

	<p>भारतीय प्रौद्योगिकीसंस्थानमद्रासचेन्ने 600 036  <b>INDIAN INSTITUTE OF TECHNOLOGY MADRAS Chennai 600 036</b>  भंडार एवं क्रय अनुभाग  <b>STORES &amp; PURCHASE SECTION</b>  Email: <a href="mailto:adstores@iitm.ac.in">adstores@iitm.ac.in</a>  दूरभाष: (044) 2257 8285 / 8287 / 8288 फॅक्स: (044) 2257 8292  Telephone : (044) 2257 8285/8287/8288 FAX: (044) 2257 8292  GSTIN: 33AAAAI3615G1Z6</p>	
---	---	--

**P K Sheba Sabari**  
**Assistant Registrar (Stores & Purchase)**

**Date: 22.11.2022**

**Tender No. IITM/SPS/Filmclub/10/2022-23/SPL**

**Due Date: 13.12.2022**  
**Before: 2.00PM**

Dear Sirs,

On behalf of the Indian Institute of Technology Madras, Tenders are invited in two bid system namely technical bid and financial bid for

**Supply and Installation of Public Address (PA) System in Film Club, IIT Madras**

conforming to the specifications enclosed.

**No manual bids will be accepted.** All tender documents including Technical and Financial bids should be submitted in **Government e-Market Place (GeM) portal through BOQ Based Bid**

1	<b>LAST DATE for receipt of Tender</b>	:	13.12.2022 @2.00 PM
1	<b>Date &amp; Time of opening of Tender</b>	:	13.12.2022 @ 3:00 PM

**GUIDELINES FOR TENDER SUBMISSION IN GOVERNMENT E-MARKET PLACE (GEM) PORTAL THROUGH BOQ BASED BID**

Bidders are requested to go through the GeM Handbook for instructions, preparation of bids and submission of bid.

**General instructions to the Bidders:**

The tenders will be received online in GeM portal through BoQ Based Bid. In the Technical Bids, the bidders are required to upload all the documents in single pdf file.

**Assistance to Bidders:**

Any queries relating to the process of BoQ Based Bid submission or queries related to GeM Portal, contact the portal by email [helpdesk-gem@gov.in](mailto:helpdesk-gem@gov.in) or toll free nos. **1800-419-3436 / 1800-102-3436.**

**TERMS AND CONDITIONS OF TENDER**

1	<b>EMD &amp; Performance Guarantee</b>	:	<p>i. EMD of <b>INR 75,000/-</b> (Rupees seventy five thousand only) should be transferred through NEFT/RTGS to the following bank account on or before due date.  Name : Registrar IIT Madras  Bank : State Bank of India  Account No. : 10620824305  Branch : IIT MADRAS  IFSC CODE : SBIN0001055</p> <p>ii. The EMD will be returned to unsuccessful Bidder(s), after finalization of the tender. The EMD shall be forfeited if any Bidder withdraws the offer before finalization of the tender.</p> <p>iii. The EMD amount should not be sent through DD.</p>
---	--	---	--

		<p>iv. Non-submission of EMD details on or before the due date and time will result in rejection of the e-bid.</p> <p>v. As per Rule 170 of GFR 2017, exemption of EMD will be given subject to submission of undertaking by the firm seeking exemption. Copies of relevant orders/ documents regarding such exemption should be submitted along with the tender document</p> <p>vi. The successful bidder shall submit a Performance Guarantee of 3% of the bid amount by way of DD/ Bank Guarantee obtained from any commercial bank within 7 (seven) days from the date of issue of Letter of Intimation and Acceptance by IIT Madras. The tender inviting authority may extend the period for another 7 (seven) days on written request of the contractor for a valid reason for delay in submission of the performance guarantee.</p>
2	<b>Preparation of Tender:</b>	<ol style="list-style-type: none"> <li>1) The bids <b>should be submitted through online only in two bid system i.e. Technical Bid and Financial Bid separately.</b></li> <li>2) The bidder has to submit the tender document duly signed on all pages by an authorized person and his / her full name and status shall be indicated below the signature along with official seal/stamp of the firm. Submission of wrong / forged information / document will be liable to legal action, and rejection of the bid submitted by the firm.</li> <li>3) The bids of the agency/firm/company not in possession of valid statutory license / registrations are liable for rejection.</li> <li>4) If any relative of the bidder is an employee of IIT Madras, the name, designation and relationship of such employee shall be intimated to the Registrar, IIT Madras in writing while submitting the bid.</li> <li>5) No bidder will be allowed to withdraw / alter / modify the bid during the bid validity period.</li> </ol>
3	<b>Signing of Tender:</b>	<p>The bid is liable to be rejected if complete information is not given therein or if the particulars and date (if any) asked for in the schedule to the tender are not fully filled in or not duly signed/authenticated. Specific attention is drawn to the delivery dates and terms and conditions enclosed herewith. <b>Each page of the bids shall be duly signed with the official seal of the Bidders.</b></p> <p>If the bid is submitted by a firm in partnership, it shall be signed (with seal) by all the partners of the firm above their full typewritten names and current addresses. Alternatively it shall be signed by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the bid. A certified copy of the partnership deed along with current addresses of all the partners of the firm shall also accompany the bid.</p> <p>If a limited company or a corporation makes the application, it shall be signed by a duly authorized person holding power of attorney for signing the bid, in which case a certified copy of the power of attorney shall accompany the bid. Such limited company or corporation may be required to furnish satisfactory evidence of its existence. The bidder shall also furnish a copy of the Memorandum of Articles of association duly attested by a Notary Public.</p>
4	<b>Period for which the offer will remain open:</b>	<p>The bids shall remain valid for acceptance/validity till: <b>120 days from the date of opening of the tender.</b> However, the day up to which the offer is to remain open being declared closed holiday for the Indian Institute of Technology Madras, the offer shall remain open for acceptance till the next working day.</p>
5	<b>Prices:</b>	<ul style="list-style-type: none"> <li>• The prices quoted must be Nett considering all scope of supply, installation and terms &amp; conditions mentioned in the tender document.</li> <li>• <b>The prices quoted by the Bidders should be inclusive of GST and other charges.</b></li> <li>• <b>All conditional tenders will be summarily rejected.</b></li> <li>• Quote should be in INR only</li> </ul>
6	<b>No Advance Payment will be made for the supply.</b>	<p>The Payment will be made only after satisfactory completion of the supply and as per terms and conditions of the purchase order.</p>
7	<b>Delivery:</b>	<p>The delivery period shall be 30 days from the date of purchase order.</p>
8	<b>GST: As applicable</b>	
9	<b>Terms and Conditions:</b>	<p>Failure to comply with any of the instructions stated in this document or offering unsatisfactory explanations for non-compliance will lead to rejection of offers.</p>
10	<b>Right of Acceptance:</b>	

