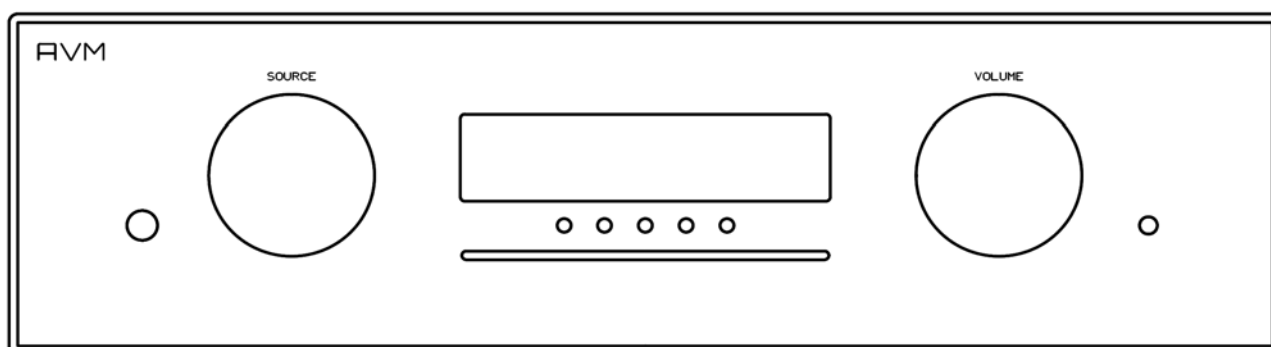


Operating instructions

EVOLUTION C 5.2



AVM
AUDIO VIDEO MANUFAKTUR

Dear customer

thank you for purchasing this AVM product. You now own a versatile, excellent sounding hifi component. Before enjoying music, please read this manual carefully. After that you will know how to use your new AVM component in the optimal way.

Please note that the range of functions of your AVM hifi component can be easily expanded by means of a software update at any time. Hence, the present operating instructions will require continued updates going forward. You you can always download the most current version from our website at www.avm.audio.

Sincerely yours,

The AVM Team

CAUTION : This unit contains a class 1 laser diode. Do not open. Invisible laser radiation can damage your eyes.

Laser diode Type : Ga-Al-As
Wavelength : 755 - 815 nm (@ 25 °C)
Output power : 0,7 mW max.



NOTE: Use only high quality cables for connection between the unit and the other components of your hifi set. We recommend cable lengths under 50 cm to avoid interference which can affect the reception of radio and TV tuners.

Declaration of conformity (for EC only)

We herewith confirm, that the unit to which this manual belongs fulfills the EC rules necessary to obtain the sign



the necessary measurements were taken with positive results.

AVM Audio Video Manufaktur GmbH, Daimlerstraße 8, D-76316 Malsch
www.avm-audio.com, info@avm-audio.com

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1 Getting started

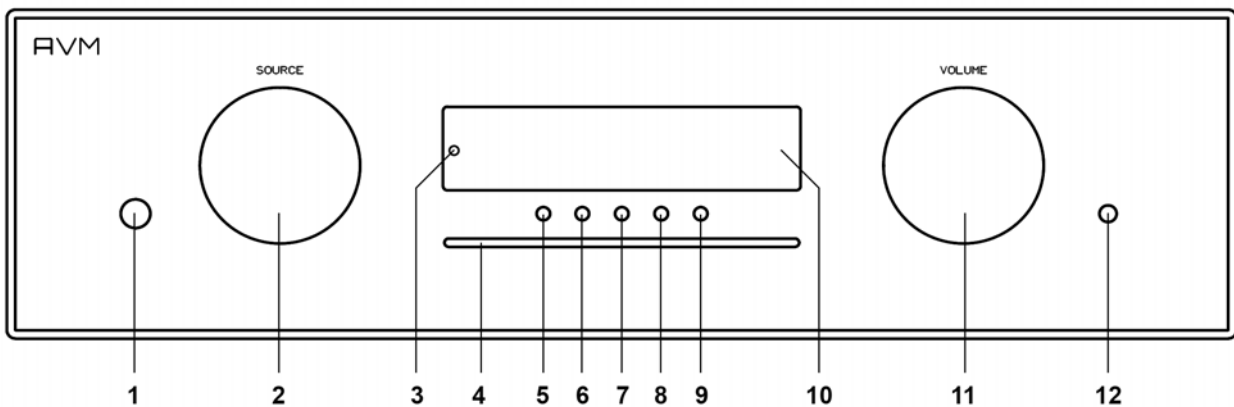
1.1 What's in the box?

