

For more Project details visit:

<http://www.projectsof8051.com/touchscreen-based-ordering-system-for-restaurants/>

Code	Project Title
1911	Touchscreen based Ordering System for Restaurants

Synopsis for

Touchscreen based ordering system for Restaurants

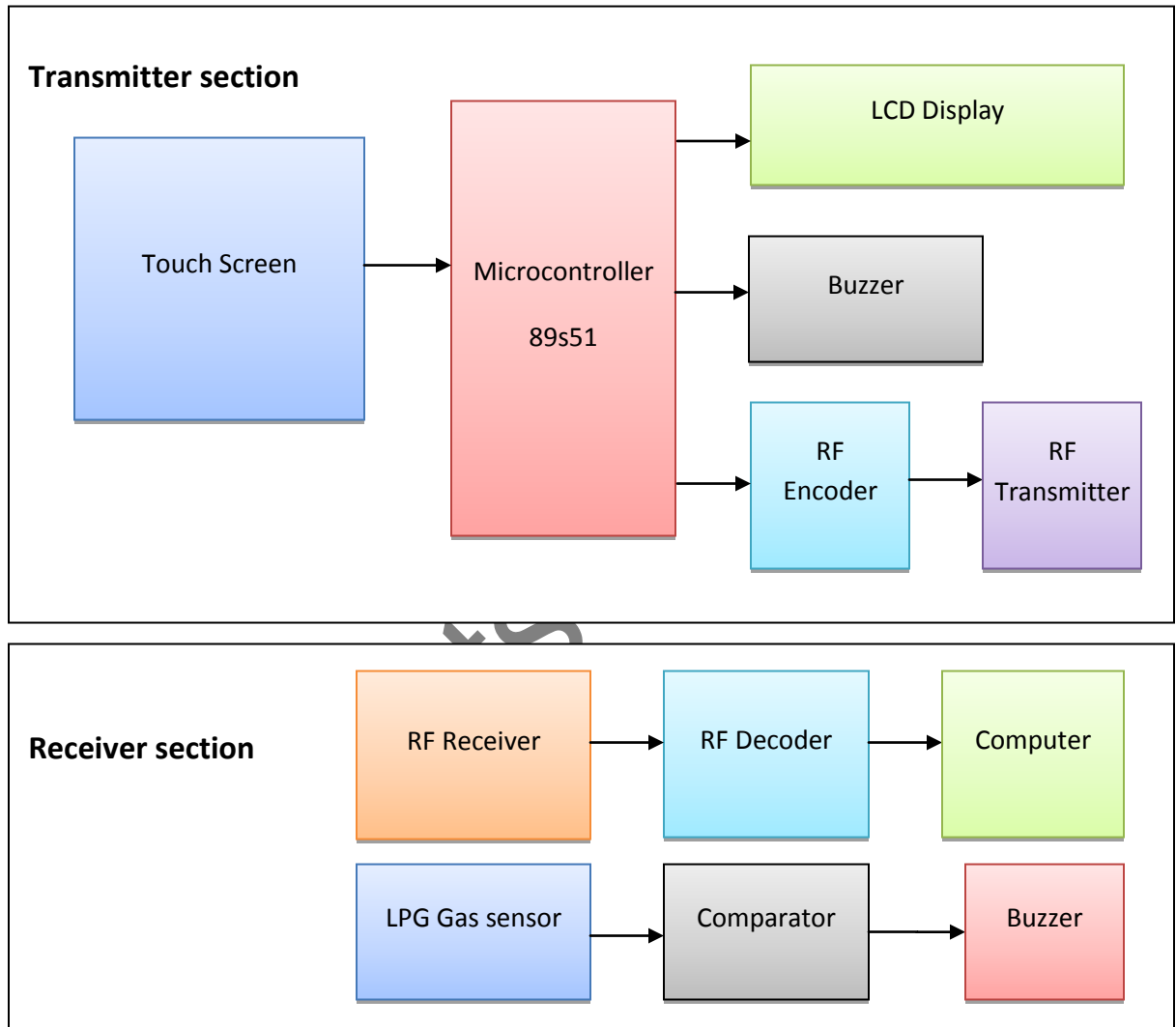
INTRODUCTION

In today's world we have automation in all areas; there is one field where technology not entered yet. It is the menu display & ordering system & so far there is no initiative to taken to introduce technology in this area. Touch-screen based advanced menu ordering is the method by which anyone will select any items by their choice which are in menu display & that order will be transferred to the cook or manager's personal computer using RF wireless transmission module & that ordered item will be given to that customer.

Touch screens as a popular user interface are more and more common. Applications span from public information systems to Customer self-service terminals. Thus, as a Logical step, more and more devices today Feature this kind of user interface, e.g. Bank Automatic teller machines (ATMs), personal Digital assistants (PADs), mobile phones and displays. A touch screen is a display that can detect the presence and location of a touch within the display area. Lets one do so without requiring any intermediate device, again, such as a stylus that needs to be held in the hand. Such displays can be attached to computers or, as terminals, to it networks. Therefore it is very suitable for restaurant & time saving.

It enables one to interact with what is displayed directly on the screen, where it is displayed, rather than indirectly call the waiter & ordered the menu. These devices also allow multiple users to interact with the touch screen simultaneously. Touch based interfaces have been around for a long time in consumer electronic devices, and even longer in research labs, but it has only been recently that the wider public has taken a keen interest in this mode of human-computer interaction.

Block Diagram



Working:

Transmitter Circuit:

Transmitter circuit has 6 main blocks. Touch screen, Microcontroller, LCD display, Buzzer, RF Encoder & RF transmitter. Various menus will be shown under the touch screen. User can select menu from touch screen. Once user has pressed the confirmed the selected order menus, the respective data will be sent to the microcontroller using the serial port. The communication protocol used