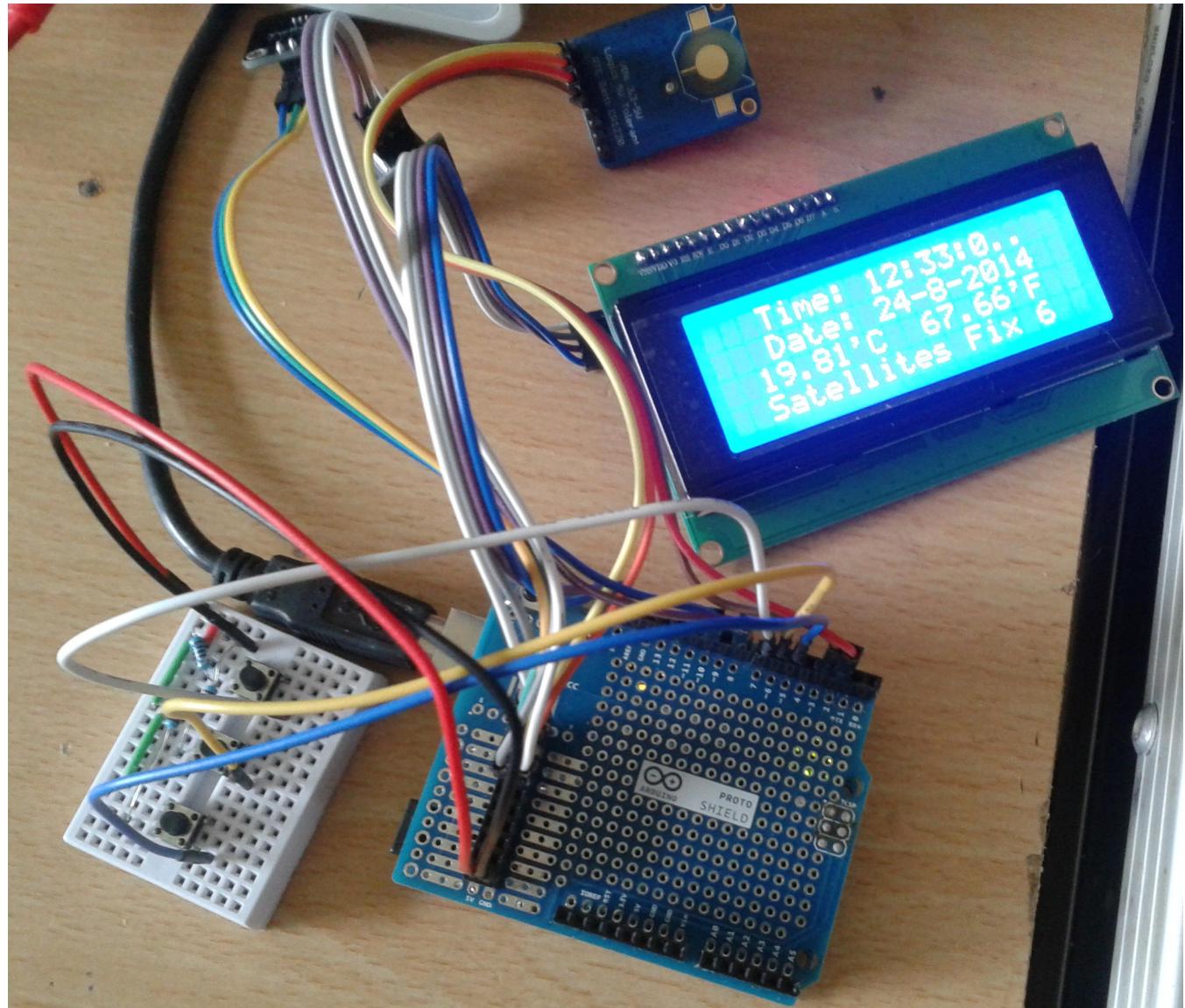




# GPS Time Clock



Time: 16:32:13.  
Date: 19-8-2014  
21.94°C 71.49°F  
Satellites Fix 0

## Parts

Adafruit Ultimate GPS Breakout  
Arduino Passive Speaker Buzzer Module  
Digital Temperature Sensor Chip  
Arduino

20X4 Character LCD Module Display Blue backlight For Arduino  
IIC/I2C/TWI/SP Serial Interface Board Module

Usb Cable for Arduino

Male to Female jumper wires

Male to Male jumper wires

jump wire

3x buttons

3x 10k resistors

Small breadboard

Arduino Proto Shield R3 and 2x20 Pin 2.54 mm Stackable short Legs Female Header  
or

2x 6 Way Arduino Header for 5v power (you 4 for 5v and 4 ground) and Pcb

### Tools Needed

Solder Iron  
Multimeter

## Software

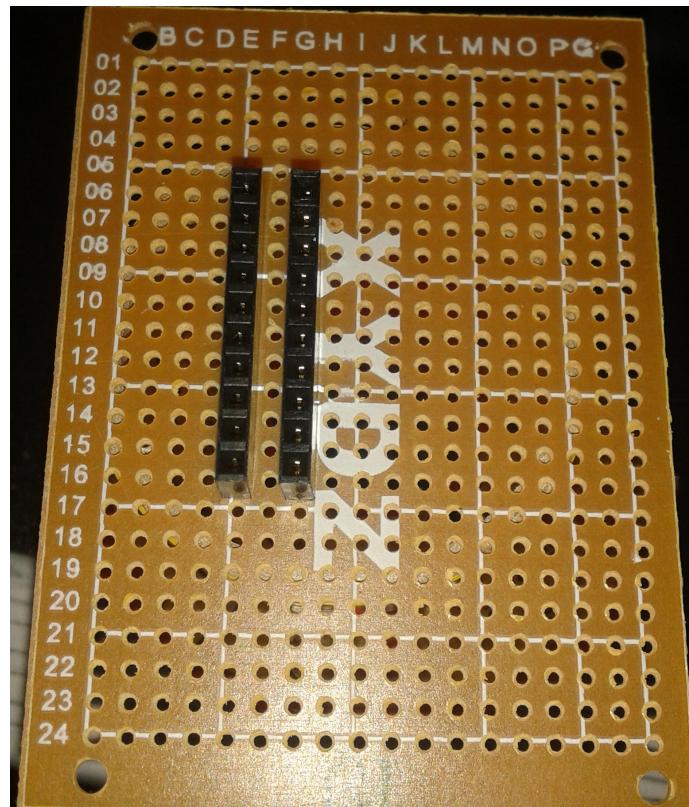
Arduino  
GPS Project 1.6 [Download](#)  
Libraries [Download](#)

Working Now

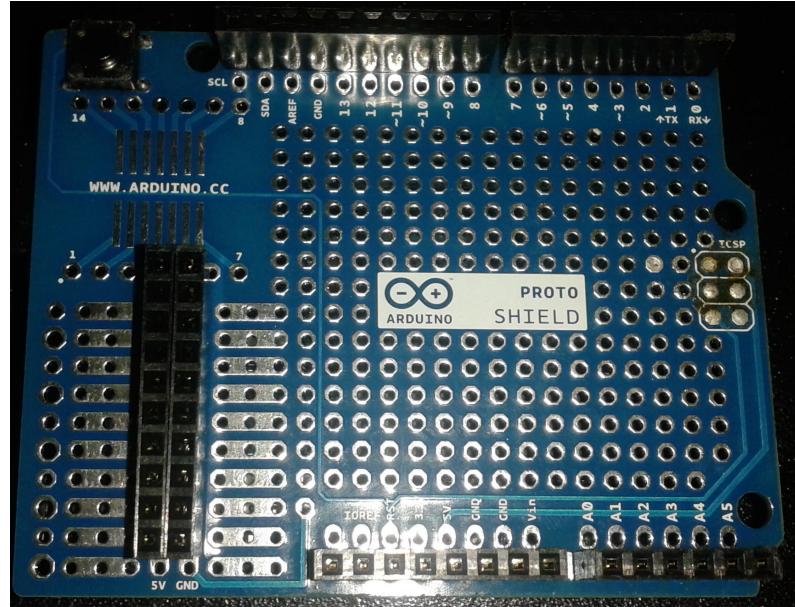
GPS Time Clock  
(24 hour working)  
(12h am - pm no working)  
C: F: (working)  
Menu (no working)  
Alarm (no working)  
your coordinates (no working)

Step 1A, First thing think change way to run 5v and ground  
Arduino Proto Shield and 2x 6 Way Arduino Header or 2x 6 Way Arduino Header for 5v power (you 4 for 5v and 4 ground) and Pcb

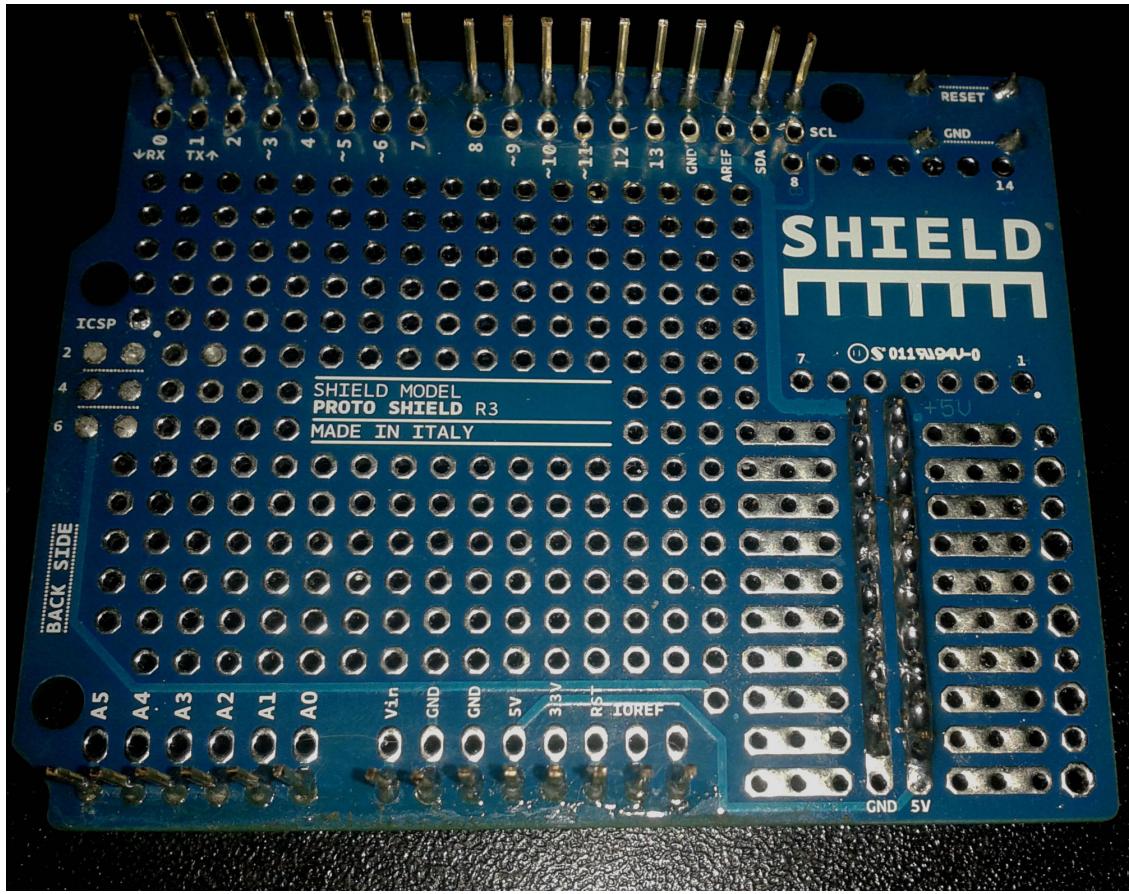
step 1B, 2x 6 Way Arduino Header for 5v power (you 4 for 5v and 4 ground) and Pcb



