

DIRECTOR

USER MANUAL

 **CONTROL U**





DIRECTOR CONTROL UI

USER MANUAL V1.3.6

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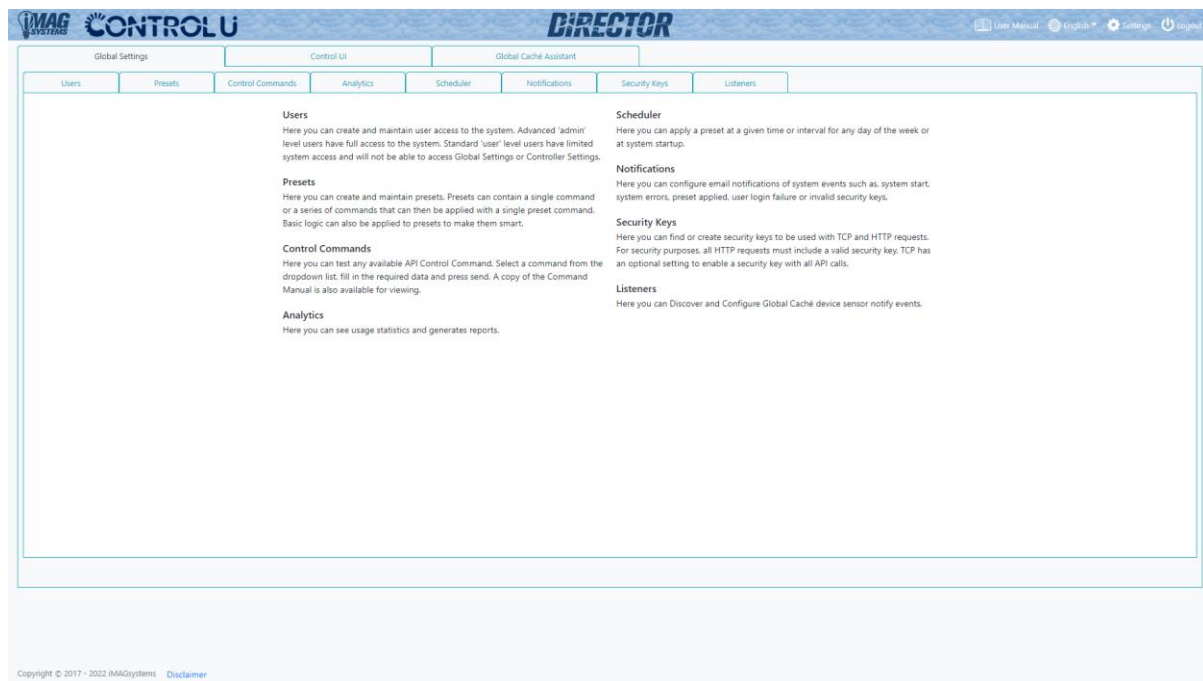
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1 Global Settings

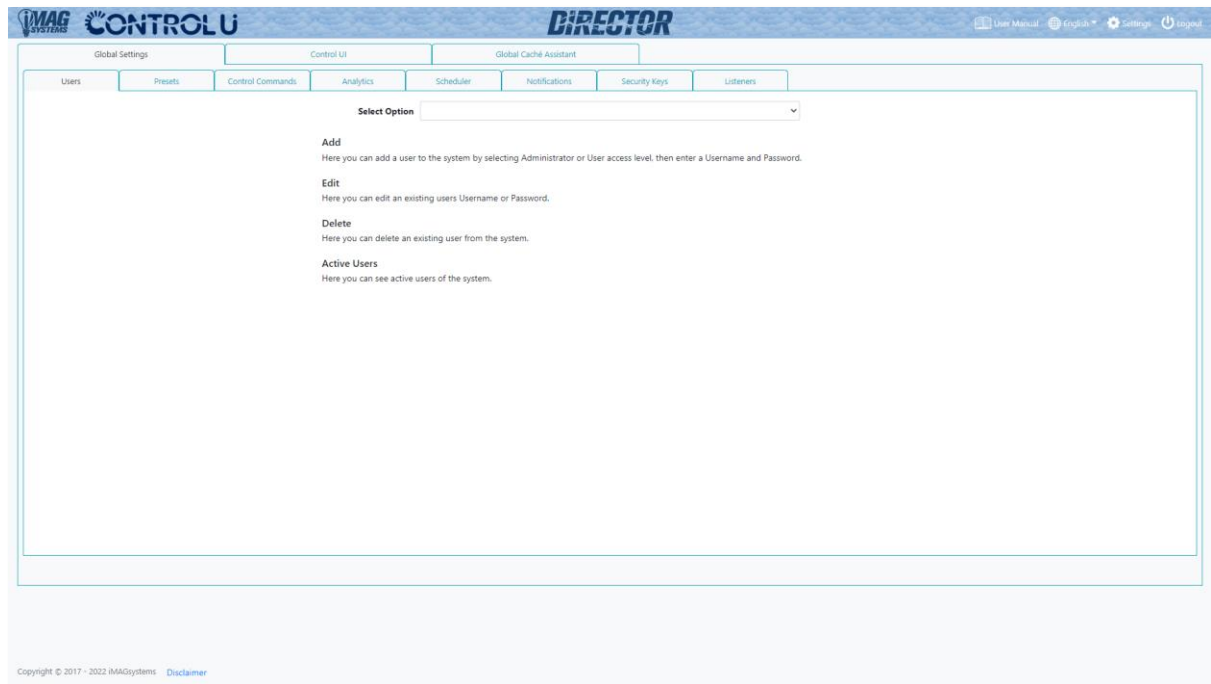
Here you will find all the global settings of the software.



1.1 Users

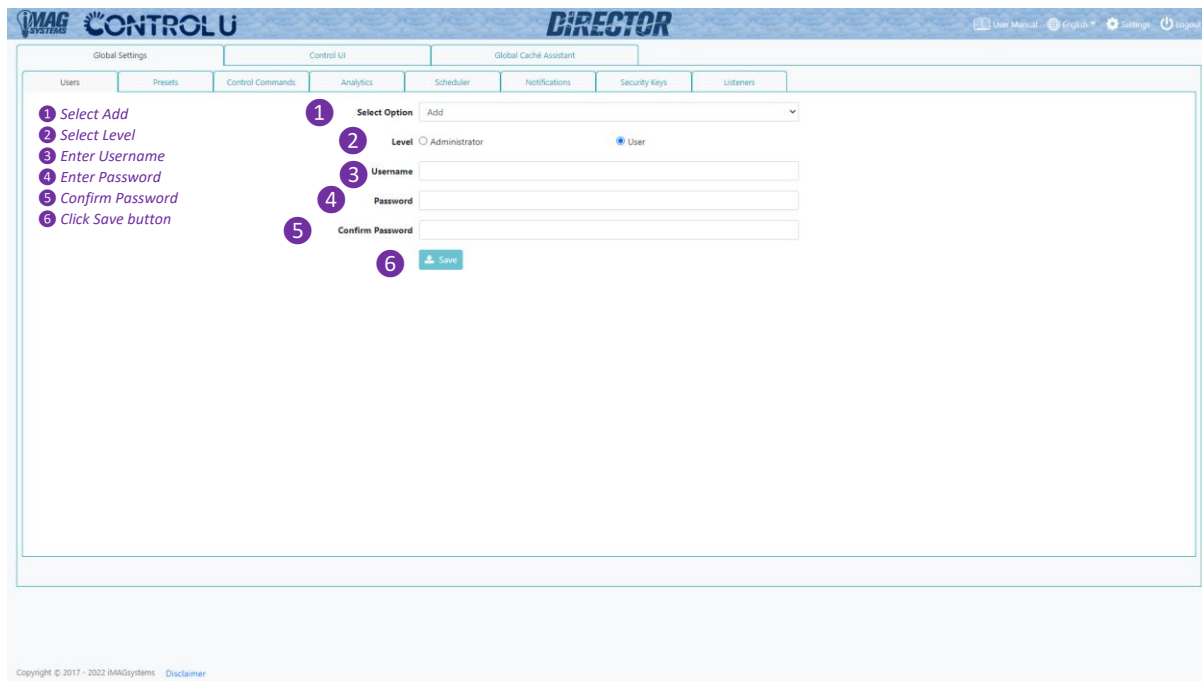
The system can be configured for user access control. Two levels of access are available, **administrator** and **user**. An **administrator** will have complete access, while a **user** is limited to the following areas:

- Control UI
- Global Caché Assistant



1.1.1 Add User

Here you can add a user to the system by selecting **Administrator** or **User** access level, then enter a name and password for the new user. For user level access you can also select the accessible groups and functions.



Global Settings | Control UI | Global Cache Assistant

Users | Presets | Control Commands | Analytics | Scheduler | Notifications | Security Keys | Listeners

1 Select Add

2 Select Level

3 Enter Username

4 Enter Password

5 Confirm Password

6 Click Save button

1 Select Option: Add

2 Level: ☐ Administrator ☒ User

3 Username:

4 Password:

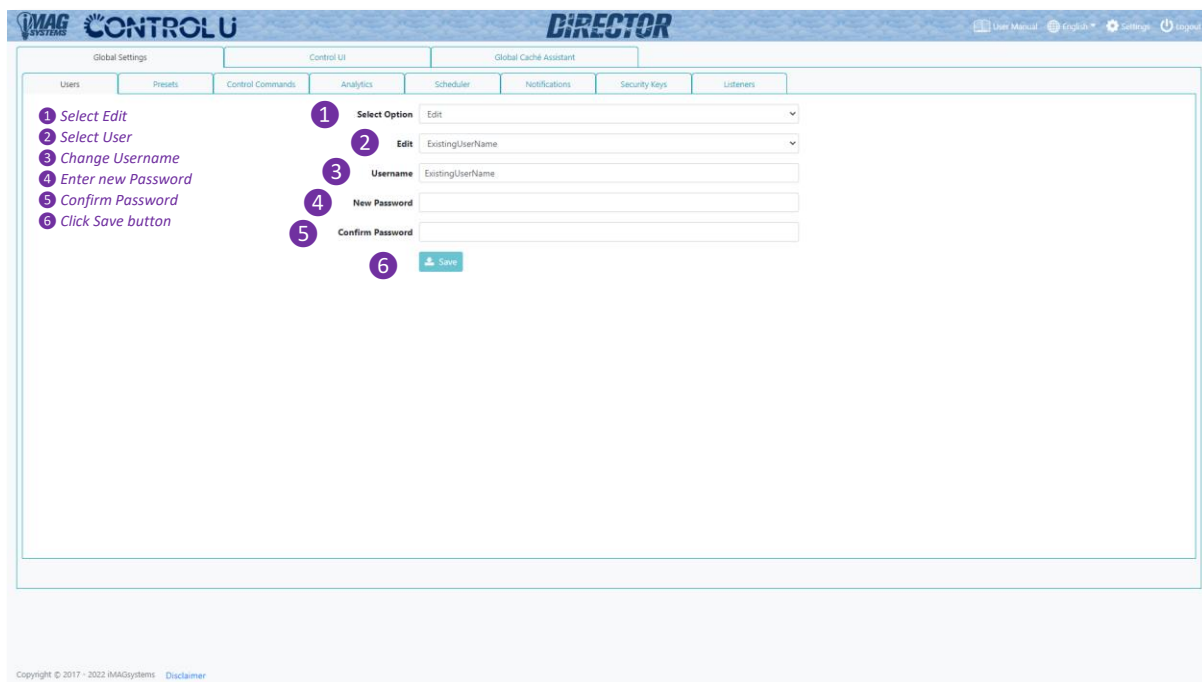
5 Confirm Password:

6 Save

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1.1.2 Edit User

Here you can edit an existing users Username, Password, allocated groups and functions.



Global Settings | Control UI | Global Cache Assistant

Users | Presets | Control Commands | Analytics | Scheduler | Notifications | Security Keys | Listeners

1 Select Edit

2 Select User

3 Change Username

4 Enter new Password

5 Confirm Password

6 Click Save button

1 Select Option: Edit

2 Edit: ExistingUserName

3 Username: ExistingUserName

4 New Password:

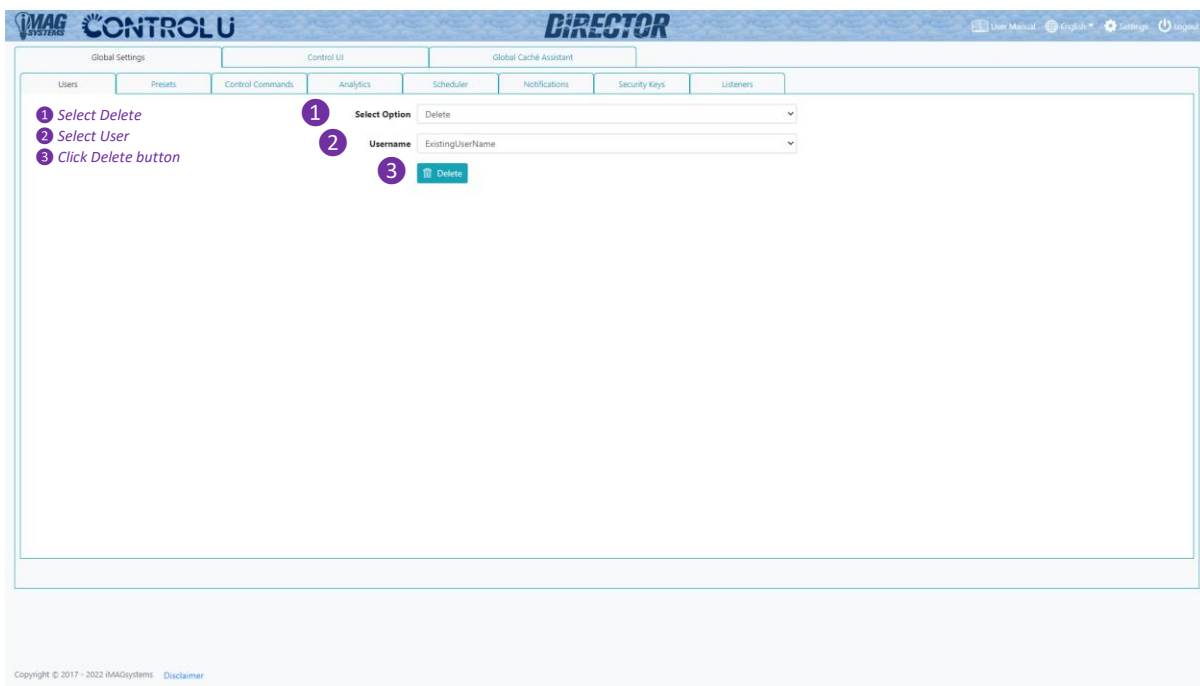
5 Confirm Password:

6 Save

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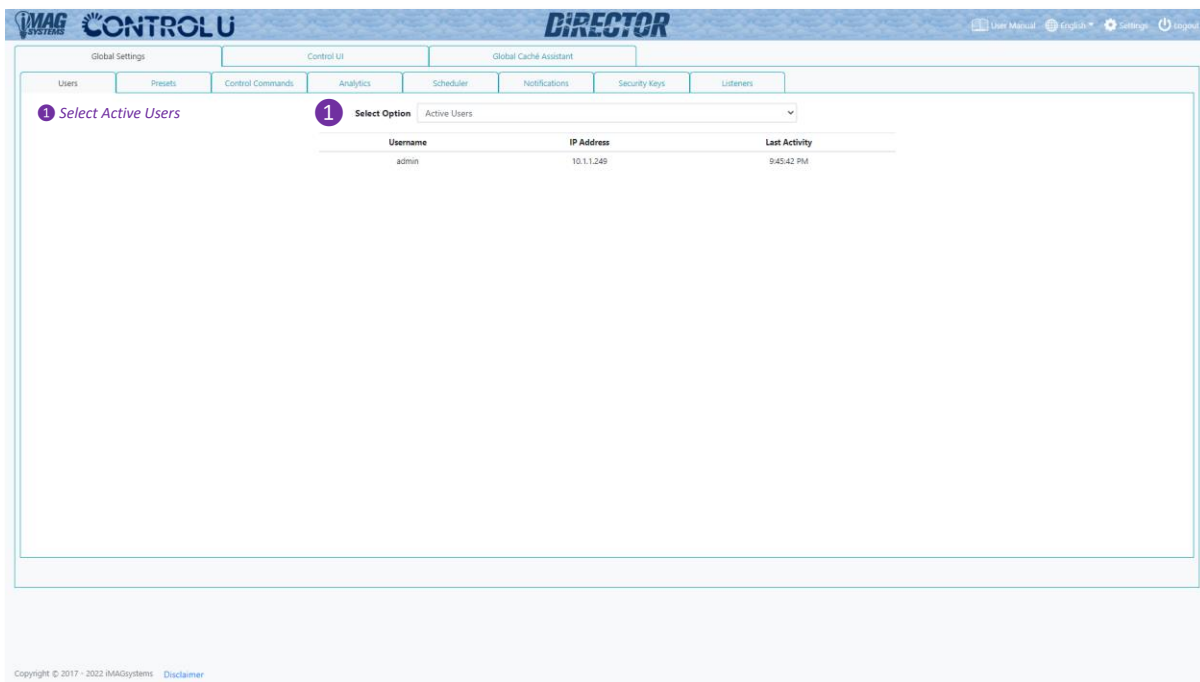
1.1.3 Delete User

Here you can delete an existing user from the system.



1.1.4 Active Users

Here you can see all the active users logged into the system and the time of their last activity.

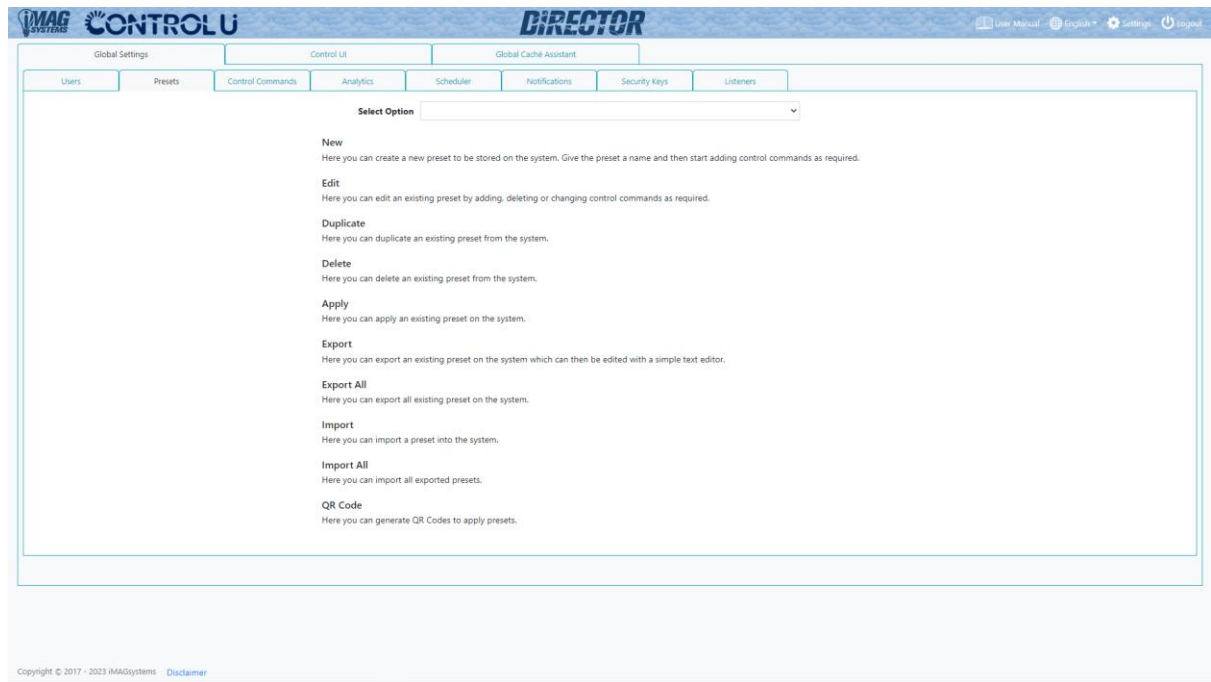


1.2 Presets

The system can store a virtually unlimited number of presets. A preset can be applied with a single “preset load” command. The preset can contain a virtually unlimited number of commands.

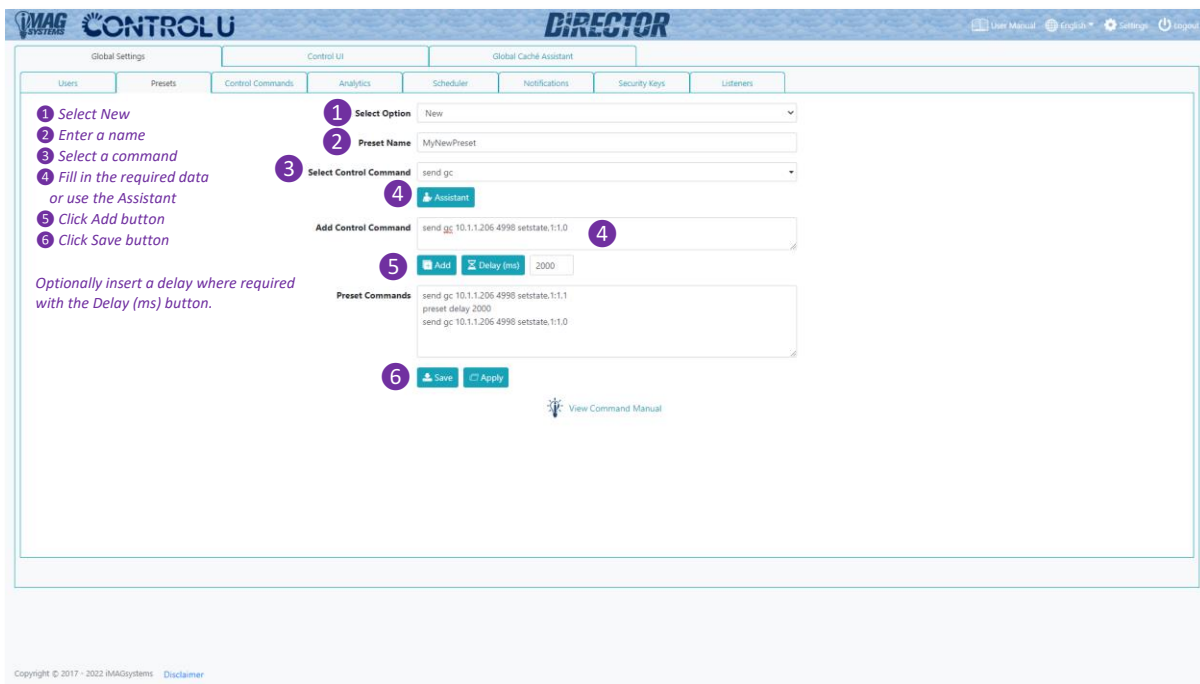
Presets can contain anything from a single command to a video wall layout.

Presets can also contain basic logic to allow you to build some “smarts” into your system. Refer to Appendix B – Preset Logic in the command manual for further details.



1.2.1 Preset New

Here you can create a new preset to be stored on the system. Give the preset a name and then start adding control commands as required by either entering commands directly or using the Assistant.



The screenshot displays the 'DIRECTOR' interface with the 'Presets' tab selected. The workflow for creating a new preset is outlined with numbered steps:

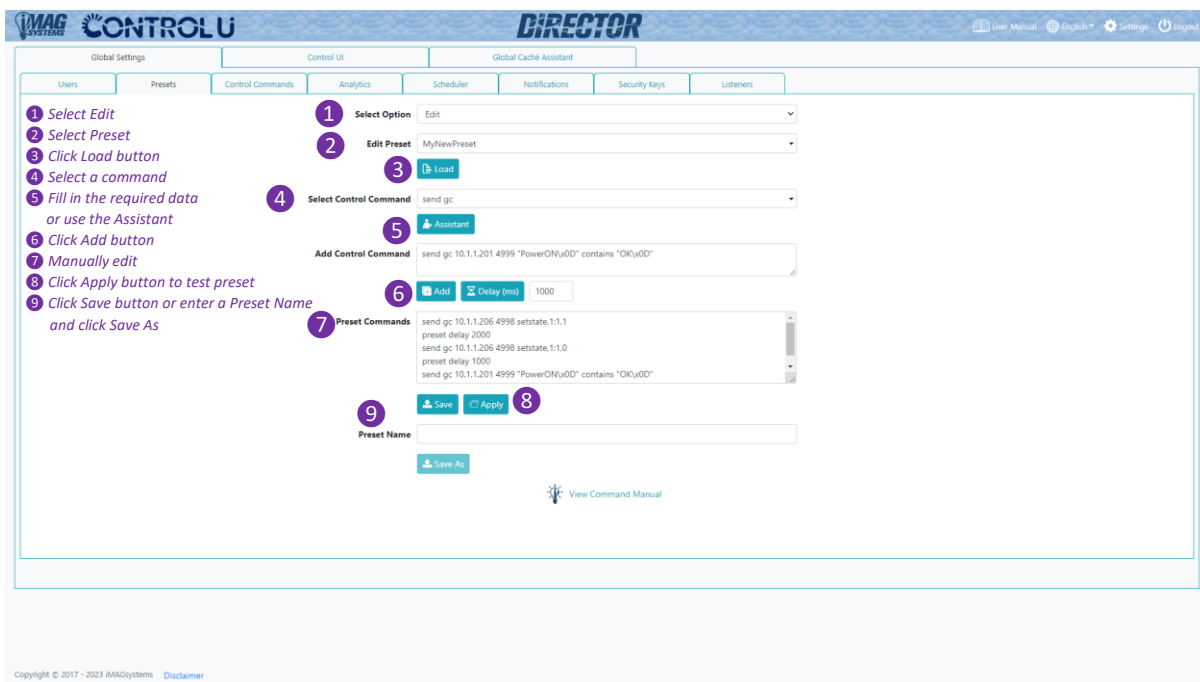
- Select New**: A dropdown menu is set to 'New'.
- Enter a name**: The 'Preset Name' field contains 'MyNewPreset'.
- Select a command**: The 'Select Control Command' dropdown is set to 'send gc'.
- Fill in the required data or use the Assistant**: The 'Add Control Command' field contains 'send gc 10.1.1.206 4998 setstate,1:1.0'.
- Click Add button**: The 'Add' button is highlighted.
- Click Save button**: The 'Save' button is highlighted.

Additional details from the interface:

- Optional delay**: A 'Delay (ms)' field is set to '2000'.
- Preset Commands**: A list of commands is shown: 'send gc 10.1.1.206 4998 setstate,1:1.1', 'preset delay 2000', and 'send gc 10.1.1.206 4998 setstate,1:1.0'.
- Buttons**: 'Assistant', 'Add', 'Delay (ms)', 'Save', and 'Apply' buttons are visible.
- Footer**: Copyright © 2017 - 2022 iMAGsystems, Disclaimer.

1.2.2 Preset Edit

Here you can edit any existing preset by adding, deleting or changing control commands as required.



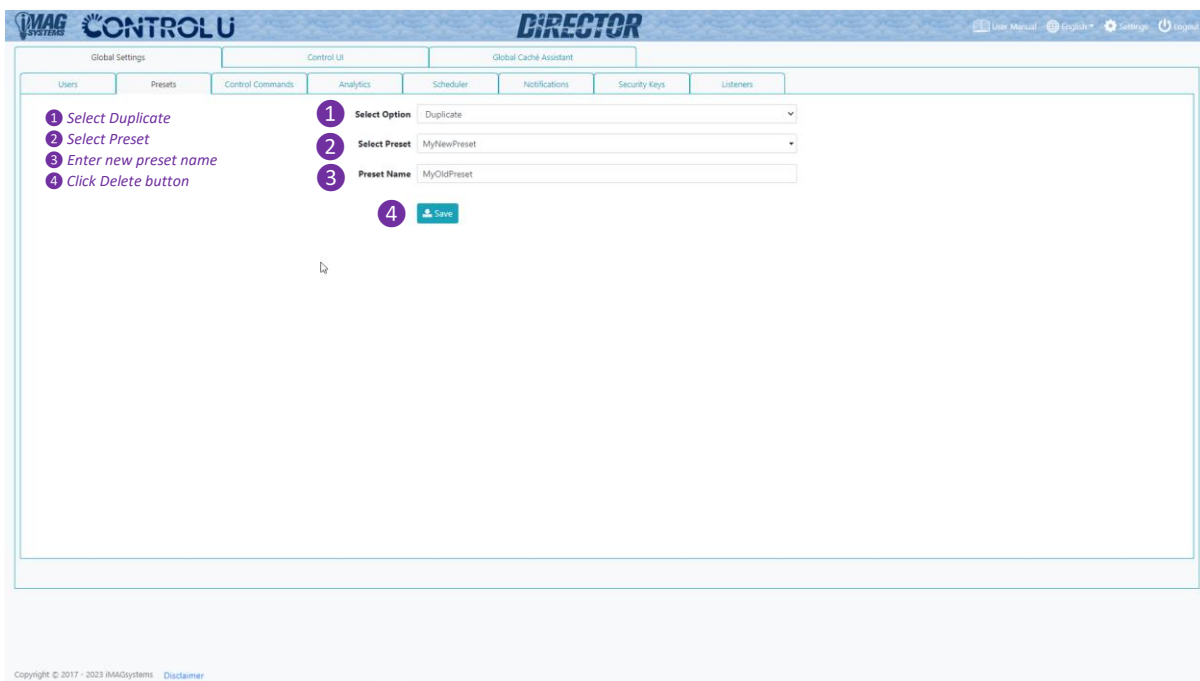
1 Select Edit
2 Select Preset
3 Click Load button
4 Select a command
5 Fill in the required data or use the Assistant
6 Click Add button
7 Manually edit
8 Click Apply button to test preset
9 Click Save button or enter a Preset Name and click Save As

1 Select Option Edit
2 Edit Preset MyNewPreset
3 Load
4 Select Control Command send gc
5 Add Control Command send gc 10.1.1.201 4999 "PowerONy0D" contains "OKy0D"
6 Add Delay (ms) 1000
7 Presets Commands send gc 10.1.1.206 4998 setstate,1:1.1
presets delay 2000
send gc 10.1.1.206 4998 setstate,1:1.0
presets delay 1000
send gc 10.1.1.201 4999 "PowerONy0D" contains "OKy0D"
8 Apply
9 Save
Preset Name
Save As
View Command Manual

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1.2.3 Preset Duplicate

Here you can duplicate any existing preset from the system.



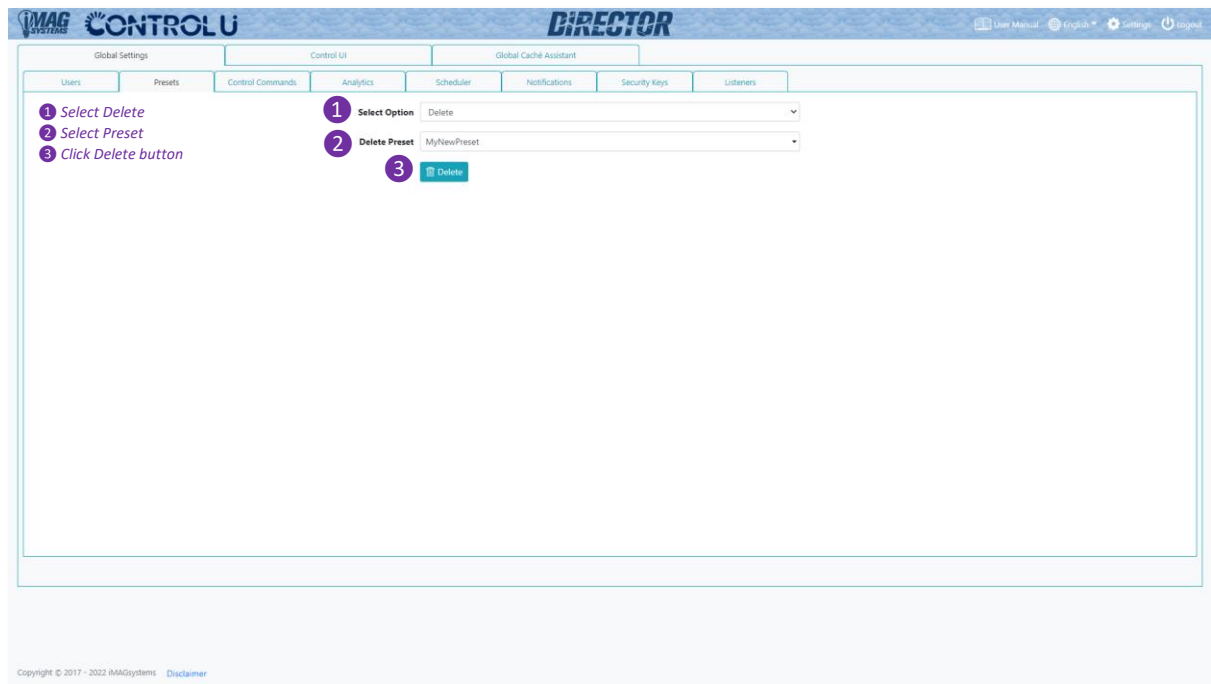
1 Select Duplicate
2 Select Preset
3 Enter new preset name
4 Click Delete button

1 Select Option Duplicate
2 Select Preset MyNewPreset
3 Preset Name MyOldPreset
4 Save

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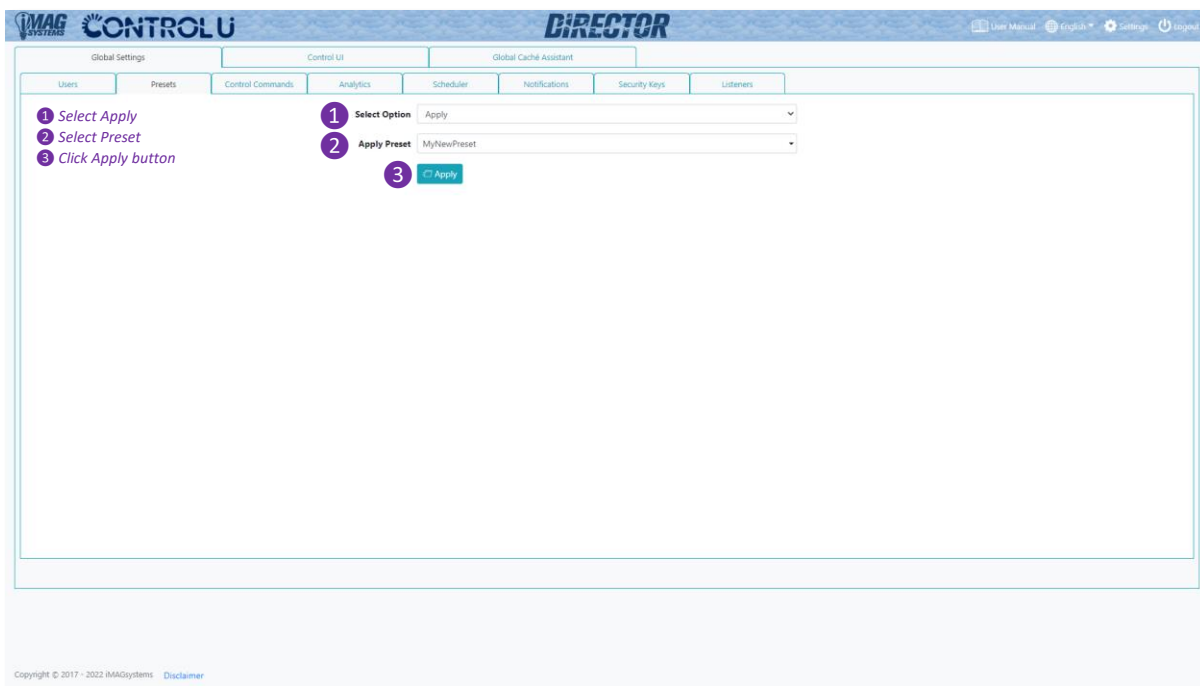
1.2.4 Preset Delete

Here you can delete any existing preset from the system.



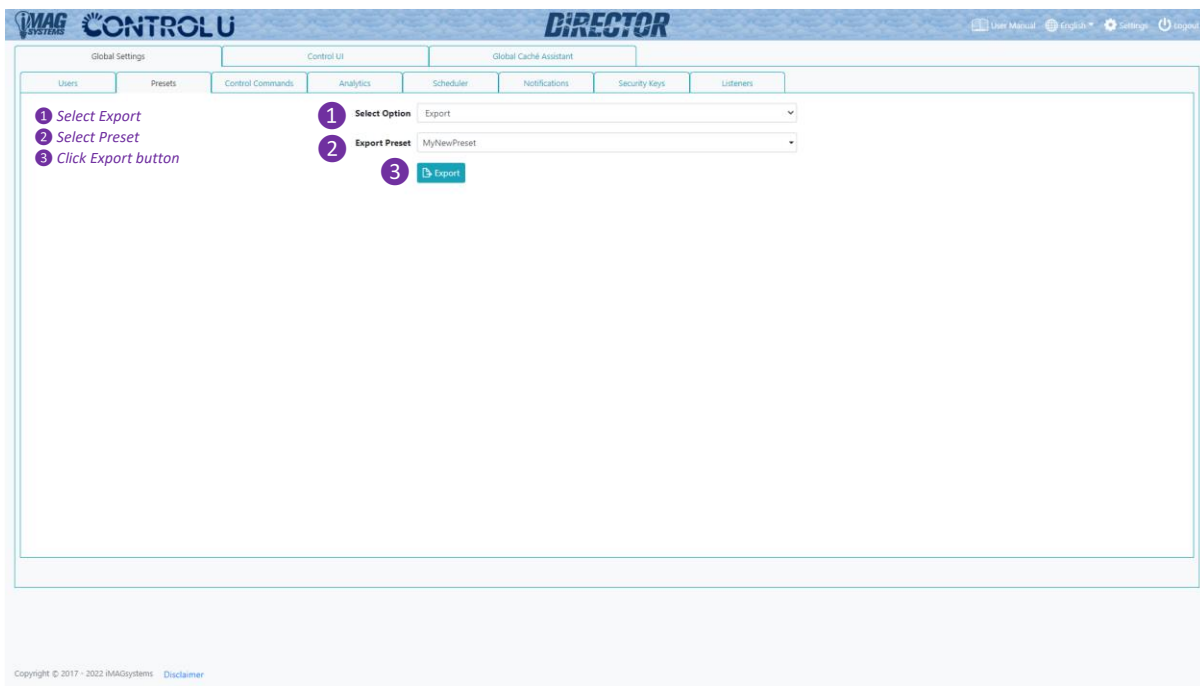
1.2.5 Preset Apply

Here you can apply any existing preset on the system.



1.2.6 Preset Export

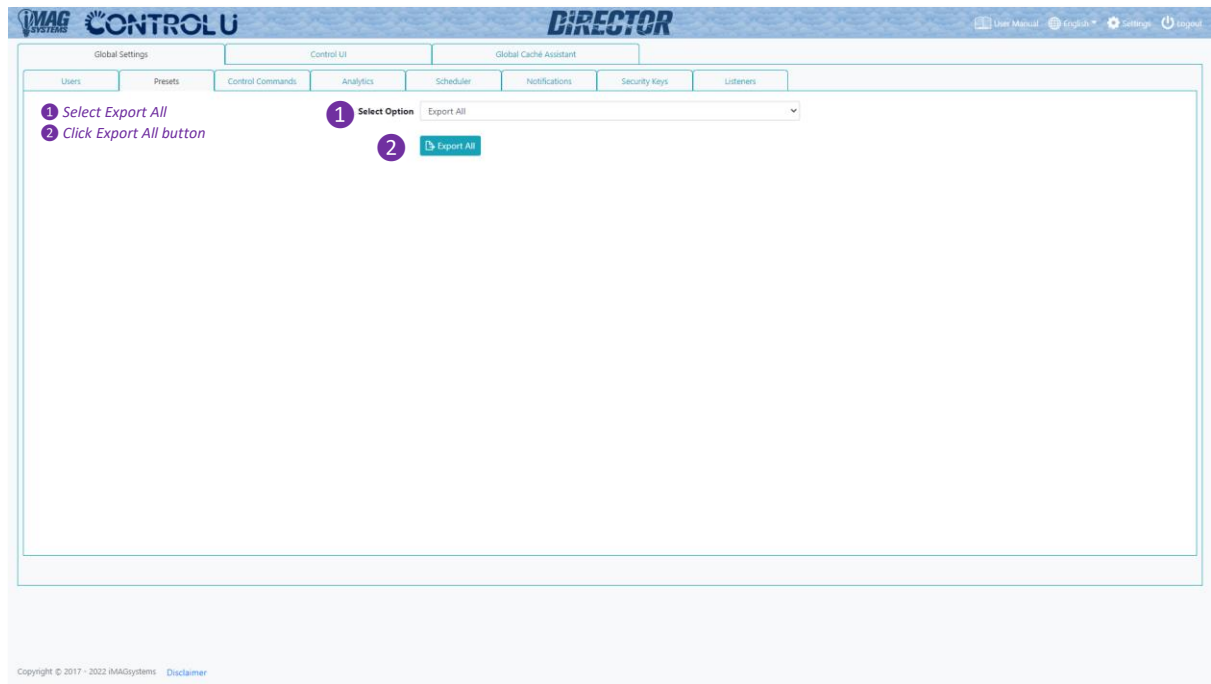
Here you can export an existing preset on the system which can then be used as a backup or edited. The preset will be saved to your Downloads folder as an ini file like *MyNewPreset.ini*.



The export preset can be edited with an application like Notepad++, right click the file and select "Open with..."

