

**Tender for Procurement of Audio Visual
System for Project Review Room and
Conference cum Training Room, BHEL
House, Siri Fort, New Delhi**



**Last date of submission of tender – 15/04/11 at 14:00 Hrs.
Due date for opening of tender – 15/04/11 at 15:00 Hrs.**

**Bharat Heavy Electricals Limited
BHEL House, Siri Fort, New Delhi-110049
Tel:011-66337405, Fax:011-66337428**



Bharat Heavy Electricals Ltd.

Corporate Administration
BHEL House, Siri Fort, New Delhi-49

Ref: AA:GAX:BH:10:101

Date: 30.03.2011

Last date of submission of tender – 14:00 Hrs. on 15/04/11 Due date for opening of tender –15:00 Hrs. on 15/04/11
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Sub: Tender for Supply, Installation, Testing & Commissioning of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi

Your most competitive bid is invited in sealed cover for the subject tender. The tender enquiry containing the terms & conditions of the tender is enclosed.

The tender(s) should reach the under mentioned on or before the last date for submission of tenders mentioned above. BHEL will not be responsible for delay in receipt of tender(s), sent by post / courier. EMD is to be submitted by all tenderers as per Para 1.15 of Terms and Conditions of the Tender. Security cum Performance Bank Guarantee is to be submitted by the successful tenderer as per Para 1.16 of Terms and Conditions of the Tender.

Any corrigendum to this tender, if issued by BHEL in future, shall be hosted on the website www.bhel.com. Therefore, the tenderers are advised to keep visiting the website regularly. Any clarification, if required, should be sought from the undersigned within one week of the date of this tender.

For & on behalf of BHEL

(Rajan Yadav)
Manager (HR-GAX)

Phone no.: 011 – 66337405
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1.0 TERMS & CONDITIONS OF TENDER

- 1.1 The bill of quantities (BOQ) of items required is mentioned in **Annexure–IV**. The material to be supplied should be of makes mentioned in **Annexure–II**.
- 1.2 The Audio Visual System is to be installed in the Project Review Room and Conference cum training Room at Ground Floor in BHEL House, Siri Fort, New Delhi.
- 1.3 The material is being procured on outright purchase basis.
- 1.4 **Pre-qualification criteria for the tenderers:**
 - a) The tenderer should have an average annual turnover of ₹15 Lakhs during last three financial years ending on 31.03.2010.
 - b) The tenderer should have successfully completed Audio Visual System Integration work/s (comprising Supply, installation, testing & commissioning of microphones, Mixer, LCD Monitor & W-ifi touch panel based control system) of following value, during last 7 years ending on 28.02.11:
 - i) One work of ₹40 Lakhs value; **or**
 - ii) Two works of ₹25 Lakhs value each; **or**
 - iii) Three works of ₹20 Lakhs value each
- 1.5 All materials should be as per applicable Indian standards. Only brand new material should be supplied.
- 1.6 The tenders should be strictly in accordance with the terms & conditions, mentioned herein; otherwise they are liable to be rejected.
- 1.7 BHEL reserves the right to increase/ decrease the item quantities by 15%.
- 1.8 The prices should be quoted in the price bid format **Annexure–I** (enclosed). If the prices are quoted in any other form then the bid is liable to be rejected.
- 1.9 Unit rate to be quoted for items in Part-A (refer Annexure-I) should be inclusive of all taxes and duties. Unit rate to be quoted for items in Part-B & C (refer Annexure-I) should be inclusive of all taxes and duties, except Service Tax. Service Tax shall be payable extra at applicable rate, for these items.
- 1.10 The unit rate should be quoted on FOR site basis and should be inclusive of the charges for packing & forwarding, freight & insurance, loading & unloading.
- 1.11 The offer should remain valid for a period of at least 60 days from due date of the tender. The prices quoted should remain firm during the validity of the offer.
- 1.12 The unit rate of item in Part-C (AMC) (refer Annexure-I) shall remain firm for a period of 4 years starting from date of expiry of warranty period and no escalation

shall be permissible on any ground, whatsoever.

