

ULTRASONIC RANGE METER WITH PIC

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ABSTRACT

My project title is the “Ultrasonic Range Meter” with PIC. I’ll be using PIC16F873 for this project. Basically, it is used to calculate the distance of an object away from the meter by the use of ultrasonic technology.

In brief, this Ultrasonic Range Meter will first send out ultrasonic pulses at the transmitter circuit, the pulse will propagate and hit any object in front of it and the pulse will be reflected back. Then the receiving circuit will detect and receive the pulse.

First, the signal received will be amplified and pass it over to the detection circuit and the signal detector. In the detection circuit, the signal is half-wave rectified and sent to the signal detector where digital value will be assigned to the analog signal. Next, the signal is passed through the signal and hold circuit.

After that, the signal is then sent to the PIC or further process. The PIC is the main component to process the signal capture, and convert it to useful information which is the distance. Finally, this output will then be output through the seven segment displays.