



Training Facilities and Representative Training Devices Guidance

Date	8 February 2019
Approver	Manager Technical Operations
Sponsor	Eastern Region Manager
Effective Date	8 February 2019
Review Date	8 February 2020

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Table of contents

Table of contents	3
Glossary	4
Acronyms and abbreviations	4
Definitions	4
Revision history	7
1 General information	8
1.1 Facilities and equipment	8
1.1.1 General space requirements	8
1.1.2 Classroom facilities	8
1.1.3 Use of instructional aids	8
2 Representative training devices	9
2.1 Components, features and types	9
2.1.1 Components	9
2.1.2 Features	9
2.1.3 Types	10
2.1.4 Facilities used for firefighting and water survival training	11
3 Additional guidance	12
3.1 Training in the use of assist spaces	12
3.2 Cabin crew training – touch drills	12
3.3 Differences	12
3.4 Training conducted by third-party organisations	13
3.5 Safety considerations	13
4 Regulatory approvals	14

Glossary

Acronyms and abbreviations

Acronym/abbreviation	Description
CASA	Civil Aviation Safety Authority
ICAO	International Civil Aviation Organization

Definitions

Term	Definition
Able-bodied passengers	Passengers who are clearly physically able and are willing to help cabin crew maintain good order and discipline on board the aircraft
Aircraft	Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the Earth's surface
Approved training – cabin crew	Training conducted under special curricula and supervision approved by a contracting State that, where applicable, is conducted within an approved training organisation
Attendant panel	Control panel(s) intended for use by cabin crew to operate and/or monitor aircraft systems relevant to cabin crew duties during normal operations and in the event of emergency situations
Cabin crew member	A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member
CTD	Cabin training devices are capable of recreating realistic situations to provide effective training on safety and abnormal/emergency procedures
Classroom training	In-person, instructor-led training which may include group exercises and interactive instructional sessions
Disruptive passenger	A passenger who fails to respect the rules of conduct at an airport or on board an aircraft or to follow the instructions of the airport staff or crew members and thereby disturbs the good order and discipline at

Training Facilities and Representative Training Devices

Term	Definition
	an airport or on board the aircraft
Ditching	Forced landing of an aircraft on water
ELT	Emergency locator transmitter
Emergency equipment	Emergency equipment is equipment installed/carried to be used in case of abnormal or emergency situations that demand immediate action for the safe conduct of the flight and protection of occupants, including life preservation, for example, fire extinguisher
Emergency exit	Door, window exit, or any other type of exit (e.g. hatch in the flight deck, tail cone exit) used as an egress point to allow maximum opportunity for cabin evacuation within an appropriate time period
Emergency exit row seating	Each seat in a row of seats located at an emergency exit, having direct access to the exit
Flight crew member	A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period
Hands-on exercise	Exercise on the use of equipment/aircraft systems that is conducted without a specific context. Equipment that is removed from operation, or other representative training equipment considered acceptable by CASA, can be used for the purposes of this training
In-charge cabin crew member	Cabin crew leader who has overall responsibility for the conduct and coordination of cabin procedures applicable during normal operations and during abnormal and emergency situations for flights operated with more than one cabin crew member
Mock-up	A training device that is a partial, functional replica of an actual aircraft, without motion
Occurrence	Any accident or incident associated with the operation of an aircraft
Operations manual	A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties
Operator	The person, organisation or enterprise engaged in or offering to engage in an aircraft operation

Training Facilities and Representative Training Devices

Term	Definition
Passenger	A person who is not an operating crew member
PBE	Protective breathing equipment
PED	Personal electronic device
Pilot-in-command	The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight
Representative training devices	Representative training devices include: <ul style="list-style-type: none"> • Safety and emergency equipment • Cabin training devices • Emergency exit trainers • Facilities used for fire-fighting and water survival training
Safety equipment	Safety equipment is equipment installed/carried to be used during day-to-day normal operations for the safe conduct of flight and protection of occupants, for example, seat belts
Survivor	A victim who is not fatally injured as a result of the aircraft accident
Unstaffed exit	Emergency exit for which no cabin crew member has been positioned for the flight

Revision history

Amendments/revisions of this cabin safety bulletin are recorded below in order of most recent first

Version No.	Date	Parts/Sections	Details
1.0	February 2019	All	First issue

1 General information

1.1 Facilities and equipment

Section 82 of Civil Aviation Orders states that each operator must provide facilities, equipment and training aids to meet the requirements of each training program. This includes a facility suitably equipped for the periodic demonstration of proficiency in emergency procedures required by CAO 20.11 and must make available such items of emergency equipment as may be necessary.

