

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

File No. Specification-RF Cable (foam type)-9/4/2022-D(TD/FM)

Dated 27.03.2023

**Subject:** Draft Specifications for Supply of RF Coaxial Foam type Cable -**regarding Industry feedback & budgetary quotes.**

Dear Sir,

DG: AIR is planning for procurement of above referred equipment/items, on open tender basis. Draft technical specification is enclosed for reference.

In this regard, the Prospective bidders from India are requested to give their industry feedback (if any) on the above referred draft Specification **up to 10.04.2023**. 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 10.04.2023**. Feedback regarding availability of local content and percentage of local content may also be provided.

Industry feedback (if any) and budgetary quote may be sent to this Directorate at the following e-mail addresses.

[murugan\\_k@prasarbharati.gov.in](mailto:murugan_k@prasarbharati.gov.in)  
[manzoor@prasarbharati.gov.in](mailto:manzoor@prasarbharati.gov.in)  
[onpradhan@prasarbharati.gov.in](mailto:onpradhan@prasarbharati.gov.in)  
[ravishankermeeena@prasarbharati.gov.in](mailto:ravishankermeeena@prasarbharati.gov.in)

Encl: As above.



(Manzoor Ali)

Dy. Director (Engg.)  
For Director General

To: (through email)

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)**

\*\*\*\*\*

SPECIFICATION FOR SUPPLY OF RF COAXIAL FOAM TYPE CABLE *for VHF FM Transmitters set-up*

**CONTENTS:**

S. No.	Description	Page No.
1.	Essential Requirements of tender	1-3
2.	Essential Eligibility Criteria for tenderers	3
3.	Section 1.0, General Specifications	4-6
4.	Section 2.0, Technical Specifications	7
5.	Section 3.0, Inspection	7
6.	Section 4.0 (A), Schedule of Requirements/Materials (Un-Priced)	8
7.	Section 4.0 (B), Schedule of Requirements/Materials (Un-Priced) (Optional)	8
8.	Annexure-I- Performa for information about Local Office for after sales support	9
9.	Annexure-II- List of Places	10

**A. ESSENTIAL REQUIREMENTS OF 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/items*** 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 equipment/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.

**819557/2023/FM Design - P&D Unit****AIR Specification No. RF Cable (foam type) /18/ March/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

R. K. Singh (AE)

Manzoor Ali (DDE)

O.N. Pradhan (DDE)

K Murugan (DDG)

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.

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

- a. The tenderer shall be from India only.
- b. The tenderer should either be the OEM of RF Coaxial foam type Cable 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 RF Coaxial foam/air dielectric type Cable for last three years or more **OR** must be in the business of sales and supply of RF Coaxial foam/air dielectric type Cable for last three years or more. Documentary evidence to support this must be provided.
- d. (i) The OEM of the RF Coaxial foam type Cable must have an experience of manufacturing and supplying RF Coaxial foam type Cable of not less than 12 kW average power rating (@ 108 MHz, VSWR 1.0, ambient temperature 40°C) for at least last **7 years**. Documentary evidence to support this must be provided.  
(ii) The OEM should have supplied RF Coaxial foam/air dielectric type Cable to reputed/public broadcasters. The OEM must provide the details of past supply record (**in the format given below**) for such offered RF Coaxial foam/air dielectric type Cable of length in total not less than 1000m, 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 RF Coaxial foam/air dielectric type Cable	Quantity/Length	Name of the broadcaster with full postal address including e-mail address to whom RF Coaxial foam/air dielectric type Cable was supplied.	Remarks
(1)	(2)	(3)	(4)	(5)

- (iii) All India Radio reserves the right to get performance feedback of the RF Coaxial Cable from any of the above broadcasters named by the tenderer/OEM.
- (iv) Copies of supply order/completion certificates/delivery challans/invoice of RF Coaxial foam/air dielectric type Cable of length in total not less than 500m out of the 1000m submitted by the tenderer in above format, are also to be enclosed by the tenderer.
- e. The OEM of the offered RF Coaxial foam type Cable 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.

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

**1.0** RF Coaxial Foam type Cable & accessories 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:**

- a. RF Coaxial Foam type Cable & accessories 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.
- b. 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 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 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 (4).
- (ii) Complete printed technical literature/technical data sheet/schematic drawings/detailed information including Technical Manual of RF Coaxial Foam type Cable & accessories as per Section-4.0 (A&B), by the respective Original Equipment Manufacturer of the offered equipment/items & countersigned by the tenderer 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.
- (iii) Detailed Schedule of Requirements/Materials (un-priced) for the supply of RF Coaxial Foam type Cable & accessories 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.
- (iv) Descriptive information and complete details of each equipment/items 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) The performance figures of the offered equipment/items must be given by the tenderer, to assess the merit of the offer without which the tender will be considered incomplete and is liable to be rejected.

**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 and fault diagnosis) **COLOUR** printed and duly bound for RF Coaxial Foam type Cable & accessories alongwith soft copy on CD 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.
- b) Photograph showing location of various units/sub units with item numbers marked thereon.

