

RE-TENDER DOCUMENT

REQUEST FOR PROPOSALS

TERMS AND CONDITIONS

For Procurement of **Multi-Functional Conferencing System** for University of Engineering & Technology Lahore.

COMPUTER CELL, RESEARCH CENTER
UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE.
PHONE: **(042) - 99029101**

REQUEST FOR PROPOSAL-2016

TENDER PRICE:

Rs. 1,000/-

Issue date:

19 / 09 / 2016

Last date of submission:

17 / 10 / 2016 till 11: 00 AM

FOR OFFICE USE ONLY

<p>Serial No. _____</p> <p>Sold to: - M/S _____</p> <p>Date of Sale _____ Bank Challan No. _____ Date _____</p>

COMPUTER CELL, RESEARCH CENTER
UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE.
PHONE: **(042) - 99029101**

OVERVIEW

University of Engineering and Technology (UET), Lahore intends to purchase & deploy the specified “**Multi-Functional Conferencing System**” in The Vice Chancellor’s Conference room. The supplier will be responsible for delivery, installation, commissioning, services & training of equipment wherever required at **UET, Lahore**.

1. Proposal instructions (for BOQs on FOR Basis)

- 1.1 Single stage/two envelope bidding procedure shall be applied in response to the RFP (Request for proposal). The envelopes shall be marked as “TECHNICAL PROPOSAL” and “FINANCIAL PROPSAL” separately plus “legible documents”. The financial proposal of bids found technically non responsive shall be returned unopened to the respective bidders. Technically responsive bidders shall be informed and their financial bids shall be opened in the next Central Purchase Committee (CPC) meeting after informing the technically responsive bidders.
- 1.2 Responding organizations shall deliver sealed proposal of the “FINANCIAL & TECHNICAL PROPOSALS” before or on **October 17, 2016** at **11:00 AM**.
- 1.3 The Proposals will not be accepted after the due date &, time proposal shall be delivered at the address given below before time. The TECHNICAL PROPOSALS shall be opened on the same day **October 17, 2016** at **11:30 AM** in the presence of bidders or the representatives of the responding organizations.
- 1.4 Bidders are advised not to quote different options for each item (only one option is to be quoted).
- 1.5 Price should be mentioned on FOR basis.
- 1.6 All BOQs submitted by the bidder must use the numbers and labels used in this Request for proposal.
- 1.7 The original Request for Proposal documents duly signed and officially sealed by the bidder must be submitted in whole with the proposals. Any conditional, ambiguous, incomplete, supplementary or revised offer after the opening of tender shall not be entertained.
- 1.8 Any overwriting/crossing, etc. appearing in the offer may be properly signed by the person signing the tender. All pages of the tender must be properly signed & stamped. Offer with any overwriting/use of Blanco shall not be accepted in any circumstances.
- 1.9 Warranty for Multi-Functional Conferencing System as approved by the manufacturers/suppliers, but not less than one year (1/1/1) replacement of Parts, Labor and Service on site must be covered for after sales and services (labor and parts) for a period of one year from the date of delivery.

- 1.10 A call at deposit equal to 3% of estimated cost should accompany the Tender as **Earnest Money** drawn in favor of **The Treasurer, UET, Lahore**. The Tender shall not be considered without Earnest Money. Bank guarantee will not be accepted.
- 1.11 10% of the contract amount shall be deducted as security at the time of bill process. The deducted amount as security will be returned after successful completion of Defect Liability / Warranty Period, after repairing the defects in the equipment / replacement found during the warranty period for FOR.
- 1.12 The Successful Bidder will deposit a blank stamp paper of value of 0.025% of the total offer / contract amount, purchased in the name of **Treasurer University of Engineering & Technology (UET), Lahore**.
- 1.13 The quantity of an order may vary depending on the quoted price and the allocated funds.
- 1.14 The decision of the committee will be a binding on all concerned and will in no case be challenged on any forum.
- 1.15 The **CHAIRMAN PURCHASE COMMITTEE**, reserves the rights to modify the conditions / specifications of the Tender Document with written intimation to all the participants those who have purchased the Tender Documents.
- 1.16 Delivery period for import items will be **8 – 12 weeks** from the date of issuance of purchase/supply order.
- 1.17 Delivery & Installation (wherever mentioned) be completed according to the agreed upon schedule of works and time.
- 1.18 In case the tenderer fails to execute the contract strictly in accordance with the terms and conditions laid down in the contract, the Security Deposit shall be forfeited.
- 1.19 The **CHAIRMAN PURCHASE COMMITTEE**, will get the equipments inspected at UET Lahore and will have the right to reject the equipment if not found according to the stated specifications.
- 1.20 The **CHAIRMAN PURCHASE COMMITTEE**, reserves the right to claim compensation for the losses so caused by delay in the delivery of equipment by deducting 1% of the total amount payable to the supplier/contractor as penalty.
- 1.21 It is the sole responsibility of the vendor to comply with local, national and international laws.
- 1.22 In case any supply / material is found not in conformity with the specifications provided in the tender, either on account of inferior quality, defective workmanship, faulty design, faulty packing or is short supplied, or wrongly supplied, the supplier shall replace the same free of charges.
- 1.23 All the proposals submitted will become the property of the University.

