ELI OÜ was founded in 1988 as a creative engineering company. In 1995 we started developing and manufacturing original military equipment.

We are extremely proud of our unique recoil simulators, which are highly valued by customers as very reliable and easily installed without any need to modify real weapons.

Several military shooting ranges use our easily transportable pop-up target systems Hardy and moving target systems Hardy M. Today we are already delivering the 5th generation of these devices.

Our forward observer and battle simulator Alfons 2M operates in a virtual environment and is primarily aimed at platoon leaders tactical training.

Besides the various authentic training equipment, we have additionally developed unmanned aerial systems (UAS), including authentic unmanned air vehicles catapult launcher and multi-rotors in various sizes.

Throughout the years, we have successfully collaborated with a number of international companies in the military area and as a result of these relations, we are today the leading company in the Baltic States with a wide variety of satisfied customers all over the world.
**Description**

**ALFONS 2M** is the next installment of ELI Ltd military simulators series controlled through completely rebuilt software solutions, simulating battle, artillery fire and forward observer commands. ALFONS 2M can be controlled by only one operator.

The centre of the simulator is a virtual environment which is based on a real and existing terrain in Estonia with roads and crossroads, plains, forests and buildings. The simulator focuses on forward observer commands and positional battles with virtual armored vehicles and infantry squads and platoons, which are all simulated through a new software engine. Simulator supports the use of handguns, automatic rifles, machineguns as well as anti-tank weaponry and provides an integrated simulator for forward observers. A rangefinder for artillery fire is contained within the virtual environment.

The hardware weapons in use with the simulator have an advanced **gas-based recoil system** installed. The simulator allows for up to nine weapon positions simultaneously. As an addition, the simulator uses a laser rangefinder to measure distances on the virtual terrain.

**The main focus** of the simulator is different defense operations and battles near crossroads, forests, or in areas where sight is partially obstructed by buildings.
Description
Radio controlled mobile target set “Hardy” is a full featured system for outdoor shooting ranges for small arms fire. Target installation is quick and easy because of its small size and light weight. Each target mechanism is provided with a bullet resistant ARMOX® shield that eliminates the need to build a wall for ballistic protection. They feature simple and reliable construction with minimum maintenance requirements.

Each target has a hit detector. The hit count is transmitted back to the control unit on request. The microprocessor-based target units have several built in programs that can be actuated by the remote control unit.

Different sizes of easily interchangeable infantry pop-up targets are available. Targets are equipped with low level illumination for night shooting. A hand-held radio control unit controls the targets. The microprocessor-based unit has several built-in programs and is capable of controlling up to 99 individual targets at 1 km range. The display shows program and target status and the number of hits on each target. The controller can be externally programmed from PC, enabling to create custom scenarios beforehand or on site.

The system is packed into a small passenger car trailer with weatherproof cover. All parts are effectively secured in place and the trailer can be locked. Battery chargers for simultaneous charging of all target units and a charger for control unit are provided.

ARMOX is a registered trade mark for SSAB Oxelösund AB.
HARDY-M

Description
Radio controlled battery driven moving infantry target set „Hardy-M“ is an outdoor system for live fire exercises. The system features 4 lightweight target trolleys that can be operated simultaneously or independently from each other. Target trolleys are integrated with radio controlled and programmable pop-up target mechanisms.

The system is intended for shooting ranges where permanent track layout is not feasible. Monorail track can be assembled on site for any desired length. Standard 3m rail elements are quickly and easily joined together without any need for tools. Rail elements are made from stainless steel, giving them excellent durability and environmental protection. Only a small wall for ballistic protection is needed due to minimal overall system size.

The target trolley case is also made of stainless steel. Polyurethane wheels ensure a quiet operation. It is capable of moving at speeds up to 15 km/h, adjustable in 9 steps. The speed and direction of targets are controllable via remote control and they can be set to continuous left-right traversal.

The pop-up target mechanisms are integrated with trolleys. Pop-up mechanisms have the functionality of our portable target set “Hardy”, including built-in programs with remotely adjustable parameters, hit count reporting, adjustable hit sensor sensitivity level and night illumination. The hand held radio control is easy to use and intuitive to operate with a range of 1 km.
Description

Personal Firing Range Simulator is ideal for individuals of all age groups, who are interested in target shooting. Simulator consists of imitating training gun (based on M16), camera module and target sheet or target module together with special software to be installed on personal computer.

Personal Firing Range Simulator is easy to set up and meant to be used indoors, at temperatures from +15 to +30°C.

Technical requirements and additional information:

Range: 5 meters

PC Requirements: Windows OS (Windows 2000 or later)

Target/module:

1) Power source 220 V adapter OR

2) NiMH 4.8 V, 8000 mAh, endurance per one recharge cycle around 250 hours, recharge time around 10 hours OR

3) Target Sheet with light-reflecting rim

Weapon battery: NC 8.4 V, 2200 mAh, with one recharge cycle can fire around 500 shots.
**Description**

Simulator allows aim and fire training indoors for up to nine positions. Simulator uses static shooting range targets.

