

ABSTRACT

Most of the problems in the communication system are caused by noise when recording sound, such as the sound of waves crashing on the beach, wind noise, and motor noise. So to avoid this it is necessary to have noise reduction activities by studying several methods or techniques used. One method that will be used is the elliptic filter on the Low Pass Filter, using Matlab software to reduce sound noise. This elliptic low pass filter is the best filter to use because it has a wide frequency range, so by using this method it is hoped that attenuation can be done by passing low frequencies or blocking high frequencies. In this activity, there are 3 cut-off frequency values used, namely 4 KHz, 10 KHz, and 20 KHz. The results of the filtering simulation are frequency response graphs, audio waveform graphs before and after filtering, and the average SDG value. Of the three simulation results, the cut-off frequency of 4 KHz is the best, so the smaller the cut-off frequency, the better the filtering results.

Keywords: *Elliptic, Low Pass Filter, Matlab, Noise*