

DIRECTOR

USER MANUAL

RAIN



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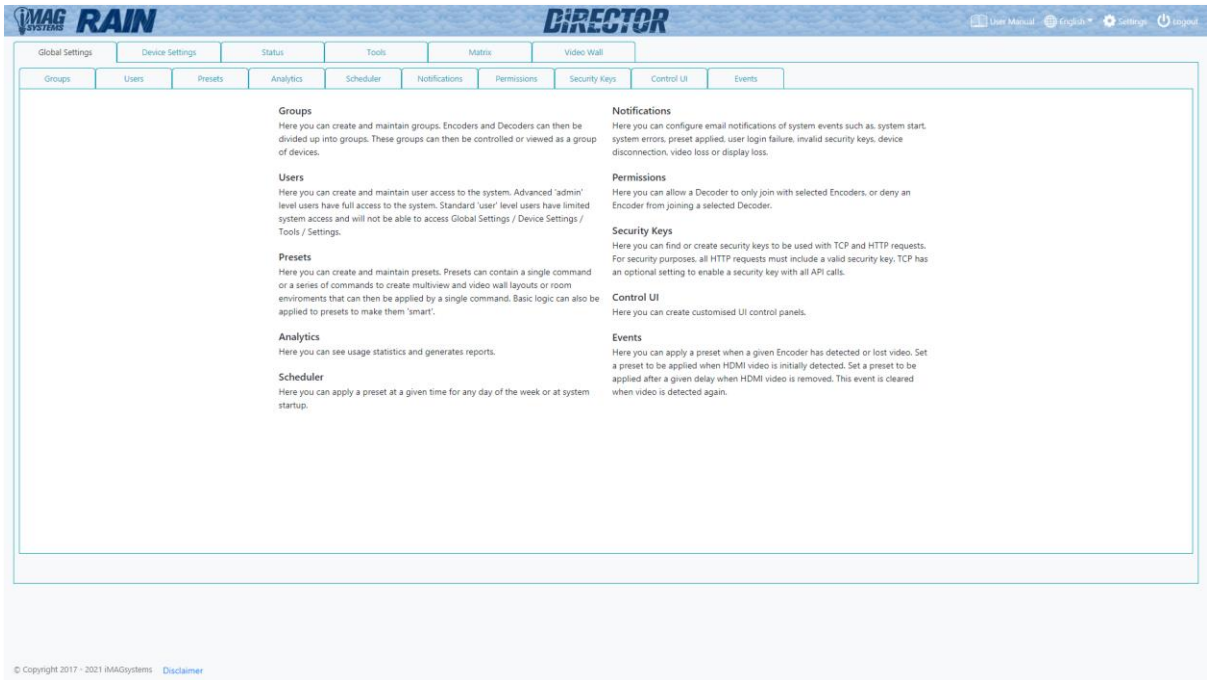
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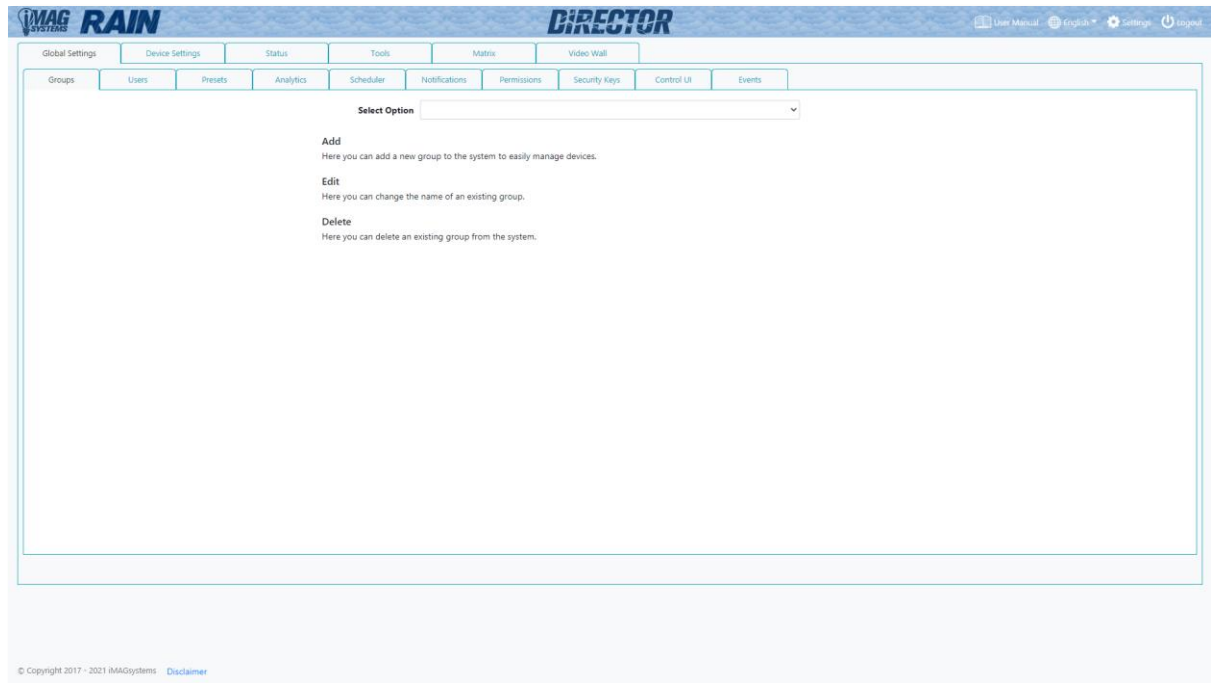
1 Global Settings

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



1.1 Groups

System Encoders and Decoders can be arranged into various groups. These groups can then be individually controlled via the API or displayed in the UI. Here we manage the groups by adding, editing or deleting them. Once a group has been added to the system, the group can then be assigned to any or all Encoders and Decoders from the Device Settings tab.



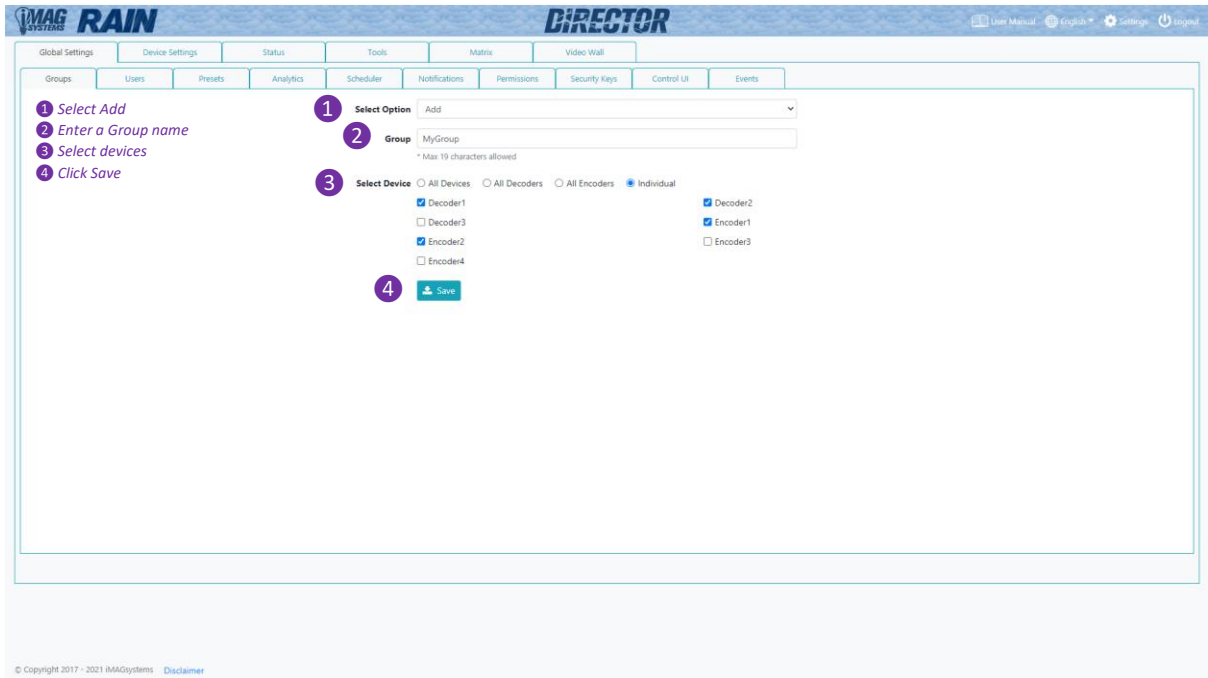
The following group names cannot be used:

- 'all'
- 'all_rx'
- 'all_tx'
- 'ungrouped'
- 'all_devices'
- Any Device name
- Any Preset name

1.1.1 Add Group

Here you can add a new group to the system to easily manage Encoders and Decoders. Devices can then be added to the group.

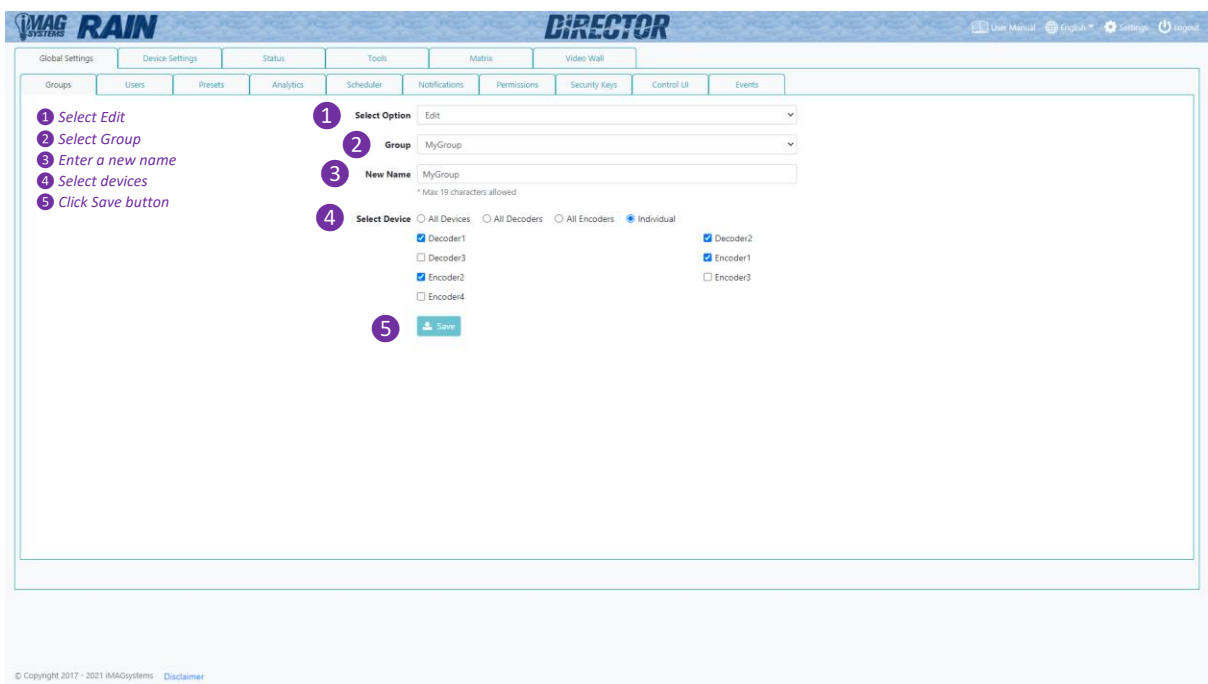
Encoders or Decoders can also be assigned to groups from Device Settings / Group.



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1.1.2 Edit Group

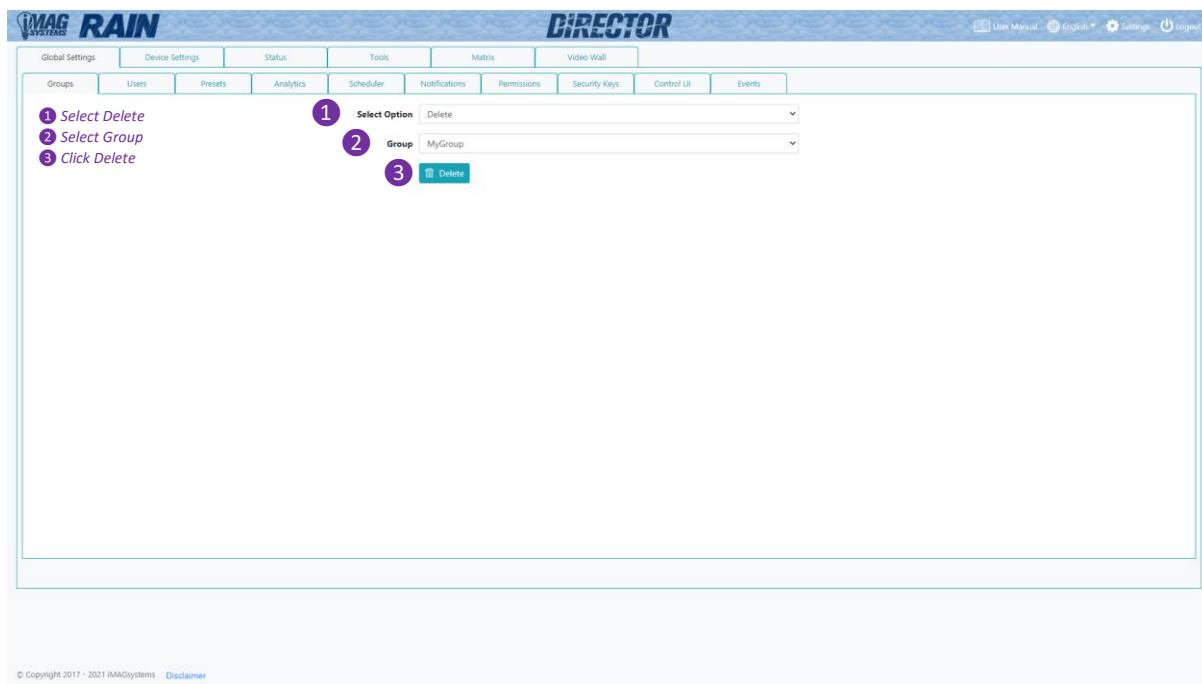
Here you can change the name of an existing group or devices associated with the group.



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1.1.3 Delete Group

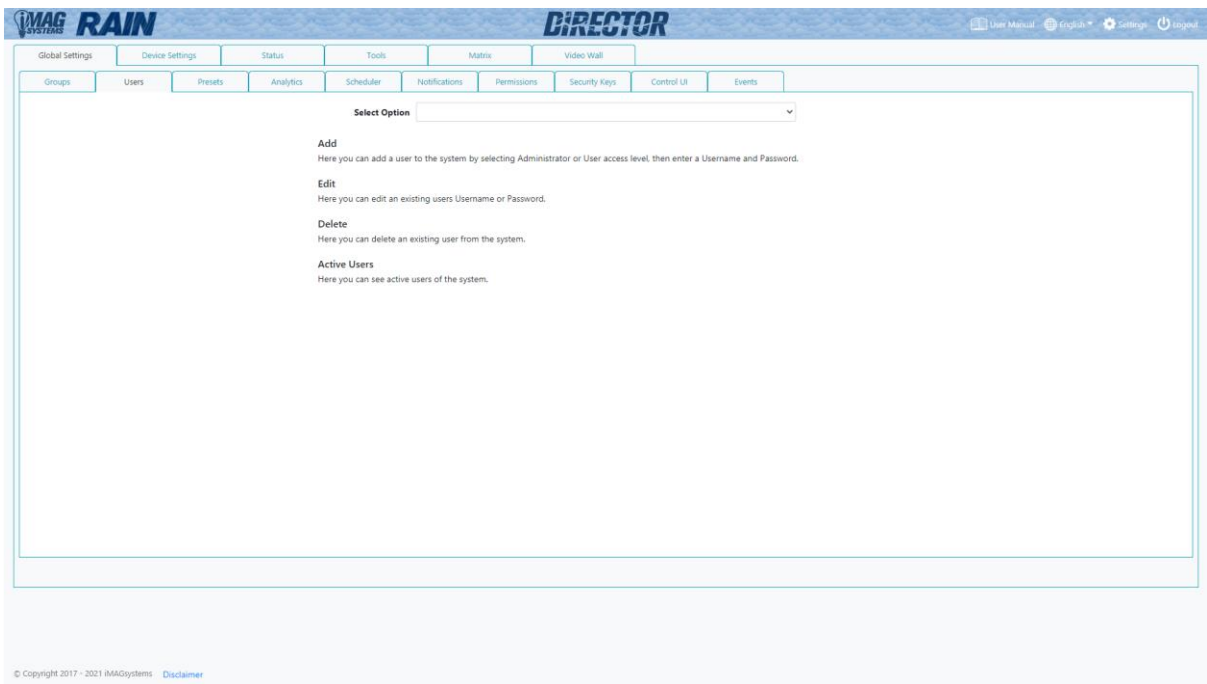
Here you can delete an existing group from the system.



1.2 Users

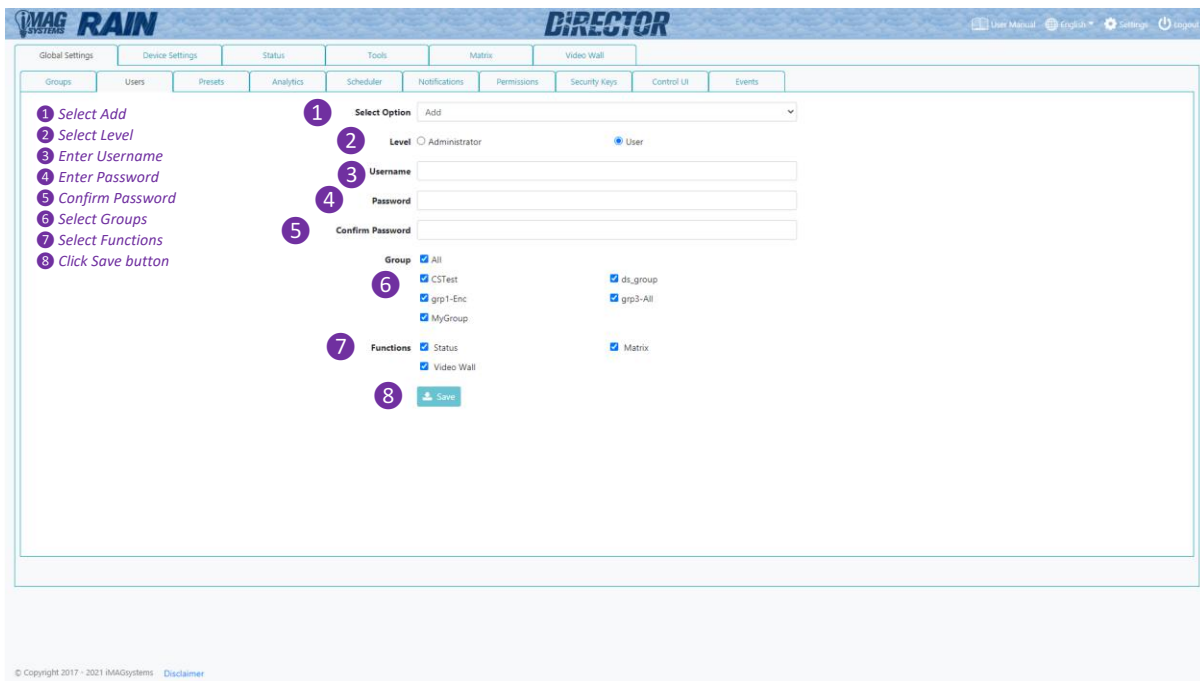
The system can be configured for user access control. Two levels of access are available, **administrator** and **user**. An **administrator** will have complete access, while a **user** is limited to the following areas:

- Status
 - Matrix
 - Video Wall
-
- The device groups for a user can also be limited so that only selected groups of Encoders and Decoders may be accessed.



1.2.1 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.



1.2.1 Add User

1 Select Add

2 Select Level

3 Enter Username

4 Enter Password

5 Confirm Password

6 Select Groups

7 Select Functions

8 Click Save button

Select Option: Add

Level: ☐ Administrator ☒ User

Username:

Password:

Confirm Password:

Group: ☒ All ☐ Cstest ☐ grp1-Enc ☐ MyGroup ☐ ds_group ☐ grp3-All

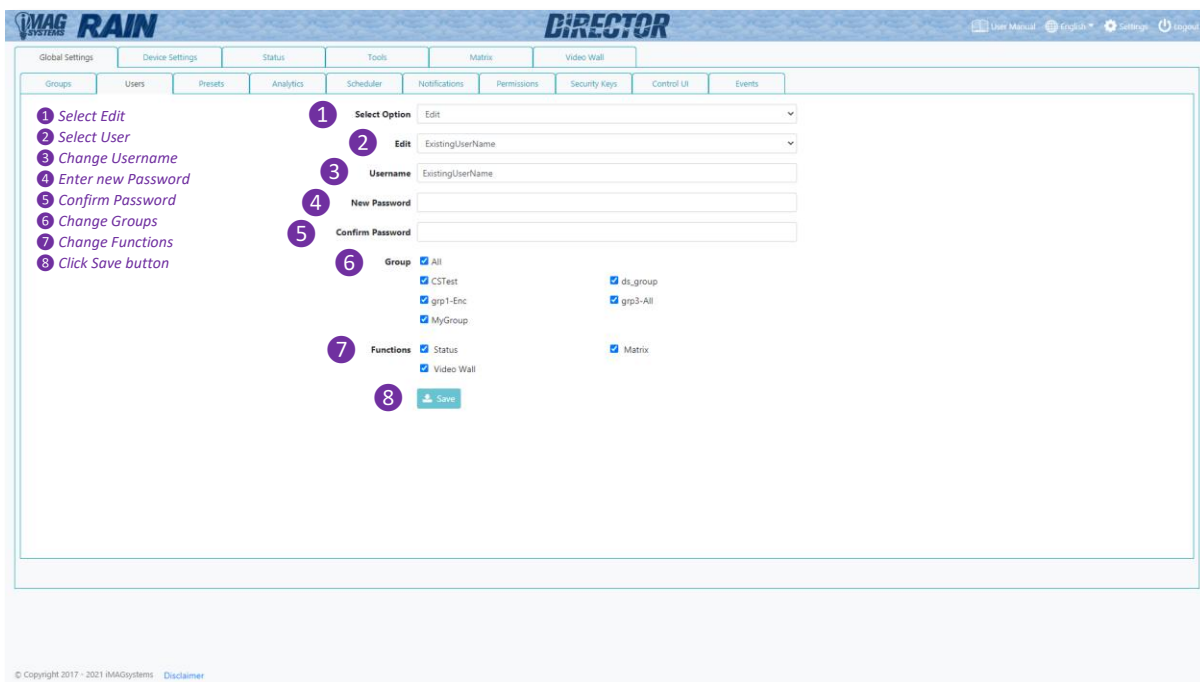
Functions: ☒ Status ☐ Video Wall ☐ Matrix

Save

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1.2.2 Edit User

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



1.2.2 Edit User

1 Select Edit

2 Select User

3 Change Username

4 Enter new Password

5 Confirm Password

6 Change Groups

7 Change Functions

8 Click Save button

Select Option: Edit

Select User: ExistingUserName

Username: ExistingUserName

New Password:

Confirm Password:

Group: ☒ All ☐ Cstest ☐ grp1-Enc ☐ MyGroup ☐ ds_group ☐ grp3-All

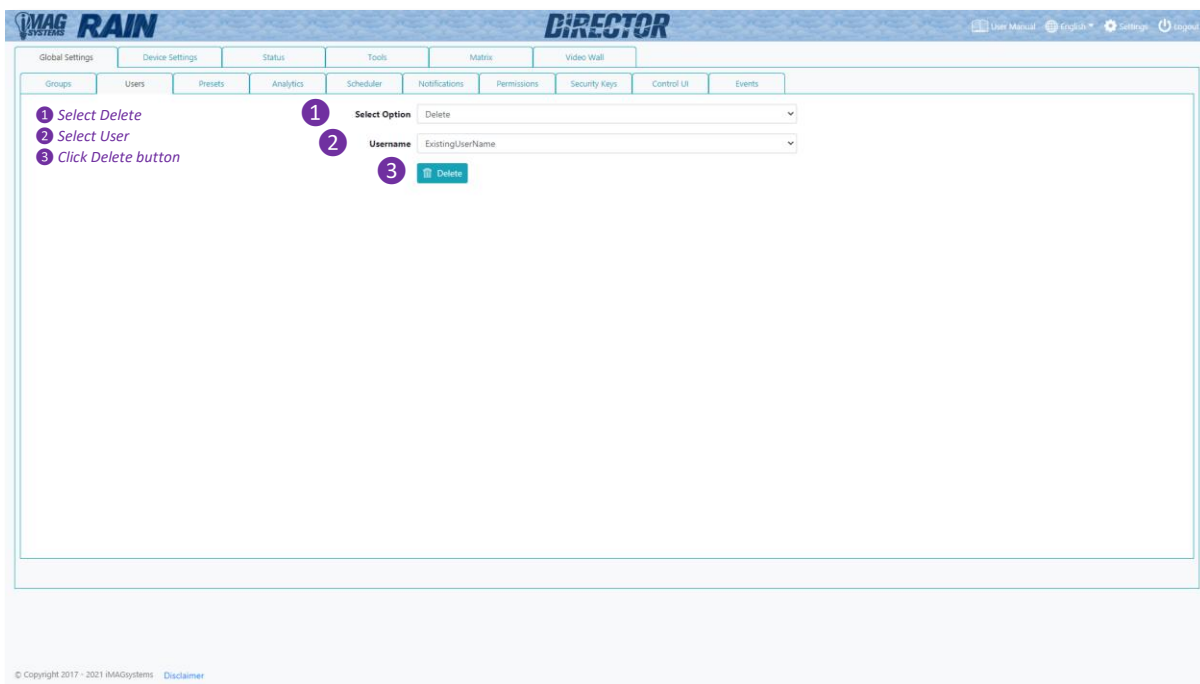
Functions: ☒ Status ☐ Video Wall ☐ Matrix

Save

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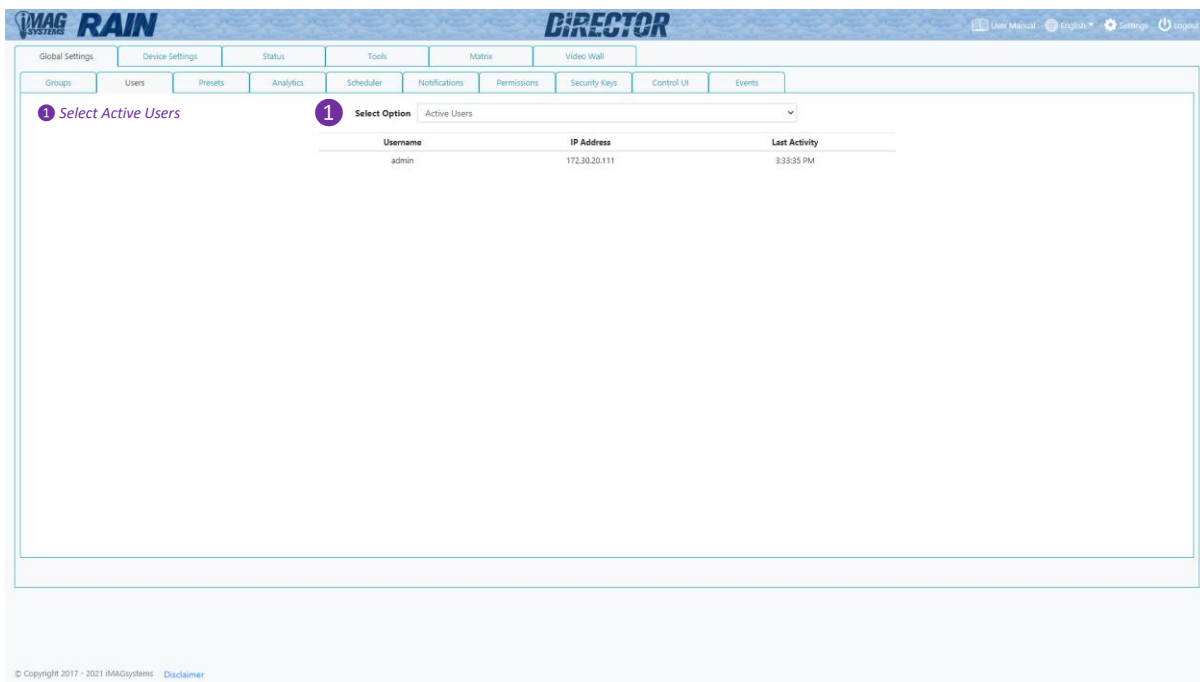
1.2.3 Delete User

Here you can delete an existing user from the system.



1.2.4 Active Users

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



1.3 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.

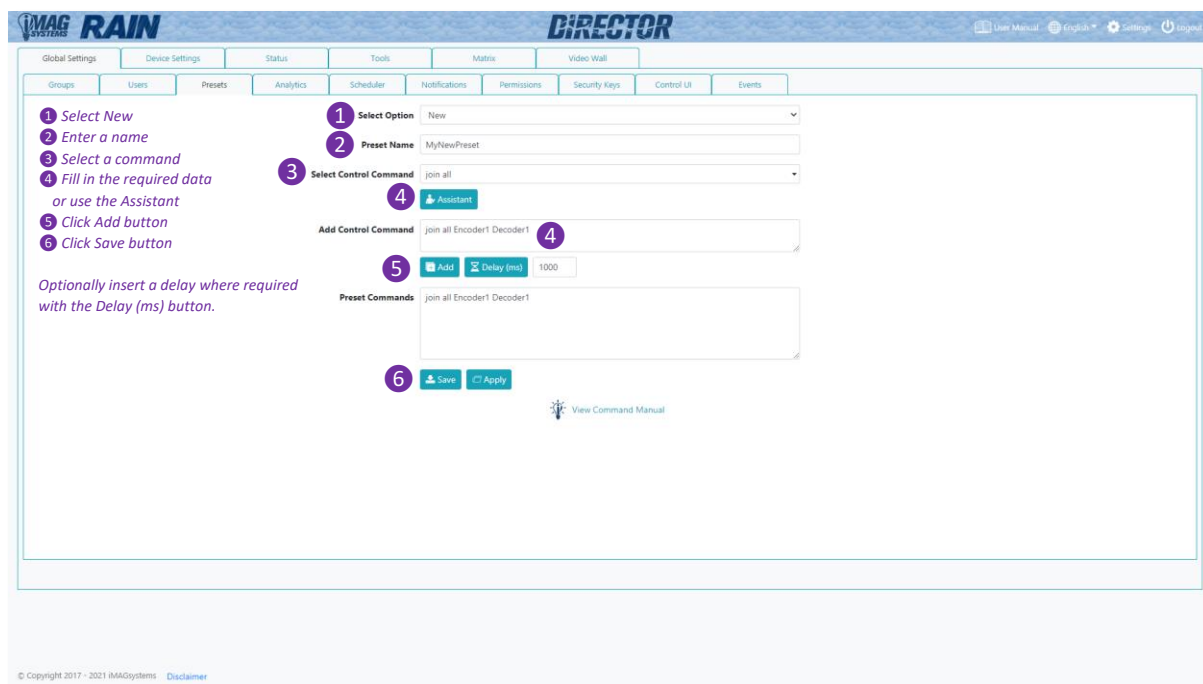
Presets can also contain basic if else logic to allow you to build some “smarts” into your system. Refer to Appendix B – Preset Logic in the command manual for further details.

The following preset names cannot be used:

- ‘all’
- ‘all_rx’
- ‘all_tx’
- ‘ungrouped’
- ‘all_devices’
- Any Device name
- Any Group name

1.3.1 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.



1.3.1 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.

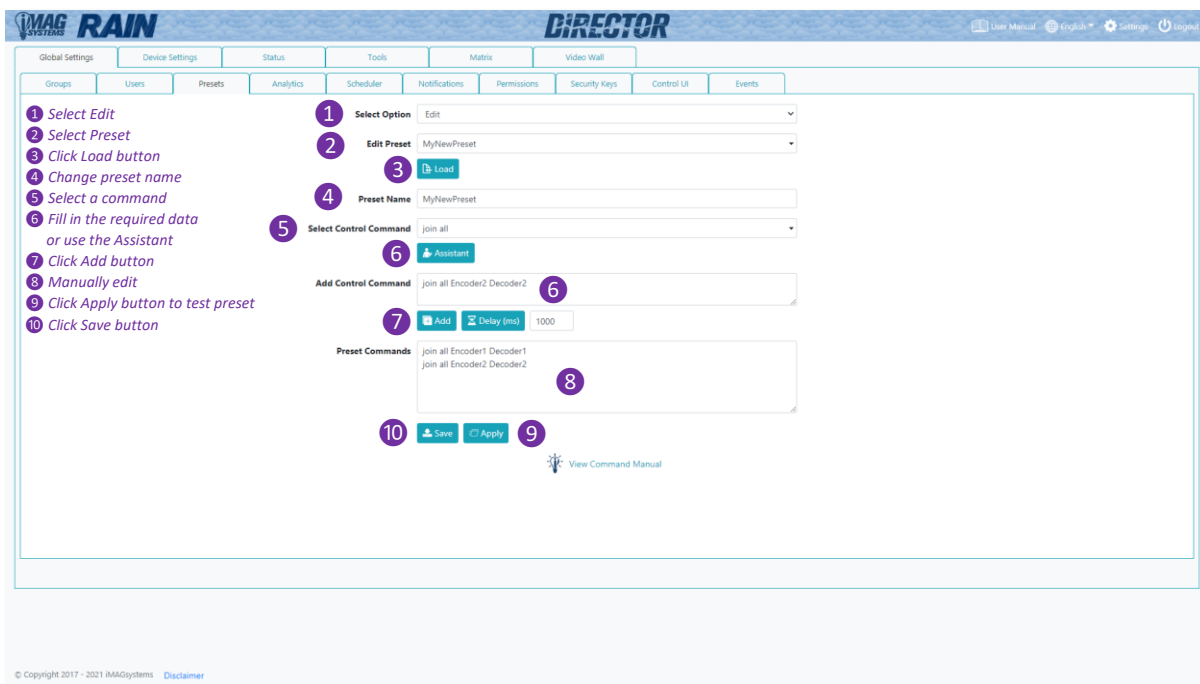
The screenshot shows the 'Preset New' form in the DIRECTOR RAIN web interface. The form includes the following elements:

- 1 Select Option:** A dropdown menu with 'New' selected.
- 2 Preset Name:** A text input field containing 'MyNewPreset'.
- 3 Select Control Command:** A dropdown menu with 'Join all' selected.
- 4 Add Control Command:** A text input field containing 'Join all Encoder1 Decoder1'.
- 5 Add:** A button to add the command.
- 6 Delay (ms):** A text input field containing '1000'.
- Preset Commands:** A text area containing 'Join all Encoder1 Decoder1'.

Numbered callouts (1-6) are placed over the form elements to guide the user through the process. A 'View Command Manual' link is located at the bottom of the form.

1.3.2 Preset Edit

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



Instructions:

- Select Edit
- Select Preset
- Click Load button
- Change preset name
- Select a command
- Fill in the required data or use the Assistant
- Click Add button
- Manually edit
- Click Apply button to test preset
- Click Save button

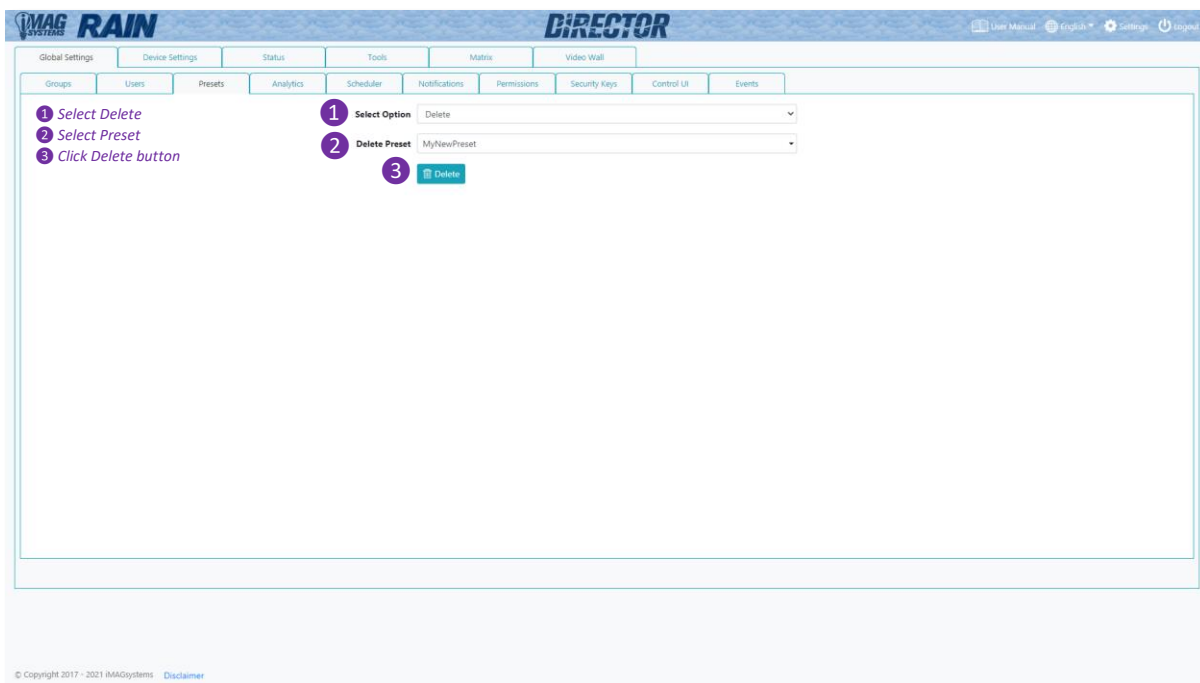
Form Fields:

- Select Option:** Edit
- Edit Preset:** MyNewPreset
- Preset Name:** MyNewPreset
- Select Control Command:** join all
- Add Control Command:** join all Encoder2 Decoder2
- Preset Commands:** join all Encoder1 Decoder1, join all Encoder2 Decoder2

Buttons: Load, Assistant, Add, Delay (ms), Save, Apply, View Command Manual

1.3.3 Preset Delete

Here you can delete any existing preset from the system.



Instructions:

- Select Delete
- Select Preset
- Click Delete button

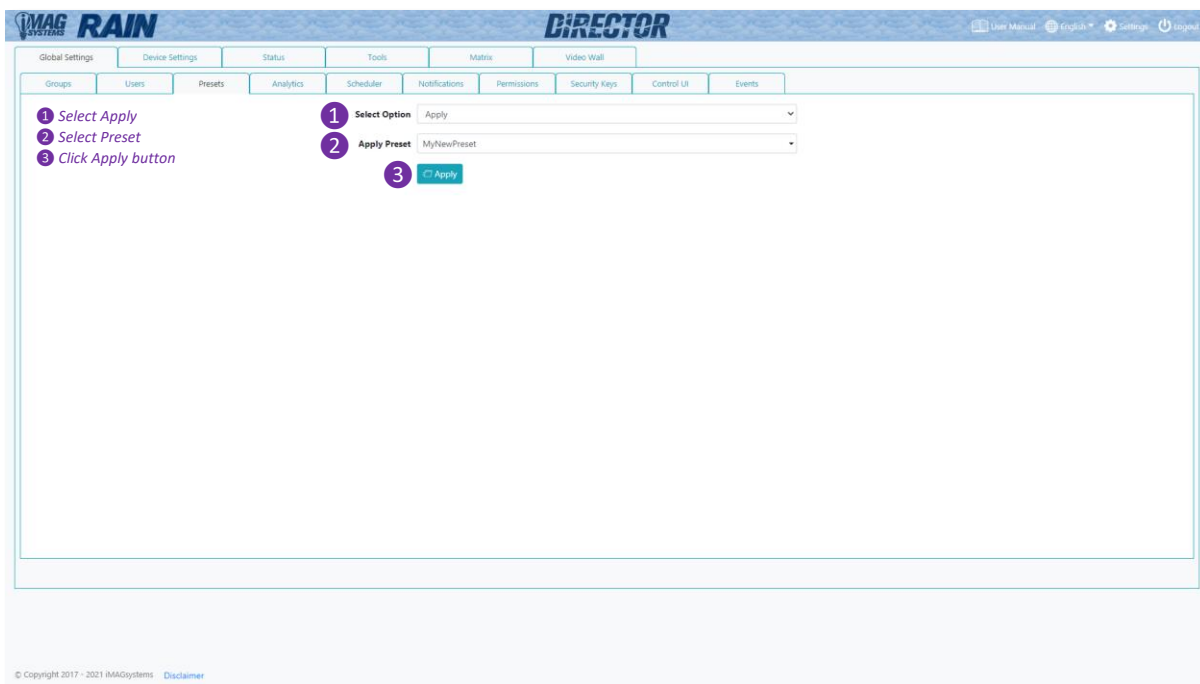
Form Fields:

- Select Option:** Delete
- Delete Preset:** MyNewPreset

Buttons: Delete

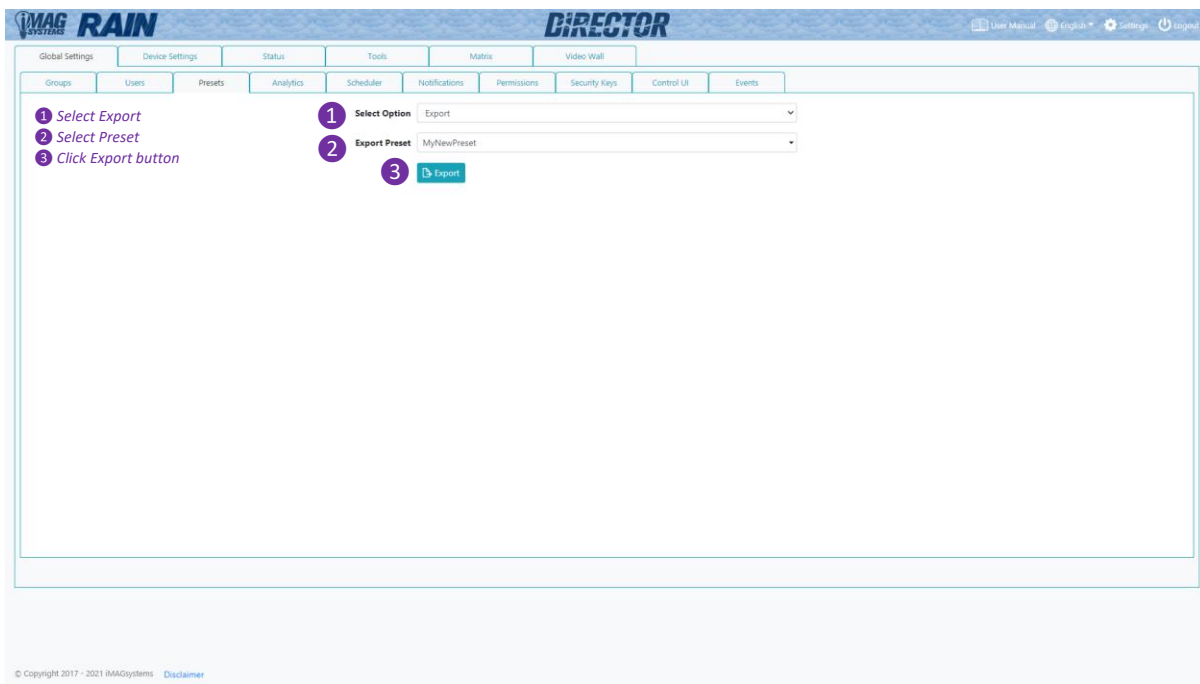
1.3.4 Preset Apply

Here you can apply any existing preset on the system.



1.3.5 Preset Export

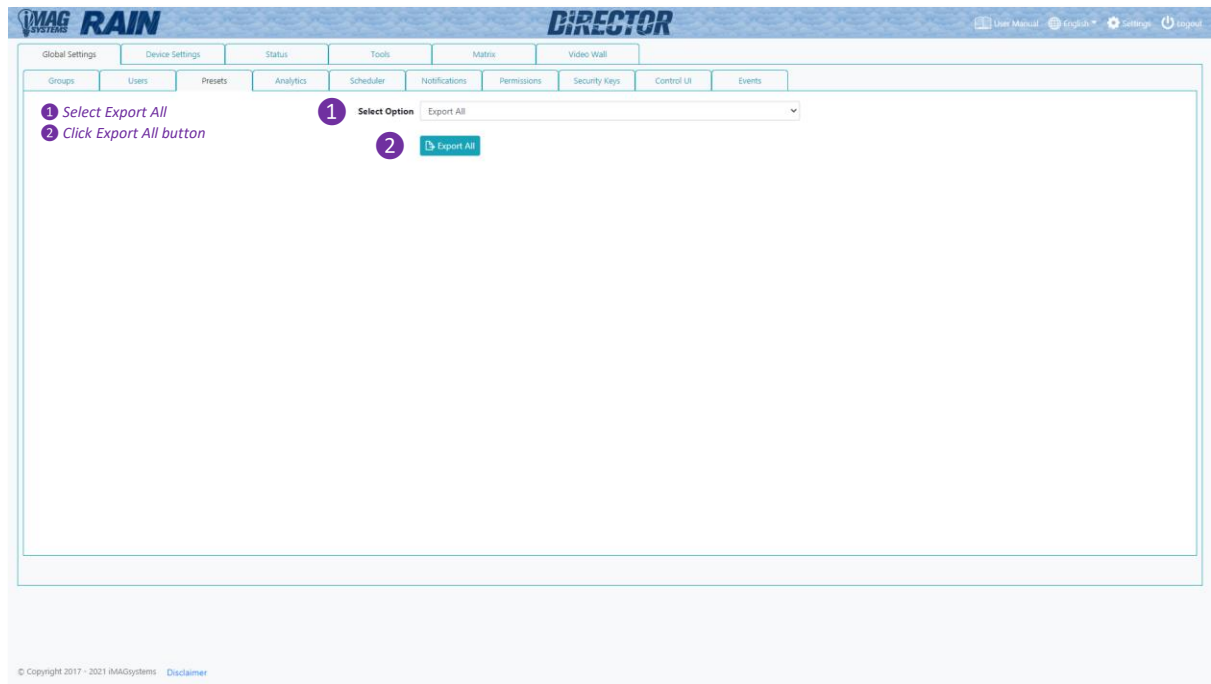
Here you can export an existing preset on the system which can then be used as a backup or edited. The preset will be saved to your Downloads folder as an ini file like *MyNewPreset.ini*.



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

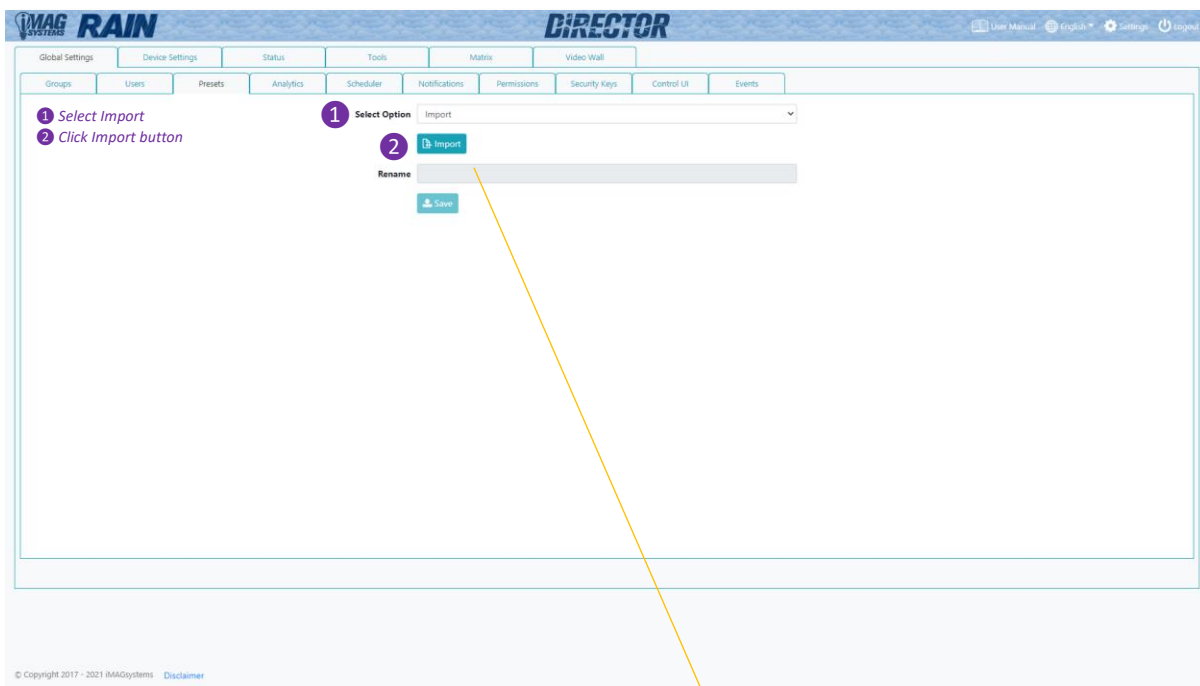
1.3.6 Preset Export All

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.

