# Portable CD/VCD Player

## AX6301

### Service Manual

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**TABLE OF CONTENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical specification</td>
<td>1-1</td>
</tr>
<tr>
<td>Features</td>
<td>1-1</td>
</tr>
<tr>
<td>Accessories</td>
<td>1-1</td>
</tr>
<tr>
<td>Instruction For Use</td>
<td>1-2-1-8</td>
</tr>
<tr>
<td>Safety &amp; Warnings</td>
<td>1-9</td>
</tr>
<tr>
<td>Service hints</td>
<td></td>
</tr>
<tr>
<td>Repair positions</td>
<td>2-1</td>
</tr>
<tr>
<td>Dismantling CD-door</td>
<td>2-1</td>
</tr>
<tr>
<td>Handling chip components</td>
<td>2-2</td>
</tr>
<tr>
<td>Service tools</td>
<td>2-2</td>
</tr>
<tr>
<td>Blockdiagram</td>
<td>3-1</td>
</tr>
</tbody>
</table>

**COMBI BOARD**

- **Circuit diagrams**
  - Part 1: 4-1
  - Part 2: 4-2
  - Part 3: 4-3

- **Layout diagrams**
  - Component side view: 4-4
  - Copper side view: 4-5

- **Exploded view**: 5-1
- **Mechanical partlist**: 5-1
- **Electrical partlist**: 6-1

---

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CLASS 1
LASER PRODUCT

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VIDEO CD
MP3-CD PLAYBACK
ReWritable
COMPACT DISC
DIGITAL AUDIO
GENERAL

Dimensions (Wx H x D): 128 x 30 x 137.5mm
Weight without batteries: 220g

Shock resistance:
+X/-X direction: ≥5g
+Y/-Y direction: ≥5g
+Z/-Z direction: ≥5g

Power supply modes:

<table>
<thead>
<tr>
<th>SUPPLY MODE</th>
<th>Voltage range</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD/MP3/VCD</td>
<td>3.5 - 6.0V</td>
</tr>
<tr>
<td>DC-IN socket</td>
<td>2.2 - 3.0V</td>
</tr>
</tbody>
</table>

Battery lifetime:

<table>
<thead>
<tr>
<th>BATTERY TYPE</th>
<th>CD ESP=on</th>
<th>VCD ESP=on</th>
<th>MP3 ESP=on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkaline batteries (2x AA)</td>
<td>≥2.8h (3h typ.)</td>
<td>≥7h (8h typ.)</td>
<td>≥8h (9h typ.)</td>
</tr>
</tbody>
</table>

Battery level detection:

<table>
<thead>
<tr>
<th>DETECTION LEVEL</th>
<th>PRIMARY BATTERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery empty</td>
<td>2.2V +100/-50mV</td>
</tr>
<tr>
<td>Difference btw. level 1 and batter empty</td>
<td>0.3V ± 100mV</td>
</tr>
<tr>
<td>Difference btw. level 2 and batter empty</td>
<td>0.6V ± 100mV</td>
</tr>
<tr>
<td>Difference btw. level 3 and batter empty</td>
<td>0.9V ± 100mV</td>
</tr>
</tbody>
</table>

Current consumption:

<table>
<thead>
<tr>
<th>OPERATION MODE</th>
<th>DC-IN SUPPLY (4.5V)</th>
<th>BATT. SUPPLY (2.25V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play</td>
<td>210mA</td>
<td>220mA</td>
</tr>
<tr>
<td>Jump</td>
<td>500mA n/a</td>
<td>650mA n/a</td>
</tr>
</tbody>
</table>

Headphone out:

Output power (THD=10%): 7mW (-1dB)
Frequency response (1mW): 100Hz - 20kHz within 6dB
S/N ratio CD (unw): 78dB (81dB typ.)
S/N ratio CD (unw),incl.muting: 85dB
S/N ratio CD (A-wght): ≥82dB (84dB typ.)
S/N ratio CD (A-wght),incl.muting: ≥85dB
THD+N (1kHz, 1mW): 1.0% (0.2% typ.)
Crosstalk (1kHz): ≤-24dB (-44dB typ.)
Channel unbalance (-40dB): 4dB
Volume attenuation (1kHz): >60dB

Dynamic Bass Boost DBB:

<table>
<thead>
<tr>
<th>DBB STAGE</th>
<th>FREQUENCY RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>100Hz</td>
</tr>
</tbody>
</table>

