

LINNENBERG

Owner's Manual



MAESTRO

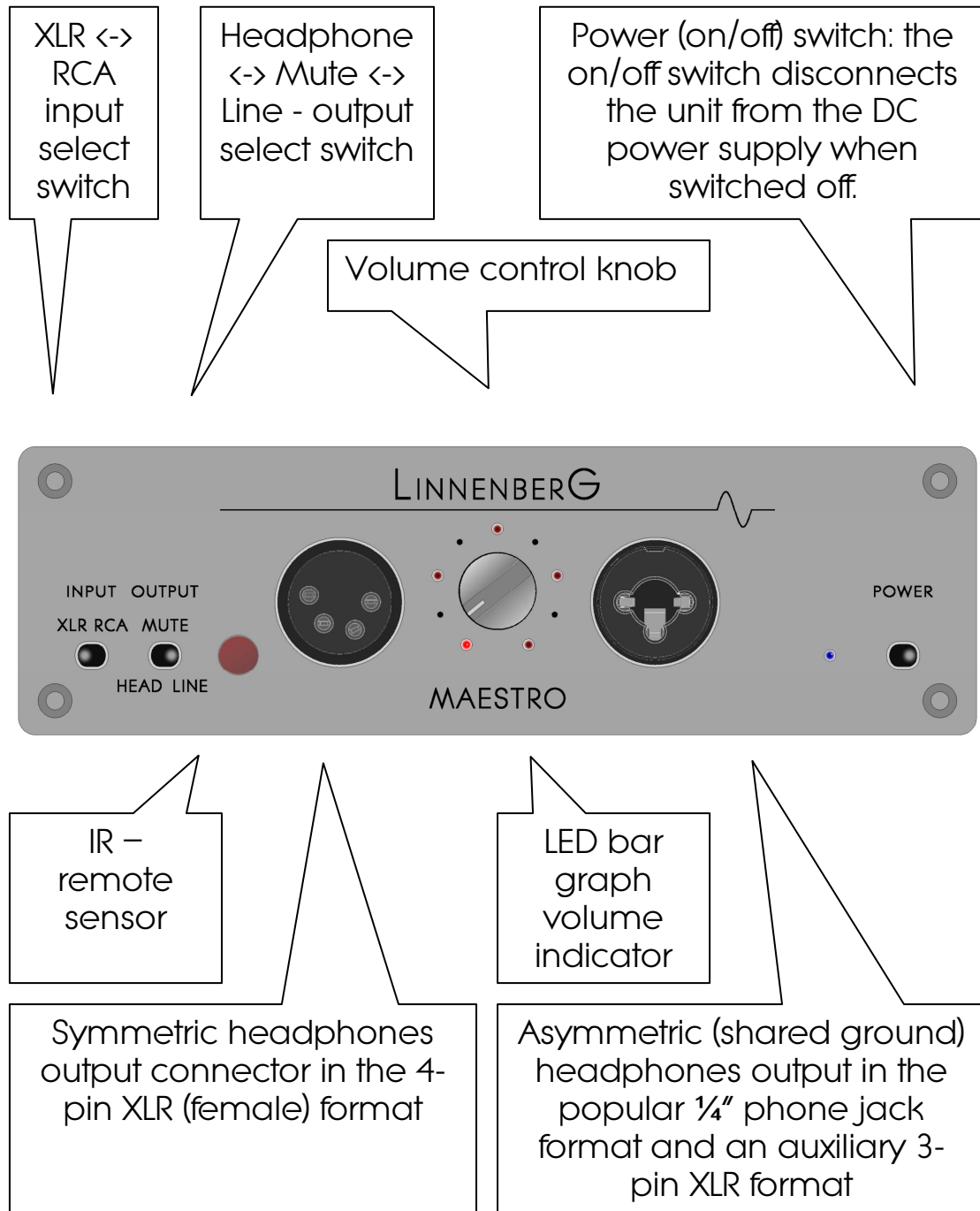
DC performance pack

Introduction



The MAESTRO is a direct descendant of the critically acclaimed spa1 headphones amplifier. Serving the demands of discerning headphone aficionados, the unit was designed for an outstanding listening experience with any type of dynamic and planar-magnetic headphones. Furthermore, the MAESTRO is the heart of any HIGH END stereo system by providing a state of the art line – level preamp function.

