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1.0	Sep 21, 2015	Victor.He	Create file



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Disclaimer

For physical injuries and possessions loss caused by those reasons which are not related to product quality, such as operating without following manual guide, natural disasters or force majeure, we take no responsibility for that.

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Grove - Thumb Joystick is a Grove compatible module which is very similar to the 'analog' joystick on PS2 (PlayStation 2) controllers. The X and Y axes are two ~10k potentiometers which control 2D movement by generating analog signals. The joystick also has a push button that could be used for special applications. When the module is in working mode, it will output two analog values, representing two directions. Compared to a normal joystick, its output values are restricted to a smaller range (i.e. 200-800), only when being pressed that the X value will be set to 1023 and the MCU can detect the action of pressing.



Grove Interface

5V/3.3V Compatible

Analog Output



Game Controller

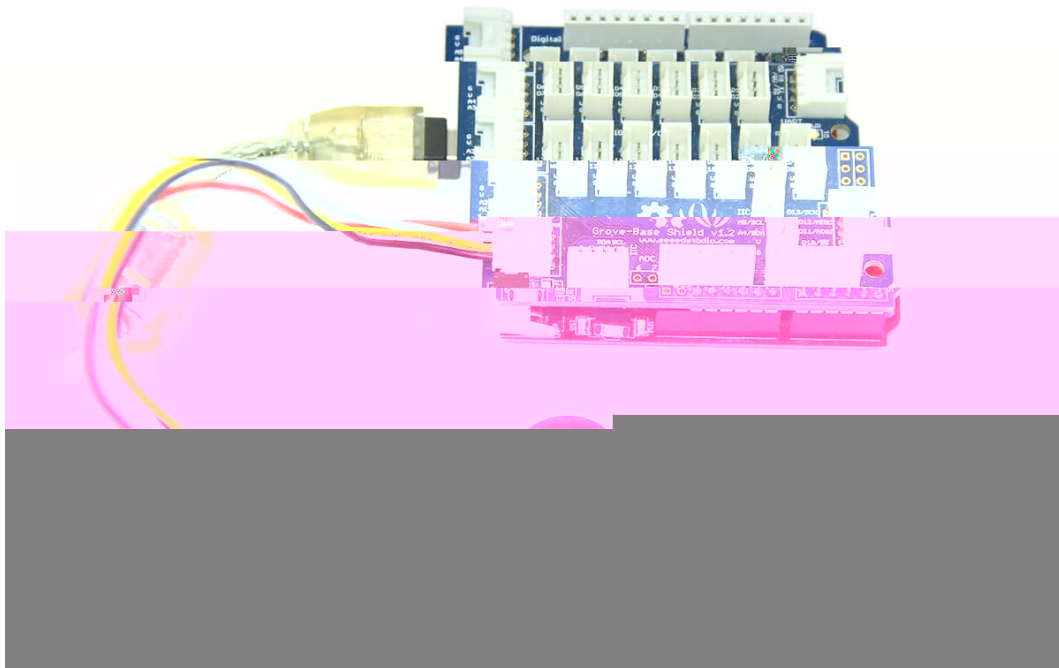
Robot remote



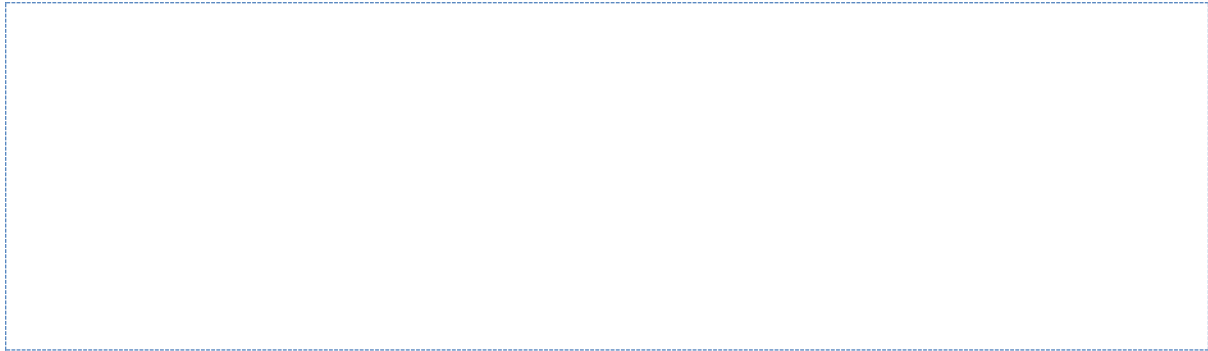
Item	Min	Typical	Max	Unit
Working Voltage	4.75	5.0	5.25	V
Output Analog Value X coordinate	206	516	798	\
Output Analog Value Y coordinate	203	507	797	\