2. Evaluation Criteria

- a) All bids shall be evaluated on technical and financial merit as per clause 1.1
- b) Bidding company should be ISO Certified.
- c) Bidder should be OEM Authorized dealer.
- d) The Bidders must be authorized sale partner of quoted brands (Letter required).
- e) Documentary evidence of minimum 5 similar installations.

Technical evaluation process may include, but not limited to the consideration of the following with respect to the functional requirements given ahead:

- 2.1 Technical specifications of proposed equipment's
- 2.2 Company profile
 - i. Age of the company
 - ii. Financial strength of the vendor
 - iii. HR strength/Man power with the vendor
 - iv. Technical support/after sale service facilities
 - v. Backup support plan
 - vi. Contact information of the firm.

Financial Evaluation process may include, but not limited to the consideration of the following:

- i. Quoted price

3. Required Information

Bidders are required to include the following documents/information in their technical proposals:

- i. The Name and Address
- ii. Profile of company (Including Financial Profile)
- iii. List of Pervious/Current customer of related equipments, with contact person and telephone/fax#
- iv. Detailed product information/brochures
- v. Detailed product warranty/guarantee information
- vi. Attested copy of National Tax Registration Certificate
- vii. Attested copy of Sales Tax Registration Certificate
- viii. Copy of the professional tax certificate for the current year (2015-16)
- ix. Detailed backup support plan
- x. Bank letter of financial standing duly signed by the relevant officer of the bank clearly mentioning name and designation.

- xi. An Affidavit on Rs.100/- Stamp paper that currently they are not black listed or debarred by any Government/Semi Government department to participate in bidding and to supply equipment. Failure to submit such affidavit may lead to disqualification.
- xii. Any additional information the bidder may like to furnish e.g. repair/maintenance workshop owned by supplier and other concerned facility

In addition to the above, the proposal must include the following in the order given below:

- i. Detailed equipment specifications, proposed quantities duly filled on the BOQ attached with this document
- ii. Detailed project implementation schedule which includes the delivery of equipment mentioned in the RFP in accordance with the clause 1.16 of the tender.
- iii. Terms and Conditions
- iv. Equipment prices (FOR) duly entered on the form in the attached BOQ
- v. Validity period of the quoted price, i.e. 60 days
- vi. Educational discounts if available/applied to the quoted price

4. Terms and Conditions (FOR Basis)

- 4.1 All prices should be in PAK Rupees inclusive of all Govt. taxes.
- 4.2 All prices should be valid for at least 60 days. Withdrawal or any modification of the original offer within the validity period shall entitle the University to forfeit the earnest money in favour of the University and/or putting a ban/black listing on the future inquires or taking any other suitable action against the bidder.
- 4.3 Delivery of the items shall be free of charge at UET Lahore during the office hours with a copy of delivery challan.
- 4.4 Items being ordered should be brand new and according to the order specifications from the current production and covered under normal warranty/guarantee etc. as mentioned in the proposal. Brochures mentioned and product details must be attached.

Any query regarding this proposal should be directed to the contact no's. Listed below.

