

6. Architects and Consultants Specifications

I. CENTRAL CONTROL EQUIPMENT

Control and Power Supply Unit with digital acoustic feedback suppression

The Control and Power Supply Unit (CPSU) shall have an incorporated digital acoustic feedback suppression facility based on pre-active algorithms (feedback is not heard). Other included features for managing the number of active microphones and determining the operating mode, without the need for a central operator, should be available. It shall be possible to connect external equipment to extend the system capabilities. There shall be a built-in loudspeaker and headphone connector to allow the conference to be monitored by, for example, a stenographer. It shall interface the following equipment to the discussion system:

- **Tape recorder** - for recording and playing back meetings and discussions
- **External PA system** - for transmitting the proceedings to an audience in the same room or an adjacent room
- **External wired or wireless microphone** - for use by guest speakers or for audience participation

Note: The external microphone shall be muted when the priority button on a chairman unit is pressed, and when the system is operating in 'chairman only' mode.

- **Audio equipment** - for providing background music
- **Telephone coupler** - for allowing a remote delegate to take part via telephone

The following five modes shall be selectable using a rotary control on the unit's front panel:

- **Open mode with auto-switch-off** - shall allow selection of the number of microphones, from one to four, which can be simultaneously active. If the delegate does not speak for 30 seconds, the microphone shall automatically be switched off. It shall also be possible to switch microphones off manually.
- **Open mode without auto-switch-off** - shall allow selection of the number of microphones, from one to four, which can be simultaneously active.

- **Override mode** - shall allow delegates to override each other simply by activating their microphones. It shall only be possible for one microphone to be active at any one time.

Note: In override mode, delegates shall not be able to override chairmen.

- **Chairman only mode** - shall only allow chairmen to speak. It shall not be possible to activate delegates' microphones, even if no chairman is speaking.
- **Test mode** - shall be used to check that the system connections have been made correctly. All microphone ring and contribution unit LEDs shall light up if the unit is properly connected.

The CPSU shall have the following controls and indicators:

- **Mains on/off switch**
- **Microphone-mode switch** for selecting one of four modes (plus test mode)
- **Rotary loudspeaker volume control** for setting the output level of loudspeakers of contribution units. This control shall also determine the maximum level for the headphone outputs of contribution units and CPSU.
- **Monitoring volume control** of CPSU loudspeaker or headphones
- **'Power on' green LED indicator**

It shall provide the following facilities:

- **Control for 150 units**
- **Mains input connection**
- **Two trunk outputs** for loop-through connection of contribution units. It shall be possible to connect 25 contribution units to each output. The maximum cable length shall be not less than 100 m (109.3 yds). 150 contribution units can be connected in one system.
- **Microphone input with gain adjustment** for connecting an external microphone
- **Recorder input and output with gain control**
- **Line input and output** for connecting a PA system or background music source
- **Telephone coupler input and output** for connecting a telephone line. The input signal shall be isolated from the output to prevent echoing.
- **Insertion connector (with by-pass switch)** for connecting external audio processors
- **One 3.5 mm (0.1 in) stereo headphone socket**
- **On/off switch** for digital acoustic feedback suppression facility

It shall be suitable for use in portable or fixed mountings. It shall be 84 mm (3.4 in) high, 361 mm (14.2 in) wide and 143 mm (5.6 in) deep.

Control and Power Supply Unit

This unit is identical but without the digital acoustic feedback suppression facility.

19-Inch Rack-Mounting Set

This set shall consist of brackets and other necessary fixings to enable the CPSU to be mounted in a 19-inch rack system. Flush mounting of the CPSU shall be possible by using a custom-made bracket.

2. CONTRIBUTION EQUIPMENT

Delegate Unit

The Delegate Unit shall enable delegates to speak and listen to the proceedings via a loudspeaker or headphones. The unit shall include a microphone with a red indicator ring, which shall illuminate when the microphone is on. To prevent acoustic feedback, the built-in loudspeaker shall be muted when the microphone is on, and/or the headphones are connected. Two 3.5 mm stereo headphone sockets (wired for mono) shall allow two pairs of headphones to be connected, enabling two delegates to simultaneously use the unit. The headphone volume level shall be adjustable on the unit for maximum comfort. It shall also be possible to connect a tape recorder to one headphone socket, and use the other headphone socket to listen to the proceedings. The unit shall have the following controls and indicators:

- **Microphone with light-ring indicator which illuminates when the microphone is on**
- **Microphone on/off button**
- **'Microphone on' indicator (red LED)**
- **Rotary volume control for adjusting headphone volume**
- **Loudspeaker, automatically muted when microphone is on and/or headphones are connected**

Each unit shall have a 2 m (78.7 in) cable terminated with a moulded 7-pole circular connector, and a 7-pole circular socket for loop-through connections. There shall be two 3.5 mm (0.1 in) stereo jack headphone sockets. The front panel shall be 63 mm (2.5 in) high and 124 mm (4.9 in) wide, and the unit footprint shall be 63 mm (2.5 in) x 172 mm (6.8 in). The weight of the unit shall be approximately 0.9 kg (2.0 lb). The stem length of the microphone shall be 313 mm (12.3 in) or 488 mm (19.2 in)

Chairman Unit

The Chairman Unit shall enable the user to function as chairman of a conference or meeting. It shall be similar in appearance to the Delegate Unit, and shall also include a 'chairman priority' button. When pressed, the priority button shall cause all currently active delegate microphones to be temporarily or permanently muted, allowing the chairman to take control of the meeting. To prevent acoustic feedback, the built-in loudspeaker shall be muted when the microphone is on, and/or the headphones are connected. An optional chime shall be selectable to precede chairman priority calls. The unit shall have the following controls and indicators:

- **Chairman priority button**
- **Microphone on/off button**
- **Rotary volume control for adjusting headphone volume**
- **Microphone with light-ring indicator which illuminates when the microphone is on**
- **'Microphone on' indicator (red LED)**
- **Internal chime selection switch**
- **Internal switch for temporary or permanent muting of delegate microphones when chairman priority key is pressed**
- **Loudspeaker, automatically muted when microphone is on and/or headphones are connected**

Note: Both of the above internal switches shall be accessible by first removing a small plastic plate on the bottom of the Chairman Unit. If any Delegate Unit is permanently muted on activation of a 'microphone priority' key, it shall be possible to reactivate it using the 'microphone on' button on the Delegate Unit.

Each unit shall have a 2 m (78.7 in) cable terminated with a moulded 7-pole circular connector, and a 7-pole circular socket for loop-through connections. There shall be two 3.5 mm (0.1 in) stereo jack headphone sockets. The front panel shall be 63 mm (2.5 in) high and 124 mm (4.9 in) wide, and the unit footprint shall be 63 mm (2.5 in) x 172 mm (6.8 in). The weight of the unit shall be approximately 0.9 kg (2.0 lb). The stem length of the microphone shall be 313 mm (12.3 in) or 488 mm (19.2 in).

Transport and Storage Suitcase for 10 contribution units

The transport and storage suitcase shall be used to protect contribution units in transit or while in storage. It shall have the capacity to hold 10 contribution units with standard-length microphones. Any combination of delegate/chairman units shall be catered for. The inside of the suitcase shall have specially moulded packing to accom-

modate the discussion units, which shall give ample protection, while making packing and unpacking easier. The suitcase shall have handles on the top and side, and two wheels on the underside for ease of transportation. There shall be two separate locks for extra security. The suitcase shall be 560 mm (22.0 in) high, 795 mm (31.3 in) wide and 235 mm (9.2 in) deep. The weight of the empty suitcase shall be 6 kg (13.2 lb). The material used shall be 3 mm (0.12 in) thick ABS. The colour shall be RAL 9004 (black).

Transport and Storage Suitcase for CPSU and 10 contribution units

This suitcase shall be functionally identical to the Transport and Storage Suitcase for 10 contribution units, except that it shall have the capacity to hold one CPSU and six contribution units with either standard or extended microphone stems, and some extension cables. The suitcase shall be 560 mm (22.0 in) high, 795 mm (31.3 in) wide and 235 mm (9.2 in) deep. The weight of the suitcase shall be 6 kg (13.2 lb). The material used shall be 3 mm (0.12 in) thick ABS. The colour shall be RAL 9004 (black).

Extension Cable Assembly

The extension cable assembly shall consist of 5 m (197 in) and 10 m (394 in) of 6 mm (0.24 in) diameter cable terminated at one end with a moulded 7-pole male circular connector, and at the other end with a moulded 7-pole female circular connector. The installation cable shall consist of 100 m (3940 in) of 6 mm (0.24 in) diameter cable plus 5 connector sets, male & female (7-pole circular)

Set of 25 Cable Locking Clamps

A set of Cable Locking Clamps shall match male and female cable connectors, such as those on Extension Cable Assemblies. Each male/female connector shall require one clamp.