



CIVIL AVIATION PUBLICATION

CAP 23

FLIGHT SYNTHETIC TRAINING DEVICES

INDEX

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CIVIL AVIATION PUBLICATIONS

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INDEX

Section	Title	Page No.
1.	Introduction	1
1.1	Purpose	1
1.2	Terminology.....	1
1.3	References	1
2.	FSTD Policy	2
2.1	Requirement	2
2.2	Approval Requirement.....	2
3.	FSTD Approval	2
3.1	Bahraini Based Simulators	2
3.2	Foreign Simulators	3
4.	Reciprocal Recognition	3
4.1	FAR 142 Organizations	3
4.2	JAR FCL Organizations.....	4
5.	Considerations	4
5.1	Type Rating Privileges	4
5.2	Zero Flight Time (ZFT).....	4
5.3	Specific Functions	5
6.	Application	5



CIVIL AVIATION PUBLICATIONS

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CIVIL AVIATION PUBLICATIONS

1. INTRODUCTION

1.1 Purpose

The purpose of this CAP is to provide guidance and policy information to all Bahraini operators on the use of simulators and training devices. The information in this publication will ensure compliance with the ANTRs and conformance with international standards.

Note: Owners or operators of simulators should refer to ANTR FSTD for qualification requirements.

1.2 Terminology

- (a) Flight Simulation Training Device (FSTD). A training device which is a Full Flight Simulator (FFS), a Flight Training Device (FTD), a Flight & Navigation Procedures Trainer (FNPT) , or a Basic Instrument Training Device (BITD).
- (b) Full Flight Simulator (FFS). A full size replica of a specific type or make, model and series aeroplane flight deck, including the assemblage of all equipment and computer programmes necessary to represent the aeroplane in ground and flight operations, a visual system providing an out of the flight deck view, and a force cueing motion system. It is in compliance with the minimum standards for FFS Qualification.
- (c) Flight Training Device (FTD). A full size replica of a specific aeroplane type's instruments, equipment, panels and controls in an open flight deck area or an enclosed aeroplane flight deck, including the assemblage of equipment and computer software programmes necessary to represent the aeroplane in ground and flight conditions to the extent of the systems installed in the device. It does not require a force cueing motion or visual system. It is in compliance with the minimum standards for a specific FTD Level of Qualification.
- (d) Flight and Navigation Procedures Trainer (FNPT). A training device which represents the flight deck or cockpit environment including the assemblage of equipment and computer programmes necessary to represent an aeroplane or class of aeroplane in flight operations to the extent that the systems appear to function as in an aeroplane. It is in compliance with the minimum standards for a specific FNPT Level of Qualification.
- (e) Basic Instrument Training Device (BITD). A ground based training device which represents the student pilot's station of a class of aeroplanes. It may use screen based instrument panels and spring loaded flight controls, providing a training platform for at least the procedural aspects of instrument flight.
- (f) Other Training Device (OTD). A training aid other than FFS, FTD, FNPT or BITD which provides for training where a complete flight deck environment is not necessary.

1.3 References

This CAP should be read in conjunction with the following references;



CIVIL AVIATION PUBLICATIONS

- ICAO Doc. 9625
- ANTR FSTD A and H

2. FSTD POLICY

2.1 Requirement

- (a) Unless specifically authorized by the CAA, all operators of turbojet aeroplanes as well as all aircraft over 9000 kg, shall utilise simulators for transition, recurrent and upgrade training. Operators of these aircraft should have a regular FFS programme every six months.
- (b) An operator may be permitted to conduct a PPC in the aircraft instead of a FFS and usually for one occasion only within a 12 month period provided there is sufficient justification.
- (c) The FSTD used must be representative of the type aircraft and, if applicable, the particular variation of the type for which the training or check is being conducted. The CAA may permit various differences, such as engine type or model variation, upon application and SMS risk assessment.
- (d) For Bahraini based FSTDs, ANTR FSTD A/H shall be the basis of qualification.
- (e) Any FFS, FTD, FNPT, BITD or OTD used to gain a credit towards a licence or rating shall be appropriately qualified and approved by the CAA.

2.2 Approval Requirement

All FSTDs utilised by Bahraini flight crew licence holders within Bahrain or internationally, must be approved by the CAA before training and/or testing conducted in such FSTDs will be recognized by the CAA.

The CAA may grant approval for simulator/training device credits and such credits would normally be based on the ANTR FCL 1 or 2, as applicable.

3. FSTD APPROVAL

3.1 Bahraini Based Simulators

To be approved by the CAA, all Bahraini based FSTDs must be firstly qualified by a recognized foreign authority capable of this task, such as the UK CAA, FAA or Dutch CAA. The CAA will then approve the operator to use the FSTD and stipulate the privileges or limitations in the letter of approval. Generally the privileges and limitations will be identical to that granted by the foreign authority under its basis of qualification.

The CAA approval will normally be the same as the qualification date of validity, although an extension of validity of up to 60 days may be approved with sufficient justification and with the agreement of the foreign authority that conducted the qualification.



CIVIL AVIATION PUBLICATIONS

3.2 Foreign Simulators

Except as specified below, a foreign FSTD may not be utilised for any training or checking of Bahraini licensed flight crew unless it has been inspected and approved by the CAA within the previous two years. As the CAA does not have the qualified manpower resources to conduct simulator qualification checks, the CAA will normally accept foreign regulatory authorities approval, provided the Inspector is satisfied during the assessment. It should be noted that the use of foreign Designated Check Airmen, who are not FAR 142 or JAR FCL approved are required to be checked by the CAA every year.

