

No. P-63013/08 /2016-Ord/BSF 85666
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 20 April 2019


To,

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

Sub: **Forwarding of revised QRs and Trial Directives of Field Search Light**

Find enclosed herewith revised QRs and Trial Directives of **"Field Search Light"** as per appendix 'A' and 'B' duly finalized by Sub group of technical experts and approved by DG BSF for your information and necessary action please.

Encl : As above


24/4/19
Dy. Inspector General (Prov)
FHQ BSF, New Delhi

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.
3. Prov Dte-Ord Sec : For info and necessary action, please.
4. Ops Dte. FHQ BSF : -do-

(3) (11)

(282)

Directorate General Border Security Force
(Prov Dte: Mod Cell)

Expression of Interest

Dy. Inspector General (Prov)
HQ DG BSF, Prov Dte (Ord Sec)
Block No. 10, CGO Complex
Lodhi Road, New Delhi
(Tele/Fax No. 011-24367683)
Mail id: comdtord@bsf.nic.in

The Sub-group of technical experts on surveillance equipment constituted by MHA vide their letter No. IV-17017/18/2001-Prov-I dated 05 Jul 2002 held its meeting at BSF HQ 17th June 2016, 21st July 2017, 18th Oct 2017, 03rd Jan 2018 and 20th December 2018 to formulate the QRs of **Field Search Light (FSL)** are as under:-

After detailed deliberation the referred Sub-group of technical experts has revised the QRs and TDs of **FIELD SEARCH LIGHT** on 05th April 2019 which are as under :-

QUALITATIVE REQUIREMENT OF FIELD SEARCH LIGHT

S/No.	PARAMETER
1.	Design: Field search light should be ergonomically designed, portable compact and hand held. Must have a carrying Strap with good quality padding to prevent any entanglement.
2.	Body: It should be high impact resistant, waterproof and shock-resistant; either made of Aerospace-Aluminium with a Mil-spec hard-anodized coating or ruggedized Military Grade ABS Plastic. The system electronics and Lithium-Ion rechargeable batteries should be easy in carrying and handling in field conditions.
3.	Colour : Preferably OG or Black
4.	Light Emitting Source: Suitable High Intensity Discharge (HID) Arc Lamp or LED, which can generate white light. The light source used must be extremely reliable and must not easily subject to breakage/failure as a result of mechanical shock or vibration.
5.	HID Lamp / LED Service Life : 2500 hours (Minimum).
6.	Light Beam : Beam should be fixed focus and/or variable focus (To be specified by the user department at the time of indent)
7.	Battery: Lithium-Ion rechargeable batteries of shape and size suiting the design of Field Search Light. The batteries must be available in Indian Market and should have operational life of two years (minimum) with minimum 500 charging cycles.
8.	Ingress Protection : IP 65 or better
9.	Range: Out of two ranges defined as below, User should have choice to select one type or both as per operational requirement.

Contd....2/-

[Handwritten signatures and initials are present at the bottom of the page, including a large signature on the left and several smaller ones on the right.]

	Long Range :-
a	Weight : 2.5 Kgs (max) with battery.
b	Effective Range : 400 meters (min).
c	Continuous run time on each charge must be 120 minutes minimum.
d	Detection Range : 400 meters (min) for a group of 3 persons.
e	Integrated handle and of a shape supporting easy carrying and handling in field conditions.
	Short Range
a	Weight : 1 Kgs (max) with battery.
b	Effective Range : 200 meters (min).
c	Continuous run time on each charge must be 120 minutes minimum.
d	Detection Range : 200 meters (min) for a group of 3 persons.
10.	Battery Status Indicator : There must be a provision for battery status indicator.
11.	Battery Charger : A suitable Intelligent, AC and DC Charger (AC 90-270V and DC 12 to 24 VDC) to be provided. The charger should have over charge protection facility. Suitable connectors (for extending power from the normal battery) be provided to charge the battery by using 12-24 volt DC. The power cable for the AC charger should be 3-meter minimum and for the DC charger should be 1 meter minimum in length with standard plug.
12.	Charging Time: 5 hours (Maximum) to fully charge one battery.
13.	ON-OFF Mechanism : Noiseless smooth push button or noiseless smooth rotary dial.
14.	Mode of Operation : The search light should have minimum two essential modes i.e. full light mode and half-light mode.
15.	Operating temperature :- 20 degree to + 55 degree
16.	Manuals :-
a	User manuals be provide with each equipment.
b	Technical manual be provided giving illustrations on repair and maintenance along with the Schematic diagram.

