

सरदार वल्लभभाई पटेल राष्ट्रीय पुलिस अकादमी  
SARDAR VALLABHBHAI PATEL NATIONAL POLICE ACADEMY  
(भारत सरकार : गृह मंत्रालय)  
(Government of India: Ministry of Home Affairs)  
हैदराबाद – 500 052  
Hyderabad – 500 052

**TENDER NOTICE NO : 31011/03/2017-18/HS.W**  
**DATED 14 Nov, 2017**

**SUPPLY OF AUDIO VISUAL EQUIPMENTS TO SARDAR**  
**VALLABHBHAI PATEL, NATIONAL POLICE ACADEMY, HYDERABAD**

Date of Tender Enquiry : 14 Nov, 2017

Closing date & time of submitting bids : 06 Dec, 2017



Website: <http://www.eprocure.gov.in>



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**NOTICE INVITING TENDER**  
**(e-Tender)(Open Tender)**

1. SVP National Police Academy, Shivrampally, Hyderabad, invites **e-bids** under Two- bid system (Technical Bid & Financial Bid) in **Open Tender** enquiry from reputed manufacturers or their authorized dealers, fulfilling the following minimum eligibility criteria and as per the terms & conditions for supply of Audio Visual Equipments (List of items is placed as Appendix –A – page No 07 & Appendix-B –page no 13) (**with 03 years onsite comprehensive warranty**) for New IPS Mess Lounge (1<sup>st</sup> floor) and Dining Hall of SVP National Police Academy Hyderabad.
2. Salient features of the tender enquiry are as follows:-

a)	Tender No.	31011/03/2017-18/HS.W dated 14.11.2017
b)	Description of item - <b>Audio Visual Equipments</b>	
	i) <b>For New IPS Mess Lounge Part-1 -(List of items placed at Appendix-A-page No 7 with specification at page No 8 to 12)</b>	
	ii) <b>For Dining Hall Part-2 (List of items placed at Appendix –B-page No 13 with specifications at page No 14 to 16)</b>	
c)	Type of Tender	Open Tender
d)	Bid System	Two Bid System (Technical Bid & Commercial Bid)
e)	Earnest Money Deposit.	Demand draft of Rs 37,000/- drawn in favour of 'The Director, S.V.P. National Police Academy, Hyderabad'.
f)	Delivery schedule / completion period	Delivery should be completed within 60 days from the date of purchase order of the Academy.
g)	Terms of Delivery	Free on Rail / Road (F.O.R.) Destination, SVP, NPA, Hyderabad.
h)	Bid validity	Bid should be valid for <b>180 days</b> from the date of opening of bid.
i)	Address of correspondence	The Administrative Officer (Admn) SVP National Police Academy, Shivrampally, Hyderabad, Andhra Pradesh – 500 052

3. Important dates related to this e-Open Tender are furnished below for information:

Srl No	Particular	Date	Time
a)	Date of online publication of tender	14/11/2017	1000 hrs
b)	Starting date for downloading tender documents	14/11/2017	1100 hrs
c)	Bid submission starting date	14/11/2017	1130 hrs
d)	Bid submission closing date	06/12/2017	1700 hrs
e)	Closing date & time for submission of original copies of EMD	06/12/2017	1700 hrs
f)	Opening of bid	08/12/2017	1700 hrs

4. Interested manufacturers/ authorised dealers/suppliers dealing with items mentioned in Appendix - 'A' can download the tender document from CPP Portal ([www.eprocure.gov.in](http://www.eprocure.gov.in)) and bid can only be submitted through the same website. Bid submitted other than on CPP Portal will not be accepted. The eligible bidders should have the digital signature certificate (DSC) issued from any agency authorised by controller of certifying authority (CCA), Govt. Of India.
5. The bids are invited online under two cover system (Technical bid – Cover-1) and price bid/bill of quantity (BOQ) (Cover-2) from eligible bidders.
6. Bidders can access and download the tender documents from CPP Portal and can fill them with all relevant information and submit the completed tender documents online on the website: <http://www.eprocure.gov.in>. The downloading of tender documents shall be carried out strictly as provided on the website. No editing, addition, deletion of matter shall be permitted. If such action is observed at any stage, such tenders are liable for outright rejection.
7. Tender shall be submitted online only at CPPP website. Bidders are advised to refer the Bidders manual kit for e-submission of the bids online through the Central Public procurement portal available at the website: <http://www.eprocure.gov.in>. Aspiring Bidders/ Suppliers who have not enrolled/ registered in e-procurement should enrol/register before participating through the website <http://www.eprocure.gov.in>. The portal enrolment is free of cost.
8. All the documents as per tender requirement should be uploaded online and further, no documents will be accepted offline. However, Demand Draft (EMD- Earnest money deposit) hard copy should be sent to SVP National Police Academy before the due date of opening. Bidders who are not submitting any of the required documents online will summarily be rejected.
9. The details of the Tender documents and EMD should be filled and uploaded online. Earnest Money Deposit (EMD) for Rs 37,000/- only should be deposited in form of Demand draft drawn on any nationalized bank in favour of 'The Director, S.V.P. National Police Academy, payable at SBI, Shivarampally, Hyderabad. **Bids without EMD will not be considered.** Tender Reference Number of details should be mentioned on the backside of the original Demand Draft and the same should be sent to SVP National Police Academy, Hyderabad before due date of opening of the tender.