The Grove - Thumb Joystick is an analog device that outputs analog signal ranging from 0 to 1023. That requires us to use the analog port of Arduino to take the readings.

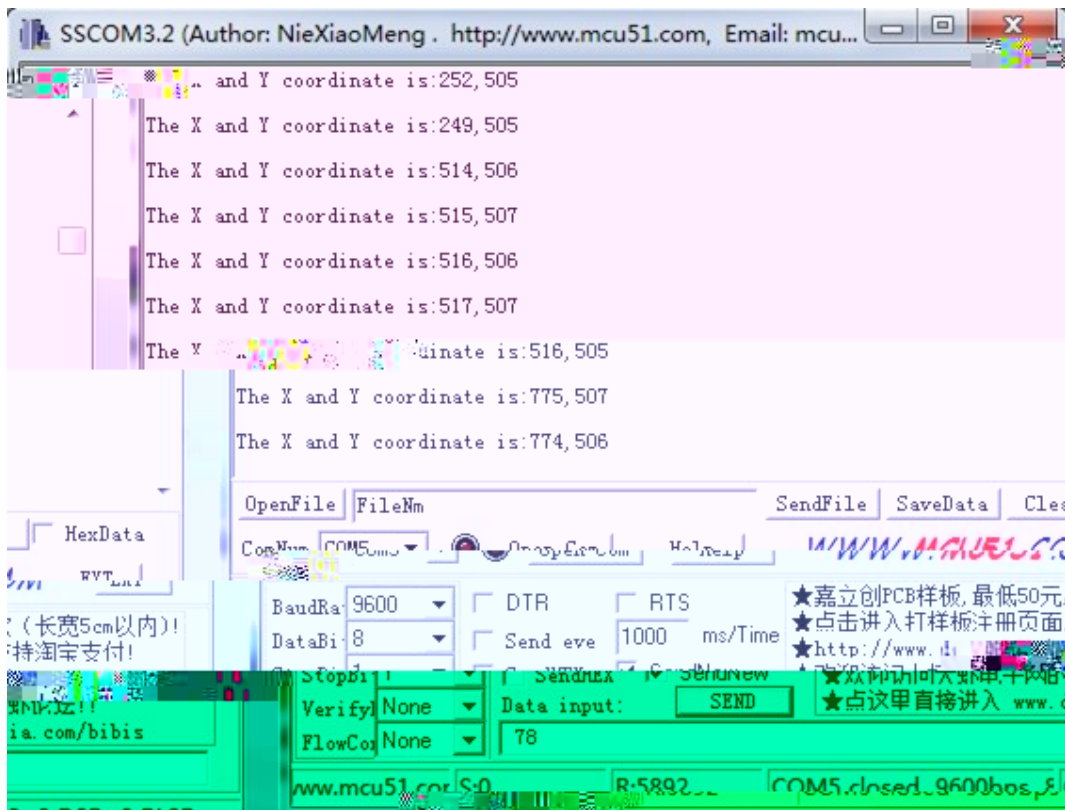
1. Connect the module to the A0/A1 of Grove - Basic Shield using the 4-pin grove cable.
2. Plug the Grove - Basic Shield into Arduino.
3. Connect Arduino to PC by using a USB cable.



