

Service
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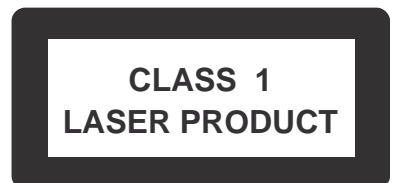


Service Manual

From week 0913 onwards, ALI solution(decode IC) has been adopted to replace ROHM solution(decode IC), accordingly new Main Board & Display/MCU Board & AC Power Board, etc. were used to match with new solution.

Please refer chapter 1 to 9 for sets produced before week 0913 and chapter 10 & chapter 15 for changed contents for sets produced in or after week 0913.

Ali solution starting S/N: EF2A0913000001.



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3141 785 32376

Version 1.6



PHILIPS

VERSION VARIATIONS

Type /Versions: Service policy		MCM277									
		/05	/12		/55	/58	/61				/98
Board in used:											
MAIN BOARD		C	C								C
CD/MCU BOARD		M	M								C
HEADPHONE JACK BOARD		C	C								C
DISPLAY BOARD		C	C								C
AC POWER BOARD		C	C								C
KEY BOARD		C	C								C
TUNER BOARD		M	M								M
Type /Versions: Feature difference		MCM277									
		/05	/12	/98							
Features in used:											
Aux in / CDR in		x	x	x							
Line Out											
Video Out											
Surround Out											
Subwoofer Out											
Power Booster Out											
Digital Out											
Digital in											
Matrix Surround											
RDS		x	x								
News		x	x								
Dolby Pro Logic (DPL)											
Incredible Surround											
Karaoke Features											
Voltage Selector				x							
ECO Power Standby (LCD Display Off)		x	x								
USB Direct		x	x	x	x						
<p>* TIPS : C -- Component Lever Repair. M -- Module Lever Repair x -- Used</p>											

SPECIFICATIONS

GENERAL:

Mains voltage : 127/240V -15%+10% Switchable for /98
 120V \pm 10% for /37
 230V \pm 10% for /05/12
 Mains frequency : 50/60Hz
 Clock accuracy : < 4 seconds per day
 Dimension centre unit : 194(W)x269(H)x90(D) (mm)

Power consumption

Active : 20W
 Standby : < 5.5W (DEMO mode)
 ECO Power Standby : < 0.5W for /05/12/37

TUNER:

FM

Tuning range : 87.5-108MHz
 Grid : 50kHz for /98/12/05
 100kHz for /98/55/37
 IF frequency : 10.7MHz \pm 20kHz
 Aerial input : 75 Ω coaxial /05/12/98
 300 Ω for /37
 Sensitivity at 26dB S/N : < 22 μ f
 Selectivity at 300kHz bandwidth : > 25dB
 Image rejection : > 25dB [> 75dB]
 IF rejection : > 60B [> 80dB]
 Distortion at RF=1mV, dev. 75kHz : < 3%
 -3dB Limiting point : < 23.5dBf
 Crosstalk at RF=1mV, dev. 40kHz : > 18dB

MW

Tuning range : 531-1602kHz for /05/12/55/98
 530-1700kHz for /37/98
 Grid : 9kHz for /05/12/55/98
 10kHz for /37/98
 IF frequency : 450kHz \pm 1kHz
 Aerial input : Frame aerial 18.1 μ H
 Sensitivity at 26dB S/N : < 4.4mV/M
 Selectivity at 300kHz bandwidth : > 18dB
 IF rejection : > 45dB
 Image rejection : > 28dB
 Distortion at RF=50mV, M=80% : < 5%

AMPLIFIER:

Output power

L & R : 2 x 5.0W (4 Ω , 1kHz, 10% THD)
 : 2 x 4.5W (4 Ω , 1kHz, 10% THD) /98
 : 2 x 4.5W (FTC Power, 4 Ω , 1kHz, 10% THD
 63Hz-12.5kHz) /37

Frequency response within -3dB : 50Hz-16kHz

Digital Sound Control (DSC) : Jazz / Rock / Pop / Classic

Dynamic Bass Boost (DBB) : ON / OFF

Input sensitivity

Aux in (at 1kHz) : 500mV at 600 Ω

USB : Host

Output sensitivity

Headphone output at 32 Ω : 10mW \pm 2dB (Max. vol.)

COMPACT DISC:

Frequency response within \pm 3dB : 125Hz - 16kHz

Output level (in Vrms) : 500mV, $Z_{out} = 100\Omega$

Signal/Noise ratio (unw.) : > 65dB

Signal/Noise ratio (A-weighted): > 76dB

Distortion at 1kHz : < 0.02%

Channel unbalance (-40dB) : < \pm 2dB

Channel separation at 1kHz : > 30dB

Emphasis : 15/50 μ S (switched
 automatically by CD10)

THD Noise(1kHz,500mW) : < 1.0%

Volume attenuation(1kHz) : > 60dB

MP3 CD WMA:

MP3 : MPEG 1 (ISO/IEC 11172-3)
 Layer3

MP3-CD Bit Rate : 8-320 kbps

WMA-CD Bit Rate : 64-192 kbps

Sampling Rate : 8, 11.025, 12, 16, 22.05,
 24, 32, 44.1, 48 kHz

Format : ISO9660, Joliet,UDF

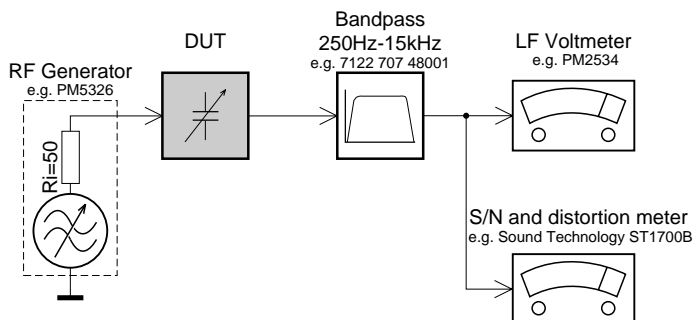
ID3 : V1 tag/V2 2.0/V2 3.0

Language Support : English

[...] Values indicated are for /05/12 only.

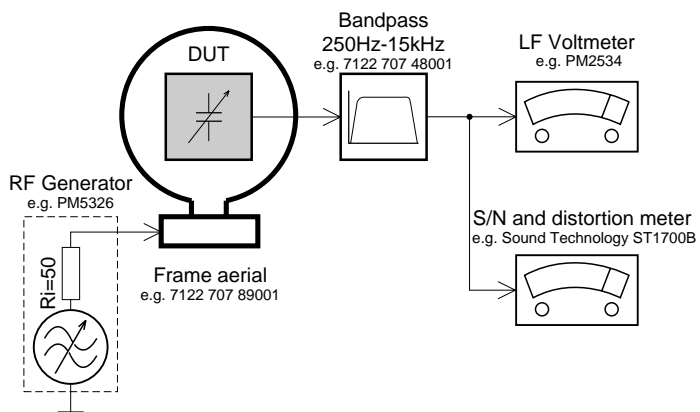
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilotone (19kHz, 38kHz).

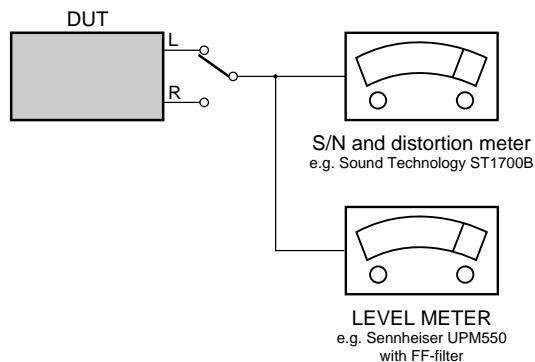
Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage. Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)



SERVICE AIDS

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.


When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

ESD



GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used

Safety components are marked by the symbol .

**CLASS 1
LASER PRODUCT**

INFORMATION ABOUT LEAD-FREE SOLDERING

Philips CE is producing lead-free sets from 1.1.2005 onwards.

IDENTIFICATION:

Regardless of special logo (not always indicated) one must treat all sets from 1 Jan 2005 onwards, according next rules:



- On our website www.atyourservice.ce.Philips.com you find more information to:
 - * BGA-de-/soldering (+ baking instructions)
 - * Heating-profiles of BGAs and other ICs used in Philips-sets
 - * Lead free

You will find this and more technical information within the "magazine", chapter "workshop news".

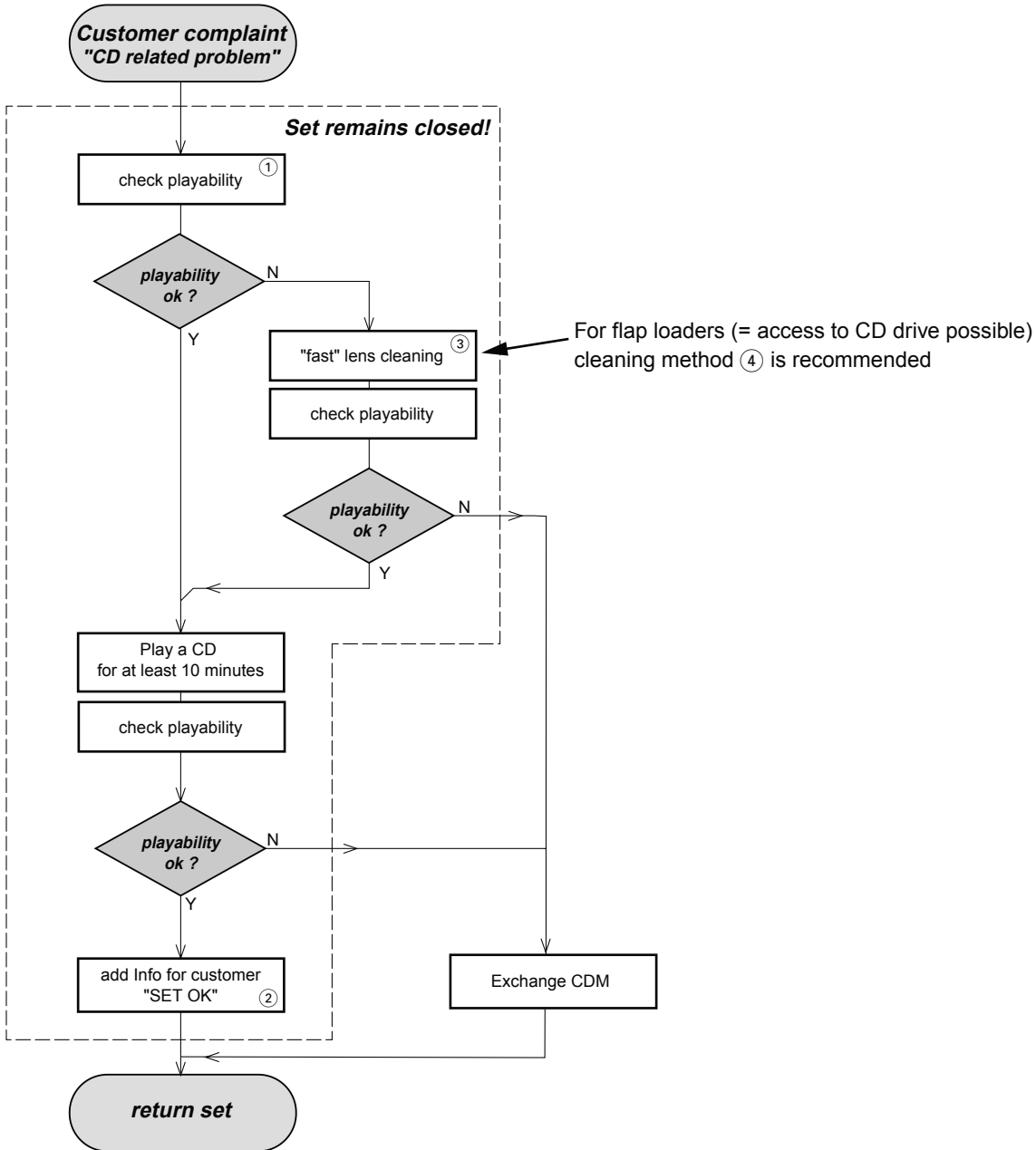
For additional questions please contact your local repair-helpdesk.

SERVICE INSTRUCTION

Safety regulations require that after a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the AC Power lead for external damage.
- Check the strain relief of the AC Power cord for proper function.
- Check the electrical DC resistance between the AC Power Plug and the secondary side (only for sets which have a AC Power isolated power supply):
 1. Unplug the AC Power cord and connect a wire between the two pins of the AC Power plug.
 2. Set the AC Power switch to the "on" position (keep the AC Power cord unplugged!).
 3. Measure the resistance value between the pins of the AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be larger than 4.5 Mohm (For U.S. it should be between 4.2 Mohm and 12 Mohm).
 4. Switch "off" the set, and remove the wire between the two pins of the AC Power plug.
- Check the cabinet for defects, to avoid touching of any inner parts by the customer.

INSTRUCTIONS ON CD PLAYABILITY



For flap loaders (= access to CD drive possible) cleaning method ④ is recommended

① - ④ For description - see following pages

INSTRUCTIONS ON CD PLAYABILITY

①

PLAYABILITY CHECK

For sets which are compatible with **CD-RW** discs
 use CD-RW Printed Audio Disc7104 099 96611
 TR 3 (Fingerprint)
 TR 8 (600µ Black dot) **maximum at 01:00**

- playback of these two tracks without audible disturbance
 playing time for: Fingerprint ≥ 10 seconds
 Black dot from 00:50 to 01:10
- jump forward/backward (search) within a reasonable time

For all other sets
 use CD-DA SBC 444A4822 397 30245
 TR 14 (600µ Black dot) **maximum at 01:15**
 TR 19 (Fingerprint)
 TR 10 (1000µ wedge)

- playback of all these tracks without audible disturbance
 playing time for: 1000µ wedge ≥ 10 seconds
 Fingerprint ≥ 10 seconds
 Black dot from 01:05 to 01:25
- jump forward/backward (search) within a reasonable time

②

CUSTOMER INFORMATION

It is proposed to add an addendum sheet to the set which informs the customer that the set has been checked carefully - but no fault was found.

The problem was obviously caused by a scratched, dirty or copy-protected CD. In case problems remain, the customer is requested to contact the workshop directly.

The lens cleaning (method ③) should be mentioned in the addendum sheet.

The final wording in national language as well as the printing is under responsibility of the Regional Service Organizations.

④

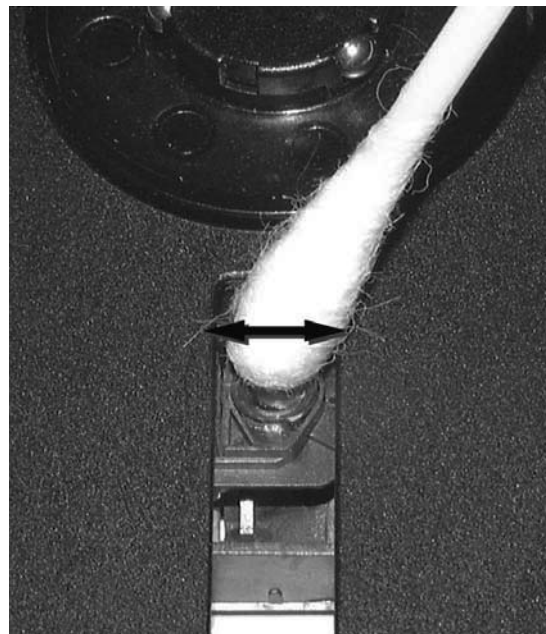
LIQUID LENS CLEANING

Before touching the lens it is advised to clean the surface of the lens by blowing clean air over it. This to avoid that little particles make scratches on the lens.

Because the material of the lens is synthetic and coated with a special anti-reflectivity layer, cleaning must be done with a non-aggressive cleaning fluid. It is advised to use "Cleaning Solvent

The actuator is a very precise mechanical component and may not be damaged in order to guarantee its full function. Clean the lens gently (don't press too hard) with a soft and clean cotton bud moistened with the special lens cleaner.

The direction of cleaning must be in the way as indicated in the picture below.



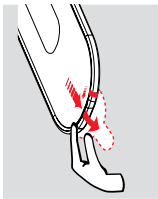
PREPARATIONS AND CONTROLS

Preparation

Using the remote control

IMPORTANT!

- Remove the protective plastic tab before using the remote control.
- Always point the remote control directly towards IR area.

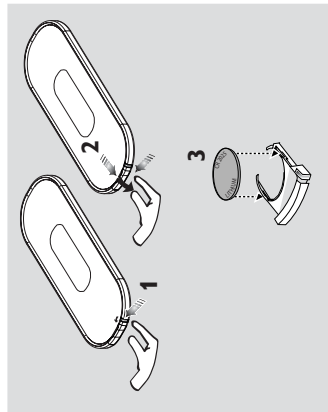


Notes for remote control:

- First select the source you wish to control by pressing one of the source select keys on the remote control (for example CD, TUNER).
- Then select the desired function (for example ► II, ◀ ◀ ►).

To replace the remote controls' battery

- 1 Press and hold ◀ as indicated.
- 2 Simultaneously, pull the battery tray at ►.
- 3 Remove the old battery and put a new CR2025 battery in place.
- 4 Put back the battery tray



CAUTION!

- Remove the battery if it is exhausted or will not be used for a long time.
- Batteries contain chemical substances, so they should be disposed of properly.

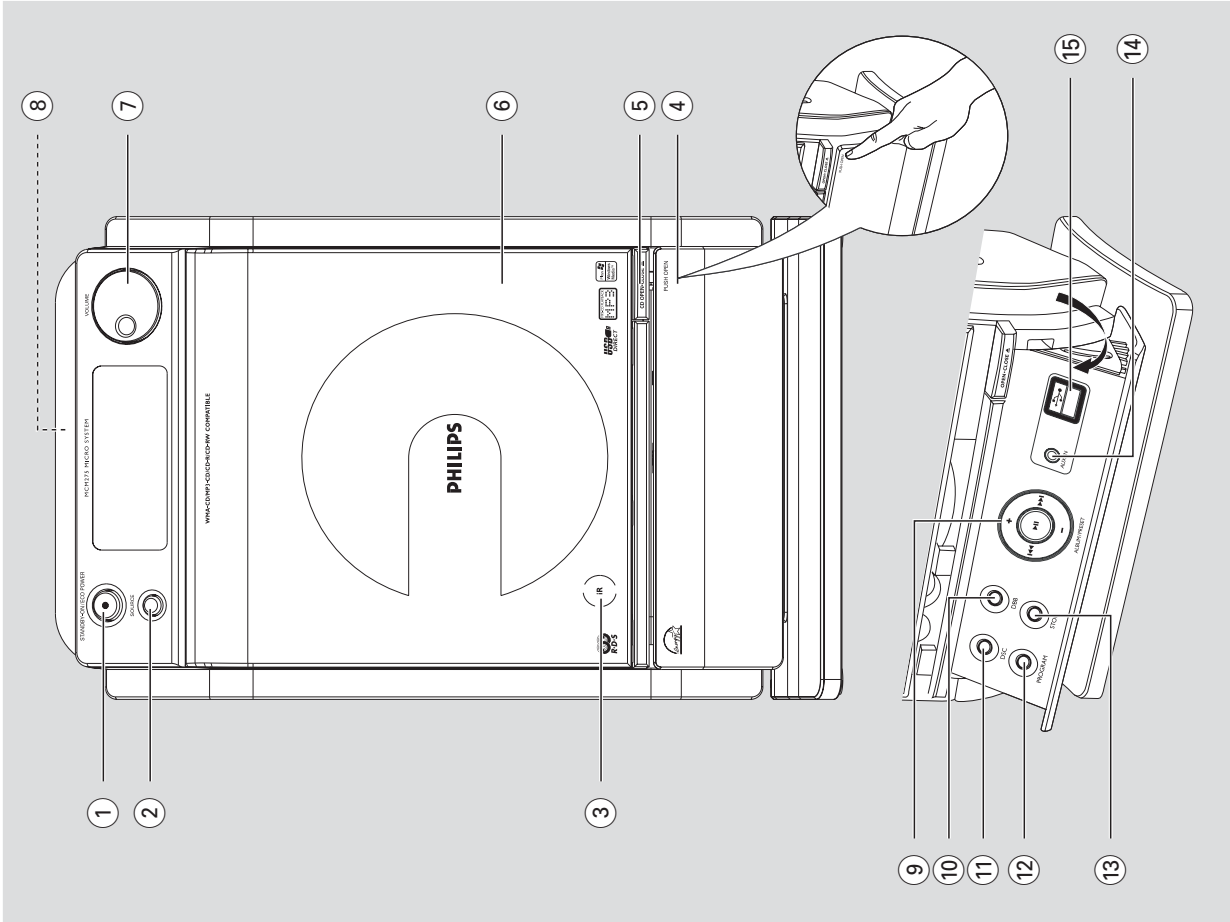
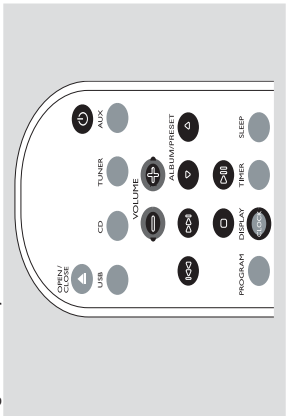
Setting the clock

After connecting MCMZ75 to the power supply, set the clock first.

- 1 Press and hold **STANDBY-ON/ECO POWER** to switch to Standby mode. The display shows the set time --:-- -- flashes by default if you have not set the clock.
- 2 In the standby mode, press and hold **DISPLAY/CLOCK** on the remote control. **SET CLOCK** scrolls on the display 24 Hr or 12 Hr appears for the initial clock setting. **To select 24-hour clock or 12-hour clock,** On the remote control, press **VOLUME +/-** once or more (or turn **VOLUME** on the set). On the remote control, press **DISPLAY/CLOCK** to confirm. The hours digits start flashing.
- 3 Hold down or press **VOLUME +/-** repeatedly to set the hours (or turn **VOLUME** on the set).
- 4 Press **DISPLAY/CLOCK** to confirm. The minutes digits start flashing.
- 5 Hold down or press **VOLUME +/-** repeatedly to set the minutes (or turn **VOLUME** on the set).
- 6 Press **DISPLAY/CLOCK** to confirm.
 - To exit without storing the clock setting press **STOP** ■

Helpful hints:

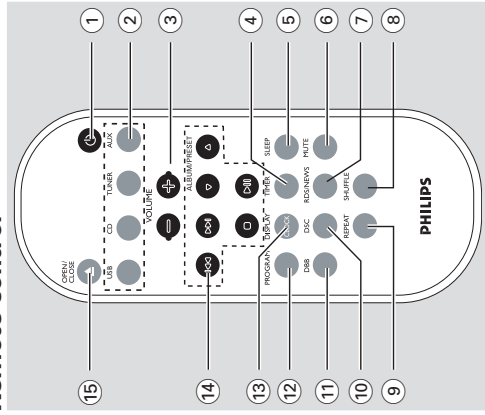
- The clock setting will be erased when the system is disconnected from the power supply.
- The set will exit from the clock setting mode if no button is pressed within 90 seconds.
- To set the clock automatically by using a time signal which is broadcast together with the RDS signal see chapter RDS: Automatic clock



Controls

- ① **STANDBY-ON/ ECO POWER**
press briefly to switch the set on or off (standby/ ECO POWER);
- **In standby or Eco Power mode:** press and hold to toggle between Standby and ECO POWER mode (power-saving mode)
- **Red indicator:** lights up red when the set is switched to ECO POWER mode
- ② **SOURCE**
selects sound source **CD, USB, TUNER** or **AUX**
- **In standby or Eco Power mode:** switches the set on and selects sound source **CD, USB, TUNER** or **AUX**
- ③ **IR**
sensor for the infrared remote control
- **Helpful hints:** Always point the remote control towards this sensor.
- ④ **PUSH OPEN**
push to unfold or fold the control panel
- ⑤ **CD OPEN • CLOSE ▲**
opens/closes the CD door
- ⑥ **CD door**
- ⑦ **VOLUME**
adjusts the volume level
- **Clock/Timer:** adjusts the hours and minutes
- ⑧ **3.5 mm headphone socket**
- **Helpful hints:**
- Adjust the volume to a moderate level before you plug in the headphones.
- Connecting headphones will switch off the speakers.
- ⑨ **ALBUM/ PRESET +/-**
CD/USB: selects albums (for MP3/WMA only)
TUNER: selects a preset radio station
- ⏪ / ⏩ **CD/USB:** skips or searches CD tracks/titles backwards/forwards
Tuner: tunes to radio stations
- **CD/USB:** starts or pauses playback
- ⑩ **DBB (Dynamic Bass Boost)**
turns the bass enhancement on/off
- ⑪ **DSC (Digital Sound Control)**
selects predefined sound settings: **ROCK, JAZZ, POP, CLASSIC**
- ⑫ **PROGRAM**
CD/USB: programs tracks
Tuner: programs preset radio stations
- ⑬ **STOP**
CD/USB: stops playback; erase a program
- ⑭ **AUX-IN**
connects to the AUDIO OUT jack on the external appliance
- ⑮ **jack for the external USB mass storage device**

Remote control



Notes for remote control:

- First select the source you wish to control by pressing one of the source select keys on the remote control (for example **CD, TUNER**).
- Then select the desired function (for example **▶ II, ◀ ▶**).
- ① **Standby-On/Eco Power**
press briefly to switch the set on or off (standby/ ECO POWER);
- **In standby or Eco Power mode:** press and hold to toggle between Standby and ECO POWER mode (power-saving mode)
- ② **Source buttons**
USB
selects **USB** source
In standby or Eco Power mode: switches the set on and selects **USB** source.
- CD**
selects **CD** source
In standby or Eco Power mode: switches the set on and selects **CD** source.
- TUNER**
selects **TUNER** source and toggles between the wavebands: **FM** and **MW**
- **In standby or Eco Power mode:** switches the set on and selects **TUNER** source

PREPARATIONS AND CONTROLS

Controls

- AUX**
selects the audio input from an additional connected appliance
- **In standby or Eco Power mode:** switches the set on and selects the audio input from an additional connected appliance
- ③ **VOLUME +/-**
adjusts the volume level
- **Clock/Timer:** adjusts the hours and minutes
- ④ **TIMER**
displays the timer setting
switches the timer on/off
enters the timer setting mode (press and hold for more than 2 seconds)
- ⑤ **SLEEP**
set the sleep timer
- ⑥ **MUTE**
switches the sound off temporarily
- ⑦ **RDS/NEWS**
Tuner: selects **RDS (Radio Data System)** information
- **CD/USB/AUX:** activates/deactivates news
- ⑧ **SHUFFLE**
selects random playback
- ⑨ **REPEAT**
selects continuous playback
- ⑩ **DSC (Digital Sound Control)**
selects predefined sound settings: **ROCK, JAZZ, POP, CLASSIC**
- ⑪ **DBB (Dynamic Bass Boost)**
turns the bass enhancement on/off
- ⑫ **PROGRAM**
CD/USB: programs tracks
Tuner: programs preset radio stations
- ⑬ **DISPLAY/CLOCK**
Clock: - displays the set time
- **In standby mode:** enters the clock setting mode (press and hold for more than 2 seconds)
- **TUNER/Audio CD:** switches between clock display and playback display
displays disc information during playback
- **MP3/WMA files:** displays disc information during playback

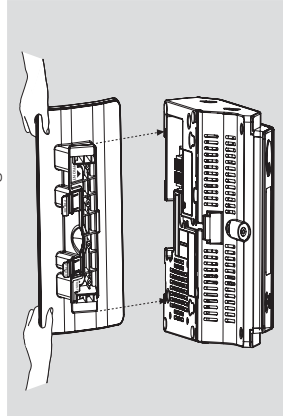
- 14 **◀◀ / ▶▶**
- **CD/USB:** skips or searches CD tracks backwards/forwards
- **Tuner:** tunes to radio stations
- **ALBUM/ PRESET ▲ / ▼**
- **CD/USB:** selects the next/previous album (for MP3/WMA only)
- **TUNER:** selects a preset station
- **▶ II**
- **CD/USB:** starts or pauses playback
- **■**
- **CD/USB:** stops playback; erase a program
- 15 **OPEN • CLOSE ▲**
- opens/closes the CD door

Placing MCM275

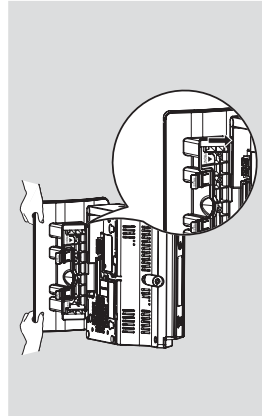
With the detachable stand and by-packed wall mounting kit, MCM275 allows you to place it in two ways: **on desktops with stand** or **on walls without stand.**

Mounting stand onto the set

- MCM275 is equipped with a stand. To mount the stand onto the set,
- 1 Put MCM275 on a flat and firm surface, rear side facing up
 - 2 As shown, align the stand to the slots at set's bottom, **▼ FRONT** facing down

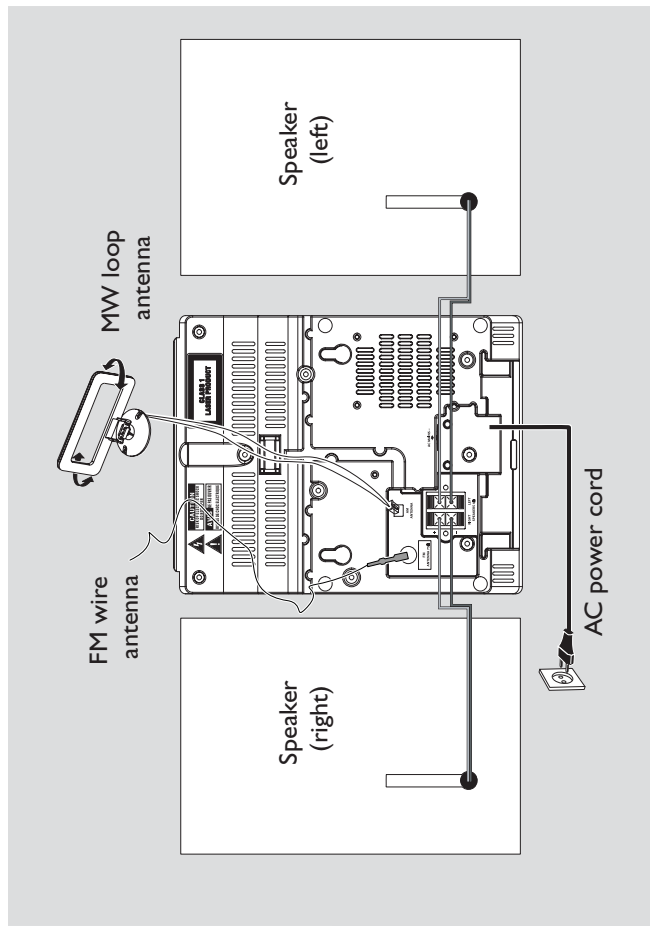


- 3 Push the stand down into the slots
When the stand is in place, you will hear a click



Mounting MCM275 onto walls

See **Appendix: How to mount your MCM275 onto walls** to learn more about wall mounting.