[Handwritten signature]

[Handwritten signature]


[Handwritten signature]

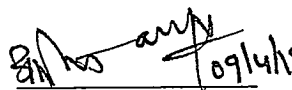
[Handwritten signature]

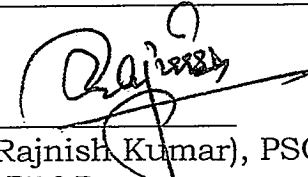
[Handwritten signature]


Contd....27-

	c	Maintenance and Repair, spare HID lamp/LED (^{be} optional to defined by the user department at the time of indent) and List of Spares to be provided.
	d	Special Tools/Kit be provided (Scale be specified by the user).
17.	A single system unit must consist of :-	
	a	Search light -01 No.
	b	Lithium-Ion Rechargeable battery - 01 fitted and 01 spare battery.
	c	AC and DC Charger -01 No each.
	d	Carrying Strap with suitable padding and quick disengaging mechanism -01 No
	e	Water proof soft carrying case -01 No.
	f	Ruggedized hard transportation box -01 No.

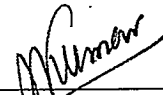

 (Ashok Kumar Sharma)
 ADG (Log) BSF


 (Aseem Vyas)
 DIG, SIW BSF


 (Rajnish Kumar), PSO (E)
 BPR&D


 (Gagan Bhardwaj), AC
 SIW BSF

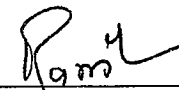

 (Ravindra Kr Meel), DC
 CISF


 (Ravindra Kumar)
 AC, SSB

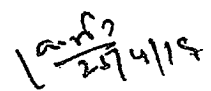

 (Sub Mahipal Singh)
 AR


 (SI Ashwani Kumar)
 SIW, BSF


 (SI/RM Prem Singh)
 Sig Regt, BSF


 (Ram Pal), DC
 ITBP

APPROVED/ NOT APPROVED


 (Rajni Kant Mishra) IPS
 DIRECTOR GENERAL
 BORDER SECURITY FORCE

273

TRIAL DIRECTIVE FOR FIELD SEARCH LIGHT

S No.	PARAMETER	SPECIFICATION	Procedure suggested for trial for Board of Officers	Result expected / desired	Complied / Not Complied
1.	Design:	Field search light should be ergonomically designed, portable, and compact and hand held. Must have a carrying Strap with good quality padding to prevent any entanglement.	To be checked by the BOO physically for Field search light design, portability, compactness and other function mentioned at parameter 1.	It must comply with the QRs Para 1.	
2.	Body:	It should be high impact resistant, waterproof and shock-resistant; either made of Aerospace-Aluminium with a Mil-spec hard-anodized coating or ruggedized Military Grade ABS Plastic. The system electronics and Lithium-Ion rechargeable batteries should be easy in carrying and handling in field conditions.	<ul style="list-style-type: none"> Firm has to submit National /International accredited Lab certificate. If no such lab available in India then , firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.. Check the system electronics and battery for easiness in carrying and handling in field conditions. 	<ul style="list-style-type: none"> Check the authenticity of submit National / International accredited Lab certificate/report for the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab. The battery used must be rechargeable and Lithium-ion. The system electronics and battery fitted in the system must be easy in carrying and handling in field conditions. 	
3.	Colour	Preferably OG or Black	To be checked by the BOO physically the system for its body colour.	The colour of the body / casing must be OG or Black.	
4.	Light Emitting Source:	Suitable High Intensity Discharge (HID) Arc Lamp or LED, which can generate white light. The light source used must be extremely	To be checked by the BOO physically the system for HID Arc Lamp/LED physically and white light by switching 'ON' the search light.	<ul style="list-style-type: none"> System must have HID Arc Lamp/LED which can generate white light. Check the authenticity of 	

[Signature]

