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تجزیہ و تحلیل کے نتائج:			
مجموعہ کے نتائج	تجزیہ و تحلیل کے نتائج	تجزیہ و تحلیل کے نتائج	تجزیہ و تحلیل کے نتائج
			مجموعہ کے نتائج
			تجزیہ و تحلیل کے نتائج (تجزیہ)
			تجزیہ و تحلیل کے نتائج (تجزیہ)
			تجزیہ و تحلیل کے نتائج

تجزیہ و تحلیل کے نتائج:	تجزیہ و تحلیل کے نتائج:
تجزیہ و تحلیل کے نتائج:	تجزیہ و تحلیل کے نتائج:
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تجزیہ و تحلیل کے نتائج:	تجزیہ و تحلیل کے نتائج:

تجزیہ و تحلیل کے نتائج

تجزیہ و تحلیل کے نتائج 3 اجزاء میں (تجزیہ و تحلیل کے نتائج) (تجزیہ و تحلیل کے نتائج) (05) (تجزیہ و تحلیل کے نتائج)

20__	20__	20__	تجزیہ و تحلیل کے نتائج
			تجزیہ و تحلیل کے نتائج
تجزیہ و تحلیل کے نتائج 3 اجزاء میں (تجزیہ و تحلیل کے نتائج) (تجزیہ و تحلیل کے نتائج) (تجزیہ و تحلیل کے نتائج)			

تجزیہ و تحلیل کے نتائج (15) (تجزیہ و تحلیل کے نتائج)

تجزیہ و تحلیل کے نتائج کے نتائج 50% (تجزیہ و تحلیل کے نتائج)

تجزیہ و تحلیل کے نتائج			
#	تجزیہ و تحلیل کے نتائج	تجزیہ و تحلیل کے نتائج	تجزیہ و تحلیل کے نتائج
			تجزیہ و تحلیل کے نتائج (تجزیہ و تحلیل کے نتائج)
			تجزیہ و تحلیل کے نتائج
			تجزیہ و تحلیل کے نتائج (تجزیہ و تحلیل کے نتائج)

نمبر ۱ ۲ ۳ ۴ ۵ ۶	تاریخ و نام و پتو	تاریخ و نام و پتو	تاریخ و نام و پتو
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	تاریخ		

تاریخ و نام و پتو	تاریخ و نام و پتو
تاریخ:	تاریخ:
نام:	نام:
پتو:	پتو:

BID SECURITY FORMAT

The Issuing Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.

_____ [Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: _____ [Name and Address of Procuring Entity]

Date: _____

BID GUARANTEE No.: _____

We have been informed that [name of the Bidder] (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of [name of contract] under Invitation for Bids No. [Procurement Reference number] ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we [name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [amount in figures] ([amount in words]) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Procuring Entity during the period of bid validity, (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the performance security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

PERFORMANCE GUARANTEE FORMAT

[The issuing bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year)]*

Title of the procurement: *[Insert general title of the procurement]*

Procurement Reference No: *[insert reference]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

Beneficiary: *[insert complete name of Procuring Entity]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s)¹ in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*,² and any demand for payment under it must be received by us at this office on or before that date. We agree to a one-time extension of this Guarantee for a period not to exceed *[six months]* *[one year]*, in response to the Procuring Entity's written request for such extension, such request to be presented to us before the expiry of the Guarantee.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

.....
[signatures of authorized representatives of the bank]

¹ The Bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Procuring Entity.

² Dates established in accordance with Clause 18.4 of the General Conditions of Contract ("GCC"), taking into account any warranty obligations of the Supplier under Clause 16.2 of the GCC intended to be secured by a partial Performance Guarantee.

BANK GUARANTEE FOR ADVANCE PAYMENT

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated.]

Date: *[insert date (as day, month, and year)]*

Title of the procurement: *[Insert general title of the procurement]*

Procurement Reference No: *[insert reference]*

[Issuing bank's letterhead]

Beneficiary: *[insert legal name and address of Procuring Entity]*

ADVANCE PAYMENT GUARANTEE No.: *[insert Advance Payment Guarantee no.]*

We, *[insert legal name and address of bank]*, have been informed that *[insert complete name and address of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert date of Agreement]* with you, for the supply of *[insert types of Goods to be delivered]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance is to be made against an advance payment guarantee.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount(s)³ in figures and words]* upon receipt by us of your first demand in writing declaring that the Supplier is in breach of its obligation under the Contract because the Supplier used the advance payment for purposes other than toward delivery of the Goods.

It is a condition for any claim and payment under this Guarantee to be made that the advance payment referred to above must have been received by the Supplier on its account *[insert number and domicile of the account]*

This Guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until *[insert date⁴]*. We agree to a one-time extension of this Guarantee for a period not to exceed *[six months][one year]*, in response to the Procuring Entity's written request for such extension, such request to be presented to us before the expiry of the Guarantee.

This Guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s) of authorized representative(s) of the bank]

³ The issuing bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Procuring Entity.

⁴ Insert the Delivery date stipulated in the Contract Delivery Schedule.

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Technical Specifications

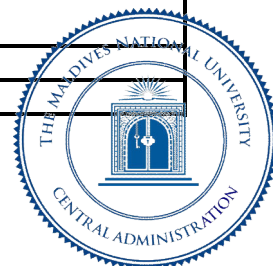
Sound Setup for Auditorium (SN-01)

Equipments and Specification of items

Specifications for Microphone

1. Hand-held Microphone Set (Qty: 2)

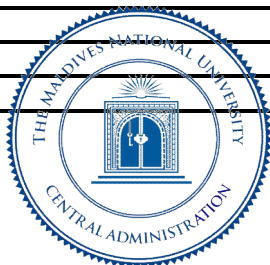
		Your brand and Specifications
Minimum Requirements		
Model	Shure SLXD24D/SM58 (BAND: H55) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1760
Included Transmitters	2 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	H55: 514 to 558 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (Full Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		2
Audio I/O	2 x XLR 3-Pin Male Balanced Mic/Line Output 2 x 1/4" TRS Female Balanced Output (Lockable)	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	



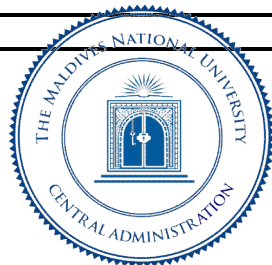
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 +21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dBV/Pa	
Warranty (Required)	1 year	
2. Pin Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD124/85 (BAND: G58) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1760
Included Transmitters	1 x Bodypack with Microphone 1 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	G58: 470 to 514 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	



Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Approximate RF Sensitivity	-97 dBm	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Display & Indicators	1 x LCD (AF Level, Battery Status, Channel, Group, RF Level, Transmitter Battery Status)	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Lavalier	
Color	Black	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 17 kHz	
Equivalent Noise Level	28 dB A-Weighted	
Maximum SPL	130.5 dB SPL	
Impedance	1800 Ohms	
Sensitivity	-45.5 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Operating Voltage	1.5 to 10 V	
Transmitter 2		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 21 dB	



Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone 2		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dB	
Warranty (Required)	1 year	
3. Head Worn Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD14/SM35 OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1840
Included Transmitters	1 x Bodypack with Microphone	
Diversity	True Digital Diversity	
RF Frequency Band	J52: 558 to 602 MHz 614 to 616 MHz	
RF Bandwidth	46 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	

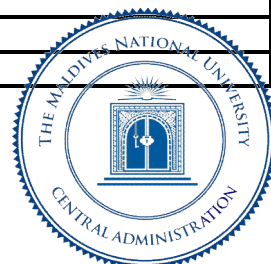


Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Headset	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	40 Hz to 20 kHz	
Maximum SPL	153 dB SPL	
Impedance	2400 Ohms	
Sensitivity	-59 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Warranty (Required)	1 year	
4. 12-Channel Analog Mixer (Qty: 1)		
		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha MG12XU 12-Channel Analog Mixer OR Equivalent	
Built-in Effects	SPX algorithm: 24 programs, PARAMETER control:1, FOOT SW:1 (FX RTN CH on/off)	
Phantom Power	(+48 V switchable, channels 1 - 4)	
Digital I/O	USB: USB Audio Class 2.0 compliant Sampling frequency: max 192 kHz Bit depth: 24-bit	
Input Channels	4x mono [mic/line] 2x mono/stereo [mic/line] 2x stereo [line]	

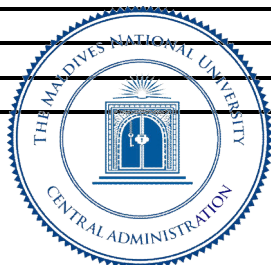


Output Channels	2x stereo out 1x monitor out 1x headphone out 2x aux out 2x group out	
Bus	Stereo: 1 AUX: 2 GROUP: 2	
Pad	26 dB (mono)	
HPF	80 Hz, 12 dB/oct (mono/stereo: MIC only)	
Compressor	Threshold: +22 dBu to -8 dBu Ratio: 1:1 to 4:1 Output level: 0 dB to 7 dB Attack time: approx. 25 msec Release time: approx. 300 msec	
Equalizer	EQ high gain: +15 dB/-15 dB, Frequency: 10 kHz shelving EQ mid gain: +15 dB/-15 dB, Frequency: 2.5 kHz peaking EQ low gain: +15 dB/-15 dB, Frequency: 100 Hz shelving	
LED	Peak LED turns on when post EQ signal reaches 3 dB below clipping	
Level Metering	2 x 12-segment LED meter [PEAK, +10, +6, +3, 0, -3, -6, -10, -15, -20, -25, -30 dB]	
Total Harmonic Distortion	0.03% @ +14 dBu (20 Hz to 20 kHz), GAIN knob: Min, 0.005% @ +24 dBu (1 kHz), GAIN knob: Min	
Frequency Response	(+0.5 dB/-1.5 dB (20 Hz to 48 kHz), refer to the nominal output level @ 1 kHz, GAIN knob: Min)	
Equivalent Input Noise	-128 dBu (mono input channel, Rs: 150 Ω, GAIN knob: max)	
Residual Output Noise	-102 dBu (STEREO OUT, STEREO master fader: min)	
Crosstalk	-78 dB	
Power Requirement	AC 100 - 240 V, 50 / 60 Hz	
Power Consumption	22 W	
Warranty (Required)	1 year	

5. Dual Channel Power Amplifier (Qty: 1)		
		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha PX5 Dual Channel 2x800W Lightweight Power Amplifier (220V-240V MODEL) OR Equivalent	
Output Power	1kHz non-clip, 20ms burst, both channels driven	
8 Ohms	500W x 2	
4 Ohms	800W x 2	
2 Ohms	500W x 2	
8 Ohms - Power Boost Mode	800W x 1	
4 Ohms - Power Boost Mode	1400W x 1	

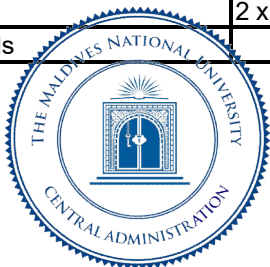


Sampling Frequency Rate	48kHz	
A/D D/A Converters	24-bit linear, 128 times over sampling	
Total Harmonic Distortion		
<i>1kHz, 10W</i>	0.1-percent	
<i>1kHz, Half Power</i>	0.3-percent	
Frequency Response	20Hz - 20kHz (+/-1.0dB, 1W, 8 Ohms)	
S/N Ratio	100dB (A-weighted, 8 Ohms, Gain set to +14dBu)	
Crosstalk	<-60dB (half power, 8 Ohms, 1kHz, Vol. max. input, 150 Ohm shunt)	
Voltage Gain/Sensitivity	8 Ohm, Volume max (Power Boost mode)	
<i>Gain Setting - 32dB</i>	34.0dB/+6.3dBu	
<i>Gain Setting - 26dB</i>	28.0dB/+12.3dBu	
<i>Gain Setting - +4dBu</i>	36.3dB/+4dBu	
<i>Gain Setting - +14dBu</i>	26.3dB/+14dBu	
Maximum Input Voltage	+24dBu	
Input Impedance		
<i>Balanced</i>	20 k Ohms	
<i>Unbalanced</i>	10 k Ohms	
I/O Connectors		
Speaker Output Ports	Neutrik SpeakON NL4 x 2, Binding Post x 2 pairs, 1/4" TS Jack x 2	
Line Input	XLR-3-31 x 2, 1/4" TRS Jack x 2	
<i>Others</i>	USB 2.0 Standard-A Connector (Female) (for Save/Load, Speaker Preset update, Firmware update with USB memory), AC Inlet x 1 (with AC cord clamp)	
Latency	1.5ms (analog input to speakers)	
Presets	8 x user amplifier presets (factory speaker presets for Yamaha passive speakers)	
Amplifier Class	Class-D, balanced output circuit (BTL)	
Power Requirements	220V-240V, 50/60Hz	
Power Consumption		
<i>1/8 Max. Power, 4 Ohms</i>	230W (pink noise at all channels)	
<i>Idling, 4 Ohms</i>	55W	
Warranty (Required)	1 year	
6. Accessories (Qty: 4 piece each)		
		Your brand and Specifications
	Minimum Requirements	
Model	TS Cable	
Lenght	2 Meters	
Connection Type	TS to TS	
Model	TRS Cable	
Lenght	2 Meters	
Connection Type	TRS to TRS	
Model	XLR Cable	
Lenght	5 Meters	
Connection Type	XLR Male to XLR Female	

