

**Notice Inviting e-Tender No. WBPTel/DG/eNIT-26/Wireless Stores/2017-18**

**Date: 28-11-2017**

The Addl. Director General & Inspector General of Police, Telecommunication, West Bengal invites e-Tenders on behalf of Home Department, Government of West Bengal from the bonafide manufacturers/dealers or distributors/traders & Industrial undertaking organization etc. who has tender specific authorization (desirable) for the item in the table below:-

| Sl.No.        | Item   | Quantity  | Technical Specifications |
|---------------|--|---|--------------------------|
| 1             | HF 100W Static Set   | 2   | Refer to Annexure - IV   |
| 2             | HF 25 Watt Manpack Set   | 2   |                          |
| 3             | Auto Antenna Tuner with Omni direction Whip Antenna for Base Station | 2   |                          |
| <b>E.M.D.</b> |  | <b>Rs. 25,000.00 (Rupees Twenty five Thousand) only</b> |                          |

**ELIGIBILITY OF BIDDERS:**

Only Manufacturers/Direct Importers/Dealers having the Tender specific authorization from OEM (Original Equipment Manufacturer) are eligible for participation in the Tender.

- In the event of e-filling, intending bidder may download the Tender documents from the website: <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate. **Earnest money Rs. 25,000.00 (Rupees Twenty five Thousand) only may be remitted through Demand Draft from any Nationalized Bank in favour of Additional Director General & Inspector General of Police, Telecommunication, West Bengal** and should be submitted physically at the Office of the Addl. Director General & Inspector General of Police Telecommunication, West Bengal, 3 Manik Bandyopadhyay Sarani, Tollygung, Kolkata 700 040 under the sealed cover as per Date & Time, mentioned in Clause 11.
- Financial Bid is to be submitted online (both words & figures) concurrently duly digitally signed in the website: <https://wbtenders.gov.in> as per Date & Time schedule stated in Clause 11.
- A tender Bidder, after being accepted by the undersigned authority, shall be liable to supply all the items in question as per the accepted rate, for a period of one year from the date of acceptance, without any hike in the prices, whatever are the circumstantial criteria thereby.
  - Conditional/incomplete bid will not be considered.
  - The Bidder should quote rate for all the items mentioned in the above table considering Clause 10 also, failing which his tender will be treated as incomplete and will be cancelled.
  - Tenderers should have Service Centre / Workshop facility within the City of Kolkata.**
  - Deviation Statement (if any) may also be enclosed.
  - There should be an on site manufacturing guarantee/warranty as per OEM for the item with a mention of specific period.
- The selected contractors shall have to deposit 5% security deposit of the total contract value of the items in favour of the Additional Director General & Inspector General of Police Telecommunication, West Bengal in G P Notes/ Bank Guarantee Bond/F.D.R. of any nationalized bank and to execute an agreement of contract within 3 (three) days from the date of issue of the work order failing which the letter of acceptance, so issued, may be treated as cancelled as well as the earnest money so deposited may be forfeited and the firm may be blacklisted. No interest would be paid on the performance Security Deposit. Payment will be made as and when fund will be available from the concerned source subject to complete supply of articles.
- Orders for the supply of the approved products will be placed with the successful tenderers after the execution of the agreements, and such supply shall have to be made in such installments as may be fixed or spread over the period to be specified in the supply orders to be made in pursuance of the agreements. The successful tenderer will have to supply within the specified time schedule that had been assured at the time of selection as supplier.
- Tender Specific authorization Certificate of OEM (Original Equipment Manufacturer) is desirable.

7. It should be noted that the firm/firms will be selected purely on a "PROVISIONAL BASIS" and the forecast requirement may increase or decrease by any quantity during the period of validity of the tender.

8. Addl. Director General & Inspector General of Police, Telecommunication, West Bengal reserves the right to reject any/or all the tendered rates without assigning any reason and not to place any orders even after selection and is not liable for any cost that might have incurred by any bidder at the stage of bidding and also reserves the right to, divide the contract amongst any number of tenderers, if required so.

