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भारत सरकार-रेल मंत्रालय  
अनुसंधान अभिकल्प और मानक संगठन  
Government of India - Ministry of Railways  
Research Designs & Standards Organisation  
Lucknow – 226011



**Quotation Notice**

No. STT/TMS/Audio Visual System

Date: 16.08.2019

Sub: Work of **Telecom Portion of work in VVIP Rest House & Conference Hall** at RDSO Lucknow -226011.

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Your sealed Quotation offer for above mentioned work is invited by ADE/TMS/RDSO office for the estimated cost of **Rs 7,97,843.00/-** with completion period of One Month. Please submit your quotation offer up to 23.08.2019 till 15:00 Hrs. in the office ADE/TMS/RDSO. Quotation offer will be opened on the same day at 15:30 Hrs in the chamber of ADE/TMS/RDSO. In case, the 23.08.2019 happens to be a holiday the Quotation offers shall be received and opened on the next working day at the same time and place. Schedule of work is attached on which the offer price in percentage above/below/at par in comparison to the estimated rates is to be quoted. Tenderer should be registered with GST, it is requested to submit GSTIN number along with the offer, failing which will be resulted in cancellation of offer.

Contractor Signatures  
(Seal)

ADE/TMS  
RDSO/LKO

**Schedule of Work**

SN	Description of Items	Unit	Qty.	Rate in Rs (in figures)	Rate in Rs. (in words )	Amount in Rs. (in Words)	Amount in Rs. (in Words)
<b>A. Audio system in VVIP Rest House</b>							
1	Supply Wall Mount Speaker 20/30 Watt with suitable frame as per technical specification Make:-Bose, Bosch, RCF.	Nos.	5				
2	Supply of Mixer Amplifier 180 Watt with 4 microphones input as per technical specification. Make:- Bose, Bosch, RCF	Nos.	1				
3	Supply and Installation Suitable Stand for amplifier.	Nos.	1				
4	Supply of Speaker cable standard make.	Mtr.	170				
5	Supply of 32 GB Pen Drive Make HP, Sandisk.	Nos.	1				
6	Supply of Power board minimum 3 no of 5/15 Amp. socket with indicator.	Nos.	2				
7	Supply of Three pin plug 5/15 Amp. As per site requirement.	Nos.	1				
8	Supply and Installation of Mixer Console with all accessories as per technical specification	Nos.	1				
9	Installation, wiring (speaker cable, power cable), testing and commissioning of as per scope of work and instruction of site in-charge of RDSO to make complete system functional properly.	Job	1				
<b>Total Part - A</b>							
<b>B. Display System in Main Conference Hall</b>							
12	Supply and Installation of 55 inch LED ( TV) display system with all accessories as per technical specification	Nos.	5				
13	Supply & Installation of Automatic 4K HDMI Auto Switcher 4:1 as per technical specification Make - Kramer or similar	Nos.	1				
14	Supply & Installation of HDMI Distribution Amplifier ( Splitter) 1:8 as per technical specification Make - Kramer or similar	Nos.	1				
15	HDMI Cable 10 Mtr. Make - Kramer or similar	Nos.	8				

16	HDMI Cable 20 Mtr. Make - Kramer or similar	Nos.	2				
17	Power Board with 3 Switch 3 Socket 5/15 Amp. with 16 Amp. Plug top	Nos.	4				
18	Power Cable 3 core 1.5 Sq.mm	Mtr.	180				
19	Main Power Board 4 Switch 4 Socket 5/15 Amp with 16 Amp. Plug Top	Nos.	1				
20	Supply of Steel stand for Video Conferencing Equipment	Nos.	1				
21	Wooden TV Stand for Main Conference Hall	Nos.	4				
22	Installation, wiring, testing and commissioning of as per scope of work and instruction of site in-charge of RDSO to make complete system functional properly.	Job	1				
			<b>Total</b>				
			<b>Grand Total ( Part A+B)</b>				

You are requested to fill up the rates against scheduled item mentioned above and submit the same in the sealed envelope in the box provided at office of Asstt. Design Engineer/TMS, Telephone Exchange Building, Manak Nagar Lucknow-226011

Quotation shall be Opened at 15:30 Hrs on 23.08.2019

Signature of Tenderer  
With Seal

ADE/TMS  
RDSO/LKO

**TERMS & CONDITION FOR SCHEDULES OF WORKS**

The Terms & Condition for schedules of works is as under:

