



**POLICE**

**HEADQUARTERS**

{ PROVISION SECTION } }

**J&K,**

**JAMMU.**

Phone/Fax No: 0194-2443031/ 2443032 (Sgr) Website: [www.jkpolice.gov.in](http://www.jkpolice.gov.in)  
0191-2459029/2459255(Jammu)

Email: [phqjk@jkpolice.gov.in](mailto:phqjk@jkpolice.gov.in)

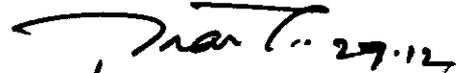
**Gist e-tender notice No 47 of 2017**

**Dated: - 27.12.2017**

For and on behalf of the Governor of Jammu and Kashmir State, e-tenders are hereby invited from the original manufacturers or their authorized dealers to quote against this tender for the supply of Intra & inter District, Digital Mobile Radios Network by using DMR Repeaters & Radio based IP Network for procurement (as indicated in the detailed SBD & BOQs). The download of the NIT shall start on 27 /12/2017 from 1600 hours. Tenders shall be submitted online on J&K State e-Procurement Portal [www.jktenders.gov.in](http://www.jktenders.gov.in) upto 20.01.2018 before 1800 hours. The tenders (technical bids only) will be opened online on 22.01.2018 at 1100 hours at Police Headquarters J&K Gulshan Ground Jammu. In case of unforeseen circumstances, the date of opening will be next working day.

A pre bid conference shall be held on 8<sup>th</sup> January 2017 at 1500 hours in conference Hall 4<sup>th</sup> floor PHQ Jammu to discuss project with prospective tenderers.

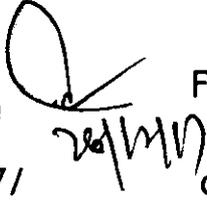
Detailed tender documents (SBD) with terms and conditions are available on J&K State e-procurement Portal [www.jktenders.gov.in](http://www.jktenders.gov.in). The intending tenderers may visit this site for detailed information.



Sheikh Junaid Mahmood  
(AIG Provision/Transport)

For Director General of Police,  
J&K-Jammu

92920-40



No: -WPR-65/2016-17/NIT-47/

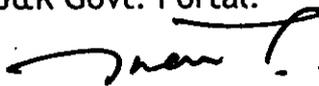
dated: 27 .12.2017

Copy to the:-

1. Principal Secretary to Govt. Home Department J&K Jammu
2. All ADsGP J&K
3. All IsGPJ&K

....for favour of information.

4. Director SSG J&K Jammu for favour of information.
5. DIG CKR Srinagar/DIG Jammu-Kathua & Samba Range Jammu.
6. Director Police Telecom J&K Jammu for information.
7. Director Industries Jammu/Srinagar for information.
8. Chief Accounts officer PHQ J&K Jammu for information
9. Manager Government Press Srinagar / Jammu for publication of the e.tender in Govt Gazette.
10. SSP J&K CID Cell, 11 Harish Chander Mathur Lane Kasturba Gandhi Marg New Delhi-110001 alongwith copy of the e.tender for information intending firms.
11. AIG Communication PHQ J&K Jammu for information with the request to arrange publication of Gist of the e.tender through information department.
12. In-Charge Police Central Store Gulshan Ground Jammu/ Zewan Srinagar for information.
13. In-Charge IT Centre PHQ/In-Charge e-tendering PHQ for placing the e-tender on the website of J&K Police and J&K Govt. Portal.

 - 27.12

Sheikh Junaid Mahmood  
(AIG Provision/Transport)

For Director General of Police,  
J&K-Jammu

  
26/12/17



**POLICE**

**HEADQUARTERS {PROVISION SECTION}**

**J&K,**

**JAMMU.**

Phone/Fax No: 0194-2443031/ 2443032 (Sgr)  
0191-2459029/2459255(Jammu)

Website: [www.jkpolice.gov.in](http://www.jkpolice.gov.in)  
Email: [phqjk@jkpolice.gov.in](mailto:phqjk@jkpolice.gov.in)

**E-Procurement tender notice No 47 of 2017**  
**Dated 26.12. 2017**

**SBD**

1.	<p>For and on behalf of the Governor J&amp;K State, e-tenders are hereby invited from original manufacturers or their authorized dealers to quote against this tender for the supply of Intra &amp; inter District, Digital Mobile Radios Network by using DMR Repeaters &amp; Radio based IP Network as detailed in Annexure 'A' to this NIT. The tender notice consisting of qualifying information, eligibility criteria, specifications, bill of quantities (BOQ), set of terms and conditions of the contract and other details can be seen/ downloaded from J&amp;K State e-procurement portal <a href="http://www.jktenders.gov.in">www.jktenders.gov.in</a> from 27.12.2017 at 1600 hours to 20.01.2018 up to 1800 hours.</p> <p><b>Note:</b> Only those firms are allowed to respond who are either manufacturer/s or their authorized dealers. In case of authorized dealers, a specific authorization letter from the principal manufacturer with reference to this particular tender should be attached. Tenders of approved/authorized dealers without authorization for this tender (as per format provided in appendix-1) from original manufacturer shall be rejected.</p>	
2.	Time/date and place for online opening of technical bid only	<u>On 22.01.2018 at 1100 hours</u> at J&K Police Headquarters, Gulshan Ground Jammu.
	Validity of tender offer	Upto 31.03.2019
3.	<p>All tender documents attached with this invitation to tender including the specifications are <b>SACROSANCT</b> for considering any offer as complete offer. It is important that scanned copies of each page of the tender document duly completed, page numbered and signed is uploaded with your offer in a sequential manner and not haphazardly.</p>	
4.	<p>The tender fee has been fixed for SSI units of J&amp;K State only Rs 100/- and all other vendors have to pay Rs. 2000/- as tender fee in shape of a</p>	

**crossed demand draft** favouring Chief Accounts Officer PHQ J&K payable at Srinagar. The tender fee is not refundable and same will be deposited into Govt Treasury under head 0055-Police for the year 2017-18. The scanned copy of the demand draft should be part of the online bid. The original demand draft should be sent by post to the AIG (Provision/Transport) C/o Director General of Police J&K, Gulshan Ground Jammu along with covering letter in an envelope should have a card affixed to it duly signed and stamped by the firm indicating (a) name of the firm (b) tender No. (c) Date of opening of the technical bids. The local SSI units of J&K State are required to pay the tender fee prescribed as per J&K Govt. rules. However, the Govt/ Semi Govt. concerns of the J&K State claiming exemption shall append copies of the authenticated orders, existence/ registration certificates etc. with regards to the SSI units issued by the competent authority in support of their claim. Tenders without stipulated tender fee shall be rejected.

5. **Earnest Money Deposit (EMD):-**

The intending tenderers will have to send the Earnest Money only in shape of CDR/FDR from any nationalized bank/State owned Banks for an amount of Rs 5000/- for J&K state SSI Unit holders only and for other tenderers Rs 1.00 lac pledged to AIG (Prov/Tpt) PHQ J&K with the tender offer, which shall be valid for one year. The EMD in the case of unsuccessful tenderer shall be released after finalization of Tender, whereas, in the case of successful tenderers it will be adjusted towards security money (required to be deposited) on application, for due performance of the agreed contract/performance during the warranty period. No interest shall be payable by the purchaser on the EMD deposited by the tenderer. The Scanned copy of the CDR/FDR should be part of the online Bid and the original be sent by post to the AIG (Prov/Tpt) C/O Director General of Police J&K Gulshan Ground Jammu alongwith tender fee before the opening of technical Bid. J&K Govt. rules with regard to furnishing of EMD in respect of local Registered SSI units of J&K State shall be applicable in letter and spirit. The local SSI units are required to pay EMD prescribed as per J&K Govt rules. For the purpose, SSI units shall have to furnish Registration Certificate INDICATING THEREIN THE DETAILS OF ITEMS AND INSTALLED CAPACITY OF THE UNIT