1.1.1 General space requirements

In planning for space requirements, consideration should be given to the following:

- classroom configuration (size of aisles)
- instructor and participant work stations (work surface for equipment and reference material); additional equipment; chair/space for chair pushback and manoeuvrability)
- area required for hands-on exercises
- equipment storage area.

1.1.2 Classroom facilities

Adequate classroom facilities should include the following considerations:

- comfortable climate (temperature; ventilation)
- adequate lighting level for work or viewing
- distracting sound must be kept to a minimum
- number of participants in a class
- adequate training equipment
- use of multi-media.

The use of media and hands-on exercises are important factors when determining the amount of common space required in a classroom. The most commonly used visual media are marker boards, projectors, PowerPoint presentations, video monitors and easels. The use of media (for example, slides, television, virtual simulations) should be taken into consideration when selecting a learning environment. Media should be visible from all angles and seats, and audio media must be audible.

Consideration should be given to furnishing a classroom with emergency and survival equipment, that is, all pieces of emergency equipment used on the operator's aircraft is displayed. It is useful to have enlarged samples of emergency procedure drill cards on permanent display on walls, as well as aircraft diagrams pinpointing the location of each piece of emergency equipment.

1.1.3 Use of instructional aids

Instructional aids include the use of computer based training (CBT).

Computer based training may encompass the use of CD-ROMs as well as web-based training (typically referred to as eLearning). Instructional aids can be used in a classroom setting or as part of distance learning.

2 Representative training devices

2.1 Components, features and types

Operators should have a documented procedure in place to ensure that such devices are representative of the aircraft, particularly with regard to door operating forces and an ongoing maintenance procedure to ensure such devices remain representative. Devices should include the following:

- Layout of the cabin in relation to emergency exits, galley areas and safety equipment stowage; dimensions should be an accurate representation typical of aircraft in the fleet
- Cabin crew and passenger seat positioning, with accuracy in relation to seating adjacent to exits
- Seat dimensions and seat pitch
- Operation of exits and emergency exits in all modes of operation, particularly in relation to method of operation and mass and balance
- Extent of movement and associated forces of all controls for all equipment and services
- Provision of the emergency equipment of the type provided in the aircraft
- Cabin markings and lighting
- Cabin crew communication equipment and associated control panels
- Evacuation slides, including normal and standby methods of operation
- Height and angle of inflated slides.

2.1.1 Components

The following components should be representative of those found on an aircraft:

- Dials, handles, switches, restraint brackets and mounting devices to be operated and the force required for their operation
- Weight of emergency exit hatches and/or mechanism to determine the weight
- Direction of movement, associated forces and travel of all controls for all equipment, including the weight of emergency exits when operated without power assist, where applicable
- Stowage and location of safety and emergency equipment secured with representative brackets and mounting devices.

2.1.2 Features

The following features should form part of the cabin training device according to the applicable scenario:

- Safety and emergency equipment currently required on an aircraft (including locations and restraint brackets representative of those installed on an aircraft)
- Aircraft systems relevant to cabin crew duties representative of those installed on an aircraft, including but not limited to:
 - operational cabin call chimes (aural and visual indicators)
 - cabin crew communication equipment and associated control panels including an operational public address/intercom system and appropriate attendant panel(s) at the crew station
 - normal and emergency cabin lighting, including fail features
 - deployable oxygen masks (passengers/crew)
- Internal cabin markings (placards/exit markings)
- Emergency exit(s)

- Flight deck door/related-security features
- Operational ordinance signs visible from each passenger seat and cabin crew station
- Seat dimensions and seat pitch
- Simulated cabin windows and features necessary to darken the cabin
- Facilities and/or sufficient speakers to simulate sound effects/crash noises audible throughout the cabin
- Smoke simulation capabilities.

