Worldwide GPS Dual Failure mystery solved

OPSGROUP Team
28 May, 2025

The mystery of the dual GPS failures around the world has been solved.

Last week, a slew of Dual/Complete GPS Failures began to be reported by airlines and AOs around the world. A peak of failure reports were received around May 21. Typically, the fault was first annunciated as an “ADS-B RPTG” Fault, followed by GPS 1/2 failure. Aircraft affected were mostly B737 and A320 series, though some widebodies also caught the lurgy.

Initially, no clear cause could be established. There were theories about new spoofing and jamming areas, solar flares, sunspots, and troubling new hacker activity. But none of those lined up with the symptoms.

However, over the weekend, the culprit was traced to a single faulty satellite, GPS PRN 37. Data from the broadcast of this satellite led to the on-board failures that we saw.

Thanks to all OPSGROUP members that assisted with the “ALL CALL” that went out on Friday, there was a great response and we were able to collect a great deal of information. An Ops Alert was issued to members on Sunday, which reads:

ZZZZ/Worldwide - Hazard The mystery of worldwide dual GPS failures appears to have been solved. Over the weekend Boeing, Honeywell, and Collins collaborated to investigate the cause, and the outcome is that the faults were traced to one GPS satellite (PRN 37). A change in the data format being broadcast from it apparently led to the receiver failures. These were limited to Honeywell MMR's, predominantely on B737 and A320 series aircraft. This change has been corrected, and no further issues are expected. There was no connection to an increase in solar activity, or jamming/spoofing. The three OEM's involved consider the case closed. Thank you to all members who responded with reports and information.

A **special briefing** is in your member Dashboard, which includes crew reports of the issue.

NANU NANU

There was a warning (published as a NANU message) to GPS users published earlier in the year, that warned of unhealthy navigation messages being broadcast on GPS satellites 35, 36 and 37 throughout 2025. Let’s hope that any rogue signals from PRN 35 or 36 don’t have the same effect down the track.

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NOTICE ADVISORY TO NAVSTAR USERS (NANU) 2025017 NANU TYPE: GENERAL
*** GENERAL MESSAGE TO ALL GPS USERS ***
Testing will be occurring through CY 2025 using PRNs 35, 36, 37
on residual SVs broadcasting UNHEALTHY navigation messages.
*** GENERAL MESSAGE TO ALL GPS USERS ***

POC: CIVILIAN - NAVCEN AT 703-313-5900, HTTPS://WWW.NAVCEN.USCG.GOV
MILITARY - GPS WARFIGHTER COLLABORATION CELL at
HTTPS://GWCC-WS.CCE.AF.MIL/GPSOC, DSN 560-2541, COMM 719-567-2541,
gpsoperationscenter@us.af.mil, HTTPS://GWCC-WS.CCE.AF.MIL
MILITARY ALTERNATE - JOINT SPACE OPERATIONS CENTER, DSN 276-3526.
COMM 805-606-3526. JSPOCCOMBATOPS@US.AF.MIL
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