	IIT Madras reserves the right to reject the whole or any part of the Tender without assigning any reason or to accept them in part or full.
11	<b>Communication of Acceptance:</b> Letter of Intimation and acceptance will be communicated by post /email to the successful bidder to the address indicated in the bid.
12	All information including selection and rejection of technical or financial bids of the prospective bidders will be communicated through GeM portal. In terms of Rule 173 (iv) of General Financial Rule 2017, the bidder shall be at liberty to question the bidding conditions, bidding process and/or rejection of bids.
13	<b>Bidder shall submit along with this Bid:</b> Name and full address of the Banker & their swift code, PAN No. and GSTIN number.
14	<b>Jurisdiction:</b> All questions, disputes, or differences arising under, out of or in connection with the contract, if concluded, shall be subject to the exclusive jurisdiction at the place from which the acceptance of tender is issued.
15	<b>Dispute Settlement:</b> <ul style="list-style-type: none"> <li>• It is mutually agreed that all differences and disputes arising out of or in connection with this agreement shall be settled by mutual discussions and negotiations. If such disputes and differences cannot be settled and resolved by discussions and negotiations then the same shall be referred to the sole Arbitrator appointed by the <b>Director, IIT Madras</b> whose decision shall be final and binding on both the parties.</li> <li>• It is also agreed that in case of any disagreements / disputes in connection with the Arbitrator's award, the same shall be settled under the Court of Law with its jurisdiction at Chennai. The resultant contract will be interpreted under Indian Laws.</li> </ul>
16	<b>Right of IIT Madras</b> <ul style="list-style-type: none"> <li>• The Registrar, IIT Madras reserves right to withdraw / relax any of the terms and conditions mentioned above so as to overcome the problem encountered by the contracting parties.</li> <li>• The Registrar, IIT Madras reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever and his / her decision shall be final and binding on the tenderer.</li> <li>• IIT Madras reserves the right to suitably increase / reduce the scope of supply put to this tender. In case of any ambiguity in the interpretation of any of the clauses in tender document or purchase order, interpretation of the clauses by the IIT Madras shall be final and binding on all parties.</li> </ul>
17	<b>Compensation / Force Majeure:</b> If the selected bidder could not complete the supply to the satisfaction of the IITM within the stipulated period, the firm shall be bound to pay IITM a sum calculated as given below by way of compensation If the firm fails to complete the supply by the scheduled date of completion, it will have to pay compensation for non-performance at rate of 0.25 % of tendered value for each week or part thereof of delay subject to maximum of 5% of the contract value. Compensation is not payable if the delay is attributable to the Institute and Force Majeure. However, it is the responsibility of the selected Bidder to prove that the delay is attributable to the Institute and Force Majeure. The selected Bidder shall submit the proof authenticated by the Bidder and Institute's official that the delay is attributed to the Institute and/or Force Majeure along with the bills requesting payment.
18	The bidder shall certify that the tender document submitted by him / her are of the same replica of the tender document as published by IIT Madras and no corrections, additions and alterations made to the same. If any deviation is found in the same at any stage and date, the bid / contract will be rejected / terminated and actions will be initiated as per the terms and conditions of the contract.
19	<b>Warranty:</b> 3 years warranty with 2 years extended warranty on the service rendered
20	<b>PRE-QUALIFICATION CRITERIA:</b> <b>Eligibility Criteria-I</b> <ol style="list-style-type: none"> <li>1. The bidder shall not be from a country sharing land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23<sup>rd</sup> July 2020, and MoCI Order No. P-45021/112/2020-PP (BE II) (E-43780) dated 24<sup>th</sup> August 2020. A declaration as per format given in <b>Annexure – D</b> shall be submitted with the bid.</li> <li>2. Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P45021/2/2017-PP (BE II) dated 16th September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I and Class-II local suppliers should be submitted in the prescribed proforma as per <b>Annexure-E</b>. Non-submission of self-declaration will lead to rejection of bid outrightly and the bidder will be treated as non-local supplier.</li> </ol>

