

Abstract

GPS is a navigation system based on satellite. This system give time, position, height untills speed data information of an obyek. This data given by satellites which circulating in earth orbit. Base on this information, then can be read to through PC or peripheral which connected with GPS receiver, and then processed and analysed to accomodate requirement. In this final project will be designed ***Transmit Controlling Latch of Train Device Based on Mikrokontroler and GPS*** so that can assist in the system of automatisasi train latch. By using this system, cross of railway dan roadway which do not monitored can be placed a latch which capable to work automatis especially in location which rural area dan far from settlement.

Design and realization transmitter controlling latch device is base on this mikrokontroler use GPS (Holux M-215). Realized peripheral in the form of latch hardware transmitter which functioning as receiver and processor of data of GPS and deliver warning signal to the train through mobilephone with call method. At this peripheral there are GPS which connected with AT89S52 mikrokontroler. GPS automatically detect train co-ordinate and display it use LCD (Liquid Cristal Display). The coodinat of the train is processed by mikrokontroler, so when train come in to the latch receiver, AT89C2051 mikrokontroler immediately call latch receiver no to close the latch. This call through special command which named AT command pass through Handphone which connected with mico, this device can deliver warning signal receiver latch system which connects also with Handphone.

Examination of system to start from block power supply, data output of GPS, tension level output of GPS and of Handphone, accuracy of data of GPS, and also system delay. Results of from the examination indicate that faster this device make increace error space to the base point. At 80km/hour speed, eror space as far as 21.7m. In Other case, total call proses at 80 km/hour about 2.663 second.

Keyword: GPS, Latch, Transmitter, mikrokontroler, Command AT