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Title: Flight Simulation Training Devices Report for Initial and Recurrent Evaluation		
Responsibility: Assistant Director, Flight Operations Department.		

Irish Aviation Authority
FSTD EVALUATION REPORT

**The Times Building,
11-12, D'Olier Street,
Dublin 2,
Ireland
Ph: +353 01 603 1540
Fax: +353 01 677 4460**

IAA FSTD code: **IE314**
Aircraft type and variant: Representative of a Diamond DA42
Class of aeroplane / type of helicopter: Multi-engine piston
Engine fit(s) simulated: Austro Engine AE300

Contents

1. Flight simulation training device (FSTD) characteristics
2. Evaluation details
3. Supplementary information
4. Training, testing and checking considerations
5. Classification of items
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7. Evaluation team

The conclusions presented are those of the evaluation team. The IAA head office reserves the right to change these after internal review.

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1. Flight simulation training device (FSTD) characteristics

(a) Organisation operating the FSTD:	Atlantic Flight Training Limited
(b) FSTD Location:	Ballygarvan Upper, Kinsale Road, Cork, Ireland.
(c) FSTD Identification (Member State FSTD code / EASA FSTD Code):	IE-314
(d) FSTD Manufacturer and FSTD Identification serial number:	ALSIM Simulators A42MKII-12
(e) First entry into service (month/year):	April 2019
(f) Visual system (manufacturer and type):	HDVS – Panoramic projection system, 3-channel FOV 210 x 60
(g) Motion system (manufacturer and type) :	N/A
(h) Aircraft type and variant:	Multi-engine piston representative of Diamond DA42
(i) Engine fit(s):	Austro Engine AE300
(j) Engine instrumentation:	Garmin 1000 NIX – Cockpit Display System
(k) Flight instrumentation:	Garmin 1000 NIX– Cockpit Display System

2. Evaluation details

(a) Date of Evaluation: 21 st March 2023	(b) Date of previous evaluation: 22 nd April 2022
(c) Type of evaluation: initial <input type="checkbox"/> recurrent X special <input checked="" type="checkbox"/>	
(d) FSTD Qualification Level recommended: FFS <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> AG <input type="checkbox"/> BG <input type="checkbox"/> CG <input type="checkbox"/> DG <input type="checkbox"/> SC FTD <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 FNPT <input type="checkbox"/> I X II <input type="checkbox"/> III <input type="checkbox"/> MCC BITD <input type="checkbox"/>	
(e) Technical criteria primary reference document:	CS-FSTD (A) Issue 2
(f) Validation Data Roadmap (VDR) ID No:	ALSIM A42M2 DA42-VI QTG Chapter 12.2

3. Supplementary Information

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(a) Company representative(s): (FSTD operator, Main FSTD user)	Michael Smith, Daniel Lynch, Kyle Johnson, Mark Casey, Philip Smyth, Eva Casey
(b) FSTD seats available	2 Pilot seats, 1 Instructor seat, 2 Observer seats
(c) Visual databases used during evaluation	EICK 16, EIWF 21, EGLL 9L, EGLF 24, EGAA 07, LFPG 08L
Other: Next evaluation due April 2024	

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4. Training, testing and checking considerations			yes / yes (partially) / no / n/a
(a) CAT I	RVR 550m	DH 200ft	yes
(b) CAT II	RVR 300m	DH 100ft	n/a
(c) CAT III A/B (lowest minimum)	RVR m	DH ft	n/a
(d) LVTO	RVR m		n/a
(e) Recency experience			n/a
(f) IFR-training/check			yes / yes
(g) Type rating			n/a
(h) Proficiency checks			n/a
(i) Autocoupled approach			yes
(j) Autoland/Roll out guidance			n/a / n/a
(k) ACAS I / II			n/a / n/a
(l) Windshear warning system/predictive windshear			n/a / n/a
(m) WX-Radar			n/a
(n) HUD/HUGS			n/a / n/a
(o) FANS			n/a
(p) GPWS/EGPWS			n/a / n/a
(q) ETOPS capability			n/a
(r) RNP APCH LNAV			yes
(s) RNP APCH LNAV/VNAV			yes
(t) RNP APCH LPV			yes
(u) RNP AR APCH			n/a
(v) Other:			None

