

IFALPA Conference Statement on GNSS Radio Frequency Interference and Signal Manipulation

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The 2026 Conference of the International Federation of Air Line Pilots' Associations (IFALPA), convened in Istanbul, expresses its concern regarding the continued escalation of Global Navigation Satellite System (GNSS) Radio Frequency Interference (RFI), including intentional jamming and spoofing, affecting civil aviation operations worldwide.

GNSS interference events are increasing in frequency, geographic spread, and operational impact. These events degrade or manipulate satellite-based Position, Navigation, and Timing (PNT) data that underpin modern Communication, Navigation, and Surveillance (CNS) systems, leading to operational disruptions such as unplanned diversions, reduced separation, and even temporary airspace closures. The integrity of modern Communication, Navigation, and Surveillance (CNS) systems is thus directly compromised. Interference can occur without notice and may persist beyond the immediate area of origin, affecting aircraft, air traffic management systems, and infrastructure well outside conflict zones.

GNSS is no longer solely a navigation aid. It has become a deeply embedded reference source within modern aircraft systems. Navigation computation, surveillance transmissions, terrain awareness systems, flight management logic, timing synchronization, and communication functions increasingly depend directly or indirectly on GNSS-derived data. Interference and signal manipulation may therefore result in degraded navigation capability, false or misleading system outputs, loss of surveillance functionality, and the erosion of critical safety layers.

Of particular concern are emerging, poorly understood and insufficiently documented cascading effects, where corrupted GNSS inputs propagate through interconnected aircraft systems in ways that may not be fully transparent to flight crews. These unknown and systemic interactions introduce additional operational uncertainty and increase flight crew workload at critical phases of flight. Hidden vulnerabilities risk system failures, especially during critical phases of flight, and underscore the urgent need for greater transparency in aircraft system architecture.

The Federation emphasizes that GNSS RFI is not merely a navigation accuracy issue; it is a systemic resilience challenge affecting the integrity of global navigation.

The IFALPA Conference reaffirms that the safety of commercial air transport depends on robust, redundant, and transparent system architecture. Operational efficiency and airspace capacity must not rely on a single vulnerable source of positioning or timing data. The continued

degradation of GNSS reliability threatens Performance-Based Navigation (PBN), surveillance capabilities, and the safe conduct of instrument procedures, particularly in high-density airspace.

The Federation further stresses the importance of retaining conventional ground-based navigation aids, such as VOR, DME, and ILS, to the maximum extent practicable until robust and proven alternative resilience measures are globally implemented.

The IFALPA Conference, therefore, calls upon:

States to establish and enforce the necessary legal and regulatory frameworks to prevent, detect, and act upon harmful GNSS interference, including the control of illegal jamming and spoofing devices;

ICAO to continue strengthening global coordination, monitoring, and reporting mechanisms, and to accelerate work on CNS resilience and contingency planning;

Air Navigation Service Providers (ANSPs) to maintain independent navigation, surveillance, and communication networks capable of supporting safe recovery from GNSS interference events;

Aircraft manufacturers and system designers to improve the transparency of GNSS dependencies within aircraft architecture, enhance interference detection and mitigation capabilities, and prioritize resilient system design;

Operators to ensure comprehensive risk assessments, training, and clear procedures addressing GNSS corruption scenarios, and effective reporting mechanisms.

Addressing GNSS interference requires coordinated global action across civil aviation, military stakeholders, spectrum regulators, and industry partners. There is no immediate universal solution. However, a delay in implementing resilience measures will further erode safety margins and increase systemic risk.

The IFALPA Conference stands committed to continued engagement with ICAO, States, industry partners, and international organizations to safeguard the integrity of satellite-based CNS services.

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Note to Editors: The International Federation of Air Line Pilots' Associations represents 145,000+ pilots in more than 75 countries. The mission of IFALPA is to promote the highest level of aviation safety worldwide and to be the global advocate of the piloting profession, providing representation, services, and support to both our members and the aviation industry. www.ifalpa.org

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