**COMPUTER CELL, RESEARCH CENTER
UNIVERSITY OF ENGINEERING AND TECHNOLOGY LAHORE.**

- **042-99029101, 99250226**

SUPPLIERS DATA FORM

1. Name of company _____

Address (Local Office) _____

_____ Telephone _____

Head Office _____

2. Number of years in relevant business (in Pakistan) _____

3. Major clients: (May attach a separate sheet, if necessary) _____

4. Is repair facility available at local office, YES NO

If yes, please provide the level of repair, maintenance and back-up facilities available at local office:

(Attach separate sheet, if necessary)

5. Bio-data of the technical staff available in the local office to provide after-sale service: (Attach details on separate sheet) if necessary

6. Contact person for after-sale and service.

Name: _____

Designation: _____

Phone No: _____ Mobile _____ Fax _____

Email _____

4. **Bid Form**

Date: _____

Tender Ref: _____

To: *[name and address of Purchaser]*

Gentlemen and/or Ladies:

Having examined the bidding documents including Addenda Nos. *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver *[description of goods and services]* in conformity with the said bidding documents for the sum of *[total bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our Bid is accepted, we hereby agree that our Bid Security as being provided herewith this "Bid Form" will remain with the Purchaser according to Clause 1.18 of Instructions to Bidders.

We also agree to abide by this Bid for a period of *[number]* days from the date fixed for Bid opening under Clause 4.2 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this _____ day of _____ 20_____.

[Signature] [In the capacity of]

Duly authorized to sign Bid for and on behalf of

5. Price Schedule

Name of Bidder

Tender Ref. Number

Page

of

Item No.	Detail of items	Estimated Quantity required	Unit Rate (with all applicable taxes & transportation charges)	Amount of total quantity

Grand Total = (Both in figures & words)

Name of Bidder / Firm:

Signature_____

Date:

Seal:

3. Contract Form

THIS AGREEMENT made the []th day of [] 2016 between **Computer Cell, Research Center UET Lahore Pakistan** (here in after called “the Purchaser”) of the one part and [] (hereinafter called “the Supplier”) of the other part:

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., **Multi-Functional Conferencing System etc.** has accepted a bid by the Supplier for the supply of those Goods and services in the sum of **Rupees []** (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSES AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Bid Form and the Price Schedule submitted by the Bidder;
 - (b) The Schedule of Requirements;
 - (c) The Technical Specification with Drawings (if any);
 - (d) The General Conditions of Contract;
 - (e) The Special Conditions of Contract;
 - (f) The Purchaser’s Notification of Award; and
 - (g) Bid Security (provided with the Bid Form)
3. In consideration of the payments to be made by the Purchaser to the Supplier as here in after mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the Contract.

IN WITNESS: whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, to whom delivered the (for the Purchaser)

Signed, sealed, delivered by the (for the Supplier)

Request for Proposal

Technical Specifications (Equal or Higher)

Multi-Functional Conferencing System. The supplier will be responsible for delivery, installation, commissioning, services & training of equipment's.

Item	Technical Specifications (Equal or Higher)	Qty.
Control Unit	<p style="text-align: center;"><i>Control Unit with recording and DAFS</i></p> <p>This version of the Control Unit shall have the following additional features:</p> <ul style="list-style-type: none"> • Built-in digital recorder with internal memory and USB recording. • Built-in loudspeaker and headphone socket for listening to recorded discussions before replaying them to the Floor, or listening to recordings. • Additional capacitive touch buttons and LED indicators for: <ul style="list-style-type: none"> – CU loudspeaker volume (or headphones volume, if connected). – Start, Pause (hold), and Stop recording. • Built-in Digital Acoustic Feedback Suppression (DAFS). • USB connector on front of unit for connecting a USB memory stick. • 3.5 mm (0.14 in) stereo headphone socket. • Micro USB connector on rear of unit for transferring internal memory (recordings) to a PC. • Four additional RCA outputs for individual microphone recording, e.g. for recording individual speakers in a courtroom. <p>Built-in digital recorder</p> <p>The built-in recorder shall enable discussions to be recorded in the MP3 format to the internal memory or a USB memory stick with a maximum capacity of 128 GB:</p> <ul style="list-style-type: none"> • Internal memory - recordings shall be automatically stored in the internal memory unless a USB memory stick is connected to the USB connector at the front of the CU. The internal memory shall be able to record up to 8 hours discussion. • USB memory stick – recordings shall be automatically saved to a USB memory stick when it is connected to the CU. A USB memory stick of 128 GB shall be able to record up to 4,000 hours discussion <p>LED indicators shall inform users when data is being recorded to the internal memory or a USB memory stick. The appropriate LED indicator shall be automatically selected when a USB memory stick is inserted or removed from the USB connector.</p> <p>Three short beeps and a red flashing LED shall indicate when 5 minutes of recording are left.</p> <p>A long beep and a red/green flashing LED shall indicate when it is not possible to record a discussion (i.e.: internal memory full and USB memory stick not connected to the CU, USB memory stick full or damaged).</p> <p>Technical Specifications</p> <p>The 'Control Unit with recording and DAFS' shall have the same technical specifications as the 'Control Unit' (see Section Error! Reference source not found.), as well as the</p>	1

