



DIRECTORATE GENERAL, CRPF
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No. B.V-7/2025-26-C-(L/BTY)-QR CELL

Dated, the 12 Feb'2026

To

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

Subject: QRs/TDs OF "LITHIUM BATTERY FOR HAND-HELD RADIO SETS"
REGARDING.

I am directed to refer to the subject mentioned above and to say that the QRs/TDs of "**Lithium Battery for Hand-Held Radio Sets**" have been approved by the DG CRPF after due deliberations and as per recommendations of Sub-Group of Technical Experts from CAPFs and experts from DCPW.

2. Hence, QRs/TDs of "**Lithium Battery for Hand-Held Radio Sets**" forwarded earlier vide letter No. B.V-7/2013-14-C (QRs)(II) dated 09/09/2013 stand rescinded please.

Encl:-As above

(Megh Raj)

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

No. B.V-7/2025-26-C-(L/BTY)-QR CELL

Dated, the 12 Feb'2026

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 "**Lithium Battery for Hand-Held Radio Sets**" on MHA website and QRs/TDs of "**Lithium Battery for Hand-Held Radio Set**" forwarded earlier vide letter No. B.V-7/2013-14-C (QRs)(II) dated 09/09/2013 stand rescinded please.

Encl:-As above

(Megh Raj)

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

QRs/TDs OF LITHIUM BATTERY FOR HAND-HELD RADIO SETs

S.N	Parameters	Specification	Trial Directives
1	Application	Use with VHF/UHF Hand-Held Radio Sets (Type & Model of Radio Sets for which battery required will be decided by user organization during procurement)	The BOOs will check physically and practically by fitting in the required Radio Set & its charger and will ensure that battery meets the requirement of requisite Radio Set.
2	Electrical		
	a) Type of Battery Chemistry	Lithium-Ion/Polymer (Chemistry of battery will be decided by user organization during procurement)	The BOOs will check physically that type of chemistry of battery produced by the firm is as per tender specification and firm will submit OEM Certificate.
	b) Rated Capacity	2000-2100 mAH, 2101-2200 mAH, 2201-2300 mAH, 2301-2400 mAH, 2401-2500 mAH, 2501-2600 mAH, 2601-2700 mAH, 2701-2800 mAH, 2801-2900 mAH 2901-3000 mAH or higher capacity (as per user requirement)	The BOOs will check practically capacity of battery with the help of standard testing instruments and will ensure that Battery meets the tender requirement
	c) Voltage	7.2 or 7.4 Volt	The BOOs will ensure that voltage of battery is as per user requirement by measuring with the help of standard measuring instrument.
	d) Minimum charging cycle	500 or more	Firm will provide OEM Certificate
3	Mechanical		
	a) The battery casing should be made of high strength Polycarbonate/ABS blend		The BOOs will check it physically as well as firm will provide certificate of Govt / NABL Accredited/ STQC approved Lab about used material in power pack casing.
	b) The Battery casing should be bonded by ultrasonic /Laser/ Vibration welding.		The BOOs will check physically.

S.N	Parameters / Specification	Trial Directives
	<p>c) The Cells are inter connected by spot-welding through necessary circuit.</p> <p>d) Easy insertion of Battery with Radio Set/charger with proper latching</p> <p>e) The Battery should be equipped with rust proof spring loaded belt clip (Optional as per user requirement).</p>	<p>Firm will provide a loose battery during sample evolution for checking the internal connection</p> <p>The BOOs will check it physically by inserting it in Radio set as well as in battery charger.</p> <p>The BOOs will check it physically.</p>
4	<p>Protection: - Battery should be equipped with protection circuit to protect from – Over Temperature, Short Circuit, Over voltage & low voltage etc.</p>	<p>The BOOs will check practically that battery is provided with safety circuit for all parameters. As well as Battery manufacturer firm will provide OEM Certificate in this regard.</p>
5	<p>Description: -</p> <p>i) The sleeve of cells used should preferably indicate the following: - Part Number/Month & Year of Manufacturer/ Voltage of cell/ Capacity of cell/ Country of cell.</p> <p>ii) The Label of the battery should be self-destructive type and specified the following: - Battery Voltage/ Capacity/ Chemistry of cell/Part number of Battery/Suitable Model of Radio Set/Serial number of battery/Month & Year of Manufacturer</p> <p>iii) Trade Mark Logo of the firm to be embossed/heat stamped/Laser print.</p> <p>iv) Clear Instruction shall be given “To Charge the battery on suitable chargers”</p>	<p>The BOOs will check physically that details mentioned at para 5 i) to iv) is available on battery.</p>
6	<p>The Battery should pass the following Environment Tests mentioned as per JSS 55555 or IS 9000, followed by Capacity Test @ C/5 Rate: -</p> <p>1. Equipment shall be suitable for operation in the following environmental conditions:</p> <p>a) Operating Temp Range: -10°C to +55°C</p> <p>b) Storage Temp Range: -40°C to +70°C</p> <p>c) Relative Humidity: 95% Max at +40°C non-condensing</p> <p>2. Tests to be conducted & Conditions of tests when test is conducted on JSS</p>	<p>The BOOs will check the Environmental Test Certificate submitted by the firm which is issued by Govt / NABL accredited /STQC Lab.</p>

