

Summary

Why this?

This is a case for my programmer breakout board I made because i got tired of using breadboards to program my chips. :) Nice weekend project.

Updates

2017.03.04:

Now with a button and a switch

2017.03.05:

Tutorial! scroll down

2017.03.06:

Additional tray (optional expansion) to store your chips, some nuts and bolts.

What a coincidence! ATmega328 fits really tight left to right, I repeat, I did NOT measure the chip before designing the tray! :D

Other projects

Tamaguino

<http://www.thingiverse.com/thing:2120692>

<https://alojzjakob.github.io/Tamaguino/>

Website traffic / Like monitor with NodeMcu

<http://www.thingiverse.com/thing:2286288>

Print Settings

Printer Brand:

Wanhao

Printer:

[Wanhao Duplicator i3 V2](#)

Rafts:

Doesn't Matter

Supports:

Doesn't Matter

Resolution:

0.1

Infill:

50

Overview and Background

If so, you probably wired your ATtiny or ATmega chip using breadboard and used your standard Arduino as ISP programmer to flash these chips.

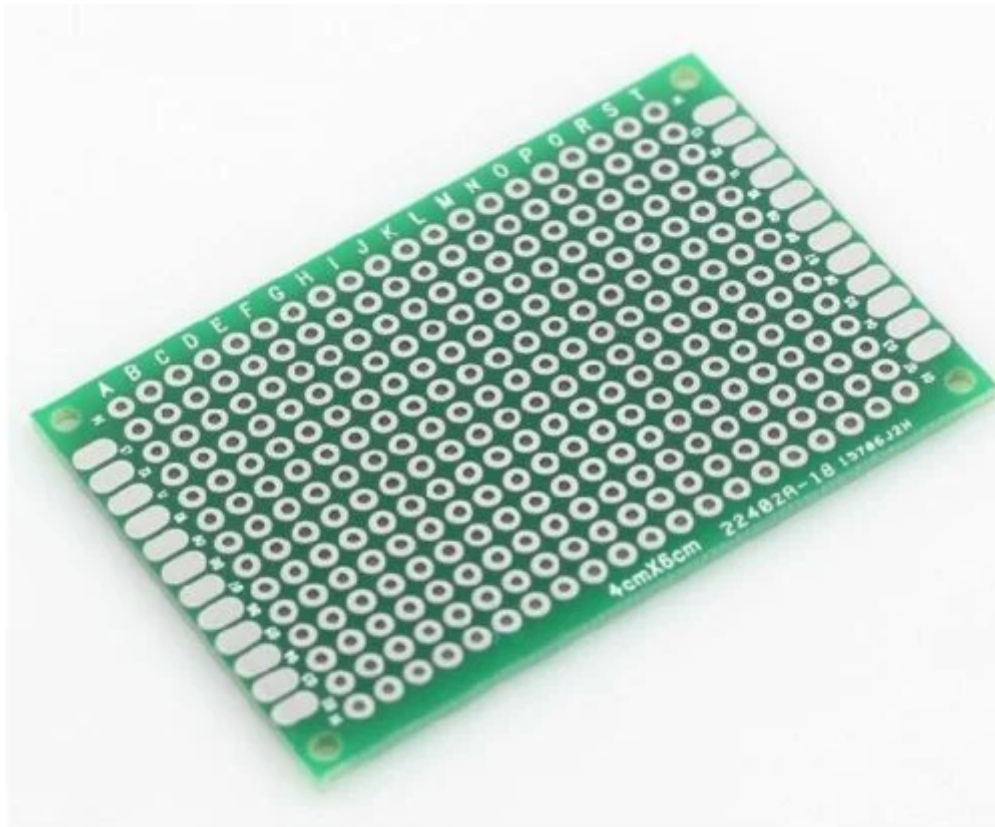
Lesson Plan and Activity

Also note that on schematic additional 2 rows of female headers are not shown for simplicity. You will basically connect these to corresponding pins on each side of chip sockets.



