

Supply a Digital Discussion Microphone System RFP

1. Introduction

The Elections Commission of Maldives (herein referred as ECM) is seeking proposals from qualified and experienced vendors submit proposals to supply of a digital discussion microphone system that supports structured, feedback-free speech in meetings.

2. Scope of Work

The vendor shall supply and deliver wired digital discussion microphone system that supports eleven (11) tabletop microphone stations and a central control/processing unit (CCU), ready for Owner self-installation. The solution must interconnect all stations using standard cabling (daisy-chain or star as the platform supports), with power and audio carried over the same cabling, no per-station power adapters. The bidder shall include any necessary distributors/hubs for the chosen topology, and a concise as-shipped wiring diagram showing port-to-port connections and labeling. The scope also includes a balanced line-level output provision from the CCU for integration to the Owner's recorder/mixer/PA, comprehensive user documentation. No on-site installation, drilling, commissioning, furniture modifications, or room acoustic works are required under this scope.

3. Technical & Functional Specifications

3.1. Central Control/Digital Conference Control Host (1 unit)

- 3.1.1. Capacity & Modes: Connect at least 16 desktop conference units per host. Provide a minimum of five (5) conference modes: FIFO, NORMAL, VOICE, FREE, and APPLY.
- 3.1.2. User Interface: Integrated a minimum 4.3-inch color touch display; local menu must provide time/backlight configuration and English UI.
- 3.1.3. Audio Processing & Recording: Embedded DSP including low-cut filter, frequency shifter and multi-band equalizer; integrated conference recording supporting automatic and manual modes.
- 3.1.4. Camera I/O & Control: Must have a minimum four (4) dedicated camera input ports on the host for auto-tracking
- 3.1.5. Audio Outputs: Provide a balanced XLR secondary output in parallel with at least two (2) unbalanced RCA line outputs (LINE OUT).
- 3.1.6. Network/Remote Control: Provide a TCP/IP network port enabling remote control via PC application and Android tablet.
- 3.1.7. Conference Bus & Powering: An 8-core aviation/DIN conference bus that combines data and power delivery; the host unit provides DC power to all connected devices and supports both daisy-chain and branched topologies through system accessories.

3.2. Desktop Chairman Microphone Unit (1 units)

- 3.2.1. Microphone: Electret condenser, cardioid directivity; removable gooseneck with accepted standard length 430 mm; must be in black finish.
- 3.2.2. Audio Performance: Effective pass-bands: Unit A→B 80 Hz–7 kHz; Host LINE→Unit 20 Hz–8 kHz; Unit→Host LINE OUT 80 Hz–9 kHz. SNR ≥80 dB; THD ≤0.5%; crosstalk attenuation ≥80dB. Max SPL ≥125 dB (THD <3%).
- 3.2.3. Loudspeaker & Headphone: Integrated magnet Hi Fi speaker (auto-muted when mic is active). Headphone output on 3.5 mm jack, 8 32 Ω, nominal level ≈9 dBu with local volume control.
- 3.2.4. Controls & Functions: Talk key and chairman priority/override; conference check-in; strong anti-interference against mobile phone signals.
- 3.2.5. Interfaces & Power: 8 pin DIN/aviation conference socket; powered by DC 24 V from host over the conference bus.

3.3. Desktop Delegate Microphone Unit (10 units)

- 3.3.1. Microphone: Electret condenser, cardioid; removable gooseneck with accepted standard length 430 mm; must be in black finish.
- 3.3.2. Audio Performance: Effective pass-bands: Unit A→B 80 Hz–7 kHz; Host LINE→Unit 20 Hz–8 kHz; Unit Host LINE OUT 80 Hz–9 kHz. SNR ≥80 dB; THD ≤0.5%; crosstalk attenuation ≥80
- 3.3.3. Loudspeaker & Headphone: Built-in magnet Hi Fi speaker; 3.5 mm headphone jack (8–32 Ω), nominal ~9 dBu; local volume control.
- 3.3.4. Controls & Functions: Talk/mute with indicators; conference check in; strong anti mobile phone interference
- 3.3.5. Interfaces & Power: 8 pin DIN/aviation socket; powered via host DC 24 V.

3.4. Cabling, Topology & Power

- 3.4.1. Provide necessary 8 pin conference interconnect cables and adapters for the specified topology; label all cables and ports. Each mic with 60 feet cable.
- 3.4.2. Provide any brackets, power cables, and auxiliaries required for a complete operational system.

3.5. Recording & Connectivity

- 3.5.1. On-board recording or USB mass storage (WAV/MP3, ≥16-bit/44.1–48 kHz) or USB audio interface on CCU for capture to PC
- 3.5.2. Always provide balanced line out for third-party recorders/PA.

4. Deliverables

- 4.1. 1 × Central Control/Processing Unit (with PSU; rack kit if needed)
- 4.2. 10 × Desktop discussion microphone stations (each with gooseneck & windscreen)
- 4.3. 1 × Desktop Chairman Microphone Unit
- 4.4. If required by the platform: distributors/hubs and their interconnect cables
- 4.5. Documentation set: quick-start, full manual, as-shipped wiring diagrams

5. Delivery Schedule

- 5.1. The vendor shall deliver the software and necessary deliverables within 30 days of the date the project is awarded.
- 5.2. After completion of delivery, the vendor should obtain sign-off on the Installation-cum-Acceptance certificate from the ECM official. ECM will carry out acceptance of hardware as per acceptance test plan.
- 5.3. Delivery will be treated as incomplete in one/all the following situations:
 - 5.3.1. Non-delivery of any hardware, software or other components, accessories, documentation, drivers, media mentioned in the order.
 - 5.3.2. Non-delivery of supporting documentation.

6. Expectations from Bidders

- 6.1. As required by this RFP, the bid must be accurate, comprehensive, and in the format specified. As stated in point 3, all suggested items must be accompanied by the relevant technical documents.
- 6.2. Minimum one (1) year warranty on all supplied equipment from acceptance. Any failure within warranty shall be rectified or replaced at no additional cost to ECM.