

Service  
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# Service Manual



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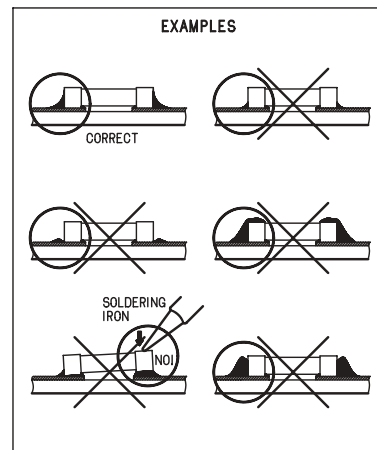
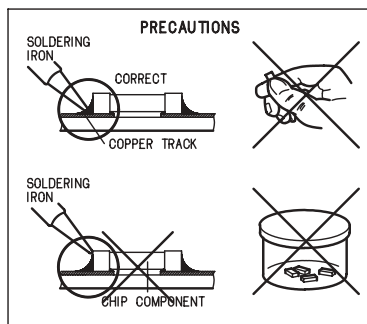
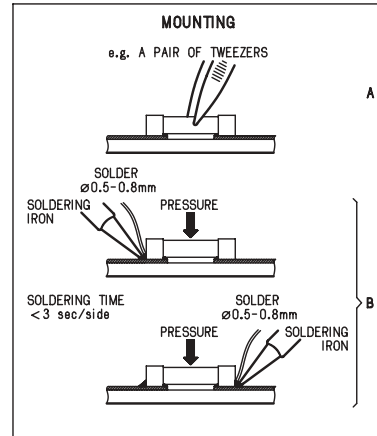
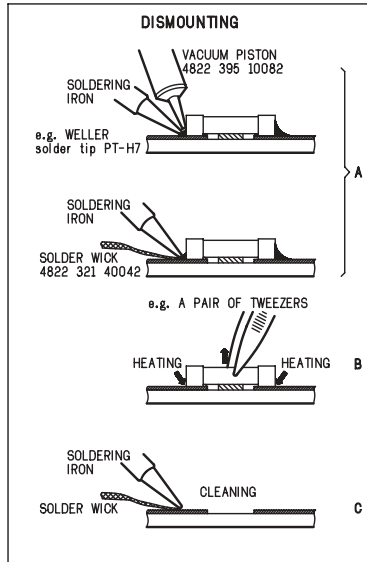
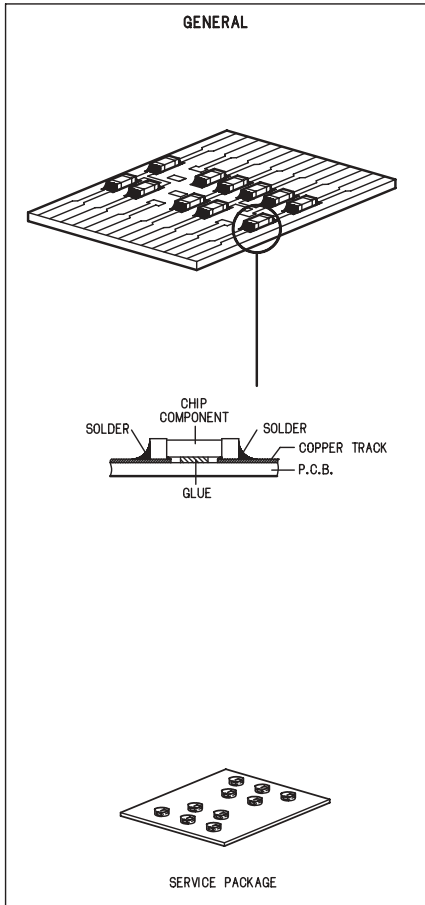
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**PHILIPS**

# HANDLING CHIP COMPONENTS



**(GB) WARNING**

All ICs and many other semiconductors 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 wristband with resistance. Keep components and tools at this potential.

**ESD**



**(NL) WAARSCHUWING**

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op dit zelfde potentiaal.

**(F) ATTENTION**

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfilez le bracelet sert d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

**(D) WARNUNG**

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unvorsichtige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren. Sorgen Sie dafür, daß Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind. Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

**(I) AVVERTIMENTO**

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialeto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

**(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

**(F)**

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées. Les composants de sécurité sont marqués

**SAFETY**



**(D)**

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden. Sicherheitsbauteile sind durch das Symbol markiert.

**(NL)**

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast. De Veiligheidsonderdelen zijn aangeduid met het symbool

**(I)**

Le norme di sicurezza estigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati. Componenti di sicurezza sono marcati con

**(GB)**

**DANGER:** Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

**(S) Varning!**

Osynlig laserstrålning när apparaten är öppnad och spärrar är urkopplad. Betrakta ej strålen.

**(DK) Advarsel!**

Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.



**(GB)**

After servicing and before returning the set to customer perform a leakage current measurement test from all exposed metal parts to earth ground, to assure no shock hazard exists. The leakage current must not exceed 0.5mA.

**(F)**

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

**(FIN) Varoitus!**

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

## SPECIFICATIONS

### GENERAL

Mains voltage	-/00C/05/10 : 230 V
	-/01 : 120/230 V
Mains frequency	-/00C/05/10 : 50 Hz
	-/01 : 50 / 60 Hz
Battery	mains : 9 V (R14 x 6)
Power consumption	: < 5 W typ.
Dimension (L x D x H)	: 360 x 225 x 152 mm
Weight	: 2.3 Kg

### AMPLIFIER

Output power	mains : 2 x 1 W
	battery : 2 x 1 W
Speaker impedance	: 2 x 8 ohm
Frequency response	: 100 Hz - 10 kHz ( $\pm 2$ dB)

### TUNER - FM SECTION

Tuning range	: 87.5 - 108 MHz
IF frequency	: 10.7 MHz $\pm 0.2$ MHz
Sensitivity	: < 22 dBf at 26dB S/N
Selectivity	: > 20 dB at $\pm 300$ kHz
IF rejection	: > 50 dB
Image rejection	: > 20 dB

### TUNER - MW SECTION

Tuning range	: 520 - 1602 kHz
IF frequency	: 450 kHz $\pm 1$ kHz
Sensitivity	: < 5000 $\mu$ V/m at 26dB S/N
Selectivity	: > 16 dB
IF rejection ratio	: > 24 dB
Image rejection ratio	: > 28 dB

### AUDIO CASSETTE RECORDER

Number of tracks	: 1 stereo
Tape speed	: 4.76 cm/sec $\pm 3\%$
Wow & flutter	: < 0.35 % JIS UWTD
Fast wind/rewind C60	: < 130 sec.
Frequency response	P/B : 125 - 8000 Hz
S/N ratio	: > 36 dB

### COMPACT DISC

S/N ratio	: > 50 dB
Channel difference	1 kHz : < 3 dB
Channel crosstalk	1 kHz : > 26 dB
Laser wavelength	: 780 $\pm 20$ nm
Laser light power	: < 0.3 mW

## SERVICE TOOLS

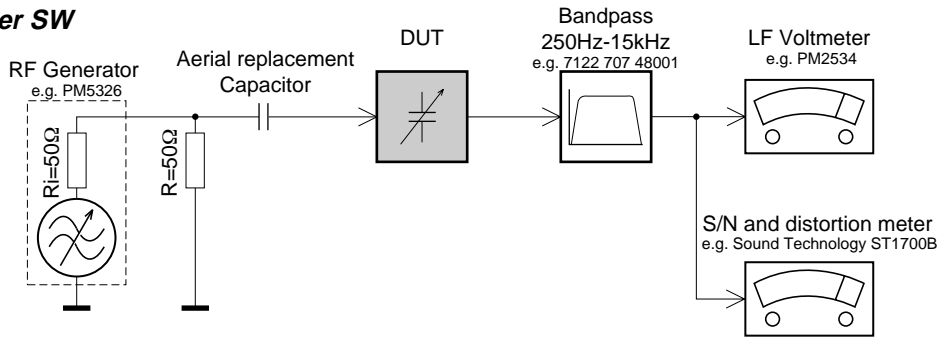
Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors) +	
Test disc 5A (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause").....	4822 397 30155

## AVAILABLE ESD PROTECTION EQUIPMENT

anti-static table mat	large 1200x650x1.25mm	4822 466 10953
	small 600x650x1.25m	4822 466 10958
anti-static wristband		4822 395 10223
connection box (3 press stud connections, 1M $\Omega$ )		4822 320 11307
extendible cable (2m, 2M $\Omega$ , to connect wristband to connection box)		4822 320 11305
connecting cable (3m, 2M $\Omega$ , to connect table mat to connection box)		4822 320 11306
earth cable (1M $\Omega$ , 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

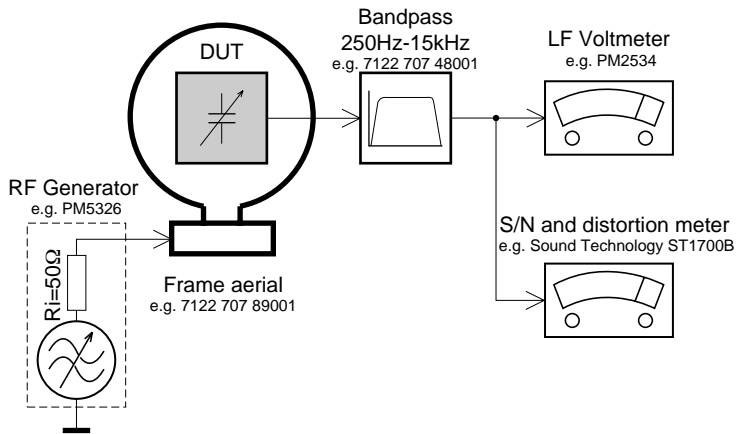
## SERVICE MEASUREMENT

### Tuner SW



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).

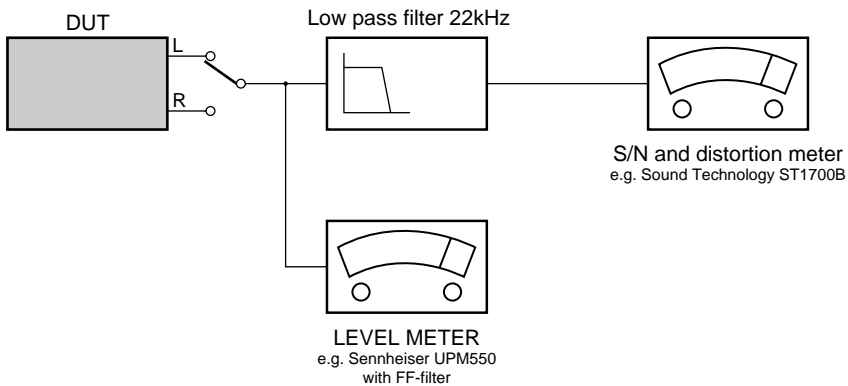
### Tuner AM (MW,LW)



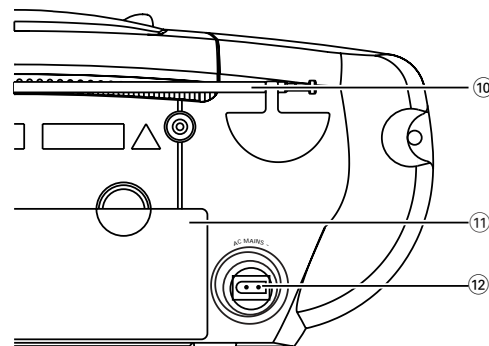
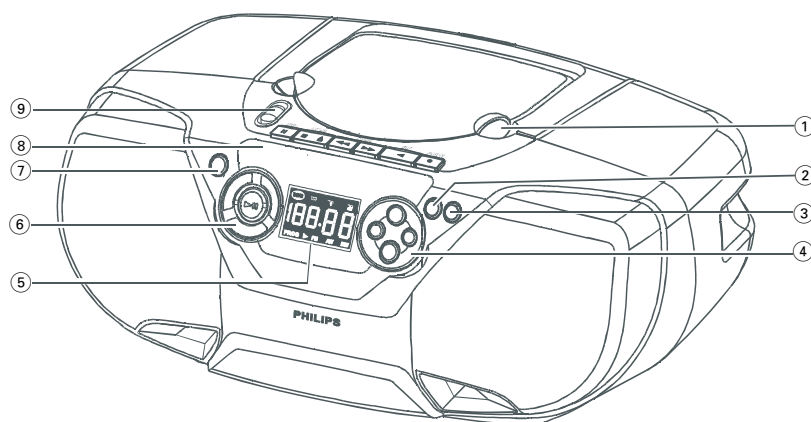
To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday«s cage.

