

Mobile phone Jammer

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Abstract— A GSM jammer or cell phone jammer is a device that transmit signal on the same frequency at which the GSM system operates. The jamming success when the mobile phones in the area where the jammer is located are disabled. Communication jamming devices were first developed and used by military. Where considered commanders use RF communications to exercise control of their forces, an enemy has interest in those communications. This interest comes from the fundamental area of deny the successful transport of the information from sender to receiver.

Nowadays the mobile jammer devices software are becoming civilian products rather than electronic warfare devices, since with the increasing number of mobile phone users the need to disable mobile phones in specific places where the ringing of cell phone would be disruptive has increased. These places include worship places, university lecture rooms, libraries, concert halls, meeting rooms, and places where silence is acceptable

I. INTRODUCTION

Cell phones are everywhere in now days. With the help of cell phone we can be able to call anyone at anytime. these days mobile phone widely used in ,restaurants, movie theatres, concerts shopping malls and side of a conversation about an incredibly personal situation as the talker shares intimate details with his friend as well as everyone else in the area? While most of us just grumble and move on, cell phones are basically two way radio process. One is sender and another is receiver. This process is going on over the signal and signal can be destroyed, or jammed.

II. BASICS OF JAMMER

Disrupted a cell phone is the same as jamming any other type of radio communication. A cell phone works by communicating with its service network through a cell tower or base station. Cell towers divide a city into small areas, or cells. As a cell-phone user drives down the street, the signal is handed from tower to tower.

A jamming device catch all the signal of radio frequencies as the cell phone, disrupting the communications between the full duplex. It's a called a denial-of-service attack. The jammer denies only when the cell phones user within range of jamming device.

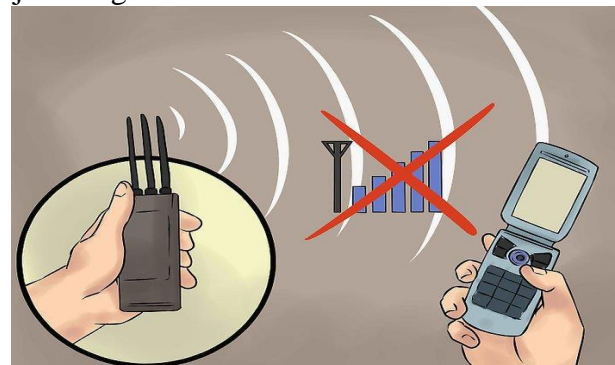


Fig1: mobile phone with no signal in the range of mobile jammers.

III. MOBILE PHONE JAMMER

Mobile phone jammer is like a radio communications transmitters designed to interfere with licensed services operated by mobile carriers. A mobile phone works by communicating with its service network via a base station. A mobile phone jammer typically works by preventing the mobile phone from receiving signals from base stations. As a result, the mobile phone does not attempt to transmit to a base station, even though it may be within range. Jammers effectively disable mobile phones. Jamming a mobile phone may potentially cause it to 'lack up' and continue in a non-receiving state outside of the jammed area until the mobile phone is turned off and on again (this may not be apparent to or understood by the user of the mobile phone). Mobile phones are commonly designed to operate across several bands. In most circumstances, a jammer would also need to operate across the same bands to effectively jam mobile phones within

range. The geographical range of a mobile phones jammer depends on its power level, its operating frequencies, the physical situation of the jammer, the mobile phones it is attempting to block, and the local environment. Mobile phone jammers vary in quality and functionality, ranging from the elementary to the sophisticated.

IV. HOW ITS WORKS

Jamming device overpower the cell phone by transmitting a signal collide and cancel each other out. Cell phones are designed to add power if they experience low-level interference, so the jammer must recognize and match the power increase from the phone. Cell phones are designed to add power if they use two separate frequencies, used by cell phones, which has the effect of blocking both. The phone is tricked into thinking there is no service because it can receive only one of the frequency. Less complex devices block only one group of frequencies, while sophisticated jammers can block several types of networks at once to head off dual-mode are try-mode phones that automatically switch among different network types to find and open signal. Some of the high end devices block high frequencies at once, and others can be tune to specific frequencies. To jam a cell phone, all u need is a device that broadcasts on the correct frequencies.

