

# **Audionet**

## **AMP IV**

4 Channel Amplifier

### **Owner's Manual**

## **Congratulations!**

For those in need of even more amplification we have engineered the AMP IV. The AMP IV is our power amplifier for multichannel applications and supplements our mono and stereo amplifiers. With its four channels modern 6.1 home cinema is easily attainable as well as other multichannel applications like, for example, bi-amping. With an intelligent circuit layout and high power output, the AMP IV plays sovereign and slender. The sound quality is outstanding. The AMP IV does not get worked up and plays highly emotionally. Like all our mono and stereo power amplifiers we have realized Audionet's ultra-linear amplifier concept consequently within the AMP IV. Its circuits are designed for the lowest distortion and highest speed and stability. The construction makes the four channels operate independently as much as possible. A clever protection circuit ensures the easiest handling, high operation safety, and detects the correct mains phase. The inputs are equipped with gold-plated, Teflon-insulated sockets, and the outputs with gold-plated loudspeaker terminals. Of course, AMP IV can be switched on and off remotely. The AMP IV fascinates with transparency, rich details and the greatest of ease. Let yourself be more than inspired by its enthusiasm.

First, please read the manual and the precautions carefully. The AMP IV is a complex unit and offers lots of common features. In case of difficulties, please do not hesitate to contact your dealer or our factory directly!

## Installation and power supply

**Placing** Please find a place for your Audionet AMP IV that is sufficiently ventilated to allow the heat to dissipate.

**Connecting** Connect the power jack at the rear to your wall outlet. You should either use the provided power cord or another one according to electrical specifications of your home country. Tuning with "audiophile" power cords can lead to improved sound field. Ask your dealer for assistance.

**NOTE: The power specifications on the rear must meet the electrical specifications of your home country. The AMP IV is a Class I-system and must be earthed. Please ensure a stable earth connection.**

**Mains phase detection** Your Audionet AMP IV is able to detect a wrong polarization of the mains. If you see the front LED flashing quickly when powering on, flip the plug in your wall outlet (also see below).

Additionally, on the rear panel you find a mark "p<sub>HASE</sub>" next to the mains connector. If you have the optional "Audionet Power Cord", APC, the phase is also marked on the wall plug itself.

The correct polarization of the mains is important for reasons of clarity and stability of sound.

**Auto Power On** **WARNING:** AMP IV switches on automatically (Auto Power On) when using the mains switch at the rear panel (see section "Operating").

## Inputs and Outputs

For adding or removing connections your AMP IV must be switched off!

**Please make sure that all cables are in absolute best condition. Broken shields or short-cut loudspeaker cables could damage loudspeakers or the amplifier!**

### Inputs

At first connect your AMP IV to your pre amplifier. The inputs are subdivided into the groups "Right Group" and "Left Group". Within both groups are two input jacks each ("IN 1R" & "IN 2R" and "IN 1L" & "IN 2L").

If you want to use the AMP IV as a 4 channel power amplifier flip both switches "Input Source" into position "Right Multi" and "Left Multi".

In case you want to use the AMP IV as a bi-amping power amplifier in stereo mode flip the switches "Input Source" into position "IN 1R" and "IN 1L". Connect the outputs of your pre amplifier to inputs "IN 1R" and "IN 1L".

Both modes are selectable separately to both input groups. For example, you can use "Group Right" with its inputs for both surround channels "Left Surround" and "Right Surround" (switch position "Right Multi"). The left group can be used to setup a Center speaker in bi-amping mode (switch position "bi-AMP IN 1L").

### Speakers

Connect your speakers to the gold plated WBT terminals at the back. Please make sure 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 negative loudspeaker inputs (usually white or black).

Wrong speaker polarization will result in severe loss of sound quality!

The nominal loudspeaker impedance should be 4 ohms or higher.

Although the AMP IV has a protection circuit to prevent damage of the system, switch off the unit while working on the loudspeaker cables.

Never use force or tools tightening the terminal screws!

### **Assignment of speakers**

In the following you will find the assignment of input jacks to corresponding loudspeaker outputs depending on position of switch "Input SOURCE":

"Input SOURCE" in position "Right Multi":

Input "IN 1R" -> Speakers output "OUT 1R"

Input "IN 2R" -> Speakers output "OUT 2R"

"Input SOURCE" in position "Left Multi":

Input "IN 1L" -> Speakers output "OUT 1L"

Input "IN 2L" -> Speakers output "OUT 2L"

"Input SOURCE" in position "bi-AMP IN 1R":

Input "IN 1R" -> Speakers output "OUT 1R" & "OUT 2R"

Input "IN 2R" -> not used

"Input SOURCE" in position "bi-AMP IN 1L":

Input "IN 1L" -> Speakers output "OUT 1L" & "OUT 2L"

Input "IN 2L" -> not used

## Operating

**Power** First, switch on the AMP IV by flipping the mains switch at the rear in position "1". The switch is located above the mains socket. Now the AMP IV will start automatically in run mode (Auto Power On). To enter the stand-by mode press the button at the front panel.