Addl. Director General & Inspector General of Police Telecommunication, West Bengal does not bind himself to accept the lowest rate.

9. Selected contractors will have to supply articles according to the indents placed with them from time to time within the specified period as per approved sample and/or the product demonstrated for inspection and evaluation, failing which the firm may be blacklisted with the forfeiture of security deposit. In the event of the non-supply of articles or if articles supplied by the selected contractors) is found to be sub-standard, the Addl. Director General & Inspector General of Police Telecommunication, West Bengal may (without notice to the contractors) purchase from elsewhere the articles required. Any loss incurred by reason of the price paid for such article(s) or any other loss or expense incurred by reason of such default on the part of the contractors may be deducted from the bills or any money payable to the contractors or from the security deposit of the concerned contractor(s). If the performance of the supplied items/equipment are found unsatisfactory or not as to our desired level even after payment, the supplier has to refund the entire amount paid to him earlier for that particular item/equipment.

10. Selected contractor will be bound to install and configure the base stations and arrange a comprehensive training program for the operation and maintenance of both type of sets to the end users at their own cost.

#### **11. DATE & TIME SCHEDULE:**

| <b>Sl. No.</b> | <b>Particulars</b>   | <b>Date &amp; Time</b>         |
|----------------|--|--------------------------------|
| 1              | Date of uploading of NIT Documents (Online)  | 28-11-2017 at 1800 Hours       |
| 2              | Documents download/Sell Start date (Online)  | 28-11-2017 at 1800 Hours       |
| 3              | Date of hoisting of documents at Departmental Website "policewb.gov.in"                | 30-11-2017 at 1800 Hours       |
| 4              | Bid submission start date (Online)   | 28-11-2017 at 1800 Hours       |
| 5              | Bid submission closing date (Online)   | 07-12-2017 at 1800 Hours       |
| 6              | Last date of submission of Earnest Money Deposit and self attested copies of (Offline) | 07-12-2017 at 1400 Hours       |
| 7              | Technical Bid opening (Bid A)  | 08-12-2017 at 1400 Hours       |
| 8              | Demonstration of sample date   | 11-12-2017 from 1100 -1700 hrs |
| 10             | Date of uploading list of technically qualified bidders                                | To be notified later           |
| 11             | Date for opening of Financial Proposal (Bid B) (Online)                                | To be notified later           |
| 12             | Date of uploading list of bidders along with the approved rates                        | To be notified later           |

**12. Bid opening Location:** Office of the Addl. Director General & Inspector General of Police, Telecommunication, West Bengal, 3 Manik Bandyopadhyay Sarani, Tollygung, Kolkata 700 040.

13. Canvassing on the part of tenderers will render his tender to cancellation summarily.

**14. For any clarification and collection/verification of sample regarding Specifications of the Tender, Tenderers are requested to contact with Inspector (Stores), Telecommunication Hqrs., 3 Manik Bandyopadhyay Sarani, Tollygunj, Kolkata 700 040.**

**NB:** Any inconsistencies in the descriptions may be expeditiously brought to the notice of the Tendering authority.

## INSTRUCTIONS TO BIDDERS

### GENERAL GUIDANCE FOR e-TENDERING:

Instructions/ Guidelines for electronic submission of the tenders have been annexed for assisting the contractors to participate in e-Tendering.

#### **I. REGISTRATION OF THE CONTRACTOR:**

Any contractors willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement System, through logging on to <https://wbtenders.gov.in> (the Web Portal of Public Works Department) the contractor is to click on the link for e-Tendering site as given on the web portal.

#### **II. DIGITAL SIGNATURE CERTIFICATE (DSC):**

Each Contractor is required to obtain a Class-II OR Class-III Digital Signature Certificate (DSC) for submission of tenders for the approval service of the National Informatics Centre (NIC) on payment of requisite amount. Details are available at the website stated in Clause-I above DSC is given as a USB e-Token.

**III.** The contractor can search & download N.I.T. & Tender Document(s) electronically from computer once he logs on to the website mentioned in clause-I using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.

#### **IV. SUBMISSION OF TENDERS:**

Tenders are to be submitted through online to the website stated in Clause-I in two folders at a time for each work, one in Technical Bid & the other is Financial Bid before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded virus scanned copy duly Digital Signed. The documents will get encrypted (transformed into non readable formats).

#### **V. PENALTY CLAUSES:**

**PENALTY FOR FORMATION OF CARTEL OR FURNISHING OF FRAUDULENT / MISLEADING DOCUMENTS:** If during the tender process or at any state during the validity of the tender period, it is found that a Tenderer(s) has formed a cartel in what so ever form or name to fix up the rates or suppliers to the detriment of the fairness of the tender process, penal measures shall be initiated. Similar penal measures shall also be initiated against those tenders who have submitted false / misleading / fraudulent documents or made incorrect declarations. The penal measure will be forfeiture of Earnest Money, Forfeiture of Performance Bank Guarantee if enlisted as a supplier.

#### **VI. TECHNICAL PROPOSAL:**

The Technical proposal should contain scanned copies of the following in two covers (folders).

**(a) Statutory Cover containing the following documents:**

- (1) NIT (2) EMD (3) AGREEMENT PAPER (AS ANNEXTURE-III) (4) TECHNICAL SPECIFICATIONS & WARRANTIES AS PER OEM

**(b) Non-statutory Cover containing the following documents:**

THE ABOVE STATED NON-STATUTORY/TECHNICAL DOCUMENTS SHOULD BE ARRANGED IN THE FOLLOWING MANNER:-

Click the check boxes beside the necessary documents in the My Document list and then click the tab "Submit Non Statutory Documents" to send the selected documents to Non-Statutory folder.

Next Click the tab "Click to Encrypt and upload" and then click the "Technical" Folder to upload the Technical Documents.

| SI. No. | Category Name     | Sub-Category Description | Detail(s)   |
|---------|-------------------|--------------------------|---|
| A       | Certificate(s)    | Certificate(s)           | GST Registration, Trade License, Income Tax/PAN, Letter of Authorization/DPL (Dealer Possession License)/ OEM (Original Equipment Manufacturer), Latest P.Tax (Challan).  |
| B       | Company Detail(s) | Company Detail           | Proprietorship Firm (Trade License) Partnership Firm (Partnership Deed, Trade License), Ltd. Company (Incorporation Certificate, Trade License) Society (Society Registration Copy, Trade License) Power of Attorney. |
| C       | Credential        | Credential - 1           | Similar nature of work done & completion certificate, which is applicable for eligibility in this tender.   |
| D       | Returns           | Income Tax               | Last 3 Financial Year's of Income Tax i.e. for 2014-15 2015-16 & 2016-17  |
| SI. No. | Category Name     | Sub-Category Description | Detail(s)   |

**NOTE: BLACK & WHITE SCAN, MULTIPAGE SCAN, DPI MAX 200-300**

**I. FINANCIAL PROPOSAL:**

(a) The contractor is to quote the rate for all the items online through computer in the space marked for quoting rate in the BOQ (Bill of Quantities). *The Quoted Rate should not be higher than printed MRP.*

(b) If any contractor is exempted from payment of EMD, copy of relevant Government Order needs to be furnished.

(c) The financial proposal should contain the following documents in one cover (folder) i.e., BOQ (Bill of Quantities).

(d) Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the contractor. If any tenderer fails to produce the original hard copies of the documents like Completion Certificates and any other documents on demand of the Tender Evaluation Committee within a specified time frame or if any deviation is detected in the hard copies from the uploaded soft copies, it may be treated as submission of false documents by the tenderer and action may be referred to the appropriate authority for prosecution as per relevant IT Act.

**OPENING & EVALUATION OF TENDER:**

1. Opening of Technical Proposal: A Committee comprising of Superintendent of Police, Deputy Superintendent of Police, and a team of Technical officers of Telecommunication West Bengal will open the Technical bid of the Tender.