- 1.13 The existing Audio Visual system consists of 49 delegate units, 1 chairman unit, 1 central amplifier, 1 mixer, 1 cassette recorder and ceiling speakers. This is to be bought back by the successful tenderer and accordingly quote its buyback price in Part-D (refer Annexure – I). The tenderers are advised to inspect this system for assessment of its value before submitting their offer.
- 1.14 **Evaluation Price:** The tenderer, quoting the lowest 'Total Package Price' (excluding service tax), shall be L1. Normally, order shall be placed on the L1 tenderer at lowest price (Refer Price Bid Format **Annexure-I**).
- 1.15 Each tenderer shall have to deposit EMD of ₹1,00,000.00 (One Lakh only) for this tender and the same will be in the form of Pay Order or Demand Draft only, in favour of BHEL, payable at New Delhi. EMD submitted by way of cheque will not be accepted & tender(s) submitted without EMD will be rejected. EMD submitted by tenderer will be forfeited if tenderer revokes his tender or increases his prices. EMD of all tenderers will be returned within fifteen days from date of acceptance of order by the successful tenderer.
- 1.16 The successful tenderer should submit security cum performance bank guarantee from any scheduled bank as per the prescribed format within 7 days from the date of placement of order; otherwise the order may be cancelled.
- The amount of the bank guarantee to be submitted should be equivalent to 10% of the Sub-total amount of items in Part-A (i.e, Item Nos. 1 to 62) and it should be valid for a period of one year.
- 1.17 Supply of the Audio Visual System should be completed in all respects within six weeks from date of issue of Purchase Order. Otherwise, penalty charges shall be imposed for delayed delivery @ half percent per week or part thereof and subject to a maximum of 10% of the sub-total amount for Part-A (Refer Price Bid Format Annexure-I).
- Installation should be completed in all respects within ten weeks from date of issue of Purchase Order.
- 1.18 "Acceptance Testing" will be undertaken by BHEL on completion of installation. The Audio Visual System will be deemed to have been commissioned after successful acceptance testing. BHEL will complete the acceptance testing within 7 days from the date the successful tenderer offers the system for the same.
- 1.19 90% payment for items in Part-A (i.e., item nos. 1 - 62) will be made within 15 days from the date of receipt of material in good condition. Balance 10% payment for Part-A items will be made within 15 days from the date of commissioning.
- 1.20 100% payment for Part-B items will be made within 15 days from the date of commissioning.
- 1.21 After expiry of warranty period, payment for Part-C (i.e. item no. 126) will be made quarterly in arrears.

- 1.22 No advance payment shall be made by BHEL.
- 1.23 The successful tenderer shall have to work out the exact quantities of material required as per detailed drawing and arrange material accordingly. Please note that the payment shall be made on the basis of the actual quantity of items consumed at unit rates.
- 1.24 The following work shall be undertaken by the successful tenderer, if required, at no extra cost:
- a) Cutting of conference table & fixing of cable managers.
 - b) Mounting of equipments in the equipment rack.
 - c) Termination of cables through connectors.
 - d) Ceiling / wall / floor chiseling for laying conduits, etc.
- 1.25 The successful tenderer should insure the material at his own cost and any loss or damage to the material, during handling, transportation; storage, etc up till commissioning shall be to the account of the successful tenderer.
- 1.26 The Audio Visual System shall remain under on-site warranty for a period of one year from the date of commissioning.
- 1.27 After the expiry of warranty period, the successful tenderer shall have to maintain the supplied equipments under a comprehensive maintenance contract. This contract for the first four years after expiry of warranty period shall be awarded to the successful tenderer at the rate quoted in the price bid. During this period, no amount shall be paid on account of any maintenance, spare parts, etc. The terms and conditions of AMC are specified in Annexure- V.
- 1.28 BHEL reserves the right to accept or reject any of the bid / all bids with or without deviation or cancel / withdraw the invitation for bid without assigning any reason whatsoever and in such case no tenderer shall have any claim arising out of such action by BHEL.

2.0 PROCEDURE FOR SUBMISSION OF SEALED TENDERS

- 2.1 The offer is to be submitted as required in two parts. **First sealed envelope** should prominently be super-scribed as "Part-1 Techno-commercial Bid of tender for Tender for Supply, Installation, Testing & Commissioning of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi, due on ____". Envelope of Part-1 "Techno-commercial Bid" should contain following documents:
- a) Copy of Audited Balance sheet for three financial years ending on 31.03.2010 in support of Pre-qualification criterion {Para 1.4 a) }
 - b) Copy of Completion Certificate alongwith detailed Work Order in support of Pre-qualification criterion{Para 1.4 b)}
 - c) Un-priced price bid i.e., price bid format (**Annexure – I**) with "Q" written in place of prices.
 - d) **Annexure-II** duly filled along with Technical brochures of the model offered.
 - e) Compliance statement for Terms & Conditions as per Annexure-III
 - f) Declaration as per Annexure V

- g) Acceptance / Deviation Certificate as per Annexure VI.
- h) Covering letter giving index interlinking all the documents with all pages signed & stamped.

