

# **Audionet**

## **AMP I**

Stereo - Amplifier

### **Owner's Manual**

## **How to operate the Audionet AMP I**

The Audionet AMP I is an 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 AMP I. Please read this carefully before the first use. Following these instructions, your AMP I will give you long-lasting pleasure and satisfaction.

## Connecting the system

**Power supply** Please connect the power jack at the rear to your wall outlet. You should either use the provided power cord or another one allowed for your homecountry specifications.

**NOTE:**

**The power specifications on the rear must meet to your home country specifications.**

**The AMP I is a Class I-system and must be earthed. Please ensure a stable earth connection.**

**Inputs** For connecting or removing a preamplifier, the AMP I has to be switched off. Please ensure that all connector cables are in absolutely best condition.

The AMP I has two RCA inputs for the connection of a preamplifier, e.g. Audionet PRE. Due to the dual mono construction, left and right inputs are separated at the rear.

Please connect left and right input of the AMP I to the corresponding outputs of your preamplifier.

**Outputs / Loudspeakers** The AMP I has a protection circuit to prevent damage of the system in case of short-circuit between the loudspeaker outputs. Nevertheless, to be on the safe side your AMP I should be switched off while you are working on the cables between amplifier and loudspeakers.

Please connect the left and right loudspeaker outputs to the corresponding inputs of your loudspeakers. You should pay attention to phase coincidence of your connections. This means that the red outputs (+) of the amplifier are connected to the positive inputs of the loudspeakers (usually red) and the white outputs (-) are connected to the loudspeakers' negative

inputs (usually white or black). Deviation will cause loss of sound quality.

**Note** The nominal loudspeaker impedance must be 2 ohms or more (recommended are 4 ohms).

**Bridged operation** With a second AMP I 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 preamplifier must be available in inverted form additionally (e.g. use the Audionet PRE).

Please ensure that all amplifiers are switched off.

For the **left** channel now please do the following: Connect the normal signal of the **left** preamplifier output to the left input and the inverted signal to the right input of the AMP I supplying the **left** loudspeaker. Please make a solid connection ( $25 \text{ mm}^2 \text{ } \varnothing$ ) 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 (you only have to replace every „left“ in bold face by „right“).

Now you may switch on the amplifiers. In bridged operation the loudspeaker impedance must be 4 ohms or more.

**Audionet Link** In combination with an Audionet preamplifier (e.g. Audionet PRE) the AMP I can be switch on and off by the preamplifier. Please connect the Audionet-link output of the preamplifier with a Toslink optical fibre cable to the Audionet-link input of the AMP I. The power switch at the front must be in „off“ position.

If you own a second (or more) AMP I, it is also possible to switch on and off these amplifiers with Audionet-link. Therefore please connect the link output of the first amplifier with the link input of the second amplifier and so on. In order to prevent overload of your house installation, the amplifiers will switch on with a time delay.

## Operating the system

Before switching on your AMP I please ensure that all cable connections are in best condition and the connected preamplifier is already switched on.

**Switching on** To switch the AMP I on, please press the „power“ button on the front panel. Because of absence of any relay in the signal path, switching on may cause a soft „plop“.

**Switching off** To switch the AMP I off, please press again the „power“ button on the front panel. The amplifier now still works for about 8 seconds, until the power capacitors are discharged. Now the music stops.

**Note** To enable „remote controlling“ by Audionet-link, after switching off the AMP I is always in stand-by state with low power consumption. Only in case of longer absence the AMP I should be disconnected from the power supply (mains unplugged).

**Protection circuit** Your AMP I has a powerful protection circuit to prevent damage of the amplifier itself or the loudspeakers connected. In case of trouble the AMP I is switched to stand-by state. The problem source is indicated by a flash code of the LED next to the „power“ button:

<b>short short short:</b>	overload / short-circuit	left channel
<b>short short long:</b>	overload / short-circuit	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

## Technical information

**Construction** The AMP I 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 'evil' elements (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.

**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 another transformer.

The capacity of the fast and pulse-resistant high-current capacitors is 132,000  $\mu\text{F}$ . The voltages are regulated with discrete and optimised ultra high-speed MOS-FET regulators.

**Circuit** The audio signal is received by a monolithic dual FET preceding a dual-stage voltage amplifier. Its gain-bandwidth product exceeds 1 GHz. Input and output section are decoupled using „bootstrapped“ emitter followers.

The output section is equipped with power MOS-FETs. They can handle a pulse power up to 2.5 kW. The high bias current through that stage (0.4 Amperes) is regulated actively. Therefore, signals at normal volume level are handled pure Class A.

The protection circuit permanently controls DC, HF, temperature and overload. In case of trouble the AMP I is switched to stand-by state. The problem source is indicated by a flash code of the LED next to the „power“ button.

## 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.

## Technical Data

function	power amplifier
power	2 * 200 W in 8 $\Omega$ 2 * 300 W in 4 $\Omega$ 2 * 450 W in 2 $\Omega$ 1 * 600 W in 8 $\Omega$ (bridged operation) 1 * 900 W in 4 $\Omega$ (bridged operation)
frequency response	0 - 300,000 Hz (-3 dB)
damping factor	> 1000 at 10 kHz > 4000 at 500 Hz
intermodulation	< -110 dB SMPTE 100 Hz : 20 kHz, 4 : 1, 50 W/4 $\Omega$
THD	<-100 dB for 35 W in 2 $\Omega$ (20 Hz to 20 kHz)
distortion spectrum	k2 typ. -120 dB for 25 W in 4 $\Omega$ k3 typ. -123 dB for 25 W in 4 $\Omega$
SNR	> 100 dB at 10 V <sub>RMS</sub>
input impedance	37 k $\Omega$ , 220 pF
inputs	RCA for left and right input signal (gold-plated)
output	clamp or 4 mm socket for left and right output signal (gold-plated)
power supply	110..120 V or 230..240V AC, 50/60 Hz
power consumption	5 W in stand- by state max 1500 W
dimensions	430 mm * 185 mm * 315 mm (w * h * d)
weight	28 kg
	Subject to modification

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