### CD

Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)  
L.P.F. = 13<sup>th</sup> order filter 4822 395 30204



## CONNECTIONS AND CONTROLS



### CONTROL

#### TOP AND FRONT PANEL (See 1)

- ① **LIFT TO OPEN** - lift here to open CD door.
- ② **PROG**  
**CD:** - programs tracks and reviews the program;  
**Tuner:** - programs preset radio stations.
- ③ **MODE** - selects different play modes: e.g. **REPEAT** or **SHUFFLE** (random) order.
- ④ **VOLUME** ▲, ▼ - to adjust volume level.  
**PRESET** +, - (up, down) - selects a preset radio station.
- ⑤ **Display** - shows the status of the set.
- ⑥ **▶||** - starts or pauses CD playback.  
**■** - to stop playback or erase a CD program.  
**SEARCH** ◀◀, ▶▶  
**CD:** - searches backward and forward within a track;  
 - skips to the beginning of a current track/ previous/ later track.  
**RADIO:** - (down, up) tunes to radio stations.
- ⑦ **DBB (Dynamic Bass Boost)** - activates a more vivid bass response.
- ⑧ **CASSETTE RECORDER keys:**  
**RECORD** ● - to start recording.  
**PLAY** ◀ - to start playback.  
**SEARCH** ◀◀ / ▶▶ - fast rewinds/ winds tape.  
**OPEN • STOP** ▲ ■ - stops the tape;  
 - open the cassette compartment.  
**PAUSE** || - pauses playback or recording.
- ⑨ **POWER slider** - selects **TAPE/ MW / FM / CD** function and also the power off switch (**TAPE/ OFF**).

#### BACK PANEL (See 1)

- ⑩ **Telescopic aerial** - improves FM reception.
- ⑪ **Battery compartment** - for 6 batteries, type **R-14, UM2** or **C-cells**.
- ⑫ **AC MAINS** - inlet for mains lead.

#### CAUTION

Use of controls or adjustments or performance of procedures other than herein may result in hazardous radiation exposure or other unsafe operation.

### POWER SUPPLY

#### POWER SUPPLY

Whenever convenient, use the AC power supply to conserve battery life. Make sure you remove the power plug from the set and wall outlet before inserting batteries.

#### Batteries (not included)

- Insert 6 batteries, type **R-14, UM-2** or **C-cells**, (preferably alkaline) with the correct polarity. (See 6)
- IMPORTANT!**
- Incorrect use of batteries can cause electrolyte leakage and will corrode the compartment or cause the batteries to burst.
- Do not mix battery types: e.g. alkaline with carbon zinc. Only use batteries of the same type for the set.
- When inserting new batteries, do not try to mix old batteries with the new ones.
- **Batteries contain chemical substances, so they should be disposed of properly.**

#### Using AC Power

1. Check if the AC power supply, as shown on the **type plate located on the bottom of the set**, corresponds to your local power supply. If it does not, consult your dealer or service centre.
2. Connect the mains lead to the wall socket.
3. To disconnect the mains supply, unplug the set from the wall socket.

*The type plate is located on the bottom of the set.*

*This set complies with the radio interference requirements of the European Community.*

*For users in the U.K., please follow the boxed instructions 'Important notes...' on this sheet.*

### POWER SUPPLY

#### BASIC FUNCTIONS

#### Switching on and off and selecting function

1. To switch on, adjust the **POWER slider** to select: **CD, MW (AM), FM** or **TAPE** function, and operate the respective function controls.
2. To switch off, adjust the **POWER slider** to select **TAPE/OFF** and make sure all the cassette keys are released.

*Note : The DBB setting, tuner presets and the volume level (maximum to 20) will be retained in the set's memory.*

#### Adjusting volume and sound (See 2)

1. Adjust the volume with the **VOLUME** controls.  
 → Display shows the volume level in number from 0-32.
2. Press **DBB** once or more to select dynamic bass boost on or off.  
 → Display: shows **DBB** when activated.

## CONNECTIONS AND CONTROLS

### DIGITAL TUNER

#### Autostore

Autostore automatically starts programming radio stations from preset 1. Available stations are programmed in order if the station with sufficient reception strength. Any previous presets e.g. manually programmed will be erased.

- Press **PROG** for 2 seconds or more to activate autostore programming.
- The display shows *R U E B*, **PROG** blinks, followed by the radio station details when stored.

After all stations are stored, the first preset station will then automatically play.

#### To listen to a preset station

- Press the **PRESET +**, **-** buttons once or more until the desired preset station is displayed.

### CD PLAYER

#### CD PLAYER

##### Playing a CD

This CD player plays Audio Discs including CD-Recordables and CD-Rewritables.

- Adjust the **POWER slider** to **CD**.
- Open the CD Door.  
→ *CD E R* is displayed.
- Insert a CD with the printed side facing up and close the door.  
→ *no CD* if no CD inserted/ CD dirty, incorrectly inserted or damaged.  
→ *no CD* if you have inserted a non-finalized CD-R(W).
- Press **▶▶** to start playback.  
→ *CD E R* if your CD contains non-audio i.e. data files.
- To pause playback press **▶▶**. Press **▶▶** again to resume play.  
→ Display flashes during pause.
- To stop CD playback, press the **■** button.

**Note** : CD play will also stop when:

- the CD door is opened
- the CD has reached the end
- you select **TAPE** or **MW / FM** function.

##### Selecting a different track

- Press **SEARCH** **◀◀** or **▶▶** once or repeatedly to select your track.
- In the pause / stop position, press **▶▶** to start playback.

##### Finding a passage within a track

- Press and hold **SEARCH** **◀◀** or **▶▶**.  
→ The CD is played at high speed and low volume.
- When you recognize the passage you want, release **◀◀** or **▶▶** to resume normal playback.

**Note** : During a CD program or if **SHUFFLE/ REPEAT** active, searching is only possible within a track.

### CASSETTE RECORDER

#### CD Synchro Start Recording

- Adjust the **POWER slider** to **CD**.
- Insert a CD and if desired, program track numbers.
- Insert a suitable tape into the cassette deck and close the door.
- Press **RECORD** **●** to start recording.  
→ Playing of the CD program starts automatically from the beginning of the program. You don't need to start the CD player separately.

#### To select and record a particular passage within a CD track:

- Press **SEARCH** **◀◀** or **▶▶**. Release the control when you recognize the passage you want.
  - To pause CD playback, press **▶▶**
  - Recording starts from this exact point in the track when you press **RECORD** **●**.
- To pause recording, press **PAUSE** **■**. Press **PAUSE** **■** again to resume recording.
  - To stop recording, press **OPEN • STOP** **▲ ■**.

#### Recording from the Radio

- Tune to the desired radio station (see **Tuning to radio stations**).
- Follow steps 3-6, under **CD Synchro Start Recording**.

### SAFETY & MAINTENANCE

#### SAFETY & MAINTENANCE INFORMATION

(See [7])

- Don't expose the set, batteries, CDs or cassettes to humidity, rain, sand or excessive heat.
- Clean the set with a dry cloth. Don't use any cleaning agents containing alcohol, ammonia, benzene or abrasives as these may harm the set.
- Place the set on a hard and flat surface so that the system does not tilt. Make sure there is good ventilation to prevent the set overheating.
- The mechanical parts of the set contain self-lubricating bearings and must not be oiled or lubricated.

#### CD player and CD handling

- If the CD player cannot read CDs correctly, use a cleaning CD to clean the lens before taking the set to repair.
- The lens of the CD player should never be touched!
- Sudden changes in the surrounding temperature can cause condensation on the lens of your CD player. Playing a CD is then not possible. Do not attempt to clean the lens but leave the set in a warm environment until the moisture evaporates.
- Always close the CD and tape door to avoid dust on the lens.
- To clean the CD, wipe in a straight line from the centre towards the edge using a soft, lint-free cloth. Do not use cleaning agents as they may damage the disc.
- Never write on a CD or attach any stickers to it.

#### Tape deck maintenance

To ensure quality recording and playback of the tape deck, clean parts (A), (B) and (C) as shown, once a month. Use a cotton bud slightly moistened with alcohol or a special head cleaning fluid to clean the deck.

- Open the tape door.
- Press **PLAY** **▶** and clean the roller (C).
- Press **PAUSE** **■** and clean the heads (A), and the capstan (B).
- After cleaning, press **OPEN • STOP** **▲ ■**.

#### Note:

Cleaning of the heads can also be done by playing a cleaning cassette through once.

### CD PLAYER

#### Different play modes: SHUFFLE and REPEAT

You can select and change the various play modes before or during playback, and combine the modes with **PROG**. (See [4])

- SHUFFLE** - tracks of the entire CD/ program are played in random order
- SHUFFLE REPEAT ALL** - to repeat the entire CD/ program continuously in random order
- REPEAT ALL** - repeats the entire CD/ program
- REPEAT** - plays the current track continuously

- To select play mode, press **MODE** once or more.
- Press **▶▶** to start playback if in the stop position.
- To select normal playback, press **MODE** repeatedly until the various modes are no longer displayed.  
→ You can also press the **■** button to cancel your play mode.

#### Programming track numbers

In the stop position, select and store your CD tracks in the desired sequence. Up to 20 tracks can be stored in the memory.

- Press **SEARCH** **◀◀** or **▶▶** on the set to select your desired track number.
- Press **PROG**.  
→ Display: *PROG, P r o g* briefly and your selected track number. (See [5])  
→ If you attempt to program without first selecting a track number, *no SE* is shown.
- Repeat steps 1-2 to select and store all desired tracks.  
→ Display: *F U L L* if you try to program more than 20 tracks.

#### Reviewing the program

In the stop position, press and hold **PROG** until the display shows all your stored track numbers in sequence.

### CASSETTE RECORDER

#### Erasing a program

You can erase the program by either:

- pressing **■** twice  
→ *E L r* is displayed briefly and **PROG** disappears.
- You select **TAPE** or **MW / FM** function.
- Open the CD door.

#### CASSETTE RECORDER

##### Cassette playback

- Adjust the **POWER slider** to **TAPE**.  
→ Display: shows *E R P E* throughout tape operation.
- Insert a cassette as shown and close the door.
- Press **PLAY** **▶** to start playback.
- To pause playback press **PAUSE** **■**. Press again to resume.
- Press **SEARCH** **◀◀** or **▶▶** to fast wind the tape.
- To stop the tape, press **OPEN • STOP** **▲ ■**.

The keys are automatically released at the end of a tape and the set switched off, except if **PAUSE** **■** has been activated.

#### General information on recording

- Recording is permissible insofar as copyright or other rights of third parties are not infringed.
- For recording, use only **NORMAL** type cassettes (IEC type I) on which the tabs have not yet been broken. This deck is not suited for recording on **CHROME** (IEC II) or **METAL** (IEC IV) type cassettes.
- The best recording level is set automatically. Altering the **VOLUME** or **DBB** controls will not affect the recording.
- To protect a tape from accidental erasure, break out the tabs. If you wish to record again, cover the tabs with a piece of adhesive tape.

### TROUBLESHOOTING

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

**WARNING:** Do not open the set as there is a risk of electric shock! Under no circumstances should you try to repair the set yourself, as this will invalidate the guarantee.

#### No sound /power

- Volume not adjusted
- Adjust the **VOLUME**
- Mains lead not securely connected
- Connect the AC mains lead properly
- Batteries exhausted/ incorrectly inserted
- Insert (fresh) batteries correctly

#### Severe radio hum or noise

- Electrical interference: set too close to TV, VCR or computer
- Move the set to increase the distance

#### Poor radio reception

- Weak radio signal
- FM: Adjust the FM telescopic aerial

#### no CD indication

- CD badly scratched or dirty
- Replace/ clean CD, see Maintenance
- Laser lens steamed up
- Wait until lens has cleared

#### no F c d indication

- CD-R(W) is blank/ not finalized
- Use a finalized CD-R(W)

#### CD E R indication

- CD contains non-audio files
- Press **SEARCH** **◀◀** or **▶▶** once or more to skip to a CD audio track, instead of the data file

#### The CD skips tracks

- CD damaged or dirty
- Replace or clean CD
- SHUFFLE or PROG is active
- Switch off SHUFFLE / PROG

#### Poor cassette sound quality

- Dust and dirt on the heads, etc.
- Clean deck parts, see Maintenance
- Use of incompatible cassette types (METAL or CHROME)
- Only use **NORMAL** (IEC I) for recording

#### Recording does not work

- Cassette tab(s) may be broken
- Apply adhesive tape over the missing tab space

#### Environmental information

We have done our best to reduce the packaging and make it easy to separate into 3 materials: cardboard, expandable polystyrene, polyethylene.

Your set consists of materials which can be recycled if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packaging, exhausted batteries and old equipment.

