

ABSTRACT

Indonesia is an archipelago country that most of its area is a sea. Indonesia haven't had national infrastructure like navigational system, source of timing and paging. All this time, that needs fulfilled with other country's infrastructure.

Loran is terrestrial radio system that use radio wave propagation characteristic above earth's surface called ground wave. Where one Loran system, with wide coverage, are made of one master station and minimum two secondary stations. With self owning of navigational system, source of timing and paging, Indonesia can minimize their dependence from other country that will improve national defense.

This final project, consist of the demultiplexing design on receiver of Loran system. The device is design the Band-Pass Filter (BPF), include BPF Timing, BPF Navigation, and BPF Paging. Measurement results show only BPF Timing and Navigation can release the cut off frequency, for BPF Paging the BW_{3dB} approximately at 2.7 KHz (design 3 KHz). For the stop-band frequency, BPF are able to reach attenuation approximately -27 dB to -31 dB. BPF can be implemented on the Loran system.