

संख्या. पी-63013/94/02/2023/मोड- I/सीसुबल 2557-67

भारत सरकार, गृह मंत्रालय
महानिदेशालय सीमा सुरक्षा बल
(रसद निदेशालय: आधुनिकीकरण सैल)
(Email-comdtord@bsf.nic.in)
(Fax: 011-24367683)

ब्लाक संख्या . 10,
सीजीओ काम्पलैक्स,
लोधी रोड, नई दिल्ली-03.
दिनांक 09 अगस्त 2023

सेवा में,

महानिदेशक:- आसाम राईफलस (through LOAR), केन्द्रीय ओद्योगिक सुरक्षा बल,
केन्द्रीय रिजर्व पुलिस बल, भारतीय तिब्बत बोर्डर पुलिस, सशस्त्र सीमा बल,
राष्ट्रीय सुरक्षा गार्ड एवं पुलिस अनुसन्धान एवं विकास ब्योरो

विषय: अनुमोदित गुणात्मक आवश्यकता /परीक्षण निर्देशों का प्रेषण

तकनीकी विशेषज्ञों के उप समूह द्वारा किए गये सूत्रीकरण एवं महानिदेशक सीमा सुरक्षा बल द्वारा अनुमोदित "Advance Small Arms Training Simulator (ASATS)" उपकरण के संसोधित गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

संलग्न : उपरोक्तनुसार

इन्द्र देव सिंह

(इन्द्र देव सिंह)
उप महानिरीक्षक (रसद)

प्रतिलिपि :-

1. तकनीकी निदेशक
The Technical Director
राष्ट्रीय सूचना-विज्ञान केन्द्र, नोर्थ ब्लाक,
गृह मंत्रालय, नई दिल्ली
NIC, North Block, MHA
New Delhi (द्वारा ई-मेल)
(ई-मेल पता : mpsugandhi@nic.in)
: आपसे अनुरोध है कि उक्त उपकरण के गुणात्मक आवश्यकता /परीक्षण निर्देशों को MHA website (Division of MHA+ -Police Modernization Division- Qualitative Requirements- Qualitative Requirements of Machinery & Eqpt Items with Surveillance item) पर अपलोड करने का श्रम करें [श्रम संख्या- 43 के स्थान पर अपलोड करें]
2. SO (IT), North Block, MHA
(Through E-mail)
(E-mail address: soit@nic.in)
: कृपया उपरोक्तानुसार कार्यवाही करने का श्रम करें।
3. तकनीकी विंग, सीमा सुरक्षा बल
: कृपया उक्त उपकरण के गुणात्मक आवश्यकता/परीक्षण निर्देशों को सीमा सुरक्षा बल की वेबसाइट पर अपलोड करने का श्रम करें।
5. प्रशिक्षण निदेशालय, सीमा सुरक्षा बल
: आपके यूओ संख्या-4971 दिनांक 12 मई 2023 के सन्दर्भ में अनुमोदित "Advance Small Arms Training Simulator (ASATS)" (उपकरण के संसोधित गुणात्मक आवश्यकता /परीक्षण निर्देशों को आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु प्रेषित जाता है।
6. फाईल

QRs & Trial Directives of Advance Small ARMS Training Simulator (08 Lane) - Revision

