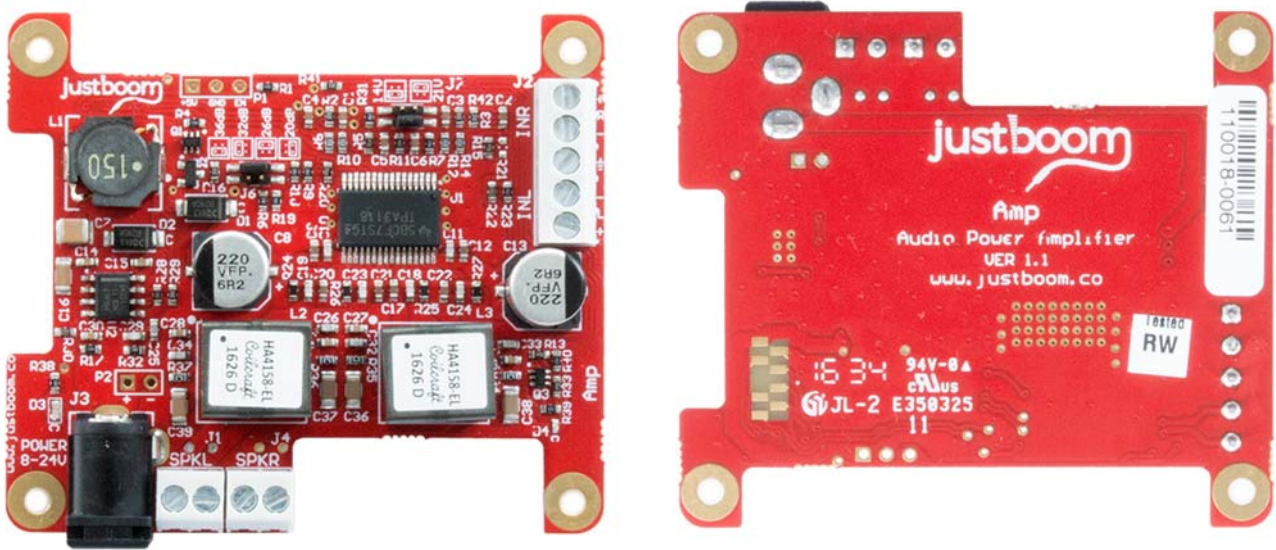# JustBoom Amp

SKU: JBM-008

The JustBoom Amp is a standalone high quality audio power amplifier that is designed to either stack on top of the JustBoom DAC / DAC HAT or alternatively take a line level input. We've designed the JustBoom Amp to be simple to use – with no soldering required and all the mounting hardware already provided, this is a true plug and play device
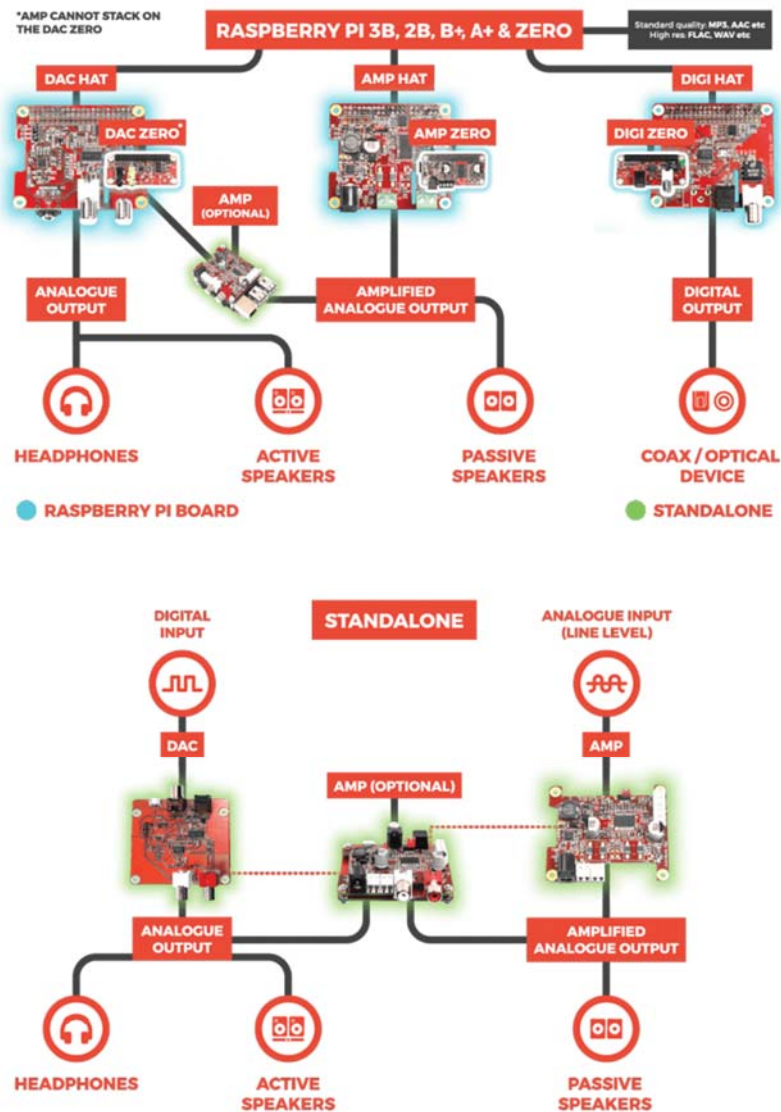
Description

