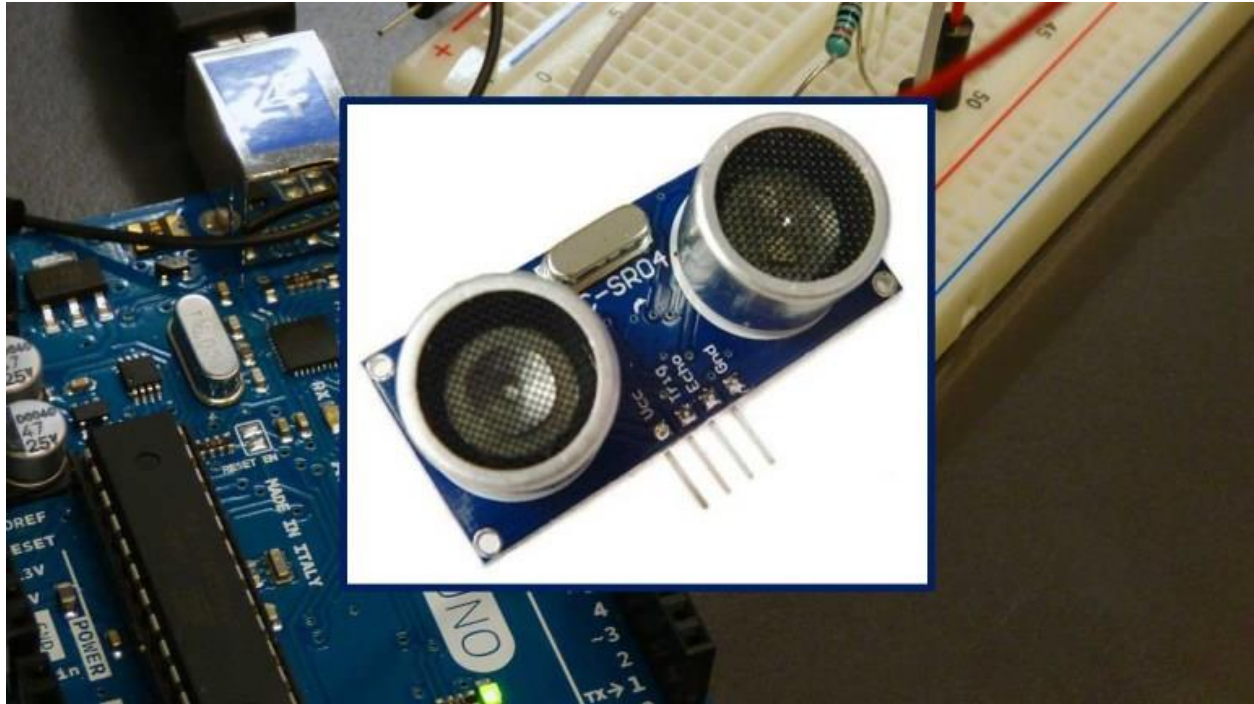


# Ultrasonic Sensor HC-SR04 with Arduino



## Description

The HC-SR04 ultrasonic sensor uses sonar to determine distance to an object like bats do. It offers excellent non-contact range detection with high accuracy and stable readings in an easy-to-use package. From 2cm to 400 cm or 1" to 13 feet. Its operation is not affected by sunlight or black material like sharp rangefinders are (although acoustically soft materials like cloth can be difficult to detect). It comes complete with ultrasonic transmitter and receiver module.

## Features

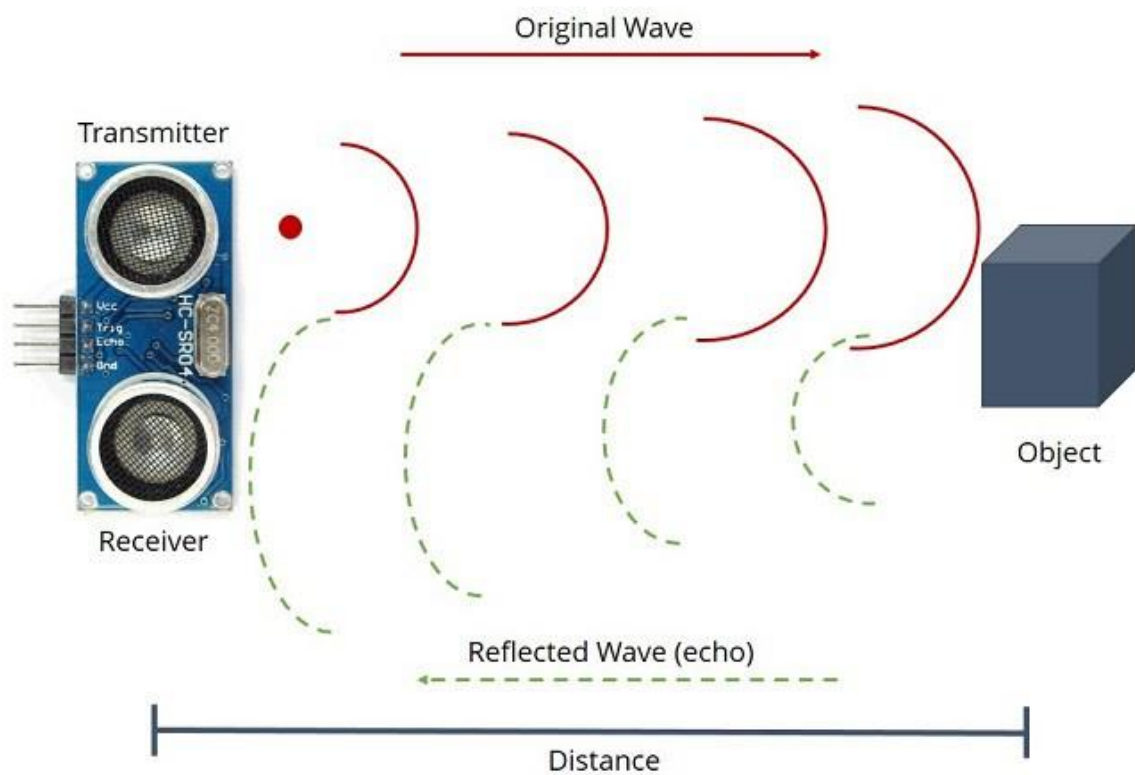
- Power Supply :+5V DC

- Quiescent Current : <2mA
- Working Current: 15mA
- Effectual Angle: <15°
- Ranging Distance : 2cm – 400 cm/1" – 13ft
- Resolution : 0.3 cm
- Measuring Angle: 30 degree
- Trigger Input Pulse width: 10uS
- Dimension: 45mm x 20mm x 15mm

## How Does it Work?

The ultrasonic sensor uses sonar to determine the distance to an object. Here's what happens:

1. the transmitter (trig pin) sends a signal: a high-frequency sound
2. when the signal finds an object, it is reflected and
3. the transmitter (echo pin) receives it.



The time between the transmission and reception of the signal allows us to know the distance to an object. This is possible because we know the sound's velocity in the air