- **EVOLUTION C 5.2 CD-Receiver**
- **RC 3 remote control**
- **Power cable**

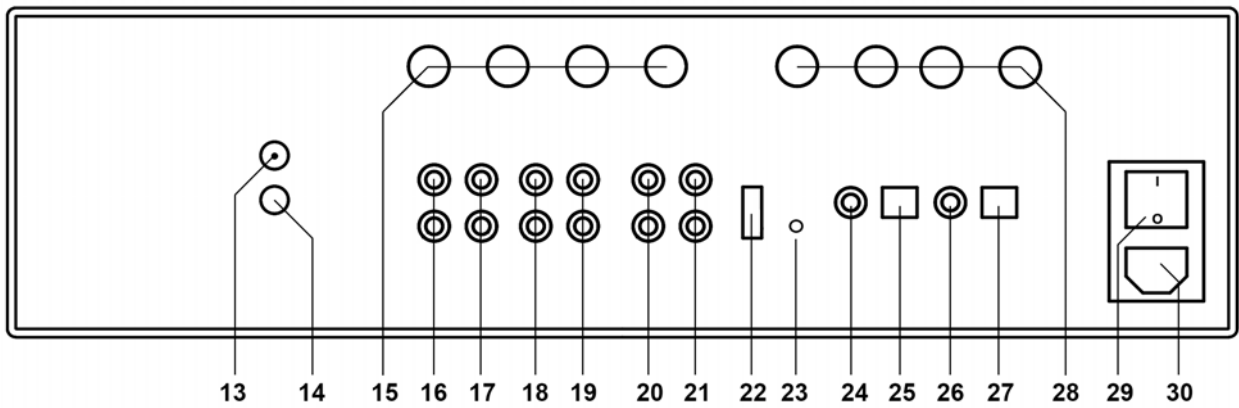
CAUTION: After unpacking, please check the scope of delivery to ensure that all the parts have been supplied and are undamaged. In case the original packing has already been opened, please contact your local dealer. Often, your dealer prepares your new device prior to delivery to adapt and change the configuration to your personal needs.

1.2 Control and operating elements

The numbers in the drawings below mark the control elements. They refer to the numbers in the text, where the operation of the unit is described.



- | | |
|--------------------------------------|--------------------------------------|
| 1. Power button (on / off) | 7. Multifunctional button (soft key) |
| 2. Source selector | 8. Multifunctional button (soft key) |
| 3. Control LED | 9. Multifunctional button (soft key) |
| 4. CD-Slot | 10. Display |
| 5. Multifunctional button (soft key) | 11. Volume knob |
| 6. Multifunctional button (soft key) | 12. Headphone output |



- | | |
|--|---|
| 13 Antenna socket | 22 Configuration port |
| 14 Ground socket for turntable chassis | 23 Connector for external infrared sensor |
| 15 Speaker terminal B | 24 Digital input coaxial |
| 16 Phono input | 25 Digital input optical |
| 17 High-level analogue input 1 | 26 Digital output coaxial |
| 18 High-level analogue input 2 | 27 Digital output optical |
| 19 High-level analogue input 3 | 28 Speaker terminal A |
| 20 Output for recorder (fixed level) | 29 Mains switch |
| 21 Preamplifier output | 30 Mains connector |

1.3 Installation and cooling

The unit can become hot depending on demanded output power / environmental temperature. Therefore it is important, that the cooling air can flow unhindered into the air inlet in the bottom and flow out through the holes in the rear panel. Direct exposure to sunlight is not recommended because this will heat up the unit.

1.4 Connection to mains

Connect the unit to the mains connector (30) by using the power cord which is (in some countries) delivered together with the unit. Make sure that mains voltage is according to the value printed on the rear panel of the amp (near mains connector).

CAUTION: Keep the unit switched off until all audio connections are made.

1.5 Connecting analogue signal sources

High-level sources

Connect the outputs of your signal sources to the inputs (17-19). The upper row is for left channel, the lower row is for right channel.

Turntable

Connect the output of your turntable with phono inputs (16) and connect the chassis ground wire to the ground connector (14). The C 5.2 phono input is suitable for MM cartridges as well as for high and medium level MC cartridges. Sensitivity can be adjusted (see 2.4.1)

1.6 Connecting digital signal sources

Inputs SPDIF/ (RCA cinch, optical)

Connect the outputs of your digital sources to the corresponding inputs of the C 5.2 (24, 25).

