



A CLEAR-COM COMPANY

# ***Mercury Core Virtual Panel User Guide***

ISSUE 0.7

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## 1. INTRODUCTION

### 1.1 OVERVIEW

Mercury is a real-time intercom communications platform that enables multichannel full-duplex one-to-one, group and conference communications over Local Area Network (LAN), Wide Area Network (WAN) and the Internet. It also provides seamless interoperability with other commonly used voice communications systems. There are many ways for users to connect to Mercury and communicate with other users. Trilogy provides dedicated Hardware Control Panels plus a range of Virtual Panels designed for different operating systems. Optional expansion boards allow third-party devices such as radios and telephones to connect to a Mercury network.

A Virtual Panel is an application that provides both a Graphical User Interface (GUI) and audio input/output for a Mercury user. Each Host can support one or more Virtual Panels, as required. The Gateway Configuration Editor is used to define Virtual Panels on a Host and then to assign key targets to the panel. For further details refer to the Mercury Core User Guide.

Additional panel settings are provided locally and allow the operator to control aspects such as panel size and audio volume.

### 1.2 PANEL RANGE

Core Virtual Panel Features	Windows	Windows using built-in SIP client	Browser	Android	iOS
Built-in SIP client requiring a licence if used with an internal sound card		✓		✓	✓
Separate SIP Client required	✓		✓		
Can work as a routing-only panel with a separate analogue audio connection	✓		✓		
Interface via Webserver			✓	✓	✓
Interface via TBC	✓	✓			
Included in Trilogy Software Installer	✓	✓		✓	
Download from App Store				✓	✓

**1.3 RELATED DOCUMENTS**

<b>Document</b>	<b>Description</b>
70090630	<i>This Document</i>
70090621	Mercury Core User Guide
70090625	Mercury Core Quick Start Guide
70090628	Intercom Control Panels (Hardware Panels)

## 2. PANEL CONFIGURATION – GATEWAY CONFIGURATION EDITOR

Virtual Panels are applications that provide a Graphical User Interface (GUI) and audio input/output for Mercury users. They allow users to communicate with each other or provide a console for operators to manage talk groups with external devices.

Initial definition and configuration of all Virtual panels is carried out by the Mercury System Administrator using the Gateway Configuration Editor. A Virtual Panel is added to a host using the Host Editor. Once added, sources, key modes and key settings are defined using the Virtual Panel Subscriber Editor. Other settings such as panel appearance and audio volume are available at the operator level.

There are four versions of Virtual Panel, appropriate for different platforms.

- Windows
- Browser
- Android
- iOS

Configuration within Gateway is identical for these four versions.

For more information about configuration using Gateway please see **Mercury Core User Guide – 70090621**.

### 3. WINDOWS VIRTUAL PANEL

#### 3.1 INSTALLATION

The Windows Virtual Panel is one of the options provided by the main installation package. Please see **Mercury Core User Guide – 70090621** for details.

#### 3.2 INITIAL SETUP

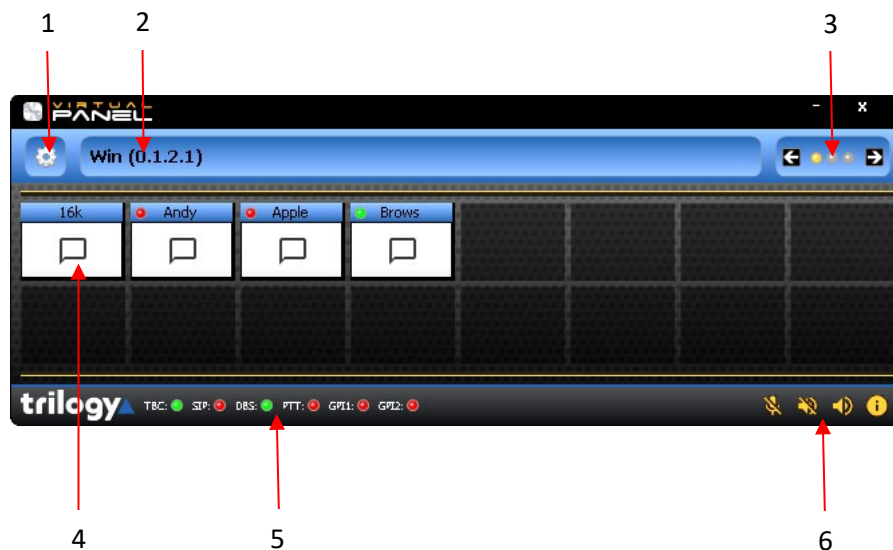
The correct settings will normally have been applied during the installation process. If this is not the case, you will need the following information from your system administrator.

Information	Example value
Web Server Host Address	192.168.93.30 or vpdemo.trilogycomms.com
Web Server TCP Port	Default 80
Subscriber Port number	35
SIP: Peer User Name	1000
SIP: Peer Domain	192.168.93.31 or sipdemo.trilogycomms.com

#### 3.3 PANEL OVERVIEW

##### 3.3.1 Default Layout

Controls and indicators are outlined below and explained in detail in later sections. This is the default panel, before any customisation or additional features.

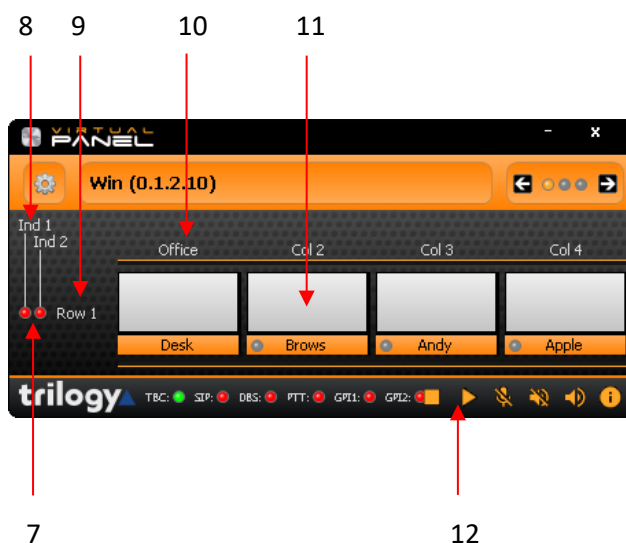


Item		
1	Menu	Click on the “gear” icon to open the menu. See section 3.4 (below) for full details.
2	Panel ident	Panel name and EDHS identification.
3	Page Selector	Use the arrows to switch between three available pages of keys.
4	Keys	Keys to make and receive calls.
5	Notifications	Show the status of the connection to other Mercury software components. See section 3.5 for details.
6	Controls	Audio controls, plus panel “About” information. See section 3.6 for details.



### 3.3.2 Additional Features

The images below show a Virtual Panel following the addition of additional features and some customisation of the layout.



Item		
7	Indicators	One or more indicators are added alongside a row. Each one is controlled by an assigned GPI input or output. See <i>Preferences &gt; Indicators</i> for all indicator settings.
8	Captions	Captions are added to identify indicators.
9	Row Label	Row and Column Labels are useful on larger panels where keys may be arranged by type (e.g., radios, telephones) or location (e.g., second floor, building 3). See <i>Preferences &gt; Labels</i> for all label settings.
10	Column Label	
11	Keys	Keys have been customised by removing glyphs, moving text to the bottom, and changing the colour to orange.
12	Controls	Two additional controls (de-activate and activate) have been added. See <i>Preferences &gt; Layout</i> for details.



### 3.4 MENU

#### 3.4.1 Overview

	<p>Click on the “gear” icon or right-click in the header bar to open the menu.</p> <p>See below for details of each item on the menu.</p> <p>Where the menu selection opens a dialogue, full details are provided in the tables which follow, starting at <i>Database Settings &gt; Database</i>.</p> <p>Menu items which relate solely to panel operation are covered in section 3.7.</p>	
		<p>A pop-up dialogue is displayed which allows the operator to set the listening level of their speaker or headset.</p>
		<p>Sidetone allows an operator to hear their voice while wearing headphones. See section 3.7.4 for details.</p>
	<p>This feature allows an operator to monitor the input or output level of any port on the system. See section 3.7.3 for details.</p>	
	<p>Reload the configuration information from the database and restart the Virtual Panel.</p>	
	<p>Causes the Virtual Panel to reset using the currently cached configuration data.</p>	
	<p>Any locally made changes (e.g., key re-assignment) are written back to the database.</p>	
	<p>This is normally used during the initial panel setup. A dialogue with 2 tabs is displayed – see <b>Error! Reference source not found.</b> to for full details.</p>	
	<p>If panel audio is provided by a SIP connection, settings on this dialogue must be completed correctly. See <i>SIP Status</i> for details.</p>	
	<p>Allows the operator to change the appearance and layout of the panel. A dialogue with 5 tabs is displayed. See <b>Error! Reference source not found.</b> to for full details.</p>	
	<p>The Virtual Panel will minimise to the Windows taskbar.</p>	

<p>Event Log</p>		<p>The Event/Error log provides a record of the events and errors relating to the Virtual Panel. Checking the log is useful if there is a problem with the Virtual Panel.</p>
<p>About</p>		<p>The information provided here may be useful during any fault-finding and may be requested if you contact Trilogy Technical Support. Contact Information is provided on the second tab (not illustrated).</p>
<p>Exit</p>	<p>Close the application.</p>	

### 3.4.2 Database Settings > Database

Virtual Panel Settings

Database Access

Offline Mode (Local File Database)

Settings

Local DB Path:  
 ...

Online Mode (Database Supervisor)

Settings

IP Address Mode

Fixed IP      IP Address: 127 · 0 · 0 · 1

Host Name      Host Name: localhost

Data Port: 12005      Supervisor Port: 13001

Compression:  (None \* Highest)

These settings will normally be made during installation. Make changes as required, then either switch to another tab or press **OK** to save and close the dialogue.

Field	Description
Offline Mode (Local File Database)	Select this radio button if the database is running locally. You will need to specify the location of the database files.
Online Mode (Database Supervisor)	Select this radio button if the database is located on a remote PC (specified in the Fixed IP or Host Name field).
Settings: IP Address Mode	Radio buttons select the mode of the IP connection to the PC hosting the database. Select either Fixed IP or Host Name.
Settings: IP Address	This field is used to specify the static IP address of the PC hosting the database. This is the preferred method.
Settings: Host Name	This field is used to specify the name of the PC hosting the database. It must be completed if the database is hosted on a PC with an IP address that is assigned by DHCP. This method is not recommended.
Settings: Data Port	The IP port used for the data connection to the Database Supervisor. This is a system-wide setting which must match the value set by the system administrator when establishing the Mercury network. Default = 12005
Settings: Supervisor Port	The IP port that the Database Supervisor listens for connection control data on. This is a system-wide setting which must match the value set by the system administrator when establishing the Mercury network. Default = 13001
Settings: Compression	Compresses each transaction exchanged between server and clients by an adjustable amount. Useful on networks with limited bandwidth. The asterisk on the scale is a suggested starting point, giving a good compromise between CPU usage (to compress the data) and bandwidth saved.

3.4.3 Database Settings > Access

Virtual Panel Settings

Database Access

Panel EDHS:

0 1 1 10

OK Cancel

Make changes as required, then either switch to another tab or press **OK** to save and close the dialogue.

Field	Description
Panel EDHS	The unique ID of the panel. This must match the ID generated in the Configuration Editor.

### 3.4.4 Preferences/Layout > General

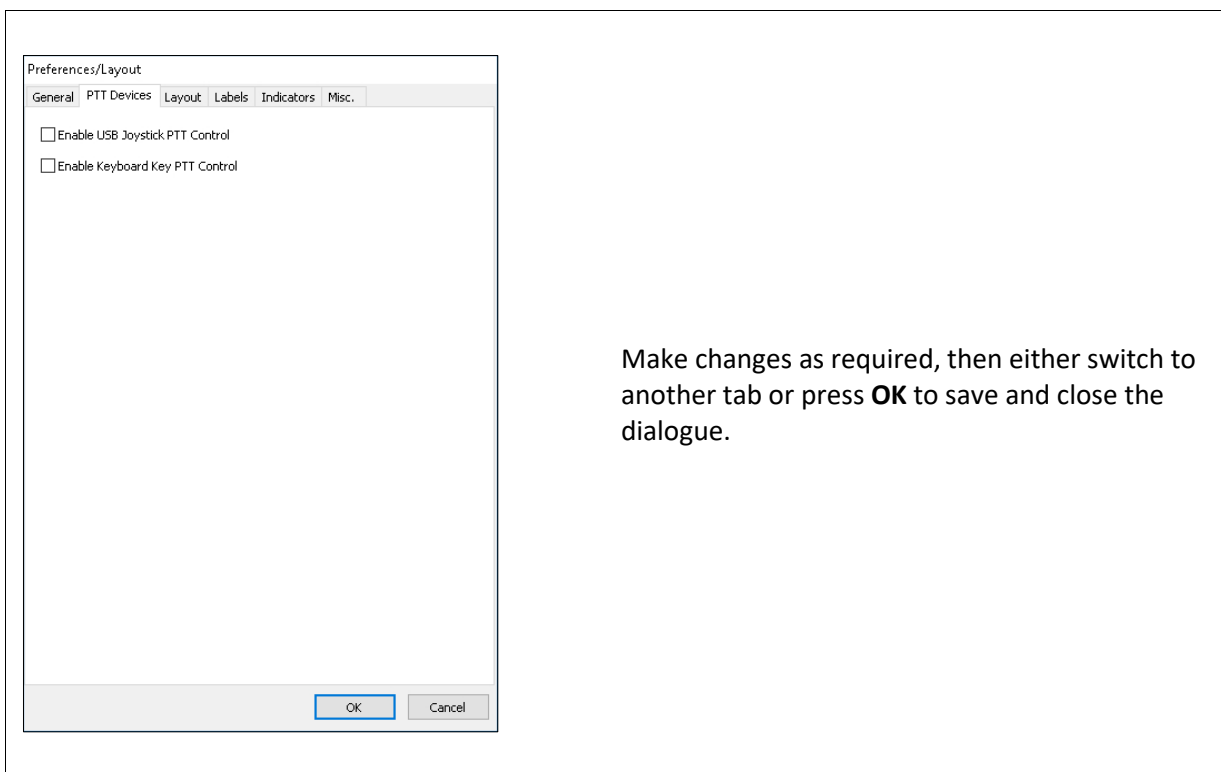
Many aspects of panel operation and appearance are set locally – only the assignment of key targets is configured centrally, using Gateway, by the system administrator.

