

Service Service Service



Service Manual

TABLE OF CONTENTS

Handling Chip Components and Safety	1 - 1
Technical Specification & Service tools.....	2 - 1
Service Measurement.....	2 - 2
Connections and controls.....	3 - 1..3 - 2
Instruction for use	3 - 3..3 - 6
Disassembly Diagram.....	4 - 1
Service Test program	4 - 2
Abbreviations and Pin-description Of ICs.....	4 - 3
Block Diagram	5 - 1
Wiring Diagram.....	5 - 2
Key Board	
Circuit diagram	6 - 1..6 - 2
Layout diagram.....	6 - 3..6 - 4
Tuner Board	
Circuit diagram	7 - 1
Layout diagram.....	7 - 2

CD99 Board	
Circuit diagram	8 - 1..8 - 2
Layout diagram	8 - 3..8 - 4
MP3 Board	
Circuit diagram	9 - 1..9 - 2
Layout diagram	9 - 3..9 - 4
Volume Board	
Circuit diagram	10 - 1
Layout diagram.....	10 - 1
Power Board	
Circuit diagram	11 - 1
Layout diagram	11 - 2..11 - 3
USB Board	
Circuit diagram	12 - 1
Layout diagram	12 - 2
Exploded view diagram	13 - 1
Mechanical partslist	13 - 2
Electrical partslist	14 - 1..14 - 16

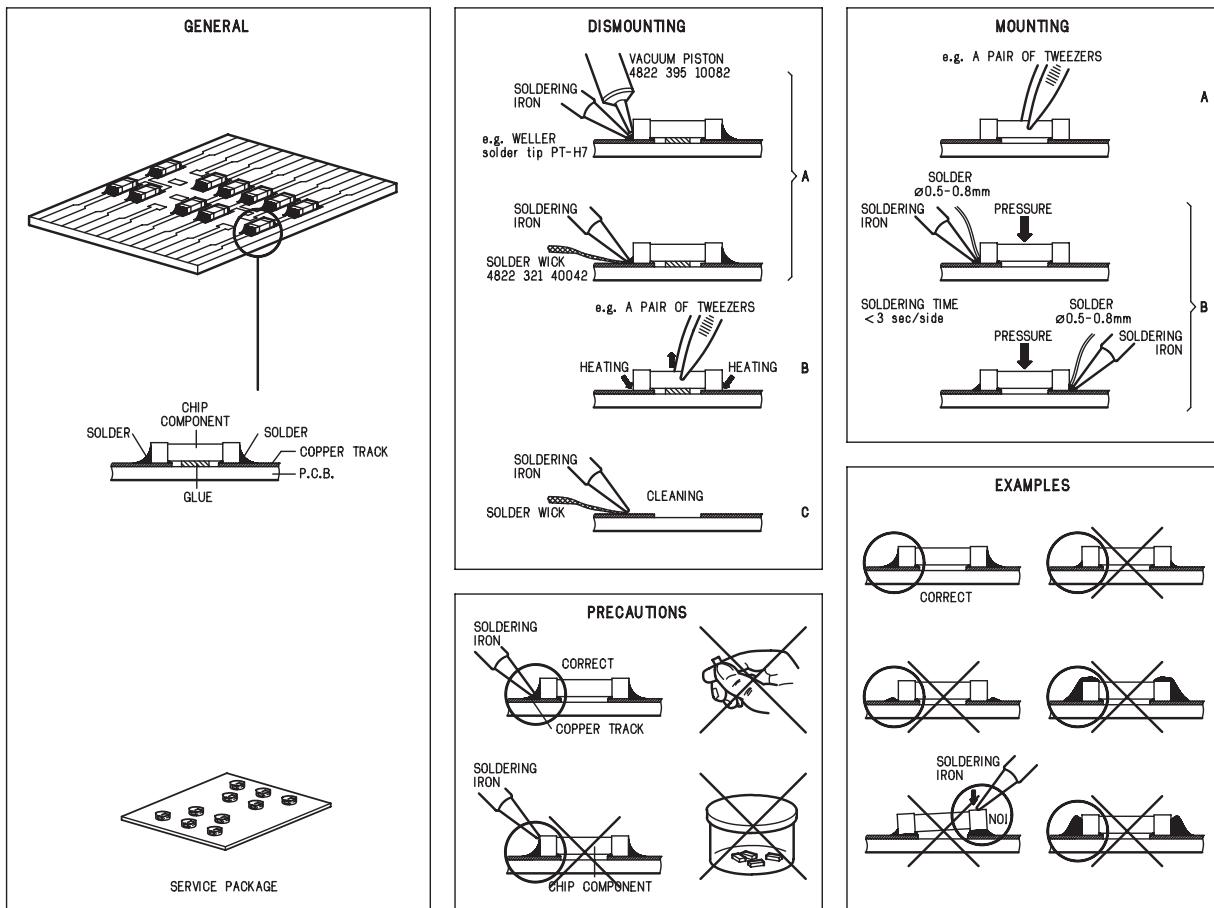
© Copyright 2001 Philips Consumer Electronics B.V. Eindhoven, The Netherlands
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.



PHILIPS

**CLASS 1
LASER PRODUCT**

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.

F ATTENTION

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

GB

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

F

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

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

S Warning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Beträkta ej strålen.

DK Advarsel !

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

ESD



NL WAARSCHUWING

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

I AVVERTIMENTO

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

NL

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

I

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

CLASS 1 LASER PRODUCT

D

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

FIN Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alittina näkymättömälle laserisäteilylle. Älä katso sääteeneseen !

GB

After servicing and before returning the set to customer perform a leakage current measurement test from all exposed metal parts to earth ground, to assure no shock hazard exists.

The leakage current must not exceed 0.5mA.

F

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

TECHNICAL SPECIFICATIONS

GENERAL

Mains voltage	-/00C/05 : 230 V -/17 : 120 V -/01 : 120V/230 V
Mains frequency	-/00C/05 : 50 Hz -/17 : 60 Hz -/01 : 60 Hz/50 Hz
Battery	mains : 12 V (R20 x 8)
Power consumption	: < 5 W typ.
Dimension (W x H x D)	: 567 x 185 x 301 mm
Weight	: 5.6 Kg

AMPLIFIER & LS WOOF

Output power	mains : 2 x 8.8 W battery : 2 x 8 W
Residual noise	: 60nW (volume minimum)
Channel difference	: 3dB typ. at 500mW
Hum & noise	: 500nw (Vol.max.-20dB)

TUNER - FM SECTION

Tuning range	: 87.5 - 108 MHz
IF frequency	: 10.7 MHz ±0.02MHz
Sensitivity	: < 25 dBf at 26dB S/N
Selectivity	: > 20 dB at S9/300kHz
IF rejection	: > 50 dB
Image rejection	: > 20 dB

TUNER - MW SECTION

Tuning range	: 531 - 1602 kHz
	-/17 : 530 - 1700 kHz
IF frequency	: 450 kHz ± 1 kHz
Sensitivity	: < 5000 µV/m at 26dB S/N
Selectivity	: > 16 dB at S9/300kHz
IF rejection	: > 24 dB
Image rejection	: > 28 dB

USB FUNCTION

Channel balance	: ±2dB typ.
THD	: < 3%
Crosstalk	0dB, 1 kHz : > 26 dB
Crosstalk	0dB, 10 kHz : > 16 dB
Frequency response	: ±1dB typ. (63 Hz- 14kHz)
SNR unwtd.	: > 50 dB
Channel difference	: < 3 dB

COMPACT DISC

SNR unwtd.	: > 50 dB
Channel difference	: < 3 dB
Crosstalk	1 kHz : > 26 dB
Crosstalk	10 kHz : > 16 dB
Frequency response	: 0dB typ. at 100Hz
(500mW output)	
Frequency response	: -1dB typ. at 10kHz
(500mW output)	
THD (1kHz,-6dB)	: 0.2% typ.
THD (10kHz,-20dB)	: <3%
Shock resistance	±Z axis : > 2 g
	±X or ±Y axis : > 3 g

SERVICE TOOLS

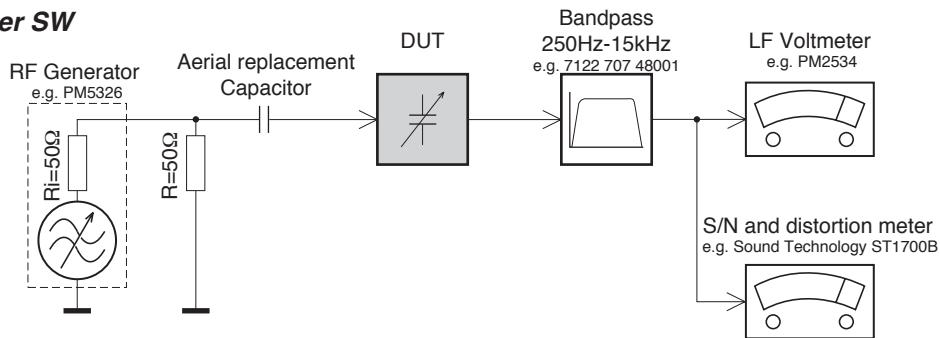
Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors) +	
Test disc 5A (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause")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

AVAILABLE ESD PROTECTION EQUIPMENT

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

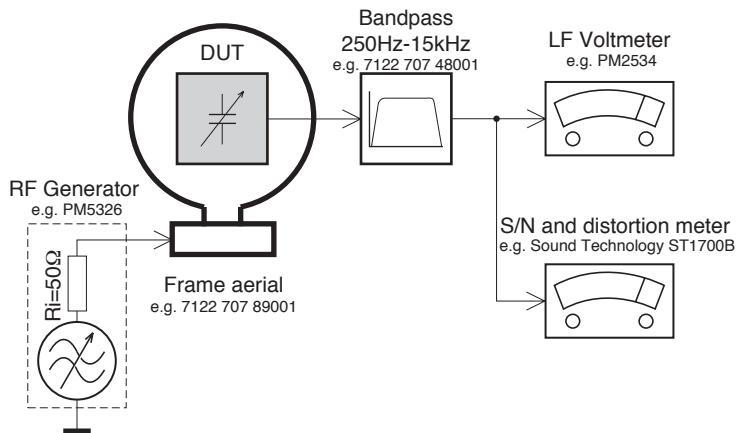
SERVICE MEASUREMENT

Tuner SW



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

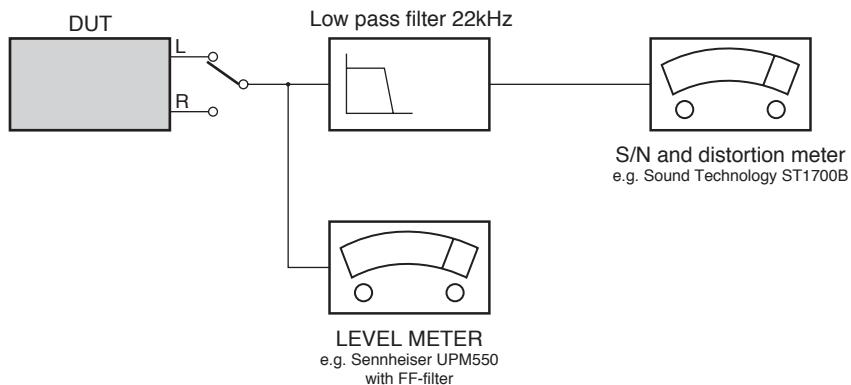
Tuner AM (MW,LW)



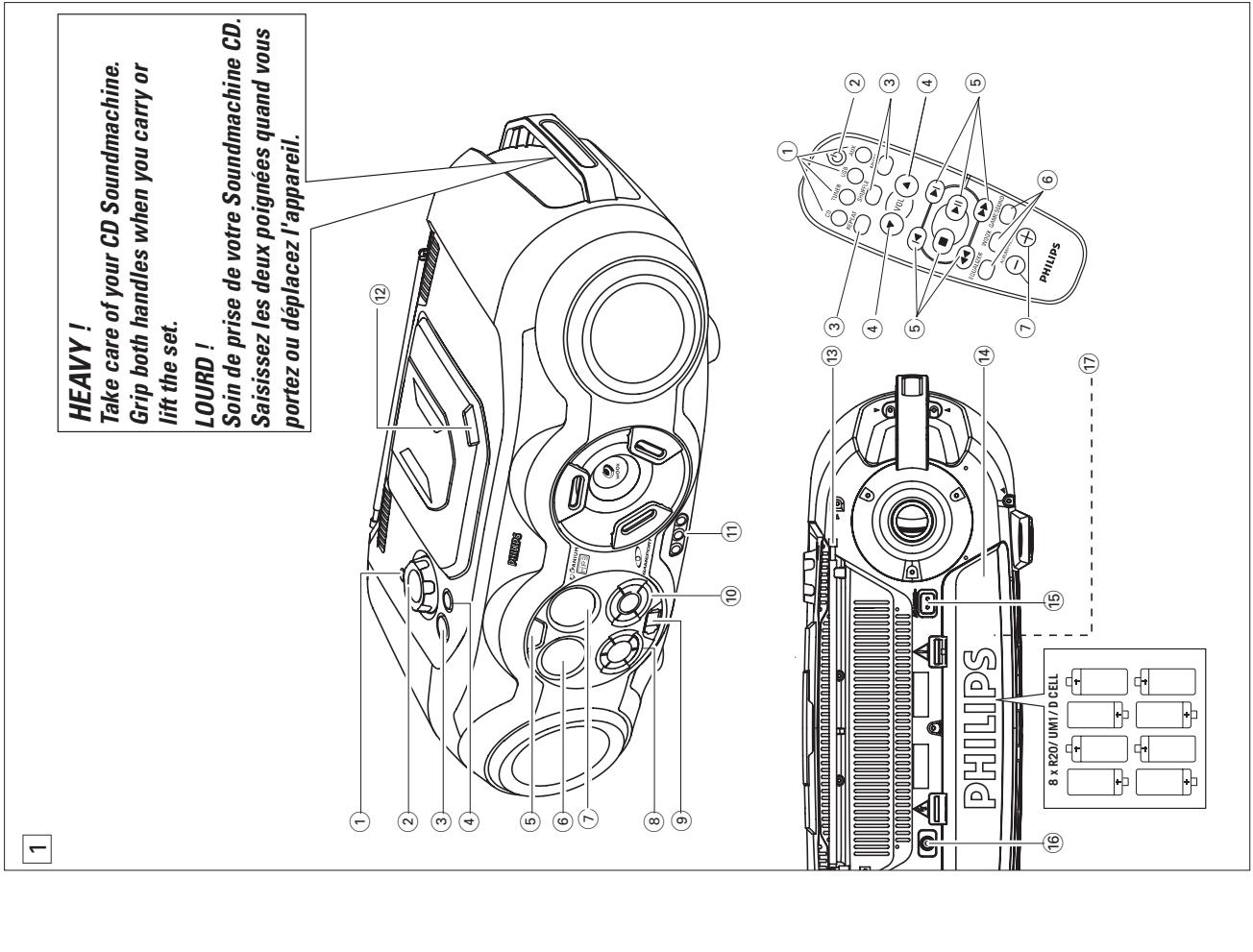
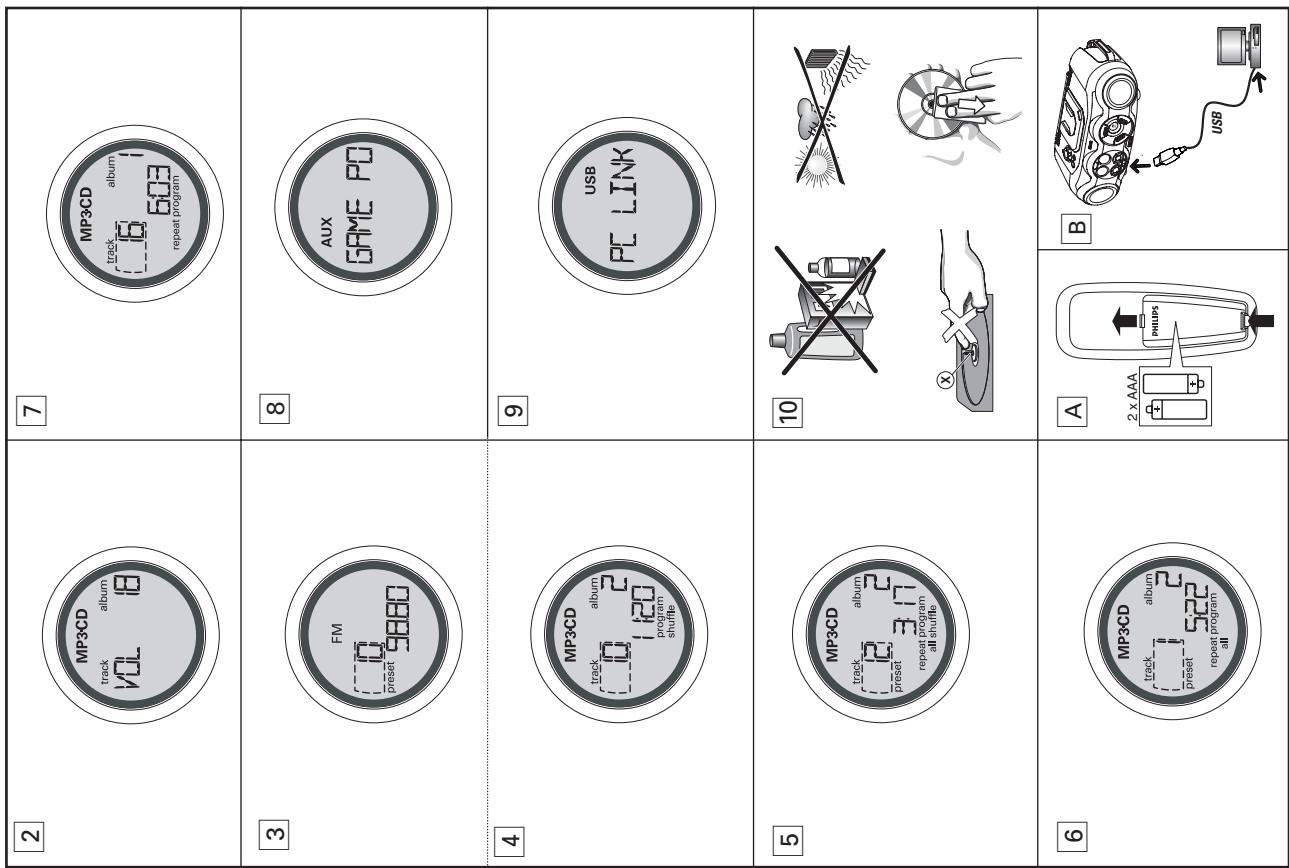
To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage.

CD

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



CONNECTIONS AND CONTROLS



English

POWER SUPPLY

CONTROL

BASIC FUNCTIONS

SUPPLIED ACCESSORIES

- remote control
- USB cable
- video cable
- CD-ROM USB PC LINK installers
- AC mains lead

PROG

MP3-CD / CD : -programs tracks and reviews the programmed songs;

TUNER : - programs radio stations.

BAND / DISPLAY

: selects waveband

DISPLAY: - display MP3-CD functions

AUDIO IN (LEFT / RIGHT) -LINE-IN jack for external audio appliance.

VIDEO IN - to keep video plug in place

OPENCLOSE – press to open/ close CD door

BACK PANEL (See [1])

TELESCOPIC ANTENNA - improved FM reception R-20, UM-1 or D-cells

BATTERY COMPARTMENT - for 8 batteries, type R-20, UM-1 or D-cells

AC MAINS - inlet for power cord

VIDEO OUT - connect to the **VIDEO IN** jack on a TV or VCR for viewing or recording.

VOLTAGE SELECTOR - adjust to match the local voltage 110/220V before plugging in the set

REMOTE CONTROL (See [1])

CD - selects MP3-CD / CD sound source

USB - selects **USB PC LINK**

AUX - selects **GAME • AUX**

STANDBY ON – switch the set on/ off.

SOURCE - selects sound source for functions: **CD / TUNER / USB PC LINK / GAME • AUX**

IR SENSOR -infrared sensor for remote control

LCD DISPLAY - shows the status of the set

[dB]: display to indicate bass power.

ALBUM / PRESET - +:

MP3 ONLY - select previous / next album.

TUNER :select a previous / next preset station.

SEARCH **◀**, **▶**

MP3-CD / CD:

- searches backward or forward ;

- skips to the beginning of a current track/ previous/ later track.

USB PC LINK -skips to the beginning of a previous/ later track.

TUNER : - tunes to radio stations

►II - starts or pauses MP3-CD / CD / USB PC LINK playback

■ - stop MP3-CD / CD / USB PC LINK playback;

- erases a MP3-CD / CD program.

MODE:

- selects different MP3-CD play modes: e.g. **repeat** or **shuffle** order.

►I - selects previous/ next track in MP3-CD / CD / USB PC LINK playback

■ - stop MP3-CD / CD / USB PC LINK playback;

- erases a MP3-CD / CD program.

►II - starts or pauses MP3-CD / CD / USB PC LINK playback

◀, **▶** -searches backwards/ forwards within a MP3-CD / CD track.

TUNER: - tunes to radio stations

POWER-SAVING AUTOMATIC STANDBY

As a power-saving feature, the system automatically switches to standby 15 minutes after MP3-CD / CD has reached the end and no control is operated.

BLAST / GAMESOUND - select sound effects: **BLAST / PUNCH / SPEED / NORMAL** in game mode
ALBUM / PRESET - + :

MP3 ONLY : select previous / next album.

TUNER :select a previous / next preset station.

POWER SUPPLY

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

BATTERIES (not included) (See [1])

• Insert 8 batteries, type **R-20**, **UM-1** or **D-cells**, (preferably alkaline) with the correct polarity.

REMOTE CONTROL (See [A])

• Insert 2 batteries, type **AAA**, **R03** or **UM4** (preferably alkaline).

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

• Do not mix battery types: e.g. alkaline with carbon zinc. Only use batteries of the same type for the set.

• When inserting new batteries, do not try to mix old batteries with the new ones.

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

REPEAT

-repeat all tracks in **USB PC LINK** source

or selects the repeat modes in **CD** source

SHUFFLE -plays MP3-CD / CD tracks in random order in **CD / USB PC LINK** source

MUTE - interrupts/ resumes sound

VOL **▼**, **▲** -- adjust volume level or adjust equalizer level **BASS / MID / HIGH**

►I, **►II** -select previous/ next track in MP3-CD / CD / USB PC LINK playback

■ - stop MP3-CD / CD / USB PC LINK playback;

- erases a MP3-CD / CD program.

►II - starts or pauses MP3-CD / CD / USB PC LINK playback

◀, **▶** -searches backwards/ forwards within a MP3-CD / CD track.

TUNER: - tunes to radio stations

SWITCHING ON AND OFF AND SELECTING FUNCTION

1. Press **STANDBY ON** **↓** on the set to switch on.

2. Press **SOURCE** once or more to select your desired function: **CD**, **TUNER**, **USB PC LINK** or **GAME • AUX**.

3. Press **STANDBY ON** **↓** to switch off the set.

ADJUSTING VOLUME AND SOUND (See [2])

1. Adjust the volume with the **VOLUME** control.

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

2. **w00x**

To enhance the bass response: press **w00x** once or more to switch on / off.

→ **w00x**-key backlight lights up when **w00x** is turned on.

NOTES:

- **w00x** can be used when you play **TUNER**, **CD**, **USB PC LINK** and **GAME • AUX** source.

- Some discs might be recorded in high modulation, which causes a distortion at high volume. If this occurs, deactivate **w00x** or reduce the volume.

3. EQUALIZER

To adjust the bass, mid and high frequencies press **EQUALIZER** once or more, then rotate **VOLUME** within 3 seconds to adjust each level.

→ Display briefly shows **BASS**, **MID**,

HIGH level (**-5 to +5**) or **VOL**.

Note:

1. **EQUALIZER** can be used during **TUNER**, **CD**, **USB PC LINK** and **GAME • AUX** source.

INSTRUCTION FOR USE

MP3-CD / CD PLAYER

IMPORTANT SPECIFICATIONS

Supported formats:

- Disc format ISO9660 Joliet and multi-session CDs. Use ISO9660 disc format when burning CD-ROMs.
- MP3 music formats.
- MP3 bit rate (data rate): 32-320 Kbps and variable bit rate.
- 650Mb and 700Mb CD-R and CD-RWs.
- Directory nesting up to a maximum of 8 levels (max. 64 characters).

How to organize MP3 files

You can store up to a maximum number of 35 albums and 400 titles on one MP3-CD, depending on the song file sizes.

Albums and titles are alphabetically sorted.

- MP3-CD / CD albums and titles are shown as numbers in the display.

IMPORTANT! This set does not play/support the following:

- Empty albums: an empty album is an album that does not contain MP3 files, and will not be shown in the display.
- Non-supported file formats are skipped. This means that e.g. Word documents .doc or MP3 files with extension .dll are ignored and will not be played.
- Playlist Files** e.g. .m3u, .pls of WMA, AAC, Winamp, Sonic, RealJukebox, MS Mediaplayer
- 7.0, MusicMatch.

How to get MP3 music

Either download legal MP3 music from the internet or convert your audio CD into MP3 format with any MP3 encoder software, and then record onto a CD-RW.

- To achieve a good sound quality a bit rate of at least 128kbps is recommended for MP3 files.
- Some encoder software offer an option to protect music files, i.e. the files can only be played on the computer which created them. If you burn such files on a CD-ROM, you cannot play them on this set. Make sure to deactivate the protection option in the encoder software before creating the music files. In this case you are responsible for adherence to all local or international copyrights.

Playing MP3-CD & CD

This CD player plays Audio Discs including CD-RW's, and MP3 CD-ROMs.

- CD-J, CDV, VCD, DVD or computer CDs, are not possible.
- 1. Press **STANDBY ON** once or more to on, then select **CD SOURCE**.
- 2. Press **OPEN•CLOSE** to open the CD door.
⇒ OPEN is displayed when the CD door is open.

- 3. Insert a CD with the printed side facing up and press down on **OPEN•CLOSE** to close the CD door.
⇒ Display show , when reading disc contents.

⇒ Display : **DISPLAY** if no disc inserted/
disc incorrectly inserted..
⇒ Display : **CHECK DISC** or **DISC ERROR**
if disc damaged / dirty..
– throughout CD operation:
– throughout MP3-CD operation;

- In CD stop mode: total track number and total playback time.

When burning the MP3-CD

- To avoid problems with playback or missing files, make sure the file names are typed in English text characters and that the MP3 files end with **.mp3**
- Use a writing software capable of recording MP3 track titles (files) in numerical and alphabetical order. For details on using the software, refer to the operating instructions of the software.
- When recording on a CD-RW, make sure that you close (finalize) all sessions in order for the set to read and play your tracks.

MP3-CD / CD PLAYER

MP3-CD mode only.

First press **ALBUM / PRESET** – or + once or more to find your album.
⇒ Display: if no albums are available.

Finding a passage within a track

1. Press and hold **SEARCH** or (on the remote control or)
 - The CD is played at high speed and low volume.
 - No sound is heard during MP3-CD fast cue/ review.

2. When you recognize the passage you want, release or . Normal playback continues,(on the remote control or)
Note: Searching is only possible within a track.

Different play modes: SHUFFLE and REPEAT (See

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/ program are played in random order

shuffle repeat all - to repeat the entire CD/ program continuously in random order

repeat all - repeats the entire CD/ program

repeat - plays the current track continuously

1. To select play mode, press **MODE** once or more. (**SHUFFLE** / **REPEAT** on the remote control).

2. Press to start playback if in the stop position.
⇒ If you have selected **shuffle**, playback starts automatically.

3. To select normal playback, press **MODE**
repeatedly until the various modes are no longer displayed.
– You can also press the to cancel your play mode in playing.

Selecting a different track

- Press **SEARCH** or (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 disc or in the **PAUSE** position, you will need to press to start playback.

MP3-CD / CD PLAYER

MP3-CD / CD PLAYER

DIGITAL TUNER

INSTRUCTION FOR USE

Programming track numbers

Program 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. Press **SEARCH** \blacktriangleleft or \triangleright on the set to select your desired track number.(on the remote control \blacktriangleleft or \triangleright)
2. Press **PROG**.
→ Display: **program** and the selected track number. **PROG** appears briefly.
3. Repeat steps 1-2 to select and store all desired tracks.
→ Display: **FULL** if you try to program more than 20 tracks.

MP3-CD mode only:

1. First press **ALBUM/ PRESET** – or + once or more to find your album, then press **SEARCH** \blacktriangleleft or \triangleright .(on the remote control \blacktriangleleft or \triangleright)
2. Press **PROG**.

3. To start playback of your disc program, press \blacktriangleright **II**.
Note: During normal playback, you can press **PROG** to add a current track to your program list.
4. In stop position, press and hold down **PROG** for a while until the display shows all your stored track numbers in sequence.

→ Display **N0 PROG** if no tracks programmed.

Reviewing the program

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

→ Display **N0 PROG** if no tracks programmed.

Erasing a program

You can erase the program by:

- pressing **■** twice;
→ **ERASE** displayed briefly, and **program** disappears.
- selecting another sound source
- opening the CD door.

IMPORTANT!

Please use this customized MusicMatch software for your USB PC Link application. Remember to un-install all other MusicMatch jukebox software first from your PC system (if available).

GAMESOUND (See [8])

PLAYING WITH GAMESOUND:

1. Press **SOURCE** once or more on the set to select the **GAME-AUX** function (**AUX** on the remote control)
→ Display scrolls : **FM** **PC** **PORT**
2. Connect your console to the cinches on the front of the set. **AUDIO IN (LEFT / RIGHT)** and **VIDEO IN**.
3. Press **GAMESOUND** once or more to select your game sound option.
→ Display briefly shows **BLFST** , **PUNCH** , **SPEED** or **NORMRL**.

4. **GAMESOUND** To adjust the game sound, press **GAMESOUND** once or more to select your option.
→ Display briefly shows **BLFST** , **PUNCH** , **SPEED** or **NORMRL**.

Note: **GAMESOUND** is only available when you play in **GAME-AUX** source.

