

Prasar Bharati  
(India's Public Service Broadcaster)  
Directorate General: All India Radio  
P & D Unit, Akashvani Bhawan, Sansad Marg, New Delhi-110001  
[FM Design Section]

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**File No-** Specification-FM Mod Monitor-9/4/2023-D(TD/FM)

**Dated** 11.05.2023

**Subject:-** Specification for supply of FM mono and stereo modulation monitor including RF amplifier (standalone unit)-regarding Industry feedback & budgetary quotes.


DG: AIR is planning for procurement of FM mono and stereo modulation monitor for use anywhere in India in FM transmitter setup, on open tender basis. Draft technical specification is enclosed herewith for reference.

In this regard, the Prospective bidders from India are requested to give their industry feedback (if any) on the above referred draft Specifications up to **25.05.2023**. To get an estimated cost, the Prospective bidders from India are also requested to give their budgetary quote for the above referred subject up to **25.05.2023**.

Industry feedback (if any) and budgetary quote may be sent to this Directorate at the following e-mail addresses. Prospective bidders are also requested to give feedback regarding availability of local content and percentage of local content.

murugan\_k@prasarbharati.gov.in  
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Encl: As above.

  
(Santosh Kumar Mishra)  
Assistant Director (Engg.)  
For Director General

To:

1. Prasar Bharati web-site
2. The Prospective Bidders
3. DDG (E-Purchase), P&D Unit, DG: AIR, New Delhi

  
For Director General

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

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**SPECIFICATION FOR SUPPLY OF FM MONO AND STEREO MODULATION MONITOR INCLUDING RF AMPLIFIER (STANDALONE UNIT)**

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**A. ESSENTIAL REQUIREMENTS FOR THE TENDER:**

- (i) The tenderer should submit Schedule of Requirements/Materials of Supply **without *price in the same format as given in Section-4.0 (I & II)*** 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.

(iii) Make/Model and detailed specifications of the equipments/items being offered shall be mentioned categorically, to access the full merit of the offer, failing which tender shall be considered incomplete and is liable to be rejected.  
**Broader terms viz. Equivalent/similar will not be accepted.**
- Each statement of this specifications 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 full merit of the offer without which tender will be considered incomplete and is liable to be rejected.
- The tenderer should submit the tender offer to AIR 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 compliance statement, to assess the full merit of the offer, failing which the tender shall be considered incomplete and is liable to be rejected.

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S. K. Mishra (ADE)

O. N. Pradhan (DDE)

K. Murugan (DDG)

## 866687/2023/Tx Design Division - P&amp;D Unit

AIR Specification No. Monitor/19/ April /2023-D (TD/FM)

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 Clause wise				
Section-2 Clause wise				
Section-3 Clause wise				
Section-4 Clause wise				

4. The tenderer should quote the rate/cost of individual items in the tender offer while submitting the tender offer for spares **(OPTIONAL)** in commercial bid. ***Optional items will not be considered for ranking purpose.***
5. The complete technical specifications (Section wise & Clause wise) compliance statements along with Schedule of Requirements/Materials (un-priced) must be signed & stamped by the respective Original Equipment Manufacturer (OEM) in the tender document, failing which the tender shall be considered incomplete and is liable to be rejected. In case tender offer is from other than the Original Equipment Manufacturer, the tenderer must also sign & stamp the complete Technical specifications (Section wise & Clause wise) compliance statements, failing which the tender shall be considered incomplete and is liable to be rejected. The OEM & tenderer should mention their name & designation of the signatories with full address, phone number, e-mail addresses etc.
6. 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. Guarantee shall be as per the format given in AIR specification.
7. 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.
8. Any change in the AIR technical specifications format or language or in parameters or of any other nature including the deletion/addition 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.
9. 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.
10. Amendment in General Financial Rules (GFRs), 2017-Golobal 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.

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

- a. The tenderer shall be from India only.
- b. The tenderer should either be the OEM of FM Mono and Stereo Modulation Monitor or their authorized representative/dealer.
- c. In case the tenderer is the authorized representative / dealer, the tenderer must be an authorized representative / dealer of any OEM of Modulation Monitor for last three years or more **OR** must be in the business of sales and supply of Modulation Monitor for last three years or more. Documentary evidence to support this must be provided.
- d. (i) The OEM of the FM Mono and Stereo Modulation Monitor must have an experience of manufacturing and supplying FM Mono and Stereo Modulation Monitor for at least last **5 years**. Documentary evidence to support this must be provided.
- (ii) The OEM should have supplied FM Mono and Stereo Modulation Monitor to reputed/public broadcasters. The OEM must provide the details of past supply record (**in the format given below**) for at least 20 Nos. of such offered FM Mono and Stereo Modulation Monitor, supplied during last **5 years** ending last day of the month previous to the one in which the tender is invited.