4. Copy and paste code below to a new Arduino sketch. Please click [here](#) if you do not know how to upload.



5. You can check the values of the output analog signals by opening the Serial Monitor.



The output value from the analog port of Arduino can be converted to the corresponding resistance using the formula: $R=(float)(1023-sensorValue)*10/sensorValue$.

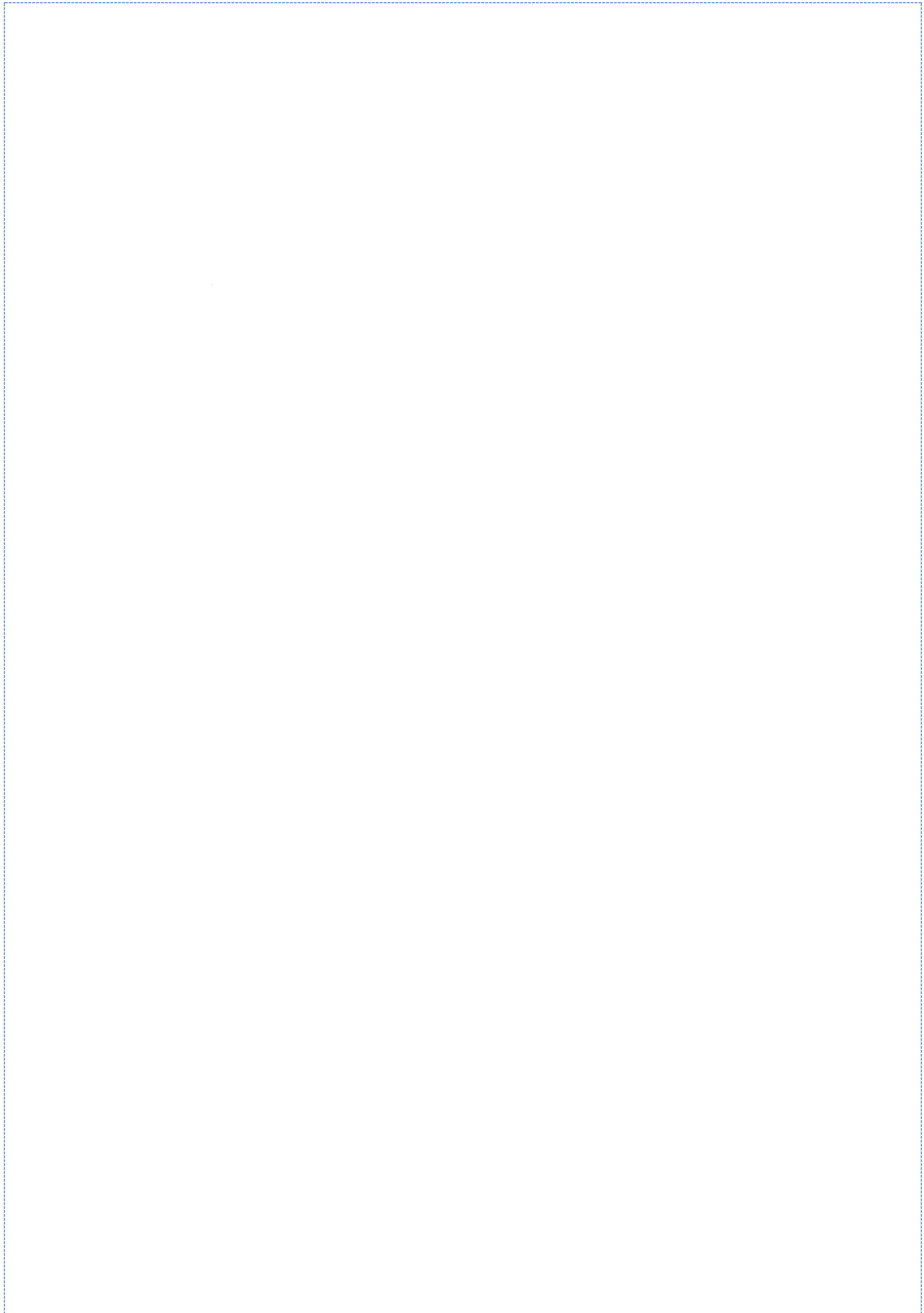
1. You should have got a raspberry pi and a grovepi or grovepi+.
2. You should have completed configuring the development environment, otherwise follow [here](#).
3. Connection. Plug the sensor to grovepi socket D4 by using a grove cable.
4. Navigate to the demos' directory:

