

## SparkFun Qwiic MP3 Trigger

DEV-15165

Sometimes you just need an MP3 to play. Whether it's a theme song as you enter the room or a power song when you are working out. The SparkFun Qwiic MP3 Trigger takes care of all the necessary requirements, all you need to do is send a simple I<sup>2</sup>C command and listen to whatever is on your micro SD card. Utilizing our handy Qwiic system, no soldering is required to connect it to the rest of your system. However, we still have broken out 0.1"-spaced pins in case you prefer to use a breadboard.

When a USB-C cable is connected to the Qwiic MP3 Trigger the contents of the microSD card appears as a jump drive. Simply plug in the Qwiic MP3 Trigger and you'll be transferring MP3s, no need for drivers and no need for WAV or Vorbis conversion! Sound output is provided via a 3.5mm headphone jack or poke-home connector allowing an external speaker to be connected without soldering. Your supplied speaker is boosted by a Class-D mono amplifier capable of outputting up to 1.4W making it capable of being incredibly loud! Volume is software selectable between 32 levels while equalization can be tuned to be sure your classical hits sound different from your jazz dance routines. If you don't want to deal with *any* programming, there are four trigger pins. When pin 3 is pulled low the T003.mp3 file will immediately be played. This allows you to start playing sound effects with the touch of a button! By pulling multiple pins down simultaneously the four triggers can play up to ten tracks: T001 to T010.

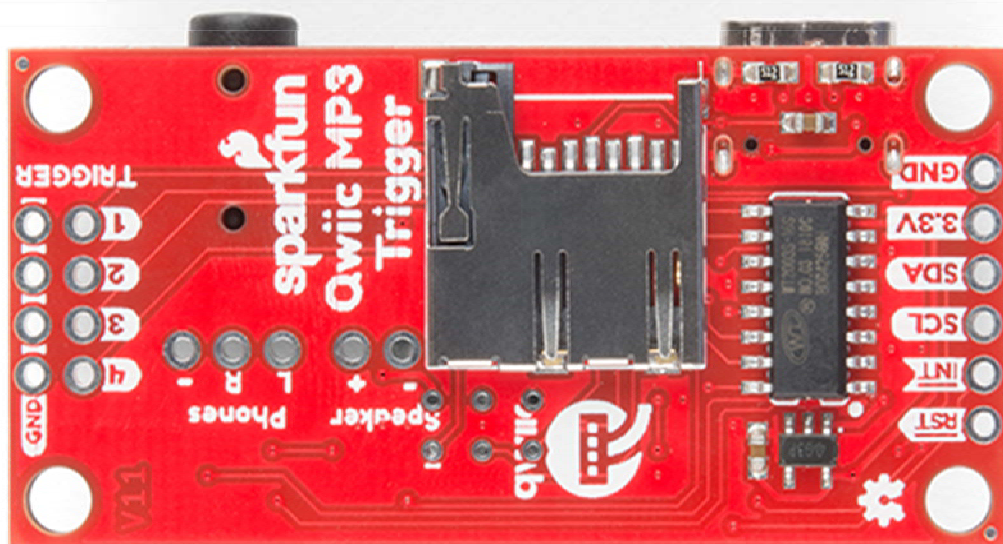
All settings including volume, EQ, and I<sup>2</sup>C address are stored in NVM and loaded at each power up. The I<sup>2</sup>C address of the Qwiic MP3 Trigger can be modified via a solder jumper or be assigned using a software command. Multiple Qwiic MP3 Triggers can be chained together on a single bus allowing for simultaneous track mixing and triggering.