	<p>following technical specifications:</p> <p>Recorder</p> <table border="1" data-bbox="381 247 971 415"> <tr> <td>Recording/ (bit rate)</td> <td>Playback</td> <td>64, 96, 128, 256 Kbit/sec</td> </tr> <tr> <td>Recording/ (sample frequency)</td> <td>Playback</td> <td>44.1 kHz</td> </tr> </table> <p>Monitoring loudspeaker</p> <table border="1" data-bbox="381 478 971 632"> <tr> <td>Nominal output</td> <td>72 dB SPL</td> </tr> <tr> <td>Frequency response</td> <td>200 Hz to 12.5 kHz</td> </tr> <tr> <td>Gain range mute</td> <td>-10.5 to +12</td> </tr> </table> <p>USB memory stick compatibility</p> <table border="1" data-bbox="381 695 971 835"> <tr> <td>SanDisk USB memory stick</td> <td>Formatted with FAT32 file system.</td> </tr> <tr> <td></td> <td>Maximum size: 128 GB</td> </tr> </table>	Recording/ (bit rate)	Playback	64, 96, 128, 256 Kbit/sec	Recording/ (sample frequency)	Playback	44.1 kHz	Nominal output	72 dB SPL	Frequency response	200 Hz to 12.5 kHz	Gain range mute	-10.5 to +12	SanDisk USB memory stick	Formatted with FAT32 file system.		Maximum size: 128 GB	
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Chairman Unit	<p>The Discussion Device shall enable participants to take part in a discussion by speaking into a microphone and listening to proceedings on a loudspeaker. The device shall have the following features and benefits:</p> <ul style="list-style-type: none"> • Plug-and-play functionality. • Compact, attractive, ergonomic design, with LED indicator in the Discussion Device and in head of microphone. • Choice of short or long fixed microphone with flexible stem. • Loudspeaker integrated into front of device. • Built-in headphone socket with output level control. • Automatic level reduction when microphone is activated (configurable via web browser application of Control Unit): prevents acoustic feedback from headphone to microphone. • Configurable as a participant or chairperson’s device: changeable microphone buttons and concealed slide switch at the bottom of the device for configuration purposes. • GSM immunity. <p>The device shall have the following user controls and indicators:</p> <ul style="list-style-type: none"> • Microphone button. • Color-coded LED indicator above microphone button for showing the status of the device: <ul style="list-style-type: none"> – White (‘Possible-To-Speak’) shall indicate that the microphone will be active immediately after pressing the microphone button. – green shall indicate that the participant has pressed the microphone button and the request to speak has been added to the waiting list. – green flashing shall indicate that the participant is first in the waiting list, i.e. next in line to speak. – red shall indicate that the microphone is active. • Color-coded light-ring indicator in head of microphone: green shall indicate that a request-to-speak has been added to the waiting list; green flashing shall indicate that the participant is first in the waiting list; red shall indicate that the microphone is active. 	1																

