

ALL INDIA INSTITUTE OF MEDICAL SCIENCE, JODHPUR

Name of the work: Supply, Installation, Testing and Commissioning of Sound Reinforcement & Video Switching for Auditorium at AIIMS, Jodhpur

N.I.T. No.: AIIMS-JDH/EE/CIVIL/2016-17/Audi/02

CLARIFICATION / ADDENDUM

S. No.	Ref. Page No. of Document	For	To be read as-																																																				
1.	Page No. 97 & 98	<p>Clause 18 List of mandatory machinery tools & plants to be deployed by the contractor at site:- As per work requirement and directions of Engineer –in-Charge. .</p> <table border="1"> <thead> <tr> <th rowspan="2">S . N o .</th> <th rowspan="2">Minimum qualification of technical representative</th> <th rowspan="2">Discipline</th> <th rowspan="2">Designation (principal technical/technical representative)</th> <th rowspan="2">Minimum Exp in Yrs</th> <th rowspan="2">Number</th> <th colspan="2">Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i) per month</th> </tr> <tr> <th>Figure</th> <th>Words</th> </tr> </thead> <tbody> <tr> <td></td> <td>Graduate Engineer</td> <td>I.T./Electronics/ Electrical</td> <td>Principal Technical Representative</td> <td>05</td> <td>01</td> <td>Rs 25000/-</td> <td>Twenty five thousand only</td> </tr> <tr> <td></td> <td>Graduate Engineer Or Diploma Engineer</td> <td>I.T./Electronics/ Electrical</td> <td>02 Project Planning / Site/Billing Engineer</td> <td>02 05</td> <td>01</td> <td>Rs 15000/-</td> <td>Fifteen thousand only</td> </tr> </tbody> </table> <p>Clause 25 Constitution of Dispute Redressal Committee (DRC) DRC shall constitute one chairman and two members</p> <p>Clause 36 (i): Requirement of Technical Representative(s) and recovery Rate Note: Assistant Engineers, retired from Govt. services that are holding Diploma, will be treated at par with Graduate Engineers. Diploma holders with minimum 10 years relevant experience with reputed construction co. can be treated at par with graduate engineers for the purpose of such deployment subject to the condition that such diploma holders not exceed 50 % of requirement of degree engineers.</p>	S . N o .	Minimum qualification of technical representative	Discipline	Designation (principal technical/technical representative)	Minimum Exp in Yrs	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i) per month		Figure	Words		Graduate Engineer	I.T./Electronics/ Electrical	Principal Technical Representative	05	01	Rs 25000/-	Twenty five thousand only		Graduate Engineer Or Diploma Engineer	I.T./Electronics/ Electrical	02 Project Planning / Site/Billing Engineer	02 05	01	Rs 15000/-	Fifteen thousand only	<p>Clause 18 List of mandatory machinery tools & plants to be deployed by the contractor at site:- As per work requirement and directions of Engineer –in-Charge.</p> <p>Clause 25 Constitution of Dispute Redressal Committee (DRC) DRC shall constitute one chairman and two members</p> <p>Clause 36 (i): Requirement of Technical Representative(s) and recovery Rate</p> <table border="1"> <thead> <tr> <th rowspan="2">S . N o .</th> <th rowspan="2">Minimum qualification of technical representative</th> <th rowspan="2">Discipline</th> <th rowspan="2">Designation (principal technical/technical representative)</th> <th rowspan="2">Minimum Exp in Yrs</th> <th rowspan="2">Number</th> <th colspan="2">Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i) per month</th> </tr> <tr> <th>Figure</th> <th>Words</th> </tr> </thead> <tbody> <tr> <td></td> <td>Graduate Engineer</td> <td>I.T./Electronics/ Electrical</td> <td>Principal Technical Representative</td> <td>05</td> <td>01</td> <td>Rs 25000/-</td> <td>Twenty five thousand only</td> </tr> <tr> <td></td> <td>Graduate Engineer Or Diploma Engineer</td> <td>I.T./Electronics/ Electrical</td> <td>02 Project Planning / Site/Billing Engineer</td> <td>02 01</td> <td>01</td> <td>Rs 15000/-</td> <td>Fifteen thousand only</td> </tr> </tbody> </table> <p>Note: Assistant Engineers, retired from Govt. services that are holding Diploma, will be treated at par with Graduate Engineers. Diploma holders with minimum 10 years relevant experience with reputed construction co. can be treated at par with graduate engineers for the purpose of such deployment subject to the condition that such diploma holders not exceed 50 % of requirement of degree engineers.</p>	S . N o .	Minimum qualification of technical representative	Discipline	Designation (principal technical/technical representative)	Minimum Exp in Yrs	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36(i) per month		Figure	Words		Graduate Engineer	I.T./Electronics/ Electrical	Principal Technical Representative	05	01	Rs 25000/-	Twenty five thousand only		Graduate Engineer Or Diploma Engineer	I.T./Electronics/ Electrical	02 Project Planning / Site/Billing Engineer	02 01	01	Rs 15000/-	Fifteen thousand only
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2.	Page No. 117, 119 & 120	<p>The following S.C.C. have been given under sub-head (xi) Role of Auditorium consultant-</p> <p>(f) No escalation whatsoever will be applicable on above price due to any reason.</p> <p>(g) The site for the work is available. The bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed.</p> <p>(h) This is a time bound project/work any no time over run is acceptable. Only bidders who can deliver project in time only need to apply.</p> <p>(i) AIIMS-Jodhpur, reserve the right to accept or reject any or all the bidders without assigning any reasons, no bidder shall have any cause of action or claim against the AIIMS-Jodhpur for rejection of his bids.</p> <p>(j) Manufacturer Authorization: The bidder (if not original equipment manufacturer must submit Original Equipment Manufacturer authorization certificate that the tenderer is authorized for selling and maintain the equipment. The bidder shall submit all necessary documents required for verification</p>	<p>The following S.C.C. are for contractors and shall be treated under sub-head 37. Miscellaneous-</p> <p>(l) No escalation whatsoever will be applicable on above price due to any reason.</p> <p>(m) The site for the work is available. The bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed.</p> <p>(n) This is a time bound project/work any no time over run is acceptable. Only bidders who can deliver project in time only need to apply.</p> <p>(o) AIIMS-Jodhpur, reserve the right to accept or reject any or all the bidders without assigning any reasons, no bidder shall have any cause of action or claim against the AIIMS-Jodhpur for rejection of his bids.</p> <p>(p) Manufacturer Authorization: The bidder (if not original equipment manufacturer must submit Original Equipment Manufacturer authorization certificate that the tenderer is authorized for selling and maintain the equipment. The bidder shall submit all necessary documents required for verification</p>
3.	Page No. 136	<p align="center">Annual Maintenance Contract – Comprehensive</p> <p>1st Year Comprehensive Annual Maintenance Cost</p>	<p align="center">Annual Maintenance Contract – Comprehensive</p> <p>Rate should not be quoted for the item and should be considered as inclusive in BOQ items rate. No separate payment shall be quoted / allowed for 1st Year Comprehensive Annual Maintenance Cost.</p>
4.			<p>Technical Specifications (Appendix-1) for Sound reinforcement have been attached herewith shall be treated as part of tender documents.</p>

