

## **ABSTRACT**

*Indonesia is a maritime country, so many ships that traffic in the territorial sea of Indonesia, it is necessary to supervise the holding of security and defense in the area of marine sea Indonesia. Surveillance regions in Indonesia can be monitored by using a radar supervisor coast, where the radar is installed along the shoreline so that it can cover large areas in the territorial sea of Indonesia.*

*In this final project research will design an antenna that can be used to support the work of beach supervisory. Antenna radar is designed using mikrostrip. Characteristic antenna beamwidth antenna must have a below  $2^\circ$ . Research on the regulatory radar antenna beach has never been done before, namely the composition eight circular mikrostrip at frequencies 9.4 GHz [1], but the results of these studies have not obtained the appropriate beamwidth and other studies is the Circular Mikrostrip Ring for Maritime Radar [2], this study also have constraints on the problem gain. In this research, researcher plan to develop antenna mikrostrip are arranged linearly with the number of eight elements and also gain greater than 12dBi. The problem in this project is the design of rationing techniques, which required special technique to make the phase between the elements to be in phase.*

*The design of mikrostrip antenna began with a formula to calculate the dimensions of the antenna according to existing theories. The dimensions of the calculation results will be used in the simulation process. This antenna is made so that the radiation pattern and polarization in accordance with the required field. This antenna is designed to work in the frequency of 3 GHz and 58 MHz bandwidth at VSWR  $\leq 1.232$ , as well as again 11,41 dBi*

**Keyword : Antenna 8 element, Radar Beach Supervisor, Impedance, Beamwidth, Gain**