How to MUTE the sound

1. Press **MUTE** on the remote control to interrupt sound reproduction instantly.
→ Playback continues without sound and the display flashes **MUTE** .
2. To reactivate sound reproduction you can:
 - press **MUTE** again;
 - adjust the volume controls;
 - change to another source.

DIGITAL TUNER (See [3])

Tuning to stations

1. Press **STANDBY ON** \odot to on, then press **SOURCE** once or more to select **TUNER** (or press **TUNER** once on the remote control).
→ Display: shows **TUNER** briefly followed by waveband, frequency, and preset station number if already stored.

2. Press **BAND / DISPLAY** once or more to select your waveband (**TUNER** on the remote control)
→ Display: you can tune to your stations manually or by automatic search tuning: Press down on \blacktriangleleft or \triangleright (\blacktriangleleft or \triangleright on the remote control) and release button when the frequency in the display starts running.
→ The radio automatically tunes to a station of sufficient reception. Display shows **SEARCH** during automatic tuning.

3. Turn on your PC then insert the supplied USB PC LINK installer disc in the PC's CD-ROM drive. This application software can also be downloaded from <http://www.audio.philips.com>.
4. Repeat the above four steps to store other stations.
→ Display shows the preset number, waveband and the frequency of the preset station.

Note : You can erase a preset station by storing another frequency in its place.

To listen to a preset station

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

1. Repeat step 3 if necessary until you find the desired station.
2. To tune to a weak station, press \blacktriangleleft or \triangleright or
→ on the remote control) briefly and repeatedly

2. To prevent sound interference the bass control options operate exclusively. You cannot combine the bass from **EQUALIZER** with **WOOX**

To improve radio reception:

- For **FM**, extend, incline and turn the telescopic antenna. Reduce its length if the signal is too strong.
- For **MW**, the set uses a built-in antenna. Direct this antenna by turning the whole set.

Connecting other equipment to your system

Use the supplied video cable to connect the **VIDEO OUT** terminal on the back of the set to **VIDEO IN** on a TV or VCR for viewing or recording.

USB PC LINK

Quick Setup Guide

PC system requirements

- USB port with Windows 98 SE / ME/2000/XP
- Intel Pentium MMXX200 or higher
- CD-ROM drive

Installing MusicMatch software

1. Use the supplied USB cable to connect the set to the USB port on your computer. (See [B])
2. Press **SOURCE** (USB on the remote control) once or more to select **USB PC LINK**.
3. Turn on your PC then insert the supplied USB PC LINK installer disc in the PC's CD-ROM drive. This application software can also be downloaded from <http://www.audio.philips.com>.

IMPORTANT!

Please use this customized MusicMatch software for your USB PC Link application. Remember to un-install all other MusicMatch jukebox software first from your PC system (if available).

INSTRUCTION FOR USE

USB PC LINK	MAINTENANCE & SAFETY	MAINTENANCE & SAFETY
<p>4. The installation guide will appear automatically. If it does not, go to the CD-ROM drive in Windows Explorer and double click on the USB PC LINK.exe. Then perform the following steps:</p> <ul style="list-style-type: none"> – Select your desired language from the list. – Select installer driver. – Select installer MusicMatch jukebox. – Select other options (Tutorial, Free goodies, FAQ). <p>Note:</p> <ul style="list-style-type: none"> - You are advised to read the <i>MusicMatch tutorial</i> before using it for the first time. Make sure the volume on your PC is suitably adjusted to ensure sound output on the set. For optimum performance, the equalizer function in MusicMatch should be set to a low level. 5. Launch MUSICMATCH JUKEBOX and create your own playlist of favorite songs by dragging and dropping the music track from anywhere on your PC into the playlist window. <p>Note:</p> <ul style="list-style-type: none"> - If you encounter any problem using the USB PC LINK, please refer to the <i>FAQ (Frequently Asked Questions)</i> stored in your USB PC LINK installer disc or visit www.audio.philips.com for the latest <i>FAQ updates</i>. <p>After setup, refer to "Connecting to USB PC Link" for details on the USB PC LINK operations.</p> <p>Enable digital CD audio output</p> <p>Before playing CDs on your PC's CD-ROM drive, it is necessary to configure your PC's hardware as follows:</p> <p>For Windows ME/ 2000/ XP</p> <ol style="list-style-type: none"> 1. Enter the system panel menu and select 'SYSTEM', 'PROPERTIES', 'HARDWARE', 'DEVICE MANAGER', 'CD-ROM DRIVES' and 'PROPERTIES'. <p>For Windows 98 SE</p> <ol style="list-style-type: none"> 2. Check the Enable digital CD audio for this CD-ROM device setting option is selected (enabled). <p>Note: For windows 98 SE you may need to refer to your PC's manual for correct configuration.</p>	<p>MAINTENANCE & SAFETY (See [10])</p> <p>CD player and disc handling</p> <ul style="list-style-type: none"> • Don't expose the set, batteries, CDs to humidity, rain, sand or excessive heat. • Clean the set with a dry cloth. Don't use any cleaning agents containing alcohol, ammonia, benzene or abrasives as these may harm the set. • Place the set on a hard and flat surface so that the system does not tilt. Make sure there is good ventilation to prevent the set from overheating. <p>Note:</p> <ul style="list-style-type: none"> - You are advised to read the <i>MusicMatch tutorial</i> before using it for the first time. Make sure the volume on your PC is suitably adjusted to ensure sound output on the set. For optimum performance, the equalizer function in MusicMatch should be set to a low level. <p>1. Turn on your set and computer . ⇒ Check your PC volume is suitably adjusted and not set to minimum / mute.</p> <p>2. Press SOURCE (USB) on the remote control once or more to select USB PC LINK.</p> <p>3. If correctly connected your PC will automatically launch MUSICMATCH JUKEBOX.</p> <p>⇒ If the audio streaming is detected, the current track name scrolls .</p> <p>⇒ If NO CONNECTION scrolls for a while, check the connection between your PC and set.</p> <p>4. Press ◀ or ▶ until the desired track in the playlist is highlighted.</p> <p>5. Press ▶▶ to start playback. ⇒ The track time appears and the track name scrolls once.</p> <p>Note: The display only supports English characters in uppercase.</p> <p>6. If you want to see the track details displayed press MODE.</p> <p>During playback,</p> <ul style="list-style-type: none"> – Press SHUFFLE on the remote control to play all available tracks in the playlist in random order. – Press REPEAT on the remote control to repeat playback all the tracks in the playlist. <p>7. To cancel play mode/ stop playback, press ■ or select another sound sources.</p>	<p>Safety Information</p> <ul style="list-style-type: none"> • Don't expose the set, batteries, CDs to humidity, rain, sand or excessive heat. • Clean the set with a dry cloth. Don't use any cleaning agents containing alcohol, ammonia, benzene or abrasives as these may harm the set. • Place the set on a hard and flat surface so that the system does not tilt. Make sure there is good ventilation to prevent the set from overheating. <p>MAINTENANCE & SAFETY (See [10])</p> <p>CD player and disc handling</p> <ul style="list-style-type: none"> • If the CD player cannot read CDs correctly, use a cleaning CD to clean the lens before taking the set to repair. • The lens of the CD player should <i>never be touched!</i> • Sudden changes in the surrounding temperature can cause condensation on the lens of your CD player. Playing a CD is then not possible. Do not attempt to clean the lens but leave the set in a warm environment until the moisture evaporates. • Always close the CD door to avoid dust on the lens. • To take a CD out of its box, press the center spindle while lifting the CD. • To clean the CD, wipe in a straight line from the center 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.

TROUBLESHOOTING

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

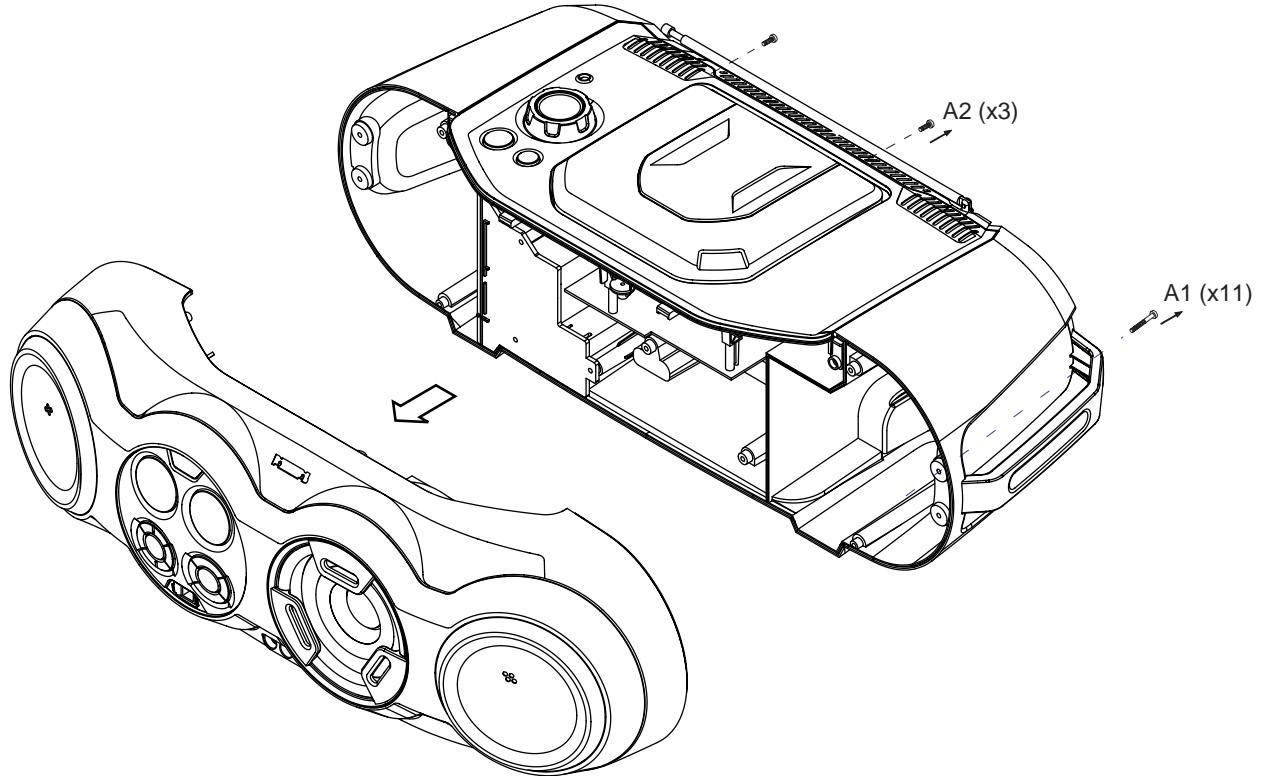
WARNING: Do not open the set as there is a risk of electric shock! Under no circumstances should you try to repair the set yourself, as this will invalidate the warranty.

No sound/power	NF II ISCE indication
<ul style="list-style-type: none">- Volume not adjusted<ul style="list-style-type: none">• Adjust the VOLUME	<ul style="list-style-type: none">- CD-R(W) is blank/ not finalized<ul style="list-style-type: none">• Use an unfinalized CD-RW)
<ul style="list-style-type: none">- Mains lead not securely connected<ul style="list-style-type: none">• Connect the AC mains lead properly	INSERT II ISCE /CHECK II ISCE ERROR indication
<ul style="list-style-type: none">- Batteries flat/ incorrectly inserted<ul style="list-style-type: none">• Insert (fresh) batteries correctly- Headphones connected to the set- Disconnect headphones	<ul style="list-style-type: none">- No CD inserted<ul style="list-style-type: none">• Insert a suitable disc- CD badly scratched or dirty<ul style="list-style-type: none">• Replace/ clean CD, see Maintenance- Laser lens steamed up<ul style="list-style-type: none">• Wait until lens has cleared
<ul style="list-style-type: none">- Electrostatic discharge/interference<ul style="list-style-type: none">• Unplug the set. If batteries inserted, remove batteries from the battery compartment. Press and hold STANDBY ON \odot for 10 seconds, then re-plug/ replace battery supply, and try activating the set again.- When in USB PC LINK mode, check that your PC's volume is audible and not set to minimum.- When playing a CD from the PC's CD-ROM drive, refer to USB PC Link - Enable digital CD audio output.	The CD skips tracks
<ul style="list-style-type: none">- CD contains non-audio files<ul style="list-style-type: none">• Press SEARCH or \blacktriangleright, once or more to skip to a CD audio track, instead of the data file	NO CONNECTION is displayed in USB PC LINK mode for more than 10 seconds
<ul style="list-style-type: none">- Poor sound quality in GAME+AUX mode<ul style="list-style-type: none">• Adjust the volume on the set or on your game console	<ul style="list-style-type: none">- Check the connection between your PC and the set. If necessary, please refer to the chapter Connecting to USB PC Link for the initial setup required.
Severe radio hum or noise	<ul style="list-style-type: none">• Make sure the connected PC is turned on and the MusicMatch software is working.
<ul style="list-style-type: none">- Electrical interference: set too close to TV, VCR or computer<ul style="list-style-type: none">• Move the set to increase the distance	Sound skips during MP3 playback
<ul style="list-style-type: none">- Remote control does not function properly<ul style="list-style-type: none">• Batteries flat/ incorrectly inserted<ul style="list-style-type: none">• Insert (fresh) batteries correctly- Distance/ angle between the set too large<ul style="list-style-type: none">• Reduce the distance/ angle	<ul style="list-style-type: none">- MP3 file made at compression level exceeding 320kbps<ul style="list-style-type: none">• Use a lower compression level to record CD tracks into MP3 format- Disc damaged or dirty<ul style="list-style-type: none">• Replace or clean disc
<ul style="list-style-type: none">- Poor radio reception<ul style="list-style-type: none">• Weak radio signal<ul style="list-style-type: none">• FM / MW: Adjust the FM / MW telescopic aerial	Cannot find desired MP3 title
	<ul style="list-style-type: none">- Wrong file extension used and/ or file name with unsuitable text characters used<ul style="list-style-type: none">• Make sure the file names are typed in English text characters and that the MP3 files end with .mp3

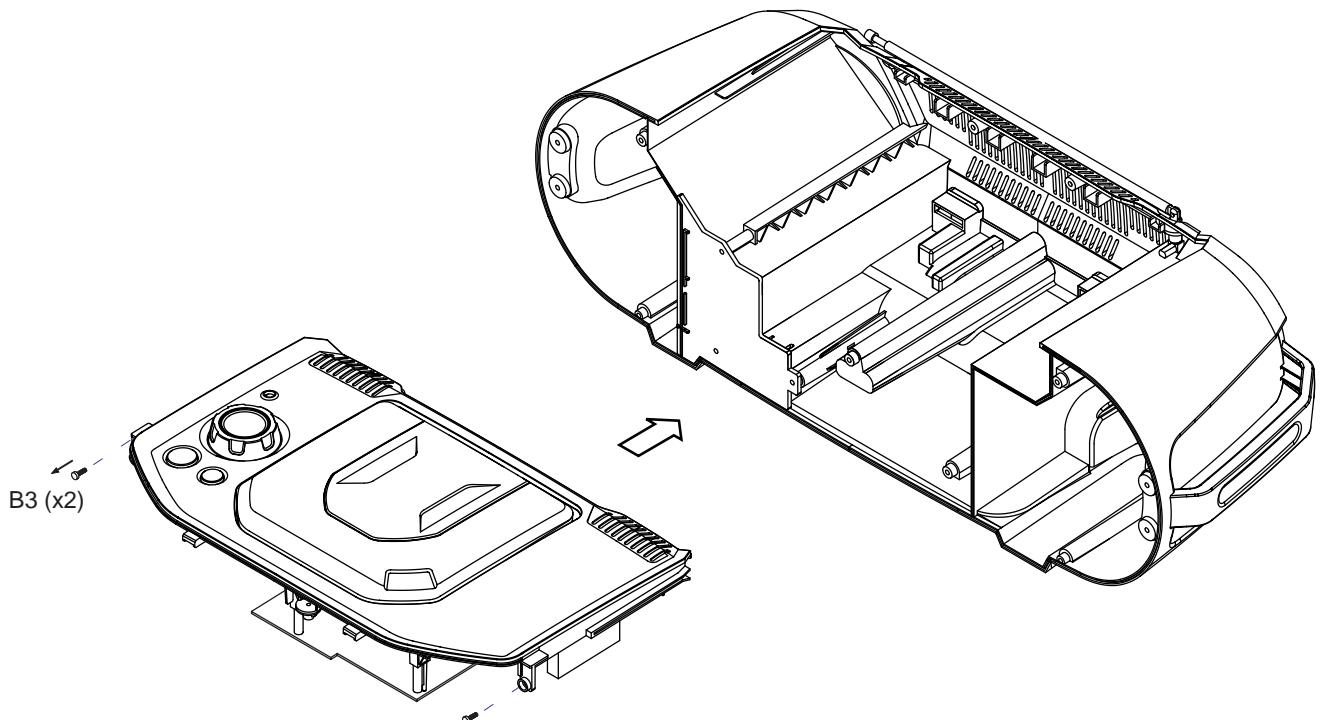
For more information on operation instruction please visit Philips Audio internet site :
<http://www.audio.philips.com>

DISASSEMBLY DIAGRAM

- A. REMOVE FRONT CABINET ASSEMBLY
- REMOVE SCREWS A1 (3X16) 11 PCS.
 - REMOVE SCREW A2 (3X10) 3 PCS
(UNDER AERIAL)

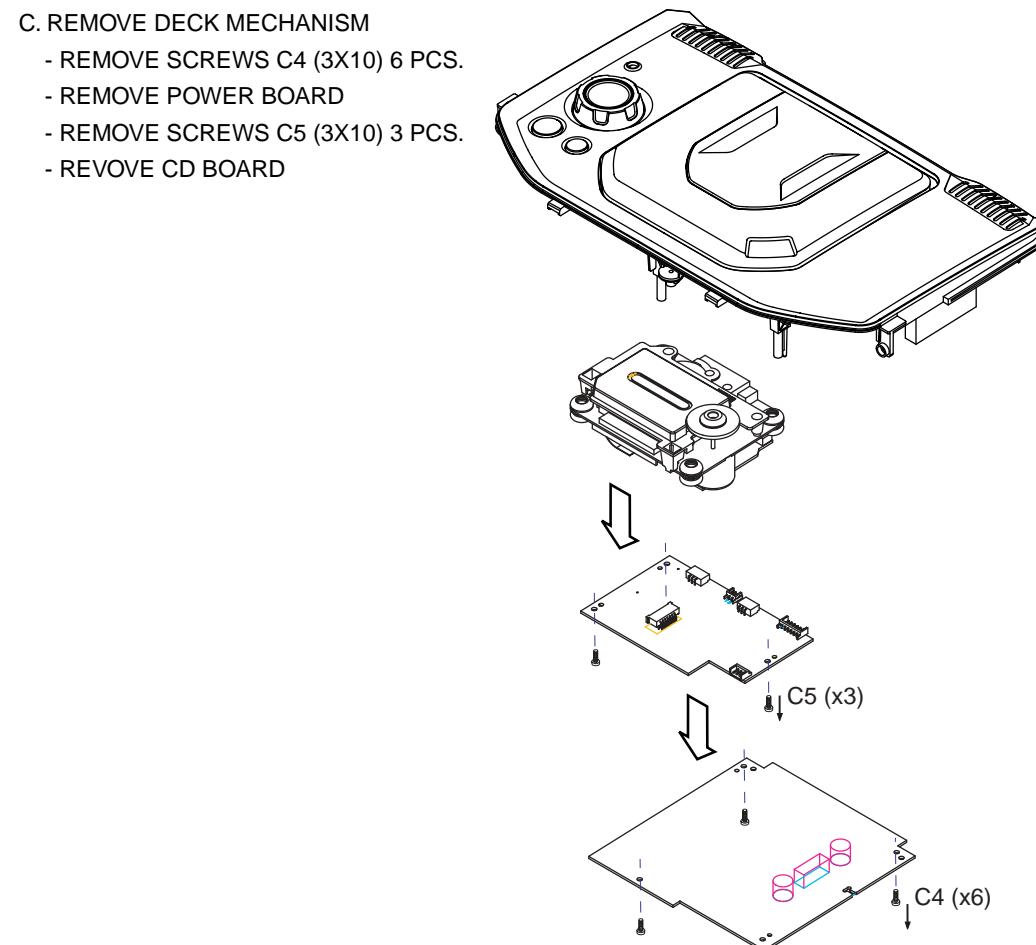


- B. REMOVE BOTTOM CABINET ASSEMBLY
- REMOVE SCREWS B3 (3X10) 2 PCS.



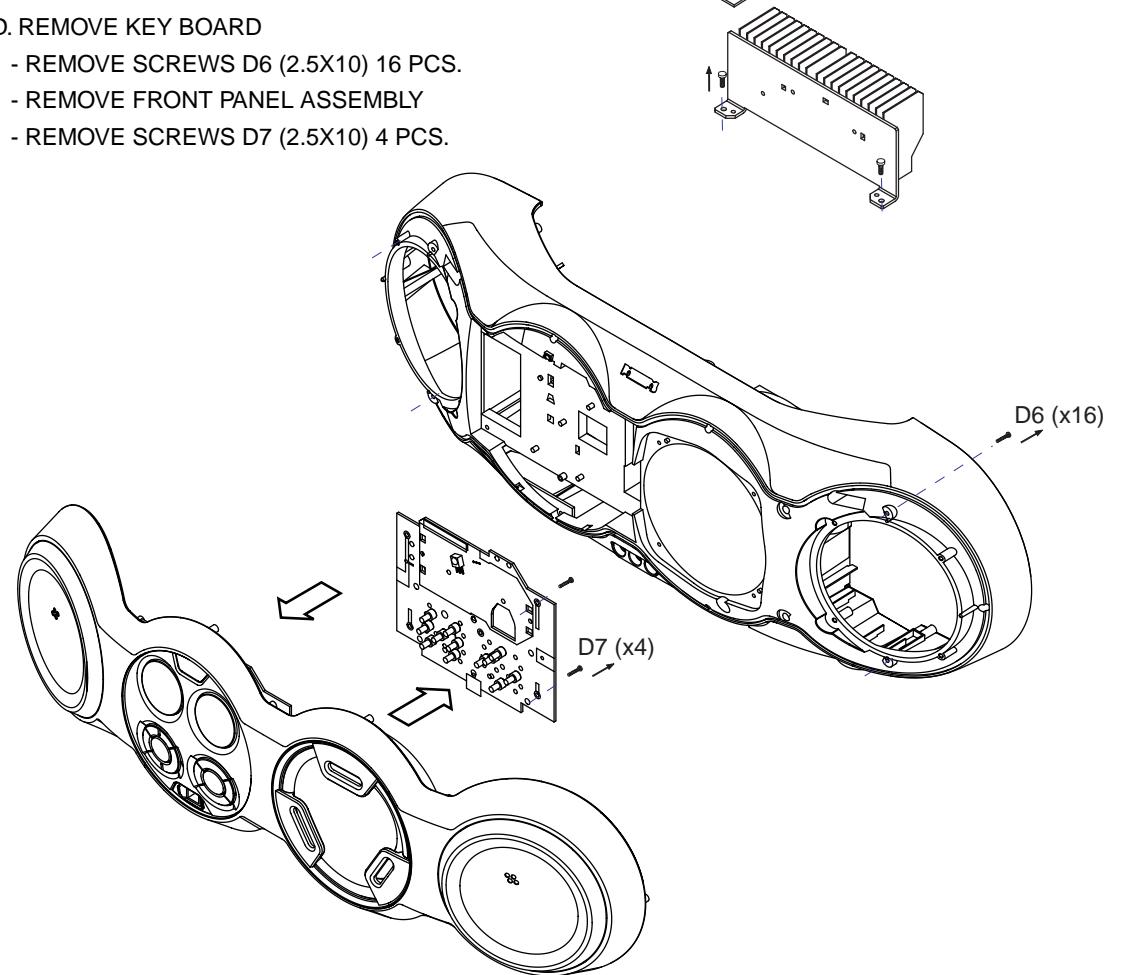
- C. REMOVE DECK MECHANISM

- REMOVE SCREWS C4 (3X10) 6 PCS.
- REMOVE POWER BOARD
- REMOVE SCREWS C5 (3X10) 3 PCS.
- REMOVE CD BOARD



- D. REMOVE KEY BOARD

- REMOVE SCREWS D6 (2.5X10) 16 PCS.
- REMOVE FRONT PANEL ASSEMBLY
- REMOVE SCREWS D7 (2.5X10) 4 PCS.



SERVICE TEST PROGRAM

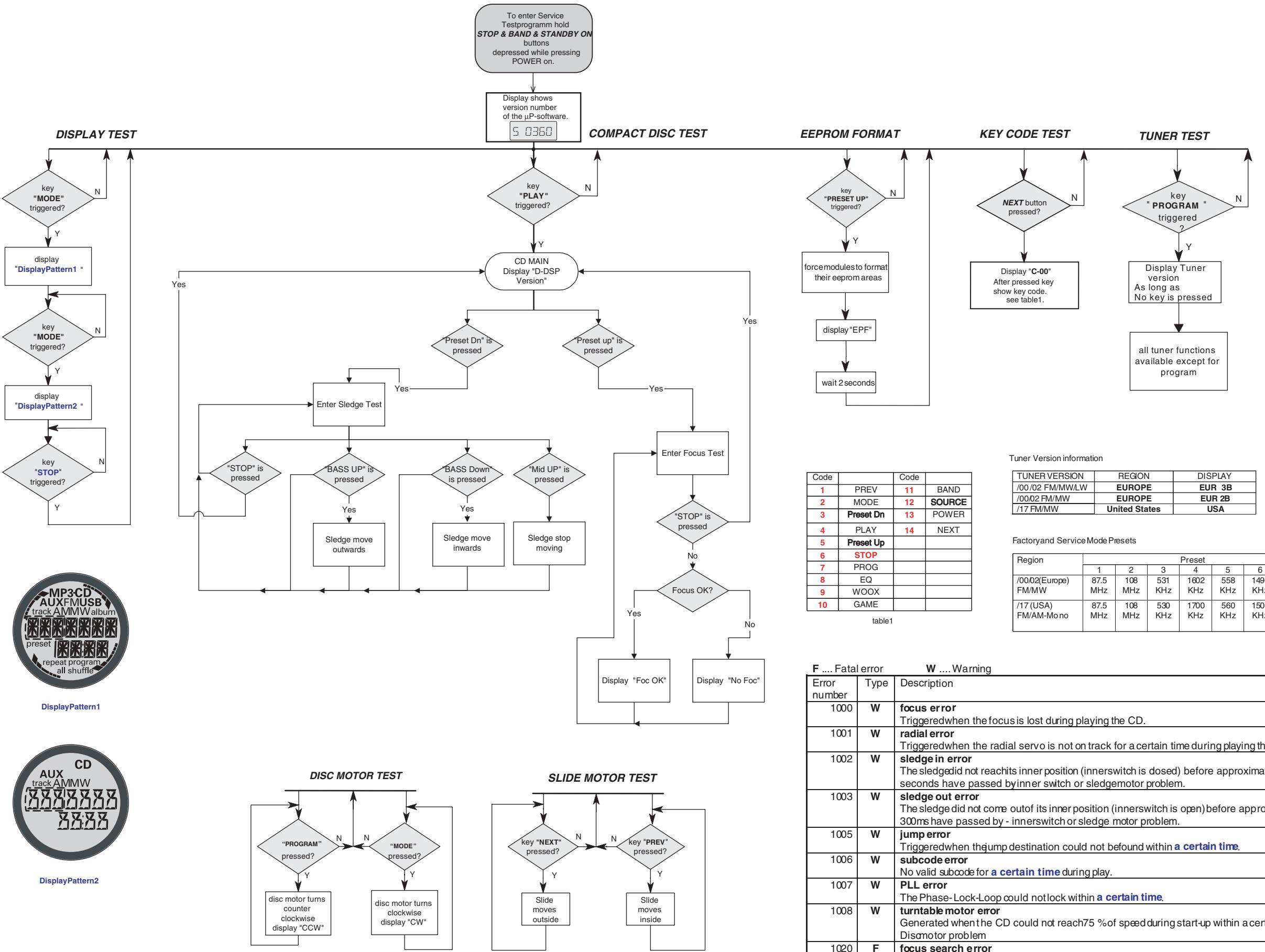


table2

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 ioutput (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)
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

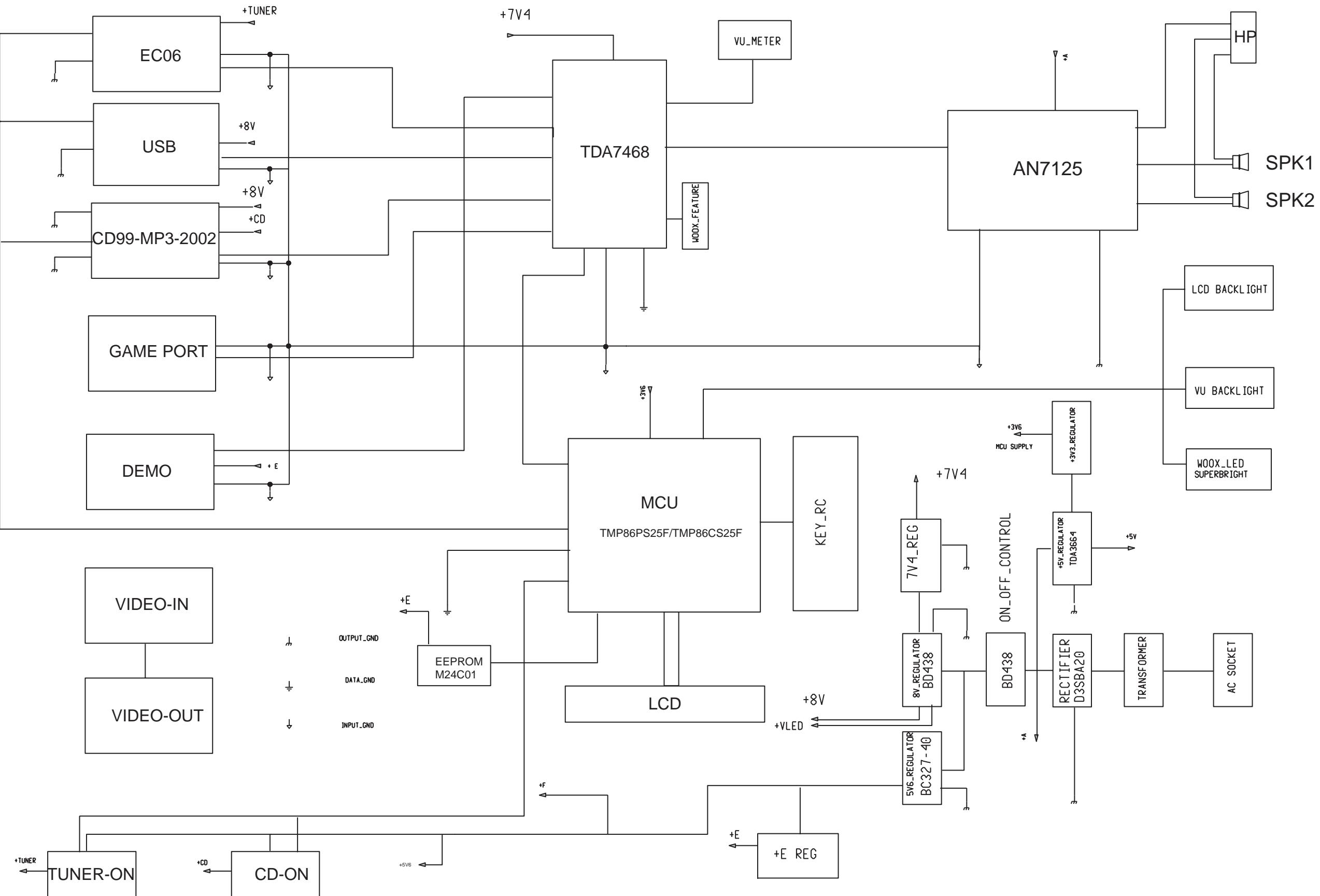
Abbreviations and Pin-description of CD ICs

SERVO PROCESSOR SAA7325H

SYMBOL	PIN	DESCRIPTION
RAB	41	microcontroller interface R/W and load control line input (4-wire bus mode)
SILD	42	microcontroller interface 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.

