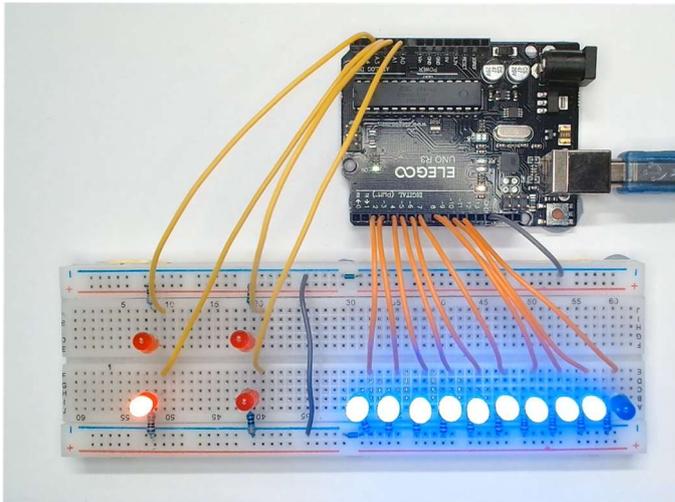


Build your Arduino Ghostbusters Proton Pack Lights Project



The Arduino Ghostbusters Proton Pack Lights is a super project for anyone who likes to construct and learn from unique and attractive electronics projects.

The 10 blue LEDs show the Power Cell strip progressing from 1 LED on up to 10 LEDs on, and the 4 red LEDs cycle around to show the Cyclotron lights.

Project and software designed in Britain by *The Electronics Kit Shop*.



