

भारतीय उष्णदेशीय मौसम विज्ञान संस्थान
INDIAN INSTITUTE OF TROPICAL METEOROLOGY,
(पृथ्वी विज्ञान मंत्रालय का स्वायत्त संस्थान, भारत सरकार के अधीन)
(An Autonomous Institute of the Ministry of Earth Sciences, Govt. of India)

Ordinary Pos

सं. / No. PS/128/18/2014/

दिनांक / Date :

मेसर्स./ M/s.

प्रिय महोदय / Dear Sirs,

“दिनांक _____ की पूछताछ से _____ की अनुक्रिया में दिनांक _____ की नवोदित दर सूची,” लिफाफे पर लिखे मुहरबंद निवोदित दर सूची निम्नलिखित भण्डारों की आपूर्ति के लिए संस्थान दिनांक _____ के 12.00 घंटों तक निमंत्रित है जिन्हे उसी दिन 15.00 घंटों तक खोला जाएगा।

Quotation in sealed cover superscribed there on Quotation due on **08.07.2014** in response to Enquiry No. **PS/128/18/2014** dated **11.06.2014** are invited for the supply of under-mentioned stores so as to reach this institute latest by **12-00 hours on 08.07.2014** which will be opened (**Technical Bids Only**) on the **same day** at 15-00 hours.

सामान्यतः खोलने के दिनांक से कम से कम 90 दिनों की अवधि तक यह निवेदित दरसूची वैध रहेगी।

The quotation shall normally remain valid for a minimum period of 90 days from the date of opening

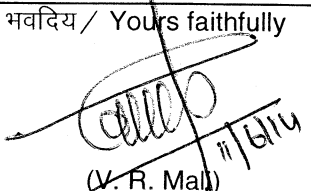
इस पष्ठ की दूसरी और छपे अनुदेशों को ध्यान में रख कर निवोदित दरसूची भरी जाएगी।

The quotation shall be filled in with the consideration to the instruction printed overleaf.

क्रम सं. Sr. No.	भण्डार का विवरण Description of Stores	इकाई Unit	मात्रा Quantity
01.	Supply, installation, Testing & Commissioning of :- Conference System for Aryabhata Hall (Specifications – As per enclosure)	System	01 System

- Note:-**
- (1) **Enquiry Letter No. and due** date should be mentioned on the top of envelope.
 - (2) If above item is available on **Rate Contract** basis, then please specify accordingly in the quotation. Also enclose Rate Contract copy.
 - (3) Technical Literature/Pamphlet, if any, may please be enclosed to quotation.
 - (4) Quotation by fax / e-mail will not be considered.

एस.टी./सी.एस.टी./आदि के लिए संस्थान कोई रियाती फार्म नहीं दे सकता।
This Institute is unable to furnish any Concessional form for S.T / C.S.T. / etc.

भवदिय / Yours faithfully

(V. R. Mal)
Scientific Officer Gr.-I
for Director

तार : ट्रोपमेट, पुणे Grams : TROPMET, PUNE

फैक्स : Fax : (020) 25865142 दूरभाष / Telephone : 25904200

डॉ. होमी भाभा मार्ग, पाषाण / Dr. Homi Bhabha Road, Pashan, पुणे / Pune – 411 008 (भारत/India)

Indian Institute of Tropical Meteorology
Pashan, Pune – 411 008

(Enclosure to Enquiry Letter No. PS/128/18/2014/ dated 11.06.2014)

Specifications for “Conference System for Aryabhata Hall” Qty - 01 System.

