

# **Audionet**

## **AMP I V2**

Stereo - Amplifier

### **User's Manual**



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# 1 Preface

The Audionet AMP1 V2 is a stereo audio power amplifier of highest performance and finish quality, and long-life stability. This system is designed for absolute natural music reproduction.

The following will give you all information about how to operate your AMP1 V2. Please read this carefully before the first use. Following these instructions, your AMP1 V2 will give you long-lasting pleasure and satisfaction.

## **1.1 Included**

Included you will find the following items:

- the stereo power amplifier AMP1 V2
- the user's manual (that you are currently reading)
- one standard mains cord

## **1.2 Transport**

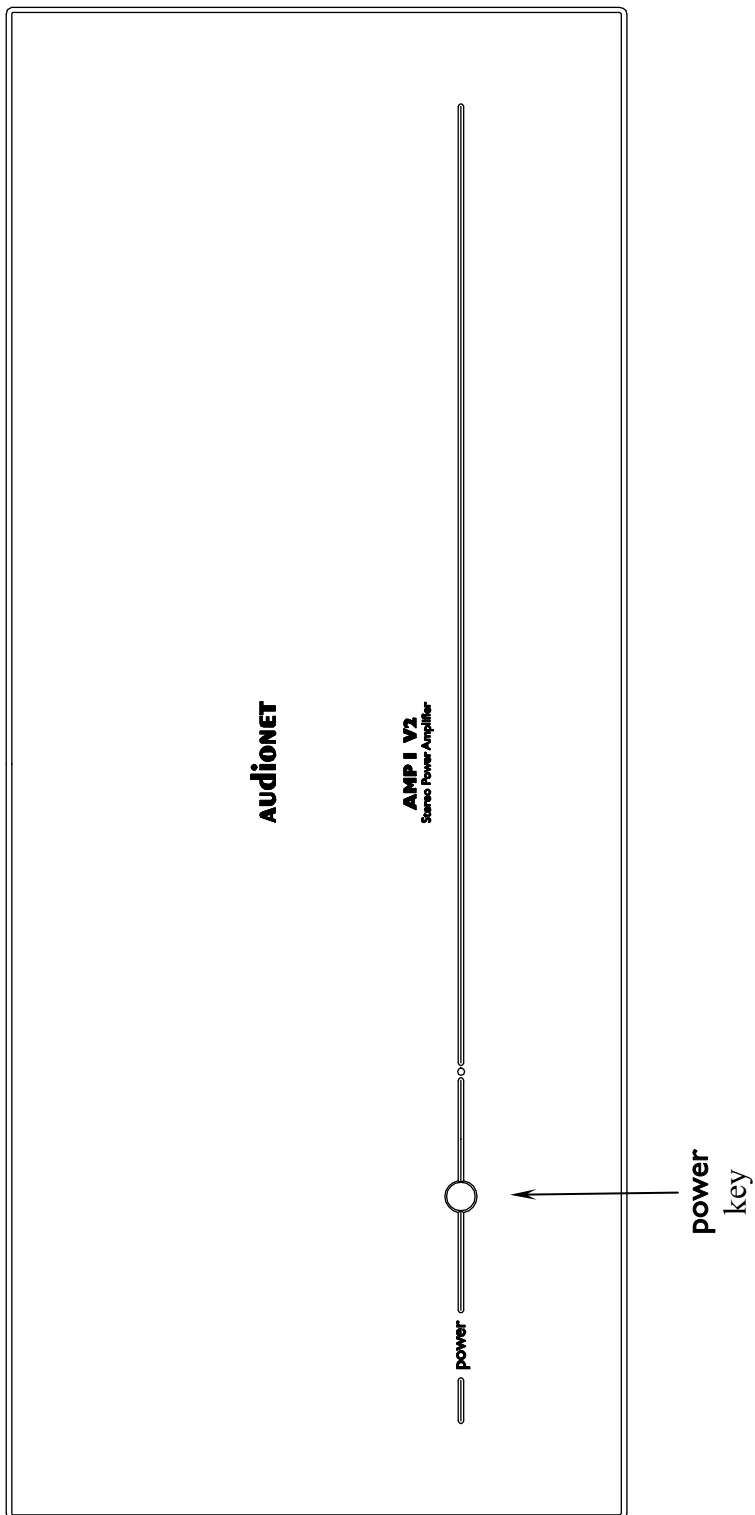


### **Important**

- Please transport the AMP1 V2 only in the included package.
- Always use the plastic bag to prevent scratches on the housing.
- Please allow the AMP1 V2 to adapt to the climatic conditions in your listening room before you switch on the unit for the first time after transport.

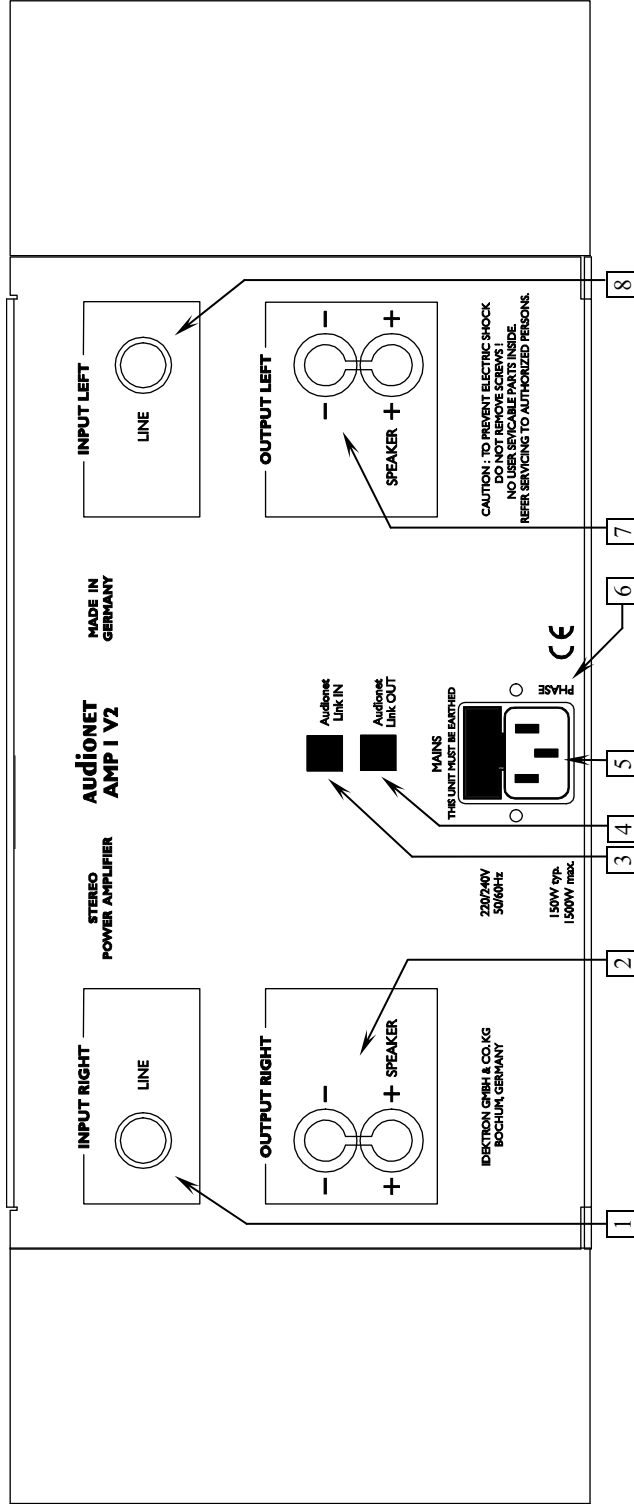
## 2 Overview control elements

### 2.1 Front panel



### 3 Overview connections

#### 3.1 Back panel



- 1 Line (RCA) input right
- 2 Speaker terminal right
- 3 Audionet Link input
- 4 Audionet Link output