### **Terms and Conditions**

1. The TIA (Tender inviting authority) will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour. For any queries regarding e-tendering process, the bidders are requested to contact over phone : 7799289911 or send a mail over to [cphp-nic@nic.in](mailto:cphp-nic@nic.in).
2. **Service Centre** : OEM should have their service centre in Hyderabad, India irrespective of the fact whether OEM is participating directly or through Indian agent to ensure prompt after sales service support. If OEM service centre is not available in India then offer of bidder is liable to be rejected.



3. Following scanned documents in PDF/Excel file format must be enclosed in separate covers duly sealed and stamped.

**First cover (In PDF)**

- a) The firm must enclose the attested copy of their **Supplier/firm's Registration, ISO Certificate, OEM Certificate, Delivery term, GST/TIN of the Firm, Pan Card of the firm, Income Tax Returns – Last 3 years, VAT/Sale Tax Returns, list of valued customers, Warranty period (03 years onsite comprehensive warranty)** and copies of earlier supply orders should accompany along with the quotation. All these documents are to be attached only with Technical Bid.
- b) The Technical Bid containing the specifications of each item, Make, Brand and Model of item and other information leaflets of the proposed brand which the bidder intends to deliver and the delivery schedule by the bidder, **shall be enclosed with the technical tender.**
- c) Scanned copy of EMD for Rs 37,000/- only in the form of Demand draft drawn on any nationalized bank in favour of 'The Director, S.V.P. National Police Academy, payable at SBI, Shivarampally, Hyderabad be submitted in portal followed by original copy before closing of tender date at the address of The Administrative Officer (Admn), SVP National Police Academy, Shivarampally, Hyderabad. **Offers received without the prescribed EMD, will be rejected summarily.**

**Second Cover :-**

- a) The Financial bid (In excel file like BoQ) :- The rates i.e. unit rate of each item and total amount including all taxes, transportation charges, labour charges and installation charges, if any, are to be quoted explicitly both in words and figures. The Price Bid/BOQ template may not be modified or replaced by the bidder; else the bid submitted is liable to be rejected for this tender. No excess amount beyond the quoted amount will be considered.
- b) The prices once accepted by the purchaser shall remain valid till the successful execution of the complete order to the satisfaction of the purchaser.
- c) The Financial Bid shall comprise the price component indicating the delivery price including all taxes and installation charges etc. The unit price thereof shall not be overwritten. The unit price, taxes and any other charges should show in separate columns.
- d) Quoted prices **should be inclusive of freight** and forwarding charges, handling charges, loading and unloading charges, insurance charges, etc.
- e) Prices shall be quoted in Indian rupees only.



4. The Bid / Tender submitted shall necessarily remain valid for 180 days after the date of commercial bid opening. If any bidder withdraws his tender before the said period, SVP NPA shall-without prejudice to any other right or remedy, be at liberty to forfeit the Bid Security submitted along with the bid.
5. No interest will be paid on Earnest Money Deposit. EMD of unsuccessful tenderers will be returned in due course of time. If the quotation is accepted and the contracted firm fails to undertake the supply contract, their EMD will be forfeited without any further notice.
6. The Director, SVP National Police Academy **reserves the right to order full or part thereof** of the items enclosed or accept/reject any or all the bids without assigning any reason.
7. Dispatch Instructions : Stores are required to be delivered at consignee place at freight, risk and cost of the supplier.
8. Payment Terms : Payment will be released on production of inspection report and receipt and installation of stores at consignee's location.
9. Penalty Clause : Firm is to be supplied the ordered stores within time failing which, penalty @ 0.5% of the Purchase Order value will be recovered for per day subject to a maximum of 5% (five percent) from the final payment unless extension is obtained in writing from this office on valid ground before expiry of delivery period. Further in case of inordinate delay of 04 weeks from the stipulated date of supply, this purchase order may be cancelled without any further notice and your firm may also be blacklisted.
10. Purchaser reserve the right to get the manufacturing capacity of all firms re-verified irrespective of the registration status.
11. The price bids of the bidders whose technical offers are acceptable will be opened and order would be considered on the lowest bid subject to their capacity and performance etc.
12. The successful bidder will provide 1 week free of cost training on handling, operation & minor repair of the Audio Visual System.
13. The firm applying tenders against the Tender Enquiry are informed that all relevant details with reference to the Tender Enquiry stipulation are clearly responded to otherwise their offer is liable to be rejected.
14. Before submission of tender, tenderers will check the Specifications compliance sheet (at page No 8 to 12 & 14 to 16) attached to these Tender Documents for compliance on various stipulations of the tender.
15. The Tender Processing Committee of the Academy may visit the site wherever the A V equipments are installed or the manufacture to verify the quality. The Tender Processing Committee may also require the bidders to give a demo either at NPA or at a place of their convenience.