The Electronics Kit Shop

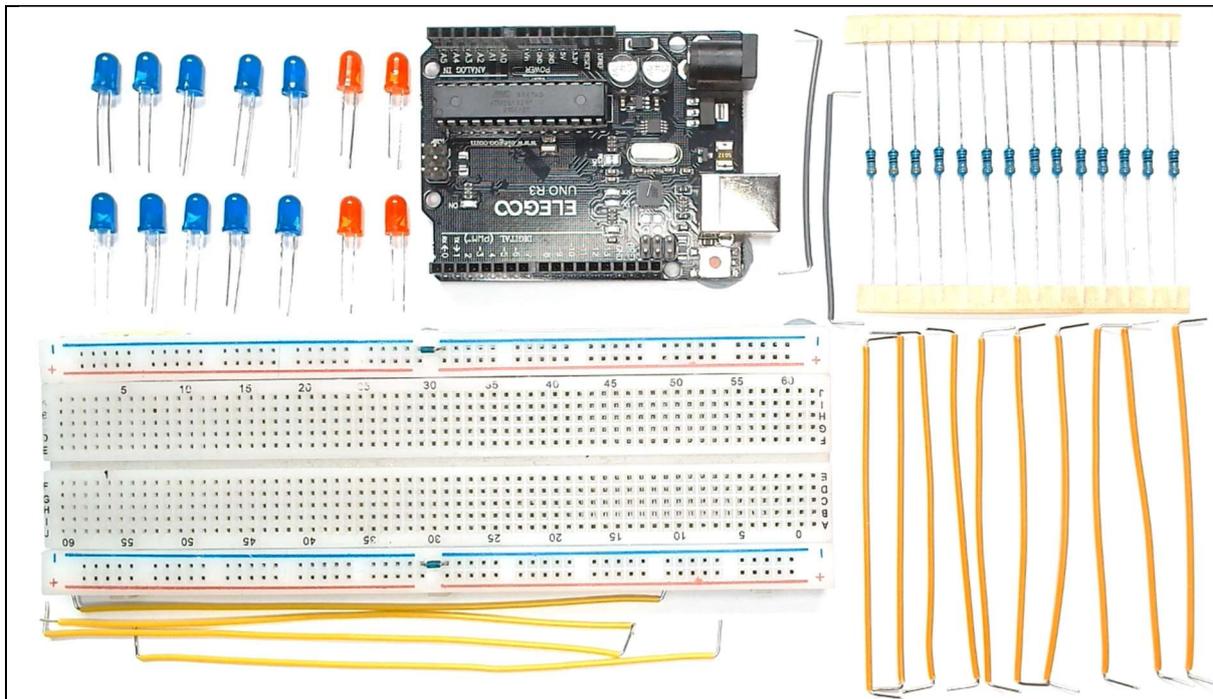
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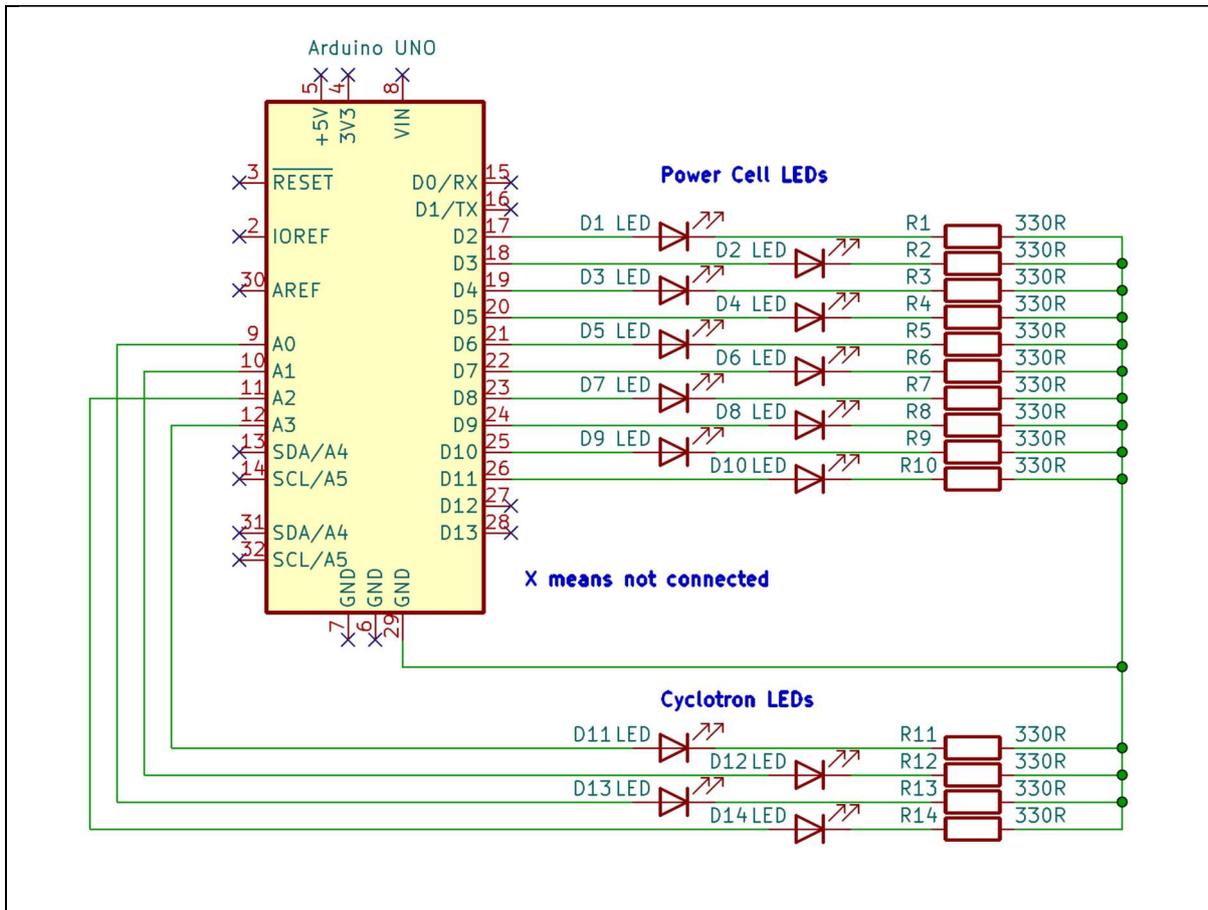
Components for your Project



For your project you will need:

- An Arduino Uno or Mega. You can also use an Arduino Nano or any other Arduino type, but you might need to change the pin assignments for these in the software (this is easy to do)
- A breadboard
- Ten Blue LEDs for the Power Cell
- Four Red LEDs for the Cyclotron lights
- Fourteen 330 Ohm resistors. You can use any resistor values ranging from 330 Ohms to 560 Ohms.
- Assorted breadboard jumper wires

Schematic Diagram



Arduino Port Pins **D2** thru **D11** are configured as *outputs*, and drive the ten LEDs to make the Power Cell lights.

