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FTDI Friend

FTDI Friend is a friend, not an enemy

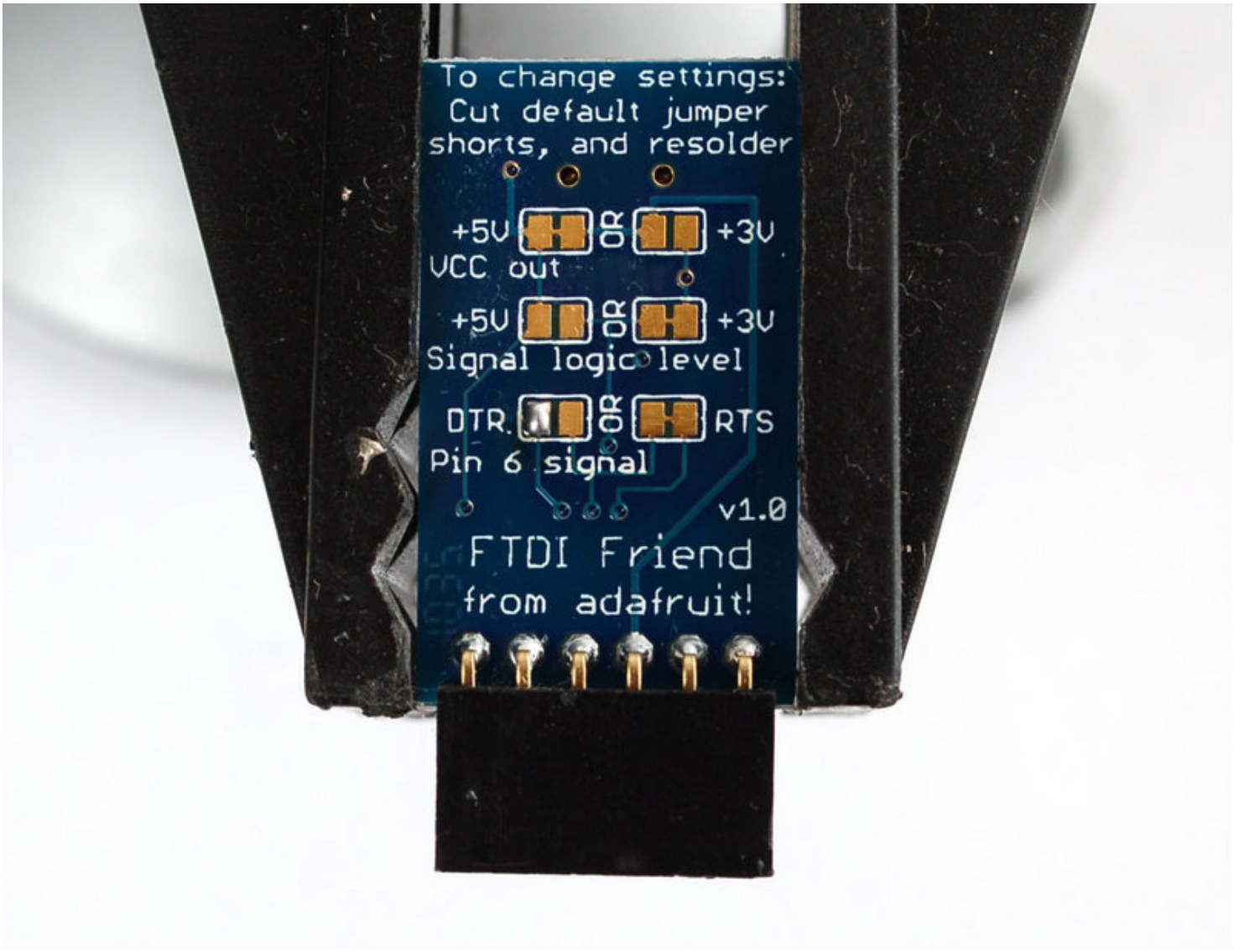
Feedback? Corrections?

