CD Stereo Radio Recorder

Service
Service
Service

AZ1060
AZ1065
all versions

Service Manual

COMPACT disc DIGITAL AUDIO

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

CLASS 1
LASER PRODUCT

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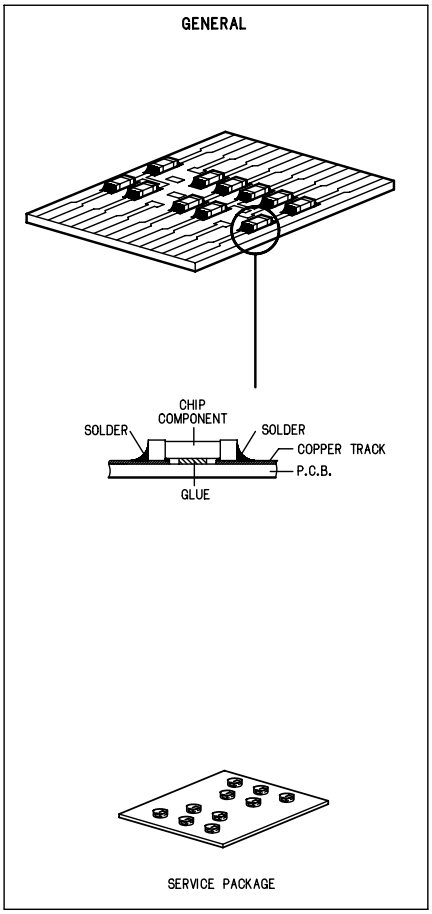
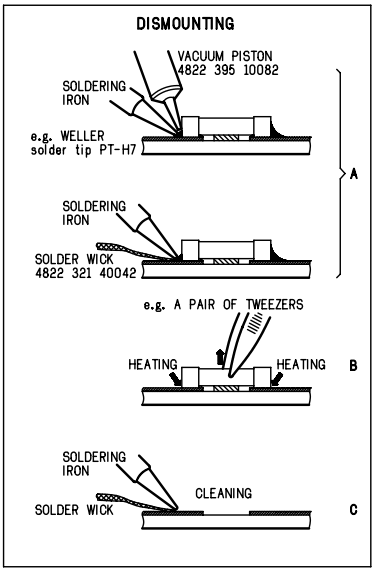
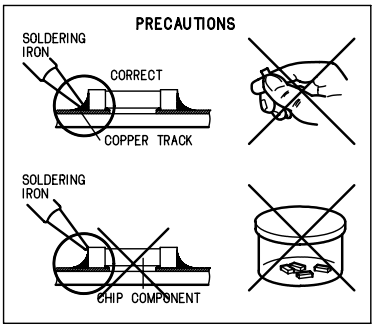
PCS 107 111

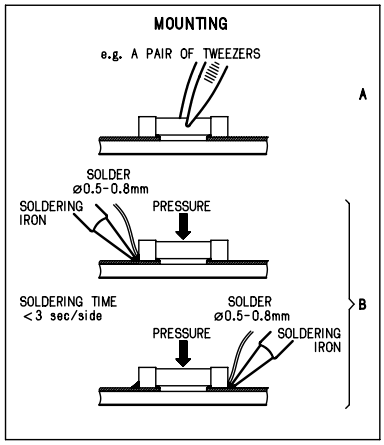
PHILIPS

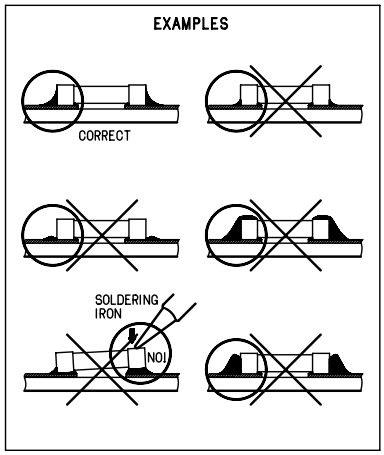
HANDLING CHIP COMPONENTS











(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 vermindern. 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 longévite pourrait être considérablement écourtée par le fait qu´aucune précaution nést prise à leur manipulation.
Lors de réparations, s´assurer de bien être relié au même potentiel que la masse de l´appareil et enfileer le bracelet serti 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).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Sorgen Sie dafür, daß Sie im Reparaturfall über ein Puls-armband 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 riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delápparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SAFETY

(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 ⚠

(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 ⚠

(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 ⚠

(I)
Le norme di sicurezza estigono che l´apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.
Componenty di sicurezza sono marcati con ⚠

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvor-schriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Original-ersatzteile zu verwenden.
Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

CLASS 1
LASER PRODUCT

(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 laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse 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 sécurite, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

TECHNICAL SPECIFICATIONS

GENERAL

Mains voltage	-/00/05/14	:	230 V
	-/01/11/16	:	120 / 230 V
	-/17	:	120 V
Mains frequency	-/00/05/14	:	50 Hz
	-/01/11/16	:	50 / 60 Hz
	-/17	:	60 Hz
Battery	mains	:	9 V (R20 x 6)
	remote	:	3V (R03 x 2)
Power consumption		:	5 W
Dimension (W x H x D)		:	435 x 262 x 174 mm
Weight		:	3.4 Kg

AMPLIFIER

Output power	mains	:	2 x 1.4 W
	battery	:	2 x 2 W
Speaker impedance		:	2 x 4 ohm
Frequency response		:	100 Hz - 10 kHz (±3dB)

TUNER - FM SECTION

Tuning range	:	87.5 - 108 MHz
IF frequency	:	10.7 MHz ± 0.2 MHz
Sensitivity	:	18 dBf at 26dB S/N
Selectivity	:	24 dB at 300kHz
IF rejection	:	85 dB
Image rejection	:	24 dB

TUNER - AM SECTION

Tuning range	MW	:	531 - 1602 kHz
	-/17	:	530 - 1700 kHz
	LW	:	153 – 279 kHz
IF frequency		:	468 kHz ± 3 kHz
Sensitivity	MW	:	3200 µV/m at 26dB S/N
	LW	:	5500 µV/m at 26dB S/N
Selectivity	MW	:	22 dB
	LW	:	29 dB
IF rejection	MW	:	64 dB
	LW	:	60 dB
Image rejection	MW	:	32 dB
	LW	:	38 dB

AUDIO CASSETTE RECORDER

Number of tracks		:	1 stereo
Tape speed		:	4.76 cm/sec ± 3%
Wow & flutter		:	< 0.48 JIS UWTD
Fast wind/rewind C60		:	< 110 sec.
Frequency response	P/B	:	125 - 8000 Hz
S/N ratio		:	40 dB

COMPACT DISC

Frequency response		:	100 Hz - 10 kHz
S/N ratio		:	60 dB
Channel difference	1 kHz	:	2 dB
Channel crosstalk	1 kHz	:	40 dB
Laser wavelength		:	780 ± 20 nm
Laser light power		:	< 0.5 mW

SERVICE TOOLS

TORX T10 screwdriver with shaftlength 150mm.....4822 395 50423
TORX screwdriver set SBC 163.....4822 295 50145

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

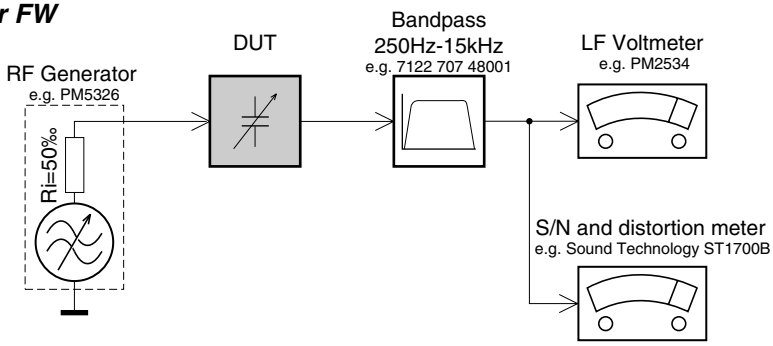
Universal test cassette Fe SBC 420.....4822 397 30071

AVAILABLE ESD PROTECTION EQUIPMENT

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

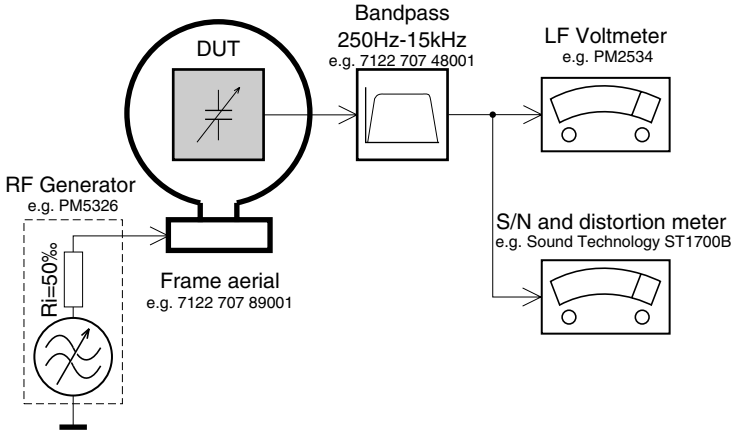
SERVICE MEASUREMENT

Tuner FW



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

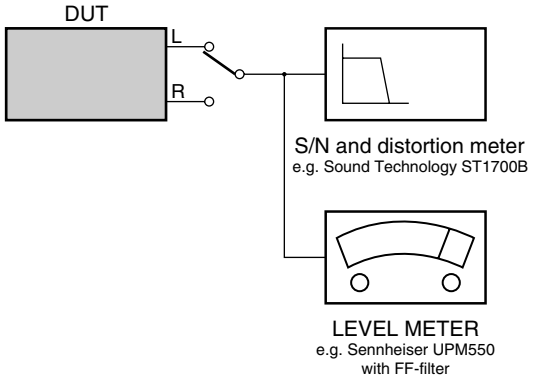
Tuner AM (MW,LW)



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

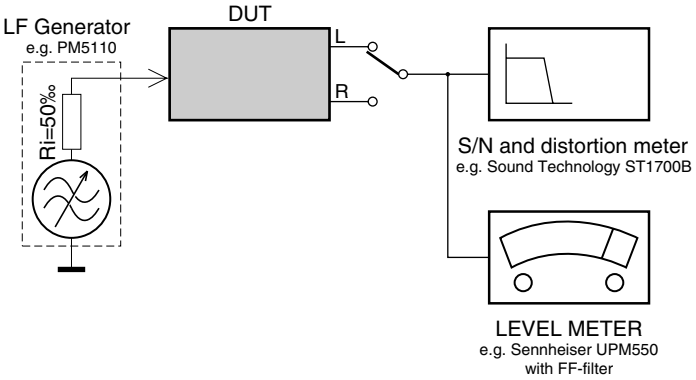
CD

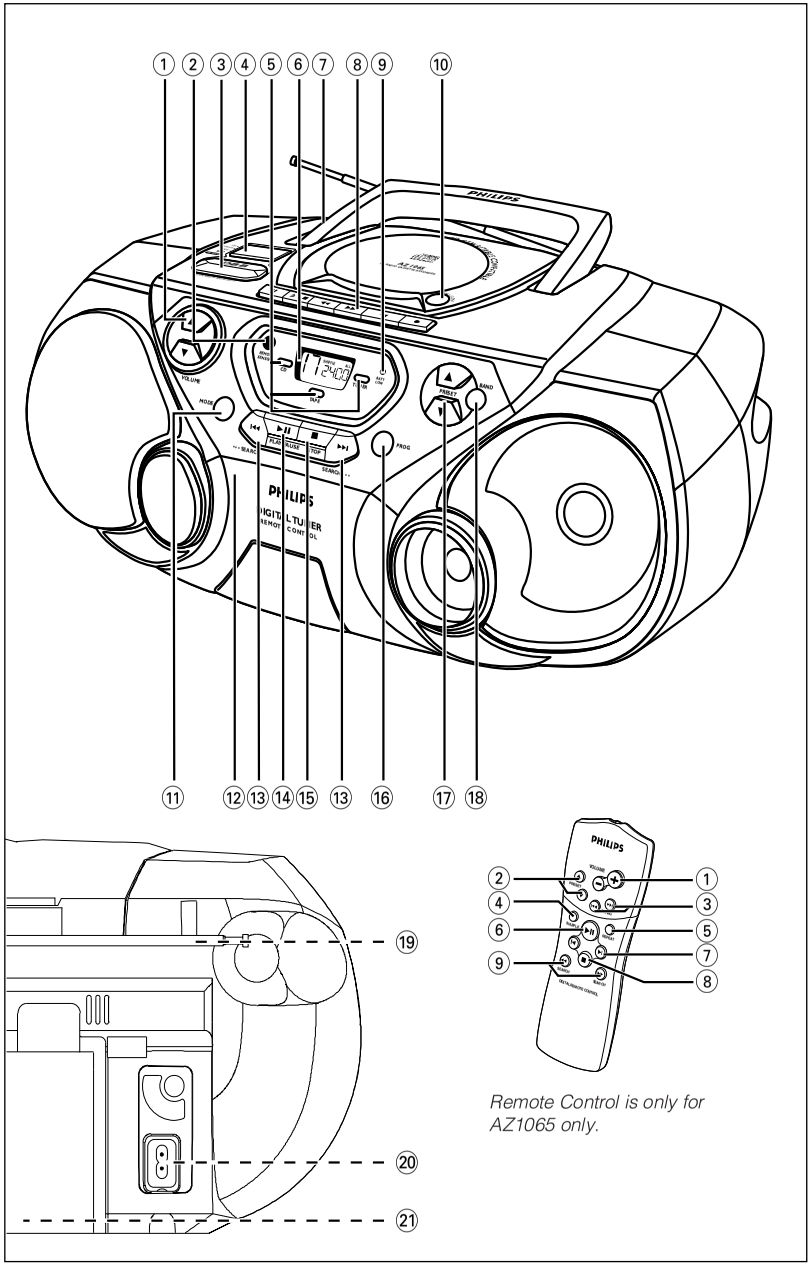
Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)



RECORDER

Use Universal Test Cassette **Fe** SBC420 4822 397 30071





Remote Control is only for AZ1065 only.

TOP AND FRONT PANELS

① ***VOLUME*** *- adjusts the volume level*
② ***REMOTE SENSOR*** *- infrared sensor for remote control*
③ ***DBB*** *(Dynamic Bass Boost) - enhances the bass*
④ ***POWER slider*** *- selects the sound source for CD/ TUNER/ TAPE/OFF and also switches the set off*
⑤ ***Function indicators*** *- lights up if the respective CD, tape or tuner function is in use*
⑥ ***Display*** *- shows the status of the set*
⑦ 🎧 *- 3.5 mm stereo headphone socket*
Note: *Connecting headphones will switch off the speakers.*
⑧ ***CASSETTE RECORDER keys:***
PAUSE ⏸ *- interrupts recording or playback*
STOP•OPEN ■⏏
- stops the tape;
- opens the cassette compartment
SEARCH ◀◀ / ▶▶ *- fast winds/rewinds the tape*
PLAY ◀ *- starts playback*
RECORD ● *- starts recording*
⑨ ***BATT LOW*** *- indicates when battery power is running low*
⑩ ***OPEN•CLOSE*** *- opens/ closes the CD door*
⑪ ***MODE*** *- selects a different play mode for CD playback e.g. repeats tracks or* ***SHUFFLE****, plays tracks in random order*
⑫ ***Cassette door***
⑬ ***SEARCH*** / ⏭ -
Radio: - (down/up) tunes to radio stations;
CD: - searches back and forward within a track;
- skips to the beginning of a current track/ previous/ subsequent track
⑭ ***PLAY•PAUSE*** ▶⏸ -
starts or interrupts CD playback
⑮ ***STOP*** ■ *- stops CD playback or erase a CD programme*
⑯ ***PROG*** -
Radio: programmes preset radio stations;
CD: programmes tracks and reviews the programme
⑰ ***PRESET*** ▲ ,▼ *(up, down) - selects a tuner preset station*
⑱ ***BAND*** *- selects waveband*

BACK PANEL

⑲ ***Telescopic aerial*** *- improves FM reception*
⑳ ***AC MAINS*** *- inlet for mains lead*
㉑ ***Battery compartment*** *- for 6 x R-20, UM-1 or D-cells*

REMOTE CONTROL

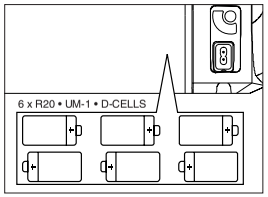
① ***VOLUME +,—*** *– adjusts volume level*
② ***PRESET*** ▲,▼ *(up, down) – selects a preset radio station*
③ ***TUNING*** , ⏭ *(down, up) – tunes to radio stations*
④ ***SHUFFLE*** *– to play CD tracks in random order*
⑤ ***REPEAT*** *– repeats a track/ CD programme/ entire CD*
⑥ ▶⏸ *– starts and pauses CD playback/ interrupts CD playback*
⑦ ⏮, ⏭ *– skips to the beginning of a current track/ previous/ later track*
⑧ ***STOP*** ■ *– stops CD playback or erases a CD programme*
⑨ ***SEARCH*** ◀◀, ▶▶ *– searches backwards or forwards within a track/CD*

CAUTION

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

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

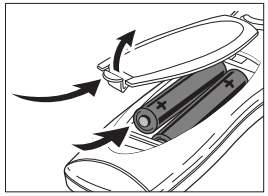
BATTERIES (OPTIONAL)



1. *Open the battery compartment and insert six batteries, type **R-20**, **UM-1** or **D-cells**, (preferably alkaline) with the correct polarity as indicated by the "+" and "-" symbols inside the compartment.*

Remote control (supplied)

*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. The set is now ready to operate.*

– *If **BATT LOW** lights up, battery power is running low.*

  – *The **BATT LOW** indicator eventually goes out if the batteries are too weak.*

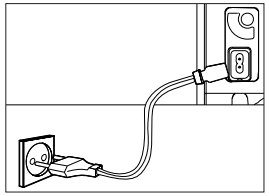
Incorrect use of batteries can cause electrolyte leakage and will corrode the compartment or cause the batteries to burst. Therefore:

- *Do not mix battery types: e.g. alkaline with 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.*
- *Remove the batteries if the set is not to be used for a long time.*

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

For users in the U.K.: please follow the instructions on page 2.

Using Mains



1. *Check if the mains voltage **as shown on the type plate on the bottom of the set**, corresponds to your local mains supply. If it does not, consult your dealer or service centre.*

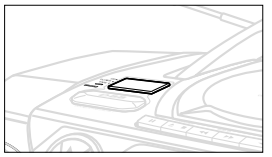
2. *If your set is equipped with a voltage selector, adjust the selector so to match with the local mains supply.*

3. *Connect the mains lead to the wall socket and the set is now ready for use.*

4. *To disconnect the set from the power supply completely, remove the plug from the wall outlet.*

Standby power consumption . . . . . .3 W

Switching on and off



1. Adjust the POWER slider to the desired sound source: ***CD***, ***TUNER*** or ***TAPE/OFF***.

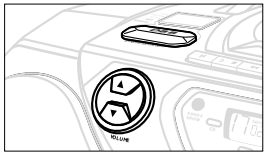
→ The respective function indicator: ***CD***, ***TUNER*** or ***TAPE*** lights up.

2. To switch off, adjust the POWER slider to ***TAPE/OFF*** position with the keys on the tape deck released.

→ The respective function indicator: ***CD***, ***TUNER*** or ***TAPE*** goes out.

→ The volume and tuner presets will be retained in the set's memory.

Adjusting volume and sound

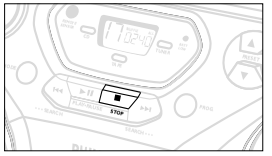


1. On the set press the ***VOLUME*** control to increase or decrease volume (or press **+** or **–** on the remote control).

→ Display shows the volume level ***VOL*** and a number from 0-32.

2. Adjust the ***DBB*** control to select dynamic bass boost on or off.

PHILIPS demo mode



1. Press the CD ***STOP*** ■ button for 5 seconds.

→ After about 30 seconds, ***PH..IL ..IPS*** scrolls across the display.

2. To return to the current display you can either:

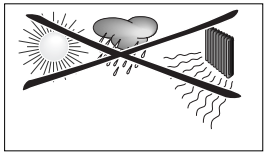
- press any function button on the front panel. This interrupts the demo mode for 30 seconds;
- press the CD ***STOP*** ■ button for 5 seconds. ***PH..IL ..IPS*** scrolls once before the demo mode is cancelled.

GENERAL INFORMATION

General maintenance

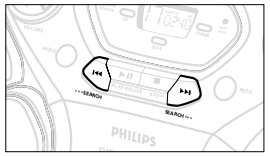
- Do not expose the set, batteries, CDs or cassettes to humidity, rain, sand or excessive heat caused by heating equipment or direct sunlight.
- To clean the set, use a soft, slightly dampened chamois leather. Do not use any cleaning agents containing alcohol, ammonia, benzene or abrasives as these may harm the housing.

Safety information



- Place the set on a hard and flat surface so that the system does not tilt. Make sure there is adequate ventilation to prevent the system from overheating.
- The mechanical parts of the set contain self-lubricating bearings and must not be oiled or lubricated.

TUNING TO RADIO STATIONS



1. Select **TUNER** source.
→ The function indication lights up. tu is displayed briefly and then the radio station frequency is shown.
2. Press **BAND** once or more to select your waveband.
3. Press **SEARCH** or ▶▶| (on the remote control, **TUNING** or ▶▶|) and release when the frequency in the display starts running.
→ The radio automatically tunes to a station of sufficient reception. Display shows srch during automatic tuning.
→ If a FM station is received in stereo, **STEREO** is shown.
4. Repeat step ***3*** if necessary until you find the desired station.
• To tune to a weak station, press **SEARCH** or ▶▶| briefly and repeatedly until you have found optimal reception.

To improve radio reception

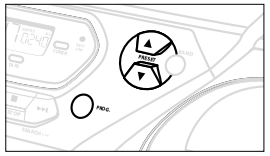
– For ***FM***, pull out the telescopic aerial. Incline and turn the aerial. Reduce its length if the signal is too strong (very close to a transmitter).
– For ***MW/AM/LW***, the set is provided with a built-in aerial so the telescopic aerial is not needed. Direct the aerial by turning the whole set.

5. To switch off, adjust the POWER slider to **TAPE/OFF** position with the keys on the tape deck released.
→ The function indicator goes out.

Programming radio stations

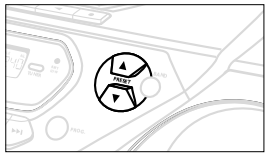
You can store up to a total of 30 radio stations in the memory.

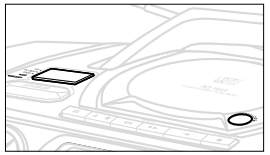
1. Tune to your desired station (see **Tuning to radio stations**).
2. Press **PROG** to activate programming.
– Display: **PROGRAM** flashes.
3. Press **PRESET** ▼ or ▲ once or more to allocate a number from 1 to 30 to this station.
4. Press **PROG** again to confirm the setting.
– Display: **PROGRAM** disappears, the preset number and the frequency of the preset station are shown.
5. Repeat the above four steps to store other stations.
– You can erase a preset station by storing another frequency in its place.



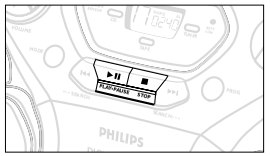
Tuning to preset stations

Press **PRESET** ▼ or ▲ until the desired preset station is displayed.





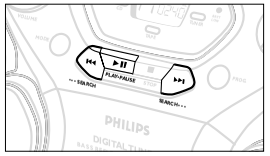
1. *Select* **CD** *source.*
→ Cd *is displayed briefly and the function indication lights up.*
2. *Press* **OPEN•CLOSE** *to open the CD door.*
→ *Display:* Cd OPEN *when you open the CD door.*
3. *Insert a CD or CD-R(W) with the printed side facing up and close the CD door.*
→ *Display:* dISC *flashes as the CD player scans the contents of a CD. The total number of tracks and playing time are then shown.*



4. *Press* **PLAY•PAUSE** ▶II *(on the remote control* ▶II*) to start playback.*
→ *Display: Current track number and elapsed playing time of the track during CD playback.*
5. *To interrupt playback press* **PLAY•PAUSE** ▶II.
Press **PLAY•PAUSE** ▶II *again to resume play.*
→ *The display freezes and the elapsed playing time flashes when playback is interrupted.*
6. *To stop CD playback, press* **STOP** ■
7. *To switch off, adjust the POWER slider to* **TAPE/OFF** *position with the keys on the tape deck released.*
→ *The function indicator goes out.*

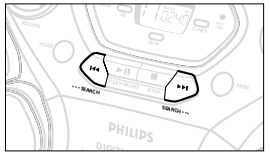
Note: *CD play will also stop when:*
– *the CD door is opened;*
– *the CD has reached the end (unless you have selected REPEAT or REPEAT ALL);*
– *you select another source: TAPE / TUNER.*

Selecting a different track



• *Press* **SEARCH** *or* ▶▶| *on the set, (on the remote control* |◀ *or* ▶|*) once or repeatedly until the desired track number appears in the display.*
• *If you have selected a track number shortly after loading a CD or in the PAUSE position, you will need to press* **PLAY•PAUSE** ▶II *(on the remote control* ▶II*) to start playback.*

Finding a passage within a track



1. *Press and hold down on* **SEARCH** *or* ▶▶|
(on the remote control ◀◀ *or* ▶▶*).*
→ *The CD is played at high speed and low volume.*
2. *When you recognize the passage you want, release* **SEARCH** *or* ▶▶|.
– *Normal playback continues.*

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

Different play modes: SHUFFLE and REPEAT

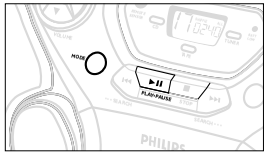
You can select and change the various play modes before or during playback. The play modes can also be combined with PROGRAM.

