ABSTRACT

Battery is a device that can convert the chemical energy it stores into electrical energy that can be used by an electronic device. The types of batteries include rechargeable and non-rechargeable batteries. Materials used to make batteries include lithium and carbon. Lithium polymer is a rechargeable battery from lithium ion technology using a polymer electrolyte. LiPo 4s battery is a Lithium Polymer battery which has 4 battery cells which usually has a voltage of 14.8 volts - 16.8 volts. State Of Health (SOH) is a unit to express the feasibility or function of a battery. SOH is usually written in the form notation in the form of a percent. SOH can be expressed in many ways, such as life cycle, deep charge, state of charge, battery voltage condition, and others [1] [2].

Usually a battery SOH is expressed using a variable state of charge, and deep of charge. In this study, a battery SOH monitoring tool will be made using the state of charge, life cycle and battery voltage as variables. State of charge is a condition that indicates the condition or level of battery charge or discharge. Life cycle is a condition where we can find out how many batteries experience a charge and discharge condition. Electric voltage is the difference in electric potential between two points in an electric circuit, and is expressed in volts.

The result of this research is to obtain a battery monitoring system design using the parameters of voltage, State of Charge, and Life Cycle. As well as obtaining an algorithm that can state the health condition of the battery.

Keywords: SOH, SOC, Life Cycle, Battery, and Voltage.