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ज्ञापांक 833/382940 / आपूर्ति

70-1-9-2018

पुलिस महानिदेशक का कार्यालय, बिहार, पटना

पटना, दिनांक- 06/08/2018

सेवा में,

निदेशक,

सूचना एवं जनसम्पर्क विभाग,  
बिहार, पटना।**विषय-** निविदा आमंत्रण सूचना सं०-05/2018-19 के प्रकाशन के संबंध में।

निदेशानुसार उपर्युक्त विषय के संबंध में निविदा आमंत्रण सूचना सं०-05/2018-19 की प्रतियाँ भेजते हुए अनुरोध है कि इसे राज्य एवं राज्य से बाहर के प्रमुख समाचार पत्रों में (अंग्रेजी एवं हिन्दी) के अगले दो संस्करणों में प्रकाशित कराने की कृपा की जाय साथ ही पी०आर०डी० वेबसाइट पर भी प्रसारित करने की कृपा की जाय।

इस निविदा आमंत्रण सूचना का प्रकाशन किन-किन समाचार पत्रों में किया गया इसकी सूचना देने की कृपा की जाय।

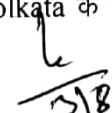
अनु०-यथोपरि।



पुलिस महानिरीक्षक के सहायक (क्यू०),  
बिहार, पटना

**प्रतिलिपि:-**

1. आई०टी० मैनेजर, पुलिस महानिदेशक का कार्यालय, बिहार, पटना को कृपया सूचनार्थ। कृपया इसे आज ही वेबसाइट पर अपलोड किया जाय। साथ ही Indian Trade Journal, Kolkata के अंक में प्रकाशन हेतु Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id- sk.mondal.dgcis@nic.in के पतेपर भी अनिवार्य रूप से भेजा जाय।
2. Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id- sk.mondal.dgcis@nic.in को कृपया सूचनार्थ एवं आवश्यक क्रियार्थ प्रेषित। अनुरोध है कि उक्त निविदा का प्रकाशन Indian Trade Journal, Kolkata के अंक में करने की कृपा की जाय।



पुलिस महानिरीक्षक के सहायक (क्यू०),  
बिहार, पटना

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**Police Headquarters, Bihar, Patna**  
**Notice Inviting Tender No.-05/2018-19**

1. Name of the Department: Office of Director General of Police, Bihar, Patna.
2. Last date & time for the acceptance of the tender : 31 / 08 / 2018, Till 02:00 PM
3. Date & time fixed for the opening of the tender : 31 / 08 / 2018, At 04:00 PM
4. Place fixed for receiving & opening the tender : Office of Director General of Police, Bihar, Patna.
5. Details of Job:

S.N.	Item name	Quantity
1	Noise Measurment Equipments	20
2	Chilli Grenade	1000
3	Tactical Throwable Camera	02
4	Dual Frequency Mines Detector	02
5	Wooden Target	1500
6	Hand Cuff	5000
7	Tactical Lader	02

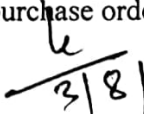
Specifications and other terms & conditions of the tender may be obtained in person from this office or may be downloaded from the website [www.prdbihar.gov.in](http://www.prdbihar.gov.in) or [www.biharpolice.bih.nic.in](http://www.biharpolice.bih.nic.in).

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### Terms & Conditions of Tender No.-05/2018-19

1. Tender of the firm will be accepted only on the condition that if their tenders are approved, the firm shall get registered with the Commercial Tax Department, Bihar, before the purchase order is issued.
2. The tender should be submitted in two parts: (i) Technical Bid and (ii) Financial Bid, duly sealed in two separate envelopes super-scribed as "Technical Bid" and "Financial Bid".
3. All relevant papers/ E.M.D./certificates/specifications etc. of items should be enclosed in the Technical Bid.
4. The rates of the items shall be quoted in the Financial Bid only.
5. All charges like IGST/CGST/SGST etc. shall be clearly mentioned in the Financial Bid and the net rate (in figures and words) including all taxes and duties must also be quoted. Vague offers like indicating taxes "as applicable" will not be accepted.
6. The rates of the items shall be quoted in the Financial Bid in two parts :  
(i) With AMC (Annual Maintenance Contract) and (ii) Without AMC
7. There should be no cutting, over writing or correction on the rates.
8. The technical and financial bids for each item should be submitted separately in separate envelopes. The technical and financial bids for more than one items submitted together in the same envelope shall not be accepted.
9. If the financial bid is submitted in the same envelope containing the technical bid then also it shall be summarily rejected.
10. The technical and financial bids should be put in two separate sealed envelopes and the envelopes should be marked Tender No-05/2018-19 (Technical Bid) and Tender No-05/2018-19 (Financial Bid) along with the name and address of the firm. The sealed envelopes containing the technical and the financial bids should be sent in another sealed envelope which should be marked as Tender No-05/2018-19. This envelope should not bear the name and address of the firm.
11. Income Tax Returns of last three years, a photocopy of GST registration number of the participating firm and turn-over of any two of the previous three financial years should be submitted with the technical bid. It should be specifically mentioned whether IT return has been filed manually or electronically.
12. The turnover of the firm for the last reported financial year should be at least equal to the amount of the supply order which is being issued. A copy of the profit and loss Account of the firm for any two of the previous three financial years, certified by a Chartered Accountant should be submitted along with the tender. If the tenderer is authorized dealer or authorized supplier of manufacturing firm, then the certified details of the turnover of authorizing firm may be accepted. Tender specific authorization from the OEM must be submitted, but in certain cases where authorization from OEM is not required, the Technical-cum-User committee (T.U.C.) shall decide about exemption (if any) on a case-by-case basis; citing appropriate reasons for the same.
13. If there is some discount in the price of any item, it should be deducted from price itself and such discounts should not be quoted separately.
14. If the product is available on DGS & D rate contract, then a copy of the contract must be attached and pricing be done including all taxes.
15. A copy of the test report for the product issued by any established and recognized private Laboratory or by agency accredited by the Government should be attached with the technical bid. However if required, the Technical-cum-User committee (T.U.C.) can take decision regarding exemptions/relaxations (if any), citing appropriate reasons.