	<p>PER MONTH and Functional Certificate of SSI Unit, issued by the competent authority, with their tender offer failing which the benefits of SSI units will not be allowed. The Government/ Semi Govt. or similar other concerns of J&amp;K state, claiming exemption from the payment of EMD shall have to append duly authenticated orders, certificate etc. from competent authority supporting their claims. Tenders without EMD shall be rejected.</p>	
6.	i)Stores required at	FREE DELIVERY AT CONSIGNEE LOCATIONS i.e, (Police Central Store Zewan Srinagar and Police Central Store Gulshan Grounds Gandhi Nagar Jammu. Tenderers are required to quote rates on free delivery at consignee's location basis only. Tenders received quoting rates on FOR Destination Stations/Station of Dispatch basis shall be rejected.
	ii)Dispatch instructions	Stores are required to be delivered at consignee's locations in perfect condition.
	iii)Delivery required	Approximately within 30 days from the date of issue of supply order.
	v)Inspection authority / place of survey	Board of officers, constituted by the J&K Police Hqrs, at consignees premises viz Police Departmental Store Jammu/Srinagar.
	vii)Payment terms	Payment shall be released by the department against consignment is delivered, surveyed, and properly brought on the stock in the concerned stock registers of the Police Central Stores.
7.	Rates quoted by the firms should be on firm price basis ie including all taxes/duties as per clause 9.	
8.	i. If approved supplier backs out or fails to supply the goods against supply order within stipulated delivery period ,the department will be at liberty to procure the item from L-2 firm and differential amount between L-1 & L-2 rates will be recovered from the security deposit furnished by the approved supplier and remaining security deposit will be forfeited besides invoking other penalties which shall include black-listing of the firm etc.	

	<p>ii. If approved supplier ,supplies the goods partially against supply order within stipulated delivery period, the J&amp;K Police reserve the right to impose liquidity damage charges upto 5% of the un-supplied store upto first 15 days and thereafter penalty can be increased depending upon the nature of supplies and extent of delay. However, period of delivery may be extended at the absolute discretion of J&amp;K Police provided delay is attributable to the reasons beyond the control of the supplier firm but not attributable to business transactions and also delay is communicated in writing justifying the cause of delay .</p>				
9.	<p>Firms shall clearly indicate different taxes, duties, charges which they propose to charge as per the format of Bill of quantity (BOQ) available with the e-tender, moreover online generation of financial comparative (BOQ Chart) is of indicative nature only and not conclusive. The detail</p>				
10.	<p>No conditional tender will be accepted/entertained. It will be summarily rejected. No other conditions than those mentioned (in the terms set-forthwith)</p>				
11.	<p>Purchaser reserves the right to change the quantity of stores mentioned in the tender.</p>				
12.	<p>Purchaser reserves the right to get the manufacturing capacity of all the firms re-verified irrespective of the registration status or any other document/ information.</p>				
13.	<p>Purchaser reserves the right to cancel/reject or scrap the tender, with no consequential liability</p>				
14.	<p><b>TWO BID SYSTEM:-</b>  All bidders are required to submit their offers in two covers online as under:-  (A) <b>FIRST COVER (Technical Bid)</b> is to be uploaded Online and Scanned Copies in PDF format should contain the following documents:-</p> <table border="1" data-bbox="316 1585 1449 1910"> <tr> <td data-bbox="316 1585 399 1680">i.</td> <td data-bbox="399 1585 1449 1680">The tenderer will clearly mention the name of the items for which he has quoted in the covering letter of the tender offer.</td> </tr> <tr> <td data-bbox="316 1680 399 1910">ii.</td> <td data-bbox="399 1680 1449 1910">Tender documents (viz technical compliance, brochures/catalogues of the quoted items containing Make &amp; model of the items ,OEM/ authorization certificate, registration/existence certificates of the firms / SSI Units &amp; performance etc. ) duly page numbered completed and signed BUT</td> </tr> </table>	i.	The tenderer will clearly mention the name of the items for which he has quoted in the covering letter of the tender offer.	ii.	Tender documents (viz technical compliance, brochures/catalogues of the quoted items containing Make & model of the items ,OEM/ authorization certificate, registration/existence certificates of the firms / SSI Units & performance etc. ) duly page numbered completed and signed BUT
i.	The tenderer will clearly mention the name of the items for which he has quoted in the covering letter of the tender offer.				
ii.	Tender documents (viz technical compliance, brochures/catalogues of the quoted items containing Make & model of the items ,OEM/ authorization certificate, registration/existence certificates of the firms / SSI Units & performance etc. ) duly page numbered completed and signed BUT				

	WITHOUT INDICATING THE RATES QUOTED.
iii.	All pages of the technical bid/pre-qualification documents must be clearly page marked at the bottom centre of each page before scanning the same and uploaded to e-tendering portal.
iv.	Duplicate documents /pages shall not be uploaded by the bidders
v.	Documents to be scanned, converted to PDF format and subsequently uploaded to the portal must be scanned at 200 DPI(Dots per inch) resolution/scale.
vi.	Tender fee and EMD documents must be scanned and placed in separate PDF files.
vii.	Bidders are advised not to upload any irrelevant /un necessary documents on tender portal.
viii.	Technical specifications of the items quoted with catalogue/broacher etc. & deposition of samples (wherever asked in Annexure "A").
ix.	Certificate of being authorized dealer having proper and specific authorization (as per format provided in Appendix-I) of the original manufacturer to quote against this tender.
x.	Authorized dealer having authorization to quote against this tender, shall furnish his registration certificate with central /state sale tax department for that particular item.
xi.	Scan copy of the NIT, all pages duly signed & stamped by the tenderer, in token of having understood and accepted the specifications, terms & conditions of the NIT and quoted items should be duly ticked.
xii.	Performance statement /turn over for last two years as APPENDIX-III of this NIT.
xiii.	Acceptance of delivery, Warranty & guarantee of the items.
xiv.	Acceptance regarding delivery within the stipulated delivery schedule.
xv.	PAN no/GST/TIN No. Self-attested photocopies thereof be appended.
xvi.	Check list for tenders as per APPENDIX-III of this NIT.
xvii.	Any other relevant document which the firms wishes to submit
15.	) (B) SECOND COVER (Commercial/Price Bid) should contain the following:-

	<p>i. Rate quoted by the firm should be on firm price basis as per Bill of Quantities (BOQ) of the e-tender to be downloaded from the website and Rates should be carefully quoted offline and then uploaded</p> <p>(Note) J&amp;K Police does not issue Road Permits, Concessional Forms, state entry tax or Octroi etc. exemption certificates, as such; Rate quoted shall be F.O.R Consignee.</p> <p>The Zero basic cost quoted for any item in BOQ will be treated as Nil Quoted</p>
	<p>ii. Rates quoted shall be final till the validity of the contract i.e. upto 31.03.2019 with provision of further extension if finally approved by competent authority.</p>
16.	<p>On due date of opening of tenders i.e. 06.01.2018 at 1100 hours, technical bids only shall be opened and technical evaluation process shall start. Those who qualify the technical bid on a/c documents uploaded by them shall be informed to arrange demo to complete technical evaluation. Thereafter participating firms shall be informed online with regard to opening of financial bids of the technically qualified firms.</p>
17.	<p>Security Deposit: - The approved tenderers will have to supply the articles as per approved rate, approved sample and specification till the validity of the contract. They will have to furnish security deposit @ 5% of the total value of the items contracted for and for DGS&amp;D Rate Contract based supplies the security deposit will be 2%, in the shape of CDR/FDR issued by a Nationalized/Scheduled Bank pledged to AIG Provision &amp; Transport PHQ J&amp;K Jammu, at the time of signing of Deed of Agreement to ensure satisfactory performance of the equipment supplied, for Warranty period from the date of acceptance of products. This security deposit will be released in due course after expiry of specified warranty period/agreed contract. The charges on stamps etc. (cost of documents in totality) shall be borne by the supplier while executing the agreement. (No interest shall be paid by the purchaser on the Security deposit). J&amp;K Govt Rules for Security Deposit in respect of local SSI Units shall be applicable</p>
18.	<p>Guarantee/Warranty Except as otherwise provided in the invitation to the tender, the</p>

