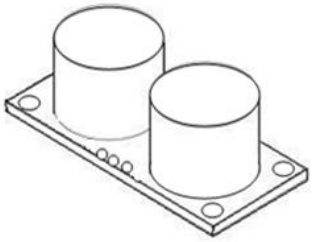
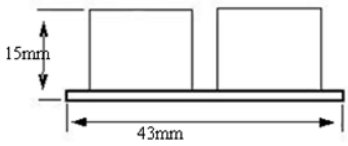
Seeed Ultrasonic Sensor

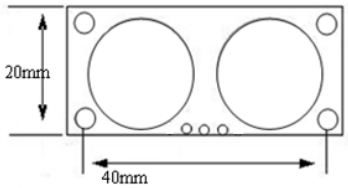
Seeed ultrasonic sensor is non-contact distance measurement module, which is also compatible with electronic brick. It's designed for easy modular project usage with industrial performance.

Features

Detecting range: 3cm-4m
Best in 30 degree angle
Electronic brick compatible interface
5VDC power supply
Breadboard friendly
Dual transducer
Arduino library ready

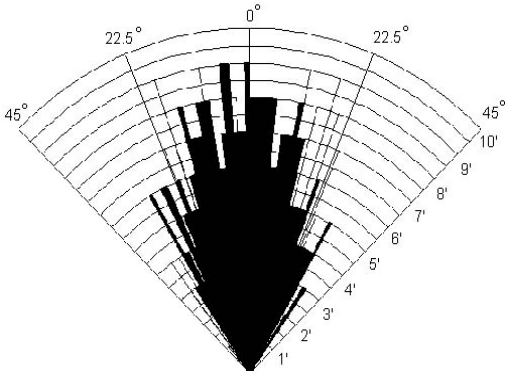






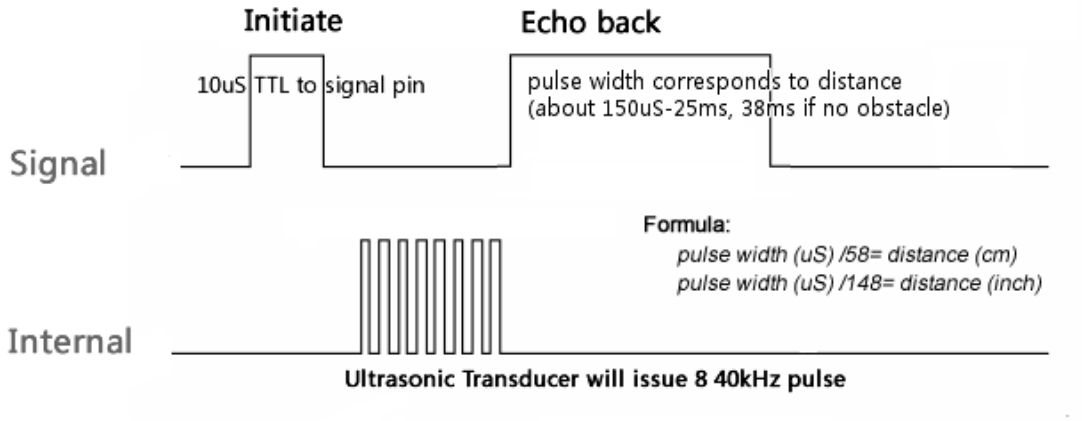
Specifications

Supply voltage	5 v
Global Current Consumption	15 mA
Ultrasonic Frequency	40k Hz
Maximal Range	*400 cm*
Minimal Range	3 cm
Resolution	1 cm
Trigger Pulse Width	10 μs
Outline Dimension	43x20x15 mm



Practical test of performance,
Best in 30 degree angle

Sequence chart



A short ultrasonic pulse is transmitted at the time 0, reflected by an object. The senor receives this signal and converts it to an electric signal. The next pulse can be transmitted when the echo is faded away. This time period is called cycle period. The recommend cycle period should be no less than 50ms.

If a 10μs width trigger pulse is sent to the signal pin, the Ultrasonic module will output eight 40kHz ultrasonic signal and detect the echo back. The measured distance is proportional to the echo pulse width and can be calculated by the formula above. If no obstacle is detected, the output pin will give a 38ms high level signal.

Revision History

Rev.	Descriptions	Release date
1.0	Seeed Ultrasonic Sensor	14.05.2010