BLOCK DIAGRAM



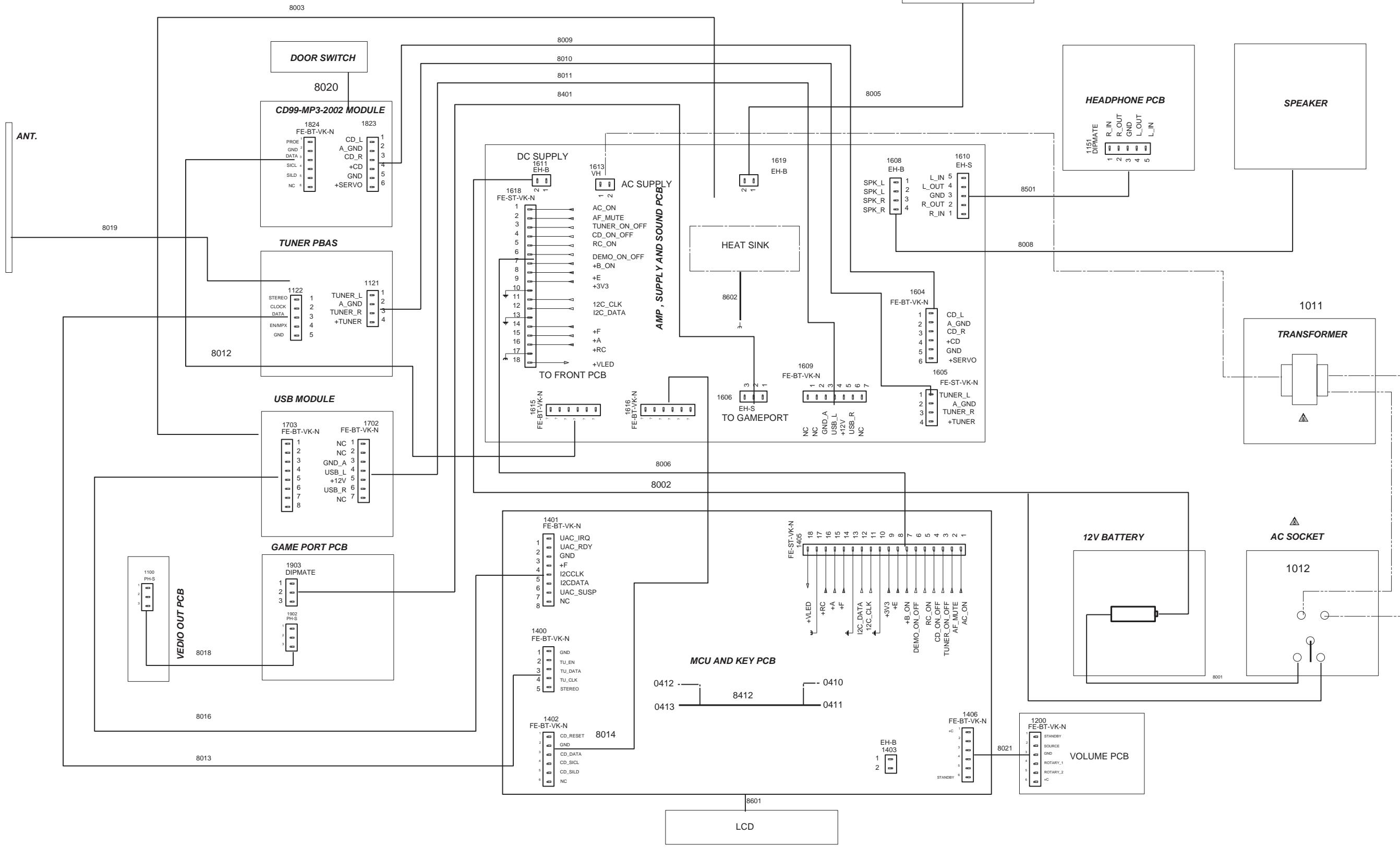
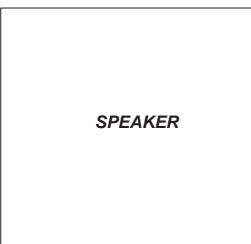
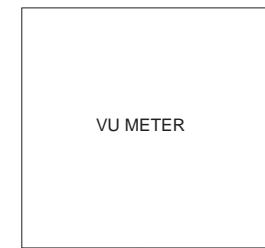
WIRING DIAGRAM

8001 3140 110 21801 400mm 22
 8002 314011022361 340mm 2p 22
 8003 313911034171 SRA/SMF 220mm
 8005 313911037171 220mm 2p
 8006 31391102331 ffc 220mm 18p ad
 8008 314011022323 spk wire
 8009 31391102561 280mm bd 6p
 8010 313911034100 140mm 04p bd

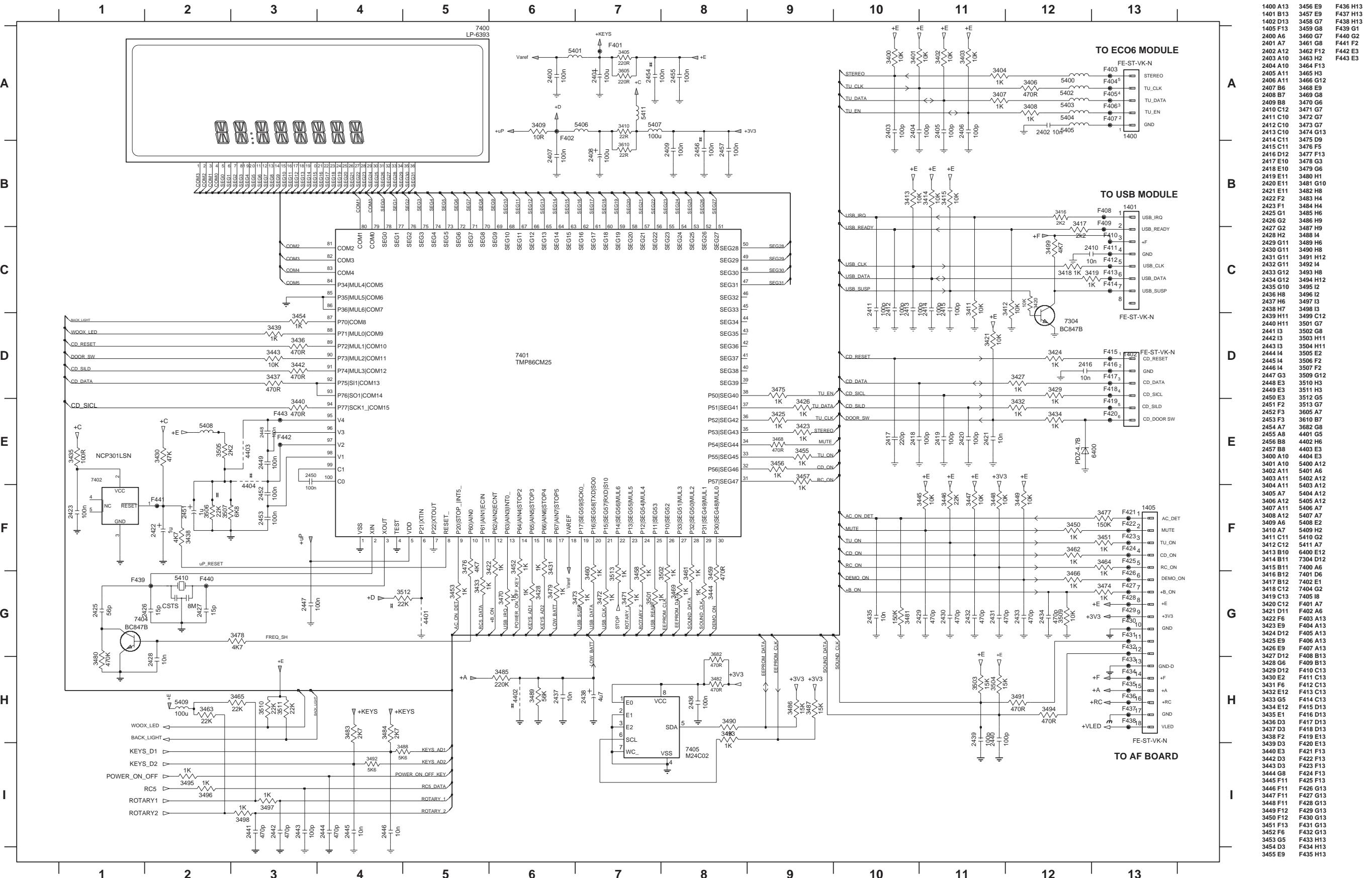
8011 313911034130 180mm 7p ad
 8012 313911034020 140mm 6p bd
 8013 31391102201 400mm 5p ad
 8014 313911034330 180mm 6p bd
 8016 313911034740 180mm 8p AD

8018 314011022331 SCR WIRE 3p 400mm
 8019 smF/sto 220mm
 8020 313911037171 220mm 2p
 8021 313911034330 180mm 6p BD

8401 313911037291 180mm 3p
 8501 314011021981 340mm 24
 8502 36pin Heat sealing tape con. to LCD
 8602 313911039780 100mm 1p



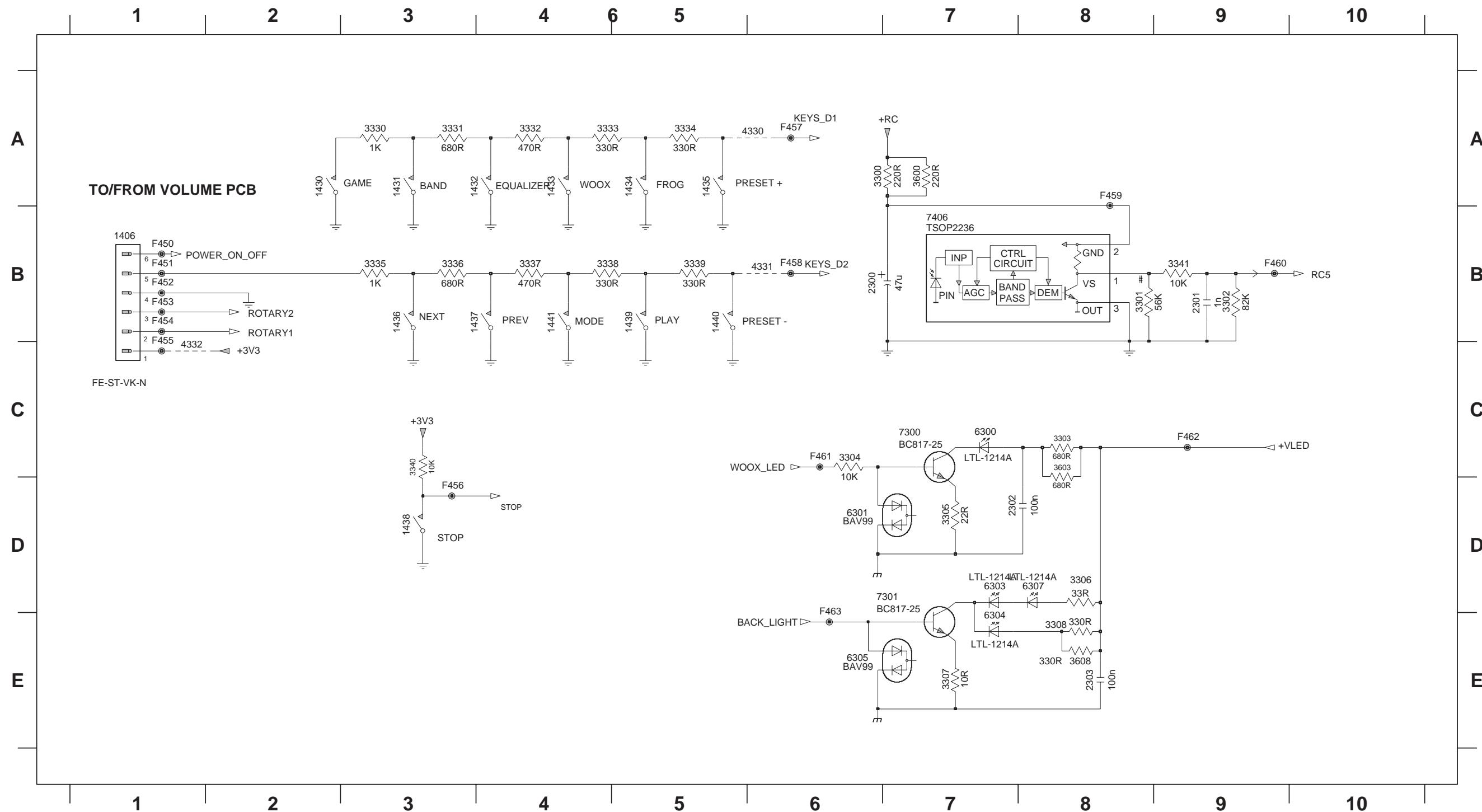
KEY BOARD - CIRCUIT DIAGRAM



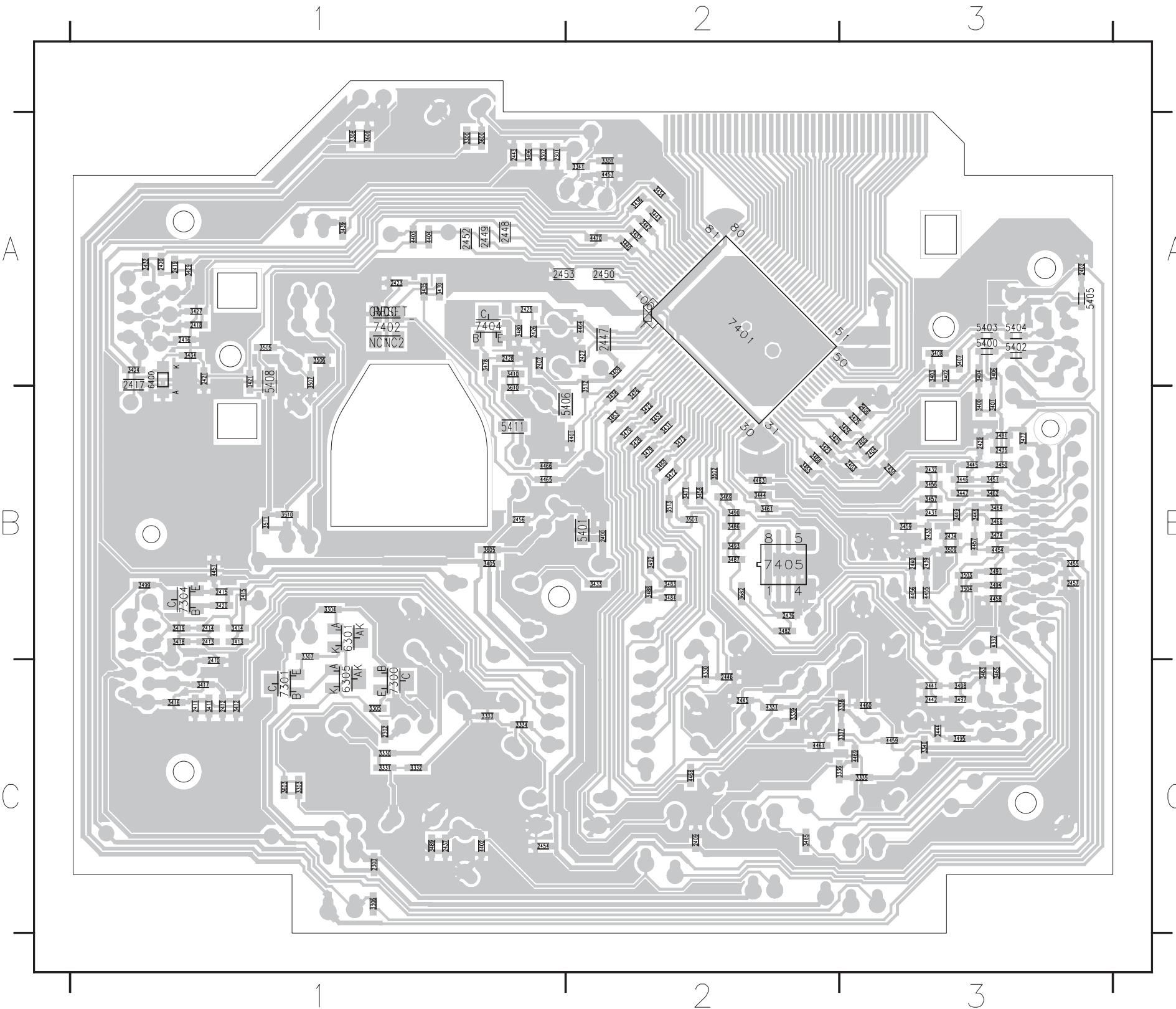
1400 A13	3456 E9	F436 H13
1401 B13	3457 E9	F437 H13
1402 D13	3458 G7	F438 H13
1405 F13	3459 G8	F439 G1
2400 A6	3460 G7	F440 G2
2401 A7	3461 G8	F441 F2
2402 A12	3462 F12	F442 E3
2403 A10	3463 H2	F443 E3
2404 A10	3464 F13	
2405 A11	3465 H3	
2406 A11	3466 G12	
2407 B6	3468 E9	
2408 B7	3469 G8	
2409 B8	3470 G6	
2410 C12	3471 G7	
2411 C10	3472 G7	
2412 C10	3473 G7	
2413 C10	3474 G13	
2414 C11	3475 D9	
2415 C11	3476 F5	
2416 D12	3477 F13	
2417 E10	3478 G3	
2418 E10	3479 G6	
2419 E11	3480 H1	
2420 E11	3481 G10	
2421 E11	3482 H8	
2422 F2	3483 H4	
2423 F1	3484 H4	
2425 G1	3485 H6	
2426 G2	3486 H9	
2427 H2	3487 H9	
2428 H2	3488 I4	
2429 G11	3489 H6	
2430 G11	3490 H8	
2431 G11	3491 H12	
2432 G11	3492 I4	
2433 G12	3493 H8	
2434 G12	3494 H12	
2435 G10	3495 I2	
2436 H8	3496 I2	
2437 H6	3497 I3	
2438 H7	3498 I3	
2439 H11	3499 C12	
2440 H11	3501 G7	
2441 I3	3502 G8	
2442 I3	3503 H11	
2443 I3	3504 H11	
2444 I4	3505 E2	
2445 I4	3506 F2	
2446 I4	3507 F2	
2447 G3	3509 G12	
2448 E3	3510 H3	
2449 E3	3511 H3	
2450 E3	3512 G5	
2451 F2	3513 G7	
2452 F3	3605 A7	
2453 F3	3610 B7	
2454 A7	3682 G8	
2455 A8	4401 G5	
2456 B8	4402 H6	
2457 B8	4403 E3	
3400 A10	4404 E3	
3401 A10	4400 A12	
3402 A11	5401 A6	
3403 A11	5402 A12	
3404 A11	5403 A12	
3405 A7	5404 A12	
3406 A12	5405 A12	
3407 A11	5406 A7	
3408 A12	5407 A7	
3409 A6	5408 E2	
3410 A7	5409 H2	
3411 C11	5410 G2	
3412 C12	5411 A7	
3413 B10	6400 E12	
3414 B11	7304 D12	
3415 B11	7400 A6	
3416 B12	7401 D6	
3417 B12	7402 E1	
3418 C12	7404 G2	
3419 C13	7405 I8	
3420 C12	7401 A7	
3421 D11	7402 A6	
3422 F6	7403 A13	
3423 E9	7404 A13	
3424 D12	7405 A13	
3425 E9	7406 A13	
3426 E9	7407 A13	
3427 D12	7408 B13	
3428 G6	7409 B13	
3429 D12	7410 C13	
3430 E2	7411 C13	
3431 F6	7412 C13	
3432 E12	7413 C13	
3433 G5	7414 C13	
3434 E12	7415 D13	
3435 E1	7416 D13	
3436 D3	7417 D13	
3437 D3	7418 D13	
3438 F2	7419 E13	
3439 D3	7420 E13	
3440 E3	7421 F13	
3442 D3	7422 F13	
3443 D3	7423 F13	
3444 G8	7424 F13	
3445 F11	7425 F13	
3446 F11	7426 G13	
3447 F11	7427 G13	
3448 F11	7428 G13	
3449 F11	7429 G13	
3450 F12	7430 G13	
3451 F13	7431 G13	
3452 F6	7432 G13	
3453 G5	7433 H13	
3454 D3	7434 H13	
3455 E9	7435 H13	

KEY BOARD - CIRCUIT DIAGRAM

1406 B1	1432 A4	1435 A5	1438 D3	1441 B4	2302 D7	3301 B8	3304 C6	3307 E7	3331 A3	3334 A5	3337 B4	3340 C3	3603 C8	4331 B6	6301 D6	6305 E6	7301 D6	F451 B1	F454 B1	F457 A6	F460 B9	F463 E6
1430 A2	1433 A4	1436 B3	1439 B5	2300 B6	2303 E8	3302 B9	3305 D7	3308 E8	3332 A4	3335 B3	3338 B4	3341 B9	3608 E8	4332 C1	6303 D7	6307 D8	7406 B7	F452 B1	F455 C1	F458 B6	F461 C6	
1431 A3	1434 A5	1437 B4	1440 B5	2301 B9	3300 A6	3303 C8	3306 D8	3330 A3	3333 A4	3336 B3	3339 B5	3600 A7	4330 A6	6304 E7	7300 C7	F450 B1	F453 B1	F456 D3	F459 A8	F462 C9		

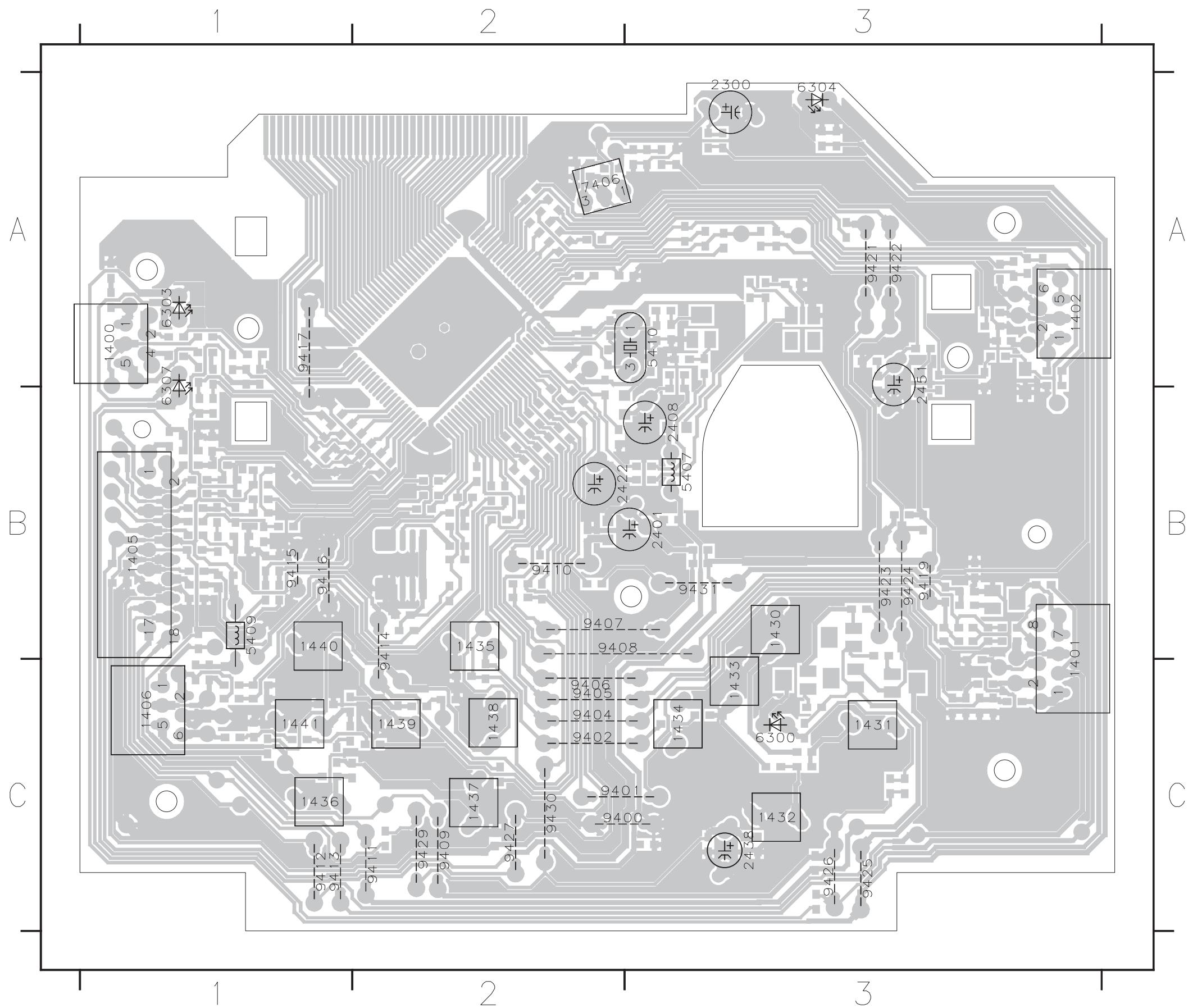


**KEY BOARD - LAYOUT DIAGRAM\\
(COPPER SIDE VIEW)**



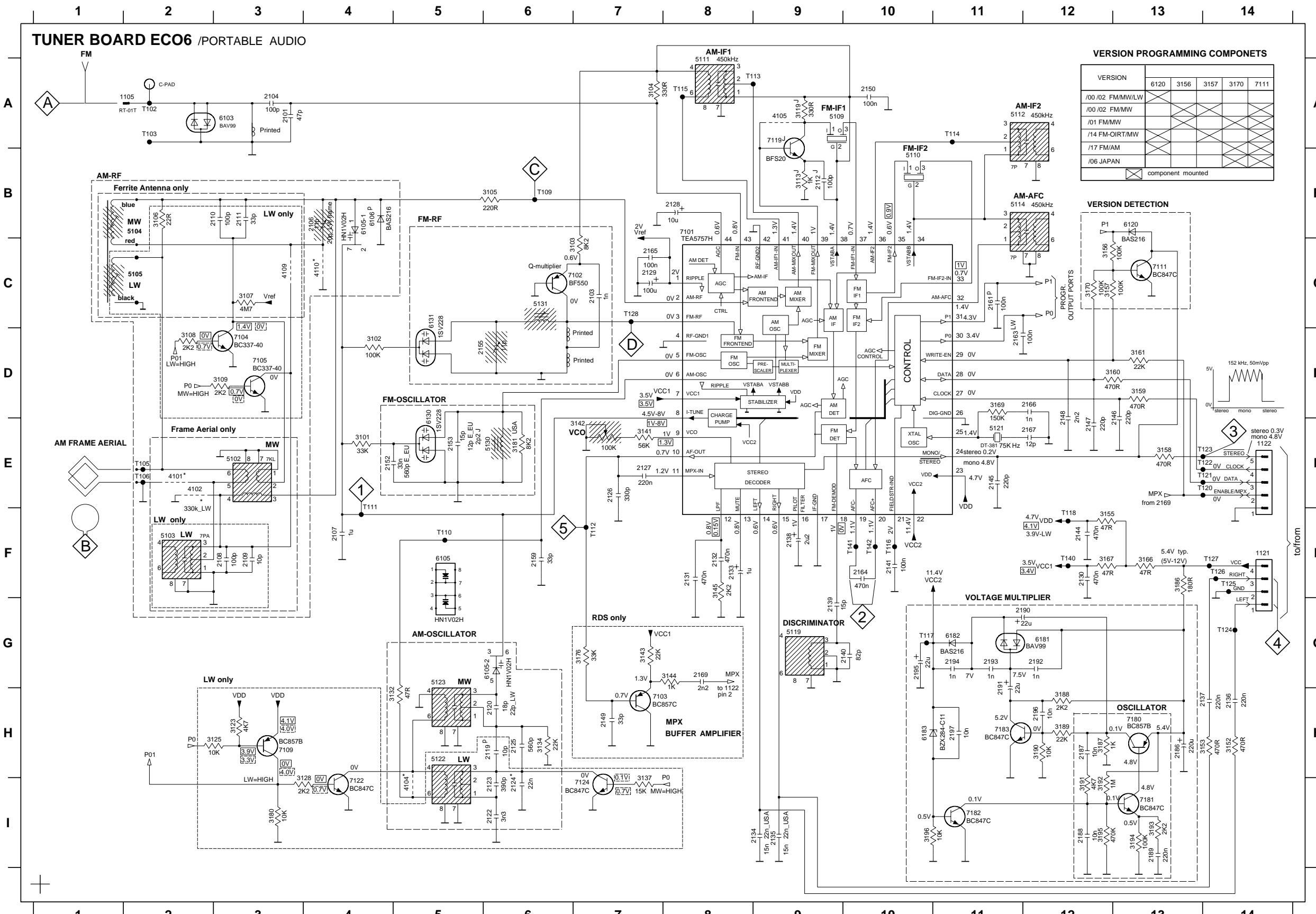
A1	F4453
C1	F4455
B1	F4456
A2	F4457
C2	F4458
B2	F4459
A1	F4460
C1	F4461
B1	F4462
A2	F4463
C2	F4464
B2	F4465
A3	F4466
C3	F4467
B3	F4468
A2	F4469
C2	F4470
B2	F4471
A3	F4472
C3	F4473
B3	F4474
A2	F4475
C2	F4476
B2	F4477
A3	F4478
C3	F4479
B3	F4480
A1	F4481
C1	F4482
B1	F4483
A1	F4484
C1	F4485
B1	F4486
A1	F4487
C1	F4488
B1	F4489
A1	F4490
C1	F4491
B1	F4492
A1	F4493
C1	F4494
B1	F4495
A1	F4496
C1	F4497
B1	F4498
A1	F4499
C1	F4500
B1	F4501
A2	F4502
C2	F4503
B2	F4504
A3	F4505
C3	F4506
B3	F4507
A1	F4508
C1	F4509
B1	F4510
A1	F4511
C1	F4512
B1	F4513
A1	F4514
C1	F4515
B1	F4516
A1	F4517
C1	F4518
B1	F4519
A1	F4520
C1	F4521
B1	F4522
A1	F4523
C1	F4524
B1	F4525
A1	F4526
C1	F4527
B1	F4528
A1	F4529
C1	F4530
B1	F4531
A1	F4532
C1	F4533
B1	F4534
A1	F4535
C1	F4536
B1	F4537
A1	F4538
C1	F4539
B1	F4540
A1	F4541
C1	F4542
B1	F4543
A1	F4544
C1	F4545
B1	F4546
A1	F4547
C1	F4548
B1	F4549
A1	F4550
C1	F4551
B1	F4552
A1	F4553
C1	F4554
B1	F4555
A1	F4556
C1	F4557
B1	F4558
A1	F4559
C1	F4560
B1	F4561
A1	F4562
C1	F4563
B1	F4564
A1	F4565
C1	F4566
B1	F4567
A1	F4568
C1	F4569
B1	F4570
A1	F4571
C1	F4572
B1	F4573
A1	F4574
C1	F4575
B1	F4576
A1	F4577
C1	F4578
B1	F4579
A1	F4580
C1	F4581
B1	F4582
A1	F4583
C1	F4584
B1	F4585
A1	F4586
C1	F4587
B1	F4588
A1	F4589
C1	F4590
B1	F4591
A1	F4592
C1	F4593
B1	F4594
A1	F4595
C1	F4596
B1	F4597
A1	F4598
C1	F4599
B1	F4600

