

Service
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Service Manual



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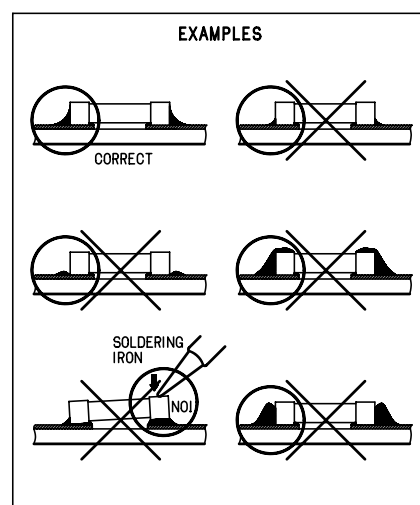
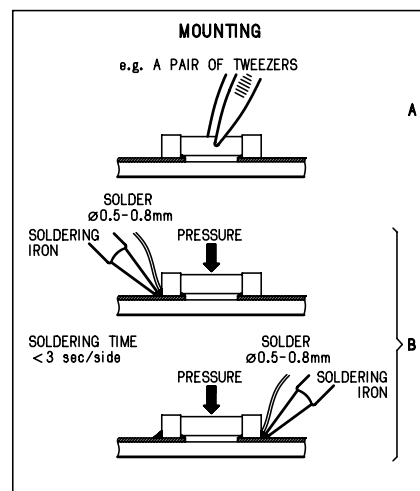
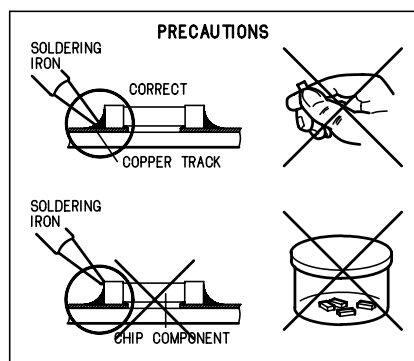
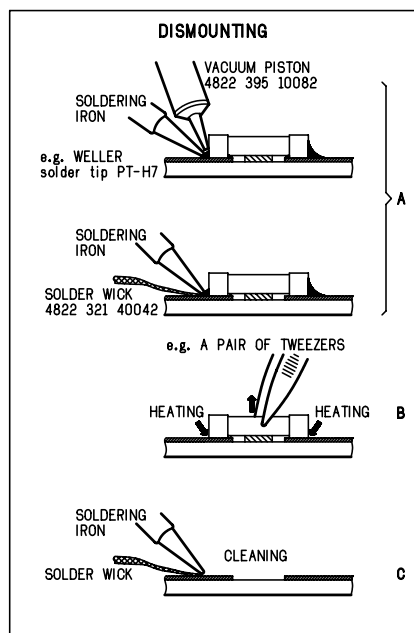
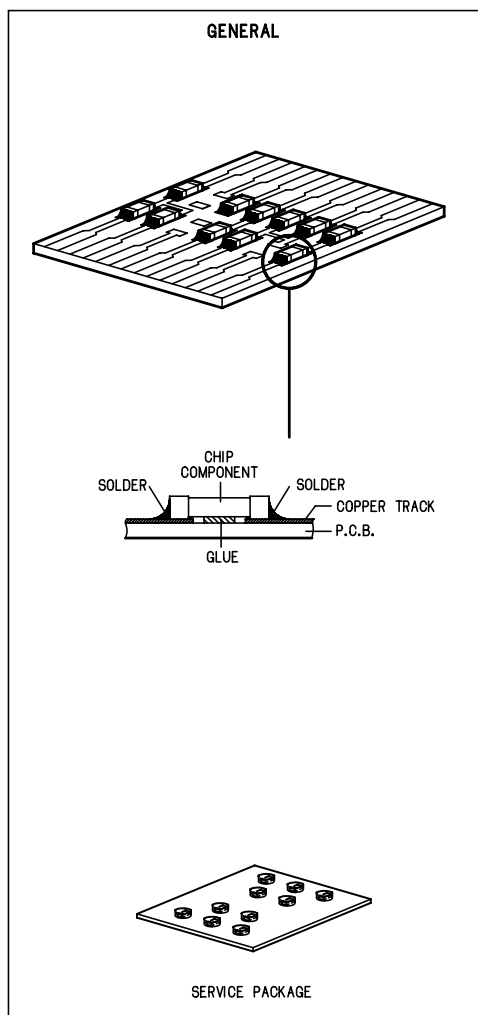
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HANDLING CHIP COMPONENTS



SERVICE TOOLS

- TORX T10 screwdriver with shaftlength 150mm.....4822 395 50423
- TORX screwdriver set SBC 163.....4822 295 50145
- Audio signal disc SBC 429.....4822 397 30184
- Playability test disc SBC 444.....4822 397 30245
- Test disc 5 (disc without errors) +
- Test disc 5A (disc with dropout errors, black spots and fingerprints)
SBC 426/426A.....4822 397 30096
- Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause").....4822 397 30155
- Universal test cassette Fe SBC 420.....4822 397 30071

AVAILABLE ESD PROTECTION EQUIPMENT

- anti-static table mat large 1200x650x1.25mm 4822 466 10953
- small 600x650x1.25mm 4822 466 10958
- anti-static wristband 4822 395 10223
- connection box (3 press stud connections, 1MΩ) 4822 320 11307
- extendible cable (2m, 2MΩ, to connect wristband to connection box) 4822 320 11305
- connecting cable (3m, 2MΩ, to connect table mat to connection box) 4822 320 11306
- earth cable (1MΩ, to connect any product to mat or to connection box) 4822 320 11308
- KIT ESD3 (combining all 6 prior products - small table mat) 4822 310 10671
- wristband tester 4822 344 13999

INFORMATION ABOUT LEAD-FREE SOLDERING

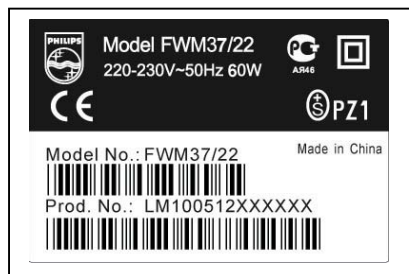
Philips CE is producing lead-free sets from 1.1.2005 onwards.

IDENTIFICATION:

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



Example S/N:



Bottom line of typeplate gives a 14-digit S/N. Digit 5&6 is the year, digit 7&8 is the week number, so in this case 2005 wk12

So from 0501 onwards = from 1 Jan 2005 onwards

Important note: In fact also products of year 2004 must be treated in this way as long as you avoid mixing solder-alloys (leaded/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
 - To reach at least a solder-temperature of 400°C,
 - To stabilize the adjusted temperature at the solder-tip
 - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded and lead-free).
If one cannot avoid or does not know whether product is lead-free, clean carefully the solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
- Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
- **Special information for BGA-ICs:**
 - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use the lead-free temperature profile, in case of doubt)
 - lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. (MSL=Moisture Sensitivity Level). This will be communicated via AYS-website. Do not re-use BGAs at all.
- For sets produced before 1.1.2005 (except products of 2004), containing leaded solder-alloy and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
- 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

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.

SPECIFICATIONS

GENERAL:

Mains voltage	: 110-127/220-240V Switchable
Mains frequency	: 50/60 Hz
Power consumption	: < 50W max. < 5W at standby
Clock accuracy	: 4 seconds per day
Dimension center unit	: 267 x 298 x 254 mm

TUNER:

FM

Tuning range	: 87.9 – 107.9 MHz
IF Frequency	: 10.7 MHz ± 20kHz
Aerial input	: 300 Ω dipole wire
Sensitivity at 26sb S/N	: < 18 µV
Selectivity at 600 kHz	
Bandwidth	: > 46 dB
IF rejection	: > 50 dB
Image rejection	: > 25 dB
Distortion	: < 2%
Crosstalk	: > 18 dB

MW

Tuning range	: 520 – 1710 kHz
Grid	: 10 kHz
IF Frequency	: 450 kHz ± 1kHz
Aerial input	: Loop antenna
Sensitivity at 26sb S/N	: < 4.4 mV/M
Selectivity at 18 kHz	
Bandwidth	: > 18 dB
IF rejection	: > 28 dB
Image rejection	: > 32 dB
Distortion	: < 5%

AMPLIFIER:

Output power	: 2 x 20 W RMS
Speaker impedance	: 6 ohm
Frequency response	
Within ± 3dB	: 50Hz – 15 kHz
Hyper bass sound ON	: 10dB ± 3dB at 100Hz
Digital sound control	: Flat /Rock/Jazz/Pop/ Classic
Headphone output	: 32 mW ± 2dB at 32 Ω

CASSETTE RECORDER:

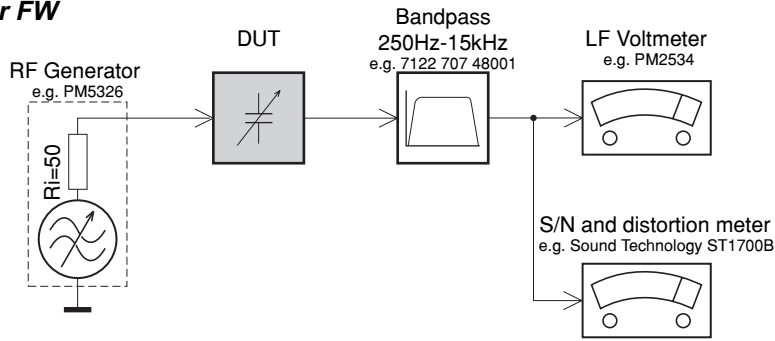
Number of tracks	: 2 x 2 stereo
Tape speed	: 4.76 cm/sec +2.5/-1.5%
Wow and flutter	: < 0.35% DIN
Fast-wind/rewind time	: < 160 sec. With C-60
Bias frequency	: 65 ± 5 kHz
R/P frequency response	: 50 – 10 kHz (8 dB)
Signal to noise radio	: > 35 dB with type 1 tape

COMPACT DISC:

Number of programming track	: 32
Frequency response	
Within ± 1.5 dB	: 20 Hz – 20 kHz
Signal/Noise ratio	: 50 dB/A-weighted
Distortion at 1 kHz	: < 3%
Channel separation at 1 kHz	: > 25 dB
Support disc format	:
Disc format ISO9660, single session CD	
Max albums: 25, max. titles: 255	
Bit rate : 128 bits (recommended)	

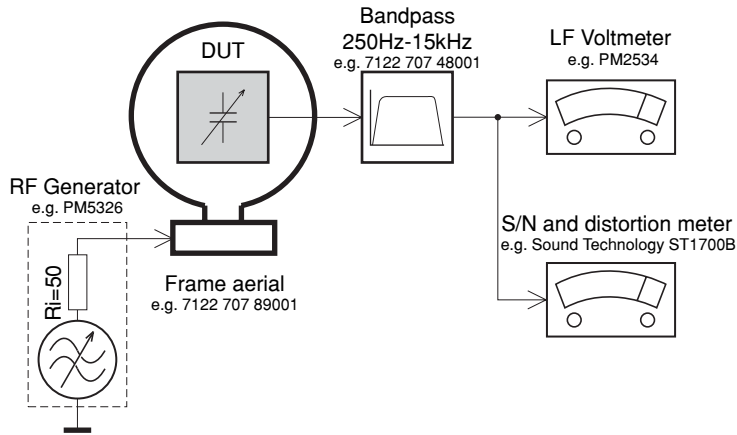
SERVICE MEASUREMENT

Tuner FW



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

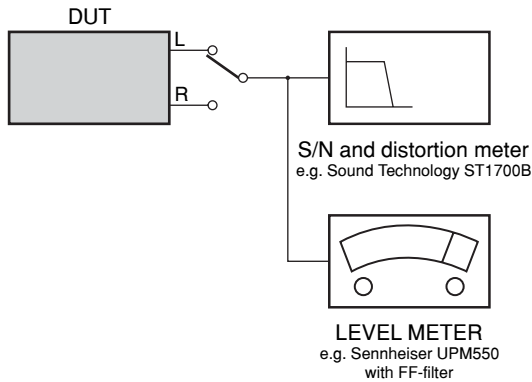
Tuner AM (MW, LW)



