

No. IV-17018/3/07-Prov-I 2242  
भारत सरकार/Government of India  
गृह मंत्रालय/Ministry of Home Affairs  
पुलिस आधुनिकीकरण प्रभाग /Police Modernization Division  
संभरण-I डेस्क/Prov.I Desk

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26, Man Singh Road, Jaisalmer House,  
New Delhi, the 3<sup>rd</sup> December, 2015.

To,

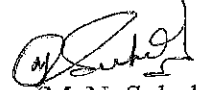
DsG : AR (through LOAR), BSF, CISF, CRPF, ITBP, SSB, NSG & BPR&D.

**Subject : Revised QRs and Trial Directives for Explosive Detector.**

The QRs and Trial Directives in respect of Explosive Detector as per the Annex-I and Annex-II respectively have been accepted by the Competent Authority in MHA.

2. Henceforth, all the CAPFs should procure the above item required by them strictly as per revised laid down Technical Specifications/QRs.
3. Concerned CAPF will be accountable for correctness of the QRs/Trial Directives.
4. MHA letter of even number dated 05-03-2008 is rescinded.

Yours faithfully,



(M. N. Sukole)

Under Secretary (Prov-I)

*Approved  
3/11/2015*

Encl.: As above.

Copy to : SO(IT), MHA : with the request to host the revised QRs and Trial Directives of Explosive Detector on the MHA website (under the page of Organizational Set up-Police Modernization Division-Qualitative Requirements-QRs-bdds.html), soft copy being sent through email.




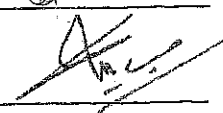

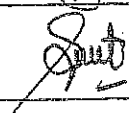
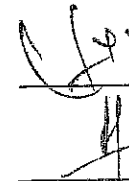
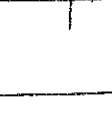
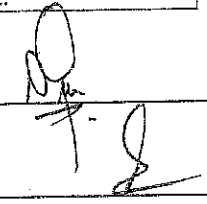

(M. N. Sukole)

Under Secretary (Prov-I)

Copy to : DDG(Procurement), MHA.

*O/C*

Ser No	Parameters	QRs
1.	<b>General.</b>	Explosive detection is a non-destructive inspection process to determine whether a container contains explosive material. Explosive detection is commonly used at airports, ports and for border control.
<b>OPERATIONAL CHARACTERISTICS</b>		
2.	<b>Sensitivity</b>	The detector should be able to detect all types of organic and inorganic explosives in vapors, liquid, powder, particle and mixture form at varying temperature without touching the suspected item.
3.	<b>Selectivity</b>	System should not respond to odor of non-explosive substances.
4.	<b>Specificity</b>	False alarm rate should be less than 5%.
5.	<b>Carrier Gas</b>	Detector system should not require the use of carrier gas. The equipment should also not require any consumables for detection.
6.	<b>Auto Calibration</b>	Adjustment/Resetting for further operations should be automatic.
7.	<b>Warm Up Time</b>	Should be less than 15 seconds.
8.	<b>Analysis Time</b>	Should be less than 30 seconds.
9.	<b>Electromagnetic Interference</b>	Operations should not be affected by electromagnetic interference of other electronic/magnetic devices.
10.	<b>Operating Temperature</b>	(a) Minimum – Minus 10 degrees C. (b) Maximum – Plus 55 degrees C. (c) Humidity – Up to 95% non-condensing.
11.	<b>Indication</b>	Equipment should give out both visual and audio alarm signal.
<b>PHYSICAL CHARACTERISTICS</b>		
12.	<b>Versatility</b>	Equipment should be rugged for military use and should be able to function correctly in all weather conditions prevalent in India.
13.	<b>Ease of Operations</b>	Results given by the detector/equipment should be self explanatory and should not require any reference.
14.	<b>Display</b>	(a) Equipment should have a full coloured LED/LCD display. (b) Clear display with touch screen. (c) Equipment should display following details:- (i) Type of explosive on detection. (ii) System on/off. (iii) Status of system calibration. (iv) System battery status. (v) Mode of detection. (vi) Any other function of the equipment.

