

AMP-02

HEADPHONE AMPLIFIER
CLEAR SERIES



USER MANUAL

D I V A L D I

SOUND & DESIGN

Thank you for purchasing our audio equipment.

We have made every effort to ensure highest quality of our products to meet your highest expectations.

We will be grateful for any comments and suggestions that will help us improve our equipment.

Włodzimierz Duval

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1. GENERAL DESCRIPTION

HEADPHONE AMPLIFIER AMP-02

Headphone amplifier is a device made for listening to audio signals using Hi-Fi headphones with 6,3 mm Jack plug.

Amplifier's and power supply's casings were designed and made of solid, high quality aluminum blocks.

AMP-02 is equipped with delayed headphone start system, which was optimized and improved for this model (compared to AMP-01). The device is ready to operate after few seconds after switching on.

The device is powered by PS-AMP01 power supply of safe 16 V AC voltage, which guarantees optimal parameters.

Construction of our amplifier is an unique version of class A amplifier with reproduction of artificial mass and work mode typical for valve amplifiers. AMP-02 was designed to play music of following genres: Opera, Classical music, Jazz, Rock, POP. It can cooperate with line signal devices such as CD, Tuner, DAT, tape recorder or work directly with analog Hi-Fi turntables (MM and MC cartridges). In Phono mode for MC cartridges an additional separate amplifier stage is used in which Global Negative Feedback Loop (Non Global NFB) is not used. The device is equipped with impedance match selector for MC cartridges from various manufacturers. The amplifier was made with two single, separated mono channels with separate power supplies for left and right channel. Assembly of all electronic components is hand-made with through-hole technology, one exception is MC stage. All electronic components were selected and paired by hand. Process of selecting and setting up the components was based on compatibility with most popular headphones by brands such as Sennheiser (HD-600, HD-800), AKG (Q701,812), Audeze (LCD3, LCD4), Final Audio Design (Pandora Hope IV, VI).

ADDITIONAL FUNCTION!

AMP-02 may also work as a Phono MM/MC preamplifier. This variant allows connection of a turntable with a transistor power amplifier, tube amplifier, AV amplifier, and a reel-to-reel tape recorder. Signal output can be derived from headphone output jack via Jack Stereo/RCA Stereo connector (not included) – connection scheme Fig.2.

In preamplifier mode output level of AMP-02 signal can be adjusted with volume knob, it's directly connected to signal's harmonic saturation. This setting allows user to slightly affect the sharpness or softness of the sound. Adjustment range is between „hour“ 9 and 14 of the volume knob.

Bare in mind that selection of wiring can significantly improve quality of the sound.

2. FUNCTIONAL DESCRIPTION

HEADPHONE AMPLIFIER AMP-02

AMP-02 has two RCA signal inputs on the rear panel.

First input is a line input **(3)** for connecting analog signals from devices such as CD, DVD, B-Ray, Tuner, tape recorder, Mixer, DAC, PC.

Second input **(4)** is for analog turntables (Phono) with RIAA correction for MM and MC phono cartridges only.

Grounding screw **(6)** for turntable is placed next to the input sockets. Skipping connecting this element may result with interferences and hums, in extreme cases also damage the amplifier or headphones.

To choose signal source change the position of Line/Phono switch **(5)**.

To choose MM or MC cartridge change the position of MM/MC switch **(2)**.

Both switches are located on the rear panel of the device.

Load adjustment selector for MC cartridges **(11)** is hidden at the bottom cover. It has a ten-step regulation for each channel separately (L / R).

Headphone input socket **(7)** is located on the front of the device. - connection scheme **Fig.1**.

Volume adjustment knob **(8)** is located on top part of the device.

The amplifier should be connected with the power supply **(sockets 1 and 12)** with a cable provided in the set - connection scheme **Fig.3**.

Power supply's ON/OFF switch **(13)** is located on its rear panel.

230/110 V main power socket is located next to the power switch on the rear panel. Main power cable is included in the set.

Turning the power on is indicated by control light **(14)** placed on the front of PS-AMP01 and under AMP-02 volume knob **(8)**.

