IML Connector

User Manual

LUMI
insight, instantly.

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Hirose – USB CABLE

'CONTROL PC'

USB LICENCE

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BATTERY COVER
BARCODE / UID
LOUDSPEAKER


HEADPHONES / MICROPHONE SOCKET
TALLY LIGHT
WRIST STRAP
SMARTCARD READER / WRITER
STATUS LED
COLOUR SCREEN
LUMI


MICROPHONE
LIGHT SENSOR
HEADPHONE VOLUME
MICROPHONE KEY
TRACKBALL & SOFT KEYS
QWERTY KEYBOARD
iml

3. Quick Start

a) Ensure IML Connector devices are **charged** sufficiently before use

b) Connect the **USB licensing dongle** to a 'control PC'

c) **Setup** the 'control PC' (i.e. power supply, projector/screen, etc.)

d) Connect the **A/B USB cable** between a 'control PC' and one of the IML Connectors, which will then initialise (blue status LED)

e) **Connect the devices** to the system

f) Start Lumi software

g) Check that all devices have connected in **IML Connector System Manager**

h) Proceed with use of the IML Connector System

4. Licensing

A battery powered, timed USB HASP 'dongle' is used for preventing unlicensed use of Lumi software as well as providing a level of security for the owner of the IML Connector System. The information contained within a licensing dongle is used to allow the use of specific Lumi software and to enable certain features and functions within it. The licence will also limit the number of IML Connector devices that may be used as part of the system.

a) Plug the dongle into any available USB port on the control PC. A red LED will light up inside the casing. If the LED is flashing, wait until it is solid before proceeding. If it is the first time the dongle has been used with the PC, new hardware will be detected and device drivers installed.

b) The HASP device drivers are pre-installed onto a PC with any Lumi software.

c) The dongle must remain connected to the control PC for the IML Connector devices to function.

d) Licensed dongles can be updated with new functionality and timing information without having to be returned to Lumi.

e) The licence will expire at a certain date and time. Users need to ensure it is updated before re-using.

f) When required, an update file is generated by Lumi and sent to the user.

Important

The IML Connector System will not operate without a valid licensing dongle.

Tip

Lumi recommends that the dongle is kept in a safe and secure place when not being used, and that it is insured to the value of a replacement licence.

5. Charging

This section describes the process for charging IML Connector devices using an **IML Multidock** or **IML Minidock**. Whilst there are slight differences in the below instructions between the two dock devices, functionality remains the same.

› IML Multidock

a) Remove the cover of the charging case.
b) If not already in the IML Multidock (i.e. 'docked'), return the IML Connector devices to the charging rack.
c) Connect the IEC power lead to the rear of the charging case.
d) Once powered, the fan built into the IML Multidock will start. This is designed to circulate air around the IML Connector devices and prevent overheating whilst charging.
e) The charging process will start straight after the initial boot up phase of the IML Connector devices (taking approximately 30 seconds). The 'traffic light' colour coding on the device's status LED will then indicate the current level of battery charge.
f) Once power is connected to the dock, the ON/OFF button on the front can be used to cycle through different power states (by pressing and holding). The colours of the two LED lights next to the power button (i.e. the left-hand side of an IML Multidock) indicate the power state of the dock (see the next page for further details).

Important

Always charge the IML Connector devices with the case cover removed.

Reminder

Whilst charging, the status LED on the IML Connector device will flash depending on its current battery level…

Red	0 – 90%
Amber	91 – 99%
Green	100%

› IML Minidock

An IML Minidock (pictured on the right) offers the same docking and charging functionality as an IML Multidock, for **10** IML Connector devices. IML Minidocks require a separate power supply unit and cannot be powered with the same IEC power lead as an IML Multidock.

› **OFF**

Power is connected to the dock, but it is in the OFF state. Devices will not charge.

› **ON - Radio Off**

Power is connected to the dock and it is in the ON state. The devices will charge but will not connect by radio to the Lumi system (if running).

› **ON - Radio On**

Power is connected to the case and the radio is switched on. Devices will charge, but will **also** connect to the IML system (if running).

Reminder

To toggle between the two different ON states, press and hold the power button on the IML Multidock or IML Minidock.

- If the status LED on an IML Connector device isn't flashing, it is not charging. Check the device is correctly inserted into the dock.
- If an IML Connector device battery is completely flat (i.e. won't turn on), it may take a short period of time to start charging after being docked.
- For an IML Connector device which is turned on, when the battery is critically low (approximately 1 hour remaining) a low battery warning is provided by a small battery icon ( ) in the status bar on the device display screen.
- An IML Connector device with a flat battery will take approximately 8 hours to charge and once the battery is fully charged will provide up to 12 hours of life (depending on level of use).

Tip

Unlike some electrical devices, the IML Connector device batteries do not need to be completely discharged before fully recharging.

- Using an IEC Mains Extension cable (supplied separately), up to 4 IML Multidocks can be ‘daisy chained’ together, requiring less mains power sockets. IML Minidocks do not have this functionality.

Important

If the IML Connector devices are not being used for long periods of time, it is still important to charge them on a regular basis (to maintain the battery’s performance).

6. Switching On

Method 1

a) If an IML Connector device is switched off, it can be turned on manually via the device's keypad.

b) Press and hold the green button.

c) The LED will turn green, when indicated on the display screen, press the microphone key.

d) If the microphone button is not pressed in time, the IML Connector device will not turn on and both steps need to be repeated.

Method 2

a) Turn on the control PC and wait for it to finish starting up.

b) Make sure the dongle is plugged into the control PC and that the IML Connector Base Station is connected and switched on.

c) Ensure that the Base Station has initialised (users will see the words "**BASE STATION**" on the display screen and the status LED will be blue).

d) With power connected, turn the IML Multidock or IML Minidock **ON** and wait for the IML Connector devices to go through the boot up process.

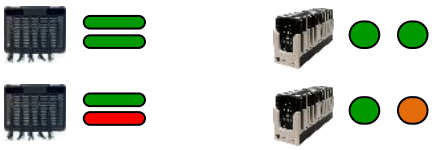
e) Remove the IML Connector devices from the dock. The devices will stay turned on whilst they search for radio signal from the IML Connector Base Station. Once they have found this and have connected, the devices will stay on.

f) The status LED on the IML Connector device will blink (a quicker, double flash) when it is turned on. It will blink red if it is on but not connected to an IML Connector Base Station and will blink green if it is on and is connected to the Base Station. The slower, single flash indicates a device is charging.

Important

An IML Connector device will turn off automatically after approximately 2 minutes if it does not connect to an IML Connector Base Station. Once an IML Connector device has connected to the Base Station it will not turn off. A device which is or has been connected can only be turned off manually or by using Lumi software.

Method 3

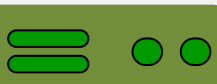


a) Repeat the first 3 steps of Method 2 (see previous page).
b) With power connected, turn the dock **ON** (at this point, it doesn't matter which of the two power states is used).
c) The IML Connector devices will start their boot up process.
d) At any stage (users do not have to wait for the devices to finish booting up), removing the power lead from the dock will cause the devices to look for radio signal from the IML Connector Base Station and connect.
e) As per Method 2, once connection with the Base Station has been established, the devices will stay turned on.

Method 4

a) Repeat the first 3 steps of Method 2 (see above).
b) With power connected, turn the dock **ON** (Radio On, Green/Green power state LEDs).
c) The IML Connector devices will start their boot up process.
d) The devices will start charging, however, with the dock in this mode - they will also connect to an IML Connector Base Station if available. If an IML Connector device is inserted into a dock in this state, it will remain connected and will charge.

Reminder



With an IML Multidock or IML Minidock in the **Radio On** state, the status LED on the IML Connector device will show the single flash for charging as well as the double 'blink' indicating the device is connected or trying to connect.

7. Switching Off

Method 1

a) An IML Connector can be turned off manually via the device's keypad.

b) Press and hold both the  and  buttons together and press the **X** key on the device.

c) The device will turn off.

Method 2

a) Ensure that the power lead is connected to the dock and that it is in the **OFF** state (Red/Red LED status).

b) Put an IML Connector device back into one of the slots in the IML Multidock or IML Minidock (i.e. so it is 'docked').

c) The device will turn off.

Method 3

a) Ensure that power is connected to the dock and set it to the **ON** state.

b) If an IML Connector device is 'docked' now (i.e. inserted into an IML Multidock or IML Minidock), it will no longer connect to an IML Connector Base Station but will remain on and charging in the case.

c) Press the power button on the charging case, turning it **OFF**. All docked devices will turn off.

Method 4

a) Using **IML Connector System Manager**, all connected devices can be turned off globally.

b) Select **Commands**.

c) Choose the **Power OFF All** option and select **Yes** when asked to proceed.

d) Any IML Connector devices which are in signal range and connected to the IML Connector Base Station will turn off.

