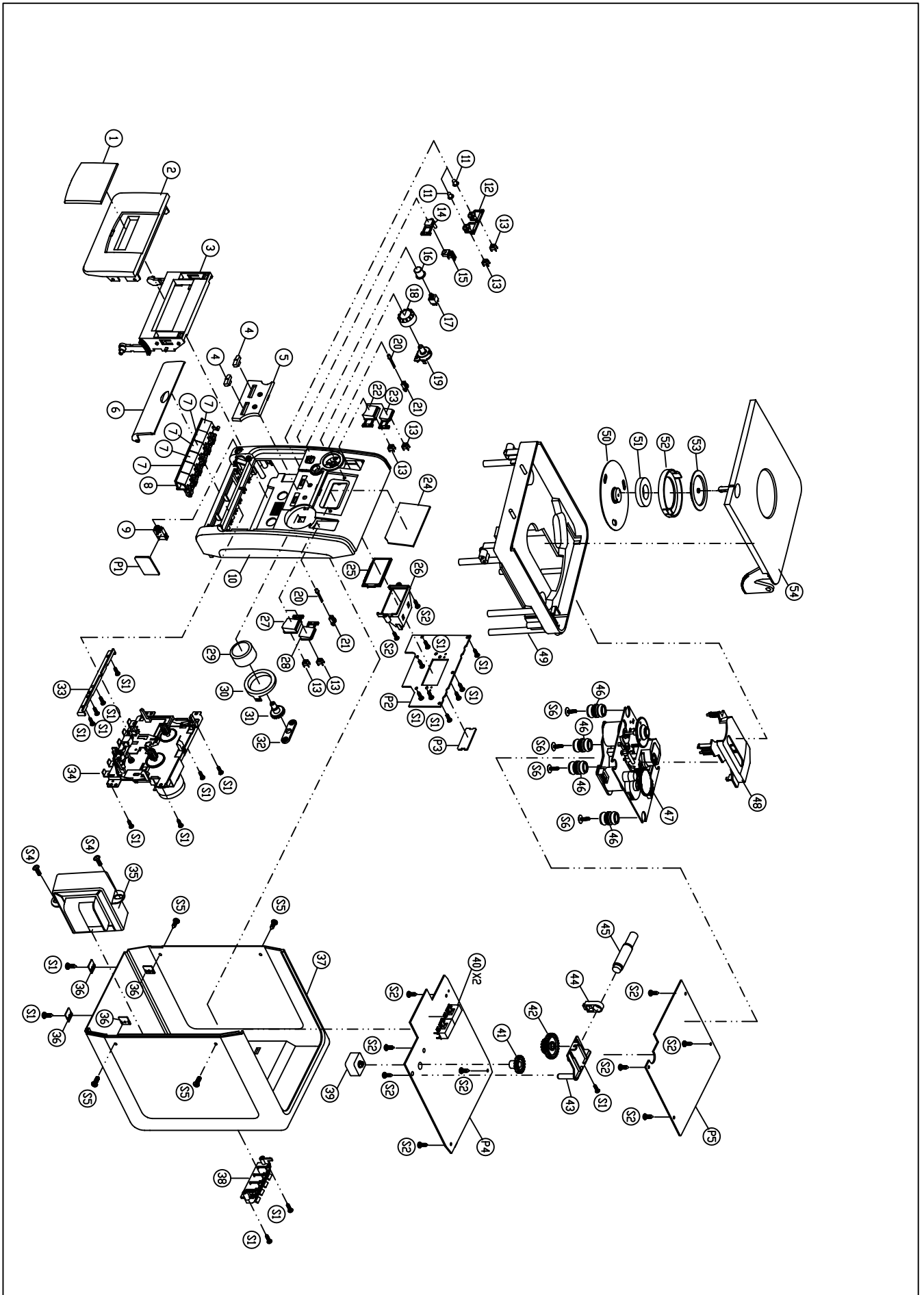
J131



# PRINTED CIRCUIT BOARDS



# EXPLODED VIEW/PARTS LIST (CABINET)



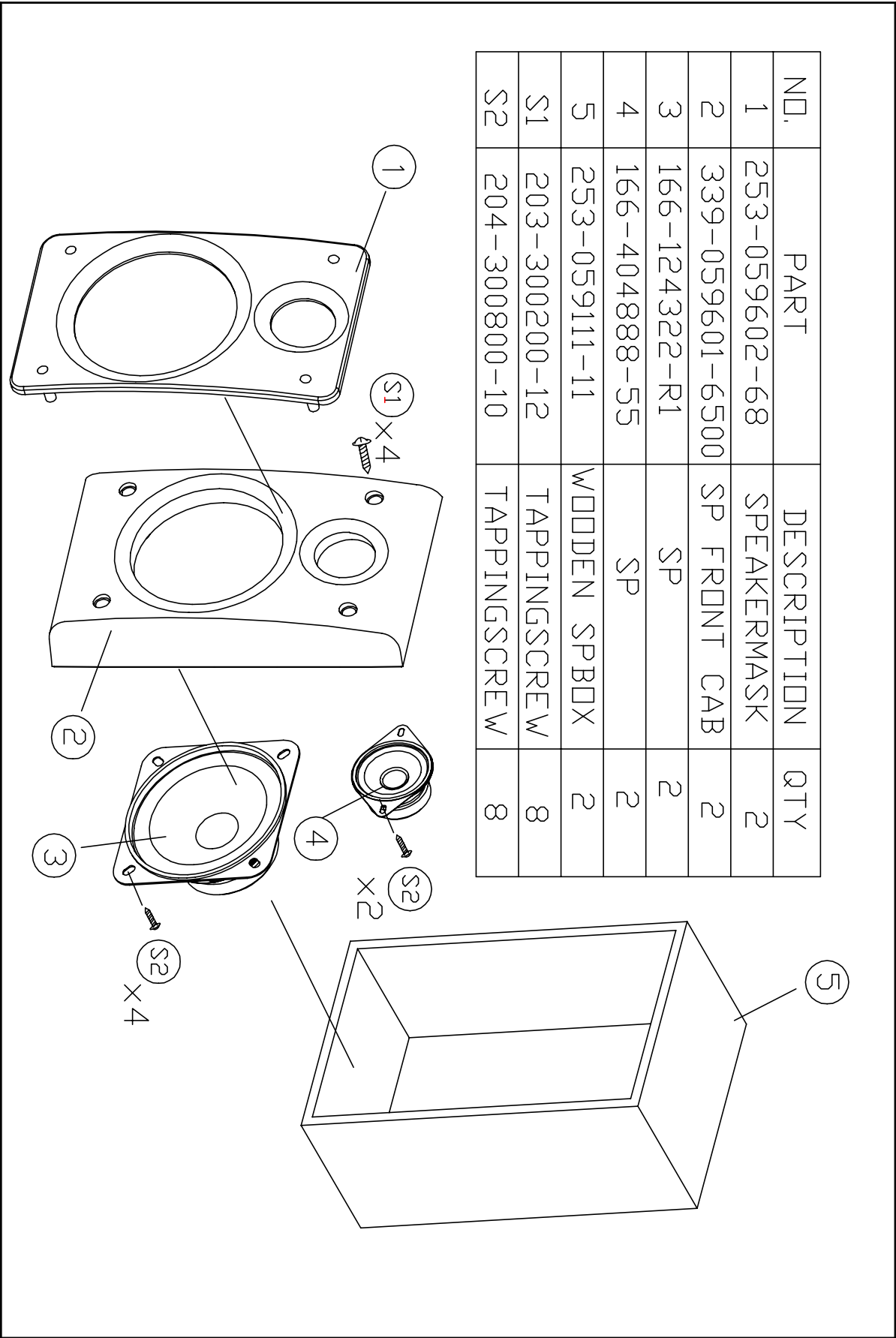
## EXPLODED VIEW/PARTS LIST (CABINET)

### MAIN EXPLODED PART NO.

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	367-056100-8JR1	CASS DOOR LENS	1	53	303-000062-0101	CLAMPER HOUSING	1
2	358-056100-6500	CASS DOOR	1	54	371-59110-8JRO	CD DOOR	1
3	461-059520-1010	CASS DOOR BRACKET	1				
4	401-056100-2500	SLIDE KNOB	2				
5	333-056100-8JRO	FRONT LENS	1				
6	357-059100-2500	CASS KEY COVER	1	P1	173-056105-01	PHONE JACK BOARD	1
7	425-059120-1C20	CASS KEY	5	P2	173-059108-01	RECORD & PLAYBACK BOA	1
8	425-059121-1C20	CASS-PLAY KEY	1	P3	173-056009-01	LED LIGHT BOARD	1
9	177-023502-01	PHONES JACK	1	P4	173-056101-01	A/F 2W MAIN BOARD	1
10	311-056100-6500	FRONT CABINET	1	P5	173-056002-01	CD SERVO BOARD	1
11	408-056100-2490	FUNCTION BUTTON	2				
12	472-056100-1000	FUNCTION BUTTON BASE	1				
13	188-011511-01	TACT SWITCH	6				
14	403-056103-8JRO	POWER BUTTON	1	S1	203-300200-12	SCREW 3X12PA	14
15	149-050624-30	REMOTE SENSOR	1	S2	203-300200-10	SCREW 3X10PA	21
16	403-056105-2500	BASS BUTTON	1	S3	203-300800-12	SCREW 3X12PWA	1
17	185-062310-01	TACT SWITCH	1	S4	203-350800-14	SCREW 3.5X14PWA	2
18	400-056101-2500	VOLUME KNOB	1	S5	203-300700-12	SCREW 3X12KA	4
19	472-056101-1000	VOLUME BASE	1	S6	207-261600-10	SCREW 2.6X10PWB-10W	4
20	1480-030000-01	LED	2				
21	462-056107-1000	LED HOLDER	2				
22	408-059105-2500	UP BUTTON	1				
23	408-056104-2500	DOWN BUTTON	1				
24	335-056100-8JRO	DISPLAY LENS	1				
25	134-056050-05	LCD DISPLAY	1				
26	461-056102-5100	LCD REFLECTOR	1				
27	408-056103-2500	STOP BUTTON	1				
28	408-056102-2500	PLAY/PAUSE BUTTON	1				
29	420-056100-2500	TUNING KNOB	1				
30	420-056101-2490	TUNING RING	1				
31	460-056102-1000	TUNING GEAR	1				
32	460-056101-1000	ADAPTOR GEAR	1				
33	303-000081-0001	CASS KNOB FIXING	1				
34	218-059012-21	DECK MACH	1				
35	156-472313-51	X'FORMER	1				
36	202-026203-01	MOUNTING PLATE	1				
37	322-059142-53J0	REAR CABINET	1				
38	177-070000-01	SPEAKER TREMINAL	1				
39	151-012630-11	PVC	1				
40	185-043010-09	SLIDE SWITCH	2				
41	460-056000-1000	VC GEAR	1				
42	460-056001-1000	ADAPTOR GEAR	1				
43	461-05600G-1000	GEAR BRACKET	1				
44	301-000000-3400	BAR HOLDER	1				
45	183-100060-02	FERRITE BAR	1				
46	213-000005-16	CUSHION RUBBER	4				
47	219-213CDM-01	CD MECHANISM	1				
48	303-000071-0001	DUST COVER	1				
49	374-059130-5M20	CD DOOR BRACKET	1				
50	303-000063-0401	CHUCKING PLATE	1				
51	202-000003-42	MAGNET M	1				
52	303-000033-0101	CHUCKING P	1				

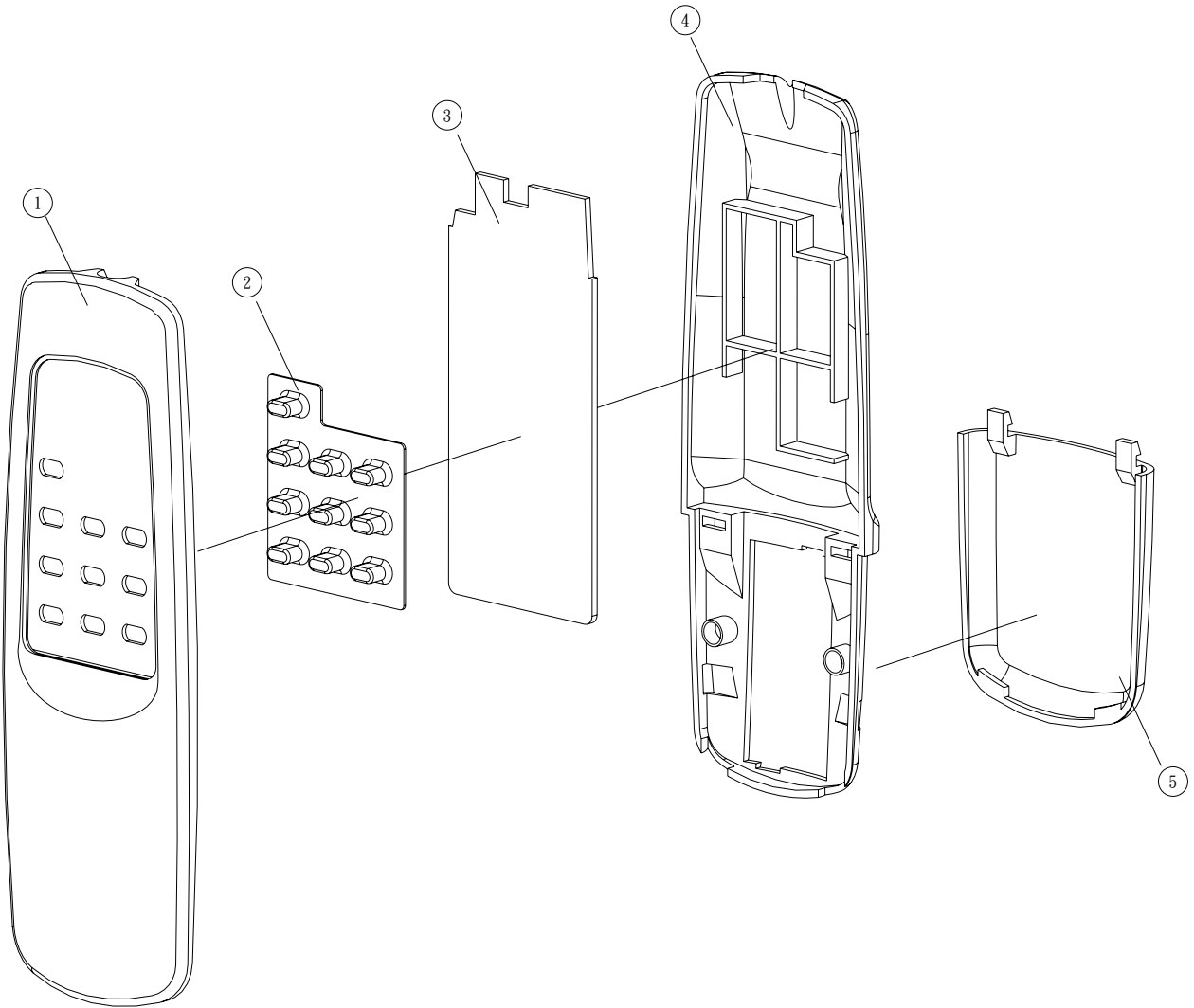
EXPLODED VIEW/PARTS LIST (CABINET)

NO.	PART	DESCRIPTION	QTY
1	253-059602-68	SPEAKERMASK	2
2	339-059601-6500	SP FRONT CAB	2
3	166-124322-R1	SP	2
4	166-404888-55	SP	2
5	253-059111-11	WOODDEN SPBDX	2
S1	203-300200-12	TAPPINGSCREW	8
S2	204-300800-10	TAPPINGSCREW	8



# EXPLODED VIEW/PARTS LIST (CABINET)

## REMOTE EXPLODE VIEW



REF NO	PART NO	DESCRIPTION
1	440-R00120-2500	REMOTE FRONT CAB
2	212-R00102-02	SILICON RUBBER
3	173-R00102-23	REMOTE PCB BOARD
4	441-R00120-2500	REMOTE REAR CAB.
5	442-R001-201060	REMO BATTE DOOR

Component list

PART NO.	DESCRIPTION
001-056088-11	NE-560R CD SERVO BOARD W/REMO.
150-1469XH-30	IC MITSUMI MM1469XH Motor Driv
150-2157FN-14	IC TOSHIBA TA2157FN RF AMP FOR DIGITAL SERVO CD SYSTEM
150-94A400-14	IC TOSHIBA TC94A29FAG-400
195-326032-16	F.F.CONNNECTOR 90 16 P UP/LOW 1MM PITCH P/N FPC1.0B-DIP-16PW
202-000055-11	HEAT-SINK FOR MM1469XH (295) •• Type
108-000750-01	CRYSTAL 75KHz ETK-75.000WBN 3 X 8MM 20 ppm 12.5pf
108-169344-01	CRYSTAL 16.9344 MHz
114-100011-05	RESISTOR 10 OHM 1/16W, ?%
114-101012-05	RESISTOR (1/16W) 100 OHM ?% HIGH GRADE
114-102012-05	RESISTOR (1/16W) 1K OHM ?% HIGH GRADE
114-103012-05	RESISTOR (1/16W) 10K OHM ?% HIGH GRADE
114-104011-05	RESISTOR 100K OHM 1/16W, ?%
114-122012-05	RESISTOR (1/16W) 1.2K OHM ?% HIGH GRADE
114-153012-05	RESISTOR (1/16W) 15K OHM ?% HIGH GRADE
114-221012-05	RESISTOR (1/16W) 220 OHM ?% HIGH GRADE
114-222011-05	RESISTOR 2.2K OHM 1/16W, ?%
114-223012-05	RESISTOR (1/16W) 22K OHM ?% HIGH GRADE
114-224012-05	RESISTOR (1/16W) 220K OHM ?% HIGH GRADE
114-225012-05	RESISTOR (1/16W) 2.2M OHM ?% HIGH GRADE
114-330201-05	RESISTOR 33 OHM 1/4W, ?%
114-331201-05	RESISTOR 330 OHM 1/4W, ?%
114-333011-05	RESISTOR 33K OHM 1/16W, ?%
114-472012-05	RESISTOR (1/16W) 4.7K OHM ?% HIGH GRADE
114-473011-05	RESISTOR 47K OHM 1/16W, ?%
114-474012-05	RESISTOR (1/16W) 470K OHM ?% HIGH GRADE
114-562011-05	RESISTOR 5.6K OHM 1/16W ?%



114-564012-05	RESISTOR (1/16W) 560K OHM ?% HIGH GRADE
114-683012-05	RESISTOR (1/16W) 68K OHM ?% HIGH GRADE
114-822012-05	RESISTOR (1/16W) 8.2K OHM ?% HIGH GRADE
114-823012-05	RESISTOR (1/16W) 82K OHM ?% HIGH GRADE
120-105502-20	E. CAP 50V 1UF +/- 20% HIGH GRADE ?5 x 11MM
120-107102-20	E.CAP (10V) 100UF ?0% HIGH GRADE ?5 x 11MM
120-226302-20	E. CAP (16V) 22UF +/- 20% HIGH GRADE ?5 x 11MM
120-227100-82	E.CAP 220 UF 10V +80% -20% ?6 x 11MM
120-335502-20	E. CAP 50V 3.3UF +/- 20% HIGH GRADE ?5 x 11MM
120-476302-20	E. CAP (16V) 47UF +/- 20% HIGH GRADE ?5 x 11MM
120-477102-20	E. CAP (10V) 470UF +/- 20% HIGH GRADE ?8 x 12MM
121-101500-10	C.CAP 100 PF (50V) ?0%
121-103500-82	C.CAP 0.01 UF (50V) +80,-20%
121-104300-82	C.CAP 0.1 UF (16V) +80 -20%
121-10A500-03	C.CAP 1 PF (50V) D=? .5PF
121-150500-03	C.CAP 15 PF (50V) +/- 10%
121-331502-10	C.CAP 330P 50V +/- 10%
121-333500-82	C.CAP 0.033UF/50V +80% -20%
121-470500-05	C.CAP 47 PF (50V) ?0%
121-471502-10	C. CAP 470P 50V +/- 10% HIGH GRADE
121-472502-20	C.CAP 0.0047 UF (50V) +/- 20% HIGH GRADE
121-473502-20	C.CAP 0.047 UF (50V) +/- 20% HIGH GRADE
121-560502-05	C. CAP (N.P.O) 56P 50V ? PF HIGH GRADE
123-103100-10	MYLAR CAP 0.01 UF 100V ?10%
123-153100-10	MYLAR CAP 0.015 UF 50V ?0%
123-272100-10	MYLAR CAP 0.0027 UF 50V +/-10%
130-410036-00	1/2W ZENER DIODE 3.6V
130-410039-00	1/2W ZENER DIODE 3.9V BZX55-C3V9ST
130-514148-05	DIODE IN4148 BRAND: "COS" DAIWA
131-08050C-38	TRANSISTOR S8050C HI LITE CENTRE B
131-09015C-38	TRANSISTOR S9015C HI LITE CENTRE B

160-100101-00	CHOKER COIL 10UH CW-708631-100K
160-270304-00	CHOKER COIL 27uhx2 +/-20%, 6.5T x0.5MM, FERRITE CORD 9x5x3MM
160-689101-00	CHOKER COIL 6.8uh ?10% R0108-CW45-6R8K-820128
173-056002-01	NE-560 CD SERVO BOARD 133.6x117x1.6MM UL 94HB
178-000505-01	COPPER WIRE L = 50 MM
195-200011-02	WAFER JS-1125-2S / JM24181-2 PH-2A 180?2 POLES 2.0MM PITCH
195-200011-03	WAFER JS-1125-3S / JM 24181-3 PH-3A 180?3 POLES 2.0 PTICH
195-200011-10	WAFER JS-1125-10S / JM24181-10 PH-10A 180?10 POLES 2.0MM PIT
195-200011-13	WAFER JS-1125-13S / JM24181-13 PH-13A 180?13 POLES 2.0MM PIT
195-200012-06	WAFER JS-1125-6R / PH-6AWS 90?6 POLES 2.0MM PITCH
001-056080-11	NE-560 R/P DC BIAS BOARD (KA22241 IC)
185-062310-01	REC. SWITCH PS-62D01 <300gf W/o SHORTING
194-232015-06	28# FLAT CABLE 150MM W/HOUSING JS-1124-6 2.0 PITCH
114-103201-05	RESISTOR 10K OHM 1/4W, ?%
114-105201-05	RESISTOR 1M OHM 1/4W, ?%
114-114201-05	RESISTOR 110K OHM 1/4W, ?%
114-123201-05	RESISTOR 12K OHM 1/4W, ?%
114-221201-05	RESISTOR 220 OHM 1/4W, ?%
114-273201-05	RESISTOR 27K OHM 1/4W, ?%
114-332201-05	RESISTOR 3.3K OHM 1/4W, ?%
114-470201-05	RESISTOR 47 OHM 1/4W, ?%
114-471201-05	RESISTOR 470 OHM 1/4W, ?%
114-472201-05	RESISTOR 4.7K OHM 1/4W, ?%
114-473201-05	RESISTOR 47K OHM 1/4W, ?%
114-562201-05	RESISTOR 5.6K OHM, 1/4W, ?%
114-683201-05	RESISTOR 68K OHM 1/4W, ?%
120-106402-20	E. CAP (25V) 10UF +/- 20% HIGH GRADE ?5 x 11MM
120-3355A3-20	E.CAP 3.3 UF (50V) +/-20% LL ?5 x 11MM LOWER LEAKAGE VALUE
120-336302-20	E. CAP 33 UF 16V +/- 20% HIGH GRADE ?5 x 11MM
120-4755A3-20	E.CAP 4.7 UF (50V) +/-20% "LL" ?5 x 11MM LOWER LEAKAGE VALUE
120-476302-20	E. CAP (16V) 47UF +/- 20% HIGH GRADE ?5 x 11MM
120-477102-20	E. CAP (10V) 470UF +/- 20% HIGH GRADE ?8 x 12MM
123-182100-10	MYLAR CAP 0.0018 UF
123-333100-10	MYLAR CAP 0.033 UF 50V +/- 10%

130-514148-05	DIODE IN4148 BRAND: "COS" DAIWA
131-09014C-38	TRANSISTOR S9014C HI LITE CENTRE B
150-0241AI-61	IC SAMSUNG S1A0241A01-I0 150-022241-61 new No.
173-059108-01	NE-591 RECORD & PLAYBACK BOARD 61 X 83.5 X 1.6MM UL 94HB
178-000505-01	COPPER WIRE L = 50 MM
195-B00001-03	WAFER JS-1001-A3 180?3 POLES
001-056173-02	NE-561 EARPHONE JACK BD W/EMC
177-023502-01	STEREO JACK EJ-3506-202 W/SW
194-232025-05	28# FLAT CABLE 250MM W/HOUSING S2M-5H 2.0 PITCH
114-151201-05	RESISTOR 150 OHM 1/4W, ?%
121-103500-82	C.CAP 0.01 UF (50V) +80,-20%
161-025200-03	FERRITE BEAD ?3.5x?1.3x3mm P 2?T X 0.3MM
173-056105-01	NE-561 PHONE JACK BOARD 33x21.6x1.6MM UL 94HB
001-056193-11	NE-561R DISPLAY/CONTROL BOARD
133-0401SN-01	IR RECEIVER MODULE STM-401SN "Spectrum Tech" 180 PIN=24mm
134-056150-05	LCD 80461TT-P-A2-3.0V 90 "400" 44x26MM 13 PIN L=10.4MM (561)
148-030000-12	LED ?3MM (RED) (LONG) 204HD "SGP"
188-011511-01	TACT SWITCH 1102-2 H 4.3MM 160 ?30gf
188-022213-02	PUSH SWITCH 2215 8 X 8 MM SELF LOCK "PROMOTION"
194-232010-02	28# FLAT CABLE 100MM W/HOUSING JS-1124-2 2.0 PITCH
194-232010-03	28# FLAT CABLE 100MM W/HOUSING JS-1124-3 2.0 PITCH
194-232010-13	28# FLAT CABLE 100MM W/HOUSING PH2.0-13P 2.0 PITCH
194-232020-03	28# FLAT CABLE 200MM W/HOUSING JS-1124-3 2.0 PITCH
195-200012-07	WAFER JS-1125-7R / JM24181-7R PH-7AWS 90?7 POLES 2.0MM PITC
234-056100-01	DRAFTING FILM 44.2x26.2x0.15MM "NELSON"
461-056102-1100	LCD REFLECTOR INJ ABS WHITE
461-05610S-1000	SENSOR BRACKET INJ ABS ANY COLOR
462-056107-1000	LED HOLDER INJ ABS ANY COLOR
114-123012-05	RESISTOR (1/16W) 12K OHM ?% HIGH GRADE
114-152012-05	RESISTOR (1/16W) 1.5K OHM ?% HIGH GRADE