TERMS & CONDITIONS

- 1) The Tenderers are requested to give detailed sealed tender in their own forms in two Bids i.e.
Part – I Technical Bid.
Part - II Commercial Bid, both the bids addressed to the Director, Indian Institute of Tropical Meteorology, Dr. Homi Bhabha Road, NCL Post, Pashan, Pune – 411 008, INDIA.
 - 2) This tender is not transferable.
 - 3) If a request is made to IITM for Tender Documents a sum of **Rs.500/- (Rs. Five Hundred only) (Non-refundable)** has to be paid in the form of Demand Draft drawn in favour of “The Director, Indian Institute of Tropical Meteorology, Pune” **preferably from Nationalized Bank**. Otherwise tender will not be considered.
Tender documents are also available on Institute’s website <http://www.tropmet.res.in> as well as Central Procurement Portal (CPP) <http://www.eprocure.gov.in>, bidder can download the same. However, tender fees as mentioned above required to pay along with technical bid.
 - 4) Tenders addressed to the Director, Indian Institute of Tropical Meteorology, Pune 411008 are to be submitted for each item in duplicate in double cover, under two bids system. Superscribed with Tender No. **PS/128/18/2014** for Supply, installation, Testing & Commissioning of **“Conference System for Aryabhata Hall Qty 01 System”** due on **08th July 2014**.
 - 5) You have to submit two separate bids in two separate envelopes and you may keep both the bid envelopes in an envelope for sending to us.
 - i) One envelope will contain only the TECHNICAL SPECIFICATIONS of the indented equipment.
 - ii) Another envelope will contain only the financial bid in which price and any other information, which has financial implications, will only be given.
- The main envelope, which will contain both the bids, should be super scribed with our tender enquiry No.**PS/128/18/2014** due on **08th July 2014**.
- 6) Please indicate page nos. on your quotation ex. If the quotation is containing 25 Pages, please indicate as 1/25, 2/25, 3/25 -----25/25.
 - 7) Cost of the items should be mentioned clearly in the Commercial Offer (Part-II) only.
 - 8) Last date for the receipt of completed tender is **up to 12:00 hrs. 08th July 2014** & will be opened **(Technical Bid only)** on the same day **at 15:00 hrs** in the presence of the representatives of the vendors present.
 - 9) The tender must be valid for a period of at least **90** days from the date of opening.

- 10) The purpose of certain specific conditions is to get or procure best Equipment / service etc. for IITM. The opinion of Technical Committee shall be guiding factor for Technical short listing.
- 11) Supplier shall finally warrant that all the stores, equipment and components supplied under the SUPPLY ORDER shall be new and of the first Quality according to the specifications and shall be free from all the defects (even concealed fault, deficiency in the design material and workmanship).
- 12) Tender must clearly indicate the features offered unit price, VAT tax, transport, transit-insurance installation charges. Institute cannot furnish any certificate for exemption or reduction in VAT tax or any other duty/tax. The vendor should mention the price of the equipment and the duties/taxes to be paid such as customs duty/excise duty/VAT taxes etc. separately.
- 13) The complete equipment including operational manuals should be supplied within stipulated period mentioned in the supply order and the vendor should install the equipment within **one month** after the delivery of the equipment.
- 14) As this Institute is exempted from payment of Custom Duty and Excise Duty, exemption certificate will be issued on request.
- 15) The equipments must carry on-site warranty for **One Year** from the date of taking over of the equipments after the acceptance tests. Warranty period will stand extended for a period of total downtime of the equipments.
- 16) The vendor has to furnish a Bank Guarantee to the extent of 10% of the order value from a nationalized bank in the prescribed format valid for the entire period of warranty including extension if any.
- 17) No advance can be paid.
- 18) The **payment terms** shall be as follows:
 - i) 90% payment after satisfactory installation, and successful completion of acceptance tests and training.
 - ii) 10% payment after execution of Bank Guarantee from a Nationalized Bank and successful completion of acceptance test. The Bank Guarantee will remain valid until the expiry of warranty period including the extensions if any.
- 19) The prices quoted should be firm and irrevocable and not subject to any change whatsoever, even due to increase in cost of raw material components and fluctuation in the foreign exchange rates and excise duty.
- 20) Vendor should arrange appropriate training to the users free of charge, **if required**.
- 21) Indicate the names of the Indian reputed Organizations where you have supplied the similar equipment and may attach the satisfactory performance report of the Personal Computer from user Organization.
- 22) The vendor should have supplied and deployed similar kind of Installation in govt. Institutes like IITM (research and educational). Completion certificate for the same should be enclosed.

