

To our valued customer and music enthusiast,

with the purchase of your new **ACCUSTIC ARTS® TUBE PHONO II** you have opted for a product which incorporates the most modern technology to achieve excellent sound and quality. To make sure that you have pleasure for as long as possible with your unit we kindly ask you to thoroughly read this instruction manual through to the end.

We wish you many enjoyable hours of listening to music with your new unit.

ACCUSTIC ARTS® / Lauffen (Germany)

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1 TUBE PHONO II highlights

- Audiophile reference phono preamplifier with a so called "tube hybrid" concept
- Advantages of this "tube hybrid" technology:
 - very high impedance
 - very high bandwidth
 - very low distortion factors and a "good-natured" distortion spectrum
 - "analog" and very precise sound performance
- Easy change of tubes without any adjustments just "plug and play"
- Extremely precise RIAA equalisation of +/- 0.17 dB (SE version: +/- 0.12 dB)
- Fits to MM and MC cartridges

- All used components are of outstanding quality and additionally selected (e.g. 1% high precision foil capacitors, 1% metal film resistors / SE version: 0.5 %)
- Professional Class A output stage using technology derived from studio engineering
- 1 x balanced output (XLR) and 1 x unbalanced output (RCA)
- 2 magnetically shielded, encapsulated 75 VA toroidal core transformer („Made in Germany“) of premium quality for high output reserves
- Front panel, cover are made of massive and solid aluminium; turning knobs are made of massive and chromed brass
- ACCUSTIC ARTS® TUBE PHONO II is “Handmade in Germany”

2 Important safety instructions

- Read these instructions.
- Keep these instructions.
- Follow all instructions.
- **Do not** use this appliance near water.
- **Never** use this appliance near hot surfaces.
- **Never** use this appliance outside and always place it in a dry environment.
- Check that your mains voltage corresponds to that stated on the appliance.
- **Never** leave the appliance unsupervised when in use. Always keep electrical equipment out of the reach of children.
- **Never** pour or spill liquids directly onto this appliance.
- **Never** operate this apparatus in an explosive atmosphere.
- **Do not** put any vases or similar objects containing water or liquids on top of this appliance.
- Unplug this appliance during lightning storms or when unused for long periods of time.
- Ensure that the appliance has sufficient air around it and avoid extreme temperature influences on the unit, especially direct sunshine and high humidity.
- The mains cable of this appliance is equipped with an equipment grounding conductor. This equipment grounding conductor must **never** be disconnected or taped over. In case any humming occurs, please contact your authorized dealer.
- **Always** disconnect the appliance from the mains power before carrying out any changes to the cables or when cleaning the appliance.
- Protect the mains cable from being walked on or pinched particularly at plugs and the point where they exit from the appliance.
- From time to time check the mains cable and the appliance for damages. Take care that the mains cable is not buckled or damaged by any house pets.
- **Never** move the appliance by pulling the mains cable. Make sure the mains cable cannot get caught in any way. **Do not** wind the mains cable around the appliance and do not bend it.
- **Never** use accessories which are not recommended by the manufacturer. They could constitute a danger to the user and risk to damage the appliance.
- **Never** operate the appliance with the housing open.
- To clean the aluminium housing, please only use a cloth moistened with water and some detergent. **Never** use inflammable or chemically aggressive cleaning agents.
- In the event of a defect, please **never** attempt to repair it yourself. Any tampering with the appliance by an unauthorised person will make the warranty void. Please get in contact with your authorized dealer.
- Replace fuses only with original types having the same ampere value, the same voltage endurance and the same time-lag. You can find the corresponding value in chapter **6.2** of this instruction manual.

- Refer all servicing to qualified service person. Servicing is required when the appliance has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the appliance, the appliance has been exposed to rain or moisture, does not operate normally or has been dropped.
- **Never** bypass a fuse.
- No user-serviceable parts inside.
- **WARNING – DANGER TO LIFE! 330 Volts of high voltage in the inside of the unit. Never operate the unit with removed top cover and do never touch the board while the unit is switched on!**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.



Marking by the “CE” symbol indicates compliance of this device with the EMC (Electromagnetic Compatibility) and LVD (Low Voltage Directive) standards of the European Community.

Remarks in the manual:

WARNING! Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in personal injury or death.

CAUTION! Calls attention to a procedure, practice, condition or the like that, if not correctly performed or adhered to, could result in a damage or destruction to part or the entire component.

To guarantee a reliable function of this unit over the long-term we kindly ask you to thoroughly **read this instruction manual** before connecting this unit and to observe the following instructions. This is also necessary for your own safety when dealing with the unit.

3 Unpacking and positioning

Great care must be exercised when unpacking the unit. Carefully store the transportation packaging for the possibility of further use. If you have a claim on the warranty, always use the original packaging for any necessary transportation. Transportation without this packaging can lead to damage of the housing.

Please check, if the following items are included:

- 1 x AC mains cable (type depends on your country)
- 2 x replacement fuses (types depend on your mains voltage)

The TUBE PHONO II has to be positioned on stable, even and horizontal surface. You can put the unit in a stable cupboard but we recommend you position the unit in an audio rack. Professionally designed audio racks can have a positive effect on the music reproduction of your audio system.

CAUTION!



Please observe at all times

Before you connect the unit with some other unit using a cable, please never forget that both units must first be switched off and disconnected from the mains power.

4 Connections and operation controls

4.1 General information

The TUBE PHONO II is an audiophile high precision phono preamplifier with a so called “**tube hybrid**” concept for maximum sound performance. Tubes are generally sensitive components and therefore to be treated with utmost care. Generally speaking tubes have characteristically required a certain time after powering up to be ready for operation. During this heating up **no music signal** can be transmitted. The tubes used in the TUBE PHONO II have a heating period of approx. 2½ to 3 minutes. You may find further information in the following chapters.

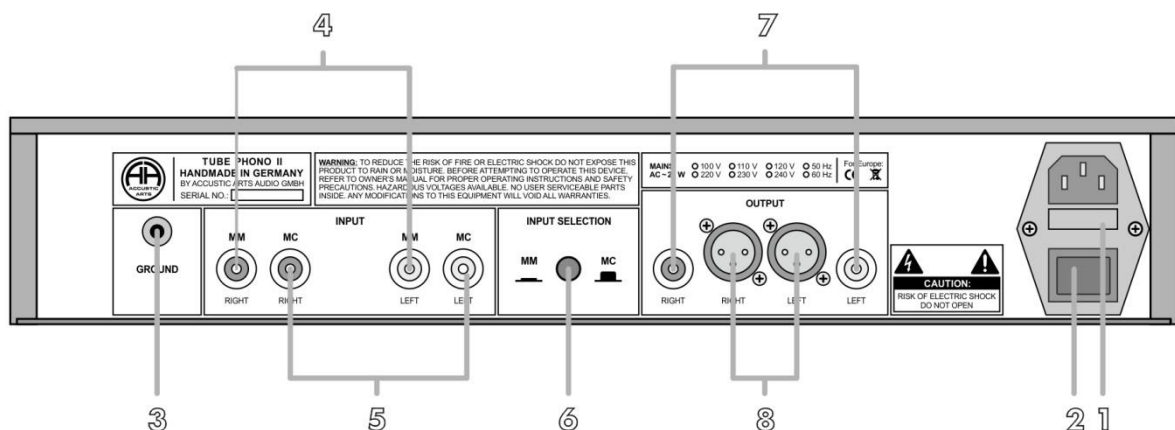
The TUBE PHONO II is designed to work with a power amplifier, e.g. TUBE PREAMP II – MK 2 from ACCUSTIC ARTS®. Of course you can use this ACCUSTIC ARTS® unit with units from other premium quality brands.

