OVATION PH 8.3

Operating instructions

AVM

AUDIOPHILE MEISTERSTÜCKE
SEIT 1986

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

$$C \epsilon$$

the necessary measurements were taken with positive results.

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1. Getting started

1.1 What's in the box?

- PH 8.3 Phono preamplifier
- Power cord
- RC 3 PHONO remote control

1.2 Packaging instructions

The PH 8.3 comes in a rugged and sturdy OVATION flight case. After unpacking, please check the scope of delivery to ensure that all 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.

i NOTE

The bottom of the flight case is not symmetrical: The distances between the holes for the feet and the outer edges of the stand are different. If you need to put the unit into the flight case again, please make sure the feet are positioned correctly. If in doubt, measure the distances of the holes from the inner edges of the base.

1.3 Control and operating elements

The numbers in the drawings below mark the control ele-
ments. They refer to the numbers in the text, where the opera-
tion of the unit is described.

Abb. 1. Front

1. POWER button (on/off)
2. INPUT selection keys
3. MODE selection key
4. EQ selection keys
5. Standby LED
6. Display
7. LOAD impedance / capacity selection keys
8. SUB Subsonic selection key
9. GAIN selection keys
10. MUTE key

Abb. 2. Rear panel
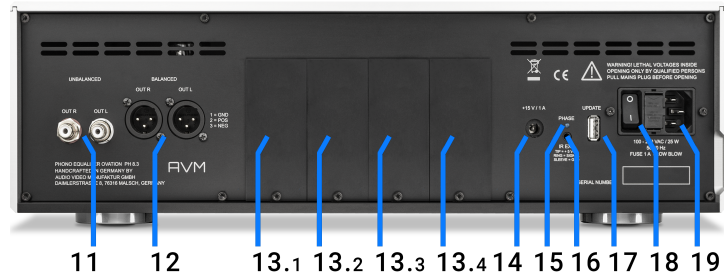
11. Unbalanced audio outputs RCA
12. Balanced audio outputs XLR
13. Slot 1-4
14. Supply socket for AVM turntables (15V)
15. Phase Indicator LED
16. Input for external infrared sensor (IR EXT)
17. Configuration port (firmware update)
18. Mains switch
19. Mains connector

1.3.1 Pin Assignments

Abb. 3. Assignment of XLR connectors

XLR Input   XLR Output
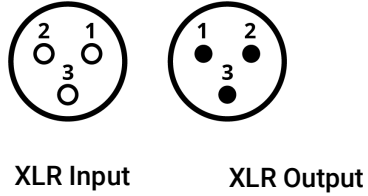
1) Ground (GND)
2) POS (+)
3) NEG (-)

Abb. 4. Pin assignment of the 3.5mm stereo jack input for external infrared receivers (16)

c   d   e

c) Ground (GND)
d) IR signal
e) +5V
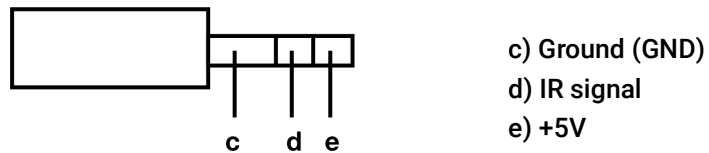
Abb. 5. Pin assignment of the supply socket for AVM turntables (14)
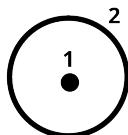
1) 15V
2) Ground (GND)

1.4 Installation of input cards

ⓘ CAUTION

Keep the unit switched off until all audio connections are made. Please make sure the mains plug is removed before you open the unit. Input cards may never be installed or removed while the unit is powered on. In case of any doubt, please consult your local dealer to assist you with the assembly of input cards.

The PH 8.3 is equipped with a total of four slots on its rear side and can be fitted with optionally available input cards (slot-in modules). These slots are counted from the left side (see Figure 2, "Rear panel," on page 3). Existing input cards can be arranged in any order. The dimensions of the different input cards are identical (width of the cover plate, position of the connectors). Unused slots are covered with a dummy plate supplied.

Inserting a card: Position the card in a way that the connector for the left channel (L) is at the top. Insert the input card into the free space. Make sure the plug of the board meets the corresponding socket inside the device. Now press the card firmly. The backplane of the card must be in the same plane as other backplanes. After attaching the two fixing screws, the PH 8.3 is ready for operation.

Removing a card: To remove a card or blind plate, first unscrew both screws completely. Now the blind plate can be removed or a plug-in card can be pulled out.