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Ser No	Parameters	QRs
15.	<u>Data Transfer</u>	Equipment should have USB port/Bluetooth for data transfer.
16.	<u>Power Supply</u>	(a) It should operate on AC/DC supply. (b) Battery Endurance – Minimum 4 hours. (c) Lithium Ion Battery with minimum 2 yrs life and 500 cycle.
17.	<u>Portability</u>	(a) Equipment should be one man portable. (b) It should fit into one hand carrying case. (c) Weight – Maximum operating weight 2 Kgs.
18.	<u>Safety</u>	(a) The equipment should be safe to handle. (b) Should be free from any kind of radiation hazard to the operator. (c) Laser output of the equipment should not activate/detonate the IED.
19.	<u>Database</u>	System database/library of explosives should be upgradable and extendable at the user level.
20.	<u>Carrying Case</u>	Should be hard, strong, rugged, light weight and water proof.
21.	<u>Carrying Case (while operating)</u>	(a) Case should be ultra-light. (b) It should have provision for carrying accessories and consumables. (c) It should have provision for wearing by the operator. (d) Should be water proof.
22.	<u>Spares and Service</u>	(a) Carrying Case – One per equipment. (b) Carrying Case (for operations) – One per equipment. (c) Battery Charger – One per equipment. (d) Test Samples – Nos to be specified by the users at the time of tendering. (e) Spare Battery – Nos to be specified by the user at the time of tendering. (f) User Hand Book (English) – One per equipment (g) Tech Service Manual (English) – One per equipment (h) Manufacturers List of Recommended Spares duly priced.
23.	<u>Training</u>	One week of in-situ training to be carried out by the OEM.

Prasanna  
(RAMESH KUMAR)  
Asst Dir SIW BSF

Nav Rajan  
(NAVI RAJAN)  
Deputy Commandant,  
25th BA, S B, Chittani.

Jatinder Singh  
Ac ITBP

D.P.  
(MAGNIBANDAN-EK,  
UCB DUNIT)

Ashish Mohanty  
Mag Ashish Mohanty  
TC WE, HQ NSG

DC C STC Thakur  
DCCADW  
AR

Abhiram Bhatnagar  
29.9.15  
(Abhiram Bhatnagar,  
DC, CRPF)

A.K. Shrestha  
Ac CIB

Sanjay Sharma  
PSO(WM)  
BPRD







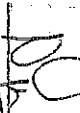



APPROVED / NOT APPROVED

(RC Tayal)  
DG, NSG  
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Anexure-D of MHA V.O. No. IV-17018/3/07-Rev-I dated - 03/12/2015  
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TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR

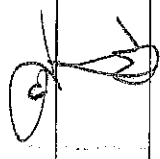


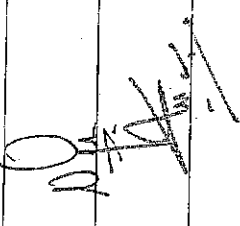
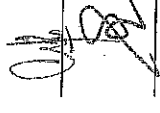
Ser No	Parameters	QRS	Trial Directives
1.	<u>General.</u> Explosive detection is a non-destructive inspection process to determine whether a container contains explosive material. Explosive detection is commonly used at airports, ports and for border control.		
<b>OPERATIONAL CHARACTERISTICS</b>			
2.	<u>Sensitivity</u>	The detector should be able to detect all types of organic and inorganic explosives: in vapors, liquid, powder, particle and mixture form at varying temperature without touching the suspected item.	To be physically checked by the BOO. Minimum 10 samples of explosives should be kept inside a container (box, pressure cooker, briefcase, carton box, bag etc) and detected separately. The container should be closed. Each sample inside the container to be checked with the explosive detector separately. Samples to include swiped, contained, powdered, spilled and liquid. Samples to be checked/detected at varying temperatures. The detector should be able to detect all types of explosives.
3.	<u>Selectivity</u>	System should not respond to odor of non-explosive substances.	To be physically checked by the BOO. Non explosives should be kept with/without the explosive samples in separate containers. All these samples should be checked with the explosive detector. The detector should not respond to non-explosive substances.
4.	<u>Specificity</u>	False alarm rate should be less than 5%.	To be physically checked by the BOO. Explosive and non-explosive samples to be placed inside different containers separately and should be checked with the detector. The false alarm rate should be less than 5%.
5.	<u>Carrier Gas</u>	Detector system should not require the use of carrier gas. The equipment should also not require any consumables for detection.	OEM to provide certificate from a NABL/international accredited lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of the certificate must be confirmed by the BOO.
6.	<u>Auto Calibration</u>	Adjustment/Resetting for further operations should be automatic.	To be physically checked by the BOO.
7.	<u>Warm Up Time</u>	Should be less than 15 seconds.	To be physically checked by the BOO. The same should be timed using a stopwatch.

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TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR (Contd....)

