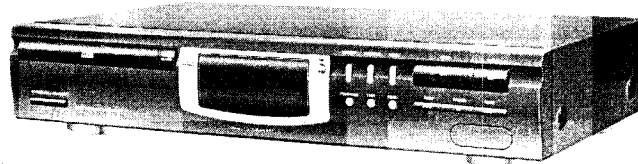


# Service Service Service

For Service Manuals Contact  
**MAURITRON TECHNICAL SERVICES**  
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 Oxon OX9 4QY  
 Tel: 01844-351694 Fax: 01844-352554  
 Email: enquiries@mauritron.co.uk

# CD723

all versions



# Service Manual



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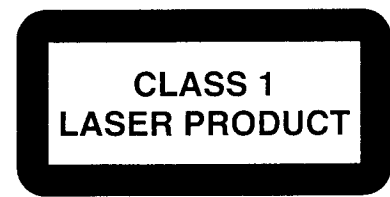
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Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

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GB 4822 725 26024



## TECHNICAL SPECIFICATION

### General

Dimensions (WxHxD) : 435 x 86 x 265mm  
 Weight : 2,9kg

### Accessories

Instruction for use : 4822 736 16252 for /00  
 : 4822 736 16253 for /01  
 : 4822 736 16254 for /14

Remote control : 4822 219 10537

Remark : RC works with CD713 as well but is delivered with CD723 only!

### Mains voltage

/00 : 220-230V(±10%) 50Hz  
 /01 : 120/230V(±15%) 50/60Hz  
 /14 : 220-230V(±10%) 50Hz

### Power consumption

stand by : ≤5W  
 operating : approx. 8W

### Audio performance

Number of channels : 2  
 Output voltage (Line out) : 2V<sub>RMS</sub> ±3dB  
 Unbalance left-right : ≤1dB  
 Frequency response : 20Hz-20kHz ≤0,4dB  
 Signal to noise ratio : 98 dB typ.  
 Dynamic range : 95dB typ. at 1kHz  
 THD : ≤0,0063% at 1kHz  
 Channel separation : 85dB typ. at 1kHz

### Headphone output

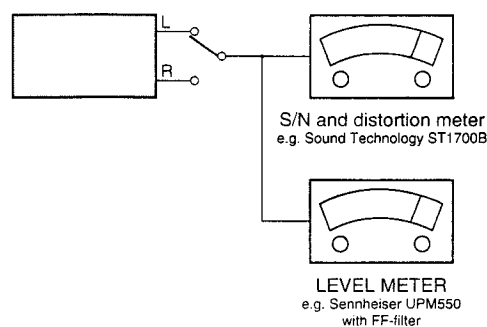
Output level (1kHz, 0dB) : ≥5V<sub>RMS</sub>  
 Unbalance left-right : ≤1,2dB  
 Output impedance : 120Ω  
 Load impedance : 32Ω - 600Ω  
 Output power : 25mW at 32Ω  
 : 52mW at 120Ω  
 : 29mW at 600Ω

### Laser

Output power : <5mW (3mW typ.)  
 Wavelength : 780nm

### Measurement setup

Use Audio Signal disc SBC429 4822 397 30184

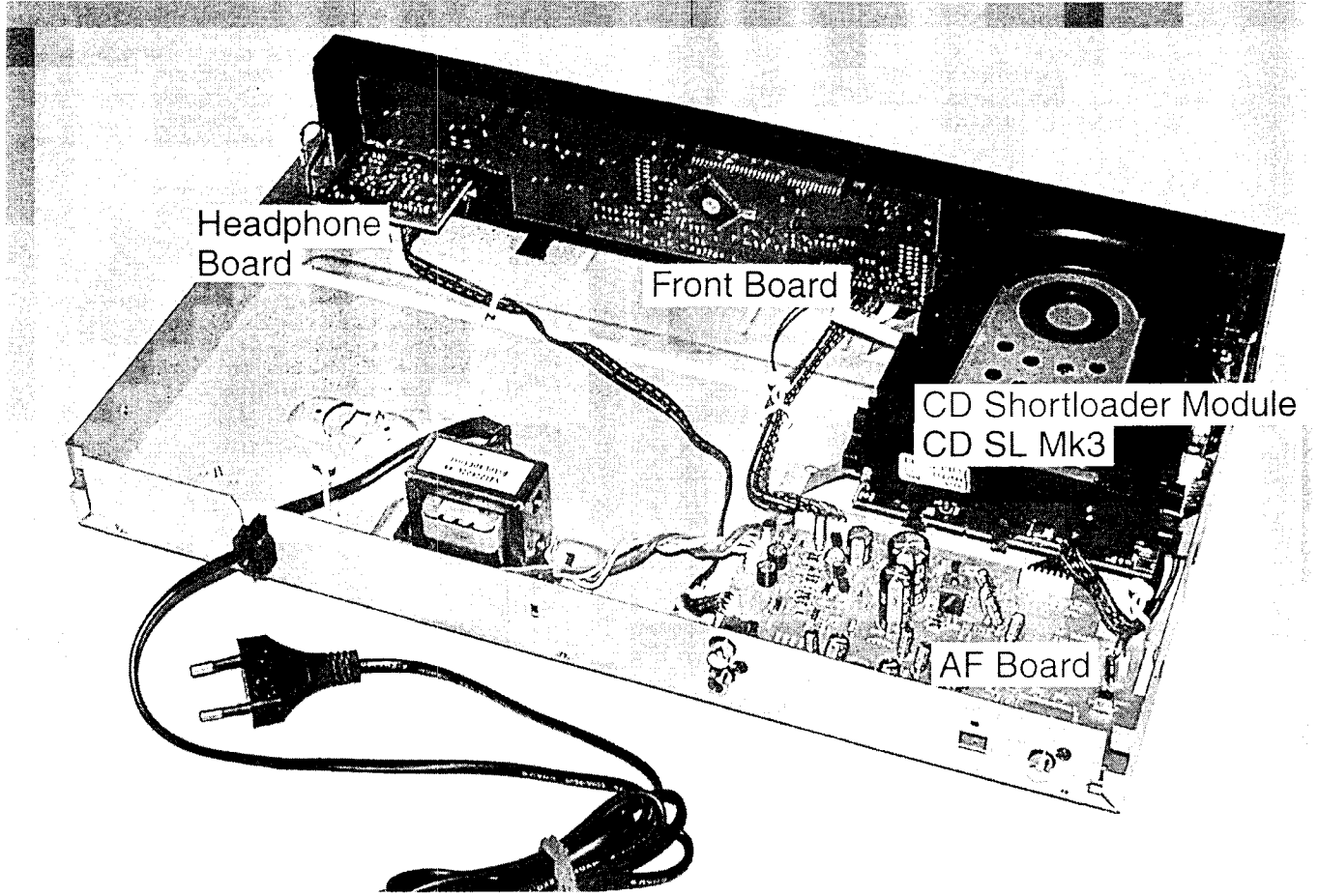


## RC 5 Commands

System code = 20

| Command | Code | Command  | Code | Command     | Code |
|---------|------|----------|------|-------------|------|
| KEY "0" | 0    | KEY "9"  | 9    | SHUFFLE     | 28   |
| KEY "1" | 1    | PLAY     | 53   | SCAN        | 43   |
| KEY "2" | 2    | STOP     | 54   | REPEAT      | 29   |
| KEY "3" | 3    | PAUSE    | 48   | FADE        | 120  |
| KEY "4" | 4    | TIME     | 11   | VOLUME UP   | 16   |
| KEY "5" | 5    | PREVIOUS | 33   | VOLUME DOWN | 17   |
| KEY "6" | 6    | REVIEW   | 50   | STAND BY    | 12   |
| KEY "7" | 7    | CUE      | 52   | MUTE        | 13   |
| KEY "8" | 8    | PROGRAM  | 36   | NEXT        | 32   |

# LOCATION OF PRINTED CIRCUIT BOARDS



**(GB) WARNING**

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.  
When repairing, make sure that you are connected with the same potential as the mass of the set via a wristband with resistance. Keep components and tools at this potential.

**ESD****(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 enfiler le bracelet serti d'une résistance de sécurité.  
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

**(D) WARNUNG**

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

**(GB) AVAILABLE ESD PROTECTION EQUIPMENT :**

anti-static table mat large 1200x650x1.25mm  
small 600x650x1.25mm  
anti-static wristband  
connection box (3 press stud connections, 1MΩ)  
extendible cable (2m, 2MΩ, to connect wristband to connection box)  
connecting cable (3m, 2MΩ, to connect table mat to connection box)  
earth cable (1MΩ, to connect any product to mat or to connection box)  
KIT ESD3 (combining all 6 prior products - small table mat)  
wristband tester

**(NL) WAARSCHUWING**

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

**(I) AVVERTIMENTO**

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

4822 466 10953  
4822 466 10958  
4822 395 10223  
4822 320 11307  
4822 320 11305  
4822 320 11306  
4822 320 11308  
4822 310 10671  
4822 344 13999

**(GB)**

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

**(F)**

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

**SAFETY****(D)**

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

**(NL)**

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

**(I)**

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

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

**CLASS 1  
LASER PRODUCT**

**(S) Varning !**

Osynlig laserstråling när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

**(DK) Advarsel !**

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Ungå udsættelse for stråling.

**(SF) Varoitus !**

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

**(GB)**

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

**(F)**

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

[www.rtv-horvat-dj.hr](http://www.rtv-horvat-dj.hr)

## GENERAL INFORMATION

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### Maintenance

Clean the CD player with a soft, slightly dampened lint-free cloth. Do not use any cleaning agents as they may have a corrosive effect.



Do not expose the CD player, batteries or CDs to humidity, rain, sand or excessive heat (caused by heating equipment or direct sunlight).

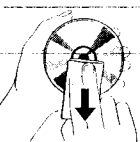


This CD player can play all kinds of Audio Discs such as CD-Recordables and CD-Rewriteables. Do not try to play a CD-ROM, CD-I, CDV or computer CD.

If the CD player cannot read CDs correctly use a commonly available cleaning CD to clean the lens before taking the CD player to repair. Other cleaning methods may destroy the lens. Always keep the tray closed to avoid dust on the lens.

The lens may cloud over when the CD player is suddenly moved from cold to warm surroundings. Playing a CD is not possible then. Leave the CD player in a warm environment until the moisture evaporates.

To clean a CD, wipe it in a straight line from the center toward the edge using a soft, lint-free cloth. A cleaning agent may damage the disc! Never write on a CD or attach a sticker to it.

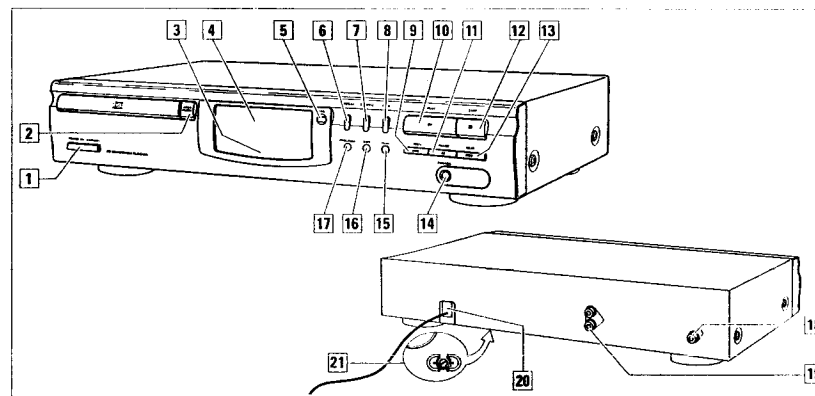


### Technical data

Subject to modification without notice.

|                                 |  |
|---------------------------------|--|
| Standby power consumption ..... | < 5W   |
| Frequency range .....           | 20-20,000Hz                                      |
| Amplitude linearity .....       | < 1dB (1kHz, -90dB)                              |
| Dynamic range .....             | 95dB (1kHz)                                      |
| Signal-to-noise ratio .....     | 98dB (1kHz, A-weighted)                          |
| Channel separation .....        | 90dB (1kHz)                                      |
| Total harmonic distortion ..... | 0.006%, -84dB (1kHz)                             |
| Audio output .....              | 2V RMS $\pm$ 3dB, 1k $\Omega$                    |
| Digital coaxial output .....    | 75 $\Omega$ acc. IEC 958                         |
| Impedance headphones .....      | 30-600 $\Omega$ (5V e. m. f. from 120 $\Omega$ ) |
| Dimensions .....                | 435 x 86 x 265mm                                 |
| Weight .....                    | 2.9kg  |

## CONTROLS AND CONNECTIONS



### Controls on the front

- 1 **POWER ON / STANDBY** ... switches the CD player on and to standby
- 2 **OPEN-CLOSE** ... opens and closes the CD tray
- 3 Sensor for the infrared remote control
- 4 Display
- 5 **TIME** ... switches through the different time information
- 6 **REPEAT** ... repeats a track, a program or the entire CD
- 7 **SHUFFLE** ... plays a CD or a program in random order
- 8 **FADE** ... fades CD play out and in
- 9 **PREV.**  $\leftarrow$  ... selects the beginning of the current or a previous track, and searches backward
- 10 **PLAY**  $\blacktriangleright$  ... starts CD play
- 11 **PAUSE**  $\parallel$  ... interrupts CD play
- 12 **STOP**  $\blacksquare$  ... stops CD play and clears a program
- 13 **NEXT**  $\blacktriangleright$  ... selects the beginning of a subsequent track, and searches forward

- 14 **PHONES** ... (CD 723 only) 6.3mm headphone socket
- 15 **PEAK** ... searches the loudest passage of a CD
- 16 **EDIT** ... changes the settings for recording on tape or CD-Recordable
- 17 **PROGRAM** ... programs track numbers

### Connections at the back

- 18 **DIGITAL OUT** ... (CD 723 only) to connect the digital input of a digital audio device
- 19 **LINE OUT L R** ... to connect the audio input of an amplifier
- 20 Mains lead ... After all other connections have been made, connect the mains lead to the wall socket

### At the bottom

- 21 **VOLTAGE SELECTOR** ... (Not on all versions.) Disconnect the mains lead first, if this selector must be reset.

English

INSTRUCTION FOR USE

3-1

English

www.rtv-horvat-dj.hr



## INSTALLATION AND REMOTE CONTROL

### Accessories

This CD player is supplied including:

- a remote control (CD 723 only)
- 2 batteries for the remote control (CD 723 only)
- a connection cable
- this instruction booklet

### Connections

#### Usual connection, LINE OUT

- 1 Insert the red plug of the supplied connection cable into R and the other plug into L.
- 2 Insert the other side of the cable into the corresponding sockets of the CD or AUX input of your amplifier.

#### Important!

You may also use the TUNER or TAPE, but **never** the PHONO input of your amplifier!

#### Digital connection, DIGITAL OUT (CD 723 only)

**Never** connect this socket to a non-digital input – such as AUX, CD, PHONO, TAPE – of an amplifier. This output supplies a digital signal and can therefore only be connected to a digital input.

- 1 Insert an optional coaxial cable into DIGITAL OUT.
- 2 Insert the other side of the cable into the digital input of your digital device (e. g. CD Recorder).

### Mains

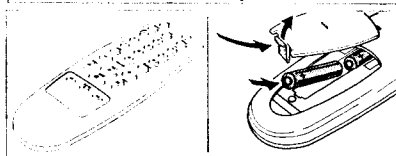
The type plate is located on the back of the CD player.

- 1 If your set is equipped with a VOLTAGE selector (at the bottom), set this selector to your local mains voltage if necessary. Position 120V includes 110V–127V. Position 230V includes 220V–240V.

- 2 Connect the mains cable to the wall socket. This switches on the mains supply.

*Note: To disconnect the CD player from the mains completely, remove the mains plug from the wall socket.*

### Remote control (CD 723 only)



#### Batteries

- Open the battery compartment of the remote control and insert 2 alkaline batteries, type AAA (R03, UM-4).

Remove batteries if they are flat or the remote control is not going to be used for a long time.

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

**TIME** ..... switches through the different time informations

⏻ ..... switches the CD player to standby

**PROGRAM** ..... programs track numbers

**FADE** ..... fades CD play out and in

**SHUFFLE** ..... plays a CD or a program in random order

Digits 1–0 ..... selects a track by number

**HIGHLIGHT** ..... plays the beginning of each track

**REPEAT** ..... repeats a track, a program or the entire CD

**VOLUME -** ..... decreases the volume level

**VOLUME +** ..... increases the volume level

**PLAY ▶** ..... starts CD play

**PREV. ◀** ..... selects the beginning of the current or a previous track

**NEXT ▶** ..... selects the beginning of a subsequent track

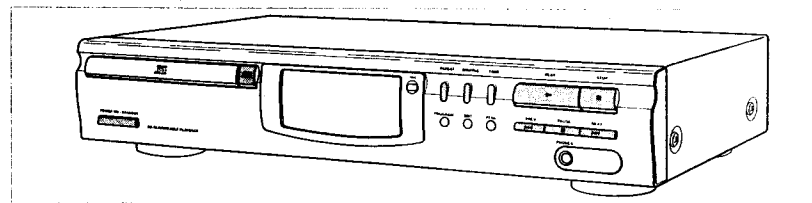
**STOP ■** ..... stops CD play and clears a program

◀◀ ..... searches backward

**PAUSE ||** ..... interrupts CD play

▶▶ ..... searches forward

## PLAYBACK



### Playing a CD

- 1 Use POWER ON / STANDBY to switch on the CD player.
- 2 Press OPEN CLOSE to open the CD tray. OPEN appears on the display.
- 3 Insert an audio CD (printed side up) and press OPEN CLOSE to close the CD compartment. READING appears on the display. Then the number of tracks and the playing time is shown.
- 4 Press PLAY ▶ to start CD play. The display shows TRACK, TIME, and the number and time of the actual track.
  - You can interrupt CD play by pressing PAUSE ||. The display shows || and the track number and time where playback was stopped.
  - Continue CD play by pressing PAUSE || again.
- 5 Press STOP ■ to stop CD play.

*Note: Playback will also stop if the end of the CD is reached.*

### Selecting a track and searching

#### Selecting a track during CD play

- Briefly press PREV. ◀◀ or NEXT ▶▶ (PREV. ◀ or NEXT ▶ on the remote control) once or several times to skip to the beginning of the current, previous or subsequent track(s).
- or
- Use the digits 1–0 on the remote control to key in the number of a track. CD play continues with the selected track.

#### Selecting a track when CD play is stopped

- 1 Briefly press PREV. ◀◀ or NEXT ▶▶ (PREV. ◀ or NEXT ▶ on the remote control) once or several times.
  - or
  - Use the digits 1–0 on the remote control to key in the number of a track.
- 2 Press PLAY ▶ to start CD play. Playback starts with the selected track.

### Searching for a passage during CD play

- 1 Hold down PREV. ◀◀ or NEXT ▶▶ (◀◀ or ▶▶ on the remote control) to find a particular passage in a backward or forward direction. CD play continues at a low volume.
- 2 Release the button when you have reached the desired passage.

*Note: In the shuffle and repeat mode and when playing a program, searching is only possible within the particular track.*

### Random order playing (SHUFFLE)

- 1 Press SHUFFLE before or during CD play to start shuffle play. SHUFFLE is shown in the display. All the tracks of the CD (or program if available) will now be played in random order.
- 2 Press SHUFFLE again to return to normal CD play.

### Repeating the CD, a track or a program

- 1 Press repeatedly REPEAT during CD play. The display shows the different repeating modes. REPEAT 1: the current track is played repeatedly. REPEAT: the entire CD or program (if available) is played repeatedly.
- 2 Press REPEAT until the display indication disappears to return to normal CD play.

*Note: It is possible to activate the different playing modes at the same time, e. g. you can repeatedly play the entire CD or program in random order (PROGRAM REPEAT SHUFFLE).*

## ADDITIONAL FUNCTIONS

**Headphone listening (CD 723 only)**

- 1 Connect your headphones to the 6.3mm PHONES socket.
- 2 Press VOLUME – or VOLUME + on the remote control to adjust the volume (see "Volume adjustment").

**Important!**

The volume of the headphones is in line with the volume of the output. Therefore do not use VOLUME –/+ during recording.

**Scanning the CD (CD 723 only)**

It is possible to listen to the beginning of each track of a CD or program. You can choose whether to play 10, 20 or 30 seconds of each track.

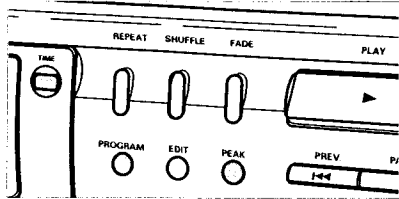
- 1 Press HIGHLIGHT on the remote control repeatedly to switch through the different scan modes.  
SCAN 10, SCAN 20, SCAN 30, SCAN OFF...  
(SCAN OFF aborts the scan function).
- 2 As soon as the desired scan mode is displayed do not press the button again.  
After 1 second scanning starts. The number and remaining time of the actual track, and REM TIME are displayed.

- You can interrupt scan by pressing PAUSE ■. Continue scan by pressing PAUSE ■ again.

- 3 Press STOP ■ to stop scanning.  
or  
• Press PLAY ► to start CD play with the actual track.

*Note: If you press HIGHLIGHT while SHUFFLE is active, shuffle will be stopped before scanning.*

## ADDITIONAL FUNCTIONS

**Programming track numbers**

You can select a number of tracks and store these in the memory in the desired sequence. You can store any track more than once. At most, 30 tracks can be stored in the memory.

- 1 Press PROGRAM to start programming.  
PROGRAM flashes.

*Note: If you press PROGRAM while playing a CD, the actual track will be added to the program.*

- 2 Press PREV ◀◀ or NEXT ▶▶ (PREV ◀ or NEXT ▶) on the remote control to select the desired track.  
or  
• Key in the number of a track with the digits 1–0 on the remote control.

- 3 Press PROGRAM to store the track number.  
TRACK, TOTAL TIME, and the number of the programmed track is displayed. The number of programmed tracks is increased and the time of the track is added to the total time of the program.

- 4 Repeat steps 2 and 3 for all tracks to be programmed.

- 5 Press STOP ■ to end programming.  
PROGRAM lights permanently.

- It is possible to review the program using the PREV ◀◀ or NEXT ▶▶ (PREV ◀ or NEXT ▶) on the remote control. You can add more tracks by pressing PROGRAM like you have done before.

- 6 Press PLAY ► to start program play.

*Note: If you try to store more than 30 tracks  
PROGRAM FULL scrolls through the display.*

**Clearing the program**

- 1 If necessary press STOP ■ to stop program playing.
- 2 Press STOP ■ to clear the program.  
PROGRAM CLEAR scrolls through the display,  
PROGRAM disappears and your program is cleared.

*Note: The program will also be cleared if you open the tray.*

**Loudest passage searching**

You can search for the loudest passage of a CD or program. This will help you in adjusting your recording device if required.

- 1 If necessary press STOP ■ to stop CD play.

- 2 Press PEAK to start searching.  
PEAK starts flashing. Searching may need a few minutes. Then 4 seconds of the loudest passage are played repeatedly.

- You can interrupt peak play by pressing PAUSE ■. Continue peak play by pressing PAUSE ■ again.

- 3 Press STOP ■ to stop playing.  
or  
• Press PLAY ► to start CD play.

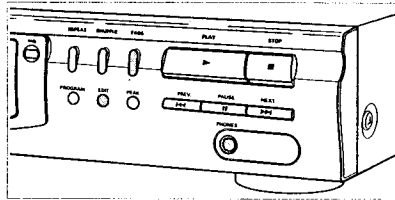
**Time display**

You can display time information which is stored on the CD.

While playing a CD or a program the number and elapsed time of the actual track, and TIME are displayed.

- Press TIME several times to display:  
The number and remaining time of the actual track, and REM TIME.  
The number of the actual track, the total elapsed time of the CD, and TOTAL TIME.  
The number of the actual track, the total remaining time of the CD, and TOTAL REM TIME.

*Note: If you press TIME when the CD is not playing you may only display the total time of the CD.*

**Fading out and in**

You can fade out and in CD play, e. g. to stop and start a recording softly.

- 1 Press FADE during CD play to fade out.  
The display shows ■■■ in steps. The volume is lowered continuously until CD play is paused.
- 2 Press FADE again to fade in.  
The display shows ■■■ in steps. CD play starts and the volume is raised continuously to its previous level.

*Note: You may use FADE anytime when CD play is paused to fade in.*

**Volume adjustment (CD 723 only)**

The volume of the CD player can be adjusted. This affects the DIGITAL OUT output as well.

- Press VOLUME – or VOLUME + on the remote control.  
The volume of the CD player is lowered or raised. The display shows the actual value between VOL MIN and VOL MAX.

**Important!**

VOLUME –/+ is altering the signal of the output. Before recording set the volume to VOL MIN and do not change during recording.

**Locking the volume**

It is possible to lock the output volume to its maximum. This affects the DIGITAL OUT output as well. Locking the volume can be useful when recording from the CD-player.

- Keep EDIT pressed for more than 2 seconds.

*If the volume was unlocked:*

The display shows VOL FULL and the volume is locked.

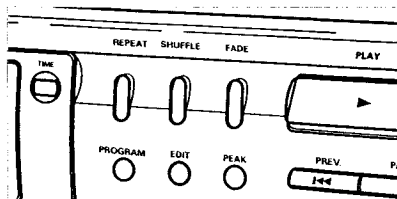
*If the volume was locked:*

The display shows VOL MIN and the volume is unlocked.

*Note: If you press VOLUME –/+ and the volume is locked the display shows VOL FULL.*

## ADDITIONAL FUNCTIONS

English



## Recording setup

It is possible to set up the CD player in a way that it will calculate which tracks will fit on your recording media. It is only possible to use the edit function if a disc has not more than 29 tracks.

If you use **NORMAL**, the recording stops after the last track that fits on one side of your recording media. Notice that CD-Recordables are single-sided only! If you use **OPTIMAL**, some tracks will be skipped to minimise the unused space on your recording media. The sequence of the tracks stays as the original.

- 1 Insert a CD and, if desired, program track numbers.
- 2 Press **EDIT** to start the setup.  
The display shows **EDIT** and **NORMAL**.
- 3 Press **PREV** or **NEXT** (PREV or NEXT on the remote control) to switch through the different scan modes: **NORMAL**, **OPTIMAL**, **STOP**... (**STOP** aborts the edit function).
- 4 As soon as the desired edit mode is displayed press **EDIT**.  
The display shows **99**.

- 5 Press **PREV** or **NEXT** (PREV or NEXT on the remote control) to switch through the different recording times and media.

**C** 100, **C** 120, **CDR** 24, **CDR** 60, **CDR** 74,  
**C** 30, **C** 45, **C** 60, **C** 90...

*Note: C is for cassette, CDR is for CD-Recordable and CD-Rewritable and therefore for single-sided recording only.*

- 6 As soon as the desired recording time and media is displayed press **EDIT**.  
The number of tracks and the playing time are displayed.
- 7 Start your recording and press **PLAY** to start CD play.  
If cassette (C) was selected the CD player pauses after playing the calculated tracks for side A. If CD-Recordable (CDR) was selected the CD player stops.
- 8 If required switch tape sides.
- 9 Press **PLAY** to start CD play again.  
The number of tracks and the playing time are displayed. The remaining tracks for side B are played.