Measurement setup CD:

Use Audio Signal disc SBC429 4822 397 30184

FEATURES

<table>
<thead>
<tr>
<th>FEATURES OF CD-PORTABLE/MP3</th>
<th>AX6301 (all versions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUNER FM / MW</td>
<td>- / -</td>
</tr>
<tr>
<td>CD-REWRITABLE COMPATIBILITY</td>
<td>●</td>
</tr>
<tr>
<td>ELECTRONIC SKIP PROTECTION CDDA / MP3/VCD</td>
<td>120s / 400s / 30s</td>
</tr>
<tr>
<td>ESP DRAM SIZE</td>
<td>16 Mbit</td>
</tr>
<tr>
<td>HOLD / RESUME FUNCTION</td>
<td>● / ●</td>
</tr>
<tr>
<td>DBB STAGES</td>
<td>1</td>
</tr>
<tr>
<td>ACOUSTIC FEEDBACK</td>
<td>-</td>
</tr>
<tr>
<td>PROGRAM MEMORY</td>
<td>20</td>
</tr>
<tr>
<td>RECHARGE FUNCTION NiCd / NiMH</td>
<td>- / ●</td>
</tr>
<tr>
<td>CORD REMOTE CONTROL PREPARED</td>
<td>●</td>
</tr>
</tbody>
</table>

ACCESSORIES

<table>
<thead>
<tr>
<th>ACCESSORIES FOR CD/VCD PORTABLE</th>
<th>AX6301</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>01</td>
</tr>
<tr>
<td>AY 3193/02 AC/DC Adaptor</td>
<td>X</td>
</tr>
<tr>
<td>SBC HE035/77s Stereo Headphone</td>
<td>X</td>
</tr>
<tr>
<td>AY3788 Remote Control</td>
<td>X</td>
</tr>
<tr>
<td>AV Cinch Cable</td>
<td>X</td>
</tr>
</tbody>
</table>
# 1-2

## INSTRUCTION FOR USE

### Controls

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OPEN</td>
</tr>
<tr>
<td>2</td>
<td>VOL</td>
</tr>
<tr>
<td>3</td>
<td>STOP</td>
</tr>
<tr>
<td>4</td>
<td>MODE</td>
</tr>
<tr>
<td>5</td>
<td>PROVIDE</td>
</tr>
<tr>
<td>6</td>
<td>R/L</td>
</tr>
<tr>
<td>7</td>
<td>Number buttons</td>
</tr>
<tr>
<td>8</td>
<td>P/N</td>
</tr>
<tr>
<td>9</td>
<td>ZOOM</td>
</tr>
<tr>
<td>10</td>
<td>PBC</td>
</tr>
<tr>
<td>11</td>
<td>GO TO</td>
</tr>
<tr>
<td>12</td>
<td>RETURN</td>
</tr>
<tr>
<td>13</td>
<td>SLOW</td>
</tr>
<tr>
<td>14</td>
<td>VIEW</td>
</tr>
<tr>
<td>15</td>
<td>RESUME</td>
</tr>
<tr>
<td>16</td>
<td>RESUME</td>
</tr>
<tr>
<td>17</td>
<td>RETURN</td>
</tr>
<tr>
<td>18</td>
<td>ON / OFF</td>
</tr>
<tr>
<td>19</td>
<td>ESP</td>
</tr>
<tr>
<td>20</td>
<td>DBB</td>
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<td>21</td>
<td>§</td>
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<tr>
<td>22</td>
<td>§</td>
</tr>
<tr>
<td>23</td>
<td>!</td>
</tr>
<tr>
<td>24</td>
<td>@</td>
</tr>
<tr>
<td>25</td>
<td>OFF·RESUME·HOLD</td>
</tr>
<tr>
<td>26</td>
<td>·</td>
</tr>
<tr>
<td>27</td>
<td>–</td>
</tr>
<tr>
<td>28</td>
<td>–</td>
</tr>
<tr>
<td>29</td>
<td>–</td>
</tr>
<tr>
<td>30</td>
<td>– RESUME</td>
</tr>
<tr>
<td>31</td>
<td>– HOLD</td>
</tr>
<tr>
<td>32</td>
<td>^</td>
</tr>
<tr>
<td>33</td>
<td>(STOP)</td>
</tr>
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<td>34</td>
<td>$</td>
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<tr>
<td>35</td>
<td>%</td>
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<tr>
<td>36</td>
<td>^</td>
</tr>
<tr>
<td>37</td>
<td>&amp;</td>
</tr>
<tr>
<td>38</td>
<td>*</td>
</tr>
<tr>
<td>39</td>
<td>10 / 0</td>
</tr>
<tr>
<td>40</td>
<td>Type plate</td>
</tr>
</tbody>
</table>

