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Remote Frequency Emitter to Block GSM Signal

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ABSTRACT: World is seeing a tremendous growth in mobile communication. A GSM or mobile phone jammer is a device that transmit signal on the same frequency throughout which the GSM system operates, the jammer when the mobile phones in the area where the jammer is connected are disabled. Communication jamming devices were first developed and used by army force. Where tactical commanders use Radio Frequency communications to exercise and control their forces, when an enemy has interest in those communications. This interest comes from the fundamental area of the successful transport denies information from the sender to the receiver. Nowadays the mobile jammer devices or cell phone jammer device are becoming civilian products rather than electronic warfare operational devices, since with the increasing number of the mobile phone users the need to disable mobile phones connection in specific places where the ringing of cell phone would be disruptive has increased. The places include worship places, lecture rooms, libraries, concert halls, meeting rooms, and other places where silence is maintained.

I. INTRODUCTION

A Mobile Jammer Circuit or a Cell Phone Jammer Circuit is an instrument or device that can prevent the reception of signals by creating some form of interference at the same frequency ranges of mobile phone. As a result, a mobile phone user will loss of signal quality. Mobile phone jammers have both benign andmalicious. Basically, a Mobile Jammer Circuit is an Radio FrequencyTransmitter, which broadcasts Radio Signals in the same (or similar) frequency range of the Gobal system mobile communication.

The amazing mobile signal jammer is designed to boost 100% effectiveness to ensure undisturbed meetings and provide you with a peace of mind. Mobile phonejammer is used to prevent the mobile phones from receiving signals from base station.



Figure 1: Typical sign used in places

II. BACKGROUND

After the first mobile phone appeared, mobile phone scramblers began to develop very quickly. Even the most senior citizens who follow the rules and regulations of electronics do not always know about all the possibilities of the devices. Latest mobile devices are used not only in everyday life, but also not for peaceful purposes.

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It will be more useful to know some information about the facts of history of mobile jammer. An interesting assumption exists, is that the ruling king of Jordan significantly attracted on the creation of mobile blockers. He became the first person who decided to ask the major developers to try to invent a new mechanism for a mobile signal breaker. The thing is that the Maharaj Hussein was constantly interfered by annoying mobile calls and long talks of his servants, which were heard even during the prayers in the palace. As a result, he ordered a major United States corporation to develop a blocker for cell phones which could block the signal. A mandatory condition was that the radius of the device should cover the full area of the palace.

Thus, the cordless mobile phone jammers were invented absolutely with peaceful motivations, and only later they were used for machinery purposes. Such devices are important in protecting the data of specific organizations, especially those whose unique activity directly depends on cognitive property. The mobile phone jammer is a device used to prevent mobile phone usage and to block unknown calls. Different devices have some various characteristics like high power, large or short range of cell phone jammer it is used, the blocker effectively disconnects cellular phones. These devices can be used actually in any random location, but are found primarily in places where a phone call would be particularly destroying because where silence is expected.

III. COMPONENTS REQUIRED

- 555 Timer IC
- Coil 4 Turn 24 AWG
- Resistors – 220Ω x 2, 5.6KΩ, 6.8KΩ, 10KΩ, 82KΩ
- Capacitors – 2pF, 3.3pF, 4.7pF, 47pF, 0.1μF, 4.7μF, 47μF
- 30pF Trimmer Capacitor
- LED
- Coil 3 Turn 24 AWG
- Antenna 15 Turn 24 AWG
- BF495 Transistor
- ON / OFF Switch
- 9Volt Battery

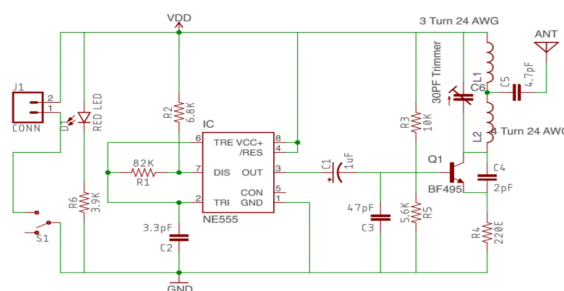


Figure 2: Circuit Diagram Of Jammer

III. OPERATIONS ON JAMMER

After building this circuit on a perf board and supplying power to it, I have placed a mobile phone near the circuit (I am yet to turn on the switch). Before turning on the power, my mobile phone was able to capture majority of the signals as it is displaying full bars. Once the circuit is turned on, the signal bars on the phone started to reduce and finally it stopped at a single bar. So in conclusion, this circuit blocks the signals but cannot completely jam them.

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Frequency Range	Uplink	Downlink
GSM 900	890-915 MHz	925-960 MHz
GSM 1800	1710-1785 MHz	1805-1880 MHz

This oscillator circuit will produce very high frequency with minimum amount of damping. The both inductor and capacitor of tuned oscillator circuit will oscillate at its own resonating frequency. The tuned oscillator circuit operation is very simple and easy to understand. When the circuit get switched ON, the voltage is accumulated by the capacitor according to its capacity. The main function of capacitor is to accumulate electric energy. Once the capacitor is completely charged, it will allow the charge to pass through inductor. We know that inductor is used to accumulate magnetic energy. When the current is flowing across the inductor, it will accumulate the magnetic energy by this voltage across through the capacitor and will get decremented, at some point complete magnetic energy is accumulated by inductor and the charge or voltage across the capacitor will be set to zero.



Figure 3: Overview of jammer

The magnetic charge through the inductor will decremented and the current will charge the capacitor in reversed polarity manner. Again after some period of time, The capacitor will get completely charged and magnetic energy across the inductor will be set to completely zero. Then the capacitor will give charge to the inductor and becomes to zero. After some period of time, inductor will pass charge to capacitor and becomes zero and they will oscillates and generate the frequency flow.

For example, Cell phone works at the frequency of 900 MHz frequency. To block this 900MHz frequency, we also need to generate 900Mega Hz frequency with some noise which will act as simpler blocking signal, because mobile phone receiver will not be able to detect which signal it has been received. By this, we can able to block themobile phone signal from reaching the cell phones device.

IV. LEGAL ISSUES OF JAMMING

Jamming is seen as a Property Theft, because a private company has purchased the rights to use a particular radio frequency, and jamming the frequency is a kind of stealing the property the company has purchased. First of all we would like to start by saying that at the beginning when signal blockers of any kinds were introduced to the public society, they were allowed for usage. Later when the governments started realizing that the event might be a threat to society, the people decided that it would be better to put a restriction to these types of devices because of two reasons. First – it was really hard to explain people not to use those devices near a police station and second – almost any person could get one of those portable frequency blockers, even if the person was a terrorist which increased the chance of



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such attack. Jamming signal could block the call of a babysitter frantically trying to contact a parent or someone trying to call for an ambulance.

V. CONCLUSION

In this paper, we proposed a device that interrupt the signal frequency to block the ringing of the mobile phone. This device could be used in places where ringing is not allowed at specific times. Every technology has a good aspect as well as bad aspect the important thing is, how we are using it. Cell phone jammer devices are very useful to the society from the anti-social events. We can prevent the anti social elements by using mobile jammers.

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