MP3 CD Soundmachine

AZ204

/55/77

Service
Service
Service

Service Manual

CONTENTS

CLASS 1
LASER PRODUCT

Published by LX 1024 Service Audio Subject to modification

3141 785 35310

Version 1.0

PHILIPS

SPECIFICATION

Audio Playback
- Loader Type: Top
- Playback Media: CD, CD-R, CD-RW, MP3-CD
- Disc Playback Modes: Fast Forward/Backward, Next/Previous Album Search, Next/Previous Track Search, Repeat Play, Shuffle Play
- Programmable Tracks: 20

Tuner/Reception/Transmission
- Tuner Bands: FM, MW (AM)
- Antenna: FM Antenna

Sound
- Output power (RMS): 2 x 1W
- Sound Enhancement: Dynamic Bass Boost
- Sound System: Stereo
- Speaker diameter: 2.5"
- Volume Control: rotary

Connectivity
- 3.5mm stereo line in: (MP3 Link)

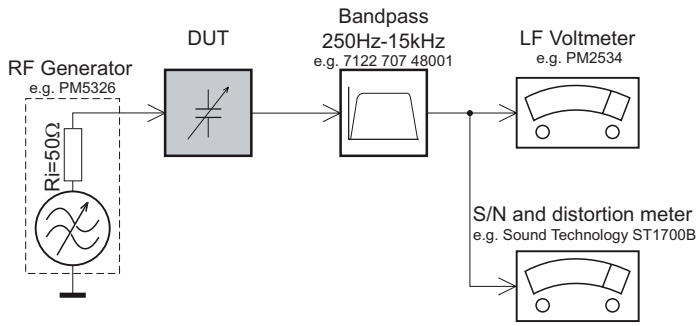
Power
- Mains power: 110 - 127V and 220 - 240V AC voltage selectable
- Battery type: LR14
- Battery voltage: 1.5 V
- Number of batteries: 6

Accessories
- Included accessories: AC Power Cord, 3.5mm stereo line in cable, *Flat pin adaptor, User Manual, Warranty certificate

Dimensions
- Packaging dimensions (W x H x D): 324 x 284 x 139 mm
- Product dimensions (W x H x D): 297 x 112 x 264 mm
- Weight: 1.6 kg
- Weight incl. Packaging: 2 kg

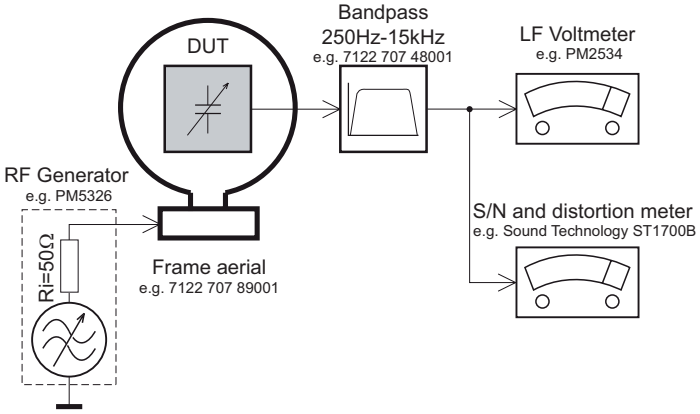
MEASUREMENT SETUP

Tuner FM



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

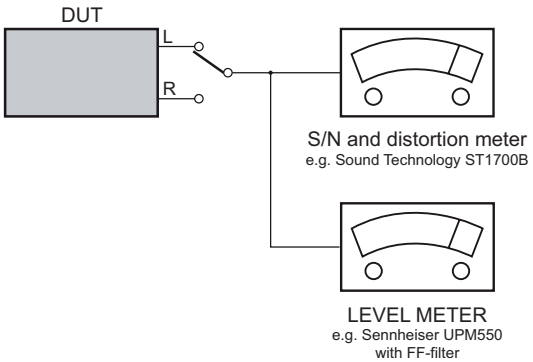
Tuner AM (MW,LW)



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).

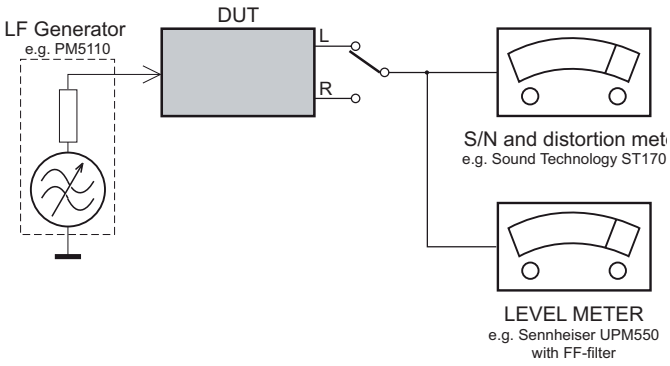
CD

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



Recorder

Use Universal Test Cassette **CrO2** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071