16. **SAMPLE** The Tender Processing Committee of the Academy may require the bidders to provide physical samples to be seen during the opening of technical bid and to test quality of Eqpt. Bidder is self responsible on his own expenditure for showing the sample before board during opening of technical bid.
17. Liability of the work order getting cancelled, if the quality / progress of the work is found to be not satisfactory or if there is an inordinate delay of more than 4 weeks in completing the supply from stipulated date as per PO.
18. The bidder will be blacklisted by the Academy in case of (column-17) above being invoked.
19. The SVP NPA reserves the right to increase or decrease the quantity of supply / items.
20. The Director SVP NPA reserves the right to cancel the order without pre notice, forfeit the security deposit or recover any damages for any breach of contract.
21. Notwithstanding any of the conditions and clauses indicated in the Tender form, the Director has whole and sole right to accept or reject either the lowest or any other valid bid and or **split up the order** for supplying of Audio Visual Equipments to more than one bidder or to cancel the Tender without assigning any reasons thereto.
22. **Performance Security Clause :-** The successful bidder on receipt of supply order should submit a Bank Guarantee (5% of the order value) issued by any Nationalized Bank in favour of the Director, SVP National Police Academy, Hyderabad payable at SBI Shivrampally, Hyderabad within 15 days of the placement of supply order for due performance as per the provisions contained in GFR-2017. Failure on the part of the firm to deposit the performance security within stipulated time the purchase reserves the right to cancel the supply order. Performance security submitted by the bidder will remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. No interest will be payable for "Performance Security".
23. **Opening and Evaluation of Technical Bids:**
  - a) The Tender Committee appointed by the Competent authority of Academy will open all Technical Bids in the first instance on the appointed date, time at SVP NPA Hyderabad.
  - b) During evaluation of the bids, the purchase committee may, at its discretion, ask the Bidder for clarifications of its bid. The clarification of the bidder shall be in writing.
  - c) No bidder shall contact the committee member on any matter relating to its bid from the time of the bid opening to the time the purchase order is placed. If the Bidder wishes to bring additional information to the notice of the Purchaser it should be done in writing.

- d) Any effort by a bidder to influence the Purchaser in its decisions on bid evaluation, bid comparison or purchase order decision will result in rejection of the bid.
- e) The results of the evaluation of the Technical Bids along with the date of opening of the Financial Bids will be communicated to the qualifying bidders. The purchase committee may at its option to choose to open the financial bids immediately after the opening and evaluation of the Technical Bids.

24 **Opening and evaluation of Financial Bids:**

- a) The Tender Processing Committee will open the financial bids in favour of vendors who successfully qualified technical bid.
- b) Arithmetical errors will be rectified on the following basis:- If there is a discrepancy between words and figures, the lower of the two shall be taken as the bid price. If the bidder does not accept the correction of errors, as aforesaid, its bid will be rejected, and its EMD will stand forfeited

25 **Eligibility Conditions**

- a) The bidding firm should have the capability to supply the ordered equipment in time as per the schedule indicated in the salient features i.e. the supply shall be completed within 60 days from the date of receipt of purchase order.
- b) Any Government organization/undertaking should not have blacklisted debarred/suspended the bidding firm.
- c) The Vendor should preferably be an entity registered in India.

26 **Taxes and duties**

- a) Vendor shall be entirely responsible for all taxes, duties, license, fees etc. incurred until delivery of the contracted services/items to the Academy.
- b) No bid will be considered unless and until all the pages / documents comprising the bid are properly numbered, signed and stamped by the person/s authorized to do so.



( R. Jayanthi )  
Administrative Officer (Admn.)  
SVP National Police Academy

**Equipment / Item Description for New IPS Mess Lounge of SVP NPA Part-I:**

<b>S/ No.</b>	<b>Description</b>	<b>Make</b>	<b>Qty</b>
1.	LCD Projector, 5400 Ansi Lumens 10000:1 Contrast Ratio WUXGA resolution	Panasonic or equivalent	01 No
2.	Universal Ceiling Mount Kit for the Projector (3-8 Feet adjustable)	Custom	01 No
3.	Motorized Projection Screen 142" Inch (16:10)	Elite / Droper or equivalent	01 No
4.	Amplifier (800 W) 2 Channel each 400W	QSC or equivalent	01 Nos
5.	Wall mount 2 Way Load Speaker (White Color)	QSC (AD-S6T) or equivalent	08 Nos
6.	16 Channel Mixer Unit with Effects	Yamaha(MGP16X U) or equivalent	01 Nos
7.	Feedback Destroyer	Shure (DFR 22) or equivalent	01 No
8.	Wireless Hand Held Microphone	Shure (BLX 24R /SM58) or equivalent	02 Nos
9.	Wireless Collar Microphone	Shure (BLX 14R /WL93) or equivalent	01 Nos
10.	Cardioids Condenser Quick-Mount Gooseneck Microphone 18 Inch Long	Shure or equivalent	02 Nos
11.	VGA Distribution Amplifier One In Six Out	Extron (DA6)	01 No
12.	RGVHV (VGA) Cable in meters	Extron (MHR 5)	200 Mtrs
13.	Audio / Microphone Cable in meters	Extron (STP 22)	150 Mtrs
14.	Speaker Cable in meters	Extron (SPK 18)	300 Mtrs
15.	Required Connectors	Extron/ Nutric	01 Lot
16.	24 U Equipment Rack with Two Universal Power Spikes	Valrack or equivalent	01 No
17.	Required Conduits & Case capping	ISI Make	01 Lot
18.	Installation & Commissioning of AV System in Professional manner, Testing Training and Handover along with Documentation	Custom	01 Job

**Note:**

1. All items should be compatible with each other and obsolete product will not be quoted.
2. 3 years onsite comprehensive warranty required.
3. OEM authorized service centre should be available in Hyderabad.
4. Laying of the VGA, CAT and HDMI cable as per future requirement has to be installed and connectors are to be connected for ready use in future.