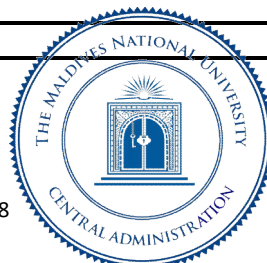


Model	speakON Cable	
Lenght	15 Meters	
Connection Type	speakON to speakON	
Model	AUX to XLR Cable	
Lenght	5 Meters	
Connection Type	AUX AUX 3.5mm to XLR	
Model	speakON to TS Cable	
Lenght	30 Meters	
Connection Type	speakON to TS Cable	
Model	RCA to AUX Cable	
Lenght	5 Meters	
Connection Type	RCA to AUX 3.5mm	
Model	AUX Cable	
Lenght	3 Meters	
Size	3.5mm	
Connection Type	AUX to AUX	

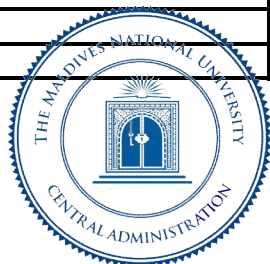
Sound Setup for Auditorium (KC-01)		
Equipments and Specification of items		
Specifications for Microphone		
7. Hand-held Microphone Set (Qty:2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD24D/SM58 (BAND: H55) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1760
Included Transmitters	2 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	H55: 514 to 558 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (Full Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		2



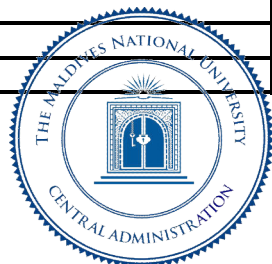
Audio I/O	2 x XLR 3-Pin Male Balanced Mic/Line Output 2 x 1/4" TRS Female Balanced Output (Lockable)	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 +21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dBV/Pa	
Warranty (Required)	1 year	
8. Pin Microphone Set (Qty:2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD124/85 (BAND: G58) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1760



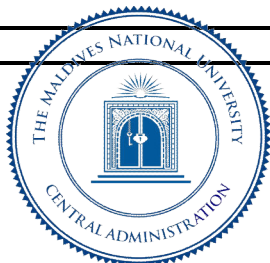
Included Transmitters	1 x Bodypack with Microphone 1 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	G58: 470 to 514 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Approximate RF Sensitivity	-97 dBm	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Display & Indicators	1 x LCD (AF Level, Battery Status, Channel, Group, RF Level, Transmitter Battery Status)	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	



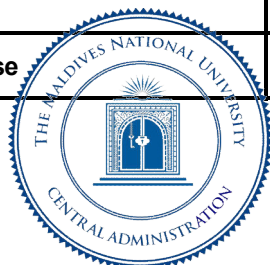
Battery Type	2 x AA	
Microphone		
Microphone Type	Lavalier	
Color	Black	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 17 kHz	
Equivalent Noise Level	28 dB A-Weighted	
Maximum SPL	130.5 dB SPL	
Impedance	1800 Ohms	
Sensitivity	-45.5 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Operating Voltage	1.5 to 10 V	
Transmitter 2		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone 2		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dB	
Warranty (Required)	1 year	
9. Head Worn Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD14/SM35 OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1840
Included Transmitters	1 x Bodypack with Microphone	
Diversity	True Digital Diversity	
RF Frequency Band	J52: 558 to 602 MHz 614 to 616 MHz	
RF Bandwidth	46 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	



Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Headset	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	40 Hz to 20 kHz	
Maximum SPL	153 dB SPL	
Impedance	2400 Ohms	
Sensitivity	-59 dBV/Pa	
Dynamic Range	102.5 dB	



Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Warranty (Required)	1 year	
10. 12-Channel Analog Mixer (Qty: 1)		
		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha MG12XU 12-Channel Analog Mixer OR Equivalent	
Built-in Effects	SPX algorithm: 24 programs, PARAMETER control:1, FOOT SW:1 (FX RTN CH on/off)	
Phantom Power	(+48 V switchable, channels 1 - 4)	
Digital I/O	USB: USB Audio Class 2.0 compliant Sampling frequency: max 192 kHz Bit depth: 24-bit	
Input Channels	4x mono [mic/line] 2x mono/stereo [mic/line] 2x stereo [line]	
Output Channels	2x stereo out 1x monitor out 1x headphone out 2x aux out 2x group out	
Bus	Stereo: 1 AUX: 2 GROUP: 2	
Pad	26 dB (mono)	
HPF	80 Hz, 12 dB/oct (mono/stereo: MIC only)	
Compressor	Threshold: +22 dBu to -8 dBu Ratio: 1:1 to 4:1 Output level: 0 dB to 7 dB Attack time: approx. 25 msec Release time: approx. 300 msec	
Equalizer	EQ high gain: +15 dB/-15 dB, Frequency: 10 kHz shelving EQ mid gain: +15 dB/-15 dB, Frequency: 2.5 kHz peaking EQ low gain: +15 dB/-15 dB, Frequency: 100 Hz shelving	
LED	Peak LED turns on when post EQ signal reaches 3 dB below clipping	
Level Metering	2 x 12-segment LED meter [PEAK, +10, +6, +3, 0, -3, -6, -10, -15, -20, -25, -30 dB]	
Total Harmonic Distortion	0.03% @ +14 dBu (20 Hz to 20 kHz), GAIN knob: Min, 0.005% @ +24 dBu (1 kHz), GAIN knob: Min	
Frequency Response	(+0.5 dB/-1.5 dB (20 Hz to 48 kHz), refer to the nominal output level @ 1 kHz, GAIN knob: Min)	
Equivalent Input Noise	-128 dBu (mono input channel, Rs: 150 Ω, GAIN knob: max)	



