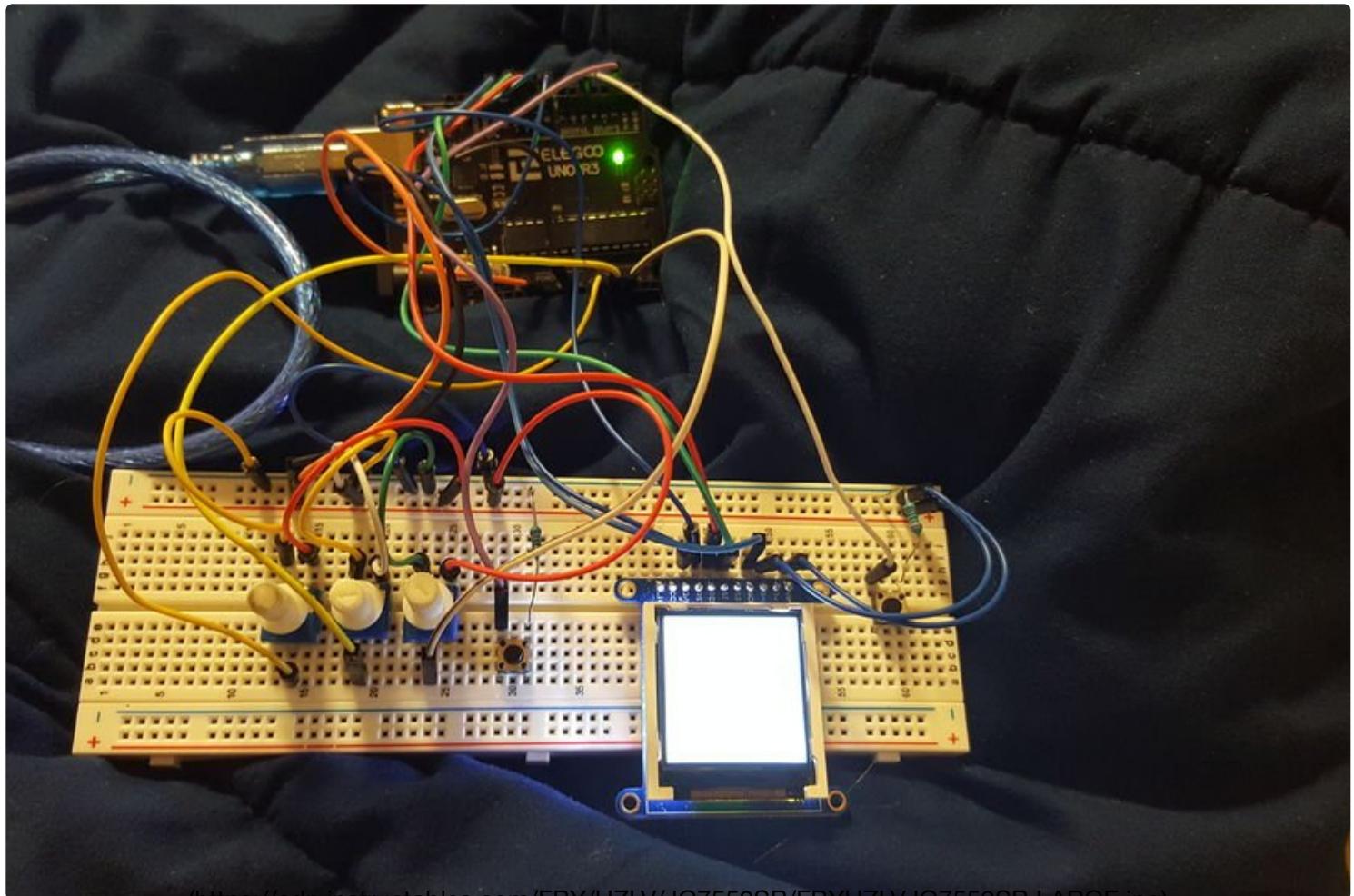


DRAWING TOOL

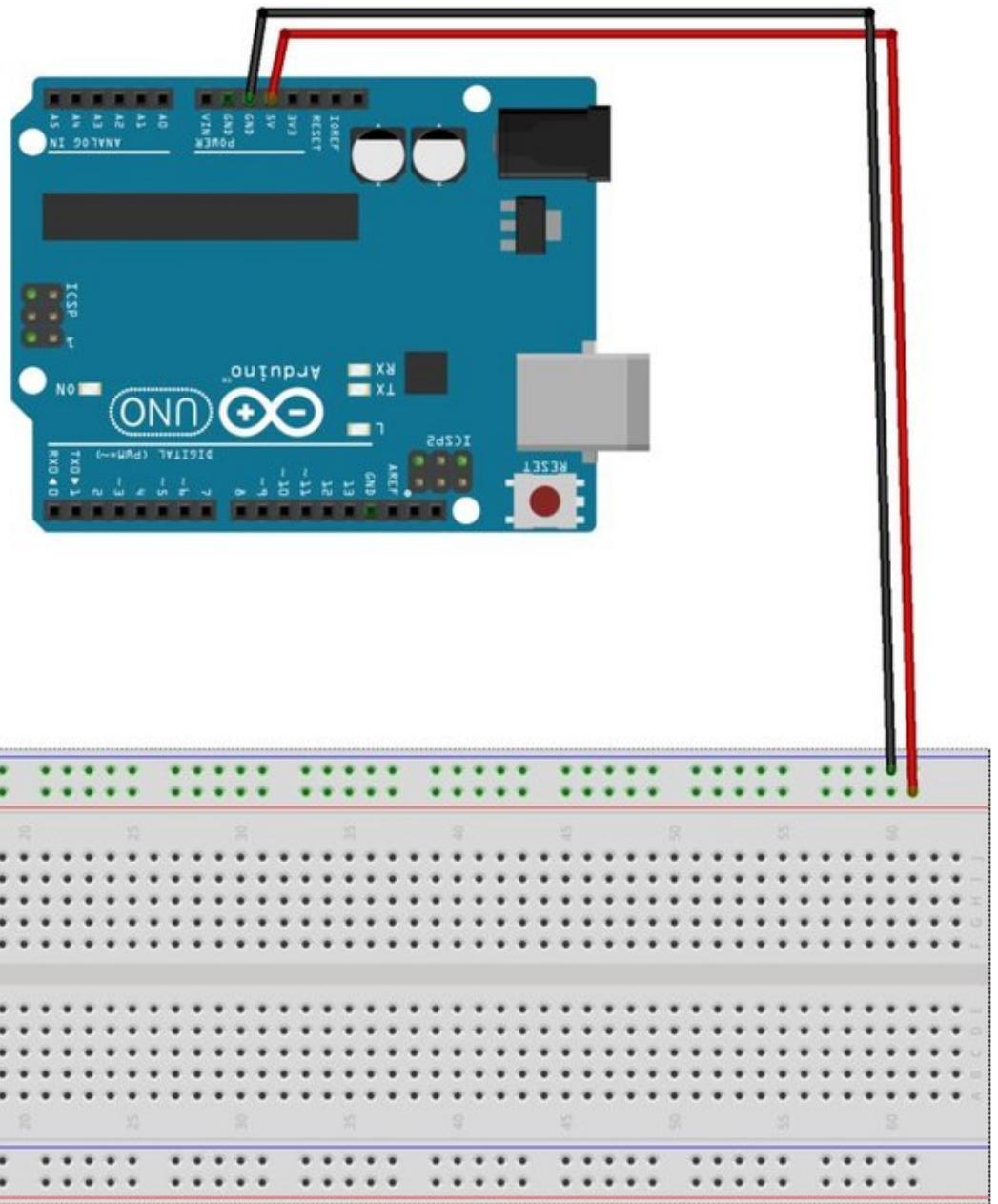
by AaronB299 (/member/AaronB299/) [Follow](#)

Posted | Stats



This drawing tool project allows for 3 different modes: 2 lines controlled by 2 potentiometers, 3 potentiometer-controlled-lines sharing 1 screen, and a minute clock with a seconds hand. There is an interrupt button that immediately switches between these 3 distinct modes. Furthermore, there is a line color changer that changes the line color for the first two modes (not the clock).

