

**Fax: 011-24367683**

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

Dated, the June 2017

Technical Director  
NIC, North Block, MHA  
New Delhi

**(Through E-mail)**

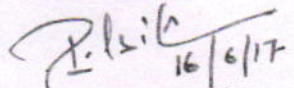
**(E-mail address : mpsugandhi@nic.in)**

Sub: **Request for comments of stakeholders/OEM on draft QRs.**

Kindly refer to MHA letter No. IV-24011/12/2011-Prov-I (part) (CFN 3300890)-1710 dated 31<sup>st</sup> Aug 2015.

2. In this connection, it is to inform that draft QRs and TDs of "Global Positioning System (GPS)" revised by Sub-group of technical experts during the meeting held on 13<sup>th</sup> June 2017 at HQ DG BSF, are forwarded herewith with the request to upload the same on MHA website for 15 days please.

Encl: - As above

  
**(Rishipal Singh)**  
Second-In-Command (Mod)

**Copy to :-**

1. SO (IT), North Block, MHA  
**(Through E-mail)**  
**(E-mail address : soit@nic.in)**

2. IT Wing, FHQ BSF

: For information and necessary action alongwith a copy of draft revised QR's and TDs of Global Positioning System (GPS).

i) Alongwith a copy of draft revised QR's and TDs of Global Positioning System (GPS) with the request to upload same on BSF website for 15 days i.e. upto 01<sup>st</sup> July 2017. The text may be removed on 02<sup>nd</sup> July 2017.

ii) It is also requested to e-mail this letter alongwith draft QRs and TDs to following addressee :-

(a) Technical Director, NIC, North Block, MHA  
**(E-mail : mpsugandhi@nic.in)**

(b) SO (IT), North Block, MHA  
**(E-mail : soit@nic.in)**

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प्राप्त		
दिनांक		
हिलाय कमान अधिकारी (आई टी)		
NIC (IT)		
उप कमाण्ड (आई टी)		
DC IT		
मुख्य लिपिक		
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दिनांक		
DATE		



**DIRECTOR GENERAL BORDER SECURITY FORCE  
PROVISIONING DIRECTORATE (Mod Cell)**

**Expression of Interest**

Commandant (Ord)  
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](mailto:comdtord@bsf.nic.in)

The Sub group of Technical Experts on Surveillance Equipments constituted by MHA vide their letter No. IV 1017/18/2001-Prov-I dated 05<sup>th</sup> July 2002 held its meeting at BSF Headquarters on 15<sup>th</sup> Feb 2016, 21<sup>st</sup> Sep 2016, 20<sup>th</sup> March 2017 and 13<sup>th</sup> June 2017 to revise the QRs of Global Positioning System.

**QUALITATIVE REQUIREMENT OF GLOBAL POSITIONING SYSTEM**

S/No	PROPOSED QRs
<b>Navigation Features :</b>	
1.	<b>Display :</b> LCD Display size 2.6" minimum diagonal.
2.	<b>Routes :</b> Minimum 200 routes with compatible SD memory card.
3.	<b>Way point:</b> Unit must have capacity to store 10,000 way points.
4.	<b>Tracks :</b> Must be able to store 10,000 track points and 200 tracks.
5.	<b>Track back :</b> Storage of track log files should be provided.
6.	<b>Map Datum's :</b> Should have the facility for user-defined datum with inbuilt standard datum's including Indian datum.
7.	<b>Co-ordinates :</b> Lat/ Lon, UTM, MGRS (Indian GR system (IGRS) with Auto IGRS zone selection and other grid based on user defined requirements. It should also show the map sheet no. as per Indian Military standard.
8.	<b>Co-ordinates conversion :</b> The system should have the provision to convert Co-ordinates from Lat-Lon to IGRS & vice versa.
9.	<b>Safety :</b> The system should have the provision of password protection for prevention of unauthorised user. The data stored in the memory card should be encrypted and can't be accessed by unauthorised user.  Validation of Co-ordinates: The system should alert the user for wrong entry of co-ordinates with map sheet number during storage of way point.
10.	<b>Navigation screens:</b> Should display battery status, Own position, altitude Compass, Graphical plot, Speed and Time, total distance covered and Cross track error.
11.	<b>PC Interface:</b> Should provide cable with software to upload and down load data with high speed USB port.
12.	<b>Optional Language :</b> Hindi & English for operation
13.	<b>Alarm :</b> Off track visual indication and arrival audio alarm.
14.	<b>Way point icons :</b> Should be provided.
15.	<b>Compass:</b> Should have built in 3 axis electronic compass for real time direction indication without GPS fix.
16.	<b>Radio Comn. Interface:</b> Optional (To be defined by the user) if required.
<b>PERFORMANCE</b>	
17.	<b>Receiver :</b> Min 12 Parallel channel receiver and should be compatible to receive