Some local settings are simply aesthetic – for example, key size or panel colour. Others add additional features to the panel – for example, labels and indicators.

Make changes as required, then either switch to another tab or press **OK** to save and close the dialogue.

Field	Description
Setup Timeout (s)	The time in which the panel will timeout on a connection to the Database Supervisor. The available options are: Range 1 – 60 s   Never. Default = 10 s.
DB Connect Retry Timeout (s)	Specifies the database connection retry timeout. Min = 1 s. Max = 5 s. Default = 4 s.
DB Connect retry Count	Specifies the number of times a database connection will be retried if not successful. Min = 0. Max = 5. Default = 0.
Reload Configuration on Start-up	When checked, the panel will reload the current configuration during the start-up process. Default = checked.
Stay On Top	If checked, the application will stay on top of any other running Windows applications. Default = un-checked.
Minimize Mode	The panel normally remains visible on the Windows desktop. If the mode is set to <b>Icon</b> , it will minimise to an icon on the Windows taskbar after a period of inactivity set by <b>Minimize Time</b> (below). Options = Disabled   Icon. Default = Disabled
Minimize Time (s)	See Minimize Mode (above). Default = 30 s
Audio Monitor Default Level (dB)	The audio monitor feature is on the main menu. This field sets the initial monitoring level, which can easily be adjusted while monitoring. See section 3.7.3 for details. Default = -20 dB
Apply Dimming To X/Point	Adjust the x/point gain level of the key, not the entire volume, by the CE-defined amount. Default = un-checked.
Auto Popup Picture/Volume	If checked, the volume control dialogue will automatically appear when a new call is established. If a call is requested but fails (for example, if the route is not available), the dialogue does not appear. The dialogue remains until manually closed. Default = un-checked.

### 3.4.5 Preferences > PTT Devices





Field	Description
Enable USB Joystick PTT Control	Enables a third-party USB Joystick button to be used in PTT features Default = un-checked.
Enable Keyboard Key PTT Control	Enables a Keyboard Key to be used in PTT features Default = un-checked.

### 3.4.6 Preferences > Layout

Make changes as required, then either switch to another tab or press **OK** to save and close the dialogue.

Field	Description
Panel: Columns	Specifies the number of columns. Default = 8. See <i>Note 1</i> below.
Panel: Rows	Specifies the number of rows. Default = 2. See <i>Note 1</i> below.
Panel: Swap Dimensions	Click to swap the number of columns and rows.
Panel: Colour	Open a standard Windows dialogue to select the panel colour. Examples are shown here.
Keys: Width	Specifies the width of each key. Range = 30 – 100. Default = 78.
Keys: Height	Specifies the height of each key. Range = 24 – 100. Default = 58.
Keys: Label Font	Click to open a standard Windows dialogue and select the font for the text on the keys. Default = Tahoma, Regular, 8pt, Black.
Keys: Idle Colour	Click to select the colour of the tally when a key is idle. Default = Grey (RGB 192,192,192)
Keys: Speak Tally Colour	Click to select the colour of the tally when a key is actively speaking. Default = Red (RGB 255,0,0)
Keys: Listen Tally Colour	Click to select the colour of the tally when a key is actively listening. Default = Yellow (RGB 255,255,0)
Keys: Bottom Justify Text	Check this box to display the key text at the bottom of the key. Default = un-checked (top justify)
Keys: Show Speak/Listen Glyphs	Check this box to display 'speak and listen' icons [glyphs] on the keys. Default = checked.
Keys: Dim Colour Instead of Flashing	Check this box to dim the colour of the key instead of flashing when a call is made or received but does not succeed. Default = un-checked.



Field	Description
Keys: Solid Colour Instead of Shiny	The key surface has a slight colour gradient which gives a raised or shiny appearance on-screen. Check the box to disable this and display a solid-coloured key, with a flat appearance. Default = un-checked.
Keys: Show Panel Reset Button 	Check this box to add an additional button to the panel which deactivates all currently pressed keys. The button is located at the bottom right corner of the panel. Default = un-checked.
Keys: Show Activate All Keys Button 	Check this box to add an additional button to the panel which activates all keys which are currently inactive. The button is located at the bottom right corner of the panel. Default = un-checked.
<i>Note 1. The maximum value of (columns) x (rows) is 256. The amount of system resource required to render the panel increases in direct proportion to the number of keys, i.e. (columns) x (rows).</i>	

### 3.4.7 Preferences > Labels

Preferences/Layout

General PTT Devices Layout Labels Indicators Misc.

Rows Columns

Enable

Settings:

Row ID	Text	Assoc. Subscriber	GPIO
P1.1	Office		
P1.2	Row 2		
P2.1	Row 1		
P2.2	Row 2		
P3.1	Row 1		
P3.2	Row 2		

Margin (Label) Width:

100

Make changes as required, then either switch to another tab or press **OK** to save and close the dialogue.



Field	Description
Rows   Columns	The dialogue has two tabs, carrying related controls but identical in layout.
Enable	Check the box to enable labels.
Settings: Row ID / Column ID	The ID of the row or column.
Settings: Text	Row or column label text.
Settings: Assoc. Subscriber	Row only. Shows the EDHS address of a subscriber that is associated with the row.
Settings: GPIO	Row only. Shows the associated GPIO.
Settings: Modify	Load the highlighted text into the adjacent field where it can be edited.
Settings: Replace	Replace the highlighted text with the edited text.
Settings: Margin (Label) Width	Rows only. Change the size of the left margin. Range = 20 – 300. Default = 100.
Settings: Margin (Label) Height	Columns only. Change the size of the top margin. Range = 5 – 300. Default = 30.
	Move the selected row or column label text up the list. The label above the selected item will move down.
	Move the selected row or column label text down the list. The label below the selected item will move up.
	Select a GPIO to associate with the selected row.
	Remove the selected GPIO.
	Associate a subscriber with a selected row.
	Remove the selected subscriber.

### 3.4.8 Preferences > Indicators

Some fields are not available until at least one indicator has been selected from the first drop-down.

Make changes as required, then either switch to another tab or press **OK** to save and close the dialogue.

Field	Description
Indicators	Select the number of indicators required. Setting this to 1 will show P1.1, P2.1 and P3.1 where P1, P2 etc. indicated the “pages” of keys on the panel. Default = 0
Top Margin	Set the distance from the indicator to the top of the panel. Range = 5 – 300. Default = 30.
Size	Adjust the size of the indicator(s) on the panel. Select 9 (default, 12, 16, 18, 24.
Captions: Pos.	Identifies the position of the caption.
Captions: Caption	The text is displayed as a caption, above the indicator.
Captions: Modify	Load the highlighted text into the adjacent field where it can be edited.
Captions: Replace	Replace the highlighted text with the edited text.
Captions:	Move the selected caption text up the list. The caption above the selected item will move down.
Captions:	Move the selected caption text down the list. The caption below the selected item will move up.
Indicators: Row	Indicators on panel pages 1 -3 are assigned independently. Select the panel page P1, P2 or P3 from the list, then the appropriate indicator in the grid below.
Indicators: Previous	Step back to the previous panel page.
Indicators: Next	Step forwards to the next panel page.
Indicators: Pos.	This identifies the indicator position. For example, P2.2 is the second indicator on panel page 2.
Indicators: Indicator Name	Once a trigger (GPI in/out) has been assigned, the name of the GPI is shown here.

Field	Description
Indicators: ID	The ID of the assigned GPIO. For reference only.
Indicators: Type	Shows the type of GPIO assigned e.g. Radio Out.
Indicators: On	Shows the colour chosen to indicate the “on” state.
Indicators: Off	Shows the colour chosen to indicate the “off” state.
Indicators: N/A	Shows the colour chosen to indicate the “N/A” state.
Indicators: Indicator Colors > On	Highlight an indicator, then press the <b>On</b> button to display a standard Windows colour selection dialogue. Pick a custom colour for the indicator “on” state. Default = Green.
Indicators: Indicator Colors > Off	Highlight an indicator, then press the <b>Off</b> button to display a standard Windows colour selection dialogue. Pick a custom colour for the indicator “off” state. Default = Red.
Indicators: Indicator Colors > Disabled	Highlight an indicator, then press the <b>Disabled</b> button to display a standard Windows colour selection dialogue. Pick a custom colour for the indicator “N/A” state. Default = Grey.
Indicators: Assign	Press <b>Assign</b> to display a dialogue showing available GPI inputs and outputs which may be used to control an indicator.
Indicators: Clear	Highlight an indicator and press <b>Clear</b> to remove the assigned trigger.
Indicators: 	Move the highlighted indicator’s assignment settings up the list. The highlighted indicator will inherit settings from the indicator above.
Indicators: 	Move the highlighted indicator’s assignment settings down the list. The highlighted indicator will inherit settings from the indicator below.

### 3.4.9 Database Settings > Misc

Preferences/Layout

General | PTT Devices | Layout | Labels | Indicators | Misc.

GPI Debounce (ms):  
200

GPI Delay (ms):  
0

GPI Poll (ms):  
10

Load Pictures

Ignore Route Status (Tallies Assume Success)

OK Cancel

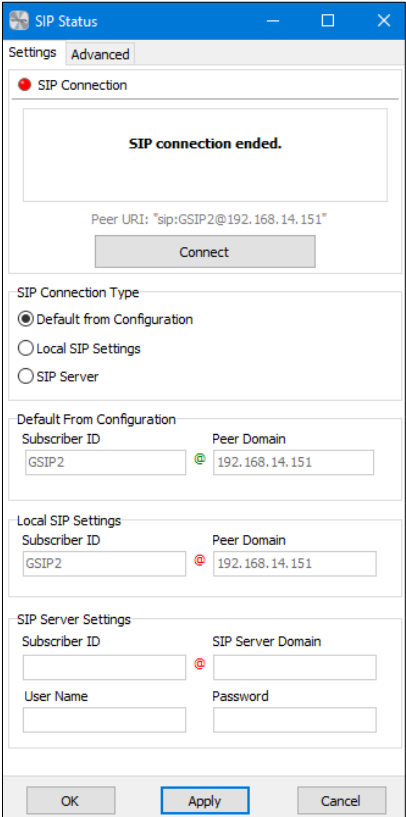
Make changes as required, then either switch to another tab or press **OK** to save and close the dialogue.

Field	Description
GPI Debounce (ms)	Minimum time an input needs to be registered for it to be valid. Default = 200 ms.
GPI Delay (ms)	COM port processing delay (increased delay reduces responsiveness). Default = 0 ms.
GPI Poll (ms)	The period between GPI polls (lower period improves responsiveness). Default = 10 ms.
Load Pictures	Pictures may optionally be attached to sources during system configuration. However, they do use additional system resources and are normally disabled at the panel. Default = un-checked.
Ignore Route Status (Tallies assume success)	Generally, tallies within keys show a solid colour if the requested action has succeeded or a flashing colour if the request has failed (e.g., due to a network outage). If checked, all requests [to speak or listen] will assume success and show a solid colour tally. Default = un-checked.

### 3.4.10 SIP Status > Settings

The SIP Status dialogue has two tabs: **Settings** and **Advanced**.

Make changes as required, then press **Apply**, followed by **Connect** to initialise the connection.

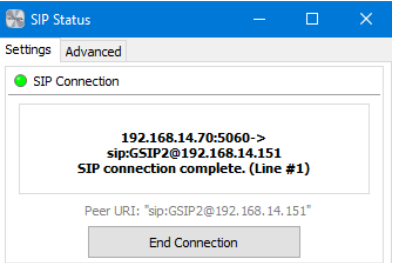


The SIP Connection panel is shown at the top of each tab. The current status of the connection is indicated by an LED style indicator:

<span style="color: red;">●</span>	Connection not active
<span style="color: green;">●</span>	Connection active

Following a successful connection, the function and label of the **Connect** button change to **End Connection**.

The corresponding image below shows an active SIP connection.



Field	Description
SIP Connection Type	<p>Choose one of the three radio button options:</p> <ul style="list-style-type: none"> <li><b>Default from Configuration.</b> Values set by the system administrator are downloaded from the database and used to establish the connection. This is the default and simplest way to establish a peer-to-peer SIP connection.</li> <li><b>Local SIP Settings.</b> Similar to above but will override the default configuration settings. This can be useful if the defaults are incorrect or incomplete.</li> <li><b>SIP Server.</b> For larger installations or closer integration with third-party SIP equipment, a SIP Server may be deployed. Each Virtual Panel will have an account on this server and details should be requested from your administrator.</li> </ul> <p>Once chosen, the appropriate fields are outlined in blue and made active – the remaining fields are deactivated.</p>

Field	Description
Default from Configuration: Subscriber ID	The Subscriber ID downloaded from the configuration data is displayed here. The field is always read-only.
Default from Configuration: Peer Domain	The Host IP Address or Name downloaded from the configuration data is displayed here. The field is always read-only.
Local SIP Settings: Subscriber ID	When active, a Subscriber ID may be entered here. If a value has been set in the configuration data, it will be shown initially.
Local SIP Settings: Peer Domain	When active, a Host IP Address or Name may be entered here. If a value has been set in the configuration data, it will be shown initially.
SIP Server Settings: Subscriber ID	When active, a Subscriber ID may be entered here. If a value has been set in the configuration data, it will be shown initially.
SIP Server Settings: IP/Name	The location of the SIP Server. It may be an IP address or hostname.
SIP Server Settings: User ID	The user ID of the account for this panel on the SIP Server.
SIP Server Settings: Password	The password of the account for this panel on the SIP Server.

### 3.4.11 SIP Status > Advanced

Make changes as required, then press **Apply** to confirm. To start the SIP Connection, press **Connect**.

For further information about the SIP Connection panel (top of the screen), see section 3.4.10 above.







Field	Description
Codec	Select an audio codec. The same codec must be active on other subscribers. Default = G.711 a-law.
Application	Name of this application. Read-only.
Address	IP Address and port of the application. Read-only.
SIP Port/Phone: SIP Listen Port	Port number the application listens on for SIP messages. Default = 5060
SIP Port/Phone: STUN	STUN server address for clarifying public IP addresses if behind a NAT.
Devices: Speaker	Select from the list of connected audio devices. Default = (Windows) default.
Devices: Microphone	Select from the list of connected audio devices. Default = (Windows) default.
Devices: Network Interface	If the Windows host PC has multiple network interfaces they will be shown in the list. Default = Auto
Sound: Auto Gain Control	Adjusts the gain level automatically to maintain a comfortable range. Default = un-checked.
Sound: Noise Reduction	Reduce noise in the audio automatically. Default = un-checked.
Acoustic Echo Cancellation	Reduce acoustic echo in audio using a selected codec. Select None   Speex   Web RTC. Default = None.
SIP Dialog options: Auto SIP Initialisation	If checked, a SIP Connection is initiated when the application is launched. Default = checked.



Field	Description
SIP Dialog options: Auto Open SIP Status Dialog	If checked, the SIP Status dialogue is displayed if the connection fails. Default = un-checked.
SIP Dialog Options: Auto Toggle SIP Status Dialog	Default = un-checked.
SIP Dialog Options: Auto SIP Reconnect Delay (s)	If the SIP Connection fails, the delay before attempting to reconnect. Range = 0 – 10 s. Default = 5 s.





### 3.5 NOTIFICATIONS

Notifications are shown in the lower-left corner of the panel, next to the logo. Notification “LEDs” are coloured green or red.



TBC 	Status of Virtual panel connection to Talkback Controller application. Green = connected, Red = not connected. TBC connection is essential for panel operation.
SIP 	Status of Virtual panel SIP Connection. Green = connected, Red = not connected. This is only of interest if a SIP Connection is used to provide panel audio.
DBS 	Status of Virtual panel connection to Database Supervisor application. Green = connected, Red = not connected. If the connection status is red, the panel will continue to operate using a local copy of the data.
PTT 	Status of Virtual panel PTT (Press-to-Talk). Green = active, Red = inactive.
GPI1 	Status of Virtual panel GPI1 (GPI Input 1). Green = active, Red = inactive.
GPI2 	Status of Virtual panel GPI2 (GPI Input 2). Green = active, Red = inactive.

### 3.6 CONTROLS

Operator controls are shown in the lower right corner of the panel.

	Mute the microphone. When muted, the control changes to red. Press again to un-mute.
	Mute the loudspeaker or headset. When muted, the control changes to red. Press again to un-mute.
	A pop-up dialogue is displayed which allows the operator to set the listening level of their speaker or headset.
	This dialogue provides full version information for the application and the software package.

There are two additional, optional controls, enabled from the Preferences > Layout menu.

	Deactivate all currently active keys. See Preferences > Layout.
	Activate all currently inactive keys. See Preferences > Layout.

### 3.7 OPERATION

#### 3.7.1 Making and Receiving Panel-Panel Calls

Calls between panels, both hardware and virtual, take place along similar lines.

##### Making a call

The most commonly used key is **Speak (default)**, which has two methods of operation.

- Click on – click off. A short press turns on “speaking”: a second short press turns it off.
- Press and hold. The call is active while you maintain the key pressed – it ceases as soon as released.



While activated by either method, the key tally changes colour to red.

##### Receiving a call

No action is needed to receive a call – incoming audio from the other party is heard immediately.



The key tally changes colour to yellow, showing that the operator **Desk** is speaking.

##### Replying to a call

To reply to an incoming call, locate the key showing the yellow tally, then follow either method described above to make a call.



If both parties are speaking (and therefore listening) simultaneously, the key tally will change to red/yellow.

##### Notes

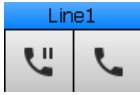

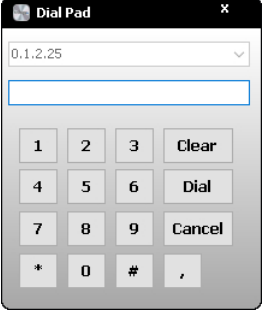
1. Red and Yellow are the default key tally colours but they can be changed in the **Preferences** menu.
2. An incoming call will normally be shown on a pre-assigned key, dedicated to the caller; see above, the caller is “Desk”.
3. If a dedicated key has not been assigned, the second-choice location to show the caller is a Quick-Response (QRS) key. A QRS key indicates the caller and supports replies in much the same way as a dedicated key.
4. If there is neither a dedicated key nor a QRS key, the incoming caller will still be heard but it will not be possible to reply.

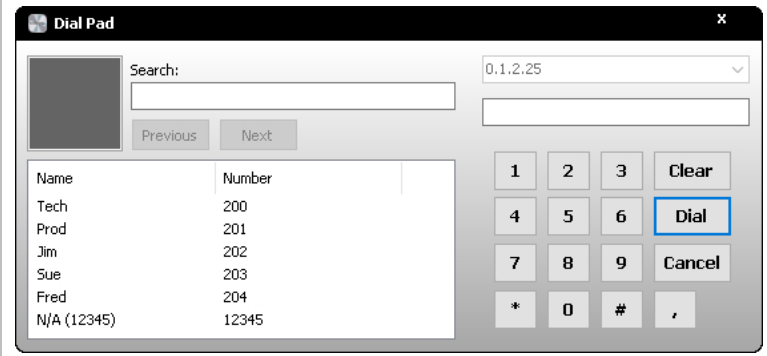
### 3.7.2 Making and Receiving Phone Calls

A range of different Telephone Expansion Boards (TEB) may be fitted in an MIU Host. If panels are then assigned suitable phone keys, users can make and receive calls.

#### Making a call

The most commonly used phone key, Combined Listen/Speak is described below.

	<p>To start a call, click on the right side of the key.</p>
	<p>The key will change to either flashing yellow and red or, as shown here, to “dim” red and yellow.</p>
	<p>At the same time, the dial keypad will be displayed. Click the numbers or use the PC/laptop to enter the number to call. The comma is used to add a small pause within the dialling string. Press <b>Dial</b> to call the number.</p>

	<p>The appearance of the Dial Pad changes for any subsequent calls. Numbers dialled are shown on the left, whether the call succeeded or failed to connect. Numbers from the centrally managed phone directory are also displayed in the list.</p>
---	--

**Making and Receiving Calls**

	Making call	Receiving call
Start – all-clear		
To start a call, click the right side of the key.		
The originating panel now has an open line, ready to dial. The dial pad is also shown on the panel making the call. See below.		

	<p>Any numbers which have been saved in the panel’s Phone List are shown on the left side of the pad. Click the entry in the list and press <b>Dial</b>.</p>
--	--

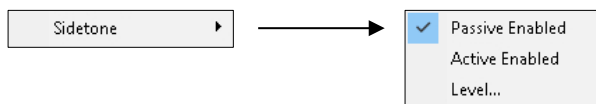
	Making call	Receiving call
The receiving panel now indicates the incoming call with a flashing yellow tally and audible ring. To answer the call, click the right side of the key.		
While the call is in progress all tallies remain lit.		
Either party can place the call “on hold” by clicking the left side of the key. The panel which originated the call is placing it on hold.		
The call is now “on-hold” and the tallies flash alternately.		
The call may be taken “off-hold” by clicking the left side of the key again.		
To end the call, either party can click the right side of the key.		
Both panels return to the all-clear state.		

### 3.7.3 Monitoring Input and Output Audio

The virtual panel can monitor the input or output audio of any port on the system. To use the feature, follow the steps below.

	<p>From the main menu (gear icon), click <b>Audio Monitor...</b></p>																																																
	<p>To change the monitored Subscriber, click the ellipsis (...)</p>																																																
<table border="1" data-bbox="212 689 523 831"> <thead> <tr> <th>Type</th> <th>Name</th> <th>Comment</th> <th>Domain</th> <th>Host</th> <th>Port</th> </tr> </thead> <tbody> <tr> <td>Desk</td> <td>Desk</td> <td></td> <td>1</td> <td>2</td> <td>7</td> </tr> <tr> <td>10</td> <td>10</td> <td></td> <td>1</td> <td>2</td> <td>10</td> </tr> <tr> <td>UHF1</td> <td>UHF1</td> <td></td> <td>1</td> <td>2</td> <td>17</td> </tr> <tr> <td>UHF2</td> <td>UHF2</td> <td></td> <td>1</td> <td>2</td> <td>18</td> </tr> <tr> <td>UHF1</td> <td>UHF1</td> <td></td> <td>1</td> <td>2</td> <td>19</td> </tr> <tr> <td>UHF2</td> <td>UHF2</td> <td></td> <td>1</td> <td>2</td> <td>20</td> </tr> <tr> <td>Win</td> <td>Win</td> <td></td> <td>1</td> <td>2</td> <td>34</td> </tr> </tbody> </table>	Type	Name	Comment	Domain	Host	Port	Desk	Desk		1	2	7	10	10		1	2	10	UHF1	UHF1		1	2	17	UHF2	UHF2		1	2	18	UHF1	UHF1		1	2	19	UHF2	UHF2		1	2	20	Win	Win		1	2	34	<p>Select a different port from the dialogue and click <b>Apply</b> to close the dialogue.</p>
Type	Name	Comment	Domain	Host	Port																																												
Desk	Desk		1	2	7																																												
10	10		1	2	10																																												
UHF1	UHF1		1	2	17																																												
UHF2	UHF2		1	2	18																																												
UHF1	UHF1		1	2	19																																												
UHF2	UHF2		1	2	20																																												
Win	Win		1	2	34																																												
	<p>Press the <b>Input</b> or <b>Output</b> radio button, then click <b>OK</b> to begin monitoring.</p>																																																
	<p>Monitoring is now active. Click <b>X</b> to end the session.</p>																																																

### 3.7.4 Sidetone



Sidetone allows an operator to hear their voice, plus some ambient room noise while wearing headphones. Most operators prefer this although the level is a matter of personal preference.

- **Passive:** side tone is always provided regardless of the status of PTT.
- **Active:** side tone is only provided when PTT is turned on.

Only one sidetone mode may be enabled at once. Clicking a second time will turn that mode off.

### 3.7.5 Local Assignment

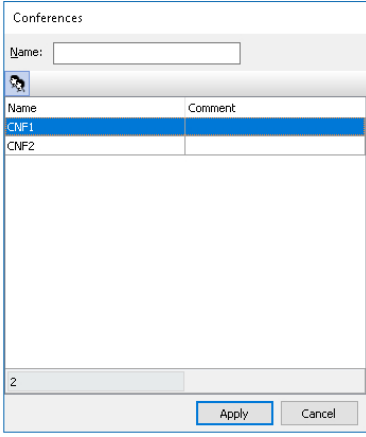
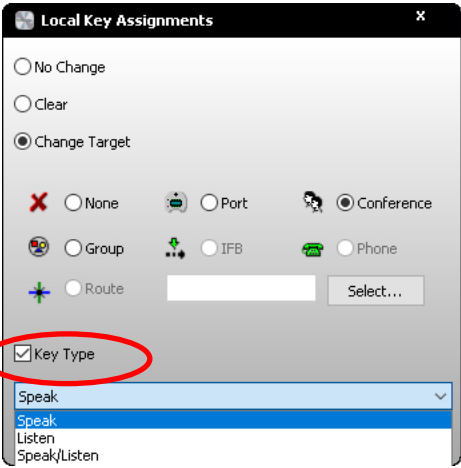
The functionality of panel keys is normally defined by the system administrator as part of the overall configuration. However, there is a provision for key assignment to be carried out by the panel operator if permission has been granted by the administrator. Local assignment is unlocked on a key-by-key basis, so mission-critical keys would normally remain locked but other less significant keys may be unlocked.

There are two aspects of key assignment to consider:

- **Target** is the party you will communicate with, either by making or receiving a call
- **Key Type** also referred to as **Mode**, is the resulting action when the key is operated (e.g listen/speak/call)

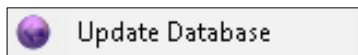
#### Re-assigning a key

	<p>Right-click on the key. Click <b>Re-assign Key</b>. The dialogue below appears.</p>
	<p>This is the opening view of the Local Key Assignment dialogue. Press the <b>Change Target</b> radio button.</p>
	<p>Now press one of the radio buttons to select a type of Target (Port, Conference etc.) then press <b>Select...</b></p>

	<p>The next dialogue shows available targets (in this example, Conferences). Choose from the list and press <b>Apply</b>.</p>
	<p>To change <b>Key Type</b>, check the box as shown. The drop-down list is now active and a new key type or mode may be selected. Press <b>OK</b> to complete the process and close the dialogue.</p>

This is a powerful feature and the re-assigned key may not operate entirely as expected, so tread carefully.

If you want the re-assignment to become permanent, changes can be posted back to the database using this entry on the main menu.



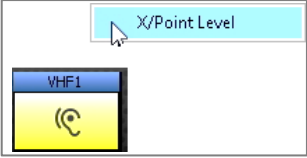



Any locally made changes (e.g., key re-assignment) are written back to the database.

**Note:** the database must be online for both the re-assignment and any subsequent update to take place. The panel will operate correctly without a connection to the database, so check the **DBS** indicator on the lower left of the panel if the features do not work as expected.