Supply Order No. with date	Type & Model of the supplied FM Mono and Stereo Modulation Monitor	Qty.	Name of the broadcaster with full postal address including e-mail address to whom FM Mono and Stereo Modulation Monitor was supplied.	Remarks
(1)	(2)	(3)	(4)	(5)

- (iii) All India Radio reserves the right to get performance feedback of the FM Mono and Stereo Modulation Monitor from any of the above broadcasters named by the tenderer/OEM.
- (iv) Copies of supply order/completion certificates/delivery challans/invoice of at least 10 Nos., out of the 20 Nos. of FM Mono and Stereo Modulation Monitor submitted by the tenderer in above format, are also to be enclosed by the tenderer.
- e. The OEM of the offered FM Mono and Stereo Modulation Monitor 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 OEMs and their authorized representative/dealer duly signed by both must also be submitted with the offer.

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SECTION-1.0**GENERAL SPECIFICATIONS:**

**1.0** FM Mono and Stereo Modulation Monitor including RF Amplifier equipment as per AIR specification shall be used for round the clock for continuous operation without any interruption in VHF FM broadcast service at AIR station for FM transmitter/studio setup. The offered equipment/items as per specification shall be field proven for satisfactory operation

**1.1** Please refer tender documents for general term 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:**

1.2.1 Detailed Pre-dispatch Inspection (PDI) of FM Mono and Stereo Modulation Monitor will be carried out at OEM's Works by **two Engineers** of All India Radio as per details given in Section-3.0.

1.2.2 Call for Pre-dispatch Inspection (PDI) is to be given by the tenderer to All India Radio at least **8 weeks** in advance. Inspection period shall be based on one working day for three FM Mono and Stereo Modulation Monitor. Testing/measurements as per approved ATP must be submitted to All India Radio along with the call for PDI for analyzing etc.

1.2.3 For AIR inspecting engineers, expenses toward to and fro air journey, boarding, lodging etc. will be borne by All India Radio.

1.2.4 The complete Acceptance Test Procedure/Protocol (ATP) will be prepared by the OEM of the FM Mono and Stereo Modulation Monitor and submitted to DDG (E-FM), P&D Unit, DG: AIR for approval within 15 days of issue of Acceptance of Tender. ATP will also indicate full details of setup for measuring/testing equipments to be deployed during the performance measurements/inspection. The **approved ATP** shall form the basis for performance measurements/inspection to be carried out. 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 DOCUMENT/INFORMATION TO BE SUPPLIED WITH THE TENDER:**

(i) 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), to assess the full merit of the offer, **without which the tender offer will be considered incomplete and is liable for rejection.**

(ii) Complete printed technical literature/data sheet/schematic drawings/detailed information including technical manual of FM Mono and Stereo Modulation Monitor and associated equipments/items as per Section-4.0 (I&II) from the Original Equipment Manufacturer (OEM) in support of compliance statement should be furnished for all the items of the tender, to assess the full merit of the offer, **without which the tender offer will be considered incomplete and is liable for rejection.**

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- (iii) Detailed Schedule of Requirements/Materials (un-priced) for supply of FM Mono and Stereo Modulation Monitor should be in conformity with Section-4.0 (I&II) 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.
- (iv) Descriptive information and complete details of each equipment offered shall be given by the tenderer.
- (v) Country of Origin, Make, Type & Model of all the offered items should be mentioned including the name & address of their vendors.
- (vi) A copy of the Technical Manual must be enclosed with technical bid for assessing the complete FM Mono and Stereo Modulation Monitor including RF Amplifier. The Technical Manual must include at least the details given below:
  - (a) General description of the offered FM Mono and Stereo Modulation Monitor including RF Amplifier, block diagram/schematic drawings etc.
  - (b) Diagrams showing the isometric view of FM Mono and Stereo Modulation Monitor including RF Amplifier equipment with dimensions in metres.
  - (c) Installation Manual & drawings with dimensions in respect of offered equipment.
  - (d) The procedure of settings FM Mono and Stereo Modulation Monitor including RF Amplifier should be described in detail with practical examples.
  - (e) Photograph of the FM Mono and Stereo Modulation Monitor including RF Amplifier showing Front, Rear, Side & Top view.
  - (f) **All Do's and Don'ts which are essential for safe Installation, Operation & Maintenance of the FM Mono and Stereo Modulation Monitor including RF Amplifier.**

#### 1.4 DOCUMENTS/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 & Servicing, including theory of operation and fault diagnosis) **COLOUR** printed and duly bound for FM Mono and Stereo Modulation Monitor along with soft copy on pen drive must be supplied to “DDG(E-FM), P & D Unit, DG: AIR, New Delhi-110001” **for examination & approval.**

#### 1.5 INFORMATION TO PRECEDE DISPATCH OF EQUIPMENT:

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

- a) Detailed list of equipment under dispatch.

