

UH-72A Lakota Flight Simulation Training Devices



Overview

CAE is responsible for the design and manufacture of helicopter training devices supporting pilot transition and proficiency training for the U.S. Army's UH-72A Lakota. As part of an initial contract from Airbus Helicopters in 2007, CAE has since delivered eight Level 6 Accredited UH-72A cockpit procedures trainers (CPTs) to the U.S. Army, supporting training activities at the U.S. Army Aviation Center of Excellence (USAACE) training site at Fort Novosel Alabama and Army National Guard (ARNG) Aviation Training sites in Pennsylvania (EAATS) and Arizona (WAATS). CAE continues to provide upgrades and enhancements to these devices delivered to the U.S. Army.

The UH-72A Lakota Helicopter

Developed by Airbus Defense and Space, formerly EADS North America, the UH-72A Lakota is the U.S. Army's multi-role light utility helicopter. The UH-72A Lakota entered service for the U.S. Army and National Guard beginning in 2007, and more than 400 helicopters have been delivered through 2020. The U.S. Army and National Guard use the UH-72A Lakota for a range of domestic missions, including homeland security, medical evacuation, drug interdiction, disaster relief and general utility support. The Army made the decision to replace the TH-67 Creek training helicopter with the UH-72A, which makes the Lakota the Army's primary training helicopter at Fort Novosel, Alabama.

UH-72A Synthetic Flight Training Simulator (SFTS)

CAE's UH-72A SFTS is a Federal Aviation Administration (FAA) Level 6-capable synthetic flight training device featuring an aircraft-specific cockpit with the fidelity and performance of a full-flight simulator without the motion system. The UH-72A SFTS fixed-based simulator includes a wide 200-degree by 70-degree field-of-view display system. Coupled with a high-fidelity Common Database (CDB) the visual system of the UH-72A SFTS immerses helicopter pilots in a high-fidelity synthetic training environment. CAE has completed significant testing and tuning, with close collaboration with U.S. Army and National Guard UH-72A pilots, ensuring the flight characteristics of the UH-72A SFTS match the performance of the actual UH-72A Lakota aircraft. CAE's UH-72A SFTS also includes a vibration system located within the simulator base frame, providing pilots with the realistic vibrations associated with rotary-wing aircraft flight. The UH-72A SFTS Instructor Operator Station is a highly-flexible, user-friendly system which optimizes instructional performance and can be controlled from the left seat or from behind the cockpit, providing maximum flexibility during training missions.

The CAE-built UH-72A training devices have been formally accredited by the U.S. Army's USAACE to certify the SFTS devices can be used to train UH-72A rated crew members in the performance of critical training tasks. The accreditation determines the accuracy and realism of the simulation, and CAE's UH-72A SFTS have surpassed the performance metrics established for this level of training device, thus allowing the Army to accomplish more training tasks in the UH-72A training devices than originally anticipated.

Current UH-72A Training Device Program

CAE delivered the first two UH-72A CPTs to EAATS in 2007. Since then CAE has developed a Level 6 accredited UH-72A SFTS and delivered the first of these high-fidelity devices to ARNG WAATS at Marana, Arizona. CAE modified and upgraded the two original CPT deliveries at WAATS and EAATS to the SFTS Level 6 configuration, and the first UH-72A Lakota SFTS was accredited by the Army in late 2014. CAE then delivered five additional UH-72A SFTS to Fort Novosel with the final device delivered in the spring of 2016. These eight devices at three training locations are currently supporting USAACE initial and transition training on the UH-72A helicopter as well as providing recurrent training to the ARNG at EAATS and WAATS.

CAE continues to support all delivered devices, providing visual system enhancements to the Common Database (CDB) in early 2017, relocation of CPTs from Fort Novosel to EAATS and WAATS in early 2020, and delivered technology and cyber security upgrades to the Fort Novosel devices in early 2022. CAE's UH-72A SFTS training devices are ready to support current and future USAACE and ARNG UH-72A training needs.

CAE Medallion-6000

The UH-72A SFTS is equipped with CAE's Medallion-6000 image generator, the latest member in CAE's powerful Medallion image generator family. The CAE Medallion-6000 provides a highly modular, scalable and portable visual solution designed to satisfy a full range of helicopter simulation training needs. The state-of-the-art out-the-window visual solution is closely targeted to rotary-wing simulation training and ensures the required field-of-view (FOV), image resolution, and scene content is delivered to support training needs. The UH-72A SFTS visual databases upgraded with the CAE-developed Common Database (CDB) architecture, significantly enhance the ability to correlate and rapidly update databases to support helicopter training and mission rehearsal requirements.



CAE 3000 Series

CAE 3000 Series helicopter flight and mission simulators provide an immersive training experience for the full range of military helicopter pilot training requirements. This CAE simulation capability offers unprecedented realism and fidelity for helicopter-specific mission training, including ship landing, search and rescue, hoisting operations, combat scenarios, confined area and rooftop landing, night-vision goggle missions and other operations. The CAE 3000 Series features CAE's industry-leading three degrees-of-freedom vibration platform along with a six degrees-of freedom CAE True™ electric motion system. The same full-fidelity simulation software used for the UH-72A SFTS is used in a CAE 3000 Series UH-72A full-mission simulator, thus simplifying concurrency and software updates across the range of UH-72A training devices.



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