	<p><b>Eligibility Criteria-II</b></p> <ol style="list-style-type: none"> <li>1. The bidder should not have been blacklisted / debarred by any Government/ regulatory bodies in India. A self-declaration should be given in the format in <b>Annexure – F</b></li> <li>2. The bidder should have registration with GST and PAN (Necessary document proof should be attached)</li> <li>3. The firm must have an annual turnover of atleast Rs.12 Lakhs in the last three year i.e.2019-20 and 2020-21, 2021-2022 (<b>ITR statements should be attached as proof</b>).</li> <li>4. The bidder should have supplied similar PA Systems in the last 3 years i.e. 2019, 2020 and 2021 for the value shown below in Govt. Institutions/any of Central PSU’s /any of Central Government Organisations/ Autonomous Bodies/ reputed firms (any one category): <ol style="list-style-type: none"> <li>i) Three (3) supplies each costing not less than Rs.10 Lakhs (Or)</li> <li>ii) Two (2) supplies each costing not less than Rs.15 Lakhs (Or)</li> <li>iii) One (1) supply costing not less than Rs.20 Lakhs</li> </ol> <p><b>Copies of the documents listed below should be submitted as a proof for the above supply:</b></p> <ol style="list-style-type: none"> <li>a. Purchase Order</li> <li>b. Work Completion Certificates with Performance</li> </ol> </li> </ol>
21	<p><b>Number of Bids and their Submission:</b> The bidders should submit the bids in two bid system as detailed below:</p> <p><b>Bid I Technical Bid</b> The technical bid should consist of filled in proforma of technical specification compliance sheet (proforma given in <b>Annexure-B</b>) along with proof for all relevant documents.</p> <p>The bidder should go through the scope of work (Annexure- A) and Technical bid (Annexure – B) of the tender document, understand the requirement of IITM before bidding and submit the technical bid covering the following details along with all relevant document proof. Any tender documents without these details shall be invalid and rejected.</p> <p><b>Bid II Financial Bid</b> The financial bid should be submitted as per the proforma (<b>Annexure C</b>). The quoted price should be inclusive of all.</p>
22	<p><b>Evaluation of Bids:</b> Bid Evaluation will take place in two stages.</p> <p><b>Stage I: Technical Bid evaluation</b></p> <ol style="list-style-type: none"> <li>1. Bidder will be evaluated first for conformity with Eligibility Criteria-I and those bidders who have complied with this criteria will alone be evaluated further.</li> <li>2. In the 2<sup>nd</sup> stage, the details for satisfying Eligibility Criteria-II and the technical specification offered by the bidders will be evaluated by the technical committee for compliance. Only those bidders who have fully complied with Eligibility Criteria I, II and technical specification will be considered for opening of financial bid.</li> </ol> <p><b>Stage II: Financial Bid Evaluation and Award of order</b> The lowest financial bid amongst those who have qualified in the Technical bid will be declared as successful bidder (L1) and the order will be awarded to the successful bidder (L1).</p>
23	<p>The bidders will not be entertained to participate in opening of Bids. Since the tender is e-tender, the opening of the bids may be checked using the respective logins of the bidders.</p>

**Sd/-**  
**Assistant Registrar (S&P)**

## **ACKNOWLEDGEMENT**

It is hereby acknowledged that I/We have gone through all the points listed under “Specification, Guidelines, Terms and Conditions” and Special Terms & Conditions of tender document, the same is abided and agreed to be executed. In case, if the above information is found false, I/We are fully aware that the tender /order will be rejected / cancelled by IIT Madras.

Signature of the Bidder  
Name & Address of the Bidder  
with Office Stamp

## SCHEDULE OF TENDER

### Supply and Installation of Public Address (PA) System in Film Club, IIT Madras

Tender No. IITM/SPS/Filmclub/10/2022-2023/SPL

Name of Organization	Indian Institute of Technology Madras
Tender Type (Open/Limited/EOI/Auction/Single)	OPEN
Tender Category (Services/Goods/Works)	Goods
Type/Form of Contract (Work/Supply/Auction/ Service/ Buy/ Empanelment/ Sell)	Supply
Name of the Tender	Supply and Installation of Public Address (PA) System in Film Club, IIT Madras
Source of Fund (Institute/Project)	IIT Madras
Is Multi Currency Allowed	No
Date of Issue/Publishing	22.11.2022
Document Download Start Date	22.11.2022
Document Download End Date	13.12.2022
Bid Submission Start Date	22.11.2022
Last Date and Time for Uploading of Bids	13.12.2022 @ 2.00 PM
Date and Time of Tender Opening	13.12.2022 @ 3.00 PM
No. of Covers (1/2/3/4)	2
Bid Validity days (180/120/90/60/30)	120 Days
Address for Communication	The Assistant Registrar Stores & Purchase Section IIT Madras Chennai – 600 036
Contact No.	For Queries : 044- 2257 8287/8290
Email Address	<a href="mailto:adstores@iitm.ac.in">adstores@iitm.ac.in</a>

## Technical Bid for Supply and Installation of Public Address (PA) System in Film Club, IIT Madras

Tender No. IITM/SPS/Filmclub/10/2022-2023/SPL

### I. Scope of Work:

- 1) Installation of new Speaker system and related amplifiers with the existing Projector and interfacing with the process controller.
- 2) Removal of all the existing speaker cables and replace with new ones.
- 3) The bidders are advised to make a visit to site prior to bidding in order to ascertain the exact quantum of work to be undertaken and be able to quote their best for the specification and quantity as mentioned in BoQ.
- 4) The bidder should submit test certificates for major OEM components as required by user during the supply of materials.
- 5) **Installation & Commissioning:**  
Bidder should be responsible for installation / commissioning and for after sales service during the Warranty period and thereafter as mentioned in the order.
- 6) Any other item/work not specified above but required for completion of intended work shall be deemed to be part of the scope of work to be executed by the successful bidder.
- 7) Bidder should bring tools, consumables and man power required for implementation of the work.
- 8) All the industrial safety practices must be followed during implementation of the project
- 9) The Bidder should have necessary experience in installation and satisfactory working of this item.
- 10) Only the approved make & models should be given otherwise bid will be rejected
- 11) Service back up should be provided as and when called and also a person must be deputed for the technical supports while screening the movie on the weekends.
- 12) The location and dimensions of the PA system is given in the **Annexure-G**

## II. Technical Specifications

S.No	Item Detail	Specifications	Make	Qty
1	<b>High Power, tri or quad-amp, 4 way Screen Speaker (2 x LF speaker and 1 x MHV speaker)</b>	<b>Specification for LF speaker: 2 Nos</b>  <b>Frequency Range:</b> 38 - 1300 Hertz ( $\pm 3$ dB) <b>Nominal Coverage:</b> 100° horizontal X 55° vertical at 600 Hz <b>Maximum Output:</b> 134.5 dB SPL peak, <b>Impedance:</b> 4 ohms nominal <b>Maximum Input Power:</b> 800 watts rms <b>Sensitivity (1 Watt, 1 meter):</b> 99.5 dB half space, 93.5 dB full space, 35 - 1000 Hertz  <b>Transducers:</b> Two 15" (381mm) high efficiency low	18Sound, QSC, RCF, Electrovoice	3 Nos

