Touch screen based advanced menu display and ordering system for Restaurants

The project mainly aims in designing completely automated menu in restaurants with the help of touch screen sensor and a graphical LCD to provide a user-friendly environment. There is no need of a person to take the order from the table. The menu will be displayed automatically on the table and we can directly order the menu with the help of touch screen.

Touch screens provide fast access to any and all types of digital media, with no text-bound interface getting in the way. Faster input can mean better service. Using a touch interface can effectively increase operator accuracy, reduce training time, and improve overall operational efficiencies, a properly designed touch interface can improve each operator's accuracy. Touch screens are practical in automation, which has become even simpler with touch screen technology. Owners familiar with the icon system appreciate touch screens that make automation systems user friendly.

The system consists of a microcontroller, which is interfaced with the input and output modules, the controller acts as an intermediate medium between both of them. So the controller can be termed as a control unit. The input module is nothing but a touch screen sensor which is placed on GLCD to have graphical image display, which takes the input from the user and provides the same to the microcontroller. The output module is RF module which makes the communication between system at table and system at ordering department. The controller also takes the responsibility to display the menu items on the graphical LCD. At the receiving end the selected items will be displayed on GLCD with user table number.

Features:

1. Touch screen based user-friendly interfacing.
2. Low power consumption.
3. No need of a person to take order from the table.
4. Long life.
5. Highly sensitive
6. Easy to install because of wireless interface.

This project provides exposure to the following technologies:

1. Touch screen sensor.
2. Conversion of AC supply to DC supply.
3. Embedded C programming.
4. Design of PCB.
5. Graphical LCD interfacing.
6. RF technology.

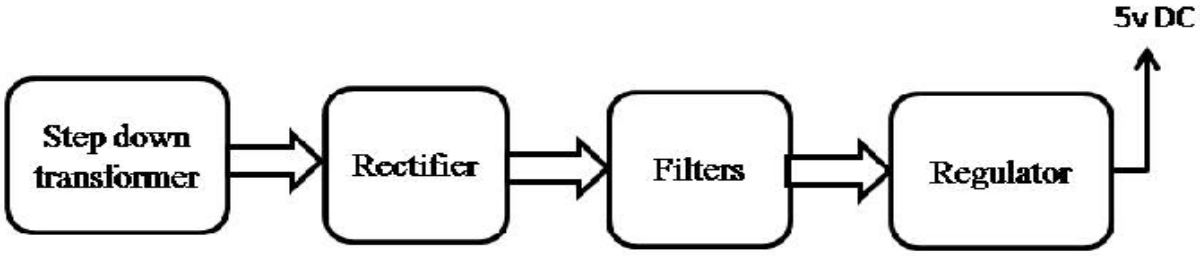
The major building blocks of this project are:

1. Regulated power supply.
2. Touch screen sensor with driver.
3. Graphical LCD with driver.
4. Two Microcontrollers Modules.
5. RF Transmitter.
6. RF Receiver.
7. Reset.
8. Crystal oscillator.
9. LED indicators.

Software's used:

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.
4. Proteus for hardware simulation.

Regulated Power Supply:



BLOCK DIAGRAM:

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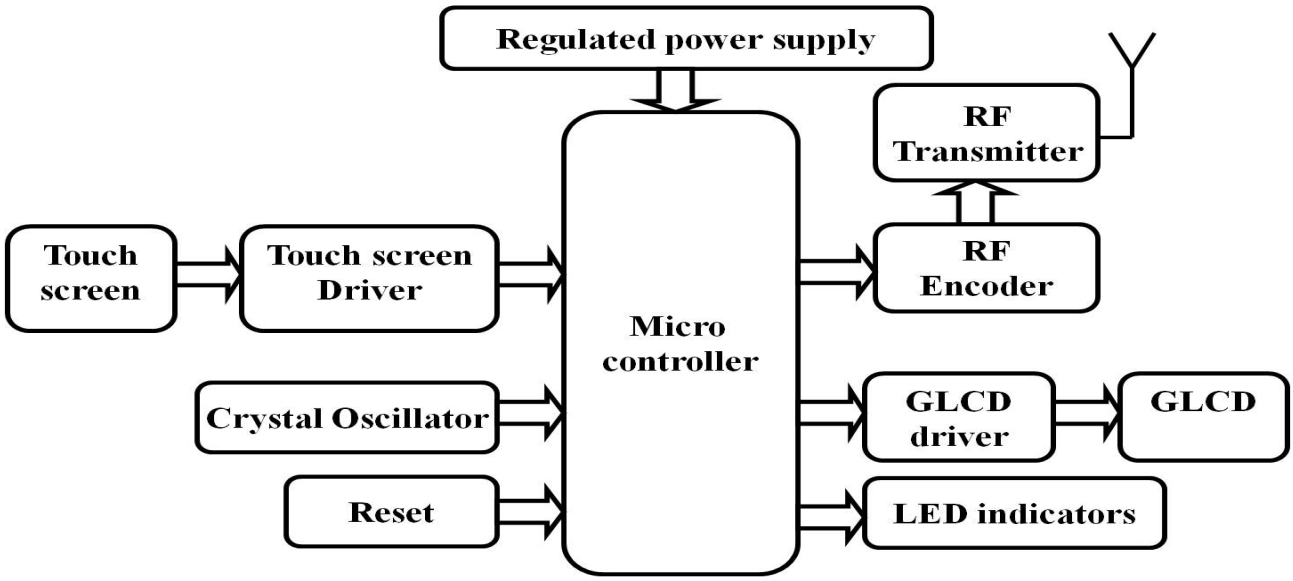
1. Transmitter



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2.Receiver