
IMPLEMENTATION OF HIGHWAY TOLL COLLECTION SYSTEM

ABSTRACT

Radio Frequency Identification (RFID) Card Readers provide a low-cost solution to read passive RFID transponder tags up to 2 inches away. The RFID Card Readers can be used in a wide variety of hobbyist and commercial applications, including access control, automatic identification, robotics navigation, inventory tracking, payment systems, and car immobilization. The RFID card reader read the RFID tag in range and outputs unique identification code of the RFID tag. The RFID reader can interface to microcontroller or PC and the unique identification code of the RFID tag received by the RFID reader is send through serial at baud rate of 9600.

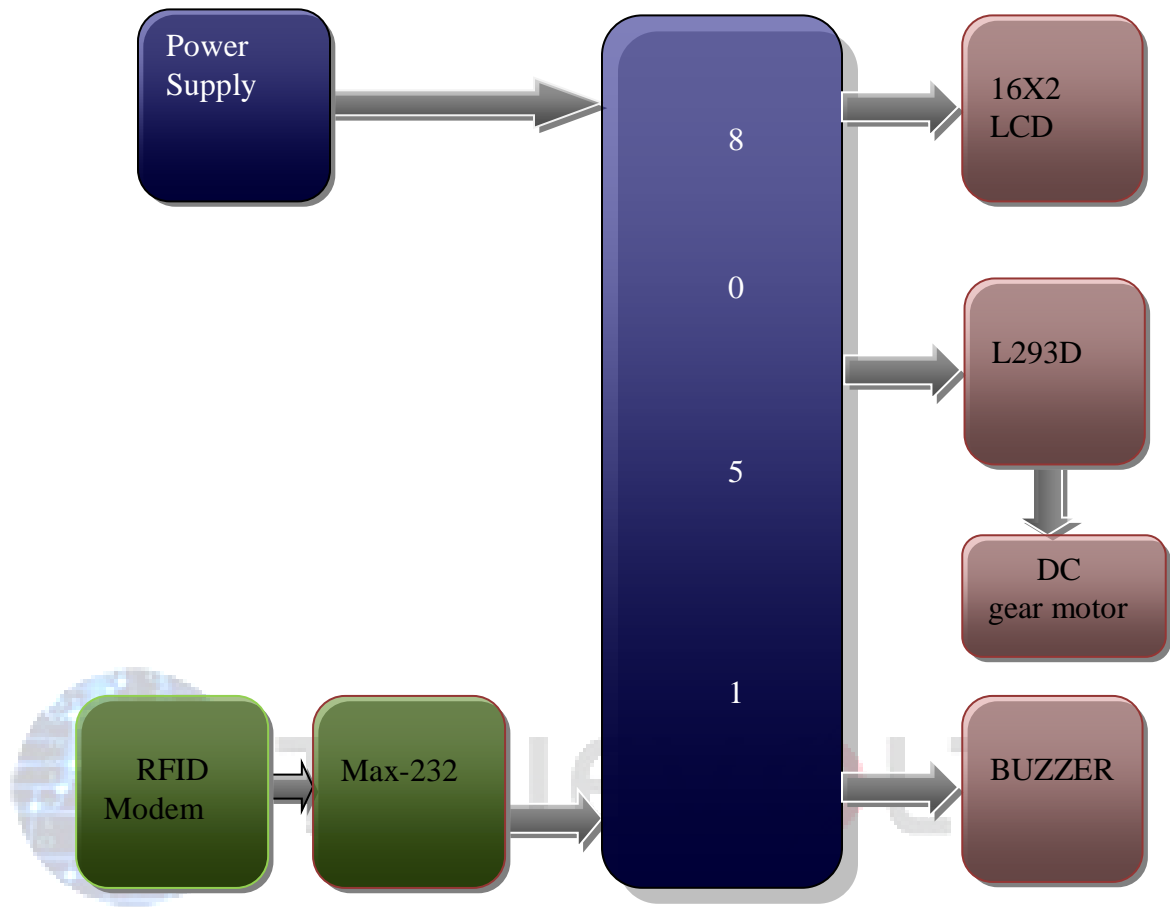
This project is built on 8051 micro controller; the project consists of RFID reader, LCD, motor and a motor driver. When the vehicle approaches the toll gate, the user has to show the RFID card to the reader. Then the system will automatically deducts the predefined amount from the users account by pressing button and the remaining amount is shown on the LCD, at the same time, a motor will be rotated to open the gate, with some delay the gate will be closed. This process continues until the amount in the users account exudes.

In this project 7805 is a regulator and it avoids noise spikes in power supply. RFID modem is connected microcontroller through serial port. These RFID modem works under 9600 or 4800 baud rates. 16X2 LCD connected to microcontroller through digital I/O lines.

APPLICATIONS:

- Toll gate system
- Check posts

BLOCK DIAGRAM:



POWER SUPPLY BLOCK DIAGRAM