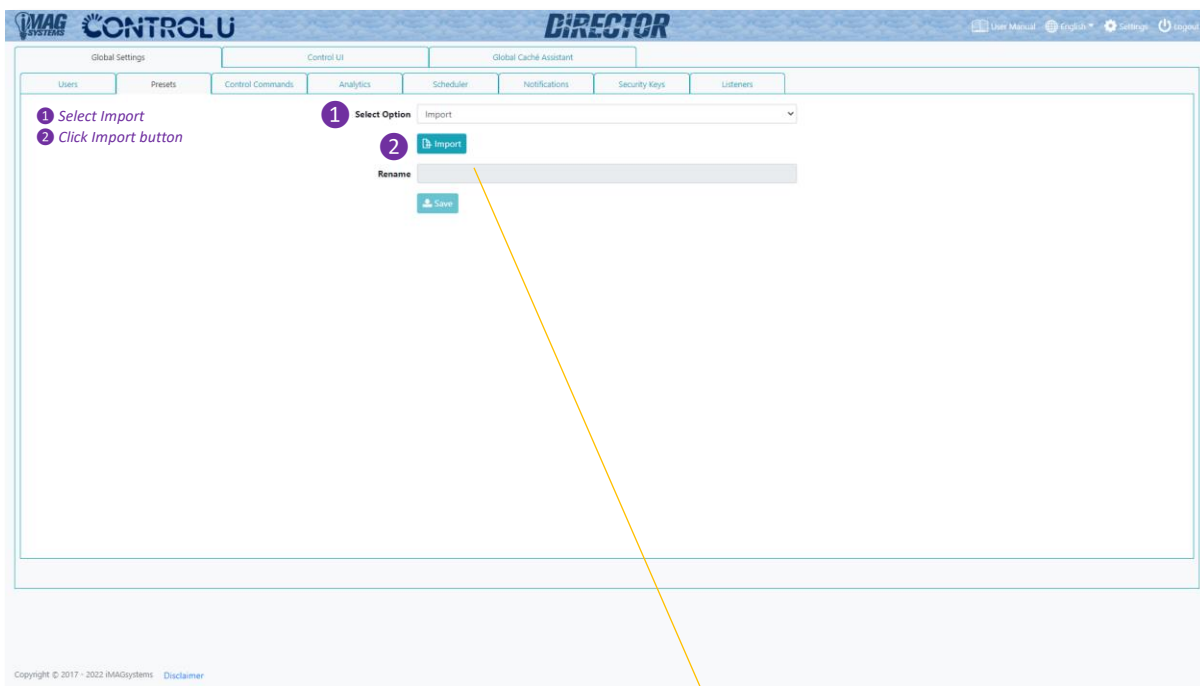
1.2.7 Preset Export All

Here you can export all existing preset on the system which can then be used as a backup or edited. The presets will be saved to your Downloads folder as an exp file presets.exp.

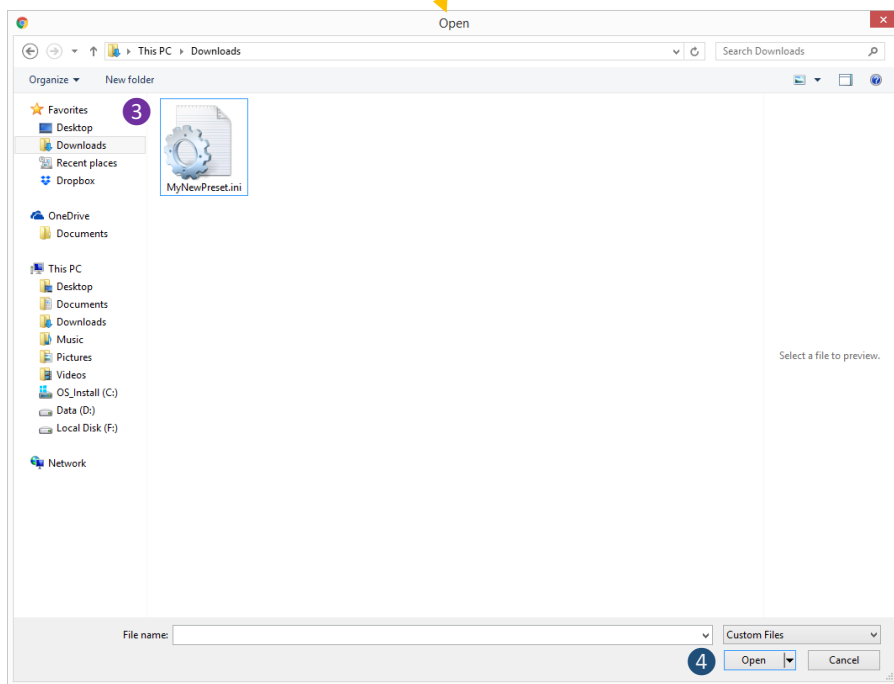


1.2.8 Preset Import

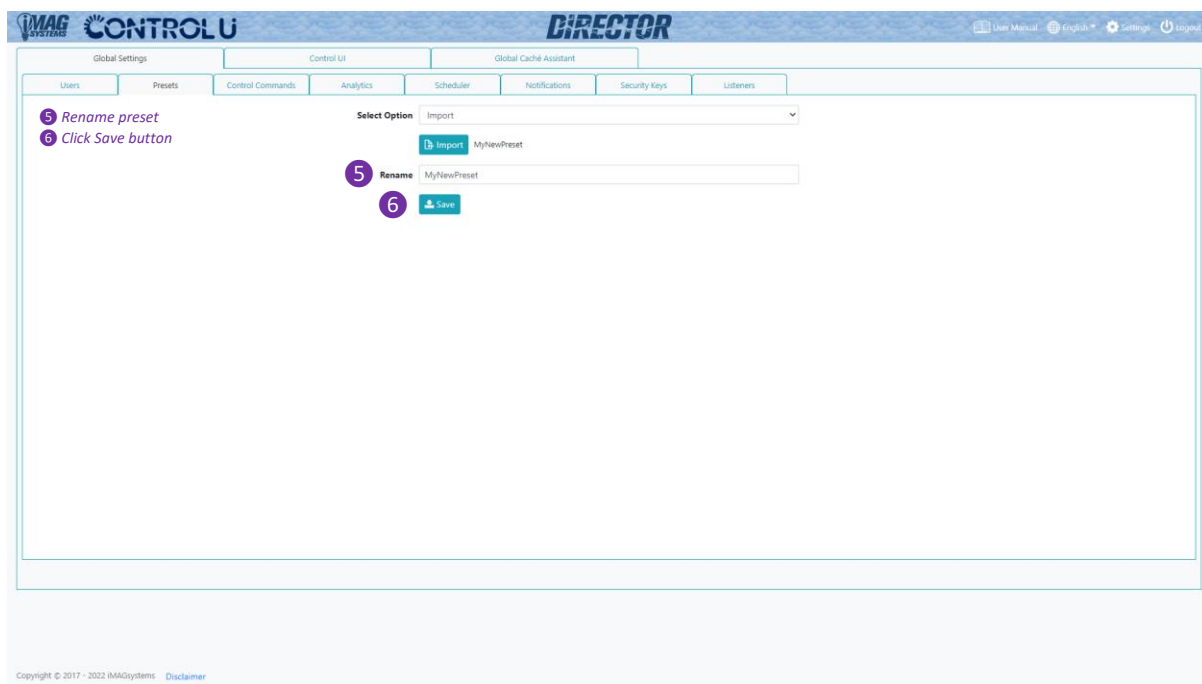
Here you can import a preset into the system.



- 3 Select preset file
- 4 Click Open

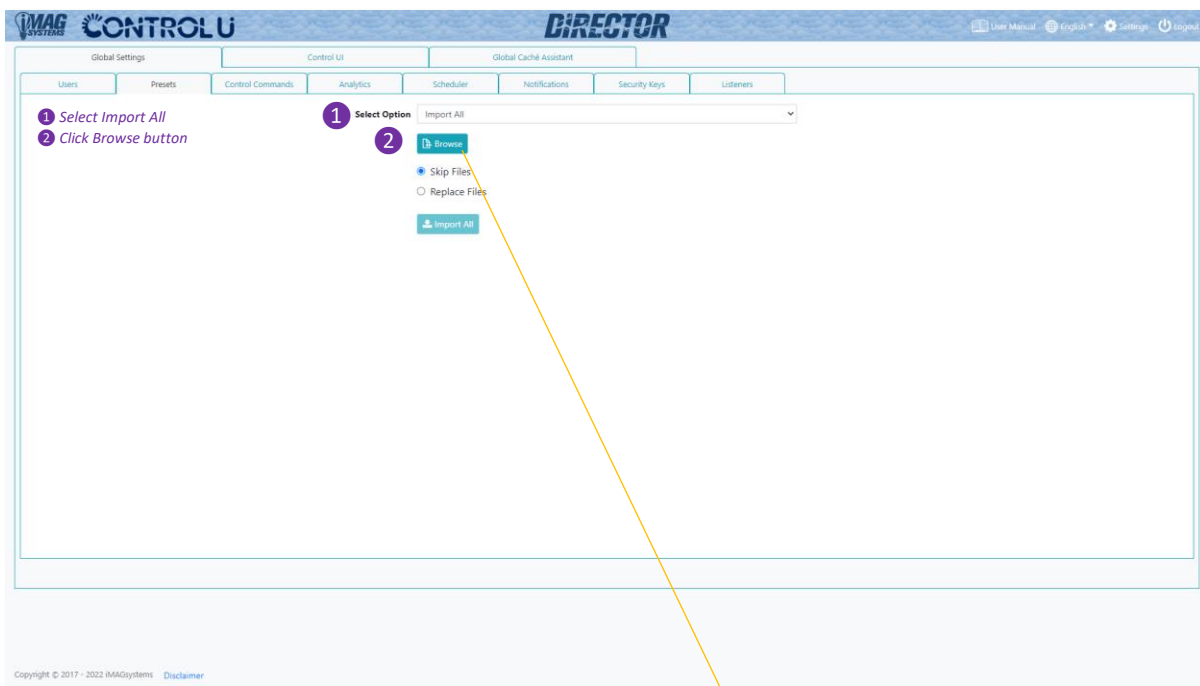


1.2.8 Import Preset continued...

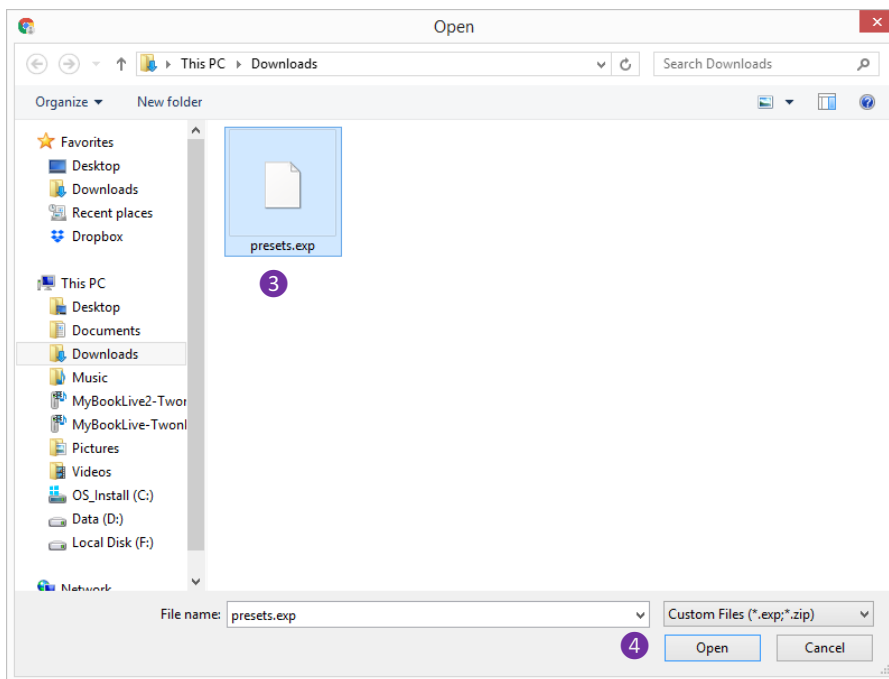


1.2.9 Preset Import All

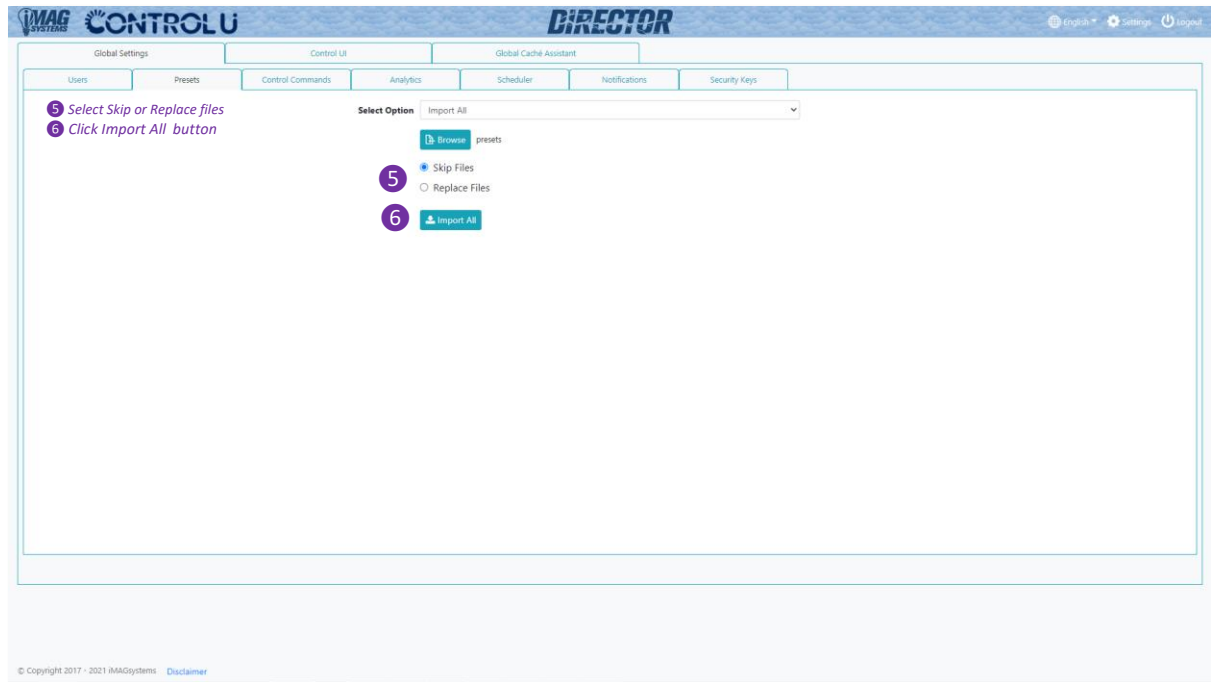
Here you can import all preset into the system from an all preset export.



- 3 Select preset file
- 4 Click Open



1.2.9 Preset Import All continued...



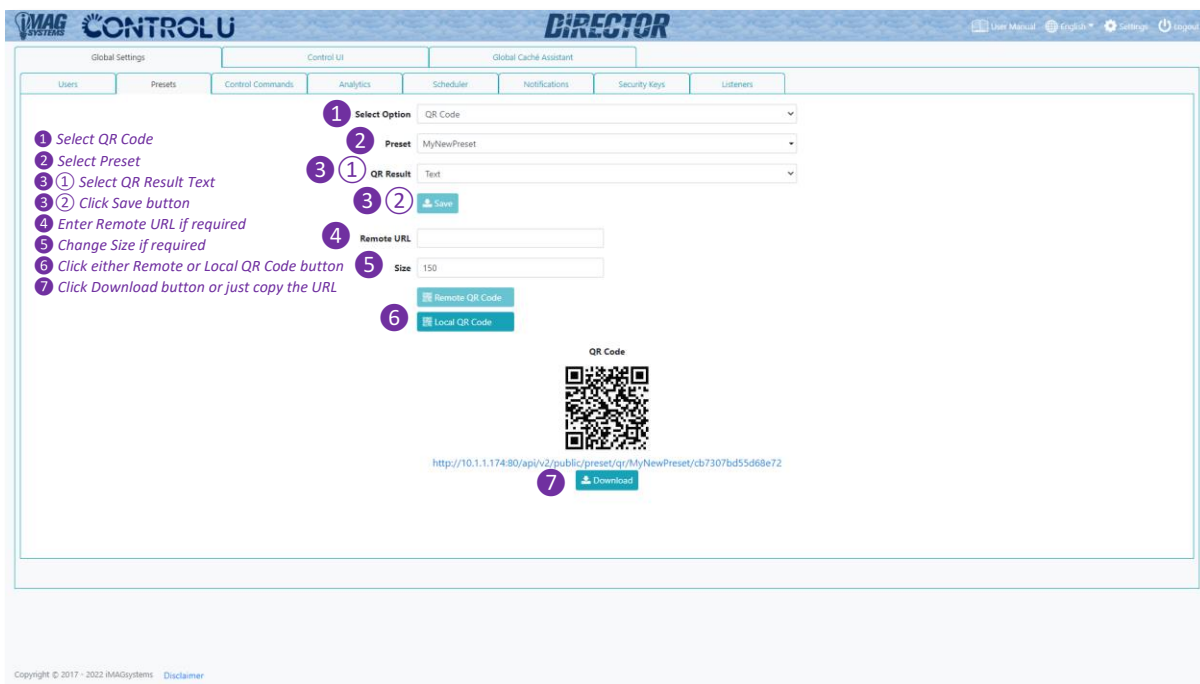
1.2.10 QR Code

A QR Code can be created to directly execute a preset. Here you can set how the result of a preset when scanned from a QR Code will be displayed. This includes QR Code buttons used in Control UI.

After the QR Code has been scanned and opened in a browser the preset will be executed and the selected result displayed in the browser.

The QR Result can be **Text** for a standard API text response. Select **Static Image** to display a user uploaded image on success or failure of the preset. Or, select **User Interface** to be redirected to a User Interface. [Refer 2.1.2 UI Creator QR Code Result mode.](#)

The below will provide a text response: *preset load MyNewPreset success*



1.2.10 QR Code

1 Select QR Code

2 Select Preset

3 1 Select QR Result Text

4 2 Click Save button

5 Enter Remote URL if required

6 Change Size if required

7 Click either Remote or Local QR Code button

8 Click Download button or just copy the URL

1 Select Option: QR Code

2 Preset: MyNewPreset

3 1 QR Result: Text

4 Remote URL: http://10.1.1.174:80/api/v2/public/preset/q/MyNewPreset/cb7307bd55d68e72

5 Size: 150

6 Remote QR Code

7 Local QR Code

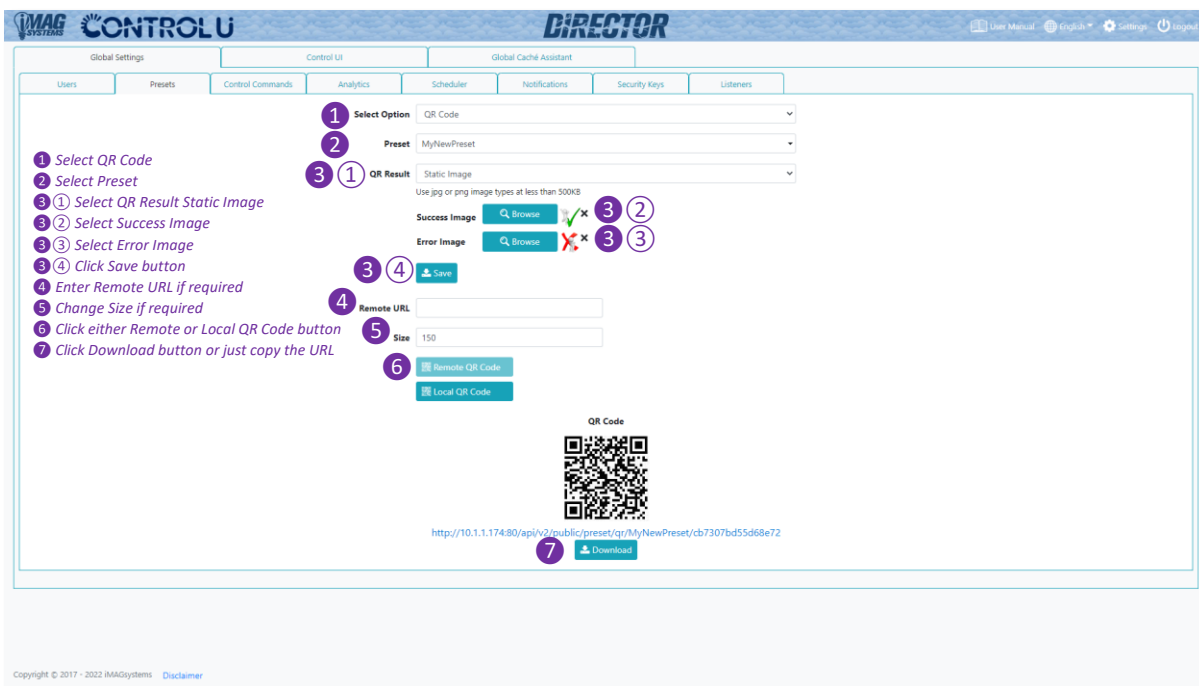
QR Code

8 Download

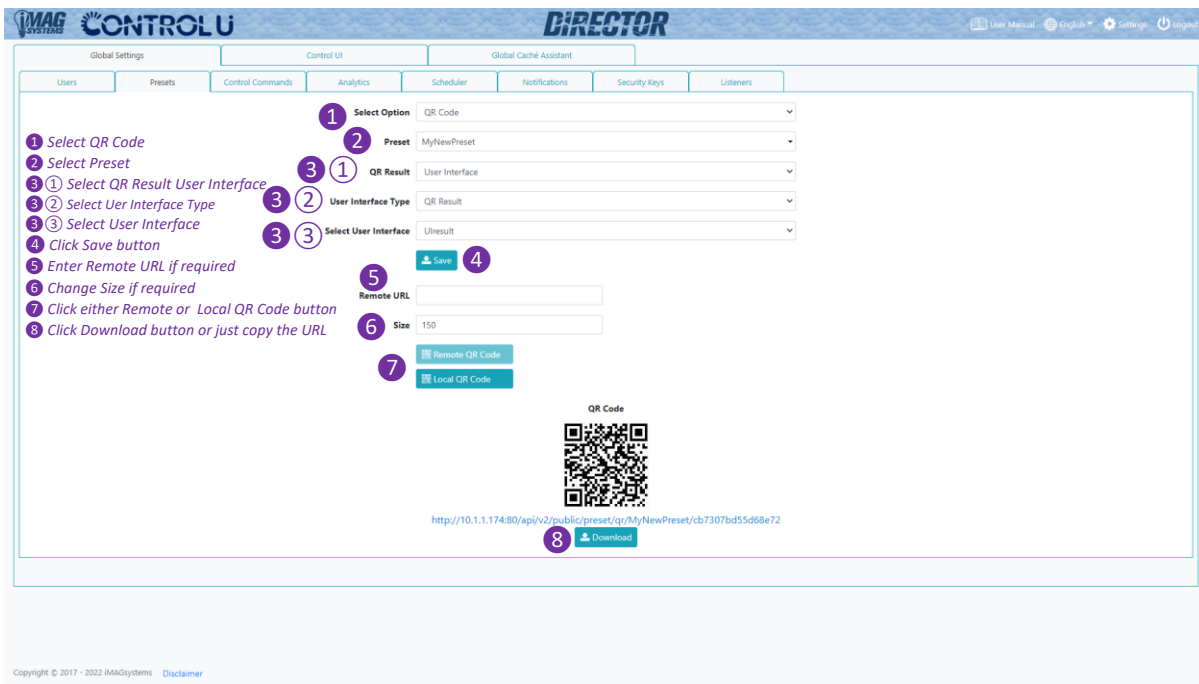
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1.2.9 QR Code continued...

The below will provide a static image response:



The below will provide a QR Results User Interface response:

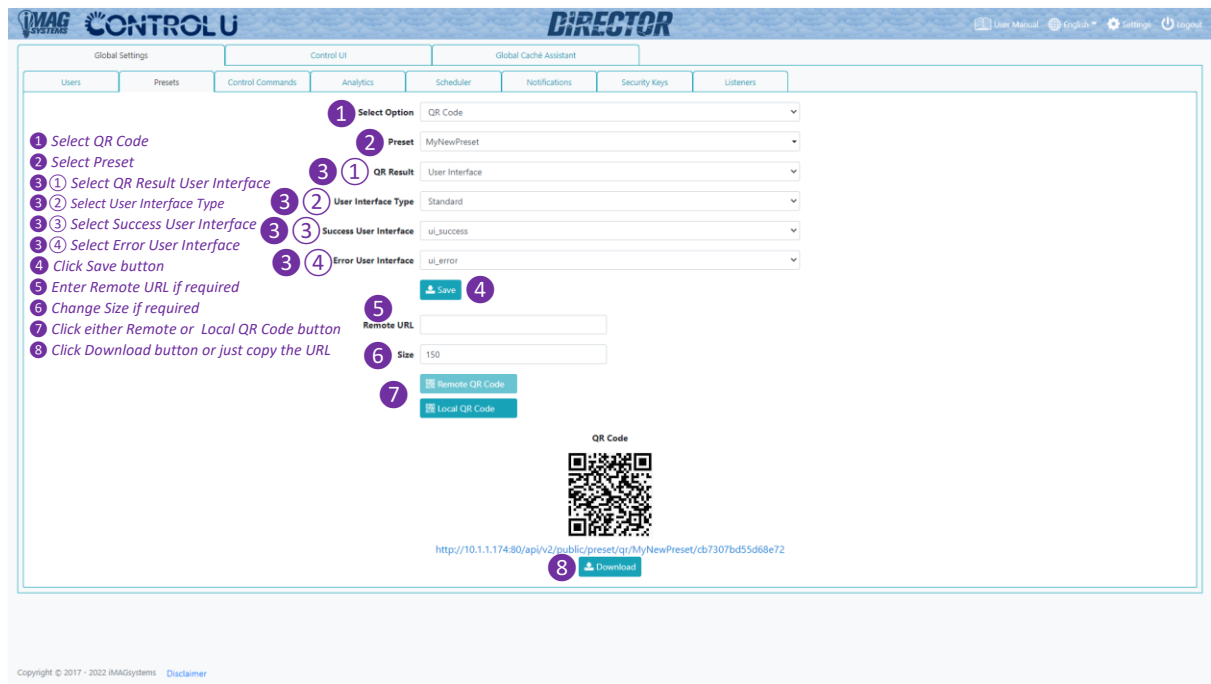


The differences between a QR Result and Standard UI result UI are as follows:

- A QR Results UI does not contain any login page or page restrictions.
- A QR Results UI contains both Success and Error result pages to be displayed.

1.4.9 QR Code continued...

The below will provide a Standard User Interface response:



The screenshot displays the 'DIRECTOR' control UI interface. The 'Control UI' tab is active, showing a configuration page for a QR Code. The interface includes a sidebar with navigation options: Users, Presets, Control Commands, Analytics, Scheduler, Notifications, Security Keys, and Listeners. The main content area contains the following configuration fields and buttons:

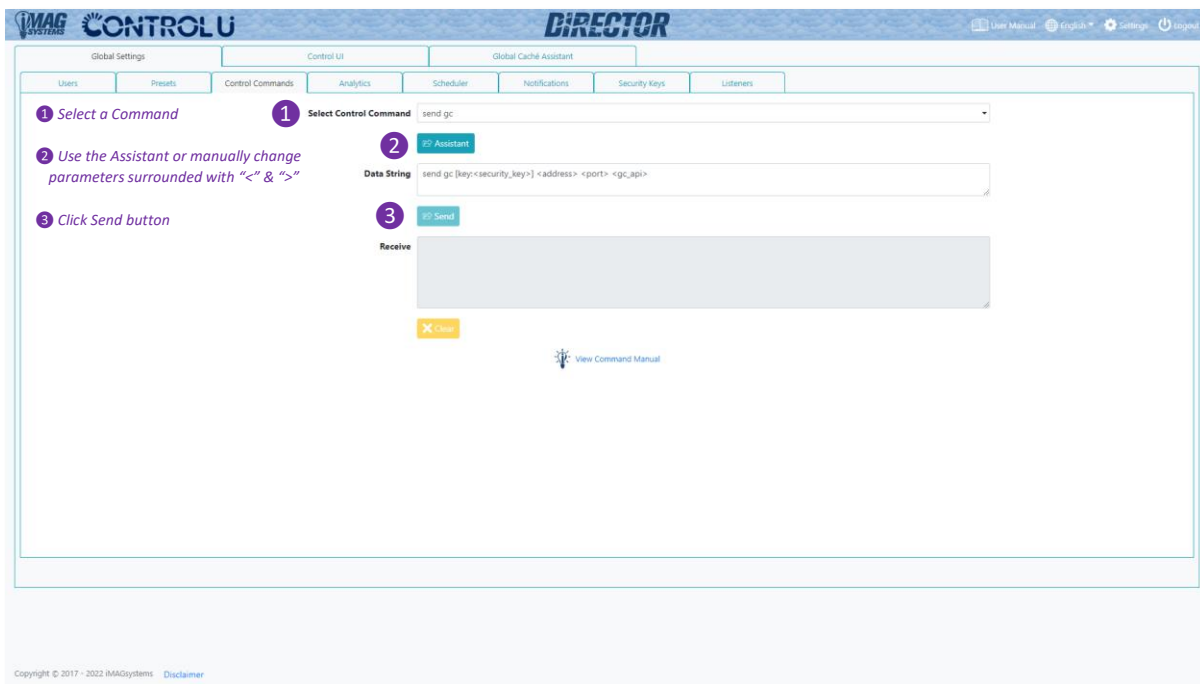
- 1 Select Option:** A dropdown menu set to 'QR Code'.
- 2 Preset:** A dropdown menu set to 'MyNewPreset'.
- 3 1 QR Result:** A dropdown menu set to 'User Interface'.
- 3 2 User Interface Type:** A dropdown menu set to 'Standard'.
- 3 3 Success User Interface:** A dropdown menu set to 'ui_success'.
- 3 4 Error User Interface:** A dropdown menu set to 'ui_error'.
- 4 Save:** A blue button to save the configuration.
- 5 Remote URL:** A text input field.
- 6 Size:** A text input field set to '150'.
- 7 Remote QR Code:** A button to generate a remote QR code.
- 7 Local QR Code:** A button to generate a local QR code.
- QR Code:** A generated QR code is displayed.
- 8 Download:** A blue button to download the QR code.

Below the QR code, the URL is displayed: <http://10.1.1.174:80/api/v2/public/preset/qr/MyNewPreset/cb7307bd55d68e72>.

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1.3 Control Commands

The Control Commands tab is used to send any of the control commands available to the system for testing purposes. Refer [Appendix B – Using Command Assistant](#).



1 Select a Command

2 Use the Assistant or manually change parameters surrounded with "<" & ">"

3 Click Send button

Select Control Command

send gc

Assistant

Data String

send gc {key:<security_key> <address> <port> <gc_api>}

Send

Receive

Clear

View Command Manual

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1.4 Analytics

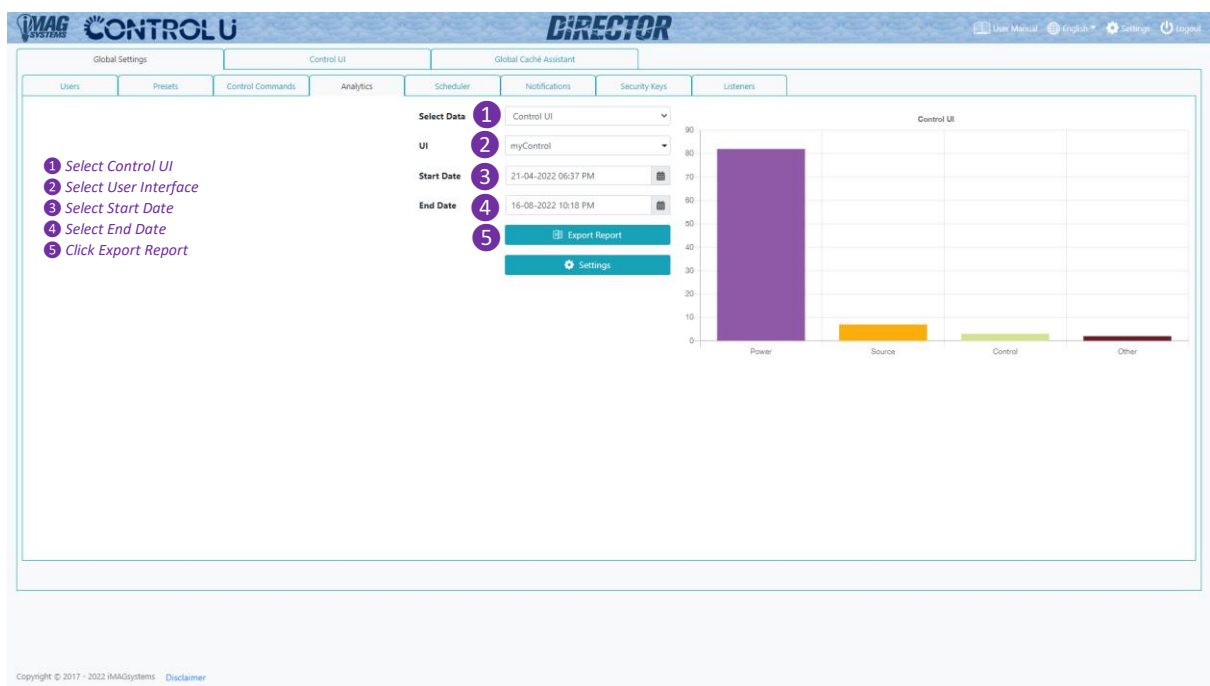
Analytical data is constantly being stored on the system. By default data will be maintained for 1 month, but this can be changed up to 12 months.

Information is stored and can be exported for use in a 3rd party analytical application such as Microsoft's Power Bi. Internal results for the following can be generated from the UI:

- **Control UI**
Control UI represents usage of various User Interface functions

1.4.1 Control UI

The Control UI represents usage of various User Interface functions.



Buttons in the UI can be assigned an analytics button type of the following:

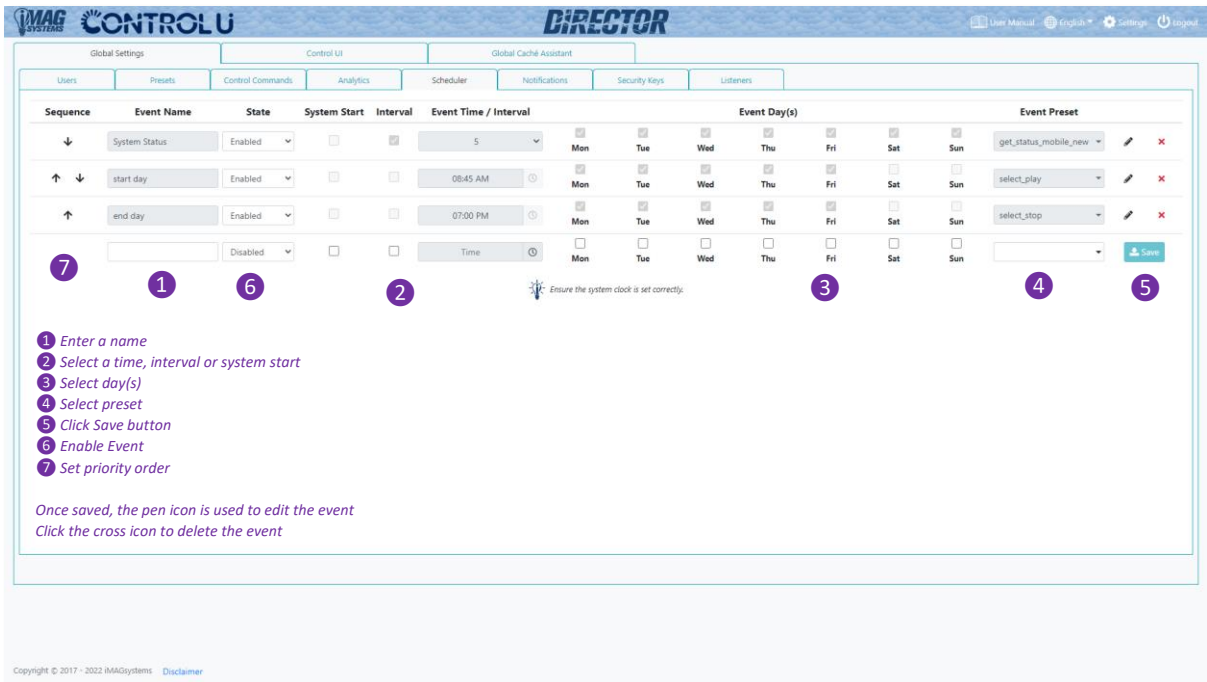
- Power
- Source
- Control
- Custom

The custom option allows an unlimited number of user defined button types to be added to the list of available analytical button types.

The button press count will increase each time the button is pressed.

1.5 Scheduler

The Scheduler is used to apply presets at system start, required time or interval on selected days.



The screenshot shows the 'Scheduler' tab in the iMAG DIRECTOR CONTROL UI. The interface includes a table for managing events with columns for Sequence, Event Name, State, System Start, Interval, Event Time / Interval, Event Day(s), and Event Preset. A new event is being added at the bottom, indicated by a 'New' button. Numbered callouts 1 through 7 provide a step-by-step guide for adding a new event.

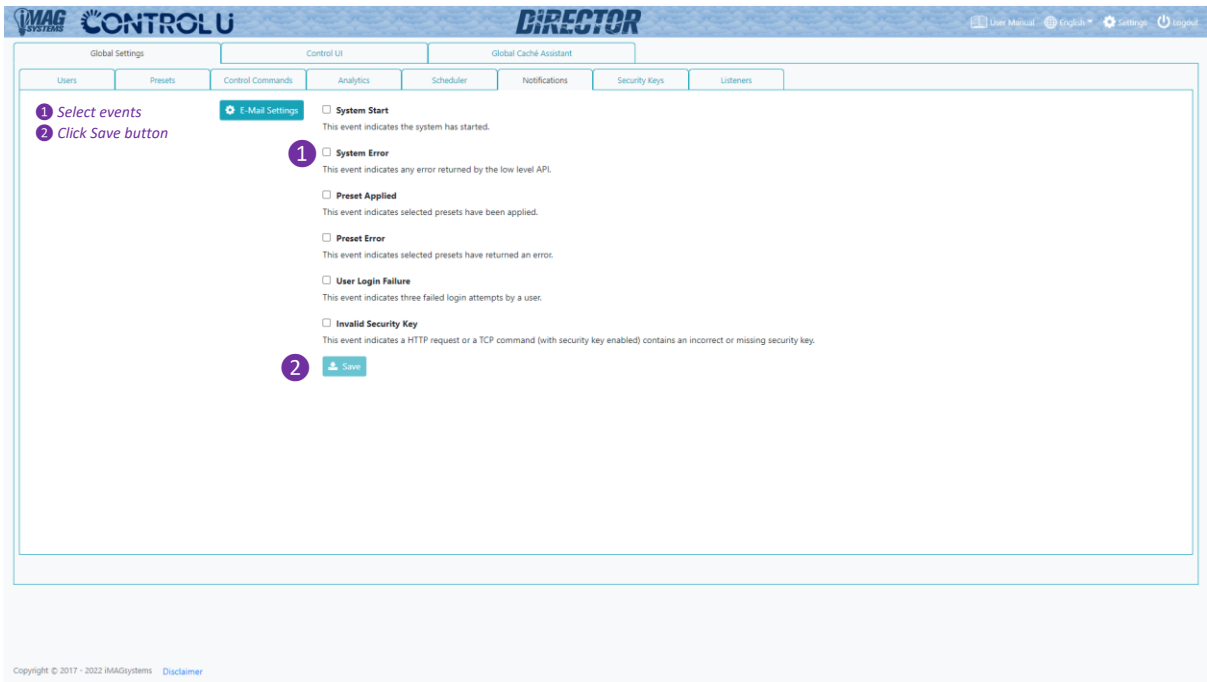
- 1 Enter a name
- 2 Select a time, interval or system start
- 3 Select day(s)
- 4 Select preset
- 5 Click Save button
- 6 Enable Event
- 7 Set priority order

Once saved, the pen icon is used to edit the event
Click the cross icon to delete the event

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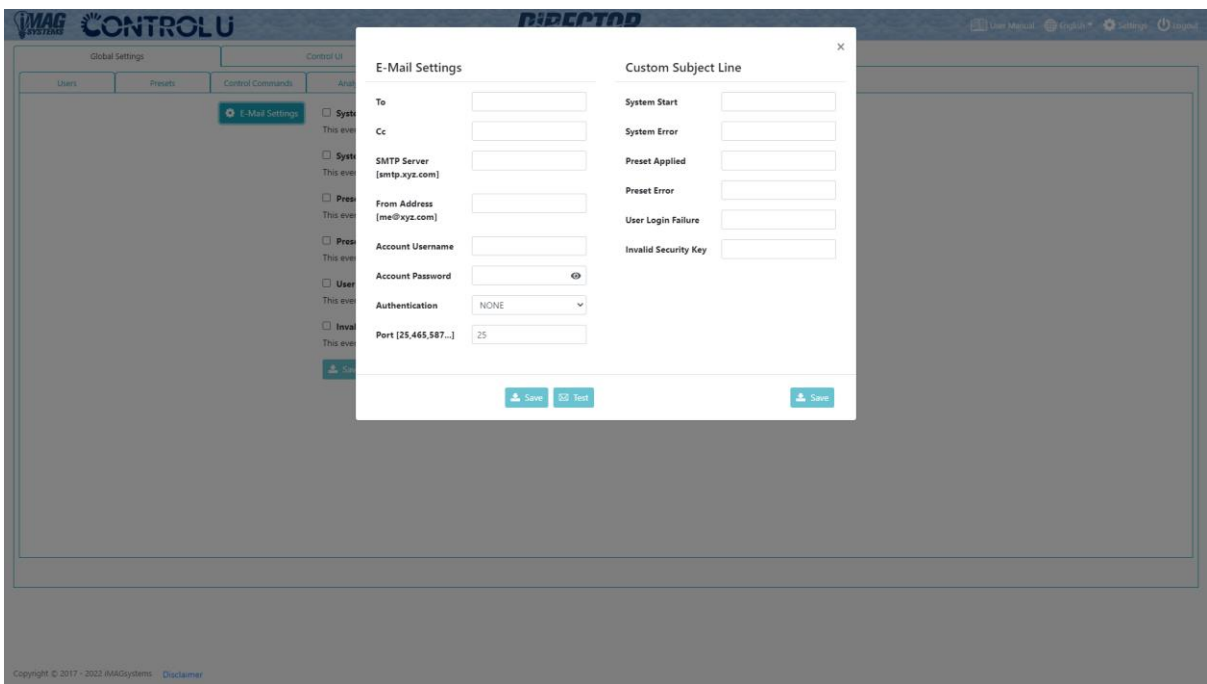
1.6 Notifications

Notifications will send E-Mail alerts whenever a selected event occurs on the system.