Rear connections

Warning:

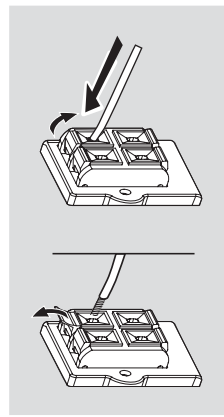
- Never make or change connections with the mains supply switched on.
- Install your set near the AC outlet and where the AC power plug can be reached easily.

(A) Speaker connections

Use the supplied speakers only. Using other speakers can damage the set or the sound quality will be negatively affected.

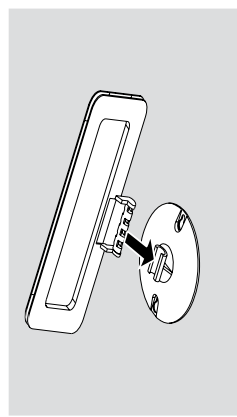
Connect the cable of the left speaker to **LEFT** (red and black) and the cable of the right speaker to **RIGHT** (red and black) as follows:

- a. Press the clip of the red terminal and fully insert the stripped portion of the colored (or marked) speaker cable into the socket, then release the clip
- b. Press the clip of the black terminal and fully insert the stripped portion of the black (or unmarked) speaker cable into the socket, then release the clip



(B) Antenna connections MW antenna

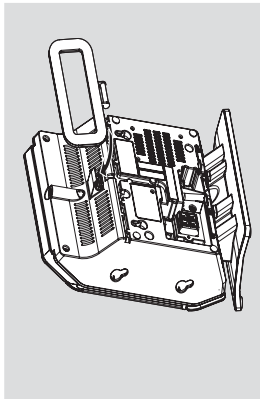
- 1 Assemble the loop antenna as shown:



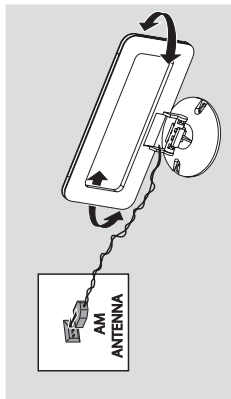
CONTROLS & INSTALLATIONS

Installation

- Or**
 1 Insert the loop antenna into the slot on the set



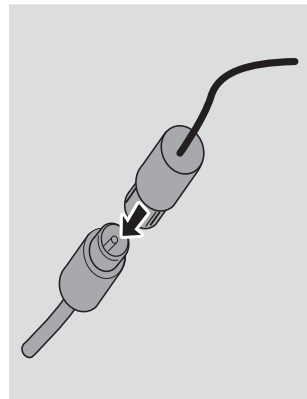
- 2 Fit the plug of the loop antenna to AM (MW) ANTENNA as shown below
- 3 Adjust the position of the antenna for optimal reception (as far away as possible from the TV, VCR or other radiation sources)



FM antenna

The wire antenna supplied can only be used to receive nearby stations. For better reception we recommend using a cable antenna system or an outdoor antenna.

- 1 Extend the wire antenna and fit it to FM ANTENNA as shown below



Note: If you are using a cable antenna system or an outdoor antenna, fit the antenna plug, instead of the wire antenna, to FM ANTENNA.

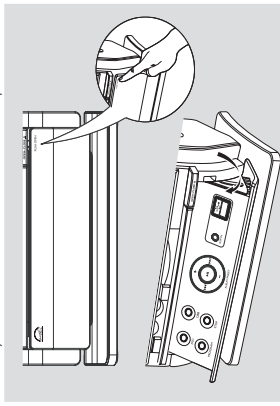
- 2 Move the antenna in different positions for optimal reception (as far away as possible from the TV, VCR or other radiation sources)
 Fix the antenna's end to the wall

Connecting an additional appliance

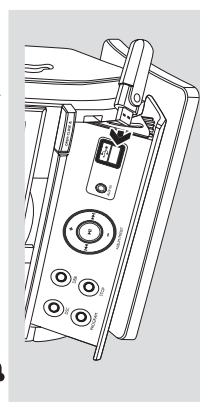
Connecting a USB device or memory card

By connecting a USB mass storage device (including USB flash memory, USB flash players or memory cards) to the Hi-Fi system, you can enjoy the device's stored music through the powerful speakers of Hi-Fi system.

- 1 Check you have unfolded the control panel



- 2 Insert the USB device's USB plug into the socket on the set's foldable control panel



or for the devices with USB cable:

- a. Insert one plug of the USB cable (not supplied) to the socket on the set's foldable control panel
- b. Insert the other plug of the USB cable to the USB output terminal of the USB device

or for the memory card:

- a. Insert the memory card into a card reader (not supplied)
- b. Use a USB cable (not supplied) to connect the card reader to the socket on the set's foldable control panel

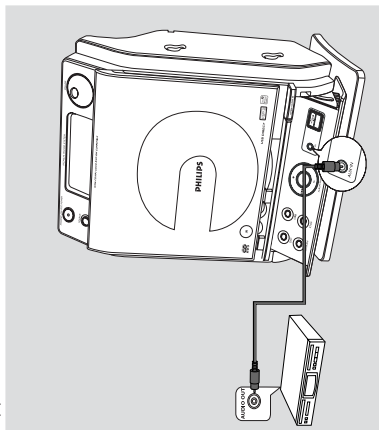
Connecting a non-USB device

It is possible to use an additional appliance, e.g. TV/VCR or CD recorder with the set. On MCM275, you can playback music from an external source.

- 1 Follow the Step 1 under **Connecting a USB device or memory card**

- 2 Insert one plug of the audio cable (not supplied) to the socket **AUX IN** on the set's foldable control panel

- 3 Connect the other end of the audio cable to the **AUDIO OUT** terminal of the additional appliance



- 4 Select **AUX** mode on the set

Helpful hints:

- Always refer to the owner's manual of other equipment for complete connection.

Installation

Using AC power

- 1 Make sure all the connections have been made before switching on the power supply

- 2 Connect the AC power cord to the wall socket. This switches on the power supply

When MCM275 is switched to standby, it is still consuming some power. **To disconnect the system from the power supply completely, remove the power plug from the wall socket.**

The type plate is located on the rear of the set.

For users in the U.K.: please follow the instructions.

Warning!

To avoid overheating of the system, a safety circuit has been built in. Therefore, your system may switch to Standby mode automatically under extreme conditions. If this happens, let the system cool down before reusing it (not available for all versions).

This product complies with the radio interference requirements of the European Community.

CAUTION

Visible and invisible laser radiation. If the cover is open, do not look at the beam. High voltage! Do not open. You run the risk of getting an electric shock.

The machine does not contain any user-serviceable parts.

Modification of the product could result in hazardous radiation of EMC or other unsafe operation.

TROUBLESHOOTING

Troubleshooting

WARNING

Under no circumstances should you try to repair the system yourself, as this will invalidate the warranty. Do not open the system as there is a risk of electric shock.

If a fault occurs, first check the points listed below before taking the system for repair. If you are unable to remedy a problem by following these hints, consult your dealer or Philips for help.

Problem	Solution
"CD EJECT" is displayed.	<p>Insert a disc.</p> <p>Wait until the moisture condensation at the lens has cleared.</p> <p>Replace or clean the disc, see "Maintenance".</p> <p>Use a finalised CD-RW or a correct MP3/WMA-CD format disc.</p>
Some files on the USB device are not displayed.	<p>Check if the number of folders exceeds 99 or the number of titles exceeds 999</p>
Radio reception is poor.	<p>If the signal is too weak, adjust the antenna or connect an external antenna for better reception.</p> <p>Increase the distance between the Micro HiFi System and your TV or VCR.</p>
The system does not react when buttons are pressed.	<p>Remove and reconnect the AC power plug and switch on the system again.</p>
Sound cannot be heard or is of poor quality.	<p>Adjust the volume.</p> <p>Disconnect the headphones.</p> <p>Check that the speakers are connected correctly.</p> <p>Check if the stripped speaker wire is clamped.</p> <p>Make sure the MP3-CD was recorded within 32~256 kbps bit rate with sampling frequencies at 48 kHz, 44.1 kHz or 32 kHz.</p>
The left and right sound outputs are reversed.	<p>Check the speaker connections and location.</p>

The remote control does not function properly.

Select the source (CD or TUNER, for example) before pressing the function button (▶||◀, ▶◀, ▶▶).

Reduce the distance between the remote control and the system.

Insert the battery with its polarities (+/- signs) aligned as indicated.

Replace the battery.

Point the remote control directly toward IR sensor on the front of the system.

Check the set is switched off

Set the clock correctly.

Press TIMER to switch on the timer.

Power has been interrupted or the power cord has been disconnected. Reset the clock/timer.

The timer is not working.

The Clock/Timer setting is erased.

DISMANTLING INSTRUCTIONS

Dismantling the Rear Portion and PCBs

- 1) Press the 2 juts and pull out the Stand as shown in figure 1.

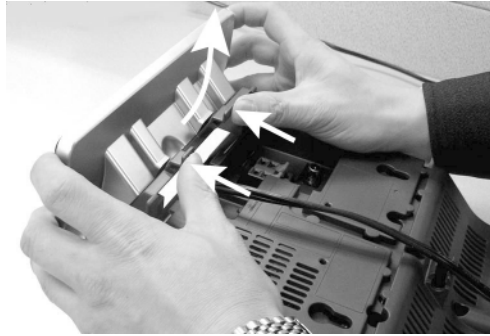


Figure 1

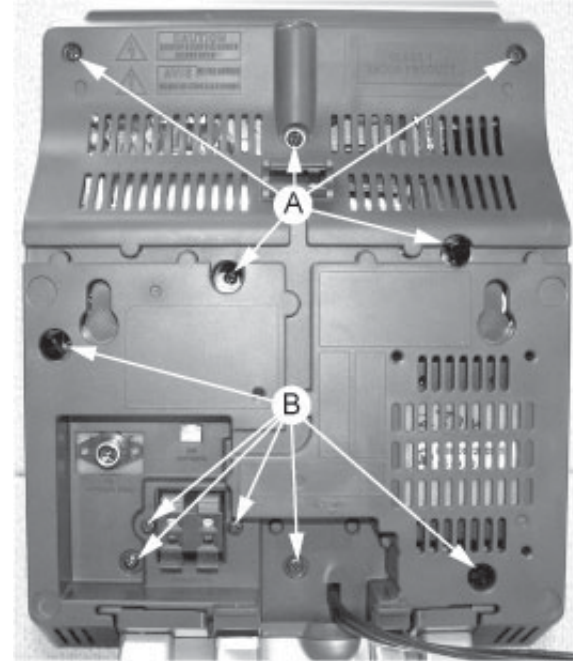


Figure 2

- 2) Loosen 5 screws A and 6 screws B to remove the Rear Cabinet as shown in figure 2.
- 3) Loosen 3 screws C to remove the SP & ANT Jack Board as shown in figure 3.
- 4) Loosen 5 screws D to remove the Power Module as shown in figure 3.

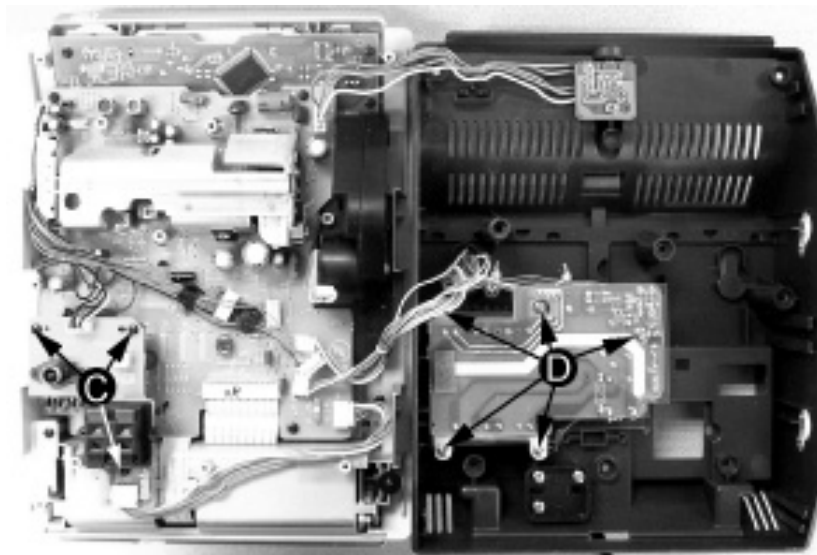


Figure 3

Dismantling the Rear Portion and PCBs

- 5) Loosen 2 screws E to remove the Bracket Jack Board as shown in Figure 4.
- 6) Loosen 3 screws F to remove the Main Board as shown in figure 5.

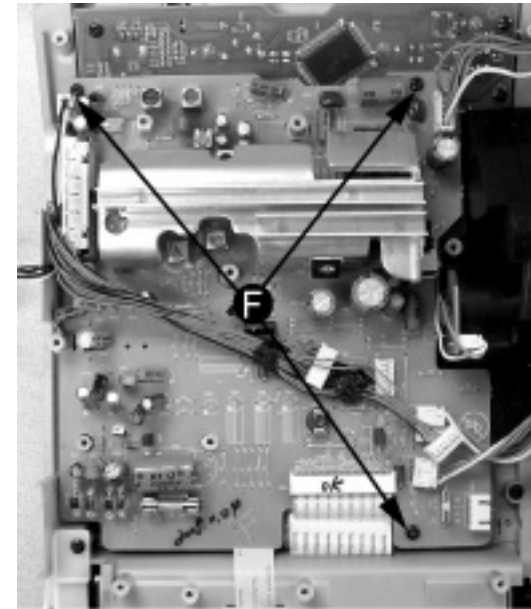


Figure 5

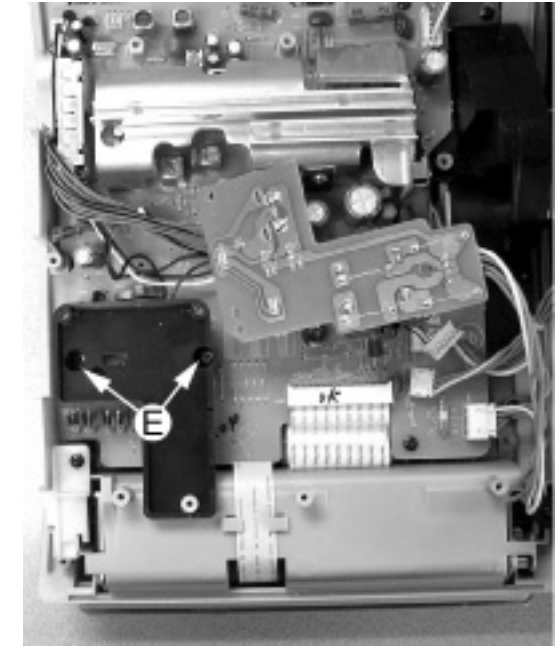


Figure 4

Dismantling of the Display Lens & the Volume knob

- 1) Use a flat head screw driver to give a push in the direction as shown in figure 6.



Figure 6

- 2) Place two small screw drivers in between the front cabinet & knob to give more leverage in pulling out the Volume Knob as shown in figure 7.



Figure 7

Dismantling of the CD Module & CD Door Carrier

- 1) Loosen 5 screws J mounting the Key Board to the Front Cabinet to remove the Key Board as shown in figure 8.
- 2) Loosen 4 screws H and 3 screws G to CD Module as shown in figure 8.
- 3) Loosen 2 screws I to remove the Servo Motor Mechanism as shown in figure 8.

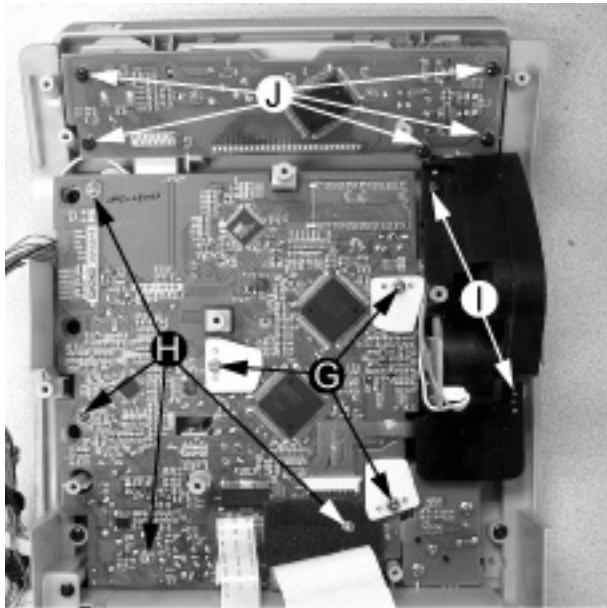


Figure 8

- 4) Loosen 4 screws K to remove the Right CD Door Carrier and 4 screws L to remove the Left CD Door Carrier as shown in figure 9.

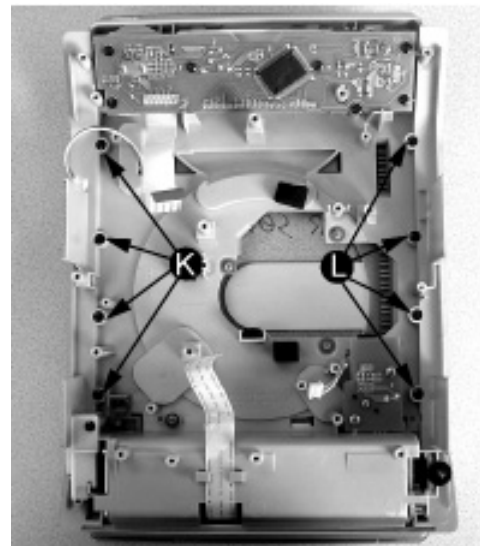
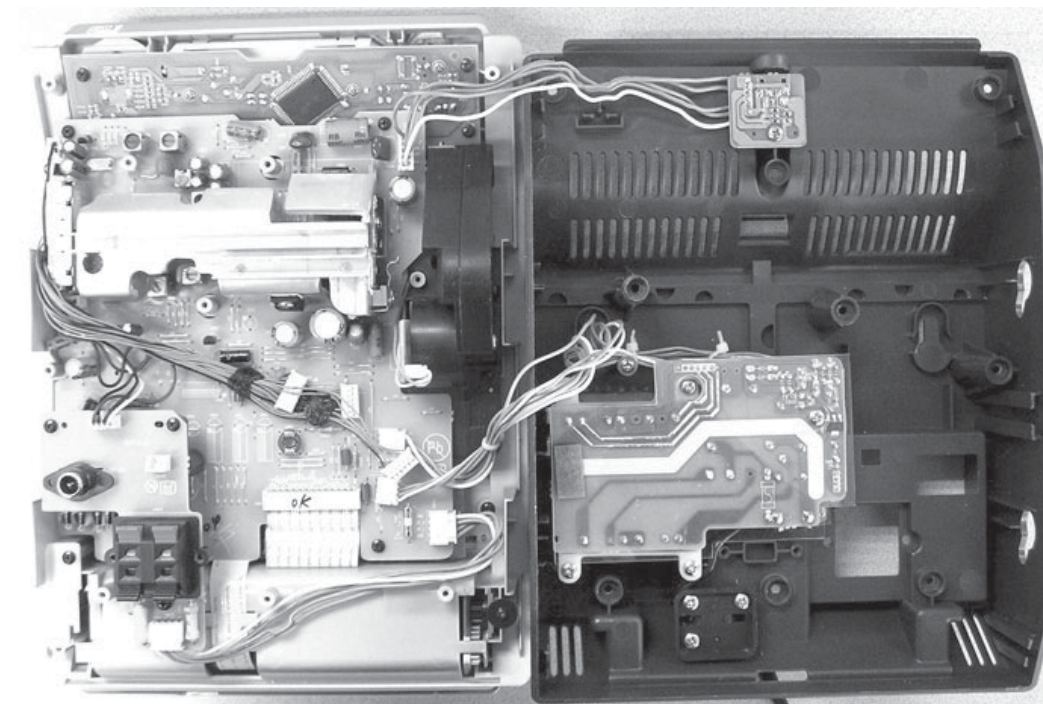


Figure 9

Service pos A



Service pos B



Note: After re-assembly, it is very important to ensure all wires are routed properly to ensure that they do not touch/obstruct all moving parts.

SERVICE TEST PROGRAM

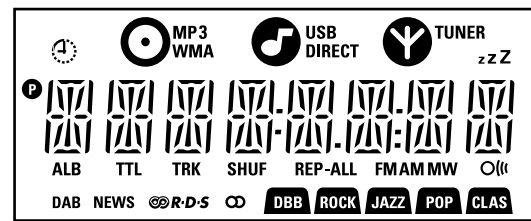
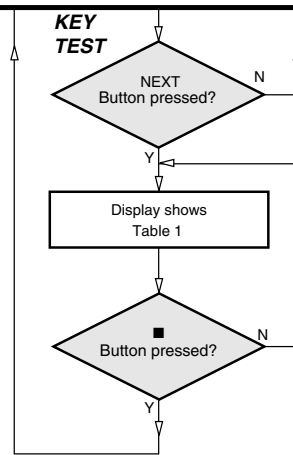
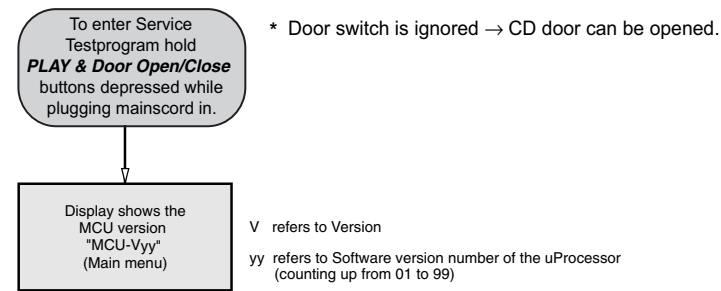
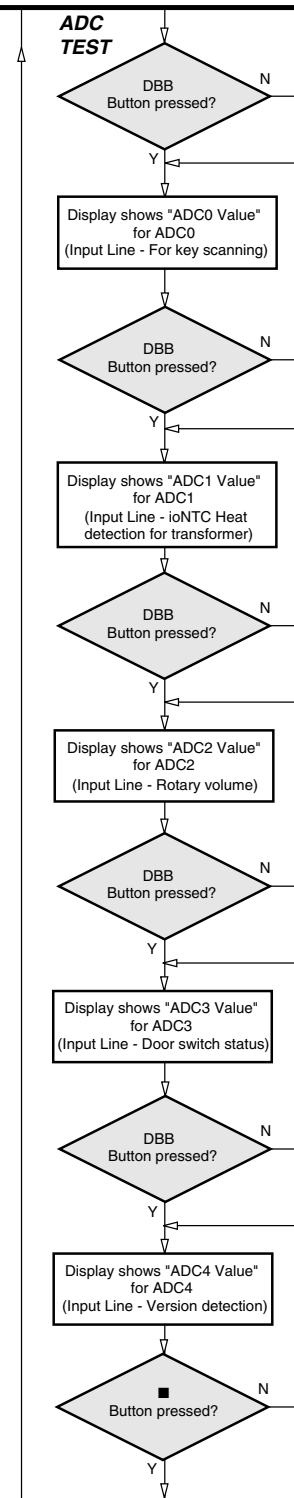
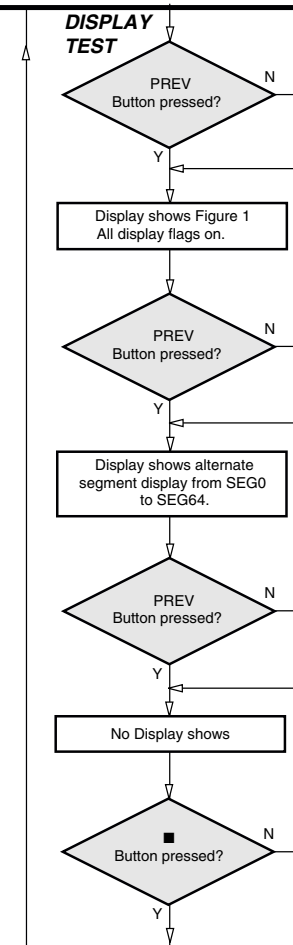
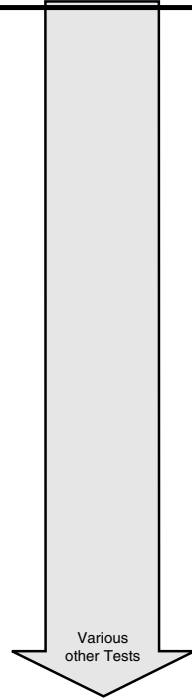


Figure 1



ADC Test is used for checking the ADC inputs to the microprocessor. The display shows an ADC value between 0 and 255 for an input signal between 0 and 5V.