**KEY BOARD - LAYOUT DIAGRAM
(COMPONENT SIDE VIEW)**



Component Label	Component Description
A1	
A2	
A3	
A4	
A5	
A6	
A7	
A8	
A9	
A10	
A11	
A12	
A13	
A14	
A15	
A16	
A17	
A18	
A19	
A20	
A21	
A22	
A23	
A24	
A25	
A26	
A27	
A28	
A29	
A30	
A31	
A32	
A33	
A34	
A35	
A36	
A37	
A38	
A39	
A40	
A41	
A42	
A43	
A44	
A45	
A46	
A47	
A48	
A49	
A50	
A51	
A52	
A53	
A54	
A55	
A56	
A57	
A58	
A59	
A60	
A61	
A62	
A63	
A64	
A65	
A66	
A67	
A68	
A69	
A70	
A71	
A72	
A73	
A74	
A75	
A76	
A77	
A78	
A79	
A80	
A81	
A82	
A83	
A84	
A85	
A86	
A87	
A88	
A89	
A90	
A91	
A92	
A93	
A94	
A95	
A96	
A97	
A98	
A99	

TUNER BOARD - CIRCUIT DIAGRAM



1105 A1	4104 I5
1121 F14	4109 C3
1201 A3	4110 C4
2103 C7	5102 E3
2104 A3	5103 F2
2106 B4	5109 A9
2107 F4	5110 B10
2108 F3	5111 A8
2109 F3	5112 A11
2110 B3	5114 B11
2111 B3	5119 G9
2112 B9	5121 E11
2119 H6	5122 H5
2120 H6	5123 G5
2122 I6	5130 E6
2123 I6	5131 C6
2124 I6	6103 A3
2125 H6	6105-1 B4
2126 E7	6105-2 G6
2127 E7	6106 B4
2128 B8	6120 B13
2129 C7	6130 D5
2130 F12	6131 C5
2131 F8	6181 G12
2132 F8	6182 G11
2133 F8	6183 H10
2134 I9	7101 B8
2135 I9	7102 C7
2136 H14	7103 H7
2137 H14	7104 D3
2138 F9	7105 D3
2139 G9	7109 H3
2140 G10	7111 C13
2141 F10	7119 A9
2144 F12	7122 I4
2145 E11	7124 I7
2146 D13	7180 H13
2147 E12	7181 H3
2148 D12	7182 I11
2149 H7	7183 H11
2150 A10	7102 A2
2152 E4	7103 A2
2153 E5	7105 E2
2155 D5	7106 E2
2159 F6	7109 B6
2161 C11	7110 F5
2163 D11	7111 F4
2164 F10	7112 F7
2165 C7	7113 A9
2166 D12	7114 A11
2167 E12	7115 A8
2169 G8	7116 F10
2186 H13	7117 G10
2187 H12	7118 F12
2188 H2	7120 E14
2189 H3	7121 E14
2190 G12	7122 E14
2191 H11	7123 E14
2192 G12	7124 G14
2193 G11	7125 F14
2194 G11	7126 F14
2195 G10	7127 F14
2196 H2	7128 C7
2197 H11	7140 F12
3101 E4	7141 F10
3102 D4	7142 F10
3103 C7	
3104 A7	
3105 B6	
3106 B2	
3107 C3	
3108 D2	
3109 D3	
3113 B9	
3119 A9	
3123 H3	
3125 H3	
3128 I4	
3132 H5	
3134 H6	
3137 I7	
3141 E7	
3142 E7	
3143 G7	
3144 G8	
3145 F8	
3152 H14	
3153 H14	
3155 F12	
3156 C12	
3157 C12	
3158 E13	
3159 D13	
3160 D13	
3161 D13	
3166 F13	
3167 F12	
3170 C12	
3176 G7	
3180 I3	
3181 E6	
3186 F13	
3187 H12	
3188 H12	
3189 H12	
3190 H12	
3191 H2	
3192 H2	
3193 H3	
3194 H3	
3195 H2	
3196 H2	
4101 E2	
4102 E2	

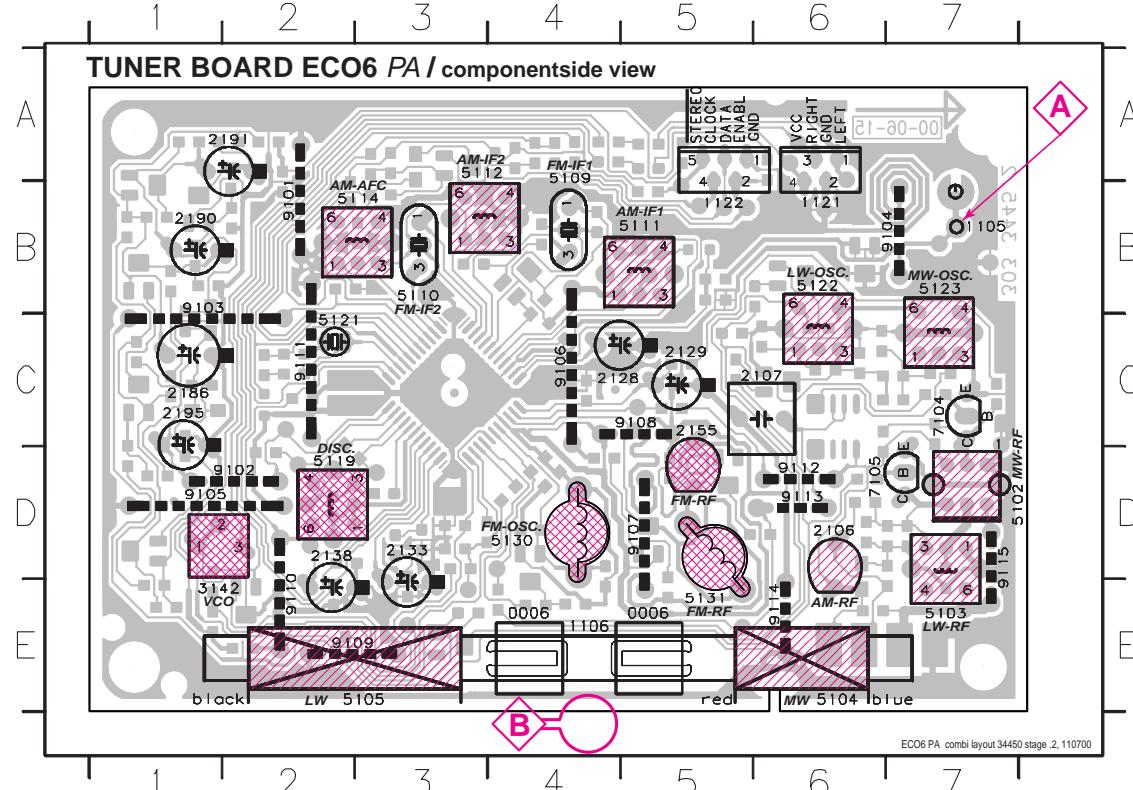
LEGEND

- * ... only assembled in FM/AM-version
- p ... 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 JAPAN version only

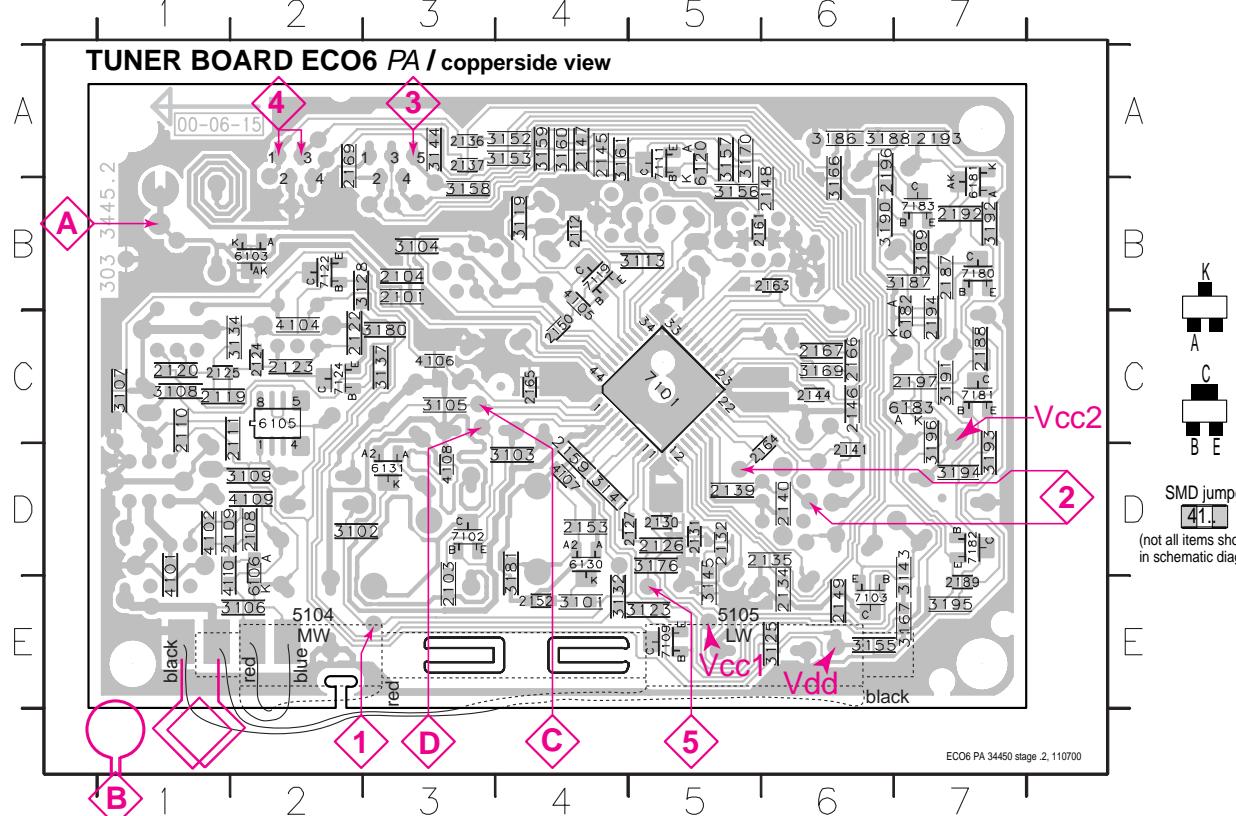
EVM ... FM mode stereo
...V ... MW mode
...V ... LW mode
voltages measured while set is tuned to a strong transmitter

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 9107 D5 9110 E2 9113 D6
 1121 B6 2107 C6 2133 D3 2186 C1 2195 C1 5103 E7 5111 B4 5119 B2 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 3131 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 B5 3103 D4 3119 B5 3143 D7 3156 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



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 ferrite antenna)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNMENT						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)			108MHz	5130		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 21 shortcircuit to block AFC	5119	2	0 - 3 mV DC
FM RF						
FM 87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)	108MHz	A	108MHz	2155	4	MAX
	87.5MHz (65.81MHz)	mod=1kHz $\Delta f=-22.5\text{kHz}$	87.5MHz (65.81MHz)	5131		
VCO						
FM	98MHz, 1mV continuous wave	A	98MHz	3142	3	152kHz -1kHz ¹⁾
AM IF						
MW	450kHz	C	IC 7101 36 $\Delta f=-10\text{kHz}$ $V_{RF}=0.5\text{mV}$ (as low as possible) see remark 2)	5111	5	
	connect pin 6 of IC 7101 (AM Osc.) with 2.2k% to Vcc	IC 7101 40 $220\text{R} \pm 100\text{nF}$	5112			
AM AFC		C	continuous wave $V_{RF}=2\text{mV}$	5114	2	0 - 2 mV DC
AM RF³⁾						
LW	198kHz	B	198kHz	5105	LW ferrite coil	
MW FM/MW/LW- and FM/MW-version (9kHz grid) 531 - 1602kHz	1494kHz		1494kHz	2106		
	558kHz		558kHz	5104	MW ferrite coil	
MW FM/AM-version, 10kHz grid 530 - 1700kHz	1500kHz	B	1500kHz	2106		
	560kHz		560kHz	5104	MW ferrite coil	

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.

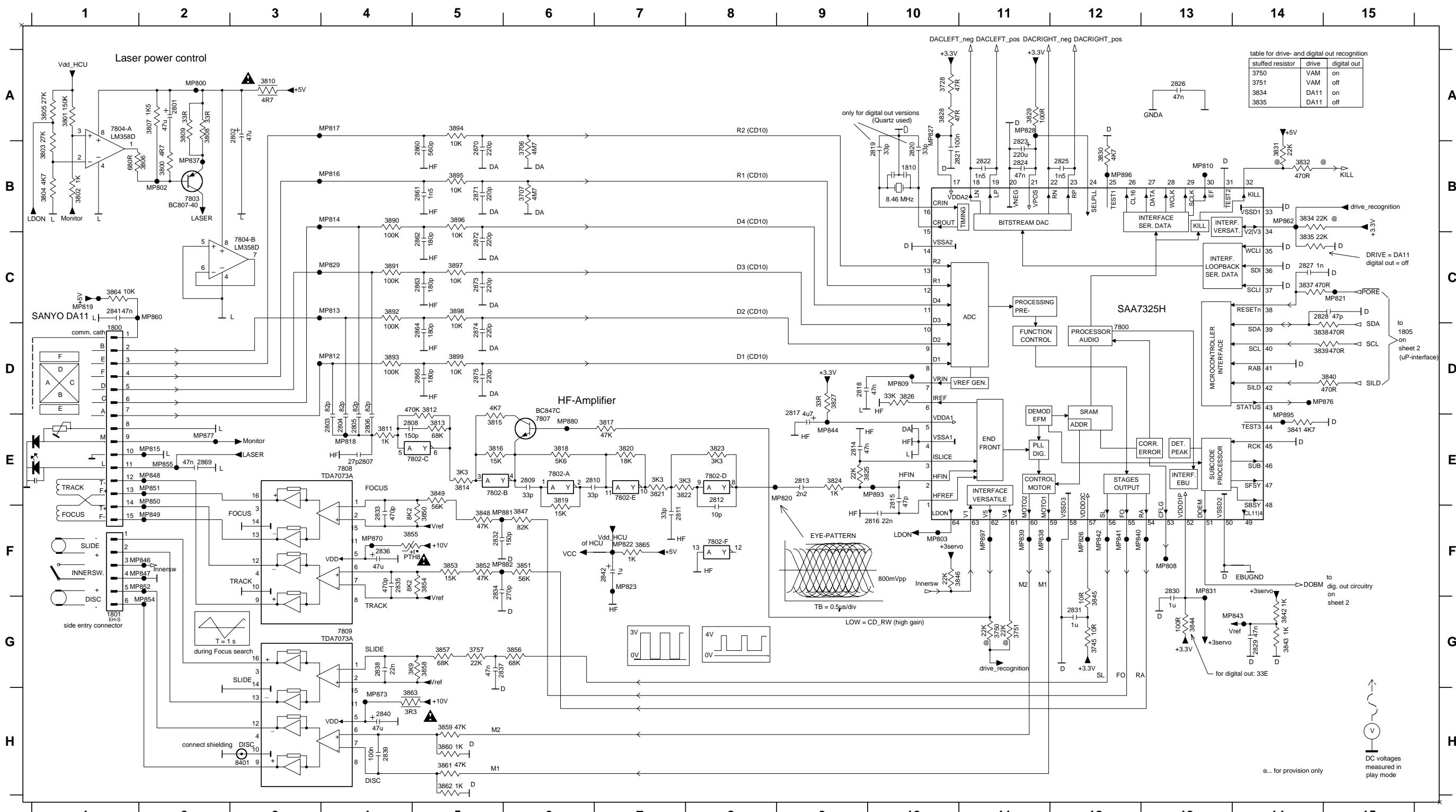
³⁾ LW has to be aligned before MW.

Repeat

ECO6, general with ferrite antenna, 070799

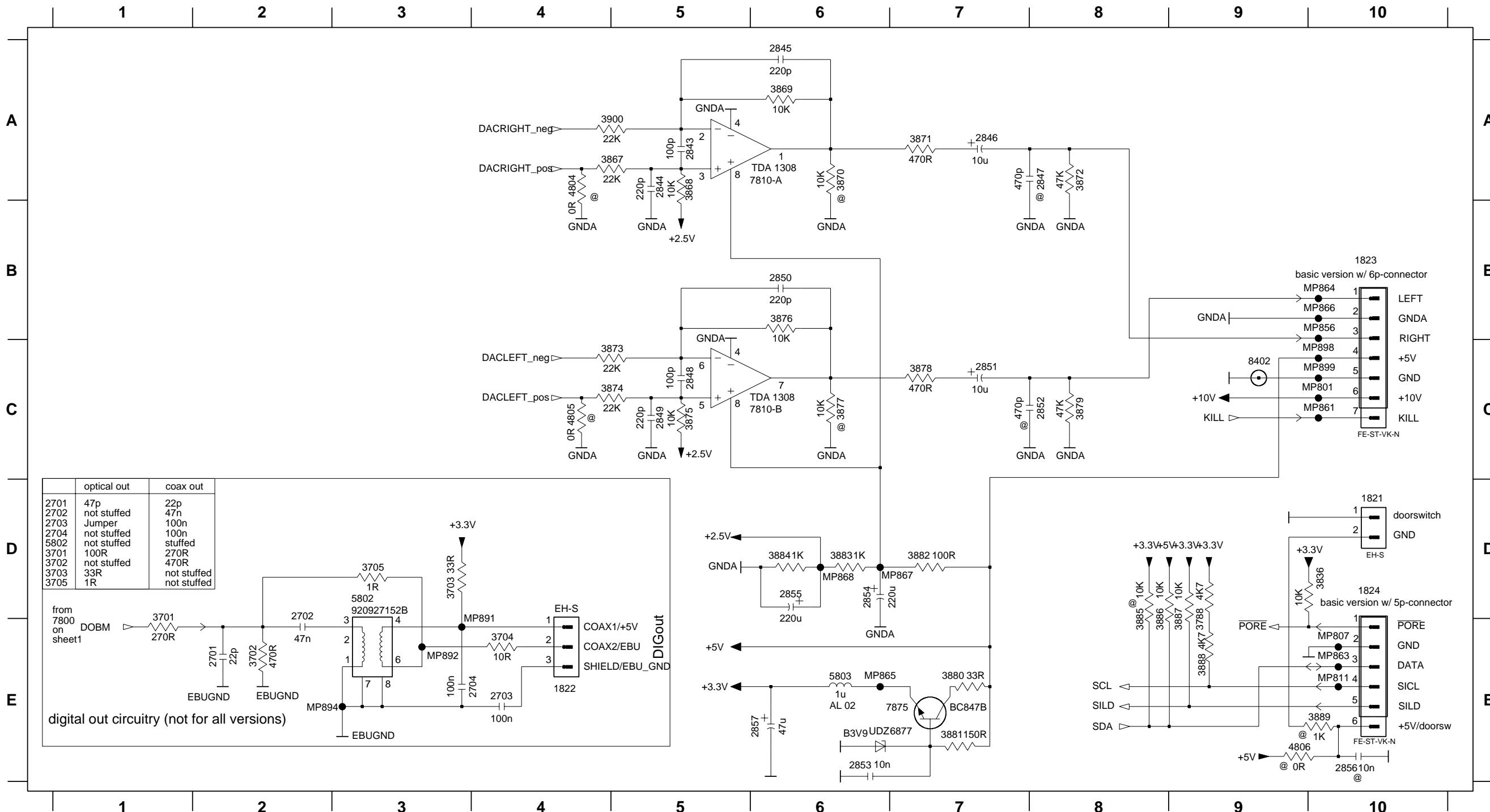
CD99 BOARD - CIRCUIT DIAGRAM

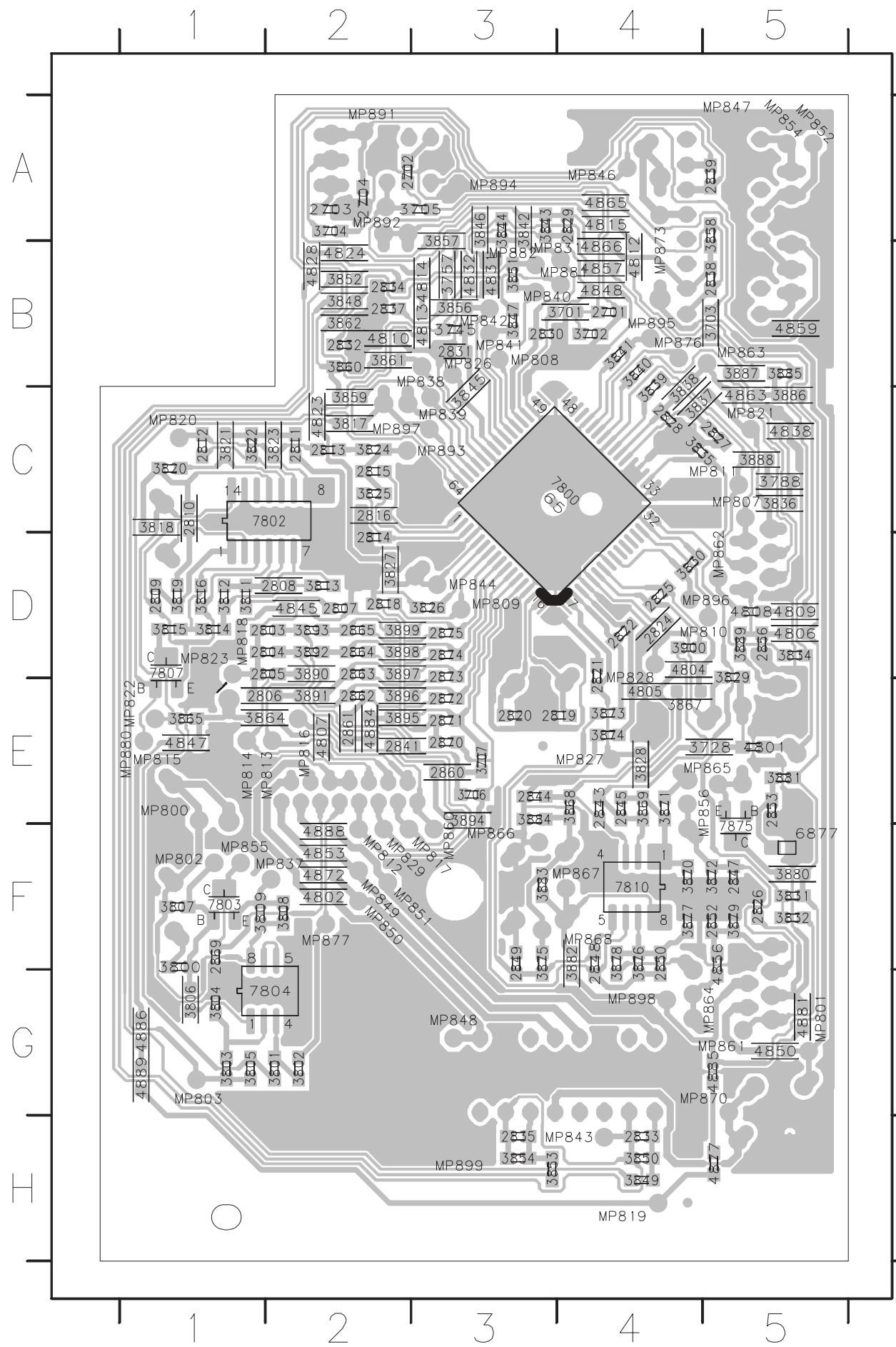
1800 D1	2807 E4	2815 E10	2823 B11	2831 G12	2839 H4	2864 D5	2875 D5	3800 B2	3816 E5	3824 E9	3832 B14	3842 G14	3850 F5	3858 G5	3890 B4	3898 C5	7802-F8	MP800 A2	MP814 B4	MP822 F7	MP838 F11	MP847 F2	MP860 C2	MP882 F5		
1801 G1	2808 E4	2816 F10	2824 B11	2832 F5	2840 H4	2865 D5	3706 B6	3801 A1	3809 A2	3817 E7	3825 E9	3834 G14	3851 F6	3859 H5	3891 C4	3899 D5	7803 B2	MP802 B2	MP815 E2	MP823 F7	MP839 F11	MP848 E2	MP862 B14	MP893 E10		
2800 A2	2809 E6	2817 D9	2825 B12	2833 F4	2841 C1	2869 E2	3707 B6	3802 B1	3810 A3	3818 E6	3826 D10	3835 C14	3844 G13	3852 F5	3860 H5	3892 C4	3899 D5	7800 D12	MP803 F10	MP816 B4	MP826 F12	MP840 F12	MP849 F2	MP870 F4	MP895 E14	
2802 A3	2810 E6	2818 D9	2826 A13	2834 F5	2842 F7	2870 B5	3728 A10	3803 B1	3811 E4	3819 E6	3827 D9	3837 C14	3845 G12	3853 F5	3861 H5	3893 D4	3899 D5	7804-A E6	7804-B C3	MP808 F13	MP817 A4	MP827 A10	MP841 F12	MP850 E2	MP873 H4	MP896 B12
2803 E4	2811 F7	2819 B10	2827 C14	2835 F4	2846 B5	2871 B5	3745 G12	3804 B1	3812 D5	3820 E7	3828 A10	3838 D14	3846 F10	3854 F5	3862 H5	3894 A5	3899 D5	7802-B E5	7807 E6	MP809 D10	MP818 E4	MP828 A11	MP842 F12	MP851 E2	MP876 D14	MP897 F11
2804 E4	2812 E8	2820 B10	2828 C14	2836 F4	2861 B5	2872 C5	3750 G11	3805 A1	3813 E5	3821 E7	3829 A11	3839 D14	3847 F6	3855 F4	3863 H4	3895 B5	3899 D5	7802-C E5	7808 E4	MP810 B13	MP819 C1	MP829 C4	MP843 G14	MP852 F2	MP877 E2	MP897 F11
2805 E4	2813 E9	2821 B11	2829 G14	2837 G5	2862 C5	2873 C5	3751 G11	3806 B2	3814 E5	3822 E7	3830 B12	3840 D15	3848 F5	3856 G6	3864 C1	3896 B5	3899 D5	7802-D E8	7809 G4	MP812 D4	MP820 E9	MP831 F13	MP844 E9	MP854 G2	MP880 E6	MP897 F11
2806 E4	2814 E9	2822 B11	2830 F13	2838 G4	2863 C5	2874 D5	3757 G5	3807 A2	3815 E5	3823 E8	3831 B14	3841 E14	3849 E5	3857 G5	3865 F7	3897 C5	3899 D5	7802-E E7	8401 H3	MP813 C4	MP821 C15	MP837 B2	MP846 F2	MP855 E2	MP881 F5	MP897 F11