Second sealed envelope should prominently be super-scribed as "Part-2 Price Bid of tender for Supply, Installation, Testing & Commissioning of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi, due on ____". Envelope of Part-2 "Price Bid" should contain prices duly quoted in the Price bid format (**Annexure-I**) only. The price bid should not contain any terms & conditions. All terms & conditions should be mentioned only in Part-1 "Techno-commercial Bid". Terms & conditions mentioned in the price bid shall be ignored.

The **third envelope** shall contain required amount of EMD and should be superscribed as "EMD for tender for Supply, Installation, Testing & Commissioning of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi, due on _____".

These three envelopes should be put together in sealed cover and should be superscribed as "Tender for Supply, Installation, Testing & Commissioning of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi, due on _____".

- 2.2 Techno – commercial bid of tender shall be opened on the due date and time as mentioned above in the presence of tenderers or their authorized representatives who may like to be present.
- 2.3 Techno – commercial bids will be evaluated first. The price bid of only those tenderers, who qualify the evaluation of techno - commercial bids, shall be opened. Date of opening of Price Bid will be intimated separately to the Tenderers who qualify in the Techno - commercial bid evaluation. **BHEL, however, reserves the right to opt for reverse auction (online bidding) instead of opening of sealed price bids, for determining the lowest tenderer. The reverse auction will be undertaken as per BHEL guidelines which will be sent to the techno-commercially qualified tenderers before the event.**
- 2.4 The tenderers are required to quote for all the items & no column should be left blank. Tenders for part supply or incomplete in any respect, are liable to be rejected.

Price bid format for the Tender for SITC of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi

SN	Item Description	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
PART-A					
Items for Project Review Room					
1	Supply of Microprocessor controlled boundary layer condenser microphone with half-cardiod polar pattern & LED indicator.	10	Nos.		
2	Supply of UHF Wireless Handheld dynamic supercardioid microphone	2	Nos.		
3	Supply of DSP Mixer with 16 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer and 6 line outputs with 2 channel Telephone (PSTN) Interface	1	No.		
4	Supply of UHF Lapel/ collar microphone	1	No.		
5	Supply of PC Based Professional Recording software	1	No.		
6	Supply of digital beam steerable line array speaker system with minimum 16 nos. of drivers, UL listed	2	Nos.		
7	Supply of DTH Cable TV Box	1	No.		
8	Supply of Prgressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.		
9	Supply of 8 x 8 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.		
10	Supply of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	2	Nos.		

11	Supply of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.		
12	Supply of Ethernet enabled Control processor, 6 x RS232, 8 x IR, 8 x Relay complete with 8.4" Wi-Fi touch panel , docking station cum charger and all necessary accessries to complete the control system including compatible wifi access point	1	No.		
13	Supply of Connectors	1	Set		
14	Supply of 12' moluded VGA & audio Cable	5	Nos.		
15	Supply of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	50	RM		
16	Supply of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	300	RM		
17	Supply of RGBHV cable	500	RM		
18	Supply of RG59 Video cable	200	RM		
19	Supply of S-Video Video cable	200	RM		
20	Supply of 25mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
21	Supply of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
22	Supply of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	1200	RM		

23	Supply of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM		
24	Supply of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM		
25	Supply of UTP Cable, Category-6, giga speed	6500	RM		
26	Supply of Cat-6, I/O slim line series Field side	70	Nos.		
27	Supply of Cat-6, 24 port Jack panel	4	Nos.		
28	Supply of Face plate four port	20	Nos.		
29	Supply of 7 Ft. Patch cord, Cat-6, factory crimped	148	Nos.		
30	Supply of Tag Tie for Patch cord numbering	2	Pack		
31	Supply of Cable Tie	2	Pack		
32	Supply of Hardware for mounting switch & Jack panel	48	Nos.		
33	Supply of PVC Gang box	20	Nos.		
34	Supply of 6 core, OM-3, 10GIG, Armored OFC cable, MM	200	RM		
Total of items for Project Review Room (A1) = Rs.					
Items for Conference cum Training Room					
35	Supply of UHF Wireless Handheld dynamic supercardioid microphone	1	No.		
36	Supply of UHF Lapel/ collar microphone	1	No.		
37	Supply of gooseneck microphone	2	Nos.		
38	Supply of DSP Mixer with 8 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer Input and 8 line outputs with 2 channel Telephone (PSTN) Interface	1	No.		
39	Supply of PC Based Professional Recording software	1	No.		

40	Supply of ceiling mounted loudspeakers with 6" coaxial driver 50 Watts continuous, UL Listed	4	Nos.		
41	Supply of 8 channel Power Amplifier with minimum 125 watts output per channel at 8 ohms with fault indicator and fan cooling	1	No.		
42	Supply of DTH Cable TV Box	1	No.		
43	Supply of Progressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.		
44	Supply of 8 x 4 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.		
45	Supply of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.		
46	Supply of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	35	Nos.		
47	Supply of Fixed Ceiling mount for projector as per site requirement to take upto 15 Kg of projector load with 3 axis adjustment.	1	No.		
48	Supply of Motorized projection screen with Native 16:10 aspect ratio. Picture size 57" x 92" with 109" diagonal	1	No.		
49	Supply of Connectors	1	Set		
50	Supply of 12' moluded VGA & audio Cable	35	Nos.		

51	Supply of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	60	RM		
52	Supply of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	100	RM		
53	Supply of RGBHV cable	500	RM		
54	Supply of RG59 Video cable	500	RM		
55	Supply of S-Video Video cable	30	RM		
56	Supply of 25 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
57	Supply of 32 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
58	Supply of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM		
59	Supply of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM		
60	Supply of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	150	RM		
61	Supply of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM		
62	Supply of UTP Cable, Category-6, giga speed	50	RM		
Total of items for Conference cum Training Room (A2) = Rs.					
Total for Part – A (= A1 + A2) = Rs.					

PART – B					
Items for Project Review Room					
63	Installation, Testing and Commissioning of Microprocessor controlled boundary layer condenser microphone with half-cardiod polar pattern & LED indicator.	10	Nos.		
64	Installation, Testing and Commissioning of UHF Wireless Handheld dynamic supercardioid microphone	2	Nos.		
65	Installation, Testing and Commissioning of DSP Mixer with 16 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer and 6 line outputs with 2 channel Telephone (PSTN) Interface	1	No.		
66	Installation, Testing and Commissioning of UHF Lapel/ collar microphone	1	No.		
67	Installation, Testing and Commissioning of PC Based Professional Recording software	1	No.		
68	Installation, Testing and Commissioning of digital beam steerable line array speaker system with minimum 16 nos. of drivers, UL listed	2	Nos.		
69	Installation, Testing and Commissioning of DTH Cable TV Box	1	No.		
70	Installation, Testing and Commissioning of Prgressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.		
71	Installation, Testing and Commissioning of 8 x 8 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.		

72	Installation, Testing and Commissioning of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	2	Nos.		
73	Installation, Testing and Commissioning of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.		
74	Installation, Testing and Commissioning of Ethernet enabled Control processor, 6 x RS232, 8 x IR, 8 x Relay complete with 8.4" Wi-Fi touch panel , docking station cum charger and all necessary accessries to complete the control system including compatible wifi access point	1	No.		
75	Fixing of Connectors	1	Set		
76	Laying of 12' moluded VGA & audio Cable	5	Nos.		
77	Laying of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	50	RM		
78	Laying of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	300	RM		
79	Laying of RGBHV cable	500	RM		
80	Laying of RG59 Video cable	200	RM		
81	Laying of S-Video Video cable	200	RM		

82	Fixing of 25mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
83	Fixing of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
84	Fixing of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	1200	RM		
85	Fixing of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM		
86	Fixing of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM		
87	Laying of UTP Cable, Category-6, giga speed	6500	RM		
88	Termination of Cat-6, I/O slim line series Field side	70	Nos.		
89	Termination of Cat-6, 24 port Jack panel	4	Nos.		
90	Fixing of Face plate four port	20	Nos.		
91	Fixing of 7 Ft. Patch cord, Cat-6, factory crimped	148	Nos.		
92	Fixing of Tag Tie for Patch cord numbering	2	Pack		
93	Fixing of Cable Tie	2	Pack		
94	Installation, Testing and Commissioning of Hardware for mounting switch & Jack panel	48	Nos.		
95	Fixing of PVC Gang box	20	Nos.		
96	Fixing of 6 core, OM-3, 10GIG, Armored OFC cable, MM	200	RM		
Total of items for Project Review Room (B1) = Rs.					