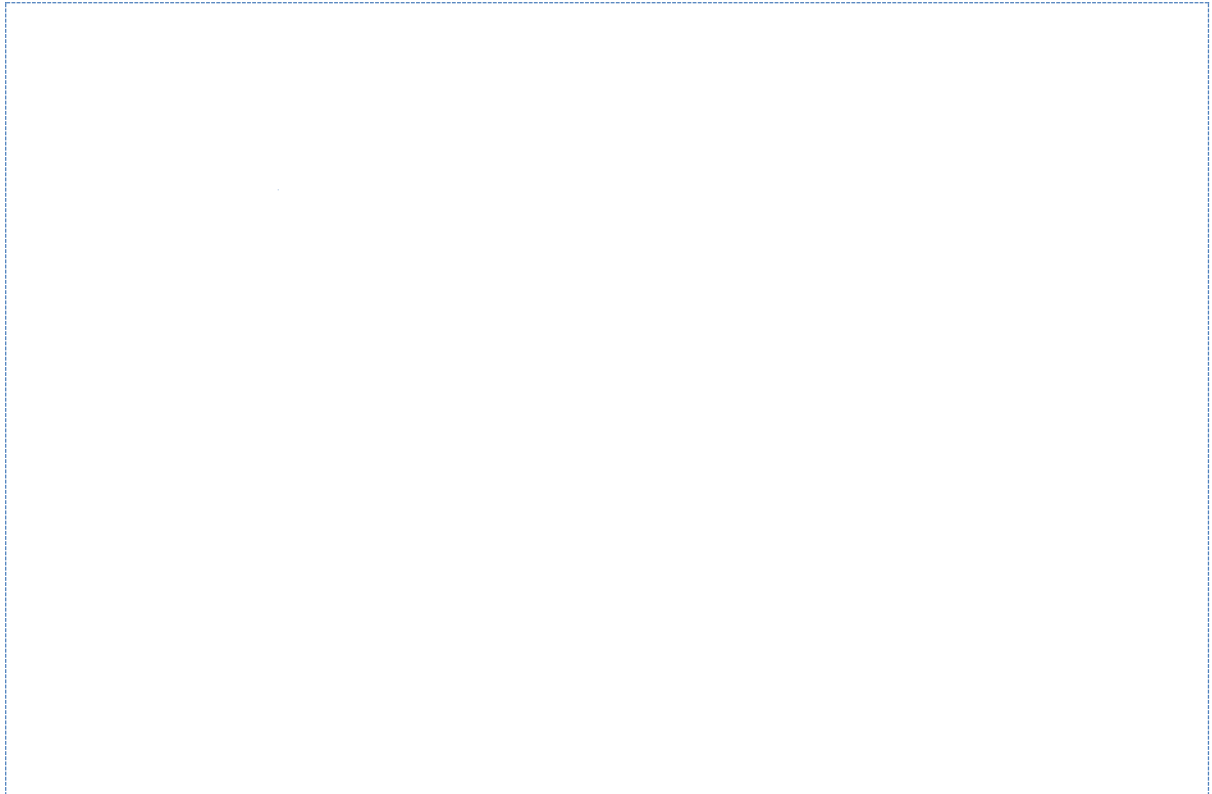
```
cd yourpath/GrovePi/Software/Python/
```

To see the code



nano grove_slide_potentiometer.py # "Ctrl+x" to exit #





5. Run the demo.

```
sudo python grove_thumb_joystick.py
```



[Grove-Thumb Joystick Eagle File](#)

[Analog Joystick Datasheet](#)



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