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16. In case of Bullet Proof/Bullet Resistant items, test report of TBRL or any Government Approved/Recognized Laboratory is compulsory.
  17. Firms participating in this tender shall also submit duly sworn affidavit to the effect that " this firm has not been black listed/debarred by any Government or Semi Government or Private Agency and no sister concern of this firm is participating in this tender."
  18. Firms participating in this tender shall also submit the self attested list of users of its equipments.
  19. All items shall be received at Central Clothing Store, Patna; therefore price should be quoted FOR Central Clothing Store, Phulwari Sharif, Patna.
  20. Firms will have to deposit a sum of Rs.50,000/- (Fifty Thousand) only as an earnest money deposit in the form of Bank Draft duly pledged in favor of the undersigned along with the quotations. The small scale units located in Bihar shall not be liable to deposit earnest money. Exemption from submitting E.M.D. will also be available to those who are registered with the Central Purchase Organization/State Purchase Organization and National Small Industries Corporation (NSIC).
  21. Technical Bids will be opened on scheduled date and time in the office chamber of Police Headquarter. Representatives of the firms competing in the tender may remain present at the time of opening of the technical bid.
  22. The technical bids will be opened first and placed before the Technical Committee of the Police Headquarters, Bihar. If the technical bids are found satisfactory as per tender conditions, it will be put before Central Purchase Committee of the Police Headquarters, Bihar. The firms may be required to participate in the demonstrations of the quoted product and discussions with this committee.
  23. Any paper/document will not be accepted after opening the tender.
  24. Successful firm will have to enter into an agreement after depositing a sum of 5% of the total value of the order as security money in the form of Bank Guarantee duly pledged in favor of undersigned.
  25. The firm will be required to provide satisfactory after-sales service after the delivery of the product.
  26. The firm will be required to supply all the items within the stipulated time frame as mentioned in the purchase order.
  27. Payment for the delivered items will be made only after the acceptance report of the Inspection Committee of the Police Headquarters, Bihar.
  28. The firm whose quotation is approved by the Central Purchase Committee of the Police Headquarters, Bihar, shall be invited to enter into an agreement with the undersigned.
  29. It is expected to submit the duly filled chart attached herewith, along with the technical bid if not the tender shall be summarily rejected.
  30. Indexing of the requisite documents must be done and submitted along with the technical bid.
  31. Hands on training for 3 weeks of the equipment must be imparted to the user group by the firm after successful installation.
  32. Director General of Police Bihar, Patna reserves the right to reject any or all the quotations partially or fully, without assigning any reason thereof.
  33. The Quantity indicated may increase or decrease at the time of issuing purchase order.
  34. The bids must be include the data sheet of individual item.

  
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Bihar, Police.

## विशिष्टियाँ

लकड़ी का टारगेट 4'x4' : यह सखुआ के 4"x2" लकड़ी की मोटाई में आठ फीट उँचा रहना चाहिए। जिसके उपर की तरफ चार फीट X चार फीट के फ्रेम के दायरे में मोटा चट लगा रहेगा जिसपर 4'x4' का टारगेट पेपर साटा जा सके।

हथकड़ी

: यह माईल्ड स्टील का डिफेंस Specification आई0एन0 / जी0एस0-1493 के अनुरूप होगा। 20 (बीस) हथकड़ियों का बंच का ताला एक दूसरे से नहीं खुलेगा।

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## Specification of Decible Meter

- Range : 20-140 dB RMS (143, 3dB peak)
- Frequency Weighting : A Weighting
- Time Weighting : Fast, Slow and impulse simultaneously
- Standards : IEC61672:2002 Class
- Total Noise Floor : 19dB(A) Class
- On/Off times : 6 sets with selectable times and a repeat function
- Weight : Less than 350gms including battery
- Memory : Minimum 2GB internal and should have provision for external expandable memory.
- Audio Recording :
  - Low Quality : 8000 samples's @ 7bitf74kb(s)up to 4khz
  - High Quality : 24000 samples/s @ 8 bit(192kb/s)up to 12khz
- Should be GPS Enabled/  
inbuilt
- Battery : Rechargeable battery with minimum ten hours operation at capability and low battery indicator
- Printer : To be provided (Dot matrix)
- Climatic/Temp Range : Climatic conditions of Rajasthan
- Calibration : Factory Calibrated with traceability to NPL Field calibration with certified optional calibrator.
- Language : English.

