

ABSTRACT

Device Electrocardiogram (ECG) heart signal detection as a tool is a tool that is expensive and requires a huge space for its placement . Any person who wants to learn the process of ECG signals and process them will be difficult. An ECG device can also be disrupted form of the signal when it is not placed in a particular place .

It required an ECG signal processing device which is more practical and cheaper to analyze or just see the signal change . Center setting parameters and ECG signal generation is performed by the microcontroller . ECG signal data and the form is cut into the shape of the template so that it can be part of a separate signal in the microcontroller . Template results in a microcontroller which would then be converted by the DAC (Digital to Analog Converter) to be displayed on the LCD or oscilloscope . Keypad as a tool to enter the part of the signal that is ditemplate so that could be a whole ECG signal to be raised .

This tool generate 12 form the signal by manipulating the value of P - QRS - T according to the characteristics of each signal . ECG signal shape seen on the oscilloscope is expected to represent the same or actual ECG signals with amplitude parameters , heart rate , interval between waves , as well as the duration of each signal . Comparisons were made with the tool PS400 Patient Simulator from Fluke Biomedical namely , ECG simulator tool that works like this , but the shape of the signal is in conformity criteria .

Keywords : ECG signal , simulator , signal generators , microcontrollers , Digital To Analog Converter , the template method