

Wireless Ultrasonic Radar with TFT Monitoring

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Abstract: *This project presents a compact and cost-effective Wireless Radar Display System designed for real-time object detection and visualization using an Arduino Uno, 3.5" TFT LCD, and HC-12 wireless serial communication modules. The radar system wirelessly receives angle and distance data from a remote sensor unit and graphically displays the object's position on a rotating radar interface. The TFT screen is customized with a creative visual layout, oriented 90 degrees clockwise to mimic traditional radar screens. The system also includes an auditory feedback mechanism, producing a beep sound upon object detection to enhance user awareness. By combining wireless communication with intuitive visual and audio feedback, this project demonstrates a scalable approach to remote sensing applications such as robotics, security systems, and obstacle detection in autonomous systems.*

Keywords: TFT LCD, HC-12, radar system