Items for Conference cum Training Room					
97	Installation, Testing and Commissioning of UHF Wireless Handheld dynamic supercardioid microphone	1	No.		
98	Installation, Testing and Commissioning of UHF Lapel/ collar microphone	1	No.		
99	Installation, Testing and Commissioning of gooseneck microphone	2	Nos.		
100	Installation, Testing and Commissioning of DSP Mixer with 8 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer Input and 8 line outputs with 2 channel Telephone (PSTN) Interface	1	No.		
101	Installation, Testing and Commissioning of PC Based Professional Recording software	1	No.		
102	Installation, Testing and Commissioning of ceiling mounted loudspeakers with 6" coaxial driver 50 Watts continuous, UL Listed	4	Nos.		
103	Installation, Testing and Commissioning of 8 channel Power Amplifier with minimum 125 watts output per channel at 8 ohms with fault indicator and fan cooling	1	No.		
104	Installation, Testing and Commissioning of DTH Cable TV Box	1	No.		
105	Installation, Testing and Commissioning of Progressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.		
106	Installation, Testing and Commissioning of 8 x 4 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.		

107	Installation, Testing and Commissioning of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.		
108	Installation, Testing and Commissioning of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	35	Nos.		
109	Installation, Testing and Commissioning of Fixed Ceiling mount for projector as per site requirement to take upto 15 Kg of projector load with 3 axis adjustment.	1	No.		
110	Installation, Testing and Commissioning of Motorized projection screen with Native 16:10 aspect ratio. Picture size 57" x 92" with 109" diagonal	1	No.		
111	Fixing of Connectors	1	Set		
112	Laying of 12' moluded VGA & audio Cable	35	Nos.		
113	Laying of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	60	RM		
114	Laying of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	100	RM		
115	Laying of RGBHV cable	500	RM		
116	Laying of RG59 Video cable	500	RM		

117	Laying of S-Video Video cable	30	RM		
118	Fixing of 25 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
119	Fixing of 32 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM		
120	Fixing of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM		
121	Fixing of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM		
122	Fixing of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	150	RM		
123	Fixing of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM		
124	Laying of UTP Cable, Category-6, giga speed	50	RM		
125	Dismantling and Removing of the existing Audio Visual System	1	Job		
Total of items for Conference cum Training Room (B2) = Rs.					
Total for Part - B (=B1 + B2) = Rs.					
PART - C					
126	Comprehensive maintenance charges for the complete system (including all the items listed above) as per tender terms and conditions	4	Years		
Total for Part – C = Rs.					
PART - D					
127	Buy-back of the existing Audio Visual System	1	Lot		
Total for Part – D = Rs.					
Total Package Price (Part : A + B + C - D)= Rs.					

Note:-

1. The unit rate to be quoted for item No. 126 should be the maintenance charges per year. And the Amount is the cost for maintaining it for a period of 4 years is {Maintenance charges per annum x 4 (years)}.
2. Unit rate to be quoted for items in Part-A should be inclusive of all taxes and duties.
3. Unit rate to be quoted for items in Part-B & C should be inclusive of all taxes and duties, except Service Tax. Service Tax shall be payable extra at applicable rate, for these items.
4. The Sub-Total of Part-D shall be subtracted from the overall total to get the Total Package Price.

Tender for SITC of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi

List of Makes

SN	Item	Make of Item Required	Make of Item Offered	Model of Item Offered
1	Microprocessor controlled boundary layer condenser microphone	Beyerdynamic / Shure		
2	UHF Wireless Handheld dynamic supercardioid microphone	Beyerdynamic / Shure		
3	Gooseneck microphone	Beyerdynamic / Shure		
4	UHF Lapel/ collar microphone	Beyerdynamic / Shure		
5	DSP Mixer	Biamp / Polycom/ Clearone		
6	Ceiling mounted loudspeakers	Tannoy / Bose / Renkus - Heinz		
7	Digital beam steerable line array speaker system	Tannoy / Renkus-Heinz		
8	Progressive Scan DVD Player	Sony / Panasonic / Pioneer		
9	RGBHV matrix switcher	Extron / Kramer		
10	Hide Away surface enclosure type cable cubby	Extron / AMX		
11	42U Equipment Rack.	IBM / HP		
12	Ethernet enabled Control processor with Wi-fi touch panel	AMX / Crestron		
13	Connectors	Neutrik / Extron		
14	12' moulded VGA & audio Cable	Extron / Kramer / Belden		
15	PVC sheathed speaker cable	Extron / Kramer / Belden		
16	22 AWG Microphone 4 core Cable	Extron / Kramer / Belden		
17	RGBHV cable	Extron / Kramer / Belden		