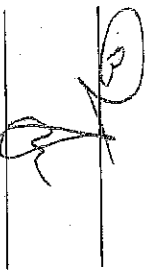
S/N	Parameters	QRs	Trial Directives
8.	<u>Analysis Time</u>	Should be less than 30 seconds.	To be physically checked by the BOO. The same should be timed using a stopwatch.
9.	<u>Electromagnetic Interference</u>	Operations should not be affected by electromagnetic interference of other electronic/magnetic devices.	OEM to provide certificate from NABL/international accredited lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate must be confirmed by the BOO.
10.	<u>Operating Temperature</u>	(a) Minimum – Minus 10 degrees C. (b) Maximum – Plus 55 degrees C. (c) Humidity – Up to 95% non-condensing.	OEM to provide certificate from NABL/international accredited lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate must be confirmed by the BOO.
11.	<u>Indication</u>	Equipment should give out both visual and audio alarm signal.	To be physically checked by the BOO.
<b>PHYSICAL CHARACTERISTICS</b>			
12.	<u>Versatility</u>	Equipment should be rugged for military use and should be able to function correctly in all weather conditions prevalent in India.	To be physically checked by the BOO. OEM to provide certificate from NABL/international accredited lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate must be confirmed by the BOO.
13.	<u>Ease of Operations</u>	Results given by the detector/equipment should be self explanatory and should not require any reference.	To be physically checked by the BOO.

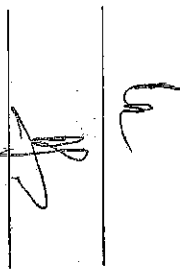






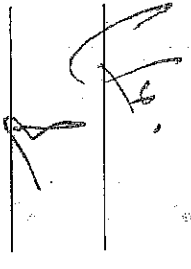
TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR (Contd...)

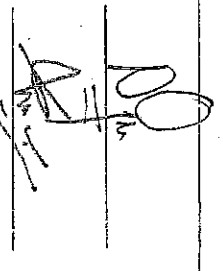
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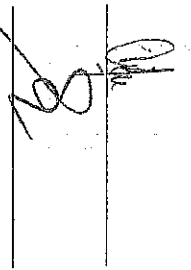
Ser No	Parameters	QRs	Trial Directives
14.	<u>Display</u>	(a) Equipment should have a full coloured LED/LCD display. (b) Clear display with touch screen. (c) Equipment should display following details:- (i) Type of explosive on detection. (ii) System on/off. (iii) Status of system calibration. (iv) System battery status. (v) Mode of detection. (vi) Any other function of the equipment.	To be physically checked by the BOO.
15.	<u>Data Transfer</u>	Equipment should have USB port/Bluetooth for data transfer.	To be physically checked by the BOO.
16.	<u>Power Supply</u>	(a) It should operate on AC/DC supply. (b) Battery Endurance – Minimum 4 hours. (c) Lithium Ion Battery with minimum 2 yrs life and 500 cycle.	To be physically checked by the BOO. OEM to provide certificate from NABL/international accredited lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate must be confirmed by the BOO.
17.	<u>Portability</u>	(a) Equipment should be one man portable. (b) It should fit into one hand carrying case. (c) Weight – Maximum operating weight 2 Kgs.	To be physically checked by the BOO.
18.	<u>Safety</u>	(a) The equipment should be safe to handle. (b) Should be free from any kind of radiation hazard to the operator. (c) Laser output of the equipment should not activate/detonate the LED.	OEM to provide certificate from NABL/international accredited lab. OEM to provide contact person details, phone number, address, e-mail address & website of the lab. Authenticity of certificate must be confirmed by the BOO.
19.	<u>Database</u>	System database/library of explosives should be upgradable and extendable at the user level.	To be physically checked by the BOO.











TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR (Contd....)

Ser No	Parameters	QRs	Trial Dir
20.	<u>Carrying Case</u>	Should be hard, strong, rugged, light weight and water proof.	To be physically check
21.	<u>Carrying Case (while operating)</u>	(a) Case should be ultra-light. (b) It should have provision for carrying accessories and consumables. (c) It should have provision for wearing by the operator. (d) Should be water proof.	To be physically check
22.	<u>Spares and Service</u>	(a) Carrying Case – One per equipment. (b) Carrying Case (for operations) – One per equipment. (c) Battery Charger – One per equipment. (d) Test Samples – Nos to be specified by the users at the time of tendering. (e) Spare Battery – Nos to be specified by the user at the time of tendering. (f) User Hand Book (English) – One per equipment (g) Tech Service Manual (English) – One per equipment (h) Manufacturers List of Recommended Spares duly priced. One week of in-situ training to be carried out by the OEM.	OEM to be provide same will be checked
23.	<u>Training</u>		

*[Handwritten signature]*  
 (RASSAN KUMAR) ENSHT  
 21/05/2011  
 D.C. Senarath  
 D.C. Sharma  
 Mr

*[Handwritten signature]*  
 (Navi Narayan)  
 Department of Commandants  
 28th Bn, SSB, 4th Avenue  
 Madurai  
 (Muniam Kunjar,)  
 DC, CRPF

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 (S. Srinivasan)  
 (M. Srinivasan)  
 (M. Srinivasan)

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 (M. Srinivasan, Etk)  
 Major, NTR Division, Etk  
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APPROVED / NOT-APPROVED

(RC Taval)