



# **CIVIL AVIATION SAFETY AUTHORITY OF PNG**

**PNG**

**Civil Aviation Rule**

**Part 60**

## **Flight Simulation Training Device Qualification and Use**

Applicable 14 December 2020

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## **DESCRIPTION**

Part 60 prescribes the certification requirements for Flight Simulation Training Device (FSTD) approval and addresses the requirements and standards required for the qualification and approval of FSTDs.

## BULLETIN

This Part first comes into force on 14 December 2020:

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## Subpart A— General

### 60.1 Purpose

- (a) This Part prescribes the requirements for:
- (1) the initial and continuing qualification and use of all aircraft flight simulation training devices (FSTD) used for meeting training, evaluation, or flight experience requirements for flight crewmember certification or qualification under the Civil Aviation Rules;
  - (2) the procedural requirements for acceptance of FSTD qualifications issued by foreign states; and
  - (3) the approval of aviation training devices (ATDs) used to meet pilot training, flight experience, or currency requirements for pilot certification or qualification.

### 60.3 Applicability

This Part applies to each person using or applying to use—

- (a) an FSTD to meet any training, evaluation, or flight experience requirement for flight crew member certification or qualification; or
- (b) an ATD to meet any pilot training, flight experience, or currency requirement for pilot certification or qualification; or
- (c) to any person who uses or causes the use of an FSTD when:
  - (1) that person knows that the FSTD does not have an approved FSTD operator; or
  - (2) the use of the FSTD by that person is nonetheless claimed for purposes of meeting any training, evaluation, or flight experience requirement; or
  - (3) that person knows or should have known that the person's acts or omissions would cause another person to mistakenly credit use of the FSTD for purposes of meeting any training, evaluation, or flight experience requirement.

### 60.5 Reserved

### 60.7 Requirement for certificate.

A person shall not operate an FSTD except under the authority of an FSTD qualification certificate issued by the Director under the Act and in accordance with this Part.

### 60.9 Application for certificate

An applicant for the grant of an FSTD qualification certificate must complete form CA 60/01 and submit it to the Director with a payment of the appropriate application fee prescribed by regulations made under the Act, not less than 90 days before the date of intended operation, unless a shorter period is acceptable to the Director.

### **60.11 Issue of certificate**

- (a) An FSTD qualification certificate may be issued by the Director under the Act in accordance with this part if the Director is satisfied that:
- (1) the applicant meets the applicable requirements of Subpart B; and
  - (2) the applicant and the applicant's senior persons are fit and proper persons; and
  - (3) the granting of the certificate is not contrary to the interests of aviation safety.
- (b) The FSTD qualification certificate shall contain at least the following information: -
- (1) the issuing authority;
  - (2) the FSTD qualification certificate holder number and its expiration date;
  - (3) the FSTD qualification certificate holder name, trading name (if different) and the address of the principal place of business;
  - (4) the date of issue and the name, signature and title of the authority representative; and
  - (5) reference to a document listing the contact details at which operator management can be contacted.

### **60.13 Privileges of certificate holder**

An FSTD qualification certificate holder may use or allow the use of or offer the use of an FSTD for flight crewmember training or evaluation or for obtaining flight experience to meet any of the requirements for flight crew member certification or qualification under an approved training programme, in accordance with the Qualification Performance Standards for the specific device.

## **Subpart B – Certification Requirements**

### **60.51 Flight Simulator Training Device Qualification Requirements**

- (a) An applicant for the grant of an FSTD qualification certificate is eligible to apply if the following conditions are met:
- (1) The applicant holds, or is an applicant for, a certificate under part 119; or 141 or;
  - (2) holds, or is an applicant for, an approved flight engineer course in accordance with part 63 and
  - (3) the FSTD will be used or will be offered for use, in the FSTD operator's – approved flight training program for the aircraft being simulated, as evidenced in application submitted to the Director
- (b) An FSTD qualification certificate holder qualifies as a FSTD operator if the following conditions are met:
- (1) The certificate holder holds a certificate under part 119, or 141 or; has an approved flight engineer course in accordance with part 63; and