Tip

Only use Method 4 when certain that all devices have been returned. Alarms will not sound on IML Connector devices that are powered down.

8. Network Screen

Once an IML Connector device has been turned on, it will immediately start seeking a radio signal from the IML Connector Base Station in an attempt to connect. The status LED on the IML Connector device will show a red double blink whilst it is turned on and attempting to connect.

At this stage (i.e. before connecting), users will see the **Network Screen** on the device's display. As soon as a device connects to an IML Connector Base Station, this is replaced by the default **Home Screen** (without any custom theming or branding on the devices, this is usually a Lumi or IML logo).

The Network Screen contains information about the device, as well as displaying important connectivity settings…

› Firmware

The release and version of Connector firmware (in the above example, the device is on the '**Habu**' release of IML Connector device firmware, version **2.30**).

Important

To change network settings on an IML Connector device, use the **Hotkey** shortcut by pressing and holding the + and - buttons together with **N**.

› UID

This is the unique identity number of the device, set by the manufacturer, which corresponds with the barcode on the reverse of the device.

Important

To access certain features on an IML Connector device, a password is required.

Password = **gaffer**

› Index

This is a programmable number, identifying an IML Connector device, ranging from **1 – 9,999** that allows all devices in a system to be sequentially and uniquely numbered.

Reminder

If IML Smartcards are not being used to identify delegates using the IML Connector devices, the index number can be used to track an individual's responses.

Radio Sequence

The radio sequences all use the 2.4 GHz radio spectrum. The number used here specifies a unique hopping pattern within that spectrum. . For further information on radio sequences and how these 'map' against wireless (i.e. WiFi) channels, please contact Lumi.

Tip

For further information on getting the most out of the IML Connector system, or for a particular environment (for example - to avoid wireless interference), please contact Lumi.

Network ID

This is a value that determines a discreet network between an IML Connector Base Station and the IML Connector devices. In order for a device to connect to the Base Station, it must use the same network ID.

Valid network IDs range from **0 – 65,535**.

The Network ID value becomes key when the **User Driven Roaming** feature is used on the IML Connector system.

Important

The Network ID on an IML Connector device must match the Network ID on the Base Station for the devices to join the network.

9. User Driven Roaming

- User Driven Roaming enables a participant to choose which **Network** to join from a pre-determined list loaded on to the device.
- Using **IML Connector Configuration Tool**, a list of Networks is created utilising the **Network ID** for each system (for example, this could be workshops or breakout sessions running in different rooms). This information is contained within a configuration file which must be deployed to all devices and the IML Connector Base Station.
- The **Default Network** feature ensures that when a device is rebooted, it will always revert to this Network ID (this will always be the top row in the list of Networks).
- With all Networks in the list (except the Default Network) the ability to enable a **password** (which must be entered into the device) ensures that access to certain Networks can be controlled.
- When User Driven Roaming is enabled, the Network selection menu is accessed by navigating to the **Settings** menu on an IML Connector device. The trackball and soft keys on the device are used to navigate through the menu system.
- A wireless icon indicates which Network a device has joined. A blue icon here indicates the device is connected. A gray icon shows that the device is not connected to an IML Connector Base Station configured with that Network ID.
- Using the localisation options in **IML Connector Configuration Tool**, a variety of terms are available in different languages for use in the Network selection menu (for example, users do not have to use "**Workshop**" as seen in the example images on the right).

Reminder

To implement User Driven Roaming, a configuration file must be deployed to the IML Connector Base Station and all IML Connector devices. This is achieved by connecting devices via USB cable to a PC and using **IML Connector Configuration Tool**.

10. Utility Cards

Using an IML Smartcard (supplied separately), utility cards can be created (using any IML Connector device) to perform certain functions. This usually saves time compared to performing these functions manually. Once created, inserting the utility card into any other device will automatically carry out the programmed task. Utility cards include…

› Facilitator Microphone

The facilitator microphone provides an additional IML Connector device microphone that can be used independently of the standard microphone feature (hereafter called the **delegate microphone**). The facilitator microphone is enabled by simply inserting a **facilitator microphone** utility card into the device.

Unlike delegate microphones, the facilitator microphone can operate whilst another delegate microphone is in-use. The IML Connector Powered Base Station contains two audio outputs, **A** and **B**. The delegate microphone audio is delivered through **Output A**, and the facilitator microphone audio is delivered through **Output B**. This allows a facilitator and a delegate to have a back-and-forth conversation without needing to repeatedly open and close the two microphones. Only one facilitator microphone card can be used at a time in an IML Connector System.

› Language

Once a language utility card has been created, this can be used on other IML Connector devices to quickly repeat changing the language setting on a device (e.g. if a French card is created, a user will not need to manually go into individual devices' language settings and change to French, simply inserting the card will do this instantly).

› Admin

When accessing settings menus on the IML Connector device (see Appendix B), a password is required to proceed. The same password as provided earlier in this document (**gaffer**) applies to all menus on the IML Connector device. An admin card (when inserted into a device) saves time by removing the need to type this password.

Net Config

As seen in an earlier section (Section 8) there are some IML Connector device settings which are configurable (known as 'Network settings', these include **Index** number, **Radio Sequence** and **Network ID**). Whilst a method has been outlined (using the Hotkey shortcuts), to change these settings manually on a device, a Net Config utility card can be created to save time by automating the process. As with other utility cards, simply inserting the card into a device will automatically carry out the instructions programmed onto it.

> **Tip**
>
> Network settings can be changed globally using other Lumi applications such as **IML Connector Configuration Tool** or **IML Connector System Manager**.

- A Net Config card will update…

a) Index number (optionally set to update incrementally)
b) Radio Sequence
c) Network ID

To create a Utility Card…

a) Insert an IML Smartcard into any IML Connector device
b) Press and hold the  and  buttons together
c) Press **C** on the device's keypad
d) Enter the password **gaffer**
e) Press **U** and follow the on-screen instructions to create the Utility Card

11. System Manager

The **IML Connector System Manager** application is the user interface or portal into the **Lumi Hub** platform (a software service which performs the core communication between control PC and IML Connector devices).

- After installing Lumi software, Lumi Hub will not appear as an icon on the PC's desktop or in the system tray. This is because it runs as a **Service** in the background, as opposed to an application which can be opened or closed.

- Once the control PC has started up and Lumi Hub has loaded, IML Connector System Manager can be accessed via the Windows Start button (installing Lumi software does not automatically create a desktop shortcut).

  Start > All Programs > Lumi > IML Connector System Manager

- **IML Connector System Manager** is installed with any Lumi software that uses it and does not require a separate installation.

- **IML Connector System Manager** allows users to see details of their IML Connector system, ranging from how many IML Connector Base Stations and devices are connected, to the version of firmware installed and current battery levels remaining on connected devices.

- **IML Connector System Manager** also enables the user to run operational commands such as…

  a) Enable/disable alarms
  b) Power down all devices
  c) Find and/or beep selected or all devices
  d) Change network settings
  e) Sequentially index devices
  f) Analyse index numbers
  g) Export a report of all connected devices
  h) Control the audio setup of the IML Connector system
  i) Control the microphones
  j) Change the displayed screens
  k) Log battery statistics and run battery tests

Important

Users should always allow a period of time for the information in IML Connector System Manager to populate. Once an IML Connector device has been turned on and is connected to the IML Connector Base Station, IML Connector System Manager will need time to 'sync' with the device.

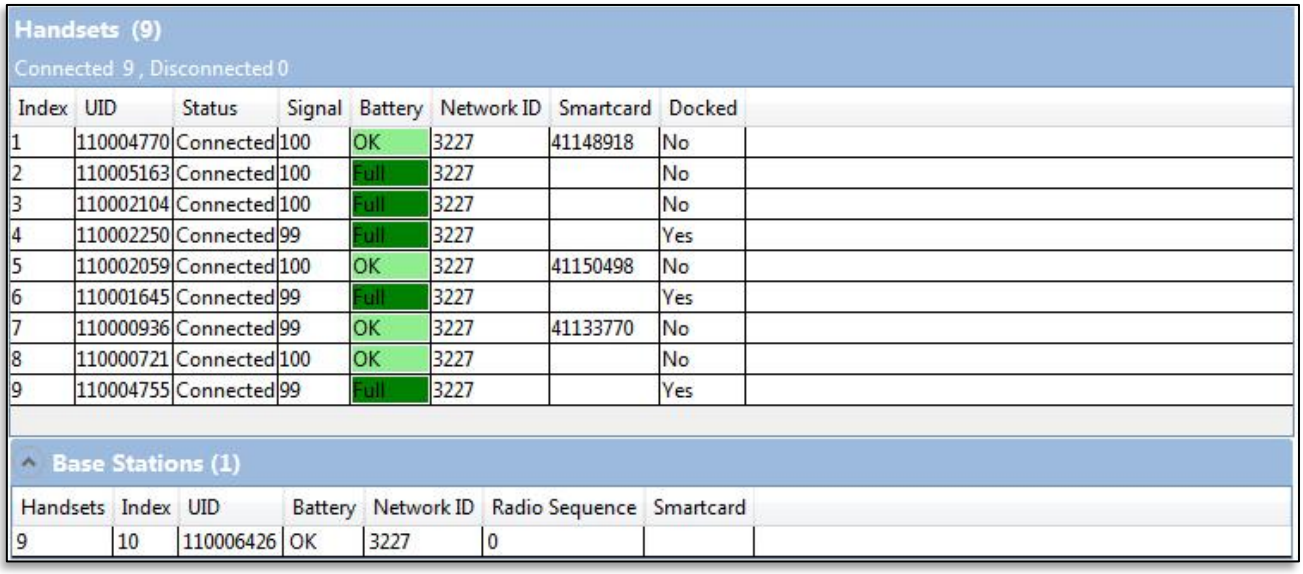
Handsets

Handsets

Displays the number of IML Connector devices connected to Lumi Hub, with further diagnostic information.

