

# Analyzing the Advanced Mobile Phone Signal Jammer for GSM and CDMA

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**Abstract**— This paper was designed for the advanced mobile phone signal jammer. Mobile jammer is a device that is used to prevent mobile phones from transmitting or receiving signals from the base stations. The mobile phone signal jammer works based upon the principle of radio wave frequency (RF). Here we have jamming techniques, section, keys, microcontroller and GSM unit. The information will propel to the microcontroller, then the regulator will propel the data to GSM and GSM will drive message to the clients whose figures are programmed in GSM and communiqué will be blocked. After sending the message, mobile jammer circuit will activate and signals are jammed or blocked. We can use network passwords and Ids in some authenticated mobile phones in schools and colleges. The 4G mobile phones can be blocked by using the advanced jamming devices. We can use the jammer in long distance by extending the network strength.

**Keywords**— Jammer; Frequency; Antenna; GSM; CDMA.

## 1. Introduction

Mobile jammer is a device used for prevent cellular phones from receiving signals from base station. It was first developed by law enforcement and used by military. There are increasing number of mobile phone users we need to disable mobile phones in specific places like schools, lecturer rooms, theaters, worship places, libraries etc. There are several methods like Type 'A' jammers[1], Type 'B' intelligent cellular disablers device, Type 'C' intelligent bonfire disablers device, Type 'D' direct receive and broadcast jammers device [2], Type 'E' EMI shield inert jamming device[2]. We use GSM and CDMA frequency bands. This jamming device used to transmit signal in same frequency. Incoming calls is blocked as if the mobile phone were off. When the mobile jammers is turned off, all mobile phones can automatically re-establish communications and provide full service. The jamming distance is relative to the signal strength in the detailed place and there also the distance from the base station as well. And the manufacturers usually test the general case, so there can be a discrepancy between the jamming

distances. The mobile phone jammer have met up with the standard and cause no radiation and has no harm to humans.

## 2. Mobile Phone Jammer

It is an apparatus that can be employed to stop cellular phones from getting signals from base stations and is a ordinary tool that is employed to shun the broadcast of network signals to the mobile phones, hereby jamming all the phones [1,4]. It is a device that transmit signal on the same frequency at which the global system operates, the jamming success when the mobile phones present in the area where the jammer is located and it get disabled. Mobile phones are widely used now and the normal frequency and common bands includes GSM, CDMA, and 3Gsignals [5]. And now with the speedy growth of the high equipment and the 4G signal also have initiated. These frequency bands is widely used in the countries all over the world. All these mobile communication phone frequency bands prepared it probable for the populace to converse universal with each other easier, numerous people's are anguish from the lot of effects of the mobile phones. So the mobile phone jammers will assist public in this case. There are chances when we convene a few public who does not appreciate the telephone protocol and converse noisily on telephone in communal locations like temples, libraries and exaggerated houses. These are places where the requirement of a mobile phone jamming apparatus emerges.

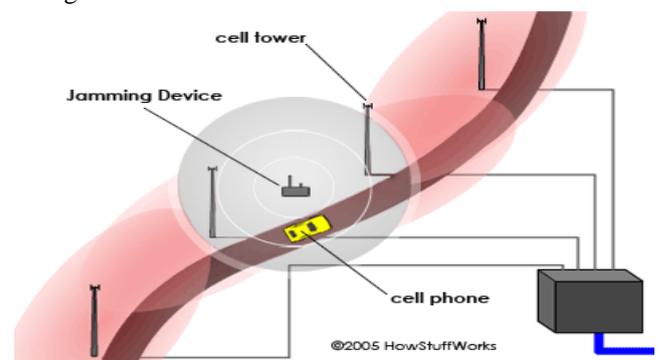


Fig.1: Cell phone jamming basics

### 2.1 Working Principle Of Mobile Phone Jammer

The mobile phone jammer is an apparatus can avert mobile phones from getting and distribution mobile signals to the base station close by. Functioning in this method the signals within the jamming frequency of a convinced mobile phone signal jammer can be stopped and cannot capable to build phone calls and transferring messages outside. Thus as a few trailing machine also using the mobile phone signal we can clever to attain the goal of thieving the solitude of further people, which is actually a huge danger for the people's to guide a usual life and if with the mobile jammers, the signals of the frequency bands will be simply stopped and rapidly the trailing device will misplace their purpose and public's solitude will be defend just by employing the mobile signal blocker



Fig.2: Working of jammer

### 2.2 Techniques for signal jamming

There are numerous methods to jam the mobile phone signal in the accessible system. They are

- Type "A" Jammers. This tool has numerous sovereign oscillators broadcast ing "jamming signals" able of blocking dissimilar frequencies utilized by paging apparatus.
- Type "B" Intelligent cellular disablers: which cannot broadcast a meddlesome signal on the organize mobile channels. It has an exclusive recognition number for communicate with the cellular station.
- Type "C" Intelligent Beacon Disablers do not broadcast an interfering signal on the phone channels. When situated in a chosen quiet area, purposes as a beacon and any companionable terminal which is coached to immobilized the ringer or stopped its process, while inside the exposure area of beacon.
- Type "D" Direct receive and transmit jammers performs like a little, autonomous and moveable base station, it can straight interrelate with the process of the local mobile and block the cell phone unwaveringly within secure range of the jammer.
- Type "E" EMI Shield-passive jamming repression methods which are employed in this to create a room into are described Faraday cage. It basically blocks all

electromagnetic emission from incoming or parting the cage.