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

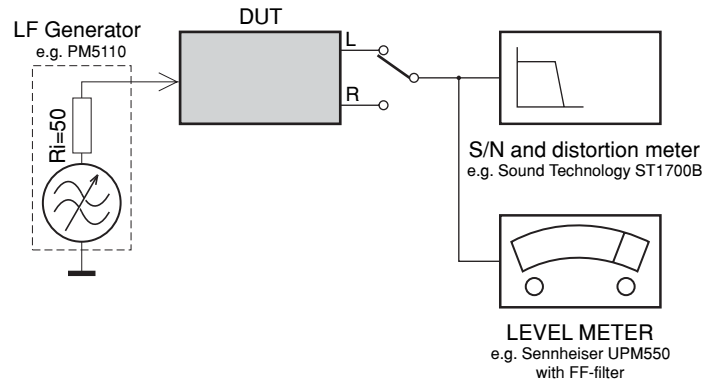
CD

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



RECORDER

Use Universal Test Cassette Fe SBC420 4822 397 30071



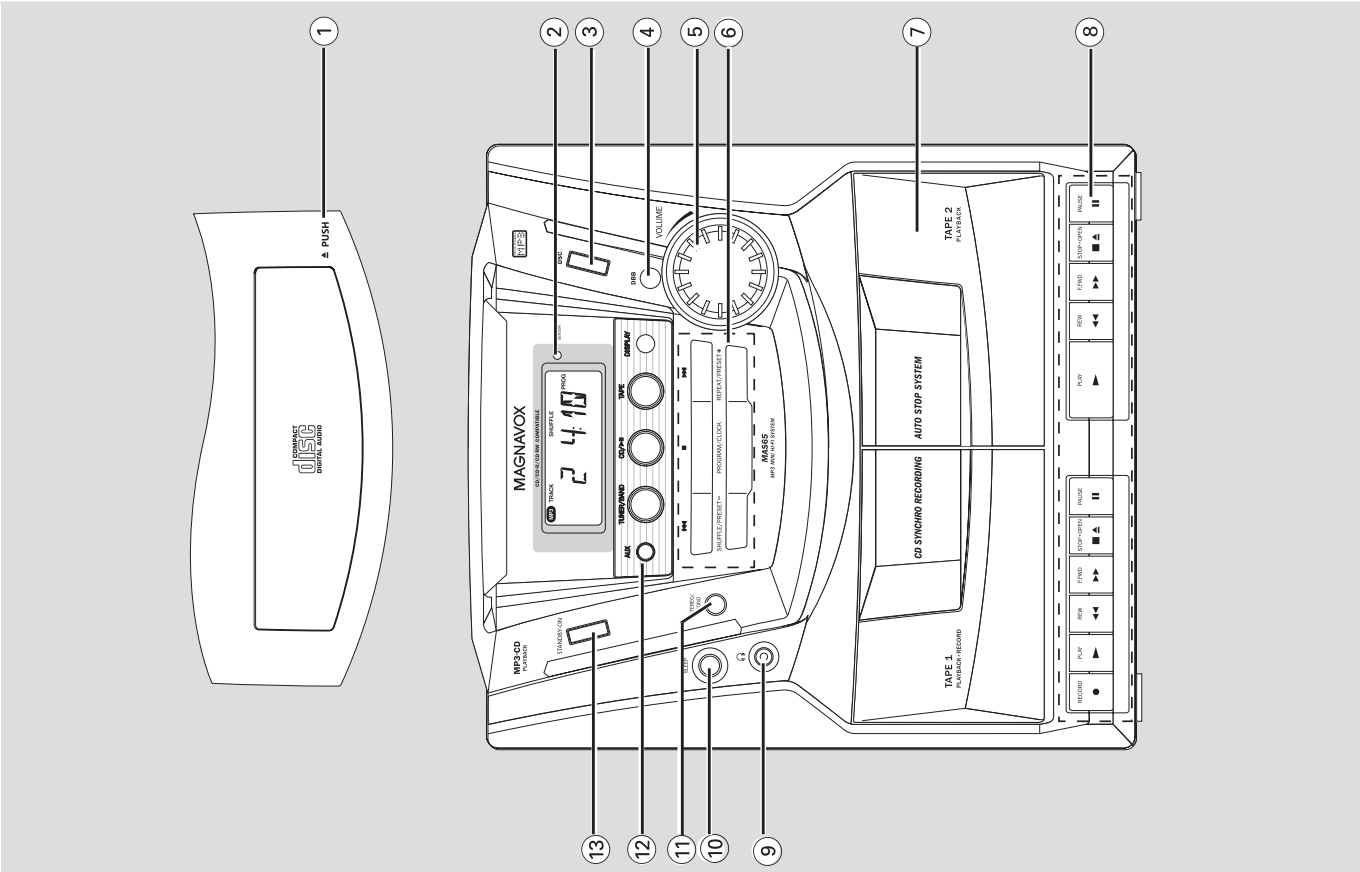
CONNECTION AND CONTROLS

Controls (illustrations on page 3)

- 9 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.
- 10 **SLEEP**
 - adjusts/switches off the sleep timer
- 11 **STEREO/MONO**
 - selects stereo or mono FM reception
- 12 **Source buttons**
AUX - selects the input from an additional connected appliance
TUNER (FM•AM) - select tuner source and toggles between the wavebands :FM or AM(MWV)
CD / ▶ - selects CD/MP3 source; starts or pauses CD/MP3 playback
TAPE - selects tape source
DISPLAY - MP3 only; displays disc information
- 13 **STANDBYON**
 - switches the system on or to standby mode.
 - switches off the sleep timer.

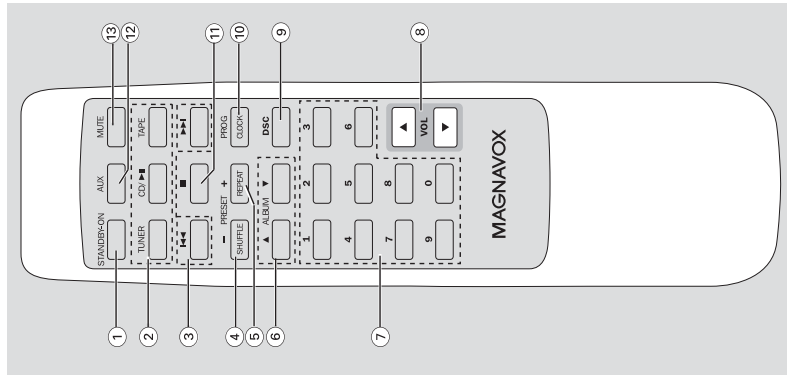
Controls on the system (Top and front panels)

- 1 **▲PUSH**
 - push to open the disc door.
- 2 **REMOTE SENSOR**
 sensor for the infrared remote control
Helpful hints: Always point the remote control towards this sensor.
- 3 **DSC (DIGITAL SOUND CONTROL)**
 - selects predefined sound settings: ROCK, JAZZ, POP, CLASSIC.
- 4 **DBB (Dynamic Bass Boost)**
 - turns the bass enhancement on/off
- 5 **VOLUME rotary**
 - adjusts the volume
- 6 **◀◀ / ▶▶**
 CD/MP3:skips or searches tracks/passage backward/forward.
 TUNER:.....tunes to radio stations.
 CLOCK:.....sets the hour/minute.
 ■ - stops playback; erase a program
 CD/MP3: stops playback; erase a program
- 7 **SHUFFLE/PRESET-**
 CD/MP3: plays a disc in random order
 TUNER: selects a preset radio station (down)
- 8 **REPEAT/PRESET +**
 CD/MP3: repeat a track, disc or a program
 TUNER: selects a preset radio station (up)
- 9 **PROGRAM/CLOCK**
 CD/MP3: programs tracks and reviews the program
 TUNER: programs preset radio stations
 CLOCK: sets the clock time
- 10 **Tape deck 1/2**
- 11 **Tape deck keys**
RECORD ● starts recording (for **TAPE 1** only)
PLAY ▶starts playback
REW◀◀ / F.FWD▶▶ fast rewinds/ winds a tape
STOP•OPEN ■▲stops playback; opens the tape holder
- 12 **PAUSE II**
- 13 **TAPE 1:** interrupts playback or recording
TAPE 2: interrupts playback



Controls

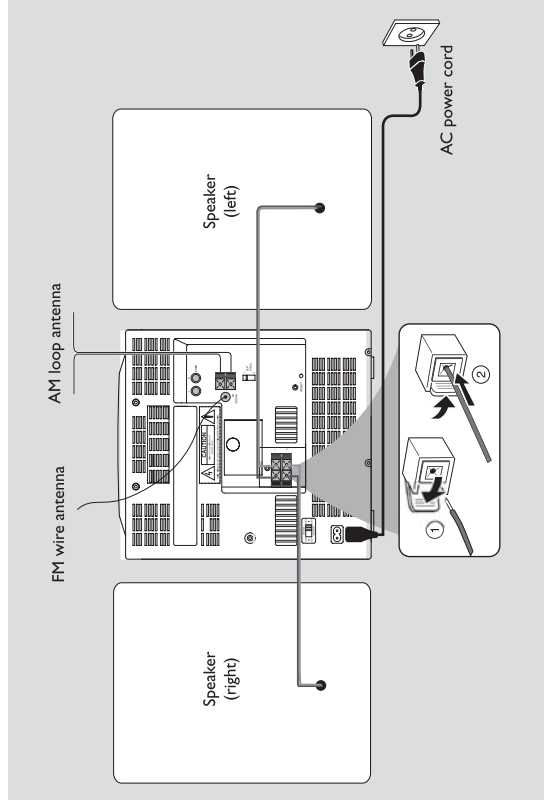
Remote control



- ③ **◀◀ / ▶▶**
 - CD/MP3: skips or searches tracks/passage backward/forward
 - TUNER: tunes to radio stations
 - CLOCK: sets the hour/minute
- ④ **SHUFFLE/PRESET -**
 - CD/MP3: plays a disc in random order
 - TUNER: selects a preset radio station (down)
- ⑤ **REPEAT/PRESET +**
 - CD/MP3: repeat a track, disc or a program
 - TUNER: selects a preset radio station (up)
- ⑥ **ALBUM ▲ / ▼**
 - MP3: selects albums (up, down)
- ⑦ **DIGITS 0 - 9**
 - CD/MP3: selects a track/album number
 - TUNER: selects a preset station
- ⑧ **VOL ▲ / ▼**
 - adjusts the volume
- ⑨ **DSC**
 - selects predefined sound settings: **ROCK, JAZZ, POP, CLASSIC**
- ⑩ **PROG/CLOCK**
 - CD/MP3: programs tracks and reviews the program
 - Tuner: programs preset radio stations
 - CLOCK: sets the clock time
- ⑪ **■**
 - CD/MP3: stops playback; erase a program
- ⑫ **AUX**
 - selects the input from an additional connected appliance
- ⑬ **MUTE**
 - switches the sound off temporarily

- ① **STANDBY-ON**
 - switches the system on or to standby mode
- ② **Source buttons**
 - **TUNER (FM+AM)**
select tuner source and toggles between the wavebands: FM or AM(MW)
 - **CD / ▶▶**
select CD/MP3 source; starts or pauses CD/MP3 playback
 - **TAPE**
selects tape source

Installation



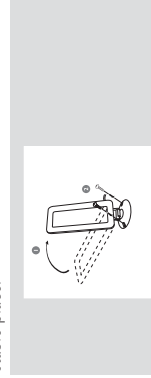
Rear connections

Warning:
Never make or change connections with the mains supply switched on.

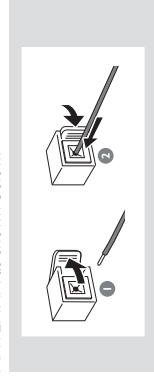
Open the clip of the black terminal and fully insert the stripped portion of the black (or unmarked) speaker cable into the socket, then close the clip.

① Antennas Connection

- ① **AM (MW) antenna**
 - Unfold the loop antenna and if necessary, use screws (not supplied) to fix it to a flat, hard and stable place:



- ② Fit the plug of the loop antenna to AM ANTENNA as shown below.

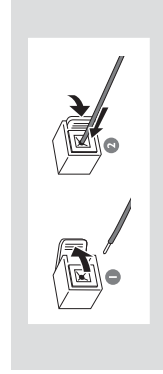


- ③ Adjust the antenna for optimal reception (as far as possible from a TV, VCR or radiation sources)

② Speakers connection

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

Connect the cables of the left speaker to L (red and black) and the cables of the right speaker to R (red and black) as follows:



Open the clip of the red terminal and fully insert the stripped portion of the coloured (or marked) speaker cable into the socket, then close the clip.

Installation

FM antenna

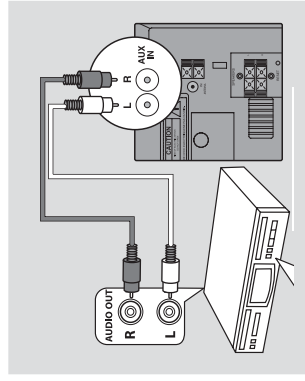
- 1 Extend the wire antenna and move the antenna in different positions for optimal reception (as far away as possible from the TV, VCR or other radiation sources).
- 2 Fix the antenna's end to the wall.

Connecting an additional appliance

- It is possible to use an additional appliance, e.g. TV, VCR, Laser Disc player, DVD player or CD recorder, with the system.
- 1 Insert the red plug of the red/white audio cables (not supplied) to the red socket AUX IN R and the white plug to the white socket AUX IN L.
 - 2 Connect the other end of the audio cables to the AUDIO OUT terminals of the additional appliance.

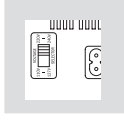
Helpful hints:

- If the connected device has only a single audio out terminal, connect it to the AUX IN left terminal. Alternatively, you can use a "single to double" cinch cable, but the output sound still remain mono.
- Always refer to the owner's manual of other equipment for complete connection.



Using AC power

- 1 If your system is equipped with a VOLTAGE SELECTOR, set this selector to your local power voltage if necessary.
- 2 Make sure all connections have been made before switching on the power supply.
- 3 Connect the power cable supplied to AC MAINS ~ and to the wall socket. This switches on the power supply.



When the system 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.

Installation

Inserting batteries into the remote control

Insert two batteries type R03 or AAA into the remote control with the correct polarity as indicated by the "+" and "-" symbols inside the battery compartment.

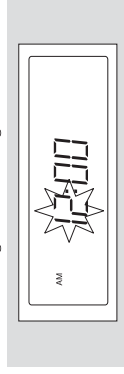


CAUTION!

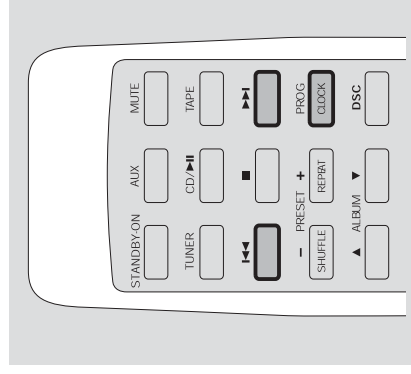
- Remove batteries if they are exhausted or will not be used for a long time.
- Do not use old and new or different types of batteries in combination.
- Batteries contain chemical substances, so they should be disposed off properly.

Setting the clock

- 1 The time is displayed using the 24-hour clock. Check the system is switched to standby mode. (see **Basic Functions. Switch on/to standby**)
- 2 Press and hold **PROGRAM/CLOCK** for more than 2 seconds. The hour digit starts flashing.



- 3 Hold down or press **◀** or **▶** repeatedly to set the hour. Release **◀** or **▶** when you have reached the correct setting.
- 4 Press **PROGRAM/CLOCK** to confirm the setting. The minute digit starts flashing.
- 5 Repeat step 3 to set the minute.
- 6 Press **PROGRAM/CLOCK** to confirm the setting. The clock shows the set time.



