

F. No. IV-21011/10/2011-Prov.I / 1084  
Bharat Sarkar/Government of India  
Griha Mantralaya/Ministry of Home Affairs  
PM Division/Prov. I Desk  
\*\*\*\*\*

26, Man Singh Road, Jaisalmer House  
New Delhi, Dated 5<sup>th</sup> September, 2012

To,

DsG : AR (through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D.

**Subject : QRs and Trial Directives**

The QRs and Trial Directives of following items as per Annexure have been accepted by the Competent Authority in MHA:-

- (i) Tripod for Matrix Plus Hand Held Laser Range Finder
- (ii) Battery Charger of F-3 Metal and Mine Detector

2. Henceforth, all the CAPFs should procure the above items required by them strictly as per the laid down Technical Specifications/QRs.

Yours faithfully,



(S. B. Nanda)

Under Secretary to the Govt. of India  
Tel : 23381278

**Copy forwarded for necessary action :-**

- (1) Director, NIC, MHA : It is requested to host the QRs (soft copy attached) on the MHA website (under the page of Organisational Set up-Police Modernisation Division- Qualitative Requirements)



(Ritesh Kumar)  
Section Officer (Prov.II)

Copy to : Director (Procurement), MHA.  
Copy for information to : PS to JS (PM)

**DIRECTORATE GENERAL, BORDER SECURITY FORCE, SPECIAL INSTRUMENT**  
**WORKSHOP TIGRI CAMP, NEW DELHI**

The sub group of technical experts on surveillance equipments constituted by MHA vide their letter No. IV-17017/18/2001-Prov-I dated 05 July 2002 held its meeting at SIW BSF Tigri Camp, New Delhi on 07<sup>th</sup> July 2011 and finalised the QRs of "Tripod for Matrix Plus Hand Held Laser Range finder" and QRs of "Battery Charger F-3 Metal/Mine Detector as under:-

SRL NO	PARAMETER
<b>TRIPOD (EXCULDING TRIPOD HEAD)</b>	
1.	Closed length of the tripod should be 55± 3 cm.
2.	Maximum height of tripod should be 120 ± 2 cm.
3.	Maximum height of tripod with extended centre column should be 145 ± 3 cm.
4.	Suitable telescopic leg locking mechanism should be provided to lock the legs firmly.
5.	The tripod should be made of Aluminium or Aluminium alloy.
6.	Should have suitable locking mechanism to fix the legs at different angles. Further adjustable locking system should be provided with each leg.
7.	Tripod legs should be provided with suitable metallic spikes. Foldable spikes to be used as and when needed.
8.	Suitable lock should be provided to fix the centre Colum at different heights.
<b>TRIPOD HEAD</b>	
1.	Height of the head – maximum 14 cm.
2.	It should have a Pan movement of 360°.
3.	It should have a tilt movement of -60 ° to +75 °(minimum). <b>*OPTIONAL-</b> Scale pointer to be provided to show elevation & depression.
4.	Pan and tilt locking mechanism should be provided.
5.	It should have a suitable interface system to fix Metrix Plus (BINOCULAR LASER RANGE FINDER)** with the tripod head .
6.	The head should be provided with suitable handle (single) for pan and tilt movement.
<b>Miscellaneous</b>	
1.	Weight of the tripod including head, interface plate and leg spikes should be 3 Kg ± 200 gms (excluding canvas/nylon bag).
2.	Should be able to hold a load up to 5 Kgs.
3.	Spare parts and after sales service should be provided for minimum 07 years.

Contd...P/2

*[Handwritten signatures]*

4.	Colour of the tripod should be black or olive green.
5.	The tripod should be supplied with suitable canvas/nylon bag/back pack to carry tripod on soldier's back.
6.	The Tripod should be anti corrosion coated/painted.


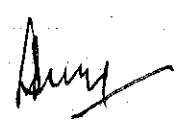
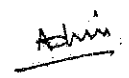

\*To be defined by the User.

\*\*Sample of a adopter fitted with Matrix Plus Hand Held Laser Range Finder is Available with SIW BSF, TIGRI CAMP, NEW DELHI, For further verification of compatibility by the vendors.