Base Stations

Displays diagnostic information relating to any IML Connector Base Stations connected to the control PC.



Handsets (9)

Connected 9 , Disconnected 0

Index	UID	Status	Signal	Battery	Network ID	Smartcard	Docked
1	110004770	Connected	100	OK	3227	41148918	No
2	110005163	Connected	100	Full	3227		No
3	110002104	Connected	100	Full	3227		No
4	110002250	Connected	99	Full	3227		Yes
5	110002059	Connected	100	OK	3227	41150498	No
6	110001645	Connected	99	Full	3227		Yes
7	110000936	Connected	99	OK	3227	41133770	No
8	110000721	Connected	100	OK	3227		No
9	110004755	Connected	99	Full	3227		Yes

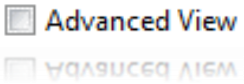
Base Stations (1)

Handsets	Index	UID	Battery	Network ID	Radio Sequence	Smartcard
9	10	110006426	OK	3227	0	

The status table, with an example image above, shows information including…

- **Index** — The device's numeric identifier (please see Section 8).
- **UID** — The device's unique serial number (please see Section 8).
- **Status** — If a device is 'seen' successfully by Lumi Hub, it will appear here as **Connected**. Note that if an IML Connector device has been disconnected, this will show as **Retrieving** until the necessary information has been populated into the table.
- **Signal** — Displays live information in regard to the radio signal. This is a useful tool for determining the strength of radio connection and is especially key when using microphones, offering a Quality of Service (**QoS**) reading for audio channels.
- **Battery** — Provides live information regarding the current battery life of the devices.
- **Network ID** — The device's Network ID *(*please see Section 8).
- **Smartcard** — If an IML Smartcard is inserted into a device, it is indicated here with the card's UID
- **Docked** — Whether or not a device is inserted ('docked') into an **IML Multidock** or **IML Minidock**.

Advanced View



Selecting this option will expand the status table, providing additional details for IML Connector device firmware, configuration files (e.g. branding or theming) and also providing further data on battery performance.

Firmware Version	ConfigVersion	Current (mA)	Voltage (mV)	Battery Total Capacity(mAh)	Battery Remaining (mAh)
2.30.0.1	ClientABC.1117.51732	Charging	4090	1665	1530
2.30.0.1	ClientABC.1117.51732	150	4029	1680	1575
2.30.0.1	ClientABC.1117.51732	140	3975	1665	1455
2.30.0.1	ClientABC.1117.51732	150	4036	1710	1590
2.30.0.1	ClientABC.1117.51732	Charging	4098	1665	1530
2.30.0.1	ClientABC.1117.51732	130	3981	1665	1485
2.30.0.1	ClientABC.1117.51732	140	3961	1680	1485
2.30.0.1	ClientABC.1117.51732	140	3967	1665	1455
2.30.0.1	ClientABC.1117.51732	Charging	4151	1695	1650
2.30.0.1	ClientABC.1117.51732	150	3960	1680	1470

- **Firmware Version** — The version number of IML Connector firmware installed on the device.
- **Config Version** — If a configuration file (created using IML Connector Configuration Tool) has been deployed to a device, it will display this information here. From the example table above, the **Config name** built into the configuration file is "**ClientABC**" whereas the second part of the value, i.e. "**1117.51732**" is the **Config UID** assigned by IML Connector Configuration Tool.
- **Current** — The milliamp is a unit relating to the flow of electrical charge.
- **Voltage** — Represents the amount of energy remaining in the battery.
- **Battery Total Capacity** — The amount of electrical charge the battery can store.
- **Battery Remaining** — Amount of electrical charge remaining using the total capacity figure.

- **Location** — Indicates whether IML Connector devices are connected to the PC on which IML Connector System Manager is being run (i.e. "**LOCAL**" will be displayed here) or if connected to an additional, networked PC using IML Connector Satellite. Please contact Lumi for more information.
- **Base Station** — The UID of the IML Connector Base Station a device is connected to.

Screens

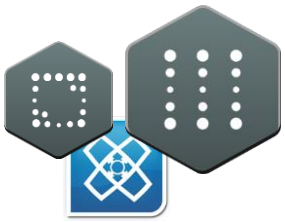
- The **Interactive Content** section of **IML Connector System Manager** will only be available if the configuration file deployed to the IML Connector Powered Base Station contains custom screens.

- For further information on custom screens and how to control the display of these on the IML Connector, please refer to Section 14 of this User Manual.

Audio

For further information on the **Audio** tab, please refer to Section 12 of this User Manual

12. Audio Settings



- Lumi products such as **Text Vote Talk** and **Queue** utilise the built-in audio features of the IML Connector device, with subsequent sections of this User Manual outlining the operation of these.
- IML Connector System Manager includes an **Audio** tab that allows the user to change the **Audio Routing** on connected devices, this is done globally (i.e. to all connected devices) and over radio. Always ensure that the correct routing is selected for the required setup. The below table, in conjunction with Appendix A (Audio Routing Diagrams), provides technical detail on how each of the 7 available routings function.

	IML Connector Device	IML Connector Powered Base Station	Example Scenario
Off (**Default**)	No audio functionality is enabled on the devices. This provides for a very fast vote response time **No** impact on battery life.	Outputs **A** and **B** are disabled. Inputs **A** and **B** are disabled.	Shareholder meetings where clients can confirm microphones are not required. 6,000 vote responses can be received in approximately 12 seconds.
Single Output	One channel of audio output is available. This provides for a fast response time Delegate microphones are available. Headphones and speakers are disabled. **No** impact on battery life when the microphone is not in use, **low** when it is.	Output **A** from delegate microphone.	Delegates have use of the microphones and there is no facilitator microphone required.
Single Input	One channel of audio input is available. Microphones are unavailable. Audio transmitted to devices is enabled through the headphones and speakers. **No** impact on battery life when audio is not transmitted, **low** when it is.	Input **A** for audio transmitted to devices.	Breakout sessions in close proximity where delegates do not require microphones and are issued with headphones to listen to the session.
Dual Output	Delegate and facilitator microphones are available. Headphones and speakers are disabled. **No impact** on battery life when the microphone is not in use, **moderate** when it is.	Output **A** from delegate microphone. Output **B** from facilitator microphone. Inputs **A** and **B** are disabled.	The chairperson wants to use an IML Connector microphone simultaneously while a delegate is also using their device microphone.

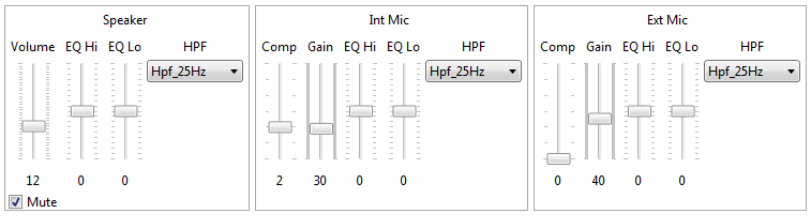
	IML Connector Device	IML Connector Powered Base Station	Example Scenario
Dual Input	Two streams of audio are available on the headphones; the device user can choose either stream. Stream 1 can also be routed to the IML Connector loudspeakers, Stream 2 cannot. The delegate and facilitator microphones are disabled. **Heavy** impact on battery life.	Outputs **A** and **B** are disabled. Input **A** to Stream 1. Input **B** to Stream 2.	Simultaneous Interpretation (SI) supporting two different languages. The device user can pick the language they prefer.
Loopback	The delegate microphone is routed directly to the headphones (and loudspeakers, if enabled). The facilitator microphone is disabled. **Minor** impact on battery life when the microphone is not in use, **moderate** when it is.	Output **A** from delegate microphone. Inputs **A** and **B** are disabled.	Route the delegate microphones directly to the IML Connector headphones or loudspeakers, without the need for an external mixing deck.
Pass Through	The delegate microphone is available for use. The facilitator microphone is disabled. A single audio stream is available for the headphones (and loudspeakers, if enabled). **Minor** impact on battery life when the microphone is not in use, **moderate** when it is.	Output **A** from delegate microphone. Input **A** to handset headphones or loudspeakers.	Audio from the delegate microphone is sent to an external mixing deck. It is mixed with other audio sources and sent back to the headphones or loudspeakers.