#### 1.6 INFORMATION TO BE SUPPLIED ALONGWITH EQUIPMENT:

Technical manuals (for Installation, testing, commissioning, Operation, Maintenance & Servicing, including theory of operation and fault diagnosis) **COLOUR** printed and duly bound for FM Modulation Monitor and inspection report with soft copy on pen drive shall be supplied as per details given below: -

- (i) For each Consignee- 2 Sets of technical manual in hard copies printed and duly bound alongwith one soft copy on pen drive.
- (ii) For the following Offices/Officers- One set of technical manual in hard copy printed and duly bound alongwith one soft copy on pen drive for each offices/officers:  
DDG(E-FM), DDG(E-TM), Zonal Office (Maintenance Wing of NZ, SZ, EZ, WZ & NEZ), Zonal Office (Project Wing of NZ, SZ, EZ, WZ & NEZ), Technical Library(P&D Unit), R&D & NABM (T).

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**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 (un-priced)}.*

- (i) 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.
- (ii) 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 **36 months** from the **date of supply at Sites / Places**. If the tenderer failed to rectify the fault within the stipulated period of 15 days, the guarantee period for that particular location (site) would be extended corresponding to the outage period.
- (iii) A guarantee to supply all components for a period of ten years from the date of acceptance of Equipment at site, at rates at which these are being supplied by him to other customers and also should match prices of original manufactures of these components prevailing at that time.
- (iv) If at any stage during next 10 years, the manufacturer stops production of this model of Equipment, he shall intimate All India Radio in advance to enable the latter to stock the critical items.

**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 MKS.

**1.9 DELIVERY OF EQUIPMENT:**

Supply at respective site shall have to be completed within **SEVEN MONTHS** from the date of Acceptance of Tender.

**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 DDG(E-FM), P & D Unit, DG: AIR, New Delhi.

**1.11 INSURANCE AND MARINE RISKS ETC:**

Please refer to commercial terms.

**1.12 POWER SUPPLY FOR ALL EQUIPMENT:**

(i)	Operating Line voltage	AC Single Phase, 230 Volts $\pm$ 10 %
(ii)	Frequency	50 Hz $\pm$ 4%
(iii)	Power factor	Better than 0.9.

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**1.13 ENVIRONMENTAL CONDITIONS FOR EQUIPMENT:**

Ambient temperature range for operation :	0° C to + 45° C
Relative humidity :	95 percent, non-condensing
Working altitude :	Up to 3000 meters AMSL

**1.14 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.

**1.15 LOCAL REPRESENTATIVE/DEALER:**

- (a) The OEM should have complete setup for maintenance/repair of the FM Mono and Stereo Modulation Monitor 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 FM Mono and Stereo Modulation Monitor 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 FM Mono and Stereo Modulation Monitor after the completion of guarantee period, shall also be provided by the OEM of the FM Mono and Stereo Modulation Monitor through their local office/authorized representative/dealer in India.
- (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) At the discretion of AIR, AIR representative(s) may visit the works of local office/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.