Technical SpecificationsSH - I Sound Reinforcement System

1	Symmetrical Line Array Right Cluster	
	Frequency Response (+/-3dB)	60 Hz to 16kHz or better
	Frequency Bandwidth (-10 dB)	55 Hz to 16kHz or better
	Nominal horizontal Dispersion	90 Horizontal or better
	Nominal Vertical Dispersion	Total of 60 degree vertical dispersion is required for uniform coverage. All OEMs shall quote appropriate number of boxes as per vertical dispersion of each box being proposed.
	Long Term Power Handling	LF: 400 Watt or better HF: 80 Watt or better
	Impedance	8 Ohm or better
	Sensitivity(SPL / W @ 1 Mtr)	LF: 93 dB or better HF: 107 dB or better
	Max SPL @ 1 Mtr (Cont.)	120 dB or better
	Transducers	LF: 2 X 8" or better HF: min 1 x 3" or better
2	Symmetrical Line Array Centre Cluster	
	Frequency Response (+/-3dB)	60 Hz to 16kHz or better
	Frequency Bandwidth (-10 dB)	55 Hz to 16kHz or better
	Nominal horizontal Dispersion	90 Horizontal or better
	Nominal Vertical Dispersion	Total of 60 degree vertical dispersion is required for uniform coverage. All OEMs shall quote appropriate number of boxes as per vertical dispersion of each box being proposed.
	Long Term Power Handling	LF: 400 Watt or better HF: 80 Watt or better
	Impedance	8 Ohm or better
	Sensitivity(SPL / W @ 1 Mtr)	LF: 93 dB or better HF: 107 dB or better
	Max SPL @ 1 Mtr (Cont.)	120 dB or better
	Transducers	LF: 2 X 8" or better HF: min 1 x 3" or better
3	Symmetrical Line Array Left Cluster	
	Frequency Response (+/-3dB)	60 Hz to 16kHz or better
	Frequency Bandwidth (-10 dB)	55 Hz to 16kHz or better
	Nominal horizontal Dispersion	90 Horizontal or better
	Nominal Vertical Dispersion	Total of 60 degree vertical dispersion is required for uniform coverage. All OEMs shall quote appropriate number of boxes as per vertical dispersion of each box being proposed.
	Long Term Power Handling	LF: 400 Watt or better HF: 80 Watt or better
	Impedance	8 Ohm or better
	Sensitivity(SPL / W @ 1 Mtr)	LF: 93 dB or better HF: 107 dB or better
	Max SPL @ 1 Mtr (Cont.)	120 dB or better