		<p>frequency transducers featuring vented 4" (100mm) copper voice coils.</p> <p><b>Enclosure:</b> Quasi B4 alignment, ported enclosure with fully flared ports, low turbulence symmetrical port design, tuned to 36 Hertz, constructed of medium density fibreboard and heavily braced. Features vandal resistant woofer mounting bolts</p> <p><b>Specification for MHV speaker: 1 No</b></p> <p><b>Frequency Range:</b> 180 – 20k Hz (±3 dB)  <b>Nominal Coverage:</b> 90° horizontal X +20 to -30° vertical  <b>Maximum Output:</b> Mid frequency 135.5 dB SPL  Tri-amp mode: high frequency/very high frequency 138 dB SPL  Quad-amp mode: high frequency 138 dB SPL, very high frequency 135 dB SPL  <b>Impedance:</b> Tri-amp mode: 8 ohms nominal, mid frequency and high/very high frequency  Quad-amp mode: 8 ohms nominal, mid, high, and very high frequency  <b>Maximum Input Power:</b> Mid frequency: 275 W  Tri-amp mode: high/very high frequency 155 W  Quad-amp mode: high frequency 85 W, very high frequency 70 W  <b>Sensitivity (1 Watt, 1 meter) :</b> Mid frequency: 105 dB SPL  Tri-amp mode: high/very high frequency 110 dB SPL  Quad-amp mode: high frequency 110 dB SPL  very high frequency 110 dB SPL</p> <p><b>Transducers:</b> Mid frequency: 10" high efficiency mid-range, phase-ring loaded  High frequency: 1.5" exit, 3.5" voice coil polyester diaphragm coaxial compression driver  Very High frequency: 1.5" exit, 1.75" voice coil polyester diaphragm coaxial compression driver</p> <p><b>Mounting Hardware:</b> Attaches to top of low frequency enclosures</p>		
2	Stage Subwoofer	<p>A cinema series subwoofer should provide the following specifications:</p> <p><b>Configuration:</b> 2 x 18-inch, subwoofer  <b>Frequency Response (-6 dB):</b> 22 Hz – 100 Hz  <b>Frequency Response (-10 dB):</b> 19Hz – 250 Hz  <b>Power Capacity ( Continuous ):</b> 1200W  <b>Sensitivity (1W, 1m):</b> 101 dB  <b>Output (Peak SPL @ 1m):</b> 137 dB  <b>Transducers:</b> Two 18-inch (457 mm) 700-watt high-efficiency subwoofer transducers featuring 4-inch (100 mm) copper voice coils on Kapton formers  <b>Nominal Impedance:</b> 4 ohms  <b>Enclosure:</b> B6 alignment, vented enclosure with symmetrical port design, tuned to 25 Hz, constructed of MDF</p>	18Sound, QSC, RCF, Electrovoice,	3Nos



		and heavily braced. Features vandal-resistant woofer mounting bolts.		
3	Surround Channel Speakers	<p>Cinema Surround Channel IP protected weather proof speakers should provide the following specifications:</p> <p><b>Effective frequency range:</b> 52 Hz – 20 kHz  <b>Rated noise power / voltage:</b> 300 watts / 50 volts (rms)  <b>Broadband Sensitivity:</b> 95 dB SPL  <b>Coverage angle (-6 dB):</b> 75° conical DMT™  <b>Directivity factor (Q):</b> 12  <b>Directivity Index:</b> 11 dB  <b>Maximum continuous SPL:</b> 120 dB  <b>Maximum peak SPL:</b> 126 dB  <b>Rated impedance:</b> 8 ohms  <b>Recommended amplifier power:</b> 600 watts  <b>HF transducer:</b> 1-inch exit / 1.4-inch voice coil compression driver  <b>LF transducer:</b> 12-inch weather resistant paper cone woofer, 2.5-inch / 64 mm voice coil</p> <p><b>Enclosure material:</b> Painted ABS polymer</p> <p><b>Grille material:</b> Powder coated aluminium</p> <p><b>Ingress protection:</b> IP-54</p> <p><b>Operating environment:</b> Designed for outdoor use</p>	18Sound, QSC, RCF, Electrovoice,	10 Nos
4	Network Core, 64x64 network I/O channels, USB AV bridging, dual LAN ports, VoIP telephony, 8 AEC processors, Half-size 1RU including all required software licences	<p><b>Channel Capacity:</b>  Channels: 64 x 64  Dante channels: 8 x 8  AEC channels: 8  WAN / media stream channels: 12 x 12  Network peripherals: 32(including cameras, I/O, NV, TSCs, paging stations)  Audio recording / playback: 4 ch recording / 16 ch playback  Media drive capacity: 16 GB on the default drive</p> <p><b>Control:</b> RS-232 (2 ports)</p> <p><b>USB Inputs &amp; Outputs (USB B or C)</b>  Channel count: 8 x 8  Sample Rate: 48 kHz</p> <p><b>USB audio device hosting:</b> Should support for standard USB headset, speakerphone on USB type A connection (one device at a time)</p> <p><b>Input:</b>  Sample rate: 48 k or 16 k, mono  Resolution: 8-bit, 16-bit, 24-bit, 32-bit, float  Format: little-endian, signed or unsigned</p> <p><b>Output:</b>  Sample rate: 48 k, Stereo  Resolution: 8-bit, 16-bit, 24-bit, 32-bit, float  Format: little-endian, signed or unsigned</p>	QSC, ASHLY, dbmark, Electrovoice	1 No