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<b><u>SECTION-2.0</u></b>		
2.1 The FM Mono and Stereo Modulation Monitor should provide a complete solution for the analog portions of the FM signal. It should combine the features and functions of an RF Amplifier, FM Demodulator, Stereo Demodulator, RDS decoder, SCA decoder etc. in one stand-alone unit.		
<b>S. NO.</b>	<b>TECHNICAL PARAMETERS</b>	<b>TECHNICAL SPECIFICATIONS</b>
<b>2.2</b>	<b>R.F. INPUT:</b>	
2.2.1	Frequency Range	88 MHz-108 MHz [To be tunable to any frequency in VHF FM band 88 MHz to 108 MHz]
2.2.2	Direct RF Input Range	1 Vrms (Min), 50 $\Omega$ BNC Connector 5 Vrms (Max), 50 $\Omega$ BNC Connector
2.2.3	Antenna Input	100 $\mu$ V or better sensitivity, 75 $\Omega$
2.2.4	Accuracy at all Modulation Levels	$\pm$ 2.0 % or better
<b>2.3</b>	<b>BASEBAND MEASUREMENTS:</b>	
2.3.1	Modulation Frequency	30 Hz - 100 kHz
2.3.2	Frequency Deviation	$\pm$ 75 kHz for 100% modulation.
2.3.3	Frequency Deviation Indication	0 to 133 %
2.3.4	Frequency Deviation Indication Accuracy	$\pm$ 2.0 % or better
2.3.5	AM Noise Measurement	To measure AM noise down to 70 dB from 100% AM modulation.
<b>2.4</b>	<b>MPX Signal Output:</b>	
2.4.1	Frequency Response	Better than $\pm$ 0.25 dB
2.4.2	Total Harmonic Distortion plus Noise (THD+N)	Not more than 0.01%
2.4.3	IMD (SMPTE) (60 Hz/7 kHz, 4:1)	Not more than 0.02%
2.4.4	SNR	$\geq$ 90 dB
<b>2.5</b>	<b>STEREO MEASUREMENTS:</b>	
	It should have 2 modulation meters for simultaneous monitoring of L & R channels, total modulation and measurements of channel separation, crosstalk, S.C. suppression, noise and pilot etc.	
2.5.1	Channel Separation (L/R or R/L) (30 Hz to 15 kHz)	Better than 70 dB

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**866687/2023/Tx Design Division - P&D Unit****AIR Specification No. Monitor/19/ April /2023-D (TD/FM)**

2.5.2	Crosstalk (L+R) to (L-R) or (L-R) to (L+R)	Better than 65 dB
2.5.3	Pilot Carrier Measurement	0 % to 15 % injection
<b>2.6</b>	<b>OUTPUT:</b>	
2.6.1	Level (L & R)	$\geq 0$ dBm, 600 $\Omega$ , balanced
2.6.2	Frequency Response	Better than $\pm 0.25$ dB
2.6.3	De-emphasis	Flat, 50 $\mu$ sec.
2.6.4	Signal to Noise Ratio	$\geq 85$ dB
2.6.5	Total Harmonic Distortion plus Noise (THD+N)	Not more than 0.01%
2.6.6	Inter Modulation Distortion (SMPTE) (60 Hz/7 kHz, 4:1)	Not more than 0.02%
2.7	<b>POWER REQUIREMENTS</b>	Single Phase as per Section-I
<b>2.8</b>	<b>GENERAL REQUIREMENTS:</b>	
2.8.1	Instrument should be suitable for mounting in a standard 19" rack.	
2.8.2	All RF input and power input cords with suitable connectors are to be provided.	
2.8.3	All accessories needed for various measurements to be quoted.	
2.8.4	<p>The Mod. Monitor should have front panel display for visual monitoring and real time level monitoring of various Parameters such as Deviation &amp; Peak deviation, Carrier level, L&amp;R Audio, L+R, L-R, Pilot injection, RDS/SCA etc.</p> <p>The Mod. Monitor should be capable for remote monitoring of above parameters via TCP/IP and should be SNMP compliant.</p>	
2.9	<b>ENVIRONMENTAL CONDITIONS</b> (As per Section -I)	

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**SECTION 3.0****INSPECTION DETAILS**

The inspection for acceptance of the FM Mono and Stereo Modulation Monitor including RF Amplifier will be carried out at the Works of OEM by Engineers of All India Radio (AIR) in accordance with Acceptance Test Procedure/Protocol (ATP). All facilities like complete set of measuring instruments, power supply, manual assistance etc. will be provided by the Manufacturer. Complete details and specifications of the FM Mono and Stereo Modulation Monitor including RF Amplifier will be checked and all parameter values will be measured.

Testing/measurements including Operational & functional checking of the FM Mono and Stereo Modulation Monitor including RF Amplifier and measurements will be carried out as per approved ATP.

It is mandatory that all these Testing/measurements including Operational & functional checking of all the FM Mono and Stereo Modulation Monitor including RF Amplifier and measurements are carried out well in advance and these measurement details, graphical printouts and figures must be available, at the time of inspection. These must also be submitted to All India Radio along with the call for inspection of the FM Mono and Stereo Modulation Monitor including RF Amplifier well in advance for analyzing etc.

Following information should also form part of above data which will also be checked for each FM Mono and Stereo Modulation Monitor including RF Amplifier during inspection by AIR representative:

1. Make, Type, Model and Country of Origin of the FM Mono and Stereo Modulation Monitor including RF Amplifier, accessories and spares.
2. Measurements of all parameters as per Section-2.0 of Technical Specifications. All the parameters will be measured.

