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No. P-63013/15/2015-Ord/BSF
Government of India Ministry of Home Affairs
Directorate General Border Security Force
(Prov Dte: Mod Cell)
(Fax: 011-24367683)

Block No.10, CGO Complex,
Lodhi Road, New Delhi-03

Dated, the 15th June 2018

To,

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

Sub: **Forwarding of QRs and Trial Directives of Hand Held Laser
Range Finder (Portable)**

Find enclosed herewith QRs and Trial Directives of "Hand Held Laser Range Finder (Portable)" as per appendix 'A' and 'B' duly formulated & finalized by Sub group of technical experts and approved by DG BSF for your information and necessary action please.

Encl : As above


(J K RUDOLA)
Dy. Inspector General (Prov)

Copy to :-

- | | |
|--|---|
| 1. SO (IT),
North Block MHA,
New Delhi | : You are requested to host the above QRs and
TDs on MHA website please. |
| 2. IT Cell
FHQ BSF,
New Delhi | : You are requested to host the above QRs and
TDs on BSF website please. |

DIRECTOR GENERAL BORDER SECURITY FORCE
(PROVISIONING DIRECTORATE (MOD CELL))

The Sub-group of Technical Experts constituted by MHA vide their letter No. IV-24011/12/2011-Prov-I dated 13 Jun 2012 and order 11012/02/2009-Fin-I/Prov-I/17 dated 02nd Jan 2018 held its meeting at BSF Headquarters on 24th April 2017, 08th June 2017, 19th July 2017, 14th Sept 2017 and 29th May 2018 to formulate the QRs of **'Hand Held Laser Range Finder (Portable)**.

After detailed deliberation the referred Sub-group of technical experts has formulated the QRs and TDs of **Hand Held Laser Range Finder (Portable)** which are as under :-

Qualitative Requirements OF Hand Held Laser Range Finder (Portable)

S/No	Parameters	
1	Range	From 50 mtr to 1200 mtr atmosphere visibility – 10 km (target size 1.5 x 0.5 mtr) and From 50 mtr to 3000 mtr atmosphere visibility – 10 km (target size 2.3 x 2.3 mtr).
2	Accuracy	± 5 mtr
3	PRF	One shot every five second or better.
4	Discrimination	50 mtr (Multiple target).
5	False alarm	Less than 05 percent.
6	Laser pulse	Should be eye safe, nominal ocular hazard distance of zero meter.
7	Weight	Less than 750 grams including battery.
8	Optics	Monocular or Binocular. (Optional requirement. To be specified by the user at the time of indent)
9	FOV	6 degree minimum.
10	Magnification	4X minimum.
11	Dioptre setting	± 4D or better.
12	Power supply	Rechargeable / Non rechargeable battery. Battery/batteries should be inside cover of main equipment. Battery should be commercially available. One set of spare batteries should also be provided along with the equipment.
13	Battery capacity	It should run the equipment for eight hours continuously (on single charge in case of rechargeable battery/batteries) and be able to take minimum 5000 or more measurement. Low battery indicator should be provided.

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14	Digital Magnetic Compass (Optional requirement. To be specified by the user at the time of indent) :	
	i.	Inclination Angle measuring capability 45° minimum.
	ii	Declination Angle measuring capability 45° minimum.
	iii	Inclination Accuracy : $\pm 1^\circ$.
	iv	Azimuth accuracy : $\pm 1^\circ$.
	v	Compass Calibration : Menu guided.
	vi.	The DMC should be MIL-STD-461E compliant for EMI/EMC.
15	Display Type :- High Brightness LED with auto brightness control.	
16	Operating temperature	-30° C to + 55° C.
17	Storage temperature	-40°C to + 60°C.
18	Ruggedness	Should comply Mil Std 810F or better/ JSS55555.
19	Standard Accessories with each LRF	
	i	Soft Carrying Case.
	ii	Neck Strap.
	iii	Hard Transportation/Packing Box.
	iv	Lens Cleaning Kit.
	v	Tripod (Optional requirement. To be specified by the user at the time of indent).
20	Literature with each LRF	
	i	User manual in English.
	ii	Short Instructions.
	iii	Technical manual : All the literature should be both in Soft and hard copy.