	<p>contractor hereby declares that the goods, stores, articles sold/supplied to the purchaser under this contract shall be of the best quality and workmanship and new in all respects and shall be strictly in accordance with the specifications and particulars contained/ mentioned in the contract. The contractor hereby guarantees that supplied goods/stores/articles would continue to conform to the specifications and quality for a period of 24 months for equipment &amp; 12 months of accessories, from the date of acceptance of supplies by the purchaser. If during this , supplied stores/goods/articles be discovered not to conforming to the specifications and quality or not giving satisfactory performance or have deteriorated, the decision of the purchaser in that behalf shall be final and binding on the contractor and purchaser shall be entitled to call upon the contractor to rectify/replace the goods/stores/articles or such portion thereof by the contractor and in such an event, the above mentioned warranty period shall apply to the goods/articles/stores rectified/replaced from the date of rectification/replacement thereof. In case of failure of the contractor to rectify or replace with the goods etc within specified time, the purchaser shall be entitled to recover the cost with all expenses from the contractor for such defective stores by the available means.</p>
19.	<p><b>Liquidity Damages</b></p> <p>Successful tenderer shall have to make the supplies within stipulated period as would be mentioned in the supply order. J&amp;K Police reserves the right to impose liquidity damages of 5% of the cost of unsupplied stores which shall depend upon the nature of supplies and extent of delay. However, period of delivery may be extended, at absolute discretion of J&amp;K Police provided the delay is attributable to reasons beyond the control of the supplier but not attributable to business transactions and provided delay is communicated in writing justifying the cause of delay.</p>
20.	<p>The supplies delivered by the successful tenderer shall be surveyed and verified by the J&amp;K Police at Police Central Stores Jammu/Srinagar, as the case may be</p>
21.	<p>As soon as the acceptance of the tender is communicated to the successful tenderer online, the contract shall be binding on him. The earnest money of the tenderer who backs out or withdraw his tender or</p>

	fails to abide by it after acceptance thereof is communicated/posted to him shall be forfeited besides other penal remedies that may be available to the Govt. of the J&K under the law for the time being in force in the State of J&K.
22.	The successful tenderer shall have to enter into an agreement on prescribed proforma (immediately after the issue of supply order) with the Department for due performance of the contract which shall be invariably furnished before the supply is made.
23.	The tenderer is required to furnish an authenticated copy of latest GST clearance certificates. The PHQ shall be at liberty to put to scrutiny, verification etc. the Sales tax /GST clearance so furnished by the successful tenderer.
24.	The authorities reserve absolute powers to reject or accept any tender or part thereof without assigning any reason and without any legal obligations. Any clause incorporated in the tender (not conforming to the NIT in any manner) shall make such an offer liable for rejection. Therefore, all the terms and conditions of the tender Notice including technical specifications shall be carefully studied for the sake of complete and comprehensive tender. Failure to comply with any of the conditions stipulated in the tender or instructions or the offer with insufficient particulars/documents shall lead to out-right rejection of the tender offer.
25.	After the registration/placement of orders/execution of the agreement and formally depositing the security money, in case the tenderer backs out or fails to supply the goods, the security deposited will be forfeited besides any other penal provisions, the department may decide as per norms.
26.	The formal deed incorporating the terms of the contract will be executed by the successful tenderer immediately after receipt of supply order. Failure to execute such bond/deed shall not however prevent the contract from being enforced against the tenderer. Any loss sustained by the Govt. as a result of re-tendering the contract shall be recovered from the defaulter, besides other penal provisions as the department may decide.
27.	<b>Delivery of Goods</b> Goods shall be delivered (as per instructions in supply order) at Police

	Central Store, Gulshan Ground, Gandhi Nagar, Jammu and Police Central Store, Zewan, Srinagar as the case may be duly packed in perfect condition. The supplier if he so desires may insure the goods against loss or theft, destruction, damages by the natural calamity loss by exposure to weather or otherwise viz war rebellion, riot etc. The insurance charges will have to be borne by the supplier and the department shall not pay such charges.
28.	If the successful tenderer fails to supply the goods of the prescribed specification or fails to deliver the goods within stipulated period as specifically mentioned in the supply order, the department shall be at liberty to arrange supplies by re-tendering or otherwise at the risk and cost of the tenderer. The department shall be lawfully entitled to forfeit the amount of the EMD/security money and take penal action to make good the loss sustained or excess cost incurred by the state in arranging of the supplies and other remedies that may be available with the department, under law .
29.	Either the original manufacturer or his authorized dealer can participate for a particular item or sample(s) only. Tender offers where both original manufacturer and his authorized dealer participate for the same items the tender of OEM shall be considered and tender of the dealer/ distributor shall be rejected
30.	If at any stage of the tender process two or more bidders are found in collusion between /among themselves with the intent to reduce competition, set price, share technical expertise ,share business information /decision ,control/share production and or distribution of products and raise prices ,all such tenders shall be out rightly rejected.
31.	If at any stage of tender process any bidder/s is/are found influencing any Government Servant associated with or handling the tender process and supplies thereof, bid of such tenderer/s shall be rejected besides invoking penal action under rules.
32.	All legal proceedings arising out of any dispute between the parties shall have to be settled in the Courts situated in Srinagar and Jammu and not elsewhere
33.	It shall be incumbent upon the supplier to provide entire supply, in conformity with the approved sample, strictly as per the specifications provided in the NIT/supply order. Supplies found deficient in quality

	/quantity viz-a-viz supply order shall be rejected. Penalty/damages would be imposed and recovered from the bidder as per terms and conditions indicated in the supply order.
34.	The supplier shall not sublet the contract or any part thereof to any other agency
35.	The decision of the accepting authority shall be final as to the quality of stores and shall be binding on the supplier. In case the articles supplied are not according to the approved sample & specifications they shall be rejected and at our absolute discretion, rejected stores may be allowed to be made good by way of replacement. The loss caused due to rejection of the supplies shall be entirely borne by the supplier. The rejected articles shall be lifted by the supplier within one week from the date of rejection. The department shall in no case be responsible for any loss or damage that may occur to the rejected stores while these are in the premises of the purchaser.
36.	The Department reserves the right to add or suitably modify the terms and conditions (without prior notification) as per exigencies and hence above shall not be construed as all inclusive.
37.	Bidders submitting their bids on-line shall only be accepted and manual bids shall be rejected and no document other than mentioned in the NIT shall be accepted manually.
38.	PHQ may call any bidder at any stage of the tender process for seeking any clarification.
39.	The bidder should furnish an undertaking APPENDIX-II of this NIT stating that he /she is not connected in any manner with any other bidder in this tender with respect to manufacturing ,distribution, supply, in sharing business information/documents price of the item etc. for the items quoted in this bid. If this is found to be incorrect, his/her tender would be rejected.
40.	The detailed NIT, SBD and BOQ are available on J&K State e-Procurement portal <a href="http://www.jktenders.gov.in">www.jktenders.gov.in</a> .

*Shah T. 27.12*

Sheikh Junaid Mahmood  
(AIG Provision/Transport)  
For Director General of Police,  
J&K-Jammu

*26/12/17*

**APPENDIX-I**

**MANUFACTURER'S AUTHORIZATION LETTER/CERTIFICATE;**

To,

The Director General of Police  
J&K, Jammu.

Subject:- \_\_\_\_\_

Sir,

Please refer to your e-tender enquiry (NIT) No- 47 of 2017 dated 26 .12.2017.

1. We \_\_\_\_\_ who are proven and reputable Manufacturers of \_\_\_\_\_ (name and description of the goods offered in the tender) having factories at \_\_\_\_\_ hereby authorize M/s \_\_\_\_\_ (name and address of the agent) to submit a tender, process the same further and enter into a contract with you against your requirement as contained in the above referred tender enquiry documents for the above said goods manufactured by us.
2. We also hereby extend our full warranty, CMS, support as per the conditions of contract, read with modifications, if any, in the special conditions of contract for the goods and services offered for supply by the above firm against this tender enquiry document.

Yours faithfully,

Signature with date, name and designation

For and on behalf of M/s \_\_\_\_\_

(Name and address of the Manufacturers)

**Note:-**

- a. This letter should be on the letter head of the manufacturing firm and should be signed by the person who is competent having the power of attorney.
- b. Scan copy of the original letter must be attached with tender documents.

**SIGNATURE OF THE TENDERER.**

APPENDIX-II

Reference e.NIT No 47 of 2017 dated 26 .12.2017.

To,

The Director General of Police  
J&K, Jammu.

