



प्रसार भारती/ PRASAR BHARATI

भारत का लोक सेवा प्रसारक/ INDIA'S NATIONAL PUBLIC SERVICE BROADCASTER  
आकाशवाणी महानिदेशालय/DIRECTORATE GENERAL: ALL INDIA RADIO  
पोषणा और विकास एकक आकाशवाणी भवन, संसद मार्ग, नई दिल्ली-110001  
P & D UNIT, AKASHVANI BHAWAN, SANSAD MARG, NEW DELHI-110001  
[क्रय अनुभाग/PURCHASE SECTION]

No. 01(53)11/NIT-36/2020-D(P)/E/ 2.196

Dated: 13.07.2020

### Notice Inviting e-Tender No.36/2020

E-tenders are invited for and on behalf of Director General, All India Radio under two bid systems for Supply/SITC/SETC of the following Equipments from firms registered with GeM/NSIC and from reputed Indian manufacturers/authorized agents and stockiest dealing with the equipments as detailed below:

Sl. No.	Tender Ref. no.	Description of Stores	Qty.	Estimated Cost of work/ Procurement (Rs. in Lakh)	EMD (Rs. in Lakh)	Tender Submission Date/Time (online)	Tender Opening Date/Time (Online)
1	No.12(51)01/6Bay/2020/D(P)/669-D(P-S) Cell/E	Supply of 6 Bay Circularly Polarized Side Mount (Pole type) VHF FM Antenna with Omni-Directional/ Directional Patterns.	(12) Places	232.26	4.65	02.09.2020 (02:30 PM)	02.09.2020 (03:00 PM)
2	No. 12(54)01/2Bay/2020/ D(P)/671-D(P-S) Cell/E	Supply of 2-Bay Vertically Polarized Side Mount VHF FM Antenna	(100) Places	163.29	3.27	09.09.2020 (02:30 PM)	09.09.2020 (03:00 PM)

#### NOTE:

- The bid forms, General Instructions to Bidders and other details including amendments/ changes can be viewed/ downloaded from the website <http://prasarbharati.eproc.in>.
- Tender notice is also available on the Prasar Bharati website [www.prasarbharati.gov.in](http://www.prasarbharati.gov.in) (using the link: Tender) and CPP PORTAL on website <http://eprocure.gov.in>.

*हृदेश कुमार*  
13/7/20

(हृदेश कुमार/ Hirdesh Kumar)

निदेशक (अभि.)/ Director (Engg.)

कृते महानिदेशक आकाशवाणी/ for Director General: All India Radio

E-mail: [depurchase@prasarbharati.gov.in](mailto:depurchase@prasarbharati.gov.in)

Tele :-011-2342 1040





प्रसार भारती/ PRASAR BHARATI  
भारत का लोक सेवा प्रसारक/ INDIA'S NATIONAL PUBLIC SERVICE BROADCASTER  
आकाशवाणी महाविभाग/DIRECTORATE GENERAL: ALL INDIA RADIO  
योजना और विकास एकक आकाशवाणी भवन, संसद मार्ग, नई दिल्ली-110001  
P & D UNIT, AKASHVANI BHAWAN, SANASD MARG, NEW DELHI-110001  
[कम वस्तुभाग/PURCHASE SECTION]

No. 01(53)11/NIT-36/2020-D(P)E/ 2197

Dated: 13.07.2020

**Notice inviting e-Tenders No. 36/2020**

**A. GENERAL INSTRUCTIONS TO BIDDERS:**

1. The tenders under this NIT are only for Indian bidders as per Amendment in General Financial Rules, 2017 - Global Tender Enquiry issued by Ministry of Finance Department of Expenditure Letter F. No. 12/17/2019-PPD dated 15.05.2020.
2. The scope of work for stores to be tendered are available in the complete bid documents which can be viewed / downloaded free of cost from Prasar Bharati portal [www.prasarbharati.gov.in](http://www.prasarbharati.gov.in) or e-tender portal of AIR <http://prasarbharati.eproc.in>, or CPP Portal <http://eprocure.gov.in>.
3. Both Technical Bid and Financial Bid will be submitted concurrently duly digitally signed in the website <http://prasarbharati.eproc.in>.
4. It is highly recommended that the bidders should not wait till last date of bid submission to avoid complications like internet connectivity issue, network problems, system crash down, power failure, browser compatibility issue, system compatibility issue, improper digital signature certificate problem etc. In view of this context, neither Prasar Bharati nor C1 India Pvt. Ltd. will be responsible for such eventualities. No claim shall be entertained on account above. Bidders are advised to upload their bids well in advance to avoid last minute technical snags.
5. All Corrigendum/Amendment/Corrections, if any, will be published on the Portal <http://prasarbharati.eproc.in>.
6. All documents / papers uploaded / submitted by the bidder must be legible.
7. It is mandatory for all the bidders to have Class-III Digital Signature Certificate with both DSC Components i.e. Signing & Encryption (in the name of person who will sign the bid document) from any of the licensed Certifying Agency under CCA, Ministry of Electronics and Information Technology, Government of India to participate in e-tendering portal of Prasar Bharati. Bidders can see the list of licensed CAs from the link [www.cca.gov.in](http://www.cca.gov.in), C1 India Pvt. Ltd. also facilitate Class III Digital Signature Certificate.
8. To participate in the e-tendering submission, it is mandatory for the applicants to get registered their firm/joint venture with the Prasar Bharati e-tendering portal <http://prasarbharati.eproc.in> to have user ID & Password by submitting a non-refundable Annual registration charges for vendor/supplier are given in table below through online mode (net banking/ debit card/ credit card). Validity of registration is 1 year.