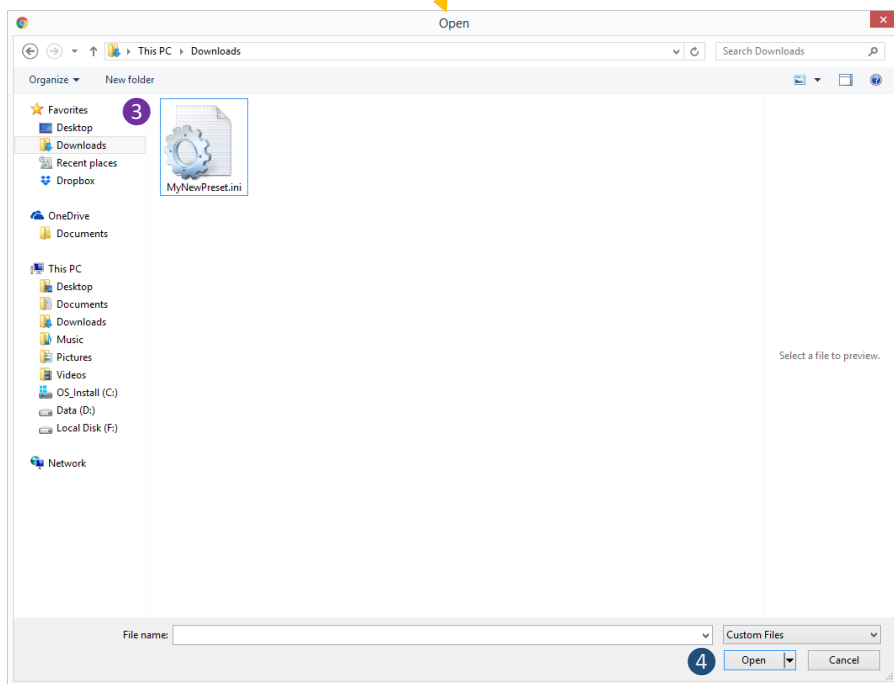


1.3.7 Preset Import

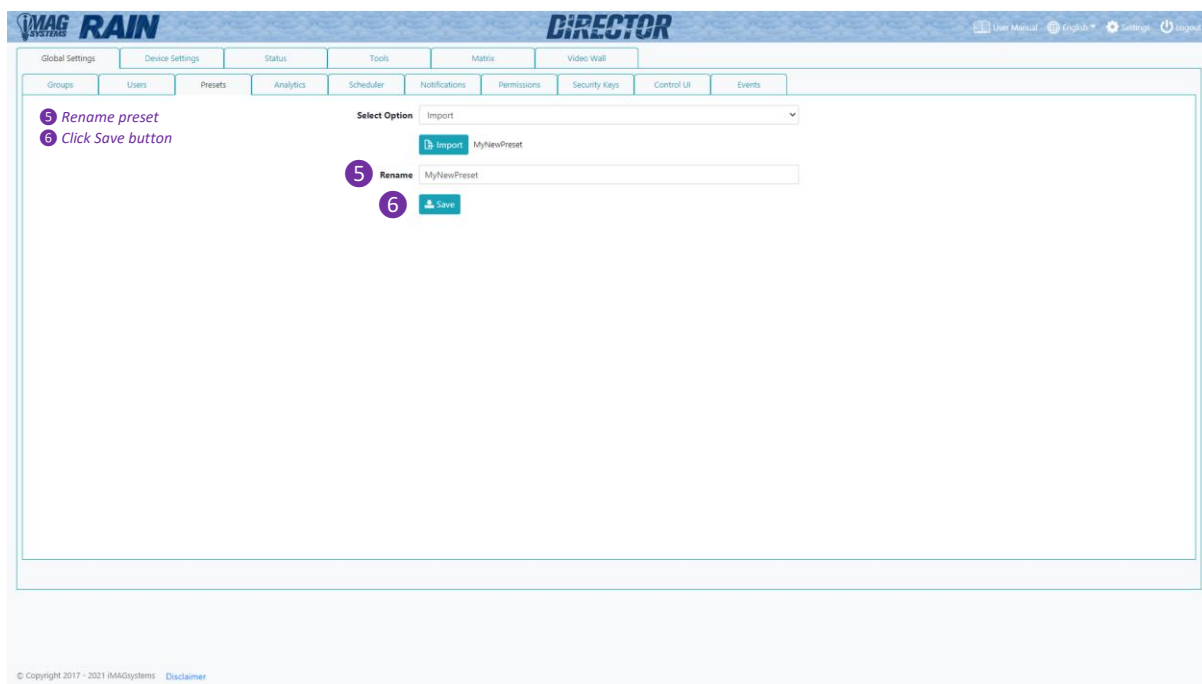
Here you can import a preset into the system.



- 3 Select preset file
- 4 Click Open

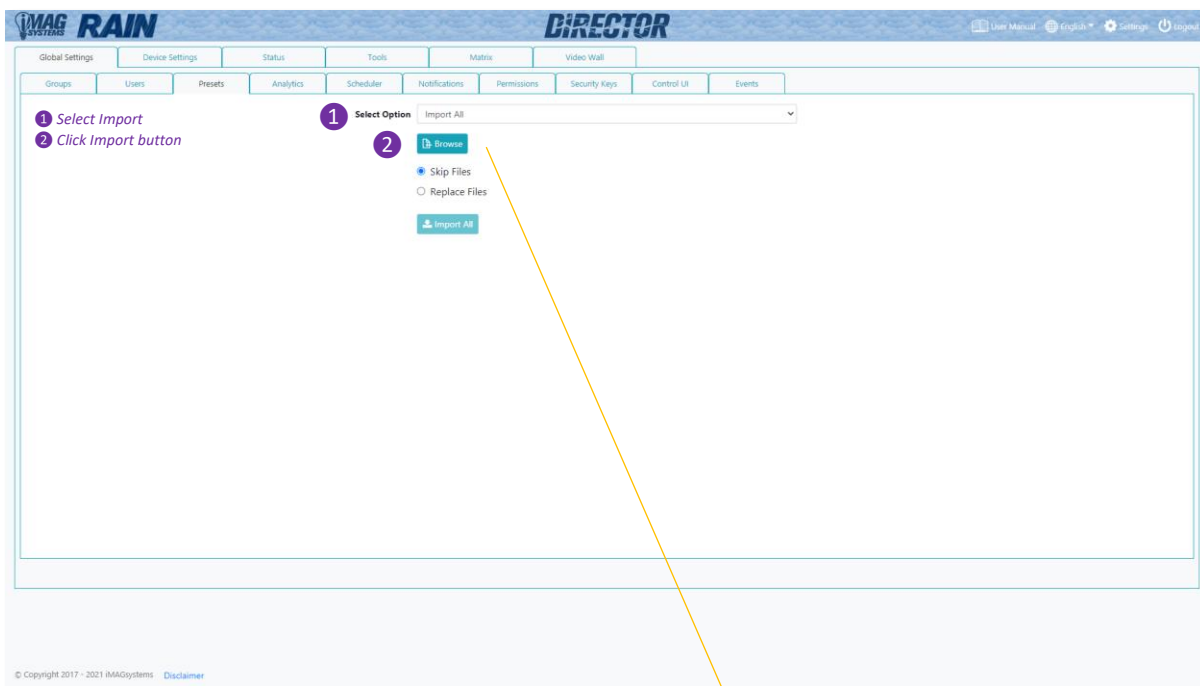


1.3.7 Import Preset continued...

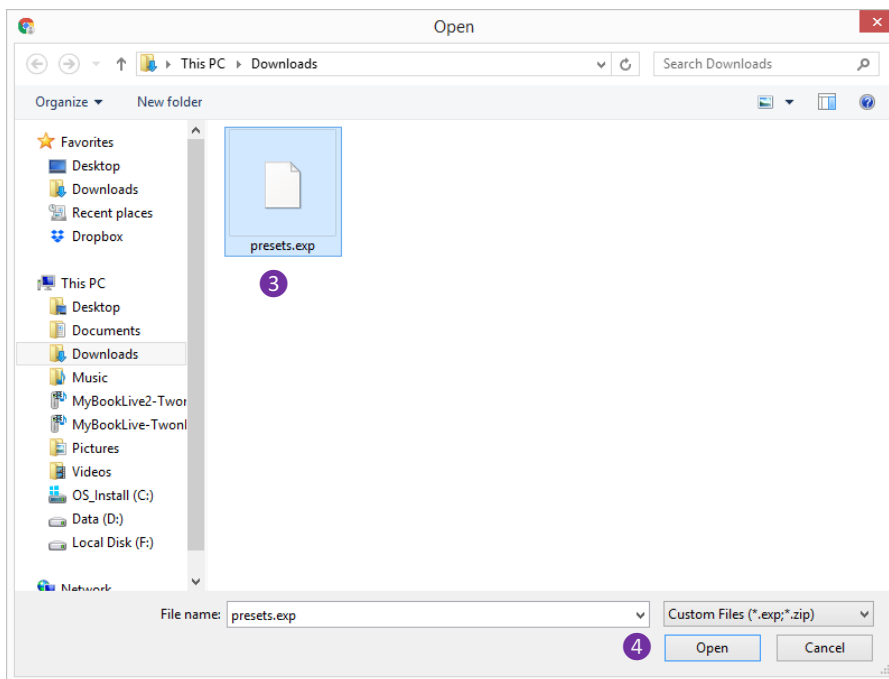


1.3.8 Preset Import All

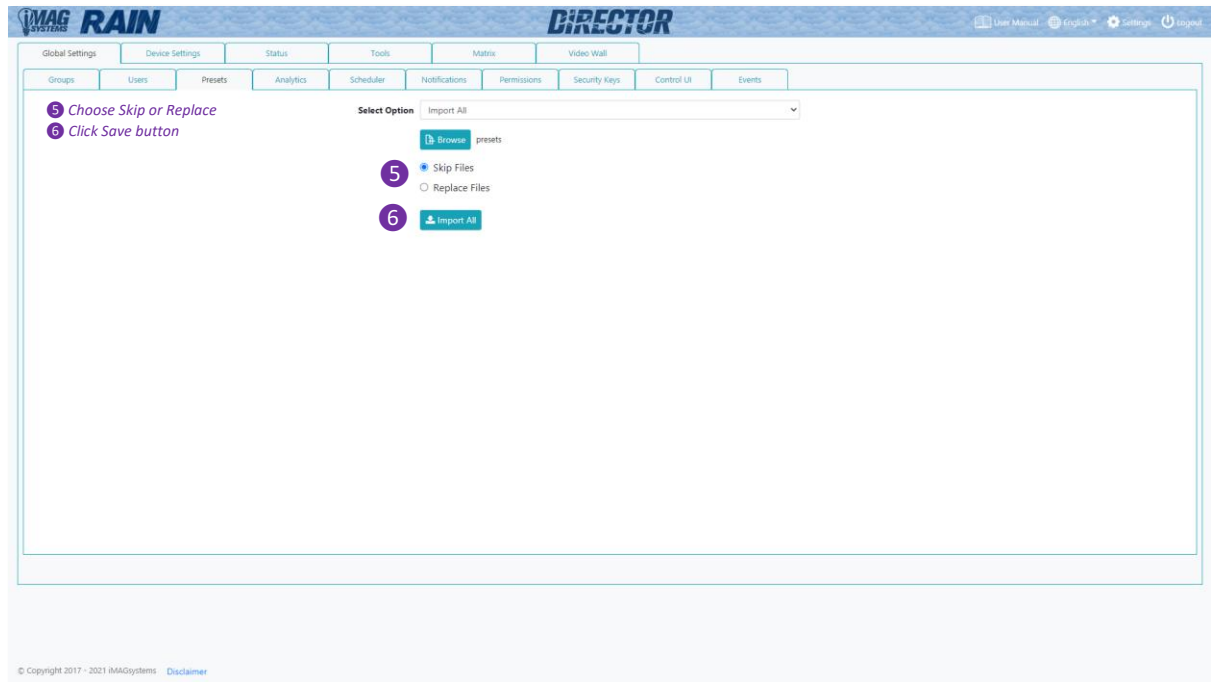
Here you can import all preset into the system from an all preset export.



- 3 Select preset file
- 4 Click Open



1.3.8 Preset Import All continued...

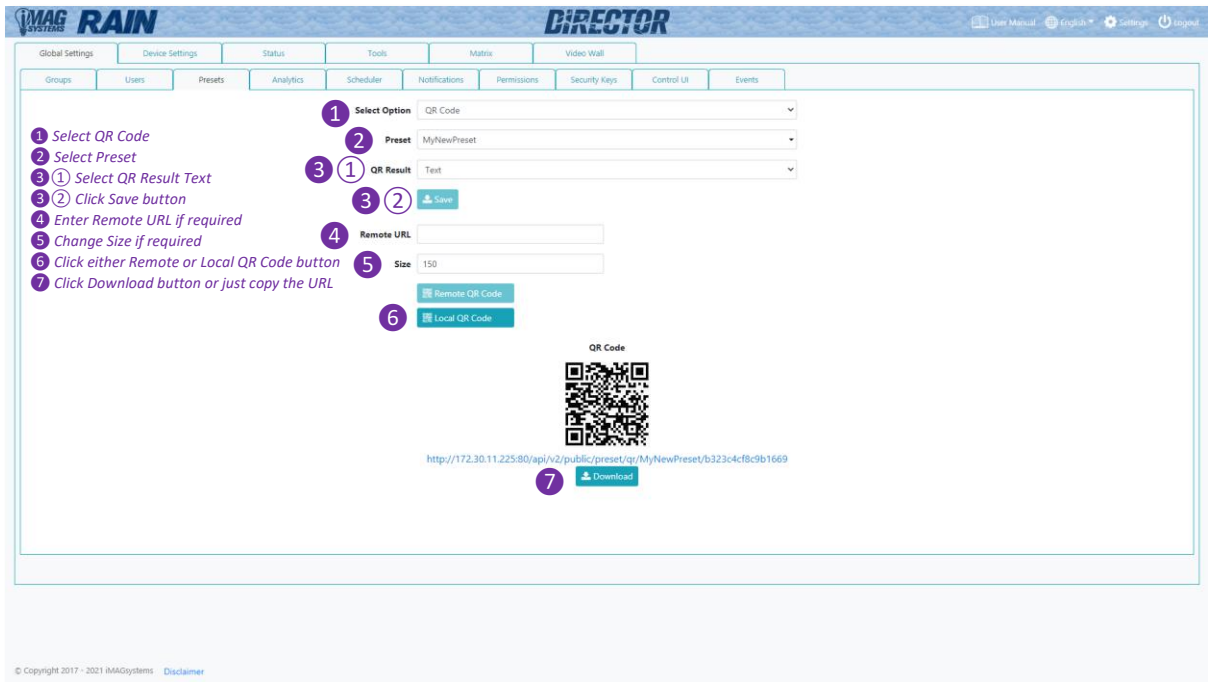


1.3.9 QR Code

Here you can create a QR Code to directly execute a preset. After the QR Code has been scanned and opened in a browser the preset will be executed and the result displayed in the browser.

The QR Result can be **Text** for a simple 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 QR Results User Interface. [Refer 1.9.1.2 Control UI QR Code Result mode.](#)

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

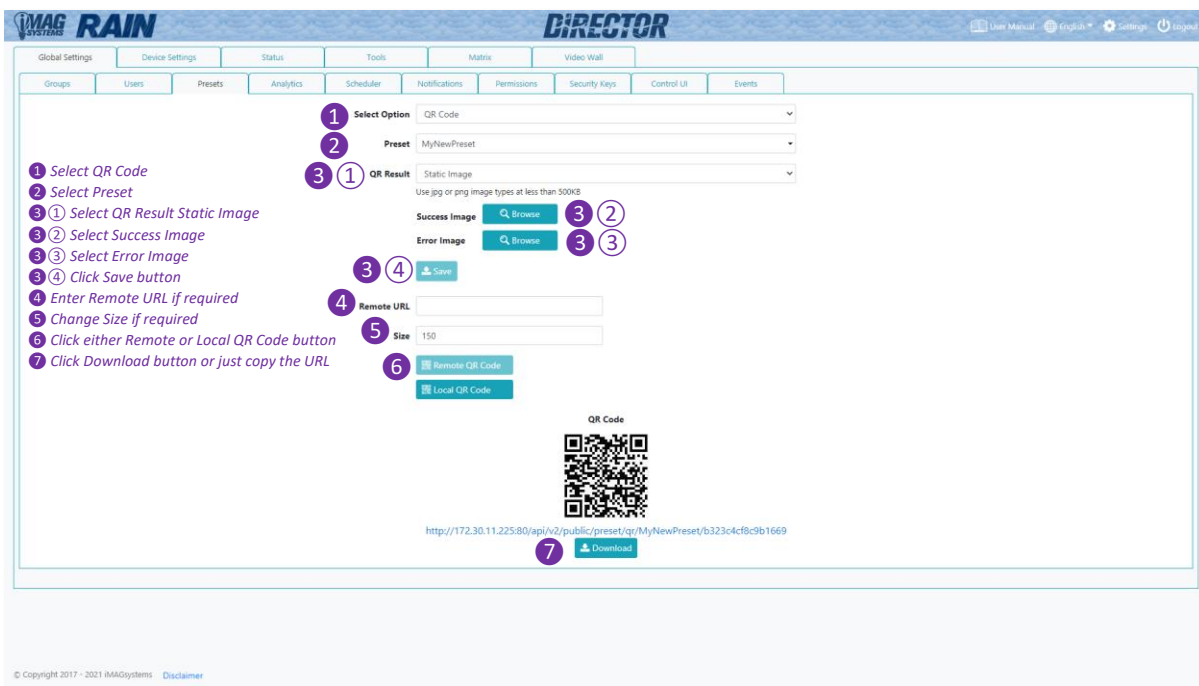


The screenshot shows the 'DIRECTOR' interface with the 'Preset' tab selected. The 'QR Code' section is active, and the 'QR Result' is set to 'Text'. The interface includes a 'Save' button and a 'Download' button. A QR code is displayed with the URL: <http://172.30.11.225:80/api/v2/public/preset/qz/MyNewPreset/b323c4cf8c9b1669>. The interface also shows a 'Remote URL' field and a 'Size' field set to 150. The 'Download' button is highlighted with a green arrow.

- 1 Select QR Code
- 2 Select Preset
- 1 Select QR Result Text
- 2 Click Save button
- 4 Enter Remote URL if required
- 5 Change Size if required
- 6 Click either Remote or Local QR Code button
- 7 Click Download button or just copy the URL

1.3.9 QR Code continued...

The below will provide a static image response:



1 Select Option QR Code

2 Preset MyNewPreset

3 1 QR Result Static Image

Use jpg or png image types at less than 500KB

Success Image Browse

Error Image Browse

Save

Remote URL

Size 150

Remote QR Code

Local QR Code

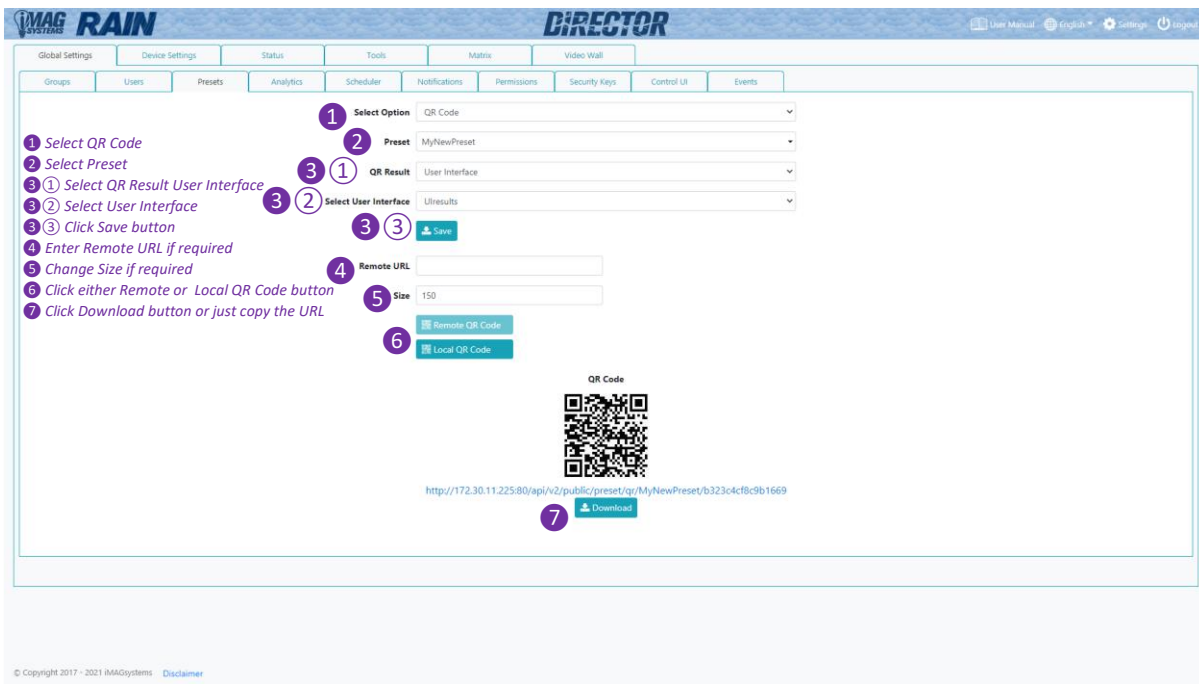
QR Code

http://172.30.11.225:80/api/v2/public/preset/qr/MyNewPreset/b323c4c8c9b1669

Download

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The below will provide a QR Results User Interface response:



1 Select Option QR Code

2 Preset MyNewPreset

3 1 QR Result User Interface

4 Select User Interface User Interface

Save

Remote URL

Size 150

Remote QR Code

Local QR Code

QR Code

http://172.30.11.225:80/api/v2/public/preset/qr/MyNewPreset/b323c4c8c9b1669

Download

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1.4 Analytics (Licensed feature)

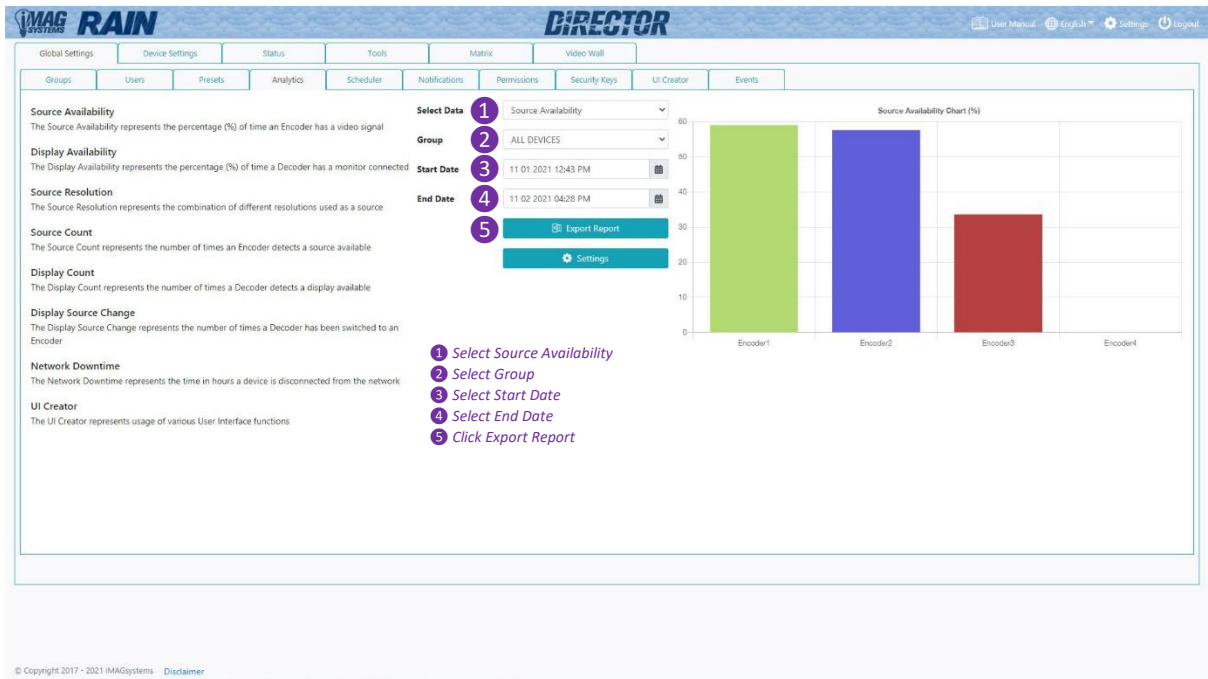
Analytical data is constantly being stored on the system. By default data will be maintained for 1 month, but this can be changed up to 12 months.

Various types of 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:

- **Source Availability**
The Source Availability represents the percentage (%) of time an Encoder has a video signal
- **Display Availability**
The Display Availability represents the percentage (%) of time a Decoder has a monitor connected
- **Source Resolution**
The Source Resolution represents the combination of different resolutions used as a source
- **Source Count**
The Source Count represents the number of times an Encoder detects a source available
- **Display Count**
The Display Count represents the number of times a Decoder detects a display available
- **Display Source Change**
The Display Source Change represents the number of times a Decoder has been switched to an Encoder
- **Network Downtime**
The Network Downtime represents the time in hours a device is missing off the network
- **Control UI**
Control UI represents usage of various User Interface functions

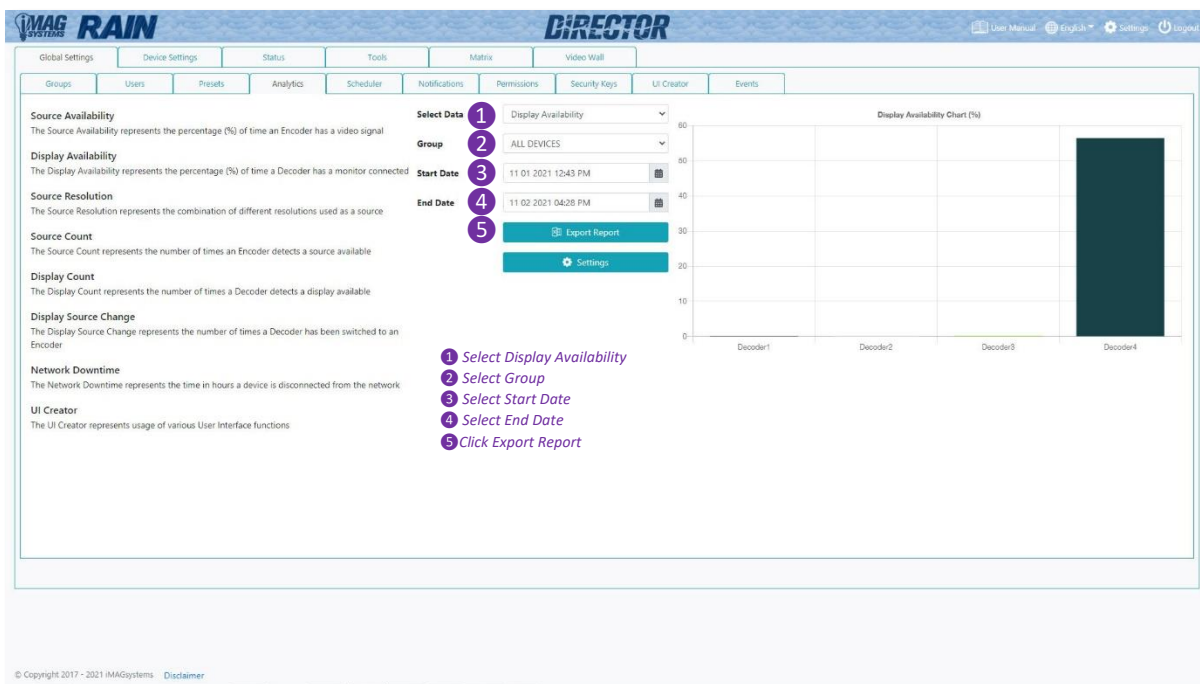
1.4.1 Source Availability

The Source Availability represents the time in hours an Encoder has video signal.



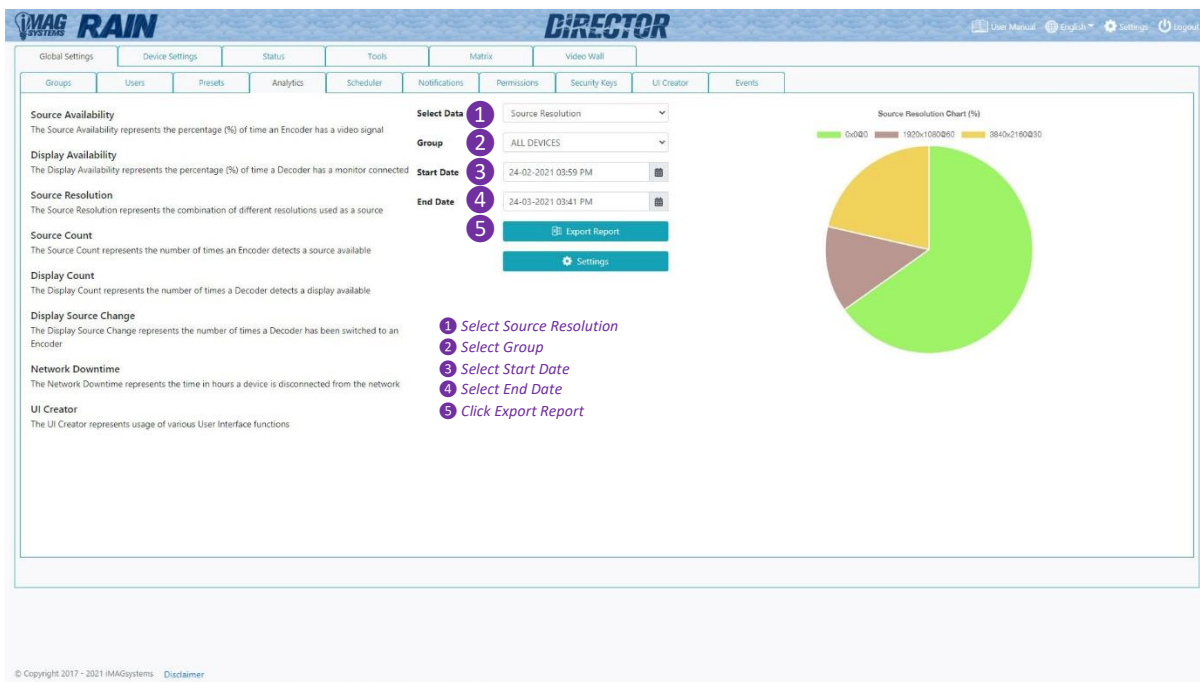
1.4.2 Display Availability

The Display Availability represents the time in hours a Decoder has a monitor connected.



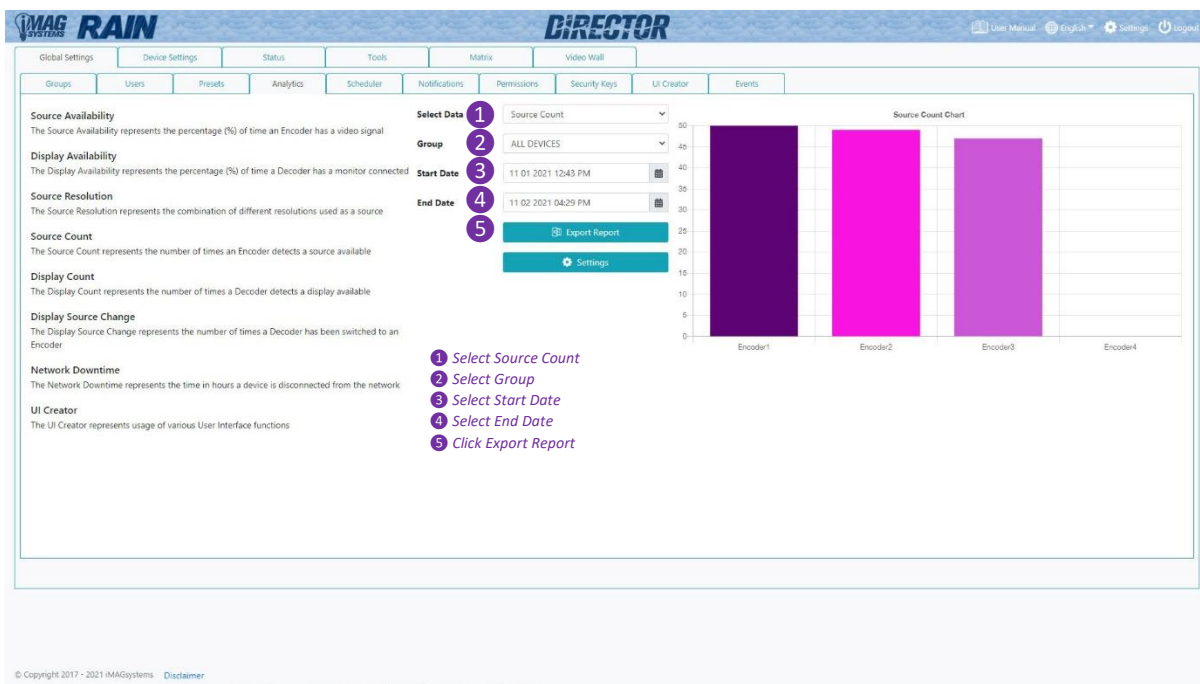
1.4.3 Source Resolution

The Source Resolution represents the combination of different resolutions used as a source.



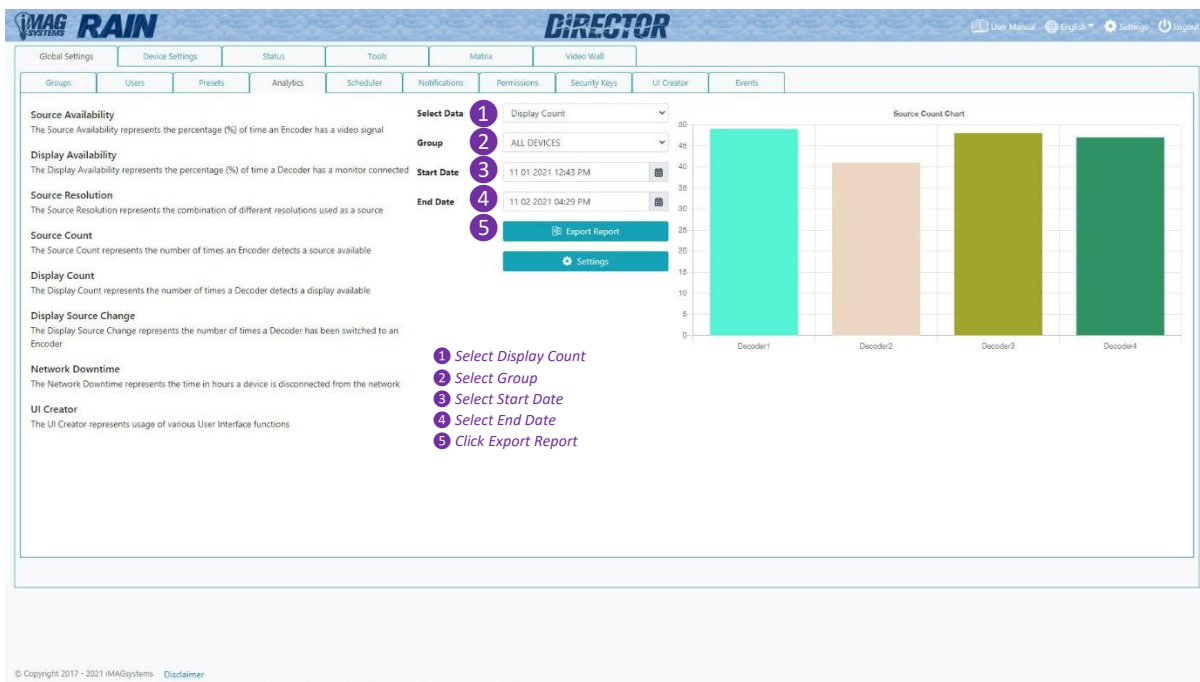
1.4.4 Source Count

The Source Count represents the number of times an Encoder detects a source available.



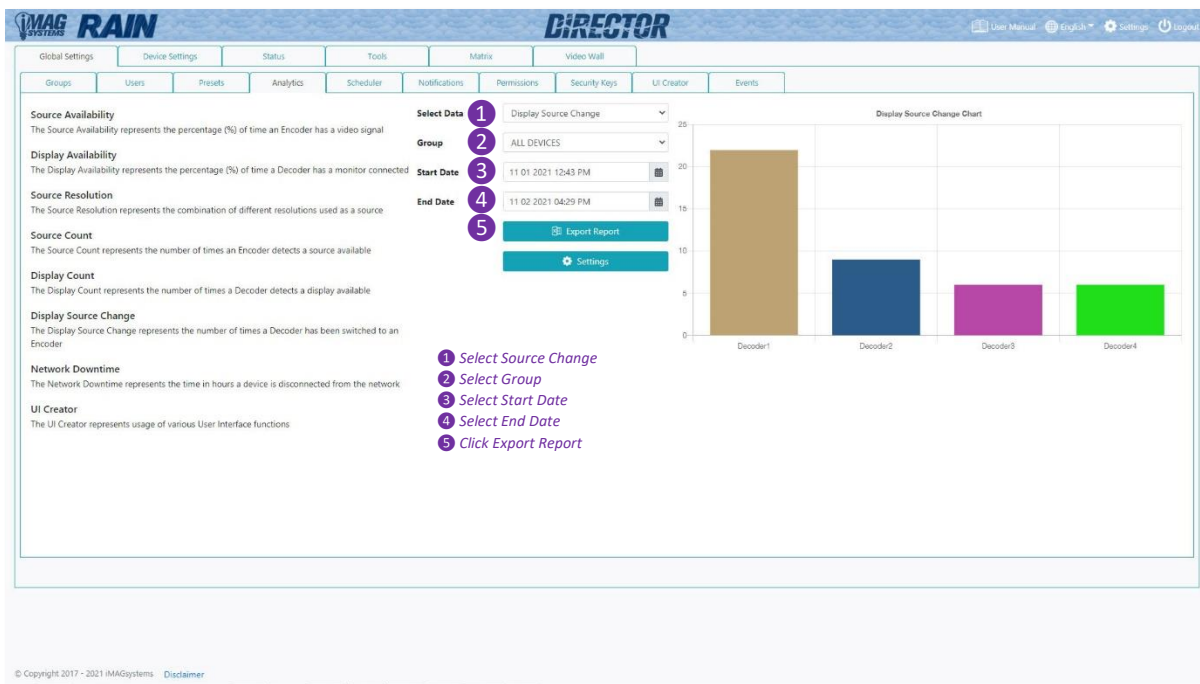
1.4.5 Display Count

The Display Count represents the number of times a Decoder detects a display available.



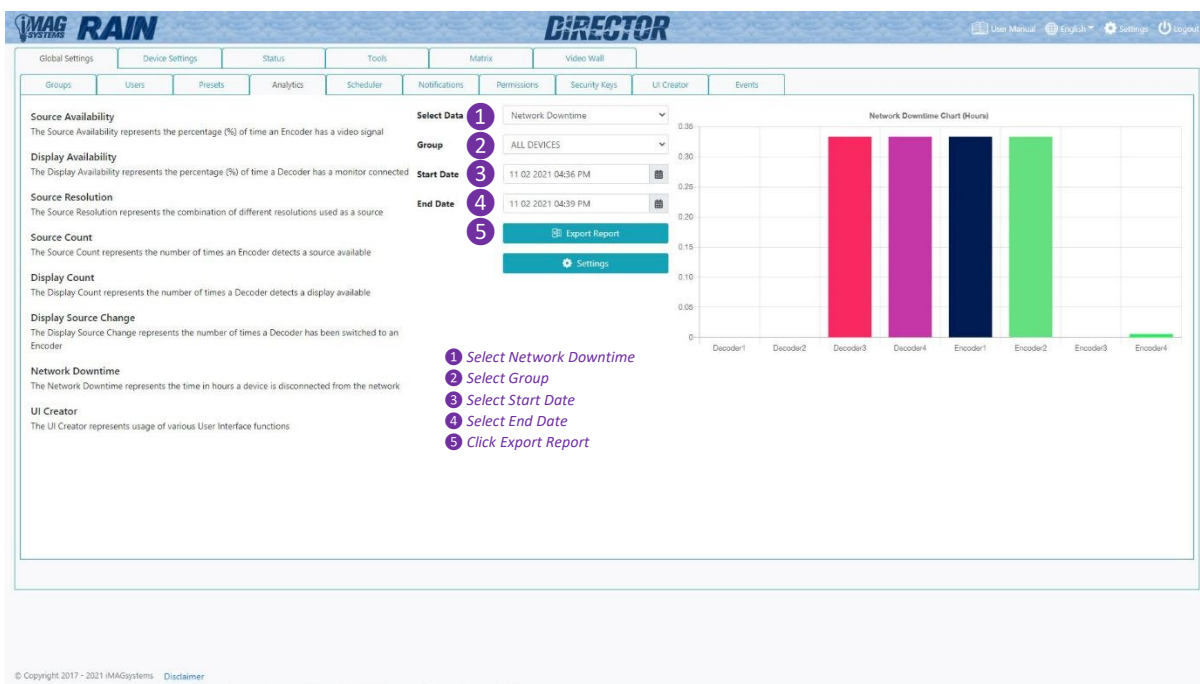
1.4.6 Display Source Change

The Display Source Change represents the number of times a Decoder has been switched to an Encoder.



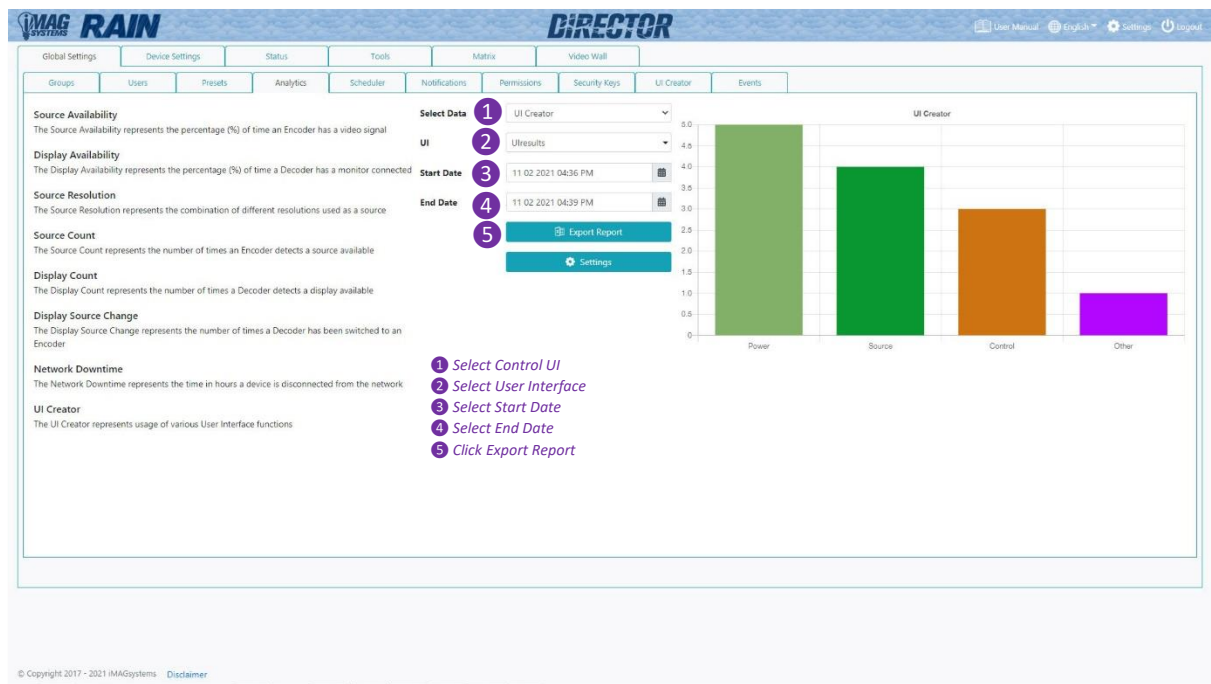
1.4.7 Network Downtime

The Network Downtime represents the time in hours a device is disconnected from the network.