2.1.3 Types

2.1.3.1 Safety and emergency equipment

Safety and emergency equipment devices replicated for use in training should be representative of those installed on aircraft, including restraint brackets.

Each crew member must satisfy the person certifying the competency, that they have an adequate knowledge of the emergency operation of equipment. If necessary, they should show that they have physically assessed the difficulty involved in operating the equipment.

Training for each piece of equipment should include, if applicable:

- General description
- Use
- Location(s)
- Pre-flight serviceability check(s)
- Removal from stowage
- Operation
- Conditions for operation
- Operational limitations and duration of use
- Operation under adverse conditions
- Precautions for use
- Post-use procedures (including relocation of equipment)

2.1.3.2 Cabin training devices

Cabin training devices that are capable of recreating realistic situations can be used to provide training on safety and abnormal/emergency procedures. When applicable, a training device should be used to enable realistic simulation of cabin crew duties without continuous need for use of the actual aircraft. These devices may include parts of the cabin containing:

- Lavatories
- Galleys
- A type of emergency exit used in an aircraft
- Some seat rows
- Cabin crew seats
- Attendant panels and overhead stowage

Cabin training devices used as emergency evacuation trainers should include the following features, according to the applicable scenario:

- Dimensions and layout of the cabin that are representative of an aircraft in relation to emergency exits, galley areas and safety and emergency equipment stowage
- Cabin crew and passenger seat positioning that is representative of that on an aircraft, with particular accuracy for seats immediately adjacent to exits
- Capability to operate exits in normal and emergency modes, particularly in relation to method of operation and forces required to operate them
- Width, height and angle of inflated evacuation slides
- A minimum of two operational emergency exits (one door and one alternate exit or two doors), plus one operational window exit (where applicable). Devices may be equipped with exits representative of more than one aircraft type, however, consideration should be given to ensure the same exit is opposite e.g. two B777 doors opposite each other as opposed to one B777 and one A330 door
- At least one cabin crew station located at an operational exit, and additional cabin crew stations depending on the grouping of exits contained in the trainer
- Cabin crew stations and the associated attendant panel(s) that are representative of an aircraft
- Simulation of an unserviceable exit(s)
- Simulation of hazards at window and door exits (e.g. obstacle, fire, water)
- Facilities and sufficient speakers to simulate sound effect/crash noises audible throughout the cabin.

2.1.3.3 Emergency exit trainers

Operators may provide training to cabin crew members on an emergency exit trainer instead of an actual aircraft and the following should be taken into account:

- Replicate the size, weight and operating characteristics of the exit of the aircraft type on which cabin crew will operate, for example, direction of the movement of handles; and
- Be designed so that the representative exit can be operated in normal and emergency modes, particularly in relation to method of operation and forces required to operate them.

2.1.4 Facilities used for firefighting and water survival training

2.1.4.1 Firefighting

A simulated firefighting exercise should be conducted in a confined area to simulate cabin fire, and under the supervision of an instructor.

- The device should include aircraft furnishings found on board an aircraft, such as seating including in-seat electrics, galley units, lavatories, panels, overhead bins and waste bins.
- Firefighting equipment and the restraints used should be representative of those installed on an aircraft with respect to weight, dimensions, controls, types and operations.

Firefighting equipment should be maintained in serviceable condition with specific regard given to:

- PBE: including removal from stowage and container, method of donning¹ and use while conducting a task relevant to the operator's fire-fighting procedures in a simulated smoke-filled environment

¹ Training must include practical donning of PBE wearing the operator's uniform, hairstyles and jewellery

- Fire extinguishers to include removal from stowage, method of operation, application techniques for different fire scenarios and use while wearing PBE (and fire gloves, if available)
- Any practical differences between fire extinguishers carried on the aircraft and those used in training, such as the difference in the force of discharge, are detailed
- Instances where practical fire and smoke training are completed separately, consideration be given to incorporating this into the training conducted in a simulated smoke-filled environment.