114-202012-05	RESISTOR (1/16W) 2K OHM ?% HIGH GRADE
114-272012-05	RESISTOR (1/16W) 2.7K OHM ?% HIGH GRADE
114-392012-05	RESISTOR (1/16W) 3.9K OHM ?% HIGH GRADE
114-682012-05	RESISTOR (1/16W) 6.8K OHM ?% HIGH GRADE
121-101500-10	C.CAP 100 PF (50V) ?0%
173-056103-0101	NE-561 DISP/CONT BD W/REM. R.1 115x83x1.6MM UL 94HB
001-056130-12	NE-561 AM/FM 455 2W W/R. W/EMC BOARD
150-007808-26	VOLTAGE REGULATOR 8V MC7808CT ON SEMICONDUCTOR
150-2180FN-14	IC TOSHIBA TA2180FN
151-012630-11	PVC 126PF F126DF1 "F.T"
162-181012-02	FERRITE CORE F4 F1810120D ?18 X ?10(IN) X 12<L> MM
174-202252-03	5 T 2L 250V ?5 X 20MM FUSE VDE SEMKO APP
177-070000-01	SPEAKER TERMINAL BOARD (505) 1x4 PIN "MSC" (MSP-104-01)
185-043010-09	SLIDE SWITCH SK43D03-M9
194-232010-03	28# FLAT CABLE 100MM W/HOUSING JS-1124-3 2.0 PITCH
194-232013-02	28# FLAT CABLE 130MM W/HOUSING JS-1124-2 2.0 PITCH
194-232015-10	28# FLAT CABLE 150MM W/HOUSING JS-1124-10 2.0 PITCH
194-232018-07	28# FLAT CABLE 180MM W/HOUSING JS-1124-7 2.0 PITCH
194-242040-03	28#2C UL2547 SHIELD WIRE 400MM W/HOUSING PH2.0-3P
195-110102-02	SINGLE ROW PIN HEADER 2 PINS JS-1001R-2 90?2.54 PITCH
202-032300-02	FUSE HOLDER (0.4mm) "NEW" SAME 202-032300-00
202-050008-02	HEAT SINK "H" TYPE <NEW> FOR TA8227P IC USE
202-057506-01	HEAT-SINK "U" TYPE 0.8mm <575> for IC 7808, TR 2SB772
204-260100-05	MACHINE SCREW 2.6 X 5KM
204-300000-06	MACHINE SCREW 3 X 6PM
205-300001-01	NUT M3
261-101010-09	SPONGE 10 X 10 X 10
107-101070-28	CERAMIC FILTER FM LT10.7MA5 (RED) "SPECIAL"
107-104550-31	CERAMIC FILTER AM SFU455B "MIDAS"
114-100012-05	RESISTOR (1/16W) 10 OHM ?%

	HIGH GRADE
114-100301-05	RESISTOR 10 OHM 1/2W ?%
114-102012-05	RESISTOR (1/16W) 1K OHM ?%
	HIGH GRADE
114-102201-05	RESISTOR 1K OHM 1/4W, 5%
114-103012-05	RESISTOR (1/16W) 10K OHM ?%
	HIGH GRADE
114-104012-05	RESISTOR (1/16W) 100K OHM ?%
	HIGH GRADE
114-123012-05	RESISTOR (1/16W) 12K OHM ?%
	HIGH GRADE
114-124012-05	RESISTOR (1/16W) 120K OHM ?%
	HIGH GRADE
114-221012-05	RESISTOR (1/16W) 220 OHM ?%
	HIGH GRADE
114-222012-05	RESISTOR (1/16W) 2.2K OHM ?%
	HIGH GRADE
114-223012-05	RESISTOR (1/16W) 22K OHM ?%
	HIGH GRADE
114-225012-05	RESISTOR (1/16W) 2.2M OHM ?%
	HIGH GRADE
114-22A012-05	RESISTOR 2.2 OHM 1/16W ?%
114-330011-05	RESISTOR 33 OHM 1/16W, ?%
114-331012-05	RESISTOR (1/16W) 330 OHM ?%
	HIGH GRADE
114-331201-05	RESISTOR 330 OHM 1/4W, ?%
114-332012-05	RESISTOR (1/16W) 3.3K OHM ?%
	HIGH GRADE
114-333012-05	RESISTOR (1/16W) 33K OHM ?%
	HIGH GRADE
114-390011-05	RESISTOR 39 OHM 1/16W ?%
114-393012-05	RESISTOR (1/16W) 39K OHM ?%
	HIGH GRADE
114-471012-05	RESISTOR (1/16W) 470 OHM ?%
	HIGH GRADE
114-472012-05	RESISTOR (1/16W) 4.7K OHM ?%
	HIGH GRADE
114-561201-05	RESISTOR 560 OHM 1/4W, ?%
114-561301-05	RESISTOR 560 OHM 1/2W ?%
114-562012-05	RESISTOR (1/16W) 5.6K OHM ?%
	HIGH GRADE
114-564012-05	RESISTOR (1/16W) 560K OHM ?%
	HIGH GRADE
114-823012-05	RESISTOR (1/16W) 82K OHM ?%
	HIGH GRADE
120-105502-20	E. CAP 50V 1UF +/- 20%
	HIGH GRADE ?5 x 11MM
120-106402-20	E. CAP (25V) 10UF +/- 20%
	HIGH GRADE ?5 x 11MM
120-107102-20	E.CAP (10V) 100UF ?0%
	HIGH GRADE ?5 x 11MM

120-107302-20	E. CAP (16V) 100UF +/- 20% HIGH GRADE ?5 x 11MM
120-107400-82	E.CAP 100 UF (25V) +80,-20% ?6 x 11MM
120-108102-20	E.CAP (10V) 1000UF ?0% HIGH GRADE ?8 x 14MM
120-225502-20	E. CAP 50V 2.2UF +/- 20% HIGH GRADE ?5 x 11MM
120-2255A3-20	E.CAP 2.2 UF (50V) +/-20% "LL" ?5 x 11MM LOWER LEAKAGE VALUE
120-226402-20	E. CAP (25V) 22UF +/- 20% HIGH GRADE ?5 x 11MM
120-227100-82	E.CAP 220 UF 10V +80% -20% ?6 x 11MM
120-227400-82	E.CAP 220 UF 25V +80,-20% ?8 x 12MM
120-228410-82	E.CAP 2200 UF (25V) +80,-20% ?13 x 21MM
120-474502-20	E. CAP 50V 0.47UF +/- 20% HIGH GRADE ?5 x 11MM
120-475502-20	E. CAP 50V 4.7UF +/- 20% HIGH GRADE ?5 x 11MM
120-476302-20	E. CAP (16V) 47UF +/- 20% HIGH GRADE ?5 x 11MM
120-476402-20	E. CAP (25V) 47UF +/- 20% HIGH GRADE ?5 x 11MM
120-477102-20	E. CAP (10V) 470UF +/- 20% HIGH GRADE ?8 x 12MM
121-101502-05	C. CAP (N.P.O) 100P 50V +/- 5% HIGH GRADE
121-103500-82	C.CAP 0.01 UF (50V) +80,-20%
121-104300-82	C.CAP 0.1 UF (16V) +80 -20%
121-141500-20	C.CAP 140 PF (50V) ?10%
121-200500-03	C.CAP 20 PF (50V) +/- 10%
121-203500-82	C.CAP 0.02 UF (50V) +80,-20%
121-220500-05	C.CAP 22 PF (50V) +/- 10%
121-270500-05	C.CAP 27 PF (50V) +/- 10%
121-300500-05	C.CAP 30 PF (50V) ?0%
121-331502-10	C.CAP 330P 50V +/- 10%
121-501500-82	C.CAP 500 PF (50V) ?0%
123-102100-05	MYLAR CAP 0.001 UF 50V ?5%
123-104100-10	MYLAR CAP 0.1 UF 50V ?0%
123-154100-10	MYLAR CAP 0.15 UF 50V ?0%
123-682100-10	MYLAR CAP 0.0068 UF 50V ?10%
130-315391-30	RECTIFIER 1N5391 "SGP"
130-410033-00	1/2W ZENER DIODE 3.3V
130-410047-00	1/2W ZENER DIODE 4.7V
130-410082-00	1/2W ZENER DIODE 8.2V
130-514148-05	DIODE IN4148 BRAND: "COS" DAIWA