*Note: It is possible to switch between A and B by using PREV or NEXT (PREV or NEXT on the remote control).*

## Environmental information

All redundant packing material has been omitted. We have done our utmost to make the packaging easily separable into three mono materials: cardboard (box), polystyrene foam (buffer) and polyethylene (bags, protective foam sheet).

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

## TROUBLESHOOTING

English

## WARNING

**Under no circumstances should you try to repair the CD player yourself as this will invalidate the guarantee.**

If a fault occurs, first check the points listed below before taking the set for repair.

If you are unable to solve a problem by following this checklist, consult your dealer or service center.

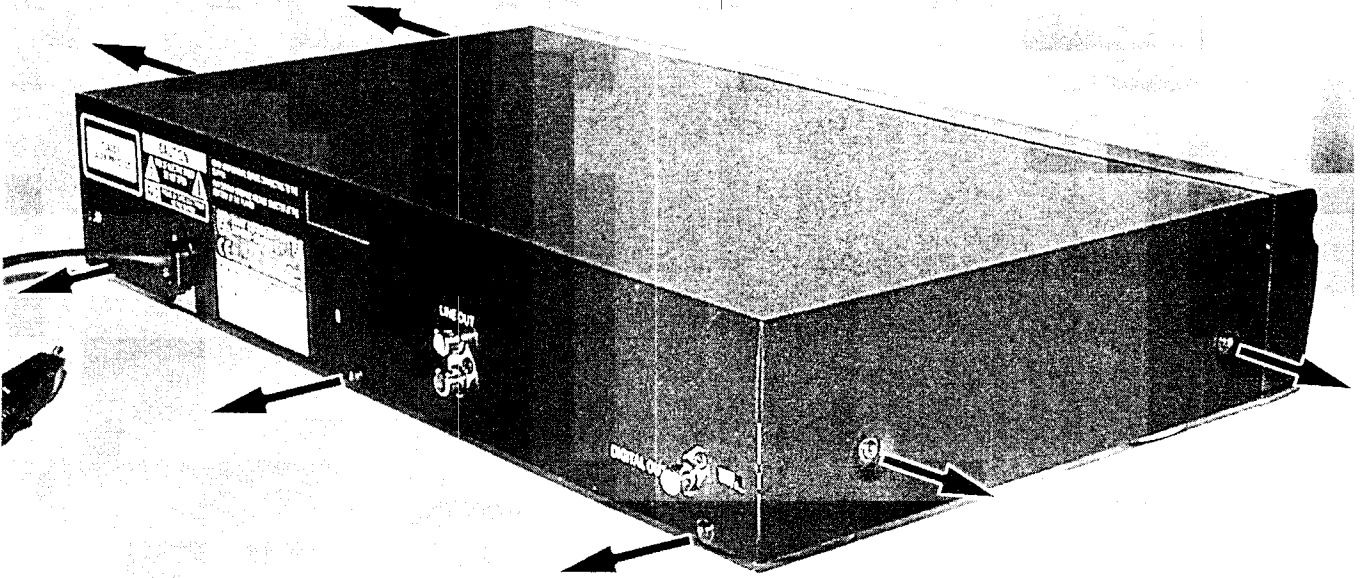
| Problem  | Possible cause   | Solution  |
|--|--|---|
| <b>No power</b>  | Mains cable is not securely connected.   | Connect mains cable properly.   |
| <b>No or bad sound</b>   | CD 723 only: volume is too low.<br>Interference caused by electric equipment like TVs, computers, engines, etc.<br>Loose or wrong connections.               | Adjust volume.<br>Keep the CD player away from electrical equipment.<br>Connect the CD player correctly.  |
| <b>No or bad headphone sound (CD 723 only)</b>                 | Volume is too low.<br>Headphone plug is dirty.   | Adjust VOLUME +/-.<br>Clean headphone plug.   |
| <b>No or low quality recording</b>                             | CD 723 only: volume is too low.<br>Loose or wrong connections.   | Adjust VOLUME +/-.<br>Connect the CD player correctly.  |
| <b>No reaction to operation of any keys</b>                    | Electrostatic discharge.   | Disconnect the CD player from mains, reconnect after a few seconds.   |
| <b>NO DISC is displayed</b>                                    | No CD is inserted.<br>The CD is badly scratched or dirty.<br>The CD is inserted upside down.   | Insert a CD<br>Replace or clean the CD<br>Insert CD with label upwards.   |
| <b>DISC NOT FINALIZED is displayed</b>                         | The CD-RW (or CD-R) is not properly recorded for the use on a standard CD player.  | Read the instruction booklet of your CD-Rewritable (or CD-Recordable) recorder on how to finalize a recording.  |
| <b>WRONG TRACK is displayed</b>                                | The CD is badly scratched or dirty.  | Replace or clean the CD.  |
| <b>0 000 is displayed</b>                                      | Chosen track number is higher than the highest track number on the CD.<br>First track of the CD is longer than the first side of the chosen recording media. | Key in a track number within the range of the track numbers on the CD.<br>Choose a recording media with a recording time longer than the first track of the CD.   |
| <b>VOL LOCK is displayed (CD 723 only)</b>                     | Volume is locked.  | Press <b>EDIT</b> for more than 2 seconds to unlock the volume.   |
| <b>CD skips tracks</b>   | <b>SHUFFLE</b> or <b>PROGRAM</b> is active.<br>The CD is badly scratched or dirty.<br>Laser lens is dirty.<br>The laser lens is steamed up.                  | Switch off <b>SHUFFLE</b> or <b>PROGRAM</b> play.<br>Replace or clean the CD.<br>Clean with a commonly available cleaning CD.<br>Wait until the lens has cleared. |
| <b>Remote control does not function properly (CD 723 only)</b> | Batteries are inserted incorrectly.<br>Batteries are flat.<br>Distance to the CD player is too large.  | Insert batteries correctly.<br>Insert fresh batteries.<br>Reduce distance.  |



## MECHANICAL INSTRUCTIONS

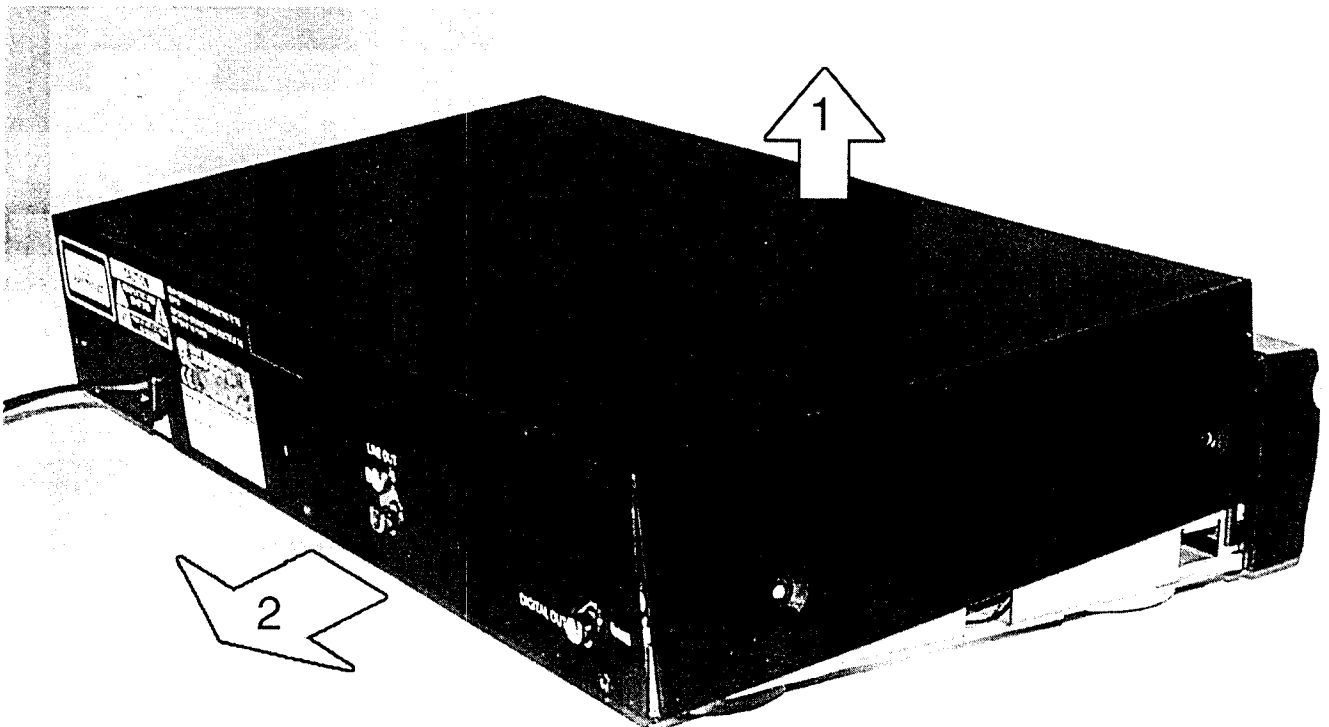
### Dismantling Top Cover

- 1) Loosen 7x screw as shown in picture 1.



picture 1

- 2) Lift top cover as shown in picture 2.
- 3) Remove top cover.

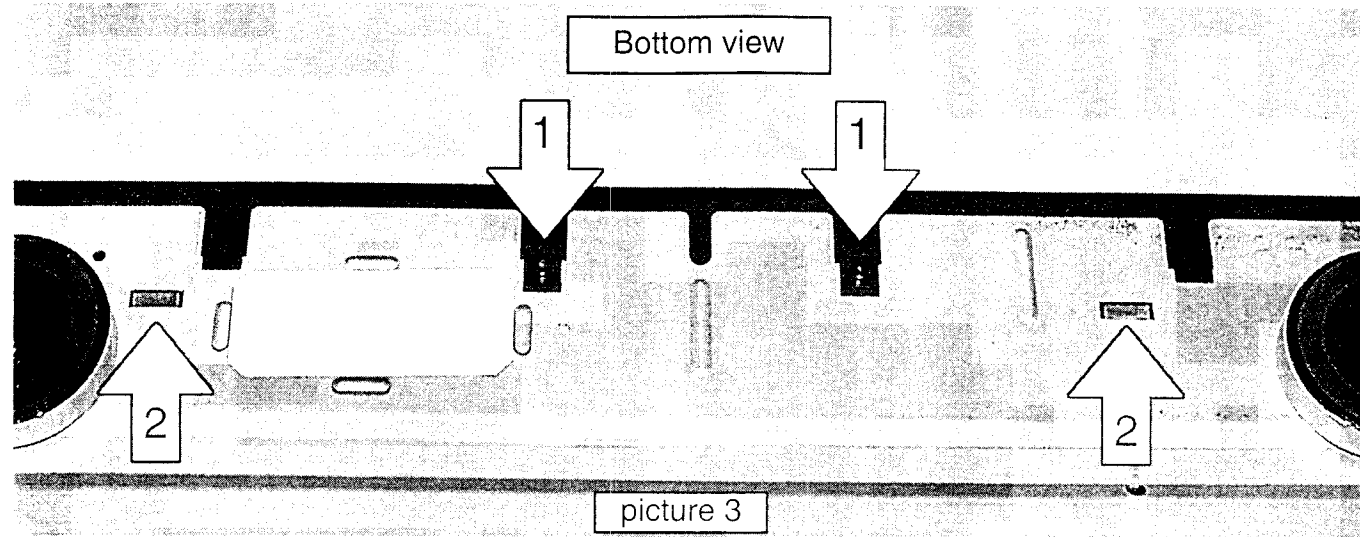


picture 2

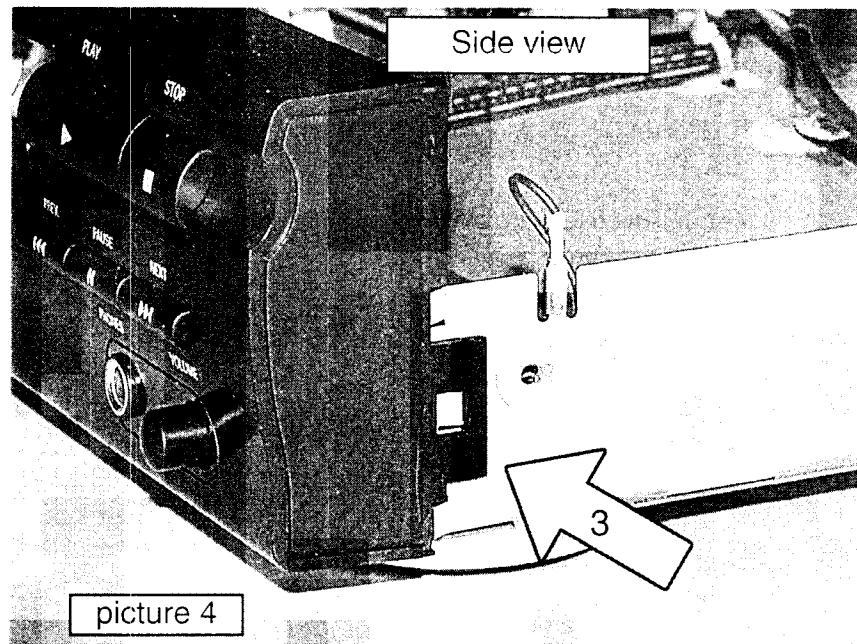
## MECHANICAL INSTRUCTIONS

### Dismantling Front

- 1) Loosen 2x screw as shown in picture 3.



- 2) Release 2x snap on bottom (see picture 3).
- 3) Release 2x snap on side (see picture 4).
- 4) Remove front.



## Dismantling hints CD Short Loader

### Dismantling the tray

- a) Press open/close button to open the tray. If the tray doesn't work, use a small screwdriver as shown in Fig.1 point 1 to move the tray outside. After the first centimetre it is possible to pull the tray out by hand.
- b) Release two snaps and remove tray.

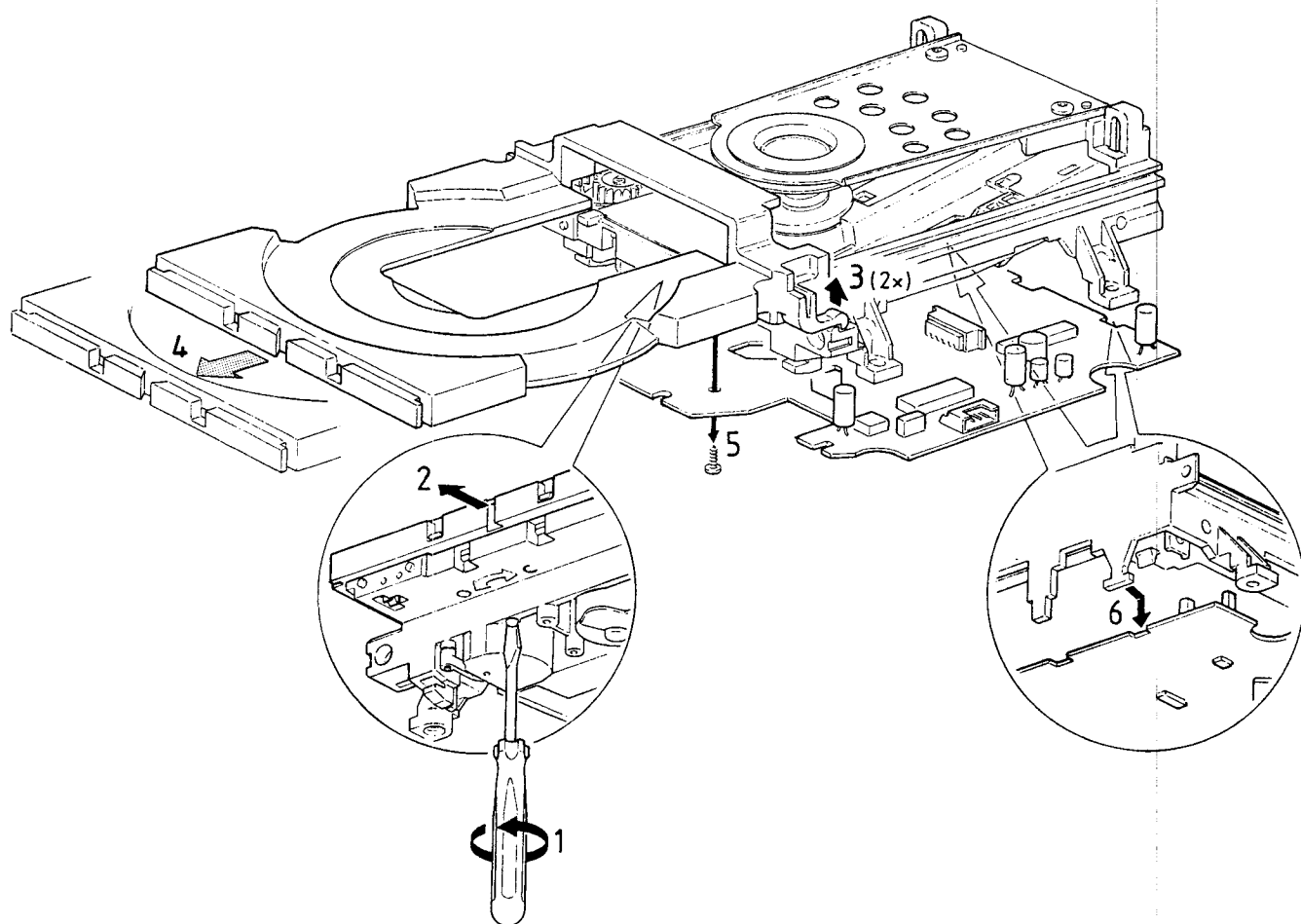


Fig. 1

### Assembly of gear

- a) Use a pin (e.g. a paperclip) to align the cam wheel (a) with the gear wheel (b). See Fig. 2.
- b) Fix the wheels with the small plastic washers

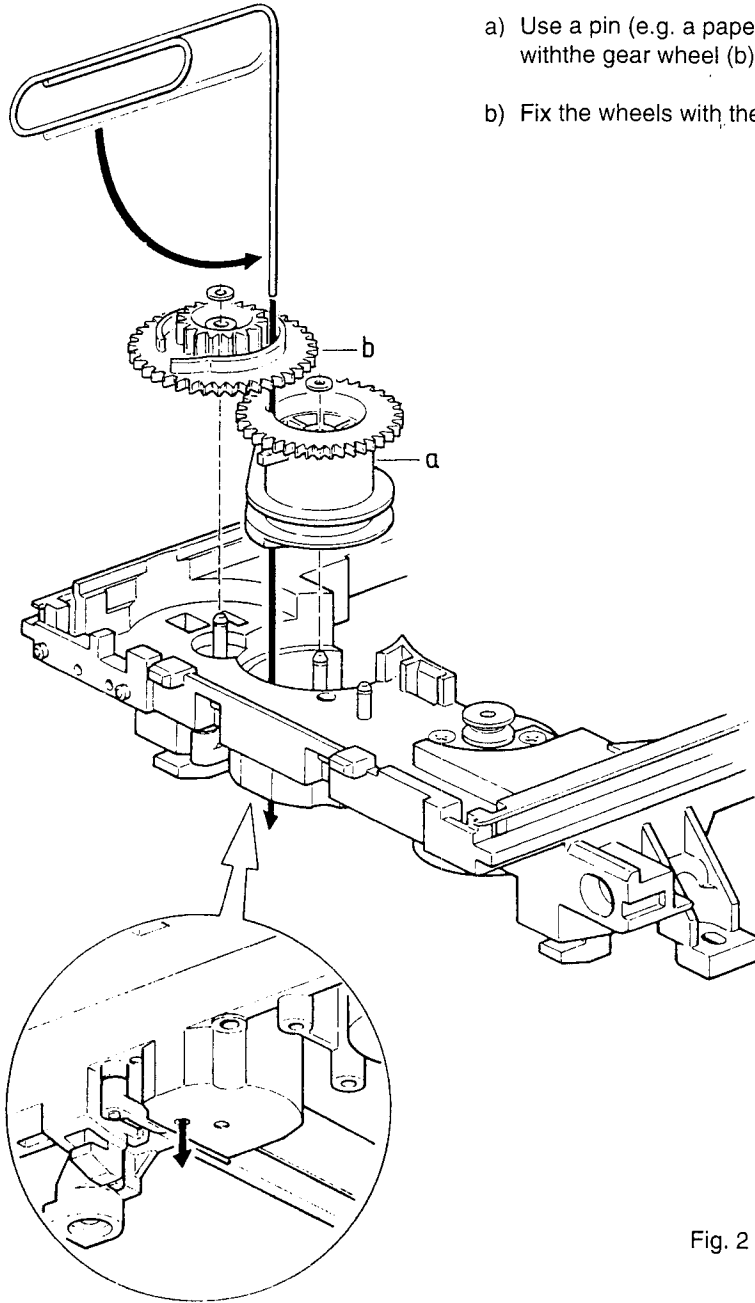


Fig. 2

- c) Mount idle wheel 2 (c) and idle wheel 1 (d) in any position. See Fig. 3.
- d) Fix the idle wheel 1 (d) with the small plastic washer.
- e) Mount the driving belt.

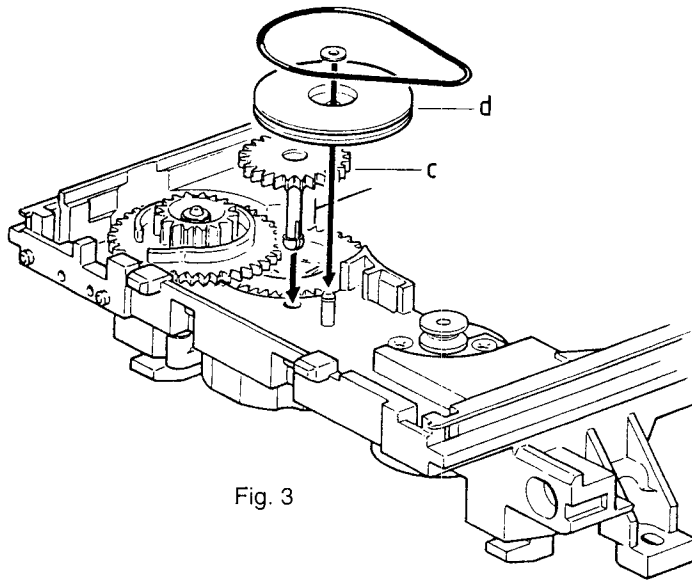


Fig. 3

- f) Mount the pinion guiding assy and the cover as shown in Fig. 4.
- g) Turn the gear wheel (b) counter clockwise to endposition.

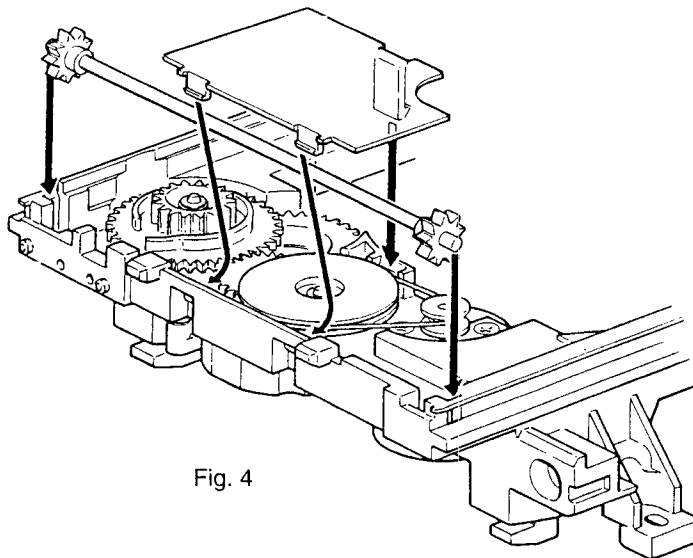


Fig. 4

- h) Mount the CD Mechanism as shown in Fig. 5.
- i) Mount the tray (Align the tray to the chassis and push it inside).

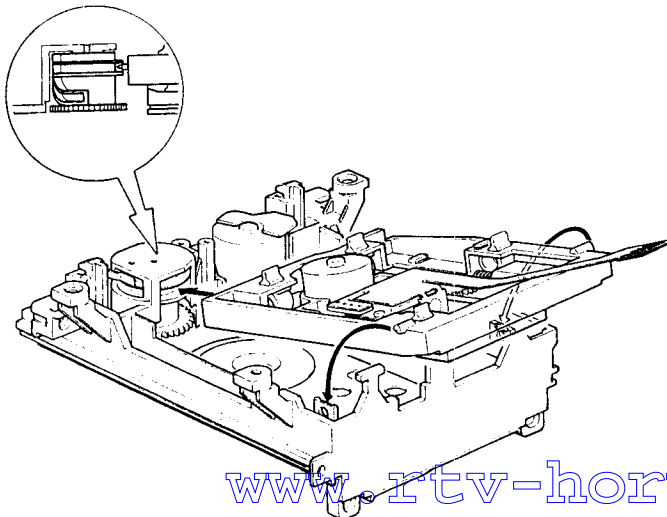


Fig. 5

### **Check if tray mechanism works correctly!**

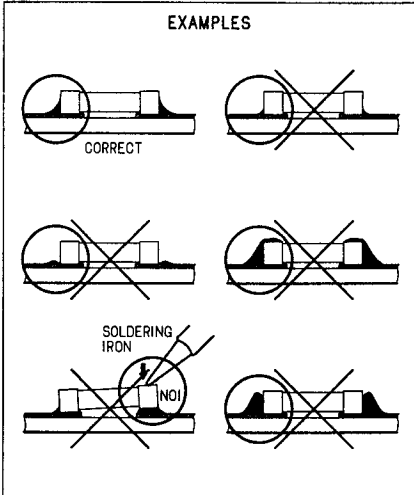
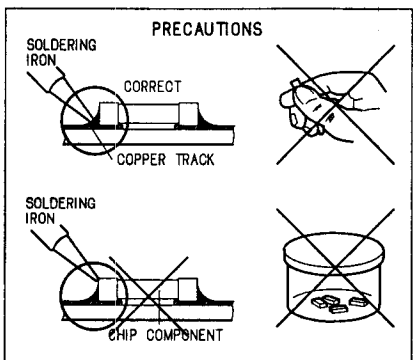
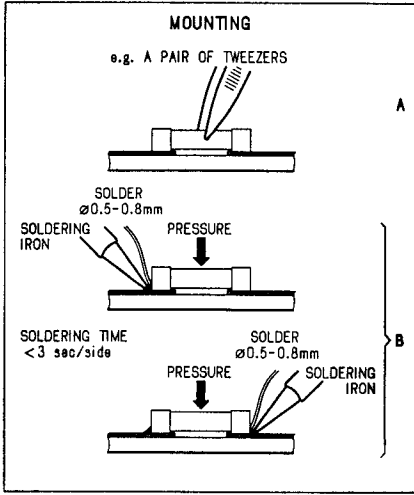
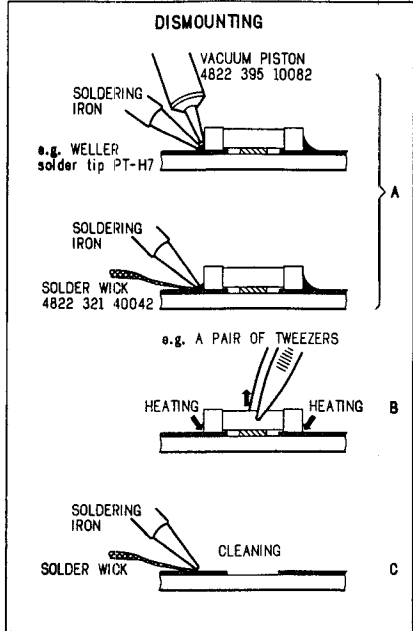
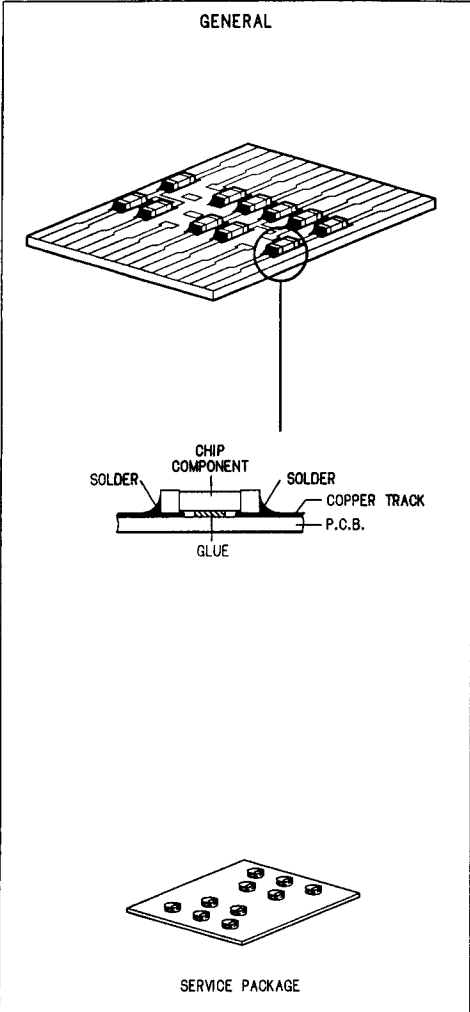
- 1) Turn the gear wheel (b) clockwise to its endposition (Use a small screwdriver as shown in Fig. 1 point 1).