Although different cellular systems process signals differently. All cell-phone networks use radio signals that can be interrupted. GSM, used in digital cellular and PCS based systems, operates in the 900-MHz and 1800 MHz bands in Europe and Asia and in the 1900MHz sometime referred to as (1.9GHz) band in the united state. Jammers can broadcast on any frequency and are effective against APMS, CDMA, TDMA, GSM, PCS, DCS, iDEM and Nexel systems. Old fashioned analog cell-phone and today digital devices are equally susceptible to jamming. The actual range of the jammer depends on its power and the local environment, which may include hills are walls of a building that block the jamming signal. Low powered jammers blocks cell in a range of about 30

feet (9m). Higher power units create a cell free zone as large as football field. Units used by low enforcement can shut down service up to one mile (1.6km) from the device.

V. INSIDE A CELL- PHONE JAMMER

Cell-phone jammers are very basic devices. The simplest just have an on /off switch and a light that indicates it's on. More complex devices has switches to activate jamming at different frequencies. Components of a jammer:

A. ANTENNA

Every jamming device has an antenna to send the signal. Some are contained with in an electrical cabinet. On stronger devices, antennas are external to provide longer range and may be tune for individual frequencies.

B. CIRCUITRY

There are 5 type of circuitry used in jammer. They all are main electronic component of a jammer as following.

C. VOLTAGE-CONTROLLED OSCILLATOR

It is used for generating the radio signal that will interfere with the cell phone signal.

D. NOISY GENERATOR

The noise will help in masking the jamming transmission, making it look like random "noise" to an outside observer. Without the noise generator, the jamming signal is just a sweeping, unmodulated continuous wave RF carrier.

E. TUNING CIRCUIT

The tuning circuit will produce the very high frequency with minimum damping. The both inductor and capacitor of tuned circuit will oscillate at its resonating frequency.

F. RF- AMPLIFICATION (gain stage)

To achieve the desired output power a gain stages was needed, about searching for a suitable power amplifier.

G. POWER SUPPLY

The mobile jammer was designed for fixed use, and to take its power from the regular 220V AC wall outlets.



Fig2. Pocket jamming device

VI. CELL PHONE JAMMERS ARE SAVING LIVES OF PEOPLE

Believe or not but the modern technologies are not only useful but are saving lives as well. One of the Most important examples that can be given is the saving of the Pakistan president. I don't know if you know but one of the latest bomb explosives are really modern and can be triggered by one simple phone call. So imagine that you have planted a bomb under a car and all you to do is just to make one simple phone call and everything will be blown up just in few seconds.

Basically after this case most of the security agencies who work for the presidents of different nations have decided that it is really important to have IED jammers aboard. Unfortunately you should know that mobile phone jammers are banned in most of the countries and this is why they are not allowed for usage by citizens.

It is important to know that you need to learn a few things on those devices before purchasing simply because there are different specifications and it would be really better for you if you know what kind of frequencies the cell phones of your neighbours are using. So this is why it is essential for you to know a couple of things. And as you know you can buy cell phone jammers from jammerstore.com- the biggest cell phone jammers manufactor all over the world. Be sure that someday bomb jammer will save even your life-this is why those devices are great.

VII. LEGAL ISSUES

Cell-phone jamming is covered under the communications Act of 1934, which prohibits people from "wilfully or maliciously interfering with the radio communications of any station licensed or authorized" to operate. In fact, the "manufacture, importation, sale or offer for sale, including advertising, of devices design to block or jam wireless transmission is prohibited".

Jamming is seen as property theft, because a private company has purchased the rights to the radio spectrum, and jamming the spectrum is to stealing the property the company has purchased. It also represents a safety hazard because jamming blocks all calls in the area, not just the annoying once. Jamming is signal could block the call of a babysitter frantically trying to contact a parent or a someone trying to call for an ambulance.

In most countries it is illegal for private citizens to jam cell phone transmission, but some countries are allowing businesses and government organisations to install jammers in areas where cell phone use is seen as a public nuisance. India has installed jammers in parliament and some prison. It has been reported that universities in Italy have adopted that technology to prevent cheating. Students were taking photos of tests with their camera phones and sending them to classmates.