S/No.	Proposed QRs Specification	Procedure suggested for Trial for BOO	Result expected / Desired
1.	The Advance Small Arms Training Simulator System shall be wireless.	To be physically checked by BOO.	As per requirement mentioned in the QRs.
2 (a)	<u>Training requirement</u> <u>Simultaneous Firing</u> The system should be capable of enabling minimum 08 Lane or more to practice (fire) simultaneously and independently on different targets each at different ranges and capable of being controlled and operated by one instructor using a single console	To be physically checked by BOO.	The system should function satisfactorily.
2 (b)	<u>Feel of Firing</u> The system shall give feel of actual recoil, acoustic corresponding to real weapon parameters. The firm should supply single recoil kit and magazine per weapon/Lane	To be physically checked by BOO.	The system should give desired feel and sound.
2 (c)	<u>Multi Weapons Facilities</u> i) The system shall have the capability to adapt all types of small arms used in CAPF like INSAS,SLR,X95,Barreta & Pistol etc. with their sights. It should also have the capability to adapt Small Arms of other types also which may be incorporated in forces in future. ii) Modification/ Up gradation as and when required in the weapons shall be carried out by the firm till life time of eqpt /system. iii) The system should be compatible to replicate various open sights, telescopic sight & reflex sight provided with different weapons including night sights. iv) The list of small Arms and Sights be obtained from tendering CAPFs. Note:- The firm shall have an obligation to provide calibration for new sights as and when inducted in the CAPFs within the life period of equipment.	i) To be physically checked by BOO. ii) BOO should check the undertaking. iii) Check the performance with applying available sights	The system should work efficiently with all types of weapons and sights.

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S/No.	Proposed QRs Specification	Procedure suggested for Trial for BOO	Result expected / Desired
2 (d)	<p>Squad Post Training Squad post training shall be provided in two modes. i) With visual feedback (normal/regular target) ii) Advanced moving pendulum. iii) In normal mode a trainee has 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 iv) In advanced mode the trainee shall continuously track a pendulum. There should be provision of varying the speed of the pendulum/similar/better alternative</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.
2(e) (i)	<p>Application Fire i) Static Target Practice Static Targets of application fire need to be provided in standard mode as per the user requirement. Additional features in Static targets shall include :- a) Timed Practice b) The system shall have the Facility to change the special effects like change in tactical scenarios, wind velocity, night conditions, pattern and type of clouds, fog, dust, smoke, position/ direction of sun etc. c) Scores shall be provided for inner, middle, outer hits and misses and in terms of percentage of score attained. There shall also be facility of customizing the scoring pattern as per the requirement of the user defining more regions on the practiced target. d) The system shall be capable of replaying fires of all firers simultaneously or of an individual firer. In the case of individual fire practice, the replay can be viewed in normal and zoom (4x) mode. Facility shall be there to study the muzzle movement of the weapons during a complete cycle of fire practice</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.

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S/No.	Proposed QRs Specification	Procedure suggested for Trial for BOO	Result expected / Desired
	<p>e) Replaying shall be provided of the point of aim, the point of impact and follow through of individual firer and can be viewed in normal and zoom (4x) mode to facilitate the instructor to interpret the mistakes being committed by the firer and to suggest corrective measures.</p> <p>f) The system shall have the capability to control the replay speed.</p> <p>g) The system shall give analysis of each shot fired.</p> <p>h) Print out of the results shall be comprehensive and shall include details like target used, type of ammunition fired, type of weapon, name of the firer etc. There shall be also provision of seeing the print preview and down load it in PDF format.</p> <p>j) Graphical depiction of the hold of the weapon, showing horizontal, vertical and oblique movements shall be provided.</p> <p>k) Static targets, which rotate on being hit shall be provided.</p>		
2(e) (ii)	<p><u>Moving Target Practice-</u> <u>Moving Target</u> exercises shall be provided with the following features :-</p> <p>a) The system should have its default targets. Besides user defined targets as specified above to be provided.</p> <p>b) Should be capable of controlling the speed of the target.</p> <p>c) Should have the facility of replaying the tracking of a target in conjunction with movement of the firer. Details of each bullet fired on the target be given by the system.</p> <p>d) Instructor shall be able to choose the default paths provided to define their own path. An orthographic view shall be provided for defining paths.</p> <p>e) For moving target fire practices there shall be provision of changing the special effect, as has been asked for the static targets.</p> <p>f) Target must appear in various profiles like head on, oblique, lateral on</p>	To be physically checked by the BOO.	As per the requirement mentioned in QRs.

