



Standard Specification for Crew Interface in Aircraft¹

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1. Scope

1.1 This specification covers international standards for the crew interface aspects of airworthiness and design for aircraft. “Crew” includes flight crew and maintenance crew.

1.2 The applicant for a design approval must seek the individual guidance of their respective Civil Aviation Authority (CAA) body concerning the use of this standard as part of a certification plan. For information on which CAA regulatory bodies have accepted this standard (in whole or in part) as a means of compliance to their airworthiness regulations (hereinafter referred to as “the Rules”), refer to ASTM F44 webpage (www.ASTM.org/COMMITTEE/F44.htm) which includes CAA website links.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

F3060 Terminology for Aircraft

F3061 Specification for Systems and Equipment in Small Aircraft

F3064/F3064M Specification for Control, Operational Characteristics and Installation of Instruments and Sensors of Propulsion Systems

2.2 *Code of Federal Regulations (CFR):*³

14 CFR Part 23 Amendment 62

3. Terminology

3.1 Refer to Terminology F3060.

¹ This specification is under the jurisdiction of ASTM Committee F44 on General Aviation Aircraft and is the direct responsibility of Subcommittee F44.10 on General.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from U.S. Government Printing Office, Superintendent of Documents, 732 N. Capitol St., NW, Washington, DC 20401-0001, <http://www.access.gpo.gov>.

4. Pilot / Occupant Compartment

4.1 Pilot Compartment:

4.1.1 For each pilot compartment, the compartment and its equipment must allow each pilot to perform flight crew duties without unreasonable concentration or fatigue.

4.1.2 For each pilot compartment, where the flight crew are separated from the passengers by a partition, there must be a means to facilitate two-way communication between flight crew and cabin occupants, such as an opening or openable window or door or other means.

NOTE 1—A single intercom port from passenger compartment to crew may suffice as other means. If an opening is not provided to allow visual verification of occupant compartment conditions, such as Oxygen System status in Specification F3061, other indication means may be required for other systems.

4.1.3 If communication between flight crew and cabin occupants relies on electrical power, the one-way communication from the flight crew to the cabin occupants must be considered an essential electrical load.

4.2 Pilot Compartment View:

4.2.1 Each pilot compartment must be arranged with sufficiently clear and undistorted view to enable the pilot to safely taxi, takeoff, approach, land, and perform any maneuvers within the operating limitations of the aircraft.

4.2.2 Each pilot compartment must be free from glare and reflections that could interfere with the pilot's vision. Compliance must be shown in all operations for which certification is requested.

4.2.3 Each pilot compartment must be designed so that each pilot is protected from the elements so that moderate rain conditions do not unduly impair the pilot's view of the flight path in normal flight and while landing.

5. Controls – General

5.1 Flight Control Systems Controls:

5.1.1 Each control must operate easily, smoothly, and positively enough to allow proper performance of its functions.

5.1.2 Controls must be arranged and, except where their function is obvious, identified to provide for convenience in operation and to not create confusion and subsequent inadvertent operation.

5.1.3 Airplane aerodynamic flight controls must be designed so that they operate in accordance with the following movement and actuation for aerodynamic controls: