



PROTECTOR

Remote Weapon Station Trainer

KONGSBERG



KONGSBERG provides a complete training solution for the PROTECTOR - Remote Weapon Station (RWS) that can easily be adapted and scaled to the customer's training needs. This training system is offered as part of the range of PROTECTOR - RWS products delivered by KONGSBERG.

Introduction

The PROTECTOR - RWS training solution has been designed to ensure the optimal operational effectiveness of the operators of the PROTECTOR - RWS whether the focus is the gunner or the entire crew. The scalable design of the system enables the customer to determine the level and extent of the training desired. The level of training can range from basic gunnery skills to full tactical team operations.

Training Concept

The PROTECTOR - RWS Training Concept can easily be scaled to meet the customer's different training needs. The complete training concept includes:

- Desktop / classroom training facilities
- Embedded training facilities
- Tactical training systems

Architecture

The training system is built upon a set of core software components designed to emulate the performance and characteristics of the live system. These core components include high fidelity simulations of:

- RWS Fire Control Unit
- 4-axis motion system
- Weapons ballistics
- Realistic visual terrain and models

Stab (Az/EI)

Lead Angle On
LRF: - - - - m RDY

Ballistic: 700 m
FOV: 3.0

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All of these software components provide a high fidelity baseline from which to design the desired training solution and to ensure the greatest level of realism in the training environment.

Realism

The PROTECTOR - RWS trainer has the same "look and feel" as the actual PROTECTOR - RWS equipment. The trainer allows all preparation/setup functions and all operational functions to be performed with realistic responses. The Gunner operates within realistic 3D terrain environment that includes visual effects for tracers and smoke grenades, weather effects, enemy engagements, and day/night conditions. Detailed target models are used to enable target recognition and identification. The super-elevation and lead angle are calculated to ensure that the trainee is required to operate the sight correctly in order to hit the target. The ballistics simulation included in the trainer can be adapted to any weapon used in the PROTECTOR - RWS.

Open Standards

The PROTECTOR - RWS training system is built using the current training standard protocols for interoperability. The system has a distributed architecture and can be delivered with both Distributed Interactive Simulation (DIS) and High Level Architecture (HLA). This architecture and the incorporation of DIS and HLA ensures the modularity of the system, the flexibility to expand the system, and ability to connect to existing systems to meet training demands.

Scalability

The RWS training system can be scaled from a single, stand-alone RWS gunner position, to a crew trainer complete with a driver and

commander, to a full-scale training centre with multiple crews training together in a tactical environment.

The basic configuration for the PROTECTOR - RWS training system includes:

- RWS simulation hardware (classroom, embedded or mock-up of cabin)
- RWS simulation software
- Training scenarios (includes intelligent target behaviour)
- Performance logging / Playback

The following options are also available as additions to the basic configuration:

- Instructor operator station
- Voice communications
- Driver and Commander positions
- Computer Generated Forces (CGF) simulation
- Integration of more than one RWS in a DIS / HLA network

Cost Effective

The PROTECTOR - RWS simulation software runs on a COTS Windows PC workstation. The latest products from the PC gaming industry are utilized to ensure the virtual environment includes high fidelity visual graphics. The use of COTS hardware and software components reduces the overall cost of the training system.



Stab (Az/EI)

Lead Angle On
LRF → PDV



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