

Home Appliances Control by Human Voice & Android Bluetooth using 89c51 Microcontroller

A. Subramaniya Siva¹, S.Sathieshkumar², T. Santhoshkumar³

Assistant Professor, K. Ramakrishnan College of Engineering Trichy, India¹

PG Scholar, K. Ramakrishnan College of Engineering Trichy, India^{2,3}

Abstract: Voice control in beautiful habitation strategy has been existing utilized for matured additionally handicap open. The anticipated technique has two most essential mechanical assemblies explicitly 1. Tone of voice identification strategy 2. Mobile Bluetooth joined module. Both home burdens inspiration exists have two guidelines control ON with control OFF directions. Motorization are two numerous a fan notwithstanding light have be knowledgeable about assets of give four manner of speaking guidelines from side to side individual focal handling unit.

Keywords: Bluetooth, Voice Control

I. INTRODUCTION

It is utilized give in comfort of client to remotely control and screen of machine and is give better utilization of the electrical vitality. In efficient utilization of intensity made of living arrangement robotization in hand of essential influence of regular daily existence. Gave be development of Personal Computer, web, cell phone and remote innovation made is simple of client to remotely get to another control in apparatus. An a large number of research have been done and other a great deal of arrangements has been proposed in remotely control of Residence machine Wireless innovation of convey another control Residence apparatus additional utilized in Android Bluetooth of computing to Residence apparatus. Require loved as matured additionally impair individuals. It is application manner of speaking discovery strategy in utilized of widely.

II. LITERATURE REVIEW

Home mechanization is the programmed or self-loader control and observing of family apparatuses and private house highlights like entryways and even the windows. This is show of how to plan and assemble a multipurpose remote framework that can turn OFF and ON any electrical family unit apparatuses relying upon the voice delivered by the clients. Another home mechanization framework was proposed by Sharma. That exhibits a framework that can be coordinated as a solitary plausible unit and enables one to remotely control light, fan, air conditioners, TVs, surveillance cameras, electronic entryways, PC framework, sound/visual supplies.

III. HARDWARE DESCRIPTION

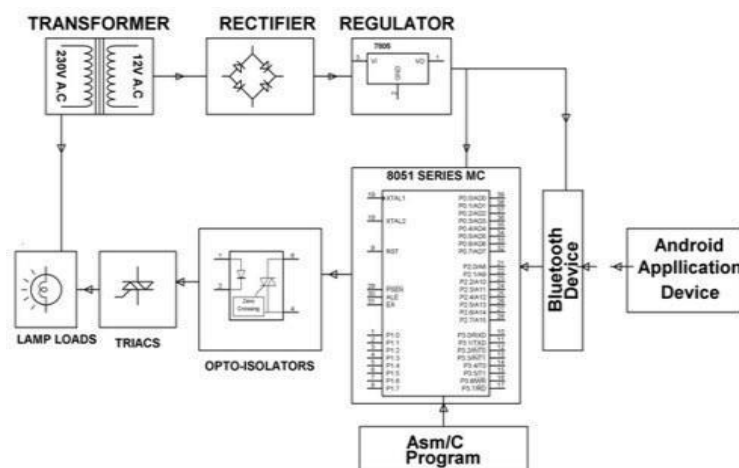


Fig 1 Demonstrates the square graph home machines control by android Bluetooth

Figure 1 demonstrates the square graph home machines control by android Bluetooth using 89C51 microcontroller. Figure 2 show the square outline home machines control by human voice using 89C51 microcontroller.

Transformer, Rectifier, Regulator, Opto-isolators and TRIACS using to home automation. Bluetooth device is using to home automation scheme.