131-08050C-38	TRANSISTOR S8050C HI LITE CENTRE B
131-08550C-38	TRANSISTOR S8550C HI LITE CENTRE B
131-09014C-38	TRANSISTOR S9014C HI LITE CENTRE B
131-09015C-38	TRANSISTOR S9015C HI LITE CENTRE B
131-0A928A-63	TRANSISTOR KSA928A FAIRCHILD CENTRE C
150-02253A-20	IC PTC PT2253A Volume IC
150-08227P-14	IC TOSHIBA TA8227P
155-0N1360-20	MW OSC 10DM-N1360 RED 10mm1083
155-861223-62	MW ANT N962530Y BLUE 10MM <232 =156-861223-60 MARKING:2530
155-960274-40	AM IFT 10DM-C960274 Y 10mm2111 MARKING:C960274
155-960275-70	FM IFT 10DM-C960275 P 10mm2111 MARKING:C960275
160-689101-00	CHOKE COIL 6.8uh ?10% R0108-CW45-6R8K-820128
161-025045-07	FM COIL ?4.5 X 2?X 0.7MM P CLOCKWISE (L)
161-035045-07	FM COIL ?4.5 X 3?X 0.7MM (85 P CLOCKWISE
161-045145-07	FM COIL ?.5 X 4?X 0.7MM P ANTI-CLOCKWISE
173-056101-01	NE-561 A/F 2W MAIN BOARD 180x144x1.6MM UL 94HB
178-000505-01	COPPER WIRE L = 50 MM
195-200011-02	WAFER JS-1125-2S / JM24181-2 PH-2A 180?2 POLES 2.0MM PITCH
195-200011-03	WAFER JS-1125-3S / JM 24181-3 PH-3A 180?3 POLES 2.0 PTICH
195-200011-05	WAFER JS-1125-5S / JM 24181-5 PH-5A 180?5 POLES 2.0MM PITCH
195-200011-06	WAFER JS-1125-6S / JM 24181-6 PH-6A 180?6 POLES 2.0MM PITCH
202-000205-01	EYELET, ?2 X 4MM (BRASS)
220-601007-00	COTTON OIL SLEEVE ?1 X 7MM S/G TUBE 1MM
220-501000-00	SILICONE COATED FIBREGLASS SLEEVE DIA. 1.0MM
003-059600-BZ50	NE-596 2W 2 WAY 2875C-757+D100 MM WOOD. GRAIN , 2C00 ,SP. BOX
120-475404-20	E. CAP 4.7UF 25V +/- 20% NON-POLARIZED ?5 x 11MM
166-12452C-X5	TWEETER 1.5"4ohm 3-5W 38E2C18- 4 SILVER CAP & CONE,H=?32
166-40458B-X0	SP 4"4 OHM 5W YD100-45P435FS2

179-026006-02	SILVER C/C, & CUSHION, H=45 JUMPER WIRE (3+54+3)MM RED #26 (9X1.3)
179-026008-00	JUMPER WIRE (3+74+3)MM BLACK #26 (9X1.3)
190-024183-00	SPEAKER WIRE (8-1800-10) 1.8M W/POLARITY MARKING 24#
202-000023-00	SPEAKER CLIP (100)
203-300200-08	TAPPING SCREW 3 X 8 P/A "+"
203-300200-12	TAPPING SCREW 3 X 12PA
203-300800-10	TAPPING SCREW 3 X 10 PWA "+" WASHER ?8.0MM
210-000001-01	QC PASS LABEL WHITE B/G / BLACK LETTER
215-111604-6S	POLYBAG PE-LD/04 6-LANG WARN. P.HOLE,RECYC.MK.11"x16"x0.04
253-059600-C8	SP MASK W/2875C-757 TR-S.GREY CLOTH NET, 348-059600-3890
253-059611-11	WOODEN SP BOX D=100MM WOODEN G F-04 PRIMARY COLOR REAR
262-001510-10	RUBBER FOOT (OIL RESISTANCE) ?15 X 1 MM W/A BLACK
339-059621-6500	SP FRONT CAB REV2. W/ TWEETER SPR. HIPS 2C00
179-026005-00	JUMPER WIRE (3+44+3)MM BLACK #26 (9X1.3)
179-026018-02	JUMPER WIRE (3+174+3)MM RED #26 (9X1.3)
179-026100-00	FM ANTENNA WIRE(3+997)MM BLACK #26 (9X1.3)
188-000400-00	LEAF SWITCH LF-323-02 "SEE"
188-000600-01	DOOR LATCH DL-01<UPC-165> SOUND FAIR
194-096506-16	F.F.C. S735-01-16C-052-44 60MM 16 PINS 1MM PITCH 20696 "MSC"
194-212208-06	28# UL1571 JUMPER WIRE 80MM W/HOUSING X 2 RIGHT PH2.0-6P
194-213015-A3	26# UL1007 WIRE 150MM W/HOUSING PH2.0-3P PH2.0
194-213018-02	26# UL1007 WIRE 180MM W/HOUSING PH2.0-2P PH2.0
194-232015-02	28# FLAT CABLE 150MM W/HOUSING JS-1124-2 2.0 PITCH
194-B42016-03	28# UL2547 SHIELD WIRE 160MM W/HOUSING JS-2001-3 BROWN
198-000002-01	AM LOOP ANTENNA AL-01 Black Same 198-LA1000-01 FOR PLL
218-059012-12	DECK THL-21SB-1821P SEMI CLUTC AUTO, DC BIAS M,ERASE 230AN
219-213CDM-01	CD MECHANISM TOP LOADING SONY KSM-213CDM



