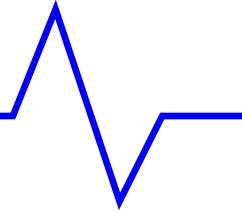


# Jiisuki Industries

Old-School Technology Re-Invented



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Document Version 1.0

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## Baseline Headphone Amplifier

### *Manual*

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# 1 Specification

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## 1.1 General Run-Down

<b>Module Dimensions</b>	3U Eurorack panel, 8 TE width. Aluminum front panel.
<b>Power</b>	$\pm 12$ Vdc, 100 mA max.
<b>Front Connections</b>	3.5 mm mono inputs, 3.5 mm stereo output, 6.3 mm stereo output.
<b>Rear Connections</b>	Eurorack bus 16 pin header.

## 1.2 Electrical characteristics

<b>Input Impedance</b>	10 k $\Omega$ .
<b>Output Impedance</b>	36 $\Omega$ .
<b>Maximum Signal Input</b>	$\pm 10$ Vac (+11 dBu).
<b>Bandwidth</b>	20 Hz to 28 kHz ( $\pm 0.1$ dB).
<b>Total Harmonic Distortion</b>	0.04 % at 1 kHz, 8 $\Omega$ load.
<b>Output Noise</b>	-90 dBV (Full bandwidth).
<b>Linearity</b>	See Technical Details.
<b>Inter-modulate Distortion</b>	$< 0.1\%$ at $V_{in} > 0.1$ Vac.

## 1.3 General

The **Jiisuki Industries** Baseline Headphone Amplifier requires a complementary power supply providing  $\pm 12$  Vdc. The module is protected against reverse voltage. However, the warranty is not valid for faults occurred by faulty installation. Please make sure that you check all connection carefully before turning on the system.

This unit is cooled by air convection only. This is made possible due to the paralleled design. However, make sure you have adequate space behind the module to allow air to flow freely. Do not place the unit under direct sunlight, or in any other source of heat.

The headphone amplifier may be mounted in a 3U Eurorack with 8 TE (HP) of available space. Mounting screws are provided, together with protective washers. Use the washers on the front panel when installing to protect the finish. Only clean the front panel with a barely damp cloth. No cleaning solutions except pure water should be used.

# 2 Installation

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## 2.1 Compliance

This product is not subject to the **European EMC Directive 89/336/EEC** which applies to apparatus which is **liable to cause electromagnetic disturbance or is itself liable to be affected by such disturbance** due to it's purely analog design.

## 2.2 Earthing

For safety reasons, the 0V (GND) line is connected to the front panel and must be grounded at all times.

## 2.3 Connecting Power

Before connecting power, please make sure the system is offline and disconnected from the mains power. Leave all connections on the front panel unconnected when installing the module.

**Warning:** Failure to observe this practice may result in hazard to life or damage to connected equipment. Please follow the recommended safety guidelines.

The module is delivered with a power cable following the Eurorack format. The marked side of the cable is -12Vdc power, and should be facing downwards. It is important that you check the polarity of the connection. Make sure that -12Vdc line is connected to -12Vdc on the distribution board. The module is protected against reverse polarity and missing supply lines. However, wrongly attached power might cause damage and problems to other modules in the system that does not have protection, so please check the power connection several times.

When the power connection has been made, mount the front panel in the rack using the screws delivered with the module. There are 2 sets of screws, M2.5 and M3 type screws. Use the washers delivered with the module to protect the front panel from scratches. It is important that the module is firmly attached to the front panel before turning on power, both for safety reasons and for electromagnetic compatibility.

## 2.4 Starting Up

When the power is correctly connected and the front panel is secured to the rack, turn on power. Please do not plug in any headphones before turning on power the first time, and turn down the volume completely.

## 2.5 Connecting Signals

Before connecting any signal, please make sure that the level is turned completely down to avoid harmful sound to your headphones. The module has two monophonic signal inputs. If only the left channel is used, the output will be mono. Connect any type of audio signal to the left channel (or left + right channels). Turn the volume up slowly until you hear the sound at a comfortable level.

**Attention:** The headphone amplifier is capable of very high sound pressure levels when using high impedance headphones! Please beware of the sound pressure level before mounting headphones on your head.

## 2.6 Checking

If you hear the sound clear as day, the module is up and running. If you encounter any problems, don't hesitate to contact us!

## 2.7 Maintenance

Only clean the front panel with a barely damp cloth. No cleaning solutions except pure water should be used, and use it very sparsely. Always make sure that the power is disconnected before cleaning the front panel!

## 3 Operation

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Due to the amplifiers parallel design, there is little (if none) stress on the components. **Jiisuki Industries** only uses high quality components where it is important, for reliability and long life.

## 4 Warranty

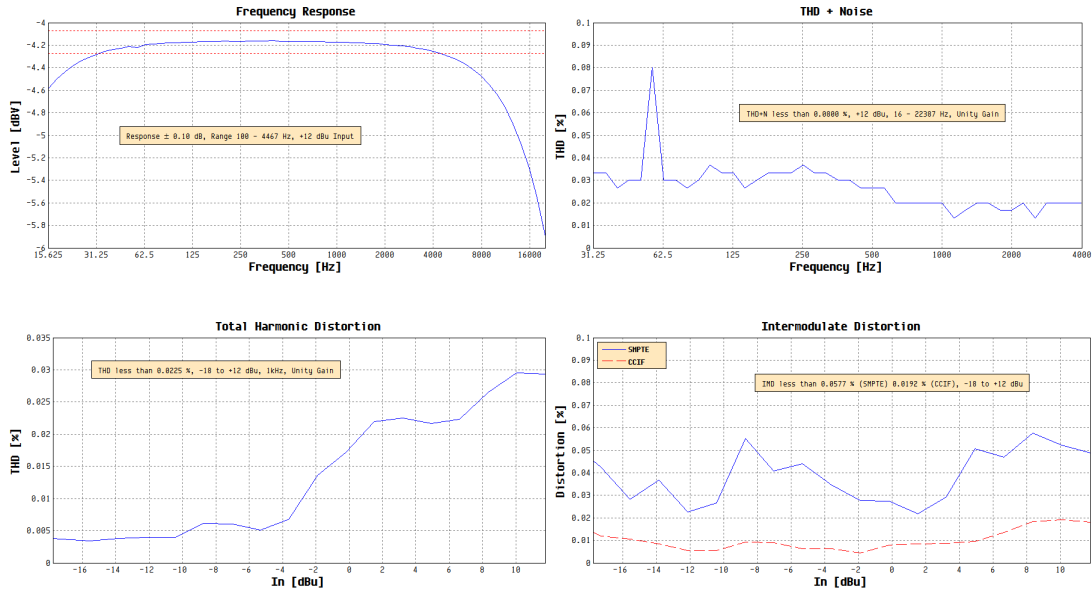
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**Jiisuki Industries** gives a 2-year warranty on this product and guarantees that it will be free of faults within this time period. The warranty does not cover any fault that has been caused by faulty operation or disregard to any instructions within this manual. The warranty does not cover error due to powering the module while still damp or wet after cleaning. **Jiisuki Industries** does not pay for delivery cost for any warranty errands. The user has to pay postage to ensure that the module reaches **Jiisuki Industries** in a safe and sound manner. However, **Jiisuki Industries** does stand for the postage fee for the return journey to the customer. **Jiisuki Industries** can not stand liable for any damage caused to anyone, or anything by the use of this product.

## 5 Technical Details

These are some of the alpha testing results. All measurements were performed on an open breadboard design.

### 5.1 Frequency Response and Distortion Figures



### 5.2 Linearity and Noise Floor