CD99 BOARD - CIRCUIT DIAGRAM

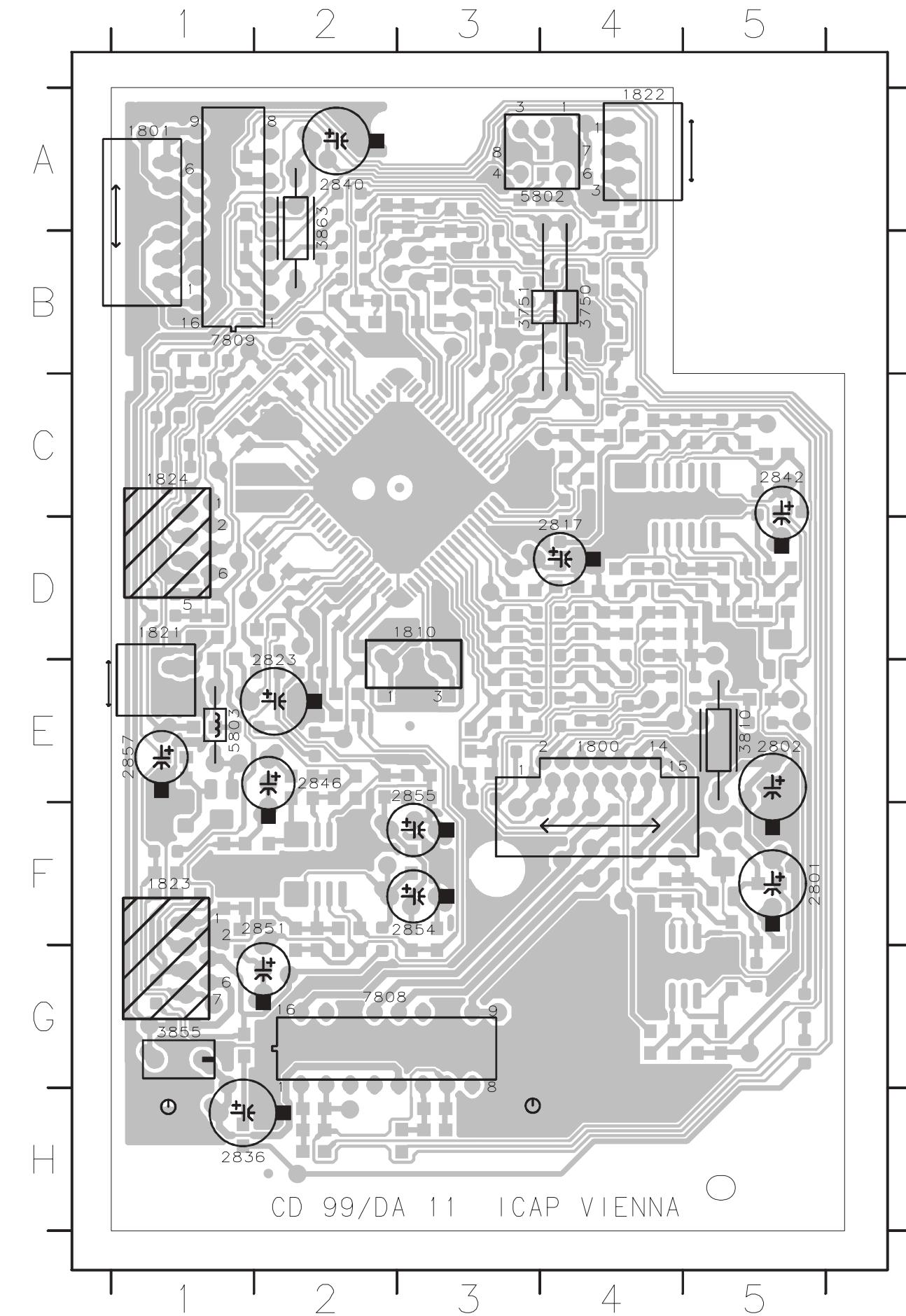
1821 D10	2702 E2	2845 A6	2850 B6	2855 D6	3703 D3	3867 A5	3872 A8	3877 C6	3882 D7	3887 E9	4805 C4	7810-A A5	MP807 E10	MP864 B10	MP891 E4
1822 E4	2703 E4	2846 A7	2851 C7	2856 E10	3704 E4	3868 A5	3873 C5	3878 C7	3883 D6	3888 E9	4806 E9	7810-B C5	MP811 E10	MP865 E6	MP892 E3
1823 B10	2704 E3	2847 A8	2852 C8	2857 E6	3705 D3	3869 A6	3874 C5	3879 C8	3884 D6	3889 E10	5802 D3	7875 E7	MP856 B10	MP866 B10	MP894 E2
1824 D10	2843 A5	2848 C5	2853 E6	3701 E1	3788 E9	3870 A6	3875 C5	3880 E7	3885 E8	3900 A5	5803 E6	8402 C9	MP861 C10	MP867 D7	MP898 C10
2701 E2	2844 A5	2849 C5	2854 D6	3702 E2	3836 D10	3871 A7	3876 B6	3881 E7	3886 E8	4804 A4	6877 E7	MP801 C10	MP863 E10	MP868 D6	MP899 C10



**CD99 BOARD - LAYOUT DIAGRAM
(COPPER SIDE VIEW)**


2701	B4	2873	D3	3847	B3	4810	B2	MP826	B3
2702	A2	2874	D3	3848	B2	4812	B4	MP827	E4
2703	A2	2875	D3	3849	H4	4813	B3	MP828	D4
2704	A2	3701	B4	3850	H4	4814	B3	MP829	F2
2803	D2	3702	B4	3851	B3	4815	A4	MP831	B4
2804	D2	3703	B5	3852	B2	4823	C2	MP837	F2
2805	D2	3704	A2	3853	H3	4824	B2	MP838	B3
2806	E1	3705	A3	3854	H3	4828	B2	MP839	C3
2807	D2	3706	E3	3856	B3	4831	B3	MP840	B3
2808	D2	3707	E3	3857	B3	4832	B3	MP841	B3
2809	D1	3728	E5	3858	A5	4838	C5	MP842	B3
2810	C1	3745	B3	3859	C2	4845	D2	MP843	H4
2811	C2	3757	B3	3860	B2	4847	E1	MP844	D3
2812	C1	3788	C5	3861	B2	4848	B4	MP846	A4
2813	C2	3800	F1	3862	B2	4850	G5	MP847	A5
2814	D2	3801	G2	3864	E1	4853	F2	MP848	G3
2815	C2	3802	G2	3865	E1	4856	F5	MP849	F2
2816	C2	3803	G1	3867	E4	4857	B4	MP850	F2
2818	D2	3804	G1	3868	E4	4859	B5	MP851	F3
2819	E4	3805	G1	3869	E4	4863	C5	MP852	A5
2820	E3	3806	G1	3870	F4	4865	A4	MP854	A5
2821	D4	3807	F1	3871	E4	4866	B4	MP855	F1
2822	D4	3808	F2	3872	F5	4872	F2	MP856	E5
2824	D4	3809	F1	3873	E4	4877	H5	MP860	F3
2825	D4	3811	D1	3874	E4	4881	G5	MP861	G5
2826	F5	3812	D1	3875	F3	4884	E2	MP862	D5
2827	C5	3813	D2	3876	F4	4885	G5	MP863	B5
2828	C4	3814	D1	3877	F4	4886	G1	MP864	G5
2829	A4	3815	D1	3878	F4	4888	F2	MP865	E5
2830	B3	3816	D1	3879	F5	4889	G1	MP866	F3
2831	B3	3817	C2	3880	F5	6877	F5	MP867	F4
2832	B2	3818	C1	3881	E5	7800	C4	MP868	F4
2833	H4	3819	D1	3882	F4	7802	C2	MP870	G5
2834	B2	3820	C1	3883	F3	7803	F1	MP873	B4
2835	H3	3821	C1	3884	E3	7804	G2	MP876	B4
2837	B2	3822	C1	3885	B5	7807	D1	MP877	F2
2838	B5	3823	C2	3886	C5	7810	F4	MP880	E1
2839	A5	3824	C2	3887	B5	7875	F5	MP881	B4
2841	E2	3825	C2	3888	C5	MP800	E1	MP882	B3
2843	E4	3826	D3	3889	D5	MP801	G5	MP891	A2
2844	E3	3827	D2	3890	D2	MP802	F1	MP892	A2
2845	E4	3828	E4	3891	E2	MP803	G1	MP893	C3
2847	F5	3829	D5	3892	D2	MP807	C5	MP894	A3
2848	F4	3830	D4	3893	D2	MP808	B3	MP895	B4
2849	F3	3831	F5	3894	E3	MP809	D3	MP896	D5
2850	F4	3832	F5	3895	E2	MP810	D5	MP897	C2
2852	F5	3834	D5	3896	E2	MP811	C5	MP898	G4
2853	E5	3835	C4	3897	D2	MP812	F2	MP899	H3
2856	D5	3836	C5	3898	D2	MP813	E2		
2860	E3	3837	C4	3899	D2	MP814	E1		
2861	E2	3838	C4	3900	D4	MP815	E1		
2862	E2	3839	C4	4801	E5	MP816	E2		
2863	D2	3840	B4	4802	F2	MP817	F3		
2864	D2	3841	B4	4804	D4	MP818	D1		
2865	D2	3842	A3	4805	E4	MP819	H4		
2869	F1	3843	A3	4806	D5	MP820	C1		
2870	E3	3844	A3	4807	E2	MP821	C5		
2871	E3	3845	C3	4808	D5	MP822	E1		
2872	E3	3846	A3	4809	D5	MP823	D1		

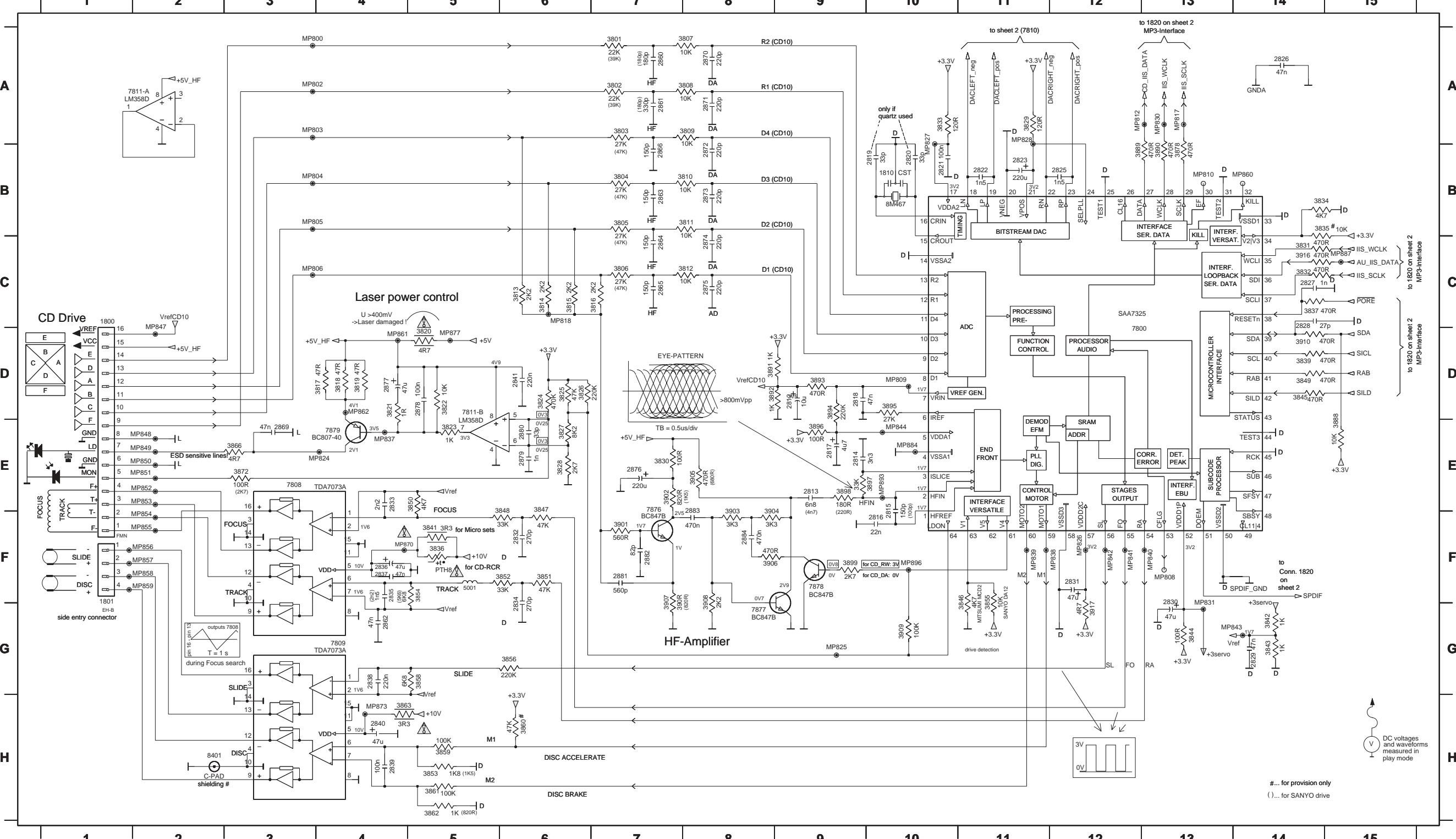
**CD99 BOARD - LAYOUT DIAGRAM
(COMPONENT SIDE VIEW)**



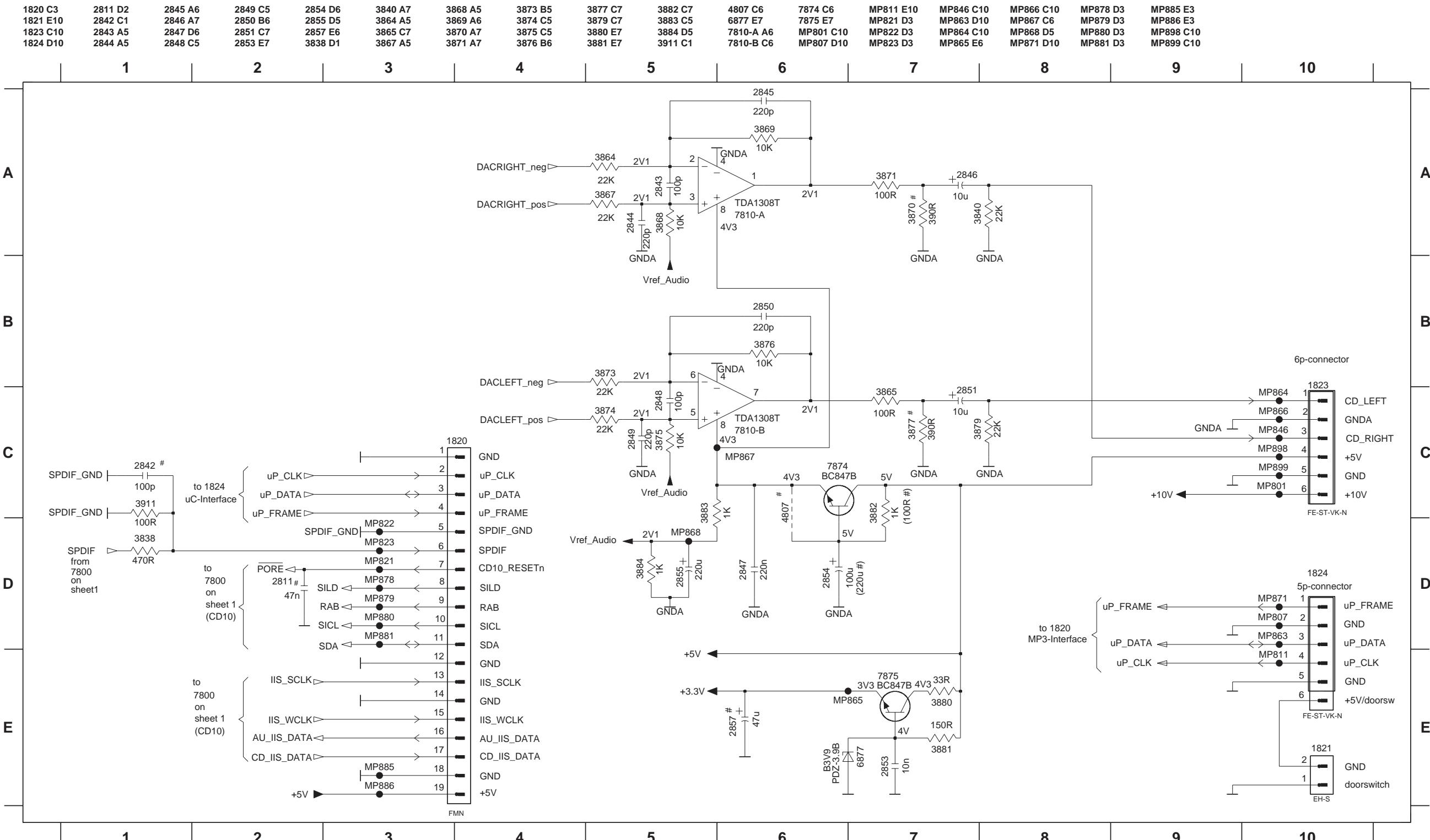
1800	F4
1801	A1
1810	D3
1821	E1
1822	A4
1823	G1
1824	D1
2801	F5
2802	E5
2817	D4
2823	E2
2836	G1
2840	A2
2842	C5
2846	E2
2851	G2
2854	F3
2855	E3
2857	E1
3750	B4
3751	B4
3810	E5
3855	G1
3863	A2
5802	A4
5803	E1
7808	G2
7809	A1
8401	H3
8402	H1

MP3 BOARD - CIRCUIT DIAGRAM

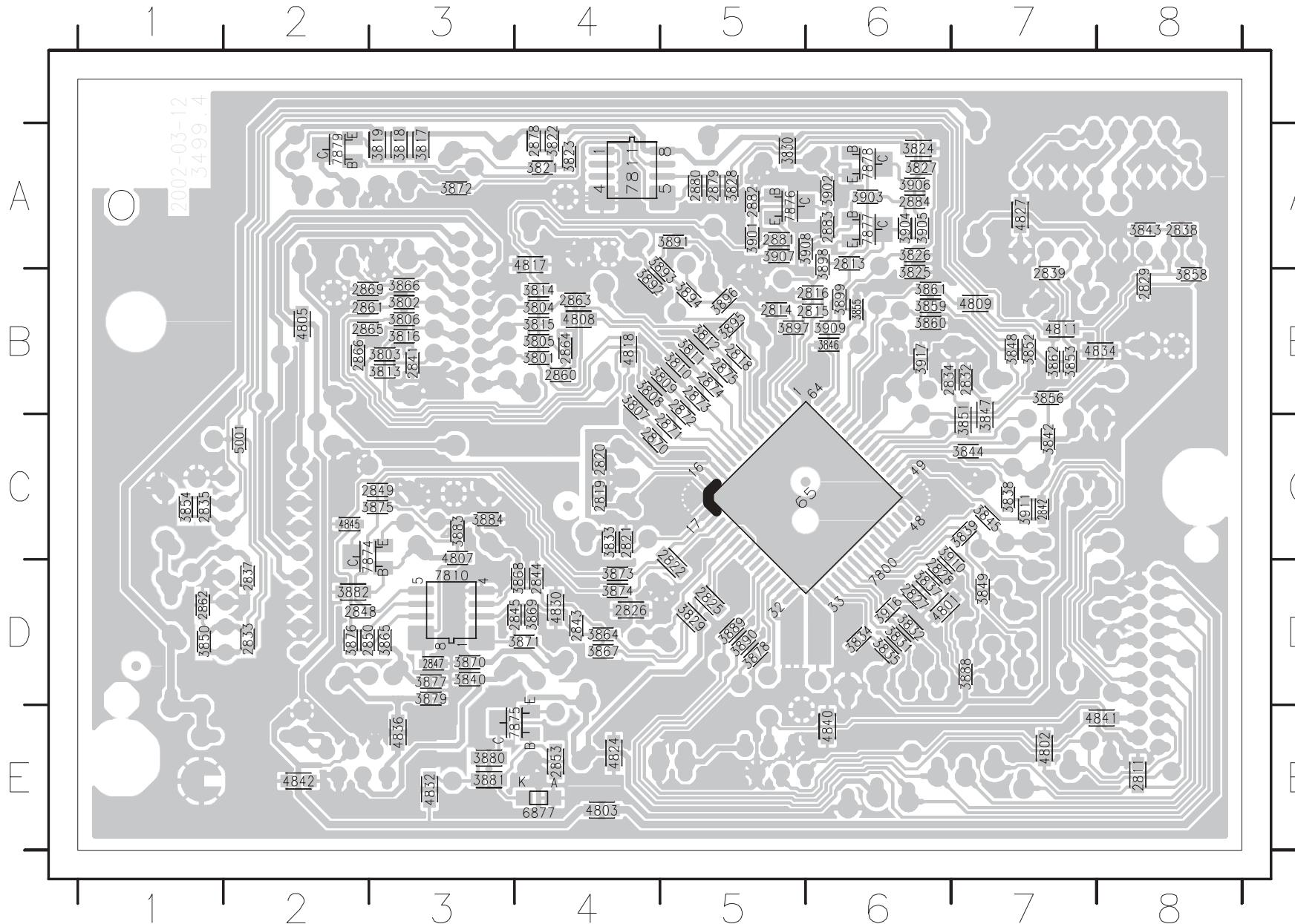
1800 C1	2816 F10	2823 B11	2831 F12	2838 G4	2863 B7	2872 B8	2879 E6	3802 A7	3809 A8	3816 C7	3823 E5	3830 E7	3837 C14	3846 F11	3853 H5	3861 H5	3889 B12	3896 E9	3904 F8	3916 C14	MP802 A3	MP810 B13	MP827 A10	MP840 F13	MP849 E2	MP856 F2	MP870 F4
1801 G1	2817 E9	2825 B12	2832 E6	2839 H4	2864 C7	2873 B8	2880 E6	3803 A7	3810 B8	3817 D3	3824 D6	3831 C14	3847 E6	3854 F11	3862 H5	3880 B13	3895 E10	3905 E8	3917 G12	MP803 A3	MP812 A12	MP828 A11	MP841 F12	MP850 E2	MP857 F2	MP873 H4	
1810 B10	2818 D9	2826 A14	2833 E4	2840 H4	2865 C7	2874 C8	2881 F7	3804 B7	3811 B8	3818 D4	3825 D6	3832 C14	3848 F6	3855 F11	3863 H4	3881 D8	3898 E9	3906 F8	5001 F5	7877 G8	MP804 B3	MP817 A13	MP830 A13	MP842 F12	MP851 E2	MP858 F2	MP877 D5
2812 D9	2819 B10	2827 C14	2834 G6	2841 D6	2866 B7	2875 C8	2882 F7	3805 B7	3812 C8	3819 D4	3826 D6	3833 A10	3842 G14	3849 D14	3856 G6	3863 E3	3892 D8	3899 F7	7878 F7	7880 C12	MP805 B3	MP818 C6	MP831 G13	MP843 G13	MP852 E2	MP859 F2	MP884 E10
2813 E9	2821 B10	2828 C14	2835 F4	2860 A7	2869 E3	2876 E7	2883 F8	3806 C7	3813 C6	3820 D5	3827 E6	3834 B10	3843 G14	3850 E5	3858 G5	3872 E3	3893 D9	3901 F7	7879 E4	7880 E3	MP806 C3	MP824 E4	MP837 E4	MP844 E10	MP853 E2	MP860 B14	MP867 C15
2814 E9	2821 B10	2829 G14	2836 F4	2861 A7	2870 A8	2877 D4	2884 F8	3807 A8	3814 C6	3821 D4	3828 E6	3835 B14	3844 G13	3851 F6	3859 G5	3878 B13	3894 D9	3902 E7	7880 G4	8401 H2	MP808 F13	MP825 G9	MP838 F12	MP847 D2	MP854 F2	MP861 D4	MP869 E10
2815 E10	2822 B11	2830 G13	2837 F4	2862 G4	2871 A8	2878 D5	3801 A7	3815 C6	3822 D5	3829 A11	3836 F5	3845 D14	3852 F6	3860 H6	3888 E15	3895 D10	3903 F8	3910 D14	7811-A A2	MP809 D10	MP826 F12	MP839 F11	MP848 E2	MP855 F2	MP862 D4	MP896 F10	



MP3 BOARD- CIRCUIT DIAGRAM

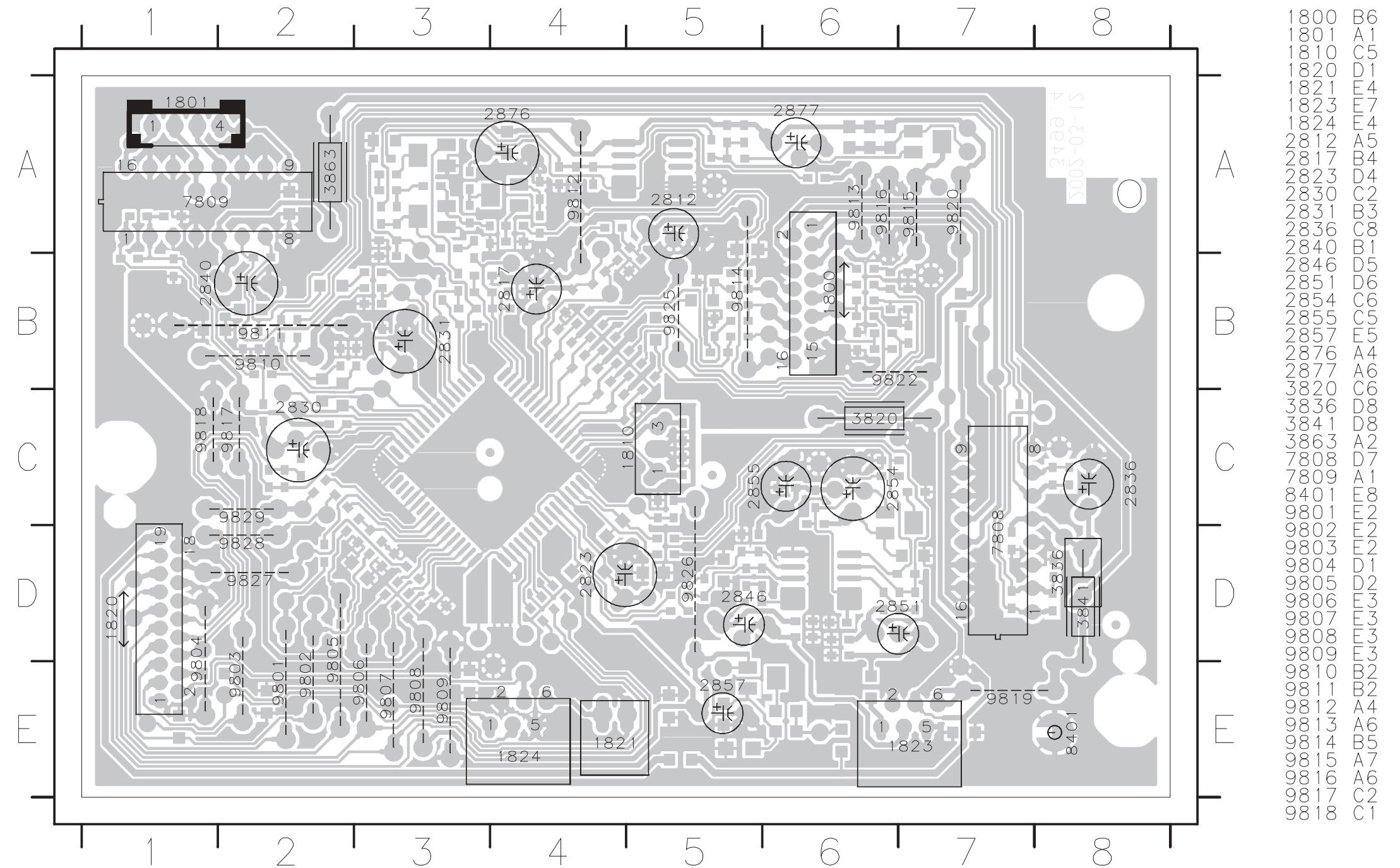


MP3 BOARD - LAYOUT DIAGRAM (COPPER SIDE VIEW)



2811	E8	2878	A4	3843	A8	3894	B5	7876	A5
2813	A6	2879	A5	3844	C7	3895	B5	7877	A6
2814	B5	2880	A5	3845	C7	3896	B5	7878	A6
2815	B6	2881	A5	3846	B6	3897	B5	7879	A2
2816	B6	2882	A5	3847	C7	3898	A6		
2818	B5	2883	A6	3848	B7	3899	B6		
2819	C4	2884	A6	3849	D7	3901	A5		
2820	C4	3801	B4	3850	D1	3902	A6		
2821	C4	3802	B3	3851	C7	3903	A6		
2822	D5	3803	B3	3852	B7	3904	A6		
2825	D5	3804	B4	3853	B7	3905	A6		
2826	D4	3805	B4	3854	C1	3906	A6		
2827	D6	3806	B3	3855	B6	3907	A5		
2828	D6	3807	B4	3856	B7	3908	A5		
2829	B8	3808	B4	3858	B8	3909	B6		
2832	B7	3809	B5	3859	B6	3910	C7		
2833	D2	3810	B5	3860	B6	3911	C7		
2834	B6	3811	B5	3861	B6	3916	D6		
2835	C1	3812	B5	3862	B7	3917	B6		
2837	D2	3813	B3	3864	D4	4801	D6		
2838	A8	3814	B4	3865	D3	4802	E7		
2839	B7	3815	B4	3866	B3	4803	E4		
2841	B3	3816	B3	3867	D4	4805	B2		
2842	C7	3817	A3	3868	D4	4807	C3		
2843	D4	3818	A3	3869	D4	4808	B4		
2844	D4	3819	A3	3870	D3	4809	B7		
2845	D3	3821	A4	3871	D4	4811	B7		
2847	D3	3822	A4	3872	A3	4817	A4		
2848	D2	3823	A4	3873	D4	4818	B4		
2849	C3	3824	A6	3874	D4	4824	E4		
2850	D2	3825	B6	3875	C3	4827	A7		
2853	E4	3826	A6	3876	D2	4830	D4		
2860	B4	3827	A6	3877	D3	4832	E3		
2861	B2	3828	A5	3878	D5	4834	B8		
2862	D1	3829	D5	3879	D3	4836	E3		
2863	B4	3830	A5	3880	E3	4840	E6		
2864	B4	3831	D6	3881	E3	4841	E8		
2865	B2	3832	D6	3882	D2	4842	E2		
2866	B2	3833	C4	3883	C3	4845	C2		
2869	B2	3834	D6	3884	C3	5001	C2		
2870	C4	3835	D6	3888	D7	6877	E4		
2871	C5	3837	D6	3889	D5	7800	D6		
2872	B5	3838	C7	3890	D5	7810	D3		
2873	B5	3839	C7	3891	A5	7811	A4		
2874	B5	3840	D3	3892	B4	7874	C2		
2875	B5	3842	C7	3893	B5	7875	E3		