18	RG59 Video cable	Extron / Kramer / Belden		
19	S-Video Video cable	Extron / Kramer / Belden		
20	MS conduit	AKG / BEC		
21	PVC conduit	AKG / BEC		
22	Raceway	ISI		
23	UTP Cable, Category-6, giga speed	Panduit / Avaya		
24	Cat-6, I/O slim line series Field side	Panduit / Avaya		
25	Cat-6, 24 port Jack panel	Panduit / Avaya		
26	Face plate four port	Panduit / Avaya		
27	7 Ft. Patch cord, Cat-6, factory crimped	Panduit / Avaya		
28	Tag Tie for Patch cord numbering	ISI		
29	Cable Tie	ISI		
30	Hardware for mounting switch & Jack panel	ISI		
31	PVC Gang box	ISI		
32	6 core, OM-3, 10GIG, Armored OFC cable, MM	Panduit / Avaya		
33	Power Amplifier	Lab Gruppen / Biamp		
34	Motorized projection screen	Draper / Da-Lite		

**Tender for SITC of Audio Visual System at Project Review Room and Conference cum
Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi**

Compliance Statement for Terms and Conditions

Para No.	Complied (Yes/No)	Deviations (if any)
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**Tender for SITC of Audio Visual System at Project Review Room and Conference cum
Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi**

Bill Of Quantities

SN	Item Description	Qty.	Unit
PART – A			
PROJECT REVIEW ROOM			
1	Supply of Microprocessor controlled boundary layer condenser microphone with half-cardioid polar pattern & LED indicator.	10	Nos.
2	Supply of UHF Wireless Handheld dynamic supercardioid microphone	2	Nos.
3	Supply of DSP Mixer with 16 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer and 6 line outputs with 2 channel Telephone (PSTN) Interface	1	No.
4	Supply of UHF Lapel/ collar microphone	1	No.
5	Supply of PC Based Professional Recording software	1	No.
6	Supply of digital beam steerable line array speaker system with minimum 16 nos. of drivers, UL listed	2	Nos.
7	Supply of DTH Cable TV Box	1	No.
8	Supply of Progressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.
9	Supply of 8 x 8 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.
10	Supply of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	2	Nos.

11	Supply of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.
12	Supply of Ethernet enabled Control processor, 6 x RS232, 8 x IR, 8 x Relay complete with 8.4" Wi-Fi touch panel , docking station cum charger and all necessary accessries to complete the control system including compatible wifi access point	1	No.
13	Supply of Connectors	1	Set
14	Supply of 12' moluded VGA & audio Cable	5	Nos.
15	Supply of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	50	RM
16	Supply of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	300	RM
17	Supply of RGBHV cable	500	RM
18	Supply of RG59 Video cable	200	RM
19	Supply of S-Video Video cable	200	RM
20	Supply of 25mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM
21	Supply of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM
22	Supply of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	1200	RM
23	Supply of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM

24	Supply of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM
25	Supply of UTP Cable, Category-6, giga speed	6500	RM
26	Supply of Cat-6, I/O slim line series Field side	70	Nos.
27	Supply of Cat-6, 24 port Jack panel	4	Nos.
28	Supply of Face plate four port	20	Nos.
29	Supply of 7 Ft. Patch cord, Cat-6, factory crimped	148	Nos.
30	Supply of Tag Tie for Patch cord numbering	2	Pack
31	Supply of Cable Tie	2	Pack
32	Supply of Hardware for mounting switch & Jack panel	48	Nos.
33	Supply of PVC Gang box	20	Nos.
34	Supply of 6 core, OM-3, 10GIG, Armored OFC cable, MM	200	RM
CONFERENCE CUM TRAINING ROOM			
35	Supply of UHF Wireless Handheld dynamic supercardioid microphone	1	No.
36	Supply of UHF Lapel/ collar microphone	1	No.
37	Supply of gooseneck microphone	2	Nos.
38	Supply of DSP Mixer with 8 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer Input and 8 line outputs with 2 channel Telephone (PSTN) Interface	1	No.
39	Supply of PC Based Professional Recording software	1	No.
40	Supply of ceiling mounted loudspeakers with 6" coaxial driver 50 Watts continuous, UL Listed	4	Nos.
41	Supply of 8 channel Power Amplifier with minimum 125 watts output per channel at 8 ohms with fault indicator and fan cooling	1	No.
42	Supply of DTH Cable TV Box	1	No.
43	Supply of Progressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.

