
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/85 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/85 Amdt 1	Sandel ST3400 Terrain Awareness Warning System/Radio Magnetic Indicator	8/2008
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Applicability: Sandel Avionics Incorporated (Sandel) Model ST3400 terrain awareness warning system/radio magnetic indicator (TAWS/RMI) units approved under United States Federal Aviation Administration (FAA) Technical Standard Order(s) (TSO) C113, C151a or C151b, as identified in Sandel ST3400 Service Bulletin SB3400-01, Revision B, dated 15 September 2004.

Note 1: ST3400 TAWS/RMI units are known to be as installed on, but not limited, to the aeroplane models listed below.

<i>Manufacturer</i>	<i>Aeroplane Model</i>
Airbus	A300
Avions Marcel Dassault - Breguet	Falcon 10
Aviation (AMD/BA)	
Boeing	727, 737, 747
Bombardier (Learjet)	24, 35, 36, 55
British Aerospace (Operations)	Jetstream 3101
Limited	
Cessna	208, 208B, 421C; 501, 525, 550, 560, 650, S550
Embraer	EMB-120
Dassault-Aviation	Mystere Falcon 50 and 200
Gulfstream	G-I, G-1159A (G-III)
Israel Aircraft Industries (IAI)	1124, 1125 Westwind Astra
M7 Aerospace (Fairchild)	SA-226, SA-227
McDonnell Douglas	DC-10
Piper	PA-31T2
Raytheon	58, 1900D, 400, A36, BAe 125 Series 800A, HS 125 Series 600A/700A, Hawker 800-XP, 200, 300, 350, A200, B100, B200, B300, C90, C90A, C90B, E90, F90, MU-300-10
Saberliner	60 (NA-265-60)
Twin Commander	500-A, 695A
Viking Air Ltd (de Havilland)	DHC-6

Radio Communication and Navigation Equipment

AD/RAD/85 Amdt 1 (continued)

- Requirement:
1. If not previously accomplished in accordance with the original issue of this Directive, install a placard on the TAWS/RMI which states "**NOT FOR PRIMARY VOR NAVIGATION**" in accordance with Sandel ST3400 SB3400-01, Revision B.
 2. If not previously accomplished in accordance with the original issue of this Directive, revise the Limitations section of the applicable Aircraft Flight Manual (AFM) to include the statement "Use of ST3400 TAWS/RMI for primary VOR navigation is prohibited unless the indicator has 3.07 or A3.06 software or later."

This may be accomplished by inserting a copy of this Directive into the AFM.

3. If not previously accomplished in accordance with the original issue of this Directive, field-load the TAWS/RMI with updated software having revision 3.07 (for units having serial numbers (S/N) under 2000) or revision A3.06 (for units having S/Ns 2000 and subsequent) in accordance with Sandel ST3400 Service Bulletin SB3400-01, Revision B.

Revisions of software later than revision 3.07 or A3.06, as applicable, are considered acceptable for compliance with this Requirement.

The placard and AFM limitations revision installed as required by Requirements 1 and 2 of this Directive may be removed after the software upgrade has been accomplished.

4. ST3400 TAWS/RMI units, unless it has been modified in accordance with Sandel ST3400 Service Bulletin SB3400-01, Revision B, may not be installed on any aeroplane either as an initial installation or a replacement spare.

Later revisions of the above SB, approved by the FAA as an Alternate Method of Compliance (AMOC) to FAA AD 2006-16-18, are considered acceptable for compliance with the equivalent Requirements of this Directive.

Note 2: FAA AD 2006-16-18 R1 Amdt 39-15557 refers.

Compliance: For Requirements 1 and 2 - Within 14 days after the effective date of this Amendment.

For Requirement 3 - Within 90 days after the effective date of this Amendment.

For Requirement 4 - Remains unchanged as 'As of 25 December 2006 (the effective date of the original issue of this Directive)'.

This Amendment becomes effective on 31 July 2008.

Radio Communication and Navigation Equipment

AD/RAD/85 Amdt 1 (continued)

Background: The United States Federal Aviation Administration (FAA) has received a report that an in-flight bearing error occurred in a Model ST3400 TAWS/RMI unit configured to receive bearing information from a very high frequency omnidirectional range (VOR) receiver interface via a composite video signal. Investigation determined that the error was due to a combination of input signal fault and software error.

The original issue of this Directive was issued to prevent a bearing error, which could lead to an aeroplane departing from its scheduled flight path, which could in turn result in a reduction in separation from, and a possible collision with, other aircraft or terrain.

This Amendment continues the requirements of the original issue of this Directive but allows later revisions of software to be installed.

The original issue of this Directive became effective on 25 September 2006.



James Coyne
Delegate of the Civil Aviation Safety Authority

20 June 2008