

FLIGHT TRAINING DEVICE (FTD) 1 and 2 CHECKLIST

Initial Evaluation	Recurrent Evaluation	Upgrade Evaluation	Special Evaluation
Date of inspection / evaluation			
Name of Organisation			
Trade name (as applicable)			
SACAA ATO Number		SACAA/1	/ATO
Base of operation			
Postal address		Postal code	
e-mail address			
Telephone number		Cellular number	
Chief Simulator Instructor			
Chief Simulator Technician			
SIMULATOR INFORMATION			
SIMULATOR REGISTRATION		Z	P
ICAO Type Designator & Variant		-	
Engine Fit			
Flight Management System			
Avionics Suite			
FSTD Manufacturer			
FSTD Serial number			
Computer information			
Visual System			
QTG source (DATA & POH etc)			
INSTRUCTIONS, DEFINITIONS AND ABBREVIATIONS			
<ul style="list-style-type: none"> • ✓ - shall mean fully compliant (FC). [Yes] • X - shall mean not compliant (NC). [No] • N/A - shall mean that the requirement is not relevant to the FSTD. (N/A) • - - shall mean Not Reviewed (NR). [Not Checked] 			
DESCRIPTION OF FINDINGS/ REMARKS/ COMMENTS IN ACCORDANCE WITH INTERNATIONAL BEST PRACTISE			
<ul style="list-style-type: none"> • LEVEL 1 A Level 1 finding will require immediate action. This is an item which fails to comply with the required standard and therefore affects the level of qualification or the qualification itself. <ul style="list-style-type: none"> - If these items will not be corrected or clarified within a given time limit, the SACAA may have to suspend, vary, restrict, or revoke the FSTD qualification. • LEVEL 2 A Level 2 finding will require the submission of a corrective action plan (CAP) within 7 days of the finding. • LEVEL 3 A Level 3 finding will require the submission of a corrective action plan (CAP) within 14 days of the finding. • RESERVATION: An item where compliance with the required standard is not clearly proven and the issue will be reserved for later decision. Resolution of these items will require either: <ul style="list-style-type: none"> - A SACAA policy ruling or - Additional substantiation • UNSERVICEABILITY: A device, which is temporarily inoperative or performing below its normal level. • RESTRICTION: An item which prevents the full usage of the FSTD according to the training, testing and checking considerations due to unusable devices, systems or parts thereof. • RECOMMENDATION FOR IMPROVEMENT: An item which meets the required standard, but where considerable improvement is strongly recommended. 			

- **COMMENT:** Self-explanatory.

INITIAL EVALUATION TOWARDS QUALIFICATION:

Conduct a complete evaluation of all systems and functionality of the FSTD.

RECURRENT EVALUATION:

Conduct a sampling evaluation to establish working of systems and functionality.

UPGRADE, POST-MODIFICATION OR SPECIAL EVALUATION:

Conduct evaluation of only those systems or functions that are/ have been affected.

A. CAA RESPONSIBILITY: PRE-INSPECTION PREPARATION		N/A	FC	NC	Note
1.	Initial Only: Has the organisation formally applied for the registration and inspection of this simulator?				
2.	Revalidation: Has the organisation formally applied for the annual recurrent qualification of this simulator?				
3.	Is there proof of payment for this initial/ revalidation inspection?				
4.	Does the application clearly indicate the following?				
5.	ATO Post Holders				
	Contact telephone numbers				
	Postal address				
	Physical place of business				
6.	Does the organisation have an approved, up to date amended Training and Procedures Manual that includes syllabus and procedures for simulator training?				
B. ON-SITE INSPECTION					
1. INFRASTRUCTURE		N/A	FC	NC	Note
a.	Is the location of the simulator acceptable?				
b.	Is this location conducive to learning ie. noise, distractions, movement of people etc?				
c.	Are the buildings, furnishings and general appearance of this location acceptable?				
d.	Does the simulator have access control?				
e.	FSTD facility fire extinguisher				
f.	FSTD facility first aid kit				
g.	Emergency evacuation markings				
2. DOCUMENTATION – Simulator		N/A	FC	NC	Note
a.	Annual QTG's ran periodically throughout the year				
b.	Reports from previous evaluations				
c.	Simulator training authorisation sheets				
d.	Daily function pre-flight check record				
e.	Maintenance and defect logs				
f.	Charts /approach plates				
g.	Flight Logs				
h.	Simulator/instructor operating manual				
i.	Have the simulator instructors been trained on the Instructor's operating station and issued with an IOS certificate?				
3. DOCUMENTATION – User/ Third Party Training		N/A	FC	NC	Note
a.	User certificate				
b.	Lease agreement				
4. SIMULATOR					
Note 1: Where * is indicated next to an item, such item may be N/A in accordance with Device Standards, but limitations will apply to device specification in terms of training credits allocated.					
Note 2: Where several options are listed under an item, rule through the options not represented or not assessed.					
a.	Does the simulator database include South-African Airports with complete navigational data with corresponding approach facilities (usable within range) and updated within 28 days:				