44	Supply of 8 x 4 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.
45	Supply of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.
46	Supply of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	35	Nos.
47	Supply of Fixed Ceiling mount for projector as per site requirement to take upto 15 Kg of projector load with 3 axis adjustment.	1	No.
48	Supply of Motorized projection screen with Native 16:10 aspect ratio. Picture size 57" x 92" with 109" diagonal	1	No.
49	Supply of Connectors	1	Set
50	Supply of 12' moluded VGA & audio Cable	35	Nos.
51	Supply of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	60	RM
52	Supply of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	100	RM
53	Supply of RGBHV cable	500	RM
54	Supply of RG59 Video cable	500	RM
55	Supply of S-Video Video cable	30	RM
56	Supply of 25 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM

57	Supply of 32 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM
58	Supply of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM
59	Supply of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM
60	Supply of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	150	RM
61	Supply of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM
62	Supply of UTP Cable, Category-6, giga speed	50	RM
PART - B			
63	Installation, Testing and Commissioning of Microprocessor controlled boundary layer condenser microphone with half-cardiod polar pattern & LED indicator.	10	Nos.
64	Installation, Testing and Commissioning of UHF Wireless Handheld dynamic supercardioid microphone	2	Nos.
65	Installation, Testing and Commissioning of DSP Mixer with 16 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer and 6 line outputs with 2 channel Telephone (PSTN) Interface	1	No.
66	Installation, Testing and Commissioning of UHF Lapel/ collar microphone	1	No.
67	Installation, Testing and Commissioning of PC Based Professional Recording software	1	No.

68	Installation, Testing and Commissioning of digital beam steerable line array speaker system with minimum 16 nos. of drivers, UL listed	2	Nos.
69	Installation, Testing and Commissioning of DTH Cable TV Box	1	No.
70	Installation, Testing and Commissioning of Progressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.
71	Installation, Testing and Commissioning of 8 x 8 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.
72	Installation, Testing and Commissioning of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	2	Nos.
73	Installation, Testing and Commissioning of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.
74	Installation, Testing and Commissioning of Ethernet enabled Control processor, 6 x RS232, 8 x IR, 8 x Relay complete with 8.4" Wi-Fi touch panel , docking station cum charger and all necessary accessories to complete the control system including compatible wifi access point	1	No.
75	Fixing of Connectors	1	Set

76	Laying of 12' moluded VGA & audio Cable	5	Nos.
77	Laying of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	50	RM
78	Laying of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	300	RM
79	Laying of RGBHV cable	500	RM
80	Laying of RG59 Video cable	200	RM
81	Laying of S-Video Video cable	200	RM
82	Fixing of 25mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM
83	Fixing of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM
84	Fixing of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	1200	RM
85	Fixing of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM
86	Fixing of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM
87	Laying of UTP Cable, Category-6, giga speed	6500	RM
88	Termination of Cat-6, I/O slim line series Field side	70	Nos.
89	Termination of Cat-6, 24 port Jack panel	4	Nos.
90	Fixing of Face plate four port	20	Nos.
91	Fixing of 7 Ft. Patch cord, Cat-6, factory crimped	148	Nos.
92	Fixing of Tag Tie for Patch cord numbering	2	Pack
93	Fixing of Cable Tie	2	Pack
94	Installation, Testing and Commissioning of Hardware for mounting switch & Jack panel	48	Nos.
95	Fixing of PVC Gang box	20	Nos.