The tray has to move to inner position first and then the CD mechanism has to move to its upper position.

- 2) Turn the gear wheel (b) counter clockwise to its endposition.

The CD Mechanism has to move to its lower position first and then the tray has to move outside.

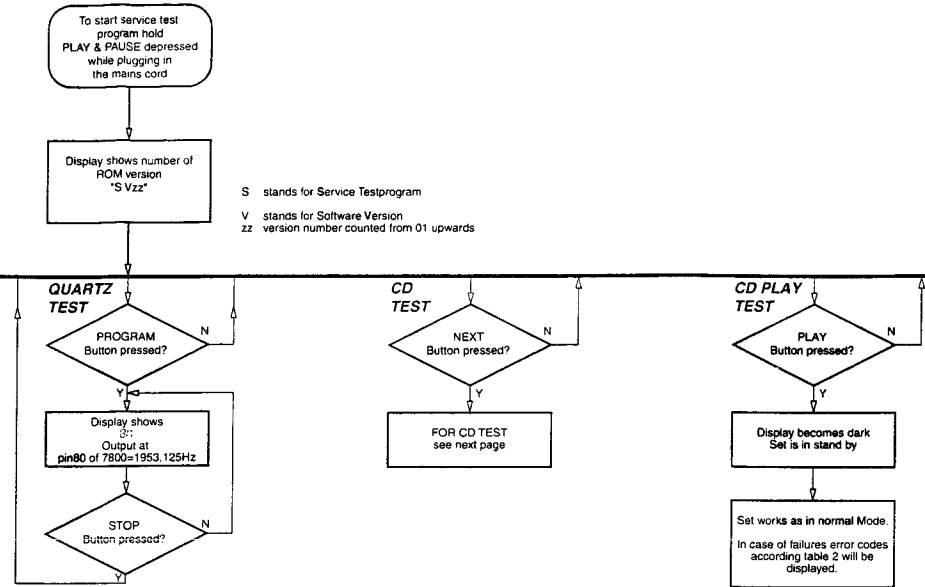
HANDLING CHIP COMPONENTS



SERVICE TOOLS

|  |                |
|--|----------------|
| TORX T10 screwdriver with shaftlength 150mm .....                          | 4822 395 50423 |
| TORX screwdriver set SBC 163 .....   | 4822 295 50145 |
| Audio signal disc SBC 429 .....  | 4822 397 30184 |
| Playability test disc SBC444 .....   | 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 -30dB level without "pause") ... | 4822 397 30155 |

# SERVICE TEST PROGRAM



The CD PLAY Test is intended to be used for continuously playing a disc in order to detect intermittent or not reproducible failures. The error code indicates where the failure can be found.

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KEY TEST

| Key        | Number | Key         | Number | Key           | Number |
|------------|--------|-------------|--------|---------------|--------|
| Next       | 1      | Shuffle     | 7      | Fade          | 13     |
| Previous   | 2      | Scan        | 8      | Time          | 14     |
| Play       | 3      | Program     | 9      | CD-Text       | 15     |
| Stop       | EXIT   | Peak search | 10     | Scroll        | 16     |
| Open/Close | 5      | Repeat      | 11     | Stand by      | 17     |
| Edit       | 6      | Pause       | 12     | any RC button | RC     |

Table 1

DISPLAY TEST

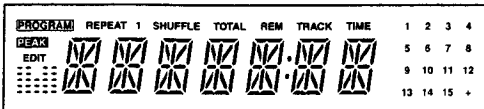


Fig. 1

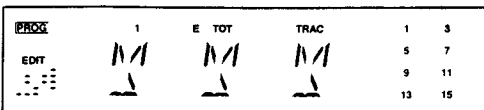


Fig. 2

CD PLAY TEST

| Error number | Type | Description  |
|--------------|------|--|
| 1000         | W    | Focus error<br>Triggered when the focus could not be found within a certain time when starting up the CD or when the focus is lost for a certain time during playing the CD. |
| 1001         | W    | Radial error<br>Triggered when the radial servo is not on track for a certain time during playing the CD.  |
| 1002         | W    | Slide in error<br>Generated when the slide did not reach its inner position (innerswitch is closed) before 6 seconds have passed by. Innerswitch or slide motor problem.     |
| 1003         | W    | Slide out error<br>Generated when the slide did not come out of its inner position (innerswitch is open) before 250ms have passed by. Innerswitch or slide motor problem.    |
| 1005         | W    | Jump error<br>Generated when the jump destination could not be found within a certain time.  |
| 1006         | W    | Subcode error<br>No valid subcode for a certain time.  |
| 1007         | W    | PLL error<br>The Phase-Lock-Loop could not lock within a certain time.   |
| 1008         | W    | Turntable motor error<br>Generated when the CD could not reach 75% of speed during starting up within a certain time. Disc motor problem                                     |
| 1020         | F    | Focus search error<br>Focus point has not been found within a certain time.  |

Table 2

W = Warning  
Error number remains on display till next warning/error  
F = Fatal error  
Set stops playing → Error number remains on display

SERVICE TEST PROGRAM CD-Part

To start Service Test program Press  
PLAY & PAUSE buttons and  
when plugged in  
the motor starts



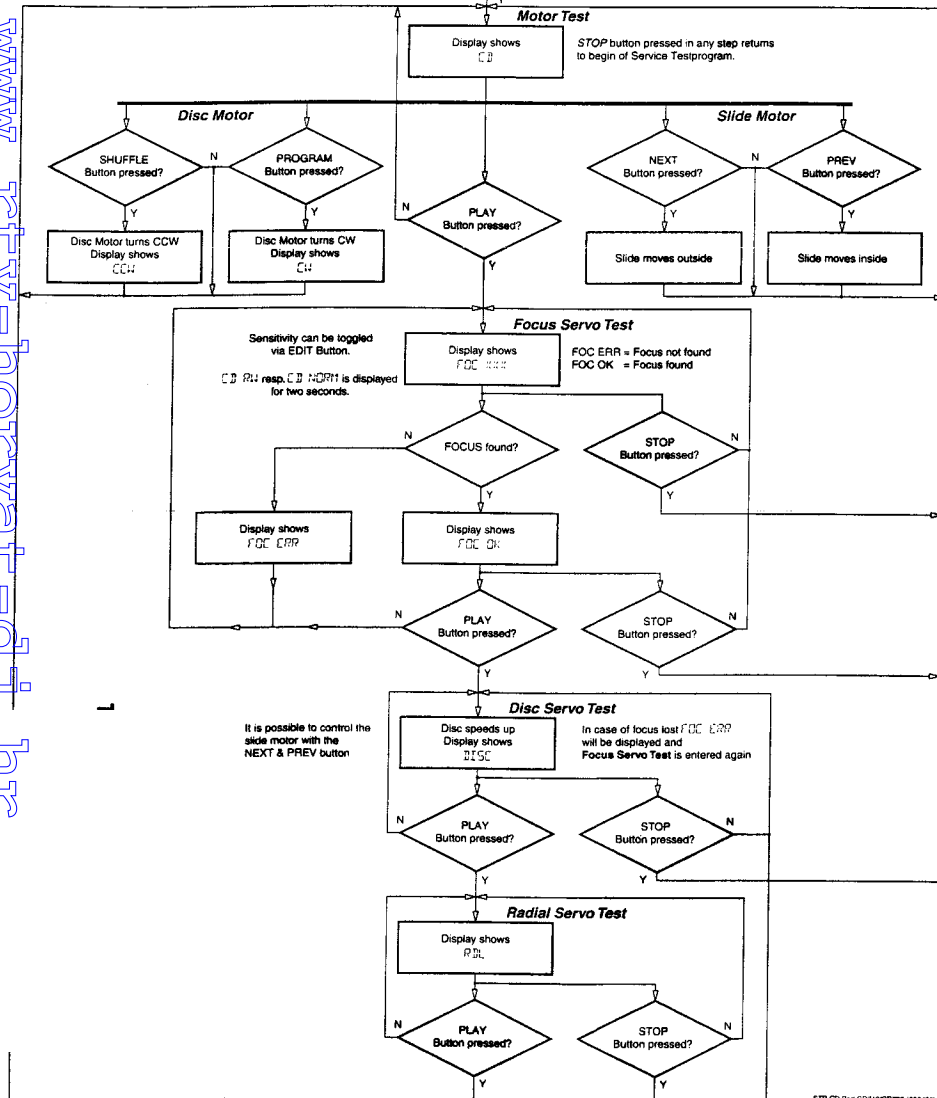
Since the CD-RW reflects much less light than an ordinary CD-A, the gain of the HF-amplifier stage and the sensitivity of the ADC inside the signal processor must be increased. The gain is switched via the HG line (pin41 of CD7), the ADC-sensitivity is switched via software ( $\mu P \rightarrow CD7$ ). During start-up the correct mode is chosen automatically; in the service test program it can be switched manually in order to allow individual measurements in both conditions.

NOTE: If sensitivity is switched to high the set will not work with normal Audio CDs!

Display shows motor start  
PROGRAM version  
S Vzzz

NEXT  
Button pressed?

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Abbreviations CD Part

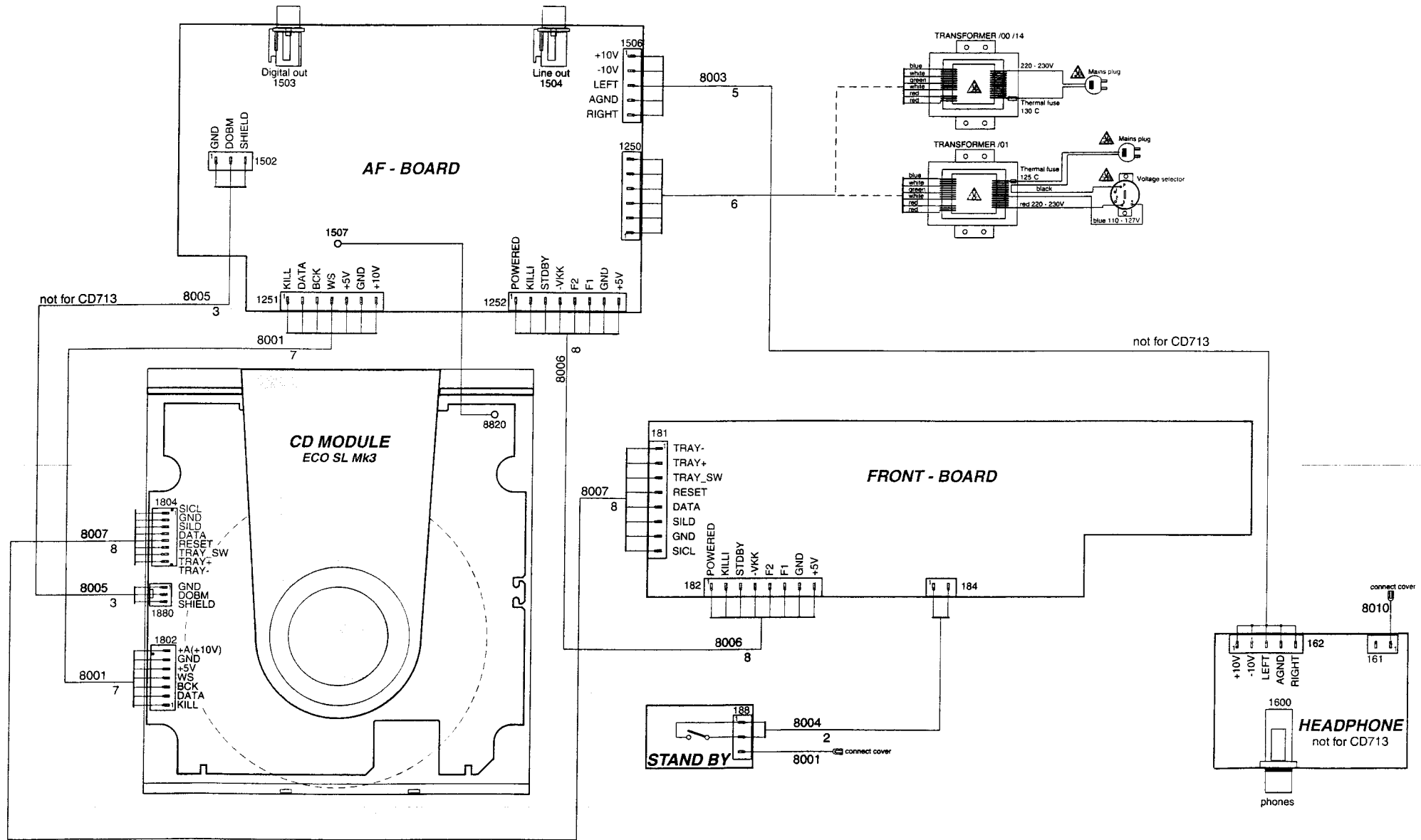
SAA7372 - DECODER AND DIGITAL SERVO IC CD7

| Pin | Name   | Direction               | Description  |
|-----|--------|-------------------------|--|
| 1   | VSSA1  | GND                     | supply (analog) of CD7   |
| 2   | VDDA1  | +4V                     | supply (analog) of CD7   |
| 3   | D1     | HF-preamp → CD7         | unipolar current input (central diode signal input)                  |
| 4   | D2     | HF-preamp → CD7         | unipolar current input (central diode signal input)                  |
| 5   | D3     | HF-preamp → CD7         | unipolar current input (central diode signal input)                  |
| 6   | VRL    | GND                     | reference input for ADC  |
| 7   | D4     | HF-preamp → CD7         | unipolar current input (central diode signal input)                  |
| 8   | R1     | HF-preamp → CD7         | unipolar current input (satellite diode signal input)                |
| 9   | R2     | HF-preamp → CD7         | unipolar current input (satellite diode signal input)                |
| 10  | IREFT  | → CD7                   | current reference for calibration ADC                                |
| 11  | VRH    | not connected           | reference output from ADC  |
| 12  | VSSA2  | GND                     | supply (analog) of CD7   |
| 13  | SELPLL | +4V                     | selects whether internal clock multiplier PLL is used                |
| 14  | ISLICE | CD7 →                   | current feedback from data slicer                                    |
| 15  | HFIN   | → CD7                   | comparator signal input  |
| 16  | VSSA3  | GND                     | supply (analog) of CD7   |
| 17  | HFREF  | → CD7                   | comparator common mode input   |
| 18  | IREF   | → CD7                   | reference current pin (nom. VDD/2)                                   |
| 19  | VDDA2  | +4V                     | supply (analog) of CD7   |
| 20  | TEST1  | GND                     | test control input   |
| 21  | CRIN   | X-Tal → CD7             | crystal/resonator input  |
| 22  | CDOUT  | X-Tal → CD7             | crystal/resonator output   |
| 23  | TEST2  | GND                     | test control input   |
| 24  | CL16   | not connected           | 16.9344MHz system clock output                                       |
| 25  | CL11   | not connected           | 11.2896MHz or 5.6448MHz clock output (3-state)                       |
| 26  | RA     | CD7 → servo driver      | radial actuator output   |
| 27  | FO     | CD7 → servo driver      | focus actuator output  |
| 28  | SL     | CD7 → servo driver      | slide actuator output  |
| 29  | TEST3  | GND                     | test control input   |
| 30  | VDD1P  | +4V                     | supply (digital) of CD7  |
| 31  | DOBM   | CD7 → digital output    | bi-phase mark output (3-state)                                       |
| 32  | VSS1   | GND                     | supply (digital) of CD7  |
| 33  | MOTO1  | CD7 → servo driver      | motor output1 of CD7; versatile (3-state)                            |
| 34  | MOTO2  | CD7 → servo driver      | motor output2 of CD7; versatile (3-state)                            |
| 35  | SBSY   | not connected           | subcode block sync (3-state)   |
| 36  | SFSY   | not connected           | subcode frame sync (3-state)   |
| 37  | RCK    | GND                     | subcode clock input  |
| 38  | SUB    | not connected           | P to W subcode bits (3-state)  |
| 39  | VSS2   | GND                     | supply (digital) of CD7  |
| 40  | V5     | not connected           | versatile output pin of CD7  |
| 41  | V4     | not connected           | versatile output pin of CD7  |
| 42  | V3     | not connected           | versatile output pin of CD7 (open drain)                             |
| 43  | KILL   | CD7 →                   | kill output; programmable (open drain)                               |
| 44  | MISC   | not connected           | C2 error flag; output only defined in CD-ROM modes (3-state)         |
| 45  | DATA   | CD7 → DAC               | serial data output (3-state)   |
| 46  | WCLK   | CD7 → DAC               | word clock output (3-state)  |
| 47  | VDD2P  | +4V                     | supply (digital) of CD7  |
| 48  | BCLK   | CD7 → DAC               | serial bit clock output (3-state)                                    |
| 49  | VSS3   | GND                     | supply (digital) of CD7  |
| 50  | CL4    | not connected           | 4.2336MHz $\mu P$ clock output                                       |
| 51  | SDA    | $\mu P \rightarrow CD7$ | $\mu P$ interface data I/O line (open drain output)                  |
| 52  | SCL    | $\mu P \rightarrow CD7$ | $\mu P$ interface clock line   |
| 53  | RAB    | $\mu P \rightarrow CD7$ | $\mu P$ interface R/W and load control line                          |
| 54  | SILD   | $\mu P \rightarrow CD7$ | $\mu P$ interface R/W and load control line                          |
| 55  | NC     |                         | no connection  |
| 56  | VSS4   | GND                     | supply (digital) of CD7  |
| 57  | RESET  | $\mu P \rightarrow CD7$ | power-on reset input (active low)                                    |
| 58  | STATUS | not connected           | servo interrupt request line/CD7 status register output (open drain) |
| 59  | VDD3C  | +4V                     | supply core (digital)  |
| 60  | C2FAIL | not connected           | indication of correction failure (open drain)                        |
| 61  | CFLG   | not connected           | correction flag output (open drain)                                  |
| 62  | V1     | → CD7                   | versatile input pin  |
| 63  | V2     | → CD7                   | versatile input pin  |
| 64  | LDON   | CD7 → 7820              | laser drive on output (open drain)                                   |



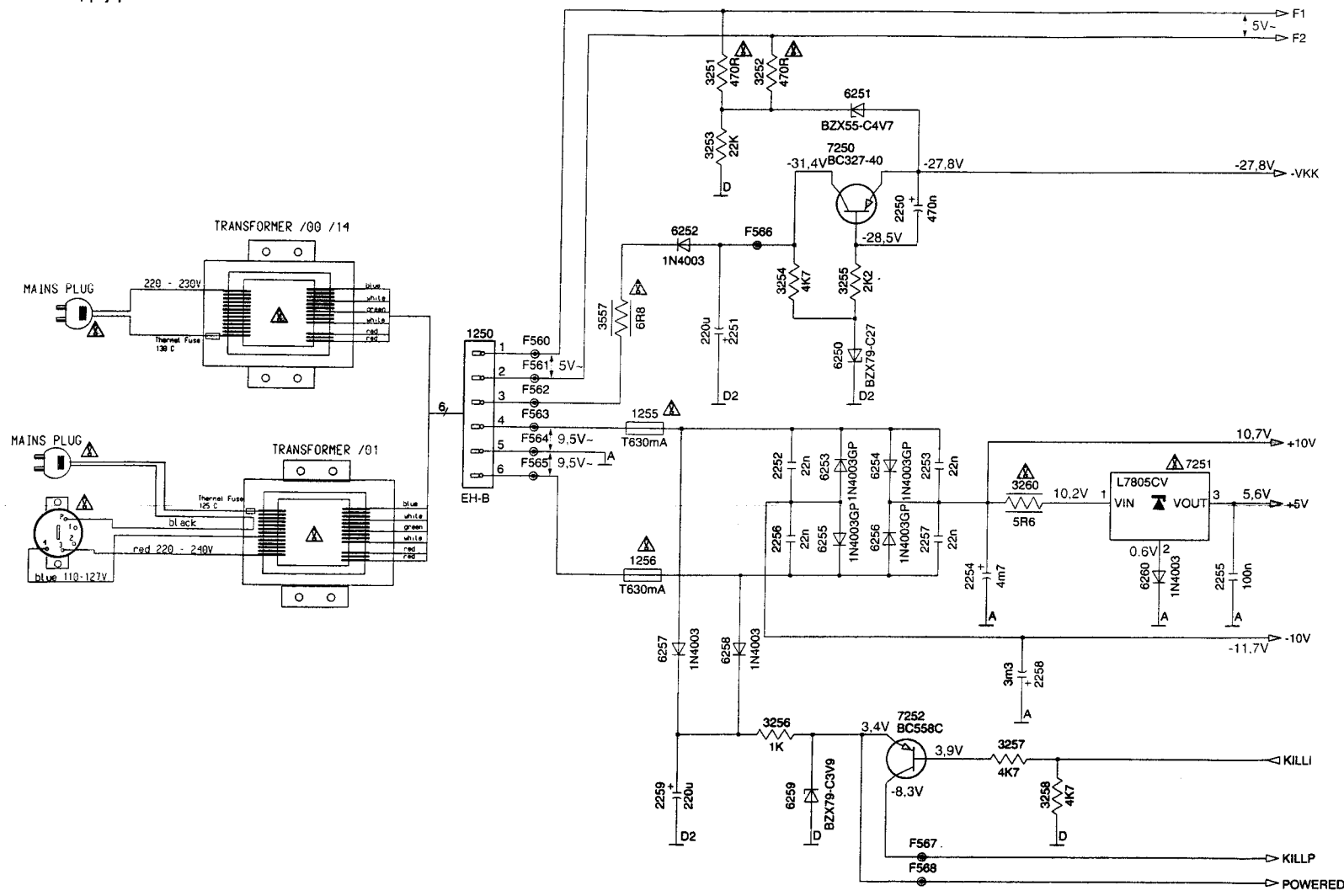
# WIRING DIAGRAM

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Wiring diagram CD713/CD713 (1984/85)

AF Board / Supply part



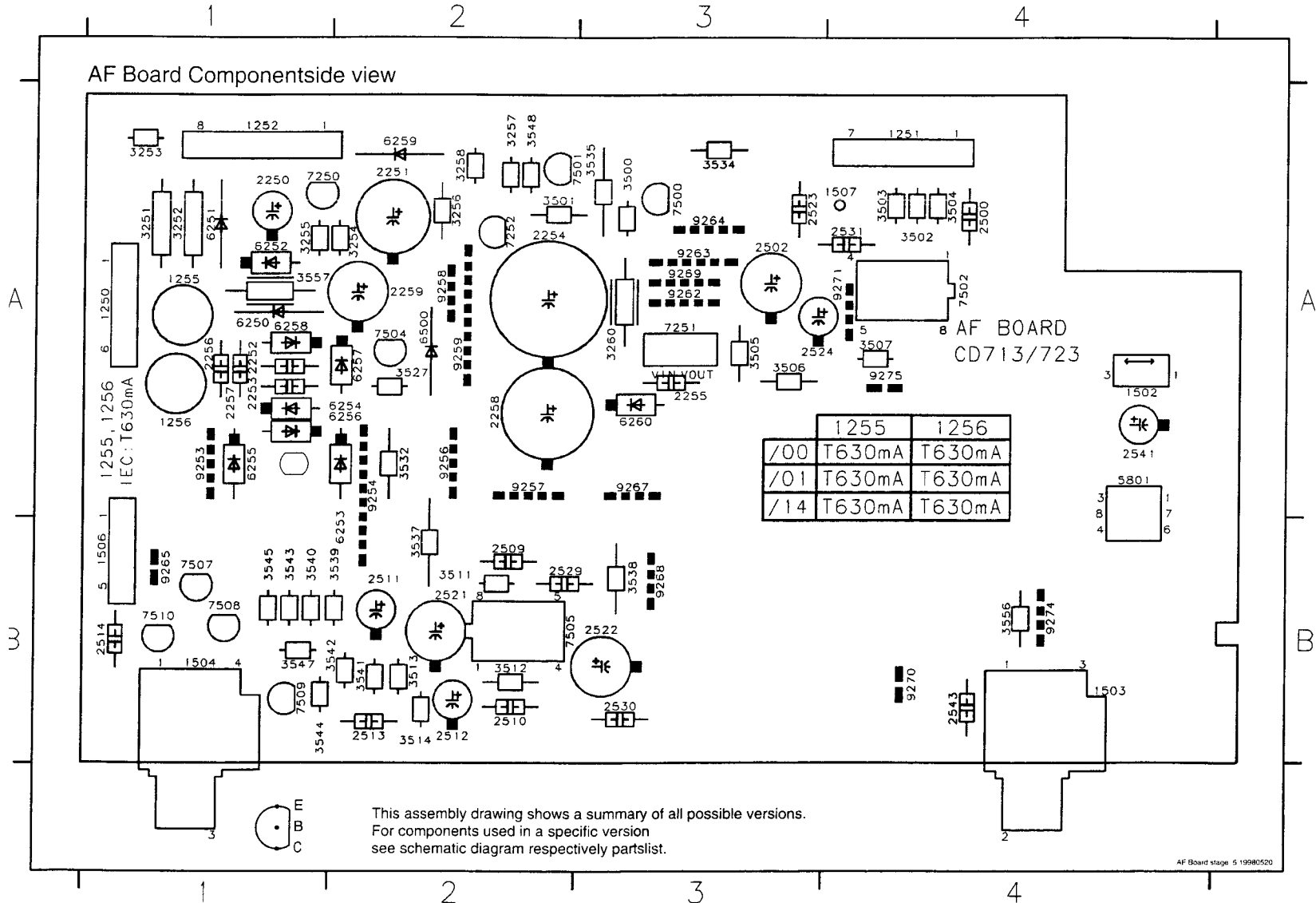
- 1250 B4
- 1255 C5
- 1256 O5
- 2250 B6
- 2251 B5
- 2252 C6
- 2253 C6
- 2254 D7
- 2255 D8
- 2256 D6
- 2257 D6
- 2258 D7
- 2259 E5
- 3251 A5
- 3252 A5
- 3253 A5
- 3254 B6
- 3255 B6
- 3256 E6
- 3257 E7
- 3258 E7
- 3260 C7
- 3557 B4
- 6250 C8
- 6251 A6
- 6252 B5
- 6253 C6
- 6254 C6
- 6255 D6
- 6256 D6
- 6257 D5
- 6258 D5
- 6259 E6
- 6260 D8
- 7250 A6
- 7251 C8
- 7252 E6
- F560 C4
- F561 C4
- F562 C4
- F563 C4
- F564 C4
- F565 C4
- F566 B5
- F567 E6
- F568 E6