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S/No.	Proposed QRs Specification	Procedure suggested for Trial for BOO	Result expected / Desired
	random path etc. g) Engagement of aerial target at variable speed & Altitude e.g. UAV and Drones of various size and shapes should be provided by the system for LMG/ Small Arms for height upto 1000 mtrs, Size 10" to 6', Speed upto 40 km/Hr.		
2(e) (iii)	<p>Snapshot practice Snapshot target shall be provided with the following features :-</p> <p>a) For each snapshot target uptime, downtime, number of exposures can be customized and controlled.</p> <p>b) Targets with rotating/falling option shall be provided wherein, if the target is hit it shall rotate/fall</p> <p>c) Facilities similar to static targets like changing special effects, replaying etc shall be provided.</p> <p>d) An exercise where the target appears at random points shall be provided. In this exercise, even the instructor shall not be aware where the target will appear.</p> <p>e) An exercise similar to 2 (e)(iii) (d) above shall be provided wherein the instructor shall be able to control points of appearance of the targets.</p> <p>f) There shall be an exercise in which each firer is assigned a target with different shape and colour combination. The target shall appear randomly.</p> <p>g) A snapshot exercise where each firing lane is assigned a different colour of target shall be provided. The targets shall appear randomly.</p>	To be physically checked by the BOO.	As per the requirement mentioned in QRs.
2 (f)	<p>Grouping Exercise A grouping exercise to judge the grouping capability of a firer shall be there in the system. The system should generate MPI on the screen with coordinates. The system shall give feedback on Hold, Aim and Trigger (HAT) operations and a firers accuracy in terms of percentage. Arrangement of comparative study of grouping Target between two consecutive grouping exercises should be provided by the manufacturer.</p>	To be physically checked by the BOO. MPI to be tested as per zeroing table of each weapon.	As per the requirement mentioned in the QRs.
2 (g)	<p>Replay a) The system shall be capable of replaying records of all lanes simultaneously or individual lanes only. It shall facilitate to view full trace of movement of the weapons.</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.

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S/No.	Proposed QRs Specification	Procedure suggested for Trial for BOO	Result expected / Desired
	<p>b) Shall be capable of replaying all lanes simultaneously or individual lanes only. In the case of individual lanes, the replaying shall be viewed in normal and zoom (4x) mode. Facility shall be provided to view full trace from the beginning of the session to the end of the session, where the movement of the weapons needs to be visually traced, giving an opportunity of time and motion study.</p> <p>c) Replay shall be provided as a short trace also. In short trace mode, the point of aim and the point of impact (follow through) need to be displayed. In the case of individual lanes the replay shall be viewed in normal and zoom (4x) mode. This shall enable the instructor to interpret the mistakes and suggest corrective measures.</p> <p>d) Replay facility providing information on track and bullet numbers at the point of impact on the target shall be provided.</p> <p>e) The user shall be able to control the speed of the reply</p>		
2 (h)	<p>Video Based Scenarios</p> <p>a) System shall be capable of enabling the user to incorporate video shots into the simulation to include scenario for patrolling, ambush, hostage rescue, VIP security and various CI Ops. The system shall also have ability to add more scenarios with customization as per the user requirement.</p> <p>b) Ranging from simple to complex these video scenarios shall be relevant to Indian Security Forces and to be created by the end user. Latest version of software shall be provided.</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.
2 (i)	<p>Database/Documentation</p> <p>The system shall provide a fully dynamic database (customizable) giving details like credentials of each trainees, his performance shown over a period of time.</p> <p>The following documents shall be provided with the system :-</p> <p>i) Software test procedure</p> <p>ii) Software user manual</p> <p>iii) Software installation procedure document</p> <p>iv) Software and hardware bilingual user handbook</p> <p>v) Software verification and validation and reliability document.</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.