Helpful hints:

- You may lose your clock setting when the power cord is disconnected or power failure occurs.

For more information on operation instruction please visit Philips Audio internet site :

<http://www.audio.philips.com>

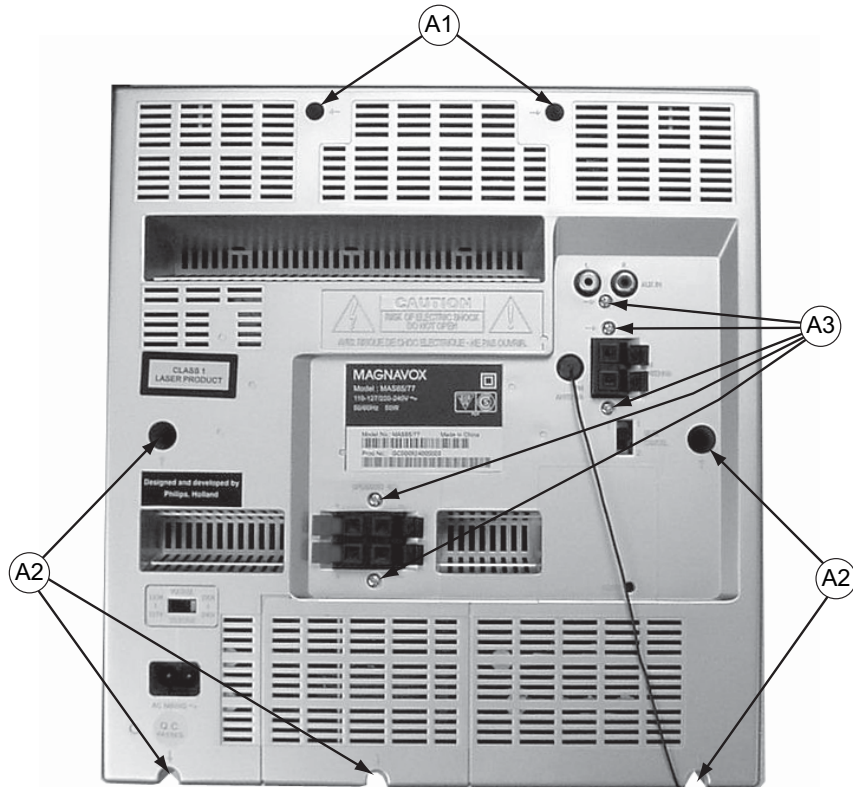
DISASSEMBLY DIADRAMS

A. Remove of Back cabinet

A1 : Remove screw SP3x10 - 2 pcs.

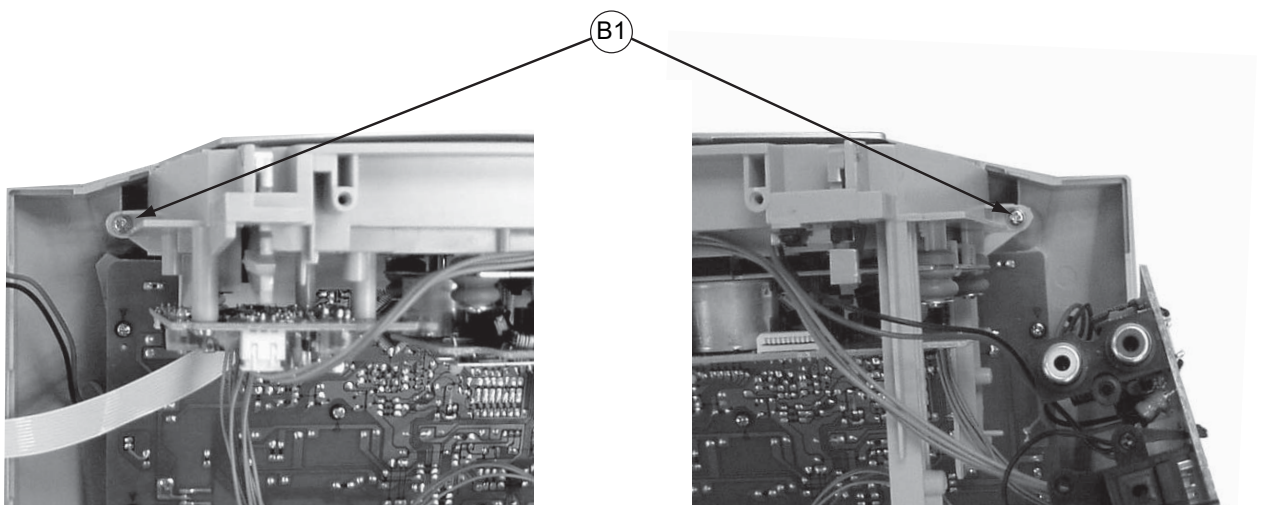
A2 : Remove screw SP3x25 - 5 pcs.

A3 : Remove screw SP3x8 - 5 pcs.



B. Remove of CD Tray

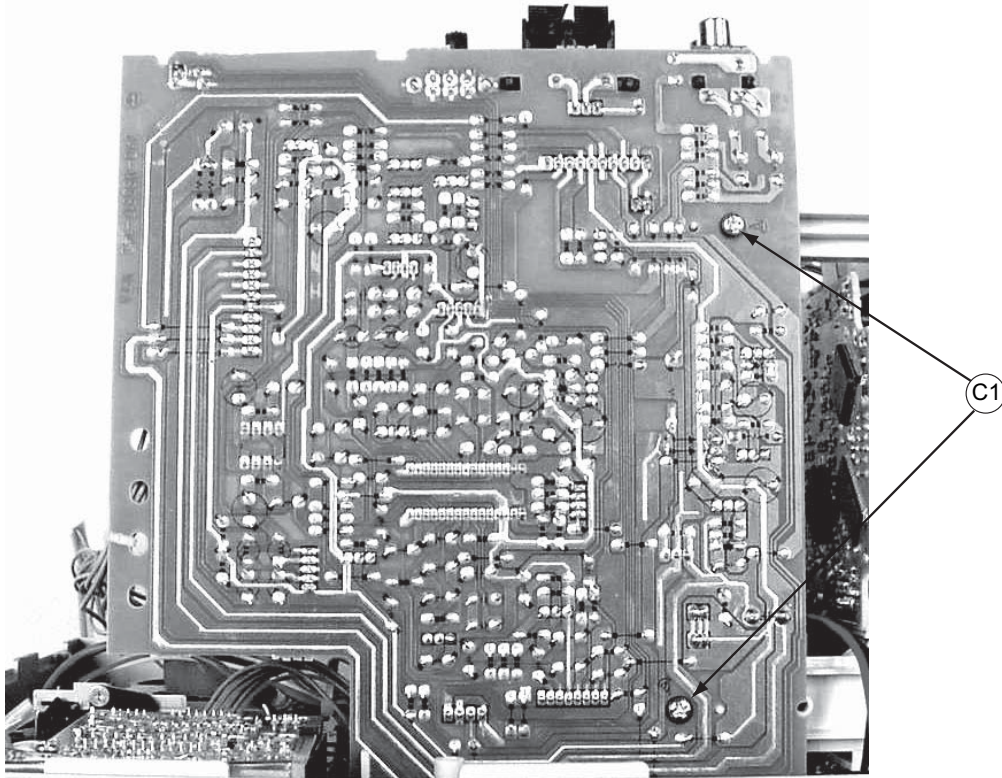
B1 : Remove screw SP3x10 (Washer) - 2 pcs.



DISASSEMBLY DIADRAMS

C. Remove of Main PCB Assembly

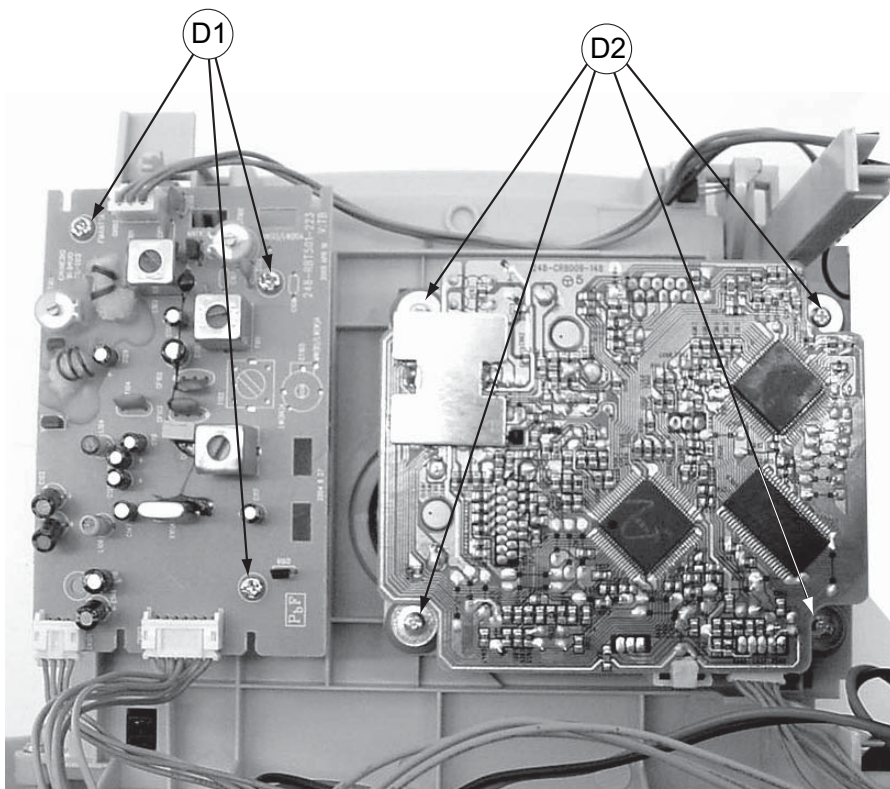
C1 : Remove screw SP3x10 - 2 pcs.



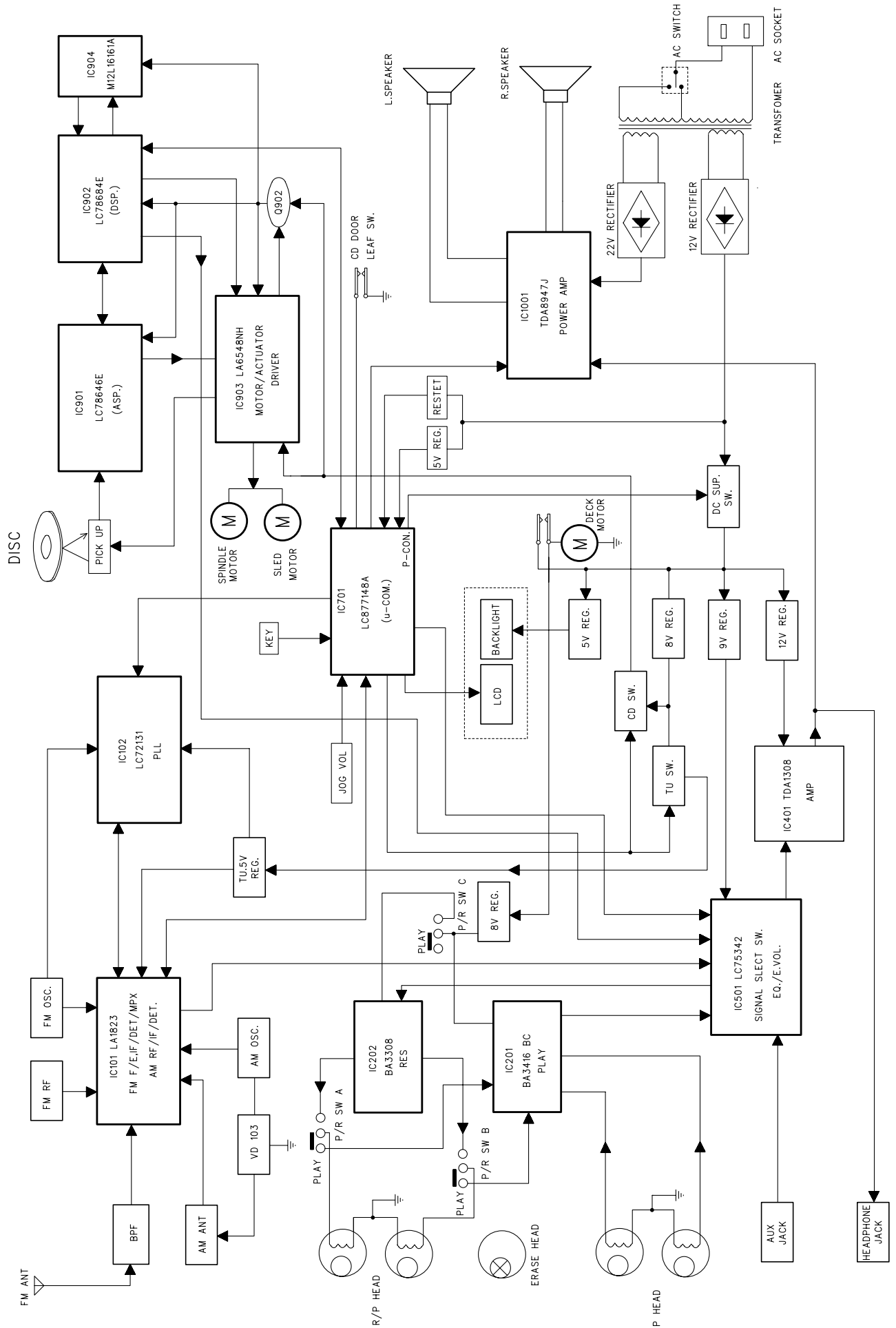
D. Remove Tuner PBAS and CD PBAS

D1 : Remove screw SP3x8 - 3 pcs.

