

Introduction

It is important that all personnel on board the ARA are wearing a suitable headset whilst working or flying. The standard headsets used are the Bose-X for science and cabin crew and the David Clark DC10-13.4 for cockpit crew. Previously the Telex Air3100 headsets were in use in the cabin, and these remain approved, whilst the DC10-13.4 has also been successfully trialled for the cabin.

Because of the non-standard intercom system on the ARA, other headsets which may be approved on other BAe-146 or similar aeroplanes are not automatically approvable on this aeroplane.

However, there may be good reasons to approve alternative headsets on board – for preference or expediency.

This document is issued by FAAM, but with the knowledge and agreement of BAeS and Directflight.

What alternative headsets are potentially useable?

Headsets to be considered must use a twin-jack system¹, as is conventional for civil light to large aeroplanes (military aircraft, microlights and helicopters usually use various other headset systems).

The headset must have an existing approval to TSO-139, ETSO-139 or an equivalent document. (TSO-C28a and TSO-C57 are older documents superseded by TSO/ETSO-139 but such approvals remain valid.)

The headset must be confirmed to have an electret or condenser capsule microphone with an impedance in the range 150-2,200 Ω

How can an alternative headset get approved?

- (1) On the ground with power on but not in flight, the new headset must be checked to work from the desired and at-least one alternative station to give 2-way communication with the baseline Bose-X headset at at-least two other stations in the aircraft.
- (2) If the headset contains any power-using elements (typically for active noise reduction), then it must be checked during the next convenient aircraft EMC check before any use in flight.
- (3) If the headset is to be used on the flight deck, then it is also to be tested on the ground in a CVR functional test conducted by Avalon Aero in accordance with the AMM, and it confirmed that normal spoken words in the cockpit are properly recorded.

- (4) Finally, the headset is to be tested for at-least one science sortie at the desired station, with checks, confirmed by the flight manager, that 2-way communications was available with all other stations on board, and with the flight deck, without distortion or unusual interference or silence.
- (5) So long as all of the above have been satisfactory, the headset may be approved for that any all other stations on the aircraft (except that it is not approved for the cockpit unless the CVR test has been carried out).
- (6) This FAMIL will then be amended with the list of approved headsets. Any restrictions due to problems at a particular station or limited testing are to be listed here also, as are any types of headsets found unsuitable.

List of approved Headsets at this version

No.	Type	Limitations
(1)	Bose-X ²	Only tested in cabin and mission scientist station, not yet approved for pilot use.
(2)	Telex Air3100	Poor noise attenuation: not to be used in very high noise areas
(3)	David Clarke H10-3.4 ²	None.

List of not approved headsets for the ARA

The following headsets have been trialled on the ARA and found unsuitable: Lightspeed 20XLC, Sennheiser 460, Lightspeed Zulu.

Authorised for use



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For FAAM

Amendment Record

<u>Issue</u>	<u>AL</u>	<u>Date</u>	<u>Pages</u>	<u>Notes</u>
Draft A	0	3 Oct 2011	2	First circulation draft
Issue 1	0	5 Jan 2011	2	First issue for use.

References

¹ BAe Systems, Headsets, Electronic Service Information Leaflet 23-146-RJ-647-1, 1 July 2010

² FAAM, *Report into ARA Headset Trials*, 16 Oct 2008