SHUFFLE - *tracks of the entire CD/ programme are played in random order*

SHUFFLE *and* **REPEAT ALL** - *to repeat the entire CD/ programme continuously in random order*

REPEAT ALL - *repeats the entire CD/ programme*

REPEAT - *plays the current track continuously*

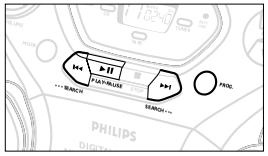


1. *To select your play mode, press the* **MODE** *button (on the remote control SHUFFLE or REPEAT) before or during playback until the display shows the desired function.*
2. *Press* **PLAY•PAUSE ▶II** *(on the remote control ▶II) to start playback if in the STOP position.*
3. *To return to normal playback, press the respective* **MODE** *(or the respective SHUFFLE or REPEAT) button until the various SHUFFLE/ REPEAT modes are no longer displayed.*

– *You can also press* **STOP ■** *to cancel your play mode.*

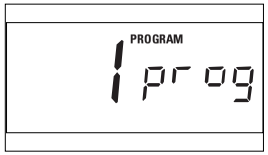
Programming track numbers

Programme in the STOP position to select and store your CD tracks in the desired sequence. If you like, store any track more than once. Up to 20 tracks can be stored in the memory.



1. *Use the* **SEARCH** *or ▶▶I on the set, (on the remote control I◀ or ▶I) to select your desired track number.*
2. *Press* **PROG**.

→ *Display:* **PROGRAM** *and the selected track number* prog *appears briefly.*



→ *If you attempt to programme without first selecting a track number,* no SEL *is shown.*

3. *Repeat steps* **1-2** *to select and store all desired tracks.*

→ FULL *is displayed if you attempt to programme more than 20 tracks.*

4. *To start playback of your CD programme, press* **PLAY•PAUSE ▶II** *(on the remote control/ ▶II).*

Reviewing the programme

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

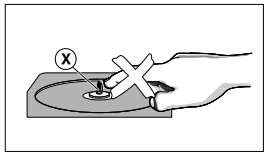
Erasing a programme

You can erase the programme by:

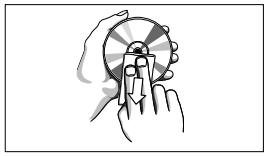
– *pressing* **STOP ■** *once in the STOP position;*
– *pressing* **STOP ■** *twice during playback;*
– *pressing the CD door open;*
– *switching to another source: TAPE/TUNER.*

• *The display shows '*no prog*' briefly.*

CD player and CD handling

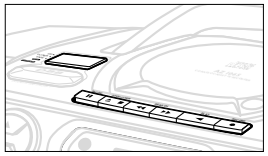


- *The lens of the CD player should never be touched!*
- *If the CD player cannot read CDs correctly, use a commonly available cleaning CD to clean the lens before taking the set to repair. Other cleaning methods may destroy the lens.*
- *Sudden changes in the surrounding temperature can cause condensation to cloud over 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 keep the CD compartment closed to avoid dust on the lens.*



- *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 return the CD to 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 any stickers to it.*

CASSETTE PLAYBACK



1. *Select* **TAPE** *source.*

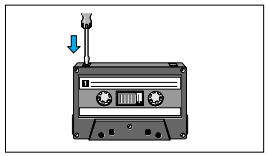
→ *The display shows* tAPE *throughout tape operation, and the function indication lights up.*

2. *Press* **STOP•OPEN ■▲** *to open the cassette door.*
3. *Insert a recorded cassette and close the cassette door.*
4. *Press* **PLAY ◀** *to start playback.*
5. *To pause playback, press* **PAUSE II**. *To resume, press the key again.*
6. *By pressing* **SEARCH ◀◀** *or ▶▶ fast winding of the tape is possible in both directions.*
7. *To stop the tape, press* **STOP•OPEN ■▲**.

– *The keys are automatically released at the end of the tape and the* tAPE *indication and function light go out, except if* **PAUSE II** *has been activated.*

GENERAL INFORMATION ON RECORDING

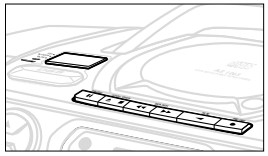
- *Recording is permissible insofar as copyright or other rights of third parties are not infringed.*
- *This deck is not suitable for recording on CHROME (IEC II) or METAL (IEC IV) type cassettes. For recording, use only NORMAL type cassettes (IEC I) on which the tabs have not been broken.*
- *The best recording level is set automatically. Altering the* **VOLUME** *and* **DBB** *controls will not affect the recording in progress.*
- *At the very beginning and end of the tape, no recording will take place during the 7 seconds, when the leader tape passes the recorder heads.*
- *To protect a tape from accidental erasure, have the tape in front of you and break out the left tab.*
  Recording on this side is no longer possible. To record over this side again, cover the tabs with a piece of adhesive tape.



SYNCHRO START CD RECORDING

1. *Select* **CD** *source.*
2. *Insert a CD and if desired, programme track numbers.*
3. *Press* **STOP•OPEN** ■▲ *to open the cassette door.*
4. *Insert a suitable cassette into the cassette deck and close the cassette door.*
5. *Press* **RECORD** ● *to start recording.*

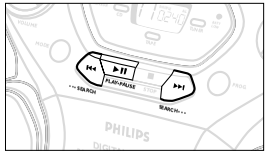
– *Playing of the CD programme starts automatically from the beginning of the programme. It is not necessary to start the CD player separately.*



To select and record a particular passage

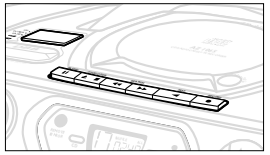
- *Press* **SEARCH** *or* ⏭. *When you recognize the passage you want, release* **SEARCH** *controls.*
- *To interrupt CD playback press* **PLAY/PAUSE** ▶II *(on the remote control* ▶II*).*

– *Recording will begin from this exact point in the track when you press* **RECORD** ●.



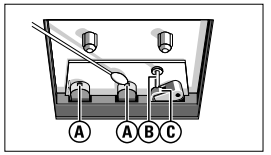
6. *For brief interruptions during recording, press* **PAUSE** II. *To resume recording, press* **PAUSE** II *again.*
7. *To stop recording, press* **STOP•OPEN** ■▲.

Recording from the radio



1. *Tune to the desired radio station (see* **Tuning to radio stations***).*
2. *Press* **STOP•OPEN** ■▲ *to open the cassette door.*
3. *Insert a suitable cassette into the cassette deck and close the cassette door.*
4. *Press* **RECORD** ● *to start recording.*
5. *For brief interruptions, press* **PAUSE** II. *To resume recording, press* **PAUSE** II *again.*
6. *To stop recording, press* **STOP•OPEN** ■▲.

Tape deck maintenance



To ensure quality recording and playback of the tape deck, clean parts Ⓐ,Ⓑ *and* Ⓒ *shown 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.*

1. *Open the cassette holder by pressing* **STOP•OPEN** ■▲.
2. *Press* **PLAY** ◄ *and clean the rubber pressure rollers* Ⓒ.
3. *Press* **PAUSE** II *and clean the magnetic heads* Ⓐ *and also the capstan* Ⓑ .
4. *After cleaning, press* **STOP•OPEN** ■▲.

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

Environmental information

All unnecessary packaging material has been omitted. We have done our utmost to make the packaging easy to separate into three materials: cardboard (box), expandable polystyrene (buffer), polyethylene (bags, protective foam).

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

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
– *POSSIBLE CAUSE*
• *REMEDY*

No sound/power
– *VOLUME not adjusted*
• *Adjust the VOLUME*
– *Headphones connected*
• *Disconnect headphones*
– *Mains lead not securely connected*
• *Connect the 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*
• *Increase the distance*

Poor radio reception
– *Weak radio signal*
• *FM: Direct the FM telescopic aerial for optimum reception*
• *MW (AM) or LW: Direct the aerial by turning the whole set.*

no dISC or Cd Err indication
– *No CD inserted*
• *Insert a CD*
– *CD badly scratched or dirty*
• *Replace/ clean CD, see Maintenance*
– *Laser lens steamed up*
• *Wait until lens has cleared*

nF dISC indication
– *CD-R(W) is blank or the disc is not finalised*
• *Use a finalised CD-R(W)*
– *CD badly scratched or dirty*
• *Replace/ clean CD, see Maintenance*

The CD skips tracks
– *CD is damaged or dirty*
• *Replace or clean the CD*
– *SHUFFLE or PROGRAM is active*
• *Quit SHUFFLE/PROGRAM mode(s)*

Poor cassette sound quality
– *Dust and dirt on the heads, etc.*
• *Clean deck parts etc., 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 a piece of adhesive tape over the missing tab space.*

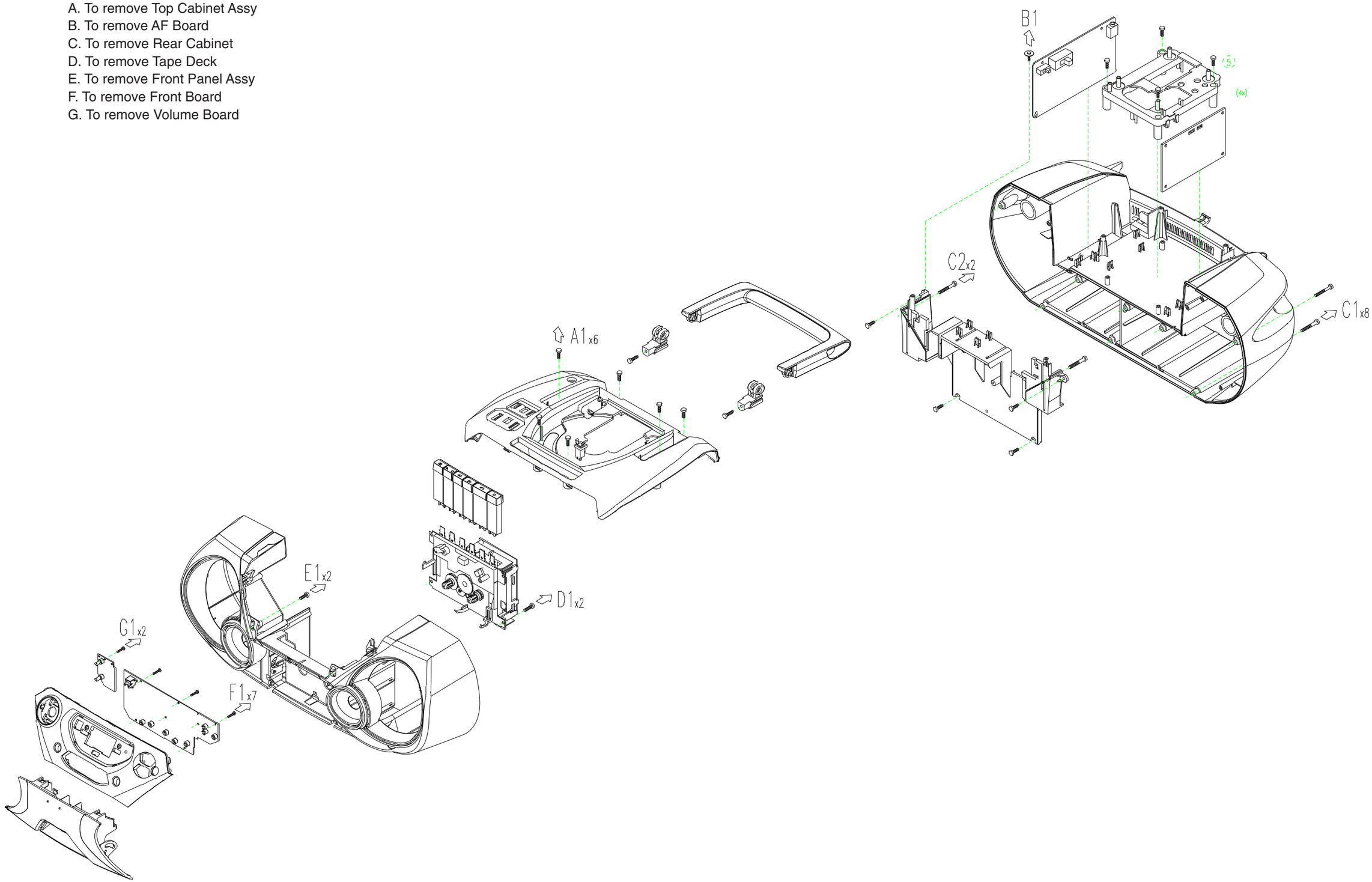
Remote control does not function properly
– *Batteries exhausted/ incorrectly inserted*
• *Insert (fresh) batteries correctly*
– *Distance/ angle between the set too large*
• *Reduce the distance/ angle*

This product complies with the radio interference requirements of the European Union.
The type plate is located on the bottom of the set.

4-1

DISASSEMBLY DIAGRM

A. To remove Top Cabinet Assy
B. To remove AF Board
C. To remove Rear Cabinet
D. To remove Tape Deck
E. To remove Front Panel Assy
F. To remove Front Board
G. To remove Volume Board



CD SERVICE TEST PROGRAM

- *STOP* button pressed in any step returns to begin of Service Testprogram.
- To leave Service Testprogram switch mode switch to off-position.
- Door switch is ignored CD door can be opened.
- *Volume up/down* buttons function independentely of the service testprogram.

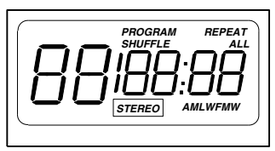
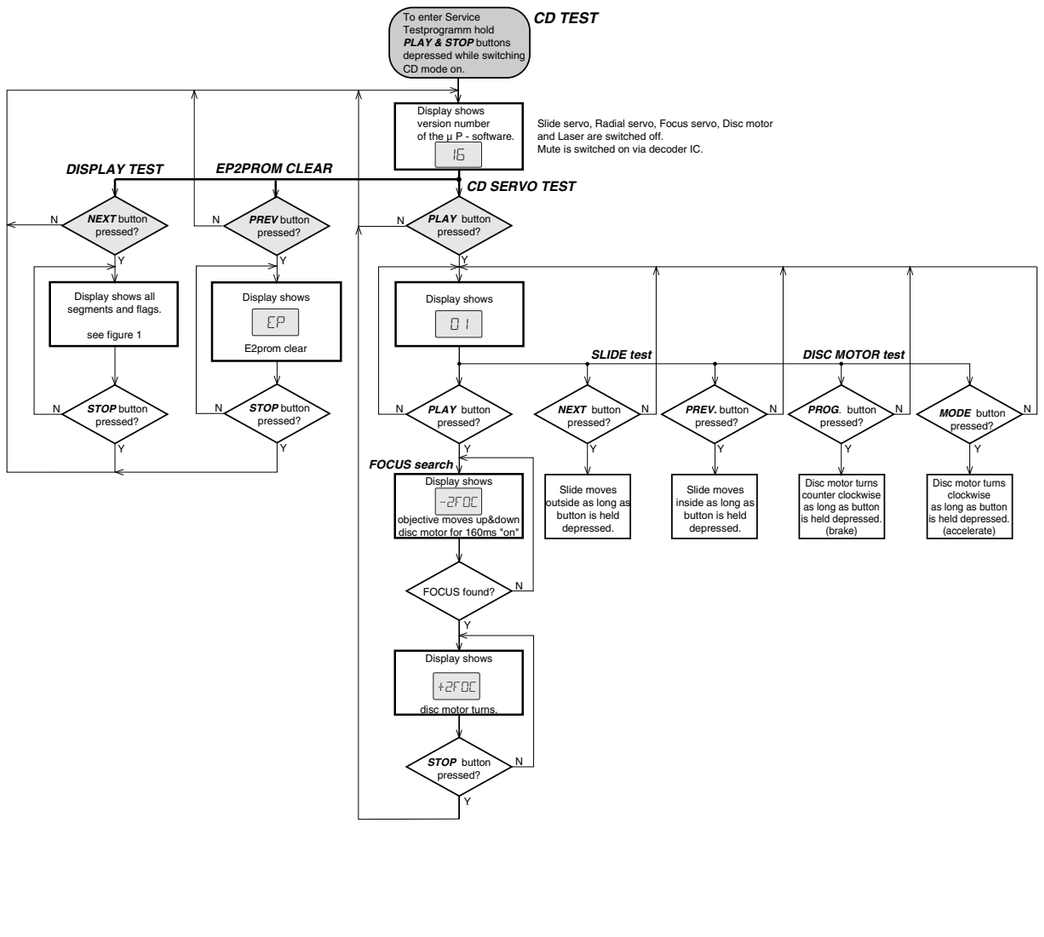
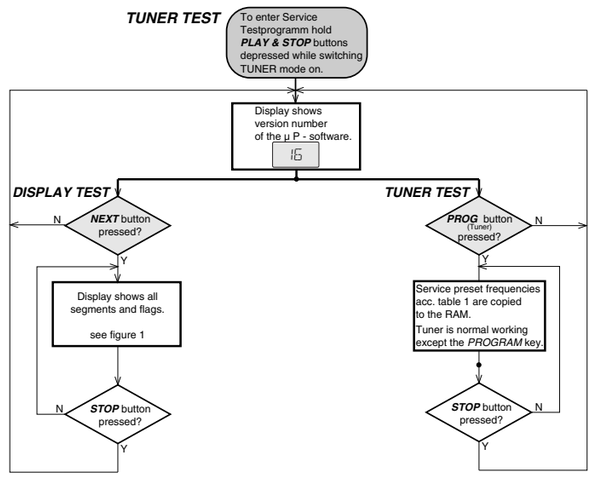


fig. 1





SERVICE PRESET FREQUENCIES

REGION / PRESET	EUROPE FM/MW/LW /00/05/20/25	EUROPE2B FM/MW /00	OVERSEAS FM/MW [1] Grid switchable 10-100kHz/9-50kHz /01/21	EAST-EUROPE FM/MW /14	USA FM/MW /14/37
1	87.5 MHz	87.5 MHz	87.5 MHz	65.81 MHz	87.5 MHz
2	108 MHz	108 MHz	108 MHz	108 Mhz	108 MHz
3	531 kHz	531 kHz	531/530 KHz	74 MHz	530 kHz
4	1602 kHz	1602 kHz	1602/1700 kHz	87.5 MHz	1700 kHz
5	558 kHz	558 kHz	558/560 kHz	531 kHz	560 kHz
6	1494 kHz	1494 kHz	1494/1500 kHz	1602 kHz	1500 kHz
7	153 kHz	-	-	558 kHz	-
8	279 kHz	-	-	1494 kHz	-
9	198 kHz	-	-	-	-
10	-	-	-	-	-
11	-	-	-	-	-
12	-	-	-	-	-
13	-	-	-	-	-

table 1

[1] **How to set frequency grid:**

AM - 9 kHz / FM - 50 kHz : Hold ***MODE KEY*** with the ***TUNING UP KEY*** simultaneously and then switch to ***TUNER***.

AM - 10 kHz / FM - 100 kHz : Hold ***MODE KEY*** with the ***PROGRAM KEY*** simultaneously and then swutch to ***TUNER***.

Selected frequency grid is stored in the EEPROM.

Abbreviations and Pin-description of CD Ics

SERVO PROCESSOR SAA7325H

SYMBOL	PIN	DESCRIPTION
HFREF	1	comparator common mode input
HFIN	2	comparator signal input
ISLICE	3	current feedback output from data slicer
V_{SSA1}	4(1)	analog ground 1
V_{DDA1}	5(1)	analog supply voltage 1
I_{ref}	6	reference current output pin
V_{RIN}	7	reference voltage for servo ADC's
D1	8	unipolar current input (central diode signal input)
D2	9	unipolar current input (central diode signal input)
D3	10	unipolar current input (central diode signal input)
D4	11	unipolar current input (central diode signal input)
R1	12	unipolar current input (satellite diode signal input)
R2	13	unipolar current input (satellite diode signal input)
V_{SSA2}	14(1)	analog ground 2
CROUT	15	crystal/resonator output
CRIN	16	crystal/resonator input
V_{DDA2}	17(1)	analog supply voltage 2
LN	18	DAC left channel differential output - negative
LP	19	DAC left channel differential output - positive
V_{neg}	20	DAC negative reference input
V_{pos}	21	DAC positive reference input
RN	22	DAC right channel differential output - negative
RP	23	DAC right channel differential output - positive
SELPLL	24	selects whether internal clock multiplier PLL is used
TEST1	25	test control input 1; this pin should be tied LOW
CL16	26	16.9344 MHz system clock output
DATA	27	serial d4(1)ata output (3-state)
WCLK	28	word clock output (3-state)
SCLK	29	serial bit clock output (3-state)
EF	30	C2 error flag output (3-state)
TEST2	31	test control input 2; this pin should be tied LOW
KILL	32	kill output (programmable; open-drain)
V_{SSD1}	33(1)	digital ground 2
V2/V3	34	versatile I/O: input versatile pin 2 or output versatile pin 3 (open-drain)
WCLI	35	word clock iutput (for data loopback to DAC)
SDI	36	serial data input (for data loopback to DAC)
SCLI	37	serial bit clock input (for data loopback to DAC)
$\overline{RESET}$	38	power-on reset input (active LOW)
SDA	39	microcontroller interface data I/O line (open-drain output)
SCL	40	microcontroller interface clock line input

4-3

Abbreviations and Pin-description of CD Ics

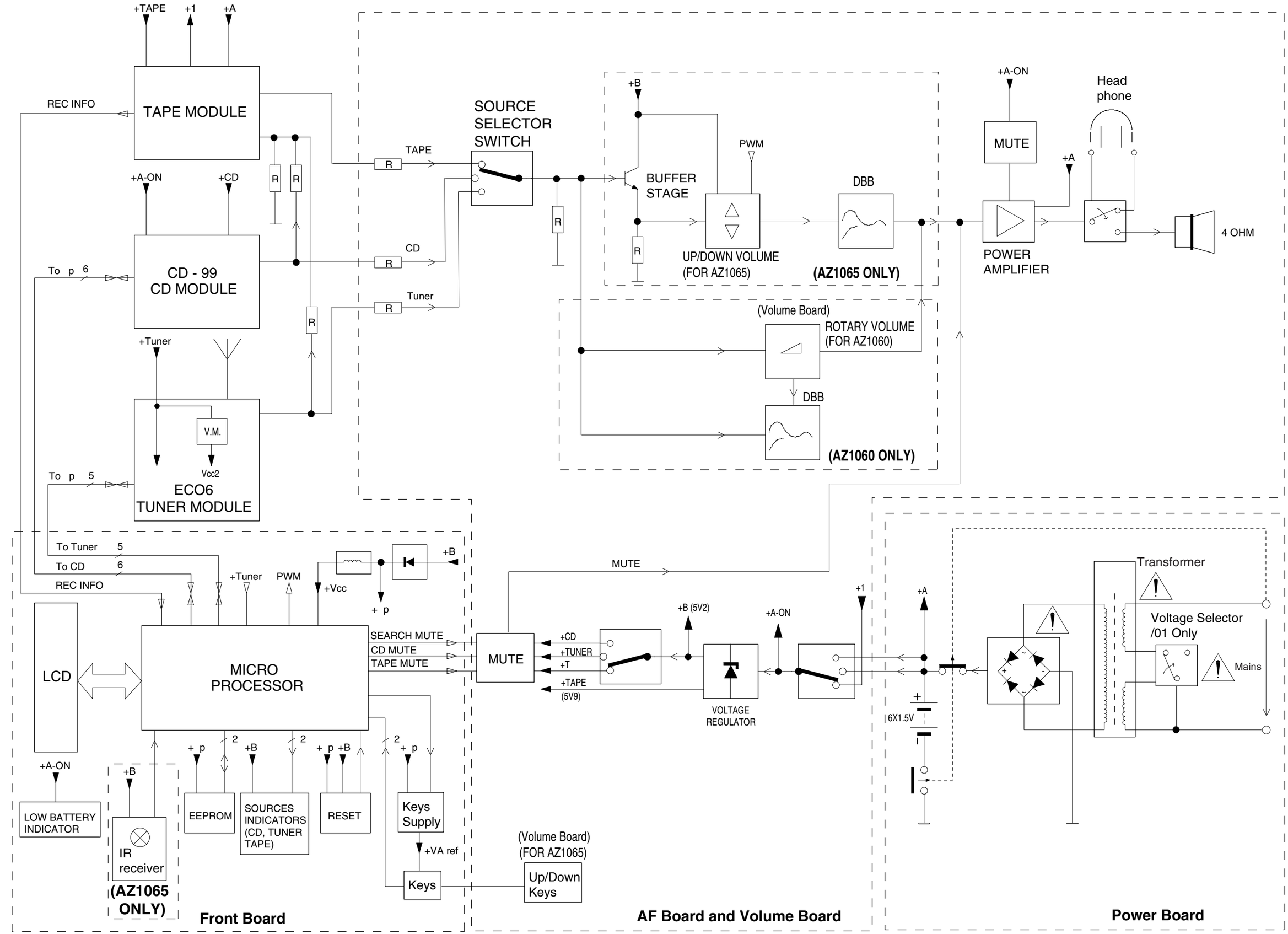
SERVO PROCESSOR SAA7325H

SYMBOL	PIN	DESCRIPTION
RAB	41	microcontroller interface R/$\overline{W}$ and load control line input (4-wire bus mode)
SILD	42	microcontroller interface $\overline{R}$/W and load control line input (4-wire bus mode)
STATUS	43	servo interrupt request line/decoder status register output (open-drain)
TEST3	44	test control input 3; this pin should be tied LOW
RCK	45	subcode clock input
SUB	46	P-to-W subcode bits output (3-state)
SFSY	47	subcode frame sync output (3-state)
SBSY	48	subcode block sync output (3-state)
CL11/4	49	11.2896 MHz or 4.2336 MHz (for microcontroller) clock output
V_{SSD2}	50(1)	digital ground 3
DOBM	51	bi-phase mark output (externally buffered; 3-state)
$V_{DDD1(P)}$	52(1)	digital supply voltage 2 for periphery
CFLG	53	correction flag output (open-drain)
RA	54	radial actuator output
FO	55	focus actuator output
SL	56	sledge control output
$V_{DDD2(C)}$	57(1)	digital supply voltage 3 for core
V_{SSD3}	58(1)	digital ground 4
MOTO1	59	motor output 1; versatile (3-state)
MOTO2	60	motor output 2; versatile (3-state)
V4	61	versatile output pin 4
V5	62	versatile output pin 5
V1	63	versatile intput pin 1
LDON	64	laser drive on output (open-drain)

Note : All supply pins must be connected to the same external power supply voltage.