		<p><b>Key required features:</b></p> <ul style="list-style-type: none"> <li>• 64 x 64 networked audio channels</li> <li>• 8 x AEC (acoustic echo cancellation) processors</li> <li>• USB AV bridging (8 x 8 audio + camera support)</li> <li>• External USB audio device host</li> <li>• Should supports up to 2 VoIP softphone instances</li> <li>• Dual gigabit 10thernet ports with assignable application resources offering any combination of VoIP, LAN Control, LAN audio or network redundancy</li> <li>• Internal power supply</li> </ul>		
5	<p><b>8-Channel 1000W network Amplifier with mic / line Inputs</b></p>	<p><b>Independent Channels: 8</b>  <b>70V/100V/8Ω Load Peak Power: 1250W</b>  <b>70V/100V/8Ω/4 Ω Load Continuous Power: 600W</b>  <b>4Ω Load Peak Power: 1500W</b>  <b>Distortion @8Ω/4Ω: ≤ 0.1%</b>  <b>Frequency Response (8 Ω): 20 Hz – 20 kHz (+0.2 dB / -0.7 dB)</b>  <b>Noise: &gt;104 dB</b>  <b>Gain (1.2 V setting): 38 dB</b>  <b>Damping factor: &gt;100</b>  <b>Input impedance: &gt;8k balanced and &gt;4k unbalanced</b>  <b>Input Sensitivity (Vrms/dBu/dBv): (1.23 mV to 17.35 V)/(-56 to 27)/(-58.2 to 24.8)</b></p>	<p>QSC, Smiths, Dynacord, Electrovoice</p>	<p><b>2Nos</b></p>
6	<p><b>Digital Cinema Input / Output for use with Network Cores with all required software licences</b></p>	<p><b>AES/EBU input Channel: 16</b></p> <p><b>Audio Performance:</b>  <b>A/D conversion: 32-bit delta-sigma, 48 kHz</b>  <b>Frequency response: 20 Hz to 20 kHz</b></p> <p><b>Stereo Line Inputs:</b>  <b>Input impedance (4dBu sens): &gt; 10kΩ</b>  <b>Max analog input level (4dBu sens): 15 dBu (4.4 Vrms)</b></p> <p><b>HDMI: HDMI 2.0/HDCP 2.2 input/output for non-sync sources</b></p> <p><b>Relay control output: 4</b></p> <p><b>H.I./V.I. outputs: 5-pin Euro-style (x1) – common GND</b></p> <p><b>Mic/Line input: XLR- Mic (+ phantom power) or line level</b></p> <p><b>Should support Dolby Audio™ and DTS-HD® decoding</b></p>	<p>QSC, Smiths, Luis wassman, Dynacord, Electrovoice &amp; Mag Audio</p>	<p><b>1 No</b></p>

7	<b>PoE Touch Screen Controller</b>	<b>Display Type:</b> Projective capacitive (PCAP) multi-touch technology, high-resolution 24-bit colour display <b>Panel dimensions (WHD):</b> 253.2 x 158.5 x 39.1 mm <b>Resolution:</b> 1920 x 1200 px <b>Aspect ratio:</b> 16:10 <b>Contrast ratio:</b> 800:1 <b>Brightness:</b> 380 Nits <b>I/O:</b> LAN (1x RJ45) 1Gbps & USB 3.1 (1x Type-C) <b>Power over Ethernet:</b> PoE+ Class 4		<b>1No</b>
8	<b>Cordless true diversity wireless micro phone</b>	Cordless true diversity long range wireless micro phone system to cover range 200Ft from the projection booth.	AKG, Shure, Sennheiser	<b>1 No</b>
9	<b>Cables etc..</b>	Speaker cables (10AWG (200/0.18mm) x 2 core), conduits, connectors	--	<b>1 Lot</b>
10	<b>Installation, Testing and Commissioning</b>		---	<b>1 Lot</b>
11	<b>Extended warranty for 2 years</b>	<b>After completion of 3 years warranty</b>	--	<b>1 No</b>

**PROFORMA FOR TECHNICAL BID****Supply and Installation of Public Address (PA) System in Film Club, IIT Madras****Tender No. IITM/SPS/Filmclub/10/2022-23/SPL****A. PRE-QUALIFICATION CRITERIA**

Sl. No.	Description	Compliance (Yes/No)	Page Ref.No.
<b>PRE-QUALIFICATION CRITERIA</b>			
<b>I. ELIGIBILITY CRITERIA - I</b>			
1	The bidder shall not be from a country sharing Land border with India and if the bidder is from a country sharing land border with India the bidder should have been registered with the competent authority as per orders of DIPP OM No. F. No. 6/18/2019-PPD dated 23 <sup>rd</sup> July 2020, and MoCI Order No. P-45021/112/2020-PP (BE II) (E-43780) dated 24 <sup>th</sup> August 2020. A declaration as per format given in <b>Annexure – D</b> shall be submitted with the bid.		
2	Only 'Class-I local suppliers' and 'Class-II local suppliers', as defined under DIPP, MoCI Order No. P-45021/2/2017-PP (BE II) dated 16 <sup>th</sup> September 2020 and other subsequent orders issued therein, shall be eligible to bid in this tender. Declaration for Class-I and Class-II local suppliers should be submitted in the prescribed proforma as per <b>Annexure-E</b>		
<b>II. ELIGIBILITY CRITERIA - II</b>			
1	The bidder should not have been blacklisted / debarred by any Government/ regulatory bodies in India. A self-declaration format given in <b>Annexure – F</b>		
2	The bidder should have registration with GST and PAN (Necessary document proof should be attached)		
3	The firm must have an annual turnover of atleast Rs.12 Lakhs in the last three year i.e. 2019-20 and 2020-21. 2021-2022 <b>(ITR Statements should be submitted as proof).</b>		
4	<p>The bidder should have supplied similar PA systems in the last 3 years i.e. 2019, 2020 and 2021 for the value shown below in Govt. Institutions/any of Central PSU's /any of Central Government Organizations / Autonomous Bodies/ reputed firms (any one category):</p> <p style="padding-left: 40px;">i) Three (3) supplies each costing not less than Rs.10 Lakhs (Or)</p> <p style="padding-left: 40px;">ii) Two (2) supplies each costing not less than Rs.15 Lakhs (Or)</p> <p style="padding-left: 40px;">iii) One (1) supply costing not less than Rs.20 Lakhs</p> <p>Copies of the documents listed below should be submitted as a proof for the above supply:</p> <p style="padding-left: 20px;">a. Purchase Order</p> <p style="padding-left: 20px;">b. Work Completion Certificates with Performance</p>		