TO/FROM AF BOARD / DAC PART

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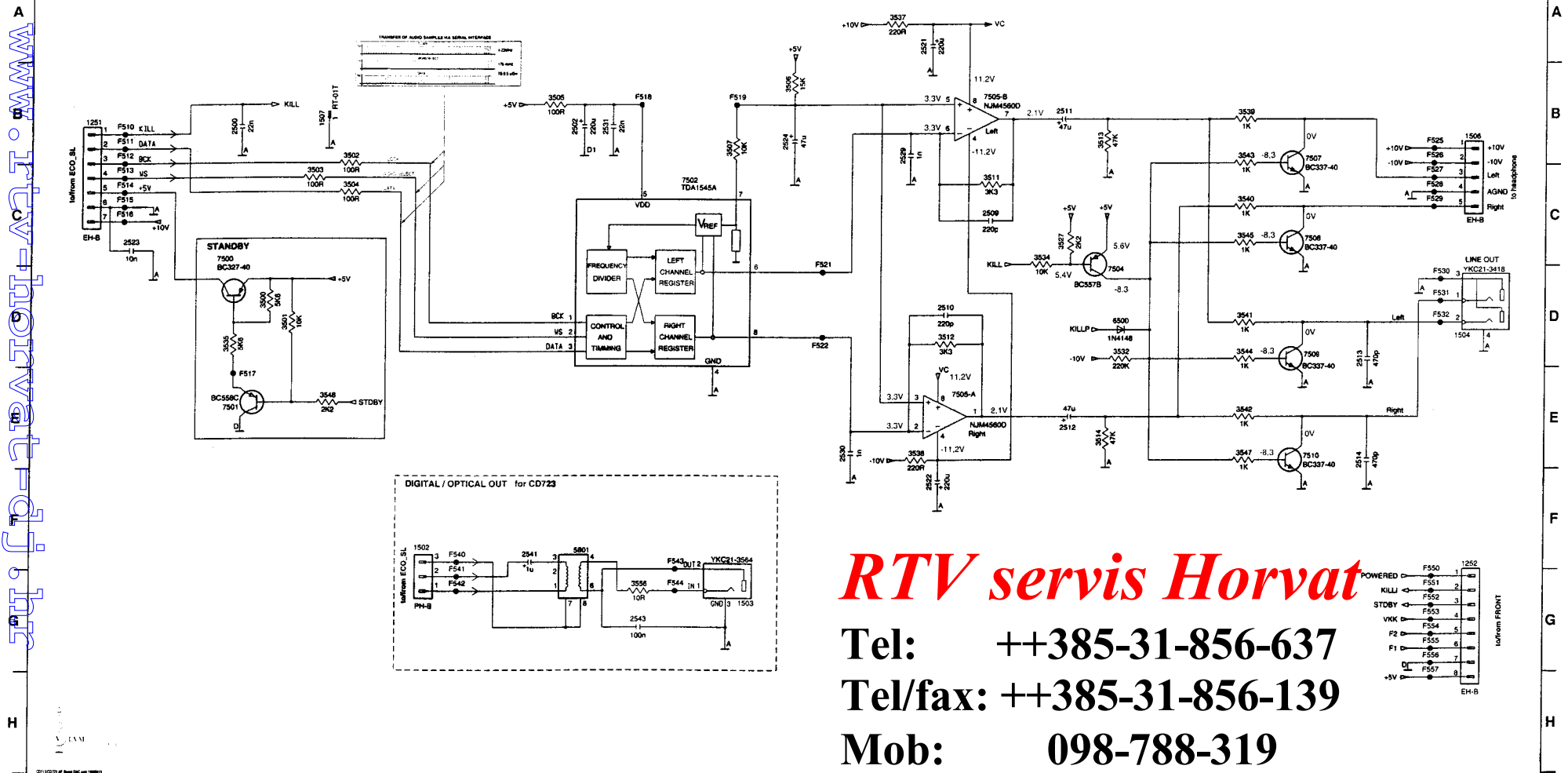
|           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1250 A1 B | 2254 A2 B | 2511 B2 B | 2544 A4 B | 3503 A4 B | 3532 A2 B | 3548 A2 B | 6256 A1 B | 7508 B1 B | 9267 B1 B |
| 1251 A4 B | 2255 A3 B | 2512 B2 B | 2545 B4 B | 3504 A4 B | 3533 B4 B | 3550 A4 B | 6257 A2 B | 7509 B1 B | 9269 A2 B |
| 1252 A1 B | 2256 A1 B | 2513 B2 B | 3251 A1 B | 3505 A3 B | 3534 A3 B | 3552 A4 B | 6258 A1 B | 7510 B1 B | 9270 A3 B |
| 1255 A1 B | 2257 A1 B | 2514 B1 B | 3252 A1 B | 3506 A3 B | 3535 A3 B | 3553 A4 B | 6259 A2 B | 7511 B4 B | 9272 A4 B |
| 1256 A1 B | 2258 A2 B | 2515 A3 B | 3253 A1 B | 3507 B2 B | 3537 B2 B | 3556 B4 B | 6260 A3 B | 7512 A1 B | 9274 B4 B |
| 1502 A4 B | 2259 A2 B | 2516 A4 B | 3254 A2 B | 3508 B2 B | 3538 B3 B | 3557 A1 B | 6500 A2 B | 9254 A2 B |           |
| 1503 B4 B | 2501 A3 B | 2521 B2 B | 3255 A1 B | 3509 B3 B | 3539 B2 B | 5801 B4 B | 7250 A1 B | 9256 A2 B |           |
| 1504 B1 B | 2502 A3 B | 2522 B3 B | 3256 A2 B | 3510 B3 B | 3540 B1 B | 5803 B4 B | 7251 A3 B | 9257 A2 B |           |
| 1505 B4 B | 2503 A4 B | 2523 A3 B | 3257 A2 B | 3511 B2 B | 3541 B2 B | 6250 A1 B | 7252 A2 B | 9258 A2 B |           |
| 1506 B1 B | 2504 A3 B | 2524 A4 B | 3258 A2 B | 3512 B2 B | 3542 B2 B | 6251 A1 B | 7500 A3 B | 9262 A3 B |           |
| 2250 A1 B | 2505 A4 B | 2527 B4 B | 3260 A3 B | 3513 B2 B | 3543 B1 B | 6252 A1 B | 7501 A2 B | 9263 A3 B |           |
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| 2252 A1 B | 2507 A3 B | 2541 A4 B | 3501 A2 B | 3515 A3 B | 3545 B1 B | 6254 A2 B | 7505 B2 B | 9265 A3 B |           |
| 2253 A1 B | 2508 B3 B | 2543 B4 B | 3502 A4 B | 3527 A2 B | 3547 B1 B | 6255 A1 B | 7507 B1 B | 9266 B3 B |           |

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|          |          |          |          |         |         |         |         |          |          |          |          |          |          |           |          |         |         |         |          |          |         |          |          |          |
|----------|----------|----------|----------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|-----------|----------|---------|---------|---------|----------|----------|---------|----------|----------|----------|
| 1251 B1  | 1504 D14 | 2502 B5  | 2512 E10 | 2522 F9 | 2530 E8 | 3500 D2 | 3504 C3 | 3511 C9  | 3527 C10 | 3537 A9  | 3541 D12 | 3545 C12 | 5801 F5  | 7502 C6   | 7507 B13 | F510 B1 | F514 C1 | F518 B6 | F525 B14 | F529 C14 | F546 F4 | F544 G6  | F553 G14 | F557 H14 |
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| 1502 F4  | 1507 B3  | 2510 D8  | 2514 E13 | 2524 B7 | 2541 F5 | 3502 B3 | 3508 B7 | 3513 B11 | 3524 C10 | 3539 B12 | 3543 B12 | 3548 E3  | 7500 C2  | 7505-A E9 | 7509 D13 | F512 B1 | F516 C1 | F521 D8 | F527 C14 | F531 D14 | F542 G4 | F551 G14 | F556 G14 |          |
| 1503 D7  | 2500 B2  | 2511 B10 | 2521 A9  | 2529 B9 | 2543 G6 | 3503 C3 | 3507 B7 | 3514 E11 | 3535 D2  | 3540 C12 | 3544 D12 | 3556 G6  | 7501 E2  | 7505-B B9 | 7510 E13 | F513 C1 | F517 E2 | F522 D8 | F528 C14 | F532 D14 | F543 F8 | F552 G14 | F558 G14 |          |

AF Board / DAC part



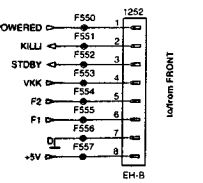
**RTV servis Horvat**

**Tel: ++385-31-856-637**

**Tel/fax: ++385-31-856-139**

**Mob: 098-788-319**

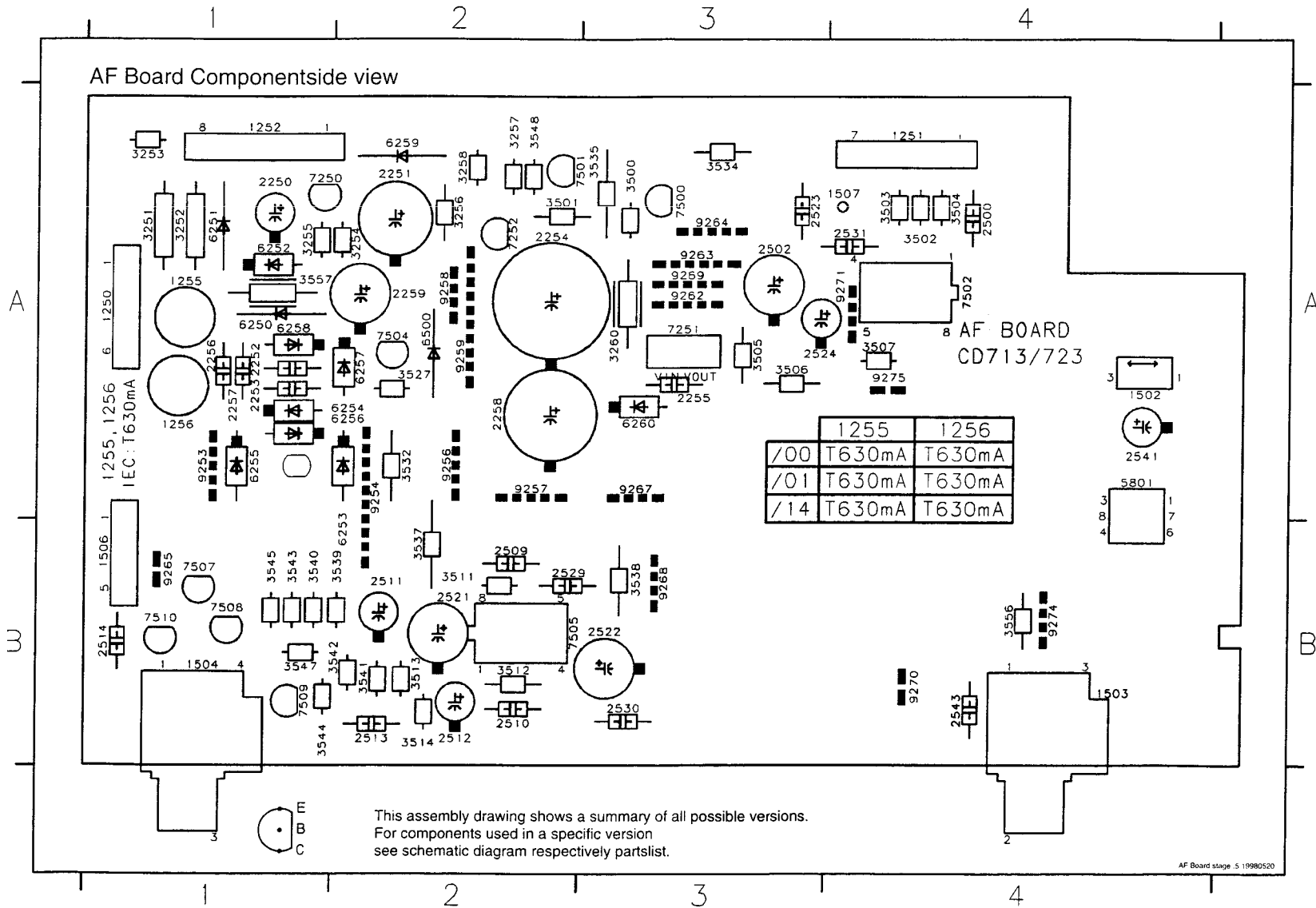
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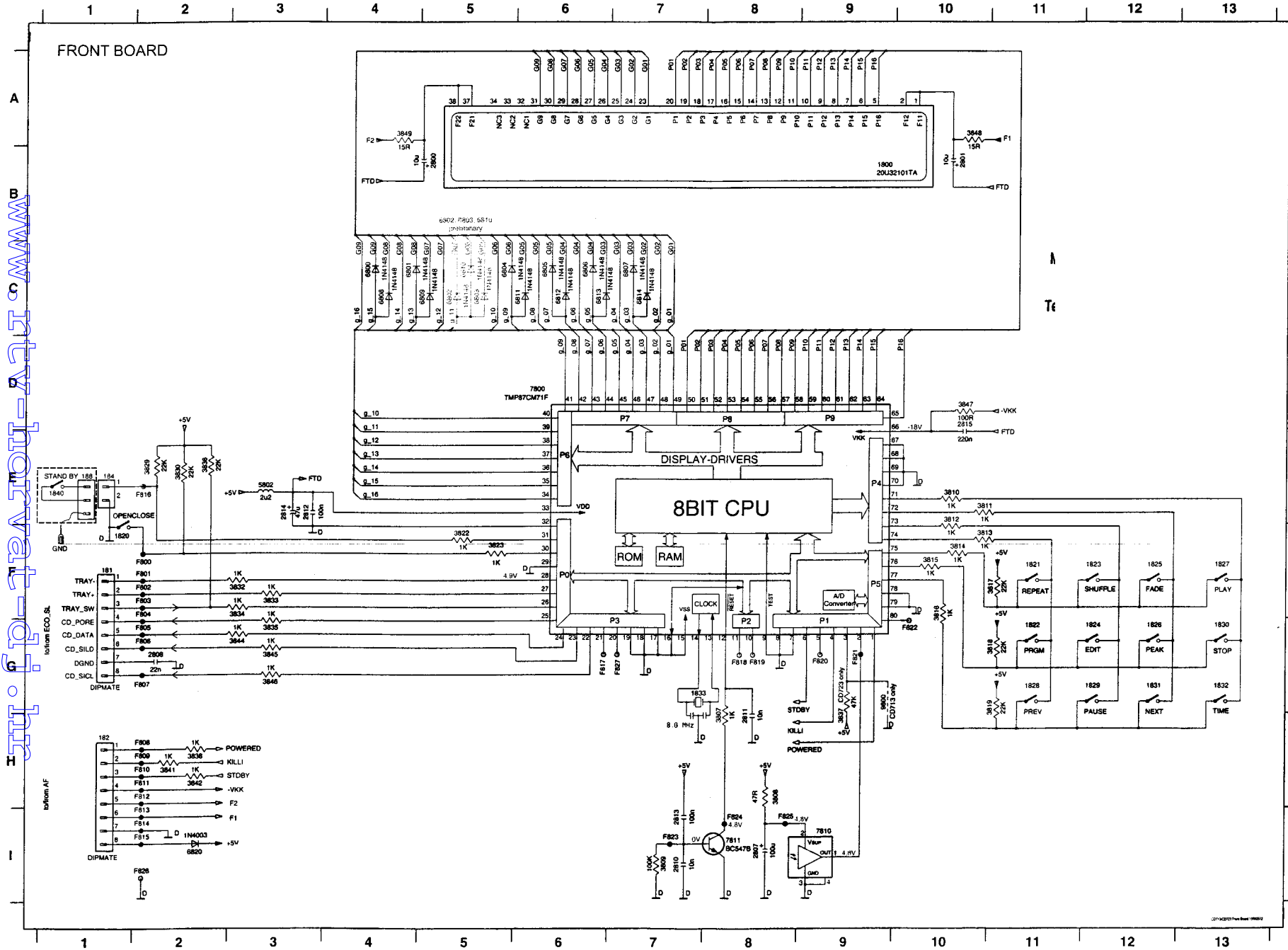
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| 1250 A1 B | 2254 A2 B | 2511 B2 B | 2544 A4 B | 3503 A4 B | 3532 A2 B | 3548 A2 B | 6256 A1 B | 7508 B1 B | 9267 B1 B |
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| 1252 A1 B | 2256 A1 B | 2513 B2 B | 3251 A1 B | 3505 A3 B | 3534 A3 B | 3552 A4 B | 6258 A1 B | 7510 B1 B | 9270 A3 B |
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| 2253 A1 B | 2508 B3 B | 2543 B4 B | 3502 A4 B | 3527 A2 B | 3547 B1 B | 6255 A1 B | 7507 B1 B | 9266 B3 B |           |

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FRONT BOARD

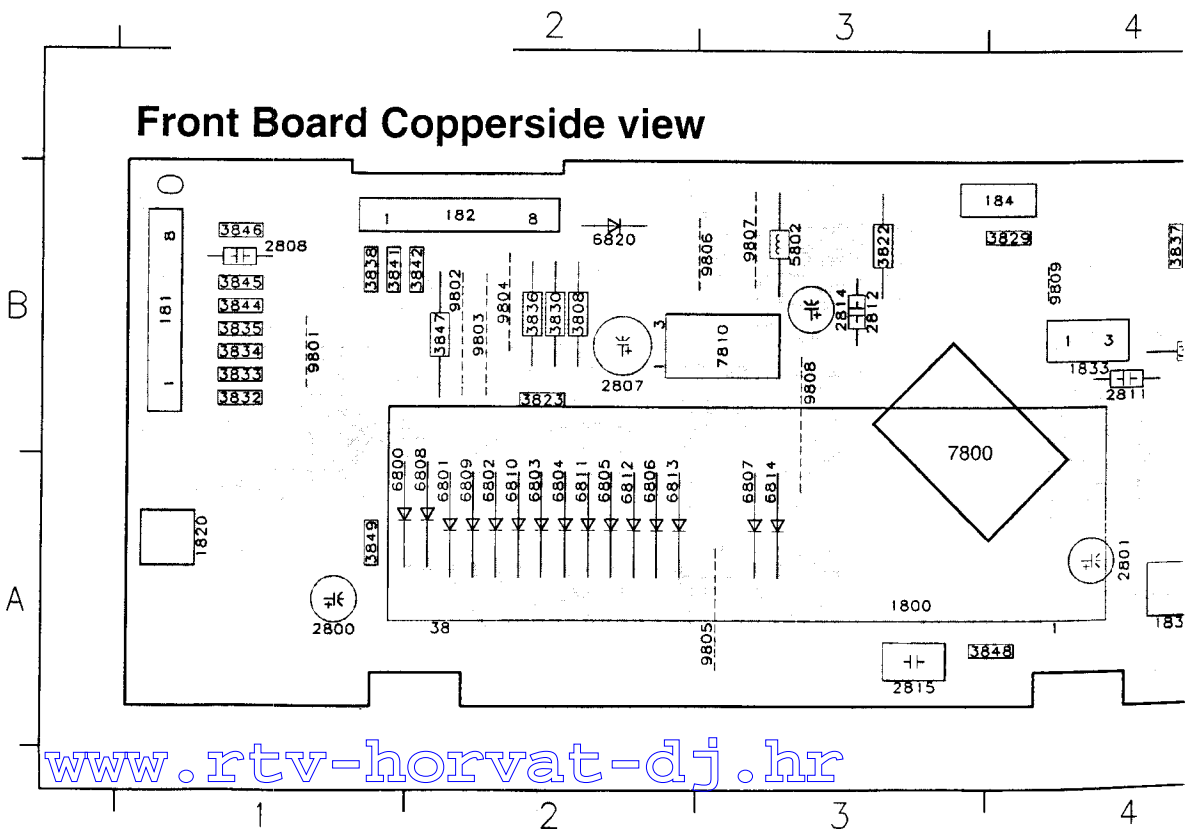
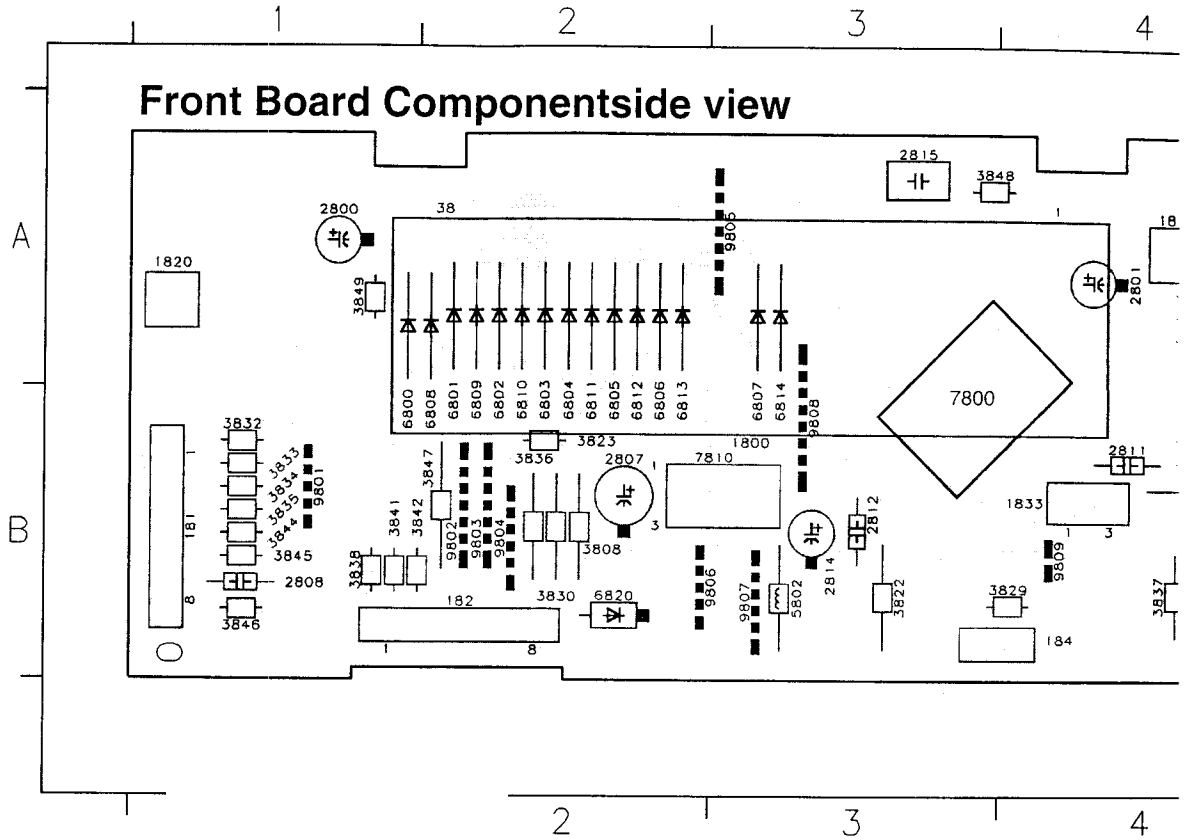


- 181 F1
- 182 H1
- 184 E1
- 1800 B9
- 1820 F1
- 1821 F11
- 1822 G11
- 1823 F12
- 1824 G12
- 1825 F12
- 1826 G12
- 1827 F13
- 1828 G12
- 1830 G13
- 1831 G12
- 1832 G13
- 1833 G7
- 2800 B5
- 2801 B10
- 2807 I8
- 2808 G2
- 2810 I7
- 2811 H8
- 2812 E3
- 2813 I7
- 2814 E3
- 2815 D10
- 2807 H8
- 2808 H8
- 2809 I7
- 2810 E10
- 2811 E10
- 2812 E10
- 2813 F10
- 2814 F10
- 2815 F10
- 2816 F10
- 2817 F11
- 2818 G11
- 2819 G11
- 2822 F5
- 2823 F5
- 2826 E2
- 2830 E2
- 2832 F3
- 2833 F3
- 2834 F3
- 2835 G3
- 2836 E2
- 2837 G9
- 2838 H2
- 2841 H2
- 2842 H2
- 2844 G3
- 2845 G3
- 2846 G3
- 2847 D10
- 2848 A10
- 2849 A4
- 2802 E3
- 2800 C4
- 2801 C4
- 2802 C5
- 2803 C5
- 2804 C5
- 2805 C6
- 2806 C6
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- 2800 D6
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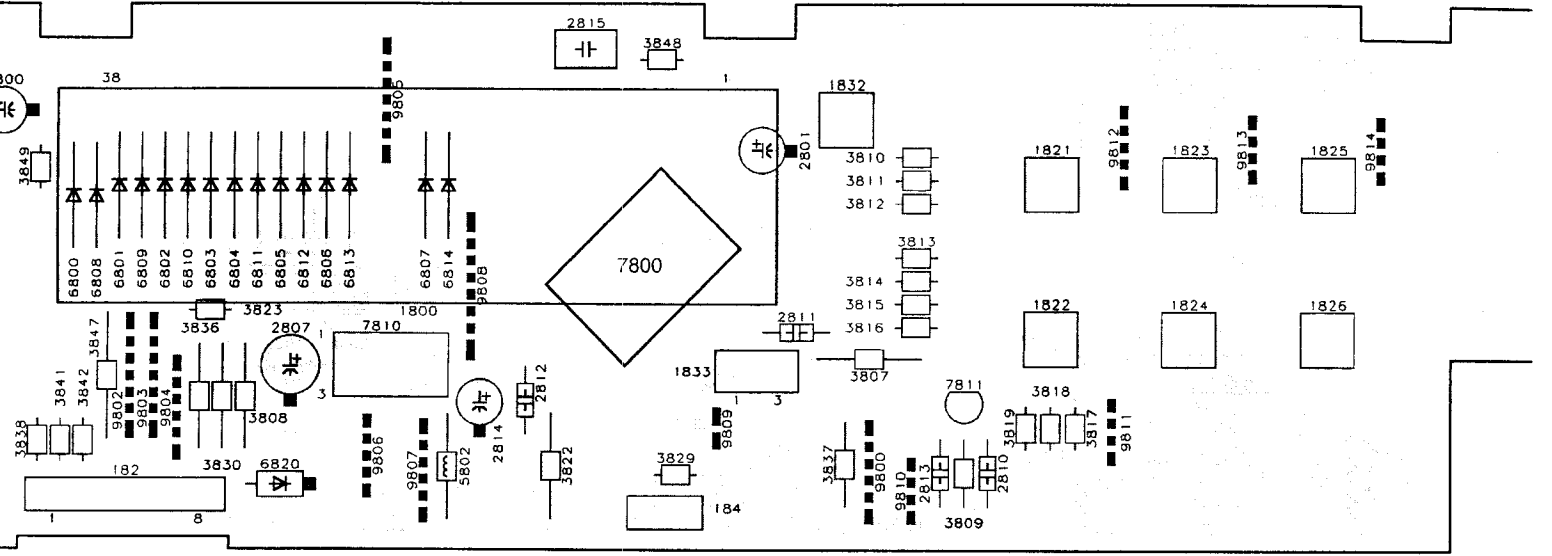
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| 182 B2  | 1824 B5 | 1831 B8 | 2810 B5 | 3808 B2 | 3815 B4 | 3829 |
| 184 B3  | 1825 A6 | 1832 A4 | 2811 B4 | 3809 B5 | 3816 B4 | 3830 |
| 1800 A3 | 1826 B6 | 1833 B4 | 2812 B3 | 3810 A4 | 3817 B5 | 3832 |
| 1820 A1 | 1827 A7 | 2800 A1 | 2813 B4 | 3811 A4 | 3818 B5 | 3833 |
| 1821 A5 | 1828 B7 | 2801 A4 | 2814 B3 | 3812 A4 | 3819 B5 | 3834 |
| 1822 B5 | 1829 B7 | 2807 B2 | 2815 A3 | 3813 B4 | 3822 B3 | 3835 |