	Sensitivity (SPL / W @ 1 Mtr) Max SPL @ 1 Mtr (Cont.) Transducers	84 dB SPL or better 96 dB or better 1 X 2.25" or better
12	Ceiling Loudspeakers	
	Frequency range Nominal Dispersion Long Term Power Handling Sensitivity (SPL / W @ 1 Mtr) Max SPL @ 1 Mtr (Cont.) Transducers	100 Hz to 17 kHz or better 140 degree or better 16 W or better 84 dB SPL or better 96 dB or better 2.25" or better
13	8 Channel Class D Digital Power Amplifier 4000W	
	Number of Min Channel Class of Amplifier Cont. Power Per Channel (impedance) Power @ 70/100V Voltage Gain THD IMD Damping factor Inbuilt DSP	8 Channels or better Class D or equivalent 500W @ 40hm or better 300W @ 80hm or better min 800W (bridged 2 channel) or better 32 dB or better <0.4% or better <0.4% or better >1000 or better Limiter, EQ'S, Crossover, Delays or more
14	Dual Channel Power Amplifier	
	Number of Min Channel Class of Amplifier Cont. Power Per Channel (impedance) Voltage Gain THD IMD	2 Channel or better Class D or equivalent 50 W @ 4 Ohms or better 25 W @ 8 Ohms or better 32 dB or better <0.3% or better <0.4% or better
15	Single Channel Power Amplifier	
	Power @ 70/100V No. of channels THD Frequency Range	90 Watt or better Min 1 Channel <1% or better 60Hz to 20kHz or better
16	Dual Channel Power Amplifier	
	Number of Min Channel Class of Amplifier Cont. Power Per Channel (100/70V) Voltage Gain THD IMD	2 Channel or better Class D or equivalent 120 W or better per channel 32 dB or better <0.3% or better <0.4% or better
17,18,19	Digital Sound Processor	
	Number of Min Channels A/D and D/A Converter Sampling Rate Signal to Noise Ratio THD Dynamic Range	Inputs : 10 or better Outputs : 6 or better 24 bit or better 48kHz or better 80 dB or better <0.01% or better > 105 Db or better



	Communication Port Inbuilt DSP	Ethernet or equivalent Compressor, Limiter, EQ'S, Crossover, Delays, Routers, Matrix mixers, Duckers etc
20	Master Controller with Power Supply	
	Programmable network controller manages gain settings or scene selections. 2-line-by-40 character backlit LCD	
21	AV Receiver	
	Surround Pre-amplifier compatible	Yes
	Dolby 7.1 format	Yes
	Balanced Outputs	Yes
22	Network Switch	
	LAN Switch/Ethernet Switch with 8 port or better.	
23	Digital Mixing Console with Stage Box	
	Type	Digital
	Input Channels	40 Mono or better
	4 Band Parametric EQ	High pass filter or better
	Aux/bus Sends	12 mono or better
	Digital I/O	Yes
	Digital effects	Yes
	Stage Box	Yes
	Touch/LCD Panel	Yes
24	Wired Handheld Microphone	
	Type of transducer	Dynamic
	Polar Pattern	Cardioid / hypercardioid / supercardioid
	Freq Response	50Hz to 15kHz or better
	Sensitivity	Min 1.85mV or better
	Nominal Impedance	< 360 or better
25	Wired Instrument microphone	
	Type of transducer	Dynamic
	Polar Pattern	Cardioid / hypercardioid / supercardioid
	Freq Response	50Hz to 14kHz or better
	Sensitivity	Min 1.8 mV or better
	Nominal Impedance	< 360 or better
26	UHF Wireless Handheld Microphone	
	Polar Pattern	Cardioid / Hypercardioid / Supercardioid
	RF Freq Range	606 MHz to 865 MHz or better
	Audio Bandwidth	80 Hz to 15kHz or better
	THD	<0.9% or better
	S/N Ratio	>105 dB or better
27	UHF Wireless Lapel Microphone	
	Modulation	FM
	Pre programmed Selectable Frequencies per Band	12 or better
	Polar Pattern	Cardioid / Hypercardioid / Supercardioid
	RF Freq Range	516 MHz to 865 MHz or better
	THD	<0.9% or better