These devices are built to jam only GSM, 2G and 3G network compatible cell phones. It can be accessed only for a few meters. The emergency calls cannot be accessed in the existing jamming device.

### 2.3 Denial Of Service (DOS) Attack

In computing, a denial-of-service (DOS) attack[4] is an attempt to make a machine or network resource unavailable to its intended users, such as to interrupted temporarily or suspend services of a host connected to the Internet. Example for dos attack refer fig 3.

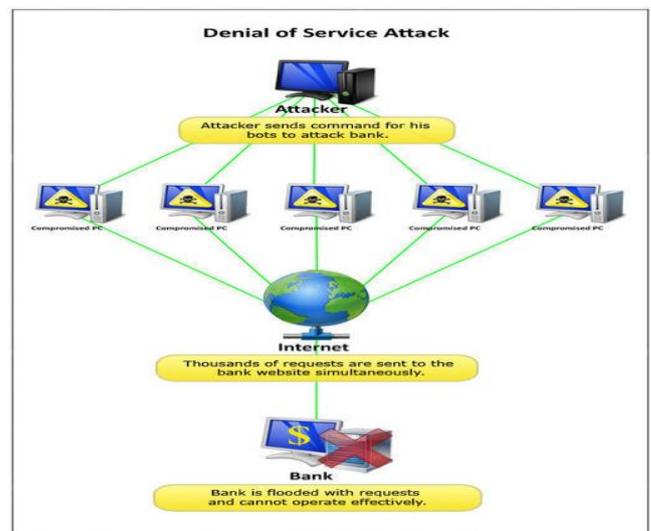


Fig.3: DOS Attack

### 2.4 Cell Phone Scrambler

Nowadays mobile phone users have been increased. The mobile phone has positive aspects and also the negative aspects. The students were carrying the mobile phone to schools and colleges were mobile phone has been restricted. So, should use mobile phone signal jammer to assure students to study without any distraction. Jammer should use in public places like libraries, hospitals, and railway stations. The emergency calls can be accessed by using the device cell phone scrambler refer fig 4.

### 2.5 Full Frequency Adjustable Cell Phone Jammer

The novel generation 4G mobile phone can be wedged by with the "Full frequency adjustable cell phone jammer" apparatus. It has 5 antennas and quad band machinery building it likely for them to achieve a bigger area. This jammer can also jam 3G, 4G, 4G LTE, 4G wimax and eliminating the GSM and CDMA frequency network.



Fig.4: Cell phone scrambler

The cell phone scrambler device can access the emergency calls which means the predefined zones like ambulance, fire station, police station etc we're not be blocked. By using this jammer the mobile phone will not be affected. Refer fig 6. This mobile phone signal jammer is with a powerful ability for jamming 2G, 3G, and 4G phones which work via those radio frequencies: CDMA (851MHz - 894MHz), GSM (925MHz-960MHz), 3G (2110MHz - 2185MHz), GLTE (725 - 785MHZ), 4G(Wimax)2300-2410MHZ. The comparison of various technologies are refer figure 5.

Technology /features	1G	2G	3G	4G
Start/Deployment	1970/1984	1980/1999	1990/2002	2000/2012
Data Bandwidth	2 kbps	14.4-64 kbps	2 Mbps	200 Mbps - 1 Gbps for low mobility
Standards	AMPS	2G:TDMA, CDMA, GSM	WCDMA, CDMA-2000	Single unified standard
Technology	Analog cellular technology	Digital cellular technology	Broad bandwidth CDMA, IP technology	Unified IP and seamless combination of broadband, LAN/WAN

Fig.5: Comparison of Technology

### 3. Conclusion

The device used in the proposed work has been actually used to block the advanced generation 3G, 4G LTE, 4G Wimax. The emergency calls can be accessed by using cell phone scrambler. For example fire station, police station,

ambulance etc. People were using mobile phones while crossing the roads or stations so by using in the public places like bus stands, railway stations can avoid the accidents.



Fig.6: Adjustable jammer

### 4. Future Scope

This mobile phone jammer is not for the upcoming 5G signals. In future by enhancing this device can able to block the 5G mobile phone signal. Cell phone signal blocker utilized in schools, can guarantee students to learn without any interruption. By extending the jammer strength frequency can able to extend the jammer range.

### References

- [1] Sami Azzam, Ahmad Hijazi, Ali Mahmoudy, "Smart Jammer for mobile phone systems" Zone of silence [cell phone jammer], Spectrum, IEEE, Vol.42, No.5, May 2005, pp.677.
- [2] Ahmed Jisrawi, "GSM 900 Mobile jammer", Undergrad project, JUST, Vol.3, 2006, pp.89-91.
- [3] Shah, S.W., Babar, M.I.; Arbab, M.N; Yahya,K.M "Cell Phone Jammer", In Multitopic Conference, 2008, pp.34-39.
- [4] P.Naresh, P.RaveendraBabu, K.Satyaswathi "Mobile Phone Signal Jammer or GSM, CDMA with pre-scheduled Time duration using ARM7", Inter. journal of science, Engineering and Technology Research, Volume 2, Issue 9, September 2013, pp.148-152.
- [5] Braun, T.; Carle, G.; Koucheryavy, Y.; Tsaoussidis, V., "Wired/Wireless InternetCommunications", Third International Conference, WWIC 2005, Xanthi, Greece, May 2005, pp.188-191.

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