

Hawk GBTS



CAE has a long history of designing, developing and supporting ground-based training systems (GBTS) to meet the simulation-based training requirements of operators of the BAE Systems Hawk lead-in fighter trainer. CAE has delivered Hawk training systems for the NATO Flying Training in Canada (NFTC) program, the Military Flying Training System (MFTS) program in the United Kingdom and the Royal Australian Air Force's Hawk 127 lead-in fighter training program. CAE also has extensive experience in the maintenance of Hawk training systems worldwide and currently supports the Indian Air Force Hawk Training Systems at Air Force Base Bidar as well as the RAAF Hawk 127 training systems at Williamstown and Pearce.

The Hawk AJT aircraft

Developed by BAE Systems, the Hawk Advanced Jet Trainer is one of the world's most successful and proven advanced jet trainer aircraft. The Hawk AJT provides pilots with a realistic training environment featuring its high-tech pilot-vehicle interface and in-flight simulation of sensors. The Hawk aircraft also delivers the most up-to-date advanced simulation for weapons, radar and defensive aids training. The Hawk AJT is currently used in training by more than 20 Air Forces worldwide, including recent orders by Australia, Oman and Saudi Arabia.



Hawk full-mission simulator

CAE has delivered and supports a twin-dome Hawk training system consisting of two full-mission simulator (FMS) devices for the Hawk Advanced Jet Trainer (AJT) at Royal Air Force (RAF) Valley. CAE has also delivered three Hawk full-mission simulators to the Royal Australian Air Force (two at Williamstown and one at Pearce). These systems consist of high-fidelity replica cockpits, each in their own dome visual display system (VDS). Each FMS has its own Instructor Operating Station (IOS) and is capable of stand-alone operation or, for collective training, the FMS devices can be linked into a single, shared training scenario.

The Hawk AJT FMS accurately simulates the aircraft and the mission environment it will operate in, simulating a realistic flight training environment for the trainee by providing state-of-the-art sound, motion (via dynamic G-Seat), and control loading systems. The Hawk FMS is equipped with CAE's Medallion-6000 image generators running databases based on the Open Geospatial Consortium Common Database (OGC CDB) standard. Immersion in the

training scenario is provided through the dome display system featuring a field-of-view of up to 360 degrees, combined with the use of CAE STRIVE computer generated forces (CGF) which interact with the embedded aircraft synthetic environment. The Hawk FMS can use the same full-fidelity simulation software as other Hawk training devices, thus simplifying concurrency and software updates.

Instructor operating station

CAE's existing Hawk FMS devices include a powerful instructor operating station (IOS) that affords instructors full control over all aspects of FMS operation. The IOS, using commercial-off-the-shelf PCs running the Windows operating system, is based around CAE's latest generation of instructor tools known as CAE Assist and is located in a separate room, removed from the FMS cockpit station.

CAE Assist is the result of more than 30 years of CAE experience in addressing the needs of the simulation and training market. It has been designed through the close cooperation between CAE's engineering team, pilots and instructors.

Your worldwide training partner of choice



CAE Medallion-6000

Each Hawk FMS is equipped with CAE's Medallion-6000 image generator providing a highly modular, scalable and portable visual solution designed to satisfy a full range of fast-jet simulation training needs. The state-of-the-art out-the-window visual solution is closely targeted to fast-jet simulation training and ensures the required field-of-view (FOV), image resolution, and scene content are delivered to support training needs. The Hawk visual databases are based on the OGC CDB standard which significantly enhances the ability to correlate and rapidly update databases to support fast-jet training and mission rehearsal requirements. The CAE Medallion-6000 image generator has been used on a range of fast-jet training solutions, including the Eurofighter Aircrew Synthetic Training Aids program, the Turkish Air Force F-16 training program and the German Tornado program.

Recent and Current Programs

In recent years, CAE has developed a suite of Hawk AJT aircraft simulators and training devices as part of an overall solution to meet the future aircrew training requirements of several customers worldwide, such as the Royal Australian Air Force. In addition to the provision of single-dome and twin-dome FMS solutions, CAE has designed and manufactured integrated procedures trainers, egress training devices, ejection seat training devices, other part-task trainers (PTT) and a range of brief/debrief systems. CAE also offers integrated support solutions for the Hawk GBTS and is uniquely qualified to provide a through-life training support service to the customer.



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