

Advanced Mobile Phone Signal Jammer for GSM, CDMA and 3G Networks with prescheduled time duration using ARM 7 TDMI processor based LPC2148 controller

Technical Specifications:

Title of the project	:	Advanced Mobile Phone signal Jammer for GSM, CDMA and 3G networks with pre scheduled time duration using ARM 7 TDMI Processor based LPC2148 controller
Domain	:	Wireless Communication & Embedded Systems
Software	:	Embedded C, Keil, Proload
Microcontroller	:	LPC2148 controller
Power Supply	:	+5V, 500mA Regulated Power Supply
Display	:	LCD
LCD	:	HD44780 16-character, 2-line (16X2)
Crystal	:	12MHz for MCU
RTC	:	DS1307
Applications	:	Security, Defense, Institutions, Libraries, Seminar Halls
Developed By	:	M/S Wine Yard Technologies
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ABSTRACT:

Mobile jammer is used to prevent mobile phones from receiving or transmitting signals with the base stations. Mobile jammers effectively disable mobile phones within the defined regulated zones without causing any interference to other communication means. Mobile jammers can be used in practically any location, but are used in places where a phone call would be particularly disruptive like Temples, Libraries, Hospitals, Cinema halls, schools & colleges etc.

As with other radio jamming, mobile jammers block mobile phone use by sending out radio waves along the same frequencies that mobile phones use. This causes enough interference with the communication between mobile phones and communicating towers to render the phones unusable. Upon activating mobile jammers, all mobile phones will indicate "NO NETWORK". Incoming calls are blocked as if the mobile phone were off. When the mobile jammers are turned off, all mobile phones will automatically re-establish communications and provide full service. The activation and deactivation time schedules can be programmed with microcontroller. Real time clock chip DS1307 is used to set the schedule.

GSM – Global System for Mobile Communication is used as a media which is used to control and monitor the transformer load from anywhere by sending a message. It has its own deterministic character. Thereby, here GSM is used to monitor and control the DC motor, Stepper motor, Temperature sensor and Solid State Relay by sending a message through GSM modem. Hence no need to waste time by manual

operation and transportation. Hence it is considered as highly efficient communication through the mobile which will be useful in industrial controls, automobiles, and appliances which would be controlled from anywhere else. It is also highly economic and less expensive; hence GSM is preferred most for this mode of controlling.

3G Technology:

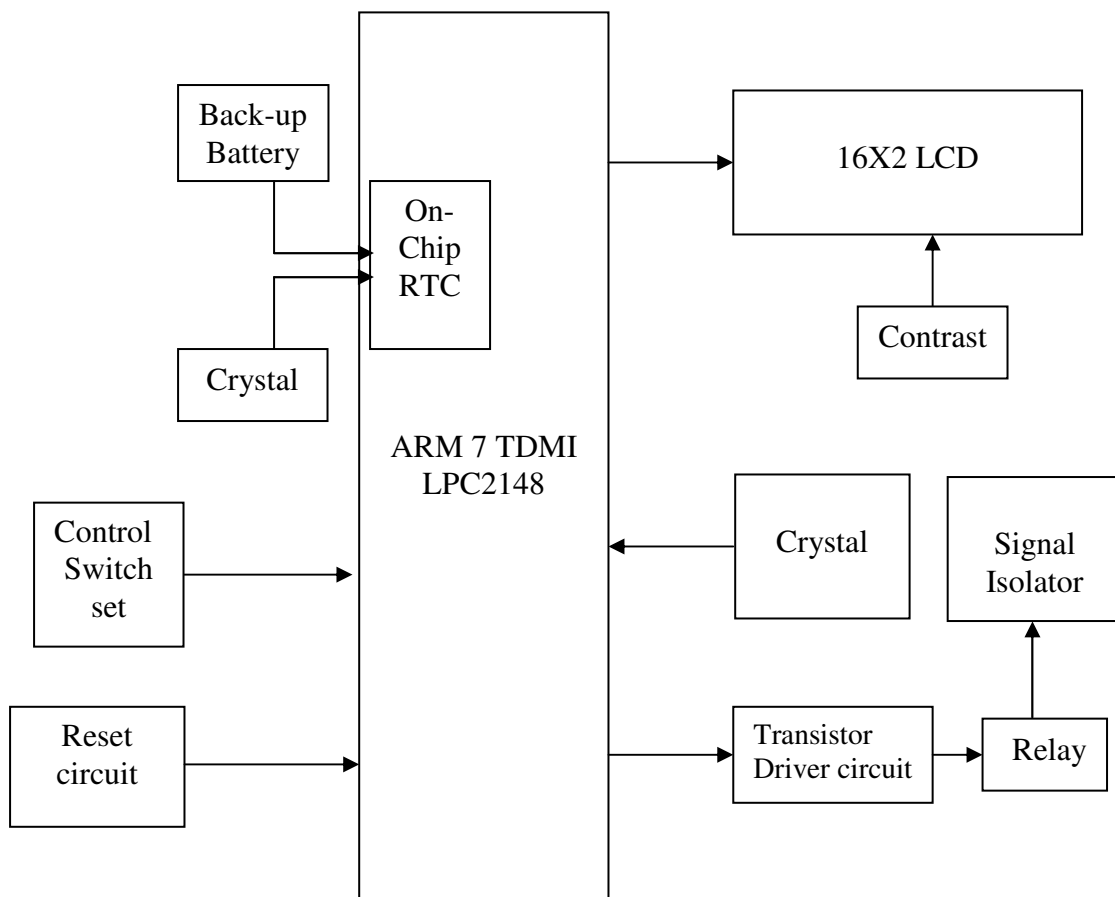
International Mobile Telecommunications-2000 (IMT — 2000), better known as 3G or 3rd Generation, is a generation of standards for mobile phones and mobile telecommunications services fulfilling specifications by the International Telecommunication Union. In 2008, India entered the 3G arena with the launch of 3G enabled Mobile and Data services by Government owned Bharat Sanchar Nigam Ltd. (BSNL). 3G networks offer greater security than their 2G predecessors. By allowing the UE (User Equipment) to authenticate the network it is attaching to, the user can be sure the network is the intended one and not an impersonator.

CDMA: Code division multiple access (CDMA) is a channel access method used by various radio communication technologies. CDMA employs spread-spectrum technology and a special coding scheme (where each transmitter is assigned a code) to allow multiple users to be multiplexed over the same physical channel. CDMA is a form of spread-spectrum signaling, since the modulated coded signal has a much higher data bandwidth than the data being communicated.

The LPC2148 are based on a 16/32 bit ARM7TDMI-S™ CPU with real-time emulation and embedded trace support, together with 128/512 kilobytes of embedded high speed flash memory. A 128-bit wide memory interface and unique accelerator architecture enable 32-bit code execution at maximum clock rate. For critical code size applications, the alternative 16-bit Thumb Mode reduces code by more than 30% with minimal performance penalty. With their compact 64 pin package, low power consumption, various 32-bit timers, 4- channel 10-bit ADC, USB PORT, PWM channels and 46 GPIO lines with up to 9 external interrupt pins these microcontrollers are particularly suitable for industrial control, medical systems, access control and point-of-sale. With a wide range of serial communications interfaces, they are also very well suited for communication gateways, protocol converters and embedded soft modems as well as many other general-purpose applications.

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

BLOCK DIAGRAM:



Advantages:

- Easy to operate
- Sophisticated security
- Simple and Reliable Design
- Isolates both GSM and CDMA mobile signal
- Scheduled time of operation can be programmed
- Works with reference to Real Time Clock

Applications:

- Defense Applications
- Libraries
- Temples
- Colleges
- Seminar halls and conference rooms
- Security for VIPs during their visit to public places