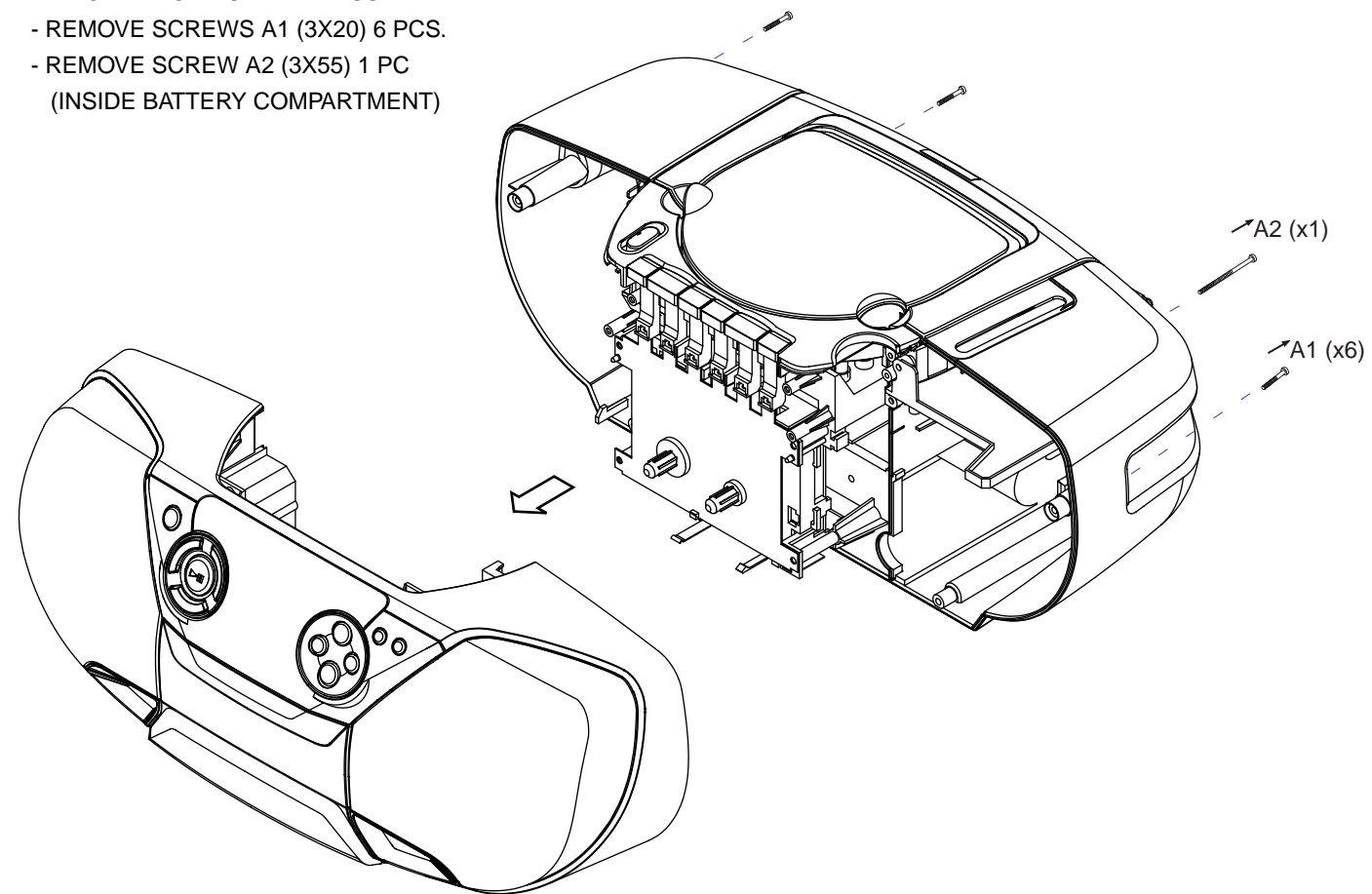
For more information on operation instruction please visit Philips Audio internet site :

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

## DISASSEMBLY DIAGRAM

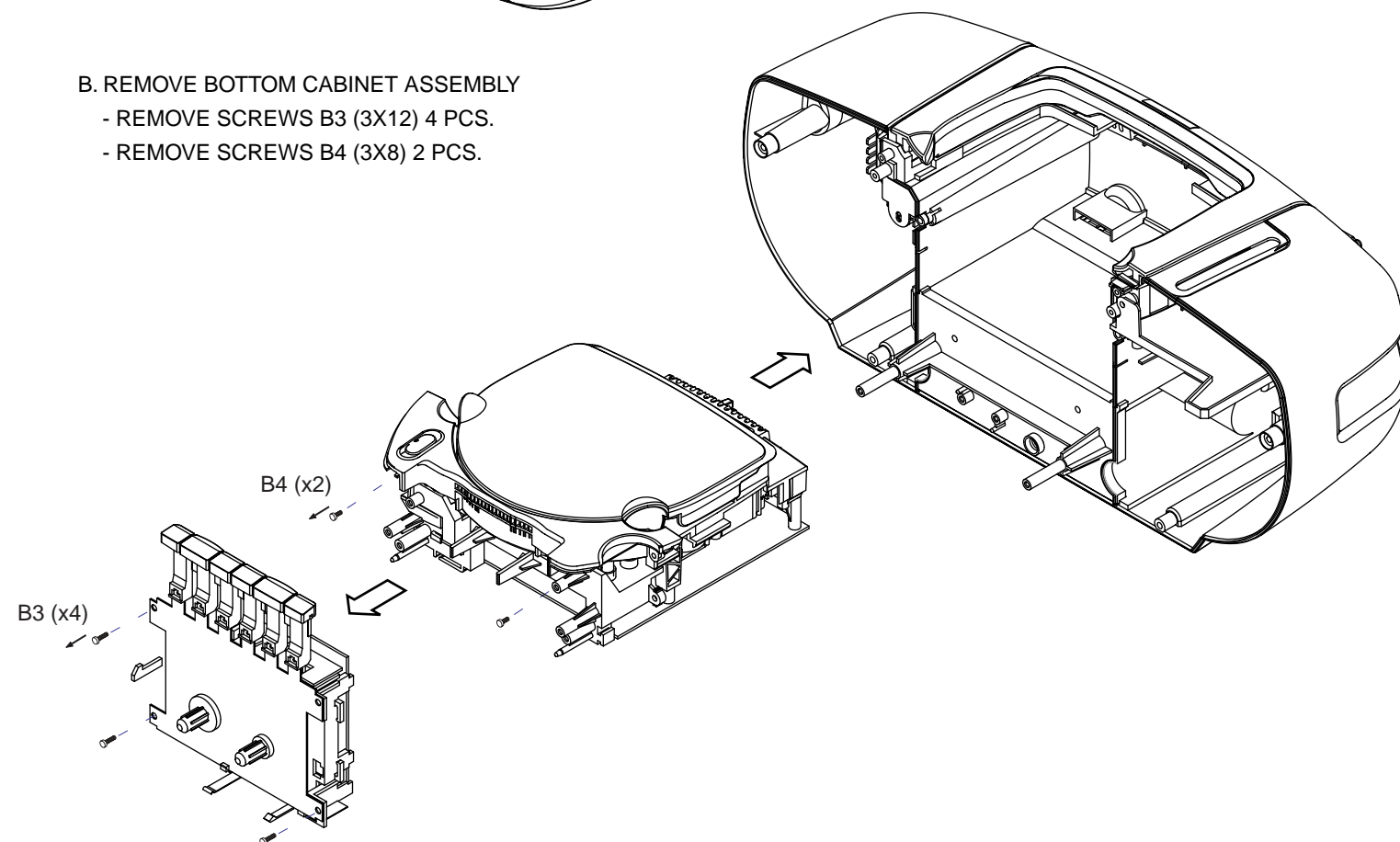
## A. REMOVE FRONT CABINET ASSEMBLY

- REMOVE SCREWS A1 (3X20) 6 PCS.
- REMOVE SCREW A2 (3X55) 1 PC (INSIDE BATTERY COMPARTMENT)



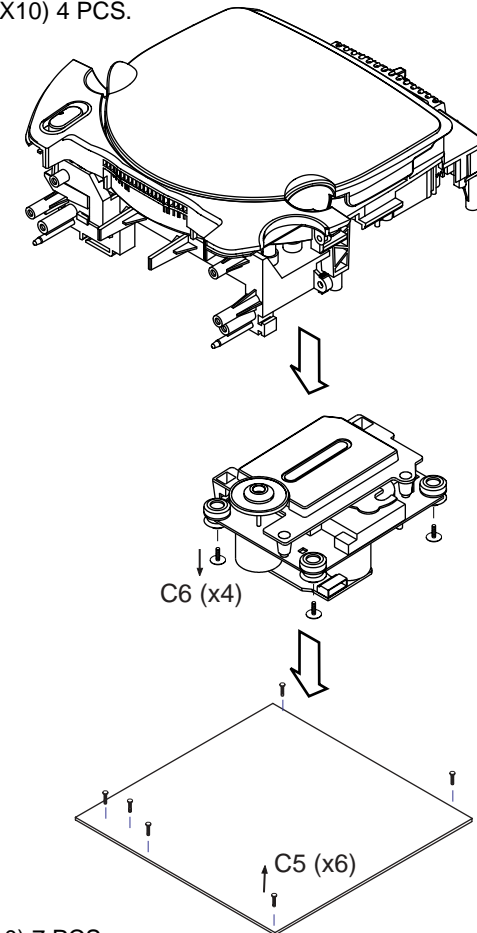
## B. REMOVE BOTTOM CABINET ASSEMBLY

- REMOVE SCREWS B3 (3X12) 4 PCS.
- REMOVE SCREWS B4 (3X8) 2 PCS.