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

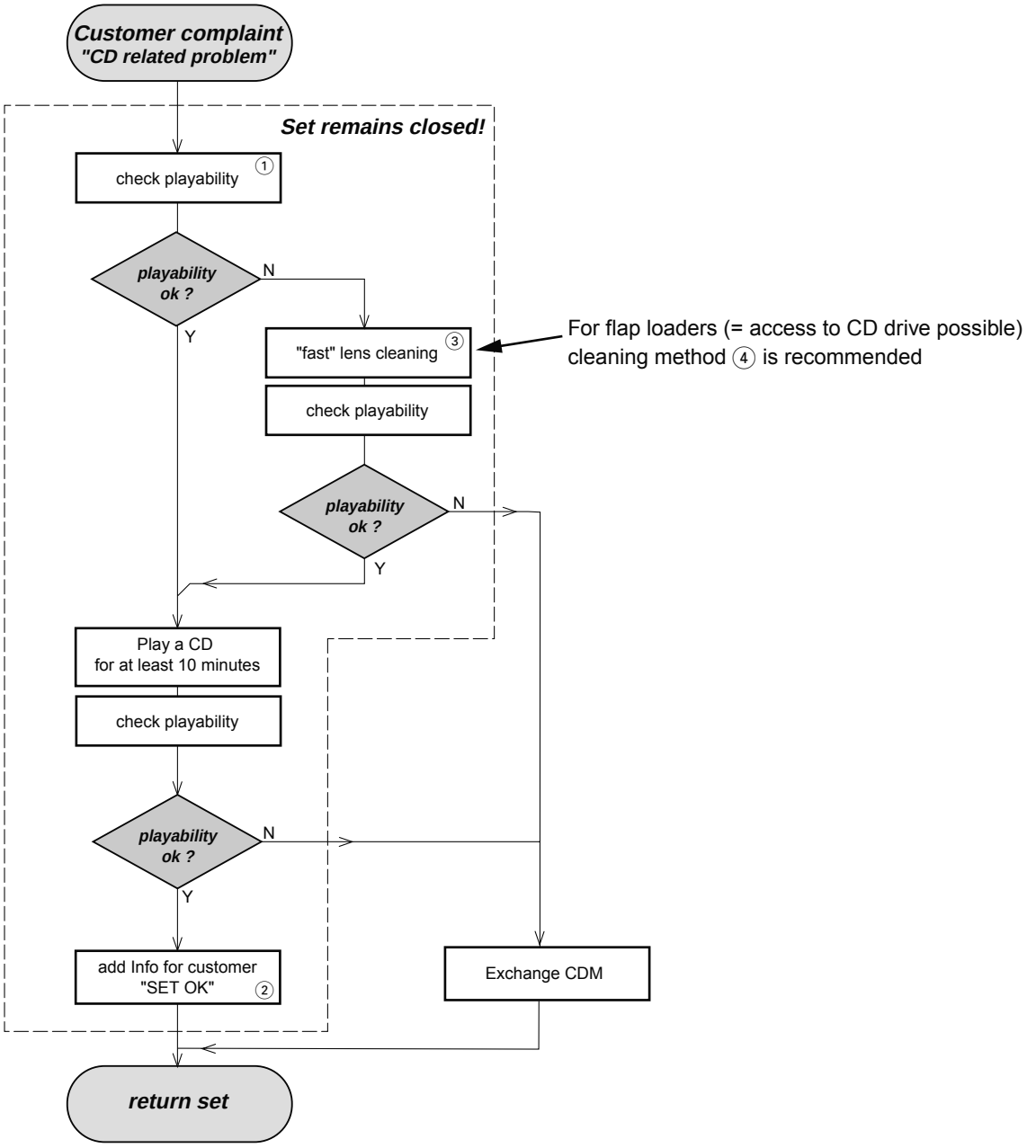
Safety regulations require that after a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- 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



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 Disc.....7104 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 ≥10seconds
  Black dot from 00:50 to 01:10
- jump forward/backward (search) within a reasonable time

For all other sets
use CD-DA SBC 444A.....4822 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 ≥10seconds
  Fingerprint ≥10seconds
  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

