

VZX-8 8-Zone Audio Processor

Q-SYS plugin



Release Notes

Release Date	Version	Changes
12/2025	v1.0.0	<ul style="list-style-type: none">• First release.• The plugin was developed and tested using Q-SYS Designer 10.1.0• Use of the Dynacord OMNEO Discovery plugin is optional but, if used, it must be v2.0.1 or later (all versions prior to v2.0.1 will not discover the VZX-8 processor).

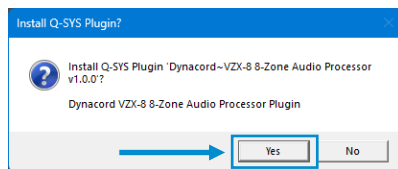
1. Installing the plugin

The plugin was developed and tested with Q-SYS Designer v10.1.0. Although untested, it should also work with earlier versions from v9.0 onwards. The latest version can be downloaded from the QSC website. If necessary, install Q-SYS Designer following the instructions given by QSC.

Note: Plugins use the Q-SYS Scripting Engine, which is a licensed feature on certain Cores prior to v10.0.0. You may need to purchase and install a feature license from QSC in order to deploy this plugin on a Core. More information can be found in the Q-SYS Designer Help and on the QSC website.

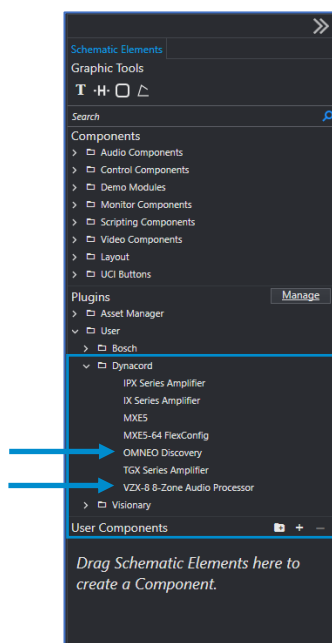
To install the plugin:

1. Double-click the plugin file **Dynacord VZX Series vx.x.x.qplugx** then click **Yes** in the confirmation dialog to complete the installation.



2. Double-click the plugin file **Dynacord OMNEO Discovery vx.x.x.qplugx** to install it in the same way. **Note:** You must use v2.0.1 or higher of the OMNEO Discovery plugin. Earlier versions will not be able to discover the VZX-8.
3. Open Q-SYS Designer. The plugins are located in the right-side **Schematic Elements** pane. They can be found in the Plugins section by expanding the menu option, **User > Dynacord**.
4. The plugins are now installed and ready for use in your Q-SYS designs.

You can also manually install the plugins by copying the files into the Plugins folder (typically located) at: C:\Users\username\Documents\QSC\Q-Sys Designer\Plugins



2. Removing the plugin

If you need to remove the plugin you can do this by deleting it from the Plugins folder (typically located) at: `C:\Users\username\Documents\QSC\Q-Sys Designer\Plugins`

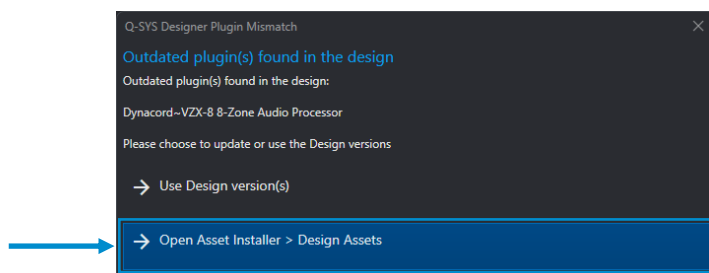
Note: This will not remove the plugin from any of your design projects. If you need to remove it from a design you will need to manually delete each plugin component added to the design.

3. Updating the plugin

If a newer version of the plugin becomes available you can update it by following the procedure to install the plugin above. Once a newer version is installed, Q-SYS Designer will ask if you want to update to that version when you next open a design containing the plugin.

Select the option to **Open Asset Installer > Design Assets** to update each instance of the plugin in the design. The design will be updated when you next save and deploy it to the Core.

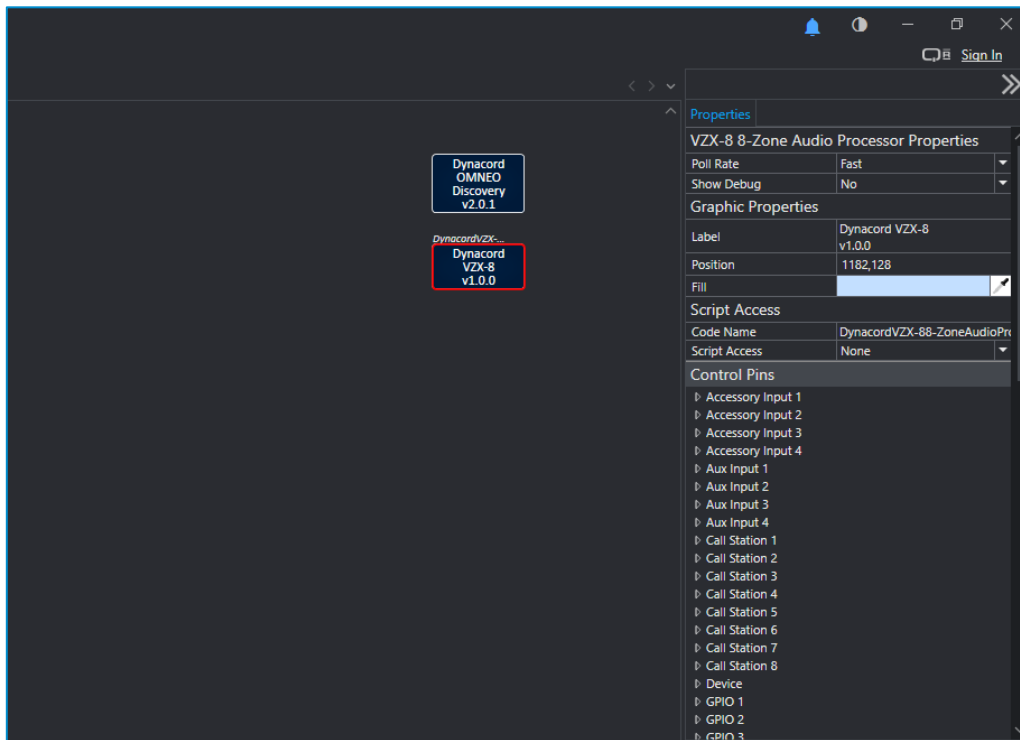
Note: If you don't want to update the plugin at this time select the option to **Use Design version(s)** instead.