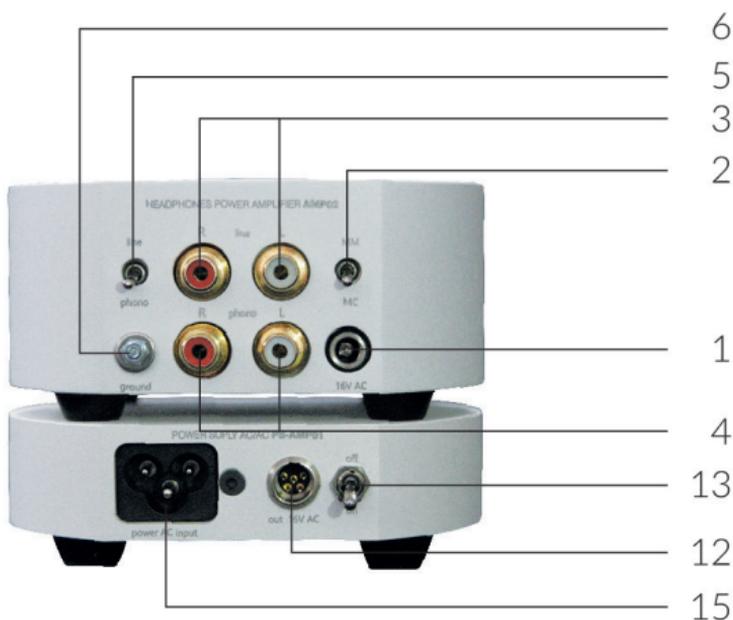
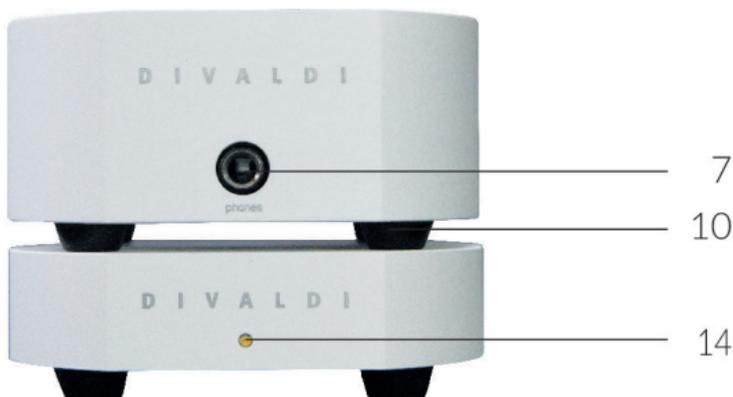
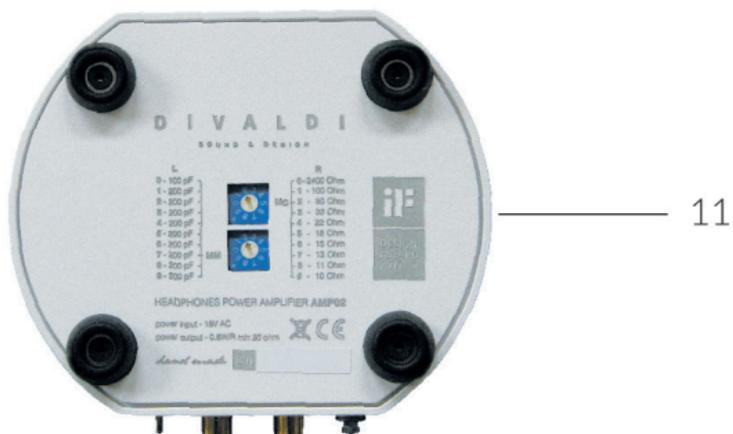
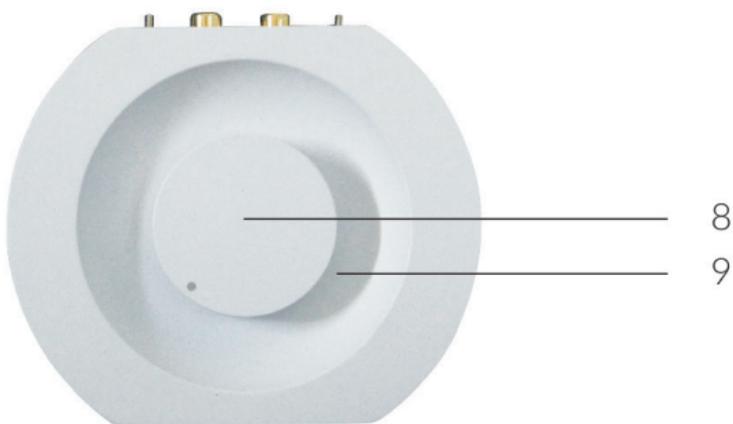
1. Power socket (16V AC)
2. MM / MC switch
3. Line input sockets
4. Turntable input sockets
5. Line / Phono input switch
6. Turntable grounding screw
7. Headphone output jack
8. Volume knob
9. Power control light under volume knob
10. Feet of the device
11. Adjustment selector for MC cartridges
12. 16V AC power supply socket
13. 230V AC (100V) power switch
14. Power control light
15. 230V AC (100V) power supply