Sir,

1. I \_\_\_\_\_ hereby state that I am not connected in any manner with any other bidder in this tender with respect to manufacturing distribution, supply, in sharing business information/documents and price of the items etc. quoted in this bid.
2. I further state that if this is found to be correct, the police department is at liberty to reject my tender.
3. I further certify that my concern has neither blacklisted nor banned by any central or state organizations to participate in tendering process.

Yours faithfully,

Signature with date, name and designation

For and on behalf of M/s \_\_\_\_\_

(Name and address of the tenderer)

Note:-

- a. This undertaking should be on the letter head of the tenderer firm and should be signed by the authorized person.
- b. Scan copy of the original letter must be attached with tender documents.

**APPENDIX-III**  
**Performance statement for last two years**

Name of the firm	
Description of stores	
Quantity on order	
Value	
Original D.P	
Quantity supplied within original D.P	
Final ExtD.P.	
Last supply position.	
Reasons for delay in supplies ( if any)	
Past performance in % age upto 2 crores	
Past performance in % age above 2 crores	

**Signature of Tenderer**

**APPENDIX-IV**

**General instructions/CHECK LIST FOR TENDERERS;**

**Before submission of tender documents, the tenderers should check whether they have complied with the following requirements or otherwise:-**

<b><u>S.No</u></b>	<b><u>Requirement to be checked before submission of the tender</u></b>	<b><u>Complied</u> <b>(Please indicate YES or No after complying with the requirement.</b></b>
1.	The tenderers for their own ease shall fill in relevant details of NIT offline & upload the same after ensuring accuracy	
2.	Whether tender fee scan copy is enclosed, with the technical bid?	
3.	Whether Earnest Money Deposit (EMD) scan copy is enclosed with the technical bid?	
4.	If an SSI Unit of J&K State, the same is indicated in the tender and scan copy of the valid registration/functional certificate is enclosed or not?	
5.	Whether list of the quoted items with name, make, model and catalogue/brochures of the quoted items are uploaded with technical bid?	
6.	Whether scanned copies of complete tender documents are up-loaded in the technical bid duly signed having official seal on all pages or not. However, the quoted items may be also be ticked?	
7.	Whether tender documents are submitted in two bid system i.e. Technical and Financial Bids separately as per tender enquiry or not?	
8.	Wherever asked to deposit the samples, whether sample conforming to the specifications has been deposited with Central Store Srinagar/Srinagar (as asked for in the specifications of item)?	

9.	Whether offer validity as required in tender enquiry is accepted and indicated in your tender document or not?	
10.	Whether terms of delivery and period as required in tender enquiry is accepted and indicated in your tender document or not?	
11.	Whether payment terms as required in the tender enquiry is accepted and indicated in your tender document or not?	
12.	Whether compliance statement in the format as required in tender enquiry is enclosed with the supporting catalogue/ brochures?	
13.	Whether performance statement for last 2 years as required in tender enquiry in the format is enclosed or not. If not, reason thereof is given?	
14.	Whether warranty period as required in the tender enquiry is accepted or not?	
15.	Whether details of AMC condition after warranty period (wherever applicable) is included in the price bid or not, if required in the tender enquiry?	
16.	(a) Status of tenderer as to whether manufacturer or authorized agent of the manufacturer is indicated in the tender document. If authorized agent/dealer, valid authority letter for the stores offered from the manufacturer is enclosed or not.  (b) If an Indian agent of foreign principal, whether the firm is enlisted with DGS&D under compulsory enlistment scheme or not. Copy of valid DGS&D enlistment certificate as Indian Agent of Foreign Principal is enclosed or not. If not, reason thereof is given in tender document or not?	
17.	If called for in the T.E. whether acceptance of functional demo/field trial clause, (whenever asked) is specified in your tender document or not?	
18.	If called for T.E. whether free training about use of equipment after supply, is accepted or not?	

19.	Whether indicated in the tender document, if your firm's business dealings is banned by any Govt/Private agency or recommended for blacklisting or not?	
20.	The complete commercial quote should be in Indian Rupees only. Currency of price should be clearly mentioned (wherever applicable).	
21.	Tenderers are required to indicate Basic Rate, Custom Duty, Excise Duty, Sales Tax/GST and any other leviable taxes/charges separately in the relevant columns of the BOQ.	
22.	Taxes will be applicable at actual supported by the original documents.	
23.	Tenderer will attach justification of price quoted which should include the recently executed contracts of the store in question with Govt/Semi Govt Organizations etc.	
24.	No column should be left blank. Wherever amount is not quoted, the column should be clearly marked as 'Nil'.	

**List of sensitive and non-sensitive documents**

S. No	Sensitive Documents part of Technical bid	Non Sensitive Documents
1.	Valid registration certificate/industrial license of original manufacturer for the items quoted	Performance statement of two years
2.	Valid authorization letter of original manufacturer in case of approved dealer	Govt. supply orders for same if any
3.	Valid registration certificate of approved dealer with central/state sales tax department for the items quoted	Income tax clearance
4.	Test report, if required/asked for	
5.	GST clearance certificate	
6.	SSI unit -registration certificate (local SSI units of J&KState only)	
7.	SSI unit - functional certificate	

	(local SSI units of J&K State only)	
8.	Scanned copies of EMD and Tender Fee	
9.	Scanned copy of NIT duly Signed & sealed	

## **Annexure -A of e. procurement tender No 47 of 2017 dated 26 .12.2017**

### **SYSTEM OVER VIEW**

In Intra District communication Network, static stations will be used to communicate locally within the District on voice and DATA(optional) with location tracking. In Inter District Network, IP based DMR Repeaters will be installed at strategic locations to give maximum coverage and multiple repeater sites will be connected through IP for voice and data transfer.

The proposed Digital Mobile Radio(DMR) Networks enable these key benefits:-

- **High Security:** Prevents unauthorized user from accessing the system, in addition the network manager disable feature makes it easy for you to remotely deactivate a lost or stolen radio.
- **Higher Capacity:** Delivers better capacity than of an analog conventional system using TDMA two slot technology
- **Text Messaging :** Pre-defined and editable messages from keypad
- **Integrated GPS :** Locate mobile teams using integrated GPS
- **Voice Logging:** Voice and events would be recorded, if required.
- **Audio:** Loud and Intelligent Digital Audio feature that automatically adjusts the radio Volume according the environments noise Level.
- **Caller ID, Selective Calling, Group Calling etc.**
- **Enhanced encryption:** Encryption for voice and data for enhanced security
- **Transmit voice interrupt:** Enables a user to interrupt another radio conversation to deliver **critical communication** exactly when and where immediately required for supervisory control.
- **Remote monitoring.** Remote target radio`s PTT is switched on.
- **Fast Access for those who need it Most: user interrupt** feature enables the key officials or personnel to interrupt existing communication during emergency situations.
- **No need to change channels:** As you travel from one site to the next, you can keep focus on the task instead of hassling with manual site changes. Dynamic site roaming automatically registers you with the nearest sites so you can travel and always stay connected
- **Save on infrastructure :** Two slot DMR technology require less number of repeaters and more spectrum efficiency
- **In-built Bluetooth:** For hands free operation

- **Emergency Button:** Orange/Red button on the top of the radio should be programmable to send an alert to a control Room or dispatcher during an emergency situation.

**Data Applications:** Features including Location tracking, Blue tooth data, email gateways, dispatch, Telephony, SMS etc.

## **BIDDERS PRE-QUALIFICATIONS:-**

The bidder must qualify the following eligibility:-

- a) Bidders must be OEM or authorized distributor of OEM with valid Dealer Possession License from WPC.
- b) The successful bidder has to follow the process of obtaining the necessary licenses, if required, from WPC & DOT.
- c) OEM for the offered system should have own registered office with Service centre in India and experienced service engineer in J&K to ensure prompt service and support after sales.
- d) Offered Digital Radios and Digital Repeaters should be listed in DMR Association.
- e) OEM should provide an undertaking/affidavit for essential spares required for the system after sales of the offered product for a period of 08 to 10 years at least.
- f) Successful bidder will be responsible for installation of equipment and fabrication of digital Networks and will demonstrate key features.
- g) The Bidder should offer Portable, Mobile/static digital radios & Repeater sets etc. of single OEM. Offered Radios shall be of same protocol, type of emission and signaling scheme and be mutually interoperable with existing DMR VHF Radios of J&K Police and other DMR manufactured by different firms so that full functional network can be established by using these radios.
- h) Necessary technical training regarding Operational, Repairing and maintenance of the equipment. The training shall be given for 15 technical persons at Jammu and Srinagar Cities and also provide original technical services manual for proper maintenance and repair of equipment after warranty.
- i) While every effort has been made to provide comprehensive and accurate background information and requirements and specifications, Bidders must form their own conclusions about the System Integration support required.
- j) **Flexibility:** The Digital Radio Network system must have flexibility for future upgradation as the said system is expected to serve the communication to Jammu & Kashmir Police for next 10 years.