4. Plugin overview

Drag an **OMNEO Discovery** component, and a **VZX-8 8-Zone Audio Processor** component from the **Plugins** pane onto the **Schematic**. Click the VZX-8 component to select it. This will also display its properties in the right-hand **Properties** pane of Q-SYS Designer.

Properties



Poll Rate: Combo box to select how frequently the device status is refreshed, the default setting is fast. The available options are;

- Fast - (updates every 100ms)
- Medium - (updates every 500ms)
- Slow - (updates every 1s)

For most applications the refresh rate can be left on the Fast setting as this will give the best graphical display for the meters and other real-time status controls. If the network is very congested, or you are working with a very large number of plugins, using a slower setting will consume less network bandwidth and Q-SYS processing horsepower.

Show Debug: Combo box with Yes/No option, the default is No. When set to Yes, the plugin will display the Q-SYS Debug Output window below the device's control panel. The Debug Output window displays the list of devices (of the same type) discovery by the OMNEO Discovery plugin, status and error messages, and log messages that are written to the Core's event log. Log messages are written to the Debug Window even in emulation mode, enabling you to test various device error log settings before deploying to your Core.

Graphic Properties

Position: Coordinates of the plugin component on the Schematic page.

Fill: Sets the background colour of the plugin component.

Refer to the Q-SYS Designer Help for more information on Graphic Properties.

Control Pins

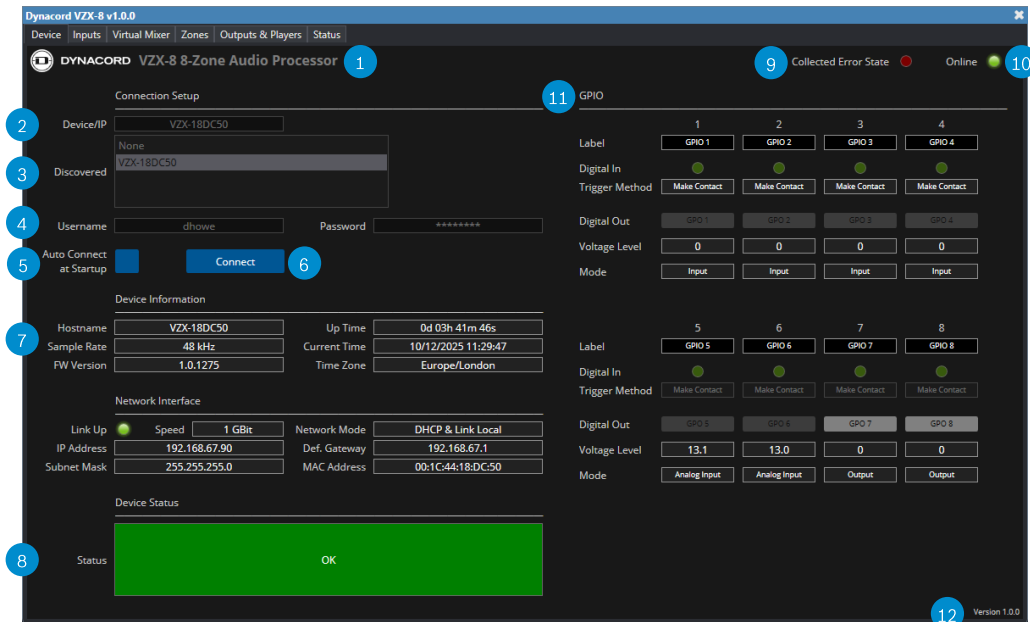
Control Pins are an advanced Q-SYS Designer function that enable controlling and monitoring of many of a plugin's parameters via other Q-SYS Control Components.

Using Control Pins and Control Components is beyond the scope of this user guide. However, there are examples of using Control Pins in the Q-SYS Designer Help.

Control Panel

Double-click the VZX-8 plugin component to open its control panel. The controls for device information, Inputs and zones, the virtual mixer, media player controls, and status are shown over several pages. Click the tabs at the top of the control panel to change pages.

Device page:



1. Displays the VZX-8 model.
2. **Device/IP:** Displays the VZX-8 selected from the 'Discovered' list of devices, or allows you to manually enter the IP address.
 - **Discovery mode:** Use the OMNEO Discovery plugin to find OMNEO devices on the network. Once the Discovery plugin has found devices, they appear in the 'Discovered' box. Select the device you want to control from the list. **Note:** The list is filtered so it will only show VZX-8 audio processors. Other OMNEO devices will not be displayed here. There are plugins available for other Dynacord devices too, so the devices displayed in the 'Discovered' box will be dependent on which plugin is being viewed.
 - **Manual mode:** The IP address can be manually entered into the 'Device/IP' box in the format `<IP address>:<Port Number>`, (for example, 192.168.1.100:443). The port number is optional but, if included, it must be port number 443 otherwise the VZX-8 will reject the connection. Note: You can also use port 80 for an insecure connection provided 'HTTP Enabled' is enabled in the **Security > API Settings** available in the **Settings** page of the VZX-8 web app interface. However, this mode is not secure and all information is exchanged without encryption. It is recommended to use a secure connection via port 443 whenever possible.

Tip: Use manual mode when you need to connect to a device on a different subnet, as the Discovery plugin is only able to discover devices on the same subnet as the Q-SYS Core. A network router, or layer 3 switch which supports routing, will also be required to route traffic between subnets.

Note: Unless you are specifically routing traffic between subnets, and have configured your network correctly to allow this, it is important that both the Q-SYS Core and the VZX-8 have IP addresses that are in the same range on the same subnet, otherwise discovery for the VZX-8 will fail. This is usually satisfied if all your network devices are set to obtain an IP address from a DHCP server, and an active server is available on the network. If there is no DHCP server a VZX-8 will default to a link local address (169.254.X.X), in which case your Q-SYS Core must also be assigned an address in this range.

Link local is an addressing system that automatically assigns an IP address to a device (in the link local range), if a DHCP server is not enabled on the network, and it has not been configured with a static IP address.

You can assign a static IP address to a VZX-8 through the web app on the **Settings > Network** page. On this page, change the 'Addressing Mode' to 'Static IP' and then enter the IP settings required in the relevant boxes. **Note:** This operation is carried out on the VZX-8 web app not in Q-SYS designer.

Discovery uses multicast UDP on port 5353, it may be necessary to allow this port on some firewalls and/or network switches. If the discovery plugin fails to find any devices these are some of the first things you should check when troubleshooting.