Digital out

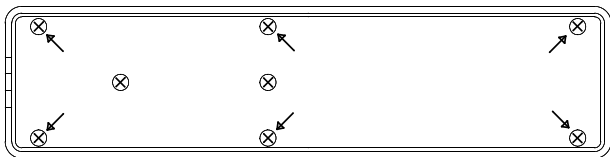
The input of a digital recorder must be connected to the digital outputs (26, 27). The signal on the digital outputs depends on the selected source (build in CD, dig in etc.).

1.7 RC 3 remote control

The included RC 3 remote control allows for easy and comprehensive control of the C 5.2. All main functions of the C 5.2 can be controlled by the RC 3: on/off, source selection, station selection, SKIP, PLAY/PAUSE, and STOP.

By pressing the PLAY button briefly a second time, the PAUSE function is activated while in CD mode. By pressing the STOP button briefly a second time, an inserted CD is ejected. By holding down one of the SKIP buttons a little longer, the device switches into seek mode (fast forward/reverse).

1.7.1 Battery charge



Bottom view

Unscrew the 6 marked screws (**CAUTION:** Do NOT unscrew the 2 unmarked screws in the middle). Take the bottom plate with the mounted pcb out. Remove the worn batteries and replace them with two new batteries (type CR2032, 3V Lithium cells). Make sure that polarity is correct (the "+" sign must be on top). Insert the bottom plate and screw it tight.

1.8 Connecting a recorder

Connect the recorder's output to one of the inputs (17-19). The inputs of the recorder must be connected to the fixed level output (20).

1.9 Connecting subwoofers

Aktiver Subwoofer ohne Frequenzweiche

If you use an active subwoofer (with built in power amplifier), simply connect it's inputs to the unit's pre out (21) and adjust the bass level at the subwoofer.

1.10 Connecting loudspeakers

The C 5.2 is equipped with two switchable speaker terminals (15 and 28) and thus allows either parallel operation with two loudspeaker pairs or operation with respectively one of the connected loudspeaker pairs. Both outputs can be activated or deactivated via the menu (see 3.1.6).

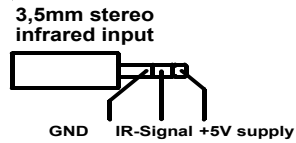
Connect your loudspeakers to the speaker terminals A (28) and B (15). Use only good speaker cables with sufficient diameter. Make sure, that the red terminals are connected to the red or "+" terminals of the speakers and the black terminals to the black or "-" terminals of the speakers.

1.11 Tuner antenna

Connect the antenna cable to the antenna socket (13).

1.12 Pin configuration of external infrared sensor

Connector for external IR-sensor (23)



2 Basic operation

2.1 First operation / self test

In case the C 5.2 was not connected to mains a self test will be performed when it is switched on by the mains switch (29) for the first time. The unit will check its configuration and that all the installed components work properly. The procedure is shown in the display. Afterwards the unit will switch to stand-by.

2.2 Switching on / stand-by

Using the button power (1) you can switch between on (operate) and stand-by. In the on state the display (10) lights up and the LED (3) is off. In stand-by mode the display is off and the LED is on to indicate that the unit is still connected to mains.

CAUTION: When switched to stand-by the unit is still connected to the mains. In case of a thunderstorm or if you leave the house for a longer time we recommend that you switch the amplifier off by using the mains switch (29) or pull the mains plug.

2.3 Selecting the signal source

The signal source can be selected by turning the source selector (2) until the desired source appears on the display.

CAUTION: If you switch to another source while playing a CD, the drive will stop first. This may take a few seconds. If you activate a digital input that has no valid signal, "NO DIG SIGNAL" is indicated in the display (10). In this case the source can not be changed.

2.4 Volume setting

Use the rotary encoder (11) to set the desired volume. Depending on rotating speed the volume increases / decreases in 0.5 dB steps (slow) or 2 dB steps (fast). The actual setting is shown in the display (10). If the volume is changed using the RC 3 remote control, the level always increases / decreases in 0.5 dB steps.

2.4.1 Setting of input sensitivity

The level of signal sources differs often by several dBs. You recognize a step in volume, when switching between two different inputs. With the sensitivity setting menu you can avoid this. The sensitivity of each input can be adjusted between - 9.5 dB and + 10.0 dB.