2. Intending Tenderers may remain present if they so desire.

3. Cover (folder) for Statutory Documents will be opened first and if found in order, cover (folder) for Non-Statutory Documents will be opened. If there is any deficiency in the Statutory Documents the tender will summarily be rejected.

4. Decrypted (transformed into readable formats) documents of the non- statutory cover will be downloaded & handed over to the Tender Evaluation Committee.
5. Summary list of technically qualified tenderers will be uploaded online.
6. Pursuant to scrutiny & decision of the Tender Evaluation Committee the summary list of eligible tenderers & the serial number of work for which their proposal will be considered will be uploaded in the web portals.
7. During evaluation, the committee may summoned of the Tenderers and seek clarification/information or documents or original hard copy of any of the documents already submitted and if these are not produced within the stipulated time frame, their proposals will be liable for rejection.
8. **Bidders should participate for all the 3 (Three) items as mentioned in the table in 1<sup>st</sup> paragraph of this NIT. Financial Evaluation will be done on the combined rates for the total items and L1 will be selected as a summation of Sl. No. 1 to 3 as mentioned in NIT.**

## **II. REJECTION OF BID:**

The Addl. Director General & Inspector General of Police Telecommunication, West Bengal reserves the right to reject any/or all the tendered rates without assigning any reason and not to place any orders even after selection and is not liable for any cost that might have incurred by any bidder at the stage of bidding and also reserves the right to divide the contract amongst any number of Tenderers if required so and to place order for more or less than the quantity mentioned in the forecast requirement. The Director General & Inspector General of Police, Telecommunication, West Bengal does not bind himself to accept the lowest rate.

## **III. AWARD OF CONTRACT:**

The Bidder whose Bid has been accepted will be notified by the Tender Inviting & Accepting Authority through acceptance letter / Letter of Acceptance both online & offline to save time. The notification of award will constitute the formation of the Contract. The Agreement in prescribed format in admissible stamp duties will incorporate all agreements between the Tender Accepting Authority and the successful bidder/bidders. The time frame for attending the fault and restoration of equipment within the warranty period and penalty clause for the defaulters will be included in the agreement. All the tender documents including N.I.T. & B.O.Q. will be the part of the contract documents. After receipt of Letter of Acceptance, the successful bidder shall have to submit requisite copies of contract documents downloading from the website stated in the N.I.T. along with requisite cost through Demand Draft issued from any nationalized bank in favor of Director General & Inspector General of Police Telecommunication, West Bengal for the concerned work within time limit to be set in the letter of acceptance.

***Payment Terms: After receipt and satisfactory testing of the equipment.***

## **IV. VALIDITY PERIOD:**

***The contract period will be up to December, 2018.***

  
Addl. Director General & Inspector General of Police  
Telecommunication, West Bengal

## FORMAT FOR CHECK LIST

| Sl.No. | Items  | Pl mark ✓ |    | Page No. |
|--------|--|-----------|----|----------|
|        |  | Yes       | No |          |
| 1      | Application submitted in Annexure - I  | Yes       | No |          |
| 2      | Annexure - II (Authorization letter of signatory from the Company)   | Yes       | No |          |
| 3      | Annexure - III (Copy of agreement between the manufacturer and the Distributor)  | Yes       | No |          |
| 4      | Copy of PAN Card / GST registration certificate  | Yes       | No |          |
| 5      | Copy of Demand Draft/Pay order as applicable in favour of the Addl. Director General & Inspector General of Police Telecommunication, West Bengal - as Earnest Money | Yes       | No |          |
| 6      | Last 3 financial years' Balance Sheet, i.e., for 2014-15 2015-16 & 2016-17   | Yes       | No |          |
| 7      | Credential for Supply of equipment & completion certificate, to any State Police / CPMF of India   | Yes       | No |          |

## Annexure - I

### APPLICATION FORMAT

(To be furnished in the Company's official letter pad with full Address and Contact No., etc.)

**To: The Addl. Director General & Inspector General of Police  
Telecommunication, West Bengal  
3 Manik Bandyopadhyay Sarani  
Tollygunj, Kolkata 700 040**

Sub: NIT for Wireless Stores at Office of the Addl. Director General, & Inspector General of Police,  
Telecommunication, West Bengal, 3 Manik Bandyopadhyay Sarani, Tollygunj, Kolkata 700 040.