- (2) the certificate holder has:
  - (i) operations specifications authorizing the use of the specific aircraft or set of aircraft; and
  - (ii) an approved training program under which at least one FSTD, simulating the aircraft or set of aircraft; and
  - (iii) for which the certificate holder is the FSTD operator, is used by the FSTD qualification certificate holder as described in paragraphs (b)(5) of this section; or
  - (iv) training specifications or an approved course of training under which at least one FSTD, simulating that aircraft or set of aircraft and for which the certificate holder is the FSTD operator, is used as described in paragraphs (b)(5) of this section.
- (3) The certificate holder has a quality management system currently approved by the Director in accordance with part 60.69.
- (4) The Director has accepted the certificate holder as the FSTD qualification certificate holder and that acceptance has not been withdrawn.
- (5) At least one FSTD as referenced in paragraph (b)(2) of this section, is used within the FSTD operator's approved flight training program for the aircraft or set of aircraft at least once within the 12-month period following:
  - (i) the initial or upgrade evaluation, and
  - (ii) at least once within each subsequent 12-month period thereafter.
- (c) If the requirements of paragraphs (b)(2) and (b)(5) of this section are not met, the certificate holder must:
  - (1) forfeit the right to operate that FSTD;
  - (2) will not be eligible to apply to operate that FSTD for at least 12 calendar months following the expiration of the qualification status.
- (d) In addition to the FSTD described in paragraph (b) of this section, an FSTD qualification certificate holder may operate any number of other FSTDs regardless of specific aircraft or set of aircraft provided:
  - (1) during the preceding 12-month period, all of the other FSTDs are used within the FSTD operator's or another certificate holder's approved flight training program for the aircraft or set of aircraft simulated; or
  - (2) the FSTD qualification certificate holder obtains a written statement at least annually from a qualified pilot who has flown the aircraft or set of aircraft (as appropriate) during the preceding 12-month period stating:
    - (i) that the subject FSTD's performance and handling qualities, within the normal operating envelope, represent the aircraft or set of aircraft described in the type design approved in accordance with Part 21 and;
    - (ii) the FSTD qualification certificate holder must retain the two most current written statements for review by the Director.

**60.53 Qualification Performance Standards**

- (a) An applicant for the grant of an FSTD qualification certificate shall use the Qualification Performance Standards (QPS) for qualification of FSTDs as determined or accepted by the Director.
- (b) The QPS specified in the AC 60.1

**60.55 Additional responsibilities.**

- (a) The FSTD qualification certificate holder must allow the Director upon request to inspect the FSTD as soon as practicable.
- (b) This inspection may include all records and documents relating to the FSTD, to determine its compliance with this part.
- (c) The certificate holder must do the following for each FSTD:
  - (1) Establish a mechanism to receive written comments regarding the FSTD and its operation in accordance with the requirements specified in its QMS.
  - (2) Post in or adjacent to the FSTD the FSTD Qualification Certificate issued by the Director.
  - (3) An electronic copy of the FSTD Qualification Certificate that may be accessed by an appropriate terminal or display in or adjacent to the FSTD is satisfactory.
- (d) Each certificate holder must identify to the Director by name, one individual to be the management representative (MR).
  - (1) One person may serve as an MR for more than one FSTD, but one FSTD must not have more than one person serving in this capacity.
  - (2) Each MR must be an employee of the certificate holder with the responsibility and authority to:
    - (i) monitor the on-going qualification of assigned FSTDs to ensure that all matters regarding FSTD qualification are being carried out as provided for in this part; and
    - (ii) ensure that the QMS is properly established, implemented, and maintained by overseeing and modifying where necessary, the structure of the QMS policies, practices, and procedures; and
    - (iii) regularly brief certificate holders management on the status of the on-going FSTD qualification program and the effectiveness and efficiency of the QMS.
  - (3) The MR serves as the primary contact point for all matters between the certificate holder and the Director regarding the qualification of that FSTD as provided for in this part.
  - (4) The MR may delegate the duties described in paragraph (c)(2) and (c)(3) of this section to an individual at each of the FSTD operator's locations.



### **60.57 Use of Flight Simulation Training Device.**

An FSTD qualification certificate holder may use or allow the use of or offer the use of an FSTD for flight crewmember training or evaluation or for obtaining flight experience to meet any of the requirements for flight crew member certification or qualification under an approved training programme, in accordance with the QPS for the specific device and the FSTD meets all of the following:

- (a) Has a single FSTD qualification certificate holder who is qualified under rule 60.51; and
- (b) The FSTD qualification certificate holder may arrange with another person for services of document preparation and presentation, as well as FSTD inspection, maintenance, repair, and servicing.
- (c) The FSTD qualification certificate holder remains responsible for ensuring that these functions are conducted in a manner and with a result of continually meeting the requirements of this part.
- (d) Is qualified as described in the FSTD qualification certificate and operated in accordance with the provisions and limitations of rule 60.109.
- (e) Remains qualified, through satisfactory inspection, continuing qualification evaluations, appropriate maintenance, and use requirements in accordance with this part and the applicable QPS.
- (f) Functions during day-to-day training, evaluation, or flight experience activities with the software and hardware that was evaluated as satisfactory by the Director; and
- (g) If modified, modified only in accordance with the provisions of this part.
- (h) This section does not apply to routine software or hardware changes that do not fall under the requirements of part 60.107.

### **60.59 Objective data requirements**

- (a) Except as provided in paragraph (b) and (c) of this section, for the purposes of validating FSTD performance and handling qualities during evaluation for qualification, the validation data package made available to the Director must include:
  - (1) the aircraft manufacturer's flight test data; and
  - (2) all relevant data developed after the type certificate was issued including data developed in response to an airworthiness directive if, such data results from a change in;
    - (i) performance;
    - (ii) handling qualities,
    - (iii) functions or;
    - (iv) other characteristics of the aircraft that must be considered for meeting flight crewmember training, evaluation, or for meeting experience requirements.

Note: *The validation data package may contain flight test data from a source in addition to or independent of the aircraft manufacturer's data in support of an FSTD qualification, but only if this data is gathered and developed by that source in accordance with flight test methods, including a flight test plan, as described in the applicable QPS.*

- (b) The validation data package may also contain:
  - (1) predicted data;
  - (2) engineering simulation data;
  - (3) data from pilot owner or pilot operating manuals; or
  - (4) data from public domain sources, provided this data is acceptable to the Director.
- (c) If found acceptable, the data may then be used in particular applications for FSTD qualification.
- (d) Data or other material or elements must be submitted in a form and manner acceptable to the Director.
- (e) The Director may require additional objective data, which may include flight testing, if necessary, if the validation data package does not support FSTD qualification requirements as described in this part and the applicable QPS appendix.
- (f) When an FSTD qualification certificate holder learns, or is advised by an aircraft manufacturer or other data provider, that an addition to, an amendment to, or a revision of data that may relate to FSTD performance or handling characteristics is available, the FSTD qualification certificate holder must notify the Director as described below:
  - (1) within 10 calendar days, notify the Director of the existence of this data; and
  - (2) within 45 calendar days, notify the Director of:
    - (i) the schedule to incorporate this data into the FSTD; or
    - (ii) the reason for not incorporating this data into the FSTD.

### **60.61 Resource requirements.**

When notified by the Director, the FSTD qualification certificate holder must make available all special equipment and qualified personnel needed to accomplish or assist in the accomplishment of tests during initial qualification, continuing qualification, or special evaluations.

### **60.63 Initial qualification requirements**

- (a) For each FSTD, the FSTD qualification certificate holder must submit a request to the Director to evaluate the FSTD for initial qualification at a specific level.
- (b) The request must be submitted in a form and manner specified by the Director
- (c) The MR described in rule 60.55(d) must sign a statement after confirming the following:
  - (1) The performance and handling qualities of the FSTD represent those of the aircraft or set of aircraft within the normal operating envelope.

- (2) This determination must be made by a pilot meeting the requirements of paragraph (f) of this section after having flown all of the operations tasks listed in the applicable QPS from AC 60.1 relevant to the qualification level of the FSTD.
- (3) Exceptions, if any, must be noted.
- (4) The name of the person making this determination must be available to the Director upon request.
- (5) The FSTD systems and sub-systems (including the simulated aircraft systems) functionally represent those in the aircraft or set of aircraft.
- (6) This determination must be made by:
  - (i) the pilot described in paragraph (c)(2) of this section; or
  - (ii) by a person trained on simulator systems/sub-systems and trained on the operation of the simulated aircraft systems, after having exercised the operation of the FSTD and the pertinent functions available through the Instructor Operating Station.
  - (iii) exceptions, if any, must be noted; and
  - (iv) the name of the person making this determination must be available to the Director upon request.
- (7) The FSTD cockpit represents the configuration of the specific type; or aircraft make, model, and series aircraft being simulated, as appropriate.
- (8) This determination must be made by:
  - (i) the pilots described in paragraph (c)(2) of this section; or
  - (ii) by a person trained on the configuration and operation of the aircraft simulated;
  - (iii) exceptions, if any, must be noted; and
  - (iv) the name of the person making this determination must be available to the Director upon request.
- (d) Except for those FSTDs previously qualified and described in part 60.67, each FSTD evaluated for initial qualification must meet the standard that is in effect at the time of the evaluation.
- (e) Notwithstanding paragraph (d) of this section, if a change to the existing standard or a new standard for the evaluation for initial qualification is published, a FSTD qualification certificate holder may request that the Director apply the standard that was in effect when an FSTD was ordered for delivery if the FSTD operator:
  - (1) Within 30 days of the publication of the change to the existing standard or publication of the new standard, notifies the Director that an FSTD has been ordered.
  - (2) This notification must include;
    - (i) a description of the FSTD; and
    - (ii) the anticipated qualification level of the FSTD; and
    - (iii) the make, model, and series of aircraft simulated; and
    - (iv) any other pertinent information.

- (3) Within 90 days of the Director notification described in paragraph (e) (1) and (2) of this section, requests that the standard in effect at the time the order was placed be used for the evaluation for initial qualification.
  - (4) Within 24 months following the publication of the change to the existing standard or publication of the new standard, the FSTD qualification certificate holder must conduct the evaluation.
  - (5) At the request of the FSTD operator, any tests, tolerances, or other requirements that are current at the time of the evaluation may be used during the initial evaluation, if the FSTD qualification certificate holder provides acceptable updates to the required Qualification Test Guide (QTG).
  - (6) The standards used for the evaluation for initial qualification will be used for all subsequent evaluations of the FSTD.
  - (7) An FSTD qualification certificate holder or FSTD manufacturer may submit a request to the Director for approval of a deviation from the QPS requirements as defined in AC 60.1.
  - (8) Requests for deviation must be submitted in a form and manner acceptable to the Director and must provide sufficient justification that the deviation meets or exceeds the testing requirements and tolerances as specified in part 60 QPS or will otherwise not adversely affect the fidelity and capability of the FSTDs evaluated and qualified under the deviation.
  - (9) The Director may consider deviation from the minimum requirements tables, the objective testing tables, the functions and subjective testing tables, and other supporting tables and requirements in the Part 60 QPS.
  - (10) Deviations may be issued to an FSTD manufacturer for the initial qualification of multiple FSTDs, subject to terms and limitations as determined by the Director.
  - (11) Approved deviations will become a part of the permanent qualification basis of the individual FSTD and will be noted in the FSTD's qualification certificate.
  - (12) If the Director publishes a change to the existing part 60 standards as described in paragraph (e) of this section or issues an FSTD Directive as described in part 60.107(b), which conflicts with or supersedes an approved deviation, the Director may terminate or revise a grant of deviation authority issued under this paragraph.
- (f) The pilot who contributes to the confirmation statement required by paragraph (c)(2) of this section must:
- (1) Be designated by the FSTD qualification certificate holder and
  - (2) Be qualified in:
    - (i) the aircraft or set of aircraft being simulated; or
    - (ii) for aircraft not yet issued a type certificate, or aircraft not previously operated by the FSTD qualification certificate holder or the FSTD qualification certificate holder not having an approved training program, an aircraft similar in size and configuration.
- (g) The subjective tests that form the basis for the statements described in paragraph (c) of this section and the objective tests referenced in paragraph (h) of this section must be accomplished at the FSTD operator's training facility, except as provided for in the applicable QPS.

- (h) The person seeking to qualify the FSTD must provide the Director access to the FSTD for the length of time necessary for the Director to complete the required evaluation for initial qualification, which includes the conduct and evaluation of objective and subjective tests, including general FSTD requirements to determine that the FSTD meets the standards for the level sought for.
- (i) When the FSTD passes an evaluation for initial qualification, the Director issues a FSTD qualification certificate that includes all of the following:
  - (1) Identification of the FSTD operator; and
  - (2) Identification of the make, model, and series of the aircraft or set of aircraft being simulated; and
  - (3) Identification of the configuration of the aircraft or set of aircraft being simulated (e.g., engine model or models, flight instruments, or navigation or other systems); and
  - (4) A statement that the FSTD is qualified as either a full flight simulator or a flight training device; and
  - (5) Identification of the qualification level of the FSTD; and
  - (6) A statement that (with the exception of the noted exclusions for which the FSTD has not been subjectively tested by the FSTD qualification certificate holder or the Director and for which qualification is not sought) the qualification of the FSTD includes the tasks set out in the applicable QPS contained in AC 60.1 relevant to the qualification level of the FSTD and;
  - (7) A statement referencing any deviations that have been granted and included in the permanent qualification basis of the FSTD.
- (j) After the Director completes the evaluation for initial qualification, the FSTD qualification certificate holder must update the (QTG), with the results of the Director or FQA- witnessed tests together with the results of all the objective tests described in the applicable QPS;
- (k) Upon issuance of the FSTD qualification certificate the updated QTG becomes the Master Qualification Test Guide (MQTG). The MQTG must be made available to the Director upon request.

#### **60.65 Additional qualifications for a currently qualified FSTD.**

- (a) A currently qualified FSTD is required to undergo an additional qualification process if a user intends to use the FSTD for meeting training, evaluation, or flight experience requirements beyond the qualification issued for that FSTD. This process consists of the following:
  - (1) The FSTD qualification certificate holder must:
    - (i) submit to the Director all modifications to the MQTG that are required to support the additional qualification and;
    - (ii) describe all modifications to the FSTD that are required to support the additional qualification and;
    - (iii) submit a confirmation statement as described in part 60.67(c) that a pilot, designated by the FSTD qualification certificate holder in accordance with part 60.67(d), has subjectively evaluated the FSTD in those areas not previously evaluated.

- (2) The FSTD must successfully pass an evaluation consisting of:
  - (i) all the elements of an initial evaluation for qualification in those circumstances where the Director has determined that all the elements of an initial evaluation for qualification is necessary; or
  - (ii) those elements of an initial evaluation for qualification designated as necessary by the Director.
- (b) In making the determinations described in paragraph (a)(2) of this section, the Director considers factors including:
  - (1) the existing qualification of the FSTD; and
  - (2) any modifications to the FSTD hardware or software involved; and
  - (3) any additions or modifications to the MQTG.
- (c) For FSTDs qualified in accordance with part 60.157, the Director may accept the evaluation conducted by the FQA as partial or complete satisfaction of the evaluation requirements of this section.
- (d) The FSTD is qualified for the additional uses when the Director issues an amended FSTD qualification certificate in accordance with part 60.67(i).
- (e) The FSTD qualification certificate holder may not modify the FSTD except as described in rule 60.107.

#### **60.67 Previously qualified FSTDs.**

- (a) Unless otherwise specified by an FSTD Directive, or in instances where a FSTD qualification certificate holder plans to remove an FSTD from active status for a period of less than two years, the following procedures apply:
  - (1) The Director must be notified in writing and the notification must include an estimate of the period that the FSTD will be inactive;
  - (2) Continuing Qualification evaluations will not be scheduled during the inactive period;
  - (3) The Director will remove the FSTD from the list of qualified FSTDs on a mutually established date not later than the date on which the first missed continuing qualification evaluation would have been scheduled;
  - (4) Before the FSTD is restored to qualified status, it must be evaluated by the Director.
  - (5) The evaluation content and the time required to accomplish the evaluation is based on the number of continuing qualification evaluations and FSTD operator-quarterly inspections missed during the period of inactivity.
  - (6) The FSTD qualification certificate holder must notify the Director of any changes to the original scheduled time out of service.
- (b) If the FSTD qualification is lost under rule 60.111 and;
  - (1) restored under rule 60.111 in less than (2) years, then the qualification basis (in terms of objective tests and subjective tests) for the re-qualification will be those against which the FSTD was originally evaluated and qualified; or

- (2) Not restored under rule 60.111 for two (2) years or more, then the qualification basis (in terms of objective tests and subjective tests) for the re-qualification will be those standards in effect and current at the time of re-qualification application.
- (c) Except as provided in paragraph (e) of this section, any change in FSTD qualification level requires an evaluation for initial qualification in accordance with this part.
- (d) A FSTD qualification certificate holder may request that an FSTD be permanently downgraded. In such a case, the Director may, downgrade a qualified FSTD without requiring and without conducting an initial evaluation for the new qualification level.
- (e) Subsequent continuing qualification evaluations will use the existing MQTG, modified as necessary to reflect the new qualification level.
- (f) When the FSTD qualification certificate holder has appropriate validation data available and receives approval from the Director, the FSTD qualification certificate holder may adopt tests and associated tolerances described in the current qualification standards as the tests and tolerances applicable for the continuing qualification of a previously qualified FSTD.
- (g) The updated tests and tolerances must be made a permanent part of the MQTG.

#### **60.69 Quality Management System and Configuration Management**

- (a) An FSTD qualification certificate holder must not use or allow the use of or offer the use of an FSTD for flight crewmember training, evaluation or for obtaining flight experience to meet any training, evaluation, or flight experience requirement unless;
  - (1) the FSTD qualification certificate holder has established and follows a QMS, currently approved by the Director or a Foreign Qualifying Authority (FQA) for;
    - (i) the continuing surveillance;
    - (ii) analysis of the operator's performance; and
    - (iii) effectiveness in providing a satisfactory FSTD for use on a regular basis:
- (b) The Quality Management System shall be based on;
  - (1) Part 100; or
  - (2) established industry standards; and
  - (3) acceptable to the Director
- (c) The QMS program must provide a process for identifying deficiencies in the program and for documenting how the program will be changed to address these deficiencies;
- (d) Whenever the Director finds that the QMS program does not adequately address the procedures necessary to meet the requirements of this part, the FSTD qualification certificate holder must;
  - (1) after notification by the Director, change the program so the procedures meet the requirements of this part; and

- (2) each such change must be approved by the-Director prior to implementation
- (e) If the Director finds that there is a situation that requires immediate action in the interest of safety, he may, upon a statement of the reasons, require a change effective without stay.
- (f) A configuration management system should be established and maintained to ensure the continued integrity of the hardware and software as from the original qualification standard, or as amended or modified through the same system

## **Subpart C – Operating Requirements**

### **60.101 Inspection, continuing qualification evaluation, and maintenance requirements.**

- (a) Inspection. An FSTD qualification certificate holder must not use or allow the use of or offer the use of an FSTD for flight crewmember training, evaluation, or flight experience unless the FSTD qualification certificate holder does the following:
  - (1) accomplishes all appropriate objective tests each year as specified in the applicable FSTD criteria and;
  - (2) Completes a functional pre-flight check within the preceding 24 hours.
- (b) Continuing qualification evaluation.
  - (1) This evaluation consists of objective tests, and subjective tests, including general FSTD requirements, as described in the applicable QPS or as may be amended by the Director.
  - (2) The FSTD qualification certificate holder must:
    - (i) contact the Director to schedule the FSTD for continuing qualification evaluations not later than 60 days before the evaluation is due; and
    - (ii) provide access to the objective test results in the MQTG and access to the FSTD for the length of time necessary for the Director to complete the required continuing qualification evaluations.
  - (3) The frequency of continuing qualification evaluations for each FSTD will be established by the Director and specified in the FSTD qualification certificate.
  - (4) Continuing qualification evaluations conducted in the 3 calendar months before or after the calendar month in which these continuing qualification evaluations are required will be considered to have been conducted in the calendar month in which they were required.
  - (5) An FSTD qualification certificate holder must not use or allow the use of or offer the use of an FSTD for flight crewmember training or evaluation or flight experience requirements unless the FSTD has passed a-continuing qualification evaluation within the time frame specified in the FSTD qualification certificate or within the grace period as described in paragraph (b)(4) of this section.



