

Safety Information Bulletin

ATM/ANS – Operations

SIB No.: 2025-08

Issued: 20 October 2025

Subject: Failure of the Digital Radio and Audio Integrated Management

System on the Airbus A320 NEO and A330 Family Aeroplanes

Ref. Publications:

- Commission Regulation (EU) No <u>2017/373</u> of 1 March 2017
- Regulation (EU) No <u>376/2014</u> of the European Parliament and of the Council of 3 April 2014
- Commission Regulation (EU) No <u>965/2012</u> of 5 October 2012
- Commission Implementing Regulation (EU) No <u>923/2012</u> of 26 September 2012
- Bureau d'enquêtes et d'analyses pour la sécurité de l'aviation civile (BEA) <u>Interim Report on Three Incidents</u> (BEA2024-0404, BEA2025-0020 and BEA2025-0179) dated 27 July 2025
- EASA Airworthiness Directive (AD) <u>2025-0118R1</u> dated 15 July 2025
- EASA Airworthiness Directive (AD) 2025-0043R1 dated 31 July 2025

Applicability:

National Competent Authorities (NCAs), Air Navigation Service Providers (ANSP), Airbus A320 NEO and A330 aeroplane operators.

Description:

Recent serious incidents (BEA file numbers BEA2024-0404, BEA2025-0020 and BEA2025-0179) and other similar incidents identified during retrospective safety investigations, related to partial or total loss of radio communication and intermittent or total unavailability of the transponder and/or Airborne Collision Avoidance System (ACAS), have been analysed.

These incidents have been attributed to a failure of the Digital Radio and Audio Integrated Management System (DRAIMS) on the Airbus A320 NEO and A330 family aeroplanes. During these events, the crew was aware of what was happening but was partially or totally unable to communicate it. Air Traffic Control (ATC), receiving none or only partial information, was unable to implement clear and unambiguous actions to maintain safety.

The abovementioned retrospective analysis of occurrences is not exhaustive, and therefore it is likely that the number of similar occurrences is higher.

The DRAIMS is part of the communication system of the Airbus A320 NEO and A330 family aeroplanes. It contributes to the communication (VHF/HF radios, SATCOM, cabin intercom), aural alerts (Flight Warning System [FWS], Terrain Awareness and Warning System [TAWS]), surveillance (transponders, ACAS) and radionavigation (Multi-Mode Receiver [MMR], Distance Measuring Equipment [DME], VHF Omnidirectional radio Range [VOR], Automatic Direction Finding [ADF]) functions. For the navigation functions, the DRAIMS acts as a back-up to the Flight Management System.

For certain failures of components within the DRAIMS, it is possible that certain or all the following functions might fail – control of communication means (radio, SATCOM, Controller Pilot Data Link Communications [CPDLC]), aural alerts, control of the transponder and the ACAS, back-up control of the radionavigation means.

Given the number of systems and functions which might be affected by a DRAIMS failure, it is not possible to accurately predict the operational consequences of such a failure. A modification of on-board software to prevent the specific failures from having consequences on the DRAIMS and its peripheral systems has been developed.

Pending implementation of that modification, Airbus has developed two temporary procedures, one for the A320 NEO, and one for the A330 family aeroplanes. These enable flight crews to carry out actions to recover the transponder's capability to transmit and to recover some other lost functionalities. These procedures are each subject of a temporary amendment to the Aeroplane Flight Manual (AFM), made mandatory by EASA AD 2025-0118R1 and EASA AD 2025-0043R1.

Further notable potential safety issues related to a DRAIMS failure:

- A failure of the DRAIMS affecting transponders cannot be handled in the same way as a conventional transponder failure. Notably, switching to the second system may not be possible and does not address the underlying failure.
- In the event of a DRAIMS failure, some dependent on-board systems availability may vary over time, with certain functions being lost or regained in a random manner. Before leaving a published flightpath or cleared ATC route, the possibility of a deterioration leading to a total loss of radiocommunications and radar contact must be considered.
- Depending on the type of airspace, and available surveillance equipment, the loss of the transponder may lead to loss of the radar contact, Automatic Dependent Surveillance -Broadcast (ADS-B) data and, therefore, the ATC safety nets. It also generally results in ACAS not functioning.
- In the event of a total transponder failure, also the data presented by open-source flight tracking sites, would not correspond to the actual position of the aeroplane. Only Air Traffic Service (ATS) units using primary radar information as part of their detection system (e.g. military units) may be able to provide an indication of the position and an approximative estimation of the altitude based on primary radar surveillance.
- Two of the three incidents subject of the BEA Interim Report also demonstrated the need for an ATC unit to transmit on the 121.500 MHz aeronautical emergency frequency, as this might be the last selected by the flight crew prior to the failure. This frequency, therefore, may sometimes be the only one that can be used to establish radio contact with the crew.
- On the flight deck side, these three incidents highlight the importance of monitoring the 121.500 MHz aeronautical emergency frequency, as the failure of the DRAIMS can make it impossible to change radio frequencies.



This SIB is published to raise awareness of Air Navigation Service Providers, Air Traffic Control Officers (ATCO), and flight crew during the transition period, until all aircraft have been modified as required by EASA AD 2025-0118R1 (EASA AD 2025-0043R1 does not contain modification requirements yet but they are expected).

The unsafe condition described in this SIB is not considered to be an unsafe condition that would warrant Safety Directive (SD) action under Commission Regulation (EU) <u>965/2012</u>, Annex II, ARO.GEN.135(c), or under Commission Regulation (EU) <u>2017/373</u>, ATM/ANS.AR.A.025.

Recommendations:

Until the updated software has been installed in all affected aeroplanes, the following practices are recommended:

ANSPs should:

- Evaluate local procedures and equipment to ensure their appropriateness considering the referenced possible degradations associated with a DRAIMS failure.
- Ensure that coordination procedures exist with local ATS units, including military ATS units, to provide in-flight assistance for aircraft in difficulty.
- Review procedures and training for ATCOs in abnormal and emergency situations.
- Review contingency plans to ensure they are robust enough to address the potential failures highlighted in this SIB.
- Review emergency response plans to ensure they are adequate to address a single event which
 may include loss of communications combined with loss of radar contact and a reduction in the
 availability of safety nets.
- Promote awareness among ATCOs and other operational staff on the potential for phased and incremental failures associated with a DRAIMS failure, including the requirements relating to providing a listening watch on 121.500 MHz frequency.
- Review their ability to easily provide primary radar information to ATCOs, when available, to enable radar identification of an aircraft with a transponder failure.
- Ensure instances of DRAIMS failures are reported in accordance with the provisions established in Regulation (EU) 376/2014.

Aircraft Operators of affected A320 NEO and A330 family aeroplanes should:

- Reinforce the importance of maintaining a listening watch on 121.500 MHz frequency given the
 potential degradation in usable frequencies for the flight crew.
- Inform flight crews about the safety issues described in this SIB, especially in the context of the impact of DRAIMS failures on the operation of ATS units and associated increased workloads.
- Ensure instances of DRAIMS failures are reported in accordance with the provisions established in Regulation (EU) 376/2014.



NCAs should:

• Take the above recommendations into account in the context of their safety oversight activities.

Contact(s):

For further information contact the EASA Safety Information Section, Certification Directorate, e-mail: ADs@easa.europa.eu.