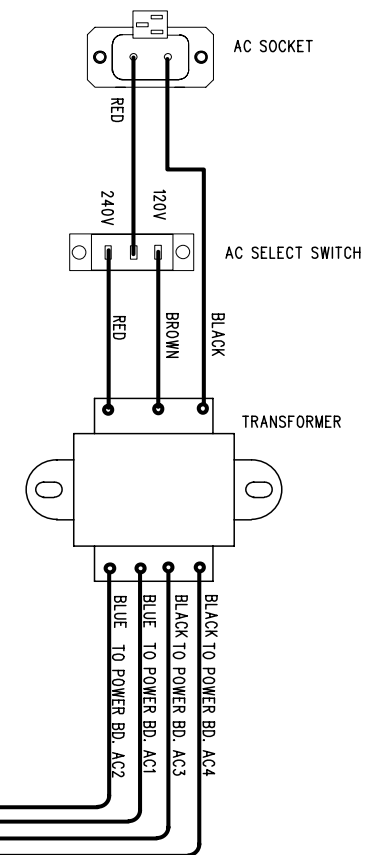
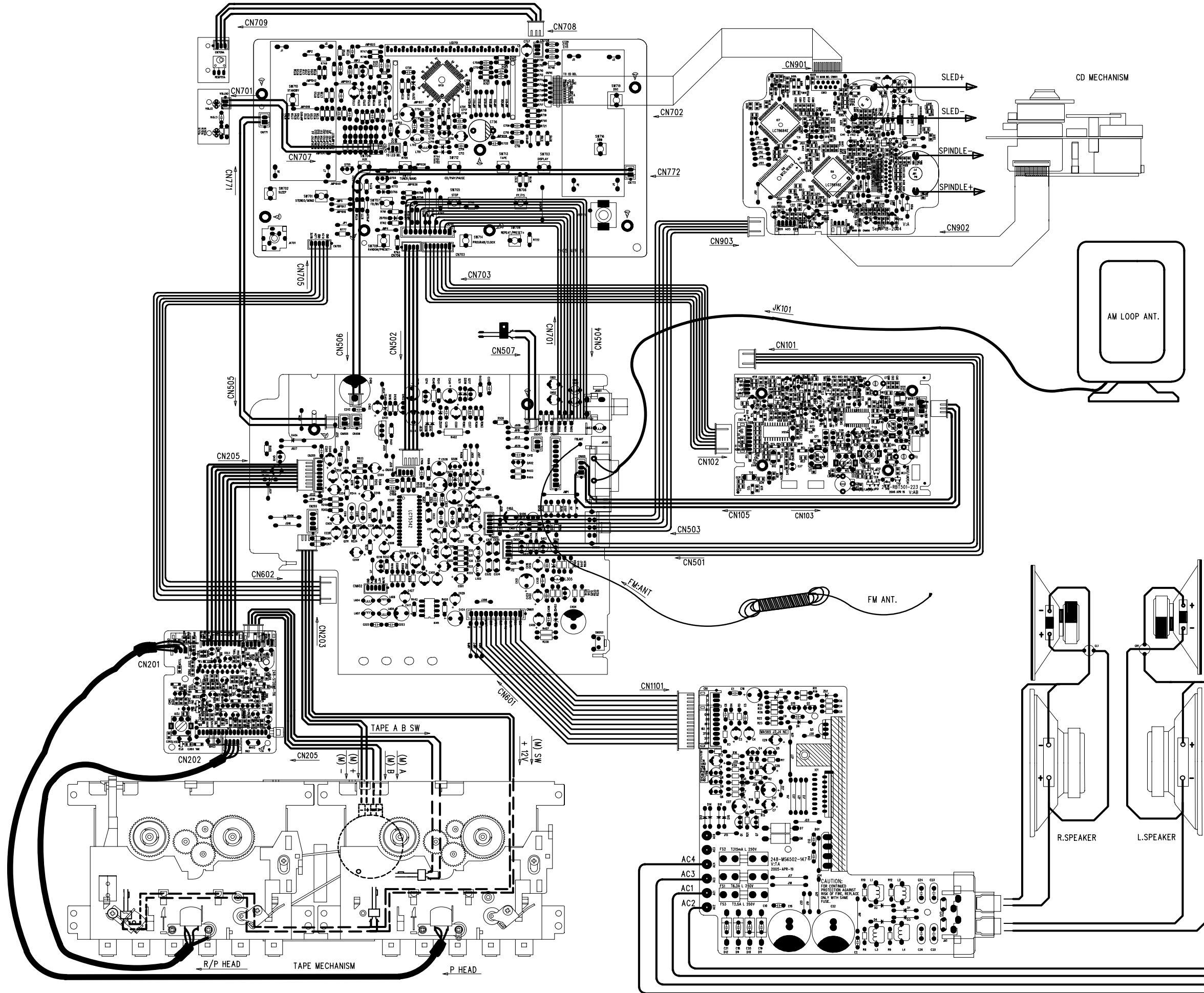
D2 : Remove screw SP3x8 - 4 pcs.