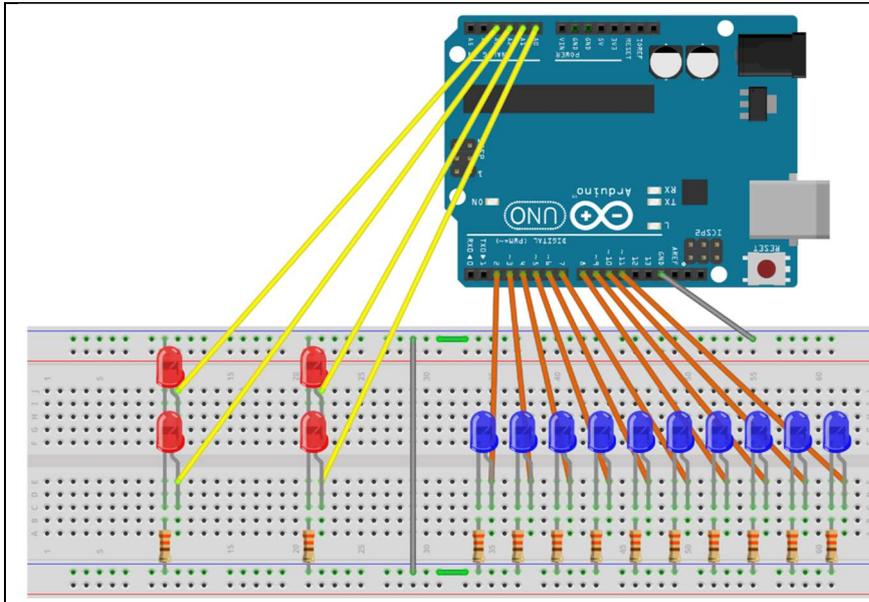
Arduino Port Pins **A0** thru **A3** are also configured as *outputs*, and drive the four LEDs for the Cyclotron lights.

Each of the LEDs has a resistor in series with it which limits the current through the LEDs (without this the LEDs would be damaged).

The **GND** from the Arduino is connected to all of the LEDs via their resistors.

The remaining Arduino pins are not connected.

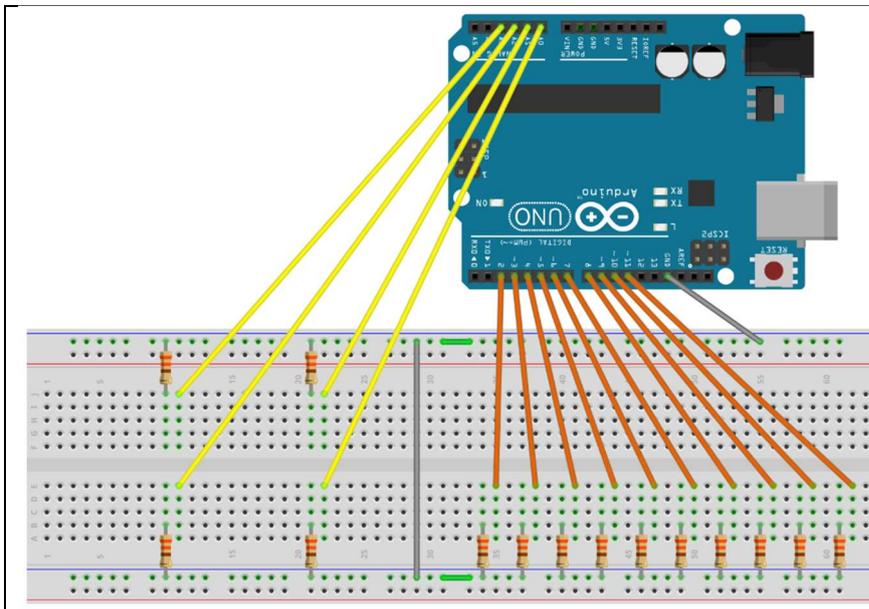
Breadboard Layout – Complete Project



This picture shows the complete Breadboard Layout.

Some of the resistors and wires are obscured in this picture by the LED graphics.

Breadboard Layout – Without LEDs



In this picture of the Breadboard Layout the LEDs are not shown, which makes it easier to see all of the resistors and wires.

Project Software

The project software is in file: **ArduinoProtonPack.ino**

The project software and documentation can be downloaded from:

<https://www.electronicshop.com/projects>

The software can be compiled in the Arduino IDE and uploaded to your Arduino.

The software contains comments to tell you what it is doing.

You can change the software if you want to reassign the Arduino Port Pins, or you want to experiment with making the project do different things.

Document Version 1.0



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