

Service  
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# Service Manual



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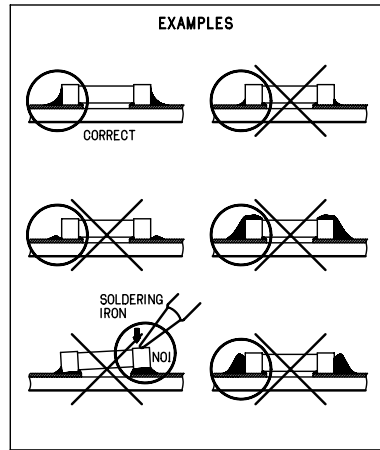
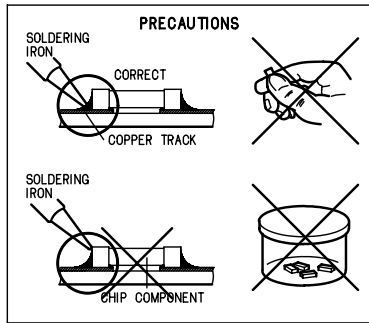
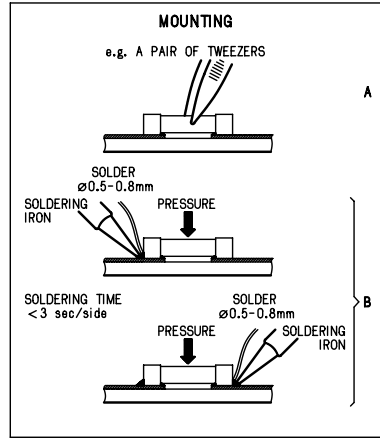
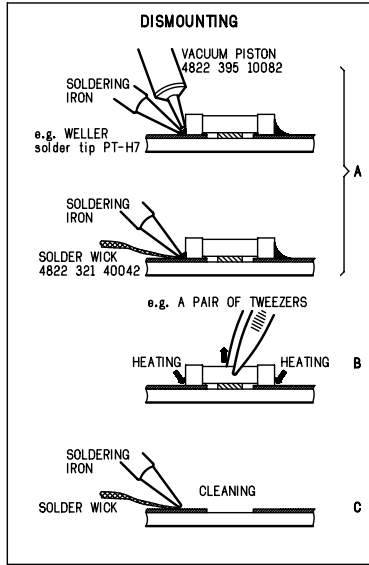
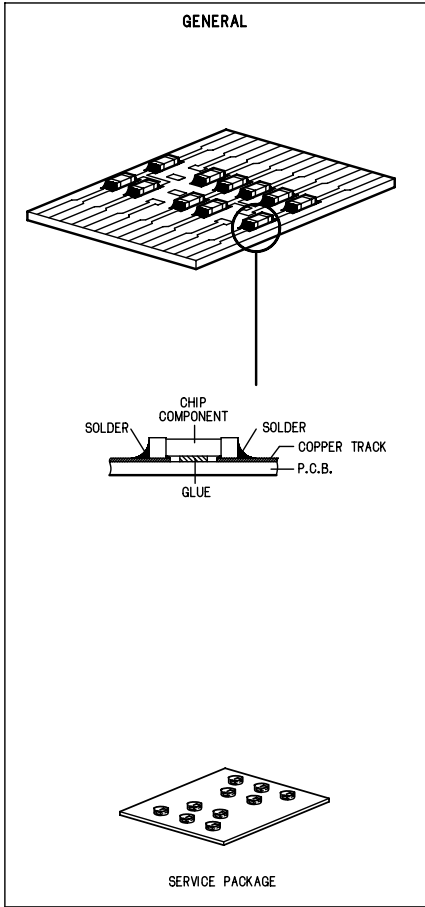
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# HANDLING CHIP COMPONENTS



**(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 ditzelfde 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 enfilier 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 ridotta 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 spärren är urkopplad. Betrakta ej strålen.

**(DK) Advarsel !** Usynlig laserstrålning ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.



**(FIN) Varoitus !** Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

**(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".

## TECHNICAL SPECIFICATIONS

### GENERAL

Mains voltage	-/01 : 120/230 V
	-/10 : 240 V
Mains frequency	-/01 : 60 / 50 Hz
	-/10 : 50 Hz
Battery	mains : 9 V (R14 x 6)
Power consumption	: 15W

### AMPLIFIER

Output power	mains : 2 x 1.5 W
	battery : 2 x 1.5 W
Speaker impedance	: 2 x 6 ohm

### TUNER - FM SECTION

Tuning range	: 87.5 - 108 MHz
IF frequency	: 10.7 MHz $\pm$ 0.3MHz
Sensitivity	: < 14 dB $\mu$ V at 26dB S/N
Selectivity S9/300kHz	: > 20 dB
IF rejection	: > 50 dB
Image rejection	: > 20 dB
-3dB limiting point	: 18dB $\mu$ V
Distortion	: 5%

### TUNER - MW SECTION

Tuning range	: 526.5 - 1606.5 kHz
IF frequency	: 456 kHz $\pm$ 3 kHz
Sensitivity	: < 72 dB $\mu$ V/m at 26dB S/N
Selectivity	: > 16 dB
IF rejection	: > 24 dB
Image rejection ratio	: > 28 dB
Channel difference	: 3dB
Overall frequency response	: 120Hz

### AUDIO CASSETTE RECORDER

Number of tracks	: 1 stereo
Tape speed	: 4.76 cm/sec + 3/-2%
Wow & flutter	: < 0.35 % JIS Unwtd.
Fast wind/rewind C60	: < 130 sec.
Frequency response	P/B : 125 - 8000 Hz
S/N ratio	: > 36 dB

### COMPACT DISC

S/N ratio unwtd.	: > 50 dB
Channel difference	1 kHz : < 2 dB
Crosstalk 1 kHz	: > 30 dB
Frequency response	: $\pm$ 2dB at 100Hz
THD(1kHz,0dB)	: 1.5%

## SERVICE TOOLS

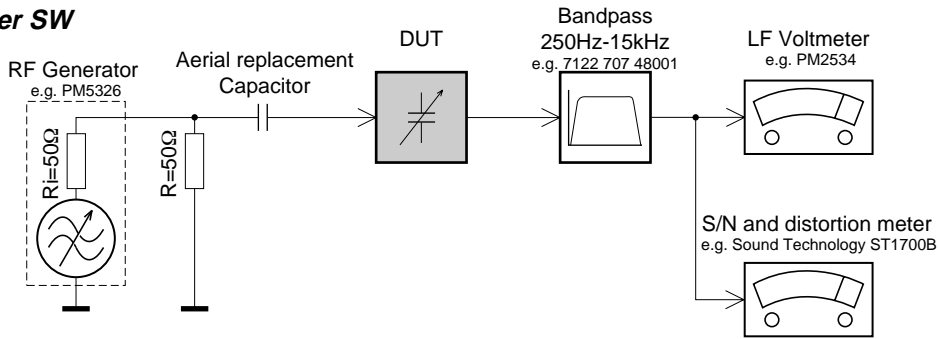
Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors ) +	
Test disc 5A (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without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

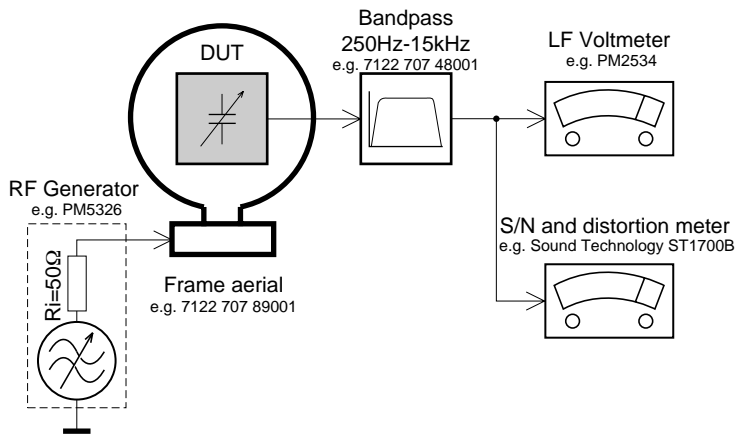
## SERVICE MEASUREMENT

### 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).

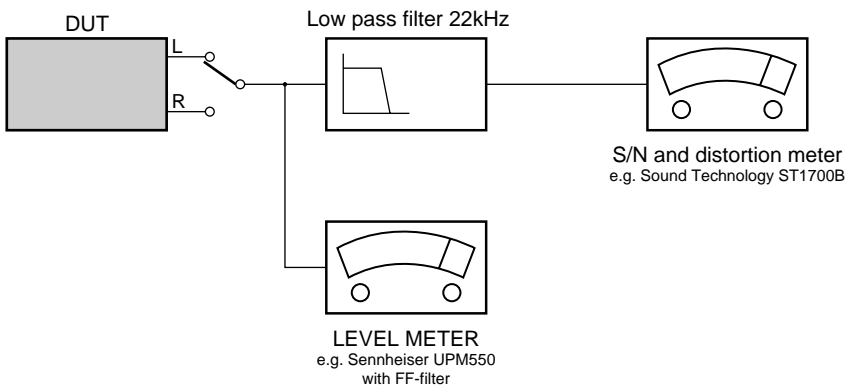
### Tuner AM (MW,LW)



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

## CONTROLS

### TOP AND FRONT PANEL

- 1 **LIFT TO OPEN** - to open the CD door.
- 2 **Source selector** - POWER ON/OFF switch and to select source of sound source:  
**CD•VCD/MW/FM/TAPE.**
- 3 **Cassette keys:**  
**PAUSE II** - to interrupt recording or playback.  
**STOP•OPEN III ▲** - To stop the tape and to open the cassette holder.  
**SEARCH ◀◀ or ▶▶** - to fast wind/rewind the tape.
- 4 **PLAY ◀** - to start playback.  
**RECORD ●** - to start recording.
- 5 **REMOTE SENSOR** - infrared sensor for remote control
- 6 **LCD Display** - to show the VCD, MP3 functions and disc status.
- 7 **TUNING** - to tune to radio stations
- 8 **PLAY•PAUSE ▶II** - To start or interrupt CD playback.
- 9 **STOP ■** - to stop playback
- 10 **SEARCH ◀◀ or ▶▶ I** - to skip or search a passage or a track
- 11 **DBB (Dynamic Bass Boost)** - for a more vivid bass response.
- 12 **REPEAT** - to repeat a track/programme/entire CD playback
- 13 **SHUFFLE** - to play all tracks in random order
- 14 **VOLUME** - to adjust volume level.

English

### BACK PANEL

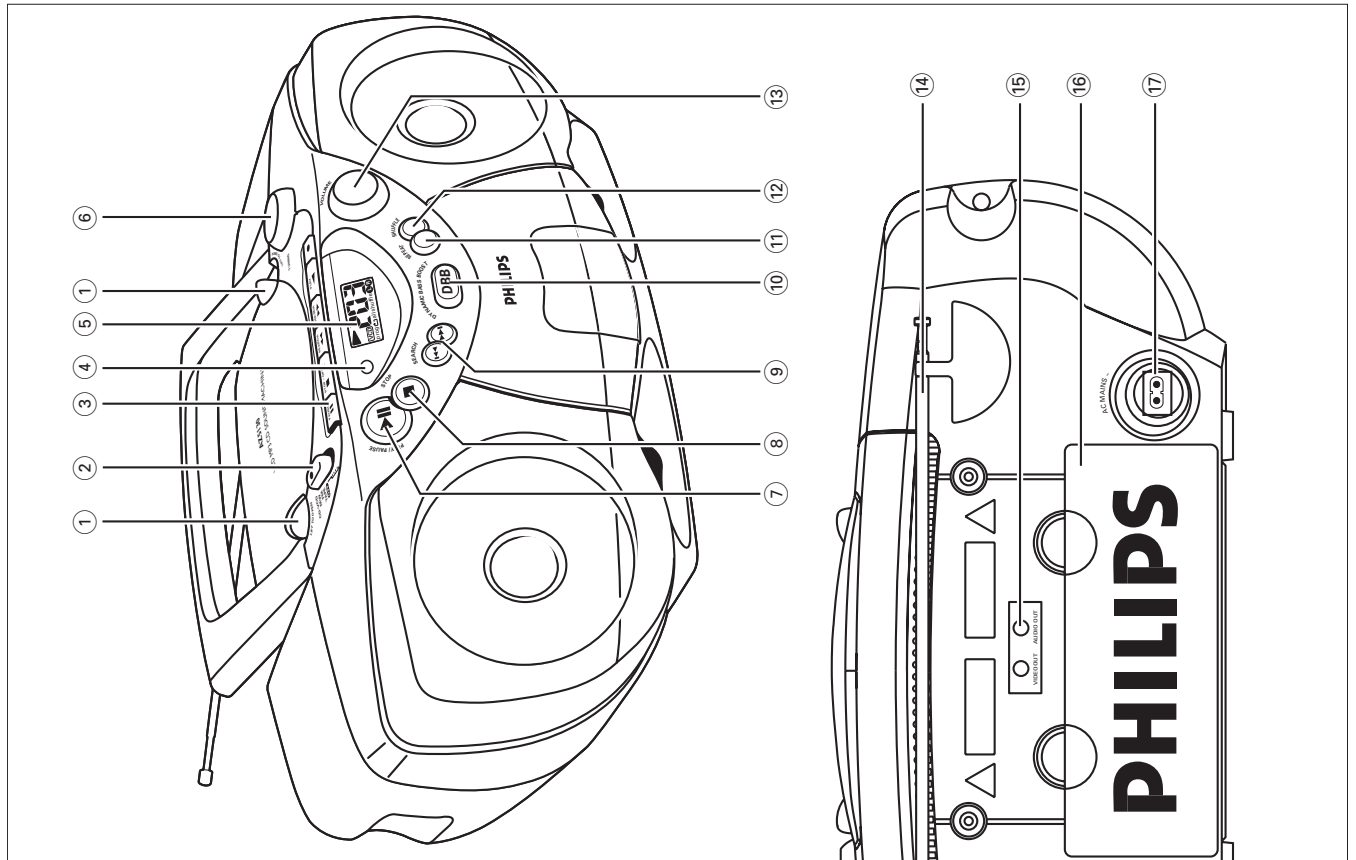
- 14 **Telescopic aerial** - to improve FM radio reception
- 15 **VIDEO/AUDIO OUT** - connect to the TV or VCR VIDEO/AUDIO IN
- 16 **Battery door** - to open the battery compartment
- 17 **AC MAINS ~** - socket for mains lead

