

संख्या. पी-63013/87/02/2023/मोड-- I/सीसुबल / 2568-नई

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 "Location of Miss & Hit Target System (LOMAH)" उपकरण के संसोधित गुणात्मक आवश्यकता/परीक्षण निर्देशों को आपकी अग्रिम कार्यवाही हेतु प्रेषित किया जाता है।

संलान : उपरोक्तनुसार

३. दे. 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। [कॉम संख्या-4] 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 वेबसाईट पर अपलोड करने का श्रम करें।
5. प्रशिक्षण निदेशालय, सीमा सुरक्षा बल
: आपके यूओ संख्या-649 दिनांक 27 जून 2023 के सन्दर्भ में अनुमोदित "Location of Miss & Hit Target System (LOMAH)" उपकरण के संसोधित गुणात्मक आवश्यकता /परीक्षण निर्देशों को आपके सूचनार्थ एवं अग्रिम कार्यवाही हेतु प्रेषित जाता है।
6. फाईल

QRs & Trial Directives of Location of Miss & Hit Target System (LOMAH)-Revision

S/ No	QRs Specifications	Procedure suggested for trial	Result expected/desired
1.	System should accurately detect, record, display and give print outs of the exact locations of hits and misses of bullets within the detection zone. System must have detection zone of 120 x 120 cms on the target and 10 cms all around its perimeter of the target. It must have facility to display hits both on grid and silhouette pattern of the target. The system should be sensor based.	It should be checked by carrying out the Firing practices	Clear display of both hits and misses in grid and silhouette pattern in detection zone as mentioned in QRs
2.	a) It should record all bullets having velocity of supersonic range at target. b) For detecting subsonic bullets, system should have optional/additional target system. This optional /additional target system shall be static target of size 120 cm x 120 cm and provide the information about hit bullets.	It should be checked by firing all type of weapons held with CAPFs, in the physical trial. Enhancing up to 16 targets.	Accurate and instantaneous display of hits and misses is recorded in respect of all types of ammunition when fired as suggested in QRs.
3.	The system should accommodate and be programmable for all kind of targets presently being used in CAPFs like Fig-11 Combat Target, 30x30 cms Grouping target, 120 Cms Combat Target, 120 Cms grouping target and 4'x4' bunker target etc. The maximum target sizes for Pop-up/turning exercise is 4ft (Height) x 2ft (Width). All Targets bigger than 4ft x 2ft are a Static target. The system should be programmed as per the requirement of the user, for minimum 15 practices and should have the capability to get upgraded upto 30 practices. Note : Exact requirement of the fire practices will be specified by the concerned CAPF	Should be checked by physical trial. Function and programming must be trouble free and without any stoppages for various practices and different type of targets. Capability of system to up-grade upto any number of more firing practices should be checked and practiced by the board. Computer savvy officer shall be associated to verify the features	Can be verified from Technical manual and physical trial.
4.	It should be capable to record firing in single shot mode, three round burst, control burst and automatic burst fire mode with a speed of 10-18 rounds/second. The system should be capable to give identification of consecutive hits to the user	Physical trial should be carried out in different firing mode at different ranges by firing different weapons	System should record accurately in all kind of firing modes with different weapons
5.	System should be capable of recording Groups with hits during grouping, zeroing fire with 4'x4' grouping target and 1'x1' grouping target and shall also calculate MPI	All type of targets deemed suitable for the practices should be used to check the efficiency of system	As per QR

A collection of handwritten signatures and initials in black ink, including names like 'R. K. Singh', 'Ankur', 'S. Singh', 'A. Singh', 'M. Singh', and 'M. Singh'.