### 3.7.6 Adjusting Volume and Level

<p>To adjust the overall volume of the loudspeaker or headset, click the loudspeaker icon in the lower right of the panel.</p>	
<p>Adjust the overall volume as required. Click X to close the dialogue.</p>	
<p></p>	<p></p>
<p>To adjust the level of an individual source without affecting the overall volume:</p>	<p></p>
<p>Right-click on the active “listen” side of a key, then click <b>X/Point Level</b>.</p>	
<p>Only the level of this specific source/destination pair (or Crosspoint) is adjusted. Move the slider and click X to complete the action. Any change is temporary and the X/Point level will be reset to 0 dB the next time the panel is opened. A persistent adjustment can be made by the system administrator, using Gateway.</p>	

## 4. BROWSER VIRTUAL PANEL

### 4.1 INSTALLATION

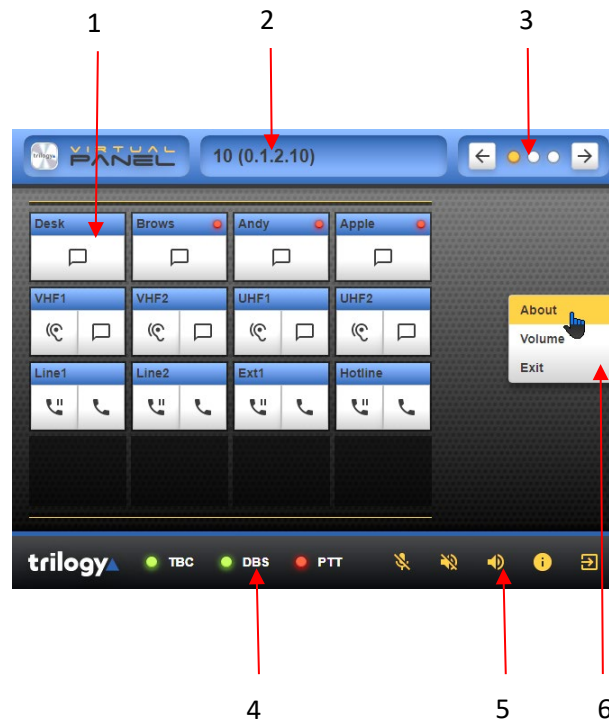
No additional files are required for the browser-based panel. Audio for this panel is provided either by associating the panel with an MIU analogue port or by a separate third-party SIP client.

### 4.2 INITIAL SETUP

On a PC with network access to the Mercury Host, type the IP address of that Host into the web browser address bar. Note: this is the Windows IP address of the Host, not the address of the Mercury audio card. You will also need the correct system port number for your panel – your System Administrator will be able to provide both.

	<p>Enter the address into a new browser tab.</p>
	<p>Select the correct Panel port from the list. Only those panels configured on this Mercury Host are presented. Choose an appropriate layout of rows and columns – 4x4 is typical. Any changes will become the defaults when the panel is next loaded.</p> <p>Click <b>Start</b>.</p>
	<p>The panel is now running and the keys defined within the configuration database are displayed.</p>

### 4.3 PANEL OVERVIEW



Item		
1	Keys	Keys to make and receive calls.
2	Panel ident	Panel name and EDHS identification.
3	Page Selector	Use the arrows to switch between three available pages of keys.
4	Notifications	Show the status of the connection to other Mercury software components. See section 4.3.1 for details.
5	Controls	Audio controls, plus panel “About” information. See section 3.6 for details.
6	Right-click options	Right-click in the blank space alongside the keys to show this pop-up menu. The options are repeated in the Controls area of the panel on the lower edge, explained below.




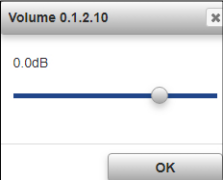



#### 4.3.1 Notifications

Notifications are shown in the lower-left corner of the panel, next to the logo. Notification “LEDs” are coloured green or red.

TBC	Status of Virtual panel connection to Talkback Controller application. Green = connected, Red = not connected. TBC connection is essential for panel operation.
DBS	Status of Virtual panel connection to Database Supervisor application. Green = connected, Red = not connected. If the connection status is red, the panel will continue to operate using a local copy of the data.
PTT	Status of Virtual panel PTT (Press-to-Talk). Green = active, Red = inactive.

4.3.2 Controls

Operator controls are shown in the lower right corner of the panel.

	<p>Mute the microphone. When muted, the control changes to red. Press again to un-mute.</p>
	<p>Mute the loudspeaker or headset. When muted, the control changes to red. Press again to un-mute.</p>
	<div data-bbox="491 528 715 707"></div> <p data-bbox="810 566 1414 667">A pop-up dialogue is displayed which allows the operator to set the listening level of their speaker or headset.</p>
	<div data-bbox="491 741 715 1010"></div> <p data-bbox="810 824 1401 925">A pop-up dialogue provides full version information for the application and the software package.</p>
	<p>Exit. This closes the panel session and the browser returns to the initial selection screen.</p>

## 4.4 OPERATION

### 4.4.1 Making and Receiving Panel-Panel Calls

Calls between panels, both hardware and virtual, take place along similar lines.

#### Making a call

The most commonly used key is **Speak (default)**, which has two methods of operation.

- Click on – click off. A short press turns on “speaking”: a second short press turns it off.
- Press and hold. The call is active while you maintain the key pressed – it ceases as soon as released.



While activated by either method, the key tally changes colour to red.

#### Receiving a call

No action is needed to receive a call – incoming audio from the other party is heard immediately.



The key tally changes colour to yellow, showing that the operator **Desk** is speaking.

#### Replying to a call

To reply to an incoming call, locate the key showing the yellow tally, then follow either method described above to make a call.



If both parties are speaking (and therefore listening) simultaneously, the key tally will change to red/yellow.

#### Notes



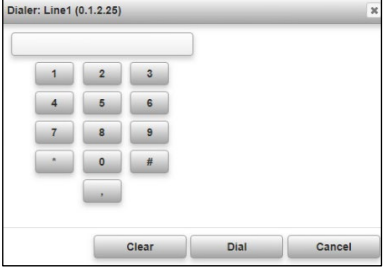
1. An incoming call will normally be shown on a pre-assigned key, dedicated to the caller; see above, the caller is “Desk”.
2. If a dedicated key has not been assigned, the second choice location to show the caller is a QRS (Quick Response) key which supports replies in much the same way as a dedicated key.
3. If there is neither a dedicated key nor a QRS key, the incoming caller will still be heard but it will not be possible to reply.

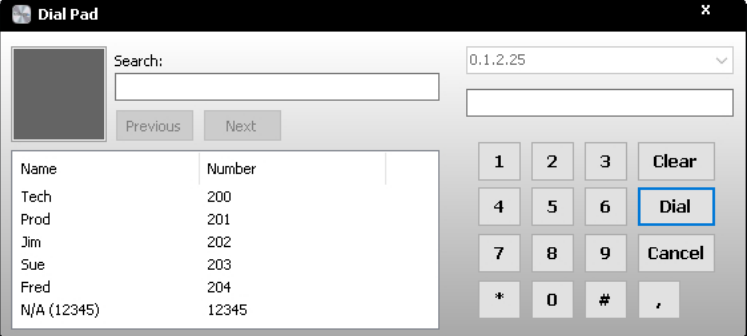
### 4.4.2 Making and Receiving Phone Calls

A range of different Telephone Expansion Boards (TEB) may be fitted in an MIU Host. If panels are then assigned suitable phone keys, users can make and receive calls.

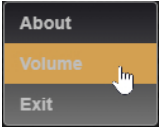
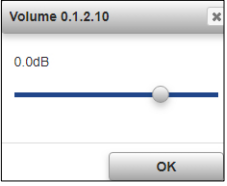


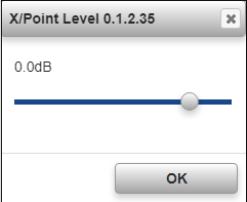
#### Making a call

The most commonly used phone key, Combined Listen/Speak is described below.

	<p>To start a call, click on the right side of the key.</p>
	<p>The key will change to flashing yellow and red.</p>
	<p>At the same time, the dial keypad will be displayed. Click the numbers or use the PC/laptop to enter the number to call. The comma is used to add a small pause within the dialling string. Click <b>Dial</b> to call the number.</p>

	<p>The appearance of the Dial Pad changes for any subsequent calls. Numbers dialled are shown on the left, whether the call succeeded or failed to connect. Numbers from the centrally managed phone directory are also displayed in the list.</p>
---	--

### 4.4.3 Adjusting Volume and Level

<p>To adjust the overall volume of the loudspeaker or headset, right-click anywhere on the panel.</p>	
<p>Click on <b>Volume</b>, as shown, then adjust the overall volume as required. Click <b>OK</b> to close the dialogue.</p>	
<p>The volume control may also be accessed by clicking the loudspeaker icon in the lower right of the panel.</p>	
<p>To adjust the level of an individual source without affecting the overall volume:</p>	
<p>Right-click on the active “listen” side of a key, then click <b>X/Point Level</b>.</p>	
<p>Only the level of this specific source/destination pair (or Crosspoint) is adjusted. Move the slider and tap <b>OK</b> to complete the action. Any change is temporary and the X/Point level will be reset to 0 dB the next time the panel is opened. A persistent adjustment can be made by the system administrator, using Gateway.</p>	

## 5. ANDROID VIRTUAL PANEL

### 5.1 INSTALLATION


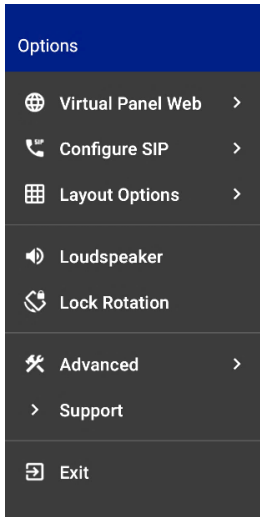
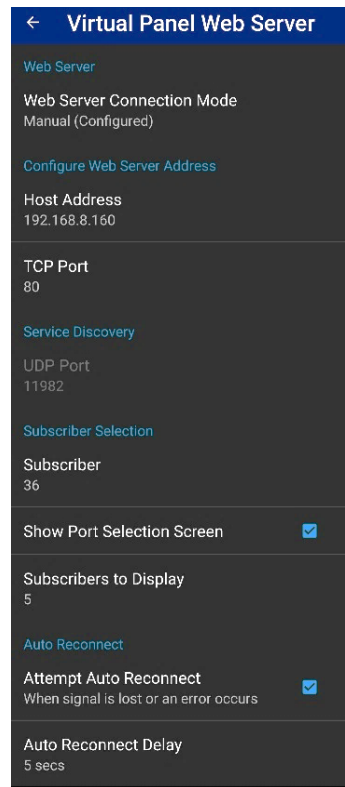
	<p>The Trilog Virtual Panel is available from the Google Play store. Search the store for “Trilog Virtual Panel” or scan the QR code with your Android device.</p>
	<p>Press <b>Install</b> to commence.</p>
	<p>When the installation is complete, tap <b>Open</b> to launch the application.</p>
	<p>Several permissions must be granted for the app to operate. Tap <b>Allow</b> on each dialogue. <b>Note:</b> if you <b>Don't Allow</b> the permission, the app will close.</p>
	<p>A comprehensive in-app Help Guide is provided. Tap <b>Yes</b> to view the guide, or <b>No</b> to skip and move directly to the app setup.</p>
	<p>This is the opening screen of the Virtual Panel. A few settings must be edited before connecting for the first time. These are covered in the next section.</p>



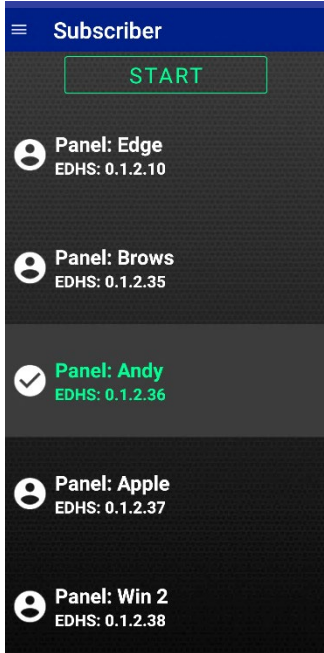

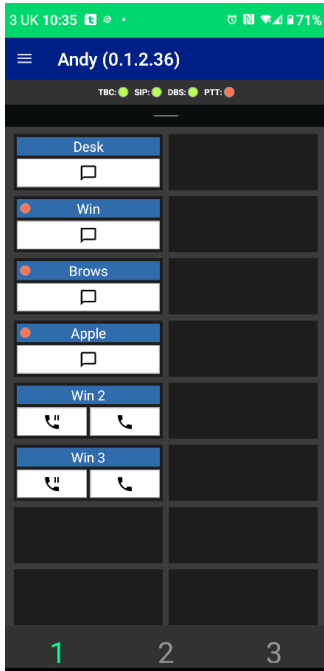



## 5.2 INITIAL SETUP

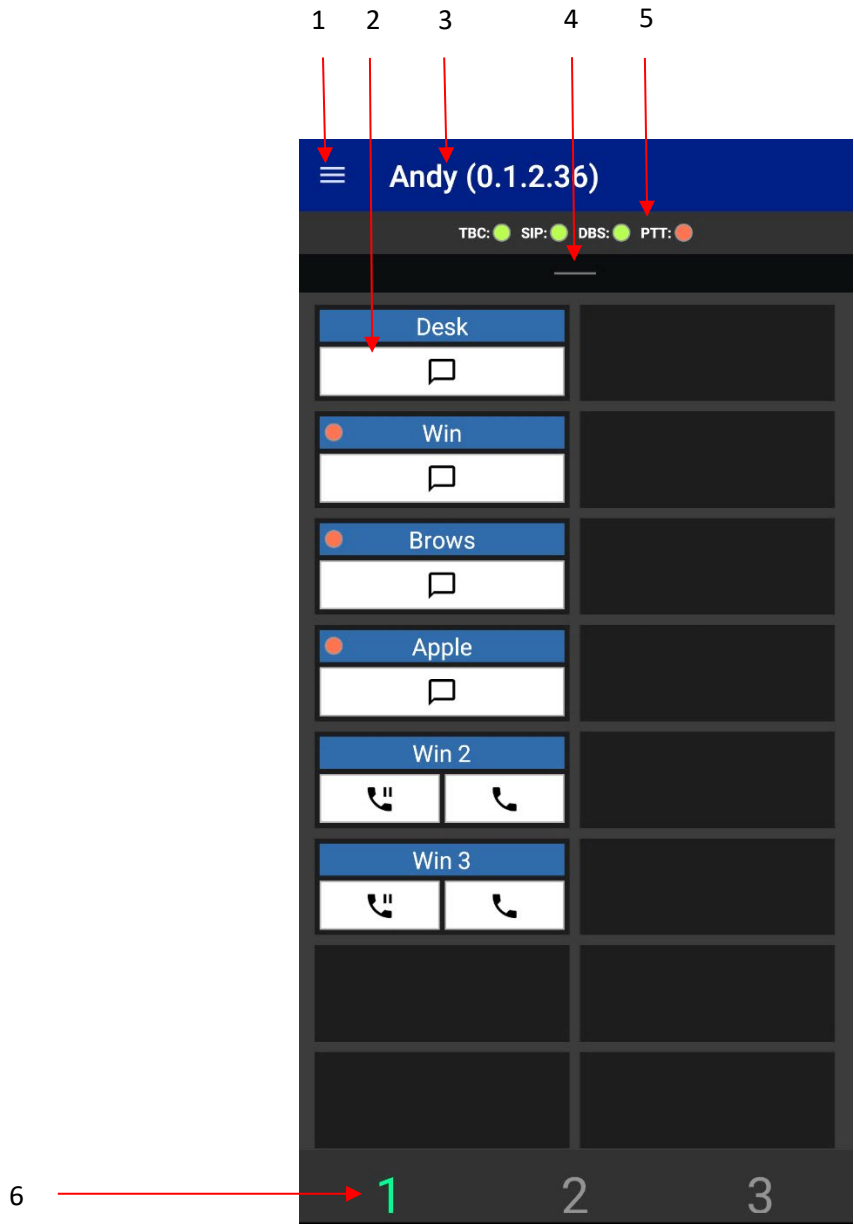
To make the initial connection you will need the following information from your system administrator.