Residual Output Noise	-102 dBu (STEREO OUT, STEREO master fader: min)	
Crosstalk	-78 dB	
Power Requirement	AC 100 - 240 V, 50 / 60 Hz	
Power Consumption	22 W	
Warranty (Required)	1 year	
11. Dual Channel Power Amplifier (Qty: 1)		
		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha PX5 Dual Channel 2x800W Lightweight Power Amplifier (220V-240V MODEL) OR Equivalent	
Output Power	1kHz non-clip, 20ms burst, both channels driven	
<i>8 Ohms</i>	500W x 2	
<i>4 Ohms</i>	800W x 2	
<i>2 Ohms</i>	500W x 2	
<i>8 Ohms - Power Boost Mode</i>	800W x 1	
<i>4 Ohms - Power Boost Mode</i>	1400W x 1	
Sampling Frequency Rate	48kHz	
A/D D/A Converters	24-bit linear, 128 times over sampling	
Total Harmonic Distortion		
<i>1kHz, 10W</i>	0.1-percent	
<i>1kHz, Half Power</i>	0.3-percent	
Frequency Response	20Hz - 20kHz (+/-1.0dB, 1W, 8 Ohms)	
S/N Ratio	100dB (A-weighted, 8 Ohms, Gain set to +14dBu)	
Crosstalk	<-60dB (half power, 8 Ohms, 1kHz, Vol. max. input, 150 Ohm shunt)	
Voltage Gain/Sensitivity	8 Ohm, Volume max (Power Boost mode)	
<i>Gain Setting - 32dB</i>	34.0dB/+6.3dBu	
<i>Gain Setting - 26dB</i>	28.0dB/+12.3dBu	
<i>Gain Setting - +4dBu</i>	36.3dB/+4dBu	
<i>Gain Setting - +14dBu</i>	26.3dB/+14dBu	
Maximum Input Voltage	+24dBu	
Input Impedance		
<i>Balanced</i>	20 k Ohms	
<i>Unbalanced</i>	10 k Ohms	
I/O Connectors		
<i>Speaker Output Ports</i>	Neutrik SpeakON NL4 x 2, Binding Post x 2 pairs, 1/4" TS Jack x 2	
<i>Line Input</i>	XLR-3-31 x 2, 1/4" TRS Jack x 2	
<i>Others</i>	USB 2.0 Standard-A Connector (Female) (for Save/Load, Speaker Preset update, Firmware update with USB memory), AC Inlet x 1 (with AC cord clamp)	
Latency	1.5ms (analog input to speakers)	
Presets	8 x user amplifier presets (factory speaker presets for Yamaha passive speakers)	



Amplifier Class	Class-D, balanced output circuit (BTL)	
Power Requirements	220V-240V, 50/60Hz	
Power Consumption		
<i>1/8 Max. Power, 4 Ohms</i>	230W (pink noise at all channels)	
<i>Idling, 4 Ohms</i>	55W	
Warranty (Required)	1 year	
12. Accessories (Qty: 4 piece each)		
		Your brand and Specifications
	Minimum Requirements	
Model	TS Cable	
Length	2 Meters	
Connection Type	TS to TS	
Model	TRS Cable	
Length	2 Meters	
Connection Type	TRS to TRS	
Model	XLR Cable	
Length	5 Meters	
Connection Type	XLR Male to XLR Female	
Model	speakON Cable	
Length	15 Meters	
Connection Type	speakON to speakON	
Model	AUX to XLR Cable	
Length	5 Meters	
Connection Type	AUX AUX 3.5mm to XLR	
Model	speakON to TS Cable	
Length	30 Meters	
Connection Type	speakON to TS Cable	
Model	RCA to AUX Cable	
Length	5 Meters	
Connection Type	RCA to AUX 3.5mm	
Model	AUX Cable	
Length	3 Meters	
Size	3.5mm	
Connection Type	AUX to AUX	

Sound Setup for Auditorium (BS-01)		
Equipments and Specification of items		
Specifications for Microphone		
13. Hand-held Microphone Set (Qty:2)		
		Your brand and Specifications



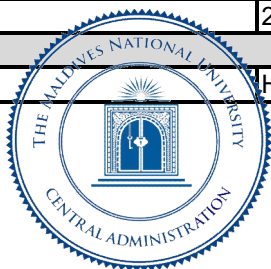
	Minimum Requirements	
Model	Shure SLXD24D/SM58 (BAND: H55) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies	1760	
Included Transmitters	2 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	H55: 514 to 558 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band	32	
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (Full Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels	2	
Audio I/O	2 x XLR 3-Pin Male Balanced Mic/Line Output 2 x 1/4" TRS Female Balanced Output (Lockable)	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 +21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	



Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dBV/Pa	
Warranty (Required)	1 year	
14. Pin Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD124/85 (BAND: G58) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1760
Included Transmitters	1 x Bodypack with Microphone 1 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	G58: 470 to 514 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	



Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Approximate RF Sensitivity	-97 dBm	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Display & Indicators	1 x LCD (AF Level, Battery Status, Channel, Group, RF Level, Transmitter Battery Status)	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Lavalier	
Color	Black	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 17 kHz	
Equivalent Noise Level	28 dB A-Weighted	
Maximum SPL	130.5 dB SPL	
Impedance	1800 Ohms	
Sensitivity	-45.5 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Operating Voltage	1.5 to 10 V	
Transmitter 2		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone 2		
Microphone Type	Handheld Capsule	



Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dB	
Warranty (Required)	1 year	
15. Head Worn Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD14/SM35 OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1840
Included Transmitters	1 x Bodypack with Microphone	
Diversity	True Digital Diversity	
RF Frequency Band	J52: 558 to 602 MHz 614 to 616 MHz	
RF Bandwidth	46 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	



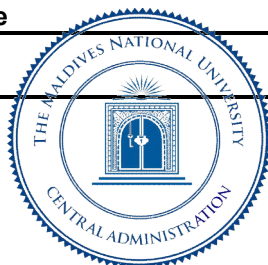
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Headset	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	40 Hz to 20 kHz	
Maximum SPL	153 dB SPL	
Impedance	2400 Ohms	
Sensitivity	-59 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Warranty (Required)	1 year	
16. 12-Channel Analog Mixer (Qty: 1)		
		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha MG12XU 12-Channel Analog Mixer OR Equivalent	
Built-in Effects	SPX algorithm: 24 programs, PARAMETER control:1, FOOT SW:1 (FX RTN CH on/off)	
Phantom Power	(+48 V switchable, channels 1 - 4)	
Digital I/O	USB: USB Audio Class 2.0 compliant Sampling frequency: max 192 kHz Bit depth: 24-bit	
Input Channels	4x mono [mic/line] 2x mono/stereo [mic/line] 2x stereo [line]	
Output Channels	2x stereo out 1x monitor out 1x headphone out 2x aux out 2x group out	
Bus	Stereo: 1 AUX: 2 GROUP: 2	
Pad	26 dB (mono)	
HPF	80 Hz, 12 dB/oct (mono/stereo: MIC only)	



