

No. IV-21011/37/2009-Prov-I
Government of India
Ministry of Home Affairs

26, Man Singh Road, Jaisalmer House,
New Delhi, 11.9.2009

To

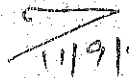
The DGs: Assam Rifles/BSF/CISF/CRPF/ITBP/NSG/SSB/BPR&D

Subject: -QRs/Technical Specifications for the Communication equipments-regarding

The QRs/Technical Specifications for the following Communication equipments have been accepted and approved by the Competent Authority in MHA.

- (i) Digital UHF Transceiver Hand Held Transceiver- Appendix-A
- (ii) Digital UHF Mobile Transceiver-Appendix-B
- (iii) Digital UHF 25 W Repeater-Appendix-C

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

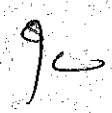

11/9/09
(R.S.Sharma)
Director (Prov)

Copy to:-

DD(Procurement),MHA

Copy for information to:-

PS to JS(PM),MHA


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QRs / SPECIFICATION OF DIGITAL MOBILE TRANS RECEIVER, UHF

Sl No.	Parameters	Specification
1.	General	
	Frequency Range	403-470 MHz
	No. of channel	256 or higher
	Channel Spacing	12.5 KHz or better
	Frequency Stability	± 1.0 PPM or better
	Protocol	Digital TDM /FDM technology
	Type of Emission	Analog ; 11K0F3E Digital ; 4 FSK or equivalent Modulation technique complying to Open Standard/ non propriety Digital Protocol as defined by an international standards body like ETSI / FCC etc
	Type of Operation	Simplex press to talk
	Weight without External battery & Antenna	Less than 2000 grams
	Power Source	Typical 13.8V DC $\pm 10\%$
	Protection	(i) Reverse polarity protection (ii) Protection against high VSWR
2.	Transmitter	
	R.F Power output	20 Watt Programmable/ Selectable or more
	FM Noise	40 dB or better (12.5 KHz)
	Frequency Deviation	± 2.5 KHz in 12.5 KHz spacing
	Modulation Sensitivity	2 to 10 mV
	Modulation Distortion	Less than 3% @1 KHz
	Modulation Fidelity	$\pm 1, -3$ dB of 6 dB
	Digital modulation	4 FSK Modulation or equivalent
3.	Receiver	
	Sensitivity	i) Analog: 0.30 μ V for 12 dB SINAD or better ii) Digital: 0.30 μ V at 5% BER or better
	Selectivity (Adjacent channel)	60 dB @12.5 KHz or better
	Inter Modulation	65 dB or better as per ETSI standard / equivalent or better
	Audio Output	3 W internal or 7.5 W external speaker 8 ohms
	Audio Response	$\pm 1, -3$ dB of 6 dB
4.	Environmental Specification	
	Operating Temperature	-30°C to + 60 °C
	Storage Temperature	-40°C to + 70 °C
	Humidity	90% at 50°C (as per MIL810E)
	Environmental standard	MIL 810 C, D, E & F standards

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MR B KASHYAP

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MRS


5.	Features	
	Support GPS	Should be supplied with GPS with accuracy less than 15m, to enable being tracked from Remote Control Station with appropriate system.
	Support GIS	Radio should have Application Protocol Interface alongwith software applications to provide Locations and messaging on PC / Console.
	Text Messaging	Should be capable of sending Short Messages from Keypad and Pre-defined Messages.
	Front panel LCD Display	The Radio should be supplied with alphanumeric display to view various settings and functions of the set
	Transmitter Time Out Timer (TOT)	The time should be programmed to best suit the application.
	Emergency Button	Covert emergency signaling to allow users to send help signals to user defined individuals or groups in critical situations.
	Scan with priority facility	Should be available
	Mode of calls	Selective Call , Group Call , Inter Group calls and Intra Group call facility
	Contact list	Contact list of more than 100 user for SMS and selective calling
	Remote Radio Kill / Stun /Revive facility	Should be available
	Caller ID Display	Should be available
	Networking	IP based for features like automatic roaming
	Secrecy	Should provide inherent protection against casual eavesdropping
6.	Accessories	
	Microphone	DTMF Microphone
	Antenna	i) 3dB gain whip antenna with 3 mtrs. Co-axial cable with connector, magnetic base/ mounting bracket for veh. use ii) 6dB gain Omni Directional antenna with 30 meter RF Cable for base station.
	Programming kit	All necessary programming software and hardware required for the set.
	Literature	i) Users manual with each radio sets ii) Technical repairing manual with complete block diagram, circuit layout etc at a scale of 10% of equipments being procured. iii) Firm should train teams of four operator and mechanics in handling, operating and repairing of radio receiver free of cost after procurement.

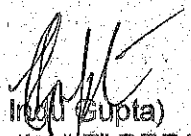
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HAJ B KASHYAP

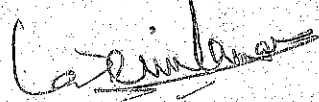
7. Description :
- i) The radio set should be light weight and compact operating in conventional system in single location and automatic roaming in other areas of operation using IP based repeater network without manual intervention. The microprocessor control of key circuits should provide automatic operation of most internal function, which allows for consistent performance and reliability. The radio should have battery cable and mounting fixtures.
 - ii) Firm should train team of four operators and technicians in handling, operating and repairing of sets free of cost after procurement.
 - iii) Vender to indicate the service centers across India for repairing of equipments after sale warranty support.
 - iv) Should provide after sales support, supply of spares for at least 6 years after warranty period.
 - v) The firm should enclose DOT/WPC license for supplying radio equipment in India.
 - vi) 3 radio sets for 30 days to be provided for field trial on "no cost no commitments" basis to ascertain the users satisfaction before the proposal is accepted.
 - vii) All the technical features will be shown during the trials.

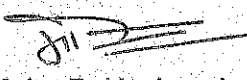

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✓
Approved / Not Approved


 (A.S. Gill) IPS
 DG, CRPF

UTILITY AND VENDOR AVAILABILITY CERTIFICATE

1. This is to certify that the following items authorised to the National Security Guards under Mod Plan is an inescapable requirement and is required to equip the task forces with the latest digital sets to give them an edge during the anti terrorist operations. The features in these sets shall also help in maintenance of security, dynamic grouping, providing flexibility and better speech quality along with various other value added features and services etc.
2. This is to certify that there are at least three vendors in India who comply with the Qualitative requirements for UHF digital sets (Hand held, mobile and repeater sets) as submitted vide HQ NSG, Provisioning dte letter no P/604/2006(483)/NSG-3760P dt 03 Aug 09.



MAJ B KASHYAP

सहायक कमाण्डर (सामान्य)

SON CDR (FQPT)

संचालन विभाग, रा. सुर. गण.

COMN DTE, HQ NSG

नई दिल्ली/New Delhi.