1.5 Software update

In case new input cards for the PH 8.3 are offered, the internal operating software (firmware) may need an update. The corresponding software is stored on a small data carrier, a so-called EEPROM dongle. If necessary, this will be supplied with the purchase of a new input card.

To perform an update, switch off the device with the mains switch (18) and insert the EEPROM dongle into the configuration port (17). The contacts of the EEPROM dongle must be turned away from the mains plug (19). Incorrect insertion does not cause any damage, but prevents launching the update process.

Now switch on the unit with the mains switch (18). The display (6) shows the number of the new firmware version at the bottom left, the number of the existing version is shown on the right. To update, press the POWER button (1), if you want to cancel the update, press the MUTE button (10).

The update takes about one minute. After successful completion you will be asked to switch off the mains voltage (mains switch 18) and remove the EEPROM Dongle. The device can now be switched on again and is ready for operation.

i CAUTION

Do not switch off the PH8.3 during the update process. This may lead to unstable operating conditions.

If the update process was interrupted, due to a power failure for example, please proceed as follows: Leave the EEPROM dongle inserted. Switch off the mains voltage with the mains switch (18) on the rear panel for about 10 seconds and then switch it on again. The software is now installed a second time. During this process (about one minute) the display (6) remains dark and the standby LED (5) flashes. When the process is complete, you will be asked to switch off the mains voltage (mains switch 18) and remove the EEPROM Dongle. The unit can then be switched on again and is ready for operation.

1.6 Installation and cooling

The unit may become hot depending on demanded output power or 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.

The cooling openings in the base and rear ensure sufficient heat dissipation when the unit is freely positioned. The PH 8.3 may be easily installed in a rack as long as the shelf above the unit is at least 5 cm away from the cover of the device. If

the unit is placed in a cabinet, please make sure the air around the unit can circulate freely. We also recommend you choose a location that is protected from direct sunlight so you can read the display easily and the effect of the remote control is not impaired by extremely bright sunlight or direct illumination with strong halogen lamps. Nort least, the PH 8.3 should neither be placed in the direct vicinity of a heating system nor in a particularly damp environment.

1.7 Connection to mains

Connect the supplied power cord to the mains connector (27) and a wall outlet.

i NOTE

Keep the unit switched off until all audio connections are made. If the unit is still cold after unpacking or from transport, leave it in your listening room for about one hour without mains power so that it can adjust to the room temperature.

1.8 Mains phase indicator

Phono amplifiers are by nature very sensitive to mains hum. Therefore, it is very important to connect the mains phase correctly. The PH 8.3 is equipped with a Phase Indicator LED (15) on the rear panel for this purpose.

To perform a phase check, switch on the unit with the POWER button (1) and take a look at the Phase Indicator LED (15).

The Phase Indicator LED only lights up if the mains connector is incorrectly connected and remains dark if the polarity is correct. Phase Indication functionality has deliberately been designed in this way, as the control electronics of the phase LED (15) produces slight interference when the LED is switched on. This is not the case when the mains polarity is correct (and the LED is switched off).

1.9 Connection of a turntable

The PH 8.3 offers connections of up to four turntables with MM or MC cartridge systems via optionally available input cards (slot-in modules). To find out whether your pick-up system works according to the MM or MC principle, please refer to the corresponding documentation of your pick-up system.

Depending on the design principle of the cartridge system used, select a suitable PH 8.3 input board with an unbalanced RCA input or balanced XLR input of the input board. Now connect the turntable to the sockets of the input card using an appropriate RCA or XLR cable. Connect the ground cable coming from the record player to the ground contact (knurled nut below the input connectors) of the corresponding input card.

1.10 Connection to a (pre)amplifier

Connect the outputs of the PH 8.3 (11, 12) to an analog high level input of your (pre)amplifier using suitable cables. Make sure the XLR connection has the correct pin assignment (see Figure 1.3.1, "Pin Assignments," on page 4) which is also printed on the rear panel of the device.

i CAUTION

Do not use any existing phono inputs on your (pre)amplifier. This would lead to input distortion and clipping.

1.11 AVM turntable supply

The PH 8.3 provides a perfectly conditioned power supply for joint operation with an AVM turntable of the ROTATION series. This special power supply which is both completely independent from the rest of the power supply unit of the PH 8.3 and has an elaborately filtered output, replaces the standard power supply unit supplied with your AVM turntable. In this case, use the supply socket for AVM turntables (15) on the rear panel. Your specialist dealer will be pleased to supply you with an appropriate cable.