TABLE 1: AUDIO ROUTINGS

There are three further audio components that can be configured using the controls in IML Connector System Manager. These are…

- **Speaker**
- **Internal Mic**
- **External Mic** (for example a lapel microphone connected to the device)

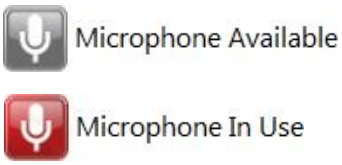
Any changes made here are global and will happen to all IML Connectors devices connected to the IML Connector Base Station. The '**Reset All Levels**' button will return all audio settings back to default.



- To use the IML Connector device loudspeakers, ensure **Mute** is unchecked and the correct routing is in use.

- '**Push To Talk**' (PTT) or '**Latch**' mode microphones can be activated on the IML Connector devices with controls in the **Microphones** section.

- The availability of microphones is reflected beneath the **Start** and **Stop** controls.



Reminder

'Push To Talk' (PTT) mode requires a user to keep the Microphone key pressed to open the IML Connector device microphone.

'Latch' mode means that a user toggles the microphone on and off by pressing the Microphone key.

13. Custom Screens

The IML Connector device has the ability to display custom screens. These provide functionality to create a variety of items such as…

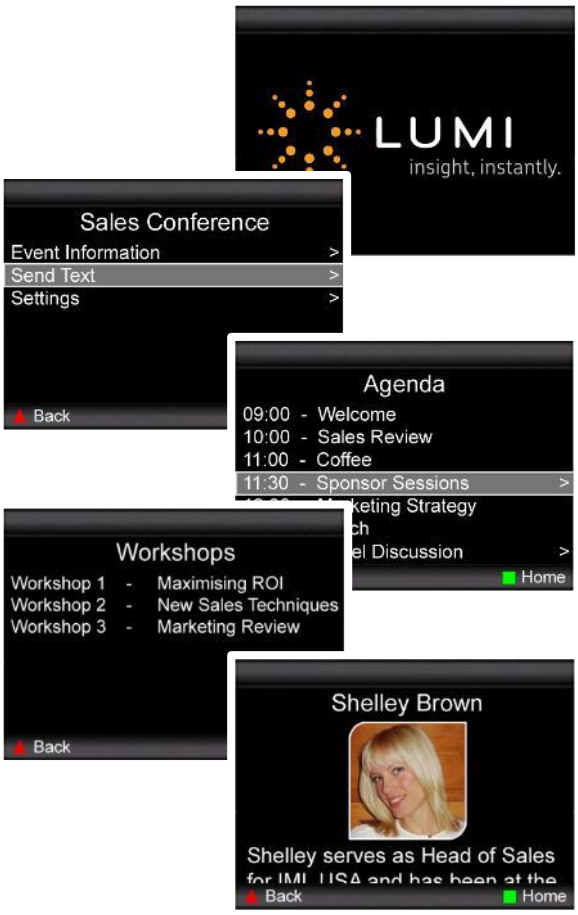
- Agendas
- Speaker biographies
- Interactive menus
- Lists
- Text
- Fixed images
- Slide shows

Furthermore, with **IML Connector Configuration Tool** these screens can be setup in a way which links screens to other custom screens, enabling the creation of a menu system which IML Connector device users are able to navigate through using the soft keys and trackball.

Important

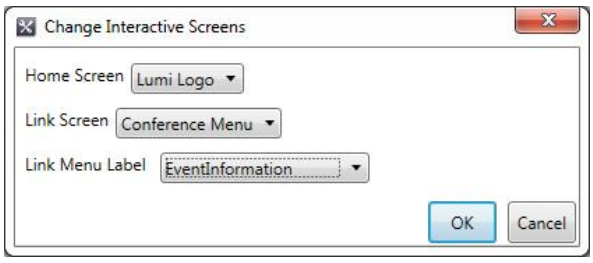
Custom screens and links can only be created and deployed to devices by using **IML Connector Configuration Tool**.

For further information please contact Lumi.



Changing Screens…

- To change the screen displayed on all IML Connector devices, **IML Connector System Manager** must be used.
  a) Open **IML Connector System Manager**
  b) Go to the **Screens** tab
  c) Press the **Change** button
  d) Set the screens as desired and press **OK**
- The **Screens** tab allows the user to set the **Home Screen** and **Link Screen**.



The Link Screen…

- The **Link Screen** is a custom screen which, if configured, will always appear as a link in the **top row** of the IML Connector device menu.
- The Link Screen can be changed globally over radio by following the **Changing Screens** instructions on the previous page. Alternatively, a default Link Screen can be setup in the IML Connector device configuration file using **IML Connector Configuration Tool**.
- There are a number of localised names which can be used for the Link Screen label (for example “Event Information” as seen in the image on the right). A custom value can also be set here by the user, however this is not localised and is hence not translated when a different language is selected by the user on an IML Connector device.

Important

A configuration file created in **IML Connector Configuration Tool** should always be deployed to all IML Connector devices **AND** the IML Connector Powered Base Station. This ensures that both custom screen and Link Screen options can be set globally over radio.

Reminder

Custom screens are created and deployed to devices using **IML Connector Configuration Tool**.

IML Connector System Manager can be used to change the displayed screen and Link Screen settings used on a device.

14. Alarm

The IML Connector devices are designed with an integrated anti-theft alarm. This is a proximity alarm, meaning that as long as a device is within range of (and connected to) an IML Connector Base Station, the alarm will not activate.

If a device is taken outside of radio range (approximately 150 metres in clear line of sight of an IML Connector Powered Base Station) the alarm will activate after approximately 15 seconds of loss of signal. A user is not able to switch off their device or stop the alarm, however – instructions are displayed on the IML Connector device display screen asking them to return the handset to the "event organiser". Once a device is back within range of the IML Connector Powered Base Station and reconnects, the alarm will stop sounding.

Important

The IML Connector device alarm is not on by default and needs to be activated by the operator of the system.

› To turn off an alarm which is sounding…

a) An alarm will stop sounding when the IML Connector device is bought back into range of the IML Connector Base Station. If a device is returned and this is not possible (for example, the control PC and IML Connector Base Station have been switched off and packed away), it is still possible to turn off the device…

b) Press and hold both the  and  buttons together and press **X**. This turns the device off manually.

Tip

Alarms are controlled using the **IML Connector System Manager** application.

Tip

'Docking' an IML Connector device (i.e. returning it to the IML Multidock or IML Minidock) will stop the alarm sounding.

Reminder

Looking at the status bar on the IML Connector device's display screen, an alarm symbol will be present if the alarms are enabled

15. Using a Handset as a Base Station

Any IML Connector handset can be used as a Base Station.

› **To setup any IML Connector handset as a Base Station…**

a) Connect the data lead (USB to **Hirose**) to the control PC
b) Plug the USB end into the PC and the other (Hirose) end of the lead into the bottom of the handset
c) After several seconds, the device will re-initialise as a Base Station (indicated on the display screen).
d) IML Connector devices will connect to the Base Station (this may take up to a minute) and allow normal use of the system.
e) Using a handset as a Base Station will offer an effective radio range of approximately 100 metres.

16. Microphones

Each IML Connector device has a microphone built into it. When in operation, these can be used by attendees of a meeting and provide the chance of instant input from the audience without the practical, technical or financial implications of passing a handheld microphone around the room.

Important

To avoid confusion, only one delegate microphone on an IML Connector device can be open (i.e. 'live') at any given time.

Each IML Connector device has a **tally light** built into the back of the device. This LED is open. This is a useful feature as it means it is easy to see who is using the microphone and where they are seated in the audience. This can be beneficial to a presenter, sound engineer or even a panel of experts on stage during a Q&A session.

When microphones are enabled by an operator of the IML Connector system, users can refer to the display screen on an IML Connector device to determine the current microphone status…

MICROPHONE AVAILABLE

MICROPHONE OPEN

MICROPHONE NOT AVAILABLE

Important

Audio quality may differ depending on how users hold the IML Connector device.

Lumi recommend that the IML Connector device is held approximately 15 – 30 centimetres in front of the face.

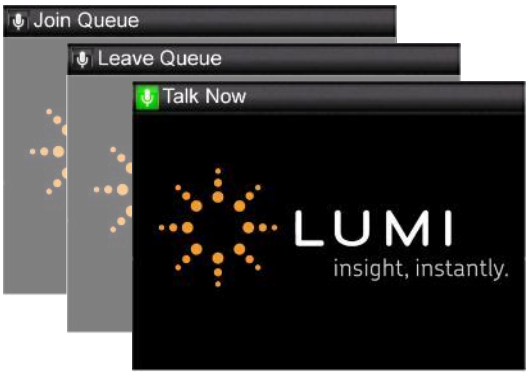
Speaker Queuing

Using the **Lumi Queue** product, IML Connector devices can be used to facilitate **Speaker Queuing**. This enables registered users (i.e. issued with an IML Smartcard) to join a microphone queue if they would like to speak, which can then be controlled by an Operator or chairman for example.