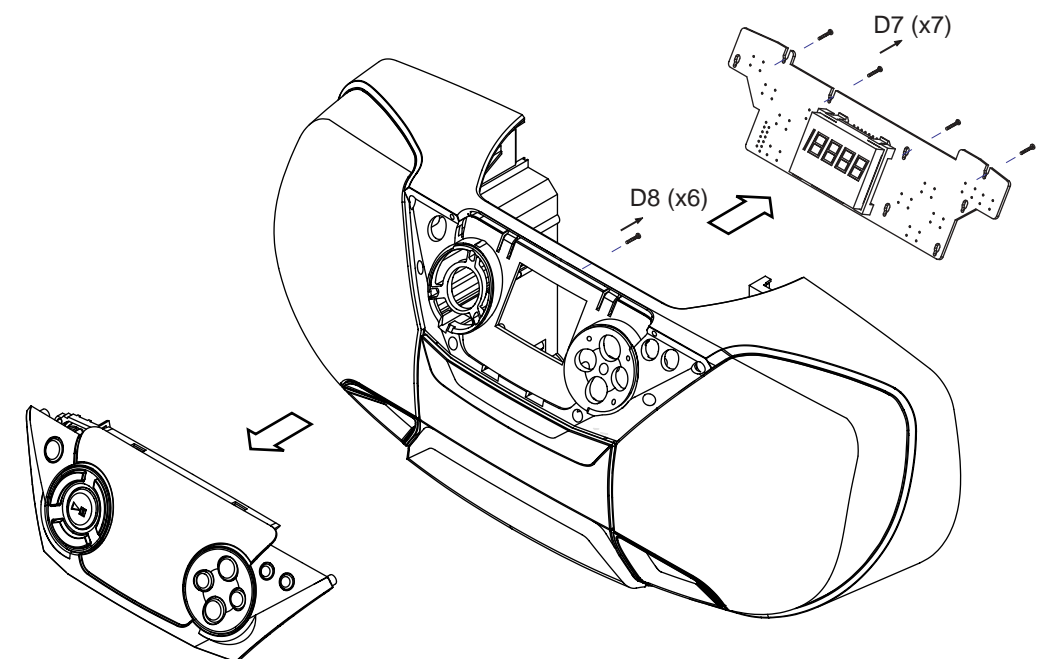
## C. REMOVE DECK MECHANISM

- REMOVE SCREWS C5 (3X12) 6 PCS.
- REMOVE MAIN BOARD
- REMOVE SCREWS C6 (2.5X10) 4 PCS.
- REMOVE CD DECK

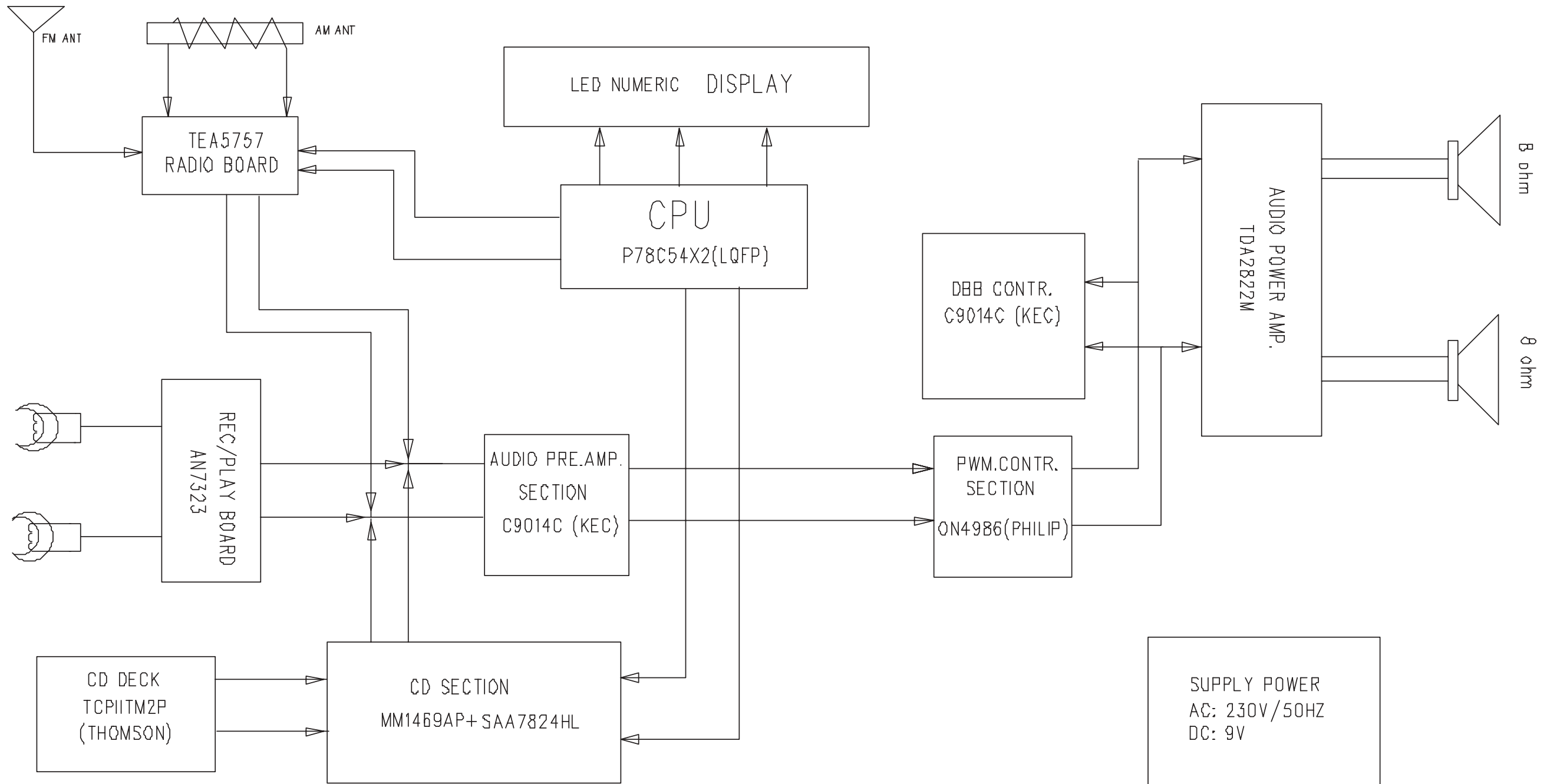


## D. REMOVE FRONT PANEL

- REMOVE SCREWS D7 (3X10) 7 PCS.
- REMOVE SCREWS D8 (2.5X8) 6 PCS.