Programming Blank AVRs Created by Ladyada

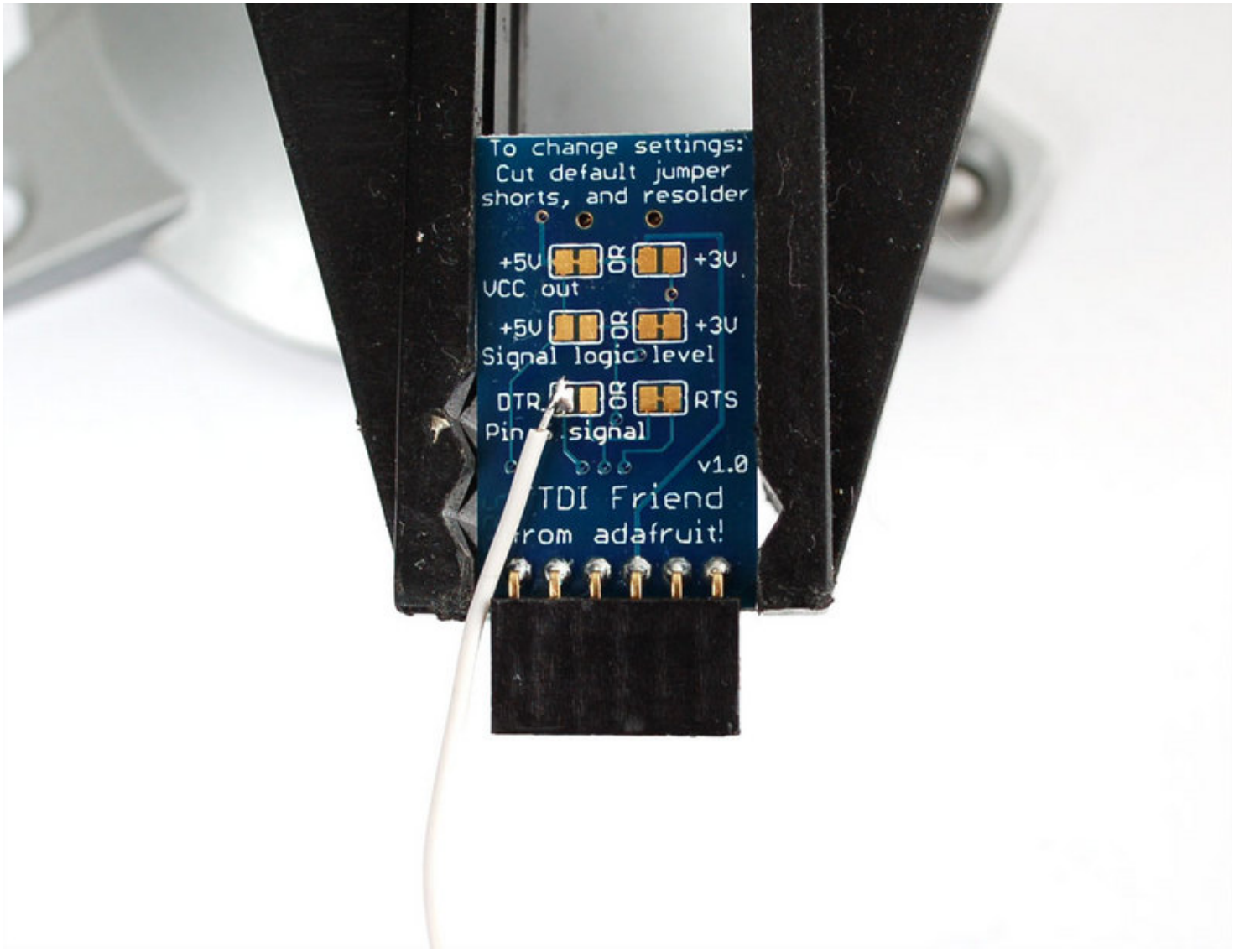
So even though I said FTDI adapters are not for programming 'raw' AVRs, it turns out you can 'convince' the chip to do it with a bit of manipulation. One way that is documented so far doesnt require soldering but it does require updating the AVRDUDE software and installing a different driver . (see also this post and this link for using an FTDI adapter instead of an Arduino)

If you have an FTDI friend or other breakout where you can get to the DTR line, I found a way to do it that requires soldering a wire but no AVRDUDE/driver messing. The trade off is that it is **really** slow - good for maybe burning a bootloader on, not good for day-to-day AVR development

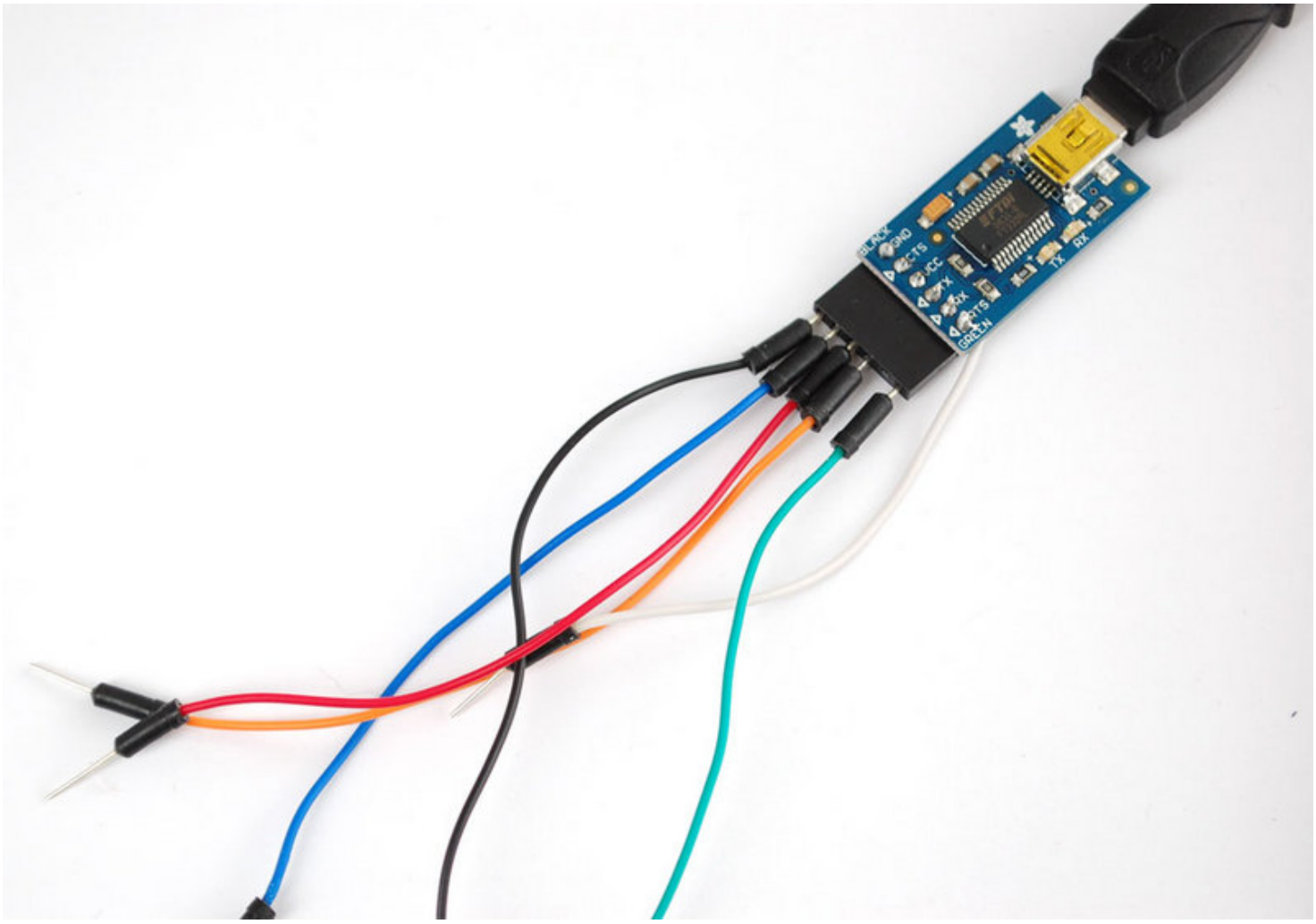
Turn over the FTDI friend, and solder a dot of solder onto the DTR pin on the bottom left.