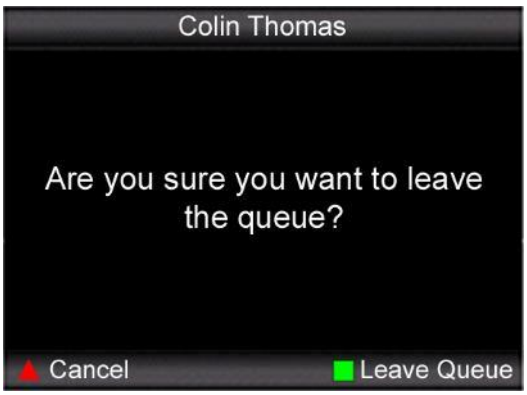
- Participants are not able to activate or deactivate their own microphone. Instead - they are opened and closed by the controller of the queue. A speaker queue can either be generic or split into up to 8 different **Queue Lines**. These provide the ability for participants to register their wish to speak against a certain topic, item or motion for example. Information including the speaker's name, time they spoke and duration they spoke for are included in reporting. Please contact Lumi for more information.

When enabled, registered users can join or leave a queue by pressing the microphone button on the IML Connector device.

- The Status Bar on the IML Connector device will reflect whether or not a user can join or leave a queue and if their microphone has been activated by the controller of the queue.



- Users are prompted to confirm or cancel if they would like to leave a speaker queue by using the soft keys on the device.



17. Audio Hardware

Integrated loudspeakers built into the IML Connector device mean that in some circumstances, i.e. for smaller events, the use of a PA system is not required.

For large scale events, or when using Audio Routings other than '**Dual Input**', '**Off**' or '**Single Input**', maximise the quality of the IML Connector device microphones by linking into a PA system or sound desk.

- For smaller scale events, The IML Connector Base Station also features standard 3.5mm 'mini-jack' connections.

18. Additional Audio Features

› Loudspeaker

Each IML Connector device has a loudspeaker built into the back of it. In some scenarios this feature can negate the need for a PA system.

The volume level and enabling/disabling of the loudspeakers is controlled using **IML Connector System Manager** (please see Section 13). It cannot be set manually via the IML Connector device and is a global setting (i.e. the same for all connected devices).

› Headphones/Microphone Connection

Example uses include for the hard of hearing or Simultaneous Interpretation (SI). The Connector has a 4-pole, 3.5mm 'mini-jack' socket enabling headphones (and/or a microphone) to be connected.

Headphone volume is controlled with the  and  buttons.

To utilise either of the above two features may require additional cabling, please see Section 17 for further information. Please also note that the availability of both of the above features depends on the Audio Routing in use (see Section 12 and Appendix A).

19. Text Messaging

Abc

With products such as **Lumi Text Vote Talk**, participants can use the QWERTY keyboard on the IML Connector devices to send text messages to a 'control PC'. These messages can be used to gain valuable information and insight from an audience. Additionally, system users are also able to broadcast a message to all connected devices.

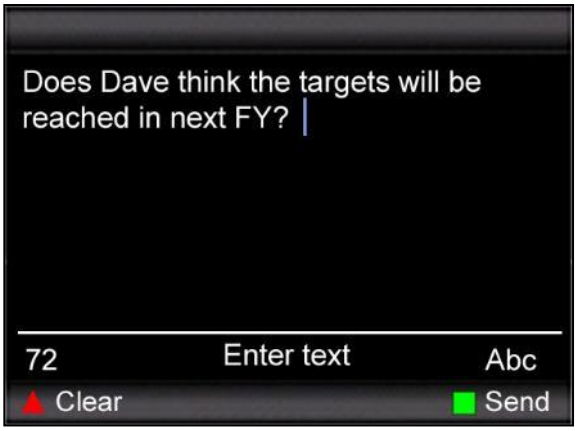
As well as collecting data, with a selection of options available through products such as **Lumi Audience Display** or **Lumi Message**, text messages can be displayed to an audience or to presenters/facilitators in a wide variety of formats and on a host of connected devices. Please contact Lumi for more information.

- Text messages can contain a maximum of **127 characters** (including spaces).
- A remaining character count is displayed on the IML Connector device.

Use the green square soft key to **Send** a message

Use the red triangle soft key to **Clear** the message

The blue trackball can be used as a cursor to navigate through the message to edit before sending



- Additional messaging buttons on the IML Connector device are included below…


SPACE


BACKSPACE

CAPS


RETURN

SYMBOLS

20. Voting

A range of Lumi products provide participants with the ability to vote. Across these applications, whether dealing with a quiz question in Lumi ViewPoint, or a legal vote at a shareholder meeting, there are some basics around voting which this section outlines.

- IML Connector devices allow participants to submit a response whilst a vote, or poll, is **open**. Votes are opened by the operator, after which all connected devices will respond. Participants can change their response during this time, however, once the vote is closed no more responses can be sent by participants as the IML Connector devices will return to the state they were previously in.

- Some Lumi products may make use of timer, or **countdown clock**, which can aid a consistent voting process. When a clock is started the vote is open. The vote usually closes automatically once the clock has finished, after which participants can no longer submit responses on their device.

- IML Connector devices **must be connected** to a Base Station and within radio range, otherwise they will not respond to a vote which is opened. Once opened, IML Connector devices must remain connected to the Base Station to submit a response.

- Depending on the Lumi product in use, or the nature of the vote, options (or choices) can be displayed to participants on the IML Connector display screen. Participants can submit responses using one of the two methods below…

  a) Submit a response by **pressing a number** button on the IML Connector device which corresponds with their voting option.
  b) A response can also be submitted by using the **blue trackball** to highlight a choice, pressing the trackball in to select and submit.

- Depending on the setting (and also on the Lumi product in use), there are usually different ways in which a participant can cancel or change their vote. Please note that instructions are always provided on the IML Connector device screen. A response can usually be cancelled by pressing the **Clear** or **Cancel** button. Some meetings may require the use of, for example, **X** or **C** buttons – which can also be used to change a response. Whilst participants can resubmit a response after clearing, they are also able to submit a new response by simply entering a new number or selecting the new option.

21. USB Connectivity

IML Connector devices can be connected to a PC for a variety of features and functionality. All of which requires the use of **IML Connector Configuration Tool**. Available functions provided by this application include…

- **Deploying** an IML Connector configuration file

  Custom theming or branding, enabling User Driven Roaming, configuring audio and language settings, etc.

- **Reporting** on hardware

  Generating reports which contain diagnostic information on IML Connector devices.

- **Configuring** Network settings

  Uniquely indexing devices, editing radio settings, etc.

- **Upgrading** IML Connector device firmware

  Upgrading the firmware installed on the device to work with updated Lumi software.

There are **3 methods** in which an IML Connector device can be connected to a PC…

a) A single IML Connector device can be connected to an available USB port on the PC using the **USB to Hirose cable**
b) Multiple IML Connector devices can be connected to a PC via an **IML Minidock**
c) Multiple IML Connector devices can be connected to a PC via an **IML Multidock**

IML Multidocks & IML Minidocks…

- Both docking devices can be connected to a PC via a standard **A/B USB cable**. The connection is located on the rear of the docking device.
- An additional feature available with **IML Multidocks**, is that these can be 'daisy chained' by connecting one dock to another. This method will require less available USB ports on the PC.
- Lumi recommends a maximum of six docking devices are connected to a PC at one time (this will depend on available USB ports, USB hubs, A/B USB cables, etc.)
- On both docking devices, USB connectivity is indicated by the right-hand LEDs on the front of an **IML Multidock** or the third (i.e. right-hand) LED on the front of an **IML Minidock**. These LEDs will be green when a dock is successfully connected to a PC.

22. Attendance Tracking

Providing that participants are identified in the **Register** and issued with IML smartcards, then system users are able to benefit from the latest **Attendance Tracking** feature of the IML Connector system.

- Attendance tracking works by recording if an attendee's smartcard has been inserted into an IML Connector device or not during a particular timeframe.
- When generating an Attendance Report, users are able to define a start and end time. Once generated, the report will return whether or not attendees were **Absent** or **Present** during this period (see image of example report below).
- An attendee is marked as **Present** if their smartcard was detected in an IML Connector device at any point during the timeframe set by the user when creating the report.

