CELL PHONE JAMMERS

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CONTENTS

• What is Jammer?
• Size of Jammer
• Why Jammers are used?
• How Jammer works?
• What inside the Jammer?
• Applications of Jammer
• Cell phone Jamming Legal issues
• Future scope for Jamming Technology
• Conclusion
What is a Jammer?

- Cell phone jammers are devices that create a temporary "dead zone" to all cell phone traffic in their immediate proximity.

- A cell phone jammer is an instrument used to prevent cellular phones from receiving and transmitting the mobile signals to a base station. When used, the jammer effectively disables cellular phones in the area.

- Other types of jammers - radar jammer and radio jammer.
Size of a Jammer

- Some cell-phone jammers are made to look like actual phones. Others are briefcase-sized or larger. The biggest jammers used by police and the military can be mounted in vehicles for convoy security.
Why Jammers are used?

• A phone jammer provides the ultimate solution in any area where cellular communications frequently cause nuisance either by loud incoming call rings or resulting loud telephone conversations.

• Cell phone jamming devices were originally developed for law enforcement and the military to interrupt communications by criminals and terrorists. Examples include: security zones public transport, classrooms, temples, tv & radio stations, jails, govt. buildings, military bases, industries etc.
How jammer works?

- A jamming device transmits - same radio frequencies as the cell phone, disrupting the communication between the phone and the cell-phone base station in the tower. It's called a **denial-of-service attack**.

.....Jamming basics.....
Jammers block cell phone use by sending out radio waves along the same frequencies that cellular phones use at a high enough power that the two signals collide and cancel each other out.

This causes interference with communication of cell phones and towers to render the phones unusable. On most phones, the network would be out of range.

So Jammers work by either disrupting phone to tower freq. or tower to phone frequencies.
What's inside the Jammer?

**Antenna:**
Every jamming - antenna to send the signal. Some are contained within an electrical cabinet. On stronger devices, antennas are external to provide longer range and may be tuned for individual frequencies.

**Power supply**
Smaller jamming - battery operated.
Some look like cell phone and use cell-phone batteries. Stronger devices - plugged into a standard outlet or wired into a vehicle's electrical system.
• **Circuitry**
  
The main electronic components of a jammer are:
  
  **Voltage-controlled oscillator** - Generates the radio signal - interfere with the cell phone signal
  
  **Tuning circuit** - Controls the frequency at which the jammer broadcasts its signal by sending a particular voltage to the oscillator
  
  **Noise generator** - Produces random electronic output in a specified frequency range to jam the cell-phone network signal
  
  **RF amplification (gain stage)** - Boosts the power of the radio frequency output to high enough levels to jam a signal
Applications

- Cell phone jamming devices were originally developed for law enforcement and the military to interrupt communications by criminals and terrorists.

- It has been widely reported that a cell-phone jammer thwarted an assassination attempt on Pakistani President Musharraf in December 2003.

- Used in areas where radio transmissions are dangerous, such as areas with a potentially explosive atmosphere, such as chemical storage facilities or grain elevators.
Legal Issues

- In the United States, United Kingdom, Australia and many other countries, blocking cell-phone services (as well as any other electronic transmissions) is against the law.
- Jamming is seen as property theft, because a private company purchased the rights to the radio spectrum, and jamming a signal could block the call of a babysitter frantically trying to contact a parent or a some one trying to call for an ambulance.
- The Federal Communications Commission is charged with enforcing jamming laws.
- In most countries, it is illegal for private citizens to jam cell-phone transmission.
Future Enhancements

• While the law clearly prohibits using a device to actively disrupt a cell-phone signal, there are no rules against passive cell-phone blocking.
• Companies are working on devices that control a cell phone but do not "jam the signal.
• Cell-phone alerters are available that indicate the presence of a cell-phone signal. These have been used in hospitals where cell-phone signals could interfere with sensitive medical equipment. When a signal is detected, users are asked to turn off their phones.
Conclusion

- Every technology has good aspect as well as bad aspect the important thing is how we are using it.

- Cell phone jammers are very useful to the society from the anti-social elements. We can save our national leaders. we can restrict the communication network 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 every thing goes fine, it is very necessary to implement in all the colleges

References

- [2] en.wikipedia.org/wiki/Mobile_phone_jammer
QUERIES
THANK YOU