RADAR/LIDAR JAMMERS

TYPES OF RADAR/LIDAR JAMMERS

For decades, motorists have attempted to defeat radar and lidar by inventing radar/lidar jammers or devices designed to destroy or alter the signal, thus rendering the speed measuring device useless. Currently, there are two types of radar and lidar jammers - active and passive. An active jammer broadcasts a strong microwave signal back to the police radar/lidar in an attempt to alter or destroy the microwave signal or the laser beam. Passive jammers attempt to prevent the signal from reflecting back to the transmitter. The shape of a stealth fighter jet is designed to prevent military radar from reflecting back to the source and would be considered a passive jammer. Electronic military passive jammers are very expensive. Placing a black bra on the front of a vehicle or removing the front license place would be types of passive civilian jammers. Removing reflective surfaces does reduce the effective range of radar and lidar but may be illegal - for example most states have a front plate license law. Civilian electronic passive jammers on the market today are basically ineffective against police radar.

PASSIVE RADAR JAMMERS

Currently, there are electronic products on the market that claim to effectively jam police radars. They also claim to meet all FCC requirements because they are passive jammers. Passive jammers do not transmit any microwave energy and, therefore, are not required to be licensed by the FCC; however, devices which interfere with radio signals are in violation of federal law and manufacturers as well as jammer owners may be culpable according to FCC policy.

If a unit does not transmit a radar signal, how then does it jam radar? The answer if very simple - it does not. Consumers are lulled into a sense of false protection. Most of these units consist of very simple circuitry designed to emit an audible signal and to turn small, electronic lights on and off giving the appearance they are really doing something. Advertisements for these units confuse even microwave engineers. Claims such as "twin turbo-waveguide synchronizers" and "FM chirp circuit" are advertising ploys to lull the uneducated buyer.

A few manufacturers of these "radar jamming devices" will actually claim to pay for any citations received while the unit is in operation. There is a Latin saying, "caveat emptor" which translated means "buyer beware". Read the fine print. These claims will only pay for citations that are issued within a very limited tolerance. For example, if you receive a citation for 5 m.p.h. over the limit, the manufacturer guarantees to pay the citation. Any citation in excess of 5 m.p.h. will not be paid. Well, that still sounds like a good guarantee. Again, read the fine print. The manufacturer will only reimburse you for one citation and only after you have proven you have already paid the citation. Again, still sounds good! Considering the fact these units cost between $150 and $350 to purchase, probably $40 to $60 to manufacture, and will only pay one $50 citation, even if the consumer cashes in on the guarantee, the company has still made a profit!

ACTIVE RADAR JAMMERS

There are two basic types of active radar jammers:

(1) Jammers which broadcast a strong microwave signal at a Doppler frequency that registers a lower than actual speed reading on a police radar. This type of jammer is less effective since it will produce a low speed on the radar that is inconsistent with the actual speed of the violator. An officer's attention will definitely be attracted to a vehicle traveling excessively fast which produces an unrealistic speed on the radar.

(2) Jammers which broadcast a strong microwave signal that vacillates in frequency (frequency modulation or FM) will confuse the radar circuitry. These jammers work because the radar's circuitry is designed to ignore returned Doppler signals which fluctuate from a very high speed to a very low speed. The radar will simply "blank out." Violators operating this type of system may escape a second look from an officer because the officer is still looking at the radar and wondering why it did not produce a reading.

The intentional use of jammers is considered "malicious interference" and is strictly prohibited by the Federal Communications Act of 1934, as amended, as well as by FCC Rules.

Communications Act of 1934
Sec. 333. Willful or malicious interference

No person shall willfully or maliciously interfere with or cause interference to any radio communications of any station licensed or authorized by or under this Act or operated by the United States Government. (June 19, 1934, ch. 652, title III, Sec. 333, as added Pub. L. 101-396, Sec. 9, Sept. 28, 1990, 104 Stat. 850.)

RADAR/LIDAR JAMMERS

Sec. 501. General penalty

Any person who willfully and knowingly does or causes or suffers to be done any act, matter, or thing, in this chapter prohibited or declared to be unlawful, or who willfully and knowingly omits or fails to do any act, matter, or thing in this chapter required to be done, or willfully and knowingly causes or suffers such omission or failure, shall, upon conviction thereof, be punished for such offense, for which no penalty (other than a forfeiture) is provided in this chapter, by a fine of not more than $10,000 or by imprisonment for a term not exceeding one year, or both; except that any person, having been once convicted of an offense punishable under this section, who is subsequently convicted of violating any provision of this chapter punishable under this section, shall be punished by a fine of not more than $10,000 or by imprisonment for a term not exceeding two years, or both. (June 19, 1934, ch. 652, title V, Sec. 501, 48 Stat. 1100; Mar. 23, 1954, ch. 104, 68 Stat. 30.)

