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26, Man Singh Road, Jaisalmer House, New Delhi, the 3<sup>17</sup> December, 2015.

To, DIGPow)

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 MHA letter of even number dated 05-03-2008 is rescinded.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)

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.

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

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Ser		QRs
15.	Data Transfer	Equipment should have USB port/Bluetooth for data transfer.
16.	Power Supply	<ul> <li>(a) It should operate on AC/DC supply.</li> <li>(b) Battery Endurance – Minimum 4 hours.</li> <li>(c) Lithium Ion Battery with minimum 2 yrs life and 500 cycle.</li> </ul>
17.	Portability	<ul> <li>(a) Equipment should be one man portable.</li> <li>(b) It should fit into one hand carrying case.</li> <li>(c) Weight – Maximum operating weight 2 Kgs.</li> </ul>
18.	Safety	<ul> <li>(a) The equipment should be safe to handle.</li> <li>(b) Should be free from any kind of radiation hazard to the operator.</li> <li>(c) Laser output of the equipment should not activate/detonate the IED.</li> </ul>
19.	Database	System database/library of explosives should be upgradable and extendable at the user level.
20.	Carrying Case	Should be hard, strong, rugged, light weight and water proof.
21.	Carrying Case (while operating)	<ul> <li>(a) Case should be ultra-light.</li> <li>(b) It should have provision for carrying accessories and consumables.</li> <li>(c) It should have provision for wearing by the operator.</li> <li>(d) Should be water proof.</li> </ul>
22.	Spares and Service	<ul> <li>(a) Carrying Case – One per equipment.</li> <li>(b) Carrying Case (for operations) – One per equipment.</li> <li>(c) Battery Charger – One per equipment.</li> <li>(d) Test Samples – Nos to be specified by the users at the time of tendering.</li> <li>(e) Spare Battery – Nos to be specified by the user at the time of tendering.</li> <li>(f) User Hand Book (English) – One per equipment</li> <li>(g) Tech Service Manual (English) – One per equipment</li> <li>(h) Manufacturers List of Recommended Spares duly priced.</li> </ul>
23.	Training	One week of in-situ training to be carried out by the OEM.

PARMAN (RAGESH KUNIAR) ZHXBIT SIW BSF (NAVI NAUJAM)
Deputy Commandant.

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(RC Tayal) DG, NSG

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# Annexule-1) of MHA U.O. No. IV-17018/3/07-Prov-I dated (565)2/2015

### TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR

	7.	n 5	4.	ω	2	OPER	٠-	Ser No	
	Warm Up Time	Carrier Gas	Specificity	Selectivity	Sensitivity	RATIONAL CHARACTERISTICS	General. Explosive detect	Parameters	
A State of the sta	should be automatic. Should be less than 15 seconds.	so l	False alarm rate should not require the use of	System should not respond to odor of non-explosive substances.	organic and inorganic explosives in vapors, organic and inorganic explosives in vapors, liquid, powder, particle and mixture form at varying temperature without touching the suspected item.	The detector should be able to detect all types of	General. Explosive detection is a non-desirable improvement of the section is commonly used at airports, ports and for border control.		QRs
The state of the s	To be physically checked by the BOO. The same should be timed using a stopwatch.		-	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.  To be physically checked by the BOO. Explosive and non-explosive	explosives should be kept more briefcase, carton box, bag etc) and detected separately. The 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 swiped, contained, powdered, spilled and liquid. Samples to be shecked/detected at varying temperatures. The detector should be able to detect all types of explosives.	To be physically checked by the BOO. Minimum 10 samples of the physically checked by the BOO. Minimum 10 samples of the physically checked by the BOO. Minimum 10 samples of the physically checked by the BOO.		to determine whether a container contains explosive material. Explosive	Trial Directives

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

9.	Parameters	QRs	Trial Directives
10.	Analysis Time	Should be less than 30 seconds.	To be physically checked by the BOO. The same should be
	Electromagnetic Interference	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
	Operating Temperature	<ul> <li>(a) Minimum – Minus 10 degrees C.</li> <li>(b) Maximum – Plus 55 degrees C.</li> <li>(c) Humidity – Up to 95% non-condensing.</li> </ul>	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
11.	Indication	Equipment should give out both visual and audio alarm signal.	certificate must be confirmed by the BOO.  To be physically checked by the BOO.
PHYSIC	CAL CHARACTERISTI	CS	*
12.	Versatility	Equipment should be rugged for military use and should be able to function correctly in all weather conditions prevalent in India.	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
13. <u>I</u>	Ease of Operations	Results given by the detector/equipment should be self explanatory and should not require any reference.	To be physically checked by the BOO.

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

		O.D.	Trial Directives
Ser	Parameters	QRs	
No		LIED/ICD	To be physically checked by the BOO.
14.	<u>Display</u>	<ul> <li>(a) Equipment should have a full coloured LED/LCD display.</li> <li>(b) Clear display with touch screen.</li> <li>(c) Equipment should display following details: <ul> <li>(i) Type of explosive on detection.</li> <li>(ii) System on/off.</li> <li>(iii) Status of system calibration.</li> <li>(iv) System battery status.</li> <li>(v) Mode of detection.</li> </ul> </li> </ul>	To be physically checked by the BOO.
	(2)	(vi) Any other function of the equipment.	The Pool
	Data Transfer	Equipment should have USB port/Bluetooth for data	To be physically checked by the BOO.
15.	Data Transfer	transfer.	
16.	Power Supply	(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.	mail address a website of the lab mathematy of order must be confirmed by the BOO.
		(a) Equipment should be one man portable.	To be physically checked by the BOO.
17.	Portability	<ul><li>(b) It should fit into one hand carrying case.</li><li>(c) Weight – Maximum operating weight 2 Kgs.</li></ul>	
18	Safety	<ul> <li>(a) The equipment should be safe to handle.</li> <li>(b) Should be free from any kind of radiation hazard to the operator.</li> <li>(c) Laser output of the equipment should no activate/detonate the IED.</li> </ul>	lab. Authenticity of certificate must be confirmed by the BOO.
			e To be physically checked by the BOO.
19	Database	System databasembrary or supre-	m
	0	upgradable and extendable at the user level.	

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

Ser Parameters  No  20. Carrying Case (while operating)  21. Carrying Case (while operating)  22. Spares and Service (a) Carrying Cas (b) It should be we (c) It should be we (c) It should be we (c) It should be we (d) Should be we (e) Spare Batter tendering.  (c) Battery Charged (d) Test Sample tendering.  (d) Test Sample (e) Spare Batter tendering.  (f) User Hand B (g) Tech Service (h) Manufacture (h) Manufact	ng, rugged, light weight and water proof be ultra-light.  e provision for carrying accessories and e provision for wearing by the operator. after proof.  e - One per equipment.  e (for operations) - One per equipment. S - Nos to be specified by the users y - Nos to be specified by the user ook (English) - One per equipment and (English) - One per equipment is Manual (English) - One per equipment is List of Recommended Spares duly printaining to be carried out by the OEM.	Trial Directives  To be physically checked by the BOO.  To be physically checked by the BOO.  at the time of at the time of the same will be checked by the BOO.  OEM to be provide certificate and the same will be checked by the BOO.  OEM to be provide certificate and the same will be checked by the BOO.  OEM to be provide certificate and the same will be checked by the BOO.
Dc Stertalers (Afleria	Hariam Guhay, (AK. Studel neces) Janson	Janjan Jose and Besolw)

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(RC Tayal) (DG, NSG