As with all ACCUSTIC ARTS® products, the focus with the TUBE PHONO II is on excellent measured values and an exceptional acoustic pattern and easy and uncomplicated operation of the unit. Friends of analogue technology naturally have the choice between **moving magnet (MM)** and **moving coil (MC)** pick-up systems and can adapt the required capacity or impedance by means of the chromed rotary knob.

Please read them very carefully to prevent any kind of malfunction.

4.2 Connections on the rear panel

Fig. 1: Rear view



- 1 **No fuse holder!** All main fuses located **inside** the housing; please see chapter **6.2**
- 2 Mains power – on / off switch
- 3 **GROUND:** Ground contact for your record player
- 4 **INPUT MM:** Phono input for MM systems only
- 5 **INPUT MC:** Phono input for MC systems only
- 6 **INPUT SELECTION:** Selection switch for activation of MM or MC input; please see chapter **5.1**
- 7 **OUTPUT 1:** Unbalanced output (RCA) for connection to a preamplifier
- 8 **OUTPUT 2:** Balanced output (XLR) for connection to a preamplifier

4.3 Operation controls on the front panel

Fig. 2: Front view



- 9 **MM:** Rotary switch to adapt capacity of the MM input; please see chapter 5.2
- 10/12 **TUBES OFF:** This push-button is exclusively responsible for the tube section of this phono preamplifier. Push the button and the complete tube section is switched off completely. The blue LED 12 will light up. Push again and the tube section will be switched on. During the following heating period the LED 13 in the middle glows red for approx. 2½ to 3 minutes and then changes its colour into blue, indicating that the unit is now fully ready for operation again.
- ! IMPORTANT: This push-button is no replacement for the power switch. It is only intended for short operational breaks and also to extend the lifetime of the tubes.**
- 11 **LED MM:** When the MM section is activated by pushing button **INPUT SECELCTION** on the rear, this LED lights up blue
- 13 **ON:** LED indicates unit is ready for operation
- 1. LED red = unit is in "warm-up" mode**
This LED lights up red when the mains power switch 2 on the rear panel is switched on and the switch 10 **TUBES OFF** isn't activated. It indicates that the unit is in the warm-up mode. The warm-up mode takes approx. 2 to 3 minutes.
- 2. LED blue = unit is ready**
After the warm-up mode the tubes are ready for operation and the colour of the LED turns blue. When the tubes are ready the unit is also completely ready for operation
- 14/16 **MUTE:** Push-button to mute the music signal; please see chapter 5.7
- 15 **LED MC:** When the MC section is activated by pushing button **INPUT SECELCTION** on the rear, the LED lights up blue
- 17 **MC:** Rotary switch to adapt impedance of the MC input; please see chapter 5.3

4.4 Connection to mains power

Only connect the unit to the mains power when all the other cable connections have already been carried out. Plug in the mains cable firstly in the inlet connector sockets of the unit and only then the earthing pin-plug in the mains socket.


By actuating switch 2 you can switch your unit on or off.

5 Installation and getting started

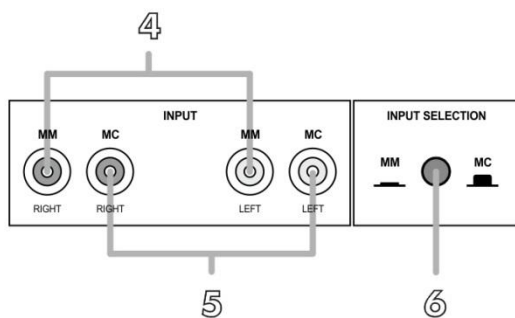
5.1 Important before initial start-up: an MM or MC pickup is required.

Before you connect the TUBE PHONO II to a device, make sure your record player has an MM or MC pickup system. Moving magnet (MM) pickup systems have an electromagnetic transducer, whereas a moving coil (MC) system is equipped with an electrodynamic transducer. These two systems are considerably different with regard to generated output voltage and therefore have different amplification factors in connection with a phono preamplifier.