The JustBoom Amp provides a 2x55W (peak) amplified stereo output. Just connect your JustBoom Amp to a set of passive speakers and you can be up and running quickly, enjoying flawless high quality audio playback within minutes of unboxing. Includes an advanced Class-D power amplifier chip for a peak power output of 2 x 55 Watts. The JustBoom Amp outputs audio over two speaker cable connector blocks that accept anything up to 14 AWG cable and will provide crystal clear audio to either 4 or 8 Ohm passive speakers.

JustBoom Amp can either be used as a standalone amplifier, or it can be stacked on the JustBoom **DAC HAT** or **DAC boards** to make a fully integrated DAC/Amp combo by means of a board to board connector and mounting hardware. Give your audio an extra kick, and extra output options for a more versatile and affordable high-quality audio experience!

The JustBoom Amp is designed with a 2.1mm DC jack power input which can accept an 8 to 24 Volt power supply. When stacked on the **JustBoom DAC** it can backpower the DAC board, and when stacked on the **JustBoom DAC HAT** it can backpower both the DAC HAT and the Raspberry Pi too (at the 2.5A for full Pi3 compatibility) meaning you only need a single power supply for the entire system...saving you time and money.

Need help understanding how this product works? Follow our **product guide**.

Setup Guide

- Follow the **JustBoom Amp setup guide** to get started
- Configure the **JustBoom Player** software

Use cases for the Amp

A standalone audio power amplifier card provides the perfect solution for a number of exciting projects and applications where standard audio resolutions just won't cut it, or where you want to give an extra kick to your JustBoom DAC / DAC HAT boards. Here are some possible use cases for the JustBoom Amp:

- Compact standalone amplifier to pair with your existing DAC
- Paired with the **JustBoom DAC** / **DAC HAT** to offer all in one DAC and amplifier for a compact high-quality audio solution
- Streaming (either from cloud or network storage) high-definition audio player
- Multi-room audio player
- Media centre / set-top box living room entertainment system
- And many many more….

Features

- Full high-quality audio – 192kHz / 24bit
- Stereo amplified 2 x 55 Watt peak output at 8 ohms (2 x 30 Watt RMS)
- Plug and play compatibility for ease of use – just connect to your passive speakers
- Onboard, hardware jumpers for configuring output voltage and gain settings (jumpers could optionally be changed with switches)
- No soldering required
- Compatible with the **JustBoom DAC** and **DAC HAT** or alternatively use as a standalone device
- When stacked on the JustBoom DAC it can backpower the DAC board, and when stacked on the JustBoom DAC HAT it can backpower both the DAC HAT and the Raspberry Pi too (at the 2.5A for full Pi3 compatibility)
- Mounting hardware included

Technical Information

- Texas Instruments TPA3118D2DAP Class-D amplifier chip with maximum power output of 2 x 55 W (2 x 30 W RMS)
- On the JustBoom Amp there are five line input connections. For balanced inputs: L+ is hot line L- cold line for left channel; R+ hot line, R- cold line for right channel; middle is ground (or cable shield) connection. For unbalanced L+ is left line, R+ right line, L-, R- and gnd are ground connections and all three inputs should be shorted to same input ground.
- Dual inductors on board for footprint efficiency

- The JustBoom Amp is designed with a 2.1mm DC jack power input which can accept an 8 to 24 Volt power supply. For 8 Ohm speakers, we recommend a 24 volt power supply with at least 75 Watt output power (POWERPAX SW4527 or similar plus C5 cable). For 4 Ohm speakers we recommend a 15 to 19 volt power supply with at least 58 Watt output power (POWERPAX SW4520 or similar). These power supply guidelines will ensure maximum output performance of the amplifier. However there are other options which can be found in our power supply recommendation document. (Please note: it is highly recommended to use an external power supply. If you power the JustBoom Amp from the DAC 5v PSU or over the GPIO pins of the Raspberry Pi and do not use one of the recommended power supplies, the maximum output power will be 2 x 3 Watts)
- When stacked on the JustBoom DAC this board can backpower the DAC board, and when stacked on the JustBoom DAC HAT it can backpower both the DAC HAT and the Raspberry Pi too (at the 2.5A for full Pi3 compatibility) meaning you only need a single power supply for the entire system
- Advanced ESD protection
- Total harmonic distortion (THD+N) of 0.1 % at 25 W, 1 kHz, 21V. Signal to noise ratio (SNR) of 102 dB A-Wtd (Ref. to THD+N < 1%, f = 1 kHz, Gain = 20 dB)
- Fully configurable onboard jumpers to adjust gain (20dB, 26dB, 32dB, 36dB) and output voltage (14V and 21V)

Additional information

WEIGHT	0.075 kg
DIMENSIONS	13 x 7.5 x 2.5 cm