ABSTRACT

There are a lot of ways that can used by medical expert to know condition of people health, one of them is by artery throb. Counting artery pulse easy used by finger, but occasionally used it need hard concentration. By the improvement of this current technology, artery throb can be counted by electronic device, either simple or sophisticated. Artery pulse is frequency of heart beat rhythm that can be papated on some of skin surface. Commonly frequency of artery pulse same as frequency of heart beat. Heart beat usually refer in amount of time that needed by heart beat each time unit, commonly is presented as bpm (beats per minute).

In this final project is designed and realized counting device of artery throb based on microcontroller. This counting device is builted using piezoelectric sensor, LM324amplifier, microcontroller typed Atmega8 and LCD 2x8. The sensor will be patched on wrist that has artery pulse. The indicator is buzzer, when pulse have been stabil, then press the push button . Artery pulse will be strength by amplifier about 24,8 times and read by timer counter Atmega8 about 10 second, then the result multiply by six then displayed in LCD with bpm.

Before pulse enter to Atmega8 microcontroller, there is push button for activiting timer of beat sample that activiting counter. After that, data is made using Atmega8 and display in LCD 2x8 apperence number with bpm (beats per minute) unit.

The device that made of this final project just can display artery pulse in bpm. Taking sample of pulse has done three times each sample and has deferences of testing device by manual counting as 9.533.

Key words: Pulse Counter, Mikrocontroller ATMega8, Piezoelectric ,LCD2x8