Controls and connections - front

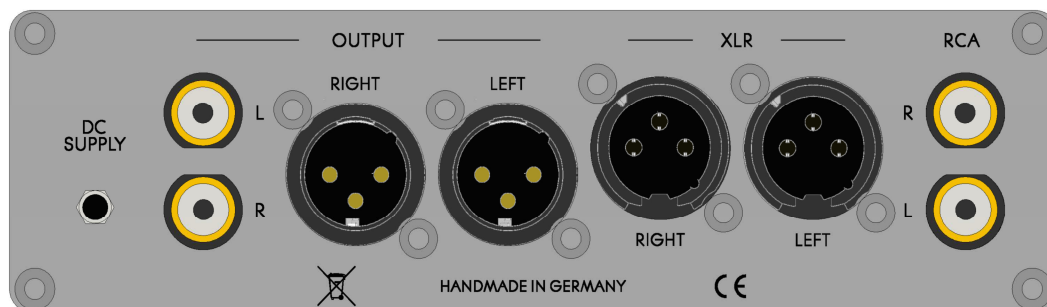


(Figure 1)

Connections - rear

Connect the power supply to the power inlet

Left / Right output: A pair of gold plated RCA – connectors and second pair of XLR – connectors (male) allows the connection of a power amplifier or active speaker.



Input connectors: one pair XLR (female) and one pair of RCA connectors for use as inputs.

(Figure 2)

Basic operation

Place the unit on a solid, flat level surface such as a shelf where it is convenient to operate.

Some naturally venting air is recommended and ambient temperatures over 27 degrees Celsius and / or extreme humidity (> 85%) should be avoided. !

One of the main features of the *DC performance pack* edition is the use of a highly sophisticated power supply instead of the wall adapter. Please note, operation of the MAESTRO (*DC performance pack*) is exclusively possible in conjunction with the UNISONO supply. To prevent potentially erroneous connections, the socket on the rear site of MAESTRO only accepts the mating plug of the UNISONO DC power cable.

Before ultimately firing up your MAESTRO, you must first establish the connection to UNISONO. The multi pin medical grade connector with lock nut must be secured first in place. Please avoid making this connection when the UNISONO is already powered up and the POWER switch of the MAESTRO is in the <ON> position. In this case, high surge currents may harm the precision contacts.

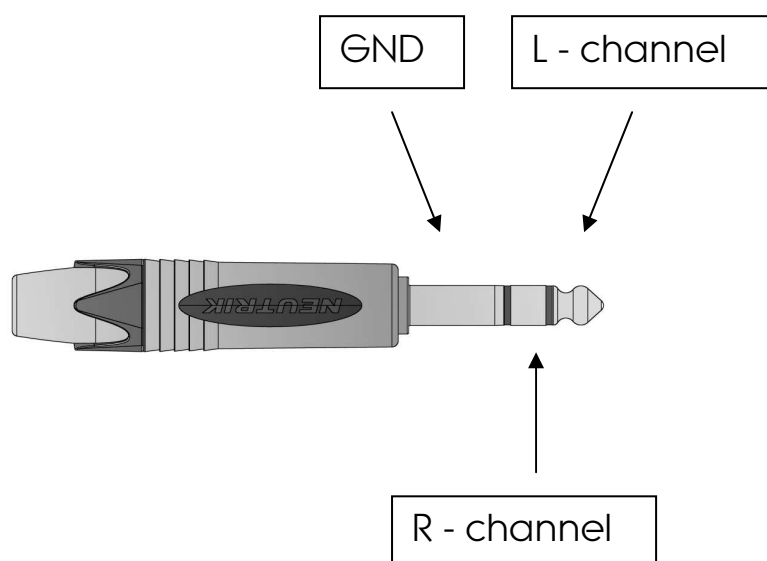
Once the power supply is connected, the blue LED should light up when the power switch is operated. Turn off the unit and do the signal connections according to figure 1 + 2. Start by connecting a line level source to one of the inputs on the rear. Due to the fully symmetrical signal routing inside the MAESTRO, a balanced source is preferable. Nevertheless, a single ended source connected to the RCA input works equally well. Select the proper input. Now, connect a power amplifier to one of the rear outputs or a headphone to one of the front outputs. Select the proper output. When everything is connected, turn on and have fun!