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| 5 | 1830 A8 | 2808 B1 | 3807 B4 | 3814 B4 | 3823 B2 | 3836 B2 | 3846 B1 | 6802 A2 | 680 |
| 5 | 1831 B8 | 2810 B5 | 3808 B2 | 3815 B4 | 3829 B4 | 3837 B4 | 3847 B2 | 6803 A2 | 68  |
| 6 | 1832 A4 | 2811 B4 | 3809 B5 | 3816 B4 | 3830 B2 | 3838 B1 | 3848 A3 | 6804 A2 | 68  |
| 6 | 1833 B4 | 2812 B3 | 3810 A4 | 3817 B5 | 3832 B1 | 3841 B1 | 3849 A1 | 6805 A2 | 68  |
| 7 | 2800 A1 | 2813 B4 | 3811 A4 | 3818 B5 | 3833 B1 | 3842 B1 | 5802 B3 | 6806 A2 | 68  |
| 7 | 2801 A4 | 2814 B3 | 3812 A4 | 3819 B5 | 3834 B1 | 3844 B1 | 6800 A1 | 6807 A3 | 68  |
| 7 | 2807 B2 | 2815 A3 | 3813 B4 | 3822 B3 | 3835 B1 | 3845 B1 | 6801 A2 | 6808 A2 | 68  |

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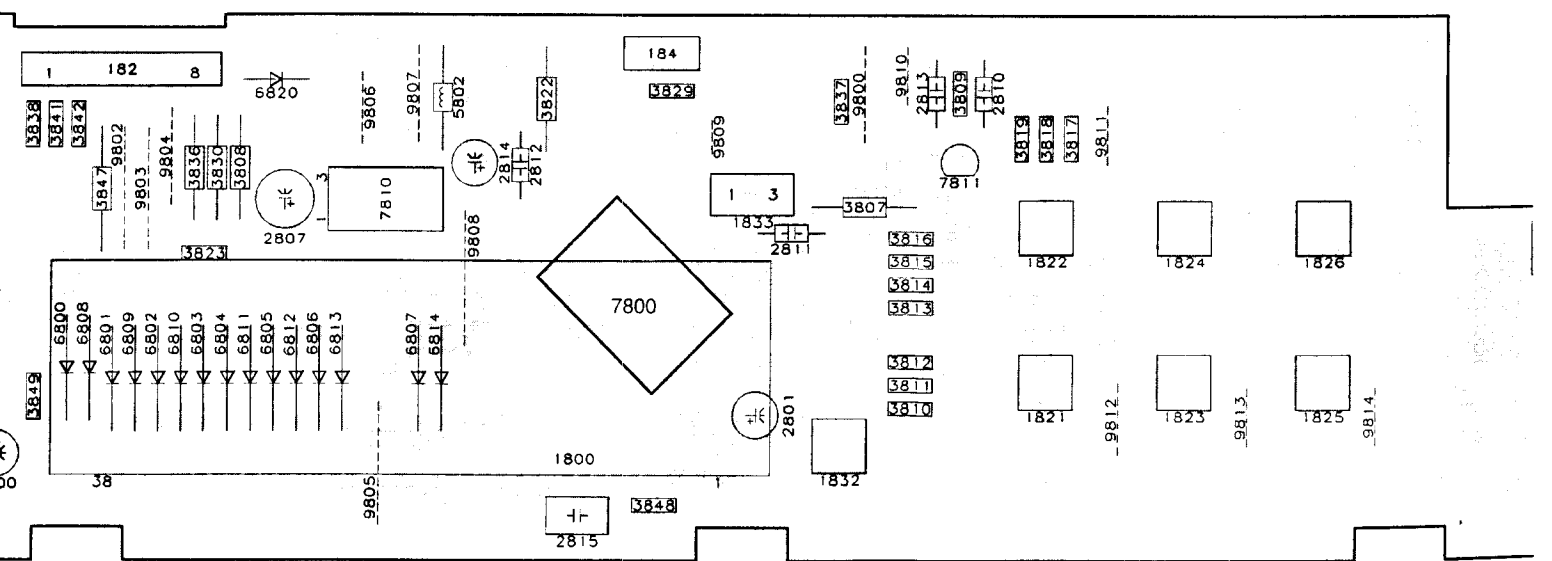
rd Componentside view



2 3 4 5 6

2 3 4 5 6

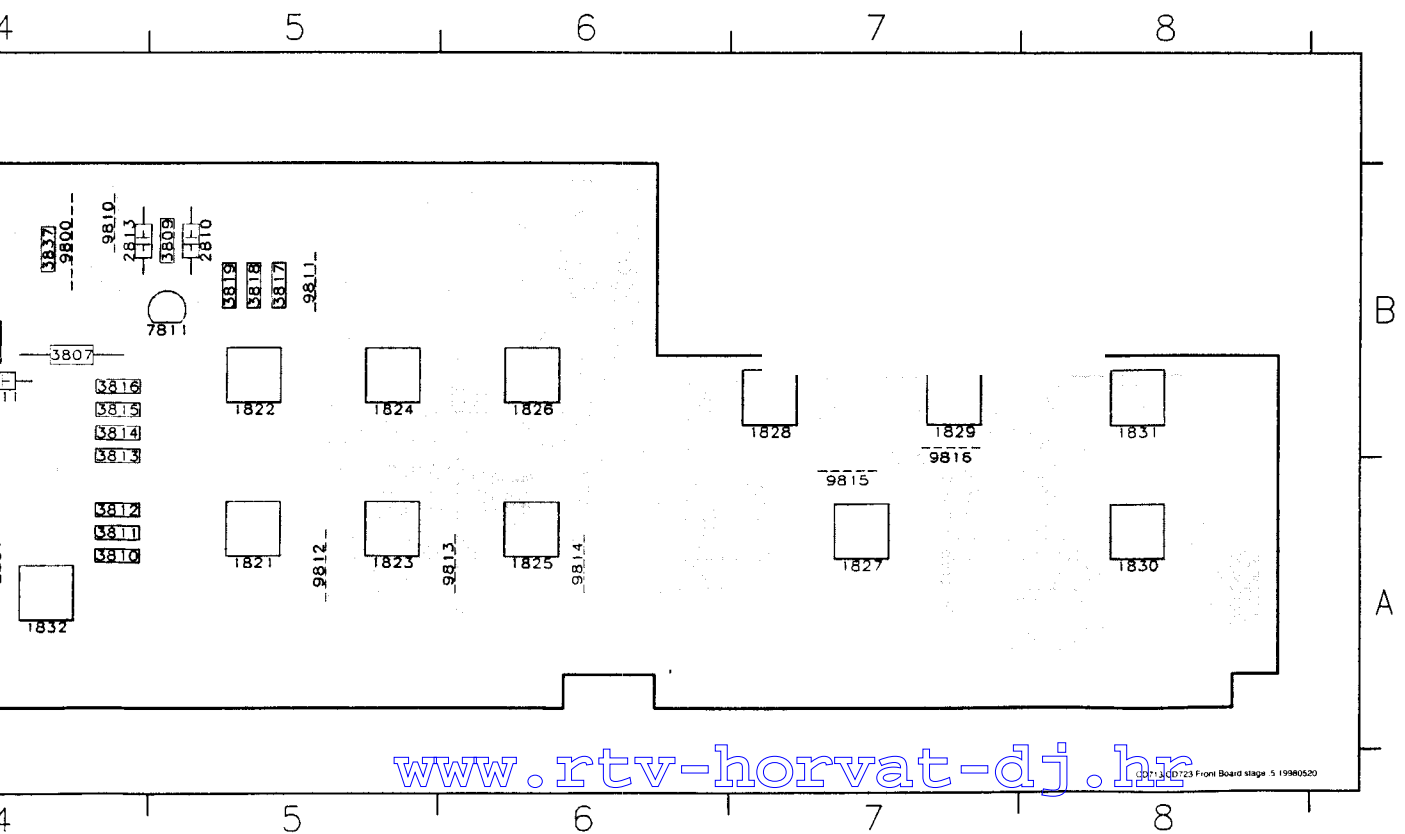
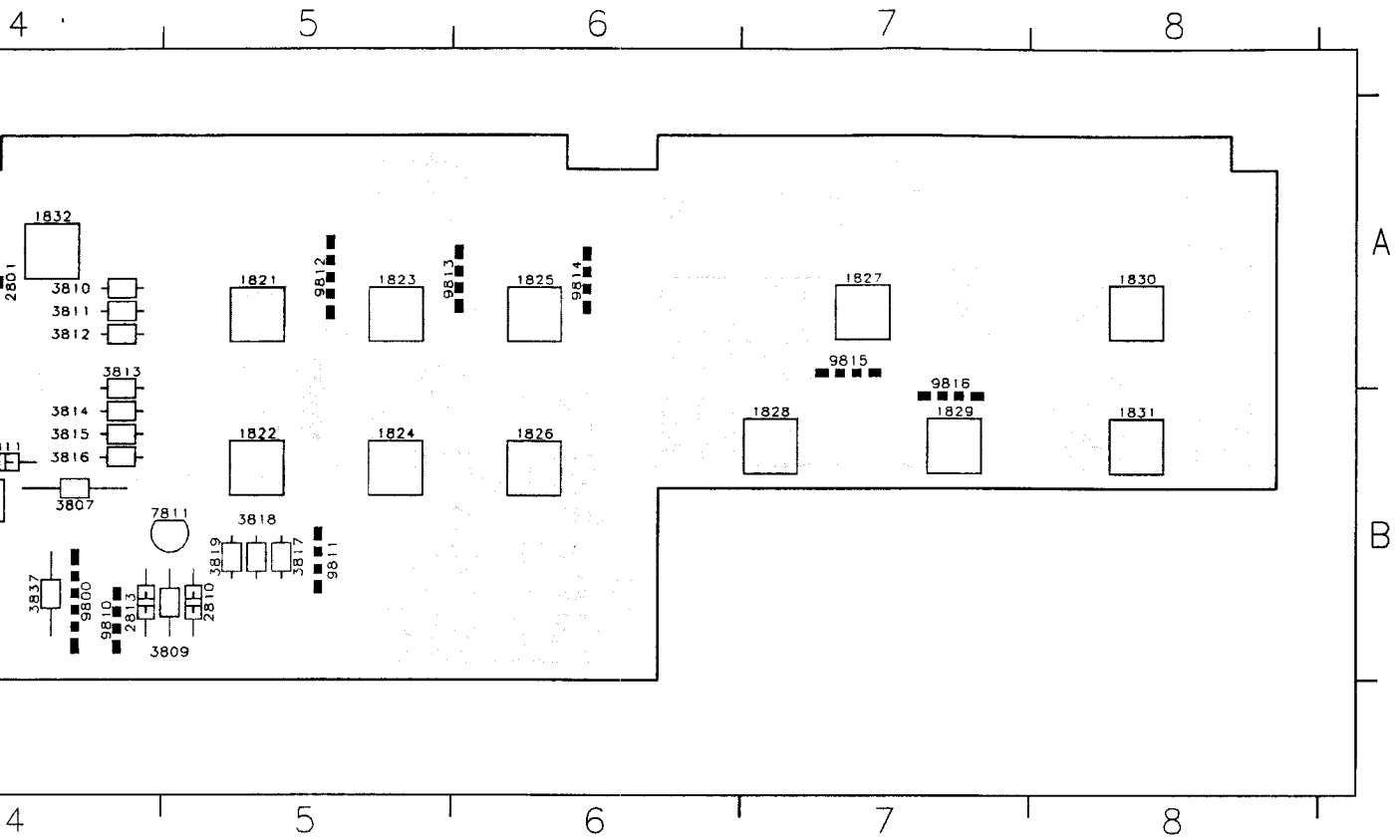
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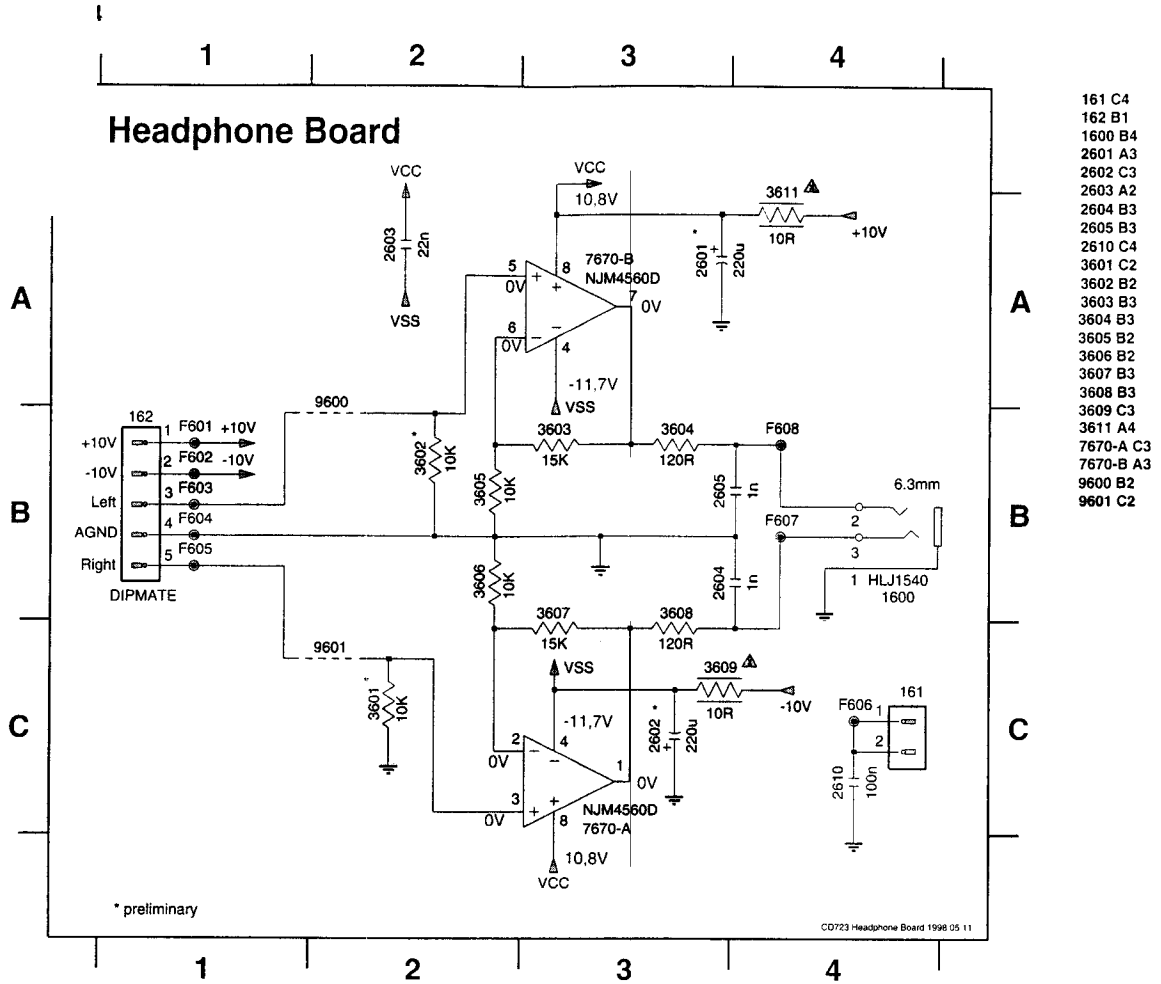


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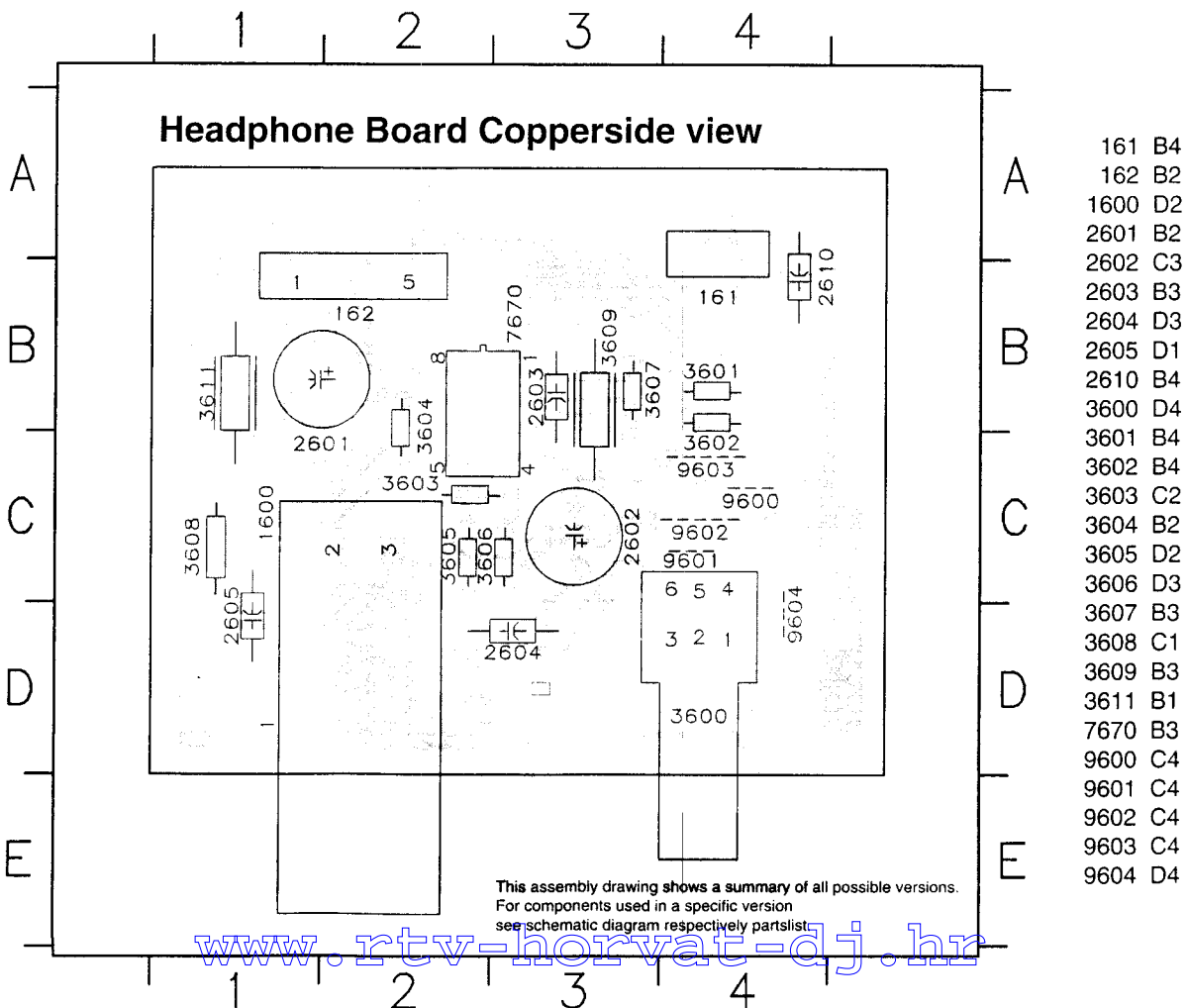


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| 3823 B2 | 3836 B2 | 3846 B1 | 6802 A2 | 6809 A2 | 7800 A3 | 9804 B2 | 9811 B5 |
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| 3833 B1 | 3842 B1 | 5802 B3 | 6806 A2 | 6813 A2 | 9801 B1 | 9808 B3 | 9815 A7 |
| 3834 B1 | 3844 B1 | 6800 A1 | 6807 A3 | 6814 A3 | 9802 B2 | 9809 B4 | 9816 B7 |
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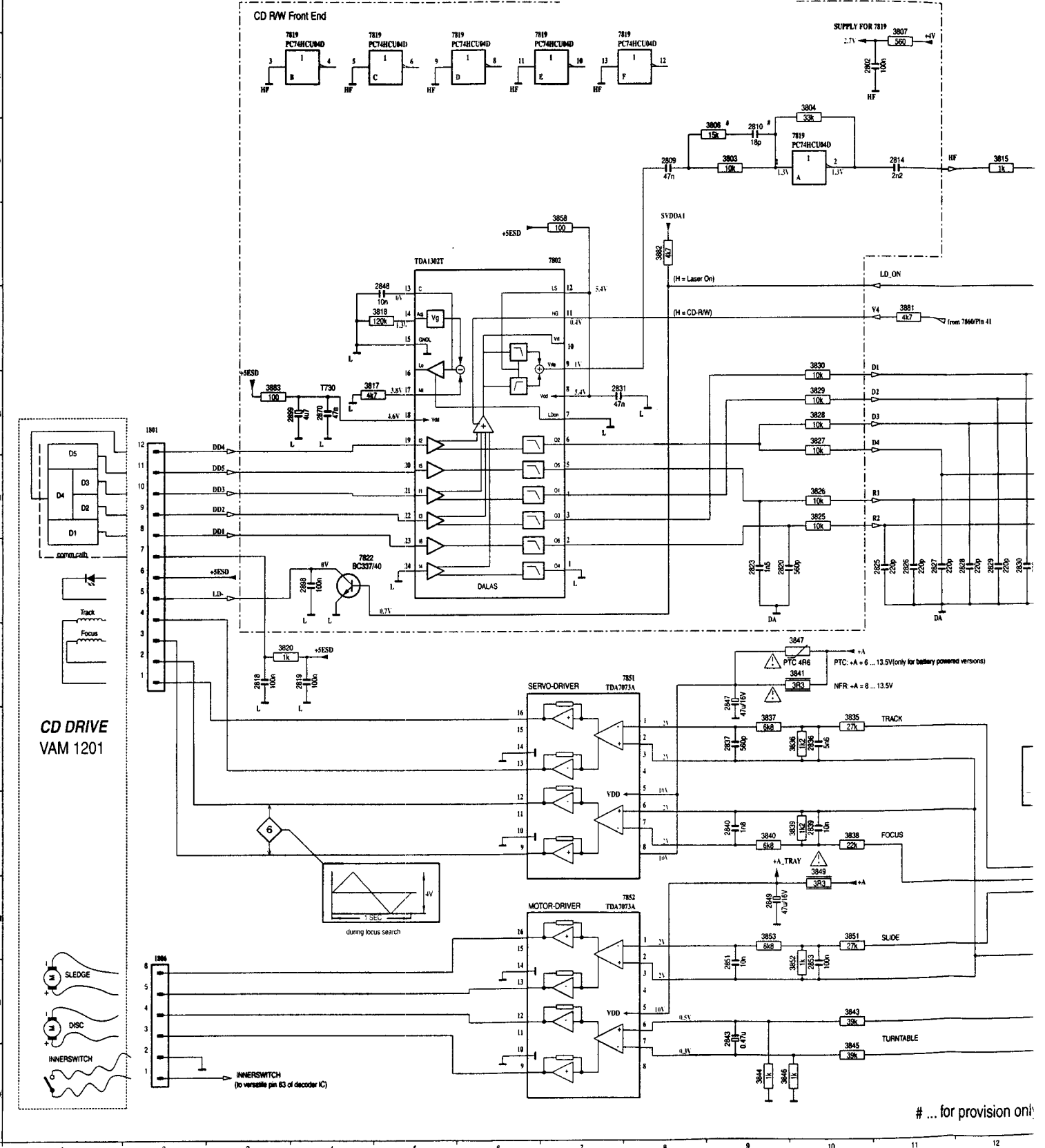


- 161 C4
- 162 B1
- 1600 B4
- 2601 A3
- 2602 C3
- 2603 A2
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- 2605 B3
- 2610 C4
- 3601 C2
- 3602 B2
- 3603 B3
- 3604 B3
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- 3606 B2
- 3607 B3
- 3608 B3
- 3609 C3
- 3611 A4
- 7670-A C3
- 7670-B A3
- 9600 B2
- 9601 C2



- 161 B4
- 162 B2
- 1600 D2
- 2601 B2
- 2602 C3
- 2603 B3
- 2604 D3
- 2605 D1
- 2610 B4
- 3600 D4
- 3601 B4
- 3602 B4
- 3603 C2
- 3604 B2
- 3605 D2
- 3606 D3
- 3607 B3
- 3608 C1
- 3609 B3
- 3611 B1
- 7670 B3
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- 9602 C4
- 9603 C4
- 9604 D4

# CD-BBOARD (ECO-SL Mk3)



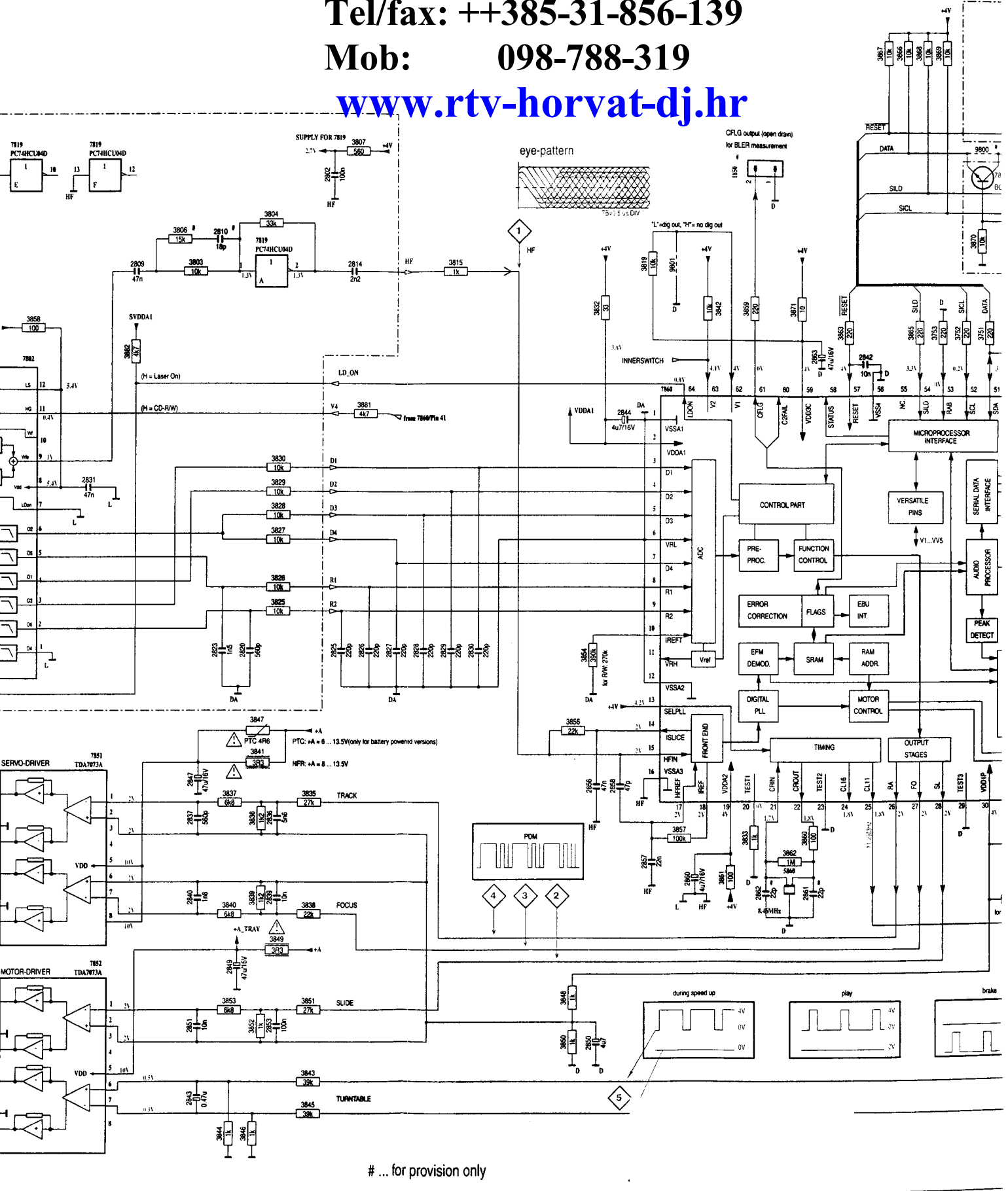
# ... for provision only!

