

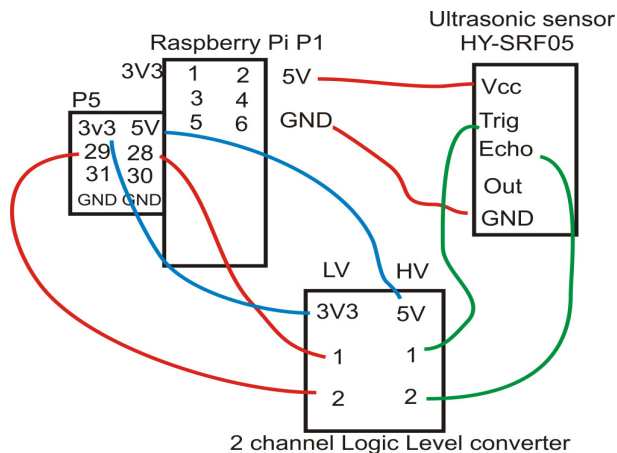
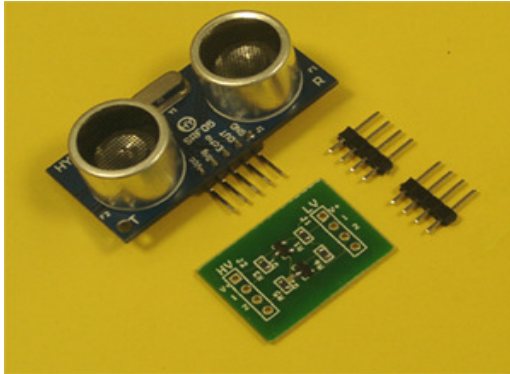
Ultrasonic distance sensor (HY-SRF05) with 2channel Logic Level converter

Use two GPIO Trig(T) Echo(E)

Update --> check distance and update

T28 --> Trig use GPIO28

E29 --> Echo use GPIO29



Ultrasonic sensor module Description :

- Working Voltage : 5V(DC)
- Static current: Less than 2mA.
- Output signal: Electric frequency signal, high level 5V, low level 0V.
- Sensor angle: Not more than 15 degrees.

- Detection distance: 2cm-450cm.
- High precision: Up to 0.2cm
- Input trigger signal: 10us TTL impulse
- Echo signal : output TTL PWL signal

- Mode of connection:
- 1.VCC 2.trig(T) 3.echo(R) 4.OUT 5.GND

- Use method:
- Supply module with 5V, the output will be 5V while obstacle in range, or 0V if not. The out pin of this module is used as a switching output when anti-theft module, and without the feet when ranging modules.

2 channel Logic Level Converter Description :

The logic level converter is a small PCB which safely allows you to interface devices which steps down 5V signals to 3.3V signals and step up 3.3V signals to 5V.

The converter has 2, inputs and outputs and can be used with I2C, SPI, UART, etc.

The board needs to be powered via two sources, 5V and 3.3V and your data lines are linked via pins 1 to 2 on each side so an input on pin 1 will be converted to the lower or higher output on the adjoining pin 1

Download GPIO library

<https://pypi.python.org/pypi/RPi.GPIO> GPIO library

GPIO library - RPi.GPIO-0.5.3a.tar.gz

Install python , library and run the test program

```
# sudo apt-get install python-dev
```

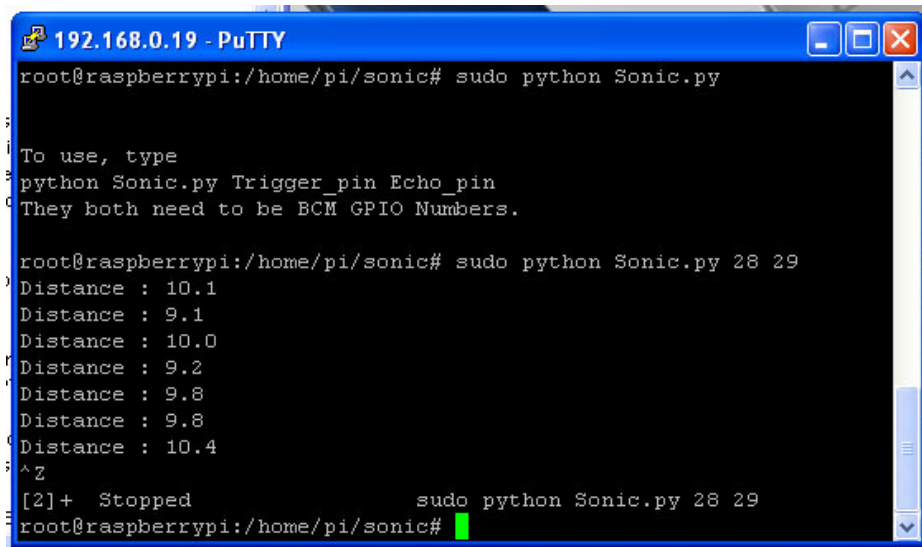
```
# wget http://www.pridopia.co.uk/pi-pgm/RPi.GPIO-0.5.3a.tar.gz
```

```
# gunzip RPi.GPIO-0.5.3a.tar.gz
```

```
# tar -xvf RPi.GPIO-0.5.3a.tar
```

```
# cd RPi.GPIO-0.5.3a
```

```
# sudo python setup.py install
```



```
192.168.0.19 - PuTTY
root@raspberrypi:/home/pi/sonic# sudo python Sonic.py

To use, type
python Sonic.py Trigger_pin Echo_pin
They both need to be BCM GPIO Numbers.

root@raspberrypi:/home/pi/sonic# sudo python Sonic.py 28 29
Distance : 10.1
Distance : 9.1
Distance : 10.0
Distance : 9.2
Distance : 9.8
Distance : 9.8
Distance : 10.4
^Z
[2]+  Stopped                  sudo python Sonic.py 28 29
root@raspberrypi:/home/pi/sonic#
```

Sonic.py demo

command `sudo python Sonic.py 28 29`
28 Trigger pin 29 Echo pin (you can use other GPIO pin)

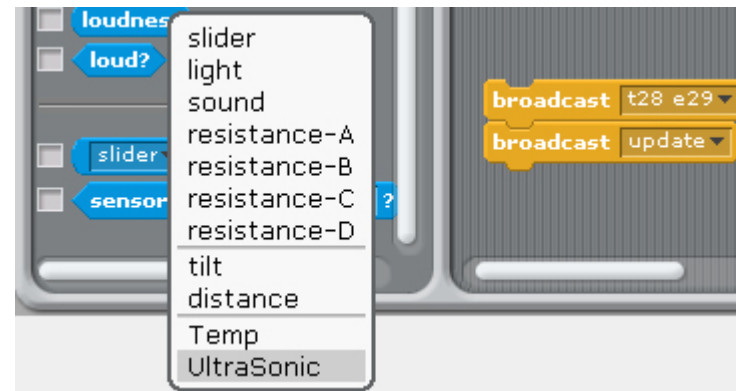
Demo program download from our web site
<http://www.pridopia.co.uk/pi-sonic-level.html>

Package Content

- 1x Rs-Pi Logic Level Converter (2 channel x1)
- 2x 2.54mm pitch 1x4 header
- 1x HY-SRF05 ultrasonic sensor module
- 8x 20cm male to male cable
- 1x manual

Pi_Scratch interface software download from our web site

<http://www.pridopia.co.uk/rs-pi-set-scratch.html>



after broadcast "t28 e29 " & "Update"
T28 Trig in GPIO28 E29 Echo in GPIO29
in Sensing --> Slider , you will see the " UltraSonic" in the list