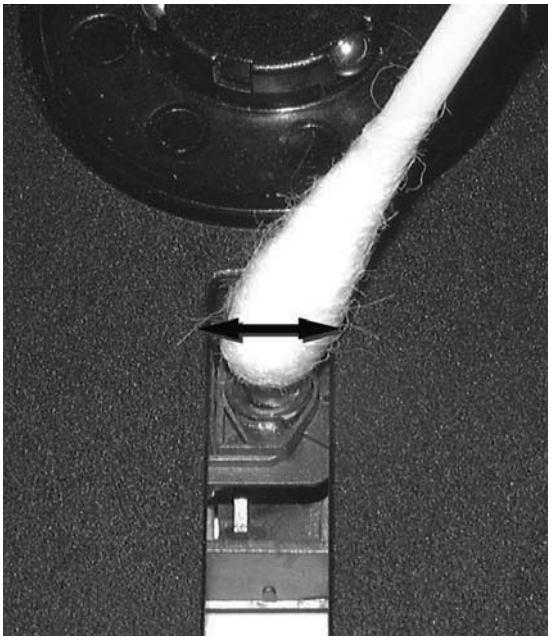
LIQUID LENS CLEANING

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

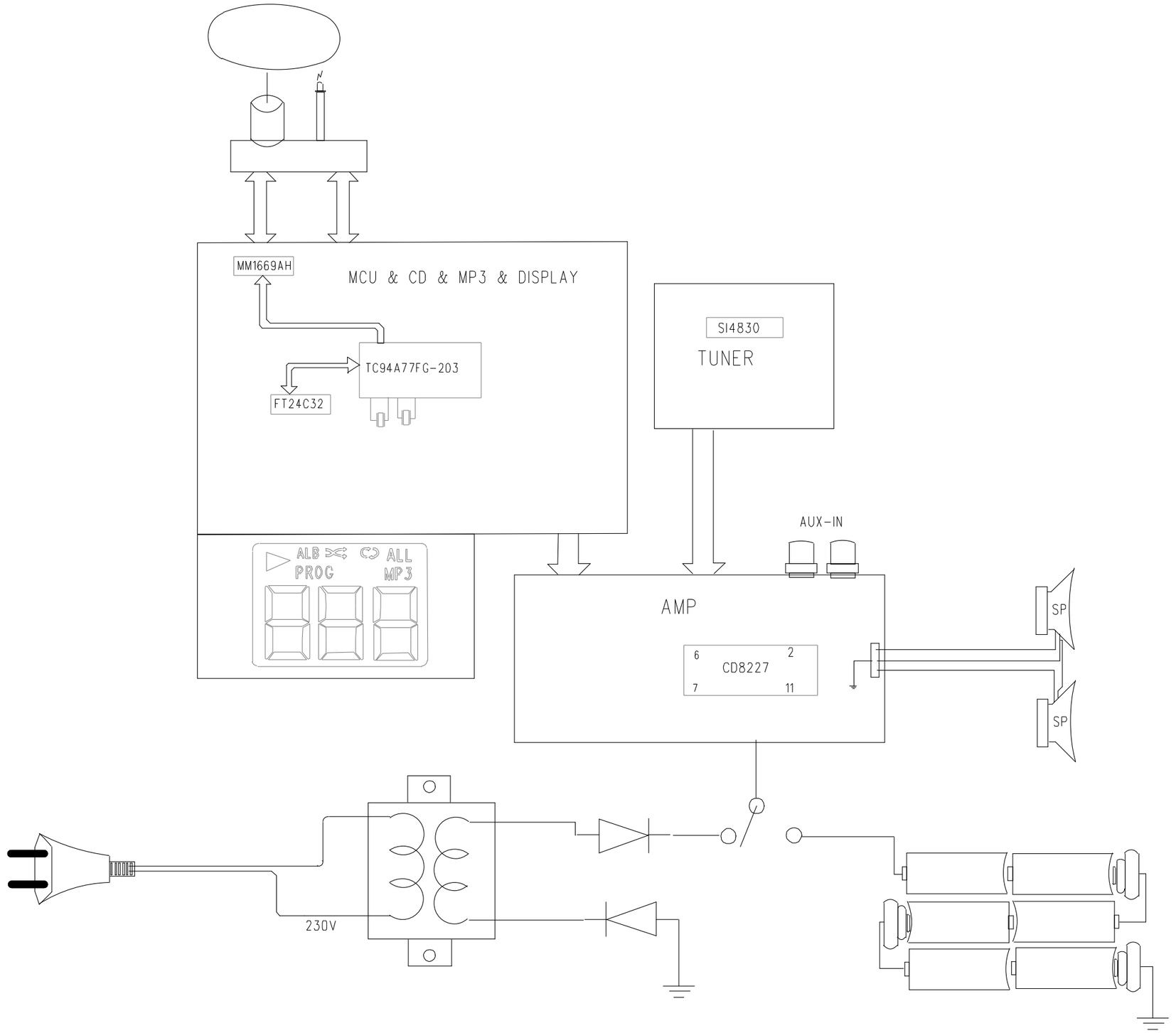
The actuator is a very precise mechanical component and may not be damaged in order to guarantee its full function. Clean the lens gently (don’t press too hard) with a soft and clean cotton bud moistened with the special lens cleaner.

