# 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
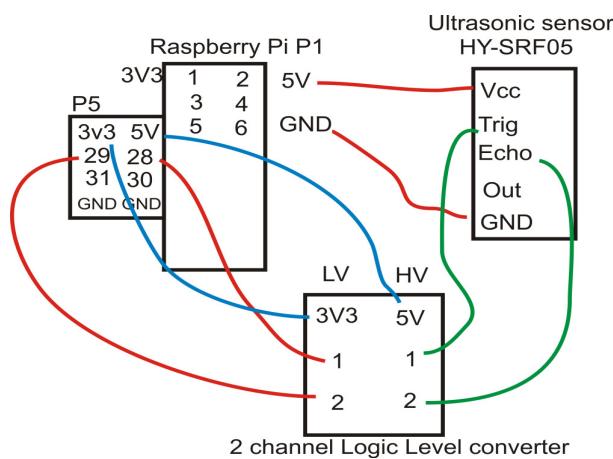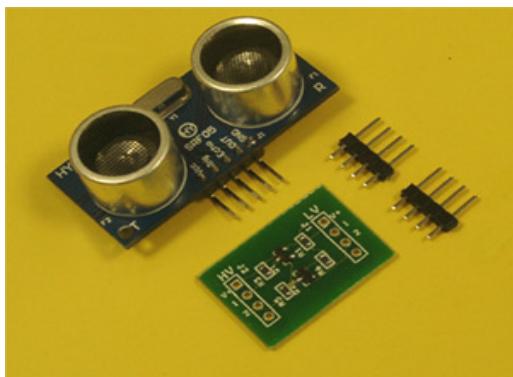
Ultrasonic sensor module Description :

- 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
```

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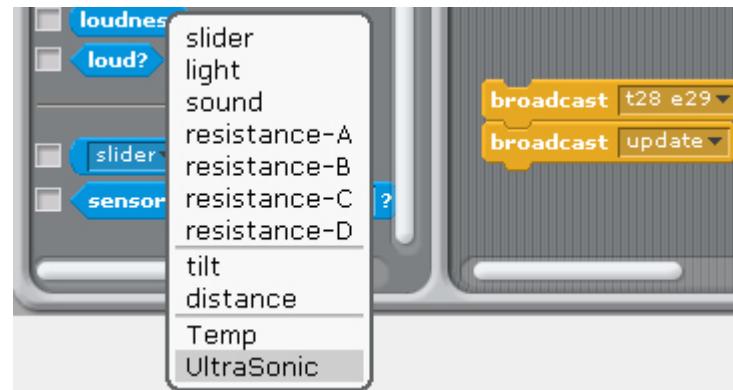
after broadcast "t28 e29 " & "Update"
T28 Trig in GPIO28 E29 Echo in GPIO29
 in Sensing --> Slider , you will see the " UltraSonic" in the list