**Technical Specifications for items required to purchase for  
New IPS Mess Lounge of SVP NPA Part-1**

S. No	Item Description	Required Features & Technical Specifications
1.	LCD Projector, 5400 Ansi Lumens, 10000:1 Contrast Ratio WUXGA resolution  Panasonic or equivalent	<b>Key Features:</b> <ul style="list-style-type: none"> <li>➤ Display method Transparent LCD panel (× 3, R/G/B)</li> <li>➤ Drive method Active matrix</li> <li>➤ Pixels 2,304,000 (1,920 × 1,200) or more</li> <li>➤ Powered zoom</li> <li>➤ Powered focus</li> <li>➤ Lamp replacement cycle &gt; 4,000Hrs.(Normal), 5,000Hrs. (Eco)</li> <li>➤ Screen size 1.02–10.16 m (40 –400 inches) (16:10 aspect ratio)</li> <li>➤ Brightness 5,400 lumens</li> <li>➤ Center-to-corner uniformity 90%</li> <li>➤ Contrast 10,000:1</li> <li>➤ Resolution 1,920 × 1,200 pixels</li> <li>➤ Scanning frequency HDMI/DIGITAL LINK</li> <li>➤ RGB</li> <li>➤ Installation - Ceiling/Floor, front/rear</li> <li>➤ Internal Speaker</li> <li>➤ Two HDMI Inputs</li> <li>➤ DIGITAL LINK IN RJ-45 × 1 (HDBaseT™ compatible)</li> <li>➤ RGB 1 IN BNC 75ohms</li> <li>➤ RGB 2 IN D-sub HD 15-pin (female) × 1</li> <li>➤ VIDEO IN 75 ohms</li> <li>➤ MONITOR OUT D-sub HD 15-pin (female) × 1</li> <li>➤ Two AUDIO IN 0.5 Vrms, input impedance: 22 kilohms</li> <li>➤ VARIABLE AUDIO OUT - M3 × 1 2.2 kilohms</li> <li>➤ SERIAL IN - D-sub 9 p × 1, for external control (RS-232C compliant)</li> <li>➤ REMOTE 1 IN - D-sub 9-pin (female) ×1, for external control (parallel)</li> <li>➤ REMOTE 2 IN - M3 jack × 1 for wired remote control</li> <li>➤ LAN RJ-45 × 1 for network connection 10Base-T/100Base-TX, compatible</li> <li>➤ WIRELESS USB Type A × 1, for wireless projection</li> <li>➤ Operation noise &lt; 29 dB (Silent), &lt; 35 dB (Normal/Eco) or better</li> <li>➤ Operating temperature 0 –45 °C (32 –113 °F) or better</li> </ul>
2.	Universal Ceiling Mount Kit for the Projector (3-8 Feet adjustable)	<b>Key Features:</b> <ul style="list-style-type: none"> <li>➤ 3–8 feet adjustable universal, cylindrical ceiling mount kit for LCD Projector (Concealed cable routing)</li> <li>➤ If required extension should be included as per the site requirement</li> </ul>
3.	Motorized Projection Screen 142" Inch (16:10) Elite/Droper or equivalent	<b>Key Features:</b> <ul style="list-style-type: none"> <li>➤ Nominal Diagonal:142" (16:10) of Viewing Area</li> <li>➤ Screen Gain: 1.1</li> <li>➤ Screen Material: Max White</li> <li>➤ 160° of wide viewing angle</li> <li>➤ Multi-Purpose Electric Projection Screen with IR Remote, Low voltage 3-way wall switch and 12 volt trigger cable</li> </ul>



<p>4.</p>	<p>Amplifier 800 W 2 Channel each 400W</p> <p>QSC or Equivalent</p>	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Stereo Mode (both channels driven)</li> <li>➤ Continuous Rated Power 100V at 1KHz, THD 1% more than 400 Watts</li> <li>➤ Continuous Rated Power 70V at 1KHz, THD 1% not less than 400 Watts</li> <li>➤ Continuous Rated Power 8 Ohms at 1KHz, THD 1% not less than 400Watts</li> <li>➤ Continuous Rated Power 4 Ohms at 1KHz, THD 1% not less than 600 Watts</li> <li>➤ Continuous Rated Power 4 Ohms at 20Hz to 20KHz, THD &lt;0.2% not less than 600 Watts</li> <li>➤ Continuous Rated Power 8 Ohms at 20Hz to 20KHz, THD &lt;0.2% not less than 400 Watts</li> <li>➤ Continuous Rated Power 70V at 20Hz to 20KHz, THD &lt;0.2% not less than 400 Watts</li> <li>➤ Frequency Response: 20 Hz – 20 kHz: ±1 dB / -3 dB points: 5 Hz – 50 kHz</li> <li>➤ Cross talk &lt;&lt;-75dB</li> <li>➤ Input Impedance: 10k ohms unbalanced, 20k ohms balanced</li> <li>➤ Input Clipping: 10 Vrms (+22 dB)</li> <li>➤ Cooling: Continuously variable-speed fan, rear-to-front air flow</li> <li>➤ Indicators</li> <li>➤ Amplifier Protection: Stable into reactive or mismatched loads</li> <li>➤ Load Protection: On/off muting, AC coupling</li> <li>➤ "Flex-Use" loading options allow you to drive low-impedance loads down to 4 ohms and certain models to drive 70 and 100V distributed loudspeaker systems</li> <li>➤ "Flex-Use" Input connectivity choices including actively balanced barrier strip, XLR, or 1/4" TRS</li> <li>➤ "Flex-Use" Output connectivity choices include NL4</li> <li>➤ Rack mountable with chassis less than 16" or 40.6 mm deep</li> </ul>
<p>5.</p>	<p>Wall mount Two Way Load Speaker</p> <p>QSC or equivalent</p>	<ul style="list-style-type: none"> <li>➤ HF transducer 1" silk dome tweeter / 1" voice-coil horn loaded</li> <li>➤ LF transducer 6.5" weather treated paper cone woofer, 1.5" / 38mm voice-coil Effective frequency range 160 – 20k Hz</li> <li>➤ Coverage angle not less than 105°</li> <li>➤ Directivity factor (Q) 5 or better</li> <li>➤ Directivity Index 7 dB or better</li> <li>➤ Maximum continuous SPL4 110 dB</li> <li>➤ Maximum peak SPL4 116 dB or better</li> <li>➤ Rated impedance 8 ohms</li> <li>➤ Transformer taps 70 V/ 100V: 60, 30, 15, 7.5 watts and 8 ohm bypass</li> <li>➤ Input connector type Euro block connector with parallel output</li> <li>➤ Enclosure material Painted ABS polymer</li> <li>➤ Grille material Powder coated aluminum</li> <li>➤ Operating environment should Designed for indoor and outdoor use</li> <li>➤ Operating Temperature Range -20 to 50 °C / -4 to 122 °F or better</li> <li>➤ Body color should in white</li> </ul>