- 23) a) If you have supplied identical or similar equipment to other Institutes under Ministry of Earth Sciences and Ministry of Science & Technology, the details of such supplies for the preceding three years should be given together with the prices eventually or finally paid.
- b) Based on the above information IITM will have its option to obtain details of the equipment, their performance, after sales services etc. for evaluation of the tender, directly from the concerned Labs. /Scientists etc.
- 24) The Institute is autonomous scientific research organization under the Ministry of Earth Sciences and is a recognized center for studies leading to M.Sc. and Ph.D. of the University of Pune and various other Universities. As such, all possible concessions / discounts / rebates applicable for educational Institutions may be given.
- 25) The Tenderers / bidders are requested to quote for Educational Institutional Price for equipment, since we are eligible for the same.
- 26) Any upgrade of OS and associated other software during the warranty period should be supplied free of charge.
- 27) The vendor should have appropriate facilities and trained personnel for supply, installation and warranty-maintenance of the equipment to be supplied. Detailed information in this regard may be furnished.
- 28) Kindly attach a copy of your latest DGS&D, New Delhi registration Certificate under the compulsory Scheme of Ministry of Finance regarding the registration of Indian Agent of foreign supplier wherever it is applicable.
- 29) The Tenderer is required to furnish the Permanent Account Number (PAN) Allotted by the Income Tax Department. If registered with the National Small Industries Corporation, the registration number, purpose of registration and the validity period of registration' etc. should also be provided in Technical Bid for Indian Agents.
- 30) Vendor should clearly mention the following:
- **Make and model of every item quoted.**
 - Delivery period.
 - Company profile with a list of those institutes/users should be attached where vendor has supplied the equipments in question in past.
 - A letter of AUTHORISED REPRESENTATIVE from the Principal should invariably be attached with quotation
 - A copy of latest Income Tax clearance Certificate from Income Tax Department (INDIA)
- 31) Discount offered should be mentioned clearly in the commercial bid only.
- 32) This Institute is exempted from paying of Local Body Tax (LBT) under Bombay Regional Municipal Corporation (LBT), 2010 and modified, 2013 Rule No.28 (1) (2).
- 33) Acceptance tests to be prescribed later will be carried out after installation and the items will be taken over only after successful completion of the acceptance tests.

- 34) The equipments are required to be installed at **IITM, Pune** and subsequently Training is to be provided to the concerned persons of the Institute, **if required**.
- 35) The item should be supplied with manuals and the manuals including technical / Electronic drawings , circuit diagrams should be complete in all respects to operate the system without any problem.
- 36) The Tenderer / bidder has to state in detail the Electrical Power/UPS requirements, floor Space, heat room, foundation needed and also to state whether Air-conditioned environment is needed to house the system and to run the tests. i.e. pre-installation facilities required for installation may please be intimated in the technical bid. *
- 37) Goods should not be dispatched until the Vendor receives a firm order.
- 38) The Date and Time of opening for Part-II (Commercial Bid) will be intimated only to pre-qualified and technically acceptable Tenderers / bidders for the item at a later date.
- 39) Earnest Money Deposit:**
- a) The Earnest Money Deposit of **Rs. 46,000/- (Rs. Forty Six Thousand only)** must be paid / sent along with your technical bid in the form of a Demand Draft, Banker cheque or Bank Guarantee **(from a Nationalized Bank only)** drawn in favour of The Director, Indian Institute of Tropical Meteorology, Pune payable at Pune, otherwise your technical & financial bids will not be considered at all. The Earnest Money of successful bidder will be returned only after installation, satisfactory demonstration and on acceptance of the equipment by the user Scientist / HOD as per the terms of our purchase order. If the successful bidder fails to fulfill the contractual obligations before the due date, he will forfeit the EMD.
- The Earnest Money of the unsuccessful bidder whose technical bid has not been found suitable will be returned within **forty five days** after receipt of Technical Committee recommendations.
- b) Those who are registered with Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation or the concerned Ministry / Department need not to furnish EMD along with their bids.
- c) Though EMD has to be submitted by Demand Draft, Banker's Cheque or Bank Guarantee, we prefer to have Bank Guarantee for easy return to the bidders once a decision is taken by IITM. (Specimen of Bank Guarantee is enclosed at Annexure 'A').
- d) Tenders not accompanied with Demand Draft / Bank Guarantee towards "Earnest Money Deposit" will summarily be rejected.
- 40) Successful bidder is required to furnish an amount equivalent to 10% of the total order value as a **'Performance Security Deposit'** in the form of Demand Draft / Bank Guarantee (from any Nationalized Bank only) in favour of 'Director, IITM, Pune' within 21 days on receipt of Purchase Order.
- Performance Security should remain valid for a period of sixty days beyond the date of completion of all contractual obligation of the supplier including warranty obligation.
- 41) Part and incomplete tenders are liable to be rejected.
- 42) Conditional Offers will not be considered.

