

ABSTRACT

Radar is an object detection system that uses electromagnetic waves to determine the distance, direction, or speed of an object. However, with the ability to track objects, conventional radar can still be tracked by enemy radar or object-supported radar. With this problem, a passive radar is developed, a type of radar system with transmitters and receivers that are in different places.

In this Final Project will be carried out research into low-cost radar systems using RTL-SDR and using GNU Radio software as an application that can make Radio Software (SDR). This passive radar will use television frequencies to detect. This research focuses on passive radar receiver systems.

The results of this study can produce a passive radar system that utilizes television frequencies in the function of detecting moving objects. The design of this passive radar system is based on SDR which uses RTL-SDR devices. The interpretation of the data received states that moving objects produce effect doppler cause a shift in correlation. The faster the object moves, the more the peak of correlation shifts. These results indicate that the passive radar system can work well.

Keywords : *Passive Radar ; SDR ; GNU Radio ; Television Frequency ; effect doppler.*