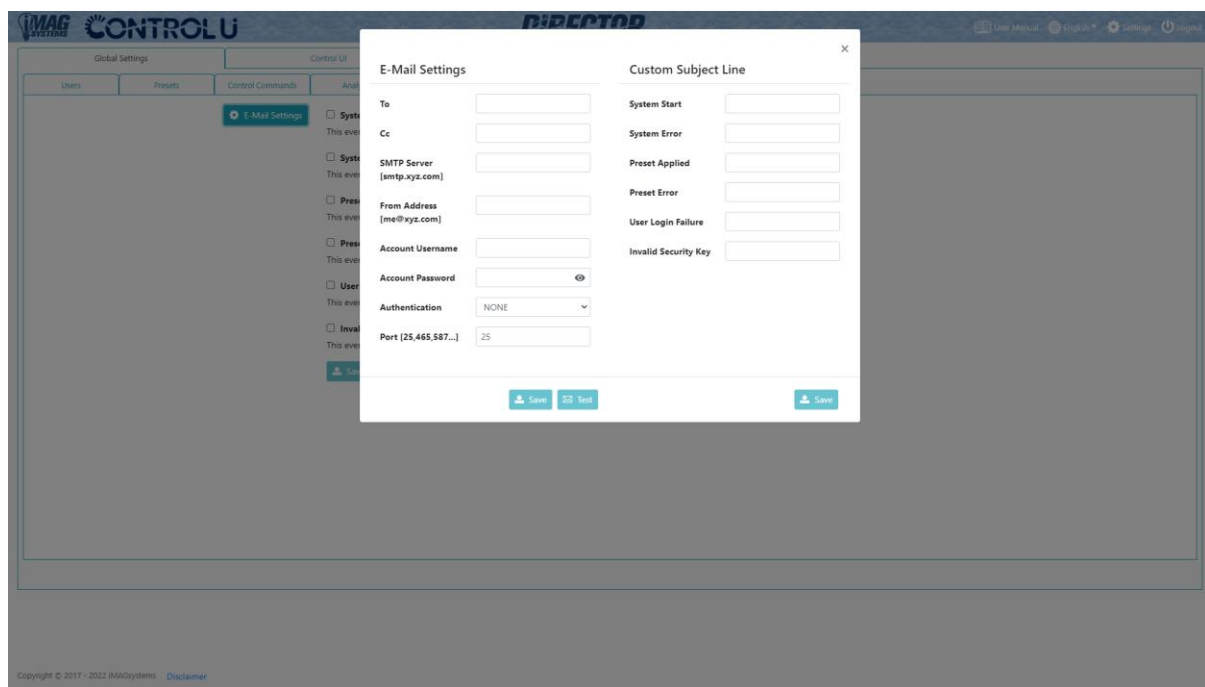


1.6.1 E-Mail Settings

Here you configure the E-Mail client to allow notification alerts to be sent from a specified E-Mail account. The Test button sends a confirmation E-Mail to confirm the settings are correct.



1.6.1 E-Mail Settings continued



A custom E-Mail subject line can be added here to override the default message.

Within the custom E-Mail subject line the following sequences can be included:

- {{hostname}} which provides the network hostname of the controller.
- {{ip}} which provides the network IP Address of the controller.
- {{presetname}} which provides the preset name of preset applied or error.

The default E-Mail subject lines are as follows (*translated into selected language*):

- System Start Notification from {{hostname}}, {{ip}}
- System Error Notification from {{hostname}}, {{ip}}
- Preset {{presetname}} Applied Notification from {{hostname}}, {{ip}}
- Preset {{presetname}} Error Notification from {{hostname}}, {{ip}}
- Login Failure Notification from {{hostname}}, {{ip}}
- Invalid Security Key Notification from {{hostname}}, {{ip}}

The E-Mail body contains the following (*translated into selected language*):

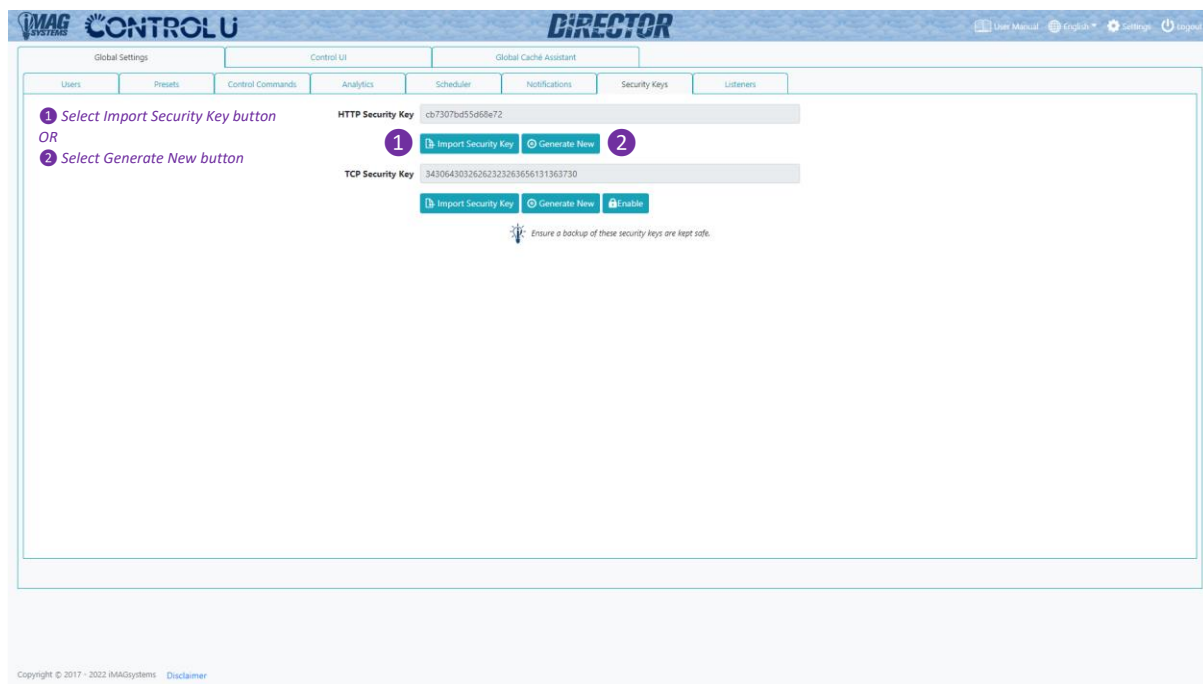
- {{timestamp}} {{hostname}} System Started
- {{timestamp}} {{hostname}} System Error: <error>
- {{timestamp}} Preset '{{presetname}}' has been applied
- {{timestamp}} Preset {{presetname}} has returned with the following error: <error>
- {{timestamp}} User Login Unsuccessful for: <user>
- {{timestamp}} Missing TCP Security Key
- {{timestamp}} Invalid TCP Security Key
- {{timestamp}} Invalid HTTP Security Key
- {{timestamp}} Missing HTTP Security Key

1.7 Security Keys

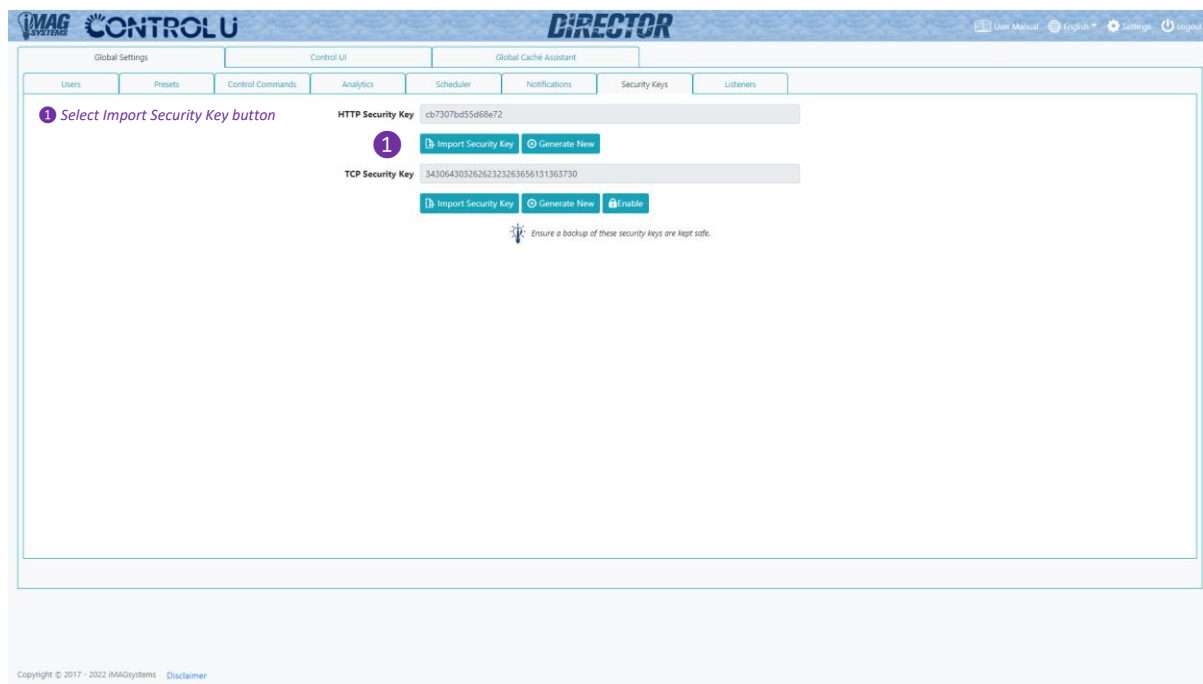
Security keys are required with all HTTP level requests and optional for TCP commands on port 6980. Only keys generated from the software can be used.

1.7.1 HTTP API Security Key

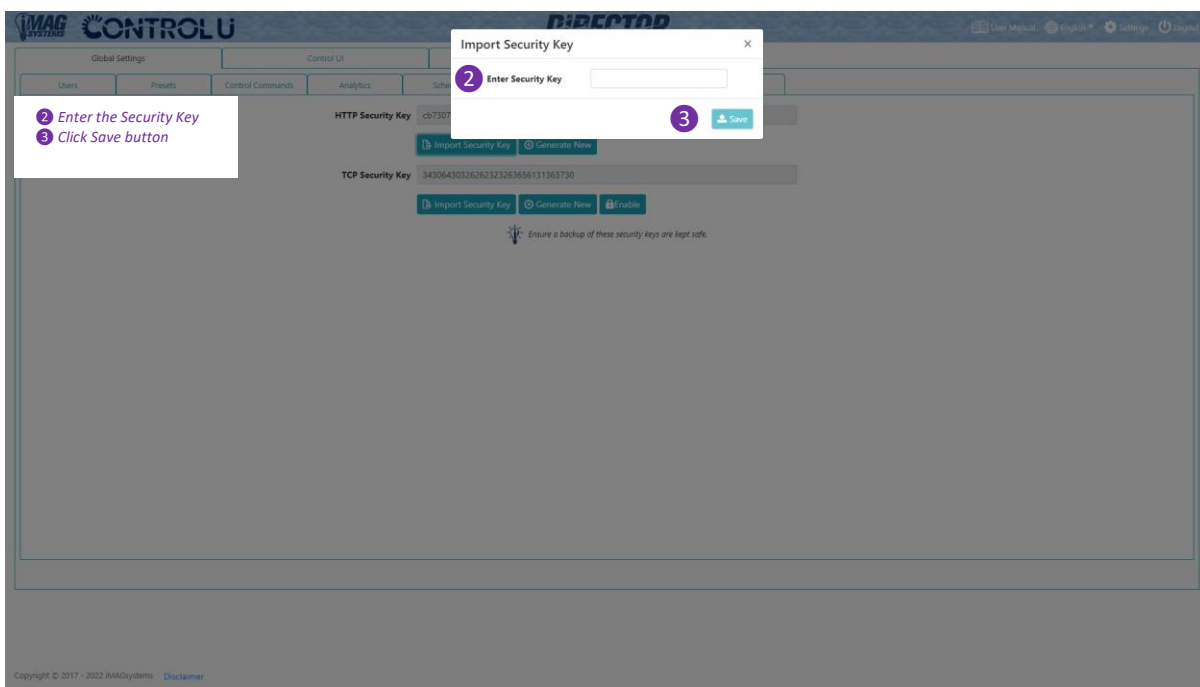
The Director Controller API can be accessed via HTTP GET and POST requests. To ensure security over the network a HTTP security key is required to be passed with all such requests. Here you can generate a new key or import a saved key that had been previously generated.



Importing a HTTP API Security Key

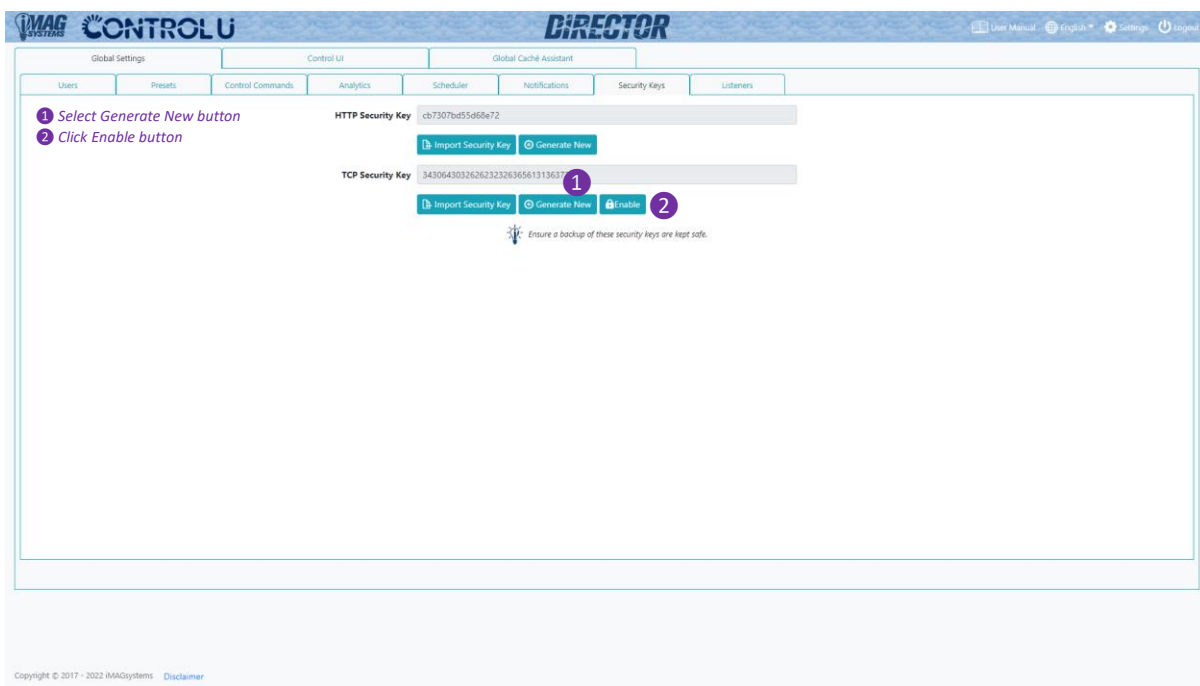


1.7.1 HTTP Security Key continued...



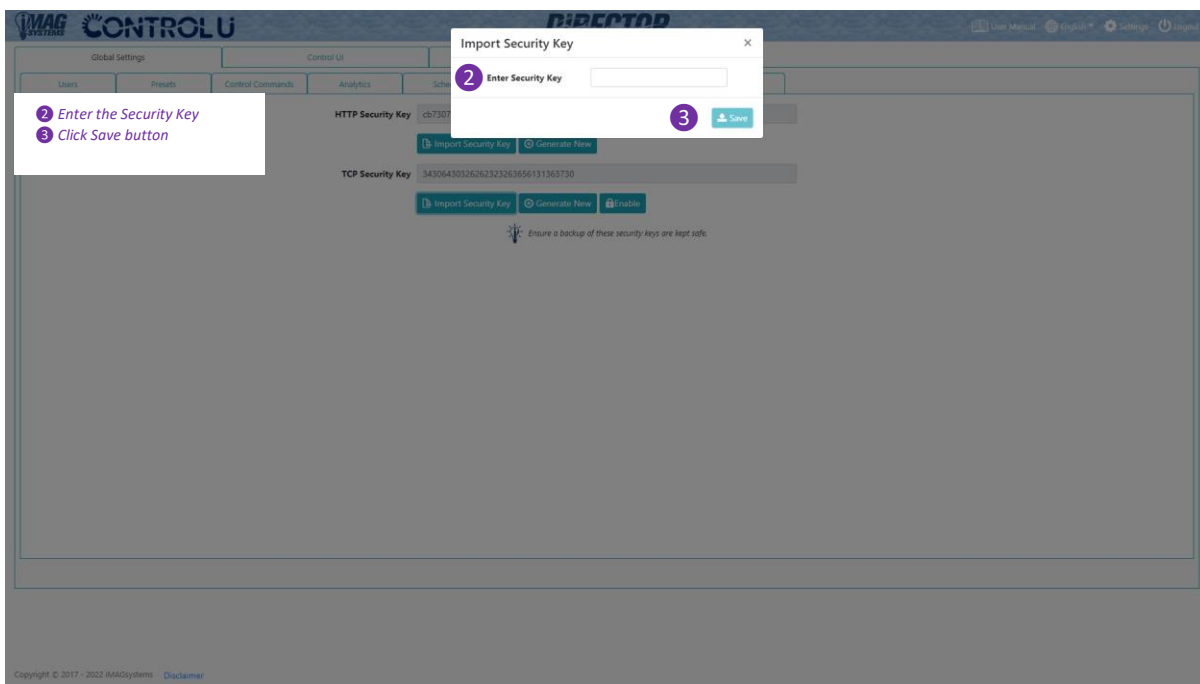
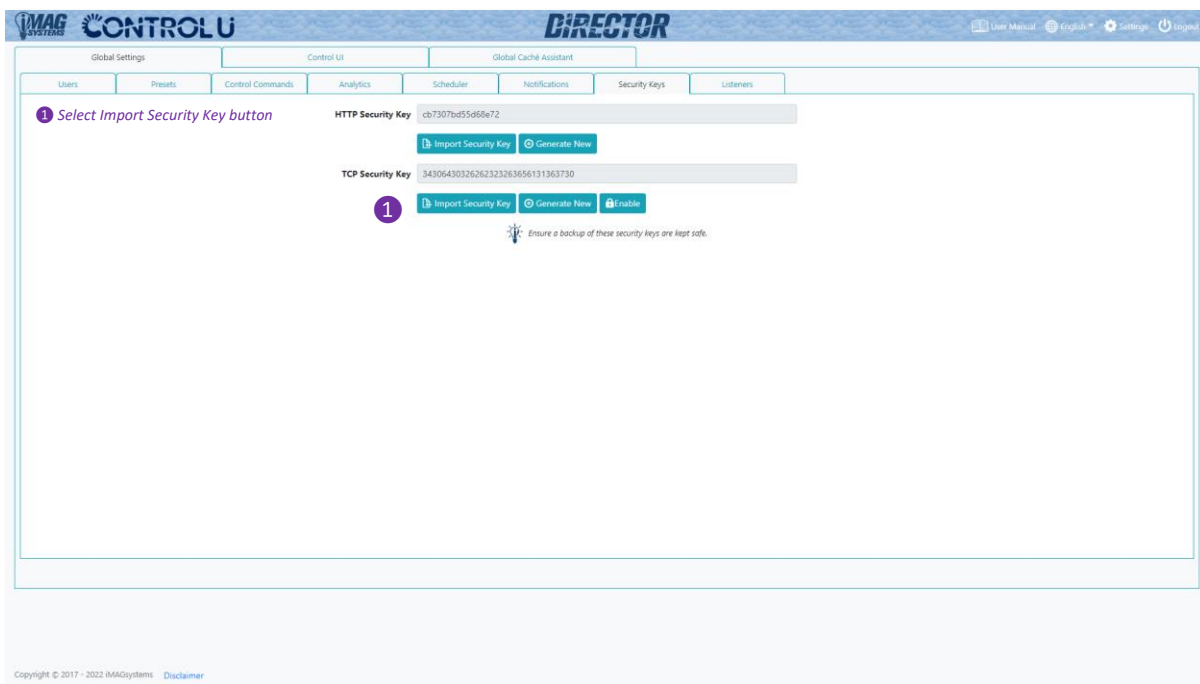
1.7.2 TCP Security Key

The Director Controller API can be accessed via Telnet requests on TCP port 6980. To ensure security over the network a TCP security key can be passed with all such commands. Here you can generate a new key or import a saved key that had been previously generated. As the TCP security key is optional its use can be Enabled or Disabled from here.

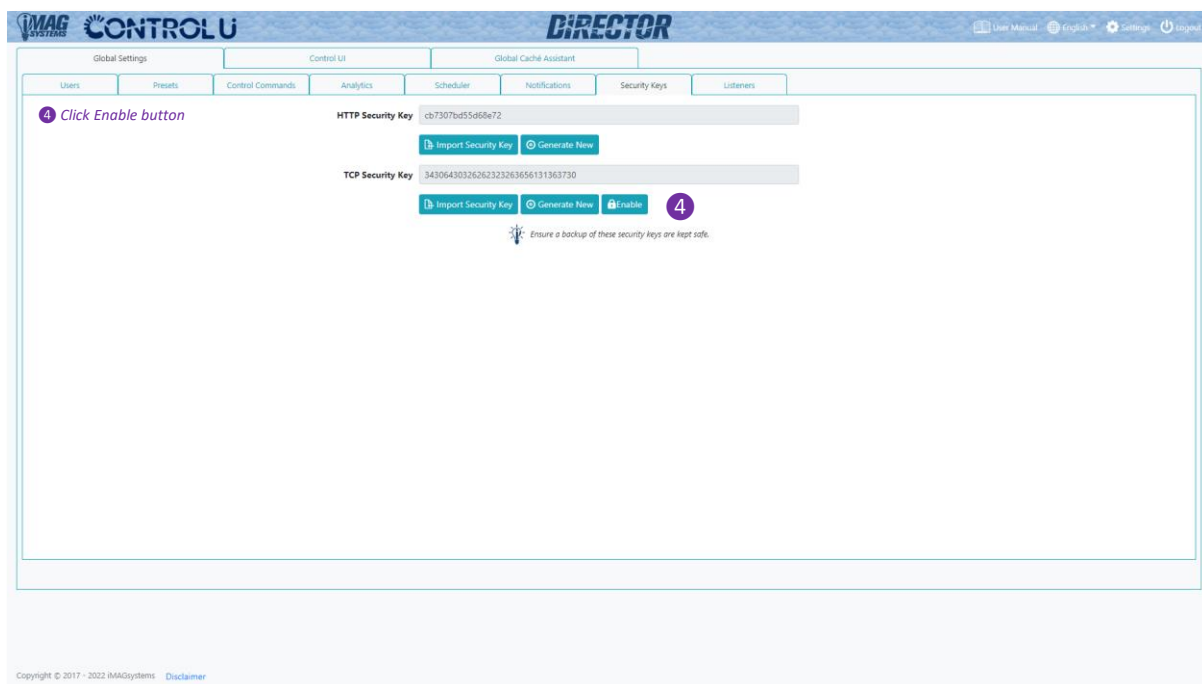


1.7.2 TCP Security Key continued...

Importing a TCP API Security Key



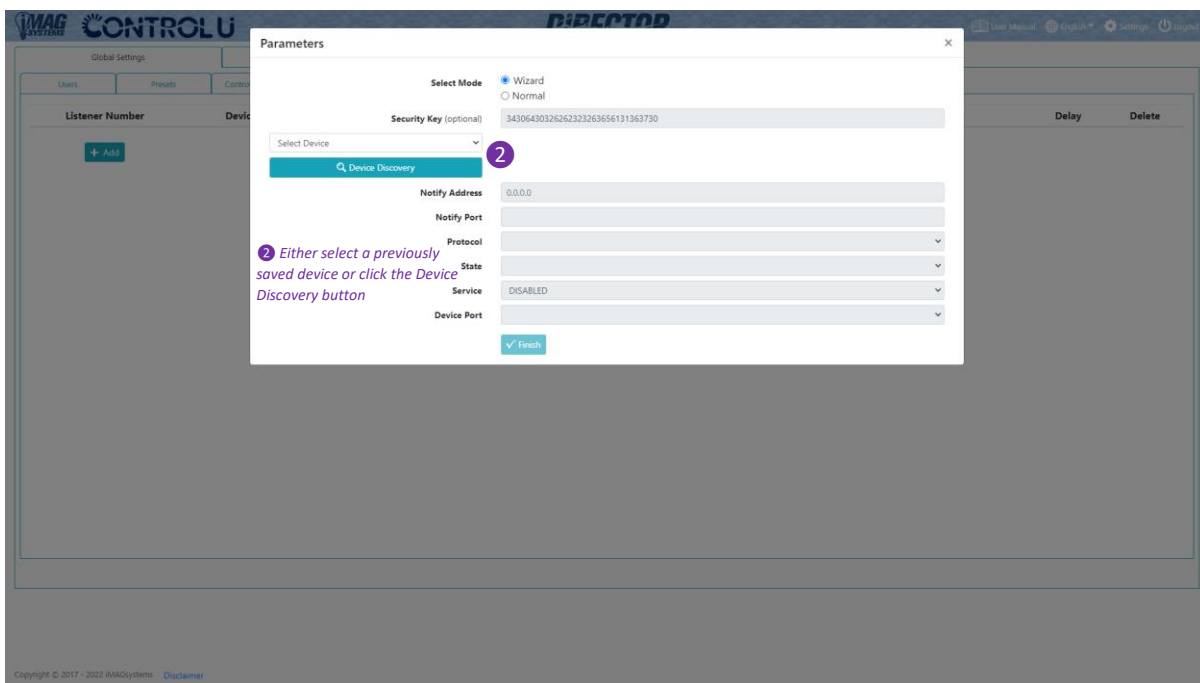
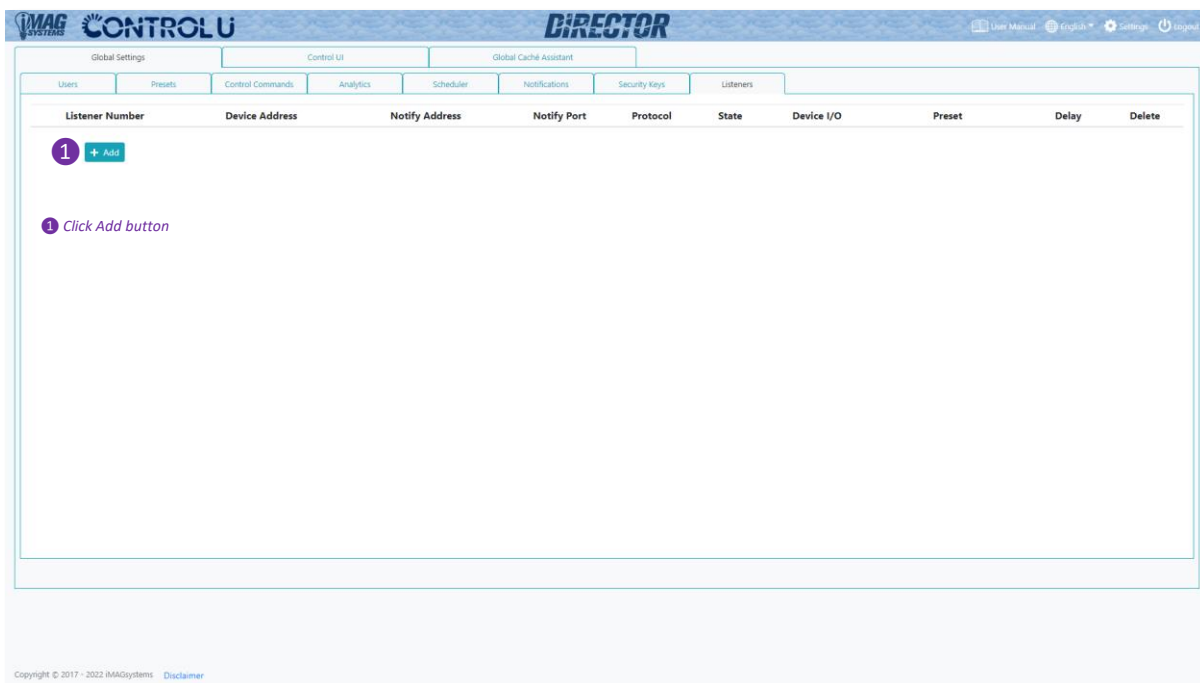
1.7.2 TCP Security Key continued...



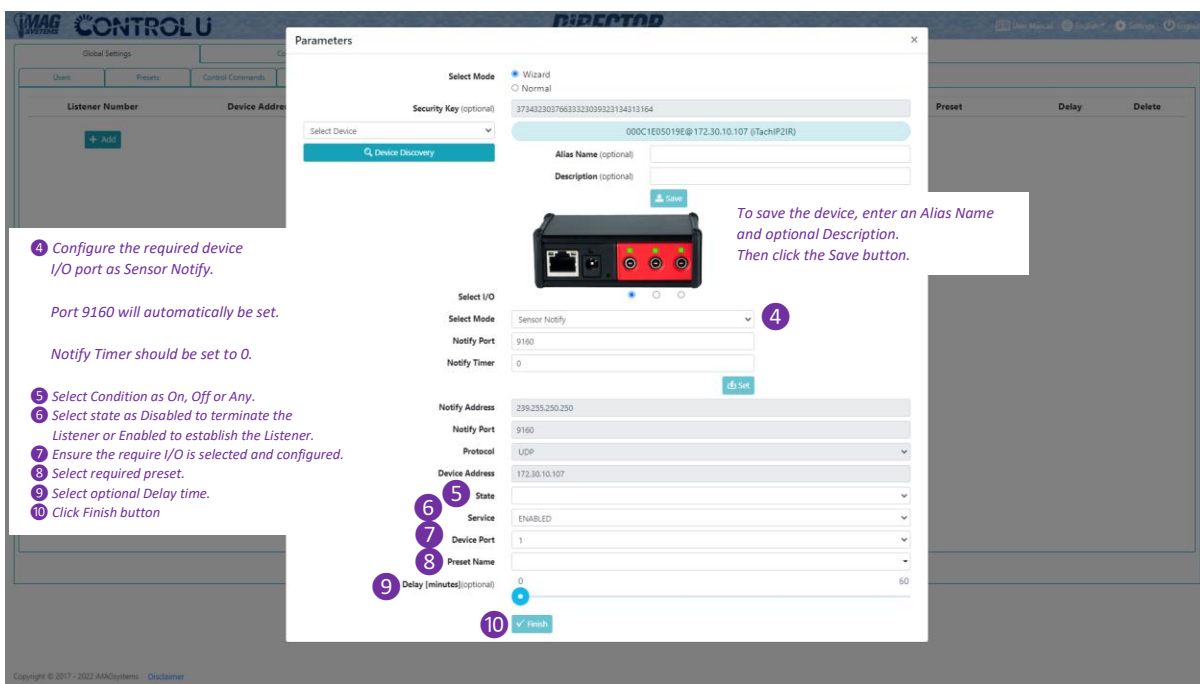
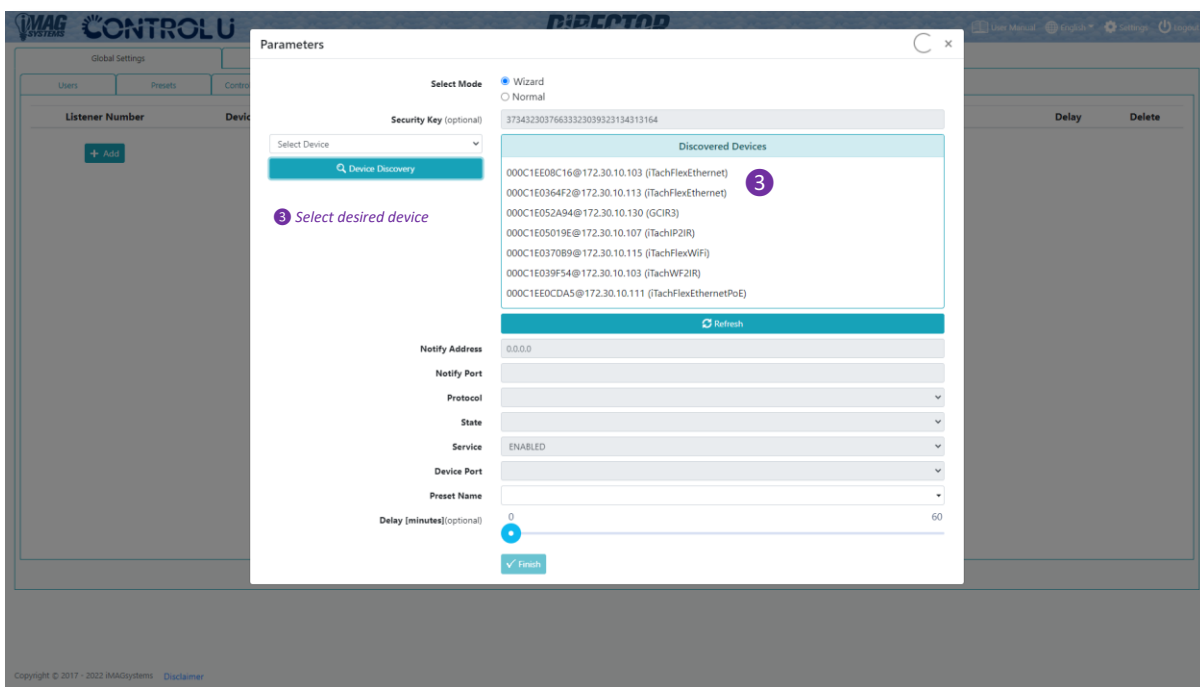
1.8 Listeners

The Listeners are Global Caché functions to apply presets when 'sensor' notifications are received from a Global Caché device as the sensor input state changes.

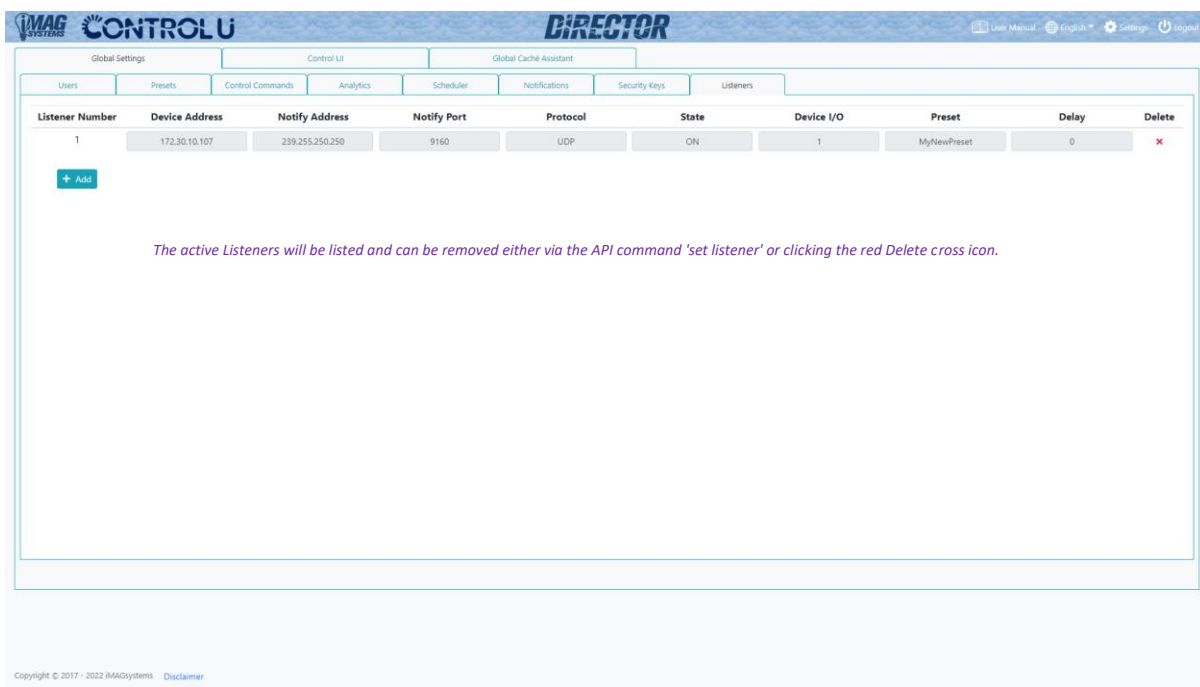
The listeners can be established either via the API command 'set listener' or directly from here.



1.8 Listeners continued...



1.8 Listeners continued...



The following Global Caché devices are supported:

- iTach WF2IR
- iTach IP2IR
- iTach Flex *with Relay/Sensor cable attached*
- Global Connect GCIR3

Devices will be automatically configured to use UDP notification port 9160.

Networks must be configured to pass UDP Multicast traffic from 239.255.250.250.

2 Control UI

The Control UI can be used instead of a 3rd party control system to fully control the functions of the system and much more. Here you can design your own User Interfaces to recall functions that have been saved as presets.

Control UI lets you create a virtually unlimited number of User Interfaces which can be viewed on any devices Google Chrome or Safari browser.

2.1 Mode

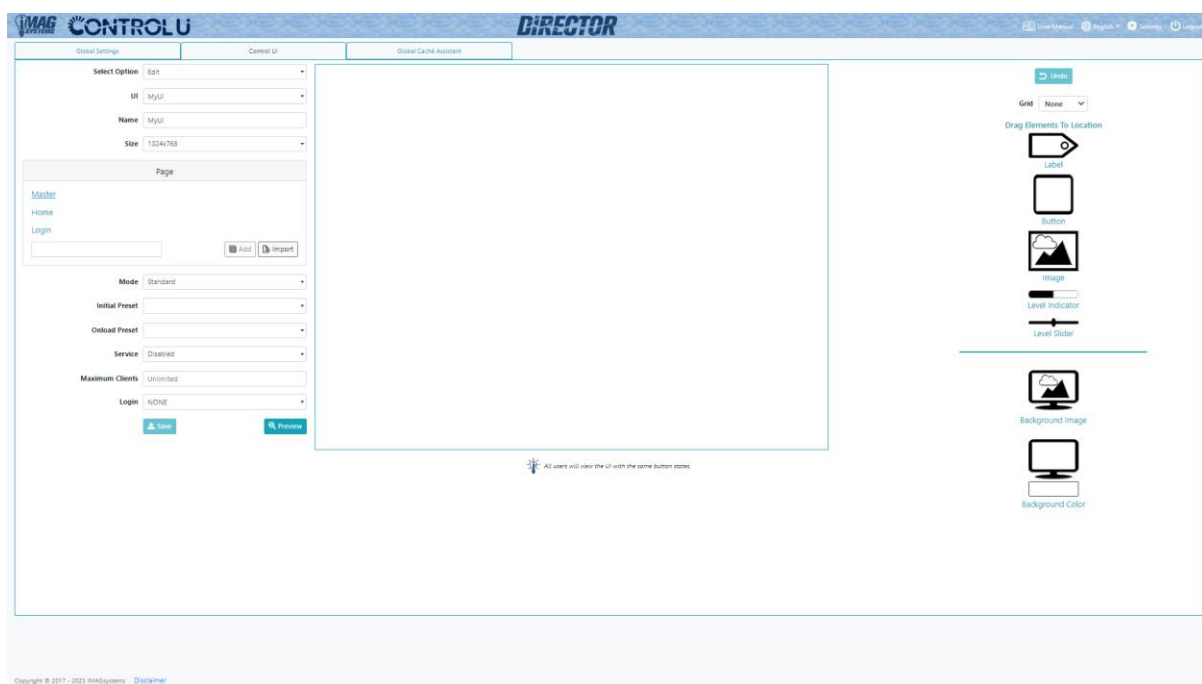
The Control UI has two modes of operation, Standard and QR Code Result mode. Standard being the normal mode of operation to create control system User Interfaces. While QR Code Result mode is specific to displaying the result from scanning and executing a QR Code preset.

Refer also to [1.2.9 Preset QR Code](#).

2.1.1 Standard Mode

Standard mode provides the default pages Master Page, Home Page and Login Page. The Master Page is used to display the elements on all other pages without a background applied. The Home Page is the initial page to be displayed. The Login page is shown when a login code is required.

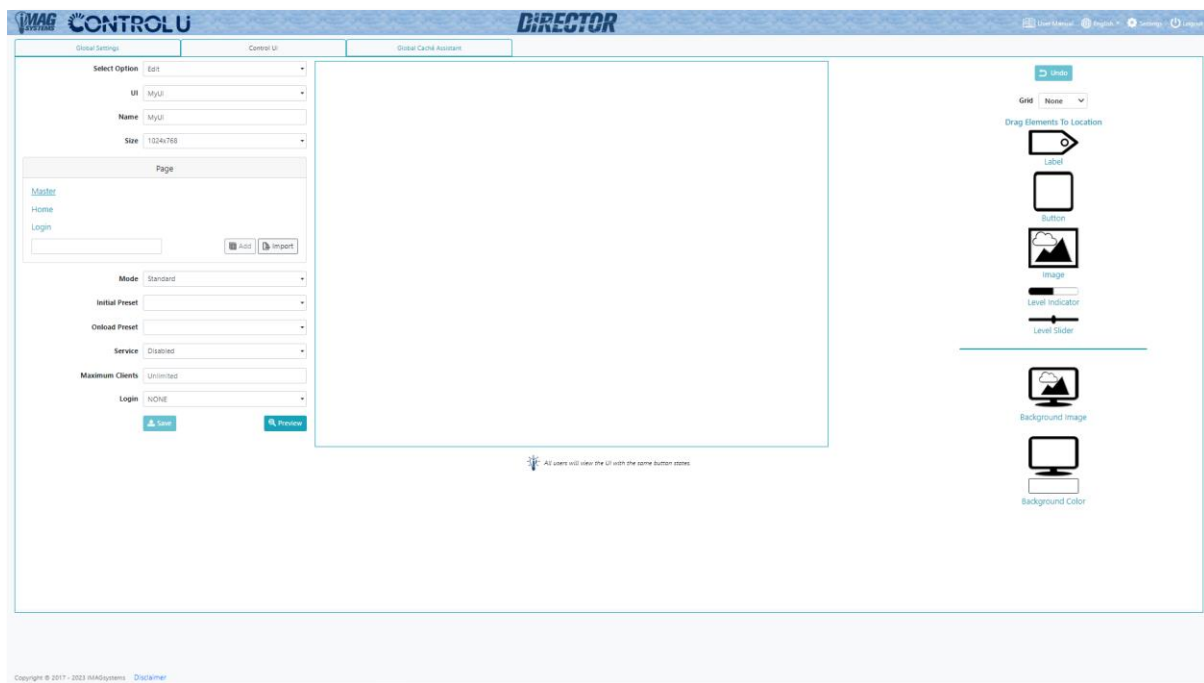
Standard mode provides options for limiting the maximum allowed clients and login with fixed or random number with a session timeout.



