Connect an LCD screen and GPS

Setting the scene

In this tutorial you will learn how to connect an LCD screen to the Arduino using a breadboard in addition to being able to read a range of different GPS data from the MKR GPS shield.

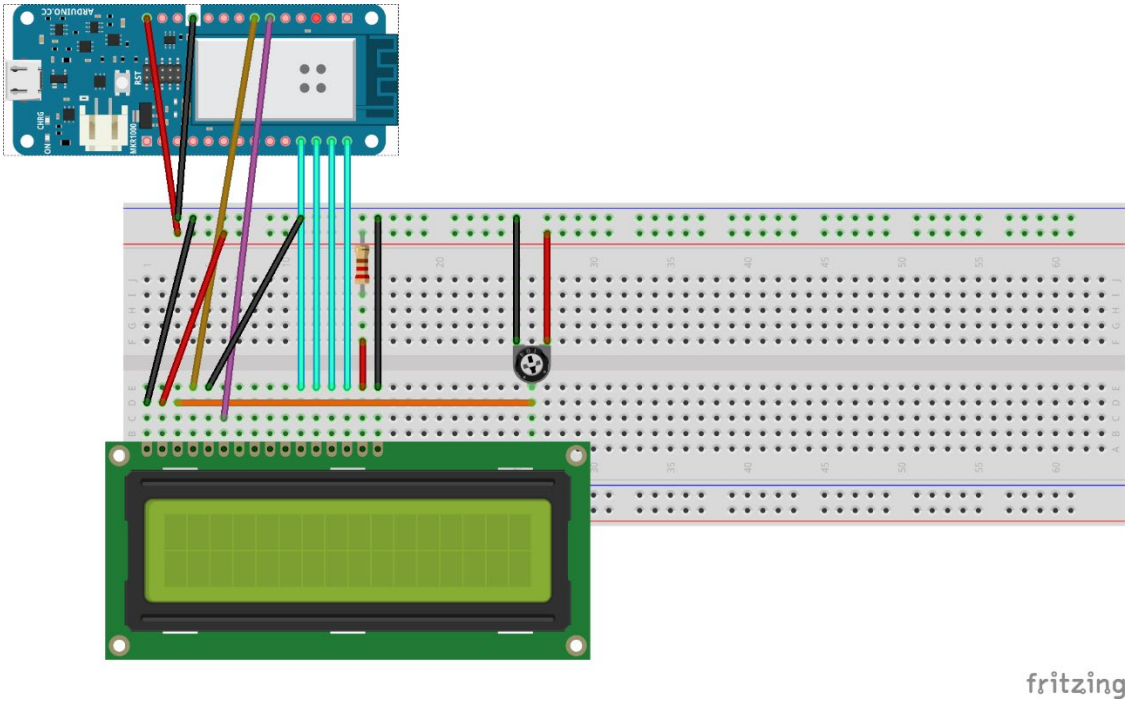
Step 1 – Building the circuit

You are going to connect the whole device and then test the LCD screen and GPS sensor separately. You should initially plug the MKR Arduino into the connector carrier.

Pro-tip

Through using the connector carrier, it helps to protect the exposed pins on the MKR GPS shield.

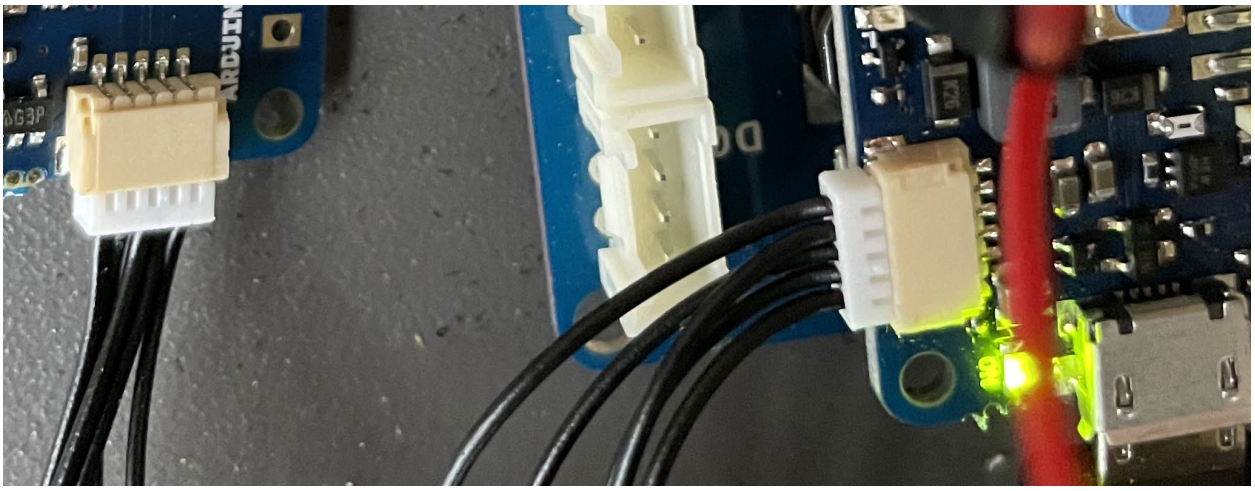
You should then connect the circuit by following the circuit diagram below.



Pro-tip

In order to make the circuit as neat as possible we recommend using shorter length cables.

Finally, connect the MKR GPS Shield using the provided cable.



Testing the LCD screen

To test the LCD Screen is working correctly upload the sample file, LCD_Screen_Test.zip to your Arduino. If it is functioning correctly you should see “hello, world!” printed on the screen. If it’s not functioning correctly check that your cables are connected correctly by following the instructions at the top of the sample file.

Testing the GPS receiver

It's now time to test that you GPS receiver is functioning correctly. You should upload the sample file GPSLocation_sample_No_LCD.zip. If it is working correctly you should see a range of coordinates printed out onto monitor in your IDE.

```
standby
delay ..........
wakeup
wait location ... 3514 ms

Location: 51.3175278, -2.1794775
Altitude: 85.30m
Number of satellites: 7

standby
delay ..........
wakeup
wait location ... 3885 ms

Location: 51.3176193, -2.1796472
Altitude: 22.20m
Number of satellites: 6

standby
delay ..........
wakeup
wait location ... 4911 ms

Location: 51.3174553, -2.1793211
Altitude: 82.00m
Number of satellites: 6

standby
delay .......
```

Pro-tip

If you do not receive GPS data, you should test your device outside as buildings will often stop the GPS signal from being received via the sensor.