[Signature] 14/19

[Signature] *[Signature]* *[Signature]*

[Signature] *[Signature]*

		reliable and must not easily subject to breakage/failure as a result of mechanical shock or vibration	<ul style="list-style-type: none"> Check the certificate in respect of mechanical shock or vibration as submitted for QRs Para 4 as Mil Std. 	National/ international accredited lab/ OEM test certificate/report for light source for breakage/failure as a result of mechanical shock or vibration. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.	
5.	HID Lamp / LED Service Life	2500 hours (Minimum).	<ul style="list-style-type: none"> To be checked by the BOO physically National /International accredited Lab certificate the OEM certificate or report in respect of HID Lamp/LED Service Life submitted by the firm. If no such lab available in India then , firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.. 	<ul style="list-style-type: none"> Check the authenticity and assurance of OEM certificate/report for the HID Lamp/LED Service Life of 2500 Hrs (Minimum). 	
6.	Light Beam	Beam should be fixed focus and/or variable focus. (To be specified by the user department at the time of indent)	To be checked by BOO physically the light beam for fixed focus <i>and for variable focus.</i>	The light beam must be fixed focus. <i>and/or variable focus.</i>	
7.	Battery:	Lithium-Ion rechargeable batteries of shape and size suiting the design of Field Search Light. The batteries must be available in Indian Market and should have operational life of two years (minimum) with minimum 500 charging cycles	<ul style="list-style-type: none"> To be checked by BOO physically the type of battery used and its suitability with the FSL physically. Check the certificate in respect of operational life and minimum charging cycles. 	<ul style="list-style-type: none"> Lithium-ion rechargeable battery of suitable size & shape suiting the design of the FSL must be provided. Check the authenticity and assurance of OEM certificate for the operational life & charging cycles (Minimum) as mentioned in the QRs Para 7. 	

[Signature]

Sinha
09/14/19

H Qs.

2019 *Minister*

Parm *[Signature]*

8.	Ingress Protection	IP 65 or better	Firm has to submit National /International accredited Lab certificate. If no such lab available in India then , firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	System must be rugged for operations as per IP 65 or better.	
9.	Range:	Out of two ranges defined as below, User should have choice to select one type or both as per operational requirement.			
		<p>I. <u>Long range:</u></p> <p>a) Weight: 2.5 Kgs (max) with battery.</p> <p>b) Effective range be 400 meters (min) on full mode.</p> <p>c) Continuous run time on each charge be 120 minutes minimum.</p> <p>d) Detection range: 400 meters (min) for a group of 3 persons</p> <p>e) Integrated handle and of a shape supporting easy carrying and handling in field conditions.</p>	<ul style="list-style-type: none"> To be checked by the BOO physically the weight of the FSL with battery with the help of weighing machine. Move group of 3 persons at the range of 400 meters (min) and move them horizontally and monitor the beam by person placed horizontally away from the beam source. Charge the battery fully and switch 'ON' the FSL in full intensity mode. 	<ul style="list-style-type: none"> The weight must be 2.5 Kgs (max) with battery. The group of 3 men must be detected from 400 meters (min) in full mode. Note: "Detection" here means that movement of a group of persons should be detected from maximum range. The FSL must run continuously for 120 minutes on full intensity mode. 	
		<p>II. <u>Short range:</u></p> <p>a) Weight: 1 Kg (max) with battery.</p> <p>b) Effective range be 200 meters (min)</p> <p>c) Continuous run time on each charge must be 120 minutes minimum.</p>	<ul style="list-style-type: none"> To be checked by the BOO physically the weight of the FSL with battery with the help of weighing machine. Move group of 3 persons at the range of 200 meters (min) and move them horizontally and monitor the beam by 	<ul style="list-style-type: none"> The weight must be 1 Kg (max) with battery. The group of 3 men must be detected from 200 meters (min) in full mode. <p>Note: "Detection" here means that movement of a</p>	

[Handwritten signature]

[Handwritten signature]
02/14/19

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

		<p>d) Detection range: 200 meters (min) for a group of 3 persons</p>	<p>person placed horizontally away from the beam source.</p> <ul style="list-style-type: none"> Charge the battery fully and switch 'ON' the FSL in full intensity mode. 	<p>group of persons should be detected from maximum range.</p> <ul style="list-style-type: none"> The FSL must run continuously for 120 minutes on full intensity mode. 	
10.	Battery Status Indicator	<p>There must be provision a provision for battery status indicator.</p>	<p>To be checked by the BOO physically the battery for battery status indicator, Switch 'ON' the FSL for 5 minutes. Repeat the same procedure two or three times. Every time monitor the battery status indicator for battery charging status.</p>	<p>Battery status display/indicator must be provided to show the current battery charge status.</p>	
11.	Battery Charger	<p>A suitable single unit Intelligent, AC/DC Charger (AC 90-270V, DC 12 to 24 VDC) to be provided. The charger should have over charge protection facility. Suitable connectors (for extending powr from the normal battery) be provided to charge the battery by using 12-24 volt DC. The power cable for the AC charger should be 3-meter minimum and for DC charger should be 1 meter minimum in length with standard plug.</p>	<ul style="list-style-type: none"> To be checked by the BOO physically by connecting the charger through Rheostat/Dimmer on mains AC power supply. Vary the Input from 90 Volt to 240 V. Check the out-put of the charger. To be checked by the BOO physically by connecting the charger with DC 12 Volt to 28 volt and check the out-put of the charger. To be checked by the BOO physically the system for automatic cut off feature when battery fully charged and also note the charging time physically after connecting the charger to the 	<ul style="list-style-type: none"> The out-put of the charger must not vary as the in-put varies from 90 volt to 240 volt. The charger must be able to charge the battery when connected with DC 12 volt to 28 volt. The battery charger must be intelligent i.e. must have indications for battery charge status during charging and must cut off the battery from over charging when gets fully charged. The power cable length of the charger must be 3 meters minimum with standard plug. 	