### SUPPLIED ACCESSORIES

- Remote Control ..... 1 pc
- Mains Cord ..... 1 pc
- Audio / Video Cable ..... 1 pc

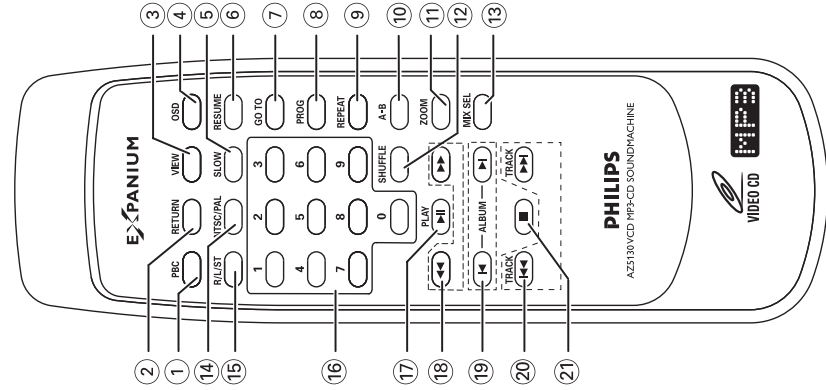
### REMOTE CONTROL

- 1 **PBC (PLAYBACK CONTROL)** - to switch on or off PBC mode (for VCD version 2.0 only).
- 2 **RETURN** - to return to the previous MENU level during playback (for VCD with PBC on).
- 3 **VIEW** - to scan through a VCD with 9 pictures display on TV screen. Only when PBC mode is switched off (for VCD operation only).
- 4 **OSD** - to switch on/off the on screen display on the TV screen.
- 5 **SLOW** - to watch a VCD at a slower speed (for VCD operation only).
- 6 **RESUME** - to resume playback in stop mode.
- 7 **GOTO** - to start playback at any chosen time on the disc (for CD/VCD operation only and PBC mode is off).
- 8 **PROG** for CD/VCD/MP3-CD ... to programme disc tracks.



English

English



- ⑨ **REPEAT** for MP3-CD ..... to repeat a track, or whole disc.
- for CD/VCD ..... to repeat a disc track or the whole disc.
- ⑩ **A - B** - to playback a certain scene or passage repeatedly (for CD/VCD operation only).
- ⑪ **ZOOM** for VCD only ..... to zoom in or zoom out picture.
- ⑫ **SHUFFLE** - When in CD/VCD mode, press to start or stop shuffle play mode.
- ⑬ **MIX/SEL** - to select disc format (CD / MP3-CD) in a mixed mode disc.
- ⑭ **NTSC/PAL** - to select the video output for NTSC or PAL system.
- ⑮ **R/L/ST** - to select channel left / channel right / stereo sound, or to select a language in a bilingual VCD.
- ⑯ **DIGITS 0 - 9** for CD/VCD/MP3-CD - to select a track number. *(numbers consisting more than 2 figures must be keyed in within 2 seconds)*
- ⑰ **PLAY/PAUSE** ▶|| - to start or interrupt playback.
- ⑱ **SEARCH** ◀◀ or ▶▶ (for CD/VCD/MP3-CD) - to search back or forward.
- ⑲ **ALBUM** ◀▶ for MP3-CD only ..... to select previous / next album
- ⑲ **TRACK** ▶▶ ▶▶ for MP3-CD only ..... to select previous/next title.
- for CD/VCD ..... to search backward/forward track
- ⑳ **STOP** ■ - to stop playback or to clear a programme.

**IMPORTANT!**  
For best CD/MP3-CD/VCD playback, please plug in your set to an AC power supply where convenient.  
If operated in DC mode, see below approximate playtime. (Playtime is also varied from different brand batteries) :

Battery type	Playtime
Alkaline	approximate 9 hrs
Zinc Carbonate	approximate 45 minutes

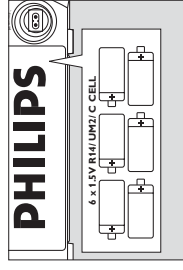
The CD part of this system also serves as a Video CD player if you connect it to your TV set.  
Before viewing the Video CD, ensure that the set is switched to corresponding PAL or NTSC system of your TV set (exception Multi-system TV).

**BATTERIES (NOT SUPPLIED)**

Whenever convenient, use the mains supply if you want to conserve battery life. The battery supply will be switched off when the set is connected to the mains. Make sure you remove the plug from the set and wall outlet before inserting batteries.

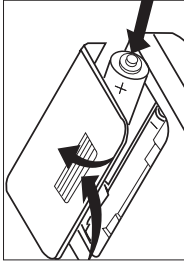
**Batteries**

1. Open the battery compartment and insert six batteries, type **R14, UM2** or **C-cells, (preferably alkaline)** with the correct polarity as indicated by the "+" and "-" symbols inside the compartment.



**Remote control**

- Open the battery compartment and insert two batteries, type **AAA, R03** or **UM4** (preferably alkaline).
2. Replace the compartment door, making sure the batteries are firmly and correctly in place.



3. Remove the batteries if they are exhausted or if they will not be used for a long period.

- The incorrect use of batteries can cause electrolyte leakage and will corrode the compartment or cause the batteries to burst. Therefore:
  - Do not mix battery types, e.g. alkaline with zinc carbonate.
  - When inserting new batteries, replace all at the same time.
  - Remove the batteries if the set is not to be used for a long time.

**Notes :**

- The battery supply is switched off when the set is connected to the mains.

**TV screen is disabled during CD / MP3-CD playing if your AZ5130 is battery powered.**

**Batteries contain chemical substances, so they should be disposed of properly**

## INSTRUCTIONS FOR USE

## CD/VCD/MP3-CD

## CAUTION

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

## Environmental information

All unnecessary packaging material has been omitted. We have done our utmost to make the packaging easily separable into three mono materials: cardboard, polystyrene and plastic.

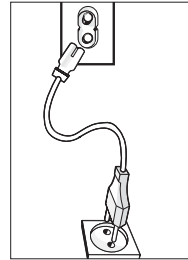
Your set consists of materials which can be recycled if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packaging materials, exhausted batteries and old equipment.

English

English

## GENERAL OPERATION

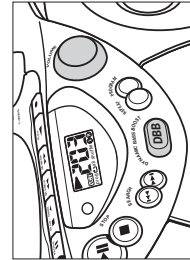
## MAINS



- Check if the mains voltage as shown on the type plate (on the bottom of the set) corresponds to your local mains voltage. If it does not consult your dealer or service organization.
- Connect the mains lead to the **AC MAINS** ~ socket and the wall socket.  
→ The set is now ready for use.
- To switch off the mains supply completely, pull the mains plug out of the wall socket.  
→ Disconnect the mains lead when you change over to battery supply, or to protect the set during heavy thunderstorms.

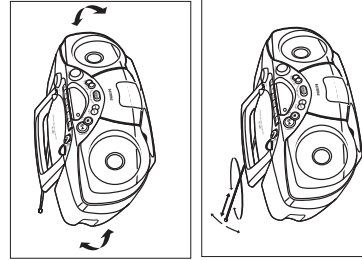
The **type plate** is located on the **bottom of the set**.

## GENERAL OPERATION



- To switch on the set, adjust the source selector.
- Adjust the sound using the **VOLUME** and **DBB** controls.
- To switch off the set, adjust the source selector to the **TAPE/OFF** position, with the cassette keys released.

## RADIO RECEPTION



- Set the source selector to **FM** or **MW**.
- Adjust the sound using the **VOLUME** controls and the **DBB** switch.
- Tune to a radio station using the **TUNING** knob.
  - For FM, pull out the telescopic aerial. To improve FM-reception, incline and turn the aerial. Reduce its length if the FM-signal is too strong (very close to a transmitter).
  - For MW, the set is provided with a built-in aerial, so the telescopic aerial is not needed. Direct the aerial by turning the whole set.
- To switch off, set the source selector to the **TAPE/OFF** position (with the cassette keys released).

## DISCS FOR PLAYBACK

This set can play all digital audio CD, video CD, finalised digital audio CD-Recordable (CDR) discs and finalised digital audio CD-Rewritable (CDRW) discs.

## Support following MP3-CD formats:

- ISO 9660 or ISO 9660 + Joliet format - Max. 30 characters
- Max. Track number is 400
- Max. nested directory is 8 levels
- The max. album number is 99
- The max. MP3 programme track number is 20
- The max. length of each track is 99 minutes 59 seconds
- The player can play mixed mode disc of CD / MP3-CD
- Supported VBR bit-rate
- Supported sampling frequencies for MP3 disc : 8 kHz to 48 kHz (44.1kHz preferably)
- Supported bit-rates of MP3 disc are: 32 - 320 kbps (128 kbps preferably)

## Following formats are not supported

- The files like \*.WMA, \*AAC, \*.DLF, \*.M3U, \*.PLS, MP3 PRO
- The non-session closed discs



## LOADING A DISC



- Set the source selector to **CD/VCD**.
- Lift to open the CD door.  
→ "CD" will be displayed
- Insert a disc with the label side facing up.
- Close the CD door.  
→ The total number of tracks of the disc appear on the display.  
→ "TRK" will be displayed if no disc is inserted or error in CD operation



## For MP3-CD only

- The total track number "TRK" and album number "ALB" will be displayed interchangeably.

## INSTRUCTIONS FOR USE

## CD/VCD/MP3-CD

## CD/VCD/MP3-CD

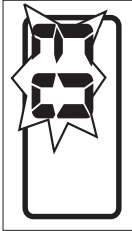
→ On TV screen, the total ALBUM and TRACK number will display, also with the album list (max. 10 lines per page). The current selected music is highlighted.

**Notes :** - To ensure good system performance, wait until the disc completely reads before proceeding.

- For MP3-CD, the disc reading time may exceed 1 minute due to the large number of songs compiled into one disc.

**PLAYING A NORMAL DISC**

1. Press **▶II** to start playback.
  - The track number of the current track and **▶** appear on the display.
  - To interrupt playback, press **▶II**.
  - **▶** will disappear and the current track number will start flashing.
  - To resume playback, press **▶II** again.
2. To stop playback, press **■**.

**SELECTING A DESIRED TRACK/PASSAGE****To select a desired track**

- Press **◀◀** or **▶▶** on the set repeatedly (or use digits 0 - 9 buttons on the remote control) until the desired track appears on the display.
- If playback is stopped, press **▶II** to start playback.

**To search for a particular passage during playback**

- Press and hold **◀◀** or **▶▶** on the set for 1 second (or on the remote control, press **◀◀** or **▶▶**)
- During searching, the volume will be muted.

**For MP3-CD only****To select a desired album**

- On the remote control, press **◀** or **▶** until the desired album number appear on the display.
- "P: x, x" will be displayed.
- On TV screen, the arrow will move forward/backward in the ALBUM menu.

**To select a desired track**

- Press **◀◀** or **▶▶** on the set repeatedly (or on the remote control, press **◀◀** or **▶▶**) to select a desired track from the current album.
- "x : x, x" will be displayed.
- On TV screen, the arrow will move forward/backward in the TRACK menu.
- Use the digital keys on the remote control to select the track under current album directly.

**To select and playback another track during playback mode**

1. Press **◀◀** or **▶▶** repeatedly to select another track.
  - The new selected track will show on the display screen and TV screen and playback continuously.
2. Press **▶II** to start playback the new selected track.

**For VCD only**

- Either press **◀◀** or **▶▶** on the remote control repeatedly to select fast search speed (x1, x2, x3 or x4) or
- press & hold **◀◀** or **▶▶** on the set for 1 second and then release **◀◀** or **▶▶** to select fast search speed (x1). Repeat this step to select other speed (x2, x3, x4).

English

English

**PROGRAMMING TRACKS**

Programming tracks of disc is possible when playback is stopped. Up to 20 tracks can be stored in the memory in any order.

1. In stop mode, press **PROG** (on remote control) to enter programme setting.
  - **PROG** will flash on the display.
2. Press **digits 0 - 9** on the remote control or **◀◀** / **▶▶** to select the desired track.
3. Press **PROG** to store the select track. The number "x : x, x" represents the track no.
  - Repeat steps **1** to **3** to store other tracks.
4. Press **■** to end programme setting.
  - **PROG** will remain on the display.
- Press **PROG** (on remote control) in stop mode to review the programme sequence.
5. Press **▶II** to play the programmed tracks.
  - If you press **REPEAT** during programme playback, the current track or all programmed tracks will be played repeatedly.
  - **REPEAT/REPEAT ALL** icon and **PROG** will appear on the display.
6. Press **■** in stop mode to clear the programme.
  - **PROG** will disappear from the display.

**Notes :** -The programming is automatically cleared as soon as the CD compartment is opened.

- The function of programme setting is disabled in PLAY/PAUSE mode.



- Programme cannot be used for VCDs when PBC is switched on. Switch off PBC before storing tracks from such a VCD.

**For MP3-CD only**

1. In stop mode, press **PROG** on the remote control to enter programme setting.
  - **PROG** will start flashing and "PQ : " will be displayed.
  - On TV screen, "PROG" program list (5 lines per page) will be displayed.
2. Press **digits 0 - 9** on the remote control or **◀** / **▶** to select the desired album.
3. Press **PROG** to store the select album. The number "P: x, x" represents the album no.
4. Press **◀◀** / **▶▶** repeatedly (or **digits 0 - 9** on the remote control) to select the desired TRACK for programming.
  - **PROG** will remain on the display.
- Repeat steps **1** to **5** to store other desired album and track.
6. Press **■** to end programme setting.
- Press **PROG** in stop mode can review the programme sequence.
7. Press **▶** to start programme playback. You can press **◀◀** / **▶▶** to select the programmed track to play.
8. Press **■** once stop programme playback or **twice** to clear the programme.