3. **Discovered:** Displays a list of compatible devices discovered by the OMNEO Discovery plugin. The list is automatically updated as devices come and go from the network. Select the device you want to connect to from the list, or select 'None' to clear the currently selected device. If no devices appear in the list check the OMNEO Discovery plugin has been added to your Q-SYS design and that discovery is actually running (make sure the 'Start' button is pressed on the Discovery plugin). Refer to the OMNEO Discovery plugin user guide for further information.
4. **Username and Password:** Enter the login credentials configured for the device. A valid username and password are always required and the VZX-8 will reject the connection without them, or if either is invalid. For security, once a password has been entered it will be replaced by asterisk symbols.

Tip: The Device/IP, Discovered, and User Credentials boxes are disabled while you are connected to a device. If you need to make changes to the connection settings, disconnect from the VZX-8 first. Toggle the Connect button on the plugin to disconnect from the VZX-8, don't disconnect from the Q-SYS Core!

5. **Auto Connect at Startup:** When this button is enabled (blue background = enabled) the plugin will automatically attempt to connect to the VZX-8 whenever the design is saved to the Core, or the Core is rebooted/power cycled.
6. **Connect:** Toggle this button to connect to, and disconnect from, the VZX-8 (blue background = connected).
7. **Device Information:** Displays information about the VZX-8 including firmware version, the current sample rate, device uptime and current real time clock, network interface information, and more.

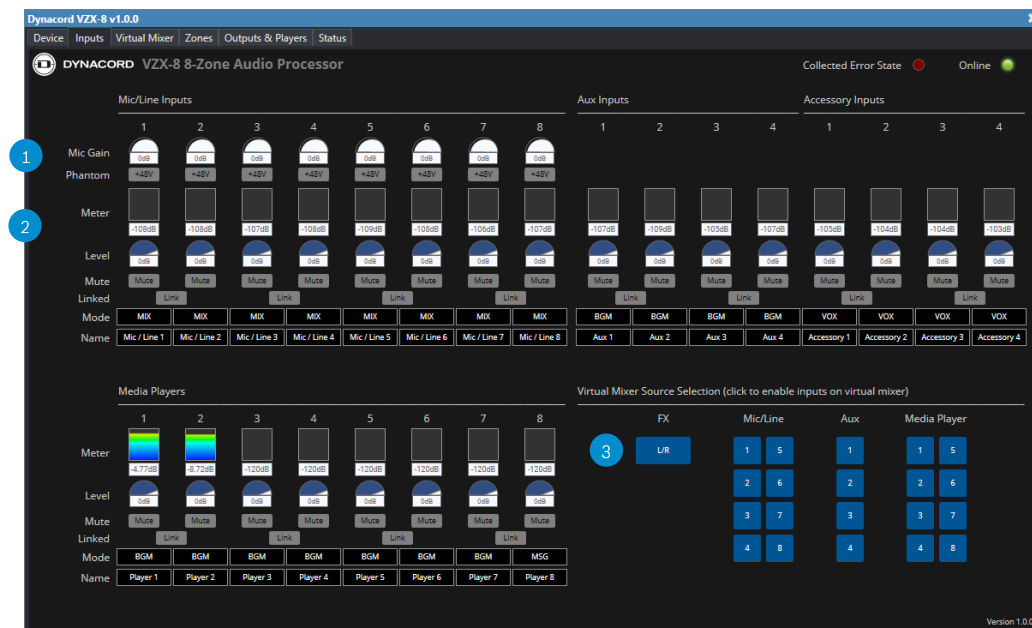
8. **Status:** Displays the current status of the VZX-8;
- Grey – Disconnected.
 - Blue – Initializing: connection to the VZX-8 is underway, it will be available soon. During initialization all device parameters are being synchronized with the plugin. This may take a few seconds.
 - Green – OK: the plugin is now connected to the VZX-8.
 - Orange – Compromised: the VZX-8 is reporting a compromised error state.
 - Red – Fault: the VZX-8 is reporting a fault error state.
 - Dark red – Device Missing: the VZX-8 is not responding to the plugin or a connection error has occurred. The plugin will automatically try to reconnect to the VZX-8 should the connection fail. It will continue to retry the connection every few seconds until the connection can be restored, or the **Connect** button on the plugin is toggled to off.
9. **Collected Error State LED:** Glows red whenever one or more supervision errors are reported by the VZX-8. The supervision error flags that activate this LED are defined by which errors have their corresponding **Collect** button enabled. This LED is displayed on every page of the plugin control panel.
10. **Online LED:** Glows green when the VZX-8 is connected to the plugin component. This LED is displayed on every page of the plugin control panel. The LED will flash if the connection to the device fails, or the device is missing from the network. The plugin will automatically try to reconnect to the VZX-8 should the connection fail.
11. **GPIO:** General purpose input/output's are the eight control ports available on the rear panel of a VZX-8. They can be used to activate external devices such as relays and LED indicators, or take input from external devices such as switches, potentiometers, and fire alarm panel relay contacts. Refer to the VZX-8 user manual for information on using these control ports. As well as controlling actions defined on the web interface, you can wire the plugin GPIO control pins to other Q-SYS Control Components to use them to control Q-SYS logic too.
- **Digital In** – glows green when the corresponding GPI digital input is on. The LED will always be off if **Mode** is not set to 'Input'. You can use the 'GPI Digital' control pin to trigger other logic within your Q-SYS design. The GPI input on the VZX-8 control port would need be connected to some form of physical switch to activate the input.
 - **Trigger Method** – combo box to select whether the GPI will be activated when the connection is made, or broken. Only available when **Mode** is set to 'Input'.
 - **Digital Out** – toggles the corresponding VZX-8 GPO on and off (blue background = on). Only activates the GPO on the VZX-8 if **Mode** is set to 'Output'. You can connect Q-SYS logic to a 'GPO' control pin to enable Q-SYS to activate a GPO output. The GPO output on the VZX-8 control port could be connected to a relay or LED to signal an output operation or status.
 - **Analog In** – displays the value of the DC voltage present at the corresponding GPI input on the VZX-8. The value will be 0 (zero) if **Mode** is not set to 'Analog Input'. You can use the 'GPI Analog' control pin to trigger logic requiring a variable input within your Q-SYS design. The GPI input on the VZX-8 control port would need to be connected to some form of

potentiometer, or resistor network to vary the voltage at the input. The actual voltage measured at the GPI Analog control port will be transferred to the GPI Analog control pin in your Q-SYS design. The voltage range is variable between 0 and approx. 13 Volts DC.

- **Mode** – combo box to select the required mode for each GPIO. The choices are Disabled, Input, Output or Analog Input. You can configure the mode of each GPIO independently.

12. **Plugin version:** Displays the major.minor.build version of the plugin.

Inputs page:



1. Mic/Line Inputs:

- **Mic Gain** – sets the input gain of the mic/line input between 0 and 60 dB.
- **Phantom** – enables 48V phantom power on the mic/line input (blue background = enabled).

