SECURITY SYSTEMS

SMALL ARMS TRAINING SIMULATOR

SAC+

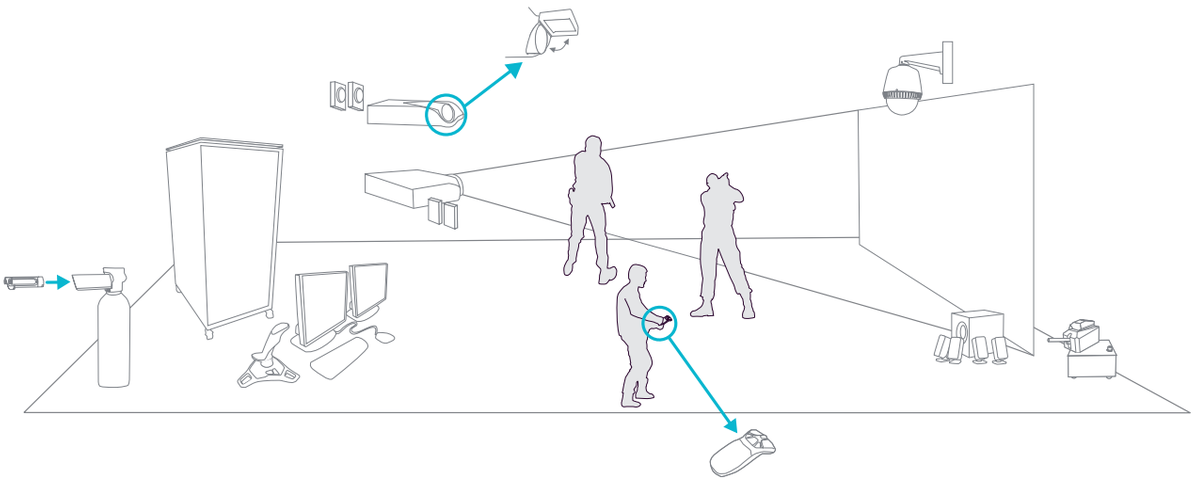
In security you cannot choose the second best option

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SMALL ARMS TRAINING SIMULATOR



Within the range of simulators developed by Indra, we find SAC+, designed to help instructors in marksmanship and tactical training.

Introduction

SAC+ is a simulator specially designed to improve army marksmanship training through a virtual reproduction of a shooting range where all types of parameters such as target type, shot distance, light and weather conditions can be set.

The instructor can define and create marksmanship exercises and obtain information for their analysis.

Its versatility allows the implementation of all instructional practices used by the security forces.

SAC+ allows carrying out tactical training individually or in groups. Missions can be created by the instructor in 3D-settings, in which trainees interact with different people, hostile or not, projected on the screen –with complete freedom of movement and many ways to reach the targets.

System features

- Tactical exercise generator with scenario and mission management
- TTS Technology, which allows the instructor to create his own messages and acoustic warnings
- Equipment, designed for continuous and lasting use
- Capability to plan courses and manage simulator users
- High-resolution projection system
- HLA Intercommunication
- Simulator contains a target editor which allows the instructor to create his own targets
- Surround sound provides "total immersion" to the trainee
- Capability of creating special atmospheric and light effects
- Hostile fire device controlled by the instructor
- Recording and playback system which monitors both the trainee and simulated exercise

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General weapon simulated system features

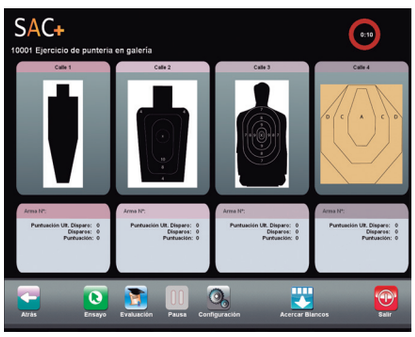


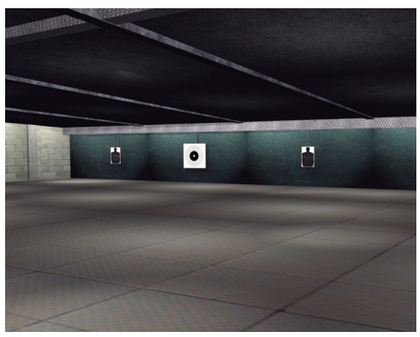
A quick and complete reversible change is done to the weapon to convert from real fire to simulated and vice versa. Complete with wireless monitoring and the ability of activating simulated malfunctions.