	A	B	C	D	E	F
1	**Start DateTime**	**23/01/2014 08:00**				
2	**End DateTime**	**23/01/2014 18:00**				
3						
4	**First Name**	**Last Name**	**Display Name**	**Notes**	**SmartCard ID**	**Attendance**
5	Anders	Österåker	Anders Österåker	Lumi Mobile	42048850	Absent
6	Andrej	Vladar	Andrej Vladar	IML South Africa	41164964	Absent
7	Dave	Palmer	Dave Palmer	Lumi Central	42056522	Present
8	Dermott	Madden	Dermott Madden	IML UK	41151098	Present
9	Matthew	Kelly	Matthew Kelly	IML Asia	42061860	Present
10	Paul	Tukker	Paul Tukker	IML Netherlands	41151202	Absent
11	Peter	Fowler	Peter Fowler		40042753	Present
12	Phil	McAllister	Phil McAllister	IML Australia	41133770	Present
13	Rainer	Schwabb	Rainer Schwabb		41159140	Absent
14	Wim	Groffen	Wim Groffen	IML Belgium	41160088	Present

- The Attendance Tracking report is generated using **Lumi Text Vote Talk**, however, this feature is still available to users of other products such as Lumi ViewPoint. For further information, please refer to the Lumi Text Vote Talk User Manual or alternatively please contact Lumi.

23. Safety, Maintenance & Compliance Information

Safety

IML Connector Devices:

- Only charge IML Connector devices in an IML Minidock or IML Multidock.
- Do not expose the product to moisture. Never spill any liquid on the product.

IML Multidock:

- Use only the type of power source indicated on the marking labels.
- Do not overload wall outlet or extension cords as this may increase the risk of electric shock or fire. If the power cord is frayed, replace it with a new one.
- Proper ventilation is necessary to prevent the product overheating. Do not block or cover the slots and openings on the device, which are intended for ventilation and proper operation.
- Do not place the product near any source of heat or expose it to direct sunshine.
- Do not expose the product to moisture. Never spill any liquid on the product.
- Do not place the product on an unstable stand or table.
- This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

- This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Maintenance

IML Connector Devices:

- Do not attempt to disassemble or open covers of this unit, nor attempt to service the product (which may void the user's authority to operate it). Contact qualified Lumi service personnel under the following conditions:

  a) If liquid has been spilled into the product.
  b) If the product has been exposed to rain or water.
  c) If the product does not operate normally when the operating instructions are followed.
  d) If the product has been dropped or the casing has been damaged.
  e) If the product exhibits a distinct change in performance.

IML Multidock:

- This product contains mains voltages. Do not attempt to disassemble or open covers of this unit, nor attempt to service the product (which may void the user's authority to operate it). Contact qualified Lumi service personnel under the following conditions:

  a) If the power cord or plug is damaged or frayed.
  b) If liquid has been spilled into the product.
  c) If the product has been exposed to rain or water.
  d) If the product does not operate normally when the operating instructions are followed.
  e) If the product has been dropped or the cabinet has been damaged.
  f) If the product exhibits a distinct change in performance.

Battery Safety…

The IML Connector device contains a lithium-ion battery that must be disposed of properly. Please contact Lumi for information about recycling and proper disposal. The battery in an IML Connector device should only be replaced by an authorised service provider.

Compliance

Disposal…

In some regions, the disposal of certain electronic devices is regulated. Users must ensure to dispose of or recycle the IML Connector System in accordance with local laws and regulations.

IML Ltd is registered with **WEEE** compliance schemes in various countries.

End-of life products can often be disposed of free of charge at local municipal collection points. For more information about where to drop off waste equipment for recycling, please contact a local city office, waste authority, approved WEEE scheme or household waste disposal service.

The symbol on the left (a crossed out, wheeled bin) indicates that a product is not to be disposed of with regular household waste. By not discarding the product along with other household waste, the volume of waste sent to incinerators or landfills will be reduced and natural resources will be conserved.

FCC Class A Statement…

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC ID RJO-IML-CONN1

This device complies with **Part 15** of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/television technician for help

IMPORTANT NOTE: Federal Communications Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits for an uncontrolled environment.

Industry Canada (IC) Statement…

This device complies with **RSS-247** of the Industry Canada Rules. Operation is subject to the following two conditions:

1 This device may not cause harmful interference
2 This device must accept any interference received, including interference that may cause undesired operation.

*Ce dispositif est conforme à la norme **CNR-247** d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes:*

1. *le dispositif ne doit pas produire de brouillage préjudiciable*
2. *ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.*

IMPORTANT NOTE: (For mobile device use)

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated handheld with minimum distance of 25mm between the unit & your face.

NOTE IMPORTANTE: (Pour l'utilisation de dispositifs mobiles)

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition au rayonnement du IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé manuellement avec une distance minimale de 25 mm entre l'unité et votre visage.

Appendix A: Audio Routing Diagrams

The following diagrams correspond with the 7 Audio Routings outlined in Section 13 (

TABLE 1: AUDIO **Routings**). These diagrams show a hypothetical usage scenario for each routing.