B. TECHNICAL SPECIFICATION

S.No	Item Detail	Specifications	Make	Qty	Compliance (Yes/No)	Page Ref.No
1	High Power, tri or quad-amp, 4 way Screen Speaker (2 x LF speaker and 1 x MHV speaker)	<p><b>Specification for LF speaker: 2 Nos</b></p> <p><b>Frequency Range:</b> 38 - 1300 Hertz (<math>\pm 3</math> dB)  <b>Nominal Coverage:</b> 100° horizontal X 55° vertical at 600 Hz  <b>Maximum Output:</b> 134.5 dB SPL peak,  <b>Impedance:</b> 4 ohms nominal  <b>Maximum Input Power:</b> 800 watts rms  <b>Sensitivity (1 Watt, 1 meter):</b> 99.5 dB half space, 93.5 dB full space, 35 - 1000 Hertz</p> <p><b>Transducers:</b> Two 15" (381mm) high efficiency low frequency transducers featuring vented 4" (100mm) copper voice coils.</p> <p><b>Enclosure:</b> Quasi B4 alignment, ported enclosure with fully flared ports, low turbulence symmetrical port design, tuned to 36 Hertz, constructed of medium density fibreboard and heavily braced. Features vandal resistant woofer mounting bolts</p> <p><b>Specification for MHV speaker: 1 No</b></p> <p><b>Frequency Range:</b> 180 - 20k Hz (<math>\pm 3</math> dB)  <b>Nominal Coverage:</b> 90° horizontal X +20 to -30° vertical  <b>Maximum Output:</b> Mid frequency 135.5 dB SPL  Tri-amp mode: high frequency/very high frequency 138 dB SPL  Quad-amp mode: high frequency 138 dB SPL, very high frequency 135 dB SPL  <b>Impedance:</b> Tri-amp mode: 8 ohms nominal, mid frequency and high/very high frequency  Quad-amp mode: 8 ohms nominal, mid, high, and very high frequency  <b>Maximum Input Power:</b> Mid frequency: 275 W  Tri-amp mode: high/very high frequency 155 W  Quad-amp mode: high frequency 85 W, very high frequency 70 W  <b>Sensitivity (1 Watt, 1 meter) :</b> Mid frequency: 105 dB SPL  Tri-amp mode: high/very high frequency 110 dB SPL  Quad-amp mode: high frequency 110 dB SPL  very high frequency 110 dB SPL</p> <p><b>Transducers:</b> Mid frequency: 10" high efficiency mid-range, phase-ring loaded</p>	18Sound, QSC, RCF, Electrovoice	3 Nos		

		<p>High frequency: 1.5" exit, 3.5" voice coil polyester diaphragm coaxial compression driver</p> <p>Very High frequency: 1.5" exit, 1.75" voice coil polyester diaphragm coaxial compression driver</p> <p><b>Mounting Hardware:</b> Attaches to top of low frequency enclosures</p>				
2	Stage Subwoofer	<p>A cinema series subwoofer should provide the following specifications:</p> <p><b>Configuration:</b> 2 x 18-inch, subwoofer</p> <p><b>Frequency Response (-6 dB):</b> 22 Hz – 100 Hz</p> <p><b>Frequency Response (-10 dB):</b> 19Hz – 250 Hz</p> <p><b>Power Capacity ( Continuous ):</b> 1200W</p> <p><b>Sensitivity (1W, 1m):</b> 101 dB</p> <p><b>Output (Peak SPL @ 1m):</b> 137 dB</p> <p><b>Transducers:</b> Two 18-inch (457 mm) 700-watt high-efficiency subwoofer transducers featuring 4-inch (100 mm) copper voice coils on Kapton formers</p> <p><b>Nominal Impedance:</b> 4 ohms</p> <p><b>Enclosure:</b> B6 alignment, vented enclosure with symmetrical port design, tuned to 25 Hz, constructed of MDF and heavily braced. Features vandal-resistant woofer mounting bolts.</p>	18Sound, QSC, RCF, Electro voice,	3Nos		
3	Surround Channel Speakers	<p>Cinema Surround Channel IP protected weather proof speakers should provide the following specifications:</p> <p><b>Effective frequency range:</b> 52 Hz - 20 kHz</p> <p><b>Rated noise power / voltage:</b> 300 watts / 50 volts (rms)</p> <p><b>Broadband Sensitivity:</b> 95 dB SPL</p> <p><b>Coverage angle (-6 dB):</b> 75° conical DMT™</p> <p><b>Directivity factor (Q):</b> 12</p> <p><b>Directivity Index:</b> 11 dB</p> <p><b>Maximum continuous SPL:</b> 120 dB</p> <p><b>Maximum peak SPL:</b> 126 dB</p> <p><b>Rated impedance:</b> 8 ohms</p> <p><b>Recommended amplifier power:</b> 600 watts</p> <p><b>HF transducer:</b> 1-inch exit / 1.4-inch voice coil compression driver</p> <p><b>LF transducer:</b> 12-inch weather resistant paper cone woofer, 2.5-inch / 64 mm voice coil</p> <p><b>Enclosure material:</b> Painted ABS polymer</p> <p><b>Grille material:</b> Powder coated aluminium</p> <p><b>Ingress protection:</b> IP-54</p> <p><b>Operating environment:</b> Designed for outdoor use</p>	18Sound, QSC, RCF, Electro voice,	10Nos		

