



Barbados Civil Aviation
Department

BCAD Document AAC-028

AIRWORTHINESS

ADVISORY

CIRCULAR

APPROVAL OF AVIONICS EQUIPMENT

APPROVAL OF AVIONICS EQUIPMENT

Evaluate Avionics Equipment Approval

1 Objective.....	4
2 General.....	4
3 Procedures.....	5

EVALUATE AVIONICS EQUIPMENT APPROVAL

1. Objective
2. General
3. Procedures

1. OBJECTIVE. This Advisory Circular provides guidance for evaluating the approval of avionics equipment and instruments as required by the Civil Aviation Regulations.

2. GENERAL.

Civil Aviation (Instrument and Equipment) Regulation 5(2) requires that all navigational equipment is installed in accordance with applicable airworthiness requirements approved by the State of Design.

Civil Aviation (Instrument and Equipment) Regulation 5(2) requires that all equipment shall be installed in a manner approved by the State of Design.

A. Approval of Instruments and/or Equipment.

The certification process for the issue of a Certificate of Airworthiness includes verification that the instruments and equipment required by Instrument and Equipment Regulations are approved. All modifications which involve the installation of instruments and equipment must involve verification of approval of equipment and the method of installation.

The BCAD will accept the following instrument or equipment approvals:

- Technical Standard Order (TSO)
- Acceptance as a part of the aircraft on the original Type Certificate (TC)
- Supplemental Type Certificate (STC)
- Parts Manufacturing Approval (PMA)
- Field approval (FAA Form 337, Major Repair and Alteration)
- United Kingdom CAA approval
- Transport Canada approval
- JAA approval.

B. Verification of Approval

Verification of approval can be accomplished by various means, such as visual inspection of the

equipment manufacturer's data plate and/or review of applicable records, such as flight manual equipment lists or maintenance records. Consulting with foreign Airworthiness Authorities to determine if an approval has been granted can also be a means of verification.

3. PROCEDURES.

A. *Review the Applicable Regulations.* Determine which instruments and/or equipment require approval. The following equipment does not require specific type approval:

- 1 Accessory equipment which does not form part of the equipment required under Instrument & Equipment Regulations, or
- 2 Accessory equipment, the normal operation or subsequent failure of which does not prejudice the performance or cause the failure of equipment required under Instrument & Equipment Regulations.

When accessory equipment is to be carried and used it is the responsibility of the operator to demonstrate compliance with the above

Note: *Accessory equipment does not include equipment for the reception or transmission of radiated electromagnetic waves or equipment used for computing navigation and flight path information and deriving its inputs from radio sources.*

B. *Verify Approval.*

- (1) If the equipment data plate does not indicate the appropriate approval status, determine through the operator's records the method by which the equipment received approval.
- (2) Ensure that all avionics equipment requiring DCA approval has the appropriate documentation for that approval. If DCA approval cannot be substantiated, the equipment and/or aircraft cannot be used until substantiated by the owner/operator.
- (3) Ensure that the equipment is used only on the aircraft for which it is approved.
- (4) Ensure that any spare instruments/equipment are approved. If substitutes are to be used as spares, verify their approval and the authority to install them on the aircraft.
- (5) When investigating modifications for approval, ensure that any instrument or equipment to be fitted is approved.

NOTE: *Instruments and equipment that have not been maintained or altered in accordance with accepted practices and procedures could affect the approval basis. Changes to the basic design of avionics equipment may render the approval invalid.*