Ref:

Sir,

Having examined the pre-qualification & other documents published in the NIT, I/we hereby submit all the necessary information and relevant documents for evaluation:

1. That the application is made by me / us on behalf of .....  
In the capacity of.....duly authorized to submit the offer. The authorization letter from the Company is attached in Annexure II.
2. We accept the terms and conditions as laid down in the NIT mentioned above and declare that we shall abide by it for throughout the tender period.
3. We are offering rate for all the item /items and assured supply to the West Bengal Police Telecommunication, Government of West Bengal as mentioned in Page-1.
4. (a) We propose that the order and bill should be raised in our name. For liaisoning, we have appointed M/s ..... having its office at ..... (Address, Contact No. and e-mail address) as C&F agent /Liaisoner /Contact person/ ..... Others (strike out whichever is not applicable) as per clause ..... of the NIT  
OR  
(b) We propose that order and bill should be raised in favour of our authorized Distributor. For that purpose, we have appointed M/s ..... having it's office at ..... (Address with contact No. and e-mail Address) as authorized Distributor who will receive order and payment in his name on our behalf.
- (c) The agreement between ourselves and the distributor/C&F/Liaisoner & other documents as prescribed is attached in annexure III .
5. In the event of being selected, supply will be made within the stipulated period excepting the condition which is beyond our control.
6. We understand that:
  - (a) Tender Selection Committee can amend the scope & value of the contract bid under this project.
  - (b) Tender Selection Committee reserves the right to reject any application without assigning any reason.

Date:-

Signature of applicant including title.  
and capacity in which application is made.

Telephone No.:

Mobile No.:

e-Mail Address:

## **Annexure - II**

Authorization letter from Company for authorized signatory.



## **Annexure - III**

Copy of agreement signed between tenderer and the distributor etc.

## Annexure - IV

### Technical Specification

#### HF 25 Watt Manpack Set

| Sl No.             | Specification               | Requirement   |
|--------------------|-----------------------------|---|
| <b>GENERAL :</b>   |                             |   |
| 1                  | Frequency Range             | 2.0 MHz to 29.9999 MHz with 100 Channel Spacing and 10 Hz Resolution. |
| 2                  | Modes                       | SSB(J3E) USB, LSB, AM/(E), CW/MCW, AFSK                               |
| 3                  | Pre-set                     | 200 Channels or more  |
| 4                  | Frequency stability         | ±0.6 PPM or better  |
| 5                  | Built-in-test               | Front panel testing.  |
| 6                  | Input Power                 | +12 V DC Nominal (10.8 V to 14.4 V) & 230 V AC                        |
| 7                  | Weight                      | Less than 6 KG with Battery   |
| 8                  | Antenna Impedance           | 50 Ohm unbalanced   |
| 9                  | Protection                  | (i) Reverse Polarity protection<br>(ii) Protection against high VSWR  |
| 10                 | Roles                       | Manpack   |
| 11                 | Headphone Impedance         | 150 Ohm/300 Ohm/600 Ohm   |
| 12                 | Cooling                     | Convection from case  |
| 13                 | VSWR                        | Better than 1.5   |
| 14                 | Visual Display              | Front panel LCD display   |
| 15                 | Interface                   | RS-232  |
| 16                 | GPS                         | Built-in GPS Receiver & Built-in GPS Antenna                          |
| 17                 | Programming                 | PC programming software and front panel programming                   |
| <b>TRANSMITTER</b> |                             |   |
| 1                  | RF Power                    | 5 W to 25 W PEP (Low, Medium, High) (user programmable)               |
| 2                  | Spurious Emission           | ≤ 40 db below PEP   |
| 3                  | Side Band Suppression       | ≥ 70 db or better   |
| 4                  | Carrier Suppression         | ≥ 40 db or better   |
| 5                  | Inter modulation distortion | 30 db min. below PEP  |
| 6                  | Audio Response              | Within 6 db from 350 Hz to 2700 Hz.                                   |
| 7                  | Side Tone Level             | Better than 0.1 mW into 150 Ohm load for 5 mV of audio input at 1 KHz |
| <b>RECEIVER :</b>  |                             |   |
| 1                  | Receiver Sensitivity        | -111 dbm for 10 db SINAD or better                                    |
| 2                  | Image Rejection :           | ≥ 70 db or better   |

