

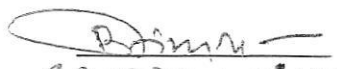
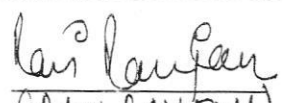
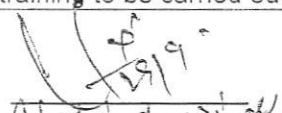
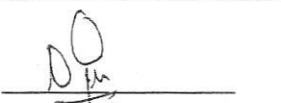
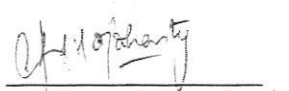
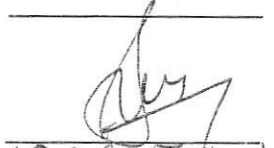
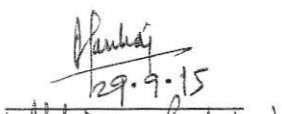
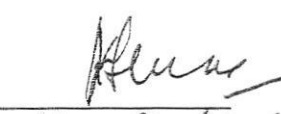

REVISED QRs FOR EXPLOSIVE DETECTOR


Annexure - 1

Ser No	Parameters	QRs
1.	General.	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.
OPERATIONAL CHARACTERISTICS		
2.	Sensitivity	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.	Selectivity	System should not respond to odor of non-explosive substances.
4.	Specificity	False alarm rate should be less than 5%.
5.	Carrier Gas	Detector system should not require the use of carrier gas. The equipment should also not require any consumables for detection.
6.	Auto Calibration	Adjustment/Resetting for further operations should be automatic.
7.	Warm Up Time	Should be less than 15 seconds.
8.	Analysis Time	Should be less than 30 seconds.
9.	Electromagnetic Interference	Operations should not be affected by electromagnetic interference of other electronic/magnetic devices.
10.	Operating Temperature	(a) Minimum – Minus 10 degrees C. (b) Maximum – Plus 55 degrees C. (c) Humidity – Up to 95% non-condensing.
11.	Indication	Equipment should give out both visual and audio alarm signal.
PHYSICAL CHARACTERISTICS		
12.	Versatility	Equipment should be rugged for military use and should be able to function correctly in all weather conditions prevalent in India.
13.	Ease of Operations	Results given by the detector/equipment should be self explanatory and should not require any reference.
14.	Display	(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.

Handwritten signatures and initials are present below the table, organized into four columns corresponding to the table's columns. Each signature is written over a horizontal line.

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.

 (RAJESH KUMAR) INSPIIT SIW BSF	 (RAVI RANJAN) Deputy Commandant, 25th BASS B, Ghiteini.	 (Jatinder Singh) Ac ICBP	 (MANOJ KUMAR - ETC.) UC DDUNIT
 Maj Ashish Mohanty TC WE, HQ NSG	 DCC Adms AR	 29.9.15 (Abhiram Kumar) DC, CRPF	 (A.K. Shukla) Ac CRPF
 ANJAY SHARMA, PSO(WM) BPR&D	APPROVED / NOT APPROVED		


(RC Tayal)
DG, NSG
21/10

Annexure-D of MHA U.O. No. IV-17018/3/07-Prav-T dated - 03/12/2015
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TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR

QRs

Trial Directives

Ser No	Parameters	QRs	Trial Directives
1.	General. 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.		
OPERATIONAL CHARACTERISTICS			
2.	Sensitivity	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.	Selectivity	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.	Specificity	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.	Carrier Gas	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.	Auto Calibration	Adjustment/Resetting for further operations should be automatic.	To be physically checked by the BOO.
7.	Warm Up Time	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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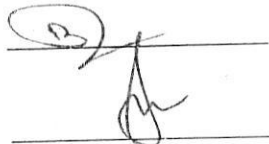
TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR (Contd....)

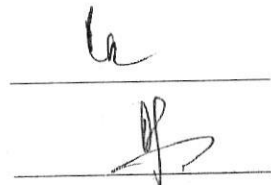
Ser No	Parameters	QRs	Trial Directives
8.	<u>Analysis Time</u>	Should be less than 30 seconds.	To be physically checked by the BOO. The same should be timed using a stopwatch.
9.	<u>Electromagnetic Interference</u>	Operations should not be affected by electromagnetic interference of other electronic/magnetic 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.
PHYSICAL CHARACTERISTICS			
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.

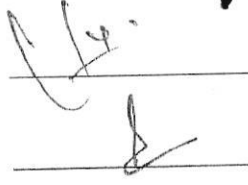
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TRIAL DIRECTIVES FOR EXPLOSIVE DETECTOR (Contd....)

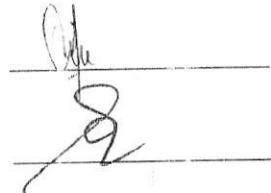
Ser No	Parameters	QRs	Trial Directives
14.	<u>Display</u>	(a) Equipment should have a full coloured LED/LCD display. (b) Clear display with touch screen. (c) Equipment should display following details:- (i) Type of explosive on detection. (ii) System on/off. (iii) Status of system calibration. (iv) System 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 IED.	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 Directives
20.	<u>Carrying Case</u>	Should be hard, strong, rugged, light weight and water proof.	To be physically checked by the BOO.
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 checked by the BOO.
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.	OEM to be provide certificate and the same will be checked by the BOO.
23.	<u>Training</u>	One week of in-situ training to be carried out by the OEM.	OEM to be provide certificate and the same will be checked by the BOO.

Law Lalwan
(LAWI LAWJAW)
Deputy Commandant
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(AK. Shukla NCC)
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