Step 1: Add Basic Components

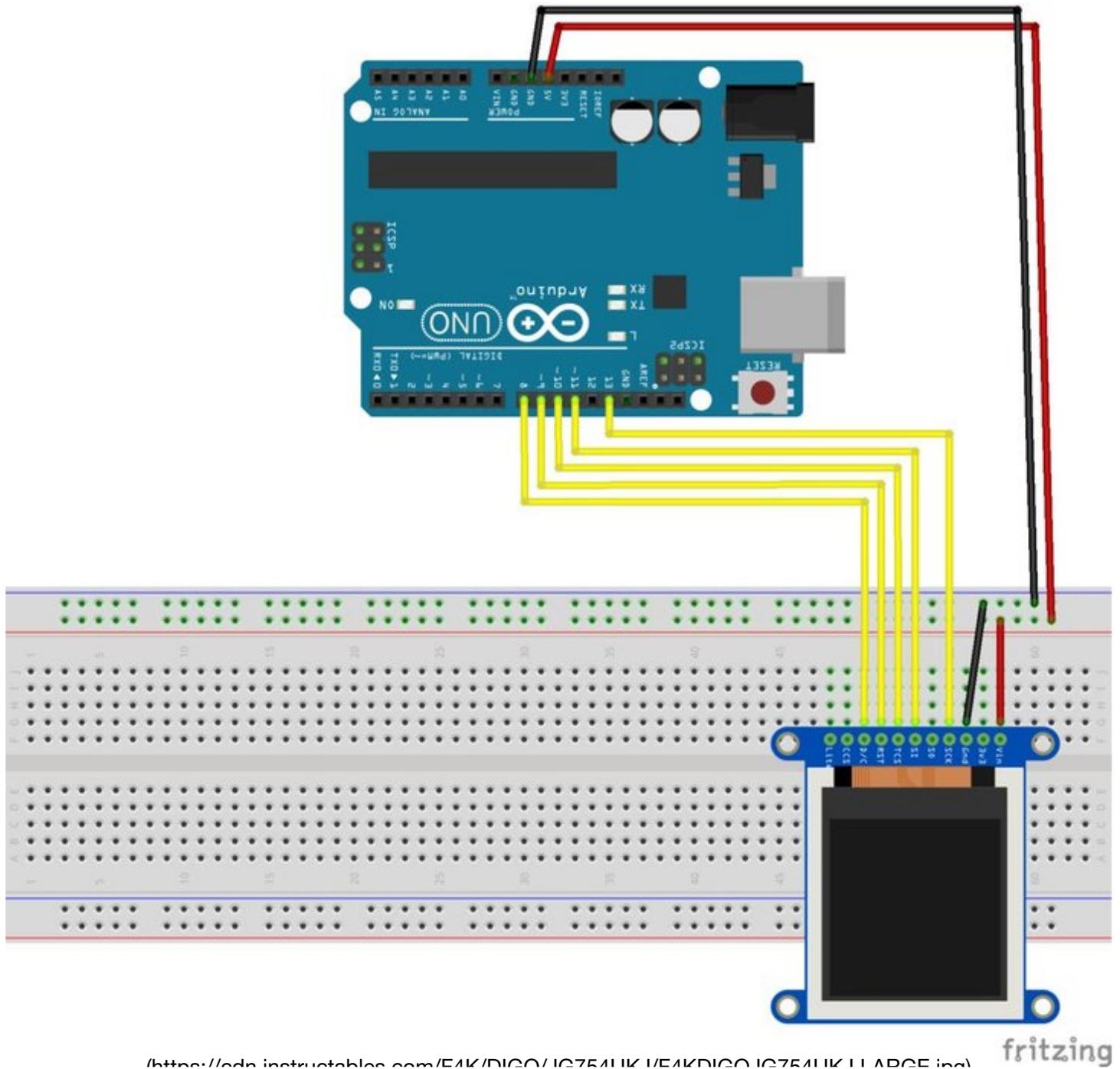


<https://cdn.instructables.com/ELB/7MSE/1C75A1DE/ELB7MSE1C75A1DE1ABCE.ino>

fritzing

1. Add Arduino Uno RV3
2. Add breadboard
3. Connect 5v to breadboard power rail
4. Connect GND to breadboard ground rail

Step 2: Add TFT Display



1. Add 1.44" TFT display to breadboard
2. Connect vin to the power rail
3. Connect Gnd to negative rail
4. Connect SCK to pin 13 on the Arduino
5. Connect SI to pin 11

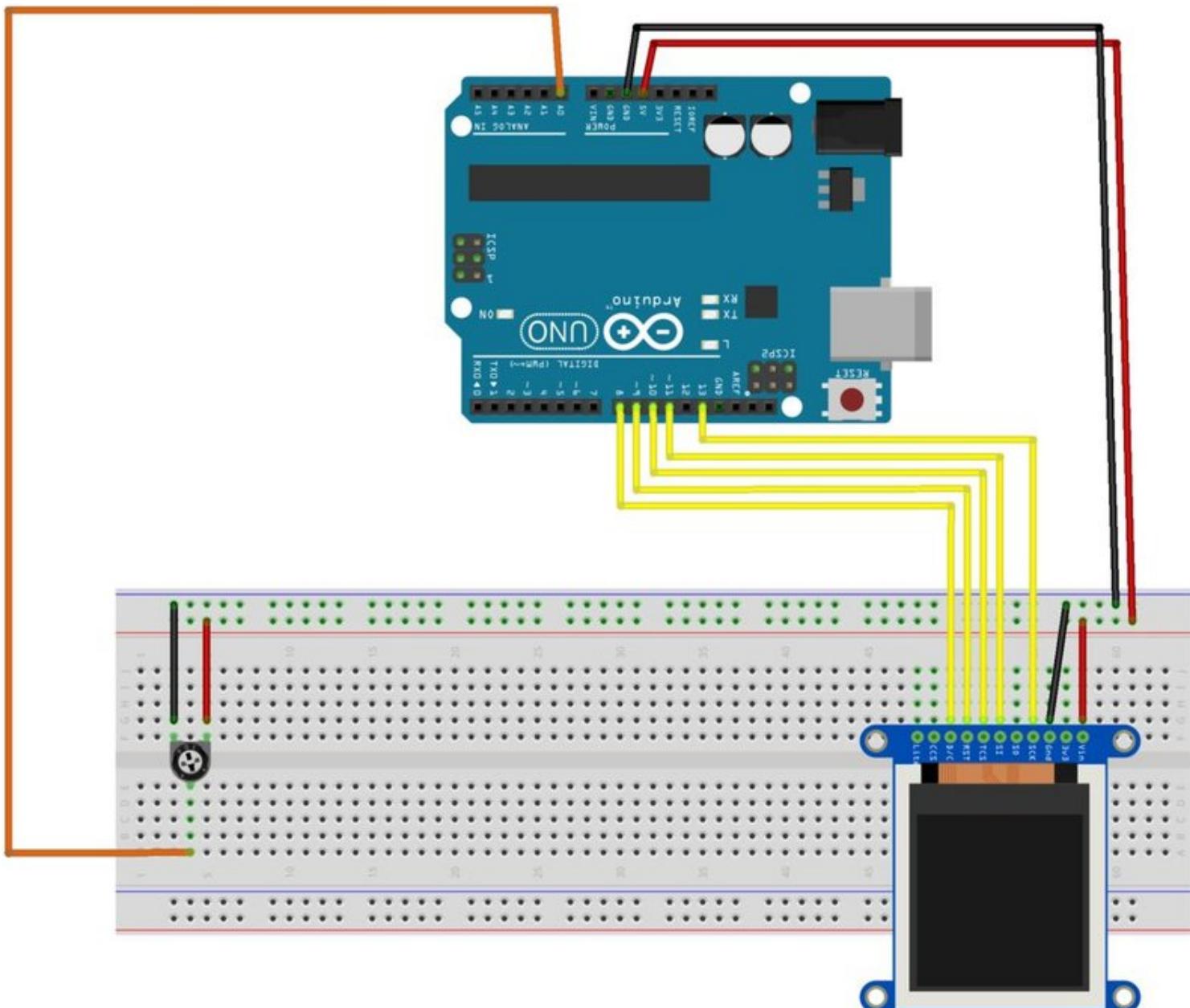
6. Connect TCS to pin 10

7. Connect RST to pin 9

8. Connect D/C to pin 8

Double check the connections! This is a likely area to make mistakes.

