ROBOT CONTROL THROUGH MOBILE PHONE

DESCRIPTION:

This project is aimed to control robot motion through mobile phone using DTMF(dual tone multi frequency) technology.

In this project we can control robot directions from our mobile without any contact. For this we are using DTMF [Dual Tone Multi Frequency] technique which is as in built feature to few mobiles. This project is designed in such a way that robot is interfaced to the microcontroller [8051] through a driver IC L293D along with one mobile which supports DTMF by using DTMF decoder on the receiver side. A normal mobile phone will be used as a remote control on the transmitter side. some keys in mobile will be dedicated to control the directions (left, right, and front, back) of the robot.

In order to control the robot, you have to make a call to the cell phone attached to the robot from remote mobile. Now the call is being established between the mobiles by pressing the answer button. Now any key pressed on the remote mobile will generate a complex frequency, which can be heard on the mobile placed on the robot. That frequency can be detected by controller by means of DTMF decoder. Keys assigned for control can be User Defined. Depending on the keys output the micro controller performs the predefined tasks of controlling the robot directions to forward or backward or moves front or back or stop. A 16X2 LCD is also interfaced to the controller on the receiver side to display the robot directions.

This project uses regulated 5V, 500mA power supply. 7805 three terminal voltage regulator is used for voltage regulation. Bridge type full wave rectifier is used to rectify the ac output of secondary of 230/12V step down transformer.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Micro controller   :   AT89x series

Crystal   :   11.0592 MHz

LCD   :   HD44780

DTMF decoder

Mobile

DC motors

Power supply

Transformer   :   12V step down

Filter   :   1000uf/25V

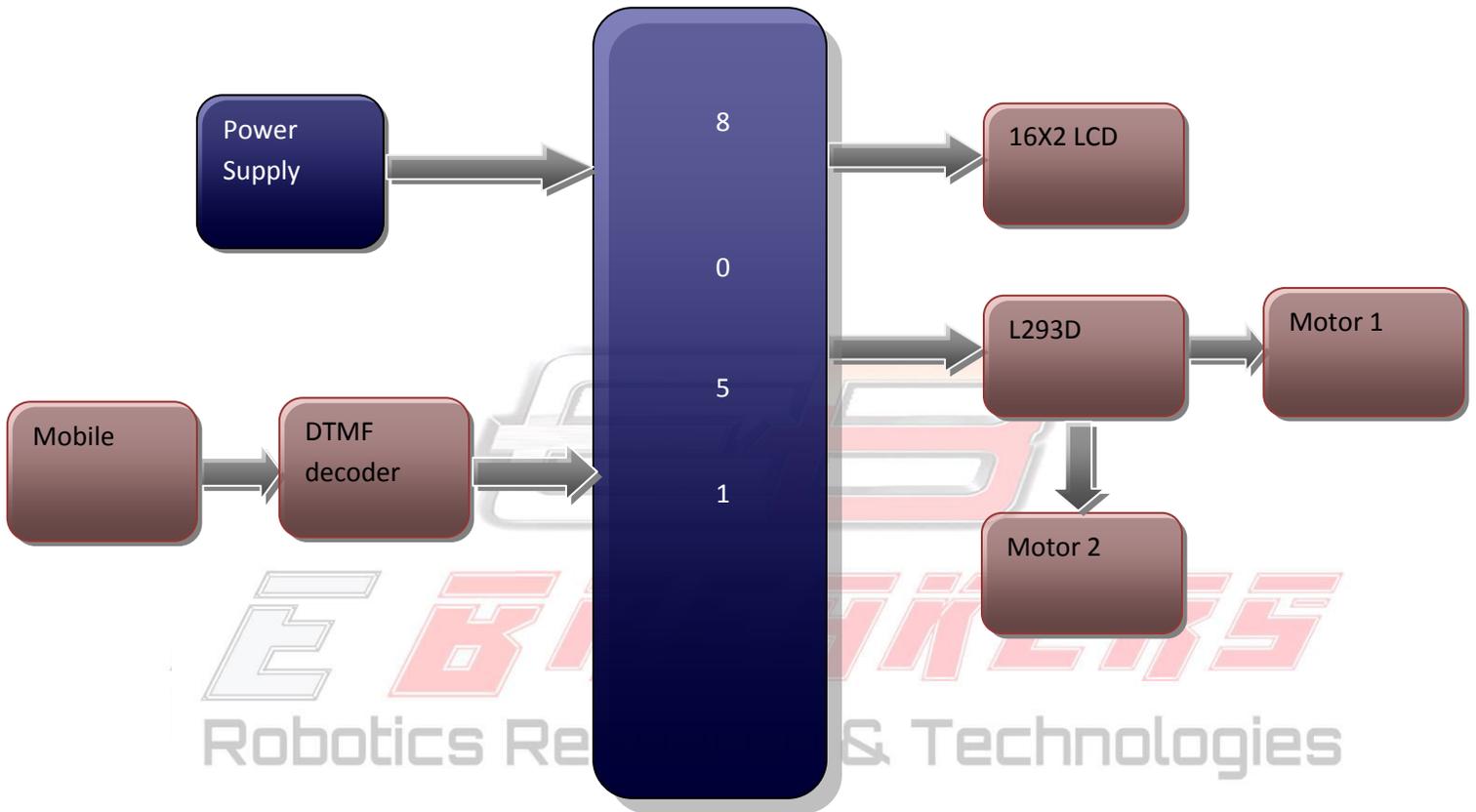Voltage Regulator   :   7805, 7812

SOFTWARE:

Keil IDE

UC flash

Proteus

APPLICATIONS:

➢ Industrial applications
➢ Household applications

Dr.no: # 10-5-56, IInd floor, opp Andhra Bank, Ramarao Peta, Kakinada-533004, (A.P) India
Website: www.ebreakers.in, E-mail : info@ebreakers.in
Land Line: 0884-2369364, Mobile: +91-9030839364, 9290101915.

BLOCK DIAGRAM:

| Power Supply | → | 8 0 5 1 | → | 16X2 LCD |
| Mobile | → DTMF decoder | | → | L293D → Motor 1 ↓ Motor 2 |

POWER SUPPLY BLOCKDIAGRAM:

Step down Transformer → Bridge Rectifier → Filter → Regulator → Output