In order to achieve the best possible adjustment, the TUBE PHONO II has separate MM/MC inputs which are selected by the **INPUT SELECTION** push button ④.

CAUTION!	IMPORTANT:
	Never connect an MM pickup system to the MC input and never connect an MC system to the MM input of the TUBE PHONO II.
	Incorrect connection can lead to considerable damage to your devices connected downstream and loudspeakers.

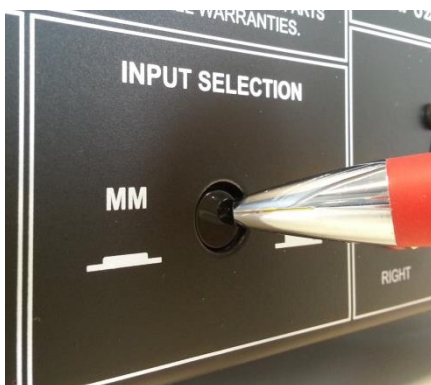
Graphic 3: MM/MC inputs and INPUT SELECTION



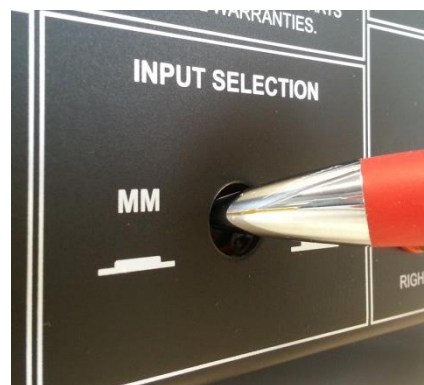
5.2 Connection and use of an MM pickup system

If your record player has an MM pickup system, press the **INPUT SELECTION** push button. The push button is in a recessed position in order to prevent unintentional operation. Proceed as in **graphic 4**. Ensure that the push button is in the right position by checking whether the **blue MM LED** lights up. The MM input is now active and the MC input is disabled.

Graphic 4: Operating the push button INPUT SELECTION



Picture shows switch position MM



Picture shows switch position MC

Graphic 5: Turning the MM rotary knob to select the input capacity



For standard MM pickup systems, the **MM** input of the TUBE PHONO II offers the choice of 4 different input capacities:

60 pF – 160 pF – 280 pF – 380 pF.

Select the value which is most appropriate for your personal MM pickup system.

The input impedance of MM systems is predefined to be 47 k Ω and therefore cannot be changed.

5.3 Connection and use of an MC pickup system

5.3.1 Selection of input impedance for MC systems

If your record player has an MC pickup system, put the **INPUT SELECTION** push button into the "switched-off" position.

Proceed as in **graphic 4**. In this case release the push button. Ensure that the push button is in the correct position by checking whether the **blue MC LED** lights up. The **MC** input is now active and the **MM** input is disabled.

Graphic 6: Turning the MC rotary knob to select the input impedance



For MC pickup systems, the **MC** input of the TUBE PHONO II offers the following input impedance values:

100 Ω – 100 Ω – 470 Ω (V1 = variant 1) – 470 Ω (V2 = variant 2)

The impedance value 470 Ω offers the special feature of having 2 variations which through different filter configurations over the value of 470 Ω have a different sound characteristic. Simply try them out to find your preference.

Select the value which is most appropriate for your MC system.