- 5 Mains input
- 6 Marking Mains phase
- 7 Speaker terminal left
- 8 Line (RCA) input left

## 4 Installation and power supply



### Important

- For connecting or removing loudspeakers and/or the pre-amplifier your AMP1 V2 must be switched off to prevent damage to the amplifier or the connected units.
- Please make sure that all cables are in absolute best conditions! Broken shields or short-cut loudspeaker cables could damage speakers and/or amplifiers.

### 4.1 Placement

The compact design of the AMP1 V2 requires the unobstructed heat dissipation during operation. Please mind the following security notes:



### Important

- Please find a place for your Audionet AMP1 V2 that is sufficiently ventilated to allow the heat to dissipate.
- Do not expose the unit to direct sunlight or in close range to heat sources like radiators or fan heaters.
- Do not cover the ventilation slots of the unit.

### 4.2 Mains connection

The mains input 5\* is on the back panel of the AMP1 V2. To connect the unit to mains use the included cord. If you prefer to use a different power cord make sure they meet the specifications for your home country.



### Important

- The electrical specifications of your home country must meet the electrical specifications printed onto the back panel.
- The AMP1 V2 is a Class I unit and must be earthed. Please ensure a stable earth connection. The Phase ('hot' pin) is marked 'PHASE' 6 on the back panel for the mains input.

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\* see numbers in section 'Back panel' on page 7



- Never pull the mains plug while the AMP1 V2 is switched on! Before you pull the mains cord off the socket, power down the unit to stand-by mode.

Only in cases of extended absence (like vacations) or if massive trouble on the mains power is to be expected you should remove the AMP1 V2 from the mains. To disconnect the unit completely from mains pull both mains plugs.



**Note**

- Using high-quality mains cords as the Audionet P10, may improve the sound quality. Please consult your local Audionet dealer.

## 5 Inputs and outputs



### Important

- For connecting or removing loudspeakers and/or the pre amplifier your AMP1 V2 must be switched off to prevent damage to the amplifier or the connected units.
- Please make sure that all cables are in absolute best conditions! Broken shields or short-cut loudspeaker cables could damage speakers and/or amplifiers.

### 5.1 Inputs

The AMP1 V2 has two RCA inputs **1** and **8** for the connection of a pre amplifier, e.g. Audionet PRE G2. Due to the dual mono construction, left and right inputs are separated at the rear.

Please connect the right **1** and left input **8** of the AMP1 V2 to the corresponding outputs of your pre amplifier.

### 5.2 Speaker terminals

Connect your speakers to the gold plated terminals **2** and **7** on the back panel of the AMP1 V2. You can use banana plugs or spades as well as simple cable ends. In case you would like to bi-wire your speakers please refer to section '*Bi-Wiring*' on page 11.



### Note

- Look out for the correct connection of your speaker cables. Usually, the terminals of your speakers are marked '+' and '-'. The AMP uses the same marks.
- Wrong speaker polarization will result in severe loss of sound quality!



### Important

- Although the AMP1 V2 has an effective protection system to prevent damage to the circuits, switch off the unit while working on the speaker and/or audio cables.



#### Note

- The nominal loudspeaker impedance should be 2 Ohms or higher.
- Never use force or tools tightening the terminal screws.

### 5.3 Bi-Wiring

If your speakers support bi-wiring, use **two** separate cables to connect each speaker to the output terminals **2** and **7** of the AMP1 V2. Impulse response and spatiality may improve significantly.



#### Note

- Again, please mind the correct polarization of the speakers!

### 5.4 Bridged operation

With a second AMP1 V2 bridged operation is possible (please refer to technical information). In this case, every amplifier supplies only one loudspeaker. For that the output signal of the pre amplifier must be available in inverted form additionally (e.g. use the Audionet PRE G2).