2.1.4.2 Water survival

When required to conduct wet drills, these should be carried out in a body of water or pool of sufficient depth to realistically perform the simulated exercise.

- A life-raft exercise should be conducted using life-saving equipment that is representative of that installed on the aircraft with respect to weight, dimensions, appearance, features and operation.
- The rafts may be substituted if the equipment used is similar with respect to weight, dimensions, appearance, and features. In such cases, training must address any differences in the operation of the raft.

3 Additional guidance

3.1 Training in the use of assist spaces

Assist spaces allow cabin crew to stand to one side of the exit path once the exit has been opened and to provide positive assistance to passengers evacuating an aircraft.

- The assist space should not project into the minimum exit path dimension requirements and are so located to minimise the possibility of cabin crew being inadvertently forced out of the aircraft.
- The location of the occupied assist space should not hinder the egress of passengers through the exit.
- Operators with aircraft that are required to have assist spaces should include specific information on their location in operations manuals. This should also be included in safety training for crowd control during an emergency evacuation.

3.2 Cabin crew training – touch drills

Annual recurrent programming for cabin crew may include touch drills by each participant for opening exits in a normal and emergency mode.

In the instance that touch drills are utilised, operators should take into consideration the following criteria:

- To achieve a comparable result, the medium to be utilised should be representative of the exit
- The means of achieving training/testing should be specified in the training and checking manual requiring regulatory approval.

3.3 Differences

Differences in exit operating characteristics between actual aircraft exits and the emergency exit trainer can be of critical importance during an emergency evacuation, especially as this may lead the cabin crew to an incorrect assessment of the serviceability of the exit and/or to incorrectly operate the exit. When a representative training device does not completely replicate the actual aircraft exit operating characteristics,

any differences between the operating characteristics of the actual aircraft exits and those of the emergency exit trainer should be highlighted during training.

3.4 Training conducted by third-party organisations

- Operators may use third-party training organisations to carry out mandatory training on their behalf. Such organisations and the training they are contracted to provide must be documented in the operator's training and checking manual.
- Any variances in items or equipment in the training devices/mock-ups must be restricted if significant differences exist. Supplemental training may be provided to address identified differences.
- Operators should ensure that third-party organisations are provided with, and training personnel have easy access to, a copy of each part of the training and checking manual connected to the training being conducted (including relevant amendments to the operations manual[s]).
- Firefighting equipment used in practical training conducted by a third-party organisation should be representative of that used by the operator.
- Theoretical and practical training must reflect the procedures documented in the operator's operations manual.
- Certification of training and checking provided by a third-party organisation should clearly identify the training and checking completed and state the compliance of the training with the operator's training and checking manual.
- Operators must ensure third-party training organisations are subject to a robust and documented audit process to ensure compliance with operator training and checking manual provisioning.

3.5 Safety considerations

Safety features should be incorporated into the design of any device used in training in order to protect all users against injury. Some of the protective measures that may be taken into consideration with respect to design include:

- Emergency stop mechanisms installed in the event of an electrical, fire or hydraulic system problem
- Fire and/or smoke detection installed
- Means of emergency egress
- No sharp edges or projections
- Danger zone markings highlighting moving platforms and door openings
- Communication methods installed independent of simulator and facility power
- Placards clearly indicating safe working loads/safety procedures
- Locks or devices which restrict the ability to access areas or exits installed
- Installation of emergency unlocking or deactivation
- Adequate ventilation.

4 Regulatory approvals

Regulatory approval for use of training devices in lieu of an aircraft will be contingent on the compatibility of the device to the related components of the training program and issued in conjunction with program approval.

Operators will provide information about the training facilities, aids and mock-ups to be used for training and checking including:

- the location
- the process for CASA approval where required
- maintenance
- instructions for use in different programs.