2.1.1.1 Standard Mode Initial Preset

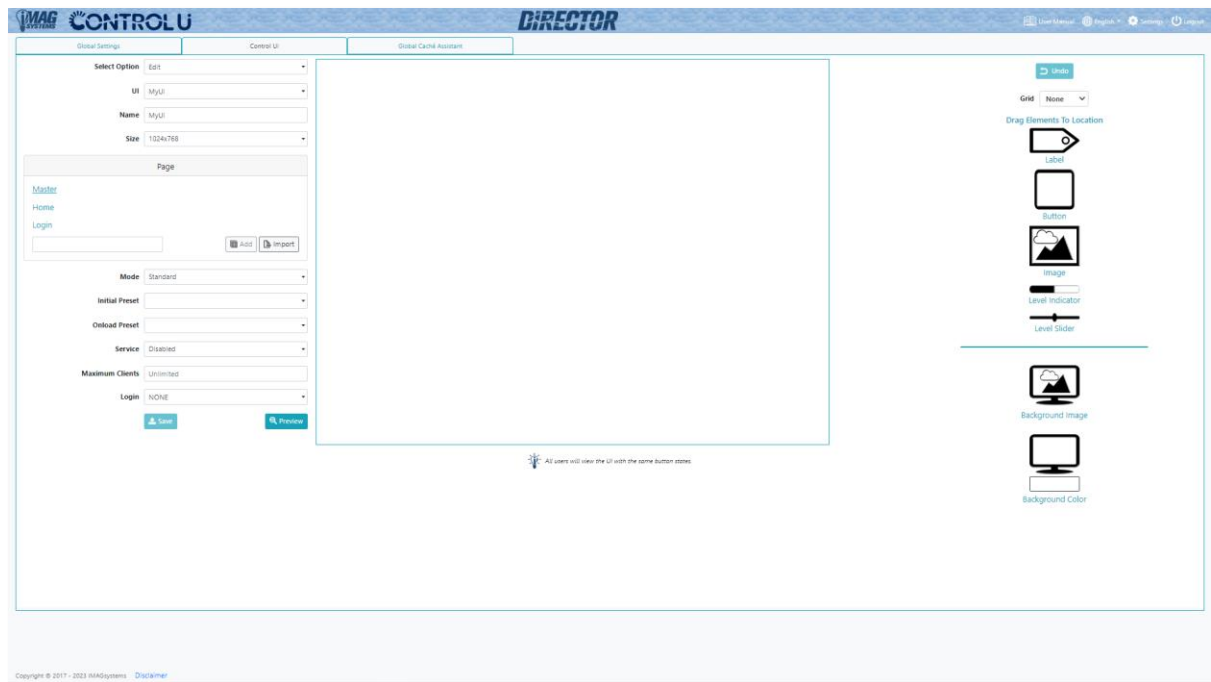
The Initial Preset is used to select a preset to be executed when the UI service is enabled. This preset can be used to set a default configuration to match User Interface initial button states.

The control command **set ui** can be used to toggle the service state.



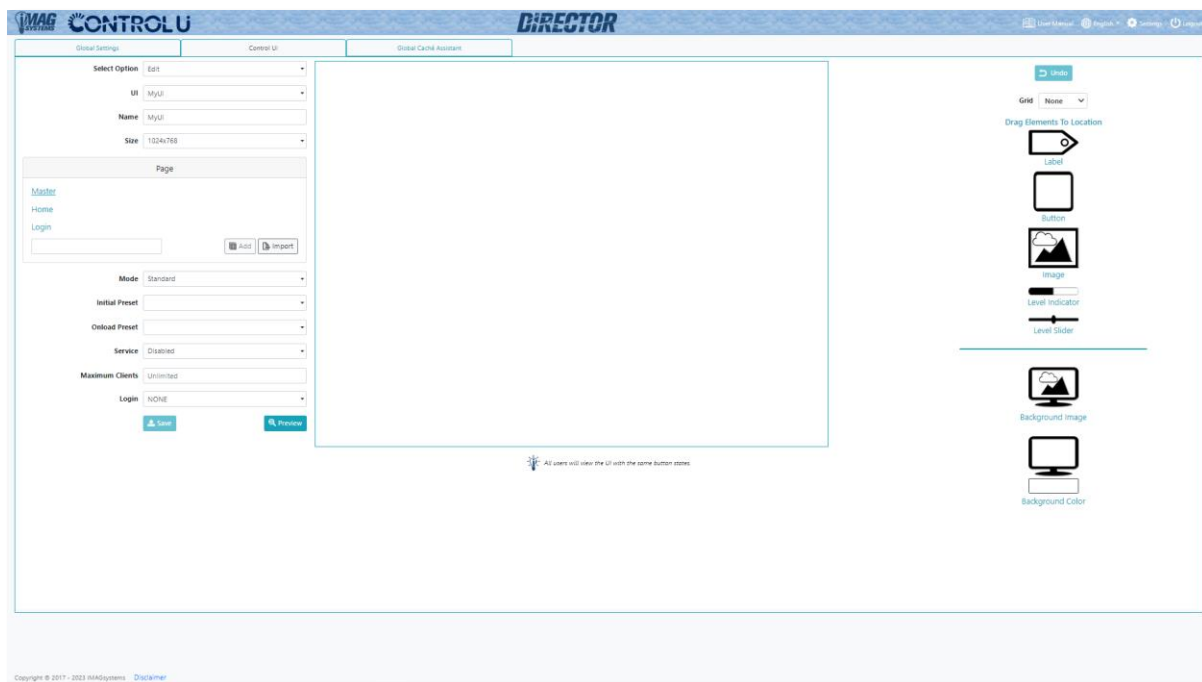
2.1.1.2 Standard Mode onLoad Preset

The onLoad Preset is used to select a preset to be executed when the UI is loaded client side.



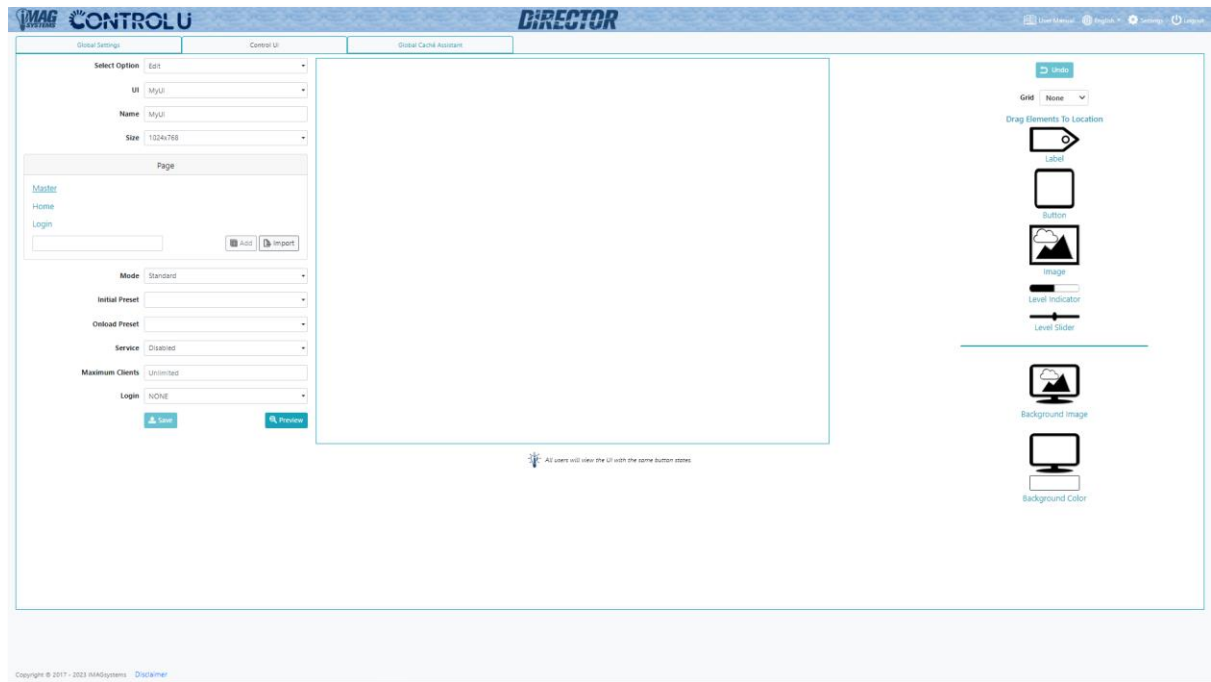
2.1.1.3 Standard Mode Service

Service is used to enable and disable access to the User Interface.



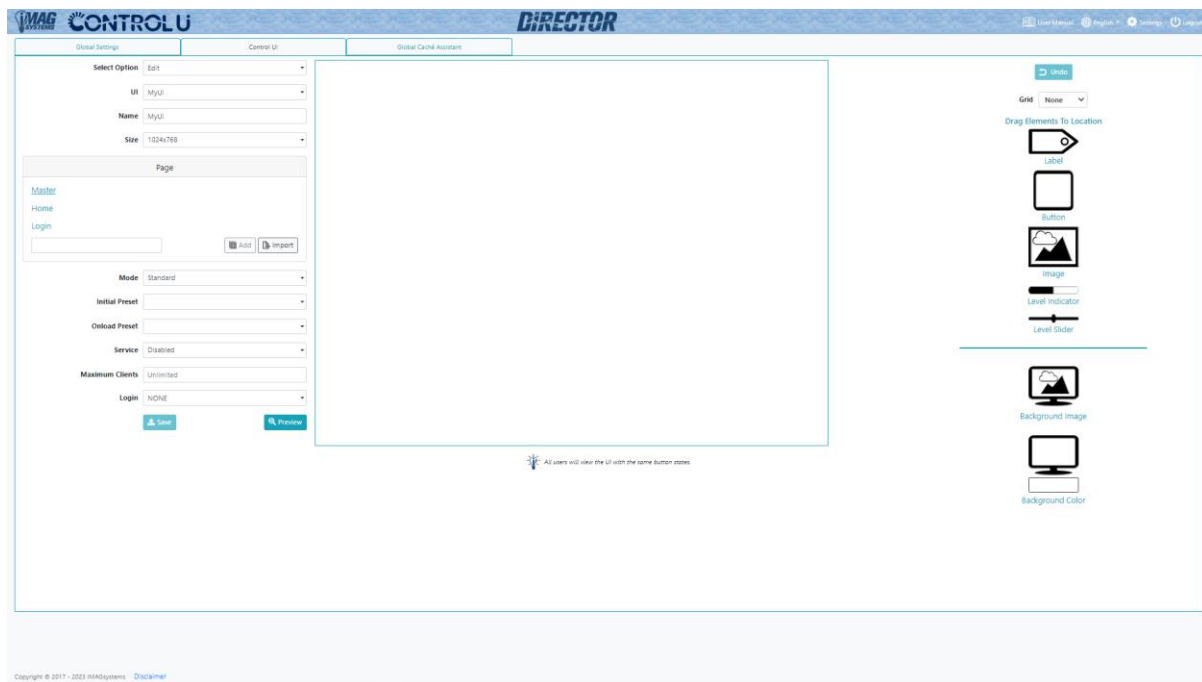
2.1.1.4 Standard Mode Maximum Clients

The number of simultaneous client connections can be limited by assigning a value to Maximum Clients otherwise the User Interface can be accessible to an unlimited number of users.



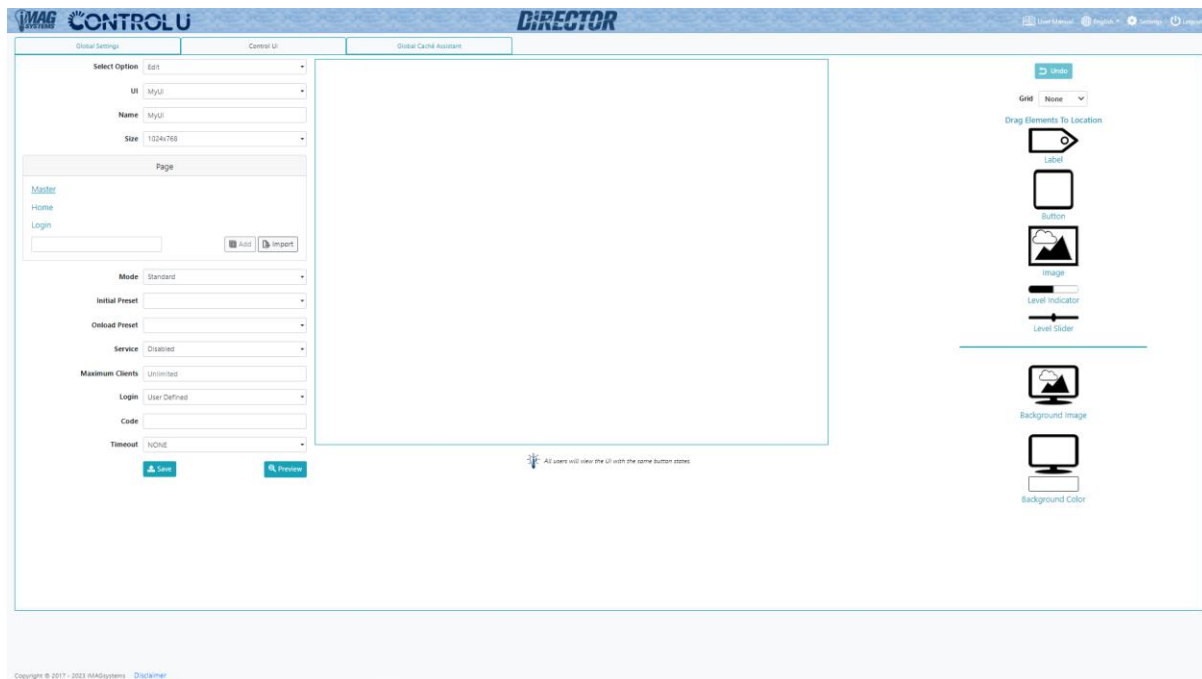
2.1.1.5 Standard Mode Login

If a pin code to access the User Interface is not required then leave the Login as NONE. The Login Page will not be used or shown in the case.



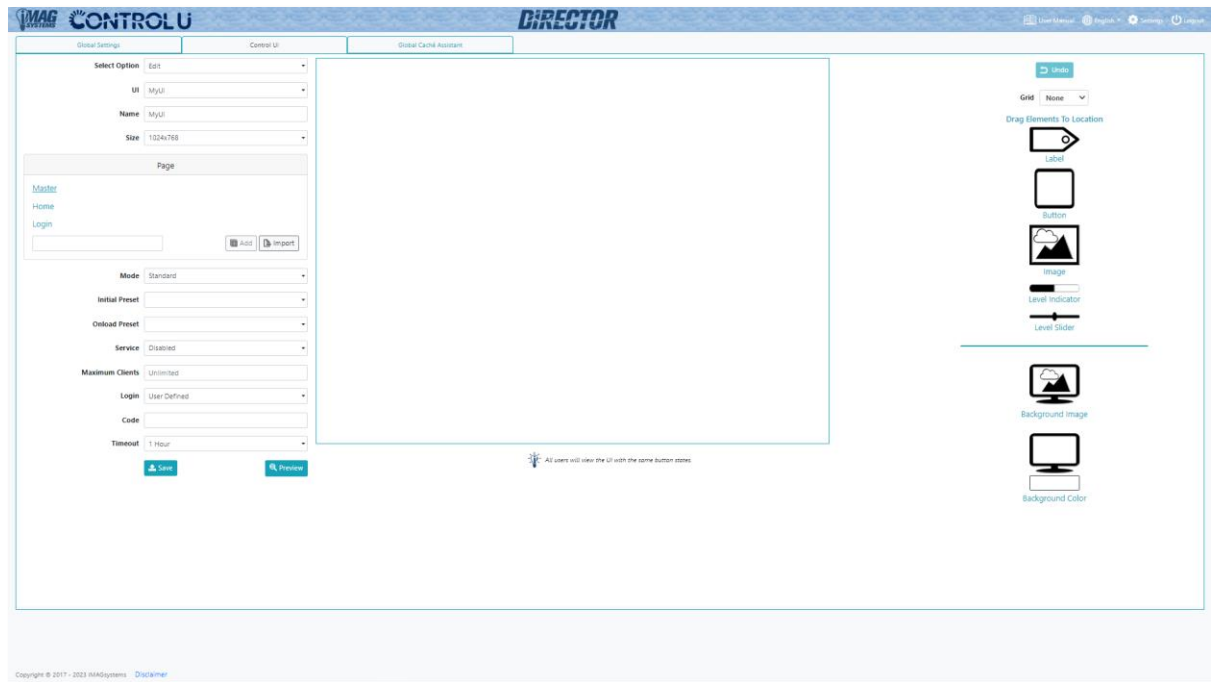
2.1.1.5 Standard Mode Login continued...

When a login pin code is required either a Random or User Defined 4 digit code can be selected. A random pin code will change each time the service is enabled. In these cases the Login Page will be used and displayed when accessing the User Interface.



2.1.1.6 Standard Mode Timeout

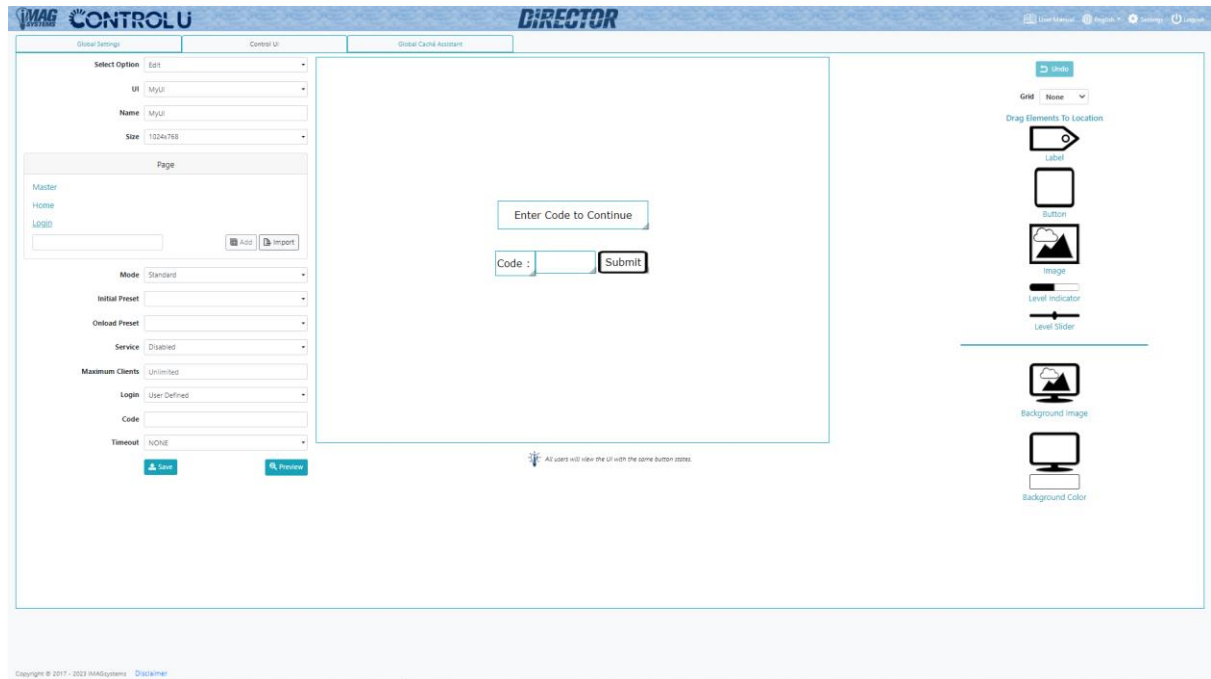
A timeout can also be applied when using a login pin code that will prevent the client access after the selected time has elapsed.



2.1.1.7 Login Page

The Login page will be displayed when a random or user defined pin code is required to access the User Interface.

This page is unique in that it already contains the main elements required. A heading label, a code label, textbox to enter the 4 digit pin code and a button to submit. These elements cannot be deleted but can be changed as required. A background and logo images can be added as required.



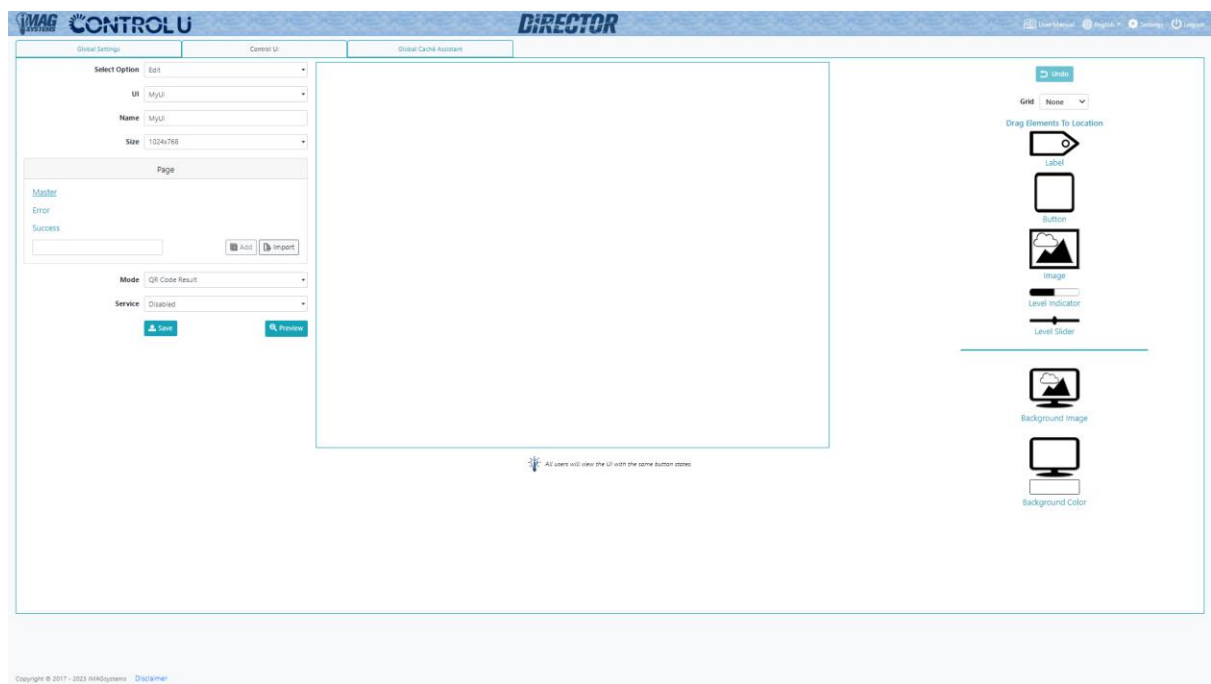
2.1.2 QR Code Result Mode

Standard mode provides the default pages Master, Home and Login. The Master page is used to display the elements on all other pages without a background applied. The Home page is the initial page to be displayed.

QR Code Result mode provides the default pages Master, Success and Error. The Master page is used to display the elements on all other pages without a background applied. The Success page is shown after a scanned QR Code preset is executed successfully. The Error page is shown after a scanned QR Code preset is executed with an error.

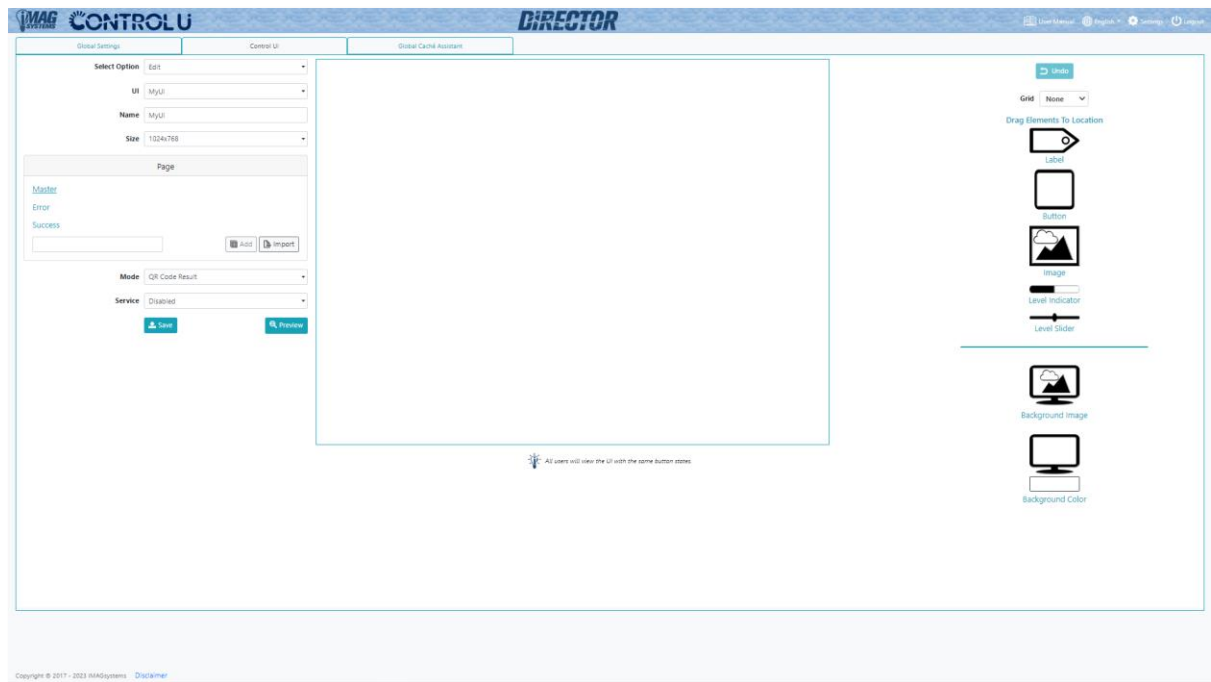
These result User Interface can be used to display a single page message or a multipage User Interface with the same abilities as standard mode.

Refer 1.2.9 Preset QR Codes



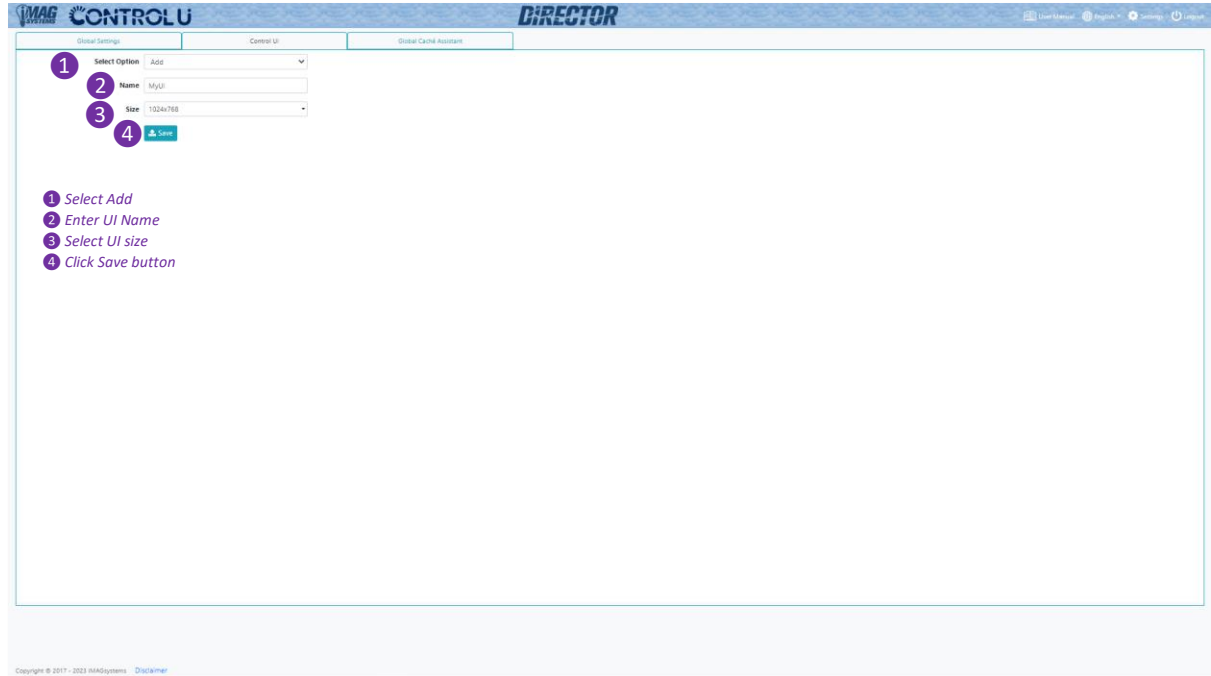
2.1.2.1 QR Code Result Mode Service

Service is used to enable and disable access to the User Interface.



2.2 Add

Here you can add a new UI to the system ready to be edited as required. The UI name must be specified along with the UI resolution. A selection of standard sized displays are available or user can enter their own size from 320x200 to 3820x2160.



1 Select Option

2 Enter UI Name

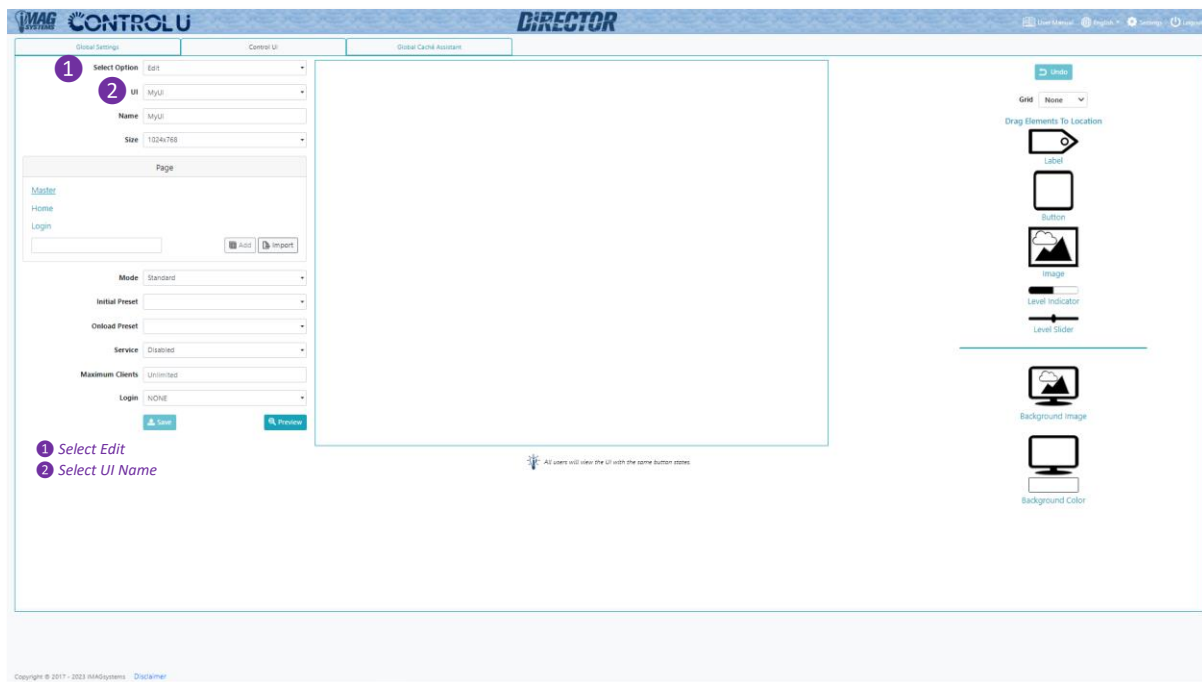
3 Select UI size

4 Click Save button

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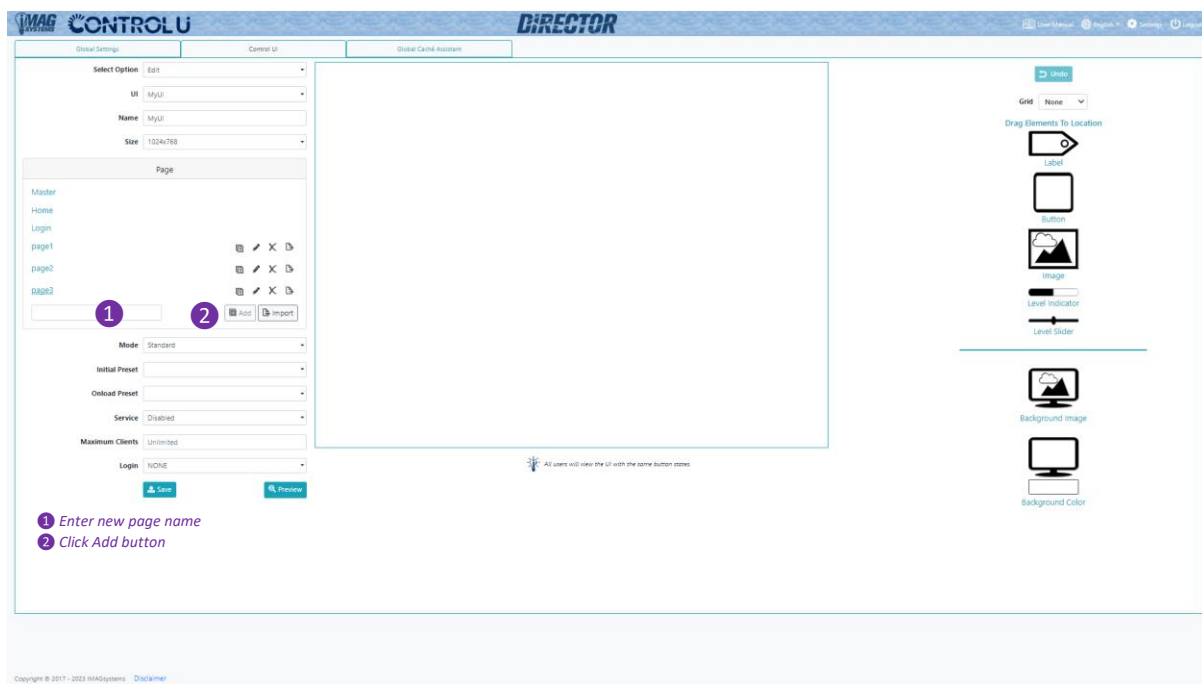
2.3 Edit

Here you can change the UI name or edit and preview an existing UI on the system. The UI service and login requirements can also be set from here.



2.3 Edit continued...

Initially only 3 pages are available, Master, Home and Login. The Master page is used for elements to be displayed on all other pages that do not have a background set. The Home page is the displayed page when the User Interface is loaded. The Login page is displayed when a pin code is required to access the User Interface. From here you can add and remove pages whenever required.



Duplicate page



Rename page



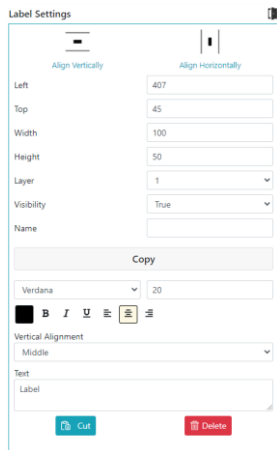
Delete page



Export page

2.3.1 Label

A Label can be dragged to any location and used as a heading, label or where ever text is required on the UI. The label must be given a name to change the colour, text and visibility via button functionality or via the API control command **set ui_label**.





Label Settings

Align Vertically | Align Horizontally

Left: 407
Top: 45
Width: 100
Height: 50
Layer: 1
Visibility: True
Name:



Copy

Verdana | 20

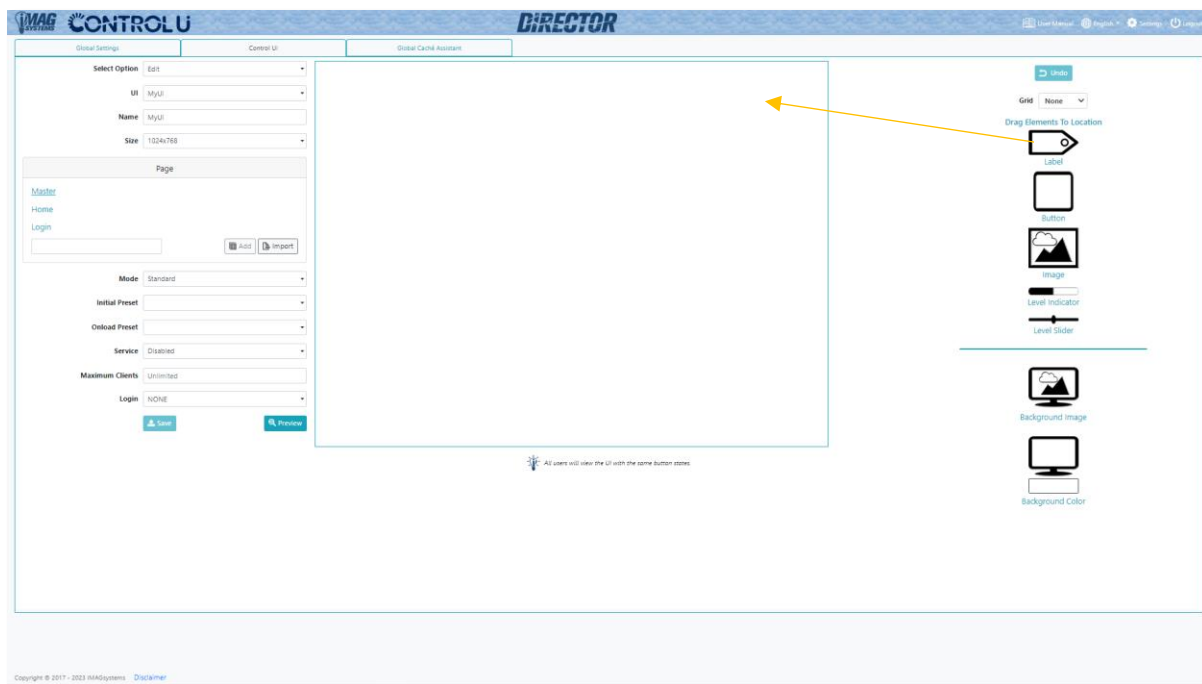
B *I* U  

Vertical Alignment: Middle

Text: Label

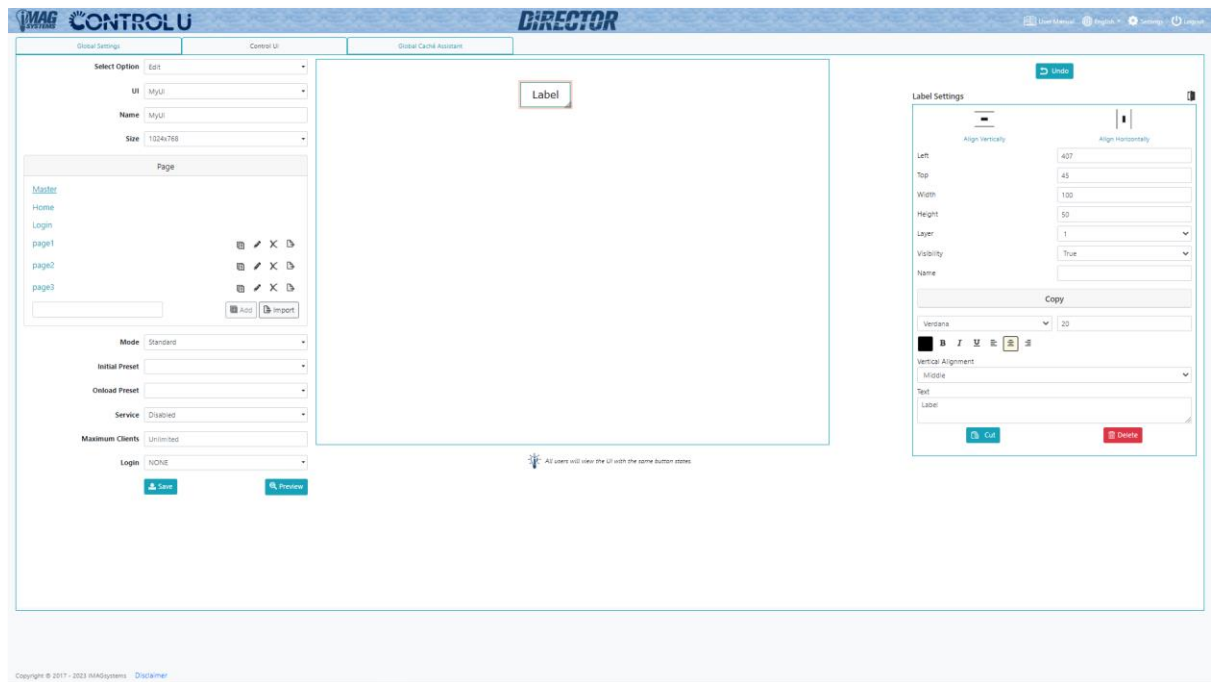
 Cut  Delete

Here we are adding a title for the UI on the Master page.