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## Specification of Chilly Grenade

- Technology type : Non explosive/Non Ammunition - Aerosol Based
- Release Mechanism - Actuator based
- Discharge type - Aerosol spray
- Safety : Over cap on actuator for prevention of accidental release
- Active ingredient : Oleoresin Capsaicin (O.C.)
- Discharge time : 15-20 seconds
- Movement : Zig Zag movement on hard surface on actuation
- Shelf Life : 3 years
- Volume : 250+/- 20 ml per hand grenade
- Packing : 20 Hand Grenades packed in one Carton weighing approx 5 kgs.

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## Specification of Ladder

- The Ladder Should have a long operating life.
- The ladder should be able to fit in a small bag for carrying.
- Should be made from an aluminium alloy.
- Should have the unfolded length between 7 to 9 ft.
- Should have the weight less than 10 kgs.
- Should have anti skidding technology.
- Should be able to support 2 people with a maximum of 140 kgs.
- The ladder should be CE as EN 131
- The bigger should be ISO 9001:2015, 14001:2015, 27001:2013 Compliant.
- Length - 2.4 m (8 ft.)
- Steps - 08
- Width - 38 cms.
- Folding size - 36x16x63 cm/pc
- Load Weight - 150 kgs.
- CE approved as per EN - 131
- Light Weight
- Deploys under 5 seconds
- Portable
- Wide Application Range

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F/No- P-63013/8/GPRs/2012-Ord/BSF/MHA-Prov-I

Bharat Sarkar/Government of India  
Griha Mantralaya/Ministry of Home Affairs  
PM Division/Prov.I Desk

26, Man Singh Road, Jaisalmer House  
New Delhi, Dated November, 2016

To,

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

**Subject: QRs and Trial Directive of Ground Penetrating RADAR (Hand Held).**

The QRs and Trial Directives in respect of **Ground Penetrating Radar (Hand Held)** as per Annexure-'A' and 'B' have been accepted by the Competent Authority in MHA.

2. The CAPFs concerned will be accountable for correctness of the QRs/Trial Directives.
3. Henceforth, all the CAPFs should procure the above item required by them strictly as per the laid down Technical Specifications/QRs.

Yours faithfully,

Encl: As above

(Ritesh Kumar)

Under Secretary to the Govt of India  
Tel: 23381278

Copy forwarded for necessary action to :-

✓ The Section Officer (IT), MHA: It is requested to host the QRs and Trial Directives (soft copy attached) on the MHA website under the page of Organizational Set up- Police Modernization Division- Qualitative Requirement under Surveillance Equipments.

( V. Devadas)

Section Officer (Prov-I)

Copy to: DDG (Procurement), MHA

**DIRECTOR GENERAL BORDER SECURITY FORCE  
(PROVISIONING DIRECTORATE (Mod Cell))**

Appendix - 'A'

The Sub-group of Technical Experts on Surveillance Equipment's constituted by MHA vide their letter No. IV-1017/18/2001-Prov-I dated 05 Jul 2002 held its meeting at BSF Headquarters on 02<sup>nd</sup> Dec 2014, 12<sup>th</sup> Jan 2015, 12<sup>th</sup> Feb 2015 16<sup>th</sup> June 2015, 20<sup>th</sup> Nov 2015, 1<sup>st</sup> Feb 2016, 11<sup>th</sup> April 2016, 11<sup>th</sup> May 2016, 31<sup>st</sup> May 2016, 15<sup>th</sup> June 2016 and 15<sup>th</sup> July 2016 to formulate the QRs of 'Ground Penetrating Radar (Hand Held)'.

After detailed deliberations the referred Sub-group has finalized the QRs of 'Ground Penetrating Radar (Hand Held)' which are as under:-

**QUALITATIVE REQUIREMENT OF 'GROUND PENETRATING RADAR' (Hand Held)**

S No.	PARAMETER	SPECIFICATION
1	<b>Features</b>	
	(i)	The GPR system should be capable to detect metallic and non-metallic threats like IEDs, Pressure plates and mines (Anti-Personnel & Anti-Vehicle) etc.
	(ii)	The system should provide GPR data in real time to the operator to detect investigate and mark IEDs or suspicious objects.
2	ATR & Alarm	Must contain automatic target recognition feature which will provide audio clue as well as visual clue on LCD screen to the operator.
3	Self-test	The system should have self-test feature to ensure the system operating properly.
4	Physical	The system should be a <b>Hand Held GPR System</b> . The weight of the GPR system should not be more than 5 Kg.
5	<b>Physical &amp; Technical features : Hand Held GPR system:</b>	
	The detail physical & technical features of the hand held unit are:	
	(i)	The system detection swath width should be 45 cms (minimum) and detection range 50 cms (minimum) underground.
	(ii)	The sensor head should be attached to a ruggedized telescopic rod assembly suitable for a standing person to scan the area.
	(iii)	Control unit should have facility to control the sensitivity of detection and audio volume.
	(iv)	The system should be able to plot the threat on LCD screen in real time.
	(v)	It should give accurate threat position and depth information with a tolerance of $\pm 5$ cm.
	(vi)	It should have uniform and continuous detection throughout the sensor swath width.
	(vii)	It should have modes i.e. metal detection mode, GPR mode and combined mode.
	(viii)	It should have automatic soil compensation feature for use in mineral soil environment.
	(ix)	It must be capable to detect all type of mines/IEDs in all soil conditions.
	(x)	The audio alarm should be through inbuilt buzzer / speaker and head phone.
	(xi)	The system should be operated on rechargeable battery. The battery should run the system for minimum 8 hrs continuously on single charge.
	(xii)	A suitable battery charger should be provided to charge the battery/ batteries within 8 hrs (maximum).
	(xiii)	The charger should have the provision to charge the battery from 100V to 240 V AC mains supply and DC source to 12-24 V.

