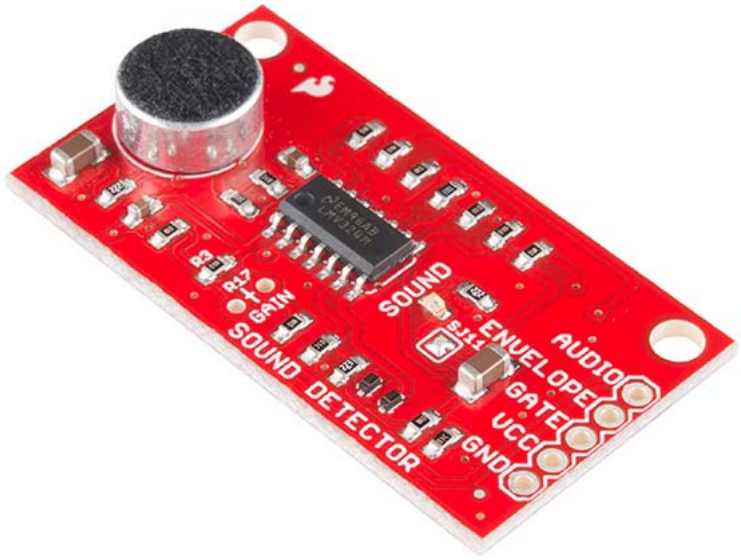
SparkFun Sound Detector

SEN-12642 ROHS

★★★★½ 9



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SparkFun Sound Detector
project on
hackster.io

whyBaby
by Patrick Flickinger

Description: The SparkFun Sound Detector is a small and very easy to use audio sensing board with three different outputs. The Sound Detector not only provides an audio output, but also a binary indication of the presence of sound, and an analog representation of its amplitude. The 3 outputs are simultaneous and independent, so you can use as many or as few as you want at once.

The envelope output allows you to easily read amplitude of sound by simply measuring the analog voltage. Gain can be adjusted with a through-hole resistor, to change the threshold of the binary (gate) output pin as well. Check the hookup guide below for more information about setting gain.

Each of the three output signals is present on the .1" header at the edge of the board. They are active simultaneously. If you aren't using one in your particular application, simply leave that pin disconnected.

SparkFun Simple Sketches - Sound Detector

Documents:

- Schematic
- Eagle Files
- Datasheet (LMV324)
- Hookup Guide
- GitHub (Design Files)
- Product Video

Recommended Products

PAGE 1 OF 6

SPARKFUN RECOMMENDED
EasyVR Shield 3.0 - Voice Recognition Shield
COM-13316
$49.95
4.5 stars 7

SPARKFUN RECOMMENDED
SparkFun MEMS Microphone Breakout - INMP401 (ADMP401)
BOB-09868
$9.95
4.5 stars 5

SPARKFUN RECOMMENDED
Electret Microphone
COM-08635
$0.95

PURCHASED TOGETHER
SparkFun RedBoard - Programmed with Arduino
DEV-12757
$19.95
4.5 stars 116

COMMENTS 71 | **REVIEWS** 4.5 stars 9 | TUTORIALS 4

Customer Reviews

4.7 out of 5

Based on 9 ratings:

5 star	7
4 star	1
3 star	1
2 star	0
1 star	0

1 of **1** found this helpful:

5 stars **A very useful audio tool.**
about 2 years ago by Member #671316 ✔ verified purchaser

I have owned four of these bad boys, and only one of them has broken. However, I am moving these things around a lot so bad transportation may have been a cause. Make sure as any other chipboard to solder in the connections properly. Still learning about the possibilities of this tool.

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1 of **1** found this helpful:

★★★★★ Buena calidad

about 2 years ago by Member #594774 ✔ verified purchaser

Gracias a toda la circuiteria solo es conectar a tu MCU y estara funcionando

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1 of **1** found this helpful:

★★★★☆

about a year ago by Member #735711 ✔ verified purchaser

Has met and exceeded my expactations

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1 of **1** found this helpful:

★★★☆☆ Sound detector

about 8 months ago by Member #803455 ✔ verified purchaser

I soldered this to an Arduino 101, with external power supply, its O.K., but with power supplied from USB cable, it constantly detected a sound, because the USB power supply is so noisy. I add a bunch of caps to VCC to GND,, this improved situation somewhat, but still pretty bad as gain was increased. I wish unit came with a built in pot to control gain. I also wish unit has better power supply filtering and/or an onboard linear regulator to help with higher gains. I also removed the microphone, to attach to my hydrophone. it worked great to detect sounds underwater in a jar of water, but it a pool, the detection would never turn off.

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1 of **1** found this helpful:

★★★★★ Love it!

about 2 years ago by Tyler H. ✔ verified purchaser

The gate and envelope pins are what set this apart from everything else I could find out there. The process of adjusting the gain was a bit daunting to me at first, but it’s actually very easy!

Definitely would recommend this to anyone looking to add live audio input to their project.

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1 of **2** found this helpful:

★★★★★ Great Design

about 2 years ago by Member #33544 ✔ verified purchaser

The LMV324 used in the design of this microphone bord is great, however, the gain has to be controlled especially if you are using long lines to connect it to other devices. I used a 100k potentiometer instead of a fixed resistor to populate R17. This allowed me to adjust amplifier gain right before the output starts to oscillate. I am using this board to fire camera, flashes etc when photographing gun shots, balloon pops and any other noise induced event. It is just great since it is compact and can be housed in any small box. I housed mine in an empty prescription vial. I am running 20foot wire so I ran the output into TC4428 and it was just what the doctor ordered. Now I can run a very long line and still have a good control over the gain. I am using Schmitt trigger output only.

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1 of **2** found this helpful:

★★★★★ easy, effective

about 2 years ago by Member #655395 ✔ verified purchaser

i used this sound detector for my MFA thesis exhibition installation piece and it works beautifully. so easy, so effective. it would’ve been much harder to pull off with something else!

★★★★★ Works great made it easy

about 3 months ago by Member #4134 ✔ verified purchaser

It was exactly what was needed and works great for my project to detect sound. I do wish they had a built in gain variable.