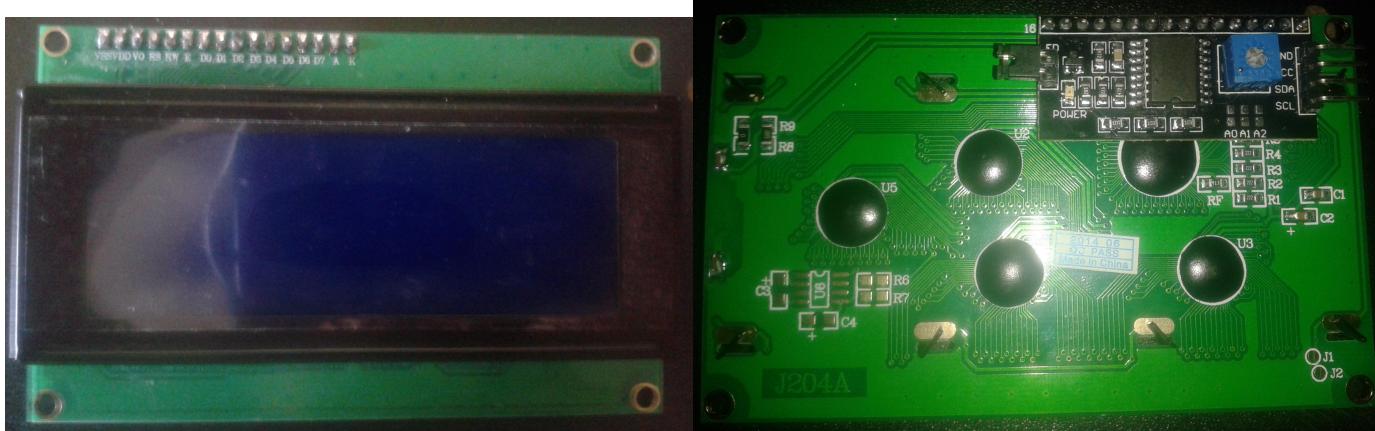
Step 1C, Arduino Proto Shield and 2x20 Pin 2.54 mm Stackable short Legs Female Header



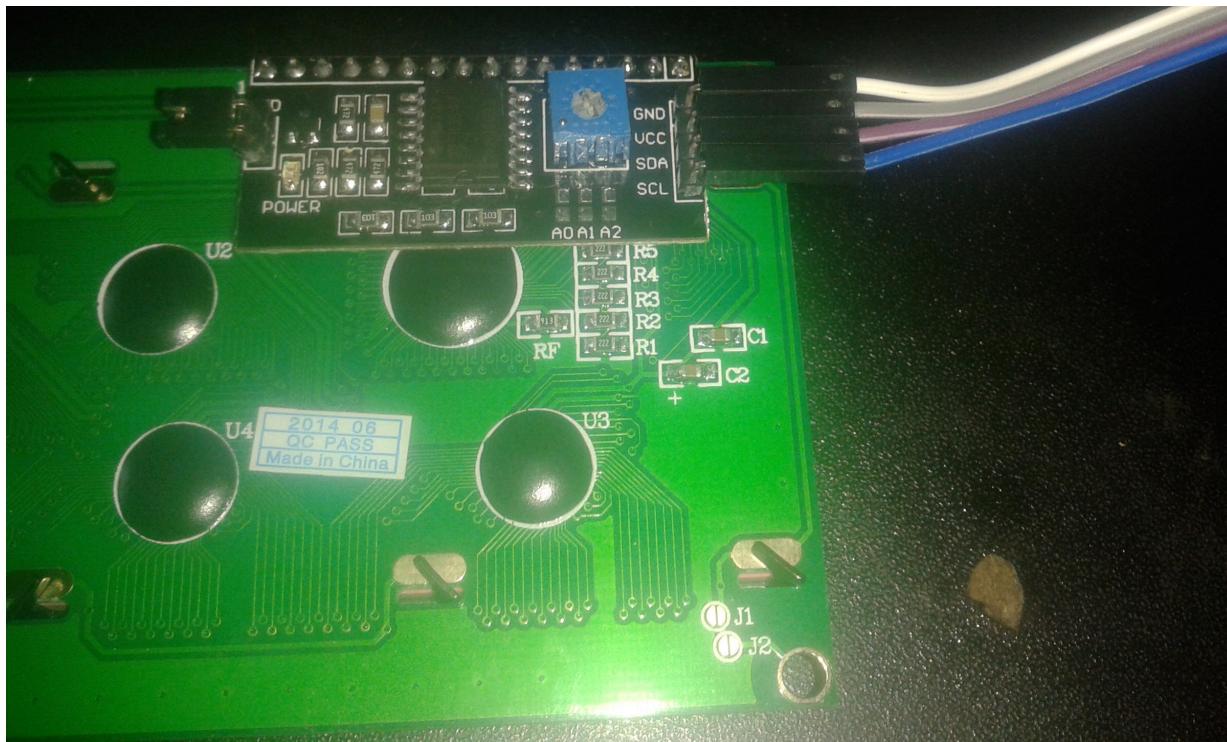
Just sold the Arduino Header to the board or pcb



Step 2. First thing your 20x4 screen and IIC/I2C/TWI/SP Serial Interface Board Module and solder them



Step 3. now get 4 of the Female to Male jumper wires and on them on your screen model



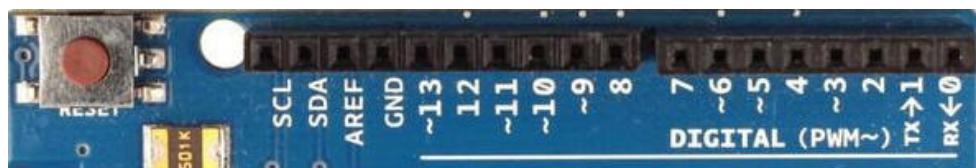
Step 4, now to add screen to the Arduino wire down the corrols and what cort from model on screen for me was