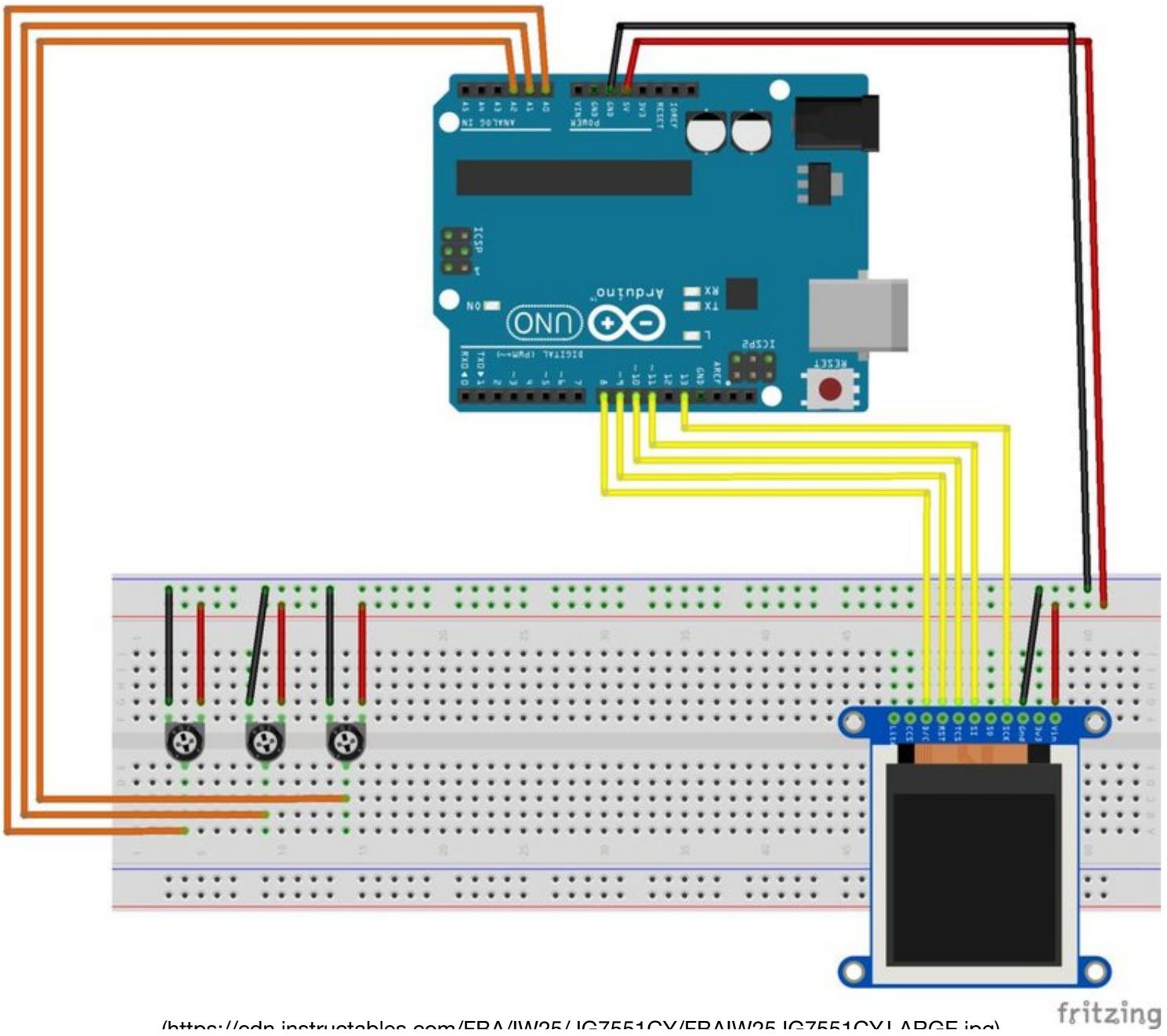
Step 3: Add the First Potentiometer



This first potentiometer controls the first y value:

1. Add a potentiometer to the breadboard
 2. Connect the left side of the potentiometer to the negative rail of the breadboard
 3. Connect the right side of the potentiometer to the positive rail of the breadboard
 4. Connect the lower potentiometer connection to **A0** on the Arduino
-