<p>6.</p>	<p>16 Channel Mixer Unit with Effects  Yamaha or equivalent</p>	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ 16-Channel Mixing Console</li> <li>➤ Max. 10 Mic / 16 Line Inputs (8 mono + 4 stereo)</li> <li>➤ 4 GROUP Buses + 1 Stereo Bus</li> <li>➤ 4 AUX (incl. FX)</li> <li>➤ "D-PRE" mic preamps with an inverted Darlington circuit</li> <li>➤ 1-Knob compressors</li> <li>➤ High-grade effects: SPX with 24 programs</li> <li>➤ 24-bit/192kHz 2in/2out USB Audio functions</li> <li>➤ Works with the iPad (2 or later)</li> <li>➤ Includes Cubase AI DAW software download version</li> <li>➤ PAD switch on mono inputs</li> <li>➤ +48V phantom power</li> <li>➤ XLR balanced outputs</li> <li>➤ Internal universal power supply for world-wide use</li> <li>➤ Rack Mount Kit</li> <li>➤ Metal chassis</li> </ul>
<p>7.</p>	<p>Feedback Destroyer  Shure or Equivalent</p>	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Audio Inputs Connections - XLR and ¼" TRS Stereo Connector</li> <li>➤ Inputs Type - Electronically Balanced input</li> <li>➤ Input impedance - Approx. 20 k Ohms balanced or Better</li> <li>➤ Nominal input level - -10 dBv to +4 dBu in adjustable</li> <li>➤ Max. Input Signal level - +20 dBu at +4 dBu or Better dBv at -10 dBv nominal level typically-40dB</li> <li>➤ Audio Outputs Connections - XLR and ¼" TRS Stereo Connector</li> <li>➤ Outputs Type - Balanced</li> <li>➤ Output impedance - 200 Ohms balanced or better</li> <li>➤ Max. Output level - +20 dBu at +4 dBu or Better</li> <li>➤ Frequency Response - &lt;10 Hz to 44 kHz or better</li> <li>➤ Dynamic range - 107 dB or better</li> <li>➤ THD - 0.007% typically @+4 dBu, 1kHz, amplification 1</li> <li>➤ Crosstalk - &lt;-100 dB @ 1 kHz or Better</li> <li>➤ MIDI interface Type Required- 5-Polo DIN connectors IN/OUT/THRU</li> <li>➤ Digital Processing_Converter - 24 Bit/96 kHz or better</li> <li>➤ Sample Rate - 96 kHz or Higher</li> </ul> <p><u>Parametric equalizer (PEQ)</u></p> <ul style="list-style-type: none"> <li>➤ Type - 20 or more independent, fully parametric filters per channel required</li> <li>➤ Frequency Range - 20 Hz to 20 kHz</li> <li>➤ Bandwidth - 1/60<sup>th</sup> to 10 octaves or better</li> <li>➤ Possible value range - +15 to -36 db or better</li> </ul> <p><u>Feedback Destroyer (FBQ)</u></p> <ul style="list-style-type: none"> <li>➤ Type - Digital Signal analysis for feedback recognition purposes</li> <li>➤ Filter - Max. 20 digital notch filters per channel</li> <li>➤ Frequency Range - 20 Hz to 20 kHz</li> <li>➤ Bandwidth - 1/60<sup>th</sup> octave or better</li> <li>➤ Possible value range - 0 to -36 dB or better</li> <li>➤ Display_Type - 3-digit numeric LED Display or More</li> </ul> <p><u>Power Supply</u></p> <ul style="list-style-type: none"> <li>➤ Main voltage - 100-240 V~, 50-60 Hz</li> </ul>