GND - Whith

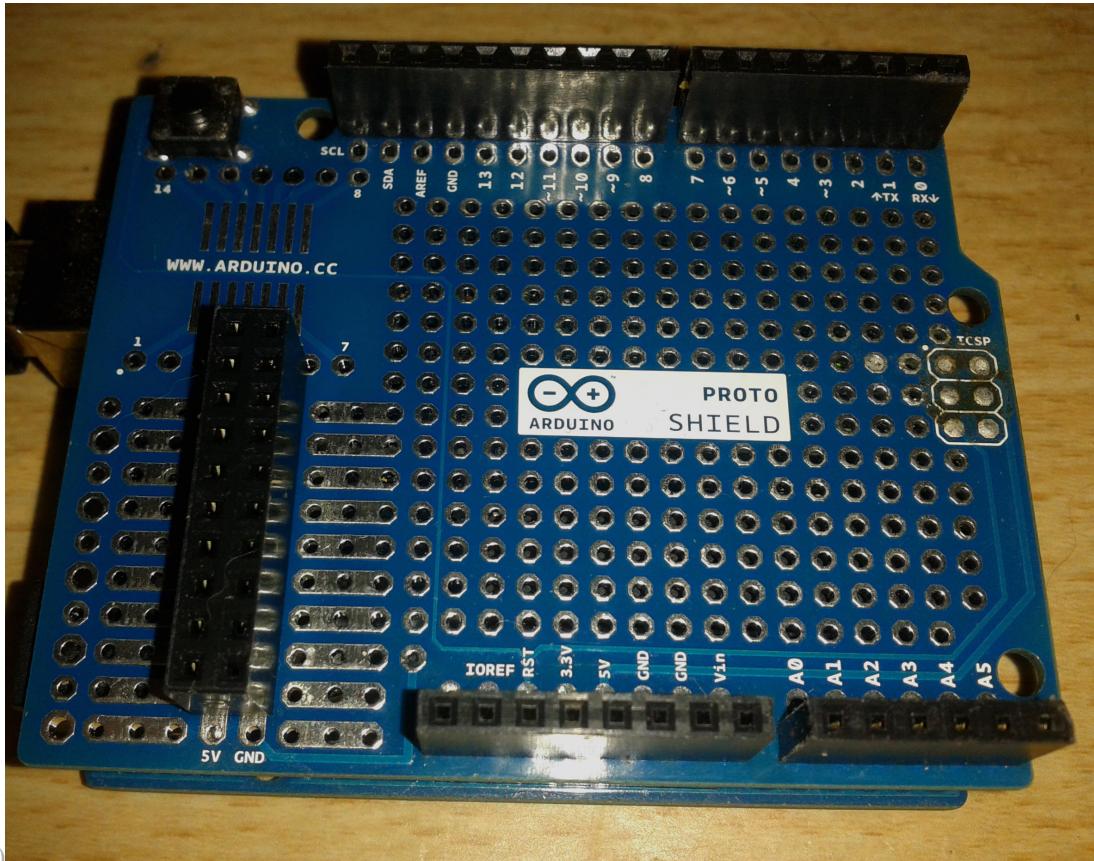
VCC - Gray

SDA - Puple

SCL - Blue

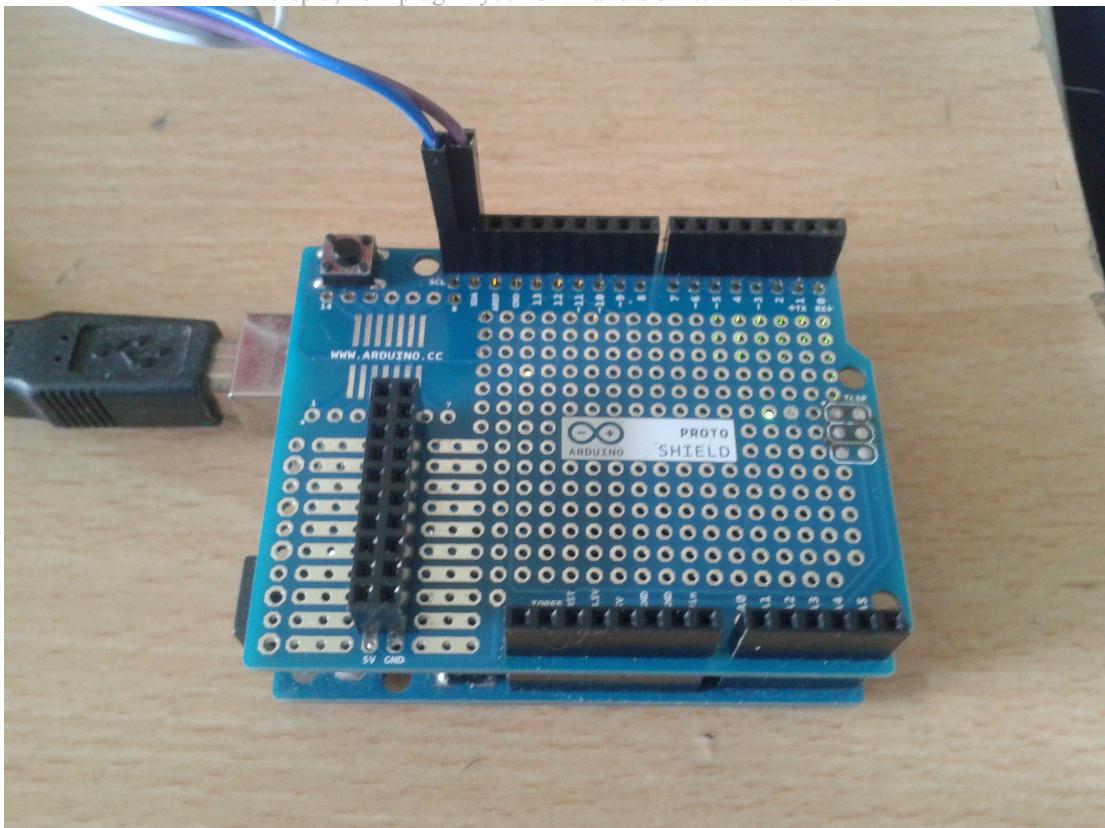


on Arduino uno and mega don't say SDA and SCL on the board but say as the pic it last two pins ( If your the Arduino Proto Shield

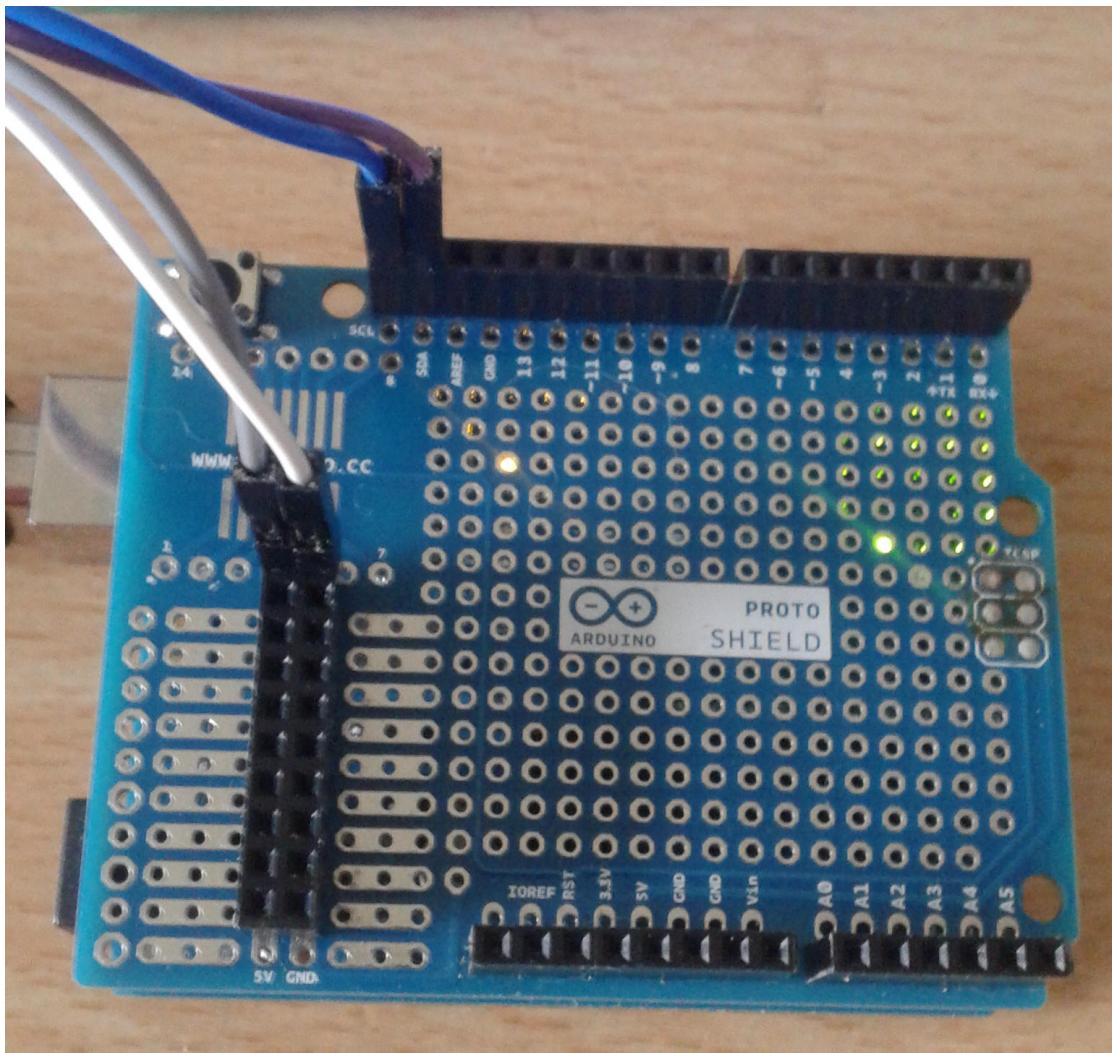


R3 said on the broad )

