

ज्ञापक 171/411213/आपूर्ति

95-1-1-2019

पुलिस महानिदेशक का कार्यालय, बिहार, पटना

पटना, दिनांक-12/01/19

सेवा में,

निदेशक,

सूचना एवं जनसम्पर्क विभाग,

बिहार, पटना।

विषय— अल्पकालीन निविदा आमंत्रण सूचना सं०-35/2018-19 के प्रकाशन के संबंध में।

निदेशानुसार उपर्युक्त विषय के संबंध में अल्पकालीन निविदा आमंत्रण सूचना सं०-35/2018-19 की प्रतियाँ भेजते हुए अनुरोध है कि इसे राज्य एवं राज्य से बाहर के प्रमुख समाचार पत्रों में (अंग्रेजी एवं हिन्दी) के अगले दो संस्करणों में प्रकाशित कराने की कृपा की जाय साथ ही पी०आर०डी० वेबसाईट पर भी प्रसारित करने की कृपा की जाय।

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

अनु०—यथोपरि।

पुलिस महानिरीक्षक के सहायक (क्यू०),  
बिहार, पटना

प्रतिलिपि:—

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

पुलिस महानिरीक्षक के सहायक (क्यू०),  
बिहार, पटना

**Police Headquarters, Bihar, Patna**  
**Notice Inviting Short Tender No.-35/2018-19**

1. Name of the Department: Office of Director General of Police, Bihar, Patna.
2. Last date & time for the acceptance of the short tender : 10/11/2019, Till 02:00 PM
3. Date & time fixed for the opening of the short tender : 10/11/2019, At 04:00 PM
4. Place fixed for receiving & opening the tender : Office of Director General of Police, Bihar, Patna.
5. Details of Job:

S.N.	Item name	Qty.
1	5 Watt Digital VHF Hand Held Set	305
2	25 Watt Digital VHF Set	437
3	25 Watt VHF Repeater Set	15
4	100 Ft. Self Supported Tower	04

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



**AIG (Q)**  
Bihar, Patna

## Terms & Conditions of Short Tender No.-35/2018-19

1. The tender should be submitted in two parts: (i) Technical Bid and (ii) Financial Bid, duly sealed in two separate envelopes super-scribed as "Technical Bid" and "Financial Bid".
2. All relevant papers/ E.M.D./certificates/specifications etc. of items should be enclosed in the Technical Bid.
3. The rates of the items shall be quoted in the Financial Bid only.
4. All charges like IGST/CGST/SGST etc. shall be clearly mentioned in the Financial Bid and the net rate (in figures and words) including all taxes and duties must also be quoted. Vague offers like indicating taxes "as applicable" will not be accepted.
5. The rates of the items shall be quoted in the Financial Bid in two parts :  
(i) With AMC (Annual Maintenance Contract) and (ii) Without AMC
6. There should be no cutting, over writing or correction on the rates.
7. The technical and financial bids for each item should be submitted separately in separate envelopes. The technical and financial bids for more than one items submitted together in the same envelope shall not be accepted.
8. If the financial bid is submitted in the same envelope containing the technical bid then also it shall be summarily rejected.
9. The technical and financial bids should be put in two separate sealed envelopes and the envelopes should be marked Short Tender No-35/2018-19 (Technical Bid) and Short Tender No-35/2018-19 (Financial Bid) along with the name and address of the firm. The sealed envelopes containing the technical and the financial bids should be sent in another sealed envelope which should be marked as Short Tender No-35/2018-19. This envelope should not bear the name and address of the firm.
10. Income Tax Returns of last three years, a photocopy of GST registration number of the participating firm and turn-over of any two of the previous three financial years should be submitted with the technical bid. It should be specifically mentioned whether IT return has been filed manually or electronically.
11. The turnover of the firm for the last reported financial year should be at least equal to the amount of the supply order which is being issued. A copy of the profit and loss Account of the firm for any two of the previous three financial years, certified by a Chartered Accountant should be submitted along with the tender. If the tenderer is authorized dealer or authorized supplier of manufacturing firm, then the certified details of the turnover of authorizing firm may be accepted. Tender specific authorization from the OEM must be submitted, but in certain cases where authorization from OEM is not required, the Technical-cum-User committee (T.U.C.) shall decide about exemption (if any) on a case-by-case basis; citing appropriate reasons for the same.
12. If there is some discount in the price of any item, it should be deducted from price itself and such discounts should not be quoted separately.
13. If the product is available on DGS & D rate contract, then a copy of the contract must be attached and pricing be done including all taxes.
14. A copy of the test report for the product issued by any established and recognized private Laboratory or by agency accredited by the Government should be attached with the technical bid. However if required, the Technical-cum-User committee (T.U.C.) can take decision regarding exemptions/relaxations (if any), citing appropriate reasons.
15. In case of Bullet Proof/Bullet Resistant items, test report of TBRL or any Government Approved/Recognized Laboratory is compulsory.