2. All Inputs (Mic/Line, Aux, Accessory, Media Player):

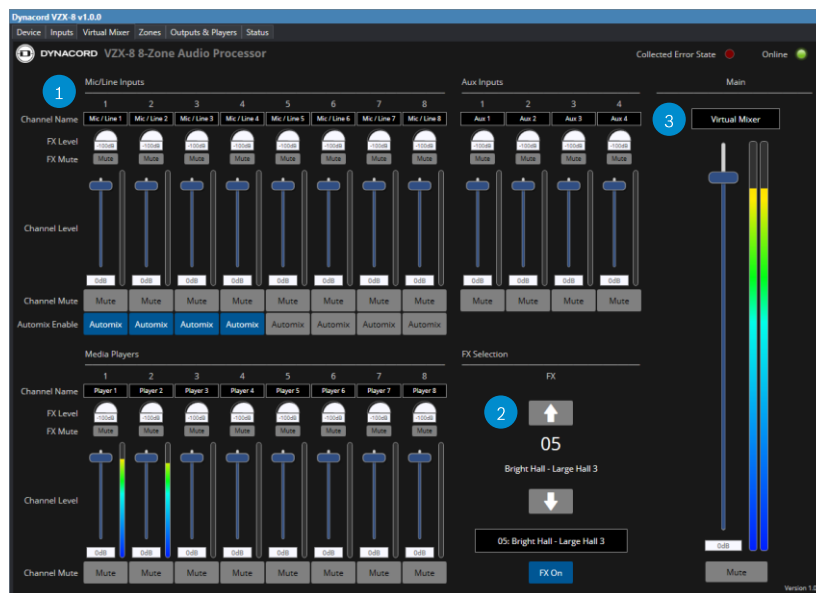
- **Meter** – VU signal meter for the input channel.
- **Level** – adjusts the level of the input channel between -100 dB and +10 dB.
- **Mute** – mutes the input channel.
- **Linked** – links the mute and level functions of an adjacent pair of inputs.
- **Mode** – combo box to select the input mode of the channel. Different input types have different options for the mode of operation while the chosen mode will determine how the input will operate from the following options:
 - BGM: available on all inputs. When several inputs are set to BGM only one source within that BGM group for a given zone can be selected at a time. Selecting a different crosspoint connection on the zone matrix mixer will automatically deselect the previous one. Select this mode for input channels containing background music sources, TV audio and other input types where it makes sense for only one to be active at a time.

- MIX: available on all inputs except media players. When several inputs are set to MIX any combination of them can be selected on the zone matrix mixer crosspoint connections for a given zone at the same time. Select this mode for inputs that need to be mixed together simultaneously, such as microphones and radio microphones.
- VOX: available on all inputs except media players. VOX mode ducks other BGM and MIX inputs when there is audio present on the VOX input channel. Use VOX mode where it is desirable to attenuate other channels whilst the VOX channel is active, such as when a paging announcement is being made. You would typically want to set the accessory inputs (these are the audio inputs call stations will be connected to) to VOX but other inputs can also be set to VOX mode if required for your application.
- ANC: available on Mic/Line inputs only. The input will be used to control Ambient Noise Compensation (ANC) on one or more line outputs. Although the mode can be changed to ANC within the plugin, actually configuration of the ANC settings for each line output must be carried out using the VZX-8 web app.
- MSG: available on media player inputs only. When a media player input is set to MSG it is dedicated to playing messages and/or chimes used for paging announcements. In this mode a media player can play message files selected from the internal storage whilst in BGM mode music files can be selected from external storage on the SD card. Note: A selection of messages, chimes and alarm tones are pre-installed on the internal storage and you can also upload your own for specific purposes. On the other hand, the SD card is supplied empty allowing you to upload music files and playlists to suite your application. You can use this plugin to select and play each type of media file but actual management (uploading, deleting media files etc.) is handled with the VZX-8 web app.
- **Name** – user definable label for the channel.

3. **Virtual Mixer Source Selection:** The virtual mixer allows you to adjust the levels of various input channels using an iPad, the VZX-8 web app, as well as the virtual mixer page of the plugin. Each of the available inputs can be enabled for virtual mixer control independently. Toggle the inputs required for the virtual mixer (blue background = on). Inputs that are not enabled will be disabled on the Virtual Mixer page of the plugin and will not appear on an iPad being used as a control surface. The virtual mixer allows you to give users access to the mixer functions without given access to the entire configuration.

- **FX** – enables the digital effects processor controls on the virtual mixer. The VZX-8 features the legendary effects processor from the Dynacord PowerMate. Numerous different effects are available including reverbs, mono and stereo delays, chorus, flanger and many more.
- **Inputs** – individual enablement of Mic/Line, Aux and Media Player inputs. You can select any combination of inputs to appear on the virtual mixer. Note: If a Mic/Line input mode is set to 'ANC' the corresponding source selection button for the virtual mixer will be disabled. Mic/Line inputs configured for ANC cannot be used as general mixing inputs.

Virtual Mixer Page:



1. Mic/Line, Aux, Media Player Inputs:

- **Channel Name** – user definable label for the input channel.
- **FX Level** – controls the amount of the selected effect to be mixed with this channel.
- **FX Mute** – toggles muting the selected effect for this individual channel.
- **Channel Level** – controls the level for channel between -100 and +10 dB.
- **Mute** – toggles the channel mute.
- **Automix Enable** – toggles the automix function for each of the eight mic/line inputs. The gain-sharing automixer provides a more consistent output level when multiple microphones are open simultaneously and helps avoid an operator having to continuously adjust the microphone levels while different people are speaking. Active microphones will be turned up whilst inactive ones will be turned down, thus helping to eliminate acoustic feedback when multiple microphones are open at the same time. It is typically used for speech reinforcement in boardrooms, conference rooms and houses of worship.