1.4.8 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:

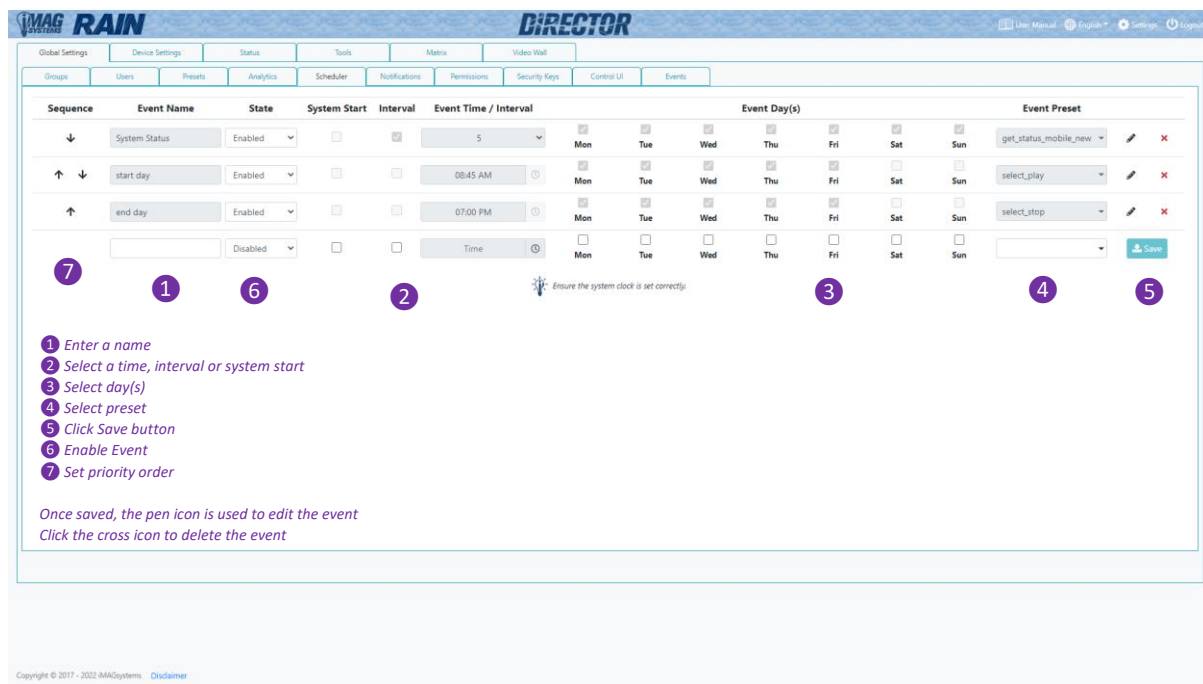
- Power
- Source
- Control
- Custom

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 (Licensed feature)

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



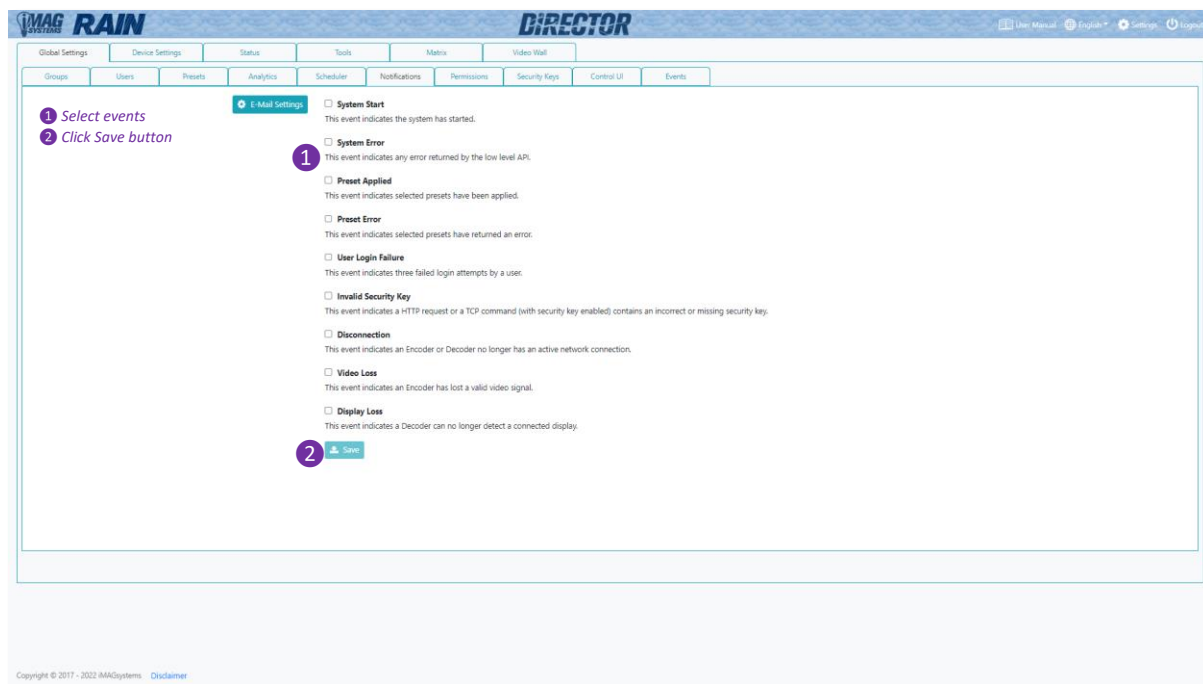
The screenshot shows the DIRECTOR RAIN Scheduler interface. It features a table with columns for Sequence, Event Name, State, System Start, Interval, Event Time / Interval, Event Day(s), and Event Preset. The table contains three rows: 'System Status', 'start day', and 'end day'. Below the table, there are numbered callouts (1-7) pointing to specific fields and actions:

- 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

Below the callouts, there is a note: "Once saved, the pen icon is used to edit the event. Click the cross icon to delete the event."

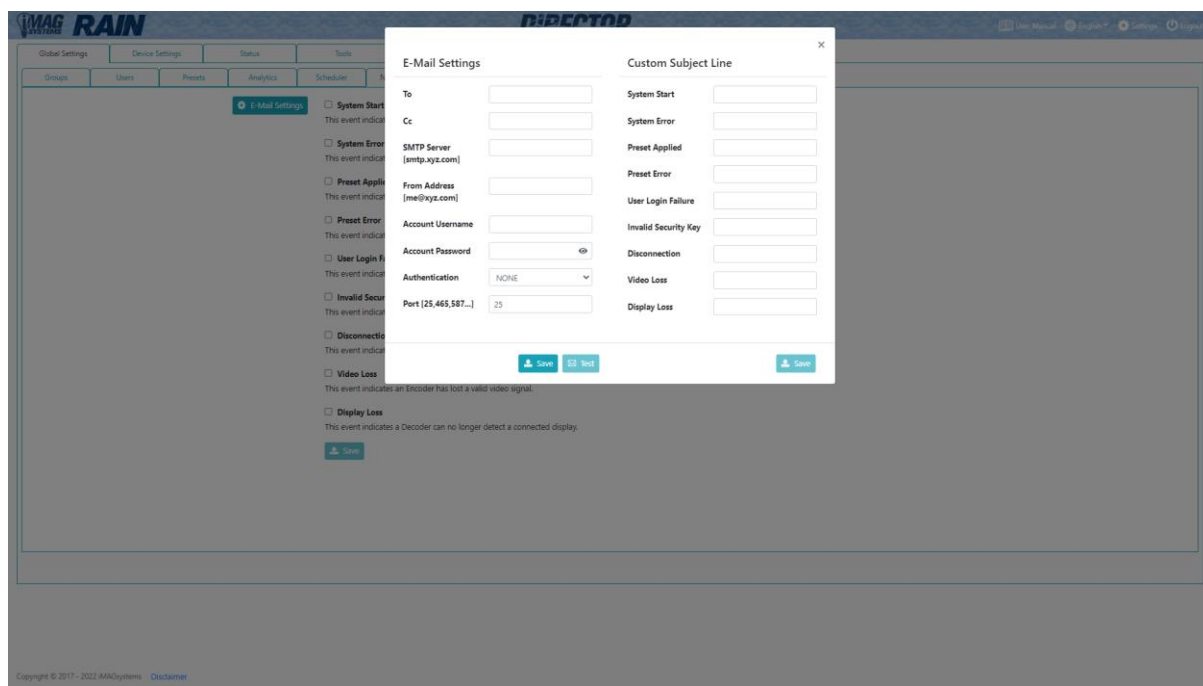
1.6 Notifications (Licensed feature)

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

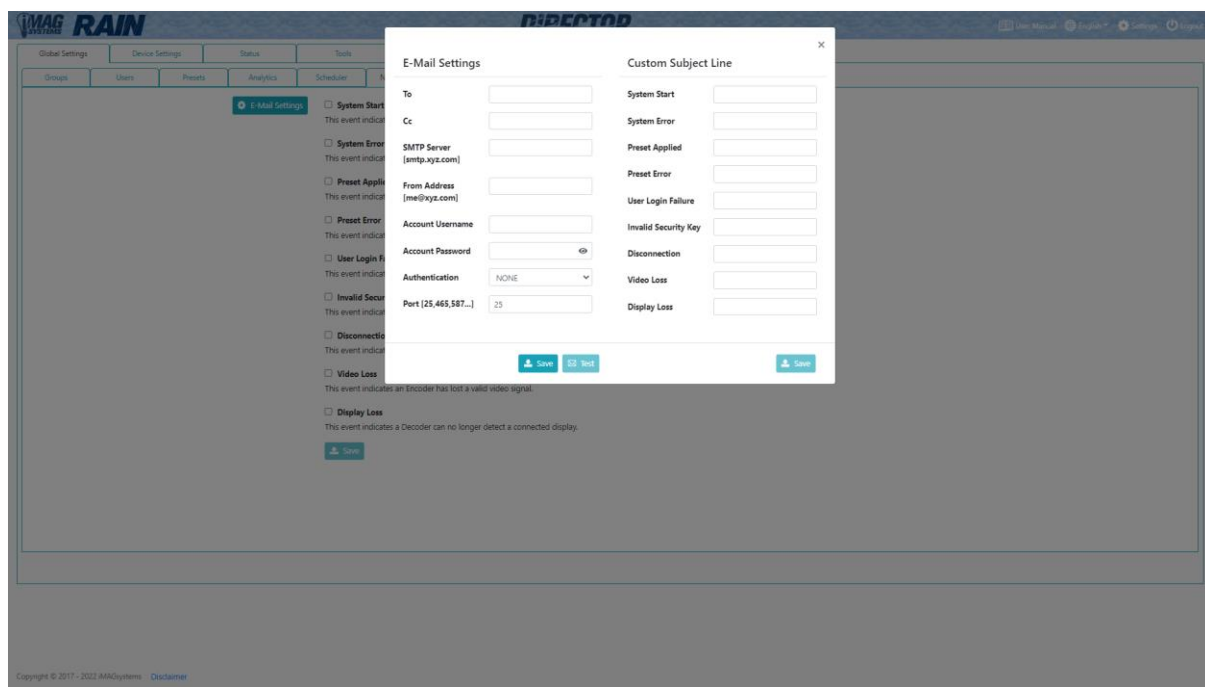


1.6.1 E-Mail Settings

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}}

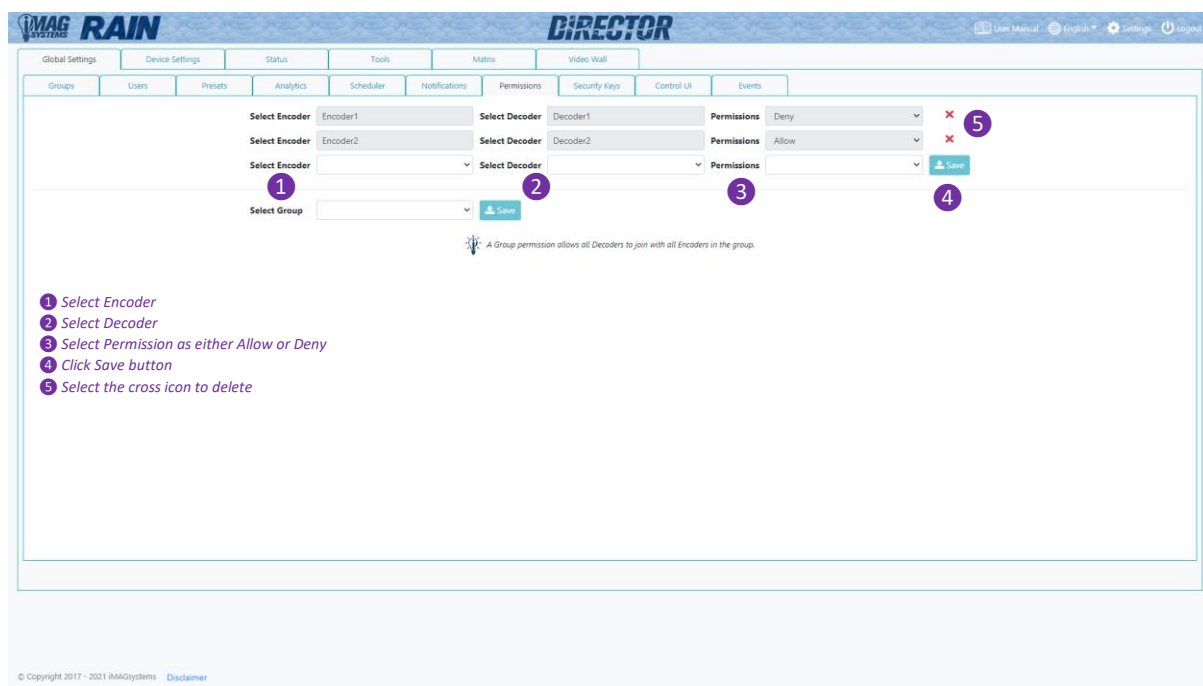
The E-Mail body contains the following (*translated into selected language*):

- {{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 Permissions (Licensed feature)

Permissions adds the ability to only allow selected Encoders to be joined with selected Decoders. Individual rules can be set per device or as a group as a whole. Rules are applied to the Decoder.

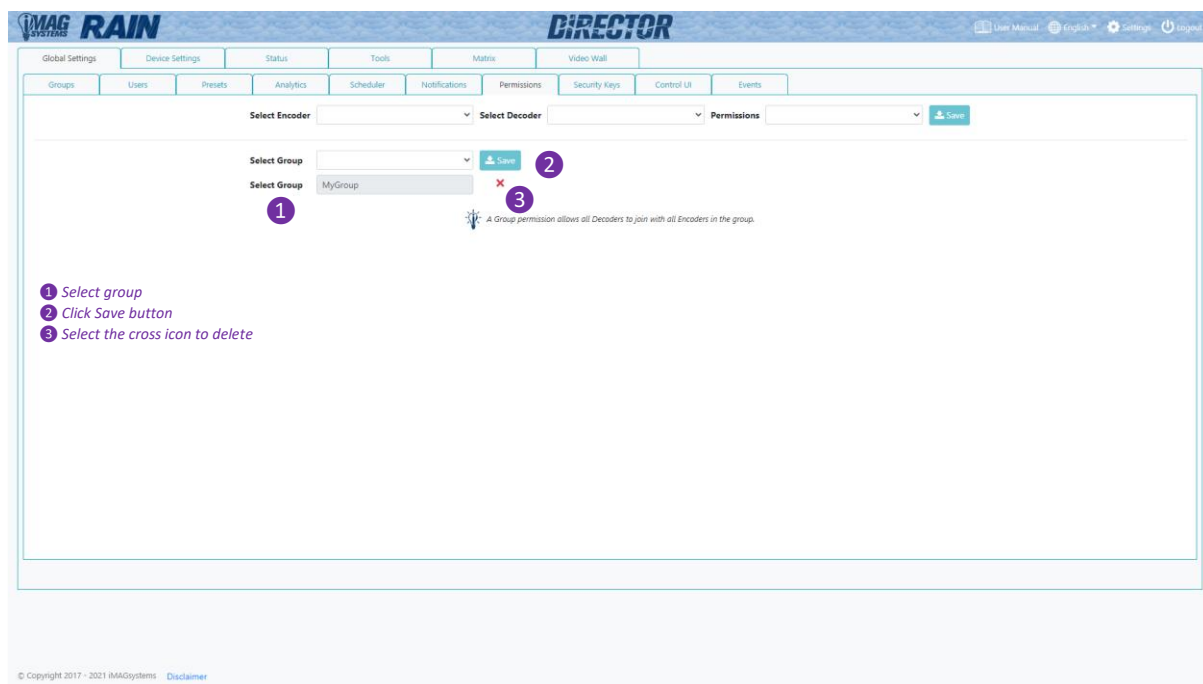
Below, Decoder1 is only allowed to be joined with Encoder1, and Encoder2 can be joined with any other Decoder except for Decoder2. Multiple conditions can be applied. Joining point-to-point the following rules will be considered before applying the join. Joining point-to-all the following rules will be applied after the join by sending a leave command to denied Decoders.



1 Select Encoder
2 Select Decoder
3 Select Permission as either Allow or Deny
4 Click Save button
5 Select the cross icon to delete

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Below, the Decoders in MyGroup can only be joined with the Encoders in the group unless individual allow rules are also set for the Decoders with other Encoders outside of the group.



1 Select group
2 Click Save button
3 Select the cross icon to delete

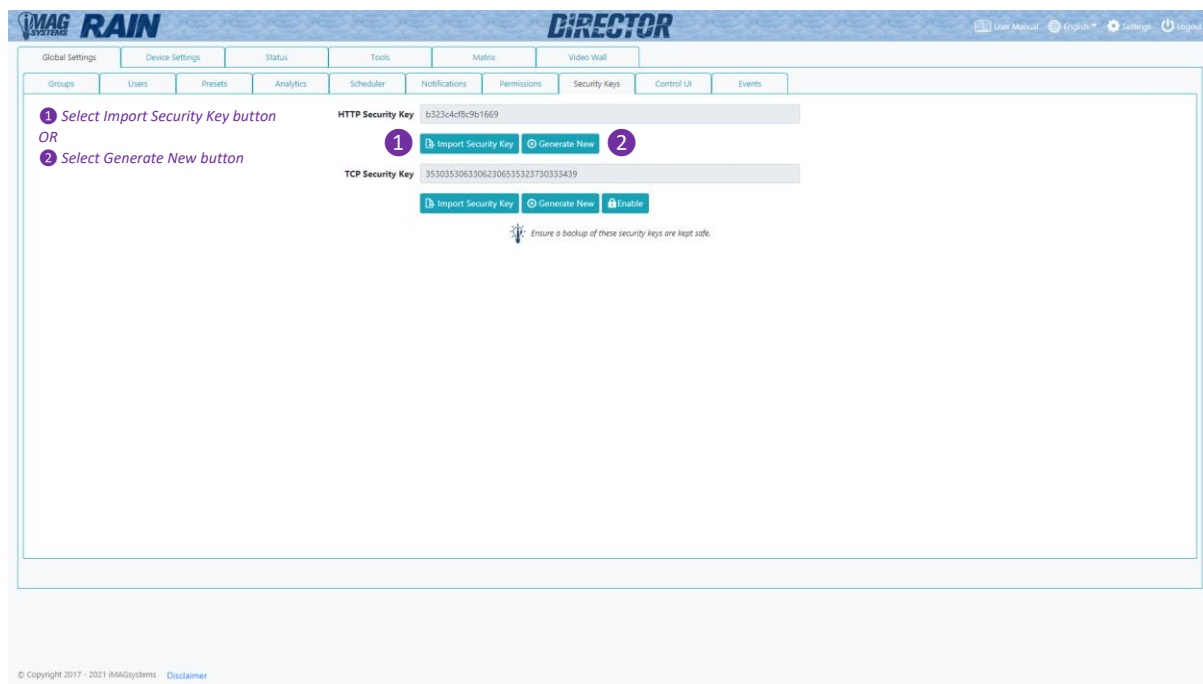
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1.8 Security Keys

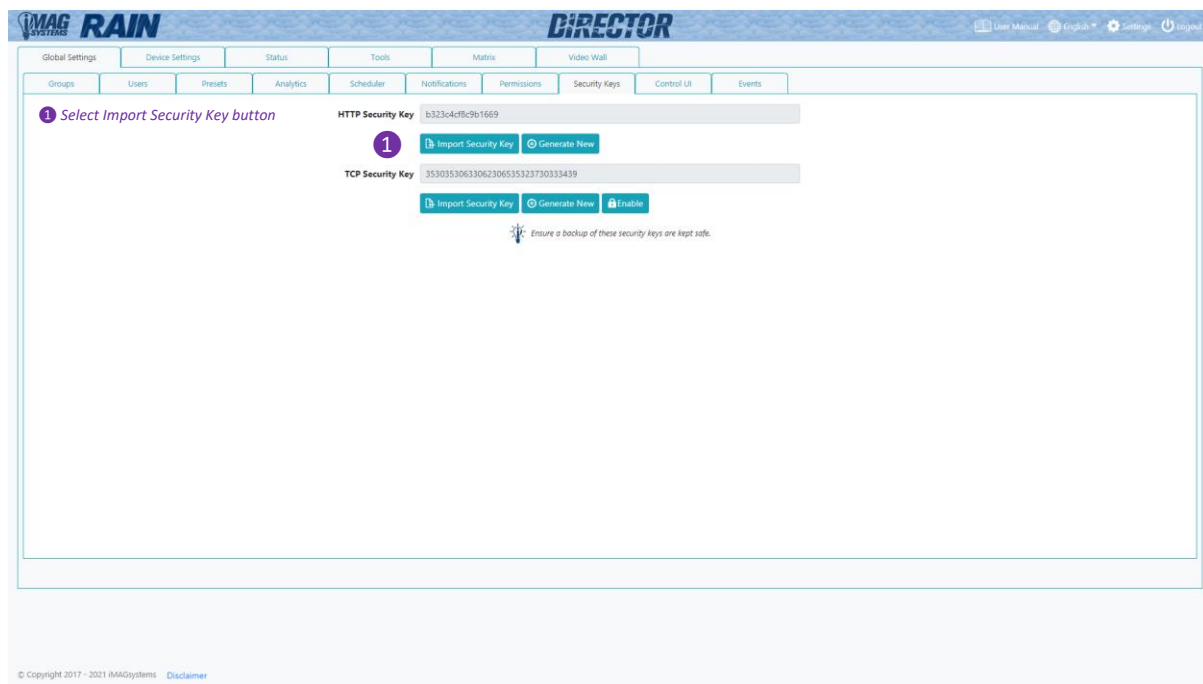
Security keys are required with all HTTP level requests and optional for TCP commands on port 6980. Only keys generated from the software can be used.

1.8.1 HTTP API Security Key

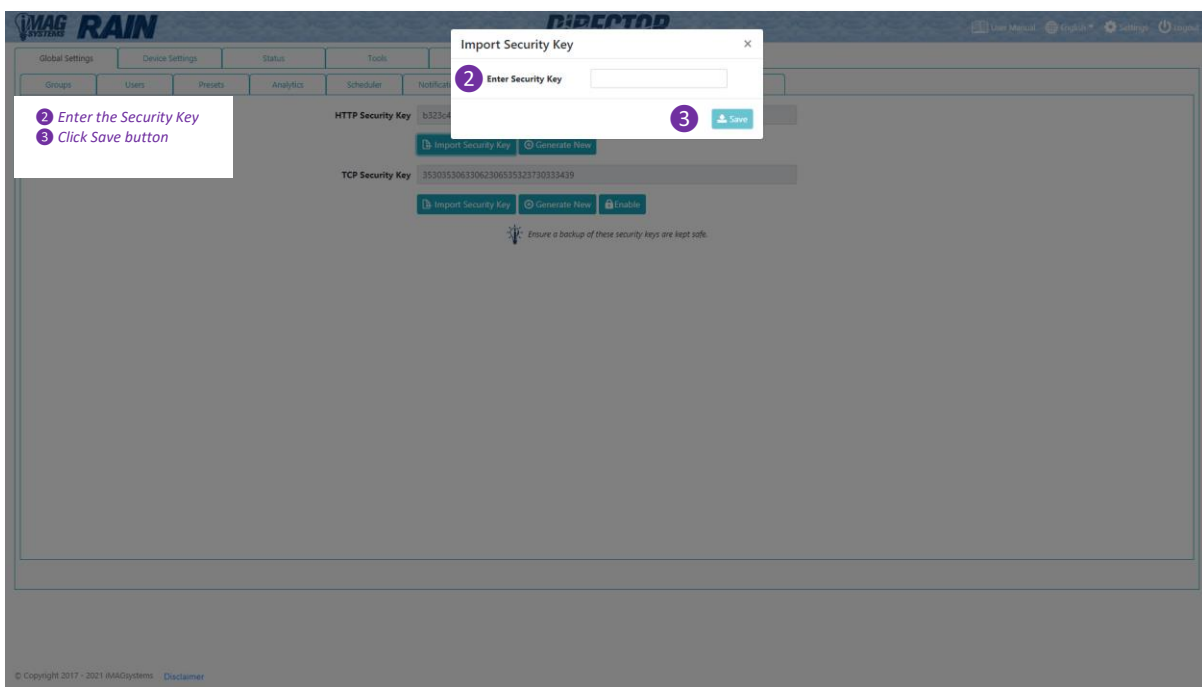
The Director Controller API can be accessed via HTTP GET and POST requests. To ensure security over the network a HTTP security key is required to be passed with all such requests. Here you can generate a new key or import a saved key that had been previously generated.



Importing a HTTP API Security Key

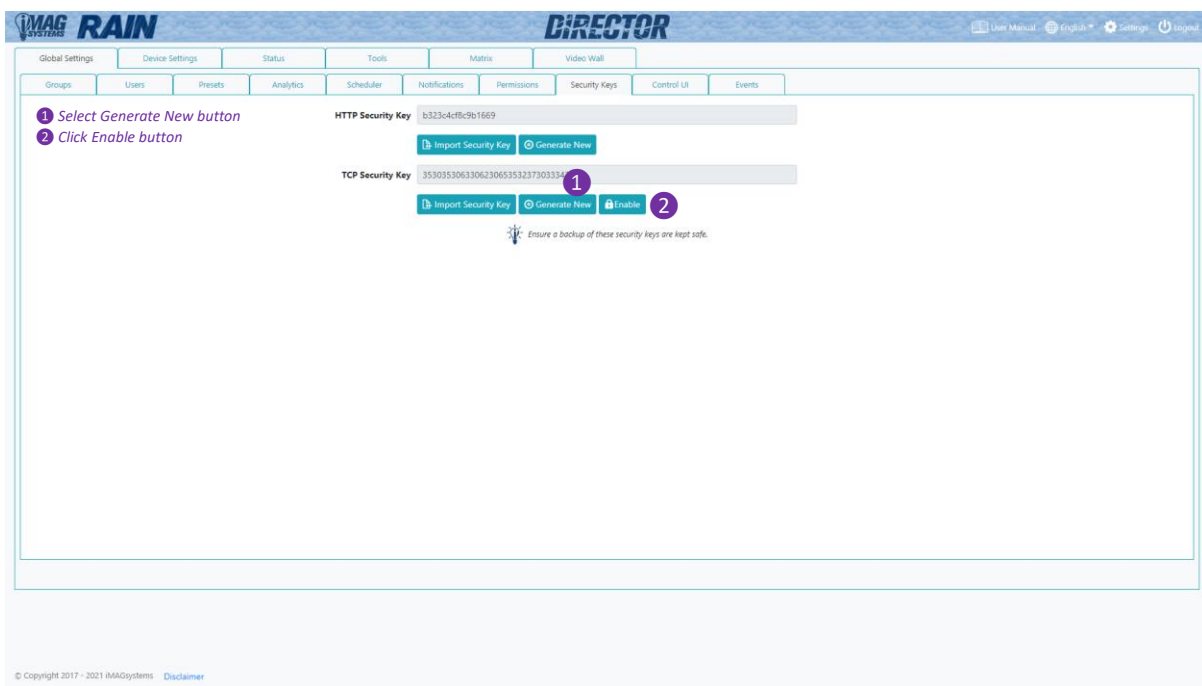


1.8.1 HTTP Security Key continued...



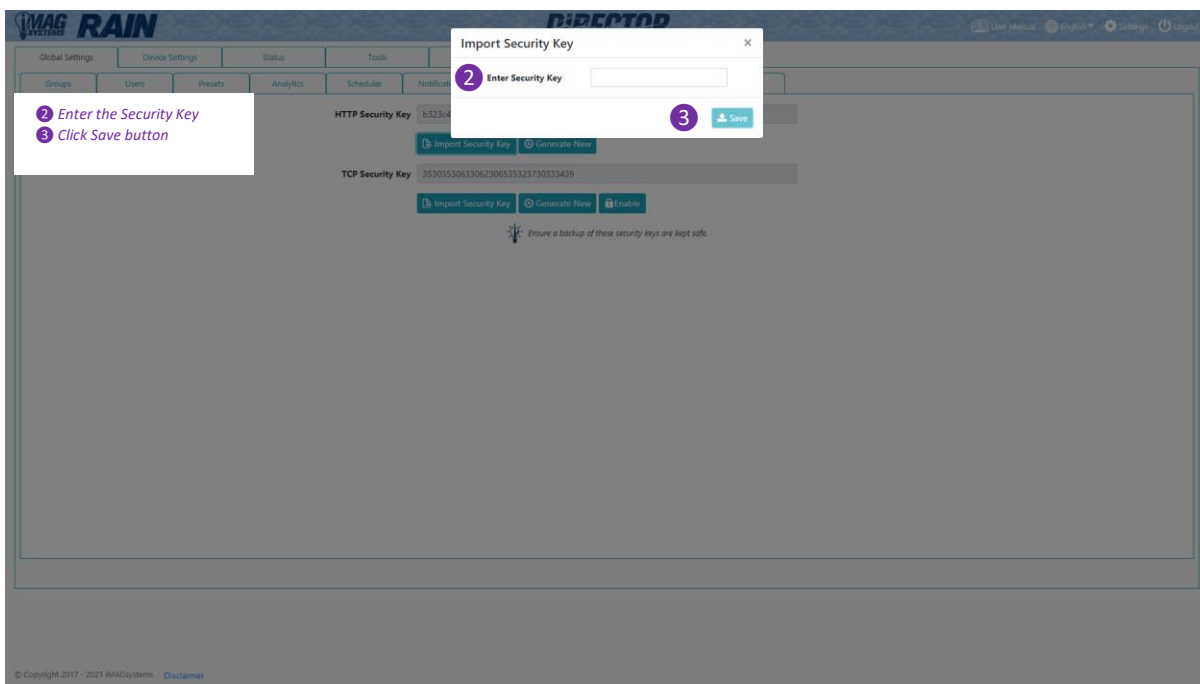
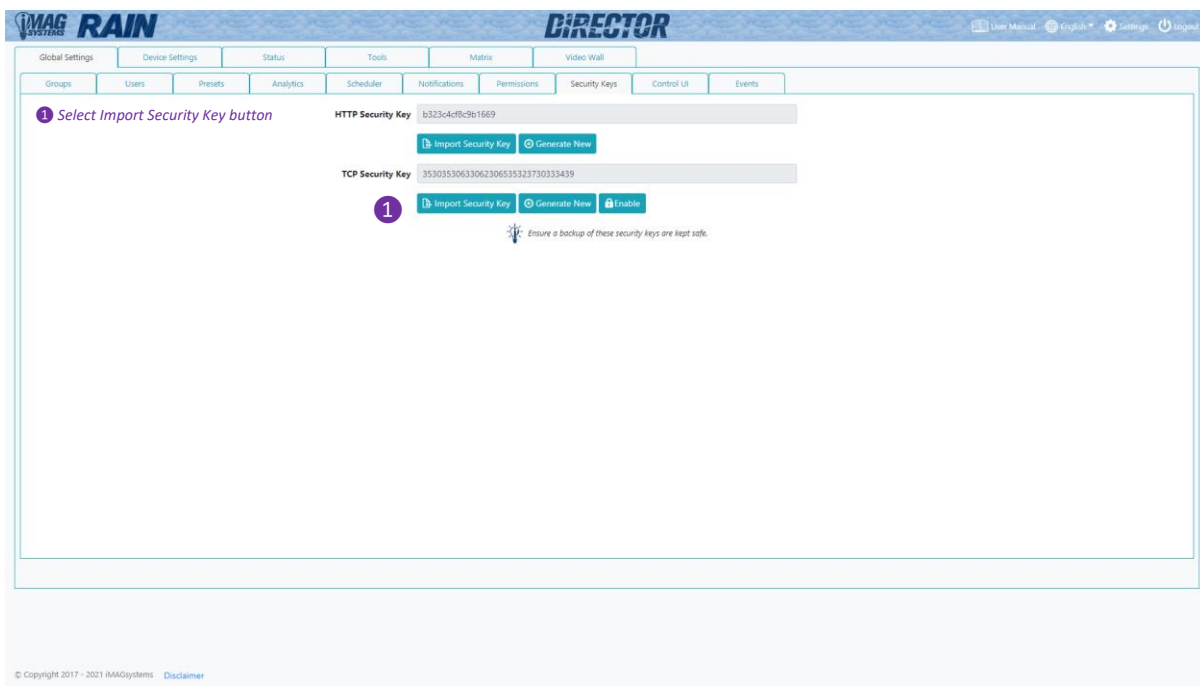
1.8.2 TCP Security Key

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.

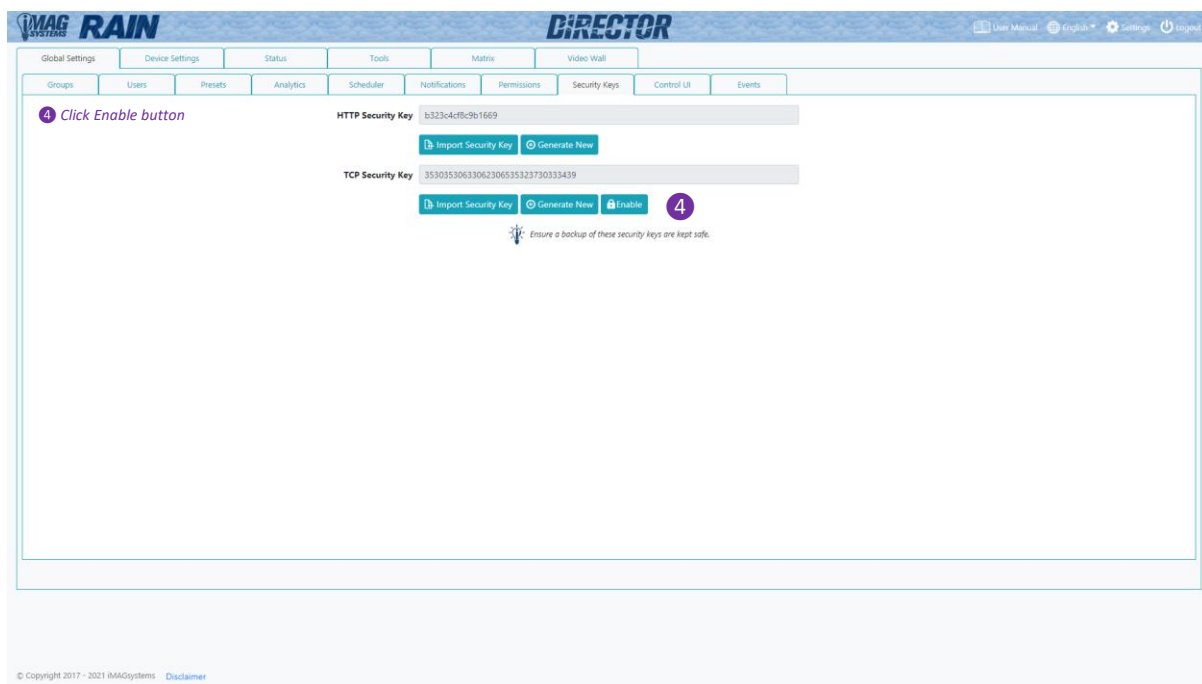


1.8.2 TCP Security Key continued...

Importing a TCP API Security Key



1.8.2 TCP Security Key continued...



The screenshot shows the 'DIRECTOR RAIN' web interface. The top navigation bar includes 'Global Settings', 'Device Settings', 'Status', 'Tools', 'Matrix', and 'Video Wall'. Below this, a sub-navigation bar contains 'Groups', 'Users', 'Presets', 'Analytics', 'Scheduler', 'Notifications', 'Permissions', 'Security Keys', 'Control UI', and 'Events'. The 'Security Keys' tab is active, displaying two sections: 'HTTP Security Key' and 'TCP Security Key'. The 'HTTP Security Key' section shows a key value 'b323c4c9c9b1669' with buttons for 'Import Security Key' and 'Generate New'. The 'TCP Security Key' section shows a key value '35303530633062306535323730333439' with buttons for 'Import Security Key', 'Generate New', and 'Enable'. A purple circle with the number '4' is next to the 'Enable' button. A note at the bottom states: 'Ensure a backup of these security keys are kept safe.'

Click Enable button

HTTP Security Key: b323c4c9c9b1669

TCP Security Key: 35303530633062306535323730333439

Enable

Ensure a backup of these security keys are kept safe.

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1.9 Control UI (Licensed feature)

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 device with supported browser Google Chrome or Safari.

1.9.1 Mode

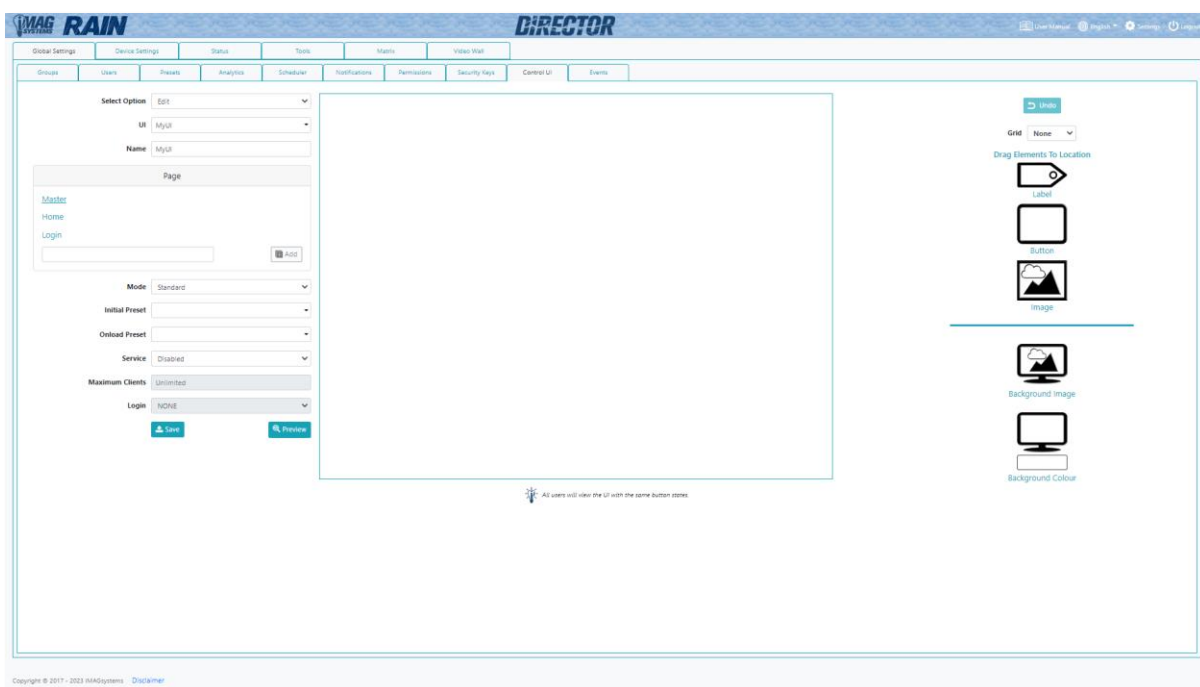
Control UI has two modes of operation, Standard and QR Code Result mode. Standard being the normal mode of operation to create control system User Interfaces. While QR Code Result mode is specific to displaying the result from scanning and executing a QR Code preset.

Refer also to [1.3.9 Preset QR Code](#).

1.9.1.1 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.

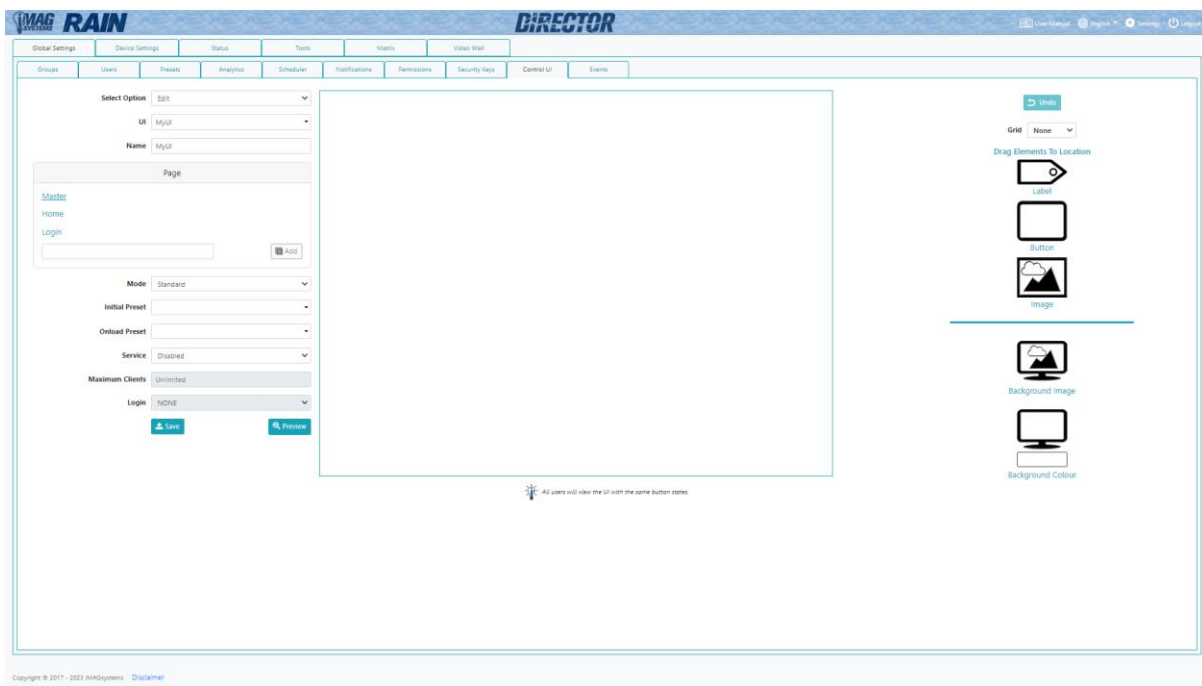
Standard mode provides options for limiting the maximum allowed clients and login with fixed or random number with a session timeout.



1.9.1.1.1 Standard Mode Initial Preset

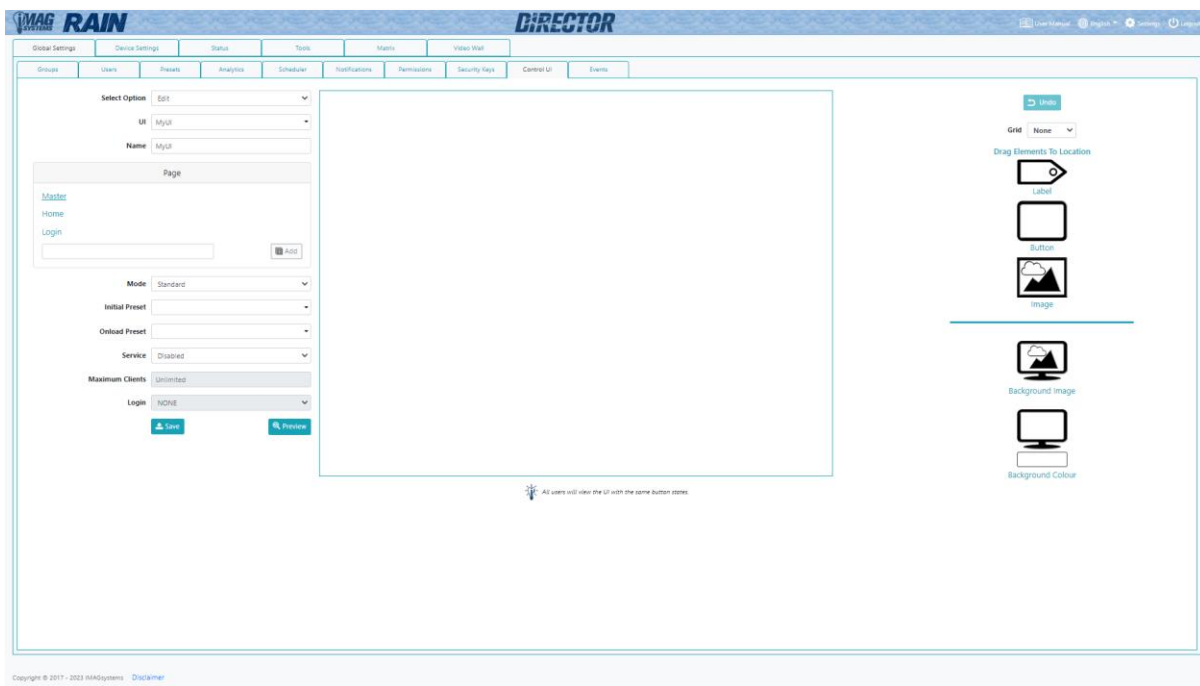
The Initial Preset is used to select a preset to be executed when the UI service is enabled. This preset can be used to set a default configuration to match User Interface initial button states.