Step 5, now plug in your SDA and SCL to the Arduino



Step 6, now put in your 5v and gourd



Step 7, now take your GPS board and run 4 of the Female to Male jumper wires

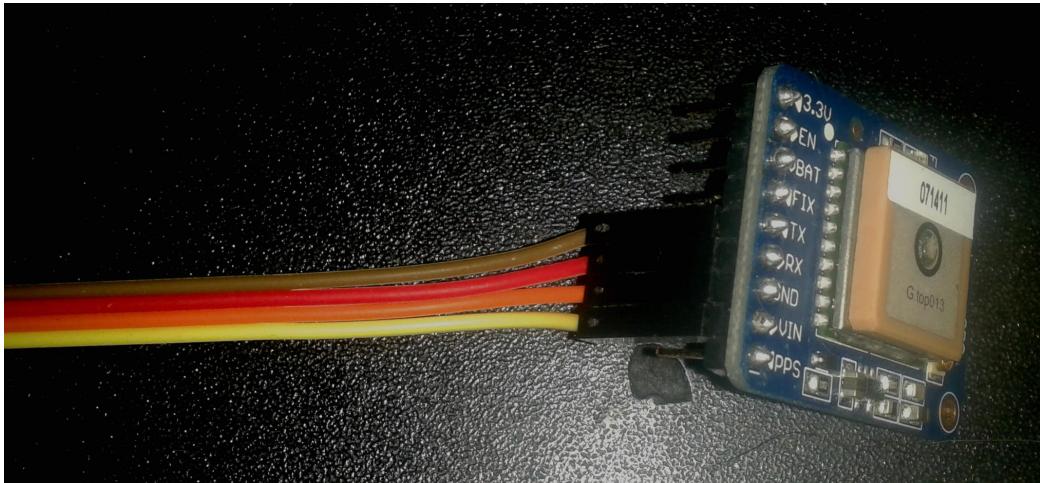
Tx - Brown

Rx - Red

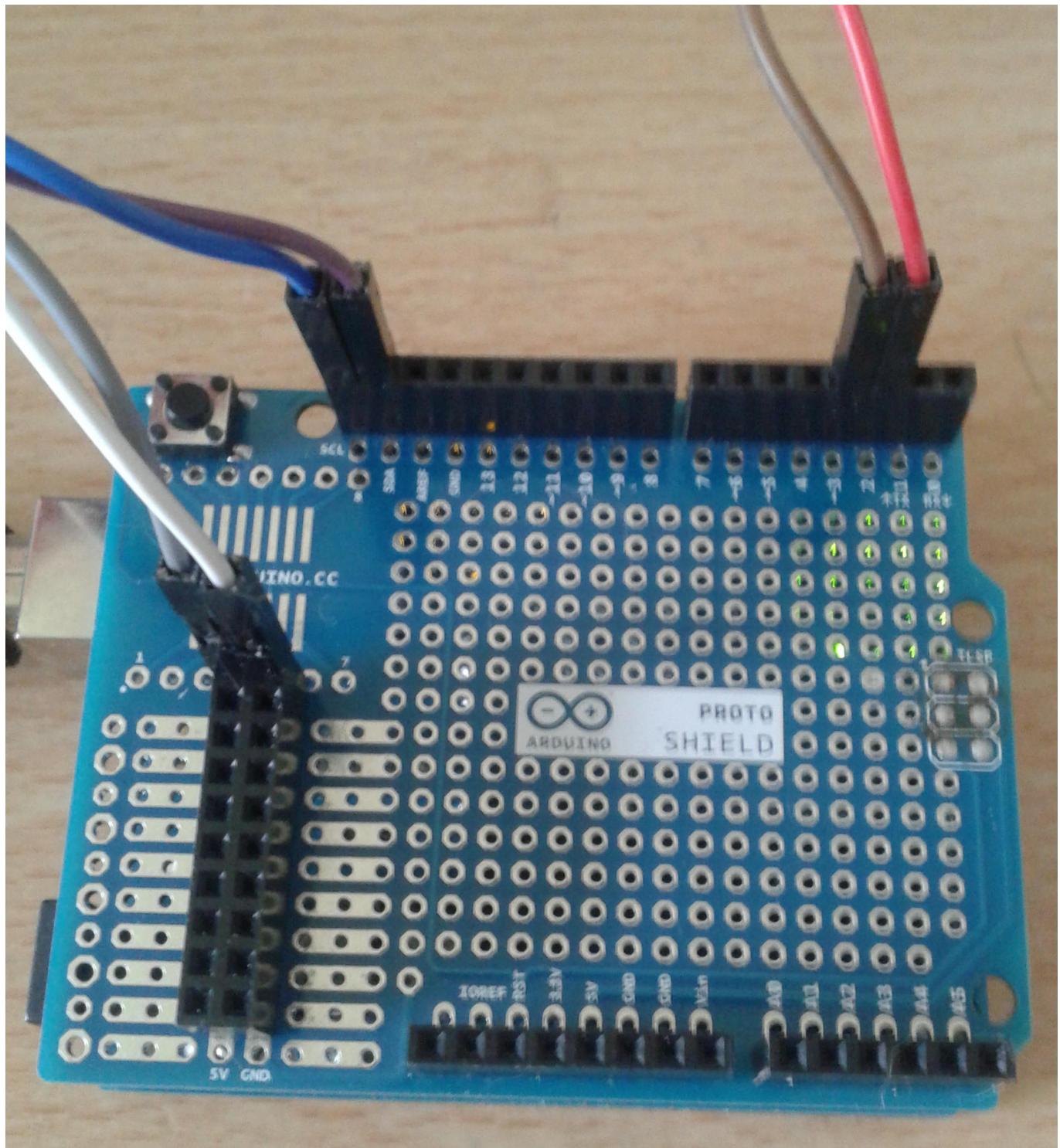
Gnd - Orange

Vin - Yellow

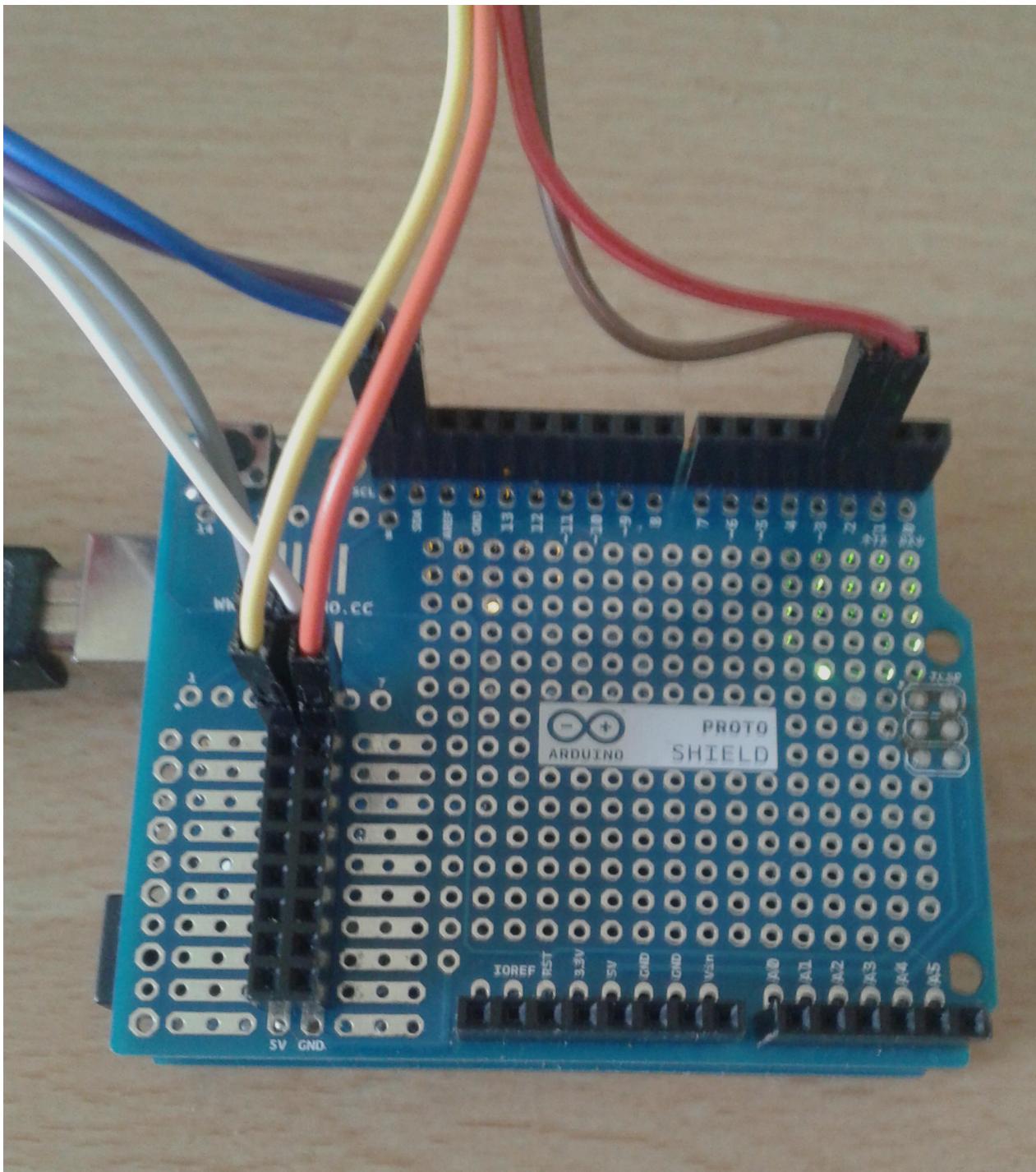




Step 8, now take the wire for the gps and put Tx to pin 3 of the Arduino Rx to pin 2 of the Arduino



Step 9, now put the power (Vin) and ground (Gnd) to the Arduino

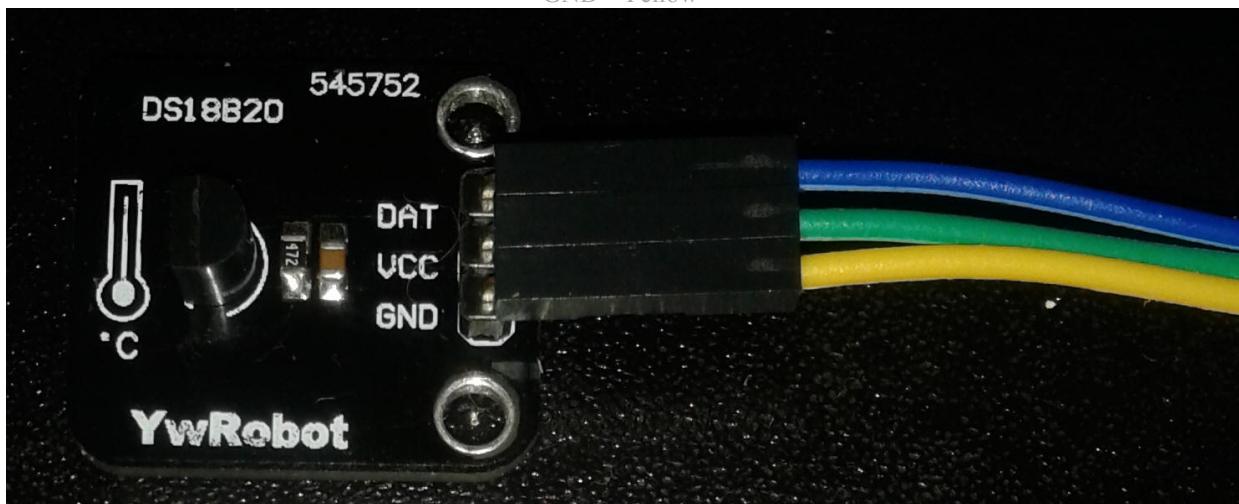


Step 10, Now get your Digital Temperature Sensor Chip (C: F:) and run 3 of the Female to Male jumper wires to it