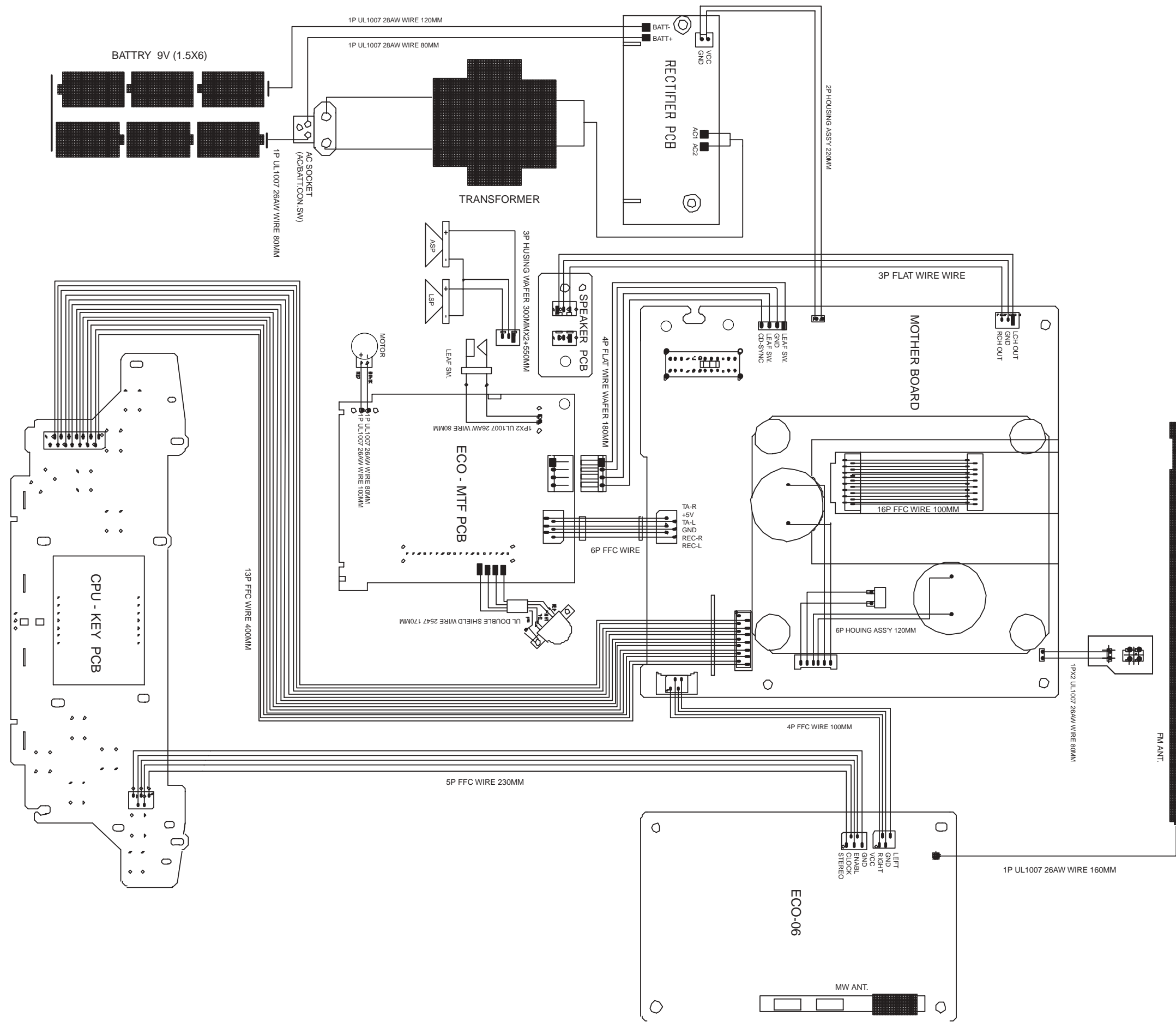


BLOCK DIAGRAM

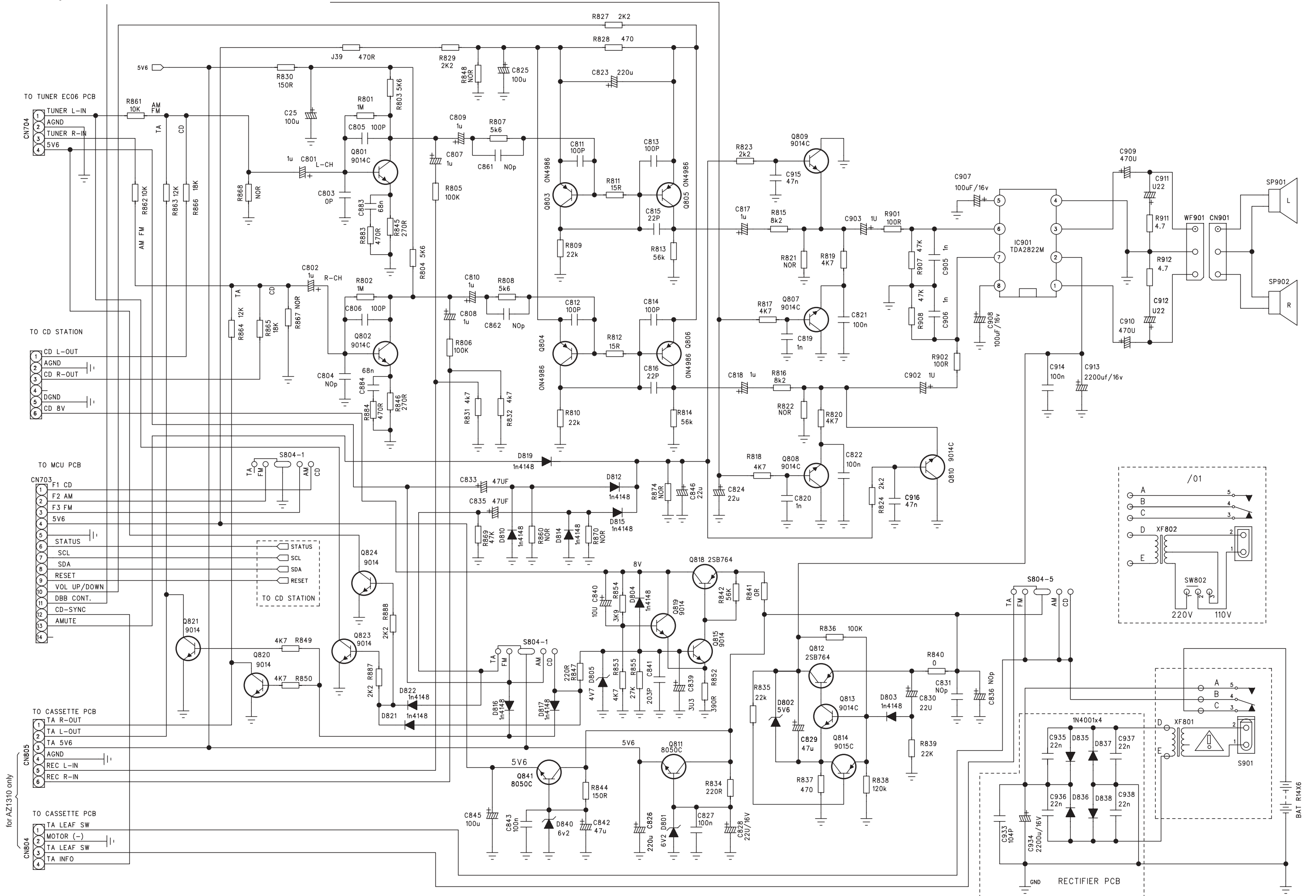




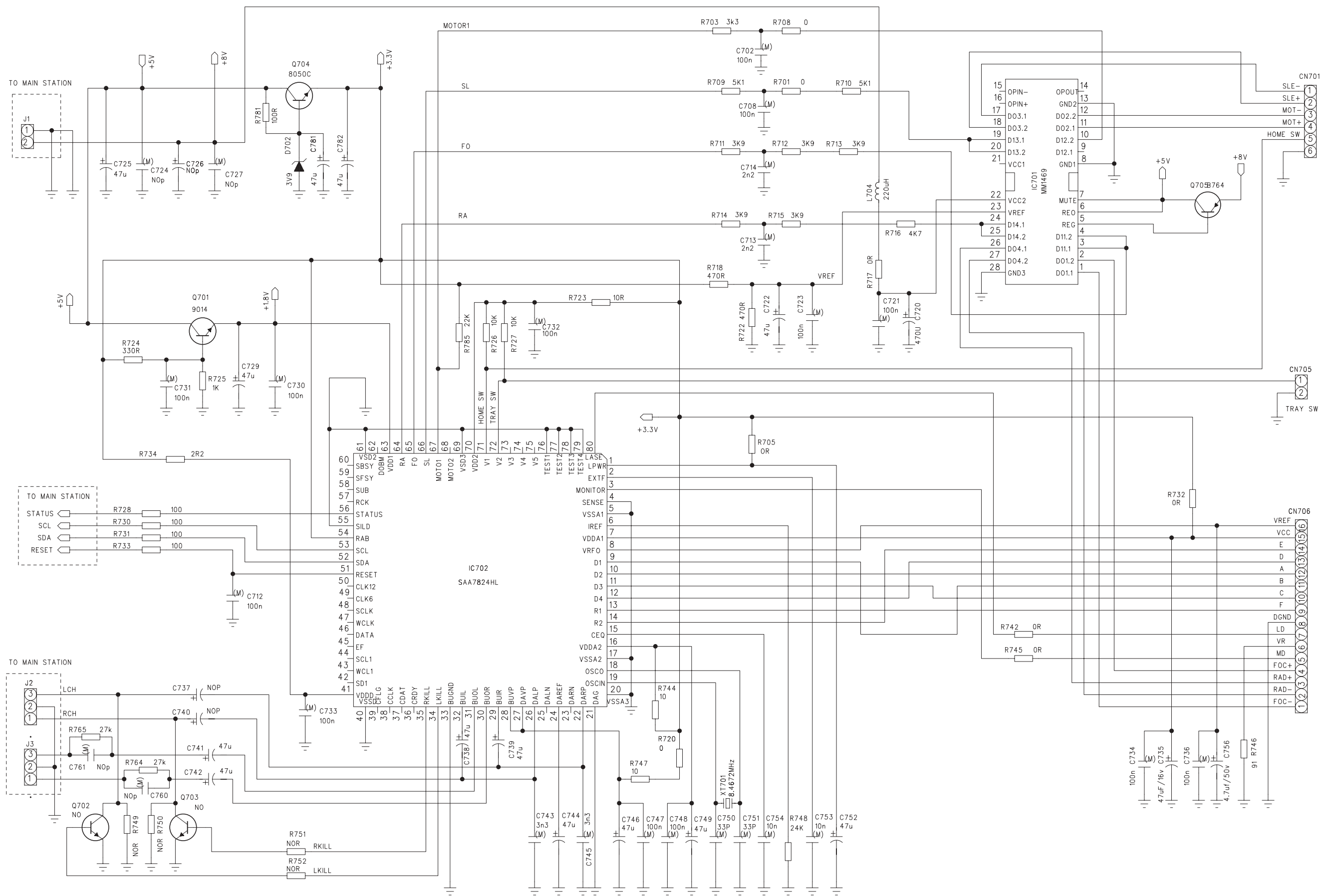
# WIRING DIAGRAM



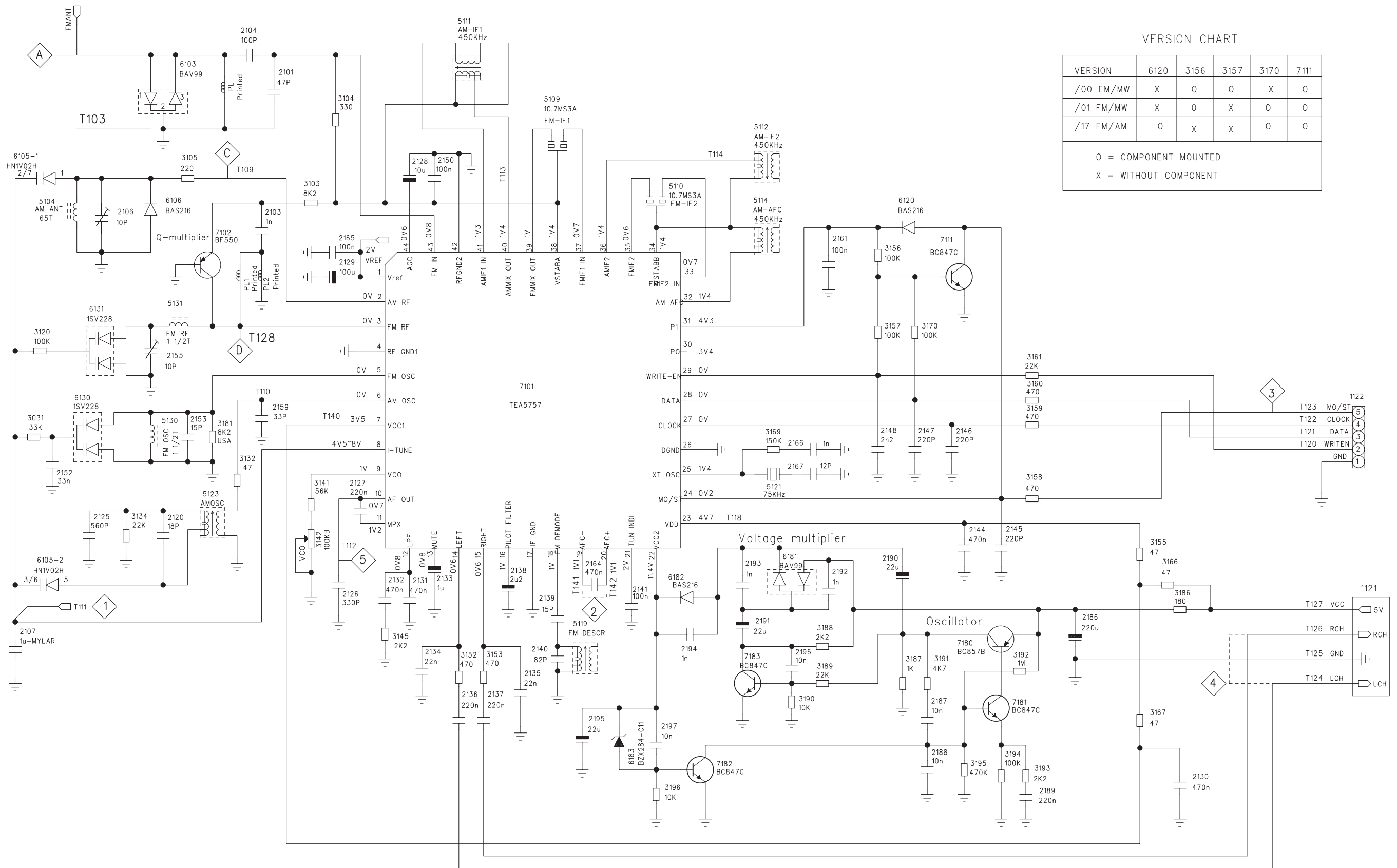
# CIRCUIT DIAGRAM - MAIN BOARD (AF PART)



# CIRCUIT DIAGRAM - MAIN BOARD (CD PART)



CIRCUIT DIAGRAM - TUNER BOARD

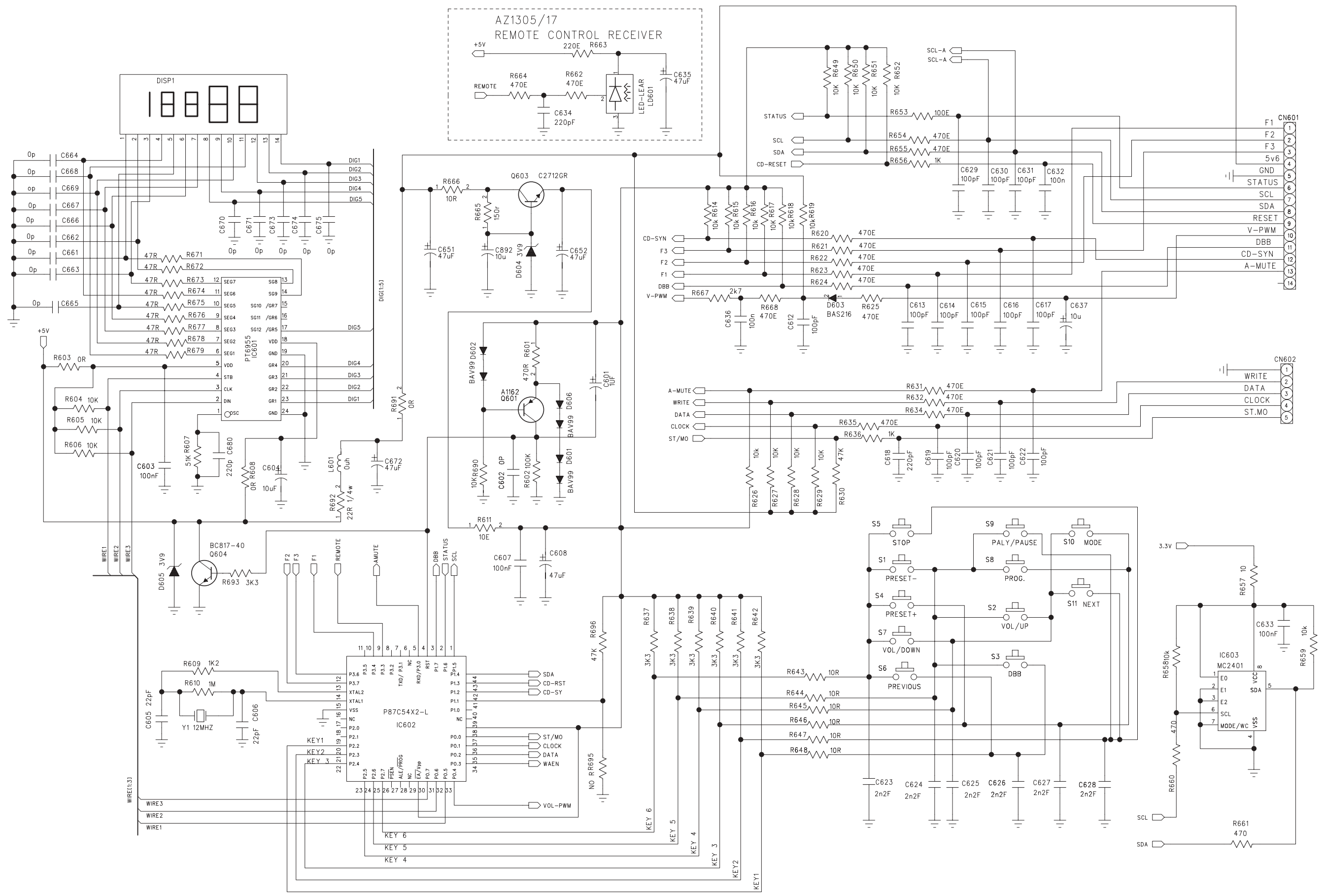


VERSION CHART

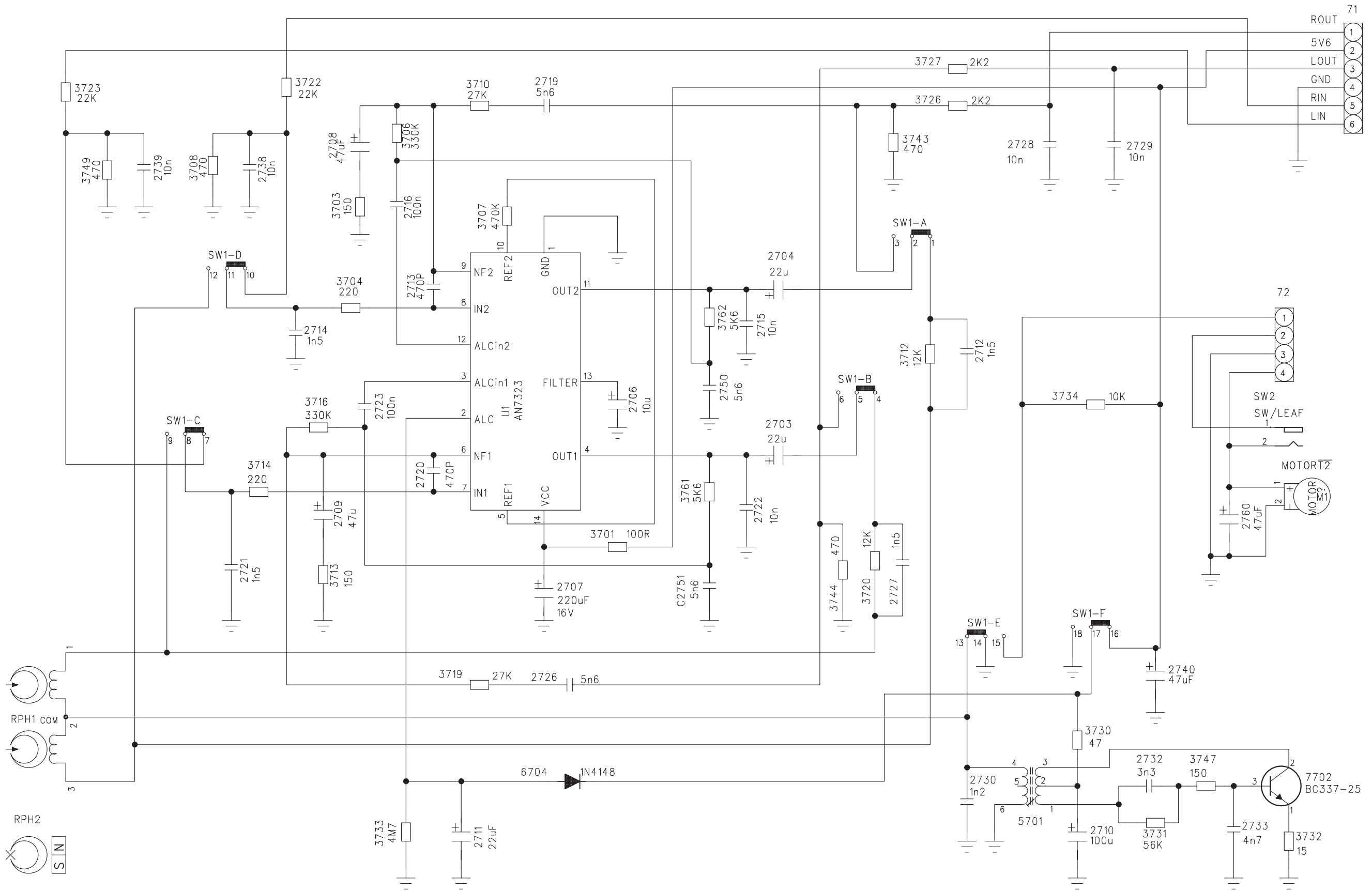
VERSION	6120	3156	3157	3170	7111
/00 FM/MW	X	0	0	X	0
/01 FM/MW	X	0	X	0	0
/17 FM/AM	0	X	X	0	0