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- a) Damp Heat (Cyclic) (Test No 10): +40°C ± 2°C with a RH 93±3 % for 16 hours
- b) High Temp (Test No. 17) under test condition K: +55°C ±3°C for 24 hrs followed by storage at 70°C ±3°C for 24 hrs.
- c) Low Temp (Test No 20) Under test condition H: -10°C± 3C° for 16 hrs for operation and Under test condition (L) - 40°C± 3C° for 16 hrs for storage.
- d) Drop Test (Test No 13): under condition (F) drop height 1000mm
- e) Vibration Test (Test No 28): Sinusoidal vibration with a freq range of 5 to 350Hz at either 2g acceleration or a ± 6mm Displacement for 2 hours in each direction.

OR

Tests to be conducted & Conditions of tests when test is conducted on IS 9000

- a) Dry Heat: Part III/SEC.5/1977 55°C ±2°C, RH <50%, duration 16 hours.
- b) Damp Heat (Cyclic) Test: Part V/SEC.2/Variant 1/1981 40°C ± 2°C, RH 95%, Two cycles of 24 (12+12) hours each
- c) Cold Test: Part II/SEC.4/1977 (-)10°C ±3°C, During 16 hours
- d) Drop Test (In packed condition): Part VII/SEC.3/1979 Six drops one on each condition face, Height of fall 1000mm in case of hand-held items and 500mm in case of other items.
- e) Vibration Test: Part VIII/1981 12 hours, 4 hours along with each axis at 15-150 Hz and with amplitude of 0.15mm/2g
- f) Storage Test: Part III/SEC 5/1977 & - 40°C for 5 hours, then raises the temperature to 70°C for 16 hours.

3. Environmental test Report with equivalent or superior conditions would be acceptable

4. The functional and permissible degradation shall be as under: -
No degradation in battery capacity when measured at C/5 Rate.

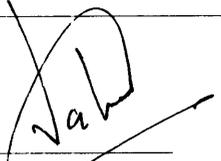
The BOOs will check the Environmental Test Certificate submitted by the firm which is issued by Govt / NABL accredited /STQC Lab.

[Handwritten signatures and initials]

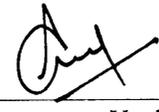
S.N	Parameters / Specification	Trial Directives
7	BIS Certification: Required as per IS 16046 (Part-2): 2018/IEC 62133-2:2017 or as per latest update/Standards	Firm will produce Certificate from BIS recognized/Empaneled Lab.
8	Battery life cycle should not be programmed in BMS (Battery Management System)	Firm will provide OEM Certificate
9	Warranty - Minimum one year	Firm will provide OEM Certificate

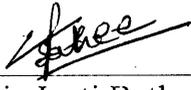

W/O Vikas Godara
Assam Rifles

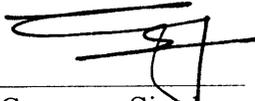

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JAD, DCPW


Satish Kumar Mahla
AC (Comn), SSB


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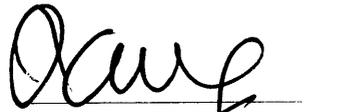

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Approved/ Not Approved


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