Compressor	Threshold: +22 dBu to -8 dBu Ratio: 1:1 to 4:1 Output level: 0 dB to 7 dB Attack time: approx. 25 msec Release time: approx. 300 msec	
Equalizer	EQ high gain: +15 dB/-15 dB, Frequency: 10 kHz shelving EQ mid gain: +15 dB/-15 dB, Frequency: 2.5 kHz peaking EQ low gain: +15 dB/-15 dB, Frequency: 100 Hz shelving	
LED	Peak LED turns on when post EQ signal reaches 3 dB below clipping	
Level Metering	2 x 12-segment LED meter [PEAK, +10, +6, +3, 0, -3, -6, -10, -15, -20, -25, -30 dB]	
Total Harmonic Distortion	0.03% @ +14 dBu (20 Hz to 20 kHz), GAIN knob: Min, 0.005% @ +24 dBu (1 kHz), GAIN knob: Min	
Frequency Response	(+0.5 dB/-1.5 dB (20 Hz to 48 kHz), refer to the nominal output level @ 1 kHz, GAIN knob: Min)	
Equivalent Input Noise	-128 dBu (mono input channel, Rs: 150 Ω, GAIN knob: max)	
Residual Output Noise	-102 dBu (STEREO OUT, STEREO master fader: min)	
Crosstalk	-78 dB	
Power Requirement	AC 100 - 240 V, 50 / 60 Hz	
Power Consumption	22 W	
Warranty (Required)	1 year	

17. Dual Channel Power Amplifier (Qty: 1)

		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha PX5 Dual Channel 2x800W Lightweight Power Amplifier (220V-240V MODEL) OR Equivalent	
Output Power	1kHz non-clip, 20ms burst, both channels driven	
<i>8 Ohms</i>	500W x 2	
<i>4 Ohms</i>	800W x 2	
<i>2 Ohms</i>	500W x 2	
<i>8 Ohms - Power Boost Mode</i>	800W x 1	
<i>4 Ohms - Power Boost Mode</i>	1400W x 1	
Sampling Frequency Rate	48kHz	
A/D D/A Converters	24-bit linear, 128 times over sampling	
Total Harmonic Distortion		
<i>1kHz, 10W</i>	0.1-percent	
<i>1kHz, Half Power</i>	0.3-percent	
Frequency Response	20Hz - 20kHz (+/-1.0dB, 1W, 8 Ohms)	
S/N Ratio	100dB (A-weighted, 8 Ohms, Gain set to +14dBu)	



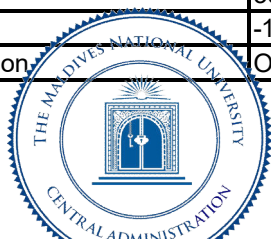
Crosstalk	<-60dB (half power, 8 Ohms, 1kHz, Vol. max. input, 150 Ohm shunt)	
Voltage Gain/Sensitivity	8 Ohm, Volume max (Power Boost mode)	
<i>Gain Setting - 32dB</i>	34.0dB/+6.3dBu	
<i>Gain Setting - 26dB</i>	28.0dB/+12.3dBu	
<i>Gain Setting - +4dBu</i>	36.3dB/+4dBu	
<i>Gain Setting - +14dBu</i>	26.3dB/+14dBu	
Maximum Input Voltage	+24dBu	
Input Impedance		
<i>Balanced</i>	20 k Ohms	
<i>Unbalanced</i>	10 k Ohms	
I/O Connectors		
<i>Speaker Output Ports</i>	Neutrik SpeakON NL4 x 2, Binding Post x 2 pairs, 1/4" TS Jack x 2	
<i>Line Input</i>	XLR-3-31 x 2, 1/4" TRS Jack x 2	
<i>Others</i>	USB 2.0 Standard-A Connector (Female) (for Save/Load, Speaker Preset update, Firmware update with USB memory), AC Inlet x 1 (with AC cord clamp)	
Latency	1.5ms (analog input to speakers)	
Presets	8 x user amplifier presets (factory speaker presets for Yamaha passive speakers)	
Amplifier Class	Class-D, balanced output circuit (BTL)	
Power Requirements	220V-240V, 50/60Hz	
Power Consumption		
<i>1/8 Max. Power, 4 Ohms</i>	230W (pink noise at all channels)	
<i>Idling, 4 Ohms</i>	55W	
Warranty (Required)	1 year	
18. Accessories (Qty: 4 piece each)		
		Your brand and Specifications
	Minimum Requirements	
Model	TS Cable	
Length	2 Meters	
Connection Type	TS to TS	
Model	TRS Cable	
Length	2 Meters	
Connection Type	TRS to TRS	
Model	XLR Cable	
Length	5 Meters	
Connection Type	XLR Male to XLR Female	
Model	SpeakON Cable	
Length	15 Meters	
Connection Type	SpeakON to SpeakON	
Model	AUX to XLR Cable	
Length	5 Meters	
Connection Type	AUX AUX 3.5mm to XLR	



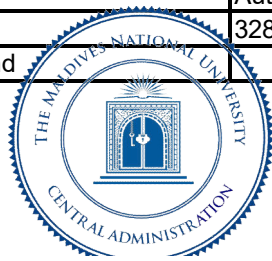
Model	speakON to TS Cable	
Length	30 Meters	
Connection Type	speakON to TS Cable	
Model	RCA to AUX Cable	
Length	5 Meters	
Connection Type	RCA to AUX 3.5mm	
Model	AUX Cable	
Length	3 Meters	
Size	3.5mm	
Connection Type	AUX to AUX	

Sound Setup for Auditorium (FE-01)
Equipments and Specification of items

Specifications for Microphone		
19. Hand-held Microphone Set (Qty:2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD24D/SM58 (BAND: H55) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies	1760	
Included Transmitters	2 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	H55: 514 to 558 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band	32	
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (Full Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels	2	
Audio I/O	2 x XLR 3-Pin Male Balanced Mic/Line Output 2 x 1/4" TRS Female Balanced Output (Lockable)	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	



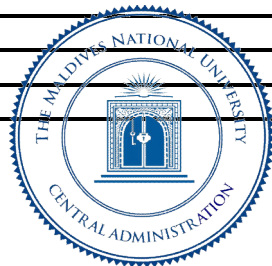
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kiloohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 +21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dBV/Pa	
Warranty (Required)	1 year	
20. Pin Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD124/85 (BAND: G58) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1760
Included Transmitters	1 x Bodypack with Microphone 1 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	G58: 470 to 514 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32



Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Approximate RF Sensitivity	-97 dBm	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Display & Indicators	1 x LCD (AF Level, Battery Status, Channel, Group, RF Level, Transmitter Battery Status)	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Lavalier	
Color	Black	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 17 kHz	
Equivalent Noise Level	28 dB A-Weighted	



Maximum SPL	130.5 dB SPL	
Impedance	1800 Ohms	
Sensitivity	-45.5 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Operating Voltage	1.5 to 10 V	
Transmitter 2		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone 2		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dB	
Warranty (Required)	1 year	
21. Head Worn Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD14/SM35 OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1840
Included Transmitters	1 x Bodypack with Microphone	
Diversity	True Digital Diversity	
RF Frequency Band	J52: 558 to 602 MHz 614 to 616 MHz	
RF Bandwidth	46 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	



Model	Yamaha MG12XU 12-Channel Analog Mixer OR Equivalent	
Built-in Effects	SPX algorithm: 24 programs, PARAMETER control:1, FOOT SW:1 (FX RTN CH on/off)	
Phantom Power	(+48 V switchable, channels 1 - 4)	
Digital I/O	USB: USB Audio Class 2.0 compliant Sampling frequency: max 192 kHz Bit depth: 24-bit	
Input Channels	4x mono [mic/line] 2x mono/stereo [mic/line] 2x stereo [line]	
Output Channels	2x stereo out 1x monitor out 1x headphone out 2x aux out 2x group out	
Bus	Stereo: 1 AUX: 2 GROUP: 2	
Pad	26 dB (mono)	
HPF	80 Hz, 12 dB/oct (mono/stereo: MIC only)	
Compressor	Threshold: +22 dBu to -8 dBu Ratio: 1:1 to 4:1 Output level: 0 dB to 7 dB Attack time: approx. 25 msec Release time: approx. 300 msec	
Equalizer	EQ high gain: +15 dB/-15 dB, Frequency: 10 kHz shelving EQ mid gain: +15 dB/-15 dB, Frequency: 2.5 kHz peaking EQ low gain: +15 dB/-15 dB, Frequency: 100 Hz shelving	
LED	Peak LED turns on when post EQ signal reaches 3 dB below clipping	
Level Metering	2 x 12-segment LED meter [PEAK, +10, +6, +3, 0, -3, -6, -10, -15, -20, -25, -30 dB]	
Total Harmonic Distortion	0.03% @ +14 dBu (20 Hz to 20 kHz), GAIN knob: Min, 0.005% @ +24 dBu (1 kHz), GAIN knob: Min	
Frequency Response	(+0.5 dB/-1.5 dB (20 Hz to 48 kHz), refer to the nominal output level @ 1 kHz, GAIN knob: Min)	
Equivalent Input Noise	-128 dBu (mono input channel, Rs: 150 Ω, GAIN knob: max)	
Residual Output Noise	-102 dBu (STEREO OUT, STEREO master fader: min)	
Crosstalk	-78 dB	
Power Requirement	AC 100 - 240 V, 50 / 60 Hz	
Power Consumption	22 W	
Warranty (Required)	1 year	

23. Dual Channel Power Amplifier (Qty: 1)

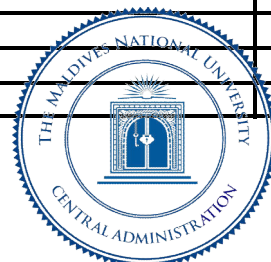


		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha PX5 Dual Channel 2x800W Lightweight Power Amplifier (220V-240V MODEL) OR Equivalent	
Output Power	1kHz non-clip, 20ms burst, both channels driven	
<i>8 Ohms</i>	500W x 2	
<i>4 Ohms</i>	800W x 2	
<i>2 Ohms</i>	500W x 2	
<i>8 Ohms - Power Boost Mode</i>	800W x 1	
<i>4 Ohms - Power Boost Mode</i>	1400W x 1	
Sampling Frequency Rate	48kHz	
A/D D/A Converters	24-bit linear, 128 times over sampling	
Total Harmonic Distortion		
<i>1kHz, 10W</i>	0.1-percent	
<i>1kHz, Half Power</i>	0.3-percent	
Frequency Response	20Hz - 20kHz (+/-1.0dB, 1W, 8 Ohms)	
S/N Ratio	100dB (A-weighted, 8 Ohms, Gain set to +14dBu)	
Crosstalk	<-60dB (half power, 8 Ohms, 1kHz, Vol. max. input, 150 Ohm shunt)	
Voltage Gain/Sensitivity	8 Ohm, Volume max (Power Boost mode)	
<i>Gain Setting - 32dB</i>	34.0dB/+6.3dBu	
<i>Gain Setting - 26dB</i>	28.0dB/+12.3dBu	
<i>Gain Setting - +4dBu</i>	36.3dB/+4dBu	
<i>Gain Setting - +14dBu</i>	26.3dB/+14dBu	
Maximum Input Voltage	+24dBu	
Input Impedance		
<i>Balanced</i>	20 k Ohms	
<i>Unbalanced</i>	10 k Ohms	
I/O Connectors		
<i>Speaker Output Ports</i>	Neutrik SpeakON NL4 x 2, Binding Post x 2 pairs, 1/4" TS Jack x 2	
<i>Line Input</i>	XLR-3-31 x 2, 1/4" TRS Jack x 2	
<i>Others</i>	USB 2.0 Standard-A Connector (Female) (for Save/Load, Speaker Preset update, Firmware update with USB memory), AC Inlet x 1 (with AC cord clamp)	
Latency	1.5ms (analog input to speakers)	
Presets	8 x user amplifier presets (factory speaker presets for Yamaha passive speakers)	
Amplifier Class	Class-D, balanced output circuit (BTL)	
Power Requirements	220V-240V, 50/60Hz	
Power Consumption		
<i>1/8 Max. Power, 4 Ohms</i>	230W (pink noise at all channels)	
<i>Idling, 4 Ohms</i>	55W	
Warranty (Required)	1 year	
24. Accessories (Qty: 4 piece each)		