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

  
**A I G (Q)**  
**Bihar, Police.**

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**Technical specification of 25 Watt Programmable VHF Two Way Digital static / Mobile Radio set**

SL. No.	Particular	Specification
<b>A</b>	<b>GENERAL</b>	
1.	Frequency Range	136-174 MHz (split or full band)
2.	Channel Capacity	255 or higher (for display)
3.	Protocol	TDMA (02 slot)
4.	Channel Spacing	12.5 Khz or better
5.	Frequency stability	±1.5 PPM or better
6.	Weight	Less than 2 kg
7.	Operating Voltage	10.8 to 15.6 volt DC with reverse polarity.
8.	Antenna Impedance	50 ohm
9.	Communication interface	Ethernet/USB/RS232 and Bluetooth
10.	Display	Multifunction alpha numeric with back light.
11.	Warranty	Standard warranty is for 2 years
12.	Capability	With all types of analog radio.
<b>B</b>	<b>TRANSMETER</b>	
1.	RF Power output	25 watt programmable
2.	Type of Emission	Analog: 11 KOF3E Digital: as per digital standard for voice data.
3.	Digital modulation	4FSK
4.	Modulation Limiting	±2.5 KHz
5.	Audio Response	+1, -3db. As per TIA 603D
6.	FM Hum noise	-40 dB or better
7.	Adjacent channel power	-60 dB or better
8.	Digital Voice Recorder	AMBE+2
<b>C</b>	<b>RECEIVER</b>	
1.	Sensitivity	Analog : 0,3μV (12dB SINAD) or better Digital: 0,μV@5% BER or better
2.	Adjacent Channel selectivity	60 dB or better
3.	Inter-modulation	70dB or better
4.	Audio output	Minimum 3 watt with built in speaker
5.	Audio distortion	3% or better
<b>D</b>	<b>ENVIRONMENTAL SPECIFICATION</b>	
1.	Operating temperature range	-30°C to 55°C
2.	Storage temperature	-30°C to +60°C
3.	Humidity	95% non condensing (-20°C to +60°C)
4.	Applicable MIL standards	MIL standard 81 C/D/E/F/G
5.	Applicable IP standards	IP 54/IP 57/IP 67

