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# **WIRELESS DATA TRANSMISSION BETWEEN TWO MICRO- CONTROLLERS USING R.F.COMMUNICAION**

## **ABSTRACT**

The project is aimed to design a security system which can transmit the data between two microcontrollers located at remote places by using wireless RF communication technology. The major advantage of this project is providing the security for data, as the encrypted data is not understandable while transmitting, so that the chances of hacking the data can be reduced.

The RF communication technique is preferred here for it's reliability and it can be used for long distance communication. The RF modules used here are STT-433 MHz Transmitter along with an RF encoder HT12E, STR-433 MHz Receiver along with an RF decoder HT12D. The project is designed in such a way that a PC will be interfaced to the controller through serial communication, using which we will input the data to the controller using the hyper terminal of PC. Here we will use a serial line driver IC MAX232 to interface the PC with controller for serial communication. The RF transmitter is also interfaced to the controller through an RF encoder to encode the data received by the controller and to transmit the data. Hence the encoded data will be transmitted by the transmitter over the wireless medium and will be received by the RF receiver which will be interfaced to the controller through an RF decoder, on the receiver side. The RF decoder is used to decode the received data into a 4 bit digital data which will be fed to the controller. Now it is the responsibility of the controller to transfer the received data to the PC which will have interfaced to the controller, using serial communication. Hence wireless data transfer between two microcontrollers is achieved i.e. the data entered through the PC on the transmitter side will appear on the receiver side PC.

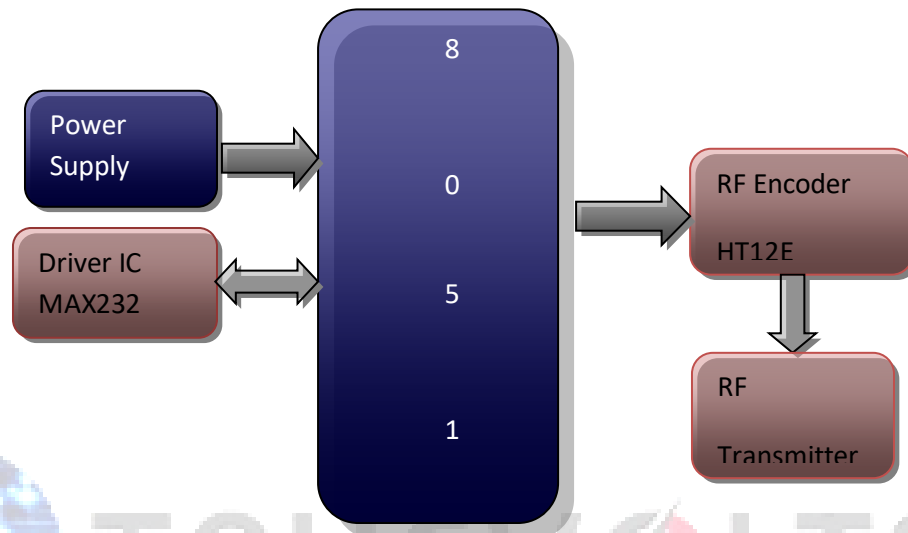
This project uses regulated 5V, 500mA power supply 7805 three terminal voltage regulator is used for voltage regulation. Full wave bridge rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

## APPLICATIONS:

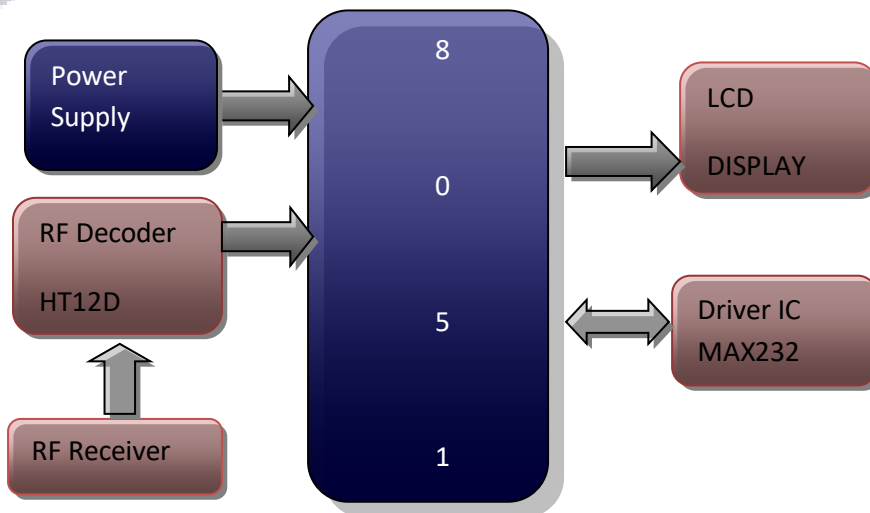
- Industrial applications
- Security applications

## BLOCK DIAGRAM:

### TRANSMITTER SECTION:

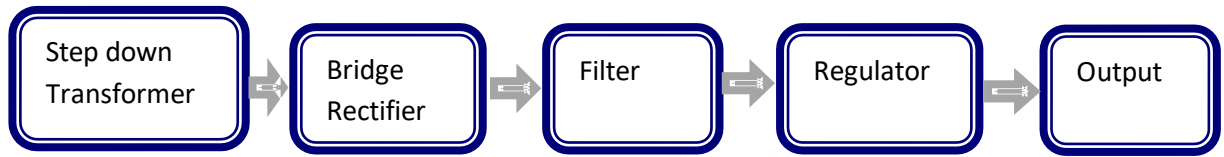


### RECEIVER SECTION:



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## POWER SUPPLY BLOCK DIAGRAM:



TRUEVOLTS