4	<p><b>Network Core, 64x64 network I/O channels, USB AV bridging, dual LAN ports, VoIP telephony, 8 AEC processors, Half-size 1RU including all required software licences</b></p>	<p><b>Channel Capacity:</b>  Channels: 64 x 64  Dante channels: 8 x 8  AEC channels: 8  WAN / media stream channels: 12 x 12  Network peripherals: 32(including cameras, I/O, NV, TSCs, paging stations)  Audio recording / playback: 4 ch recording / 16 ch playback  Media drive capacity: 16 GB on the default drive</p> <p><b>Control:</b> RS-232 (2 ports)</p> <p><b>USB Inputs &amp; Outputs (USB B or C)</b>  Channel count: 8 x 8  Sample Rate: 48 kHz</p> <p><b>USB audio device hosting:</b> Should support for standard USB headset, speakerphone on USB type A connection (one device at a time)</p> <p><b>Input:</b>  Sample rate: 48 k or 16 k, mono  Resolution: 8-bit, 16-bit, 24-bit, 32-bit, float  Format: little-endian, signed or unsigned</p> <p><b>Output:</b>  Sample rate: 48 k, Stereo  Resolution: 8-bit, 16-bit, 24-bit, 32-bit, float  Format: little-endian, signed or unsigned</p> <p><b>Key required features:</b></p> <ul style="list-style-type: none"> <li>• 64 x 64 networked audio channels</li> <li>• 8 x AEC (acoustic echo cancellation) processors</li> <li>• USB AV bridging (8 x 8 audio + camera support)</li> <li>• External USB audio device host</li> <li>• Should supports up to 2 VoIP softphone instances</li> <li>• Dual gigabit ethernet ports with assignable application resources offering any combination of VoIP, LAN Control, LAN audio or network redundancy</li> <li>• Internal power supply</li> </ul>	QSC, Dynacord, dbmark, Electro voice	1 Nos		
5	<p><b>8-Channel 1000W network Amplifier with mic / line Inputs</b></p>	<p><b>Independent Channels: 8</b>  <b>70V/100V/8Ω Load Peak Power: 1250W</b>  <b>70V/100V/8Ω/4 Ω Load Continuous Power: 600W</b>  <b>4Ω Load Peak Power: 1500W</b>  <b>Distortion @8Ω/4Ω: ≤ 0.1%</b>  <b>Frequency Response (8 Ω): 20 Hz - 20 kHz (+0.2 dB / -0.7 dB)</b>  <b>Noise: &gt;104 dB</b>  <b>Gain (1.2 V setting): 38 dB</b>  <b>Damping factor: &gt;100</b>  <b>Input impedance: &gt;8k balanced and &gt;4k unbalanced</b>  <b>Input Sensitivity (Vrms/dBu/dBv): (1.23 mV to 17.35 V) / (-56 to 27)/(-58.2 to 24.8)</b></p>	QSC, Smiths, Dynacord, Electro voice	2Nos		

6	Digital Cinema Input / Output for use with Network Cores with all required software licences	<p><b>AES/EBU input Channel:</b> 16</p> <p><b>Audio Performance:</b></p> <p><b>A/D conversion:</b> 32-bit delta-sigma, 48 kHz</p> <p><b>Frequency response:</b> 20 Hz to 20 kHz</p> <p><b>Stereo Line Inputs:</b></p> <p><b>Input impedance (4dBu sens):</b> &gt; 10kΩ</p> <p><b>Max analog input level (4dBu sens):</b> 15 dBu (4.4 Vrms)</p> <p><b>HDMI:</b> HDMI 2.0/HDCP 2.2 input/output for non-sync sources</p> <p><b>Relay control output:</b> 4</p> <p><b>H.I./V.I. outputs:</b> 5-pin Euro-style (x1) – common GND</p> <p><b>Mic/Line input:</b> XLR- Mic (+ phantom power) or line level</p> <p><b>Should support Dolby Audio™ and DTS-HD® decoding</b></p>	QSC, Smiths, Luis wasman, Dynacord, Electro voice	1 Nos		
7	PoE Touch Screen Controller	<p><b>Display Type:</b> Projective capacitive (PCAP) multi-touch technology, high-resolution 24-bit colour display</p> <p><b>Panel dimensions (WHD):</b> 253.2 x 158.5 x 39.1 mm</p> <p><b>Resolution:</b> 1920 x 1200 px</p> <p><b>Aspect ratio:</b> 16:10</p> <p><b>Contrast ratio:</b> 800:1</p> <p><b>Brightness:</b> 380 Nits</p> <p><b>I/O:</b> LAN (1x RJ45) 1Gbps &amp; USB 3.1 (1x Type-C)</p> <p><b>Power over Ethernet:</b> PoE+ Class 4</p>	QSC, Crestorn, Extron, Dynacord, Electro voice	1No		
8	Cordless true diversity wireless micro phone	Cordless true diversity long range wireless micro phone system to cover range 200Ft from the projection booth.	AKG, Shure, Sennheiser	1 Nos		
9	Cables etc..	Speaker cables (10AWG (200/0.18mm) x 2 core), conduits, connectors	--	1 Lot		
10	Installation, Testing and Commissioning		---	1 Lot		
11	Extended warranty for 2 years	After completion of 3 years warranty	--	1 No		

Place:  
Date:

Signature of the Bidder  
Name & Address of the Bidder with Office Stamp



**PROFORMA FOR FINANCIAL BID (BOQ)****Supply and Installation of Public Address (PA) System in Film Club, IIT Madras****Tender No. IITM/SPS/Filmclub/10/2022-23/SPL**

Sl.No.	Description	Qty.	Rate Per Unit	Cost (without GST)	GST (in %)	Total Cost (with GST)
1	High Power, tri or quad-amp, 4 way Screen Speaker (2 x LF speaker and 1 x MHV speaker)	3 Nos				
2	Stage Subwoofer	3 Nos				
3	Surround Channel Speakers	10 Nos				
4	Network Core, 64x64 network I/O channels, USB AV bridging, dual LAN ports, VoIP telephony, 8 AEC processors, Half-size 1RU including all required software licences	1 No				
5	8-Channel 1000W network Amplifier with mic / line Inputs	2 Nos				
6	Digital Cinema Input / Output for use with Network Cores with all required software licences	1 No				
7	PoE Touch Screen Controller	1 No				
8	Cordless true diversity wireless micro phone	1 No				
9	Cables etc..	1 lot				
10	Installation, Testing and Commissioning	1 lot				
11	Extended warranty for 2 years	1 No				
<b>Total Cost</b>						

**Total Cost in figures:****NOTE:**

- \* The rate should be inclusive of, transportation, loading, unloading, assembly and installation.

Place:

Date:

Signature of the Bidder

Name &amp; Address of the

Bidder with Office Stamp

(To be given on the Letter Head of the bidder)

---

**Tender No. IITM/SPS/Filmclub/10/2022-23/SPL**

Dated:

**CERTIFICATE**

*(Bidders from India)*

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I am not from such a country.