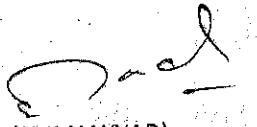
**PROPOSED QRs OF BATTERY CHARGER OF F-3 METAL AND MINE DETECTOR**


Srl No	SPECIFICATIONS	
01.	Input Voltage	It should operate on 90 – 270 Volt AC Single phase 50 Hz. <b>*OPTIONAL</b> - It should have vehicle charging facility on 12 Volt DC.
02.	Bty Charger Type	SMPS based Battery charger to charge four D size, 4.5 Ah capacity NiCd / NiMH cells simultaneously.
03.	Charging Current	D size 4x 1000 mA.
04.	Indications	There should be separate indicators for each cell.
		Bty charging status and full charge indication should be provided for each cell.
		Function of indicator should be printed on the cabinet.
05.	Protection	The charger should have over charging protection circuit.
		The charger should have reverse polarity protection circuit.
06.	Cabinet	The charger should be housed in a good quality cabinet easily open able for repair purpose. The charging terminal should be of good quality and smooth enough to hold the cells easily.
07.	Weight	1 kg (max)
08.	Operating Temperature	-20°C to + 55°C
09.	Input lead	The charger should have a AC input lead of length of minimum 3 Mtr. <b>*OPTIONAL</b> - It should have separate DC input lead with adopter and with minimum 4 Mtr lead length in case of vehicle charging adaptor.
10.	Training	Base level repair and maintenance training for 15 Technicians of SIW BSF NEW DELHI at factory premises in 02 batches.


\* To be defined by the User.


11.	After sale services	Spare parts and after sale services should be provided for minimum 7 years.
12.	Warranty	18 months from the date of JRI.
13.	Carrying Case	It should have rugged/hand carrying case for transportation & storage further. It should be provided with canvass/nylon back pack too.
14.	Documents	Operating manual should be provided with each charger.

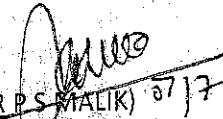
  
(N K NAYYAR)  
DY DIRECTOR, DRDO

  
(ASHIM SEN)  
E. ASSTT Director. DCPW

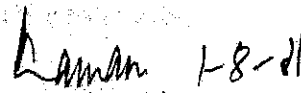
  
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(HIMANSHU TIWARI)  
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(R P S MALIK) 07/7/11  
DIG-SIW BSF N/D

✓  
APPROVED / NOT APPROVED

  
(RAMAN SRIVASTAVA)  
DIRECTOR GENERAL  
BORDER SECURITY FORCE

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RESTRICTED

**TRIAL DIRECTIVES  
FOR  
"TRIPOD FOR MATRIX PLUS HAND HELD  
LASER RANGE FINDER"**

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7.	Copy of approved QR by MHA	Yet to be approved

**INTRODUCTION:-**

BSF was raised mainly for safety / security and close surveillance of international border. In addition BSF is also entrusted with responsibility for internal security duty / election duty. Due to present security scenario and increasing activities of anti national elements, it was found necessary to introduce Hi-Tech / sophisticated surveillance equipments in BSF for effective border domination and to spoil any attempt of anti national elements. The Hand Held Laser Range Finder (HHLRF) is effective / accurate equipment to calculate the range of targets clearly even at a very long distance and target can be properly located for effective fire by laser. The LRF should be mounted on a suitable tripod to locate stable position for reading the range of long distance targets. Therefore, Tripod for HHLRF is essential requirement.

**AIM:-**

To frame trial directives to facilitate B.O.O to carry out physical evaluation of tender sample of Tripod for Matrix Plus HHLRF at the time of procurement process.

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## **GENERAL INSTRUCTIONS-**

1. This trial directive is issued to assist and guide the technical / physical 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 considers necessary to satisfy them that the quality of the tender sample is up to the relevant specification.
3. The Evaluation committee should ensure proper safety of man 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 TRIPOD for Matrix Plus Laser Range Finder will be carried out by the board of officers detailed by the competent authority as per value of total stores.

