MIDI CHIP

The tiny All-In-One MIDI IO Circuit!

BadassMIDI.com

2022-05-04

MIDI CHIP is a tiny board measuring at 0.7" x 0.85" with a MIDI Input and Output Circuit ready to drop into any Arduino/Teensy/ESP32 project. It includes all the circuitry needed for Serial MIDI Communication including an Optocoupler Isolated MIDI Input and a Buffered Output.

You will only need to wire MIDI CHIP to your MCU via 4 wires, a Serial RX, Serial TX, VCC (3.3v or 5v depending on your MCU logic level) and GND.

MIDI CHIP was designed to be wired directly between your Teensy/Arduino/ESP32 boards and your MIDI Jacks with nothing else needed for full MIDI compliant communications.
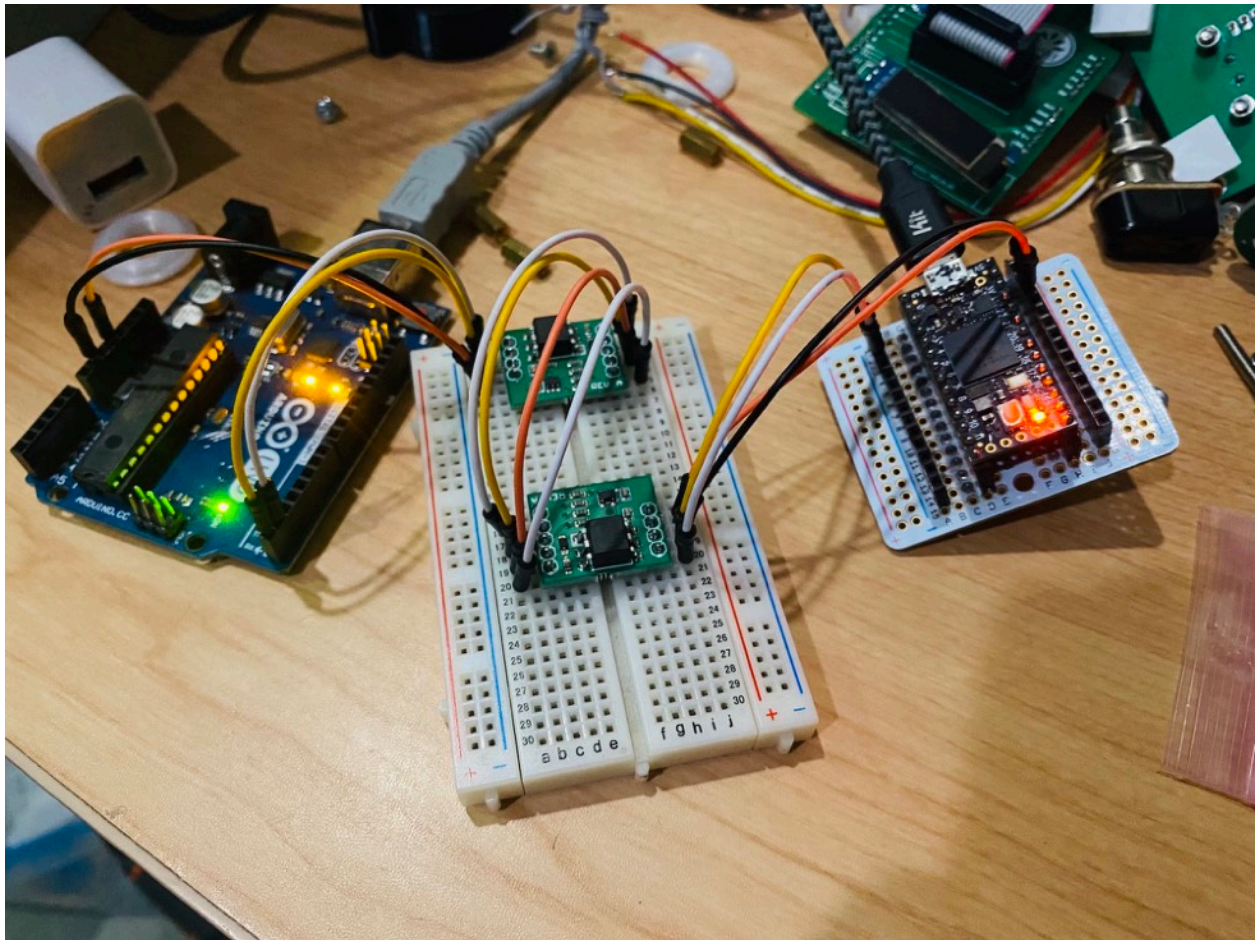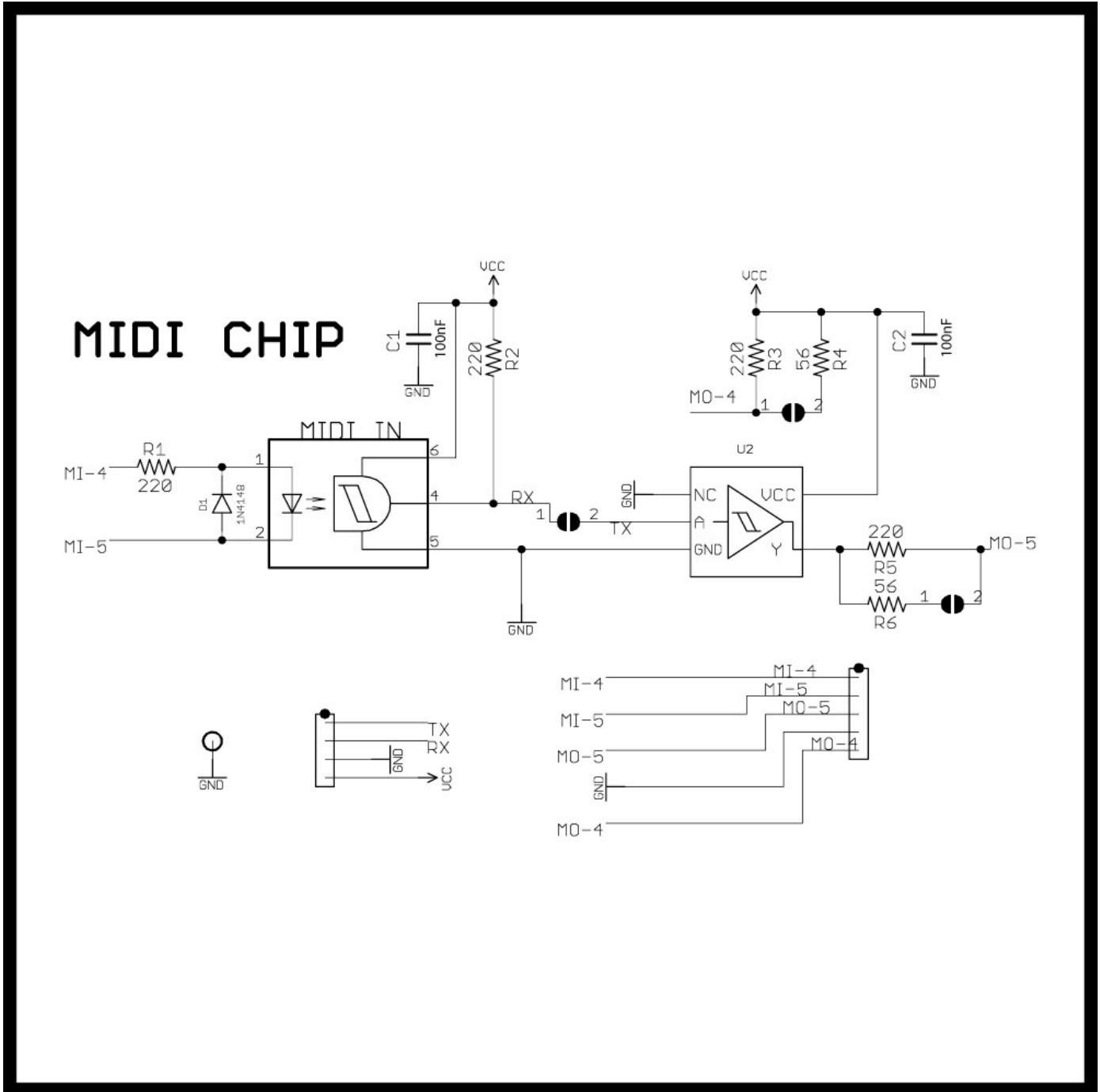
FRONT
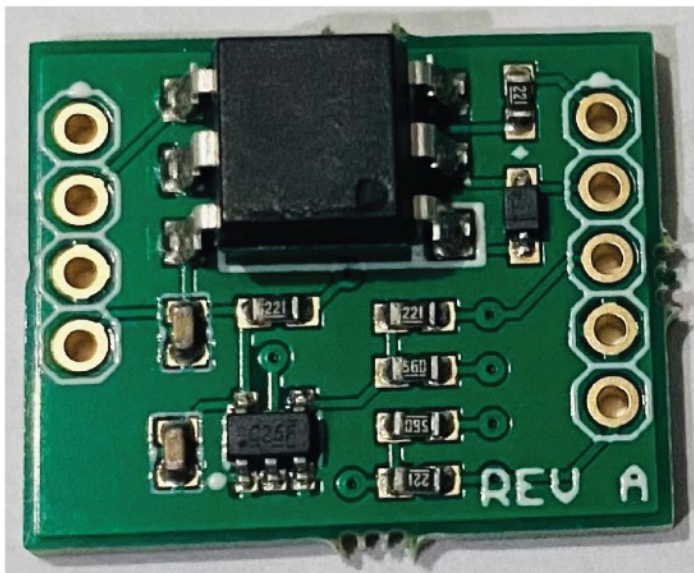
BACK