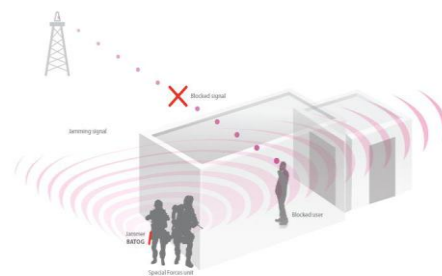


Fig3. Mobile signal blocked by user with mobile jammer.

VIII. ADVANTAGES

It is very necessary using cell phone jammers in the most divine temples as we require silence and ringing mobile phone may cause disturbance. Also jammer can be used to provide security to V.I.P's from the anti-social elements. By using cell phone jammers we can't disturb other people in the public places like restaurants, shopping place etc. It is very

necessary to use cell phone jammers in nasal feared places. This helps the authorities to work their duty softly. By, using cell phone jammers in the vehicles, we can overcome accidents problem which is very helpful to the people.

IX. DISADVANTAGES

Mobile jammers are cost oriented and require special hardware. Also some people feel inconvenience in using mobile jamming device. Another major drawback of mobile phone jamming device is that V.I.P's may loose some important calls.

X. CONCLUSION

Cell phone jammers are very useful to the society from the anti-social elements. We can save our national between the anti-social elements by using the cell phone jammers. Cell phone jammers prevent the students from carrying cell phones to the colleges. As everything goes fine, it is very necessary to implement in all the colleges.

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REFERENCES

- [1].K.Feher , "Wireless Digital Communication", prentice Hall of India , New Delhi
- [2].T.S.Rappaport , wqq "Wireless communication", Principals and Practice, Prentice Hall, NJ , 1996
- [3].Robert L. Boylestad and Louis Nashelsky , "Electronic Device and Circuit Theory ", Prentice Hall of India, New Delhi , 2002
- [4].Mobile & Personal Communications Committee of the Radio Advisory Board of Canada, "Use of jammer and disabler Devices for blocking PCS, Cellular & Related Services"
- [5].John Scourias, Overview of the Global System for Mobile Communications, University of Waterloo.
- [6].Horowitz, P.; Hill, W., the Art of Electronics, 2nd. Ed, Cambridge University Press.

- [7].Floyd, Electronic Devices, Prentice Hall, 5th. Ed, pp.60-85
- [8].Pojar, D. M., Microwave Engineering, John Wiley and Sons, 2nd.Ed, p198.
- [9]. "HYPERLINK
 "https://www.legislation.gov.au/Details/F2011L00346"NRadiocommunications (Prohibition of PMTS Jamming Devices) Declaration 2011HYPERLINK
 "https://www.legislation.gov.au/Details/F2011L00346""
- [10]. http://en.wikipedia.org/wiki/Mobile_phone_jammer
- [11]. <http://www.howstuffworks.com/cell-phone-jammer.htm>
- [12]. <http://electronics.howstuffworks.com/cell-phone-jammer1.htm>
- [13]. <http://www.mcuexamples.com/forum/showthread.php?tid=10>
- [14]. <http://www.HYPERLINK>
 "http://www.google.com/"googleHYPERLINK
 "http://www.google.com/"HYPERLINK "http://www.google.com/"com
- [15]. hHYPERLINK
 "http://world.std.com/~walthowe/"tpt://world.std.com/~walthowe/
- [16]. .htHYPERLINK
 "http://ftp.uwashington.edu/public/Interne"tp://ftp.uwashington.edu/publi c/Interne
- [17]. <http://netways.shef.ac.uk/index.htm>
- [18]. <http://www.science.widener.edu/>
- [19]. "HYPERLINK "http://services.parliament.uk/bills/2012-13/prisonsinterferencewithwirelesstelegraphy.html"Prisons (Interference with Wireless Telegraphy) Act 2012HYPERLINK
 "http://services.parliament.uk/bills/2012-13/prisonsinterferencewithwirelesstelegraphy.html"
- [20]. <http://whatisacellphonejammer.com>
- [21]. <http://blog.jammer-store.com/2009/11/how-mobile-jammers-work20>