|                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| 3                                   | IF Rejection                        | ≥ 70 db or better  |
| 4                                   | In band Inter modulation Distortion | 35 db min. below PEP   |
| 5                                   | Audio Response                      | Within ±6 db from 350 Hz to 2700 Hz  |
| 6                                   | Audio Output :                      | 1 W across loudspeaker or more   |
| 7                                   | A/F Harmonic Dist :                 | ≤ 25 db or better  |
| <b>ENVIRONMENTAL</b>                |                                     |  |
| 1                                   | Operating Temperature               | -30°C to +55°C   |
| 2                                   | Storage Temperature                 | -30°C to +60°C   |
| 3                                   | Humidity                            | 95% non-condensing (-20°C to +60°C)  |
| <b>FEATURES</b>                     |                                     |  |
| 1                                   | Selective calling                   | Digital FSK coding (4/6 digit select call)                                   |
| 2                                   | Scanning                            | 5 Channels per second or better  |
| 3                                   | ALE (2G/3G)                         | Complying MIL-STD-188-141B   |
| 4                                   | Flash messages                      | Predefined messages  |
| 5                                   | GPS                                 | Inbuilt GPS Receiver & Inbuilt Antenna with polling facility                 |
| 6                                   | RS-232 Control                      | The Radio set should have capability to operate at 4800 baud Rate or better. |
| 7                                   | Tunable receiver                    | Continuous tunable   |
| 8                                   | Radio kill/un-kill                  | Should have kill/un-kill function  |
| 9                                   | Squelch                             | High quality syllabic squelch  |
| 10                                  | Push to talk                        | Suitable Microphone to be provided.  |
| <b>Essential Radio Accessories:</b> |                                     |  |
| 1                                   | Whip Antenna                        |  |
| 2                                   | Long Wire Antenna                   |  |
| 3                                   | OEM Battery 12 V, 13 Ah, NiMH       |  |
| 4                                   | OEM Battery Charger                 |  |
| 5                                   | OEM Handset                         |  |
| 6                                   | Backpacks (Carrying Harness)        |  |
| 7                                   | Service manual complete (Soft Copy) |  |
| 8                                   | System Programmer CD                |  |