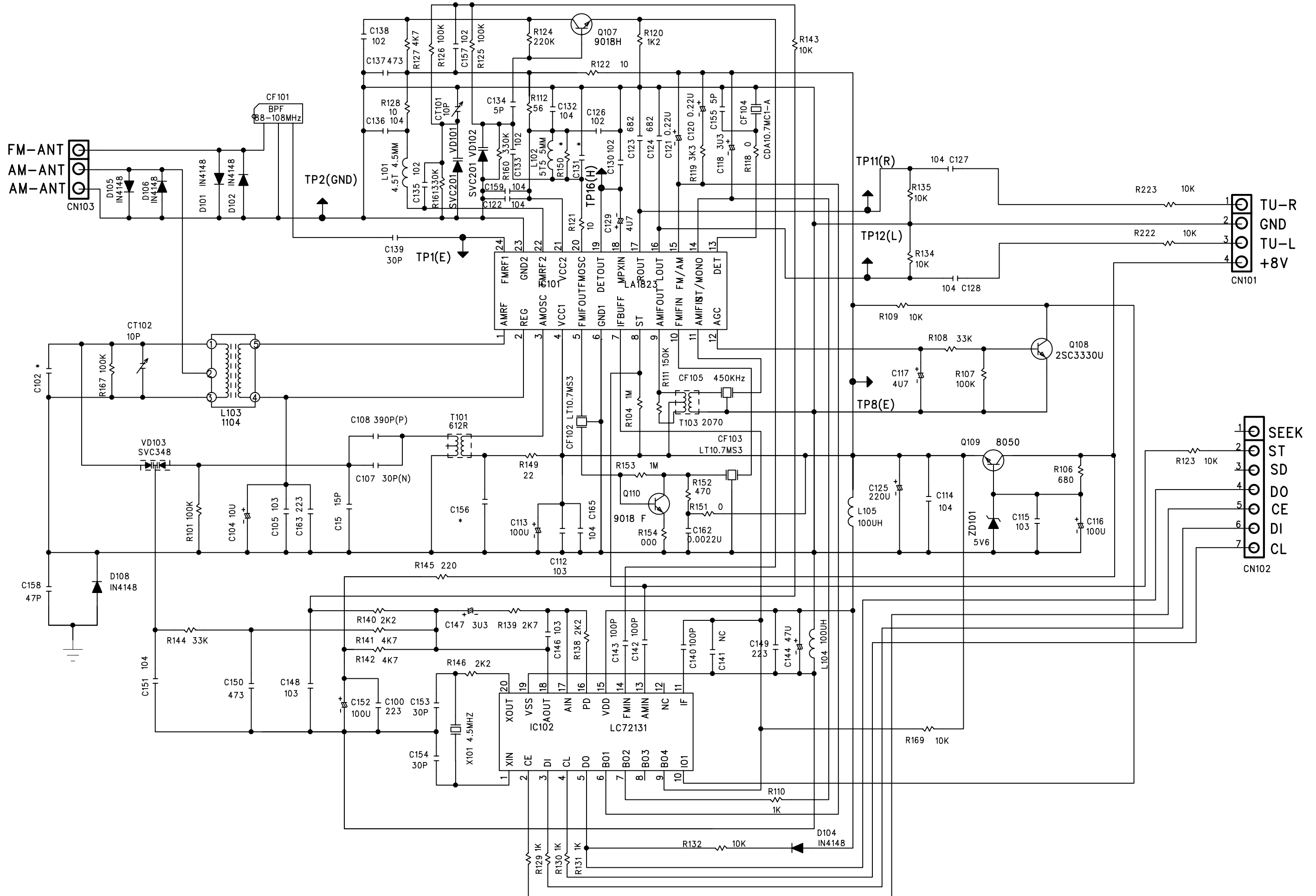
BLOCK DIAGRAMS



SET WIRING DIAGRAM

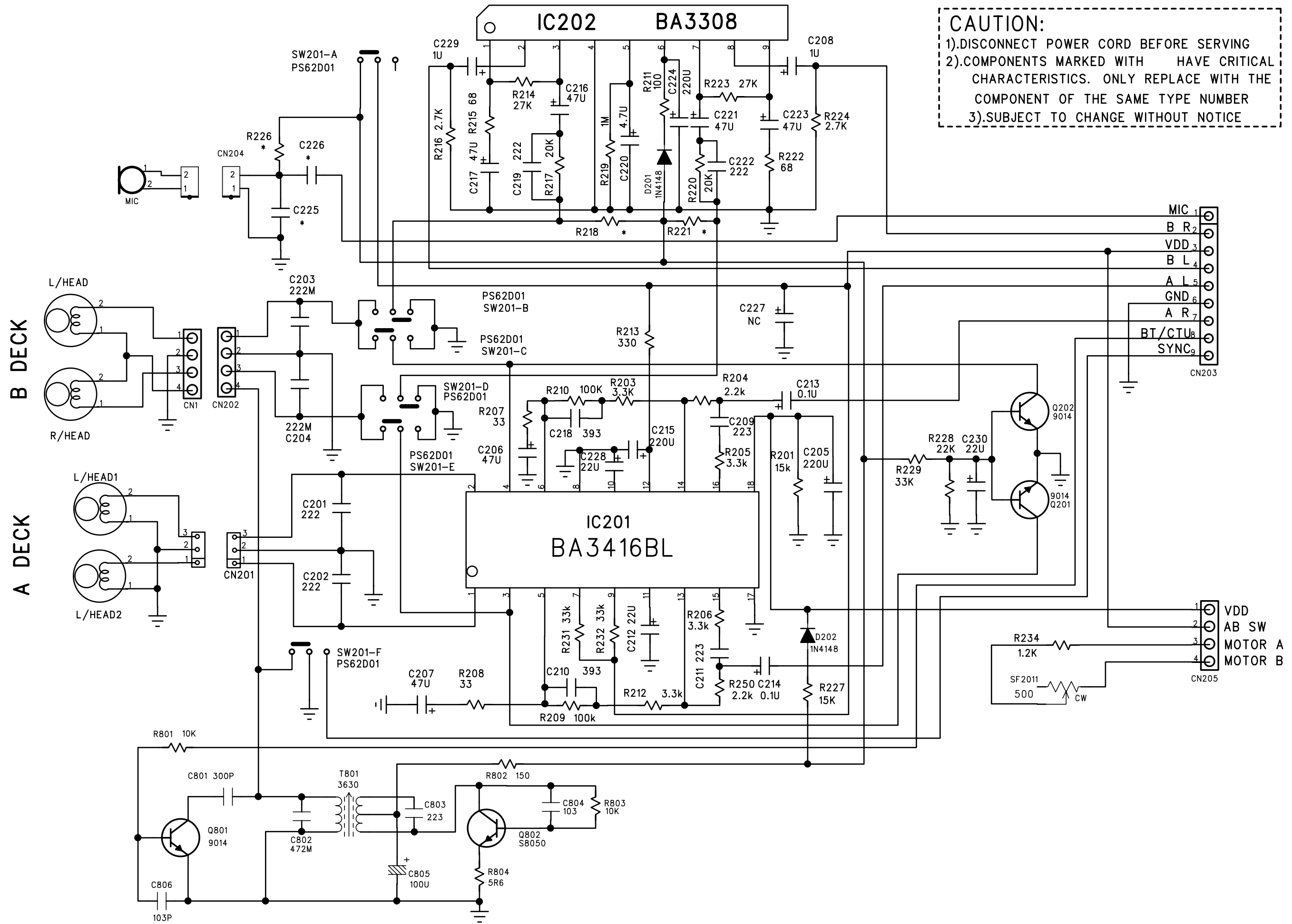


CIRCUIT DIAGRAM - RADIO BOARD



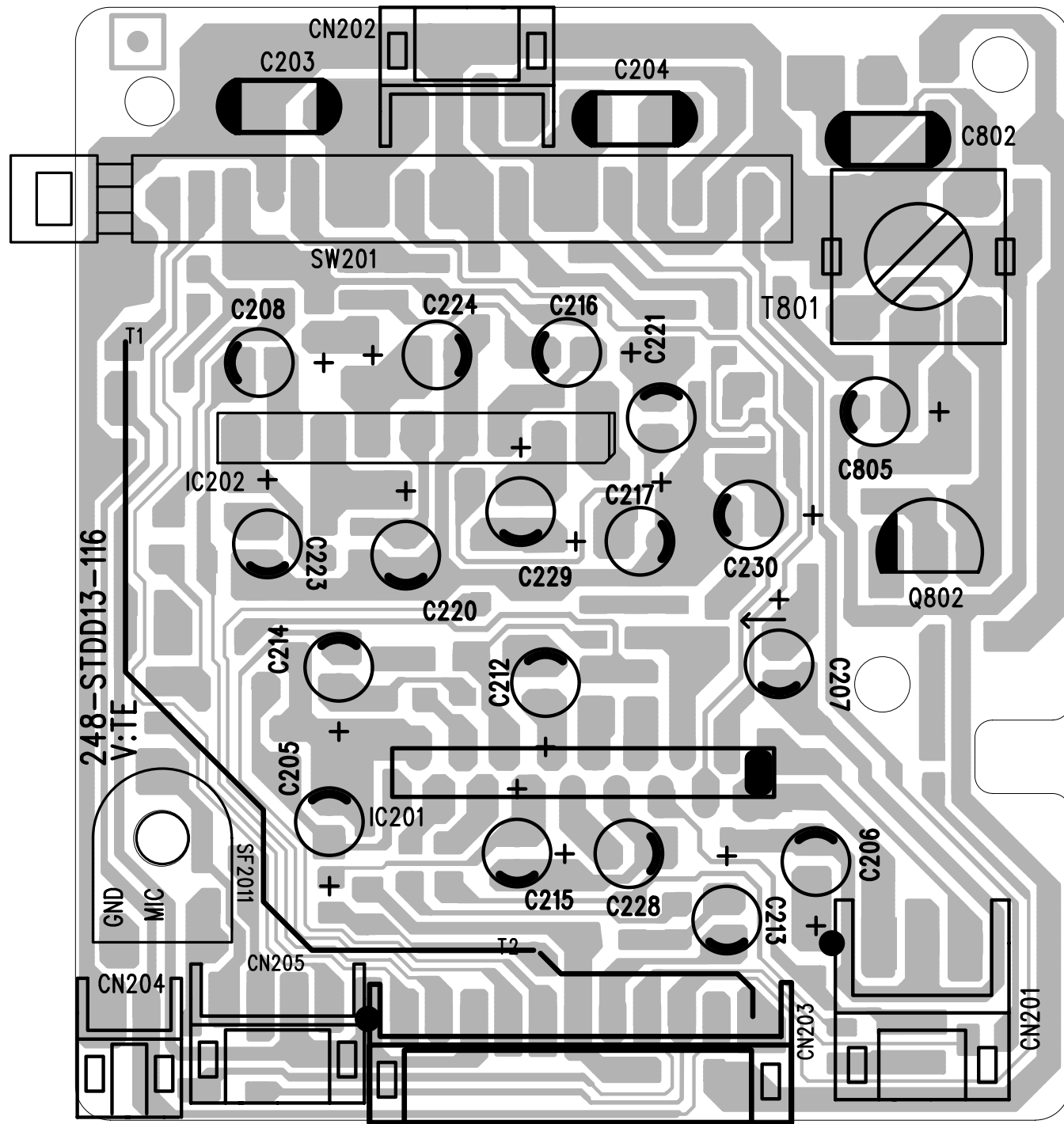
CIRCUIT DIAGRAM - CASSETTE BOARD

CAUTION:
 1).DISCONNECT POWER CORD BEFORE SERVING
 2).COMPONENTS MARKED WITH * HAVE CRITICAL CHARACTERISTICS. ONLY REPLACE WITH THE COMPONENT OF THE SAME TYPE NUMBER
 3).SUBJECT TO CHANGE WITHOUT NOTICE

