

Subject: INFORMATION: Policy and Guidance on the
Approval of Electronic Components on Aircraft
Seating Systems

Date: October 27, 1998

From: Manager, Aircraft Engineering Division, AIR-100

Reply to J. Petrakis,
Attn. of: 202 267-9274

To: All Directorates, ACOs and MIDOs/MISOs

This memorandum establishes procedures and reaffirms the process to be used for the approval of In Flight Entertainment (IFE) systems and other seat amenity electronic components installed on aircraft seating systems.

There are two basic methods of obtaining airworthiness design approval of seat mounted electronics which are strictly defined in Part 21. Either the IFE is approved under Technical Standard Order (TSO) or Type Certification/Supplemental Type Certification (TC/STC) process. Both methods of approval are intended to assure that the design, certification and conformance of seat mounted electronics are adequately controlled.

The certification of seat mounted electronics has been of concern for some time. To address the issue of seat mounted IFE, the FAA participated in an industry sponsored "Passenger Seat & Associated Electronics TSO Workshop" held in Atlanta, Georgia on April 27-30, 1998. The FAA agreed to provide further guidance on the subject. The workshop demonstrated that the issue of altering the sequencing of the installation of electronics onto a TSO seat was of paramount concern to the industry. This memorandum is a result of our commitment to issue guidance on the approval process of IFE installed on seats. A detailed description of the approval process is contained in Attachment 1.

The seat TSO manufacturing process was of particular concern to the workshop. In particular, the need to physically separate the manufacture of the TSO seat from the modifications made to the seat to add the electronic components. In that regard, it has been determined that the seat manufacturing process should not have to reflect a division on the production line for the basic TSO article/appliance and their subsequent modifications. This division in the manufacturing process may not be necessary when the TSO Authorization (TSOA) or Letter of TSO Design Approval (LODA) holder is acting in a supplier capacity to a TC/STC holder. The electronics may be assembled on the seat in a manner that is most efficient for manufacturing. However, the quality control must be separated. The quality control of the TSO article/appliance remains the responsibility of the TSOA or LODA holder, while the quality control of the additional electronic components is the responsibility of the TC/STC holder through their FAA-approved quality system.

Moreover, it is acceptable to the FAA, in the case of a TSOA, or other civil aviation authorities (CAA), in the case of a LODA, to permit the shipment or export of a completed seat assembly with electronics installed although the electronics may not be included on the TSOA or LODA. For another CAA, this will require the issuance of a Certificate of Airworthiness for Export which reflects the TSO seat assembly part number. In addition, the export airworthiness document must clearly state that the seat approval only applies to the seat itself and does not cover the additional electronic components. Remarks such as "Does not apply to installed IFE equipment or additional electronic components" should be noted on the export form. In such a case, the CAA would only be responsible for the conformity of the seat assembly covered by the FAA LODA. The TC/STC holder is responsible for the conformity and compliance for the remainder of the seat assembly which includes the installation of the electronic components.

If you have any questions please contact Mr. John Petrakis at (202) 267-9274.

Original Signed By
David W. Hempe for
James C. Jones
Attachment
cc: AIR-120(2)

Attachment 1