	RF Power	20mW or better
	S/N Ratio	>105 dB or better
28	Gooseneck microphone with ON/OFF Switch	
	Gooseneck Length	15" or better
	Polar Pattern	Cardioid / hypercardioid / supercardioid
	RFI Shielding	Yes
	S/N Ratio	65 dB or better
	Max SPL for 1% THD	107 dB or better
	Freq Response	50 Hz to 17kHz or better
29	Ceiling Microphone	
	Type	condenser or better
	Polar Pattern	Cardioid /Supercardioid or better
	Sensitivity	3 mV/Pa or better
	Nominal Impedance	< 180 Ohm or better
	Max SPL for 1% THD	138 dB SPL dB or better
	Freq Response	50 Hz to 17kHz or better
30	CD Cum USB Player	
	Type	CD Cum USB Player
	Frequency Response	2 Hz to 20 kHz or better
	THD	<0.05% or better
	S/N Ratio	85 dB or better
	Dynamic Range	85 dB or better
	IR Remote Control	Yes
	Audio CD	Yes
	MP 3	Yes
	Balanced Output	Yes
31	DVD Cum USB Player	
	Playback Format	AAC, CD, CD-R/RW, DVD-Video, JPEG, LPCM, MP3, MPEG-1, Simple MPEG4, SVCD, Video CD, WMA
	Instant Replay	Yes
	DVD/CD Input	Yes
	USB Input	Yes
32	Junction Box	
	Stage Junction Box with 4 Female XLR , 1# NL4 Speaker Output.	
33	Tripod Long microphone stand	
	Light weight tripod aluminium Microphone stand with Long Arm, boom type & chrome plating.	
34	Loudspeaker cable	
	2 core 4.0 sq mm PVC insulated Cu conduction loudspeaker cable with Conductor 224 x 0.15 mm, Impedance 4.5 Ω/km Capacitance 180 pF/m, Outer dia 11.0 mm, working temperature -20 °C / +70 °C.	
35	Loudspeaker cable	
	2 core 2.5 sq mm PVC insulated Cu conduction loudspeaker cable with Conductor 50 x 0.25 mm, Impedance 7.0 Ω/km Capacitance 170 pF/m, Outer dia 8.0 mm, working temperature -20 °C / +70 °C.	
36	Microphone cable	



	2 core Shielded mm PVC Insulated Microphone cable with Ultra low Capacitance 60(Pf/m) ; Outer Jacket : PVC Matt ; Working Temperature :20 °C / +70 °C ; Diameter : 6.5mm ; extremely flexible.
37	PVC Conduit 32mm PVC Conduit.
38	UL Listed Connectors UL Listed Connectors
39	Equipment Rack Equipment Rack for housing all rack mountable equipments with internal wiring, front glass door; heat dissipation fans; movement wheels, power distribution units etc.

SH-II Video Switching System

1	Multiformat Transmitter Wall Plate Cum Presentation Point	
	Inputs	HDMI, VGA, Audio Input or better
	Outputs	Twisted Pair
	HDCP Compliant	Yes
	Maximum Data Rate	Min 6.75 Gbps (2.25 Gbps per colour)
2	8X8 HDMI Matrix Presentation switcher	
	Input	8 HDMI or better
	Output	8 HDMI
	Max Data Rate	6.75Gbps or better
	Compliance with HDMI & HDCP	Yes
	Resolution	Up to UXGA; 1080p
	Control Ports	RS-232/Ethernet/IR/USB
	Power Consumption	100-240 VAC, 50-60 Hz
3	HDMI over Shielded Twisted Pair Receiver	
	Input	Shielded Twisted Pair Output
	Output	HDMI
	Max Data Rate	10.2 Gbps or better
	Supports HDMI and HDCP	Yes