Step 4: Add Two More Potentiometers

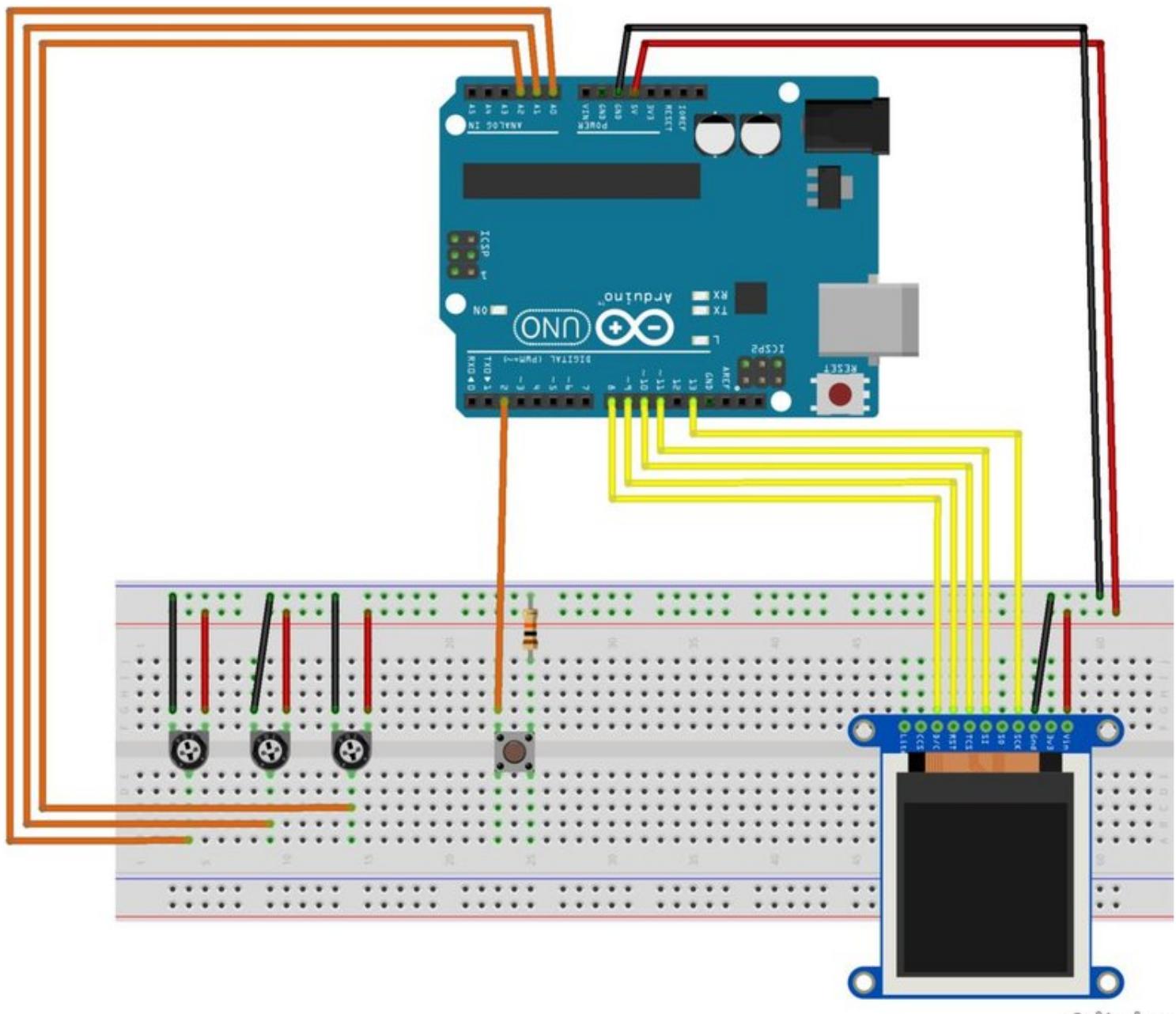


The second potentiometer controls the second y value while the third controls the third y value:

1. Add the second potentiometer to the breadboard (in the middle)
2. Connect the left side of the potentiometer to the negative rail of the breadboard
3. Connect the right side of the potentiometer to the positive rail of the breadboard
4. Connect the lower potentiometer connection to **A1** on the Arduino
5. Add the third potentiometer to the breadboard (on the right)