Select any input (except for tuner or CD) and chose a convenient volume level. Now press the MENU button (7) under the display for more than 2 seconds. The button is now marked "EXIT LVL". Pressing this button again will exit the level setting mode and bring the unit back to normal operating mode.

While level setting is active the display shows the actual level instead of the volume. Level can be set using the volume knob (11). Now you can switch between the sources (also CD and tuner) and adjust the levels. When this is done press the "EXIT LVL" knob and bring the unit back to normal operating mode. All level settings are now stored.

NOTE: While the level setting mode is active the unit will not respond to any RC 3 remote control command.

2.5 Tuner

The basic functions of the tuner can be accessed by the buttons right under the display (5 – 9). More sophisticated functions and all web radio features are available via the menu and the included RC 3 remote control.

2.5.1 Tuning

Depending on the selected mode (manual / auto) the far right buttons (8, 9) under the display (10) are named < **AUT** > or < **MAN** >. In AUT mode a tip on one of the buttons lets the tuner automatically seek the next upper or lower station. In MAN mode the frequency changes in 50 kHz-steps as long as the button is pressed. In this case the tuning indicator shown in the display (10) helps you to tune correctly to the desired station. If tuning is correct it will show "locked".

NOTE: To optimize the sound quality you can use the functions **mode**, **sensitivity** and **bandwidth**, which are described later on in chapter 3.

2.5.2 Station and memory

Storing a new station

If you want to store a certain station in the memory, press the button MENU (7) under the display (10) for more than 2 seconds. The display will propose the next free memory position for storage (for example: if 5 stations are already stored, position 6 will be proposed). Using the "MOVE" buttons (5, 6) you can change the position.

Modifying, moving or deleting an existing station

If the tuner is set to an already stored station you can change its settings, move it to a different position or delete it. If you, want first change settings (mono/stereo, bandwidth or other). Then press the button MENU (7) under the display (10) for more than 2 seconds. If you then press "STORE" the station will be stored a new at the old position with the changed settings. Using the buttons "MOVE" allows you to change the position of this station before storing. "DELETE" will erase the station out of the memory. "EXIT" will bring the unit back to normal operating mode without changing the memory.

NOTE: The station memory allows you to store up to 63 stations. It stores not only their frequency, but also the individual setting (mono/stereo, bandwidth or other).

2.5.3 Selecting a station out of the memory

The buttons < **STAT** > (5, 6) select the stations stored in the memory. A short tip switches to the next / previous station. Holding the button down scans automatically up / down. The number of the actual station is shown in the display ("STAT xx").

2.6 CD-Player

The basic functions of the CD player can be accessed by the buttons right under the display (5 – 9). For more sophisticated functions see chapter 3.

2.6.1 Insert / eject

Insert a CD

The C 5.2 has a slot-in CD drive. Insert the CD (cover side up) and push slightly. The drive will now automatically draw the disc inside. After that the player reads the TOC and shows it on the display. Furthest left is the number of the actual track followed by the total number of tracks on the CD (for example "1/17"). The middle of the display shows the total playing time of the CD.

NOTE: If there is still a CD inside or the unit is in stand by, the slot will be blocked. If the inserted disc is not readable (DVD, data-CD) the display will show "no playable disc".

Eject CD

Press the button (8) under the display (10). Then the disc will be ejected.

Auto-CD function

If CD is not selected as source the unit will automatically change to CD from any other input after you have inserted a CD.

2.6.2 PLAY, PAUSE, STOP

While the player is stopped the button |<< or >>| (5, 6) select the title. A short tap switches to the next / previous title. Holding the button down scans automatically up / down. The number of the actual title is shown in the display.

Pressing PLAY (9) starts the CD player. While playing, the button changes its function to PAUSE.

While the player is playing, the button (8) under the display shows the STOP symbol. When the player is stopped this button changes its function to the EJECT symbol.

2.6.3 SEARCH / SKIP

While the player is stopped, the buttons |<< oder >>| (5, 6) select the title. A short tap switches to the next / previous title. Holding the button down scans automatically up / down. The number of the actual title is shown in the display.

While the player is playing a short tap on the buttons 5 and 6 selects the previous / next title. Holding down the buttons starts the rewind / fast forward function. Rewind / fast forward stops automatically when the begin / end of the actual title is reached.