Double sided prototype board 4x6cm

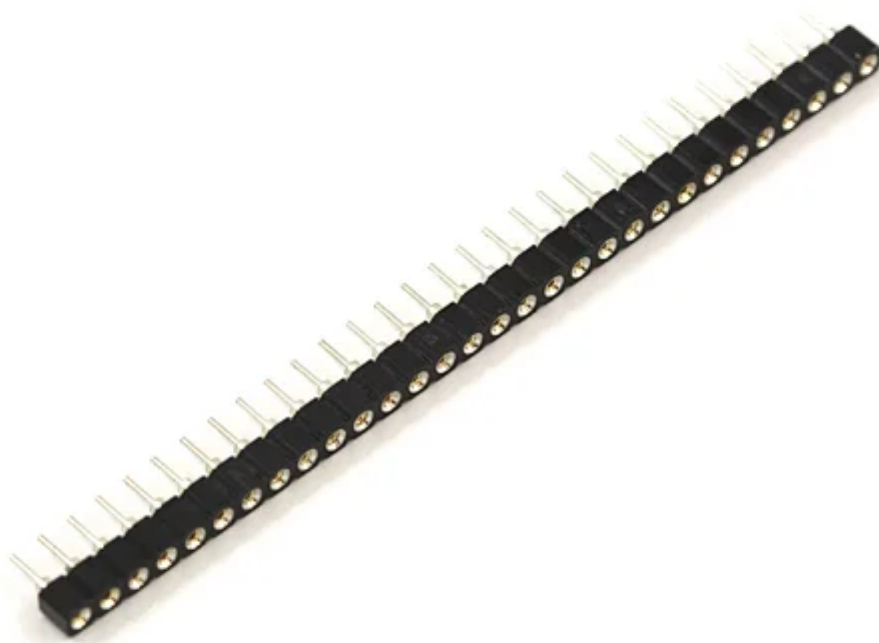
This is the board we are going to solder components onto.



Female headers

You can cut these at any number of pins that are required





28-pin and 8-pin DIP sockets

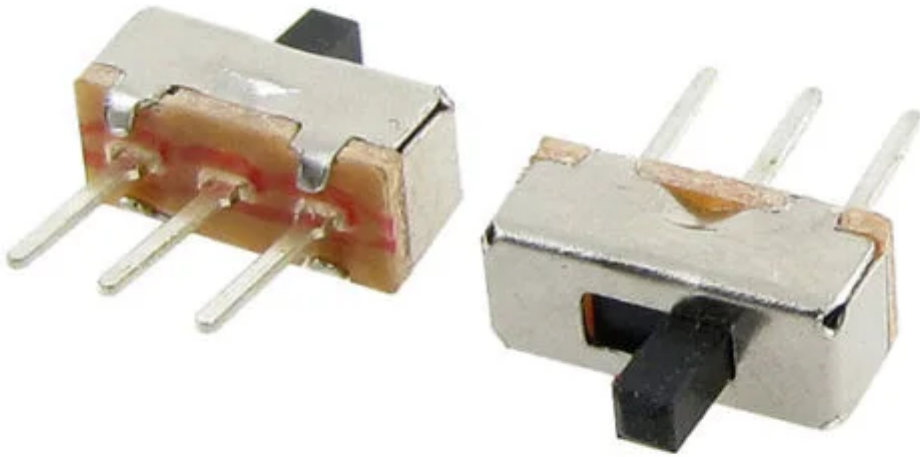
I used round hole female headers to solder to the board, and then sockets can sit on top of it, so both combined match the height of square female headers, which will be soldered alongside for extra pin access points





A vertical sliding Switch

This one is used to optionally disconnect pin 13 (ATmega) and pin 3 (ATtiny) from the LED on this board