## INSTRUCTIONS FOR USE

CD/VCD/MP3-CD	CD/VCD/MP3-CD
<p><b>SHUFFLE</b></p> <p>You can play all the tracks in random order.</p> <ol style="list-style-type: none"> <li>1. During playing, pause or stop mode, press <b>SHUFFLE</b> to enable SHUFFLE play mode. → <b>SHUFFLE</b> will appear on the display.</li> <li>2. To exit shuffle mode, press <b>SHUFFLE</b> again or ■. → <b>SHUFFLE</b> will disappear from the display.</li> </ol> <p><b>Note :</b> - If the Shuffle function enabled, and the Repeat function is set on, will disable the Shuffle play mode.</p>	<p><b>VIDEO CD</b></p> <p><b>Playing a Video CD with PBC</b></p> <p>VCD with PBC (Playback Control) will be indicated on your TV screen as soon as they are inserted. PBC is a predefined play sequence stored on the VCD.</p> <ol style="list-style-type: none"> <li>1. Switch on the TV, insert a VCD with PBC.</li> <li>2. Menu appears on the TV screen.</li> </ol> <p><b>if the menu consists of a list of titles, you can select a sequence directly</b></p> <ol style="list-style-type: none"> <li>1. Press <b>digits 0 - 9</b> on the remote control to select your choice. → The VCD starts playing of the selected sequence automatically.</li> <li>2. Press <b>RETURN</b> on the remote control to go back to the previous menu. <b>Note :</b> - If a menu consists of more than one page, press <b>◀◀ / ▶▶</b> to go through the pages.</li> </ol> <p><b>Switching off PBC</b></p> <ul style="list-style-type: none"> <li>• In stop mode, press <b>PBC</b>. → On TV screen, "PBC OFF" will be displayed shortly.</li> </ul> <p><b>Notes :</b> - Programme mode is not available whenever PBC mode is switched on. - The menu structure depends on the programme stored on the VCD. Please refer to the information supplied with the disc.</p>
<p><b>REPEAT</b></p> <p>You can play the current track or the whole disc repeatedly.</p> <ol style="list-style-type: none"> <li>1. During CD/MP3-CD playing or pause mode, press <b>REPEAT</b> on the remote control or on the set. → <b>REPEAT</b> icon  - To repeat the current track. → <b>REPEAT ALL</b> icon  all - to repeat the whole disc.</li> <li>2. To exit the repeat mode, press <b>REPEAT</b> until the <b>REPEAT/REPEAT ALL</b> icon disappears from the display.</li> </ol> <p><b>Notes :</b> - If the Repeat function is enable, and the Shuffle function is set on, will disable all the Repeat play modes. - If the Repeat function is enable, and the Stop button is pressed, will disable all the Repeat play modes.</p>	<p><b>Pause</b></p> <ol style="list-style-type: none"> <li>1. During playback, press <b>▶II</b> to have a still picture on the TV screen. → The sound will be muted. → On TV screen, "PAUSE" will be displayed.</li> <li>2. Press <b>▶II</b> again to continue playback.</li> </ol> <p><b>Goto</b></p> <ol style="list-style-type: none"> <li>1. Press <b>GOTO</b> on the remote control. → On TV screen, "GOTO --:--" will be displayed.</li> <li>2. Press <b>digits 0 - 9</b> on the remote control to key in the disc time which you want the disc to begin playback.</li> </ol> <p><b>Note :</b> - The disc time entered should not be greater than the total disc time. - Goto mode is not available whenever PBC mode is switched on.</p>
<p><b>VIDEO CD</b></p> <p><b>Adjusting the TV System</b></p> <p>Before viewing the Video CD, ensure that the set is switched to corresponding PAL or NTSC system of your TV set (exception Multi - system TV).</p> <ol style="list-style-type: none"> <li>1. On the remote control, press <b>NTSC/PAL</b> to switch between NTSC and PAL TV system.</li> </ol> <p><b>OSD - On Screen Display</b></p> <p>If you insert VCD/CD, your TV screen will serve as an additional display for messages (e.g. PLAY, STOP), and information stored on the VCD/CD.</p> <ul style="list-style-type: none"> <li>• Press OSD on the remote control to select viewing various information. → The current track and current /elapsed time in the track/disc appear on the display.</li> </ul>	<p><b>Slow</b></p> <ol style="list-style-type: none"> <li>1. Press <b>SLOW</b> on the remote control to watch a VCD at a slower speed. There are 4 types of slow modes to select. → The sound will be muted. → On TV screen, "SLOW 1/4", "SLOW 1/8", "SLOW 1/16" will be displayed.</li> <li>2. To resume playback at normal speed, press <b>SLOW</b> repeatedly until "PLAY" appears on the TV screen or press <b>▶II</b>.</li> </ol> <p><b>A-B repeat</b></p> <p>This feature is also applicable to audio CD (except for MP3-CD). To Play a certain scene or passage of the disc repeatedly.</p>

## INSTRUCTIONS FOR USE

## CD/VCD/MP3-CD

## VIDEO CD

- Press **A-B** on the remote control during playback to mark the start point of the chosen scene or passage.
  - "**REPEAT A**" will appear on the screen.
- Press **A-B** again to mark the end of the chosen scene or passage.
  - "**REPEAT AB**" will appear on the screen.
  - The selected scene or passage will start playing repeatedly.
- Press **A-B** once more to return to normal playback.
  - "**REPEAT AB**" will disappear from the display.

**Notes :** - You can also cancel A-B repeat by pressing **◀◀** or **▶▶**.  
 - A-B repeat marking can cross from one track to another. But for VCD 2.0, you are only able to set the A-B repeat marking within the same track.

**Resume**

- In stop mode, press **RESUME** on the remote control to start playback again from where you have stopped.

**Note :** - Resume will not be available if you have changed the disc, opened the disc tray or disconnected the system from the power supply.

**View**

This feature allows you to scan through a VCD for a quick review. PBC mode must be switched off.

- In stop mode, press **VIEW** on the remote control to go to disc view function.
  - On TV screen, up to 9 pictures will be displayed. If a menu consists of more than one page, press **◀◀** or **▶▶** to view the previous/next page.
  - The first several seconds of each track will be played.
  - To exit review mode, press **digits 0 - 9** to play the desired track or **▶▶▶** to play the current selected track.
- In playback mode, press **VIEW** on the remote control to go to track view function.
  - press **◀◀** or **▶▶** to select the track.
  - On TV screen, up to 9 pictures within the track will be displayed.
  - The first several seconds of each picture will be played.
  - To exit review mode, press **digits 0 - 9** to play the desired position within the track or **▶▶▶** to play the current selected position.

**Note :** - If the disc is AVCD disc and there're no video tracks on the same viewed page, cannot use the direct digital key to play the track.

**Return**

- Press **RETURN** on the remote control to return to the previous VCD disc MENU level. It is functional only for Video CD when PBC is switched on.

**R/L/ST**

You can use it to select the different audio modes.

- Press **R/L/ST** on the remote control repeatedly to select the following modes:
  - L** **R** **L** **R** on the LCD represents channel left/channel right / dual channel on a bilingual VCD or mono left / mono right / stereo on single language VCD.

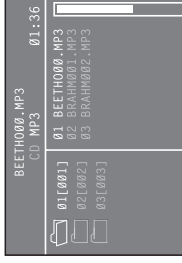
## CD/VCD/MP3-CD

## PLAYING A MIXED MODE DISC

This set can play a mixed mode disc.

- mixture of audio CD and MP3-CD
- mixture of other combination may not be operated normally.

- As default, audio CD tracks will be read first.
  - **L** **R** will be displayed.
  - TV screen, "MIX, CD-DA", will be displayed.
- Press **MIX/SEL** (on the remote control) repeatedly to select other disc modes.
  - **MP3-CD**.
  - **MP3** is displayed.
  - TV screen, MP3 menu is displayed.



**Notes :** - For protected CDs, "MIX CD-DA" is displayed on your TV screen even if the disc does not have other format. The **MIX/SEL** normal functions are not available for protected CDs.

English

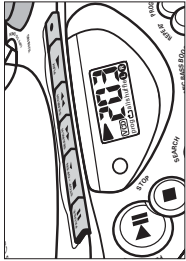
English

## INSTRUCTIONS FOR USE

## CASSETTE RECORDER




## CASSETTE PLAYBACK

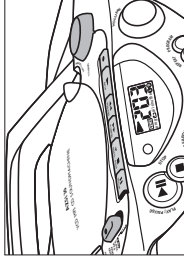
1. Set the source selector to **TAPE/OFF**.
  2. Press **STOP-OPEN**   to open the cassette holder.
  3. Insert a recorded cassette.
  4. Press **PLAY**  and playback will start.
  5. Adjust the sound using the **VOLUME** and **DBB** controls.
  6. For brief interruptions, press **PAUSE II**. Press **PAUSE II** again to resume playback.
  7. By pressing **FF** or **FF**, fast winding of the tape is possible in both directions.
  8. To stop playback, press **STOP-OPEN**  .
- The keys are automatically released at the end of the tape.
9. Set the source selector to **TAPE/OFF** position (with the cassette keys are released) to switch off the set.



## CASSETTE RECORDER

## RECORDING FROM THE RADIO









1. Set the source selector to **FM** or **MW**.
2. Tune to the desired radio station using the **TUNING** knob.
3. Press **STOP-OPEN**   to open the cassette holder.
4. Insert a blank tape.
5. Press **RECORD**  to start recording.
6. For brief interruptions, press **PAUSE II**. To resume recording, press **PAUSE II** again.
7. To stop recording, press **STOP-OPEN**  .

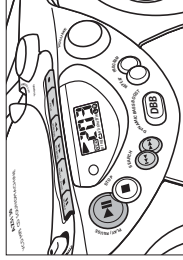


English

English

## SYNCHRO START CD RECORDING

1. Set the source selector to **CD-VCD**.
  2. Insert a CD and if desired, programme track numbers.
  3. Press **STOP-OPEN**   to open the cassette holder.
  4. Insert a blank cassette.
  5. Press **RECORD**  to start recording.  
→ Playing of the CD programme starts automatically from the beginning of the programme. It is not necessary to start the CD player separately.
  6. For brief interruptions, press **PAUSE II**. To resume recording, press **PAUSE II** again.
  7. To stop recording press **STOP-OPEN**  .
- To select and record a particular passage within a track**
1. Press and hold **SEARCH**  or  on the set to select a passage.
  2. Put the CD player in **PAUSE II** position at the selected passage.  
→ Recording will start from this exact point when you press **RECORD** .



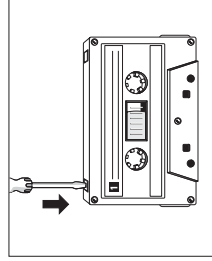
## CASSETTE RECORDING

## General information on cassette recording

- Recording is permissible insofar as copyright or other rights of third parties are not infringed.
- This deck is not suitable for recording on CHROME (IEC II) or METAL (IEC IV) type cassettes. For recording you should use NORMAL type cassettes (IEC I) on which the tabs have not been broken.
- Check and tighten slack tape before use with a pencil, to avoid jamming the deck mechanism.
- The recording level is set automatically. Altering the **VOLUME** and **DBB** controls will not affect the recording in progress.
- No recording will take place during the 3 seconds, when the leader tape passes the recorder heads.

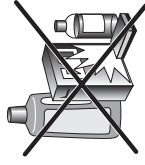
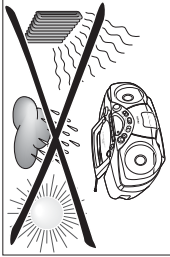
**Notes :** -No recording will take place during the 7 seconds in the beginning of the tape.

- To prevent the accidental erasure of a recording, keep the cassette side to be safeguarded in front of you and break out the left tab. Recording on this side is no longer possible.



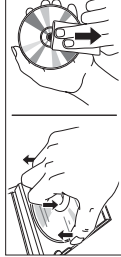
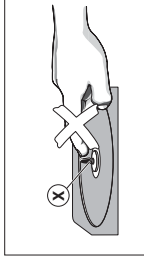
**PRECAUTIONS & GENERAL MAINTENANCE**

- Place the set on a hard, flat surface so that the system does not tilt.
- Always shut the CD door to keep the CD compartment dust-free. To clean, dust the compartment with a soft dry cloth.
- The mechanical parts of the set contain self-lubricating bearings and must not be oiled or lubricated.
- To clean the set, use a soft, slightly dampened chamois leather. Do not use any cleaning agents containing alcohol, ammonia, benzene or abrasives as these may harm the housing.



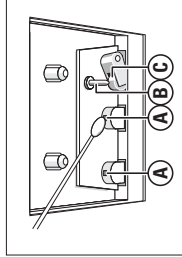
**CD PLAYER AND CD HANDLING**

- The lens of the CD player should *never be touched*.
- Sudden changes in the surrounding temperature can cause condensation to form and the lens of your CD player to cloud over. 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.
- Use only Digital Audio CDs.
- To take a CD out of its box, press the centre spindle while lifting the CD.
- Always pick up the CD by the edge and replace the CD back in its box after use to avoid scratching and dust.
- 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 stickers to it.



**TAPE DECK MAINTENANCE**

- To ensure a good recording and playback of the tape deck, clean parts (A), (B) and (C) show in the diagram below, after approx. 50 hours of operation, or on average once a month. Use a cotton bud slightly moistened with alcohol or a special head cleaning fluid to clean the deck.
- Open the cassette holder by pressing **STOP•OPEN** .
  - Press **PLAY**  and clean the rubber pressure rollers (C).
  - Press **PAUSE II** and clean the magnetic heads (A) and also the capstans (B).
  - After cleaning, press **STOP•OPEN** .



