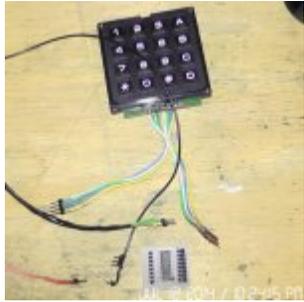


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Sunday, October 5, 2014 - 00:41

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Sunday, December 14, 2014 - 14:20



This article/page is part of a larger project, the main project page is: [MINI NC Controller for Z-axis](#)

Heres is the 4x4 matrix Keypad.

When hooking a keypad of this type to an Arduino board normally you would use 8 digital pins. For the project im using this keypad for i was trying to use as little pins as possible. While searching the net there seams to be two ways to use less pins.

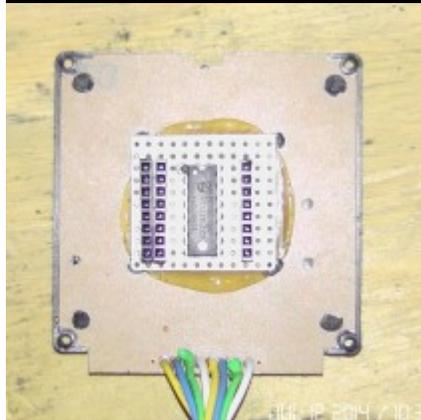
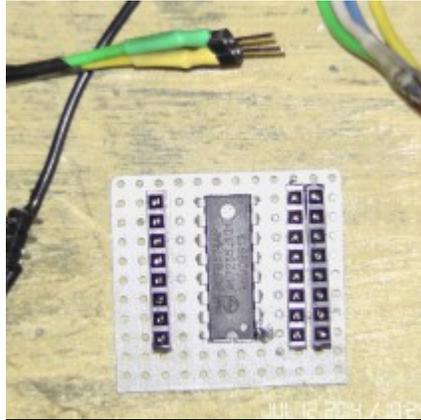
- 1) [Resistor grid](#)
- 2) [I2C I/O Bus Expander Chip](#)

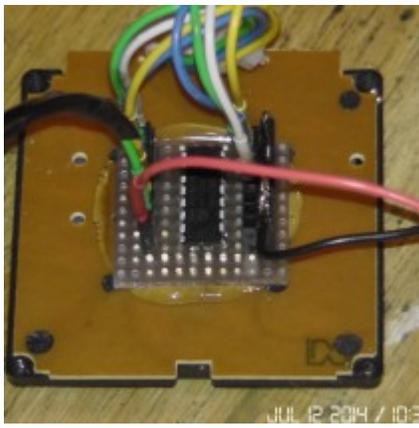
For a full weekend i tried to get a resistor grid to work, but did not have good results. The readings i was getting where not consistent, if you lightly press a key i would get one reading, if i was to push the same key all the way down i would get another reading and this was something which i did not want. I wanted something consistent and solid, so the I2C Expander Chip was the route i took.

Using the I2C chip along with the [Keypad_I2C](#) library you can hook the 4x4 Keypad to your Arduino's SDL and SDA pins, which is nice because you can hook many I2C chips to the Arduino board by changing each chips '[address](#)'. For the project this keypad is being used for i have three other items hooked to the SDL and SDA pins.

Here are some images of the chip hot glued to the back of the keypad.

The end result: one pin for power (5V), one pin for Ground along with the SDL and SDA pins. Nice and clean install with little wires to keep track of.





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