

## **ABSTRACT**

Indonesia's geography is largely a sea require extra attention from the government especially on the military marine. The threat from various parts require the need for early anticipation of the loss of wealth or territory of Indonesia. This can be monitored in the presence of a maritime radar. So before they entered the territory of Indonesia further, can be dealt with first. In principle, a maritime radar use the reflected radio waves to determine the location of the target.

At the end of this task will design and realization of microstrip ring array antenna at a frequency of 9370 Mhz - 9430 Mhz, which is expected to work well for maritime radar applications. This antenna is designed using microstrip antennas because a lot of advantages, including its small, lightweight, and simple in manufacture.

The final task is started by calculating the dimensions of the antenna, in theory, then the results of calculations that are used in software as a simulation tool Ansoft HFSS. In the simulations, performed repeated measure antenna dimensions to obtain results in accordance with design specifications of the antenna. After completing the simulation will then be implemented using the material.

Realization of the ring antenna is capable of working at a frequency of 9.4 GHz with a bandwidth of 60 MHz and has an output VSWR 1052 11 131 dBi gain.

**Key word : Microstrip ring antenna, coastal surveillance radar, bandwidth, VSWR**