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



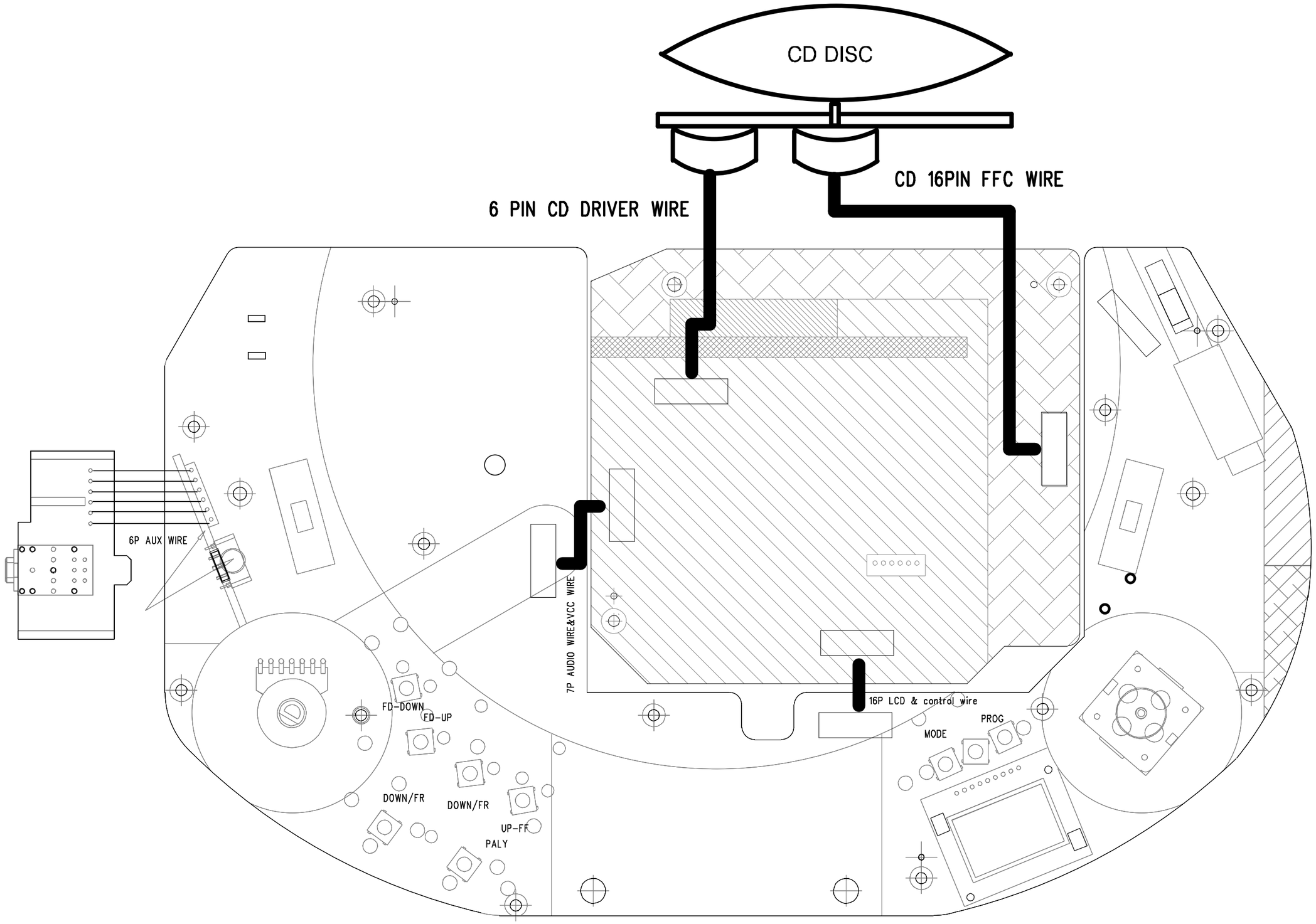
3 - 1

SET BLOCK DIAGRAM



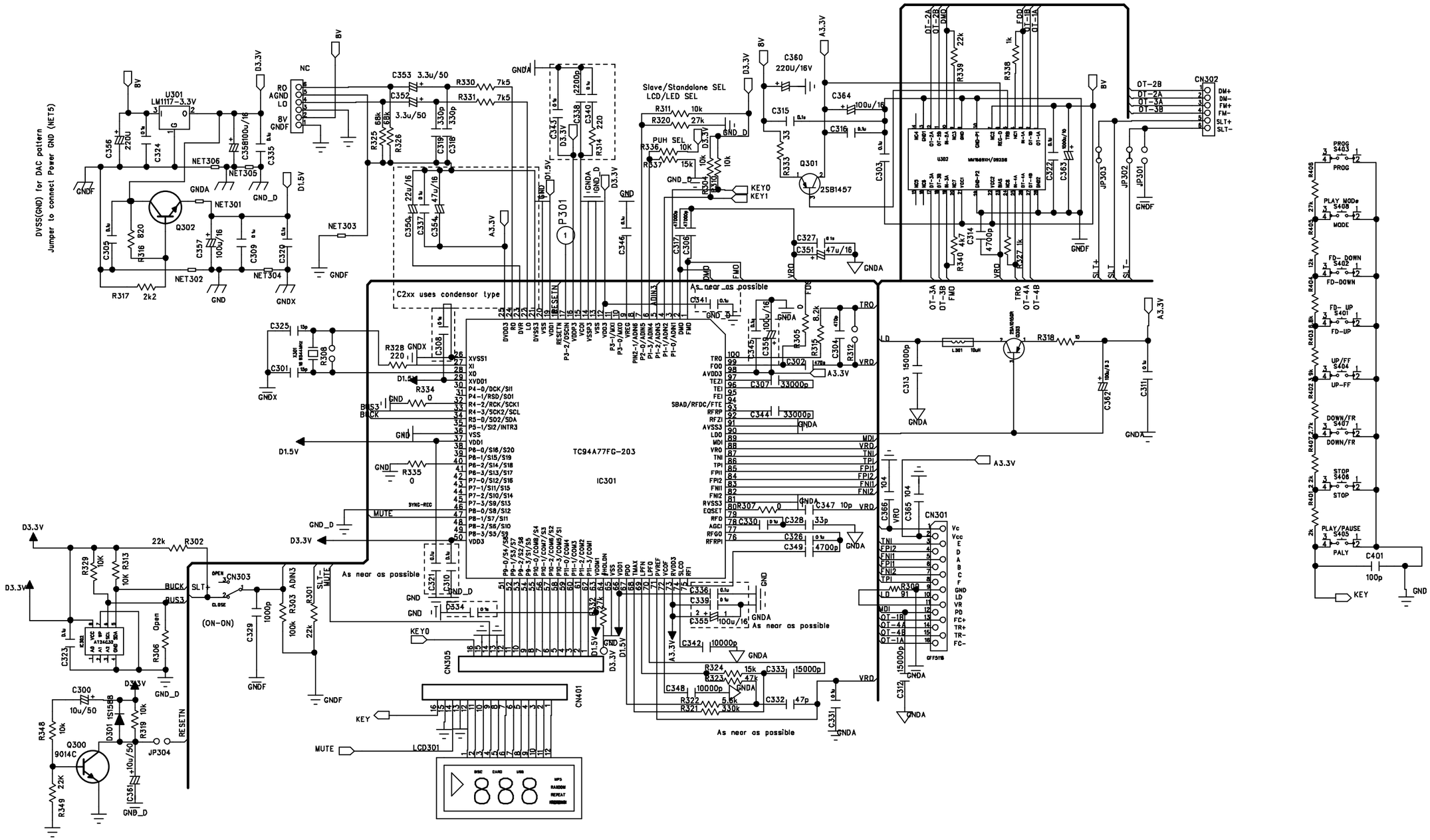
4 - 1

SET WIRING DIAGRAM



5 - 1

CIRCUIT DIAGRAM - CD BOARD



Mode: Pin 7	Volt
Slave	0V
LED 16k EEPROM	1.35V