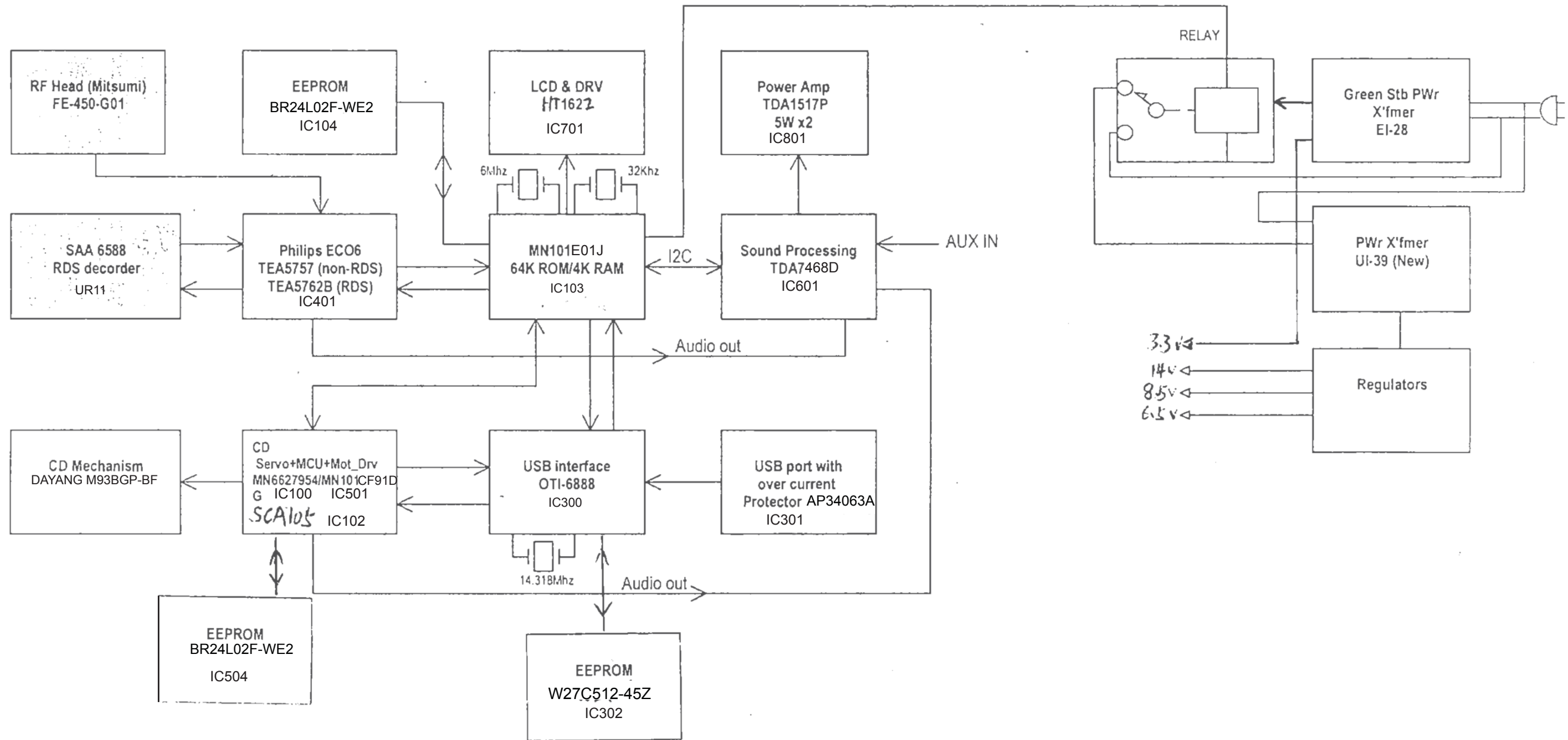


TEST	Activated with	ACTION
EEPROM CLEAR	PROGRAM ■ to Exit	A test pattern will be sent to the EEPROM. "EEP CLR" is displayed while the erase processing. Caution! All presets from the customer will be lost!!
LEAVE SERVICE TEST PROGRAM	Disconnect mains cord	

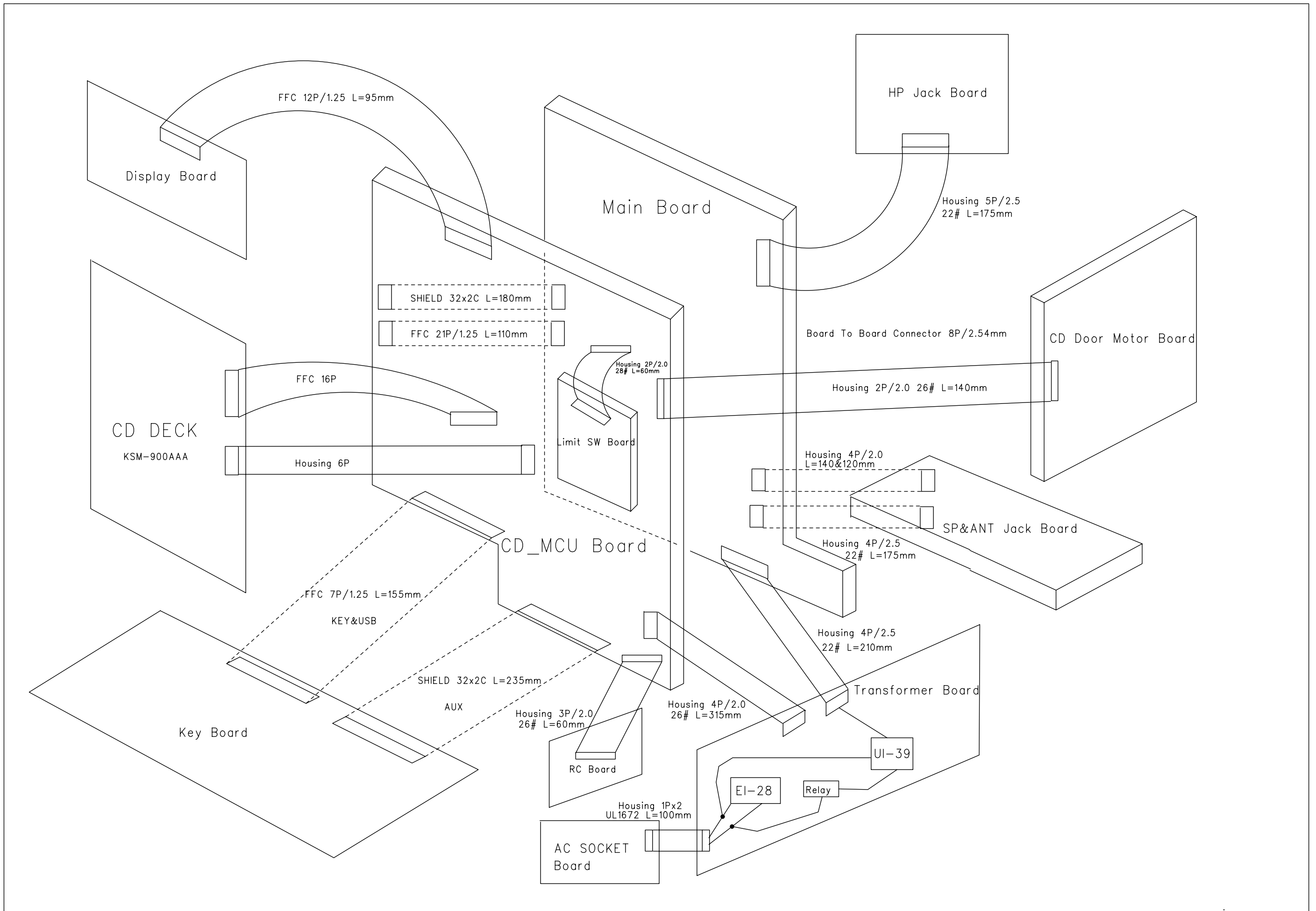
Key test table					
KeyNr	Setkey	KeyNr	Setkey	KeyNr	Set key
0	CD	10	RDS	20	PROGRAM
1	AUX	11	▶	21	SHUFFLE
2	TUNER	12	CLOCK/DISPLAY	22	NULL
3	SOURCE	13	ALBUM +	23	SLEEP
4	STANDBY/ON	14	ALBUM -	24	TIMER
5	OPEN/CLOSE	15	SKIP PREV	25	DBB
6	VOLUME DOWN	16	SKIP NEXT	26	DSC
7	VOLUME UP	17	NULL	27	MUTE
8	NULL	18	NULL	28	USB
9	NULL	19	REPEAT		

Table 1

SET BLOCK DIAGRAM



SET WIRING DIAGRAM



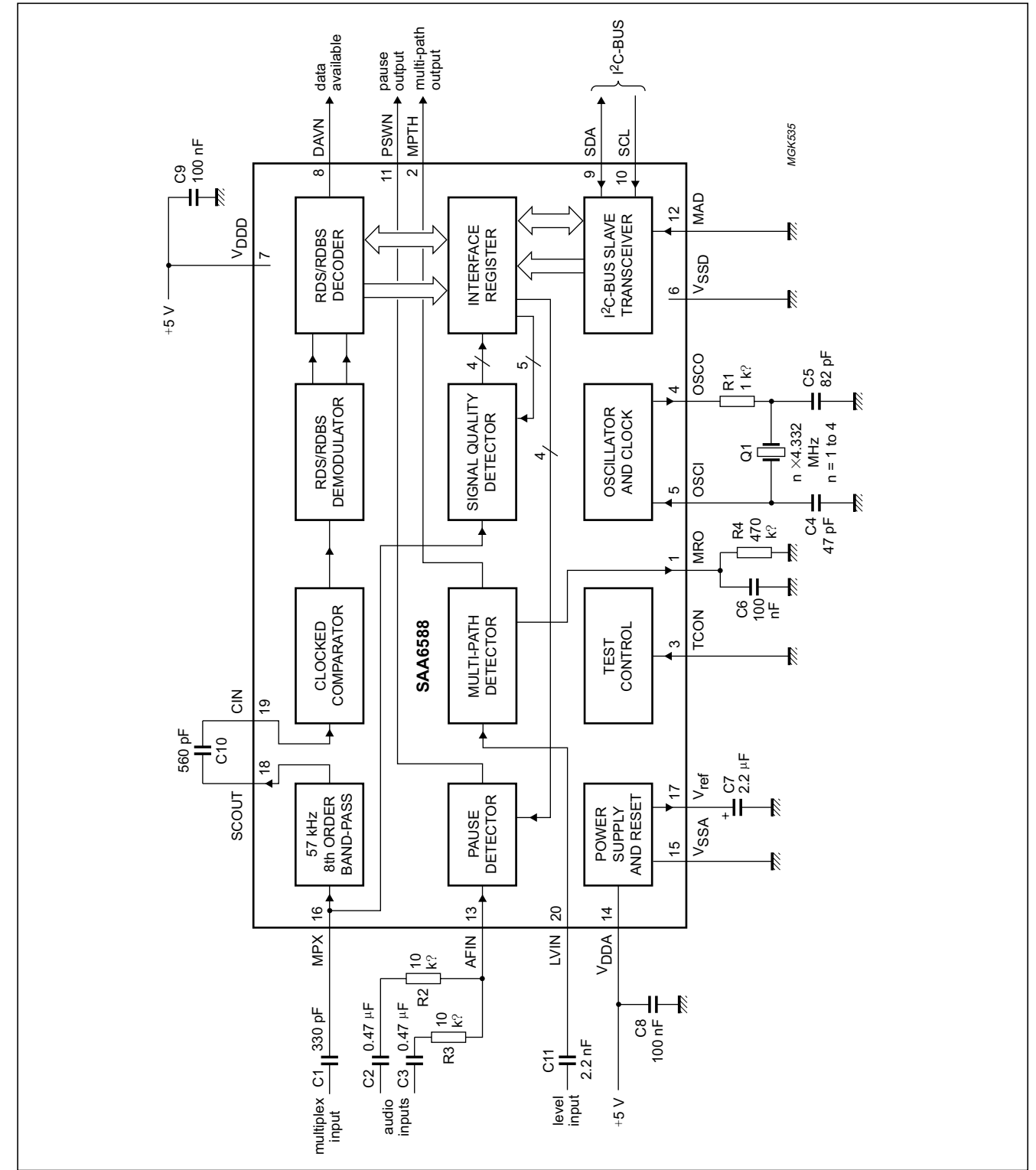
MAIN BOARD

TABLE OF CONTENTS

Internal IC Diagram	6-1 to 6-5
Main Board(5757) Layout Top View	6-6
Main Board(5757) Layout Bottom View	6-7
Circuit Diagram - Main Board(5757)	6-8
Main Board(5762) Layout Top View	6-9
Main Board(5762) Layout Bottom View	6-10
Circuit Diagram - Main Board(5762)	6-11
HP Jack Board	6-12
Electrical Parts List	6-13

BLOCK DIAGRAM - RDS/RBDS PRE-PROCESSOR SAA6588T

BLOCK DIAGRAM

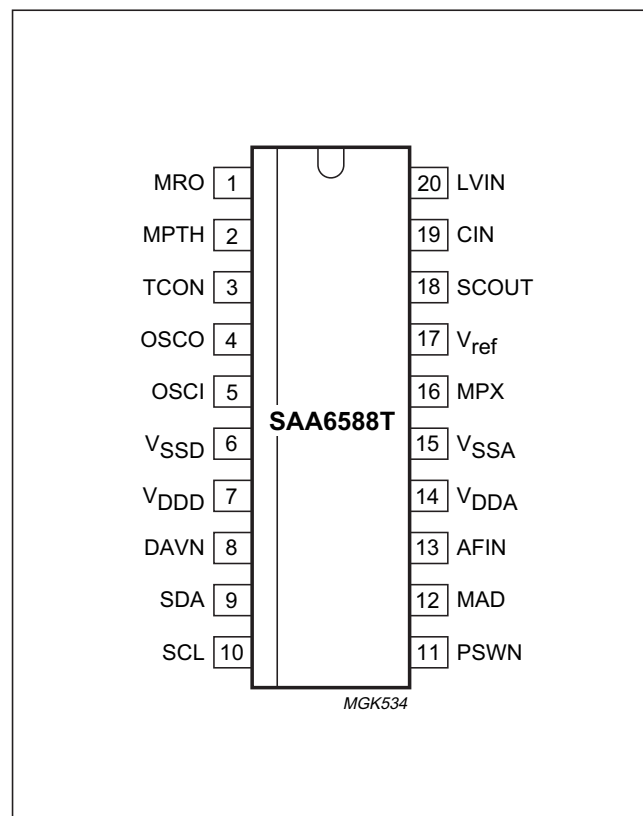


**PIN DESCRIPTION - RDS/RBDS PRE-PROCESSOR
SAA6588T**

PINNING

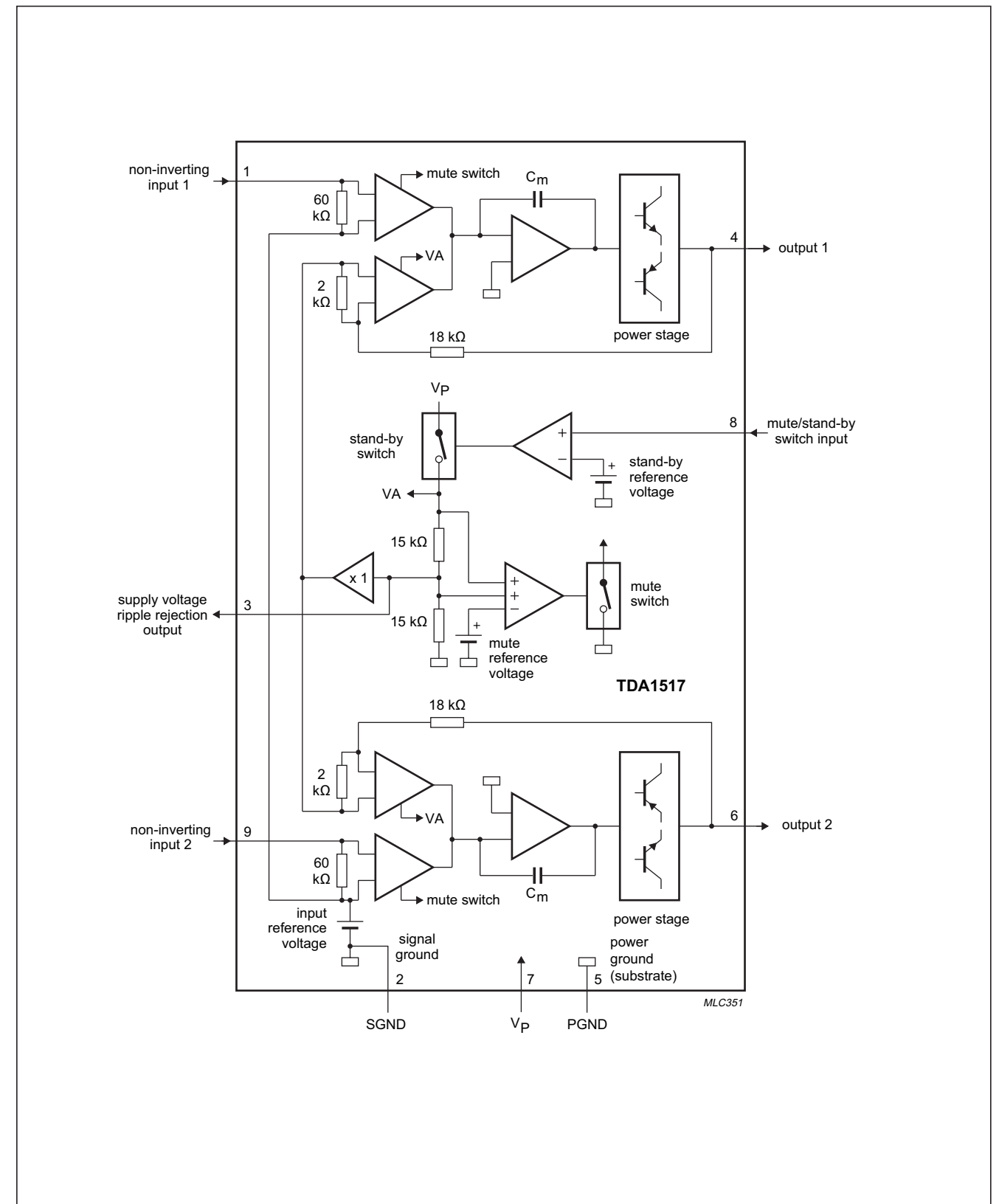
SYMBOL	PIN	DESCRIPTION
MRO	1	multi-path rectifier output
MPTH	2	multi-path detector output
TCON	3	test control input pin
OSCO	4	oscillator output
OSCI	5	oscillator input
V _{SSD}	6	digital ground (0 V)
V _{DDD}	7	digital supply voltage (5 V)
DAVN	8	data available output (active LOW)
SDA	9	I ² C-bus serial data I/O
SCL	10	I ² C-bus serial clock input

SYMBOL	PIN	DESCRIPTION
PSWN	11	pause switch output (active LOW)
MAD	12	slave address (LSB) input
AFIN	13	audio signal input
V _{DDA}	14	analog supply voltage (5 V)
V _{SSA}	15	analog ground (0 V)
MPX	16	multiplex input signal
V _{ref}	17	reference voltage output
SCOUT	18	band-pass filter output
CIN	19	comparator input
LVIN	20	level input



**BLOCK DIAGRAM - POWER AMPLIFIER
TDA1517**

BLOCK DIAGRAM



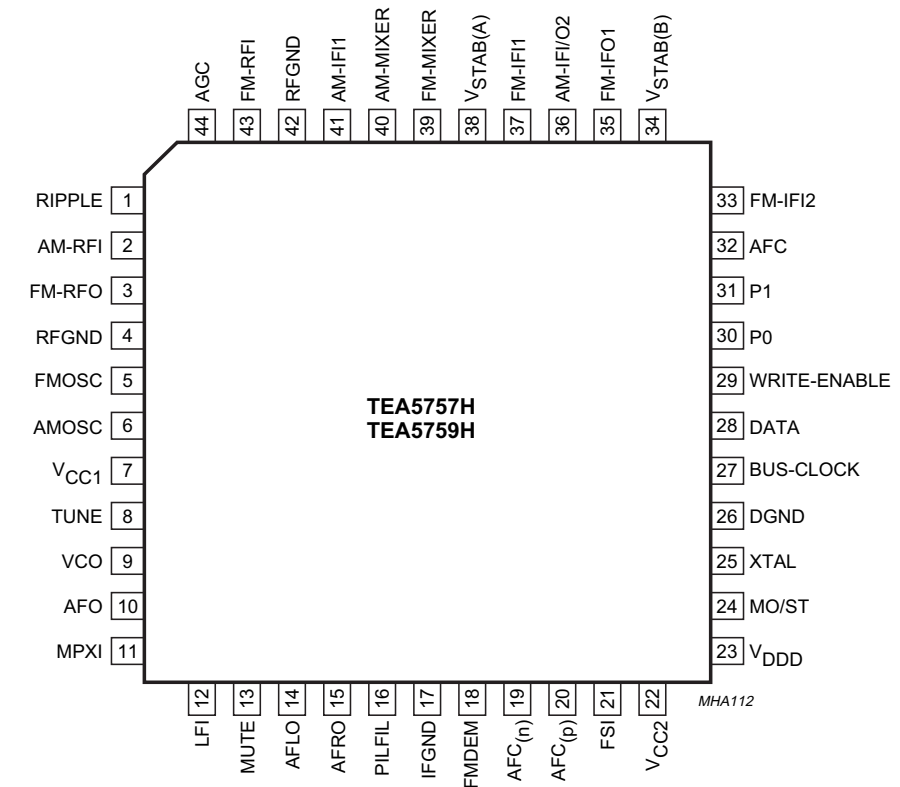
**PIN DESCRIPTION - SELF TUNED RADIO
TEA5757**

PINNING

SYMBOL	PIN	DESCRIPTION
RIPPLE	1	ripple capacitor input
AM-RFI	2	AMRF input
FM-RFO	3	parallel tuned FMRF circuit to ground
RFGND	4	RF ground and substrate
FMOSC	5	parallel tuned FM-oscillator circuit to ground
AMOSC	6	parallel tuned AM-oscillator circuit to ground
V _{CC1}	7	supply voltage
TUNE	8	tuning current output
VCO	9	voltage controlled oscillator input
AFO	10	AM/FM AF output (output impedance typical 5 k Ω)
MPXI	11	stereo decoder input (input impedance typical 150 k Ω)
LFI	12	loop-filter input
MUTE	13	mute input
AFLO	14	left channel output (output impedance typical 4.3 k Ω)
AFRO	15	right channel output (output impedance typical 4.3 k Ω)
PILFIL	16	pilot detector filter input
IFGND	17	ground of IF, detector and MPX stage
FMDDEM	18	ceramic discriminator input
AFC _(n)	19	AFC negative output
AFC _(p)	20	AFC positive output
FSI	21	field-strength indicator
V _{CC2}	22	supply voltage for tuning
V _{DDD}	23	digital supply voltage
MO/ST	24	mono/stereo and tuning indication output
XTAL	25	crystal input
DGND	26	digital ground
BUS-CLOCK	27	bus-clock input
DATA	28	bus data input/output
WRITE-ENABLE	29	bus write-enable input
P0	30	programmable output port (P0)
P1	31	programmable output port (P1)
AFC	32	450 kHz LC-circuit
FM-IFI2	33	FMIF input 2 (input impedance typical 330 Ω)
V _{STAB(B)}	34	internal stabilized supply voltage (B)
FM-IFO1	35	FMIF output 1 (output impedance typical 330 Ω)
AM-IFI/O2	36	input/output to IF-Tank (IFT); output: current source
FM-IFI1	37	FMIF input 1 (input impedance typical 330 Ω)
V _{STAB(A)}	38	internal stabilized supply voltage (A)
FM-MIXER	39	ceramic filter output (output impedance typical 330 Ω)
AM-MIXER	40	open-collector output to IFT

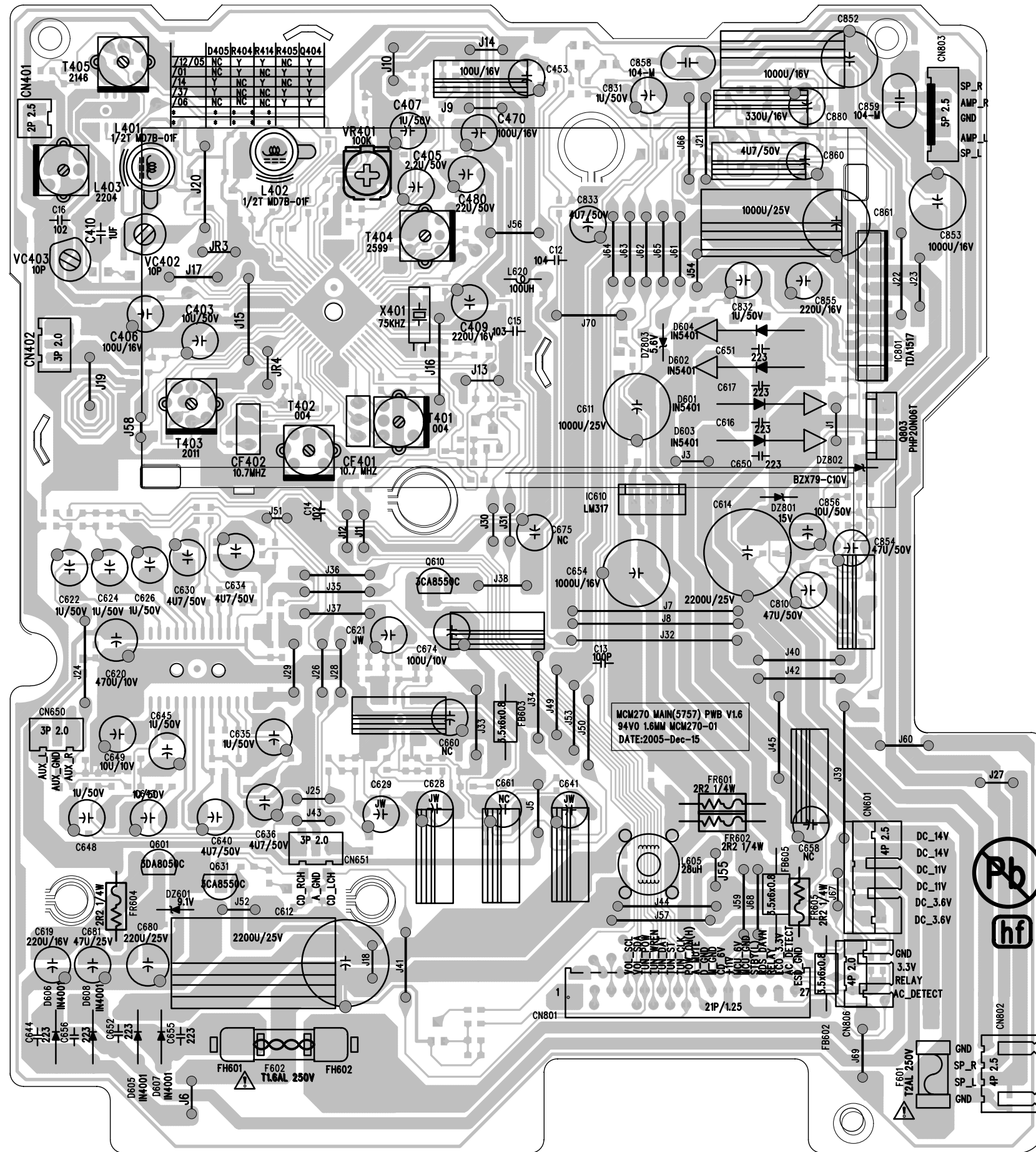
**PIN DESCRIPTION - SELF TUNED RADIO
TEA5757**

SYMBOL	PIN	DESCRIPTION
AM-IFI1	41	IFT or ceramic filter input (input impedance typical 3 k Ω)
RFGND	42	FMRF ground
FM-RFI	43	FMRF aerial input (input impedance typical 40 Ω)
AGC	44	AGC capacitor input

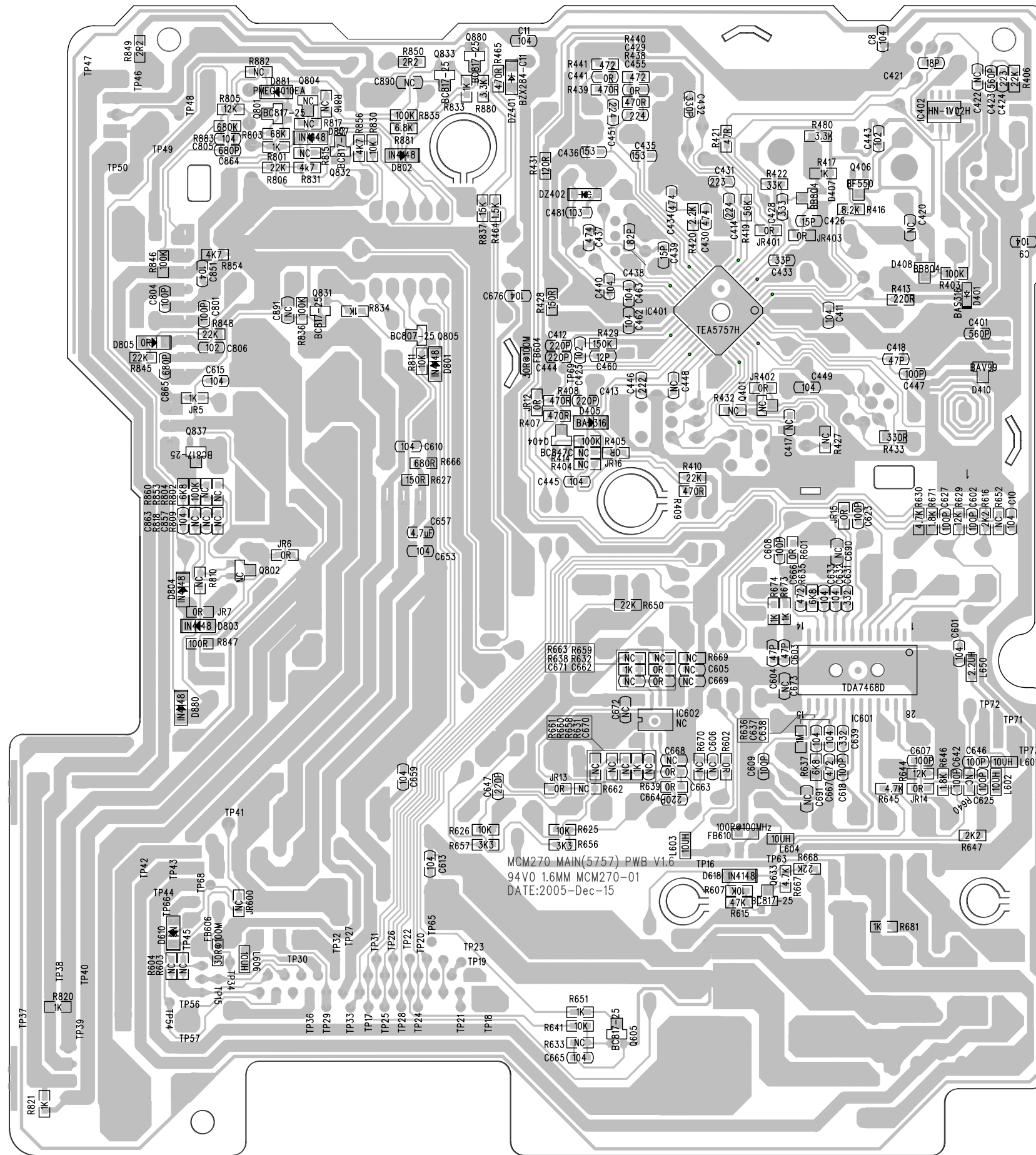


Pin configuration.

