

# Advisory Wire

REFERENCE NO: AW300-23-0312, Rev.01

EFFECTIVITY:

Challenger 300  
Challenger 350  
Challenger 3500

ATA: 23-51

**SUBJECT: Use of Commercially Available Aviation Headsets**

## 1. REFERENCES:

- 1.1. Flight Crew Operating Manual – Volume 2 (FCOM 2), Section 06-01, Audio Integrating [Bombardier Smartpubs](#) under SmartPubs > Technical Publications > Challenger 300 /Challenger 350 Flight > Flight Crew Operating Manual Volume 2
- 1.2. FAA Special Airworthiness Information Bulletin [\(SAIB\) CE-16-08](#), Noise Cancelling Headsets
- 1.3. FAA Information For Operators [InFO 07001](#), Noise Attenuation Properties of Noise-Canceling Headsets

## 2. INTRODUCTION:

This Advisory Wire (AW) provides guidance to operators using commercially available aviation headsets. In addition, it also references the FAA Special Airworthiness Information Bulletin (SAIB, Ref. 1.2) and the Information For Operators (InFO, Ref. 1.3) on usage of noise cancelling headsets.

Revision 01 of this AW is to revise the aircraft effectivity and as a reminder to the flight crew on the communication headsets.

## 3. DESCRIPTION:

Bombardier is aware that operators are using many different types of commercially available aviation headsets other than the Telex Airman 750 delivered with the green aircraft. Many of these commercially available headsets incorporate features such as noise cancelling technology and independent audio volume control.

The headsets plugged in the pilot and copilot headset control panels and the third crew control panel, are directly wired to the audio control panels (ACP) ACP No.1, ACP No.2 and optional ACP No.3 respectively.

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## 3.1. Headsets incorporating independent audio volume control:

The ACP operates in two modes, Normal mode and Emergency mode:

- In normal mode, the audio volume level output from the headset can be adjusted with the audio control panel headphone volume control (HEADPHONE or HDPH) and the headset volume control, if the headset is equipped with independent volume control
- In emergency mode, the output audio volume level is fixed at a pre-determined level and cannot be modified. Headset volume control (if equipped) remains functional

**NOTE:** It is possible that headset volume control may be set to such a low setting such that output audio previously audible in normal mode, is no longer audible in emergency mode.

Refer to FCOM 2 (Ref. 1.1) for a detailed description of the audio integrating system.

## 3.2. Noise Cancelling Headsets:

FAA released SAIB (Ref. 1.2) on the usage of headsets with active noise-cancelling capabilities that are used to reduce unwanted ambient noise and to facilitate clearer communication. This feature effectively cancels a significant amount of the low-frequency noise, but the specific frequencies may vary by make and model, thus making it difficult to assess any effects the headsets may have on discerning environmental sounds.

The concern is that, when wearing these headsets, the crew may be unaware of environmental sounds such as abnormal mechanical noises or abnormal engine sounds and audible warning annunciations in the cockpit that do not come through the intercom system.

The SAIB re-enforce a previously released FAA InFO 07001 (Ref. 1.3) on the same subject and associated recommended action.

Bombardier does not condemn the use of different headsets, however, cannot guarantee proper functionality and high-fidelity performance of the aircraft communication system. Only the Telex Airman 750 delivered with the green aircraft was fully tested by Bombardier.

Therefore, Bombardier supports FAA position, that it is the operators' responsibility to evaluate different headset equipment for proper operation, especially noise canceling type, should be subject to the action 4.2 below.

As a minimum requirement, the headsets should meet the applicable Technical Standards Order (TSO) for approval specified in TSO C-57a for headsets and speakers, and TSO-C58a for microphones.

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#### 4. ACTION:

Operator should be familiar with references 1.1 to 1.3 and more specifically:

##### 4.1. Headsets incorporating independent audio volume control:

- Operators should be aware of the headsets and the audio control panel operational modes and ensure audio volume is adjusted to the appropriate level. When operating in ACP emergency mode, headsets with independent volume control should have their control set to High/Max setting

##### 4.2. Ordinary (non-noise-canceling) or Noise Cancelling Headsets:

- If different than the Bombardier certified headset Telex Airman 750. Operators should evaluate the usage of different headsets in accordance with the FAA InFO 07001 (Ref. 1.3) or any local authority guidelines.

Should you have any queries pertaining to this Advisory Wire (AW), please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC).