

## AMC to OR.GEN.210 NPA 2008-22c



**Your Career Your Industry Your Association**

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### Glossary

<b>AMC</b>	Acceptable Means of Compliance
<b>EASA</b>	European Aviation Safety Agency
<b>FAA</b>	Federal Aviation Administration
<b>FOM</b>	FSTD Operation and Maintenance
<b>FSETA</b>	Flight Simulation Engineer and Technician Association
<b>FSTD</b>	Flight Simulation Training Device
<b>NPA</b>	Notice of Proposed Amendment
<b>NSP</b>	National Simulator Program
<b>OR.GEN</b>	Organisation Requirements General
<b>QMS</b>	Quality Management System
<b>QTG</b>	Qualification Test Guide

## 1. Introduction

This document proposes an AMC to OR.GEN.210(c) and (d), which introduces simulation industry personnel technical levels, minimum qualified manning levels recommended to maintain qualified FSTD's and a standard technical personnel training logbook. This AMC is presented by the Flight Simulation Engineer and Technician Association (FSETA), a non-profit professional association representing flight simulation engineer and technician members globally.

The FSETA initiative has developed from many years of challenges experienced by the flight simulation industry. Employers and technical personnel have identified the difficulty in cross-referencing technical skills and experience. The movements between civilian, military and international operators or initial entry of technical personnel into the industry are significant challenges.

Consultation was sought with technical personnel, regulators, manufacturers, commercial and military operators, as well as industry working group specialists. From these consultations, the FSETA developed an Accreditation process that enables technical personnel to gain an international Accreditation.

The FSETA initiative was presented to EASA, Head of Flight Standards – Certification, and the FAA NSP Manager. Favourable support was received during these meetings leading to the invitation to submit this AMC to EASA and similar recommendation for the next Part 60 review by the FAA.

## 2. Scope

This AMC provides guidance to OR.GEN.210 (c) and (d). The recommendations covered are new to the flight simulation maintenance industry which is not a recognised profession to date and for which standard academic programs do not exist. This AMC will contribute to existing QMS practices and provide clarification applicable to technical personnel employed to maintain qualified FSTD's under EASA regulation on a daily basis.

The approval and incorporation of this AMC will provide the following benefits for the aviation training industry and simulation maintenance personnel:

- Define flight simulation maintenance as a formal profession
- Define professional technical levels applicable to simulation maintenance engineers and technicians
- Identify those that hold and maintain the professional technical levels as being 'qualified'
- Integration of existing technical personnel into the new professional levels
- Define acceptable academic, training and recordkeeping requirements
- Attract new entrants into flight simulation maintenance
- Improve the recruitment and transfer process for personnel within the industry
- Simplify the audit process of qualified technical personnel
- Ensure aircrews operating qualified FSTD's have access to technically qualified personnel at all times

### 3. Professional Technical Levels

The FSETA proposes three 'S' levels: S1, S2 and S3 for technical personnel which can be provided through the FSETA Accreditation process. Each level is renewable every 3 years and those holding a current 'S' level would be deemed 'qualified' under this AMC to OR.GEN.210 NPA 2008-22c.

#### 3.1 S1 Technical Level Description

The individual is capable of performing full preventative and planned maintenance and supervised work on selected corrective maintenance tasks. Skill can be demonstrated in the use of technical documentation and the ability to interface with logistics and procurement.

#### 3.2 S1 Technical Level Key Attributes

- Work unsupervised or with minimum supervision
- Perform and sign preventative maintenance on a FSTD

The S1 technical level can be obtained upon successful completion of FSETA Level 3 or 4. Refer to Appendix A, FSETA Membership and Accreditation document, Section 4.

#### 3.3 S2 Technical Level Description

The individual can demonstrate capacity as a maintainer of a FSTD. The individual can demonstrate an understanding of documentation and is able to interface with logistics and procurement to obtain parts or materials required to accomplish technical tasks. They can maintain existing or produce new technical documentation and procedural enhancements within their current operational environment and practices. The S2 level can perform all the necessary technical checks to ensure the FSTD is ready for daily operation.

#### 3.4 S2 Technical Level Key Attributes

- Work unsupervised as well as supervise an individual
- Perform or supervise preventative maintenance on a FSTD
- Perform corrective maintenance on a FSTD
- Successfully completed an aircraft systems ground course on same aircraft type FSTD's to ensure technical competency in performing the following tasks as documented in the QMS:
  - Perform all necessary technical checks to ensure FSTD is ready for daily operation
  - Run and check QTG's
  - Conduct a technical defect clearance session
  - Conduct a subjective evaluation session of FSTD performance
  - Conduct a subjective evaluation session of a visual database
  - Review and implement service bulletins

The S2 technical level is equivalent to a Level 5 FSETA Accreditation with the completion of the applicable aircraft systems ground course. Refer to Appendix A, FSETA Membership and Accreditation document, Section 4 for details.

#### 3.5 S3 Technical Level Description

The individual is in a technical supervisory role for a maintenance team and capable to act as the technical representative of an operator during FSTD evaluation sessions.

#### 3.6 S3 Technical Level Key Attributes

- Supervise a group
- Supervise preventative maintenance on a FSTD
- Supervise corrective maintenance on a FSTD
- Provide quality assurance of FSTD maintenance activities under their control
- Investigate root causes of recurring defects and implement corrective measures
- Point of contact for customer enquiries during daily operations
- Ensure knowledge and application of operators QMS within their group

- Successfully completed an aircraft systems ground course on same aircraft type FSTD's to ensure technical competency in performing the following tasks as documented in the QMS:
  - Perform all necessary technical checks to ensure FSTD is ready for daily operation
  - Run and check QTG's
  - Conduct a technical defect clearance session
  - Conduct a subjective evaluation session of FSTD performance
  - Conduct a subjective evaluation session of a visual database
  - Review and implement service bulletins
  - Provide technical support for recurrent self-evaluations, authority visits and follow up
  - Successfully completed an EASA recognised FSTD Evaluators course

The S3 technical level is equivalent to a Level 6 or above FSETA Accreditation with the completion of the applicable aircraft systems ground course and an EASA recognised FSTD Evaluators course. Refer to Appendix A, FSETA Membership and Accreditation document, Section 4 for details.

#### 4. Implementation Plan

For an FSTD operator to be compliant with the new technical personnel requirements, operators must provide detailed personnel technical records as detailed in Section 9 within 1 year upon implementation of this AMC. These records are available to FSTD operators who sponsor their technical personnel's FSETA accreditation.

#### 5. Issue of Technical Level Renewal and Upgrade

For the existing and future technical workforce to achieve an 'S' technical level the FSETA proposes EASA formally recognise the following FSETA Accreditation Level equivalencies:

Equivalency Table	
FSETA Accreditation Level	'S' Technical Level
Level 3 or 4	S1
Level 5 <sup>(1)</sup>	S2
Level 6 or Above <sup>(1)(2)</sup>	S3

<sup>(1)</sup>Requires aircraft systems ground course for the relevant aircraft type FSTD

<sup>(2)</sup>Requires recognised FSTD Evaluators Course

**6. OR.GEN.210(c)**

Current regulation OR.GEN.210(c): The organisation shall have sufficient appropriately qualified staff for the planned tasks and activities.

**7. AMC to OR.GEN.210(c)**

To ensure the best environment with minimal training interruptions an operator must provide suitably qualified technical support on-site at all times. FSTD turnaround between training sessions, periodic maintenance, defect rectification and critical tasks require a minimum number of skilled personnel to ensure the device qualification level is maintained for every training session.

Qualified FSTD operator manpower requirements per building:

- The minimum qualified manpower requirement must be 50% of the number of 'calculated' qualified FSTD's, rounded up to the nearest whole number.

Note: 'calculated' qualified FSTDs are based on the following:

- Each FSTD Level C or D device assigned a weighting of 1
- Any other qualified FSTD assigned a weighting of 0.5

The calculated result can only be applied as 1 if Level C or D devices are not operated. In any other case it will be 2. In both cases, all technical personnel must be qualified.

- 50% of qualified personnel on duty at any time must be S2 or S3 and the remainder S1
- Minimum number of 1 - S3 per aircraft type per operator
- An S2 or S3 may be qualified on more than one aircraft type
- Provision must be made for maintaining these minimum manpower levels during periods of vacation or unexpected absences

**Example:** If an operator has 4 Level D FSTD's and 3 Level 1 FSTD's within 1 building, the 'calculated' FSTD count is 6 (rounded up from 5.5). This equates to 3 qualified personnel on duty at any time of which 2 must be qualified as S2 or S3.

Technical level requirements that are deemed operationally critical tasks:

Task Description	S1	S2	S3
Complete and sign daily maintenance checks	Y	Y	Y
Complete and sign preventative maintenance checks	Y	Y	Y
Brief crews on FSTD safety and evacuation procedures	Y	Y	Y
Update navigational database	Y	Y	Y
Complete and sign daily technical checks <sup>(1)</sup>	N	Y	Y
Meeting crews between training session turnaround <sup>(1)</sup>	N	Y	Y
Perform defect clearance session with instructor pilot <sup>(1)</sup>	N	Y	Y
Perform a simulator flight test schedule with instructor pilot <sup>(1)</sup>	N	Y	Y
Evaluate regular performance test results (QTG) <sup>(1)(2)</sup>	N	N	Y
Technical support during periodic authority visits or self-evaluation sessions <sup>(1)(2)</sup>	N	N	Y
Post-regulatory or self-evaluation reporting and follow-up <sup>(1)(2)</sup>	N	N	Y

<sup>(1)</sup>Requires aircraft systems ground course for the relevant aircraft type FSTD

<sup>(2)</sup>Requires FSTD Evaluators Course

**8. OR.GEN.210(d)**

Current regulation OR.GEN.210 (d): The organisation shall maintain appropriate experience, qualification and training records to show compliance with paragraph (c) above.

**9. AMC to OR.GEN.210 (d)**

The organisation will hold and maintain an up-to-date technical logbook for all technical personnel. As a minimum, the logbook must contain the following:

- Name, employer, date of joining current employer; S1, S2 or S3 technical level, initial technical level date, current validity date, qualified aircraft systems
- Previous FSTD employment experience. From MM/YY to MM/YY, employer name, country, position held
- Aircraft system/s course records, course name, course provider name, date completed, length, assessment provider name
- FSTD evaluators course, course provider name, date completed, length
- QMS training records, course provider name, date completed, length
- All other FSTD related training records, course provider name, date completed, length, brief description of areas covered



**APPENDIX A – Membership and Accreditation Document**

Due to the size of the Membership and Accreditation Document the webpage link has been provided below:

<http://www.fseta.com/Services/Documentation.aspx>