Small

2/11/18 09/14/18

2/11/18 P.S. Munn

Pam 2/11/18

			<p>220 v AC mains with the help of stop watch.</p> <ul style="list-style-type: none"> To be checked by the BOO physically the length of the power cable provided with the charger. Check also the standard plug be provided. 		
12.	Charging Time	5 hours (Maximum) to fully charge one battery in routine operation.	To be checked by the BOO physically by connecting the fully discharged battery with the charger on main AC power supply for charging. Note down the charging time with the help of stop watch till gets fully charged.	Battery charger should charge a fully discharged battery in 5 hours (max).	
13.	ON-OFF Mechanism	Noiseless smooth push button or noiseless smooth rotary dial. There should be facility to cut off the battery from the system.	<ul style="list-style-type: none"> Physically check the FSL for the mechanism provided in the light to switching it ON & OFF. To be checked by the BOO physically the FSL for the facility to cut-off the battery from the system when not in use. 	<ul style="list-style-type: none"> FSL must have noiseless smooth ON-OFF mechanism through push button or rotary dial. FSL must have facility to cut off the battery from the system when not in use. 	
14.	Mode of Operation	The search light should have min two essentials modes i.e. full light mode and half light mode.	To be checked by the BOO physically the modes provided in the FSL.	FSL must have two modes of operation as mentioned in the QRs Para 14.	
15.	Operating temperature	-20 degree to + 55 degree	Firm has to submit National /International accredited Lab certificate. If no such lab available in India then , firm has to submit any Indian Govt Lab/OEM certificate in respect of the same.	Check the authenticity of National/ international accredited lab test certificate/report for the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.	

16.	Manuals	<ul style="list-style-type: none"> i) User manuals be provided with each equipment. ii) Technical manual be provided giving illustrations on repair and maintenance along with the Schematic diagram. iii) Maintenance and Repair, spare HID lamp/LED (optional to be defined by the user department at the time of indent) and List of Spares to be provided. iv) Special Tools/Kit be provided (Scale be specified by the user). 	<ul style="list-style-type: none"> i) Check the user manual provided with the FSL. ii) Check the assurance certificate in respect of the QRs Para 18 (ii), (iii) & (iv) submitted by the firm. 	<ul style="list-style-type: none"> i) User manual must be provided with the FSL. ii) The assurance certificate in respect of the QRs Para 18 (ii), (iii) & (iv) submitted by the firm. 	
17.	A single system unit must consist of:	<ul style="list-style-type: none"> i) Searchlight- 01 no ii) Lithium-Ion Rechargeable battery - 01 fitted and 01 spare battery iii) AC and DC charger- 01 No each. iv) Single Unit AC/DC Charger- 01 no v) Carrying Strap with suitable padding and quick disengaging mechanism- 01 no 	<p>Not concerned at the time of physical evaluation. (Only assurance certificate may be submitted by the firm in respect of the same)</p>	<p>Not concerned at the time of physical evaluation.</p>	

[Signature] 09/11/18 [Signature] [Signature] [Signature] [Signature] [Signature]

273

		vi) Water proof soft carrying case- 01 no vii) Ruggedized hard transportation box - 01 no			
--	--	--	--	--	--

(Ashok Kumar Sharma)
ADG (Log) BSF

(Aseem Vyas),
DIG, SIW BSF

(Rajnish Kumar), PSO (E)
BPR&D

(Gagan Bhardwaj), AC
SIW BSF

(Ravindra Kr Meel), DC
CISF

(Ravindra Kumar), AC
SSB

(Sub Mahipal Singh),
AR

(SI Ashwani Kumar),
SIW, BSF

(SI/RM Prem Singh),
Sig Regt, BSF

(Ram Pal), DC
ITBP

APPROVED/ NOT-APPROVED

(Rajni Kant Mishra) IPS
DIRECTOR GENERAL
BORDER SECURITY FORCE