

ABSTRACT

The amount of human activity, causing them to sometimes forget the conditions of his own health. The heart is a very important vital organ in the human body that can indicate the condition of the body is normal or are sick and can take preventive action. One way that can be used is to use Photoplethysmograph sensor that can measure changes in blood volume.

In the Final Project, authors make the heart rate measuring device based on J2ME using mobile phone. The author uses the Block Sensor Photoplethysmograph consisting of an infrared LED as a light source and the LDR as detector. The amplifier and filter blocks consisting of amplifiers and filters. Amplifier used to amplify the reflected light and the filter will reduce the signal. In addition, there is a micro block to convert analog signals to digital in order to be sent to the serial port using bluetooth communication and J2ME applications as a display of heart rate measurement results.

In this final project, a tool created to calculate the heart rate per minute. Also, it can provide measurements of heart rate in the mobile phone screen so users can determine the condition of his health with false presentation 1-5%.

Key words: Photoplethysmograph, mobile phone