Information	Example value
Web Server Host Address	192.168.93.30 or vpdemo.trilogycorps.com
Web Server TCP Port	Default 80
Subscriber Port number	36

<p>Tap the hamburger icon to open the <b>Options</b> Menu.</p>	
	<p>All options, except for <b>Virtual Panel Web</b> are also present on the menu when the Virtual Panel has connected to the web server.</p> <p>Tap <b>Virtual Panel Web</b> to set up the initial connection.</p>
	<p>Leave <b>Web Server Connection Mode</b> set as <b>Manual (Configured)</b></p> <p>Enter the values provided by your administrator for the <b>Host Address</b>, <b>TCP Port</b> and <b>Subscriber</b>.</p> <p>Tap the device “back” button twice to return to the <b>Start</b> screen.</p>

	<p>Press <b>Connect</b> to initiate the connection.</p>
	<p>While the connection is being established, <b>Connect</b> is replaced by <b>Cancel</b>.</p>
 <p>The <b>Subscriber Selection Screen</b> shows the available Virtual Panels. Select one from the list, then <b>Start</b>.</p>	
 <p>After a few seconds, the correctly configured panel should display. The green indicators show that the panel is connected to the Host TBC application, peer-to-peer SIP and the Database Supervisor. PTT is currently not configured.</p>	
 <p>This is an example of a correctly configured panel. If your panel shows any connection errors or does not display any keys, please check the settings or contact your system administrator.</p> <p>If SIP has been initialised correctly, the Android notification bar will be coloured green, as shown on the left.</p> <p>If SIP has failed to initialise, likely due to a configuration error, the notification bar will be red.</p>	

5.3 PANEL OVERVIEW



Item		
1	Menu	Click on the three-line “hamburger” icon to open the menu. See section 5.4 (below) for full details.
2	Keys	Keys to make and receive calls.
3	Panel ident	Panel name and EDHS identification.
4	SIP Connect Drawer	Drag down to show the SIP Connect Drawer. Drag up from the bottom of the screen to hide. See section 5.3.1 for details.
5	Notifications	Show the status of the connection to other Mercury software components. See section 5.3.2 for details.
6	Page Selector	Tap the numbers to switch between three available pages of keys. The number highlighted in green indicates the current page.

### 5.3.1 SIP Connect Drawer

		<p>Drag down to open the SIP Connect drawer. This provides an easy way to re-establish the SIP connection if it fails during panel operation.</p> <p>Drag up from the bottom of the screen to hide the SIP Connect Drawer.</p>
<p>SIP Connection has ended. Tap <b>Connect</b> to re-establish.</p>	<p>SIP Connection has been re-established. Tap <b>End</b> to terminate.</p>	

### 5.3.2 Notifications


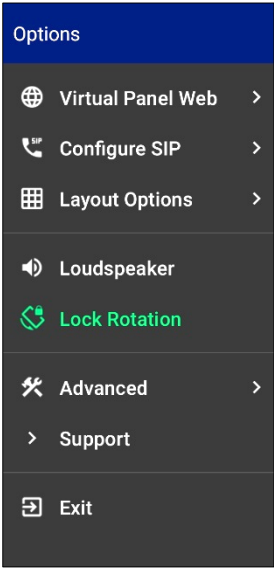
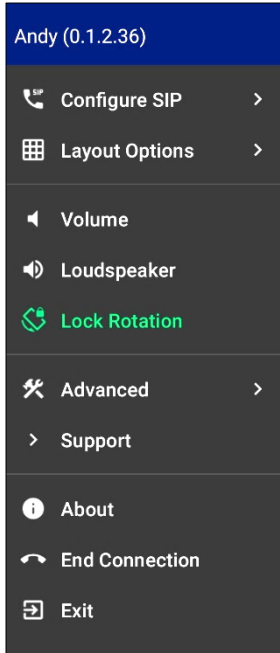
Notifications are shown top centre of the panel. Notification “LEDs” are coloured green or red.

<p>TBC </p>	<p>Status of Virtual panel connection to Talkback Controller application. Green = connected, Red = not connected. TBC connection is essential for panel operation.</p>
<p>SIP </p>	<p>Status of Virtual panel SIP Connection. Green = connected, Red = not connected. This is only of interest if a SIP Connection is used to provide panel audio.</p>
<p>DBS </p>	<p>Status of Virtual panel connection to Database Supervisor application. Green = connected, Red = not connected. If the connection status is red, the panel will continue to operate using a local copy of the data.</p>
<p>PTT </p>	<p>Status of Virtual panel PTT (Press-to-Talk). Green = active, Red = inactive.</p>

## 5.4 MENU


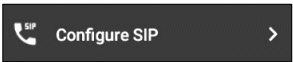
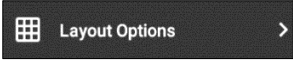
### 5.4.1 Overview

The menu is available before and after connection to the Virtual Panel Web Server. Many items are common, as can be seen below. Some items are only present after the connection has been established; the Virtual Panel Web Server settings are only present before connection.

<p>Tap the hamburger icon to open the Menu.</p>	
<p>Pre-connection:</p> 	<p>Post-connection:</p> 

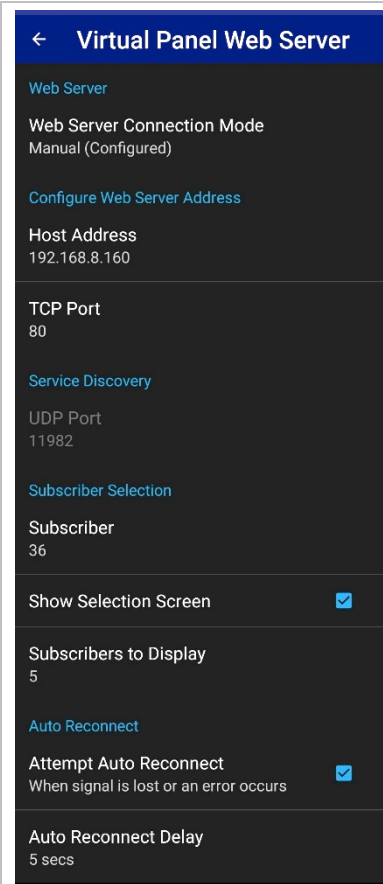
The arrow symbol ( > ) adjacent to an item indicates that a further settings dialogue will be displayed. **Loudspeaker** and **Lock Rotation** use a toggle action to turn the feature on or off.

To avoid repetition, the post-connection style menu will be used in this manual to describe each menu item. Where the menu selection opens a dialogue, full details are provided in the tables which follow, starting at section 5.4.2.

 <p>(Pre-connection menu only)</p>	<p>Tap to open the <b>Virtual Panel Web Server</b> dialogue, used to set up the initial connection. See section 5.4.2 for more details. Tap the device back button to commit changes and return to the panel.</p>
	<p>Tap to open the <b>Configure SIP</b> dialogue. See section 5.4.3 for more details. Tap the device back button to commit changes and return to the panel.</p>
	<p>Tap to display the <b>Layout Options</b> dialogue, allowing changes to the number of panel rows and columns. See section 5.4.4 for more details. Tap the device back button to commit changes and return to the panel.</p>

		<p>A pop-up volume slider allows speaker or headset volume to be adjusted between -34.5 dB and +12 dB with a default of 0 dB.</p> <p>Tap <b>Reset</b> to return the volume to the default level or <b>OK</b> to set a new level.</p>	
	<p>Tap to toggle between the device loudspeaker and earpiece.</p>	<p>When the loudspeaker is active, the text is green.</p>	
	<p>Tap to toggle the device's automatic screen rotation on/off.</p>	<p>Screen orientation is now locked in either portrait or landscape mode.</p>	
	<p>Tap to display the <b>Advanced</b> dialogue. See section 5.4.5 for more details. Tap the device back button to commit changes and return to the panel.</p>		
	<p>Tap to expand and display <b>Support</b> options.</p>		
	<p>Tap to read the comprehensive Help Guide.</p>	<p>Use the form to submit a support request.</p>	<p>Link to the Trilogy Support web page.</p>
	<p>Tap to display application version information and connection details. Tap <b>OK</b> to close the dialogue.</p>		
		<p>Tap <b>YES</b> to quit this Virtual Panel session and return to the initial Connect screen. Tap <b>NO</b> to cancel this request and continue using the current panel.</p>	
		<p>Tap <b>YES</b> to exit the Virtual Panel application. Tap <b>NO</b> to cancel this request and continue using the application.</p>	

### 5.4.2 Virtual Panel Web Server (only present pre-connection)

	<p>These settings will normally be made during installation. Make changes as required, then tap the device “back” button.</p>
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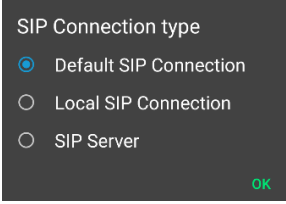
Field	Description
Web Server: Web Server Connection Mode	Select from Auto (Service Discovery)   Manual (Configured) Default = Manual (Configured)
Configure Web Server Address: Host Address	Enter the Name or IP Address of the Virtual Panel Web Server while in Manual (Configured) Web Server mode.
Configure Web Server Address: TCP Port	Only applicable in Manual (Configured) Web Server mode. Default = 80
Service Discovery: UDP Port	Only applicable in Auto (Service Discovery) mode. Default = 11982
Subscriber Selection: Subscriber	Tap to select a Subscriber ID. Range 1 – 36, or “None”. If “None” is selected, an intermediate screen is displayed during the connection sequence, allowing subscriber selection by the user.
Subscriber Selection: Show Selection Screen	If checked, an intermediate screen is displayed, allowing the user to select a particular Subscriber from a list. Default = checked.
Subscriber Selection: Subscribers to Display	Tap to select the number of subscribers displayed on the selection screen (see above). Select from 3   5   7   9.
Auto Reconnect: Attempt Auto Reconnect	Check to enable auto-reconnect when the signal is lost or an error occurs. Default = checked
Auto Reconnect: Reconnect Delay	If the above is checked, sets the delay before attempting to reconnect. Range 3 – 10 s. Default = 5 s.

### 5.4.3 Configure SIP

	<p>The <b>Configure SIP</b> dialogue is displayed, allowing changes to the connection method. Tap the device back button to commit changes and return to the panel.</p> <p>Only settings which relate to the current <b>SIP Connection Selection</b> mode are shown. In the image (left), <b>Default SIP Connection</b> mode is selected, and the corresponding settings below are shown as read-only.</p> <p>Images of the menu for other SIP Connection modes are below.</p>
--	--

SIP Connection mode set to <b>Local</b>	SIP Connection mode set to <b>Server</b>



Field	Description
SIP Connection Selection	Choose one of the three options:
	<ul style="list-style-type: none"> <li>• Default from Configuration. Values set by the system administrator are downloaded from the database and used to establish the connection. This is the default and simplest way to establish a peer-to-peer SIP connection.</li> <li>• Local SIP Settings. Similar to above but will override the default configuration settings. This can be useful if the defaults are incorrect or incomplete.</li> <li>• For larger installations or closer integration with third-party SIP equipment, a SIP Server may be deployed. Each Virtual Panel will have an account on this server and details should be requested from your administrator.</li> </ul> <p>Once chosen, the appropriate fields are displayed.</p>
Default SIP Connection: Subscriber ID	If configured correctly, this value will be retrieved from the system database. This field is read-only.
Default SIP Connection: Host IP/Name	If configured correctly, this value will be retrieved from the system database. This field is read-only.
Local SIP Connection: Subscriber ID	Enter a Subscriber ID number (e.g., 1002) to load panel configuration data. If a value can be retrieved from the system database, it will be displayed.
Local SIP Connection: Host IP/Name	Enter the Host IP or Name for the Mercury audio card associated with the ID entered. If a value can be retrieved from the system database, it will be displayed.
SIP Server: Subscriber ID	Enter a Subscriber ID number (e.g., 1002) to load panel configuration data. If pre-configured by your system administrator, this value will be loaded with the configuration data.
SIP Server: Host IP/Name	Enter the Host IP or Name of the SIP Server. If pre-configured by your system administrator, this value will be loaded with the configuration data.
SIP Server: User ID	Enter the ID of the user account on the SIP Server. If pre-configured by your system administrator, this value will be loaded with the configuration data.
SIP Server: Password	Enter the password of the user account on the SIP Server. If pre-configured by your system administrator, this value will be loaded with the configuration data.
More: Auto Configuration Update	Update Local and Server fields with the new configuration. If un-checked, then only update if they have not changed. Default = checked
More: Auto SIP Initialisation	Perform SIP Initialisation and make SIP connection during the start-up procedure. Default = checked
More: Auto Toggle SIP Status Drawer	If checked, the SIP Status drawer is shown, then hidden, during the start procedure. Default = un-checked.
More: Auto SIP Reconnect Delay	If the SIP Connections fails during operation, it will attempt to auto-reconnect after this delay. Range 0 – 10 s. Default = 5 s.
More: Auto Open SIP Status Drawer	If checked, the SIP Status drawer will open if the SIP connection fails for any reason. Default = un-checked.