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**SECTION-4.0 (I)****SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) (FOR SUPPLY OF ONE SET OF FM MONO AND STEREO MODULATION MONITOR INCLUDING RF AMPLIFIER)**

S. No.	Description	Make	Model	Unit	Qty.
1.0	Supply of FM Mono and Stereo Modulation Monitor equipment complete with all accessories including technical manuals as per AIR specification.			Set complete	1 Set complete
2.0	Supply of any other items/accessories offered for the completeness of the system (Items wise details of offered and included material with part numbers, if any are to be given by the tenderer) <b>State NA, if not applicable</b>			Lot	1 Lot
3.0	Inspection charges of FM Mono and Stereo Modulation Monitor as per AIR specifications			Lot	1 Lot

**SECTION-4.0 (II)****SPARE (OPTIONAL) SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) (FOR SUPPLY OF ONE SET OF FM MONO AND STEREO MODULATION MONITOR INCLUDING RF AMPLIFIER)**

S. No.	Description	Make	Model	Unit	Qty.
1.0	Supply of FM Mono and Stereo Modulation Monitor equipment complete with all accessories as per AIR specification.			Set complete	1 Set complete
2.0	Supply of recommended spares (Items wise details of offered with part numbers, if any are to be given by the tenderer)			Lot	1 Lot

All India Radio at its own discretion may procure spares for a value not exceeding 10% of the cost of equipments.  
The tenderer should quote all the essential spares.

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## ANNEXURE-I

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

1.	Address of local office/authorized representative/ Dealer	
	Telephone (Landline) No.	
	Mobile No.	
	E-mail Address	
2.	Address for communication (if different)	
3.	Legal Status ( local office/authorized representative/dealer)	
4.	Name, contact number (Mobile number) & e-mail address of official representative of the local office/authorized representative/dealer	
5.	Brief details of Technical facilities available for after sales support:  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.	
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
<b>(Authorized Signatory of local office/authorized representative/dealer)</b>  Name :  Signature:		<b>(Authorized Signatory of Modulation Monitor OEM)</b>  Name :  Signature:

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**List of places for supply of FM Mod. Monitor****(Annexure-II)**

S. No	Proposed Location	Name of State/UT	Qty.
1	Nandyal	Andhra Pradesh	1 No.
2	Chintpalle	Andhra Pradesh	1 No.
3	Viziangaram	Andhra Pradesh	1 No.
4	Darbhanga	Bihar	1 No.
5	Katihar	Bihar	1 No.
6	Saharsa	Bihar	1 No.
7	Gopalganj	Bihar	1 No.
8	Jagadalpur	Chhattisgarh	1 No.
9	Kondagaon	Chhattisgarh	1 No.
10	Narayanpur	Chhattisgarh	1 No.
11	Bailadila	Chhattisgarh	1 No.
12	Kanker	Chhattisgarh	1 No.
13	Devbhumi(Dwarka)	Gujarat	1 No.
14	Bhuj	Gujarat	1 No.
15	Radhanpur	Gujarat	1 No.
16	Bhavnagar	Gujarat	1 No.
17	Churah	Himachal Pradesh	1 No.
18	Sarkaghat	Himachal Pradesh	1 No.
19	Pakur	Jharkhand	1 No.
20	Simdega	Jharkhand	1 No.
21	Giridih	Jharkhand	1 No.
22	Kodarma	Jharkhand	1 No.
23	Udupi	Karnataka	1 No.
24	Shimoga	Karnataka	1 No.
25	Leh	Ladakh	1 No.
26	Singrauli	Madhya Pradesh	1 No.
27	Ambajogai	Maharashtra	1 No.
28	Balasore	Odisha	1 No.
29	Jaisalmer	Rajasthan	1 No.
30	Sikar	Rajasthan	1 No.
31	Anupgarh	Rajasthan	1 No.
32	Yercaud	Tamil Nadu	1 No.
33	Vellore	Tamilnadu	1 No.
34	Kumbakonam	Tamilnadu	1 No.
35	Farrukhabad	Uttar Pradesh	1 No.
36	Basti	Uttar Pradesh	1 No.
37	Etah	Uttar Pradesh	1 No.
38	Hardoi	Uttar Pradesh	1 No.
39	Nainital	Uttrakhand	1 No.
40	Pithoragarh	Uttrakhand	1 No.
41	Munsiyari	Uttrakhand	1 No.

**R. K. Singh (AE - NZ)****S. K. Mishra (ADE)****O. N. Pradhan (DDE)****K. Murugan (DDG)**