### Remote Control

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OSD</td>
</tr>
<tr>
<td>2</td>
<td>MODE</td>
</tr>
<tr>
<td>3</td>
<td>スピード</td>
</tr>
<tr>
<td>4</td>
<td>PROG</td>
</tr>
<tr>
<td>5</td>
<td>R/L</td>
</tr>
<tr>
<td>6</td>
<td>Number buttons</td>
</tr>
<tr>
<td>7</td>
<td>P/N</td>
</tr>
<tr>
<td>8</td>
<td>ZOOM</td>
</tr>
<tr>
<td>9</td>
<td>PBC</td>
</tr>
<tr>
<td>10</td>
<td>GO TO</td>
</tr>
<tr>
<td>11</td>
<td>RETURN</td>
</tr>
<tr>
<td>12</td>
<td>SLOW</td>
</tr>
<tr>
<td>13</td>
<td>VIEW</td>
</tr>
<tr>
<td>14</td>
<td>RESUME</td>
</tr>
<tr>
<td>15</td>
<td>RESUME</td>
</tr>
<tr>
<td>16</td>
<td>RETURN</td>
</tr>
<tr>
<td>17</td>
<td>ON / OFF</td>
</tr>
<tr>
<td>18</td>
<td>ESP</td>
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<td>19</td>
<td>DBB</td>
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<td>§</td>
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<td>§</td>
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<tr>
<td>22</td>
<td>!</td>
</tr>
<tr>
<td>23</td>
<td>@</td>
</tr>
</tbody>
</table>

### Remote Control

- **10x25 3V Lithium Battery**: 1xCR2025
- **Battery Type**: 3V lithium battery
- **Back View**: Push + to release, Pull – to remove

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*Figure: Philips Remote Control with buttons labeled for various functions.*
POWER SUPPLY/GENERAL INFORMATION

Batteries (not included)

Inserting batteries
- Open the battery compartment and insert 2 alkaline batteries of type AA (LR6, UM3).
- When using the remote control for the first time, please remove the clear protective tab from the battery.
- Do not mix old and new or different types of batteries.

Indication of empty batteries
- Replace the batteries or connect the mains adapter as soon as \[ \text{blinks}. \]

Average playing time of batteries under normal conditions

<table>
<thead>
<tr>
<th>Alkaline battery</th>
<th>ESP on</th>
<th>ESP off</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCD</td>
<td>3 hours</td>
<td>3.5 hours</td>
</tr>
<tr>
<td>CD</td>
<td>7 hours</td>
<td>7.5 hours</td>
</tr>
<tr>
<td>MP3-CD</td>
<td>9.5 hours</td>
<td></td>
</tr>
</tbody>
</table>

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

Mains adapter (supplied AY3193)

Use only the AY3193 adapter (DC: 4.5V/800mA; AC: 110V/220V and 50/60Hz). Any other product may damage the player.

1 Make sure the mains voltage matches the voltage requirement of the mains adapter.
2 Connect the mains adapter to the 4.5V DC socket of the player and to the wall socket.

PLAYBACK

Playing a disc

With this set, you can play
- Video discs
- audio discs (pre-recorded audio CDs, finalized audio CDs and CD-RWs)
- MP3-CDs (CD-ROMs with MP3 files)

For VCD playback, you need to connect the player to your TV (see Connecting to your TV system)

1 Push the OPEN \( \uparrow \) slider to open the disc lid.
2 Insert a disc, printed side up, by pressing the CD onto the hub. Close the lid by pressing the lid down.
3 Press \( \square \) on the set to start playback.

Playback starts:
- Video disc: \( \text{appears. The current track number} \)
- Audio disc: The current track number and the elapsed playing time are displayed.
- MP3-CD: \( \text{appears. The current album number, track number and the elapsed playing time are displayed.} \)

4 To stop playback, press \( \square \).

Video disc: The number of tracks and the total playing time of the disc are displayed.
Audio disc: The number of tracks and the total playing time of the disc are displayed.
MP3-CD: The number of albums and the number of tracks are displayed.

5 Press \( \square \) again to switch off the player.

- To remove the disc, hold it by its edge and press the hub gently while lifting the disc.