No. 01(53)11/NIT-36/2020-D(P)E

Dated: 13.07.2020

*Signature*  
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13/7/20



9. To participate in e-bid, bidders have to pay e-Tender Processing fee (non-refundable) per tender per bid through online mode (net banking/ debit card/ credit card) as per following table-

Estimated Value of the Tender	Processing Fees per Tender per Bidder
Less than or Equal to Rs.10 Lakhs	Rs. 475.00 + 18% GST
More than 10 Lakhs But Less than or Equals to 50 Lakhs	Rs. 925.00 + 18% GST
More than 50 Lakh	Rs. 1150.00 + 18% GST
Annual Charges for Online Bidder/ Vender for the Registration	Rs. 450.00 + 18% GST

- a. Bid document contains certain conditions for Manual submission of tender and are now redundant. Document shall be deemed to have been modified to that extent.
  - b. Paying Authority will be respective Pay & Accounts office of the Zonal Office.
10. The bidder may modify or withdraw their bid after submission prior to the Bid Due date. No bid shall be modified or withdrawn by bidder after the bid due date and time.
  11. Both 'EMD' and 'Tender Document Fee', if any, are mentioned in individual tender document published at Prasar Bharati e-Tendering Portal(<https://prasarbharati.eproc.in>).
  12. For helpdesk, please contact e-tendering cell and Help Desk Support Monday to Friday Ph: 0124-4302033/36/37, [prasarbharatisupport@c1india.com](mailto:prasarbharatisupport@c1india.com).
  13. Page No. shall be given on each and every paper/documents serially uploaded in the technical bid.
  14. Bidders shall ensure to quote rate of each items. If any cell is left blank and no rate is quoted by the bidders, the rate of such item shall be treated as "0" (Zero).
  15. The bid security (EMD) may be accepted in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks or payment online in an acceptable form. The Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks may be in favour of **PB, BCI, DG: AIR, New Delhi** with the validity for a period of forty-five days beyond the final bid validity period.
  16. 'EMD deposit' shall be placed in a single sealed envelope superscripted with tender reference no. and date of opening so as to reach Assistant Engineer in Room No.326/346, P&D Unit, Akashvani Bhawan, DG: AIR, New Delhi before scheduled time on prescribed tender opening date. EMD received late shall be summarily rejected. Hard copy of any other tender document shall not be accepted.
  17. Performance Security may be accepted in the form of an Account Payee Demand Draft, Fixed Deposit Receipt from a Commercial bank, Bank Guarantee from a Commercial bank or online payment in an acceptable form. The Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks may be in favour of

*Signature*  
13/7/20



PB, BCI, DG: AIR, New Delhi with the validity for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations.

Estimated Value of the Contract/Tender (X)	Amount of Bid Security	Amount of Performance Security
X is less than or equal to Rs. 10 crore	2%	5%
X is greater than Rs. 10 Crore and less than or equal to Rs. 15 Crore	3%	7%
X is greater than Rs. 15 Crore and less than or equal to Rs. 20 Crore	4%	8%
X is greater than Rs. 20 Crore	5%	10%

18. The successful tenderers will be required to furnish Security Deposit as per above table within 30 days of placement of contract.
19. Tenderers may ask any clarification, if required, before the date stipulated in the details of tender items for the purpose. After that no request will be entertained.
20. Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department or Start-ups as recognised by Department of Industrial Policy & Promotion (DIPP) for the items required in NIT shall be exempted from payment in respect of cost of Earnest Money as per the Government instructions on the subject on submission of documentary evidence of valid Registration. Policy is meant for procurement of only goods produced and services rendered by MSEs. However, traders are excluded from the purview of Public Procurement Policy.
21. The purchaser reserves the option to give Purchase preference to the offer from Public Sector Units and/or from Small Scale Cottage Industries Units over those from other firms, in accordance with policies of the Government of India from time to time.
22. Tenderers shall separately indicate the rate and amount of GST/IGST etc. as applicable on the date of tendering in their offer failing which the offer will be summarily rejected.
23. Tenderers have to submit GST Registration Certificate while uploading the tender.
24. Tenderers shall separately indicate the HSN/SAC code, rate and amount of GST/IGST as applicable on the date of tendering in their offer, failing which the offer will be summarily rejected.
25. IGST and Compensation Cess (wherever applicable) will be levied on imports.
26. Public Procurement (Preference to Make in India) Order No. P-45021/2/2017-B.E-II dated 15.06.2017 of Government of India, Ministry of Commerce and Industry, Department of Industrial Policy and Promotion shall be applicable.
27. Terms Conditions given in specification will supersede for conflict with any terms and condition given in AIR Tender Document.
28. In Repeat Order Clause 6.9, page-10 and Clause 22, page-52 of AIR Tender Document, 50% may be read as follows-
  - (i) Variation of Quantities at the Time of award: At the time of awarding the contract, the quantity to be procured must be re-judged based on the current