43) The tenders must be clearly written or typed without any cancellations / corrections or overwriting.

44) Fax / E-mail / Telegraphic / Telex tenders will not be considered.

45) IITM will not be responsible:

a) For delayed / late quotations submitted / sent by Post / Courier etc.

b) For submission / delivery of quotations at wrong places other than the Office of Director, IITM, Pune – 411 008.

46) Liquidated Damages: If the supplier fails to Supply and Install the system as per specifications mentioned in the order within the due date, the Supplier is liable to pay liquidated damages of one percent value of the Purchase Order awarded, per every week delay subject to a maximum of 10% for every week beyond the due date and such money will be deducted from any money due or which may become due to the supplier.

47) In case of any dispute regarding part-shipment, non-compliance of any feature etc., the Director, Indian Institute of Tropical Meteorology, Pune will be the final authority to decide the appropriate action and it will be binding on the vendor.

48) The vendor needs to have a full fledged office, PoC or testing centre to showcase and test the functionality of the ordered equipments in Pune.

49) Director reserves the right to reject any or all tenders without assigning any reason.

Pre-Qualification Criteria: (Documentary Evidences may be submitted along with tender)

- 1) The vendor should have executed orders of Supply, installation, Testing & Commissioning of Conference System, during the last three year to colleges /universities/ Central Govt. Depts., /Central Govt. PSUs/Consumer Society approved by Central Govt. / State Govt. Dept.
- 2) Vendor should have successfully supplied, installed, commissioned 02 (**two**) similar type of the system in recent three years.
- 3) Vendor should have at least 03 years of experience of maintaining such system.
- 4) Vendor should have service centre at Pune.
- 5) Copy of PAN Card, TIN NO. VAT /CST / Service Tax registration certificate may be submitted along with tender.


11/6/14

(V. R. Mahi)
(V. R. Mahi)
वैज्ञानिक अधिकारी, ग्रेड-1/Scientific Officer, Gr.-I
आवक व भंडार विभाग/Purchase and Stores Section
भारतीय उष्णकटिबंधीय मétéorology
भारतीय उष्णकटिबंधीय मétéorology
भारतीय उष्णकटिबंधीय मétéorology
(An Autonomous Body under the Ministry of Earth Sciences, Govt. of India)

Scope of Work

The Aryabhata Conference hall located at the 2nd floor of IITM library building is being equipped with Audio visual equipment. The Broad scope of the work comprises of disconnecting existing system for buyback and supply, installation and commissioning of conferencing system comprises of various mikes ceiling speakers, DSP/Amplifier/Mixer/Feedback Reducer, cables & connectors. All necessary and essential software's for connecting & setting of Conference systems must be supplied free of cost along with the hardware.

Supply, Complete installation of conferencing systems needs to be done by the supplier. All the microphones & speakers should be connected in the same location / slot where existing equipments disconnected without disturbing the ambience of the hall. After installation and successful commissioning, training to user group is to be arranged by the supplier free of cost. The required features and specifications, BOQ are enclosed.

Conferencing System for Aryabhata Hall with 1 Chairman Mic, 29 delegate mics and required hardware as below.