S/No	QRs Specifications	Procedure suggested for trial	Result expected/desired
6.	Neither it should detect nor score stones, dirt or ricocheting bullet.	Physical trial be carried out to deliberately cause such hits and then observe the response of system	QRs should be met without any instance of failure
7.	System should be capable to detect cross fire shots i.e. shots fired by a firer at a target (lane) other than his own specific target (lane). Such shot should not be recorded by the system for the purpose of calculating score	To be checked by firing at a target (lane) other than firer own specific target (line)	The hit recorded on cross lane target should be displayed and marked/indicated as invalid for easy identification
8.	System should have inbuilt night firing arrangements with target illumination system with variable intensity of light at source/ranging from star light, quarter moon, full moonlight to sunrise/sunset.	In built night firing arrangements with target illuminating system to be checked during trial and check the variable intensity of illumination. Light intensity specifically in lux, cannot be checked except for the certification from the accredited agencies/authorities	Can be verified from physical trial/Technical manual
9.	All components of the system exposed in the open area should be weather proof and function satisfactorily in all weather conditions. The system should meet international standard IP 65 or better.	Firm should submit national/international accredited lab test report in compliance to this point	The system should be as per the requirement of the QRs.
10.	System should have 08 lanes and provision for extending upto 16 lanes. Note : Exact requirement of number of lanes to be specified by the user.	It should be checked that system will work and same can be verified from technical manual.	Can be verified from Technical Manual and physical trial
11.	The complete system should be wireless (effective upto 1000 mtrs or better) and modular in design	Interconnection between target mechanism, firing point system and system at the target end should be wireless	Can be verified from physical trial
12.	The display monitor should be portable at all the firing points (i.e. 100/200/300/400/500 & 600 Mtrs) of the same firing range	Display monitor should be easily man portable	Can be verified from physical trial
13.	System should be rust proof, user friendly, easy to operate and sturdy.	Ease in installation and set up of the system. May be verified in physical trial. To check rusting, Metallic components may be exposed to water and humidity for 24 hours. No corrosion should be observed.	Able to perform as per QR (Note : The firm should submit compliance report /certificate for rust proof from NABL)

S/ No	QRs Specifications	Procedure suggested for trial	Result expected/desired
		Srl No.14	
18.	The accuracy of the system should confirm to min accuracy of 8 mm or less from the target Centre within a radius of 08 cm at wind speed less than 1.5 m/sec.	System to be tested by firing of all types of weapons during physical trial. A minimum of 5 rounds should be fired for each weapon to check this feature.	Target mechanism to record hit from the specified range of the weapon
19.	System should be compatible with 100-240 Volt AC and DC voltage	Should be checked during trial for different source of power supply	Can be verified from physical trial and Technical manuals.
B	<u>SYSTEMAT FIRING POINT</u>		
20.	Should have a sturdy weather proof display unit near the shooter where shooter should be able to see location of the shots on graphical representation of the target with scores, MPI, group size, target to firer distance (range), Nos of each shots total shots fired in that practice and location of shots, score of each shots with simultaneous total score of that practice. Visual display unit should allow clear visibility as per all type of weather conditions i.e. Dim light, Bright sunlight. The brightness and contrast of the display can be customized by the user. System should also give clear viewing of data from the various firing position i.e. kneeling, lying, standing and battle crouch	All aspects related to group size, location of MPI, correction in the sights required, score achieved vis a vis the ESA defined be thoroughly verified in physical trial. Suitability of VDU be checked under varying light conditions and different firing position.	All aspects should be verifiable in trials
21.	Should allow printout of individual practice of a particular lane and Comparative chart of all the lanes in the control room.	Should be checked from the integrated printers during trial	As specified in QRs
22.	Display unit/key board should have the following functions :- i) Zoom – At least upto 4x size ii) Pause – To pause the exercise in between at any time iii) Continue-To continue the exercise after the required pause iv) Replay-Shot by shot replay of the exercise in real time and in slow motion v) Quit- To terminate the exercise at anytime vi) Save-To save the exercises, so that it can be revisited anytime	The desired features as mentioned in QRs may be checked by carrying out the desired practices in the field trial	Can be verified from Physical trials