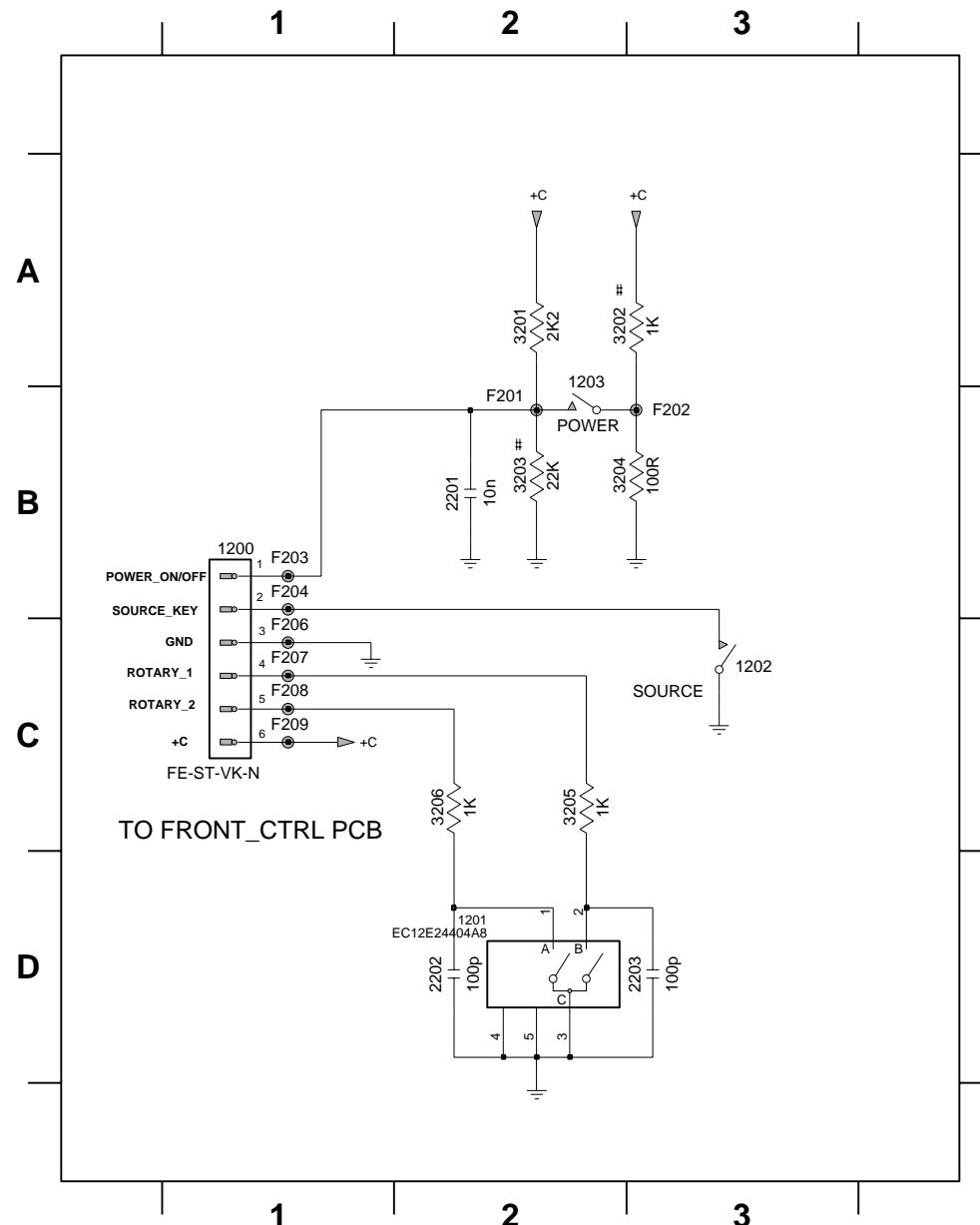
**MP3 BOARD - LAYOUT DIAGRAM
(COMPONENT SIDE VIEW)**



1800	B6	9819	E7
1801	A1	9820	A7
1810	C5	9822	B6
1820	D1	9825	B5
1821	E4	9826	D5
1823	E7	9827	D2
1824	E4	9828	D2
2812	A5	9829	C2
2817	B4		
2830	D4		
2831	C2		
2836	C8		
2840	B1		
2846	D5		
2851	D6		
2854	C5		
2855	C6		
2857	E5		
2876	A4		
2877	A6		
3820	C6		
3836	D8		
3841	D8		
3863	A2		
7808	D7		
7809	A1		
8401	E1		
9801	E2		
9802	E2		
9803	D1		
9804	D2		
9805	D5		
9806	D6		
9807	D7		
9808	D8		
9809	D9		
9810	B2		
9811	B2		
9812	A4		
9813	A6		
9814	B5		
9815	A7		
9816	A6		
9817	C2		
9818	C2		
9819	C1		
9820	C2		
9821	C2		
9822	C2		
9823	C2		
9824	C2		
9825	C2		
9826	C2		
9827	C2		
9828	C2		
9829	C2		
9830	C2		
9831	C2		
9832	C2		
9833	C2		
9834	C2		
9835	C2		
9836	C2		
9837	C2		
9838	C2		
9839	C2		
9840	C2		
9841	C2		
9842	C2		
9843	C2		
9844	C2		
9845	C2		
9846	C2		
9847	C2		
9848	C2		
9849	C2		
9850	C2		
9851	C2		
9852	C2		
9853	C2		
9854	C2		
9855	C2		
9856	C2		
9857	C2		
9858	C2		
9859	C2		
9860	C2		
9861	C2		
9862	C2		
9863	C2		
9864	C2		
9865	C2		
9866	C2		
9867	C2		
9868	C2		
9869	C2		
9870	C2		
9871	C2		
9872	C2		
9873	C2		
9874	C2		
9875	C2		
9876	C2		
9877	C2		
9878	C2		
9879	C2		
9880	C2		
9881	C2		
9882	C2		
9883	C2		
9884	C2		
9885	C2		
9886	C2		
9887	C2		
9888	C2		
9889	C2		
9890	C2		
9891	C2		
9892	C2		
9893	C2		
9894	C2		
9895	C2		
9896	C2		
9897	C2		
9898	C2		
9899	C2		

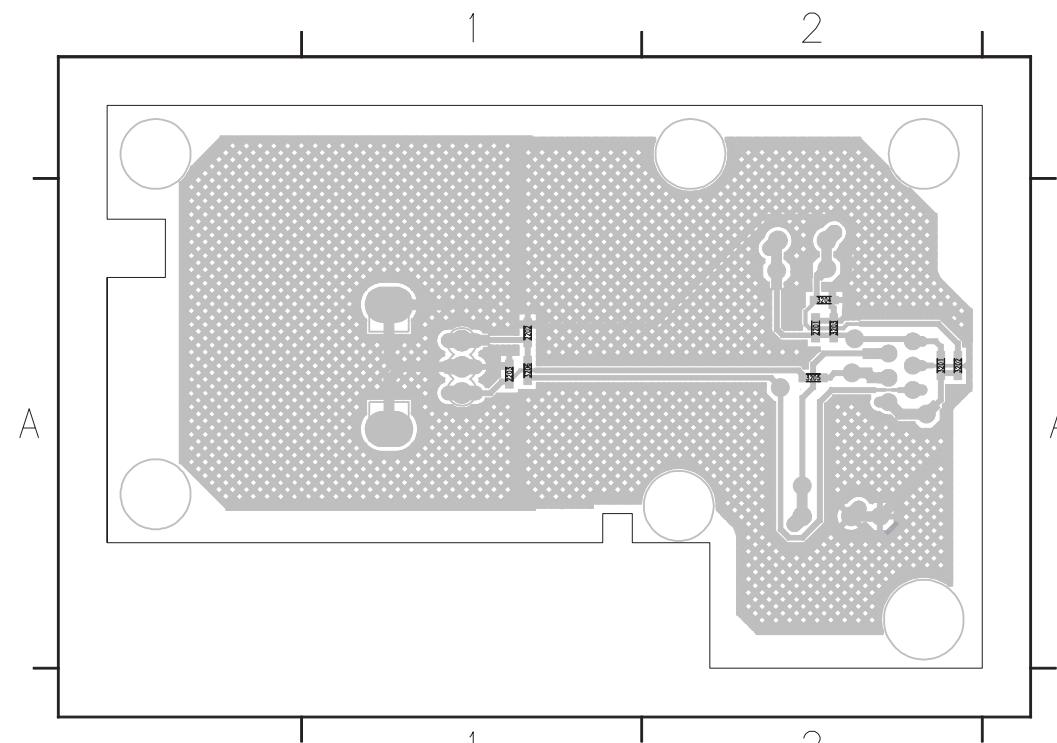
VOLUME BOARD - CIRCUIT DIAGRAM

1200 B1	1203 B2	2203 D3	3203 B2	3206 C2	F203 B1	F207 C1
1201 D2	2201 B2	3201 A2	3204 B2	F201 B2	F204 B1	F208 C1
1202 C3	2202 D2	3202 A2	3205 C2	F202 B3	F206 C1	F209 C1

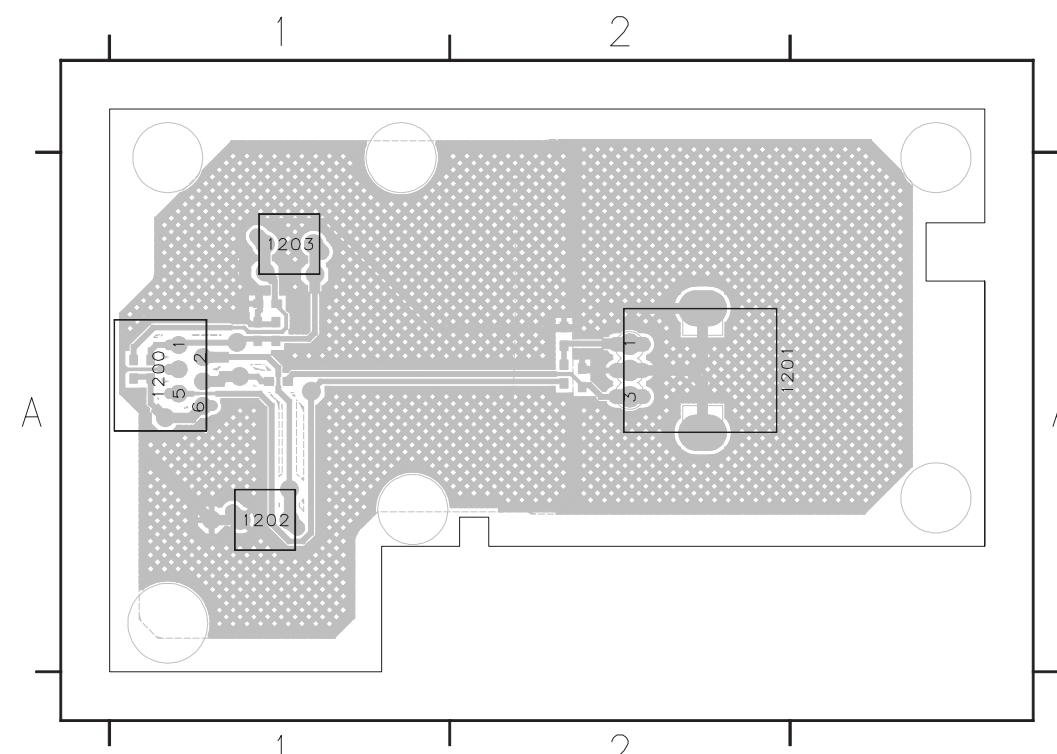


VOLUME BOARD - LAYOUT DIAGRAM

2201	A2
2202	A1
2203	A1
2201	A2
2202	A2
2203	A2
2204	A2
3205	A2
3206	A1

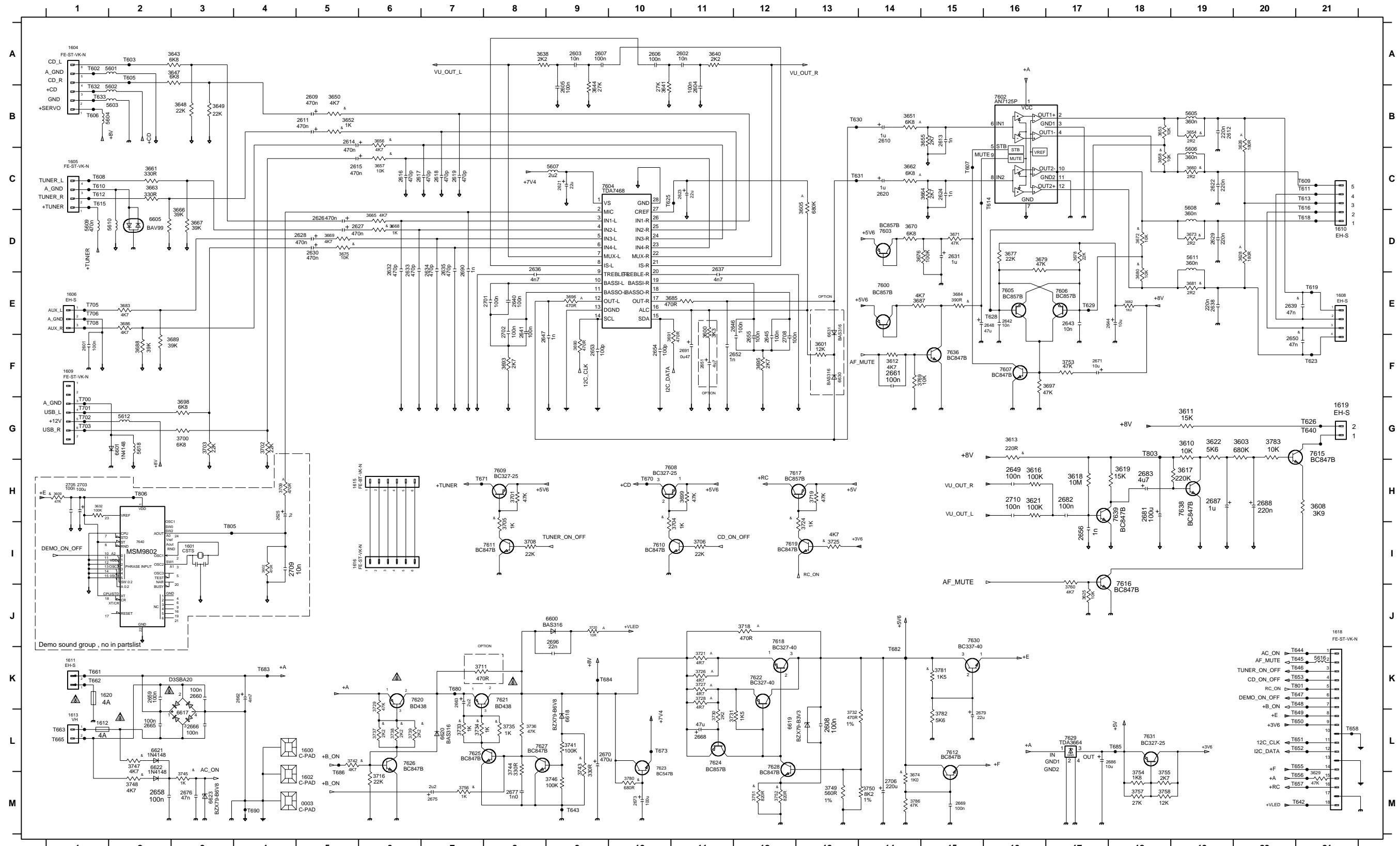


1200	A1
1201	A2
1203	A1



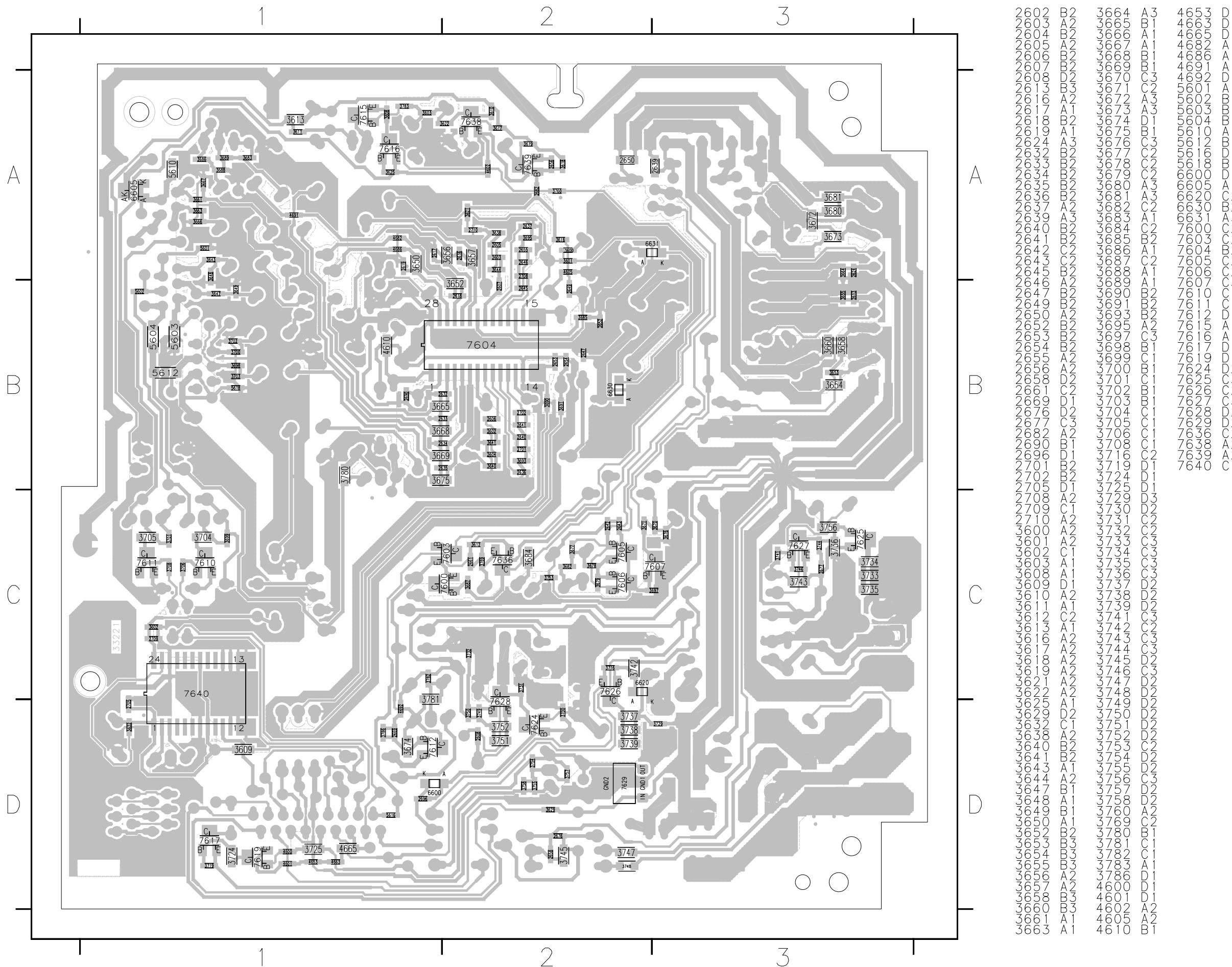
POWER BOARD - CIRCUIT DIAGRAM

0003 M5	1610 D21	2601 F1	2610 B14	2619 C7	2628 D5	2637 D11	2646 E10	2655 F12	2666 L3	2679 L15	2696 J9	3600 E11	3612 F14	3626 B20	3647 A3	3656 B6	3666 D3	3675 D5	3684 E15	3695 F12	3704 H1	3720 J9	3731 L1	3741 L5	3750 M14	3760 J17	5603 B2	5612 G2	6620 L7	7604 C9	7615 G21	7624 L11	7638 H19	7609 C21	T619 E21	T633 B1	T649 L21	T661 K1	T683 K4	T705 E1
1600 L5	1611 K1	2602 A11	2611 B5	2620 C14	2629 D19	2638 E19	2647 F8	2656 H17	2681 H18	2701 E8	3601 F13	3613 F16	3628 D20	3648 B3	3657 C6	3667 D3	3676 D14	3685 E11	3696 E9	3705 H8	3721 K11	3732 L13	3742 L5	3751 M12	3769 F15	5604 B1	5616 K21	6621 L2	7605 E16	7616 H18	7625 L7	7639 H19	7610 C1	T623 F21	T640 G21	T662 K1	T684 K9	T706 E1		
1601 L1	1612 L1	2603 A10	2610 B5	2621 C15	2630 D19	2639 E20	2648 F8	2657 H16	2682 H17	2701 E8	3602 F13	3613 F18	3629 D20	3649 B3	3658 C6	3668 D3	3677 D14	3687 E11	3698 E9	3708 H8	3724 K11	3733 L13	3743 L5	3752 M12	3770 F15	5605 B1	5618 G2	6622 L2	7606 E10	7617 H13	7626 L7	7635 M9	7611 A1	T624 C21	T641 G21	T663 L1	T685 M4	T703 K1		
1602 M5	1613 M1	2604 B11	2612 B5	2623 C15	2632 D15	2641 E8	2650 F20	2660 K3	2671 F17	2705 H19	3605 C13	3616 H17	3638 A8	3651 B14	3661 C2	3670 D16	3688 F2	3699 H11	3709 H4	3726 K11	3735 L8	3745 M3	3754 M18	3782 L15	5607 C9	5630 G2	6623 L2	7603 A2	7613 C21	7628 E16	7644 K21	7653 K21	T670 H10	T690 M4	T703 K18					
1604 A1	1615 H5	2605 B9	2614 B15	2623 C11	2632 D6	2641 E9	2650 F20	2660 K3	2671 F17	2705 H19	3605 C13	3616 H17	3638 A8	3651 B14	3661 C2	3670 D16	3688 F2	3699 H11	3709 H4	3726 K11	3735 L8	3745 M3	3754 M18	3782 L15	5607 C9	5630 G2	6623 L2	7603 A2	7613 C21	7628 E16	7644 K21	7653 K21	T670 H10	T690 M4	T703 K18					
1605 C1	1616 I5	2606 A10	2615 C5	2624 C15	2633 D6	2642 E16	2651 F11	2661 F14	2672 M10	2687 H19	2706 M14	3608 H21	3619 H18	3640 A11	3652 B15	3662 C14	3671 D15	3689 F3	3700 G3	3711 K7	3727 K11	3736 L8	3746 M3	3755 M18	3783 G25	5608 D19	5665 D2	6631 G1	7609 H8	7620 L17	7654 D16	7665 K21	7675 L21	7673 L10	T701 G1	T705 P3				
1606 E1	1616 J5	2607 A9	2616 C6	2625 D4	2634 E17	2643 E17	2652 F12	2662 K4	2675 M7	2688 H20	2708 F14	3609 H1	3621 H16	3641 B16	3653 B11	3663 C15	3673 D19	3682 E18	3690 F9	3701 H3	3716 M6	3728 K11	3737 L6	3747 L2	3756 M7	3786 M14	5609 D19	5667 L3	6617 L3	7606 B14	7610 H10	7621 K6	7630 J15	7666 B1	T615 C16	T645 K21	T655 L21	T671 H7	T700 G1	T805 H2
1608 E21	1619 G21	2608 L13	2617 C6	2626 D5	2635 D7	2644 E18	2653 F9	2663 K7	2676 M6	2689 D7	2709 I4	3610 G19	3622 G19	3643 A3	3654 B19	3664 C15	3673 D19	3682 E18	3691 F0	3702 G4	3718 J2	3729 K6	3738 L6	3748 M2	3757 M18	5601 A2	5610 D1	6618 L9	7602 B16	7611 H8	7622 K12	7631 L18	7667 C15	T616 D21	T632 B1	T648 K21	T658 L21	T682 K14	T702 G1	
1609 F1	1620 K1	2609 B5	2618 C7	2627 D5	2636 D8	2645 F12	2654 F10	2665 L2	2677 M8	2691 F11	2710 H16	3611 G19	3625 J17	3644 B9	3655 B15	3665 D6	3674 E12	3683 F8	3703 G3	3719 H13	3730 L11	3739 L6	3749 M13	3758 M18	5602 B2	5611 D19	6619 L12	7603 D14	7612 L15	7623 L10	7636 F15	7668 C1	T618 D21	T632 B1	T648 K21	T658 L21	T682 K14	T703 G1		