1.	The work should be completed within One month of issue of LOA.
2.	During installation fixing etc, in this work shall be carried out as per direction of Site Engineer.
3.	<b>Completion Period of Work:-</b> The work of Telecom Portion of work in VVIP Rest House & Conference Hall of work should be completed with-in <b>One Month</b> from the dated of receipt of acceptance letter in all respect
4.	The bidder (whether his quotation accepted or not), shall treat the contents of his quotation as private and confidential. He shall also treat the prices quoted by him as strictly confidential till the quotation is opened.
5.	<b>No CLAIM FOR REJECTION OF BIDDER:</b> The quotation, when submitted shall not constitute an agreement and the bidder shall have no cause of action of claim against the RDSO for rejection of his offer. The RDSO shall always be at liberty to reject or accept at his own discretion and any such action will not be called into question and the bidder shall have no claim in that regard against the RDSO.
6.	<b>CAPIBILITY OF THE BIDDER:</b>  The bidders shall provide satisfactory evidence acceptable to RDSO to show that:  1.1 He is an experienced and established contractor who regularly under takes the work of Audio Visual System, wiring, shifting fixing and laying of PVC Conduit Pipes, Casing-N- Capping ,CAT-6 Cable and Active equipments configuration & related accessories and removal of old wiring in reputed organizations and has adequate technical knowledge and practical experience in this specific field. The bidder has to establish to the full satisfaction of RDSO his credentials and technical competency for executing such work.
7.	<b>Payment: -</b> (i) <b>95 %</b> payment will be arranged after satisfactory completion of the work on submission of duly signed bill. (ii) PAN, GSTN & Bank account details including IFSC & MICR code shall be submitted with bill. (iii) Income tax and UPTT etc. will be deducted at source from the bill as per rule as applicable. (iv) Rate & Amount shall be quoted in both words & Figures. (v) <b>Security Deposit:</b> The Security Deposit shall be <b>5%</b> of the contract values. Security will be deducted from the bill of contractor as per work done. It will be released after successful completion of free maintenance period. (vi) Free maintenance period : <b>Six Month</b>
8.	<b>Warranty:</b> Warranty period of each equipment may be different from free maintenance period. Firm has to pass on full warranty benefit to railway. Warranty from OEM for Active equipment to be given in the name of Railway authority. Warranty should be commencing after completion of work.

Acceptance of quotation shall be communicated by FAX/Telex/Telegram/Express Letter or a formal letter of acceptance of quotation by RDSO. When acceptance is communicated by FAX/ Telex/ Telegram/ Express letters, the formal letter of acceptance will be sent to the bidder as soon as possible. Issue of FA/ Telex/ Telegram/ Express letter should be deemed to conclude the contract.

Signature of Tenderer  
With Seal

ADE/TMS  
RDSO/LKO

## Execution of Schedule of work

### Technical Specification & Special Conditions of the Work

#### Brief Description of work:

- 1.1 As mentioned in Schedule of Work 'Annexure -A' and as per the direction of site engineer.
- 2 **Audio Visual work & Installation of Display system:**
- 2.1 There is already Conference system existing in RDSO Admin building conference hall. This work is for Audio system in VVIP Rest house and Display system of existing Conference system infrastructure and provision of additional display system in conference hall at RDSO Admin building.
- 2.2 Speakers are to be installed on wall proper wiring and termination through amplifier .All these wirings are to be done as per standard practices.
- 2.3 PVC conduit pipes and PVC casing-n-capping channels are to be fixed on the wall properly with help of suitable clamps & screws. All required accessories like T joints, bends screws etc. are to be supplied by contractor as per the site requirements. All required masonry work like making holes in the wall for taking these pipes, repairing of wall after laying pipes are to be done by the contractor.
- 2.4 wooden stand and steel stand for equipments are well designed and suitable for the conference system, before installation of stand contractor submit a drawing or sample in Telecom maintenance section. It will change as per site requirement.
- 2.5 The site engineer of RDSO shall decide the places where the pipes & channels are to be laid and Cable wirings are to be provided on the walls such as verandas, conference room etc.
- 2.6 If any breaking work is done on the wall the wall shall be restored to its original condition after the work is completed.
- 2.7 Channels are to be cut on wall/floor for laying PVC conduit pipes inside rooms/offices as decided by RDSO engineer. Wall & Floor are to be repaired to their original condition after completion of these activities.
- 2.8 TV, Switcher and splitter should be proper functioning.
- 2.9 All connecting HDMI Cables, power board wiring should be laying inside in PVC pipe or Casing-n- capping in a straight alignment and should be neat and clean and nicely executed.
- 2.10 Various items mentioned in schedule are to be executed as per standard practices being following nationally/internationally as applicable.