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



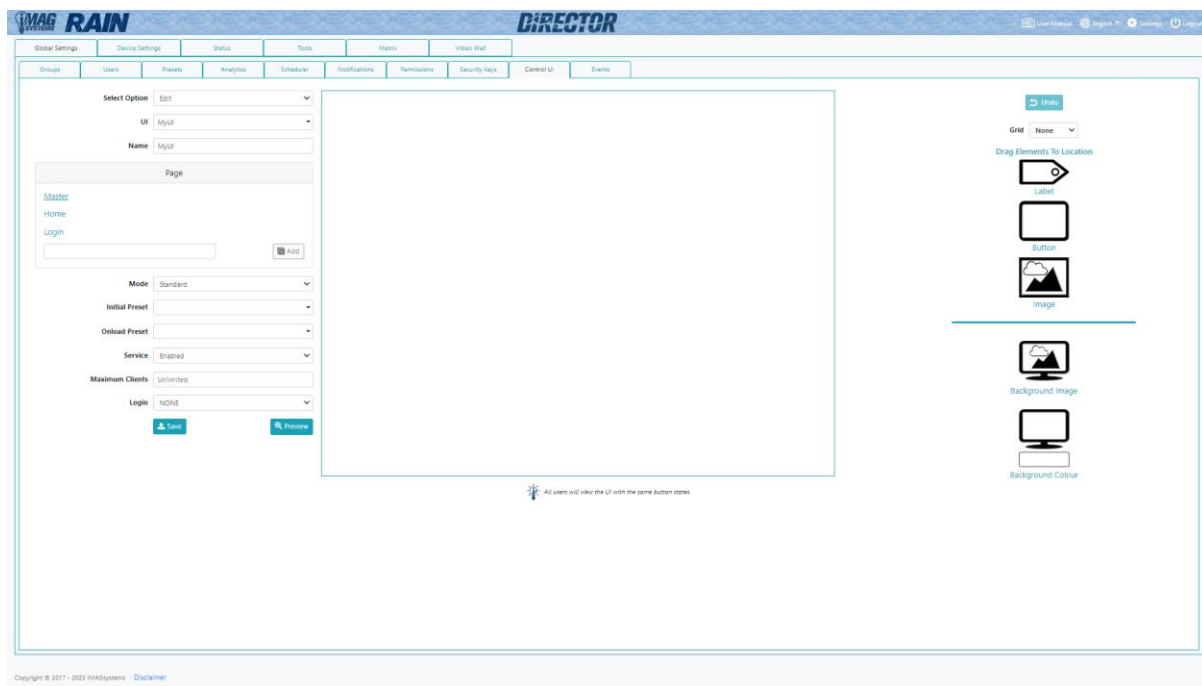
1.9.1.1.2 Standard Mode Onload Preset

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



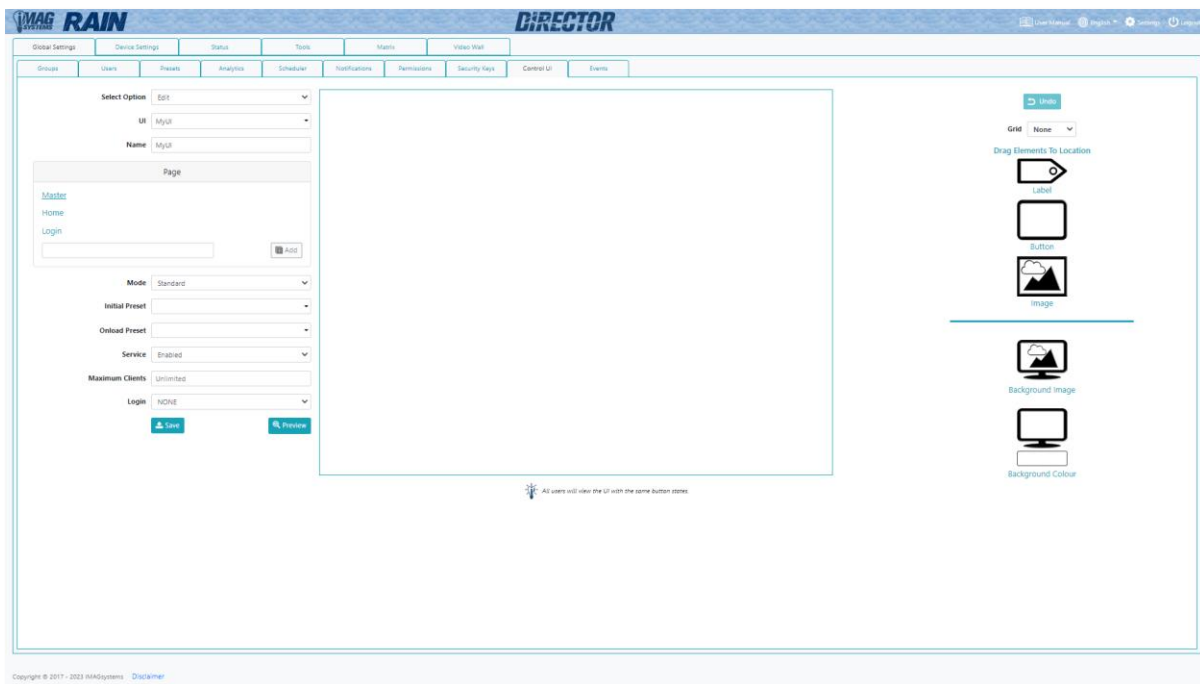
1.9.1.1.3 Standard Mode Service

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



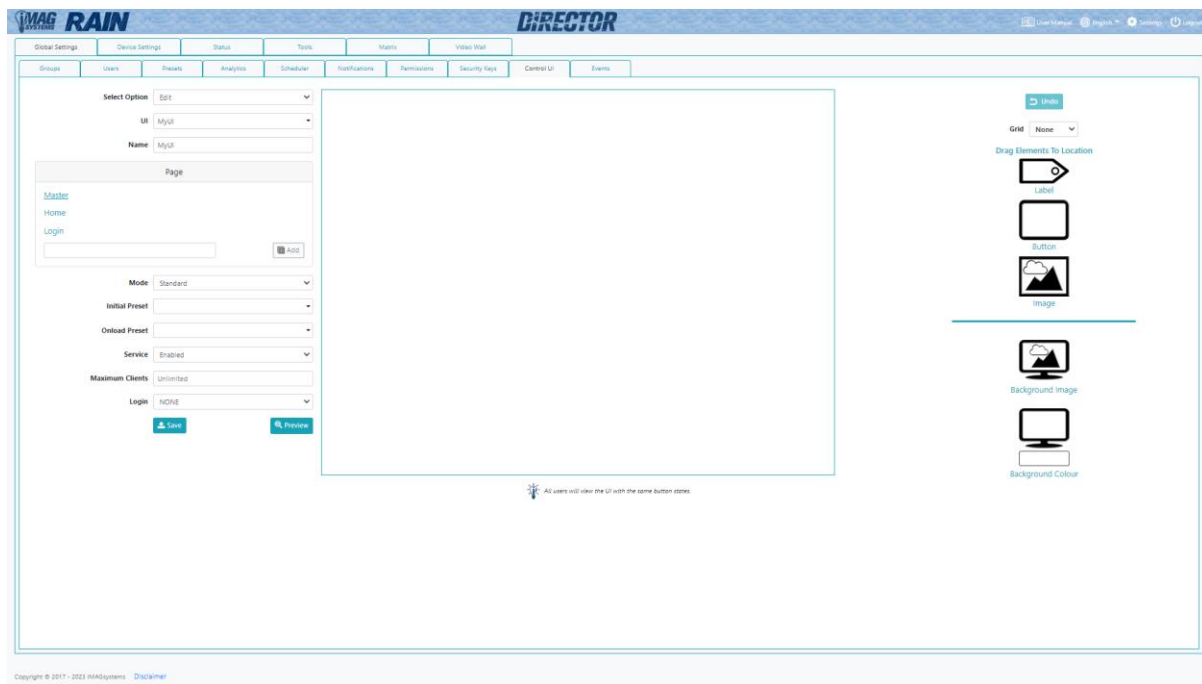
1.9.1.1.4 Standard Mode Maximum Clients

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



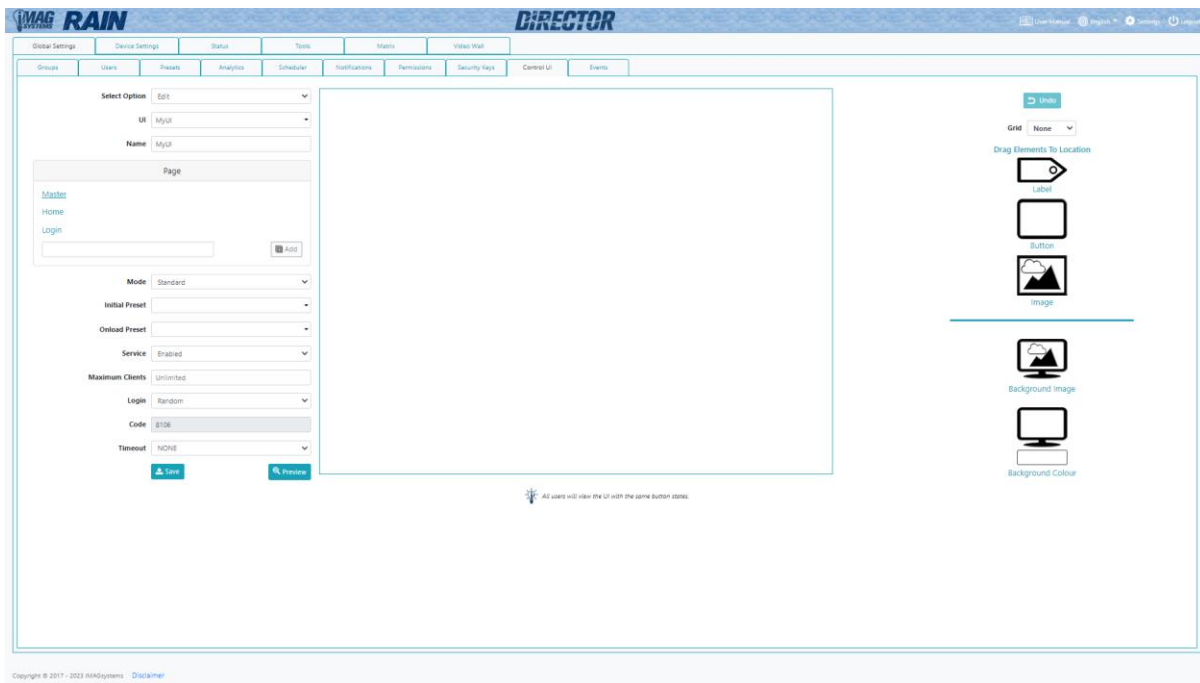
1.9.1.1.5 Standard Mode Login

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.



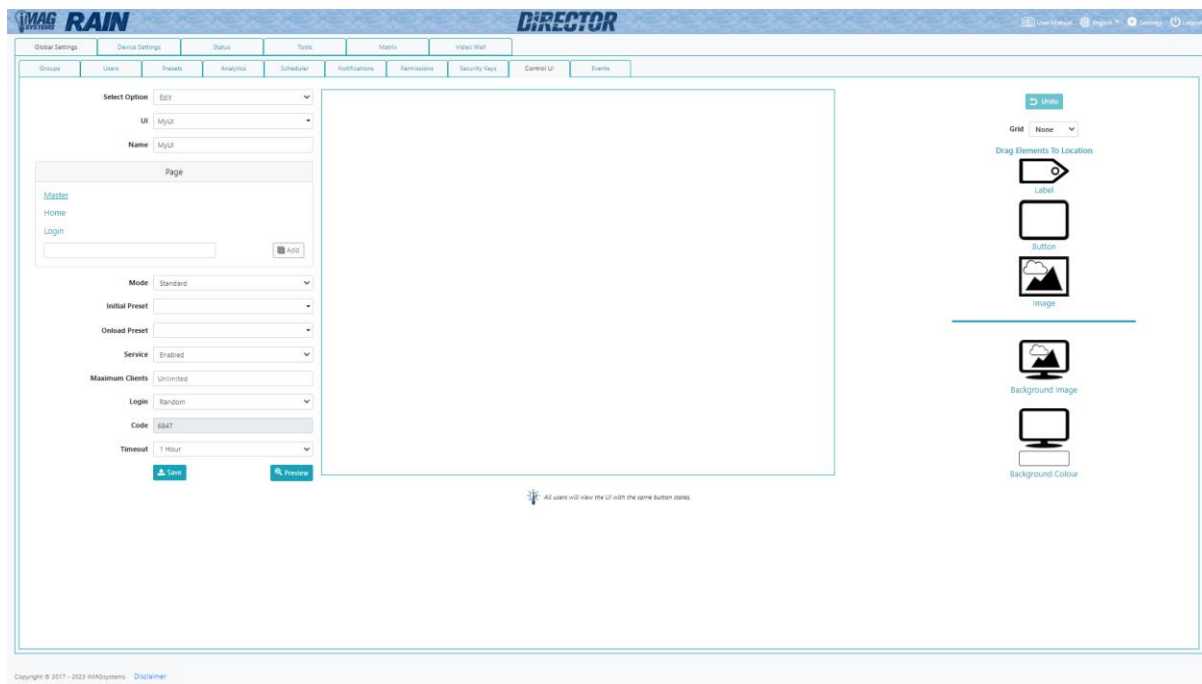
1.9.1.1.5 Standard Mode Login continued...

When a login pin code is required either a Random or Fixed 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.



1.9.1.1.6 Standard Mode Timeout

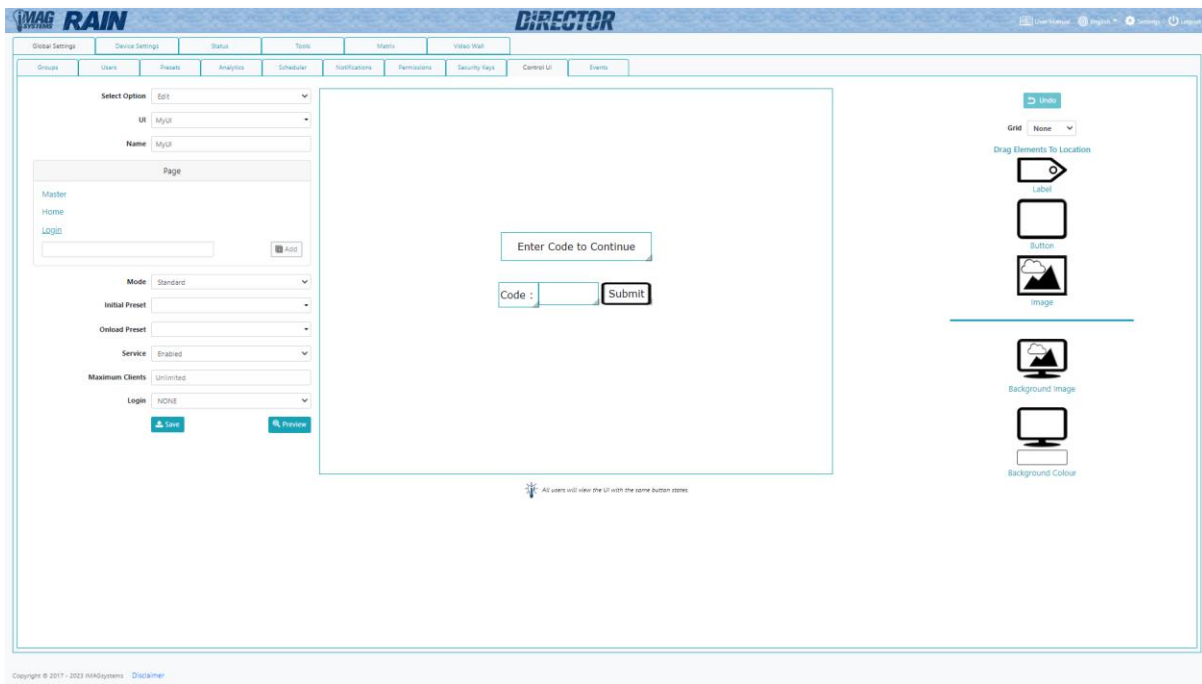
A timeout can also be applied when using a login pin code that will prevent the client access after the selected time has elapsed.



1.9.1.1.7 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.



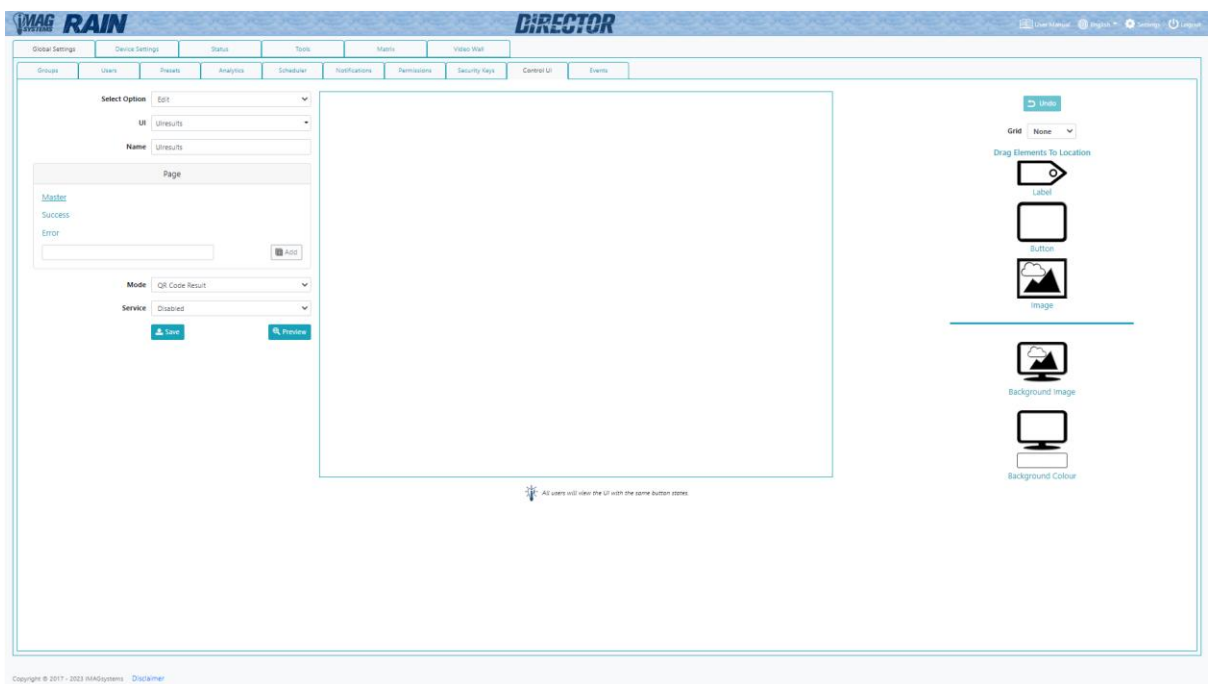
1.9.1.2 QR Code Result Mode

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.

QR Code Result mode provides the default pages Master Page, Success Page and Error Page. 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.

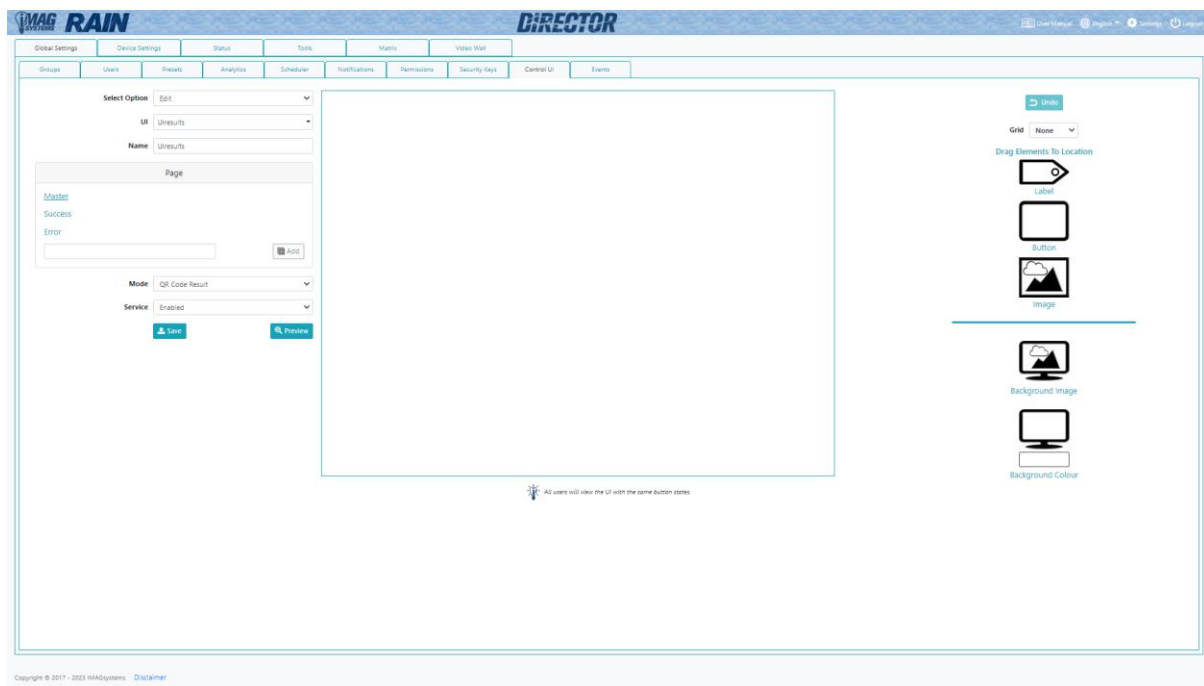
These result User Interface can be used to display a single page message or a multipage User Interface with the same abilities as standard mode.

[Refer 1.3.9 Preset QR Codes](#)



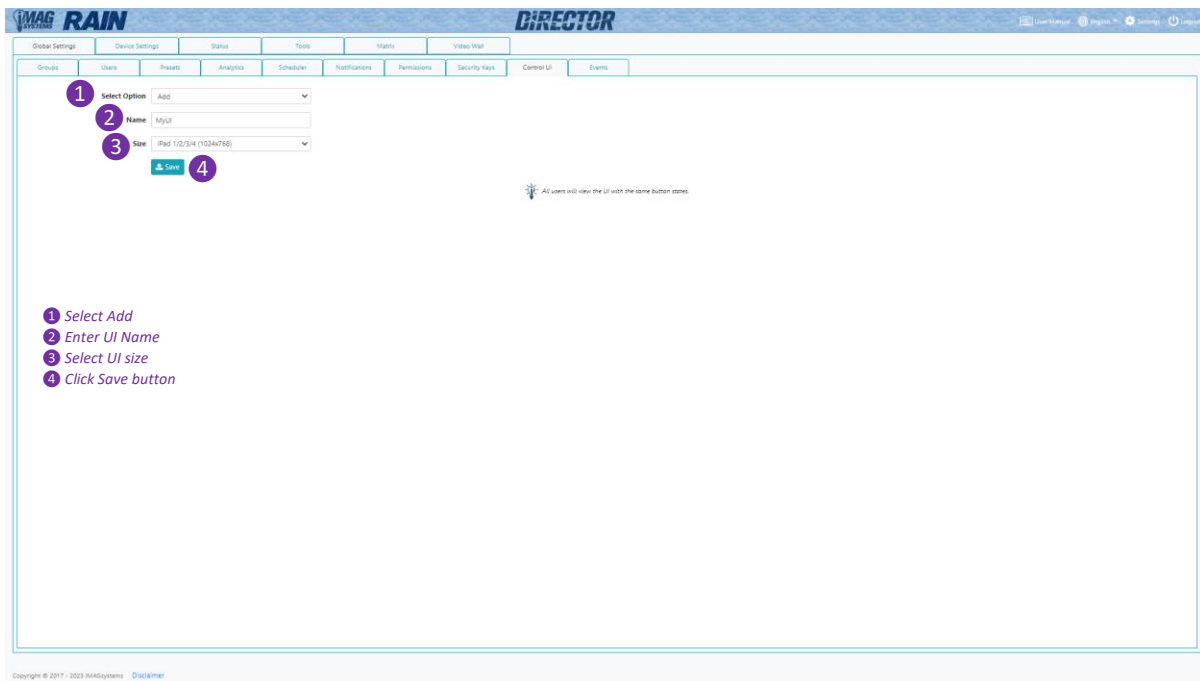
1.9.1.2.1 QR Code Result Mode Service

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



1.9.2 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 100x100 to 3820x2160.



1 Select Add

2 Enter UI Name

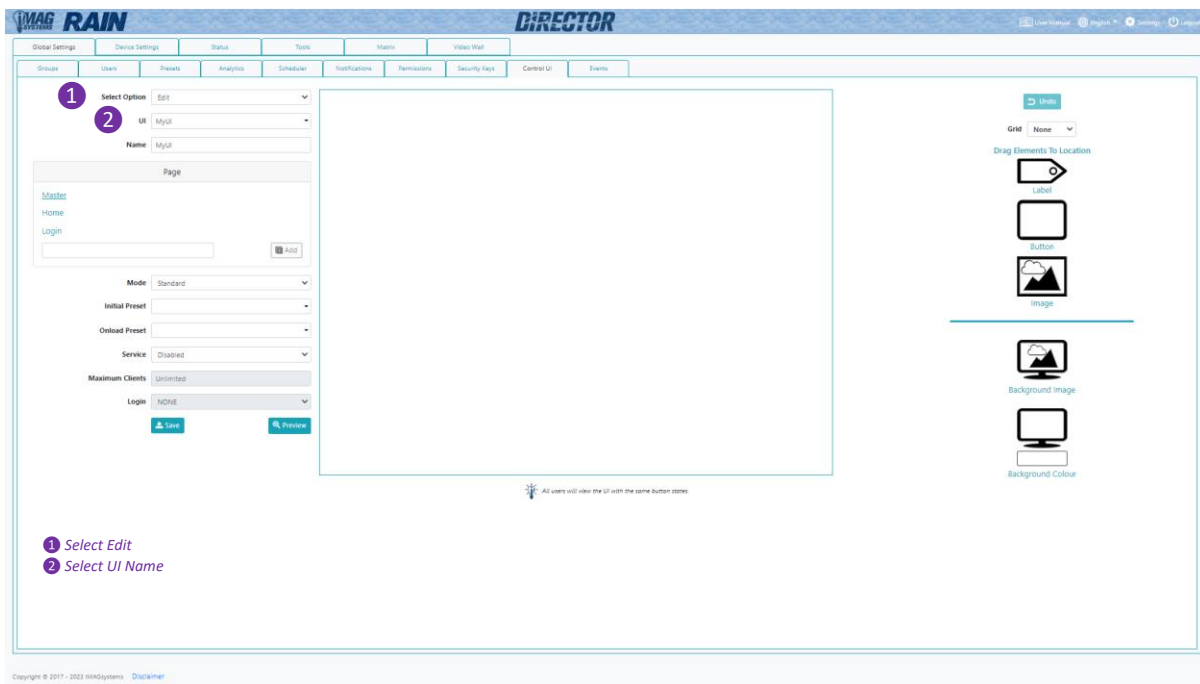
3 Select UI size

4 Click Save button

All users will view the UI with the same button names.

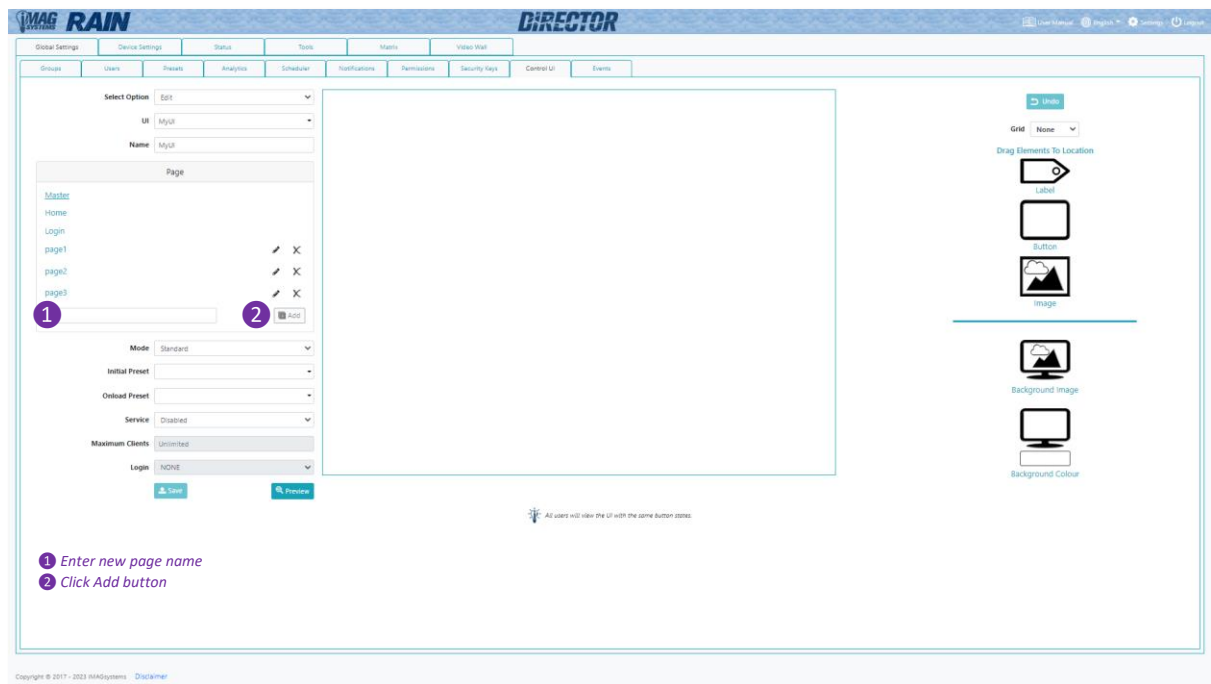
1.9.3 Edit

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.



1.9.3 Edit continued...

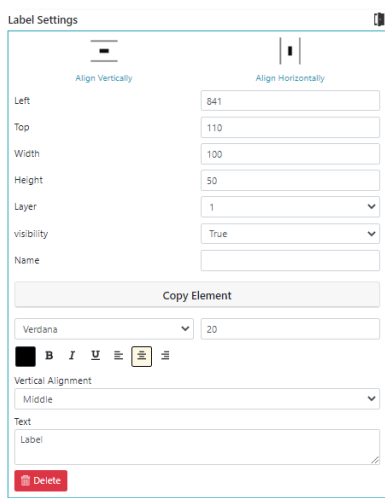
Initially only 3 pages are available, Master Page, Home Page and Login Page. The Master Page is used for elements to be displayed on all other pages that do not have a background set. The Home Page is the displayed page when the User Interface is loaded. The Login Page is displayed when a pin code is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



1.9.3.1 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 the control command **set ui_label**.

The label must be given a name to change the colour, text and visibility via the control command **set ui_label**.




Label Settings

Align Vertically | Align Horizontally

Left: 841
Top: 110
Width: 100
Height: 50
Layer: 1
visibility: True
Name:


Copy Element

Verdana | 20

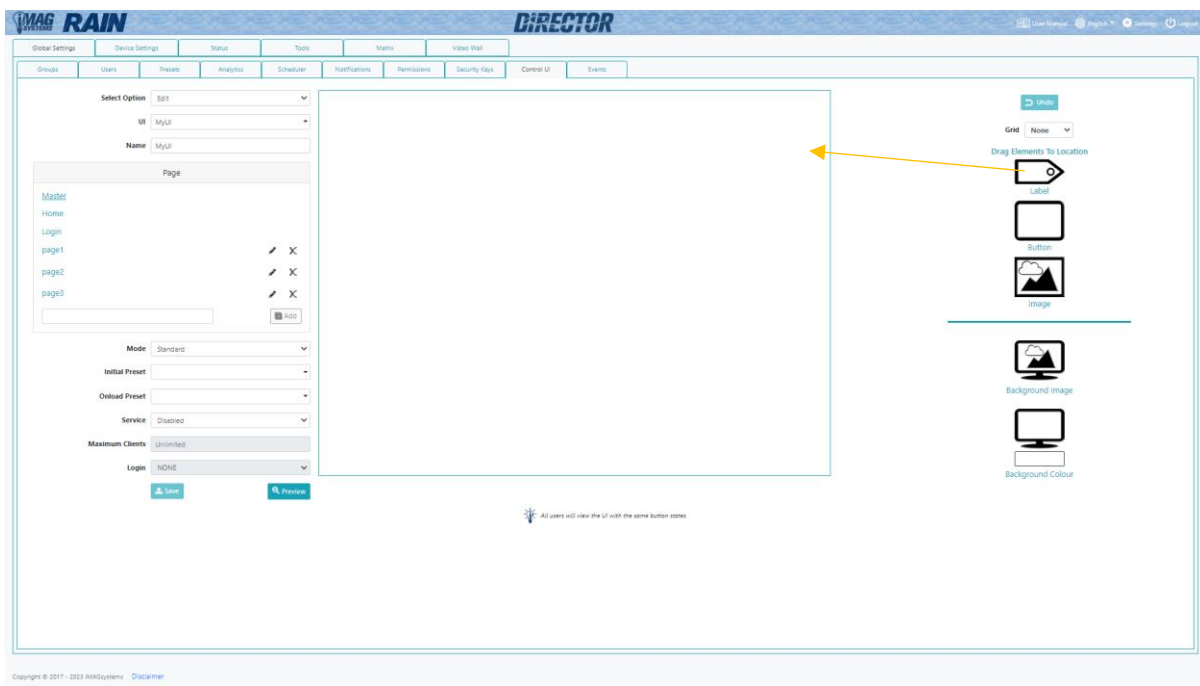
B I U | 

Vertical Alignment: Middle

Text: Label

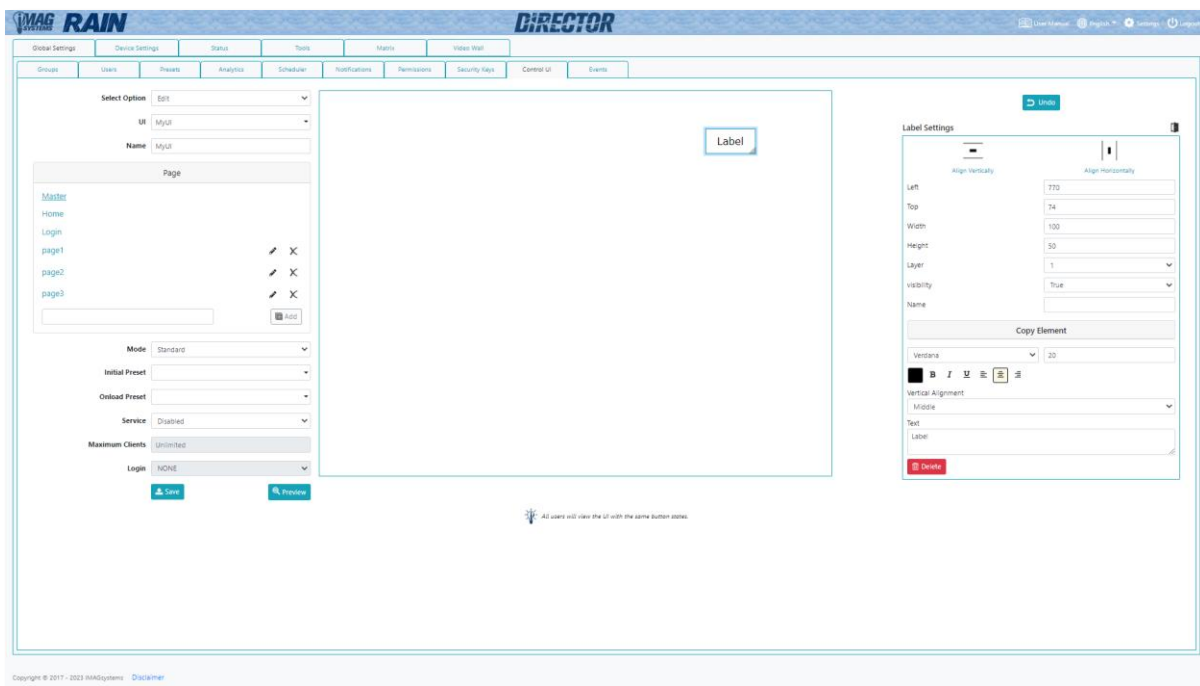
 Delete

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



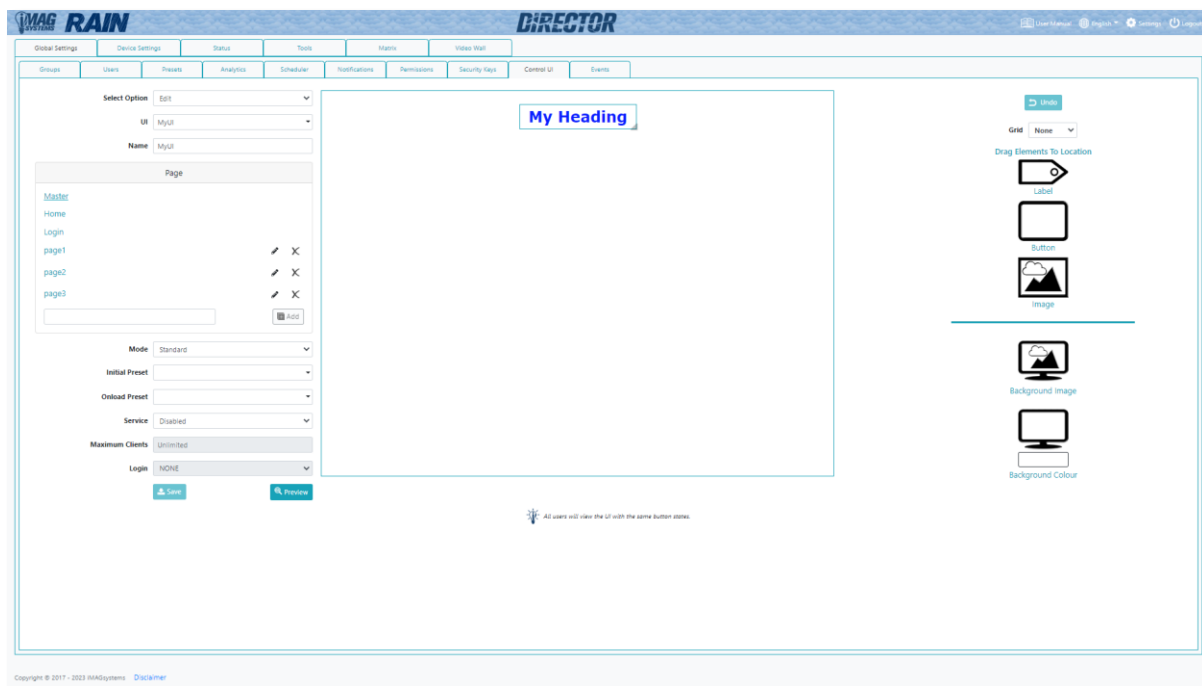
1.9.3.1 Label continued...

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



1.9.3.1 Label continued...

Here the heading label has been defined.



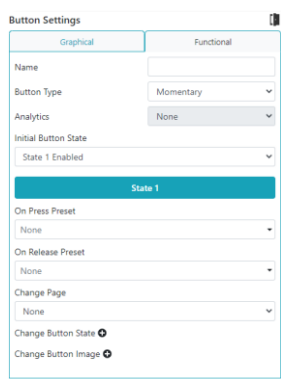
1.9.3.2 Button

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

A button can be configured to operate with 6 different functions as explained here:

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 both button press and button release.



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.

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

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

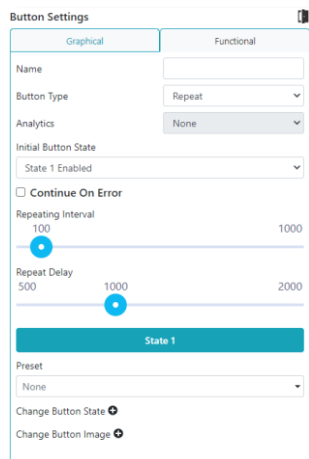
Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

1.9.3.2 Button continued...

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 execution.



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 Repeat.

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.

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

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

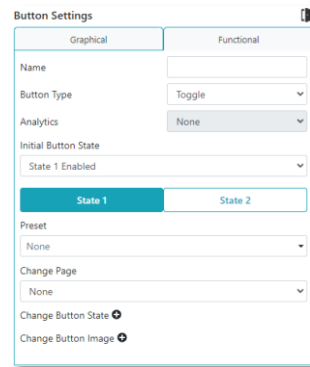
Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

1.9.3.2 Button continued...

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 state2. 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 Toggle.

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.

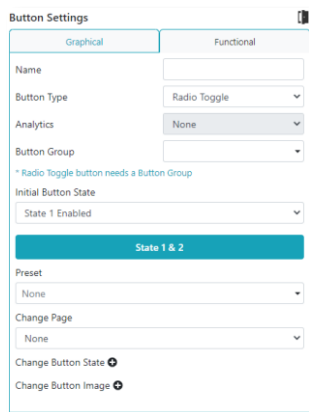
Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

1.9.3.2 Button continued...

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.



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 Radio Toggle.

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 Radio Toggle 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.

Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

1.9.3.2 Button continued...

Split button

A Split button group will work in a matrix type way whereby buttons are configured as either an Encoder button or Decoder Button. Encoder buttons will operate as Radio (Exclusive) toggle buttons so only one can be selected, while the Decoder buttons will operate as a Toggle button so multiple can be selected.

Once a button is configured as an **Encoder** button next the actual Encoder to be used is selected. Buttons configured as a **Decoder** button will also have the required Decoder selected along with a preset that is executed when the Decoder button is pressed.

A single **Decoder All** button can also be assigned to the Split button group. This type of button is used to join the selected Encoder to all the Decoders. No device selection is required for this button and a preset can be optionally assigned to each button state. The reason the presets are optional is depending on how the system is to be used. When all the Decoders of the system are allocated to a Split button group then the use of "all_rx" can simplify things and in some cases ensure all displays change seamlessly (*depending on the system capabilities*). So then the Decoder All button can be set with presets to control all devices. If no presets are set then the individual Decoder buttons will be sequentially executed, as if pressing the Decoder buttons one after each other.

A preset has to be created for the Decoder button state 1 as a join command and state 2 as a leave command. In the majority of cases all Decoder buttons will use the same preset. In the preset assistant you will notice in the device lists <<Encoder>> and <<Decoder>>. These are the device selections required to create presets for Split button functionality. <<Encoder>> will be replaced by the selected Encoder button and <<Decoder>> will be replaced by the selected Decoder button. A Decoder button preset can also use <<button_name>> to identify the actual Decoder button pressed by name.

Preset example Decoder button state 1 join:

```
join av <<Encoder>> <<Decoder>>
```

Preset example Decoder button state 2 leave:

```
leave av <<Decoder>>
```

Preset example Decoder All button state 1 join:

```
join av <<Encoder>> all_rx
```

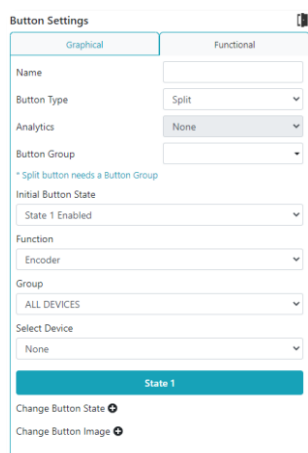
Preset example Decoder button state 2 leave:

```
leave av all_rx
```

Note: <<Decoder>> is not supported in a Decoder All button preset.

If you need to interact with buttons then a unique name for the button must be specified. The state of the button can then be changed with the functionality settings or via the control command **set ui_button**. The **set ui_button** command can also be used to change the buttons enabled state, text or be virtually pressed.

1.9.3.2 Button continued...



Here you can see the functionality of an **Encoder Split** 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 Split.

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 Split buttons to function together.

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

Function: Select the button to operate as Encoder.

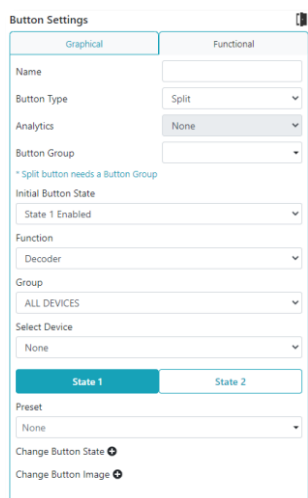
Group: Allows you to filter the Encoders by group.

Select Device: Select the required Encoder.

Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

1.9.3.2 Button continued...



Here you can see the functionality of an **Decoder Split** 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 Split.

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 Split buttons to function together.

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

Function: Select the button to operate as Decoder.

Group: Allows you to filter the Decoders by group.

Select Device: Select the required Decoder.

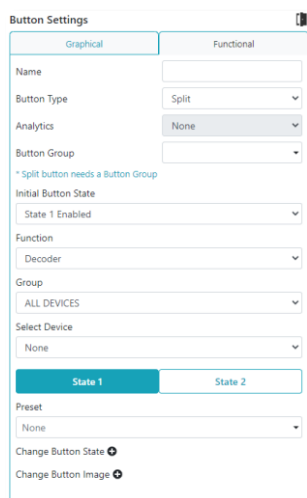
State 1 / State 2: These buttons allow you to select the following for each button state:

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

Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

1.9.3.2 Button continued...



Here you can see the functionality of a **Decoder Split** 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 split buttons to function together.

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

Function: Select the button to operate as Decoder.

Group: Allows you to filter the Decoders by group.

Select Device: Select the required Decoder.

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.

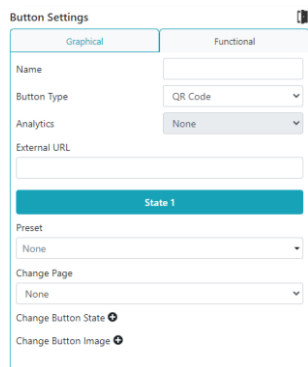
Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

1.9.3.2 Button continued...

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 'Name' field is empty. The 'Button Type' dropdown is set to 'QR Code'. The 'Analytics' dropdown is set to 'None'. The 'External URL' field is empty. Below these fields is a blue bar labeled 'State 1'. Under 'State 1', the 'Preset' dropdown is set to 'None', the 'Change Page' dropdown is set to 'None', and there are links for 'Change Button State' and 'Change Button Image'.

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 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.

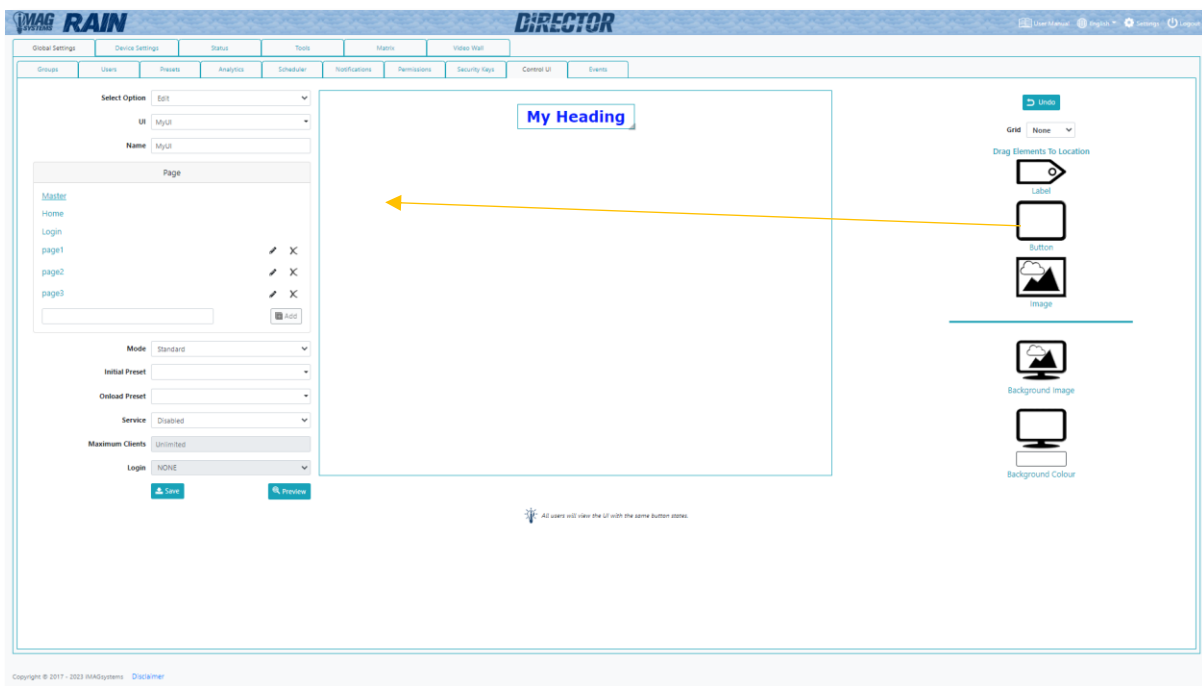
Change Page: This allows you to change to another page.

Change Button State: This allows you to change the state of a button.

Change Button Image: This allows you to change the image of a button.

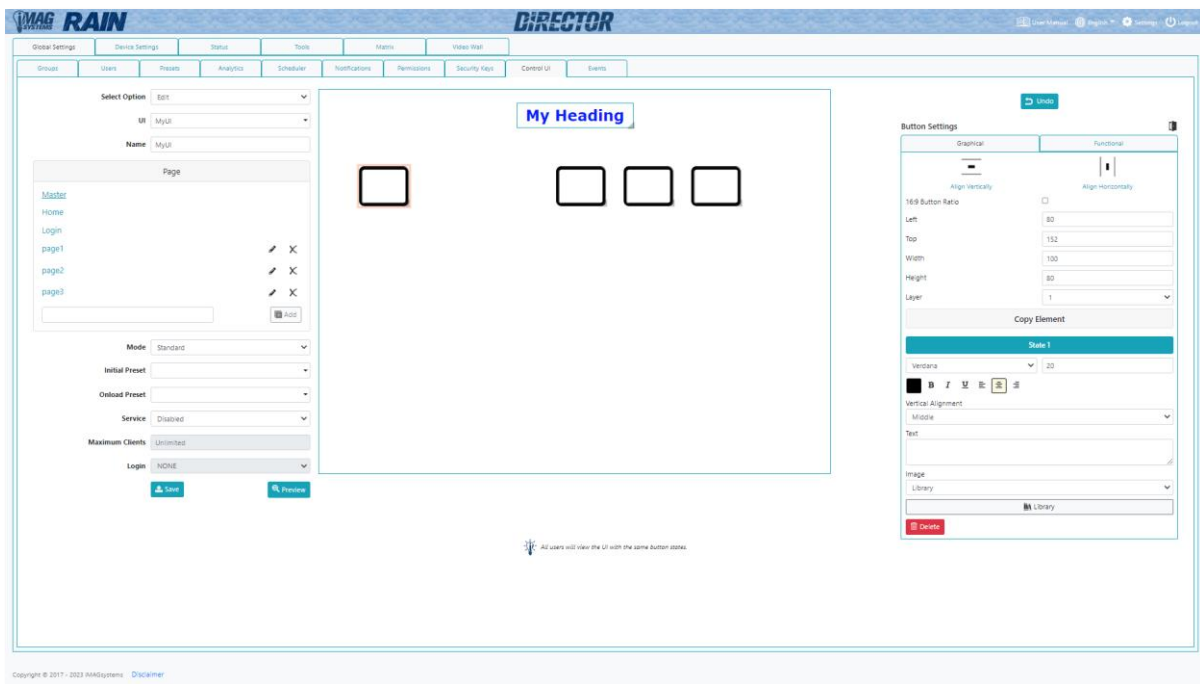
1.9.3.2 Button continued...

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.



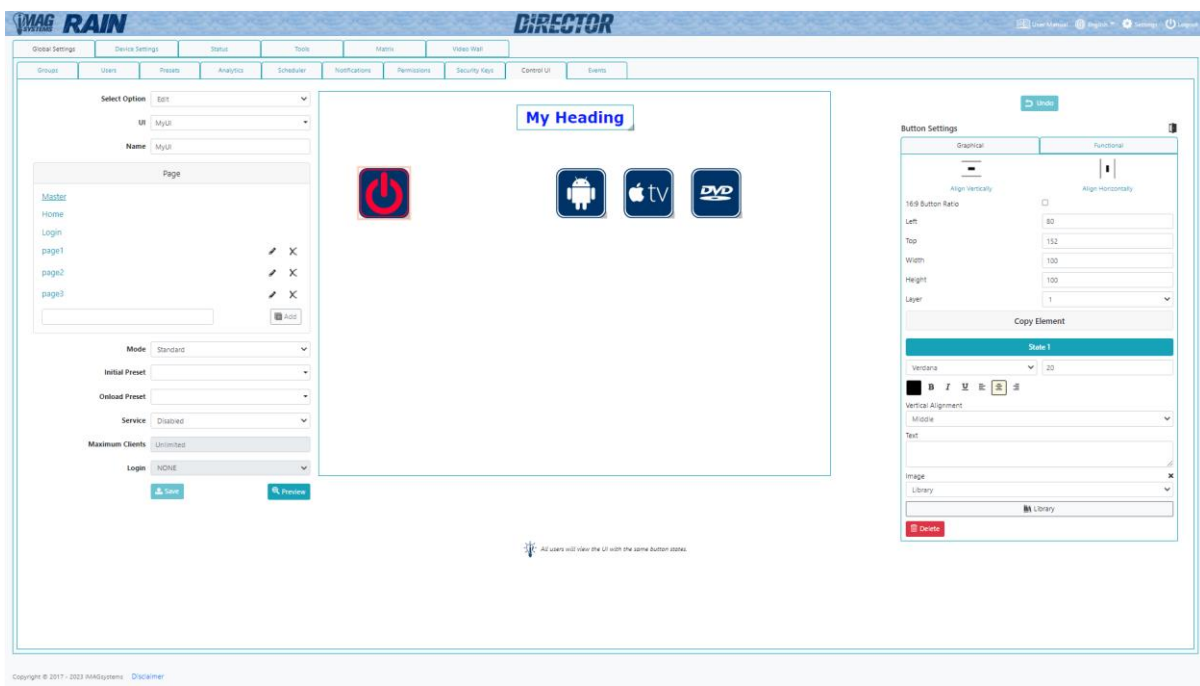
1.9.3.2 Button continued...