The choice of weapons where these systems can be installed is wide: Beretta 92, Beretta 96, Beretta M9, Glock 17, Glock 19, Llama 82, H&K USP Compact, H&K USP Standar, as well as rifles, machine guns, among others.

Once installed in the weapon, the system works completely independently without connecting to external devices, including in the magazine a compressed-air rechargeable component, to simulate recoil.

Shooting range





SAC+ has several virtual shooting ranges with different dimensions and features including 10 lanes for simultaneous shooting.

The instructor can vary weather conditions as well as the target type, distance, movement types and speed and wind direction, among other parameters.

A ballistic model is used to calculate the projectile trajectory depending on the distance to the target, weather conditions and gun caliber, giving maximum precision in the shot calculation.

Tactical exercises generator





The exercise generator makes the instructor task of adapting exercises to the training needs easier.

The instructor creates his own exercises choosing the scene and the meteorological conditions, inserting characters and vehicles on the console map, configuring the weapons and each character's behavior and performing any other necessary set up actions.

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Intelligent tactical environment

















Maps. SAC+ offers the instructor detailed maps and information regarding all the settings, allowing precise monitoring as the exercise unfold

Tactical support. : SAC+ allows the instructor to use events, objects and tactical signal elements.



Database. SAC+ has several scenarios related to tactical training featuring the ability to enter buildings. It also includes complete character and vehicle libraries. Buildings can be entered in the scenarios.

New exercises generator. The simulator has a setup station with an intuitive user interface which allows the instructor to design, generate and /or modify tactical exercises

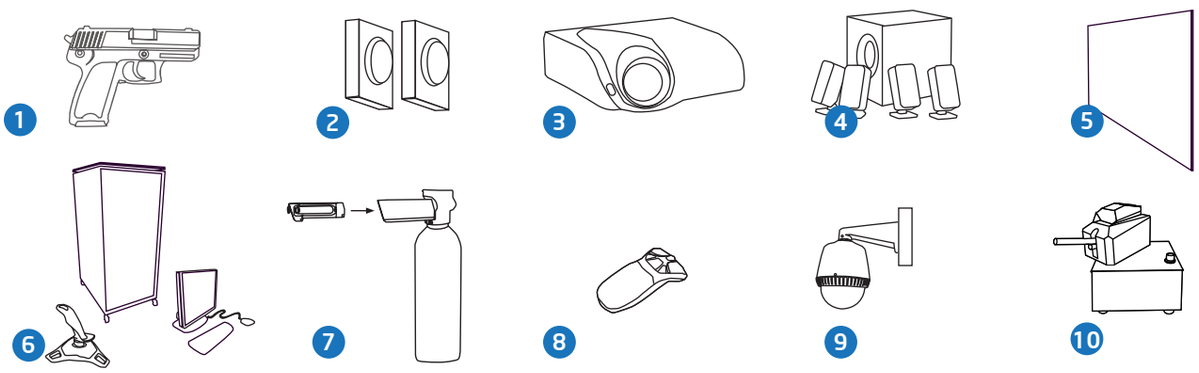
Artificial intelligence. Indra has developed its own artificial intelligence system which gives virtual characters the ability to communicate among themselves, collaborate as a team and behave in a real way.

The instructor has the possibility of populating the scenarios with characters which have configurable lethality and resistance levels, resulting in different impact effects, depending on the part of the body hit

Light intensifier: with its help SAC+ allows nocturnal marksmanship training. Scenario details are modeled with the related emissivity features of the represented elements

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Components



1 **Simulated system for real weapon:** Without external connections

2 **Shot detection system:** Detects all impacts

3 **Projection system**: Cutting-edge technology

4 **Audio system**: 3D-surround digital sound system

5 **Projection screen:** large-format flat screen

6 **Instructor operating station:** Commercial computer with an easy-to-use and customized interface. It includes a joystick which allows the instructor to manage the shooter's point of view throughout the scenario.

7 **Refill system:** Capacity to fill magazines with CO_2

8 **3D-Mouse (optional):** Individual movement system through the scenarios

9 **Recording and reproduction system (optional):** Records the trainees during exercises

10 **GLADIUS (optional):** Hostile fire system managed by the instructor

Benefits



Safety. No real ammunition is used so accidents are avoided.

No real-weapon modification necessary. The simulation system is installed in the unmodified weapon, making logistics easier and reducing maintenance costs.

Costs reduction. Costs derive from weapons ammunition and logistics are minimized.

Experience. Indra has a wide technical experience in security and armed forces training.

Detailed evaluation. Evaluable parameters such as reaction time, speed of response and correctness of the response are increased.

Adaptability and modification. SAC+ can be modified or updated in a quick and easy way without the need of advanced technical knowledge.

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