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Cell Phone Jammer using 555 Timer IC

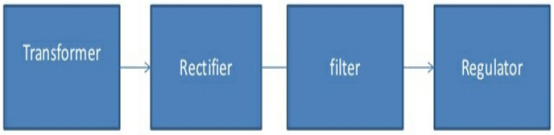
David Rana[1], Shivam Sharma[2], Dinesh Adhikari[3] and Rakesh Pandey[4]
[1,2,3]UG Student, Department of Electronics & Communication, AITS, Haldwani, (U.K.), INDIA
[4]Assistant Professor, AITS, Haldwani, (U.K.), INDIA
Assistant Professor, GL Bajaj Group of Institutions, Mathura (U.P.), INDIA

ABSTRACT: This paper is designed and implemented for cell phone jammer using 555 IC. The jammer device generates RF signals in the same frequency in which cell phone works. Jammer jams the transmitted radio signal by the antenna and block the cell phone on an effective area.

I. INTRODUCTION

Now a days cellular devices works on RF signal and those devices use wireless signals to connect the network. Jammer create a dead zone for the cell phone by giving a RF Signal at the same frequency expected by the device. The jamming signal itself a random noise. The device signal interference by the jammer signal, and then device cannot longer connect to the network. Jammer have different frequency signal. The power output of the jammer is state din WATTS or in DBM, (decibels perameter).

The technology behind this jammer is very simple. It breaks down the network between the cell phone and the base station and broadcast a RF signal with frequency range of cell phone. The small cell phone jammer block the range of feet in the frequency range of 800 to 1900 Mhz and bigger radius can be block by the bigger jammer device.



II. THE PROPOSED CIRCUIT

Cell phone jammer device have three main important circuits. When they are combined together, the output of that circuit will works as a jammer. The three main circuits are follows: Power supply, IF section and RF section

III. POWER SUPPLY

The power supply is used to provide the power to the entire sections in the mobile jammer with the available voltages. The basic block diagram of the power supply consists of the following parts.

(i) Transformer: The transformer is used to transform the 220V AC to the other voltage levels(step up and step down)

(ii) Rectification: The rectification is used to convert the AC voltage to the DC voltage and this process can be done in two methods which are full wave & half wave rectification

(iii) Half wave Rectification: During the half wave rectification the input signal should be positive cycle, hence the output voltage will be appearing

(iv) Full wave Rectification: In this type of rectifications the input signal should be in both i.e. in positive and negative cycles hence the output voltage will be appear.

(v) Filter: In this the large capacitors are used to minimize the ripples in the output. The filter is used in the output of full wave rectifier to eliminate the noise & fluctuations to provide the constant DC voltage

(vi) Regulators: The regulators are used to provide a preferred DC voltage

IV. IF SECTION

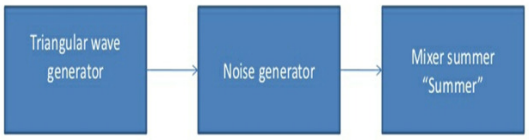
The IF section is just a triangular or saw tooth wave generator. With the help of desired range of frequencies the tuning section of the jammer brushes the VCO. To compensate the proper amount of VCO from the desired frequency to the maximum. The noise which is mixed with triangular waves is generated by the tuning signal. The IF section is divided into three main sections which are given below

- Noise generator
- Mixer
- Triangular wave generator

V. RF SECTION

The RF section is the heart of the mobile jammer because the output of the RF section is interacting with the mobile. There are three main sections in the RF section which are voltage controlled oscillator, power amplifier and antenna. The voltage controlled oscillator is very important in the RF section and it is a device. The RF section generates the RF signal which is

interacting with the cell phones. The VCO output frequency is directly proportion to the input voltage, hence we can manage the output frequency with the help of input voltage. If the input voltage is DC then the out has a specific range of frequency or we have the triangular wave form is the input then the output will be extended to the specific range of frequency.



VI. ANTEENA FEED LINE

Antenna Feed-line comprises of all components that makes the jamming signal arrive and radiate at the antenna efficiently and successfully. It is worthy of note that for maximum power transfer of any electrical system, the input impedance of such a system must match with its output impedance. A 50 ohm Micro strip line performs impedance matching as the use of lumped element sand resist or net works is limited to low frequency applications. The impedance matching must be done to prevent a nun acceptable VSWR (voltage standing wave ratio) which will create signal reflections and reduce the efficiency of the jammer or prevent it from functioning.

VII. 555 TIMER IC

555timer is an integrated circuit which contains 8 pins and the description of each pin is given in the pin description. This timer is used in the pulse generation, oscillators and in different timer circuits. The 555timer produces time delays in the oscillator, also in flip flop elements and the 555 timer contains three modes which are Astable, Bistable and Monostable modes

VIII. CONCLUSION

This project is mainly made to prevent the usage of mobile phones in places inside its coverage without interfering with the communication channels outside its range, thus providing a cheap and reliable method for blocking mobile communication in the required restricted areas only.

Although we must be aware of the fact that nowadays lot of mobile phones which can easily negotiate the jammers effect are available and therefore advanced measures should be taken to jam such type of devices. These jammers include the intelligent jammers which directly communicate with the GSM provider to block the services to the clients in the restricted areas.

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