Pause

1 Press \( \square \) to interrupt playback.
The track number and the elapsed playing time are displayed.
2 Press \( \square \) again to resume playback

- If the set stays in the PAUSE mode for more than 90 seconds, it will enter the STOP mode automatically. After 30 seconds or more in the STOP mode, your set automatically powers down.

TV connection

Connecting to your TV System

Use the supplied AV cable to connect the player to your TV system. To ensure uninterrupted viewing, we recommend you use AC mains power for your player during VCD operation.

1 Insert the yellow video cable pin into the VIDEO IN jack on the rear of your TV.
2 Insert the pin on the other end of the AV cable into the LINE OUT jack on your player.

TIP:
- You can only press \( \square \) on the set to start playback.
- If there is no activity, the player will automatically switch off in 30 seconds to save energy.
- After pressing \( \square \), you may need to wait for 10 seconds or more until the first MP3 track is played.

TIP:
- If the set stays in the PAUSE mode for more than 90 seconds, it will enter the STOP mode automatically. After 30 seconds or more in the STOP mode, your set automatically powers down.
**INSTRUCTION FOR USE**

### FEATURES

**Special features for VCD playback only**

**Adjusting your TV System**
Before viewing the Video CD, ensure that the set is switched to the corresponding PAL or NTSC system of your TV set (except multi-system TV).

1. Connect the audio/video output cable to the corresponding ports of the TV set.
2. Turn on your TV system and adjust the input mode to AV.
3. On the remote control, press P/N to toggle between PAL and NTSC TV systems.

**OSD - On Screen Display**
If you insert a VCD, your TV screen will serve as an additional display for messages (e.g. PLAY, STOP) and information stored in the VCD.

- Press OSD on the remote control or DISPLAY on the set repeatedly to switch OSD on or off.
- When OSD is switched on, your TV screen may for example display the following:

  `XX-MM:SS` - where:
  - “XX” is the current track
  - “MM” is for minute.
  - “SS” is for second.

**DISPLAY features for VCD, CD and MP3-CD**
During normal playback, you can press OSD on the remote control or DISPLAY on the set repeatedly to select your desired display.

<table>
<thead>
<tr>
<th>Press OSD or DISPLAY</th>
<th>Display</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x</td>
<td>Track number + track’s remaining playing time</td>
</tr>
<tr>
<td>2x</td>
<td>Normal display</td>
</tr>
</tbody>
</table>

**Return**
If you want to return to MENU PLAY (the main menu at the beginning of your VCD) during SEQUENCE PLAY, press RETURN.

**Go to**
1. Press GO TO on the remote control. `GO TO--:--` appears on the TV screen.
2. Enter the desired time from which you want to start playback.
3. Press GO TO again to deactivate GO TO. `GO TO CANCEL` appears.

**View**
This feature allows you to scan through your VCD in 9 segments.

1. Press VIEW to divide the whole movie of the video into 9 segments. The 7-second of each segment is played. After the last segment, playback starts from the first segment.
2. Select your desired segment using the number buttons on the remote control. Playback continues from the selected segment.
3. Press VIEW again or to resume normal playback.

**Zoom**
Select from 4 speeds to capture action in slow motion: 1/2, 1/4, 1/8, and 1/16.

1. Press ZOOM on the remote control once to enlarge the picture by 2 times. `ZOOM 2` appears.
2. Press ZOOM again to quit the zoom feature. RESTORE appears and normal playback resumes.

**Slow**
Select from 4 speeds to capture action in slow motion: 1/2, 1/4, 1/8, and 1/16.

1. Press SLOW on the remote control once or more for playback at slow speed. Sound is muted and SLOW1/2, SLOW1/4, SLOW1/8 or SLOW1/16 is displayed.
2. To resume normal playback, press .

**Playing a VCD V2.0 with PBC**
PBC is a predefined play sequence stored in the CD.

**SEQUENCE PLAY** is by default on when VCD playback starts.

Before viewing your VCD, make sure the set is switched to the corresponding PAL or NTSC system of your TV set (except multi-system TV).

1. Press P/N repeatedly to select PAL or NTSC.
2. You can press PBC to toggle between MENU PLAY and SEQUENCE PLAY.
   - If SEQUENCE PLAY is selected, the playback starts from the beginning of the first track.
   - If MENU PLAY is selected, a list of tracks is displayed on the TV screen.