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Tel/fax: ++385-31-856-139

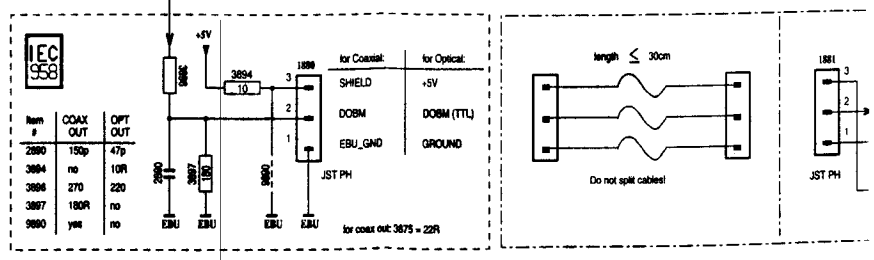
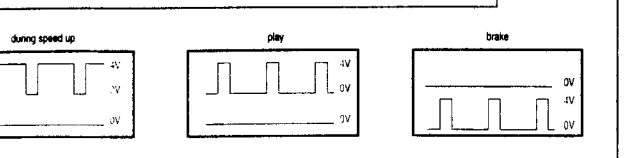
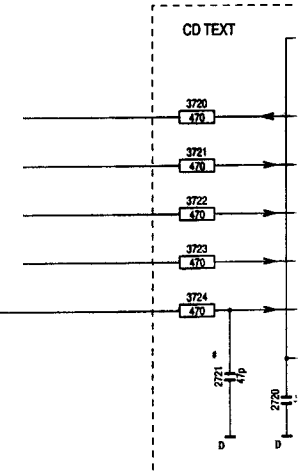
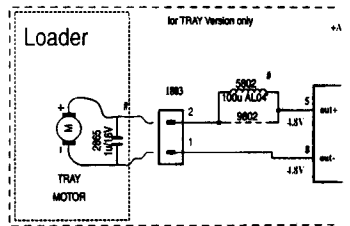
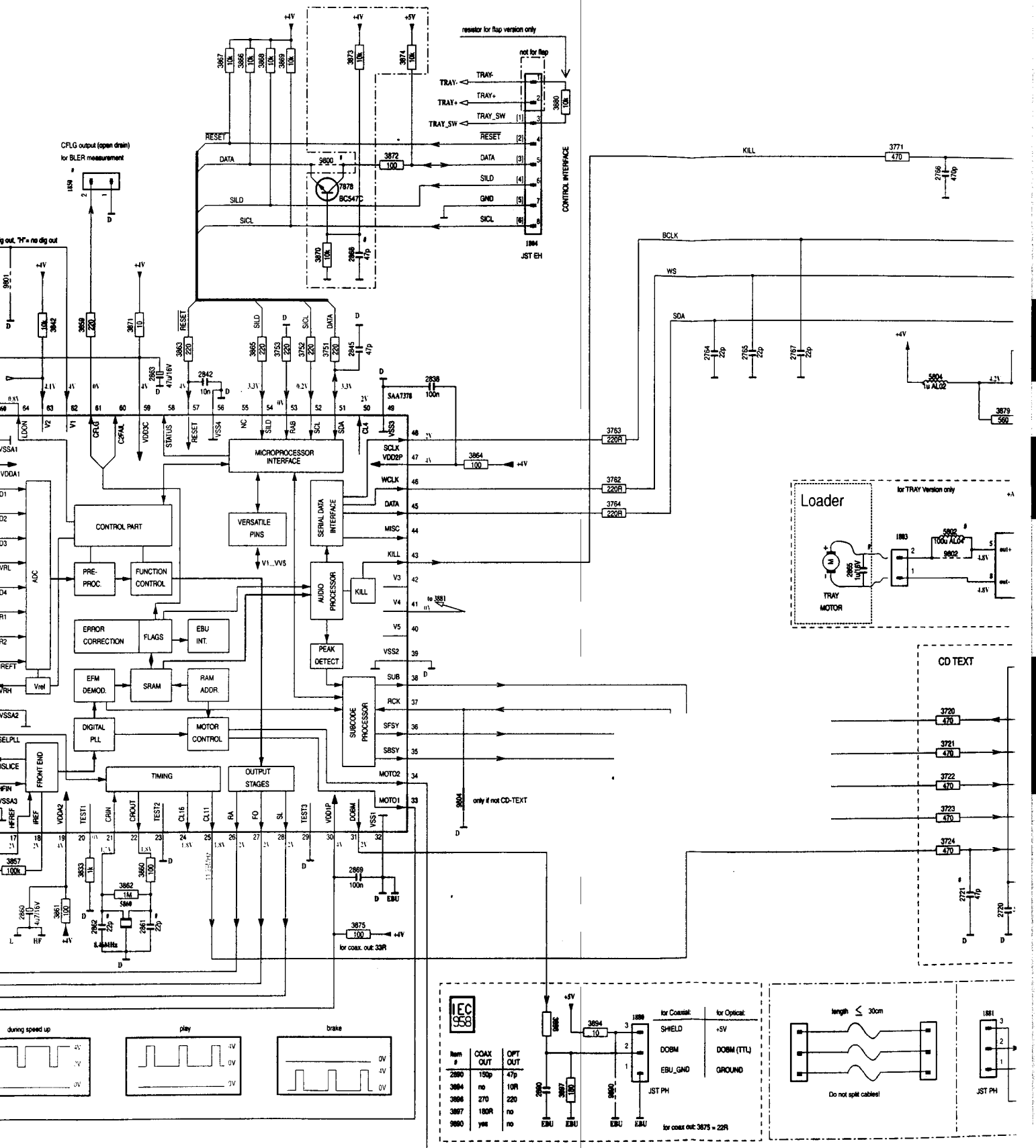
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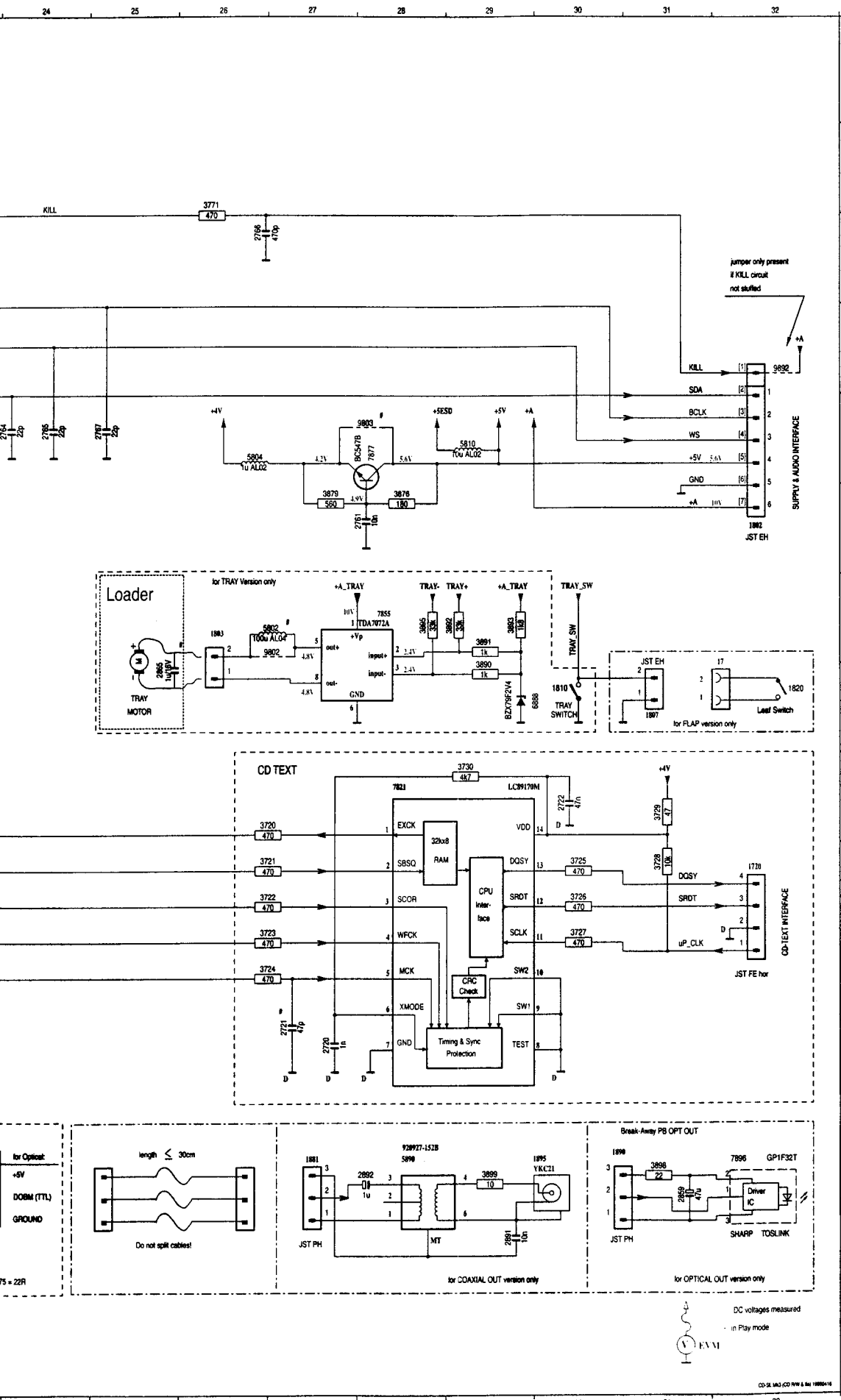
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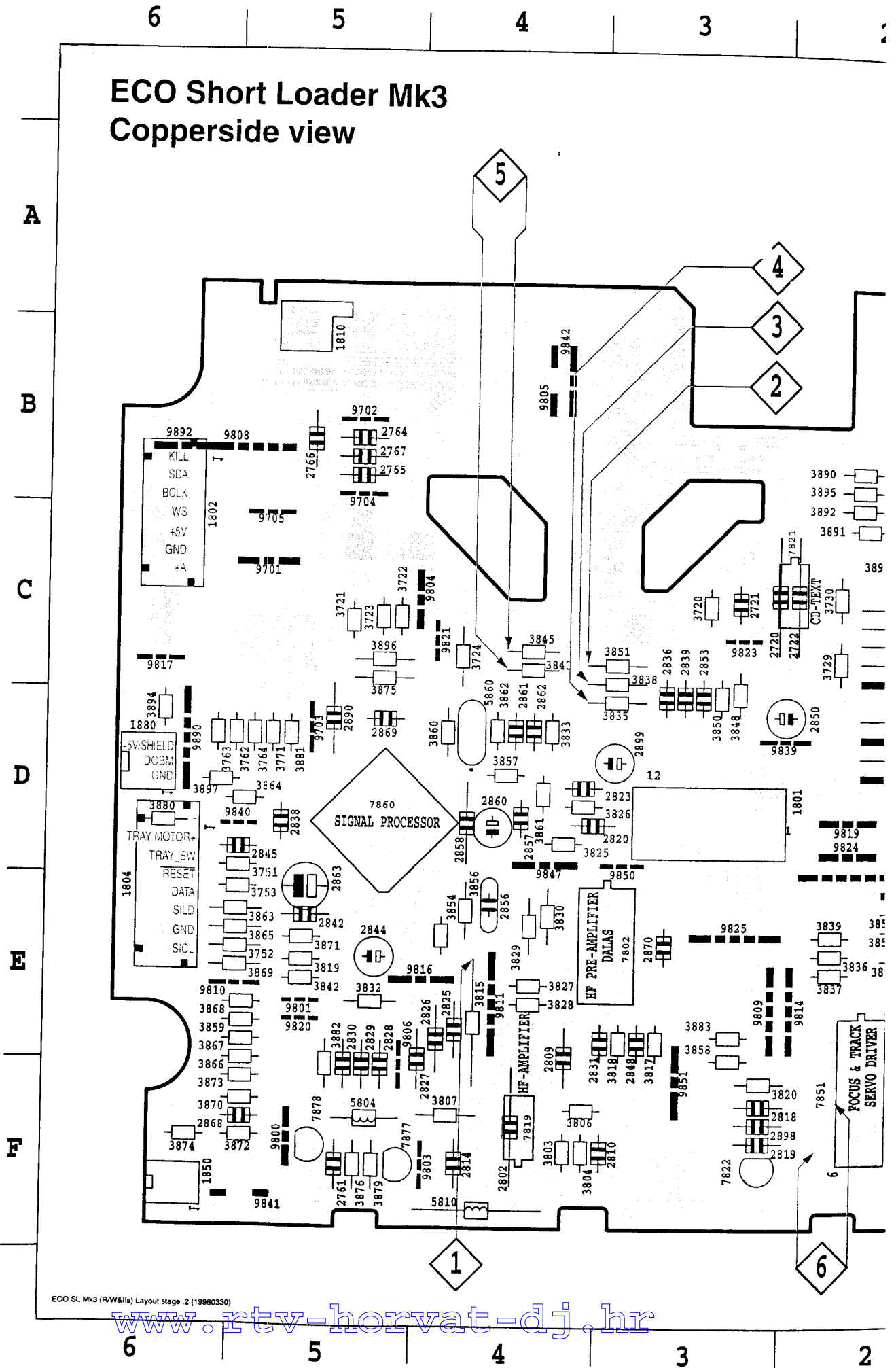
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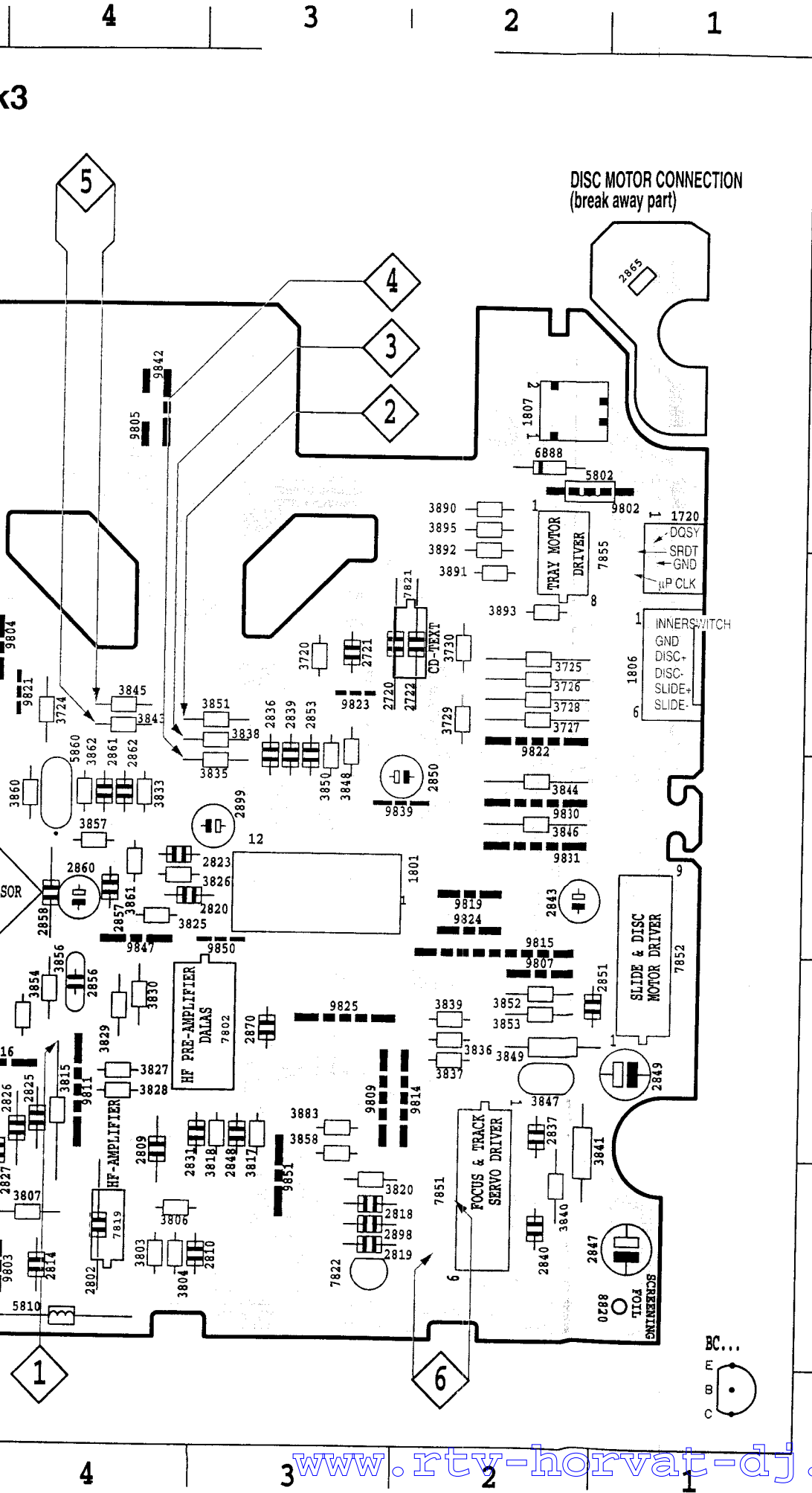




# ECO Short Loader Mk3 Copperside view



ECO SL MK3 (RW&I) Layout stage 2 (19980330)



|      |      |      |      |
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| 17   | opt. | 3844 | D2   |
| 1720 | C1   | 3845 | C4   |
| 1801 | D3   | 3846 | D2   |
| 1802 | C6   | 3847 | E2   |
| 1804 | E6   | 3848 | D3   |
| 1806 | C1   | 3849 | E2   |
| 1807 | B2   | 3850 | D3   |
| 1810 | B5   | 3851 | C3   |
| 1820 | B3   | 3852 | E2   |
| 1850 | F6   | 3853 | E2   |
| 1880 | D6   | 3854 | E4   |
| 1881 | opt. | 3856 | E4   |
| 1890 | opt. | 3857 | D4   |
| 1895 | opt. | 3858 | E3   |
| 2720 | C3   | 3859 | E5   |
| 2721 | C3   | 3860 | D4   |
| 2722 | C2   | 3861 | D4   |
| 2761 | F5   | 3862 | D4   |
| 2764 | B5   | 3863 | E5   |
| 2765 | B5   | 3864 | D5   |
| 2766 | B5   | 3865 | E5   |
| 2767 | B5   | 3866 | E5   |
| 2802 | F4   | 3867 | E5   |
| 2809 | E4   | 3868 | E5   |
| 2810 | F3   | 3869 | E5   |
| 2814 | F4   | 3870 | F5   |
| 2818 | F3   | 3871 | E5   |
| 2819 | F3   | 3872 | F5   |
| 2820 | D4   | 3873 | F5   |
| 2823 | D4   | 3874 | F6   |
| 2825 | E4   | 3875 | C5   |
| 2826 | E4   | 3876 | F5   |
| 2827 | E4   | 3879 | F5   |
| 2828 | F5   | 3880 | D6   |
| 2829 | F5   | 3881 | D5   |
| 2830 | F5   | 3882 | F5   |
| 2831 | E3   | 3883 | E3   |
| 2836 | D3   | 3890 | B2   |
| 2837 | E2   | 3891 | C2   |
| 2838 | D5   | 3892 | C2   |
| 2839 | D3   | 3893 | C2   |
| 2840 | F2   | 3894 | D6   |
| 2842 | E5   | 3895 | B2   |
| 2843 | D2   | 3896 | C5   |
| 2844 | E5   | 3897 | D6   |
| 2845 | D5   | 3898 | opt. |
| 2847 | F1   | 3899 | opt. |
| 2848 | E3   | 5802 | B2   |
| 2849 | E1   | 5804 | F5   |
| 2850 | D2   | 5810 | F4   |
| 2851 | E2   | 5860 | D4   |
| 2853 | D3   | 5890 | opt. |
| 2856 | E4   | 6888 | B2   |
| 2857 | D4   | 7802 | E4   |
| 2858 | D4   | 7819 | F4   |
| 2859 | opt. | 7822 | F3   |
| 2860 | D4   | 7851 | F2   |
| 2861 | D4   | 7852 | D1   |
| 2862 | D4   | 7855 | C2   |
| 2863 | E5   | 7860 | D5   |
| 2865 | A1   | 7877 | F5   |
| 2868 | F5   | 7878 | F5   |
| 2869 | D5   | 7896 | opt. |
| 2870 | E3   | 9701 | C5   |
| 2890 | D5   | 9702 | B5   |
| 2891 | opt. | 9703 | D5   |
| 2892 | opt. | 9704 | B5   |
| 2898 | F3   | 9705 | C5   |
| 2899 | D3   | 9800 | F5   |
| 3720 | C3   | 9801 | E5   |
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| 3722 | C5   | 9803 | F4   |
| 3723 | C5   | 9804 | C4   |
| 3724 | C4   | 9805 | B4   |
| 3725 | C2   | 9806 | F5   |
| 3726 | C2   | 9807 | E2   |
| 3727 | C2   | 9808 | B5   |
| 3728 | C2   | 9809 | E3   |
| 3729 | C2   | 9810 | E5   |
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| 3752 | E5   | 9815 | D2   |
| 3753 | E5   | 9816 | E4   |
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| 3763 | D6   | 9819 | D2   |
| 3764 | D5   | 9820 | E5   |
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| 3818 | E3   | 9839 | D2   |
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| 3827 | E4   | 9850 | D3   |
| 3828 | E4   | 9851 | F3   |
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| 3833 | D4   |      |      |
| 3835 | D3   |      |      |
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| 3837 | E2   |      |      |
| 3838 | C3   |      |      |
| 3839 | E2   |      |      |
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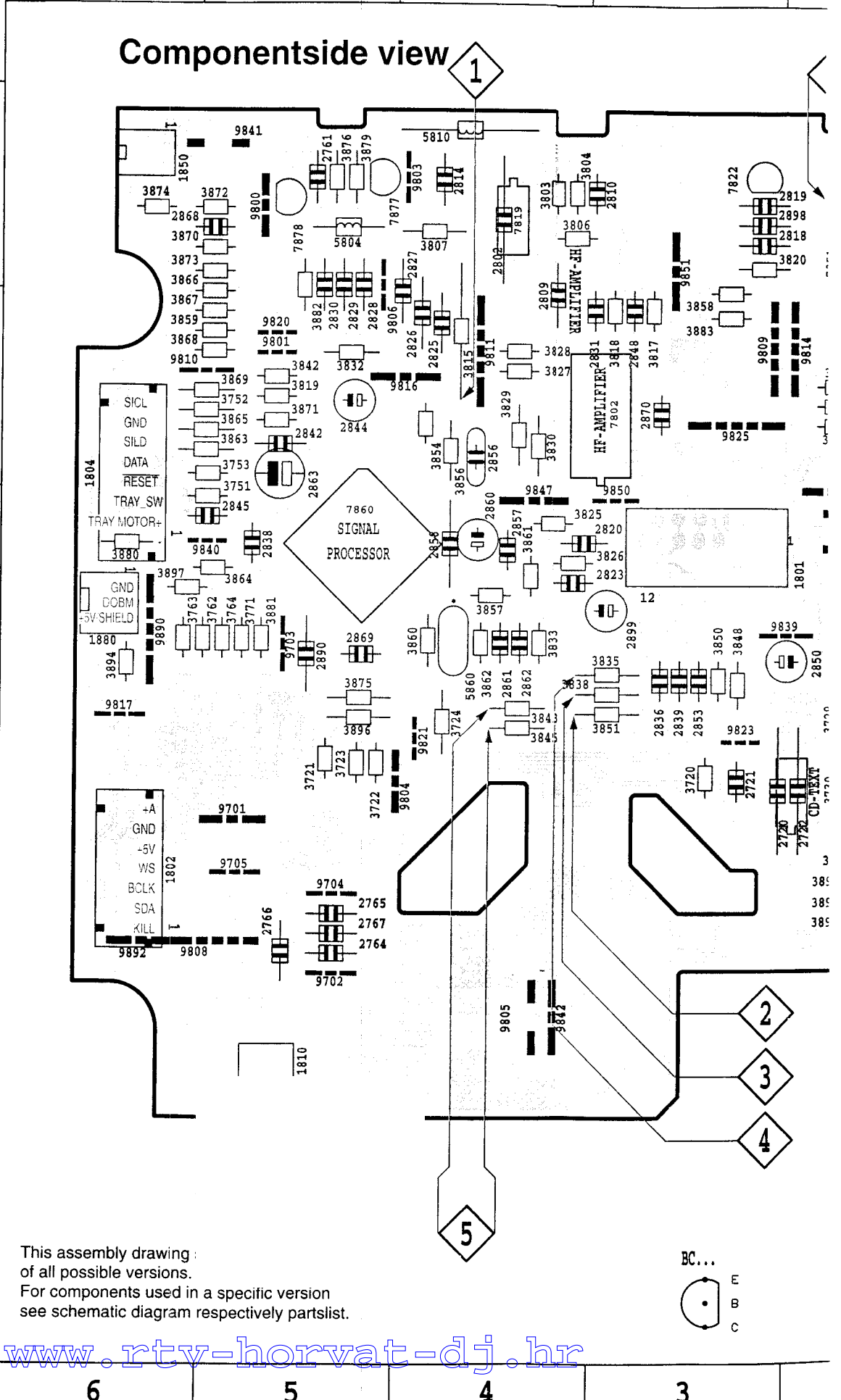
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# Componentside view