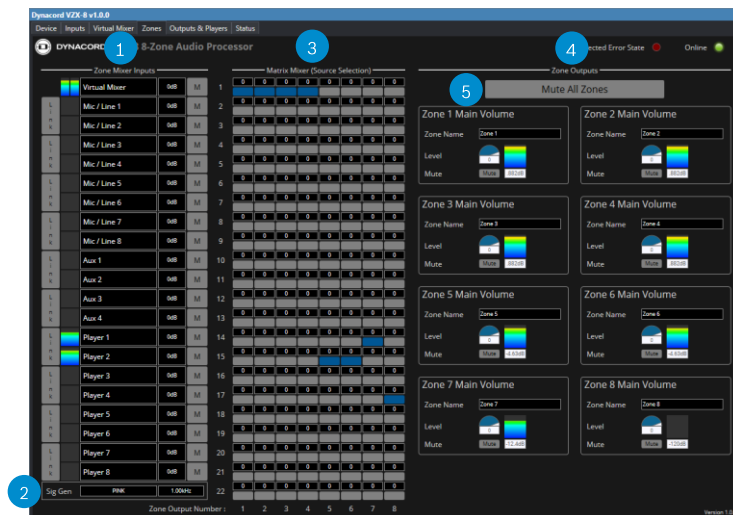
2. FX Selection:

- **Selection** – click the up and down array buttons to move up and down the available effects, or use the combo box below to select the required effect directly. The currently selected effect is displayed between the arrow buttons.
- **FX On** – toggles the effects on and off. This button turns the effects on and off globally for all inputs.

3. Main:

- **Name** – user definable label for the virtual mixer.
- **Level** – controls the output level of the virtual mixer between -100 and +10 dB.
- **Mute** – toggles the virtual mixer output mute.

Zones page:



1. Zone Mixer Inputs:

- **Link** – links the mute and level functions of an adjacent pair of inputs.
- **Meter** – VU signal meter for the channel at the input to the zone mixer.
- **Name** – user definable label for the channel.
- **Level** – adjusts the level of the input channel between -100 dB and +10 dB.
- **Mute** – mutes the input channel.

2. Signal Generator:

- **Type** – combo box to select the generator type, choose between white noise, pink noise and sine wave.
- **Frequency** – sets the frequency of the sine wave generator between 20 Hz and 20 kHz. Has no effect when pink noise or white noise is selected.

3. Matrix Mixer:

Inputs can be routed to each zone independently using the matrix mixer. Where the input mode is set to BGM for several inputs, only one of the inputs within the BGM group for a given zone can be selected at a time. When a new crosspoint connection is made for that zone, a previously selected crosspoint will automatically be deselected.

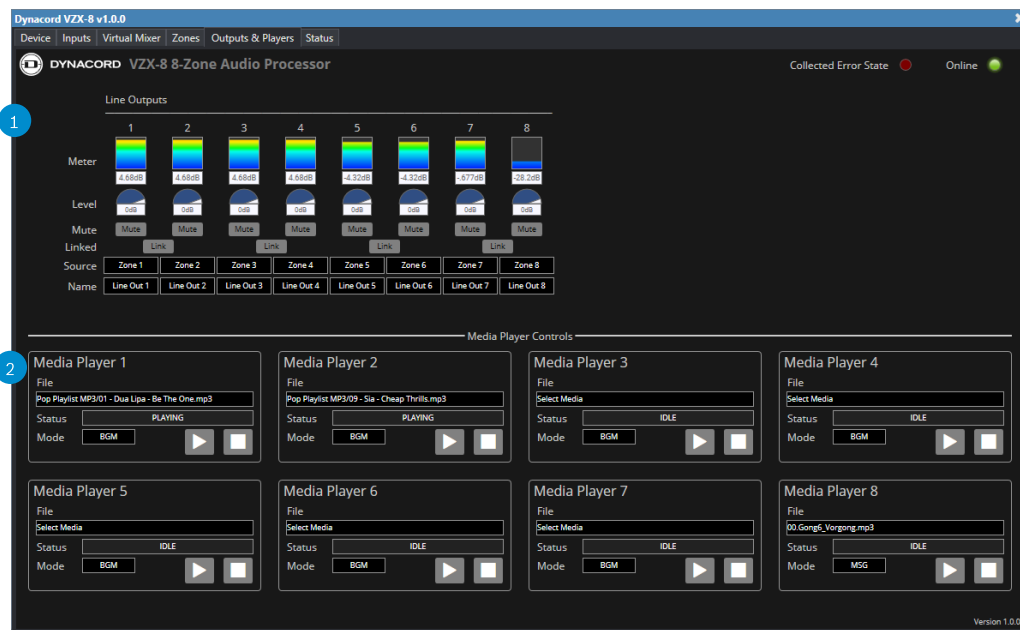
- **Crosspoint Level** – sets the input signal level that should be mixed to the output at the associated crosspoint between -100 and +10 dB. Enter the required value into the box.
- **Crosspoint Connect** – routes the input channel to the corresponding mixer output at the associated crosspoint (blue background = enabled).

4. Zone Outputs:

- **Zone Name** – user definable label for the zone.
- **Level** - adjusts the level of the zone output between -100 dB and +10 dB
- **Mute** – mutes the zone.
- **Meter** – VU signal meter for the zone output.

5. Mute All Zones – toggle button to mute and unmute all zone outputs simultaneously.

Outputs & Players page:



1. Line Outputs:

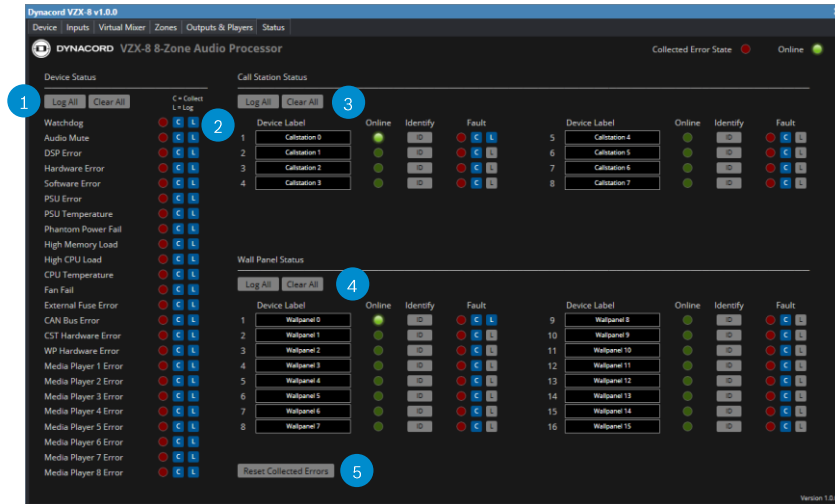
- **Meter** – VU signal meter for the output channel.
- **Level** – adjusts the level of the input channel between -100 dB and +10 dB.
- **Mute** – mutes the input channel.
- **Link** – links the mute and level functions of an adjacent pair of outputs.
- **Source** – selects the zone mixer output zone to route to this line output.
- **Name** – user definable label for the output.

