

T-90 Tank Training Systems

CAE's T-90 tank training systems provide the fidelity and realism necessary to efficiently and cost-effectively train the driver, gunner, and commander in the T-90 armoured vehicle. The comprehensive T-90 training system, developed in partnership with TATA Advanced Systems, is comprised of three state-of-the-art simulation devices designed to meet an army's most rigorous training and mission rehearsal requirements at home and in theatre. Housed in a container which accommodates a six degree of freedom motion platform, CAE's T-90 tank training systems are ready for deployment to any location.

CAE's T-90 tank training systems are not only designed to faithfully represent the instrumentation and controls, but the simulation environment provides the fidelity and realism to represent the physical reality in which the T-90 crew must work. The T-90 driver and crew compartments emulate the restrictive physical environment and ergonomics as well as the diffused lighting conditions experienced in the T-90 platform. The comprehensive T-90 training system also incorporates all vision devices, sighting systems, controls, switches, and indicators relevant to the training task.

Driver Training

The T-90 driver training device provides initial, continuation, and refresher training to individual drivers. This training device supports a range of training tasks, including procedures familiarization; instrumentation, communications equipment, and controls familiarization; and driving in a variety of conditions, such as terrain, visibility, underwater, and natural and artificial obstacles.

Gunner Training

The T-90 gunner training device supports initial and continuation training for individual T-90 gunner personnel as they develop gunnery skills and rehearse for target identification, tracking, lasing, and firing drills. In addition, the training device supports training tasks such as missile firing in static and moving conditions, handling equipment malfunctions and emergency situations, and battlefield exercises.

Crew Training

The T-90 gunner crew trainer provides initial and continuation training to the T-90 commander and gunner crew at the individual, crew, and troop levels. Along with developing individual skills, the gunner crew trainer creates a team environment to support the development of crew teamwork and coordination skills, tactical skills, decision-making and planning, and crew communications. Through effective training and rehearsal of these skills, the crew will improve its proficiency in working as a team and as part of an entire troop during combat operations.



Driver trainer



Full motion platform



Crew trainer

Instructor Tools

CAE's T-90 tank training system provides instructors with an intuitive, easy-to-use interface for creating and controlling training exercises, monitoring student performance, and conducting after action review (AAR) and analysis. The 2D plan and stealth views provide the instructor with a bird's-eye view of the virtual battlefield, including the student's vehicle and all friendly and hostile entities. This display allows the instructor to control the scenario (including environmental effects), monitor student's actions within the driver and crew compartment, and insert malfunctions. Instructors are able to access the same views as the students, including the images visible through the thermal sight and the gunner's and commander's sighting systems, and the driver's vision devices in order to monitor skill development. The training system also includes a simulated communications system to provide radio simulation and interphone communications between the crew and the instructor.

High fidelity, high flexibility

The detailed and realistic synthetic environment for CAE's T-90 tank training systems is created with CAE's Medallion™-6000 image generator and CAE STRIVE™ computer generated forces (CGF) software. The high performance, high resolution 3D image generators and display systems produce high-fidelity images in full perspective and depth representative of those seen in both day and night conditions through the driver's vision devices and periscopes as well as the gunner's and commander's vision devices and sighting systems, including thermal sight systems.

CAE's STRIVE™-CGF is an advanced synthetic tactical environment and computer generated forces software package. This off-the-shelf, proven software simulates a real-time virtual battlefield featuring high-fidelity computer-generated forces for air, land, sea, and space applications. It provides automatic or manual tactical movement and control of sensors, weapons and communications, ordnance fly-out until detonation, player vulnerability to different weapons types, and simulation of countermeasures and defensive systems.

Realistic Motion and Sound

Students experience the physical and auditory effects of driving under various conditions and firing the main gun while driving or stationary. A six degrees-of-freedom (DOF) motion system guided by dynamic algorithms reacts to the actions of the driver and provides the motion cues depending on the control inputs. An effective and realistic sound simulation system generates engine sound, track movement sound, battlefield noise, armament firing, and gun control equipment sound effects.

Interoperability

CAE's T-90 training systems are built using high-level architecture (HLA) compliant networking technologies. This allows the T-90 training systems to function as a stand-alone training environment or an integrated federate within a distributed network of training devices for exercising and mission rehearsal.

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