LED 32k EEPROM	1.9V
LCD 32k EEPROM	2.45V
LCD 16k EEPROM	3.3V

PUH SEL Pin 6	Volt	R8	R17
Sony KSS-213CL	0V	Open	15k
Richly R801	1.2V	27k	15k
Sanyo DA11VF	2V	10k	15k
Sony KSS-900AAA	3.3V	10k	Open

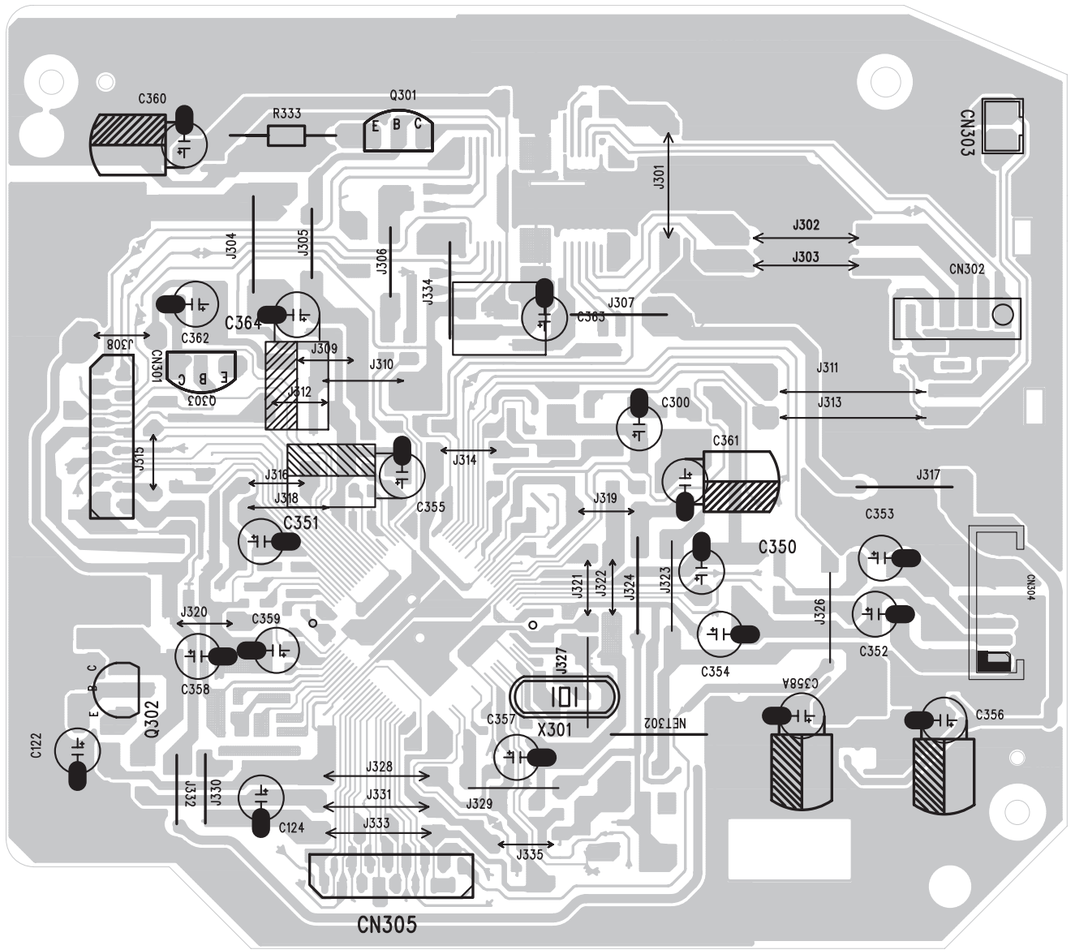
	Pin 32
USB Enable	Pull Up
USB Disable	Pull Down

