

No. IV-21011/17/2009-Prov-I
Government of India
Ministry of Home Affairs

26, Man Singh Road, Jaisalmer House,
New Delhi, 4.6.2009


To

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

Subject:- QRs/Technical Specifications of the Digital HF Trans Receiver -100 Watt,
Static.

The QRs/ Technical Specifications of the Digital HF Trans Receiver -10Watt,
Static as per Annexure, has been accepted by the Competent Authority in MHA.

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


4/6/09

(R.S.Sharma)
Director (Prov)

Copy to:-

DD(Procurement),MHA

Copy for information to:-

PS to JS(PM),MHA

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Disseminated.
4/6/09

P.B. Mehta 19 to CEO
4/6/09 SSB
2/4/09 WARR
2/5/09 MSH

QRs/Technical Specifications of the Digital HF Trans Receiver -100 Watt, Static.

GENERAL	
Frequency Range	1.6 to 29.999 MHz
Modulation	USB,LSB,AM, CW
Digital Signal Processing	A single DSP chip should provide digital modulation and demodulation of all on air signaling, including the one used in the ALE, selective call and syllabic mute processes and to provide noise reduction of received signal.
Pre-set Channels	100 or more
Frequency Stability	+/- 0.6 PPM or better
Built-in test	Front Panel Testing
Power input	12 VDC & 230 VAC
Operating Temperature	- 30 deg. C to 60 deg. C
Weight	Less than 6 kgs
TRANSMITTER	
RF Power Output	100 watt for the entire band
Microphone	5 mV nominal across 150 ohm
Tx Current at full power	Less than 20 Amps.
Harmonic Suppression	>/- 45 dB with respect to single tone
Unwanted side band suppression	>/- 45 dB w.r.t. single tone
Non Harmonic Spurious	>/- 50 dB w.r.t. single tone
Inter modulation Distortion	31 dB min. below PEP
RECEIVER	
Receiver Sensitivity SINAD	>/- 10 dB for -113 dBm (0.5uv) RF input level or better
Image & IF rejection	80 dB Min. or better
Audio Output	> 10 mw across 600 ohm, > 250 mw across 50 ohm or better
Squelch	Active . Digitally coded
Audio Distortion	< 5% or better
In band inter modulation	38 dB min. below PEP distortion
FEATURES	
Automatic Link Establishment	AS per MIL standard 188-141B
GPS Tracking	The Radio set should have inbuilt GPS facility for tracking
SMS Facility	SMS/page call should be available
Selective Call	4/6 digit selective call, which should be fully compatible with sets of various major manufactures
Tel call	The Radio should have capability to dial and operate on data
RS – 232 Control	The Radio should have capability to operate on data
Tunable Receiver	Should be available
Radio Kill/Unkill Function	Should be available
Encryption	DES or AES (optional)
Protections	i) Reverse polarity protection should be provided. ii) The final RF stage be protected against high VSWR
Environmental Specification	As per JSS 55555 or equivalent