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5. Classification of Items

UNACCEPTABLE

An item that fails to comply with the required standard and, therefore, affects the level of qualification or the qualification itself. If these items will not be corrected or clarified within a given time limit (refer to period of rectification below), the Irish Aviation Authority may have to vary, limit, suspend or revoke the FSTD qualification.

RESERVATION

An item where compliance with the required standard is not clearly proven and the issue will be reserved for a later decision. Resolution of these items will require either:

1. An Irish Aviation Authority policy ruling;
- or
2. Additional substantiation.

UNSERVICEABILITY

A device that is temporarily inoperative or performing below its nominal level.

LIMITATION

An item that prevents the full usage of the FSTD according to the training, testing and checking considerations due to the unusable devices, systems or parts thereof.

RECOMMENDATION FOR IMPROVEMENT

An item that meets the required standard, but where considerable improvement is strongly recommended.

COMMENT


Self-explanatory

Period of Rectification

[As set out in AMC2 ARA.FSTD.100(a)(1)(b)]

Following an evaluation, it is possible that a number of defects are identified. Generally, these defects should be rectified and EASA notified of such action within 30 days. Serious defects, which affect flight crew training, testing and checking, could result in an immediate downgrading of the qualification level, or if any defect remains unattended without good reason for a period greater than 30 days, subsequent downgrading may occur or the FSTD qualification could be revoked.

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6. Results

6.1 Subjective/Functional

A Unacceptable

1	None
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B Reservation

1	None
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C Unserviceability

1	DECLARED - Item 6.1.C.9 from 2019 report remains open: No air available from air vents installed on the LHS and RHS of the cockpit instrument panel. Equipment has arrived. But is not yet mounted. Waiting on the electrician. Switch Fitted. IE314_142 (Click to see ticket) CLOSED
2	DECLARED - Item 6.1.C.20 from 2019 report remains open: Transponder 'failure' message; number 1 transponder inoperative. ALSIM Have fixed this with a software patch for the Garmin. We were not the first to report this. IE314_143 (Click to see ticket) CLOSED
3	DECLARED - Item 6.1.C.21 from 2019 report remains open: Warning messages always on: MFD and PFD database error. ALSIM Have fixed this with a software patch for the Garmin. We were not the first to report this. IE314_144 (Click to see ticket) CLOSED
4	DECLARED - No hold short points on generic airports. Not a requirement for FNPTII - added to future requirement. IE314_145 (Click to see ticket) CLOSED
5	DECLARED - At EICK, taxiway F there are no Wig Wags. Not a requirement for FNPTII - added to future requirement. IE314_146 (Click to see ticket) CLOSED
6	There was an intermittent mechanical vibration (pulsing) in both the LH and RH joy sticks during the subjective flyout.

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Potentiometer replaced. Placard erected for feedback
[IE314_147 \(Click to see ticket\)](#) **CLOSED**

D Limitation (Restriction)

1 None

E Recommendation for improvement

1

RH projector discoloration – very evident yellow hue visible on the RHS but acceptable at this time for FSTD training. It is recommended that the affected projector be replaced when a spare part becomes available.

AFTA are checking for availability once a week on major distributors online – Ebay Amazon etc – We will purchase one when it becomes available. Purchased and fitted.

[IE314_148 \(Click to see ticket\)](#) **CLOSED**

2

It was not clear at the FSTD what number to call in the event of an emergency.

Placard erected in SIM


[IE314_149 \(Click to see ticket\)](#) **CLOSED**

F Comment

1

It was noted that the FSTD operator now has an Ipad which can be used to control the IOS in addition to control at the IOS station.