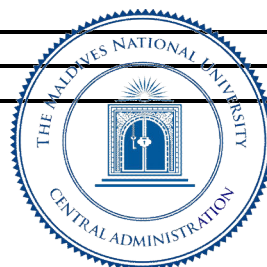


		Your brand and Specifications
	Minimum Requirements	
Model	TS Cable	
Length	2 Meters	
Connection Type	TS to TS	
Model	TRS Cable	
Length	2 Meters	
Connection Type	TRS to TRS	
Model	XLR Cable	
Length	5 Meters	
Connection Type	XLR Male to XLR Female	
Model	speakON Cable	
Length	15 Meters	
Connection Type	speakON to speakON	
Model	AUX to XLR Cable	
Length	5 Meters	
Connection Type	AUX AUX 3.5mm to XLR	
Model	speakON to TS Cable	
Length	30 Meters	
Connection Type	speakON to TS Cable	
Model	RCA to AUX Cable	
Length	5 Meters	
Connection Type	RCA to AUX 3.5mm	
Model	AUX Cable	
Length	3 Meters	
Size	3.5mm	
Connection Type	AUX to AUX	

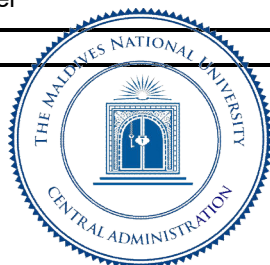
Sound Setup for Hall (FHS-01)		
Specifications for Microphone		
25. Hand-held Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD24D/SM58 (BAND: H55) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies	1760	
Included Transmitters	2 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	H55: 514 to 558 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	



RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (Full Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		2
Audio I/O	2 x XLR 3-Pin Male Balanced Mic/Line Output 2 x 1/4" TRS Female Balanced Output (Lockable)	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 +21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dBV/Pa	
Warranty (Required)	1 year	



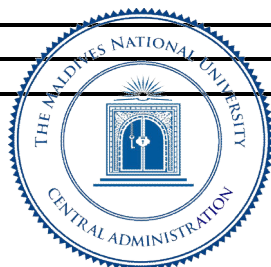
26. Pin Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD124/85 (BAND: G58) OR Equivalent	
System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1760
Included Transmitters	1 x Bodypack with Microphone 1 x Handheld	
Diversity	True Digital Diversity	
RF Frequency Band	G58: 470 to 514 MHz	
RF Bandwidth	44 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Approximate RF Sensitivity	-97 dBm	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	



Display & Indicators	1 x LCD (AF Level, Battery Status, Channel, Group, RF Level, Transmitter Battery Status)	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone		
Microphone Type	Lavalier	
Color	Black	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 17 kHz	
Equivalent Noise Level	28 dB A-Weighted	
Maximum SPL	130.5 dB SPL	
Impedance	1800 Ohms	
Sensitivity	-45.5 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Operating Voltage	1.5 to 10 V	
Transmitter 2		
Transmitter Type	Handheld	
RF Output Power	1 / 10 mW	
Audio Input Level	8.2 dBV	
Gain Range	0 21 dB	
Frequency Response	20 Hz to 20 kHz (Dependent on Mic)	
Sync Method	IR	
Antenna	Internal Single-Band Helical	
Power Requirements	Battery	
Battery Type	2 x AA	
Microphone 2		
Microphone Type	Handheld Capsule	
Sound Field	Mono	
Capsule	Dynamic	
Polar Pattern	Cardioid	
Frequency Range	50 Hz to 15 kHz	
Sensitivity	-54.5 dB	
Warranty (Required)	1 year	
27. Head Worn Microphone Set (Qty: 2)		
		Your brand and Specifications
	Minimum Requirements	
Model	Shure SLXD14/SM35 OR Equivalent	

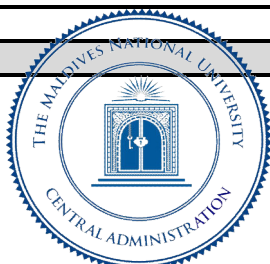


System		
Wireless Technology	Digital UHF	
Number of RF Channel Frequencies		1840
Included Transmitters	1 x Bodypack with Microphone	
Diversity	True Digital Diversity	
RF Frequency Band	J52: 558 to 602 MHz 614 to 616 MHz	
RF Bandwidth	46 MHz	
Frequency Step Size	25 kHz	
RF Channel Scanning	Auto-Scan	
Max Operating Range	328' / 100 m	
Max Transmitters per Band		32
Sample Rate/Resolution	24-Bit	
Latency	3.2 ms	
Dynamic Range	120 dBA (Typical)	
Receiver		
Receiver Type	Tabletop / Rackmount	
Mounting Options	Rackmount (with Included Hardware)	
Rackmount Size	1 RU (1/2 Rack)	
Antenna	2 x 1/4 Wave External, BNC (Rear-Mount)	
Number of Audio Channels		1
Audio I/O	1 x XLR 3-Pin Male Balanced Mic/Line Output 1 x 1/4" TRS Female Balanced Output	
Gain Range	0 to +21 dB (3 dB Steps)	
Pad	30 dB	
Audio Output Level	-18 to +42 dB (Balanced, Unbalanced)	
Phantom Power Protection	On 1/4", XLR Outputs	
Frequency Response	20 Hz to 20 kHz +1/-2 dB (Dependent on Mic)	
Network I/O	1 x RJ45 (10/100 Mb/s)	
Network Protocols	DHCP, Manual IP	
Impedance	1/4" Output: 1.3 Kilohms (Balanced) 670 Ohms (Unbalanced) XLR Output: 400 Ohms (Balanced) 150 Ohms (Balanced)	
Adjacent Channel Isolation	>70 dB	
Spurious	Rejection: >75 dB	
Power Requirements	AC/DC Power Adapter	
AC/DC Power Adapter	15 VDC at 600 mA, Center-Positive (Included)	
AC Input Power	100 to 240 VAC, 50 / 60 Hz	
Transmitter		
Transmitter Type	Bodypack with Microphone	
RF Output Power	1 / 10 mW	
Audio I/O	1 x TA4/Mini XLR 4-Pin Male Unbalanced Input (Lockable)	
Gain Range	0 +21 dB	
Sync Method	IR	
Antenna	1/4 Wave External, Fixed	
Power Requirements	Battery	
Battery Type	2 x AA	