0 = COMPONENT MOUNTED  
X = WITHOUT COMPONENT

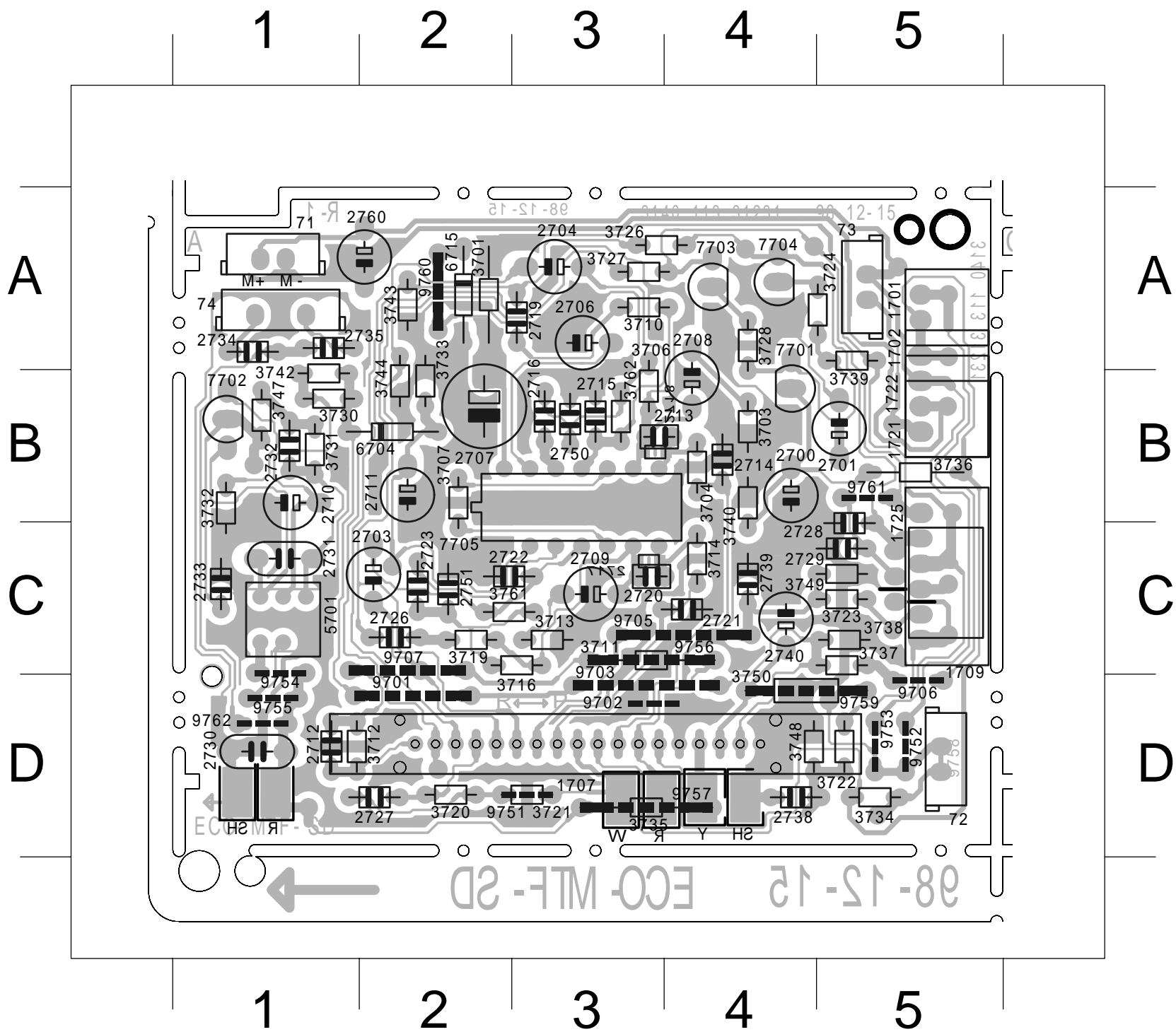
# CIRCUIT DIAGRAM - MCU BOARD



CIRCUIT DIAGRAM - CASSETTE BOARD



LAYOUT DIAGRAM - CASSETTE BOARD



71 A 1	2729 C 5	3733 B 2	9756 C 3
72 D 5	2730 D 1	3734 D 5	9757 D 3
73 A 5	2731 C 1	3735 D 3	9759 D 4
74 A 1	2732 B 1	3736 B 5	9760 A 2
1701 A 5	2733 C 1	3737 C 5	9761 B 5
1702 B 5	2734 A 1	3738 C 5	9762 D 1
1707 D 3	2735 A 1	3739 A 5	T701 C 5
1709 C 5	2738 D 4	3740 B 4	T702 C 5
1721 B 5	2739 C 4	3742 B 1	T705 B 5
1722 B 5	2740 C 4	3743 A 2	T706 B 5
1725 C 5	2750 B 3	3744 B 2	T709 A 5
2700 B 4	2751 C 2	3747 B 1	T710 C 1
2701 B 5	2760 A 2	3748 D 4	T711 B 5
2703 C 2	3701 A 2	3749 C 5	T712 C 2
2704 A 3	3703 B 4	3750 D 4	T713 A 5
2706 A 3	3704 B 4	3761 C 2	T714 D 5
2707 B 2	3706 B 3	3762 B 3	T715 D 5
2708 B 4	3707 B 2	5701 C 1	T716 D 1
2709 C 3	3710 A 3	6704 B 2	T719 B 1
2710 B 1	3711 C 3	6715 A 2	T720 A 5
2711 B 2	3712 D 1	7701 B 4	T721 C 5
2712 D 1	3713 C 3	7702 B 1	T722 C 2
2713 B 3	3714 C 4	7703 A 4	T725 D 2
2714 B 4	3716 C 3	7704 A 4	T7707 A 4
2715 B 3	3719 C 2	7705 B 3	T7708 A 4
2716 B 3	3720 D 2	9701 D 2	
2717 C 3	3721 D 3	9702 D 3	
2718 B 3	3722 D 5	9703 D 3	
2719 A 3	3723 C 5	9705 C 4	
2720 C 3	3724 A 5	9706 D 5	
2721 C 4	3726 A 3	9707 C 2	
2722 C 2	3727 A 3	9751 D 3	
2723 C 2	3728 A 4	9752 D 5	
2726 C 2	3730 B 1	9753 D 5	
2727 D 2	3731 B 1	9754 C 1	
2728 C 5	3732 B 1	9755 D 1	

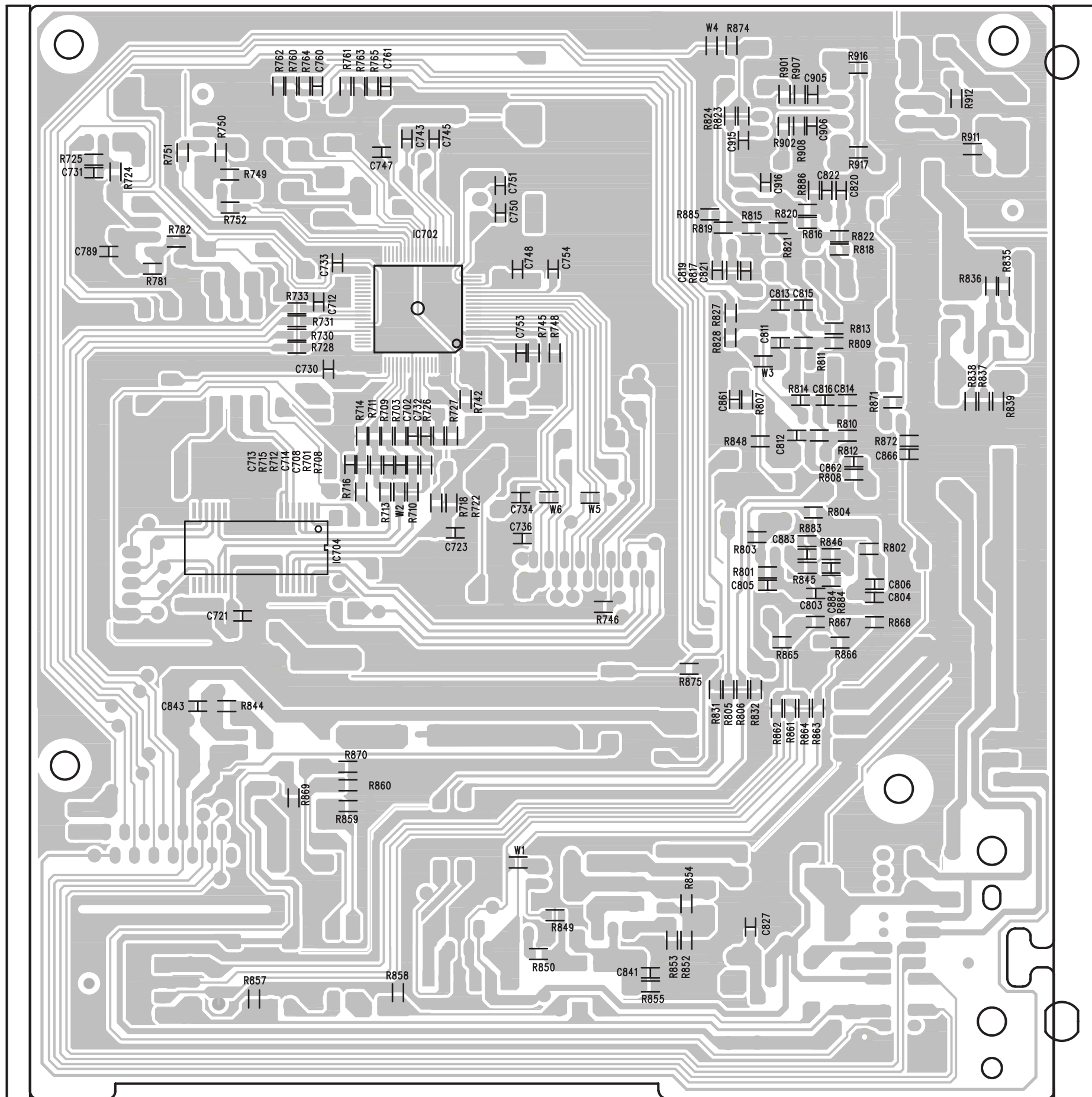
CASSETTE ADJUSTMENT

Adjustment	Cassette	SK ....	Deck 1	Measure on	Read on	Adjust with	Adjust to
Azimuth	10 kHz SBC420*	Tape	Play	H/P Jack	mV meter	Left hand Screw R/P head	max.
Motor Speed	3150 kHz SBC420*	Tape	Play	H/P Jack	Wow and flutter meter	Preset in motor	**a

\* SBC420 : 4822 397 30071

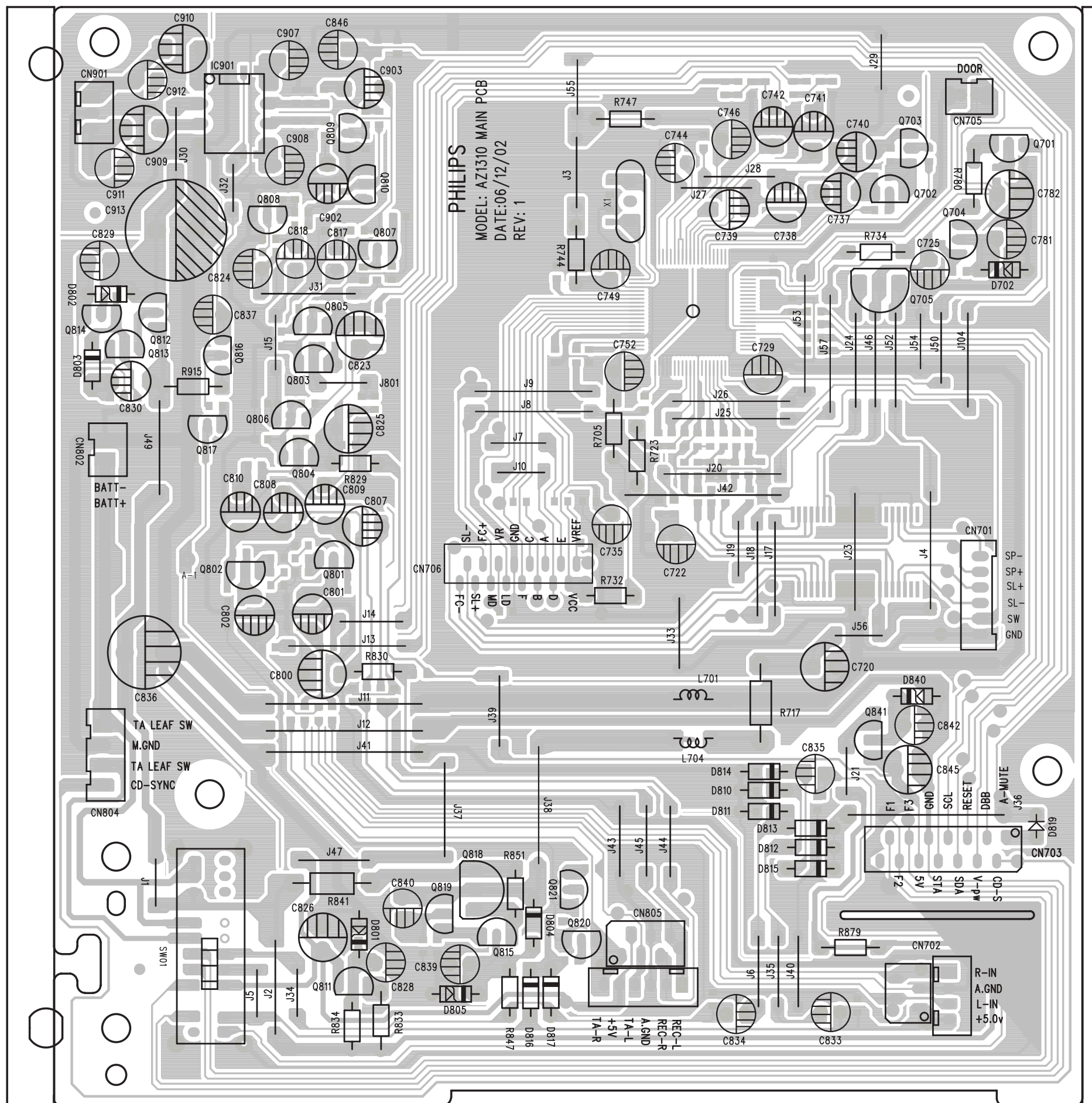
\*\*a The maximum permissible speed deviation is - 3%.  
Moreover, the wow and flutter value can be read.