### **OTHER ESSENTIALS OF THE INTRA - INTER DISTRICT DIGITAL RADIO NETWORK**

- a) Pre-bid tender conference to discuss and finalize all technical parameters and specifications prior to final acceptance of tender documents.
- b) The project should be *turn-key-job based* with onsite warranty for three years.
- c) Technically & financially qualified bidder should give proof of concept of the project by demonstrating all offered system features especially wide area coverage in comparison with existing Analog Radio networks.
- d) Comprehensive warranty for whole system for a period of 03 years followed by 02 years AMC.

**Intra District (local) Dispatcher Console Application with work Stations , GIS and Web Managed Switch with SMS GPS Tracking ,Digital Features and auto searching of channel facility in Repeaters**

**Item No 01**

S.No	Nomenclature	Qty
1.1	Dispatcher Console Application with Workstation	1200 NO
1.2	GIS Subscriber Application Software license	39 No
1.3	Web Managed 08 port Switches	39 No

**Technical Specifications of Dispatcher Console/ Radio Server**

**System Configuration:-**

CPU i5 or above, RAM 4GB, HDD 500GB or above, embedded or external sound card, Speaker , Mike, Head phone with Mike, TFT Screen 18.5"or more, multimedia key board, licensed Windows 8.1/10 Professional, Antivirus (complete) with all application software's for the system.

**Radio - Server:-**

The Dispatcher /server can be co-located or at different locations (depends on user requirement) via IP. Single server should be able to handle multiple different radio networks simultaneously and have provision to connect at least 6 Control Stations per Radio Server.

**Dispatcher features :-**Must handle all type of calls (Private, Group and All call), Remote Monitoring, Emergency Calls, Voice Recording for all channels in MP3 format in connected network, Radio Check, Radio Kill and Un-kill, Call Alert, Subscriber Identification. Black list for Automatic Blocking of unauthorized radios in the Digital Radio network

Facility for voice and event logging at both Dispatcher Consoles and Radio servers

**GPS tracking/ AVL: -**Real-time subscriber location monitoring.

Should support different types of maps like Online Google Maps, Open street map and offline raster maps, Shape file integration. Track animation for specified period of time, Geo-fencing, automatic location request, Location request by event, Manual location request Integration with Google Earth and Google Maps (export locations to KML)

**Database back-up and restore:-**At least for one month

**Searchby:-** Incoming/Outgoing, Source/Destination/Talk group/Channel/Time, Voice Call Annotation

**Rules & Alerts:-**Rules and Alerts for events, GPS Rules etc

**Event Logging:-**Subscriber Activity Report, Report Wizard

**Text Messaging Service:-** Must be available.

**Technical Specifications of 8/12 Port web managed Switch(FOR REPEATER SITES)**

No. of Ports	8/12 Ports
Flow Control	IEEE 802.3x
Jumbo Frames:	1536 Bytes
QoS Support	Supports 802.1p QoS

<b>Switching Fabric</b>	1.6 Gbps
<b>Standards</b>	IEEE 802.3 10BASE-T Ethernet (twisted-pair copper) IEEE 802.3u 100BASE-TX Fast Ethernet (twisted-pair copper)
<b>Protocol</b>	CSMA/CD
<b>Data Transfer Rates</b>	Fast Ethernet: 100 Mbps (full duplex)
<b>Media Interface Exchange</b>	Auto MDI/MDIX adjustment for all ports
<b>MAC Address Table</b>	1K
<b>Packet Filtering/Forwarding Rates</b>	Ethernet: 14,880 pps per port Fast Ethernet: 148,800 pps per port
<b>RAM Buffer</b>	768 KBytes per device
<b>DC Input</b>	External 5 V/1 A Level

**2. Inter District VHF HB Digital Repeaters  
DMR Repeaters with Auto Searching of Channels and other applications. The system should consist of the following components :-**

S.No	Nomenclature	Qty
2.1	DMR VHF 50 Watt Repeater with Mains Power cable	19
2.2	Combiner 4 Port, Multicoupler with Duplexer	02
2.3	Duplexer	17
2.4	Static 3 db Antenna	19
2.5	½ inch LDF Cable of 45 Mtrs .length each with UHF Male connectors at both ends	19
2.6	DC Cable battery backup for repeater	19
2.7	Repeater programming kit	17
2.8	Repeater License key for capacity plus	19
2.9	Web managed 12 port switch	17

**TECHNICAL SPECIFICATIONS OF DIGITAL VHF HIGH BAND REPEATER**

S.No	Parameters	Specification
	<b>General</b>	
1	i.Frequency Range	136-174 MHz (Full Band)
	ii.No. of Channels	64 or higher
	iii.Channel Spacing	12.5 KHz or better
	v.Frequency Stability	±1.5 PPM or better
	Protocol & Technology	Digital TDMA 2-Slot Technology or better
	Types of Emission(Modulation)	Analog: 11K0F3E Digital: 4FSK or equivalent technique complying to open standard/non-proprietary Digital Protocol as defined by an international standards body like ETSI/FCC etc.
	Power Source	i.13.8 Volt DC ±15% ii. 100- 240 volt AC, 50 Hz iii. There should be provision to shift automatically on DC supply during mains failure & when mains supply restored it should be shifted on mains from DC supply.
	Protection	(i) Reverse Polarity Protection (ii) Protection against high VSWR
	i.R.F Power Output	50 Watt Programmable/Selectable)
	ii.FM Hum/Noise	-40 dB or better
	iii.Modulation Limiting	±2.5 KHz @ 12.5KHz
	iv.Adjacent Channel Power	-60dB or better
	v.Audio Distortion	Less than 3%
	i.sensitivity	i) Analog: 0.30 µV for 12dB SINAD or better ii) Digital: 0.30 µV at 5% BER or better
	ii.Selectivity(Adjacent Channel)	60 dB or better
	iii.Inter Modulation	70 dB or better
	iv.Audio Response	+1,-3dB
	v.Rated Audio Distortion	Less than 3%

4	<b>Networking</b>	Should have provision to interconnect multiple repeaters through IP and provision to interconnect multiple repeaters in single site through switch and single-site repeaters should work in Channel Sharing basis to give minimum 4 channel switching. Radio users should quickly and efficiently share voice and data communication on the same system. Multiple user groups should get access to the same repeater system without changing channel on first cum first serve basis.,
5	<b>Interface</b>	Ethernet port RJ-45 to provide a) Wide area IP connectivity for voice and DATA. b) Remote monitoring and status check.
6.	<b>Accessories</b>	
	Battery Cable & Mounting fixtures	Should be supplied with Repeater
	Antenna with Self-supporting Triangular Mast/Towers	3dBgain Omni Directional GP antenna Complete with 45 meter long rollRF LDF cable fitted with suitable connector for repeater stations. The self supporting Triangular Masts/Towers, height as per requirement with concrete bases for the repeater Sites which shall be able to withstand up to 150Kms/Hour wind speed.
	Programming Kit	All necessary programming software and hardware required for the set should be provided as per user's requirements.
	Literature	i) Users 'manual with each radio sets should be provided free of cost in soft as well as hard copy. ii) Original Technical repairing manual with complete block diagram, circuit layout etc should be provided as per user's requirement in soft as well as hard copy.
7.	<b>Receiver Multi-Coupler</b>	
	Output port Numbers	4
	Frequency Range	136~174MHz *
	Rx-Rx Isolation	20dB
	VSWR	≤1.5:1
	Noise Figure	≤2.5dB
	Gain Adjustable Range	10dB in 1dB step
	Connector	N-F
	Power Supply	220V AC
	Operating Temperature	-20~55°C
8.	<b>Combining System</b>	
	Channel Numbers	4
	Frequency Range	136~174MHz *
	Insertion Loss (Typ.) / Per Channel	8.0dB
	Max. Input Power	100W
	Isolation Between Input Ports	≥ 40dB (typ. 25dB)
	VSWR	≤ 1.3:1
	Connector	N-F
Operating Temperature	-30 ~ +60°C	
9	<b>Protocol and Signaling Scheme</b>	Mobile Radios, Handheld Radios, Repeaters shall be same in respect of protocol type of emission and signaling scheme etc, and shall be mutually interoperable so that full functional network can be established using these radios and repeaters