	<ul style="list-style-type: none"> • Rotary thumbwheel on side of device for adjusting volume of connected headphones. • Concealed initialization button at base of device for re-assigning the network address. • Concealed slide-switch at base of Discussion Device for configuring device as a participant device or chairperson’s device. To prevent accidental operation, it shall only be possible to set the switch with a tool, i.e. bent paperclip. • Chairperson’s configuration only – separate microphone button and priority button. <p>The chairperson’s device shall enable the user to function as the chairperson at a conference or meeting. The chairperson’s microphone shall be activated when the priority button is pressed and held in. All currently active participant microphones shall be muted, allowing the chairperson to take control of the meeting. A chime shall be sounded to announce that the chairperson is about to speak. The device shall have the following connections:</p> <ul style="list-style-type: none"> • 1 x 6-pole circular female connector at rear of device with cable locking recess • 1 x 3.5 mm (0.14 in) stereo headphone socket on side of device • 1 x 2 m (78.7 in) cable with a 6-pole circular male connector with cable lock <p>After connecting the Discussion Device to the system for the first time, it shall be possible to initialize the device by pressing the microphone button or the initialization button at the bottom of the device.</p> <p>The ‘Discussion Device’ shall have the following Technical Specifications:</p> <p>Electrical</p> <table border="0"> <tr> <td>Frequency response</td> <td>200 Hz to 12.5 kHz</td> </tr> <tr> <td>Headphones load impedance</td> <td>> 32 ohms < 1k ohm</td> </tr> <tr> <td>Loudspeaker nominal output</td> <td>72 dB SPL</td> </tr> </table>	Frequency response	200 Hz to 12.5 kHz	Headphones load impedance	> 32 ohms < 1k ohm	Loudspeaker nominal output	72 dB SPL	
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Delegate Unit	<p>The Discussion Device shall enable participants to take part in a discussion by speaking into a microphone and listening to proceedings on a loudspeaker. The device shall have the following features and benefits:</p> <ul style="list-style-type: none"> • Plug-and-play functionality. • Compact, attractive, ergonomic design, with LED indicator in the Discussion Device and in head of microphone. • Choice of short or long fixed microphone with flexible stem. • Loudspeaker integrated into front of device. • Built-in headphone socket with output level control. • Automatic level reduction when microphone is activated (configurable via web browser application of Control Unit): prevents acoustic feedback from headphone to microphone. • Configurable as a participant or chairperson’s device: changeable microphone buttons and concealed slide switch at the bottom of the device for configuration purposes. • GSM immunity. <p>The device shall have the following user controls and indicators:</p> <ul style="list-style-type: none"> • Microphone button. • Color-coded LED indicator above microphone button for showing the status of the device: <ul style="list-style-type: none"> – White (‘Possible-To-Speak’) shall indicate that the microphone will be active immediately after pressing the microphone button. 	20						

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USB	8 GB USB	1								
Amplifier	<p>The mixer amplifier shall be a high performance, professional public address mixer amplifier with modern state of the art features. It shall have an internal power amplifier for constant voltage systems. The connections to the loudspeakers shall be on Euro style pluggable screw terminals. The mixer amplifier shall have 4 microphone/line inputs. All Mic/line inputs shall be switchable between microphone level and line level sensitivity. The inputs shall be balanced and shall be able to be used unbalanced, to provide power to condenser microphones phantom power shall be provided. The mic/line inputs shall have XLR connectors.</p> <p>The mixer amplifier shall have 2 stereo music source inputs on cinch connectors. The inputs shall be converted to mono. The mixer amplifier shall have a separated input for 100v and telephone input on a balanced screw terminal. Mic/line input one shall be suitable for a call station with activation contact (for push to</p>	1								