Sec. 510. Forfeiture of communications devices

(a) Violation with willful and knowing intent

Any electronic, electromagnetic, radio frequency, or similar device, or component thereof, used, sent, carried, manufactured, assembled, possessed, offered for sale, sold, or advertised with willful and knowing intent to violate section 301 or 302a of this title, or rules prescribed by the Commission under such sections, may be seized and forfeited to the United States.

The frequencies used for the transmission of radar signals have been specifically reserved for police traffic radar. All units which broadcast a signal on this frequency are required to be licensed by the Federal Communication Commission (FCC) and in accordance with the Code of Federal Regulations (CFR). Police agencies and manufacturers of radar must have an FCC license to operate radar.

Code of Federal Regulations (CFR)

CFR 97.5: Station License Required

"The person having physical control of the apparatus (transmitter) must have written FCC authorization."

CFR 95.603: "Each transmitter must be type accepted by the FCC."

Federal Communication Commission (FCC)

FCC rule 2.803: "No person shall sell or lease, or offer for sale or lease, including advertising for sale, or distribute for the purpose of selling or offering for sale, any such radio frequency device unless such device shall have been type accepted (by the FCC)." (Note: Section 10.4, Certification, for more information.)

According to John Reed, FCC Senior Engineer, Technical Rules Branch "both active and passive radar jammers are illegal and punishable with fines and, in some cases, jail time. Manufacturers as well as jammer owners are culpable. You cannot interfere with radio signals." Referring to the Code of Federal Regulations (CFR 95:422a) he continued, "If the FCC finds they have willfully and repeatedly violated the Communications Act or FCC rules, you may have to pay as much as $10,000 for each violation up to a total of $75,000 and/or imprisoned for one year or both."

In the past, the FCC has issued cease-and-desist orders to manufacturers that produce active radar jamming devices. Some manufacturers have discontinued producing active radar jammers. Other manufacturers have simply changed the company name and changed the product name and continue to produce these illegal devices.

For a list of states and provinces of Canada that have passed laws against the possession and use of active radar and lidar jamming devices, refer to conclusions at the end of this chapter. Due to the lack of enforcement by the federal government and by most states, radar and lidar jamming devices are popular products with speed buffs.

ACTIVE LIDAR JAMMERS

Active lidar jammers produce a strong infrared light that is directed back at the laser to refract or diffuse the laser beam. These devices consist of dash mounted units, plus grill or license plate units.

LIDAR JAMMER LAWS

Currently, there are no U.S. federal laws prohibiting the use of laser jammers. Therefore it is imperative that states pass their own laws regarding the jamming of police radar and lidar. In 1998, Utah became the first state in the nation to pass a laser jamming law. This law reads as follows:

RADAR/LIDAR JAMMERS

41-6a-609, Utah Code
(Renumbered 2005 General Session)
Radar jamming devices and
jamming radar prohibited.
Defense -- Exemptions -- Penalties.

1. As used in this section, "radar jamming device" means any instrument or mechanism designed or intended to interfere with the radar or laser that is used by law enforcement personnel to measure the speed of a motor vehicle on a highway.

2.a. A person may not operate a motor vehicle on a highway with a radar jamming device in the motor vehicle.

2.b. A person may not knowingly use a radar jamming device to interfere with the radar signals or lasers used by law enforcement personnel to measure the speed of a motor vehicle on a highway.

3. It is an affirmative defense to a charge under Subsection (2)(a) that the radar jamming device was in an inoperative condition or could not be readily used at the time of the arrest or citation.

4. This section does not apply to law enforcement personnel acting in their official capacity.

5. A person who violates this section is guilty of a class C misdemeanor.

RADAR JAMMER TESTS

In 1996, Peterson Publications, Inc., an automotive, law enforcement and technical consumer products advisor from Denver, Colorado, tested radar and lidar jammers. Radar jammers were supplied by: Global Marketing Associates (Blackout), Fox Fuitronics (Fujitronics 400), Phantom Technology (Mirage 2001 and Phantom RCD), and Rocky Mountain Radar (Illusion, Phantom, Phazer, and Spirit). This test was conducted at the Colorado State Patrol's Emergency Vehicle Operation (EVO) Track in Golden, Colorado. The radar jammers were tested against three X-band radars, five K-band radars, and two Ka-band radars with the following results:

Only one of the radar jammers affected the radar in any manner. The Stealth/VRCD effectively defeated all analog radar transmitting on the X and K band. The Stealth/VRCD employs military electronic countermeasure technology which decodes police radar microwave and then generates a false return signal which is vacillated (frequency modulated - FM) from 10 m.p.h. to 550 m.p.h.. The analog radar circuitry will not accept such a wide and rapid fluctuation in frequency. The Doppler audio does produce a very loud static; however, the radar continues to seek a valid signal and the display window remains blank. This unit was so effective it even managed to make invisible a large tractor-trailer. The Stealth/VRCD was not effective against DSP circuitry or Ka band radar.