💡 **TIP:**
This function is not available for discs without Table Of Contents.
INSTRUCTION FOR USE

GENERAL INFORMATION

**Maintenance**
- Do not touch the lens \( \Delta \) of the player.
- Do not expose the unit, batteries or discs to humidity, rain, sand or excessive heat (caused by heating equipment, or direct sunshine).
- You can clean the player with soft, slightly dampened and lint-free cloth. Do not use any cleaning agents, as they may be corrosive.
- To clean the CD, wipe it in a straight line from the center toward the edge using soft, lint-free cloth.
- Never write on a disc or attach a sticker to it.
- Discs and lens may cloud over when the unit is moved suddenly from cold to warm surroundings. Leave the player in a warm environment until the moisture has evaporated.
- Active mobile phones in the vicinity may cause malfunctions.
- Avoid dropping the unit as this may cause damage.

**Environmental information**
- We have done our best to make the packaging easily separable into mono materials. Cardboard (box) 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 material, exhausted batteries and old equipment.

**Accessories**
- Headphones, HE035
- Mains adapter, AY3193
- Wireless remote control, AY3788
- AV cable, AY3484

**Headphones (HE035)**
- Connect the supplied headphones to LINE OUT/\( \Delta \).

**TIP:**
LINE OUT/\( \Delta \) can also be used to connect this set to your HiFi or TV system.

**Take care when using headphones**

**Hearing safety**
Do not play your headphones at a high volume. Hearing experts advise that continuous use at high volume can permanently damage your hearing.

**Traffic safety**
Do not use your headphones while driving a vehicle. It may create a hazard and it is illegal in many countries.

**General MP3 information**

**How to make a CD-ROM with MP3 files**
In order to easily handle the large number of music files on a CD-ROM, you can organize them in folders (“albums”).

**TIP:**
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**General MP3 information**

**How to get music files**
The music compression technology MP3 (MPEG Audio Layer 3) reduces the digital data of an audio CD significantly while maintaining CD-like sound quality. With MP3 you can record up to 10 hours of CD-like music on a single CD-RW.

**How to organize music files**
Either download legal music files from the Internet to your computer hard disc or create them from your own audio CDs. For this, insert an audio CD into your computer’s CD-ROM drive and convert the music using appropriate encoder software. To achieve good sound quality, a bit rate of 128 kbps or higher is recommended for MP3 music files.

**How to make a CD-ROM with MP3 files**
In order to easily handle the large number of music files on a CD-ROM, you can organize them in folders (“albums”). The tracks of an album will be played in alphabetical order. If you want to arrange them in a certain order, let the file names start with numbers.

For example:
- 001-EWORLD.MP3
- 002-FIRESTARTER.MP3
- 003-DEEPMUX3

Albums will be arranged in alphabetical order, but subfolders (albums within another album) will be played immediately after the album in which they are located. Albums without MP3 files will be skipped.

If there are MP3 files which you did not put into an album, you will find them in the album VARIOUS with album number 0. VARIOUS is the first album that will be played.

**Supported formats**
This set supports:
- Video CD V1.0, Video CD V2.0
- DVD
- ISO-9660, ISO-9660+Joliet, Joliet, Packet writing
- MP3 bit rate: 32-320 kbps and variable bit rate (VBR)
- Maximum number of tracks per disc: 400
- Maximum number of albums per disc: 99

**TIP:**
- When the system reads a mixed mode MP3-CD, only the number of total CDDA tracks is displayed.
INSTRUCTION FOR USE

GENERAL INFORMATION/FEATURE

Volume and sound

Volume adjustment
Adjust the volume by using the volume control VOL.

Sound adjustment
1 Press DBB for a moderate bass enhancement. DBB appears.
Press DBB again to switch off the bass enhancement. DBB disappears.

R/L : Channel and stereo sound selection
It is possible to select the right channel or left channel or stereo from a multi-channel disc when you connect your player to your TV or Hi-Fi system.

1 For VCDs, make sure you connect the player correctly to your TV system first.
2 For music discs, make sure you connect the player to your Hi-Fi system first.

Press R/L once or more to select your sound output option.

Selecting and searching on all discs

Selecting a track during playback
Briefly press << or >> once or several times to skip to the beginning of the previous or subsequent track.
Playback continues with the selected track.

Search for a passage during CD playback
1 Keep << or >> pressed to find a particular passage in a backward or forward direction.
Searching is started.
2 Release the button at the desired passage.
Normal playback continues.

