

5G Interference with Commercial Aircraft Operations

In late 2021, as wireless companies planned to roll out the latest technology for cellular networks, it became apparent that there was a slight frequency overlap between these 5G systems and the radio altimeters on some commercial aircraft, causing interference and performance issues.

A TEMPORARY FIX: The 5G rollout was delayed around certain airports, and Notices to Air Mission (NOTAMs) were published to certain aircraft and airports that had the potential of 5G signals impacting their operations. Alternate Methods of Compliance (AMOC) were developed for several models of aircraft to be able to continue to operate safely within those terminal areas.

WORKING TOWARD A LONGER-TERM SOLUTION: Key stakeholders in the aviation and wireless industries have identified a series of steps that will continue to protect commercial air travel from disruption by 5G interference while also enabling Verizon and AT&T to enhance service around certain airports.

Airlines and other operators of aircraft equipped with the affected radio altimeters must install filters or other enhancements as soon as possible. Filters and replacement units for the mainline commercial fleet were available on a schedule that permitted the work to be largely completed by July 2023. After that time, the wireless companies expect to operate their networks in urban areas with minimal restrictions.

Altimeter manufacturers have worked at an unprecedented pace with Embraer, Boeing, Airbus, and Mitsubishi Heavy Industries to develop filters and installation kits for these aircraft. In most cases, the kits can be installed in a few hours.

Throughout this process, the FAA has been working with both industries to track the pace of the radio altimeter retrofits. They will continue to work with the wireless companies to relax mitigations around key airports in carefully considered phases. The FAA also will continue to engage with the FCC and the National Telecommunications and Information Administration on associated issues.

The **FAA Reauthorization Act of 2024** (HR 3935) was signed into law on May 16, 2024. Sections 318, 1018, and 1026 all work toward solving future electromagnetic spectrum interference by:

- 1) Directing the Department of Transportation Inspector General to audit of the FAA's internal processes and procedures to communicate the position of civil aviation operators and the safety of the national airspace system to the National Telecommunications and Information Administration regarding proposed spectrum reallocations or auction decisions.
- 2) Directing the FAA Administrator, in coordination with the aviation and commercial wireless industries, the National Telecommunications and Information Administration, the Federal Communications Commission, and other relevant government stakeholders, to carry out an accelerated research and development program to inform the development and testing of the standards and technology necessary to ensure appropriate FAA certification actions and industry production that meets the installation requirements for next generation radio altimeters across all necessary aircraft by January 1, 2028.
- 3) And directing the FAA Administrator, in consultation with the National Telecommunications and Information Administration and the Federal Communications Commission, to conduct research, engineering, and development related to the effective and efficient use and management of radio frequency spectrum in the civil aviation domain, including for aircraft, unmanned aircraft systems, and advanced air mobility.

We look forward to seeing the results of the lines of effort directed by this law and their positive impact on aviation safety.

For questions or additional information please email GAC-Chairman@alliedpilots.org