6. Connect the left side of the potentiometer to the negative rail of the breadboard
7. Connect the right side of the potentiometer to the positive rail of the breadboard
8. Connect the lower potentiometer connection to **A2** on the Arduino

Step 5: Add an Interrupt Push Button



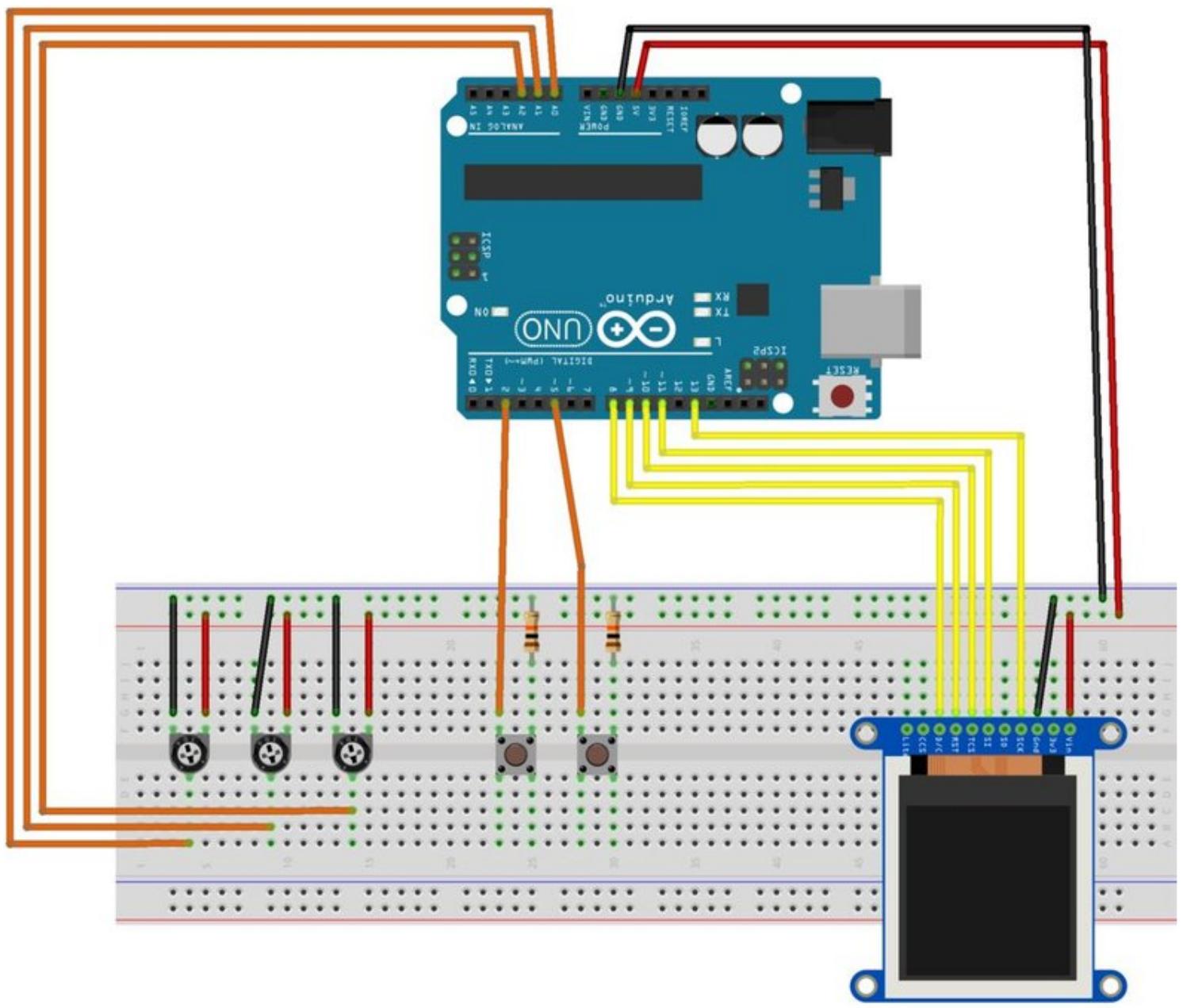
[/https://cdn.instructables.com/EEEN/RTV/D/1C7552DT/EEENRTV/D1C7552DT1.ARGZ6.ino](https://cdn.instructables.com/EEEN/RTV/D/1C7552DT/EEENRTV/D1C7552DT1.ARGZ6.ino)

