

ABSTRACT

PORTABLE SYSTEM DISABILITIES GUIDE FOR CAR PARKING SENSORS USING AUTOMATIC ULTRASONIC ULTRASONIC DT-SENSE RANGER (USR)

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Portable is derived from the word portable, which means that according to the Big Indonesian Dictionary (KBBI), the tool is easy under, easy to move, easy to carry. This portable disability guidance system for parking automatically uses an ultrasonic sensor DT-SENSE ULTRASONIC RANGER (USR) which is used to measure the distance between the portable and the parking lot based on the Arduino UNO microcontroller. Portable disability car guide system for parking automatically is a device used to help park vehicles in parallel for people with disabilities. Limitation of vision towards the back and minimal lighting at night. The purpose of this research besides helping to park the car automatically and safely, is also knowing the accuracy of the distance between the portable and the actual distance mapping, where the measured distance starts at the starting distance of 250 cm. The LED is green then when portable on a distance of 150 cm. LEDs are yellow and 30 cm. Red and portable LEDs stop. Testing distance measurements using 2 different ultrasonic sensors namely the DT-USR ultrasonic sensor and the HC-SR04 ultrasonic sensor with the aim of finding out the measurement results of 2 different sensors. The results of the measurement of portable testing using the fuzzy program the value of the percentage of errors is 0% and the value of the percentage of errors not using the fuzzy program is 0.91%.

Keywords : *portable, mikrokontroler, Arduino UNO, ultrasonic sensors, fuzzy*