1.11.1 External infrared input

If you have installed your PH 8.3 in such a way that the supplied RC 3 PHONO infrared remote control has no visual contact with the device, please connect an external receiver to the input for an external infrared sensor IR EXT (16).

2. Basic operation

2.1 First operation / self test

When the unit is switched on via the mains switch (18), a so-called self-test is performed. The device checks the configuration and functionality of the installed components. The current status of the hardware test is shown on the display (6). Upon successful completion of the hardware test, the device switches to standby mode. This process may take a few seconds.

2.2 Switching on / standby

Using the power button (1) you can switch between on (operate) and standby. When switched on, the display (6) lights up and the LED (3) is switched off. In standby mode the display is switched off and the LED is on to indicate that the unit is still connected to mains.

Tube warmup

Due to the warm-up phase of the integrated tube stage, the switch-on process takes about 30 additional seconds. Please wait until the entire reading on the display **waiting for tube warmup** changes completely from lower to upper case. The device is now ready for use.

i NOTE

In standby mode, the device is not completely disconnected from the mains. To disconnect completely, use the mains switch (18) on the back of the unit or unplug the power cord from the mains connector (19).

2.3 Input selection

Select the desired input card with the INPUT selection keys (2). The currently selected input card is indicated on the display (6).

2.4 Adjustment of the cartridge system

For optimal sound reproduction, the adjustment of the selected cartridge system is of great importance. The PH 8.3 offers a wide range of adjustment options for this purpose.

2.4.1 Selection of a suitable input card

Use an MM or MC input card depending on the installed cartridge system. Please refer to the relevant documentation of your pick-up system, to find out whether your pick-up system works according to the MM or MC principle.

There are two types of inputs for MC systems: The most common RCA connector or the balanced XLR connector found on some turntables. Both types of input cards are available for the PH 8.3.

For MM systems, only one input board with an RCA connector is available.

2.4.2 Setting the terminating impedance/capacity

In order to achieve optimum sound quality, each cartridge system must be operated with the appropriate terminating impedance or capacity. This is particularly important for MM systems, as the terminating capacity generates a high-frequency resonance that extends the frequency response. If the capacity is too low, the sound of the pick-up system may lack brilliance. If the capacity is too high, the resonance shifts too far down and thus causes strong peaks in the upper frequency range, resulting in harsh and unpleasant sound reproduction.

We recommend a consultation of the operating instructions of your cartridge system before adjusting the respective impedance or capacity on the PH 8.3. In the opraring instructions you will usually find the optimum termination impedance or capacity. Otherwise you may use a general rule: For MM systems approx. 200 pF capacity, for MC systems 100 Ohm terminating impedance.

Depending on the selected card type (MM or MC), the impedance or capacity may be adjusted in six steps. The PH 8.3 stores the last set value for each individual card and recalls it when the corresponding card is selected again at a later time.

You may adjust the final impedance/capacity (preferably while a record is playing) with the LOAD impedance/capacity keys on the unit (7) or via the RC 3 PHONO remote control.

i NOTE

Please note that the termination capacity of MM cartridges is increased by the capacity of the cable by about 100 pF. We recommend to select a setting on the PH 8.3 that is about 100 pF below the manufacturer's recommended capacity.

It is worth experimenting to find out the setting for optimum sound quality. Wrong settings will not harm the cartridge or the PH 8.3.

2.4.3 Gain adjustment

The output voltage of cartridges is not standardized. Therefore, there are very "loud" and very "quiet" models. However, this has nothing to do with their sound quality. In order to get the best out of each cartridge, the gain of the PH 8.3 can be set individually for each input in 5 dB steps. It is recommended to start with "0dB" and increase the gain until you are satisfied with the overall sound.

i NOTE

If the gain is too high, the input may be overloaded and distorted. In this case reduce the gain of the PH 8.3 by one or two steps.

2.5 Selection of an equalization curve

There are two basic problems in the production of records (also called "pressing"): Since most of the energy is available in the bass range of the music signal, very large deflections would have to be cut into the vinyl. However, the large groove spacing required for this would reduce the playing time of the record to only a few minutes. Conversely, the signals in the high frequency range are very weak and would be lost in groove noise with "linear" cutting. Therefore, the music signal is pre-equalized during the production process: In the bass range the level is lowered, in the high frequency range the level is raised. Since this is a linear distortion that does not produce any harmonics, this pre-equalization process can be compensated when the record is played by applying an inverted equalization curve to the actual pressing curve.