*Signature*  
13/7/20



data, since the ground situation may have very well changed. The tendered quantity can be increased or decreased by 25 (Twenty-Five) per cent for ordering, if so warranted.

- (ii) Option clause: In case of long running, yearly procurements, to take care of any change in the requirement during the currency of the contract, a plus/minus option clause (normally 25 (Twenty-Five) per cent) is incorporated in the tender document, reserving purchaser's right to increase or decrease the quantity of the required goods up to that limit without any change in the terms and conditions and prices quoted by the tenderers.

**B. LIST OF MANDATORY DOCUMENTS** (to be uploaded with tender):

1. Copy of EMD.
2. AIR Tender Document duly filled and signed on each page along with all Annexures and amendment.
3. AIR Technical Specifications duly signed on each page.
4. Integrity Pact (for estimated contract value of Rs. Two Crores or more) duly filled and signed.
5. Letter of authority to sign and upload bid documents.
6. Original Equipment's Manufacturer's (OEM) Authorization for Equipment quoted.
7. Past performance along with the user certificate in respect of Supply/ SITC/SETC of the Equipment quoted.



हिरदेश  
13/7/20

(हिरदेश कुमार/ Hirdesh Kumar)

निदेशक (अभि.)/ Director (Engg.)

कृते महानिदेशक आकाशवाणी/for DG: AIR

E-mail: depurchase@prasarbharati.gov.in

Tele :-011-23421040

**PRASAR BHARATI**  
(India's Public service Broadcaster)  
**DIRECTORATE GENERAL: ALL INDIA RADIO**  
(PLANNING & DEVELOPMENT UNIT)

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**SPECIFICATION FOR SUPPLY OF 2-BAY VERTICALLY POLARIZED SIDE MOUNT VHF FM  
ANTENNA-100 Places**

**SUMMARY OF CONTENTS:**

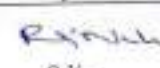
S. No.	Description	Page No.
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**A. ESSENTIAL REQUIREMENT FOR TENDER:**

- (i) The tenderer should submit Schedule of Requirements/Materials of Supply (un-priced) *in the same format as given in Section-4.0 (A&B)* of AIR Specifications in the technical bid, failing which the tender shall be considered incomplete and is liable to be rejected.  
(ii) It is also mandatory to mention *Make & Model of the offered equipment* in the Schedule of Requirements/Materials of Supply, failing which the tender shall be considered incomplete and is liable to be rejected.
- Each statement of this specification has to be complied with & supported by printed technical literature, technical data sheets, schematic drawings and technical manuals from the manufacturer of the equipment by the tenderer, to assess the merit of the offer without which the tender will be considered incomplete and is liable to be rejected.
- The tenderer should submit the tender offer to All India Radio in the format given below, section wise & clause wise, in respect of all the sections of technical specifications. The OEM/tenderer must provide the page number reference, in column (4) of the table given below, of the Technical bid clearly indicating the volume number also, if any, for each supporting document to verify the parametric values shown in the technical specifications compliance statement, to assess the full merit of the offer, failing which tender shall be considered incomplete and is liable to be rejected.

  
Sd/-  
Manzoor Ali, ADE

  
Sd/-  
Sanjeev Pandey, DE

  
Sd/-  
Rajendra Nahar, DE


  
Sd/-  
S. Hyder, DDG (E)




## Specification No. Antenna (2 Bay)/1/April/2020-D (TD/FM)-Rev.1

S. No. of AIR Specifications (Section wise & Clause wise) (1)	Details of AIR Specifications (Part/ Section wise & Clause wise) (2)	Compliance (Yes/No) (3)	The page No. of the tender offer, where the information/ supporting document is available. (4)	Remarks (5)
A. Essential requirement for tender				
B. Essential eligibility criteria for tenderers				
Section-1.0 Clause wise				
Section-2.0 Clause wise				
Section-3.0 Clause wise				
Section-4.0 (A&B) Clause wise				