When plugging your headphones into the MAESTRO, please make sure that the volume control is set at minimum. Adjust the level for the first time, when some music is playing. Listening to music through headphones at much higher levels than normal is a common phenomenon: be aware that exposing your ears to high sound pressure levels for an extended amount of time damages your hearing permanently. !

The volume control works simultaneously for all outputs. The control range spans from -70 ... +10dB in increments of 0.65dB, allowing fine adjustment of the listening loudness. The circuit features 4x independent, tightly matched discrete (0.1% metal film resistors) R-2R ladder networks resulting in perfect channel and phase balance. The outstanding quality of this attenuator is preserved over the entire control range.

Headphones - connections

Over the years, a variety of headphones connection schemes have been established. By far the most popular way of connecting a set of headphones is the phone jack, mostly in the $\frac{1}{4}$ " = 6.35 mm size.

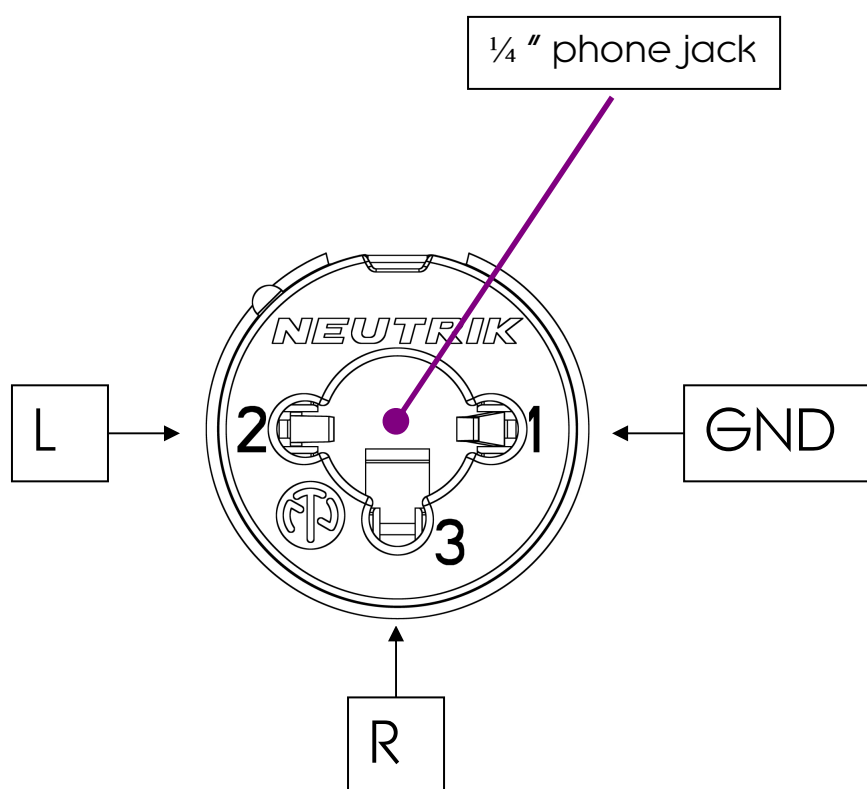


(Figure 3)

Please, do not connect a mono phone jack to the MAESTRO, !
since this shortens the right channel output to ground.

Although rarely seen, you can connect your headphone to the MAESTRO with a 3 pin XLR jack. Both the phone jack and the 3 pin XLR connection use a shared ground for both channels. The only advantage of the XLR connection is the avoidance of shorts when plugging in and out a phone jack. Moreover, this is the reason why one should place the MAESTRO or any other headphones amplifier with low output impedance in the "MUTE" mode when changing the headphone connection.

