

MK3 EAGLE VIEWING DEVICE (EVD)



The EAGLE Mk3 Viewing Device (EVD) is multifunctional emulator of any Target Acquisition & Surveillance (TAS) device.

It can be used to emulate all current/future devices and reduces project lead times with zero risk.

Device Specifications:

- Display resolution:
 - * Binocular - 1440 x 1440 px (per eye)
 - * Monocular - 1900 x 1440 px
- HDMI connection for Video
- USB connection for power and buttons
- Precision 6DoF tracking with 360° range
- 6 x Joystick Buttons & 1 x Mouse
- Tripod Mount Plate
- Optional Ink splay Screen



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MORTAR FIRE TRAINING SYSTEM



MINERVA's Mortar Fire Training System (MFTS) developed in partnership with D3A Defence, enables a live mortar line to conduct training in a Live Virtual and Constructive environment for synthetic end to end training.

MFTS integrates with existing Defence Virtual Simulation (DVS) architecture allowing Mortar Fire Controllers to conduct training in identification and prosecution of targets using allocated Mortars.

Training Audience:

- Mortar Troop OC and 2IC
- Ab-Initio and trained Mortar Crew Members (No1, No2, and No3s)
- Assistant CPOs, CPOs and Mortar Line Section Commanders
- Mortar Fire Controllers (Alpha and Bravo)

Features:

- Open architecture and common protocols which enables integration into an array of simulation systems
- Configurable for use with single or multiple in-service training barrels to augment training
- All weather capability
- Untethered
- Distributed delivery
- Supports remote in the field networking of the Mortar Line
- Allows the Mortar Line to provide effects into DIS and HLA compliant simulated environments
- Developed field tested and manufactured in the UK



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FIRE CONTROL EMULATIONS



MINERVA have developed a number of fire control emulations, based on the UKs BISA and FCA applications to enable fire missions to be conducted in a Live Virtual and Constructive environment.

Live data is passed between Observer, Command Post and Fire Unit and alerts and indications are presented in the same way as on in-service systems.

All users are required to conduct drills, enter data and accept commands, as they would when live training, using the accurate emulation.

Example - observers can identify fall of shot and apply a correction which is sent over the network to the Commander and onto the Fire Unit. The observer receives 'SHOT' indication and 'ROUNDS COMPLETE' directly from the Fire Unit.

When integrated with MINERVA's Mortar Fire Training System (MFTS) this can supply quality virtual training in a synthetic environment that is both easy to set up and cost effective.

The fire Control Emulations can be integrated with the existing Defence Virtual Simulation (DVS) architecture or other simulation systems.

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HAWK DIS RADIO



Hawk Radio is a compact DIS (Distributed Interactive Simulation) based device that enables representative communication in a simulation environment generating “train as you fight” scenarios.

The generic form factor is specifically chosen to emulate the small handheld units that are currently in use with today’s military.

Other variants such as the Harris 152 or H4855 Personal Role Radio (PRR) are also available.

Hawk Radio configuration and management is achieved by a separate application resident on the training network allowing centralised communications management and recording for AAR.

By adhering to DIS standards, Hawk Radios are interoperable with all other DIS compliant training systems while wireless networking allows portable, untethered operation.

For more specialist requirements, Hawk is available in a chassis closely styled on the Harris AN/PRC-152A



Features:

- 2000mAh internal battery
- External 5v PSU
- Push-to-talk (PTT) button
- Remote PTT connector
- USB socket for computer headset



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SNIPER ROLE TRAINING SYSTEM



MINERVA's Sniper Role Training System (SRTS) developed in partnership with D3A Defence enables snipers to conduct role training in a Live Virtual and Constructive (LVC) environment for synthetic end to end training.

SRTS integrates with existing Defence Virtual Simulation (DVS) architecture, or other simulation systems, allowing snipers to conduct primary and secondary role training in identification and prosecution of targets using integral or allocated assets.

Training Audience:

- Sniper and Spotter
- Long Range Riflemen
- Marksman
- Sharp Shooters

Features:

- Open architecture and common protocols which enables integration into an array of simulation systems
- Configurable for use with single or multiple in-service sniper rifles
- All weather capability
- Tethered
- Distributed delivery
- Support Remote in the field networking of the sniper role within an LVC environment
- Allows the Sniper to identify engage and provide secondary role support to the attached manoeuvre arm commander into DIS and HLA compliant simulated environments
- Developed field tested and manufactured in the UK

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SIMSTATION



SIMSTATION is a Portable Role Training System, developed by MINERVA in partnership with D3A Defence. This mobile self-contained simulation station enables end to end synthetic training in a Live Virtual and Constructive (LVC) environment. PRTS is available in several configurations including single and dual screen and with up to 3 embedded PCs.