010-05609W-50E0	R-01 10 KEY TOSHIBA 400 2C00 REM (PT2243S) 999-0561G0-0100
020-056039-01	R-01 10 KEY FOR TOSHIBA "400" REMOTE CONTROL BOARD (PT2243S)
108-004550-07	CERAMIC RESONATOR CSBLA455KECE -B0 "old CSB455EB"
114-22A012-05	RESISTOR 2.2 OHM 1/16W ?%
114-682012-05	RESISTOR (1/16W) 6.8K OHM ?% HIGH GRADE
120-476112-20	E. CAP MINI 47UF 10V +/- 20% HIGH GRADE
121-101502-05	C. CAP (N.P.O) 100P 50V +/- 5% HIGH GRADE
130-514148-05	DIODE IN4148 BRAND: "COS" DAIWA
131-09014C-38	TRANSISTOR S9014C HI LITE CENTRE B
133-STE305-00	INFRARED EMITING DIODE STE-305 TRAN. "SPECTRUM-TECH"
150-02243S-20	IC PTC PT2243S
173-056010-03	R-01 REMOTE EMITTER BD PT2243S 87.1X38.2x1.2MM UL 94HB
178-000505-01	COPPER WIRE L = 50 MM
209-056000-R0	R-01 10 KEY PLATE TOSHIBA 400 STD PRINTING (PT2243S)
210-000001-01	QC PASS LABEL WHITE B/G / BLACK LETTER
212-R00101-02	SILICON RUBBER 12 KEY PAD REV.
215-030823-20	POLYBAG PE04-LD W/RECYCLE MARK P.HOLE, WARN, 3" X 8" X 0.023
251-R00101-01	BATTERY SPRING R-01 "+"
251-R00102-01	BATTERY SPRING R-01 "-"
251-R00103-03	BATTERY PLATE R-01 "+,-" REV.2
440-R00166-2504	REMO H FRONT CAB (NEW) REV.SPR ABS 2C00 , 999-0561G0-0100
441-R00160-2500	REMO H BACK CAB (NEW) REV. SPR ABS 2C00
442-R00150-2500	REMO H BATT DOOR (NEW) SPR ABS 2C00
020-056194-06	NE-561 "BLUE" LED BACK LIGHT BOARD
114-221012-05	RESISTOR (1/16W) 220 OHM ?% HIGH GRADE
149-050624-30	High Intensity LED Blue 120Deg HKL-504SBCK-2 FLAT HEAD "LED"
173-056109-01	NE-561 LED LIGHT BOARD 34x16.4x1.6MM UL 94HB
195-200012-02	WAFER JS-1125-2R / PH-2AWS 90?2 POLES 2.0MM PITCH
156-482313-62	X'FORMER N48363FAV AF DI (591) EI-48 16x23.5MM VDE APP

199-000002-12 OIL DAMPER "LAP TUNG" SLOW

202-000003-41 MAGNET M 30x16x5MM 48+/-2g  
Magnetic force

202-000040-01 EAR HEADPHONE PCB PRESS PLATE  
13.2mm x 10mm X 1.0mm

202-000063-12 SOLDERING PLATE M3x12mm (18)

202-000063-25 WIRE HOLDER (106)  
3.3 X 25 X 0.3MM

202-026203-01 MOUNTING PLATE (262)  
0.8mm 12x12mm

202-057511-01 REC PCB MTG.BRACKET (A) (575)  
1MM METAL PLATE

202-059101-11 CD DOOR SPRING "NEW" (591)

202-059201-11 CASS DOOR SPRING 10MMx4T REV.1  
90 ANGLE 1MM SPRING WIRE

202-063008-01 CABINET MOUNTING PLATE

202-081807-02 RECORDING PLATE -STAINLESS NEW  
STEEL

203-200200-12 TAPPING SCREW 2 X 12 PA

203-200303-05 TAPPING SCREW 2 X 5PB  
ZINC BLACK

203-261300-05 TAPPING SCREW 2.6 X 5.5PWB  
DI. 8MM WASHER

203-300200-10 TAPPING SCREW 3 X 10PA

203-300200-12 TAPPING SCREW 3 X 12PA

203-300300-07 TAPPING SCREW 3 X 7 PB "+"

203-300700-10 TAPPING SCREW 3 X 10 KA

203-300700-12 TAPPING SCREW 3 X 12 KA

203-300800-08 TAPPING SCREW 3 X 8PWA  
WASHER ?8.0MM

203-300800-10 TAPPING SCREW 3 X 10 PWA "+"  
WASHER ?8.0MM

203-300800-12 TAPPING SCREW 3 X 12PWA  
WASHER ?.0MM

203-300800-14 TAPPING SCREW 3 X 14PWA  
WASHER ?.0MM

204-200000-04 MACHINE SCREW 2 X 4PM TAP TYPE

204-260000-04 MACHINE SCREW 2.6 X 4PM

204-300000-06 MACHINE SCREW 3 X 6PM

204-300100-10 MACHINE SCREW M3 X 10 KM

207-261600-10 TAPTITE SCREW 2.6 X 10PWB-10W

213-000005-16 CUSHION RUBBER 40 WHITE "CDM"  
"YAMWAY"

213-056001-01 ALUMINIUM PAPER MM1469 CD PCB  
SIZE: 133.6x117x0.4mm

213-056002-01 FIBRE PAPER MM1468 CD PCB(560)  
SIZE: 135.6x119x0.4mm

213-056101-01	FIBRE PAPER FOR MAIN PCB(561) SIZE:125x60x0.4mm
216-059101-05	POLYFOAM TOP half BOX REV5<591 W/ RECYCLE MARK 62g
216-059102-03	POLYFOAM BOTTOM half REV3(591) W/ RECYCLE MARK 57g
221-053591-01	APPLIANCE FLLAMENT TAPE "3M" 12MM X 3CM TRANSPARENT
221-000091-02	APPLIANCE FLLAMENT TAPE "3M" 12MM X 55M TRANSPARENT
227-053500-41	PROTECTIVE SHEET ENGLISH ?120 X ?15MM X 0.4MM
232-100025-51	CABLE TIES ITEM NO.:EY-100 SIZE: 100MM (L) X 2.5MM (W)
251-057501-01	BATTERY PLATE (+) NI PLATED IRON
251-057502-01	BATTERY PLATE (-) NI PLATED IRON
251-057503-01	BATTERY CONTACT (+-) "A" (575>
251-057504-01	BATTERY CONTACT (+-) "B" (575>
262-111120-10	RUBBER FOOT (OIL RESISTANCE) 10.8 X 10.8 X 2mm W/A BLACK
303-000063-0301	CLAMPER HOUSING Rev."SONY" INJ ABS BLACK
303-000063-0501	CHUCKING PLATE "SONY" REV3 INJ ABS BLACK
303-000071-0001	DUST COVER FOR SONY INJ ABS BLACK Same 199-000013-01
208-059100-60	CD COVER PLATE SILVER (591) 877C BK WORDS
209-05619W-03	RATING PLATE "GOODMANS" (561) 230v,50HZ,MADE IN PRC
210-000001-01	QC PASS LABEL WHITE B/G / BLACK LETTER
210-000003-03	SERIAL NO LABEL WITH (P.P) WHITE B/G / BLACK LETTER
210-000014-12	FUSE LABEL WITH P.P. (THERMAL FUSE 125• M30)
210-000041-02	MADE IN P.R.C. LABEL 8(H)x60(L) MM
210-000052-01	AC LABEL (230V/50Hz) (WHITE B/G / BLACK LETTER)
210-000053-07	BATTERY LABEL (R6S X 3) (WHITE B/G / BLACK LETTER)
210-000053-13	BATTERY LABEL (R03S X 2) (WHITE B/G / BLACK LETTER)
210-000061-67	"104" LABEL (WHITE B/G / BLACK LETTER)
210-000062-01	"CAUTION LABEL" LAMINATED (WHITE B/G / RED LETTER)
210-02318F-08	CLASS 1 LABEL - BUSH (231)