b.	Does the FSTD have a sufficiently enclosed deck to exclude distractions?				
c.	Are documents including QRH, AFM, Checklist (Normal, Abnormal, Emergency) OR EFB available?				
d.	Does the simulator have a full-size panel of replicated system(s) which have actuation of controls and switches that replicate those of the aeroplane simulated? (<u>Note</u> : The use of electronically displayed images with physical overlay incorporating operable switches, knobs and buttons is acceptable).				
e.	Is the general set-up of the simulator, monitor, instructor station etc acceptable? (<u>Note</u> : Seating should include position for instructor and Examiner, or Authority Inspector).				
f.	Circuit breakers that affect procedures and/ or result in observable cockpit indications properly located and functionally accurate?				
g.	Is the Instrument panel active or a reasonable representation of an Instrument panel?	Active		Mock-up	
		N/A	FC	NC	Note
h.	Is the pilot/student seat acceptable and adjustable to achieve the design eye reference position appropriate to aeroplane and for the visual system to be aligned with that eye position?				
i.	Is the stick/yolk acceptable, and is the movement free and realistic?				
j.	Does the stick/yolk interface with the simulator program?				
k.	Are the rudder pedals acceptable, and is the movement free and realistic?				
l.	Do the rudder pedals interface with the simulator program?				
m.	Are the engine controls realistic?				
n.	Do the engine controls interface with the simulator program?				
o.	Is there a system/mechanism for the student/pilot to set the QNH/QNE?				
p.	Are there circuit breakers that affect procedures and/ or result in observable cockpit indications (properly located and functionally accurate)?				
q.	Does the simulator have the capacity for headsets?				
r.	Can the student communicate with the instructor via headset?				
5. EQUIPMENT					
a.	Oxygen masks				
b.	Headsets				
c.	Smoke goggles				
d.	Sunvisor				
e.	Escape hatches				
f.	Chart holders				
g.	Limit placards				
h.	Flashlights				
i.	Fire extinguisher				
j.	Crash axe				
k.	Gear pins				
6. INSTRUCTOR STATION					
a.	Is the instructor station acceptable?				
b.	Can the instructor set / control the scenario of the simulated				
c.	Can the instructor control the flight scenario with regards to emergencies?				
d.	Can the instructor communicate with the student/pilot via headset?				
e.	Is the interaction between the student and the instructor realistic and acceptable for simulated flight instruction to be effective?				
7. FLIGHT TRACKING AND PRINTING		N/A	FC	NC	Note
a.	Does the simulator program allow the flight to be tracked and the result printed?				
b.	Does the printed flight contain the correct profiles of the flight i.e. plan and side view?				
c.	Does the printed document reflect the duration of the simulated flight?				
C. SYSTEM FLIGHT CHECKS					

1. PREPARATION FOR FLIGHT					
a.	Flight deck design and function identical to aeroplane replicated?				
b.	Cockpit preparation (Pre-flight procedure)				
c.	FMS route planning and programming capability, including i.e. noise abatement procedures				
2. PRE-TAKE-OFF					
a.	Normal engine start				
b.	Alternate start procedures				
c.	Abnormal start and shutdowns (Hot start, hung start, tail pipe fire, other _____)				
d.	*Taxi – Thrust response				
e.	*Taxi – Power lever function				
f.	*Taxi – Ground handling				
g.	*Taxi – Brake operation normal and alternate				
3. TAKE-OFF					
a.	A/C engine parameter relationships				
b.	Acceleration characteristics (non-motion)				
c.	Nose wheel and rudder steering				
d.	Windshear				
e.	Crosswind (maximum demonstrated)				
f.	*Low-visibility take-off				
g.	*Landing gear, wing flap and leading-edge device operation				
h.	*Abnormal/emergency – RTO				
4. CLIMB					
a.	Normal				
b.	One or more engines inoperative				
c.	Noise abatement procedure				
5. CRUISE					
a.	Performance characteristics (speed vs. power)				
b.	High altitude handling				
c.	High Mach number handling (tuck/ buffet) and recovery				
d.	High IAS handling				
e.	TCAS				
f.	WX radar				
g.	GPWS/ EGPWS				
6. MANOEUVRES					
a.	High AOA, approach to stalls, stall warning, buffet, and g-break (all configurations)				
b.	Flight envelope protection (high angle of attack, bank limit, overspeed, other _____)				
c.	Turns with/ without speedbrake/ spoilers deployed				
d.	Normal and standard rate turns				
e.	In flight engine shutdown and restart (assisted and windmill) satisfactory.				
f.	Manoeuvring with one or more engines inoperative, as appropriate				
g.	Flight control systems failures, reconfiguration modes, manual reversion and associated handling				