96	Fixing of 6 core, OM-3, 10GIG, Armored OFC cable, MM	200	RM
CONFERENCE CUM TRAINING ROOM			
97	Installation, Testing and Commissioning of UHF Wireless Handheld dynamic supercardioid microphone	1	No.
98	Installation, Testing and Commissioning of UHF Lapel/ collar microphone	1	No.
99	Installation, Testing and Commissioning of gooseneck microphone	2	Nos.
100	Installation, Testing and Commissioning of DSP Mixer with 8 Inputs - AEC / Noise canceller / Feedback reduction w/Auto Mic Mixing and Matrix Mixer Input and 8 line outputs with 2 channel Telephone (PSTN) Interface	1	No.
101	Installation, Testing and Commissioning of PC Based Professional Recording software	1	No.
102	Installation, Testing and Commissioning of ceiling mounted loudspeakers with 6" coaxial driver 50 Watts continuous, UL Listed	4	Nos.
103	Installation, Testing and Commissioning of 8 channel Power Amplifier with minimum 125 watts output per channel at 8 ohms with fault indicator and fan cooling	1	No.
104	Installation, Testing and Commissioning of DTH Cable TV Box	1	No.
105	Installation, Testing and Commissioning of Progressive Scan DVD Player with S-Video/Componnet Video/ HDMI output	1	No.
106	Installation, Testing and Commissioning of 8 x 4 ultra high bandwidth RGBHV matrix switcher with audio, 600 MHz (-3 dB), fully loaded bandwidth, RS232, RS422 and ethernet control	1	No.

107	Installation, Testing and Commissioning of 42U Equipment Rack with all required accessories, caster wheel, Front perforated door, Cooling fan, Dual Power strips (16 socket on each side), earthing kit, KVM switch with 16 ports & cables alongwith rack mountable 17 inch LCD Monitor with integrated mouse & key board, 2 nos. of mounting kit, 4 nos. of rack tray, etc.	1	No.
108	Installation, Testing and Commissioning of Hide Away surface enclosure type cable cubby with female 15-pin HD connector and 3.5 mm mini stereo audio jack, Composite Video Input, Two CAT 6 RJ-45 network/data/phone connectors; unswitched AC outlet, Black colour, CE compliant	35	Nos.
109	Installation, Testing and Commissioning of Fixed Ceiling mount for projector as per site requirement to take upto 15 Kg of projector load with 3 axis adjustment.	1	No.
110	Installation, Testing and Commissioning of Motorized projection screen with Native 16:10 aspect ratio. Picture size 57" x 92" with 109" diagonal	1	No.
111	Fixing of Connectors	1	Set
112	Laying of 12' moluded VGA & audio Cable	35	Nos.
113	Laying of 2 core twin twisted 80/0.2mm, 2.5 sqmm, over all PVC sheathed speaker cable	60	RM
114	Laying of 22 AWG Microphone 4 core Cable with 2 wires shielded, 2 control lines, overall shield	100	RM
115	Laying of RGBHV cable	500	RM
116	Laying of RG59 Video cable	500	RM
117	Laying of S-Video Video cable	30	RM
118	Fixing of 25 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM

119	Fixing of 32 mm cable MS conduit including providing of all accessories, junction box, supports, bends, etc.	100	RM
120	Fixing of 32mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM
121	Fixing of 25mm dia and 2mm thickness PVC conduit including providing of all accessories, junction box, supports, bends, etc.	25	RM
122	Fixing of Raceway -200x25 mm including providing of all accessories, junction box with SS cover, etc.	150	RM
123	Fixing of Raceway -75x25 mm including providing of all accessories, junction box with SS cover, etc.	50	RM
124	Laying of UTP Cable, Category-6, giga speed	50	RM
125	Dismantling and Removing of the existing Audio Visual System	1	Job
PART - C			
126	Comprehensive maintenance charges for the complete system (including all the items listed above) as per tender terms and conditions	4	Years
PART - D			
127	Buy-back of the existing Audio Visual System	1	Lot

Tender for SITC of Audio Visual System at Project Review Room and Conference cum Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi

Terms and Conditions of AMC

Preventive maintenance:

1. Service of the complete Audio Visual system should be undertaken at least once every quarter.

Breakdown maintenance:

2. The remedial or breakdown maintenance shall have to be undertaken as and when complaint is lodged over telephone. All complaints should be attended within 48 hours from the time of their lodgment.
3. Spare parts required for maintenance should be provided at no extra cost.

**Tender for SITC of Audio Visual System at Project Review Room and Conference cum
Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi**

Declaration

We hereby declare that we have not been banned or de-listed by any PSU / Government Department / Financial Institution / Court.

Authorized signatory
(With seal)

**Tender for SITC of Audio Visual System at Project Review Room and Conference cum
Training Room at Ground Floor in BHEL House, Siri Fort, New Delhi**

Acceptance / Deviation Certificate

Notwithstanding anything mentioned in our bid, we hereby accept all the terms and conditions of this tender. We hereby undertake and confirm that we have understood the terms and conditions as mentioned in this tender enquiry.

Authorized signatory
(With seal)