ADVANCED AVIATION TRAINING DEVICE (AATD) REQUIREMENTS

GACAR PART – 60

Organization Name			
Organization's Address		Contact Number	
Representative Name		Position	
Representative Contact Number		Email Address	

APPENDIX C. ADVANCED AVIATION TRAINING DEVICE (AATD) REQUIREMENTS

No.	Maneuvers and Tasks	GACAR Reference	COMPLIANCE YES	NO	NA
C.1	Purpose. This appendix describes how GACA evaluates an AATD for approval and authorized use. A BATD incorporating the additional specific advanced design simulation criteria will be evaluated for approval as an AATD on the basis of meeting or exceeding the additional criteria outlined in this Checklist (appendix C of FAA, AC No: 61-136B).		☐	☐	☐
C.2	Authorized Use. Except for specific aircraft type training and testing, an AATD may be approved and authorized for use in accomplishing certain required tasks, maneuvers, or procedures as applicable under GACARs parts 61 and 141. GACA will specify the allowable credit in the AATD LOA/Certificate for private pilot, instrument rating, instrument recency of experience, IPC, commercial pilot, and ATP.		☐	☐	☐
	Note 1: The flight experience allowance for the use of an AATD and the flight experience allowance for a flight training device (FTD) or a flight simulator towards obtaining an instrument rating may be combined. However, that combination may not exceed that allowed under part 61, §61.89 and may not exceed that allowed under part 141 appendix B (50 percent maximum of the required training).		☐	☐	☐
	Note 2: A part 141 certificated pilot school must obtain a specific authorization for the use of the ATD as part of that pilot school's approved TCO. This authorization must come from GACA.		☐	☐	☐
C.3	AATD Design Criteria. Devices presented for approval as an AATD must first meet or exceed the requirements for BATD approval criteria contained in Appendix B, Basic Aviation Training Device (BATD) Requirements. An AATD must display sufficient aircraft cockpit design, ergonomic features, and performance characteristics beyond that of the BATD approval criteria to qualify for the authorized uses appropriate for the AATD simulation devices. Since it is highly desirable for the pilot to be mentally immersed in a realistic aircraft cockpit when using an AATD, design features must significantly exceed those of a BATD cockpit layout.		☐	☐	☐
C.3.1	An AATD must include the following additional features and components:		☐	☐	☐
C.3.1.1	A realistic shrouded (enclosed) or unshrouded (open) cockpit design and instrument panel arrangement representing a specific model aircraft cockpit.		☐	☐	☐
C.3.1.2	Cockpit knobs, system controls, switches, and/or switch panels in realistic sizes and design appropriate to each intended function, in the proper position and distance from the pilot's seated position, and representative of the category and class of aircraft being represented.		☐	☐	☐
C.3.1.3	Primary flight and navigation instruments appropriately sized and properly arranged that exhibit neither stepping nor excessive transport delay.		☐	☐	☐
C.3.1.4	Digital avionics panel.		☐	☐	☐
C.3.1.5	GPS navigator with moving map display.		☐	☐	☐
C.3.1.6	Two-axis autopilot, and, as appropriate, a flight director (FD). This is only required when an autopilot is original standard equipment from the aircraft manufacturer.		☐	☐	☐

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C.3.1.7	Pitch trim (manual or electric pitch trim) permitting indicator movement either electrically or analog in an acceptable trim ratio (airplane only).		☐	☐	☐
C.3.1.8	An independent visual system, panel, or screen that provides realistic cues in both day and night VFR and IFR meteorological conditions to enhance a pilot's visual orientation in the vicinity of an airport including:		☐	☐	☐
a.	• Adjustable visibility parameters; and		☐	☐	☐
b.	• Adjustable ceiling parameters.		☐	☐	☐
C.3.1.9	A fixed pilot seat appropriate to the aircraft configuration, including an adjustable height and an adjustable forward and aft seat position.		☐	☐	☐
C.3.1.10	Rudder pedals secured to the cockpit floor structure, or that can be physically secured to the floor beneath the device in proper relation to cockpit orientation.		☐	☐	☐
C.3.1.11	Push-to-talk switch on the control yoke.		☐	☐	☐
C.3.1.12	A separate instructor station to permit effective interaction without interrupting the flight in overseeing the pilot's horizontal and vertical flight profiles in real time and space. This must include the ability to:		☐	☐	☐
1.	Oversee tracks along published airways, holding entries and patterns, and LOC and GS alignment/deviation (or other approaches with a horizontal and vertical track).		☐	☐	☐
2.	Function as air traffic control (ATC) in providing vectors, etc., change in weather conditions, ceilings, visibilities, wind speed and direction, light/moderate/severe turbulence, and icing conditions.		☐	☐	☐
3.	Invoke failures in navigation and instruments, radio receivers, landing gear and flaps, engine power (partial and total), and other aircraft systems (pitot, electric, static, etc.) by using either a keyboard or mouse.		☐	☐	☐
C.3.2	The following features and components are not required for GACA's approval of an AATD, but are encouraged:		☐	☐	☐
C.3.2.1	Multi-panel or wrap-around visual system providing 120 degrees or more of horizontal vision.		☐	☐	☐
C.3.2.2	Automated ATC communications, scenario-based training (SBT), or line-oriented type training in which the instructor can evaluate pilot performance without having to act as ATC.		☐	☐	☐
C.3.2.3	Simulated loss of performance and aerodynamic changes from ice accretion.		☐	☐	☐
C.3.2.4	Realistic aircraft engine sound appropriate to the aircraft configuration, power settings, and speed.		☐	☐	☐
C.3.2.5	A magnetic compass with incremental markings each 5 degrees, that displays the proper lead or lag during turns, and displays incremental markings typical of that shown in the aircraft.		☐	☐	☐
	Note: GACA will allow touch screen functionality to be used in an ATD for those functions or tasks executed in an aircraft that are simple push-button actions (or similar) to replicate similar actions on the instrument panel or flight deck, to control aircraft systems or avionics. However, for actions that require a twisting or turning action of a physical knob, and/or require a gripping or pulling action of a physical lever or handle to actuate a system in the aircraft, the trainer must have a similar physical knob/lever/handle representation in the AATD.		☐	☐	☐

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Remarks

Inspection Result	
☐ Satisfactory	☐ Unsatisfactory

No.	Inspector Name	Signature	Date (dd/mm/yy)