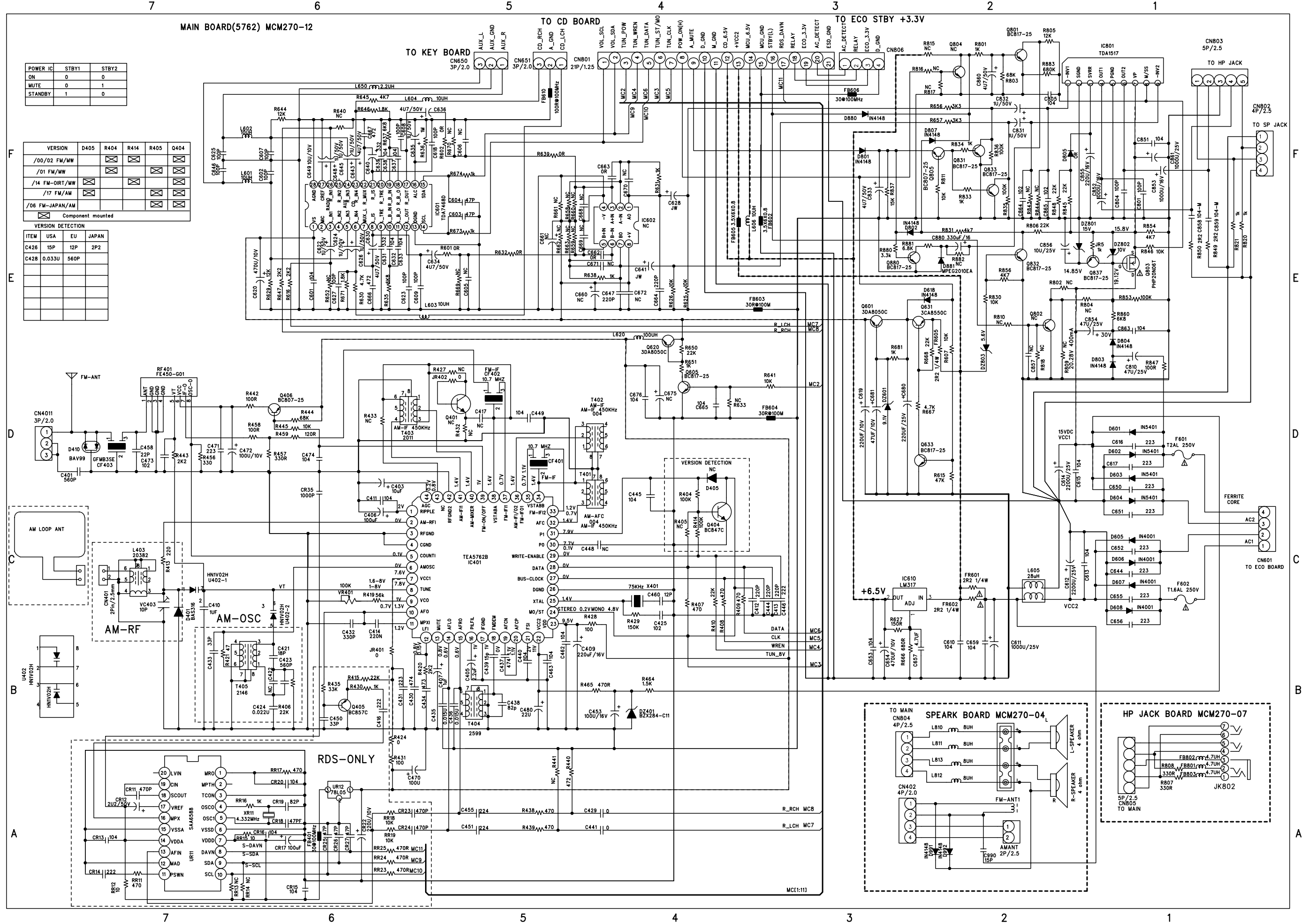
LAYOUT DIAGRAM - MAIN BOARD (5757) for I37/98
TOP SIDE



LAYOUT DIAGRAM - MAIN BOARD (5757) for I37/98
BOTTOM SIDE



CIRCUIT DIAGRAM - MAIN BOARD (5762) for /05/12

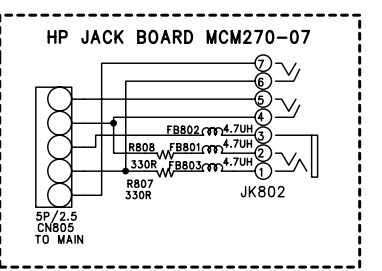
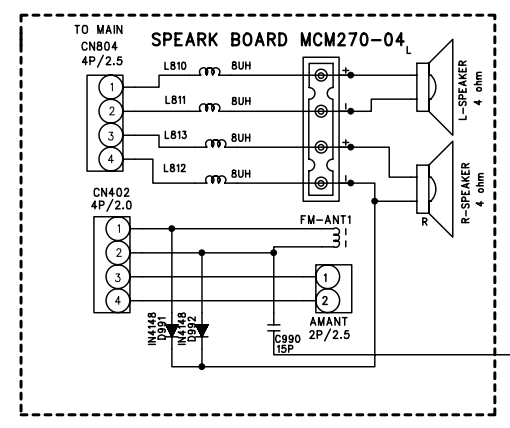
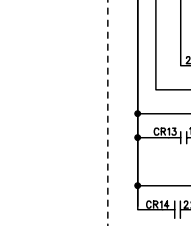
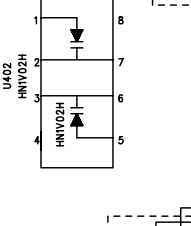
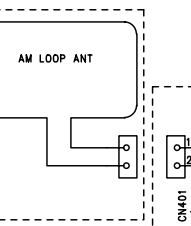
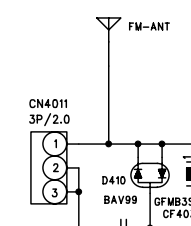


POWER IC	STBY1	STBY2
ON	0	0
MUTE	0	1
STANDBY	1	0

VERSION	D405	R404	R414	R405	Q404
/00/02 FM/MW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
/01 FM/MW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
/14 FM-ORT/MW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
/17 FM/AM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
/06 FM-JAPAN/AM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

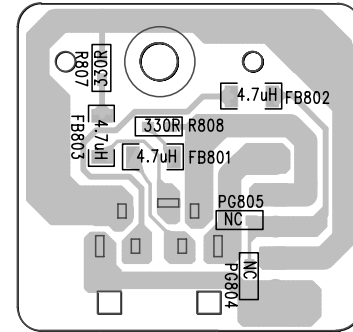
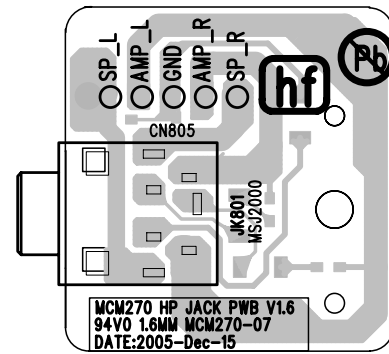
Component mounted

VERSION DETECTION				
ITEM	USA	EU	JAPAN	
C426	15P	12P	2P2	
C428	0.033u	560P		

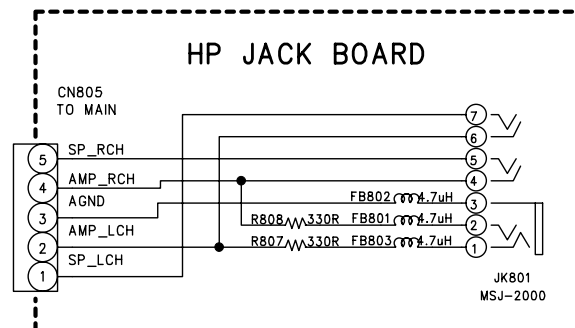


LAYOUT DIAGRAM - HP JACK BOARD
TOP SIDE

LAYOUT DIAGRAM - HP JACK BOARD
BOTTOM SIDE



CIRCUIT DIAGRAM - HP JACK BOARD



ELECTRICAL PARTS LIST - MAIN BOARD

C858	9940 000 04216	CAP MMF HMFS 0.1 μ F 50V	Q631	9940 000 02642	TRANSISTOR, 3CA8550
C859	9940 000 04216	CAP MMF HMFS 0.1 μ F 50V	Q803	9940 000 04218	TRANS PHP20N06T
CF401	9940 000 04236	FM CER. FILTER 10M7HA00-B0	RF401	9940 000 04237	FM MODULE FE450-G11.
CF402	9940 000 04236	FM CER. FILTER 10M7HA00-B0	T401	9940 000 04518	AM IFT 7MM C712KC-004
D407	9940 000 04434	VARIABLE DIODE BB804 /98	T402	9940 000 04518	AM IFT 7MM C712KC-004
D408	9940 000 04434	VARIABLE DIODE BB804 /98	T403	9940 000 01213	AM IFT 7MM
D410	9940 000 04233	SW DIODE BAV99	T404	9940 000 04519	FM IFT 7MM KS2599
D618	9940 000 03599	DIODE RLS4148 LL-34	T405	9940 000 04517	AM OSC 7MM 7M1A2146
D801	9940 000 03599	DIODE RLS4148 LL-34	UR11	9940 000 04239	IC SAA6588T
D802	9940 000 03599	DIODE RLS4148 LL-34	UR12	9940 000 04241	IC 78L05 REGULATOR
D803	9940 000 03599	DIODE RLS4148 LL-34	VC403	9940 000 01615	TRIMMER CAP 10PF N450
D804	9940 000 03599	DIODE RLS4148 LL-34	VR401	9940 000 04232	VAR RES 100K 3P 1/10W
D807	9940 000 03599	DIODE RLS4148 LL-34	X401	9940 000 04231	CRYSTAL 75KHZ DT381
D880	9940 000 03599	DIODE RLS4148 LL-34	XR11	9940 000 04238	CRYSTAL 4.332MHZ
D881	9940 000 04422	SCHOTTKY PMEG2010			
DZ601	9940 000 04222	ZENER DIODE 9.1V			
F601	 9940 000 04229	FUSE PTU 2A 250V			
F602	 9940 000 04228	FUSE S506 T1.6AL 250V			
FB602	9940 000 04215	FILTER BEAD RH3.5X6X0.8			
FB603	9940 000 04215	FILTER BEAD RH3.5X6X0.8			
FB605	9940 000 04215	FILTER BEAD RH3.5X6X0.8			
FR601	9940 000 04221	FUSE RES 2.2R 1/4W			
FR602	9940 000 04221	FUSE RES 2.2R 1/4W			
FR604	9940 000 04221	FUSE RES 2.2R 1/4W			
FR605	9940 000 04221	FUSE RES 2.2R 1/4W			
IC401	9940 000 04235	IC TEA5762H/V1 /05/12			
IC401	9940 000 04428	IC TEA5757H/V1 /98			
IC402	9940 000 04236	CAP DIODE HN-1V02H			
IC601	9940 000 03304	IC TDA7468D SOUND			
IC610	9940 000 04225	IC LM317P			
IC801	9940 000 04219	IC TDA1517			
JK801	9940 000 03318	HP JACK D3.6MM			
L401	9940 000 04429	BOBBIN COIL 1 1/2T /98			
L402	9940 000 04429	BOBBIN COIL 1 1/2T /98			
L403	9940 000 01212	AM IFT (BLACK) 7MM			
L605	9940 000 03311	28 μ H CORE 6TURNS 715R			
L620	9940 000 04226	RAD AXIAL IND. 100 μ H 3.5R			
Q406	9940 000 04427	TRANSISTOR BF550 /98			
Q601	9940 000 02707	TRANSISTOR, 3DA8050			
Q610	9940 000 02642	TRANSISTOR, 3CA8550			

Note: Only these parts mentioned in the list are normal service parts.

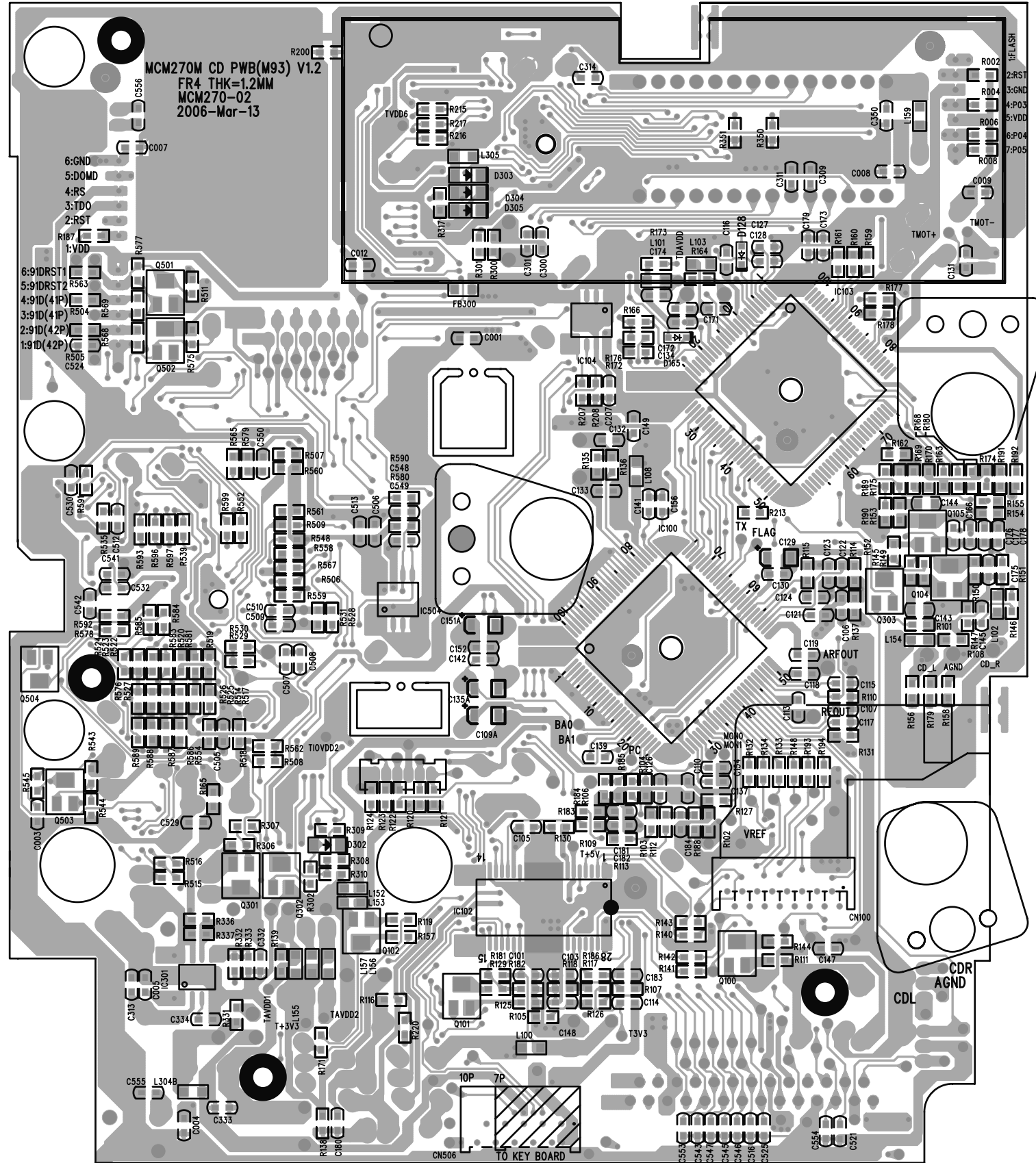
CD & MCU BOARD

This board isn't intend to repair. Only for orientation.

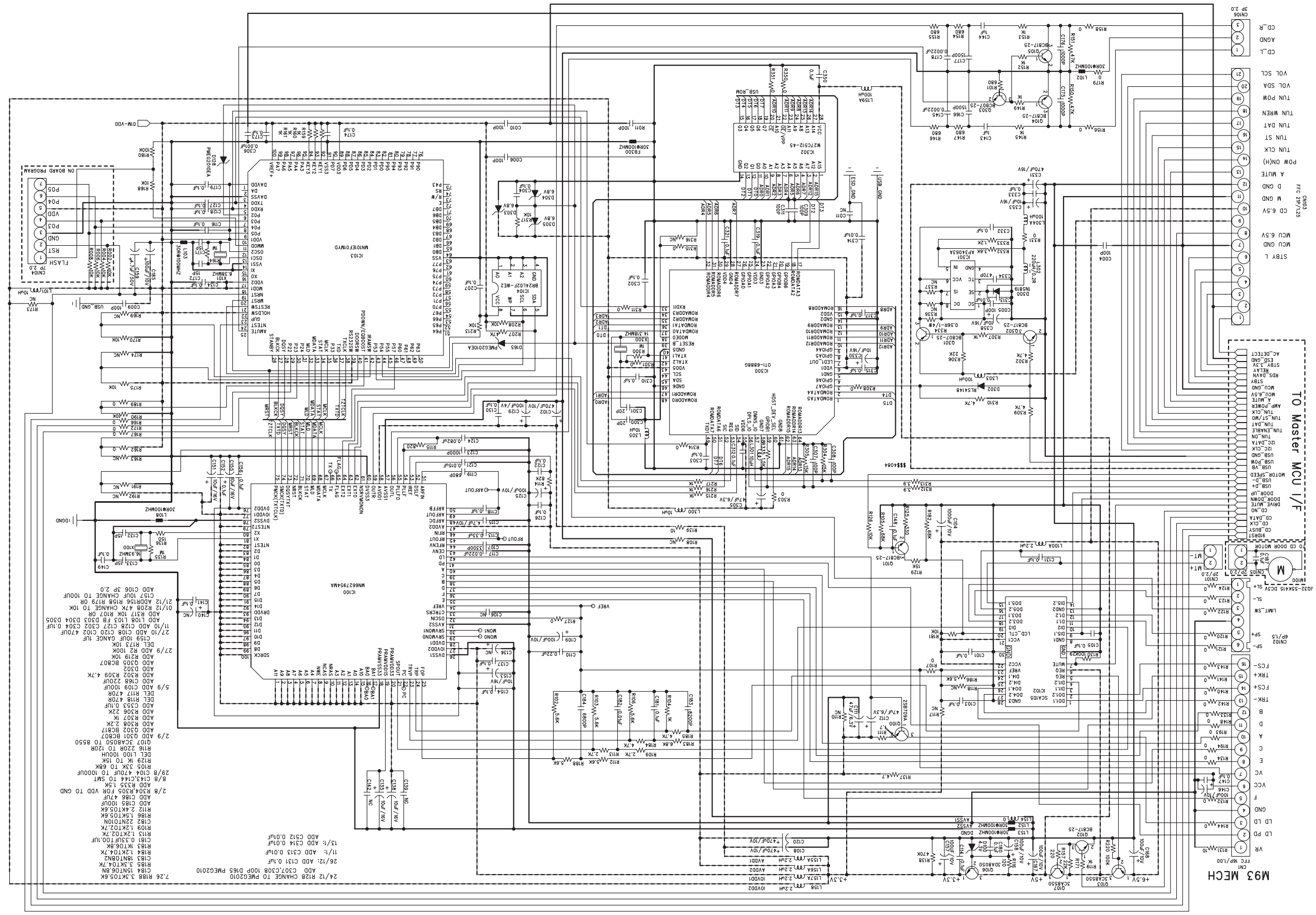
TABLE OF CONTENTS

Main Board Layout Top View	7-2
Main Board Layout Bottom View	7-3
Circuit Diagram - CD Part	7-4
Circuit Diagram - MCU Part	7-5
Layout Diagram - SW Board	7-6
Electrical Parts List	7-6

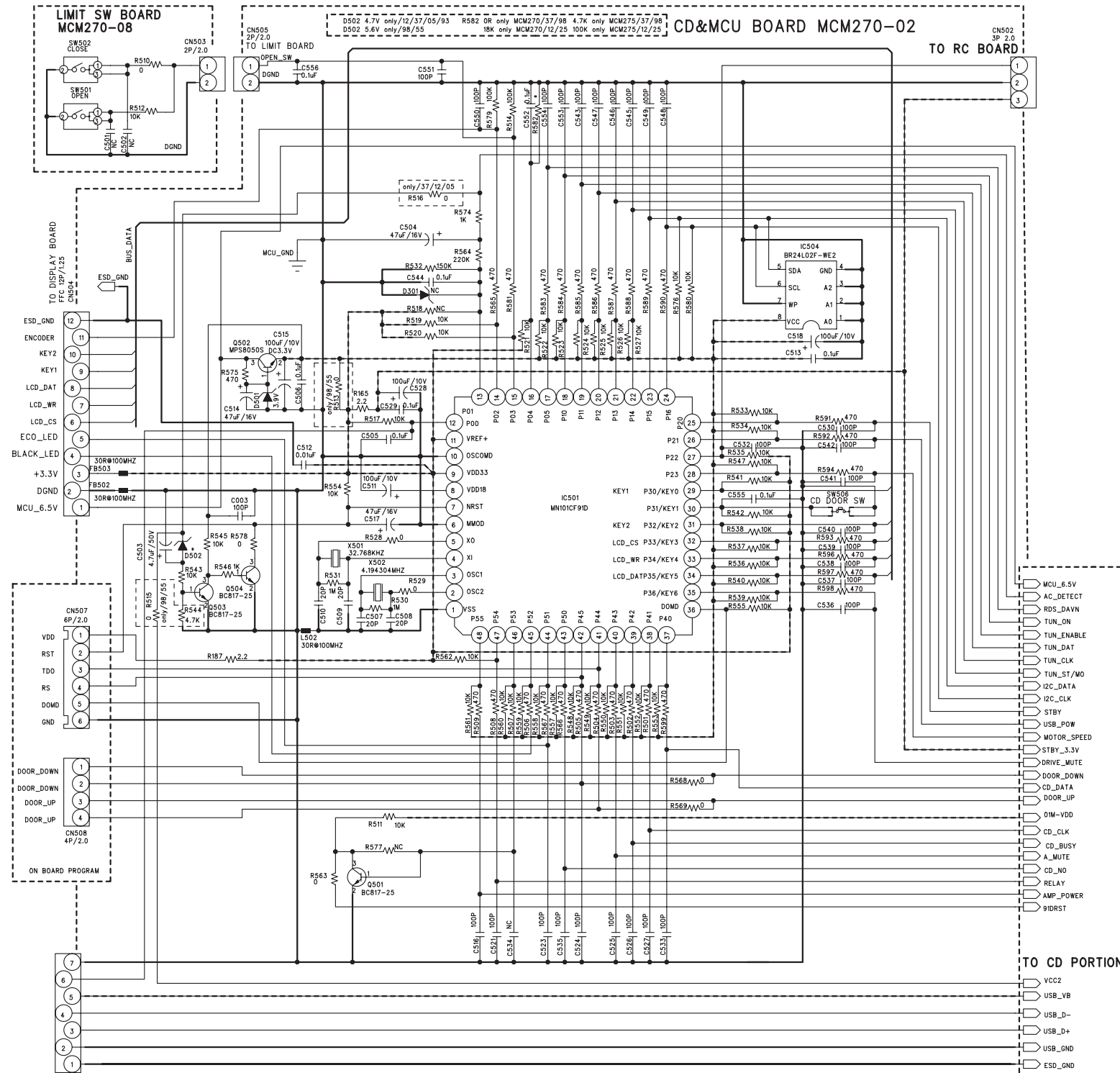
LAYOUT DIAGRAM - CD&MCU BOARD
BOTTOM VIEW



CIRCUIT DIAGRAM - CD&MCU BOARD CD PORTION

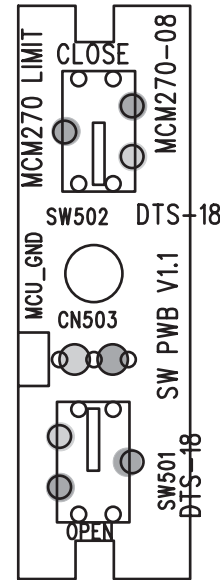


CIRCUIT DIAGRAM - CD&MCU BOARD MCU PORTION

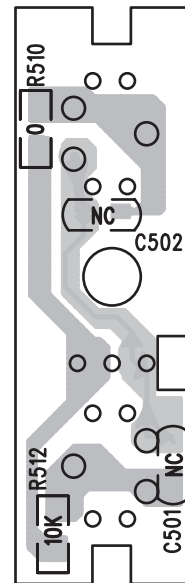


- TO KEY BOARD**
- | | | | |
|-------------|--|------------------------------|--------------------------------|
| CN506 | 05/07/04 R538 R539 3.3K TO OR, DEL R530 R531 | ADD R532 4.7K | 12/08 ADD C503 0504 |
| FFC 7P/1.25 | 7/27 DEL L502 L503 | ADD D301 3.3V | ADD: R543 R545 10K |
| | 2/8 ADD L702 2.2UH | DEL R518 10K | ADD: R578 OR R546 1K |
| | 3/8: FB711/712 CHANGE TO ML711/712 | C544 100P CHANGE TO 0.1UF | ADD: R568 R569 OR |
| | 3/8: RB713/714 CHANGE TO PC713/714 | R564 NC TO 22K | R507 OR CHANGE TO 10K |
| | 3/8: C712 CHANGE TO OR | 9/10 R532 2.2K CHANGE TO 10K | 21/12 ADD CN703 3P 2.0 |
| | 31/8 R512 10K CHANGE TO OR | DEL R507 470R | CN702 CN506 10P CHANGE 7P |
| | DEL R582 470R | R702 33K CHANGE TO 6.8K | 24/12 ADD R65 R187 2.2R |
| | DEL C542 100P | ADD R707 10K | 26/12: ADD C555 0.1UF |
| | 2/9 DEL R564 22K | ADD C707 100UF/10 | 18/1: R564 22K TO 220K |
| | ADD CN508 4P/2.0 | ADD D750 4148 | R532 10K TO 150K |
| | 18/9 ADD R715 R716 33K | 11/10 DEL L503 | 21/1: R535 Change to STBY-3.3V |
| | ADD R717 R718 33R | ADD C504 47UF R574 1K | |

LAYOUT DIAGRAM - SW BOARD
TOP SIDE



LAYOUT DIAGRAM - SW BOARD
BOTTOM SIDE



ELECTRICAL PARTS LIST - CD & MCU BOARD (FOR CDM _ DAYANG M93)

D128	994000004422	SCHOTTKY, PMEG2010
D165	994000004422	SCHOTTKY, PMEG2010
D302	996510000271	DIODE RLS4148 LL-34
D303	994000004285	ZENER DIODE UDZS6.8B UMD2
D304	994000004285	ZENER DIODE UDZS6.8B UMD2
D305	994000004285	ZENER DIODE UDZS6.8B UMD2
IC100	996500041888	IC MN6627954MA DSP
IC102	994000004278	IC SCA105 MOTOR DRIVER
IC103	996500041890	IC MN101E01J TA MASKING
IC104	994000005674	IC BR24L02F-WE2
IC300	994000004287	IC OTI-6888G USB DECODER
IC301	994000004286	IC AP34063A CONVERTER
IC302	994000004288	IC W27C512-45Z EPROM
IC501	996510006486	IC MN101CF91D MCU TQFP048
IC504	994000005674	IC BR24L02F-WE2
L100A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
L155A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
L156A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
L157A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
L158	996510006487	IND.MULTILAYER 2.2UH,210MA,10%
L159A	994000004226	RAD AXIAL IND. 100UH 3.5R
L302	994000004289	TOROIDAL COIL 220UH +/-10%
L303	994000004226	RAD AXIAL IND. 100UH 3.5R
L304A	996510006488	INDUCTOR 10UH +/-10% 0.1R
Q100	994000004275	TRANSISTOR 2SB709A
Q103	994000004223	TRANSISTOR 3CA8550 HFE=120-220
Q106	994000004224	TRANSISTOR 3DA8050 HFE=120-200
Q107	994000004223	TRANSISTOR 3CA8550 HFE=120-220
Q502	994000004267	TRANSISTOR MPS8050S
SW501	994000004283	DETECT SWITCH DTS-18 1P1T
SW502	994000004283	DETECT SWITCH DTS-18 1P1T
SW506	994000004259	SWITCH TACT TSA-06430-150
X100	994000004273	CER RESONATOR 16.93MHZ +/-0.5%
X101	996510000295	XTAL 8.38MHZ +/-20PPM CAP=20PF
X501	994000005671	XTAL 32.768KHZ +/-20PPM 12PF
X502	994000004266	X'TAL 4.194304MHZ 30PF

Note: Only these parts mentioned in the list are normal service parts.