*[Handwritten signatures and initials]*

	(xiv)	<b>Optional Requirement (To be specify by the user at the time of indent)</b> The system should have data storage facility through either external memory card of 16 GB capacity or inbuilt memory system of minimum 4 GB.
6	Transportation	A ruggedized transportation box with water proof canvas carrying case should be provided which accommodates the system with all accessories comfortably.
7	EMI & EMC	The system must confirm to lay down EMI and EMC specifications.
8	Environmental Specification:	i) Operational temp: -20°C to 55°C ii) Storage temp: -40°C to 70°C
9	System Ruggedness	The system (GPR) must conform to Mil STD 810F.
10	Spare Batteries	For one additional cycle of operation, required batteries be provided.
11	User Manual and Operation Instructions	Detailed instructions technical literature with schematic diagram, maintenance manual and Inspection standards be provided with the equipment.

*Silko Singh*  
 (HARJINDER KUMAR) DC  
 SWS-BSF

*Harjinder Kumar*  
 (HARJINDER KUMAR) DC  
 SWS-BSF

*Rajinder Kumar*  
 (Rajinder Kumar) DC  
 SWS-BSF

*Harjinder Kumar*  
 (Harjinder Kumar) DC  
 SWS-BSF

*Rajinder Kumar*  
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 SWS-BSF

*Harjinder Kumar*  
 (Harjinder Kumar) DC  
 SWS-BSF

*Rajinder Kumar*  
 (Rajinder Kumar) DC  
 SWS-BSF

RECOMMENDED/ NOT RECOMMENDED

*K K Sharma*  
 (K K SHARMA) IPS  
 DIRECTOR GENERAL  
 BORDER SECURITY FORCE

**TRIAL DIRECTIVES FOR GROUND PENETRATING RADAR (HAND HELD)**

S No.	PARAMETER	SPECIFICATION	Procedure suggested for trial for Board of Officers	Result expected / desired	Complied / Not Complied
1.	Features	<p>i) The GPR system should be capable to detect metallic and non-metallic threats like IEDs, Pressure plates and mines (Anti-Personnel &amp; Anti-Vehicle) etc.</p> <p>ii) The system should provide GPR data in real time to the operator to detect investigate and mark IEDs or suspicious objects.</p>	Physically check GPR for the detection of metallic and non-metallic objects like IEDs, pressure plate etc, underground in specific depth.	The GPR system must be capable to detect metallic and non-metallic threats like IEDs, Pressure plates and mines (Anti-Personnel & Anti-tank) etc.	
2.	ATR & Alarm	<p>Must contain automatic target recognition feature which will provide audio clue as well as visual clue on LCD screen to the operator.</p>	<p>Physically check the system for the detection of IEDs or suspicious objects by displaying the data in real time on LCD screen to investigate and mark the threats.</p> <ul style="list-style-type: none"> <li>• Detect some known objects hidden underground and check the system for audio &amp; visual alarm.</li> <li>• Check the system for automatic target recognition feature while detection.</li> </ul>	<p>The system must provide GPR data in real time to detect, investigate and mark the IEDs or suspicious objects.</p> <ul style="list-style-type: none"> <li>• It must give audio clue as well as visual clue on LCD screen to the operator.</li> <li>• It must also have the feature of automatic target recognition for threat confirmation.</li> </ul>	
3.	Self-test	The system should have self-test feature to ensure the system operating properly.	Switch 'ON' the system and put it in self-test mode to ensure proper operation of the system.	The system must have self-test feature to ensure the system operating properly.	
4.	Physical	The system should be a <b>Hand Held GPR System</b> . The weight of the GPR system should not be more than 5 Kg.	Check the system provided by the firm as per the user requirement of the user. Weigh the GPR system with the weighing machine.	The system provided must be as per the user requirement. Weight of GPR should be less than 5 kg.	
5.	Physical & Technical features	<p><b>Hand Held GPR system</b></p> <p><b>The detail physical &amp; Technical features of the hand held unit are:-</b></p> <p>(i) The system detection swath width should be 45 cms (minimum) and detection range 50 cms (minimum) underground.</p> <p>(ii) The sensor head should be</p>	<p>i) Measure the detector swath width and check the detection range of an object dig underground.</p> <p>ii) Check the system for having a ruggedized telescopic rod</p>	<p>i) The system detection swath width must be 45 Cms (min) and detection range 50 Cms (min) underground.</p> <p>ii) The sensor head must be supported by ruggedized telescopic rod</p>	