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

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.*

Problem	Solution
<b>CD/VCD OPERATION</b> "40 DISC" is displayed	<ul style="list-style-type: none"> <li>- Insert a disc.</li> <li>- Check if the disc is inserted upside down.</li> <li>- Wait until the moisture condensation at the lens has cleared.</li> <li>- Replace or clean the disc, see "Maintenance"</li> <li>- Use a readable disc or correct recorded format MP3-CD.</li> </ul>
No picture on TV screen No colour on TV	<ul style="list-style-type: none"> <li>- Connect the cable between the system and TV.</li> <li>- Change the system to the respective PAL or NTSC setting.</li> </ul>

<b>RADIO RECEPTION</b> Radio reception is poor	<ul style="list-style-type: none"> <li>- If the signal is too weak, adjust the antenna for better reception.</li> <li>- Increase the distance between the Receiver and your TV or VCR.</li> </ul>
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<b>TAPE OPERATION/RECORDING</b> Recording or playback cannot be made	<ul style="list-style-type: none"> <li>- Clean deck parts, see "Maintenance".</li> <li>- Use only NORMAL (IEC I) tape.</li> <li>- Apply a piece of adhesive tape over the missing tab space.</li> </ul>
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<b>GENERAL</b> The system does not react when buttons pressed/set does not work/no display on LCD. Sound cannot be heard or is of poor quality The remote control does not function properly	<ul style="list-style-type: none"> <li>- Slide the source sector to TAPE/OFF. Remove and reconnect the AC power plug for 30 seconds and switch on the system again.</li> <li>- Adjust the volume.</li> <li>- Make sure the MP3-CD was recorded within 32-320 kbps (128kbps preferably) with sampling frequencies at 8 - 48 kHz (44.1kHz preferably).</li> <li>- Reduce the distance between the remote control and the system.</li> <li>- Insert the batteries with their polarities (+/- signs) aligned as indicated.</li> <li>- Replace the batteries.</li> <li>- Point the remote control in the direction of the system's IR sensor.</li> </ul>
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## DISASSEMBLY DIAGRAM

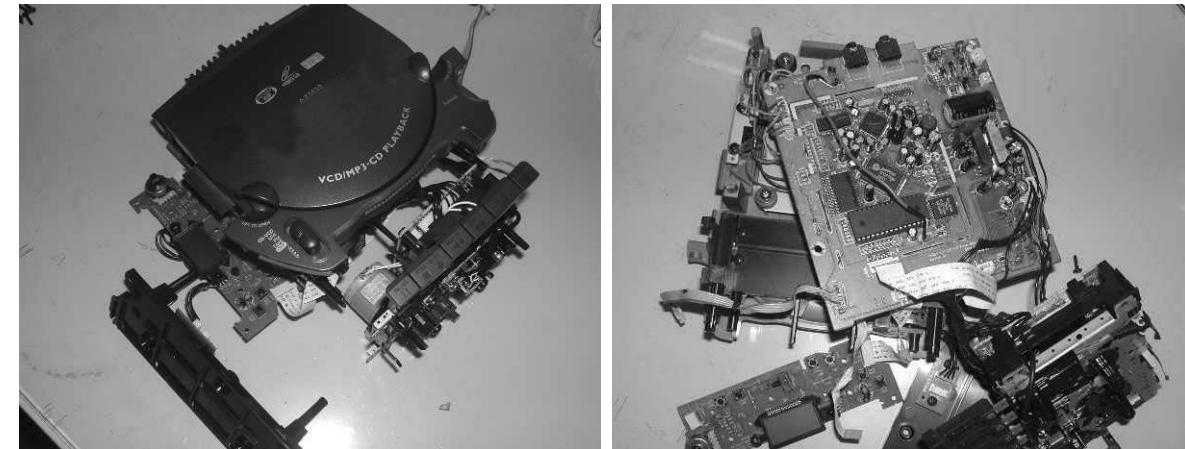
- A. REMOVE BACK CABINET ASSEMBLY
- REMOVE SCREWS A1(3x35) 7PCS
  - REMOVE SCREWS A2(3x20) 2PCS
  - REMOVE SCREWS A3(3x12) 2PCS(under the handle)
  - REMOVE FRONT CABINET



- B. REMOVE CD PANEL ASSEMBLY
- REMOVE SCREWS B1(3X12) 2PCS
  - REMOVE CD PANEL



- C REMOVE VCD BOARD
- REMOVE SCREWS C4(2.5x10) 4PCS, THEN REMOVE LCD BOARD
  - REMOVE SCREWS C5(3x10) 4PCS, THEN REMOVE BRACK-LCD
  - REMOVE SCREWS C6(3x12) 4PCS, THEN REMOVE CASSETTE BOARD
  - REMOVE SCREWS C7(3x10) 6PCS, THEN REMOVE VCD BOARD.



ABBREVIATIONS AND PIN-DESCRIPTION OF ICS

S1A902X01

PIN DESCRIPTION

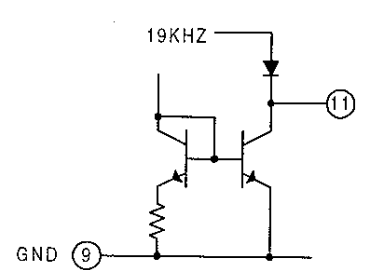
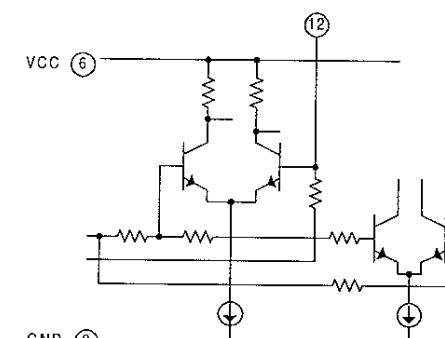
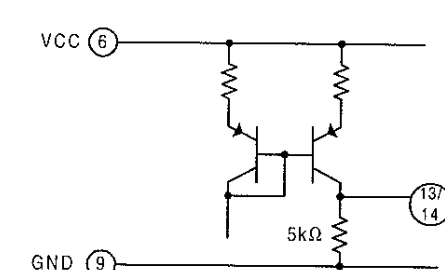
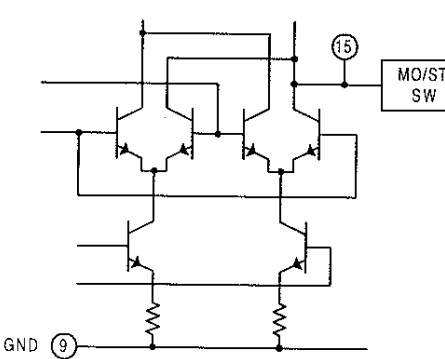
Terminal voltage: Typical terminal voltage at no signal with test circuit.  
VCC = 3V, Ta = 25°C

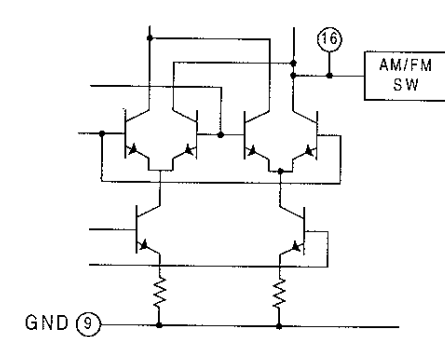
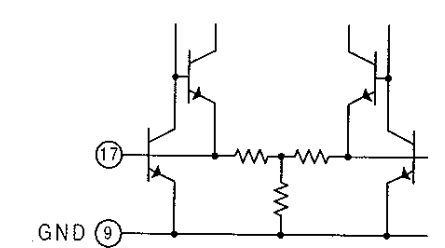
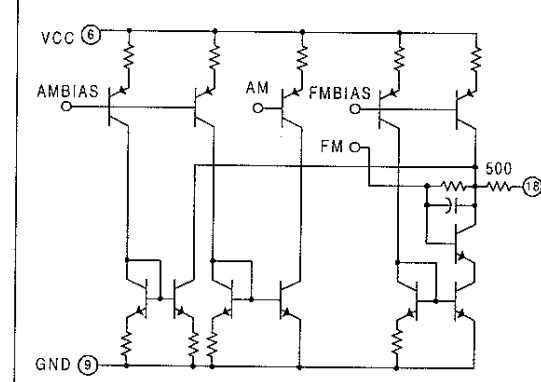

Pin No.	Characteristic	Internal Circuit	Terminal Voltage	
			AM	FM
1	FMRFIN		0	0.8
2	RFGND		0	0
3	FMMUTE		2.2	2.2
4	MIXOUT		3.0	2.9

Pin No.	Characteristic	Internal Circuit	Terminal Voltage	
			AM	FM
11	STLED (Stereo LED)		-	-
12	QUAD (FM QUAD. Detector)		2.5	2.2
13 14	R-OUT (R-ch out) L-OUT (L-ch out)		1.1	1.1
15	LPF1 - LPF terminal for sync. Detector - Bias terminal for MO/ST SW ckt. V16 = Vcc → MONO V16 = OPEN → STEREO		2.2	2.2

ABBREVIATIONS AND PIN-DESCRIPTION OF ICS

S1A902X01

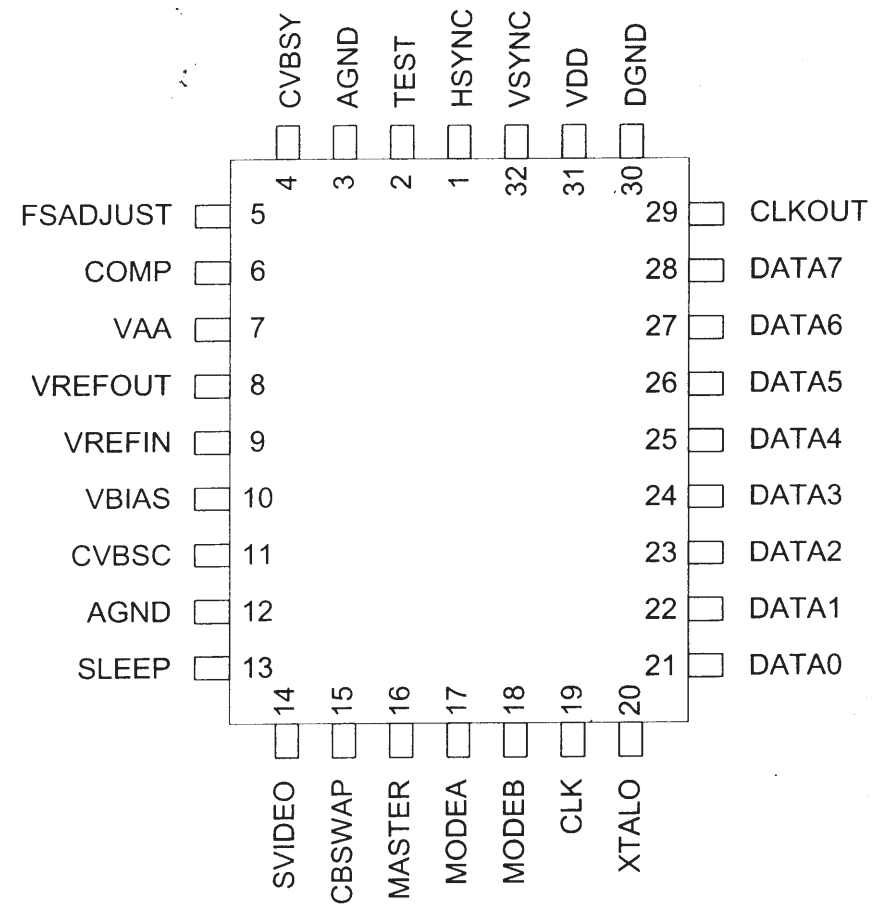
Pin No.	Characteristic	Internal Circuit	Terminal Voltage	
			AM	FM
11	STLED (Stereo LED)		-	-
12	QUAD (FM QUAD. Detector)		2.5	2.2
13 14	R-OUT (R-ch out) L-OUT (L-ch out)		1.1	1.1
15	LPF1 - LPF terminal for sync. Detector - Bias terminal for MO/ST SW ckt. V16 = Vcc → MONO V16 = OPEN → STEREO		2.2	2.2

Pin No.	Characteristic	Internal Circuit	Terminal Voltage	
			AM	FM
16	LPF2 - LPF terminal for phase detector - Bias terminal for AM/FM SW ckt. V16=Vcc→AM V16=OPEN→FM		3	2.2
17	MPXIN		0.8	0.8
18	DETOUT		1.0	0.9
19	AFC		-	-

**BLOCK DIAGRAM OF INTEGRATED CIRCUIT**

**SPCA711A**

**PINOUT and DESCRIPTION**



**(Table 1.)**

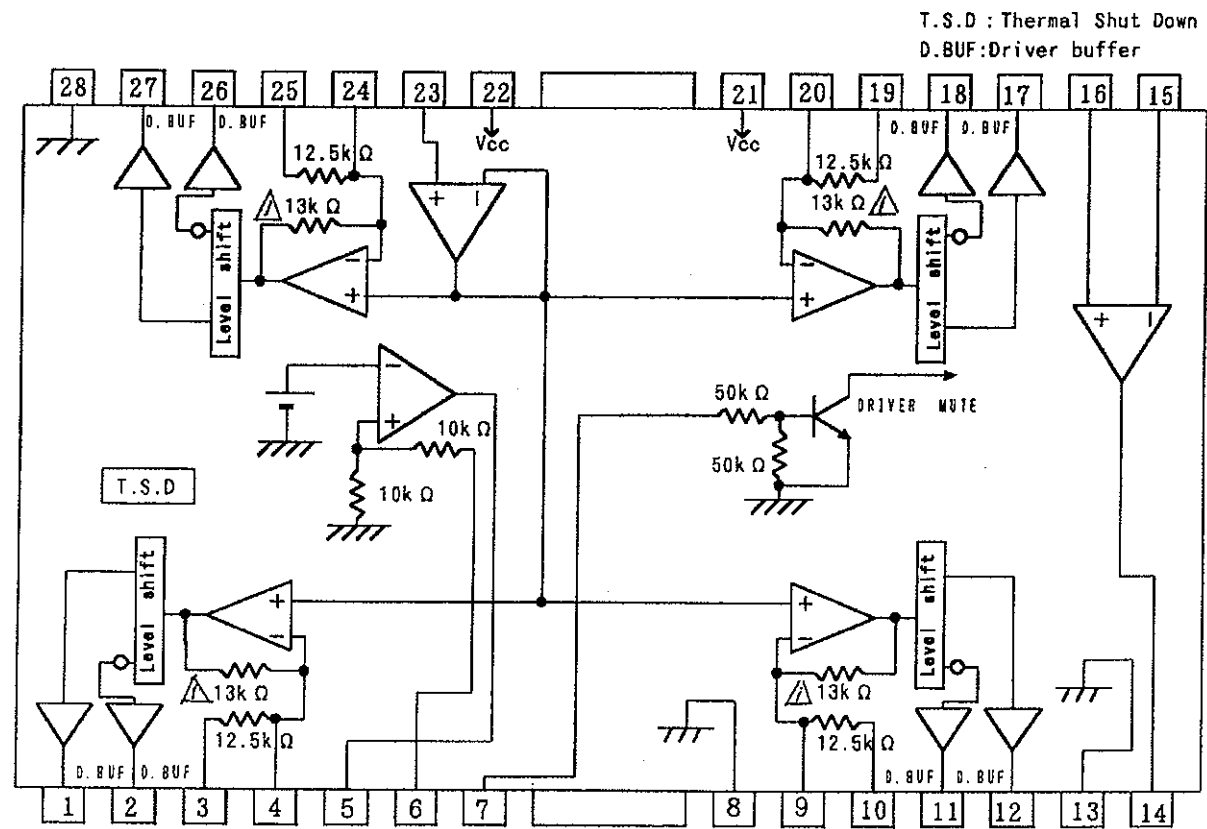
Mnemonic	PIN No.	Type	Description
DATA[7:0]	21 - 28	I	YCrCb pixel inputs. They are latched on the rising edge of CLK. YCrCb input data conform to CCIR 601.
CLKOUT	29	O	Pixel clock output
VSYNC	32	I/O	Vertical sync input/output. VSYNC is latched/output following the rising edge of CLK.
HSYNC	1	I/O	Horizontal sync input/output. HSYNC is latched/output following the rising edge of CLK.
MASTER	16	I	Master/slave mode selection. A logical high for master mode operation. A logical 0 for slave mode operation.
CBSWAP	15	I	Cr and Cb pixel sequence configuration pin. A logic high swap the