- The tenderer should also quote the rate/cost of individual items in the tender offer while submitting the offer for spares (**OPTIONAL**) in commercial bid.
- The tenderer should submit the complete technical specifications (Section wise & Clause wise) compliance statement along with Schedule of Requirements/Materials (un-priced) duly signed & stamped by the respective Original Equipment Manufacturer (OEM) in the tender document. In case tender offer is from other than the Original Equipment Manufacturer, the tenderer must also sign & stamp the complete technical specifications compliance statement (Section wise & Clause wise), failing which the tender offer shall be considered incomplete and is liable to be rejected. The OEM & tenderer should mention their name in CAPITAL LETTERS & designation of the signatories, full address with pin code, phone number, fax number, e-mail addresses etc.
- All the volumes of the entire technical bid must be page numbered.
- The authorization and guarantee must be given by respective Original Equipment Manufacturer (OEM) on their letter head pad duly signed & stamped. In case tender offer is from other than the Original Equipment Manufacturer, the tenderer must also give guarantee on their letter head pad duly signed & stamped, failing which the tender shall be considered incomplete and is liable to be rejected without any notice/back reference. Guarantee shall be as per the format given in clause 1.7 of Section-1.0.
- In case tender offer is from other than the Original Equipment Manufacturer, the tenderer should also furnish a certificate from the OEM that the tenderer can quote items of the OEM directly, failing which the tender shall be considered incomplete and is liable to be rejected without any notice/back reference.
- Any change in the AIR technical specifications format or language or in parameters or of any other nature including the deletion of technical specifications clause, words, lines in the technical specifications compliance statement by the OEM/ tenderer will not be acceptable to AIR and the tender is liable to be rejected.

  
Sd/-  
Manzoor Ali, ADE

  
Sd/-  
Sanjeev Pandey, DE

  
Sd/-  
Rajendra Nahar, DE

  
Sd/-  
S. Hyder, DDG (E)

10. Prasar Bharati will follow the reciprocal market access strategy of the Government of India, which describes on the Clause 10(d) of Public Procurement Preference to Make in India, Order 2017. The Purchaser shall have right for not consider any Bid and may restrict such Bidders from the bidding process; who originate from those countries, where they do not allow market access for Indian companies; in such cases, the Clause 10 (d) of Public Procurement Preference to Make in India, order 2017, shall be invoked wherever applicable, when it is relevant.
11. Amendment in General Financial Rules (GFRs), 2017-Global Tender Enquiry issued vide F. No. 12/17/2019-PPD dated 15.05.2020 of Government of India, Ministry of Finance, Department of Expenditure, Public Procurement Division shall be applicable.

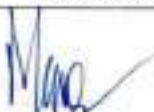
*12. Optional items will not be considered for ranking purpose.*

**B. ESSENTIAL ELIGIBILITY CRITERIA FOR TENDERERS:**

- (a) **The tenderer shall be from India only.**
- (b) The tenderer should either be the OEM of VHF FM Antenna or their authorized representative/dealer.
- (c) (i) The OEM of the VHF FM Antenna must have an experience of manufacturing and supplying 4-Bay (or higher type)/8 Panel (or higher type) of VHF FM Antenna for at least last 5 years. Documentary evidence to support this must be provided.
- (ii) The OEM should have supplied VHF FM Antenna to reputed/public broadcasters. The OEM must provide the details of past supply record **(in the format given below)** for at least 50 Nos. of 4-Bay (or higher type)/8 Panel (or higher type) of VHF FM antenna, supplied during last 3 years ending last day of the month previous to the one in which the tender is invited.

Supply Order No. with date, reference	VHF FM antenna Type & Model	Qty. supplied	Name of the broadcaster with full postal address including e-mail address to whom VHF FM antenna was supplied.	Remarks
(1)	(2)	(3)	(4)	(5)

- (iii) All India Radio reserves the right to get performance feedback of the VHF FM antenna from any of the above broadcasters named by the tenderer/OEM.
- (iv) Copies of Supply orders/completion certificate/invoice of at least 20 Nos., out of the 50 Nos. of VHF FM antenna submitted by the tenderer in above format, are also to be enclosed by the tenderer.
- (d) In case tenderer is the authorized representative/dealer i.e. other than OEM, the tenderer must be an authorized representative/dealer of any OEM of VHF FM antenna/TV antenna for last three years or more OR the tenderer must be in the business of sales and supply of VHF FM antenna/TV antenna for last three years or more. Documentary evidence to support this must be provided.
- (e) The OEM of the offered VHF FM antenna must have his local office/authorized representative/dealer in India for after sales support. **A certificate as per Annexure-I** duly signed by the OEM as well as local office/authorized representative/dealer must be submitted with the offer. Copy of Agreement/MoU executed between OEM and their local representative/authorized representative/dealer duly signed by both must be submitted with the offer.



