

REMOTE SENSING OF BATTERY CHARGE

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ABSTRACT

Battery management system is a system that required mostly in all places. In nowadays, battery is mostly used in all electrical and electronics equipments, which means that the capacity of the battery that being used in the equipments are very important to the user.

Remote sensing of battery charge is actually a project that might be a more advanced battery management system, this project's aim is to design and build a system that will inform the user when the battery that under monitoring is low. The methods of informing the user are through text messaging to the cell phones and also to E-mails.

To retrieve data from the battery, a microchip with integrated Analog to Digital Converter is needed. This microchip will process the battery data and communicated with microcontroller PIC16F877A which will then transmit the status of the battery to a computer that is monitoring the battery. When the battery voltage is low such as 50% of remaining capacity, an E-mail and a text message will be sent to the user.

The interfacing between the microchip and the microcontroller will be achieved by 1-wire technology that provide by the DS2438 microchip. 1-wire technology is actually a technology that requires only a wire of communication. DS2438 microchip can communicate to microcontroller using only a wire.

Key words: battery, DS2438, 1-wire technology, e-mail, SMS, PIC16F877A