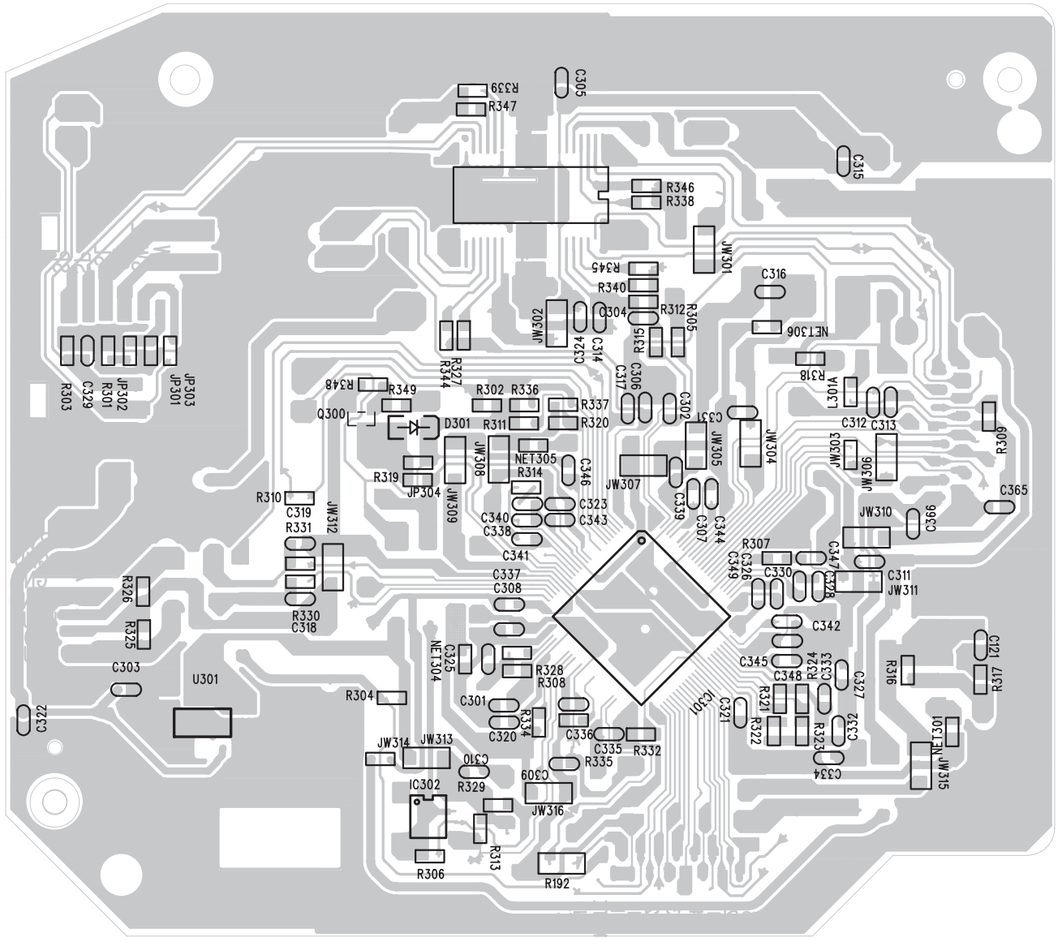
	Pin 40
SD Enable	Pull Up
SD Disable	Pull Down

1. R16 change to 91
2. Pin 8 add USB power control
3. Pin 7 LCD/LED/Slave/Standalone SEL
4. Add R10: 4.7k ohm
5. R123 change to 8.2k ohm
6. Change R18 to open, R19 to 10k
7 Add R20 10k ohm
8 Add R49 2.2k ohm