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



1.9.3.2 Button continued...

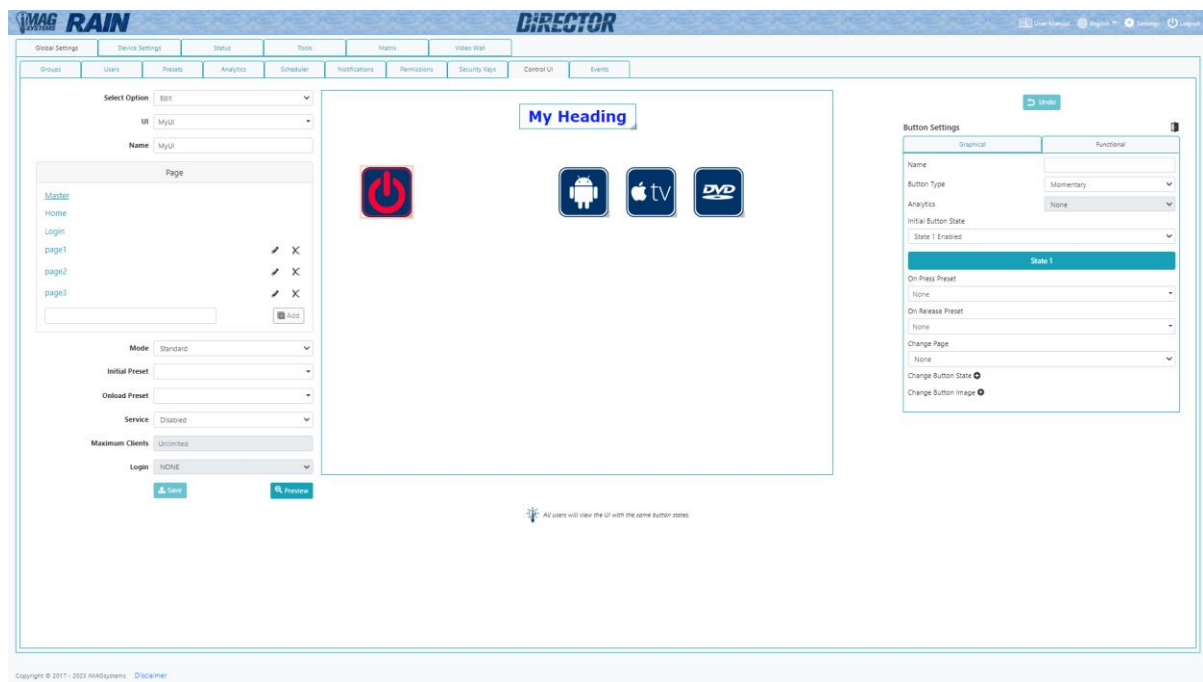
Select an image for the button by selecting either External File and browsing your own images or selecting Library to choose one from the button library. When selecting an image from the button library, both state 1 and state 2 images will be assigned when required. When using external file, an image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



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

1.9.3.2 Button continued...

From the Button Settings Functional tab, select a preset to be triggered on button press.



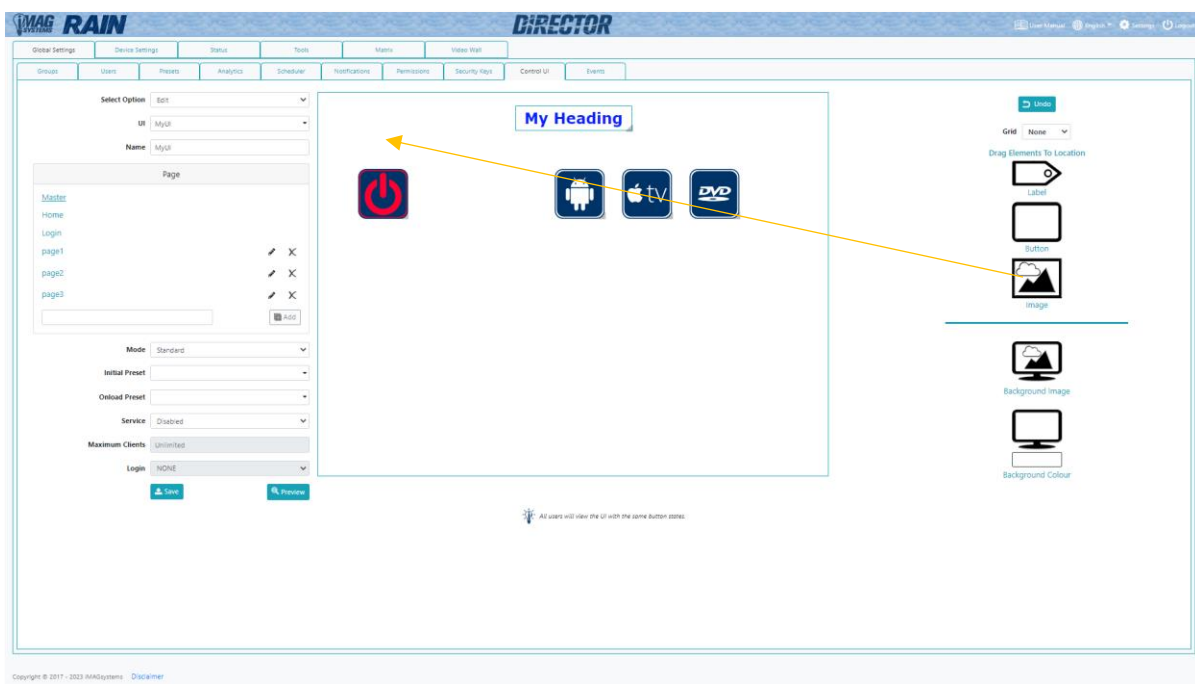
1.9.3.3 Image

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**.

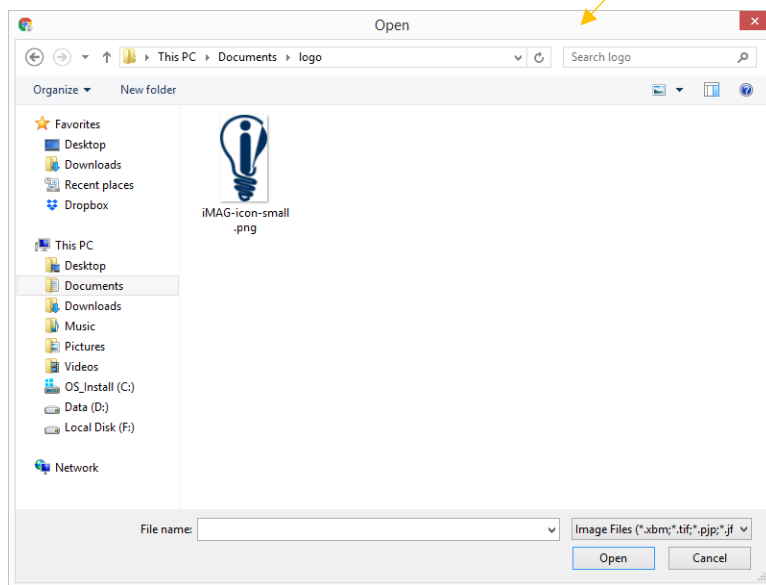
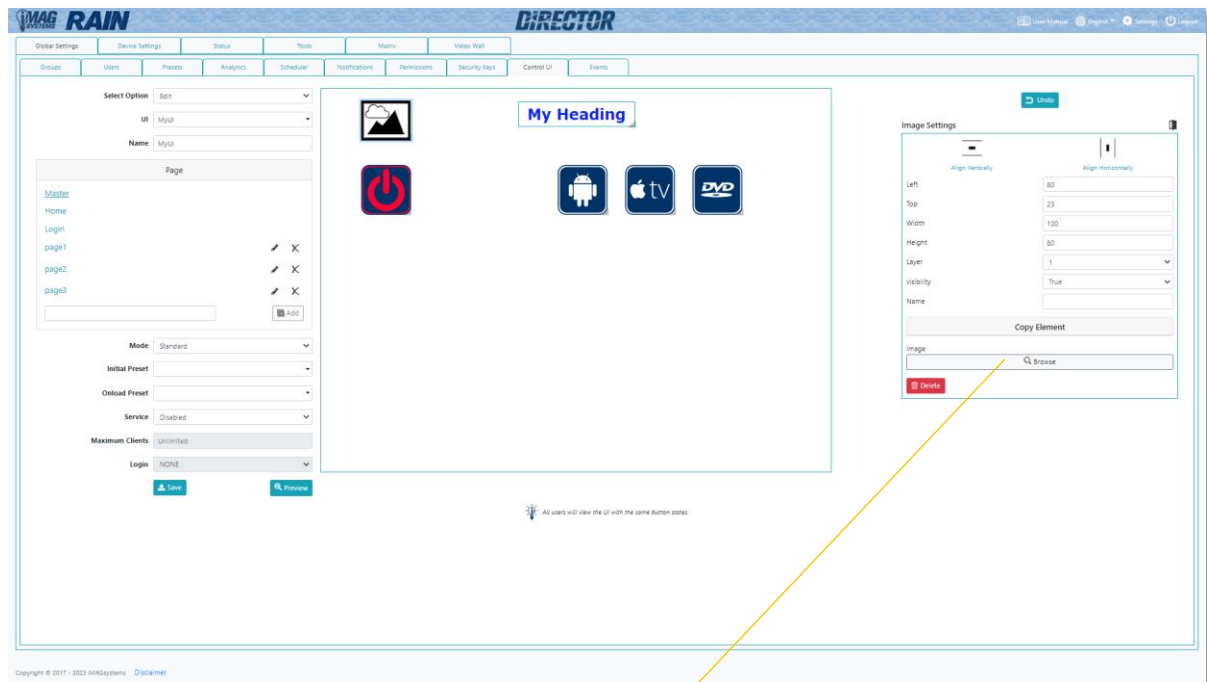


Here we are going to place a logo on the Master Page.



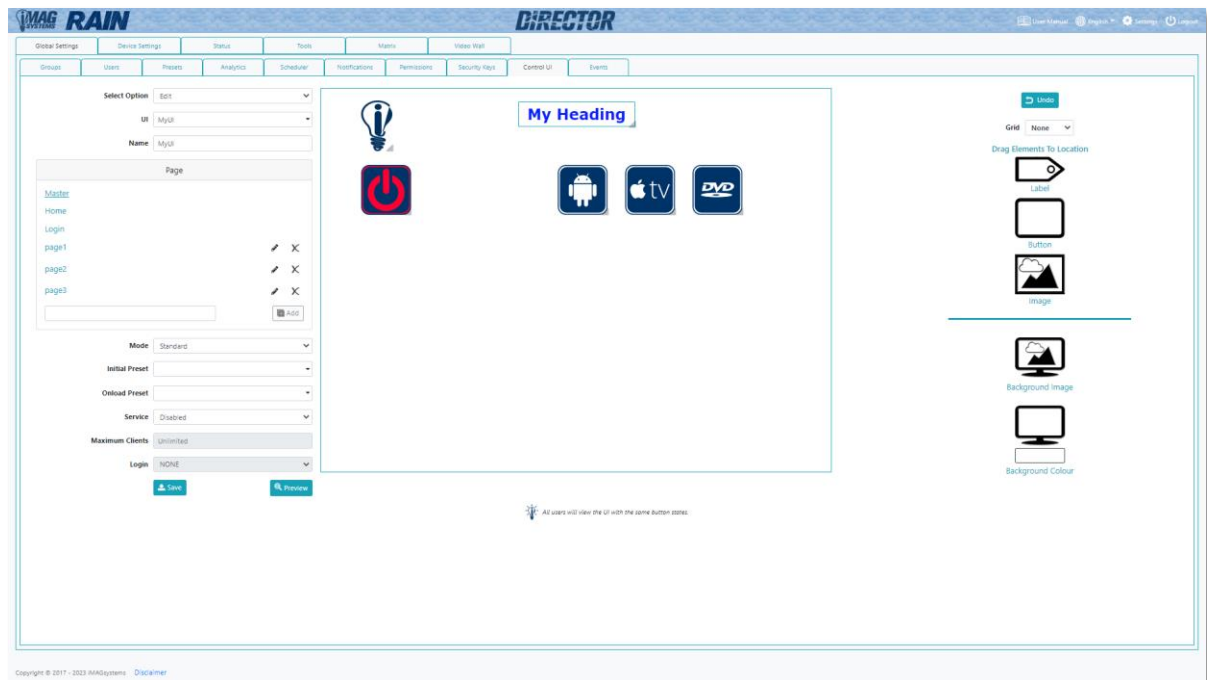
1.9.3.3 Image continued...

Select Browse to select an image from your own images.



1.9.3.3 Image continued...

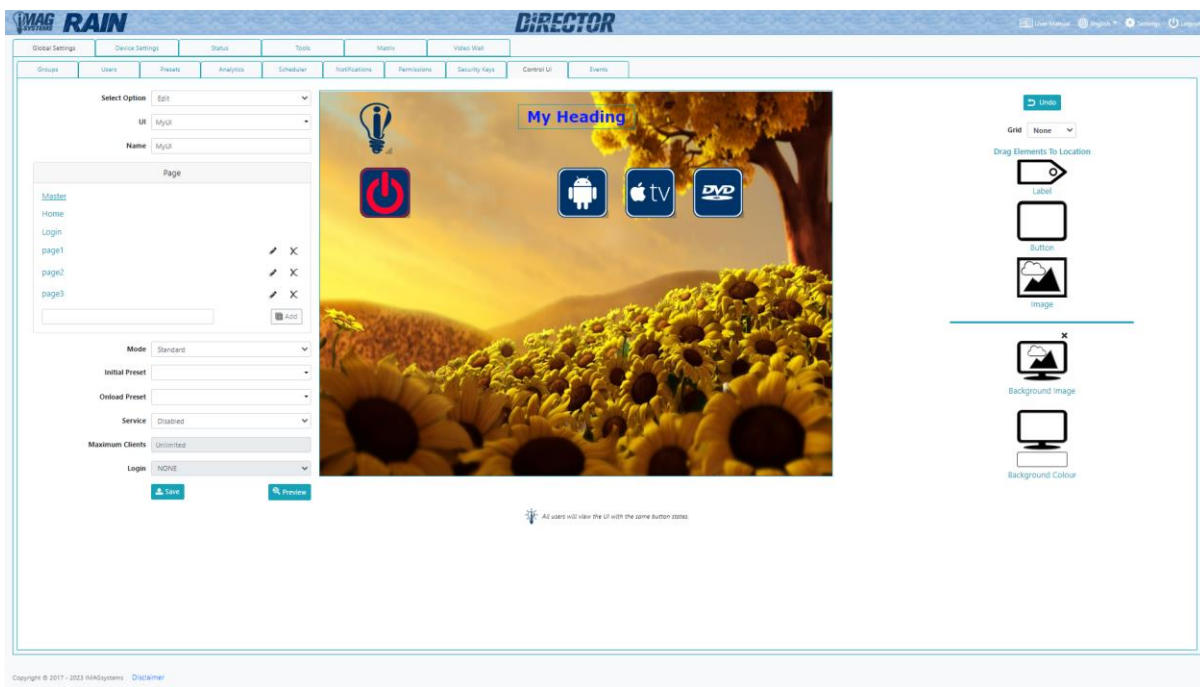
Here a logo image has now been assigned.



1.9.3.4 Background

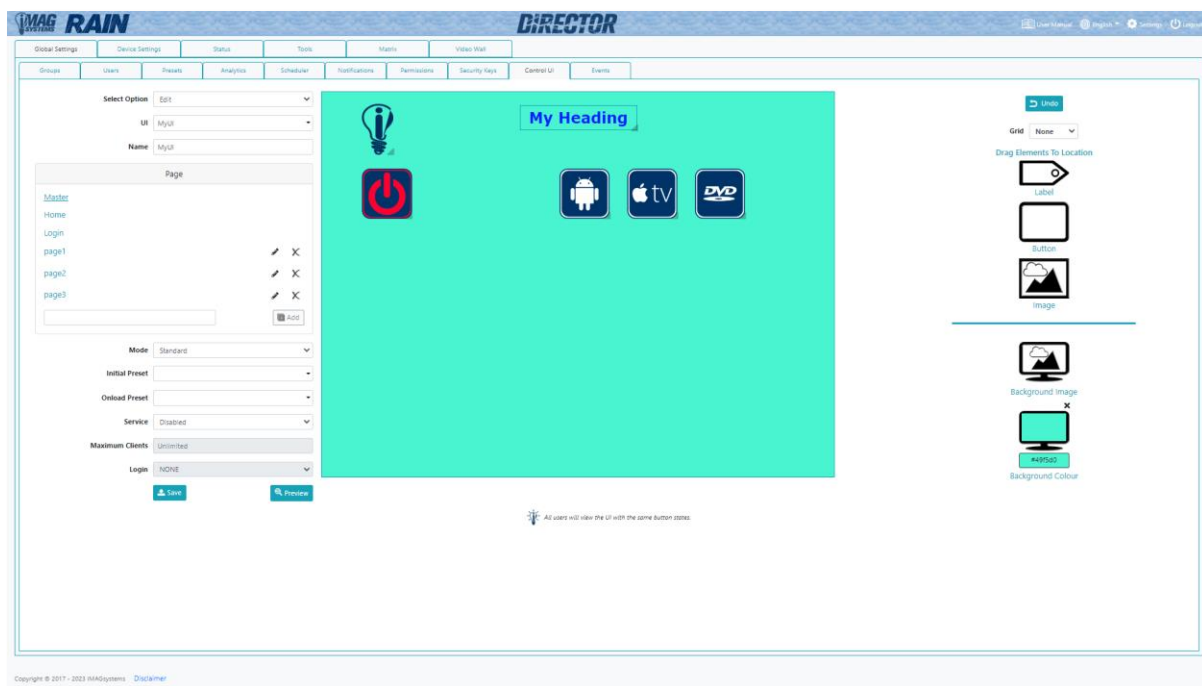
Either an image or solid colour can be selected for the page background. Applying a background on the Master Page will be seen on all other pages without a background. Applying a background to any other page than the Master Page will hide the Master Page altogether.

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



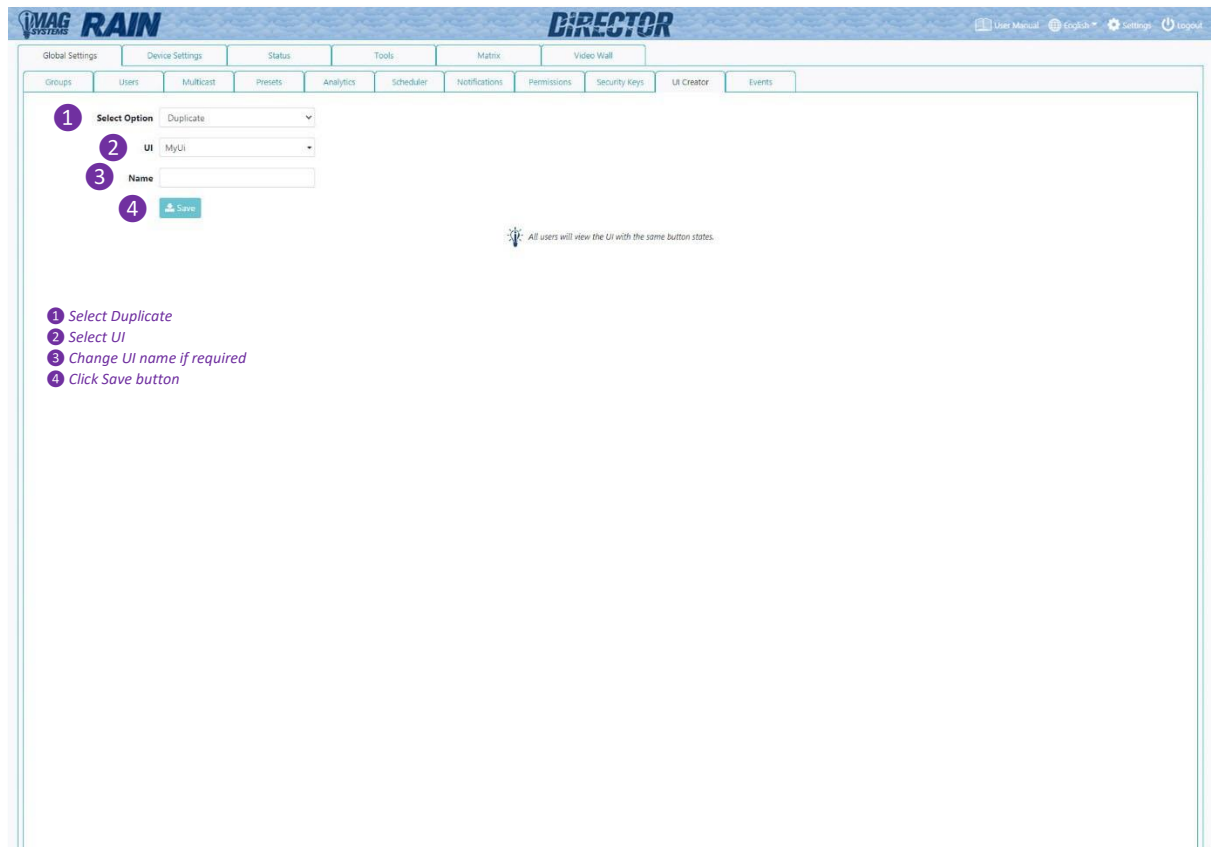
1.9.3.4 Background continued...

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



1.9.4 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.



The screenshot shows the DIRECTOR RAIN UI Creator interface. The top navigation bar includes tabs for Global Settings, Device Settings, Status, Tools, Matrix, and Video Wall. Below this is a sub-navigation bar with tabs for Groups, Users, Multicast, Presets, Analytics, Scheduler, Notifications, Permissions, Security Keys, UI Creator, and Events. The UI Creator tab is active, displaying a form to duplicate a UI. The form has four numbered steps: 1. Select Option (a dropdown menu showing 'Duplicate'), 2. UI (a dropdown menu showing 'MyUi'), 3. Name (a text input field), and 4. Save (a green button with a save icon). Below the form, a note states: 'All users will view the UI with the same button states.' A legend at the bottom left explains the numbered steps: 1. Select Duplicate, 2. Select UI, 3. Change UI name if required, and 4. Click Save button.

1 Select Option Duplicate

2 UI MyUi

3 Name

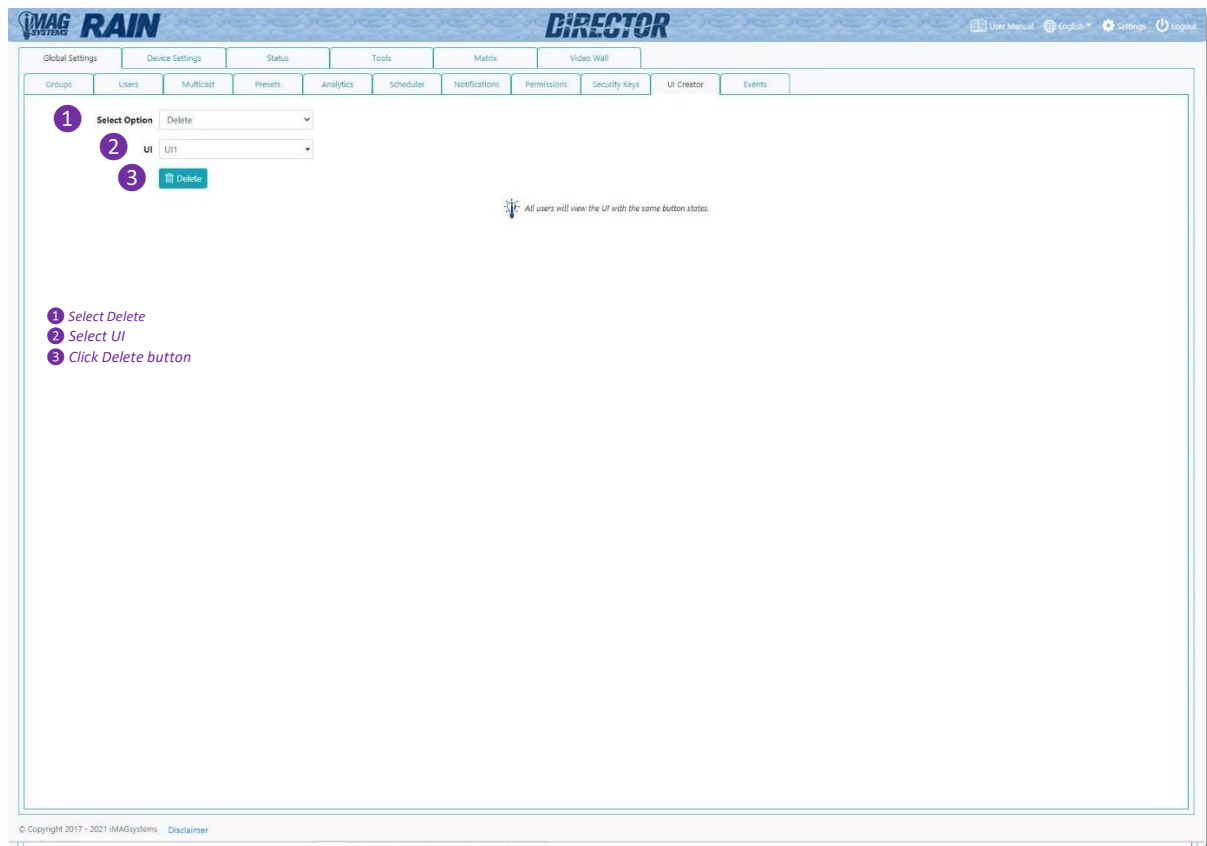
4 Save

All users will view the UI with the same button states.

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

1.9.5 Delete

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

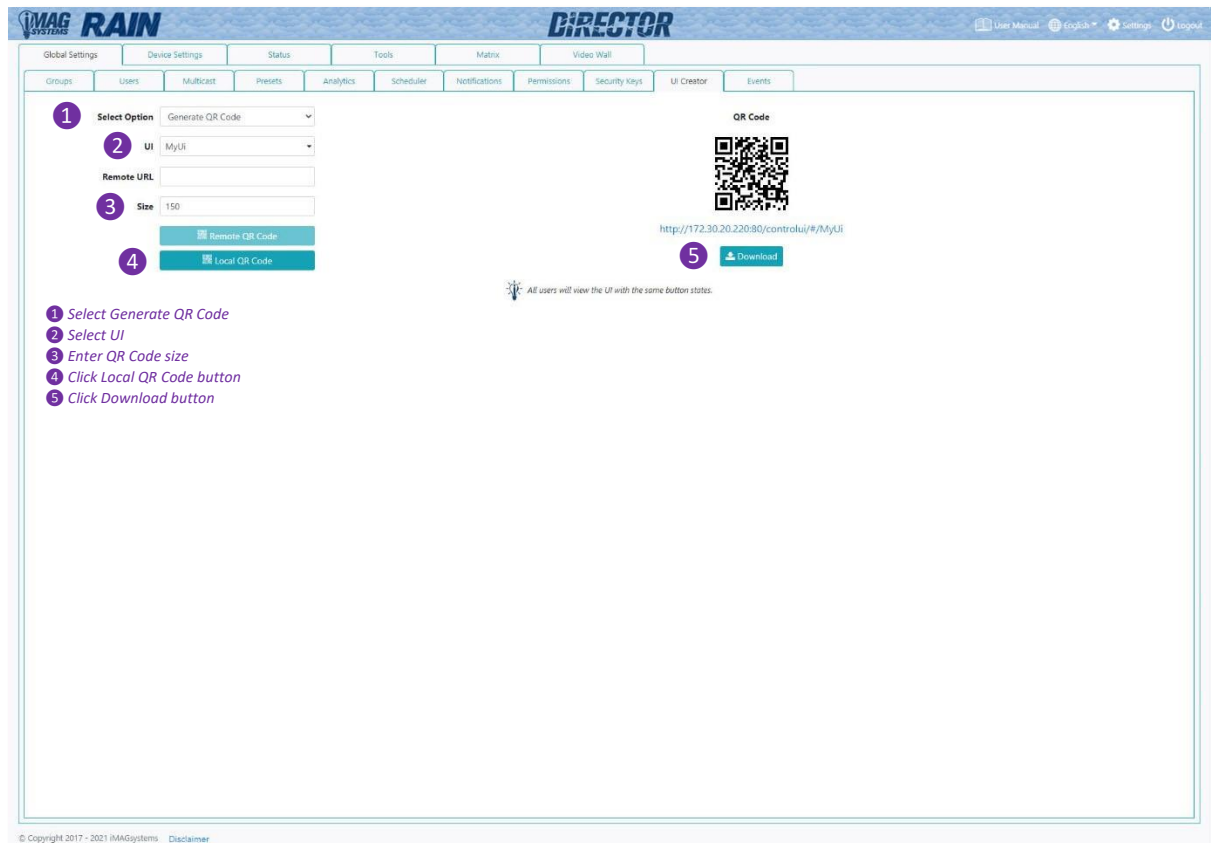


1.9.6 Generate QR Code

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.

1.9.6.1 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.



1 Select Generate QR Code

2 Select UI

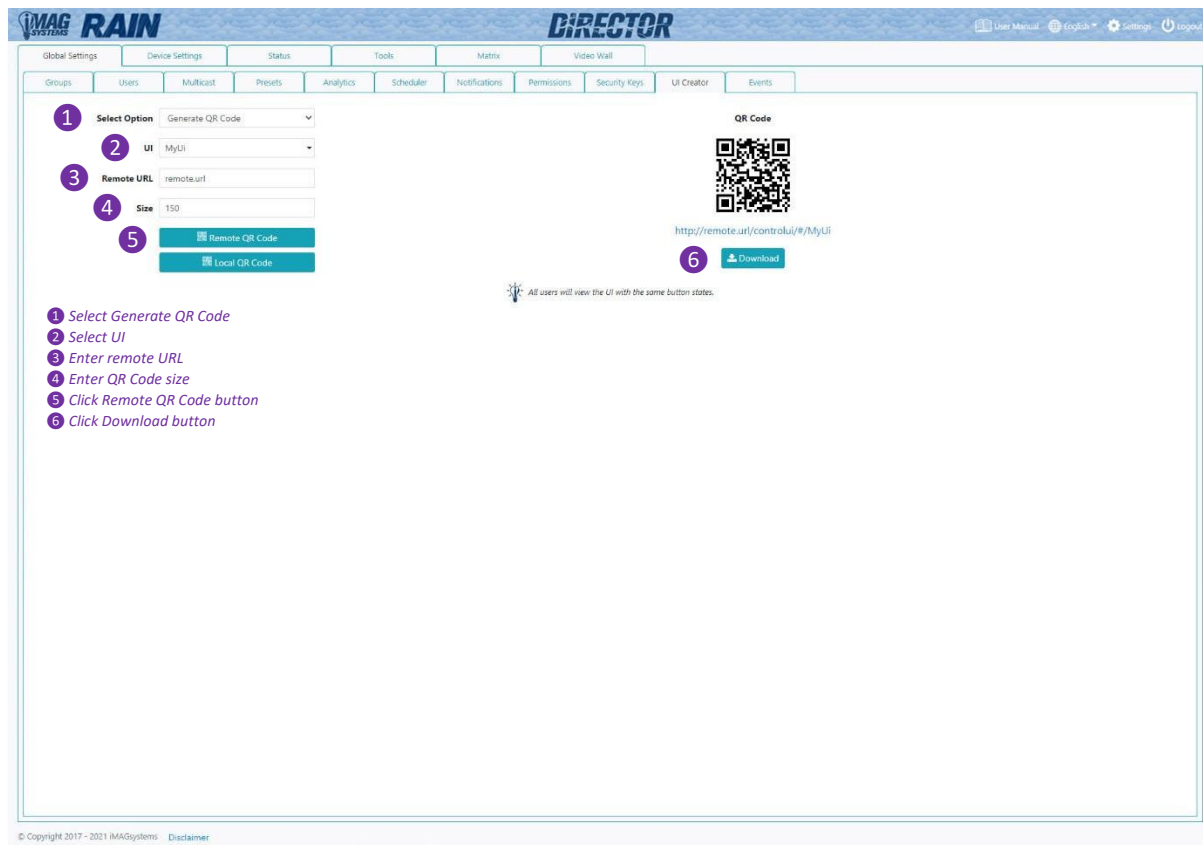
3 Enter QR Code size

4 Click Local QR Code button

5 Click Download button

1.9.6.2 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.



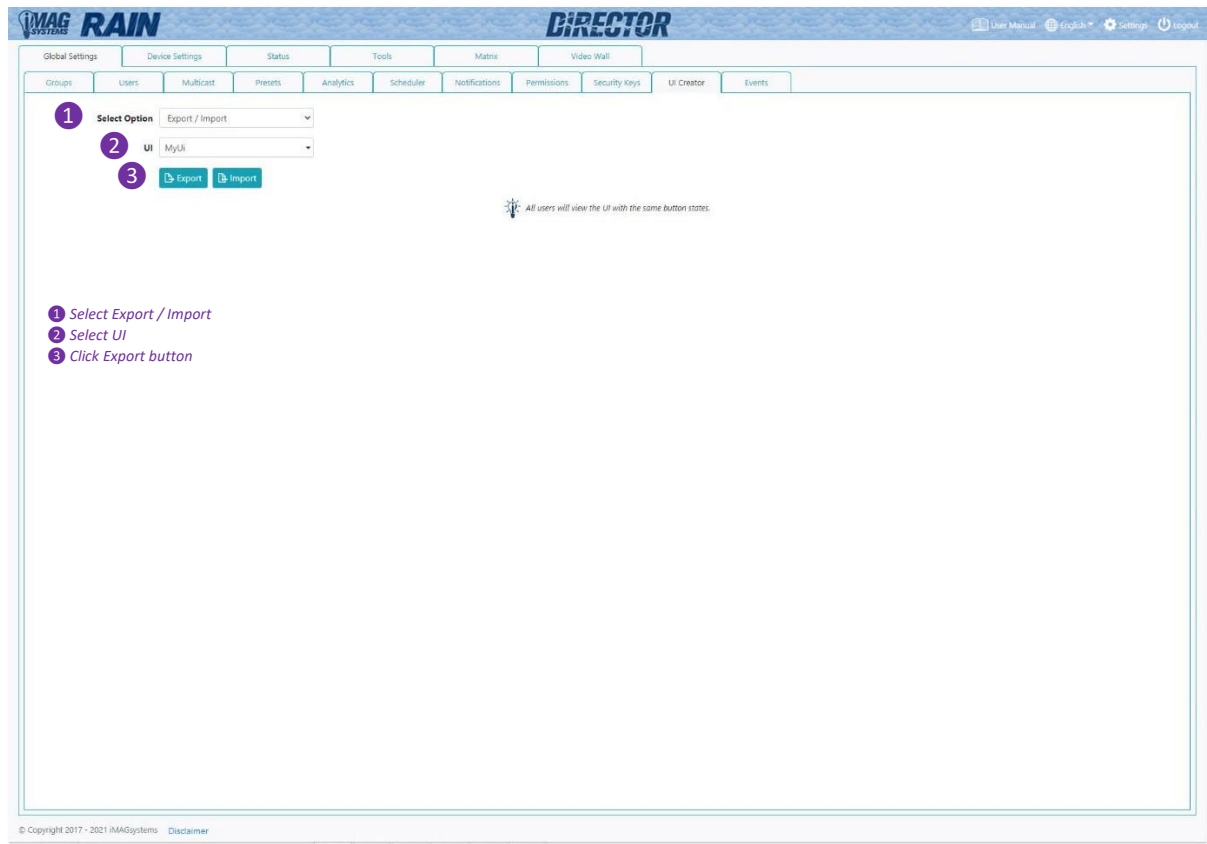
Legend:

- 1 Select Generate QR Code
- 2 Select UI
- 3 Enter remote URL
- 4 Enter QR Code size
- 5 Click Remote QR Code button
- 6 Click Download button

Note: All users will view the UI with the same button states.

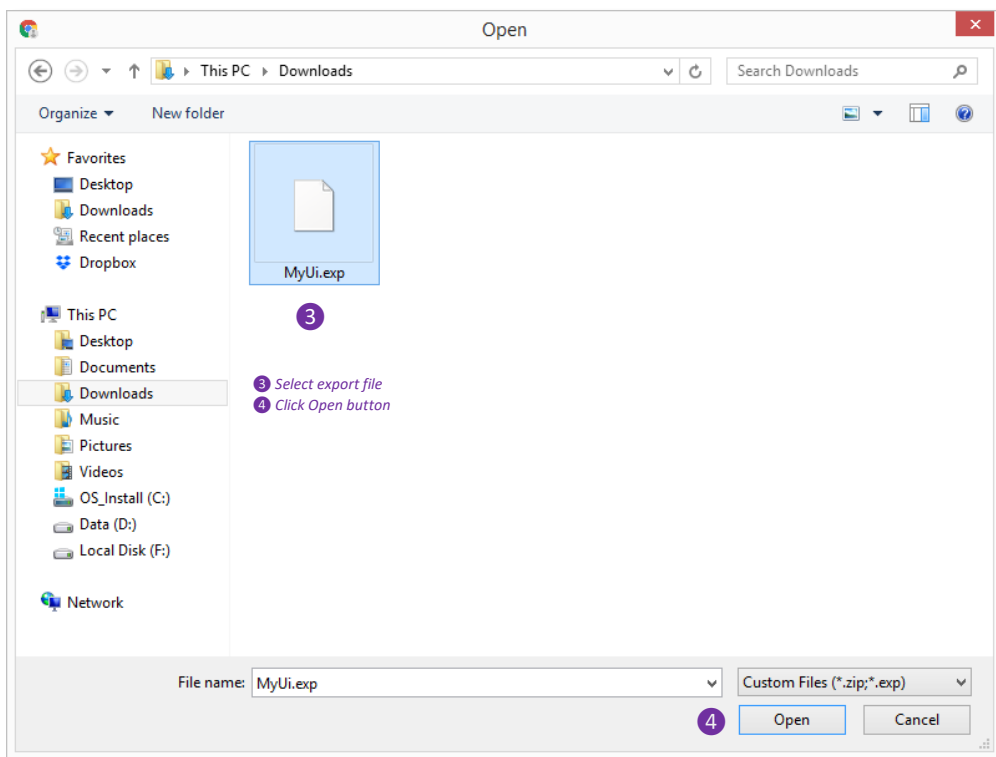
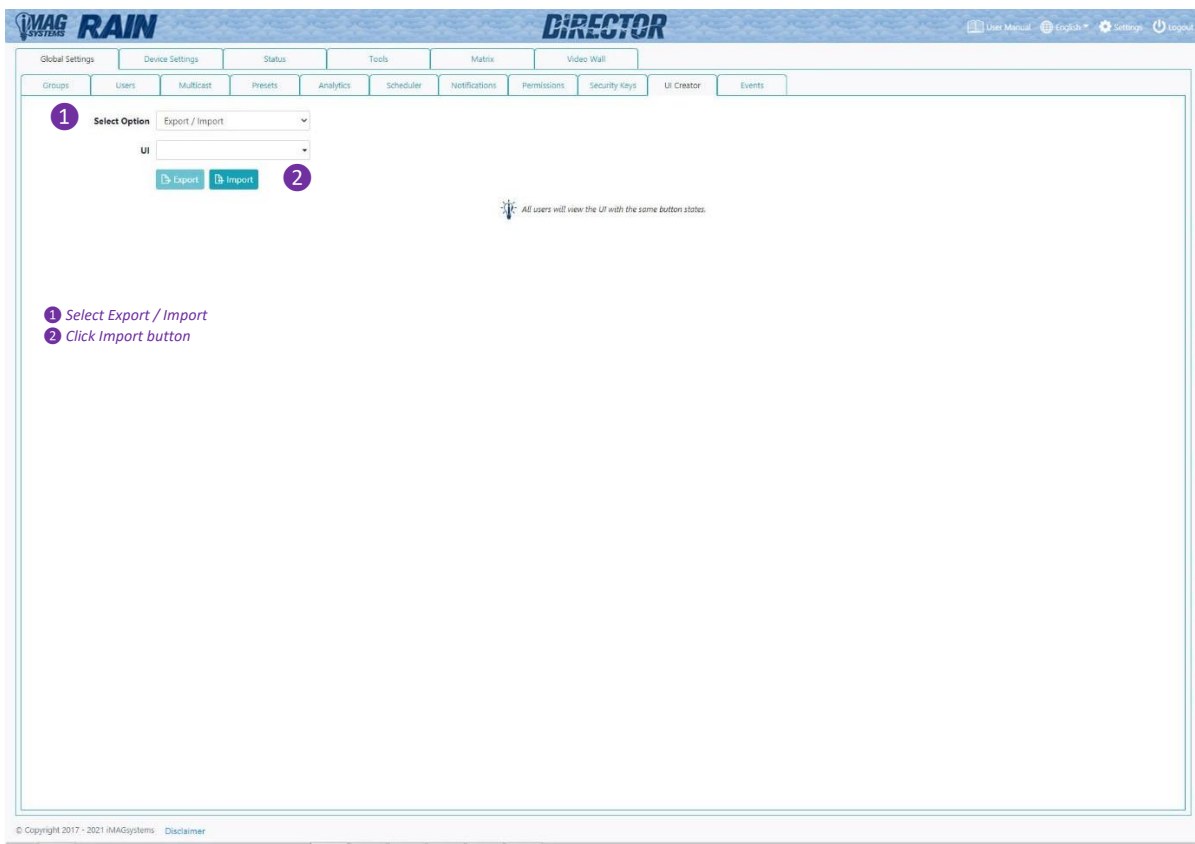
1.9.7 Export / Import

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.



1.9.7 Export / Import continued...

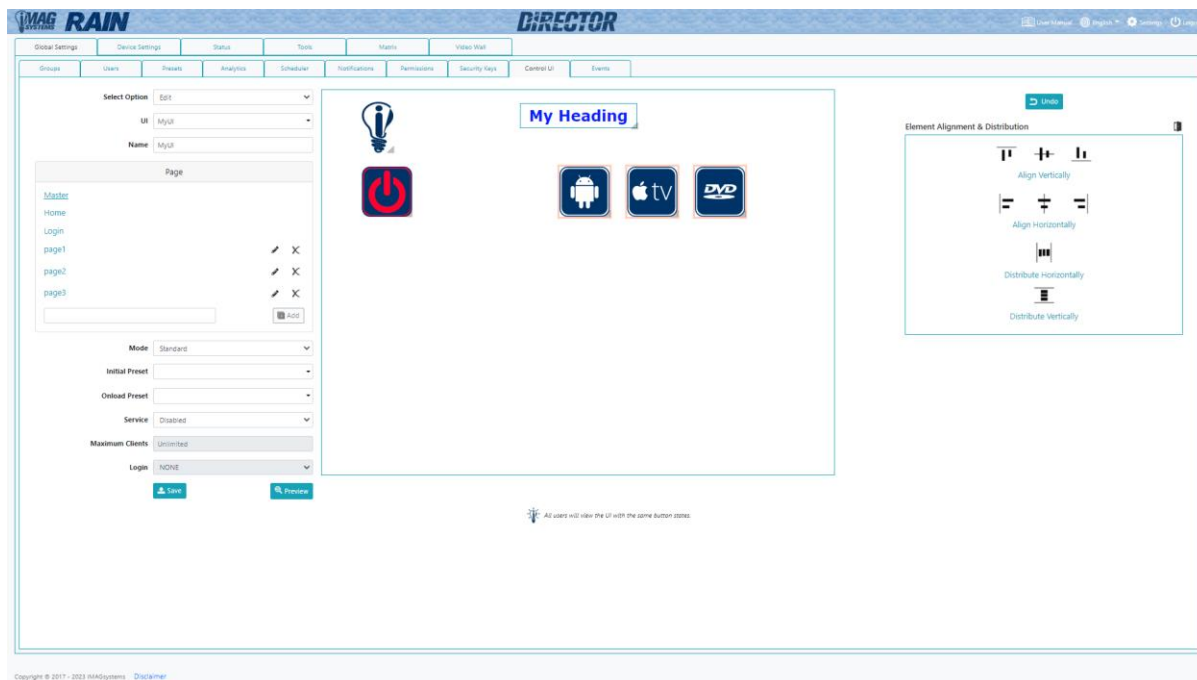
To import a User Interface click Import then browse and select the *.exp export file to be imported back onto the system.



1.9.8 Element Alignment



An elements graphical tab provides vertically and horizontally page alignment.



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

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

Clicking in white space will deselect selected elements.

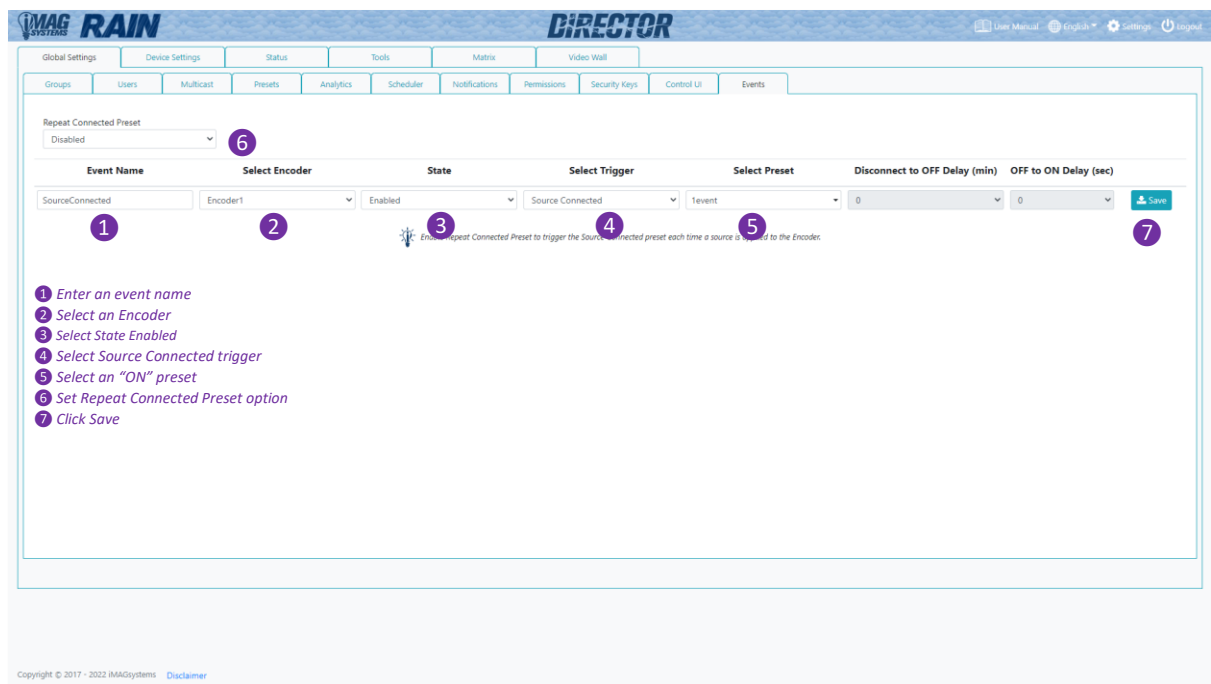
1.10 Events (Licensed feature)

Events is a buttonless control system to operate a display device such as a TV or projector automatically depending on the source status of a selected Encoder. The triggered presets can contain any number of functions to select source, volume and even raise and lower projector screens.

