

PRASAR BHARATI
[Broadcasting Corporation of India]
OFFICE OF THE Additional Director General(E)(SZ)
ALL INDIA RADIO & DOORDARSHAN
Swamy Sivananda Salai, Chennai-600005

NO.ADG(E)(SZ)/PUR/AIR/IEBR/21/MEAQ/2011-12

Date: - 04.10.11

SUB.: Limited Tender FOR SUPPLY OF C-Band Digital Receiver – 11 Nos

1. DESCRIPTION:-

Sealed tenders are hereby invited for and on behalf of the President of India from reputed firms for **Supply of C-band Digital Receiver** for AIR Stations.

SI No	Description of stores	Qty	Remarks
1	Supply of C-Band Digital Receivers ABR 202 for All India Radio Stations.	11Nos.	**

- ** CONSIGNEE:**
1. The Dy. Director General(Engg), All India Radio, Dharwad – 1 No.
 2. The Dy. Director General(Engg), All India Radio, Trivandrum.- 1 No.
 3. The Dy. Director General(Engg), All India Radio, Trichy- 2 Nos.
 4. The Dy, Director(E)All India Radio, Port Blair – 1 No.
 5. The Dy, Director (E),All India Radio, Calicut- 1 No.
 6. The Dy, Director (E),All India Radio, Warangal-1 No.
 7. The Dy, Director (E),All India Radio, Karaikal – 1 No.
 8. The Dy, Director (E), All India Radio, Mysore – 1 No.
 9. The Dy, Director (E), All India Radio, Nizamabad- 2 Nos.

2. The tender shall consist of two bid system:

(a) TECHNICAL BID:

Technical bid should contain the confirmation to the enclosed technical specifications **along with EMD**. The tenderer should enclose necessary Technical phamlets of the equipment quoted. This should be submitted in a separate sealed envelope with **“TECHNICAL BID”, Name of the material, date of opening** written on it.

(b) **COMMERCIAL BID:**

The commercial bid should contain the price bid and acceptance of the commercial terms and conditions of this tender document. The price should be quoted for free delivery of materials at respective destinations. This should be submitted in a separate sealed envelope with **"COMMERCIAL BID", Name of the material, date of opening** written on the envelope.

The above mentioned envelopes should be enclosed and submitted in another large size envelope duly sealed and superscribed with **"Tender for supply of C-band Digital Receiver ABR 202 - 11 Nos and date of opening"**.

The tender will be received at this office of The Additional Director General (SZ), AIR & DD, Swami Sivananda Salai, Chennai-5 up to **1200 hrs. on 28.10.2011**. The technical bid with EMD will be opened on the same day at **1500 hrs.** The commercial bid of technically qualified tenders will be opened on **01.11.2011 1500 hrs** or **any other suitable date** that may be intimated to the bidders.

In case tender opening date falls on a holiday, the bids will be received and opened at the same specified time on next working day. Bids received late or submitted after the scheduled specified time on scheduled date will not be entertained and will be returned back unopened.

3. **EMD:** Earnest Money amounting **Rs.33,000/-** (Rupees Thirty Three Thousand Only) in the form of Demand Draft on Nationalized Bank drawn in favour of ADG(E)(SZ), AIR&DD, Chennai should accompany the Technical Bid of the tender. EMD by means of Bank guarantee or any other mode of payment other than DD shall not be accepted. Tenders without EMD shall be summarily rejected and their technical cum commercial bid will not be opened at the time of tender opening. **(No exemption for payment of EMD is accepted by this office)**

4. **VALIDITY:** The tender shall be kept valid for three months **(90 days)** from the date of opening.

5. **PRICES:** The prices quoted should be firm and for free delivery at site inclusive of transit insurance, excise duty and entry tax and other tax, if any, should be quoted separately. Tenderers should quote in figures as well as in words the amounts tendered by them. In the case of illiterates, the rates or the amounts tendered should be attested by a witness. Breakup of prices for individual/ whole units should be specified wherever possible, instead of bunching all units together.

6. **DUTIES AND TAXES:**

(a) **EXCISE DUTY:**

The prices should contain an element of Excise Duty which should be indicated separately. Any statutory variation in the Excise Duty taking place after acceptance of tender within the delivery date will be adjusted by the purchaser on production of documentary proof.

(b) **SALES TAX/VAT:**

The prices should be exclusive of ST/CST/VAT. The prevailing rate of ST/CST/VAT should be clearly mentioned in the tender. The following certificates are to be submitted by the supplier along with the bills.