Here is the corresponding pinning:

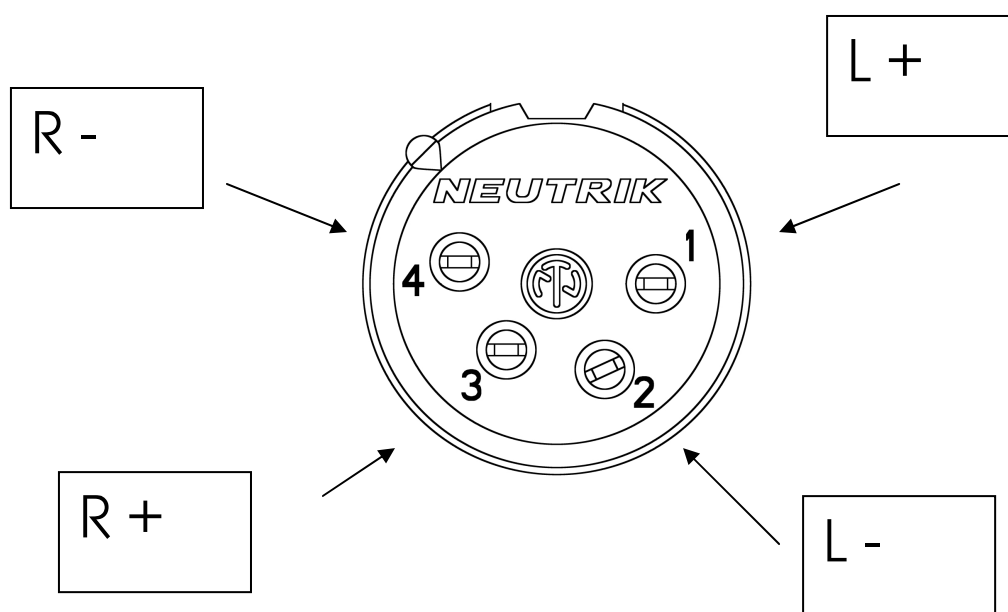


(Figure 4)

Whenever possible, consider the symmetric connection. This scheme overcomes the shared ground used for left and right channel. Unfortunately there are a number of upper class headphones on the market that do not allow rewiring in to the symmetric balanced mode. Keep that in mind when buying a set of new headphones.

From the manufacturers point of view we strongly recommend using a 4 wire re-cabled headphone driven by the symmetric output; since the MAESTRO is internally strictly balanced, this is the perfect match.

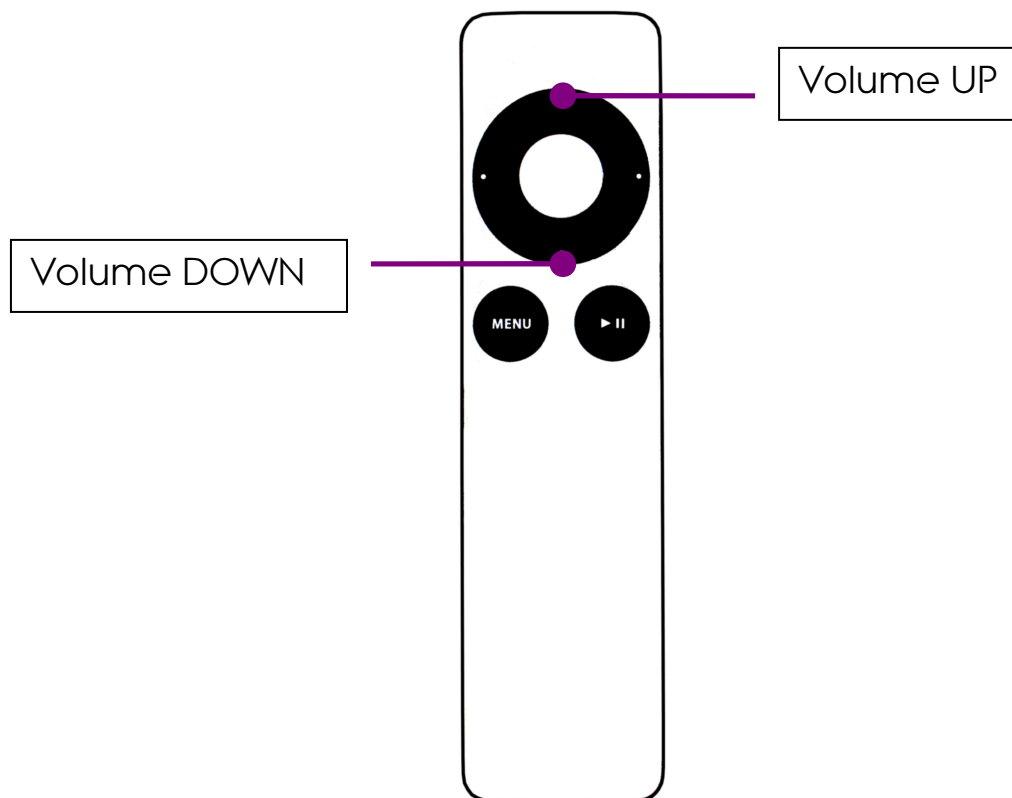
Here is the required wiring scheme; sometimes referred to as the AKG K-1000 scheme:



(Figure 5)

Remote control operation

The MAESTRO is an eligible contender and tremendous performer in a serious HIGH END stereo system. Besides the restriction to just 2x selectable inputs, there is essentially no limitation for its use. To enhance the versatility of the MAESTRO, the volume is remote controllable. The unit responds to the © Apple remote.



(Figure 6)

Please note, the ©Apple remote is not included in the delivery !

When powering up the MAESTRO amplifier, the setting of the volume knob will be used as actual playback volume (...usual potentiometer operation). Once you have pressed the remote in either direction, the actual volume alters depending on how long you have ramped up or down the volume. In contrast to the knob marking, the LED bar graph display always corresponds to the actual volume. Rotating the knob restores the potentiometer operation.

Specifications

Frequency response	DC – 270kHz -3dB (HF – blocking filter)
Distortion and noise	<0.001% 10Hz - 20kHz
Channel balance	0.03dB
Channel separation	130dB @ 100Hz, 110dB @ 1kHz, 90dB @ 10kHz
Gain	+10dB
Input impedance	47k Ω per phase
Dynamik range :	130dB
Output power	5W continuous, 32 Ω , both channels driven, 2A peak current capability
Output level	16V rms max. balanced, 8V rms unbalanced
Output impedance on headphones output :	0.4 Ω per phase
Output impedance on line output :	22 Ω per phase
Power consumption :	15W, < 0.5W turned off
Dimensions (H x W x D) :	51 x 165 x 226 mm

CE declaration of conformity

Product Type: Headphones amplifier

Model: MAESTRO

Linnenberg-Elektronik declares that this product complies with the Low Voltage Directive 2006/95/EG and the Electromagnetic Compatibility Directive 2004/108/EG.

The unit meets all currently valid regulations only in its original condition. The original, unaltered factory serial number must be present on the outside of the unit and must be clearly legible! The serial number is an essential part of our conformity declaration and therefore of the approval for operation of the MAESTRO. The serial numbers on the unit and in manual, must not be removed or modified, and must correspond.

Furthermore, the unit has been found to comply with the limits for a Class B digital device, pursuant to Part 15, subpart B (unintentional radiators) of the FCC rules.

LINNENBERG – ELEKTRONIK

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Warranty Certificate

LINNENBERG ELEKTRONIK warrants this product, under normal use, to be free of defects in materials and workmanship for a period of 2 years from date of purchase, as long as the product is owned by the original purchaser.

In the event that LINNENBERG ELEKTRONIK receives, from an original purchaser and within the warranty coverage period, written notice of defects in materials or workmanship, LINNENBERG ELEKTRONIK will replace the product, repair the product, or refund the purchase price at its option.

In the event repair is required, all shipment costs to and from LINNENBERG ELEKTRONIK shall be covered by the purchaser. In the event that repair is required, a return authorization must be obtained from LINNENBERG ELEKTRONIK. After this authorization is obtained, the unit should be shipped back to LINNENBERG ELEKTRONIK in a protective package with a description of the problem.

In the event that LINNENBERG ELEKTRONIK determines that the product requires repair because of user misuse or regular wear, it will consider a fair repair or replacement fee. The customer will have the option to pay this fee and have the unit repaired and returned, or not pay this fee and have the unit returned not repaired.

Serial No. :

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