5 - 2

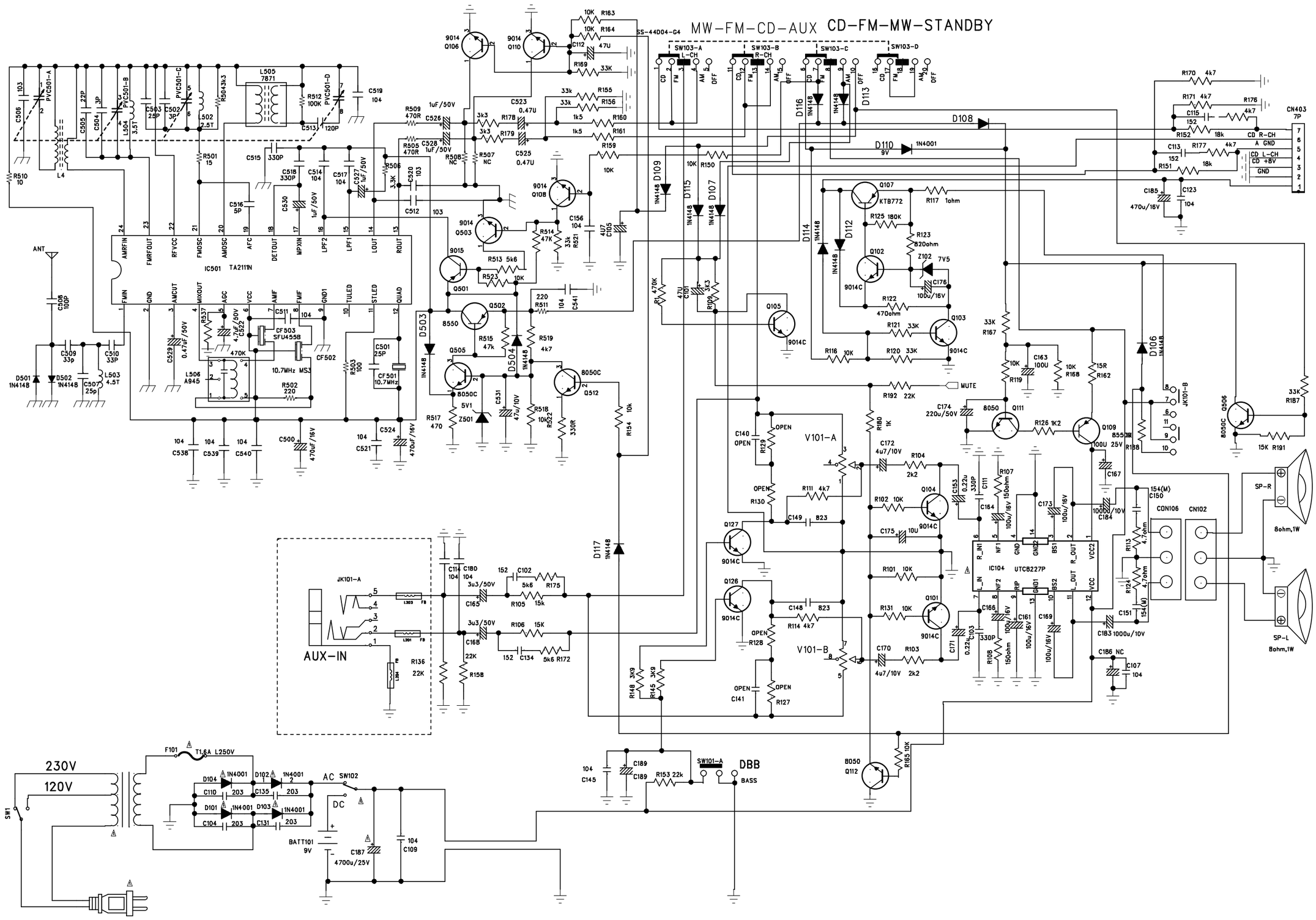
LAYOUT DIAGRAM - CD BOARD





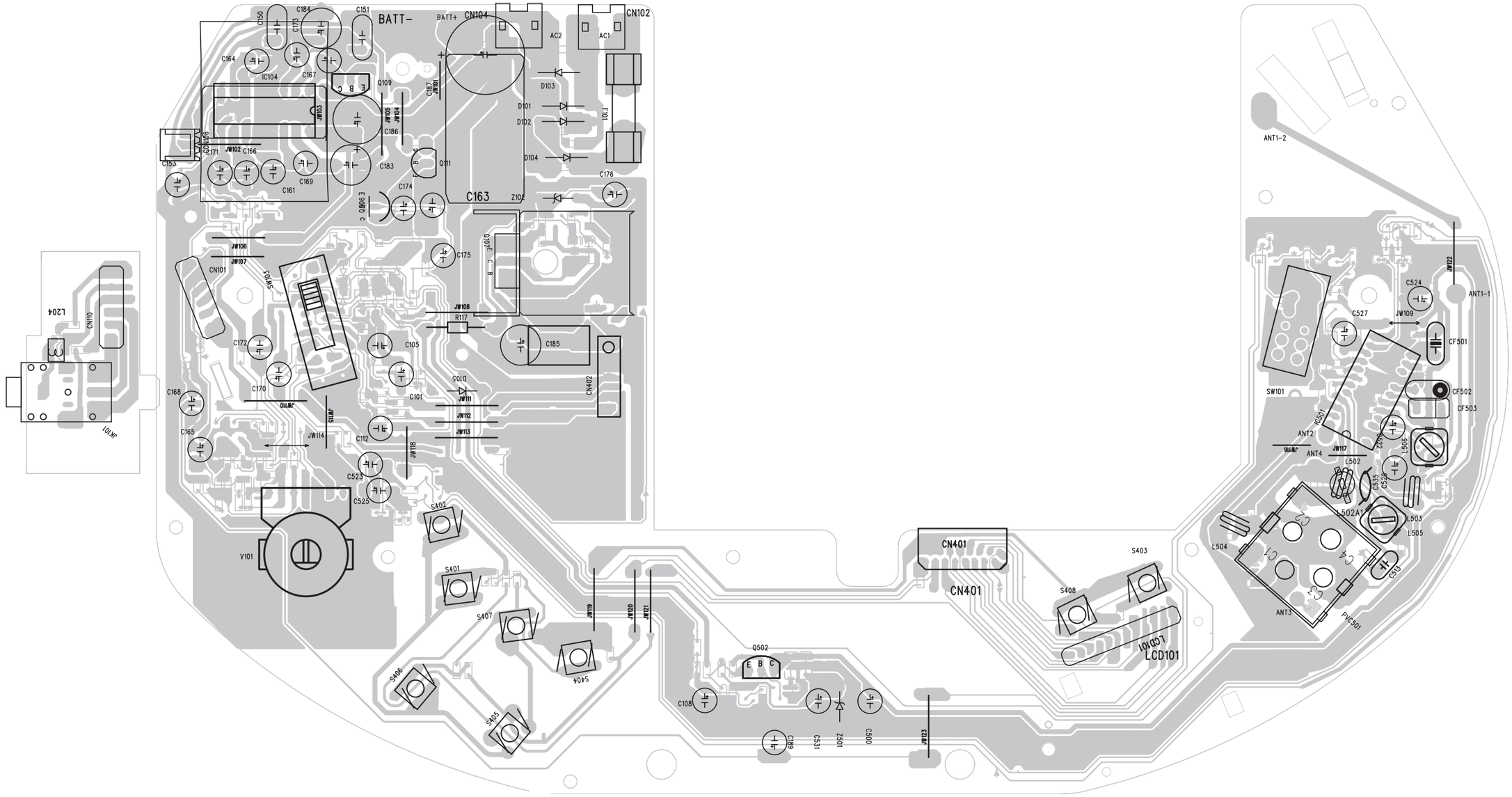
6 - 1

CIRCUIT DIAGRAM - MAIN BOARD



