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(54) Title: ECG DEVICE WITH IMPULSE AND CHANNEL SWITCHING ADC NOISE FILTER AND ERROR CORRECTOR FOR DERIVED LEADS

(57) Abstract: The present invention provides a device and method for filtering impulsive noise and channel switching noise at ADC in an ECG device with multiplexed ESCs. The filtering is based on an implementation of Burst Sampling technique also a method for correcting errors in derived leads caused by time delays due to sequential sampling of different ECG signals is also provided. Real time digital FIR filters are used for removing other types of noise in ECG signals. The ECG device is compact and light weight and includes features of self calibration, clip detection and drawing of power from USB port of a PC, batteries or an external power source. The ECG monitoring device of the present invention measures real time ECG signals with automated data recording, data storage and retrieval, data transmission/ transfer to an external system, along with parameter extraction for ECG analysis in an efficient manner for quick and reliable ECG measurement, in an extremely cost effective manner.



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