On January 6, 2005, Speed Measurement Laboratories, Inc. tested a Scorpion Ultimate Ka, a high power all bands remote active radar cloaking device and all band remote radar detector. This device was the first jammer to successfully jam Ka band radar. This device was 100% effective at distances to 1,500 feet. In 2007, the Scorpion sold for $1,500.

On July 9, 2007, the Federal Communications Commission (FCC) cited Scorpion Jammer Technology pursuant to Section 503(b)(5) of the Communications Act of 1934, as amended for "marketing unauthorized radio frequency devices in the United States." This action effectively shut down the manufacture of this product. Future violations are subject to a fine of $11,000 for each violation or each day of a continuing violation. However, there are still products that were sold previous to this action that are now distributed illegally.

LIDAR JAMMER TESTS

Lidar jamming tests conducted in 1996, by Peterson Publication, Inc. showed lidar jammers at that time were only 18 to 36 percent effective. Tests conducted in 1998, by Speed Measurement Laboratories, Inc. (SML) showed jamming devices had improved significantly. The Laser Echo was the first jammer to successfully jam all lidar at all ranges. By 2003, the Laser Blinder was also able to jam all lidars. Tests conducted in 2008, showed the Laser Interceptor DUAL ($625.00) also successfully jammed all police lidar.

RADAR/LIDAR JAMMERS

In 2010, the latest model of Laser Blinder M27 X-TREME ($474.95) comes with 2 transmitters (front only) and the Laser Blinder M47 X-TREME ($749.95) comes with 4 transmitters (front and rear). These devices include a Laser Warning System (LWS) that alerts the driver the Blinder is jamming police lidar. These units also automatically reduce the volume of the vehicle's stereo, for those violators that enjoy speeding with the music turned up. The Cheetah Blinder M27 X-TREME ($749.95) is designed for a motorcycle and is equipped with a wireless helmet alert.

Pictures of all these devices and information regarding detection of jammers are contained in **Understanding Police Traffic RADAR & LIDAR** (Instructor flash drive).

With the proliferation of radar and lidar jamming devices the motoring public continues to look for ways to circumvent traffic laws and police traffic radar and lidar. It is imperative that more states pass radar and lidar jamming laws.

CONCLUSIONS

1. Radar detectors are illegal in Virginia, Washington D.C., on U. S. military bases and federal installations, and in the following provinces of Canada: Labrador, Manitoba, New Brunswick, Newfoundland, Northwest Territories, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Yukon Territory.
2. Radar detectors are illegal in commercial trucks under Federal Motor Carriers Safety Regulations 392.71.
3. Jamming radio (radar) waves is illegal under the Federal Communication Act of 1934, plus the Code of Federal Regulations (CFR), which requires licensing of radio frequencies, and according to FCC rules.
4. Active radar jammers that produce a rapidly oscillating (FM) return frequency have successfully defeated all police radar.
5. In 2007, the FCC cited Scorpion Jammer Technology for violation of the Communications Act of 1934. This action effectively stopped the manufacture of this product.
6. Currently, there are no U.S. federal laws prohibiting the use of laser jammers. Therefore it is imperative that states pass their own laws regarding the jamming of police radar and lidar.
7. As of January 2021, twelve states (Alaska, California, Colorado, Nebraska, Illinois, Minnesota, Oklahoma, South Carolina, Tennessee, Texas, Utah and Virginia) and Washington D.C., have enacted laws banning the use of radar and lidar jamming devices. (Note: Alaska, Nebraska and Washington D.C. prohibits the jamming of radar only.) Radar and lidar jammers are also illegal in the following provinces of Canada: Labrador, Manitoba, New Brunswick, Newfoundland, Northwest Territories, Nova Scotia, Ontario, Prince Edward Island, Quebec, and Yukon Territory.
8. Currently, there are numerous products available to the motoring public that successfully defeat all police lidar, including the Lidatek LE-20 Laser Echo, Laser Blinder X-TREME M27, M47 and Cheetah, the Laser Interceptor Dual (Generation 8), TPX Motorcycle Laser Jammer from Adaptiv Technologies, and Escort SR4 & Qi45 Laser Shifters.
9. Until more states pass laws banning active radar and laser jammers and aggressively enforce the law, these products will continue to flourish.
10. Police officers working in states that do no have radar and lidar jamming laws should access:

    www.LawEnforcementServices.biz
    Click on:
    TRAINING
    Click on:
    Radar - Lidar Jammers.pdf

    Then forward this document to your state representative and state senator. Once lawmakers understand the problem and the need, they are often willing to back this much needed legislation.
11. Police officers working in states that have laws regulating radar and lidar jamming and have probable cause that the speed measuring device they are operating has been jammed, should use state laws, department policy, and rules of search and seizure to take appropriate enforcement action.

Source:
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