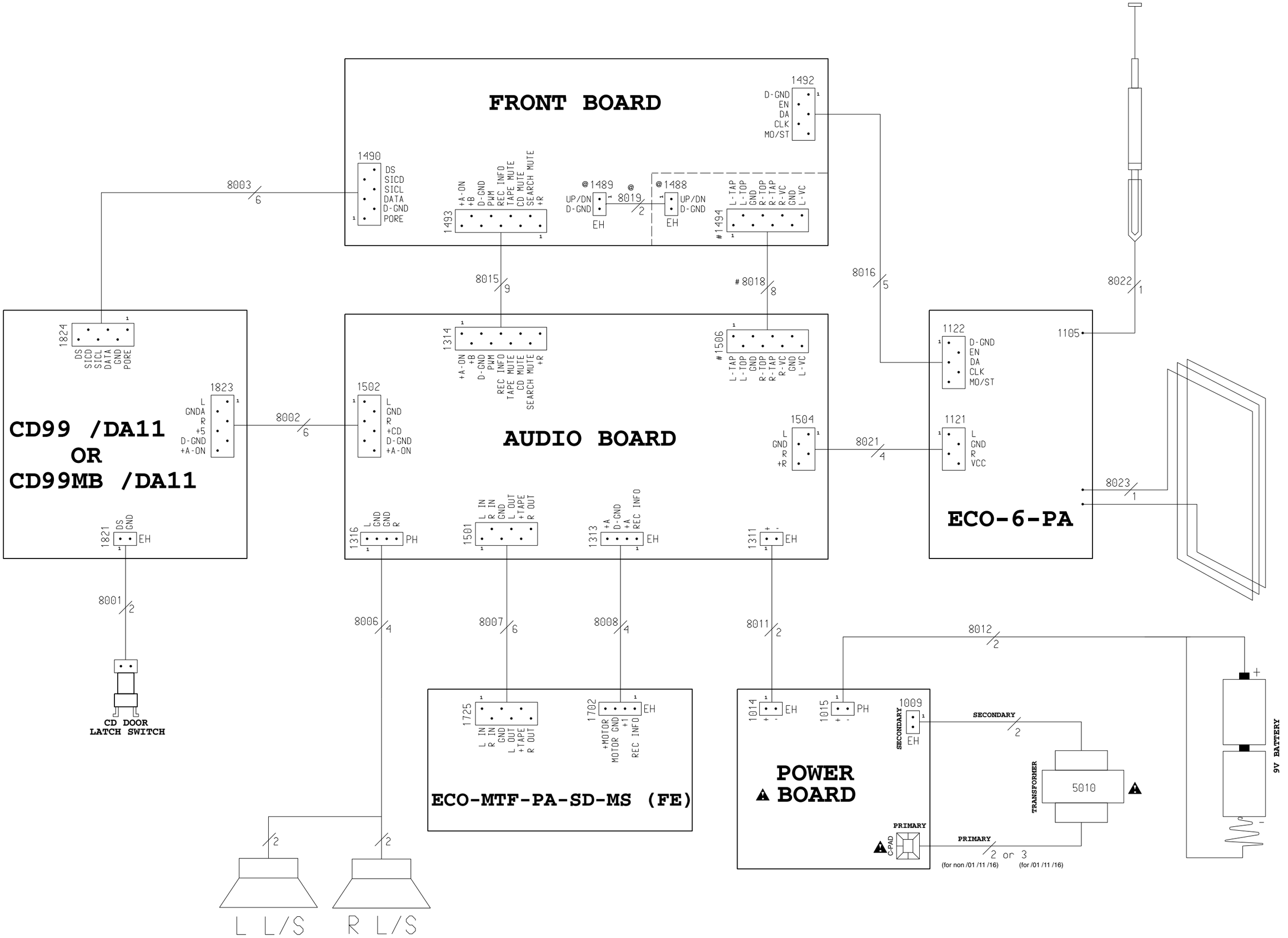
5-1

BLOCK DIAGRAM



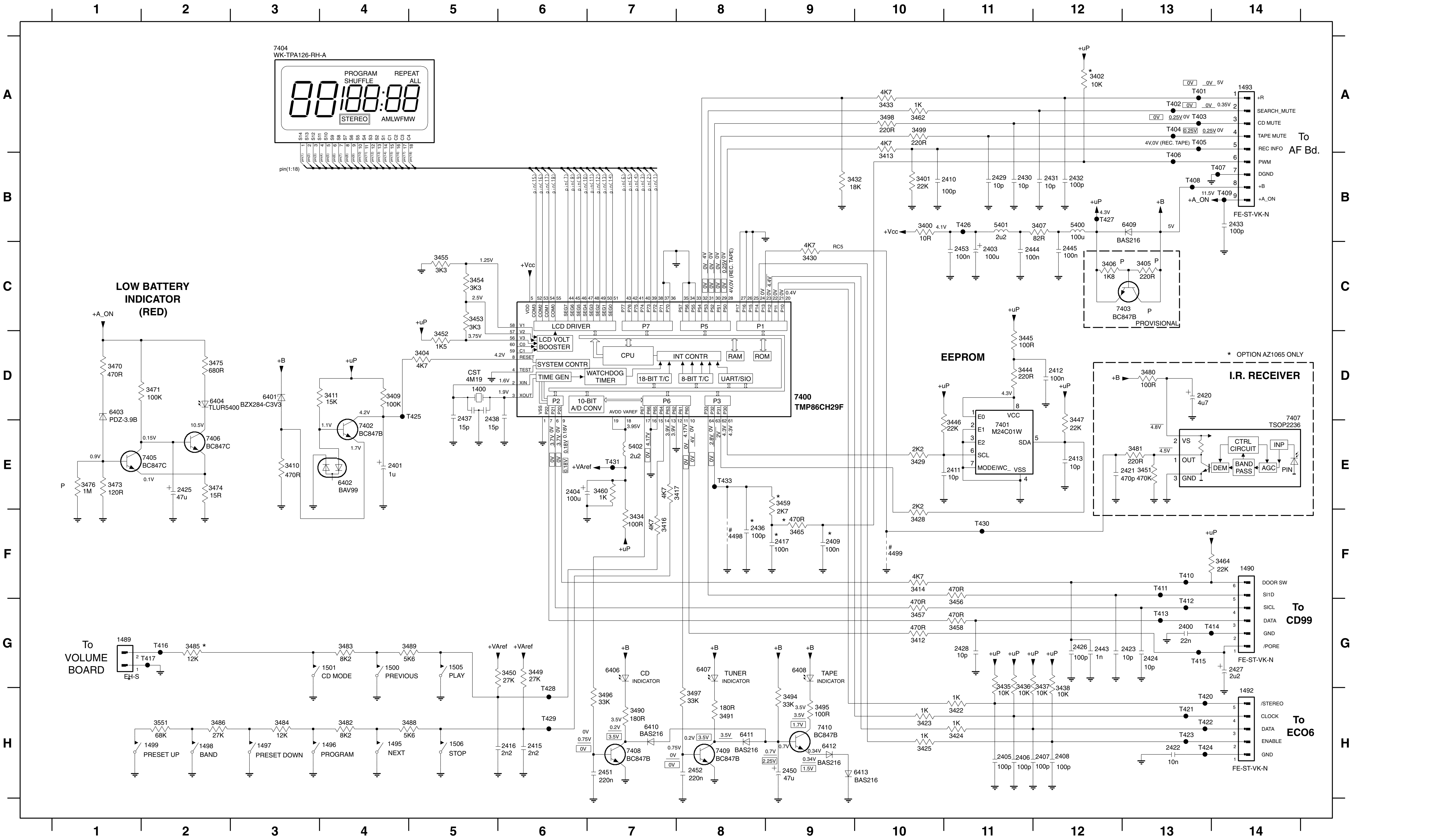
5-2

WIRING DIAGRAM



FRONT BOARD - CIRCUIT DIAGRAM

1400 D5	1496 H4	1505 G5	2405 H11	2411 E10	2420 D13	2426 G12	2432 B12	2444 C11	3400 B10	3407 B12	3414 F10	3425 H10	3434 F7	3445 D11	3452 D5	3458 G11	3470 D1	3480 D13	3486 H2	3495 H9	4498 F8	6402 E4	6409 B13	7401 E11	7407 E14	T403 A13	T409 B14	T415 G13	T423 H13	T429 H6
1489 G1	1497 H3	1506 H5	2406 H11	2412 D12	2421 E12	2427 G14	2433 B14	2445 C12	3401 B10	3409 D4	3416 F7	3428 F10	3435 G11	3446 E10	3453 C5	3459 E9	3471 D1	3481 E13	3488 H5	3496 H7	4499 F10	6403 D1	6410 H7	7402 E4	7408 H7	T404 A13	T410 F13	T416 G2	T424 H13	T430 F11
1490 F14	1498 H2	2400 G13	2407 H11	2413 E12	2422 H13	2428 G11	2436 F8	2450 H9	3402 A12	3410 E3	3417 E7	3429 E10	3436 G11	3447 E12	3454 C5	3460 E7	3473 E1	3482 H4	3489 G5	3497 H8	5400 B12	6404 D2	6411 H8	7403 C12	7409 H8	T405 A13	T411 F13	T417 G2	T425 D5	T431 E7
1492 H14	1499 H2	2401 E4	2408 H12	2415 H6	2423 G12	2429 B11	2437 E5	2451 H7	3404 D5	3411 D3	3422 H11	3430 C9	3437 G11	3449 G6	3455 C5	3462 A10	3474 E2	3483 G4	3490 H7	3498 A10	5401 B11	6406 G7	6412 H9	7404 A3	7410 H9	T406 B13	T412 G13	T420 H13	T426 B11	T433 E8
1493 A14	1500 G4	2403 C11	2409 F9	2416 H6	2424 G13	2430 B11	2438 E6	2452 H8	3405 C13	3412 G10	3423 H10	3432 B9	3438 G12	3450 G6	3456 G11	3464 F13	3475 D2	3484 H3	3491 H8	3499 A10	5402 E7	6407 G8	6413 H9	7405 E2	T401 A13	T407 B14	T413 G13	T421 H13	T427 B12	
1495 H4	1501 G4	2404 E6	2410 B10	2417 F9	2425 E2	2431 B12	2443 G12	2453 C11	3406 C12	3413 B10	3424 H11	3433 A10	3444 D11	3451 E13	3457 G10	3465 F9	3476 E1	3485 G2	3494 H9	3551 H2	6401 D3	6408 G9	7400 D9	7406 E2	T402 A13	T408 B13	T414 G14	T422 H13	T428 H6	



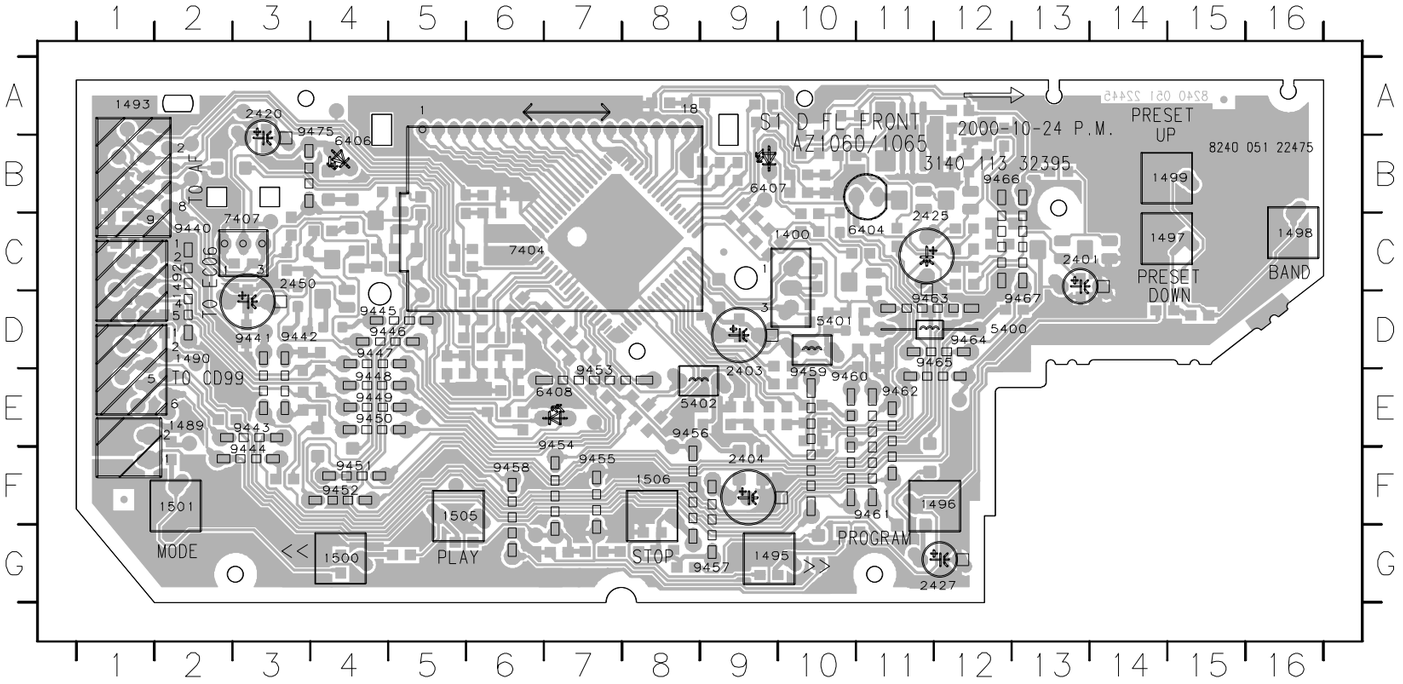
P = PROVISIONAL
# = FOR AZ1060 (non RC + ROT VOL)
* = FOR AZ1065 (RC + UP/DN VOL)

ITEM / MODEL	2409	2417	2436	2420	2421	3402	3459	3465	3451	3480	3481	4498	4499	7407
AZ1060	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×
AZ1065	100n	100n	100p	4u7	470p	10K	2K7	470R	470K	100R	220R	×	×	TSOP2236

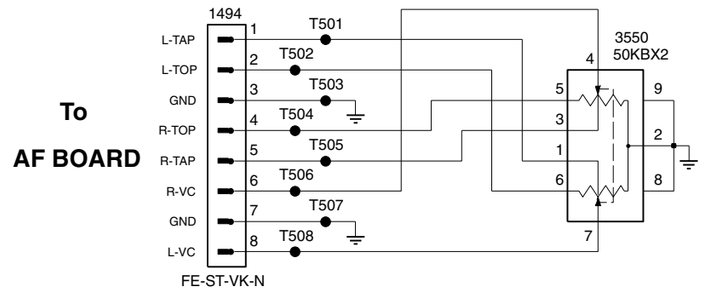
AC230V 50Hz
AC120V 60Hz
V TUNER MODE
V (underlined) CD MODE
V (boxed) TAPE MODE
V (overlined) AZ1065 ONLY VOL. 7

FRONT BOARD - LAYOUT DIAGRAM

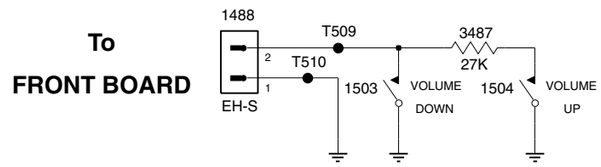
1400 C10 1495 G9 1500 G4 2403 E9 2450 C3 6406 B4 9440 C2 9445 D4 9450 E4 9455 F7 9460 E10 9465 D12
1489 E2 1496 F12 1501 F2 2404 F9 5400 D12 6407 B9 9441 D3 9446 D4 9451 F4 9456 E8 9461 F11 9466 B12
1490 D2 1497 C14 1505 F5 2420 A3 5401 D10 6408 F7 9442 D3 9447 D4 9452 F4 9457 G9 9462 E11 9467 D13
1492 C2 1498 C16 1506 F8 2425 C11 5402 E8 7404 C6 9443 F3 9448 E4 9453 E7 9458 F6 9463 D11 9475 A4
1493 A1 1499 B15 2401 C13 2427 G12 6404 C11 7407 C3 9444 F3 9449 E4 9454 E7 9459 E10 9464 D12



VOLUME BOARD - CIRCUIT DIAGRAM



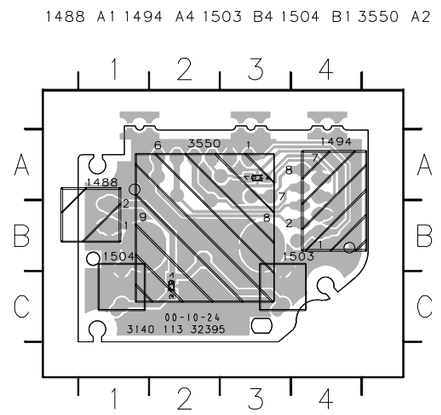
FOR AZ1060 ONLY



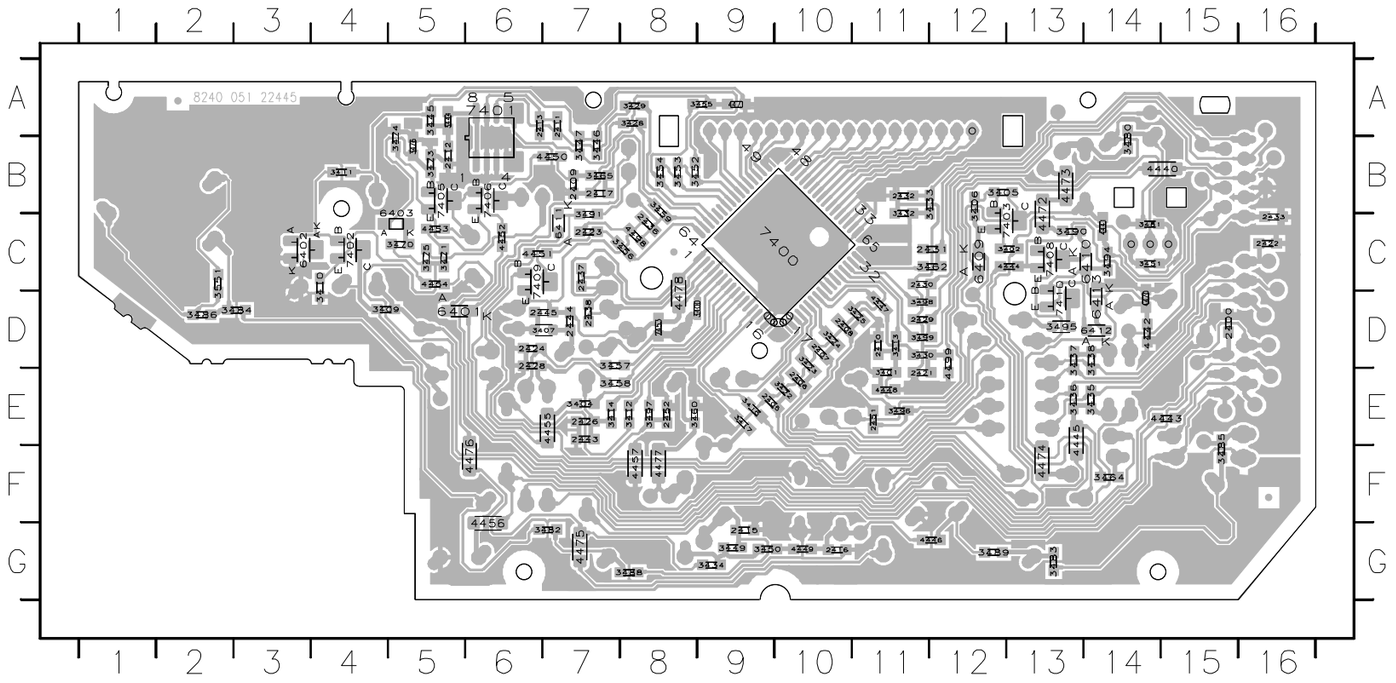
FOR AZ1065 ONLY

VOLUME BOARD - LAYOUT DIAGRAM

1488 A1 1494 A4 1503 B4 1504 B1 3550 A2



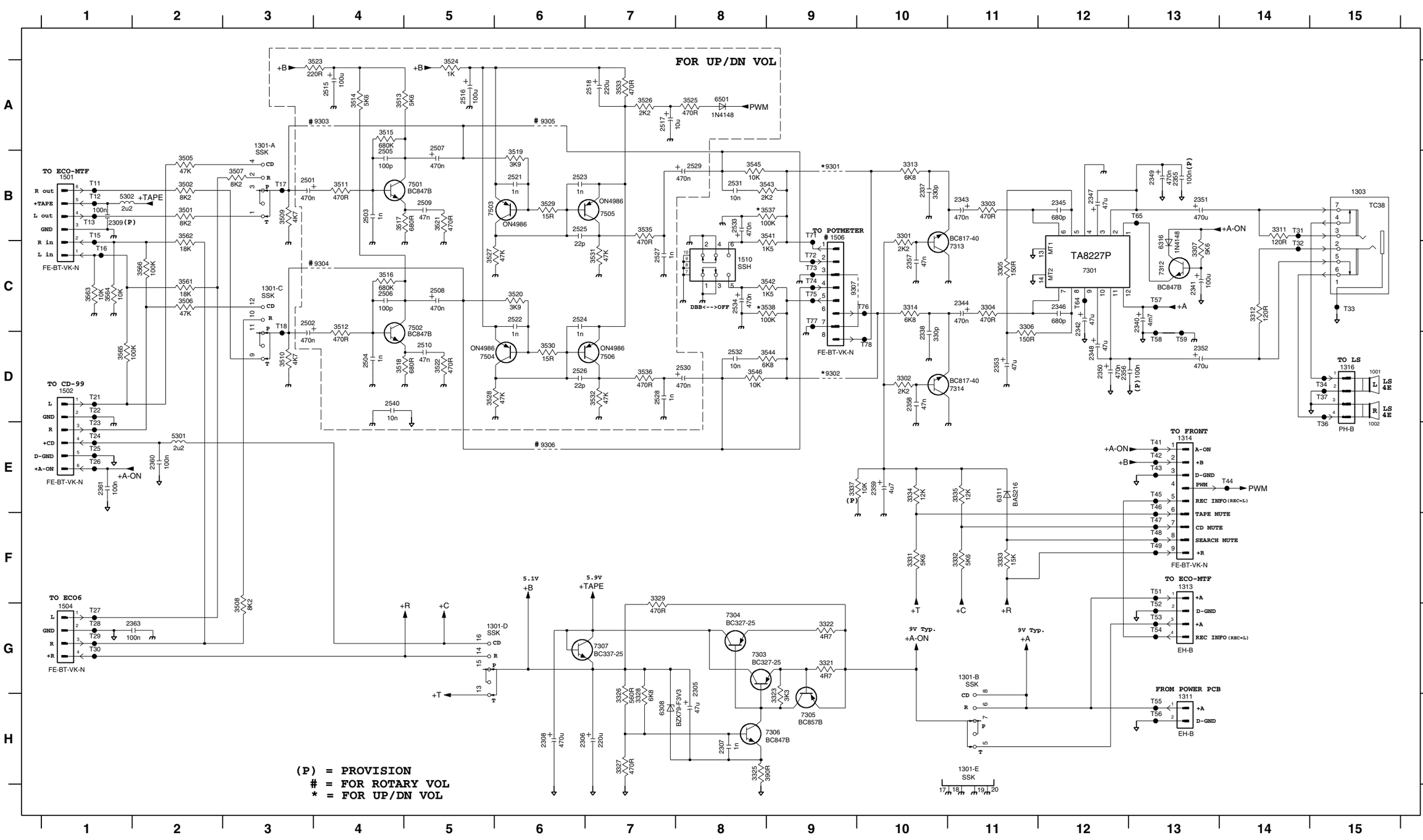
2400 D15 2416 G10 2432 B11 3400 D9 3413 D11 3432 C11 3449 G9 3460 E8 3481 C14 3495 D13 4445 E13 4456 G6 4498 C8 7401 A6
2405 E9 2417 B7 2433 C16 3401 E11 3414 E7 3433 B12 3450 G9 3462 C12 3482 G7 3496 E11 4446 C12 4457 F8 4499 D12 7402 C4
2406 E10 2421 E11 2436 C8 3402 C13 3416 E9 3434 G9 3451 C14 3464 C14 3483 G3 3497 E8 4447 D14 4470 D14 6401 D5 7403 C13
2407 D10 2422 C16 2437 C9 3404 E7 3419 E9 3435 F14 3452 B8 3465 B7 3484 F3 3498 D11 4448 E11 4471 A9 6402 C3 7405 B5
2408 D10 2423 C7 2438 D7 3405 B12 3422 F13 3436 C5 3470 C5 3485 F15 3499 D11 4449 C10 4472 C13 6403 B5 7406 B6
2409 B7 2424 D6 2443 E7 3406 B12 3423 D10 3437 D13 3454 B8 3471 C5 3486 D2 3551 C2 4450 B7 4473 B13 6409 C12 7408 C13
2410 D11 2426 E7 2444 D7 3407 D7 3424 D10 3438 D14 3455 A9 3473 B5 3488 C8 4440 D15 4451 C6 4474 F13 6410 C14 7409 C6
2411 A7 2428 D6 2445 D7 3409 D4 3425 D11 3444 A5 3456 D2 3474 B5 3489 C12 4441 D14 4452 C6 4475 G7 6411 C7 7410 D13
2412 B5 2429 D11 2451 E11 3410 C4 3428 A8 3445 A5 3457 D2 3475 B5 3490 C13 4442 D14 4453 C6 4476 F6 6412 D14
2413 A6 2430 C11 2452 E8 3411 B4 3429 A8 3446 B7 3458 E7 3476 B5 3491 C7 4443 E15 4454 C6 4477 F8 6413 D14
2415 G9 2431 C12 2453 D8 3412 E8 3430 D11 3447 B7 3459 B8 3480 B14 3494 C14 4444 C13 4455 E7 4478 D8 7400 C10