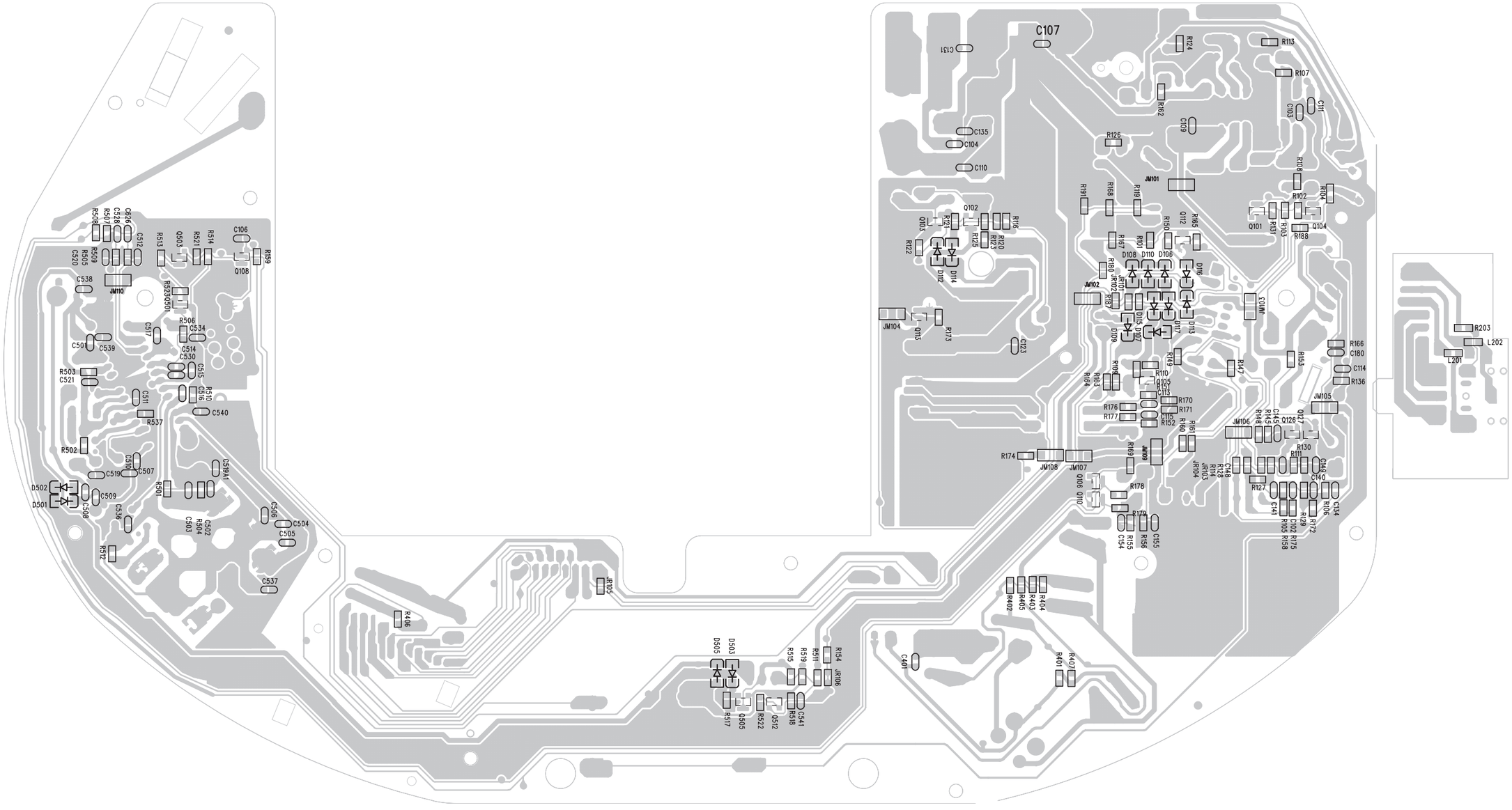
6 - 2

LAYOUT DIAGARM - MAIN BOARD
COMPONENT SIDE VIEW



6 - 3

LAYOUT DIAGARM - MAIN BOARD
COPPER SIDE VIEW



7 - 1

EXPLODED VIEW DIAGRAM