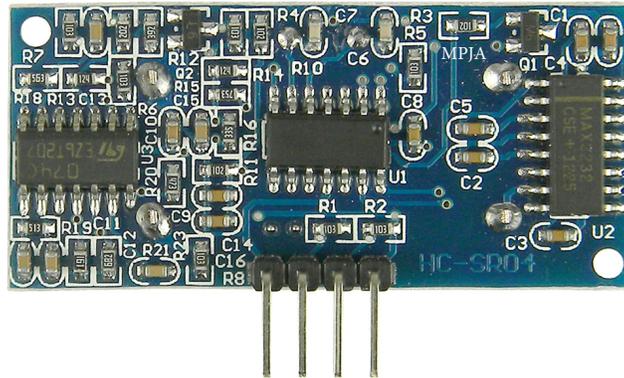


19605-UT

ULTRASONIC RANGING MODULE

DATA SHEET



1.0 GENERAL

The 19605-UT ultrasonic ranging module is used to determine the distance to a target. Features high accuracy, non-contact, stable measurements in a simple 4 connection module. Module "Pings" a target when triggered then outputs a logic pulse proportional to the distance.



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2.0 SPECIFICATIONS

Power: 5VDCnom 4.5Vmin 5.5Vmax
Current: <20mA Operation <2mA quiescent
Frequency: 40KHz
Range: 2cm to 4m (1in. to 13ft.)
Resolution: 0.3cm
Angle: 30deg. (most sensitive at 15deg.)
Trigger: 10uS min TTL Logic Level

3.0 OPERATION

When an >10us TTL (+5V) level pulse is applied to the "TRIG" input, the unit will transmit a burst of 8 cycles of 40kHz audio. The "ECHO" output will go high and remain high in proportion to the range of the object.

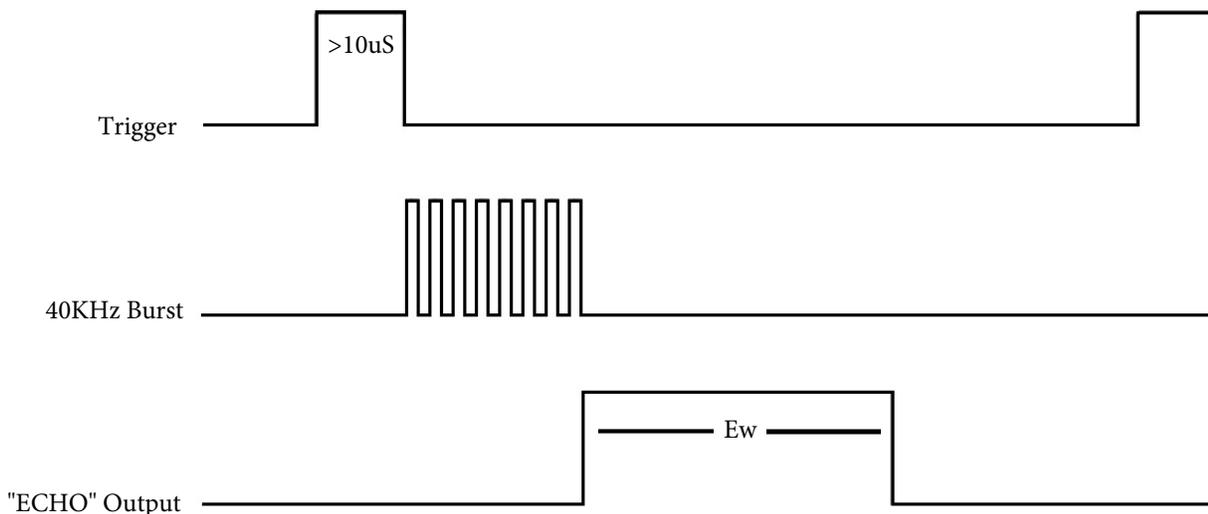
To calculate the range: $D_{in} = Ew / 148$ Where D= Distance inch or centimeters
 $D_{cm} = Ew / 58$ Ew=Echo Width in uS (microseconds)

If there is no target or out of range output pulse Ew will terminate around 38mS

Note:

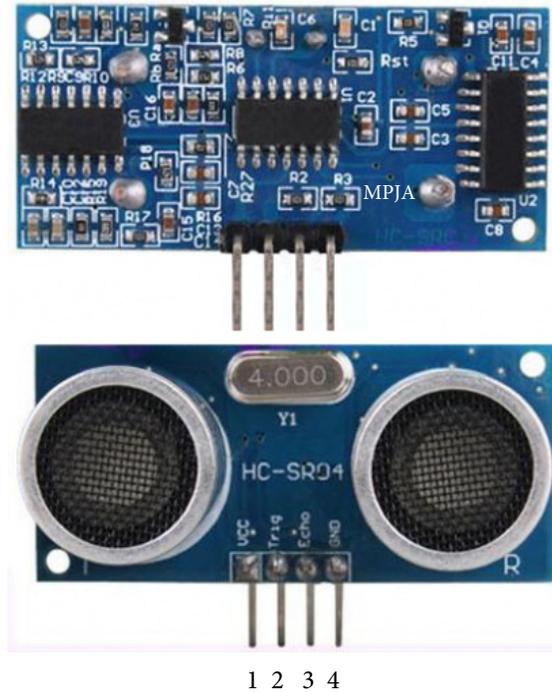
- Please connect the GND pin first before supplying power to VCC.
- Please make sure the surface of object to be detect should have at least 0.5 meter² for better performance.

4.0 TIMING



19605-UT

5.0 CONNECTIONS



- 1: "Vcc" +5VDC Power
- 2: "Trig" Trigger input
- 3: "Echo" Output Pulse
- 4: "Gnd" Common

6.0 DIMENSIONS & FIELD