Sd/-  
Manzoor Ali, ADE



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Sanjeev Pandey, DE



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S. Hyder, DDG (E)



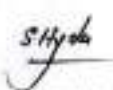
**SECTION - 1.0****GENERAL SPECIFICATIONS:**

- 1.0** 2-Bay Vertically Polarized Side Mount VHF FM Antenna as per AIR specification shall be used round the clock for continuous operation without any interruption in VHF FM broadcast service at AIR station.
- 1.1** Please refer tender documents for general terms and conditions of contract for supply including all the commercial aspects like; Packing and packing list, Insurance and Marine Risk etc. Payment terms, Penalty/Compensation for delay, Damages and liabilities, Time Period and Extension for Delay, Foreclosure of contract due to Abandonment or Reduction in scope of supply, Cancellation of contract in full or part, Recovery of security deposit, Performance Guarantee, Unsatisfactory workmanship, Damages incurred during transit, tenderer liable for damages, Defects, Recovery of compensation, Ensuring payment and amenities, tenderer to indemnify Government against Patent Rights, Release of security deposit, Safety Code, insurance from manufacturer's works/factory to respective site etc. **i.e. in totality.**
- 1.2 INSPECTION:**
- 2-Bay Vertically Polarized Side Mount VHF FM Antenna will be accepted on the basis of OEM's test certificates (as per AIR specifications) duly stamped and signed by respective OEM on their letterhead, failing which test certificates will be considered incomplete and equipment offered by the firm is liable to be rejected.
  - The complete Acceptance Test Procedure/Protocol (ATP) will be prepared by the respective OEM of the equipment/items as per Section-4.0 (A&B) and submitted to DDG (E-FM), P&D Unit, DG: AIR for approval within 15 days of issue of Acceptance of Tender. The **approved ATP** shall form the basis for OEM test certificate of actual performance measurements/inspection to be carried out by OEM. AIR has the right to include other technical parameters in ATP submitted by OEM within the ambit of specification of the product offered.
- 1.3 INFORMATION/DOCUMENTS TO BE SUPPLIED WITH THE TENDER OFFER:**
- The complete technical specifications (Section wise & Clause wise) compliance statement alongwith Schedule of Requirements/Materials (un-priced) duly signed & stamped by the respective Original Equipment Manufacturer (OEM) and countersigned by the tenderer as per the format given above in **clause A (3).**
  - Complete printed technical literature/technical data sheet/schematic drawings/detailed information including Technical Manual of 2-Bay Vertically Polarized Side Mount VHF FM Antenna from the respective Original Equipment Manufacturer (OEM) in support of compliance statement should be furnished, to assess the full merit of the offer, without which the tender offer will be considered incomplete and is liable for rejection.
  - Detailed Schedule of Requirements/Materials (un-priced) for the supply of 2-Bay Vertically Polarized Side Mount VHF FM Antenna should be in conformity with Section-4.0 (A&B) without any change in the format, failing which, the tender will be considered incomplete and is liable for rejection. The tenderer must quote all items.
  - Descriptive information and complete details of each equipment offered shall be given by the tenderer.
  - Country of Origin, Make, Type & Model of all the offered items should be mentioned including the name & address of their vendors.

  
Sd/-  
Manzoor Ali, ADE

  
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Sanjeev Pandey, DE

  
Sd/-  
Rajendra Nahar, DE

  
Sd/-  
S. Hyder, DDG (E)

**1.4 INFORMATION TO BE SUPPLIED BY THE TENDERER WITHIN 15 DAYS AFTER ISSUE OF ACCEPTANCE OF TENDER:**

One set of Technical Manuals (for Installation, Testing, Commissioning, Operation & Maintenance including theory of operation, circuit description and fault diagnosis) **COLOUR** printed and duly bound for 2-Bay Vertically Polarized Side Mount VHF FM Antenna alongwith soft copy on pen drive must be supplied to "DDG (E-FM), P & D Unit, DG: AIR, New Delhi-110001".

**1.5 INFORMATION TO PRECEDE DESPATCH OF EQUIPMENT:**

Following information should be supplied to the DDG (E-FM), P & D Unit, DG: AIR and each of the consignee prior to dispatch of Equipment:

- Detailed list of equipment under dispatch.
- Photograph showing location of various units/sub units with item numbers marked thereon.

**1.6 INFORMATION/DOCUMENTS TO BE SUPPLIED ALONGWITH EQUIPMENT:**

Technical manuals (for Installation, Testing, Commissioning, Operation & Maintenance including theory of operation, circuit description and fault diagnosis) for 2-Bay Vertically Polarized Side Mount VHF FM Antenna shall be supplied as per details given below:

- For each consignee: One set of hard copy colour printed and duly bound alongwith one soft copy on pen drive.
- For the following offices/officers: One set of hard copy colour printed and duly bound alongwith one soft copy on pen drive for each offices/officers  
Zonal Office Project Wing (NZ, SZ, WZ, EZ), Zonal Office Maintenance Wing (NZ, SZ, WZ, EZ), R&D, NABM (T), DDG(E-FM), DDG(E-TM), Technical Library P&D Unit

**1.7 GUARANTEE:**

The tenderer shall submit with his tender an undertaking to accept the following guarantees:

*[This Guarantee clause is applicable to all the equipments/items mentioned in Schedule of Requirements/Materials in Section-4.0 (A&B)].*

- A guarantee that the equipment supplied will be in accordance with these specifications, varied only to the extent stated in his tender and agreed to in the contract.
- A guarantee to make good within 15 days (from the date of first intimation to OEM/tenderer) at tenderer's expense any component which becomes defective under normal operating conditions for 60 months from the date of supply. If the tenderer failed to rectify the fault within the stipulated period of 15 days, the guarantee period would be extended corresponding to the outage period.
- A guarantee to supply all components for a period of ten years from the date of supply, at rates at which these are being supplied by the firm to other customers and also should match prices of original manufactures of these components prevailing at that time.
- If at any stage during next 10 years, the manufacturer stops production of this model of VHF FM Antenna, the firm shall intimate All India Radio in advance to enable the latter to stock the critical items.