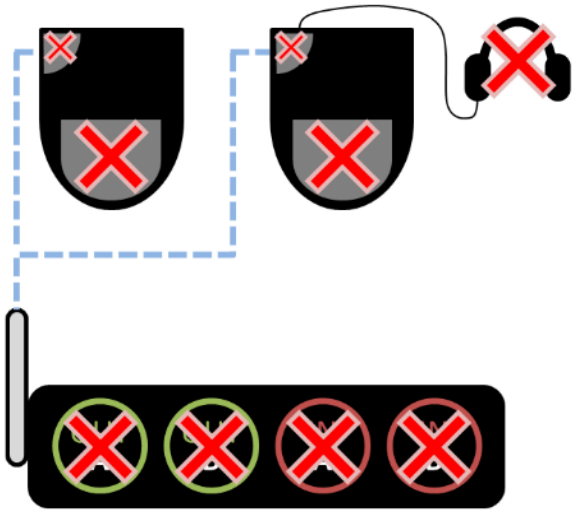


FIGURE 1: OFF

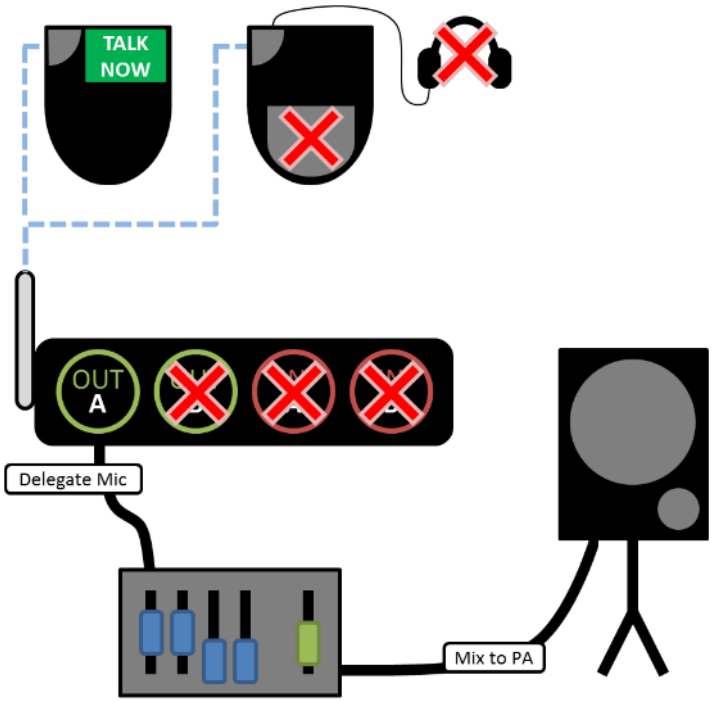


FIGURE 2: SINGLE OUTPUT

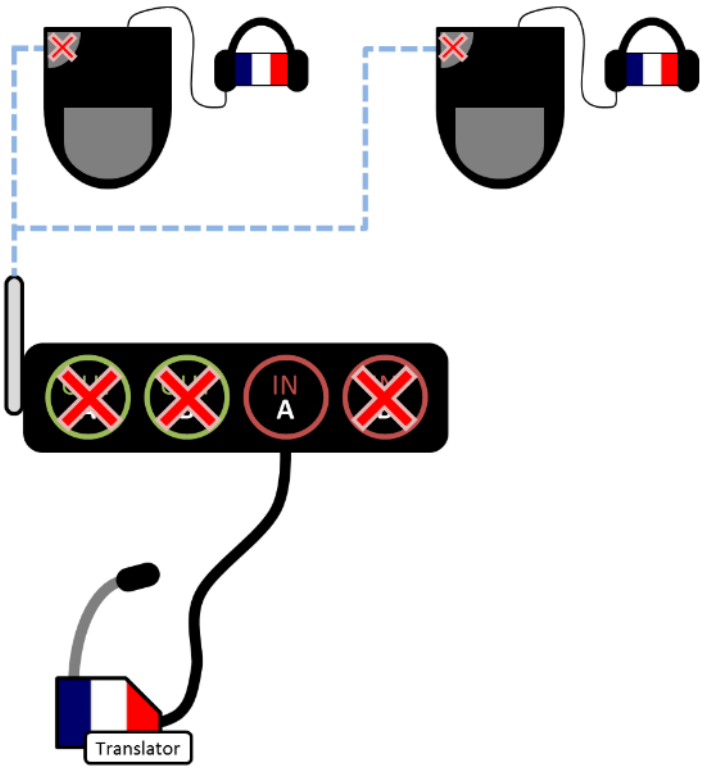


FIGURE 3: SINGLE INPUT

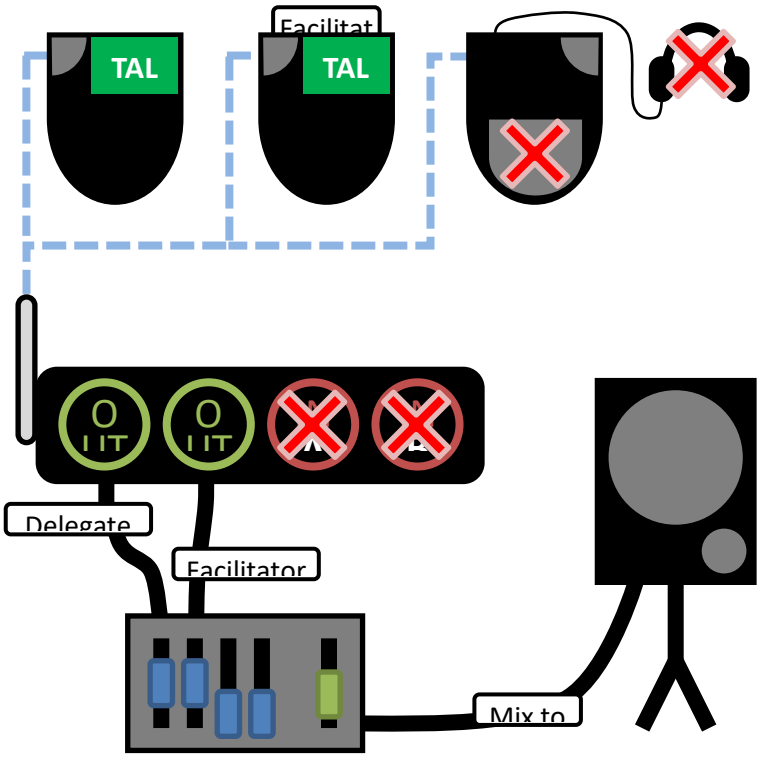


FIGURE 4: DUAL OUTPUT

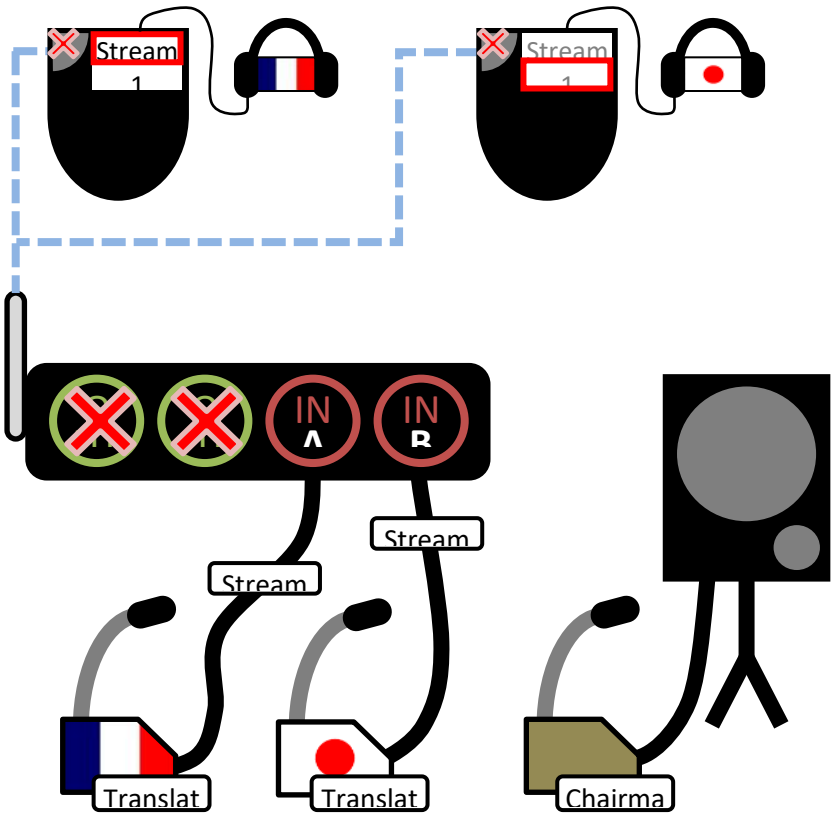


FIGURE 5: DUAL INPUT

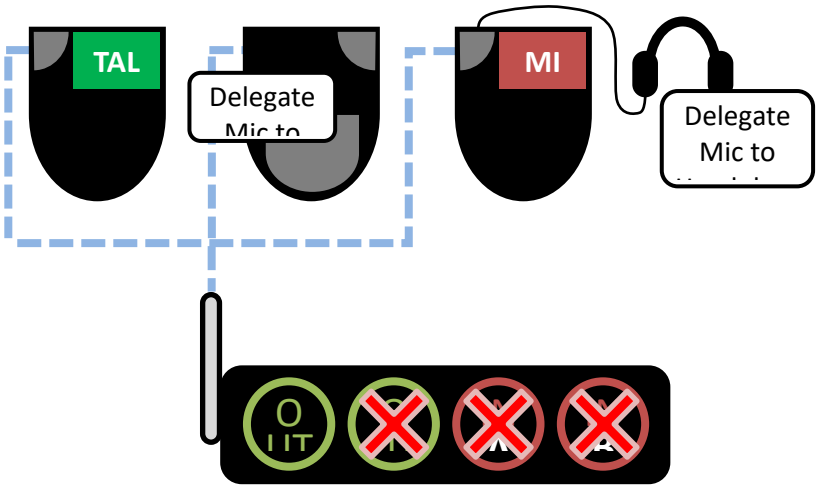


FIGURE 6: LOOPBACK

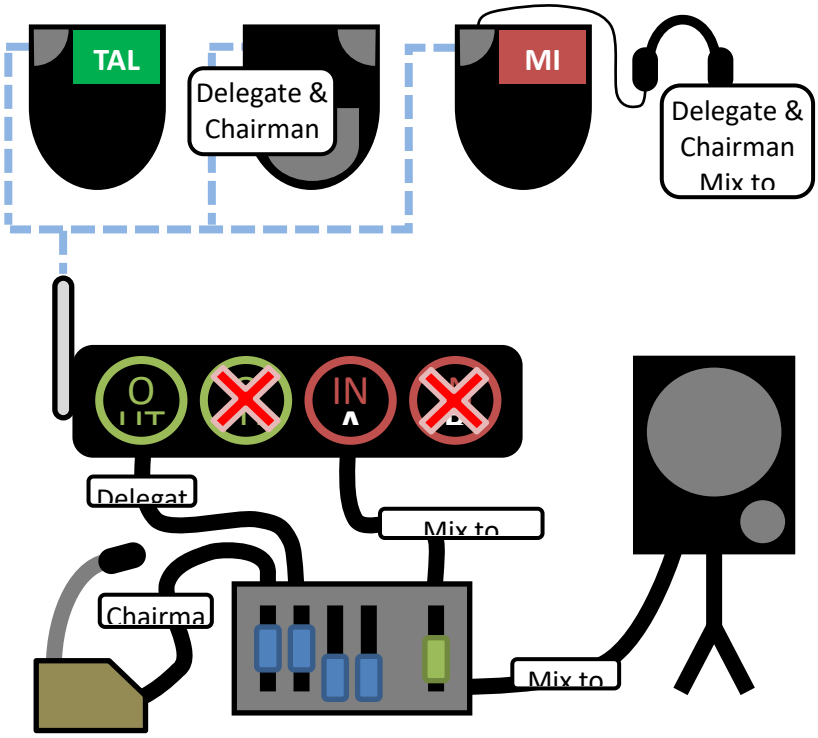


FIGURE 7: PASS THROUGH

Appendix B: Hotkeys

See below for a complete list of the IML Connector device **Hotkeys**. These open various menus or display diagnostic information on the device and are accessed by pressing and holding the  and  buttons together, followed by the Hotkey letter as listed below.

- Once a Hotkey has been entered into an IML Connector device, users will have to input the admin password "**gaffer**" and press **OK**. 
- Where applicable, users can exit a menu by pressing **Back**. 

Reminder

To avoid having to type the admin password into the Connector, create an **Admin** Utility Card.