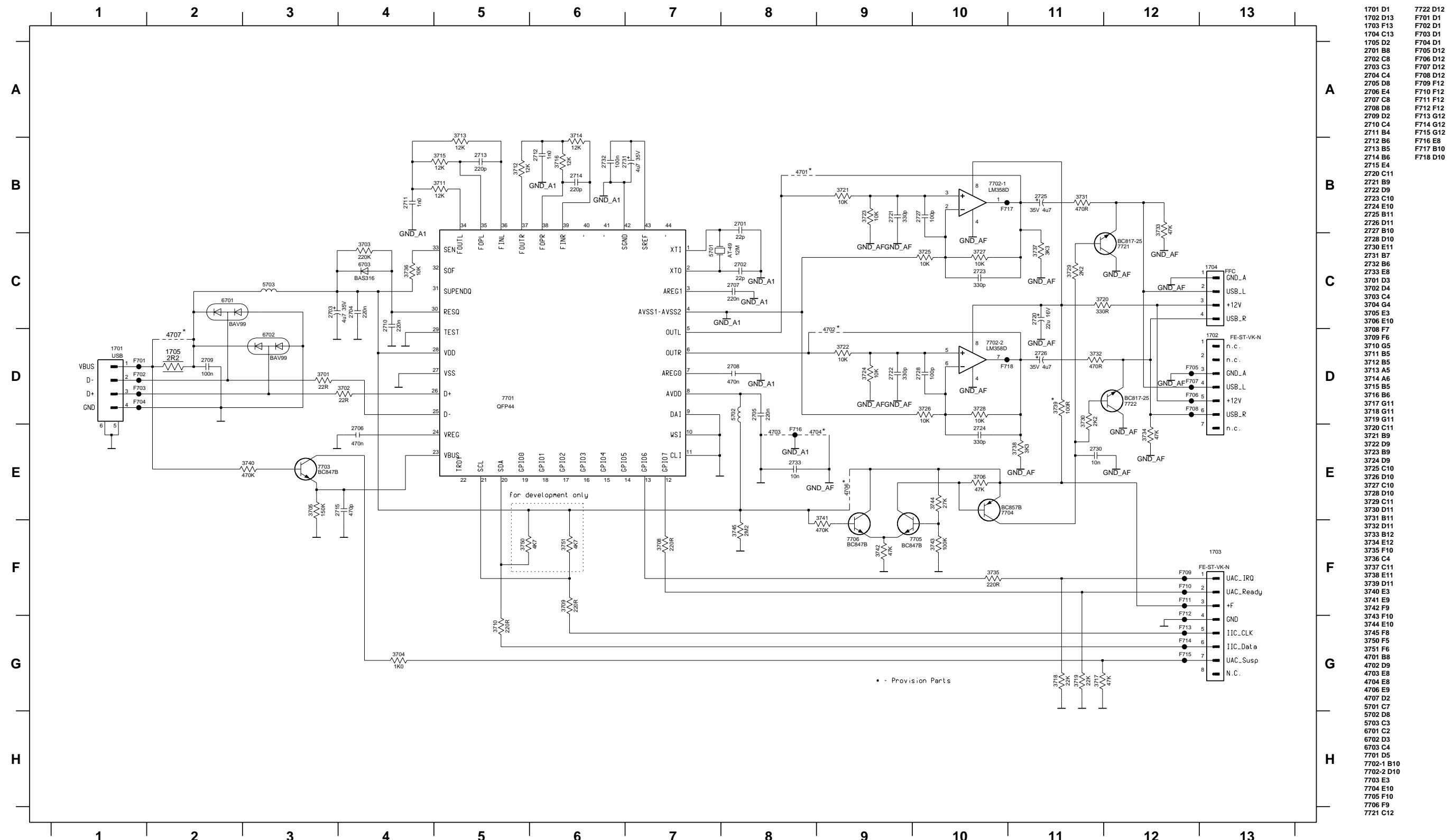


NOTE
 & : EXPRESS 0805 INSTANCES
 A : EXPRESS A1 INSTANCES

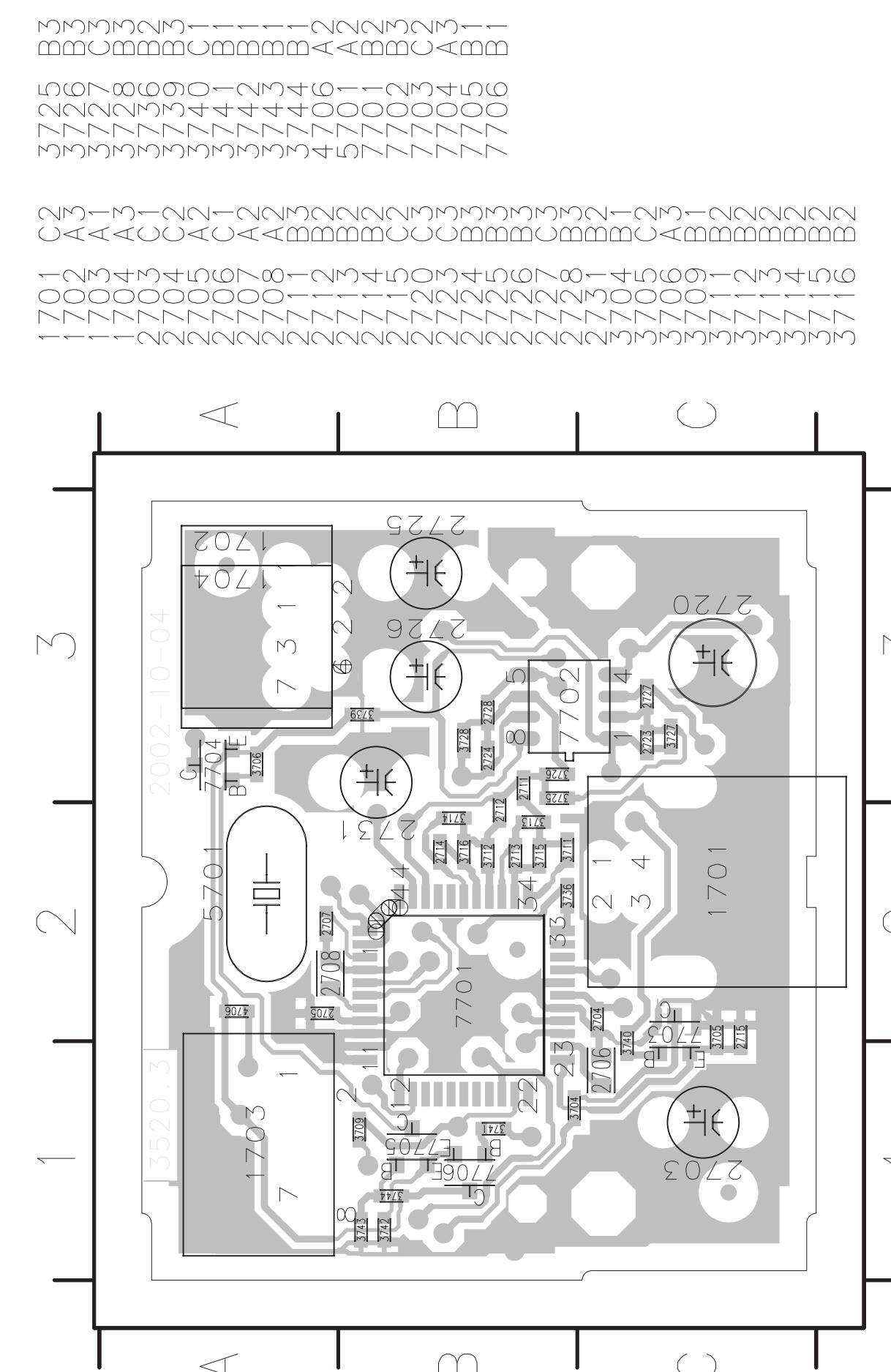
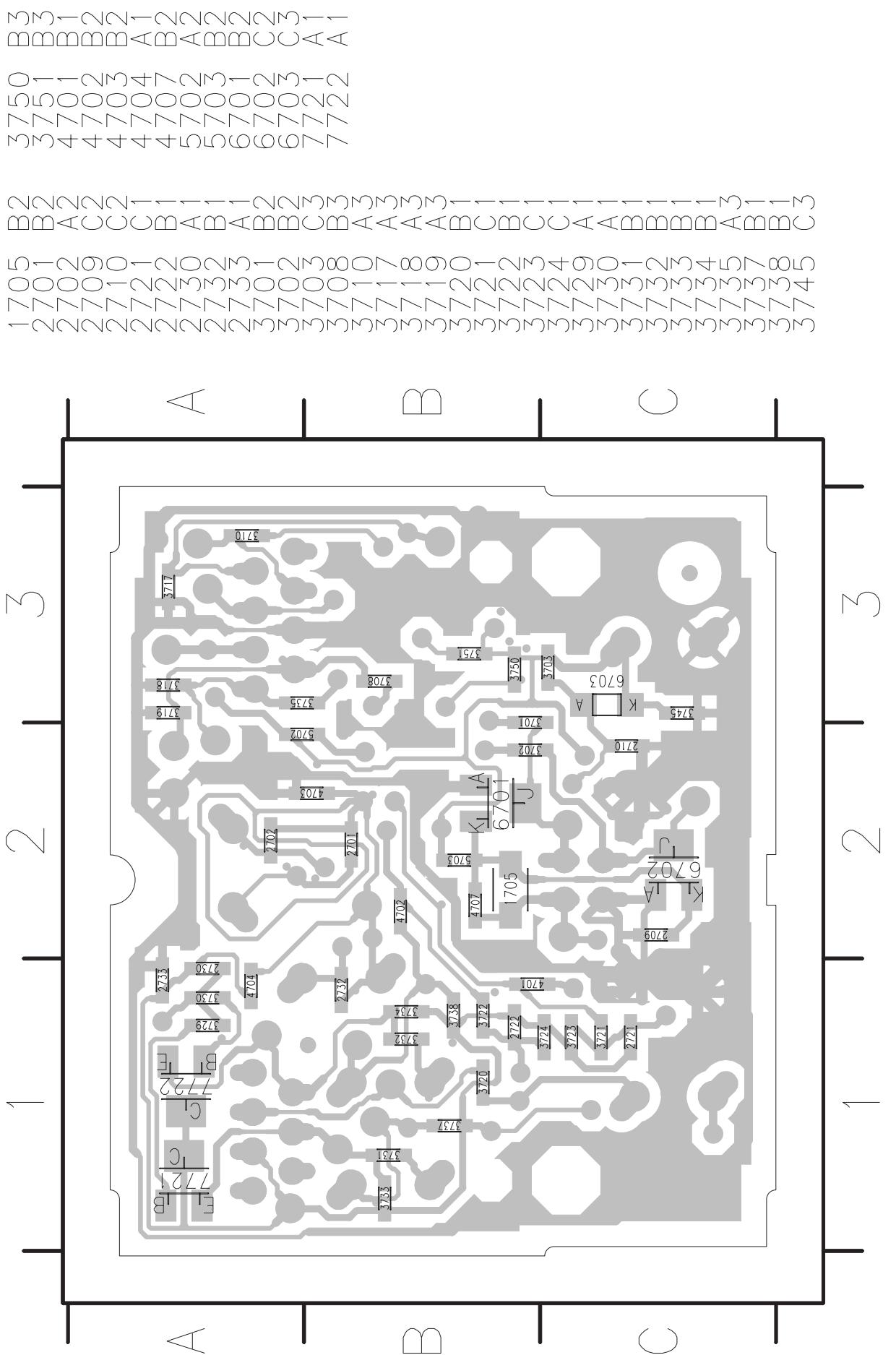
**POWER BOARD - LAYOUT DIAGRAM
(COPPER SIDE VIEW)**



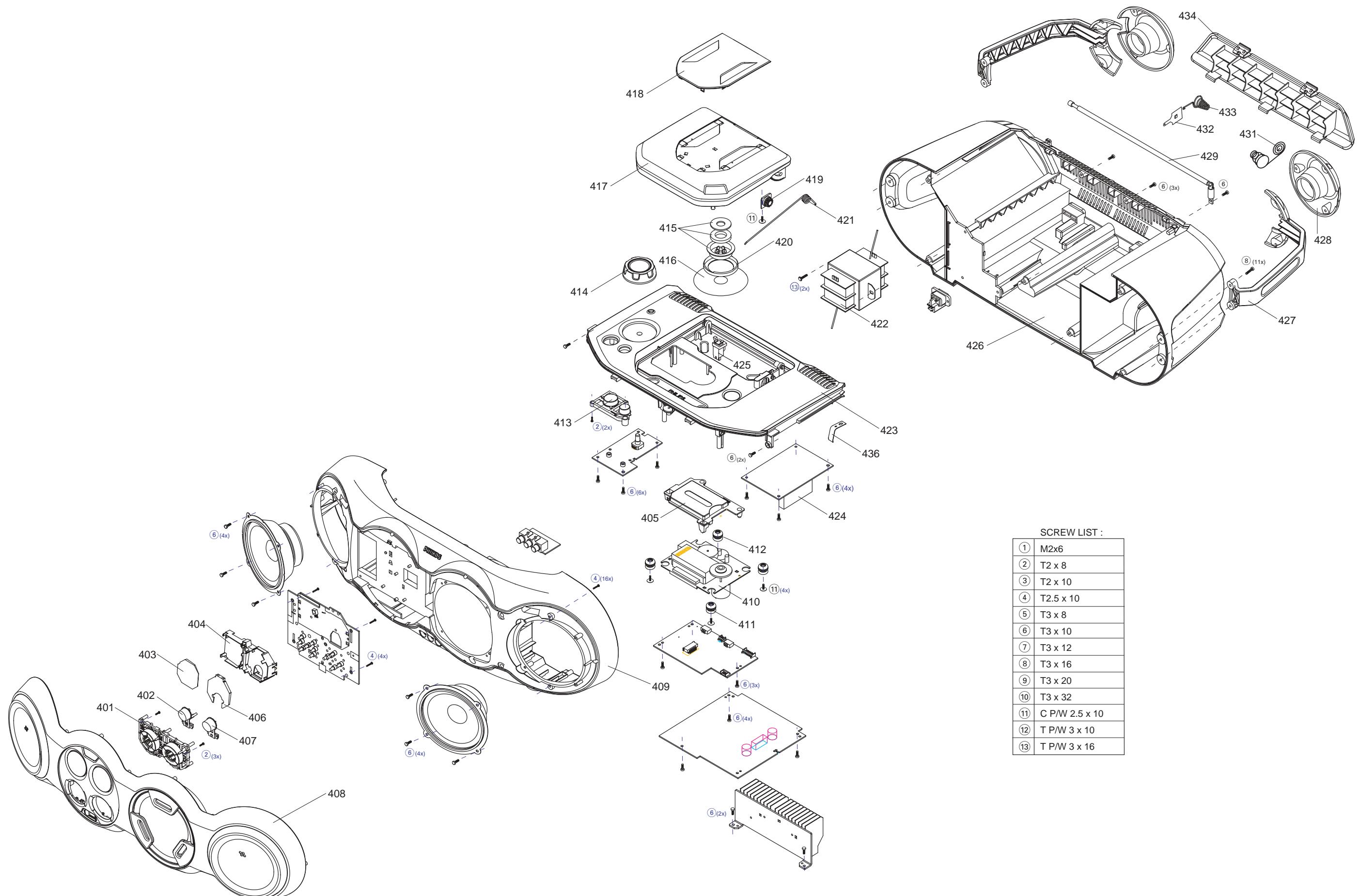
USB BOARD - CIRCUIT DIAGRAM



USB BOARD - LAYOUT DIAGRAM



EXPLODED VIEW DIAGRAM - CABINET



MECHANICAL PARTSLIST - CABINET

401	3140 117 66681	BUTTON TREE PNT PRT
402	3140 117 66671	PLAY/PAUSE BUTTON PNT PRT
403	3140 114 49271	LIGHT GUIDE-LCD
404	3140 114 49231	BRACKET-LCD
405	4822 442 01713	COVER CD COMPATIBLE
406	3140 114 49261	LIGHT GUIDE-VU
407	3140 117 66661	WOOX BUTTON PRT
408	3140 117 68301	FRONT PANEL ASSY
409	3140 117 66561	FRONT CABINET ASSY
410	3103 309 05380	CD MCD2 ASSY
411	4822 529 10387	DAMPER - RUBBER (40 DEG)
412	4822 529 10386	DAMPER - RUBBER (30 DEG)
413	3140 117 66611	POWER-SOURCE BUTTON PNT PRT
414	3140 117 66711	VOLUME KNOB ASSY
415	4822 532 12798	RING PRESSURE
416	4822 535 60096	DISC
417	3140 117 68261	CD DOOR PRT
418	3140 117 66621	CD DOOR DETAIL PRT
419	4822 529 10322	DAMPER ASSY
420	4822 532 13153	RING (CD LID)
421	3140 111 22761	SPRING-CD (LONG)
422	4822 263 21206	P50 ADAPTOR
423	3140 118 68252	CD TRAY ASSY AZ2555
424	4822 256 90463	HOLDER FERRITE BAR
425	4822 276 13963	CD DOOR SWITCH
426	3140 117 66531	BACK CABINET ASSY
427	3140 117 67111	HANDLE PNT
428	3140 117 66741	BASS PORT CAP PNT
429	3140 118 71790	ROD ANTENNA EXTEND 660MM
431	4822 492 51733	SPRING
432	3140 111 21320	CONTACT PLATE
433	3140 111 22951	SPRING-COMPRESSION
434	3140 117 68141	BATTERY DOOR PNT AZ2555
436	3140 111 22971	START SPRING PLATE
	2422 070 98151	MAINSCORD EUR 1M5 BK B
	2422 070 98246	MAINSCORD UL 7A 1M5 DET 2P B (-/17)
	3139 228 61871	REMOTE CONTROL 19621005/01 PACKED
	3140 110 22391	CBLE USB-A/1500/USB-B

Note: Only these parts mentioned in the list are

normal service parts.

ELECTRICAL PARTSLIST - KEY BOARD

- MISCELLANEOUS -		
1100	2422 025 10768	CONNECTOR 3P
1101	4822 267 31996	CONNECTOR 1P
1150	2422 026 05099	CONNECTOR PHONE H 1P
1151	4822 265 30735	CONNECTOR 5P
1400	4822 267 10958	CONNECTOR5P
1401	4822 265 11535	SOCKET FFC 8P
1402	4822 265 11207	SOCKET FFC 6P
1405	4822 265 11184	CONNECTOR
1406	4822 265 11207	SOCKET FFC 6P
1430	2422 128 02922	SWITCH-TACT
1431	2422 128 02922	SWITCH-TACT
1432	2422 128 02922	SWITCH-TACT
1433	2422 128 02922	SWITCH-TACT
1434	2422 128 02922	SWITCH-TACT
1435	2422 128 02922	SWITCH-TACT
1436	2422 128 02922	SWITCH-TACT
1437	2422 128 02922	SWITCH-TACT
1438	2422 128 02922	SWITCH-TACT
1439	2422 128 02922	SWITCH-TACT
1440	2422 128 02922	SWITCH-TACT
1441	2422 128 02922	SWITCH-TACT
- CAPACITORS -		
2101	2238 586 59812	100nF +80-20% Y5V 50V
2150	5322 126 11578	1nF 10% X7R 50V
2151	5322 126 11578	1nF 10% X7R 50V
2300	4822 124 81286	47μF 20% 16V
2301	3198 016 31020	1nF NP0 25V
2302	2238 586 59812	100nF +80-20% Y5V 50V
2303	2238 586 59812	100nF +80-20% Y5V 50V
2400	2238 586 59812	100nF +80-20% Y5V 50V
2401	4822 124 23432	100μF 20% 10V
2402	5322 126 11583	10nF 10% X7R 50V
2403	2020 552 94427	100pF 5% NP0 50V
2404	2020 552 94427	100pF 5% NP0 50V
2405	2020 552 94427	100pF 5% NP0 50V
2406	2020 552 94427	100pF 5% NP0 50V
2407	2238 586 59812	100nF +80-20% Y5V 50V
2408	4822 124 23432	100μF 20% 10V
2409	2238 586 59812	100nF +80-20% Y5V 50V
2410	5322 126 11583	10nF 10% X7R 50V
2411	2020 552 94427	100pF 5% NP0 50V
2412	2020 552 94427	100pF 5% NP0 50V
2413	2020 552 94427	100pF 5% NP0 50V
2414	2020 552 94427	100pF 5% NP0 50V
2415	2020 552 94427	100pF 5% NP0 50V
2416	5322 126 11583	10nF 10% X7R 50V
2417	4822 126 13883	220PF 5% 50V
- RESISTORS -		
3150	4822 116 52219	330R 5% 0,5W
3151	4822 116 52219	330R 5% 0,5W
3152	4822 116 52219	330R 5% 0,5W
3153	4822 116 52219	330R 5% 0,5W
3154	4822 116 52226	560R 5% 0,5W
3155	4822 116 52226	560R 5% 0,5W
3300	4822 051 30221	220R 5% 0,062W
3302	4822 117 12864	82K 5% 0,6W
3303	4822 051 30681	680R 5% 0,062W
3304	4822 051 30103	10K 5% 0,062W

ELECTRICAL PARTSLIST - KEY BOARD**- RESISTORS -**

3305 4822 117 12139 22R 5% 0,062W
 3306 4822 051 30339 33R 5% 0,062W
 3307 4822 051 30109 10R 5% 0,062W
 3308 4822 051 30331 330R 5% 0,062W
 3330 4822 051 30102 1K 5% 0,062W

- RESISTORS -

3434 4822 051 30102 1K 5% 0,062W
 3435 4822 051 30101 100R 5% 0,062W
 3436 4822 051 30471 470R 5% 0,062W
 3437 4822 051 30471 470R 5% 0,062W
 3438 4822 051 30472 4,7K 5% 0,062W

3439 4822 051 30102 1K 5% 0,062W
 3440 4822 051 30471 470R 5% 0,062W
 3442 4822 051 30471 470R 5% 0,062W
 3443 4822 051 30103 10K 5% 0,062W
 3444 4822 051 30102 1K 5% 0,062W

3445 4822 051 30103 10K 5% 0,062W
 3446 4822 051 30223 22K 5% 0,062W
 3447 4822 051 30103 10K 5% 0,062W
 3448 4822 051 30103 10K 5% 0,062W
 3449 4822 051 30103 10K 5% 0,062W

3450 4822 051 30102 1K 5% 0,062W
 3451 4822 051 30102 1K 5% 0,062W
 3452 4822 051 30102 1K 5% 0,062W
 3453 4822 051 30102 1K 5% 0,062W
 3454 4822 051 30102 1K 5% 0,062W

3455 4822 051 30102 1K 5% 0,062W
 3456 4822 051 30102 1K 5% 0,062W
 3457 4822 051 30102 1K 5% 0,062W
 3458 4822 051 30102 1K 5% 0,062W
 3459 4822 051 30471 470R 5% 0,062W

3460 4822 051 30102 1K 5% 0,062W
 3461 4822 051 30102 1K 5% 0,062W
 3462 4822 051 30102 1K 5% 0,062W
 3463 4822 051 30223 22K 5% 0,062W
 3464 4822 051 30102 1K 5% 0,062W

3465 4822 051 30223 22K 5% 0,062W
 3466 4822 051 30102 1K 5% 0,062W
 3468 4822 051 30471 470R 5% 0,062W
 3469 4822 051 30102 1K 5% 0,062W
 3470 4822 051 30102 1K 5% 0,062W

3471 4822 051 30102 1K 5% 0,062W
 3472 4822 051 30102 1K 5% 0,062W
 3473 4822 051 30102 1K 5% 0,062W
 3474 4822 051 30102 1K 5% 0,062W
 3475 4822 051 30102 1K 5% 0,062W

3476 4822 051 30472 4,7K 5% 0,062W
 3477 4822 051 30154 150K 5% 0,062W
 3478 4822 051 30472 4,7K 5% 0,062W
 3479 4822 051 30102 1K 5% 0,062W
 3480 4822 051 30474 470K 5% 0,062W

3481 4822 051 30154 150K 5% 0,062W
 3482 4822 051 30471 470R 5% 0,062W
 3483 4822 051 30272 2,7K 5% 0,062W
 3484 4822 051 30272 2,7K 5% 0,062W
 3485 5322 117 13039 220K 1% 0,063W

ELECTRICAL PARTSLIST - KEY BOARD**- RESISTORS -**

3486 4822 051 30153 15K 5% 0,062W
 3487 4822 051 30153 15K 5% 0,062W
 3488 4822 051 30562 5,6K 5% 0,063W
 3489 2322 704 65603 56K 1%
 3490 4822 051 30102 1K 5% 0,062W

3491 4822 051 30471 470R 5% 0,062W
 3492 4822 051 30562 5,6K 5% 0,063W
 3493 4822 051 30102 1K 5% 0,062W
 3494 4822 051 30471 470R 5% 0,062W
 3495 4822 051 30102 1K 5% 0,062W

3496 4822 051 30102 1K 5% 0,062W
 3497 4822 051 30102 1K 5% 0,062W
 3498 4822 051 30102 1K 5% 0,062W
 3499 4822 051 30472 4,7K 5% 0,062W
 3501 4822 051 30102 1K 5% 0,062W

3502 4822 051 30102 1K 5% 0,062W
 3503 4822 051 30153 15K 5% 0,062W
 3504 4822 051 30153 15K 5% 0,062W
 3505 4822 051 30152 1,5K 5% 0,062W
 3507 4822 051 30682 6,8K 5% 0,062W

3509 4822 051 30103 10K 5% 0,062W
 3510 4822 051 30223 22K 5% 0,062W
 3511 4822 051 30223 22K 5% 0,062W
 3513 4822 051 30102 1K 5% 0,062W
 3600 4822 051 30221 220R 5% 0,062W

3603 4822 051 30681 680R 5% 0,062W
 3605 4822 051 30221 220R 5% 0,062W
 3608 4822 051 30331 330R 5% 0,062W
 3610 4822 117 12139 22R 5% 0,062W
 3682 4822 051 30471 470R 5% 0,062W

4330 4822 051 30008 OR JUMPER
 4331 4822 051 30008 OR JUMPER
 4332 4822 051 30008 OR JUMPER
 4401 4822 051 30008 OR JUMPER
 4403 4822 051 30008 OR JUMPER

4451 4822 051 30008 OR JUMPER
 4453 4822 051 30008 OR JUMPER
 4454 4822 051 30008 OR JUMPER
 4455 4822 051 30008 OR JUMPER
 4456 4822 051 30008 OR JUMPER

4457 4822 051 30008 OR JUMPER
 4458 4822 051 30008 OR JUMPER
 4459 4822 051 30008 OR JUMPER
 4460 4822 051 30008 OR JUMPER
 4461 4822 051 30008 OR JUMPER

4463 4822 051 30008 OR JUMPER
 4464 4822 051 30008 OR JUMPER
 4465 4822 051 30008 OR JUMPER
 4466 4822 051 30008 OR JUMPER
 4468 4822 051 30008 OR JUMPER

- RESISTORS -

4469 4822 051 30008 OR JUMPER
 4470 4822 051 30008 OR JUMPER

- COILS & FILTERS -

5150 2422 549 44919 IND FXD SM 100MHZ 600R
 5400 2422 549 43062 IND FXD SM 100MHZ 600R
 5401 2422 549 44393 IND FXD SM 100MHZ 2,7K
 5402 2422 549 43062 IND FXD SM 100MHZ 600R
 5403 2422 549 43062 IND FXD SM 100MHZ 600R

5404 2422 549 43062 IND FXD SM 100MHZ 600R
 5405 2422 549 43062 IND FXD SM 100MHZ 600R
 5406 2422 549 44393 IND FXD SM 100MHZ 2,7K
 5407 4822 157 11228 100µH LAN02TB101J 5%
 5408 2422 549 44393 IND FXD SM 100MHZ 2,7K

- DIODES -

5409 4822 157 11228 100µH LAN02TB101J 5%
 5410 2422 540 98518 8MHZ CSTS*MG03
 5411 2422 549 44393 IND FXD SM 100MHZ 2,7K
 5500 3140 110 51881 METER VU

6300 9322 172 75676 VS LTL-1CHKFK
 6301 5322 130 34337 BAV99

6303 9322 172 75676 VS LTL-1CHKFK
 6304 9322 172 75676 VS LTL-1CHKFK
 6305 5322 130 34337 BAV99

6307 9322 172 75676 VS LTL-1CHKFK
 6400 4822 130 11148 UDZ4,7B

- IC & TRANSISTORS -

7300 4822 130 42804 BC817-25
 7301 4822 130 42804 BC817-25
 7304 5322 130 60159 BC846B
 7400 3140 110 51911 LCD PANEL
 7401 3140 110 51831 TMP86CS25F

7402 9322 178 88685 NCP301LSN27
 7404 5322 130 60159 BC846B
 7405 9965 000 04931 M24C01-WMN6
 7406 9322 185 95667 TSOP4836

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

ELECTRICAL PARTSLIST - TUNER BOARD**- MISCELLANEOUS -**

1105	4822 267 10676	CONNECTOR 1P
1106	4822 526 10176	FERRITE BAR
1121	4822 267 10733	CONNECTOR CABLE/WIRE
1122	4822 267 10954	SOCKET FFC 5P

- CAPACITORS -

2101	4822 126 13692	47pF 1% NP0 63V
2103	5322 122 31647	1nF 10% X7R 63V
2104	5322 122 32531	100pF 5% NP0 50V
2106	2020 800 00191	CTRM 100V 3pF-11pF N450
2107	4822 121 51319	1µF 10% 63V
2120	4822 126 14507	18pF 5% 50V NP0
2124	2238 916 15641	22nF 10% X7R 25V
2125	2238 861 18561	560pF 1% NP0 50V
2126	4822 126 14241	330pF NP0 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	4822 126 13188	15nF 5% X7R 63V
2135	4822 126 13188	15nF 5% X7R 63V
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 126 14236	15pF 5% 50V
2140	4822 126 13695	82pF 1% NP0 63V
2141	2238 586 59812	100nF +80-20% Y5V 50V
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 14585	100nF 10% X7R 50V
2152	4822 126 14549	33nF 16V X7R
2153	4822 126 13486	15pF 2% NP0 63V
2155	2020 800 00191	CTRM 100V 3pF-11pF N450
2159	2238 861 18339	33pF 1% NP0 50V
2164	3198 017 44740	470nF Y5V 10V
2165	2238 586 59812	100nF +80-20% Y5V 50V
2166	5322 122 31647	1nF 10% X7R 63V
2167	4822 122 33926	12pF 50V
2186	4822 124 40196	220µF 20% 16V
2187	4822 122 33177	10nF 20% X7R 50V

- CAPACITORS -

2188	4822 122 33177	10nF 20% X7R 50V
2189	4822 126 13879	220nF +80-20% 16V
2190	4822 124 81151	22µF 50V
2191	4822 124 81151	22µF 50V
2192	5322 122 31647	1nF 10% X7R 63V
2193	5322 122 31647	1nF 10% X7R 63V
2194	5322 122 31647	1nF 10% X7R 63V
2195	4822 124 81151	22µF 50V
2196	4822 122 33177	10nF 20% X7R 50V
2197	4822 122 33177	10nF 20% X7R 50V
3101	4822 051 30333	33K 5% 0,062W
3102	4822 117 10837	100K 1% 0,1W
3103	4822 051 20822	8,2K 5% 0,1W
3104	4822 117 13577	330R 1% 1,25W
3105	4822 117 11503	220R 1% 0,1W
3132	4822 051 30479	47R 5% 0,062W
3134	4822 051 20223	22K 5% 0,1W
3141	4822 051 30563	56K 5% 0,062W
3142	4822 100 12159	100K 30%
3145	4822 117 11449	2,2K 5% 0,1W
3152	4822 051 30471	470R 5% 0,062W
3153	4822 051 30471	470R 5% 0,062W
3155	4822 051 30479	47R 5% 0,062W
3156	4822 117 10837	100K 1% 0,1W
3157	4822 117 10837	100K 1% 0,1W
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 20154	150K 5% 0,1W
3170	4822 117 10837	100K 1% 0,1W
3186	4822 117 11448	180R 1% 0,1W
3187	4822 051 10102	1K 2% 0,25W
3188	4822 117 11449	2,2K 5% 0,1W
3189	4822 051 20223	22K 5% 0,1W
3190	4822 117 10833	10K 1% 0,1W
3191	4822 051 30472	4,7K 5% 0,062W
3192	4822 051 20105	1M 5% 0,1W
3193	4822 117 11449	2,2K 5% 0,1W
3194	4822 117 10837	100K 1% 0,1W
3195	4822 051 30474	470K 5% 0,062W
3196	4822 117 10833	10K 1% 0,1W
4104	4822 051 30008	0R JUMPER

ELECTRICAL PARTSLIST - TUNER BOARD**- RESISTORS -**

4105	4822 051 30008	OR JUMPER
4107	4822 051 30008	OR JUMPER
4108	4822 051 30008	OR JUMPER
4110	4822 051 30008	OR JUMPER

- COILS & FILTERS -

5104	2422 536 00364	IND FXD ANT FM065 190 μ H 5%
5109	4822 242 70665	SFE10,7MS3-A
5110	4822 242 70665	SFE10,7MS3-A
5111	2422 549 44023	IND VAR 7MM 7PY 450KHZ
5112	4822 157 70302	F7MCS-12216N
5114	4822 157 70302	F7MCS-12216N
5119	4822 157 11443	2,4 μ H 10,7MHZ
5121	4822 242 10261	T6252F00 (75KHZ)
5123	2422 549 44108	IND VAR 7MM 7PY 796KHZ
5130	4822 157 11843	MD7B-01F
5131	4822 157 11843	MD7B-01F

- DIODES -

6103	5322 130 34337	BAV99
6105	4822 130 83075	HN1V02H-B
6130	4822 130 82833	1SV228
6131	4822 130 82833	1SV228
6181	5322 130 34337	BAV99
6182	4822 130 83649	1SS355
6183	9340 386 90115	BZX284-C11

- IC & TRANSISTORS -

7101	9351 740 80557	TEA5757H/V1
7102	4822 130 42131	BF550
7111	5322 130 42755	BC847C
7180	4822 130 60373	BC856B
7181	5322 130 42755	BC847C
7182	5322 130 42755	BC847C
7183	5322 130 42755	BC847C

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

ELECTRICAL PARTSLIST - CD99 BOARD**- MISCELLANEOUS -**

1002	3103 308 67031	MP3CD2002 ROM TXT 5V-IF
1800	4822 267 11028	SOCKER FFC H 16P
1801	4822 267 10565	CONNECTOR SOCKET 4P
1820	2422 025 16836	SOCKER FFC H 19P
1821	2422 025 12488	SOCKER FFC H 2P
1823	4822 265 11207	CONNECTOR SOCKET 6P
1824	4822 265 11207	CONNECTOR SOCKET 6P
8001	3103 308 92680	SOCKER FFC H 19P
8002	3103 308 93040	SOCKET FFC 16P