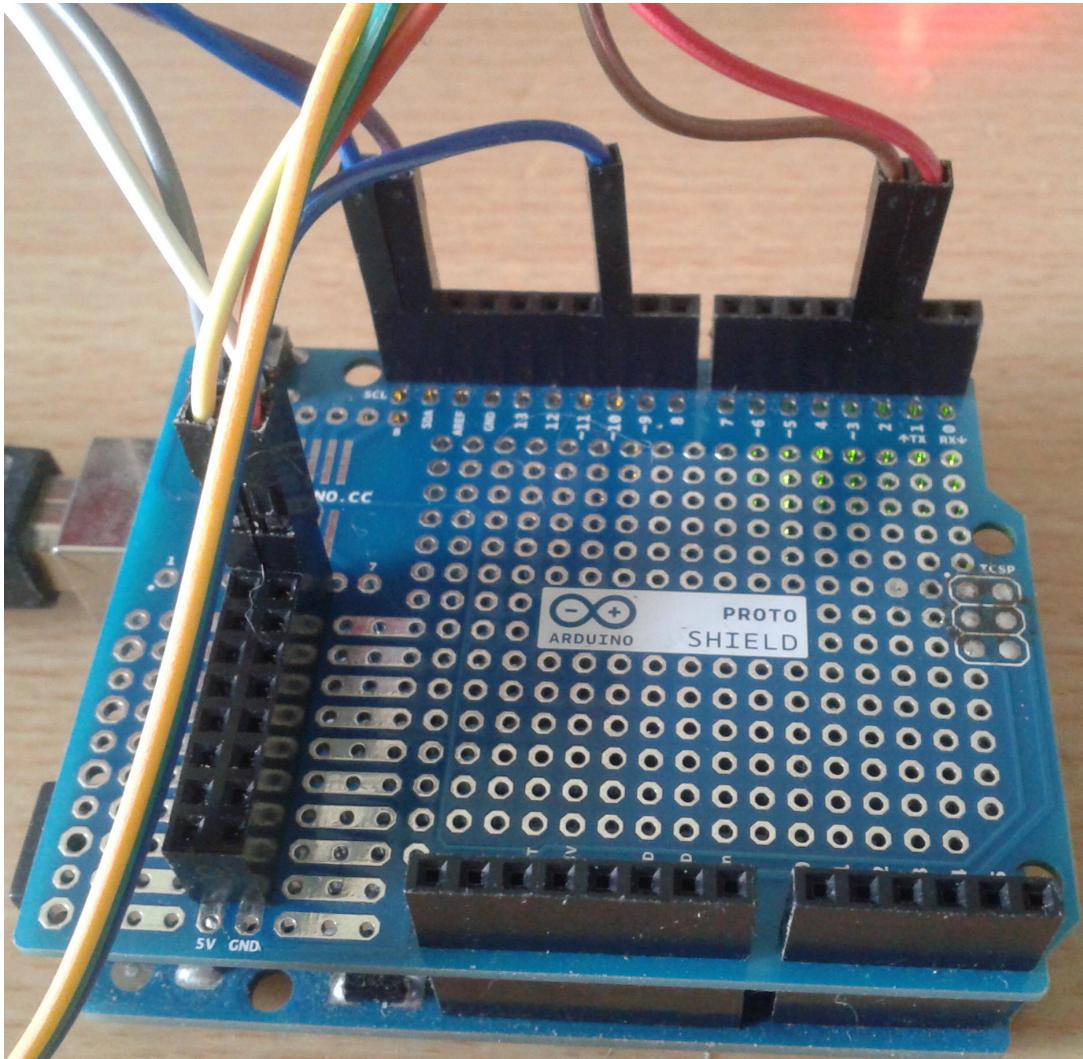
DAT - Blue

VCC - Green

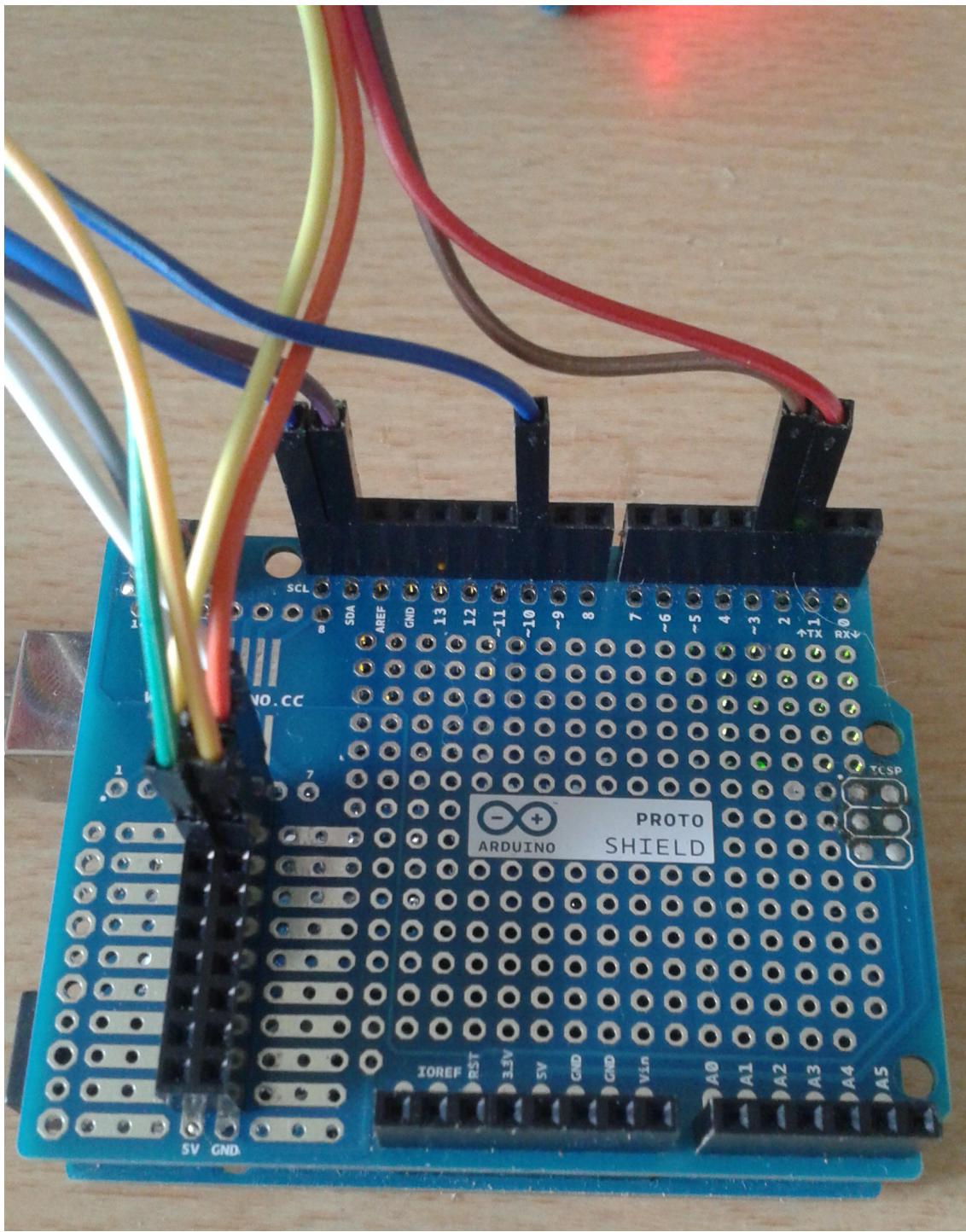
GND - Yellow



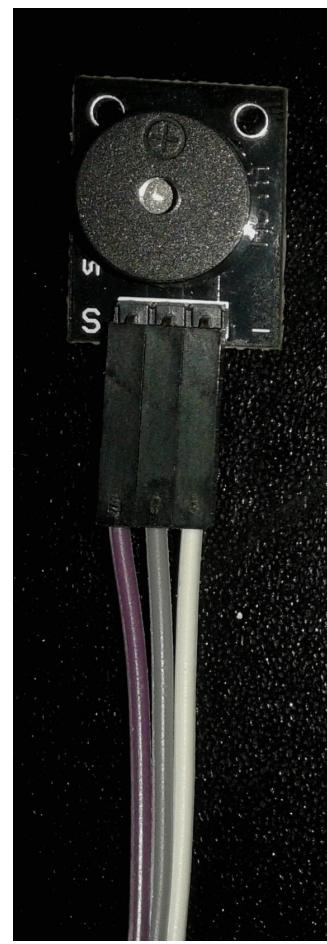
Step 11, Now the DAT to pin 10 (Blue)



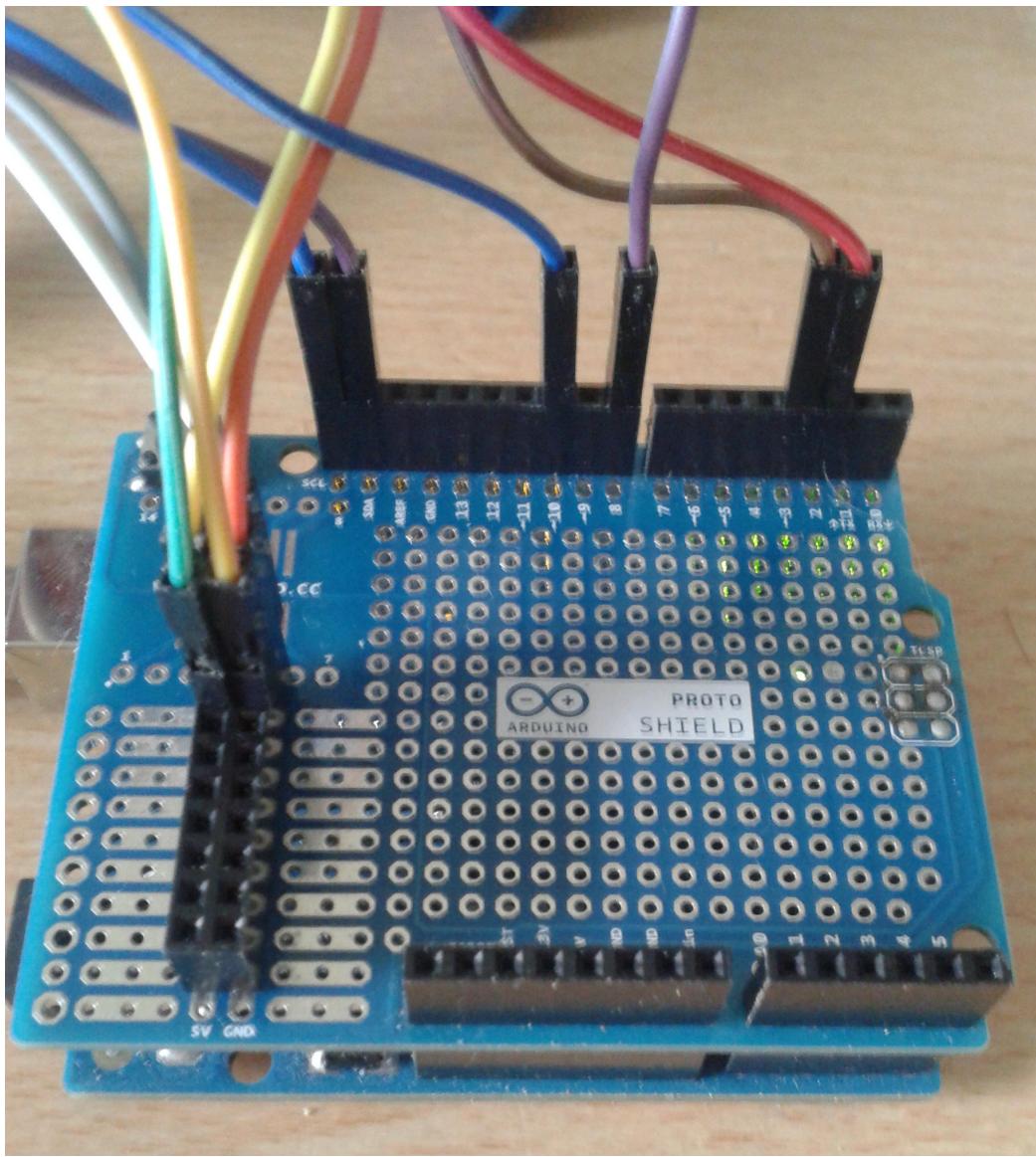
Step 12, now run Vcc to 5v and Gnd (Green 5v Yellow Ground)