## **GENERAL REQUIREMENT:**

Following test instruments should be available during the trial:

- (a) Matrix Plus Hand Held Laser Range Finder
- (b) Measuring Tape
- (c) Weighing Machine
- (d) Inclinometer



# TRIAL DIRECTIVE FOR TRIPOD FOR MATRIX PLUS HAND HELD LASER RANGE FINDER

S No.	PARAMETERS	Procedure suggested for trial	Result expected / desired	Complied / Not Complied
<b>TRIPOD (EXCLUDING TRIPOD HEAD)</b>				
01	Closed length of the tripod should be $55 \pm 3$ cm.	Fully close all the legs of the tripod and measure the length.	length of the tripod should be $55 \pm 3$ cm.	
02	Maximum height of tripod should be $120 \pm 2$ cm.	Install the tripod for its maximum height (with centre column closed) and then measure the height from ground to top level of the tripod	height of tripod should be $120 \pm 2$ cm.	
03	Maximum height of tripod with extended centre column should be $145 \pm 3$ cm.	Install the tripod for its maximum height with centre column fully extended and then measure the height from ground to top level of the tripod	height of tripod with extended centre column should be $145 \pm 3$ cm.	
04	Suitable telescopic leg locking mechanism should be provided to lock the legs firmly.	Open the tripod legs at any desirable height and lock all the legs. Put a weight of 5 Kg on the tripod	The locks should hold the legs firmly and legs should not go inside on putting weight over it.	
05	The tripod should be made of Aluminum or Aluminum alloy.	Should be checked physically.		
06	Should have suitable locking mechanism to fix the legs at different angles. Further adjustable locking system should be provided with each leg.	(Certificate should be provided by the firm) Should be checked physically	Legs should have suitable locking mechanism to fix the legs at different angles.	
07	Tripod legs should be provided with suitable metallic spikes. Foldable spikes to be used as and when needed.	Should be check physically	Suitable metallic spikes should be provided which can be fitted on the foot of the legs when required	
08	Suitable lock should be provided to fix the centre Column at different heights.	Extend the centre column at different heights with weight of 5 kgs on it and lock the centre column.	The lock should hold the centre column firmly and it should not go down on putting weight over it.	
<b>TRIPOD HEAD</b>				
01	Height of the head – maximum 14 cm.	Height of the head should be measure with the help of measuring tape.	Should be max 14 cm	

02	It should have a Pan movement of 360°.	Angle should be checked physically by rotating the head.	It should have a pan movement of 360°.
03	It should have a tilt movement of minus (-) 60° to plus (+) 75° (minimum). (* <b>OPTIONAL</b> - Scale pointer to be provided to show)	Tilt the head fully downward and fully upward and read the angle on the inclinometer.	The head should have and minimum tilt angle of -60° in downward and + 75° in upward direction.
04	Pan and tilt locking mechanism should be provided.	Rotate the pan at different angle and lock the pan movement similarly tilt the head at different tilt angle and lock the tilt movement.	The angles should not change on with the load of gentle pressing.
05	It should have a suitable interface system to fix Matrix Plus (BINOCULAR LASER RANGE FINDER)** with the tripod head.	The interface plate provided with the tripod head should be fitted on the LRF and then mounted on the tripod head.	Should be properly fitted.
06	The head should be provided with suitable handle (single) for pan and tilt movement.	Should be checked physically	There should be a single handle to change the pan and tilt angle.
<b>MISCELLANEOUS</b>			
01	Weight of the tripod including head, interface plate and leg spikes should be 3 Kg ± 200 gms (excluding canvas/nylon bag).	Measure the weight of the tripod including head, interface plate and leg spikes with the help of weighing machine.	Should be 3kg ± 200 gms
02	Should be able to hold a load up to 5 Kgs.	Put the load of 5 kg.	The tripod should easily hold the weight.
03	Spare parts and after sales service should be provided for minimum 07 years.	Check the supporting documents provided by the firm. (Undertaking should be provided by the firm)	The firm should give undertaking to provided after sale services for a period of minimum 7 years
04	Colour of the tripod should be black or olive green.	Should be checked physically	Colour of the tripod should be black or olive green
05	The tripod should be supplied with suitable canvas/nylon bag/back pack to carry tripod on soldier's back.	Should be checked physically	Good quality canvas/nylon bag/back pack should be provided.
06	The Tripod should be anti corrosion coated / painted.	Should be checked physically (Certificate should be provided by the firm)	Good quality of coating/paint should be ensured.