1	Table Microphone (1 Chairman Mic and 29 delegate mics) (As in Specification 1)	30 Nos.
2	DSP/AMP/Automatic Mixer/ Automatic Dynamic Feedback Reducer/ Software (As in Specification 2)	1 set
3	Wireless Collar Mic Set (As in Specification 3)	2 Nos.
4	Wireless Head Worn Mic (As in Specification 4 D) (Only Mics with TA3F connector). (As in Specification 4)	2 Nos.
5	Wireless UHF Hand Held Mic Set (As in Specification 5)	2 Nos.
6	Ceiling Speakers (As in Specification 6)	16 Nos.
7	Cables/Connectors (As in Specification 7)	1 set
8	Operational Programming (As in Specification 8)	1 Job
9	Installation/Commissioning/Training (As in Specification 9)	1 Job

All the above items are for the same conferencing system. Hence all should be compatible.

Technical Specification for Conferencing Systems at Aryabhata Hall

1. Goose Neck Microphone with Base and programmable power switch:

Qty 30 nos

Gooseneck length	18"
Generation Element	Dual condenser, back electrets.
Frequency Response	50 to 17,000 Hz
Polar Pattern	Cardoid
Open Circuit Sensitivity At 1 kHz, ref.	1 V per Pascal*
Cardioid	33.5 dBV (21.1 mV)
Max SPL (1kHz at 1% THD, 1 k-Ohm load)	123.0 dB
Equivalent Output Noise (A-weighted)	29.0 dB SPL
SNR (referenced at 94 dB SPL)	65.0 dB
Dynamic Range with 1 k- Ohm load	94.0 dB
Common Mode Rejection	45.0 dB minimum
Mute Switch Attenuation	50.0 dB minimum
Preamplifier Output Clipping Level (1% THD)	-6.0 dBV (0.5 V)
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of XLR output connector
Power Requirements	11 to 52 Vdc phantom, 2.0 mA
Operating Temperature Range:	-18deg to 57 Deg C
Relative Humidity	0 to 95%
Certification	UL/CE

2. Digital Sound Processor with Front panel display, Acoustic Echo Cancellation, Noise Cancellation, Automatic Mixer, Matrix Mixing, Multi Channel Amplifier and Multi Channel Automatic Dynamic Feedback Reducer: Qty 1 set

Category	Feature	Specification
I/O Configuration	Mic/Line Inputs	40 Nos with Freq response 20Hz -22KHz .
	Line Inputs	10 Nos.
	Line Outputs	10 Nos.
	Input Scalability	Shall be able to Expand Multiple Units for connecting more no. of microphones.
	Mix Minus Digital Expansion Bus	Mix Minus Full Duplex Bi Directional bus to support a min of 200ft distance.
	Features	Input Gain Adjust, Mic or Line Level, Phantom Power on/off, Mute on/off, Chairman Override on/off, AGC on/off, Automatic Level Control on/off, Filters(Low Pass, High Pass, PEQ.).

DSP Features.	Cobranet compatible	Required.
	RJ-45 Port for Ethernet connectivity	2 nos.
	RS 232 Port for Serial Control with External Control System	Required.
Auto Mixer Features	Type	First Mic priority based
	PA Adaptive	Editable ON/OFF.
	Adaptive Ambient	Editable ON/OFF.
	Off Attenuation Setting	User Editable Off Attn Setting Required.
	Hold Time Setting	User Editable Hold Time Setting Required.
	Gating Groups Between Units	Shareable Auto Mixer parameters such as Gating Status and Control Information available across multiple units.
Control	GPIO Ports	40 No's of Ports to run external general purpose inputs and outputs for Logic Control.
	Macro Recorder	Shall be able to create Macros using Recorder as well as Command Lines.
	Presets	Shall be able to assign a min of 30 Presets per unit for recalling various configurations.
Management	Front Panel Display	Shall have front panel Display to do functions such as preset Change, Macro Selection and Volume changes etc.
	Events	Event Scheduling Functionality shall be possible to recall macros, presets and serial commands etc.
	It shall allow Real-time Parameters / Routing Changes	Entire Layout and Parameters shall be built in to the DSP and should be able make the changes in real time without disconnecting from PC Software.
	System Checks	Functionality to check the Microphone Connection Status, Amplifier Status etc...
	SNMP Agent	Required to monitor health status of the system via simple network management protocol.
	HTTP Agent	Internal Web server to support any java supported browser to be used for control functionality.
	SMTP Client	Shall be able register with SMTP server for automated Email Generation with Status and Fault reporting.
	Telnet Client	Required.

