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Barbados Civil Aviation  
Department

**BCAD Document OAC-010**

FLIGHT DECK OBSERVER SEAT  
AND ASSOCIATED EQUIPMENT

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# **FLIGHT DECK OBSERVER SEAT AND ASSOCIATED EQUIPMENT**

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# FLIGHT DECK OBSERVER SEAT AND ASSOCIATED EQUIPMENT

## 1. INTRODUCTION.

To provide guidance for the Barbados Civil Aviation Regulations 2004 certificate holders regarding the operational safety/suitability of the Flight Deck Observer Seat and Associated Equipment.

## 2. DEFINITIONS.

**a. Flight Deck Observer Seat.** The Flight Deck Observer Seat (henceforth referred to as “observer seat”) designated by the BCAD located in or adjacent to the flight deck does not include any passenger seat. If the airplane has more than one observer seat installed on the flight deck, it means the seat that is designated by the BCAD for the purposes of conducting en-route inspections.

**b. Flight Deck or Cockpit.** While only the term “flight deck” is used in this OAC, these terms are interchangeable. For the purpose of this document, “flight deck” and “cockpit” have the same meaning.

**3. OPERATIONAL CONSIDERATIONS AND STANDARDS.** The observer seat must meet all the requirements for occupancy as prescribed by the Type Design Certification of the airplanes into which observer seats are installed. Newer airplanes may have more stringent requirements applied to observer seats than older airplanes.

**a. Observer Seat Location.** The location of the observer seat should allow the observer a clear unobstructed view of the aircraft instrument panel to determine the pilot’s compliance with operating rules and standards. The location must not impede flight deck crewmember or observer emergency egress routes from the flight deck to the cabin or flight deck windows (if they are used as escape routes) and flight deck escape hatches. The observer seat location must account for both tall and short individuals occupying it. The observer seat location needs to provide adequate leg and foot clearance to prevent leg impingement with adjoining structure or other crew seats during crew seat adjustments.

**b. Observer Seat Foot Rest.** The observer seat will be occupied for extended periods of time, therefore human factors associated with foot placement must be considered. The occupant’s feet need to be able to rest on a solid surface and to have some freedom of movement during flight. If the occupant’s feet cannot rest on a solid surface, then installation of footrests or fixed or retractable footrest bars should be considered. Foot placement can be extremely critical if an observer seat location permits the occupant’s feet to be placed on the flight deck center pedestal area and/or the flight deck controls or systems. Consideration should be given to installing foot restraint bars to prevent foot migration to critical airplane controls.

**c. Observer Seat Comfort.** The observer seat may be occupied for extended periods of time. Observer seat comfort considerations should be addressed, such as padding, thickness, foam density, firmness, etc. In addition, observer seat comfort evaluations should be conducted under actual flight conditions and should consider the length of time the seat is occupied by an observer.

**d. Visibility from Observer Seat.** The observer seat should also provide a clear view through the flight deck windows with the observer seated fully upright. The observer should be able to assist the flight crew in seeing other aircraft during all phases of flight.

**e. Observer Seat Safety Harness Systems.** The observer seat Torso Restraint or Safety Harness System should have the same “five-point” quick release harness (lap, crotch, and two shoulder belts) as the other flight deck crewmembers to restrain movement during turbulence or impact. The restraint system should allow the observer seat occupant the same flexibility to remove shoulder harnesses without removal of the seatbelt during certain phases of flight. Shoulder harness and belt restraint system comfort should be evaluated under actual flight conditions.

**f. Oxygen.** The observer seat should have the same quick don type oxygen mask and smoke goggles as the other flight deck crewmembers. The oxygen mask must be located within easy reach while seated and be able to be donned in 5 seconds. The oxygen mask must provide for communications with the flight and cabin crew. All Barbados Civil Aviation (Instruments and Equipment) Regulations requirements for Protective Breathing Equipment (PBE) should be addressed and evaluated under actual flight conditions.

**g. Communications.** The observer seat should have a dedicated communications panel that allows the observer to listen to the flight and cabin crewmembers and all other channels of communications that are used by flight crewmembers. This includes, but is not limited to, communication with ground service personnel, flight attendants, and all radio communication. The observer seat should be located so that the occupant has access to a standard headset, and the location of the headset receptacle must be within easy reach while seated. All Barbados Civil Aviation (Instruments and Equipment) Regulations communications requirements should be addressed and evaluated.

**h. Lighting.** The observer seat should have a dedicated light available that can be directed (pointed) and dimmed while seated. The on/off dimmer switch should be easily accessible while seated.

**i. Ventilation.** The observer should have dedicated fresh airflow available through an “eyeball” or similar outlet. Control of the airflow should be within easy reach while seated.

**j. Safety and Security.** The observer seat should be designed so that it cannot be retracted while seated. Downward collapsing observer seats that employ suspension type hook arrangements are not desirable where inadvertent movement of the locking devices could cause the observer seat to collapse. Observer seats should not be designed with sharp edges or finger entrapment locations. Placarding of instructions for observer seat deployment and stowage should be provided for observer seats whose operation is not obvious. Observer seat release and

stowage control handles should be identifiable with a contrasting colour to the general background.