For switching your AMP IV on and off, please use the power button at the front panel from now on. The mains switch does not need to be operated unless you are absent for a long time. It must only be operated while the AMP IV is in stand by mode

**Mains phase indicator** As mentioned above, your Audionet AMP IV is able to detect a wrong polarization of the mains. The indication is done by the front LED between the touch of the "power" key and the "click" of the loudspeaker relays.

If the polarization is correct, the LED flashes  $\otimes$  \_\_\_\_\_  $\otimes$  \_\_\_\_\_  $\otimes$  etc. However, if you should observe a fast signal  $\otimes$  \_  $\otimes$  \_  $\otimes$  \_  $\otimes$  \_  $\otimes$  \_  $\otimes$  etc., flip the plug in your wall outlet after having switched off the AMP IV.

**Audionet Link** When the AMP IV is in stand-by mode it can be powered up by any Audionet pre amplifier (e.g. MAP, PRE, PRE 1, PRE G2, PRE 1 G2) using the "Audionet link". This feature is described in the pre amplifier manuals, too.

You only need a simple optical "Toslink" cable. Connect one of the pre-amplifier outputs "Audionet Link" with the "Link" input of your AMP IV "IN"). Now the AMP IV is switched on and off by the pre amplifier. Length of the "Toslink" cable is not critical- so you can place the AMP IV next to the speakers if you prefer.

Connect the "Audionet Link" input of further Audionet power amplifiers to the "link" output ("OUT") of AMP IV using a simple, optical "Toslink" cable.

## Protection system

Your Audionet AMP IV is equipped with one of the most powerful protection circuits available on the market.

In case of an error please check the cause referring to the following table:

- ◆ Overload: Short-circuit of a loudspeaker cable or loudspeaker defect.
- ◆ Overtemperature: Please free the top and bottom ventilation slots!
- ◆ HF Error: HF oscillation, please check your input source.
- ◆ DC Error: Dangerous DC-voltage at the output: Defective preamp, source or active crossover carrying DC.

A possible fault is indicated for all four power amplifiers separately. In case of an error the LED at the front panel will flash. Look through the gaps in the top plate. At the rear end of the main PCB you will find 12 LEDs. While running in error free operating mode all 12 LEDs will be on. If an error occurred only one of the LEDs will be on indicating the error. There is a number printed next to each LED. Please look up the corresponding error description in the following table:

1. DC on channel 1L
2. DC on channel 2L
3. DC on channel 1R
4. DC on channel 2R
5. Overload on channel 1L
6. Overload on channel 2L
7. Overload on channel 1R
8. Overload on channel 2R
9. Overtemperature on heat sink L
10. Overtemperature on heat sink R
11. High frequency in group L
12. High frequency in group R

**WARNING:** Remove cause for error before switching on AMP IV again!

## Specialities

**Construction** For optimizing the high frequency capabilities Audionet consequently uses Surface-Mounted Devices (SMD). As a result the faster and more compact circuits enable the engineer to use low-straw and extreme short wiring. The very good damping factor is a result of this, for instance.

**Power supply** Pre and power stages have separate rectifiers circuits. The main transformers are rated at 2 \* 400VA and drive sixteen high current capacitors with an overall capacity of 120.000 $\mu$ F. All 16 rectifying diodes are ultra-fast "schottky"-types.

Input and driver stages have separate fast and discrete voltage regulators.

**Circuitry** In the input stage Audionet employs a low-noise monolithic Dual-FET. A dual differential gain stage follows feeding multiple bootstrapped emitter-followers, which decouple the power stages from the voltage gain stages perfectly.

A fast arithmetic correction circuit locally ensures that distortion of the power stages is eliminated at once. The fast American "IR" Power-MOSFET-Transistors ensure powerful loudspeaker control and long term stability.



## Precautions and Care

- ◆ Prevent children from playing with plastic bags!
- ◆ Please 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. Do not cover the top.
- ◆ Do not open the case. No user serviceable parts inside. Unauthorized opening will cause the loss of warranty.
- ◆ Do not short-circuit the output terminals.
- ◆ Please use a dry cloth for cleaning

We wish you many exciting listening experiences with your Audionet products!

If you need further information about our products please do not hesitate to contact your local Audionet dealer or us directly!

Your Audionet Team

## Technical Data

Function	4-channel power amplifier
Output power	4 * 100 Watts into 8 ohms 4 * 160 Watts into 4 ohms
Frequency range	2 - 300.000 Hz (-3 dB)
Damping factor	> 1000 from 10 Hz to 10 kHz
THD + N	> 104 dB (25 Watts / 4 ohms)
Harmonic distortion	k2 typ. -115 dB for 25 Watts into 4 ohms k3 typ. -120 dB for 25 Watts into 4 ohms
Signal to noise ratio	> 110 dB
Channel separation	> 90 dB at 1 kHz
Input impedance	37 kohms, 150 pF
Inputs	4 RCA line AC-coupled, gold-plated 1 Audionet-Link, optical
Outputs	4 stereo loudspeaker terminals, gold-plated 1 Audionet-Link, optical
Mains	120 V or 230 V, 50...60 Hz 2 W Stand by, max. 800 W
Dimensions	430 mm * 110 mm * 360 mm (W * H * D)
Weight	18 kg
Features	Protection circuit for HF, DC, temperature and overload remote switch-on via Audionet-Link (optical) automatic mains phase recognition autostart function

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