Mnemonic	PIN No.	Type	Description
			Cr and Cb sequence.
SVIDEO	14	I	SVIDEO select input pin. A logic high selects Y/C output. A logic low selects composite video output.
SLEEP	13	I	Power save mode. A logic high on this pin puts the chip into power-down mode. This pin is equal to reset pin. An external logic high pulse should input to the pin when power on.
MODEA	17	I	Mode configuration pin.
MODEB	18	I	Mode configuration pin.
CLK	19	I	27MHz crystal oscillator input. A crystal with 27MHz clock frequency can be connected between this pin and XTALO.
XTALO	20	O	Crystal oscillator output.
TEST	2	I	Test pin. These pins must be connected to DGND.
VREFIN	9	I	Voltage reference input. An external voltage reference must supply, typical 1.235V to this pin. A 0.1µF ceramic capacitor must be used to de-couple this input to GND. The decoupling capacitor must be as closed as possible to minimize the length of the lead. This pin may be connected directly to VREFOUT.
VREFOUT	8	O	Voltage reference output. It generates typical 1.2V voltage reference and may be used to drive VREFIN pin directly.
FSADJ	5	-	Full-Scale adjust control pin. The Full-Scale current of D/A converters can be adjusted by connecting a resistor (RSET) between this pin and ground.
COMP	6	-	Compensation pin. A 0.1µF ceramic capacitor must be used to bypass this pin to VAA. The lead length must be kept as short as possible to avoid noise.
VBIAS	10	-	DAC bias voltage. Potential normally 0.7V less than COMP.
VDD	31	-	Digital power pin
DGND	30	-	Digital ground pin
CVBSY	4	O	Composite/Luminance output. This is a high-impedance current source output. The output format can be selected by the PAL pin. The CVBSY can drive a 37.5 Ω-load.
CVBSC	11	O	Composite/Chroma output. This is a high impedance current source Output. The output format can be selected by the PAL pin. The pin can drive a 37.5 Ω load.



BLOCK DIAGRAM OF INTEGRATED CIRCUIT

MM1469AH



SPCA718A

4. SIGNAL DESCRIPTIONS

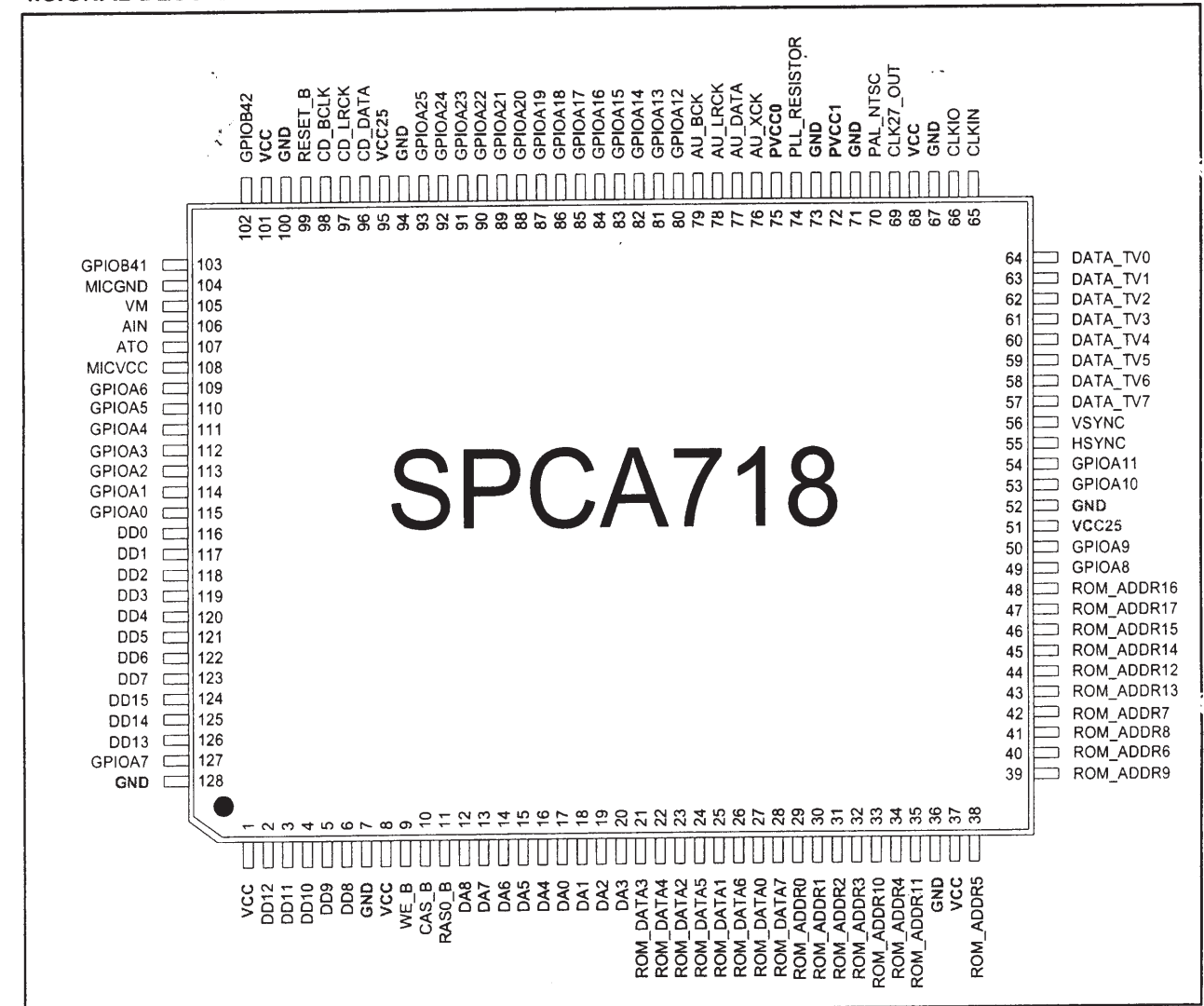
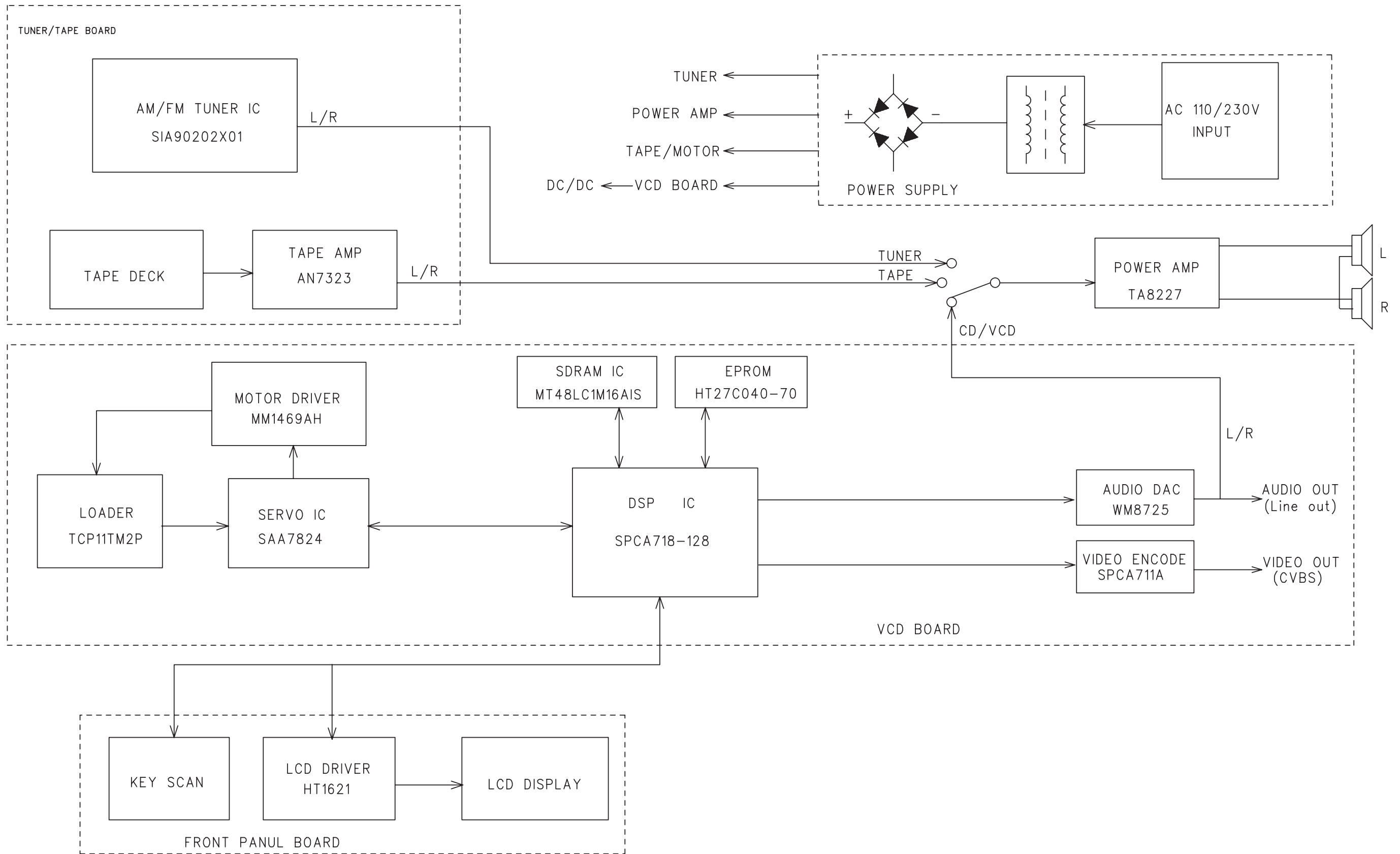
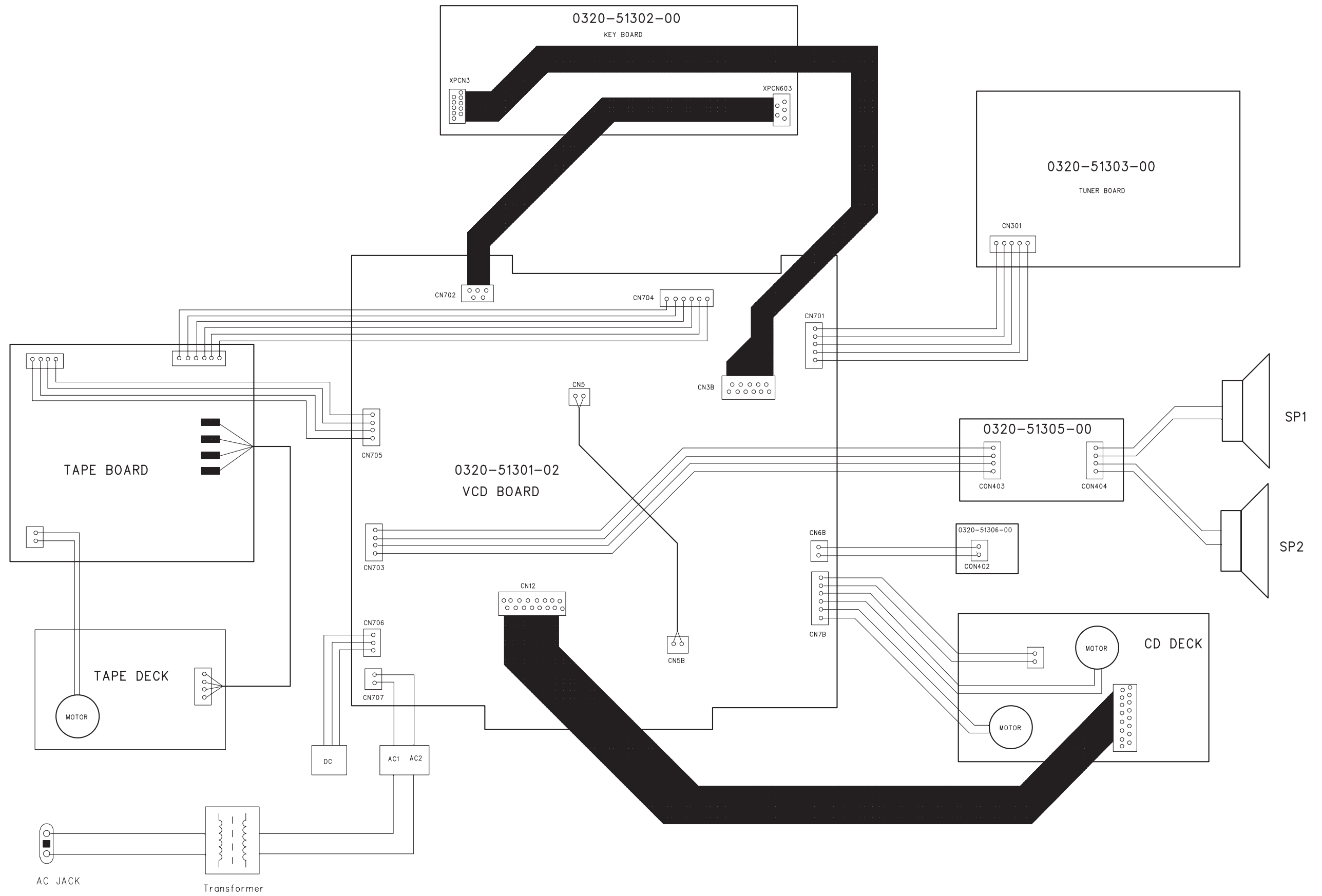