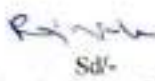
Sd/-

Manzoor Ali, ADE



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Sanjeev Pandey, DE



Sd/-

Rajendra Nahar, DE



Sd/-

S. Hyder, DDG (E)



## Specification No. Antenna (2 Bay)/1/April/2020-D (TD/FM)-Rev.1

**1.8 LANGUAGE/UNITS:**

All information supplied by the tenderer & all markings, notes, designation on the drawings & associated write-ups shall be in "English language" only.

All dimensions, units on drawings, all references to weights, measures & quantities shall be in SI Units.

**1.9 DELIVERY PERIOD OF EQUIPMENT:**

Supply will have to be completed within **four months** from the date of Acceptance of Tender or **Three months** from the date of the Decision Letter from WPC(wherever is required) in respect of RF equipment, provided by AIR, whichever is later.

**1.10 PACKING AND PACKING LISTS:**

All the equipment should be securely and properly packed to withstand transit hazards. Equipment packing shall be fit for sea freight and incorporate adequate protection against ingress of moisture. Packing slips giving details of the items contained in each package shall be placed inside the package in a water proof envelop to enable easy identification and should contain cross references to item/part numbers of installation drawings/components lists. Copies of packing slips and other details should be sent separately to respective consignee and also to the Dy. Director General (E-FM), P & D Unit, DG: AIR, New Delhi.

**1.11 INSURANCE AND MARINE RISKS ETC:**

Please refer to commercial terms.

**1.12 MAINTENANCE SUPPORT AND SPARES:**

- (a) The minimum recommended essential spares shall be quoted separately by the tenderer.
- (b) The minimum recommended essential spares may be based on predicted rate of failure.
- (c) In case, the tenderer quotes the optional items as 'a Set', the details of the components/items offered in the 'Set' must be spelt out clearly including their Make & Model and quantity.


**1.13 ESSENTIAL REQUIREMENT FOR LOCAL OFFICE/AUTHORIZED REPRESENTATIVE/ DEALER IN INDIA:**

- (a) The OEM should have complete setup for maintenance/repair of the offered equipments/items in India, either of its own or through local office/authorized representative/dealer.
- (b) The local office/authorized representative/dealer will be the nodal point for resolving issues related to after sales support. It is the responsibility of local office/authorized representative/dealer to arrange the repair/replacement of faulty items. Any module of the offered equipments/ items requiring repairs will be repaired at site. If it is not feasible to repair the module at site, the same will be collected from the site by local office/authorized representative/dealer that will arrange repairs locally. The cost of transportation, repairs etc. shall be borne by the tenderer during the guarantee period.
- (c) After sales support for the repairs/maintenance of offered equipments after the completion of guarantee period, shall also be provided by the respective OEM of the offered equipments/ items through their local office/authorized representative/dealer in India.

  
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- (d) The details of technical facilities available with local office/authorized representative/dealer for after sales support such as test bench, necessary test & measuring equipment and photographs thereof, must be provided in the technical bid.
- (e) AIR representatives may visit the works of local authorized representative/dealer of OEM in India to ensure/verify that adequate technical infrastructure is available for after sales service for timely resolving the issues related to attending/replacing the equipments. Tenders from the tenderers who failed to meet these criteria shall be considered incomplete and is liable to be rejected without any notice/back reference.

## **SECTION-2.0**

### **TECHNICAL SPECIFICATIONS:**

#### **2.0 ANTENNA SYSTEM**

**2.1** The 2-Bay Vertically Polarized Side Mount VHF FM Antenna along with antenna clamp suitable for mounting on class C G.I pipe of size 50 NB, shall be supplied with each set for 100 places.

**2.2** The Antenna will be mounted on the Guyed Mast/Self Supporting tower of AIR.

**2.3** Following documents shall be supplied along with the Tender:

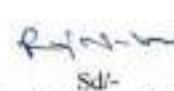
- VSWR curve for complete Frequency range i.e. 88 MHz-108 MHz.
- Horizontal Radiation Pattern.
- Vertical Radiation Pattern.

