

ZEN ARMOUR COMBAT TRAINING SYSTEM (ZEN ACTS™)



'Force-on Force' exercises in operational environment are doubtlessly the best form of mission oriented training for Mechanised Forces. Zen ACTS is a comprehensive system which meets this key training requirement. It is scalable for any force levels and configurable to MBTs and AFVs of armies' world over. The system evaluates professional skills of the crew and accurately registers outcome of tactical engagements between opposing forces thereby allowing the commanders at all levels to validate their plans and test the combat effectiveness of their command.

The basic module of Zen ACTS encompasses training in field craft, battle drills and tactical and gunnery procedures at Combat Team level. The system exploits superior technology and eye-safe laser to precisely simulate tank fire, accurately detect the hits, and incorporate high fidelity simulation to achieve realism and objectivity in training. Commanders at all levels are provided Exercise Control (Excon) to setup, conduct, monitor, control and evaluate tactical training from remote locations.

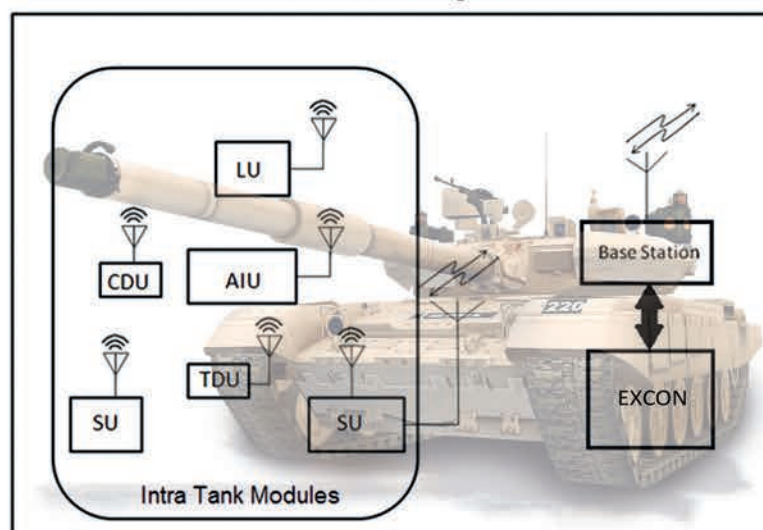
System Operation Modules:

- LASER Unit (LU): Simulates projectile trajectory and finds target range.
- Sensor Unit (SU): Detects the pulse coded laser from the LU.
- Transparent Display Unit (TDU): Displays fall of shot and tracer rounds to the gunner.
- Commander Display Unit (CDU): Displays status of the tank including allocated ammunition and target-end hits.
- ACTS Interface Unit (AIU): Interfaces tank control and ACTS subsystems.

Command and Control Subsystems:

- Exercise Control (Excon): Monitors, controls and records the conduct of exercise.
- Base Station (BS): Provides wireless communication between participants and Excon.
- Umpire Gun (UG): Associates various elements of ACTS to a tank and controls participant's status in an exercise in real time.

ZEN ACTS Block Diagram



Key Features:

- Real time Tank versus Tank battle in a risk-free environment with automated objective assessment.
- Retrofittable user friendly system, requires no modifications on the platform.
- Accurately simulates projectile trajectory of all types of ammunition.
- 360° detection capability with an accuracy of ± 5 meters.
- Real Time Clock & Dual-compass to display Time and Turret Azimuth Angle.
- Audio-visual alarm to indicate impact of hit; operational status of target AFV as per location of hit and corresponding extent of damage (K-Kill and M-Kill).
- Standard drills and existing tank controls retained to maintain realism.
- Graphical LCD with commander to monitor the Gunner and status of all modules.
- All modules wirelessly connected and independently powered by long endurance rechargeable batteries.
- Comprehensive After Action Review (AAR).
- Maneuvers displayed in real time on 2D Map with an option of 3D display.
- Provision to depict virtual minefields and artillery fire.

Components of ACTS



Laser Unit (LU)



Sensor Unit (SU)



Commander's Display Unit (CDU)



Umpire Gun



Exercise Control Unit (Excon)

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