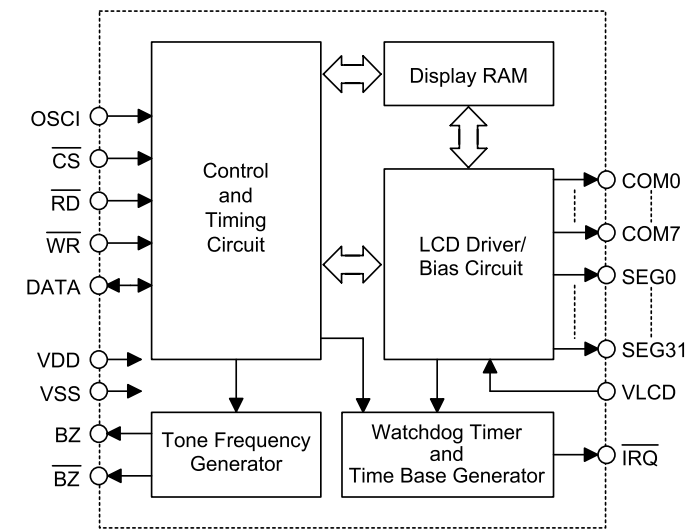
AC POWER & DISPLAY & KEY BOARD

TABLE OF CONTENTS

Internal IC Diagram 8-1
 Layout Diagram - AC Power Board 8-2
 Circuit Diagram - AC Power Board 8-3
 Layout Diagram - AC Socket Board 8-4
 Layout Diagram - Door Moter Board 8-4
 Layout Diagram - RC Board 8-4
 Display Board 8-5
 Key Board 8-6
 Speaker & Ant Board 8-7
 Electrical Parts List 8-8

**IC BLOCK DIAGRAM - LCD DRIVER
HT1622**

Block Diagram

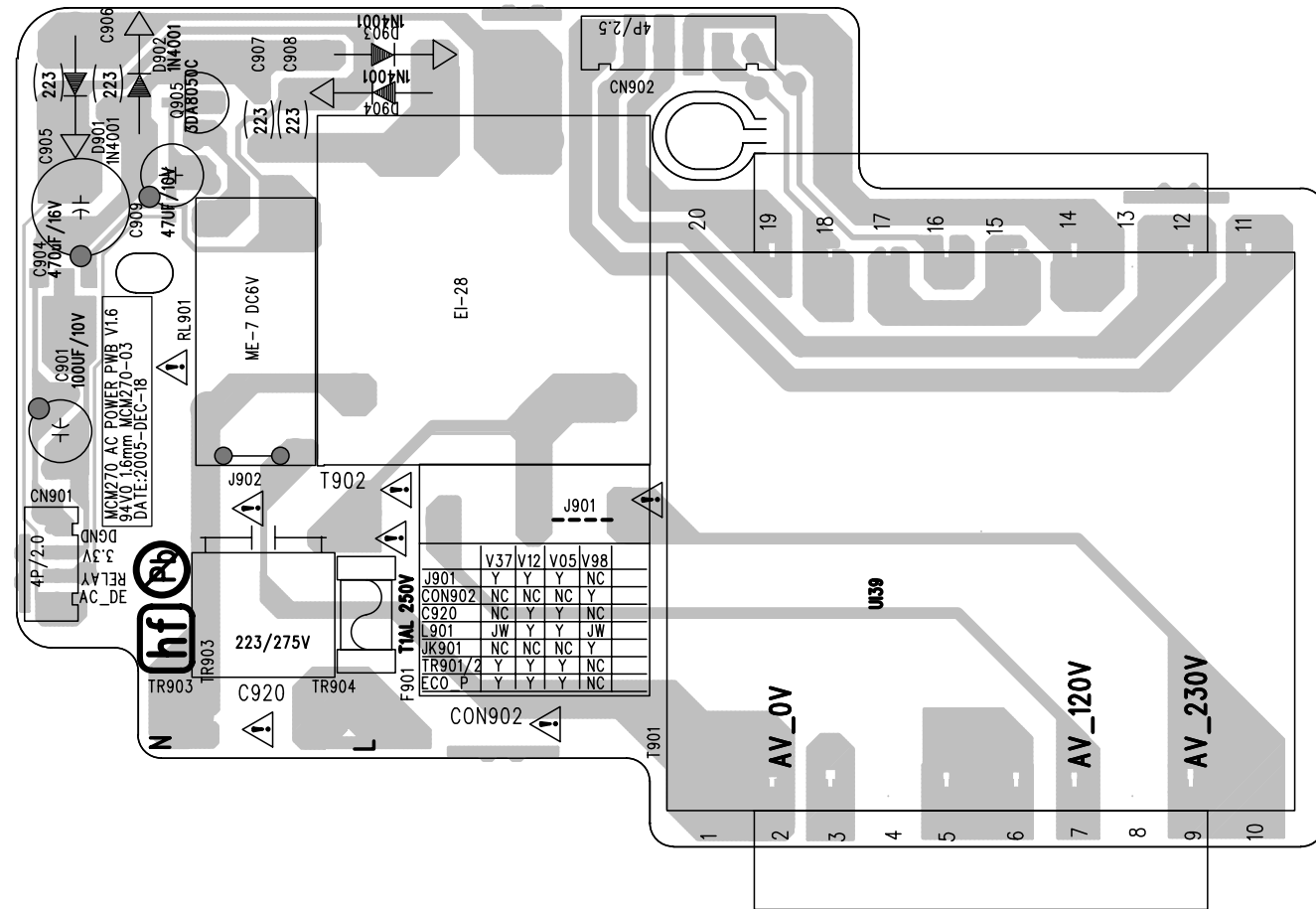


**PIN DESCRIPTION - LCD DRIVER
HT1622**

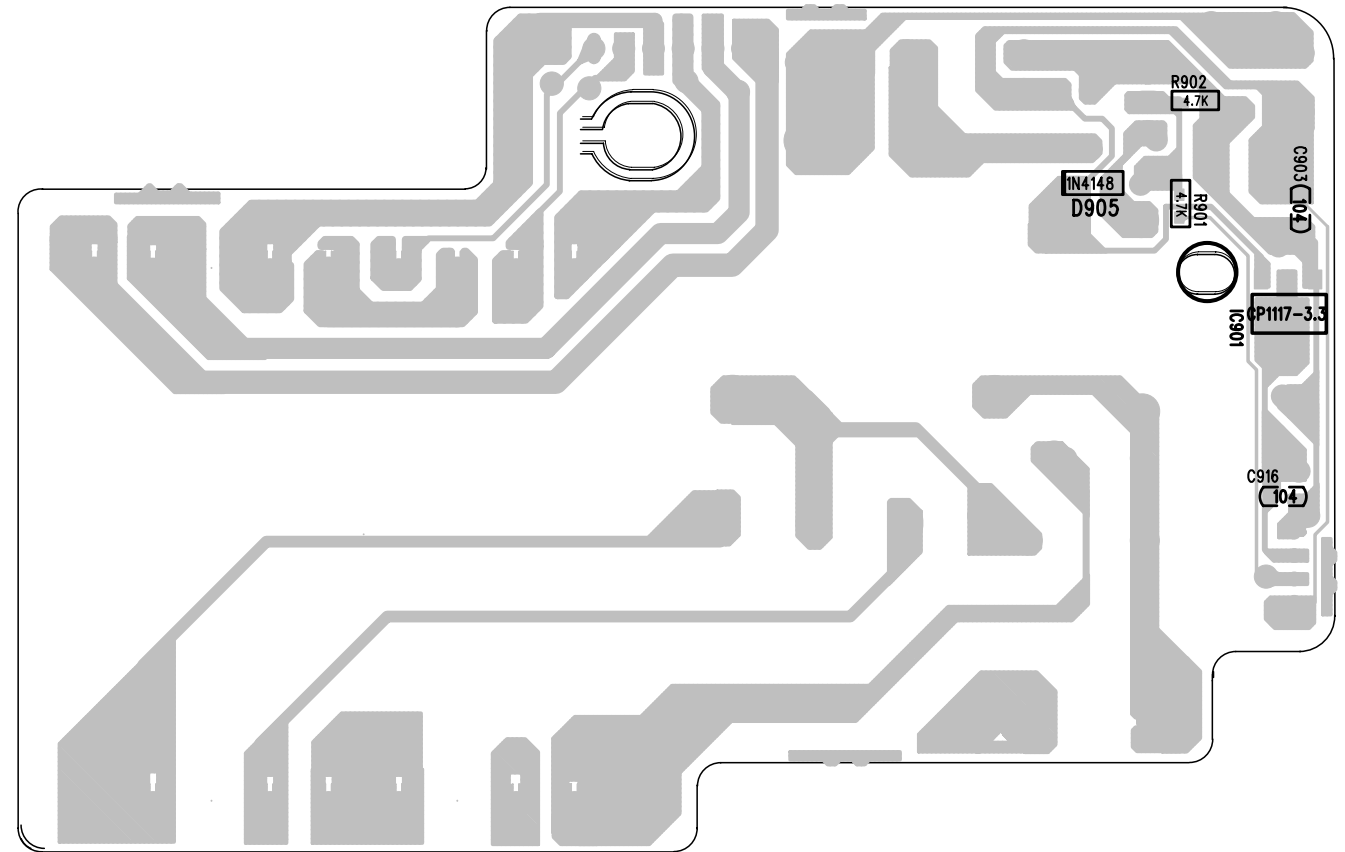
Pad Description

Pad No.	Pad Name	I/O	Description
1	\overline{CS}	I	Chip selection input with Pull-high resistor. When the \overline{CS} is logic high, the data and command read from or written to the HT1622 are disabled. The serial interface circuit is also reset. But if \overline{CS} is at logic low level and is input to the \overline{CS} pad, the data and command transmission between the host controller and the HT1622 are all enabled.
2	\overline{RD}	I	READ clock input with Pull-high resistor. Data in the RAM of the HT1622 are clocked out on the rising edge of the \overline{RD} signal. The clocked out data will appear on the data line. The host controller can use the next falling edge to latch the clocked out data.
3	\overline{WR}	I	WRITE clock input with Pull-high resistor. Data on the DATA line are latched into the HT1622 on the rising edge of the \overline{WR} signal.
4	DATA	I/O	Serial data input/output with Pull-high resistor
5	VSS	—	Negative power supply, ground
6	OSCI	I	If the system clock comes from an external clock source, the external clock source should be connected to the OSCI pad.
7	VDD	—	Positive power supply
8	VLCD	I	LCD operating voltage input pad
9	\overline{IRQ}	O	Time base or Watchdog Timer overflow flag, NMOS open drain output
10, 11	BZ, \overline{BZ}	O	2kHz or 4kHz tone frequency output pair
12~14	T1~T3	I	Not connected
15~22	COM0~COM7	O	LCD common outputs
23~54	SEG0~SEG31	O	LCD segment outputs

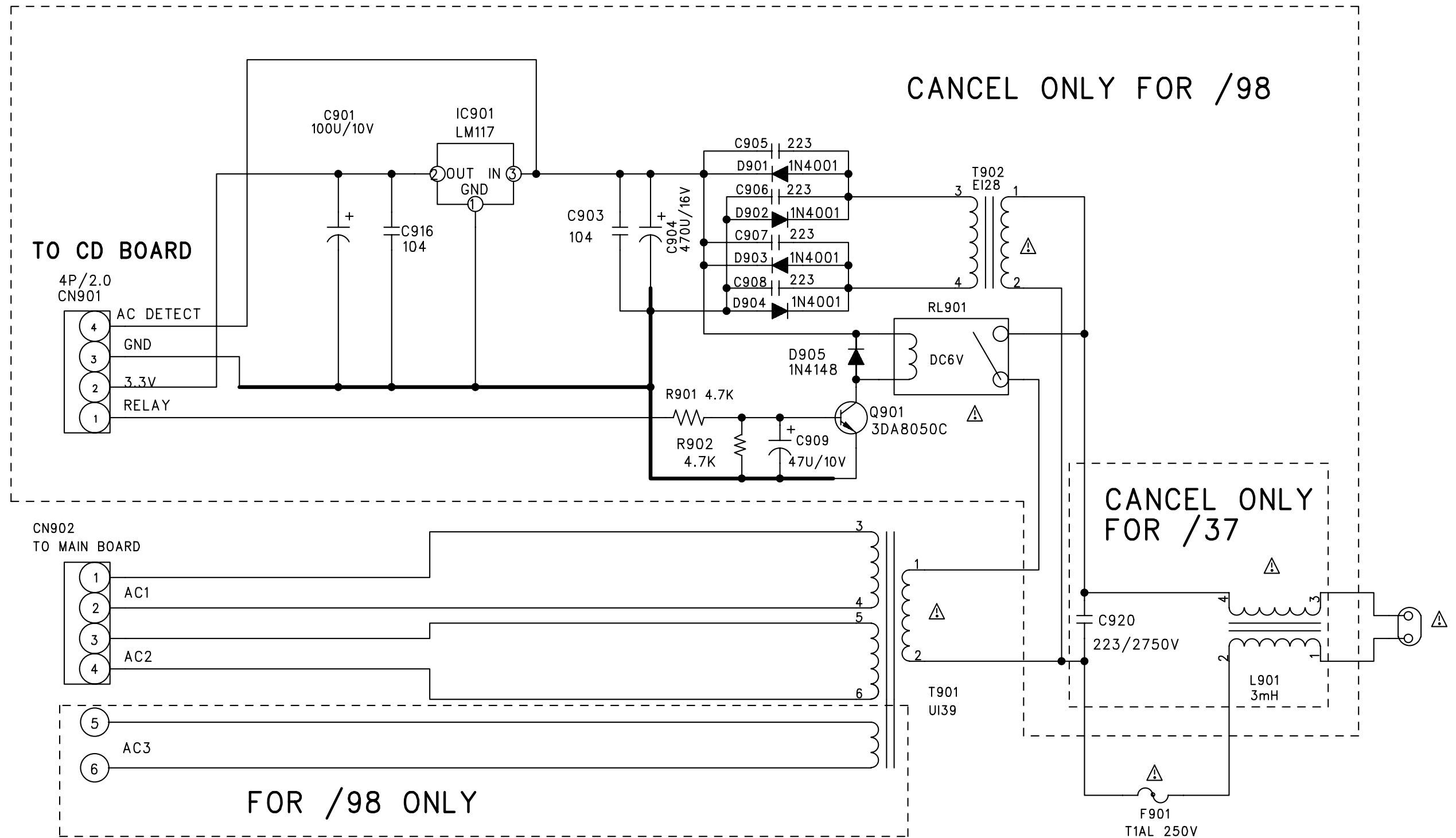
LAYOUT DIAGRAM - AC POWER BOARD
TOP SIDE



LAYOUT DIAGRAM - AC POWER BOARD
BOTTOM SIDE

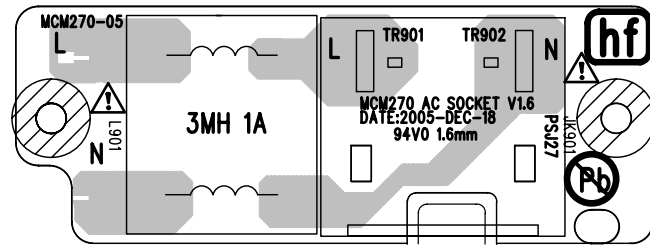


CIRCUIT DIAGRAM - AC POWER BOARD

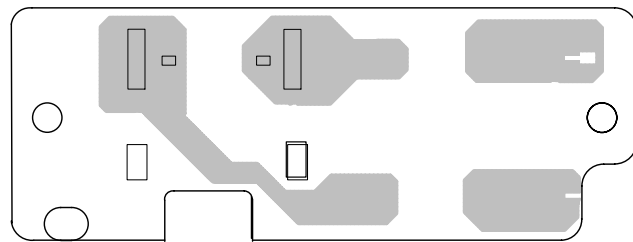


18/9 R901 2.2K CHANGE 10K
 ADD C920 223/275V
 ADD F901 T1A 250V
 ADD L901 3MH
 11/01 CN901 3P CHANGE TO 4P

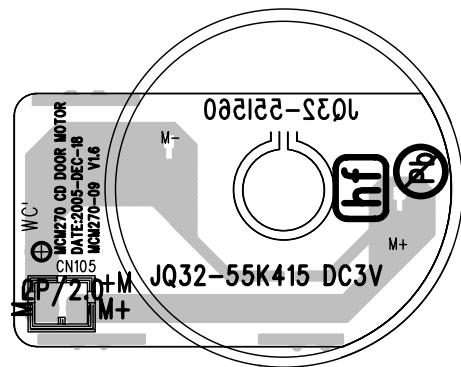
LAYOUT DIAGRAM - AC SOCKET BOARD
TOP SIDE



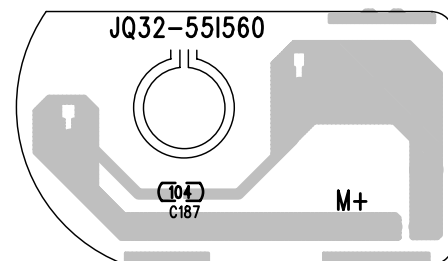
LAYOUT DIAGRAM - AC SOCKET BOARD
BOTTOM SIDE



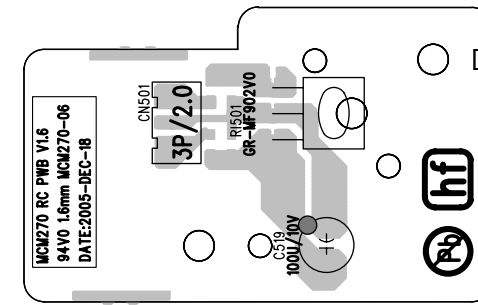
LAYOUT DIAGRAM - DOOR MOTOR BOARD
TOP SIDE



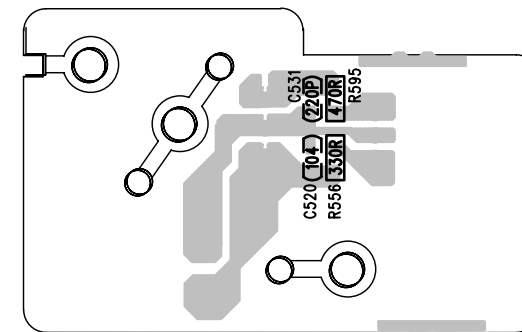
LAYOUT DIAGRAM - DOOR MOTOR BOARD
BOTTOM SIDE



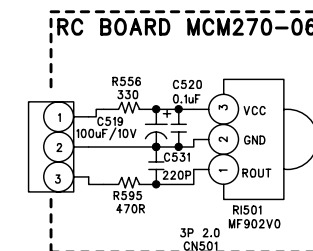
LAYOUT DIAGRAM - RC BOARD
TOP SIDE



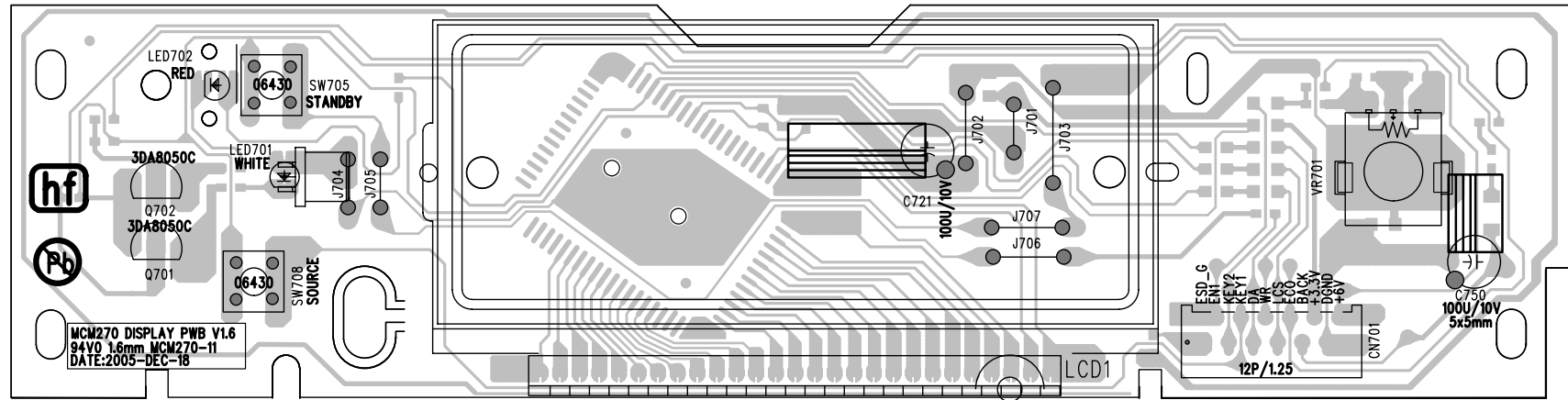
LAYOUT DIAGRAM - RC BOARD
BOTTOM SIDE



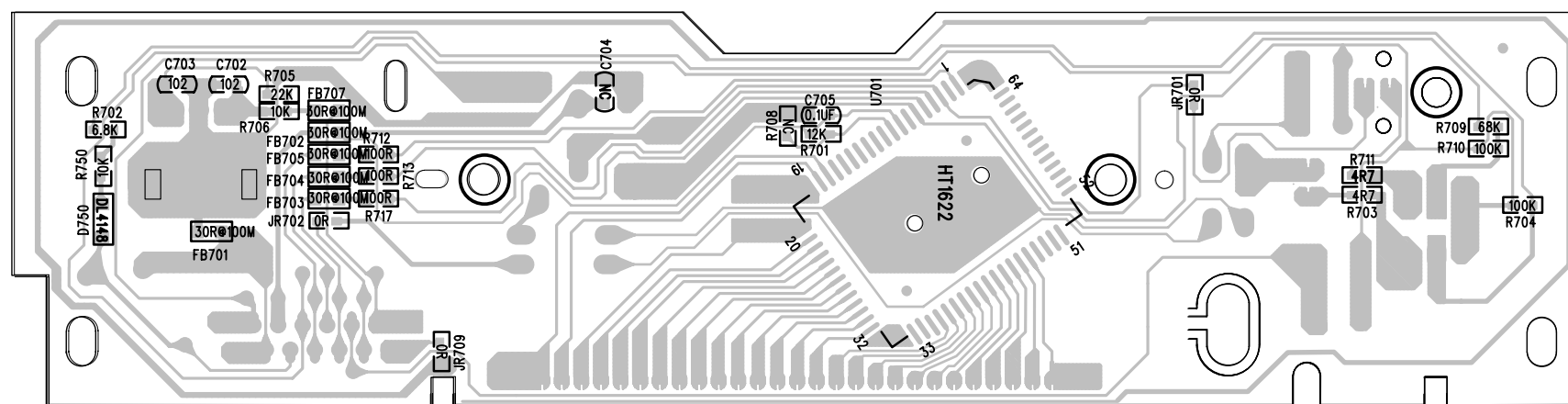
CIRCUIT DIAGRAM - RC BOARD



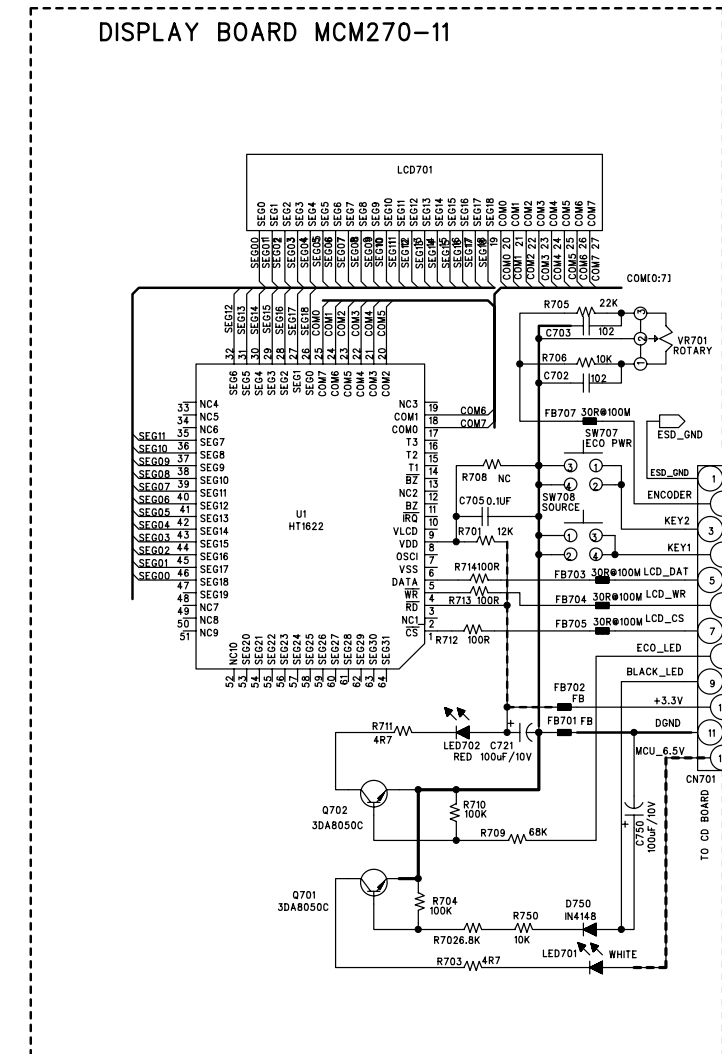
LAYOUT DIAGRAM - DISPLAY BOARD
TOP SIDE



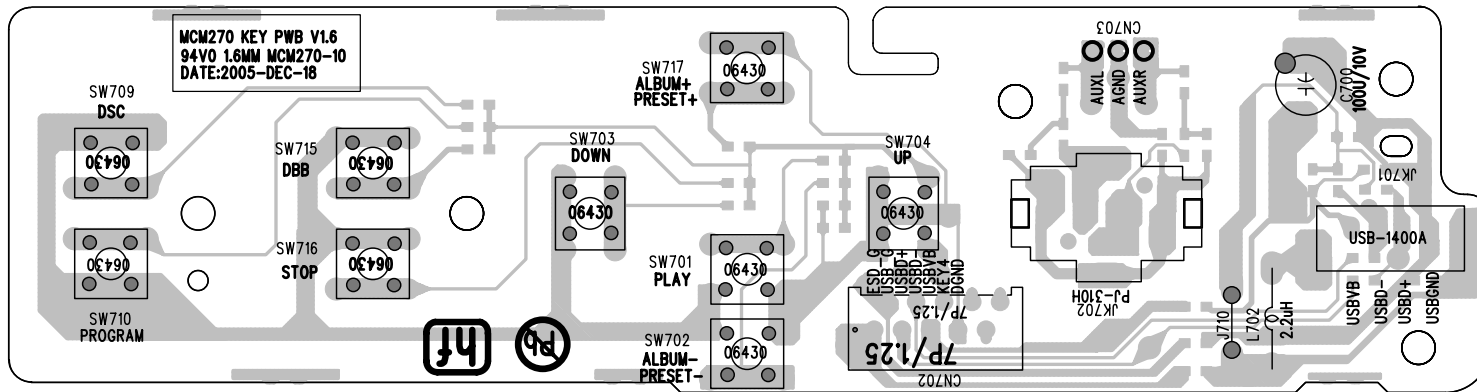
LAYOUT DIAGRAM - DISPLAY BOARD
BOTTOM SIDE