	attached to a ruggedized telescopic rod assembly suitable for a standing person to scan the area.	assembly. A standing person should be able to scan the area with the help of the system comfortably.	assembly for scanning the area.
(iii)	Control unit should have facility to control the sensitivity of detection and audio volume.	(iii) Switch 'On' the system and check the detection of an object. Change the sensitivity of detection and observe its effect on detection. Check also the volume control for alarm audio.	(iii) The control unit must have sensitivity control for detection and volume control for alarm.
(iv)	The system should be able to plot the threat on LCD screen in real time.	(iv) Check the detected threat indication on the display screen. i.e (LCD screen).	(iv) The system must display the threat in real time on LCD screen.
(v)	It should give accurate threat position and depth information with a tolerance of $\pm 5$ cm.	(v) Place a known target underground at a known depth and check its detection with in deviation of $\pm 5$ cm.	(v) The system must give threat position and depth information with in permissible deviation.
(vi)	It should have uniform and continuous detection throughout the sensor swath width.	(vi) Check the detection of a target at different locations under the swath width by keeping the position of detector swath fixed.	(vi) The system must have uniform and continuous detection throughout the sensor swath width.
(vii)	It should have modes i.e. metal detection mode, GPR mode and combined mode.	(vii) Switch 'ON' the system and put it in different modes as mentioned in the QRs Para and check the performance in each of the mode one by one.	(vii) The system must detect threats in different modes, as mentioned in QR.
(viii)	It should have automatic soil compensation feature for use in mineral soil environment.	(viii) Check the system performance in different soil conditions like in sand, in available soil, in wet soil & salt mixed soil.	(viii) The system must have an automatic soil compensation feature to neutralise the mineral soil environment and perform effectively without affecting the sensitivity.

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(ix) It must be capable to detect all type of mines/IEDs in all soil conditions.	(ix) Check the detection of the system for available mines/IEDs dug in different soil conditions as in Para (viii).	(x) It must be capable to detect all type of mines/IEDs indifferent soil conditions.
(x) The audio alarm should be through inbuilt buzzer / speaker and head phone.	(x) Check the detection alarm in system control unit and also through head phone.	(x) The system must give audio alarm through inbuilt buzzer / speaker and head phone.
(xi) The system should be operated on rechargeable battery. The battery should run the system for minimum 8 hours continuously on single charge.	(xi) Physically check the system operation on rechargeable battery provided. Check the continuous run time of the system on fully charged rechargeable battery provided and note down the continuous run time.	(xi) The system must operate on rechargeable battery. The battery must run the system continuously for 8 hours on single charge.
(xii) A suitable battery charger should be provided to charge the battery/ batteries within 8 hrs (min).	(xii) Charge a fully discharged battery with the battery charger provided with the system and note down the time to get fully charge.	(xii) Battery charger provided must recharge a fully discharged battery within 8 hrs (min).
(xiii) The charger should have the provision to charge the battery from 100 V to 240 V AC mains supply and DC source from 12V to 24V.	(xiii) Check the battery charger operation on AC mains power supply by varying it from 100 to 240 volts. Also check the charger operation on DC source from 12 V to 24 V	(xiii) The battery charger provided must have the facility to charge the battery from 100 to 240 volt AC mains supply and from DC 12 V to 24 V.
(xiv) Optional Requirement (To be specify by the user at the time of indent) The system should have data storage facility through external memory card of 16 GB or inbuilt memory system of minimum 4GB.	(xiv) Check the system for the facility of external memory card and inbuilt memory system for data storage.	(xiv) The system must have data storage facility through either external memory card of 16 GB capacity or internal inbuilt memory system of minimum 4 GB.

6.	Transportation	A ruggedized transportation box and water proof canvas carrying case should be provided which accommodates the system with all accessories comfortably.	<ul style="list-style-type: none"> <li>Check the transportation box and canvas carrying case for accommodation of system with all accessories.</li> <li>Check the National/International accredited lab certificate/report in respect of ruggedness of transportation box.</li> <li>Check the canvas carrying case for water proofing.</li> </ul>	<ul style="list-style-type: none"> <li>The transportation box and canvas carrying case must accommodate the system with all accessories comfortably.</li> <li>The firm must provide the National/International Accredited lab certificate/report in respect of the transportation box. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.</li> <li>Canvas carrying case must be water proof.</li> </ul>	
7.	EMI & EMC	The system must confirm to lay down EMI and EMC specifications.	Check the National/International accredited lab certificate/report in respect of the same.	The firm must provide the National/International Accredited lab certificate/report in respect of EMI & EMC specifications. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.	
8.	Environmental Specification:	i) Operational temp: -20°C to 55°C ii) Storage temp : -40°C to 70°C	Check the National/International accredited lab certificate/report in respect of the same.	The firm must provide the National/International Accredited lab certificate/report in respect of the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.	
9.	System Ruggedness	The system (GPR) must conform to Mil STD 810F.	Check the National/International accredited lab certificate/report in respect of the same.	The firm must provide the National/International Accredited lab certificate/report in respect of the same. In case of any doubt in the test report, the veracity of the same may be checked from the concerned lab.	
10.	Spare Batteries	For one additional cycle of operation, required batteries be provided.	Not to be evaluated at the time of physical evaluation.		