Figure 4-1 SPCA718A Pin Map

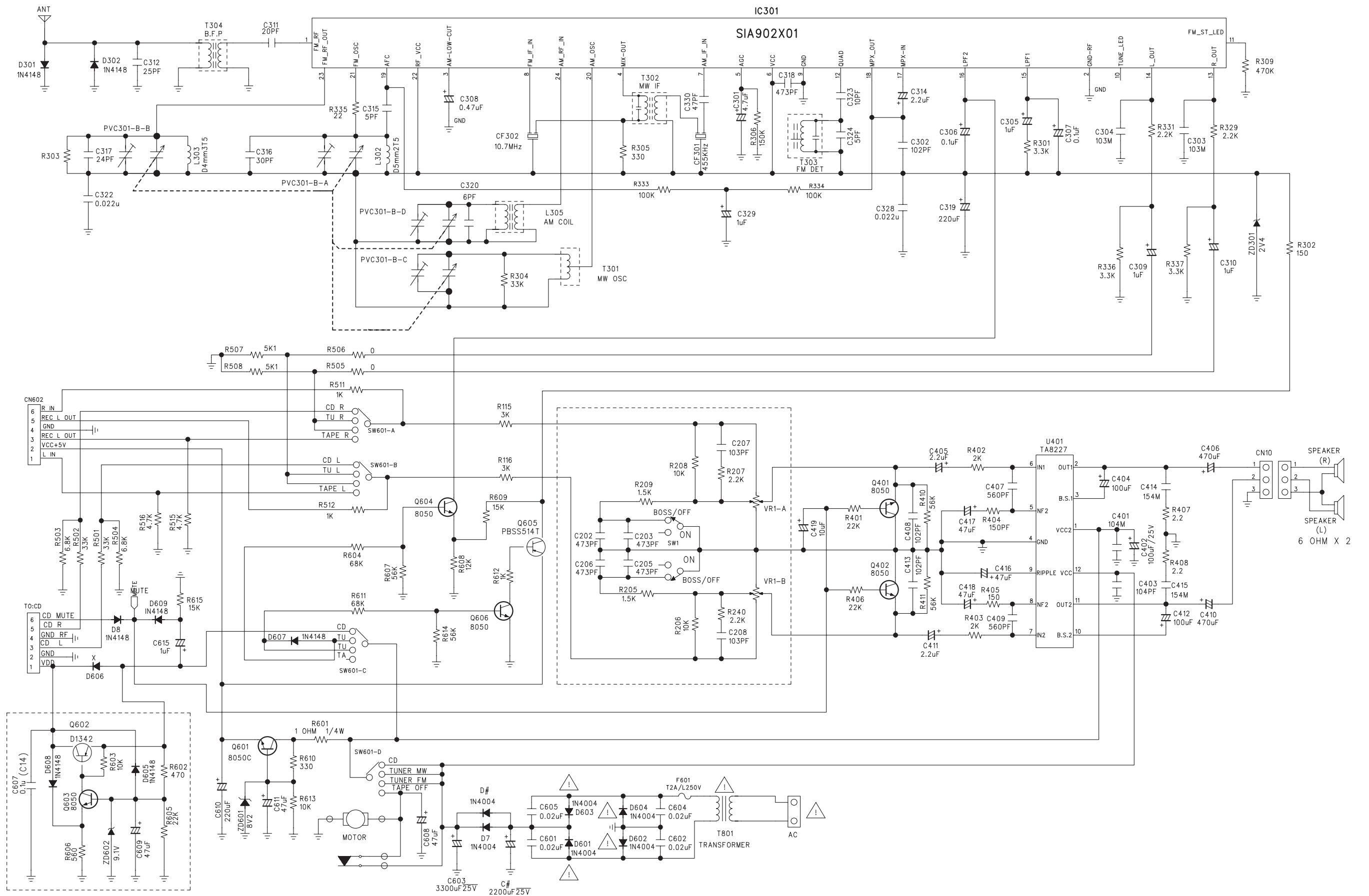
BLOCK DIAGRAM



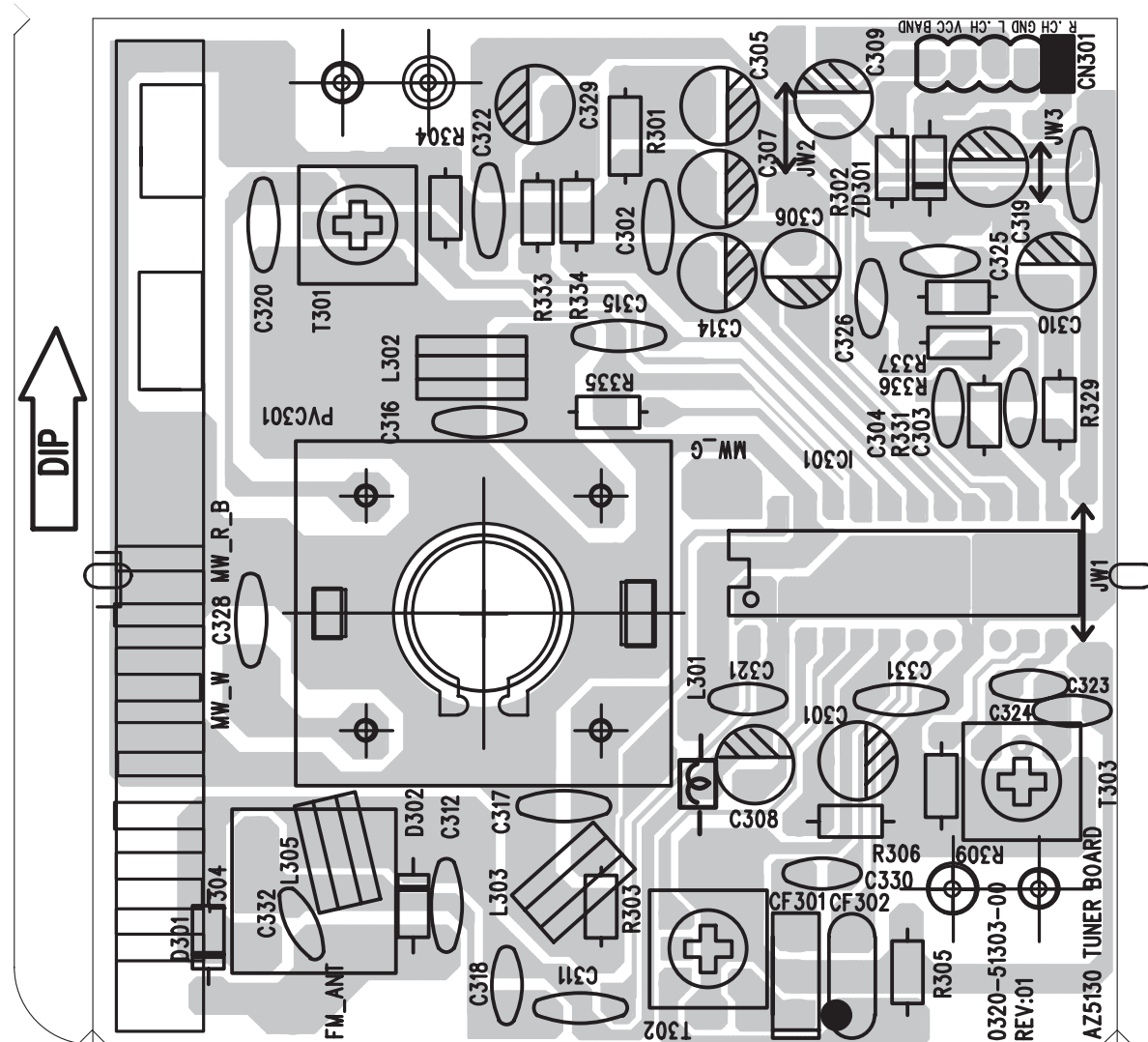
# WIRING DIAGRAM



# TUNER AND POWER AMPLIFIER BOARD - CIRCUIT DIAGRAM



## TUNER AND POWER AMPLIFIER BOARD - LAYOUT DIAGRAM

**Alignment Procedure****Model No. AZ-5130****Instruments Required :**

1. AM Signal Generator
2. FM Signal Generator
3. AM/FM if Sweep Generator
4. Dual Trace Oscilloscope
5. Solid State Voltage Meter (SSVM)
6. Frequency Counter
7. Nonmetallic Alignment Tools
8. Test Tape : Teac - MTT ñ 113N (6.3 kHz) or Equiv.
9. Test Tape : Teac - MTT ñ 111N (3 kHz) or Equiv.

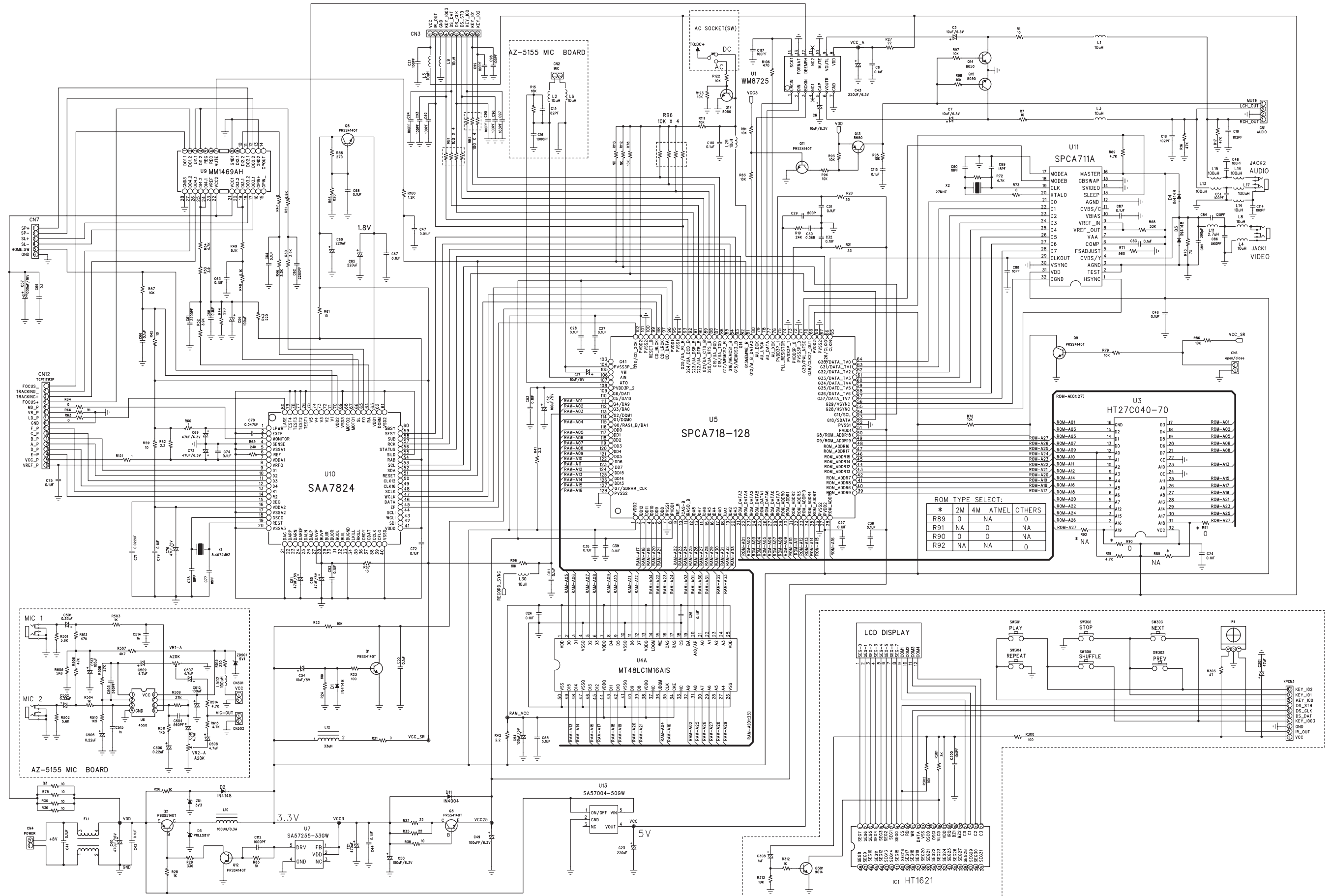
**Important**

1. Check Power Source Voltage
2. Set the Function Switch to Band Being Aligned.
3. Volume Should Be Turned To Minimum.
4. Signal Input Should be Kept as Low as Possible.
5. AM Modulation : 1 kHz 30%
6. FM Modulation : 1 kHz 22.5 kHz DEV.

