

Ambulatory Electrocardiogram Prototype

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Abstract

The use of electrocardiogram nowadays, is very important in diagnosis of heart disease. The emergent increase of portable technology provides medical monitoring of vital signs allowing freedom of movement and watching during normal activity of the patient. In this study, it is described the development of a prototype of an ambulatory cardiac monitoring system using 3 leads. The systems consists on conversion of an analog signal, having been previously processed and conditioned, into digital ECG signal and after processed with a microcontroller (MCU). The heartbeat rate can be observed in an LCD display. The LCD display is also used as the interface during the setup process. All digital data stream can be stored on a SD memory card allowing the ECG signal to be accessed later on a PC.

Keywords: Electrocardiogram, prototype, cardiac monitoring, Ambulatory ECG, Holter, Microcontroller.