5.3.2 Selection of amplification factor for MC systems

The amplification factor (gain) for a connected MC system is set ex works to a value of approx. 960-times. This setting is a good and suitable amplification factor for most pick-up systems. In the meantime, however, there are MC systems available on the market which can be very "quiet" or very "loud" and so sometimes it may be appropriate to adjust the amplification factor. Due to the overall very low voltage used by the magnetic cartridge, the most practical way to change the amplification factor and get the best result is to adjust it directly on the board inside the device. If you feel it is necessary to adjust the amplification factor, proceed as follows:

1. Firstly make sure the device is switched off. Wait 1 minute and then remove the mains power cable.
2. Open the upper housing cover of your device (see picture on right). The amplification factor is adjusted using so-called DIP switches. The DIP switches are located at the rear side of the device (see red circles in picture).
3. Now you can set the DIP switches. Take care that both switches are ALWAYS set exactly to the same amount. There are 3 possible variations:

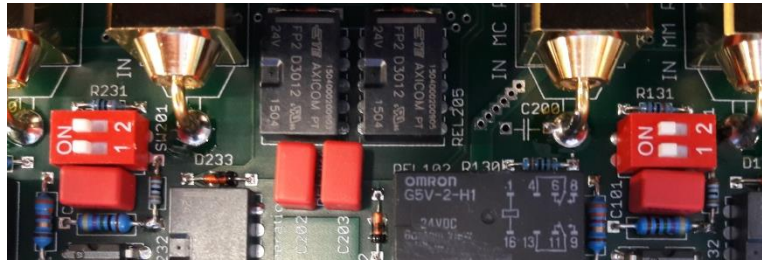


... see next page

Version A: Amplification factor approx. 770–times, suitable for "loud" MC systems

DIP switch:

Pos. 1: ON
Pos. 2: ON



Version B: Amplification factor approx. 960–times, suitable for "standard" MC systems

DIP switch:

Pos. 1: OFF
Pos. 2: ON



Version C: Amplification factor approx. 1460–times, suitable for "quiet" MC systems

DIP switch:

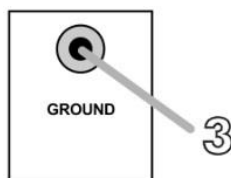
Pos. 1: OFF
Pos. 2: OFF



5.4 GROUND: How is your record player grounded?

A record player must be grounded with a separate cable in order to prevent interference. For this purpose, the TUBE PHONO II is equipped with a ground terminal.

Graphic 7: GROUND terminal

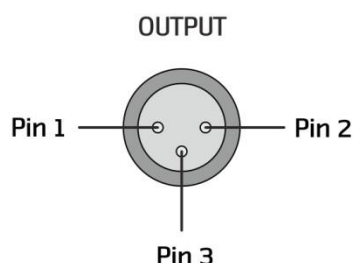


The ground contact **GROUND 3** is connected to the printed circuit board integrated inside the device.

5.5 Use of the analogue outputs

The TUBE PHONO II is equipped with 7 unbalanced and 8 balanced outputs designed for connection to a conventional preamplifier such as the ACCUSTIC ARTS® TUBE PREAMP II – MK 2.

Graphic 8: Pin assignments of the balanced output



Pin 1: Ground (shield)
Pin 2: Non-inverting (hot; 0°)
Pin 3: Inverting (cold; 180°)

These pin assignments comply with the standard adopted by the Audio Engineering Society. Refer to the operating manual of your other units to verify that the pin assignments of their connectors correspond to your ACCUSTIC ARTS® unit.

IMPORTANT!



Always switch off the preamplifier before connecting an additional unit.

5.6 Initial start-up of the selected pickup system

After you have determined which pickup system you would like to use, you can make the connection to your record player.

The following is a summary of all the steps including further instructions:

1. Use the INPUT SELECTION push button to carry out the correct setting of the MM/MC input.
2. Firstly plug cinch cable into the record player and then into the MM or MC socket. Never mix up the sockets. Check the connection is correct.
3. Connect the ground cable of the record player to the ground terminal GROUND of this unit.
4. Connect the analogue OUTPUT of the TUBE PHONO II to a preamplifier of your choice.
5. **IMPORTANT:** Never press the INPUT SELECTION push button 9 during operation.
6. **IMPORTANT:** DO NOT plug or unplug cables during operation of the equipment. This can lead to your equipment being damaged. Make sure you always switch off the device first.
7. After all the connections have been correctly made, you are now ready to start. Switch on the TUBE PHONO II on the rear side at the mains switch 2. The LED ON 13 now lights up in red (red = device is warming up) because the tubes are in the warming-up phase. After the warming-up phase, the LED colour changes to blue (blue = device ready for operation).

