

Pirate Radio - Pi Zero W Project Kit

PIM261



Build your very own internet-connected radio with the Pirate Radio Kit!

This kit has everything* you'll need, including a Pi Zero W, our flash new pHAT BEAT DAC and stereo amp, a 5W speaker, and a beautifully retro acrylic enclosure to make it look the business. It'll take you around 30 minutes to assemble everything** (check out our assembly guide for details).

Kit contents*

- Pi Zero W
- pHAT BEAT DAC and stereo amp. with VU meter and six buttons
- Male and female 2x20 pin headers
- Single 5W 4Ω speaker
- Blue acrylic enclosure***
- 50cm USB A to micro-B cable
- USB A (female) to micro B (male) adaptor
- Mini to full-size HDMI adaptor
- Sticker sheet (personalise your Pirate Radio!)
- Comes in a reusable kit box

**Just add your own micro-SD card*

***Note that this is a soldering project, although you could use one of no-solder hammer headers!*

****We've tweaked the design of the back layer and legs recently, and have updated the build guide with extra instructions for these new pieces.*

Pirate Radio uses our new pHAT BEAT DAC and stereo amp. to drive the single speaker (left and right channels are mixed when you flip the DIP switch on the underside to mono mode). pHAT BEAT uses the same I2S mono DAC and amplifier that we use on Speaker pHAT and Picade HAT and... adds a second one for stereo goodness! The two rows of 8 APA102 RGB LEDs make the perfect VU meter, and there are 6 buttons along the edges to control your audio.

This kit takes advantage of the built-in wireless LAN and Bluetooth on the Pi Zero W, meaning that there's no longer any need for a USB Wi-Fi dongle.

We've put together three different software projects for your Pirate Radio: an internet radio, a Spotify streaming box, or an AirPlay speaker.

Features

- Dual I2S DAC/amplifiers (MAX98357A)
- 3W per channel
- 2x push fit speaker terminals
- DIP switch to select blended mono or stereo modes
- 16 RGB LED pixels (APA102) in 2 rows of 8
- 6 edge-mounted push buttons
- Software installer and ALSA VU meter plugin <https://github.com/pimoroni/phat-beat#full-install-recommended>
- 5W 4Ω speaker with pre-soldered wires
- 3-layer blue acrylic enclosure
- Pi Zero W with single core CPU and built-in wireless LAN and Bluetooth
- Adaptor kit
- 50cm USB A to micro-B cable (power your Pi from an existing charger or computer)
- Python library <https://github.com/pimoroni/phat-beat>
- **Female and male headers require soldering**

Software

Our nifty one-line installer will get your pHAT BEAT configured and install our VU meter plugin for ALSA that uses the RGB LEDs on pHAT BEAT to display sound levels.

We've also put together a Python library to allow you to control the LEDs independently, if you wish, and to program the buttons to do whatever you wish.

Notes

Assembled size of Pirate Radio is 135x85x70mm (WxHxD).

