


**INVITATION OF VENDOR COMMENTS ON QR/ TDs OF HAND HELD RTVS/ WIRELESS
REAL TIME VIEWING SYSTEM**

1. It is intimated that firms/ vendors' comments are invited on the QR/ TDs of **Hand Held RTVS/ Wireless Real Time Viewing System**. All firms are requested to offer their comments on e-mail address scord@nsg.gov.in or gcproc@nsg.gov.in in under mention format.

QRs	TDs	Comments by the firm
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2. You are requested to offer comments within 15 days from the date of uploading on the website. The QR/ TDs of above mentioned equipment/ weapon are being considered by sub group committee meeting for finalization.

Dated : 15 Jan 2021


(Sonu Rai)
Maj
SC (Ord)

DRAFT QRs/ TRIAL DIRECTIVES OF HAND HELD RTVS/ WIRELESS REAL TIME VIEWING SYSTEM

S/No	QR	Trial Directives
1.	<p>Handheld Real Time Viewing System is a compact portable X-Ray machine that can be carried in a backpack by a single individual and is designed to take digital 16 bit X-Ray image on the spot to locate power source, mechanism, detonator, explosive materials etc in any concealed suspicious boxes/enclosure items. The Hand Held Real Time Viewing System should have a compact Imager, X-Ray Source, Hand held tablet and Accessories as per the below mentioned specifications</p>	<p>1. The BOO to take X-Rays of various LED Models to incl : (a) Plastic Briefcase (b) stainless steel/tool Steel Pipe Bomb (c) School Bag (d) stainless steel/tool Steel Pipe Bomb Tiffin Box</p> <p>2. The system should be able to generate good quality X-Rays wherein various components of the LED can be identified</p>
2.	<p>IMAGER</p> <p>(i) Imaging Area should be minimum 30 cm X 35 cm. (ii) Maximum width of Imager size should not exceed 2 cm. (iii) Image Area Position: 8 mm or less from ground level. (iv) Imager should be flat panel detectors of solid-state x-ray digital radiography using amorphous silicon/ Linear detector array or better. (v) Imager weight: Less than 5 Kg +15% with rechargeable battery. (vi) Dynamic Range / Bit Depth of the Imager should be True 16 bit or better. (vii) Image quality should of high quality with high 16 bit resolution or better. (viii) Imager should have inbuilt wireless for data transfer. (ix) Seamless wireless connection from Imager to control/ display unit. (x) Continuous working time of the Imager not less than 4 hrs. (xi) The Imager and X-Ray generator to be IP 53 rated or better. (xii) User friendly to use. (xiii) The system should facilitate ROV and Tripod mounting facility.</p>	<p>To be physically checked by BOO To be physically checked by BOO To be physically checked by BOO Firm to furnish OEM certificate To be physically check the authenticity of the certificate by BOO To be physically checked by BOO Firm to furnish OEM certificate. Firm to furnish OEM certificate. To be physically checked by BOO To be physically checked by BOO To be physically checked by BOO Firm to furnish National/International accredited lab certificate. To be physically checked by BOO To be physically checked by BOO</p>

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S/No	QR	Trial Directives
3.	X-Ray Source	
	(i) The X-Ray source should be Pulsedor constant potential X-Ray Source.	Firm to furnish National/international accredited lab certificate. To be physically check the authenticity of the certificate by BOO.
	(ii) The X-Ray source should not have any radioactive material.	Firm to furnish AERB "TYPE APPROVAL & NOC". To be physically check the authenticity of the certificate by BOO
	(iii) Penetration: Should be able to penetrate minimum 25 mm of stainless steel/cool steel.	Detonators No 27 or 33 or all commercially available detonators or dummy detonators should be clearly identified. To be physically checked by BOO
	(iv) The X-Ray source should be of 100 KVP or more energy.	Firm to furnish National/international accredited lab/AERB certificate. To be physically check the authenticity of the certificate by BOO
	(v) The weight of X-Ray source with battery should be less than 6.5 Kgs.	To be physically checked by BOO
	(vi) Less X-Ray dose safe for use as certified by AERB.	Firm to furnish AERB "TYPE APPROVAL & NOC". To be physically check the authenticity of the certificate by BOO
	(vii) The X-Ray source to be remotely operable through wireless option with only small connector from X-Ray Source to the ruggedized MIL STD 810 G/ Lemo connector of the wireless module.	To be physically checked by BOO
	(viii) The X-Ray Source to be operated withstandard commercial availablerechargeable batteries in open market.	To be physically checked by BOO
	(ix) The system should facilitate ROV and Tripod mounting facility.	Compatibility with type of ROV to be decided at the time of indenter agency To be physically checked by BOO
	(x) The X Ray source must enable Dual energy mode	To be physically checked by BOO
4.	Display Unit	
	(i) The display unit should be ruggedized tablet of MIL Std 810 G with minimum 10" screen size with HD daylight-readable with intel core i5 or latest processor, 8 GB RAM, 256 GB SSD Hard Disk, latest Operating System and USB connectors	Firm to furnish OEM certificate.
	(ii) The display unit should be completely touch screen for easy operation.	certificate To be physically checked by BOO.
	(iii) The display unit weight with battery to be less than 1.5 Kgs.	To be checked by BOOS
	(iv) The display unit should be working on normal windows operating system.	Firm to furnish OEM Certificate/ Data Sheet
	(v) The display unit should be IP53 or better.	A certificate be provided by Firm from Govt recognized LAB

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5.	System Accessories	
(i) Communication: Efficient Wireless data transfer. The wireless range should be minimum 200 meters (line of sight) without repeaters between imager and display unit and wireless data transfer between imager and x ray source.	To be checked by the BOO by operating the system from a distance of 200m. LOS distance between the imager and the Control Unit to be 200m	
(ii) Continuous working stand by time not less than 4 hours.	To be physically checked by BOO	
(iii) 110- 220V AC Battery Charger for the Display Unit (Tablet), X-Ray Source and imager along with spare ply to be provided with each equipment.	To be physically checked by BOO	
(iv) Provision of separate charging facility of Imager, X Ray Generator and Control/ display Unit simultaneously.	To be physically checked by BOO	
(v) The operating manual should be provided with each equipment.	To be physically checked by BOO	
(vi) The system should also operate on wired facility. 30 meter wire to be provided by the firm with option to extend the length with suitable Mil Grade connectors, in case of requirement. The weight of wire is excluded from total weight of the system	To be physically checked by BOO	
(vii) The display unit should come with the software having the following features:		
(a) Software which allows for taking just one image and enhancing both the easy to penetrate and difficult to penetrate objects on the same image showing everything with just one touch and highlighting all the threats.	To be physically checked by BOO	
(b) Image enhancement, 800% Zoom, Visual DataBase including picture name, time, date & description and annotations.	To be physically checked by BOO	
(c) Split screen capabilities, Audible and Visual warning during X-Ray activation.		
(d) Window Leveling, sharpening of images, Tilting/Rotation of an Image and on screen measurement facility, etc.		