Field	Description
SIP Phone Controls: Enable SIP Only Mode	Default = un-checked
SIP Phone Controls: Use DTMF Phone Control	The field is only active if <b>Enable SIP Only Mode</b> is checked. Default = checked
SIP Phone Controls: DTMF Phone Control	The field is only active if <b>Enable SIP Only Mode</b> is checked. Enter the phone control.
SIP Phone Controls: DTMF Phone Control Repeat Delay	The field is only active if <b>Enable SIP Only Mode</b> is checked. Range 0 – 10 s. Default = 3 s.
Advanced: SIP Stack	Tap to select either ABTO VoIP or Native Android. Default = ABTO VoIP (recommended not to change)

### 5.4.4 Layout Options

**← Layout Options**

**Rows & Columns**

Rows  
8

Columns  
2

Enable Rows & Columns switching  
Switch Rows and Columns when screen rotates

**Panel Name**

Include EDHS in panel name  
Full panel name will always be visible in navigation

Size  
Medium

**Return to Panel page**

Return to your last Panel Page if your EDHS is the same

**Gestures**

SIP drawer swipe down  
Swipe down on the panel screen to pull down the SIP drawer

Navigation bar Auto hide  
Automatically hide the page navigation bar when panel screen becomes long

**Extra information**

Panel key count in navigation  
Display total number of keys per page in page navigation

Status bar colour  
Update status bar colour based on SIP connection status

**Key Options**



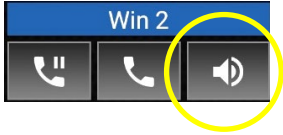

X/Point Level Button  
Show button to control the X/Point level as part of a Key

**Belt Pack**

Enable Belt Pack Mode  
Customised presentation of Keys for Belt Pack users

Keys  
6

The **Layout Options** dialogue is displayed, allowing changes to the number of panel rows and columns. Tap the device back button to commit changes and return to the menu.

Field	Description
Rows & Columns: Rows	Range 1 – 10. Default = 8.
Rows & Columns: Columns	Range 1 – 10. Default = 2.
Rows & Columns: Enable Rows & Columns switching	Switch rows and columns when the screen rotates. Default = un-checked.
Include EDHS: Include EDHS in panel title	Check to include the EDHS in the panel title bar. The panel name is always present. Default = checked.
Panel name size: Size	Select from Small   Medium   Large. Default = Medium.
Return to Panel Page: Return to Panel Page	Return to your last panel page if your EDHS is the same. Default = un-checked.
Gestures: SIP drawer swipe down	Default = checked.
Gestures: Navigation bar Auto hide	Default = checked.
Extra information: Panel key count in navigation	Check to add additional text to the panel screen navigation bar indicating the number of keys on the page. Default = un-checked.
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Un-checked</p> </div> <div style="text-align: center;">  <p>Checked</p> </div> </div>
Extra information: Status bar colour	Default = checked.
Key Options: X/Point Level Button	If checked, this additional control is shown as part of a key, allowing the pop-up slider (below) to be displayed. Default = un-checked.
	<div style="display: flex; justify-content: space-around; align-items: center;">  </div> <div style="text-align: center; margin-top: 10px;">  </div>
Belt Pack: Enable Belt Pack mode	Custom panel layout for Belt Pack users. Default = un-checked.
Belt Pack: Keys	This only applies when Belt Pack mode (above) is enabled. Select from 2   4   6   8. Default = 6.

### 5.4.5 Advanced

	<p>The <b>Advanced</b> dialogue is displayed, allowing changes to advanced settings. Tap the device back button to commit changes and return to the menu.</p>
Field	Description
Always Confirm Exit	Default = checked.
Always Confirm Quit	Default = checked.
Use Non-Wi-Fi Connections	Default = checked.
Allow Momentary Key Types	Default = un-checked.
PTT Trigger Action	Select from Toggle   Hold. Default = Toggle.
Vibration: Allow vibration feedback	Default = checked.

## 5.5 OPERATION

### 5.5.1 Making and Receiving Panel-Panel Calls

Calls between panels, both hardware and virtual, take place along similar lines.

#### Making a call

The most commonly used key is **Speak (default)**, which has two methods of operation.

- Tap on – tap off. A short press turns on “speaking”: a second short press turns it off.
- Press and hold. The call is active while you maintain the key pressed – it ceases as soon as released. This option is only available if **Allow Momentary Key Types** is enabled from the **Advanced** menu.



While activated by either method, the key tally changes colour to red.

#### Receiving a call

No action is needed to receive a call – incoming audio from the other party is heard immediately.



The key tally changes colour to yellow, showing that the operator **Desk** is speaking.

#### Replying to a call

To reply to an incoming call, locate the key showing the yellow tally, then follow either method described above to make a call.



If both parties are speaking (and therefore listening) simultaneously, the key tally will change to red/yellow.

#### Adjusting the level of a call

While a call is in progress and a listen tally (normally yellow) is displayed, the level of that call can be adjusted. This is useful if a particular source is unusually quiet or loud but it is important to understand that it does not change the overall (loudspeaker) volume.

<p>Tap and hold the key until the X/Point Level pop-up appears.</p>	
<p>Only the level of this specific source/destination pair (or Crosspoint) is adjusted. Move the slider and tap <b>OK</b> to complete the action. Tap <b>RESET</b> to return the X/Point Level to 0 dB. Any change is temporary and the X/Point level will be reset to 0 dB the next time the panel is opened. A persistent adjustment can be made by the system administrator, using Gateway.</p>	

**Note:** Red and Yellow are the default key tally colours, but they can be changed in the Preferences menu.

### 5.5.2 QRS (Quick-Response) Key

A QRS key is a useful addition to any panel configuration.

- An incoming call will normally be shown on a pre-assigned key, dedicated to the caller; see above, the caller is “Desk”.
- If a dedicated key has not been assigned, the second-choice location to show the caller is a Quick-Response (QRS) key. A QRS key indicates the caller and supports replies in much the same way as a dedicated key.
- If there is neither a dedicated key nor a QRS key, the incoming caller will still be heard but it will not be possible to reply.

	<p>The QRS key label is initially &lt; &gt;</p>	
	<p>Caller H1S36 does not have a dedicated key on the panel so the QRS key is used. Label and tally change accordingly.</p>	
	<p>Tap the QRS key to reply to H1S36: tap for a second time to end the call. You can reply multiple times but the target (H1S36) will automatically clear after a time preset by the system administrator.</p>	
	<p>Tap and hold the key to see more options.</p>	

See sections 5.5.1 (above) and 5.5.4 for an explanation of X/Point Level. The option to **Clear Target** causes the label to revert to < > and removes the ability of the QRS key to reply to H1S36. **Clear Target** is also available when the call has finished and the QRS key is inactive.

### 5.5.3 Making and Receiving Phone Calls

The most commonly used phone key, Combined Listen/Speak is described below.

#### Making and Receiving Calls

	Making call	Receiving call
Start – all-clear		
To start a call, tap the right side of the key.		
Alternatively, tap and hold either the left or right side of the key. The list item <b>Dial Pad</b> will appear: tap again to show the <b>Dialer</b> .		
The originating panel now has an open line, ready to dial. The <b>Dialer</b> is shown on the panel making the call. See below.		

	<p>Any numbers which have been saved in the panel’s Phone Number List are shown by tapping the “down arrow”. Either enter a number on the keypad or tap an entry from the list and then tap <b>Dial</b>.</p>
--	--

	Making call	Receiving call
The receiving panel now indicates the incoming call with a flashing yellow tally and audible ring. To answer the call, tap the right side of the key.		
While the call is in progress all tallies remain lit.		



	Making call	Receiving call
Either party can place the call “on hold” by tapping the left side of the key. The panel which originated the call is placing it on hold.		
The call is now “on-hold” and the tallies flash alternately.		
The call may be taken “off-hold” by tapping the left side of the key again.		
To end the call, either party can tap the right side of the key.		
Both panels return to the all-clear state.		

### 5.5.4 Adjusting Volume and Level

To adjust the overall volume of the loudspeaker or headset, open the menu and tap <b>Volume</b> .	
Adjust the volume by moving the slider, then tap <b>OK</b> .	
There are two ways to adjust the level of an individual source without affecting the overall volume:	
<ul style="list-style-type: none"> <li>Tap and hold the “listen” side of a key until the X/Point Level slider appears.</li> </ul>	
<ul style="list-style-type: none"> <li>If enabled in <b>Layout &gt; Key Options &gt; X/Point Level Button</b>, an additional section of the key also brings up the slider control.</li> </ul>	
Only the level of this specific source/destination pair (or Crosspoint) is adjusted. Move the slider and tap <b>OK</b> to complete the action. Tap <b>RESET</b> to return the X/Point Level to 0 dB. Any change is temporary and the X/Point level will be reset to 0 dB the next time the panel is opened. A persistent adjustment can be made by the system administrator, using Gateway.	

## 6. iOS VIRTUAL PANEL

### 6.1 INSTALLATION

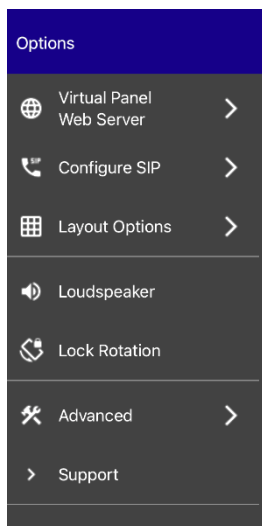
	<p>The Trilog Virtual Panel is available from the App Store. Search the store for “Trilog Virtual Panel” or scan the QR code with your device.</p>
	<p>Tap <b>Install</b> to commence.</p>
	<p>When the installation is complete, tap <b>Open</b> to launch the application.</p>
	<p>Several permissions must be granted for the app to operate. Tap <b>OK</b> on each dialogue. <b>Note:</b> if you tap <b>Don't Allow</b>, the app will close.</p>
	<p>A comprehensive in-app Help Guide is provided. Press <b>Yes</b> to view the guide, or <b>No</b> to skip and move directly to the app setup.</p>
	<p>This is the opening screen of the Virtual Panel. A few settings must be edited before connecting for the first time. These are covered in the next section.</p>

## 6.2 INITIAL SETUP

To make the initial connection you will need the following information from your system administrator.

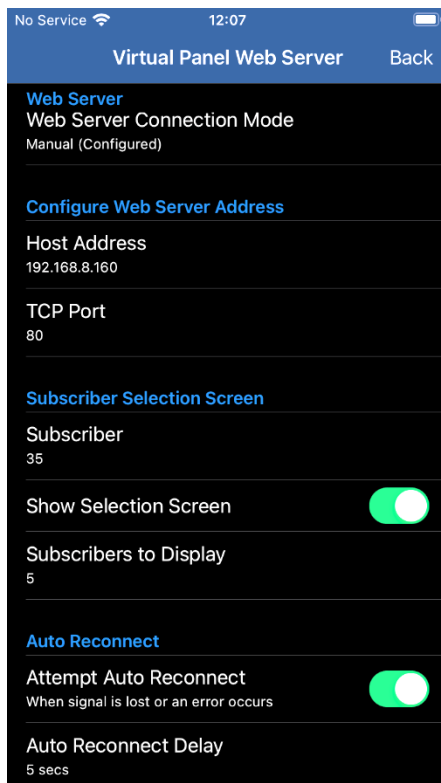
Information	Example value
Web Server Host Address	192.168.93.30 or vpdemo.trilogycorps.com
Web Server TCP Port	Default 80
Subscriber Port number	35

Tap the hamburger icon to open the **Options** Menu.



All options, except for **Virtual Panel Web Server** are also present on the menu when the Virtual Panel has connected to the web server.



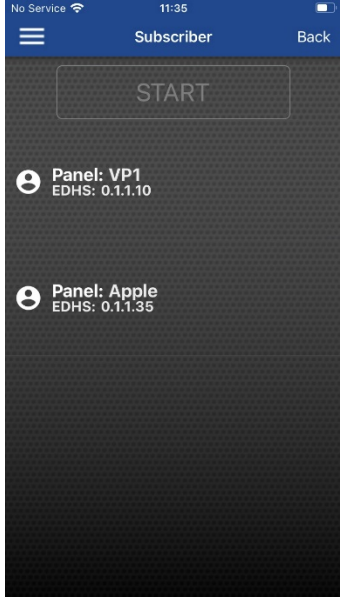

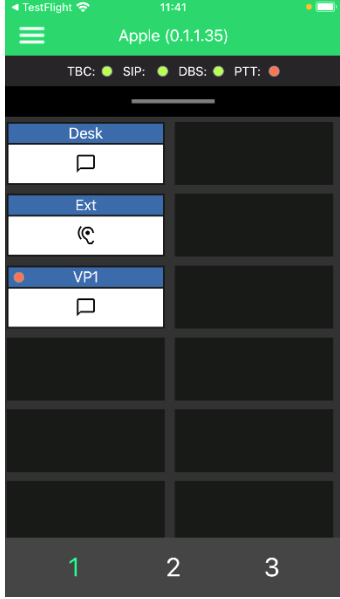
Tap **Virtual Panel Web Server** to set up the initial connection.