Before the so-called RIAA equalization became standard in the mid 1950s, recording studios often used different frequency response curves when cutting their records. When such records are played back via an RIAA equalizer, the sound quality suffers. The PH 8.3 therefore offers a selection of the six most common equalization curves using the EQ selection keys (4). Often the labels or record sleeves of older records show the pre-equalization used at the time. This can be used to set the correct equalization curve on the PH 8.3.

If the record sleeves or labels do not provide any information, trial and error may help. For newer recordings (from the 60's onwards) the RIAA setting is usually applied.

ℹ NOTE

Detailed information on the time constants / cut-off frequencies can be found further down in "Specifications" on page 28**.**

2.6 Subsonic Filter

Turntables often emit very low frequency noise, which has nothing to do with the played back music signal, but is caused by wavy records or turntables that are sensitive to footfall sound. To suppress such noises, the PH 8.3 is provided with a highly effective subsonic filter which suppresses all signals below 30 Hz with a steep slope. For activation / deactivation use the Subsonic selection key SUB (8). The PH 8.3 stores the subsonic filter setting for each individual card and recalls it when the corresponding card is selected at a later time.

2.6.1 Mute Function

To temporarily mute the audio output of the PH 8.3, please press the MUTE button (10). Pressing the button again turns the MUTE function off.

2.6.2 Special playback settings

With the MODE selection key (3) the PH 8.3 may be set to mono mode ("MONO" shown in the display) or, by pressing the button several times, to phase rotation by 180° in STEREO (display: "stereo-") or MONO ("mono-").

For playback of older mono records the setting of the PH 8.3 to MONO can be very helpful, as the groove noise (present in stereo) is suppressed to a certain degree. If, in addition, a record has been recorded out of phase, the PH 8.3 can easily correct this: In this case, choose one of the following settings: "stereo-" or "mono".

3. Advanced Settings

3.1 Personal Setup

In addition to its basic functions, the PH 8.3 provides a wide range of options for individual adaptation to your personal requirements. To enter the Personal Setup menu, switch on the unit with the mains switch (18) and wait until it automatically switches to standby mode. Now press and hold the operating MODE selection key (3) and switch on the PH 8.3 with the POWER button on the front (1). The display (6) now shows the Personal Setup menu. Individual menu items can be selected with both EQ selection keys (4), available options can be adjusted to your requirements with the selection LOAD selection keys (9). If you wish to exit the setup, press the MUTE key (10). The selected settings are now permanently saved.

3.1.1 Set display brightness

Adjusts the display brightness from 25% (dark) to 50%, 75% to 100% (very bright).

ⓘ NOTE

The brightness setting 100% can lead to uneven brightness of individual segments of the display during long periods of operation due to so-called burn-in effects. Therefore, do not leave the device with the 100% setting switched on for too long. Switch it to standby mode when not in use (e.g. overnight).

3.1.2 Set auto-standby

The PH 8.3 provides an automatic standby function to save energy. If no signal is fed into any input for a period of 20 minutes or no other function is used, the unit automatically switches to standby mode. Of course, the unit can be switched on again at any time by pressing the POWER key (1). Depending on the selected setting "ON" or "OFF", the automatic switch-off is activated or deactivated.

NOTE
Please note that deactivating the automatic standby function leads to increased power consumption, as the device remains in operation even if no signal is fed into any input for a longer period of time or no other function is used.

3.1.3 Renaming inputs

This function allows you to change the default naming of the individual inputs. There are a total of eight letters (upper and lower case), numbers and some special characters available for each name.

Select the position of the character to be changed with the INPUT selection keys (2) and change the character with the LOAD selection keys (7). Use the EQ selection keys (4) to move to the next input or to the previous setup point.

3.2 Reset (Factory settings)

The RESET option allows you to reset the device to the original delivery state and thus to all factory settings. The following settings are reset:

- Display brightness: 100%

- Operating mode: STEREO

- EQ curve: RIAA

- Impedance: 1 kOhm (MC) / 100 pF (MM)

- Gain: 0 dB

- Input name: STANDARD NAME

- Auto Standby: ON

To perform a RESET, switch off the unit with the mains switch (18) on the back. Now press and hold the EQ> (4) and <LOAD key (7) at the same time and turn the unit on again with the mains switch (18). Now press the POWER button (1) to perform the RESET or MUTE (10) to cancel the process. Wait until the unit switches to standby mode. Your PH 8.3 is now reset to its factory settings.