Push button

Used to reset the chip, connects reset line to ground when pressed



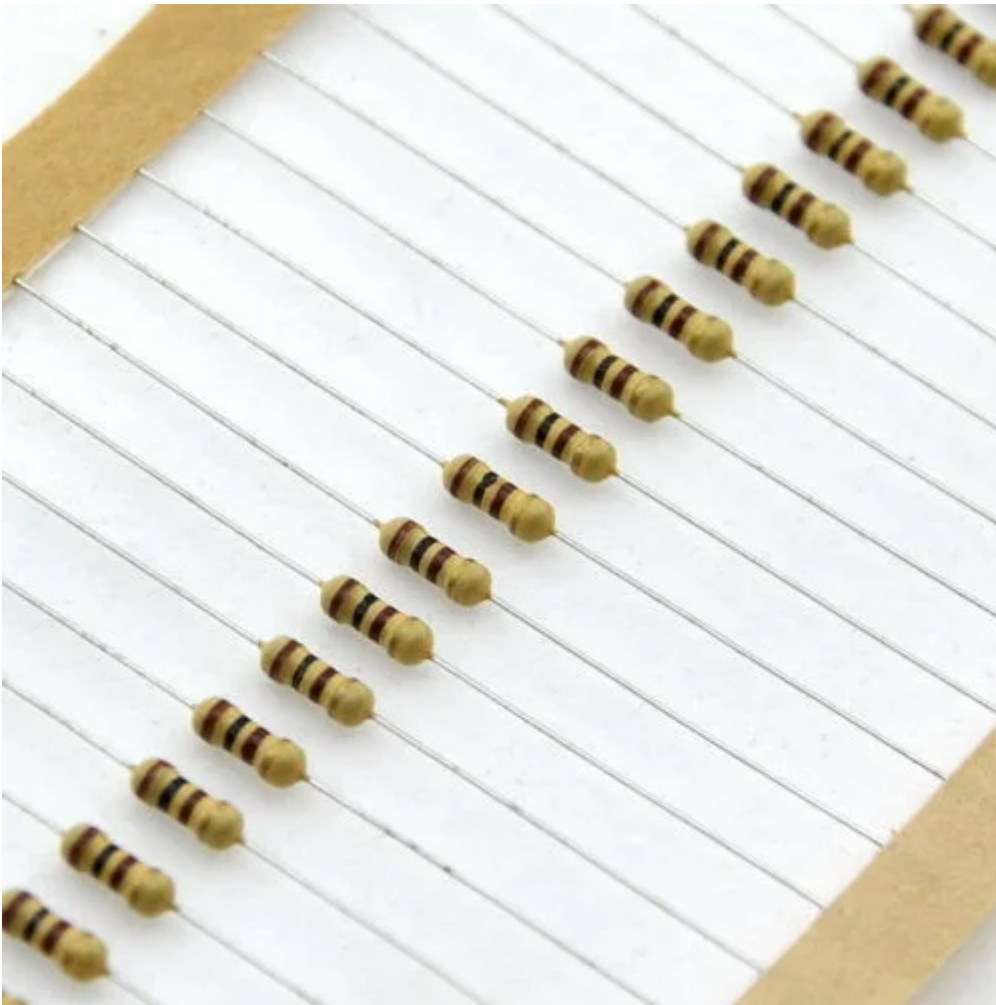
2 LEDs

One for power indication, one for pin13/pin3



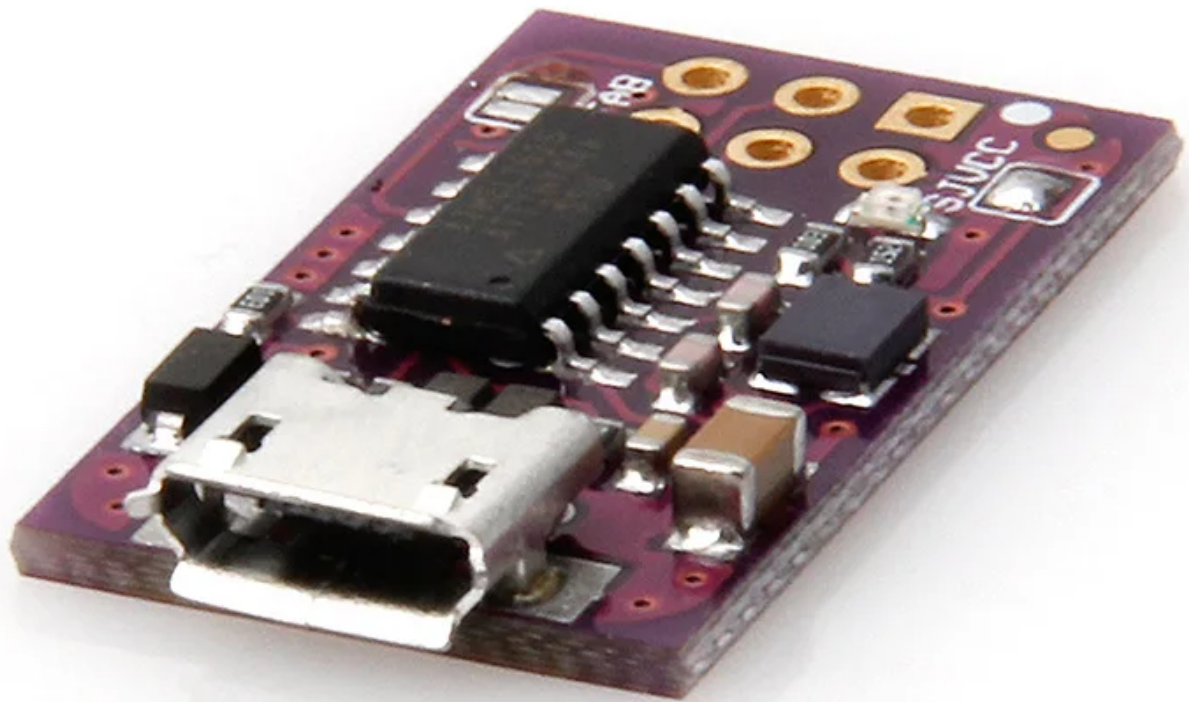
Resistor(s)

We need one resistor for the power indicator LED to limit the current through it.
I did not use the resistor for pin13/pin3 LED because chips have internal resistors.



USB TinyISP programmer or similar

In this project I used this programmer to connect to 6-pin header.



References

Pinout diagrams

Below you can find pinout diagrams for ATmega328 and ATtiny85