2.6.4 Repeat

Choose a repeat mode by pressing the MENU button (7): "ONE" repeats the actual title). "ALL" repeats the whole CD or a programmed sequence.

2.6.5 Random

To activate the random mode, press and hold the MENU button (7) and choose the random mode by pressing the RANDOM button (8).

2.6.6 Programming an individual playlist

If a disc is inside the player you can program your individual playing sequence as follows: Hold the button **MENU** (7) down for more than 2 seconds to enter the playlist menu.

The display shows on the left side the actual title (TRCK), below the playing time of this title (TIME). Pressing the buttons 6 and 6 allows you to select a title.

Pressing **ADD** (7) adds the selected title to the playlist. The display shows on the right side the number of programmed titles (PGM-QT"), below the playing time of the programmed list (P-TIME).

NOTE: The program function is only available while the player is stopped. The maximum number of programmed tracks is 99, the maximum program duration is 99 minutes. In case the level setting is active, you must exit first.

Example

The CD inside the player contains 15 titles. You want to play only titles 7, 3 and 8.

Press MENU (7) for more than 2 seconds.

- Select title 7 using the SELECT buttons 5 and 6. Display shows "TRCK 7/15".
- Now add this track (pressing **ADD** (7)) to the playlist.
- Select title 3 using the SELECT buttons 5 and 6. Display shows "TRCK 3/15".
- Now add this track (pressing **ADD** (7)) to the playlist.
- Select title 8 using the SELECT buttons 5 and 6. Display shows "TRCK 8/15".
- Now add this track (pressing **ADD** (7)) to the playlist.
- Now press **STORE** (8) to finish the programming and store the playlist

Deleting an existing playlist

Press **MENU** (7) for more than 2 seconds. Then press **DEL PGM** (9) and the playlist is deleted. The playlist will also be deleted automatically as soon as a CD is ejected or the unit is switched off (stand-by).

3 Advanced Settings

The C 5.2 offers a lot of custom specific settings in its menu system. To enter the menu just tap on the button MENU (7). The button now changes to EXIT. A second tap on this button leads you to the normal operating mode. When the menu system is active you can select the desired function using the buttons < **ITEM** > (5, 6). The setting is done using the buttons < **VALUE** > (8, 9).

Depending on the actual source the menu system offers a range of settings described in the following.

3.1 Global settings

3.1.1 Tone control

Set tone control to "bypass" (= linear) or "active". In case the tone control is activated "TONE ON" is shown in the display (10), otherwise "LINEAR".

You can choose if you want to change bass and treble settings simultaneously for all inputs ("global") or especially for the actual input ("individual").

The loudness function depends on speakers and properties of the listening room and is therefore always "global".

NOTE: In case tone control is set to "bypass" the menu will skip the bass, treble, and loudness settings.

3.1.2 Bass

Set a global or individual bass level between – 5 dB and + 9 dB.

3.1.3 Treble

Set a global or individual treble level between – 7 dB and + 7 dB.

3.1.4 Loudness (Contour)

If you listen to music at low levels, you often recognize that bass and treble reproduction are weak. This is because the human ear is not sensitive to bass and treble at low sound levels. To compensate this you can use the parametric loudness function of the C 5.2. This function will increase bass and treble levels when you decrease the volume. When the volume is increased the frequency response will be more and more flat and remain linear at high volume levels. In order to obtain best results you have to proceed in the following way:

Set the amplifier to a moderate volume level. Using the **VALUE** buttons (8, 9) choose in the loudness menu a curve ("of" and 1 to 9) which gives best sound impression and exit the menu (button **EXIT** (7)).

NOTE: The loudness function selects automatically the correct curve depending on actual volume setting. So if you change volume a different curve than previously selected may be shown in the loudness menu. This is not a malfunction.

3.1.5 Balance

Set the balance between right and left channel for optimal stereo image.

3.1.6 Poweramp

In order to enable or disable both switchable speaker terminals (15, 28), you can set the poweramp ON or OFF. This can be useful if you have connected a headphone amp or a separate power amplifier to the pre out (21). The chosen setting is saved permanently and can be changed again by new call of the menu.

3.2 Tuner settings

3.2.1 RDS display

Choose if station NAME, RDS-TEXT or FREQUENCY is displayed.

3.2.2 Scan mode

Set tuning mode between "auto" or "manual" (see also 2.5.1).

3.2.3 2 channel mode

Set tuner to mono or stereo to obtain best sound.