Power Amplifier	Built in or separate Power Amplifier Channels	8Nos x 35 W Each at 8Ohms and 70/100V Selectable.
	Graphic Equalizer	8 Channel Graphic Equalizer And 10 Band EQ filter.
AUDIO Parameters	Frequency Response:	20 Hz to 22 kHz +/- 1 dB
	Noise (EIN):	-126 dBu, 20 kHz BW, max gain
	THD+ Noise:	<0.02%
	Dynamic Range:	>105 dB (non A weighted)
	Crosstalk:	<-91 dB re 20 dBu full band.
Automatic Dynamic Feedback Reducer	No of Feedback channels	8 Channel Feedback Reducer at the output of the audio chain and shall feed the Power Amplifier.
	Dynamic Automatic Feedback Reduction	Feedback Reducer shall be configurable as Fixed or Dynamic Nodes as per user requirements.
	Ring Eliminator	Required.
	User Definable Fixed/Dynamic Nodes	16 Nodes shall be possible to apply on individual Channel and shall be user editable.
	Automated Setup	Feedback reducer shall support automated setup.
	Features	Graphic Equalizers, Parametric Equalizers, Crossovers , Compressor/Limiter, Delay.

3. Wireless Collar Mic Set: -

2 sets

(A) Wireless Collar Mic

Type	Condenser, electrets bias.
Frequency Response	60Hz to 12,000Hz*.
Polar Pattern	Cardioids (unidirectional).
Output Impedance	1200Ω @1kHz*.
Output Level	-47dBV/Pa (4.5 mV)*.
Signal to Noise Ratio	66dB, 1kHz at 1 Pa*.
Maximum SPL	120dB.
Dynamic Range (max. SPL to A-weighted noise level)	92dB*.
Output Noise	28dB (typical, A-Weighted).
Recommended Operating Voltage	+5VDC, 10V max (pin 2 to pin 1).
Polarity	Positive sound pressure on diaphragm produces positive voltage on pins 3 and 4 relative to pin 1 (ground) on the mini TA4F connector.
Cable	1.22 m (48 in.) two-conductor shielded.
Net Weight	23 g..
Certification	UL/CE.

(B) Beltpack Transmitter

Audio Input Level	Mic setting -7 to -15 dBV, Line setting 9 to 1 dBV.
Input Impedance	Mic setting 16k Ohms, Line setting 120k Ohms.
Gain Adjust. Range	8 dB.
RF Output	10mW or more.
Power Requirements	Rechargeable batteries.
Battery Life	10 hours or more.
Weight	90 g without batteries or less.
Construction	Molded ABS.
Certification	UL/CE.

(C) Wireless Receiver

Audio Output Level XLR connector into 100k Ohms load	-16 dBV.
1/4" Jack connector into 100k Ohms load (Ref. ± 48 kHz deviation with 1 kHz tone)	-22 dBV.
Output Impedance XLR connector	600 Ohms.
1/4" Jack connector	600 Ohms.
RF Sensitivity	-105 dBm for 12 dB SINAD, typical.
Image Rejection	>50 dBm, typical.
Power Requirements	12 to 18 V DC at 130 mA, from external power supply.
Construction	Molded ABS.
Certification	UL/CE.

4. Wireless Head worn Mic:-**2 nos.**

Compatibility	All AKG Wireless w/TA3F.
Connector	TA3F (For AKG).
Polar Pattern	Cardioid.
Microphone Type	Condenser.
Frequency Response	20Hz-20kHz.
Max SPL	126dB SPL.
Signal to Noise Ratio	72dB.
Certification	UL/CE

5. Wireless UHF Hand held Mic Set:**2 Sets****A. Wireless Transmitter**

Polar pattern	Cardoid
Frequency Response	60 Hz to 15 KHz
Audio Input Level	-20 dBV maximum
Input Impedance	22k Ohms
RF Output	HI power mode: 10 mW maximum
LO power mode	1 mW maximum