"Certified that the goods on which the sales tax has been charged have not been exempted under central sales tax act of the rules made thereunder. The amount charged on account of Sales Tax/VAT on these goods is not more than what is payable under provision of the relevant act or the rules made thereunder".

"Certified that we are registered as dealers in the State under registration No..... for the purpose of Sales Tax. Any Statutory variation in ST/VAT taking place after acceptance of tender within the delivery date will be adjusted by the purchaser. For this purpose, Government order should be produced".

7. Eligibility:-

Bids should be from actual manufacturers. Bids from sole selling agents/authorized distributors/Authorized dealers/Authorized contractors can also be considered provided such bids are accompanied with necessary supporting documents/authority letter from concerned actual manufacturers who authorized them to market their products, provided further, such an authority letter is valid at the time bidding. The supplier/contractor shall ensure that the required warranty cover is provided by the original manufacturer of the product.

8. PAYMENT: 100 % Payment on receipt of stores in good condition at the respective consignee stations.

9. Terms of Delivery: The materials should be delivered to the respective consignee(s).

10. DELIVERY PERIOD:

Tenderer may note that the entire work shall be completed within **60 days** from the date of the supply order.

11. PAYING AUTHORITY: The Additional Director General(E)(SZ)
All India Radio & Doordarshan
Swami Sivananda Salai
Chennai-600 005

12. BILLS: Bills shall be prepared in the same format as that of the order and submitted to the consignee for necessary certificate and for onward transmission to the Paying Authority.

13. SECURITY DEPOSIT: The successful bidder shall furnish performance guarantee at the rate of 10% of the contract value in favour of ADG(E)(SZ), AIR & DD, Chennai-5 in the form of cash/DD payable at Chennai/bank guarantee from any nationalised bank valid upto the end of the warranty period of the contract.

14. Insurance: The supplier is responsible for safe delivery of equipments in good condition at the destination and the purchaser will not pay separately for transit insurance.

15. PAN No

Details of PAN No, TIN No, Sales Tax/Service Tax shall be submitted along with the tender.

16. Penalty clause: If the contractor is unable to complete the supply within the stipulated time, the purchaser may at his option allow such additional time as may be considered justified with/without penalty and without altering the terms and conditions of the order. In the event of failure of the contractor to complete the supply within the stipulated time or extended time, the purchaser has the right to impose penalty of Rs.350/- per week or part thereof for every Rs.100000/- of the total contract value. The contractor's liability for delay, however, shall not exceed 5% of the total contract value.

17. **Arbitration:** All disputes, differences or question including the subject matter of the contract on the rights and liabilities of the parties, hereunder of whatsoever arise between parties except **those**, the decision thereof is herein before otherwise expressly provided for shall be referred to the sole arbitration of the Addl. Director General (E)(SZ), AIR & DD, Chennai or any person nominated by him and his decision shall be final and binding on the parties. The provisions of Arbitration and Conciliation Act, 1996 or any statutory modifications or re-enactment thereof and the rules made there under for the time being in force shall apply to such arbitration. The arbitration proceedings shall be held in Chennai.

18. **ACCEPTANCE/REJECTION OF TENDER:**

The acceptance of a tender will rest with the Additional Director General(E)(SZ), AIR & DD, Chennai-5 who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all of the tenders received without assigning any reason.

19. **GENERAL:**

Canvassing in connection with tender is strictly prohibited and the tenders submitted by tenderness who resort to canvassing will be rejected.

Yours faithfully,

(R.ALAGARSAMY)
Assistant Engineer
For Addl. Director General(E) (S.Z)

Encl.:-

- | | | |
|------------------------|----------------------------|----------------------|
| 1. Summary of contents | : | - 1 sheet (Page 5) |
| 2. Section -I | : General Conditions | - 1 sheet (Page 6,7) |
| 3. Section -II | : Technical Specifications | - 1 sheet (Page 8,9) |
| 4. Section -III | : Schedule of Requirements | - 1 sheet (Page 10) |

PRASAR BHARATI
[Broadcasting Corporation of India]
OFFICE OF The Additional Director General(E)(SZ)
ALL INDIA RADIO & DOORDARSHAN
Swamy Sivananda Salai, Chennai-600005