<p>8.</p>	<p>Wireless Microphone Hand Held</p> <p>Shure or Equivalent</p>	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Operating Frequencies - UHF Band Immune to GSM,CDMA,3G Etc.</li> <li>➤ Modulation Mode - FM</li> <li>➤ Audio Freq. Range to response- 50 – 15,000Hz</li> <li>➤ LCD Display - Display of RF, Audio and Battery level</li> <li>➤ Antenna - Removable Antenna</li> <li>➤ Antenna Input - 50 ohms</li> <li>➤ Operating Range - Not Less than 100Meter (300'), typical Open Range environment with no interfering signals</li> <li>➤ Operating Temp. Range- 5°C to 45°C or better</li> <li>➤ Receiving System - True diversity</li> <li>➤ Image Refection - 60 dB nominal, 55 dB minimum or better</li> <li>➤ RF Sensitivity - 20 dBuV at 60 dB S/N or better</li> <li>➤ Power Requirements - DC Operation / Mains 230VAC Adaptor</li> <li>➤ Maximum Output Level- XLR, balanced: -27 dBv Mic Level</li> <li>➤ Balanced Audio Output Attenuator - Selectable attenuation</li> </ul> <p><b>Hand Held Transmitter</b></p> <ul style="list-style-type: none"> <li>➤ RF Power Output - Not Less than 10mW</li> <li>➤ Spurious Emissions - Following federal and national regulation</li> <li>➤ Microphone Element - Dynamic Microphone</li> <li>➤ Batteries Operation - Two 1.5-V AA</li> <li>➤ Battery Life - Not Less than 10 Hrs. in continue use</li> <li>➤ Accessory Included - Quiet-Flex stand clamp</li> </ul>
<p>9.</p>	<p>Wireless Collar Microphone</p> <p>Shure or equivalent</p>	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Operating Frequencies - UHF Band Immune to GSM,CDMA,3G Etc.</li> <li>➤ Modulation Mode - FM</li> <li>➤ Audio Freq. Range to response- 50 – 15,000Hz</li> <li>➤ LCD Display - Display of RF, Audio and Battery level</li> <li>➤ Antenna - Removable Antenna</li> <li>➤ Antenna Input - 50 ohms</li> <li>➤ Operating Range - Not Less than 100Meter (300'), typical Open Range environment with no interfering signals</li> <li>➤ Operating Temp. Range- 5°C to 45°C or better</li> <li>➤ Receiving System - True diversity</li> <li>➤ Image Refection - 60 dB nominal, 55 dB minimum or better</li> <li>➤ RF Sensitivity - 20 dBuV at 60 dB S/N or better</li> <li>➤ Power Requirements - DC Operation / Mains 230VAC Adaptor</li> <li>➤ Maximum Output Level- XLR, balanced: -27 dBv Mic Level</li> </ul> <p><b>Body Transmitter</b></p> <ul style="list-style-type: none"> <li>➤ RF Power Output - Not Less than 10mW</li> <li>➤ Spurious Emissions - Following federal and national regulation</li> <li>➤ Microphone Element - Cardioids condenser microphone</li> <li>➤ Lavalier Microphone - Clip provision is must</li> <li>➤ Batteries Operation - Two 1.5-V AA</li> <li>➤ Battery Life - Not less than 10 Hrs when continue usage</li> </ul>

10.	Podium Microphone (XLR, 18 Inch)  Shure or Equivalent	<b>Key Features:</b> <ul style="list-style-type: none"> <li>➤ Transducer principle: pre-polarized condenser microphone</li> <li>➤ Acoustics: cardioids</li> <li>➤ Frequency response: 50 Hz - 20 KHz</li> <li>➤ Nominal impedance &lt; 100 Ohm</li> <li>➤ Maximum sound pressure level 130 dB SPL</li> <li>➤ Equivalent noise level: 26 dB (A)</li> <li>➤ Phantom powering: P12 - P48 V</li> <li>➤ Current consumption microphone: 3 mA</li> <li>➤ Connectivity: XLR 3 Pin</li> <li>➤ Length: Not more than 18"</li> <li>➤ Colour : Black</li> </ul>
11.	VGA Distribution Amplifier One In Six Out  Extron or Equivalent	<b>Key Features:</b> <ul style="list-style-type: none"> <li>➤ Input: One female 15-pin HD connector</li> <li>➤ Output: Six female 15-pin HD connectors</li> <li>➤ Support 350 MHz (-3 dB) RGB video bandwidth, fully loaded</li> <li>➤ Should Compatible with VGA-QXGA resolutions</li> <li>➤ Should Drive outputs up to 250 feet (75 meters)</li> <li>➤ Video gain switch to select gain level</li> <li>➤ Internal universal power supply</li> <li>➤ ID Bits routed to local monitor output</li> <li>➤ Rack and under-desk mountable</li> <li>➤ 1U size height metal enclosure</li> </ul>
12.	VGA Cable (Extron/ Krammer)	High resolution video signal distribution with Five 26 AWG, 75 ohm coaxial conductors in a single jacket (In Meters)
13.	Audio Cable (Extron/ Krammer)	High performance cable for serial control/audio signals with single 22 AWG shielded twisted pair with drain wire (In Meters)
14.	Speaker Cable (Extron/ Krammer)	High performance cable for audio signals with Two 18 AWG conductors in a single jacket (In Meters)
15.	Connectors Extron / Nuetric	Neutric or NTI or Extron make (In Lot: as required for the project)
16.	Equipment Rack (Valrack or equivalent)	Standard 24U Equipment Rack with Two Universal Power Strip, Cooling fans and four numbers of rack tray plates
17.	Conduits and casing capping	ISI mark PVC Conduits and Box type PVC Channel Casing as required by the project
18.	Custom	Installation /Commissioning, layout diagram and training