Power Requirements	Rechargeable batteries
Battery Life	Up to 10 hours (alkaline) or more
Construction	Molded ABS
Steel mesh	Ball grille with built-in "pop" filter
Selectable frequencies per band	8 or more
Compatible channels per band	4 or more
Certification	UL/CE

B. Wireless Receiver

Audio Output Level 100k Ohms load	-16 dBV/4" Jack connector into 100k Ohms load: -22 dBV
Output Impedance	600 Ohms 1/4" Jack connector: 600 Ohms
RF Sensitivity	-105 dBm for 12 dB SINAD, typical
Image Rejection	>50 dBm, typical
Power Requirements	12 to 18 V DC at 130 mA, from external power supply
Construction	Molded ABS
Weight	245 g or less
No of channels	8 or more
Certification	UL/CE

6. Ceiling Mountable Speakers : 16 nos

Speaker type	2-way, ceiling speaker with metal back can
Frequency response	75 Hz to 20 kHz
Power handling	60 Watts RMS or more
Nominal sensitivity	min 87 dB, <u>1W@1m</u>
Nominal coverage angle	80/110° conical coverage required
Nominal impedance	8 ohms
Transformer taps	70V: 30W, 15W, 7.5W 8 ohms 100: null, 30W, 15W 8 ohms
Woofer	6.5" (165 mm) polypropylene cone with moisture resistant coating
Tweeter	3/4" (19 mm) or more
Overload protection	Full range power limiter with the 8 ohm direct input only, protecting the tweeter, woofer, and crossover.
Certification	UL/CE

7. Cables and Connectors (Extron/Kramer only)

A. Speaker Cable : (Extron/Kramer only) 500 mtrs

Conductors	16AWG, (26/30) bare copper conductors.
Insulation	PVC color coded: red, black
Diameters	1.478mm (0.058in)
Center conductor	2.0mm (0.079in)
Pvc insulation Outer jacket	5.2mm (0.205in).
Dc resistance	13.7Ω/km (4.17Ω/1000ft)
Temperature	-20° to 75°C (-4° to 167°F)
Certification	UL

B. Mic cable : (Extron/Kramer only)**600 mtrs**

Conductors	20AWG, (10/30) tinned copper conductors
Insulation	PVC color coded: red, black
Drain wire	20AWG (10/30) tinned copper (in contact with shield)
Shield	Aluminum Mylar foil 25% overlap rate
Diameters Conductor	0.916mm (0.036in)
Pvc insulation	0.44mm (0.071in) nominal thickness, 1.8mm diameter
Outer jacket	5.4mm (0.213in)
Electrical Impedance	40 to 100Ω
Dc resistance	34.6Ω/km (10.5Ω/1000ft)
Mutual capacitance conductor-conductor	89pF/m (27pF/ft).
Mutual capacitance connected to shield	161pF/m (49pF/ft).
Temperature	-20° to 75°C (-4° to 167°F).
Certification	UL

C. RGBHV cable : (Extron/Kramer only)**150 mtrs**

Specification	RGBHV 26AWG 75Ω 5 mini-coaxial dual shield design consisting of copper spiral and aluminum Mylar foil. Coax jackets color coded red, green, blue, yellow, black. Rugged and flexible jacket with sequential markings every meter
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D. Patch Cord :

VGA	1.8 m length/ molded connectors
XLR-M (Stereo) to 3.5 mm Stereo male	1.8 m length/ molded connectors

E. Connectors and Face Plate:

Face plate BNC-M (for Matrix Mixer rear connectors)	With 1 VGA (15 pin Sub D) and 1 Phono-F (Stereo) connector Heavy Duty Type
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8. Operational Programming :**As reqd.**

Complete programming for optimum working of all Mics, DSPs, Mixers, Amplifiers, Speakers, Cables and Connectors should be done by the supplier. Software license without expiry and free updates has to be provided with the hardware free of cost.

9. Installation, Commissioning and Training:**As reqd.**

Complete installation of the Conferencing Systems including dismantling of existing system, installation of all Mics, DSPs, Amplifiers, Feedback Reducers, Speakers, Power supply, Cables and Connectors needs to be done by the supplier. No damage should be done to the false ceiling, or tables while installation.