NO. ADG(E)(SZ)/PUR/ AIR/IEBR/21/MEAQ/2011-12

Date: - 04.10.11

TECHNICAL SPECIFICATION FOR C-Band Digital Receiver ABR 202

SUMMARY OF CONTENTS:-

- | | | |
|-----------------|----------------------------|----------------|
| 1. Section -I | : General Conditions | - Page No. 6,7 |
| 2. Section -II | : Technical Specifications | - Page No. 8,9 |
| 3. Section -III | : Schedule of Requirements | - Page No. 10 |

Note:

1. Each clause of this specification has to be complied with & supported by printed matter from the manufacturer of the equipment by the Tenderer, without which Tender will be considered incomplete and the Tender shall be liable to be rejected.
2. All the data of the C-Band Receiver model offered such as, technical details, schematic drawings and schedule of requirement/material must be submitted and enclosed with the Tender by the Tenderer, failing which the Tender shall be liable to be rejected.
3. Tenderer shall quote the rate / cost of C-Band Receiver including the essential accessories required for testing of antenna.
4. Tenderer shall quote the rate / cost of other accessories separately in the Tender offer while submitting the offer, which will be considered as optional items. Optional items will not be considered **for ranking**.
5. The Tenderer shall submit schedule of material /requirement of Supply without price along with Technical Bid.
6. The tender document should be signed on each page by the tenderer.
7. The Tenderer shall submit the Tender offer to AIR in the format given below.

Sl. No.	Details of AIR Spec.	Compliance Yes/No	Deviations in case of noncompliance	Remarks

SECTION – I

GENERAL CONDITIONS:

I. SCOPE :

This section covers the technical specifications requirements for Supply of C-band Digital Receiver ABR 202. The tenderers should carefully study the General Conditions and the Technical Specifications and submit the quotations for the Schedule of Requirements mentioned in Section – III.

II. INFORMATION TO BE SUPPLIED:

1. 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 on drawings and all references to weights and measures and quantities shall be in metric units.

2. Compliance Statement, Complete as per AIR specification, parawise / each clause must be submitted.

3. Complete printed information (including make and model of the equipment) in support of compliance statement should be furnished with the Tender to assess the full merit of the offer. Similar information should be furnished in respect of Auxiliary items, Accessories and Spares etc.

4. Descriptive information giving complete details of Equipment offered.

5. Detailed Schedule of Materials offered in conformity with the schedule of requirement / material. This list should be in the same format as in the price bid without indicating the prices.

6. EXPERIENCE:

The tenderer should give documentary proof for having supplied similar type of equipment to other departments. They should also submit list of supplies/works which are in hand at the time of submission of tender. The list shall contain the name of work, cost of work and present position of work.

7. AFTER SALES SERVICE:-

The Tenderer should give full details of after sales service capability. The locations of service centers across the country shall be indicated. If there is no service centers at/ near the location of the site, the tender is likely to be rejected.

III. PERFORMANCE MEASUREMENTS:

One copy of performance measurements taken at the factory before dispatch duly signed by OEM should also be sent to the respective consignees stated above.

IV. **TECHNICAL MANUAL:**

Supplier shall furnish comprehensive technical manuals for use by the operative staff. Such manuals shall contain instructions from the preventive as well as routine maintenance of the C-band Digital receiver ABR 202.

V. **INSPECTION:**

Detailed inspection will be carried out by AIR representative before acceptance of the Antenna tester. Acceptance to this has to be clearly stated in the Tender document by the Tenderer.

VI. **GUARANTEE :**

The tenderer shall quote a period of guarantee during which the equipment failing due to faulty manufacture shall be replaced free of charge. A minimum guarantee of one year should be given.

(R.ALAGARSAMY)
Assistant Engineer
For Addl. Director General(E)(SZ)

SECTION II

SPECIFICATIONS for C-Band Digital Receiver ABR 202

AUDIO PERFORMANCE:

Frequency response : 20 Hz to 20.0 kHz max, based on data rate
Audio Output channels : One or two
Compression Technique : ISO/MPEG Layer II
Compression Factor : 12:1, 8:1, 6:1
MPEG data rates : 64,96,112,128,192,256, 384 kbps
Symbol rate : Flexibility variable rate (1-sps resolution)
Modes : mono, dual mono (stereo), joint stereo
Total harmonic Distortion : < 0.2% at kHz
Dynamic range : > 83 dB
Analog sampling rate : 48 kHz
Stereo phase Deviation : < 1.0° for 0 to 10 kHz; < 3.0° for 10 to 20 kHz max,
based on data rate.
Audio output Impedance : 510 ohms, directly coupled,
Audio output levels : 0dB throughout gain into 100 K ohm load nominal,
adjustable to provide 0 dB throughout gain for 600 ohm load
Maximum audio level : + 18 dBu
Connector : DB-9 make, L and R analog audio