- (6) For FSTDs qualified in accordance with part 60.67, the Director may accept evaluations conducted by the FQA as partial or complete satisfaction of the continuing evaluation requirements of this section.
- (c) Maintenance. The FSTD qualification certificate holder is responsible for continuing corrective and preventive maintenance on the FSTD to ensure that it continues to meet the requirements of this part and the applicable FSTD criteria. No FSTD qualification certificate holder may use or allow the use of or offer the use of an FSTD for flight crewmember training, evaluation, or flight experience requirements unless the FSTD qualification certificate holder does the following:
- (1) maintains a discrepancy log; and
  - (2) ensures that, when a discrepancy is discovered, the following requirements are met:
    - (i) a description of each discrepancy is entered in the log and remains in the log until the discrepancy is corrected as specified in part 60.109(b) and;
    - (ii) a description of the corrective action taken for each discrepancy, the identity of the individual taking the action, and the date that action is taken is entered in the log and;
    - (iii) the discrepancy log is kept in a form and manner acceptable to the Director and is kept in or adjacent to the FSTD. An electronic log that may be accessed by an appropriate terminal or display in or adjacent to the FSTD is satisfactory.

### **60.103 Logging discrepancies.**

Each instructor, check pilot, or representative of the Director conducting training, evaluation, or flight experience, and each person conducting the pre-flight inspection who discovers a discrepancy, including any missing, malfunctioning, or inoperative components in the FSTD, must write or cause to be written a description of that discrepancy into the discrepancy log at the end of the FSTD pre-flight or FSTD use session.

### **60.105 Interim qualification for new aircraft types or models.**

- (a) A FSTD qualification certificate holder may apply for and the Director may issue an interim qualification level for an FSTD for a new type or model of aircraft, even though the aircraft manufacturer's aircraft data package is preliminary, if the FSTD qualification certificate holder provides the following to the satisfaction of the Director:
- (1) the aircraft manufacturer's data, which consists of at least predicted data, validated by a limited set of flight test data;
  - (2) the aircraft manufacturer's description of the prediction methodology used to develop the predicted data; and
  - (3) the QTG test results.

- (b) An FSTD that has been issued interim qualification is deemed to have been issued initial qualification unless the Director rescinds the qualification.
- (c) Interim qualification terminates two years after its issuance, unless the Director determines that specific conditions warrant otherwise.
- (d) Within twelve months of the release of the final aircraft data package by the aircraft manufacturer, but no later than two years after the issuance of the interim qualification status, the FSTD qualification certificate holder must apply for initial qualification in accordance with part 60.67 based on the final aircraft data package approved by the aircraft manufacturer, unless the Director determines that specific conditions warrant otherwise.
- (e) An FSTD with interim qualification may be modified only in accordance with rule 60.107.

#### **60.107 Modifications to FSTDs.**

- (a) ***Description of a modification.*** For the purposes of this part, an FSTD is said to have been modified when:
  - (1) equipment or devices intended to simulate aircraft appliances are added to or removed from FSTD, which change the FSTD QUALIFICATION CERTIFICATE or the MQTG or;
  - (2) changes are made: to either software or hardware intended to impact flight or ground dynamics; or
  - (3) changes are made that impact performance or handling characteristics of the FSTD (including motion, visual, control loading, or sound systems for those FSTD levels requiring sound tests and measurements); or
  - (4) changes are made to the MQTG which do not affect required objective testing results or validation data approved during the initial evaluation of the FSTD are not considered modifications under this section.
- (b) ***FSTD Directive.*** When the Director determines that FSTD modification is necessary for flight safety, the FSTD qualification certificate holder of each affected FSTD must ensure that the FSTD is modified according to the FSTD Directive regardless of the original qualification standards applicable to any specific FSTD.
- (c) ***Using the modified FSTD.*** The FSTD qualification certificate holder may not use, or allow the use of, or offer the use of, the FSTD with the proposed modification for flight crewmember training or evaluation or for obtaining flight experience for the flight crewmember to meet any training, evaluation, or flight experience requirement under the CAR unless:
  - (1) The FSTD qualification certificate holder has notified the Director of their intent to incorporate the proposed modification, and one of the following has occurred;

- (i) The Director has approved the proposed modification.
  - (ii) Twenty-one days have passed since the FSTD qualification certificate holder notified the Director of the proposed modification and the FSTD qualification certificate holder has not received any response from the Director or;
  - (iii) The FSTD qualification certificate holder has successfully completed any evaluation the Director may require in accordance with the standards for an evaluation for initial qualification or any part thereof before the modified FSTD is placed in service.
- (2) The notification is submitted with the content as, and in a form and manner as, specified by the director.
- (d) **User notification.** When a modification is made to an FSTD that affects the FSTD Qualification Certificate, the FSTD qualification certificate holder must post an addendum to the FSTD Qualification Certificate until such time as a permanent, updated statement is posted.
- (e) **MQTG update.** The MQTG must be updated with current objective test results in accordance with part 60.67(k) and appropriate objective data in accordance with part 60.67, each time an FSTD is modified and an objective test or other MQTG section is affected by the modification. If an FSTD Directive is the cause of this update, the direction to make the modification and the record of the modification completion must be filed in the MQTG.