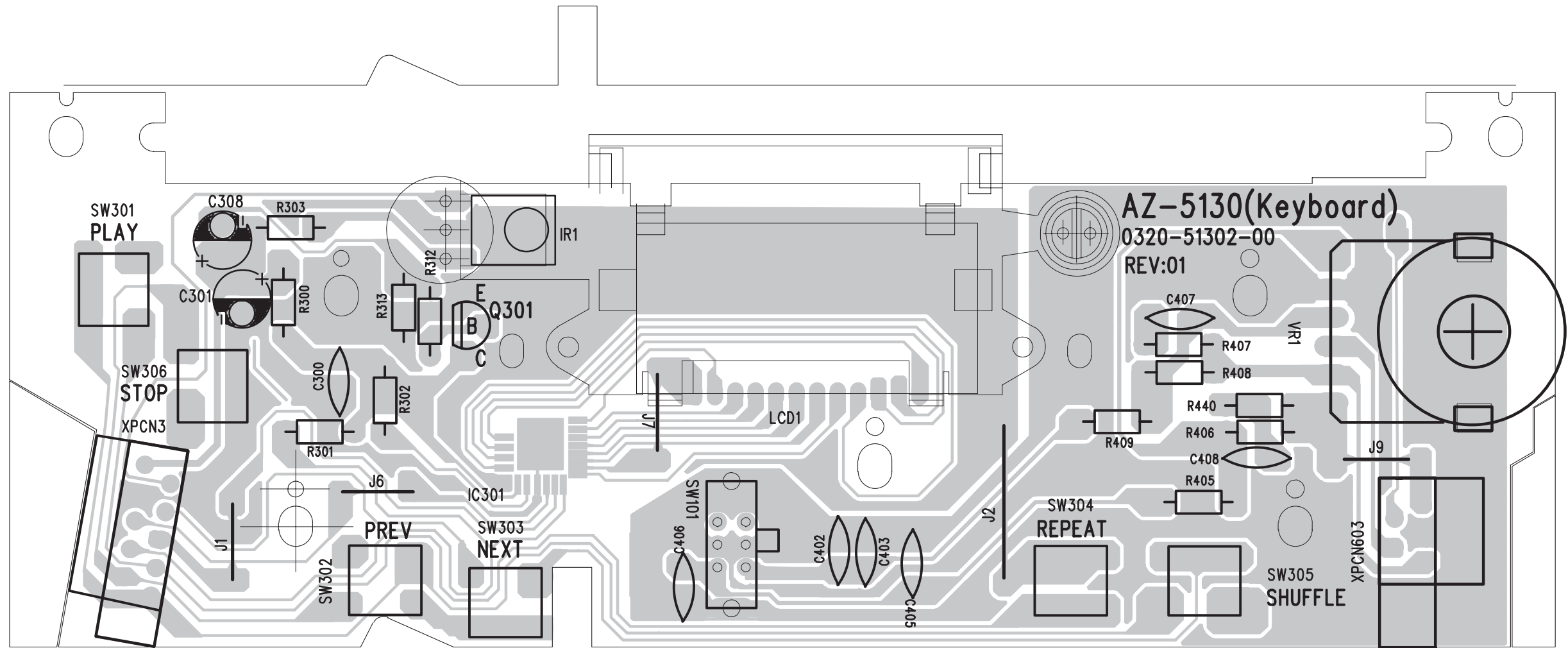
**Radio Alignment**

	Frequency	Input	Varian	Adjust	Output	Scope/Meter
MW IF						
	455 kHz	LOOP ANT AM Coil	MIN.	T302	IC301 Pins 18	MAX.
MW IF						
	520 kHz 1750 kHz	LOOP ANT AM Coil	MAX. MIN.	T301 VC301C	IC301 Pins 18	MAX.
	600 kHz 1400 kHz		600 kHz 1400 kHz	L305 VC301D		MAX.
FM IF						
	10.7 MHz	IC301 Pins 4	MIN.	T303	IC301 Pins 18	Symmetrical
FM IF						
	87.5 MHz 108.5 MHz	FM ANT. C312 Cer. Cap.	MAX. MIN.	L302 VC301A	IC301 Pins 18	MAX.
	90 MHz 106 MHz		90 MHz 106 MHz	L303 VC301B		MAX.

# VCD BOARD AND LCD BOARD - CIRCUIT DIAGRAM



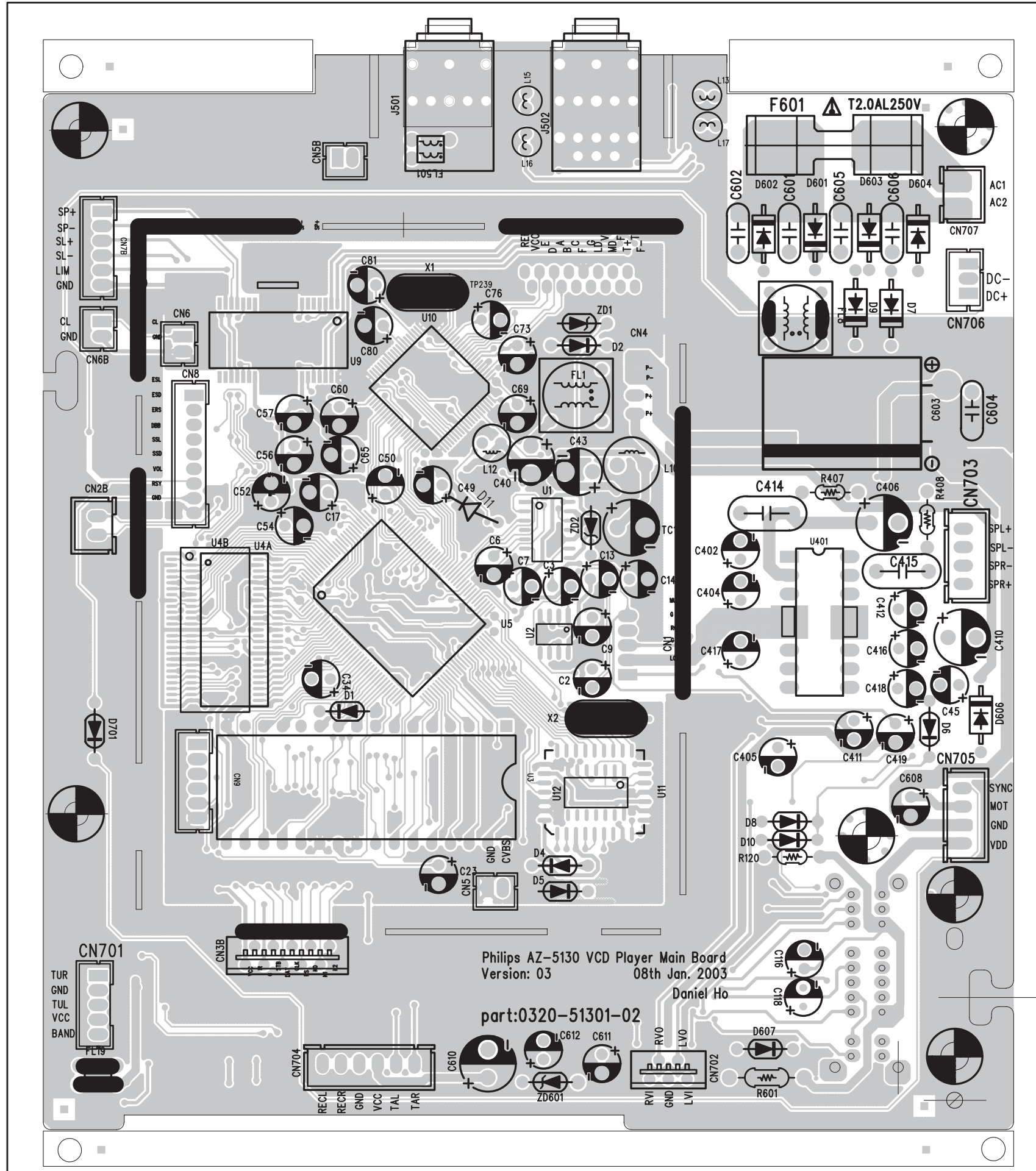
LCD BOARD - LAYOUT DIAGRAM





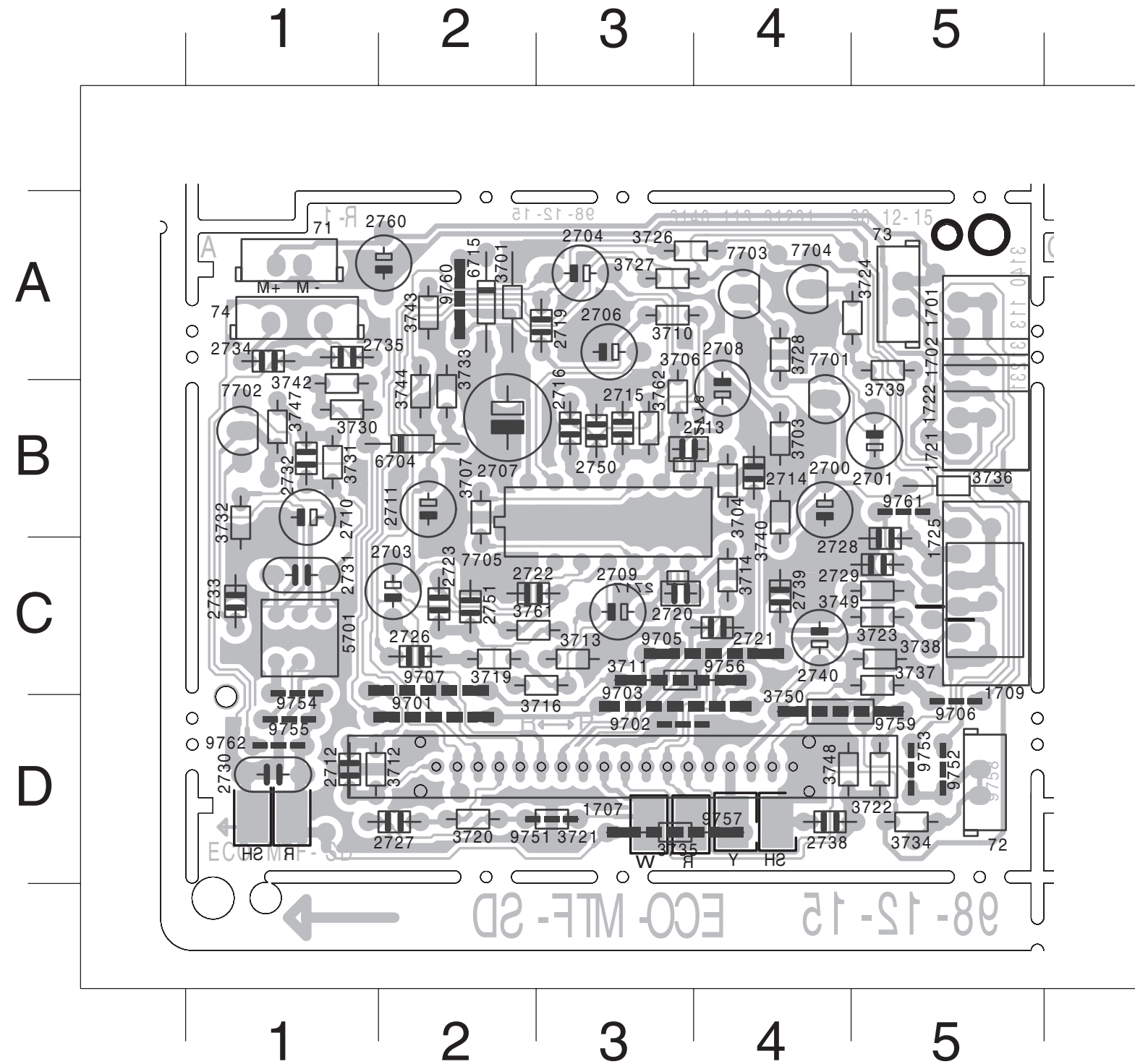


# LCD BOARD - LAYOUT DIAGRAM





TAPE BOARD - LAYOUT DIAGRAM



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

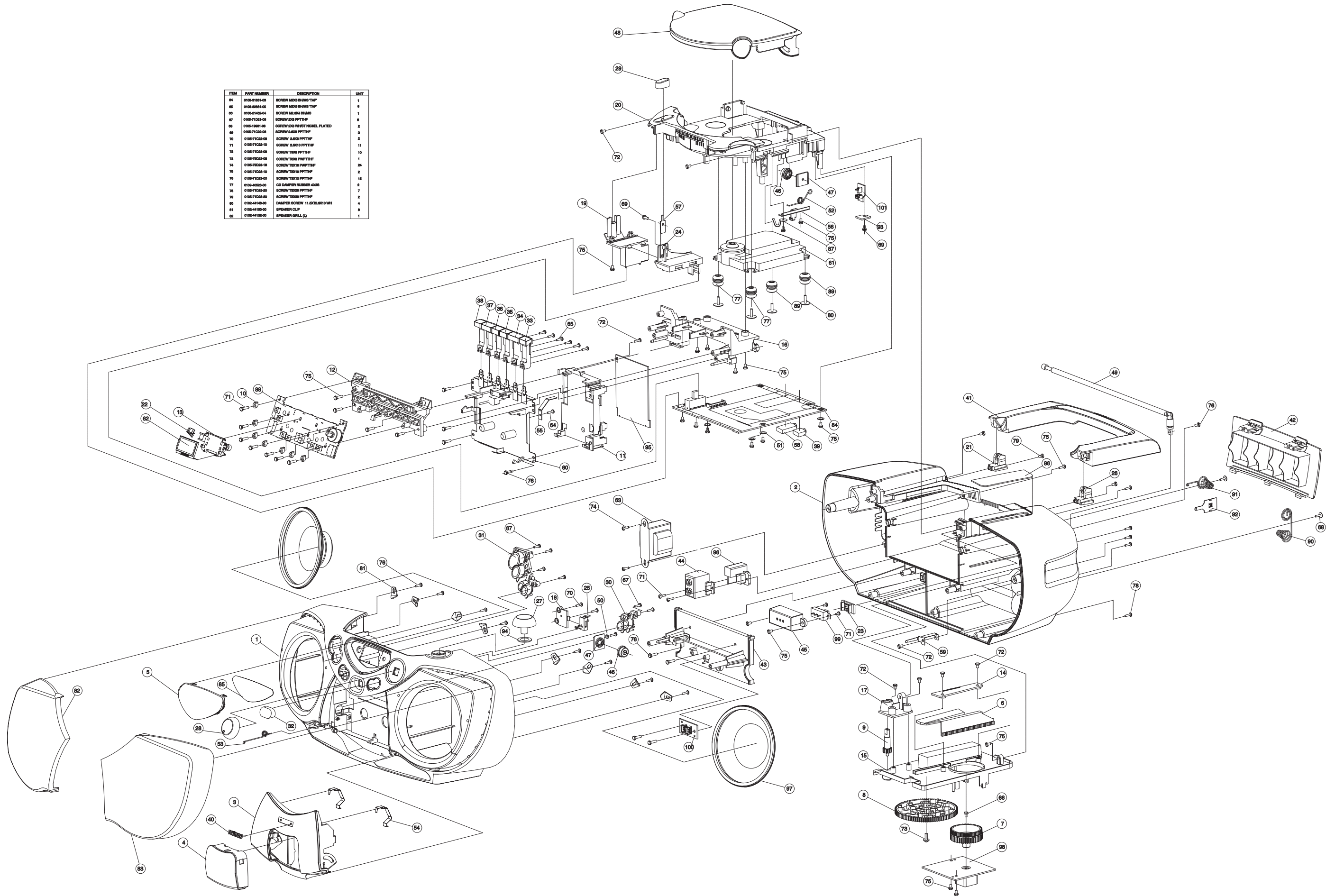
Adjustment	Cassette	SK ....	Deck 1	Measure on	Read on	Adjust with	Adjust to
Azimuth	10 kHz SBC420*	Tape	Play	H/P Jack	mV meter	Left hand Screw R/P head	max.
Motor Speed	3150 kHz SBC420*	Tape	Play	H/P Jack	Wow and flutter meter	Preset in motor	**a