After installation and successful commissioning, Onsite training to user group needs to be arranged by the supplier free of cost.

VENDOR PERFORMANCE STATEMENT FOR SIMILAR

DEPLOYMENTS IN THE LAST THREE YEARS

Name of the Firm: _____

Pls note that vendors need to enclose supporting documents for the below details including satisfaction report.

Order placed by (full address of the purchaser)	Order No and date	Description and Qty of ordered equipment	Date of completion as per contract	Actual date of completion	Reasons for delay if applicable	Contact details for reference

NAME OF THE VENDOR

STAMP AND SIGNATURE

Bill of Quantities

Vendors should submit the BOQ in the following for format. Commercial rates are to be left blank in the **technical bid**, but other details like make & model No, description of stores and services, quantities.etc are to be duly filled and submitted along with technical bid.

Commercial rates are to be quoted in INR / foreign currency and are to be submitted only with **commercial bid**. All the applicable taxes till IITM's door delivery are to be considered while quoting tax details, tax exemption/concession benefits shall be transferred to IITM while execution/supply/installation.


Sr. No.	Description	Qty	Unit Rate	Taxes	Total Amount
1.	Table Microphone :- (1 Chairman Mike and 29 delegate mikes) (As in Specification 1)	30 nos.			
2.	DSP/AMP/Mixer/Feedback Reducer (As in Specification 2)	1 set			
3.	Wireless Collar Mike Set (As in Specification 3)	2 nos.			
4.	Wireless Headworn Mike Set (As in Specification 4)	2 nos.			
5.	Wireless Hand Held Mikes (As in Specification 5) Only mics.	2 nos			
6.	Ceiling Speakers (As in Specification 6)	16 nos.			
7.	Cables/Connectors (As in Specification 7)	-			
A.	Speaker Cable	500Mtr			
B.	Mic cable	600 Mtr			
C.	RGBHV Cable	150 Mtr			
D.	Patch Cords RGBHV XLR-M (Stereo) to 3.5 mm Stereo male	5 sets			
E.	Face plate with 1 VGA (15 pin Sub D) +1 X XLR-F Connector	5 Nos			
F.	BNC Connectors	30 nos			
8.	Operational Programming (As in Specification 8)	1 job			
9.	Installation/Commissioning/Training (As in Specification 9)	1 job			
9	Total (1 to 8)				
10	Buyback value for existing system	1 set	(-)		
	Total Amount (9)-(10)				

Buyback Items: -

Sr. No.	Description	Qty.	Make/model
1	Table mics with speaker	29 nos.	Alpha make
2	Collar mics	2 nos.	Proton, Studio Master & Mipro
3	Hand mic	2 nos.	Studio Master
4	Speakers	14 nos.	
5	Amplifier	1 no.	Alpha make
6	Mixer Amplifier	1 No.	Ahuja make

Note :

- (i) **Make, Model name & Warranty Period** of the equipment may be mentioned clearly failing which quotation will not be considered.
- (ii) Technical compliance sheet may please be given in **Technical Bid** & cost of the item may please be mentioned in **Commercial Bid** only.
- (iii) Details of taxes, duties, levies may indicate separately.


(V.R. Mali)

Scientific Officer Gr.-I
for Director

Contact No. : (020) 25904483 / 210
e-mail : vipin@tropmet.res.in

BID SECURITY FORM

Whereas 1 (hereinafter called "the Bidder") has submitted its bid dated (*date of submission of bid*) for the supply of _____ (*name and/or description of the goods*)(hereinafter called "the Bid").

KNOW ALL PEOPLE by these presents that WE _____ (*name of bank*) of (*name of the country*), having our registered office at (*address of bank*)(hereinafter called "the Bank"), are bound unto (*name of Purchaser*) (hereinafter called "the Purchaser") in the sum of _____ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this ____ day of 20__ THE CONDITIONS of this obligation are:

1. If the Bidder withdraws it's bid during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of it's bid by the Purchaser during the period of bid validity:
 - a) fails or refuses to execute the Contract Form if required; or
 - b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders.

We undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, Without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee shall remain in force up to forty five days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the Bank)

Name of Bidder.