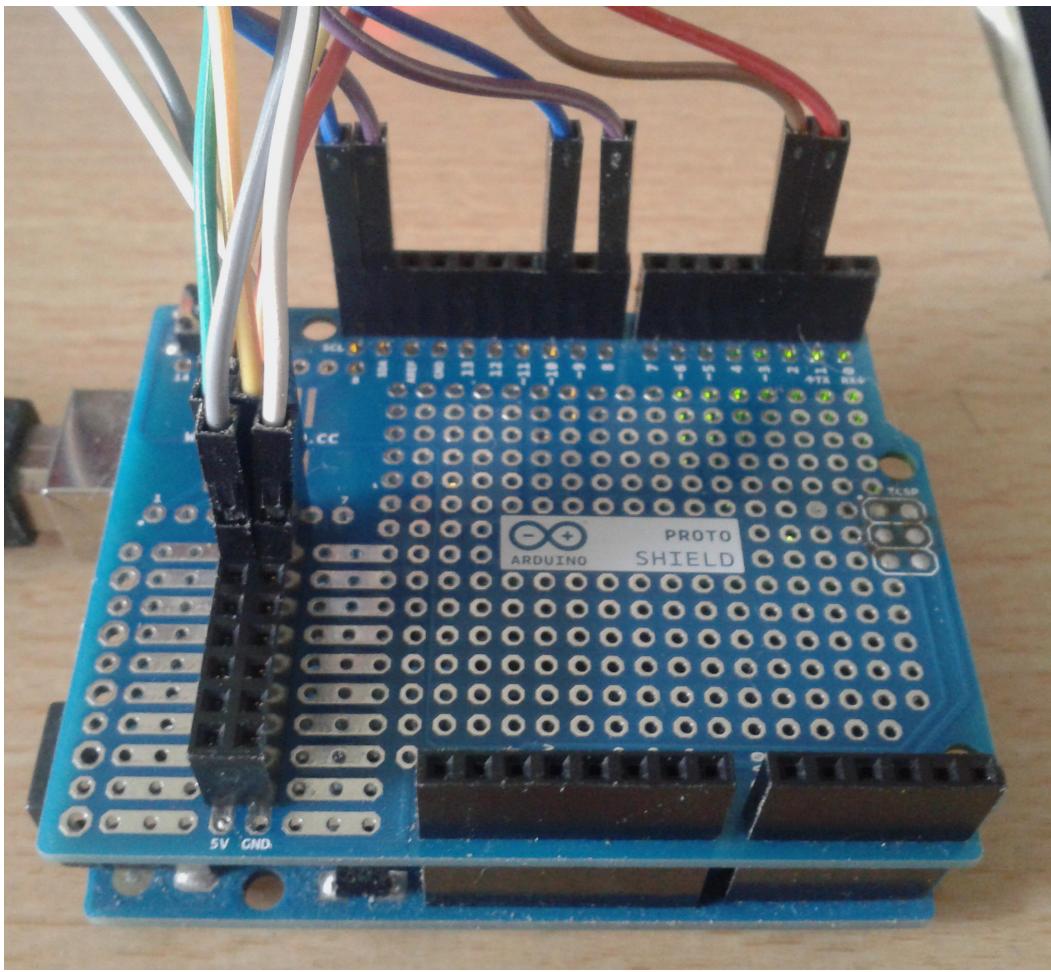
Step 13, Now get you Arduino Passive Speaker Buzzer Module run 3 of the Female to Male jumper wires to it



Step 14, This is tricky but S is song go to pin 8 of the Arduino (purple)



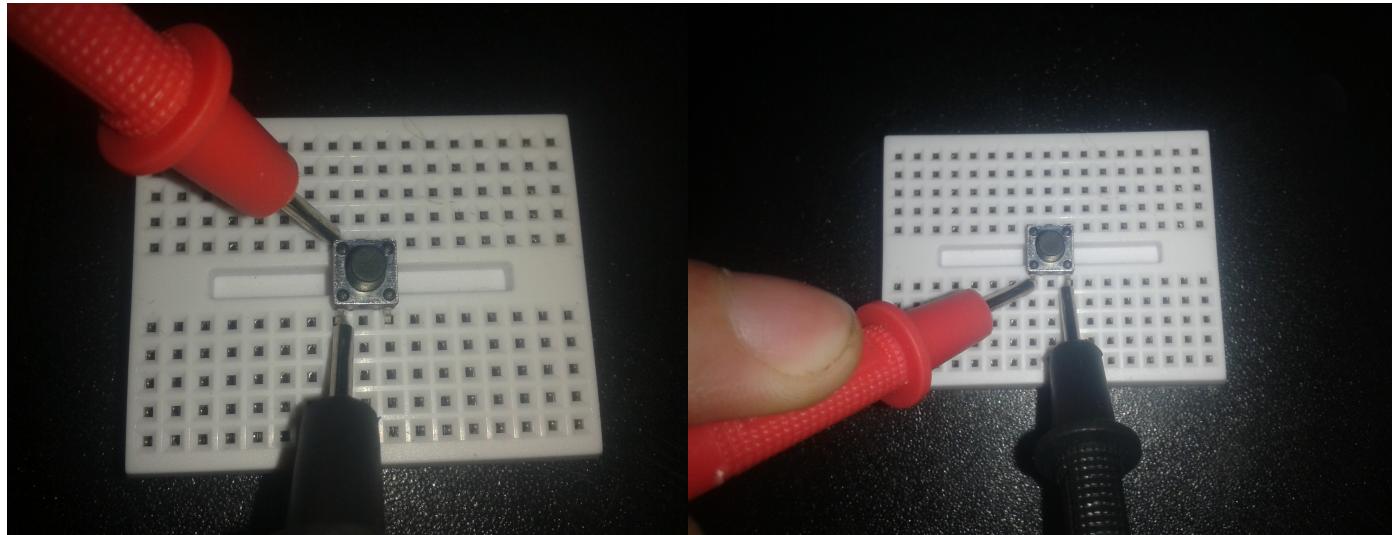
Step 15, now run the wire for - to ground (white) the middle wire (grey) is 5v so put then to the Arduino



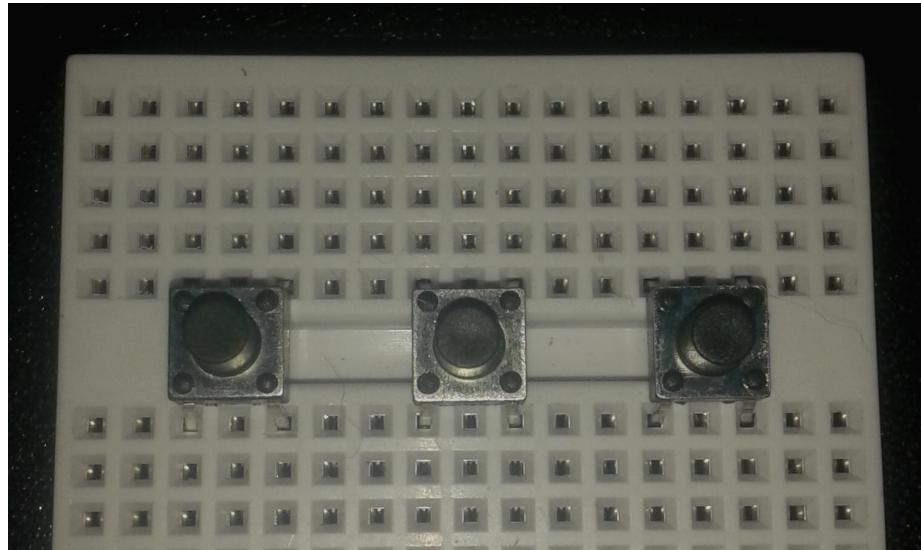
Step 16, now take your one of buttons and put into your breadboard over the line in the breadboard  
now take your multimeter check it for continuity (Pic 1 should beep) and Pic 2 should do nothing  
if Pic 2 get the beep Then just turn the button around

Pic 1

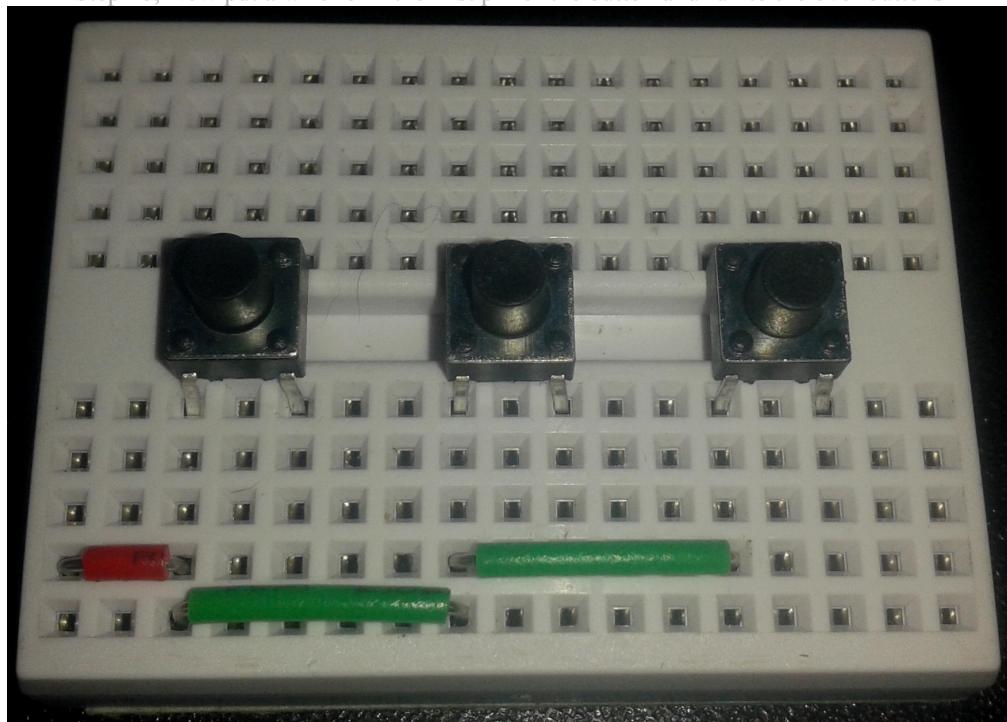
Pic 2



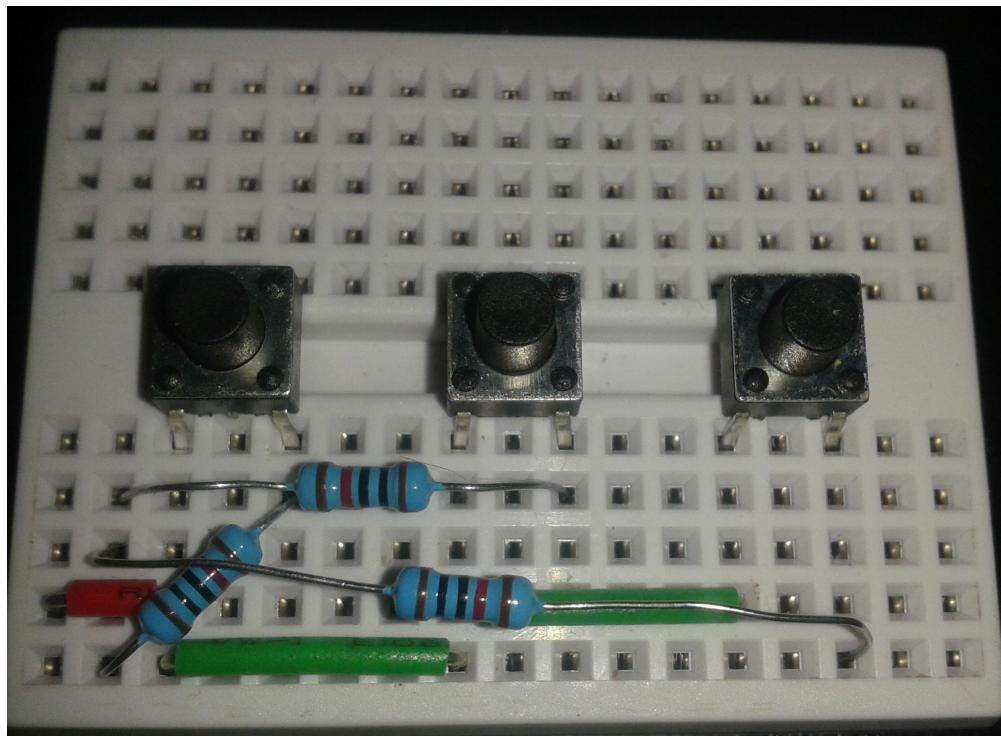
Step 17, now get the over 2 buttons and check them  
(Step 16,) now have 3 buttons check on the breadboard  
I leave two column between them