This project is a simple and very useful in the future condition. Let us discuss about the working of the project. Here we use the command 230 V as the power supplying unit. And it is a AC source. So it is readily available. Now the 220V is stepped down to 12V using a step down transformer. Now using converter circuit, we are converting the AC to DC source using bridge rectifier. Now it is filtered using capacitor. By using regulator IC 7805 we are converting the 12V to 5V. Now we have two level of DC voltage 12V and 5V. 12V is used for voice recognizing sensor and 5V is used for touch sensor. The touch sensor and the voice sensor

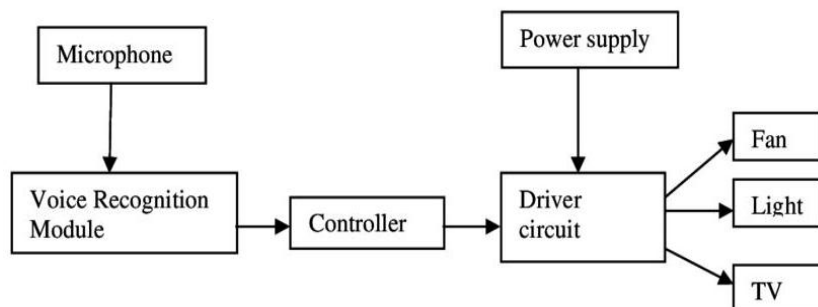


Fig 2 show the block diagram home appliances control by voice

In this we are connected parallel to the relay circuit which goes about as a switch to operate home appliances. The transfer circuit and the load are isolated by opto coupler circuit for the purpose of safety precautions. The controlling circuit used here is 89C51 microcontroller. It is operate under 5V and controls the operation of Bluetooth module voice sensor and touch sensor. By the input of the above mentioned modules it controls the appliances through the relay. We are also using Bluetooth module for the control purpose. It is connected by MAX232. We are connecting the hardware with PC. The central control device with the help of RS232 cable.

A). LCD (Liquid Crystal Display):



Fig 3.LCD Display

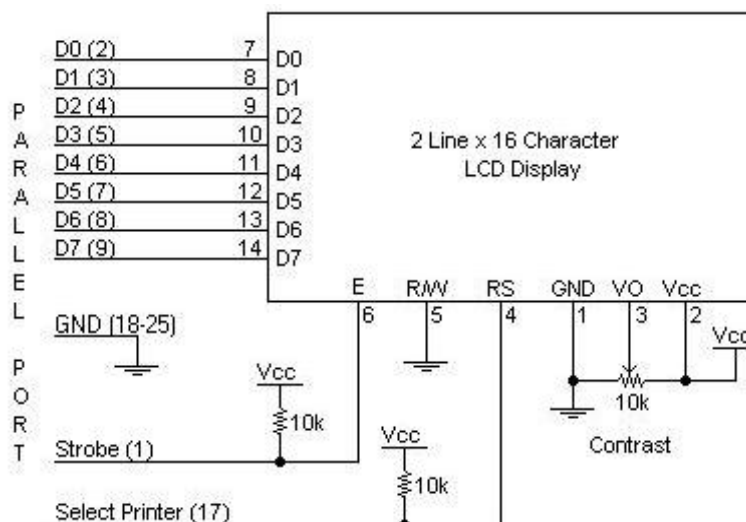


Fig 4 Block Diagram of LCD

LCD is flexible controller and can be used with 8 bit or 4 bit. Smaller scale controller utilizing the information and control lines Micro controller shows chosen thing and other determined outcomes on its screen.

Stick 1 ground. Stick 2 VCC. Stick 3 differentiates voltage.

Stick 4 "R/S"- Instruction/ enroll select.

Stick 5 "R/W"- Read/Write LCD registers.

Stick 6 "E" Clock.

Stick 7-14 Data I/O pins.

B). Power Supply:

unit to generate +5v,+12v.