2. Media Players:

- **File** – combo box to select the media file or playlist to play.
- **Status** – current status of the media player.
- **Mode** – combo box to select the mode of the media player.
 - BGM: plays media available on the external SD card. In BGM mode, once started the selected media file or playlist will repeat indefinitely until stopped by the user.
 - MSG: plays messages, chimes or alarms from the internal storage. A media player in MSG mode can also be started from actions and call station buttons defined in the VZX-8 web app. In MSG mode the selected media will play once and then stop if started from the play button. If triggered by an action defined in the VZX-8 web app, the media can be assigned a priority and the number of repetitions required. Refer to the web app user guide for further details.
- **Play** – play button starts playing the selected media.
- **Stop** – stop button stops playing the selected media.

Status page:

1. **Log All / Clear All:** Clicking these buttons provides a shortcut to selecting, or deselecting, all of the device error detection Log buttons for the current section – Device, Call Stations, or Wall Panels. Individual error **Log** buttons can then be toggled to customise the selection.



2. Device Status:

- **State flags** – LED's corresponding to the state flags active on the VZX-8. The LED glows red to indicate that the state flag is active and potentially signalling an error or fault condition.
Collect – enabled/disables collecting the error status of the corresponding state flag. Errors that are not collected will be ignored by the **Status** box on the **Device** tab. They will also not be logged (if enabled) or sent to the Status control pin.
- **Log** – enables/disables writing the corresponding device error to the Core's event log (the corresponding Collect button must also be selected).

3. Call Station Status:

- **Device Label** – user definable name for the call station.
- **Online** – LED glows green when the corresponding call station is connected and operational on the accessory port.
- **Identify** – toggles lighting up the indicators on the corresponding physical call station for easier identification.
- **State flags** – see device status.
- **Collect** – see device status.
- **Log** – see device status.

4. Wall Panel Status:

- **Device Label** – user definable name for the wall panel.
- **Online** – LED glows green when the corresponding wall panel is connected and operational on the accessory port.
- **Identify** – toggles lighting up the LCD display on the corresponding physical wall panel for easier identification.

- **State flags** – see device status.
- **Collect** – see device status.
- **Log** – see device status.

6. Getting started

1. Drag an OMNEO Discovery plugin onto the Schematic. Only one discovery plugin is required in a design as it sends the discovered device information to all other Dynacord OMNEO enabled components. Using the OMNEO Discovery plugin is optional but it automates finding the IP address of each OMNEO device on the network. This is most useful if you are not using static IP addressing as the IP address assigned to each device may change over time. If you are using static IP addresses, you can instead enter the address directly into the **Device/IP** box on the plugin **Device** page once your design has been deployed to the Core.
2. Drag a VZX-8 plugin onto the Schematic for each physical device you have in your system.
3. Set any properties required on the properties pane.
4. Save the design to the Core (press F5), then double-click the OMNEO Discovery component to open its control panel, select the required network interface from the combo box, then click 'Start' to begin device discovery. Refer to the OMNEO Discovery user guide for further information on working with the discovery plugin.
5. Once your device is displayed in the 'Discovered OMNEO Devices' list of the Discovery plugin, double-click the VZX-8 component. On the **Device** page, select your VZX-8 from the 'Discovered' list box. It appears in the **Device/IP** box to confirm your selection. Alternatively enter the IP address in the **Device/IP** box instead. Click **Connect** to connect to the device.
6. If you don't have a Core available, the plugin can also be tested in Emulation mode (press F6), then follow the remainder of steps 4 and 5.
7. When the plugin connects to the VZX-8 it will synchronise with the control values currently stored on the device. This may take a few seconds. If the values on the device are different, the values in the plugin will be updated to match.

Tip: You can use the 'Status' control pin of the plugin to send the status of multiple devices to a Q-SYS Status Combiner component.

IMPORTANT: You **MUST** use the 'Status' control pin to connect to a Status Combiner component. Other error flag control pins on the plugin have Boolean (true/false) outputs. These can be used to drive other operations and signal LED's in your Q-SYS project but they do not produce the output format expected by the Status Combiner.

7. Application Note – Scheduling Message Actions

The VZX-8 web app allows you to configure actions. Actions can carry out a particular task and can be started from a GPI input or from a button on a call station. There are currently three different action types available:

- Play Message – starts a message macro into the selected zone(s)
- Set GPO – turns on/off a GPO output on the control port
- Mute Zone – mutes one or more zone outputs

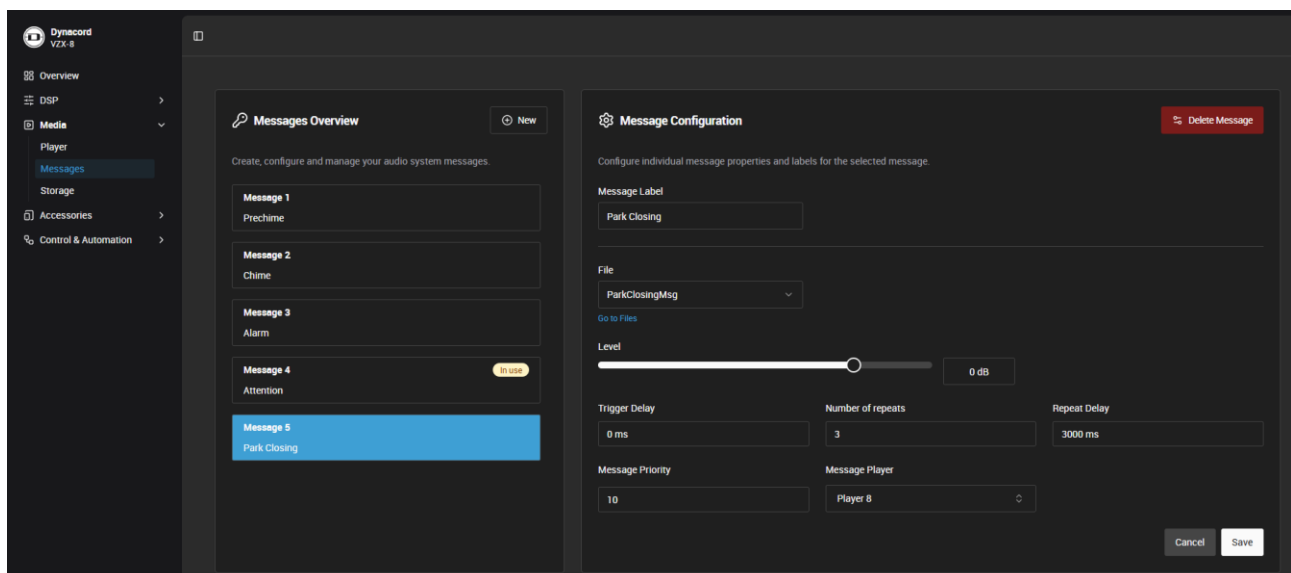
You can replicate the Set GPO and Mute Zone actions using control pins available on the plugin. This will allow you to use Q-SYS logic or the Q-SYS ‘When’ component to set GPO’s and mute zones based on other logic in your design, or at a certain day and time.