fritzing

The following button is used for the interrupt to change between the modes:

1. Add a push button to the breadboard
2. Connect the top right connector of the button to the negative rail of the breadboard through a 10k resistor
3. Connect the top left connector of the button to pin **2** on the Arduino

Step 6: Add a Line Color Changer Push Button



<https://cdn.instructables.com/FWD/EVINS/1C755206/FWD/EVINS/1C755206.LARGE.jpg>

fritzing

The following button is used to change the color of the line:

1. Add a push button to the breadboard
 2. Connect the top right connector of the button to the negative rail of the breadboard through a 10k resistor
 3. Connect the top left connector of the button to pin **5** on the Arduino
-

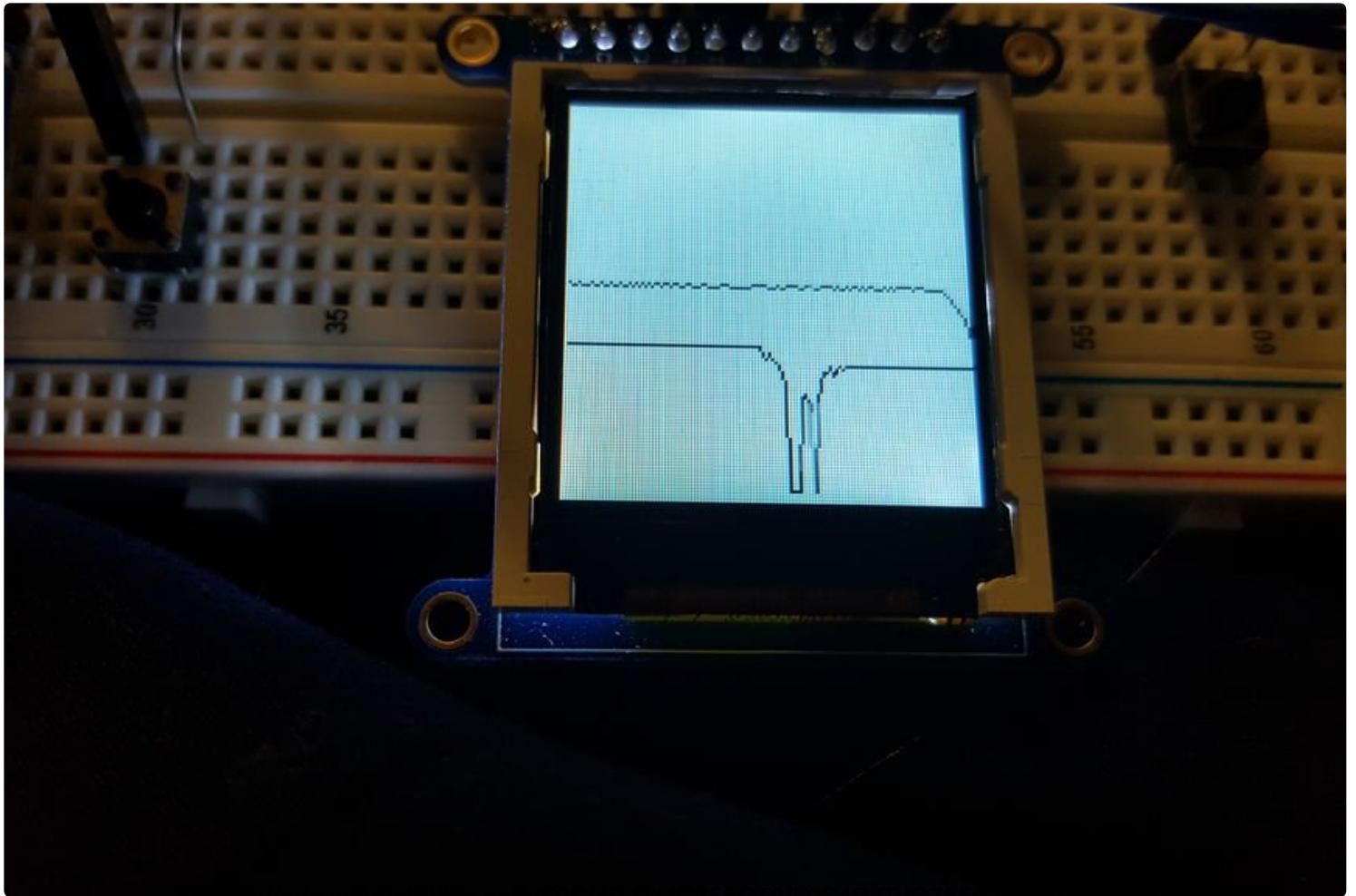
Step 7: Add the Code

1. Connect the Arduino UNO R3 to a computer
2. Download and open up provided Arduino code in the Arduino IDE
3. Upload the code to the Arduino