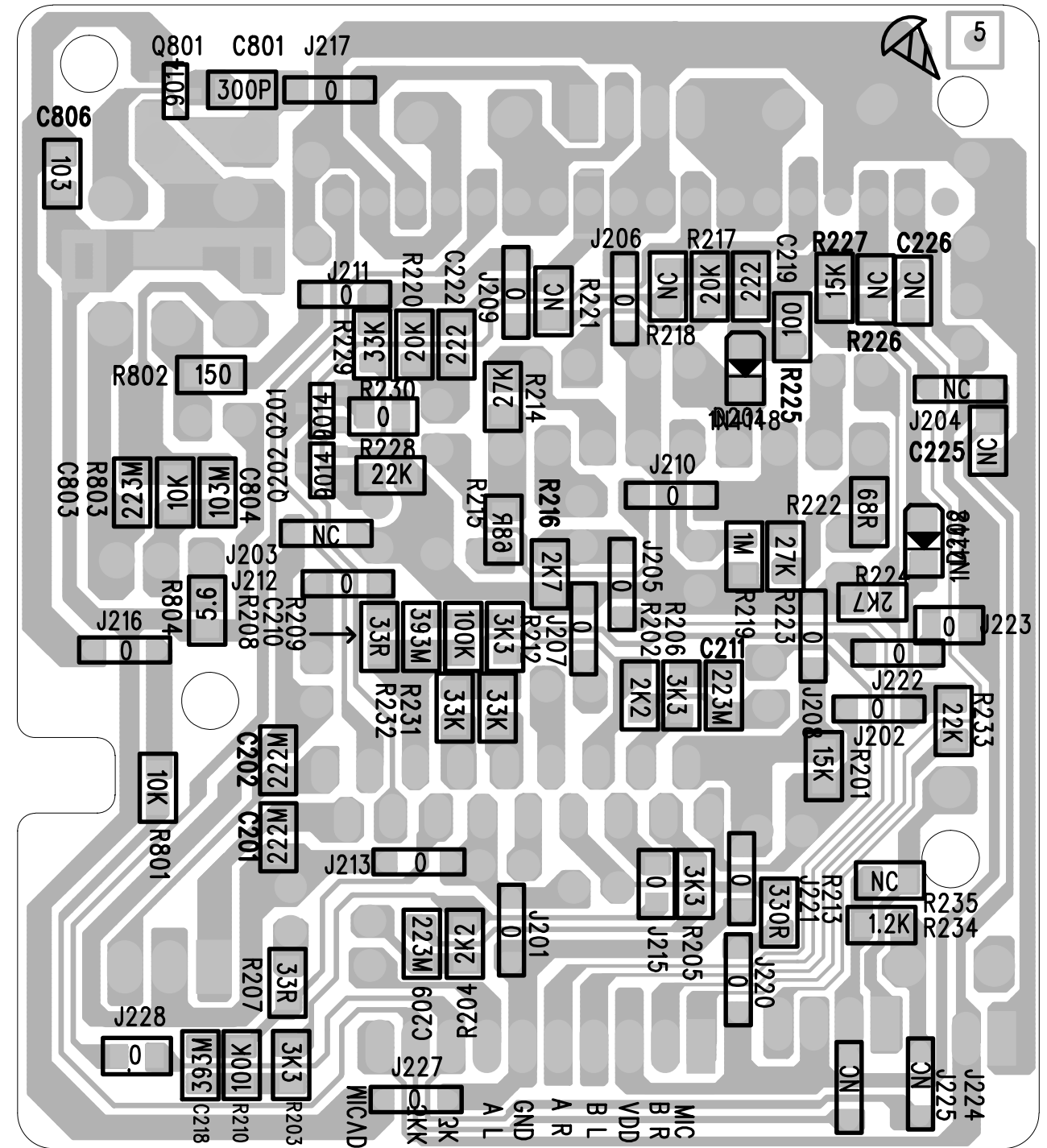


LAYOUT DIAGRAM - CASSETTE BOARD

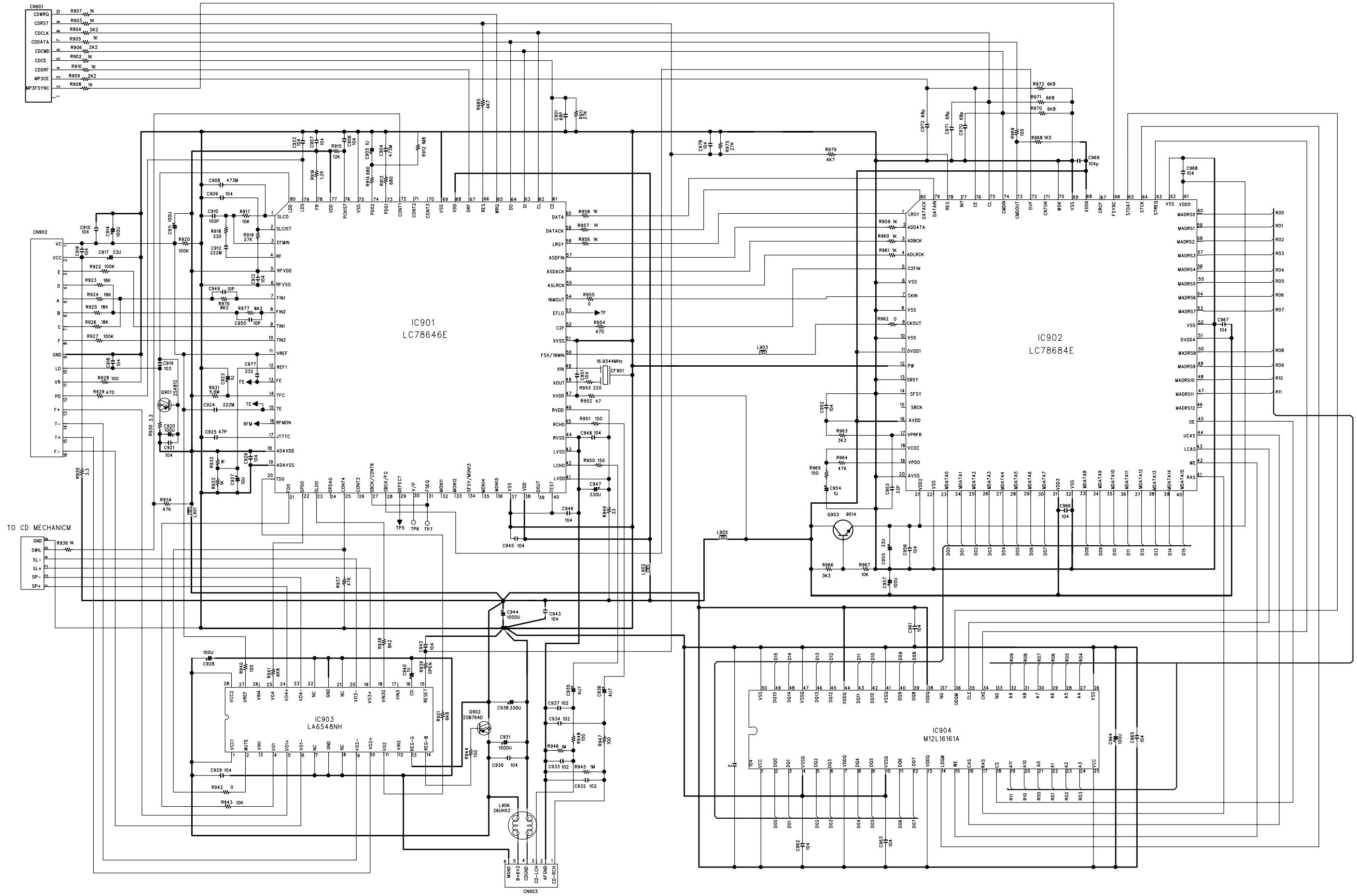
COMPONENT SIDE



COPPER SIDE

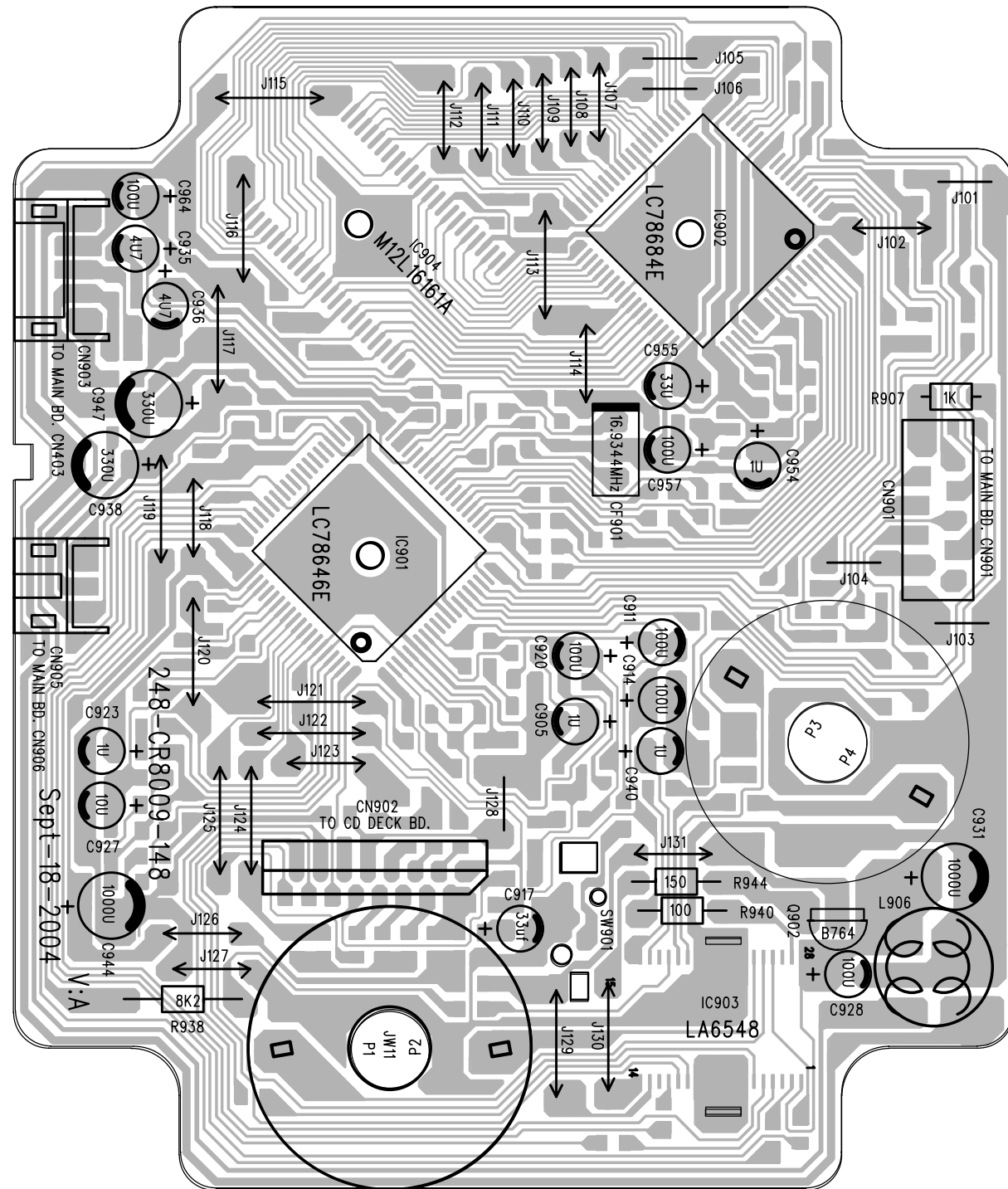


CIRCUIT DIAGRAM - CD BOARD

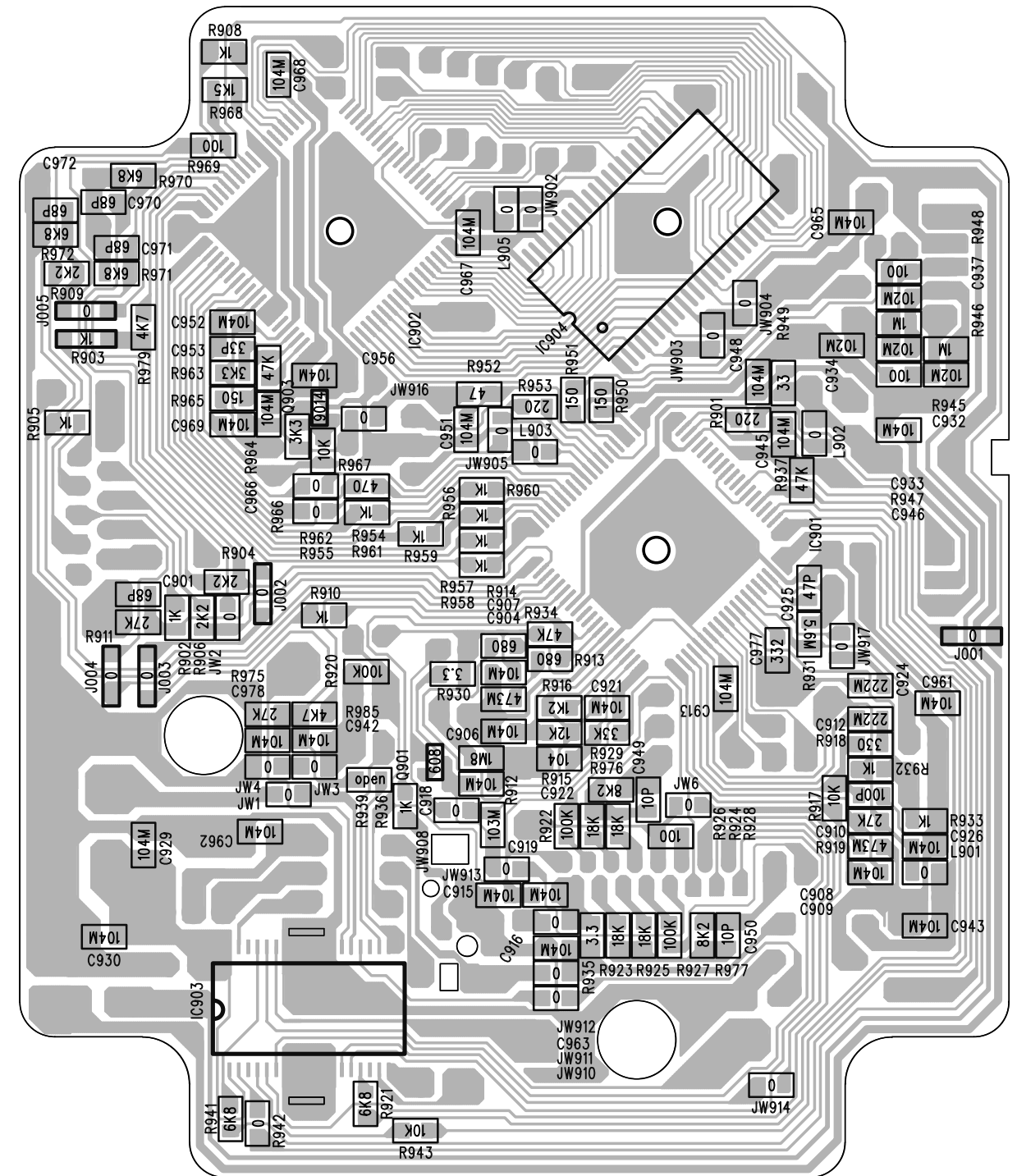


LAYOUT DIAGRAM - CD BOARD

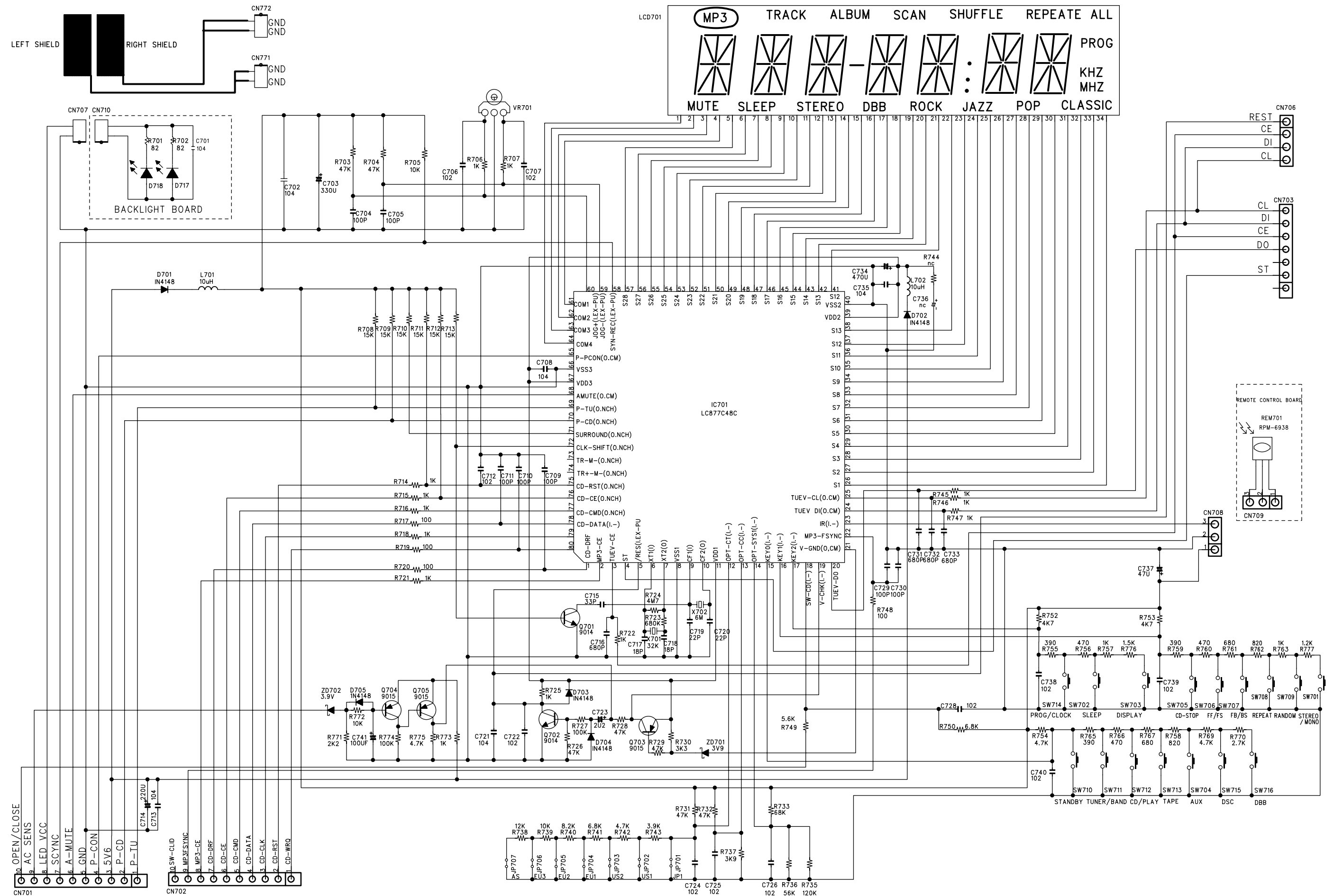
COMPONENT SIDE



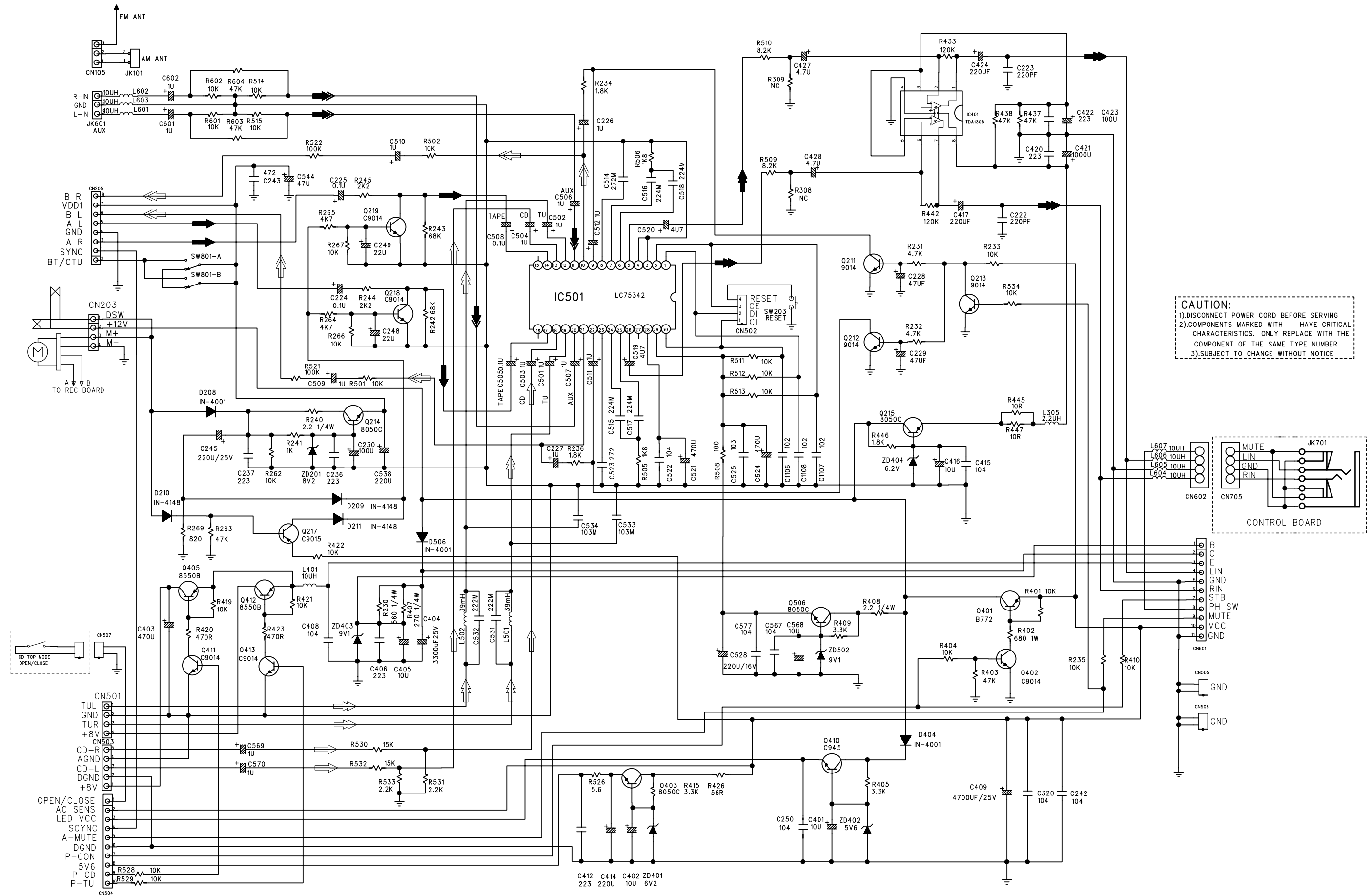
COPPER SIDE



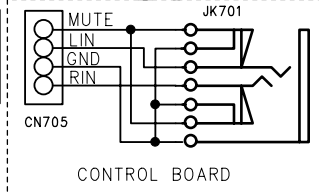
CIRCUIT DIAGRAM - CONTROL BOARD



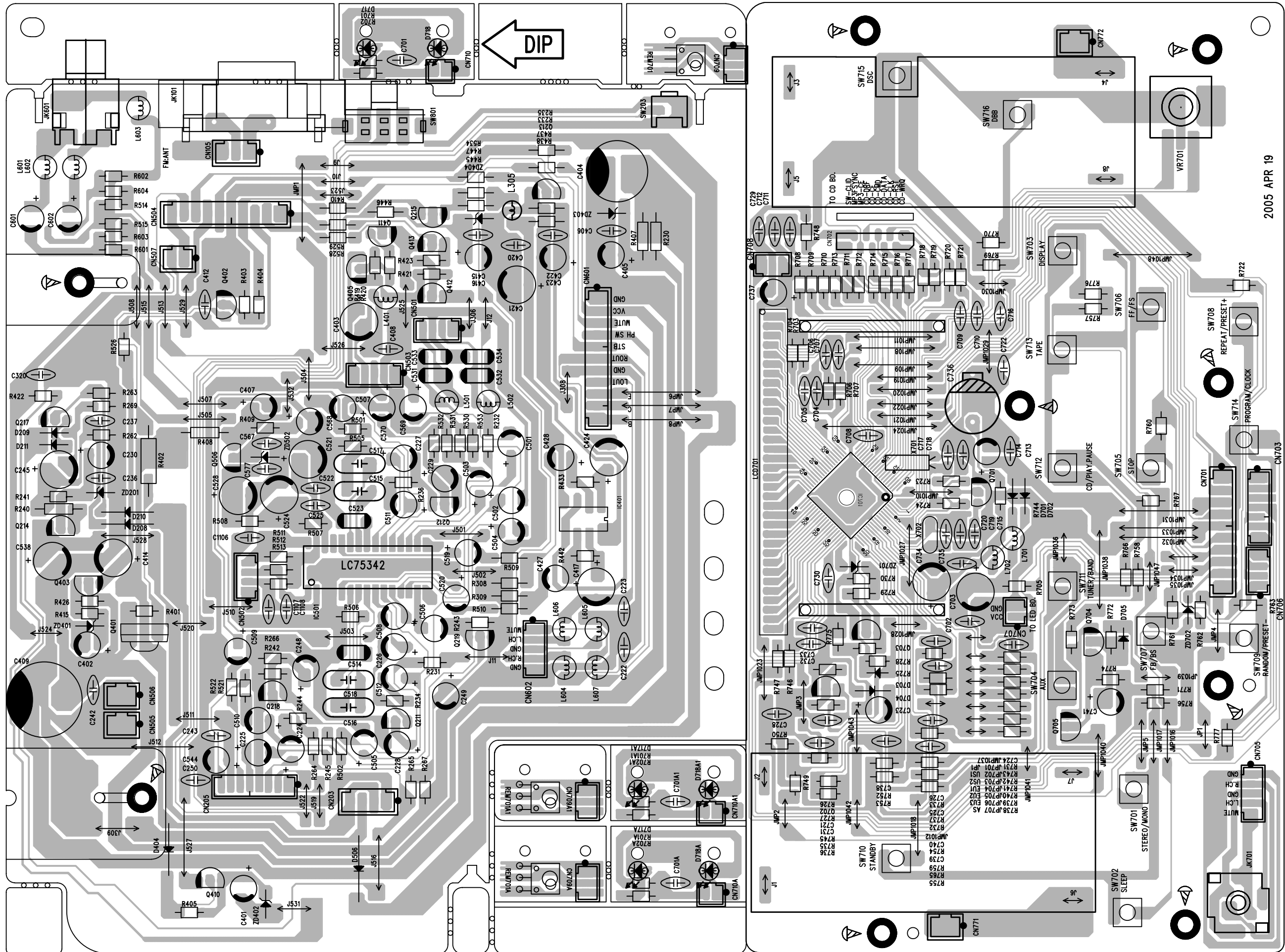
CIRCUIT DIAGRAM - MAIN BOARD



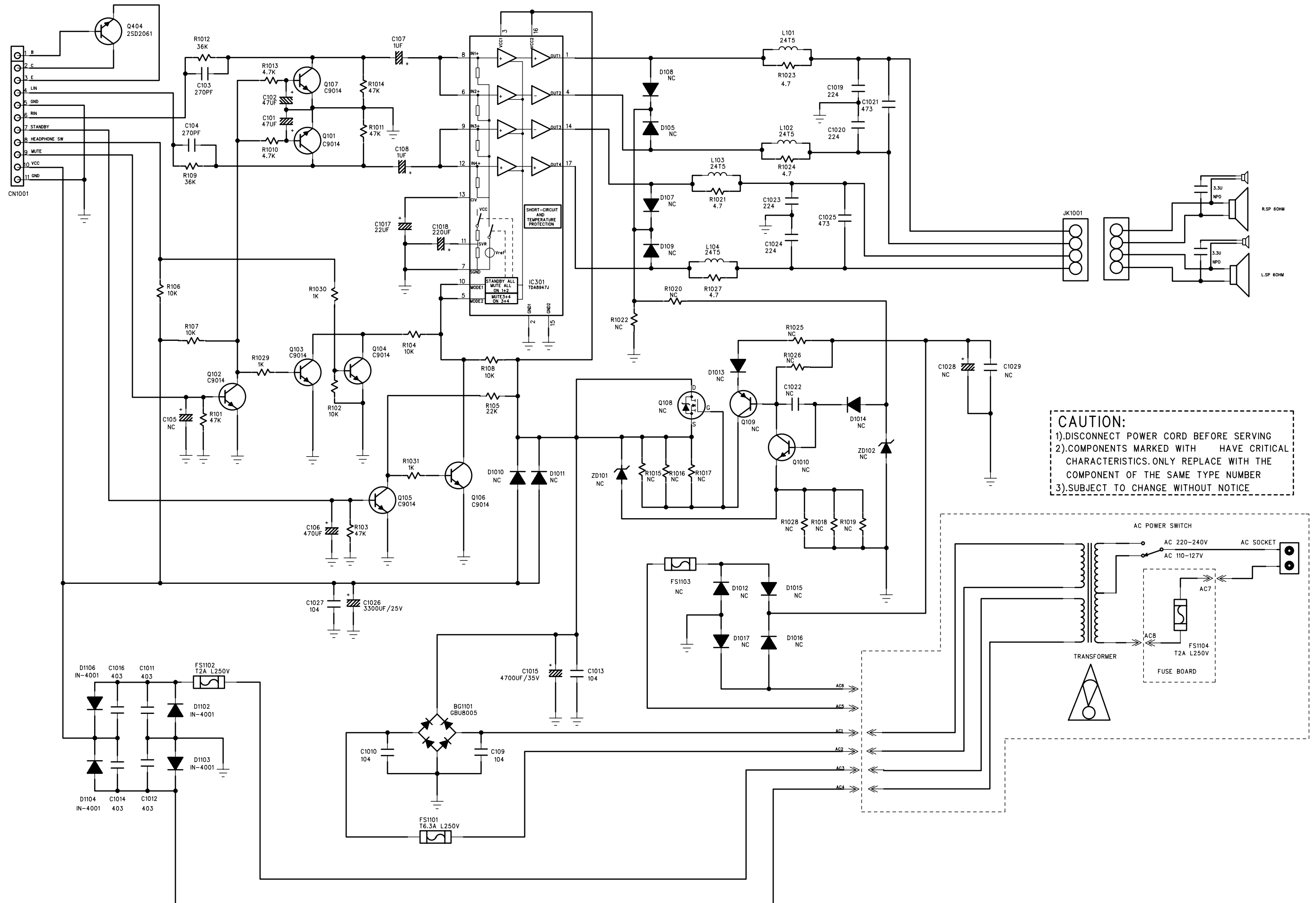