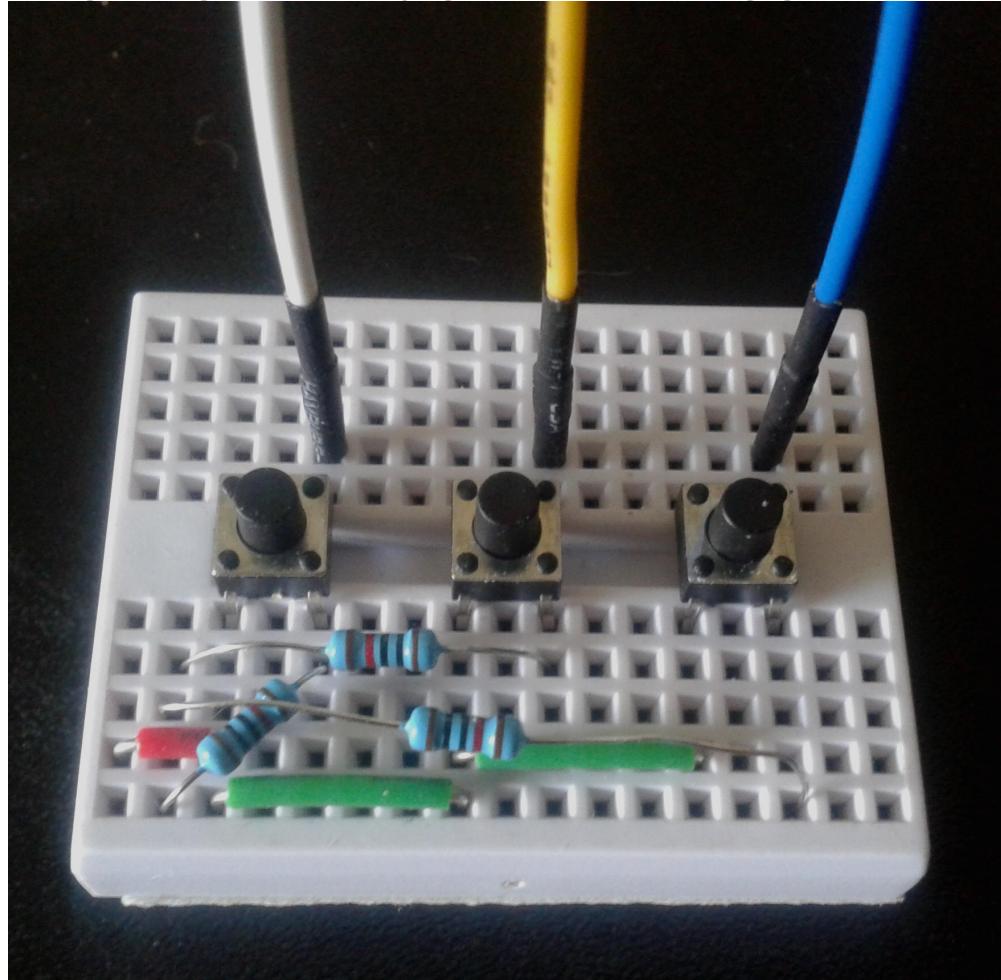
Step 18, Now put a wire from the first pin of the button and run to the over buttons



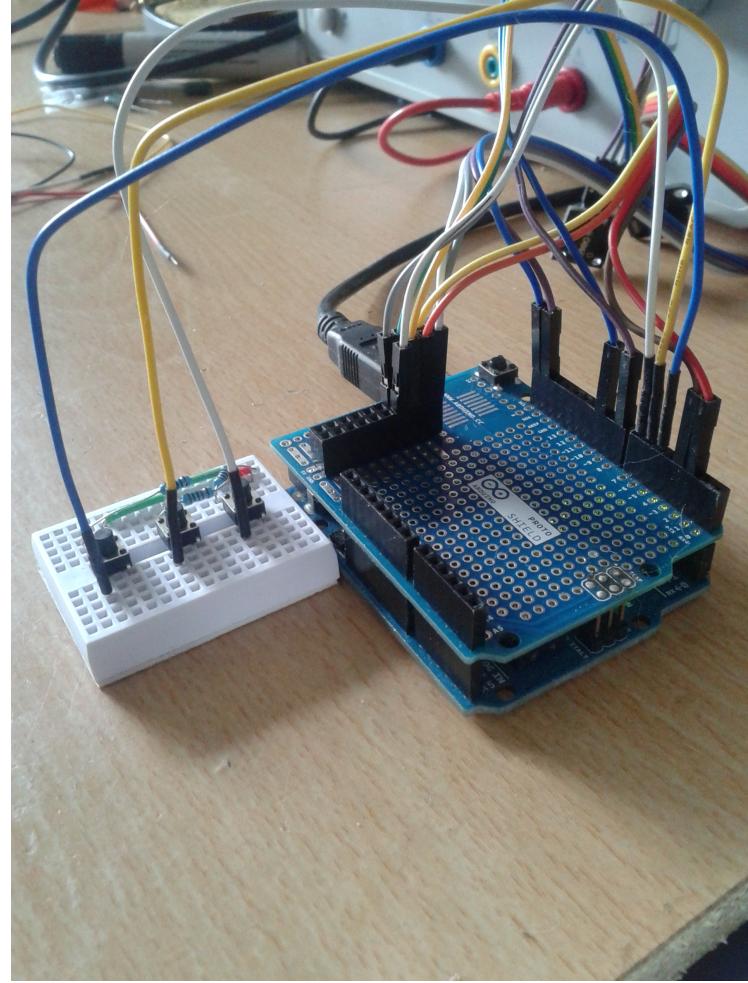
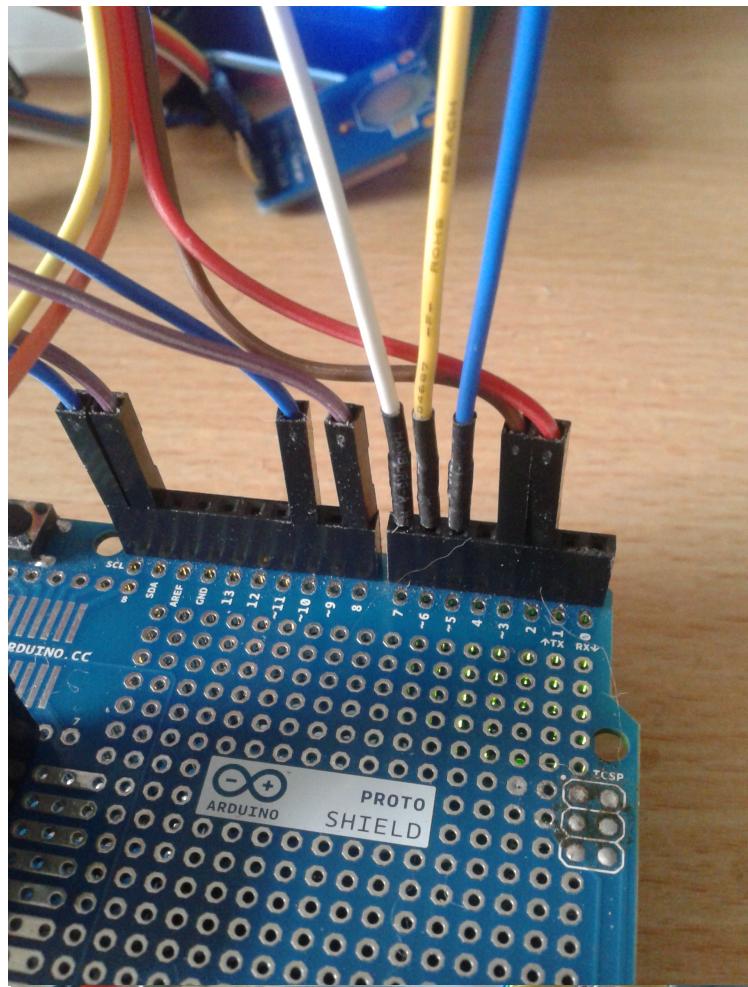
Step 19, Now get your 3 10k resistors and them to second pin of the buttons and run them to column 2  
(these make sure when the push button not press to ground)



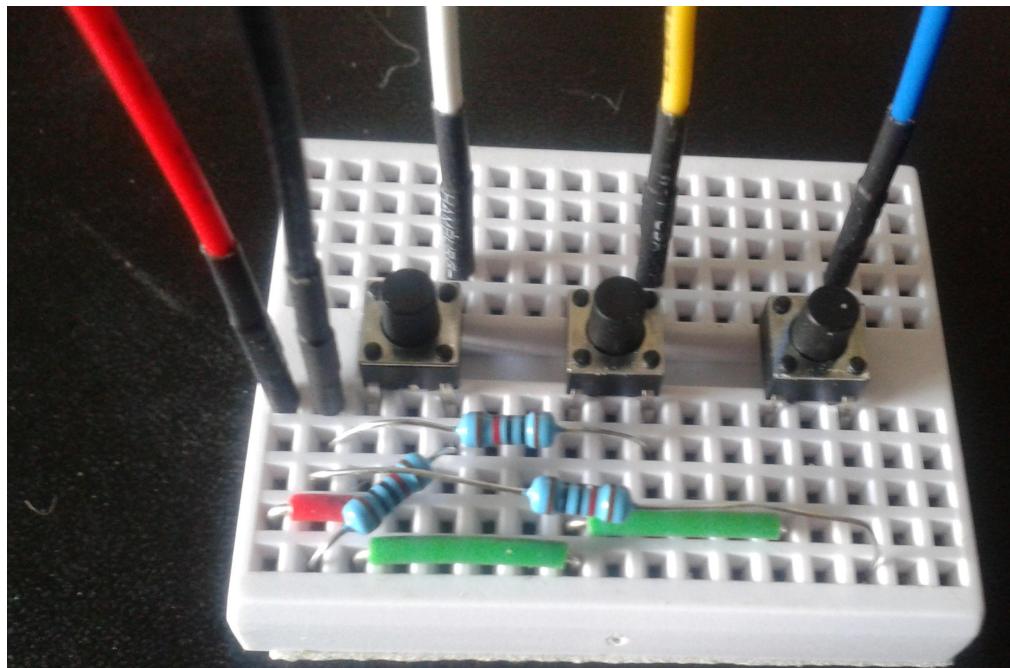
Step 20, now get 3 Male to Male jumper wires and run for back right pin of the button