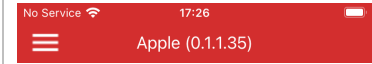
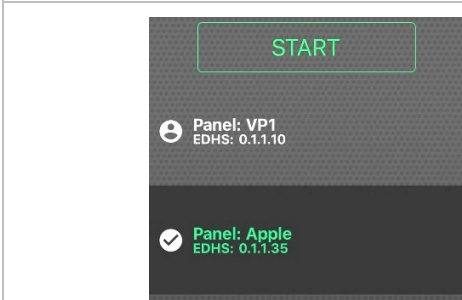


Leave **Web Server Connection Mode** set as **Manual (Configured)**

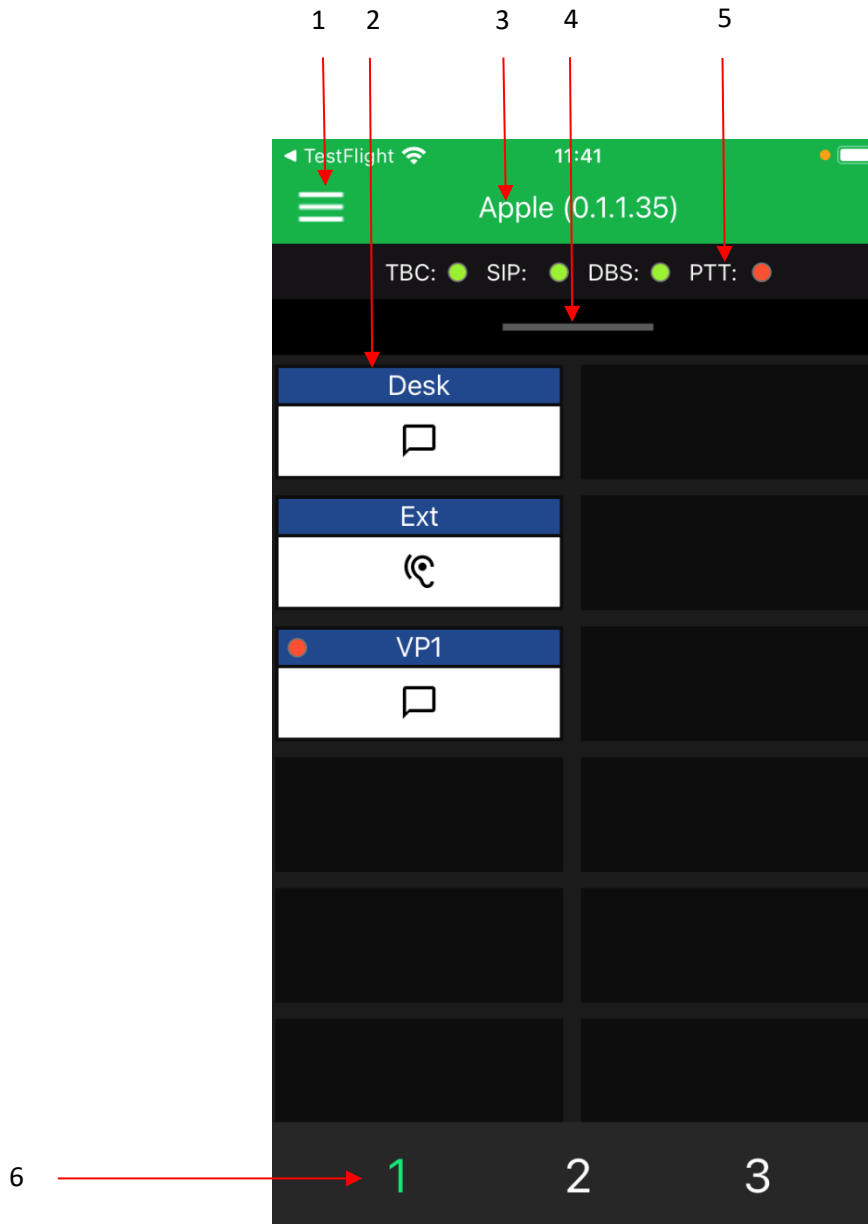
Enter the values provided by your administrator for the **Host Address**, **TCP Port** and **Subscriber**. All other settings may be left unchanged.

Tap **Back** to return to the **Start** screen.

	<p>Press <b>Connect</b> to initiate the connection.</p>
	<p>While the connection is being established, <b>Connect</b> is replaced by <b>Cancel</b>.</p>
	<p>The <b>Subscriber</b> screen (left) shows the available Virtual Panels. Choose one from the list, then tap <b>Start</b>.</p>
	<p>After a few seconds, the correctly configured panel should display. The green indicators show that the panel is connected to the Host TBC application, peer-to-peer SIP and the Database Supervisor. PTT is currently not configured.</p>
	<p>This is an example of a correctly configured panel. If your panel shows any connection errors or does not display any keys, please check the settings or contact your system administrator.</p> <p>If SIP has been initialised correctly, the notification bar will be coloured green, as shown on the left.</p> <p>If SIP has failed to initialise, likely due to a configuration error, the notification bar will be red.</p>
<p><b>NOTE:</b> If the Virtual Panel is assigned to a physical port then no SIP Connection will be established. This is correct behaviour since analogue panel audio is provided by the physical port on the host.</p>	

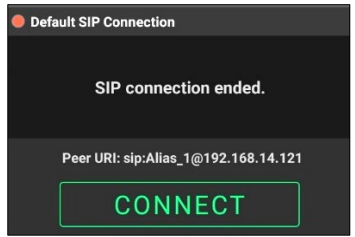



6.3 PANEL OVERVIEW







Item		
1	Menu	Click on the three-line “hamburger” icon to open the menu. See section 6.4 (below) for full details.
2	Keys	Keys to make and receive calls.
3	Panel ident	Panel name and EDHS identification.
4	SIP Connect Drawer	Drag down to show the SIP Connect Drawer. Drag up from the bottom of the screen to hide. See section 6.3.1 for details.
5	Notification LEDs	Show the status of the connection to other Mercury software components. See section 6.3.2 for details.
6	Page Selector	Tap the numbers to switch between three available pages of keys. The number highlighted in green indicates the current page.

### 6.3.1 SIP Connect Drawer

 <p>SIP Connection has ended. Tap <b>Connect</b> to re-establish.</p>	 <p>SIP Connection has been re-established. Tap <b>End</b> to terminate.</p>	<p>Drag down to open the SIP Connect drawer. This provides an easy way to re-establish the SIP connection if it fails during panel operation.</p> <p>Drag up from the bottom of the screen to hide the SIP Connect Drawer.</p>
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### 6.3.2 Notification LEDs


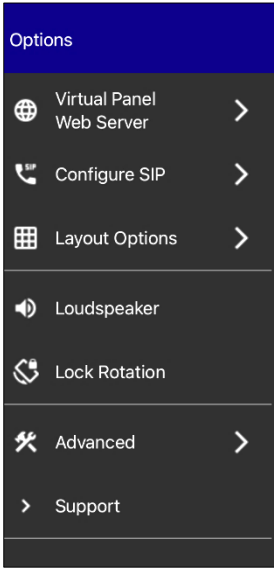
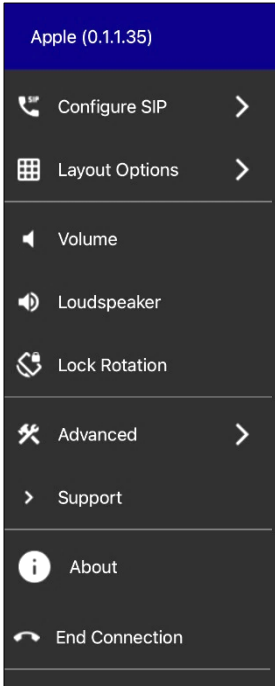
Notifications are shown top centre of the panel. Notification “LEDs” are coloured green or red.

<p>TBC </p>	<p>Status of Virtual panel connection to Talkback Controller application. Green = connected, Red = not connected. TBC connection is essential for panel operation.</p>
<p>SIP </p>	<p>Status of Virtual panel SIP Connection. Green = connected, Red = not connected. This is only of interest if a SIP Connection is used to provide panel audio.</p>
<p>DBS </p>	<p>Status of Virtual panel connection to Database Supervisor application. Green = connected, Red = not connected. If the connection status is red, the panel will continue to operate using a local copy of the data.</p>
<p>PTT </p>	<p>Status of Virtual panel PTT (Press-to-Talk). Green = active, Red = inactive.</p>

## 6.4 MENU



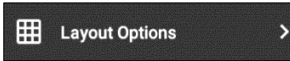
### 6.4.1 Overview

The menu is available before and after connection to the Virtual Panel Web Server. Many items are common, as can be seen below. Some items are only present after the connection has been established; the Virtual Panel Web Server settings item is only present before connection.

<p>Tap the hamburger icon to open the Menu.</p>	
<p>Pre-connection:</p> 	<p>Post-connection:</p> 

The arrow symbol ( > ) adjacent to an item indicates that a further settings dialogue will be displayed. **Loudspeaker** and **Lock Rotation** use a toggle action to turn the feature on or off.

To avoid repetition, the post-connection style menu will be used in this manual to describe each menu item. Where the menu selection opens a dialogue, full details are provided in the tables which follow, starting at section 6.4.2.

 <p>(Pre-connection menu only)</p>	<p>Tap to open the <b>Virtual Panel Web Server</b> dialogue, used to set up the initial connection. See section 6.4.2 for more details. Tap “Back” to commit changes and return to the panel.</p>
	<p>Tap to open the <b>Configure SIP</b> dialogue. See section 6.4.3 for more details. Tap “Back” to commit changes and return to the panel.</p>
	<p>Tap to display the <b>Layout Options</b> dialogue, allowing changes to the number of panel rows and columns. See section 6.4.4 for more details. Tap “Back” to commit changes and return to the panel.</p>

		<p>A pop-up volume slider allows speaker or headset volume to be adjusted between -34.5 dB and +12 dB with a default of 0 dB.</p> <p>Tap <b>Reset</b> to return the volume to the default level or <b>OK</b> to set a new level.</p>	
	<p>Tap to toggle between the device loudspeaker and earpiece.</p>	<p>When the loudspeaker is active, the text is green.</p>	
	<p>Tap to toggle the device's automatic screen rotation on/off.</p>	<p>Screen orientation is now locked in either portrait or landscape mode.</p>	
	<p>Tap to display the <b>Advanced</b> dialogue. See section 6.4.5 for more details. Tap "Back" to commit changes and return to the panel.</p>		
	<p>Tap to expand and display <b>Support</b> options.</p>		
	<p>Tap to read the comprehensive Help Guide.</p>	<p>Use the form to submit a support request.</p>	<p>Link to the Trilogy Support web page.</p>
		<p>Tap to display application version information and connection details. Tap <b>OK</b> to close the dialogue.</p>	
		<p>Tap <b>Yes</b> to quit this Virtual Panel session and return to the initial Connect screen. Tap <b>No</b> to cancel this request and continue using the current panel.</p>	



### 6.4.2 Virtual Panel Web Server (only present pre-connection)



<div style="display: flex; justify-content: space-between; align-items: center;"> <span>Virtual Panel Web Server</span> <span>Back</span> </div> <div style="background-color: #1a202c; padding: 5px;"> <p><b>Web Server</b> Web Server Connection Mode Manual (Configured)</p> <p><b>Configure Web Server Address</b></p> <p>Host Address 192.168.8.160</p> <p>TCP Port 80</p> <p><b>Subscriber Selection Screen</b></p> <p>Subscriber 35</p> <p>Show Selection Screen <input checked="" type="checkbox"/></p> <p>Subscribers to Display 5</p> <p><b>Auto Reconnect</b></p> <p>Attempt Auto Reconnect <input checked="" type="checkbox"/> <small>When signal is lost or an error occurs</small></p> <p>Auto Reconnect Delay 5 secs</p> </div>	<p>These settings will normally be made during installation. Make changes as required, then tap <b>Back</b>.</p>
--	--

Field	Description
Web Server: Web Server Connection Mode	Select from Auto (Service Discovery)   Manual (Configured) Default = Manual (Configured)
Configure Web Server Address: Host Address	Enter the Name or IP Address of the Virtual Panel Web Server while in Manual (Configured) Web Server mode.
Configure Web Server Address: TCP Port	Only applicable in Manual (Configured) Web Server mode. Default = 80
Service Discovery: UDP Port	Only applicable in Auto (Service Discovery) mode. Default = 11982
Subscriber Selection: Subscriber	Tap to select a Subscriber ID. Range 1 – 36, or “None”. If “None” is selected, an intermediate screen is displayed during the connection sequence, allowing subscriber selection by the user.
Subscriber Selection: Show Selection Screen	If checked, an intermediate screen is displayed, allowing the user to select a particular Subscriber from a list. Default = on.
Subscriber Selection: Subscribers to Display	Tap to select the number of subscribers displayed on the selection screen (see above). Select from 3   5   7   9.
Auto Reconnect: Attempt Auto Reconnect	Check to enable auto-reconnect when the signal is lost or an error occurs. Default = on.
Auto Reconnect: Reconnect Delay	If the above is checked, sets the delay before attempting to reconnect. Range 3 – 10 s. Default = 5 s.