FEATURES		
1.	Mode of operations	Analog conventional, digital conventional, simple press to talk
2.	GPS capacity	<ul style="list-style-type: none"> <li>• In put GPS with TTFF (Hot start &lt;20 sec or better)</li> <li>• Time to first fix(TTFF) cold start:</li> <li>• Horizontal accuracy &lt;10 meter or better.</li> <li>• GPS data access method (a) by polling (b) by fetching (on request) (c) Vendor</li> </ul> <p>Should mention-coordinate file format compatible with free map. Google map will be preferred. Necessary hardware, software shall be provided for making radios "GPS Enabled" and for receiving and extracting GPS data/info. For the use of location tracking purpose.</p>
3.	Status message and SMS text message facility	<ul style="list-style-type: none"> <li>• Staus message facility</li> <li>• Short and Long data message facility</li> <li>• Messaging facility using PC one to one or many</li> <li>• Necessary hardware shall be provided to interfacing PC.</li> </ul>
4.	Protection	Reverse Polarity protection, protection against high VSWR
5.	Radio Programming Facility	PC programmable using USB, Programming cable and also without programming cable through Bluetooth.
6.	Hand set with key pad	DTMF keypad with backlight
7.	Signal strength indicator	RSSI-Received signal strength indicator or digital read out.
8.	OTAR	Should have provision for over the air frequency re-programming and other parameters
9.	Integrated Bluetooth	Should be supplied with integarated Bluetooth for shaing data wireless, radio configuration for Programing and supports the voice hands free operations.
10.	Networking	Should be IP based for automatic roaming etc. and radio should support Muti multi repeater trunking.
11.	Repeater Access Control	Radio should have capability of programming access key to prevent unauthorized access of Repeaters.
<b>F</b>	<b>OTHER FEATURES</b>	
1.	Alpha numeric list of 256 users for sending SMS	

	& for selective calling	
2.	Alpha numeric channel alias	
3.	Alpha numeric PTT ID alias	
4.	Facility to assign Network access code, CTCSS/DCS	
5.	Channel scan & priority channel scan	
6.	Call alert	
7.	Talk around lock	
8.	Transmitter Tone Out Timer (TOT) operation	
9.	Emergency call (SOS)	
10.	Selective call, group call	
11.	Late entry	
12.	Busy channel lock out	
13.	Capable to kill – unkill disable-enable remotely	
14.	External accessible accessory connector (for connecting programming kit. Repeater interface, data interface etc.)	
15	Vendor shall mention other manufacturer's models of the radios which are inter operable for voice & data communication to the system offered.	
<b>G</b>	<b>ACCESSORIES AND MANUALS</b>	
1.	Type of Antenna	3dB Whip Antenna with suitable connector. 30 meter co-axial cable and mounting bracket of stainless steel with reflector.
2.	Operating Manual	Hard copy, one for each radio.
3.	Mounting Kit	Mounting Kit.
4.	Hand set (Mic)	DTMF handset with clip.
5.	Battery cable	Length 3 meter with suitable fuse.
6.	Training	Necessary technical training regarding <ul style="list-style-type: none"> <li>• Configuration of the repeater</li> <li>• System planning and operation</li> <li>• Repairing and maintenance</li> <li>• Technical manual book</li> </ul>

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		for repairing view. Training shall be given to 15 technical persons per project for two week.
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**Note :** Firm must demonstrate their quoted product before the purchase committee communication with quoted model must be established with the existing digital 5 watt & 25 watt VHF set in the Bihar Police Radio.

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 Insp. (Tech) conf.  
 B. P. Radio, Patna.

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**Technical specification of 5 watt VHF Digital Hand Held Radio Sets.**

SL. No.	Particular	Required Specification
<b>A</b>	<b>GENERAL</b>	
1.	Frequency Range	136-174 MHz (split or full band)
2.	Channel Capacity	255 or higher (for display)
3.	Protocol	TDMA (02 slot)
4.	Channel Spacing	12.5 KHz or better
5.	Frequency stability	±1.5 PPM or better
6.	Weight	Light in weight preferable including accessories.
7.	Battery Capacity	Li-ion rechargeable smart/ with recording battery of 2250 mAH or better of original OEM. Battery should support over the air the battery management. Vendor shall mention DC voltage during capacity test, battery shall give 100% of its rated capacity if discharged by C/5.
8.	Antenna Impedance	50 ohm
9.	Communication interface	Ethernet/USB/RS232 and Bluetooth
10.	Display	Multifunction alphanumeric with back light.
11.	Warranty	Standard warranty is for 2 years
12.	Capability	With all types of analog radio.
<b>B</b>	<b>TRANSMETER</b>	
1.	RF Power output	1 and 05 watt programmable
2.	Type of Emission	Analog: 11 KOF3E Digital: as per digital standard for voice data.
3.	Digital modulation	4FSK
4.	Modulation Limiting	±2.5 KHz
5.	Audio Response	+1, -3db. As per TIA 603D
6.	FM Hum noise	-40 dB or better
7.	Adjacent channel power	-60 dB or better
8.	Digital Vocader	AMBE+2
<b>C</b>	<b>RECEIVER</b>	
1.	Sensitivity	Analog : 0.3µV (12dB SINAD) or better Digital: 0.3µV@5% BER or better
2.	Adjacent Channel selectivity	60 dB or better
3.	Inter-modulation	70dB or better
4.	Audio output	Minimum 500 mw with built in speaker

