

INTELLIGENT MAILBOX USING SOLAR POWER SUPPLY

Prepared by: Lee Yee Chun

ABSTRACT

The intelligent mailbox is a normal mailbox with some additional circuit built inside it to perform some specific function. It is used to inform the users that there is some new post that presence inside the mailbox. The users might not know about the new incoming post or letters immediately due to some reason and they tend to miss out some important mails.

Based on this problem, the project entitles, 'Intelligent Mailbox Using Solar Power Supply' is designed to overcome the problem. The project aims to build up an intelligent mailbox that is able to detect the presence of the letter and display the amount of letter inside the mailbox to the user through the display system using Seven Segment Display.

This project can be divided as 3 parts; the solar powered battery charger, the sensor circuit, the Radio Frequency transmitter and receiver and the counter display system. For the battery charger using solar power, the batteries used is AA rechargeable batteries. Fr the sensor circuit, the IR sensor is built up with the IT transmitter and phototransistor pairs to detect the presence of the items. The signal is then sent to the RF transmitter and receiver using 315 MHz module. The output is the RF receiver is connected to the signal input of the 7490 BCD Counter IC pair up with 7447 Seven Segment Display Driver IC. Then finally show the signal count on the seven segment display.