NOTE: Depending on actual setting the threshold for auto tuning will change (sensitive in MONO, less sensitive in STEREO).

3.2.4 Deemphasis

Depending on the country in which you will be using your device, setting a corresponding deemphasis value helps to improve the sound quality by optimizing the signal-to-noise ratio and transmission behavior of your FM tuner. Please choose the option "EUR, AUS, JPN", unless the unit is being used in the United States of America (USA).

3.3 Personal setup

The personal setup offers you a range of settings to individualize the device according to your personal needs. To enter the **personal setup** menu, please switch off your device on the rear of the unit at the mains switch (29). Keep the most right key under the display pressed (9) while you switch on the unit again (29). As soon as the display shows the **personal setup** menu you can release the multifunctional button (9).

When the personal setup is active you can select the desired function using the buttons < **ITEM** >. The button **SELECT** activates the function. The setting is done using the buttons < **VALUE4** >. **BACK** leads you back to other settings. **EXIT** exits the personal setup and stores the settings.

3.3.1 Display brightness

Sets display brightness 25% to 100%.

NOTE: The setting 100% can lead to "burn in" effects on the display if the unit is operated in this setting for a very long time. So please switch the unit to stand by, if not in use.

3.3.2 Bass & treble control

Choose if you want to change bass and treble settings simultaneously for all inputs ("global") or especially for the actual input ("individual").

3.3.3 Skip unused inputs

Deactivate unused inputs ("SKIP"). The unit will then skip these inputs when the source selector (2) is pressed or if you select the inputs via the RC 3 remote control.

3.3.4 Define input names

You can individually set the names (max. 8 characters) of the different sources shown in the display (10). Proceed as follows:

Press **SELECT**. The display shows now on the left side the old name, on the right side the new name. The character to change is marked by an underscore. The keys < **ITEM** > (5, 6) select the input, the keys < **POS** > (8, 9) select the position of the character to change. The marked character can be set using the volume knob (11). When you are ready, simply press **BACK** (7). and the new names will be stored.

3.3.5 Gain fix / variable

In a surround system the channel balance, tone setting and bass management are done by the decoder. This setting must not be altered by another component because the channel balance would be incorrect. For this application the C 5.2 offers the fixed gain function (only for inputs 1-3).

Set the input where the main channels of the surround system are connected to fixed gain. When this input is selected, tone controls are bypassed, balance is set to neutral position and the gain is on a fixed level independently of the volume setting on the other inputs.

3.3.6 FM auto store

This function is useful when storing a large quantity of stations from cable. Please note that the stations are stored including the actual tuner setting. For cable we recommend: RDS-display = name, scanmode = auto, 2-ch mode = stereo, bandwidth = narrow, sensitivity = local.

Once the tuner parameters are set in the desired way enter the personal setup and select "FM auto store". Then press the button START (5). While the auto store function is in progress all stations are played audibly for half a second. When the function is terminated the display shows for 2 seconds the number of stations found. Then the unit comes back to normal tuner operating mode.

If desired you can now shift certain stations to different positions, change the settings and store back or delete unwanted stations.

3.3.7 Autoplay

When AUTOPLAY is ON, the CD player will start playing automatically every time a new CD is inserted. If AUTOPLAY is OFF, the player will read the TOC of the inserted disc and then go to STOP mode.

3.4 Reset

This function cancels certain or all settings and makes the unit return to default settings.

To enter the reset menu, please switch off your device on the rear of the unit at the mains switch (29). Keep the middle key under the display pressed (7) while you switch on the unit again (29). As soon as the display shows the reset menu you can release the multifunctional button (7).

Select if you want to clear the station memory (**STAT**), the input names (**NAME**) or reset the unit completely (**ALL**).

CANCEL will bring the unit back to normal operating mode without resetting any item.

4 Cleaning

Use a soft cloth and normal glass cleansing fluid.

CAUTION: Make sure that no fluid comes into the unit. Do not use scouring cleaners. They may damage the surface.

5 If something doesn't work...

Some putative defects are often caused by mistakes in operation. Sometimes other units connected to the amplifier can cause problems. Therefore please read the following tips before you consult your dealer or us.

1. Amplifier is muted

- a) Mute function is active, press button MUTE on remote control or increase volume using the rotary encoder (11).
- b) Inadvertent switching to standby by remote control. Press power button (1). If the LED indicator and display do not light up a fuse can be blown due to overvoltage (thunderstorm). Please contact your dealer.