The impedance adjustment selector for the MC insert:

- 0 - 2400 Ohm
- 1 - 100 Ohm
- 2 - 50 Ohm
- 3 - 33 Ohm
- 4 - 22 Ohm
- 5 - 18 Ohm
- 6 - 15 Ohm
- 7 - 13 Ohm
- 8 - 12 Ohm
- 9 - 10 Ohm

Impedance adjustment is independent for right channel (upper) and left channel (lower) and allows to adjust impedance accordingly to the MC cartridge manufacturer's recommendations.

For MM cartridge 0 is 100pF, positions 1.2.3.4.5.6.7.8.9 match 200pF.



3. CONNECTION SCHEME

HEADPHONE AMPLIFIER AMP-02

Fig. 1.
Connection of RCA inputs to signal sources - turntable/CD/tuner

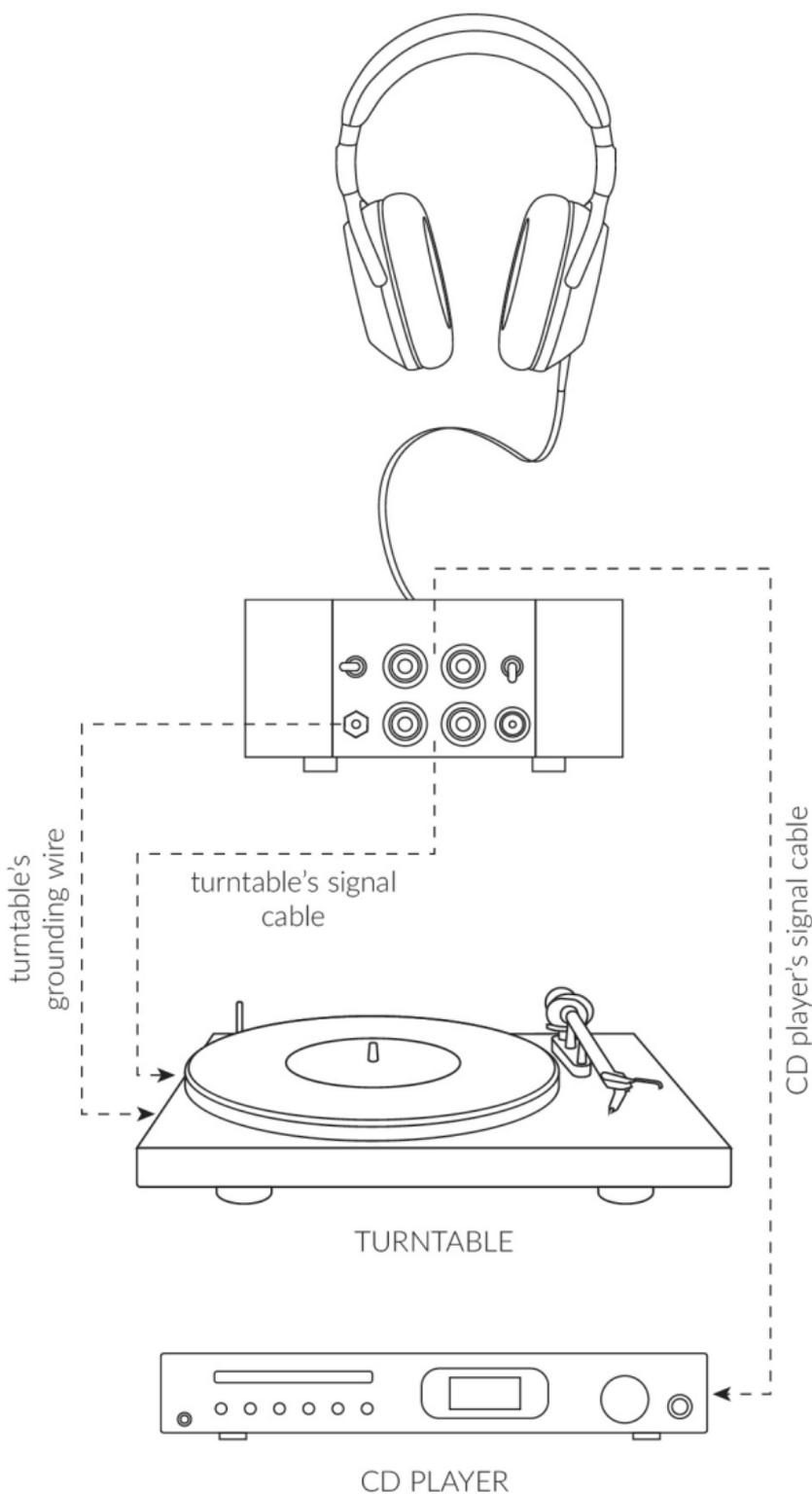
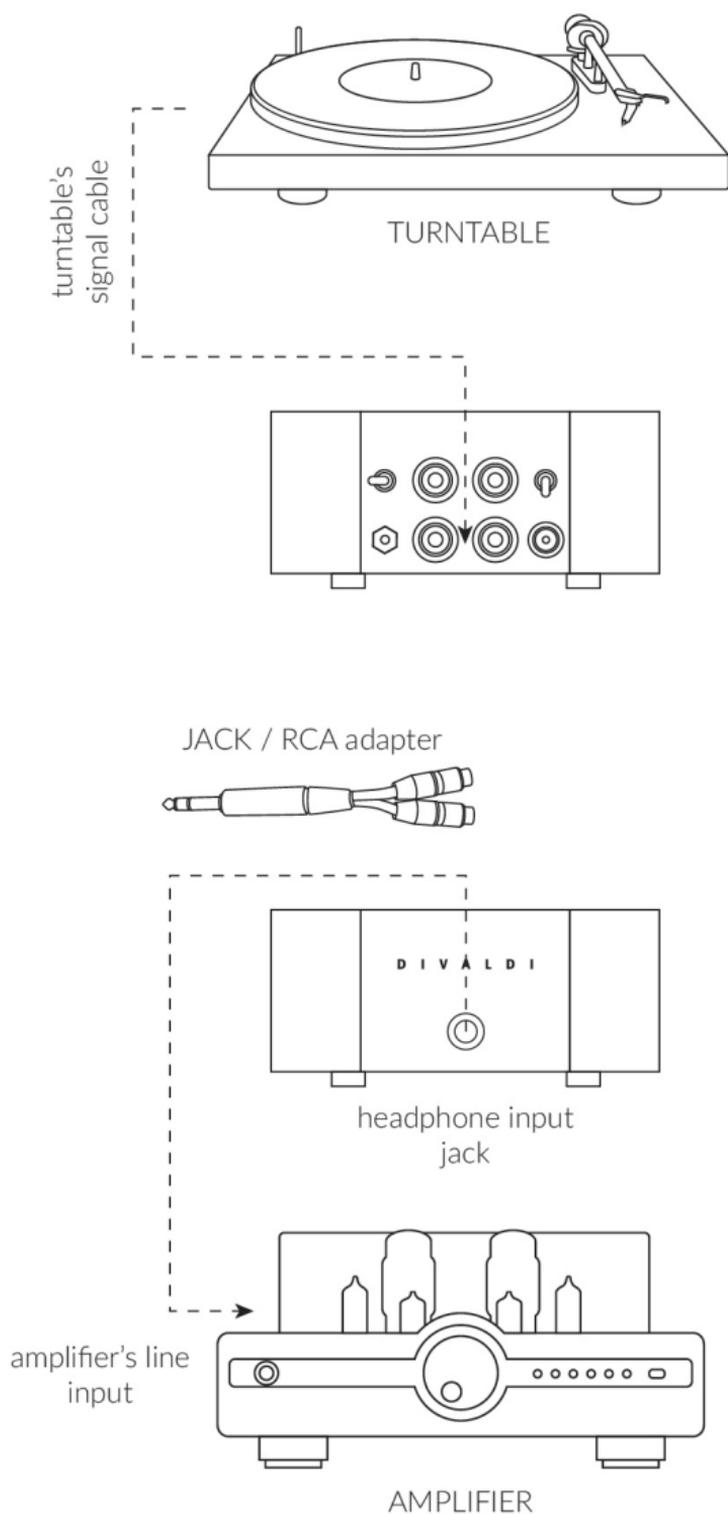


