

No. B.V-7/2013-14-C(QRs)-(16) Uo2  
Government of India/भारत सरकार  
Ministry of Home Affairs/गृह मंत्रालय  
Police Modernization Division/पुलिस आधुनिकीकरण प्रभाग  
Prov.I Desk/संभरण-I डेस्क

26, Mansingh Road, Jaisalmer House,  
New Delhi, the 19<sup>th</sup> February, 2014

To,

DsG : AR(Through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D

**Subject : QRs and Trial Directives of Battery Charger to charge battery of hand held radio set.**

The QRs and Trial Directives in respect of Battery Charger to charge battery of hand held radio set. as per Annexure-I and Annexure-II respectively have been approved by the Competent Authority in MHA.

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

Yours faithfully,

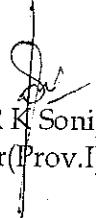


(Smt. S B Nanda)

Under Secretary(Prov.I)

Encl : As above.

Copy forwarded to SO(IT) with the request to host the QRs and Trial Directives of Battery Charger to charge battery of hand held radio set on the website of MHA (under the page of organizational set up Police Modernization Division - Qualitative Requirement), soft copy is being sent through email.



(R K Soni)

Section Officer(Prov.I)

Copy to DDG(Proc.)

Copy for information to PPS to JS(PM)

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QRs/ SPECIFICATION FOR BATTERY CHARGER TO CHARGE BATTERY OF  
HAND HELD RADIO SET

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SI No	DESCRIPTION
1	<b>Operating Voltage:</b> 230VAC $\pm$ 20% 50 Hz (AC Adopter with European plug) or with built in adopter.
2	Output DC voltage and output current should be available with the quoted charger as per the model battery pack and number of pocket charger require by user.
3	<b>Number of pockets :</b> 1/2/4/6/8/10/12 (User will decide number of pocket during procurement as per their requirement)
4	Charge Process: Rapid/Trickle: - Rapid rate (should charge 90% within two to three hours and employs trickle modes that ensure batteries are safely charged to full capacity.
5	<b>Charger Type:</b> Tri- chemistry, Charger should support to charge the Ni-MH and/or Lithium-ion/poly batteries of capacity 2000 mAh to 3000 mAh or higher capacity. (Users will define during procurement whether they require charger of particular battery chemistry or for both i.e Ni-Mh and Lithium)
6	<b>Charging capability:</b> - Capable to charge 1/2/4/6/8/10/12 batteries at a time. (User will decide during procurement numbers of pocket charger require)
7	Charger should have a Charge status LED that shows battery charging "in progress" or "fully charged".
8	Charger should be a "smart" to prevent over charging a battery.
9	Fully protected against overload, Short-circuit against accidental continuous shorting of any charge contact and reverse polarity protection should be available in the charger.
10	The charger should pass the following Environmental Tests mentioned as under as per IS: 9000 or any equivalents standard. 1. Equipment shall be suitable for operation in the following environmental conditions. a. Operating Temp. Range: -10°C to + 55°C b. Storage Temp. Range : - 40°C to + 70°C c. Relative Humidity : 95% Max at + 40° C non-condensing 2. <b>Tests to be conducted &amp; Conditions of tests as per IS: 9000</b> a) Dry Heat: Part III/SEC.5/1977 55°C $\pm$ 2° C, RH < 50%, duration 16 hours. b) Damp Heat (Cyclic) Test: PartV/SEC.2/variant1/1981 40°C (+/-) 2°C, RH 95%, Two cycles of 24 (12+12) hours each. c) Cold Test: Part III/ SEC. 4/1977 (-) 10°C +/- 3° C, duration 16 hours. d) Drop Test(in packed : 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 15-150Hz and with amplitude of 0.15mm/2g. f) Storage Test: Part III/ SEC. 5/1977 & - 40°C for 5 hours. Part II/SEC. 4/1977 then raises the temperature to 70° C for 16 hours. g) Bump test : Part VII/SEC.2/1979 4000 bumps at peak acceleration of 400m/s sq.

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*(Handwritten signatures and initials)*


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- 3. Environmental test Report with equivalent or superior conditions would be acceptable.
- 4. The functional tests and permissible degradation shall be as under:-  
No degradation in output voltage

  
(M S Yadav, AC (Tech), CRPF)

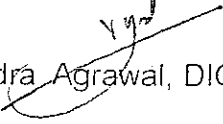
  
(D.K. Bhatt, Asstt Comdt, SSB)

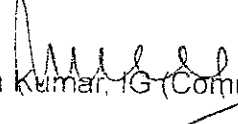
  
(Gurbachan Singh, SSO (E), BPR&D)

  
(Sunil Kumar, DC (Comn), ITBP)

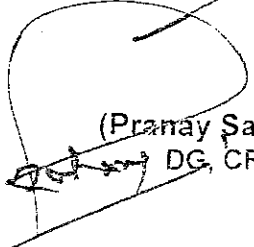
  
(Major Kapil Dahiya, TC (Eqpt), NSG)