Here you configure presets to be applied controlling a display and other devices when an Encoder source becomes available or removed.

Select a Source Connected trigger event from an Encoder then select a preset to be applied when the Encoder source becomes available. You can set the Repeat Connected Preset option to apply this preset each time a source is applied or only if the display is off.

The state of the event can be enabled or disabled via the UI here or with API command 'set events'.



Events Configuration Interface

Repeat Connected Preset: Disabled

Event Name	Select Encoder	State	Select Trigger	Select Preset	Disconnect to OFF Delay (min)	OFF to ON Delay (sec)
SourceConnected	Encoder1	Enabled	Source Connected	1event	0	0

Save

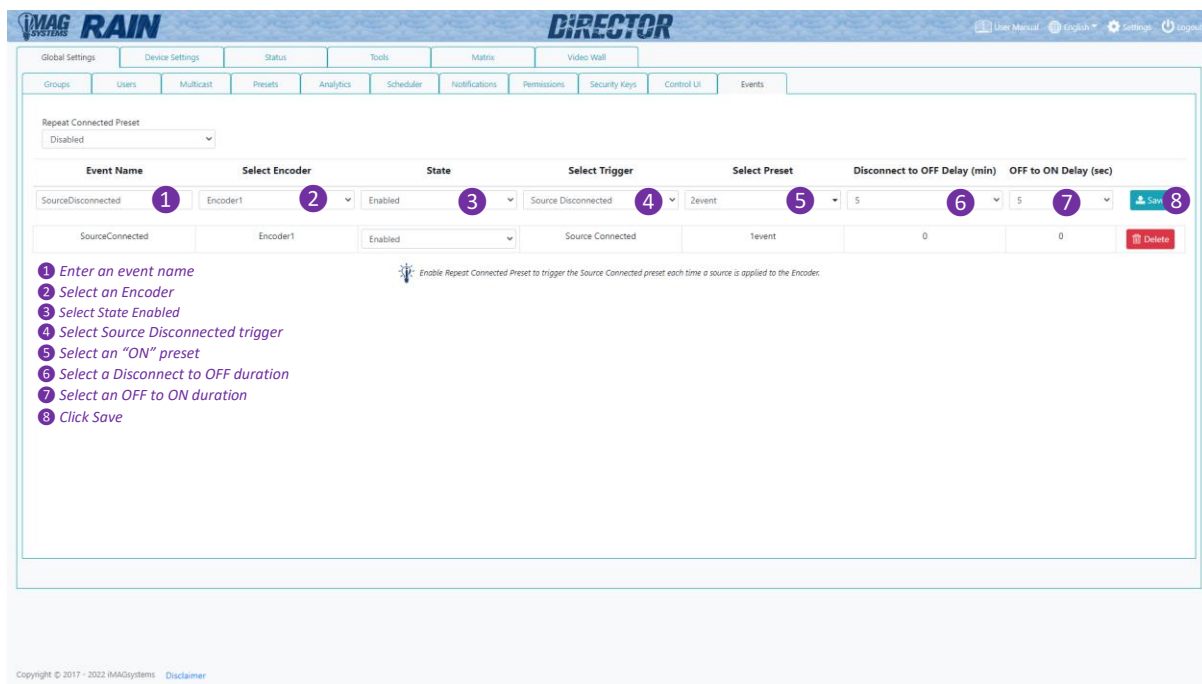
1 Enter an event name
 2 Select an Encoder
 3 Select State Enabled
 4 Select Source Connected trigger
 5 Select an "ON" preset
 6 Set Repeat Connected Preset option
 7 Click Save

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1.10 Events continued...

Select a Source Disconnected trigger event from an Encoder then select a preset to be applied when the Encoder source becomes unavailable. The preset will only be applied after the Disconnect to OFF delay duration. This event is cancelled each time an Encoder source becomes available.

The OFF to ON Delay will prevent the Source Connected event for the delay duration.



Repeat Connected Preset: Disabled

Event Name	Select Encoder	State	Select Trigger	Select Preset	Disconnect to OFF Delay (min)	OFF to ON Delay (sec)	
SourceDisconnected	Encoder1	Enabled	Source Disconnected	Zeivent	5	5	Save
SourceConnected	Encoder1	Enabled	Source Connected	Teivent	0	0	Delete

1 Enter an event name
 2 Select an Encoder
 3 Select State Enabled
 4 Select Source Disconnected trigger
 5 Select an "ON" preset
 6 Select a Disconnect to OFF duration
 7 Select an OFF to ON duration
 8 Click Save

Enable Repeat Connected Preset to trigger the Source Connected preset each time a source is applied to the Encoder.

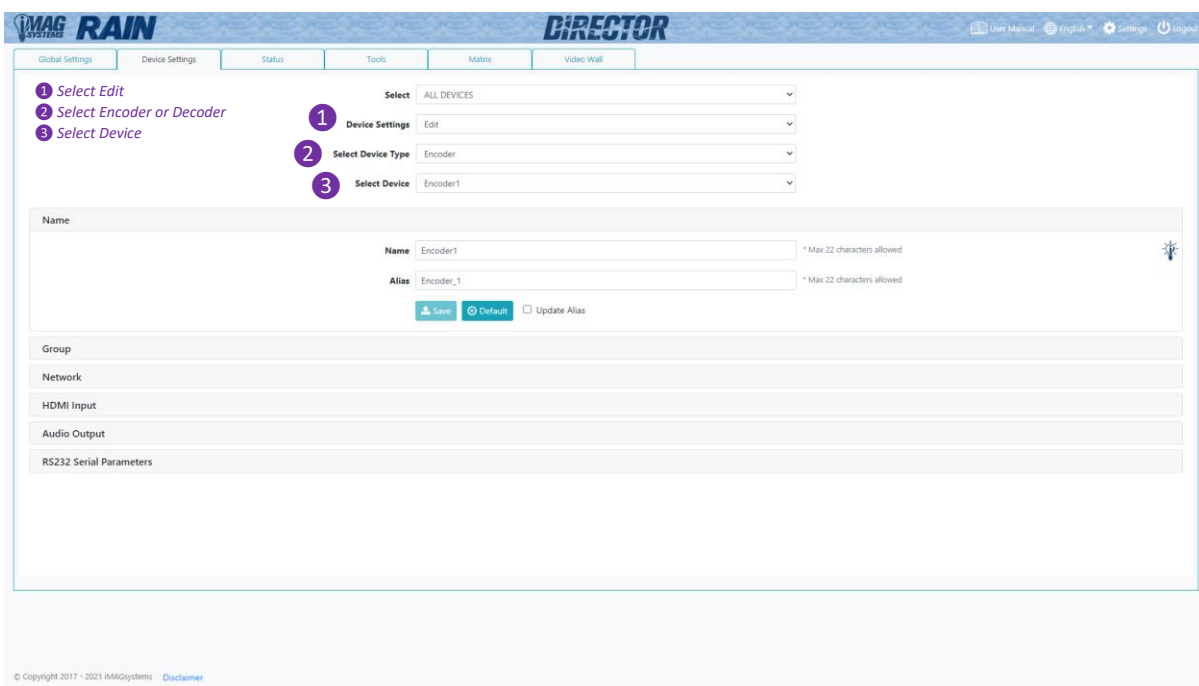
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2 Device Settings

This is where all the Encoders and Decoders are configured. Encoders and Decoders can be individually configured or all together taking advantage of exporting the csv formatted data and manipulating it as required before importing it back into the system. All changes made in the DeviceExport.csv configuration file will be applied to the Encoders and Decoders.

2.1 Edit Settings

Here you can change the device settings for all Encoders and Decoders on the system.



Global Settings | Device Settings | Status | Tools | Matrix | Video Wall

1 Select Edit
2 Select Encoder or Decoder
3 Select Device

Select: ALL DEVICES
Device Settings: Edit
Select Device Type: Encoder
Select Device: Encoder1

Name: Encoder1 * Max 22 characters allowed
Alias: Encoder_1 * Max 22 characters allowed

Save Default Update Alias

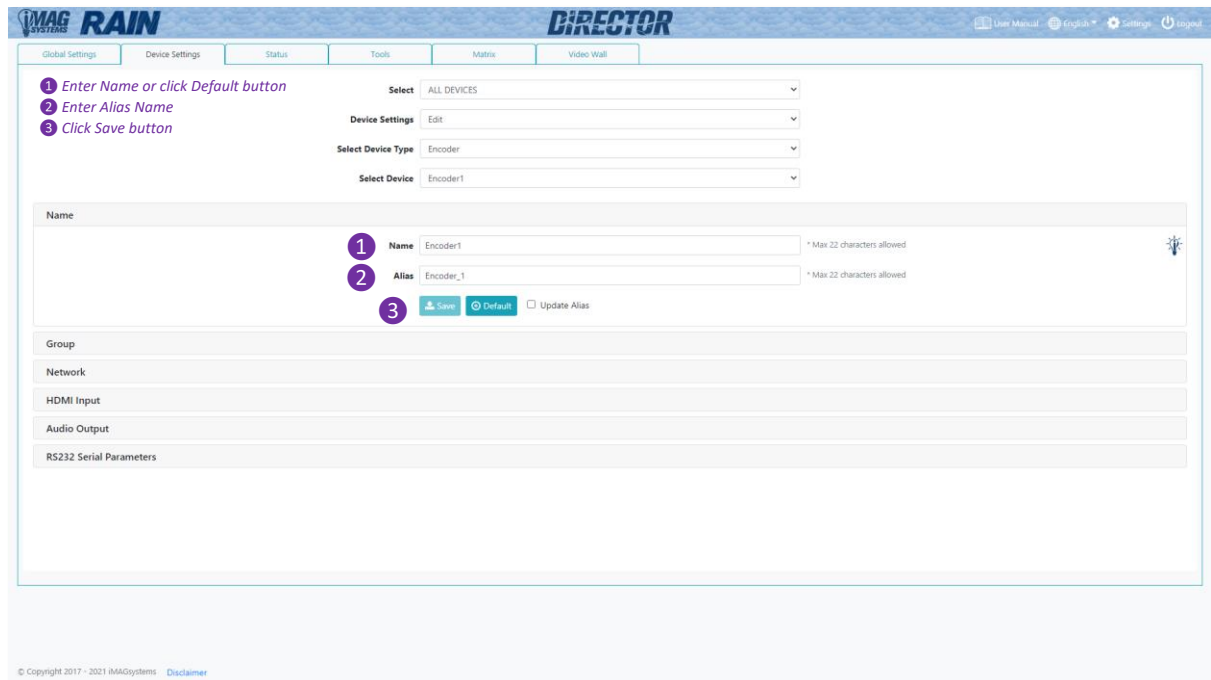
Group
Network
HDMI Input
Audio Output
RS232 Serial Parameters

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2.1.1 Name

The name of the device is used for control. This is the device name used in all control commands. Device names have a maximum of 22 characters and no spaces are allowed.

The Alias name will be used on the matrix once a group is selected.



1 Enter Name or click Default button
2 Enter Alias Name
3 Click Save button

Select: ALL DEVICES
Device Settings: Edit
Select Device Type: Encoder
Select Device: Encoder1

Name: Encoder1 * Max 22 characters allowed
Alias: Encoder_1 * Max 22 characters allowed
Save Default Update Alias

Group
Network
HDMI Input
Audio Output
RS232 Serial Parameters

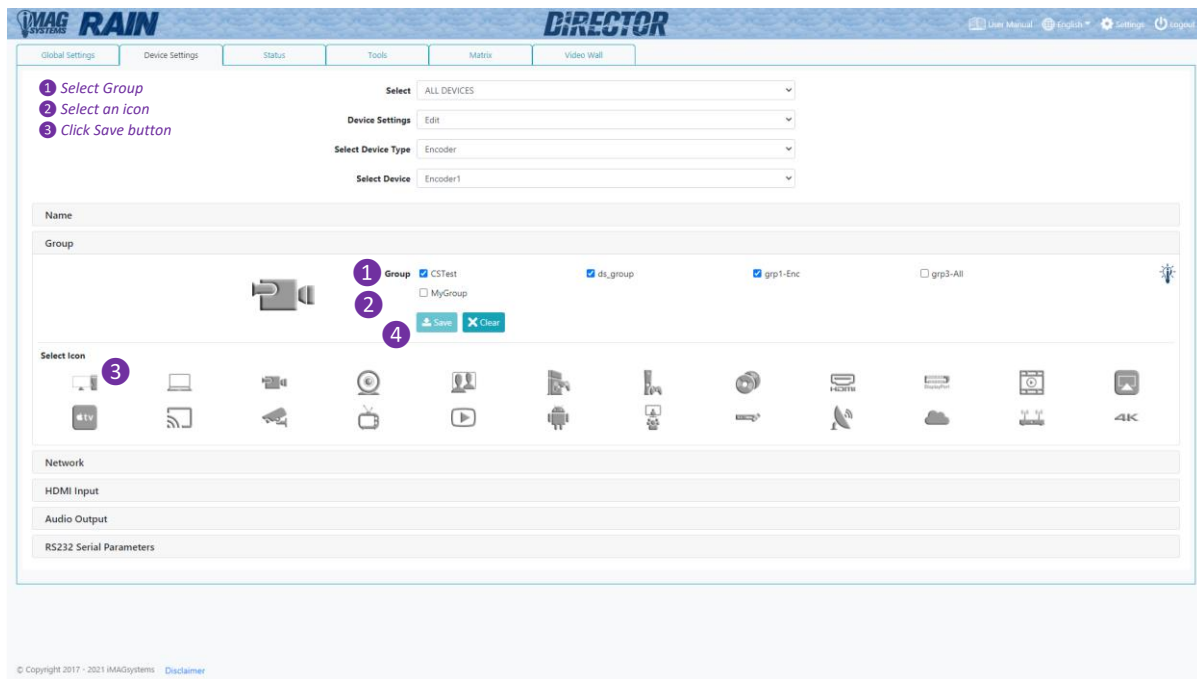
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The following devices names cannot be used:

- 'all'
- 'all_rx'
- 'all_tx'
- 'ungrouped'
- 'all_devices'
- Any Group name
- Any Preset name

2.1.2 Group

Encoders and Decoders can be assigned to groups. These groups are created from the Global Settings > Groups tab. An icon can be assigned to the device. The matrix will show the device with the selected icon.



1 Select Group
2 Select an icon
3 Click Save button

Select: ALL DEVICES
Device Settings: Edit
Select Device Type: Encoder
Select Device: Encoder1

Name

Group

1 Group ☒ CSTest ☒ ds_group ☒ grp1-Enc ☐ grp3-All

2 ☐ MyGroup

4 Save Clear

Select Icon 3

Network

HDMI Input

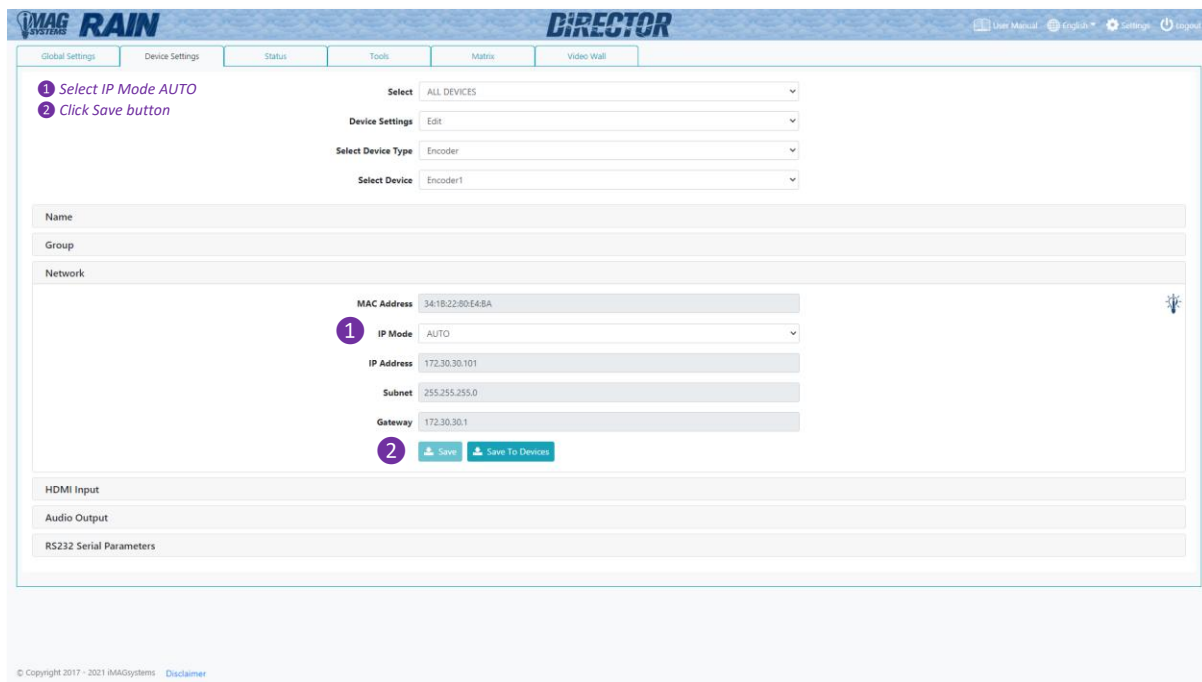
Audio Output

RS232 Serial Parameters

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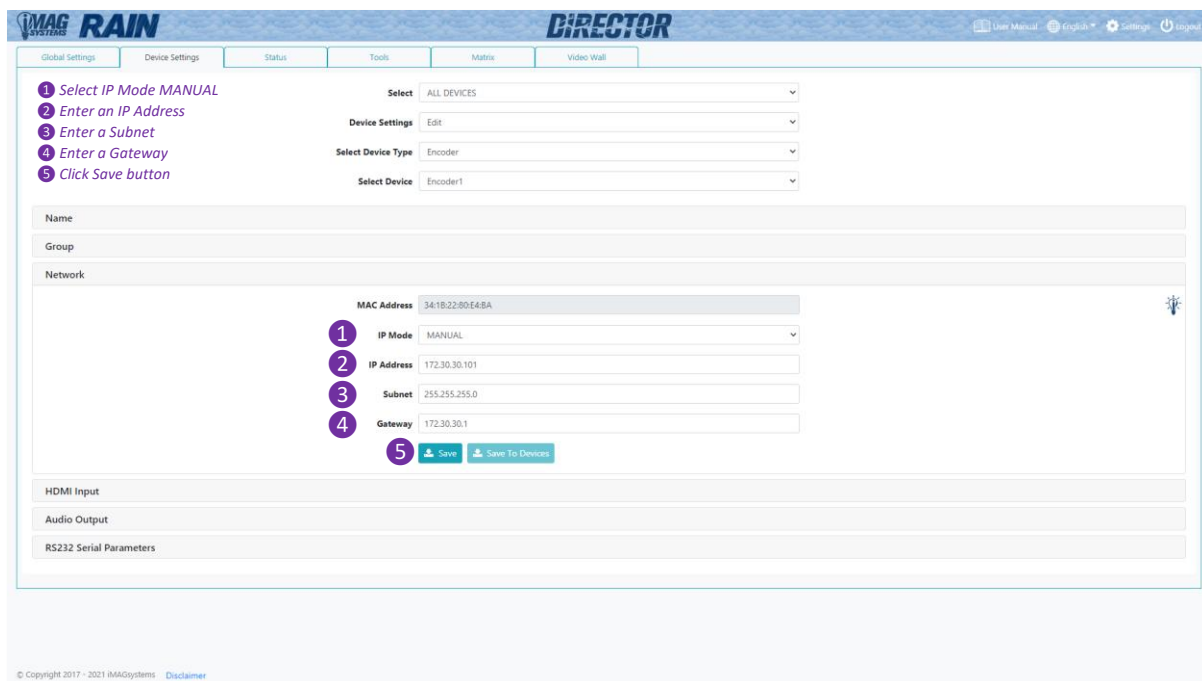
2.1.3 Network Interface

To assign DHCP so the device is automatically assigned an IP address from a DHCP server on the network select AUTO.



The screenshot shows the 'DIRECTOR RAIN' web interface. The 'Device Settings' tab is active. On the left, there are instructions: '1 Select IP Mode AUTO' and '2 Click Save button'. The 'Select' dropdown is set to 'ALL DEVICES'. The 'Device Settings' dropdown is set to 'Edit'. The 'Select Device Type' dropdown is set to 'Encoder'. The 'Select Device' dropdown is set to 'Encoder1'. The 'Name' field is empty. The 'Group' field is empty. The 'Network' field is empty. The 'MAC Address' field is '54:1B:22:80:E4:8A'. The 'IP Mode' dropdown is set to 'AUTO'. The 'IP Address' field is '172.30.30.101'. The 'Subnet' field is '255.255.255.0'. The 'Gateway' field is '172.30.30.1'. There are 'Save' and 'Save To Devices' buttons. Below the network settings, there are sections for 'HDMI Input', 'Audio Output', and 'RS232 Serial Parameters'.

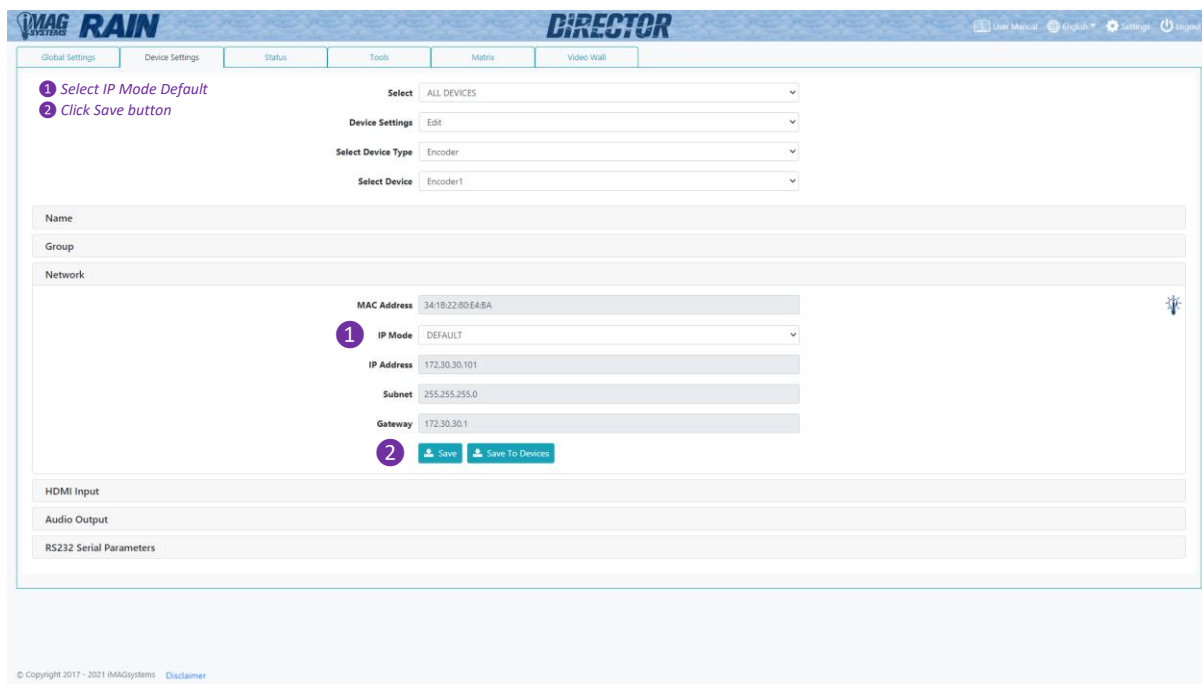
To assign a static IP address select MANUAL, then enter the details.



The screenshot shows the 'DIRECTOR RAIN' web interface. The 'Device Settings' tab is active. On the left, there are instructions: '1 Select IP Mode MANUAL', '2 Enter an IP Address', '3 Enter a Subnet', '4 Enter a Gateway', and '5 Click Save button'. The 'Select' dropdown is set to 'ALL DEVICES'. The 'Device Settings' dropdown is set to 'Edit'. The 'Select Device Type' dropdown is set to 'Encoder'. The 'Select Device' dropdown is set to 'Encoder1'. The 'Name' field is empty. The 'Group' field is empty. The 'Network' field is empty. The 'MAC Address' field is '54:1B:22:80:E4:8A'. The 'IP Mode' dropdown is set to 'MANUAL'. The 'IP Address' field is '172.30.30.101'. The 'Subnet' field is '255.255.255.0'. The 'Gateway' field is '172.30.30.1'. There are 'Save' and 'Save To Devices' buttons. Below the network settings, there are sections for 'HDMI Input', 'Audio Output', and 'RS232 Serial Parameters'.

2.1.3 Network Interface continued...

To assign DEFAULT so the device is automatically assigned a 169.x.x.x IP address select Default.



Global Settings | **Device Settings** | Status | Tools | Matrix | Video Wall

1 Select IP Mode Default
2 Click Save button

Select: ALL DEVICES
Device Settings: Edit
Select Device Type: Encoder
Select Device: Encoder1

Name
Group
Network

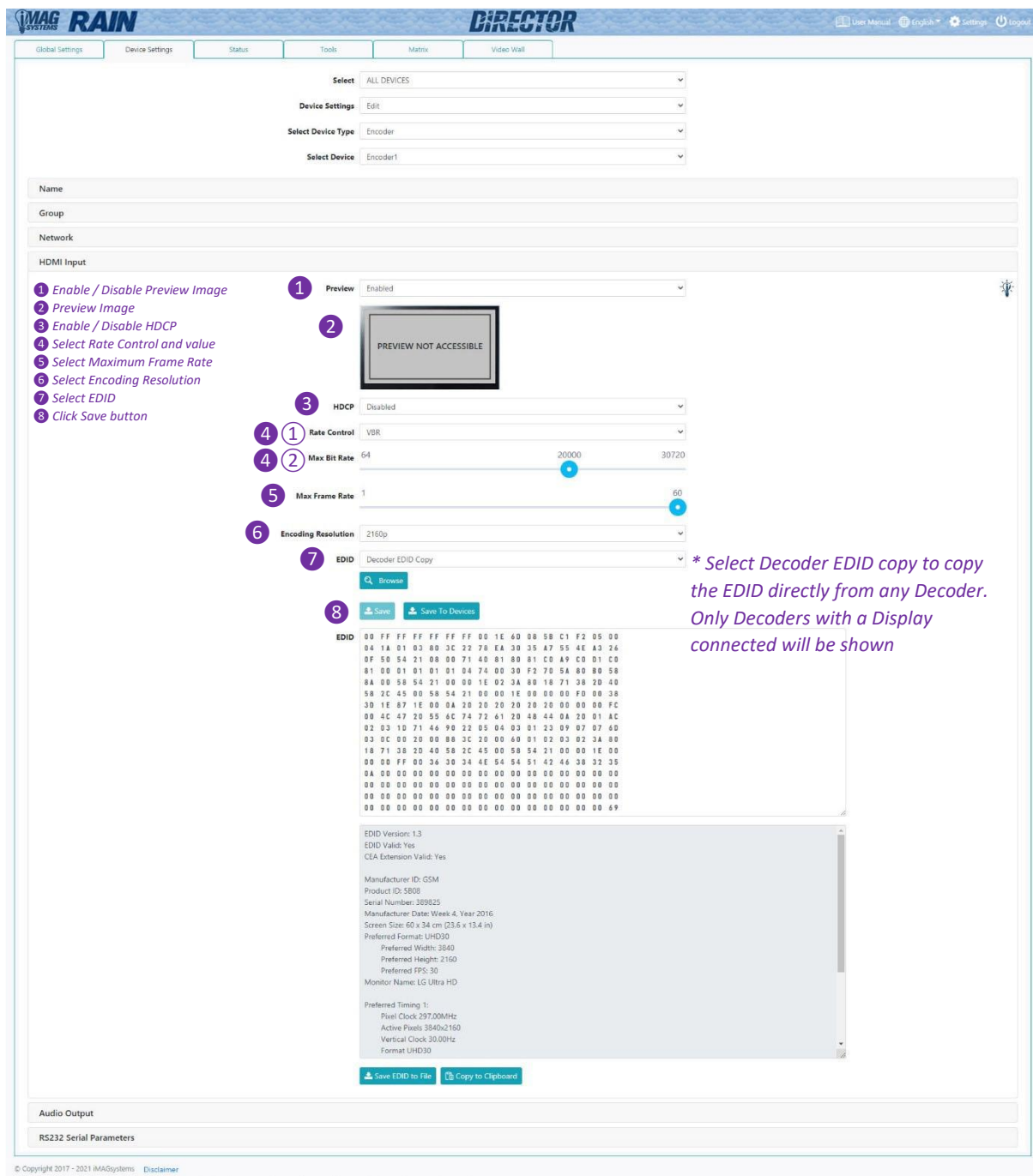
MAC Address: 34:1B:22:80:E4:8A
1 IP Mode: DEFAULT
IP Address: 172.30.30.101
Subnet: 255.255.255.0
Gateway: 172.30.30.1
2 Save Save To Devices

HDMI Input
Audio Output
RS232 Serial Parameters

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2.1.4 HDMI Input

Here you assign settings to the video input of an Encoder.



1 Enable / Disable Preview Image

2 Preview Image

3 Enable / Disable HDCP

4 Select Rate Control and value

5 Select Maximum Frame Rate

6 Select Encoding Resolution

7 Select EDID

8 Click Save button

1 Preview: Enabled

2 PREVIEW NOT ACCESSIBLE

3 HDCP: Disabled

4 **1** Rate Control: VBR

4 **2** Max Bit Rate: 64 (slider from 64 to 30720)

5 Max Frame Rate: 1 (slider from 1 to 60)

6 Encoding Resolution: 2160p

7 EDID: Decoder EDID Copy

8 Save, Save To Devices

EDID

```

00 FF FF FF FF FF FF 00 1E 40 08 5B C1 F2 05 00
04 1A 01 03 80 3C 22 78 EA 30 35 A7 55 4E A3 26
0F 50 54 21 08 00 71 40 81 80 81 C0 A9 C0 01 C0
81 00 01 01 01 01 04 74 00 30 F2 70 5A 80 80 58
8A 00 58 54 21 00 00 1E 02 3A 00 18 71 38 20 00
58 2C 45 00 58 54 21 00 00 1E 00 00 00 FD 00 38
30 1E 87 1E 00 0A 20 20 20 20 20 20 00 00 FC
00 4C 47 20 55 4C 74 72 61 20 48 44 0A 20 01 AC
02 03 10 71 46 90 22 05 04 03 01 23 09 07 07 40
03 0C 00 20 00 88 3C 20 00 60 01 02 03 02 3A 80
18 71 38 20 40 58 2C 45 00 58 54 21 00 00 1E 00
00 00 FF 00 3A 30 3A 4E 54 54 51 42 44 38 32 35
0A 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 49
  
```

EDID Version: 1.3
 EDID Valid: Yes
 CEA Extension Valid: Yes

Manufacturer ID: GSM
 Product ID: 5808
 Serial Number: 389325
 Manufacturer Date: Week 4, Year 2016
 Screen Size: 60 x 34 cm (23.6 x 13.4 in)
 Preferred Format: UHD30
 Preferred Width: 3840
 Preferred Height: 2160
 Preferred FPS: 30
 Monitor Name: LG Ultra HD

Preferred Timing 1:
 Pixel Clock 297.00MHz
 Active Pixels 3840x2160
 Vertical Clock 30.00Hz
 Format UHD30

Save EDID to File, Copy to Clipboard

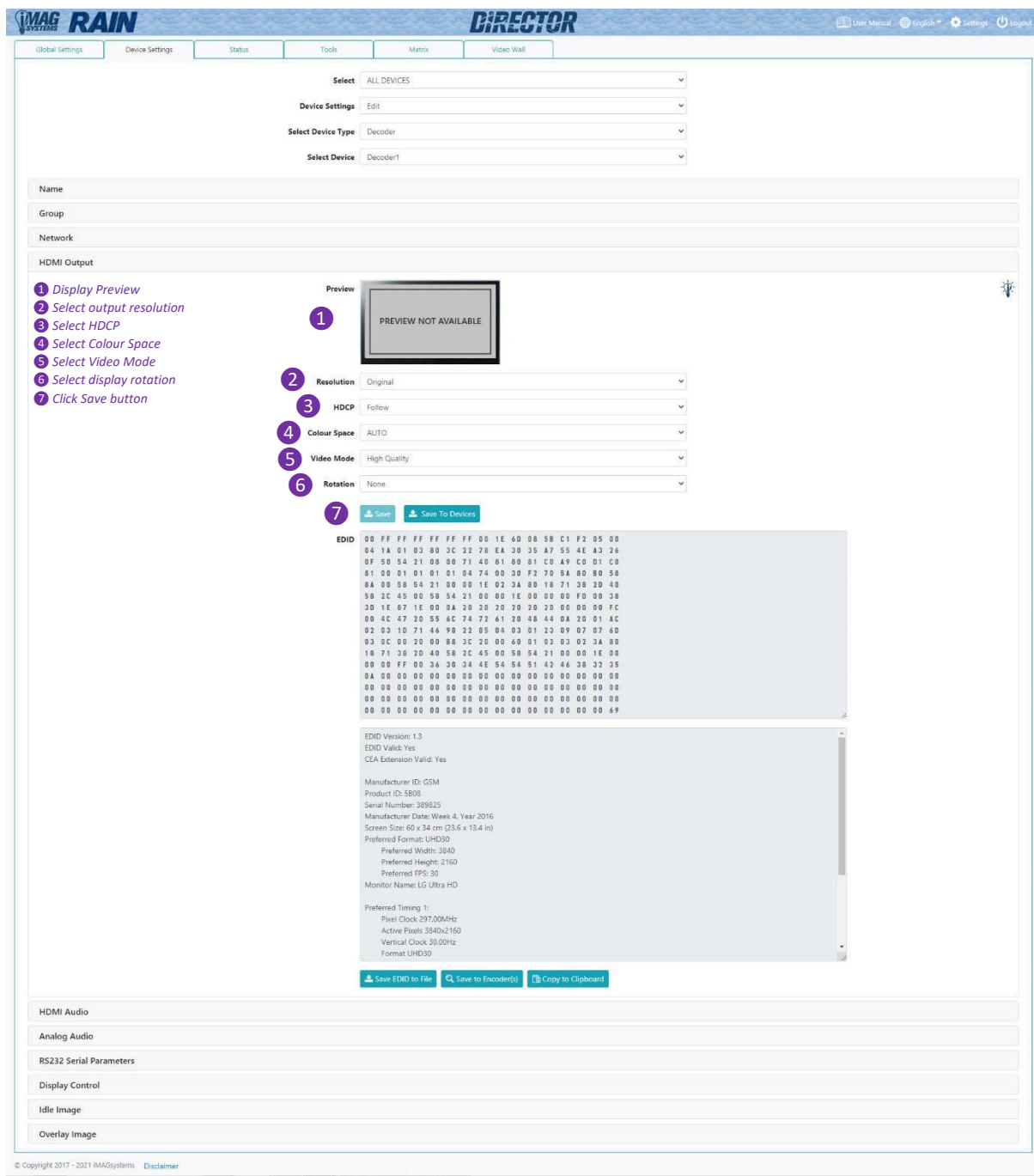
Audio Output

RS232 Serial Parameters

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2.1.5 HDMI Output (Decoder)

Here you can preview the display image and change all the Decoder video output related settings.



Global Settings | **Device Settings** | Status | Tools | Matrix | Video Wall

Select: ALL DEVICES

Device Settings: Edit

Select Device Type: Decoder

Select Device: Decoder1

Name: _____

Group: _____

Network: _____

HDMI Output

- 1 Display Preview
- 2 Select output resolution
- 3 Select HDCP
- 4 Select Colour Space
- 5 Select Video Mode
- 6 Select display rotation
- 7 Click Save button

Preview: PREVIEW NOT AVAILABLE

Resolution: Original

HDCP: Follow

Colour Space: AUTO

Video Mode: High Quality

Rotation: None

Save Save To Devices

EDID: 00 FF FF FF FF FF FF 00 1E 6D 08 5B C1 F2 05 00
04 1A 01 03 80 3C 22 78 EA 30 35 A7 55 4E A3 26
0F 50 54 21 08 00 71 40 01 80 81 C0 A9 C0 01 C0
81 00 81 01 01 01 04 74 00 30 73 70 5A 80 80 5B
8A 00 58 54 21 00 00 1E 02 3A 80 18 71 38 20 00
5B 2C 45 00 5B 54 21 00 00 1E 00 00 00 F0 00 38
3D 1E 87 1E 00 0A 20 20 20 20 20 00 00 00 FC
00 4C 47 20 55 6C 74 72 61 20 48 44 0A 20 01 AC
02 03 10 71 46 90 22 05 04 03 01 23 09 07 07 40
03 0C 00 20 00 8B 2C 20 00 60 01 02 00 02 3A 80
18 71 38 20 40 5B 2C 45 00 5B 54 21 00 00 1E 00
00 00 FF 00 36 30 34 4E 54 54 51 42 46 38 32 35
0A 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 69

EDID Version: 1.3
EDID Valid: Yes
CEA Extension Valid: Yes
Manufacturer ID: GSM
Product ID: 5808
Serial Number: 389825
Manufacturer Date: Week 4, Year 2016
Screen Size: 60 x 34 cm (23.6 x 13.4 in)
Preferred Format: UHD30
Preferred Width: 3840
Preferred Height: 2160
Preferred FPS: 30
Monitor Name: LG Ultra HD

Preferred Timing 1:
Pixel Clock 297.00MHz
Active Pixels 3840x2160
Vertical Clock 30.00Hz
Format UHD30

Save EDID to File Save to Encoder(s) Copy to Clipboard

HDMI Audio

Analog Audio

RS232 Serial Parameters

Display Control

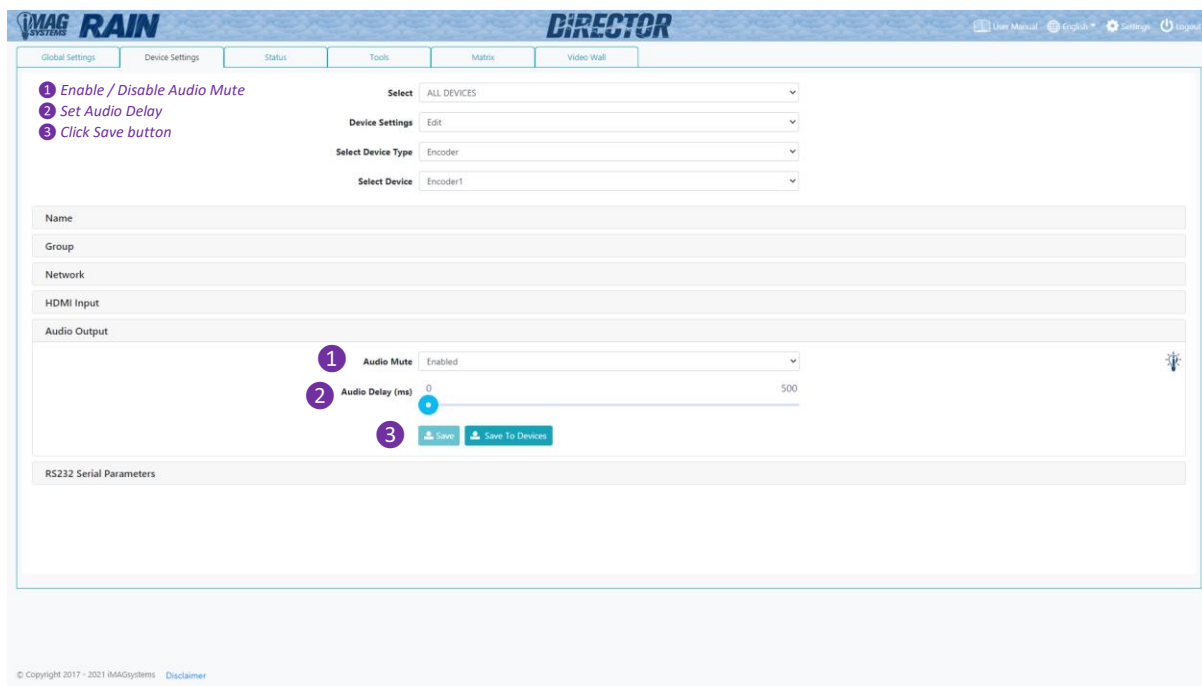
Idle Image

Overlay Image

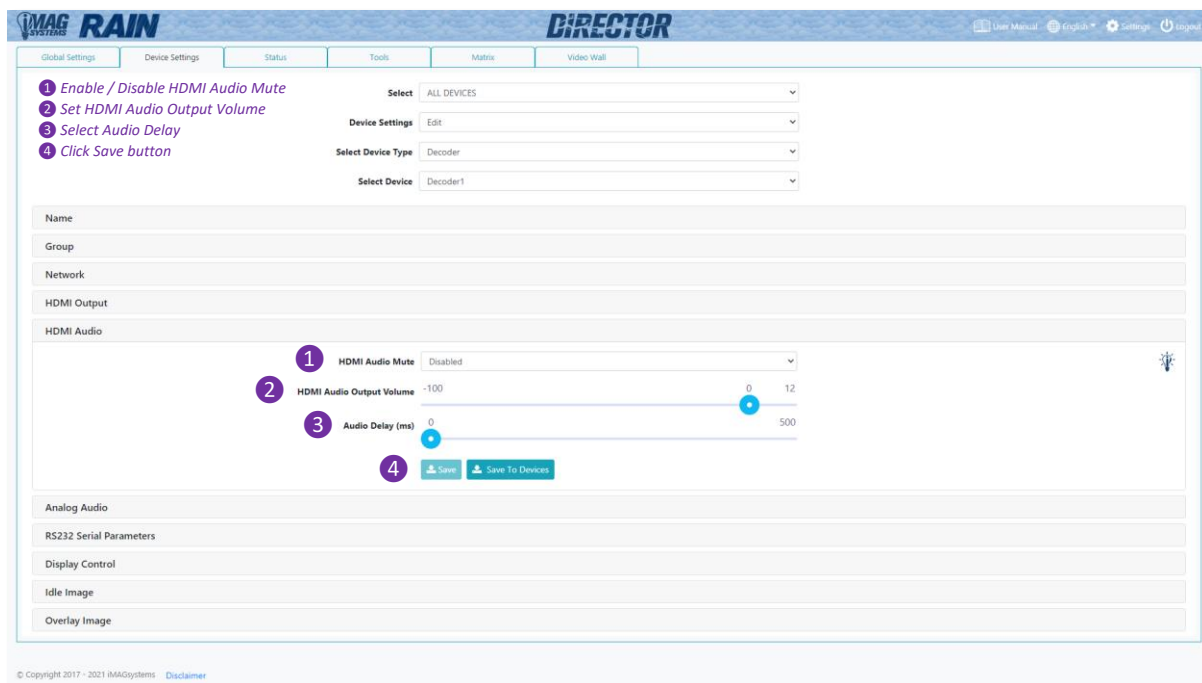
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2.1.6 Audio Output (Encoder)

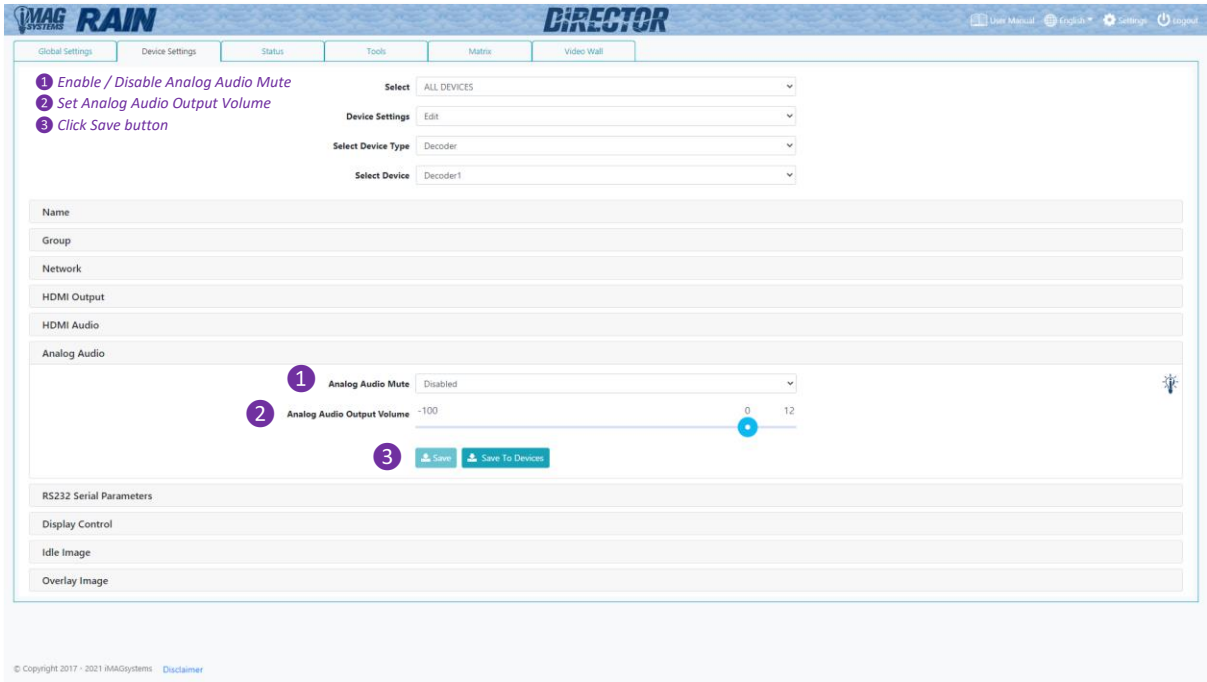
The analog audio output connector of an Encoder is an output of embedded HDMI audio.



2.1.7 HDMI Audio Output (Decoder)



2.1.8 Analog Audio Output (Decoder)



1 Enable / Disable Analog Audio Mute
2 Set Analog Audio Output Volume
3 Click Save button

Select: ALL DEVICES
Device Settings: Edit
Select Device Type: Decoder
Select Device: Decoder1

Name
Group
Network
HDMI Output
HDMI Audio
Analog Audio

1 Analog Audio Mute: Disabled
2 Analog Audio Output Volume: -100 to 12 (0)
3 Save Save To Devices

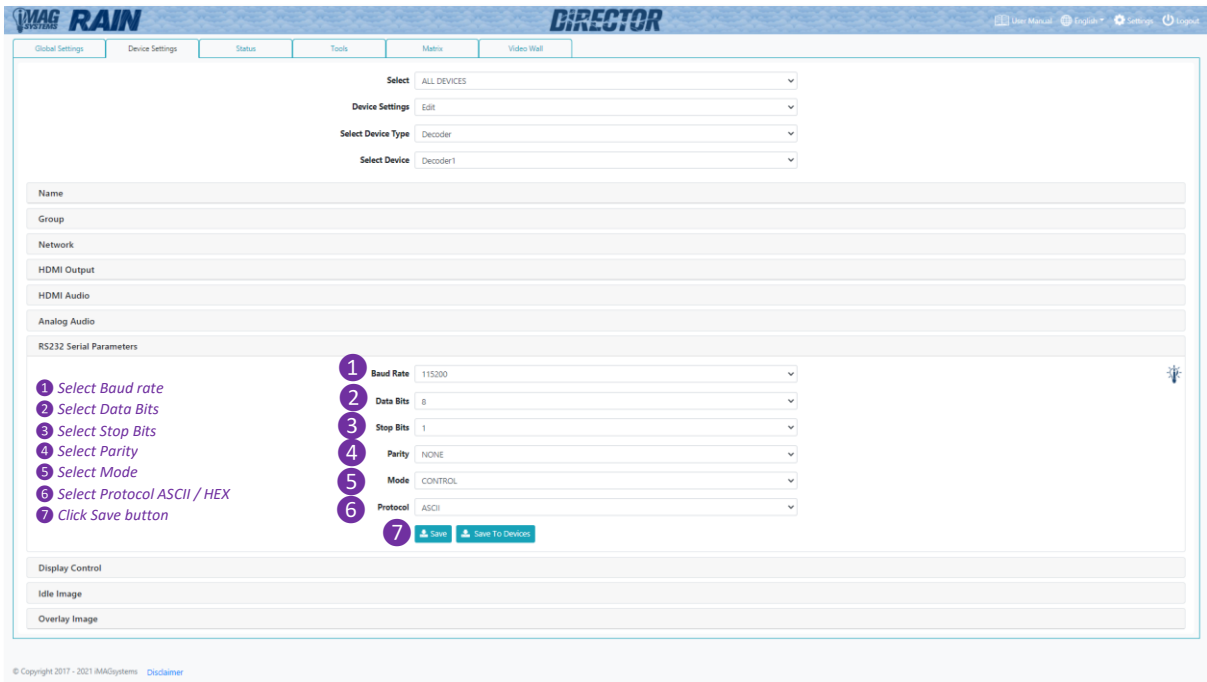
RS232 Serial Parameters
Display Control
Idle Image
Overlay Image

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2.1.9 RS232 Serial Interface Parameters

Here you configure the parameters for the serial RS232 port. Select the mode of communication as either ASCII or HEX. This will ensure the device feedback can be compared in the correct format.