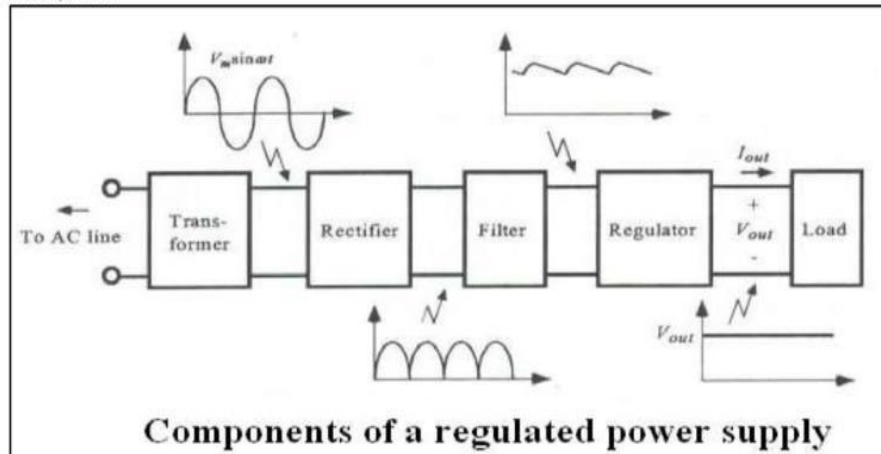


Fig 5. Block diagram of control supply

The Power Supply unit is utilized to give a consistent 5volts Regulated Supply to different IC's this is standard circuits using external 12 VDC adapters and fixed 3 pin voltage regulators. Venture step down transformer once AC be linked toward essential twisting of the instruments transformer it be able to either be ventured downward or upward contingent upon the estimation of Direct current required. Inside our circuit the transformer of 230v/15-0-15v is utilized to play out the progression down activity where 230v AC shows up as 15 V AC over the auxiliary winding.

C). 89C51 Micro Controller



Fig 6.Pin Diagram 89C51 Microcontroller

- Compatible with MCS-51 Products
- Three-level program Memory bolt
- 128*8-bit inward RAM
- 32 Programmable I/O Lines

The AT89C51 is a low power superior CMOS 8-bit microcontroller by means of 4Kbytes of Streak Programmed and deleted understand writing Only recollection (PEROM).AT89C51 Microcontroller is a ground-breaking, which give profoundly adaptable and practical answers for some installed control applications.

- 89C51 CPU
- On deliver FLASH Program Memory
- velocity up to 33 MHZ
- Dual Data Pointer
- break up improvement starting control downward method
- 32 Programmable I/O Lines

D) Hardware Properties:

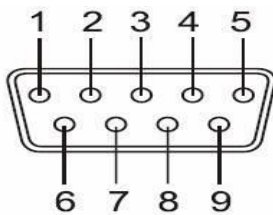


Fig7. View investigating male connector

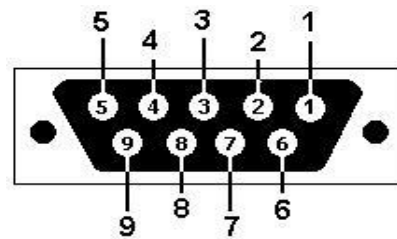


Fig 8. View investigating Female connector

A "Space"(logic 0) will be somewhere in the range of +3 and +25 Volts.

1. A "Mark"(logic 1) will be between - 3 and - 25 Volts.
2. The locales among +3 and - 3 volts is vague.
3. An open circuit voltage ought to never surpasses 25 volts.(In Reference to GND)
4. A short out current ought not surpass 500mA.

E) MAX232:

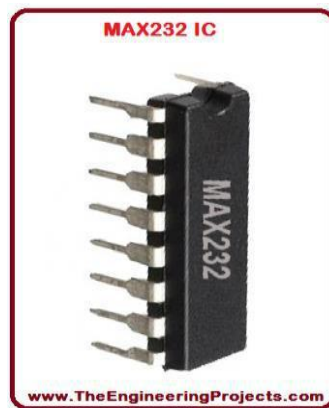
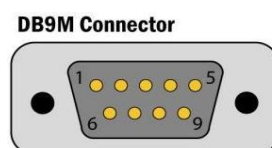


Fig 9. MAX232

The MAX232 is a double driver/gathering to include a capacitive potential generator in the direction supply EIA-232 potential levels from a solo 5-V supply. Each gathering information converts EIA-232 input to 5-VTTL/CMOS stages.

F) RS232:



RS232 Pin Out

Pin #	Signal
1	DCD
2	RX
3	TX
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI

Fig10.RS232

Details being transfer statistics dispensation tools and peripherals be within form of digital statistics which be transmitting inside either a serial or similar mode. In difference similar message need at slightest as a lot of lines as there are bit in a word life form transmitted (for an 8 bit word a minimum of 8 lines is needed). home appliances of like fan and lights. we can controlled the fan on –off , light on –off can controlled by android mobile phones through the Bluetooth and manual voice control.

V. CONCLUSION

The undertaking work has been finished effectively. The task work works acceptably according to the structure. The task work was created subsequent to leading various analyses previously finishing the plan work this diminished the jug necks and we didn't confront much trouble in the last reconciliation process.

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