- |   |           |           |
|---|-----------|-----------|
| A | 17 opt.   | 3844 D2   |
|   | 1720 C1   | 3845 C4   |
|   | 1801 D3   | 3846 D2   |
|   | 1802 C6   | 3847 E2   |
|   | 1804 E6   | 3848 D3   |
|   | 1806 C1   | 3849 E2   |
|   | 1807 B2   | 3850 D3   |
|   | 1810 B5   | 3851 C3   |
|   | 1820 B3   | 3852 E2   |
|   | 1850 F6   | 3853 E2   |
|   | 1880 D6   | 3854 E4   |
|   | 1881 opt. | 3856 E4   |
|   | 1890 opt. | 3857 D4   |
|   | 1895 opt. | 3858 E3   |
|   | 2720 C3   | 3859 E5   |
|   | 2721 C3   | 3860 D4   |
|   | 2722 C2   | 3861 D4   |
|   | 2761 F5   | 3862 D4   |
|   | 2764 B5   | 3863 E5   |
|   | 2765 B5   | 3864 D5   |
|   | 2766 B5   | 3865 E5   |
|   | 2767 B5   | 3866 E5   |
|   | 2802 F4   | 3867 E5   |
|   | 2809 E4   | 3868 E5   |
|   | 2810 F3   | 3869 E5   |
|   | 2814 F4   | 3870 F5   |
|   | 2818 F3   | 3871 E5   |
|   | 2819 F3   | 3872 F5   |
|   | 2820 D4   | 3873 F5   |
|   | 2823 D4   | 3874 F6   |
|   | 2825 E4   | 3875 C5   |
|   | 2826 E4   | 3876 F5   |
|   | 2827 E4   | 3879 F5   |
|   | 2828 F5   | 3880 D6   |
|   | 2829 F5   | 3881 D5   |
|   | 2830 F5   | 3882 F5   |
|   | 2831 E3   | 3883 E3   |
|   | 2836 D3   | 3890 B2   |
|   | 2837 E2   | 3891 C2   |
|   | 2838 D5   | 3892 C2   |
|   | 2839 D3   | 3893 C2   |
|   | 2840 F2   | 3894 D6   |
|   | 2842 E5   | 3895 B2   |
|   | 2843 D2   | 3896 C5   |
|   | 2844 E5   | 3897 D6   |
|   | 2845 D5   | 3898 opt. |
|   | 2847 F1   | 3899 opt. |
|   | 2848 E3   | 5802 B2   |
|   | 2849 E1   | 5804 F5   |
|   | 2850 D2   | 5810 F4   |
|   | 2851 E2   | 5860 D4   |
|   | 2853 D3   | 5890 opt. |
|   | 2856 E4   | 6888 B2   |
|   | 2857 D4   | 7802 E4   |
|   | 2858 D4   | 7819 F4   |
|   | 2859 opt. | 7822 F3   |
|   | 2860 D4   | 7851 F2   |
|   | 2861 D4   | 7852 D1   |
|   | 2862 D4   | 7855 C2   |
|   | 2863 D5   | 7860 D5   |
|   | 2865 A1   | 7877 F5   |
|   | 2868 F5   | 7878 F5   |
|   | 2869 D5   | 7896 opt. |
|   | 2870 E3   | 9701 C5   |
|   | 2890 D5   | 9702 B5   |
|   | 2891 opt. | 9703 D5   |
|   | 2892 opt. | 9704 B5   |
|   | 2898 F3   | 9705 C5   |
|   | 2899 D3   | 9800 F5   |
|   | 3720 C3   | 9801 E5   |
|   | 3721 C5   | 9802 B2   |
|   | 3722 C5   | 9803 F4   |
|   | 3723 C5   | 9804 C4   |
|   | 3724 C4   | 9805 B4   |
|   | 3725 C2   | 9806 F5   |
|   | 3726 C2   | 9807 E2   |
|   | 3727 C2   | 9808 B5   |
|   | 3728 C2   | 9809 E3   |
|   | 3729 C2   | 9810 E5   |
|   | 3730 C2   | 9811 E4   |
|   | 3751 D5   | 9814 E2   |
|   | 3752 E5   | 9815 D2   |
|   | 3753 E5   | 9816 E4   |
|   | 3782 D5   | 9817 C6   |
|   | 3763 D6   | 9819 D2   |
|   | 3764 D5   | 9820 E5   |
|   | 3771 D5   | 9821 C4   |
|   | 3803 F4   | 9822 C2   |
|   | 3804 F4   | 9823 C3   |
|   | 3806 F4   | 9824 D2   |
|   | 3807 F4   | 9825 E3   |
|   | 3815 E4   | 9830 D2   |
|   | 3817 E3   | 9831 D2   |
|   | 3818 E3   | 9839 D2   |
|   | 3819 E5   | 9840 D5   |
|   | 3820 F3   | 9841 F5   |
|   | 3825 D4   | 9842 B4   |
|   | 3826 D4   | 9847 D4   |
|   | 3827 E4   | 9850 D3   |
|   | 3828 E4   | 9851 F3   |
|   | 3829 E4   | 9890 D6   |
|   | 3830 E4   | 9892 B6   |
|   | 3832 E5   |           |
|   | 3833 D4   |           |
|   | 3835 D3   |           |
|   | 3836 E2   |           |
|   | 3837 E2   |           |
|   | 3838 C3   |           |
|   | 3839 E2   |           |
|   | 3840 F2   |           |
|   | 3841 E2   |           |
|   | 3842 E5   |           |
|   | 3843 C4   |           |

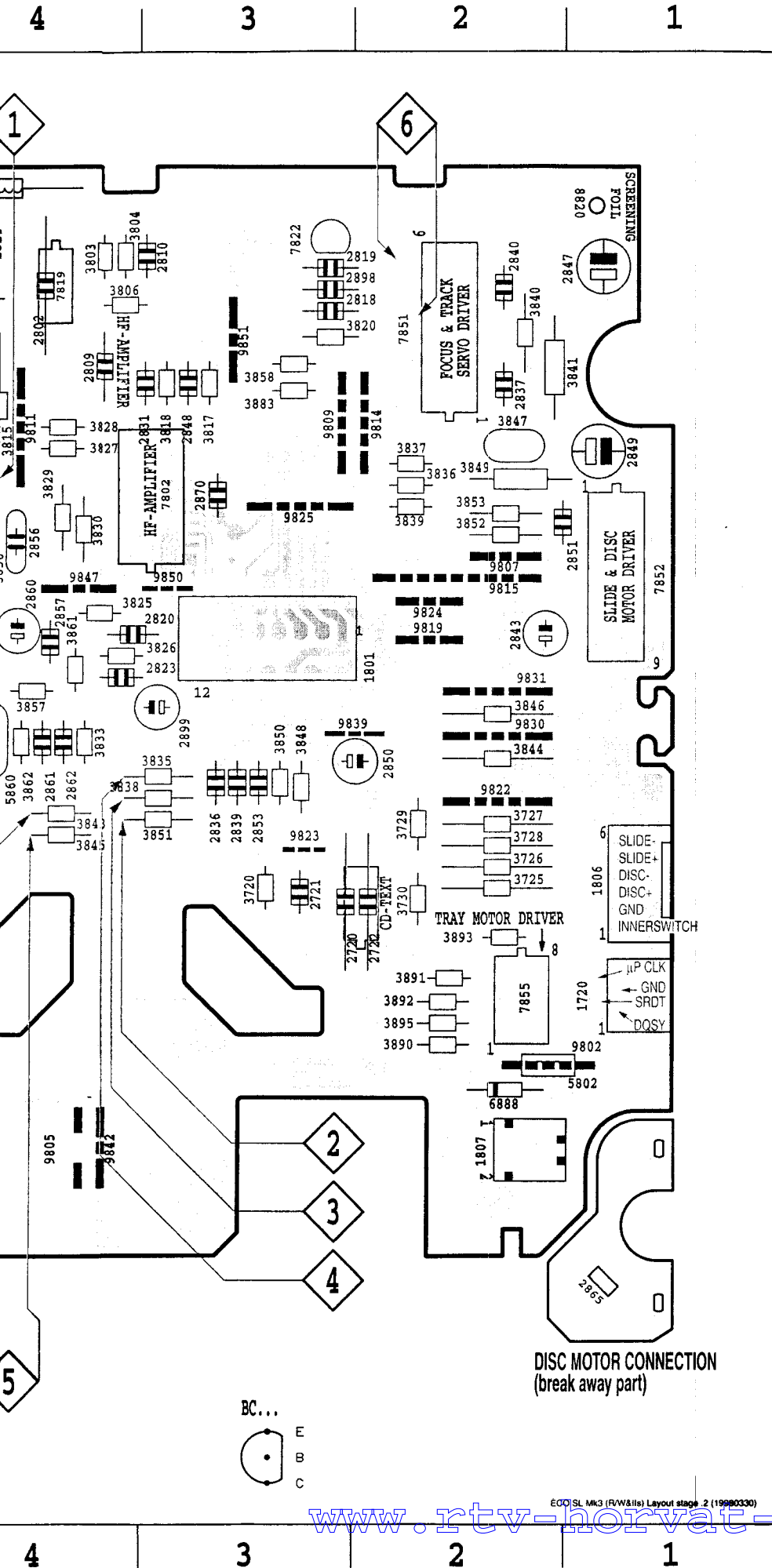


This assembly drawing :  
of all possible versions.  
For components used in a specific version  
see schematic diagram respectively partslist.

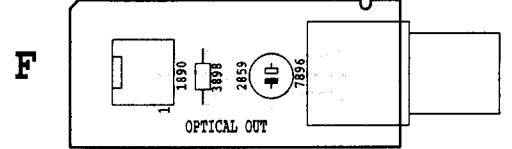
BC...



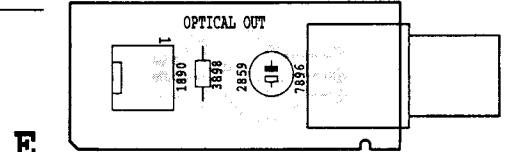
6 5 4 3



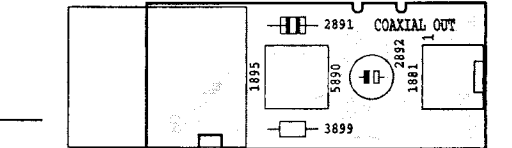
**OPTIONAL FOR SETS WITH OPTICAL OUT**  
Copperside view



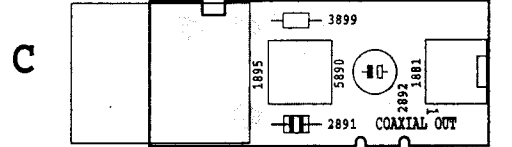
Componentside view



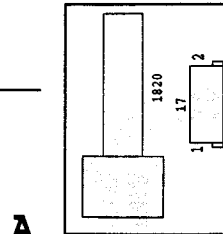
**OPTIONAL FOR SETS WITH COAXIAL OUT**  
Copperside view



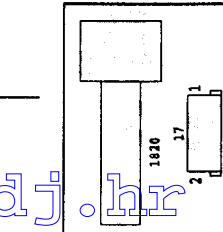
Componentside view



**OPTIONAL FOR FLAP LOADERS**  
Copperside view



Componentside view



## WARNING

**CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE CDM-ELECTRONICS WHEN CONNECTING A NEW CDM MECHANISM. THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE**

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

**ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.**

The following steps have to be done when replacing the CDM mechanism:

1. Disconnect old CDM flexfoil from printed board
2. Connect paperclip to CDM flexfoil to short-circuit flexfoil (fig.1)
3. Short-circuit printed board with **brass-sheet (4822 321 11197)** plugged into the flexfoil connector (fig.2)
4. Remove old CDM mechanism
5. Position new CDM mechanism in its studs
6. Remove short-circuit from printed board connector
7. Remove short-circuit from flexfoil of new CDM
8. Connect new flexfoil to print connector (fig.3)

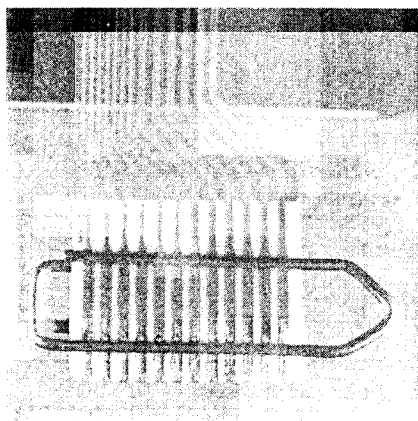


fig.1

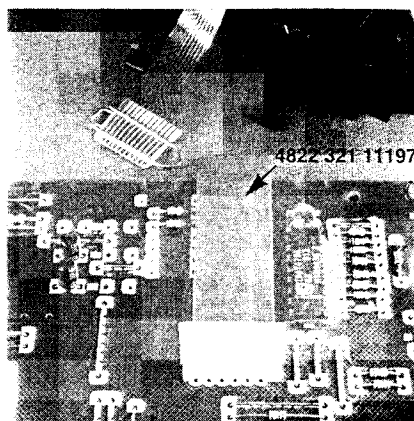


fig.2

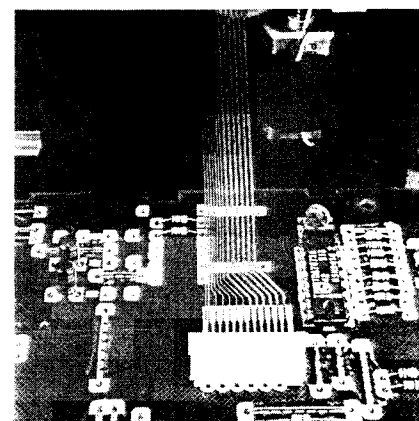
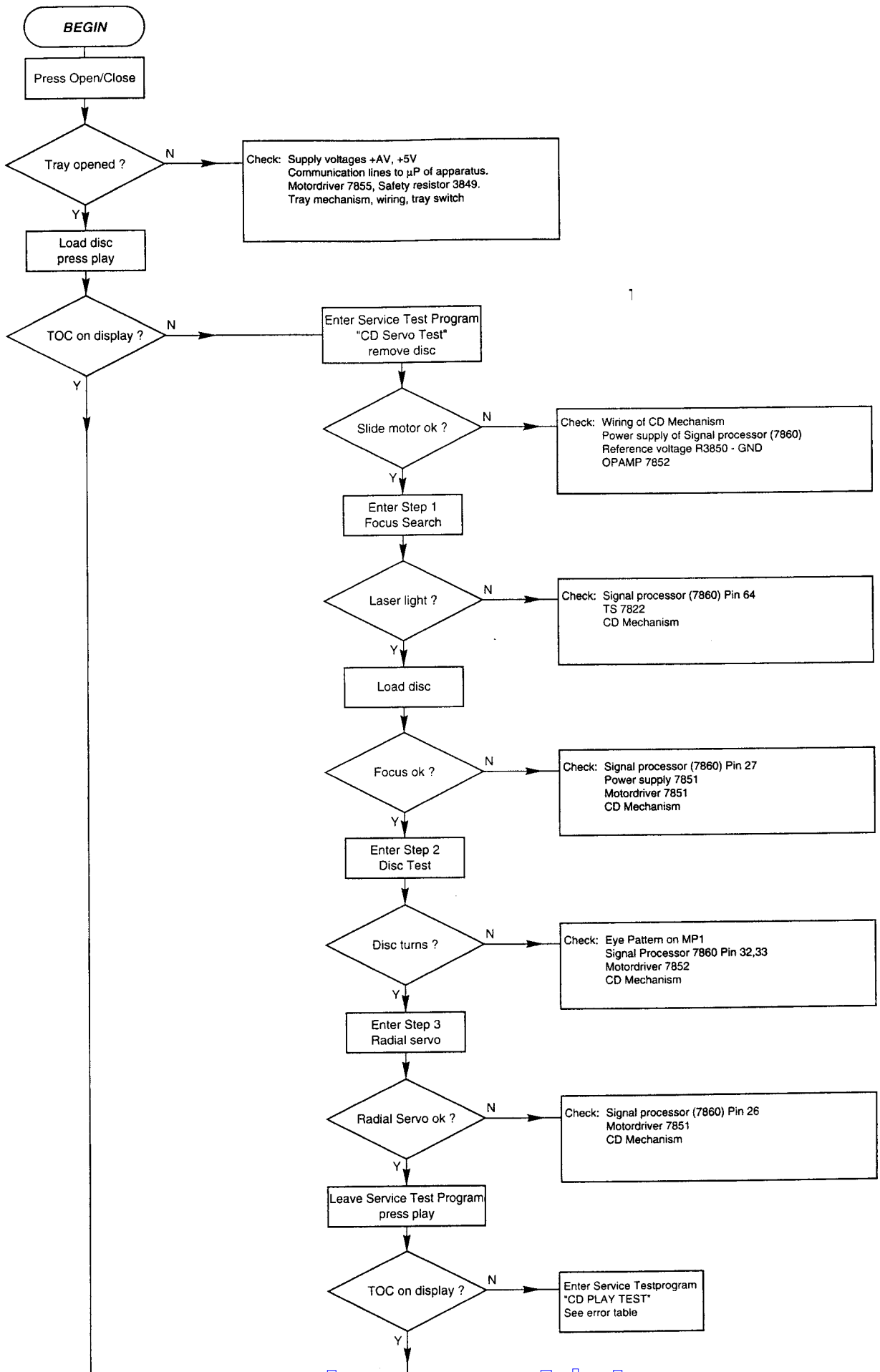
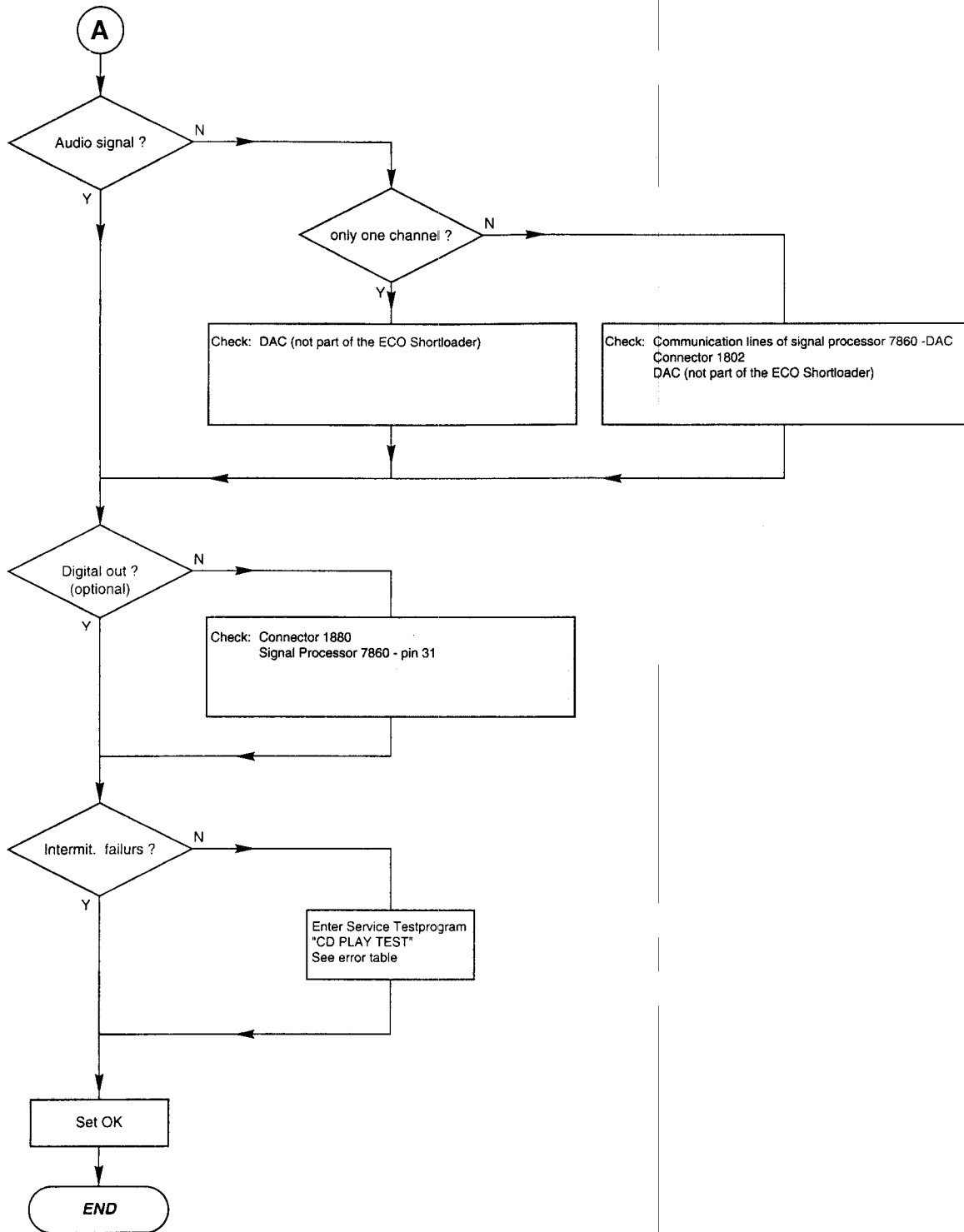


fig.3

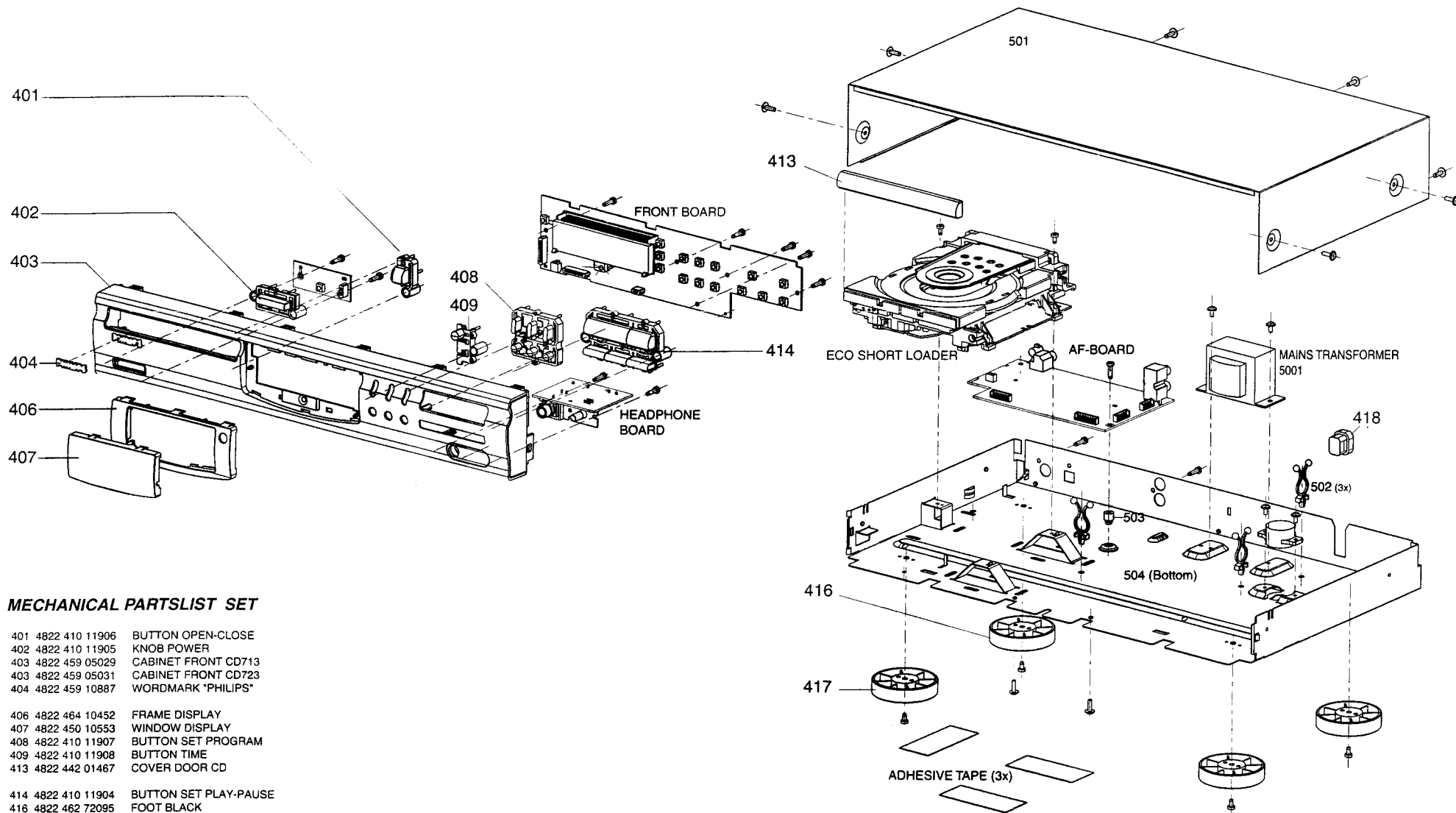
Remarks

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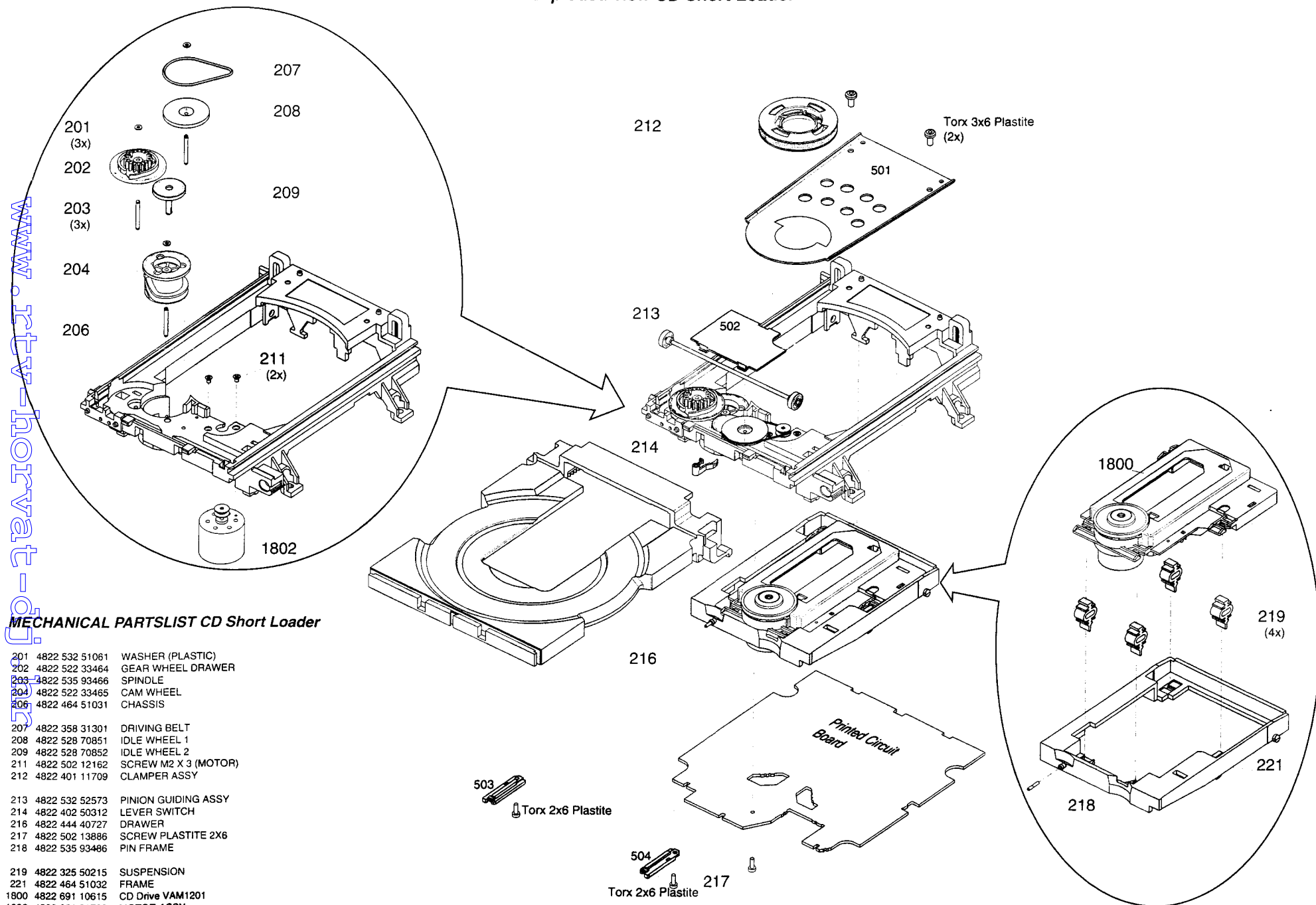
## EXPLODED VIEW of SET