5.	Audio distortion	3% or better
6.	EMI / EMC	Tec GR no. TEC/EMI/TEL-001/01/01/Feb.09
<b>D</b>	<b>ENVIRONMENTAL SPECIFICATION</b>	
1.	Operating temperature range	-30°C to 55°C
2.	Storage temperature	-30°C to +60°C
3.	Humidity	MIL-STD
4.	Applicable standards MIL	MIL standard 81 C/D/E/F/G
5.	Applicable standards IP	IP 54/IP 57/IP 67
<b>E</b>	<b>FEATURES</b>	
1.	Mode of operations	Analog conventional, digital conventional, simple press to talk
2.	GPS capacity	<ul style="list-style-type: none"> <li>• In put GPS with TTFF (Hot start &lt;20 sec or better)</li> <li>• Time to first fix(TTFF) cold start:</li> <li>• Horizontal accuracy &lt;10 meter or better.</li> <li>• GPS data access method (a) by polling (b) by fetching (on request)</li> </ul> <p>© Vendor</p> <p>Should mention-coordinate file format compatible with free map. Google map will be preferred. Necessary hardware, software shall be provided for making radios "GPS Enabled" and for receiving and extracting GPS data/info. For the use of location tracking purpose.</p>
3.	Status message and SMS text message facility	<ul style="list-style-type: none"> <li>• Staus message facility</li> <li>• Short and Long data message facility</li> <li>• Messaging facility using PC one to one or many</li> </ul> <p>Necessary hardware shall be provided to interfacing PC.</p>
4.	Protection	protection against high VSWR
5.	Radio Programming Facility	PC programmable using USB, Programming cable and also without programming cable through Bluetooth.
6.	Front panel key pad	DTMF keypad with backlight
7.	Battery strength indicator	Battery strength bar indicator or digital readout, alert for low battery.
8.	Signal strength indicator	RSSI-Received signal strength indicator or digital read out.
9.	OTAR	Should have provision for over the air frequency re-programming and other parameters
10.	Integrated Bluetooth	Should be supplied with integratored Bluetooth for shaing data wireless, radio configuration for Programming and supports the voice hands free operations.

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11.	Networking	Should be IP based for automatic roaming etc. and radio should support Muti multi repeater trunking.
12.	Repeater Access Control	Radio should have capability of programming access key to prevent unauthorized access of Repeaters.

**F OTHER FEATURES**

1.	Simple press to talk
2.	Alpha numeric list of 256 users for sending SMS & for selective calling
3.	Alpha numeric channel alias
4.	Alpha numeric PTT ID alias
5.	Facility for locking the channel or keypad
6.	Facility to assign Network access code, CTCSS/DCS
7.	Channel scan & priority channel scan
8.	Call alert
9.	Talk around lock
10.	Transmitter Time Out Timer (TOT) operation
11.	Emergency call facility (SOS)
12.	Selective call, group call
13.	Late entry
14.	Busy channel lock out
15.	Capable to kill – unkill disable-enable remotely
16.	Any one of 2 tone / 5 tone / DTMF signaling
17.	Test message & pre defined messages.
18.	Automatic number identification
19.	Vendor shall mention other manufacturer's models of the radios which are inter operable for voice & data communication to the system offered.
20.	Capable of hand free operations.