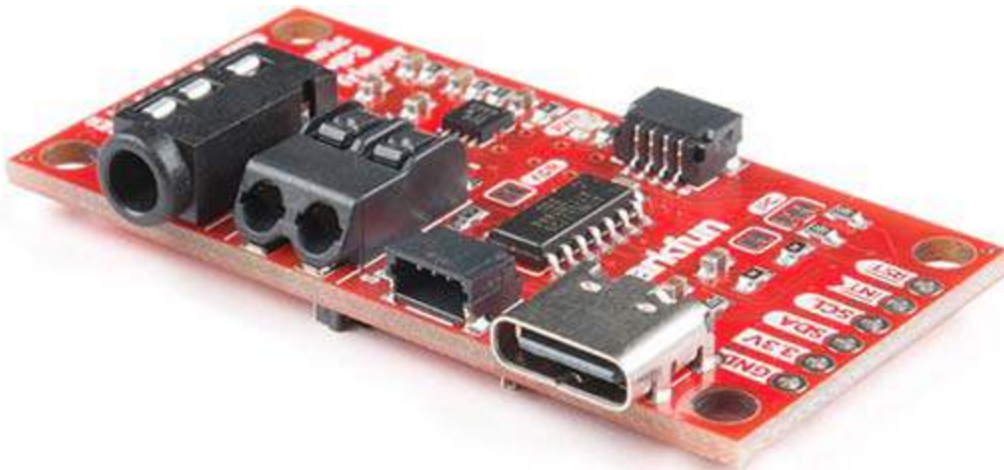
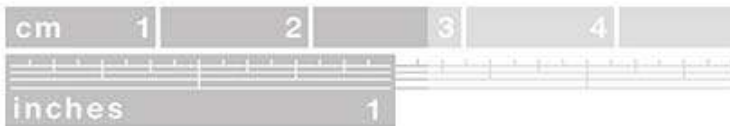
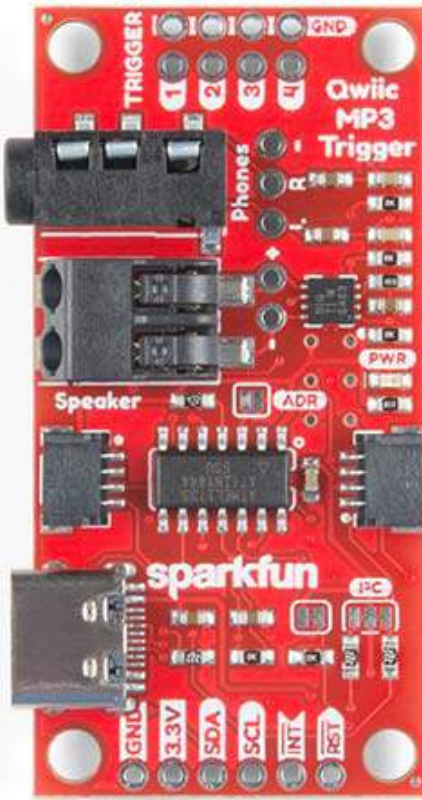
We've written an extensive Arduino library to make MP3 playing over I<sup>2</sup>C a breeze. Play tracks, change volume, play next/previous, check if track is playing, stop play, change EQ, and change I<sup>2</sup>C address are all supported.

*The SparkFun Qwiic Connect System is an ecosystem of I<sup>2</sup>C sensors, actuators, shields and cables that make prototyping faster and less prone to error. All Qwiic-enabled boards use a common 1mm pitch, 4-pin JST connector. This reduces the amount of required PCB space, and polarized connections mean you can't hook it up wrong.*

## FEATURES

- Operating voltage: 3.3V
- Current consumption:
  - 40mA standby
  - 40mA when playing over headphones at any volume level
  - 150mA-300mA when driving external 8Ω speaker at full volume setting
- microSD supports 128MB to 32GB cards
- Volume, EQ setting, and I<sup>2</sup>C address settings stored in non-volatile memory and loaded at each power-on
- WT2003S MP3 decoder IC provides USB access to microSD socket (up to 32GB) and MP3 decoding
- ATtiny84 receives I<sup>2</sup>C commands and controls the MP3 decoder
- Poke-home connector allows for sturdy but temporary speaker connection without soldering
- Trigger pins 1, 2, 3, and 4. When pins 1+4 are pulled low simultaneously T005.mp3 will play
- Built-in TPA2005D1 based 1.4W Class-D mono amplifier
- Address jumper to select between I<sup>2</sup>C address 0x37 (default) and 0x38. I<sup>2</sup>C address is also configurable via software to one of 110 different addresses.
- USB-C Connector
- Qwiic Connector





<https://www.sparkfun.com/products/15165/2-6-19>