

# Blocking the Phone Signals with the Help of Mobile Jammer

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**ABSTRACT:** This paper deals with the description of mobile phone jammers. A cell phone jammer is a device that blocks transmission or reception of signals, usually by creating some form of interference at the same frequency ranges that cell phones use. As a result, a cell phone user will either lose the signal or experience a significant loss of signal quality. 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. The task of jamming a cell signal or preventing cell phone from receiving or transmitting signals is somewhat difficulty. To achieve this task, the jammer must high-grade of hopping generator, with good bandwidth. When used, the Jammer effectively disables cellular phones. These devices can be used in practically any location, but are found primarily in places where a phone call would be particularly disruptive because silence is expected.

**KEYWORDS:** Remote Control Mobile jammer, Adjustable Mobile Jammer, Police & Military Mobile Jammer, Portable Mobile Jammer

## I. INTRODUCTION OF MOBILE JAMMER

A mobile phone jammer is an instrument used to prevent cellular phones from receiving signals from base stations. 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 were originally developed for law enforcement and the military to interrupt communications by criminals and terrorists to foil the use of certain remotely detonated explosives. The civilian applications were apparent with growing public resentment over usage of mobile phones in public areas on the rise & reckless invasion of privacy. Over time many companies originally contracted to design mobile jammers for government switched over to sell these devices to private entities. 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. Mobile jammer's effect can vary widely based on factors such as proximity to towers, indoor and outdoor settings, presence of buildings and landscape, even temperature and humidity play a role.



Fig. 1 MOBILE JAMMER

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## II. HOW MOBILE JAMMER WORKS

Jamming devices overpower the cell phone by transmitting a signal on the same frequency and at a high enough power that the two signals 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 a full-duplex device, which means they use two separate frequencies, one for talking and one for listening simultaneously. Some jammers block only one of the 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 frequencies. 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 or tri-mode phones that automatically switch among different network types to find an open signal. Some of the high-end devices block all frequencies at once, and others can be tuned to specific frequencies.

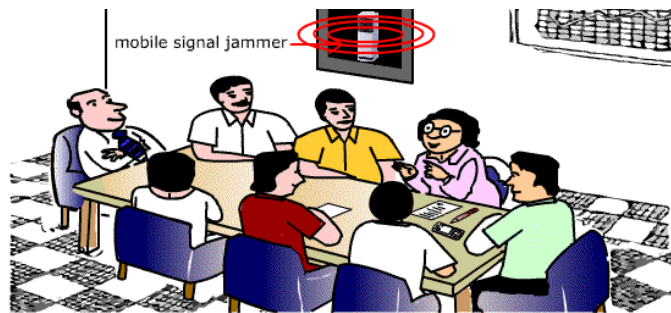


Fig. 2 MOBILE SIGNAL JAMMER

To jam a cell phone, all you 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 1900-MHz (sometimes referred to as 1.9-GHz) band in the United States. Jammers can broadcast on any frequency and are effective against AMPS, CDMA, TDMA, GSM, PCS, DCS, iDEN and Nextel systems. Old-fashioned analog cell phones and today's 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 or walls of a building that block the jamming signal. Low-powered jammers block calls in a range of about 30 feet (9 m). Higher-powered units create a cell-free zone as large as a football field. Units used by law enforcement can shut down service up to 1 mile (1.6 km) from the device

### Cell Phone Jammer Circuit

Cell Phone Jammer circuit analysis is simple and easy. For any jammer circuit, remember that there are three main important circuits. When they are combined together, the output of that circuit will work as a jammer. The three circuits are

- RF amplifier.
- Voltage controlled oscillator.
- Tuning circuit.

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## III. TYPES AND APPLICATION OF JAMMER DEVICE

There are many types of cell phone jammer devices which is given as below:

1. **Remote Control Mobile jammer:** Remote controls are used widely in our daily life such as the TV remote control, the air conditioner remote control and toy remote control, car remote control and so on. Not all the remote controls is with the same frequency bands such as **315Mhz, 330Mhz, 390Mhz, 433Mhz, 868Mhz** and so many other frequency bands. And there is no doubt that the design of the remote control jammer is to cut off the signals of the remote control.



Fig.3 REMOTE CONTROL MOBILE JAMMER

On one hand the remote controls like the TV remote control, the air conditioner remote control can bring us a lot of convenience however there are also other kinds of device that is controlled by the remote control which may causes negative effect for people. Such as the remotely controlled robots, unmanned Aerial Vehicles (UAVs) and other surveillance drones operated by humans by using the remote control, which is widely used these days. If so your privacy and life may be disturbed by such kind of surveillance drones, to avoiding this situation and protect your privacy the best and simple way is to rf jammer to block the signals of the remote control signals. Thus the remote control jammer can also keep your children pay attention to the study, as it can block the signals of the TV remote control when they are not willing to do homework and want to watch TV, you can just open the remote control jammer and told them that the TV remote control is out of power or it is broken and coax them to do the home work first. And here you can gain both the portable and desktop remote control jammer according to your real situation.

2. **Adjustable Mobile Jammer:** Seguro SSG 202 is a high power variable mobile jammer. It is used to block mobile phone signals within medium range. It is a complete jamming solution which can provide 24 X 7 mobile jamming. It is a user friendly device and can easily be switched on to block mobile phone signals in meeting rooms, hospitals, libraries, recording studios etc. to avoid disturbance and gives you a break from phone calls, messages and helps you to concentrate on work. What makes it different from other jammer is that it can control each frequency channel separately and simultaneously. It is a powerful jammer which helps in ensuring silence all around. Are You Looking For A Sophisticated Mobile Phone Signal Jammer? An Adjustable Cell Phone Jammer May Be Just What You Need! If you are looking for a top-of-the-line cell phone jammer, you might be interested in an adjustable model. Adjustable cell phone jammers are considered to be the most sophisticated type of jammer on the market today. This is because they are fixed units that contain adjustable settings, making it possible to keep cell phone chatter and disturbances away from large areas restricted from areas considered to be Mobile Free Zones.

