



Pirate Audio: 3W Stereo Amp for Raspberry Pi

PIM484

Bring an old radio or set of speakers into the 21st century with Pirate Audio 3W Stereo Amp for Raspberry Pi! Get punchy digital audio through the push-fit terminals and control your music with the built-in colour LCD and playback control buttons.

The push-fit connectors on Pirate Audio 3W Stereo Amp make it super-simple to connect up a set of speakers, whether they're bookshelf or floor-standing speakers, or the speakers in an old radio. Play crisp digital audio from local files (MP3, FLAC, etc.) or stream from services like Spotify. The combined DAC and amp gives you crisp 24-bit / 192KHz digital audio through your connected stereo speakers (or mixed-down mono through a single channel).

Pirate Audio is a range of all-in-one audio boards for Raspberry Pi, with high-quality digital audio, beautifully-crisp IPS displays for album art, tactile buttons for playback control, and our custom Pirate Audio software and installer to make setting it all up a breeze.

Features

- MAX98357A DAC / amplifier chip x2 (**datasheet**)
- Stereo 3W (per channel) audio out
- Push-fit speaker terminals
- Switch for stereo / mixed-down mono modes
- 1.3" IPS colour LCD (240x240px) (ST7789 driver)
- Four tactile buttons
- Mini HAT-format board
- **Fully-assembled**
- Compatible with all 40-pin header Raspberry Pi models
- **Pirate Audio software**
- Dimensions: 65x30.5x9.5mm

Software

Our **Pirate Audio software and installer** installs the Python library for the LCD, configures the I2S audio and SPI, and then installs Mopidy and our custom Pirate Audio plugins to display album art and track info, and to use the buttons for playback control.

Here's how to get started:

1. Set an SD card up with the latest version of Raspbian.
2. Connect to Wi-Fi or a wired network.
3. Open a terminal and type the following:

```
git clone https://github.com/pimoroni/pirate-audio
cd pirate-audio/mopidy
sudo ./install.sh
```

4. Reboot your Pi

You can find more detailed instructions here: <https://github.com/pimoroni/pirate-audio/tree/master/mopidy>

Notes

Note that our installer, linked above, does all of the below for you, but if you're an intrepid hacker then you might need to know this stuff!

- The push-fit connectors require you to push gently on the tab to allow the cable to be inserted / removed. Do this carefully, to avoid breaking the clip!
- The DAC can be configured by adding `dtoverlay=hifiberry-dac` to the `/boot/config.txt` file.
- There is a DAC enable pin—BCM 25—that must be driven high to enable the DAC. You can do this by adding `gpio=25=op,dh` to the `/boot/config.txt` file.
- The buttons are active low, and connected to pins BCM 5, 6, 16, and 20
- The display uses SPI, and you'll need to enable SPI through the Raspberry Pi configuration menu.
- If you want to use these boards with a Pibow Coupé case (either for the Zero / Zero W or Pi 4), then you'll need to use a **booster header** to raise it up a little.