**2.4** Brief Specifications of Antenna to be supplied are given below;

S. No.	Parameters	Specifications
2.4.1	Operating Frequency Range	88 MHz -108 MHz
2.4.2	Nominal Impedance	50 $\Omega$ unbalanced
2.4.3	VSWR	Better than 1.2 : 1 over 5 MHz from 100 MHz to 105 MHz and to be optimized to 1.1 : 1 for operating frequency (to be intimated later at the time of placement of order)
2.4.4	Power Handling Capacity (Total)	$\geq$ 500 Watts
2.4.5	Polarization	Vertical
2.4.6	Gain w.r.t. Half Wave Dipole	$\geq$ 4.5 dBd
2.4.7	Lightning Protection	All metal parts to be DC grounded.
2.4.8	Input Connector of main power divider(splitter) of antenna system	7/16 DIN Female connector suitable for connecting 7/8" RF Coaxial foam dielectric cable fitted with 7/16 DIN Male connector.

  
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2.4.9	Output Connectors of main power divider (Splitter) of antenna system	7/16 DIN connector
2.4.10	Branch feeder cables and Clamps for mounting Dipoles	Suitable Branch feeder cable fitted with 7/16 DIN connector at both ends and Clamps to be supplied with the Antenna.
2.4.11	Input Connector of dipoles	7/16 DIN connector
2.4.12	Maximum Wind Speed	198 km/Hour
2.4.13	Ambient Temperature	-5°C to 55 °C
2.4.14	Humidity	95% non-condensing
2.4.15	Rainfall	Moderate to heavy

**2.5 Inter-bay feeding/Feed System:** Full details of Feeding arrangement and the engineering drawings with dimensions along-with the details of inter-connecting RF coaxial foam dielectric cables/rigid lines etc. to be submitted with the tender. The entire feeding system should be adequately protected against heavy rainfall, extreme daily temperature variance.  
*All technical parameters are to be supported by printed technical literature, technical data sheets & technical manuals from the OEM by the tenderer to assess the merit of the offer, failing which the tender shall be considered incomplete and is liable to be rejected. The tenderer should make a detailed offer.*

**2.6 External material:** Exterior of dipoles will be made of stainless steel or Marine Brass. Power Dividers & Rigid feed lines will be made of Marine Brass or Copper. All electrical contacts must be silver plated. Clamps shall be constructed of stainless steel. All fasteners will be of Stainless Steel or High Tensile non corrosive material.

**2.7 Internal material:** Inner lines of Dipoles will be of copper or Brass. All electrical contacts will be silver plated. All inners and bullets will be made of Beryllium copper and silver plated. Insulators will be made of virgin Teflon.

**2.8** All joints to be made completely air tight & water tight.

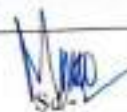
**SECTION-3.0****INSPECTION:**


2-Bay Vertically Polarized Side Mount VHF FM Antenna will be accepted on the basis of OEM's test certificate of actual performance measurements as per AIR specification before dispatch to All India Radio and receipt of equipments/items at site in good condition.

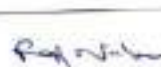
The Original Equipment Manufacturer's (OEM) test certificates shall be duly signed & stamped on the letter head of the OEM, failing which Original Equipment Manufacturer's (OEM) test certificates will be considered incomplete and equipment offered by the tenderer is liable to be rejected.

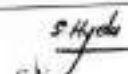
Following information should also form part of OEM test certificate for each VHF FM antenna.

1. Make, Type, Model and Country of Origin of the accessories and spares.
2. Measurements of all parameters as per Section 2.0 of Technical Specification.

  
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**SECTION-4.0 (A)****SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) [FOR ONE SET OF 2-BAY VERTICALLY POLARIZED SIDE MOUNT VHF FM ANTENNA]**

S. No.	Description	Make	Model	Qty.
1.	Supply of 2-Bay Vertically Polarized Side Mount VHF FM Antenna system including power divider, branch feeder cables, connectors, clamps for mounting dipoles etc., alongwith technical manuals per AIR specification.			1 Set Complete
2.	Any other accessories offered for the completeness of the system. <b>State NA, if not Applicable</b>			1 Lot

**SECTION-4.0 (B)****SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) [FOR ONE SET OF 2-BAY VERTICALLY POLARIZED SIDE MOUNT VHF FM ANTENNA SYSTEM] (OPTIONAL)**

(Not to be considered for Ranking)

{The tenderer must quote all items}

S. No.	Description	Make	Model	Qty.
1.	7/16" DIN Connector (Male)			1 No.
2.	7/16" DIN Connector (Female)			1 No.



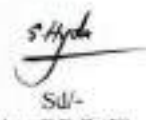
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Rajendra Nahar, DE



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**ANNEXURE-I****PERFORMA FOR INFORMATION ABOUT LOCAL OFFICE/AUTHORIZED REPRESENTATIVE/DEALER FOR AFTER SALES SUPPORT IN INDIA**