### 3. DIGITAL VHF STATIC HIGH BAND TRANSRECEIVER

S.No	Nomenclature	Qty
3.1	DMR VHF HB 25 Watt. Sets(compatible with Dispatcher console), with inbuilt -Bluetooth, GPS etc.	1000
3.2	Capacity Plus subscriber license	300
3.3	03db GP Antenna complete with suitable connectors	1000
3.5	BNC Male/Female Adaptor ( compatible with set)	1000

#### TECHNICAL SPECIFICATIONS OFDIGITAL VHF STATIC HIGH BAND TRANSRECEIVER

S.NO	Parameters	Specification
1	<b>General</b>	
	Frequency Range	136-174 MHz (Full Band)
	No. of Channels	255 or higher
	Channel Spacing	12.5 KHz or better
	Frequency Stability	±1.5 PPM or better
	Protocol & Technology	Digital TDMA Two slot Technology or better in simplex and Repeater mode also.
	Types of Emission(Modulation)	Analog: 11K0F3E Digital: 4FSK or equivalent technique complying to open standard/non-proprietary Digital Protocol as defined by an international standards body like ETSI/FCC etc.
	Type of Operation	Simplex, Press to talk
	Power Source	13.8 Volt DC ±15%
	Protection	(i) Reverse Polarity Protection (ii) Protection against high VSWR
2	<b>Transmitter</b>	
	R.F Power Output	25 Watt Programmable/Selectable)
	FM Hum/Noise	-40 dB or better
	Modulation Limiting	±2.5 KHz @ 12.5KHz
	Adjacent Chanel Power	-60dB or better
	Audio Distortion	Less than 3%
3	<b>Receiver</b>	
	sensitivity	i) Analog: 0.30 μV for 12dB SINAD or better ii) Digital: 0.30 μV at 5% BER or better
	Selectivity(Adjacent Channel)	60 dB or better
	Inter Modulation	70 dB or better
	Audio Output	3W or better
	Audio Response	+1,-3dB
	Rated Audio Distortion	Less than 3%
	Environmental Standard i.e. Low & High Temperature, Low pressure, Temperature, Shock Solar Radiation, Rain, Salt Fog, Vibration, Dust & Shock	As per MIL 810 C,D,E,F ( Bidder to enclose ILAC/NABL Lab report for MIL Standard for offere Radio models only).
	Dust & Water Intrusion	IP 54 or better
4	<b>Accessories</b>	

	Microphone	DTMF Microphone should be supplied with Radio
	Battery Cable & Mounting fixtures	Should be supplied with Radio
	Remote Radio Kill/Stun/Revive facility	Should be available
	Mode of operation	Radio should operate in analog mode and digital mode.(Compatible with existing all type of VHF analog radio sets viz:: Motorola, Kenwood, Vertex etc.)
	Emergency Button	Allows a user to obtain help in critical situation
	SMS Texting	Should be capable of sending predefined and editable short messages from the keypad of more than 250 characters and should have text to voice speech facility.
	Inbuilt Bluetooth	Inbuilt Bluetooth for over the air programming and Bluetooth headset with PTT switch for hands free operation .
	Compatibility with PC/existing data terminal system	Supplied DMR radio should be directly interfaced to computer without any external hardware or modem in digital mode for DATA transfer. Offered Software should be compatible with existing data terminal software.
	Programming	Front panel programming with password protection , PC programming and Over the Air programming.
	Support GPS	Inbuilt GPS System with accuracy of less than 10 meters.
	Networking	Should be IP based for automatic roaming etc
	GIS	Radio should have application protocol interface alongwith software applications to provide locations and messaging on PC/Console.
	Antenna	03 dBgain Omni Directional GP antenna with 30 meter RF cable RG-217 for static static should be provided as per user's requirement
	Programming Kit	All necessary programming software and hardware required for the set will be provided as per user's requirements.
	Literature	i)Users ' manual with each radio sets should be provided free of cost in soft as well as hard copy. ii)Technical repairing manual with complete block diagram, circuit layout etc should be provided as per user's requirement in soft as well as hard copy.
5.	<b>Configuration</b>	
	i)Caller ID display	Should be available
	ii)Busy channel lock out	Should be available
	iii)Scan with priority	Should be available
	iv)Transmitter Time Out Timer (TOT)	The time should be programmed to best suit the application.
	v)LCD Display	Should be available
	vi)Mode of calls	Selective Call, Group Call, Inter and intra Group Call facility.
	Trunking Capability	Radio should have pre-installed license compatible with the Digital Repeater to work in channel sharing basis for entire Digital Radio Network.
	Encryption	AES 256 bits.
6.	<b>Field Trial</b>	The actual performance of the radio set will be assessed.
7.	<b>Protocol and Signaling Scheme</b>	Mobile Radios, Static Radios Handheld Radios and Repeaters shall be same in respect protocol type of emission and signaling scheme etc, and shall be mutually interoperable so that full functional network can be established by using these radios and repeaters.

## 4. Vehicle Mounted Digital Mobile Radio VHF High Band TRANSRECEIVER

S.No	Nomenclature	Qty
4.1	DMR VHF HB(Vehicle Mount)25 Watt with inbuilt-Bluetooth, GPS and Accessories Power cable ,Standard Mounting Bracket and DTMF Mic	900
4.2	Capacity Plus subscriber License	200
4.3	Whip Antenna complete fitted with co-axial cable and suitable connectors	900
4.4	BNC Male /Female Adaptor ( compatible with Set)	900

### TECHNICAL SPECIFICATIONS OFDIGITAL VHF MOBILE HIGH BAND TRANSRECEIVER

S.NO	Parameters	Specification
1	<b>General</b>	
	Frequency Range	136-174 MHz (Full Band)
	No. of Channels	255 or higher
	Channel Spacing	12.5 KHz or better
	Frequency Stability	±1.5 PPM or better
	Protocol & Technology	Digital TDMA Two slot or better in simplex and repeater mode also
	Types of Emission(Modulation)	Analog: 11K0F3E Digital: 4FSK or equivalent technique complying to open standard/non-proprietary Digital Protocol as defined by an international standards body like ETSI/FCC etc.
	Type of Operation	Simplex, Press to talk
	Power Source	13.8 Volt DC ±15%
	Protection	(i) Reverse Polarity Protection (ii) Protection against high VSWR
2	<b>Transmitter</b>	
	R.F Power Output	25 Watt Programmable/Selectable)
	FM Hum/Noise	-40 dB or better
	Modulation Limiting	±2.5 KHz @ 12.5KHz
	Adjacent Chanel Power	-60dB or better
	Audio Distortion	Less than 3%
3	<b>Receiver</b>	
	sensitivity	i) Analog: 0.30 µV for 12dB SINAD or better ii) Digital: 0.30 µV at 5% BER or better
	Selectivity(Adjacent Channel)	60 dB or better
	Inter Modulation	70 dB or better
	Audio Output	3W or better
	Audio Response	+1,-3dB
	Rated Audio Distortion	Less than 3%
	Environmental Standard i.e. Low & High Temperature, Low pressure, Temperature, Shock Solar Radiation, Rain, Salt Fog, Vibration, Dust & Shock	As per MIL 810 C,D,E,F ( Bidder to enclose ILAC/NABL Lab report for MIL Standard for offered Radio models only).
	Dust & Water Intrusion	IP 54 or better