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3.5.47 GPR HCL #1 (GPR) HCL #2 (GPR)



11.	User Manual and Operation Instructions	Detailed instructions literature with schematic diagram, maintenance manual and inspection standards be provided with the equipment.	Not to be evaluated at the time of physical evaluation.	
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(ASSEM V/105, DIGGIND)

Hemant Kumar  
(ASSEM V/105, DIGGIND)

Ranjit  
(Bhimarampuraj)  
(DC, CRPF)

[Signature]  
(Rajendra Singh)

[Signature]  
(K. K. Sharma, D.C. (Tech))

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(K. K. Sharma, D.C. (Tech))

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(Nangaj, ITBP)

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(K K SHARMA) IPS  
DIRECTOR GENERAL  
BORDER SECURITY FORCE

204



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**F.No.P-63013/11/2011(MSC)-Ord/BSF/MHA-Prov-I 388**  
**Bharat Sarkar/Government of India**  
**Griha Mantralaya/Ministry of Home Affairs**  
**PM Division/Prov.I Desk**

26, Man Singh Road, Jaisalmer House  
New Delhi, Dated 5<sup>th</sup> July, 2013  
8

To,

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


**Subject: QRs and Trial Directive for Video Surveillance Ball.**

The QRs and Trial Directives in respect of Video Surveillance Ball as per Annexure (except warrant and AMC clause as mentioned in para 6 & 7 of QRs) 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 the laid down Technical Specifications/QRs.

Yours faithfully,

Encl: as above

  
(P.K. Srivastava)  
Under Secretary to the Govt. of India  
Tel: 23381278

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**Director General Border Security Force**  
**(Provisioning Directorate)**

The Sub-group of Technical Experts on Surveillance Equipments constituted by MHA vide their letter No. IV-17017/18/2001-Prov-I dated 05 Jul 2002 held its meeting at BSF headquarters on 25 Aug 2011, 02 Sep 2011, 27 Sep 2012 & 29 Nov 2012 to formulate the fresh QRs of Video Surveillance Ball as desired by MHA vide their letter No. IV-21011/4/2010-Prov-I dated 09 Jun 2011.

After detailed deliberations the referred Sub-group has finalized the QRs of Video Surveillance Ball which are as under:-

**General**

1. **Sensor:** The video surveillance ball should have following features
  - a) It should have audio and video svl capacity
  - b) Should be rugged enough to survive a "throw" or "roll" of more than 20 mts with landings in rough terrain, concrete, piles of debris, or through windows.
  - c) 360° audio and video coverage
  - d) Continuous operation up to 2 Hrs
  - e) Night vision capability.
2. **Receiver:** The portable Remote Display Unit should have a TFT display of minimum five inches or more with inbuilt DVR capability to record and play back. This should have output facility for recording on external device.

3. **Technical Specification**

Ser No	Features	Specifications	Remarks by vendors/Firms
(a)	Image sensor		
	(i) Resolution	More than 450 TV lines	
	(iv) Frame rate	Line Video minimum 25 fps	
	(v) Shutter operation	Automatic	

Contd.2/-

*[Handwritten signatures and dates: 28.11.12, 29/11, 29/11, 29/11]*

b)	Audio Microphone		
	i) Audio mike detection	Omrni directional	
	ii) Sensitivity of audio mike	should detect human voice from 5 m or more	
	iii) Squelch	Automatic squelch to decrease noise	
c)	Video and Audio Transmission		
	i) Indoor transmission dist	25 mtr minimum	
	ii) Outdoor transmission dist	100 mtr minimum	
	iii) Frequency of control and feed back link/net	License free	
d)	Illumination		
	i) Illumination wavelength	Illumination by using near infrared LEDs	
	ii) Illumination distance	5 mtr or more	
	iii) Light sensor	Automatic and manual control of illuminating light depending on light condition of target area	
e)	Camera		
	i) Camera Range of sensor ball	Less than 1meter to 20 m or more	
	ii) Pan and Zoom	Pan 360, 2x Digital Zoom, day/night camera.	
f)	Mechanical specifications		
	i) Dimensions of Ball unit	100 mm Diameter or less	
	ii) Weight	1 Kg (max)	
	iii) Stabilization and Motion	Quick self stabilization	
g)	Power source		
	i) Rechargeable battery	LiON/LIPO	
	ii) Battery operation capacity	Ball Unit: Minimum 2 Hrs PDU : Minimum 3 Hrs	
	iii) Battery Charger	For PDU and Sensor	
	iv) Battery charging time	Less than 4 hours	
	v) Battery Charger input	220V, 50 Hz AC Mains and provision for Charging from the vehicle.	