**G ACCESSORIES AND MANUALS**

1.	Type of Antenna	Rugged flexible helical Antenna for the specified frequency Band.
2.	Battery	<ul style="list-style-type: none"> <li>• Vendor shall mention DC voltage</li> <li>• Average battery life for 5/5/90 duty cycle.</li> </ul> Digital: 16 hours or more. Analog: 13 hours or more Hand Held should be supplied
3.	Rapid Charger	<ul style="list-style-type: none"> <li>• Single unit, desktop type rapid battery charger.</li> </ul> Charging Time 2 to 4 hours.
4.	Belt clip with proper Lock	1. Belt clip with proper Lock 2. If the clip is provided on battery, it shall be provided for both the batteries.
5.	Carrying case	Suitable carrying case shall be provided.
6.	Operating Manual / Technical Manual	1. Hard copy, one for each hand held radio. 2. TX and RX measurement test adopter. <i>(One set for each 20 HX set)</i>

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7.	Training	Necessary technical training regarding <ul style="list-style-type: none"> <li>• Configuration of the mobile set</li> </ul> Operation, Repairing and maintenance. The training shall be given to 15 technical persons per project for two week.
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Note : Firm must demonstrate their quoted product before the purchase committee communication with quoted model must be established with the existing digital 5 watt & 25 watt VHF set in the Bihar Police Radio.

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*H. S. Singh*  
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Asst. (Tech) Cont.

*Prasad*  
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Asst. (Tech) Cont.

*Gopal Singh*  
18/01/19  
Asst. (Tech) Cont.

*Prasad*  
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(K. B. Prasad)  
Asst. (Tech) Cont.  
B. P. Radio, Patna

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**Technical Specification of 25/50 watt VHF synthesized Digital Repeater Sets.**

SL NO	Particular	Required Specification
<b>A</b>	<b>GENERAL</b>	
1.	Frequency Range	136-174MHZ(split or full band)
2.	Indication	Separate LED indication of TX and RX
3.	Protocol	TDMA (2 slots)
4.	Channel Spacing	12.5 KHz or better
5.	Channel capacity	16 or more
6.	Frequency stability	± 1PPM or better
7.	Operating voltage	10.8 to 15.6 volt DC with reverse polarity
8.	Antenna Impedance	50 Ohms
9.	Communication interface	Ethernet with USB/RS 232 and blue tooth
10.	Display	Multifunctional with back light/ LED light
11.	Warranty	2 years
12.	Copability	With analog radio
<b>B</b>	<b>TRANSMITTER</b>	
1.	RF Power output	25 to 50 watt
2.	Type of Emission	Analog: 1KOF3E Digital : as per digital standard for voice data
3.	Digital modulation	4FSK
4.	Modulation Limiting	± 2.5 KHz
5.	Audio Response	+1, -3db, as per TIA 603D
6.	FM Hum noise	-40dB or better
7.	Adjacent channel power	60 dB or better
8.	Digital Vocoder	AMBE+2
<b>C</b>	<b>RECEIVER</b>	
1.	Sensitivity	Analog : 0,3μV (12dB SINAD) or better Digital: 0.μV@5% BER or better
2.	Adjacent Channel selectivity	60 dB or better
3.	Inter-modulation	70dB or better
4.	Audio output	Minimum 3 watt with internal / external speaker
5.	Audio distortion	3% or better
<b>D</b>	<b>ENVIRONMENTAL SPECIFICATION</b>	
1.	Operating temperature range	-30°C to 55°C
2.	Storage temperature	-30°C to +60°C
3.	Humidity	95% non condensing (-20°C to +60°C)
4.	Applicable MIL standards	MIL standard 81 C/D/E/F/G