The Mode of operation is either MATRIX or CONTROL. When in MATRIX mode the device will appear in the serial matrix and can be routed. When in CONTROL mode it will not appear in the matrix and can be used to send and receive from external serial peripherals.



Global Settings | Device Settings | Status | Tools | Matrix | Video Wall

Select: ALL DEVICES

Device Settings: Edit

Select Device Type: Decoder

Select Device: Decoder1

Name

Group

Network

HDMI Output

HDMI Audio

Analog Audio

RS232 Serial Parameters

- Select Baud rate
- Select Data Bits
- Select Stop Bits
- Select Parity
- Select Mode
- Select Protocol ASCII / HEX
- Click Save button

Baud Rate: 115200

Data Bits: 8

Stop Bits: 1

Parity: NONE

Mode: CONTROL

Protocol: ASCII

Save Save To Devices

Display Control

Idle Image

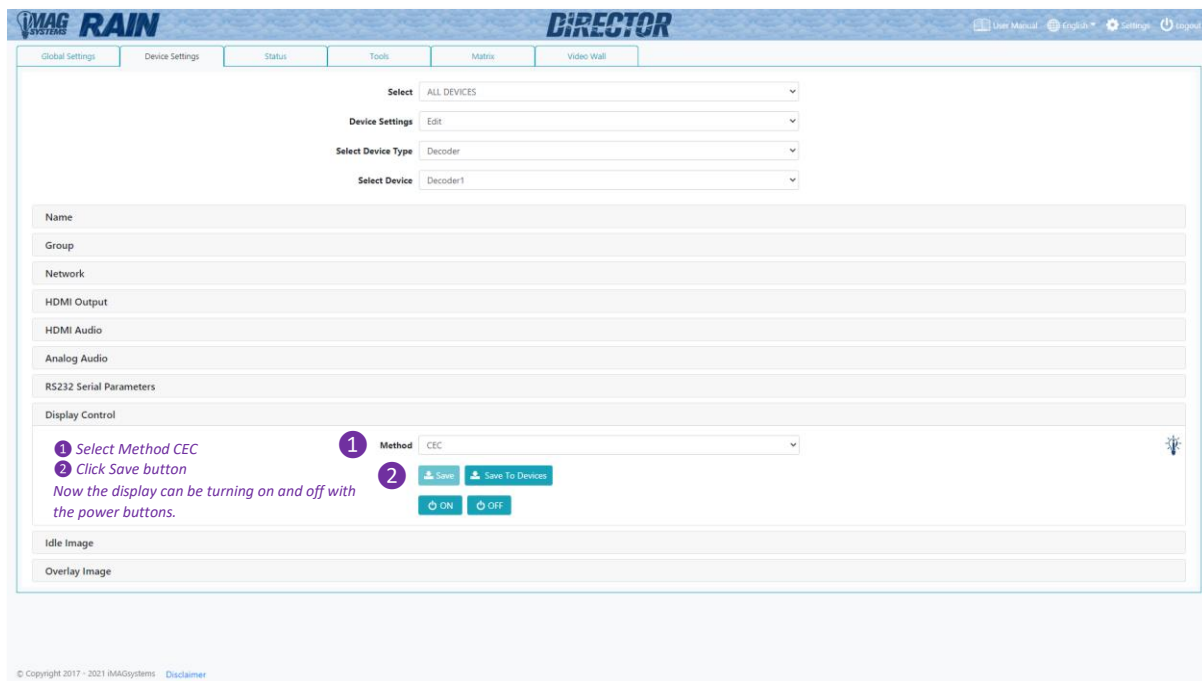
Overlay Image

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2.1.10 Display Control

Here you can turn the displays power on or off with CEC or RS232.

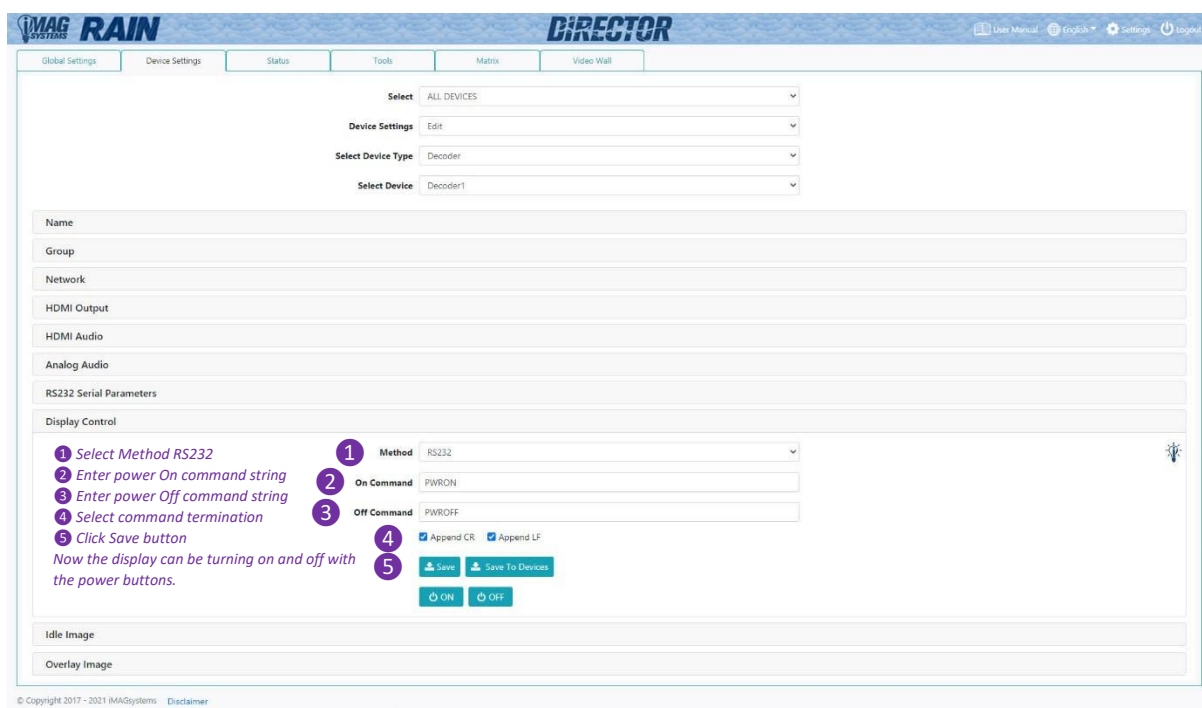
With CEC selected and a compatible display the power can be switched with no other commands.



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RS232 With selected and a compatible display the power can be switched with ASCII or HEX commands depending on the serial port setting applied.

Enter a command for power ON and power OFF, save and now the power buttons are functional.



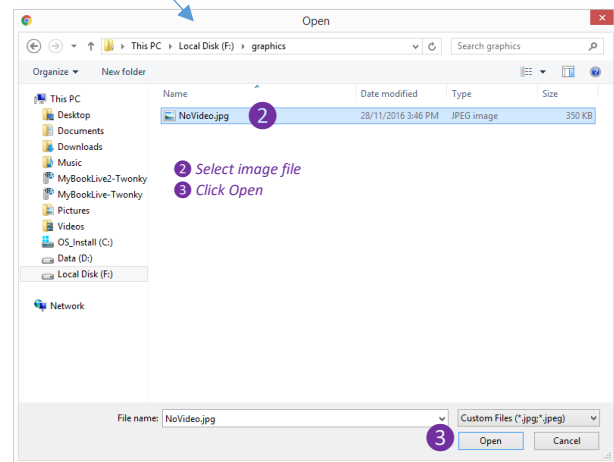
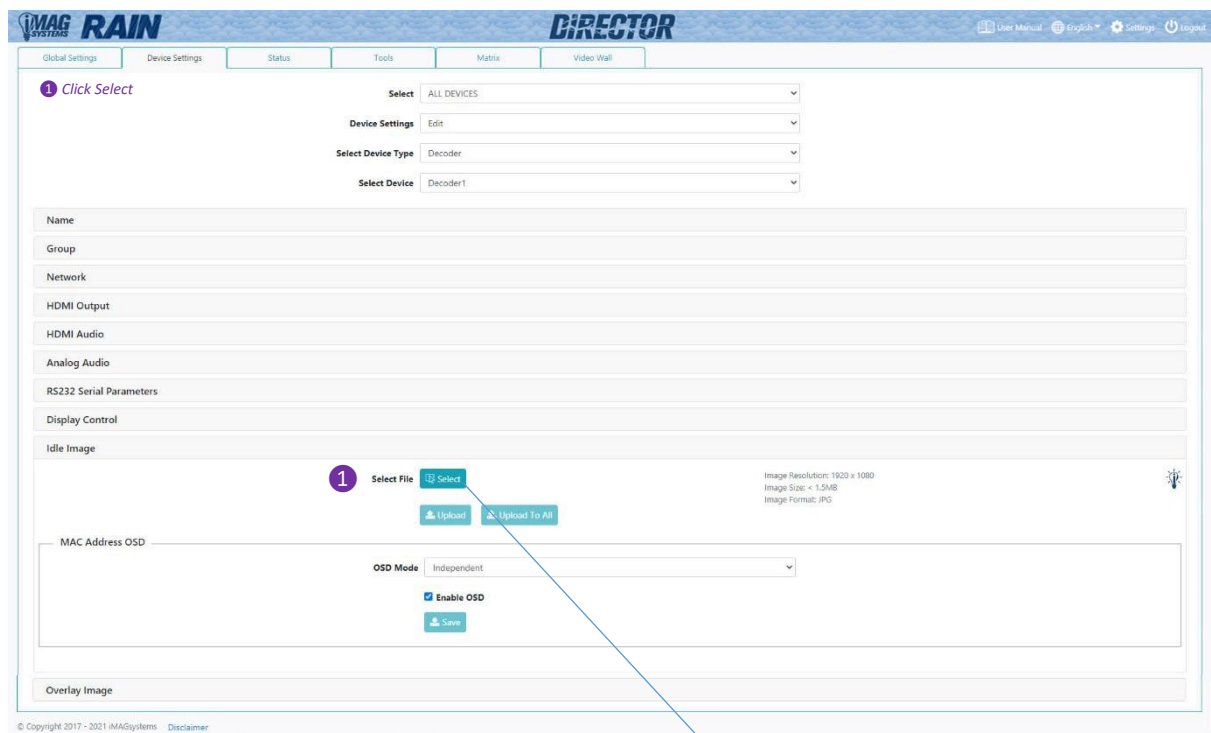
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2.1.11 Idle Image

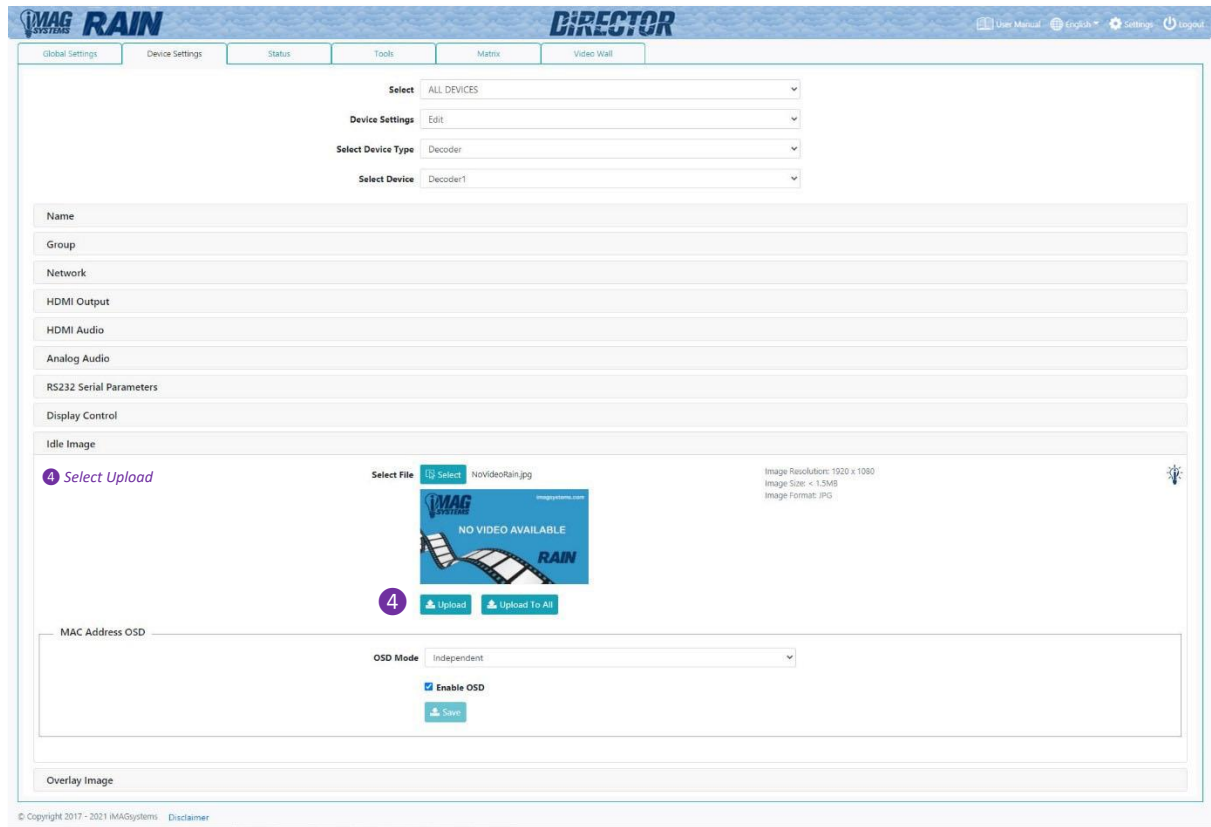
Here is where you can change the default splash screen shown when no video is displayed.



The format of the image must be jpg with a resolution of 1920x1080 and a maximum size of 1.5MB.

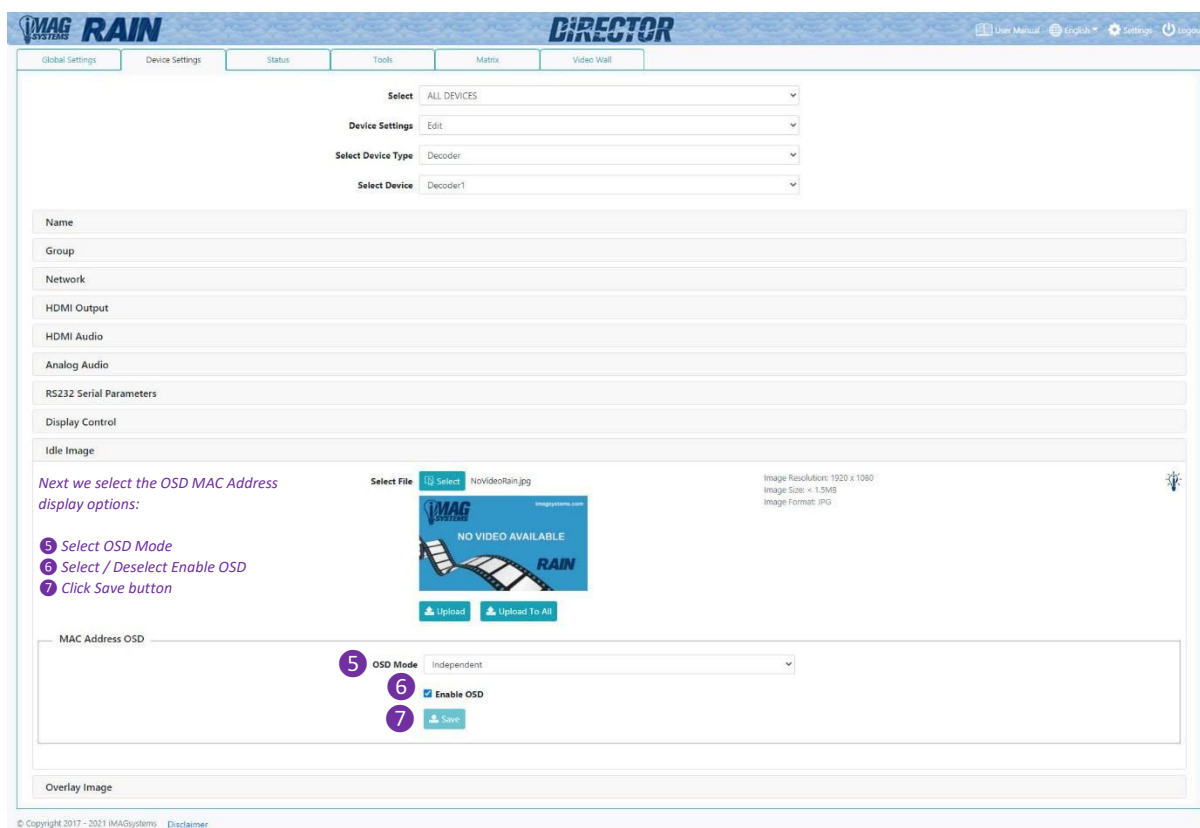


2.1.11 Idle Image continued...



The screenshot displays the DIRECTOR RAIN web interface. At the top, there is a navigation bar with tabs: Global Settings, Device Settings, Status, Tools, Matrix, and Video Wall. The 'Device Settings' tab is active. Below the navigation bar, there are four dropdown menus: 'Select' (set to ALL DEVICES), 'Device Settings' (set to Edit), 'Select Device Type' (set to Decoder), and 'Select Device' (set to Decoder1). Below these are several input fields for Name, Group, Network, HDMI Output, HDMI Audio, Analog Audio, RS232 Serial Parameters, Display Control, and Idle Image. The 'Idle Image' section is highlighted with a purple circle and the text '4 Select Upload'. It contains a 'Select File' button, a file selection area showing 'NoVideoRain.jpg' with a preview of a blue screen with 'NO VIDEO AVAILABLE' and 'RAIN' text, and a '4 Upload' button. To the right of the file selection area, it shows 'Image Resolution: 1920 x 1080', 'Image Size: < 1.5MB', and 'Image Format: JPG'. Below the file selection area, there is a 'MAC Address OSD' input field, an 'OSD Mode' dropdown (set to Independent), a checked 'Enable OSD' checkbox, and a 'Save' button. At the bottom, there is an 'Overlay Image' input field. The footer of the interface shows '© Copyright 2017 - 2021 iMAGSystems' and a 'Disclaimer' link.

2.1.11 Idle Image continued...



Next we select the OSD MAC Address display options:

- 5 Select OSD Mode
- 6 Select / Deselect Enable OSD
- 7 Click Save button

MAC Address OSD

OSD Mode: Independent

Enable OSD: ☒

Save

The upload status will indicate progress of the image upload.

The Decoder will require a reboot after the image has uploaded.

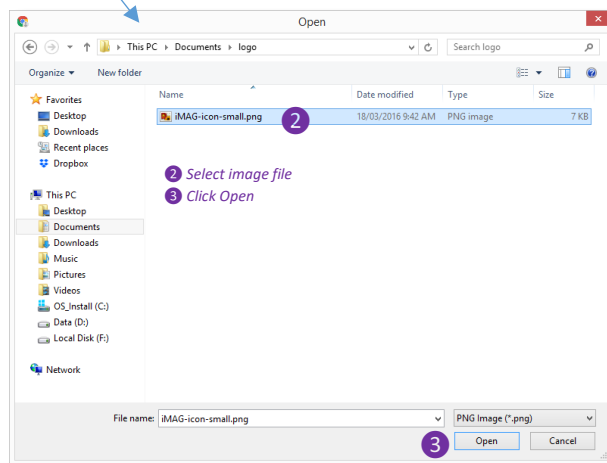
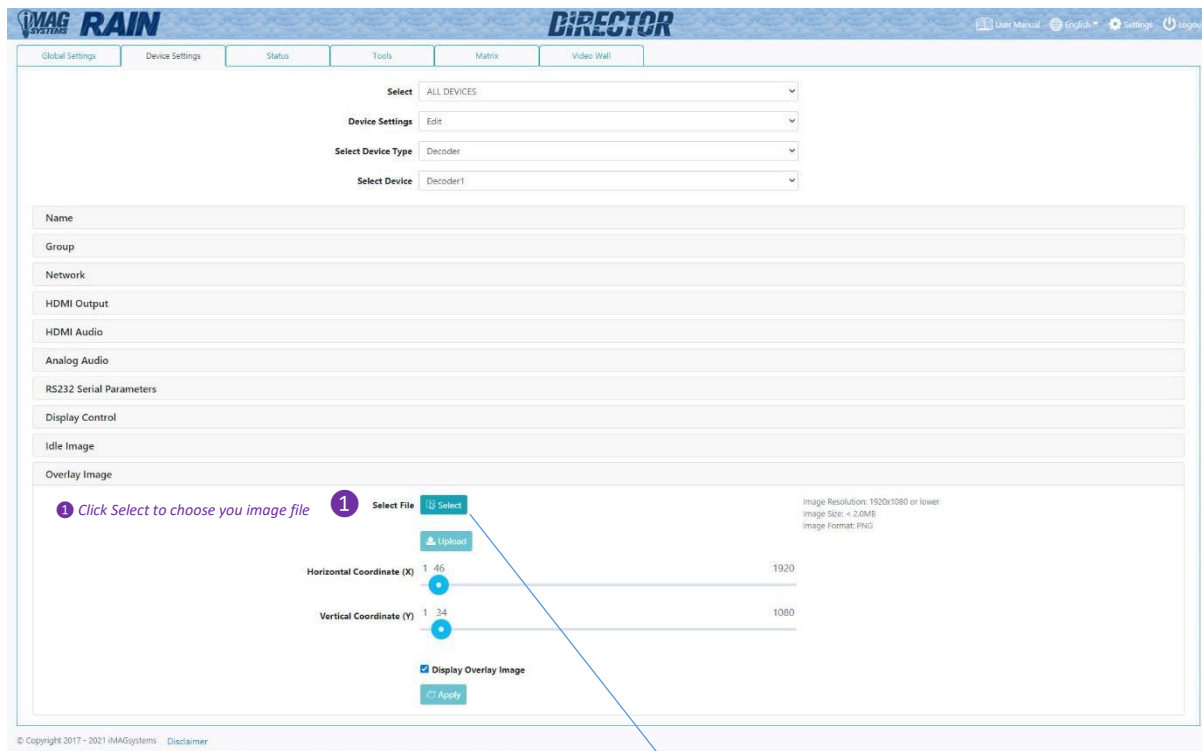
The MAC Address OSD can be displayed in two different ways:

- Follow means the OSD will be displayed with the no source image.
- Independent means the OSD will only be displayed when enabled.

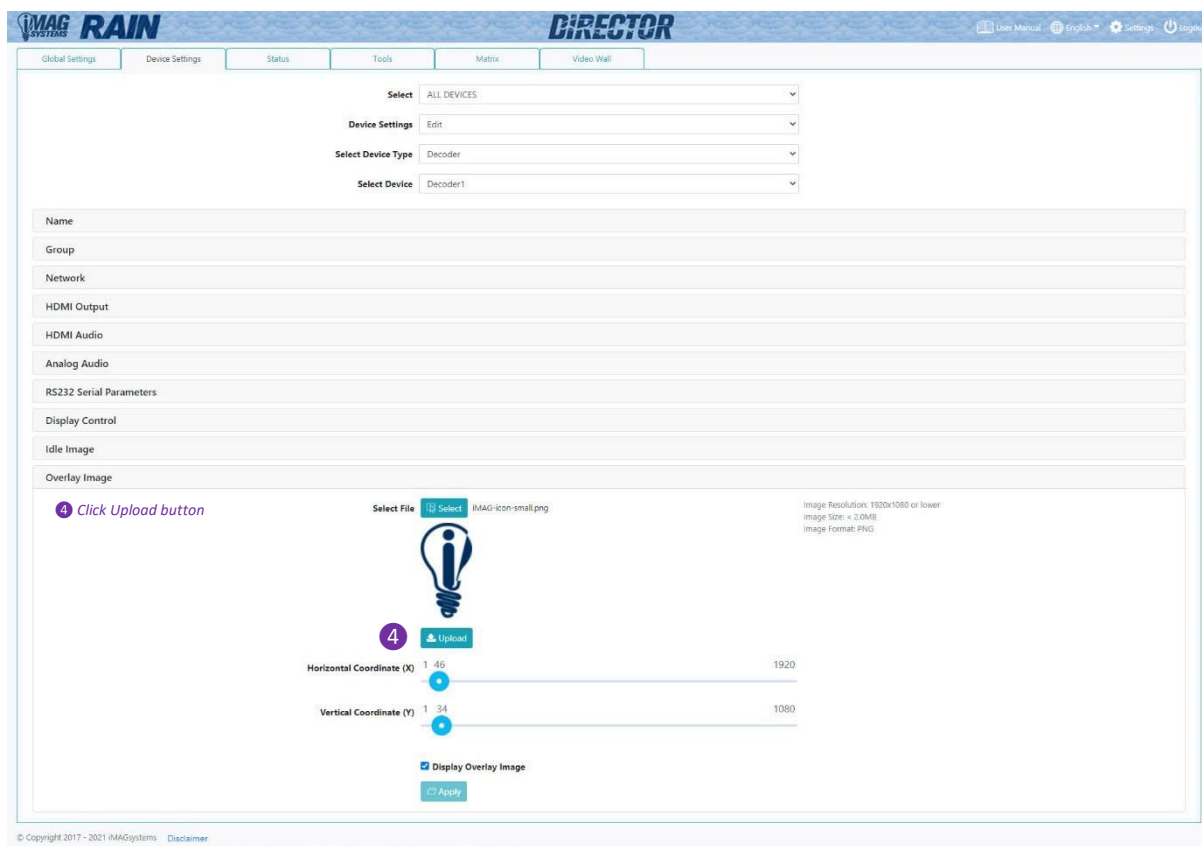
2.1.12 Overlay Image

Here is where you can set an overlay image that appears over the video being displayed. Usually this would be a logo. The maximum png image size is 1920x1080 but usually something much smaller would be used and placed in the corner by adjusting both the horizontal and vertical coordinates.

Once an image has been uploaded to the decoder it can then be shown with the Display Overlay Image checkbox.



2.1.12 Overlay Image continued...



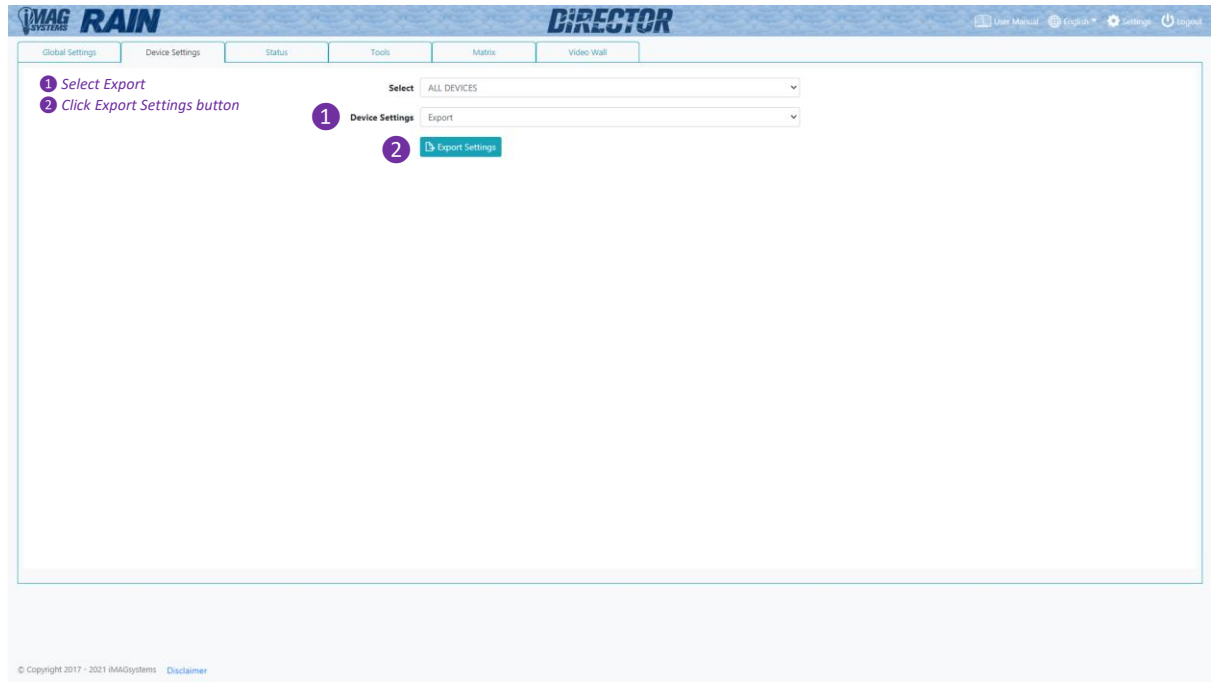
The Decoder will require a reboot after the image has uploaded.

Use the Horizontal and Vertical coordinates to position the image on the screen and click the Apply button to save any changes.

2.2 Export Settings

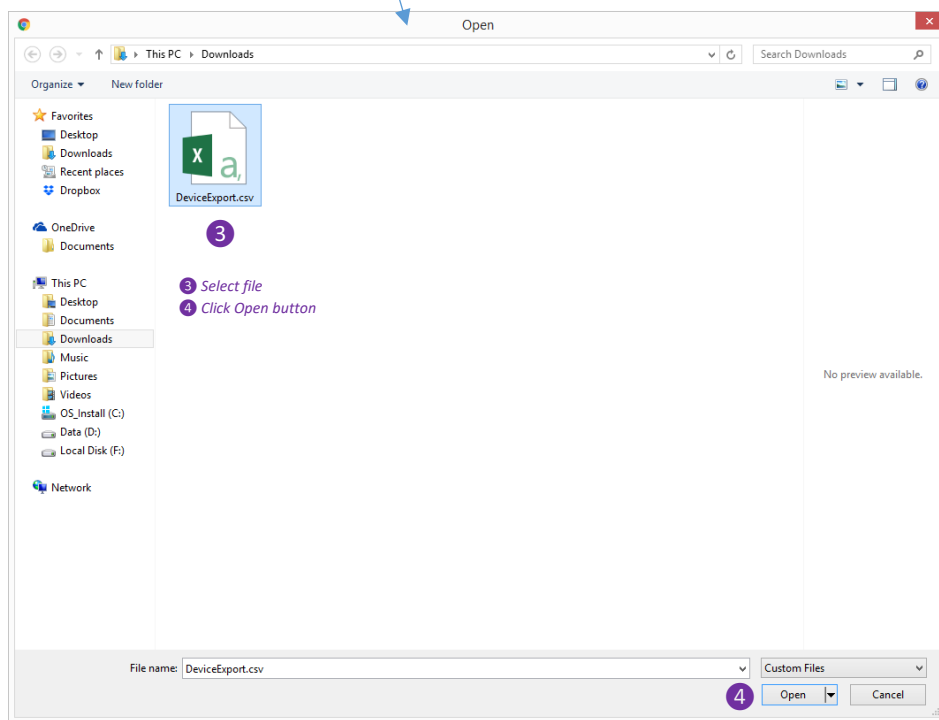
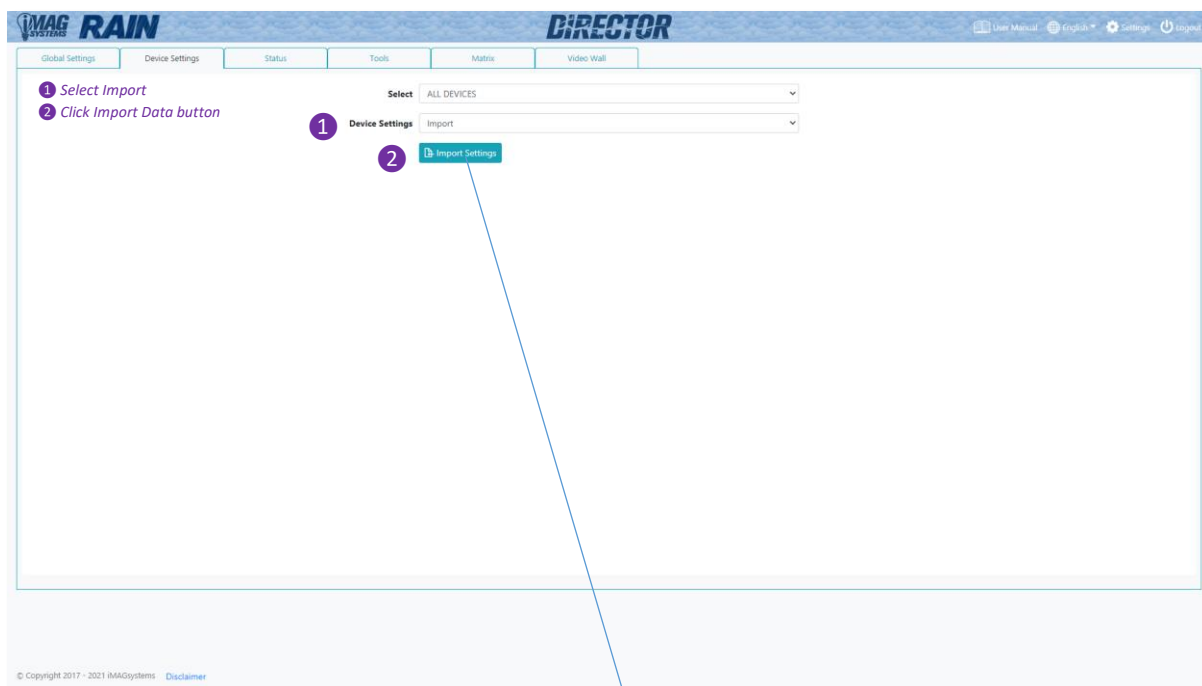
The current settings of all the Encoders and Decoders can be exported to a csv formatted file to be used as a configuration backup or be used to reconfigure the Encoders and Decoders by changing the required data and importing it back into the Director Controller.

A file named “DeviceExport.csv” will be exported to your Downloads folder.



2.3 Import Settings

The exported device settings file can be imported back into the system from here. Any device configuration changes made to the DeviceExport.csv will be applied once the file has been imported. This may take some time depending on the amount of configuration changes that need to be performed.



3 Status

The Status tab contains information about how an Encoder or Decoder is currently functioning. Streams can also be stopped or started.

Encoders and Decoders can be filtered by groups to limit the number of devices being displayed.

The status of all Encoders and Decoders can be exported to a csv formatted file using the “Export Status Report” button located at the top of the page. A StatusExport.csv file will be saved to your Downloads folder.

Icons are used to visually indicate the status of a device as follows:



Device is disconnected from the network.



Device is connected to the network, however, if the device is an Encoder it has no source, and if it is a Decoder it has no display connected.



Encoder is online and has a source connected.



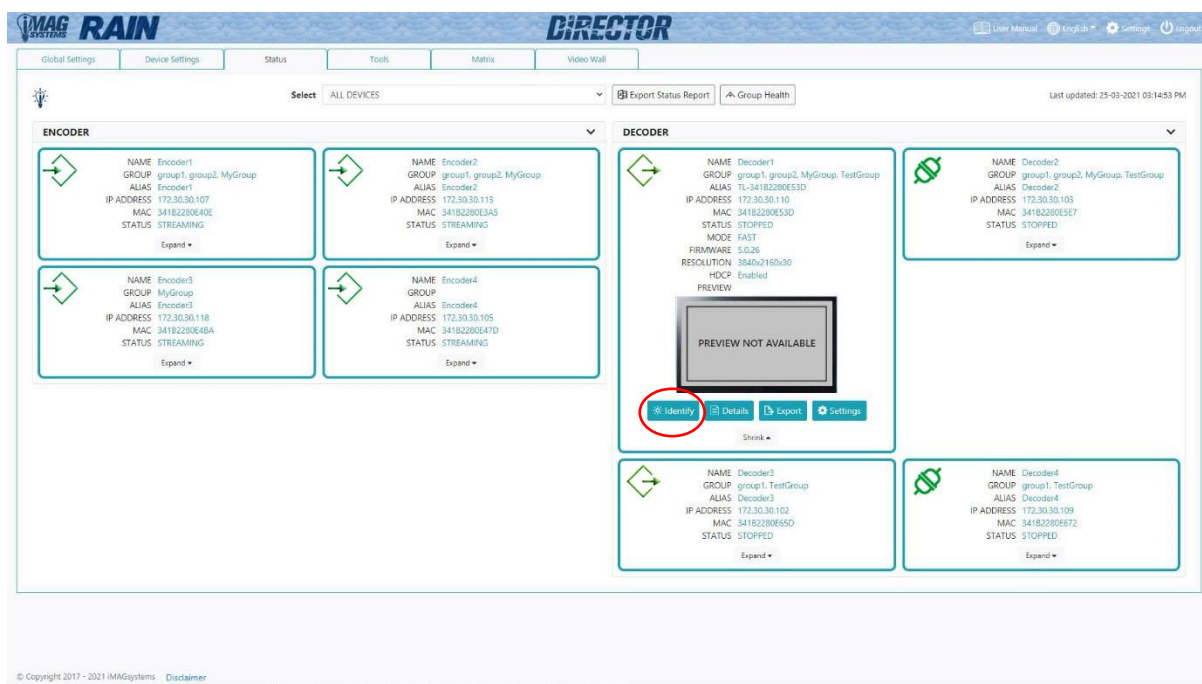
Decoder is online and has a display connected.



Device error.

3.1 Identify

Identify is found on a Decoder to display its details on the connected display OSD. Details will be displayed for 30 seconds.



The screenshot shows the DIRECTOR RAIN Status tab. The interface includes a top navigation bar with tabs: Global Settings, Device Settings, Status, Tools, Matrix, and Video Wall. The Status tab is active. Below the navigation bar, there is a 'Select' dropdown set to 'ALL DEVICES' and buttons for 'Export Status Report' and 'Group Health'. The main content area is divided into two sections: ENCODER and DECODER. The ENCODER section shows four encoder cards, each with fields for NAME, GROUP, ALIAS, IP ADDRESS, MAC, and STATUS. The DECODER section shows four decoder cards. The first decoder card, Decoder1, is expanded, showing additional fields: MODE FAST, FIRMWARE 5.0.26, RESOLUTION 3840x2160/30, and HDCP Enabled. Below these fields is a 'PREVIEW' section with a placeholder image and the text 'PREVIEW NOT AVAILABLE'. At the bottom of the expanded decoder card, there are buttons for 'Identify', 'Details', 'Export', and 'Settings'. The 'Identify' button is highlighted with a red circle. The interface also includes a 'Last updated' timestamp in the top right corner.

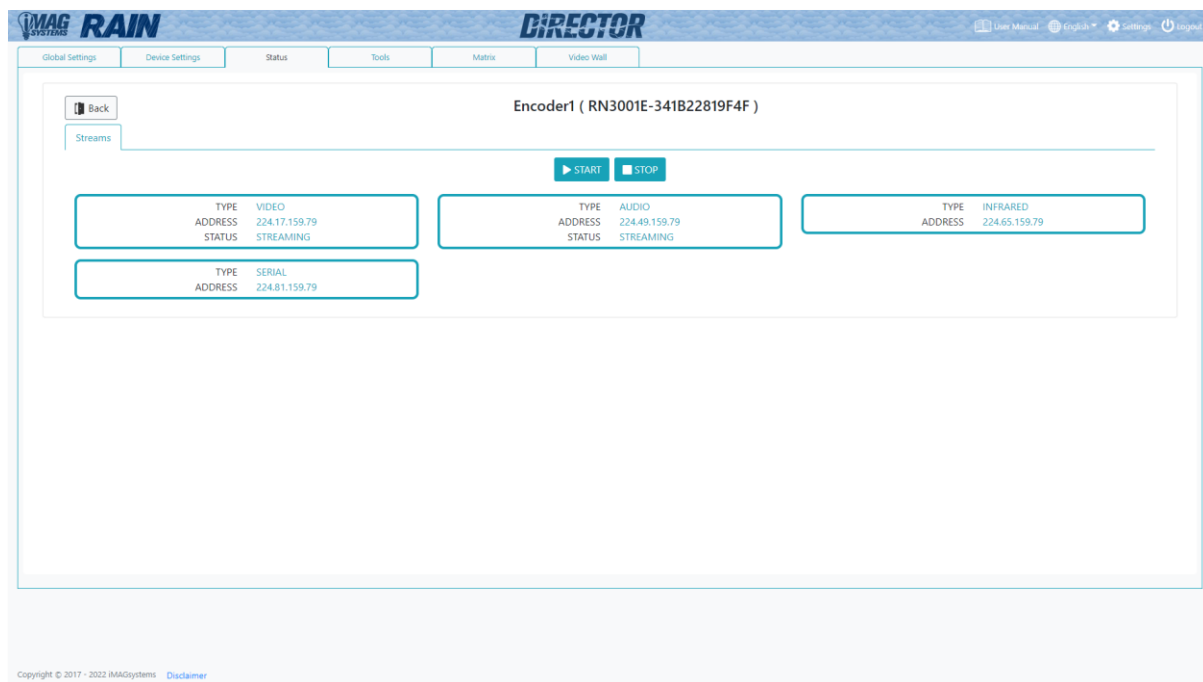
3.2 Details

Details contains information regarding the streams and subscriptions to those streams.

3.2.1 Streams (Encoder)

The Streams tab of an Encoder will show the status of the streams along with their multicast address.

From here you can **stop** or **start** AV streams.



The screenshot displays the DIRECTOR RAIN web interface. At the top, there's a navigation bar with tabs: Global Settings, Device Settings, Status, Tools, Matrix, and Video Wall. The 'Status' tab is active. Below the navigation bar, the main content area shows 'Encoder1 (RN3001E-341B22819F4F)'. On the left, there's a 'Back' button and a 'Streams' tab. In the center, there are 'START' and 'STOP' buttons. Below these, there are three boxes representing different stream types: VIDEO, AUDIO, and INFRARED. Each box shows the stream's address and status.

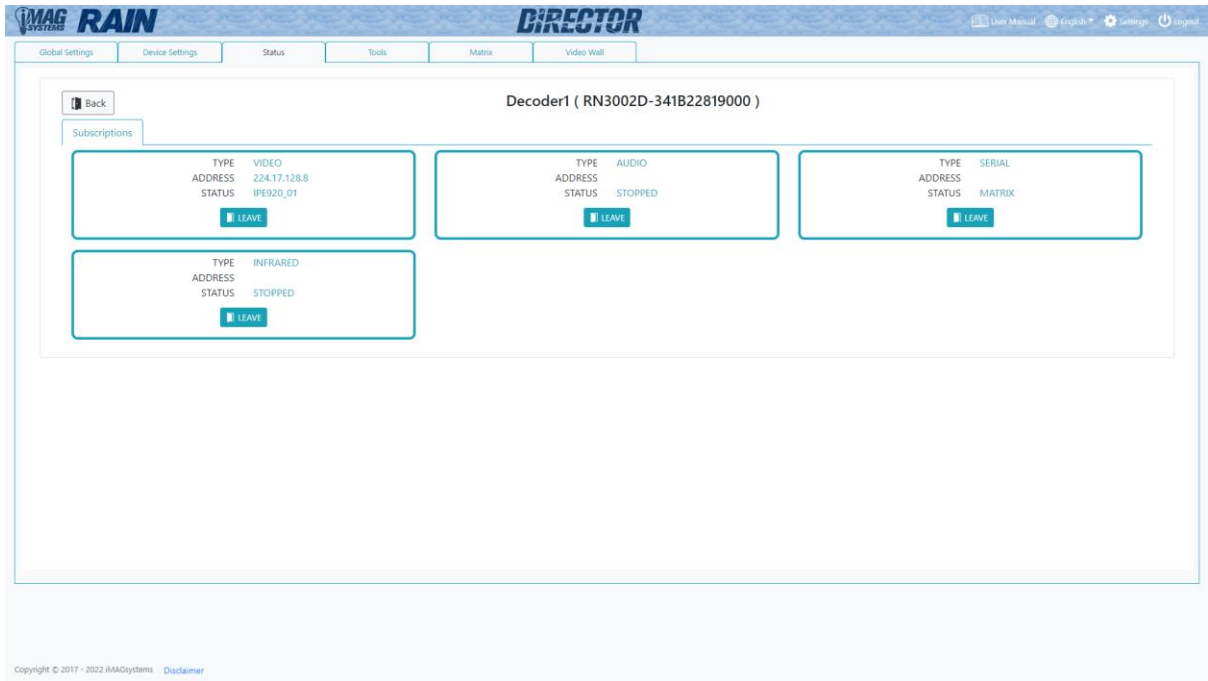
TYPE	ADDRESS	STATUS
VIDEO	224.17.159.79	STREAMING
AUDIO	224.49.159.79	STREAMING
INFRARED	224.65.159.79	

At the bottom left, there's a copyright notice: Copyright © 2017 - 2022 iMAGsystems Disclaimer.

3.2.2 Subscriptions (Decoder)

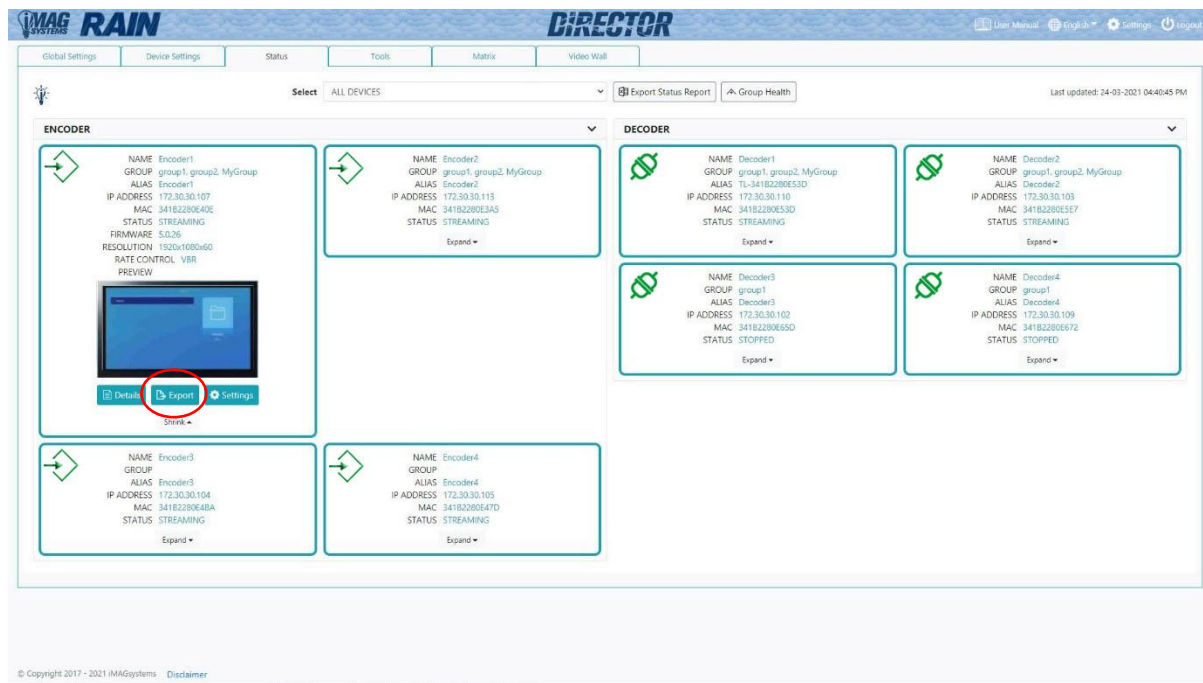
The Subscriptions tab of a Decoder will show what multicast address is being used to receive data. It will also indicate from what Encoder it is receiving the streams.