Fig. 2.
Phono preamplifier mode connection scheme for external power amplifier

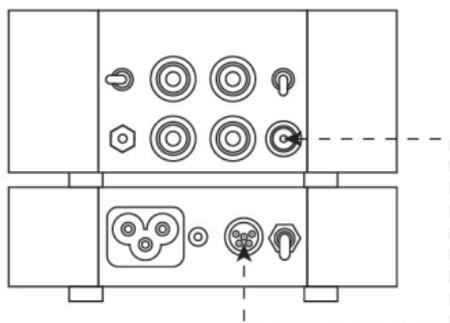


WARNING!

Connecting a line signal to Phono input may cause signal's overload and side effects including risk of damaging connected headphones.

Fig. 3.

Connection scheme of the amplifier and power supply



4. BASIC SAFETY CONDITIONS

HEADPHONE AMPLIFIER AMP-02

- Device can be powered only by a dedicated 16V AC power supply supplied by the manufacturer.
- The device is intended to be used indoors only.
- Protect the device from mechanical damage (in particular dropping) and contact with liquids (rain, drinks).
- All repairs may be performed by authorized service providers only.
- Do not connect power to damaged device.
- Do not disassemble the device. There are no adjustable elements inside.
- Do not switch the device on in rooms with a humidity of 90% and more.
- The device should not be used in temperatures lower than 10°C or above 45°C.
- 16V AC power cable ended with plugs should be plugged into the rear panel of the power supply and rear panel of the amplifier. The plug of the power supply is secured with a latch. 230V AC power cable should be plugged into the rear panel of the power supply. Main power switch is located on the rear panel of the power supply.

5. MAINTENANCE AND REPAIR

HEADPHONE AMPLIFIER AMP-02

The device can be wiped with a damp cloth. Do not use alcohol or water in direct contact with the device. Do not use other cleaning substances available in the household. The device does not contain any elements that can be repaired by an unqualified person. In case of a malfunction, please contact the seller or manufacturer.

WARNING!

Any unauthorized repairs may cause irreparable damage of the device or create other hazards and cancel the warranty.

6. PACKAGING CONTENTS

HEADPHONE AMPLIFIER AMP-02

- Amplifier
- Power Supply
- AC power cord
- 16V AC connection cable

7. TECHNICAL PARAMETERS

HEADPHONE AMPLIFIER AMP-02

POWER SUPPLY PS-AMP01

Headphone Amplifier AMP-02

Output power: 800 mW (Class A), 3.5W max. (impulse)

Output load: min 30 Ohm - 600 Ohm

Frequency response: 20Hz-20kHz / -0.5dB

Voltage amplification of the power stage: 20 dB

Phono MM step gain: 40 dB

Voltage amplification of the MC stage: 20 dB

Fit to the MM insert: 47 kOhm (100pF)

Adaptation to the MC cartridge: 10/22/33/50/100 Ohm (and more)

Input: RCA stereo socket 1x Linear, RCA stereo 1x Phono MM / MC

Output: 6.3mm stereo jack

Power supply: 16 V AC

Power consumption: 1A max.

Power consumption: 15 W max.

Load capacity of outputs: Max. 0.5A / channel (impulse)

Dimensions:

Width: 115mm

Height: 55 mm

Depth: 102mm

Weight: 0.7 kg

Power Supply PS-AMP01

230V AC input power supply (100V)

16V AC output power

Current load max 1A

Max power 20W

Toroidal transformer

230V AC power switch (100V)

Dimensions:

Width: 115mm

Height: 37mm

Depth: 102mm

Weight: 0.7kg

Total weight AMP-02 + PS-AMP01 + packaging: 2.1kg

8. CONTACT

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S O U N D & D E S I G N

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