ABSTRACT

AM radio communication is radio communication that uses AM modulation. Easy to design and manufacture modulation but low noise resistance. Although not good enough, AM modulation is still widely used for radio broadcasts as well as television broadcasts. However, with the development of technology, data transmission is not only carried put in the air but also in sea water.

Data transmisson in seawater, it is often encountered using SONAR(Sound, Navigation and Ranging) which emits soundwaves which will be reflected back if they detect certain objects. In this study, the author made a device in the form of an AM radio transmitter and receiver. Using this transmitters and receivers made measurements of attenuation in the air by measuring the Vpp value, the percentage of attenuation and the FSL value which is carried out at a distance of the transmitter and receiver as far as 0.1 m to 12 m

From the test and measurement results, it is known that the percentage attenuation value of the tool that has been made using a carrier frequency of 490KHz obtained the percentage of attenuation from a distance of 0.1 m to 12 m of (-416%) - 48%. Then by using a carrier frequency of 544KHz at the same distance, the attenuation value is (-31%) - 77%. Meanwhile, for propagation attenuation using a frequency of 490KHz, the attenuation is obtained from a distance of 0.1 m to 12 m is -4.80 dB until -6.30 dB. Then by using a frequency of 544KHz at the same distance, the attenuation value is -5.78 dB until -14.52 dB. Here it can be said that the farther the distance between the transmitter and receiver, the greater the attenuation value.

Keywords **:** AM *Radio communication*, AM *Modulation*, *percentage of attenuation*