2. Amplifier switches off during normal operation

This can happen if the temperature inside the unit becomes too high. In this case the amplifier switches off and the display shows 'overheat'. Switch the unit off and let it cool down for five minutes.

3. Hum

- a) Hum while playing records: Make sure that the chassis of your record player is properly grounded.

4. Remote control doesn't work

- a) Charge the included lithium-ion battery of your RC 3 or RC 8 remote control (see 1.7.1).
- b) Point with the remote control transmitter directly to the unit.

5. The display shows „now disc“ although A CD is inserted

- a) Please make sure the CD has not been damaged and is inserted with the correct side facing up
- b) Please clean your CD with a soft cleaning cloth

6. No RDS display

- a) The receive signal is too weak, hence data can't be decoded and aren't displayed.
- b) Certain radio stations do not support and broadcast RDS.

6 Conditions of warranty (EC only)

If despite expectations a defect occurs that cannot be repaired by yourself or your dealer, we undertake the repair of your unit free of charge for up to three years from date of purchase. The warranty covers the costs of material and working time, transport costs are to be borne by the owner.

Provisions for this warranty are:

- The unit must have been purchased from an authorised dealer. Equipment from other sources will not be repaired, not even at charge.
- The warranty registration card, together with a copy of the bill of sale, must be received by us within four weeks of the date of purchase.
- The defect must not have been caused by improper handling or misuse.
- Return the unit to us only in its original packing. If this is not possible we are entitled to refuse acceptance. We will not assume responsibility for transport damage under any circumstances.
- A short description of the defect is to be included with the returned unit.
- In cases of doubt we reserve the right to request a copy of the bill of sale.
- We also reserve the right to levy a handling charge for items returned without good or valid reason, or if the unit proves to be not defective.

NOTE: If you are returning the unit from a country other than Germany you should ensure that correct export documents are obtained. We cannot accept any charges for costs arising from improper or incomplete export documentation.

If you have purchased your unit from a dealer outside Germany please refer to him or the relevant importing firm to process the warrant

7 Technical Data

7.1 Amplifier

Sensitivity (25 W/4 Ohm)	12.5 mV to 125 mV (adjustable)
Sensitivity Phono (25 W/4 Ohm)	40 μ V to 400 μ V (adjustable)
Input impedance	6.8 kOhms
Input impedance PHONO	47 kOhms / 100 pF
S/N	96 dB(A)
S/N PHONO	83 dB(A)
THD (25 W/4 Ohm)	< 0,1 %
Frequency response (4 Ohm)	< 5 Hz - > 50 kHz
Damping factor (8 Ohm)	>400
Output power	> 2 x 220 Watt (8 Ω) / 2 x 330 Watt (4 Ω)

7.2 Tuner

Frequency range	87,5 MHz – 108,0 MHz
Tuning step	50 kHz
Sensitivity mono / stereo	50 Ω
Empfindlichkeit mono / stereo	1,5 μ V / 50 μ V
S/N ratio mono / stereo	73 dB(A) / 68 dB(A)
THD+N mono / stereo	0,1% / 0,3%

7.3 CD-Player / D/A Converter

Formats	CD Audio, CDR (according to red book standard)
Upsampling	192 kHz / 24 Bit
Frequency response CD	<20 Hz – 20 kHz
Frequency response USB	<20 Hz – 24 kHz
Frequency response SPDIF	<20 Hz – 90 kHz
Deemphasis	automatically
Input Dig in opt	SPDIF, linear PCM 33 kHz – 96 kHz / 16 Bit – 24 Bit
Input Dig in coax	SPDIF, linear PCM 33 kHz – 192 kHz / 16 Bit – 24 Bit
USB Input	up to 48 kHz / 16 bits
Dig out opt/coax (S/PDIF/TOSLINK)	SPDIF 44,1 kHz / 16 Bit (CD-Player) SPDIF, or input format (Dig in opt / coax/USB)
Input impedance dig in coax	75 Ω
Input level dig in coax	according to IEC 908
Output impedance dig out coax	75 Ω
Output level dig out coax	according to IEC 908

7.4 Other

Supply voltage	230 Volt / 50 Hz / 450 VA (stand-by <1 VA)
Dimensions (W x H x D)	430 mm x 130 mm x 370 mm
Weight	12 kg

Changes reserved without notice.