

ABSTRACT

Indonesia advancement of telecommunications technology is rapidly increasing, providing a variety of positive impact on the development of all aspects, not least in terms of public transport particularly in the national aviation. Various parts of the world's general aviation itself is an Instrument Landing System (ILS). ILS is a navigational device that serves to steer the plane as it will make landfall. ILS consists of three parts, namely the localizer which serves to guide or steer the plane on the runway center line, the glideslope which serves to direct the plane to land at the right angle is 3° from the edge trajectory, Marker Beacon is landing on aircraft instrumentation that provides information plane to plane distance of the runway with the aircraft's position is currently located.

At this final project has designed a prototype system of the transmitter sub block Outer Marker Beacon, is expected to build a prototype that is designed to be a system that can be applied directly to the airport. To simplify the design, schematic that is used by an application data sheet, in addition to the filter and amplifier design Advanced Design System software used to simulate the circuit directly to the corresponding results obtained. Measurements performed using a transmitter block oscilloscope and spectrum analyzer to obtain information about the performance and characteristics of the prototype is made.

The prototype has been realized that the transmitter is capable of producing a carrier frequency of 75 MHz frequency range and work on it in accordance with the expected specifications. Parameters that have been tested from prototype transmitter block is the frequency and magnitude of the output response. This prototype has a high attenuation value however, the power level of -51.8 dBm when converted into 6.607 nW in watts while a specification tool is 320 ± 64 MW, so the prototype can not be realized and need further development.

Keywords: *ILS, Marker Beacon*