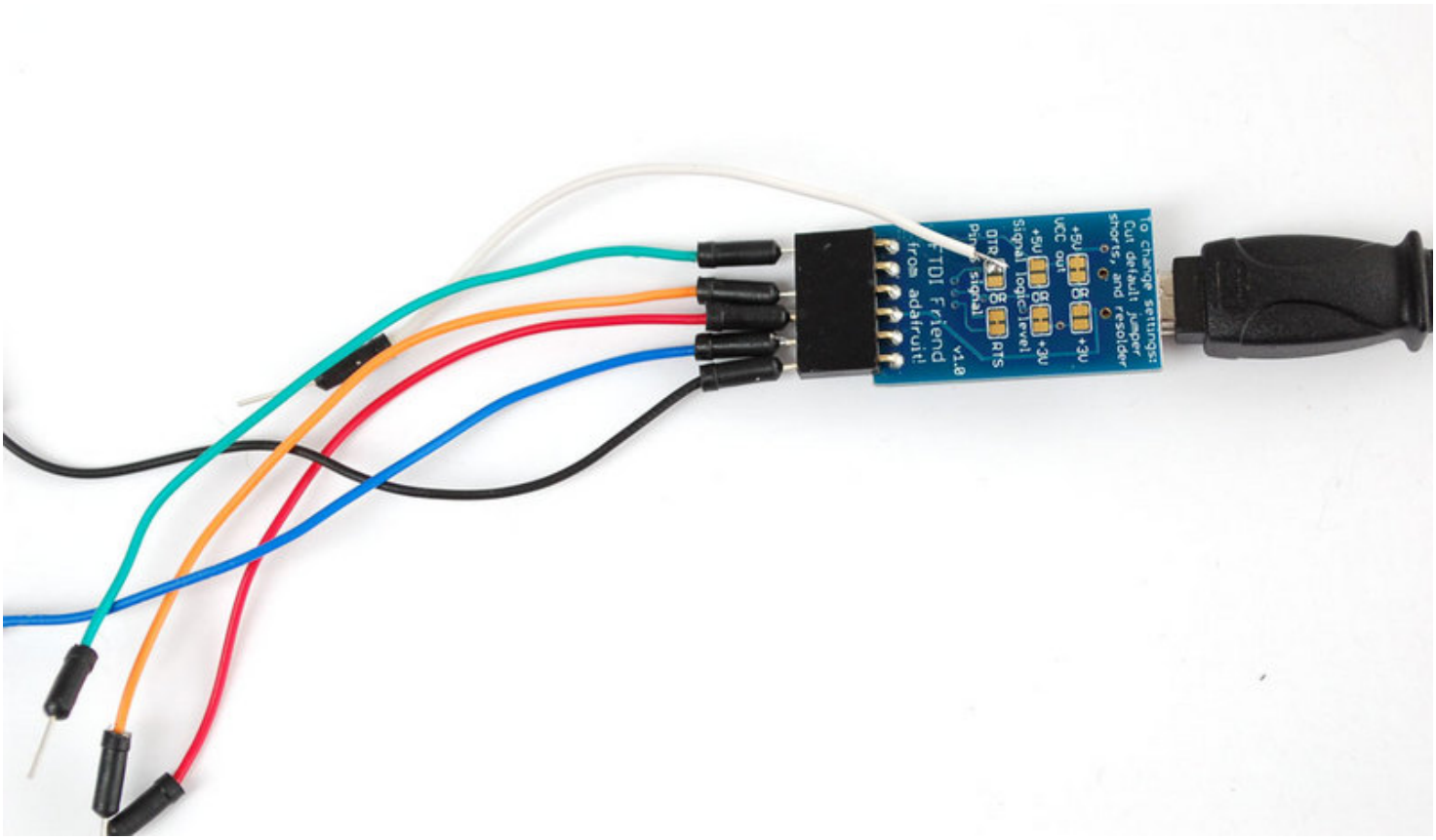


Solder a wire onto it, making sure you dont short it to the gold square just to the right. We'll use a **white** wire.



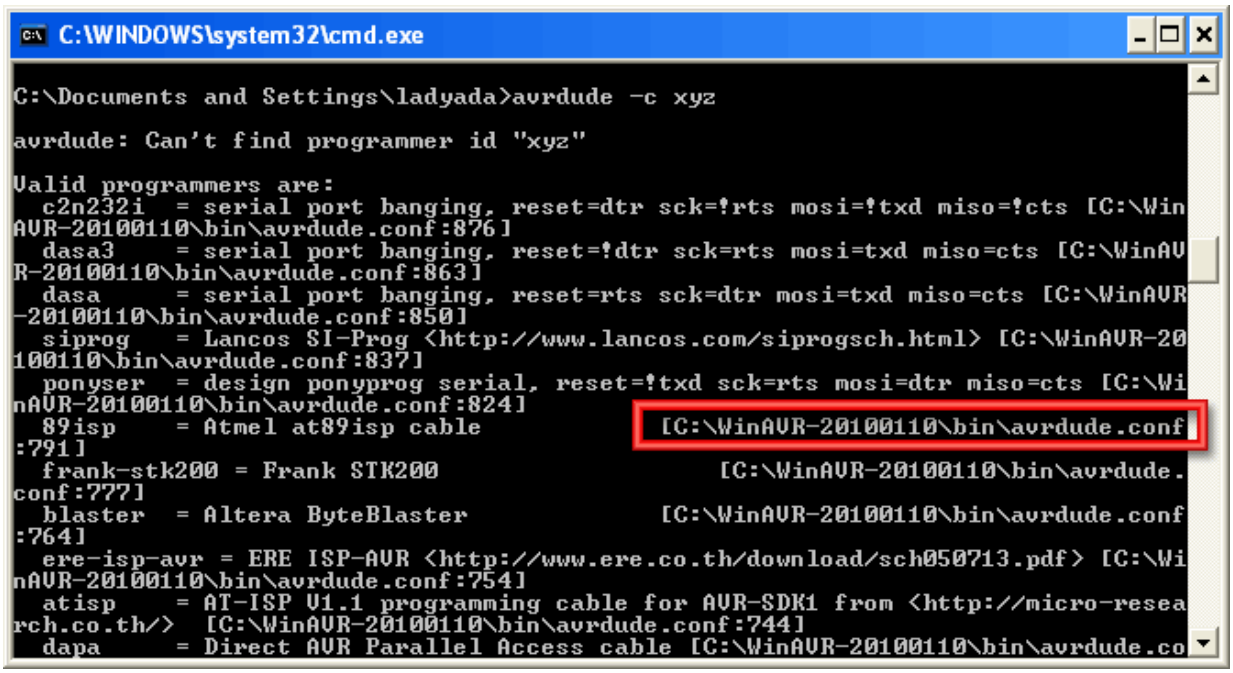
Plug in wires into the FTDI breakout, **black** is ground, **blue** is CTS, **red** is VCC, **orange** is TX and **green** is RTS.





