Specifications

The shield itself conforms to Raspberry Pi's Hardware Attached on Top (HAT) specifications and connects to Pi via the 40-pin header. The shield is slightly bigger in length (56x100 mm) than RPi itself. It has two female DIN-5 connectors for MIDI in/out and two ¼" (6.35mm) stereo jack connectors for stereo audio in/out. There are two pots for gain and volume control, a programmable button and MIDI activity and input clip LEDs.

Audio

| Parameter | Conditions | Value |
|----------------------------|--|------------------------|
| Input/Output Coupling | - | AC and DC respectively |
| Input/Output Channels | - | 2 / 2 (Left and Right) |
| Input/Output Type | - | 1/4" (6.35mm) Stereo |
| Input/Output Resolution | - | 24bit |
| Sampling Frequency (Fs) | - | 48kHz, 96kHz, 192kHz |
| Input/Output SNR@1kHz | G = 0 dB | 110dB |
| Input Impedance | - | 100kOhm 2pF |
| Input Gain (G) | - | 0dB to +40dB |
| Input Clip LED | - | Yes |
| Input Clip Voltage | G = 0 dB | 2.5V (peak to peak) |
| Full Scale Output | Load impedance > 1 kOhm | 0V to 2.1V (RMS) |
| Loopback Bandwidth (-3 dB) | G = 0 dB, Fs = 48 kHz | 7.5Hz - 23kHz |
| Loopback THD@1kHz | G = 0 dB, Fs = 48 kHz | < 0.045% |
| Loopback Latency | Fs = 192 kHz, RPi2, buffer size = 128 frames | 2.092ms |
| Phantom Power | - | None |

MIDI

| Parameter | Value |
|-------------------------|----------------------|
| Input/Output connectors | DIN-5 female sockets |
| MIDI loopback latency | 2.105ms |
| Activity LEDs | Input & Output |

Other

https://blokas.io/pisound/docs/specs/

| Parameter | Value |
|--------------|------------------|
| Current Draw | < 300mA @ 5.1VDC |
| Dimensions | 56mm x 100mm |
| Weight | 67g |

Power Supply

There are two versions of Pisound regarding power supply:

- **5.1V version (latest):** Pisound powers up from Raspberry Pi's power supply via pins on the GPIO header. Pisound consumes no more than 300mA at 5.1VDC. For use with this version of Pisound, we recommend to use the official <u>5.1VDC RPi power supply for RPi version 1, 2 and 3</u> or <u>USB-C Power Supply for RPi version 4</u>.
- 9V version (old beta version): 7.2V 12.6V, 18W minimum. 5.5x2.1 mm coaxial power jack connector. The inner connector is connected to the positive terminal, and the sleeve is connected to the ground. The power adapter connected to Pisound supplies the RPi board too, so RPi does not need to have its USB supply port connected. The Pisound itself has a power consumption of about 1.8W. A 9VDC power supply capable of delivering at least 2 Amps of current is recommended for this version.

Supported Raspberry Pi Models

| Compatible Models | |
|-------------------------------|-------------------------------|
| Raspberry Pi 4 ¹ | Raspberry Pi 3 |
| Raspberry Pi 3B+ | Raspberry Pi 2 version 1.2 |
| Raspberry Pi 2 | Raspberry Pi 1 Model B+ |
| Raspberry Pi 1 Model A+ | Raspberry Pi Zero version 1.2 |
| Raspberry Pi Zero version 1.3 | |

1. Full compatibility since Pisound hardware version v1.1.

Pisound v1.0 can still be used with the RPi model 4, but there's a known issue caused by a power supply design change in Raspbery Pi 4, see this topic in our community for detailed information and software workaround details. pisound-config has a menu to help with enabling / disabling it. +

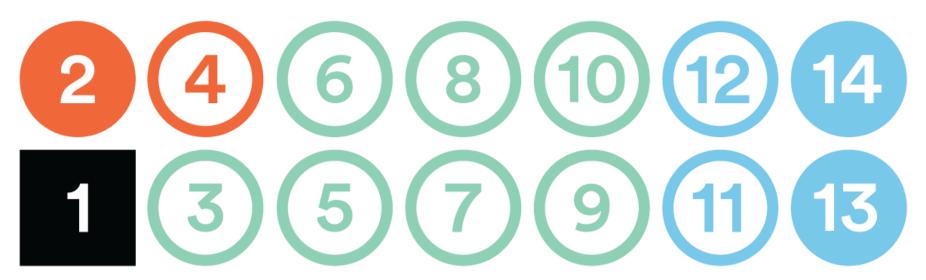
Raspberry Pi Pins Used by Pisound



- Black Power supply pins.
- Red Pins used by Pisound.
- Green Pins available for your use.
- Blue Pins reserved for Raspberry Pi hats use.

Pinout of Pisound Header

https://blokas.io/pisound/docs/specs/



| Number | Corresponding Raspberry Pi Pin |
|--------|--------------------------------|
| 1 | Ground |
| 2 | 5v Power |
| 3 | BCM 7 (CE1) |
| 4 | 3v3 Power |
| 5 | BCM 5 |
| 6 | BCM 6 |
| 7 | BCM 22 |
| 8 | BCM 23 |
| 9 | BCM 27 |
| 10 | BCM 4 (GPCLK0) |
| 11 | BCM 15 (RXD) |
| 12 | BCM 14 (TXD) |
| 13 | BCM 2 (SDA) |
| 14 | BCM 3 (SLC) |



https://blokas.io/pisound/docs/specs/