Customer Services

Advisory Wire

REFERENCE NO:	AW700-23-0499, Rev. 1	INFORMATION TYPE:	Maintenance Operational
ATA:	23-51	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 - 9429) Global 5000 (9127 to 9383, 9389 to 9400, 9404 to 9431 and 9998) Global 5000 feat. Vision Flight Deck (9386, 9401, 9445 - 9997) Global 6000 (9313, 9381, 9432 -9997)
SUBJECT:	**Use of Commercially Available Aviation Headsets**		

1. REFERENCES:

1.1. Flight Crew Operating Manual – Volume 2 (FCOM 2) CSP700-6 & CSP700-5000-6, Section 06-10, Audio Control Panel Switch Operation

1.2. Flight Crew Operating Manual – Volume 2 (FCOM 2) GL 6000 FCOM & GL 5000 GVFD FCOM, Section 06-10, Audio Integrating

1.3. FAA Special Airworthiness Information Bulletin (SAIB) number CE-16-08, Noise Cancelling Headsets

http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgSAIB.nsf/0/69f3304c9fdefa9186257f03007b6986/$FILE/CE-16-08.pdf

1.4. FAA Information For Operators InFO 07001, Noise Attenuation Properties of Noise-Canceling Headsets

https://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/media/2007/info07001.pdf

The referenced web links are confirmed valid at the time of release of this AW.

References 1.1 and 1.2 are available on the Bombardier Customer Portal: (my.businessaircraft.bombardier.com) > Library > Search by Keyword

2. INTRODUCTION:

This Advisory Wire (AW) revision provides additional guidance to operators using commercially available aviation headsets on Global aircraft. In addition, it also references the FAA Special Airworthiness Information Bulletin (SAIB, Ref. 1.3) and the Information For Operators (InFO, Ref. 1.4) on usage of noise cancelling 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 green aircraft. Many of these commercially available headsets incorporate features such as noise cancelling technology and independent audio volume control.

3.1. Headsets incorporating 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 No.1, ACP No.2 and ACP No.3 respectively.

The audio control panel (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 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 Global Aircraft with Honeywell avionics suite & 1.2 Global aircraft featuring Vision Flight Deck) for a detailed description of the audio integrating system.

3.2. Noise Cancelling Headsets:

FAA released SAIB (Ref. 1.3) 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 0700 (Ref. 1.4) on the same subject and associated recommended action.

When using different headsets, Bombardier cannot guarantee proper functionality and high-fidelity performance of the aircraft communication system. Only the Telex Airman 750 delivered with green aircraft was fully tested and certified by Bombardier.

In recent years, upon customers growing demand for alternate headsets with volume control, Bombardier Completion Center have been delivering additional headset, Telex Airman 850 as part of the aircraft loose equipment. These headsets, as well should be subjected to the FAA special bulletin and info letter Ref. 1.3 and 1.4 respectively.

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 requirements, 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.

4. ACTION:

Operator should be familiar with the references 1.1 to 1.4 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. 1.4) 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).