
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/RAD/87 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Radio Communication and Navigation Equipment

**AD/RAD/87
Amdt 1**

Thales VHF Data Radios

5/2009

Applicability: Thales Communications France VHF data radios, with the following part numbers (P/N) and serial number (S/N) range:

P/N	All S/N up to but not including S/N
EVR716-01-0100A	2546
EVR716-01-0200A	2546
EVR716-11-0300A	2594
EVR716-11-0350A	2932
EVR750-03-0100A	2546

Note 1: These radios are known to be installed on, but not limited to, the following aircraft:

Airbus A318, A319, A320, A321, A330, A340 (all series)

Boeing 717, 727, 737, 747, 757, 767, 777 (all series)

Bombardier (de Havilland) DHC-8-400 series

Requirement: If not previously accomplished, modify the VHF data radios by incorporating the following Thales Communications Service Bulletins or later revisions approved by the European Aviation Safety Agency (EASA):

Data Radio P/N	Service Bulletin
EVR716-11-0300A and EVR716-11-0350A	EVR716-23-015
EVR716-01-0200A	EVR716-23-012 Initial Issue or EVR716-23-012 Rev 01
EVR716-01-0100A and EVR750-03-0100A	EVR7-23-05 Initial Issue or EVR7-23-05 Rev 01

Note 2: EASA AD 2006-0334R1 refers.

Radio Communication and Navigation Equipment

AD/RAD/87 Amdt 1 (continued)

Compliance: No later than 42 months after 15 February 2007, the effective date of the original issue of this Directive.

This Amendment becomes effective on 7 May 2009.

Background: During the past few years, a phenomenon known as 'PLOC' (Prolonged Loss of Communications) has emerged. Over one thousand reports of this type of problem have been received from operators of various types of aircraft with different manufacturer's equipment. It is suspected that the actual number of occurrences is higher, but due to some 'PLOC' occurrences having a short time interval they were either not noticed by the crew or not reported. Various studies were performed by Eurocontrol, CAA(UK) and operators to determine if there was a common reason for the occurrences. The results were not totally conclusive because other technical reasons, within the reported occurrences, may have caused the crew to experience a loss of communication. One type of 'PLOC' occurrence can be caused by equipment not receiving radio communication from an Air Traffic Controller or another aircraft. Typically, this type of failure is temporary and can be corrected by the crew of the aircraft transmitting a radio message. Following this transmission, the equipment correctly receives all incoming radio signals. This type of failure is referred to a 'sleeping receiver' problem.

This type of problem causes workload issues for the Air Traffic Controller and can result in a reduction in safety levels. It is important, therefore, to do all that is possible to reduce or eliminate this type of occurrence.

Thales, during exhaustive testing, managed to re-create the problem of the 'sleeping receiver' once. Further testing failed to induce the failure and the actual cause of the problem still remains unknown.

Thales, however, instigated a design change to eliminate the possibility of this type of occurrence by checking every 20ms, when not transmitting, that the "sleeping receiver" conditions are not fulfilled and by forcing it into receive mode if it is not the case. The modified Thales VHF data radio is now installed on some aircraft. Since installing the modified radio, no reports of any 'PLOC' occurrences attributable to a 'sleeping receiver' have been received.

For this reason, it is considered that the modification as per the Thales Service Bulletins should be mandatory for all aircraft with these models of radio installed.

This Amendment corrects some minor omissions from the original issue of the Directive and extends compliance by 12 months.

Radio Communication and Navigation Equipment

AD/RAD/87 Amdt 1 (continued)

The original issue of this Directive became effective on 15 February 2007.

A handwritten signature in black ink, appearing to read 'James Coyne', with a stylized flourish at the end.

James Coyne
Delegate of the Civil Aviation Safety Authority

26 March 2009