CAUTION:
 1).DISCONNECT POWER CORD BEFORE SERVING
 2).COMPONENTS MARKED WITH * HAVE CRITICAL CHARACTERISTICS. ONLY REPLACE WITH THE COMPONENT OF THE SAME TYPE NUMBER
 3).SUBJECT TO CHANGE WITHOUT NOTICE




LAYOUT DIAGRAM - CONTROL AND MAIN BOARD

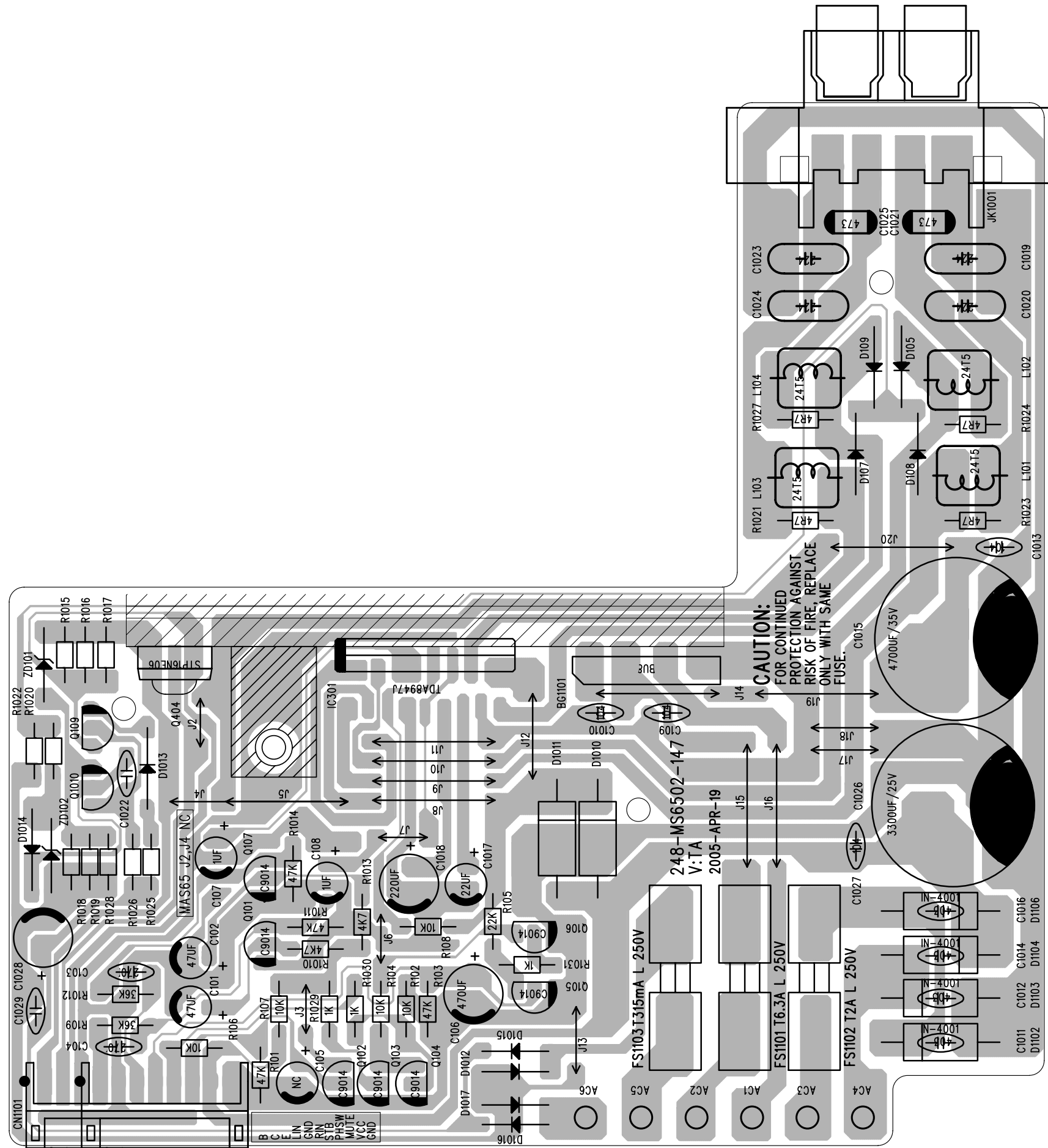


CIRCUIT DIAGRAM - POWER BOARD

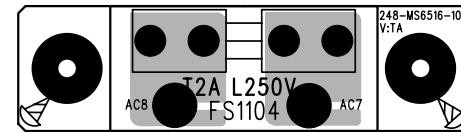


CAUTION:
 1).DISCONNECT POWER CORD BEFORE SERVING
 2).COMPONENTS MARKED WITH  HAVE CRITICAL CHARACTERISTICS. ONLY REPLACE WITH THE COMPONENT OF THE SAME TYPE NUMBER
 3).SUBJECT TO CHANGE WITHOUT NOTICE