LAYOUT DIAGRAM - MAIN BOARD  
(COPPER SIDE VIEW)

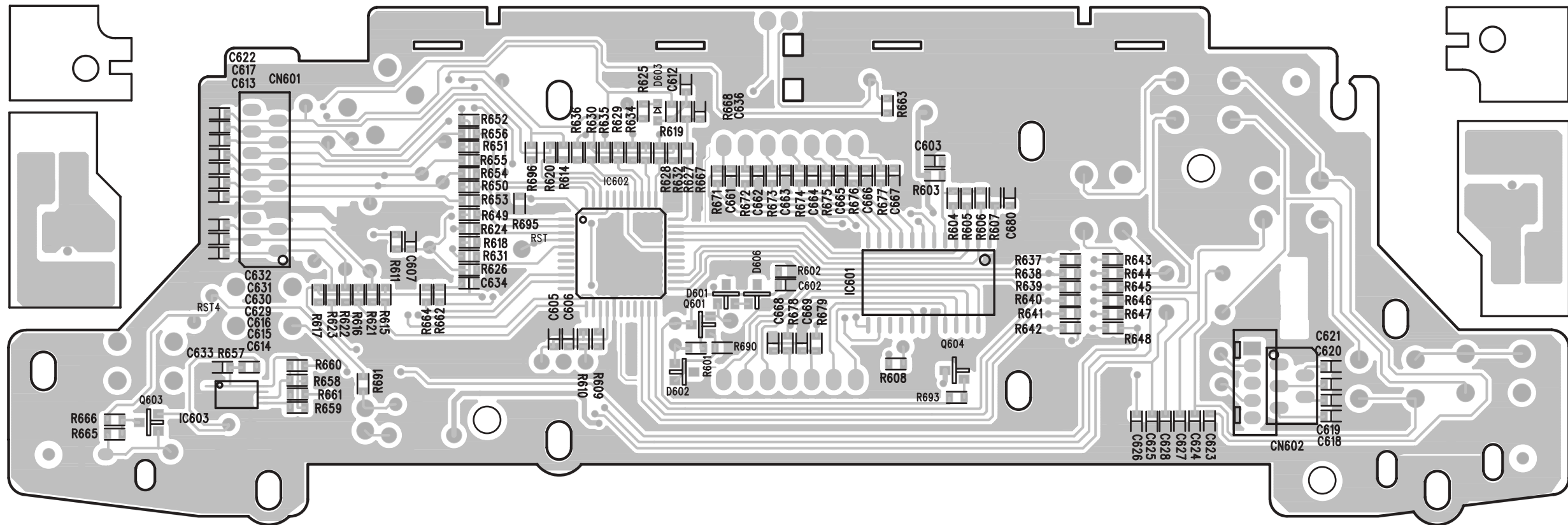




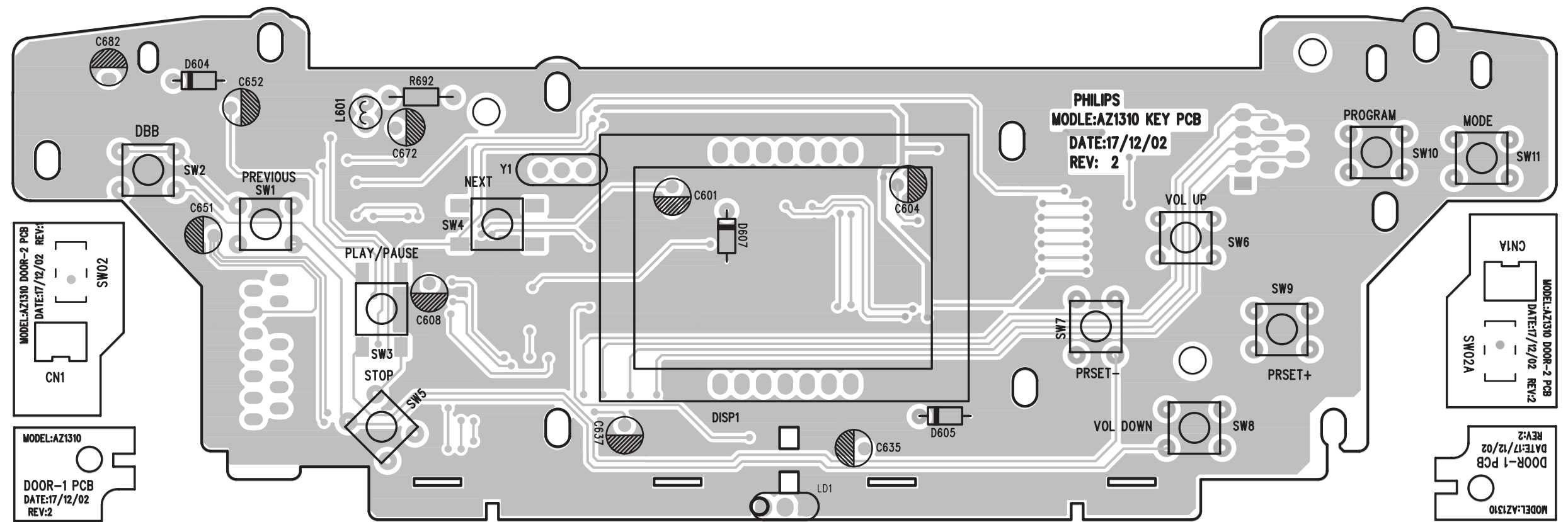
LAYOUT DIAGRAM - MAIN BOARD  
(COMPONENT SIDE VIEW)



LAYOUT DIAGRAM - MCU BOARD  
(COPPER SIDE VIEW)



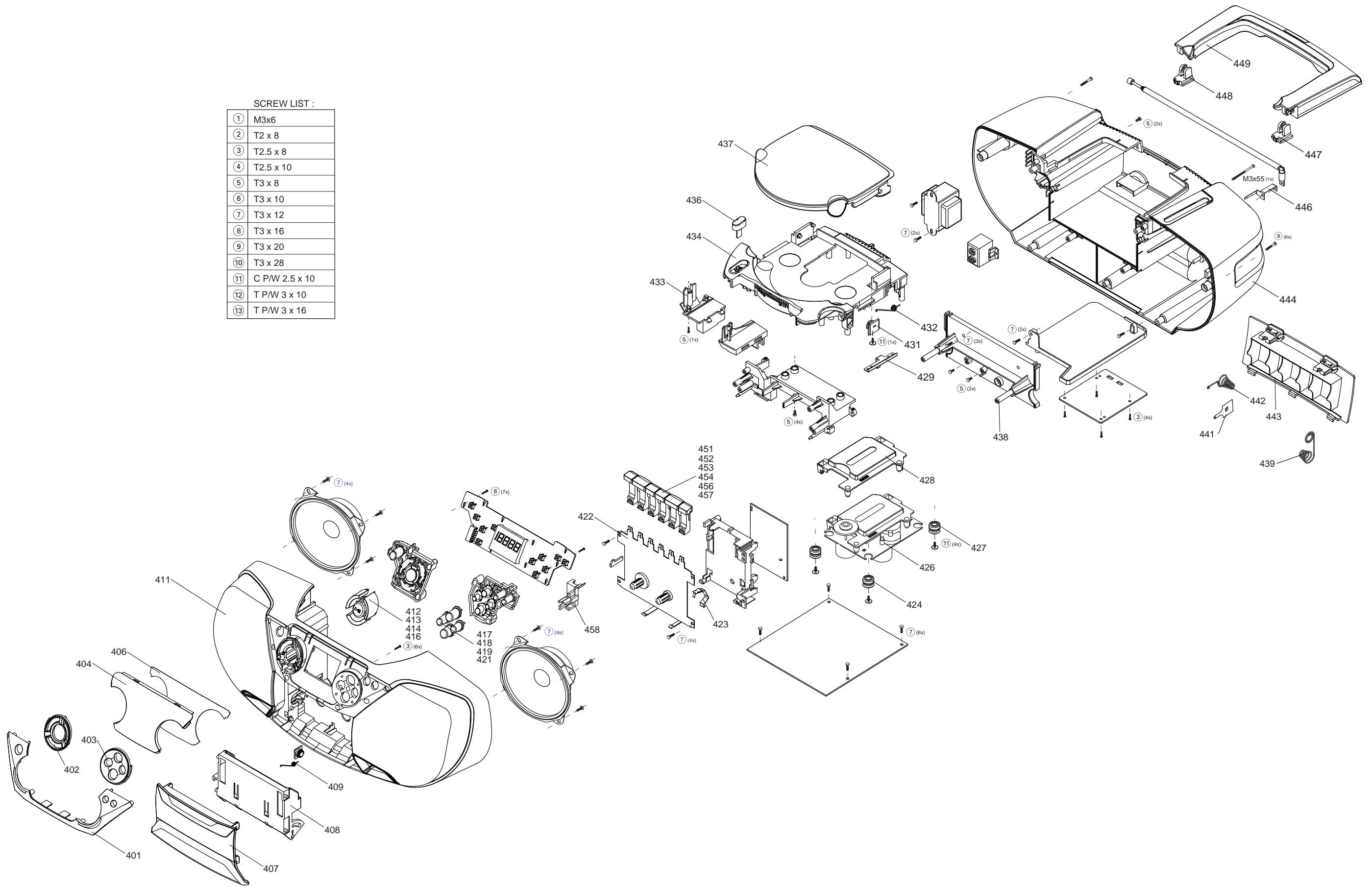
LAYOUT DIAGRAM - MCU BOARD  
(COMPONENT SIDE VIEW)



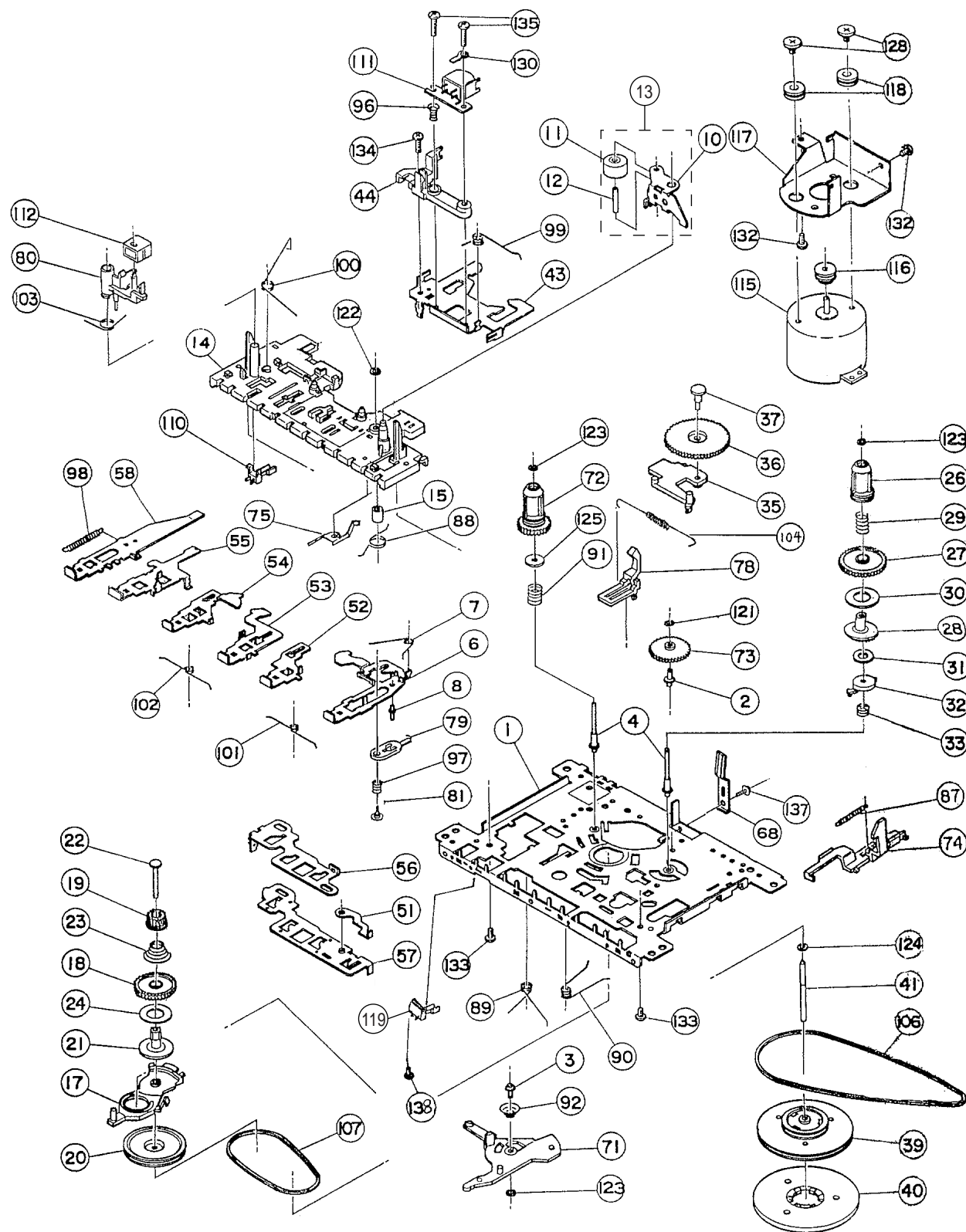
EXPLODED VIEW DIAGRAM - CABINET

SCREW LIST :