Selecting albums and tracks on MP3-CDs

Selecting an album during playback
Briefly press - or + once or several times to skip to the first track of the current, previous or subsequent album.
Playback starts from the first track of the selected album.

Selecting a track during playback
1 Briefly press << or >> once or several times to select previous or subsequent tracks within the current album.
2 Release the button at the desired track.
Playback continues with the selected track.

Selecting tracks using the number digits

Press number buttons 0-9 on the remote control to select your desired track.
If more than 10 tracks are stored in a disc, you can use 10+:

- Press 10+ first, and then the last number.
- Press 10+ once for 10+, twice for 20+, and three times for 30+, and so on.

Searching VCDs at different fast / slow speeds during playback

Press + once or several times to select your desired forwarding speed:

<table>
<thead>
<tr>
<th>Press</th>
<th>Times of normal speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x</td>
<td>FORWARD x1</td>
</tr>
<tr>
<td>2x</td>
<td>FORWARD x2</td>
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<tr>
<td>3x</td>
<td>FORWARD x3</td>
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<tr>
<td>4x</td>
<td>FORWARD x4</td>
</tr>
<tr>
<td>5x</td>
<td>Normal Play</td>
</tr>
</tbody>
</table>

Press – once or several times to select your desired rewinding speed:

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<td>BACKWARD x4</td>
</tr>
<tr>
<td>5x</td>
<td>Normal Play</td>
</tr>
</tbody>
</table>

Playing tracks repeatedly or in a random order - MODE

Press MODE once or several times to select the desired playback possibility.
- REPEAT 1:
The current track is played repeatedly.
- REPEAT ALL:
The entire disc is played repeatedly. But for MP3-CDs, only all the tracks in the current album are played repeatedly.
- SHUFFLE:
All tracks are played in a random order.
- SCAN:
The first 10 seconds of each track is played in sequence.

FEATURES

Selecting and searching on all discs

Selecting a track during playback
Briefly press << or >> once or several times to skip to the beginning of the previous or subsequent track.
Playback continues with the selected track.

Search for a passage during CD playback
1 Keep << or >> pressed to find a particular passage in a backward or forward direction.
Searching is started.
2 Release the button at the desired passage.
Normal playback continues.

Selecting albums and tracks on MP3-CDs

Selecting an album during playback
Briefly press - or + once or several times to skip to the first track of the current, previous or subsequent album.
Playback starts from the first track of the selected album.

Selecting a track during playback
1 Briefly press << or >> once or several times to select previous or subsequent tracks within the current album.
2 Release the button at the desired track.
Playback continues with the selected track.

Selecting tracks using the number digits

Press number buttons 0-9 on the remote control to select your desired track.
If more than 10 tracks are stored in a disc, you can use 10+:

- Press 10+ first, and then the last number.
- Press 10+ once for 10+, twice for 20+, and three times for 30+, and so on.

Searching VCDs at different fast / slow speeds during playback

Press + once or several times to select your desired forwarding speed:

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</table>

GENERAL INFORMATION/FEATURE

Volume and sound

Volume adjustment
Adjust the volume by using the volume control VOL.

Sound adjustment
1 Press DBB for a moderate bass enhancement. DBB appears.
Press DBB again to switch off the bass enhancement. DBB disappears.

R/L : Channel and stereo sound selection
It is possible to select the right channel or left channel or stereo from a multi-channel disc when you connect your player to your TV or Hi-Fi system.

1 For VCDs, make sure you connect the player correctly to your TV system first.
2 For music discs, make sure you connect the player to your Hi-Fi system first.

Press R/L once or more to select your sound output option.

Selecting and searching on all discs

Selecting a track during playback
Briefly press << or >> once or several times to skip to the beginning of the previous or subsequent track.
Playback continues with the selected track.

Search for a passage during CD playback
1 Keep << or >> pressed to find a particular passage in a backward or forward direction.
Searching is started.
2 Release the button at the desired passage.
Normal playback continues.

Selecting albums and tracks on MP3-CDs

Selecting an album during playback
Briefly press - or + once or several times to skip to the first track of the current, previous or subsequent album.
Playback starts from the first track of the selected album.

