



Vrinda Technologies Private Limited

Simplifying Electronics

Advance Small Arms Training Simulator





Advance Small Arms Training Simulator

- Wireless system -8 lanes
- Facilitates Marksmanship training
- Both for Individuals and groups
- 3D software enables handling of various small arms
- Exercise battle handling of weapons for both individuals and groups



Advance Small Arms Training Simulator- Purpose

- It keeps trainees trained at a fraction of cost of real training
- It contains all features of battlefield and training ranges
- Instructor can guide the trainee in improving the skills using replays & reports



Advance Small Arms Training Simulator- Advantages

- Tailor made – Any specific training requirement
- Completely safe and can be operated 24X7- Round the clock training
- All battle field conditions – Rain, Dust, Fog and Storm
- Different types of weapons – varying terrain & environmental conditions



Advance Small Arms Training Simulator- Advantages

- No damages to the actual costly equipment
- Variable target sensitivity to meet specific training requirements
- Preview of range can be provided
- One TB Storage
- Records of firing results stored for future reference
- Different sky modes, time of day and visibility range can be set



Advance Small Arms Training Simulator- Advantages

- Target range upto 1000 Mts
- Aimer is provided
- Effective correction tool- result analysis, immediate fault detection and fault correction
- Different sky modes, time of day and visibility range can be set
- Latest configuration PC is provided
- Software support- Devnagri/Roman Hindi



List of Weapons

- Pistol
- Carbine
- Insas Rifle
- Insas Light Machine Gun
- Sniper Rifle
- Grenade Luancher
- All Small Arms weapons



Power Requirement

- Power supply of 240V at 50 Hz.
- It will work single phase and commercial 3 phase power supply



Working Place

- Needs a dark Room
- 12Mtr X 9Mtr X 3Mtr
- The system operates for 6 hours and more.
- The service life of the system is 10 years.
- The system can operate effectively in an air conditioned room temperature.



Principle of Operation

- After an exercise is set, weapon is enabled for trainee to take an aim and fire at the target. The Projection device has a sensing device which tracks the movements of weapons and records them on Database. Recoil of weapon is simulated.



Principle of Operation

- The simulator allows modified weapons to be integrated. All weapon characteristics are sustained in the modified versions. No of bullets and weapons can be varied. Different types of targets are provided.



Overall Description

The simulator is easy to operate. It prepares trainees for real-life situations.

It has complex exercises to raise the skill level of trainees. Instructor can create scenarios to make training more specific.



Functional Description

- **User Interface:** User Interface is simple to use. Operation requires basic knowledge of computers.
- **Database:** All the data related to the system and training is stored in Database. This well-structured Database allows one to know the state of Simulator.

Software modules are designed in a such a manner that it can be upgraded.



Reporting

- Various types of report such as Individual Reports, Group Reports,
- Parameterised Reports, and Proficiency Report are provided



Exercises Provided

- Aiming
- Grouping
- Static
- Moving
- Snap shot
- Video Scenario
- Tactical Scenario

Aiming

- With visual feedback (normal/regular target)
- Advanced (moving pendulum)
- It gives audio visual output with score
- In normal mode a trainee has a facility to view the bull's eye of the target. While the trainee is on bull's eye a visual indication shall be given to the trainee.



Aiming

- In advanced mode the trainee can continuously track a pendulum.
- Provision of varying the speed of the pendulum.
- It gives audio visual output with score.



Grouping

- This exercise allows the instructor to judge the grouping capability of a fire. The simulator gives a feedback on Hold, Aim and Trigger (HAT) operations of the trainee.
- Replay can be provided
- Hold Graph



STATIC

- Static Target of application fire would be provided in standard mode as per the user requirement
- Timed practice
- Facility to control environmental effects in tactical scenarios like wind velocity, day/night conditions, patterns and types of clouds, fog, dust, smoke etc.,



STATIC

- Scores are provided for inner, middle, outer hits and misses.
- Scores are provided in terms of percentage also. Further the customisation of the scoring pattern as per the user's requirement can also be provided
- Static targets, which rotate on being hit, are provided



STATIC

The replay of all firers can be viewed simultaneously or individually.

- In case of individual fire practice, the replay can be viewed in normal as well as zoom mode.
- There is a facility to study the muzzle movement of the weapons during a complete cycle of fire practice



STATIC

- Replay shall provide the point of aim, the point of impact and follow through of individual firer, and can be viewed in normal and zoom modes to facilitate the instructor to interpret the mistakes being committed by the firer and to suggest corrective measures.
- Analysis of each shot fired is provided in the report



STATIC

- Print out of the results is comprehensive and includes details like target used, type of ammunition fired, type of weapon, name of the firer etc.
- Provision of seeing the print preview is available.
- Graphical depiction of the hold of the weapon, showing horizontal, vertical and oblique movements is available.



Moving

- The system has default targets. Besides there is a provision to have user defined targets.
- The system is capable of controlling the speed of the target.
- The system has the facility of replaying the tracking of a target in conjunction with movement of the firer. Details of each bullet fired on the target can be given by the system.



Moving

- Instructor can choose the default paths provided or define their own path. An orthographic view is also provided for defining paths.
- There is a provision of changing the special effects, as provided for the static Targets
- Targets can appear in various profiles like head-on, oblique, lateral, on random path & etc



Snapshot

- For each snapshot target uptime, downtime, number of exposures and special effects can be customised and controlled.
- Targets with rotating option are provided wherein, if the target is hit it will rotate.
- Facilities similar to static targets like changing special effects, replaying etc, are provided.



Snapshot

- An exercise where the targets appear at random points are provided. The instructor also has an option to define the points of appearance of the targets.
- Exercises are provided in which each firer is assigned a target with different shape and colour combination. The target shall appear randomly.



Snapshot

- A snapshot exercise where each firing lane is assigned a different colour of target is available. The targets shall appear randomly.
- Facility to preview the range is provided



Video Scenario

- Scenarios ranging from simple to Complex like hostage rescue, ambush, patrolling, VIP Security, CI Ops etc are provided. The system has the provision of customisation of scenarios.



Tactical Scenario

- Different types of operational environment are provided like built up area, high rise buildings, shopping malls, historical monuments, desert area, jungle and mountainous terrain etc.

Different kinds of scenario and movements can be created.



Targets

- Light vehicle target
- Medium vehicle target
- Heavy vehicle target
- Further the system has provision to incorporate user defined targets as per their requirements.



Scenario Builder

- The Scenario Builder allows the instructor to design his own scenarios. The created scenario can be saved used in the simulator.

Misc

- The system also includes:
- LCD Monitor 21” with PC connectivity
- Laser Jet Printer
- UPS with minimum 2 years of guarantee
- Option to select language of Graphical User Interface of the software application is provided. The GUI can be selected from Devnagari/Roman Hindi apart from default English.





THANK YOU

By
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Hyderabad