

Voice Enable Device for Physically Challenged Person and Alert through SMS

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Abstract – The main aim of this project is to design and construct a voice enabled device switching system for physically challenged person and also alert through the SMS using GSM modem. User can also control the electrical devices like light, fan with the help of voice recognition system. This device is very helpful for paralysis and physically challenged persons. The GSM modem provides the communication mechanism between the user and the predefined number through SMS messages.

Index Terms – GSM Modem, SMS, LCD, Speech recognition.

1. INTRODUCTION

This project makes use of a relay for switching the device and voice recognition chip for recognition of the audio announcement and Microcontroller, which is programmed with the help of embedded C instructions.

This microcontroller is capable of communicating with all input and output modules. The voice recognition system which is the input module to the microcontroller takes the voice instruction given by the user as input and the controller judge whether the instruction is ON/OFF the device, and according to the users voice the switching mechanism controls the devices.

An alerting SMS message is sent to the mobile phone using GSM modem and the status of the device is displayed on LCD.

2. RELATED WORK

2.1 In this project we are using PIC Microcontroller to control the all commands and operations. Voice Reorganisation Kit to recognise our voice as an input command. LCD for display the command Which operations we will perform.

2.2 In this circuit we are using the step down transformer ,it down the voltage 440v to 220v.

2.3 This 240v passed through the rectifiers which converts this 240v into the 12v, and this voltage goes through regulator. Which again converts it into 5v, which the required power for a equipment to operate in the lab. This 5v power supply goes to microcontroller and the voice recognition device in the circuit.

2.4 In the microcontroller there will be pre define numbers and the few commands are stored already in which the message will sent and that commands will perform respectively.

2.5 Whenever we give the instruction or any command through the voice recognition kit that command will match through the stored command in the microcontroller. If the command will match then the operation will perform will perform otherwise that operation will not perform.

2.6 When the operation will perform then operation will displayed in the LCD display screen.

3. PORPOSED MODELLING

This project makes use of a Relay for switching the devices and voice recognition chip for recognition of the audio announcements and Microcontroller, which is programmed, with the help of embedded C instructions. This microcontroller is capable of communicating with all input and output modules. The voice recognition system which is the input module to the microcontroller takes the voice instruction given by the user as input and the controller judges whether the instruction is ON \OFF the device, and according to the users voice the switching mechanism controls the devices. An alerting SMS message is sent to the mobile phone using GSM modem and the status of the device is displayed on LCD.

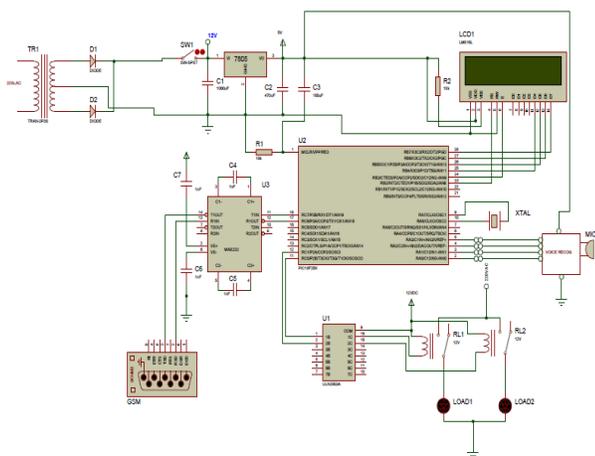


Fig 1 : Circuit diagram

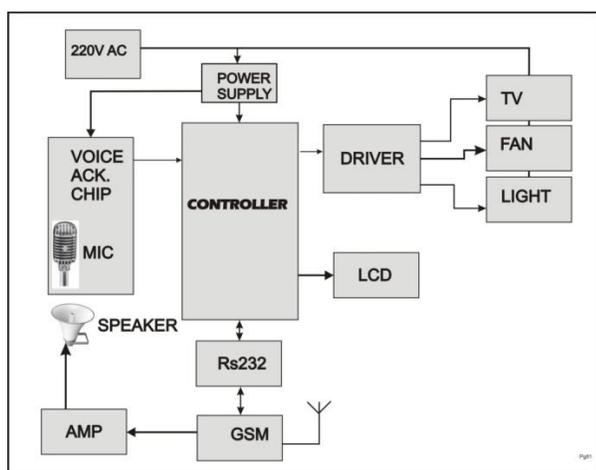


Fig 2 . block diagram

4. RESULTS AND DISCUSSION

The outputs are generated with respect to the voice command given to speech recognition kit with a relatively high accuracy. The status of loads are correctly displayed on the LCD. GSM modem sends SMS to the provided numbers in case of emergency commands. The temperature sensor's value is correctly displayed on LCD. Recognition analysis was taken place to analyze the effects of factors such as accent on the system's accuracy. It also evaluates the systems overall percentage of correct recognition as the system is trained. This device finally going to very useful and effective for the physically challenged person. They will be independent of the other and there will be more other feature in the future which is the more cause to garnering the people.

5. CONCLUSION

Voice enabled device switching system was designed and satisfactory results and outputs were achieved. The project is a

user friendly and cost effective system to help physically challenged, elderly, and disabled people.

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