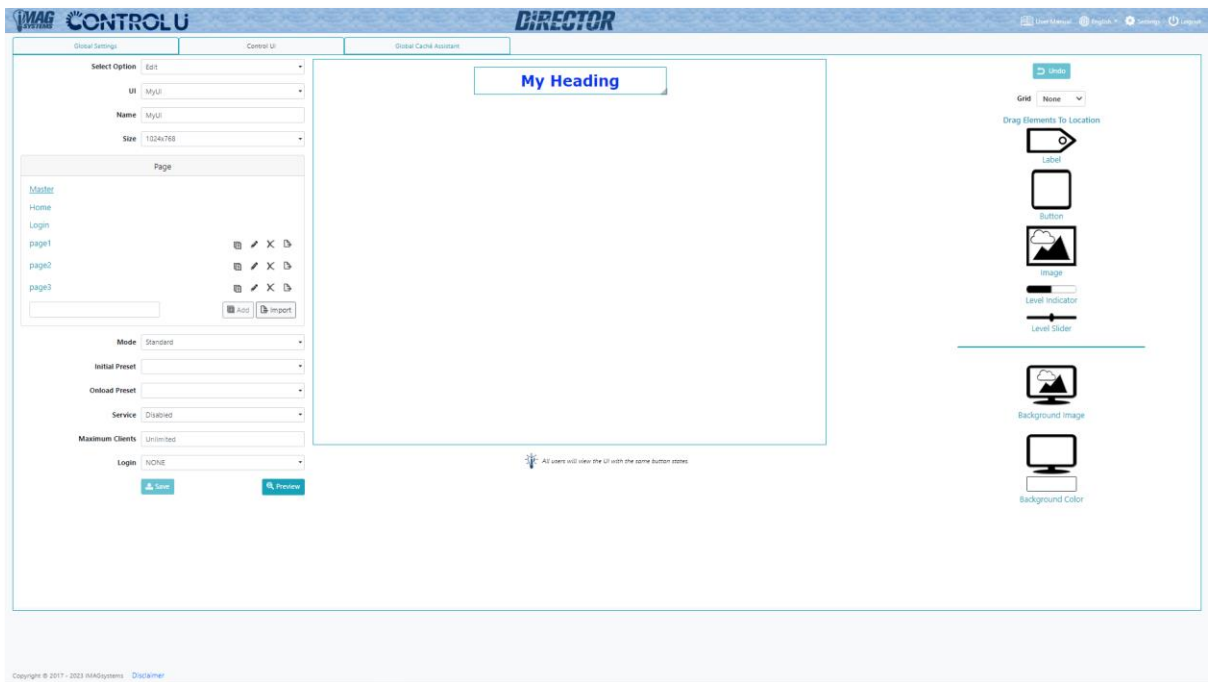
2.3.1 Label continued...

Edit the text font, size, style, alignment and position, or remove it from the UI.



2.3.1 Label continued...

Here the heading label has been defined.



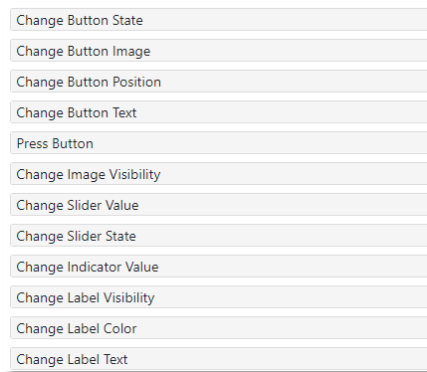
2.3.2 Button

Buttons are primarily used to excite presets, but can also be used to indicate the status of something by toggling their position, up or down. A button will indicate the execution status of a preset as success or failure by glowing either green for success, or red for failure.

The button must be given a name to change the state, position and text via button functionality or via the API control command **set ui_button**.

A button can be configured to operate with 5 different functions:

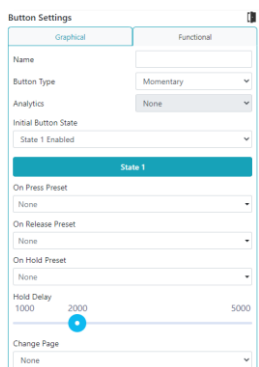
- **Momentary**
- **Repeat**
- **Toggle**
- **Radio Toggle**
- **QR Code**



Each button includes functionality to control all UI elements the same as possible via the API. This allows a button basic manipulation of the UI without any coding required.

2.3.2.1 Momentary Button

A momentarily button will operate in a push button single state fashion where a preset is executed once for every press. Presets can be set for button press, button release and button hold.



Here you can see the functionality of a **Momentary** button.

Name: A button name is required as a reference for analytics or when manipulating the button from another buttons functionality or via the API.

Button Type: Select the operation of the button as Momentary, Toggle, Radio Toggle, Split, Repeat or QR Code.

Analytics: Select a button function from the list that best matches the operation of the button or add a custom button type of your own.

Initial Button State: This is the initial state of the button when the UI is loaded.

On Press Preset: Select the preset to be executed on button press.

On Release Preset: Select the preset to be executed on button release.

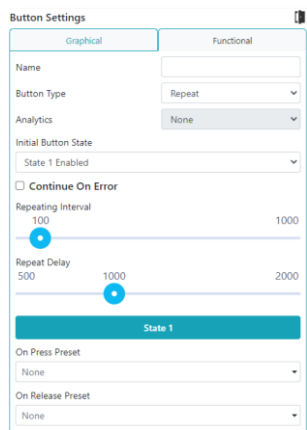
On Hold Preset: Select the preset to be executed on button hold.

Hold Delay: Select the hold trigger delay time.

Change Page: This allows you to change to another page.

2.3.2.2 Repeat Button

A Repeat button will operate in a momentarily fashion where only a preset is assigned to state 1 but the preset will be repeated while the button is held down. The preset will be executed as soon as the button is pressed, then there is a configurable repeat delay before repeating begins and a configurable repeating interval which sets the delay time between preset executions.



Button Settings

Graphical Functional

Name

Button Type: Repeat

Analytics: None

Initial Button State: State 1 Enabled

☐ Continue On Error

Repeating Interval: 100 1000

Repeat Delay: 500 1000 2000

State 1

On Press Preset: None

On Release Preset: None

Here you can see the functionality of a **Repeat** button.

Name: A button name is required as a reference for analytics or when manipulating the button from another buttons functionality or via the API.

Button Type: Select the operation of the button as Momentary, Toggle, Radio Toggle, Repeat or QR Code.

Analytics: Select a button function from the list that best matches the operation of the button or add a custom button type of your own.

Initial Button State: This is the initial state of the button when the UI is loaded.

Continue On Error: This is an option to continue executing the preset if it returns failed.

Repeating Interval: This is the time delay in milliseconds the button preset repeats while being held down.

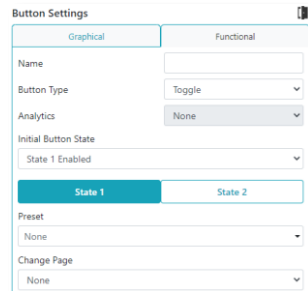
Repeat Delay: This is the time in milliseconds the button must remain held down before the preset starts repeating.

On Press Preset: Select the preset to be executed on button press and repeat.

On Release Preset: Select the preset to be executed on button release.

2.3.2.3 Toggle Button

A Toggle button will operate in a push on, push off fashion so a preset can be assigned to both state 1 and state 2. First press of the button executes state 1 preset and puts the button into state 2 showing a state 2 button image. Second press of the button then executes state 2 preset and returns the button back to state 1.



Here you can see the functionality of a **Toggle** button.

Name: A button name is required as a reference for analytics or when manipulating the button from another buttons functionality or via the API.

Button Type: Select the operation of the button as Momentary, Toggle, Radio Toggle, Split, Repeat or QR Code.

Analytics: Select a button function from the list that best matches the operation of the button or add a custom button type of your own.

Initial Button State: This is the initial state of the button when the UI is loaded.

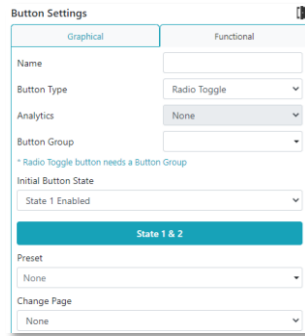
State 1 / State 2: These buttons allow you to select the following for each button state:

Preset: Select the preset to be executed on button press.

Change Page: This allows you to change to another page.

2.3.2.4 Radio Toggle Button (Exclusive Toggle button)

A Radio Toggle group of buttons will operate in an exclusive toggle fashion and must be assigned to a Button Group. When you want a group of buttons to work together as radio toggle buttons where only one button of the group can be in state 2 (down), such as a radio station selector or source selection, then define the same Button Group name for each of those buttons.



The screenshot shows the 'Button Settings' dialog box with the 'Functional' tab selected. The 'Name' field is empty. 'Button Type' is set to 'Radio Toggle'. 'Analytics' is set to 'None'. 'Button Group' is empty, with a note below it stating '* Radio Toggle button needs a Button Group'. 'Initial Button State' is set to 'State 1 Enabled'. There is a blue button labeled 'State 1 & 2'. 'Preset' is set to 'None'. 'Change Page' is set to 'None'.

Here you can see the functionality of a **Radio Toggle** button.

Name: A button name is required as a reference for analytics or when manipulating the button from another buttons functionality or via the API.

Button Type: Select the operation of the button as Momentary, Toggle, Radio Toggle, Split, Repeat or QR Code.

Analytics: Select a button function from the list that best matches the operation of the button or add a custom button type of your own.

Button Group: A group name must be provided to combine individual buttons to function together.

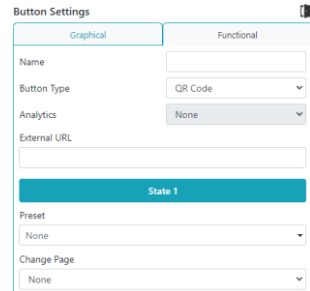
Initial Button State: This is the initial state of the button when the UI is loaded.

Preset: Select the preset to be executed on button press.

Change Page: This allows you to change to another page.

2.3.2.5 QR Code Button

Adds touchless functionality to a touchscreen control panel. A QR Code button will operate in a momentarily fashion where only a preset is assigned to state 1 and a QR Code replaces the button image. When the QR Code is scanned a virtual press of the button is performed.



The screenshot shows the 'Button Settings' dialog box with the 'Functional' tab selected. The 'Graphical' tab is also visible. The 'Functional' tab contains the following fields:

- Name: [Text input field]
- Button Type: [Dropdown menu with 'QR Code' selected]
- Analytics: [Dropdown menu with 'None' selected]
- External URL: [Text input field]
- State 1: [Section header]
- Preset: [Dropdown menu with 'None' selected]
- Change Page: [Dropdown menu with 'None' selected]

Here you can see the functionality of a **QR Code** button.

Name: A button name is required as a reference for analytics or when manipulating the button from another buttons functionality or via the API.

Button Type: Select the operation of the button as Momentary, Toggle, Radio Toggle, Split, Repeat or QR Code.

Analytics: Select a button function from the list that best matches the operation of the button or add a custom button type of your own.

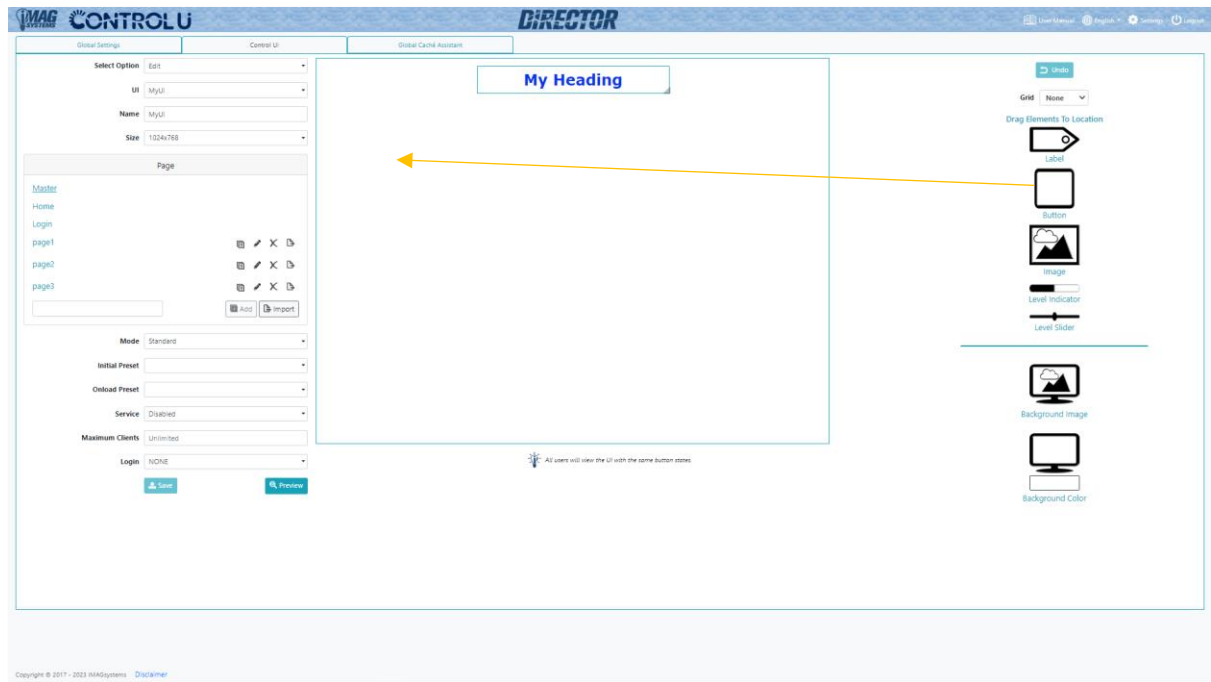
External URL: Enter the controllers external URL if working outside of the local network.

Preset: Select the preset to be executed on button press.

Change Page: This allows you to change to another page.

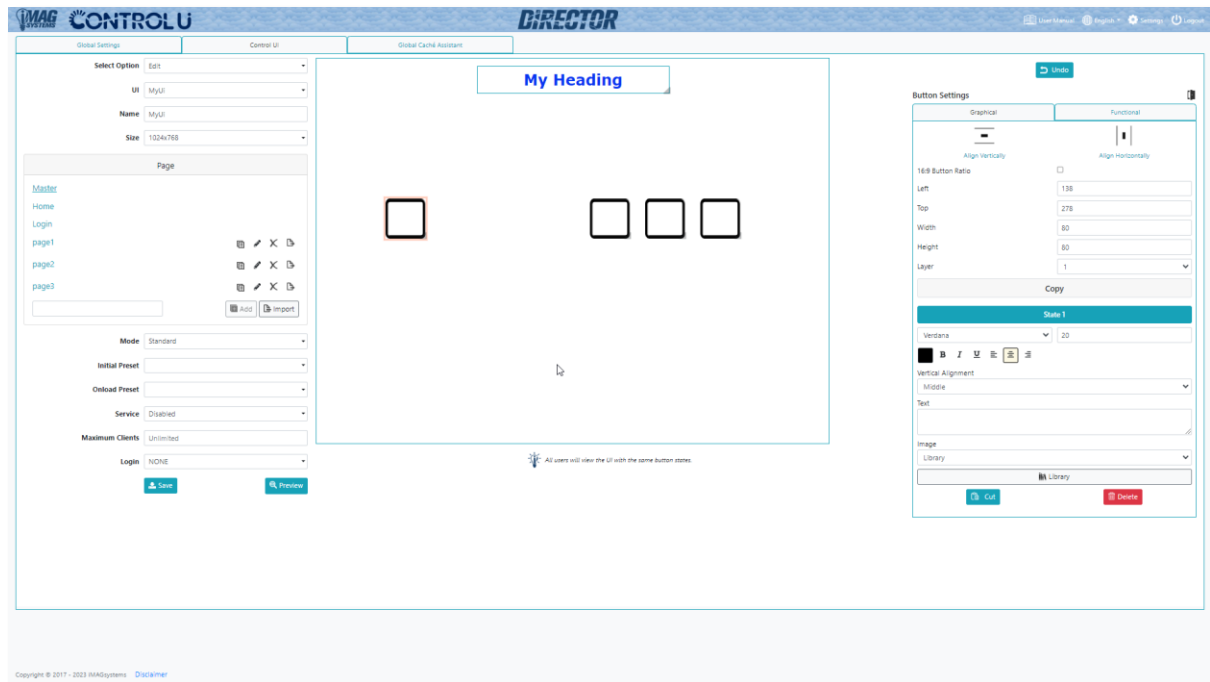
2.3.2 Button continued...

A Button can be dragged to any location and used as a press button, QR Code or an indicator. Here we are going to place some common buttons for the UI on the Master page.



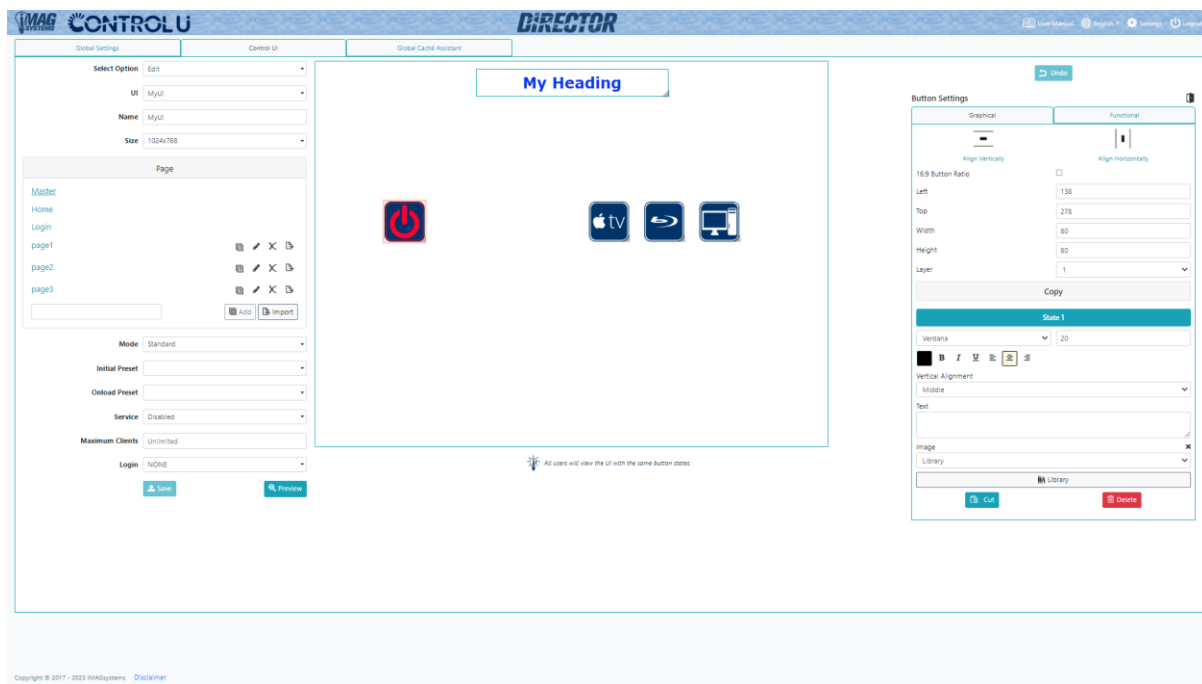
2.3.2 Button continued...

From the Button Settings Graphical tab, edit the button size, position and text font, size, style and alignment, or remove it from the UI.



2.3.2 Button continued...

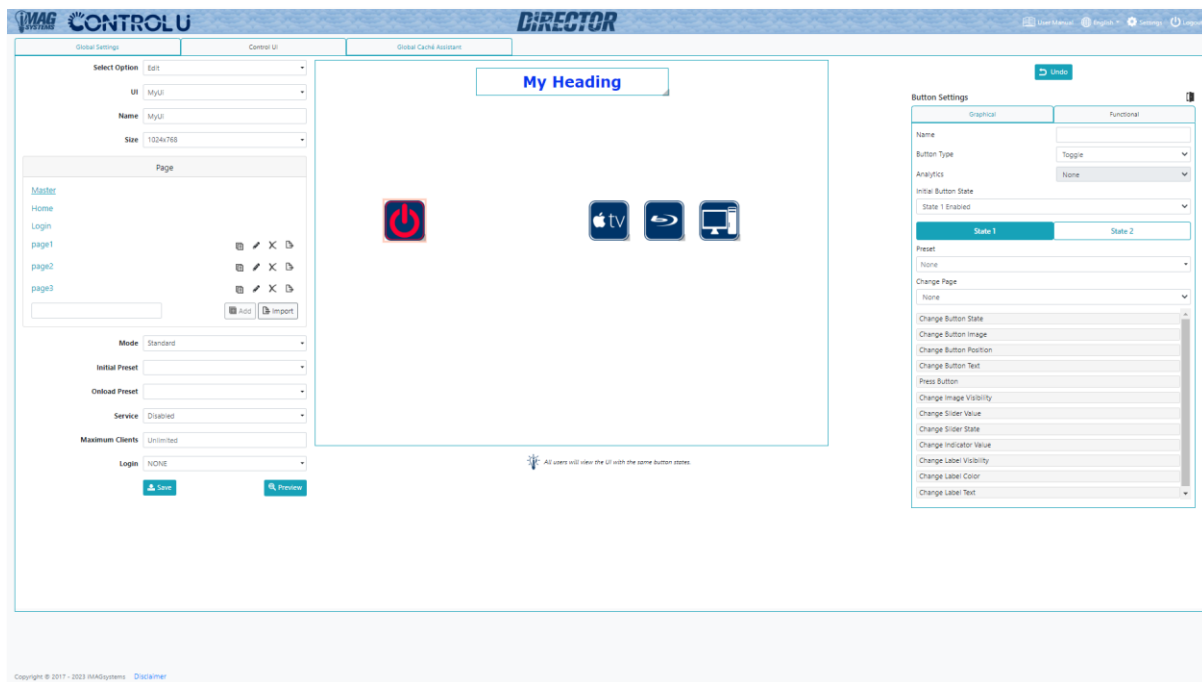
Select an image for the button by selecting either External File and browsing your own images, selecting Library to choose one from the button library or selecting Preview (when available) to display a preview steam. When selecting an image from the button library, both state 1 and state 2 images will be assigned when required. When using external file, an image must be assigned for each button state.



Here button sizes and images have been assigned to the master page buttons.

2.3.2 Button continued...

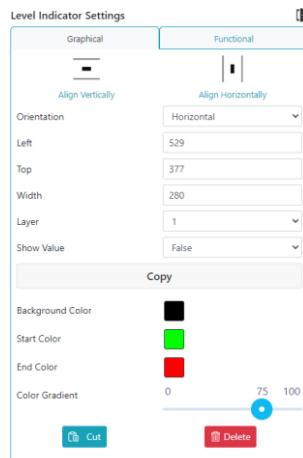
From the Button Settings Functional tab, select a preset to be triggered on button press along with any other required button actions.



2.3.3 Level Indicator

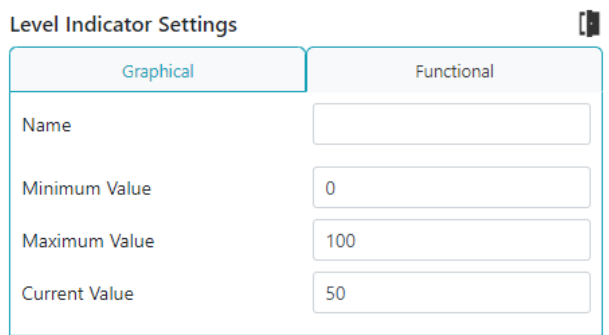
A Level Indicator can be dragged to any location then resized by dragging the placeholder or changing the size and location values directly. The Level Indicator must be given a name to change the value with button functionality and via API control command **set ui_indicator**.

Refer to Level Slider settings to link a Level Indicator automatically with Level Slider value. Once the Level Indicator is link with a Level Slider, the Level Indicators values will be set to match the Level Slider.



Graphical settings allow for horizontal or vertical orientation and option to show the current value within the Level Indicator.

The background and level colors can be set and the color gradient set to required levels.



Here you can see the functionality of a Level Slider.

Name: A name is required as a reference for when manipulating the Level Indicator from a buttons functionality or via the API control command **set ui_indicator**.

Minimum Value: Enter the minimum value

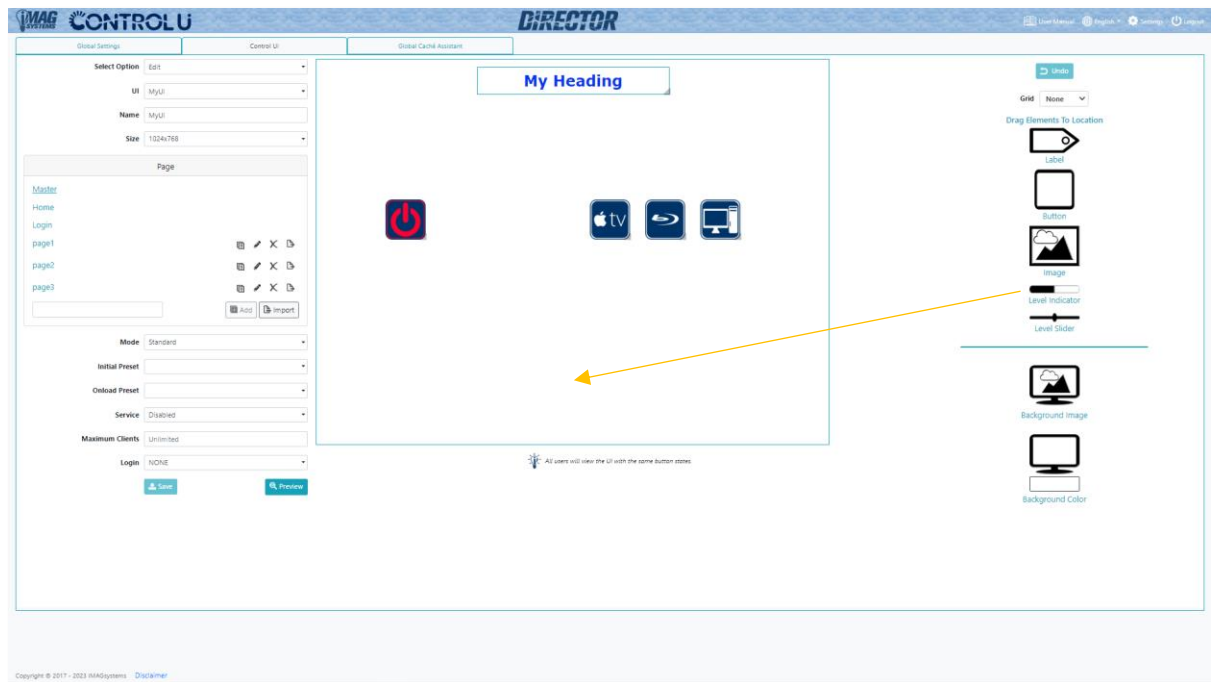
Maximum Value: Enter the maximum value

Current Value: Enter the current value

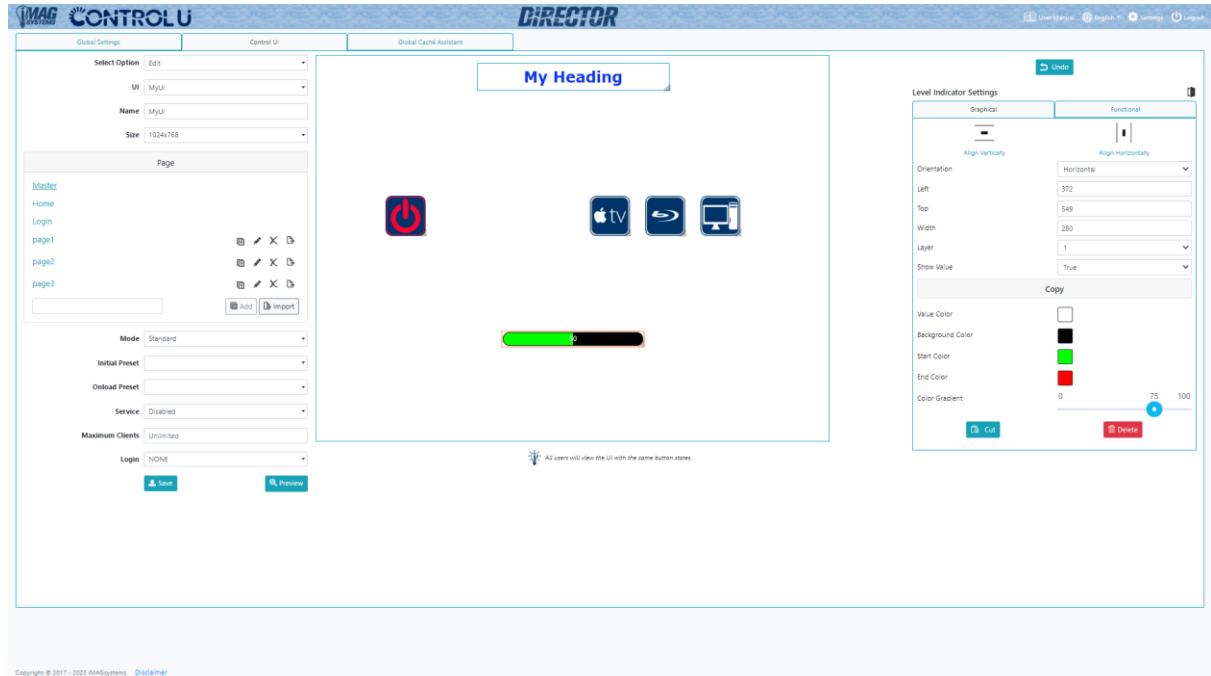
The range of values that can be used are from -1000 to 1000.

2.3.3 Level Indicator continued...

Here we are adding a Level Indicator on the Master page.



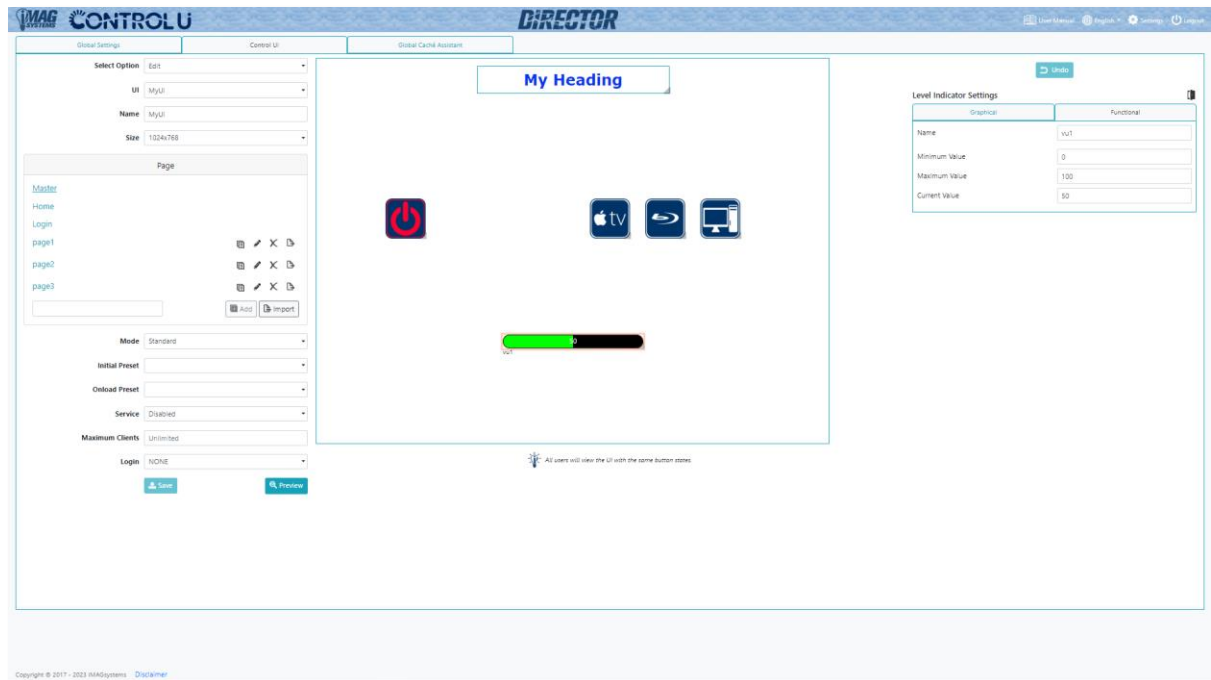
In the Graphical settings the visual effects of the Level Indicator can be applied.



2.3.3 Level Indicator continued...

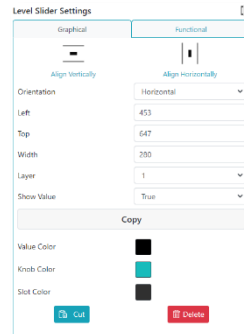
In the Functional settings a name needs to be added to control the value of the Level Indicator. Values can be applied here if not being combined with a Level Slider.

Once a Level Indicator is combined with a Level Slider, the Level Slider values will be applied.

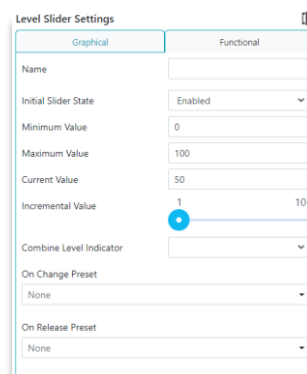


2.3.4 Level Slider

A Level Slider can be dragged to any location then resized by dragging the placeholder or changing the size and location values directly. The Level Slider must be given a name to change the value and state with button functionality and via API control command **set ui_slider**.



Graphical settings allow for horizontal or vertical orientation and option to show the current value above the Level Slider.



Here you can see the functionality of a Level Slider.

Name: A name is required as a reference for analytics or when manipulating the Level Slider from a buttons functionality or via the API.

Initial Slider State: This is the initial state of the slider when the UI is loaded.

Minimum Value: Enter the minimum value

Maximum Value: Enter the maximum value

Current Value: Enter the current value

Incremental Value: Select the incremental change value from 1 to 10

Combine Level Indicator: Select a Level Indicator to be combined and controlled automatically.

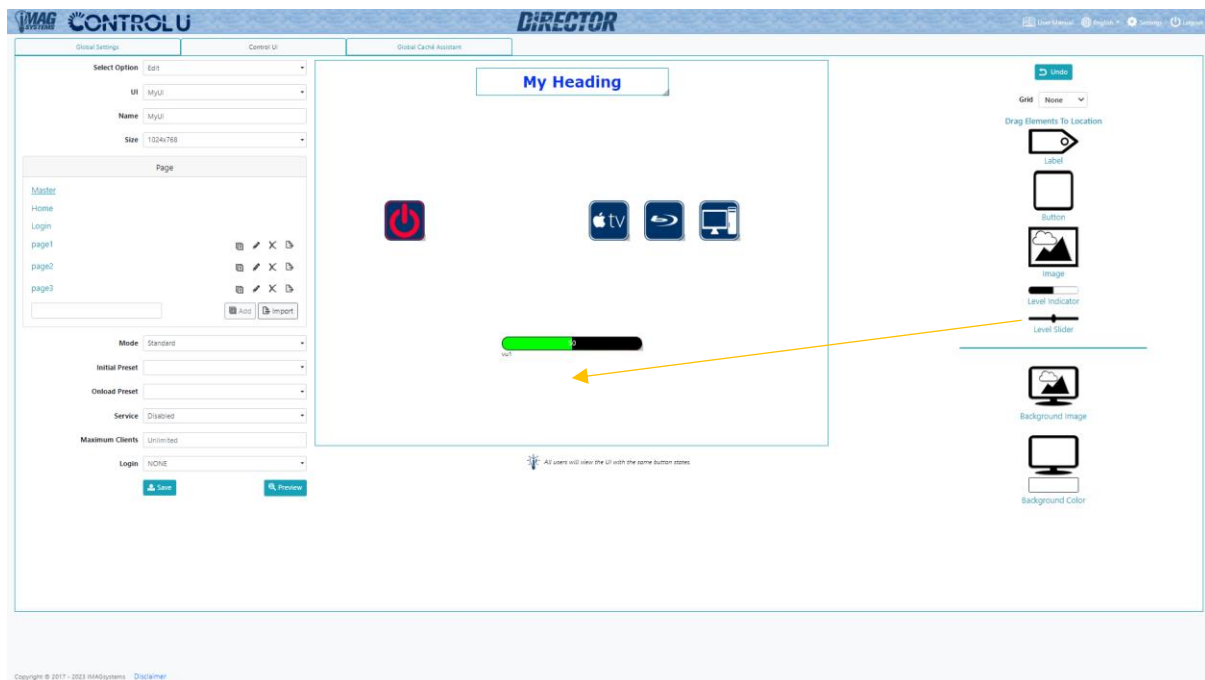
On Change Preset: Select a preset to be applied on a change of the slider value.

On Release Preset: Select a preset to be applied on release of the slider.

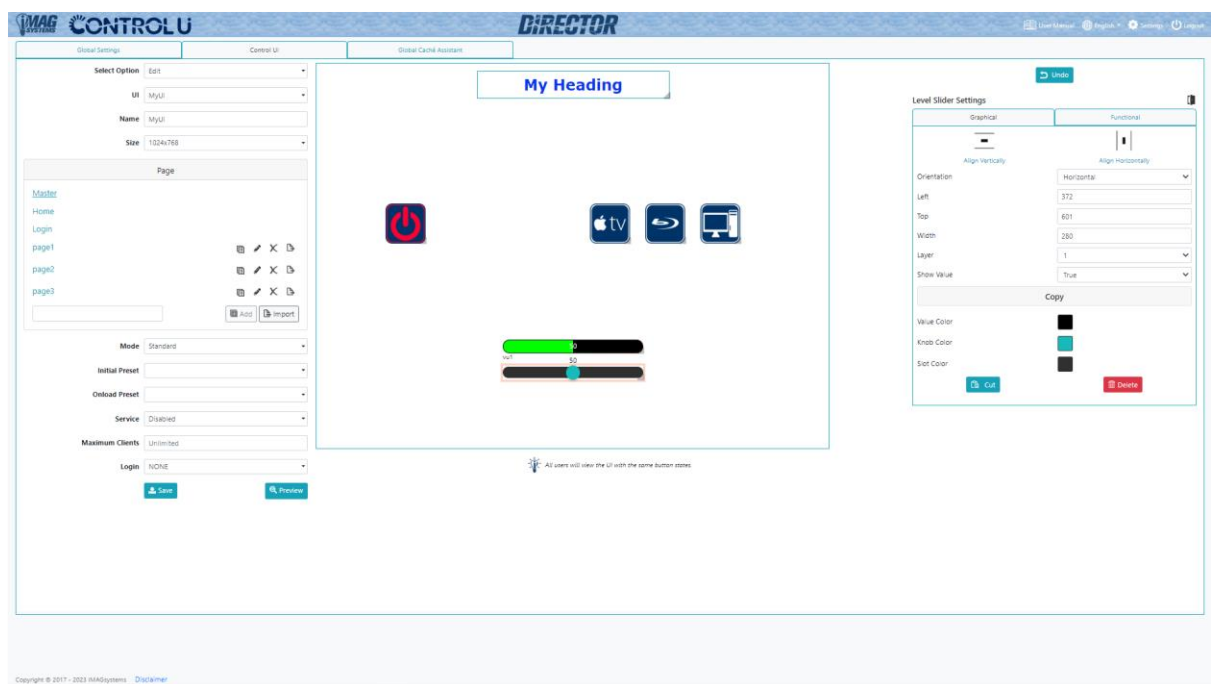
The range of values that can be used are from -1000 to 1000.

2.3.4 Level Slider continued...

Here we are adding a Level Indicator on the Master page.



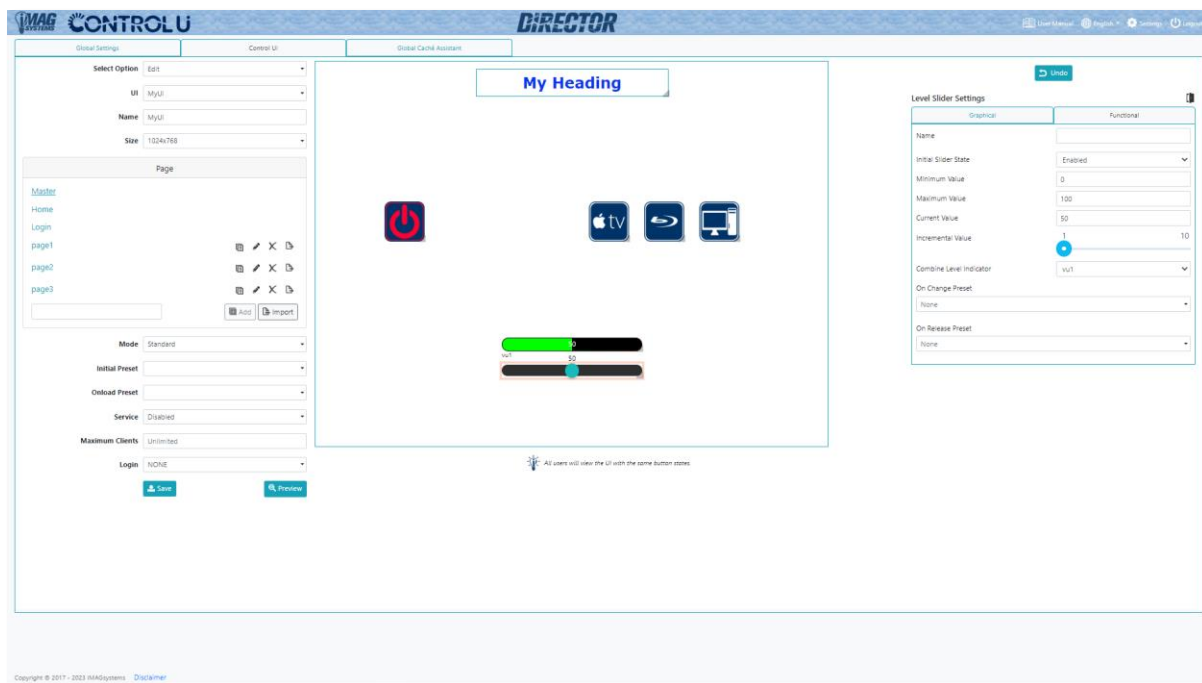
In the Graphical settings the visual effects of the Level Slider can be applied.