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S/No.	Proposed QRs Specification	Procedure suggested for Trial for BOO	Result expected / Desired
(b)	<p>Range The system shall have the capability facilitate target engagement from 10 to 2000 meters in individual lanes or in all the lanes simultaneously.</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.
(c)	<p>Special Effects Special effects shall be provided on the range to simulate :- i) Different modes for sky like clear sky, dense clouds, sparse clouds, rain clouds etc. ii) The system shall provide configurable time of day (for e.g. night dusk/dawn and day) iii) The system shall provide configurable fog, wind and smoke condition which once enabled shall allow adjustment of visibility at varying ranges</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.
(d)	<p>Preview Facility to preview the range shall be provided in the set up mode. The range shall be displayed at the beginning of the exercise</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.
(e)	<p>Weapon Calibration Facility of calibration shall be provided. The details of the calibration shall be stored of current as well as future sessions</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.
(f)	<p>Annual Range Course The system software shall have the capability to generate a range course as pursuers requirement and should appear in the main menu</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.
(g)	<p>3D Scenario The system shall be capable of generating Computer Generated Imagery based 3-D scenario including humans, vehicles, different terrains and structures and built up areas. 3D human targets shall react to firing as would be in case of real humans. The following are the scenarios should be available with the application :- i) Jungle warfare akin to Anti Naxal scenario ii) Ambush attack iii) Fidayeen attack iv) Scenario for employment & firing PAGs. v) Patrol vi) Raid attack vii) Raid defence</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.

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S/No.	Proposed QRs Specification	Procedure suggested for Trial for BOO	Result expected / Desired
5.	<p>Misc</p> <p>a) The software with Devnagri/Roman Hindi Script shall also be supplied</p> <p>b) The system should be portable with facility to set it up within 2 hours</p> <p>c) The warranty will be of minimum three years period</p> <p>d) The AMC clause should allow for AMC after expiry of the warranty</p> <p>e) The system should work within normal voltage of 220 volts AC single phase/Generator/2.2 KV UPS backup</p> <p>f) The computer with latest configuration minimum 32 GB or more RAM , 8 GB Graphic Card, minimum 1 TB or more SSD to be provided with antivirus</p> <p>g) Projector should be of minimum 3000 ansi lumens.</p> <p>h) Software up gradation, if any during the warranty period should be updated at free of cost.</p> <p>i) The simulators should be successfully installed within 120 days of issuing of PO. (Point to be considered at the time of tender process)</p> <p>j) A reasonable level of in house R&D back up of the manufacturer in India is desirable as the end user would like to constantly review and upgrade the technology to cater to future training requirements. Such R&D facility should be certified by Government of India or NABL. (Point to be considered at the time of tender process)</p> <p>k) The maximum time required to attend a service call should be less than 7 days from the date of receipt of call.</p> <p>l) Functional demonstration of the product as per requirement of the user need to be shown at the time of technical evaluation.</p>	To be physically checked by the BOO.	As per the requirement mentioned in the QRs.


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	m) The company providing the ASATS should have the capacity to provide spare parts, repair and maintenance, support for both, hardware and software, for the minimum period of service life of the equipment i.e. 10 years or more.		

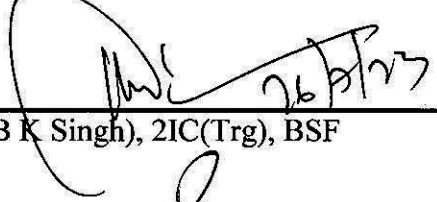

(B K Mehta), ADG (Log), BSF



(D S Rawat), DIG(Trg), BSF


(Ajeet Kumar), Comdt. (SIW), BSF


(Dr. Raveesh Kumar), PSO(W), BPR&D


(K Elamurugan), Asstt. Director, DCPW


(B K Singh), 2IC(Trg), BSF



(Mukesh Kumar), 2IC (SIW), BSF

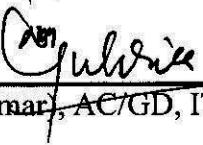

(Arun R, AIG(Ord), CISF



(Ajay Kumar Sharma), DC(Comn), SSB



(Maj. Semchon Hungon), TC, NSG



(Paramjeet), DC(AIA), BSF


(Sunil Kumar), AC, CRPF


(Ravinder Kumar), AC/GD, ITBP


(Gaurav Drai), AC, SIW, BSF


(Inspr/RM Manish Raj), SIW, BSF


(Sub D P Mishra), Assam Rifle

Approved /Not Approved



**Director General
Boarder Security Force**