**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 RF Coaxial Cable with soft copy on pen drive shall be supplied as per details given below: -

- (i) For 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 soft copy on pen drive for each offices/officers:  
DDG(E-FM), DDG(E-TM), Zonal Office (Maintenance Wing of North zone), Zonal Office (Project Wing of North zone), Technical Library(P&D Unit), R&D & NABM (T)

***The tenderer is required to supply Technical Manual wherever mentioned in the specification free of cost.***

**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 Site. 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/items, 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 SI Units.

**1.9 DELIVERY OF EQUIPMENT:**

**Five (5) months** from the date of issue 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 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 LOCAL REPRESENTATIVE/DEALER:**

- (a) The OEM should have complete setup for maintenance/repair of the RF Coaxial foam type Cable 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/accessories of RF Coaxial foam type Cable requiring repairs will be repaired at site. If it is not feasible to repair the module/accessories 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 RF Coaxial foam type Cable after the completion of guarantee period, shall also be provided by the OEM of the RF Coaxial foam type Cable 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 equipment/items. Tenders from the tenderers who failed to meet these criteria shall be considered incomplete and are liable to be rejected.

**SECTION-2.0****TECHNICAL SPECIFICATIONS:****2.1. RF COAXIAL FOAM TYPE CABLES & ACCESSORIES**

S. No.	Technical parameter	Technical specification
1.	Size	1-5/8"
2.	Average Power Rating of RF Coaxial foam type Cable at standard conditions VSWR 1.0, ambient temperature 40° C ( @ 108 MHz)	≥ 12 kW
3.	Attenuation of each RF Coaxial foam type Cable at standard conditions VSWR 1.0, ambient temperature 20° C ( @ 108 MHz in dB/100 M)	≤ 0.70
4.	Frequency Range	88 MHz-108 MHz
5.	Impedance	50 Ohm ± 1 Ohm

*The RF Coaxial foam type Cable shall be as per AIR Specification, failing which, tender will be considered incomplete and is liable to be rejected. The RF Coaxial foam type Cable shall be supplied with 1-5/8" EIA flange fitted at both end of the cable with Bullets (inners) for 1-5/8" Flange Connectors complete for each places.*

All following accessories associated with RF Coaxial foam type Cables are to be provided:

- (i) Hoisting stockings
- (ii) Earthing kits
- (iii) Wall gland
- (iv) Cable Clamps (adjustable height) with nut, bolt & washer and associated accessories as per cable manufacturer's recommendations.
- (v) Any other accessories offered for the completeness of the system (Item wise details & part No., if any, of the offered and included materials are to be given by the tenderer)

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

RF Coaxial foam type Cables & accessories 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 RF Coaxial foam type Cables & accessories.

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.



**SECTION-4.0 (A)****SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) [FOR EACH SITE]**

S. No.	Description	Make	Model	Qty.
4.1	i) Supply of 1-5/8" RF Coaxial foam type Cable as per AIR Specification			*80 Meter
	ii) 1-5/8" EIA flange Connector fitted at both end of the above cable			2 Nos.
	iii) Bullets (inners) for 1-5/8" Flange Connectors			2 Nos.
4.1.1	Hoisting stockings for each cable as per recommendation of manufacturer			1 Set
4.1.2	Earthing kits for RF Coaxial foam type Cable			3 Nos.
4.1.3	Wall gland/ feed through assembly with accessories for RF Coaxial foam type Cable			2 Nos.
4.1.4	Cable Clamps (adjustable height) with nut, bolt & washer			*80 Nos.
4.2	Any other items/hardware materials etc. offered for the completeness of the above System. (Item wise details & Part No., if any, of the offered items/hardware materials etc. shall be given by the tenderer) <b>State "NA" if not applicable.</b>			1 Lot

**SECTION-4.0 (B)**

**SCHEDULE OF REQUIREMENTS/MATERIALS (UN-PRICED) (OPTIONAL ITEMS) (Not to be considered for Ranking)**  
**{The tenderer must quote all items}**

S. No.	Description	Make	Model	Qty.
4.3	1-5/8" EIA flange Connector		Set	1 Set
4.4	Bullets (inners) for 1-5/8" Flange Connectors		Set	1 Set

*\*For ranking purpose only. The RF Coaxial foam type Cable length/qty. may be considered as tentative. The length/qty. may increase or decrease as per AIR requirements.*

## 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
(Authorized Signatory of local office/authorized representative/dealer)  Name :  Signature:		(Authorized Signatory of RF Coaxial Cable OEM)  Name :  Signature:

R. K. Singh (AE)

Manzoor Ali (DDE)

O.N. Pradhan (DDE)

K Murugan (DDG)

**ANNEXURE-II****List of places for the Supply of RF foam Type Cable**

S. No.	Name of places	State
1.	Udupi	Karnataka
2.	Nainital	Uttarakhand
3.	Pithoragarh	Uttarakhand
4.	Gopal ganj	Bihar
5.	Kondagaon	Chhattisgarh
6.	Churah	Himachal Pradesh
7.	Singrauli	Madhya Pradesh
8.	Sikar	Rajasthan
9.	Anupgarh	Rajasthan

R. K. Singh (AE)

Manzoor Ali (DDE)

O.N. Pradhan (DDE)

K Murugan (DDG)