- CAPACITORS -

2854	4822 124 23052	100µF 20% 16V
2855	4822 124 11912	220µF 20% 6,3V
2860	4822 126 14508	180pF 5% 50V NP0
2861	4822 126 14241	330pF NP0 50V
2862	3198 017 34730	47nF X7R 16V
2863	4822 122 33753	150pF 5% NP0 50V
2864	4822 122 33753	150pF 5% NP0 50V
2865	4822 122 33753	150pF 5% NP0 50V
2866	4822 122 33753	150pF 5% NP0 50V
2869	3198 017 34730	47nF X7R 16V
2870	4822 126 13883	220pF 5% 50V
2871	4822 126 13883	220pF 5% 50V
2872	4822 126 13883	220pF 5% 50V
2873	4822 126 13883	220pF 5% 50V
2874	4822 126 13883	220pF 5% 50V
2875	4822 126 13883	220pF 5% 50V
2876	4822 124 40196	220µF 20% 16V
2877	4822 124 40433	47µF 20% 25V
2878	2238 586 59812	100nF +80-20% Y5V 50V
2879	5322 126 11578	1nF 10% X7R 50V
2880	2222 867 15339	33pF 5% NP0 50V
2881	4822 126 14249	560pF 10% X7R 50V
2882	4822 126 14226	82pF 5% NP0 50V
2883	3198 017 44740	470nF Y5V 10V
2884	3198 017 44740	470nF Y5V 10V
2827	5322 126 11578	1nF 10% X7R 50V
2828	4822 126 11669	27pF
2829	3198 017 34730	47nF X7R 16V
2830	4822 124 81286	47µF 20% 16V
2831	4822 124 81286	47µF 20% 16V
2832	4822 126 14506	270pF 5% 50V NP0
2833	4822 126 14238	2,2nF X7R 50V
2834	4822 126 14506	270pF 5% 50V NP0
2835	4822 126 14247	1,5nF X7R 50V
2836	4822 124 40433	47µF 20% 25V
2837	3198 017 34730	47nF X7R 16V
2838	4822 126 13879	220nF +80-20% 16V
2839	2238 586 59812	100nF +80-20% Y5V 50V
2840	4822 124 81286	47µF 20% 16V
2841	4822 126 13879	220nF +80-20% 16V
2843	2020 552 94427	100pF 5% NP0 50V
2844	4822 126 13883	220pF 5% 50V
2845	4822 126 13883	220pF 5% 50V
2846	4822 124 21732	10µF 20% 25V
2847	4822 126 13879	220nF +80-20% 16V
2848	2020 552 94427	100pF 5% NP0 50V
2849	4822 126 13883	220pF 5% 50V
2850	4822 126 13883	220pF 5% 50V
2851	4822 124 11947	10µF 20% 16V
2853	5322 126 11583	10nF 10% X7R 50V
3801	4822 051 30223	22K 5% 0,062W
3802	4822 051 30223	22K 5% 0,062W
3803	4822 051 30273	27K 5% 0,062W
3804	4822 051 30273	27K 5% 0,062W
3805	4822 051 30273	27K 5% 0,062W
3806	4822 051 30273	27K 5% 0,062W
3807	4822 051 30103	10K 5% 0,062W
3808	4822 051 30103	10K 5% 0,062W
3809	4822 051 30103	10K 5% 0,062W
3810	4822 051 30103	10K 5% 0,062W
3811	4822 051 30103	10K 5% 0,062W
3812	4822 051 30103	10K 5% 0,062W
3813	4822 051 30222	2,2K 5% 0,062W
3814	4822 051 30222	2,2K 5% 0,062W
3815	4822 051 30222	2,2K 5% 0,062W
3816	4822 051 30222	2,2K 5% 0,062W
3817	4822 051 30479	47R 5% 0,062W
3818	4822 051 30479	47R 5% 0,062W
3819	4822 051 30479	47R 5% 0,062W
3820	4822 052 10478	4,7R 5% 0,33W

ELECTRICAL PARTSLIST - CD99 BOARD**- RESISTORS -**

3821	4822 117 12917	1R 5% 0,062W
3822	4822 051 30103	10K 5% 0,062W
3823	4822 051 30102	1K 5% 0,062W
3824	4822 051 20474	470K 5% 0,1W
3825	5322 117 13029	47K 1% 0,063W
3826	4822 117 12891	220K 1%
3827	5322 117 13056	8,2K 1% 0,063W
3828	5322 117 13052	2,7K 1% 0,063W
3829	4822 051 30121	120R 5% 0,062W
3830	4822 117 11373	100R 1%
3831	4822 051 30471	470R 5% 0,062W
3832	4822 051 30471	470R 5% 0,062W
3833	4822 051 30121	120R 5% 0,062W
3834	4822 051 30472	4,7K 5% 0,062W
3836	4822 116 40227	4,6R 25% 12V
3837	4822 051 30471	470R 5% 0,062W
3839	4822 051 30471	470R 5% 0,062W
3840	4822 051 30223	22K 5% 0,062W
3842	4822 051 30102	1K 5% 0,062W
3843	4822 051 30102	1K 5% 0,062W
3844	4822 051 30101	100R 5% 0,062W
3845	4822 051 30471	470R 5% 0,062W
3846	4822 051 30472	4,7K 5% 0,062W
3847	4822 117 10834	47K 1% 0,1W
3848	4822 051 30333	33K 5% 0,062W
3849	4822 051 30471	470R 5% 0,062W
3850	4822 051 30472	4,7K 5% 0,062W
3851	4822 117 10834	47K 1% 0,1W
3852	4822 051 30333	33K 5% 0,062W
3853	4822 117 12903	1,8K 1% 0,063W
3854	4822 051 30682	6,8K 5% 0,062W
3856	4822 117 12891	220K 1%
3858	4822 051 30682	6,8K 5% 0,062W
3859	4822 117 13632	100K 1% 0,62W
3861	4822 117 13632	100K 1% 0,62W
3862	4822 051 30102	1K 5% 0,062W
3863	4822 052 10338	3,3R 5% 0,33W
3864	4822 051 30223	22K 5% 0,062W
3865	4822 051 30101	100R 5% 0,062W
3866	4822 117 13608	4,7R 5% 0,0016W
3867	4822 051 30223	22K 5% 0,062W
3868	4822 051 30103	10K 5% 0,062W
3869	4822 051 30103	10K 5% 0,062W
3871	4822 051 30101	100R 5% 0,062W
3872	4822 051 30101	100R 5% 0,062W
3873	4822 051 30223	22K 5% 0,062W
3874	4822 051 30223	22K 5% 0,062W
3875	4822 051 30103	10K 5% 0,062W
3876	4822 051 30103	10K 5% 0,062W
3878	4822 051 30471	470R 5% 0,062W

- RESISTORS -

3879	4822 051 30223	22K 5% 0,062W
3880	4822 051 30339	33R 5% 0,062W
3881	4822 051 30151	150R 5% 0,062W
3882	4822 051 10102	1K 2% 0,25W
3883	4822 051 30102	1K 5% 0,062W
3884	4822 051 30102	1K 5% 0,062W
3888	4822 051 30103	10K 5% 0,062W
3889	4822 051 30471	470R 5% 0,062W
3890	4822 051 30471	470R 5% 0,062W
3891	4822 051 30102	1K 5% 0,062W
3892	4822 051 30102	1K 5% 0,062W
3893	4822 051 30471	470R 5% 0,062W
3894	4822 117 12891	220K 1%
3895	4822 051 30273	27K 5% 0,062W
3896	4822 051 30101	100R 5% 0,062W
3897	4822 051 30333	33K 5% 0,062W
3898	4822 051 30181	180R 5% 0,062W
3899	4822 051 30272	2,7K 5% 0,062W
3901	4822 051 30561	560R 5% 0,062W
3902	4822 117 12968	820R 5% 0,62W
3903	4822 051 30332	3,3K 5% 0,062W
3904	4822 051 30332	3,3K 5% 0,062W
3905	4822 051 30471	470R 5% 0,062W
3906	4822 051 30471	470R 5% 0,062W
3907	4822 051 30391	390R 5% 0,062W
3908	4822 051 30222	2,2K 5% 0,062W
3909	4822 117 13632	100K 1% 3 0,62W
3910	4822 051 30471	470R 5% 0,062W
3916	4822 051 30471	470R 5% 0,062W
3917	4822 117 13608	4,7R 5% 0,0016W
4801	4822 051 20008	0R JUMPER(0805)
4802	4822 051 20008	0R JUMPER(0805)
4803	4822 051 20008	0R JUMPER(0805)
4805	4822 051 20008	0R JUMPER(0805)
4808	4822 051 20008	0R JUMPER(0805)
4809	4822 051 20008	0R JUMPER(0805)
4811	4822 051 20008	0R JUMPER(0805)
4817	4822 051 30008	0R JUMPER
4818	4822 051 20008	0R JUMPER(0805)
4824	4822 051 20008	0R JUMPER(0805)
4827	4822 051 20008	0R JUMPER(0805)
4830	4822 051 20008	0R JUMPER(0805)
4832	4822 051 20008	0R JUMPER(0805)
4834	4822 051 20008	0R JUMPER(0805)
4836	4822 051 20008	0R JUMPER(0805)
4840	4822 051 20008	0R JUMPER(0805)
4841	4822 051 20008	0R JUMPER(0805)
4842	4822 051 20008	0R JUMPER(0805)
4845	4822 051 30008	0R JUMPER

ELECTRICAL PARTSLIST - CD99 BOARD

- COILS & FILTERS -

1810	2422 540 98519	8MHZ467 CSTS*MG03 A
5001	2422 549 44607	EMI100MHZ600RR

- DIODES -

6877	9322 129 34685	BZM55-C3V9
------	----------------	------------

- IC & TRANSISTORS -

7800	9352 684 20557	SAA7325H/T/M2B
7808	4822 209 32852	TDA7073A/N2
7809	4822 209 32852	TDA7073A/N2
7810	4822 209 33165	TDA1308T/N1
7811	5322 209 82941	LM358D
7874	5322 130 60159	BC846B
7875	5322 130 60159	BC846B
7876	5322 130 60159	BC846B
7877	5322 130 60159	BC846B
7878	5322 130 60159	BC846B
7879	5322 130 60123	BC807-40

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

ELECTRICAL PARTSLIST - POWER BOARD**- MISCELLANEOUS -**

1604	4822 265 11207	SOCKET FFC 6P
1605	4822 265 11183	SOCKET FFC 4P
1609	4822 267 10956	SOCKET FFC 7P
1612	4822 253 10126	FUSE 4,0A
1613	2422 025 16043	CONNECTOR H 2P
1615	4822 267 10731	06FE-BT-VK-N
1616	4822 265 11207	CONNECTOR SOCKET 6P
1618	4822 265 11184	SOCKET FFC 18P
1620	4822 253 10126	FUSE 4,0A
1904	8240 009 37971	SOCKET CINCH H 3P

- CAPACITORS -

2637	4822 126 13193	4,7nF 10% X7R 63V
2638	4822 121 42408	220nF 5% 63V
2639	4822 126 13751	47nF 10% X7R 63V
2640	2238 586 59812	100nF +80-20% Y5V 50V
2641	2238 586 59812	100nF +80-20% Y5V 50V
2642	5322 126 11583	10nF 10% X7R 50V
2643	5322 126 11583	10nF 10% X7R 50V
2644	4822 124 40248	10µF 20% 63V
2645	2238 586 59812	100nF +80-20% Y5V 50V
2646	2238 586 59812	100nF +80-20% Y5V 50V
2647	3198 016 31020	1nF NP0 25V
2648	4822 124 40433	47µF 20% 25V
2649	2238 586 59812	100nF +80-20% Y5V 50V
2650	4822 126 13751	47nF 10% X7R 63V
2651	4822 124 22726	4,7µF 35V
2652	3198 016 31020	1nF NP0 25V
2653	2020 552 94427	100pF 5% NP0 50V
2654	2020 552 94427	100pF 5% NP0 50V
2655	2238 586 59812	100nF +80-20% Y5V 50V
2656	3198 016 31020	1nF NP0 25V
2658	2238 586 59812	100nF +80-20% Y5V 50V
2659	5322 121 42386	100nF 5% 63V
2660	5322 121 42386	100nF 5% 63V
2661	2238 586 59812	100nF +80-20% Y5V 50V
2662	4822 124 12012	4700µF 20% 25V
2663	4822 124 22652	2,2µF 20% 50V
2665	5322 121 42386	100nF 5% 63V
2666	5322 121 42386	100nF 5% 63V
2668	4822 124 40433	47µF 20% 25V
2669	2238 586 59812	100nF +80-20% Y5V 50V
2670	4822 124 80791	470µF 16V 20%
2671	4822 124 40248	10µF 20% 63V
2673	4822 124 41584	100µF 20% 10V
2675	4822 124 22652	2,2µF 20% 50V
2676	3198 017 34730	47nF X7R 16V
2677	3198 016 31020	1nF NP0 25V
2679	4822 124 81151	22µF 50V
2681	4822 124 41584	100µF 20% 10V
2682	2238 586 59812	100nF +80-20% Y5V 50V
2683	4822 124 12032	4,7µF 20% 50V
2686	4822 124 40248	10µF 20% 63V
2687	4822 124 22651	1,0µF 20% 50V
2688	4822 124 40746	0,22µF 20% 63V
2690	3198 016 31020	1nF NP0 25V
2691	5322 124 41948	470nF+80-20% 50V
2696	2238 916 15641	22nF 10% X7R 25V
2701	2238 586 59812	100nF +80-20% Y5V 50V
2702	2238 586 59812	100nF +80-20% Y5V 50V
2706	4822 124 40196	220µF 20% 16V
2708	2238 586 59812	100nF +80-20% Y5V 50V

ELECTRICAL PARTSLIST - POWER BOARD**- CAPACITORS -**

2710 2238 586 59812 100nF +80-20% Y5V 50V

- RESISTORS -3600 4822 051 30332 3,3K 5% 0,062W
3601 4822 051 30123 12K 5% 0,062W
3603 4822 051 30684 680K 5% 0,062W
3605 4822 116 52298 680K 5% 0,5W
3608 4822 051 30392 3,9K 5% 0,063W3610 4822 051 30103 10K 5% 0,062W
3611 4822 051 30153 15K 5% 0,062W
3612 4822 051 30472 4,7K 5% 0,062W
3613 4822 117 11503 220R 1% 0,1W
3616 4822 117 13632 100K 1% 0,62W3617 4822 117 12891 220K 1%
3619 4822 051 30153 15K 5% 0,062W
3621 4822 117 13632 100K 1% 0,62W
3622 4822 051 30562 5,6K 5% 0,063W
3625 4822 051 30103 10K 5% 0,062W3626 4822 116 52213 180R 5% 0,5W
3628 4822 116 52213 180R 5% 0,5W
3629 4822 117 12925 47K 1% 0,063W
3638 4822 051 30222 2,2K 5% 0,062W
3640 4822 051 30222 2,2K 5% 0,062W3641 4822 051 30273 27K 5% 0,062W
3643 4822 051 30682 6,8K 5% 0,062W
3644 4822 051 30273 27K 5% 0,062W
3647 4822 051 30682 6,8K 5% 0,062W
3648 4822 051 30223 22K 5% 0,062W3649 4822 051 30223 22K 5% 0,062W
3650 4822 051 20472 4,7K 5% 0,1W
3651 4822 116 83961 6,8K 5%
3652 4822 051 10102 1K 2% 0,25W
3653 4822 051 30103 10K 5% 0,062W3654 4822 051 20228 2,2R 5% 0,1W
3655 4822 051 30272 2,7K 5% 0,062W
3656 4822 051 20472 4,7K 5% 0,1W
3657 4822 117 10833 10K 1% 0,1W
3658 4822 117 10833 10K 1% 0,1W3660 4822 051 20228 2,2R 5% 0,1W
3661 4822 051 30331 330R 5% 0,062W
3662 4822 116 83961 6,8K 5%
3663 4822 051 30331 330R 5% 0,062W
3664 4822 051 30272 2,7K 5% 0,062W3665 4822 051 20472 4,7K 5% 0,1W
3666 4822 051 30393 39K 5% 0,062W
3667 4822 051 30393 39K 5% 0,062W
3668 4822 051 10102 1K 2% 0,25W
3669 4822 051 20472 4,7K 5% 0,1W**- RESISTORS -**3670 4822 051 30682 6,8K 5% 0,062W
3671 4822 117 12925 47K 1% 0,063W
3672 4822 117 10833 10K 1% 0,1W
3673 4822 051 20228 2,2R 5% 0,1W
3674 4822 051 10102 1K 2% 0,25W3675 4822 117 10833 10K 1% 0,1W
3676 4822 117 13632 100K 1% 0,62W
3677 4822 051 30223 22K 5% 0,062W
3678 4822 051 30223 22K 5% 0,062W
3679 4822 117 12925 47K 1% 0,063W3680 4822 117 10833 10K 1% 0,1W
3681 4822 051 20228 2,2R 5% 0,1W
3682 4822 051 30102 1K 5% 0,062W
3683 4822 051 30472 4,7K 5% 0,062W
3684 4822 051 20391 390R 5% 0,1W3685 4822 051 30471 470R 5% 0,062W
3686 4822 051 30472 4,7K 5% 0,062W
3687 4822 051 30472 4,7K 5% 0,062W
3688 4822 051 30393 39K 5% 0,062W
3689 4822 051 30393 39K 5% 0,062W3690 4822 051 30471 470R 5% 0,062W
3691 4822 051 30471 470R 5% 0,062W
3693 4822 051 30272 2,7K 5% 0,062W
3695 4822 051 30272 2,7K 5% 0,062W
3696 4822 116 83883 470R 5% 0,5W3697 4822 117 12925 47K 1% 0,063W
3698 4822 051 30682 6,8K 5% 0,062W
3699 4822 117 12925 47K 1% 0,063W
3700 4822 051 30682 6,8K 5% 0,062W
3701 4822 117 12925 47K 1% 0,063W3702 4822 051 30223 22K 5% 0,062W
3703 4822 051 30223 22K 5% 0,062W
3704 4822 051 10102 1K 2% 0,25W
3705 4822 051 10102 1K 2% 0,25W
3706 4822 051 30223 22K 5% 0,062W3708 4822 051 30223 22K 5% 0,062W
3716 4822 051 30223 22K 5% 0,062W
3718 4822 116 83883 470R 5% 0,5W
3719 4822 117 12925 47K 1% 0,063W
3720 4822 116 52176 10R 5% 0,5W3721 4822 050 24708 4,7R 1% 0,6W
3724 4822 051 10102 1K 2% 0,25W
3725 4822 051 20472 4,7K 5% 0,1W
3726 4822 050 24708 4,7R 1% 0,6W
3727 4822 050 24708 4,7R 1% 0,6W3728 4822 050 24708 4,7R 1% 0,6W
3729 4822 117 12925 47K 1% 0,063W
3730 4822 051 30222 2,2K 5% 0,062W
3731 4822 051 30152 1,5K5% 0,062W
3732 5322 117 13049 470R 1% 0,063W

ELECTRICAL PARTSLIST - POWER BOARD**- RESISTORS -**

3733 4822 051 10102 1K 2% 0,25W
 3734 4822 051 10102 1K 2% 0,25W
 3735 4822 051 10102 1K 2% 0,25W
 3736 4822 117 10834 47K 1% 0,1W
 3737 4822 117 11449 2,2K 5% 0,1W

3738 4822 117 11449 2,2K 5% 0,1W
 3739 4822 117 11449 2,2K 5% 0,1W
 3741 4822 117 13632 100K 1% 0,62W
 3742 4822 051 20472 4,7K 5% 0,1W
 3743 4822 117 13577 330R 1% 1,25W

3744 4822 051 30331 330R 5% 0,062W
 3745 4822 051 10102 1K 2% 0,25W
 3746 4822 117 13632 100K 1% 0,62W
 3747 4822 051 20472 4,7K 5% 0,1W
 3748 4822 051 20472 4,7K 5% 0,1W

3749 5322 117 13059 560R 1% 0,063W
 3750 5322 117 13056 8,2K 1% 0,063W
 3751 4822 117 11454 820R 1% 0,1W
 3752 4822 117 11454 820R 1% 0,1W
 3753 4822 117 12925 47K 1% 0,063W

3754 4822 117 12903 1,8K 1% 0,063W
 3755 4822 051 30272 2,7K 5% 0,062W
 3756 4822 051 10102 1K 2% 0,25W
 3757 4822 051 30273 27K 5% 0,062W
 3758 4822 051 30123 12K 5% 0,062W

3760 4822 051 30472 4,7K 5% 0,062W
 3769 4822 051 30103 10K 5% 0,062W
 3780 4822 117 10361 680R 1% 0,1W
 3781 4822 117 11139 1,5K 1% 0,1W
 3782 4822 051 30562 5,6K 5% 0,063W

3783 4822 051 30103 10K 5% 0,062W
 3786 4822 117 12925 47K 1% 0,063W
 4600 4822 051 30008 0R00 JUMPER
 4601 4822 051 30008 0R00 JUMPER
 4602 4822 051 30008 0R00 JUMPER

4605 4822 051 30008 0R00 JUMPER
 4610 4822 051 20008 0R JUMPER(0805)
 4653 4822 051 30008 0R00 JUMPER
 4663 4822 051 30008 0R00 JUMPER
 4665 4822 051 20008 0R JUMPER(0805)

4682 4822 051 30008 0R00 JUMPER
 4686 4822 051 30008 0R00 JUMPER
 4691 4822 051 30008 0R00 JUMPER
 4692 4822 051 30008 0R00 JUMPER
 4693 4822 051 30008 0R00 JUMPER

4698 4822 051 20008 0R JUMPER(0805)
 4880 4822 051 20008 0R JUMPER(0805)

- COILS & FILTERS -

5601 2422 549 43062 EMI 100MHZ 600R
 5602 2422 549 43062 EMI 100MHZ 600R
 5603 2422 549 44919 EMI 100MHZ 600R
 5604 2422 549 44919 EMI 100MHZ 600R
 5605 4822 157 11837 0,36µH 10% 5,6X5

5606 4822 157 11837 0,36µH 10% 5,6X5
 5607 4822 157 62552 2,2µH
 5608 4822 157 11837 0,36µH 10% 5,6X5
 5609 4822 157 10686 CHOKE COIL 0,47µF
 5610 2422 549 44393 EMI 100MHZ 2,7K

5611 4822 157 11837 0,36µH 10% 5,6X5
 5612 2422 549 44919 EMI 100MHZ 600R
 5616 2422 549 43062 EMI 100MHZ 600R
 5618 2422 549 43062 EMI 100MHZ 600R

- DIODES -

6600 4822 130 11397 BAS316
 6601 4822 130 30621 1N4148
 6605 5322 130 34337 BAV99
 6617 4822 130 82079 D3SBA20
 6618 4822 130 34278 BZX79-B6V8

6619 3198 010 53380 BZX79-B3V3
 6620 4822 130 11397 BAS316
 6621 4822 130 30621 1N4148
 6622 4822 130 30621 1N4148
 6623 4822 130 34278 BZX79-B6V8

6630 4822 130 11397 BAS316
 6631 4822 130 11397 BAS316

- IC & TRANSISTORS -

7600 4822 130 60373 BC856B
 7602 9322 133 18682 AN7125P
 7603 4822 130 60373 BC856B
 7604 9322 150 74668 TDA7468D
 7605 4822 130 60373 BC856B

7606 4822 130 60373 BC856B
 7607 5322 130 60159 BC846B
 7608 4822 130 41246 BC327-25
 7609 4822 130 41246 BC327-25
 7610 5322 130 60159 BC846B

7611 5322 130 60159 BC846B
 7612 5322 130 60159 BC846B
 7615 5322 130 60159 BC846B
 7616 5322 130 60159 BC846B
 7617 4822 130 60373 BC856B

ELECTRICAL PARTSLIST - POWER BOARD**- IC & TRANSISTORS -**

7618	4822 130 41327	BC327-40
7619	5322 130 60159	BC846B
7620	4822 130 40995	BD438
7621	4822 130 40995	BD438
7622	4822 130 41327	BC327-40
7623	4822 130 40959	BC547B
7624	4822 130 60373	BC856B
7625	5322 130 60159	BC846B
7626	5322 130 60159	BC846B
7627	5322 130 60159	BC846B
7628	5322 130 60159	BC846B
7629	9352 621 95135	TDA3664/N
7630	4822 130 40855	BC337
7631	4822 130 41246	BC327-25
7636	5322 130 60159	BC846B
7638	5322 130 60159	BC846B
7639	5322 130 60159	BC846B

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

ELECTRICAL PARTSLIST - USB BOARD

- IC & TRANSISTORS -

7701 9322 190 70671 UAC3553-B-QG-F5

7702 5322 209 82941 LM358D

7703 5322 130 60159 BC846B

7704 4822 130 60373 BC856B

7705 5322 130 60159 BC846B

7706 5322 130 60159 BC846B

7721 4822 130 42804 BC817-25

7722 4822 130 42804 BC817-25

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

ELECTRICAL PARTSLIST - MP3 BOARD**- MISCELLANEOUS -**

1451 2422 025 17303 SOCKET FFC 19P

- CAPACITORS -

2450 2238 586 59812 100nF +80-20%Y5V 50V

2451 3198 017 41050 1 μ F Y5V 10V

2452 3198 017 41050 1 μ F Y5V 10V

2453 2238 586 59812 100nF +80-20%Y5V 50V

2454 2238 586 59812 100nF +80-20%Y5V 50V

2455 2238 586 59812 100nF +80-20%Y5V 50V

2457 5322 126 11583 10nF 10% X7R 50V

2459 3198 017 41050 1 μ F Y5V 10V

2460 2238 586 59812 100nF +80-20%Y5V 50V

2461 4822 124 81059 220 μ F 20% 4V

2462 3198 017 41050 1 μ F Y5V 10V

2463 3198 017 41050 1 μ F Y5V 10V

2464 2238 586 59812 100nF +80-20%Y5V 50V

2465 2238 586 59812 100nF +80-20%Y5V 50V

2466 2238 586 59812 100nF +80-20%Y5V 50V

2467 3198 017 41050 1 μ F Y5V 10V

2468 3198 017 41050 1 μ F Y5V 10V

2469 2238 586 59812 100nF +80-20%Y5V 50V

- RESISTORS -

3479 4822 051 30102 1K 5% 0,062W

3481 4822 051 30101 100R 5% 0,062W

3482 4822 051 30471 470R 5% 0,062W

3483 4822 051 30101 100R 5% 0,062W

3484 4822 117 12971 15R 5% 0,62W

3486 4822 051 30101 100R 5% 0,062W

3488 4822 117 13632 100K 1% 0,62W

3489 4822 051 30103 10K 5% 0,062W

3490 4822 051 30101 100R 5% 0,062W

3491 4822 051 30101 100R 5% 0,062W

3492 4822 051 30105 1M 5% 0,062W

3493 4822 051 30103 10K 5% 0,062W

3494 4822 051 30103 10K 5% 0,062W

3495 4822 051 30103 10K 5% 0,062W

3496 4822 051 30101 100R 5% 0,062W

3497 4822 051 30103 10K 5% 0,062W

3498 4822 051 30332 3,3K 5% 0,062W

3499 4822 051 30103 10K 5% 0,062W

4450 4822 051 30008 OR JUMPER

4451 4822 051 30008 OR JUMPER

- COILS & FILTERS -

1460 4822 242 10989 CSTCV16,93MXJ0C3

5450 2422 549 43062 IND FXD SM 100MHZ 600R

- DIODES -

6450 4822 130 11411 BZX284-C3V3

6451 4822 130 11366 BZX284-C3V9

- IC & TRANSISTORS -

7452 3198 010 42310 BC847BW

7453 3198 010 42310 BC847BW

7455 4822 209 17108 LM317LD

7456 3198 010 42310 BC847BW

7458 9322 130 41668 M24C64-WMN6

7460 3198 010 42310 BC847BW

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

ELECTRICAL PARTSLIST - VOLUME BOARD

- MISCELLANEOUS -

1200	4822 265 11207	SOCKET FFC 6P
1201	2422 129 16545	ROTARY ENCODER 24P
1202	2422 128 02917	SWITCH-TACT
1203	2422 128 02917	SWITCH-TACT

- CAPACITORS -

2201	5322 126 11583	10nF 10% X7R 50V
2202	2020 552 94427	100pF 5% NP0 50V
2203	2020 552 94427	100pF 5% NP0 50V

- RESISTORS -

3201	4822 051 30222	2,2K 5% 0,062W
3204	4822 051 30101	100R 5% 0,062W
3205	4822 051 30102	1K 5% 0,062W
3206	4822 051 30102	1K 5% 0,062W

- MISCELLANEOUS -

1006	3103 308 66991	PBAS USB PC LINK
1009	2440 257 40406	LSP 6R 10W OPN FULR R105S
1010	2440 257 40406	LSP 6R 10W OPN FULR R105S
1011	△ 3140 118 33701	TRANSFORMER AZ2558/00C/05
1011	△ 3140 118 33711	TRANSFORMER AZ2558/01
1011	△ 3140 118 33721	TFM POW EI-57 UL (-/17)
1012	2422 030 00374	CON NBM SUPP H 2P M TC08 B
1012	2422 030 00333	CON NBM SUPP H 2P M TC08
8006	3139 111 02331	FFC FOIL 18P/220/18P AD
8009	3139 111 02561	FFC F1IL 06P/280/06P BD
8010	3139 110 34100	CWAS FFC BD 04P 140
8011	4822 320 12752	7P - 180MM
8012	4822 320 12702	6P - 140MM
8013	3139 110 34650	FFC FOIL 05P/400/05P AD
8014	3139 110 34330	FFC FOIL
8016	3139 110 34740	FFC FOIL 08P/180/08P AD
8021	3139 110 34330	FFC FOIL

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