ABSTRACT

Indonesia is an archipelagic country, with an area of water preponderant than its land area. The development of technology for communication services is currently increasing. Data transmission is not only carried out on land still the importance of sending data carried out on seawater.

Data transmission in seawater is generally still using SONAR (Sound, Navigation, and Ranging) work system. In this final project research, using the propagation of radio waves with amplitude modulation techniques and the effect of the carrier signal used in the system to attenuation. The carrier frequencies used in this system are 490 kHz and 544 kHz.

The results obtained are based on tests and measurements on the implementation of the system, namely at the carrier frequency of 490 kHz the attenuation occurs in the system of -18.00 dB to -21.02 dB and at the carrier frequency of 544 kHz there is an attenuation of -18.06% to -22.03 dB. Whereas for the propagation attenuation obtained at a frequency of 490 kHz of 19.9454 dB to -23.0372 dB and at a carrier frequency of 544 kHz of -20.3 dB to -23.5293 dB These results were obtained through measurement of transmitter and receiver voltages carried out at a distance of 10 cm to 50 cm at depth of 15 cm, 20 cm, and 25 cm.

Kata Kunci: Radio Waves, Amplitude Modulation, Attenuation, Carrier Frequency.