## : ©hipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation, and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email \& Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, \#122 Zhenhua RD., Futian, Shenzhen, China

## COM-08653



DISCLAIMER:
This document is the result of an obscene amount of work and research because I really wanted to make a nice wood case / bezel using Ponoko for a project I'm working on. Literally everything in this document might be wrong and if you waste money or injure somebody based on this document, it's your own look out. If you can and want to correct any of the information here, contact andrew@amorrow.com.

## Mechanical



# Electrical 

PushButtons: Columns + Rows
This is the same information in several different ways.
I've gotten requests to visualize it differently, so why fight it?
1: 3+2
2: $1+2$
3: $5+2$
4: $3+7$
5: $1+7$
6: 5+7
7: 3+6
8: $1+6$

$$
\begin{array}{ll}
1=3 \& 2 & =7=3 \& 6 \\
2 & =1 \& 2 \\
=1 & =1 \& 6 \\
=5 \& 2 & =9 \\
=3 \& & =5 \& 6 \\
5 & =1 \& 7 \\
=0 & =3 \& 4 \\
6 & =5 \& 7 \\
\# & =5 \& 4
\end{array}
$$

Keypad Columns: 3,1,5
Keypad Rows: 2,7,6,4

|  | 3 |  | 1 |
| :---: | :---: | :---: | :---: |
|  | 5 |  |  |
| 2 | 1 | 2 | 3 |
| 7 | 4 | 5 | 6 |

*: 3+4
0: $1+4$
\#: 5+4


## Arduino information

Thanks to Jim Winburn for additional Arduino related info, and for changing the groupings on the pin layouts. MUCH more clear now!

Keypad Pin 3 Arduino digital 2
Keypad Pin 1 Arduino digital 3
Keypad Pin 5 Arduino digital 4
Keypad Pin 2 Arduino digital 5
Keypad Pin 7 Arduino digital 6
Keypad Pin 6 Arduino digital 7
Keypad Pin 4 Arduino digital 8
Notice the rowPins and colPins below in the sample code example:
// example from Arduino playground: http://www.arduino.cc/playground/Code/Keypad

```
#include <Keypad.h>
const byte ROWS = 4; //four rows
const byte cOLS = 3; //three columns
char keys[ROWS][COLS] = {
    {'1','2','3'},
    {'4','5','6'},
    {'7','8','9'},
    {'*','0','#'}
};
byte rowPins[ROWS] = {5, 6, 7, 8}; //connect to the row pinouts of the keypad
byte colPins[COLS] = {2, 3, 4}; //connect to the column pinouts of the keypad
```


## Sources

http://www.sparkfun.com/products/8653
http://www.tenrod.com.au/pdf/accord/keypads.pdf
http://www.accordia.com.tw/html/tel/index.htm (AK-304-BBW)
http://www.accordia.com.tw/html/tel/imagepages/imagepg11.htm
http://www.idpcorp.net/product_expertise/silicone_keypads/stock_keypads/technical_information.html

5-5-2011<br>- changed part \# to Sparkfun COM-08653<br>- added link to tutorial

6-27-2011

- changed grouping on column/row pins for clarity - Thanks Jim
- Added source for Arduino with new grouping
- Added new visualization for pin mapping
- Split document into multiple pages