210-050002-04 MDL:CR605CD HM ORDER 6LANG  
 LASER LABEL - "STANDARD" (500)  
 YEL BG/BLK LETT. LAM. Triangle  
 210-050003-05 CD CAUTION LABEL (500)  
 YELLOW B/G/BLK LET  
 210-05619W-06 SHIPMARK LABEL-GOODMANS (561)  
 P.O.  
 210-05619W-11 SPEAKER LABEL "GOODMANS" (561)  
 215-031123-20 POLYBAG PE04-LD W/RECYCLE MARK  
 P.HOLE, WARN, 3" X 11" X 0.023  
 215-060823-20 POLYBAG PE-04,PE-LD W/WARNING  
 P.HOLE,RECY.MARK 6"x8"x0.023  
 215-061023-6S POLYBAG PE-LD/04 6-LANG WARN.  
 P.HOLE,RECYC.MK. 6"x10"x0.023  
 215-141804-6S POLYBAG PE-LD/04 6-LANG WARN.  
 P.HOLE,RECYC.MK.14"x18"x0.04  
 221-000010-11 P.P.TAPE 3" X 3Oyd TRANSPARENT  
 227-02999W-12 W/C - "GOODMANS" (299)  
 MDL : GMS 500 W/O 2YRS LOGO  
 227-05619W-02 I/B-GOODMANS AM/FM 6 LANG(561)  
 MDL: GMS880D  
 228-05619W-01 G/B- Goodmans VDE (561)  
 MDL: GMS880D  
 300-056120-01CV GOODMANS SONY 4.5V DC W/O AC-S  
 W/AC C., CHROME+2C00+1813+8800  
 302-000003-1300 PLASTIC WASHER 13x3.2X1.4 MM  
 INJ ABS ANY COLOR  
 303-000033-0001 CHUCKING P HOLDER-BUCKLE "SONY  
 INJ ABS BLACK  
 303-000081-0001 CASSE KNOB FIXER REV. INJ ABS  
 BLACK  
 310-000021-53J0 AC CORD COVER REV. INJ HIPS  
 311-056110-6501 FRONT CABINET REV. SPR HIPS  
 2C00 999-056100-0000 REV.1  
 322-059142-53J0 REAR CAB REV4.W/4.5DC,AC COVER  
 INJ HIPS 5822  
 333-056100-8892 FRONT LENS INJ SAN TRANSPARENT  
 999-056105-0101  
 335-056100-8891 DISPLAY LENS INJ SAN TRANSPAR.  
 999-056165-0001  
 353-056100-5M20 DECORATION BAR INJ HIPS 5816  
 LIGHT GREY  
 357-059102-2501 CASS KNOB COVER SPR ABS 2C00  
 999-0561C7-0000  
 358-056110-6500 CASSETTE DOOR REV. SPR HIPS  
 2C00  
 367-056100-8892 CASS DOOR LENS INJ SAN TRANSPA  
 999-056145-0100  
 371-059120-6500 CD DOOR REV2. SPR HIPS 2C00  
 374-059150-5M20 CD BRACKET REV5. INJ HIPS 5816

5822

380-057520-53J0	BATTERY DOOR REV2. INJ. HIPS	5822
381-057510-53J0	BATTERY BOX REV. INJ. HIPS	5822
400-056100-2500	TUNING KNOB SPR ABS 2C00	
401-056100-2500	SLIDE KNOB SPR ABS 2C00	
403-056102-2500	UP/DOWN VOL BUTTON SPR ABS 2C00	
403-056103-8JR0	POWER BUTTON INJ SAN 8800	
403-056105-2500	BASS BUTTON SPR ABS 2C00	
408-056100-2490	FUNCTION BUTTON CHROME ABS SILVER	
408-056102-2500	PLAY BUTTON SPR ABS 2C00	
408-056103-2500	STOP BUTTON SPR ABS 2C00	
408-056104-2500	DOWN BUTTON SPR ABS 2C00	
408-056115-2500	UP BUTTON REV. SPR ABS 2C00	
420-056101-2490	TUNING KNOB RING CHROME ABS SILVER	
425-059120-1C20	CASS KNOB REV2 INJ ABS 1813	
425-059121-1C20	CASS KNOB - PLAY REV2. INJ ABS	1813
460-056100-1000	PVC GEAR INJ ABS ANY COLOR	
460-056101-1000	ADAPTOR GEAR INJ ABS ANY COLOR	
460-056102-1000	TUNING GEAR INJ ABS ANY COLOR	
461-05610A-1000	MOUNTING BRACKET-A INJ ABS ANY COLOR	
461-05610B-1000	MOUNTING BRACKET-B INJ ABS ANY COLOR	
461-05610C-1000	MOUNTING BRACKET-C INJ ABS ANY COLOR	
461-05610G-1000	GEAR BRACKET INJ ABS ANY COLOR	
461-059520-1010	CASS DOOR BRACKET REV2 INJ ABS BLACK	
469-056101-1000	GEAR FIXER INJ ABS ANY COLOR	
472-056110-1000	FUNCTION BUT BASE REV. INJ ABS ANY COLOR	

UNIT	QTY. PER
SE	1
PC	1
PC	1
PC	1
PC	1
PC	1
PC	1
PC	1
PC	2
PC	1
PC	2
PC	9
PC	14
PC	2
PC	1
PC	1
PC	2
PC	3
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PC	12
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PC	1
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PC	1
PC	8
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PC	3
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PC	32
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PC	2



PC	5
PC	2
PC	1
PC	1
PC	4
PC	1
SE	1
PC	1
PC	1
PC	2
PC	2
C	3
PC	1
SE	1
PC	1
PC	1
PC	2
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