Triggering a ‘Play Message’ action is not currently available from the plugin though – this will be added in a future update of the VZX-8 firmware. Until then, this application note shows an alternative way of triggering Play Message actions from within Q-SYS using the VZX-8 Open Interface protocol.

Step 1 – Configure the message macro and Play Message action using the VZX-8 web app.

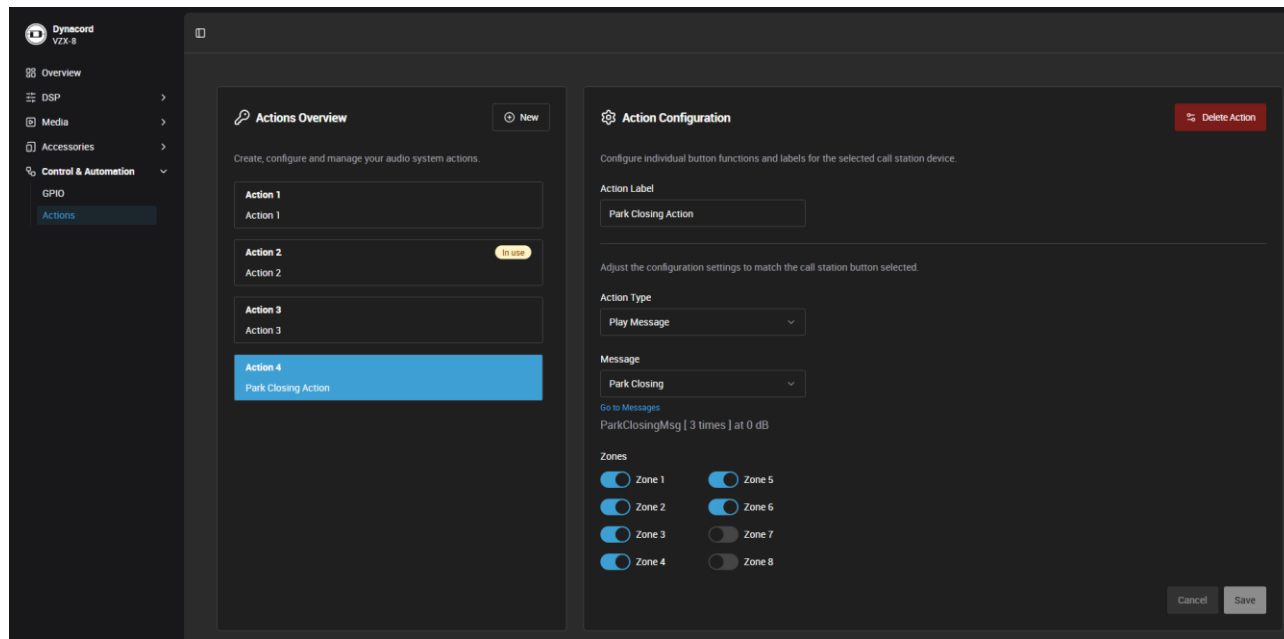
The message macro allows you to specify the message to be played out, its volume level, the number of repeats required, and other properties too. Here we’ve created a macro to play a ‘Park Closing’ message three times with a 3 second (3000 ms) delay between the repeats. The park closing message was uploaded to the VZX-8 prior to creating the message macro. To do this use the **Media > Storage** page of the web app to upload a media file with the required message to the **Internal Storage** of the VZX-8. You will also need to set the player mode of at least one media player to ‘MSG’. You can change the player mode on the Inputs page of the VZX-8 plugin, or the **DSP > Inputs > Media Player** page of the web app. For this example, media player 8 is the designated message player.

Give the message macro a helpful name and, once all the message properties have been entered, click ‘Save’ to store the message configuration.



After the message is defined we next need to create a 'Play Message' action. This action type lets you specify the message to play and the zone(s) it should be broadcast into. Give the action a helpful name, select 'Play Action' from the 'Action Type' combo box and the message macro to be started from the 'Message' combo box. Finally set the zone(s) the message should be played to and click 'Save' to store the action.

For this example, the Park Closing message macro will be played out to zones 1 through 6. You can of course create more actions to play the message to a different set of zones.



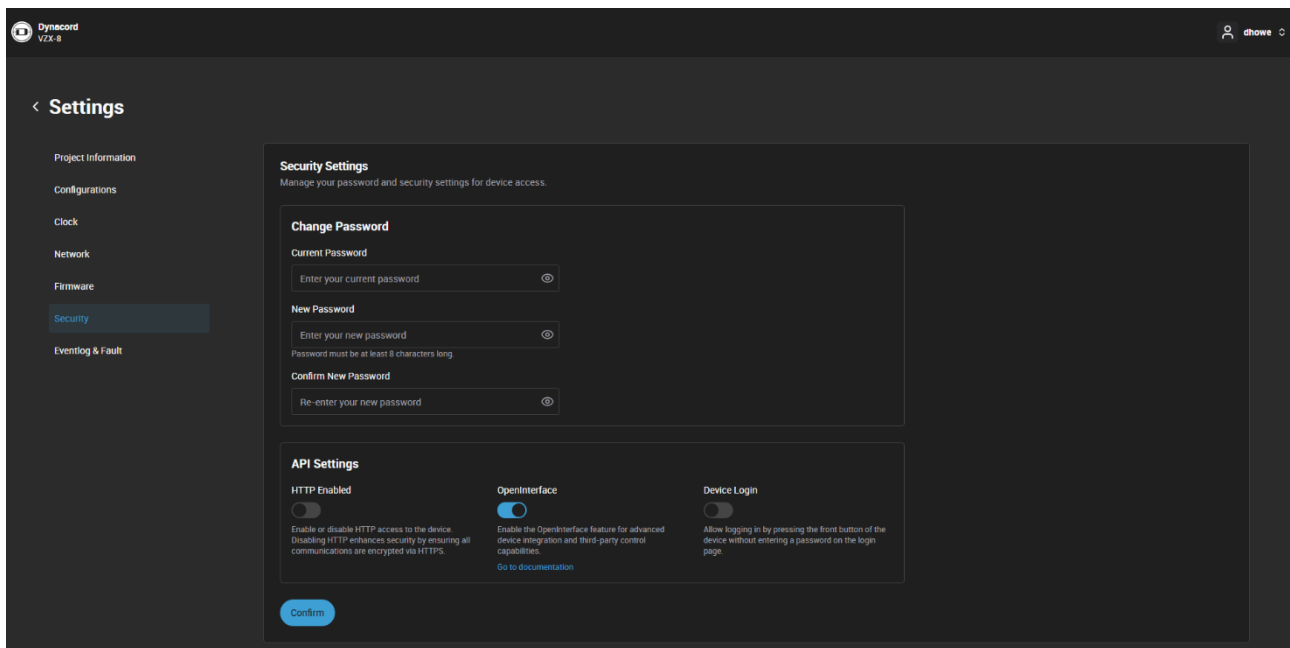
Make a note of the action number from the Actions Overview pane. Here the Park Closing Action is action number 4. We will use this action number to trigger the correct action from within our Q-SYS designer file.