You can also use MIDI as a way to communicate via Serial between boards with different logic levels, for example: a Teensy (at 3.3v) and an Arduino Uno (at 5v), in cases like that one you can wire your boards like this:
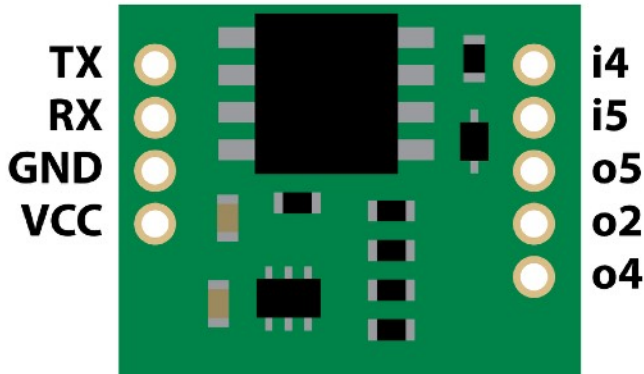
UNO	TEENSY
i4	o4
i5	o5
o2	o2
o5	i5
o4	i4

Schematic

Pins & Solder Jumpers

TX: to your Arduino's UART TX Pin
RX: to your Arduino's UART RX Pin
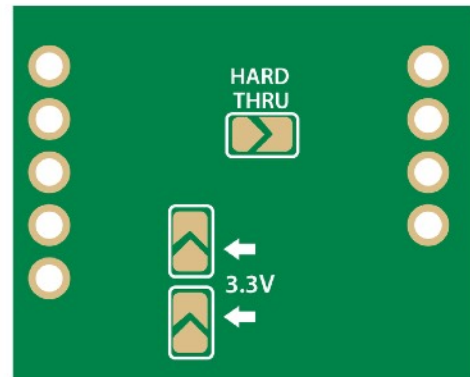**GND:** to your Arduino's GND Pin
VCC: to your Arduino's VCC Pin

---

i4: To MIDI IN Jack pin 4
i5: To MIDI IN Jack pin 5
o5: To MIDI OUT Jack pin 5
o2: To MIDI OUT Jack pin 2
o4: To MIDI OUT Jack pin 4
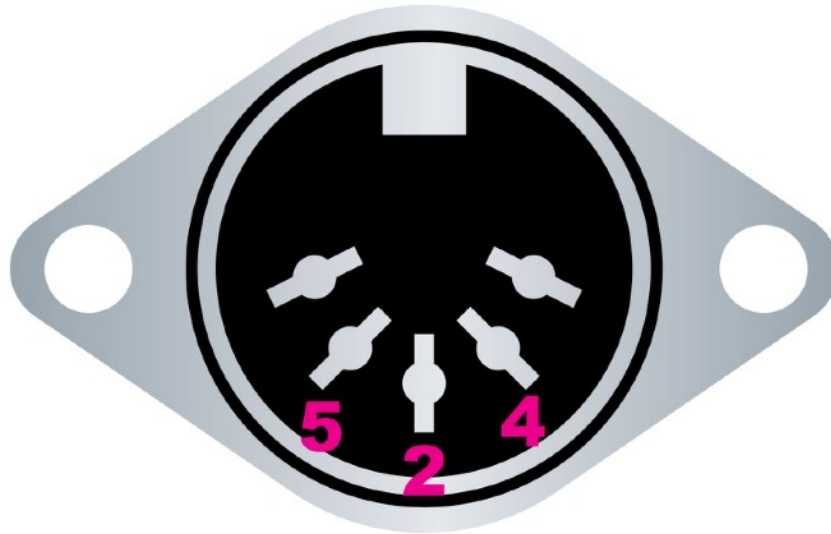
SOLDER JUMPERS

HARD THRU: Solder this jumper to use the OUT JACK as a hardware thru instead of an output. This is great when you only need a MIDI IN jack and you want any incoming messages sent back out without any software latency. If you do this, do not wire the TX Pin as the RX & TX pins are connected together via the jumper.

3.3V: Solder both jumpers if you are using a board with 3.3V logic like Teensy or ESP32. VCC Must match the MCU logic.

MIDI Jacks Pinout

FRONT OF MIDI JACK

BACK OF MIDI JACK