	<p>talk button). The mixer amplifier shall have a voice activated emergency override on inputs one and two. The mixer amplifier shall have a two-tone chime built in. The output of the mixer amplifier shall be transformer isolated 100V and 8 Ohms. There shall be a relay that switches with the call activation (call only). The mixer amplifier shall be able to deliver a total 30 / 60 / 120 Watts continuously to a constant voltage or low impedance load. It shall be possible to distribute the power in any ratio between all outputs; zones, call only output and low impedance. Peak power output shall be 50% higher than the continuous output.</p> <p>The mixer amplifier shall have an audio loop through for inserting a serial processing device like an equalizer in the signal path. The mixer amplifier shall have a line level output. The line level output shall be switchable between preamplifier out or music only output for zone that require only music or for music on hold for telephone systems.</p> <p>It shall be possible to run the mixer amplifier on 230 VAC. Input channel 1 and 2 shall be able to take priority over all other microphone and music inputs. Input 1 shall be able to be activated by contact closure on the PTT (push to talk) input or the input shall be able to be switched automatically if a signal shall be fed to the input i.e. if someone speaks into the microphone (VOX activation). A 2-tone chime shall be able to be configured to precede an announcement. Input 2 also shall have a VOX possibility. When one or both inputs shall be configured to have priority, the amount of attenuation (reduction) of all other inputs, mic/line or cinch, shall be able to be set between 0 dB (no attenuation) and -∞dB (mute). This provides a talk over or voice over function. To increase intelligibility for announcements, input channels 1 and 2 shall also feature selectable speech filters.</p> <p>Separate music inputs shall be available with their own input selector, volume control and tone control. The user shall be able to choose a music source like a CD player and set the level of music. It shall be possible to set the desired sound for the music source separate from the mic/line inputs.</p> <p>It shall be able to indicate on the front panel the names and types of inputs and output zones. It shall be possible to indicate preset level on the front panel. It shall be possible to instruct a user to set all the controls to the green pins to set the system for their particular use. A second user shall be able to be instructed to set all controls to the red pins for their use. The mixer amplifier shall have a detachable label where the user shall be able to write down the correct names for inputs, music sources and zone names. After these shall be identified they shall be able to be mounted on the front protected by a clear window.</p> <p>For easy integration with another PA system or a telephone paging system, a telephone / 100V emergency input with VOX activation shall be provided. It shall have its own preset volume control and overrides all other inputs, including call station and inputs 1 and 2.</p>	
Speaker	<p>Loud Speaker designed to withstand operating at their rated power for 100 hours in accordance with IEC 268-5 Power Handling Capacity (PHC) standards and has also developed the Simulated Acoustical Feedback Exposure (SAFE) test to demonstrate that they can withstand two times their rated power for short durations. This ensures extra reliability under extreme conditions, leading to higher customer satisfaction, longer operating life, and much less chance of failure or performance deterioration.</p> <p>Maximum power 36 W Rated power 24 / 12 / 6 W Sound pressure level at 24 W / 1 W (1 kHz, 1 m) 110 dB / 96 dB (SPL) Effective frequency range (-10 dB) 165 Hz to 16 kHz Opening angle 1 kHz / 4 kHz (-6 dB) horizontal 190° / 88° vertical 30° / 8° Rated input voltage 100 V Rated impedance 417-ohm Connector 4-pole push-in</p>	4

	<p>terminal block *</p> <p>lb) Color Black (D) or white (L) cabinet / cloth (D) Matches RAL 9004 / RAL 9004 cabinet / cloth (L) Matches RAL 9010 / RAL 7044</p> <p>Environmental Operating temperature -25 °C to +55°C (-13 °F to +131 °F)</p> <p>Storage temperature -40 °C to +70 °C (-40 °F to +158 °F) Relative humidity</p>	
Microphone	<p>The complete system consists of a microphone receiver a wireless belt-pack transmitter with clip-on lavalier microphone a wireless handheld microphone The products are sold separately to offer optimal flexibility in the composition of the system. The wireless microphone system is designed for public address in houses of worship, restaurants, conference centers, hotels, shops and many other applications. The lavalier microphone can be ordered separately without the belt-pack transmitter. An optional head-worn microphone can also be ordered separately. Functions Frequencies This microphone system operates in the UHF band providing interference reduction, while 193 available frequencies ensure stable reception. Operation The belt-pack transmitter can operate approximately 15 hours on alkaline batteries. A lock function protects the transmitter settings, making accidental changes impossible. An LCD on the transmitter shows the selected frequency and the battery status. The belt-pack transmitter comes with a case to protect it from damage, and a lavalier clip-on microphone</p> <p>Wireless Collar Microphone</p> <p>Technical specifications Electrical Belt-pack Batteries 2 x LR6/AA/UM3 1.5 V Battery life time Approx. 15 hr Modulation FM frequency modulation Frequency selection PLL synthesized control Frequency range 722 to 746 MHz Channels 193 channels (in steps of 125 kHz) Frequency stability ±0.005% Frequency deviation ±48 kHz S/N ratio >102 dB RF output 10 mW Spurious rejection >60 dBc Dynamic range >110 dB Frequency response 50 Hz to 15 kHz Squelch Pilot tone & noise mute Lavalier microphone Connector Mini XLR (tiny QG) Frequency range 100 Hz to 12 kHz Polar pattern Cardioid Sensitivity (at 1 kHz) -70 dB ± 3 dB Impedance 2.2 kohm ±30% Max SPL for 1% THD 130 dB (SPL)</p>	1
Cable	Cable for Speakers 40/76 or 1.5 mm	01 Roll