No.IV-17017/13/06-Prov.I
Ministry of Home Affairs
Prov.I
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New Delhi the 9th June,2006

To

The DGs:Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/SSB/BPR&D.

Subject: Finalization of QRs/Specifications for Weaponary/securityEquipments

The Sub-Group constituted by MHA vide Memorandum No. .IV.17017/18/2001-Prov.I dated 5-7-2002 for laying down QRs/specifications of various items/equipments has since submitted its recommendations in respect of following weaponary/security equipments:

(i) Digital HF Transceiver
(ii) Networking(NSG)
(iii) VHF/UHF Portable monitoring receiver
(iv) Broad band satellite terminal

2. These recommendations have been accepted by MHA. The QRs finalized by the Sub-Group and accepted by MHA in respect of the above equipments are enclosed herewith.

3. Henceforth, all the CPMFs should procure the above items required by them to meet their operational needs strictly as per the laid down QRs/specifications.

Yours faithfully,

(Alok Mukhopadhyay)
Under Secretary(Prov.I)
Tele. No.23381278

Copy to : DD(Procurement), MHA

Copy for information to:

1. PS to JS(PM), MHA
2. Dir(Prov), MHA

UTILITY OF EQUIPMENT :

(i) DIGITAL HF TRANCEIVER

World is moving from analog to digital and there is a need to introduce HF digital radio sets in the force. The analog technology of HF communication suffers from many limitations like noise, susceptibility to interception, instability of links etc. Digital technology addresses these problems by providing improved signal quality, affords greater security through digital encryption and frequency hopping ad gives more efficient links through ALE features. Army is already using digital HF sets.

(ii)NETWORKING

NSG has unique roles of counter terrorist (CT), counter hijack (CH) and VIP protection which demand mobilization of force and conduct of operation on very short notice. The reliable communication is the quintessence of its success. The NSG is distributed at three separate locations at Palam, Manesar & Samalkha. The networking involves inter connectivity of communication networks and data network between these locations to ride on one 'converged platform' to speed up coordination, planning, decision making and mobilization of task force the additional utility of this converged network will be :-

a) (i) Communication and data network down to unit level.
(ii) Facilitating use of computers by all the units to implements e-governance policy of MHA.
(iii) OFC is capable of providing high order of band-width, and superior quality of service. Due to its suitability for multiple applications, it has been preferred as media within the NSG cantonment.

b) Block diagram of the voice and data networking is enclosed with framed QRs at page 38 to 40.

(iii)VHF/UHF PORTABLE MONITORING RECEIVER

Proposed portable monitoring receiver will be utilized at operation site for monitoring of VHF/UHF radio transmissions of terrorists/anti social elements for gaining information NSG has been entrusted with very important task of counter terrorist and counter Hijack operations. It is experienced that anti national elements/terrorists very extensively use VHF/UHF radio communication before and after launch of any terrorist attack. They also extensively use radio comn. during conduct of counter Hijacking and counter terrorism operations by NSG TF against them for passing info. and obtaining directions from their mentors. Monitoring of messages being passed by terrorists to their mentor and/or instructions being received by terrorists from their mentors would undoubtedly be of immense utility of NSG TF in reshaping of action plan and conduct of operations.

(iv)**BROAD BAND SATELLITE TERMINAL**

NSG is a Federal contingency force of Govt. of India responsible for conducting counter Hijacking and counter terrorism operations any where in the country. Area of operation for NSG is not defined. It may be sent even to those areas where no landline or cellular phone facility is available. NSG TF on reaching site of operation should be in constant communication with HQ NSG Delhi and NSG FHQ at Manesar for keeping IG (OPS), DG NSG and in turn MHA inform the progress of operations and obtain directions depending upon the situation till leaving site after completion of the operation. The operation site may be any where closer to (within UHF/VHF comn range) or away from (beyond the VHF/UHF communication range) HQ NSG Delhi. As HF communication does not a support transmission of broad band data (256 Kbps). Satellite communication is the only means of communication left for keeping NSG TF in constant voice & Data communication with HQ NSG Delhi and Force HQ at Manesar.

AVAILABILITY OF VENDORS

It is also confirmed that QRs of the above mentioned communication equipment have been formulated in such a manner that there would be sufficient vendors for each equipment available in the market.

QUALITATIVE REQUIREMENT
BROAD BAND SATELLITE TERMINAL

1. **Type** - A light weight and compact broad band satellite terminal for mobile applications.

