

To program the board, you'll need an FTDI cable or FTDI friend. Or you can program the ATmega328 chip using your Arduino board and move the chip to the RGB Matrix Backpack for testing.

The board snaps onto the back of the panel and provides power to the panel through the terminal block connections. The board should be powered by a 5V regulated power adapter that can deliver up to 2A.

Features:

- A 8x2 female header on the back of the board allows this backpack board to simply snap onto the back of the matrix panel.
- 2.1mm power jack for a regulated 5V power supply. The 5V supply should be able to deliver 2A of current to meet the demands of the matrix panel. We strongly recommend this 5V regulated power supply for use with the matrix panel. The terminal block is used to provide power to the RGB matrix panel.
- The 6-pin programming header makes it easy to program the board using the Arduino IDE and a cable or adapter like an FTDI cable or FTDI friend
- A small tactile button can be used as an input to your Arduino program. It is connected to Arduino pin 11. To use the button, the `setup()` function in your program should call `pinMode(11, INPUT); digitalWrite(11, HIGH);`. The button is read by calling `digitalRead(11)`.

To program the backpack board, you use it just like an Arduino. The board type to select in the Arduino IDE is "Arduino Uno". You need to connect an FTDI cable or FTDI friend.

Adafruit provides Arduino libraries for controlling the RGB Matrix Panel. You can download the libraries and learn how to use them on our matrix tutorial page. You don't have to worry about any of the complex wiring -- just skip down to the sections "Test example code" and "Library".

The ATmega328 chip comes preloaded with the animation shown in the video above. To change the demo program download the sketch here. Make sure you've installed the Adafruit libraries correctly. Compile the sketch and upload it to your board

Technical Details

Check out the complete build instructions on the Nootropic site!