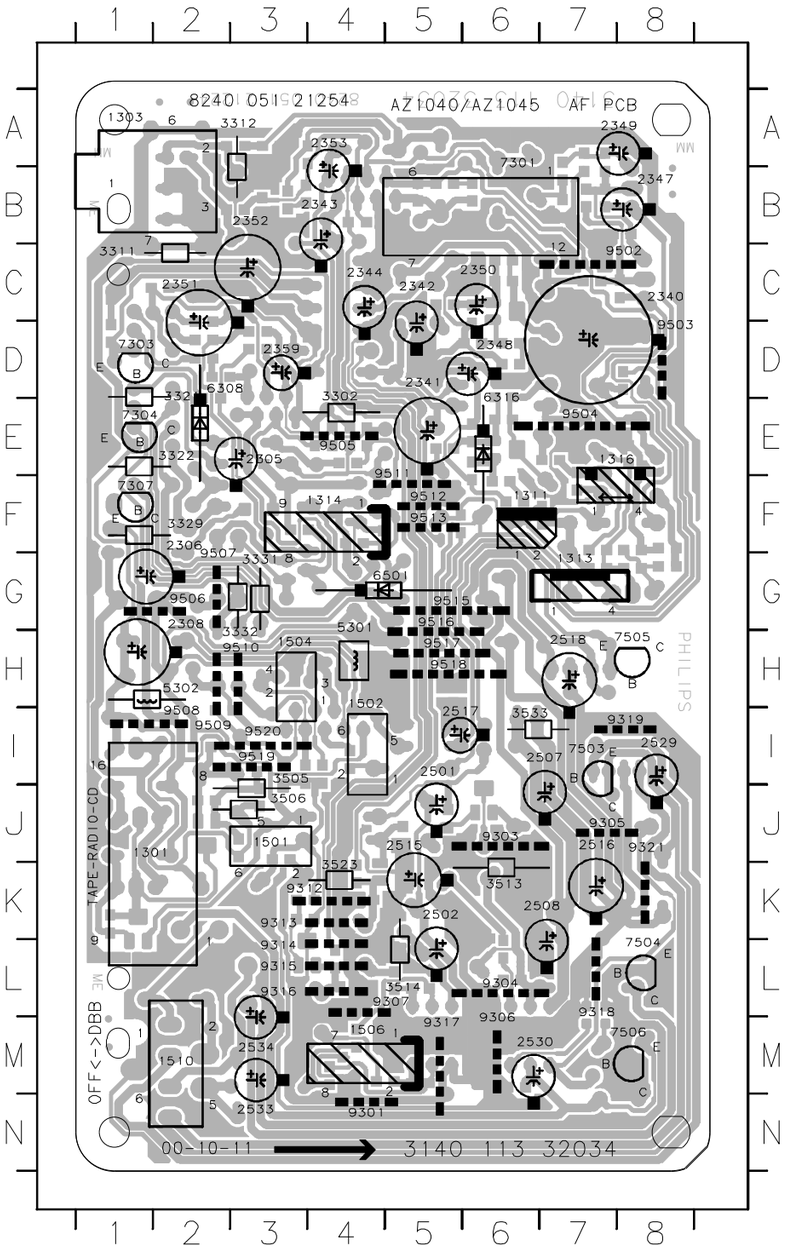
7-1

AF BOARD (AZ1060) - CIRCUIT DIAGRAM

T11 B1	T22 D1	T30 G1	T42 E13	T51 F13	T59 D13	T76 C10	1301-D G5	1502 D1	2309 B1	2345 B12	2353 D11	2363 G2	2508 C5	2522 C6	2530 D8	3303 B11	3314 C10	3329 F7	3502 B2	3512 C4	3520 C6	3528 D5	3537 B9	3561 C2	6308 H7	7306 H8	7504 D6	9306 E6
T12 B1	T23 E1	T31 B14	T43 E13	T52 G13	T64 C12	T77 C9	1301-E H11	1504 G1	2337 B10	2346 C12	2355 B13	2501 B3	2509 B5	2523 B6	2531 B8	3304 C11	3321 G9	3331 F10	3505 B2	3513 A4	3521 B5	3529 B6	3538 C9	3562 B2	6311 E11	7307 G7	7505 B7	9307 C9
T13 B1	T24 E1	T32 C14	T44 E14	T53 G13	T65 B13	T78 D10	1303 B15	1506 B9	2338 D10	2347 B12	2356 D12	2502 C3	2510 D5	2524 C6	2532 D8	3305 C11	3322 G9	3332 F11	3506 C2	3514 A4	3522 D5	3530 D6	3541 B9	3563 C1	6316 C13	7312 C13	7506 D7	
T15 B1	T25 E1	T33 C15	T45 E13	T54 G13	T71 B9	1001 D15	1311 H13	1510 C8	2340 C13	2348 D12	2357 C10	2503 B4	2515 A4	2525 B6	2533 B8	3306 C11	3323 H9	3333 F11	3507 B3	3515 A4	3523 A4	3531 C7	3542 C9	3564 C1	6501 A8	7301 C12	7313 C11	9301 B9	
T16 C1	T26 E1	T34 D15	T46 E13	T55 H13	T72 C9	1002 E15	1313 F13	1511 C8	2341 C13	2349 B13	2358 D10	2504 B4	2516 A5	2526 D6	2534 C8	3307 C13	3325 H8	3334 E10	3508 G3	3516 C4	3524 A5	3532 D7	3543 B9	3565 D1	7301 C12	7314 D11	9302 D9	
T17 B3	T27 G1	T36 E15	T47 F13	T56 H13	T73 C9	1301-A A3	1314 E13	2306 H6	2342 C12	2350 D12	2359 E10	2505 B4	2517 A7	2527 C7	2540 D4	3311 B14	3326 H7	3335 E11	3509 B3	3517 B4	3525 A8	3533 A7	3544 D9	3566 C2	7303 G8	7501 B5	9303 A4	
T18 C3	T28 G1	T37 D15	T48 F13	T57 C13	T74 C9	1301-B G11	1316 D15	2307 H6	2343 B11	2351 B13	2360 E2	2506 C4	2518 A7	2528 D7	3301 B10	3312 C14	3327 H7	3337 E9	3510 D3	3518 D4	3526 A7	3535 B7	3545 B8	5301 E2	7304 G8	7502 C5	9304 C4	
T21 D1	T29 G1	T41 E13	T49 F13	T58 D13	T75 C9	1301-C C3	1501 B1	2308 H6	2344 C11	2352 D13	2361 E1	2507 A5	2521 B6	2529 B8	3302 D10	3313 B10	3328 H7	3501 B2	3511 B4	3519 B6	3527 C5	3536 D7	3546 D8	5302 B1	7305 H9	7503 B5	9305 A6	

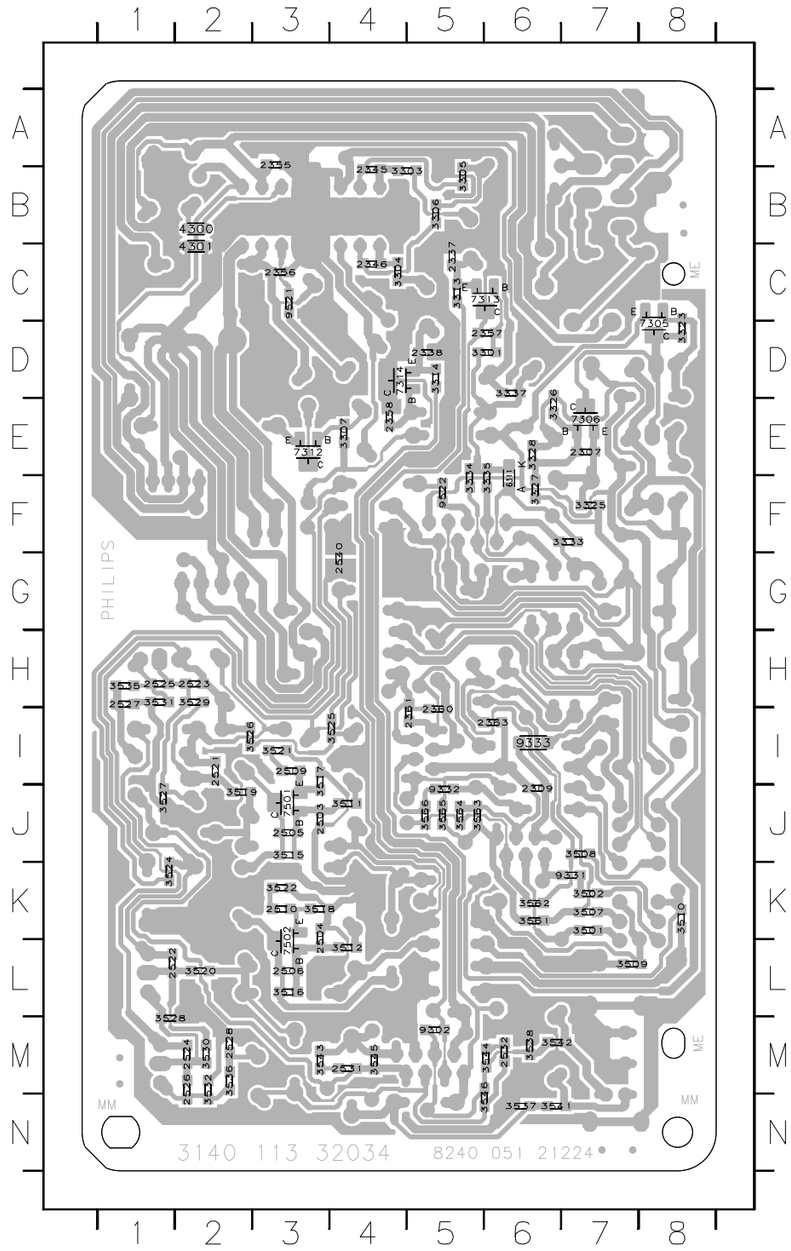


AF BOARD - LAYOUT DIAGRAM



1301	J1	9305	J7
1303	A1	9306	M6
1311	F6	9307	L5
1313	G7	9312	K3
1314	F4	9313	K3
1316	E7	9314	L3
1501	J3	9315	L3
1502	H4	9316	L3
1504	H3	9317	M5
1506	M4	9318	L7
1510	M2	9319	I8
2305	E3	9321	J8
2306	F2	9502	C8
2308	G2	9503	D8
2340	C8	9504	E7
2341	D5	9505	E4
2342	C5	9506	G2
2343	B4	9507	G2
2344	C4	9508	I2
2347	B8	9509	I2
2348	D6	9510	H3
2349	A8	9511	E5
2350	C6	9512	F5
2351	C2	9513	F5
2352	B3	9515	G5
2353	A4	9516	G5
2359	D3	9517	H5
2501	I5	9518	H5
2502	K5	9519	I3
2507	I7	9520	I3
2508	K7		
2515	J5		
2516	J7		
2517	I5		
2518	H7		
2529	I8		
2530	M6		
2533	N3		
2534	M3		
3302	D4		
3311	C1		
3312	A3		
3321	D2		
3322	E2		
3329	F2		
3331	G3		
3332	H3		
3505	I3		
3506	J3		
3513	K6		
3514	L5		
3523	K4		
3533	I6		
5301	G4		
5302	H2		
6308	D2		
6316	D6		
6501	G5		
7301	A6		
7303	D1		
7304	E1		
7307	F1		
7503	I7		
7504	L8		
7505	H8		
7506	M8		
9301	N4		
9303	J6		
9304	L6		

7-2



2307	E7	3530	M2
2309	J6	3531	H1
2337	C5	3532	M2
2338	D5	3535	H1
2345	B4	3536	M2
2346	C4	3537	N6
2355	A3	3538	M6
2356	C3	3541	N6
2357	D6	3542	M6
2358	E4	3543	M3
2360	I5	3544	M6
2361	I5	3545	M4
2363	I6	3546	N6
2503	J3	3561	K6
2504	K3	3562	K6
2505	J3	3563	J5
2506	L3	3564	J5
2509	I3	3565	J5
2510	K3	3566	J5
2521	I2	4300	B2
2522	L1	4301	C2
2523	H2	6311	F6
2524	M2	7305	D8
2525	H1	7306	E7
2526	M2	7312	E3
2527	H1	7313	C6
2528	M2	7314	D4
2531	M4	7501	J3
2532	M6	7502	L3
2540	G4	9302	M5
3301	D6	9331	K7
3303	B4	9332	J5
3304	C4	9333	I6
3305	B5	9521	C3
3306	B5	9522	F5
3307	E4		
3313	C5		
3314	D5		
3323	D8		
3325	F7		
3326	E6		
3327	F6		
3328	E6		
3333	E7		
3334	F5		
3335	F6		
3337	D6		
3501	K7		
3502	K7		
3507	K7		
3508	J7		
3509	L7		
3510	K8		
3511	J4		
3512	L4		
3515	J3		
3516	L3		
3517	I3		
3518	K3		
3519	J2		
3520	L2		
3521	I3		
3522	K3		
3524	K1		
3525	I4		
3526	I2		
3527	J1		
3528	M1		
3529	H2		

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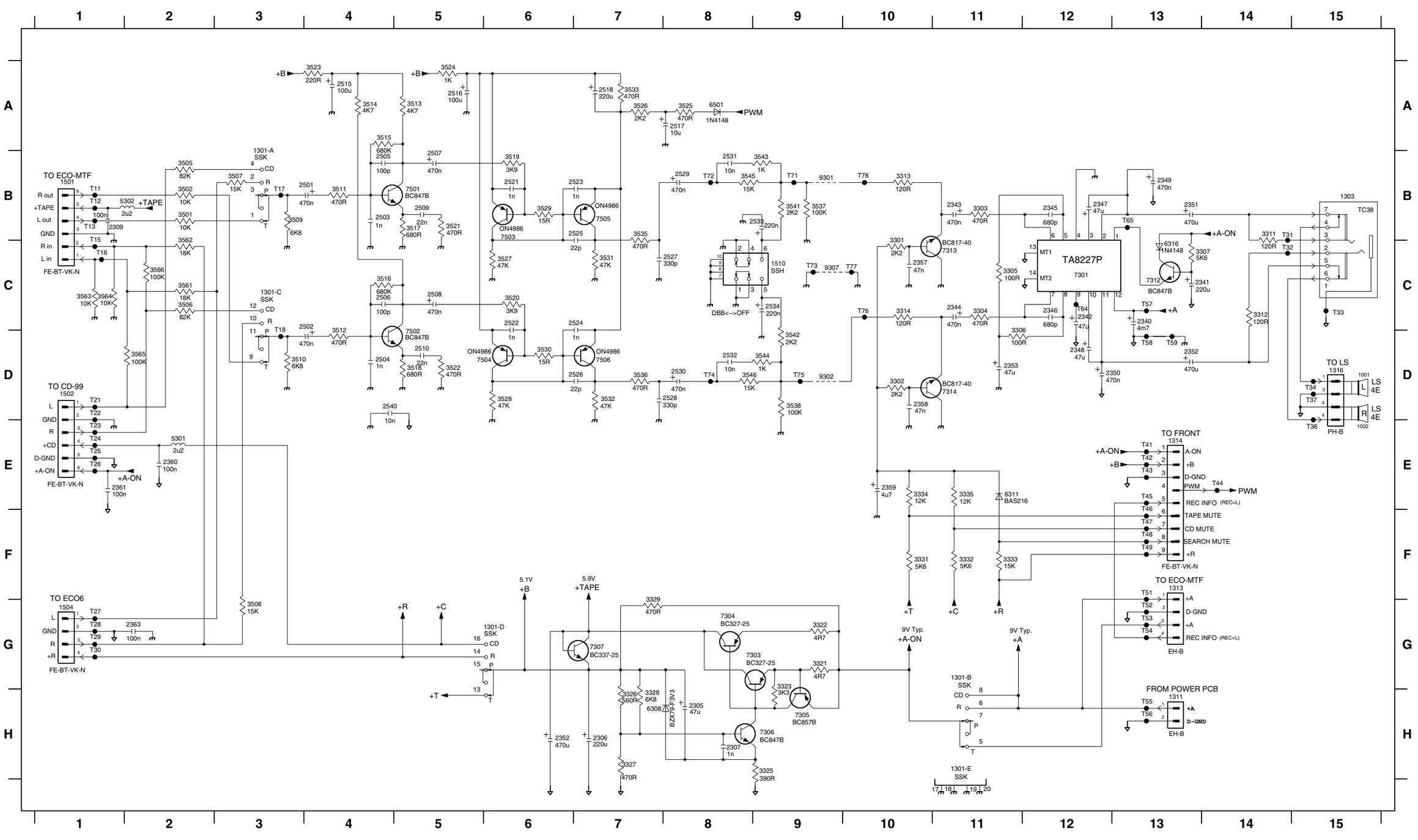
AF BOARD (AZ1065) - CIRCUIT DIAGRAM

T11 B1	T22 D1	T30 G1	T42 E13	T51 F13	T59 D13	T76 C10	1301-D G5	1502 D1	2338 D10	2347 B12	2357 C10	2503 B4	2515 A4	2525 B7	2533 B9	3306 D11	3323 H9	3333 F11	3508 G3	3516 C4	3524 A5	3532 D7	3543 B9	3565 D1	7301 C12	7314 D11	9302 D9
T12 B1	T23 E1	T31 B14	T43 E13	T52 G13	T64 C12	T77 C10	1301-E H11	1504 G1	2340 C13	2348 D12	2358 D10	2504 D4	2516 A5	2526 D7	2534 C9	3307 C13	3325 H8	3334 E10	3509 B3	3517 B5	3525 A8	3533 A7	3544 D9	3566 C2	7303 G8	7501 B5	9307 C9
T13 B1	T24 E1	T32 C14	T44 E14	T53 G13	T65 B13	T78 B10	1303 B15	1510 C9	2341 C13	2349 B13	2359 E10	2505 B4	2517 A7	2527 C7	2540 D4	3311 B14	3326 H7	3335 E11	3510 D3	3518 D5	3526 A7	3535 B7	3545 B8	5301 E2	7304 G8	7502 D5	
T15 C1	T25 E1	T33 C15	T45 E13	T54 G13	T71 B9	1001 D15	1311 H13	2305 H8	2342 D12	2350 D12	2360 E2	2506 C4	2518 A7	2528 D7	3301 C10	3312 C14	3327 H7	3501 B2	3511 B4	3519 B5	3527 C6	3536 D7	3546 D8	5302 B2	7305 H9	7503 B6	
T16 C1	T26 E1	T34 D15	T46 F13	T55 H13	T72 B8	1002 E15	1313 F13	2306 H7	2343 B11	2351 B13	2361 E1	2507 B5	2521 B6	2529 B8	3302 D10	3313 B10	3328 H7	3502 B2	3512 D4	3520 C6	3528 D6	3537 B9	3561 C2	6308 H7	7306 H9	7504 D6	
T17 B3	T27 G1	T36 E15	T47 F13	T56 H13	T73 C9	1301-A A3	1314 E13	2307 H8	2344 C11	2352 D13	2363 G2	2508 C5	2522 C6	2530 D8	3303 B11	3314 C10	3329 G7	3505 B2	3513 A5	3521 B5	3529 D6	3538 D9	3562 C2	6311 E11	7307 G7	7505 B7	
T18 D3	T28 G1	T37 D15	T48 F13	T57 C13	T74 D8	1301-B G11	1316 D15	2309 B1	2345 B12	2352 H6	2501 B4	2509 B5	2523 B7	2531 B8	3304 C11	3321 G9	3331 F10	3506 C2	3514 A4	3522 D5	3530 D6	3541 B9	3563 C1	6316 C13	7312 C13	7506 D7	
T21 D1	T29 G1	T41 E13	T49 F13	T58 D13	T75 D9	1301-C C3	1501 B1	2337 B10	2346 C12	2353 D11	2502 C4	2510 D5	2524 C7	2532 D8	3305 C11	3322 G9	3332 F11	3507 B3	3515 A4	3523 A4	3531 C7	3542 D9	3564 C1	6501 A8	7313 C11	9301 B9	