**Equipment / Item Description for New IPS Mess Dinning Area of SVP NPA Part-2**

<b>S/ No.</b>	<b>Description</b>	<b>Make</b>	<b>Qty</b>
1.	2 Channel each 400W Amplifier (800 W)	QSC or equivalent	01 Nos
2.	12 Channel Mixer Unit with Effects	Yamaha or equivalent	01 Nos
3.	Feedback Destroyer	Shure (DFR 22) or equivalent	01 No
4.	Wireless Hand Held Microphone	Shure (BLX 24R /SM58) or equivalent	01 Nos
5.	Wireless Collar Microphone	Shure (BLX 14R /WL93) or equivalent	02 Nos
6.	Audio / Microphone Cable in meters	Extron (STP 22) or equivalent	40 Mtrs
7.	Speaker Cable in meters	Extron (SPK 18) or equivalent	300 Mtrs
8.	Required Connectors	Extron/ Nutric	01 Lot
9.	24 U Equipment Rack with Two Universal Power Spikes	Valrack or equivalent	01 No
10.	Required Conduits & Case capping	Custom	01 Lot
11.	Installation along with Speakers existing with NPA store & Commissioning of AV System in Professional manner, Testing Training and Handover along with Documentation	Custom	01Job

**Note:**

1. All items should be compatible with each other and absolute product will not be quoted.
2. 3 years onsite comprehensive warranty required.
3. OEM authorized service centre should be available in Hyderabad.
4. Existing speakers available with stores required to be installed as per our requirement.
5. Laying of the VGA, CAT and HDMI cable as per future requirement has to be installed and connectors are to be connected for ready use in future.



**Technical Specifications for items required to purchase for  
New IPS Mess Dining area of SVP NPA Part-2**

S. No	Item Description	Required Features & Technical Specifications
1.	Amplifier 800 W 2 Channel each 400W QSC or Equivalent	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Stereo Mode (both channels driven)</li> <li>➤ Continuous Rated Power 100V at 1KHz, THD 1% more than 400 Watts</li> <li>➤ Continuous Rated Power 70V at 1KHz, THD 1% not less than 400 Watts</li> <li>➤ Continuous Rated Power 8 Ohms at 1KHz, THD 1% not less than 400Watts</li> <li>➤ Continuous Rated Power 4 Ohms at 1KHz, THD 1% not less than 600 Watts</li> <li>➤ Continuous Rated Power 4 Ohms at 20Hz to 20KHz, THD &lt;0.2% not less than 600 Watts</li> <li>➤ Continuous Rated Power 8 Ohms at 20Hz to 20KHz, THD &lt;0.2% not less than 400 Watts</li> <li>➤ Continuous Rated Power 70V at 20Hz to 20KHz, THD &lt;0.2% not less than 400 Watts</li> <li>➤ Frequency Response: 20 Hz – 20 kHz: ±1 dB / -3 dB points: 5 Hz – 50 kHz</li> <li>➤ Cross talk &lt;&lt;-75dB</li> <li>➤ Input Impedance: 10k ohms unbalanced, 20k ohms balanced</li> <li>➤ Input Clipping: 10 Vrms (+22 dB)</li> <li>➤ Cooling: Continuously variable-speed fan, rear-to-front air flow</li> <li>➤ Indicators</li> <li>➤ Amplifier Protection: Stable into reactive or mismatched loads</li> <li>➤ Load Protection: On/off muting, AC coupling</li> <li>➤ "Flex-Use" loading options allow you to drive low-impedance loads down to 4 ohms and certain models to drive 70 and 100V distributed loudspeaker systems</li> <li>➤ "Flex-Use" Input connectivity choices including actively balanced barrier strip, XLR, or 1/4" TRS</li> <li>➤ "Flex-Use" Output connectivity choices include NL4</li> <li>➤ Rack mountable with chassis less than 16" or 40.6 mm deep</li> </ul>
2.	12 Channel Mixer Unit with Effects  Yamaha 2 Channel each 400W	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ 12-Channel Mixing Console</li> <li>➤ Max. 6 Mic / 12 Line Inputs (4 mono + 4 stereo)</li> <li>➤ 2 GROUP Buses + 1 Stereo Bus</li> <li>➤ 2 AUX (incl. FX)</li> <li>➤ "D-PRE" mic preamps with an inverted Darlington circuit</li> <li>➤ 1-Knob compressors</li> <li>➤ High-grade effects: SPX with 24 programs</li> <li>➤ 24-bit / 192kHz 2in / 2out USB Audio functions</li> <li>➤ Works with the iPad (2 or later)</li> <li>➤ PAD switch on mono inputs</li> <li>➤ +48V phantom power</li> <li>➤ XLR balanced outputs</li> <li>➤ Internal universal power supply</li> <li>➤ Rack Mount Kit</li> </ul>