For the **left** channel now please do the following:

Connect the normal signal of the **left** pre amplifier output to the left input **1** and the inverted signal to the right input **8** of the AMP I V2 supplying the **left** loudspeaker. Please make a solid connection (wire cross section of 4.0 mm<sup>2</sup>) between both (-) loudspeaker outputs. Now please connect the left loudspeaker to both remaining (+)-outputs (the positive input of the loudspeaker to the (+) output of the left channel).

For connecting the **right** channel please do the corresponding with the second amplifier.



#### Important

- **In bridged operation the loudspeaker impedance must be 4 ohms or more.**

## 5.5 Audionet Link

For your convenience, the AMP1 V2 can be controlled remotely by one of Audionet's multi channel pre amplifiers (e.g. MAP or MAP 1) as well as one of Audionet's stereo pre amplifiers (e.g. PRE G2, PRE 1 G3) using the Audionet Link interface.

You only need a optical 'Toslink' cable to connect the Audionet Link output of your Audionet pre amplifier to the Audionet Link input **IN** 3 of the AMP1 V2.

In case you would like to automatically switch on/off further Audionet units in your system (e.g. a second AMP1 V2) using the Audionet Link interface, please connect the Audionet Link output **OUT** 4 of your AMP1 V2 to the Audionet Link input of the next Audionet unit (e.g. power amplifier, tuner, CD player etc.) using a simple 'Toslink' cable.



### Note

- The 'switch on' signal is issued to any further Audionet units daisy chained to the Audionet Link output of your AMP1 V2 with a little delay to avoid all units switching on at the same moment, which could cause an overload of your mains fuse.

## 6 Operating

### 6.1 Powering up

First of all, please make sure your AMP1 V2 is connected correctly to your pre-amplifier, speakers and mains (see section '*Installation and power supply*' on page 8 and section '*Inputs and outputs*' on page 10).

The AMP1 V2 is a stand-by unit. As soon as the amplifier is connected to the mains, the unit is in stand-by mode

Only in cases of extended absence (like vacations) or if massive trouble on the mains power is to be expected it is recommended to disconnect the AMP1 V2 from mains.



#### Important

- **Never pull the mains cord while the AMP1 V2 is switched on! Before you pull the mains plug, power down the unit to stand-by mode first.**

### 6.2 Switching on/off

To power up the AMP1 V2 from stand-by mode, press the **power** key on the front panel. Now the AMP1 V2 is in normal operating mode.

If you would like to switch off the unit, please press the **power** key on the front panel.



#### Note

- If 'remote controlling' via Audionet-link is used, after switching off the AMP1 V2 is always in stand-by operation with low power consumption. Only in case of longer absence the AMP1 V2 should be disconnected from the power supply (mains unplugged).

### 6.3 Using Audionet Link

If your AMP1 V2 is connected to an Audionet pre amplifier via Audionet Link, use the remote control of the pre amplifier to automatically switch on/off the AMP1 V2 (and all other Audionet units also connected via Audionet Link).

For setting up the necessary connections please refer to section '*Audionet Link*' on page 12.

## 7 Protection system

Your AMP1 V2 has a powerful protection circuit to prevent damage of the amplifier itself or the loudspeakers connected. In case of trouble the AMP1 V2 is switched to stand-by state. The source of the problem is indicated by a flash code of the LED next to the **power** key on the front panel:

<b>Error Code</b>	<b>Possible Cause</b>
<b>short short short</b>	overload – left channel
<b>short short long</b>	overload – right channel
<b>short long short</b>	overheat – left channel
<b>short long long</b>	overheat – right channel
<b>long short short</b>	high frequency oscillation – left channel
<b>long short long</b>	high frequency oscillation – right channel
<b>long long short</b>	direct current (DC) – left channel
<b>long long long</b>	direct current (DC) – right channel

## **8 Technical information**

### **8.1 Construction**

The AMP1 V2 is constructed as a dual-mono amplifier. SMD techniques are used to optimise high-frequency characteristics. All signal paths are reduced to minimum length. No elements malicious to sound quality (i.e. coupling capacitors, coils, relays) are located in the signal path. The construction is magnetically and capacitively optimised. Negative magnetic and electric influence and interaction between input, decoupling and power section are reduced to a residual minimum.

### **8.2 Power supply**

The input sections are supplied by a 50 VA toroidal transformer with separate windings for stereo channels. Two potted 700 VA toroidal transformers feed the power section. The control unit is supplied by separate transformer.

The capacity of the fast and pulse-resistant high-current capacitors is 188,000  $\mu\text{F}$ . The voltages are regulated with discrete and optimised ultra high-speed MOSFET regulators.

## 9 Security advice

- Avoid packaging material, especially plastic bags, to come into children's hands.
- Store and operate the unit in a dry room at a reasonable room temperature.
- Avoid moisture or any liquid to get into the unit.
- Set up the unit in a free position so that the air is allowed to flow through the unit slits.
- **Do not cover**, e.g. with a blanket.
- **Do not open** the case. Unauthorised opening will cause loss of guarantee.
- Use a dry cloth for cleaning.



## 10 Technical data

<b>Function</b>	Stereo power amplifier
<b>Output Power</b>	2 * 200 Watt into 8 Ohm 2 * 300 Watt into 4 Ohm 2 * 450 Watt into 2 Ohm 1 * 600 Watt into 8 Ohm (bridged) 1 * 900 Watt into 4 Ohm (bridged))
<b>Frequency range</b>	0 – 300.000 Hz (-3dB)
<b>Damping factor</b>	> 1000 @10 kHz > 4000 @ 500 Hz
<b>Intermodulation</b>	< -110 dB SMPTE 100 Hz : 20 kHz, 4:1, 50 W/4 Ohm
<b>THD+N</b>	< -102 dB @1 kHz (35 Watt / 2 Ohm)
<b>Harmonic distortion</b>	k2 typ. -120 dB @ 25 Watt into 4 Ohm k3 typ. -123 dB @ 25 Watt into 4 Ohm
<b>SNR</b>	> 106 dB @ 10 Veff
<b>Inputs</b>	2 <b>WBT</b> RCA line, gold-plated 1 Audionet Link, optical
<b>Input impedance</b>	37 kOhm, 220 pF
<b>Outputs</b>	2 pair <b>WBT-NextGen</b> jacks, gold-plated 1 Audionet Link, optical (TosLink)
<b>Mains</b>	120 V or 230 V, 50..60 Hz
<b>Power consumption</b>	Stand-by < 1W, max. 1.500 W
<b>Dimensions</b>	Width: 430 mm Height: 175 mm Depth: 315 mm
<b>Weight</b>	28 kg
<b>Finish</b>	<b>Front:</b> brushed aluminium, 10 mm black anodized, white printing or nature anodized, black printing <b>Display:</b> red or blue <b>Cover and heat sink:</b> aluminium black anodized <b>Chassis:</b> steel, black varnished, 2 mm

<b>Features</b>	<ul style="list-style-type: none"> <li>- Audionet ULA technology</li> <li>- dual-mono amplifier</li> <li>- magnetically and capacitatively optimized construction</li> <li>- signal paths are kept to a minimum</li> <li>- no capacitors and electromechanical components in the signal path</li> <li>- completely DC coupled</li> <li>- separate power supply for input and power stage</li> <li>- 2 toroid transformer, each with 700 VA</li> <li>- 4 impulse-stable high-current capacitors with filtering capacity totalling 188,000 uF</li> <li>- discrete, extremely fast and stable driver and output stages</li> <li>- control unit for HF, DC, temperature rise and overload</li> <li>- remote activation via Audionet Link (fibre optics cable)</li> </ul>
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Errors and omissions excepted. Specifications and design are subject to changes without prior notice.

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