Selecting a track during playback
1 Briefly press << or >> once or several times to select previous or subsequent tracks within the current album.
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Press number buttons 0-9 on the remote control to select your desired track.
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Playing tracks repeatedly or in a random order - MODE

Press MODE once or several times to select the desired playback possibility.
- REPEAT 1:
The current track is played repeatedly.
- REPEAT ALL:
The entire disc is played repeatedly. But for MP3-CDs, only all the tracks in the current album are played repeatedly.
- SHUFFLE:
All tracks are played in a random order.
- SCAN:
The first 10 seconds of each track is played in sequence.
ESP - Electronic Skip Protection

The ESP duration is 120 seconds for CD playback, 400 seconds for MP3 disc playback and 30 seconds for VCD playback.

The ELECTRONIC SKIP PROTECTION system prevents sound loss or unstable playback caused by light vibrations and shocks. Continuous playback is thus ensured. ESP does not prevent playback interruptions during vigorous running. It does not protect the unit against any damage caused by dropping!

Press ESP repeatedly during playback to toggle between ESP ON and ESP OFF:
- When ESP appears, ESP is activated.
- When ESP disappears, ESP is deactivated

RESUME and HOLD

You can interrupt playback and continue (after a short while at the stop position only) from the position where playback has stopped [RESUME]. You can also lock all buttons of the set so that no action will be executed [HOLD]. Use the OFF - RESUME - HOLD slider for these functions.

RESUME – continuing from where you have stopped
1 Switch the slider to RESUME during playback to activate RESUME.
   ➤ RESUME is shown.
2 Press ■.
3 Press ► or press ◄ or RESUME on the remote control to resume playback.
   ➤ RESUME is shown and playback continues from where you have stopped.
   - To deactivate RESUME, switch the slider to OFF.
   ➤ RESUME goes off.

TIP:
- Resume is also cancelled if you have opened the disc lid or disconnected your player from the power supply.

HOLD - locking all buttons
- Switch the slider to HOLD to activate HOLD.
   HOLD appears and all buttons are locked.
   When any key is pressed, HOLD is displayed.
- To deactivate HOLD, switch the slider to OFF.
   HOLD disappears.

Programming track numbers

You can select up to 20 tracks and store them in the memory in a desired sequence. You can store any track more than once.

1 In the stop mode, press PROGRAM on the set or PROG on the remote control.
   PROGRAM appears and P with the number of stored tracks is displayed.
2 Select a track with ◄ or ►.
3 Press PROGRAM on the set or PROG on the remote control to store the track.
4 Select and store all desired tracks in this way.
5 Press ► to start playback of the program
   Playback starts.

TIP:
- P-FULL appears when the program memory is full.

Clearing the program

You can clear the program by:
- pressing ■ again in the stop mode;
- powering off the player;
- opening the disc lid;
- pressing and holding PROGRAM during playback
- pressing PROG on the remote control during playback.

TIP:
- P-CLEAR appears on the display of the player for VCD, CD and MP3-CD.
- PROGRAM CANCEL appears on the TV screen for VCD.
WARNING: Under no circumstances should you try to repair the set 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 these hints, consult your dealer or service centre.

Problems

No sound/power
- Check if the player is connected securely.
- Check volume on the player.
- Disconnect headphones when not using headphones.
- Make sure you operate the TV or amplifier correctly.
- Make sure you have selected VCD player position on the amplifier.
- The power circuit in your player is designed with a power shutdown mode. This is activated only during battery power operation of the player when the battery becomes completely drained. When this happens:
  1. Connect your player to AC power with the supplied mains adapter.
  2. Let the player stand idle for 30 seconds before switching on again to resume disc operation on AC power supply.

Loud noise when operating the player
- This is normal and due to mechanical parts. Playback is not affected.

The player feels very warm
- When the player is in use for a long period of time, the surface will be heated. This is normal.

No picture / No color on TV screen
- Connect the cable between the systems and the TV.
- Change the system to the respective PAL or NTSC setting.

My disc cannot play
- Check you have loaded a disc in the player if empty.
- Check you have loaded a disc properly with the label side up.
- Disc dirty/damaged. Clean the disc properly.
- Moisture has condensed in the player. Remove the disc and leave the player to adjust to the surrounding temperature. Some audio CDs available on the market are copy protected. These discs will not play on this set. See your retailer for options regarding non-protected audio CDs.
- Make sure the MP3-CD was recorded within 32-320kbps (128kbps preferably) with sampling frequencies at 8-48KHz (44.1KHz preferably).