Microphone		
Microphone Type	Headset	
Sound Field	Mono	
Capsule	Electret Condenser	
Polar Pattern	Cardioid	
Frequency Range	40 Hz to 20 kHz	
Maximum SPL	153 dB SPL	
Impedance	2400 Ohms	
Sensitivity	-59 dBV/Pa	
Dynamic Range	102.5 dB	
Outputs	1 x TA4/Mini XLR 4-Pin Female Unbalanced	
Cable Length	4' / 1.22 m	
Warranty (Required)	1 year	
28. 12-Channel Analog Mixer (Qty: 1)		
		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha MG12XU 12-Channel Analog Mixer OR Equivalent	
Built-in Effects	SPX algorithm: 24 programs, PARAMETER control:1, FOOT SW:1 (FX RTN CH on/off)	
Phantom Power	(+48 V switchable, channels 1 - 4)	
Digital I/O	USB: USB Audio Class 2.0 compliant Sampling frequency: max 192 kHz Bit depth: 24-bit	
Input Channels	4x mono [mic/line] 2x mono/stereo [mic/line] 2x stereo [line]	
Output Channels	2x stereo out 1x monitor out 1x headphone out 2x aux out 2x group out	
Bus	Stereo: 1 AUX: 2 GROUP: 2	
Pad	26 dB (mono)	
HPF	80 Hz, 12 dB/oct (mono/stereo: MIC only)	
Compressor	Threshold: +22 dBu to -8 dBu Ratio: 1:1 to 4:1 Output level: 0 dB to 7 dB Attack time: approx. 25 msec Release time: approx. 300 msec	
Equalizer	EQ high gain: +15 dB/-15 dB, Frequency: 10 kHz shelving EQ mid gain: +15 dB/-15 dB, Frequency: 2.5 kHz peaking EQ low gain: +15 dB/-15 dB, Frequency: 100 Hz shelving	
LED	Peak LED turns on when post EQ signal reaches 3 dB below clipping	

Level Metering	2 x 12-segment LED meter [PEAK, +10, +6, +3, 0, -3, -6, -10, -15, -20, -25, -30 dB]	
Total Harmonic Distortion	0.03% @ +14 dBu (20 Hz to 20 kHz), GAIN knob: Min, 0.005% @ +24 dBu (1 kHz), GAIN knob: Min	
Frequency Response	(+0.5 dB/-1.5 dB (20 Hz to 48 kHz), refer to the nominal output level @ 1 kHz, GAIN knob: Min)	
Equivalent Input Noise	-128 dBu (mono input channel, Rs: 150 Ω, GAIN knob: max)	
Residual Output Noise	-102 dBu (STEREO OUT, STEREO master fader: min)	
Crosstalk	-78 dB	
Power Requirement	AC 100 - 240 V, 50 / 60 Hz	
Power Consumption	22 W	
Warranty (Required)	1 year	
29. Dual Channel Power Amplifier (Qty: 1)		
		Your brand and Specifications
	Minimum Requirements	
Model	Yamaha PX5 Dual Channel 2x800W Lightweight Power Amplifier (220V-240V MODEL) OR Equivalent	
Output Power	1kHz non-clip, 20ms burst, both channels driven	
<i>8 Ohms</i>	500W x 2	
<i>4 Ohms</i>	800W x 2	
<i>2 Ohms</i>	500W x 2	
<i>8 Ohms - Power Boost Mode</i>	800W x 1	
<i>4 Ohms - Power Boost Mode</i>	1400W x 1	
Sampling Frequency Rate	48kHz	
A/D D/A Converters	24-bit linear, 128 times over sampling	
Total Harmonic Distortion		
<i>1kHz, 10W</i>	0.1-percent	
<i>1kHz, Half Power</i>	0.3-percent	
Frequency Response	20Hz - 20kHz (+/-1.0dB, 1W, 8 Ohms)	
S/N Ratio	100dB (A-weighted, 8 Ohms, Gain set to +14dBu)	
Crosstalk	<-60dB (half power, 8 Ohms, 1kHz, Vol. max. input, 150 Ohm shunt)	
Voltage Gain/Sensitivity	8 Ohm, Volume max (Power Boost mode)	
<i>Gain Setting - 32dB</i>	34.0dB/+6.3dBu	
<i>Gain Setting - 26dB</i>	28.0dB/+12.3dBu	
<i>Gain Setting - +4dBu</i>	36.3dB/+4dBu	
<i>Gain Setting - +14dBu</i>	26.3dB/+14dBu	
Maximum Input Voltage	+24dBu	
Input Impedance		
<i>Balanced</i>	20 k Ohms	
<i>Unbalanced</i>	10 k Ohms	
I/O Connectors		



Speaker Output Ports	Neutrik SpeakON NL4 x 2, Binding Post x 2 pairs, 1/4" TS Jack x 2	
Line Input	XLR-3-31 x 2, 1/4" TRS Jack x 2	
Others	USB 2.0 Standard-A Connector (Female) (for Save/Load, Speaker Preset update, Firmware update with USB memory), AC Inlet x 1 (with AC cord clamp)	
Latency	1.5ms (analog input to speakers)	
Presets	8 x user amplifier presets (factory speaker presets for Yamaha passive speakers)	
Amplifier Class	Class-D, balanced output circuit (BTL)	
Power Requirements	220V-240V, 50/60Hz	
Power Consumption		
<i>1/8 Max. Power, 4 Ohms</i>	230W (pink noise at all channels)	
<i>Idling, 4 Ohms</i>	55W	
Warranty (Required)	1 year	
30. Accessories (Qty: 4 piece each)		
		Your brand and Specifications
	Minimum Requirements	
Model	TS Cable	
Length	2 Meters	
Connection Type	TS to TS	
Model	TRS Cable	
Length	2 Meters	
Connection Type	TRS to TRS	
Model	XLR Cable	
Length	5 Meters	
Connection Type	XLR Male to XLR Female	
Model	speakON Cable	
Length	15 Meters	
Connection Type	speakON to speakON	
Model	AUX to XLR Cable	
Length	5 Meters	
Connection Type	AUX AUX 3.5mm to XLR	
Model	speakON to TS Cable	
Length	30 Meters	
Connection Type	speakON to TS Cable	
Model	RCA to AUX Cable	
Length	5 Meters	
Connection Type	RCA to AUX 3.5mm	
Model	AUX Cable	
Length	3 Meters	
Size	3.5mm	
Connection Type	AUX to AUX	



31. Auditorium Speaker (Passive) (Qty: 1)		Your brand and Specifications
Minimum Requirements		
Model	Yamaha R115 OR Equivalent	
Speaker type	2-way bass reflex	
Quantity	1 Pair	
Frequency range (-10dB)	50Hz-20kHz	
Nominal coverage		
	H	90°
	V	40°
Components		
	LF	15" cone
	HF	1.75", Ti vc, CD-Horn
Power rating		
	PGM	500W
	PEAK	1000W
Nominal impedance	8Ω	
SPL: Sensitivity (1W; 1m on axis)	98dB SPL	
I/O connectors	Speakon x 1, Phone x 2	
Warranty (Required)	1 year	