1.	Address of Local Office/authorized representative/dealer in India	
	Telephone (Landline) No.	
	Mobile No.	
	E-mail Address	
2.	Address for communication (if different)	
3.	Legal Status: (Local Office/Authorized Representative/Dealer)	
4.	Name, Mobile number, e-mail ID & address of the concerned persons of (Local Office/Authorized Representative/Dealer) in India	
5.	Brief details of Technical facilities available for after sales support:  (The details of technical facilities in the local after sales support office, such as test bench, necessary test & measuring equipment and photographs thereof, must be provided in the technical bid).	
6.	Main line of business, specialization and number of years of operation	
7.	Total number of permanent technical employees including their designation and qualification	
8.	Details of Agreement/MoU for after sales support with OEM (Copy must be provided with the offer)	Date of Agreement:  Executed at :  Executed by :
(Authorized Signatory of Local Office/Authorized Representative/Dealer)		(Authorized Signatory of Antenna OEM)
Name :		Name :
Signature :		Signature :
Place & Date		Place & Date

  
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## ANNEXURE-II

**List of Places for supply of 2-Bay Vertically Polarized Side Mount VHF FM Antenna system under 12<sup>th</sup> Plan**

S. No.	Name of Place	State	S. No.	Name of Place	State	S. No.	Name of Place	State
1	Alagadda	Andhra Pradesh	38	Diskit	Ladakh	75	Bhadre	Rajasthan
2	Diphu	Assam	39	Nyoma	Ladakh	76	Bhilwara	Rajasthan
3	Bunka	Bihar	40	Khalsi	Ladakh	77	Bhinmal	Rajasthan
4	Begusarai	Bihar	41	Badwani	MP	78	Dungarpur	Rajasthan
5	Sikandra (Jamui)	Bihar	42	Burhanapur	MP	79	Hanumangarh	Rajasthan
6	Buxar	Bihar	43	Damoh	MP	80	Jalore	Rajasthan
7	Jamui	Bihar	44	Kukdeswar	MP	81	Karapur	Rajasthan
8	Lakhisarai	Bihar	45	Kurwai	MP	82	Khajuwala	Rajasthan
9	Navada	Bihar	46	Murwara(katni)	MP	83	Pali	Rajasthan
10	Sheikhpura	Bihar	47	Nagada	MP	84	Phalodi	Rajasthan
11	Katihar	Bihar	48	Narsinghpur	MP	85	Pratapgarh	Rajasthan
12	Rajaharajharan dili (Balod)	Chhattisgarh	49	Panna	MP	86	Sujargarh	Rajasthan
13	Narayanpur	Chhattisgarh	50	Piparia	MP	87	Davarkonda	Telangana
14	Bailadilla	Chhattisgarh	51	Seoni	MP	88	Nalgonda	Telangana
15	Amreli	Gujarat	52	Shajapur	MP	89	Ramagunda	Telangana
16	Botad	Gujarat	53	Shyampur	MP	90	Sirpur(Kumaram Bheem)	Telangana
17	Kevadia Colony (Narmada)	Gujarat	54	Achalpur	Maharashtra	91	Uttarkashi	Uttarakhand
18	Khambalia	Gujarat	55	Aheri (Gadchiroli)	Maharashtra	92	Karwi (Chitrakoot)	UP
19	Modasa	Gujarat	56	Hingoli	Maharashtra	93	Auraya	UP
20	Dahod	Gujarat	57	Nandurbar	Maharashtra	94	Deoria	UP
21	Radhanpur	Gujarat	58	Satana	Maharashtra	95	Fatehpur	UP
22	Rapur	Gujarat	59	Shirdi	Maharashtra	96	Lalitpur	UP
23	Surendra Nagar	Gujarat	60	Sironch (Gadchiroli)	Maharashtra	97	Naugarh (Sidharthnagar)	UP
24	Tharad	Gujarat	61	Washim	Maharashtra	98	Car Nicobar	A&N
25	Valsad	Gujarat	62	Nangstoin	Meghalaya	99	Havelock	A&N
26	Veraval	Gujarat	63	Williamnagar	Meghalaya	100	Alipurduar	West Bengal
27	Bhiwani	Haryana	64	Tuesang	Nagaland			
28	Jind	Haryana	65	Mon	Nagaland			
29	Godda	Jharkhand	66	Koraput	Odisha			
30	Lohardaga	Jharkhand	67	Bargarh	Odisha			
31	Barharwa	Jharkhand	68	Kendrapara	Odisha			
32	Bagalkot	Karnataka	69	Malkangiri	Odisha			
33	Bidar	Karnataka	70	Nabarangpur	Odisha			
34	Kolar	Karnataka	71	Phulbani	Odisha			
35	Renebenur	Karnataka	72	Mohana	Odisha			
36	Kayamkulam	Kerala	73	Suratgarh	Rajasthan			
37	Pathanamthitta	Kerala	74	Baran	Rajasthan			

**Note: The site locations mentioned above are tentative and the same may be changed later on by AIR Directorate.**

  
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Sanjeev Pandey, DE

  
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Rajendra Nahar, DE

  
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