SIMSTATION can be integrated with COTS hardware/software and integrates fully with VBS4 whilst also capable of utilising existing Defence Virtual Simulation (DVS) architecture. This enables operators and trainees to conduct primary and secondary specific role training anywhere in the world.

Training Audience:

- Administrators
- Instructors
- Role players
- Tactics, Techniques and Procedures training
- Judgmental Training
- Command and control

Features:

- Open architecture and common protocols enabling integration into an array of simulation systems
- Configurable for use with single or multiple PRTS's to augment training
- Support connection of peripheral devices such as the MINERVA EVD or IZLID.
- LAN and WLAN 3G/4G/5G capable
- Supports remote in field networking of a synthetic environment
- Allows exercising troops to conduct end to end training in a Live Virtual and constructive environment whilst also utilising DIS and HLA compliant simulated environments

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HIGH FIDELITY F3 DEVICES

FIT, FORM AND FUNCTION



MINERVA can produce Fit, Form and Functionally correct replications of almost any piece of military equipment for use in the simulated environment.

Provision of high fidelity devices is subject to the provision of OEM approval and one of the devices to be replicated, but almost anything is possible.

Case Study—VECTOR 21

Features:

- Day and Night (single lens) Modes
- Dimensions – 210.9mm (L) x 178mm (W) x 82mm (H)
- Connectivity – HDMI & USB
- Weight – 1.2 Kg
- Tracking – 3-DOF (Roll, Pitch & Yaw to 0.0055deg)
- Mechanically Adjustable Eye Relief (15mm)
- Dioptic (-0.5 to +0.5)
- Interpupillary (59mm to 71mm)
- Magnification: 2.5x - Adjustable Night Image Focus and Screen Brightness
- Simulated DAGR Connection

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STANDARD DEFINITION F3 DEVICES



MINERVA have produced several standard definition viewing devices manufactured to replicate the Fit, Form and Function (dictated by the simulation host capabilities) of their military spec counterparts.

Example of devices already produced include the SOPHIE Lite, SOPHIE XF and TYR Laser Designator.

All devices are designed to seamlessly integrate into VBS or any other simulation system.

Devices are configured as a HID and work with the functionality provided by the host simulation system. In the case of VBS this can include a model of the replicated device itself.

Functionality can include high resolution thermal imagery, day or night modes, target information and range and bearing information.

If we haven't produced a simulated variant already and you require something new then please get in touch.

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REPLICATED INFRARED POINTERS



Replicated Infrared Pointers, developed in partnership with D3A Defence, enable Joint Terminal Attack Controller (JTAC), Joint Fires Officer (JFO), Tactical Air Control Party (TACP), Fire Support Team (FST) and Snipers, to conduct training in a Live Virtual and Constructive environment for synthetic end to end training.

The devices integrate with existing DIS/HLA compatible software's, including Defence Virtual Simulation (DVS) architecture allowing the training audience to conduct training in identification, marking and prosecution of targets using allocated air assets.

Current models include the IZLID Ultra and Cyclops III

Examples of training audience:

- JTAC
- JFO
- TACP
- Fire Support Team
- Sniper
- Aircrew

Features:

- Replicates full functionality (low, high and pulse)
- 6DOF Tracking
- Open architecture and common protocols enabling integration into an array of simulation systems.
- All-weather capability
- Tethered
- Distributed delivery
- Support Remote in the field networking of the JTAC/JFO
- Allows the JTAC/JFO to mark targets and provide effects into DIS and HLA compliant simulated environments.
- Handheld or rail mounted and can be mounted via a picatinny rail
- Remote firing switch enabling it to be adaptable for other user cases.
- Developed, field tested and manufactured in the UK

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LENTICULAR COMPASS



The Lenticular Compass has been developed by MINERVA and is capable of being customised with bespoke compass screens it is available as either a tethered or untethered device.

The compass operates independently of the simulation, utilising an Inertial Sensor to simulate the effect of magnetic north. When placed in its charge dock, the device acquires a mechanical reference to the simulation area (Mechanical North) but is also connected via serial connection to the simulation computer, which is then able to provide an angular offset to suit the simulation (Simulation North).

When removed from the dock, rotation of the compass body will result in rotation of the simulated compass disc (shown on an LCD display), to track Simulation North.

N.B the device specifically excludes magnetic effects.

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