2.3.4 Level Slider continued...

In the Functional settings a name can be added to control the value of the Level Slider. Values are applied here.

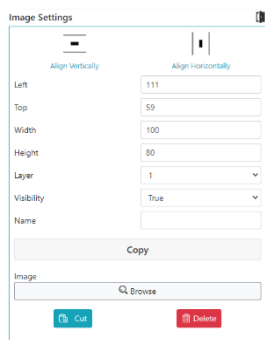
A Level Indicator can be selected to combined operation.



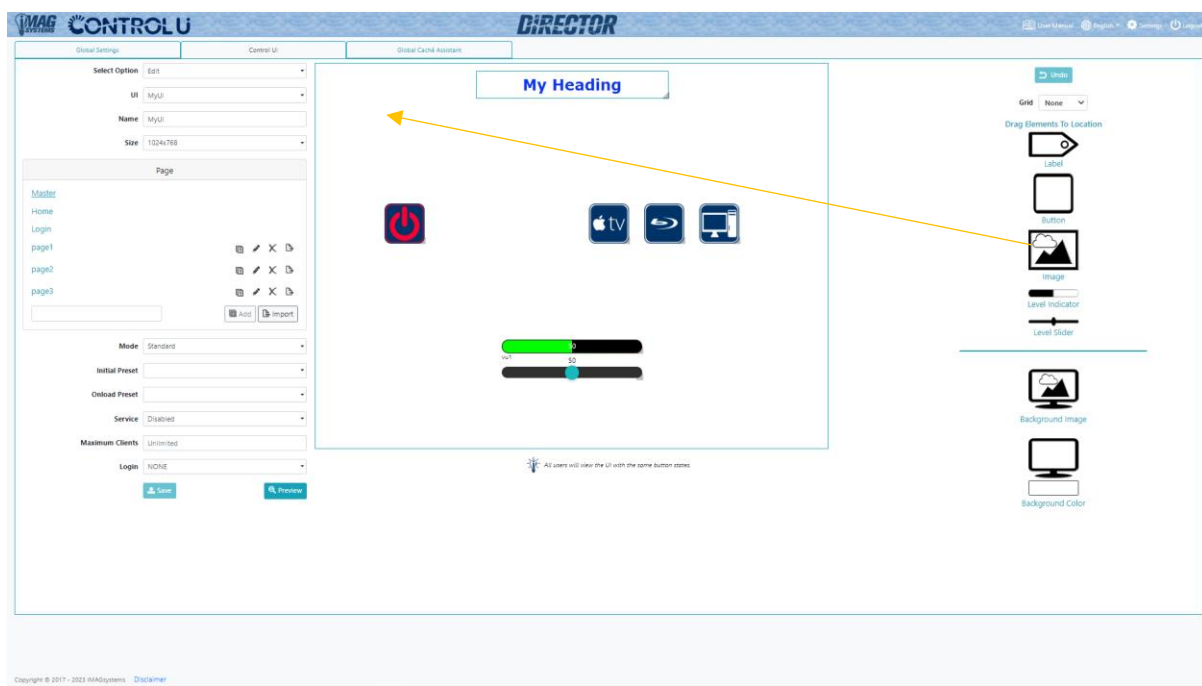
2.3.5 Image

An Image can be dragged to any location then resized by dragging the image placeholder or changing the Image Settings directly. The selected image will be resized to fit the size of the image placeholder. *It is recommended to use only the same sized images as the size being displayed.*

The image must be given a name to change the visibility via the control command **set ui_image**.

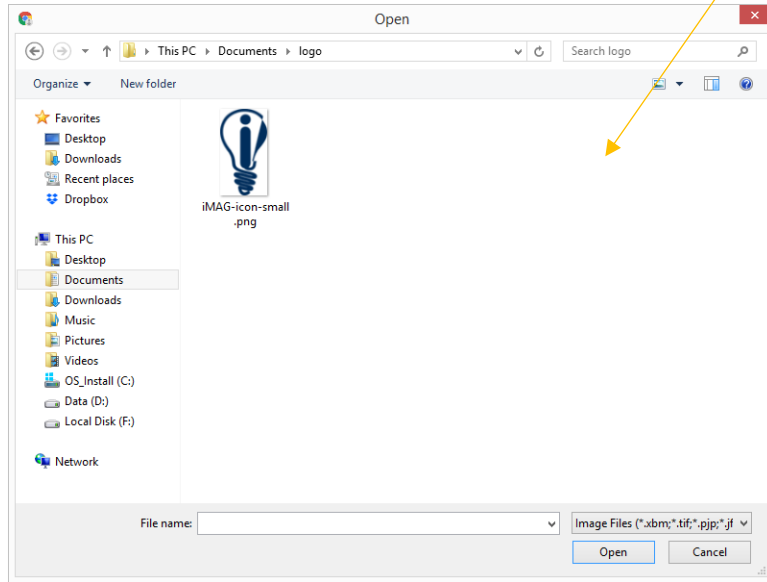
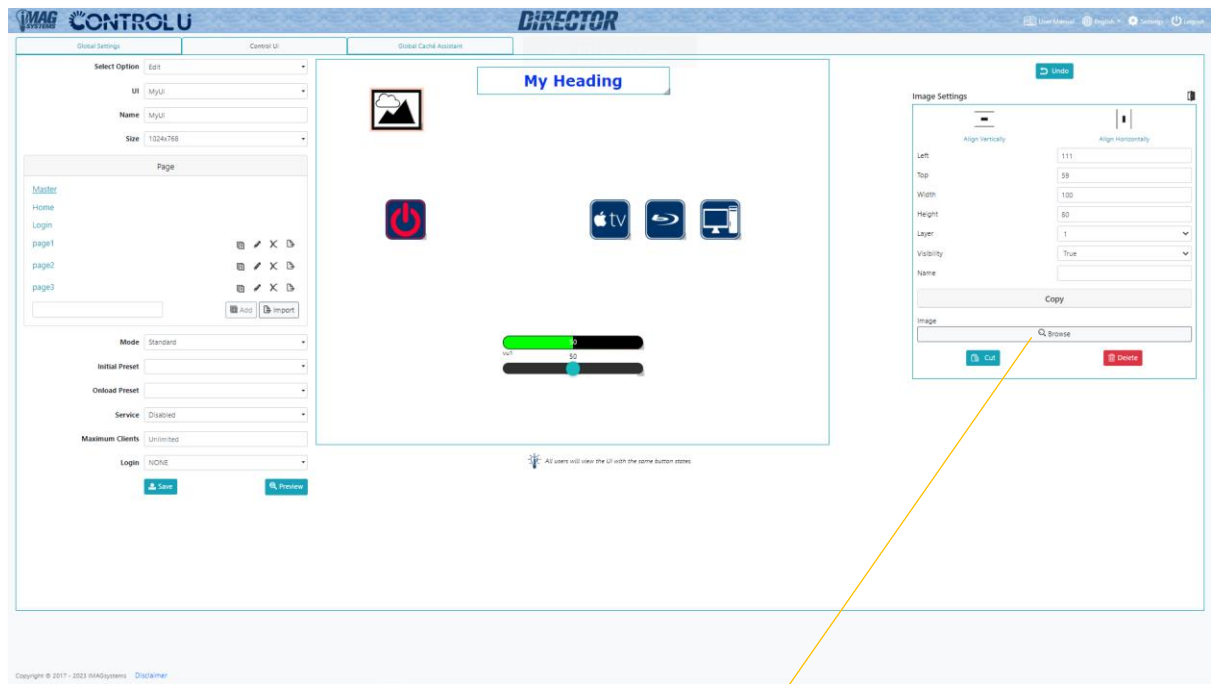


Here we are going to place a logo on the Master Page.



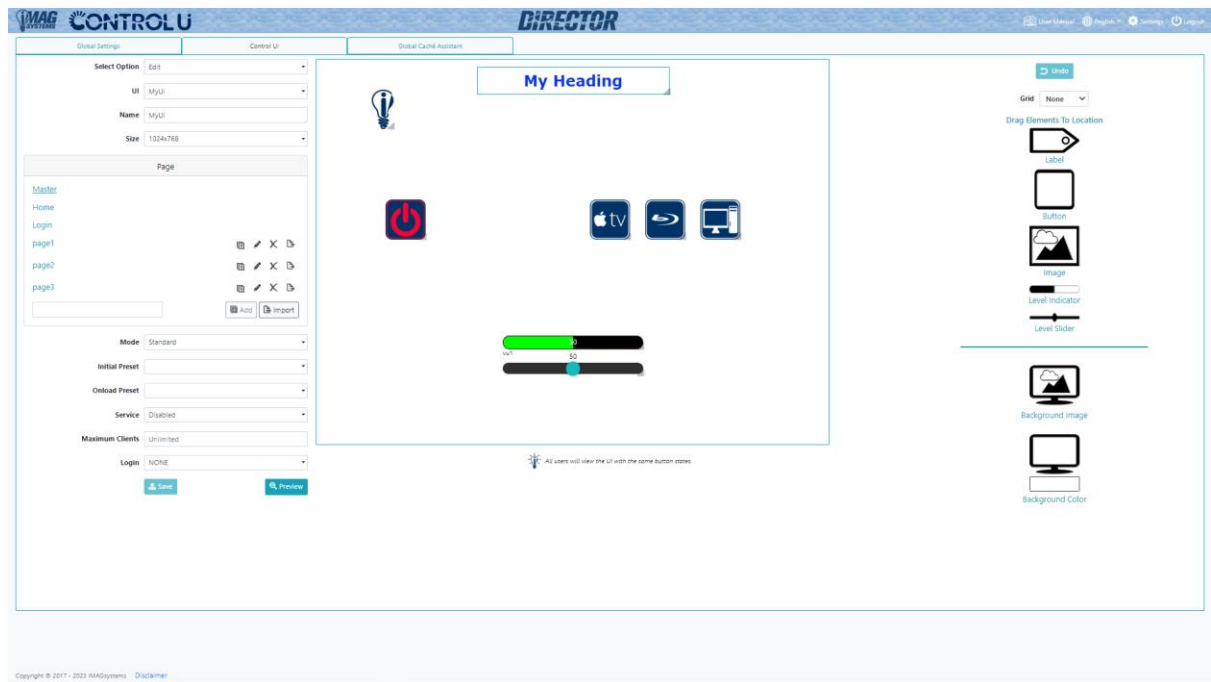
2.3.5 Image continued...

Select Browse to select an image from your own images.



2.3.5 Image continued...

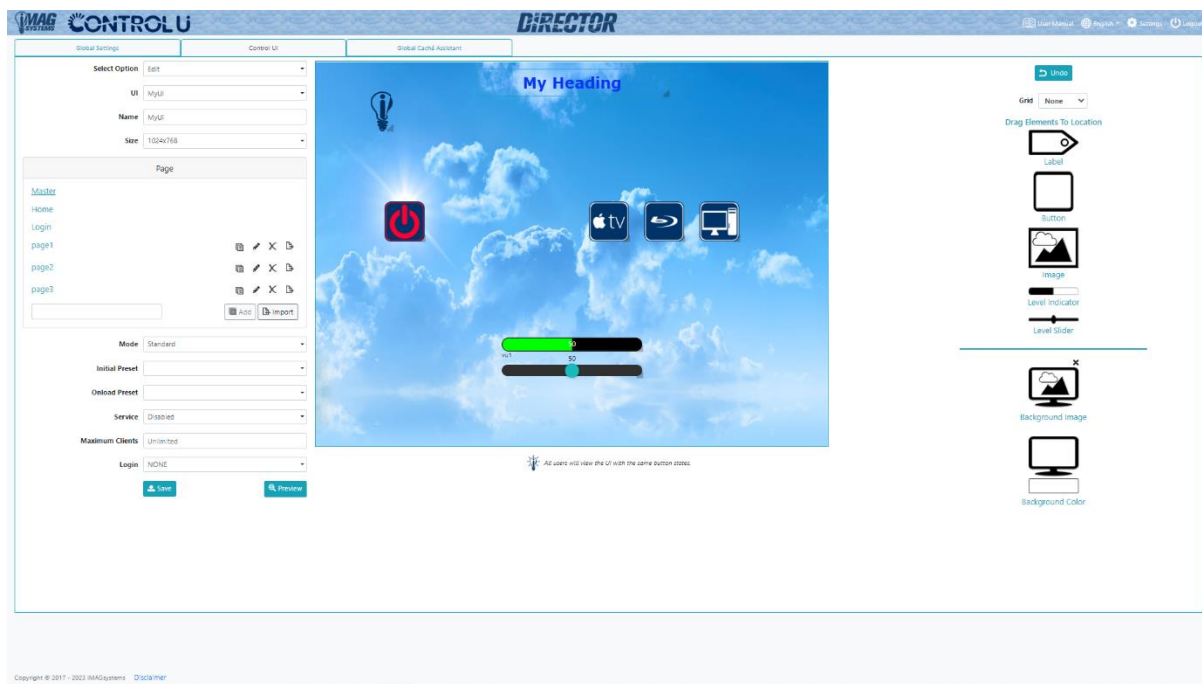
Here a logo image has now been assigned.



2.3.6 Background

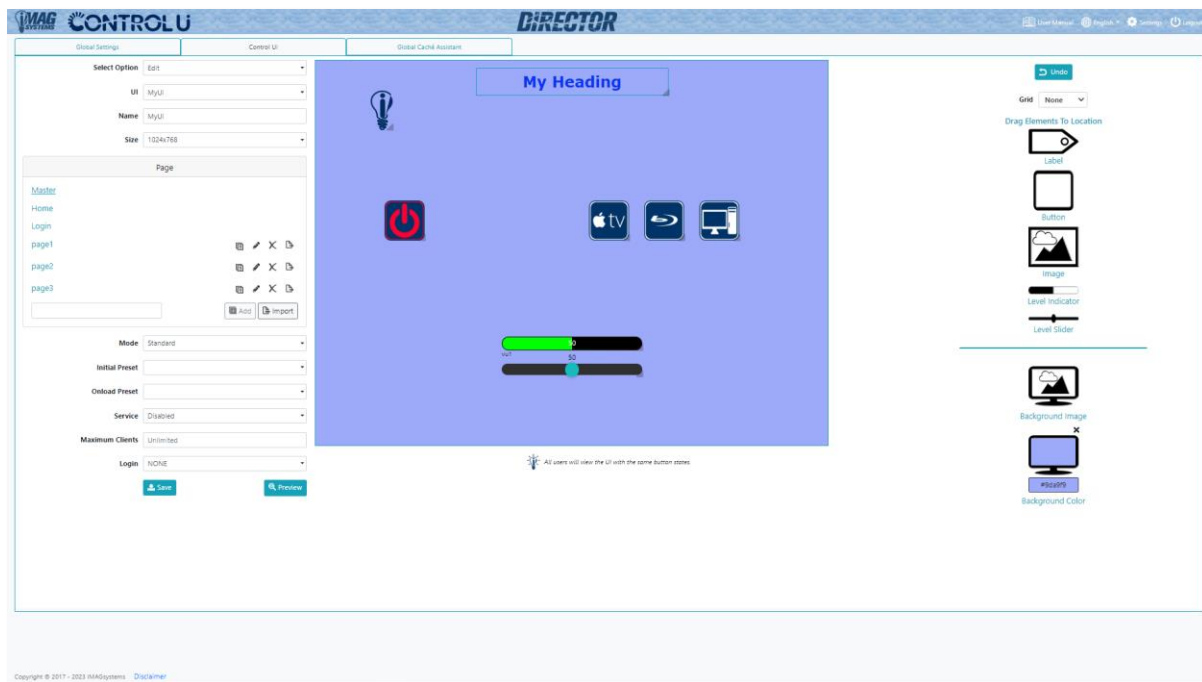
Either an image or solid colour can be selected for the page background. Applying a background on the Master Page will be seen on all other pages without a background. Applying a background to any other page than the Master Page will hide the Master Page altogether.

Here a background image has been applied to the Master Page.



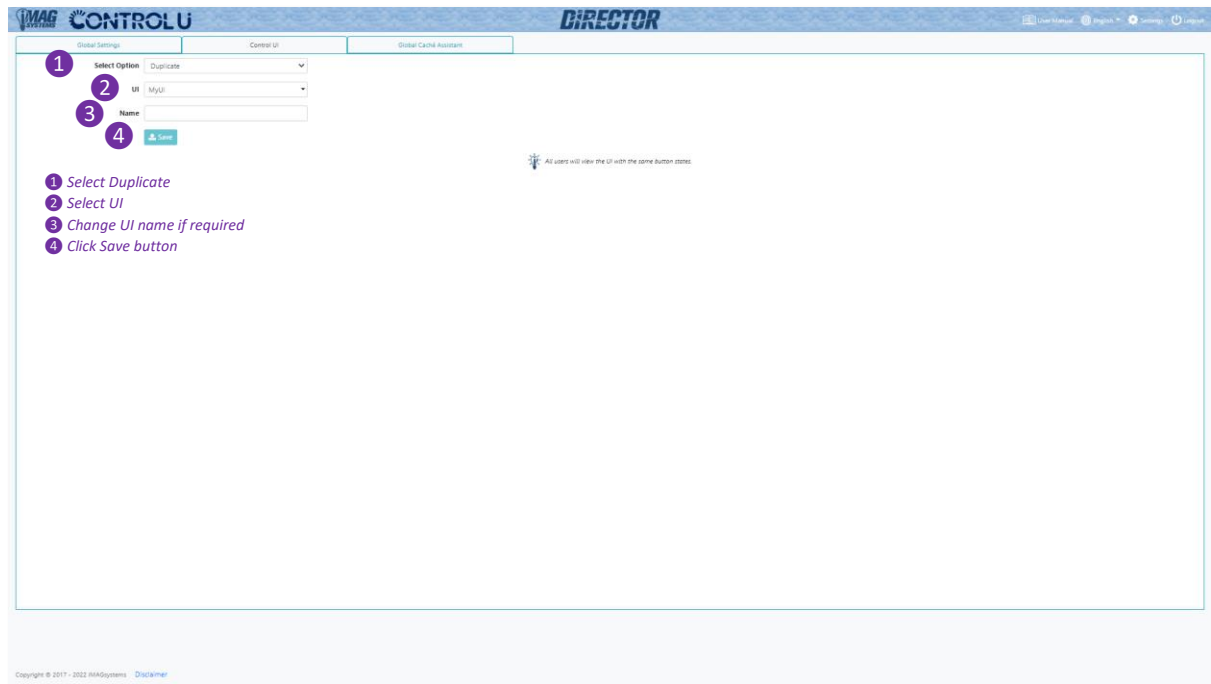
2.3.6 Background continued...

If a solid colour is required then select the Background Colour icon and select a colour from the popup colour picker.



2.4 Duplicate

Here you can duplicate an existing User Interface to be used as a backup or duplicated from a template file that can then be edited.



1 Select Option: Duplicate

2 UI: MyUI

3 Name:

4 Save

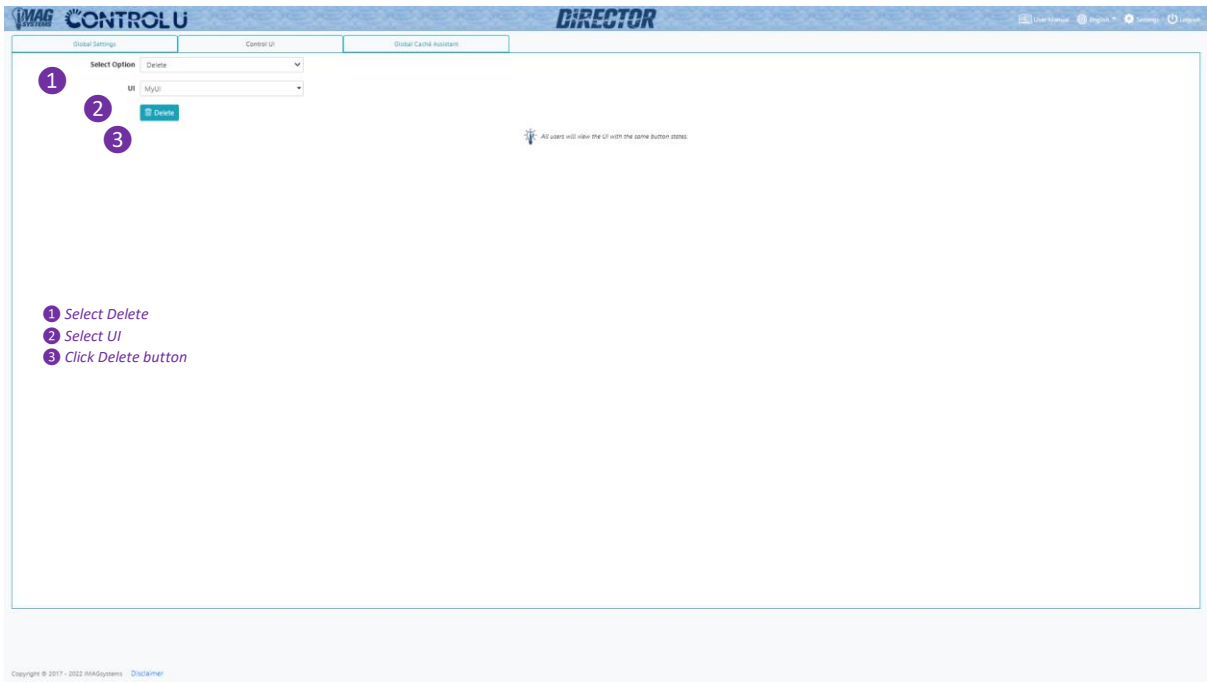
1 Select Duplicate
2 Select UI
3 Change UI name if required
4 Click Save button

All users will view the UI with the same button states

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2.5 Delete

To delete an existing UI select option Delete, select the User Interface and then click the Delete button.

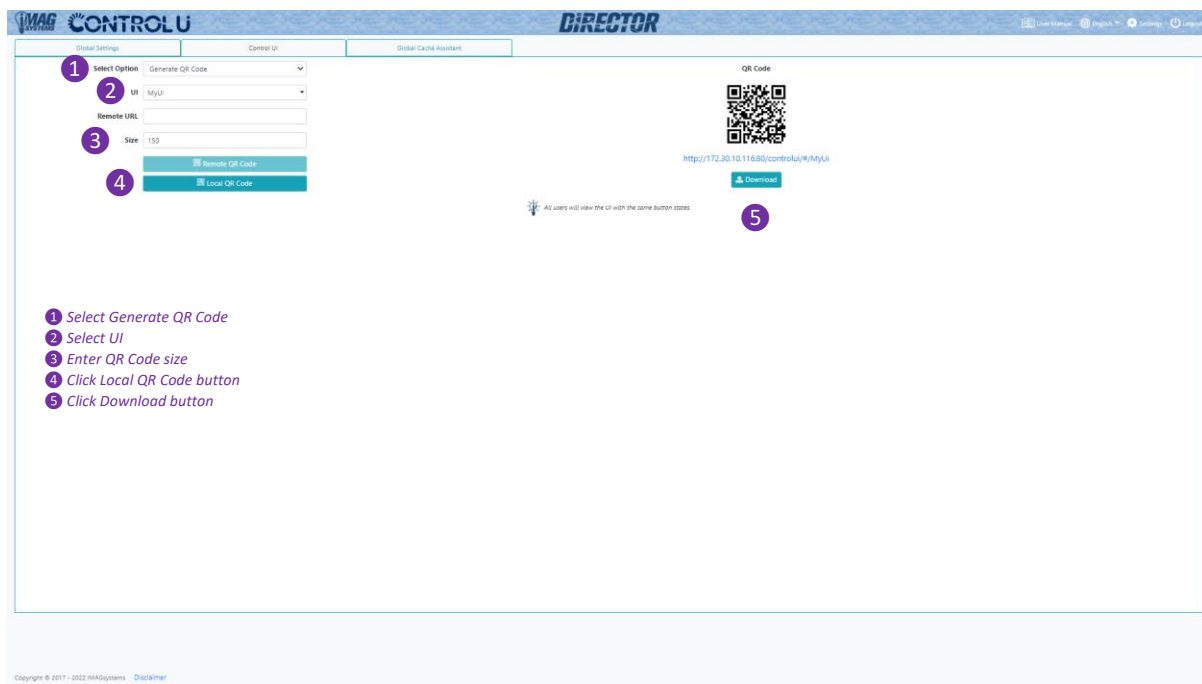


2.6 Generate QR Code

QR codes can be generated and downloaded to easily create the URL required to browse to the User Interface webpage. The size of the QR Code can be set between 100 – 2000px.

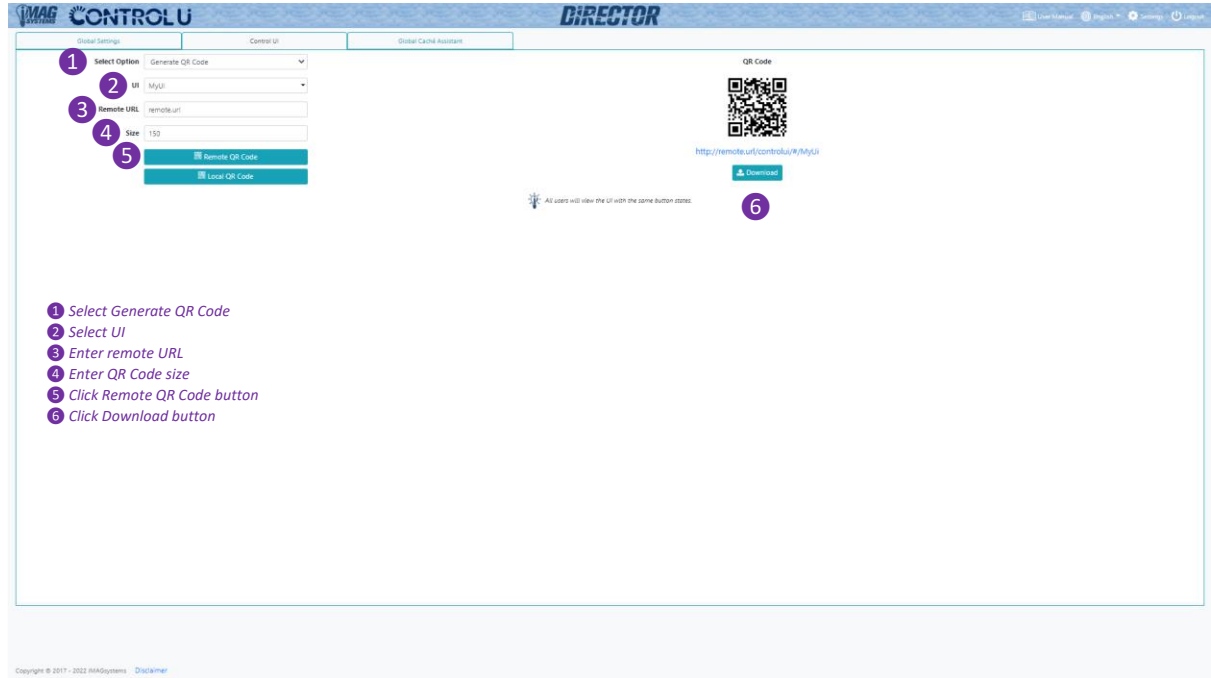
2.6.1 Generate Local QR Code

To browse to the User Interface via an internal URL select Local QR Code. The size of the QR Code image can be changed then downloaded to be used in manuals or printed as required.



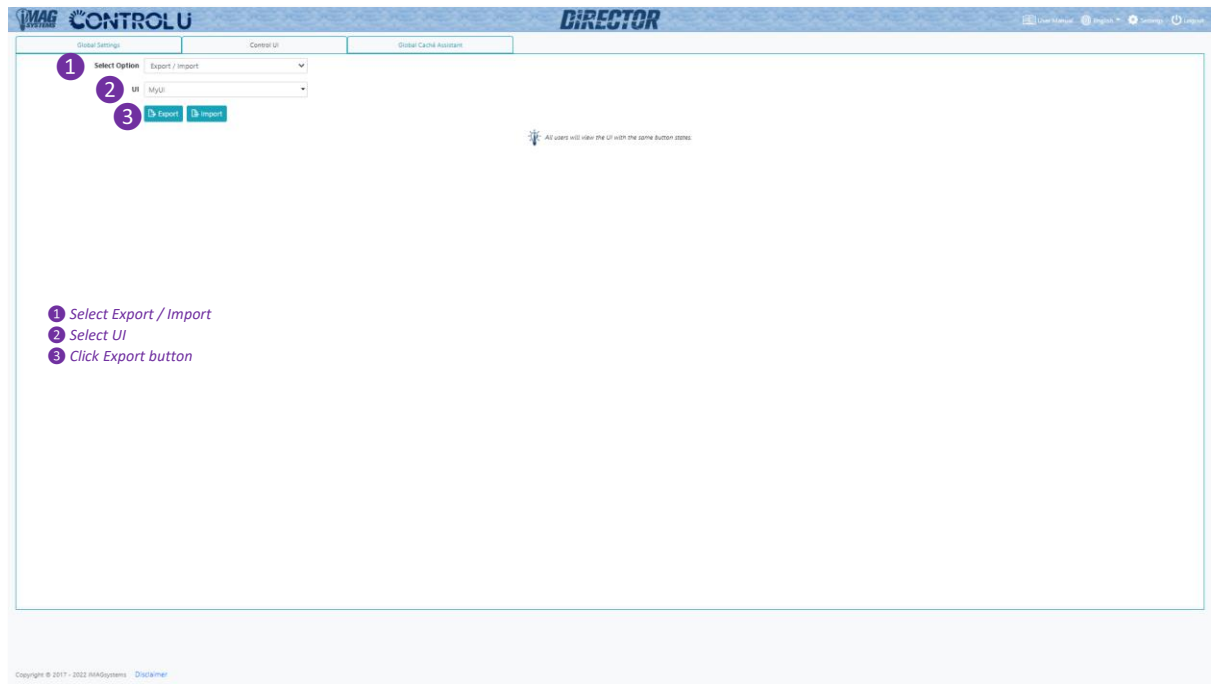
2.6.2 Generate Remote QR Code

To browse to the UI via an external URL enter the details in the External URL box and select Remote QR Code. The size of the QR Code image can be changed then downloaded to be used in manuals or printed as required.



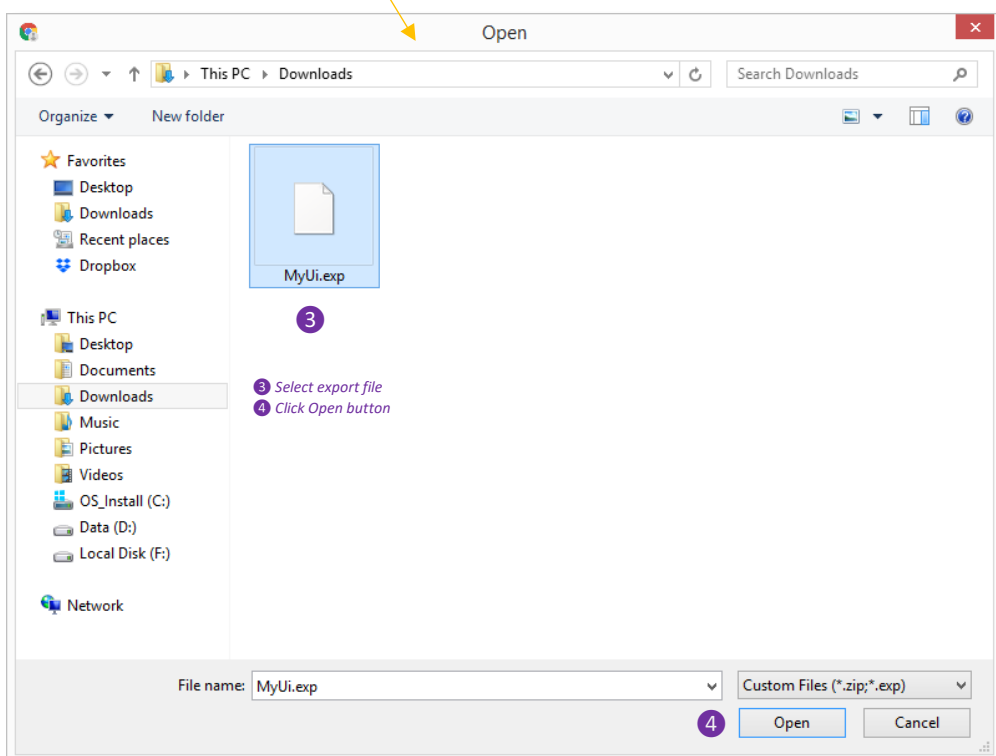
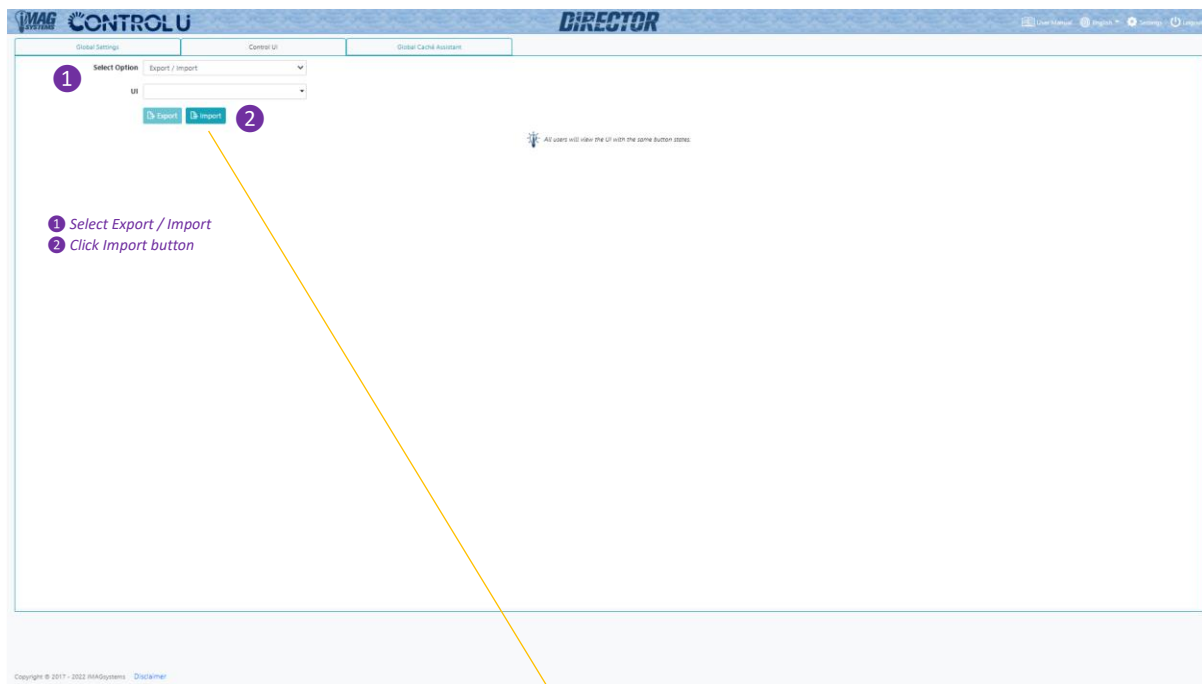
2.7 Export / Import

To keep a backup of your UI work select Export / Import then click the Export button.
A *.exp file will be saved to your Downloads folder.



2.7 Export / Import continued...

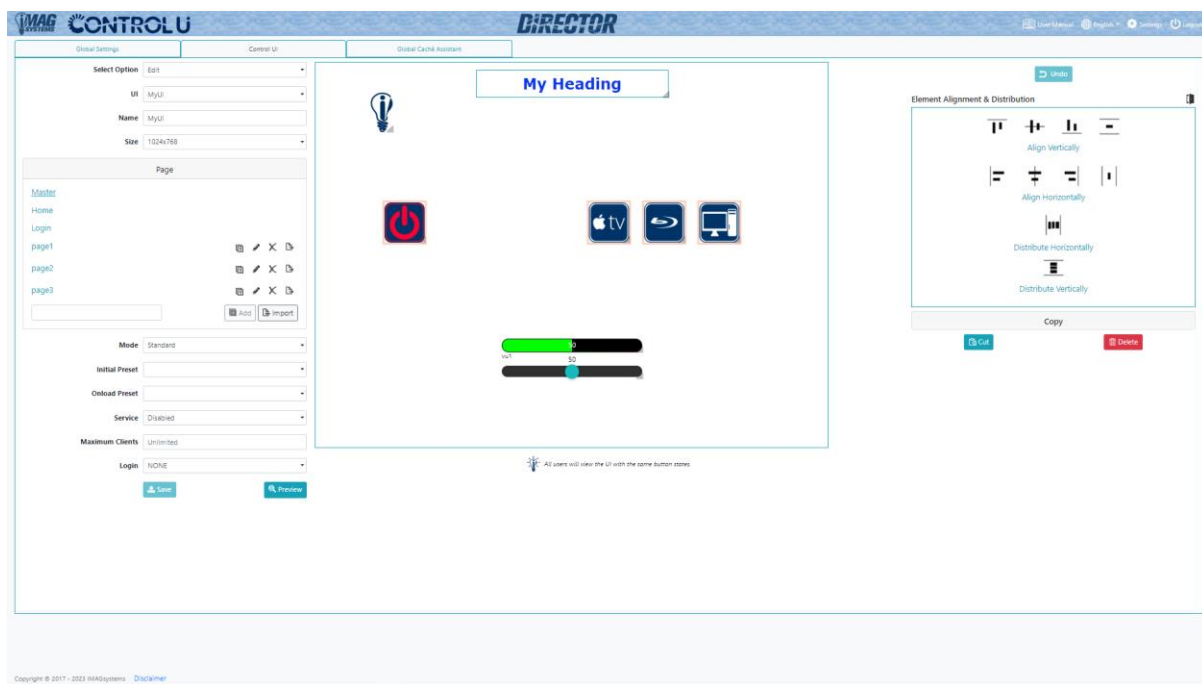
To import a User Interface click Import then browse and select the *.exp export file to be imported back onto the system.



2.8 Element Alignment



An elements graphical tab provides vertically and horizontally page alignment. Multiple selected elements can also be aligned with respect to the page.



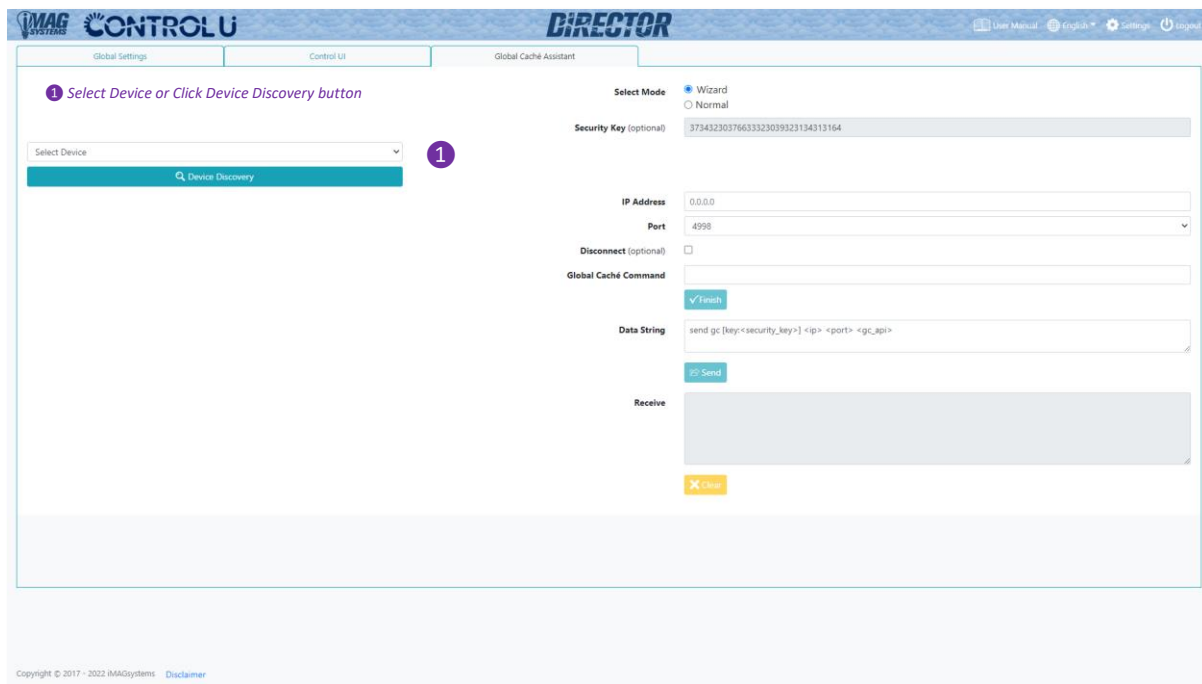
Multiple elements can be aligned with respect to the first selected element, or the page.

Click on the first referenced element to select it, then hold Ctrl while selecting further elements to be aligned. An Element Alignment and Distribution panel will then be shown to Align Vertically, Align Horizontally, Distribute Horizontally or Distribute Vertically.