## MECHANICAL PARTSLIST SET

|      |                |                                |
|------|----------------|--------------------------------|
| 401  | 4822 410 11906 | BUTTON OPEN-CLOSE              |
| 402  | 4822 410 11905 | KNOB POWER                     |
| 403  | 4822 459 05029 | CABINET FRONT CD713            |
| 403  | 4822 459 05031 | CABINET FRONT CD723            |
| 404  | 4822 459 10887 | WORDMARK "PHILIPS"             |
| 406  | 4822 464 10452 | FRAME DISPLAY                  |
| 407  | 4822 450 10553 | WINDOW DISPLAY                 |
| 408  | 4822 410 11907 | BUTTON SET PROGRAM             |
| 409  | 4822 410 11908 | BUTTON TIME                    |
| 413  | 4822 442 01467 | COVER DOOR CD                  |
| 414  | 4822 410 11904 | BUTTON SET PLAY-PAUSE          |
| 416  | 4822 462 72095 | FOOT BLACK                     |
| 417  | 4822 462 42159 | FOOT SILVER                    |
| 418  | 4822 532 60948 | CABLE BUSH                     |
| 5001 | 4822 146 11031 | TRANSFORMER MAINS not for /01  |
| 5001 | 4822 146 11032 | TRANSFORMER MAINS for /01 only |
|      | 4822 219 10537 | RC07104/01 (Remote Control)    |
|      | 4822 321 22832 | CINCH-CABLE                    |

Exploded view CD Short Loader



**MECHANICAL PARTSLIST CD Short Loader**

|      |                |                      |
|------|----------------|----------------------|
| 201  | 4822 532 51061 | WASHER (PLASTIC)     |
| 202  | 4822 522 33464 | GEAR WHEEL DRAWER    |
| 203  | 4822 535 93466 | SPINDLE              |
| 204  | 4822 522 33465 | CAM WHEEL            |
| 206  | 4822 464 51031 | CHASSIS              |
| 207  | 4822 358 31301 | DRIVING BELT         |
| 208  | 4822 528 70851 | IDLE WHEEL 1         |
| 209  | 4822 528 70852 | IDLE WHEEL 2         |
| 211  | 4822 502 12162 | SCREW M2 X 3 (MOTOR) |
| 212  | 4822 401 11709 | CLAMPER ASSY         |
| 213  | 4822 532 52573 | PINION GUIDING ASSY  |
| 214  | 4822 402 50312 | LEVER SWITCH         |
| 216  | 4822 444 40727 | DRAWER               |
| 217  | 4822 502 13886 | SCREW PLASTITE 2X6   |
| 218  | 4822 535 93486 | PIN FRAME            |
| 219  | 4822 325 50215 | SUSPENSION           |
| 221  | 4822 464 51032 | FRAME                |
| 1800 | 4822 691 10615 | CD Drive VAM1201     |
| 1802 | 4822 361 21708 | MOTOR ASSY           |
|      | 4822 502 30735 | SCREW 3 X 6 PLASTITE |

## ELECTRICAL PARTSLIST CD BOARD

## MISCELLANEOUS

|      |                |                                  |  |  |
|------|----------------|----------------------------------|--|--|
| 1720 | 4822 265 11183 | CON. FLEX FOIL 4 PIN SIDE ENTRY  |  |  |
| 1800 | 4822 691 10645 | CD DRIVE VAM1201                 |  |  |
| 1801 | 4822 267 51453 | CON. FLEX FOIL 12 PIN SIDE ENTRY |  |  |
| 1810 | 4822 276 13503 | SWITCH                           |  |  |

## CAPACITORS

|      |                |        |     |     |
|------|----------------|--------|-----|-----|
| 2720 | 4822 122 33197 | 1nF    | 10% | 50V |
| 2722 | 4822 126 12785 | 47nF   | 10% | 50V |
| 2761 | 4822 121 51387 | 10nF   | 20% | 16V |
| 2764 | 4822 122 33191 | 22pF   | 5%  | 50V |
| 2765 | 4822 122 33191 | 22pF   | 5%  | 50V |
| 2766 | 4822 126 12878 | 1,5nF  | 10% | 16V |
| 2767 | 4822 122 33191 | 22pF   | 5%  | 50V |
| 2802 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2809 | 4822 126 12785 | 47nF   | 10% | 50V |
| 2814 | 4822 126 12339 | 2,2nF  | 10% | 16V |
| 2818 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2819 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2820 | 4822 122 10459 | 560pF  | 10% | 50V |
| 2823 | 4822 126 12878 | 1,5nF  | 10% | 16V |
| 2825 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2826 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2827 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2828 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2829 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2830 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2831 | 4822 126 12785 | 47nF   | 10% | 50V |
| 2836 | 4822 126 13098 | 5,6nF  | 20% | 16V |
| 2837 | 4822 122 10459 | 560pF  | 10% | 50V |
| 2838 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2839 | 4822 121 51387 | 10nF   | 20% | 16V |
| 2840 | 4822 122 10576 | 1,8nF  | 10% | 16V |
| 2842 | 4822 121 51387 | 10nF   | 20% | 16V |
| 2843 | 5322 124 41948 | 0,47μF | 20% | 50V |
| 2844 | 4822 124 22726 | 4,7μF  | 20% | 35V |
| 2845 | 4822 122 33848 | 47pF   | 5%  | 50V |
| 2847 | 4822 124 40433 | 47μF   | 20% | 25V |
| 2848 | 4822 121 51387 | 10nF   | 20% | 16V |
| 2849 | 4822 124 40433 | 47μF   | 20% | 25V |
| 2850 | 4822 124 22726 | 4,7μF  | 20% | 35V |
| 2851 | 4822 121 51387 | 10nF   | 20% | 16V |
| 2853 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2856 | 4822 121 70619 | 22nF   | 10% | 50V |
| 2857 | 4822 126 11585 | 22nF   | 20% | 50V |
| 2858 | 4822 122 33848 | 47pF   | 5%  | 50V |
| 2860 | 4822 124 22726 | 4,7μF  | 20% | 35V |
| 2861 | 4822 122 33191 | 22pF   | 5%  | 50V |
| 2862 | 4822 122 33191 | 22pF   | 5%  | 50V |
| 2863 | 4822 124 81286 | 47μF   | 20% | 16V |
| 2869 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2870 | 4822 126 12785 | 47nF   | 10% | 50V |
| 2890 | 4822 122 33849 | 150pF  | 10% | 50V |
| 2898 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2899 | 4822 124 22726 | 4,7μF  | 20% | 35V |

## RESISTORS

|        |                |       |    |       |
|--------|----------------|-------|----|-------|
| 3720   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3721   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3722   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3723   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3724   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3725   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3726   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3727   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3728   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3729   | 4822 116 52195 | 47Ω   | 5% | 0,5W  |
| 3730   | 4822 116 52283 | 4,7kΩ | 5% | 0,5W  |
| 3751   | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3752   | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3753   | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3762   | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3763   | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3764   | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3771   | 4822 116 83883 | 470Ω  | 5% | 0,16W |
| 3803   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3804   | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3807   | 4822 116 52226 | 560Ω  | 5% | 0,5W  |
| 3815   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3817   | 4822 116 52283 | 4,7kΩ | 5% | 0,5W  |
| 3818   | 4822 116 52239 | 120kΩ | 5% | 0,5W  |
| 3820   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3825   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3826   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3827   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3828   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3829   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3830   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3832   | 4822 116 52191 | 33Ω   | 5% | 0,5W  |
| 3833   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3835   | 4822 116 52264 | 27kΩ  | 5% | 0,5W  |
| 3836   | 4822 116 52207 | 1,2kΩ | 5% | 0,5W  |
| 3837   | 4822 116 83961 | 6,8kΩ | 5% | 0,16W |
| 3838   | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3839   | 4822 116 52207 | 1,2kΩ | 5% | 0,5W  |
| 3840   | 4822 116 83961 | 6,8kΩ | 5% | 0,16W |
| 3841 ▲ | 4822 052 10338 | 3,3Ω  |    | NFR25 |
| 3842   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3843   | 4822 116 83882 | 39kΩ  | 5% | 0,5W  |
| 3844   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3845   | 4822 116 83882 | 39kΩ  | 5% | 0,5W  |
| 3846   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3848   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3849 ▲ | 4822 052 10338 | 3,3Ω  |    | NFR25 |
| 3850   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3851   | 4822 116 52264 | 27kΩ  | 5% | 0,5W  |
| 3852   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3853   | 4822 116 83961 | 6,8kΩ | 5% | 0,16W |
| 3854   | 4822 116 83878 | 270kΩ | 5% | 0,5W  |
| 3856   | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3857   | 4822 116 52234 | 100kΩ | 5% | 0,5W  |
| 3858   | 4822 116 52175 | 100Ω  | 5% | 0,5W  |
| 3859   | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3860   | 4822 116 52175 | 100Ω  | 5% | 0,5W  |
| 3861   | 4822 116 52175 | 100Ω  | 5% | 0,5W  |
| 3862   | 4822 116 52235 | 1MΩ   | 5% | 0,5W  |



**ELECTRICAL PARTSLIST CD BOARD****RESISTORS**

|      |                |      |    |      |
|------|----------------|------|----|------|
| 3863 | 4822 116 83872 | 220Ω | 5% | 0,5W |
| 3864 | 4822 116 52175 | 100Ω | 5% | 0,5W |
| 3865 | 4822 116 83872 | 220Ω | 5% | 0,5W |
| 3866 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3867 | 4822 116 83864 | 10kΩ | 5% | 0,5W |

|      |                |      |    |      |
|------|----------------|------|----|------|
| 3868 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3869 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3870 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3871 | 4822 116 52176 | 10Ω  | 5% | 0,5W |
| 3872 | 4822 116 52175 | 100Ω | 5% | 0,5W |

|      |                |      |    |      |
|------|----------------|------|----|------|
| 3873 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3874 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3875 | 4822 116 52191 | 33Ω  | 5% | 0,5W |
| 3876 | 4822 116 52213 | 180Ω | 5% | 0,5W |

|      |                |       |    |      |
|------|----------------|-------|----|------|
| 3879 | 4822 116 52226 | 560Ω  | 5% | 0,5W |
| 3881 | 4822 116 52283 | 4,7kΩ | 5% | 0,5W |
| 3882 | 4822 116 52283 | 4,7kΩ | 5% | 0,5W |
| 3883 | 4822 116 52175 | 100Ω  | 5% | 0,5W |
| 3890 | 4822 050 11002 | 1kΩ   | 5% | 0,2W |

|      |                |       |    |       |
|------|----------------|-------|----|-------|
| 3891 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3892 | 4822 116 52271 | 33kΩ  | 5% | 0,16W |
| 3893 | 4822 116 52249 | 1,8kΩ | 5% | 0,16W |
| 3895 | 4822 116 52271 | 33kΩ  | 5% | 0,16W |
| 3896 | 4822 116 83876 | 270Ω  | 5% | 0,16W |

|      |                |      |    |      |
|------|----------------|------|----|------|
| 3897 | 4822 116 52213 | 180Ω | 5% | 0,5W |
|------|----------------|------|----|------|

**COILS**

|      |                |                   |
|------|----------------|-------------------|
| 5804 | 4822 157 53302 | 1μH               |
| 5810 | 4822 157 11517 | 10μH              |
| 5860 | 4822 242 10566 | CRYSTAL 8.4672MHZ |

**DIODES**

|      |                |            |
|------|----------------|------------|
| 6888 | 4822 130 80655 | BZX79-F2V4 |
|------|----------------|------------|

**TRANSISTORS**

|      |                |          |
|------|----------------|----------|
| 7822 | 4822 130 41344 | BC337-40 |
| 7877 | 4822 130 40959 | BC547B   |
| 7878 | 4822 130 44503 | BC547C   |

**INTEGRATED CIRCUITS**

|       |                |             |
|-------|----------------|-------------|
| 7802© | 4822 209 12636 | TDA1302T/N1 |
| 7819© | 5322 209 11517 | PC74HCU04T  |
| 7821  | 4822 209 16143 | LC89170M    |
| 7851  | 4822 209 32852 | TDA7073A/N2 |
| 7852  | 4822 209 32852 | TDA7073A/N2 |

|       |                |           |
|-------|----------------|-----------|
| 7855© | 4822 209 31519 | TDA7072A  |
| 7860© | 4822 209 12752 | SAA7378GP |

**ELECTRICAL PARTSLIST HEADPHONE BOARD****MISCELLANEOUS**

|      |                |                        |
|------|----------------|------------------------|
| 1600 | 4822 267 31453 | HEADPHONE SOCKET 6,3mm |
|------|----------------|------------------------|

**CAPACITORS**

|      |                |       |     |     |
|------|----------------|-------|-----|-----|
| 2603 | 4822 126 11585 | 22nF  | 20% | 50V |
| 2604 | 4822 122 33197 | 1nF   | 10% | 50V |
| 2605 | 4822 122 33197 | 1nF   | 10% | 50V |
| 2610 | 4822 126 12882 | 100nF | 20% | 50V |

**RESISTORS**

|      |                |      |    |      |
|------|----------------|------|----|------|
| 3603 | 4822 116 52244 | 15kΩ | 5% | 0,5W |
| 3604 | 4822 116 52206 | 120Ω | 5% | 0,5W |
| 3605 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3606 | 4822 116 83864 | 10kΩ | 5% | 0,5W |
| 3607 | 4822 116 52244 | 15kΩ | 5% | 0,5W |

|       |                |      |    |      |
|-------|----------------|------|----|------|
| 3608  | 4822 116 52206 | 120Ω | 5% | 0,5W |
| 3609  | 4822 052 10109 | 10Ω  | 5% | NFR  |
| 3611▲ | 4822 052 10109 | 10Ω  | 5% | NFR  |
| 3612  | 4822 116 83864 | 10kΩ | 5% | 0,5W |

**INTEGRATED CIRCUITS**

|      |                |          |
|------|----------------|----------|
| 7670 | 4822 209 83274 | NJM4560D |
|------|----------------|----------|

**ELECTRICAL PARTSLIST SET****MISCELLANEOUS**

|       |                |                                |
|-------|----------------|--------------------------------|
| 5001▲ | 4822 146 11031 | TRANSFORMER MAINS not for /01  |
| 5001▲ | 4822 146 11032 | TRANSFORMER MAINS for /01 only |
|       | 4822 219 10537 | RC07104/01 (Remote Control)    |
|       | 4822 321 22832 | CINCH-CABLE (THIN)             |

**ELECTRICAL PARTSLIST AF BOARD****MISCELLANEOUS**

|        |                |                   |
|--------|----------------|-------------------|
| 1255 ▲ | 4822 071 56301 | FUSE T 630mA/250V |
| 1256 ▲ | 4822 071 56301 | FUSE T 630mA/250V |
| 1503   | 4822 267 31996 | CINCH SOCKET      |
| 1504   | 4822 265 20553 | CINCH SOCKET      |

**CAPACITORS**

|      |                |        |     |     |
|------|----------------|--------|-----|-----|
| 2250 | 4822 124 41407 | 0,47µF | 20% | 63V |
| 2251 | 4822 124 11769 | 220µF  | 20% | 50V |
| 2252 | 4822 126 11585 | 22nF   | 20% | 50V |
| 2253 | 4822 126 11585 | 22nF   | 20% | 50V |
| 2254 | 4822 124 11878 | 4700µF | 20% | 16V |
| 2255 | 4822 126 12882 | 100nF  | 20% | 50V |
| 2256 | 4822 126 11585 | 22nF   | 20% | 50V |
| 2257 | 4822 126 11585 | 22nF   | 20% | 50V |
| 2258 | 4822 124 40784 | 3300µF | 20% | 16V |
| 2259 | 4822 124 40849 | 330µF  | 20% | 16V |
| 2500 | 4822 126 11585 | 22nF   | 20% | 50V |
| 2502 | 4822 124 22263 | 220µF  | 20% | 25V |
| 2509 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2510 | 4822 122 10466 | 220pF  | 10% | 50V |
| 2511 | 4822 124 40433 | 47µF   | 20% | 25V |
| 2512 | 4822 124 40433 | 47µF   | 20% | 25V |
| 2513 | 4822 122 33519 | 470pF  | 10% | 50V |
| 2514 | 4822 122 33519 | 470pF  | 10% | 50V |
| 2521 | 4822 124 22263 | 220µF  | 20% | 25V |
| 2522 | 4822 124 22263 | 220µF  | 20% | 25V |
| 2523 | 4822 121 51387 | 10nF   | 20% | 16V |
| 2524 | 4822 124 40433 | 47µF   | 20% | 25V |
| 2529 | 4822 122 33197 | 1nF    | 10% | 50V |
| 2530 | 4822 122 33197 | 1nF    | 10% | 50V |
| 2531 | 4822 126 11585 | 22nF   | 20% | 50V |
| 2541 | 4822 124 40242 | 1µF    | 20% | 63V |
| 2543 | 4822 126 12882 | 100nF  | 20% | 50V |

**RESISTORS**

|        |                |       |    |       |
|--------|----------------|-------|----|-------|
| 3251 ▲ | 4822 053 10471 | 470Ω  | 5% | 1W    |
| 3252 ▲ | 4822 053 10471 | 470Ω  | 5% | 1W    |
| 3253   | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3254   | 4822 116 52283 | 4,7kΩ | 5% | 0,5W  |
| 3255   | 4822 116 52256 | 2,2kΩ | 5% | 0,16W |
| 3256   | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3257 ▲ | 4822 116 52283 | 4,7kΩ | 5% | 0,5W  |
| 3258   | 4822 116 52283 | 4,7kΩ | 5% | 0,5W  |
| 3259   | 4822 052 10478 | 4,7Ω  | 5% | NFR   |
| 3260 ▲ | 4822 052 10568 | 5,6Ω  | 5% | 0,33W |
| 3500   | 4822 116 52289 | 5,6kΩ | 5% | 0,16W |
| 3501   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3502   | 4822 116 52175 | 100Ω  | 5% | 0,5W  |
| 3503   | 4822 116 52175 | 100Ω  | 5% | 0,5W  |
| 3504   | 4822 116 52175 | 100Ω  | 5% | 0,5W  |
| 3505   | 4822 116 52175 | 100Ω  | 5% | 0,5W  |
| 3506   | 4822 116 52244 | 15kΩ  | 5% | 0,5W  |
| 3507   | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3511   | 4822 116 52269 | 3,3kΩ | 5% | 0,5W  |
| 3512   | 4822 116 52269 | 3,3kΩ | 5% | 0,5W  |

**RESISTORS**

|      |                |       |    |       |
|------|----------------|-------|----|-------|
| 3513 | 4822 116 83884 | 47kΩ  | 5% | 0,16W |
| 3514 | 4822 116 83884 | 47kΩ  | 5% | 0,16W |
| 3527 | 4822 116 52256 | 2,2kΩ | 5% | 0,16W |
| 3532 | 4822 116 83874 | 220kΩ | 5% | 0,5W  |
| 3534 | 4822 116 83864 | 10kΩ  | 5% | 0,5W  |
| 3535 | 4822 116 52289 | 5,6kΩ | 5% | 0,16W |
| 3537 | 4822 116 83872 | 220Ω  | 5% | 0,5W  |
| 3538 | 4822 116 52207 | 1,2kΩ | 5% | 0,5W  |
| 3539 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3540 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3541 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3542 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3543 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3544 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3545 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3547 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3548 | 4822 116 52256 | 2,2kΩ | 5% | 0,16W |
| 3556 | 4822 116 52176 | 10Ω   | 5% | 0,5W  |
| 3557 | 4822 052 10688 | 6,8Ω  | 5% | 0,33W |

**DIODES**

|      |                |            |
|------|----------------|------------|
| 6250 | 4822 130 34379 | BZX79-C27  |
| 6251 | 4822 130 34174 | BZX79-B4V7 |
| 6252 | 4822 130 31878 | 1N4003G    |
| 6253 | 4822 130 31878 | 1N4003G    |
| 6254 | 4822 130 31878 | 1N4003G    |
| 6255 | 4822 130 31878 | 1N4003G    |
| 6256 | 4822 130 31878 | 1N4003G    |
| 6257 | 4822 130 31878 | 1N4003G    |
| 6258 | 4822 130 31878 | 1N4003G    |
| 6259 | 4822 130 31981 | BZX79-C3V9 |
| 6260 | 4822 130 31878 | 1N4003G    |
| 6500 | 4822 130 30621 | 1N4148     |

**TRANSISTORS**

|      |                |          |
|------|----------------|----------|
| 7250 | 4822 130 41327 | BC327-40 |
| 7252 | 5322 130 60068 | BC558C   |
| 7500 | 4822 130 41327 | BC327-40 |
| 7501 | 5322 130 60068 | BC558C   |
| 7504 | 4822 130 44568 | BC557B   |
| 7507 | 4822 130 41344 | BC337-40 |
| 7508 | 4822 130 41344 | BC337-40 |
| 7509 | 4822 130 41344 | BC337-40 |
| 7510 | 4822 130 41344 | BC337-40 |

**INTEGRATED CIRCUITS**

|        |                |                 |
|--------|----------------|-----------------|
| 7251 ▲ | 4822 209 80817 | L7805CV         |
| 7502   | 4822 209 31147 | TDA1545A/N2 DAC |
| 7505   | 4822 209 83274 | NJM4560D        |

**ELECTRICAL PARTSLIST FRONT BOARD****MISCELLANEOUS**

|      |                |                  |
|------|----------------|------------------|
| 1800 | 4822 135 00233 | DISPLAY          |
| 1820 | 4822 276 13114 | TACT SWITCH      |
| 1821 | 4822 276 13114 | TACT SWITCH      |
| 1822 | 4822 276 13114 | TACT SWITCH      |
| 1823 | 4822 276 13114 | TACT SWITCH      |
| 1824 | 4822 276 13114 | TACT SWITCH      |
| 1825 | 4822 276 13114 | TACT SWITCH      |
| 1826 | 4822 276 13114 | TACT SWITCH      |
| 1827 | 4822 276 13114 | TACT SWITCH      |
| 1828 | 4822 276 13114 | TACT SWITCH      |
| 1829 | 4822 276 13114 | TACT SWITCH      |
| 1830 | 4822 276 13114 | TACT SWITCH      |
| 1831 | 4822 276 13114 | TACT SWITCH      |
| 1832 | 4822 276 13114 | TACT SWITCH      |
| 1840 | 4822 276 13114 | TACT SWITCH      |
| 7810 | 4822 130 10165 | GP1U28XP, IR EYE |

**CAPACITORS**

|      |                |       |     |     |
|------|----------------|-------|-----|-----|
| 2800 | 4822 124 22726 | 4,7µF | 20% | 35V |
| 2801 | 4822 124 22726 | 4,7µF | 20% | 35V |
| 2807 | 4822 124 81029 | 100µF | 20% | 25V |
| 2808 | 4822 126 11585 | 22nF  | 20% | 50V |
| 2810 | 4822 121 51387 | 10nF  | 20% | 16V |
| 2811 | 4822 121 51387 | 10nF  | 20% | 16V |
| 2812 | 4822 126 12882 | 100nF | 20% | 50V |
| 2813 | 4822 126 12882 | 100nF | 20% | 50V |
| 2814 | 4822 124 40433 | 47µF  | 20% | 25V |
| 2815 | 4822 121 42408 | 220nF | 5%  | 63V |

**RESISTORS**

|      |                |       |    |       |
|------|----------------|-------|----|-------|
| 3807 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3808 | 4822 116 52195 | 47Ω   | 5% | 0,5W  |
| 3809 | 4822 116 52234 | 100kΩ | 5% | 0,5W  |
| 3810 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3811 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3812 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3813 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3814 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3815 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3816 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3817 | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3818 | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3819 | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3820 | 4822 116 52182 | 15Ω   | 5% | 0,5W  |
| 3821 | 4822 116 52182 | 15Ω   | 5% | 0,5W  |
| 3822 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3823 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3829 | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3830 | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3832 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3833 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3834 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3835 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3836 | 4822 116 52257 | 22kΩ  | 5% | 0,5W  |
| 3837 | 4822 116 83884 | 47kΩ  | 5% | 0,16W |
| 3838 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3841 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3842 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3844 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |
| 3845 | 4822 050 11002 | 1kΩ   | 5% | 0,2W  |

**RESISTORS**

|      |                |      |    |      |
|------|----------------|------|----|------|
| 3846 | 4822 050 11002 | 1kΩ  | 5% | 0,2W |
| 3847 | 4822 116 52175 | 100Ω | 5% | 0,5W |
| 3848 | 4822 116 52182 | 15Ω  | 5% | 0,5W |
| 3849 | 4822 116 52182 | 15Ω  | 5% | 0,5W |

**COILS**

|      |                |                       |
|------|----------------|-----------------------|
| 1833 | 4822 242 72066 | CERAMIC FILTER 8,0MHz |
| 5801 | 4822 156 31058 | FILTER DIGITAL OUT    |
| 5802 | 4822 156 21721 | 2,2µH                 |

**DIODES**

|      |                |         |
|------|----------------|---------|
| 6800 | 4822 130 30621 | 1N4148  |
| 6801 | 4822 130 30621 | 1N4148  |
| 6804 | 4822 130 30621 | 1N4148  |
| 6805 | 4822 130 30621 | 1N4148  |
| 6806 | 4822 130 30621 | 1N4148  |
| 6807 | 4822 130 30621 | 1N4148  |
| 6808 | 4822 130 30621 | 1N4148  |
| 6809 | 4822 130 30621 | 1N4148  |
| 6811 | 4822 130 30621 | 1N4148  |
| 6812 | 4822 130 30621 | 1N4148  |
| 6813 | 4822 130 30621 | 1N4148  |
| 6814 | 4822 130 30621 | 1N4148  |
| 6820 | 4822 130 31878 | 1N4003G |

**TRANSISTORS**

|      |                |        |
|------|----------------|--------|
| 7811 | 4822 130 40959 | BC547B |
|------|----------------|--------|

**INTEGRATED CIRCUITS**

|        |                |                                |
|--------|----------------|--------------------------------|
| 7800 © | 4822 209 16738 | TMP87CM71-83770 MICROPROCESSOR |
|--------|----------------|--------------------------------|

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