K. Shouk
 Gulwani
 A
 Jyoti
 Shukla
 MF

S/ No.	QRs Specifications	Procedure suggested for trial	Result expected/desired
	<p>The VDU screen size to be 7" or more with touch screen MIL Std 810H/JSS-55555.</p> <p>Connection status and exercise details to be displayed by the system</p>		
C	<u>SYSTEM AT CONTROL ROOM</u>		
23.	<p>A computer with latest configuration of 8 GB Ram, 2TB HDD/SSD, MCU bigger size, multimedia projector, ID-RW/USB Port Drive connectivity position and compatibility for adhering, printer and big screen LED TV monitor 50" or more should be configured to display the feed on multimedia projector also.</p> <p>The printer, LED monitor 50" or more and multimedia projector shall not be part of the consignment.</p>	Manual to be checked. It would be advisable to have a computer savvy officer deputed to verify the features	Can be verified from Technical Manual
24.	Control room system should be capable to perform all the tasks performed by the firing point system which is covered under heading "System at Firing Point" above.	The desired features of control room system may be checked by carrying out the desired function during field trial	Can be verified manually and with help of Technical manual
25.	System should be capable to divide target in to the scoring and non-scoring zone. It may have ability to be customized as per firing practices in different Forces including super imposed targets, Rubia target etc.	Target must be divided into zones in the physical trial and 5 rounds should be fired at every zone of target	The system should be able to detect all hits and mark as per divided zone
26.	<p>The display unit should show the following data :-</p> <ul style="list-style-type: none"> - Graphical representation of the target - Firer-Target distance (in meters) - Name of exercise/fire with exercise No. - Type of weapon being fired - Identification of firer (Regt No./Name) - Group size achieved - State of system-Ready/Pause/Stop - X-Y coordinate of each hit & MPI - Max Score - Actual score with grading (MM, FC, SS & Fail) - 	All desired features may be checked on display unit by carrying out different firing practices during field trial	Can be verified from physical trial

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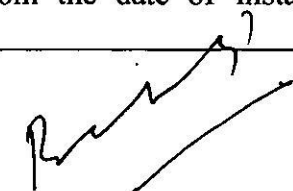
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S/ No.	QRs Specifications	Procedure suggested for trial	Result expected/desired
D	<u>OTHER REQUIREMENT</u>		
27.	The firm will arrange to conduct training of 25 personnel on handling, repair and maintenance of the system free of cost.	To be physically checked by BOO for synchronization and interchangeability	-
28.	The system/equipment supplied by the firm must have a life span of min 10 years with warranty period of 2 years and CMC up to 5 years besides spare part /systems support up to 10 years from the date of installation of the equipment/system.	-	-



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


26/7/23

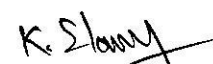
(D S Rawat), DIG(Trg), BSF



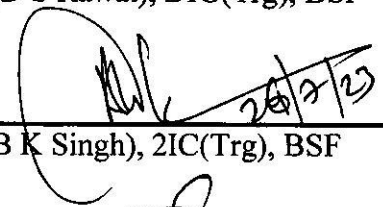
(Ajeet Kumar), Comdt. (SIW), BSF



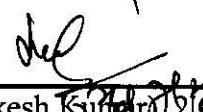
(Dr. Raveesh Kumar), PSO(W), BPR&D



(K Elamurugan), Asstt. Director, DCPW


26/7/23

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



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



(Paramjeet), DC(AIA), BSF



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



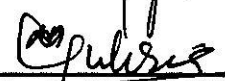
(Maj Semchon Hungon), TC, NSG



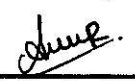
(Gaurav Draf), AC, SIW, BSF



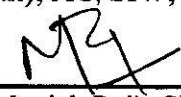
(Sunil Kumar), AC, CRPF



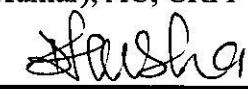
(Ravinder Kumar), AC/GD, ITBP



(Arun R, AIG(Ord), CISF



(Inspr/RM Manish Raj), SIW, BSF



(Sub D P Mishra), Assam Rifle

Approved / Not Approved


Director General
Boarder Security Force