\* SBC420 : 4822 397 30071

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

EXPLODED VIEW DIAGRAM - CABINET

ITEM	PART NUMBER	DESCRIPTION	QTY
04	0105-6885-00	SCREW M2X4 BRASS TAP	1
06	0105-6885-00	SCREW M2X4 BRASS TAP	8
08	0105-6145-04	SCREW M2.5X4 BRASS	1
09	0105-7125-08	SCREW 2.0X PPH11F	6
10	0105-1891-08	SCREW 2.0X WHITE NICKEL PLATED	2
11	0105-7125-08	SCREW 2.0X PPH11F	2
12	0105-7125-08	SCREW 2.0X PPH11F	2
13	0105-7125-10	SCREW 2.5X10 PPH11F	11
14	0105-7125-08	SCREW 2.0X PPH11F	10
15	0105-7028-08	SCREW 2.0X PPH11F	1
16	0105-7028-16	SCREW 2.0X16 PPH11F	84
17	0105-7125-10	SCREW 2.5X10 PPH11F	2
18	0105-7125-08	SCREW 2.0X PPH11F	15
19	0105-4025-00	CD DAMPER RUBBER 40.88	2
20	0105-7125-08	SCREW 2.0X PPH11F	7
21	0105-7125-08	SCREW 2.0X PPH11F	6
22	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
23	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
24	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
25	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
26	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
27	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
28	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
29	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
30	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
31	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
32	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
33	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
34	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
35	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
36	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
37	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
38	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
39	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
40	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
41	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
42	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
43	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
44	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
45	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
46	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
47	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
48	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
49	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
50	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
51	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
52	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
53	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
54	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
55	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
56	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
57	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
58	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
59	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
60	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
61	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
62	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
63	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
64	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
65	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
66	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
67	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
68	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
69	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
70	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
71	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
72	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
73	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
74	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
75	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
76	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
77	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
78	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
79	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
80	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
81	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
82	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
83	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
84	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
85	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
86	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
87	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
88	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
89	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
90	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
91	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
92	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
93	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
94	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
95	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
96	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
97	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
98	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
99	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4
100	0105-4416-00	DAMPER SCREW 11.6X12.8X10 WH	4



**MECHANICAL PARTSLIST - CABINET**

2	9965 000 20508	REAR CABINET
3	9965 000 20517	CASSETTE DOOR
4	9965 000 20518	CASS DOOR LENS
6	9965 000 20528	POINTER
7	9965 000 20530	GEAR PVC
8	9965 000 20529	GEAR BIG
9	9965 000 20531	GEAR TUNING
11	3140 114 20430	BRACKET ECO-MTF-SD
20	9965 000 20507	CD TRAY
21	9965 000 20526	HANDLE BKT LEFT
26	9965 000 20527	HANDLE BKT RIGHT
27	9965 000 20512	TUNING KNOB
28	9965 000 20514	VOLUME KNOB
29	9965 000 20519	SELECT KNOB
30	9965 000 20515	REPEAT PROGRAM KEY
31	9965 000 20516	PLAY/STOP/FF/REW KEY
32	9965 000 20513	DBB KNOB
33	9965 000 20520	CASS KEY (PAUSE)
34	9965 000 20521	CASS KEY (STOP)
35	9965 000 20522	CASS KEY (F.F.)
36	9965 000 20523	CASS KEY (REW)
37	9965 000 20524	CASS KEY (PLAY)
38	9965 000 20525	CASS KEY (RECORD)
41	9965 000 20511	HANDLE
42	9965 000 20510	BATTERY DOOR
46	4822 529 10322	DAMPER ASSY
48	9965 000 20509	CD DOOR
49	9965 000 20535	ROD ANT (3 SECTION)
52	9965 000 20533	CD DOOR SPRING
53	9965 000 20534	CASS DOOR SPRING

**MECHANICAL PARTSLIST - TAPE DECK**

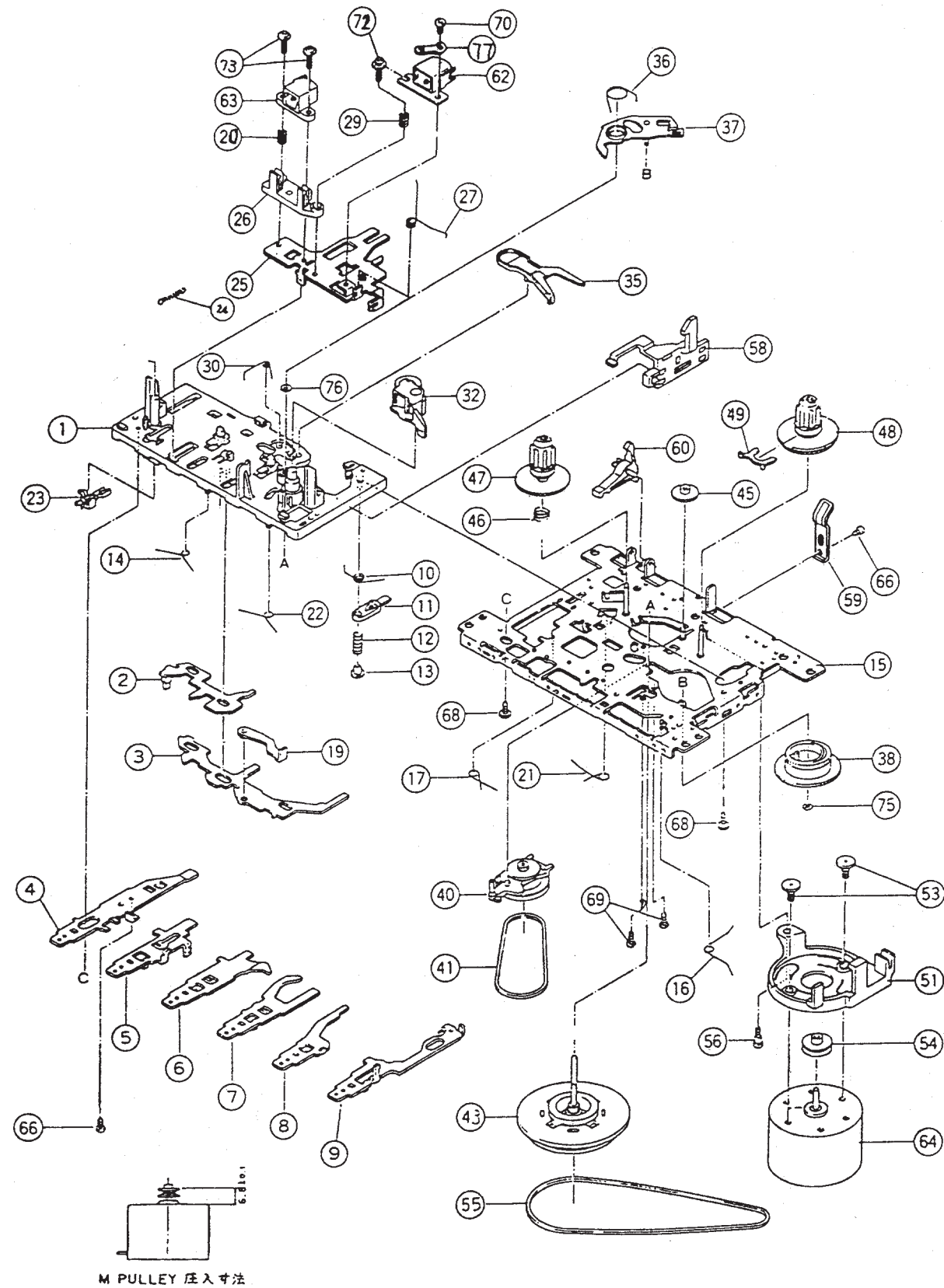
32	4822 403 20244	Roller Arm Assy
41	4822 358 31323	F. Belt
55	4822 358 31322	Main Belt
58	4822 403 71219	Eject Belt
62	4822 249 10475	R/P Head
63	4822 249 10531	E. Head
64	4822 361 21599	Motor EG-530AD-2B

54	9965 000 20532	CASS TAPE SPRING
55	9965 000 08506	REC SPRING
60	9965 000 14240	TAPE DECK TK20FX-V682-001
61	9965 000 20539	LENS COVER (CDM)
61	9965 000 20542	TCP-11-TM2P CD MECH.
77	9965 000 20541	DAMPER RUBBER 40JIS GREY
89	9965 000 20540	DAMPER RUBBER 30JIS BLK
90	9965 000 20538	BATTERY SPRING(+/-)
91	9965 000 20537	BATTERY SPRING(-)
92	9965 000 20536	BATTERY PLATE(+)

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

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

**EXPLODED VIEW DIAGRAM - TAPE DECK**



## ELECTRICAL PARTSLIST

### - MISCELLANEOUS -

J502	9965 000 20543	STEREO EARPHONE
	9965 000 20544	EARPHONE
DOOR	9965 000 09617	TACT-SWITCH
SW50	9965 000 20555	SWITCH
SW1	9965 000 20556	SWITCH

	9965 000 20557	TACT-SWITCH
	4822 158 60645	FERROCEPTOR
1707	4822 277 11504	PUSH-SWITCH
⚠	9965 000 08577	AC SOCKET
	4822 277 30971	SWITCH

⚠	9965 000 20564	TRANSFORMER AC120/230V
⚠	9965 000 20566	TRANSFORMER AC230V
⚠	2422 070 98151	MAINSCORD EUR 1M5 BK B
⚠	9965 000 12162	AC CORD SET (SAA)
	9965 000 20565	LOUDSPEAKER

F601	⚠ 4822 070 32001	FUSE
IR1	9965 000 20561	REMOTE RECEIVER

### - CAPACITORS & RESISTORS -

	9965 000 20563	PVC 20P-160P/20X2
VR1	9965 000 20558	VR B50K
RB1	9965 000 20553	100OHM X4 RESISTOR ARRAY
RB2	9965 000 20553	100OHM X4 RESISTOR ARRAY
RB5	9965 000 20553	100OHM X4 RESISTOR ARRAY
RB6	9965 000 20554	10 KOHM X4 RESISTOR ARRAY

### - COILS & FILTERS -

	9965 000 20560	LCD DISPLAY
5701	4822 157 10371	COIL
T301	9965 000 16786	MW OSC,COIL 843744
T302	9965 000 16787	IFT MW 843745
T303	4822 157 10689	FM DET COIL
	9965 000 16788	MW ANT,COIL 95T:15T
L303	9965 000 11817	FM COIL 3-1/2T
L302	4822 157 71567	2,5T
L301	9965 000 20562	10μH FIXED INDUCTOR
CF30	9965 000 16789	LT10,7MS CER,FILTER
T304	9965 000 16790	BAND PASS FILTER
CF30	9965 000 16797	CERAMIC FILTER SFU465B
L1	9965 000 20549	10μH CHIP INDUCTOR
L13	9965 000 20549	10μH CHIP INDUCTOR
L14	9965 000 20549	10μH CHIP INDUCTOR
L15	9965 000 20549	10μH CHIP INDUCTOR
L3	9965 000 20549	10μH CHIP INDUCTOR
L5	9965 000 20549	10μH CHIP INDUCTOR
L9	9965 000 20549	10μH CHIP INDUCTOR
L11	9965 000 20550	2,7μH SMD COIL

### - COILS & FILTERS -

L8	9965 000 20550	2,7μH SMD COIL
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### - DIODES -

ZD1	5322 130 31504	BZX79-B3V3
D1	4822 130 30621	1N4148
D2	4822 130 30621	1N4148
D4	4822 130 30621	1N4148
D5	4822 130 30621	1N4148
D701	4822 130 30621	1N4148
X1	9965 000 20552	8,4672 MHZ CRYSTAL
X2	9965 000 14271	CRYSTAL 27MHZ
ZD60	4822 130 10493	DIODE 8,2V
D601	5322 130 34574	1N4004G
D602	5322 130 34574	1N4004G
D603	5322 130 34574	1N4004G
D604	5322 130 34574	1N4004G
D606	5322 130 34574	1N4004G
D7	5322 130 34574	1N4004G
D6	4822 130 30621	1N4148
D607	4822 130 30621	1N4148
ZD30	9965 000 16799	ZENER DIODE 2,4V 1/2W
D301	4822 130 30621	1N4148
D302	4822 130 30621	1N4148
6704	4822 130 30621	1N4148

### - IC & TRANSISTORS -

Q1	9965 000 16236	PBSS4140T
Q5	9965 000 16236	PBSS4140T
Q11	9965 000 16236	PBSS4140T
Q12	9965 000 16236	PBSS4140T
Q14	9965 000 16236	PBSS4140T
Q15	9965 000 16236	PBSS4140T
Q8	9965 000 16236	PBSS4140T
Q2	9965 000 16235	PBSS5140T
U11	9965 000 14730	SPCA711A
U5	9965 000 20545	SPCA718A
U9	9965 000 16777	MM1469A
U3	9965 000 20546	AT27C040-70PC
U13	9965 000 20547	SA57004-50GW
U8	9965 000 20547	SA57004-50GW
U7	9965 000 20548	SA57255-33GW
U10	9965 000 16922	SAA7824HL
U1	9965 000 13432	WM8725
D3	9965 000 20551	SM5817
IC30	9965 000 16785	KA22902
	9965 000 10667	HT1621

**ELECTRICAL PARTSLIST**

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**- IC & TRANSISTORS -**

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7705	4822 209 17498	AN7323
U401	4822 209 31544	TA8227P
Q401	9965 000 14275	HMBT8050
Q402	9965 000 14275	HMBT8050
Q601	9965 000 14275	HMBT8050
Q604	9965 000 14275	HMBT8050
Q606	9965 000 14275	HMBT8050
Q301	9965 000 20559	SS9014C
7702	4822 130 40981	BC337-25

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