Remote control does not work
- Remove obstacle between the remote control and the player, and point directly instead of at a wide angle at the infrared sensor on the player.
- The battery may be exhausted. Replace the battery with a new one.
- Try using the remote control with a maximum distance of 3 meters from the sensor on the player.
- Try using the remote control within a maximum angle of 30°

Picture CD cannot be played
- Make sure that the picture CD is JPEG VGA format (640x480 pixels)

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

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.

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

WARNUNG

WAARSCHUWING
Alle ICs en vele andere halfgeleiders zijn gevoelig voor elektrostatische ontladings (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminden. 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.

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 cautela alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa del’apparechio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

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

SAFETY & WARNINGS

CLASS 1 LASER PRODUCT

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

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

Advarsel !
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsætelse for stråling.

Varoitus !
Avatessa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymätömmälle lasersäteilylle. Älä katso sätteeseen !

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.

“For votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne.”
SERVICE HINTS

REPAIR POSITION COPPERSIDE

To get access to the copperside of the printed board assembly proceed as follows:

1. Remove bottom screws (3x)
2. Lift the bottom-assy-1
3. Supply the unit via external DC-socket
4. Take care that the door switch is closed during measurements

REPAIR POSITION COMPONENTSIDE

To get access to the componentside of the printed board assembly proceed as follows:

1. Remove the bottom screws (3x)
2. Open the CD-door
3. Lift the cabinet-assy-2 and put it backwards on the table
4. Supply the unit via the external DC-socket
5. Take care that the door switch is closed during measurements

DISMANTLING THE CD-DOOR

To dismantle the CD-door proceed as follows:

1. Dismantle bottom and printed board/drive assembly
2. Disconnect the sticker (flex-foil connector on the membrane keyboard)
3. Disconnect membrane keyboard (flex-foil connector on copperside of printed board)
4. Bend the CD-door rightwards downwards as indicated in the picture above

Remark: Do not use screwdrivers or tools. Sharp edges could damage hinge or cabinet part.
HANDLING CHIP COMPONENTS

SERVICE TOOLS

Audio signal disc SBC429
Playability test disc SBC444
Test disc 5 (disc without errors) + Test disc 5A (disc with dropout errors, black spots and fingerprints) SBC426/ SBC426A

ESD PROTECTION EQUIPMENT

Anti-static table mat large 1200x650x1.25mm
small 600x650x1.25mm
Anti-static wristband
Connection box (3 press stud connections, 1 MΩ)
Extendible cable (2m, 2 MΩ, to connect wristband to connection box)
Connecting cable (3m, 2 MΩ, to connect table mat to connection box)
Earth cable (1 MΩ, to connect any product to mat or to connection box)
KIT ESD3 (combining all 6 prior products - small table mat)
Wristband tester
MECHANICAL PARTLIST

401 9965 000 22605  CD DOOR ASSY
402 9965 000 22612  LCD DISPLAY
403 9965 000 22610  JOINT RUBBER
404 9940 000 00235  MEMBRANCE PCB
406 9965 000 22600  CD DOOR SPRING LEFT
407 9965 000 22601  CD DOOR SPRING RIGHT
408 9965 000 22606  MIDDLE CAB
409 9965 000 22599  OPEN KNOB SPRING
411 9965 000 22604  SLIDE KNOB-OPEN
412 9965 000 22609  CD DAMPER
413 9965 000 22598  BATTERY SPRING(+-)
414 3103 309 05480  CD DA23ZPH
416 9965 000 22603  SLIDE KNOB-HOLD
417 9965 000 22597  BATTERY SPRING PLATE(-)
418 9965 000 22596  BATTERY SPRING PLATE(+) 
419 9965 000 22608  REMOTE LENS
421 9965 000 22607  BOTTOM CAB
422 9965 000 22611  RUBBER FOOT
423 9965 000 22602  BATTERY DOOR

Note: Only these parts mentioned in the list are normal service parts.
### ELECTRICAL PARTS LIST - COMBI BOARD

#### - MISCELLANEOUS -

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
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<td>IR RECEIVER GR-M902</td>
</tr>
<tr>
<td>SW1</td>
<td>9965 000 16227</td>
<td>SLIDE SWITCH 1P3T</td>
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<td>SW6</td>
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<td>CD DOOR SWITCH DTS-03</td>
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<td>DC JACK TC18-099-03</td>
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<td>9965 000 22614</td>
<td>STEREO PHONE JACK</td>
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<tr>
<td>VR1AB</td>
<td>9965 000 22615</td>
<td>ROTARY VOLUME</td>
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#### - IC & TRANSISTORS -

<table>
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