### 6.4.3 Configure SIP

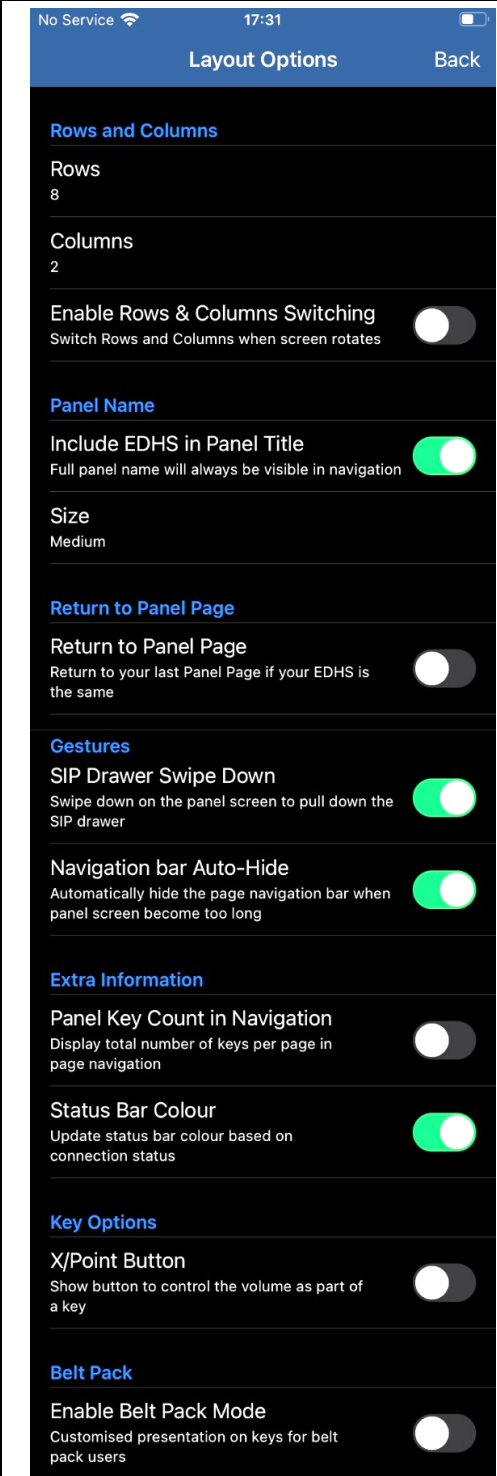
	<p>The <b>Configure SIP</b> dialogue is displayed, allowing changes to the connection method. Tap <b>Back</b> to commit changes and return to the panel.</p> <p>Only settings which relate to the current <b>SIP Connection Selection</b> type are shown. In the image (left), <b>Default SIP Connection</b> type is selected, and the corresponding settings below are shown as read-only.</p> <p>Images of the menu for other SIP Connection Types are shown below.</p>
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SIP Connection Type set to <b>Local SIP Connection</b>	SIP Connection Type set to <b>SIP Server</b>

Field	Description
SIP Connection Selection	From the list, choose one of the three options and tap <b>OK</b> : <ul style="list-style-type: none"> <li>• <b>Default SIP Connection.</b> Values set by the system administrator are downloaded from the database and used to establish the connection. This is the default and simplest way to establish a peer-to-peer SIP connection.</li> <li>• <b>Local SIP Connection.</b> Similar to above but will override the default configuration settings. This can be useful if the defaults are incorrect or incomplete.</li> <li>• <b>SIP Server.</b> For larger installations or closer integration with third-party SIP equipment, a SIP Server may be deployed. Each Virtual Panel will have an account on this server and details should be requested from your administrator.</li> </ul>
	
	Tap <b>OK</b> to make the selection. The appropriate fields are now displayed.
Default SIP Connection: Subscriber ID	If configured correctly, this value will be retrieved from the system database. This field is read-only.
Default SIP Connection: Host IP/Name	If configured correctly, this value will be retrieved from the system database. This field is read-only.
Local SIP Connection: Subscriber ID	Enter a Subscriber ID number (e.g., 1002) to load panel configuration data. If a value can be retrieved from the system database, it will be displayed.
Local SIP Connection: Host IP/Name	Enter the Host IP or Name for the Mercury audio card associated with the ID entered. If a value can be retrieved from the system database, it will be displayed.
SIP Server: Subscriber ID	Enter a Subscriber ID number (e.g., 1002) to load panel configuration data. If pre-configured by your system administrator, this value will be loaded with the configuration data.
SIP Server: Host IP/Name	Enter the Host IP or Name of the SIP Server. If pre-configured by your system administrator, this value will be loaded with the configuration data.
SIP Server: User ID	Enter the ID of the user account on the SIP Server. If pre-configured by your system administrator, this value will be loaded with the configuration data.
SIP Server: Password	Enter the password of the user account on the SIP Server. If pre-configured by your system administrator, this value will be loaded with the configuration data.
More: Auto Configuration Update	Update Local and Server fields with the new configuration. If off, then only update if they have not changed. Default = on.
More: Auto SIP Initialisation	Perform SIP Initialisation and make SIP connection during the start-up procedure. Default = on.
More: Auto Toggle SIP Status Drawer	If on, the SIP Status drawer is shown, then hidden, during the start procedure. Default = off.
More: Auto SIP Reconnect Delay	If the SIP Connections fails during operation, it will attempt to auto-reconnect after this delay. Range 0 – 10 s. Default = 5 s.

Field	Description
More: Auto Open SIP Status Drawer	If on, the SIP Status drawer will open if the SIP connection fails for any reason. Default = off.
SIP Phone Controls: Enable SIP Only Mode	Default = off.
SIP Phone Controls: Use DTMF Phone Control	The field is only active if <b>Enable SIP Only Mode</b> is on. Default = checked
SIP Phone Controls: DTMF Phone Control	The field is only active if <b>Enable SIP Only Mode</b> is on. Enter the phone control.
SIP Phone Controls: DTMF Phone Control Repeat Delay	The field is only active if <b>Enable SIP Only Mode</b> is on. Range 0 – 10 s. Default = 3 s.

#### 6.4.4 Layout Options

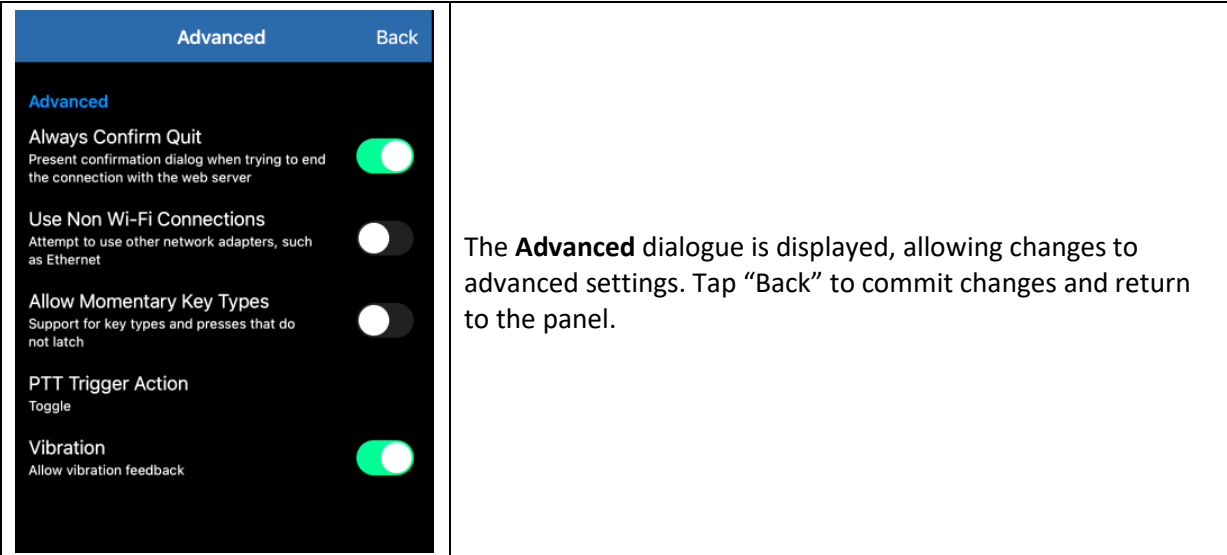


The **Layout Options** dialogue is displayed, allowing changes to the number of panel rows and columns.

Tap **Back** to commit changes and return to the panel.

Field	Description
Rows & Columns: Rows	Range 1 – 10. Default = 8.
Rows & Columns: Columns	Range 1 – 10. Default = 2.
Rows & Columns: Enable Rows & Columns switching	Switch rows and columns when the screen rotates. Default = off.
Include EDHS: Include EDHS in panel title	Check to include the EDHS in the panel title bar. The panel name is always present. Default = on.
Panel name size: Size	Select from Small   Medium   Large. Default = Medium.
Return to Panel Page: Return to Panel Page	Return to your last panel page if your EDHS is the same. Default = off.
Gestures: SIP drawer swipe down	Default = on.
Gestures: Navigation bar Auto hide	Default = on.
Extra information: Panel key count in navigation	Check to add additional text to the panel screen navigation bar indicating the number of keys on the page. Default = off.
Extra information: Status bar colour	Default = on.
Key Options: X/Point Level Button	If on, this additional control is shown as part of a key, allowing the pop-up slider (below) to be displayed. Default = off.
Belt Pack: Enable Belt Pack mode	Custom panel layout for Belt Pack users. Default = off.
Belt Pack: Keys	This only applies when Belt Pack mode (above) is enabled. Select from 2   4   6   8. Default = 6.

6.4.5 Advanced



The **Advanced** dialogue is displayed, allowing changes to advanced settings. Tap “Back” to commit changes and return to the panel.

Field	Description
Always Confirm Quit	Default = on.
Use Non-Wi-Fi Connections	If set “on”, connection will be established over mobile data, which may incur additional charges. Default = off.
Allow Momentary Key Types	Default = off.
PTT Trigger Action	Select from Toggle   Hold. Default = Toggle.
Vibration: Allow vibration feedback	Default = on.

## 6.5 OPERATION

### 6.5.1 Making and Receiving Panel-Panel Calls

Calls between panels, both hardware and virtual, take place along similar lines.

#### Making a call

The most commonly used key is **Speak (default)**, which has two methods of operation.

- Tap on – tap off. A short press turns on “speaking”: a second short press turns it off.
- Press and hold. The call is active while you maintain the key pressed – it ceases as soon as released. This option is only available if **Allow Momentary Key Types** is enabled from the **Advanced** menu.



While activated by either method, the key tally changes colour to red.

#### Receiving a call

No action is needed to receive a call – incoming audio from the other party is heard immediately.



The key tally changes colour to yellow, showing that the operator **Desk** is speaking.

#### Replying to a call

To reply to an incoming call, locate the key showing the yellow tally, then follow either method described above to make a call.



If both parties are speaking (and therefore listening) simultaneously, the key tally will change to red/yellow.

#### Adjusting the level of a call

While a call is in progress and a listen tally (normally yellow) is displayed, the level of that call can be adjusted. This is useful if a particular source is unusually quiet or loud but it is important to understand that it does not change the overall (loudspeaker) volume.

<p>Tap and hold the key until the X/Point Level pop-up appears.</p>	
<p>Only the level of this specific source/destination pair (or Crosspoint) is adjusted. Move the slider and tap <b>OK</b> to complete the action. Tap <b>RESET</b> to return the X/Point Level to 0 dB. Any change is temporary and the X/Point level will be reset to 0 dB the next time the panel is opened. A persistent adjustment can be made by the system administrator, using Gateway.</p>	

**Note:** Red and Yellow are the default key tally colours, but they can be changed in the Preferences menu.



### 6.5.2 QRS (Quick-Response) Key

A QRS key is a useful addition to any panel configuration.

- An incoming call will normally be shown on a pre-assigned key, dedicated to the caller; see above, the caller is “Desk”.
- If a dedicated key has not been assigned, the second-choice location to show the caller is a Quick-Response (QRS) key. A QRS key indicates the caller and supports replies in much the same way as a dedicated key.
- If there is neither a dedicated key nor a QRS key, the incoming caller will still be heard but it will not be possible to reply.

	<p>The QRS key label is initially &lt; &gt;</p>	
	<p>Caller H1S36 does not have a dedicated key on the panel so the QRS key is used. Label and tally change accordingly.</p>	
	<p>Tap the QRS key to reply to H1S36: tap for a second time to end the call. You can reply multiple times but the target (H1S36) will automatically clear after a time preset by the system administrator.</p>	
	<p>Tap and hold the key to see more options.</p>	

See sections 6.5.1 (above) and 6.5.4 for an explanation of X/Point Level. The option to **Clear Target** causes the label to revert to < > and removes the ability of the QRS key to reply to H1S36. **Clear Target** is also available when the call has finished and the QRS key is inactive.

### 6.5.3 Making and Receiving Phone Calls

The most commonly used phone key, Combined Listen/Speak is described below.

#### Making and Receiving Calls

	Making call	Receiving call
Start – all-clear		
To start a call, tap the right side of the key.		
Alternatively, tap and hold either the left or right side of the key. The list item <b>Dial Pad</b> will appear: tap again to show the <b>Dialer</b> .		
The originating panel now has an open line, ready to dial. The <b>Dialer</b> is shown on the panel making the call. See below.		

	Either (a) -- Tap <b>{Custom}</b> to show the keypad Or (b) -- Scroll through the list.
(a)	Enter a number on the keypad and then tap <b>Dial</b> .
(b)	Any numbers which have been saved in the panel's Phone Number List are shown by scrolling through the list. Tap the required number, then <b>Dial</b> .

	Making call	Receiving call
The receiving panel now indicates the incoming call with a flashing yellow tally and audible ring. To answer the call, tap the right side of the key.		
While the call is in progress all tallies remain lit.		
Either party can place the call "on hold" by tapping the left side of the key. The panel which originated the call is placing it on hold.		

	Making call	Receiving call
The call is now “on-hold” and the tallies flash alternately.		
The call may be taken “off-hold” by tapping the left side of the key again.		
To end the call, either party can tap the right side of the key.		
Both panels return to the all-clear state.		

### 6.5.4 Adjusting Volume and Level

To adjust the overall volume of the loudspeaker or headset, open the menu and tap <b>Volume</b> .	
Adjust the volume by moving the slider, then tap <b>OK</b> .	
There are two ways to adjust the level of an individual source without affecting the overall volume:	
<ul style="list-style-type: none"> <li>Tap and hold the “listen” side of a key until the X/Point Level slider appears.</li> </ul>	
<ul style="list-style-type: none"> <li>If enabled in <b>Layout &gt; Key Options &gt; X/Point Level Button</b>, an additional section of the key also brings up the slider control.</li> </ul>	
Only the level of this specific source/destination pair (or Crosspoint) is adjusted. Move the slider and tap <b>OK</b> to complete the action. Tap <b>RESET</b> to return the X/Point Level to 0 dB. Any change is temporary and the X/Point level will be reset to 0 dB the next time the panel is opened. A persistent adjustment can be made by the system administrator, using Gateway.	