3.3 Info

This function informs you about the serial number and the software status of the PH 8.3. First, switch off the instrument using the mains switch (18). Now press and hold the POWER button (1) while you switch on the unit with the mains switch (18).

The info display is shown as long as you hold down the POWER (1) button. After releasing it, the unit switches back to standby mode.

3.4 Demo Mode

The PH 8.3 provies a so-called Demo Mode. This mode is primarily intended for specialist dealers to show the respective features of the device as a continous 'slide show' on the display (6) during a presentation at a retail store or an exhibition.

To activate the Demo Mode, switch off the device using the mains switch (18). Now press and hold the MUTE button (10) while you switch on the unit again with the mains switch (18).

The demo mode is deactivated by switching off the mains voltage via the mains switch (18). As soon as you switch on the unit again, it will return to normal operating mode.

3.5 RC 3 PHONO remote control

Abb. 4. Control elements of the RC 3 PHONO
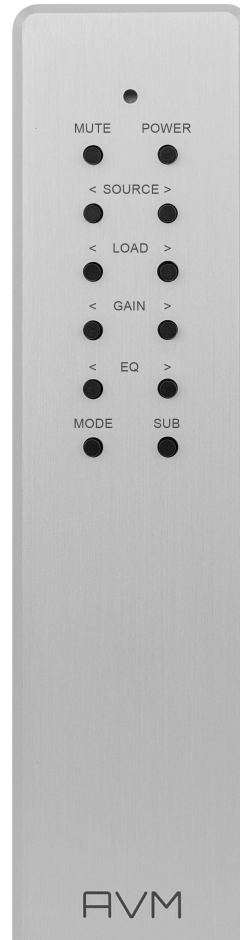
The PH 8.3 is supplied with the RC 3 PHONO remote control. The keys on the RC 3 PHONO remote control correspond to the keys on the front panel of the unit and have the same functionality.

i NOTE

Always point the RC 3 PHONO remote control directly at the front of the PH 8.3.

3.0.1 Replacing batteries

Abb. 4. Bottom of the RC 3 PHONO remote control
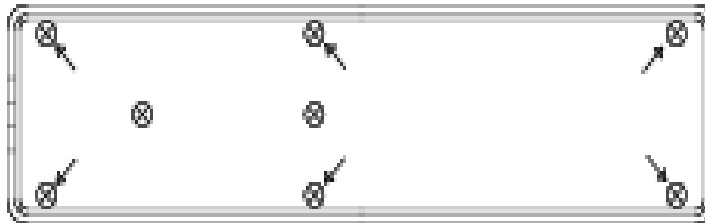
CAUTION
Do not remove the two middle screws without arrow markings for battery replacement!

If the range of the remote control decreases significantly, new batteries must be installed. Remove the six screws on the bottom marked with arrows.

Now turn the remote control over and take out the bottom with the printed circuit board. Remove the used batteries and replace them with two new ones of the same type (Lithium button cell 3V, type CR2032). When inserting the batteries, make sure that the polarity of the batteries is correct (the "+" mark points upwards), otherwise the electronics may be damaged.

4. Appendix

4.1 Cleaning

Use a soft cloth and normal glass cleansing fluid and a soft, lint-free dust cloth.

CAUTION: **Under no circumstances liquids may enter the inside of the device during cleaning. For safety reasons, the power cord should be disconnected before wiping with a damp cloth. Do not use any solvents or abrasive cleaners, as these could damage the surface or print.**

4.2 Troubleshooting

Often, supposed defects can be traced back to inadvertent operating errors. Occasionally other components connected to the device are also responsible for a malfunction. Therefore, before you contact your dealer or AVM about a defect, we would like to ask you to rule out the following causes.

4.2.1 No music playback

a) The MUTE function is active. Press the MUTE button (10).

b) Accidentally switching to standby using the remote control. Press the POWER button (1).

c) The unit has automatically gone into standby mode after 20 minutes of no music playback or operation (see "Set auto-standby" on page 19).

d) If neither the standby LED (5) nor the display (6) lights up after switching the device on, the mains fuse may be defective. Since this is usually caused by a defect in the power supply unit or amplifier electronics (e.g. due to lightning), please contact your specialist dealer.