between touchscreen and microcontroller is RS232 serial communication. Baud rate is 9600 bps. Then microcontroller will display the selected options on the LCD display. We have used 16 by 2 alphanumeric display. A buzzer will be turned on after the confirmation. This will help to inform user that his/her order is sent to receiver section, which is inside the kitchen of the hotel. This information is sent through wireless communication. The communication technology used is RF communication. It has inbuilt RF encoder and RF transmitter.

Receiver Circuit:

Receiver circuit has 6 main blocks. RF Receiver, RF Decoder, Computer interfacing, LPG Gas sensor, Comparator & Buzzer. This section will receive the data sent from transmitter by using wireless RF communication. The first important block is RF receiver section, it also has inbuilt RF decoder. It sends the data to the computer using the serial communication. The baud rate is of 9600 bits per second. On the computer side, we are going to use Hyper terminal software to see various order menus sent from the transmitter section. Another important block at the receiver side is LPG gas sensor section. It has LPG gas sensor which gives analog output. This output is connected to the comparator. This comparator has a potentiometer which can decide the threshold level. Comparator output is given to the Buzzer. This will help to inform the user about the gas leakage.

Advantages:

1. Fast response
2. Error free input
3. Easy to install
4. Use finger, gloved hand, stylus or any soft tip pointer to operate.
5. Easy to clean & maintain.
6. Make computing easy, powerful and fun.

Disadvantages:

1. Stress on human finger when used for more than a few minutes at a time
2. Touch screen can suffer from the problem of fingerprints on the display.

Application:

1. Time saving:

Time is money, especially in a fast paced retail or restaurant environment. In retail or restaurant environment, touch screen systems are easy to use so employees can get work done faster and also training time can be reduced for new employees. As input is present right on the screen, valuable counter space can be saved.

2. Computer based training:

The touch screen interface is more user friendly than other input devices so overall training time for computer novices and therefore training expense can be reduced. It can also be more useful to make learning more fun and interactive.

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