

DIRECTOR GENERAL BORDER SECURITY FORCE
(TRAINING DIRECTORATE)

The Sub-group of Technical Experts on Weaponry Equipment constituted by MHA vide their letter No.IV-17017/18/2011-Prov-I dated 05 Jul 2002 and UO No IV 24011/12/2011-Prov-I dated 31 Jan, 2013 held its meeting at BSF Headquarters on 18th May 2016 to formulate the draft QRs of "OUTDOOR REFLEX SHOOTING RANGE".

After detailed deliberations the referred Sub-group has finalized the draft QRs of "OUTDOOR REFLEX SHOOTING RANGE".

QUALITATIVE REQUIREMENTS – "OUTDOOR REFLEX SHOOTING RANGE"

S.No	QRs/Specification
01.	<p>Target system in reflex shooting ranges is designed for training on firing of light weapons i.e. 9 mm Pistol, SMG, X-95 Rifle, AK Series Rifle and INSAS Rifle upto 100 Mtrs.</p> <p>a) Figure 11 and 12 shape targets must consist of following mechanism - Turning, Pop-up and Tilting (movements all enclosed in one)</p> <p>b) All these movements should be instantaneous with time involved in one second</p> <p>c) Man sized targets in different positions like standing, kneeling, peeing and lying etc.</p> <p>d) Targets can be combined type depicting both hostile and hostage in one frame.</p> <p>Should have inbuilt lighting arrangements of variable intensity to illuminate the targets from complete darkness to 60 Watt bulb illumination to facilitate night firing practices</p>
02.	<p><u>CONTROL UNIT</u></p> <p>Targets can be controlled with the help of programmable central control unit placed at the designated point which can control up-to 10 to 12 targets individually or collectively</p> <p>a) It should be capable to record firing in Single shot mode, three round burst and automatic burst fire mode.</p> <p>b) It should record all types of Subsonic and supersonic bullets used by CAPFs</p> <p>c) Control unit should display hit pattern imposed on the target image or on its silhouette.</p> <p>d) It should display, record and store the score and produce the print out if required</p> <p>e) Facility for differential scoring as per the area/zone designed on target body to be considered as fatal or otherwise as defined by the user at the time of indent</p>

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- f) It should be able to vary the intensity of light from complete darkness to 8 Watt bulb illumination or night firing practices.
- g) Control unit should have minimum 500 GB storage capacity for storing the data
- h) It should have minimum 42" LED display.
- i) A portable hand held controller (Tough Note Book M4-grade) should be available for trainer/supervisor to execute command independently as well as via central command computer wirelessly.

03. PROGRAMMABILITY

Targets should be programmed by the control unit to operate as per different firing practices and for variable timings. Targets should be controlled in a pre designated sequence or randomly. There should be manual facility to override the pre designated sequence. The following operations should be programmable -

- a) Fall or turn when hit
- b) Reappear after fall or turn
- c) Appear on command in turning motion, pop-up motion, tilting and sliding motion
- d) Hold up to fixed time or till certain number of hits.

04. PHYSICAL ATTRIBUTES

Target system must be robust and easy to transport and weather proof which may be used under all weather conditions. Should have anti ricochet armour plate in front for protection from Bullets regardless of their calibre and ricocheted projectile. Should be easy and quick to install and must comply IP - 67.

05. POWER SOURCE

- a) Target system should work on 220 volt, 50 Hz AC mains power supply.
- b) Target system should also be capable to run on Rechargeable Battery for minimum 08 hours.
- c) Target system should have inbuilt facility to switch over between AC to DC supply automatically.

06. TARGET MECHANISM

Should have adjustable clamps to hold and control different types of targets used in reflex shooting practices.

07. MOVEMENT/PROXIMITY DETECTOR

A proximity detector having its own power supply should be connected to target system which activates it to pop-up/turn or tilt when shooter comes within its operating range. Targets should remain exposed for a pre set duration to give real life feel of combat situations. The range of proximity detector should be minimum 10 mtrs. (programmable)

08. NIGHT FIRING

Should have inbuilt lighting arrangements of variable intensity to illuminate the targets from complete darkness to 08 Watt bulb illumination to facilitate night firing practices.

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TRAINING

The firm will arrange and conduct training as per the user requirement in operation, handling and maintenance at respective consignee location, free of cost.

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MISC

- a) The software with Devnagri Script (Hindi) shall also be supplied
- b) The Computer and accessories with the latest configuration be provided as specified by the user at the time of procurement.

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(K K SHARMA)IPS
DIRECTOR GENERAL
BORDER SECURITY FORCE

RESTRICTED

TRIAL DIRECTIVE
FOR
OUTDOOR REFLEX SHOOTING RANGE

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INTRODUCTION :-

Due to constant deployment of CAPFs on Counter Insurgency Ops, men have to be trained in Reflex Shooting. In the growing complaints of law and order situation, it is essential for the troops to react in the minimum time, therefore they have to be trained accordingly. Availability of Reflex Shooting Ranges in Training Institutions will provide adequate opportunity for this kind of Training.

AIM :-

To frame Trial Directives to facilitate Board of Officers to carry out physical / technical evaluation of Tender sample of Outdoor Reflex Shooting Range at the time of procurement.

GENERAL INSTRUCTIONS :-

1. This Trial Directive is issued to assist and guide the evaluation committee. Nothing in this Trial Directive absolves the BOOs from their responsibility to ensure that the evaluation is carried out strictly as per the specifications in every respect.
2. The Evaluation Committee may carry out additional test which they consider necessary after seeking approval of Competent Authority, to verify the quality of the tender sample with the specifications.
3. The Evaluation Committee should ensure proper safety of men and equipment during evaluation to avoid any damage.
4. Trial / evaluation will be conducted in presence of firm representative only.

COMPOSITION OF THE BOARD :-

The physical evaluation of the tender samples of Outdoor Reflex Shooting Range will be carried out by the Board of Officers detailed by the Competent Authority.

GENERAL REQUIREMENT :-

Following test instruments should be available during the trial / evaluation:-

1. Measuring tape
2. Stop watch.
3. Binocular.
4. Small Arms & Amn

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TRIAL DIRECTIVE FOR "OUTDOOR REFLEX SHOOTING RANGE"

S/ No.	QRS/Specifications	Procedure suggested for Trial for Board of Officers	Result expected	Completed / Not completed
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01

Target system in reflex shooting ranges is designed for training on firing of light weapons i.e. 9 mm Pistol, SMG, X-95 Rifle, AK Series Rifle and INSAS Rifle upto 100 Mtrs

a) Figure 11 and 12 shape targets must consist of following mechanism:-
Turning, Pop-up and Tilting (movements all enclosed in one)

b) All these movements should be instantaneous with time involved < one second.

c) Man sized targets in different positions like standing, kneeling, peeping and lying etc.

d) Targets can be combined type depicting both hostile and hostage in one frame

Should have inbuilt lighting arrangements of variable intensity to illuminate the targets from complete darkness to 08 Watt bulb illumination to facilitate night firing practices

Should be checked physically by the Board of officers by carrying out the firing practices. Functioning of the system must be trouble free and without any stoppages for various practices and different type of targets.

Must comply to QRS.

Result expected / Completed / Not completed

02

CONTROL UNIT

Targets can be controlled with the help of programmable central control unit placed at the designated point which can control up to 10 to 12 targets individually or collectively

a) It should be capable to record firing in Single shot mode three round burst and automatic burst fire mode

b) It should record all types of Subsonic and supersonic bullets

Should be checked physically by the Board of officers. System should accurately record all modes of fire and all types of Subsonic and Supersonic bullets as specified in QRS and must have clear display of hits in grid and silhouette pattern

QRS

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- c) Control unit should display hit pattern imposed on the target image or on it's silhouette.
- d) It should display, record and store the score and produce the print out if required.
- e) Facility for differential scoring as per the area/zone designed on target body to be considered as fatal or otherwise as defined by the user at the time of indent.
- f) It should be able to vary the intensity of light from complete darkness to 8 Watt bulb illumination or night firing practices.
- g) Control unit should have minimum 500 GB storage capacity for storing the data.
- h) It should have minimum 42" LED display.
- i) A portable hand held controller (Tough Note Book Mil-grade) should be available for trainer/supervisor to execute command independently as well as via central command computer wirelessly.

03 PROGRAMMABILITY

Targets should be programmed by the control unit to operate as per different firing practices and for variable timings. Targets should be controlled in a pre-designated sequence or randomly. There should be manual facility to override the pre designated sequence. The following operations should be programmable -

- a) Fall or turn when hit
- b) Reappear after fall or turn
- c) Appear on command
- d) Hold up-to fixed time or till certain number of hits

04 PHYSICAL ATTRIBUTES

The desired features such as pop up, lateral and turning movements should be trouble free & should be controlled by the instructor in a prearranged manner. Capability of system to up- grade up to any number of more firing practices should be checked by the board. These features should be checked physically by the Board of officers by carrying out the desired function in the field during trial.

Anti rocket of Target system must comply to

should be checked by carrying out

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Target system must be robust and easy to transport and weather proof which may be used under all weather conditions. Should have anti ricochet armour plate in front for protection from Bullets regardless of their calibre and ricocheted projectile. Should be easy and quick to install and must comply IP - 67.

the firing practices.

QIRs

The firms must submit required certificate regarding general ruggedness and suitability of system in various climatic conditions and is complying IP-67.

Should be checked during trial for different source of power supply by the Board of Officers.

Must complied to QIRs.

05. POWER SOURCE

- a) Target system should work on 220 volt, 50 Hz AC mains power supply.
- b) Target system should also be capable to run on Rechargeable Battery for minimum 08 hours.
- c) Target system should have inbuilt facility to switch over between AC to DC supply automatically.

06. TARGET MECHANISM

Should have adjustable clamps to hold and control different types of targets used in reflex shooting practices.

Adaptability of clamps should be checked during trial by holding and controlling all types of targets mentioned in QIRs.

Must complied to QIRs.

07. MOVEMENT/PROXIMITY DETECTOR

A proximity detector having it's own power supply should be connected to target system which activates it to pop-up/turn or tilt when shooter comes within it's operating range. Targets should remain exposed for a pre set duration to give real life feel of combat situations. The range of proximity detector should be 10 to 100 mtrs (programmable)

Should be checked physically by the Board of officers

Must complied to QIRs.

08. NIGHT FIRING

Should have inbuilt lighting arrangements of variable intensity to illuminate the targets from complete darkness to 08 Watt bulb illumination to facilitate night firing practices

Should be checked physically by the Board of officers

Must complied to QIRs

09. TRAINING

The JPO will arrange and conduct training as per the user

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requirement in operation, handling and maintenance at respective consignee location, free of cost.

10 MISC

- a) The software with Devnagri Script (Hindi) shall also be : Should be checked physically by the As per QRS Board of officers.
- b) The Computer and accessories with the latest configuration be provided as specified by the user at the time of procurement.

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(K K SHARMA), IPS
 DIRECTOR GEN-RAI
 BORDER SECURITY FORCE