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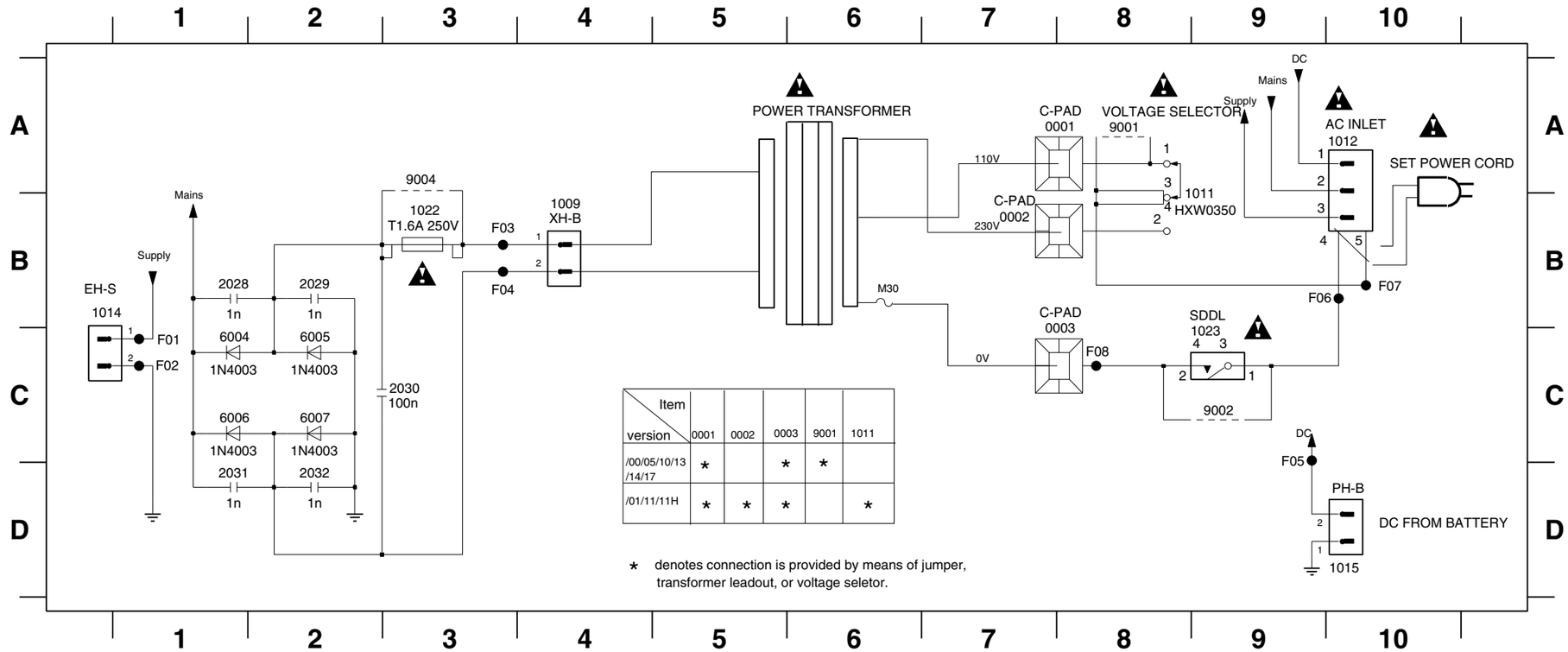
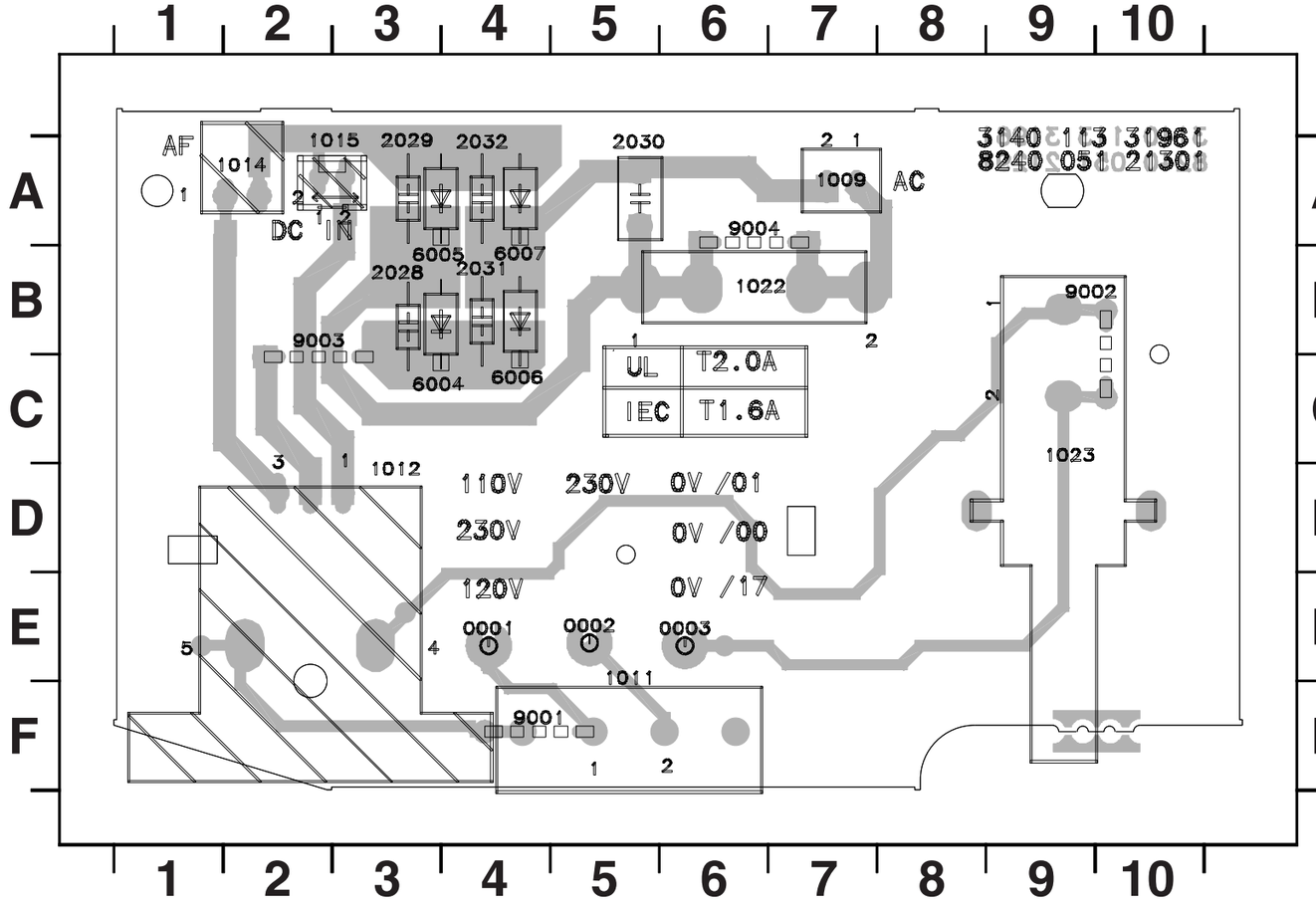
POWER BOARD - CIRCUIT & LAYOUT DIAGRAM



F01 C1
F02 C1
F03 B3
F04 B3
F05 D9
F06 B9
F07 B10
F08 C8
0001 A7
0002 B7
0003 C7
1009 B4
1011 A9
1012 A10
1014 B1
1015 D10
1022 B3
1023 B9
2028 B1
2029 B2
2030 C3
2031 D1
2032 D2
6004 C1
6005 C2
6006 C1
6007 C2
9001 A8
9002 C9
9004 A3



0001 E4
0002 E5
0003 E6
1009 A7
1011 E5
1012 D3
1014 A2
1015 A3
1022 B6
1023 C9
2028 B3
2029 A3
2030 A5
2031 B4
2032 A4
6004 C3
6005 B3
6006 C4
6007 B4
9001 F4
9002 B9
9003 B2
9004 A6

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TUNER BOARD ECO6 - CIRCUIT DIAGRAM

TUNER BOARD ECO6 / PORTABLE AUDIO

VERSION PROGRAMMING COMPONENTS

VERSION	6120	3156	3157	3170	7111
/00 /02 FM/MW/LW	☒				
/00 /02 FM/MW		☒	☒	☒	☒
/01 FM/MW		☒	☒	☒	☒
/14 FM-OIRT/MW	☒				
/17 FM/AM		☒	☒	☒	☒
/06 FM-Japan/AM		☒	☒	☒	☒

☒ component mounted

VERSION DETECTION

PROGRAMMABLE OUTPUT PORTS

LEGEND

* ... only assembled in FM/AM-version
ⓟ...for provision only
USA ... for USA version only
LW ... for LW version only
LW frame ... for LW version with frame aerial only

E_EU ... for East European version only
J ... for Japanese version only

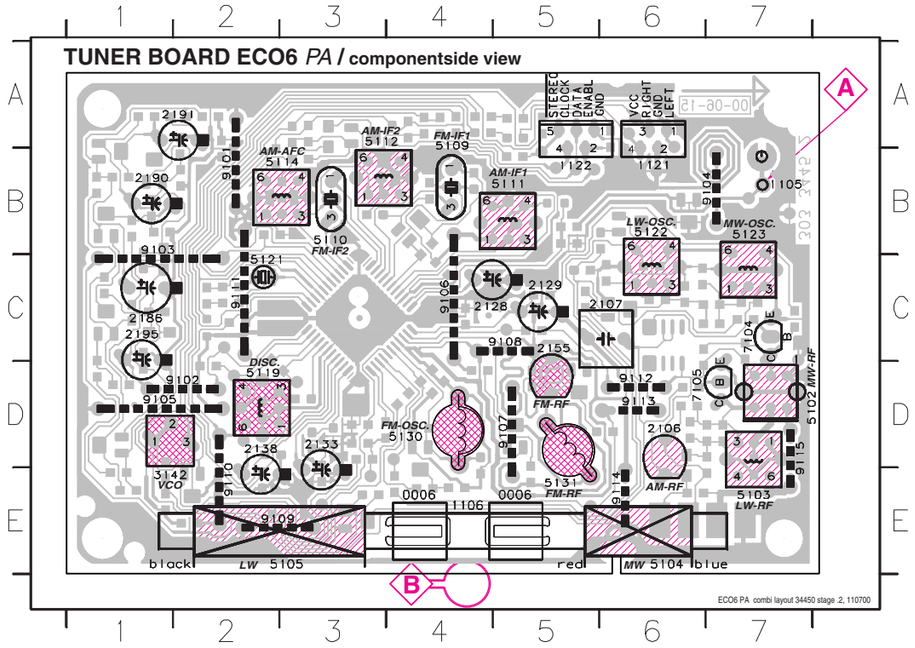
SMD jumper 41xx 0R

EVM ...V FM mode stereo; ...V MW mode; ...V LW mode
voltages measured while set is tuned to a strong transmitter

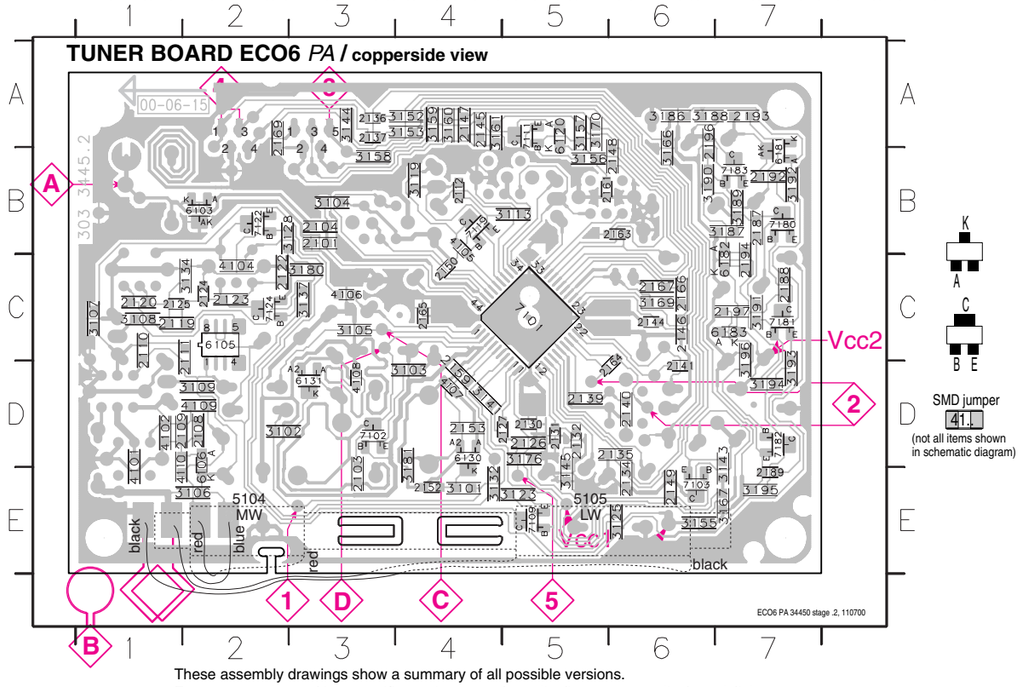
Signal path
FM
AM
MPX (Audio Frequency)
AF - left/right

TUNER BOARD ECO6 - LAYOUT DIAGRAM

1105 B7 2106 D6 2129 C5 2155 C5 2191 A2 5102 D7 5110 B3 5114 B3 5122 B6 5131 E5 9101 B2 9104 B7 9107 D5 9110 E2 9113 D6
1121 B6 2107 C6 2133 D3 2186 C1 2195 C1 5103 E7 5111 B4 5119 D2 5123 B7 7104 C7 9102 D2 9105 D1 9108 C5 9111 C2 9114 E6
1122 B5 2128 C4 2138 D2 2190 B1 3142 E1 5109 B4 5112 B3 5121 C2 5130 D4 7105 D6 9103 B1 9106 C4 9109 E2 9112 D6 9115 D7



2101 B3 2119 C1 2130 D5 2140 D6 2150 C4 2166 C6 2194 C7 3106 E2 3128 B2 3152 A4 3161 A4 3186 A6 3194 D7 4107 D4 6130 D4 7109 E5 7183 B7
2103 E3 2120 C1 2131 D5 2141 D6 2152 E4 2167 C6 2196 A6 3107 C1 3132 E4 3153 A4 3166 B6 3187 B7 3195 E7 4108 D3 6131 D3 7111 A5
2104 B3 2122 C2 2132 D5 2144 C6 2153 D4 2169 A2 2197 C7 3108 C1 3134 C2 3155 E6 3167 E7 3188 A6 3196 C7 4109 D2 6181 B7 7119 B5
2108 D2 2123 C2 2134 E6 2145 A4 2159 D4 2187 B7 3101 E4 3109 D2 3137 C3 3156 B5 3169 C6 3189 B7 4101 D1 4110 D1 6182 C7 7122 B2
2109 D1 2124 C2 2135 D6 2146 C6 2161 B5 2188 C7 3102 D2 3113 B5 3141 D4 3157 A5 3170 A5 3190 B6 4102 D1 6103 B2 6183 C7 7124 C2
2110 C1 2125 C1 2136 A3 2147 A4 2163 B6 2189 E7 3103 D4 3119 B5 3143 D7 3158 B3 3176 D5 3191 C7 4104 C2 6105 C2 7101 C5 7180 B7
2111 C2 2126 D5 2137 A3 2148 B6 2164 D6 2192 B7 3104 B3 3123 E5 3144 A3 3159 A4 3180 C3 3192 B7 4105 B4 6106 D2 7102 D3 7181 C7
2112 B4 2127 D5 2139 D5 2149 E6 2165 C4 2193 A7 3105 C3 3125 E6 3145 E5 3160 A4 3181 D4 3193 D7 4106 C3 6120 A5 7103 E6 7182 D7



SMD jumper 41..
(not all items shown in schematic diagram)

These assembly drawings show a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

TUNER ADJUSTMENT TABLE (ECO6 FM/MW- and FM/MW/LW - versions with AM-frame aerial)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)			108MHz	5130	◇1	8V ±0.2V
			87.5MHz (65.81MHz)	check		4.3V ±0.5V (1.2V ±0.5V)
MW FM/AM-version, 10kHz grid 530 - 1700kHz			1700kHz	5123		8V ±0.2V
			530kHz	check		1.1V ±0.4V
FM/MW-version, 9kHz grid 531 - 1602kHz			1602kHz	5123		6.9V ±0.2V
			531kHz	check		1.1V ±0.4V
LW 153 - 279kHz			279kHz	5122		8V ±0.2V
			153kHz	check		1.1V ±0.4V
MW FM/MW/LW- version, 9kHz grid 531 - 1602kHz			1602kHz	5123		8V ±0.2V
			531kHz	check		1.1V ±0.4V
FM IF						
FM	10.7MHz, 45mV continuous wave	◇D	IC 7101 pin 21 — shortcircuit to block AFC — 2141	5119	◇2	0 ± 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	◇A mod=1kHz f=±22.5kHz	108MHz	2155	◇4	MAX
	87.5MHz (65.81MHz)		87.5MHz (65.81MHz)	5131		
VCO						
FM	98MHz, 1mV continuous wave	◇A	98MHz	3142	◇3	152kHz ±1kHz 1)
AM IF						
MW	450kHz connect pin 6 of IC 7101 (AM Osc.) with 3.3k to Vcc	◇C f=±10kHz V_{RF} = 0.5mV (as low as possible)	IC 7101 pin 36 — 100nF — 220R	5111	◇5	f$_o$ symmetric, max.
			IC 7101 pin 40 — 100nF — 220R — see remark 2)	5112		
AM AFC **MW**		◇C continuous wave V_{RF} = 2mV		5114	◇2	0 ± 2 mV DC
AM RF 3)						
MW 4) FM/MW/LW- and FM/MW-version (9kHz grid) 531 - 1602kHz	1494kHz	◇B f = ±30kHz V_{RF} as low as possible	1494kHz	2106	◇5	f$_o$ symmetric, max.
	558kHz		558kHz	5102		
LW	198kHz		198kHz	5103		
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz		1500kHz	2106		
	560kHz		560kHz	5102		

ECO6, Sys + PA with frame aerial, 070799

Use Service Testprogram. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

1) If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

2) RC network serves for damping the IF-filter while adjusting the other one.

3) For AM RF adjustments the original frame antenna has to be used !

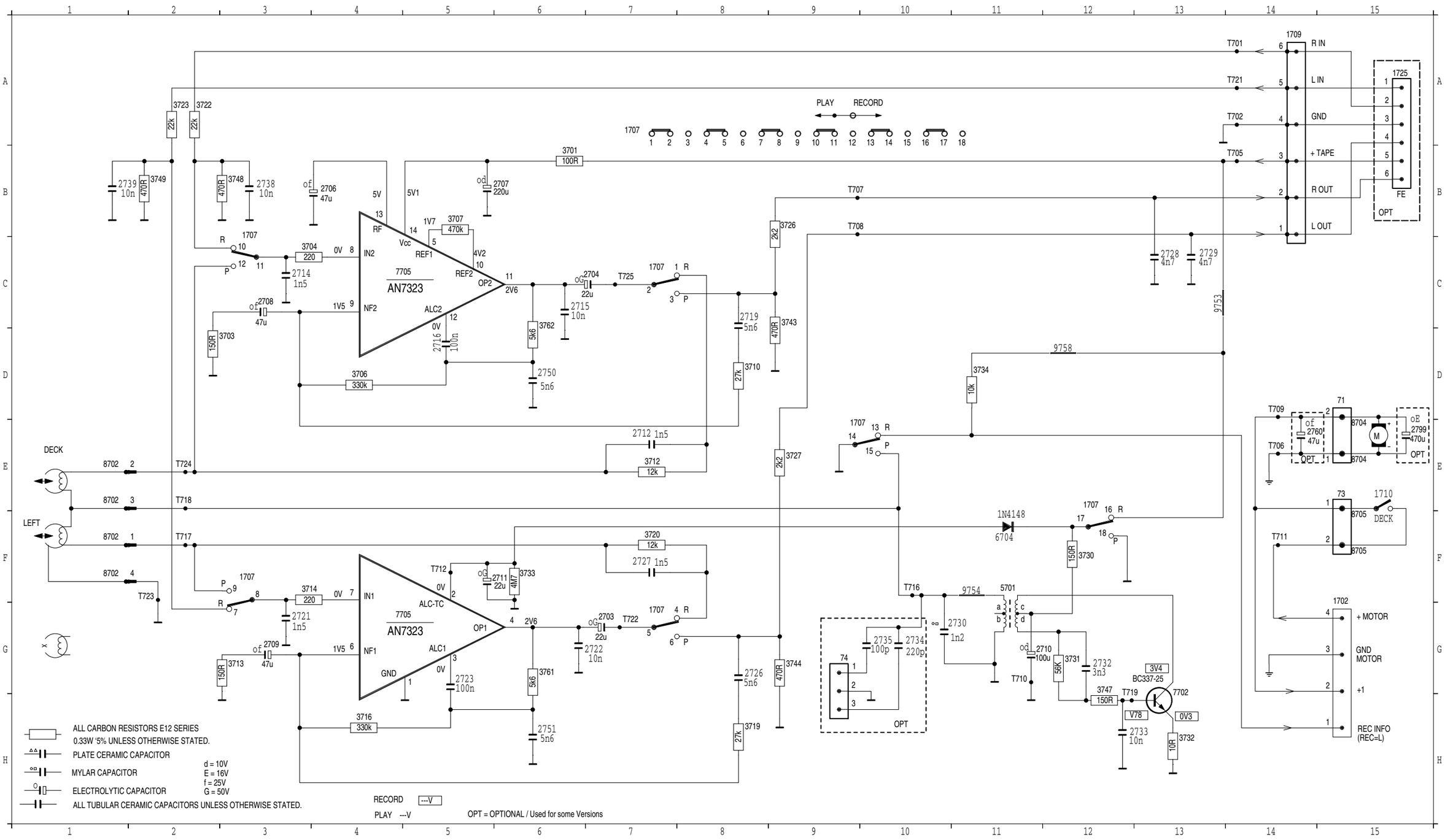
4) MW has to be aligned before LW.

↕ Repeat

10-1

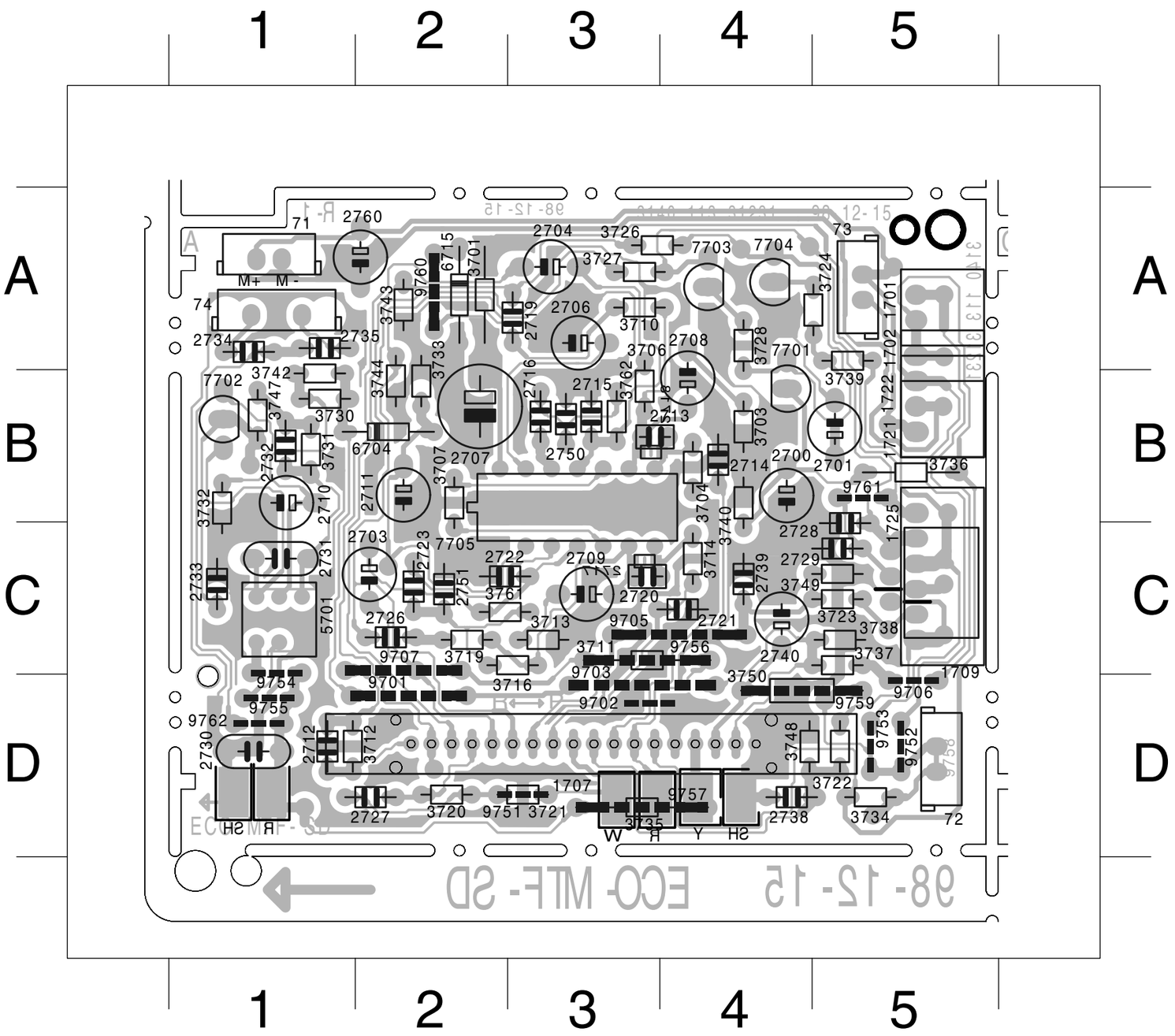
RECORDER BOARD - CIRCUIT DIAGRAM

71	D15	1707	C 3	1709	A14	2706	B 4	2711	F 6	2719	C 8	2727	F 7	2733	H13	2750	D 6	3703	D 3	3712	E 7	3720	F 7	3730	F12	3743	C 9	3761	G 6	7705	G 4	8702	E 1	9753	C13	T705	B14	T710	G11	T718	E 2	T724	E 2
73	E15	1707	G 7	1710	E15	2707	B 6	2712	E 7	2721	G 3	2728	C13	2734	G10	2751	H 6	3704	C 3	3713	G 3	3722	A 2	3731	G12	3744	G 9	3762	D 6	7705	C 4	8704	E15	9754	F11	T706	E14	T711	F14	T719	H13	T725	C 7
74	G 9	1707	C 7	1725	A15	2708	C 3	2714	C 3	2722	G 7	2729	C13	2735	G10	2760	E14	3706	D 4	3714	F 3	3723	A 2	3732	H13	3747	G12	5701	F11	8702	F 1	8704	E15	9758	D12	T707	B10	T712	F 5	T721	A14		
1702	G15	1707	E 9	2703	G 7	2709	G 3	2715	C 6	2723	G 5	2730	G11	2738	B 3	2799	E15	3707	B 5	3716	H 4	3726	B 9	3733	F 6	3748	B 3	6704	F11	8702	F 1	8705	F15	T701	A14	T708	B10	T716	F10	T722	G 7		
1707	F 3	1707	E12	2704	C 7	2710	G12	2716	D 5	2726	G 8	2732	G12	2739	B 1	3701	B 6	3710	D 8	3719	H 8	3727	E 9	3734	D11	3749	B 2	7702	H13	8702	E 1	8705	F15	T702	A14	T709	D14	T717	F 2	T723	F 2		