#### **60.109 Operation with missing, malfunctioning, or inoperative components.**

- (a) No person may knowingly use or allow the use of or misrepresent the capability of an FSTD for any manoeuvre, procedure, or task that is to be accomplished to meet training, evaluation, or flight experience requirements for flight crewmember certification or qualification when there is a missing, malfunctioning, or inoperative (MMI) component required to be present and correctly operate for the satisfactory completion of that manoeuvre, procedure, or task.
- (b) Each MMI component as described in paragraph (a) of this section, or any MMI component installed and required to operate correctly to meet the current FSTD QUALIFICATION CERTIFICATE must be repaired or replaced within 30 calendar days, unless otherwise required or authorized by the Director or the FQA.
- (c) A list of the current MMI components must be readily available in or adjacent to the FSTD for review by users of the device.
- (d) Electronic access to this list via an appropriate terminal or displays in or adjacent to the FSTD is satisfactory.
- (e) The discrepancy log may be used to satisfy this requirement provided each currently MMI component is listed in the discrepancy log.

**60.111 Automatic loss of qualification and procedures for restoration of qualification.**

- (a) An FSTD qualification is automatically lost when any of the following occurs:
- (1) The FSTD is not used in the operator's approved flight training program in accordance with rule 60.51(b)(5) and the FSTD qualification certificate holder does not obtain and maintain the written statement as described in rule 60.51(d)(2).
  - (2) The FSTD is not inspected in accordance with rule 60.101.
  - (3) The FSTD is physically moved from one location and installed in a different location, regardless of distance.
  - (4) The MQTG is missing or otherwise not available and a replacement is not made within 30 days.
- (b) If FSTD qualification is lost under paragraph (a) of this section, qualification is restored when either of the following provisions is met:
- (1) The FSTD successfully passes an evaluation:
    - (i) For initial qualification, in accordance with rules 60.67 and 60.67(c) in those circumstances where the Director has determined that a full evaluation for initial qualification is necessary; or
    - (ii) For those elements of an evaluation for initial qualification, in accordance with rules 60.67 and 60.67(c), as determined to be necessary by the Director.
  - (2) The Director advises the FSTD qualification certificate holder that an evaluation is not necessary.
- (c) In making the determinations described in paragraph (b) of this section, the Director considers factors including:
- (1) the number of continuing qualification evaluations missed;
  - (2) the number of Director-conducted quarterly inspections missed; and
  - (3) the care that had been taken of the device since the last evaluation.

**60.113 Other losses of qualification and procedures for restoration of qualification.**

- (a) Except as provided in paragraph (c) of this section, when the Director determines that the FSTD no longer meets qualification standards, the following procedure applies:
- (1) The Director notifies the FSTD qualification certificate holder in writing that the FSTD no longer meets some or all of its qualification standards.
  - (2) The Director sets a reasonable period (but not less than 7 days) within which the FSTD qualification certificate holder may submit written information, views, and arguments on the FSTD qualification.
  - (3) After considering all material presented, the Director notifies the FSTD qualification certificate holder about the determination with regard to the qualification of the FSTD.

- (4) When the Director notifies the FSTD qualification certificate holder that some or all of the FSTD is no longer qualified, the action described in the notification becomes effective not less than 30 days after the FSTD qualification certificate holder receives that notice unless—
  - (i) The Director finds under paragraph (c) of this section that there is an emergency requiring immediate action with respect to safety in air commerce; or
  - (ii) The FSTD qualification certificate holder petitions the Director for reconsideration of a finding under paragraph (b) of this section.
- (b) When a FSTD qualification certificate holder seeks reconsideration of a decision from the Director concerning the FSTD qualification, the following procedure applies:
  - (1) The FSTD qualification certificate holder must petition for reconsideration of that decision within 30 days of the date that the FSTD qualification certificate holder receives a notice that some or all of the FSTD is no longer qualified.
  - (2) The FSTD qualification certificate holder must address its petition to the Director
  - (3) A petition for reconsideration, if filed within the 30-day period, suspends the effectiveness of the determination by the Director that the FSTD is no longer qualified unless;
    - (i) the Director has found, under paragraph (c) of this section, that an emergency exists; and
    - (ii) requires immediate action with respect to safety in air operations.
- (c) If the Director finds that an emergency exists requiring immediate action with respect to safety in air operation and public interest:
  - (1) The Director withdraws qualification of some or all of the FSTD and makes the withdrawal of qualification effective on the day the FSTD qualification certificate holder receives the notice; and
  - (2) the notice must articulate the reasons for its finding that an emergency exists requiring immediate action; and
  - (3) it is impractical or contrary to the public interest to alter the effectiveness of the finding.
- (d) FSTD qualification lost under paragraph (a) or (c) of this section may be restored when either of the following provisions are met:
  - (1) The FSTD successfully passes an evaluation for initial qualification, in accordance with rules 60.67 and 60.67(c) in those circumstances where the Director has determined that a full evaluation for initial qualification is necessary; or
  - (2) The FSTD successfully passes an evaluation for those elements of an initial qualification evaluation, in accordance with rules 60.65 and 60.65(c), as determined to be necessary by the Director.
- (e) In making the determinations described in paragraph (d) of this section, the Director considers factors including:
  - (1) the reason for the loss of qualification;
  - (2) any repairs or replacements that may have to have been completed;
  - (3) the number of continuing qualification evaluations missed;

- (4) the number of FSTD qualification certificate holder - quarterly inspections missed, and;
- (5) the care that had been taken of the device since the loss of qualification.

