

# CAE Direct Fire Trainers



CAE designs, manufactures and supports a range of simulators to meet all direct fire training needs. Our solutions provide progressive training for basic gunnery, crew and turret skills with fully interactive training at the troop/platoon level in a realistic simulated operational environment.

CAE's family of direct fire trainers covers the full range of training devices, from stand-alone desktop gunnery trainers through to fully instrumented tank simulators that can be operated individually or in troop/platoon networks.

CAE's simulated sighting systems include day/night sights with normal and magnified views, thermal imaging or image intensification. Graticules and other imagery including laser range data are incorporated in the simulations. Computerized fire control systems including gun stabilization on the move are also simulated. CAE's gunnery trainers are highly modular to accommodate vehicle upgrades such as modified weapons or new ammunition types.



The basic gunnery trainers have targets that move simply on fixed tracks, whereas for training at a crew and troop/platoon level or above, a sophisticated intelligent computer generated forces (CGF) system can provide a high level of interactive tactical training.

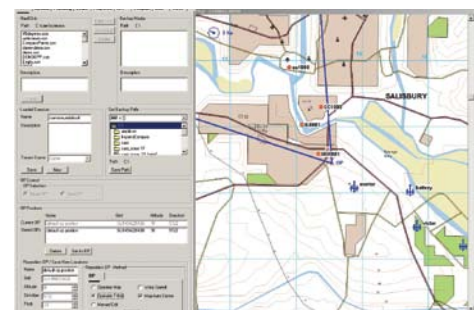
A controller station is provided to enable the instructor/operator to plan, oversee and review training. It typically includes:

- Graphical representations of the gunner's and commander's control panels that accurately reflect the system status.
- A stealth viewer that enables the instructor to view the same visuals as the crew and allows stealth viewing from any position in the database chosen by the instructor.
- A tactical map display at various zoom levels that displays all scenario entities using standard NATO symbology.
- Easy-to-use scenario creation facilities.
- After action review (AAR) facilities.
- A system which stores all information from an individual crew station to a platoon of four vehicles. The system automatically calculates and stores statistics on student performance, including accuracy of lay and engagement times.



## Experience

CAE has delivered a range of armored infantry fighting vehicles (AIFV), armored reconnaissance vehicles, and main battle tank (MBT) gunnery trainers to customers worldwide. The trainers, which represent platforms such as the Scorpion, Warrior, M60A3, and Leopard 2A4, feature high fidelity sighting systems (including magnification, thermal and image intensified sights and vision blocks), simulated fire control systems and full spatial representation of crew positions. If fitted to the real vehicle, stabilized turret firing on the move is an important feature included on many of the trainers. Where multiple trainers have been deployed, students may train individually, as a full crew, or multiple crews for collective tactical training.





## Features

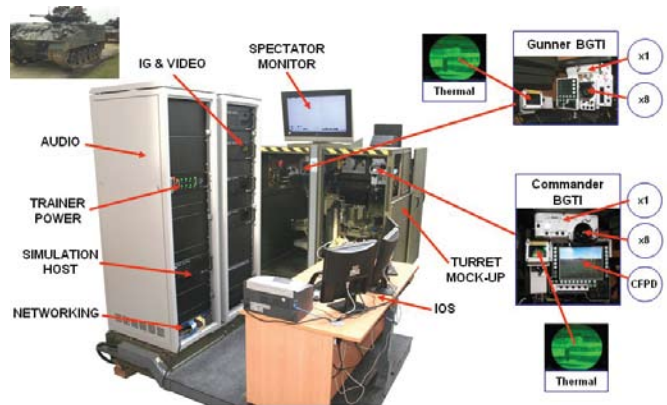
- Software features
  - A range of sighting systems including optical, image intensifier (II) and thermal imager (TI)
  - Full 3D terrain scene and target models
  - Drive through capability and “fire on the move”
  - Accurate ballistic simulation
  - Library terrain areas available
  - Summer and winter scenes
  - Interactive tactical map
  - Scalable computer-generated forces
  - Variable weather conditions
  - Dawn/dusk transitions
  - Variable visibility
- Unlimited number of exercises can be set up
- Record and replay facility
- Student assessment facility
- Student record management
- System features
  - Scalable range of devices to satisfy all training needs
  - High-level architecture (HLA) or distributed interactive simulation (DIS) compliant
  - Maps produced from the visual database to ensure 100 percent compatibility
  - Mobile systems available
  - Standard system software throughout the product range makes cross training simple

## Benefits

- Use of advanced technologies and enhancement features
- Reusable databases for other synthetic training devices
- Reduced instructor workload
- More effective training and monitoring
- Providing interoperability with other training devices
- Reduced costs

## Trainers

- Main battle tank (MBT) gunnery trainers
- Infantry fighting vehicle (IFV) gunnery trainers
- Air defence systems



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