**PROTEUS Periscope Simulator**

The PROTEUS Periscope Simulator provides the functionality and human interface of a real periscope.

The periscope optics display a variety of high-fidelity targets for the user to practise search routines to locate, recognise by type and identify by class.

Having visually identified enemy targets, the operator can use the PROTEUS Periscope Simulator optics to measure their range, bearing and estimate the angle on the bow.

Coastal and other navigation features are included, along with environmental conditions including: weather; sea state; and scene illumination based on the time of day - there is a natural transition between day and night at dusk or dawn.

The PROTEUS Periscope Simulator can be configured to represent the periscope on any submarine.

The PROTEUS Periscope Simulator can be linked to the PROTEUS Submarine CTT and other PROTEUS trainers.

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**FEATURES**

- Proven in operational training - provides low-risk, cost-effective training solution.
- Can be tailored to meet each user’s specific training requirements.
- Runs on COTS PCs.
- HLA evolved compliant (IEEE1516.2010).
- Can be federated with any other PROTEUS training system, or: Kongsberg Maritime’s POLARIS training systems.
- Third party trainers using either an HLA or DIS interface.
- Long-term follow-on support contract available.
PROTEUS PERISCOPE SIMULATOR

As a submarine’s primary aim is to remain undetected whilst positioning to attack a target or to gather intelligence, it will usually use passive sensors to detect its target. However, such sensors rarely provide accurate range to the target, nor its speed and course. To provide confirmation of target data prior to making an attack, the submarine may need to use its periscope. However, raising a periscope exposes the submarine to detection by the target vessel or its consorts. Therefore, the shorter the time the periscope has to be raised, the better is the chance of the submarine remaining undetected. The more familiar and better trained the periscope user is with the periscope’s optics and controls, the quicker the target information can be measured thus reducing vulnerable time at the surface and allowing the submarine to be taken back down to a safe depth as soon as possible.

The PROTEUS Periscope Simulator provides the functionality and human interface of a real periscope. Therefore, when looking through the optics the user sees a realistic target and environmental conditions, including sea state, visibility, weather and scene illumination based on the time of day, which includes a natural transitioning from light to darkness.

The PROTEUS Periscope Simulator is supplied with an appropriate library of accurate target models, traffic ships, helicopters and maritime patrol aircraft. If required, coastlines, navigation marks and even harbours can be included, allowing users to practice taking visual bearings when conning their submarine close to shore or in confined waters.

As part of KONGSBERG’s PROTEUS family of naval trainers, the PROTEUS Periscope Simulator can be operated stand-alone or networked with other PROTEUS systems, such as the PROTEUS Submarine CTT and the PROTEUS ASTT.