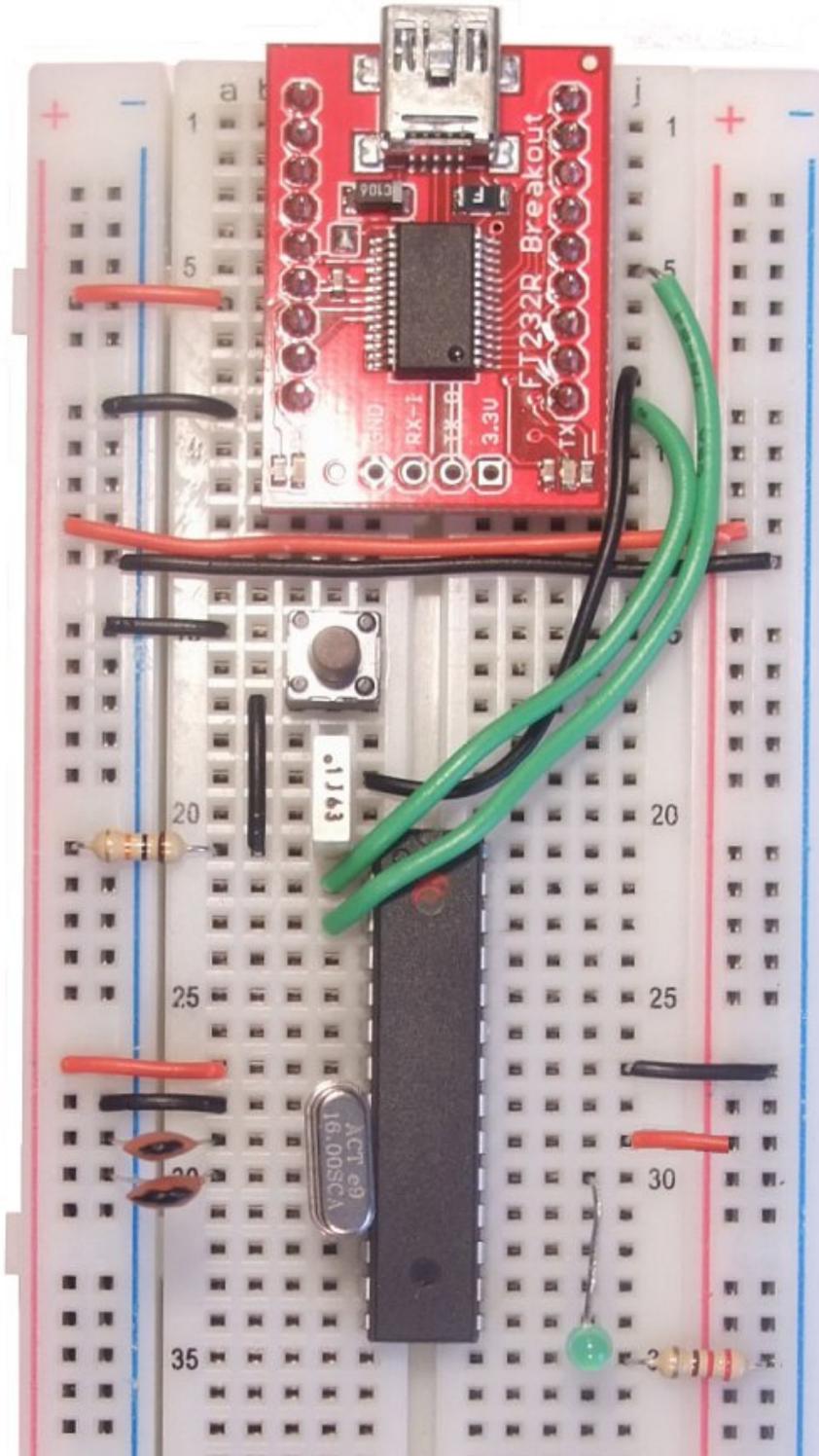


BreadboArduino

Instruction Sheet

Arduino on a Breadboard

BreadboArduino Kit Building Instructions



Components

1. Start by soldering the header pins onto the Sparkfun FT232 breakout board. Cut two lengths of 9 pins off the strip and solder them to the two rows on the side of the board. It is easiest to push the pins into the breadboard before soldering as this helps to keep them vertical. The pins should go in columns C and H starting at row 1
2. Put the Arduino chip onto the board. Place it in the center columns E and F and starting at row 21.
3. Place the reset switch starting at row 15, columns C and E. The switch needs to be oriented correctly with the leads visible at the side.
4. Place the 0.1uF capacitor in column D rows 19 and 21
5. Place the 10K resistor from A21 to the left hand positive rail
6. The crystal (metal can with legs) goes in D29 and D30
7. The two small 22pF capacitors go from A29 left to the negative rail and from A30 left to the negative rail.
8. The LED goes from I30 to I35. The longer of the two leads must go into I30. Bend the leads to suit
9. The 220 ohm resistor for the LED goes from J35 right to the negative rail

Wires

Strip wires to correct lengths

1. Red wire from A6 left to positive rail
2. Red wire from A27 left to positive rail
3. Red wire from J29 right to positive rail
4. Black wire from A9 left to negative rail
5. Black wire from A15 left to negative rail
6. Black wire from B17 to B21
7. Black wire from A28 left to negative rail
8. Black wire from J27 right to negative rail
9. Black wire from left hand negative rail in row 13 to right hand negative rail row 13
10. Red wire from left hand positive rail in row 12 to right hand positive rail row 12
11. Black wire from J8 to E19
12. Green wire from J9 to E22
13. Green wire from J5 to E23

That should be it. Check the wiring over and compare it to the picture above.

Connect a micro USB cable from the Sparkfun FT232 board to your PC. The drivers for the chip should load automatically and the LED should flash once per second. If the LED is not flashing, check the wiring

Load up the Arduino IDE software and go to the menu

Tools/Board - select Arduino UNO as the board.

Tools/Serial Port and select your serial port

(if you are unsure which serial port is the correct one, go to Control panel/Device Manager [Windows] and click on the Ports (COM and LPT). There should be one labeled USB Serial Port. Note the port number and use this in the Arduino IDE)

Open the **Blink** example sketch and click the **Upload** button. After the program has compiled you will see

```
Binary sketch size: 1018 bytes (of a 32256 byte maximum)
```

And then the leds in the Sparkfun board should flash as your program is uploaded.

The LED will now be flashing at a slower rate. This is the flash rate for the blink program and indicates the the program has been successfully uploaded.