Abstract

In this paper, we are going to introduce the new technique for measurement of blood flow rate in humans based on LDF (Laser Doppler Flowmetry) technique. We had developed overall embedded system which takes input from laser Doppler blood flow sensor & gives output on personal computer via wireless communication. The structure of the sensor consists of two compartments with a light dependant resistor (LDR) and a laser diode in each. The size & weight of sensor & overall system is very less. The overall system is powered through a dedicated battery & hence power saving arrangement is also provided. Proper blood flow in human body is essential because an adequate amount of blood supply is necessary for the proper functioning of all body organs as blood carries all the nutrients and oxygen that our body needs to stay healthy. Improper blood flow rate is main symptoms of various diseases. The measurement of the blood flow can therefore provide essential information for the judgment of diseases. Since changes in blood flow occurs with the very primary stage of disease, with a fast, reliable blood flow measurement technique, the physicians have a new option for early disease diagnosis. So using this system, we can successfully & easily able to measure human
blood flow rate. Major advantage of this technique is this method is non-invasive which means not involving the introduction of instruments into the body[1][2]

References


Index Terms

Computer Science

Signal Processing
Keywords

blood flow, laser Doppler flowmetry, low power consumption, LDF Sensor, wireless, non-invasive