5.7 Use of the MUTE push button

The MUTE push button 16 is designed to enable short interruptions to listening, e.g. if you have to clean the pickup needle of your record player. The button is not a substitute for the mains power switch.

5.8 Use of push-button TUBES OFF

The push-button TUBES OFF is exclusively responsible for the tube section of this phono preamplifier. Push the button and the complete tube section is switched off completely, der LED TUBES OFF lights up blue.

Push again and the tube section will be switched on. During the following heating period the LED 13 in the middle glows red for approx. 2 to 3 minutes and then changes its colour into blue, indicating that the unit is now fully ready for operation again.

CAUTION!



This push-button is no replacement for the power switch. It is only intended for short operational breaks and also to extend the lifetime of the tubes.

6 Information about the used tubes and mains fuses

6.1 Important details about the used tubes

The TUBE PHONO II contains 2 tubes - one for the left and one for the right channel.

The tube type used is: E83CC dual triode 12 AX 7

We use only tested and additionally hand selected tubes. The tubes are run in 100 hours in a special lab test prior to delivery. After completion of this lab test the unit is tested again.

In principle every tube with exactly this type designation may be used. However we want to point out that there are faulty tubes or tubes of minor quality available on the market which may cause big harm to the TUBE PHONO II.

There are also countless copies of well known brands on the market, which however neither have the characteristic value, nor the quality of the copied brands.

In any case only use quality branded products!

WARNING!



DANGER TO LIFE!

High voltage inside! Opening of the housing may only be done by an authorized ACCUSTIC ARTS® service or distributor.

Therefore please note that:

- You will void all warranties when using other tubes than those tested and recommended by ACCUSTIC ARTS®.
- Changing of tubes may only be done by an authorized ACCUSTIC ARTS® service or distributor.
- Switch the unit off with the mains power switch 2 and then wait for at least 1 minute until the capacitors are fully discharged before removing the top cover.
- **WARNING – DANGER TO LIFE!** 330 Volts of high voltage in the inside of the unit. Never operate the unit with removed top cover and do never touch the board while the unit is switched on!
- After an exchange of tubes the TUBE PHONO II automatically adjusts to the new tubes (“plug and play”), provided that the right type is used.

6.2 Replacing damaged mains fuses

If a fuse is damaged only replace the fuse with original types having the same ampere value, the same voltage endurance and the same time-lag. Never use fuses with other ampere classes or time-lag classes.

WARNING!



DANGER TO LIFE! Pull out the mains plug!

**High voltage inside! Opening of the housing may only be done by an authorized ACCUSTIC ARTS® service or distributor.
Always disconnect the unit from the mains power before replacing a fuse.**

The two mains fuses of the TUBE PHONO II are located in the inside of the unit on the board. On the board the fuses are marked with:

FSE 001 TUBE (fuse for the tube section)

FSE 002 TRANS (fuse for the analog section)

Please use the included fuse for replacement!

For countries with 220–240 V / 50–60 Hz
please use the following fuse types:

FSE 001: 400 mA – time lag

FSE 002: 400 mA – time lag

For countries with 100–120 V / 50–60 Hz
please use the following fuse types:

FSE 001: 800 mA – time lag

FSE 002: 800 mA – time lag

7 Looking after your equipment

The TUBE PHONO II from ACCUSTIC ARTS® does not require special treatment in excess of the usual care taken with high quality devices. Clean the housing with a dry or slightly moistened cloth. Please do not use any aggressive detergents or detergents which contain silicon.

The best way to clean the chromed inlay and knobs is with a mild, non-aggressive fat-dissolving detergent (e.g. glass cleaner). Use a very soft clean cloth and wipe the front plate with same without exerting strong pressure. **Never** use abrasive agents or polishing agents with abrasive particles.