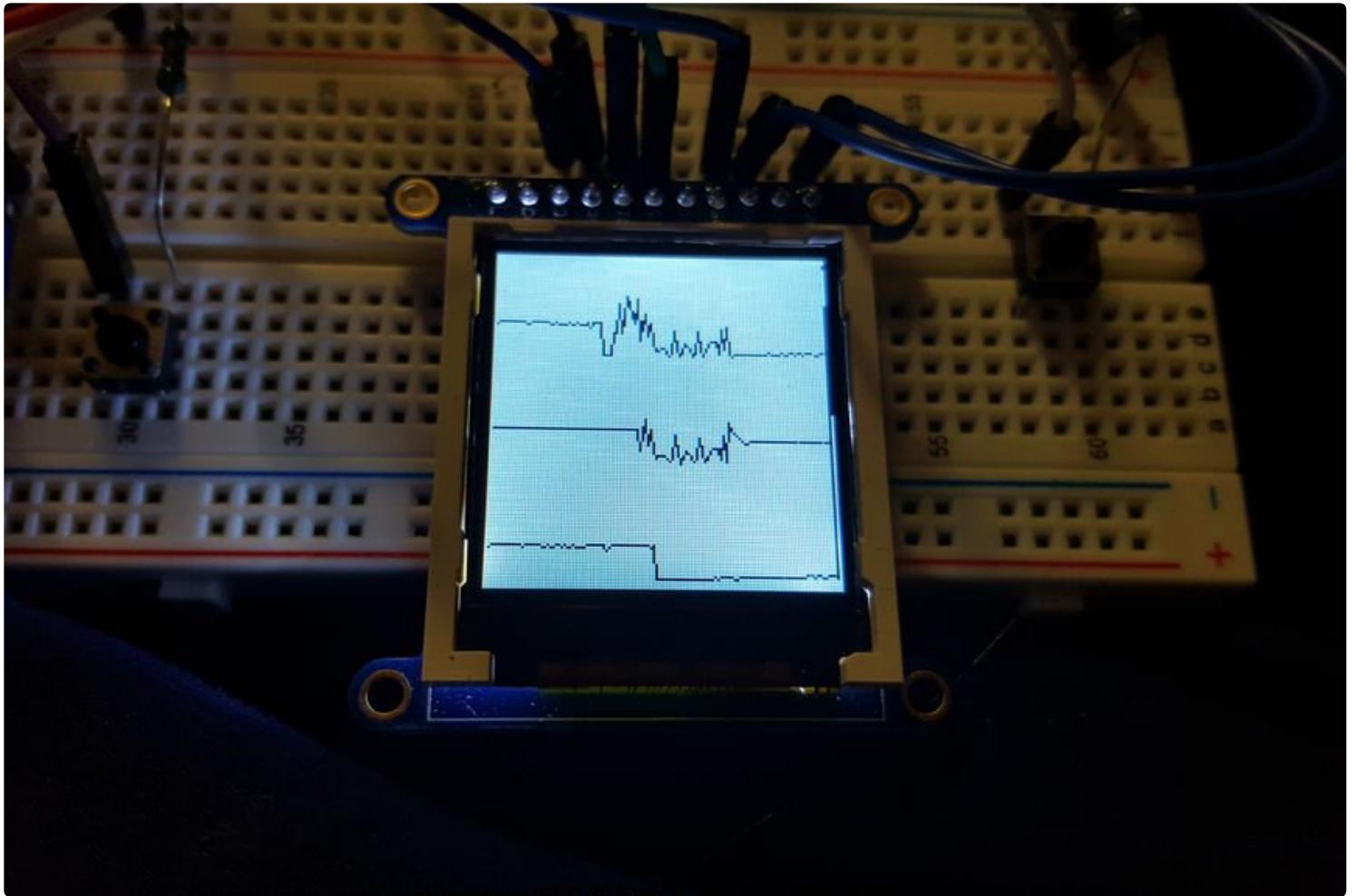
final_exam.ino (<https://cdn.instructables.com/ORIG/FQN/X55Y/JG755DL5/FQNX55YJG755DL5.ino>)
(<https://cdn.instructables.com/ORIG/FQN/X55Y/JG755DL5/FQNX55YJG755DL5.ino>)