4.	<b>Accessories</b>	
	Microphone	DTMF Microphone should be supplied with Radio
	Battery Cable & Mounting fixtures	Should be supplied with Radio
	Remote Radio Kill/Stun/Revive facility	Should be available
	Mode of operation	Radio should operate in analog mode and digital mode.(Compatible with existing all type of VHF analog radio sets viz:: Motorola, Kenwood, Vertex etc.)
	Emergency Button	Allows a user to obtain help in critical situation
	SMS Texting	Should be capable of sending predefined and editable short messages from the keypad of more than 250 characters and should have text to voice speech facility.
	Inbuilt Bluetooth	Inbuilt Bluetooth for over the air programming and Bluetooth headset with PTT switch for hands free operation.
	Programming	Front panel programming with password protection ,PC programming and Over the Air programming
	Support GPS	Inbuilt GPS System with accuracy of less than 10 meters.
	Networking	Should be IP based for automatic roaming etc
	GIS	Radio should have application protocol interface alongwith software applications to provide locations and messaging on PC/Console.
	Antenna	i) Odbgain whip antenna with 3 meter co-axial cable fitted with suitable connector, magnetic base/ mounting bracket for vehicle use should be provided as per user's requirement.
	Programming Kit	All necessary programming software and hardware required for the set will be provided as per user's requirements.
Literature	i) Users 'manual with each radio sets should be provided free of cost in soft as well as hard copy. ii) Technical repairing manual with complete block diagram, circuit layout etc should be provided as per user's requirement in soft as well as hard copy.	
5.	<b>Configuration</b>	
	i) Caller ID display	Should be available
	ii) Busy channel lock out	Should be available
	iii) Scan with priority	Should be available
	iv) Transmitter Time Out Timer (TOT)	The time should be programmed to best suit the application.
	v) LCD Display	Should be available
	vi) Mode of calls	Selective Call, Group Call, Inter and intra Group Call facility.
	Trunking Capability	Radio should have pre-installed license compatible with the Digital Repeater to work in channel sharing basis for entire Digital Radio Network.
Encryption	AES 256 bits. Or better	
6	<b>Protocol and Signaling Scheme</b>	Mobile Radios, Handheld Radios, Repeaters shall be same in respect of protocol type of emission and signaling scheme etc, and shall be mutually interoperable so that full functional network can be established using these radios and repeaters

## 5. DIGITAL VHF HIGH BAND HAND HELD RADIO SET 5 WATT WITH CHARGER & SPARE BATTERY PACK consisting of :-

S.No	Nomenclature	Qty
5.1	DMR VHF High Band Hand Held Radio with inbuilt-Bluetooth, GPS and Li-ion 2000 mAh or more battery ,charger and Rugged Antenna	2200
5.2	7.4 V Li-ion 2000 mAh or more spare Battery pack	2200
5.3	Capacity Plus subscriber license	450

### TECHNICAL SPECIFICATIONS OF DIGITAL VHF HAND HELD RADIO SET WITH CHARGER & SPARE BATTERY PACK

S.No.	Parameters	Specification
	i) Frequency Range	136 – 174 MHz ( Full Band)
	ii)No. of channel	255 or more
	iii)Channel spacing	12.5 KHz or better
	iv)Frequency Stability	± 1.5 PPM or better
	v)Protocol & Technology	Digital TDMA Two slot technology or better in simplex and repeater mode also
	vi)Type of Emission( Modulation)	Analog: 11K0F3E Digital: 4FSK international standards
	vii) Type of operation	Simplex press to talk
	viii)Type of Antenna	Rugged flexible Helical Antenna
	x)Power source	Lithium-ion battery pack of 2000 mAH or more with belt clip ( Bidder shall mention DC voltage).
	xi) Protection	i. Reverse polarity protection ii. Protection against high VSWR
	2.	<b>Transmitter</b>
	i)RF Power output	1 to 5 watt ( programmable/ selectable)
	ii)FM Hum /Noise	-40 dB or better
	iii)Modulation Limiting	± 2.5 KHz @ 12.5 KHz.
	iv) Adjacent Channel power	60 db or better
	v) Audio Distortion	Less than 3%
3	<b>Receiver</b>	
	Sensitivity	i)Analog:- 0.30µv for 12 dB SINAD or better. ii)Digital :- 0.30µv at 5% BER or better
	ii)Selectivity Adjacent channel	60 dB or better
	iii)Inter modulation	60 dB or better
	iv)Audio output	500mW
	v) Audio response	+ 1, -3 dB
	vi)Rated Audio Distortion	Less than 3%
	iv) Environmental standard i.e) low & high Temperature, Low pressure, Temperature Shock , Solar Radiation ,Rain , Salt fog , Vibration, Dust & shock.	As per MIL 810 C,D,E,F ( Bidder to enclose ILAC/NABL Lab report for MIL Standard for offered Radio models only).
	v) Dust & water Intrusion	IP 57 or better

4	<b>Accessories</b>	
	i) Battery Charger	Single unit smart charger (capable to charge Lithium-Ion, Ni-MH, Lithium-Polymer batteries.
	ii) Hands free kit (VOX unit with PTT) (Optional)	The vendor should provide minimum of two variants for trials.
	iii) Programming kit	All necessary programming software and hardware required for the set should be provided as per user's requirements.
	iv) Literature	i) User manual with each radio set should be provided free of cost in soft as well as hard copy. ii) Original Technical repairing manual with complete block diagram circuit layout etc should be provided as per users requirement in soft as well as hard copy.
	v) Battery	Spare Battery pack Lithium-Ion 2000 mAh or above with each radio set.
	vi) Leather case (Optional)	One good quality leather case with belt clip and shoulder strip.
5	<b>Configuration</b>	
	i) Caller ID display	Should be available
	ii) Facility for Locking the Channel or Key Pad Locking	Should be available
	iii) Scan with Priority	Should be available
	iv) Transmitter Time Out Timer (TOT)	The time should be programmed to best suit the application
	vi) LCD Display	Should be available
	vii) Mode of calls	Selective, group call, inter and intra group call facility
	viii) Remote Radio Kill/Stun/Revive facility	Should be available
	Viii) Mode of Operation	Radio should operate in Analog mode and Digital mode.(Compatible with existing all type of VHF analog radio sets viz. Motorola, ICOM, Kenwood etc.)
	ix) Emergency Button	Allows a user to obtain help in critical situations.
	x) SMS Texting	Should be capable of sending predefined and editable short messages from the keypad of more than 250 characters and should have text to voice speech facility.
	xi) Programming	Front Panel Programming with password protection, PC Programming and Over the Air programming.
	xii) DTMF Front Panel keypad with back lit	Should be available
	xiii) Battery Strength bar	Should be available
	xiv) Support GPS	Inbuilt GPS System with accuracy of less than 05 meters.
	xv) GIS	Radio should have application protocol interface along with software application to provide locations and messaging on PC/console
	xvi) Networking	Should be IP based for automatic roaming etc.
Inbuilt Bluetooth	Inbuilt Bluetooth for over the air programming and Bluetooth headset with PTT switch for hands free operation.	
Trunking Capability	Radio should have pre-installed license compatible with the Digital Repeater to work in channel sharing basis for entire Digital Radio Network.	
Encryption	AES 256 bits.	
6	<b>Field Trial</b>	The actual performance of the radio set will be assessed.
7	<b>Protocol and Signalling Scheme</b>	Mobile Radios, Handheld Radios, Repeaters shall be same in respect of protocol type of emission and signaling scheme etc, and shall be mutually interoperable so that full functional network can be established using these radios and repeaters

## 6. Duplex Radio for RF IP LINK Total 12 locations

THE FIRM SHALL PROVIDE COMPLETE SOLUTION TO CONNECT BELOW MENTIONED LOCATIONS ON RF Link. Comprising of :-

S.No	Nomenclature	Qty
6.1	IP Server complete with hardware, software, power supply, battery backup and all required accessories	01 No
6.2	IP Digital Phones	50 No
6.3	E-Mail Sever complete with Hardware, software, power supply, battery backup and all required accessories	1 NO

- i. R.F IP Link from PCR-Jammu, PHQ-Jammu To PCR-Srinagar ,PHQ-Srinagar with through put 50 Mbps and other locations viz RPTR Shankarachariya, RPTR Humhama, RPTR Jawhar Tunnel, RPTR Beoli BN Hqrs Doda, RPTR Patinitop, RPTR Sanjichhat Katra, RPTR DHQ T/Com Jammu, RPTR PTTI Vijaypur on through put 20 Mbps in first-phase for IP Wireless based applications for digital Repeaters and file and folder transfer from PHQ/PCR Jammu to PHQ/PCR Srinagar and vice versa.