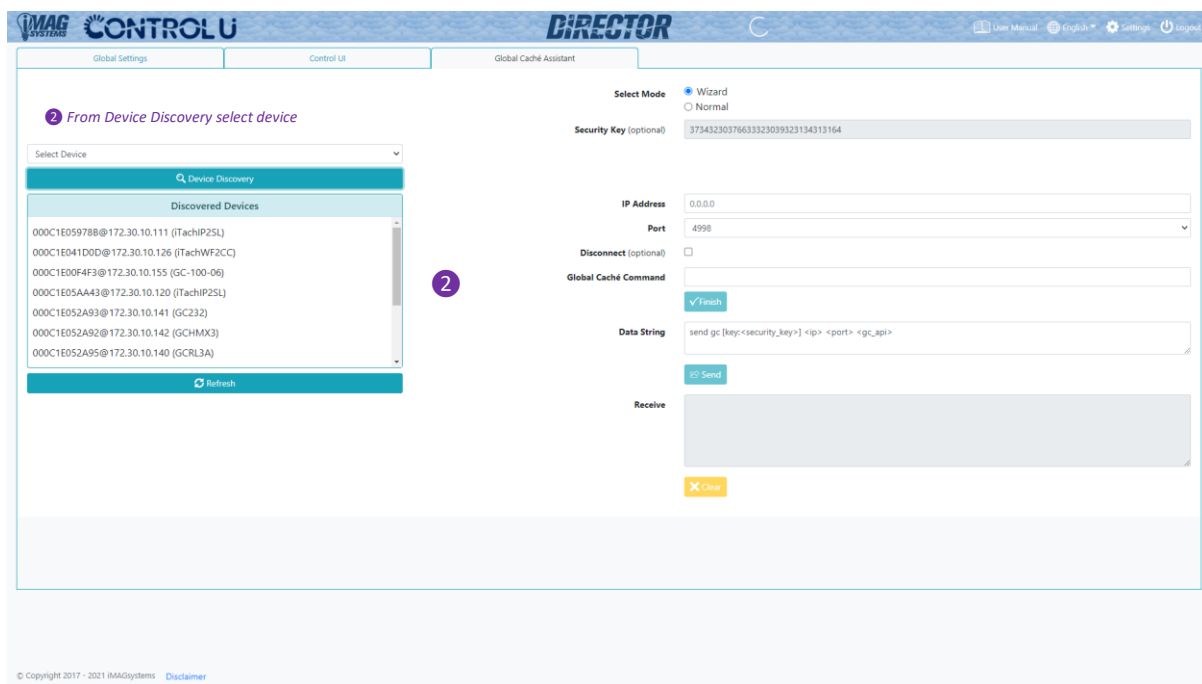
Clicking in white space will deselect selected elements.

3.0 Global Caché Assistant

The Global Caché Assistant is used to discover Global Caché devices on the network to configure or control them. The assistant will help create the command **send gc** to control the devices via the API.

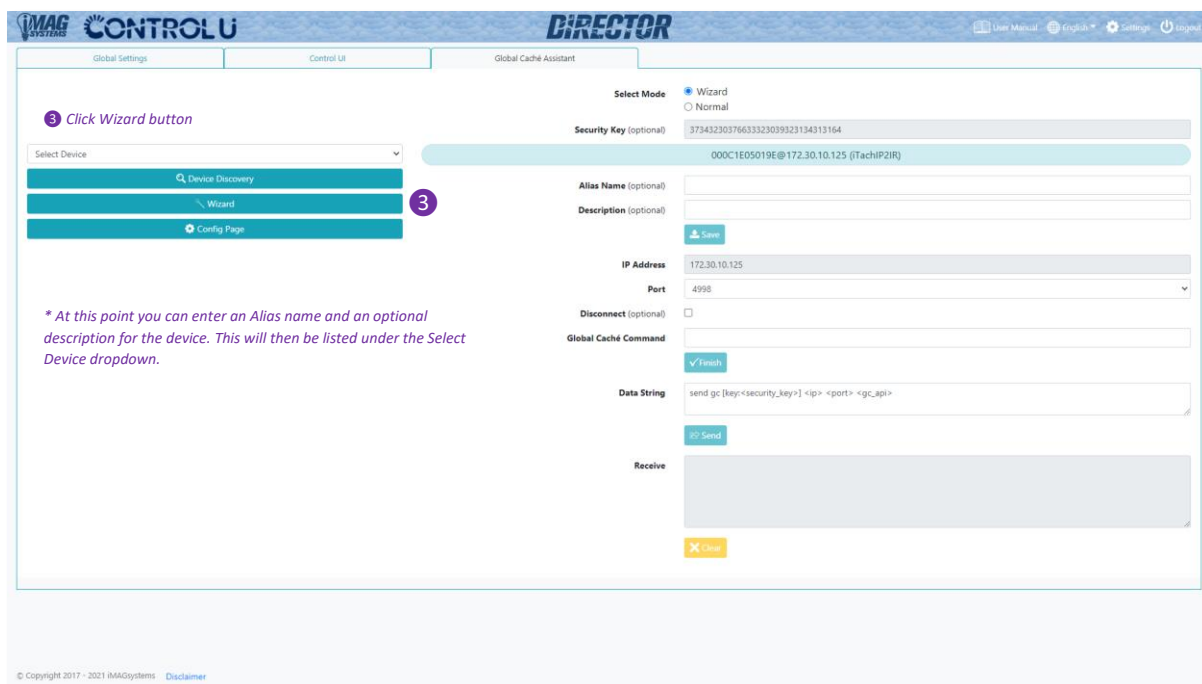


The screenshot shows the 'Global Caché Assistant' tab in the Director Control UI. On the left, there is a 'Select Device' dropdown menu and a 'Device Discovery' button. A purple circle with the number '1' is placed next to the 'Device Discovery' button. On the right, there are fields for 'Select Mode' (Wizard selected), 'Security Key (optional)', 'IP Address', 'Port', 'Disconnect (optional)', 'Global Caché Command', 'Data String', and a 'Send' button. A 'Receive' area is at the bottom right.



The screenshot shows the 'Global Caché Assistant' tab after clicking 'Device Discovery'. The 'Select Device' dropdown now shows a list of discovered devices. A purple circle with the number '2' is placed next to the list. The list includes devices like '000C1E05978B@172.30.10.111 (iTachIP25L)' and others. A 'Refresh' button is at the bottom of the list. The right side of the interface remains the same as in the previous screenshot.

3.0 Global Caché Assistant continued...



3 Click Wizard button

Select Device

Device Discovery

Wizard

Config Page

* At this point you can enter an Alias name and an optional description for the device. This will then be listed under the Select Device dropdown.

Select Mode

Wizard

Normal

Security Key (optional)

37343230376633323039323134313164

000C1E05019E@172.30.10.125 (TachIP2IR)

Alias Name (optional)

Description (optional)

Save

IP Address

172.30.10.125

Port

4998

Disconnect (optional)

Global Caché Command

Finish

Data String

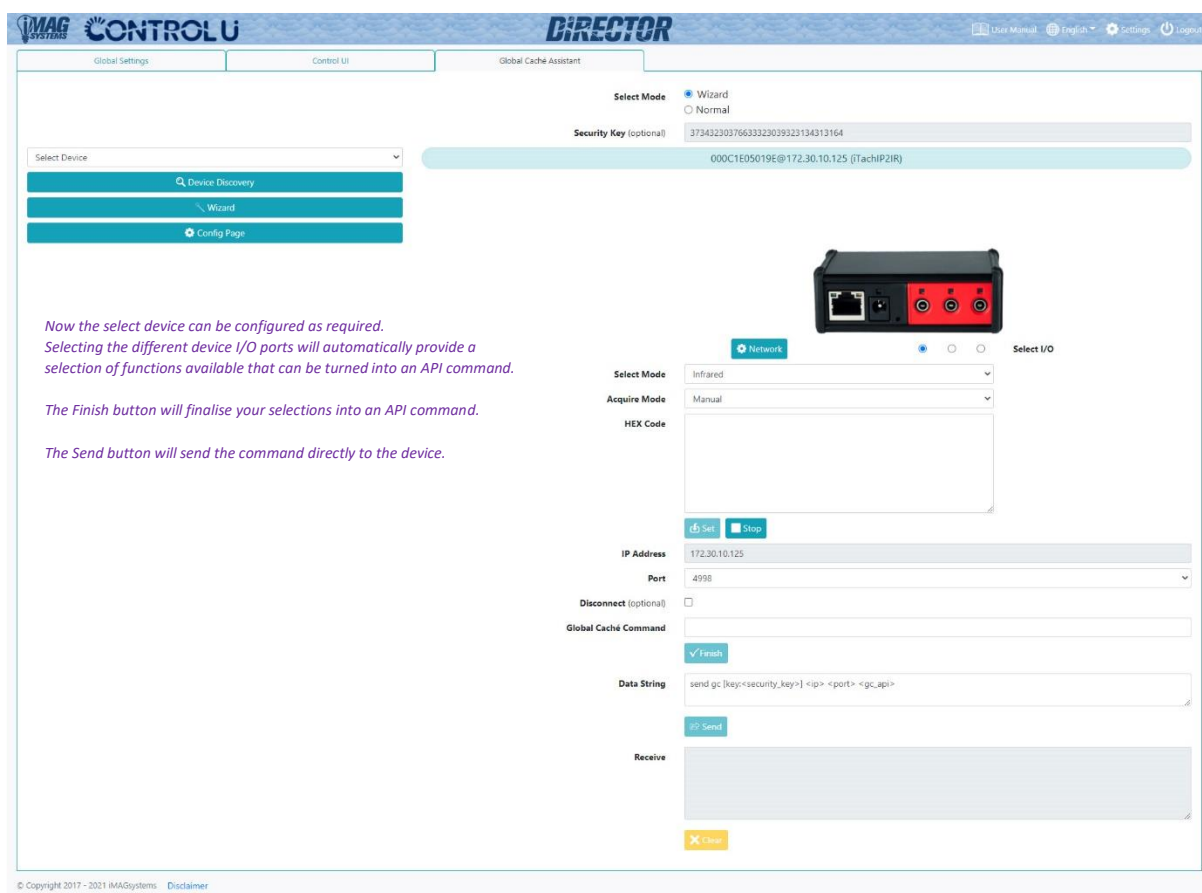
send gc [key=<security_key>] <ip> <port> <gc_api>

Send

Receive

Close

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Select Device

Device Discovery

Wizard

Config Page

Now the select device can be configured as required. Selecting the different device I/O ports will automatically provide a selection of functions available that can be turned into an API command.

The Finish button will finalise your selections into an API command.

The Send button will send the command directly to the device.

Select Mode

Wizard

Normal

Security Key (optional)

37343230376633323039323134313164

000C1E05019E@172.30.10.125 (TachIP2IR)

Select I/O

Network

Select Mode

Infrared

Acquire Mode

Manual

HEX Code

Set

Stop

IP Address

172.30.10.125

Port

4998

Disconnect (optional)

Global Caché Command

Finish

Data String

send gc [key=<security_key>] <ip> <port> <gc_api>

Send

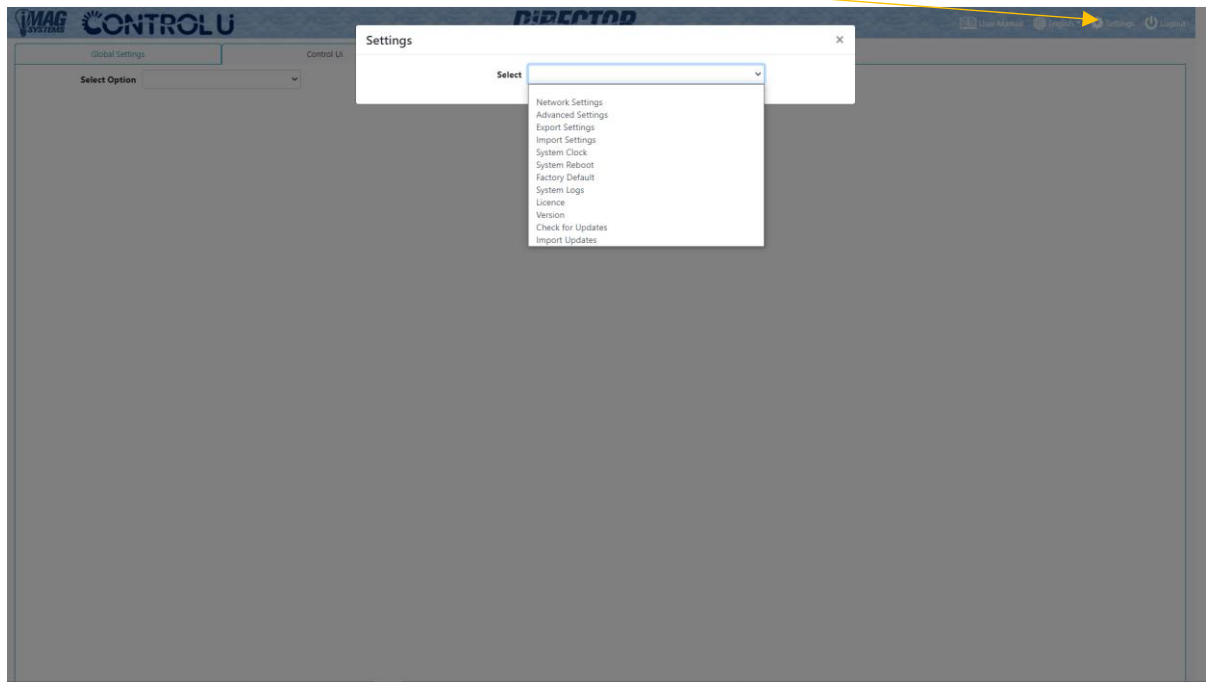
Receive

Close

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4 System Settings

All the controller system level settings can be accessed by admin level users by clicking the gear icon on the top of the page.



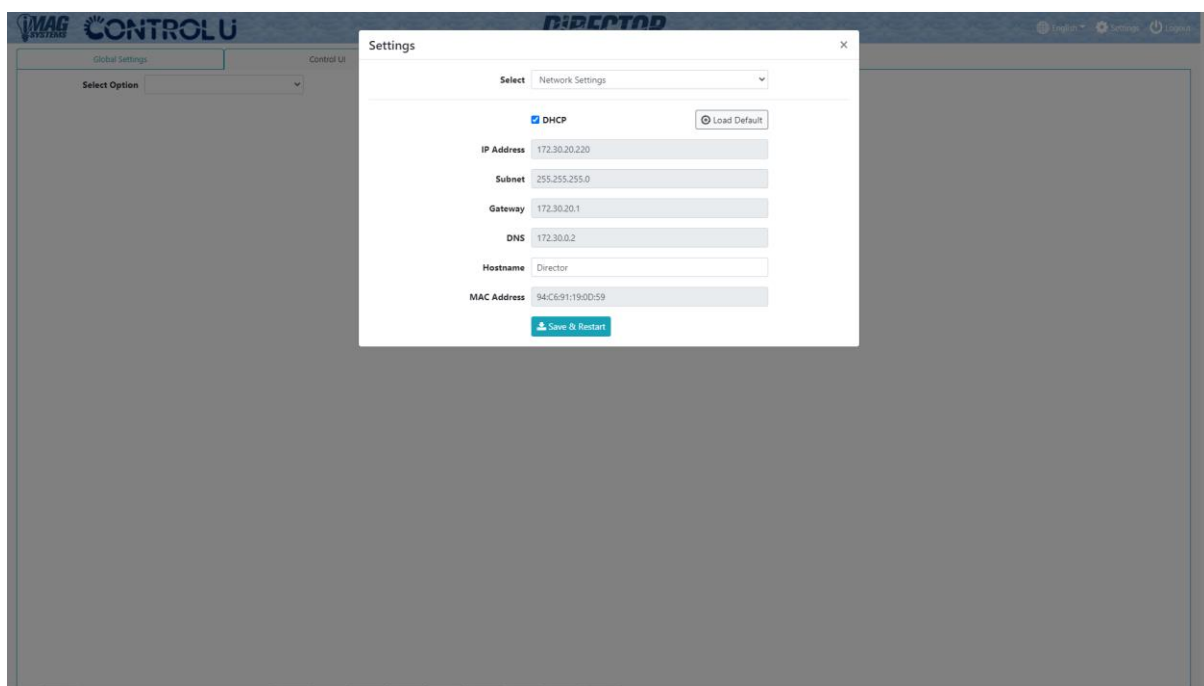
4.1 Network Settings

Here you can change the IP configuration of the Director Controller. Two types of configuration are possible, single and dual NIC (Network Interface Controller). Each of which will be described below:

Single NIC

By default the Director Controller will be found at 169.254.1.1.

Use the Director Finder application if unable to locate the controller on the network or plug a display into the controllers HDMI port, a message of the controller's IP address will be displayed. Open a web-browser on your PC and enter the displayed IP address.



4.1 Network Settings continued...

Dual NIC

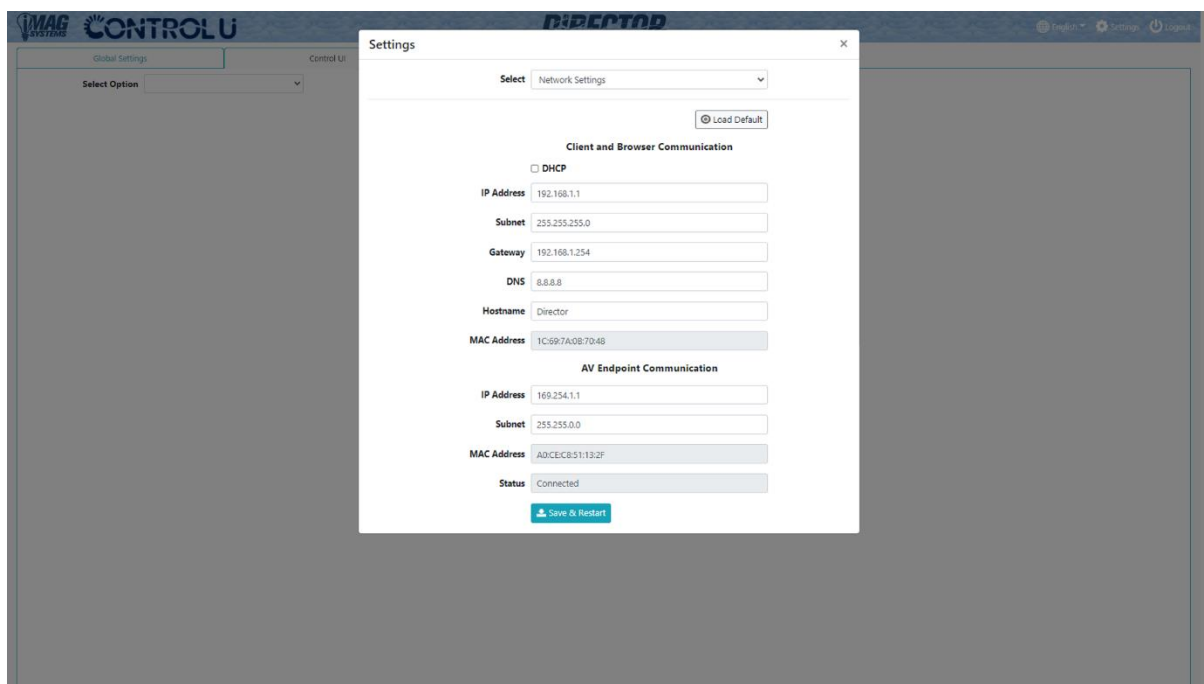
A USB to Gigabit Ethernet NIC Network Adapter can be attached to the controller providing a second dedicated AV Endpoint network. Approved adaptors include Tripp-Lite U236-000-GBW and Cable Matters 202013.

By default the Director Controller will be found on the primary NIC at 192.168.1.1 while maintaining 169.254.1.1 for the second network.

The primary NIC is dedicated for Client, Browser Communication and control while the secondary NIC dedicated for control purposes only of devices on another network. Peripheral TCP devices can be controlled from either.

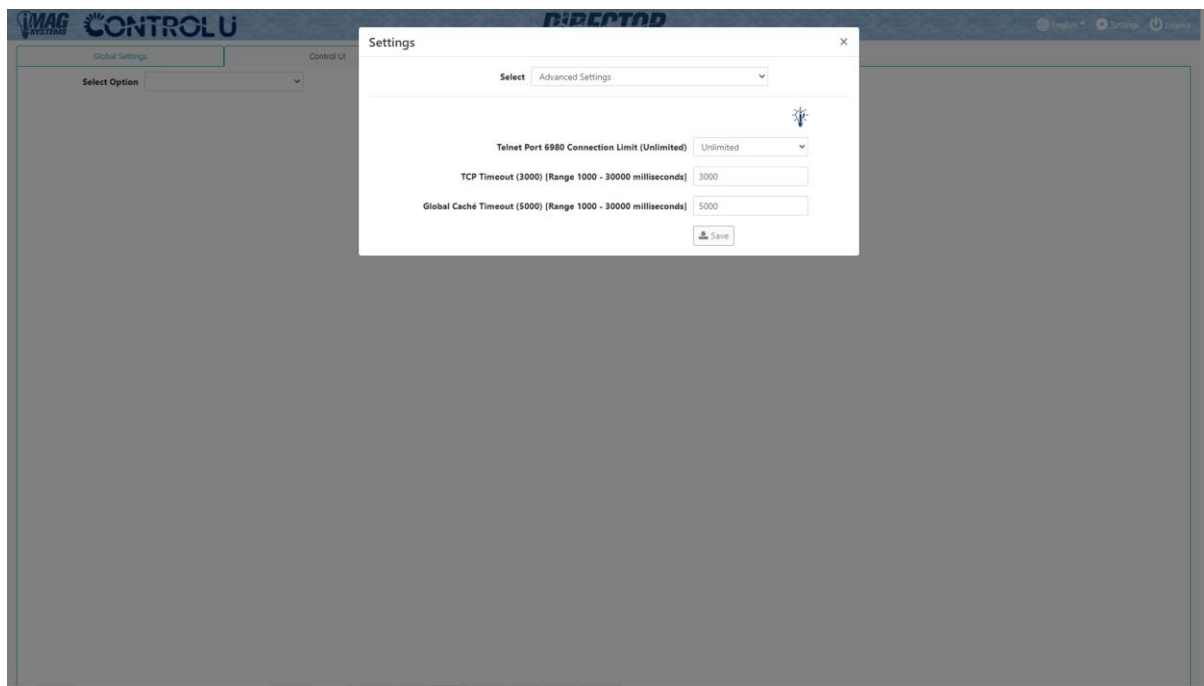
Only a static IP address can be applied to the secondary NIC, the primary NIC also supports DHCP.

Use the Director Finder application if unable to locate the controller on the network or plug a display into the controllers HDMI port, a message of the controllers IP address will be shown.



4.2 Advanced Settings

The Advanced Settings section contains the timing and Telnet port restriction settings of the controller.



4.2.1 Telnet Port 6980 Connection Limit

Here you can set the number of simultaneous connections to the Telnet TCP control port 6980 to unlimited or from 1 to 10 connections.

4.2.2 TCP Timeout

TCP Timeout is the maximum time in milliseconds the Director Controller will wait for a response from a TCP controlled device. The default is 3000 = 3 seconds with a range of 1000 – 30000.

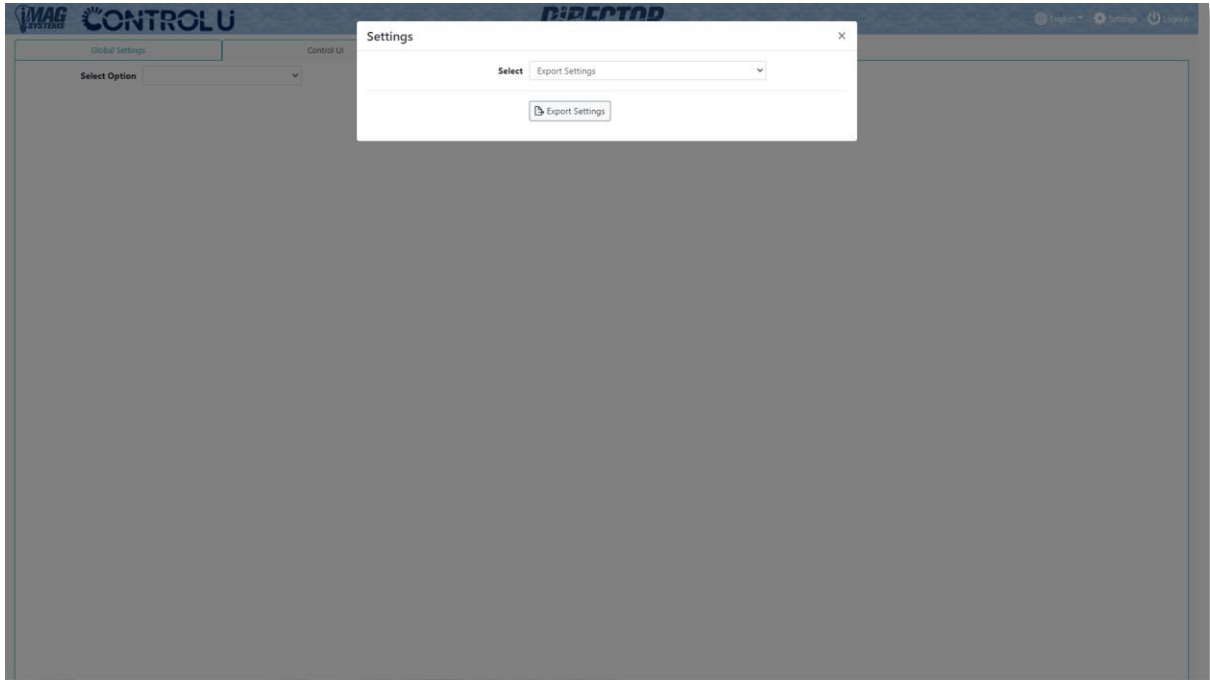
4.2.3 Global Caché Timeout

Global Caché Timeout is the maximum time in milliseconds the Director Controller will wait for a response from a Global Caché device. The default is 5000 = 5 seconds with a range of 1000 – 30000. Some very long IR codes take longer before a response is received.

Static Preview Image Interval used with Static Preview Image Override is the interval in seconds the preview images are updated client side. The default is 10, with selectable 5, 10, 20, 30, 60 second intervals.

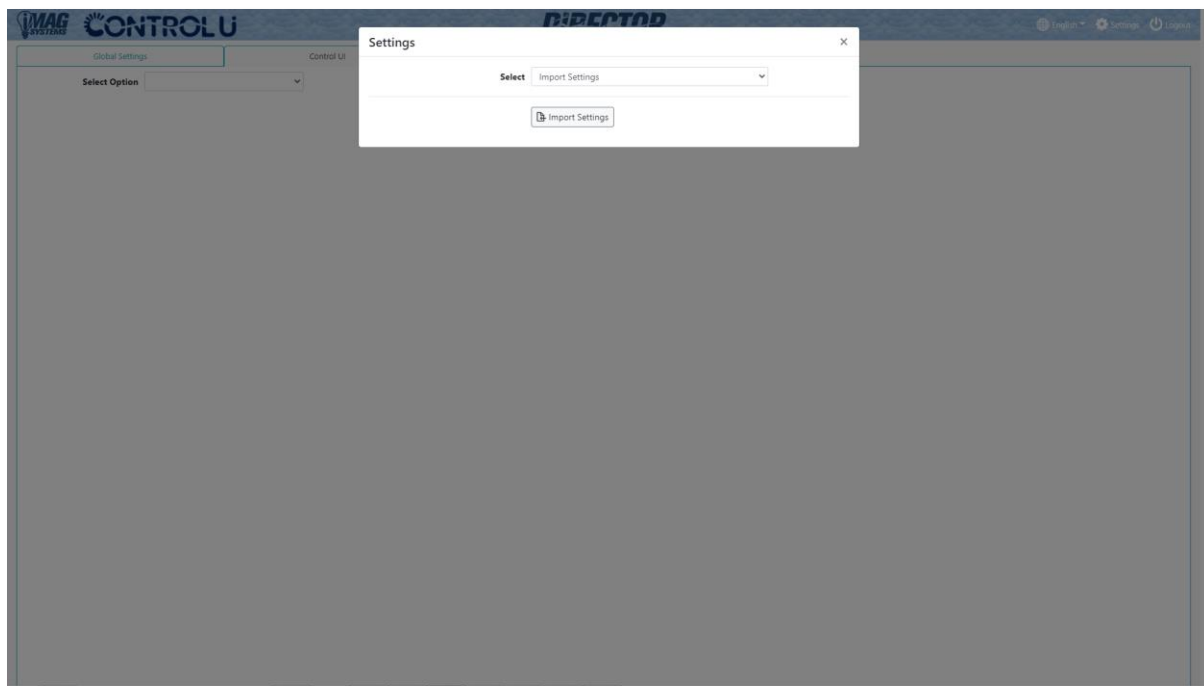
4.3 Export Settings

Export Settings will save a file named UIsettings.exp to your Downloads folder. This file contains all the settings of the Director Controller. Use this exported file as a configuration backup that can be imported back into the system to restore the current configuration.



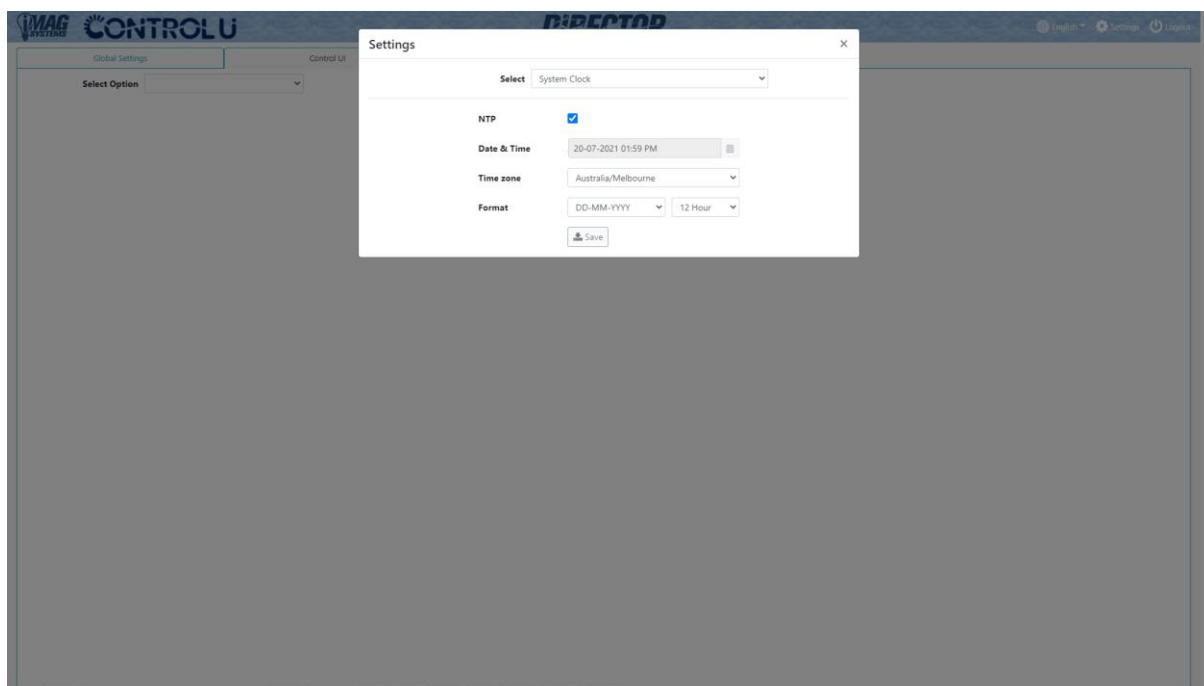
4.4 Import Settings

Use Import Settings to load an exported UIsettings.exp file which will restore the Director Controllers settings.



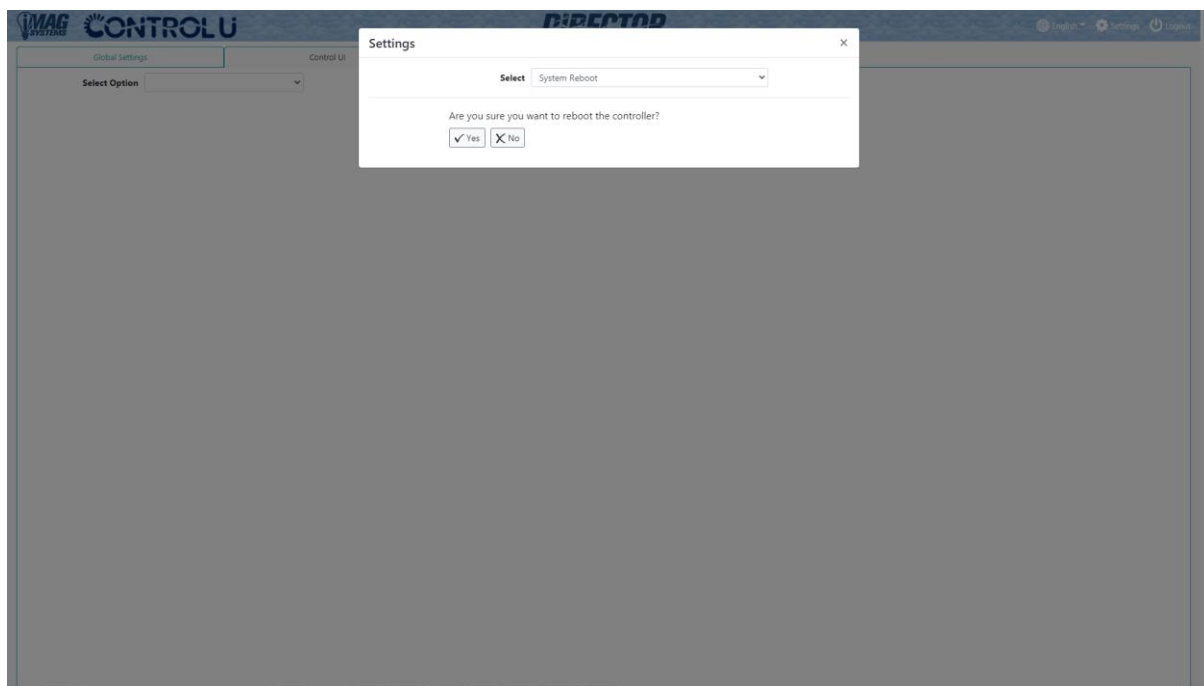
4.5 System Clock

The Director Controller contains a RTC (Real Time Clock) to maintain the correct time and date. Set your local time and date here and click the Save button to apply the changes. The system clock is used for the scheduler and also time stamping the log entries.



4.6 System Reboot

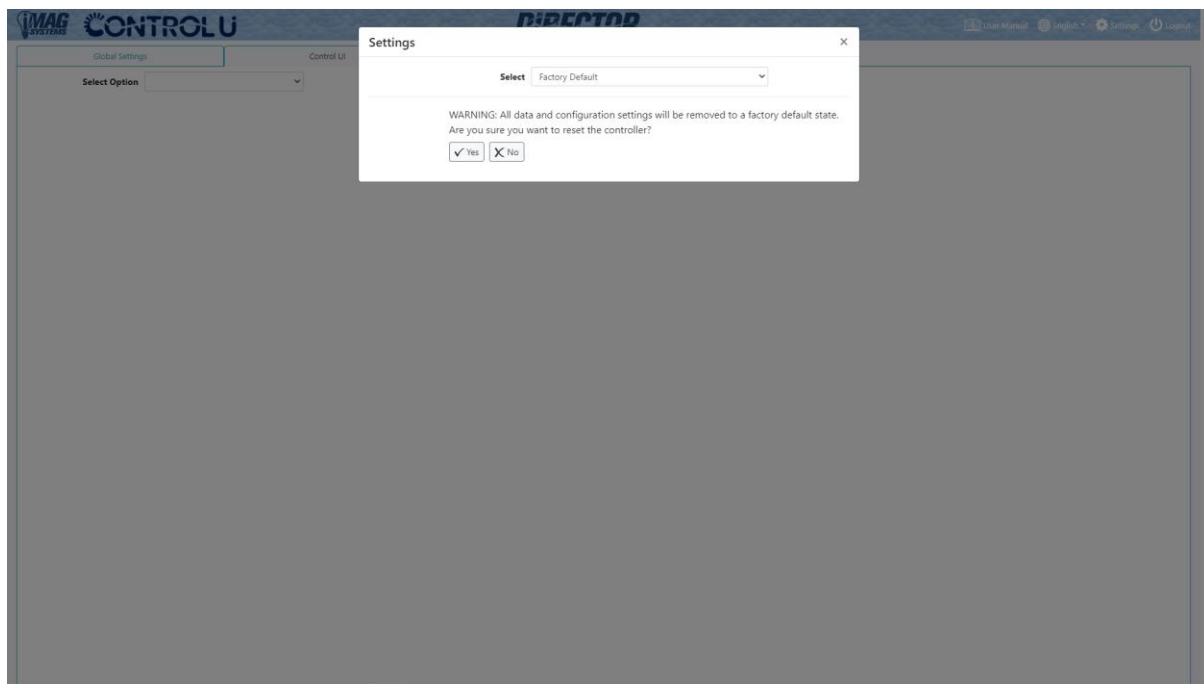
Here you can reboot the Director Controller. It takes 90 seconds for the controller to Reboot.



4.7 Factory Default

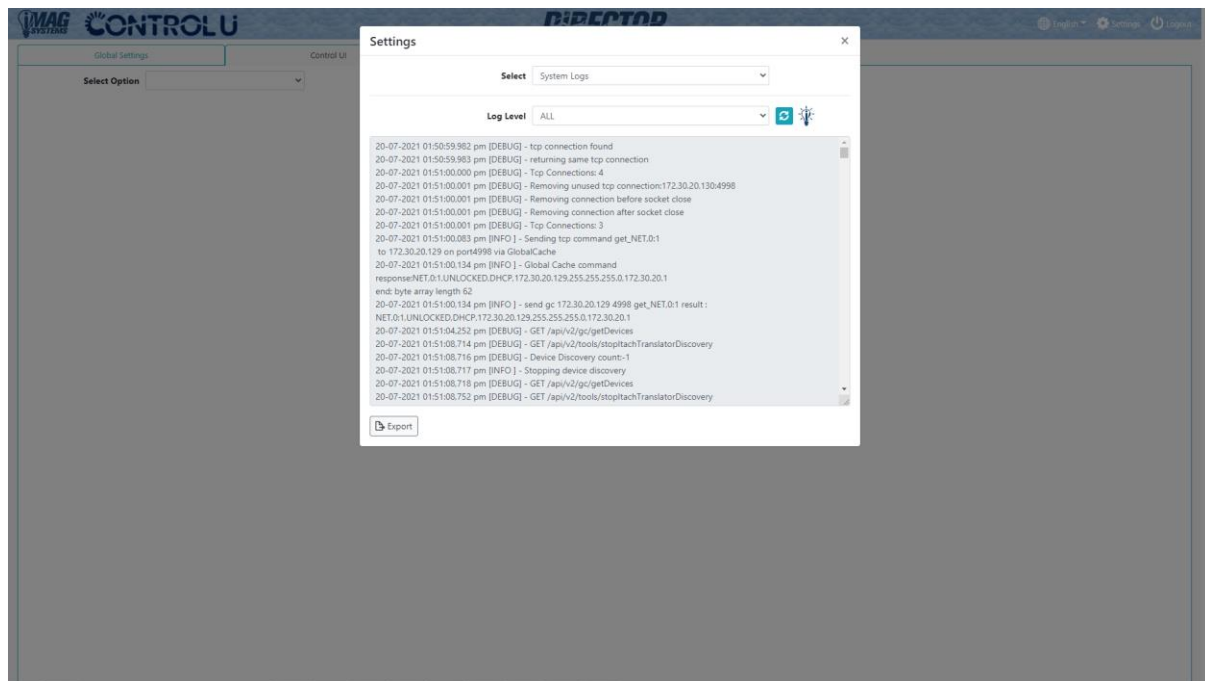
Here you can reset the Director Controller back to factory default.

WARNING: All data and configuration settings will be removed to a factory default state.



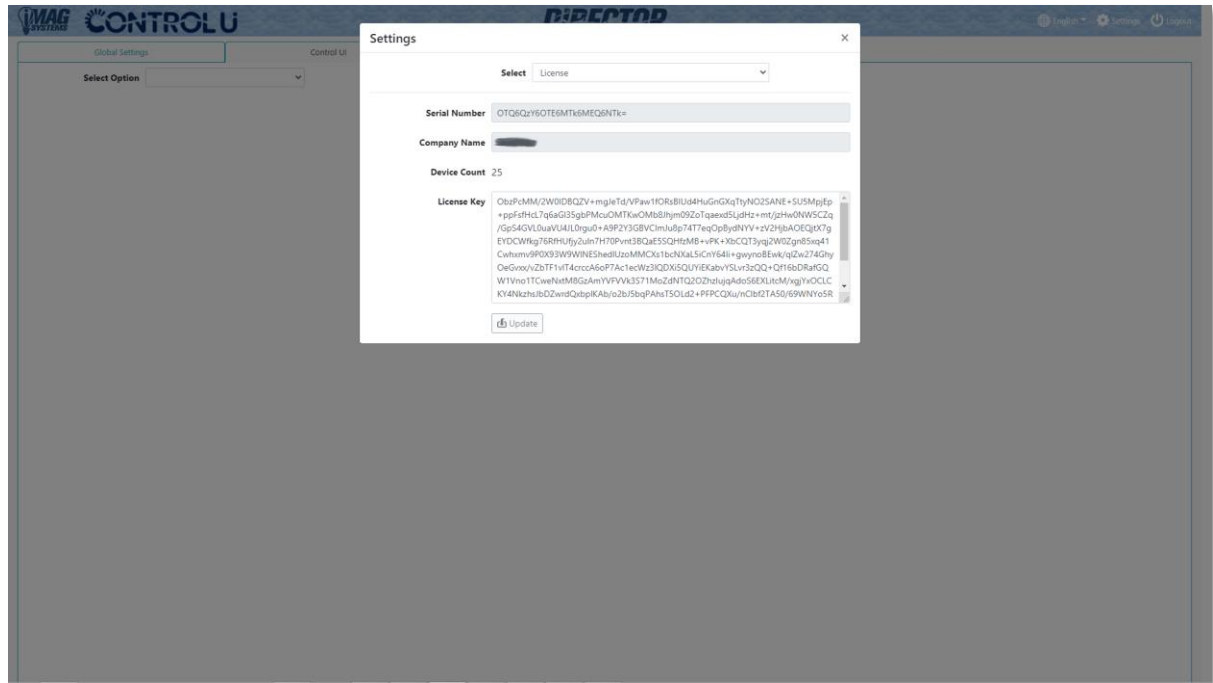
4.8 System Logs

The system keeps a log of all system activities. The level of logged information can be set from the Log Level selection. Click the Export button to export the log. A file named softwareLog.exp will be saved to your Downloads folder. This file has zip compression.



4.9 License

The Director Controller will not operate without a valid license. When the Director Controller is used for the first time you will be prompted to enter a License Key. If a License Key has already been issued it can be entered into the system from here. Contact your distributor for all licensing requirements.