10-2

RECORDER 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

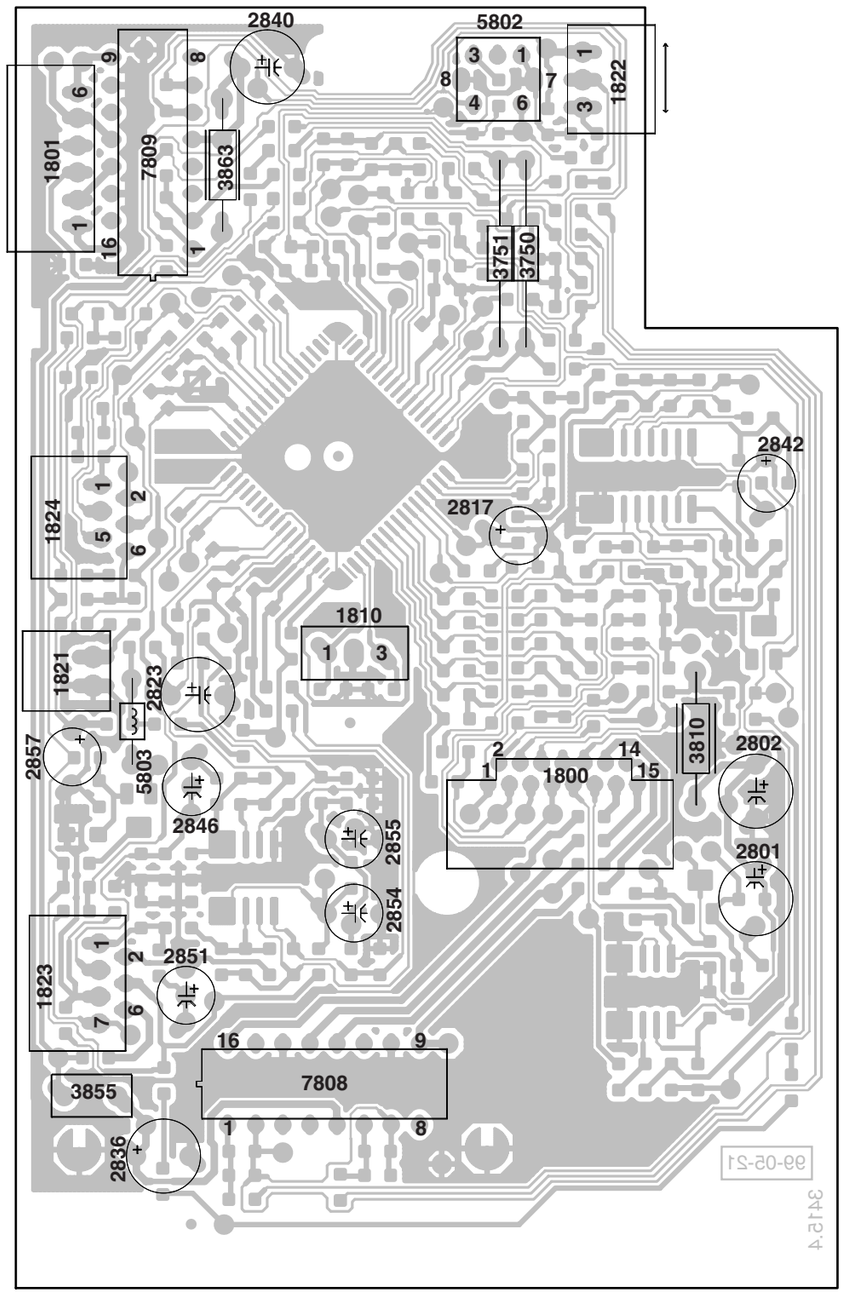
Adjustment	Cassette	SK	Deck 1	Measure on	Read on	Adjust with	Adjust to
Azimuth	10 kHz SBC420*	Tape	Play	H/P Jack	mV meter	Left hand Screw R/P head	max.
Motor Speed	3150 kHz SBC420*	Tape	Play	H/P Jack	Wow and flutter meter	Preset in motor	**a

* SBC420 : 4822 397 30071

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

CD99 DA11 - LAYOUT DIAGRAM

CD99 Board component side view



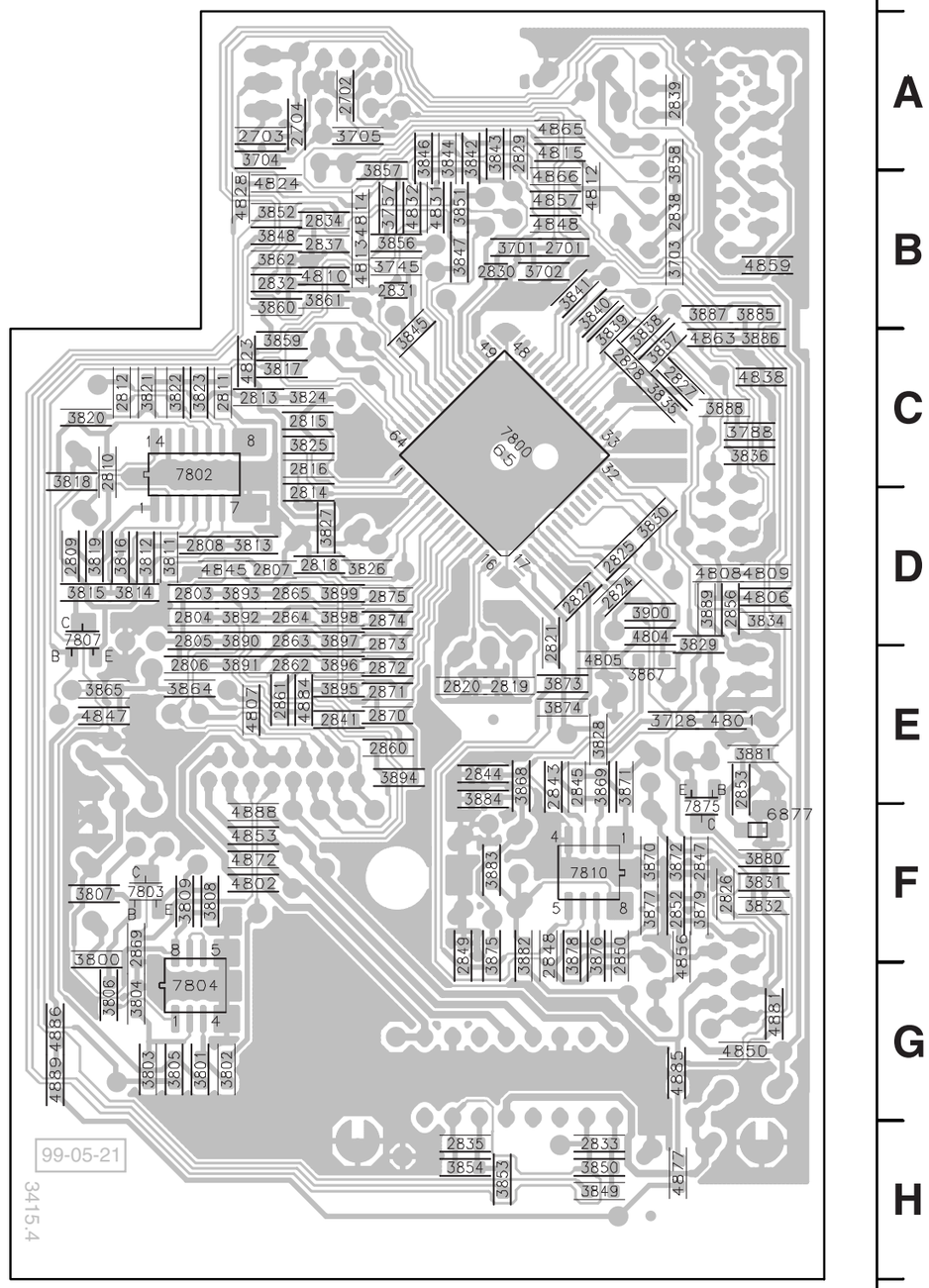
1800	F2	3703	B5	3876	F4
1801	A5	3704	A2	3877	F4
1810	D3	3705	A3	3878	F4
1821	E5	3728	E5	3879	F5
1822	A2	3745	B3	3880	F5
1823	G5	3750	B2	3881	E5
1824	D5	3751	B2	3882	F4
2701	B4	3757	B3	3883	F3
2702	A2	3788	C5	3884	E3
2703	A2	3800	F1	3885	B5
2704	A2	3801	G2	3886	C5
2801	F1	3802	G2	3887	B5
2802	E1	3803	G1	3888	C5
2803	D2	3804	G1	3889	D5
2804	D2	3805	G1	3890	D2
2805	D2	3806	G1	3891	E2
2806	E1	3807	F1	3892	D2
2807	D2	3808	F2	3893	D2
2808	D2	3809	F1	3894	E3
2809	D1	3810	E1	3895	E2
2810	C1	3811	D1	3896	E2
2811	C2	3812	D1	3897	D2
2812	C1	3813	D2	3898	D2
2813	C2	3814	D1	3899	D2
2814	D2	3815	D1	3900	D4
2815	C2	3816	D1	4801	E5
2816	C2	3817	C2	4802	F2
2817	D2	3818	C1	4804	D4
2818	D2	3819	D1	4805	E4
2819	E4	3820	C1	4806	D5
2820	E3	3821	C1	4807	E2
2821	D4	3822	C1	4808	D5
2822	D4	3823	C2	4809	D5
2823	E4	3824	C2	4810	B2
2824	D4	3825	C2	4812	B4
2825	D4	3826	D3	4813	B3
2826	F5	3827	D2	4814	B3
2827	C5	3828	E4	4815	A4
2828	C4	3829	D5	4823	C2
2829	A4	3830	D4	4824	B2
2830	B3	3831	F5	4828	B2
2831	B3	3832	F5	4831	B3
2832	B2	3834	D5	4832	B3
2833	H4	3835	C4	4838	C5
2834	B2	3836	C5	4845	D2
2835	H3	3837	C4	4847	E1
2836	G5	3838	C4	4848	B4
2837	B2	3839	C4	4850	G5
2838	B5	3840	B4	4853	F2
2839	A5	3841	B4	4856	F5
2840	A4	3842	A3	4857	B4
2841	E2	3843	A3	4859	B5
2842	C1	3844	A3	4863	C5
2843	E4	3845	C3	4865	A4
2844	E3	3846	A3	4866	B4
2845	E4	3847	B3	4872	F2
2846	E4	3848	B2	4877	H5
2847	F5	3849	H4	4881	G5
2848	F4	3850	H4	4884	E2
2849	F3	3851	B3	4885	G5
2850	F4	3852	B2	4886	G1
2851	G4	3853	H3	4888	F2
2852	F5	3854	H3	4889	G1
2853	E5	3855	G5	5802	A2
2854	F3	3856	B3	5803	E5
2855	E3	3857	B3	6877	F5
2856	D5	3858	A5	7800	C4
2857	E5	3859	C2	7802	C2
2860	E3	3860	B2	7803	F1
2861	E2	3861	B2	7804	G2
2862	E2	3862	B2	7807	D1
2863	D2	3863	A4	7808	G4
2864	D2	3864	E1	7809	A5
2865	D2	3865	E1	7810	F4
2869	F1	3867	E4	7875	F5
2870	E3	3868	E4	8401	H3
2871	E3	3869	E4	8402	H5
2872	E3	3870	F4		
2873	D3	3871	E4		
2874	D3	3872	F5		
2875	D3	3873	E4		
3701	B4	3874	E4		
3702	B4	3875	F3		

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

CD99 Layout stage .4 990817

11-1

CD99 Board copper side view

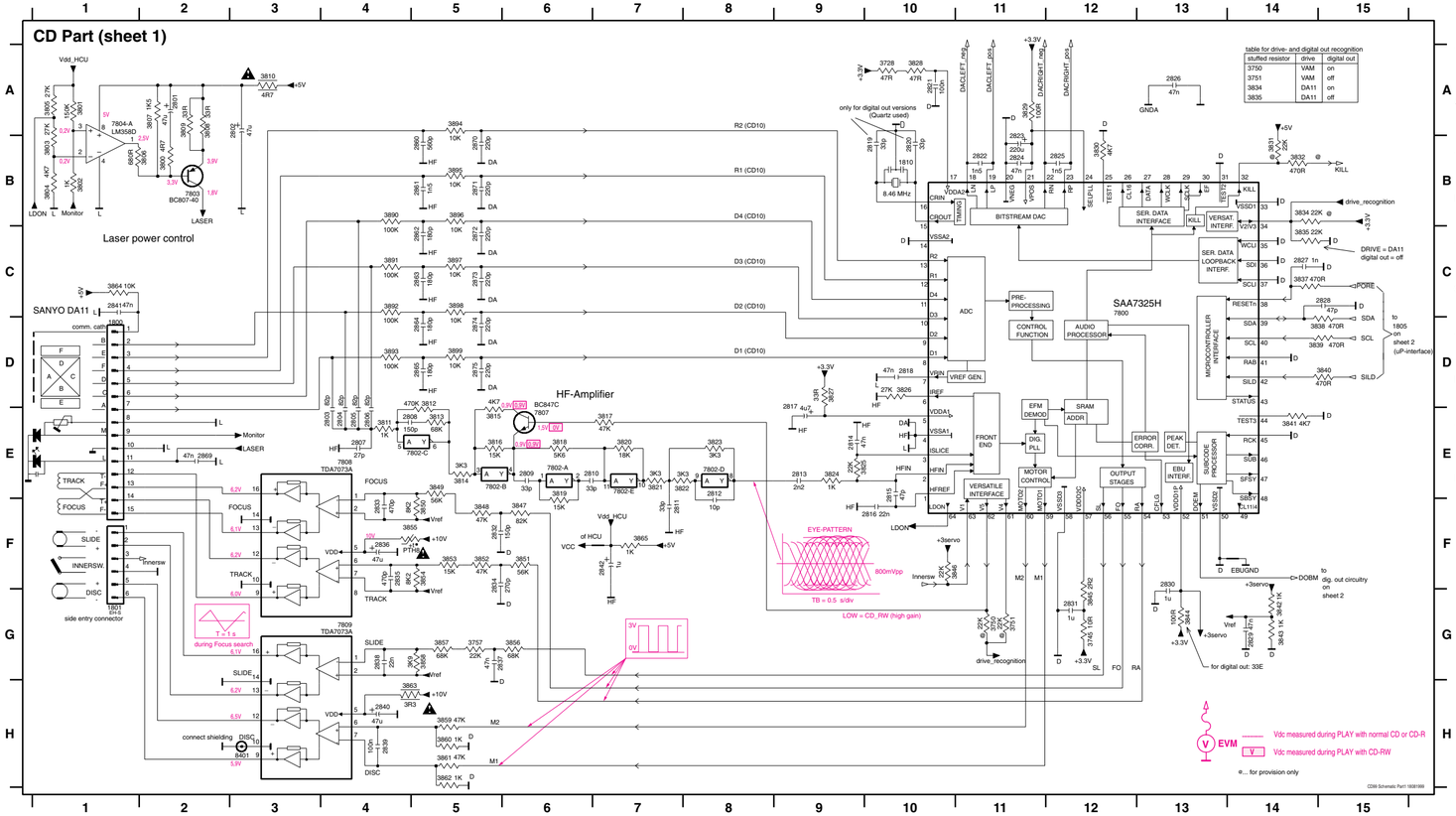


This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

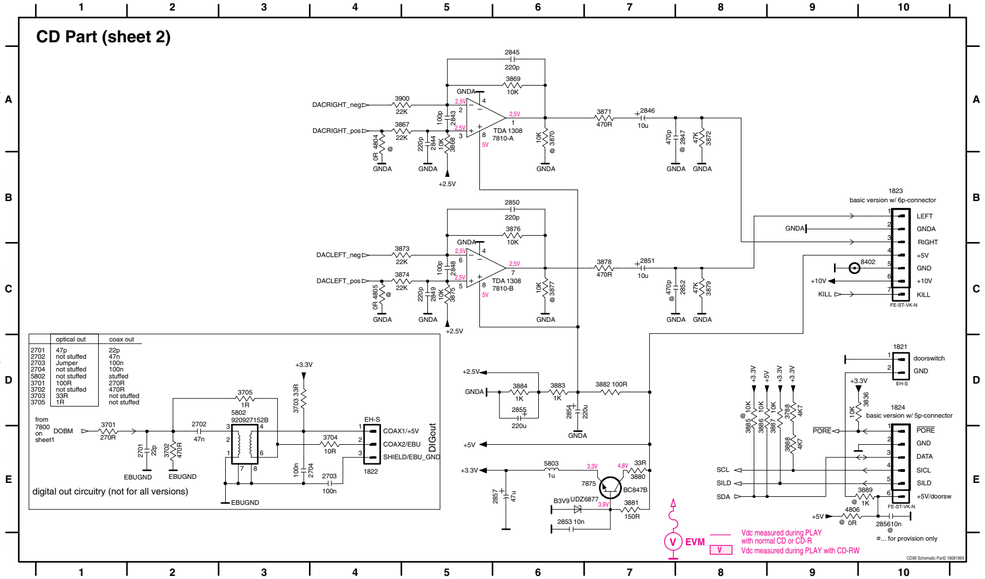
CD99 Layout stage .4 990817

CD99 DA11 - CIRCUIT DIAGRAM

CD Part (sheet 1)



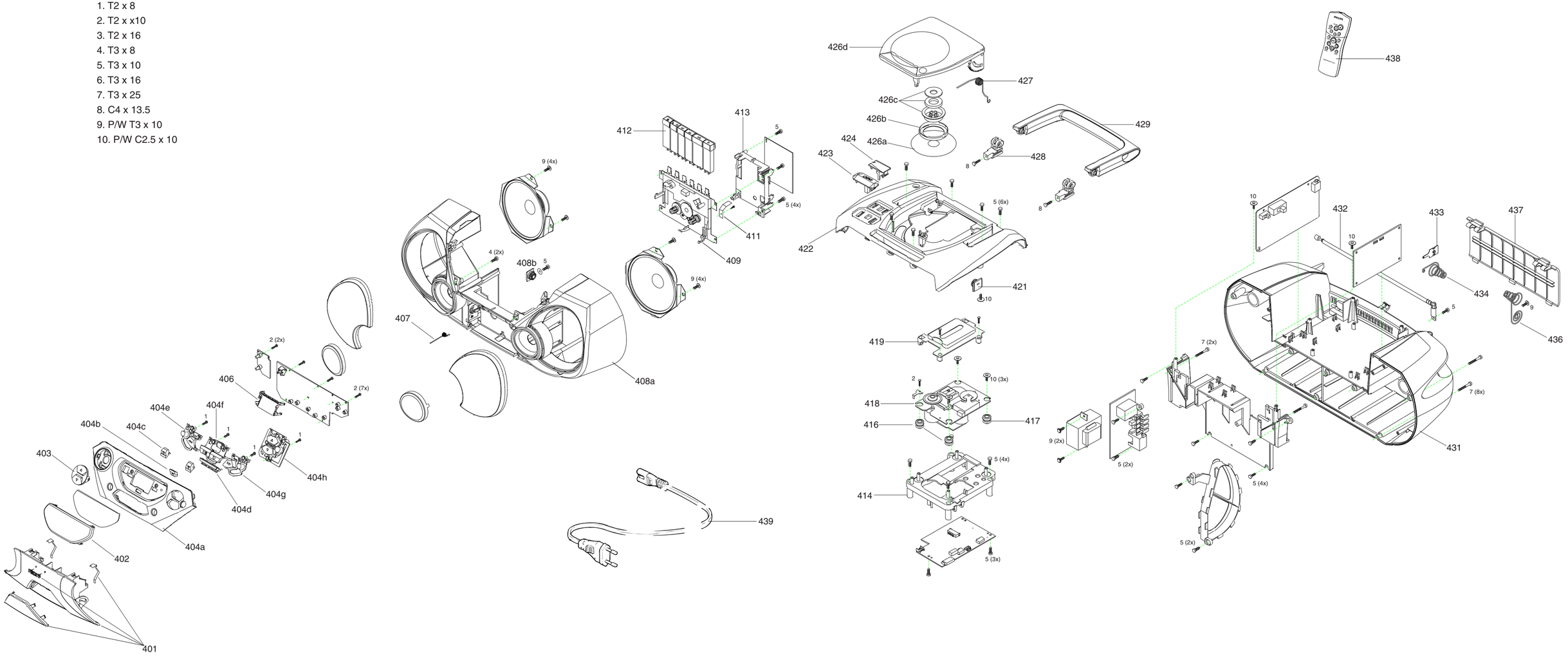
CD Part (sheet 2)



EXPLODED VIEW DIAGRAM - CABINET

SCREW LIST

1. T2 x 8
2. T2 x x10
3. T2 x 16
4. T3 x 8
5. T3 x 10
6. T3 x 16
7. T3 x 25
8. C4 x 13.5
9. P/W T3 x 10
10. P/W C2.5 x 10



MECHANICAL PARTSLIST - CABINET

401	3140 117 60420	Door Cassette Assy (For AZ1060)
401	3140 117 60430	Door Cassette Assy (For AZ1065)
402	3140 114 36230	Lens CD
403	3140 114 36160	Rotary Volume (For AZ1060)
403	3140 114 36170	Up Down Volume (For AZ1065)
404	3140 117 60410	Front Panel Assy (For AZ1060)
404	3140 117 60450	Front Panel Assy (For AZ1065)
406	3140 114 36130	Bracket Didital LCD
407	4822 492 11776	Spring Cass Door
408	3140 117 60370	Front Cab. Assy Grill (For AZ1060)
408	3140 117 60690	Front Cab. Assy Grill (For AZ1065)
409	4822 691 10612	Tape Deck
411	3140 111 20800	Spring Recording
412	3140 114 36750	Keyset Cass
413	3140 114 20430	Bracket Recording
414	3140 114 31230	CD Mounting Frame
416	4822 529 10387	Damper Rubber (40 DEG)
417	4822 529 10386	Damper Rubber (30 DEG)
418	3103 309 05290	CD DA11 Drive Assy
419	4822 442 01096	CD Drive Cover
421	4822 529 10322	Damper Assy
422	3140 114 36710	Cabinet Top
423	3140 114 36730	Knob DBB
424	3140 114 36740	Knob Mode
426	3140 117 60400	CD Door Assy (For AZ1060)
426	3140 117 60440	CD Door Assy (For AZ1065)
427	3140 111 00750	Spring CD
428	4822 402 10724	Bracket Handle
429	3140 114 36720	Handle
431	3140 114 36700	Cabinet Rear
432	3140 118 71570	Antenna
433	3140 111 21320	Contact Plate
434	4822 492 51961	Spring Compression
436	4822 492 51733	Spring Compression
437	3140 114 36690	Door Battery
438	3139 228 87580	Remote RC331402/01 (For AZ1065)
439	4822 321 10249	Mains Cord (For -/00/01/11/14)
439	4822 321 10886	Mains Cord (For -/05)
439	4822 321 10954	Mains Cord (For -/10)
439	4822 321 11466	Mains Cord (For -/17)

3140 115 27920	Instr Manual (For AZ1060/00/05)	
3140 115 28040	Instr Manual (For AZ1060/14)	
3140 115 28050	Instr Manual (For AZ1060/17)	
3140 115 27930	Instr Manual (For AZ1065/00)	
3140 115 28060	Instr Manual (For AZ1065/01/10/11)	
3140 115 28080	Instr Manual (For AZ1065/17)	

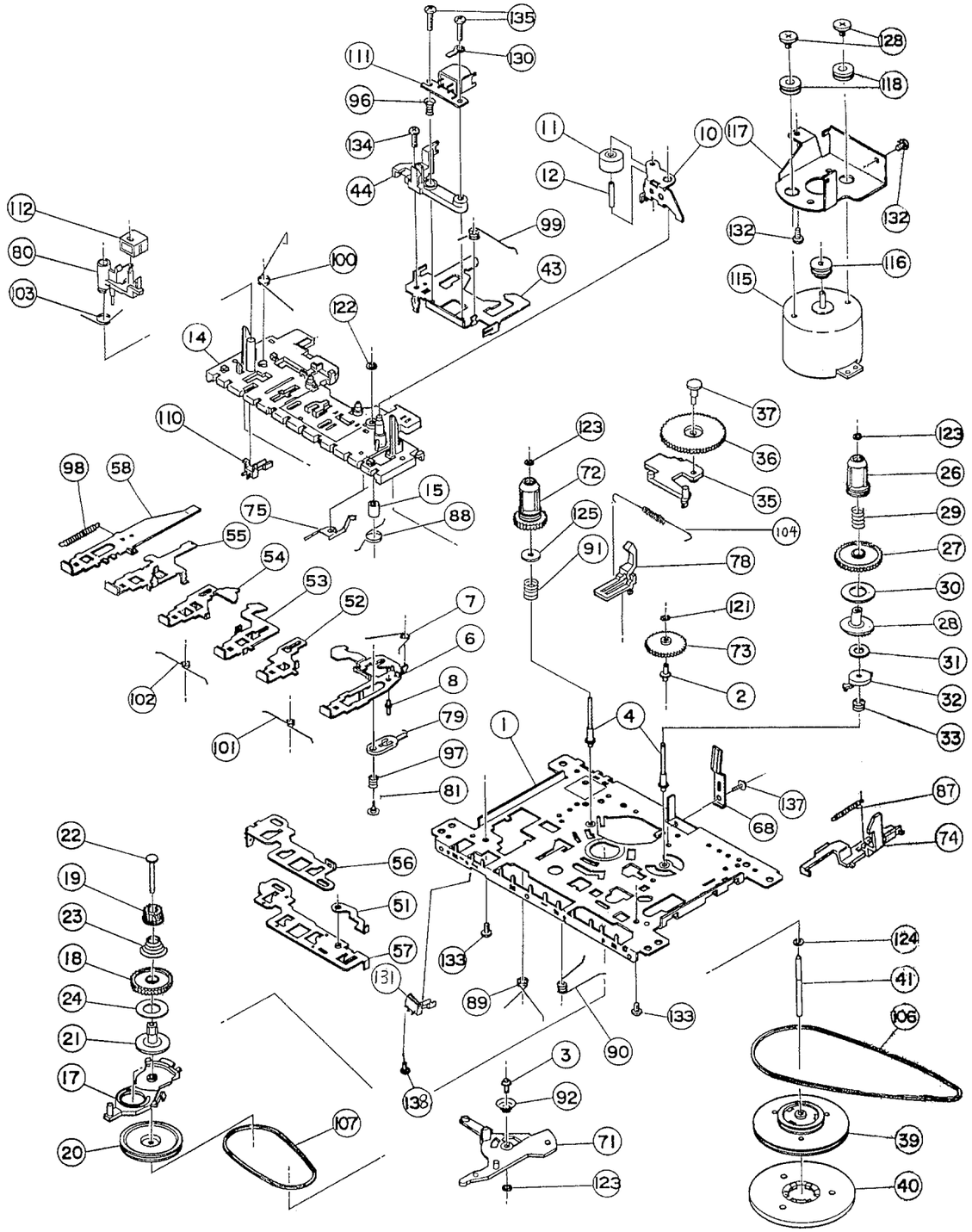
Note: Only these parts mentioned in the list are normal service parts.