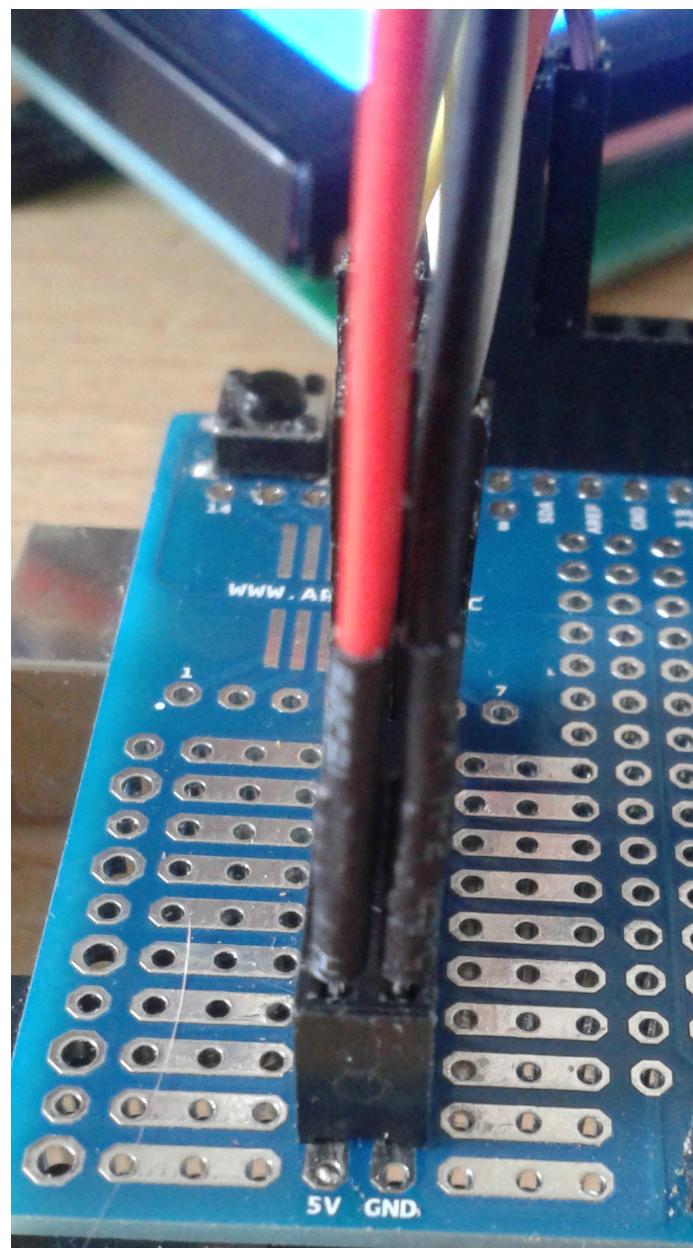
Step 21, now run the cable to the Arduino board to pins 7, (up key - white) 6, (select key - yellow) 5, (down key - blue)



Step 22, Now add cable the column 1 this going be 5v power (red) and to column 2 **ground (black)**



Step 23, now go back the this Arduino board and plug



Step 24, now to time to upload the the software to the Arduino download the lastics software at top this page and load to your Arduino

```

#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <Adafruit_GPS.h>
#include <SoftwareSerial.h>
#include <OneWire.h>
#include "pitches.h"

LiquidCrystal_I2C lcd (0x27,20,4);
OneWire ds(10);

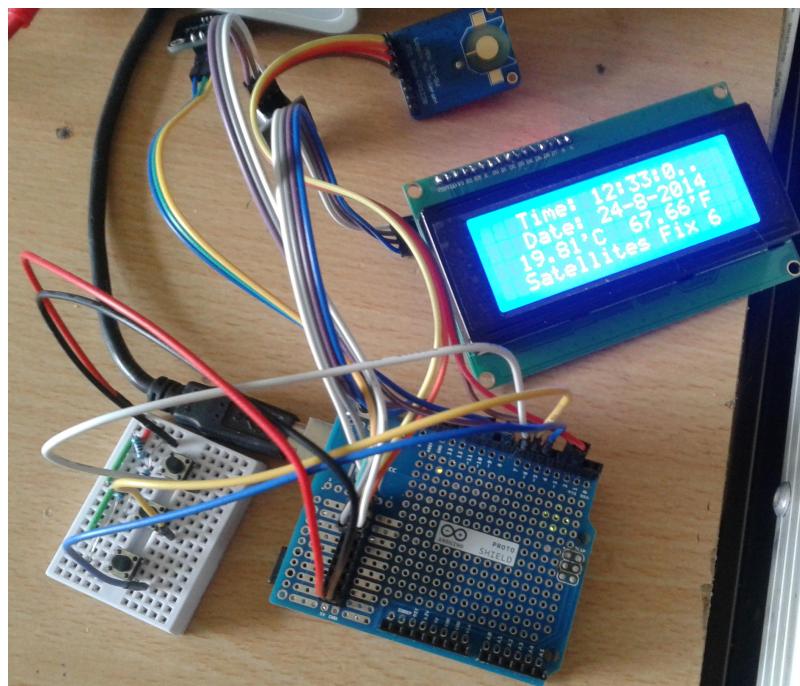
SoftwareSerial mySerial(3, 2);

Adafruit_GPS GPS(&mySerial);
#define GPSECHO true

boolean usingInterrupt = false;
void useInterrupt(boolean); // Func prototype keeps Arduino 0023

```

Step 25, now you finish you have gps clock and date and temperature



```

Time: 16:32:13.
Date: 19-8-2014
21.94°C 71.49°F
Satellites Fix 0

```

working to for this now

## (Trouble shoot)

Q, I get rong date and time

A, as the date and time come for the gps tracker This can take few minter to get right time and date (trying fix it get time before show on lcd )

Q, Time rong for my Zone

A, yes it on UK time but email your time and i seen i change for u

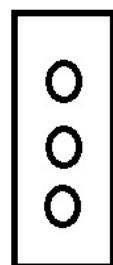
Q, can i help you with the code?

A, yes any help be very nice of you just ([Click here](#))

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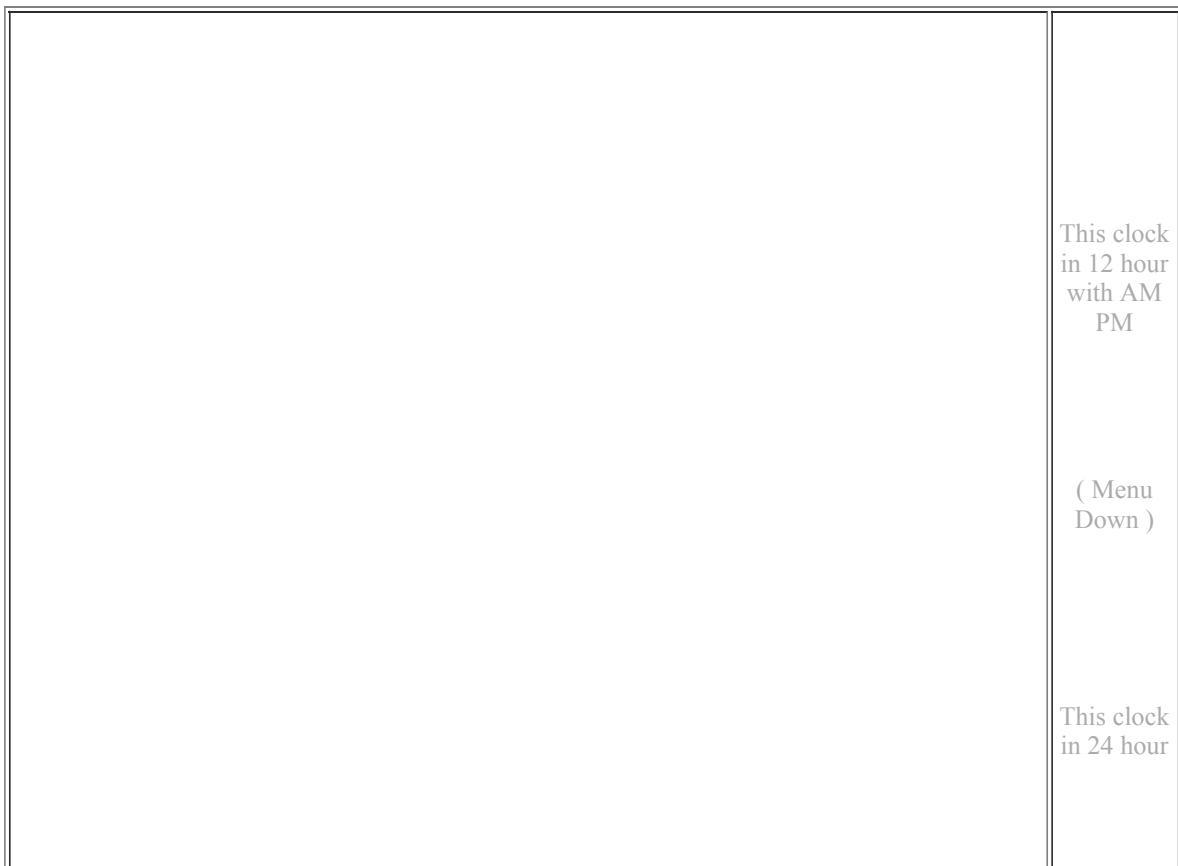
What should look like when all finish ( 4 menu and Alarms sounds )

## Button to size Clock



**Up and down go  
thow menu**

Here what should look like when finish



**Time: 4:24:43 PM (12h)**  
**Date: 23-12-2014**  
**Temperature 40'C 70'f**  
**Satellites Fix 1**

( Menu Down )

This  
Alarms list  
this show  
Alarms i  
have set  
and should  
up date  
when new  
alarms as  
them  
coming

**Time: 24:56:51(24h)**  
**Date: 23-12-2014**  
**Temperature 40'C 70'f**  
**Satellites Fix 1**

This  
should  
when on  
when  
alarm  
sound then  
have prese  
(select  
button to  
stop  
beeping  
and clear)

## **Alarms**

**9:33am Good Morning**  
**12:00pm Dinner Time**  
**2:50 pm medicine Time**  
**More down form lists and**  
**update this list**

( Menu Down )

last your  
coordinates

## **Alarm**

**Dinner Time**

( Menu Down )

**GPS Coordinates**  
**Your location is**  
**N 000000**  
**w 000000**

Speed  
knots  
Angle  
Altitude

( Menu Down )

**Speed 0.21 knots  
Angle: 154.26  
Altitude: 108.50  
Satellites: 5**

go back to  
clock in 12  
hour

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