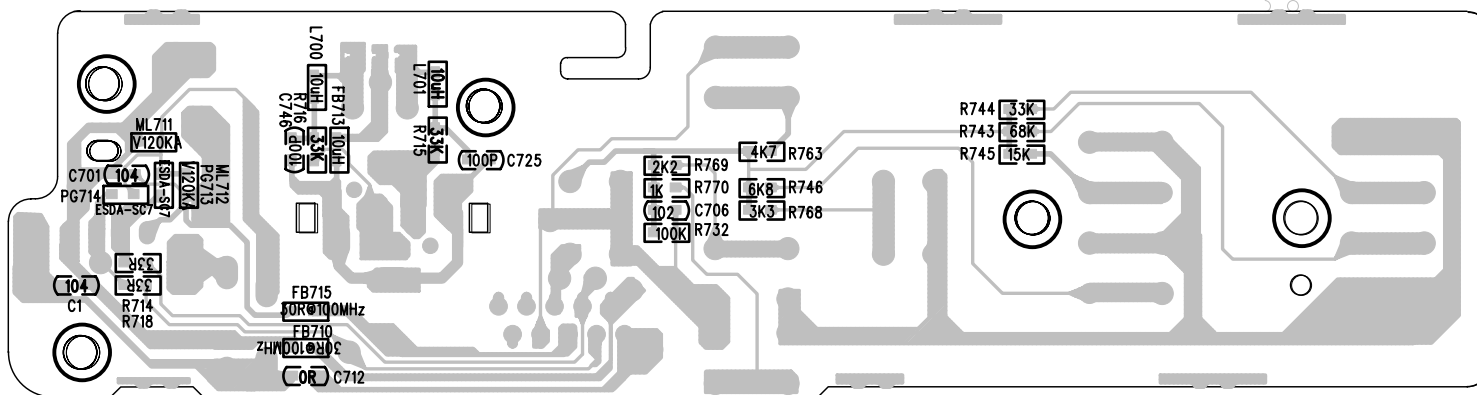
CIRCUIT DIAGRAM - DISPLAY BOARD



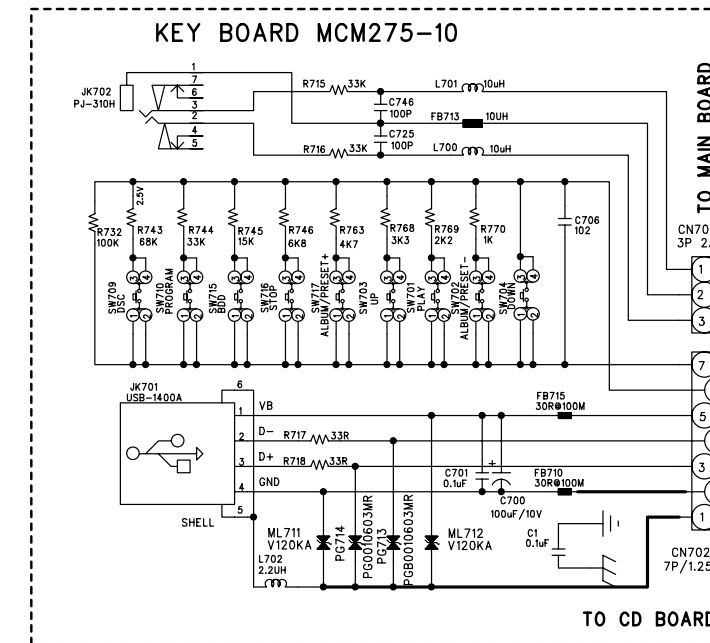
LAYOUT DIAGRAM - KEY BOARD
TOP SIDE



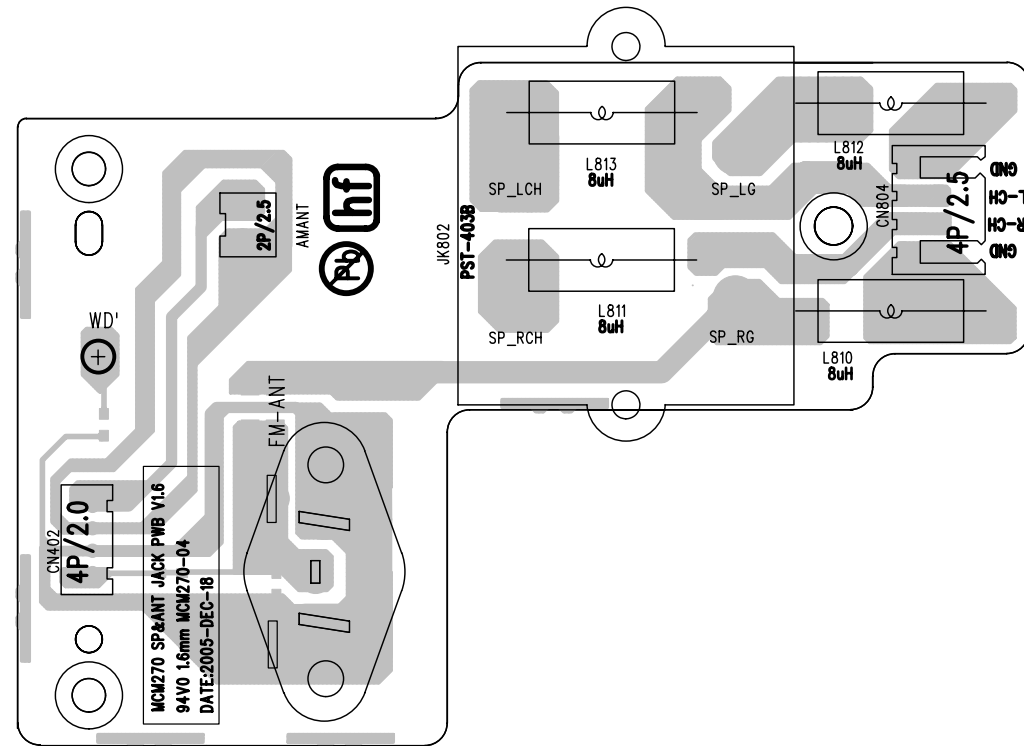
LAYOUT DIAGRAM - KEY BOARD
BOTTOM SIDE



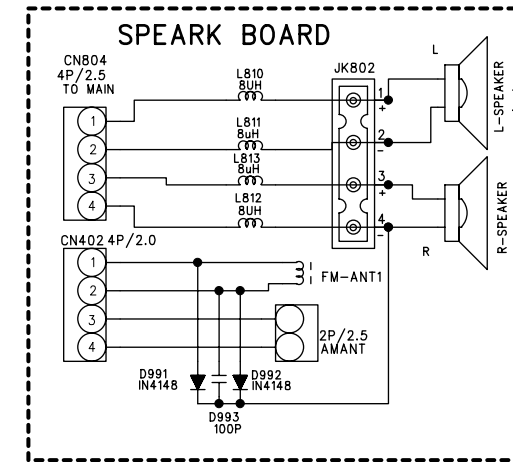
CIRCUIT DIAGRAM - KEY BOARD



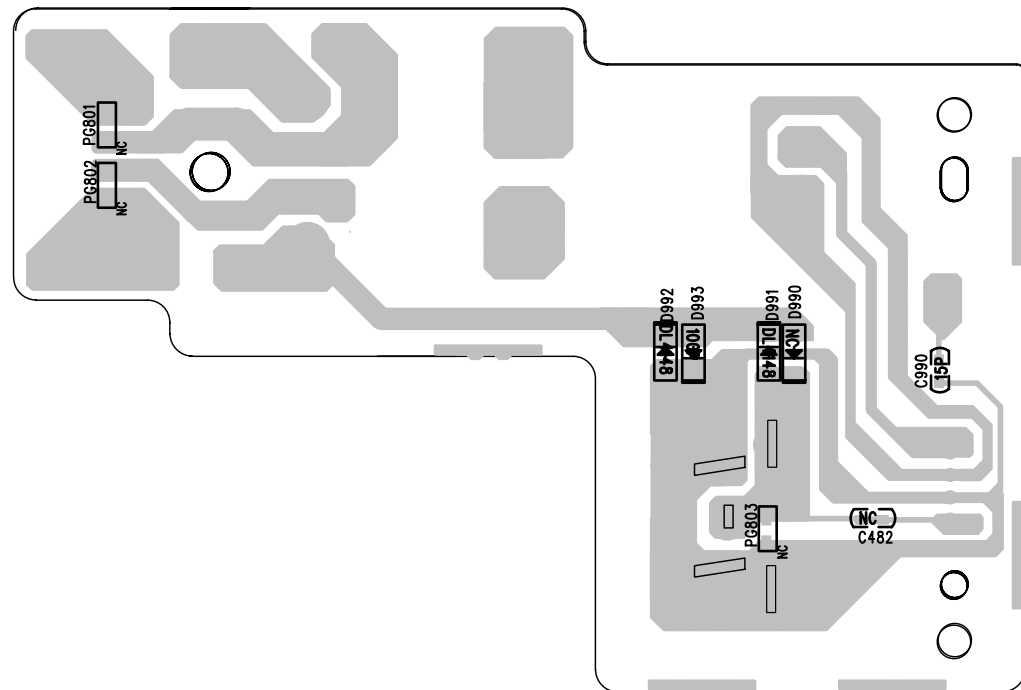
LAYOUT DIAGRAM - SP & ANT BOARD
TOP SIDE



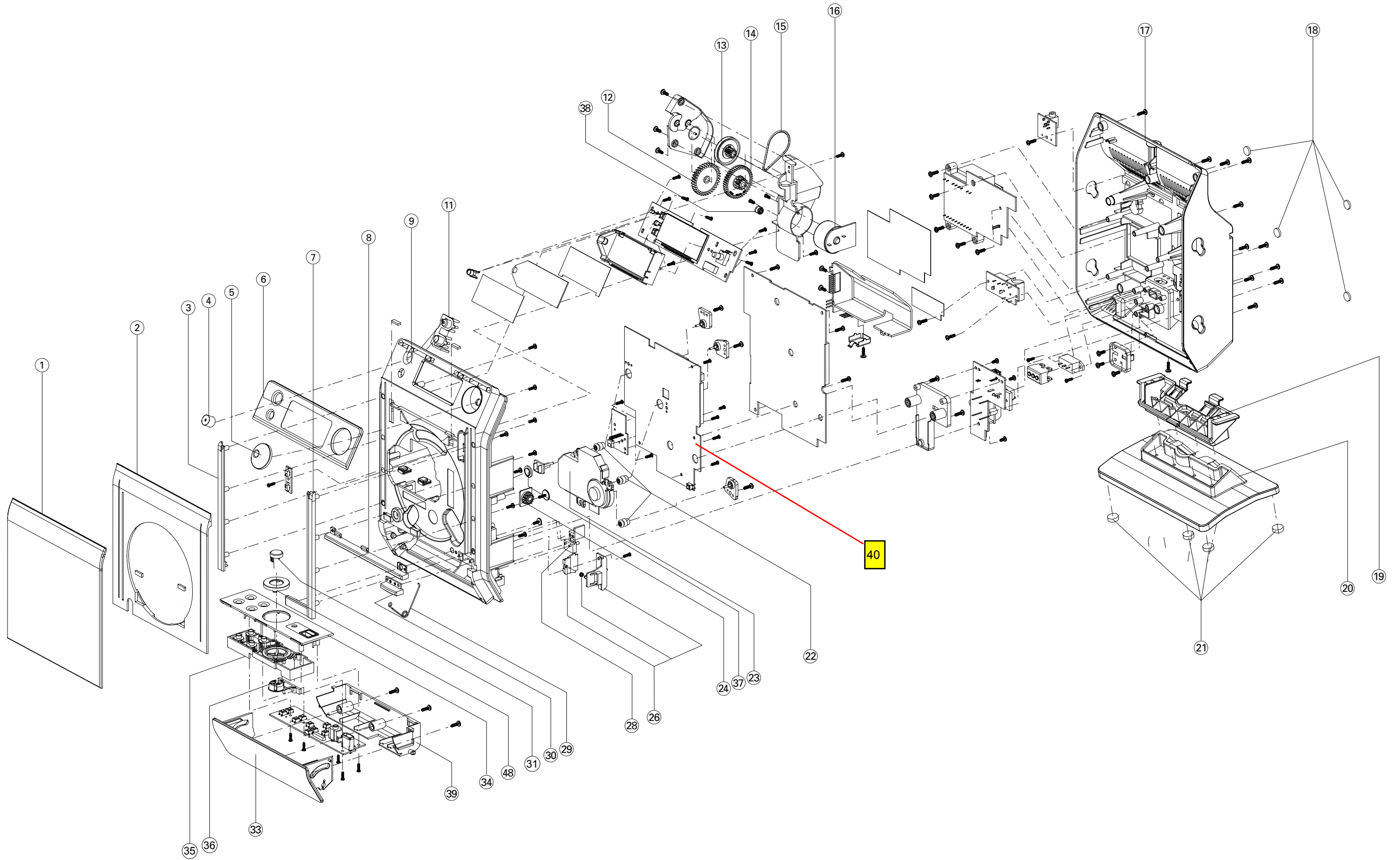
CIRCUIT DIAGRAM - SP & ANT BOARD



LAYOUT DIAGRAM - SP & ANT BOARD
BOTTOM SIDE



SET MECHANICAL EXPLODED VIEW



MECHANICAL & ACCESSORIES PARTS LIST

1	996510010723	LENS-CD DOOR /05/12	T901	△	994000004431	POWER TRASFO AC115/230V /98
1	996510012871	LENS-CD DOOR /98	T902	△	994000004245	POWER TRASFO EI-28 AC230V /05/12
2	996510010722	DOOR-CD	RF401		994000004237	FM FRONT END MODULE /05/12
3	996510010724	HOLDER CD DOOR CARRIER (L)				
4	994000004302	COVER POWER BUTTON				
5	996510010728	KNOB-VOLUME				
6	996510010726	LENS DISPLAY				
7	996510010725	HOLDER CD DOOR CARRIER (R)				
8	996510010729	LENS BAR				
9	996510010721	CABINET FRONT				
11	996510010727	BUTTON POWER/SOURCE				
15	994000004325	BELT MOTOR				
17	996510010720	CABINET REAR FOR /12/05				
17	996510012870	CABINET REAR /98				
19-21	996520032987	STAND PORTION OF MCM277				
22	9940 000 04323	CD DAMPER (BLACK) 20DEG				
23	996510010437	CD MECHANISM M93BGP-BF				
24	9940 000 01664	DAMPER GEAR ASSEMBLY				
26	9940 000 03384	SPRING TORSION LEFT				
28	994000004304	BRACKET OPEN/CLOSE BUTTON				
29	994000004324	SPRING CONTROL PANEL				
30	996510010730	BUTTON OPEN/CLOSE				
31	994000004315	COVER PLAY BUTTON				
32	994000004309	BUTTON FW/FF				
33	996510010732	PANEL FUNCTION /12/05				
33	996510012873	PANEL FUNCTION /98				
34	996510010733	COVER FUNCTION PANEL 05/12/98				
35	996510010731	BUTTON FUNCTION				
36	994000004308	BUTTON PLAY				
37	994000004333	IR LENS				
38	994000004316	PULLEY SERVO MOTOR				
39	994000004314	BRACKET FUNCTION PANEL				
40	996510006485	CD/MCU BOARD ASS'Y (M93) /05/12				
SPK	996510010734	SPEAKER BOX /05/12				
SPK	996510012874	SPEAKER BOX /98				
FMA	994000004329	FM ANT WIRE 75R 1.0M				
REM	996510028568	REMOTE CONTROL /05/12				
REM	996510028568	REMOTE CONTROL /98				
AML	994000004331	AM LOOP ANT 164X75MM				
ACW	△	994000002223				POWER AC WIRE BSI /05
ACW	△	994000001675				POWER AC WIRE VDE 230V /12
ACW	△	994000002082				POWER AC CORD VDE 2C 1.5M /98
FFC1	994000004281	FFC 21P P1.25MM L110MM C TYPE				
FF1	996510006481	FFC 7P P1.25MM L155MM D TYPE				
T901	△	994000004244				POWER TRASFO AC230V H50 /05/12

Note: Only these parts mentioned in the list are normal service parts.

**ELECTRICAL PARTS LIST - AC POWER BOARD & DISPLAY & KEY & SP & ANT
& RC & AC SOCKET & DOOR MOTOR BOARD**

D750	9940 000 03599	DIODE RLS4148 LL-34
D905	9940 000 03599	DIODE RLS4148 LL-34
D991	9940 000 03599	DIODE RLS4148 LL-34
D992	9940 000 03599	DIODE RLS4148 LL-34
FMANT	9940 000 04249	RCA JACK RCA-125
IC701	9940 000 04256	IC HT1622 LCD DRIVER
IC901	9940 000 02672	IC, CP1117-3.3 REGULATOR
JK701	9965 100 10715	USB JACK USB-1400A1-060-010 4P
JK702	9940 000 03605	MICRO PHONE JACK CKX-3.5-23
JK802	9940 000 04248	SPEAKER TERMINAL PST-403B-01
L810	9940 000 04247	RADIAL AXIAL IND. 8.0μH 60MR
L811	9940 000 04247	RADIAL AXIAL IND. 8.0μH 60MR
L812	9940 000 04247	RADIAL AXIAL IND. 8.0μH 60MR
L813	9940 000 04247	RADIAL AXIAL IND. 8.0μH 60MR
L901	9940 000 02657	AC LINE FILTER 3MH 1A
LCD701	9940 000 04257	LCD DISPLAY 1/8 DUTY 1/4 STN
LED701	9940 000 04254	LED 4MM WHITE
LED702	9940 000 02115	LED 3MM 3R4HD-7(REDF)
M100	9940 000 04253	DC MOTOR JQ32-55K415 DC3V
ML711	9940 000 04264	MULT. VAR. 10.6-15.4V
ML712	9940 000 04264	MULT. VAR. 10.6-15.4V
PG713	9940 000 04265	PULSE GUARD
PG714	9940 000 04265	PULSE GUARD
Q701	9940 000 02707	TRANSISTOR, 3DA8050
Q702	9940 000 02707	TRANSISTOR, 3DA8050
Q905	9940 000 02707	TRANSISTOR, 3DA8050
RI501	9965 100 01366	IR SENSOR FM-6038TM2-5AN
RL901	9940 000 04246	RELAY ME-7-006-HSL DC6V AC10A
SW701	9940 000 04259	SWITCH TACT
SW702	9940 000 04259	SWITCH TACT
SW703	9940 000 04259	SWITCH TACT
SW704	9940 000 04259	SWITCH TACT
SW705	9940 000 04259	SWITCH TACT
SW709	9940 000 04259	SWITCH TACT
SW710	9940 000 04259	SWITCH TACT
SW715	9940 000 04259	SWITCH TACT
SW716	9940 000 04259	SWITCH TACT
SW717	9940 000 04259	SWITCH TACT
	9940 000 04432	VOL SEL SW 110/220V /98
	9940 000 04433	AC POWER SOCKET 2P /98

VR701	9940 000 04258	ROTARY ENCODER
	9940 000 04251	EC TERMINAL 1P
F901	⚠ 9940 000 04243	FUSE PTU 1A 250V 3.9X10.5MM /37/98
RL901	⚠ 9940 000 04246	RELAY DC6V AC10A /05/12/37
T901	⚠ 9940 000 04244	POWER TRASFO AC230V /05/12
T902	⚠ 9940 000 04245	POWER TRASFO AC230V /05/12
T901	⚠ 9940 000 04431	POWER TRASFO AC115/230V /98

**Note: Only these parts mentioned in the list are
normal service parts.**

ELECTRICAL PARTS LIST

CF401	994000004236	FM CERAMIC FILTER 10M7	IC402	994000004234	VAR. CAP DIODE HN-1V02H
CF402	994000004236	FM CERAMIC FILTER 10M7	IC501	996510006486	IC MN101CF91D MCU TQFP048
D100	996510010718	DIODE BZX79-C4V3	IC504	994000005674	IC BR24L02F-WE2
D128	994000004422	SCHOTTKY, PMEG2010 EA	IC601	996500041701	IC TDA7468D SOUND SO28
D165	994000004422	SCHOTTKY, PMEG2010 EA	IC610	994000004225	IC LM317P VOL REGULATOR
D300	996510006964	DIODE 1N5819 DO-41	IC701	994000004256	IC HT1622 LCD DRIVER
D302	996510000271	DIODE RLS4148 LL-34	IC801	994000004219	IC TDA1517 POWER AMPLIFIER
D303	994000004285	ZENER DIODE UDZS6.8B UMD2	IC901	996500040080	IC AP1117E33LA REGULATOR
D304	994000004285	ZENER DIODE UDZS6.8B UMD2	JK701	996510010715	USB JACK 4P
D305	994000004285	ZENER DIODE UDZS6.8B UMD2	JK702	994000003605	MICRO PHONE JACK
D401	996510007742	DIODE, HIGH BAS316	JK801	994000003318	HP JACK D3.6MM
D501	996510010716	DIODE,BZX79-C3V9	JK802	994000004248	SPK TERMINAL PST-403B-01
D502	996510010717	DIODE, BZX79-C4V7 TAPING	L100A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
D618	996510000271	DIODE RLS4148 LL-34	L155A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
D750	996510000271	DIODE RLS4148 LL-34	L156A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
D801	996510000271	DIODE RLS4148 LL-34	L157A	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
D802	996510000271	DIODE RLS4148 LL-34	L159A	994000004226	RAD AXIAL IND. 100UH 3.5R
D803	996510000271	DIODE RLS4148 LL-34	L302	994000004289	TOROIDAL COIL 220UH +/-10%
D804	996510000271	DIODE RLS4148 LL-34	L303	994000004226	RAD AXIAL IND. 100UH 3.5R
D807	996510000271	DIODE RLS4148 LL-34	L304A	996510006488	INDUCTOR 10UH+/-10% 0.1R
D880	996510000271	DIODE RLS4148 LL-34	L403	996510010713	AM ANT 7MM 7M1A2204N
D881	994000004422	SCHOTTKY, PMEG2010 EA	L605	994000004227	28UH CORE: 6T 715R 1.2A
D905	996510000271	DIODE RLS4148 LL-34	L620	994000004226	RAD AXIAL IND. 100UH 3.5R
D991	996510000271	DIODE RLS4148 LL-34	L702	994000004279	RADIAL IND. 1.2R 2.2UH +/-5%
D992	996510000271	DIODE RLS4148 LL-34	L810	994000004247	RADIAL AXIAL IND. 8.0UH 60MR
DZ401	996510010712	CH-DIODE, BZX284-C11	L811	994000004247	RADIAL AXIAL IND. 8.0UH 60MR
DZ801	996510007763	ZENER DIODE BZX55C15V	L812	994000004247	RADIAL AXIAL IND. 8.0UH 60MR
DZ802	996500041721	ZENER DIODE BZX79-C10	L813	994000004247	RADIAL AXIAL IND. 8.0UH 60MR
DZ803	996510010711	ZENER DIODE BZX79-C5V6	L901	994000002657	AC LINE FILTER 3MH 1A
F601	△ 994000004229	FUSE PTU 2A 250V	LCD701	996510006483	LCD DISPLAY 1/8 DUTY 1/4 STN
F602	△ 994000004228	FUSE S506 T1.6AL 250V	LED701	996510006484	LED 4MM WHITE
F901	△ 994000004243	FUSE PTU 1A 250V 3.9X10.5MM	LED702	996510000292	LED 3MM 3R4HD-7(REDF)
FF1	996510006481	FFC 7P P1.25MM L155MM	M100	994000004253	DC MOTOR JQ32-55K415 DC3V
FMANT	994000004249	RCA JACK RCA-125	Q100	994000004275	TRANSISTOR 2SB709A
IC100	996500041888	IC MN6627954MA DSP	Q101	996510006954	CH-TRANSISTOR,BC817-25
IC102	994000004278	IC SCA105 MOTOR DRIVER	Q102	996510006954	CH-TRANSISTOR,BC817-25
IC103	996500041890	IC MN101E01J TA MASKING	Q103	994000004223	TRANSISTOR 3CA8550
IC104	994000005674	IC BR24L02F-WE2	Q104	996510006954	CH-TRANSISTOR,BC817-25
IC300	994000004287	IC OTI-6888G USB DECODER	Q105	996510006954	CH-TRANSISTOR,BC817-25
IC301	994000004286	IC AP34063A CONVERTER	Q106	994000004224	TRANSISTOR 3DA8050
IC302	996510010719	IC AT27C512R OTP EPROM	Q107	994000004223	TRANSISTOR 3CA8550
IC302	994000004288	IC W27C512-45Z EPROM	Q301	996510000939	TRANSISTOR BC807-25 PNP
IC401	994000004235	IC TEA5762H/V1	Q302	996510006954	CH-TRANSISTOR,BC817-25

ELECTRICAL PARTS LIST

Q303	996510000939	TRANSISTOR BC807-25 PNP	X300	994000004284	XTAL 14.318MHZ +/-20PPM 20PF
Q501	996510006954	CH-TRANSISTOR,BC817-25	X401	994000004231	X'TAL 75KHZ +/-20PPM DT381
Q502	994000004267	TRANSISTOR MPS8050S	X501	994000005671	XTAL 32.768KHZ +/-20PPM 12PF
Q503	996510006954	CH-TRANSISTOR,BC817-25	X502	994000004266	X'TAL 4.194304MHZ 30PF
Q504	996510006954	CH-TRANSISTOR,BC817-25	XR11	994000004238	X'TAL 4.332MHZ +/-20PPM
Q601	994000004224	TRANSISTOR 3DA8050 HFE=120-200			
Q610	994000004223	TRANSISTOR 3CA8550 HFE=120-220			
Q631	994000004223	TRANSISTOR 3CA8550 HFE=120-220			
Q701	994000004224	TRANSISTOR 3DA8050 HFE=120-200			
Q702	994000004224	TRANSISTOR 3DA8050 HFE=120-200			
Q803	994000004218	N-CHANNEL MOS TRANS PHP20N06T			
Q905	994000004224	TRANSISTOR 3DA8050 HFE=120-200			
RF401	994000004237	FM FRONT END MODULE FE450-G11			
RI501	996510001366	IR SENSOR (OPTO)			
RL901	△ 994000004246	RELAY ME-7-006-HSL DC6V AC10A			
SW501	994000004283	DETECT SWITCH DTS-18 1P1T			
SW502	994000004283	DETECT SWITCH DTS-18 1P1T			
SW506	994000004259	SWITCH TACT TSA-06430-150			
SW701	994000004259	SWITCH TACT TSA-06430-150			
SW702	994000004259	SWITCH TACT TSA-06430-150			
SW703	994000004259	SWITCH TACT TSA-06430-150			
SW704	994000004259	SWITCH TACT TSA-06430-150			
SW705	994000004259	SWITCH TACT TSA-06430-150			
SW708	994000004259	SWITCH TACT TSA-06430-150			
SW709	994000004259	SWITCH TACT TSA-06430-150			
SW710	994000004259	SWITCH TACT TSA-06430-150			
SW715	994000004259	SWITCH TACT TSA-06430-150			
SW716	994000004259	SWITCH TACT TSA-06430-150			
SW717	994000004259	SWITCH TACT TSA-06430-150			
T401	994000004518	AM IFT YELLOW 7MM C712KC-004			
T402	994000004518	AM IFT YELLOW 7MM C712KC-004			
T403	996510010714	AM IFT BLACK 7MM 7M4A2011N			
T404	994000004519	FM IFT BLACK 7MM KS2599			
T405	994000004517	AM OSC BROWN 7MM 7M1A2146			
T901	△ 994000004244	POWER TRASFO AC230V H50.			
T902	△ 994000004245	POWER TRASFO EI-28 AC230V			
UR11	994000004239	IC SAA6588T RADIO RECEIVERS			
UR12	996510001350	IC LM78L05 3-TERMINAL TO-92			
VC403	994000001615	TRIMMER CAP 10PF N450			
VR401	994000004232	VARI RES 100K 3P 1/10W+/-30%			
VR701	994000004258	ROTARY ENCODER			
X100	994000004273	CER RESONATOR 16.93MHZ +/-0.5%			
X101	996510000295	XTAL 8.38MHZ +/-20PPM CAP=20PF			

Note: Only these parts mentioned in the list are normal service parts.