#### **Supply of wall mount speaker (20/30 watt)**

Rated Power – 20 Watt /30 Watt , Rated Input voltage -100 Volts, Sound Pressure level -106/83 dB, Effective frequency Range (- 10 db ): 200 Hz. To 12 KHz, Rated Input Impedance : 500 Ohms, Opening angle ( -6db): 90 Deg at 4 KHz., dimension: 600x120x112 mm (HWD), speaker should be good quality Make - Bosch

#### **Supply of Mixer Amplifier 180 Watt**

Two zone output, 4 microphone input with independent level control, USB drive ports, SD support and inbuilt FM tuner –Make Bosch

#### **Supply of Mixer console**

. Maximum Output level : 19dBm ( 1Khz,THD= 0.5 %), . Residual Noise – 105 dB, S/N Ratio – 105 dB, Equivalent Input – 115 dBm, Equalization Low – 80 Hz +/-15 dB, Equalization Low – 12 KHz +/-15db, Gain Control Mono-60 dB to 40 dB Stereo -8dBd to 0dB., frequency Range Response : 20 Hz to 20 kHz ( =/-3db), Inbuilt speaker Blue tooth, switchable + 48 V phantom power. In built MP3 music player. Make - MX

#### Supply of TV 55 Inch (Television)

Size	55"
Display Type	Edge LED
Panel Technology	IPS
Resolution	1920 x 1080 (FHD)
Aspect Ratio	16:09
Audio Output	10 X 2 W
Broadcasting System	PAL/SECAM, DVB-T2/C
General Features	Smart, WiFi, Preloaded App, Smart Energy Saving USB Cloning
Interface	HDMI -2, USB 2.0, RF in, AV in, Component In, Digital Optical Audio Out, Headphone Out, RJ 45, RS232C,
Warranty	The Display system should be supplied with minimum Three years OEM warranty.
Documentation	Supplier should produce authorization letter from OEM with supply of item.
	The supplier shall provide the complete operation, maintenance and installation manuals in English for the product under procurement.
Make/Model	LG, Sony, Panasonic & Make and model number should be mentioned while submitting the tender along with datasheet.

#### Supply of 4K HDMI Auto Switcher 4:1

**VIDEO:** Up to 10.2Gbps bandwidth (3.4Gbps per graphic channel) Up to 4K @60Hz (4:2:0) 24bpp resolution HDMI 2.0 and HDCP 1.4 signal compliance. **INPUT:** 1 HDMI on HDMI connector. **OUTPUTS:** 8 output HDMI and 2 loop output HDMI on HDMI connectors, **INDICATION LEDS:** OUTPUTS 1 to 8, LOOP 1 and 2 and ACTIVE input LED, **POWER SOURCE:** 100–240V AC, 50/60Hz 28VA, **POWER CONSUMPTION:** 100–240V AC, 50/60Hz 26VA, Max. Data Rate — 8.91Gbps (2.97Gbps per graphic channel), Max. Resolution — 4K@60Hz (4:2:0), Stereo analog audio per input, Balanced stereo analog audio output, Automatic input detection & selection, Manual or fast auto switching to last connected or preset priority, Manual or fast auto switching to last connected or preset priority, switcher should be good quality .Make – Karmer

#### Supply of HDMI Distribution Amplifier (Splitter 1:8)

**INPUTS:** 4 HDMI connectors, 4 unbalanced stereo audio on 3.5mm mini jacks **OUTPUTS:** 1 HDMI connector, 1 balanced stereo audio on 5–pin terminal block **PORTS:** 1 RS–232 on a 3–pin terminal block, 1 mini USB for programming **COMPLIANCE WITH HDMI STANDARD:** HDMI 1.4, Deep Color, 3D, ARC, up to 7.1 uncompressed audio channels, CEC **MAX DATA RATE:** 8.91Gbps (2.97Gbps per graphic channel) **SUPPORTED RESOLUTIONS:** Up to 4K x 2K, 4K@60Hz (4:2:0) **CONTROLS:** Front panel buttons, contact closure, IR, RS–232 Protocol 3000 **POWER CONSUMPTION:** 5V DC, 500mA, 1:8 + 2 loop HDMI distributor, Up to 4K@60Hz (4:2:0) video resolution, Up to 10.2Gbps bandwidth, HDMI 2.0, HDCP 1.4 compliance, Splitter should be good quality Make –Karmer.

#### Supply of HDMI Cable

**Max. Resolution 4K@60Hz (4:4:4) High-Quality Connectors** 24K gold–plated connectors resist corrosion, and offer the best possible connectivity, **K-Lock Pull-Resistant Connectors** Provides 15lbs of restraining force for a non–slip connection **Lengths** 35 and 50 feet. Make – Karmer

Wooden and steel stand as per site requirement contractor submit drawing or sample of wooden and steel stand submit before supply.