

A UNIVERSAL REMOTE CONTROLLER WITH HAPTIC INTERFACE FOR CUSTOMER ELECTRONIC DEVICES

The main aim of this project is to introduce a new universal remote control that gives easy-to-control interface for home devices such as TV, video/audio player, room lighting and temperature control. In order to use conventional remote controls, people need to understand complex instruction manuals and remember functions assigned to buttons.

Automation is the most frequently spelled term in the field of electronics. The hunger for automation brought many revolutions in the existing technologies. One among the technologies, which had greater developments, is the touch screen sensor. These had greater importance than any other technologies due to its user-friendly nature. Touch screen based devices can be easily reachable to the common man due to its simpler operation, and at the same time it challenges the designers of the device. These touch screen sensors can be used as a replacement of the existing switches in home which produces sparks and also results in fire accidents in few situations. Considering the advantages of touch screen sensors an advanced automation system was developed to control the appliances in the house.

In addition, the button-based control does not provide a sensitive interface so the user presses a button several times to browse information and has difficulty in searching the right button among many buttons. Our universal remote control addresses these limitations by using a touch screen on graphical LCD display. The data transmission through wireless can take place by using Zigbee technology.

The device 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 a touch screen sensor, which takes the input from the user and fed it to the microcontroller. The output module is graphical LCD and the appliances to be controlled. Here the microcontroller receives the input from the touch sensor and switches the device with respect to the input. The controller also takes the responsibility to display the status of the individual devices on the graphical LCD. The micro controller is programmed by using embedded C program. Express PCB software is used to design the circuit board.

Features of this project:

1. User-friendly interfacing by using touch screen and GLCD.
2. Low power consumption.
3. Controls high and low voltage devices.
4. Long life.
5. Highly sensitive.

This project provides exposure to the following technologies:

1. Touch screen sensor.
2. Interfacing Zigbee module to microcontroller.
3. Graphical LCD interfacing.
4. Wireless communication using Zigbee.
5. Interfacing DC motor to Microcontroller.
6. Embedded C programming.
7. PCB design.

Advantages of this project:

www.mycollegeproject.com

Ph: +91 9490219339, 040-23731030

Ameerpet: *A-8, 2nd floor, Eureka court, beside Image hospital, Ameerpet, HYDERABAD 73.*

Santoshnagar: *Opp: Magna Hypermarket, Santoshnagar X-Roads, HYDERABAD – 59.*

1. Touch screen based user-friendly interfacing.
2. Low power consumption.

The major building blocks of this project are:

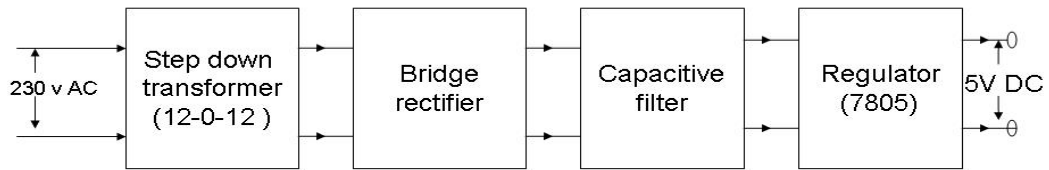
1. Regulated power supply.
2. Touch screen sensor.
3. Graphical LCD.
4. Microcontroller
5. Zigbee module.
6. DC motor with DC motor driver circuit.
7. DC fan with DC FAN driver circuit.
8. LCD.
9. TRIAC.

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.

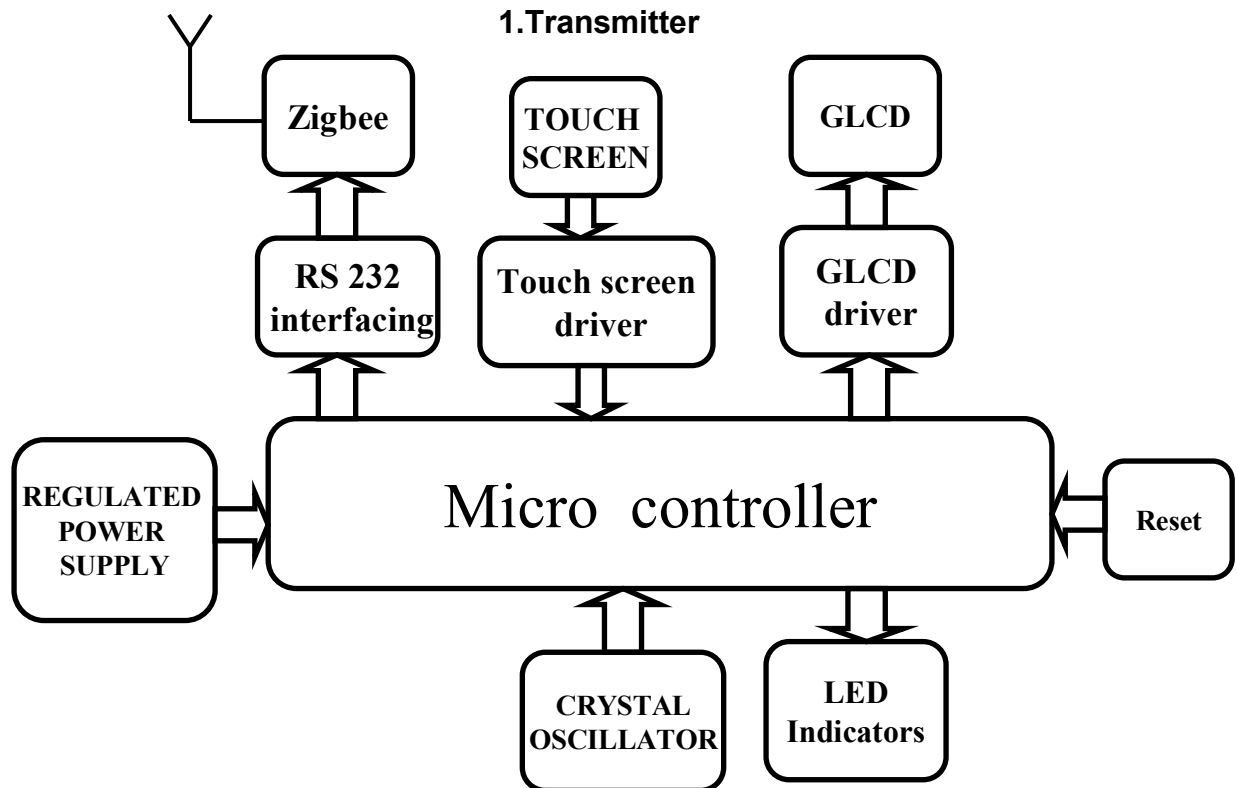
Power supply:

REGULATED POWER SUPPLY



Block Diagram:

UNIVERSAL REMOTE CONTROLLER WITH HAPTIC INTERFACE FOR CUSTOMER ELECTRONIC DEVICES



UNIVERSAL REMOTE CONTROLLER WITH HAPTIC INTERFACE FOR CUSTOMER ELECTRONIC DEVICES