CAUTION!



Do not place the unit in direct sunshine and avoid extreme changes in temperature.

8 Troubleshooting

Malfunctions are mostly caused by something simple which can be put right quickly. In the next section some possible malfunctions are described together with their corrective action. However, if it is not possible to remove the malfunction please contact your authorized ACCUSTIC ARTS® dealer.

Malfunction **The unit is switched on but all LEDs remain dark.**

- | | |
|----------|---|
| Cause 1 | The mains cable is not properly connected. |
| Solution | Check mains cable and push in firmly. |
| Cause 2 | The fuse FSE 002 TRANS is damaged. |
| Solution | Pull out the mains plug and replace the corresponding fuse (see chapter 6.2). Restart the unit. If the LED still remains dark please contact your authorized ACCUSTIC ARTS® dealer. |
| Cause 3 | Both fuses are damaged. |
| Solution | Pull out the mains plug and replace the corresponding fuses FSE 002 TRANS and FSE 001 TUBE (see chapter 6.2). Restart the unit. If the LEDs still remain dark please contact your authorized ACCUSTIC ARTS® dealer. |

Malfunction **The unit was switched on but LED 13 remains dark.**

- | | |
|----------|---|
| Cause | The fuse FSE 001 TUBE is damaged. |
| Solution | Pull out the mains plug and replace the corresponding fuse (see chapter 6.2). Restart the unit. If the LED still remains dark please contact your authorized ACCUSTIC ARTS® dealer. |

Malfunction **The music sounds distorted.**

- | | |
|----------|--|
| Cause 1 | Maybe a tube is damaged. |
| Solution | Pull out the mains plug contact your authorized ACCUSTIC ARTS® dealer. |
| Cause 2 | The connections between your units are not correct. |
| Solution | Please check out if the pin declaration of this unit fits to your other units. |

For malfunctions which affect the reproduction of individual devices first of all make sure that all connections are correctly and thoroughly carried out. In general errors which arise are often a result of an unsatisfactory or wrongly-made connection.

9 Specifications (selection)

Inputs:	1 x MM phono input, unbal. (RCA) 1 x MC phono input, unbal. (RCA)
Outputs:	1 x balanced line-out (XLR) 1 x unbalanced line-out (RCA)
Input impedance MM:	47.5 k Ω / 60 pF – 160 pF – 280 pF – 380 pF (selectable)
Input impedance MC:	100 Ω , 235 Ω , 475 Ω (selectable)
Amplification/Gain:	MM operation: 95.6-times / 39.6 dB MC operation: 960-times / 59.6 dB (factory setting) 770-times and 1460-times (optional)
RIAA precision:	+/- 0.17 dB (50 Hz to 20 kHz) SE version: +/- 0.12 dB

Output resistance:	balanced: 2 x 50 Ω unbalanced: 50 Ω
Signal-to-noise-ratio:	MM operation: -83 dB (A weighted, 500 mV) MC operation: -74 dB (A weighted, 500 mV)
Distortion (THD+N):	MM operation: 0.007 % MC operation: 0.04 %
Tube type:	Dual triode E83CC / 12 AX 7 – selected and matched
Power consumption:	approx. 20 watts (unit totally on)
Dimensions (H x W x D):	100 x 482 x 375 mm / 3.9 x 19 x 14.8 inches
Weight:	12 kg / 26.4 lbs.

10 Copyright, trademarks, warranty

Copyright:

This instruction manual was correct at the time of going to press. The manufacturer reserves the right to make changes to the technical specification without prior notice as deemed necessary to uphold the ongoing process of technical development.

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Trademarks:

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Warranty:

The manufacturer accepts no responsibility for damage caused by not adhering to these instruction manual. Modification or change to any part of the product by unauthorized persons releases the manufacturer from any liability over and above the lawful rights of the customer.