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Fig.4 ADJUSTABLE MOBILE JAMMER

- School Mobile Jammer:** Cell phone jammers in schools are becoming more popular, and for good reason. Many teachers are fed up with trying to stop students from texting in class, and want to know how to stop cell phone use in the classroom. Students ignore lectures while they surf social networks. Some send texts, and even do research online, in order to cheat on exams. Although these jammers are capable of ending cell phone communications and may seem technically complex, you may be surprised by their simplicity, which requires nothing more than the push of a button.



Fig.5 SCHOOL MOBLIE JAMMER

- Take Back Control in Your Classroom
  - Stop Cheating During Examinations
  - Get Kids OFF the Phone and Paying Attention to Lectures
- Prison Mobile Jammer:** The Prison Jammer manages the problem of illegal cell phones in a Prison or Government facility. Prison Solutions from HSS offer multiple approaches to stop smuggled phones from making calls by using RF Jammers, Detector Jammers, or Managed Access. Our solutions differ in operation and design. Some Prison Jammers work to block off large areas in a building to stop cell phone calls. These Prison Jammers consist of active or reactive cell phone jammers that are installed in a pre-determined pattern. Other Prison Jammers may be set up in a fixed design to radiate RF interference and defeat any attempt to use a mobile phone service provider's network to make or receive calls. This would involve stationary rack-mounted RF jamming telemetry. The alternative to using Prison Jammer technologies would be using Managed Access and Cell Catchers with Selective Jammer features. These are not RF jamming technologies.

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Fig. 6 PRISON MOBILE JAMMER

They are permission based systems managed by an administrator in a Prison or a Government building. Their operational duties involve establishing cellular communication guidelines that permit authorized users to connect to the local phone networks, while unauthorized cell phone users are denied service. The Prison Jammer is a cellular jamming and cellular detection system. Model IJS 6000 is an intelligent cellular Prison Jammer system designed to jam unauthorized cellular phones while permitting authorized cellular phones to operate. With the Prison Jammer, control can be managed over criminal communications in a prison, unauthorized calls in a courthouse, military installation, or specific environment where cell phone activity must be managed. In correctional circles, it is known as the prison jammer or prison jamming system.

- 5. Explosion – Proof Mobile jammer:** Since each jammer device owns its own characteristics and people also take such kind of factors into account before they buy it. For some people who want to use the mobile phone jammers outside the house and want to protect the jammer device from being damaged by the water the waterproof mobile phone jammer is suitable, and for people who look for the explosion proof jammer, this Explosion proof Type 12W High Power Mobile Phone Signal Jammer is just their choice. Besides this explosion proof phone jammer also owns powerful jamming radius, of which the jamming radius is up to 50 meters based on the signal strength in the given area as it is designed with 12 high output power.



Fig. 7 EXPLOSION PROOF MOBILE JAMMER

- 6. Police & Military Mobile Jammer:** PKI 6120 Cellular Phone Jammer represents an excellent and powerful jamming solution for larger locations, such as prison buildings, law-courts and banks or government and military areas where usually a high level of cellular base station signals is emitted. Due to the high total output power, this device can cover all such areas with a RF-output control of 10, 20, 30, 40 W with digital display. A

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total of 160 W is available for covering each frequency between 800 and 2200 MHz in steps of max. 40 W for each single frequency band. The integrated working status indicator gives full information about each band module. Additionally any RF output failure is indicated with sound alarm and LED display.



Fig. 8 MILITARY MOBILE JAMMER

- 7. Portable Mobile Jammer:** A portable mobile phone jammer fits in your pocket. Choose from cell phone only or combination models that include GPS, or even our most popular model, the cell phone blocker mini, to create a quiet zone around you, or prevent leaking of information in sensitive areas. The portable cell phone signal blocker is compact yet powerful. The blocking radius of a portable one is no narrower than those bigger ones. Its working range can cover from 10 meters to about 100 meters. The portable jammers are now well welcomed by people are all because of the convenience and advantages. For example, large amounts of students now in the senior and high school own mobile phones and a lot of the like to play with the mobile phones instead of listen carefully to their teachers, and to improve the efficiency of the classes, the teacher can take use of the portable mobile phone jammer to block the signals of the cell phones and naturally the students will be absorbed to the attention of their teachers.



Fig. 9 PORTABLE MOBILE JAMMER

The Crusaders Portable Mobile Jammer is a high end state of the art modern technology used to jam mobile devices such as phones in required areas for security and professional concerns. The Crusader jammer uses very modern technology and works on the latest 3G technology devices. The device requires an effective distances of 2-5 meters radius giving it a very wide range of functionality. It is a compact size and lightweight and thus easily carried and installed. The device has a low output power transmitter with stronger wave as output making sure that all specified frequency bands will be paralyzed simultaneously showing a no service status in that area. This device is ideal for meeting rooms, conferences, museum, galleries, theatres, concert halls, religious sites and buildings, restaurants, classrooms, training centers, factories, banks etc.



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## VI. CONCLUSION

In this we discussed about Cell phone jammer that effectively jams the operation of cell phone such that providing high security to mankind. Cell phone jammer can be effectively used in all area for maintaining security of data. Further we considered the types of mobile phone jammers such as adjustable mobile jammer, remote control mobile jammer, school mobile jammer , prison mobile jammer. Cell phone Jammer is an instrument used to prevent cellular phones from receiving signals from or transmitting signals to base stations.

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