Please note that these menus can also be accessed on an IML Connector Powered Base Station…

X	Power off	Turns the device off.
P	Power/Battery levels	Provides additional information relating to the battery life and capacity Estimated time remaining can also be seen.
N	Network settings	Enables user to manually change the network settings on the device.
S	Performance statistics	Displays live information in regard to the radio signal. This is a useful tool for determining the strength of connection and is especially key when using microphones. Offers a Quality of Service (QoS) reading for audio channels.
L	Language settings	Depending on the device configuration, participants can choose a language (i.e. the device display language, not the audio channel). Whether the Display Language setting is enabled or not in the configuration file, this Hotkey will always access the Current Language menu.
C	Utility card tool	To create utility cards and view information on a smartcard that is currently inserted into the device.
V	Version	Displays IML Connector device firmware and software details.
G	Show log	Displays a log of the IML Connector device's activity.

Appendix C: Glossary of Terms

A/B USB cable	Common USB data connection for devices to connect to a PC.
Accelerometer	Device which measures acceleration, usually associated with detecting movement of the IML Connector device.
Alarm	Proximity alarm on each IML Connector device which can be enabled to activate shortly after once the device has disconnected frin the Base Station (i.e. goes out of range).
Attendance Tracking	Feature which marks participants as present once they have inserted the IML Smartcard into an IML Connector. Time period can be set by the operator.
Application	The term used for a software program, which can [usually] be installed and/or run from a PC.
Audio Routing	An audio configuration which provides for multiple scenarios and various levels of audio use.
Bandwidth	Rate of data transfer, bit rate or throughput.
Base Station	IML Connector handset which connects to the PC and communicates wirelessly with other IML Connector devices.
Battery	Hardware device which converts chemical energy into electrical energy. Each IML Connector device contain a rechargeable Lithium Ion battery.
Boot Up	The period of time whilst a device is turning on initialising before it can be used.
Configuration File	Programmable file which is deployed to IML Connector devices and manages settings such as power, language and customisable content.
Control PC	Term used for the PC which is used to connect a Base Station to and control IML Connector devices. Lumi applications installed and used on the PC control this.
Countdown Clock	Timer used to show audience when vote is open and how long remaining.
Custom Screen	A customisable screen which is included in the IML Connector configuration file. Can usually be accessed by participants or displayed on devices by the operator.
Daisy Chain	Term used when devices are connected to each other in linear formation, as opposed to in a star.
Default Network	User Driven Roaming, the network appearing at the top of the list, which an IML Connector device connects to if restarted. Can't be secured with a password.
Delegate Mic	The standard microphone functionality available on the IML Connector device.
Deploy	To 'burn' or copy a configuration file onto an IML Connector device
Display screen	Electronic visual display device built into each IML Connector.
Docked	Term used to indicate that an IML Connector device is inserted into the docking device.
Docking device	IML Multidock or IML Minidock, hardware for storing, charging or connecting IML Connector devices to a PC.
Dongle	Small piece of hardware which attaches to a PC (usually by USB). Term commonly used for a Lumi USB HASP licence.
Drivers	Configuration files needed for a PC to communicate with hardware.

Facilitator Mic	An additional micrphone in an IML Connector system which is provided by inserting a utilty card.
Firmware	A software program or set of instructions programmed on a hardware device.
Gigabyte (GB)	A multiple of the 'byte' digital data storage unit (1 GB = 1,024 Megabytes)
Global	If referring to a setting or action, implies all IML Connector devices will be affected.
Handset	Alternative term for an IML Connector device, or keypad.
Hardware	Collection of physical components which comprise a system.
Headphones	Small pair of loudspeakers designed to be held in place close to a user's ears. Third party audio hardware which can be connected to an IML Connector device.
Hirose	Data connection type built into each IML Connector device.
Home Screen	Default screen displayed on the IML Connector device during perios of no use or activity.
Hotkey	Button(s) used to quickly access a menu or setting on the IML Connector device.
IEC	International Electrotechnical Commission, a standard of common, three-pin power connection.
IML Connector Configuration Tool	Application to create and deploy configuration files to IML Connector devices.
IML Connector device	An IML Connector wireless handset, or keypad
IML Connector System	The IML hardware and Lumi software system as a whole, usually including the control PC, all IML Connector devices and a Base Station.
IML Connector System Manager	Application to monitor and control the IML Connector System
IML Minidock	Docking device for up to 10 IML Connector devices. Provides charging and USB connectvity.
IML Multidock	Docking device for up to 50 IML Connector devices. Provides charging and USB connectvity. IML Multidocks can be 'daisy-chained' by up to four devices for power or data connections.
IML Smartcard	Chip card which can be programmed to identify participants or carry out administrator tasks on IML Connector devices.
Index Number	Programmable number on each IML Connector device used for identification purposes.
Keypad	Alternative term for an IML Connector device, or handset. Can also refer to the actual keyboard and buttons on the front of the IML Connector device.
Latch	Microphone mode where the Microphone key is pressed once to open and again to close the microphone.
LED	A Light-Emitting Diode is a [usually] small, low energy, light source.
Licence	End user licence for Lumi software and hardware, provided via use of a USB HASP licensing 'dongle'.
Light sensor	Hardware on the front of the IMl Connector device which can be configured for IML Connector devices to use and set optimum screen brightness.

Link Screen	Additional cutsom screen which can be set to always appear as the top of the IML Connector device's on-screen menu.
Localisation	Translation of device display when a user selects a language.
Loudspeaker	Audio hardware that produces sound in response to an electrical signal input.
Lumi Audience Display	Lumi display application working in conjunction with Lumi Text Vote Talk.
Lumi Hub	Platform of Lumi software which performs core communication between control PC and connected devices.
Lumi Message	Lumi text message display application working in conjunction with Lumi Text Vote Talk.
Lumi Queue	Lumi application working in conjunction with Lumi Text Vote Talk to provide speaker queueing.
Lumi Text Vote Talk	Lumi application which provides for text message management, microphone use (including speaker queueing) and ad-hoc voting.
Lumi ViewPoint	Lumi voting plug in for Microsoft PowerPoint.
Microphone	Audio hardware that converts sounds in to an electrical signal (i.e. for recording or amplification).
Microphone key	Button on the IML Connector device to open and/or close the built in microphone. Also used for certain administrative functions.
Network ID	A value that determines a discreet network between an IML Connector Base Station and the IML Connector devices.
Network Screen	An administrator screen on the IML Connector device displaying various 'network' and radio settings.
Operator	A system user of Lumi software applications, controlling the IML Connector devices.
Over Radio	Wirelessly, using the radio network connection
PA System	Public Address system, usually comprises a microphone and amplified loudspeakers and the ability to connect other audio sources.
PC	A Personal Computer (PC) is a general-purpose computer, whose size, capabilities and price makes it useful for individuals, and is intended to be operated directly by an end-user with no intervening computer operator
Power State	Term used for the power mode a docking device can be set to.
Projector	Optical device which projects an image onto a surface.
Push To Talk (PTT)	Microphone mode where the Microphone Key must be pressed down to open the microphone.
Queue Line	A topic, motion, subject, etc. which a participant can join, indicating they wish to talk around.
QWERTY	Most common modern-day keyboard layout for Latin script.
Radio	Wireless transmission of electromagnetic signals through space.
Radio Sequence	A number used which specifies either an area of the 2.4 GHz radio spectrum for the IML Connector system to use and/or a unique hopping pattern within that specific area.
Register	Lumi application integrated into a number of products which allows for identifying of participants via several methods.

Rumbler	Vibrate functionality on the IML Connector device which can be used to notify or alert and attendee.
Simultaneous Interpretation (SI)	Instant translation of conference audio into another language and provided to participants, usually through headphones.
Smartcard reader/writer	Hardware built into the top of each IML Connector device used to read and/or write data to compatible chip cards.
Soft keys	The green square and red triangle buttons on the IML Connector device, which have different functions depending on how the system is in use.
Software	Non tangible components installed on computers.
Speaker Queue	A list or queue which particpants join using their IML Connector device, indicating their desire to speak during a meeting/event.
Status bar	The upper bar on an IML Connector device display, used to display IML Smartcard information (when inserted) and other messages to attendees (for example microphone availability or instructions)
Status LED	LED on the front of the IML Connector device used to indicate power, battery or charge level, connectivity, signal strength and other system functions.
Tally light	Additional LED on the reverse of the IML Connector device used to show if a participant is in an audio queue or if their microphone is open.
Trackball	Pointing device using the ball on the IML Connector, which can also be used to select by pressing in.
User Driven Roaming	Participant ability to select which network to connect to on their IML Connector device.
UID	Universal ID (Identification). Term used for the serial number of hardware (IML Connector devices, Powered Base Stations or smartcards)
USB	Universal Serial Bus, data connection technology for connecting devices to a PC via cable.
Utility Card	An IML Smartcard which has been programmed to carry out certain functions on the IML Connector device when inserted.
WiFi	Local area wireless technology.
XLR	An electrical connector commonly used in audio equipment.

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