SOFTWARE VERSION CHECKING

How to check Software Version on set Front Panel

Check software version:

- (1) Plug in the set;
- (2) Hold "PROGRAM" and "DBB" buttons together when set on "ECO Power" mode (LED light is on);
- (3) The LCD will display the software version as " Mxxx xxx"

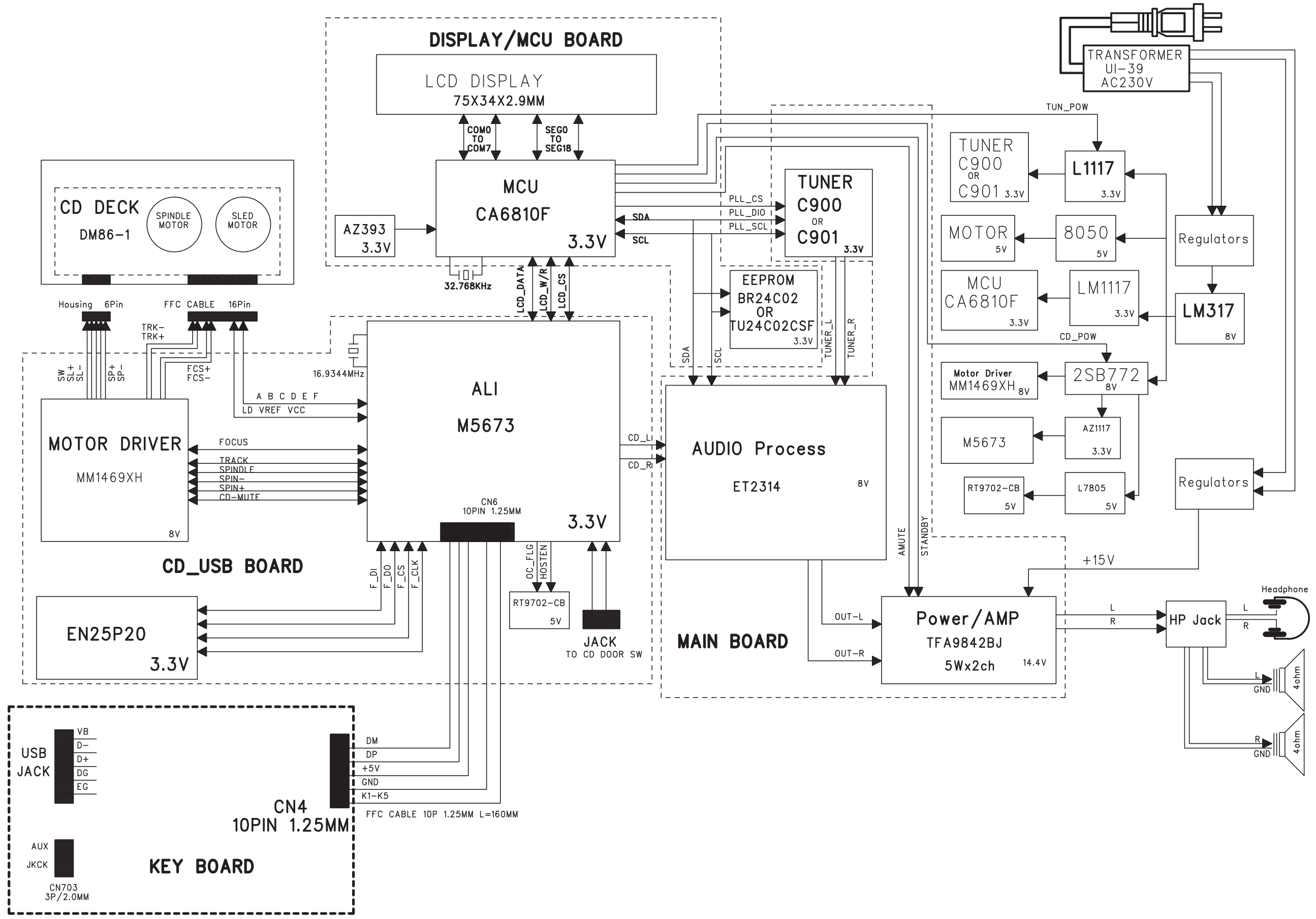
To clear all program station of tuner mode:

- (1) Plug in the set;
- (2) Hold "STOP" button when set on "ECO Power" mode (LED light is on);
- (3) The LCD will display full screen, all program station of tuner will be cleared.

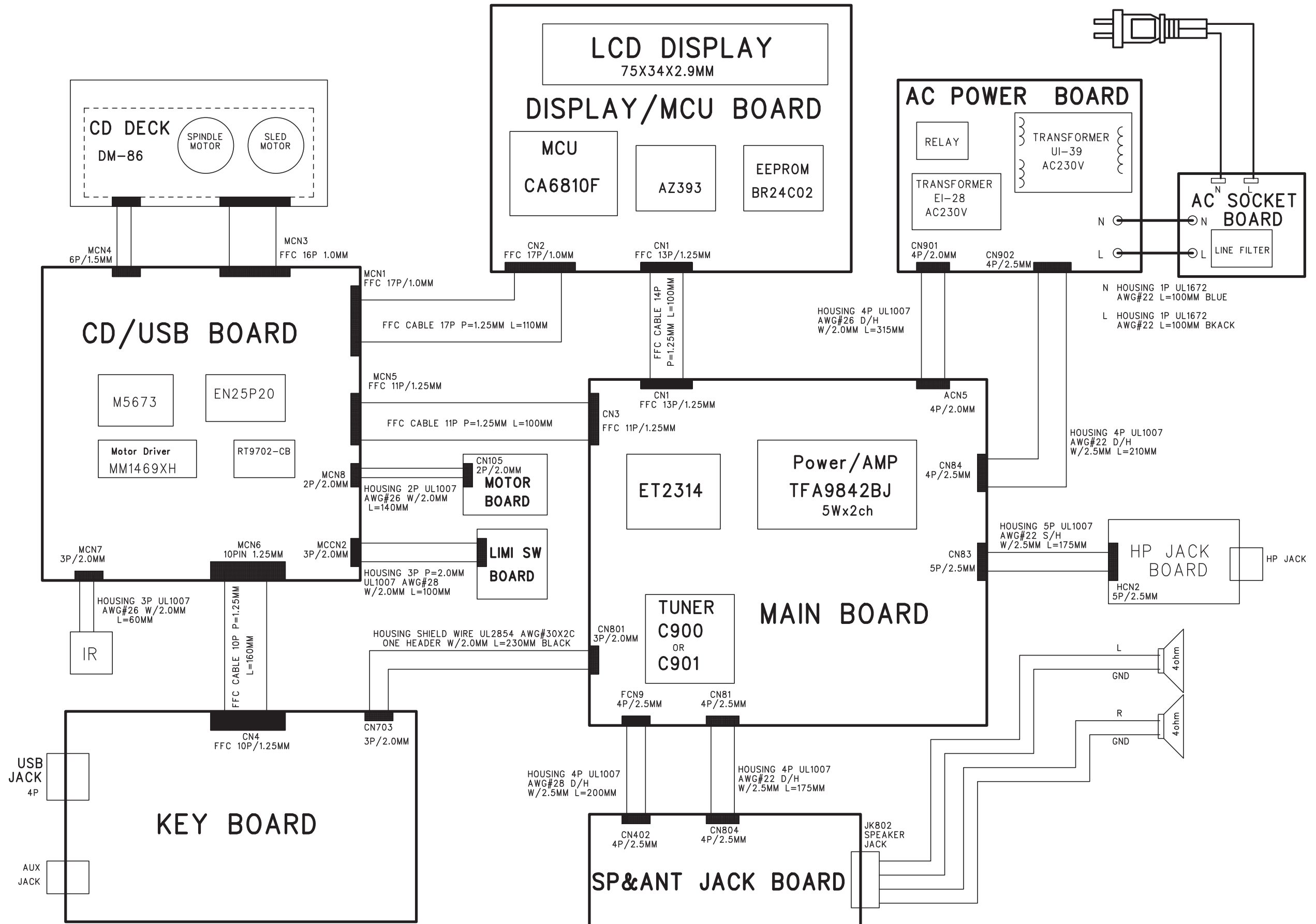
Starting Serial Number:

EF2A0913000001

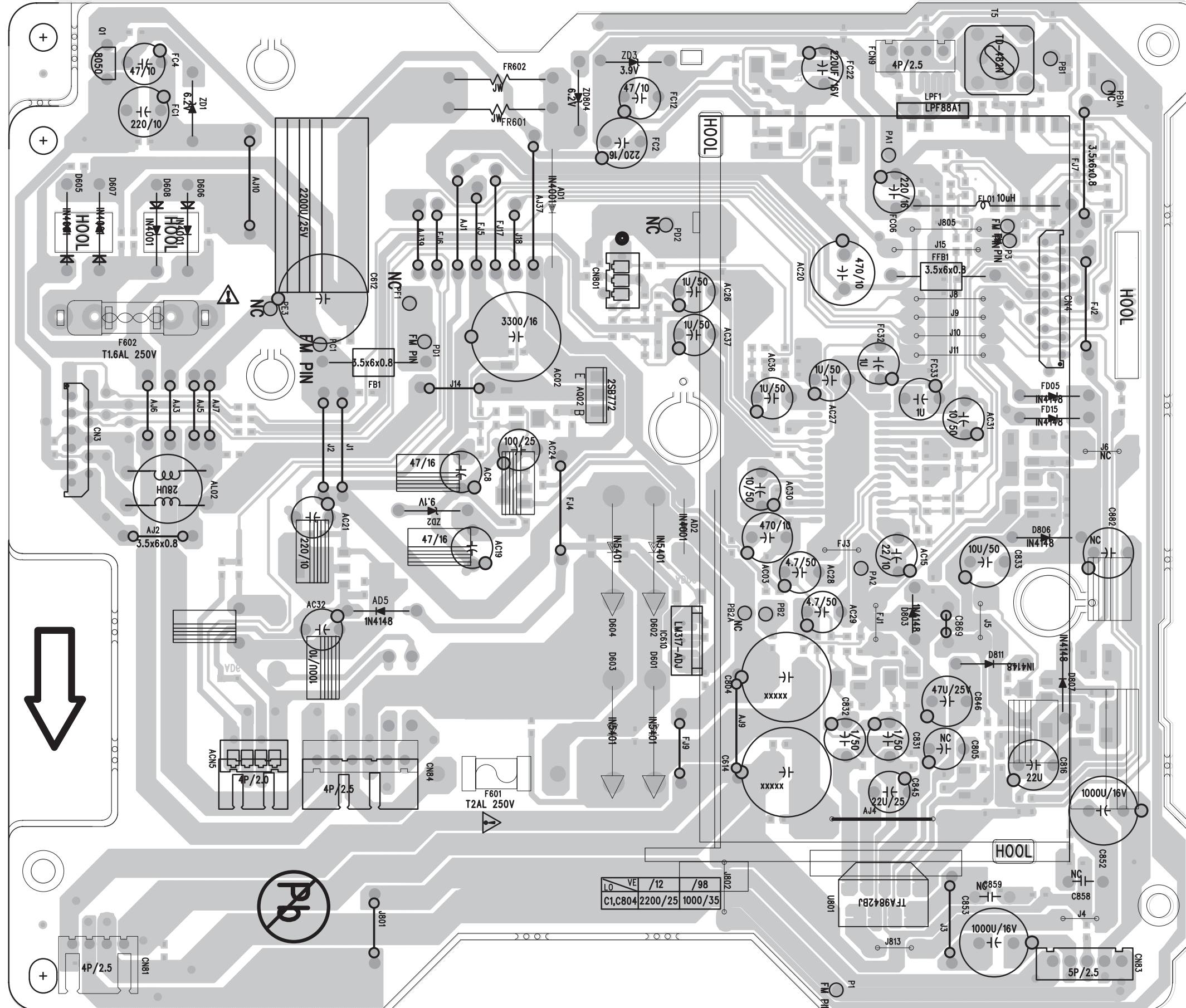
SET BLOCK DIAGRAM



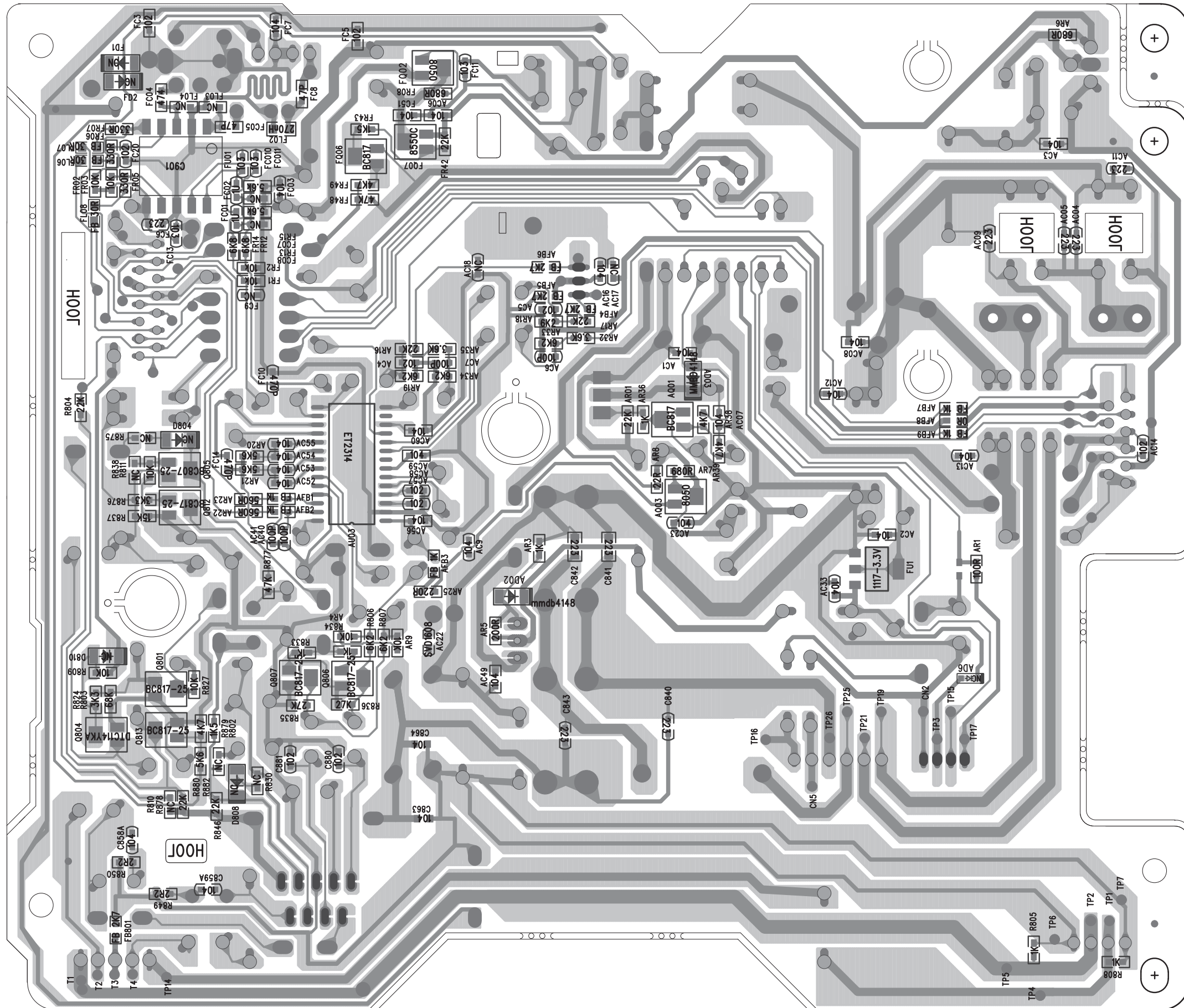
SET WIRING DIAGRAM



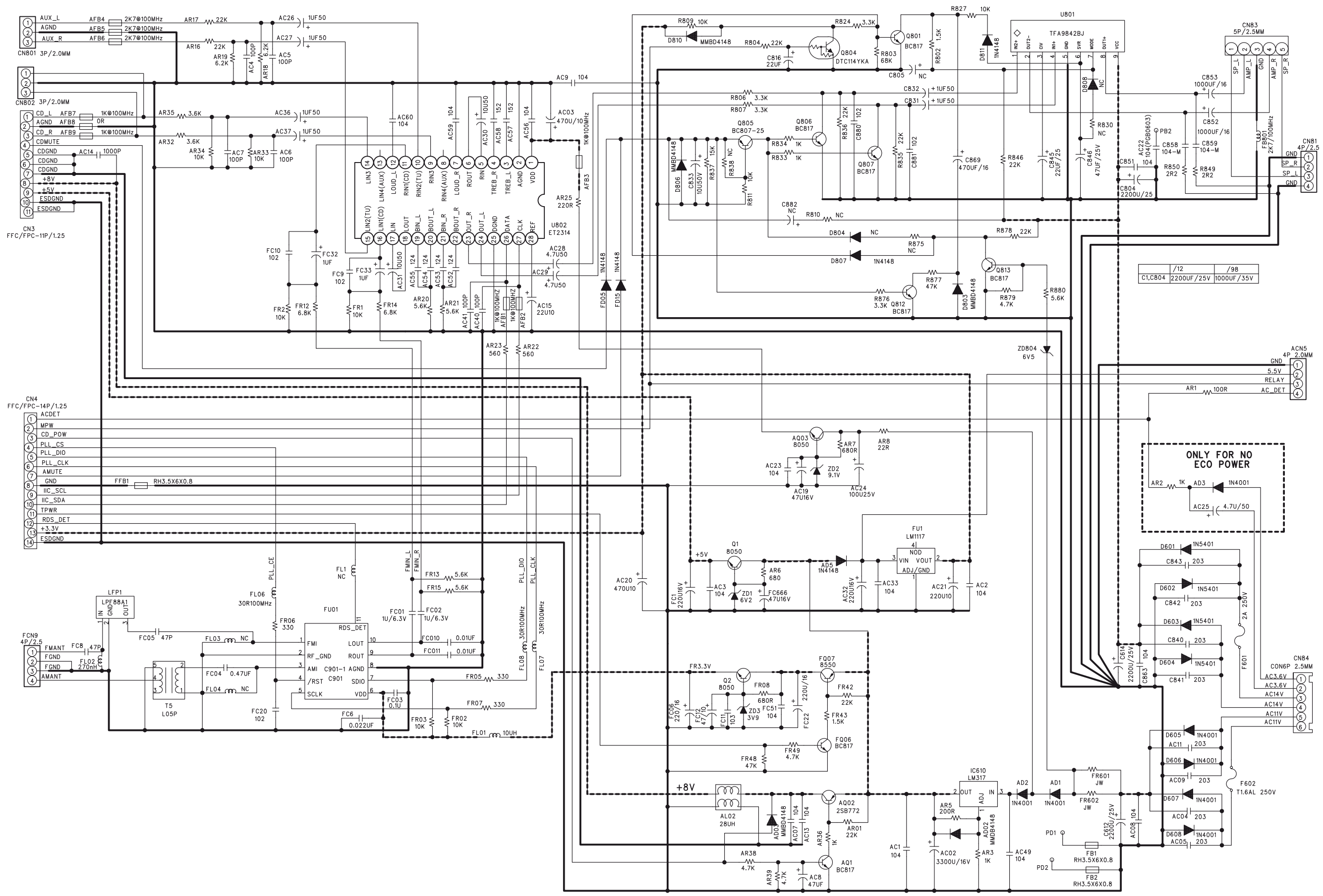
PCB LAYOUT - MAIN BOARD (TOP VIEW)



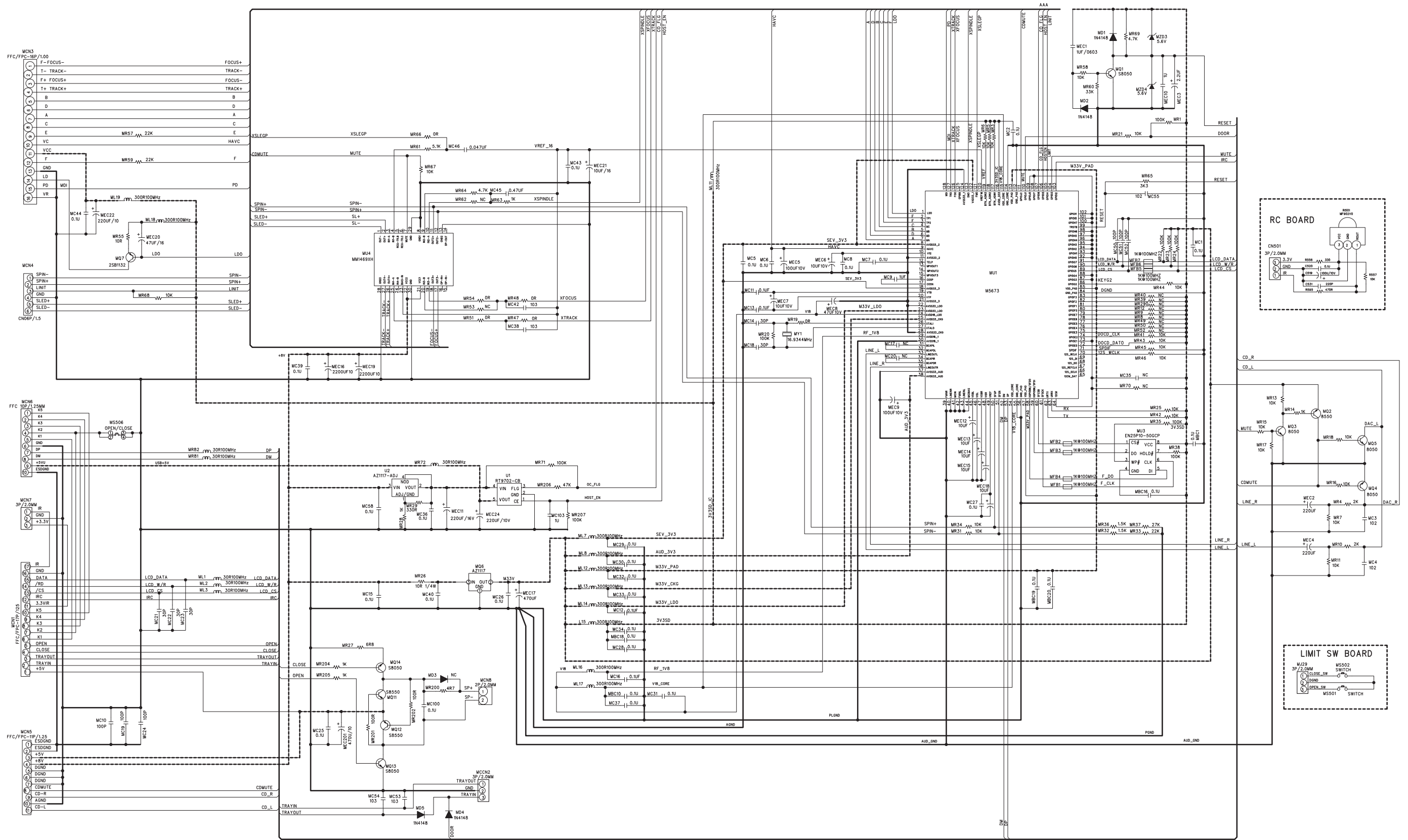
PCB LAYOUT - MAIN BOARD (BOTTOM VIEW)