## **HF 100W Static Set**

| General: -     |                                     |  |
|----------------|-------------------------------------|--|
| Sl No.         | Specification                       | Requirement  |
| 1.             | Frequency Range                     | 2.0 MHz to 29.999 MHz  |
| 2.             | Mode of Operation                   | SSB(J3E) USB, LSB, AM/(E), CW/MCW, AFSK  |
| 3.             | Pre set Channels                    | 200 or more  |
| 4.             | Frequency Stability                 | +/- 0.6 PPM or better  |
| 5.             | Built-in test                       | Front Panel Testing/BITE   |
| 6.             | Power Input                         | 12VDC (10.8V to 14.4V)   |
| 7              | Power Consumption                   | ≤ 30 W in receive &<br>≤ 450 W in transmit   |
| 9              | Weight                              | Less than 5 KG   |
| 10             | Antenna Impedance                   | 50 Ohm unbalanced  |
| 11             | Protection                          | (i) Reverse Polarity protection (without fuse)<br>(ii) Protection against high VSWR<br>(iii) Over Voltage and under Voltage Protection |
| 12             | Roles                               | Fixed / Mobile   |
| 13             | Headphone Impedance                 | 150 Ohm/300 Ohm/600 Ohm  |
| 14             | Cooling                             | Built in Fan / Heat sink   |
| 15             | VSWR                                | Better than 1.5  |
| 16             | Visual Display                      | Front panel LCD display  |
| 17             | Interface                           | RS-232/USB/Ethernet  |
| 18             | Programming                         | PC programming software, front panel programming, USB  |
| Transmitter: - |                                     |  |
| 1              | RF Power                            | 15 W to 100 W PEP (Low, Medium, High) (user programmable)  |
| 2              | Spurious Emission                   | ≤ 50mW and 40 db and more below PEP  |
| 3              | Side Band Suppression               | ≥ 70 db or better  |
| 4              | Carrier Suppression                 | ≥ 40 db or better  |
| 5              | Inter modulation distortion         | 30 db min. below PEP   |
| 6              | Audio Response                      | Within 6 db from 350 Hz to 2700 Hz.  |
| 7              | Side Tone Level                     | Better than 0.1 mW into 150 Ohm load for 5 mV of audio input at 1 KHz  |
| Receiver: -    |                                     |  |
| 1              | Receiver Sensitivity                | 0.16 micro volt or better at 10 db SINAD   |
| 2              | Image Rejection :                   | ≥ 70 db or better  |
| 3              | IF Rejection                        | ≥ 70 db or better  |
| 4              | In band Inter modulation Distortion | 35 db min. below PEP   |
| 5              | Audio Response                      | Within ±6 db from 350 Hz to 2700 Hz  |
| 6              | Audio Output :                      | 1 W across loudspeaker or more   |
| 7              | Audio Frequency Harmonic Distortion | ≤ 25 db or better  |

| <b>ENVIRONMENTAL</b>               |  |  |
|------------------------------------|--|--|
| 1                                  | Operating Temperature                          | -30°C to +55°C   |
| 2                                  | Storage Temperature                            | -30°C to +60°C   |
| 3                                  | Humidity                                       | 95% non-condensing (-20°C to +60°C)  |
| <b>FEATURES</b>                    |  |  |
| 1                                  | Selective calling                              | Digital FSK coding (4/6 digit select call)                                   |
| 2                                  | Scanning                                       | 5 Channels per second or better  |
| 3                                  | ALE (2G/3G)                                    | Complying MIL-STD-188-141B   |
| 4                                  | Flash messages                                 | Predefined messages  |
| 5                                  | GPS Interface :                                | Inbuilt GPS with polling facility  |
| 6                                  | Data Communication                             | Provision for data communication   |
| 7                                  | Tele Call                                      | The Radio set should have capability to dial and operate data                |
| 8                                  | RS-232 Control                                 | The Radio set should have capability to operate at 4800 baud Rate or better. |
| 9                                  | Tunable receiver                               | Continuous tunable   |
| 10                                 | Radio kill/un-kill                             | Should have kill/un-kill function  |
| 11                                 | Remote Operation                               | Capable to operate from remote location                                      |
| 12                                 | Audio input sockets                            | Mic and Internal socket  |
| 13                                 | Squelch  | High quality syllabic squelch  |
| 14                                 | Push to talk                                   | Suitable Microphone to be provided.  |
| <b>Essential Radio Accessories</b> |  |  |
| 1                                  | 12 V, 30A AC/DC Power Supply                   |  |
| 2                                  | Radio Programming cable & System Programmer CD |  |
| 3                                  | Service Manual (Soft Copy)                     |  |
| 4                                  | User Manual                                    |  |
| 5                                  | GPS Antenna                                    |  |

**Auto Antenna Tuner with Omni direction Whip Antenna for Base Station Specifications**

|  |                             |  |
|--|-----------------------------|--|
| 1  | Power rating                | 150 Watts PEP Voice only   |
| 2  | Power requirement           | 12 V DC nominal (Supplied from the transceiver) or power amplifier 0.9 A nominal |
| 3  | Input Impedance             | 50 Ohm unbalanced  |
| 4  | Operating temperature range | -35°C to +70°C   |
| <b>Vertical Whip Antenna (On Building or Open Ground) Specifications</b> |                             |  |
| 1  | Frequency range             | 2 to 30 MHz Self resonant at 7.5 MHz   |
| 2  | Antenna Length              | 9.5 m  |