7. ANY FLIGHT PHASE		N/A	FC	NC	Note
a.	ADSB operations				
b.	Air conditioning and pressurisation				
c.	De-icing/anti-icing				
d.	Auxiliary powerplant/ auxiliary power unit				
e.	Communications				
f.	Electrical				
g.	Fire and smoke detection and suppression				
h.	Flight controls (primary and secondary)				
i.	Fuel, oil, hydraulic and pneumatic				
j.	Landing gear				
k.	Oxygen				
l.	Powerplant				
m.	Autopilot and flight director				
n.	Flight control computers (ie. stability, control augmentation)				
o.	Flight display systems				
p.	FMC				
q.	Navigation system				
r.	Stall warning/avoidance				
8. DESCENT					
a.	Normal				
b.	Max rate (clean, with speedbrake)				
c.	With autopilot				
d.	Flight control system failures, reconfiguration modes, manual reversion and associated handling				
9. INSTRUMENT APPROACHES AND LANDING					
a.	PAR (vectoring)				
b.	Holding				
All engines operating (Manual)					
c.	NDB, VOR, VOR/DME				
d.	RNAV (GNSS)				
e.	RNAV (RNP)				
f.	ILS CAT I				
g.	ILS CAT II				
h.	ILS CAT III				
i.	Missed approach				
j.	Circling				
All engines operating (Automated flight)					
k.	NDB, VOR, VOR/DME				
l.	RNAV (GNSS)				
m.	RNAV (RNP)				
n.	ILS CAT I				
o.	ILS CAT II				
p.	ILS CAT III				
q.	Missed approach				
r.	Circling				
s.	Autoland				

One engine inoperative (Manual or Automated)		N/A	FC	NC	Note
t.	NDB, VOR, VOR/DME				
u.	RNAV (GNSS)				
v.	RNAV (RNP)				
w.	ILS CAT I				
x.	ILS CAT II				
y.	ILS CAT III				
z.	Missed approach				
aa.	Circling				
bb.	Autoland				
10. *VISUAL APPROACHES (SEGMENT) AND LANDINGS					
a.	*Manoeuvring, normal approach and landing all engines operating with and without visual approach aid guidance				
b.	*Approach and landing with one or more engines inoperative				
c.	*Approach and landing with max crosswind				
d.	*Approach and landing with flight control system failures				
e.	Crosswind (maximum demonstrated)				
f.	Windshear				
11. POST LANDING					
a.	Landing roll and taxi – Spoiler operation				
b.	Landing roll and taxi – Reverse thrust operation				
c.	Directional control and ground handling, with and without reverse thrust				
d.	Brake operation, to include autobrake system where applicable				
e.	Parking brake operation				
f.	Engine shut down and systems operation				
D. * VISUAL SYSTEM		N/A	FC	NC	Note
Note: Where the visual system is to be used for the training of manoeuvring by visual reference (such as route and airfield competence) the visual system should comply with at least that required for level "A" FFS – SACAA-FSTD A p1-C-25.					
a.	Continuous minimum collimated visual field-of-view of 45° horizontal by 30° vertical field of view simultaneously for each pilot.				
b.	A means of recording the visual response time?				
c.	System is free from optical discontinuities and artefacts that create non-realistic cues?				
d.	Visual textural cues to assess sink rate and depth perception during take-off and landing?				
e.	Horizon and attitude correlates to the simulated attitude indicator?				
f.	Minimum of 10 levels of occulting?				
g.	Light point contrast ratio – not less than 10:1?				
h.	Daylight, twilight and night visual capability?				
i.	Representative airport runways and taxiways				
j.	Visual ground segment (VGS)				
k.	Runway definition				
l.	Runway surface and markings				
m.	Runway lighting in use including runway edge and centreline lighting, visual approach aids and approach lighting of appropriate colours.				
n.	Instructor controls of – cloud base, cloud effects, cloud density, visibility in SM/KM and RVR in M/feet				
o.	Airport/aerodrome selection				
E. SOUND SYSTEM		N/A	FC	NC	Note

H. DE – BRIEF							
FSTD Operator Representatives							
SACAA Representatives							
FSTD Subjective Performance:		Satisfactory		Unsatisfactory			
FSTD Objective Performance:		Satisfactory		Unsatisfactory			
FSTD Quality System:		Satisfactory		Unsatisfactory			
I. RECOMMENDATION BY FSTD INSPECTOR							
FSTD to be		RECOMMENDED		NOT RECOMMENDED			
Conditions							
SIGNATURE OF PEL INSPECTOR		NAME IN BLOCK LETTERS		DATE			
J. I WAS DE-BRIEFED ON THE INSPECTION AND READ THE COMMENTS BY THE PEL INSPECTOR							
SIGNATURE OF INSPECTED ORGANISATION'S REPRESENTATIVE		NAME IN BLOCK LETTERS		DATE			
K. DECISION BY MANAGER TRAINING							
INITIAL		RECURRENT		UPGRADE		SPECIAL	
of FSTD with registration		Z	P	-			
is hereby		APPROVED		NOT APPROVED			
COMMENTS / RESTRICTIONS							
SIGNATURE OF MANAGER: TRAINING		NAME IN BLOCK LETTERS		DATE			