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(ARUN KUMAR) IPS, ADG

29/5/18
(AASEEN VAS) DIG SIW
BSF

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(RAJESH EKKAT) BY DIG DCN
HMSI dny
29/05/2018

(R.K. MEET) DC, CUF

29/5/18
(JASJINDER KUMAR) 2IL SIW
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(SANDHYA BAJAJ) Sec 6'
DRDO

(PAWAN KUMAR) DC, SSD

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(KARAN SINGH) AL, ITBP

(MANISH RAST) INSATI SIW
BSF

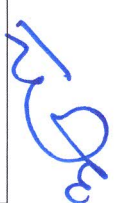
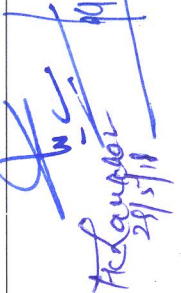
(APPROVED/NOT APPROVED)

(SURINDER KUMAR) NS/Sub
AR

(K K SHARMA) IPS
DIRECTOR GENERAL
BORDER SECURITY FORCE

TDs OF Hand Held Laser Range Finder (Portable)

S/ No	Parameters	Trial Directives	Remarks
1	Range From 50 mtr to 1200 mtr atmosphere visibility - 10 km (target size 1.5 x 0.5 mtr) and From 50 mtr to 3000 mtr atmosphere visibility - 10 km (target size 2.3 x 2.3 mtr).	The BOO will check physically for this parameter.	
2	Accuracy ± 5 mtr.	The BOO will check physically for this parameter.	
3	PRF One shot every five second or better.	The BOO will check physically for this parameter.	
4	Discrimination 50 mtr (Multiple target).	The BOO will check physically for this parameter.	
5	False alarm Less than 05 percent.	Certificate to be provided by OEM.	
6	Laser pulse Should be eye safe, nominal ocular hazard distance of zero meter.	The firm should produce the National/International accredited lab certificate along with the contact details of concerned Lab.	
7	Weight Less than 750 grams including battery.	BOOs will physically measure the desired parameters.	
8	Optics Monocular or Binocular (Optional requirement. To be specified by the user at the time of indent).	Physically check the equipment is having only one Eye piece assembly.	
9	FOV 6 degree minimum.	The firm should produce the National/ International accredited lab certificate along with the contact details of concerned Lab.	



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S/ No	Parameters	Trial Directives	Remarks
10	Magnification	4X minimum.	The firm should produce the National/ International accredited lab certificate along with the contact details of concerned Lab.
11	Diopetre Setting	+ 4D or better	The BOOs will check physically for this parameter.
12	Power Supply	Rechargeable /Non rechargeable battery. Battery/batteries should be inside cover of main equipment. Battery should be commercially available. One set of spare batteries should also be provided along with the equipment.	The BOOs will check physically for this parameter. The BOOs will check physically for this parameter. Firms to produce certificate in this regard. Not to be checked at the time of trial.
13	Battery Capacity	It should run the equipment for eight hours continuously (on single charge in case of rechargeable battery/batteries) and be able to take minimum 5000 or more measurement. Low battery indicator should be provided.	The firm should produce the National/International accredited lab certificate along with the contact details of concerned Lab. The BOOs will check physically for Low Battery indicator.










105	14	Digital Magnetic Compass (Optional requirement. To be specified by the user at the time of indent):-		The firm should produce the National/International accredited lab certificate along with the contact details of concerned Lab.
	i.	Inclination	Angle measuring capability minimum.	45°
	ii	Declination	Angle measuring capability minimum.	45°
	iii	Inclination Accuracy : $\pm 1^\circ$.		
	iv	Azimuth accuracy : $\pm 1^\circ$.		
	v	Compass Calibration : Menu guided.		
	vi.	The DMC should be MIL-STD-461 E compliant for EMI/EMC.		
15	Display Type : High Brightness LED with auto brightness control.			The firm should produce the National/International accredited lab certificate along with the contact details of concerned Lab for the display type.
16	Operating temperature	-30° C to + 55° C.		
17	Storage temperature	-40°C to + 60°C.		
18	Ruggedness	Should comply Mil Std 810F or better/JSS55555.		
19	Standard Accessories with each LRF :-			The firms will submit an undertaking for the supply of the standard accessories. The firm will also
	i	Soft Carrying Case.		

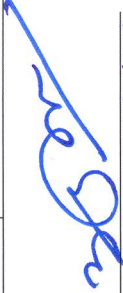









	ii	Neck Strap.	submit a sample of each at the time of Trials.
	iii	Hard Transportation/Packing Box.	
	iv	Lens Cleaning Kit.	
	v	Tripod (Optional requirement. To be specified by the user at the time of indent)	
20	Literature with each LRF :-		
	i	User manual in English.	The firm will submit an undertaking for the supply of the Literature in both Soft and Hard copy. The firm will also submit a sample of each at the time of Trials.
	ii	Short Instructions.	
	iii	Technical manual : All the literature should be both in Soft and hard copy.	


 (ARUN KUMAR) IPS, SDG
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 (SANDHYA BAJAJ) SC 'G'
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 12/09/2018
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 12/09/2018
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