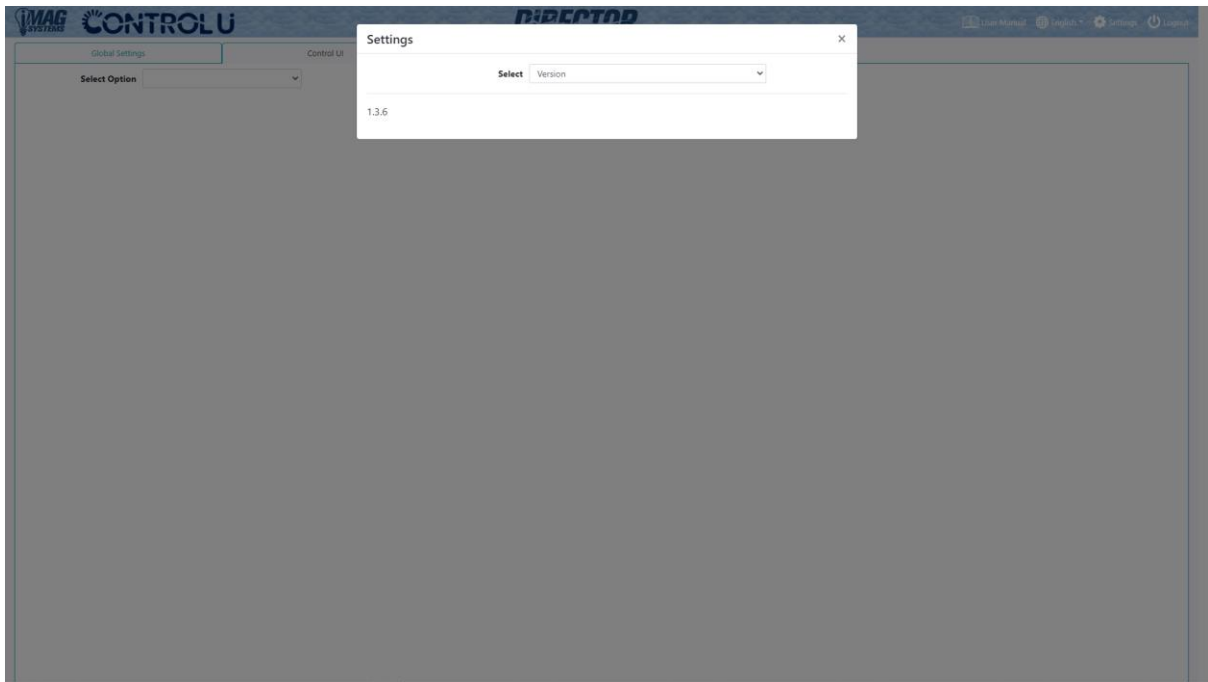


The table below indicates standard features in green and optional licensed features in red.

Global Settings	
	Users
	Presets
	Security Keys
	Notifications
	Analytics
	Scheduler
	UI Creator
	Listeners
	Control Command
Global Caché Assistant	

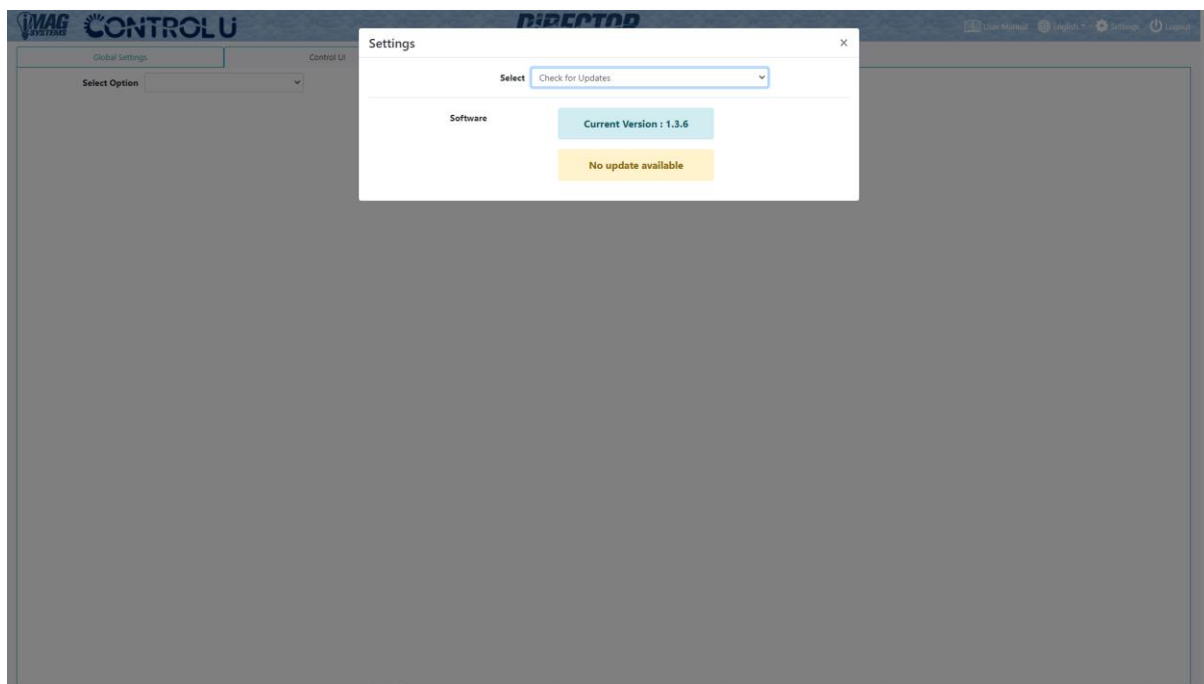
4.10 Version

Here you can find the current software version.



4.11 Check for Updates

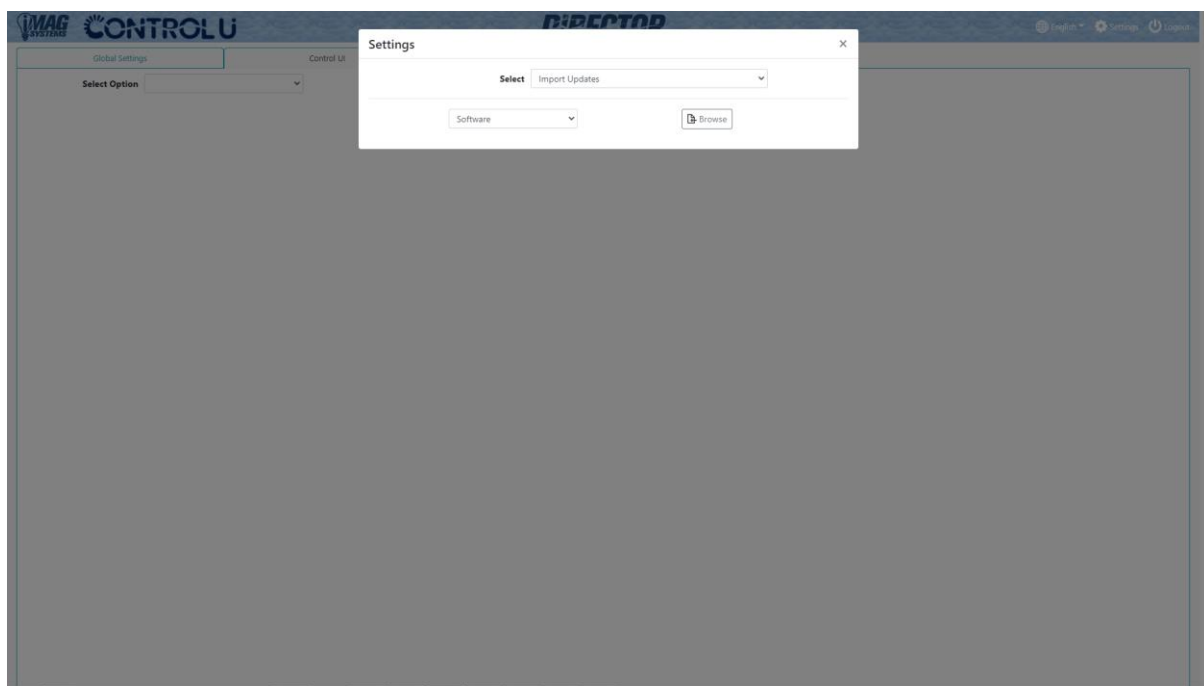
Check for Updates will contact an ftp server over the internet to obtain the latest releases.



4.12 Import Updates

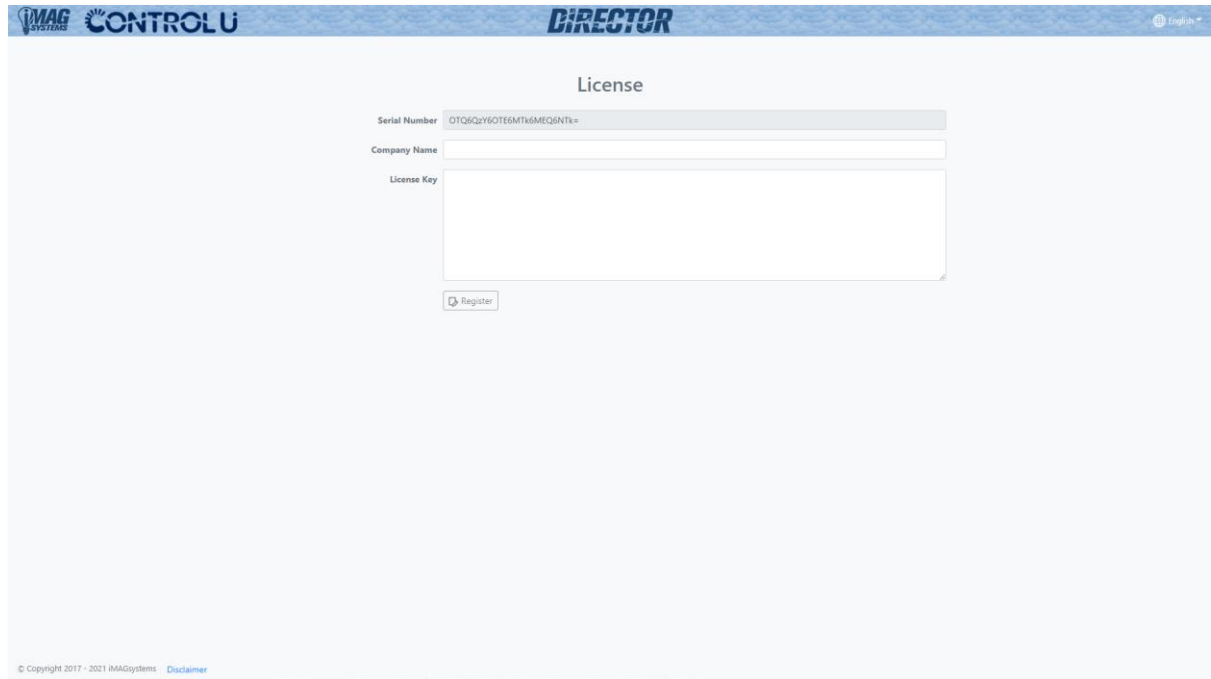
When no internet access is available or a specific update is required, the files will be provided to manually update the system.

Select Software, then click the browse button to select the required file from the file dialog popup.



5 UI Overview

Director is accessed by using Google Chrome or Safari to browse to the controllers IP address. Initially when the Director Controller is first used you will be prompted to enter a Registration Key obtained from your distributor. The controllers Serial Number (as shown) along with a company name will be provided to your distributor to create the Registration Key for you. The Registration Key is also used to unlock features of Director and the number of controllable User Interfaces.



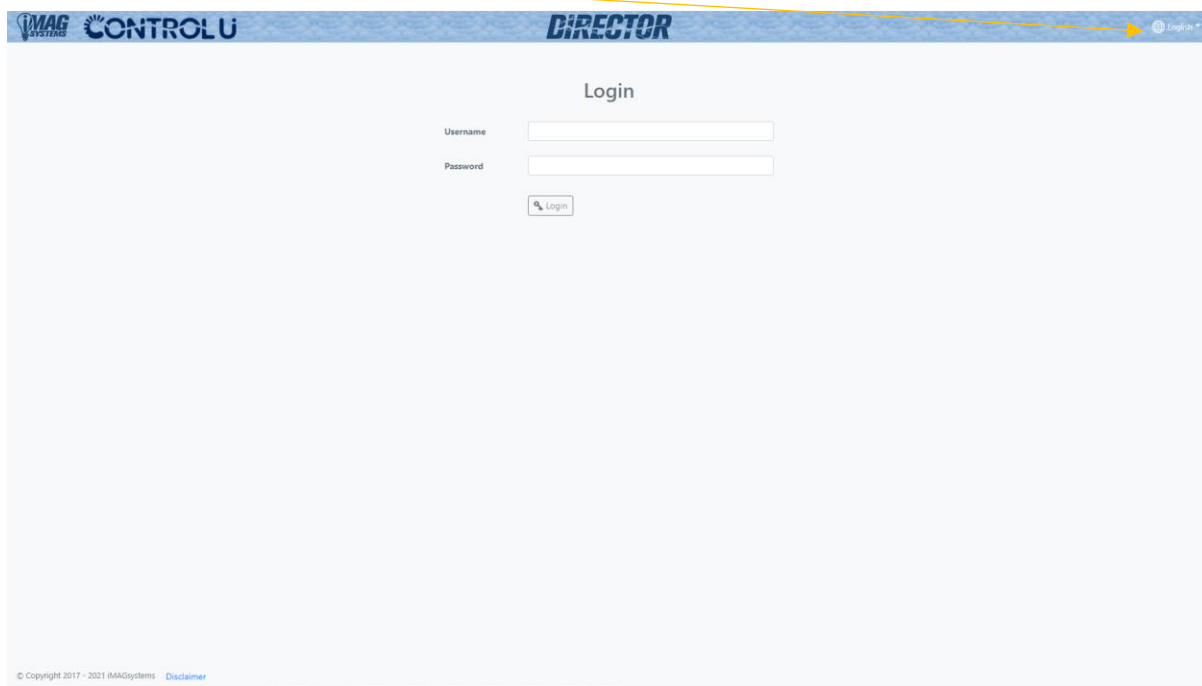
The screenshot shows the 'License' registration page of the Director Control UI. The page has a blue header with the 'iMAG SYSTEMS' logo on the left, the word 'DIRECTOR' in the center, and a language dropdown menu on the right. The main content area is white and contains the following fields:

- Serial Number:** A text field containing the value '0TQ8Q2Y80T6MT6MREQ8NT6='.
- Company Name:** An empty text input field.
- License Key:** A large, empty text input area.
- Register:** A button with a right-pointing arrow icon and the text 'Register'.

At the bottom left of the page, there is a small copyright notice: '© Copyright 2017 - 2021 iMAGSystems' followed by a link to the 'Disclaimer'.

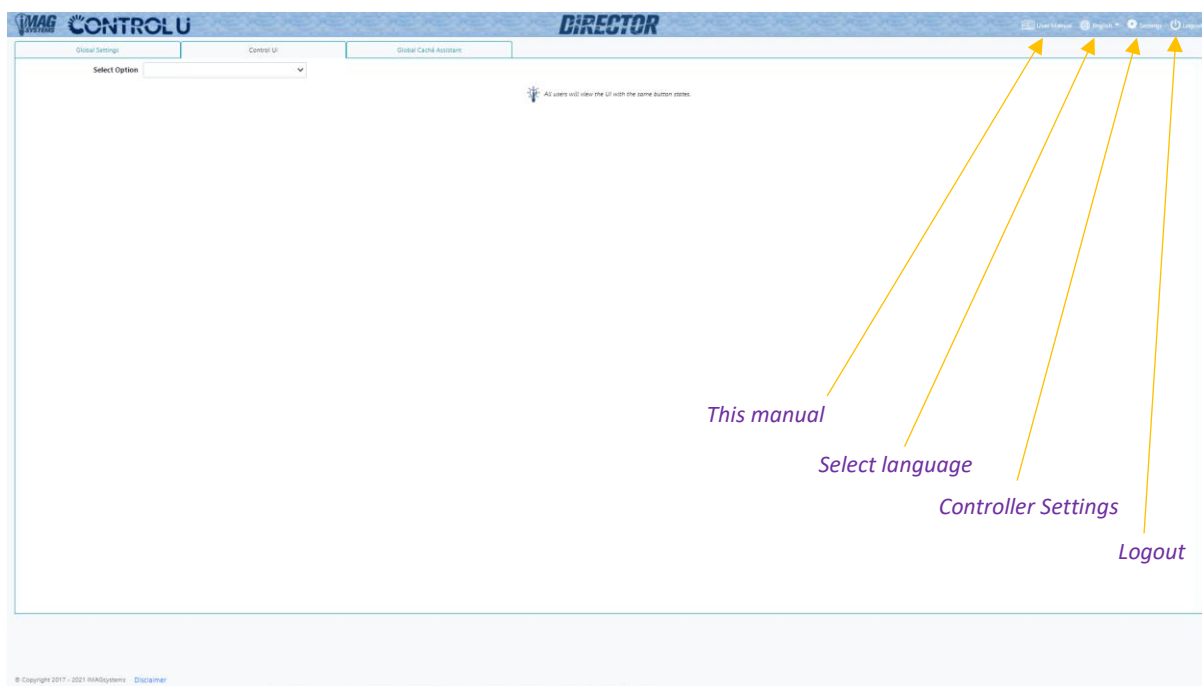
5 UI Overview – continued...

After a successful Registration Key has been entered you will be prompted to login to the system. Initially the default login is **Username: admin Password: admin**. You will be forced to change the default password as the default login will no longer be allowed. From here you can change the language.



Once logged into the system the Control UI tab will be displayed by default.

Users will automatically be logged out after 30 minutes of inactivity.



6 Factory Reset

The method of resetting to default factory settings varies depending on the controller type.

For controllers with a headphone jack use the following procedure:

Insert a 3.5mm phono plug into the rear headphone socket for more than 10 seconds then unplug to reset to factory default settings.

WARNING: All data will be removed and the device will return to a default IP address.



6 Factory Reset continued...

For controllers without a headphone jack use the following procedure:

- 1) Using a PC, create a new text file named factoryreset.txt and save it to a USB Flash Drive.
(Recommended to use a Flash Drive with a LED)
- 2) Apply power to controller for at least 1 min before continuing.
- 3) Insert USB Flash Drive into any USB port. The USB Flash Drive LED will begin to flash.
- 4) Within a few seconds the USB Flash Drive LED will turn off as the controller reboots to factory default settings at which point remove the USB Flash Drive.

A confirmation text file named OK.txt will be saved to the USB Flash Drive.

WARNING: All data will be removed and the device will return to a default IP address.



Appendix A – Security Features

The Director software has many security features built in which will be described in detail below. Some of these features are optional and can be enabled or disabled depending on your system security requirements.

1. Required security key with all HTTP requests

The API of the system is accessible via HTTP PUT & GET requests which are protected with the addition of a security key that must be passed with each request.

The security key is accessible from the Global Settings – Security Keys tab.

2. Optional security key with all TCP commands

The API of the system is accessible via TCP port 6980 which can be optionally protected with a security key that must be passed with each command.

The security key is accessible from the Global Settings – Security Keys tab.

3. User Login Failure

This is an optional feature that is part of the system Notifications functions available from the Global Settings – Notifications tab.

An email can be sent after three (3) failed login attempts to the system.

4. Limiting simultaneous TCP connections to control port 6980

By default there is no limitation to the number of simultaneous TCP connections to control port 6980.

The number of simultaneous TCP connections can be limited between 1 and 10 from the UI Settings Advanced tab Connections Limit.

Appendix B – Using Command Assistant

When dealing with direct API control commands or creating presets, the Command Assistant is available for all commands to help make the construction of command strings as simple as possible.

Most commands have a Normal and Wizard mode of creation. In Normal mode most parameters are set by entering the details into the various text boxes, while in Wizard mode parameters are mostly set with dropdown selections.

Command send tcp – Normal Mode

Parameters

1 Enter optional Security Key

2 1 Select a previously saved Device

2 2 Enter an Alias for the Device

2 3 Enter a Description

* This virtual device will save all the settings and strings

Select Mode

Wizard

Normal

1 Security Key (optional)

2 1 Select Device

3 Enter device IP Address

2 2 Alias Name (optional)

4 Enter device Port

2 3 Description (optional)

5 Enter command string

Save

6 Leave NONE selected (when no feedback required)

3 IP Address

4 Port

5 Command

6 Feedback (optional)

NONE

7 Click Finish button

7 Finish

Parameters

1 Enter optional Security Key

2 1 Select a previously saved Device

2 2 Enter an Alias for the Device

2 3 Enter a Description

* This virtual device will save all the settings and strings

Select Mode

Wizard

Normal

1 Security Key (optional)

2 1 Select Device

3 Enter device IP Address

2 2 Alias Name (optional)

4 Enter device Port

2 3 Description (optional)

5 Enter command string

Save

6 Select Reply (when feedback required)

3 IP Address

4 Port

5 Command

6 Feedback (optional)

Reply

7 Click Finish button

7 Finish

Command send tcp – Normal Mode continued...

Parameters ×

1 Enter optional Security Key

2 1 Select a previously saved Device **Select Mode** ☐ Wizard
 2 2 Enter an Alias for the Device ☒ Normal

2 3 Enter a Description 1 Security Key (optional)

* This virtual device will save all the settings and strings 2 1 Select Device

3 Enter device IP Address 2 2 Alias Name (optional)

4 Enter device Port 2 3 Description (optional)

5 Enter command string

6 Select Contains (when part feedback compared) 3 IP Address

7 Enter Feedback string 4 Port

8 Click Finish button 5 Command

6 Feedback (optional)

7 Feedback String (optional)

8

Parameters ×

1 Enter optional Security Key

2 1 Select a previously saved Device **Select Mode** ☐ Wizard
 2 2 Enter an Alias for the Device ☒ Normal

2 3 Enter a Description 1 Security Key (optional)

* This virtual device will save all the settings and strings 2 1 Select Device

3 Enter device IP Address 2 2 Alias Name (optional)

4 Enter device Port 2 3 Description (optional)

5 Enter command string

6 Select Equals (when full feedback compared) 3 IP Address

7 Enter Feedback string 4 Port

8 Click Finish button 5 Command

6 Feedback (optional)

7 Feedback String (optional)

8

Command send tcp – Wizard Mode

Parameters ×

① ① Select a previously saved Device
 ① ② Enter an Alias for the Device
 ① ③ Enter a Description
 * This virtual device will save all the settings and strings

Select Mode ☒ Wizard
☐ Normal

Security Key (optional) 31393031336333333431613264333465

② Enter device IP Address ① ① Select Device

③ Enter device Port ① ② Alias Name (optional)

④ Select string format ASCII / HEX ① ③ Description (optional)

⑤ Enter command string

⑥ Leave NONE selected (when no feedback required)

⑦ Click Finish button

IP Address

Port

Disconnect (optional) ☐

Protocol ASCII

Command

Append CR (optional) ☐

Append LF (optional) ☐

⑥ **Feedback** (optional) NONE

⑦

⑦

Parameters ×

① ① Select a previously saved Device
 ① ② Enter an Alias for the Device
 ① ③ Enter a Description
 * This virtual device will save all the settings and strings

Select Mode ☒ Wizard
☐ Normal

Security Key (optional) 31393031336333333431613264333465

② Enter device IP Address ① ① Select Device

③ Enter device Port ① ② Alias Name (optional)

④ Select string format ASCII / HEX ① ③ Description (optional)

⑤ Enter command string

⑥ Select Reply (when feedback required)

⑦ Click Finish button

IP Address

Port

Disconnect (optional) ☐

Protocol ASCII

Command

Append CR (optional) ☐

Append LF (optional) ☐

⑥ **Feedback** (optional) Reply

⑦

⑦



Parameters ✕

1 1 Select a previously saved Device

1 2 Enter an Alias for the Device

1 3 Enter a Description

* This virtual device will save all the settings and strings

2 Enter device IP Address

3 Enter device Port

4 Select string format
ASCII / HEX

5 Enter command string

6 Select Contains
(when part feedback compared)

7 Enter Feedback string

8 Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31393031336333333431613264333465

1 1 Select Device

1 2 Alias Name (optional)

1 3 Description (optional)

Save

2 IP Address

3 Port

Disconnect (optional)

4 Protocol

5 Command

Append CR (optional)

Append LF (optional)

6 Feedback (optional)

7 Feedback String

Append CR (optional)

Append LF (optional)

8 Finish



Parameters

1

1

Select a previously saved Device

1

2

Enter an Alias for the Device

1

3

Enter a Description

* This virtual device will save all the settings and strings

2

Enter device IP Address

3

Enter device Port

4

Select string format
ASCII / HEX

5

Enter command string

6

Select Equals
(when all feedback compared)

7

Enter Feedback string

8

Click Finish button

Select Mode

☒ Wizard
 ☐ Normal

Security Key (optional)

31393031336333333431613264333465

1

1

Select Device

1

2

Alias Name (optional)

1

3

Description (optional)

Save

2

IP Address

3

Port

Disconnect (optional)

☐

4

Protocol

ASCII

5

Command

Append CR (optional)

☐

Append LF (optional)

☐

6

Feedback (optional)

Equals

7

Feedback String

Append CR (optional)

☐

Append LF (optional)

☐

8

Finish

Command send gc – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter device IP address

3 Select device port

4 Enter command string

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 IP Address

3 Port

4 Global Cache Command

5

Command send gc – Wizard Mode

Parameters ⌂ ×

1 Click Device Discovery button

2 Select required device

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

37343230376633323039323134313164

Select Device

1

2

Discovered Devices

000C1EC01DB1@172.30.10.138 (GC-100-12)

000C1E05978B@172.30.10.109 (iTachIP2SL)

000C1EE08C16@172.30.10.103 (iTachFlexEthernet)

000C1E0364F2@172.30.10.113 (iTachFlexEthernet)

000C1E052A93@172.30.10.143 (GC232)

000C1E052A92@172.30.10.132 (GCHMX3)

000C1E052A95@172.30.10.136 (GCRL3A)

IP Address

0.0.0.0

Port

4998

Disconnect (optional)

☐

Global Cache Command

Command send gc – Wizard Mode continued...

Parameters

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

37343230376633323039323134313164

Select Device

▼

Device Discovery

Wizard

Config Page

000C1EC01DB1@172.30.10.138 (GC-100-12)

Alias Name (optional)

Description (optional)

Save

IP Address

172.30.10.138

Port

4998 ▼

Disconnect (optional)

☐

Global Caché Command

Finish

** The selected devices IP Address and available ports are now automatically populated. At this point you can select the required port and enter the required command or continue with the Wizard by clicking the Wizard button.*

Command send gc – Wizard Mode continued...

When using the Wizard an image of the device will be shown and if multiple I/O's are available for the device a selection will be available that will automatically set the TCP Port and create the command line for you.

This example shows sending a serial string from RS232 port #1 of a GC-100-12.

Parameters

Select Mode

☒ Wizard
 ☐ Normal

Security Key (optional)

37343230376633323039323134313164

Select Device

Device Discovery


Wizard

Config Page

000C1EC01DB1@172.30.10.138 (GC-100-12)

Network

Serial



1 Select I/O

Protocol

ASCII

2 String to Send

3 Append CR (optional)

☐

Append LF (optional)

☐

4 Feedback (optional)

NONE

5 Set

IP Address

172.30.10.138

Port

4999

Disconnect (optional)

☐

Global Caché Command

6 Finish

1 Select I/O for RS232 port 1

2 Enter String to Send

3 Select terminator

4 Select Feedback options:
NONE / REPLY / EQUALS / CONTAINS

5 Click Set button

6 Click Finished button

This example shows setting relay #1 of a GC-100-12.

Select Device

Device Discovery

Wizard

Config Page

Select Mode


☒ Wizard
 ☐ Normal

Security Key (optional)

37343230376633323039323134313164

000C1EC01DB1@172.30.10.138 (GC-100-12)

Network



Select I/O

1

2

Select State

3

Set

Get

IP Address

172.30.10.138

Port

4998

Disconnect (optional)

☐

Global Caché Command

setstate,3:1,1

4

Finish

When selecting an I/O port the “Select Mode” option will become available. From this selection you can configure the I/O port to any supported condition. This will send the configuration commands direct to the device.

This example shows sending an Infrared signal from I/O #3 of a GC-100-12.

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Command send gc – Wizard Mode continued...

The iTach Flex range of controllers are configured by selecting the cable connected to the device. Once the cable type has been selected all the controllable options will become available. The iTach Flex will automatically be configured for the selected cable.

Parameters

Select Mode

☒ Wizard
 ☐ Normal

Security Key (optional)

37343230376633323039323134313164


Select Device

Device Discovery


Wizard

Config Page


000C1E0364F2@172.30.10.113 (iTachFlexEthernet)




FLC-SL




FLC-SL-MJ




FLC-SL-485




FLC-RS




FLC-1E




FLC-BL




FLC-T3



FLC-3E



FLC-2E1B



Network

Control

Sensor

IP Address

172.30.10.113

Port

4998

Disconnect (optional)

☐

Global Cache Command

Finish

Command set listener – Normal Mode

Example turning ON a listener

Parameters ×

1 Enter optional Security Key

2 Enter UDP Multicast IP

3 Enter Notify IP Port

4 Select Protocol UDP

5 Enter device IP Address

6 Select State ON, OFF or ANY

7 Select listener service ENABLED

8 Select the device I/O port

9 Select Preset

10 Set optional delay time

11 Click Finish button

1 Security Key (optional)

2 Notify Address

3 Notify Port

4 Protocol

5 Device Address

6 State

7 Service

8 Device Port

9 Preset Name

10 Delay [minutes](optional)

11 ✓ Finish

Select Mode

☐ Wizard

☒ Normal

60

Example turning OFF a listener

Parameters ×

1 Enter optional Security Key

2 Enter UDP Multicast IP

3 Enter Notify IP Port

4 Select Protocol UDP

5 Enter device IP Address

6 Select State ON, OFF or ANY

7 Select listener service DISABLED

8 Select the device I/O port

9 Click Finish button

1 Security Key (optional)

2 Notify Address

3 Notify Port

4 Protocol

5 Device Address

6 State

7 Service

8 Device Port

9 ✓ Finish

Select Mode

☐ Wizard

☒ Normal

Command set listener – Wizard Mode

Example configuring and turning ON a listener

Parameters ×

1 Select Device or Click Device Discovery button

Select Mode ☒ Wizard ☐ Normal

Security Key (optional) 37343230376633323039323134313164

1 Select Device

Device Discovery

Notify Address 0.0.0.0

Notify Port

Protocol

State

Service DISABLED

Device Port

Finish

Parameters ↺ ×

2 Select Device

Select Mode ☒ Wizard ☐ Normal

Security Key (optional) 37343230376633323039323134313164

Select Device

Device Discovery

2

Discovered Devices

000C1EE08C16@172.30.10.103 (iTachFlexEthernet)

000C1E0364F2@172.30.10.113 (iTachFlexEthernet)

000C1E052A94@172.30.10.130 (GCIR3)

000C1E05019E@172.30.10.107 (iTachIP2IR)

000C1E0370B9@172.30.10.115 (iTachFlexWiFi)

000C1E039F54@172.30.10.103 (iTachWF2IR)

000C1EE0CDA5@172.30.10.111 (iTachFlexEthernetPoE)

Refresh

Notify Address 0.0.0.0

Notify Port

Protocol

State

Service ENABLED

Device Port

Preset Name

Delay [minutes](optional) 0 60

Finish

Command set listener – Wizard Mode continued...

Parameters

Select Mode

☒ Wizard
 ☐ Normal

Security Key (optional)

37343230376633323039323134313164


Select Device

000C1E05019E@172.30.10.107 (iTachIP2IR)

Alias Name (optional)

Description (optional)

Save



3

☒
☐
☐

4

Select Mode

Sensor Notify

5

Notify Port

9160

6

Notify Timer

0

7

Set

8

State

ON

9

Service

ENABLED

3

Device Port

1

10

Preset Name

MyNewPreset

11

Delay [minutes](optional)

0

60

12

Finish

1

Select the device port being used

2

Select Sensor Notify

3

Enter 9160 port number
(9160 will be automatically applied with Finish button)

4

Set Notify Timer to 0

5

Click Set button

6

Select Condition ON, OFF or ALL

7

Select listener service ENABLED

8

Select the preset to be executed

9

Select an optional delay

10

Click Finish button

* At this point you can enter an Alias name and an optional description for the device. This will then be listed under the Select Device dropdown.

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Command set listener – Wizard Mode continued...

Example turning OFF a listener

Parameters ×

Select Mode

☒ Wizard
 ☐ Normal

Security Key (optional)

37343230376633323039323134313164

Select Device


000C1E05019E@172.30.10.107 (iTachIP2IR)

Device Discovery

Alias Name (optional)

Description (optional)

Save



Select I/O

☒ 3
 ☐
☐

Select Mode

Sensor Notify

Notify Port

9160

Notify Timer

0

Set

Notify Address

239.255.250.250

Notify Port

9160

Protocol

UDP

Device Address

172.30.10.107

4 State

ON

5 Service

DISABLED

3 Device Port

1

6 Finish

Command set events – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Event Name

3 Enter Function "state"

4 Enter Value

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Events

3 Function

4 Value

5

Command set events – Wizard Mode

Parameters

1 Select Event Name

2 Select Value

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Events

Function

2 Value

3

Command set var – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Variable Name
* MAX 256 characters

3 Enter value
* MAX 256 characters

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Variable Name

3 Value

4

Command set var – Wizard Mode

Parameters

1 Select / Enter Variable Name
* MAX 256 characters

2 Enter Value or select Delete
* MAX 256 characters

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Variable Name

2 Delete

2 Value

☐

Data String

3

Command get events – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Event Name

3 Enter Function as State

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Events

3 Function

4

✓ Finish

Command get events – Wizard Mode

Parameters

1 Select Event Name

2 Select Function as State

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Events

2 Function

3

✓ Finish

Command get var – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Variable Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Variable Name

3

✓ Finish

Command get var – Wizard Mode

Parameters

1 Enter / Select Variable Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Variable Name

2

✓ Finish

Command preset add

Parameters ×

1 Enter Preset Name

2 Enter Preset Command

3 Click Finish button

Security Key (optional)

31393031336333333431613264333465

1 Preset Name

2 Preset Data

3

✓ Finish

Command preset delete

Parameters ×

1 Select Preset Name

2 Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31393031336333333431613264333465

1 Preset Name

2

✓ Finish

Command preset load

Parameters ×

1 Select Preset Name

2 Select optional delay time or select Cancel

3 Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31393031336333333431613264333465

1 Preset Name

2 Cancel

2 Delay [minutes] (optional)

0 60

3

✓ Finish

Command set ui – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter UI Name

3 Select Service > Enabled

4 Enter optional UI Timeout (minutes)

5 Enter optional Client Limit (1 – 100)

6 Enter optional 4 digit code (0000 – 9999)

7 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Service

4 Session Timeout (optional)

5 Client Limit (optional)

6 Login (optional)

7

✓ Finish

Parameters

1 Enter optional Security Key

2 Enter UI Name

3 Select Service > Disabled

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Service

4

4

✓ Finish

Parameters

1 Enter optional Security Key

2 Enter UI Name

3 Select Service > Disabled

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Service

4

4

✓ Finish

Command set ui – Wizard Mode

Parameters ×

1 Select UI Name

2 Select Service > Enabled

3 Select optional UI Timeout

4 Enter optional Client Limit (1 – 100)

5 Select optional Login None / Random / Fixed

6 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

37343230376633323039323134313164

1 UI Name

demo_ui

2 Service

Enabled

3 Session Timeout (optional)

4 Client Limit (optional)

☒

1 100

5 Login (optional)

Dynamic UI Name

☐ * Select Dynamic UI Name to replace the selected UI Name in command string

6

Parameters ×

1 Select UI Name

2 Select Service > Disabled

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

37343230376633323039323134313164

1 UI Name

demo_ui

2 Service

Disabled

Dynamic UI Name

☐ * Select Dynamic UI Name to replace the selected UI Name in command string

3

Parameters ×

1 Select UI Name

2 Select Service > Logout

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

37343230376633323039323134313164

1 UI Name

demo_ui

2 Service

Logout

Dynamic UI Name

☐ * Select Dynamic UI Name to replace the selected UI Name in command string

3

Command set ui_button – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter UI Name

3 Enter Button /Group Name

4 Select Function
Position / State / Text / Press

5 Enter Value

6 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Button / Group Name

4 Function

5 Value

6

Command set ui_button – Wizard Mode

Parameters ×

1 Select UI Name

2 Select Button or Group names

3 Select Button / Group Name

4 Select Function
Position / State / Text / Press

5 Select or Enter Value

6 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 UI Name

2 Select

3 Button Name

4 Function

5 Value

Dynamic UI Name ☐ * Select Dynamic UI Name to replace the selected UI Name in command string

6

Command set ui_image – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter UI Name

3 Enter Image Name

4 Select Function Visibility

5 Enter Value

6 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Image Name

4 Function

5 Value

6 ✓ Finish

Command set ui_image – Wizard Mode

Parameters ×

1 Select UI Name

2 Select Image Name

3 Select Function Visibility

4 Enter Value

5 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 UI Name

2 Image Name

3 Function

4 Value

5 ✓ Finish

37343230376633323039323134313164

demo_ui

img01

Visibility

False

☐ * Select Dynamic UI Name to replace the selected UI Name in command string

Command set ui_indicator – Normal Mode

Parameters

×

1 Enter optional Security Key

2 Enter UI Name

3 Enter Indicator Name

4 Select Function

5 Enter Value

6 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Indicator Name

4 Function

5 Value

6

Command set ui_indicator – Wizard Mode

Parameters

×

1 Select UI Name

2 Select Indicator Name

3 Select Function

4 Enter Value

5 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 UI Name

2 Indicator Name

3 Function

Dynamic Value

4 Value

Dynamic UI Name

5

Command set ui_label – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter UI Name

3 Enter Label Name

4 Select Function
Color / Visibility / Text

5 Enter Value

6 Click Finish button

Select Mode
☐ Wizard
☒ Normal

1 Security Key (optional)

2 UI Name

3 Label Name

4 Function

5 Value

6

Command set ui_label – Wizard Mode

Parameters ×

1 Select UI Name

2 Select Label Name

3 Select Function
Color / Visibility / Text

4 Select or Enter Value

5 Click Finish button

Select Mode
☒ Wizard
☐ Normal

Security Key (optional)
37343230376633323039323134313164

1 UI Name
demo_ui

2 Label Name
lbl1

3 Function
Text

4 Value

Dynamic UI Name
☐ * Select Dynamic UI Name to replace the selected UI Name in command string

5

Command set ui_page – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter UI Name

3 Enter Page Name

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Page Name

4

✓ Finish

Command set ui_page – Wizard Mode

Parameters

1 Select UI Name

2 Select Page Name

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

37343230376633323039323134313164

1 UI Name

demo_ui

2 Page Name

Home

Dynamic UI Name

☐ * Select Dynamic UI Name to replace the selected UI Name in command string

3

✓ Finish

Command set ui_slider – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter UI Name

3 Enter Slider Name

4 Select Function Value / State

5 Enter Value

6 Click Finish button

Select Mode
☐ Wizard
☒ Normal

1 Security Key (optional)

2 UI Name

3 Slider Name

4 Function

5 Value

6

Command set ui_slider – Wizard Mode

Parameters ×

1 Select UI Name

2 Select Slider Name

3 Select Function Value / State

4 Select or Enter Value

5 Click Finish button

Select Mode
☒ Wizard
☐ Normal

Security Key (optional)
37343230376633323039323134313164

1 UI Name
demo_ui

2 Slider Name
slider1

3 Function
Value

Dynamic Value
☐

4 Value
0 50 100

Dynamic UI Name
☐ * Select Dynamic UI Name to replace the selected UI Name in command string

5

Command set ui_redirect – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Current User Interface

3 Enter new User Interface

4 Select optional Page Name

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Current User Interface

3 Redirect to User Interface

4 Page Name (optional)

5

✓ Finish

Command set ui_redirect – Wizard Mode

Parameters

1 Enter Current User Interface

2 Enter new User Interface

3 Select optional Page Name

4 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Current User Interface

2 Redirect to User Interface

3 Page Name (optional)

4

✓ Finish

Command set ui_revert – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Original User Interface

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Original User Interface

3

Command set ui_revert – Wizard Mode

Parameters

1 Select Original User Interface

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Original User Interface

2

Command get ui – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter UI Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3

Command get ui – Wizard Mode

Parameters

1 Select UI Name or Dynamic UI Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 UI Name

Dynamic UI Name

2

Command get ui_button – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter UI Name

3 Enter Button Name

4 Enter Function > down

5 Click Finish button

Select Mode

Wizard

Normal

1 Security Key (optional)

2 UI Name

3 Button Name

4 Function

5

Finish

Command get ui_button – Wizard Mode

Parameters

1 Select UI Name

2 Select Button Name

3 Select Function > Down

4 Click Finish button

Select Mode

Wizard

Normal

Security Key (optional)

1 UI Name

2 Button Name

3 Function

4

37343230376633323039323134313164

demo_ui

Dynamic UI Name

* Select Dynamic UI Name to replace the selected UI Name in command string

Finish

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Command get ui_indicator – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter UI Name

3 Enter Indicator Name

4 Select Function Value

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Indicator Name

4 Function

5

Command get ui_indicator – Wizard Mode

Parameters

1 Select UI Name

2 Select Indicator Name

3 Select Function Value

4 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 UI Name

2 Indicator Name

3 Function

Dynamic UI Name ☐ * Select Dynamic UI Name to replace the selected UI Name in command string

4

Command get ui_slider – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter UI Name

3 Enter Slider Name

4 Select Function Value / State

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 UI Name

3 Slider Name

4 Function

5

✓ Finish

Command get ui_slider – Wizard Mode

Parameters ×

1 Select UI Name

2 Select Slider Name

3 Select Function Value / State

4 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

37343230376633323039323134313164

1 UI Name

demo_ui

2 Slider Name

slider1

3 Function

Dynamic UI Name

☐ * Select Dynamic UI Name to replace the selected UI Name in command string

4

✓ Finish