Hardware: ATTiny85 Prototyping Board

Please note there is no voltage regulator, maximum Vcc is 5v!

A: CP2102/FTDI Pinout for USB-UART Serial Device. By default a bootloader has been burned so you can upload over serial if you wish. If your serial adapter does not have the usual Grn and Blk markings see the next page for pinout order.

B: These three jumpers connect digital/analog pins 0, 1 and 2. You may want to disconnect them while programming as these pins are used by the programmer.

C: SPI (ISP) Programming header. Connect your 6 pin programming connector here. I recommend a USBAsp.

D: The row marked + are all Vcc the row marked - are all Gnd. The row in the middle is from left to right, in "Arduino Pin Numbering" 0, 1, 2/A1, 3/A3, 4/A2, in native AVR th$_{85}^{-+}$'s PB0..PB4

E: These three pins connect to the Drain of an N-Channel Mosfet on each of Arduino pins 0, 1 and 2 (PB0..2). That is, if you digitalWrite(0, HIGH) then the top pin of these three will be connected to ground, digitalWrite(1, HIGH) connects the middle pin to ground, and digitalWrite(2, HIGH) connects the bottom pin to ground. Note that each mosfet is pulled down by a 10k resistor. The mosfet currently in use is the Si2302DS, but this may change in future.

F: This array of pads can be used for anything you like. You will see on the back of the PCB that the pads of each column are connected and you can cut the trace to split a column into two, or more.
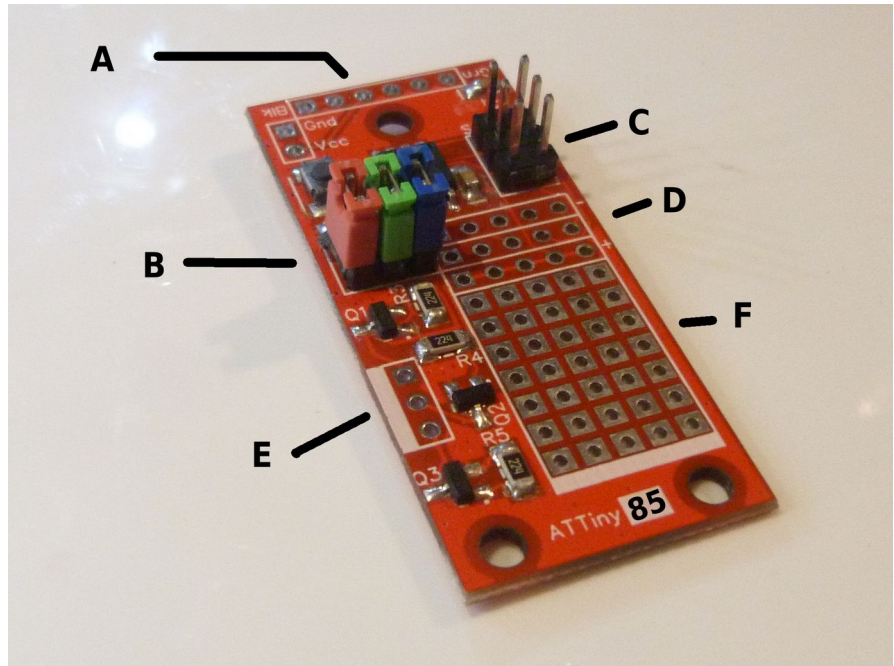
Software: ATtiny85 Arduino Core

If you are using the Arduino IDE, you will need to install a
"core" for the ATtiny85 as the default Arduino does not support
Tiny processors.

I recommend using Arduino IDE version 1.8.19 (or later) with my
own personal fork and distribution of ATTinyCore which I have
better optimised for very Tiny processors like the Tiny 85.

Install instructions can be found at:

https://goo.gl/nQzMb2

After install, choose Tools > Board > ATtiny85
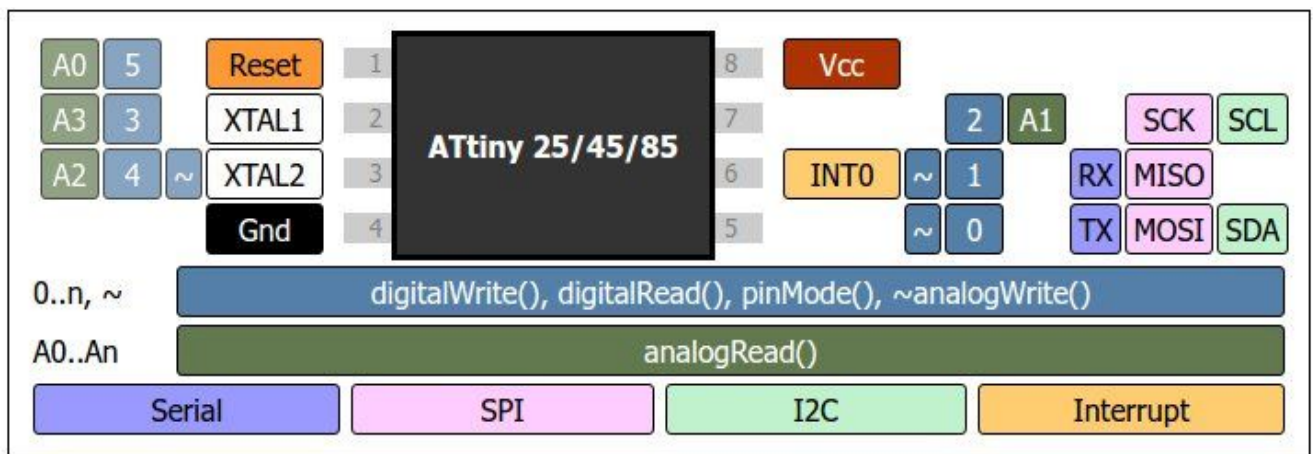
CP2102/FTDI (USB-Uart) Header Pinout

The best devices have a Grn and Blk marking, just match Grn to Grn
and Blk to Blk, you can purchase such devices from me, search my
listings for CP2102.

If you are using a device without the markings though, this is the
pinout order.

Blk GND
     CTS
     VCC
     TXD (of CP2102/FTDI device)
     RXD (of CP2102/FTDI device)
Grn DTR