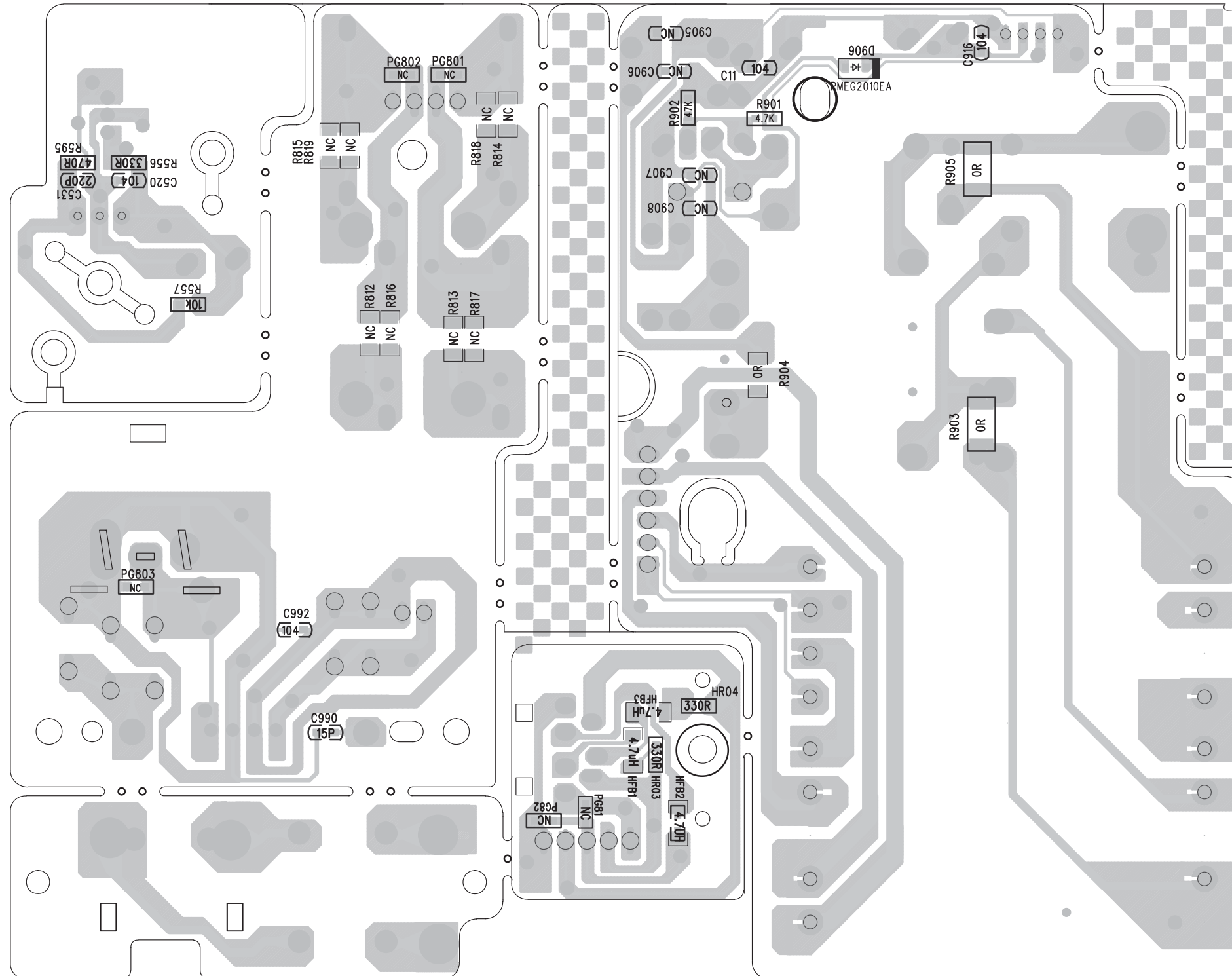
CIRCUIT DIAGRAM - MAIN BOARD



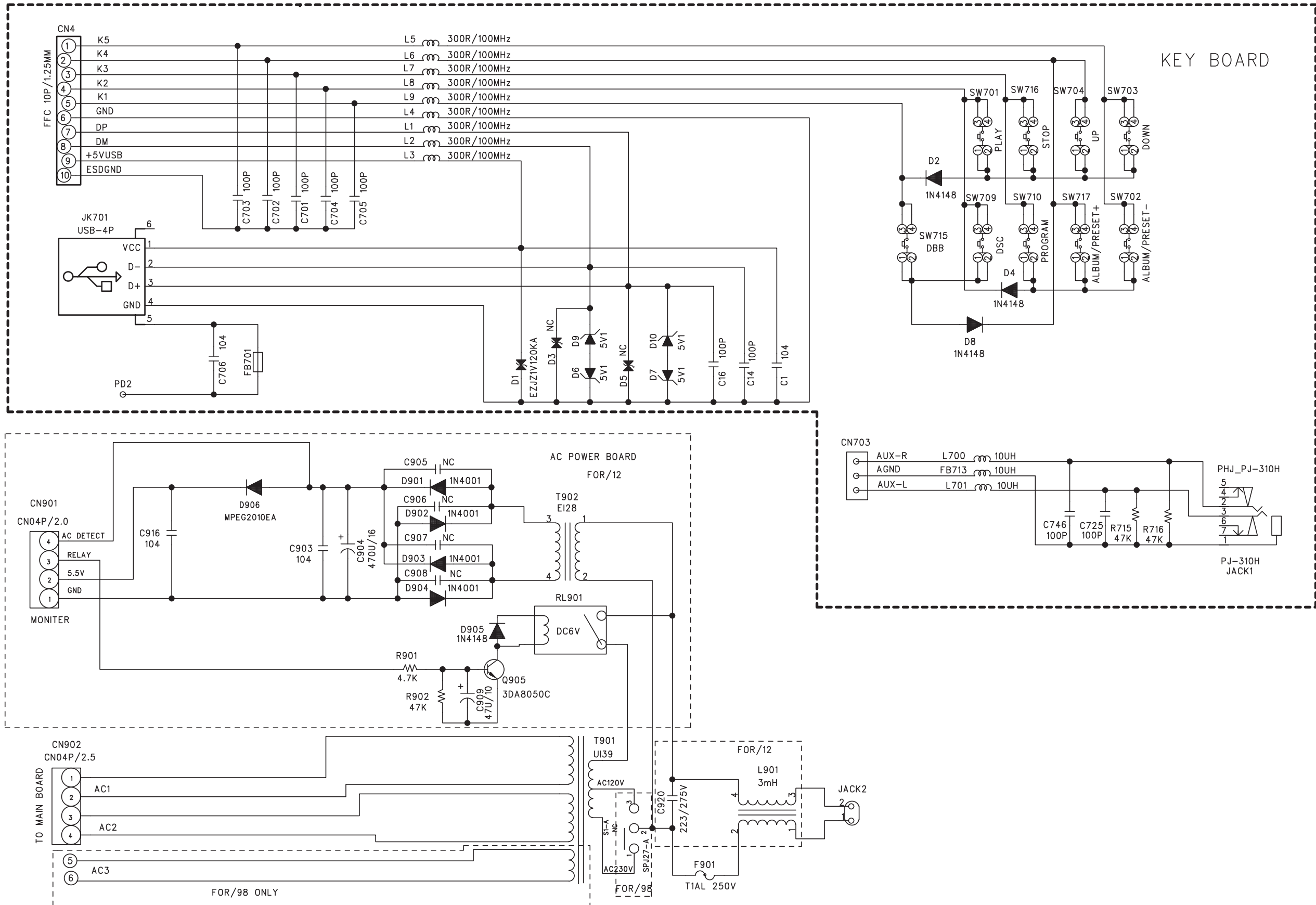
CIRCUIT DIAGRAM - CD & LIMIT SW BOARD ONLY FOR REFERENCE



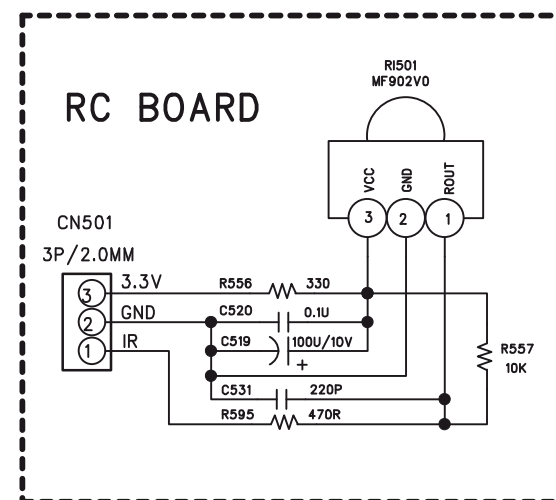
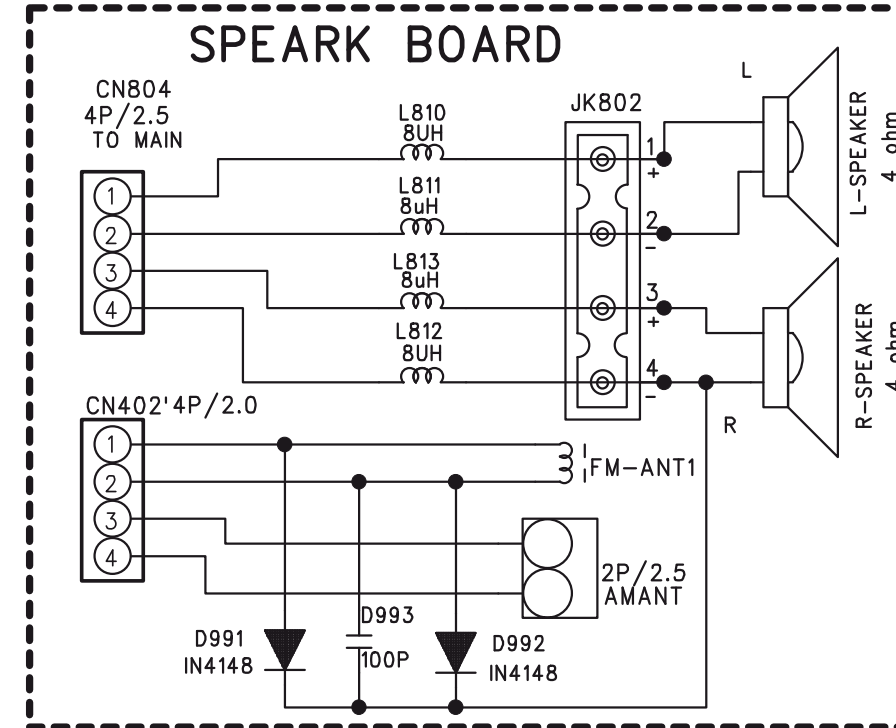
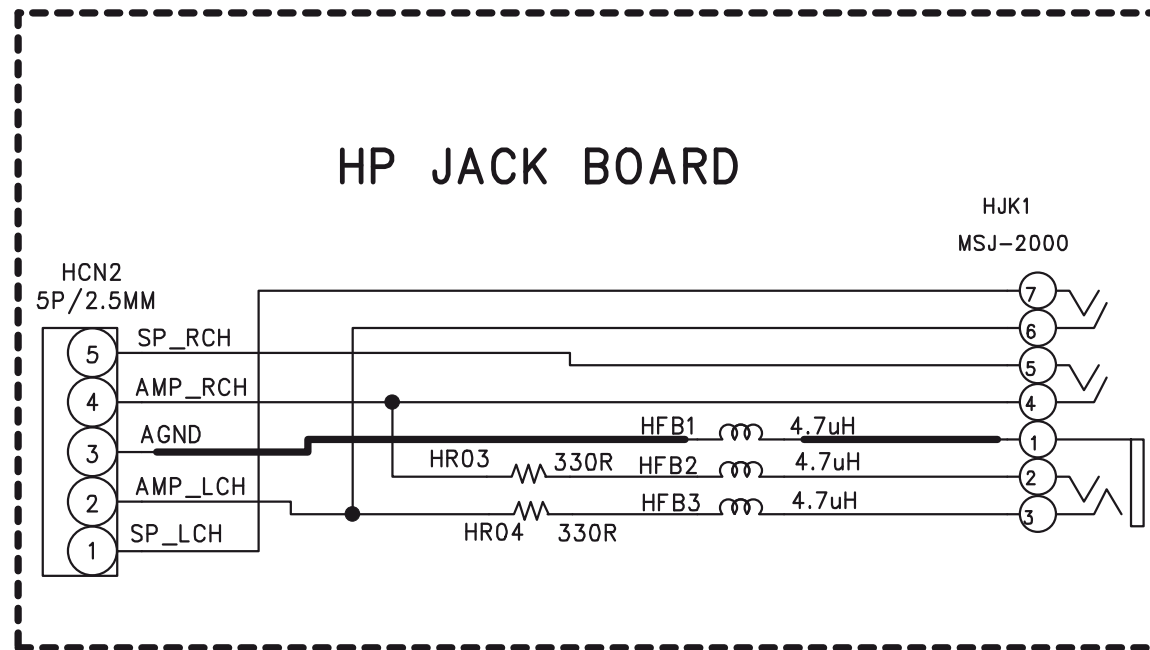
PCB LAYOUT - AC POWER & HP JACK & SP & ANT JACK & RC BOARD (BOTTOM VIEW)



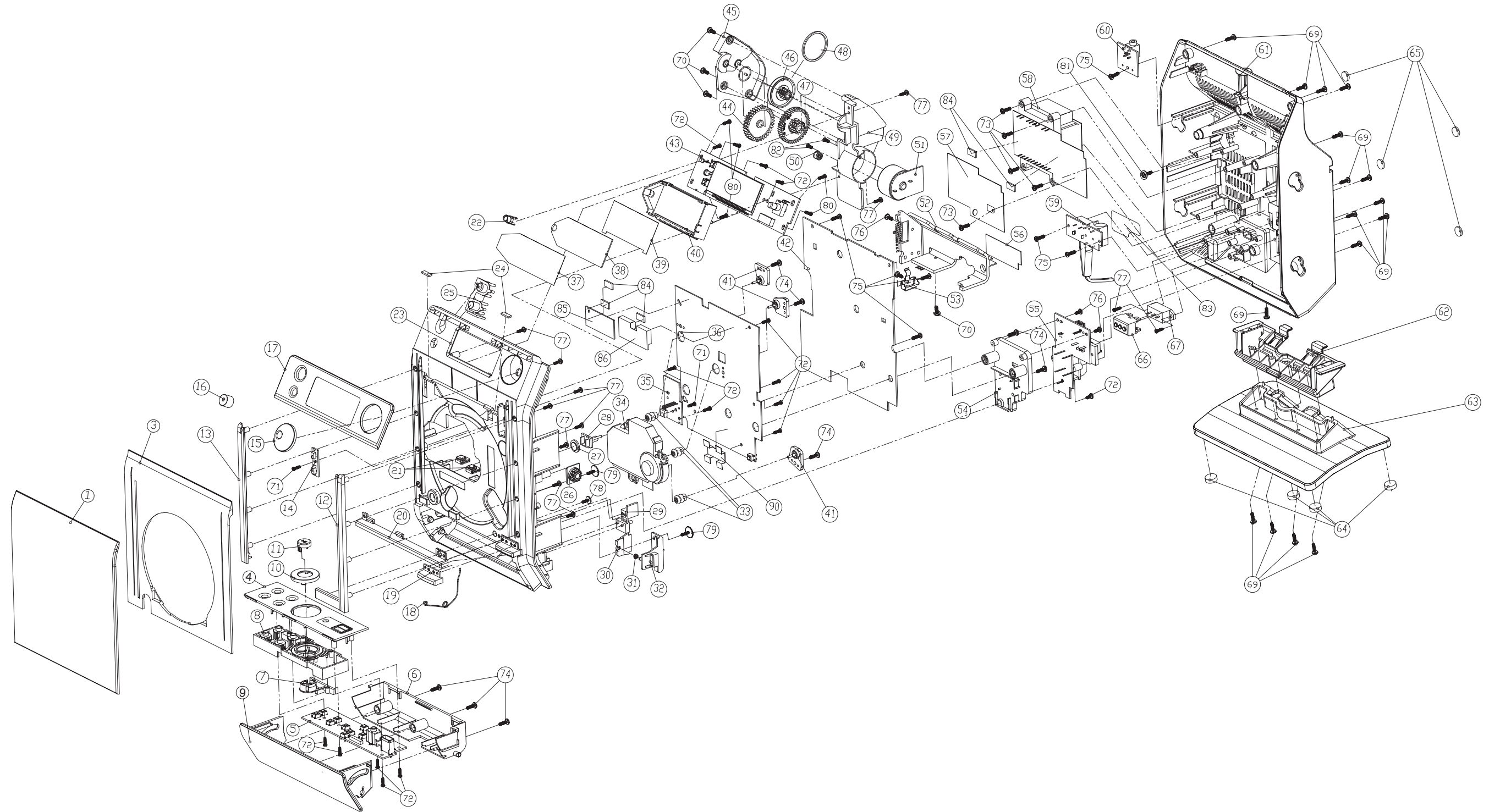
CIRCUIT DIAGRAM - KEY BOARD & AC POWER BOARD



CIRCUIT DIAGRAM - HP JACK & SP & ANT & RC BOARD



SET MECHANICAL EXPLODED VIEW



**(FOR ALI SOLUTION)
MECHANICAL & ACCESSORIES PARTS LIST**

Loc.	12NC	Description
MAIN UNIT		
1	996510010723	LENS-CD DOOR FOR /12/05/37
3	996510010722	DOOR-CD
4	996510010733	COVER FUNCTION PANEL
7	994000004308	BUTTON PLAY
8	996510010731	BUTTON FUNCTION
9	996510026403	PANEL FUNCTION /12/05/37
10	994000004309	BUTTON FW/FF
11	994000004315	COVER PLAY BUTTON
12	996510010725	HOLDER CD DOOR CARRIER (R)
13	996510010724	HOLDER CD DOOR CARRIER (L)
15	996510010728	KNOB-VOLUME
16	996510026382	MECHANICAL SECTION (ALI)
16	994000004302	COVER POWER BUTTON
17	996510010726	LENS DISPLAY /12/05/37
19	996510010730	BUTTON OPEN/CLOSE
20	996510010729	LENS BAR
23	996510010721	CABINET FRONT FOR /12
25	996510010727	BUTTON POWER/SOURCE
29	994000004304	BRACKET OPEN/CLOSE BUTTON
34	996510026351	CD MECHANISM DM86-1
61	996510010720	CABINET REAR FOR /12
62-63-69	996510027355	STAND PORTION OF MCM277
FMANT	996510000308	FM ANT WIRE 75R L1.0M
REM	996510028568	REMOTE CONTROL
SPKBOX	996510019466	SPK BOX FOR MCM277/12 IN PAIR
AMANT	996510026334	AM ANT ASSEMBLY OF MCM277
43	996510026377	DISPLAY/MCU BOARD ASSEMBLY
36	996510026373	CD SERVO PWB ASSEMBLY
42	996510026336	MAIN PWB ASSEMBLY
58	996510026343	AC POWER ASSEMBLY
ACCORC ▲	996510026381	AC POWER CORD HL-77 L1800MM

ELECTRICAL PARTS LIST

Loc.	12NC	Description
DISPLAY/MCU PCB ASS'Y		
D3	996510026339	DIODE MMBD4148W
D3	996510026385	DIODE LS4148-GS08
D7	996510026339	DIODE MMBD4148W
D7	996510026385	DIODE LS4148-GS08
IC1	996510026362	MCU CA6810F LQFP64
LCD1	996510006483	LCD DISPLAY 1/8 DUTY 1/4 STN
LED701	996510036396	LED 4MM WHITE
LED701	996510026368	LED 4MM WHITE
LED702	996510000292	LED 3MM 3R4HD-7(RE D) TAPING
Q1	996500041698	CH-TRANS. 8050M SOT23
Q10	996510007049	CH-TR. PNP 3CA8550M SOT-23
Q2	996500041698	CH-TRANS. 8050M SOT23
Q4	996510006954	CH-TRANSISTOR BC817-25
Q5	996510007049	CH-TR. PNP 3CA8550M SOT-23
Q6	996500041698	CH-TRANS. 8050M SOT23
SW705	996510026354	SWITCH TACT KFC-A06-43
SW708	996510026354	SWITCH TACT KFC-A06-43
U1	996510026375	IC AZ393M-E1
U2	996510026333	IC FM24C02-SO-T
U2	996510026349	IC BR24C02SOP8
VR701	994000004258	ROTARY ENCODER
Y1	996510026359	XTAL 32768KHZ +/-30PPM
ZD1	996510026348	ZENER DIODE BZX384-C3V3
ZD5	996510026395	ZENER DIODE BZX384-C5V1
ZD6	996510026395	ZENER DIODE BZX384-C5V1

CD/USB PCB ASSY (ONLY FOR REFERENCE)

MS501	996510026394	DETECT SWITCH DTS-18-PA46 1P1T
MS502	996510026394	DETECT SWITCH DTS-18-PA46 1P1T
MD1	996510026339	DIODE MMBD4148W
MD1	996510026385	DIODE LS4148-GS08
MD2	996510026339	DIODE MMBD4148W
MD2	996510026385	DIODE LS4148-GS08
MD4	996510026339	DIODE MMBD4148W
MD4	996510026385	DIODE LS4148-GS08
MD5	996510026339	DIODE MMBD4148W
MD5	996510026385	DIODE LS4148-GS08

ELECTRICAL PARTS LIST

Loc.	12NC	Description
CD/USB PCB ASSY (ONLY FOR REFERENCE)		
MQ1	996500041698	CH-TRANS. 8050M SOT23
MQ11	996510007048	CH-TR. PNP SS8550LT1 SOT-23
MQ12	996510007048	CH-TR. PNP SS8550LT1 SOT-23
MQ13	996500041698	CH-TRANS. 8050M SOT23
MQ14	996500041698	CH-TRANS. 8050M SOT23
MQ2	996510007048	CH-TR. PNP SS8550LT1 SOT-23
MQ3	996500041698	CH-TRANS. 8050M SOT23
MQ4	996500041698	CH-TRANS. 8050M SOT23
MQ5	996500041698	CH-TRANS. 8050M SOT23
MQ6	996500040080	IC AP1117E33LA REGULATOR
MQ6	996500041892	IC AZ1117H-3.3 REGULATOR
MQ7	996510000285	TRANSISTOR 2SB1132R
MS506	996510026354	SWITCH TACT KFC-A06-43
MU1	996510026364	MCU ALI-M5673 QFP/128P
MU3	996510026376	IC 2M FLASH EN25F20-100GCP
MU3	996510026378	IC 2M FLASH EN25P20-100GCP
MU4	996510026353	IC SA1469XH 4CH MOTOR DRIVER
MU4	996510026398	IC MM1469XH 4CH MOTO DRIVER
MY1	996510026365	CER RESONTOR 1693MHZ +/-05
MZD3	996510026358	ZENER DIODE BZX384-C5V6
MZD4	996510026358	ZENER DIODE BZX384-C5V6
U1	996510026337	IC RT9702PB POWER SWITCHES-5
U2	996510007057	IC AZ1117H-ADJTRE1REGULATOR SOT

MAIN PCB ASSY

AUDIO PROCESSOR PORTION		
AD02	996510026339	DIODE MMBD4148W
AD02	996510026385	DIODE LS4148-GS08
AD03	996510026339	DIODE MMBD4148W
AD03	996510026385	DIODE LS4148-GS08
AJ2	994000004215	FILTER BEAD RH3.5X6X0.8
AL02	994000004227	28UH CORE:T9X5X3 6T 715R 1.2A
AQ01	996510006954	CH-TRANSISTOR
AQ02	996510026397	TRANSISTOR 2SB772-P PNP
AQ03	996500041698	CH-TRANS. 8050M SOT23
AU03	996510001347	IC ET2314 SOUND SO28
F602	▲ 994000004228	FUSE S506 T1.6AL 250V

**(FOR ALI SOLUTION)
ELECTRICAL PARTS LIST**

Loc.	12NC	Description
MAIN PCB ASSY		
F602	△ 996510026357	FUSE 50T T16AL 250V
F602	△ 996510026369	FUSE 5K 16A 250V
FB1	994000004215	FILTER BEAD RH3.5X6X0.8
IC610	994000004225	IC LM317P VOL REGULATOR
Q1	994000004224	TRANSISTOR 3DA8050 HFE=120-200
ZD1	996510007003	ZENER DIODE 6.2V 1/2W TAPING
ZD2	996510007762	ZENER DIODE 9V1 1/2W TAPING. POWER AMPLIFIER PORTION
AC22	996510026338	MULT VAR SDV1608H180C050
AD5	996510016501	DIODE IN4148FT-72
D803	996510016501	DIODE IN4148FT-72
D806	996510016501	DIODE IN4148FT-72
D807	996510016501	DIODE IN4148FT-72
D811	996510016501	DIODE IN4148FT-72
F601	△ 994000004229	FUSE PTU 2A 250V
F601	△ 996510026387	FUSE 30TS 2A 250V
F601	△ 996510026389	FUSE 3N 2A 250V
FD05	996510016501	DIODE IN4148FT-72
FD15	996510016501	DIODE IN4148FT-72
FU1	996500041892	IC AZ1117H-3.3 REGULATOR
Q801	996510006954	CH-TRANSISTOR
Q804	996500041700	CH-TRANS. DTC114YKA NPN
Q805	996510000939	TRANSISTOR BC807-25 PNP
Q806	996510006954	CH-TRANSISTOR
Q807	996510006954	CH-TRANSISTOR
Q812	996510006954	CH-TRANSISTOR
Q813	996510006954	CH-TRANSISTOR
U801	996510001348	IC POWER AMPLIFIER TFA9842BJ.
ZD804	996510007003	ZENER DIODE 6.2V 1/2W TAPING TUNER PORTION
FERRITE	996510026347	FERRITE CORE RH16x28x9
FFB1	994000004215	FILTER BEAD RH3.5X6X0.8
FJ7	994000004215	FILTER BEAD RH3.5X6X0.8
FQ02	996500041698	CH-TRANS. 8050M SOT23
FQ06	996510006954	CH-TRANSISTOR
FQ07	996510007049	CH-TR. PNP 3CA8550M SOT-23
FU01	996510026346	TUNER MODULE
LPF1	996510026355	FM BP FILTER LPF88A1
T5	996510026352	AM ANT BLK YD-482N 10mm
ZD3	996510016482	ZENER DIODE BZX79-B3V9

ELECTRICAL PARTS LIST

Loc.	12NC	Description
KEY PCB ASSY		
D1	996510026338	MULT VAR SDV1608H180C050
D2	996510000271	DIODE RLS4148 LL-34
D2	996510026339	DIODE MMBD4148W
D2	996510026385	DIODE LS4148-GS08
D3	996510026338	MULT VAR SDV1608H180C050
D4	996510000271	DIODE RLS4148 LL-34
D4	996510026339	DIODE MMBD4148W
D4	996510026385	DIODE LS4148-GS08
D5	996510026338	MULT VAR SDV1608H180C050
D8	996510000271	DIODE RLS4148 LL-34
D8	996510026339	DIODE MMBD4148W
D8	996510026385	DIODE LS4148-GS08
FB701	994000004215	FILTER BEAD RH3.5X6X0.8
JK701	996510010715	USB JACK 4P
JK702	994000003605	MICRO PHONE JACK
SW701	996510026354	SWITCH TACT KFC-A06-43
SW702	996510026354	SWITCH TACT KFC-A06-43
SW703	996510026354	SWITCH TACT KFC-A06-43
SW704	996510026354	SWITCH TACT KFC-A06-43
SW709	996510026354	SWITCH TACT KFC-A06-43
SW710	996510026354	SWITCH TACT KFC-A06-43
SW715	996510026354	SWITCH TACT KFC-A06-43
SW716	996510026354	SWITCH TACT KFC-A06-43
SW717	996510026354	SWITCH TACT KFC-A06-43
AC POWER ASSY		
		HP JACK PORTION
HJK1	996510026367	HP JACK CK-35-39 7P D36MM
		AC POWER PORTION
D905	996510016501	DIODE IN4148FT-72
D906	994000004422	SCHOTTKY
F901	△ 994000004243	FUSE PTU 1A 250V 3.9X10.5MM
F901	△ 996510026342	FUSE 3N 1A 250V
F901	△ 996510026345	FUSE 30TS 1A 250V
Q905	994000004224	TRANSISTOR 3DA8050 HFE=120-200
RL901	△ 994000004246	RELAY ME-7-006-HSL DC6V AC10A
RL901	△ 996510026383	RELAY TV-5 DC6V AC10A

ELECTRICAL PARTS LIST

Loc.	12NC	Description
AC POWER ASSY		
T901	△ 996510026372	TRASFO UI39 AC230V T08829A
T902	△ 996510026391	TRASFO EI-28 230V T08628B SP&ANT JACK PORTION
D991	996510016501	DIODE IN4148FT-72
D992	996510016501	DIODE IN4148FT-72
D994	996510016501	DIODE IN4148FT-72
D995	996510016501	DIODE IN4148FT-72
FMANT	994000004249	RCA JACK RCA-125
JK802	994000004248	SPEAKER TERMINAL PST-403B-01
L810	994000004247	RADIAL AXIAL IND. 8.0UH 60MR
L811	994000004247	RADIAL AXIAL IND. 8.0UH 60MR
L812	994000004247	RADIAL AXIAL IND. 8.0UH 60MR
L813	994000004247	RADIAL AXIAL IND. 8.0UH 60MR AC SOCKET PORTION
L901	996510026396	LINE FILTER 38mH 38mH 380MR RC PORTION
RI501	996510001366	IR SENSOR (OPTO)
Note: Only these parts mentioned in the list are normal service parts.		

REVISION LIST

1.0 Manual 3141 785 32370

Initial Service Manual released.

1.1 Manual 3141 785 32371

In this version, version /05 added.

- 1) P9-1 Mechanical and Accessories Partslist updated.

1.2 Manual 3141 785 32372

In this version, version /98 added.

- 1) P9-2 Mechanical and Accessories Partslist updated.
- 2) P1-2 PCBs Service Policy Variations added.

1.3 Manual 3141 785 32373

In this version,

- 1) P9-2 Mechanical and Accessories Partslist updated.

40 996510006485 CD/MCU BOARD ASS'Y (M93) /05/12 (WAS 996520033047)

1.4 Manual 3141 785 32374

In this version, Page 9-1 & Page 9-2 have been updated.

- 1) In Page 9-1: Item No. 33 & Item No.34 exchanged.

(the original sequence numbers -No.33 & No. 34 mixed up)

- 2) In Page 9-2: Pos. No. 33 ---->new 12nc for /98 added.

33 996510012873 PANEL FUNCTION /98

1.5 Manual 3141 785 32375

In this version, Ali solution is introduced and Chapter 10 to Chapter 15 have been added.

1.6 Manual 3141 785 32376

In this version, Page 15-2 updated.

LED701 996510036396 LED 4MM WHITE (WAS 996510006484)