2. **Services**

   (a) Voice
   (b) Fax
   (c) Data

3. **Satellite terminal to include the following**:-

   (a) Interface unit (main equipment)- Contains all the interfaces for connecting to a computer and handset and operational status indicators. It also houses the SIM card and battery.

(b)	Rechargeable Li-ion battery	-	4 per terminal
(c)	Li-ion battery charger	-	2 per terminal
(d)	AC adaptor	-	1 per terminal
(e)	Connectors and interfaces	-	as applicable
(f)	Phone / handset for voice comn	-	1 per terminal

4. **General specifications**

(a) Satellite terminal to be two separate units (antenna unit and interface unit) to enable the operation from inside a room / vehicle.

(b) Antenna unit can be placed at a min distance of 20 mtrs from the interface unit.

5. **Technical specifications**

   (a) Satellite terminal

   (i) Data rates - Trans - 240 Kbps or more
   Receive - 384 Kbps or more

Technical Specification	Qualitative Requirement
Receiver Accessories.	
Aerial / Antennas	(a) Telescopic whip aerial to be directly fitted on the receiver .
	(b) Telescopic whip aerial mounted on magnetic base with 5 meter of flexible coaxial cable .
	(c) Discone aerial with 15 and 30 meter coaxial cable and telescopic mast of 10 feet with carrying case.
Data Clone Lead	To interface with computer on RS 232 port or USB port
Tape recording lead	For recording radio interception directly on to tape recorder in real time
Digital Tape Recorder and cassettes	To record radio intercept on digital recorder with digital recorder with digital cassettes
Earphone / Headphone	For hands free operation during monitoring of radio intercept, which provides clear audio even in noisy environment.
External speakers	External speaker of 8 ohms with connector
Belt Clip	Swivel belt clip or alligator type.
Carrying case	Long lasting carrying case to help protect receiver from scratches
DIGITAL RECORDING AND ANALYSING SYSTEM SPECIFICATION	
Processor	Intel Pentium 4 or higher processor
RAM	1 to 2 GB
Hard disk	40 to 80 GB
Display	10 to 12 inch TFT touch screen
Combo Drive (Internal or External)	CD/ DVD write/read
Interface	(a) Inbuilt LAN Card with option for Wireless LAN, GSM/CDMA and GPS.
	(b) External audio input
	(c) Blue tooth enabled,
Accessories	(a) External 100 Watt Speaker
	(b) Internal Battery life - 8 hours
	(c) Connecting lid from monitoring receiver audio out to audio in of
	(d) Audio head gear with noise filter inbuilt to be connected with digital recording and analysing system audio output
	(e) AC Power supply cable
	(f) Carrying case (Ruggedised magnesium alloy) with hinge.
	(g) External 650VA digital UPS with 30 minutes backup
Software original (OEM)	(a) Windows XP or higher operating system
	(b) MS Office compact pack
	(c) Cool edit (Audio editing)
	(d) Other audio editing software can be quoted

Technical Specification	Qualitative Requirement
Environmental conditions	(a) Operating Temperature: – 5° C to + 50° C
	(b) Confirm to Mil Std 810 F or higher.
Literatures.	
User Hand Book	One per set
Technical Manual for receiver	Should give out full technical description of equipment circuit layout, etc., to be supplied at the scale of 10% of equipment being purchased or minimum quantity two
Warranty	Comprehensive three years with option for five year AMC after warranty.
Spares / Tools.	For user level maintenance:-
Supply of spares	Be able to supply the spares of radio receiver for six years after warranty
Spares List	(i) MRLS (Manufacture Recommended List of Spares) should be provided.
	(ii) ISPL (Illustrated Spares Part List) should be provided.
Test Equipment	List of Test Equipment should be provided.
Field Trial.	One receiver and one digital recording and analysing system for field trials at no cost and no commitment basis to ascertain the user satisfaction before the proposal is accepted.
Training.	Firm should train a team of four operator and mechanic in handling, operating and repairing of radio receiver free of cost after procurement.
After Sales Service.	Firm should mention the system of repair, AMC, after sales service and customer care facilities in India for carrying out repairs after warranty.
Govt of India License.	Firm should enclose Government of India license for selling the radio receiver in India.
DOT / WPC License.	Firm should enclose DOT /WPC license for using surveillance equipment in India.

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