[IE314_150 \(Click to see ticket\)](#) **NOTED/CLOSED**

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6.2 Objective

A Unacceptable

1	<p>QTG 2cii 1a – Flap change dynamics during take-off (retraction), was run manually during this evaluation. All three tolerance item graphs (airspeed, altitude and pitch) were completely outside allowed tolerances and could not be passed.</p> <p>Created ticket with ALSIM, some back and forth Still closed.</p> <p>IE314_151 (Click to see ticket) CLOSED</p>
2	<p>QTG 2dvi – Rudder response during approach, was run manually during this evaluation. The graph for tolerance item 'yaw rate' was completely outside allowed tolerances and could not be passed. Also the manual procedure should state that the Left rudder pedal should be pressed. Also it was noted that the rudder pedal position was offset at the start of the QTG by 9 degs (left pedal), 13 degs (right pedal) and 12 degs (no pedal movement).</p> <p>Ticket opened with ALSIM, the "offset" was resolved by the provided recalibration tool on the IOS. However, QTG cannot be passed still using the specific instructions in the QTG. Awaiting feedback from ALSIM. It will be looked at along with ticket IE314_151. See manual QTG attached in ticket.</p> <p>IE314_152 (Click to see ticket) CLOSED</p>


B Reservation

1	<p>DECLARED - Item 6.2.B.5 from 2019 report remains open: It was not evident how the software change history of the FSTD can be determined through the IOS functionality.</p> <p>Please see ticket below with PDF attachment of ALSIM Ticket system. If you require a more definitive statement from ALSIM Please let me know and I'll advise ALSIM of the same</p> <p>IE314_153 (Click to see ticket) REQUEST CLOSURE</p>
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E Recommendation for improvement

1	<p>The FSTD operator advised that six QTGs require re-mastering. Following a review of the quarterly QTG re-runs it appears that seventeen QTGs need to be remastered. The FSTD operator should provide to the IAA, for each QTG, the requirement for re-mastering, the old QTG and the new QTG. There was no time in this evaluation to review the seventeen remastered QTGs.</p> <p>IE314_154 (Click to see ticket) REQUEST CLOSURE</p>
2	<p>The QTG 4.c.i (VGS) re-run should have the result indicated on the re-run QTG.</p>

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	Requested that ALSIM include a check box and signature request on the page so that it cannot be overlooked in the future. IE314_155 (Click to see ticket) CLOSED
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F Comment

1	<p>The following QTGs were re-run during the evaluation 2cii 1a (auto + manual), 2civ 1b (auto + manual), 2dvi (auto + manual), 2dvii b (auto) and 4ci (VGS).</p> <p>Just an observation comment.</p> <p>IE314_156 (Click to see ticket) CLOSED</p>
2	<p>The evaluation team would like to thank all at AFTA for the very good presentation of the FSTD and their full assistance during the evaluation.</p> <p>Just an observation comment.</p> <p>IE314_157 (Click to see ticket) CLOSED</p>



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7. Evaluation Team

Name	Position	Organisation	Signature
Kevin Masterson	Technical Inspector IAA	IAA	
Capt. Bob Linehan	Flight Inspector IAA	IAA	
Daniel Lynch	Chief Flying Instructor AFTA	AFTA FSTD Operator	
Michael Smith	FSTD Maintenance Manager	AFTA FSTD Operator	
Mark Casey	Accountable Manager	AFTA FSTD Operator	
Kyle Johnson	Compliance Monitoring Manager	AFTA FSTD Operator	
Philip Smythe	Safety Manager	AFTA FSTD Operator	

For the Authority:

Signature: Name (FOI): Capt. Bob Linehan... Date: ...21st March 2023....

FSTD Standards

8. Retention of Records

The FOD.CAT3.F.801 FSTD Evaluation Report shall be retained in accordance with "FOD Filing System" policy FOD.113 and FOD.002.

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