Republic of the Philippines
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES

MEMORANDUM CIRCULAR NO. 012-2024

TO : **ALL ATS PERSONNEL AND PILOTS CONCERNED**

SUBJECT : **MANDATORY REPORTING OF GNSS RADIO FREQUENCY INTERFERENCES (RFIS) FOR INTERNATIONAL FLIGHTS**

DATE : **24 JUNE 2024**

The Civil Aviation Authority of the Philippines (CAAP) recognizes the critical role of the Global Navigation Satellite System (GNSS) in ensuring safe and efficient air navigation, particularly PBN flights. However, recent data from the International Air Transport Association (IATA) Flight Data Exchange (FDX) indicate elevated levels of long-duration and deliberate military jamming and spoofing. These activities have threatened the integrity of Positioning, Navigation, and Timing (PNT) services across several regions, including the Asia-Pacific.

To address GNSS Radio Frequency Interference (RFI) events, all air operators and Air Traffic Service (ATS) personnel are directed to report GNSS RFI events with potential cross-border impact, regardless of flight type, and GNSS RFI events encountered within the Manila FIR that significantly impact flight operations. Reports should be submitted to the Office of the Director General for Operations (ddgo@caap.gov.ph) within three (3) days from the occurrence using the prescribed ICAO GNSS Interference reporting form[1].

For strict implementation

CAPTAIN MANUEL ANTONIO L. TAMAYO
Director General

[1] see attached prescribed GNSS RFI Reporting Forms

GNSS RFI REPORTING FORM FOR USE BY ATS PERSONNEL (1/2)				
Originator of report				
Organization				
Department				
Street address				
Zip code/city				
Name/surname				
Phone number				
E-Mail				
Date and time of report				
Description of interference				
Source of initial interference report	[ ] Pilot [ ] Engineer/technician [ ] Other			
Observability of the interference	Interference was noticeable: [ ] only on board the aircraft (flying, not on the ground) [ ] only on the ground (aircraft parked/taxiing) or by means of ground detection systems available [ ] both			
Number of received reports				
Coordinates of the area of occurrence/time (UTC)	UTC: ___ Lat: ___ Long: ___ FL/Altitude: ___			
Problem duration:	Days, hours, minutes, seconds _____ [ ] continuous [ ] intermittent			
Affected GNSS element	[ ] GPS [ ] GLONASS [ ] GALILEO [ ] BDS [ ] Other constellation [ ] EGNOS [ ] WAAS [ ] BDSBAS [ ] Other SBAS [ ] GBAS (VHF data-link for GBAS)			
Affected constellation frequency	[ ] L1 [ ] L2 [ ] L5 [ ] All	[ ] L1 [ ] L2 [ ] L3 [ ] All	[ ] E1 [ ] E5a [ ] E5b [ ] E6 [ ] All	[ ] B1 [ ] B2 [ ] B3 [ ] All
Used GNSS contingency procedure	[ ] Radar vectoring [ ] Switch to procedures based on conventional navaids (e.g. DME/DME or VOR/DME-based PBN, DME and VOR-based conventional, ILS) [ ] Diversion to another airport [ ] Missed approach [ ] Use of alternate means for communication (e.g. VHF) [ ] Other: ___			

GNSS RFI REPORTING FORM FOR USE BY ATS PERSONNEL (2/2)	
In case of report by pilot	
Airline name	
Aircraft type and registration	
Flight number	
Airway/route flown	
Reported on-board failure	[ ] Total loss of navigation capabilities [ ] Need to change the navigation procedure [ ] Inability to fly RNP and request for radar vectoring [ ] Inability to fly a GNSS-based approach (GLS, SLS) [ ] GNSS fault (1 or 2) [ ] TAWS/EGPWS warnings or loss of terrain and surface functionalities [ ] Loss of ADS-B [ ] Wind and ground speed wrong presentations [ ] Aircraft clock anomaly [ ] Loss of situational awareness (SVS, Cockpit Display of Traffic Information) [ ] Loss of communication functions (CPDLC, ACARS) [ ] AHRS failure [ ] Map shift [ ] Other: ___
Information on presumed source of interference	
Presumed location of interference source	Lat: ___ Long: ___ or Nearest city or landmark:
Interfering frequency (if known)	
Signal strength and reference bandwidth (if known)	
Further descriptions of the interference case	[ ] Spectrum plot [ ] Map [ ] Other material:

GNSS RFI REPORTING FORM FOR USE BY PILOTS (1/2)	
Originator of report	
Organization	
Department	
Street address	
Zip code/city	
Name/surname	
Phone number	
E-Mail	
Date and time of report	
Description of interference	
Reported failure and operational impact	[ ] Total loss of navigation capabilities [ ] Need to change the navigation procedure [ ] Inability to fly RNP and request for radar vectoring [ ] Inability to fly a GNSS-based approach (GLS, SLS) [ ] GNSS fault (1 or 2) [ ] TAWS/EGPWS warnings or loss of terrain and surface functionalities [ ] Loss of ADS-B [ ] Wind and ground speed wrong presentations [ ] Aircraft clock anomaly [ ] Loss of situational awareness (SVS, Cockpit Display of Traffic Information) [ ] Loss of communication functions (CPDLC, ACARS) [ ] AHRS failure [ ] Map shift [ ] Other: ___
Used GNSS contingency procedure	[ ] Request for radar vectoring [ ] Switch to another mean of navigation (e.g. DME/DME, VOR/DME, ILS) [ ] Diversion to another airport [ ] Missed approach [ ] Use of alternate means for communication (e.g. VHF) [ ] Other: ___
Affected GNSS element	[ ] GPS [ ] GLONASS [ ] GALILEO [ ] BDS [ ] other constellation [ ] EGNOS [ ] WAAS [ ] BDSBAS [ ] other SBAS [ ] GBAS (VHF data-link for GBAS)

Affected constellation frequency	[ ] L1 [ ] L2 [ ] L5 [ ] All	[ ] L1 [ ] L2 [ ] L3 [ ] All	[ ] E1 [ ] E5a [ ] E5b [ ] E6 [ ] All	[ ] B1 [ ] B2 [ ] B3 [ ] All

GNSS RFI REPORTING FORM FOR USE BY PILOTS (2/2)	
Aircraft type and registration	
Flight number	
Airway/route flown (airport RWY/gateway/parking gate in case of on ground detection)	
Coordinates of the area of occurrence/time (UTC)	UTC: ___ Lat: ___ Long: ___ FL/Altitude: ___
Problem duration	Days, hours, minutes, seconds _____ [ ] continuous [ ] intermittent