## 7. Specifications of Packet Radio system complete with all required accessories. 70 No

**General:- Computer System :** Processor i3 or above with minimum 04 COM- ports 2GB DDR RAM, 500 GB HDD, DVD RW Drive, 21" inch TFT, internal PSTN Modem, 100/ 1000 Mbps LAN Port ,Multimedia Keyboard, Optical Mouse, & Windows 8.1 /10 OS , Mother board drivers and Antivirus software (Branded system, latest configuration preferred).

**A: - Communication Software:-**

Software with protocols PSTN, Poinet and DMR should be available. The software must be able to receive/Transmit messages with inbuilt encryption. Supplied DMR radio should be directly interfaced to computer without any external hardware or modem in digital mode.

- i. Configurable Message Scheduling/Message Priorities
- ii. Log facilities (Tx, Rx, Failed/Print Messages) with date / time & acknowledgement.
- iii. Tool bar Icons for SEND,PRINT,CONNECT,DISCONNECT, LOG, ADDRESS DIRECTORY , EDITOR FOR Messaging , INBOX, OUTBOX, SENT MSG, Receive MSG and other features relating data communication.
- iv. On Screen connection status viz IDLE,BUSY, CONNECTING, RECEIVING and SENDING. User & admin password protected
- v. Message arrival indicator.
- vi. Message transmits acknowledgement/failure indication
- vii. The software should be fully compatible with existing AMSS software
- viii. Required protocols for email applications.

**C. Technical Specifications of 9 PIN 80 Column Dot Matrix Printer.**

- i. Printing method: Impact dot matrix; 10,12, 15

- ii. Printing direction: Bidirectional for text printing, Unidirectional for graphics and by software command for text
- iii. Number of copies: One original plus two copies total thickness
- iv. Paper feed method: Friction, Pull tractor, Holder, Push tractor
- v. Ribbon: Cartridge, Black
- vi. Voltage: 220Volt to 240volt AC
- vii. Interface : Parallel /USB

**D. Technical Specifications of UPS - 1 KVA Line Interactive**

Capacity: 1000 VA

- i. Output Wattage: 700 Watts
- ii. Input Voltage: 140 V.A.C to 270 V.A.C 50 Hz
- iii. Output Voltage: 220 V (A.C) 50 Hz
- iv. Protection : Under Voltage/Over Voltage, Surge Control, Short Circuit Protection on Output Circuit, Inverter Shutdown Protection
- v. Indication: Audio Visual for different conditions of UPS.
- vi. Battery Backup: Battery Backup for at least 30 minutes

**8. SPECIFICATIONS OF RADIO COMMUNICATION TEST SET(ANALOG/DIGITAL)**

**THE INSTRUMENT MUST CONSIST OF:**

**Qty One No**

- (i) RF SIGNAL GENERATOR
- (ii) RF POWER METER
- (iii) AUDIO FREQUENCY COUNTER
- (iv) SINAD METER
- (v) DISTORTION METER
- (vi) HUM AND NOISE METER
- (vii) SIGNAL TO NOISE RATIO METER
- (viii) AUDIO FUNCTION GENERATOR
- (ix) TRACKING GENERATOR
- (x) OSCILLOSCOPE
- (xi) DIGITAL MULTIMETER
- (xii) RF SPECTRUM ANALYZER
- (xiii) AUDIO SPECTRUM ANALYZER
- (xiv) HARMONICS & SPURIOUS METER
- (xv) TRACKING GENERATOR
- (xvi) DIGITAL TEST (OPTIONS) FOR P25- I&II (FDMA/TDMA), DPMR & DMR etc

**GENERAL**

a)	Operating Voltage:	AC 220V±10%@50Hz
b)	Internal Storage	20GB or More
c)	Display Size	6" or more(diagonal)
d)	USB port	Should be available
e)	Ethernet	RJ 45, 100/ 10 Mbit/s Minimum 1 port
f)	GPIB Connector	24 Pin IEEE
g)	RS 232 Connector	9-pin , D-sub , Male
h)	IF output Connector	BNC
i)	Function	10.7 Mhz Receiver IF
j)	Automated signal Measurement and analysis	The software should have interface with digital radio test set The software is capable to test an saline the transmitter / receiver of a Radio se

	software	automatically and analysis in the field. field
k)	Calibration support:	Calibration facilities should be available in India free of cost during the guarantee/warranty period.
l)	Field upgradation	a) The product should field upgradable to other Digital Technologies such as: P 25 Phase I & II testing, DMR Radio with Repeater, NXDN, DPMR & Tetra Mobile and Base station and DMO mode testing. b) The equipment should be capable of performing tests of digital/analog radio set and contain all functionalities in one standalone unit.
<b>SIGNAL GENRATOR FOR RECIEVER TEST</b>		
a)	Frequency Range.	250 KHz- 2.5 GHz or better
b)	Frequency Resolution	1 Hz or better
<b>Modulation</b>		
a)	Select Mode	OFF,AM,FM,AM USB,AM LSB
b)	Waveforms	Sine, Square, Triangle, Ramp, DCS, DTMF
<b>FM Modulation</b>		
a)	Deviation Range	0 to $\pm$ 125 KHz or better , Off
b)	Deviation Accuracy	3% of setting
c)	Resolution	10 Hz or better
d)	Modulation Range	20 Hz to 20 KHz or better
<b>AM Modulation</b>		
a)	Am depth range	0 to 90% or better
b)	Accuracy	UP to 3%
c)	Modulation Bandwidth	100Hz to 15 KHz or better
d)	Resolution	1%
<b>SSB Modulation</b>		
a)	Modulation Selection	Upper Side Band (USB) or Lower side Band (LSB)
b)	SSB Depth Range	0 to 100% (LSB or USB)
c)	Modulation Bandwidth	300Hz to 20 KHz
<b>Receiver ( Transmitter test)</b>		
a)	Frequency Range	250 KHz to 2.5 GHz or better
b)	Demodulation selection	OFF,AM,FM,AM SSB,AM LSB
c)	Sensitivity	Less than – 100 dBm ( 10 dB SINAD) or better
d)	Range	20 Hz to 20 KHz
<b>RF power Meter</b>		
a)	Range	0.10 to 125 watt , Resolution 0.01w
b)	VSWR	( with attenuation $\leq$ 10 dB): better than 1.20 : 1
<b>Audio frequency Meter</b>		
a)	Range	20 Hz to 20 KHz
b)	Wave shape	Sine or square
c)	AF level meter	0 to 20 Vrms or better
<b>SINAD Meter</b>		
a)	Frequency meter	300Hz to 3 KHz or better
b)	Accuracy	$\pm$ 1dB , $\pm$ 1 count
c)	Range	0 to 50 dB or better
d)	Level	0.1 Vrms minimum to 20 Vrms or better
<b>Audio Function Generator</b>		
a)	Wave shape	Sine, Square, Triangle, Ramp , Digital Code squelch , DTMF
b)	Frequency Range	Sine: 20Hz to 20 KHz or better Square ,Triangle and Ramp: 20Hz to 4KHz or better.
c)	Level Range	1 mV to 5 V RMS across a 10 K $\Omega$ load or better

d)	Frequency resolution	0.1 Hz
e)	Level accuracy	± 1% of setting across 10 KΩ load or better.
<b>Oscilloscope:-Two channels or more</b>		
<b>Digital MultiMeter</b>		
a)	Voltage Range	200mV to 1000V, or more ( 150VAC RMS , or VDC MAX input)
b)	Ac Voltage frequency Range	50Hz to 20 KHz
c)	Accuracy	Ac±5% Dc±1%
d)	AC/DC Ampere meter	200mA to 20A, or better Auto (20A range uses optional shunt connected to voltmeter)
e)	Ohmmeter	Full Scale Range: 200 ohms to 20Mohms, Auto.
<b>RF Spectrum Analyzer</b>		
a)	Frequency Range	250KHz to 2.5 GHz
b)	Frequency Resolution	1Hz
<b>Audio Spectrum Analyzer</b>		
a)	Frequency Range	Start and stop Frequency- 0Hz to 20 KHz

**NOTE:-**

The necessary test certificates from authorized test labs must be attached with the technical bid for communication test set(analog/digital)instrument.

*Nov 27.12*

Sheikh Junaid Mahmood  
 AIG Provision & Transport  
 For Director General of Police J&K  
 Jammu

*9/8/12/17*