MECHANICAL PARTSLIST - TAPE DECK

10	4822 528 70849	Pinch Roller Arm (B)
11	4822 528 70695	Pinch Roller Assy
74	4822 403 70968	Eject Hook (A)
106	4822 358 31325	Main Belt 45.2 x 1.2
107	4822 358 31124	Sub Belt 44.7 x 1.2
110	4822 278 90721	Leaf Switch
111	4822 249 30218	MS18R-AKONI
112	4822 249 40306	E. Head
115	4822 361 21565	Motor EG-530AD-9B
116	4822 528 81497	Motor Pulley

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

EXPLODED VIEW DIAGRAM - TAPE DECK



ELECTRICAL PARTSLIST - FRONT BOARD (AZ1060)

- CAPACITORS -

2400	3198 017 42230	22nF Y5V 50V
2401	4822 124 22651	1,0µF 20% 50V
2403	4822 124 23432	100µF 20% 10V
2404	4822 124 23432	100µF 20% 10V
2405	4822 122 31765	100pF 2% NP0 63V
2406	4822 122 31765	100pF 2% NP0 63V
2407	4822 122 31765	100pF 2% NP0 63V
2408	4822 122 31765	100pF 2% NP0 63V
2410	4822 122 31765	100pF 2% NP0 63V
2411	4822 122 33741	100pF 2% NP0 63V
2412	4822 126 14305	100nF 10% X7R 16V
2413	4822 122 33741	10pF 10% NP0 50V
2415	4822 126 14238	2,2nF X7R 50V
2416	4822 126 14238	2,2nF X7R 50V
2422	5322 126 11583	10nF 10% X7R 50V
2423	4822 122 33741	10pF 10% NP0 50V
2424	4822 122 33741	10pF 10% NP0 50V
2425	4822 124 81286	47µF 20% 16V
2426	4822 122 31765	100pF 2% NP0 63V
2427	4822 124 22652	2,2µF 20% 50V
2428	4822 122 33741	10pF 10% NP0 50V
2429	4822 122 33741	10pF 10% NP0 50V
2430	4822 122 33741	10pF 10% NP0 50V
2431	4822 122 33741	10pF 10% NP0 50V
2432	4822 122 31765	100pF 2% NP0 63V
2433	4822 122 31765	100pF 2% NP0 63V
2437	4822 122 33752	15pF 5% NP0 50V
2438	4822 122 33752	15pF 5% NP0 50V
2443	5322 126 11578	1nF 10% X7R 50V
2444	4822 126 14305	100nF 10% X7R 16V
2445	4822 126 14305	100nF 10% X7R 16V
2450	4822 124 81286	47µF 20% 16V
2451	4822 126 13879	220nF +80-20% 16V
2452	4822 126 13879	220nF +80-20% 16V
2453	4822 126 14305	100nF 10% X7R 16V

- RESISTORS -

3400	4822 051 30109	10R 5% 0,062W
3401	4822 051 30223	22K 5% 0,062W
3404	4822 051 30472	4K7 5% 0,062W
3407	4822 051 20829	82R 5% 0,1W
3409	4822 117 13632	100K 1% 0.62W
3410	4822 051 20471	470R 5% 0,1W
3411	4822 051 30153	15K 5% 0,062W
3412	4822 051 20471	470R 5% 0,1W
3413	4822 051 30472	4K7 5% 0,062W
3414	4822 051 30472	4K7 5% 0,062W

- RESISTORS -

3416	4822 051 30472	4K7 5% 0,062W
3417	4822 051 30472	4K7 5% 0,062W
3422	4822 051 30102	1K 5% 0,062W
3423	4822 051 30102	1K 5% 0,062W
3424	4822 051 30102	1K 5% 0,062W
3425	4822 051 30102	1K 5% 0,062W
3428	4822 051 30222	2K2 5% 0,062W
3429	4822 051 30222	2K2 5% 0,062W
3430	4822 051 30472	4K7 5% 0,062W
3432	4822 051 30183	18K 5% 0,062W
3433	4822 051 30472	4K7 5% 0,062W
3434	4822 117 11373	100R 1%
3435	4822 051 30103	10K 5% 0,062W
3436	4822 051 30103	10K 5% 0,062W
3437	4822 051 30103	10K 5% 0,062W
3438	4822 051 30103	10K 5% 0,062W
3444	4822 051 30221	220R 5% 0,062W
3445	4822 117 11373	100R 1%
3446	4822 051 30223	22K 5% 0,062W
3447	4822 051 30223	22K 5% 0,062W
3449	4822 051 30273	27K 5% 0,062W
3450	4822 051 30273	27K 5% 0,062W
3452	4822 051 30152	1K5 5% 0,062W
3453	4822 051 30332	3K3 5% 0,062W
3454	4822 051 30332	3K3 5% 0,062W
3455	4822 051 30332	3K3 5% 0,062W
3456	4822 051 20471	470R 5% 0,1W
3457	4822 051 20471	470R 5% 0,1W
3458	4822 051 20471	470R 5% 0,1W
3460	4822 051 30102	1K 5% 0,062W
3462	4822 051 30102	1K 5% 0,062W
3464	4822 051 30223	22K 5% 0,062W
3470	4822 051 20471	470R 5% 0,1W
3471	4822 117 13632	100K 1% 0.62W
3473	4822 051 20121	120R 5% 0,1W
3474	4822 051 20159	15R 5% 0,1W
3475	4822 117 10361	680R 1% 0,1W
3482	4822 117 12902	8K2 1% 0.063W
3483	4822 117 12902	8K2 1% 0.063W
3484	4822 051 30123	12K 5% 0,062W
3486	4822 051 30273	27K 5% 0,062W
3488	4822 051 30562	5K6 5% 0,063W
3489	4822 051 30562	5K6 5% 0,063W
3490	4822 117 11448	180R 1% 0,1W
3491	4822 117 11448	180R 1% 0,1W
3494	4822 051 30333	33K 5% 0,062W
3495	4822 117 11373	100R 1%
3496	4822 051 30333	33K 5% 0,062W
3497	4822 051 30333	33K 5% 0,062W
3498	4822 051 30221	220R 5% 0,062W

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ELECTRICAL PARTSLIST - FRONT BOARD (AZ1060)

- RESISTORS -

3499	4822 051 30221	220R 5% 0,062W
3550	2120 354 90029	Var Resistor 50KX2
3551	4822 051 30683	68K 5% 0,062W
4440	4822 051 20008	Jumper
4441	4822 051 30008	Jumper
4442	4822 051 30008	Jumper
4443	4822 051 30008	Jumper
4444	4822 051 30008	Jumper
4445	4822 051 20008	Jumper
4446	4822 051 30008	Jumper
4447	4822 051 30008	Jumper
4448	4822 051 30008	Jumper
4449	4822 051 30008	Jumper
4451	4822 051 30008	Jumper
4453	4822 051 30008	Jumper
4454	4822 051 30008	Jumper
4455	4822 051 20008	Jumper
4456	4822 051 20008	Jumper
4457	4822 051 20008	Jumper
4470	4822 051 30008	Jumper
4471	4822 051 30008	Jumper
4472	4822 051 20008	Jumper
4473	4822 051 20008	Jumper
4474	4822 051 20008	Jumper
4475	4822 051 20008	Jumper
4476	4822 051 20008	Jumper
4477	4822 051 20008	Jumper
4478	4822 051 20008	Jumper
4497	4822 051 30008	Jumper
4498	4822 051 30008	Jumper
4499	4822 051 30008	Jumper

- COILS -

5400	4822 157 11228	Coil 100µH 5%
5401	4822 157 11823	Coil 2,2µH 5%
5402	4822 157 11823	Coil 2,2µH 5%

- DIODES -

6401	4822 130 10838	Diode UDZ3.3B
6402	5322 130 34337	Diode BAV99
6403	4822 130 11564	Diode UDZ3.9B
6404	4822 130 83059	LED TLUR4400
6406	4822 130 10418	LED LTL16KGE
6407	4822 130 10418	LED LTL16KGE
6408	4822 130 10418	LED LTL16KGE
6409	4822 130 83757	Diode BAS216
6410	4822 130 83757	Diode BAS216
6411	4822 130 83757	Diode BAS216

- DIODES -

6412	4822 130 83757	Diode BAS216
6413	4822 130 83757	Diode BAS216

- IC & TRANSISTORS -

7400	3140 110 50880	IC MCU TMP86CH29
7401	9965 000 04931	IC M24C01-WMN6
7402	5322 130 60159	Trans BC846B
7404	3140 110 51040	LCD Display
7405	5322 130 42755	Trans BC847C
7406	5322 130 42755	Trans BC847C
7408	5322 130 60159	Trans BC846B
7409	5322 130 60159	Trans BC846B
7410	5322 130 60159	Trans BC846B

- MISCELLANEOUS -

1400	4822 242 73769	Filter CST4,19MGW
1490	4822 265 11207	Connector 6P
1492	4822 267 10958	Connector 5P
1493	4822 265 11531	Flex Socket 9P
1494	4822 265 11535	Flex Socket 8P
1495	2422 128 02917	Tact Switch
1496	2422 128 02917	Tact Switch
1497	2422 128 02917	Tact Switch
1498	2422 128 02917	Tact Switch
1499	2422 128 02917	Tact Switch
1500	2422 128 02917	Tact Switch
1501	2422 128 02917	Tact Switch
1505	2422 128 02917	Tact Switch
1506	2422 128 02917	Tact Switch

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

ELECTRICAL PARTSLIST - FRONT BOARD (AZ1065)

- CAPACITORS -

2400	3198 017 42230	22nF Y5V 50V
2401	4822 124 22651	1µF 20% 50V
2403	4822 124 23432	100µF 20% 10V
2404	4822 124 23432	100µF 20% 10V
2405	4822 122 31765	100pF 2% NP0 63V
2406	4822 122 31765	100pF 2% NP0 63V
2407	4822 122 31765	100pF 2% NP0 63V
2408	4822 122 31765	100pF 2% NP0 63V
2409	4822 126 14305	100nF 10% X7R 16V
2410	4822 122 31765	100pF 2% NP0 63V
2411	4822 122 33741	10pF 10% NP0 50V
2412	4822 126 14305	100nF 10% X7R 16V
2413	4822 122 33741	10pF10% NP0 50V
2415	4822 126 14238	2,2nF X7R 50V
2416	4822 126 14238	2,2nF X7R 50V
2417	4822 126 14305	100nF 10% X7R 16V
2420	4822 124 22726	4,7µF 35V
2421	4822 126 13881	470pF 5% 50V
2422	5322 126 11583	10nF 10% X7R 50V
2423	4822 122 33741	10pF10% NP0 50V
2424	4822 122 33741	10pF10% NP0 50V
2425	4822 124 81286	47µF 20% 16V
2426	4822 122 31765	100pF 2% NP0 63V
2427	4822 124 22652	2,2µF 20% 50V
2428	4822 122 33741	10pF 10% NP0 50V
2429	4822 122 33741	10pF 10% NP0 50V
2430	4822 122 33741	10pF 10% NP0 50V
2431	4822 122 33741	10pF 10% NP0 50V
2432	4822 122 31765	100pF 2% NP0 63V
2433	4822 122 31765	100pF 2% NP0 63V
2436	4822 122 31765	100pF 2% NP0 63V
2437	4822 122 33752	15pF 5% NP0 50V
2438	4822 122 33752	15pF 5% NP0 50V
2443	5322 126 11578	1nF 10% X7R 50V
2444	4822 126 14305	100nF 10% X7R 16V
2445	4822 126 14305	100nF 10% X7R 16V
2450	4822 124 81286	47µF 20% 16V
2451	4822 126 13879	220nF +80-20% 16V
2452	4822 126 13879	220nF +80-20% 16V
2453	4822 126 14305	100nF 10% X7R 16V

- RESISTORS -

3400	4822 051 30109	10R 5% 0,062W
3401	4822 051 30223	22K 5% 0,062W
3402	4822 051 30103	10K 5% 0,062W
3404	4822 051 30472	4K7 5% 0,062W
3407	4822 051 20829	82R 5% 0,1W

- RESISTORS -

3409	4822 117 13632	100K 1% 0.62W
3410	4822 051 20471	470R 5% 0,1W
3411	4822 051 30153	15K 5% 0,062W
3412	4822 051 20471	470R 5% 0,1W
3413	4822 051 30472	4K7 5% 0,062W
3414	4822 051 30472	4K7 5% 0,062W
3416	4822 051 30472	4K7 5% 0,062W
3417	4822 051 30472	4K7 5% 0,062W
3422	4822 051 30102	1K 5% 0,062W
3423	4822 051 30102	1K 5% 0,062W
3424	4822 051 30102	1K 5% 0,062W
3425	4822 051 30102	1K 5% 0,062W
3428	4822 051 30222	2K2 5% 0,062W
3429	4822 051 30222	2K2 5% 0,062W
3430	4822 051 30472	4K7 5% 0,062W
3432	4822 051 30183	18K 5% 0,062W
3433	4822 051 30472	4K7 5% 0,062W
3434	4822 117 11373	100R 1%
3435	4822 051 30103	10K 5% 0,062W
3436	4822 051 30103	10K 5% 0,062W
3437	4822 051 30103	10K 5% 0,062W
3438	4822 051 30103	10K 5% 0,062W
3444	4822 051 30221	220R 5% 0,062W
3445	4822 117 11373	100R 1%
3446	4822 051 30223	22K 5% 0,062W
3447	4822 051 30223	22K 5% 0,062W
3449	4822 051 30273	22K 5% 0,062W
3450	4822 051 30273	22K 5% 0,062W
3451	4822 051 30474	470K 5% 0,062W
3452	4822 051 30152	1K5 5% 0,062W
3453	4822 051 30332	3K3 5% 0,062W
3454	4822 051 30332	3K3 5% 0,062W
3455	4822 051 30332	3K3 5% 0,062W
3456	4822 051 20471	470R 5% 0,1W
3457	4822 051 20471	470R 5% 0,1W
3458	4822 051 20471	470R 5% 0,1W
3459	4822 051 30272	2K7 5% 0,062W
3460	4822 051 30102	1K 5% 0,062W
3462	4822 051 30102	1K 5% 0,062W
3464	4822 051 30223	22K 5% 0,062W
3465	4822 051 30471	470R 5% 0,062W
3470	4822 051 20471	470R 5% 0,1W
3471	4822 117 13632	100K 1% 0.62W
3473	4822 051 20121	120R 5% 0,1W
3474	4822 051 20159	15R 5% 0,1W

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ELECTRICAL PARTSLIST - FRONT BOARD (AZ1065)

- RESISTORS -

3475	4822 117 10361	680R 1% 0,1W
3480	4822 117 11373	100R 1%
3481	4822 117 11503	220R 1% 0.1W
3482	4822 117 12902	8K2 1% 0.063W
3483	4822 117 12902	8K2 1% 0.063W
3484	4822 051 30123	12K 5% 0,062W
3485	4822 051 30123	12K 5% 0,062W
3486	4822 051 30273	27K 5% 0,062W
3487	4822 051 30273	27K 5% 0,062W
3488	4822 051 30562	5K6 5% 0,063W
3489	4822 051 30562	5K6 5% 0,063W
3490	4822 117 11448	180R 1% 0,1W
3491	4822 117 11448	180R 1% 0,1W
3494	4822 051 30333	33K 5% 0,062W
3495	4822 117 11373	100R 1%
3496	4822 051 30333	33K 5% 0,062W
3497	4822 051 30333	33K 5% 0,062W
3498	4822 051 30221	220R 5% 0,062W
3499	4822 051 30221	220R 5% 0,062W
3551	4822 051 30683	68K 5% 0,062W
4440	4822 051 20008	Jumper
4441	4822 051 30008	Jumper
4442	4822 051 30008	Jumper
4443	4822 051 30008	Jumper
4444	4822 051 30008	Jumper
4445	4822 051 20008	Jumper
4446	4822 051 30008	Jumper
4447	4822 051 30008	Jumper
4448	4822 051 30008	Jumper
4449	4822 051 30008	Jumper
4450	4822 051 30008	Jumper
4451	4822 051 30008	Jumper
4452	4822 051 30008	Jumper
4453	4822 051 30008	Jumper
4454	4822 051 30008	Jumper
4455	4822 051 20008	Jumper
4456	4822 051 20008	Jumper
4457	4822 051 20008	Jumper
4470	4822 051 30008	Jumper
4471	4822 051 30008	Jumper
4472	4822 051 20008	Jumper
4473	4822 051 20008	Jumper
4474	4822 051 20008	Jumper
4475	4822 051 20008	Jumper
4476	4822 051 20008	Jumper
4477	4822 051 20008	Jumper
4478	4822 051 20008	Jumper

- COILS -

5400	4822 157 11228	Coil 100µH
5401	4822 157 11823	Coil 2,2µH 5%
5402	4822 157 11823	Coil 2,2µH 5%

- DIODES -

6401	4822 130 10838	Diode UDZ3.3B
6402	5322 130 34337	Diode BAV99
6403	4822 130 11564	Diode UDZ3.9B
6404	4822 130 83059	LED TLUR4400
6406	4822 130 10418	LED LTL16KGE
6407	4822 130 10418	LED LTL16KGE
6408	4822 130 10418	LED LTL16KGE
6409	4822 130 83757	Diode BAS216
6410	4822 130 83757	Diode BAS216
6411	4822 130 83757	Diode BAS216
6412	4822 130 83757	Diode BAS216
6413	4822 130 83757	Diode BAS216

- IC & TRANSISTORS -

7400	3140 110 50880	IC MCU TMP86CH29
7401	9965 000 04931	IC M24C01-WMN6
7402	5322 130 60159	Trans BC846B
7404	3140 110 51040	LCD Display
7405	5322 130 42755	Trans BC847C
7406	5322 130 42755	Trans BC847C
7407	9322 155 82667	IR Receiver TSOP2236
7408	5322 130 60159	Trans BC846B
7409	5322 130 60159	Trans BC846B
7410	5322 130 60159	Trans BC846B

- MISCELLANEOUS -

1400	4822 242 73769	Filter CST4,19MGW
1490	4822 265 11207	Connector 6P
1492	4822 267 10958	Connector 5P
1493	4822 265 11531	Flex Socket 9P
1495	2422 128 02917	Tact Switch
1496	2422 128 02917	Tact Switch
1497	2422 128 02917	Tact Switch
1498	2422 128 02917	Tact Switch
1499	2422 128 02917	Tact Switch
1500	2422 128 02917	Tact Switch
1501	2422 128 02917	Tact Switch
1503	2422 128 02922	Tact Switch
1504	2422 128 02922	Tact Switch
1505	2422 128 02917	Tact Switch
1506	2422 128 02917	Tact Switch

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

ELECTRICAL PARTSLIST - AF BOARD

- CAPACITORS -

2305	4822 124 80483	47µF	20%	6,3V		
2306	4822 124 12052	220µF	20%	6,3V		
2307	5322 122 31647	1nF	10%	X7R	63V	
2308	4822 124 80791	470µF	16V	20%		
2309	4822 126 14585	100nF	10%	X7R	50V	
2337	5322 122 31863	330pF	5%	63V		
2338	5322 122 31863	330pF	5%	63V		
2340	4822 124 11878	4700µF	16V			
2341	4822 124 40196	220µF	20%	16V		
2342	4822 124 40433	47µF	20%	25V		
2343	4822 124 41407	0,47µF	20%	63V		
2344	4822 124 41407	0,47µF	20%	63V		
2345	4822 122 32535	680pF	10%	X7R	63V	
2346	4822 122 32535	680pF	10%	X7R	63V	
2347	4822 124 40433	47µF	20%	25V		
2348	4822 124 40433	47µF	20%	25V		
2349	4822 124 41407	0,47µF	20%	63V		
2350	4822 124 41407	0,47µF	20%	63V		
2351	4822 124 80791	470µF	16V	20%		
2352	4822 124 80791	470µF	16V	20%		
2353	4822 124 40433	47µF	20%	25V		
2357	4822 126 13751	47nF	10%	X7R	63V	
2358	4822 126 13751	47nF	10%	X7R	63V	
2359	4822 124 40769	4,7µF	20%	100V		
2360	4822 126 14585	100nF	10%	X7R	50V	
2361	4822 126 14585	100nF	10%	X7R	50V	
2363	4822 126 14585	100nF	10%	X7R	50V	
2531	4822 122 33177	10nF	20%	X7R	50V	
2532	4822 122 33177	10nF	20%	X7R	50V	
2533	4822 124 40746	0,22µF	20%	63V		
2534	4822 124 40746	0,22µF	20%	63V		

