

Attachment



Federal Communications Commission
Enforcement Bureau
South Central Region
Tampa Office
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5 GHz INTERFERENCE TO PATRICK AIR FORCE BASE

The Tampa Field Office of the Federal Communications Commission (FCC) and the 45th Space Wing, Air Force Space Command, Range Operations Squadron, Frequency Control and Analysis have been investigating interference to military radar at Patrick Air Force Base and Cape Canaveral Air Force Station. The interference affects essential safety systems and must be eliminated.

This notice sets forth the steps that must be taken to prevent the interference from occurring and reminds all unlicensed operators that they must cease operations upon notification by an FCC agent that they are causing harmful interference.

We have found that the interference has generally been caused by Wireless Internet Service Providers operating in the 5725-5850 MHz band. This includes both devices installed outdoors, at high elevations, within line-of-sight of the radar installations, and indoor operated devices. Additionally, the cumulative effect of outdoor-mounted access points provided by cable television operators and other commercial entities are substantially increasing the noise floor which results in harmful interference.

In order to mitigate interference to military radars, operators and installers of all 5 GHz systems are strongly advised to avoid transmitting any emissions within the following range of frequencies in Brevard County, Florida¹:

5640 to 5800 MHz (Wi-Fi Channels 128 to 161)

It is imperative to note that non-licensed systems may not cause harmful interference and must cease operating immediately upon notification by the FCC, even if the systems are not operating on the above range of frequencies.² Failure to do so will result in strong enforcement action, which may include monetary penalties and confiscation of equipment.

¹ Outdoor systems with antennas mounted less than 60 ft. above ground should avoid these channels within 35 km (22 miles) of Cape Canaveral and Patrick Air Force Base. For heights between 60 ft. and 100 ft. above ground, increase the distance to 40 km (25 miles). For heights greater than 100 ft. above ground, the approximate line-of-sight distance is the square root of the height in feet multiplied by 1.4. An additional 10 miles must be added to account for the radar line-of-sight. For example, 150 ft. above ground would yield 12.2 (square root of 150) times 1.4 which is 17, plus 10 for a total distance of 27 miles.

² Section 15.5 of the Commission's rules (Rules) states that operation of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused and that interference must be accepted, and the operator of a radio frequency device shall be required to cease operating the device upon notification by a Commission representative that the device is causing harmful interference. Operation shall not resume until the condition causing the harmful interference has been corrected. 47 C.F.R. § 15.5.

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We remind the operators and professional installers of 5-GHz devices that it is the responsibility of both the operators and the installers to ensure that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations in the 5150 to 5250 MHz and 5725 to 5850 MHz bands.³ In addition, all systems must be made available for inspection by the FCC upon request.⁴

Contact the Tampa Office with any questions at (813) 348-1741.

³ Section 15.407(a)(1)(iii) of the Rules specifies the general technical requirements for fixed point to point systems utilizing high gain antenna systems. 47 C.F.R. § 15.407(a)(1)(iii).

⁴ Section 15.29(a) of the Rules states that any radio frequency equipment or device, together with any certificate, notice of registration, or any technical data required to be kept on file by the operator, supplier, or party responsible for the equipment or device's compliance must be made available for inspection by a Commission representative upon reasonable request. 47 C.F.R. § 15.29(a).