4.2.2 Hum during music playback

a) A turntable is located near an electrical device (e.g. power amplifier) whose stray magnetic field scatters into the cartridge system or cable.

b) The ground cable of the record player is not connected. Connect the earth cable coming from the record player to the earth contact (knurled nut below the input sockets) of the relevant plug-in card.

4.2.3 Remote control without function

a) The batteries or accumulators of the remote control are flat. Please replace or recharge them.

b) There is no direct connection between the remote control and the device or the distance is too far (the signals are transmitted using infrared light).

4.2.4 Inputs cannot be selected

Only slots in which an input card is inserted can be selected. Unused slots are automatically skipped.

4.3 Warranty conditions

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:

1. The unit must have been purchased from an authorised dealer. Equipment from other sources will not be repaired, not even at charge.

2. The warranty registration is done via our website: **www.avm.audio**.

3. The fault must not have been caused by improper handling or intervention in the device

4. In case of repair the device must be sent to us free of charge in its original packaging. If this is not the case, we are entitled to refuse acceptance. In any case, we do not accept any responsibility for transport damage.

If you no longer have the original packaging, please contact your dealer. We may also provide you with a packaging on request. However, we must charge a service charge for replacement packaging.

5. Please always enclose a short description of the fault with the device sent in. Please print out our **SERVICE FORM**. You will find this form at www.avm.audio under **SERVICE**.

6. In cases of doubt we reserve the right to request a copy of the purchase invoice. In case of unauthorized return, or if there is no damage to the device, we reserve the right to charge a handling fee.

PLEASE NOTE
If you are not shipping your device from Germany, please makre sure you have the correct export or import documents. Unfortunately, we cannot assume any costs arising from improper export, failure to declare or customs clearance.

4.4 Specifications

4.4.1 Base unit

Settings

Sub filter (switchable): 30 Hz, 12 dB/Octave

Sensitivity (adjustable): -10 / -5 / 0 / +5 / +10 dB

MONO / STERO: Switchable (incl. Phase inversion)

Equalization: base frequencies / time constants

RIAA: 50Hz / 500Hz / 2120Hz entspricht 3180µs / 318µs / 75µs

TELDEC: 50Hz / 500Hz / 3180Hz entspricht 3180µs / 318µs / 50µs

NARTB: 60Hz / 500Hz / 1590Hz entspricht 2653µs / 318µs / 100µs

EMI: 70Hz / 500Hz / 2500Hz entspricht 2274µs / 318µs / 64µs

COLUMBIA: 100Hz / 500Hz / 1590Hz entspricht 1592µs / 318µs / 100µs

DECCA: 50Hz / 500Hz / 2790Hz entspricht 1592µs / 318µs / 57µs

NOTE: All equalization curves for LPs (33 1/3 U/min).

Outputs

Output impedance RCA: 50 Ohm

Output impedance XLR: 100 Ohm

Max. Output voltage RCA: 7 V

Max. Output voltage XLR: 14 V

Power supply turntable: 15V / 1,5 A, galvanically isolated

Miscellaneous

Mains voltage: 100 - 240VAC / 50 -60 Hz

Power consumption max: 25W

Power consumption standby mode (stand-by): 0.45W

Power consumption Power switch (18) in 0 (zero) position: 0W

Time after which the device is automatically put into standby mode using the energy saving function (see section "Set auto-standby" on page 19): 19 minutes 30 seconds

Dimensions (BxHxT): 431 x 130 x 390mm / Weight: 12 kg

4.4.2 EAN Codes

Silver / Silver Chrome: 791511837079 / 791511837055

Black / Black Chrome: 791511837062 / 791511837048

4.4.3 Plug-in cards

MC RCA, MC XLR

Sensitivity (1 kHz, Ua=1V): 55 / 100 / 170 / 315 / 550 µV (adjustable)

Overload (1 kHz, 0dB): 2,5 mV

Impedance: 1000 / 500 / 300 / 100 / 50 / 30 Ohm (einstellbar)

S/N (0,5mV / 0dB / 33 Ohm: 73 dB / 77 dB(A)

MM RCA

Sensitivity (1 kHz, Ua=1V): 0,5 / 0,9 / 1,6 / 2,8 / 5 mV (ein-stellbar)

Overload (1 kHz, 0dB): 25 mV

Impedance: 50 / 100 / 150 / 200 / 300 / 400 pF (einstellbar)

S/N (0,5mV / 0dB / 33 Ohm: 79 dB / 85 dB(A)