Contd.3/-

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h)	Remote display Unit with system software	The portable Remote Display Unit should have a TFT display of minimum five inches along with the system software	
i)	Output connection	S - Video/AV and earphone connectors for audio	
j)	IP Standard for Ball units	IP 65 or better	
k)	<u>Accessories:- The following accessories to be supplied with each system in hard carrying case:</u>		
	i) Throw able camera ball		02
	ii) Training ball		01
	iii) Portable Operator Control Unit with Jacket and bty charger		01
	iv) Camera Ball Charger		02
	v) Head phones		01
	vi) Telescopic pole with adaptor		01
	vii) Spare Powering pin		02
	viii) User Manual		01
	ix) Quick Reference Guide		01
	x) Ground Spike		01
	xi) Door Hanger for Throw able camera ball		01
	xii) Tripod		02
	xiii) Retrieval rope		02
l)	Additional battery charger for PDU and Ball units per deployment kit		01 x each charger for PDU and Ball unit
m)	<u>Carrying case</u> A single soft backpack type carrying case housing the complete equipment and its accessories less the pole. A soldier should be able to carry the equipment on his back conveniently. It should be preferably of camouflage pattern		

Misc Aspects

4. Literature Operating and Technical literature for each discrete components of system should be in English language

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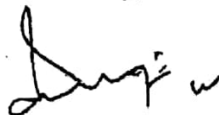
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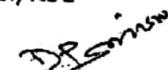
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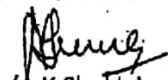
5. Demonstration and Training Demonstration of one set of complete system with its full accessories to be given in Delhi on no cost no commitment basis. In site training of users for three day on operation, maintenance, fault finding and user level repairs.


6. Warranty Comprehensive warranty for 1 year.

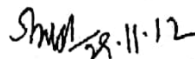
7. Annual Maintenance Contract/Repair Cover The vendor will provide AMC for 3 yrs after expiry of the warranty. The manufacturer shall guarantee to complete repairs and return the equipment to the customer within 30 days of reporting the fault, during the period the eqpt is under warranty/ AMC Repair cover to be made available ex Delhi

  
(A Chaturvedi)  
Col, NSG

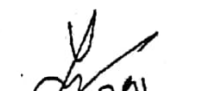
  
(D P Mishra)  
PSO, BPR&D

  
(A K Shukla)  
AC, CISF

  
(Venu Kumar K M)  
Jt. Dir, DCPW


  
(B C Joshi)  
DC (AIA), BSF

  
(Ravindra Nath)  
SI/Tech

  
(Mohd Yusuf)  
DC(MT/Ord), CRPF

  
(Ajit Prasad)  
AC, ITBP

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(SUBHASH JOSHI) IPS  
DIRECTOR GENERAL  
BORDER SECURITY FORCE

## TRIAL DIRECTIVE FOR VIDEO SURVEILLANCE BALL

### General:

1. **Sensor:** The video surveillance ball should have following features. (The following features are required to be checked physically by the Board of Officers/STEC)
  - a) It should have audio and video svl capacity
  - b) Should be rugged enough to survive a "throw" or "roll" of more than 20 Mts with landings in rough terrain, concrete, piles of debris, or through windows.
  - c) 360° audio and video coverage.
  - d) Continuous operation up to 2 Hrs.
  - e) Night Vision capability.
2. **Receiver:** The portable Remote Display Unit should have a TFT display of minimum five inches or more. (To be checked by the Board of Officers/STEC)

### 3. **Technical Specification**

S No.	PARAMETERS	Procedure suggested for trial	Result expected / desired	Complied / Not Complied
a)	Image sensor			
	i) Resolution:- more than 450 TV lines.	Check the supporting documents provided by the OEM/NABL accredited lab certificate.	Check the certificates submitted. In case of any doubt the veracity of same be checked from concerned lab.	
	ii) Frame rate:- line video minimum 25 fps.	Check the supporting documents provided by the OEM/NABL accredited lab certificate.	check the certificates submitted. In case of any doubt the veracity of same be checked	

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b)	ii) Shutter operation:- automatic.	Should be checked physically by the Board of Officers.	from concerned lab.	
	Audio microphone		Shutter operation must be automatic	
	i) Audio mike detection:- Omni directional.	Should be checked physically by the Board of Officers by checking input from all around.	Mike detection must be from any corner.	
	ii) Sensitivity of audio mike:- should detect human voice from 5m or more.	Should be checked physically by the Board of Officers with the help of measuring tape.	Should detect the human voice from 5 m or more.	
c)	iii) Squelch:- Automatic squelch to decrease noise.	Should be checked physically by the Board of Officers	Must decrease automatically.	
	Video and Audio Transmission			
	i) Indoor transmission dist:- 25 mtr minimum.	Should be checked physically with the help of measuring tape.	Indoor transmission must be 25 mtr minimum.	
	ii) Outdoor transmission dist:- 100 mtr minimum.	Should be checked physically with the help of measuring tape.	Outdoor transmission must be 100 mtr minimum.	
d)	iii) Freq of control and feed back link /net : license free.	Check the supporting documents provided by the OEM.	Check the certificates submitted. In case of any doubt the veracity of same be checked from concerned OEM.	
	Illumination			
	i) Illumination wavelength:- Illumination by using near Infrared LEDs.	Should be checked physically with the help of IR sensor and also Check the supporting documents provided by the OEM.	Check the certificates submitted. In case of any doubt the veracity of same be checked from concerned OEM.	
	ii) Illumination distance:- 5 mtr or more.	Should be checked physically in the dark room	Illumination distance must be 5	