<p>3.</p>	<p>Feedback Destroyer</p> <p>Shure or Equivalent</p>	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Audio Inputs Connections - XLR and ¼" TRS Stereo Connector</li> <li>➤ Inputs Type - Electronically Balanced input</li> <li>➤ Input impedance - Approx. 20 k Ohms balanced or Better</li> <li>➤ Nominal input level - -10 dBv to +4 dBu in adjustable</li> <li>➤ Max. Input Signal level - +20 dBu at +4 dBu or Better dBv at -10 dBv nominal level typically-40dB</li> <li>➤ Audio Outputs Connections - XLR and ¼" TRS Stereo Connector</li> <li>➤ Outputs Type - Balanced</li> <li>➤ Output impedance - 200 Ohms balanced or better</li> <li>➤ Max. Output level - +20 dBu at +4 dBu or Better</li> <li>➤ Frequency Response - &lt;10 Hz to 44 kHz or better</li> <li>➤ Dynamic range - 107 dB or better</li> <li>➤ THD - 0.007% typically @+4 dBu, 1kHz, amplification 1</li> <li>➤ Crosstalk - &lt;-100 dB @ 1 kHz or Better</li> <li>➤ MIDI interface Type Required- 5-Polo DIN connectors IN/OUT/THRU</li> <li>➤ Digital Processing_Converter - 24 Bit/96 kHz or better</li> <li>➤ Sample Rate - 96 kHz or Higher</li> </ul> <p><u>Parametric equalizer (PEQ)</u></p> <ul style="list-style-type: none"> <li>➤ Type - 20 or more independent, fully parametric filters per channel required</li> <li>➤ Frequency Range - 20 Hz to 20 kHz</li> <li>➤ Bandwidth - 1/60<sup>th</sup> to 10 octaves or better</li> <li>➤ Possible value range - +15 to -36 db or better</li> </ul> <p><u>Feedback Destroyer (FBQ)</u></p> <ul style="list-style-type: none"> <li>➤ Type - Digital Signal analysis for feedback recognition purposes</li> <li>➤ Filter - Max. 20 digital notch filters per channel</li> <li>➤ Frequency Range - 20 Hz to 20 kHz</li> <li>➤ Bandwidth - 1/60<sup>th</sup> octave or better</li> <li>➤ Possible value range - 0 to -36 dB or better</li> <li>➤ Display_Type - 3-digit numeric LED Display or More</li> </ul> <p><u>Power Supply</u></p> <ul style="list-style-type: none"> <li>➤ Main voltage - 100-240 V~,50-60 Hz</li> </ul>
<p>4.</p>	<p>Wireless Microphone Hand Held</p> <p>Shure or Equivalent</p>	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Operating Frequencies - UHF Band Immune to GSM,CDMA,3G Etc.</li> <li>➤ Modulation Mode - FM</li> <li>➤ Audio Freq. Range to response- 50 – 15,000Hz</li> <li>➤ LCD Display - Display of RF, Audio and Battery level</li> <li>➤ Antenna - Removable Antenna</li> <li>➤ Antenna Input - 50 ohms</li> <li>➤ Operating Range - Not Less than 100Meter (300'), typical Open Range environment with no interfering signals</li> <li>➤ Operating Temp. Range- 5°C to 45°C or better</li> <li>➤ Receiving System - True diversity</li> <li>➤ Image Refection - 60 dB nominal, 55 dB minimum or better</li> <li>➤ RF Sensitivity - 20 dBuV at 60 dB S/N or better</li> <li>➤ Power Requirements - DC Operation / Mains 230VAC Adaptor</li> <li>➤ Maximum Output Level- XLR, balanced: -27 dBv Mic Level</li> <li>➤ Balanced Audio Output Attenuator - Selectable attenuation</li> </ul> <p><b>Hand Held Transmitter</b></p> <ul style="list-style-type: none"> <li>➤ RF Power Output - Not Less than 10mW</li> <li>➤ Spurious Emissions - Following federal and national regulation</li> <li>➤ Microphone Element - Dynamic Microphone</li> <li>➤ Batteries Operation - Two 1.5-V AA</li> <li>➤ Battery Life - Not Less than 10 Hrs. in continue use</li> <li>➤ Accessory Included - Quiet-Flex stand clamp</li> </ul>

Contd... P/16





5.	Wireless Collar Microphone  Shure or Equivalent	<p><b>Key Features:</b></p> <ul style="list-style-type: none"> <li>➤ Operating Frequencies - UHF Band Immune to GSM,CDMA,3G Etc.</li> <li>➤ Modulation Mode - FM</li> <li>➤ Audio Freq. Range to response- 50 – 15,000Hz</li> <li>➤ LCD Display - Display of RF, Audio and Battery level</li> <li>➤ Antenna - Removable Antenna</li> <li>➤ Antenna Input - 50 ohms</li> <li>➤ Operating Range - Not Less than 100Meter (300')</li> <li>➤ Receiving System - True diversity</li> <li>➤ Image Refection - 60 dB nominal, 55 dB minimum or better</li> <li>➤ RF Sensitivity - 20 dBuV at 60 dB S/N or better</li> <li>➤ Power Requirements - DC Operation / Mains 230VAC Adaptor</li> <li>➤ Maximum Output Level- XLR, balanced: -27 dBv Mic Level</li> </ul> <p><b>Body Transmitter</b></p> <ul style="list-style-type: none"> <li>➤ RF Power Output - Not Less than 10mW</li> <li>➤ Spurious Emissions - Following federal and national regulation</li> <li>➤ Microphone Element - Cardioids condenser microphone</li> <li>➤ Lavalier Microphone - Clip provision is must</li> <li>➤ Batteries Operation - Two 1.5-V AA</li> <li>➤ Battery Life - Not less than 10 Hrs when continue usage</li> </ul>
6.	Audio Cable (Extron/ Krammer)	High performance cable for serial control/audio signals with single 22 AWG shielded twisted pair with drain wire (In Meters)
7.	Speaker Cable (Extron/ Krammer)	High performance cable for audio signals with Two 18 AWG conductors in a single jacket (In Meters)
8.	Connectors Extron / Nuetric	Neutric or NTI or Extron make (In Lot: as required for the project)
9.	Equipment Rack 24U (Val rack or equivalent)	Standard 24U Equipment Rack with Two Universal Power Strip, Cooling fans and four numbers of rack tray plates
10.	Conduits and casing capping	ISI mark PVC Conduits and Box type PVC Channel Casing as required by the project
11.	Custom	Installation /Commissioning, layout diagram and training



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