  
(S.K. Singh, Comdt (C-Eqpt), BSF)

  
(Virendra Agrawal, DIG (Eqpt), CRPF)

  
(Shailendra Kumar, IG (Comn), CRPF)

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APPROVED/NOT APPROVED

  
(Pranay Sahay, IPS)  
~~Pranay~~ DG, CRPF

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**TRIAL DIRECTIVES OF BATTERY CHARGER TO CHARGE BATTERY OF  
HAND HELD RADIO SET**

Trial/ Testing of Battery Charger for Hand Held Radio Set will be conducted by a Board of Officers in the presence of representative of Firms to assess actual performance of the Battery Charger.

2) All parameter / Specifications mentioned in the QRs will be checked by board of officers by ascertaining /verifying following checks.

**Physical Checks:** In this category specifications of equipment will be checked physically as per QRs.

**Functional Check:** - The vendors will show all features/ configuration of the equipment to the board of officers during technical evaluation.

**Submission of certificates:** - Specification which cannot be checked due to lack of testing facilities/ expertise, a certificate of test shown against each will be provided by the firm during physical trial of equipment.

SI No	DESCRIPTION	TRIAL PROCEDURE
1	<b>Operating Voltage:</b> 230VAC $\pm$ 20% 50 Hz (AC Adopter with European plug) or with built in adopter.	The board will check it practically that charger works properly within specified AC voltage range.
2	<b>Output DC voltage</b> and output current should be available with the quoted charger as per the model battery pack and number of pocket charger require by user.	The board will check practically that pocket of charger are matching with the battery, are as per user requirement and all are working properly.
3	<b>Number of pockets :</b> 1/2/4/6/8/10/12 ( User will decide number of pocket during procurement as per their requirement)	The board will check practically and ensure that number of pockets is as per tender publication and all are working properly.
4	<b>Charge Process:</b> Rapid/Trickle: - Rapid rate (should charge 90% within two to three hours and employs trickle modes that ensure batteries are safely charged to full capacity.	The board will check practically by charging the various type of battery.
5	<b>Charger Type:</b> Tri- chemistry. Charger should support to charge the Ni-MH and/or Lithium-ion/poly batteries of capacity 2000 mAh to 3000 mAh or higher capacity. (Users may define whether charger requires for particular battery chemistry or for both i.e. Ni-Mh and Lithium)	The board will check practically by charging the various type of battery.
6	<b>Charging capability:-</b> capable to charge 1/2/4/6/8/10/12 batteries at a time. (User will decide numbers of pocket charger require during procurement)	The board will check practically by charging the battery.
7	Charger should have a Charge status LED that shows battery charging "in progress" or "fully charged".	The board will check practically by charging the battery.
8	Charger should be a "smart" to prevent over charging a battery.	The board will check it practically.
9	Fully protected against overload, Short-circuit against accidental continuous shorting of any charge contact and reverse polarity protection should be available in the charger.	The board will check it practically.

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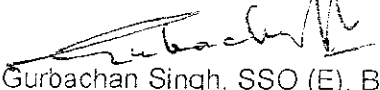
10 The battery charger should pass the following Environmental Tests mentioned as under as per IS: 9000 or any equivalents standard.

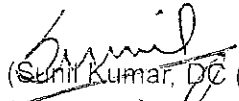
1. Equipment shall be suitable for operation in the following environmental conditions.
  - a. Operating Temp. Range : -10° C to + 55° C
  - b. Storage Temp. Range : - 40° C to + 70° C
  - c. Relative Humidity : 95% Max at + 40°C non-condensing
2. **Tests to be conducted & Conditions of tests as per IS: 9000**
  - a) Dry Heat: Part III/SEC.5/1977 55°C ± 2°C, RH< 50%, duration 16 hours.
  - b) Damp Heat (Cyclic) Test: PartV/SEC.2/variant1/1981 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, duration 16 hours.
  - d) Drop Test(in packed : 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 15-150Hz and with amplitude of 0.15mm/2g.
  - f) Storage Test: Part III/ SEC. 5/1977 & -40°C for 5 hours. Part II/SEC. 4/1977 then raises the temperature to 70°C for 16 hours.
  - g) Bump test : Part VII/SEC.2/1979 4000 bumps at peak acceleration of 400m/s sq.
3. Environmental test Report with equivalent or superior conditions would be acceptable.
4. The functional tests and permissible degradation shall be as under.  
No degradation in output voltage

The B.O.Os will check the Environmental test certificate submitted by the firm is conducted in Govt. of india approved laboratory and ensure that all the test have been carried out as per specification.

  
(M S Yadav, AG (Tech), CRPF)

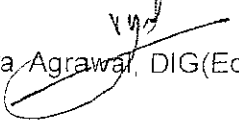
  
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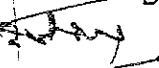
  
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