***OR (whichever is applicable)***

*(Bidders from Country which shares a land border with India)*

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and hereby certify that I from \_\_\_\_\_ (Name of Country) and has been registered with the Competent Authority. I also certify that I fulfil all the requirements in this regard and is eligible to be considered. (Copy/ evidence of valid registration by the Competent Authority is to be attached)

Place:

Date:

Signature of the Bidder  
Name & Address of the  
Bidder with Office Stamp

**FORMAT FOR AFFIDAVIT OF SELF-CERTIFICATION UNDER PUBLIC PROCUREMENT POLICY****(PREFERENCE TO MAKE IN INDIA) 2017****Supply and Installation of Public Address (PA) System in Film Club, IIT Madras****Tender No. IITM/SPS/Filmclub/10/2022-23/SPL**

Date: \_\_\_\_\_

I/We \_\_\_\_\_ S/o, D/o, W/o, \_\_\_\_\_

Resident

of \_\_\_\_\_ Hereby solemnly affirm and declare as under:

That I will agree to abide by the terms and conditions of the Public Procurement (Preference to Make in India) Policy vide Gol Order no. P-45021/2/2017-PP (B.E.-II) dated 15.06.2017 (subsequently revised vide orders dated 28.05.2018, 29.05.2019 and 04.06.2020) MOCI order No. 45021/2/2017-PP (BE II) Dt.16th September 2020 & P- 45021/102/2019-BE-II-Part(1) (E-50310) Dt.4th March 2021 and any subsequent modifications/Amendments, if any and

That the local content for all inputs which constitute the said item/service/work has been verified by me and I am responsible for the correctness of the claims made therein.

Tick ( ✓ ) and Fill the Appropriate Category	
<input type="checkbox"/>	I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to or more than 50% and come under <b>"Class-I Local Supplier"</b> category.
<input type="checkbox"/>	I/We _____ [name of the supplier] hereby confirm in respect of quoted items that Local Content is equal to or more than 20% but less than 50% and come under <b>"Class-II Local Supplier"</b> category.

The details of the location (s) at which the local value addition is made and the proportionate value of local content in percentage

Percentage of Local content:\_%\*\* .

Place of the local content value calculated: \_\_\_\_\_

For and on behalf of ..... (Name of firm/entity)

Authorized signatory (To be duly authorized by the Board of Directors)

&lt;Insert Name, Designation and Contact No.&gt;

[Note: In case of procurement for a value in excess of Rs. 10 Crores, the bidders shall provide this certificate from statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

This letter should be on the letterhead of the quoting firm and should be signed by competent authority.

\*\* Services such as transportation, insurance, installation, commissioning, and training and after sales service support like AMC/CMC cannot be claimed as local value addition

(To be given on the Letter Head of the bidder)

**Self-Declaration that the Service Provider has not been Black listed**

**Tender No. IITM/SPS/Filmclub/10/2022-23/SPL**

I ..... S/o .....  
R/o ..... police station ..... District ..... Director  
/ partner/ sole proprietor (Strike out whichever is not applicable) of .....  
..... (Firm or Company) do hereby declare and solemnly affirm:

- I. That the Firm ..... has not been Blacklisted or declared insolvent by any of the Union or State Government / Organization.
- II. That none of the individual / firm / Company Blacklisted or any partners or shareholder thereof has any connection directly or indirectly with or has any subsistence interest in the deponent business / firm company.
- III. That neither the Firm nor any of its partner has been involved / convicted in any criminal case / economic offence nor any criminal case / economic offence is pending against firm or any partner of the Firm before any Court of Law / Police.

Place:  
Date:

Signature of the Bidder  
Name & Address of the  
Bidder with Office Stamp

The location and dimensions of the PA system

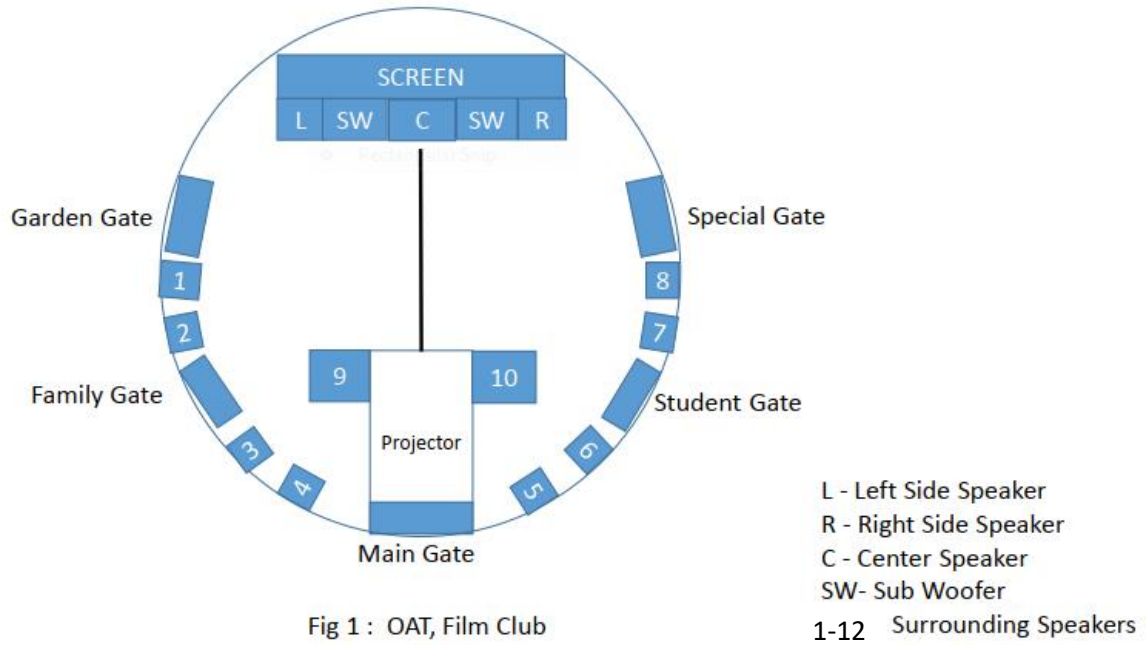


Fig 1 : OAT, Film Club