Now you have to make a text edit to your **avrdude.conf**.

If you've installed **WinAVR** or similar (say for Mac or Linux) , it'll be in something like **C:\WinAVR\bin\avrdude.conf** or **C:\WinAVR\etc\avrdude.conf** if you aren't sure where it is, but you have **avrdude** installed, you can run**avrdude -c xyz**which will dump the programmer list, if you look to the right, the name of the conf file will be printed



A common reason for wanting to program an AVR is to put the Arduino bootloader on there, in which case, you may not have WinAVR installed. Luckily, avrdude is there, its just 'hidden' in the IDE package (for Mac users,you need to actually "explore" the App) if you're running windows, go to the folder where you have the IDE installed and go into the **hardware\tools\avr\etc** folder to open up **avrdude.conf**

OK! Now that you have **avrdude.conf** open, find the string **ponyser**, then add the following bold text right before hand so the **avrdude.conf** looks like this:

Copy Code

```
# some ultra cheap programmers use bitbanging on the
# serialport.
#
# PC - DB9 - Pins for RS232:
#
# GND   5   -- |O
#              |   O| <-   9   RI
# DTR   4   <- |O   |
#              |   O| <-   8   CTS
# TXD   3   <- |O   |
#              |   O| ->   7   RTS
# RXD   2   -> |O   |
#              |   O| <-   6   DSR
# DCD   1   -> |O
#
# Using RXD is currently not supported.
# Using RI is not supported under Win32 but is supported under Posix.

# serial ponyprog design (dasa2 in uisp)
# reset=!txd sck=rts mosi=dtr miso=cts
programmer
  id    = "ftdifriend";
  desc  = "design ftdi adatper, reset=dtr sck=tx mosi=rts miso=cts";
  type  = serbb;
  reset = ~4;
  sck   = ~3;
  mosi  = ~7;
```

```
28.    miso  = ~8;
29.  ;
30.  # serial ponyprog design (dasa2 in uisp)
31.  # reset=!txd sck=rts mosi=dtr miso=cts
32.
33.  programmer
34.    id    = "ponyser";
35.    desc  = "design ponyprog serial, reset=!txd sck=rts mosi=dtr miso=cts";
36.    type  = serbb;
37.    reset = ~3;
38.    sck   = 7;
39.    mosi  = 4;
40.    miso  = 8;
41.  ;
```

Save the file.

< FTDI vs. AVR Programmer Programming the Arduino Bootloader >

Last updated on 2013-01-28 at 05.11.42 PM

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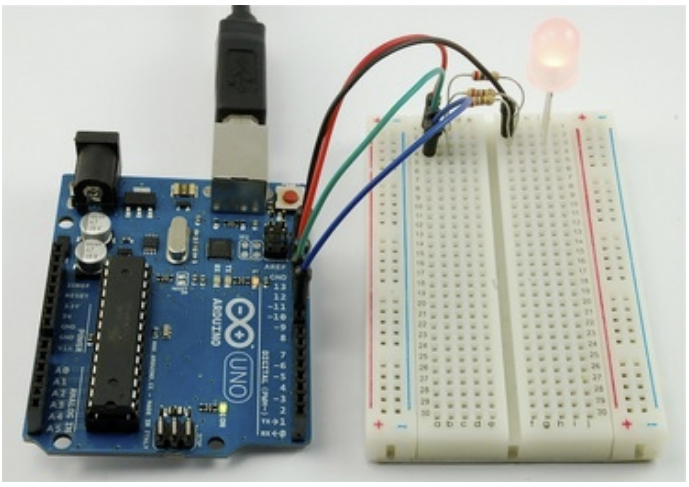
- 

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