4. RECIPROCAL RECOGNITION

4.1 FAR 142 Organizations

(a) Recognition.

The CAA will approve a valid FAA 142 organization upon application, together with the approved FSTDs located at the facility.

(b) Inspection.

FSTDs located at Foreign Training Centres, which are approved under FAR 142, need not be inspected individually every two years. Provided that the Training Centre has a valid Training Centre Certificate issued by the FAA and that the applicable FSTDs retain their FAA evaluation validity, the CAA will conduct a random inspection on a representative FAR 142 organization and associated FSTDs every two years. A successful inspection would validate all Training Centres and simulators operated by that organization.

For example, an inspection of a FAA 142 approved FlightSafety International Training Centre and applicable simulators would re-validate all FlightSafety International Training Centres and simulators worldwide for a further period of two years.

(c) Examiners.

The CAA would recognize all instructors and examiners approved by under the FAR 142 for the particular Foreign Training Centre. The CAA would recognize skill tests, type rating tests and proficiency checks conducted by an FAA approved Training Centre Examiner.

(d) Training and Checking.

All training and checking should be to ANTR-OPS 1/3 or ANTR FCL 1/2 standards. In specific cases, the applicable FAR 135 or FAR 121 standard for captains and co-pilots may be accepted by the CAA.

Note: The relevant forms must be signed by the Training Centre Examiner with his/her designation number.



CIVIL AVIATION PUBLICATIONS

4.2 JAR FCL Organizations

(a) Recognition.

The CAA will approve a valid JAR FCL Type Rating Training Organization (TRTO) upon application, together with the associated FSTDs located at the facility, provided the organisation is in an EASA Member State or approved by an EASA Member State.

(b) Inspection.

FSTDs, located at a TRTO, which are approved under JAR FCL 1 or 2, need not be inspected individually every two years. Provided that the TRTO has a valid approval issued by a EASA Member State and the applicable FSTDs retain their JAR FSTD A/H qualification, the CAA will conduct a random inspection on a representative organization and simulator every two years. That inspection would validate all JAA TRTOs. For example, a successful inspection of a JAA TRTO (such as CAE Amsterdam) would re-validate all JAA TRTOs for a further period of two years. All training and checking must be to the applicable ANTR FCL 1 or 2 standard for captains and co-pilots.

(c) Examiners.

The CAA would recognize all instructors and examiners approved by an EASA Member State.

(d) Training and Checking.

The CAA would recognize skill tests, type rating tests and proficiency checks conducted by a FSE or TRE approved by an EASA Member State provided the checks were conducted on a simulator approved under the JAR FSTD A/H by an EASA Member State.

5. CONSIDERATIONS

5.1 Type Rating Privileges

The privileges granted by a non FAA/EASA foreign authority may be adequate for initial, recurrent and up-grade training, but may not meet either their legislative requirements or the ANTR requirements for rating purposes. For example, large transport aircraft may require a base check on the actual aircraft before a rating can be issued. This is a common requirement when the FSTD used is relatively old or the FSTD performance is predictive, such as with new variants of an aircraft in service. Applicants should contact the CAA to determine the base check requirements for a particular aircraft type. The applicable ANTR-FCL Performance Test Standards will be used to determine credits for those FSTDs.

5.2 Zero Flight Time (ZFT)

Unless a simulator has been specifically approved for ZFT, all base checks for type rating purposes shall be conducted in the aircraft. The general requirements are;



CIVIL AVIATION PUBLICATIONS

- (a) The simulator maintains an ANTR FSTD A/H Level C, or equivalent, qualification.
- (b) The simulator is specifically approved for ZFT.
- (c) The performance data must not be predictive.
- (d) The simulator must be serviceable with all required systems operative.
- (e) A mechanism must be established to ensure all instructors/check airmen are aware of the simulator requirements and consequences.
- (f) ZFT only applies to pilots, who have in excess of 2500 hours total flying time, with at least 1000 jet transport flying time.
- (g) In accordance with ANTR-OPS 1.945 a pilot, undertaking a ZFTT course, shall:
 - (1) Commence Line Flying Under Supervision as soon as possible within 21 days after completion of the skill test.
 - (2) Complete the six take-offs and landings required in Appendix 1 ANTR-FCL 1.261(c)(2) in a flight simulator, qualified in accordance with ANTR-FSTD A and user approved by the Authority, not later than 21 days after the completion of the skill test.
 - (3) Conduct the first four take-offs and landings of the Line Flying Under Supervision in the aeroplane under the supervision of a TRI(A) occupying a pilot's seat.

5.3 Specific Functions

Operators, which require recency or recurrent training for specific functions, such as All Weather Operations (AWO), Head Up Display (HUD) or ZFT, shall ensure that the simulator is approved for that function and fitted with the necessary hard/soft ware to support that function.

6. APPLICATION

An application shall be made on form ALD/OPS/089

(a) Bahraini Based FSTD

An operator of Bahraini aircraft, which desires to use an approved Bahraini based FSTD or Training Centre shall apply to the CAA giving at least 14 days notice.

(b) Foreign FSTD

An operator of Bahraini aircraft, which desires to use a foreign FSTD or Training Centre shall apply to the CAA giving at least 14 days notice. Supporting information and foreign approvals, as well as aircraft model, engine and performance differences, should be included in the application. If the facility is FAR 142 or JAR FCL



CIVIL AVIATION PUBLICATIONS

approved, an inspection should not normally be required. Should an inspection be required by the CAA, all costs shall be borne by the operator.