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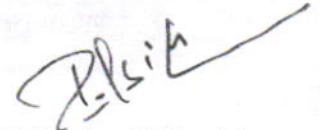


	signals from GPS, GLONASS, MSAS, GAGAN, WAAS and IRNSS (NavIC).
18.	<b>Acquisition:</b> $\leq 20$ second hot, $\leq 60$ seconds warm and 3 minutes cold.
19.	<b>Mapping units and software:</b> Loading of maps of user specific format in the GPS unit along with map loading software should be provided. Also an option to load satellite images into GPS unit. It should also support raster maps in Geo TIFF, JPG etc. formats, Vector maps or digital maps (Shape files).
20.	<b>Unit to Unit transfer:</b> Data can be transferred from one unit to another via Bluetooth.
21.	<b>Update rate :</b> One per second continuous.
22.	<b>Accuracy:</b> $< 10$ meters.
23.	<b>Power (source):</b> Rechargeable Batteries 'AA' size (NIMH or Lithium) and compatible battery charger . The battery should function for 10 hours minimum in operational mode and 48 hours minimum in stand by mode.
24.	<b>Operating system:</b> The GPS software should be compatible with MS windows operating system 2000 onwards that normal personal computer and laptop use.
<b>Physical</b>	
25.	<b>Weight :</b> Max 350 grams with batteries
26.	<b>Display :</b> Sunlight-readable, High contrast colour display with backlight
27.	<b>Keyboard :</b> Should have keys or multi function keys or soft keys (touch screen) for easy & quick operations like navigation, set up, illumination, Go to, point logging and marking.
28.	<b>Case :</b> Ruggedized and water resistance (30 minutes at 1 meter depth).
29.	<b>Temperature:</b> Operating $-20^{\circ}$ C to $+55^{\circ}$ C Storage $-20^{\circ}$ C to $+55^{\circ}$ C
30.	<b>Memory Backup :</b> Minimum 1 GB inbuilt memory must be provided along with additional memory of 2 GB through SD card.
31.	<b>Shelf Life :</b> 10 Years
32.	<b>Warranty :</b> The vendor will provide the AMC (including spare part if required) by the user for 05 years after expiry of warranty. Free warranty for 12 months with spares.
33.	<b>Spare Battery :</b> One set spare battery should be provided as mentioned in QRs Para. 5.
34.	<b>Engineering Support Package :</b> i) Technical literature. ii) Training manual and user hand book. iii) Illustrated spare part list duly priced. iv) Repair and maintenance training (factory level) should be arranged for about 10 working days to minimum 20 Technicians at OEM premises and operational training to 100 users.

**Note-** All firms are requested to provide the following.

1. Original Brochure of product by OEM.
2. Detail literature about the product.
3. Comprehensive comments for incorporation in the specifications.

The Sub-group has decided to upload the QRs on MHA and BSF website for 15 days to invite the views/ comments/ suggestions of prospective bidders to make the QRs more broad based.



(Rishipal Singh)  
Second-In-Command (Mod)