- RESISTORS -

3301	4822 117 11449	2K2	5%	0,1W		
3302	4822 116 52256	2K2	5%	0,5W		
3303	4822 051 20471	470R	5%	0,1W		
3304	4822 051 20471	470R	5%	0,1W		
3305	4822 117 10353	150R	1%	0,1W		
3306	4822 117 10353	150R	1%	0,1W		
3307	4822 051 20562	5K6	5%	0,1W		
3311	4822 116 52206	120R	5%	0,5W		
3312	4822 116 52206	120R	5%	0,5W		
3313	4822 117 11507	6K8	1%	0,1W		
3314	4822 117 11507	6K8	1%	0,1W		
3321	4822 050 24708	4R7	1%	0,6W		
3322	4822 050 24708	4R7	1%	0,6W		
3323	4822 051 20332	3K3	5%	0,1W		
3325	4822 051 20391	390R	5%	0,1W		
3326	4822 051 20561	560R	5%	0,1W		
3327	4822 051 20471	470R	5%	0,1W		
3328	4822 117 11507	6K8	1%	0,1W		
3329	4822 116 83883	470R	5%	0,5W		
3331	4822 116 52289	5K6	5%	0,5W		
3332	4822 116 52289	5K6	5%	0,5W		
3333	4822 116 83933	15K	1%	0,1W		
3334	4822 117 11383	12K	1%	0,1W		
3335	4822 117 11383	12K	1%	0,1W		
3501	4822 051 20822	8K2	5%	0,1W		
3502	4822 051 20822	8K2	5%	0,1W		
3505	4822 050 23303	33K	1%	0,6W		
3506	4822 050 23303	33K	1%	0,6W		
3507	4822 051 20822	8K2	5%	0,1W		
3508	4822 051 20822	8K2	5%	0,1W		
3509	4822 117 10833	10K	1%	0,1W		
3510	4822 117 10833	10K	1%	0,1W		
3541	4822 117 11139	1K5	1%	0,1W		
3542	4822 117 11139	1K5	1%	0,1W		
3543	4822 117 11449	2K2	5%	0,1W		
3544	4822 117 11449	2K2	5%	0,1W		
3545	4822 117 10833	10K	1%	0,1W		
3546	4822 117 10833	10K	1%	0,1W		
3561	4822 117 10965	18K	1%	0,1W		
3562	4822 117 10965	18K	1%	0,1W		
3563	4822 117 10833	10K	1%	0,1W		
3564	4822 117 10833	10K	1%	0,1W		
3565	4822 117 10837	100K	1%	0.1W		
3566	4822 117 10837	100K	1%	0.1W		
9331	4822 051 20008	Jumper				
9332	4822 051 20008	Jumper				
9333	4822 051 20008	Jumper				
9521	4822 051 20008	Jumper				
9522	4822 051 20008	Jumper				

- COILS -

5301	4822 157 11823	2,2µH	5%
5302	4822 157 62552	2,2µH	

- DIODES -

6308	3198 010 53380	Diode BZX79-B3V3
6311	4822 130 83757	Diode BAS216
6316	4822 130 30621	Diode 1N4148

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ELECTRICAL PARTSLIST - AF BOARD

- IC & TRANSISTORS -

7301	4822 209 31544	IC TA8227P
7303	4822 130 41246	Trans BC327-25
7304	4822 130 41246	Trans BC327-25
7305	4822 130 60373	Trans BC856B
7306	5322 130 60159	Trans BC846B
7307	4822 130 40981	Trans BC337-25
7312	5322 130 60159	Trans BC846B
7313	4822 130 42615	Trans BC817-40
7314	4822 130 42615	Trans BC817-40

- MISCELLANEOUS -

1301	4822 277 11846	Slide Switch
1303	2422 026 05076	Headphone Socket
1314	2422 025 14518	Connector 9P
1501	4822 267 10731	Connector 6P
1502	4822 267 10731	Connector 6P
1504	4822 267 10733	Connector 4P
1506	4822 265 11515	Connector 8P
1510	4822 277 11786	Silde Switch

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

ELECTRICAL PARTSLIST - TUNER BOARD ECO6

- CAPACITORS -

2101	4822 122 33777	47pF 5% NP0 63V
2103	5322 126 11578	1nF 10% X7R 50V
2104	4822 122 31765	100pF 2% NP0 63V
2106	2020 800 00204	Var Cap 4,2pF-20pF 100V
2107	4822 121 51319	1µF 10% 63V
2108	4822 122 31765	100pF 2% NP0 63V
2109	4822 122 33741	10pF 10% NP0 50V
2120	4822 122 33761	22pF 5% NP0 50V
2122	5322 126 11579	3,3nF 10% X7R 63V
2123	2238 861 18391	390pF 1% NP0 50V
2125	2238 861 18561	560pF 1% NP0 50V
2126	4822 126 14241	330pF NPO 50V
2127	4822 126 13879	220nF +80-20% 16V
2128	4822 124 40248	10µF 20% 63V
2129	4822 124 41584	100µF 20% 10V
2130	3198 017 44740	470nF Y5V 10V
2131	3198 017 44740	470nF Y5V 10V
2132	3198 017 44740	470nF Y5V 10V
2133	4822 124 21913	1µF 20% 63V
2134	3198 017 31530	15nF X7R 50V
2135	3198 017 31530	15nF X7R 50V
2136	4822 126 13879	220nF +80-20% 16V
2137	4822 126 13879	220nF +80-20% 16V
2138	4822 124 22652	2,2µF 20% 50V
2139	4822 122 33752	15pF 5% NP0 50V
2140	4822 126 14226	82pF 5% NP0 50V
2141	4822 126 14305	100nF 10% X7R 16V
2144	3198 017 44740	470nF Y5V 10V
2145	4822 126 13883	220pF 5% 50V
2146	4822 122 33575	220pF 5% NP0 63V
2147	4822 126 13883	220pF 5% 50V
2148	4822 126 14238	2,2nF X7R 50V
2150	4822 126 13838	100nF +80-20% Y5V 50V
2152	4822 126 14549	33nF 16V X7R
2153	4822 122 33752	15pF 5% NP0 50V
2155	2020 800 00191	Var Cap 3pF-11pF 100V
2159	4822 126 11671	33pF
2163	4822 126 14305	100nF 10% X7R 16V
2164	3198 017 44740	470nF Y5V 10V
2165	4822 126 14305	100nF 10% X7R 16V
2166	5322 126 11578	1nF 10% X7R 50V
2167	4822 126 11663	12pF
2186	4822 124 40196	220µF 20% 16V
2187	5322 126 11583	10nF 10% X7R 50V
2188	5322 126 11583	10nF 10% X7R 50V
2189	4822 126 13879	220nF +80-20% 16V
2190	4822 124 81151	22µF 50V
2191	4822 124 81151	22µF 50V
2192	5322 126 11578	1nF 10% X7R 50V
2193	5322 126 11578	1nF 10% X7R 50V

- CAPACITORS -

2194	5322 126 11578	1nF 10% X7R 50V
2195	4822 124 81151	22µF 50V
2196	5322 126 11583	10nF 10% X7R 50V
2197	5322 126 11583	10nF 10% X7R 50V

- RESISTORS -

3101	4822 051 30333	33K 5% 0,062W
3102	4822 117 13632	100K 1% 0.62W
3103	4822 117 12902	8K2 1% 0.063W
3104	4822 117 13577	330R 1% 1,25W
3105	4822 051 30221	220R 5% 0,062W
3108	4822 051 30222	2K2 5% 0,062W
3109	4822 051 30222	2K2 5% 0,062W
3123	4822 051 30472	4K7 5% 0,062W
3125	4822 051 30103	10K 5% 0,062W
3128	4822 051 30222	2K2 5% 0,062W
3132	4822 051 30479	47R 5% 0,062W
3134	4822 051 30223	22K 5% 0,062W
3137	4822 051 30153	15K 5% 0,062W
3141	4822 051 30563	56K 5% 0,062W
3142	4822 100 12159	100K 30%
3145	4822 051 30222	2K2 5% 0,062W
3152	4822 051 30471	470R 5% 0,062W
3153	4822 051 30471	470R 5% 0,062W
3155	4822 051 30479	47R 5% 0,062W
3158	4822 051 30471	470R 5% 0,062W
3159	4822 051 30471	470R 5% 0,062W
3160	4822 051 30471	470R 5% 0,062W
3161	4822 051 20223	22K 5% 0,1W
3166	4822 051 30479	47R 5% 0,062W
3167	4822 051 30479	47R 5% 0,062W
3169	4822 051 30154	150K 5% 0,062W
3180	4822 051 30103	10K 5% 0,062W
3186	4822 051 30181	180R 5% 0,062W
3187	4822 051 30102	1K 5% 0,062W
3188	4822 051 30222	2K2 5% 0,062W
3189	4822 051 30223	22K 5% 0,062W
3190	4822 051 30103	10K 5% 0,062W
3191	4822 051 30472	4K7 5% 0,062W
3192	4822 051 30105	1M 5% 0,062W
3193	4822 051 30222	2K2 5% 0,062W
3194	4822 117 13632	100K 1% 0.62W
3195	4822 051 30474	470K 5% 0,062W
3196	4822 051 30103	10K 5% 0,062W
4102	4822 051 30334	330K 5% 0,062W
4105	4822 051 30008	Jumper
4107	4822 051 30008	Jumper
4108	4822 051 30008	Jumper
4110	4822 051 30008	Jumper

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ELECTRICAL PARTSLIST - TUNER BOARD ECO6

- COILS, CRYSTAL & FILTERS -

5102	4822 157 71634	MW Aerial
5103	2422 549 44107	Ind Var 252kHz
5109	4822 242 70665	Filter SFE10,7MS3-A
5110	4822 242 70665	Filter SFE10,7MS3-A
5111	2422 549 44023	Ind Var 450kHz
5112	4822 157 70302	Coil F7MCS-12216N
5114	4822 157 70302	Coil F7MCS-12216N
5119	4822 157 11443	Coil 2,4µF
5121	4822 242 10261	Crystal 75kHz
5122	2422 549 44108	Ind Var 796kHz
5123	2422 549 44108	Ind Var 796kHz
5130	4822 157 11843	Coil MD7B-01F
5131	4822 157 11843	Coil MD7B-01F

- DIODES -

6103	5322 130 34337	Diode BAV99
6105	4822 130 83075	Diode HN1V02H-B
6120	4822 130 83757	Diode BAS216
6130	4822 130 82833	Diode 1SV228
6131	4822 130 82833	Diode 1SV228
6181	5322 130 34337	Diode BAV99
6182	4822 130 83757	Diode BAS216
6183	9340 386 90115	Diode BZX284-C11

- IC & TRANSISTORS -

7101	4822 209 90924	IC TEA5757H/V1
7102	4822 130 42131	Trans BF550
7104	4822 130 40855	Trans BC337
7105	4822 130 40855	Trans BC337
7109	4822 130 60373	Trans BC856B
7122	5322 130 42755	Trans BC847C
7124	5322 130 42755	Trans BC847C
7180	4822 130 60373	Trans BC856B
7181	5322 130 42755	Trans BC847C
7182	5322 130 42755	Trans BC847C
7183	5322 130 42755	Trans BC847C

- MISCELLANEOUS -

1121	4822 267 10733	Connector 4P
1122	4822 267 10954	Connector 5P

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

ELECTRICAL PARTSLIST - CD99 DA11

- CAPACITORS -

2801	482212441751	47µF 20% 50V
2802	482212441751	47µF 20% 50V
2803	482212613695	82pF 1% NP0 63V
2804	482212613695	82pF 1% NP0 63V
2805	482212613695	82pF 1% NP0 63V
2806	482212613695	82pF 1% NP0 63V
2807	482212613691	27pF 1% NP0 63V
2808	532212233538	150pF 2% NP0 63V
2809	482212613691	27pF 1% NP0 63V
2810	482212613691	27pF 1% NP0 63V
2811	532212232659	33pF 5% 50V
2812	532212232448	10pF 5% NP0 63V
2813	482212233127	2,2nF 10% X7R 63V
2814	482212613751	47nF 10% X7R 63V
2815	482212613692	47pF 1% NP0 63V
2816	532212232654	22nF 10% X7R 63V
2817	482212440769	4,7µF 20% 100V
2818	482212613751	47nF 10% X7R 63V
2821	482212614585	100nF 10% X7R 50V
2822	482212613344	1,5nF 5% 63V
2823	482212442383	220µF 20% 4V
2824	482212613751	47nF 10% X7R 63V
2825	482212613344	1,5nF 5% 63V
2826	482212613751	47nF 10% X7R 63V
2827	532212231647	1nF 10% X7R 63V
2828	482212613692	47pF 1% NP0 63V
2829	482212613751	47nF 10% X7R 63V
2830	482212614043	1µF +80-20% Y5V 16V
2831	482212614043	1µF +80-20% Y5V 16V
2832	532212233538	150pF 2% NP0 63V
2833	532212232268	470pF 10% 50V
2834	482212233216	270pF 5% NP0 50V
2835	532212232268	470pF 10% 50V
2836	482212441751	47µF 20% 50V
2837	482212613751	47nF 10% X7R 63V
2838	532212232654	22nF 10% X7R 63V
2839	482212614585	100nF 10% X7R 50V
2840	482212441751	47µF 20% 50V
2841	482212613751	47nF 10% X7R 63V
2842	482212421913	1µF 20% 63V
2843	532212232531	100pF 5% NP0 50V
2844	482212233575	220pF 5% NP0 63V
2845	482212233575	220pF 5% NP0 63V
2846	482212440248	10µF 20% 63V
2848	532212232531	100pF 5% NP0 50V
2849	482212233575	220pF 5% NP0 63V
2850	482212233575	220pF 5% NP0 63V
2851	482212440248	10µF 20% 63V
2853	482212233177	10nF 20% X7R 50V
2854	482212411912	220µF 20% 6,3V

- CAPACITORS -

2855	482212411912	220µF 20% 6,3V
2857	482212412362	47µF 4V 20%
2860	532211680853	560pF 5% NP0 63V
2861	532212231865	1,5nF 10% X7R 63V
2862	482212610326	180pF 5%NP0 63V
2863	482212610326	180pF 5%NP0 63V
2864	482212610326	180pF 5%NP0 63V
2865	482212610326	180pF 5%NP0 63V
2869	482212613751	47nF 10% X7R 63V
2870	482212233575	220pF 5% NP0 63V
2871	482212233575	220pF 5% NP0 63V
2872	482212233575	220pF 5% NP0 63V
2873	482212233575	220pF 5% NP0 63V
2874	482212233575	220pF 5% NP0 63V
2875	482212233575	220pF 5% NP0 63V

- RESISTORS -

3728	482205120479	47R 5% 0,1W
3745	482205120109	10R 5% 0,1W
3757	482205120223	22K 5% 0,1W
3788	482205120472	4K7 5% 0,1W
3800	482205120478	4R70 5% 0,1W
3801	482205120154	150K 5% 0,1W
3802	482205110102	1K 2% 0,25W
3803	482205120273	27K 5% 0,1W
3804	482205120472	4K7 5% 0,1W
3805	482205120273	27K 5% 0,1W
3806	482211710361	680R 1% 0,1W
3807	482211711139	1K5 1% 0,1W
3808	482205120339	33R 5% 0,1W
3809	482205120339	33R 5% 0,1W
3810	482205210478	4R7 5% 0,33W
3811	482205110102	1K 2% 0,25W
3812	482205120474	470K 5% 0,1W
3813	482205120683	68K 5% 0,1W
3814	482205120332	3K3 5% 0,1W
3815	482205120472	4K7 5% 0,1W
3816	482211683933	15K 1% 0,1W
3817	482211710834	47K 1% 0,1W
3818	482205120562	5K6 5% 0,1W
3819	482211683933	15K 1% 0,1W
3820	482211710965	18K 1% 0,1W
3821	482205120332	3K3 5% 0,1W
3822	482205120332	3K3 5% 0,1W
3823	482205120332	3K3 5% 0,1W
3824	482205110102	1K 2% 0,25W
3825	482205120223	22K 5% 0,1W

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ELECTRICAL PARTSLIST - CD99 DA11

- RESISTORS -

3826	482205120273	27K 5% 0,1W
3827	482205120339	33R 5% 0,1W
3828	482205120479	47R 5% 0,1W
3829	482205120101	100R 5% 0,1W
3830	482205120472	4K7 5% 0,1W
3835	482205120223	22K 5% 0,1W
3836	482211710833	10K 1% 0,1W
3837	482205120471	470R 5% 0,1W
3838	482205120471	470R 5% 0,1W
3839	482205120471	470R 5% 0,1W
3840	482205120471	470R 5% 0,1W
3841	482205120472	4K7 5% 0,1W
3842	482205110102	1K 2% 0,25W
3843	482205110102	1K 2% 0,25W
3844	482205120101	100R 5% 0,1W
3845	482205120228	2R2 5% 0,1W
3846	482205120223	22K 5% 0,1W
3847	482211711149	82K 1% 0,1W
3848	482211710834	47K 1% 0,1W
3849	482211711148	56K 1% 0,1W
3850	482205120822	8K2 5% 0,1W
3851	482211711148	56K 1% 0,1W
3852	482211710834	47K 1% 0,1W
3853	482211683933	15K 1% 0,1W
3854	482205120822	8K2 5% 0,1W
3855	482211640227	4R6 25% 12V
3856	482205120683	68K 5% 0,1W
3857	482205120683	68K 5% 0,1W
3858	482205120392	3K9 5% 0,1W
3859	482211710834	47K 1% 0,1W
3860	482205110102	1K 2% 0,25W
3861	482211710834	47K 1% 0,1W
3862	482205110102	1K 2% 0,25W
3863	482205210338	3R3 5% 0,33W
3864	482211710833	10K 1% 0,1W
3865	482205110102	1K 2% 0,25W
3867	482205120223	22K 5% 0,1W
3868	482211710833	10K 1% 0,1W
3869	482211710833	10K 1% 0,1W
3871	482205120471	470R 5% 0,1W
3872	482211710834	47K 1% 0,1W
3873	482205120223	22K 5% 0,1W
3874	482205120223	22K 5% 0,1W
3875	482211710833	10K 1% 0,1W
3876	482211710833	10K 1% 0,1W
3878	482205120471	470R 5% 0,1W
3879	482211710834	47K 1% 0,1W
3880	482205120339	33R 5% 0,1W
3881	482211710353	150R 1% 0,1W
3882	482205120101	100R 5% 0,1W

- RESISTORS -

3883	482205110102	1K 2% 0,25W
3884	482205110102	1K 2% 0,25W
3886	482211710833	10K 1% 0,1W
3887	482211710833	10K 1% 0,1W
3888	482205120472	4K7 5% 0,1W
3889	482205110102	1K 2% 0,25W
3890	482211710837	100K 1% 0.1W
3891	482211710837	100K 1% 0.1W
3892	482211710837	100K 1% 0.1W
3893	482211710837	100K 1% 0.1W
3894	482211710833	10K 1% 0,1W
3895	482211710833	10K 1% 0,1W
3896	482211710833	10K 1% 0,1W
3897	482211710833	10K 1% 0,1W
3898	482211710833	10K 1% 0,1W
3899	482211710833	10K 1% 0,1W
3900	482205120223	22K 5% 0,1W
4801	482205120008	Jumper
4802	482205120008	Jumper
4807	482205120008	Jumper
4808	482205120008	Jumper
4809	482205120008	Jumper
4810	482205120008	Jumper
4812	482205120008	Jumper
4813	482205120008	Jumper
4814	482205120008	Jumper
4815	482205120008	Jumper
4823	482205120008	Jumper
4824	482205120008	Jumper
4828	482205120008	Jumper
4831	482205120008	Jumper
4832	482205120008	Jumper
4838	482205120008	Jumper
4845	482205120008	Jumper
4847	482205120008	Jumper
4848	482205120008	Jumper
4850	482205120008	Jumper
4853	482205120008	Jumper
4856	482205120008	Jumper
4857	482205120008	Jumper
4859	482205120008	Jumper
4863	482205120008	Jumper
4865	482205120008	Jumper
4866	482205120008	Jumper
4872	482205120008	Jumper
4877	482205120008	Jumper
4881	482205120008	Jumper
4884	482205120008	Jumper
4885	482205120008	Jumper
4886	482205120008	Jumper

ELECTRICAL PARTSLIST - CD99 DA11

- RESISTORS -

4888	482205120008	Jumper
4889	482205120008	Jumper

- COILS & FILTERS -

1810	482224273557	Filter CST8,46MTW-TF01
5803	482215711231	Coil LAN02TB1R0J

- DIODES -

6877	482213011564	Diode UDZ3.9B

- IC & TRANSISTORS -

7800	482220917324	IC SAA7325H
7802	532220911517	IC PC74HCU04T
7803	532213060123	Trans BC807-40
7804	532220982941	IC LM358D
7807	532213042755	Trans BC847C
7808	482220932852	IC TDA7073A/N2
7809	482220932852	IC TDA7073A/N2
7810	482220933165	IC TDA1308T/N1
7875	482213060511	Trans BC847B

- MISCELLANEOUS -

1800	482226510925	Connector 15P
1823	482226511207	Connector 6P
1824	482226511207	Connector 6P
8000	482232012178	Flexible Foil 15P

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

ELECTRICAL PARTSLIST - RECORDER BOARD

- CAPACITORS -

2703	482212481151	22µF 50V
2704	482212481151	22µF 50V
2706	482212440433	47µF 20% 25V
2707	482212440196	220µF 20% 16V
2708	482212440433	47µF 20% 25V
2709	482212440433	47µF 20% 25V
2710	482212441584	100µF 20% 10V
2711	482212481151	22µF 50V
2712	482212612878	1,5nF 10% 16V
2714	482212612878	1,5nF 10% 16V
2715	482212151387	10nF 20% 16V
2716	482212612882	100nF +80-20% 50V
2719	482212613098	5,6nF 20% 16V
2721	482212612878	1,5nF 10% 16V
2722	482212151387	10nF 20% 16V
2723	482212612882	100nF +80-20% 50V
2726	482212613098	5,6nF 20% 16V
2727	482212612878	1,5nF 10% 16V
2728	482212611714	4,7nF 20%
2729	482212611714	4,7nF 20%
2730	202030090561	1,2nF 10%
2732	482212210577	3,3nF 10% 16V
2733	482212151387	10nF 20% 16V
2738	482212151387	10nF 20% 16V
2739	482212151387	10nF 20% 16V
2750	482212613098	5,6nF 20% 16V
2751	482212613098	5,6nF 20% 16V

- RESISTORS -

3701	482211652175	100R 5% 0,5W
3703	482211683868	150R 5% 0,5W
3704	482211683872	220R 5% 0,5W
3706	482211652272	330K 5% 0,5W
3707	482211652285	470K 5% 0,5W
3710	482211652264	27K 5% 0,5W
3712	482211652238	12K 5% 0,5W
3713	482211683868	150R 5% 0,5W
3714	482211683872	220R 5% 0,5W
3716	482211652272	330K 5% 0,5W
3719	482211652264	27K 5% 0,5W
3720	482211652238	12K 5% 0,5W
3722	482211652257	22K 5% 0,5W
3723	482211652257	22K 5% 0,5W
3726	482211652256	2K2 5% 0,5W

- RESISTORS -

3727	482211652256	2K2 5% 0,5W
3730	482211683868	150R 5% 0,5W
3731	482211652291	56K 5% 0,5W
3732	482211652176	10R 5% 0,5W
3733	482211130893	4M7 5% 0,2W
3734	482205021003	10K 1% 0,6W
3743	482211683883	470R 5% 0,5W
3744	482211683883	470R 5% 0,5W
3747	482211683868	150R 5% 0,5W
3748	482211683883	470R 5% 0,5W
3749	482211683883	470R 5% 0,5W
3761	482211652289	5K6 5% 0,5W
3762	482211652289	5K6 5% 0,5W

- COIL -

5701	482215710371	Coil 100kHz

- DIODE -

6704	482213030621	Diode 1N4148

- IC & TRANSISTORS -

7702	482213040981	Trans BC337-25
7705	482220917498	IC AN7323

- MISCELLANEOUS -

1707	482227711504	Push Switch
1725	482226511207	Connector 6P

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

ELECTRICAL PARTSLIST - POWER BOARD

- CAPACITORS -

2028		4822 126 12882	100nF +80-20% 50V
2029		4822 126 12882	100nF +80-20% 50V
2030		5322 121 42386	100nF 5% 63V
2031		4822 126 12882	100nF +80-20% 50V
2032		4822 126 12882	100nF +80-20% 50V

- DIODES -

6004		4822 130 31878	Diode 1N4003G
6005		4822 130 31878	Diode 1N4003G
6006		4822 130 31878	Diode 1N4003G
6007		4822 130 31878	Diode 1N4003G

- MISCELLANEOUS -

1012		4822 265 20287	Socket Mains

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

ELECTRICAL PARTSLIST - MISCELLANEOUS

- MISCELLANEOUS -

1007		4822 240 10248	Speaker 4 Ohm 6W
1008		4822 240 10248	Speaker 4 Ohm 6W
1009		2422 264 00423	Piezo Speaker
1010		2422 264 00423	Piezo Speaker
1011	⚠	3140 113 22610	Volt Selector (For -/01/11/16)
5001	⚠	3140 118 32850	Transformer (For -/00/05/10/14)
5001	⚠	3140 118 33060	Transformer (For -/01/11/16)
5001	⚠	3140 118 32860	Transformer (For -/17)
8002		3140 110 21680	FFC Foil 6P
8003		3139 110 34590	FFC Foil 6P
8007		4822 320 12243	Flex Cable 6P
8015		3140 110 21690	FFC Foil 9P
8016		3139 110 34420	FFC Foil 5P
8018		3140 110 21720	FFC Foil 8P
8021		3140 110 21670	FFC Foil 4P
8800		4822 320 12178	Flexible Foil 15P
		4822 276 13963	CD Door Switch

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