



DIRECTORATE GENERAL, CRPF
EAST BLOCK-7, SECTOR-1, R.K PURAM, NEW DELHI-66
e-mail : digeqpt@crpf.gov.in Tele No. 011-26109038



No. B.V-7/2025-26-C(M/Pack HF)-QR Cell

Dated, the 08 Oct'2025

To

1. The DsG: AR, BSF, CISF, ITBP, NSG, SSB and BPR&D
2. Director, DCPW

Subject: QRs/TDs OF "HF MANPACK TRANSCEIVER" REGARDING.

I am directed to refer to the subject mentioned above and to say that the QRs/TDs of "**HF Manpack Transceiver**" have been approved by the DG CRPF after due deliberations as per recommendations of CAPFs sub-group of technical experts and experts from DCPW.

2. QRs/TDs of "**HF Transceiver Man-pack**" forwarded earlier vide letter No. B.V-7/2019-20-C(HF) dated 12/09/2019 stand rescinded.

This is for favour of information and further needful action please.

Encl:-As above

(Megh Raj)

DIG (Equipment)
Communication & IT Branch
Directorate General C R P F

No. B.V-7/2025-26-C(M/Pack HF)-QR Cell

Dated, the 08 Oct'2025

Copy to:-

1. Mr. Deepak Kumar, Technical Director, North block, MHA (e-mail ID: deepakg@gov.in) with request to upload the QRs/TDs of "HF Manpack Transceiver" on MHA website and QRs/TDs of "HF Transceiver Man-pack" forwarded earlier vide letter No. B.V-7/2019-20-C(HF) dated 12/09/2019 stand rescinded please.

Encl:-As above

(Megh Raj)

DIG (Equipment)
Communication & IT Branch
Directorate General C R P F

QRs/TDs OF HF MANPACK TRANSCEIVER

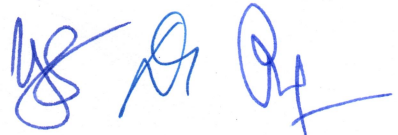
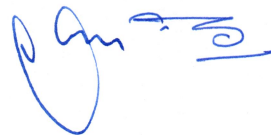
1.1 General Specification

S. N	Parameters	Specifications	Trial Directives
1	Frequency Range	2.0 MHz to 29.9999 MHz channel spacing 10 Hz.	BOO will check practically
2	Modes	SSB(J3E) USB, LSB, AM, CW/MCW	BOO will check practically and firm will produce OEM Certificate.
3	Preset	100 Channels or more	BOO will check practically.
4	Frequency Stability	±1 PPM or better	BOO will check practically.
5	Built-in-test	Front panel testing.	BOO will check practically.
6	Input Power	+12 V DC Nominal (10.8V to 14.4V)	BOO will check practically
7	Battery Type	10 Ah or more Li-Ion or better	The firm will produce certificate of Govt. Lab. or NABL/ILAC accredited laboratory and BOO will check practically.
8	Battery life (Duty Cycle: 5 / 5 / 90)	20 Hrs. or more	BOO will check practically and Firm will produce OEM certificate.
9	EMI / EMC	MIL-STD- 461/462C or ETSI or CISPR 32 or IEC 61000-4 Series (TEC/EMI/TEL-001/01 FEB-09) or latest standard	The firm will produce certificate of Govt Lab or NABL/ILAC accredited laboratory.
10	Weight	Less than 6Kg with battery	BOO will check practically
11	Antenna port impedance of radio	50 Ω Unbalanced	Firm will submit OEM Certificate
12	Protection	(i) Reverse Polarity protection (ii) Protection against high VSWR.	BOO will check practically and firm will produce OEM certificate.
13	Roles	Manpack	BOO will check practically.
14	Headphone Impedance	up to 600Ω	BOO will check practically and firm will produce OEM Certificate.
15	Cooling	Convection from case	BOO will check Physically.
16	VSWR	Better than 1.5	BOO will check practically.
17	Visual display	Front panel LCD/LED display or latest technology	BOO will check practically.
18	Interface	RS-232/ USB/ Ethernet/ (as per user requirement)	BOO will check practically.
19	Programming	PC programming software and front panel Programming.	BOO will check practically by software and front panel programming.