It is possible to use different firearms and automatic weaponry for training, including M16, AK4, AK-47. For automatic reloading of the weapons and recoil simulation, special manufactured recoil adapters are used. The adapter is placed inside the weapon, replacing the lock from the weapons and spring from the magazine. A special, easily refillable CO₂ container is placed inside the weapon, which - depending on weapon type - can fire around 50 shots without reloading. The container is easily refilled again from a 7kg CO₂ balloon, that comes with the product. The balloon holds enough CO₂ for around ten thousand shots.

A special camera module is placed on the weapons, which sends an image to software program that analyzes weapon position and direction at the moment of firing. This information is used to determine the bullet travel trajectory and thus the position on target. Weapon movement is also recorded prior to each shot.

**What’s in the product:**

Simulator consists of nine separate firing positions. Firing positions are separated into three groups, where each holds three weapons. Operating computers are connected to base computer, which gathers the data and visualizes them for the instructor and trainees. The base computer holds control over all other computers within a local network and the firing results and sessions are stored in a database and represented on screen.

**Simulation allows:**

- safe indoor environment training
- up to 9 trainees training simultaneously
- observing the precise weapon movement prior to and during each shot and represents the results on screen
- stores session results in database for further review
M-GOLF

60mm, 81mm and 120mm mortar simulator

Description
The mortar simulator M-Golf is intended for field training a mortar team to aim and fire in conditions close to real firing. The appearance and the operation of the simulator are identical to the real mortar. It uses pressurized CO₂ gas for propulsion of special non-explosive rounds. The range is brought down to 1:10 scale enabling the user to use small training area.

Due to innovative construction, the M-Golf has superior accuracy and it is easy and very cost-effective to use and maintain. The actual size of the barrel opening is smaller than the real weapon to prevent accidents with live ammunition.

Different round charges are simulated by changing the operating pressure. A microprocessor-based control unit controls the charging of the reservoir and its pressure. Sighting and aiming are calibrated to simulate an actual weapon. The ballistic tables and wind corrections are used for sighting and aiming as in the case of real firing.

With a minimum charge the 81 mm mortar simulator can fire at least 1000 shots and with maximum charge at least 200 shots using the 10 L CO₂ gas reservoir.

With a minimum charge the 120 mm mortar simulator can fire at least 850 shots and with maximum charge at least 170 shots using the 10 L CO₂ gas reservoir.

Special multi-usable simulation rounds with hardened tip are used for shooting. Inside the shell is a specially constructed reservoir for CO₂ gas and a container with an environmentally friendly hit marker to simulate an explosion.
Description
The simulator SIM4MU is aimed to develop basic skills of operating light anti-tank weapons. This device enables to practice aiming and shooting at standing and moving targets.

SIM4MU uses unmodified weapon equipped with camera module and sensor. These modifications do not affect the weapon handling parameters and if removed, the weapon can again be used for live firing. Presently available recoilless anti-tank weapons: RPG, M69, B300, Carl Gustaf, PF89 grenade launchers and 106mm, SPG9. Precise ballistic data of used weapons are built into the program. Additional weapons can be adapted on request.

SIM4MU requires only a small room for practice – 7 x 4 m is sufficient. Shooting is performed at 5 m distance from the video screen. The speed of the target can be simulated in the 0...50 km/h and the wind speed in the 0...15 m/s range, environmental temperature can be changed in the -5 to +25 °C range.

The instructor operating station enables to monitor weapon status and shot results of every individual shooter during the exercise. The course of exercise is recorded and can be replayed and analyzed with trainees. Individual results are stored in the database.
Description

Unique “tubeless” recoil system from ELI Military Simulations provides recoil for automatic and semi-automatic handguns and gives the user a realistic feel of live firing. The recoil system can be used with wide variety of simulators as well as for basic weapon training.

Instead of traditional tubes of pressurized air, the system incorporates liquid CO2 reservoirs located in the weapons magazine. It gives the user freedom of movement, thus significantly widening the area of its use compared to conventional systems.

Another advantage of the system is that it can be installed on real unmodified weapons. The modifications do not affect the weapons handling parameters. If needed, the weapons can be converted back for live firing in just a few minutes.

The magazines can be refilled in seconds and reloading of the weapons is carried out exactly the same way as with its original parts. The shot count is at least equal to the magazine cartridge capacity, but in most cases exceeds it by factor of two or three.

Presently the “tubeless” recoil imitation is available for the G36, BERYL, T81, SWD, M14, M16, M4, AK4, AK47, Galil ARM/SAR, UZI, PM 84/98 automatic rifles and for the machine gun MG3, PKM, UKM2000 and RPD. Recoil imitation is also available for SIG SAUER, Heckler & Koch, Glock, FN, Beretta, TT and CZ pistol models. We have also recoil simulators for Sako TRG, TOR and BOR sniper rifles.

Additional weapon models for tubeless recoil can be adapted on customer request.