Note: a maximum of 20 actions can be defined in the web app.

Step 2 – Enable the 'OpenInterface' protocol on the VZX-8 web app.

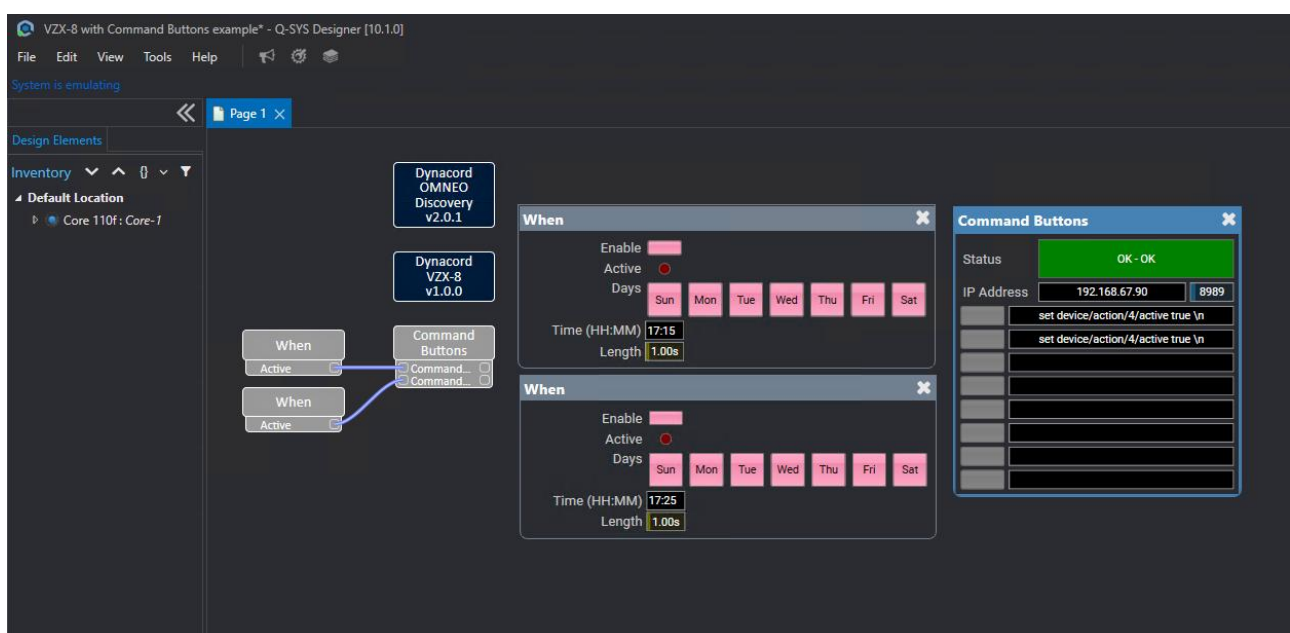
Go to the 'Settings' page in the app. Click on your 'user name' in the lower left corner of the app and select 'Settings' from the popup menu to open the Settings page. Then click 'Security' on the left-hand Settings pane. Finally ensure the 'OpenInterface' switch is enabled. If not (it is disabled by default), enable it and click 'Confirm'.

It may also be helpful to read the OpenInterface documentation at this point. Click the 'Go to documentation' link below the OpenInterface switch to view it in your browser.



Step 3 – Configure Q-SYS to trigger the action(s)

1. Add a '**Command Buttons**' component to your Q-SYS design from the **Components > Control Components** section of the Schematic Elements pane.
2. On the Command Button properties, check the 'Type' is TCP and enable the Trigger control pin for Command 1 and Command 2. The default Command Count is 8 but you can adjust this to suite your needs. Expose the Trigger control pins for additional commands as required.
3. Add two '**When**' components from the Control Components section.
4. Wire the 'Active' control pin of the When components to Trigger input pin 1 & 2 on the Command Buttons component.
5. Emulate the design, or load it to your Core.
6. Configure the Command Buttons and When component settings.



Command Buttons component settings

From the 'Open Interface Protocol Documentation' (see step 2 above for how to view this help file), we can see that the open interface requires a TCP/IP connection and the VZX-8 will be listening for clients on port 8989. You can use the OMNEO Discovery plugin, or the Device page of the VZX-8 plugin to see the current IP address assigned to the VZX-8.

Enter this IP address and port 8989 in the IP Address boxes on the Command Buttons control panel.

Again referring to the Open Interface documentation, scroll down to the 'Action Parameters' section to find that an action can be started using the command `device/action/[1-20]/active`. This is a Boolean (true/false) command and the section [1-20] will need to be replaced with the action number we want to start. Action number '4' for our example. Following the 'Protocol Characteristics' and 'Command' sections of the documentation, the complete command to send to the VZX-8 over the OpenInterface to trigger our action 4 will be:

```
set device/action/4/active true \n
```

Enter this command string into the boxes for commands 1 and 2.

When component settings

The When component will set its 'Active' control pin output to true at the specified day(s) and time. We have added two When components to trigger the park closing action, and hence play the park closing message to zones 1 - 6, at 17:15 and 17:25 every day of the week.

And finally

You can see it is quite straightforward to add multiple **When** components to trigger Play Message actions at different times of the day or days of the week. You can trigger the same Play Message action multiple times, create more actions to play different messages, or to broadcast the same message to different sets of zones.

Alternatively, you can use more advanced Q-SYS concepts such as more complex logic circuits or Lua scripts to trigger actions if the When component is not sufficiently granular for a particular project.

Simply add more action command strings to the Command Buttons to trigger different actions – just remember to change the action number as required, expose the Trigger input control pins and wire up the logic you need to trigger each action at the scheduled time.

Tip: As you need to enter the IP address of the VZX-8 into the Command Buttons component we recommend you assign a static IP address to your VZX-8 so it will not change over time, as could happen if a DHCP server or link local addressing is being used.

Direct support for actions will be added to the VZX-8 plugin in a future release but, in the meantime, this application note describes an alternative way of triggering Play Message actions from a Q-SYS design using the VZX-8 OpenInterface protocol.

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