5.	Applicable IP standards	IP 54/IP 57/IP 67
<b>E FEATURES</b>		
1.	Mode of operations	Analog conventional, digital conventional, simple press to talk
2.	IP compatibility	Repeater supplied should be provided with IP licenses and should support Multi Site repeater Trunking Mode Operations.
3.	Duplexer	Should be supplied with repeater required frequency 130 MHz to 174 MHz with all accessories.
4.	Repeater Access control	Repeater should be capable of accessing code validation of subscribers and repeater should have facility to deny access of black list subscriber ID's range to prevent unauthorised access.
<b>F ACCESSORIES &amp; MANUAL</b>		
1.	Battery cable	Battery cable having 3 meter length with suitable fuse.
2.	Duplexer	Duplexer having <ul style="list-style-type: none"> <li>• Rx-Tx separation 5 MHz minimum</li> <li>• Insertion loss <math>\leq</math> 1.2 dB and</li> <li>• Rx Isolation at TX freq better than 70 dB</li> <li>• Port impedance 50 ohms</li> </ul>
3.	Antenna and Feeder cable	<ul style="list-style-type: none"> <li>• 6dB GP antenna with suitable fitting clamps.</li> <li>• 30 meter RF Coaxial cable RG 217 with suitable connectors.</li> </ul>
4.	Power supply (in case of not in built main power supply provider)	<ul style="list-style-type: none"> <li>• Power supply cum battery charger</li> <li>• In put 230 V AC +/- 10%, 50 Hz</li> <li>• DC output 13.8V/30 Amps</li> </ul>
5.	Cabinet	<ul style="list-style-type: none"> <li>• Rack mounting as well as desktop compatible.</li> <li>• Suitable rack shall be provided.</li> </ul>
6.	Installation	1. Installation and commissioning of the repeater sites.
7.	Operating Manual	Hard copy one for each repeater with technical manual.
8.	Training	<p>Necessary technical training regarding</p> <ul style="list-style-type: none"> <li>• Configuration of the repeater</li> <li>• System planning and operation</li> <li>• Repairing and maintenance</li> </ul> <p>Training of operation &amp; repairs must be provided by the firm at Patna.</p>

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SL NO.	Particular	SPECIFICATION
1.	GPS Tracking	Dispatcher can able to track the live N/W Radio
2.	Voice Recorder	Dispatcher should be able to record the live radio voice converter
3.	Kill/Stun/Revive radios	Dispatcher should be able to Enable or Disable the radios within the RF Network remotely.
4.	Type of call	All types of voice calls support, i.e. individual call group call, broadcast call and emergency call
5.	Text messaging	Dispatcher should be capable of sending messages to radios with in RF Coverage.
6.	Remote monitoring	Dispatcher should be capable of Ambiance Listing
7.	Map Support	Should support Open Sources.

**Note:** Firm must install the Repeater set at the places given by the department and establish the communication with existing digital wireless VHF Network.

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WIRELESS  
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## TECHNICAL SPECIFICATION OF 100 FEET SELF SUPPORTED TOWER

Tender Specification		
SL NO.		
1	Height	100 feet from base
2	Type	Self supported.
3	Dimensions	(a) Base- 11 feet SQR (b) Top- 2 feet SQR
4	Wind velocity	165 KM per hour
5	Ladder	From outside base to top with one feet wide steps.
6	Platform	One 4' x 4' at every internal & last one 2 below the top.
7.	Materials	Mild steel / Galvanized.
8.	Size of Angle	75 x 75 x 6 mm 65 x 65 x 6 mm 50 x 50 x 6 mm 40 x 40 x 6 mm 35 x 35 x 5 mm ½ inch iron rod 50 x 50 x 6 mm Patti and Nuts, Bolts etc.
9	Earthing	5 ft deep and 1 ½ ft SQR earth plate with salt and charcoal and bare copper, size 8 SW/G tight with Earth plate to Tower leg.
10	Aviation Lamp	On the top of the Tower wiring from Tower mains with 3/20 PVC double core copper conductor wire.
11	Lightning arrestor	6 KVA on the top of the Tower (3 ft height).
12.	Foundation	Complete aeration and installation on RCC foundation base 5 ½ deep 3' x 3' bottom, 2' x 2' top for every leg and above the ground.
13.	Provision	Arrangement for installation of VHF/UHF/Micro Link antenna should be provided.
14.	Finish	Two coat red / white paint super enameled painting over one coat primer.
15.	Other	Other clarification (if so desired) may be obtained from the office.

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