LAYOUT DIAGRAM - POWER BOARD

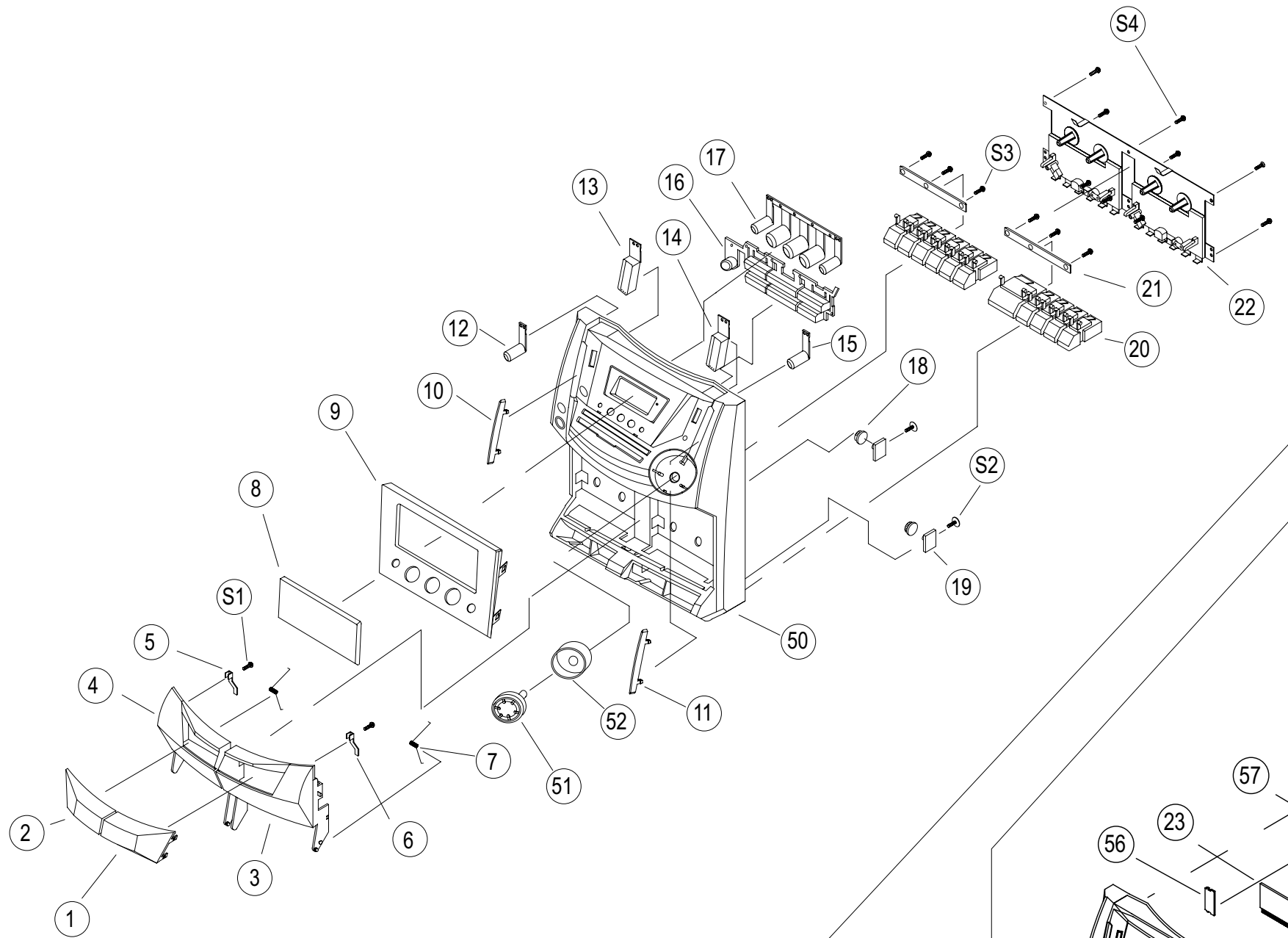


LAYOUT DIAGRAM - FUSE BOARD

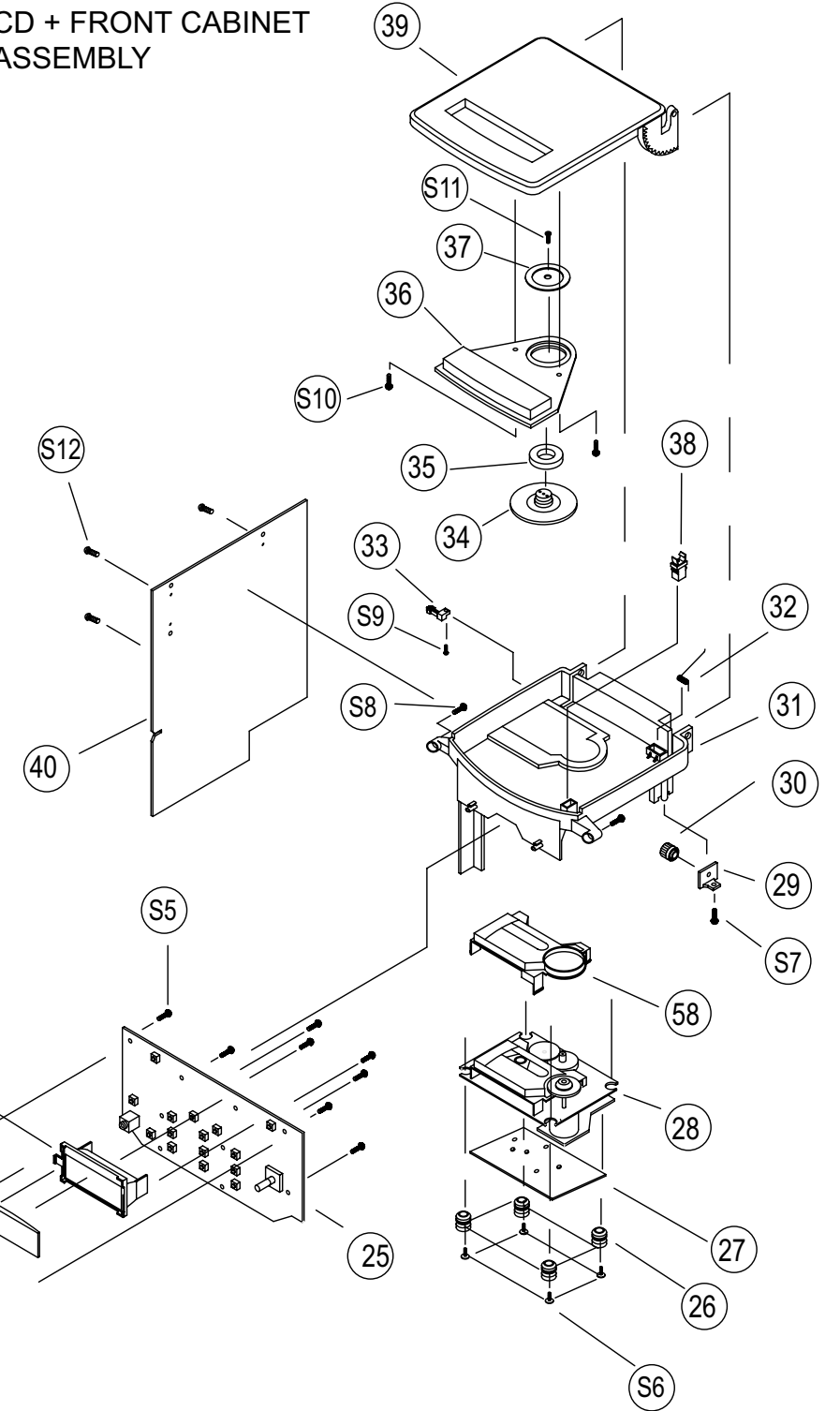


EXPLODED VIEW DIAGRAM

FRONT CABINET ASSEMBLY



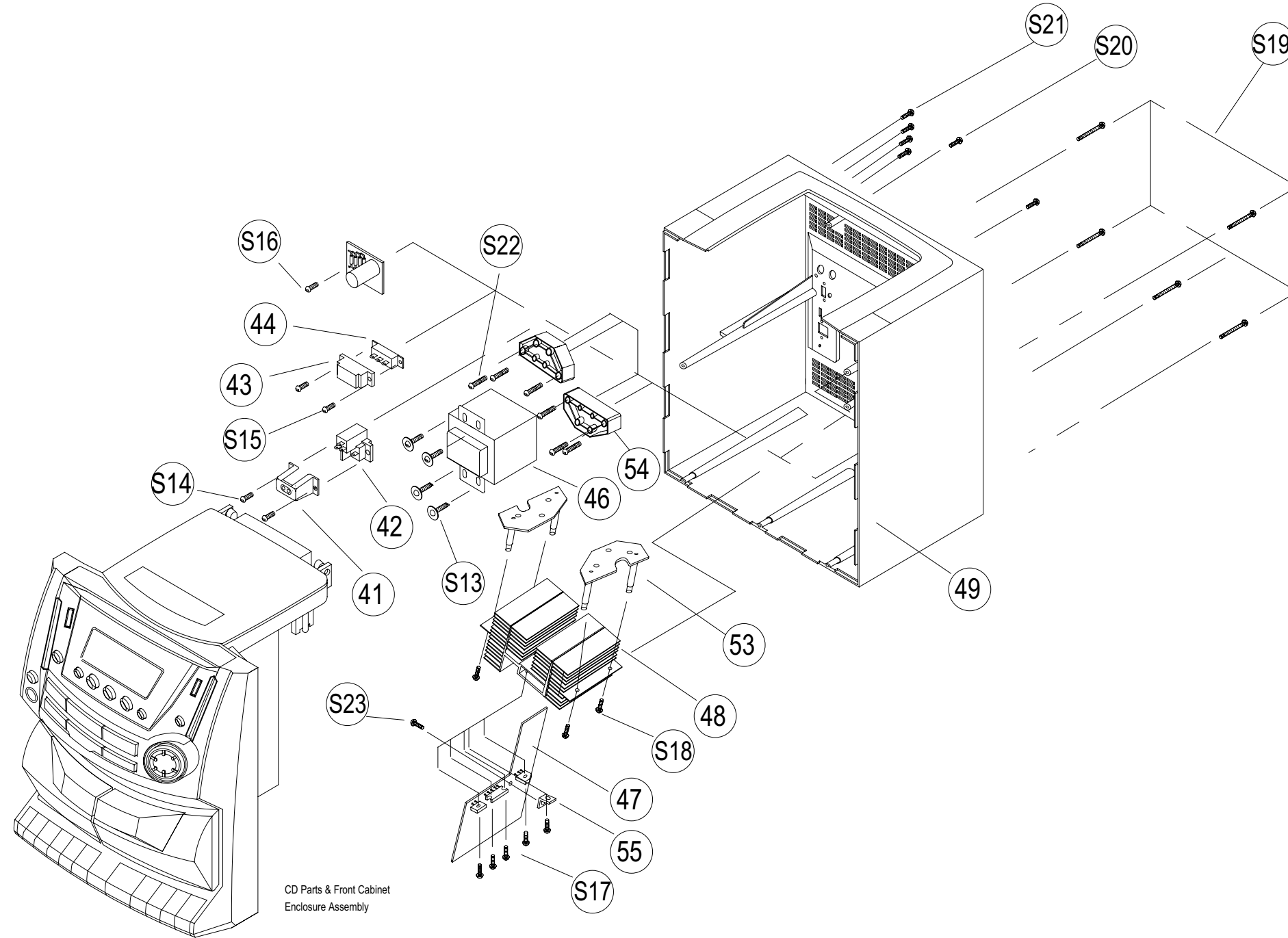
CD + FRONT CABINET ASSEMBLY



Front Cabinet Assembly

EXPLODED VIEW DIAGRAM

CD + FRONT + BACK CABINET ASSEMBLY



MECHANICAL PARTS LIST

MAS65/21 ACCESSORIES

- 9940 000 01739 AM EXTERNAL ANTENNA LOOP
- 9940 000 02799 REMOTE CONTROL MAS65
- 9940 000 02798 SPEAKER BOX ASSY
- △ 9940 000 02773 POWER CORD SET (/21)
- △ 9940 000 02061 POWER CORD SET (/77)

MAS65/21 MECHANICAL PARTS LIST

- 1 9940 000 02749 CASS DOOR LENS (R)
- 2 9940 000 02748 CASS DOOR LENS (L)
- 3 9940 000 02744 CASS DOOR RIGHT
- 4 9940 000 02743 CASS DOOR LEFT
- 5 9940 000 02747 CASS DOOR SPEING PLATE

- 7 9940 000 02771 CASS DOOR SPRING
- 8 9940 000 02766 DISPLAY LENS
- 9 9940 000 02757 FRONT LENS
- 10 9940 000 02745 DECORATION PLATE(L)
- 11 9940 000 02746 DECORATION PLATE(R)

- 12 9940 000 02767 BASS KNOB
- 13 9940 000 02764 POWER KNOB
- 14 9940 000 02759 EQ KNOB
- 15 9940 000 02761 BASS KNOB
- 16 9940 000 02765 FUNCTION KNOB

- 17 9940 000 02763 CD CONTROL KNOB
- 18 9940 000 01759 CASS DOOR GEAR
- 19 9940 000 01761 GEAR HOLER - CASS DOOR
- 20 9940 000 01782 CASS KNOB (L)
- 20 9940 000 01781 CASS KNOB (R)

- 22 9940 000 01738 CASS DECK HY-21SW-718
- 28 9940 000 02797 CD DECK DA11MMV
- 31 9940 000 02751 CD TRAY
- 32 9940 000 02769 SPRING FOR CD DOOR
- 34 9940 000 02754 CD CHUCK M

- 35 9940 000 02768 CD MAGNET RING
- 36 9940 000 02756 CD DOOR LENS
- 37 9940 000 02753 CD CHUCK A
- 38 9940 000 01744 CD DOOR LOCK
- 39 9940 000 02752 CD DOOR

- 49 9940 000 02742 BACK CABINET
- 50 9940 000 02741 FRONT CABINET
- 51 9940 000 02762 VOLUME KNOB
- 52 9940 000 02758 VOLUME KNOB RING
- 58 9940 000 02755 CD MEDHANISM COVER

ELECTRICAL PARTS LIST**TUNER BOARD**

CT101	9940 000 02776	TRIMMER 10 PF RED
CT102	9940 000 02776	TRIMMER 10 PF RED
IC101	9940 000 01707	I.C. LA1823-ESIA
IC102	9940 000 01708	I.C. LC72131
L103	9940 000 01713	I.F.T. ANT OSC RED
T101	9940 000 01712	I.F.T OSC RED 10MM MW
T103	9940 000 01714	I.F.T YELLOW 10MM
VD101	9940 000 01709	DIODE VCD/SVC201
VD102	9940 000 01709	DIODE VCD/SVC201
VD103	9940 000 01711	DIODE VCD/SVC348

CASSETTE BOARD

IC201	9940 000 01736	I.C. BA3416BL
IC202	9940 000 01735	I.C. B-3308 DUAL MODEL
SW201	9940 000 01737	RECORDING SW. PS-62D01-S

CD BOARD

IC901	9940 000 02794	I.C. LC78646E
IC902	9940 000 02795	I.C. LC78684
IC903	9940 000 02793	I.C. LA6548
IC904	9940 000 02796	I.C. M12L16161A (ESMT)
	9940 000 02792	FFC CABLE 16 P 80MM
	9940 000 02797	CD DECK DA11MMV
	9940 000 01771	LEAF SW. LS-053-02

MAIN BOARD

IC401	994000002778	I.C. TDA1308 H/P AMP
IC501	994000001716	I.C. LC75342
JK101	994000001719	ANTENNA JACK 75 OHM
JK601	994000002779	RCA JACK AV2-8.4-34
Q401	994000002777	TRANS. KSB-772Y
SW203	994000001717	TACT SWITCH
SW801	994000001718	SLIDE SW. SK22F03G12

MISCELLANEOUS

⚠	994000002772	POWER TRANSFORMER
⚠	994000002774	AC SOCKET
⚠	994000002775	VOLTAGE SELECTOR

CONTROL BOARD

D717	994000001729	LED 5MM 53B3SC08
D718	994000001729	LED 5MM 53B3SC08
IC701	994000002789	I.C. LC877C48C
JK701	994000001727	STEREO EARPHONE JACK
LCD701	994000002787	LCD 5.DISPLAY
REM701	994000002791	REMOTE SENSOR RPM-7100
SW701	994000002786	TACT SWITCH 2P
SW702	994000002786	TACT SWITCH 2P
SW703	994000002786	TACT SWITCH 2P
SW704	994000002786	TACT SWITCH 2P
SW705	994000002786	TACT SWITCH 2P
SW706	994000002786	TACT SWITCH 2P
SW707	994000002786	TACT SWITCH 2P
SW708	994000002786	TACT SWITCH 2P
SW709	994000002786	TACT SWITCH 2P
SW710	994000002786	TACT SWITCH 2P
SW711	994000002786	TACT SWITCH 2P
SW712	994000002786	TACT SWITCH 2P
SW713	994000002786	TACT SWITCH 2P
SW714	994000002786	TACT SWITCH 2P
SW715	994000002786	TACT SWITCH 2P
SW716	994000002786	TACT SWITCH 2P
VR701	994000001728	POTARY ENCODER
	994000002788	FFC CABLE 10P 250MM

POWER BOARD

BG1101	994000002781	BRIDGE RECTIFIERS 8.0A
FS1101	⚠ 994000002784	FUSE 6.3A 250V TSD
FS1104	⚠ 994000002785	FUSE 2A 250V TSD
IC301	⚠ 994000002783	POWER IC TDA8947J
JK1001	994000001722	SPEAKER TERMINAL
Q404	994000002782	TRANS. 2SD-2061E