

FACULTY OF ELECTRICAL ENGINEERING

UNIVERSITI TEKNOLOGI MARA

PULAU PINANG

FINAL REPORT :

**DEVELOPMENT OF ULTRASONIC SENSOR FOR MEASUREMENT
SYSTEM**

MUHAMAD ASYRAAF BIN ISMAIL

MOHAMMAD SHAKIR ZUFAYRI BIN ZAINI

SUPERVISOR :

EN.MOHD FIRDAUS ABDULLAH

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This report is approved by :

Supervisor's name

MOHD FIRDAUS BIN ABDULLAH

Date : 8/9/16

MOHD FIRDAUS B. ABDULLAH

Pensyarah

FAKULTI KEJURUTERAAN ELEKTRIK
UNIVERSITI TEKNOLOGI MARA (UiTM)
13500 Permatang Pauh
Pulau Pinang

Abstract

Ultrasonic Sensors are self-contained solid-state devices designed for non-contact sensing of solid and liquid objects. For many applications, such as monitoring the level of water in a tank, ultrasonic technology lets a single device to do a job that would otherwise require multiple sensors. Based on this studies, this project intends to develop a “distance measurement by ultrasonic sensor”, mostly to measured distance of an object. Nowadays, measuring tools such as measuring tape cannot be used to measure the length that is more than 300ft that is equivalent to 100meter. But by inventing this ultrasonic sensor distance measure machine could really improve in getting the accurate and precise measurement. Because, high quality of ultrasonic sensor used sound wave to transmit with high frequency it can measure distance up to 5000meter. The ultrasonic sensor will transmit a sound wave and the output of the sensor is voltage signal that will be interpreted by the PIC and going to be display on the LCD in terms of measurement unit. The use of variable resistor on the LCD display is for the brightness control, so the words can be seen. Progressing with the use of the LED as an indicator on the range of the sensor measured, the LED green for starting measured range from 0 to 1000mm, the yellow LED is for medium measured range from 1000to 2999mm, and the last is red LED for maximum range measured from 2999 to5115mm.

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