Step 8: Mode 1 - Two Lines



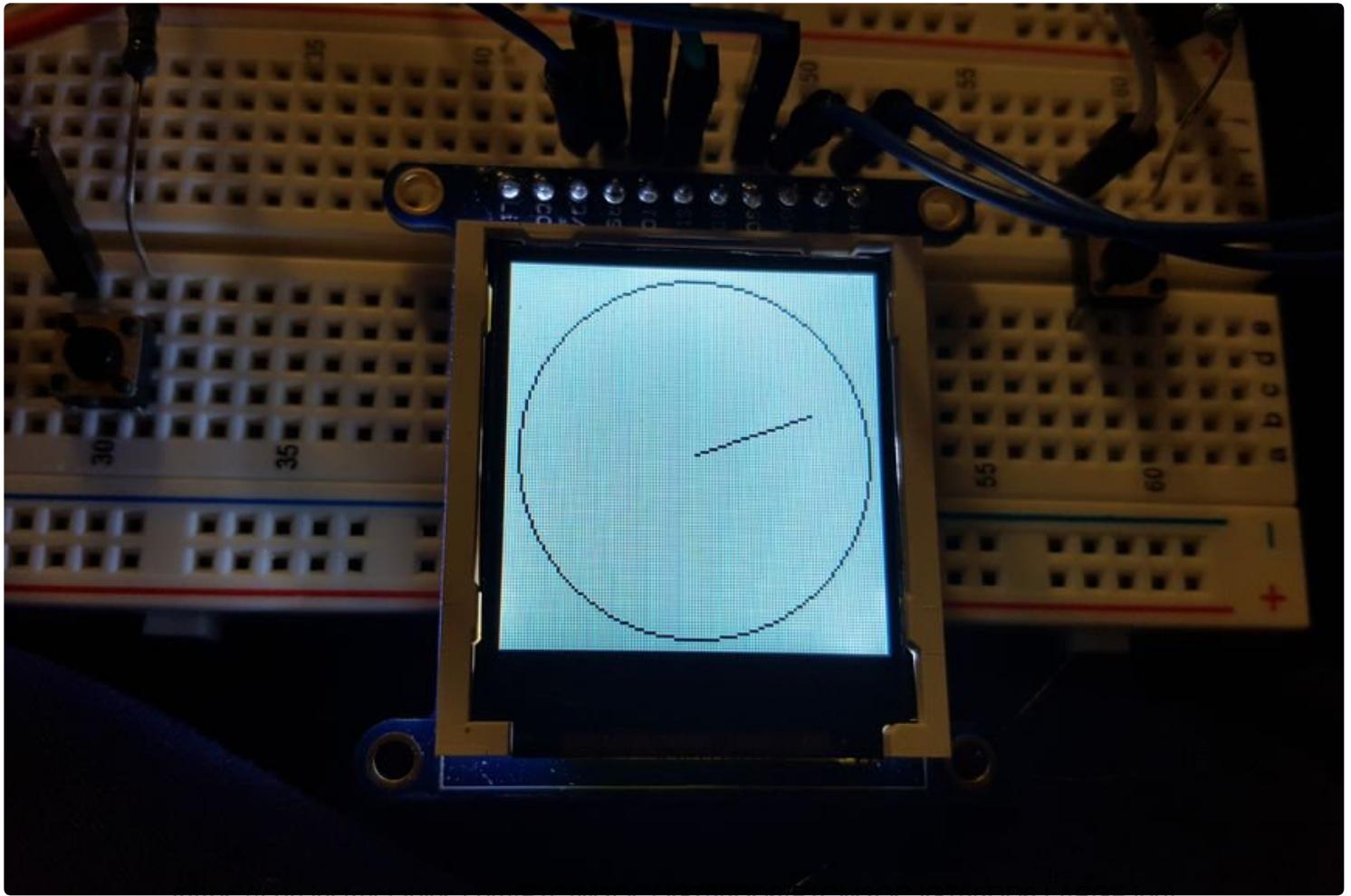
The first mode allows one to control two lines with the left and middle potentiometers.

Step 9: Mode 2 - Three Lines



Mode 2 allows one to control 3 lines that share 3 separate spaces with the 3 potentiometers.

Step 10: Mode 3 - Minute Clock



Mode 3 allows one to count a minute with the seconds hand.

Share

Did you make this project? Share it with us!

I Made It!

Recommendations





Add Tip



Ask Question



Post Comment

We have a **be nice** policy.

Please be positive and constructive.

Add Images

Post

Author



[editInstructable/edit/EBAESONJG750Q61/](#)

CATEGORIES

Category



Submit

KEYWORDS

Add new keyword

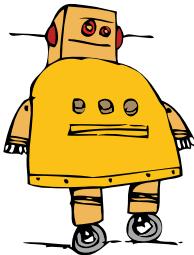
Remove All Keywords

LICENSE

Select License



Submit



Newsletter

Let your inbox help you discover our best projects, classes, and contests. Instructables will help you learn how to make anything!

enter email

I'm in!

About Us

[Who We Are \(/about/\)](#)

[Advertise \(/advertise/\)](#)

[Contact \(/about/contact.jsp\)](#)

[Jobs \(/community/Positions-available-at-Instructables/\)](#)

[Help \(/id/how-to-write-a-great-instructable/\)](#)

Find Us

Facebook (<http://www.facebook.com/instructables>)

Youtube (<http://www.youtube.com/user/instructablestv>)

Twitter (<http://www.twitter.com/instructables>)

Pinterest (<http://www.pinterest.com/instructables>)

Google+ (<https://plus.google.com/+instructables>)

Resources

For Teachers (</teachers/>)

Residency Program (</pier9residency>)

Gift Premium Account (</account/give?sourcea=footer>)

Forums (</community/?categoryGroup=all&category=all>)

Answers (</tag/type-question/?sort=RECENT>)

Sitemap (</sitemap/>)

Terms of Service (<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=21959721>) |

Privacy Statement (<http://usa.autodesk.com/adsk/servlet/item?siteID=123112&id=21292079>) |

Legal Notices & Trademarks (<http://usa.autodesk.com/legal-notices-trademarks/>) | Mobile Site (<https://www.instructables.com>)

 (<http://usa.autodesk.com/adsk/servlet/pc/index?id=20781545&siteID=123112>)

© 2018 Autodesk, Inc.