①	M3x6
②	T2 x 8
③	T2.5 x 8
④	T2.5 x 10
⑤	T3 x 8
⑥	T3 x 10
⑦	T3 x 12
⑧	T3 x 16
⑨	T3 x 20
⑩	T3 x 28
⑪	C P/W 2.5 x 10
⑫	T P/W 3 x 10
⑬	T P/W 3 x 16



**EXPLODED VIEW DIAGRAM - TAPE DECK**



**MECHANICAL PARTSLISE - CABINET**

- |     |                |                       |     |                |                           |
|-----|----------------|-----------------------|-----|----------------|---------------------------|
| 401 | 9965 000 16838 | FRONT PANEL           | 432 | 9965 000 16875 | CD DOOR SPRING            |
| 402 | 9965 000 16844 | COSMETIC DISC (L)     | 433 | 9965 000 16849 | FUNCTION KNOB ADAPTOR     |
| 403 | 9965 000 16845 | COSMETIC DISC (R)     | 434 | 9965 000 16843 | CD TRAY                   |
| 404 | 9965 000 16839 | DISPLAY LENS          | 436 | 9965 000 16859 | FUNCTION KNOB             |
| 406 | 9965 000 16846 | PC MAGIC MIRROR       | 437 | 9965 000 16842 | CD DOOR                   |
| 407 | 9965 000 16848 | CASS DOOR             | 438 | 9965 000 16852 | SOUND BOX COVER           |
| 408 | 9965 000 16847 | CASS DOOR PANEL       | 439 | 9965 000 16874 | BATTERY SPRING (+)        |
| 409 | 9965 000 16876 | CASS DOOR SPRING      | 441 | 9965 000 16872 | BATTERY CONTACT PLATE (+) |
| 411 | 9965 000 16836 | FRONT CABINET         | 442 | 9965 000 16873 | BATTERY SPRING (-)        |
| 412 | 9965 000 16863 | PLAY KNOB             | 443 | 9965 000 16840 | BATTERY DOOR              |
| 413 | 9965 000 16862 | NEXT KNOB             | 444 | 9965 000 16837 | BOTTOM CABINET            |
| 414 | 9965 000 16861 | STOP KNOB             | 444 | 9965 000 17019 | BOTTOM CABINET (-/01)     |
| 416 | 9965 000 16860 | PREVIOUS KNOB         | 446 | 9965 000 16871 | ANTENNA CONTACT PLATE     |
| 417 | 9965 000 16855 | VOLUME KNOB (UP)      | 447 | 9965 000 16854 | HANDLE HINGE (R)          |
| 418 | 9965 000 16856 | VOLUME KNOB (DOWN)    | 448 | 9965 000 16853 | HANDLE HINGE (L)          |
| 419 | 9965 000 16857 | PRESET KNOB (UP)      | 449 | 9965 000 16841 | HANDLE                    |
| 421 | 9965 000 16858 | PRESET KNOB (DOWN)    | 451 | 9965 000 16864 | CASS KEY (F.F.)           |
| 422 | 9965 000 16885 | CASSETTE DECK         | 452 | 9965 000 16865 | CASS KEY (REW)            |
| 423 | 9965 000 16877 | RECORD LEVER          | 453 | 9965 000 16866 | CASS KEY (STOP)           |
| 424 | 9965 000 16883 | CUSHION 658PH (GREY)  | 454 | 9965 000 16867 | CASS KEY (PAUSE)          |
| 426 | 9965 000 16884 | CD DECK TCP11TM2P     | 456 | 9965 000 16868 | CASS KEY (REC)            |
| 427 | 9965 000 16882 | CUSHION 658PG (BLACK) | 457 | 9965 000 16869 | CASS KEY (PLAY)           |
| 428 | 9965 000 16881 | DUST COVER SK-02      | 458 | 9965 000 16851 | FRONT WALL COVER          |
| 429 | 9965 000 16870 | DAMPER HOLDER BRACKET |     |                |                           |
| 431 | 9965 000 16850 | CD DOOR GEAR          |     |                |                           |

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

**MECHANICAL PARTSLIST - TAPE DECK**

- |     |                |                     |
|-----|----------------|---------------------|
| 10  | 4822 528 70849 | BRACKET, STEEL      |
| 11  | 4822 528 70695 | ROLLER, RUBBER      |
| 13  | 4822 528 11189 | PINCH ROLLER ASSY   |
| 106 | 4822 358 31325 | BELT, DRIVING       |
| 107 | 9965 000 11408 | SUB BELT (B)        |
| 110 | 4822 278 90663 | SWITCH, OTHERS      |
| 111 | 9965 000 11448 | R/P HEAD SR-20B03   |
| 112 | 9965 000 11449 | E HEAD TC-235       |
| 115 | 9965 000 11450 | MOTOR MG090Z90U24-1 |
| 116 | 9965 000 11451 | MOTOR PULLEY        |
| 119 | 4822 276 13712 | LSA1115B            |

**ADJUSTMENT - TAPE DECK**

Adjustment	Cassette	SK ....	Deck 1	Measure on	Read on	Adjust with	Adjust to
Azimuth	10 kHz SBC420*	Tape	Play	H/P Jack	mV meter	Left hand Screw R/P head	max.
Motor Speed	3150 kHz SBC420*	Tape	Play	H/P Jack	Wow and flutter meter	Preset in motor	**a

\* SBC420 : 4822 397 30071

\*\*a The maximum permissible speed deviation is - 3%.  
Moreover, the wow and flutter value can be read.

**ELECTRICAL PARTSLIST**

**- MISCELLANEOUS -**

	9965 000 16396	ROD ANTENNA
1106	9965 000 16886	FERRITE BAR
SW01	9965 000 16887	BAND SWITCH
SW02	9965 000 16888	DETECTOR SWITCH
SW1	9965 000 13705	TACT-SWITCH
SW2	9965 000 13705	TACT-SWITCH
SW3	9965 000 16889	TACT-SWITCH
SW4	9965 000 16889	TACT-SWITCH
SW5	9965 000 13705	TACT-SWITCH
SW6	9965 000 13705	TACT-SWITCH
SW7	9965 000 13705	TACT-SWITCH
SW8	9965 000 13705	TACT-SWITCH
SW9	9965 000 13705	TACT-SWITCH
SW10	9965 000 13705	TACT-SWITCH
SW11	9965 000 13705	TACT-SWITCH
	9965 000 16890	BAND SWITCH
	9965 000 16891	FERRITE BEAD
	9965 000 16892	FFC CABLE WIRE 13P
	9965 000 16893	FFC CABLE WIRE 6P
	9965 000 16894	FFC CABLE WIRE 4P
	9965 000 16895	FFC CABLE WIRE 5P
	9965 000 16896	SPEAKER 4" 8 OHM 3W
	9965 000 16897	TRANSFORMER
	9965 000 16898	AC VDE SOCKET
	9965 000 16899	VDE POWER CORD SET

**- CAPACITORS AND RESISTERS-**

3142	9965 000 16900	SEMI-FIXED 100KB
2155	4822 125 11113	TRIM CAPACITOR
2106	9965 000 16901	TRIMMER CVN620

**- COILS & FILTERS -**

5104	9965 000 16902	AM COIL AN75-871390
5109	9965 000 16903	10.7MHZ MS3A
5110	9965 000 16903	10.7MHZ MS3A
5111	9965 000 16904	I.F.T. AHK7-850978
5112	9965 000 16905	I.F.T. AHK7-850981
5114	9965 000 16905	I.F.T. AHK7-850981
5119	9965 000 16906	I.F.T. KHI7-855142
5123	9965 000 16907	I.F.T. OHK7-850977
5130	9965 000 16908	FT10-878842
5131	9965 000 16908	FT10-878842
5701	9965 000 16909	I.F.T. 00D8-870400
L704	9965 000 16910	CHOKE COIL 220 µH
X1	9965 000 16911	CRA8,467M3
Y1	9965 000 16912	CRA12,0M3
	9965 000 16913	75KHZ/12,5pF

**- DIODES -**

6103	5322 130 34337	BAV99
6105	9965 000 07240	HN1V02H
6130	9965 000 16914	ISV228
6131	9965 000 16914	ISV228
6181	5322 130 34337	BAV99
6182	9340 255 30135	BAS216
6183	9340 386 90115	BZX284-C11
6704	4822 130 30621	1N4148
D601	5322 130 34337	BAV99
D602	5322 130 34337	BAV99
D603	9340 255 30135	BAS216
D604	9965 000 16915	HZ4B2
D605	9965 000 16915	HZ4B2
D606	5322 130 34337	BAV99
D702	9965 000 16915	HZ4B2
D801	9965 000 16916	6,2V
D802	9965 000 16917	5,6V
D803	4822 130 30621	1N4148
D804	4822 130 30621	1N4148
D805	9965 000 16918	4,7V 1/2W
D810	4822 130 30621	1N4148
D812	4822 130 30621	1N4148
D814	4822 130 30621	1N4148
D816	4822 130 30621	1N4148
D817	4822 130 30621	1N4148
D819	4822 130 30621	1N4148
D835	4822 130 31438	1N4001G
D836	4822 130 31438	1N4001G
D837	4822 130 31438	1N4001G
D838	4822 130 31438	1N4001G
D840	9965 000 16916	6,2V
DISP1	9965 000 16919	LED DISPLAY

**- IC & TRANSISTORS -**

7101	9351 740 80557	TEA5757HV1
7102	4822 130 42131	BF550
7111	5322 130 42755	BC847C
7180	4822 130 60373	BC856B
7181	5322 130 42755	BC847C
7182	5322 130 42755	BC847C
7183	5322 130 42755	BC847C
7702	4822 130 40981	BC337-25
IC601	9965 000 16920	PT6955
IC602	9965 000 16921	P87C54X2BBD
IC603	9322 143 49668	M24C01-RDW6
IC702	9965 000 16922	SAA7824HL
IC704	9965 000 16923	MM1469AH
IC705	4822 209 17498	AN7323
IC901	5322 209 83002	TDA2822M

**ELECTRICAL PARTSLIST**

**- IC & TRANSISTORS -**

Q601	4822 130 61311	2SA1162Y
Q603	9965 000 16924	2SC2712-GR
Q604	4822 130 42615	BC817-40
Q701	9965 000 16927	KTC-9014C
Q704	9965 000 16928	KTC-8050C
Q705	9965 000 16926	2SB764
Q801	9965 000 16927	KTC-9014C
Q802	9965 000 16927	KTC-9014C
Q803	9965 000 04928	ON4986
Q804	9965 000 04928	ON4986
Q805	9965 000 04928	ON4986
Q806	9965 000 04928	ON4986
Q807	9965 000 16927	KTC-9014C
Q808	9965 000 16927	KTC-9014C
Q809	9965 000 16927	KTC-9014C
Q810	9965 000 16927	KTC-9014C
Q811	9965 000 16928	KTC-8050C
Q812	9965 000 16925	KTC-8550D
Q813	9965 000 16927	KTC-9014C
Q814	9965 000 16929	KTC-9015C
Q815	9965 000 16927	KTC-9014C
Q818	9965 000 16926	2SB764
Q819	9965 000 16927	KTC-9014C
Q820	4822 130 40981	BC337-25
Q821	4822 130 40981	BC337-25
Q841	9965 000 16928	KTC-8050C

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