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e)	iii) Light sensor:- Automatic and manual control of illuminating light depending on light condition of target area.	with the help of IR sensor and measuring tape.	The light sensor illumination must adjust automatically as well as manually with light condition of the target area.	
	Camera			
	i) Camera range of sensor ball:- Less than 1 meter to 20 m or more.	Should be checked physically with the help of measuring tape by the Board of Officers.	Camera range of sensor ball (video surveillance ball) must be less than 1 meter to 20 m or more.	
	ii) Pan and zoom:- Pan 360, 2x digital zoom, day/night camera.	Should be checked physically with the help of Integrated Test Station by the Board of Officers.	Pan must be 360 degree and zoom must be 2x digital zoom.	
f)	Mechanical specifications			
	i) Dimensions of ball unit:- 100 mm or less	Should be checked physically with the help of measuring scale by the Board of Officers.	Dimension of ball must be 100 mm or less.	
	ii) Weight:- 1 Kg Maximum.	Should be checked physically with the help of weighing machine by the Board of Officers.	Weight not to exceed 1 Kg.	
g)	iii) Stabilization and motion:- Quick self stabilisation	Should be checked physically by the Board of Officers.	Stabilization must be self and quick.	
	POWER SOURCE			
	i) Rechargeable Bty:- Li-ON/ LIPO	Should be checked physically by the Board of Officers.	Bty must be Li-ON/LIPO.	
	ii) Bty operation capacity:- Ball Unit: Min. 2 Hrs PDU: Min. 3 Hrs	i) Should be checked physically by the Board of Officers. ii) Switch on the ball unit. iii) It must run min 2 Hrs, check with the help of stop watch.	Ball unit and PDU must run continuously for two hrs and three hrs respectively.	
	iii) Bty Charger:- For PDU & Sensor	Should be checked physically by the Board of	Bty charger for PDU & sensor	

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	iv) Bty charging time:- Less than 4 Hrs	Officers.	must be provided.	
	v) Bty charger Input:- 220V, 50 Hz AC mains and provision for charging from the vehicle.	Should be checked physically after connecting to AC mains supply. It should charge the bty in less than 4 Hrs. Should be checked physically by the Board of Officers.	Charging must be completed in less than 4 Hrs. Charging input from AC 220 V 50 Hz and also from vehicle battery.	
h)	Remote Display Unit with System Software:- The portable Remote display unit should have a TFT display of minimum five inches along with the system software.	Five inch TFT display should be physically checked by the Board of Officers.	The portable Remote display unit must have a TFT display of minimum five inches along with the system software.	
i)	Output Connection:- S-Video/ AV & Earphone connection for Audio	Should be checked physically by the Board of Officers.	Must have Output Connection S-Video/AV & Earphone connection for Audio.	
j)	IP Standard for Ball units:- IP 65 or better.	Check the supporting documents provided by the NABL accredited Lab.	Check the certificates submitted. In case of any doubt the veracity of same be checked from concerned lab.	
k)	Accessories :- The following accessories to be supplied with each system in hard carrying case:  i) Throw able camera ball:- 02 nos. ii) Training ball :- 01 nos. iii) Portable Operator Control unit with jacket and bty charger:- 01 nos. iv) Camera Ball Charger:- 02 nos. v) Head phones:- 01 nos. vi) Telescopic pole with adaptor:- 01 nos. vii) Spare Powering pin:- 02nos. viii) User Manual:- 01 nos.	Should be checked physically by the Board of Officers.	Must have all the accessories.	

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<p>ix) Quick Reference Guide:- 01 nos. x) Ground Spike:- 01 nos. xi) Door Hanger for Throw able camera ball:- 01 nos. xii) Tripod:- 02 nos. xiii) Retrieval rope:- 02 nos.</p>			
<p>l) Additional battery charger for PDU and Ball units per deployment kit:- 01 x each charger for PDU and ball unit.</p>	<p>Should be checked physically by the Board of Officers.</p>	<p>Must have 01 no additional bty charger for PDU and ball unit.</p>	
<p>m) <b>Carrying case</b> A single soft backpack type carrying case housing the complete equipment and its accessories less the pole. A soldier should be able to carry the equipment on his back conveniently. It should be preferably of camouflage pattern.</p>	<p>Should be checked physically by the Board of Officers.</p>	<p>Must have soft backpack type carrying case.</p>	

*[Signature]*  
(A Chaturvedi)  
Col, NSG

*[Signature]*  
(Venu Kumar K M)  
Jt. Dir, DCPW

*[Signature]*  
(Madd Yusuf)  
DC(MT/Ord), CRPF

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(D P Mishra)  
PSO, BPR&D

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(B C Joshi)  
DC (AIA), BSF

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AC, ITBP

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