## Subpart D – Records

### 60.151 Recordkeeping and reporting.

- (a) The FSTD qualification certificate holder must maintain the following records for each FSTD it operates:
  - (1) The MQTG and each amendment thereto.
  - (2) A record of all FSTD modifications affected under rule 60.107 since the issuance of the original FSTD Qualification Certificate .
  - (3) A copy of all of the following:
    - (i) Results of the qualification evaluations (initial and each upgrade) since the issuance of the original FSTD Qualification Certificate ;
    - (ii) Results of the objective tests conducted in accordance with rule 60.101(a) for a period of 2 years;
    - (iii) Results of the previous three continuing qualification evaluations, or the continuing qualification evaluations from the previous 2 years, whichever covers a longer period and;
    - (iv) Comments obtained in accordance with rule 60.65(c) for a period of at least 90 days.
  - (4) A record of all discrepancies entered in the discrepancy log over the previous 2 years, including the following:
    - (i) a list of the components or equipment that were or are missing, malfunctioning, or inoperative.
    - (ii) the action taken to correct the discrepancy.
    - (iii) the date the corrective action was taken.
    - (iv) the identity of the person determining that the discrepancy has been corrected.
- (b) The records specified in this section must be maintained in plain language form or in coded form if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Director.

### 60.153 Specific full flight simulator compliance requirements.

- (a) No device will be eligible for initial or upgrade qualification to a FFS at Level C or Level D under this part unless it includes the equipment and appliances installed and operating to the extent necessary for the issuance of an airman certificate or rating.
- (b) No device will be eligible for initial or upgrade qualification to a FFS at Level A or Level B under this part unless it includes the equipment and appliances installed and operating to the extent necessary for the training, testing, and/or checking that comprise the simulation portion of the requirements for issuance of an airman certificate or rating.

**60.155 FSTD qualification on the Basis of Foreign Qualification.**

- (a) The evaluation and qualification of an FSTD by a contracting State to the Convention on International Civil Aviation may be used as the basis for issuing a FSTD Qualification certificate to the certificate holder of that FSTD seeking the Directors approval.
- (b) The FSTD must successfully pass an evaluation for those elements of an evaluation for initial qualification, in accordance with rules 60.63 and 60.67 (a), as determined to be necessary by the Director.
- (c) The FSTD must successfully pass a complete initial qualification, in accordance with rules 60.63 and 60.67 (a) if the FSTD qualification certificate holder is seeking qualification at a higher level than the current foreign qualification.
- (d) FSTD operators of foreign-qualified FSTDs, upon request by the Director, must provide evidence of current foreign qualification for each such FSTD.

**60.157 Notification of Changes to Foreign Qualification Status**

The FSTD qualification certificate holder of any FSTD qualified under rule 60.65 must notify the Director within one working day of any suspension, revocation, modification, or other change of the status of the qualification of the FSTD by the (FQA).

**Subpart E – Aviation Training Devices****60.201 ATD Approval and Use.**

Before a person may use an ATD for administering or receiving pilot training, obtaining flight experience, or maintaining currency requirements for pilot certification or qualification under an approved training programme, the manufacturer of the ATD must, with respect to that ATD model and configuration;

- (a) hold a letter of approval issued by the Director under this part; or
- (b) hold an equivalent approval document issued by a contracting State to the Convention on International Civil Aviation that is acceptable to the Director; and
- (c) the person seeking to use the ATD must receive approval from the Director under rule 60.203

**60.203 Procedure for Approval of ATD Use.**

- (a) Any person seeking to use an ATD for pilot training, obtaining flight experience, or maintaining currency requirements for pilot certification or qualification under an approved training programme must request approval as follows:
  - (1) A person other than a pilot school certificated under Part 141 must apply for approval in a form and manner specified by the Director.
  - (2) Following satisfactory review of the applicant's request and inspection of the ATD for which approval is sought, the Director will issue a letter of approval to the applicant.

- (3) A pilot school certificated under Part 141 must describe, in each training course approved by the Director in which an ATD is to be used, the training to be administered using the ATD.
- (b) Any person seeking approval to use an ATD for pilot training, obtaining flight experience, or maintaining currency requirements for pilot certification or qualification under an approved training programme must:
- (1) Have the following documents readily available for inspection by the student and instructor:
    - (i) a list of the ATD components; and
    - (ii) a copy of the letter of approval issued to the manufacturer as noted in rule 60.201(a); and
    - (iii) a copy of the manufacturer's Qualification and Approval Guide for the ATD being used.
  - (2) Demonstrate that the ATD is able to:
    - (i) provide training in all elements in which it will be used; and
    - (ii) successfully pass a start-up self-test of control inputs by the computer and software; and
    - (iii) remain in the approved configuration during the training session.

#### **60.205 Modification of an Approved ATD.**

- (a) Except as provided in paragraph (b) of this section, an operator who modifies an approved ATD must submit notice of the modification in a form and manner prescribed by the Director
- (b) The notice requirements in paragraph (a) of this section do not apply to changes that have minimal effect on the functional capability of the ATD.
- (c) The Director may withdraw his approval for use of the ATD upon finding that the modification makes a material change affecting the functional capability of the ATD.