PORTS:

Audio port : Function L and R stereo pair, balanced + and – outputs each
Connector : DB-9 male

User Data port:

Interface : Asynchronous RS-232
Data rates : 300,1200,2400,4800,and 9600 baud
Connector : DB-9 female

Monitor and Control Port

Interface : Asynchronous RS-232 and RS-485
Radyne Com Stream Packet Protocol or ASCII
Connector : DB-9 female

Printer Data Port

Interface : Asynchronous RS-232 and RS-422
Data rates : 300,1200,2400,4800 and 9600 baud
Connector : DB-25 female.

Relay/Control Port

Contact closures : Eight, Form A, individually controlled
Connector : DB-25 male
Status inputs : 7 TTL

Auxillary Port

Connector : DB-15 female
Functions : Fault alarm relay contacts output, AGC voltage output
RS-422 composite Synchronous Data

Monitor and Control reset AES/EBU Port

Connector : DB-15 female

L-BAND DEMODULATOR (INDOOR UNIT):

Input frequency : 950 to 1700 MHz, F connector, 75 ohm
 Demodulation type : BPSK or QPSK
 FEC decoding : sequential rate $\frac{1}{2}$, $\frac{3}{4}$, Viterbi $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$ or $\frac{7}{8}$
 or concatenated Viterbi/Reed-Solomon rate 187/204
 Audio threshold : 5 dB Eb/NO (BPSK); 5.5 dB Eb/NO (QPSK) for Sequential
 $\frac{1}{2}$ FEC

LNB (OUT DOOR UNIT):

Input frequency range : 10.95-11.7, 11.7-12.2, 12.25-12.75, 3.7-4.2, 4.5-4.8
 GHz
 Output frequency range : 950 to 1700 MHz
 Local oscillator : DRO (BPSK) or PLL (QPSK)

AVAILABLE AUDIO RATES AND BANDWIDTHS:

Rate (kbps)	Bandwidth Audio Mode (kHz)	Audio Quality	Recommended User Data Rate*
64	Mono 8	AM	2400
96	Mono 20	CD	4800
112	Mono 20	CD	4800
112	Dual Mono (Stereo) 10	AM	4800
112	Joint Stereo 20	CD	4800
128	Mono 20	CD	4800
128	Dual Mono(Stereo) 10	AM	4800
128	Joint stereo 20	CD	4800
192	Mono 20	CD	9600
192	Dual Mono (Stereo) 20	CD	9600
192	Joint Stereo 20	CD	9600
256	Mono 20	CD	9600
256	Dual Mono (Stereo) 20	CD	9600
256	Joint Stereo 20	CD	9600
384	Mono 20	CD	9600
384	Dual Mono (stereo) 20	CD	9600
384	Joint stereo 20	CD	9600

* Maximum user data rate is 9600 baud for all audio rates, but lower data rates should be used with audio rates less than 192 kbps to prevent audio quality degradation.

DIMENSIONS/WEIGHT (INDOOR UNIT):

Size 7.5 cm (3in)h, 41 cm(16in) W, 24.5cm (9.75in)D
 Weight < 5.5 Kg (12.1 lbs).
 Rack Mount 2 RU brackets provided.

POWER(INDOOR UNIT):

Input voltage 85 to 265 VAC auto sensing
 Frequency 47 to 63 Hz
 Consumption 45 watts true RMS power (typical)

ENVIRONMENTAL:

Temperature 0 to + 50°C (IDU, operating)
 -30 to + 50°C (ODU, operating)
 Humidity 5 to 95% no condensing(operating) (Indoor Unit)
 0 to 99% condensing (ODU, operating)

SECTION - III

SCHEDULE OF REQUIREMENT - SUPPLY OF C-Band Digital receiver ABR 202

Sl. No.	Description	Qty. sets.	Unit Price in Rs/-	Total Price in Rs/-
1	C-Band Digital Receiver ABR 202 Make: Model: with standard accessories	11 Nos		
2	<u>Accessories - Optional:</u>			
	a.			
	b.			
	c.			
	d.			

NOTE:

ED/VAT/ other charges, if any, to be specified and should be clearly indicated whether those are inclusive or exclusive.