S. N	Parameters	Specifications	Trial Directives
1.2 Transmitter Specification			
1	RF Power	5W to 25W PEP (Low, Medium, High) (user programmable)	BOO will check practically.
2	Spurious Emission	≤ 46 dB below PEP	BOO will check practically.
3	Side Band Suppression	≥ 50 dB or better	BOO will check practically.
4	Carrier Suppression	≥ 40 db or better	BOO will check practically.
5	Inter modulation distortion	30db minimum below PEP	Firm will produce OEM certificate.
6	Audio Response	Within ± 6 db from 350Hz to 2700Hz.	BOO will check practically.
7	Side Tone Level	Better than 0.1mW into 150 Ω load for 5mV of audio input at 1 KHz.	BOO will check practically.
8	Modulation Sensitivity	1 to 10 mV at 1 KHz for full power under SSB mode.	BOO will check practically.
1.3 Receiver Specification			
1	Receiver Sensitivity	-110 dBm for 10dB SINAD or better	BOO will check practically.
2	Image Rejection	≥ 70 dB or better	BOO will check practically.
3	IF Rejection	≥ 70 dB or better	BOO will check practically.
4	In band Inter Modulation Distortion	35dB minimum below PEP	Firm will produce OEM Certificate.
5	Audio Response	Within ± 6 dB from 350Hz to 2700Hz	BOO will check practically.
6	Audio Output	1W or more across loudspeaker	BOO will check practically.
7	Audio Frequency Harmonics Distortion.	≤ 25 dB or better	BOO will check practically.
1.4 Environmental Parameters: -			
1	Operating Temperature	-30°C to +55° C	The firm will produce certificate of Govt. Lab. Or NABL/ILAC accredited laboratory.
2	Storage Temperature	-30°C to +60°C	
3	Humidity	93 $\pm$ 5% RH non-condensing at +40°C $\pm$ 3°C	
4	Dust	MIL-STD-810F or better or	
5	Vibration	JSS-55555 (As laid down in Class L3 of JSS-55555,	
6	Shock	revision No.2) or better	
7	Water Intrusion		
8	Altitude		

[Handwritten signatures and initials in blue ink]

S. N	Parameters	Specifications	Trial Directives
1.5	Features: -		
1	Selective calling	Digital FSK coding	Firm will produce OEM Certificate.
2	Scanning	5 channels per second or better	
3	Flash messages	Minimum 60 characters	BOO will check practically.
4	Vocoder	MELP/CELP/ACELP/TWELP (600/800/1200/2400 bps) or better	Firm will produce OEM Certificate.
5	RS-232 control	The Radio set should have capability to operate at 4800 baud rate or better.	BOO will check practically.
6	Inbuilt Data Modem	MIL-STD-188 -110A/B/C single tone $\geq$ 4800 bps or better	Firm will produce OEM Certificate
7	Data Communication	Provision for Data Communication and compatible with previous model of same brand	BOO will check practically.
8	Tunable receiver	Continuous tunable.	BOO will check practically.
9	Radio kill/un-kill	(i) Manual or Over the air (ii) Self-kill function after 5 unsuccessful attempts of unauthorized access (optional)	BOO will check practically and Firm will produce OEM certificate.
10	Audio input sockets	Mic and external socket.	BOO will check practically.
11	Squelch	Voice /Digital squelch	BOO will check practically.
12	Push to talk.	Suitable Microphone to be provided.	BOO will check practically.
13	Audio Socket	Suitable headgear should be provided.	BOO will check practically.
1.6	Optional Features (As per user requirement)		
1	Communication Security	AES 256 bit or better/ SAG approved encryption (as per user requirement)	Firm will produce OEM Certificate
2	ALE 2G/3G/4G (As per user requirement)	ALE 2G as per Appendix "A" or ALE 3G as per Appendix "C" or ALE 4G as per Appendix "G" of MIL-STD-188-141D	Firm will produce OEM Certificate
3	Frequency Hopping	Hop Rate: $\geq$ 6 hops per second	Firm will produce OEM Certificate

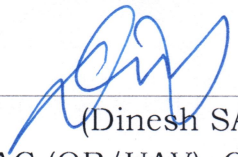




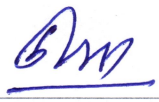


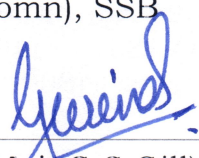
S. N	Parameters	Specifications	Trial Directives
4	GPS Interface	Inbuilt GPS with polling facility	BOO will check practically.
5	Voice Message (Optional)	Ability to send and receive voice message	BOO will check practically

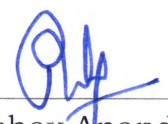

 (WO/RM Sandip Kumar)
 AR


 (Sanjay Mathur)
 AC (Comn), SSB

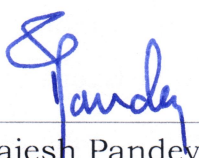

 (Dinesh SA)
 AC (QR/UAV), CRPF


 (Lalji Ram)
 JAD, DCPW

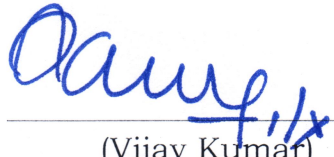

 (Maj. G.S Gill)
 NSG


 (Abhay Anand Patil)
 DC, CISF


 (R.K. Saran)
 2 I/C, BSF


 (Rajesh Pandey)
 Comdt (Tele), ITBP


 (Megh Raj)
 DIG (Eqpt), CRPF


 (Vijay Kumar)
 IG (Comn & IT), CRPF


 (Vitul Kumar, IPS)
 SDG (OPS), CRPF


Approved/Not Approved


 (Sh. G.P. Singh, IPS)
 DG, CRPF