

ABSTRACT

The heart is one of the most vital organs in its function which is a muscle that can contract which causes changes in the electrical heart of the heart. ECG is a signal that is formed as a result of the electrical activity of the heart shown by P-Q-R-S and T waves. The ECG signal has a specific signal form so that it can be used as a reference for determining the condition of heart health by cardiologists. An electrocardiograph is a device that records the electrical signals of the heart. The purpose of making this tool is to record the electrical signal of the heart using an analog filter obtained from the AD8232 module on order 2 with a butterworth type IIR digital filter on order 8, which of the two is the better signal for easier reading. This study uses Arduino Mega 2560 as a data transmission system and uses Delphi7 as a processing system and to display processed data. Signal retrieval and monitoring were carried out for 1 minute. From data collection carried out 5 times per lead, it was found that the analog filter had a good signal of 60 percent while the digital filter had a good signal of 80 percent. So it can be concluded that the butterworth order 8 type IIR digital filter is the best digital filter to determine the recording of the signal on the ECG.

Keywords : *Electrocardiograph, Analog Filter, Digital Filter*