

ABSTRACT

The heart condition of a patient with heart disease need of care and monitoring intensively. In monitoring of the heart, there are several parameters including the electrocardiograph (ECG) signal which to record the electrical activity in the heart, phonocardiograph (PCG) which to record heart sound signals, and Carotid Pulse (CP) which to record carotid arterial blood pressure signals. The purpose of this study is to visualize the results of recording Carotid Pulse signals using the frequency 0-100 Hz. The main circuit of tapping Carotid pulse signal consists of Pre-Amplifier, Low Pass analog Filter with frequency cut off 102 Hz, High Pass analog Filter with frequency cut off 0.1 Hz, Notch Filter with frequency cut off 49.82 Hz, Non-Inverting Amplifier, Summing Arduino Amplifiers and Microcontroller.

The recording of the Carotid Pulse signals was recorded from the right neck surface by locating a piezo electric sensor to detect the pulse of the carotid artery. In this study, the signal will be displayed on the computer unit which is used to monitor the work of the heart.

The results of data collection, from fifteen respondents, was measured five times. The result show that the correlation between the pattern of dicrotic notch (the D wave) in the carotid pulse and second heart sound (S2) was occurred simultaneously or just before the D wave pulse from carotid pulse for each respondent. From the correlation measurement data obtained an average of 15 respondents the interval between S2 and Dicrotic Notch was ± 0.036 s.

Key Words : Carotid Pulse, Mikrokontroller, PC.