From here you can leave the streams.



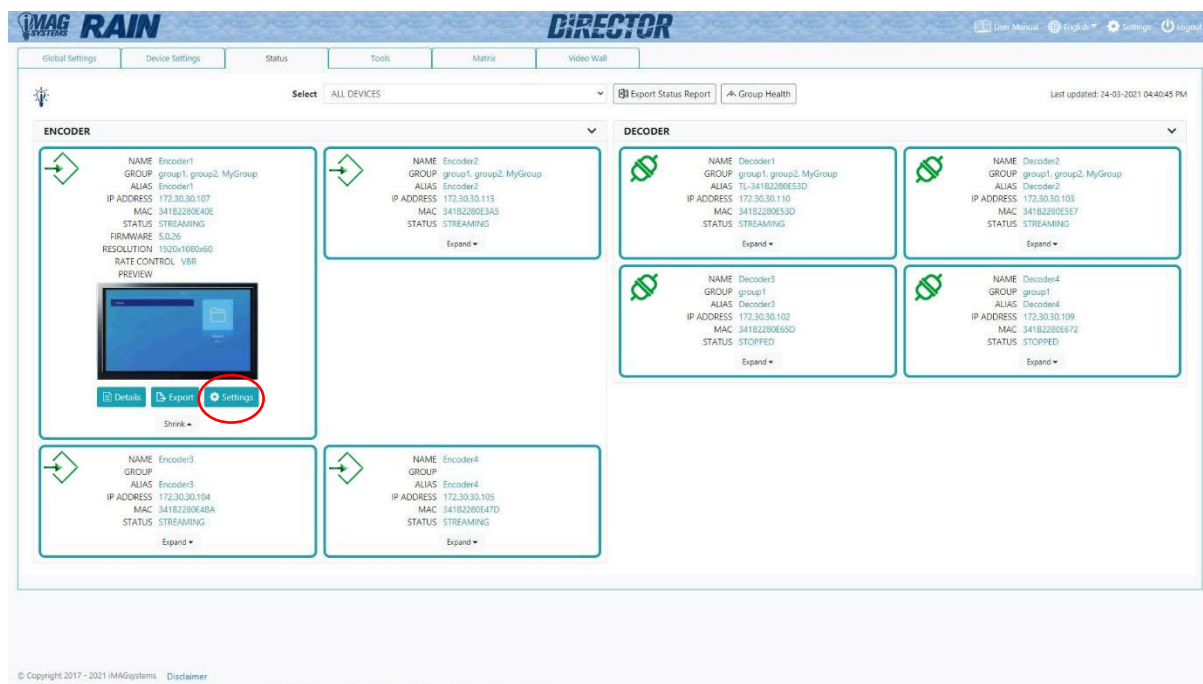
3.3 Export

A json formatted file will export the complete status of the selected device. This is to be used for system diagnostics. A *.ini file with the device name will be saved to your Downloads folder.



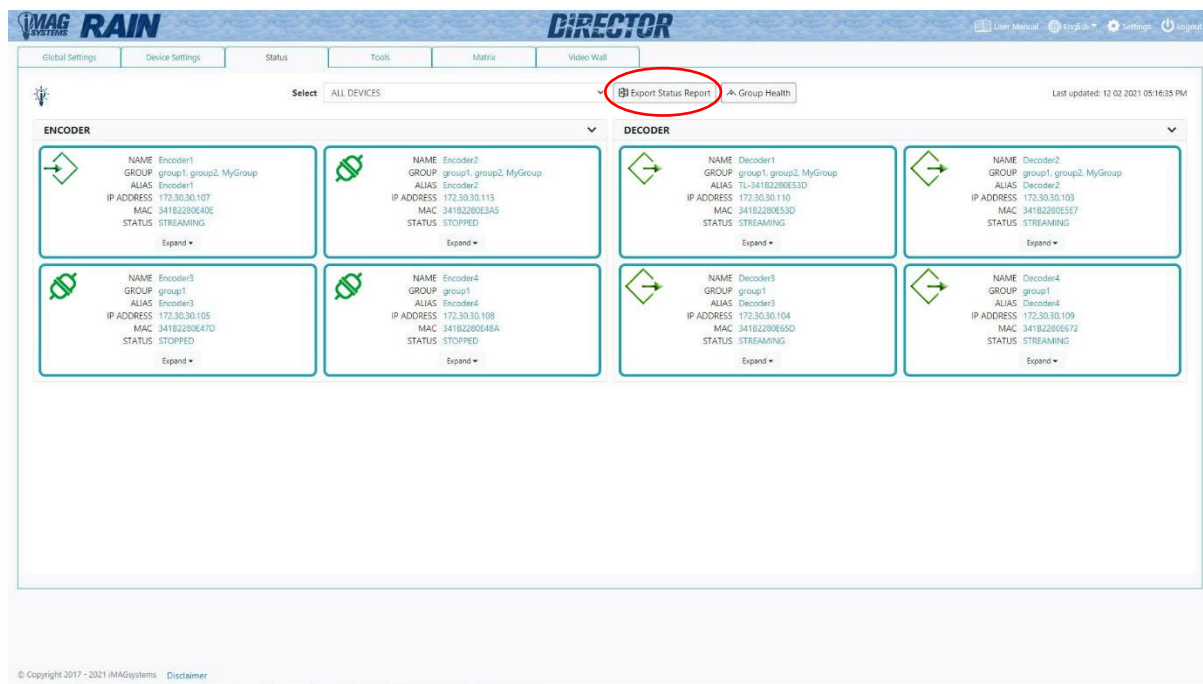
3.4 Settings

Clicking the Settings button on a device will send you directly to the device settings tab.



3.4 Export Status Report

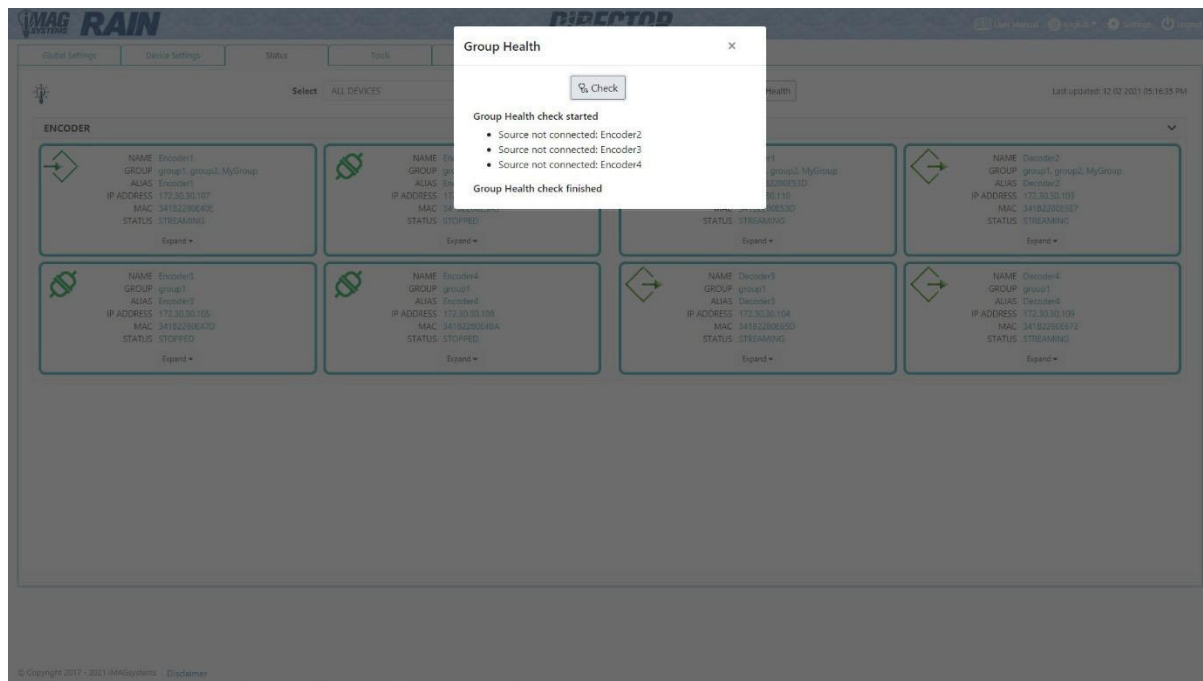
Export Status Report will save a csv formatted file with all the status details from this section.



The screenshot displays the iMAG RAIN DIRECTOR web interface. At the top, there is a navigation bar with tabs: Global Settings, Device Settings, Status, Tools, Matrix, and Video Wall. Below the navigation bar, a 'Select' dropdown menu is set to 'ALL DEVICES'. To the right of the dropdown, the 'Export Status Report' button is highlighted with a red circle. Further right, there is a 'Group Health' button. The main content area is divided into two sections: 'ENCODER' and 'DECODER'. Each section contains a grid of device status cards. Each card displays the following information: NAME, GROUP, ALIAS, IP ADDRESS, MAC, and STATUS. Below each card is an 'Expand' button. The 'ENCODER' section shows four cards for Encoder1 through Encoder4. The 'DECODER' section shows four cards for Decoder1 through Decoder4. The interface also includes a 'User Manual' link, a language selector (English), a settings icon, and a 'Logout' button in the top right corner. A timestamp 'Last updated: 12/02/2021 05:16:35 PM' is visible in the top right corner. At the bottom left, the copyright notice '© Copyright 2017 - 2021 iMAGSystems Disclaimer' is present.

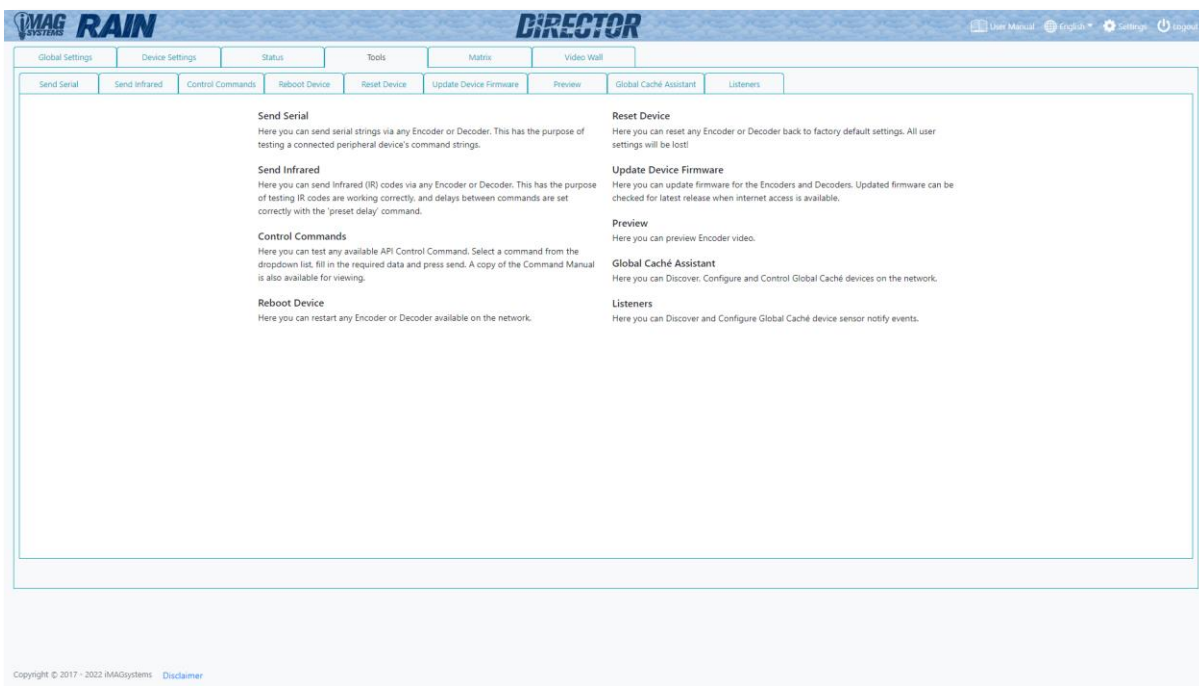
3.5 Group Health

Group Health will report the status of all the Encoders and Decoders in the selected group. If a group has a default preset associated with it, this can also be selected and applied to make sure there are no issues before the system is put into use.



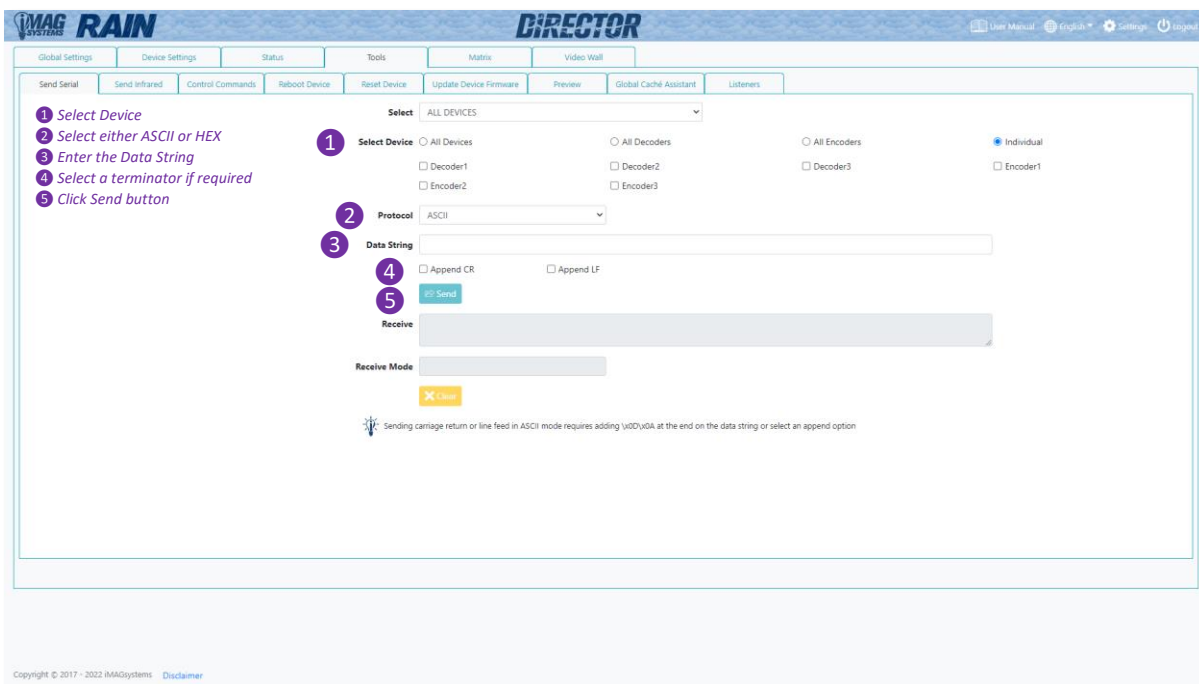
4 Tools

The Tools tab contains utilities to assist in the installation process and updating device firmware.



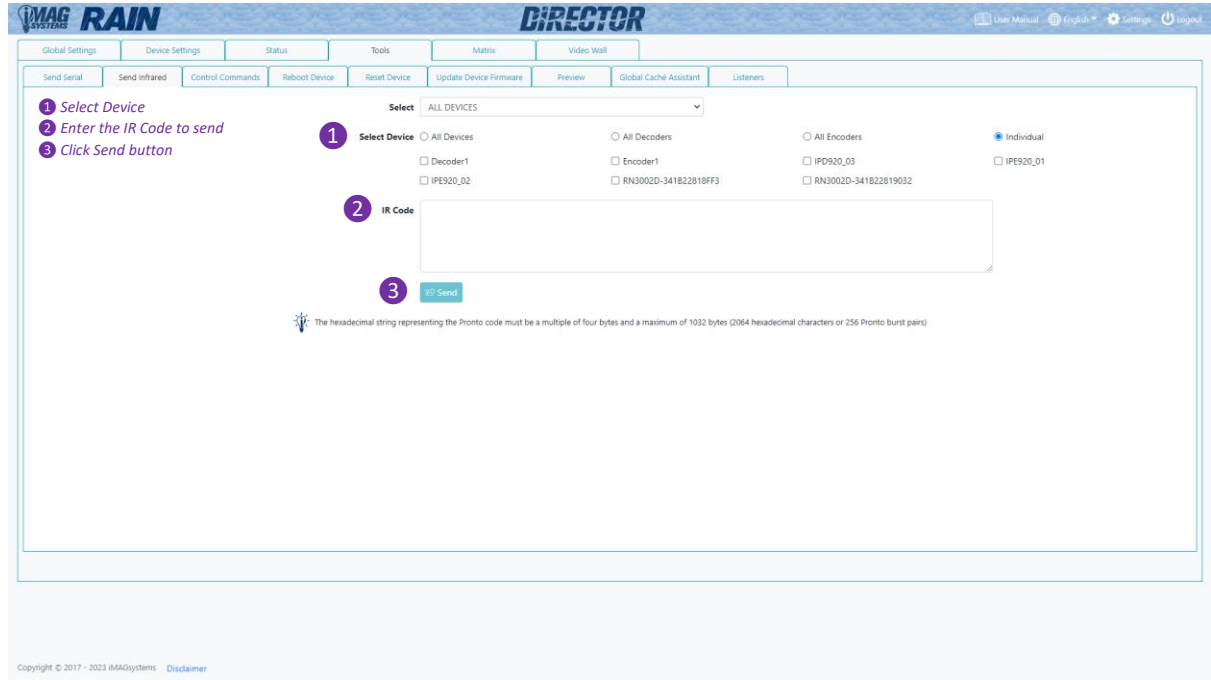
4.1 Send Serial

The Send Serial tab is used to test serial strings being sent from an Encoder or Decoder to a 3rd party peripheral device such as a projector or other display device. The Receive mode will indicate the feedback format of the selected device(s) as ASCII or HEX.



4.2 Send Infrared

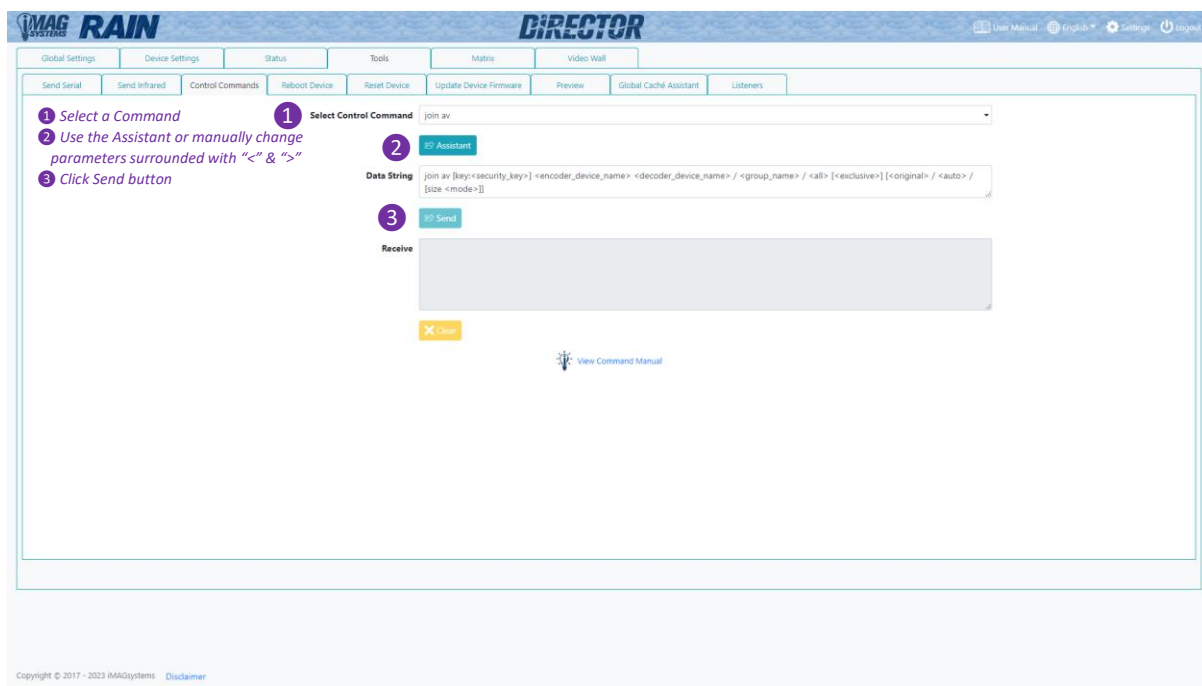
The Send Infrared tab is used to test IR signals being sent from an Encoder or Decoder to 3rd party peripheral devices such as a TV, DVD or Blu-ray players.



The screenshot shows the 'Send Infrared' tab in the DIRECTOR RAIN software. The interface includes a top navigation bar with tabs like 'Global Settings', 'Device Settings', 'Status', 'Tools', 'Matrix', and 'Video Wall'. Below this, there's a sub-navigation bar with tabs like 'Send Serial', 'Send Infrared', 'Control Commands', 'Reboot Device', 'Reset Device', 'Update Device Firmware', 'Preview', 'Global Cache Assistant', and 'Listeners'. The main content area has three numbered steps: 1. Select Device, 2. Enter the IR Code to send, and 3. Click Send button. Under 'Select Device', there's a dropdown menu set to 'ALL DEVICES' and a 'Select Device' section with radio buttons for 'All Devices', 'All Decoders', 'All Encoders', and 'Individual'. Below these are checkboxes for specific devices: Decoder1, Encoder1, IPD920_03, IPD920_02, RN3002D-341B22818FF3, RN3002D-341B22819032, and IPE920_01. A large text input field for the 'IR Code' is provided. A 'Send' button is at the bottom right. A note at the bottom states: 'The hexadecimal string representing the Pronto code must be a multiple of four bytes and a maximum of 1032 bytes (2064 hexadecimal characters or 256 Pronto burst pairs)'.

4.3 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: join av

Assistant

Data String: join av [key=<security_key>] <encoder_device_name> <decoder_device_name> / <group_name> / <all> [<exclusive>] [<original>] / <auto> / [size <mode>]

Send

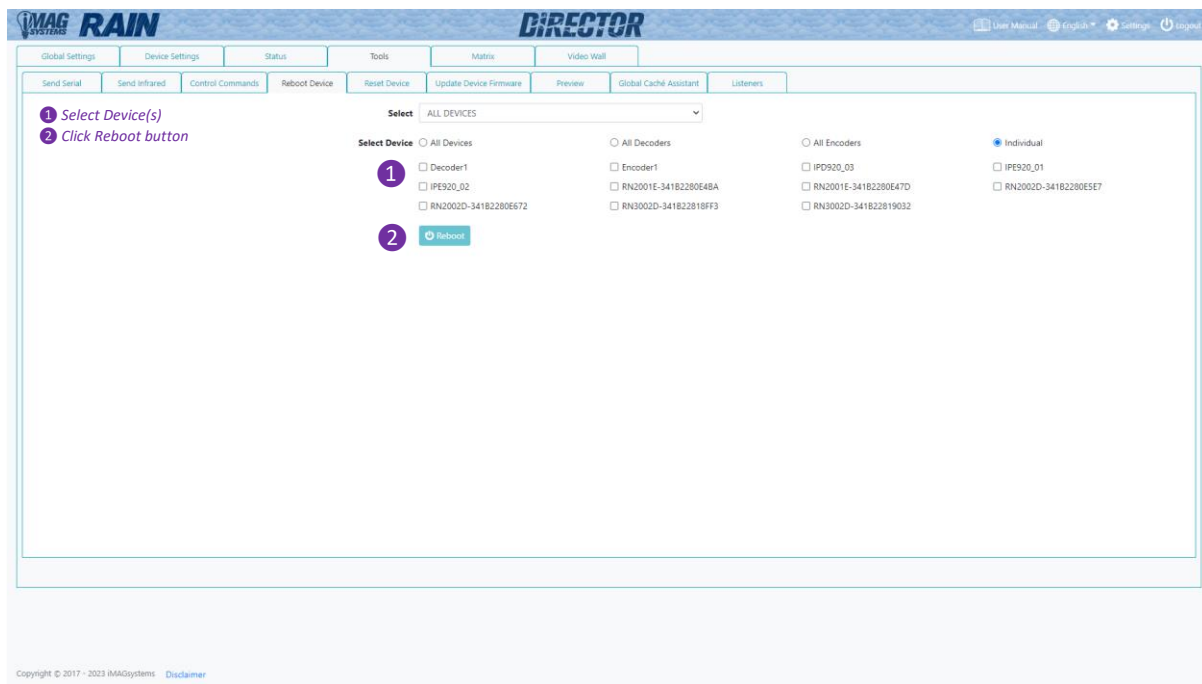
Receive

View Command Manual

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4.4 Reboot Device

The Reboot Device tab is used to reboot the selected device(s).



1 Select Device(s)

2 Click Reboot button

Select: ALL DEVICES

Select Device: ☐ All Devices ☐ All Decoders ☐ All Encoders ☒ Individual

1 ☐ Decoder1 ☐ Encoder1 ☐ IPD920_03 ☐ IPE920_01

☐ IPE920_02 ☐ RN2001E-34182280E48A ☐ RN2001E-34182280E47D ☐ RN2002D-34182280E5E7

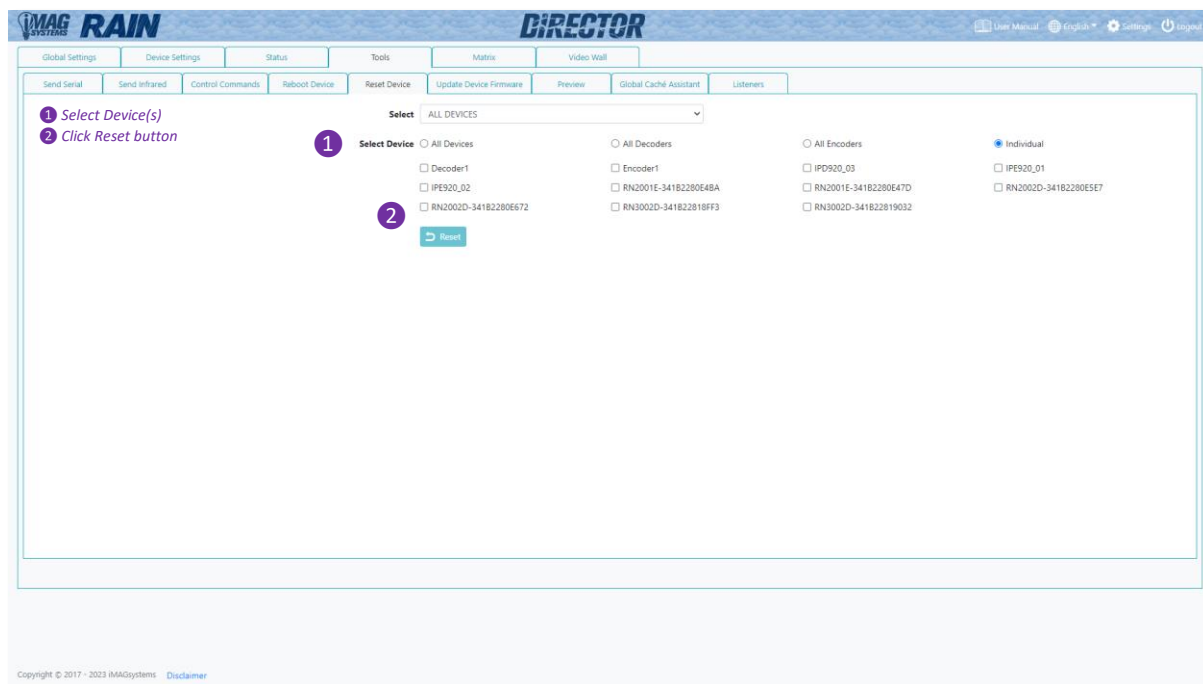
☐ RN2002D-34182280E672 ☐ RN3002D-341822818FF3 ☐ RN3002D-341822819032

2 Reboot

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4.5 Reset Device

The Reset Device tab is used to reset the selected device(s) back to factory default settings.

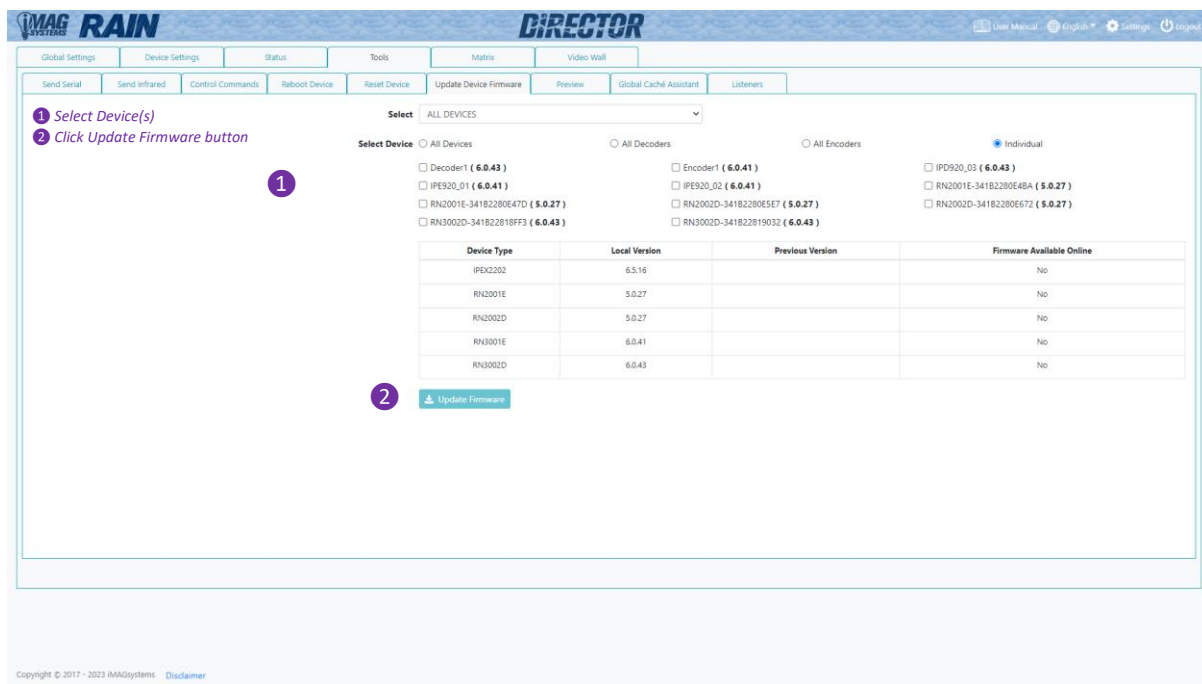


4.6 Update Device Firmware

The Update Device Firmware tab is used to update the firmware of Encoders and Decoders. Here you can also check for updated firmware from the internet when the Director Controller has access. If a previous version of firmware is on the system then rolling back the device firmware is also possible.

4.6.1 Update Firmware

Firmware is the device firmware for Encoders and Decoders.



1 Select Device(s)
2 Click Update Firmware button

Select: ALL DEVICES

Select Device: ☐ All Devices ☐ All Decoders ☐ All Encoders ☒ Individual

☐ Decoder1 (6.0.43) ☐ Encoder1 (6.0.41) ☐ IPD920_03 (6.0.43)

☐ IPE920_01 (6.0.41) ☐ IPE920_02 (6.0.41) ☐ RN2001E-341B2280E4BA (5.0.27)

☐ RN2001E-341B2280E47D (5.0.27) ☐ RN2002D-341B2280E5E7 (5.0.27) ☐ RN2002D-341B2280E672 (5.0.27)

☐ RN3002D-341B22818FF3 (6.0.43) ☐ RN3002D-341B22819032 (6.0.43)

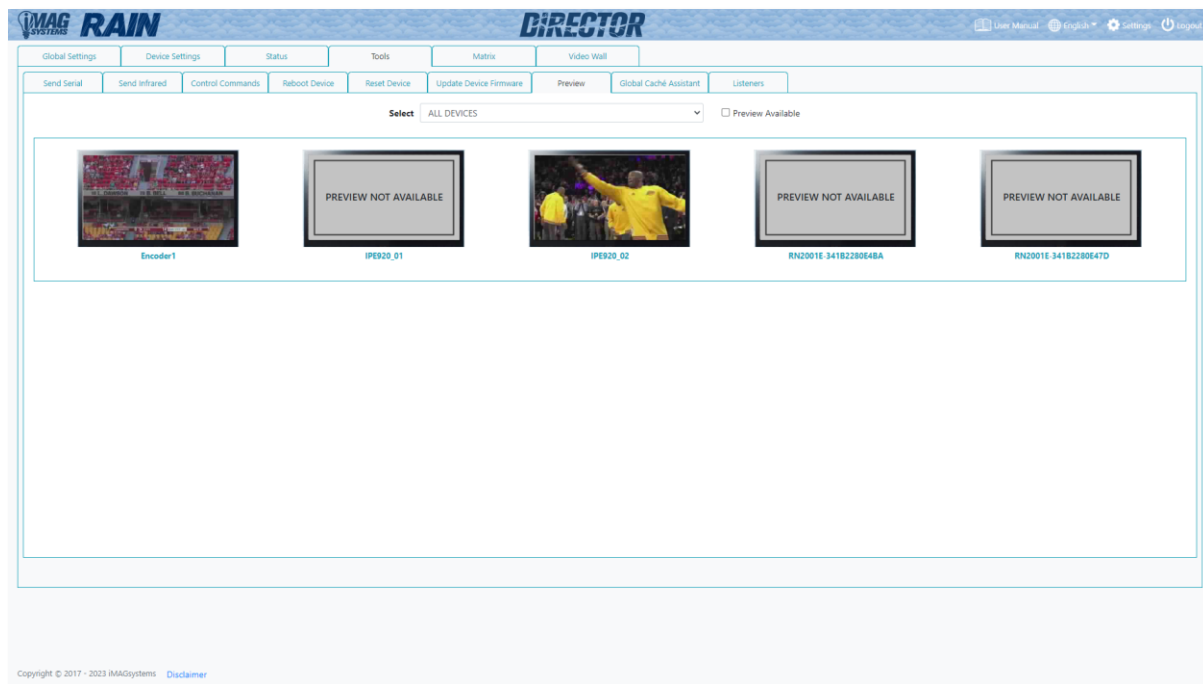
Device Type	Local Version	Previous Version	Firmware Available Online
IPEX2202	6.5.16		No
RN2001E	5.0.27		No
RN2002D	5.0.27		No
RN3001E	6.0.41		No
RN3002D	6.0.43		No

2 [Update Firmware](#)

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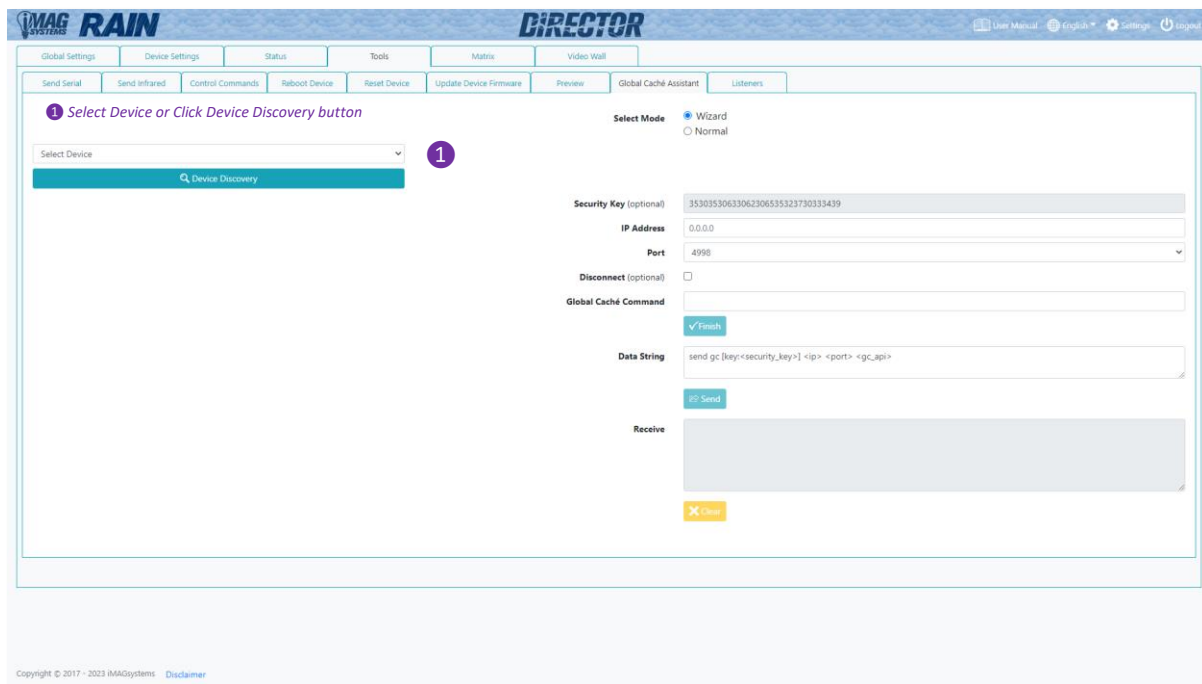
4.7 Preview

The preview tab is used to view the preview stream of all Encoders. The Preview Available checkbox can be selected to only display Encoders with a video source / preview stream available.



4.8 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.



1 Select Device or Click Device Discovery button

Select Device: Device Discovery

Select Mode
☒ Wizard
☐ Normal

Security Key (optional): 3530353063306230653523730333439

IP Address: 0.0.0.0

Port: 4998

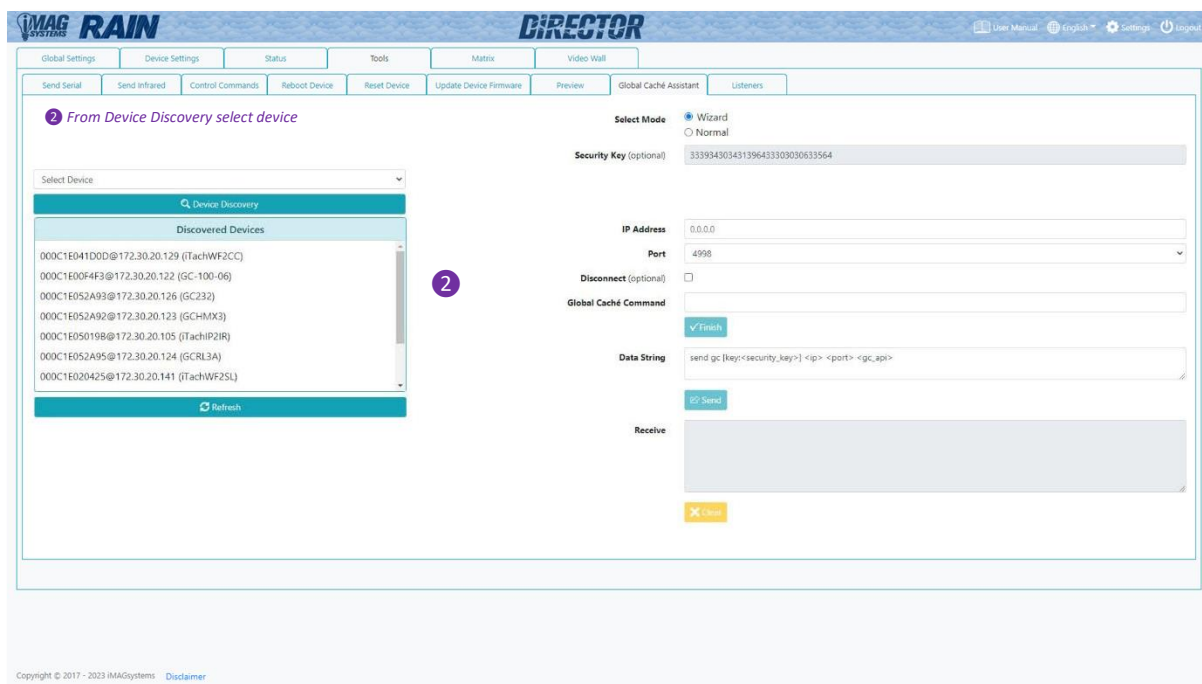
Disconnect (optional): ☐

Global Caché Command:

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

Send **Receive**

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2 From Device Discovery select device

Select Device: Device Discovery

Discovered Devices

- 000C1E041D0D@172.30.20.129 (TachWF2CC)
- 000C1E00F4F3@172.30.20.122 (GC-100-06)
- 000C1E052A93@172.30.20.126 (GC232)
- 000C1E052A92@172.30.20.123 (GCHMX3)
- 000C1E05019B@172.30.20.105 (TachIP2IR)
- 000C1E052A95@172.30.20.124 (GCRL3A)
- 000C1E020425@172.30.20.141 (TachWF2SL)

Select Mode
☒ Wizard
☐ Normal

Security Key (optional): 3339834303431396433303030633564

IP Address: 0.0.0.0

Port: 4998

Disconnect (optional): ☐

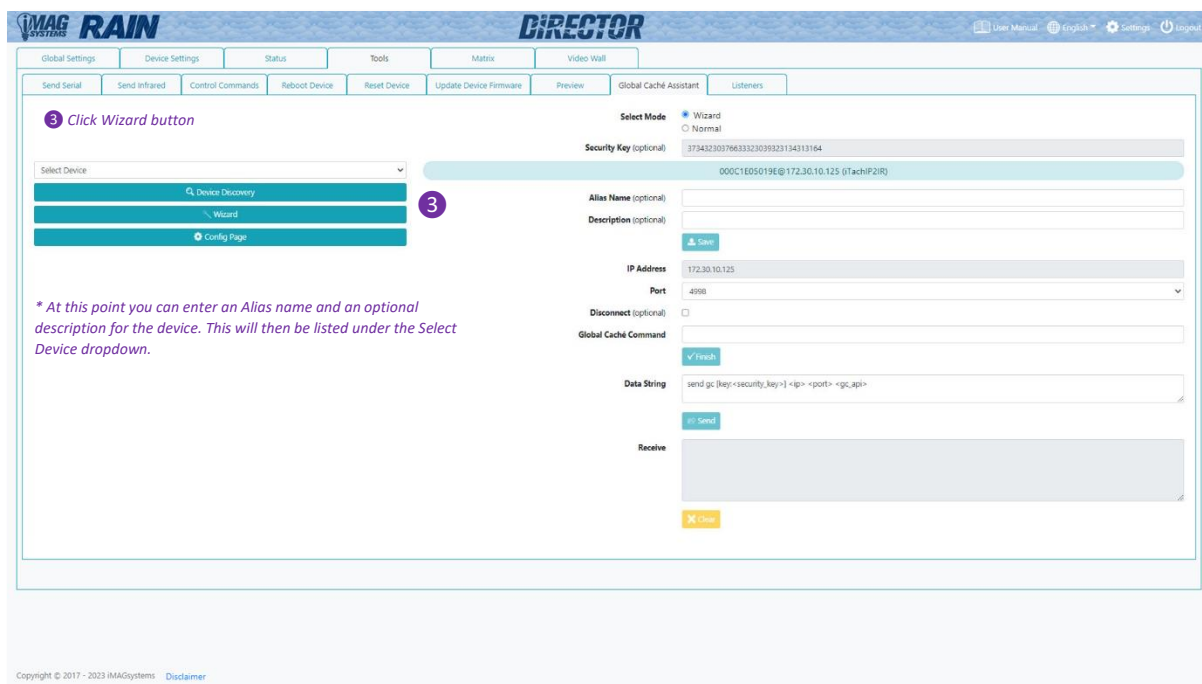
Global Caché Command:

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

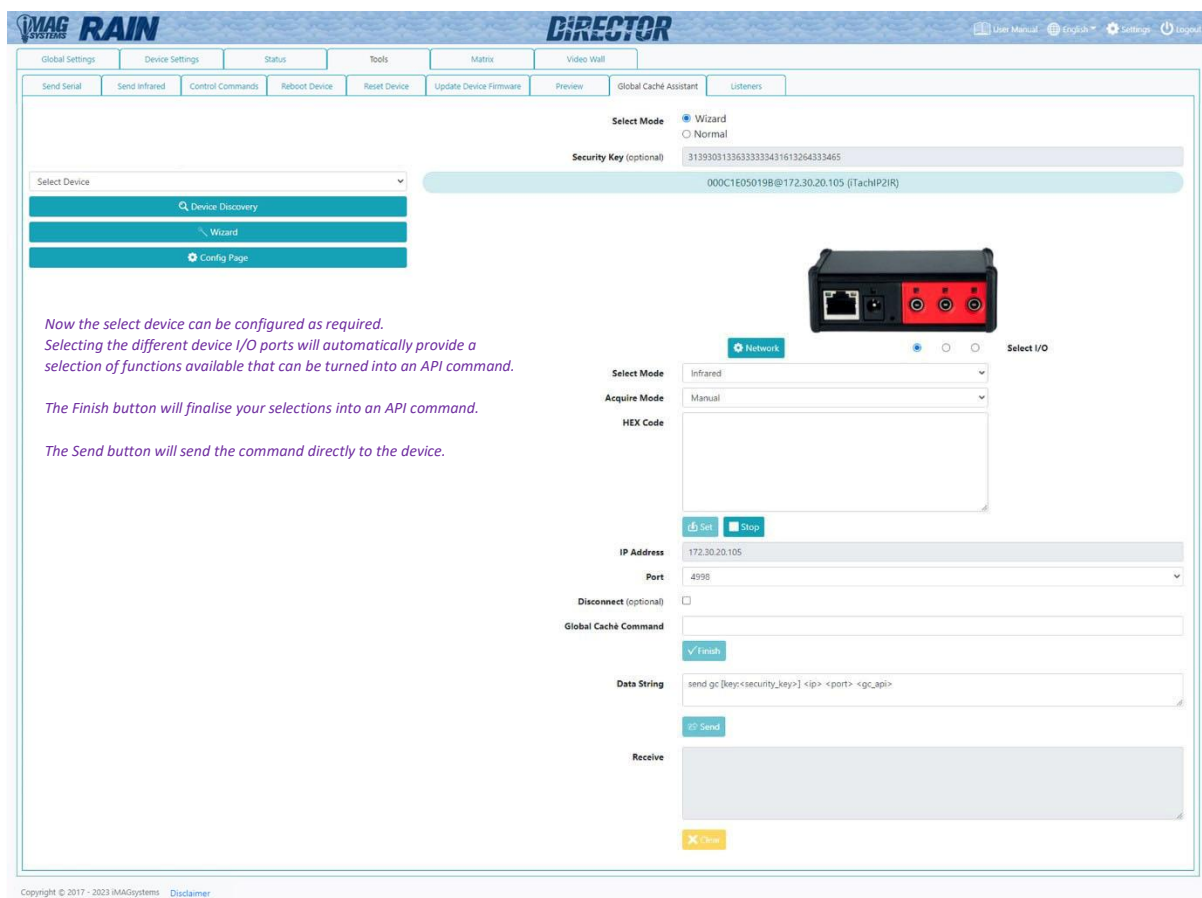
Send **Receive**

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4.8 Global Caché Assistant continued...



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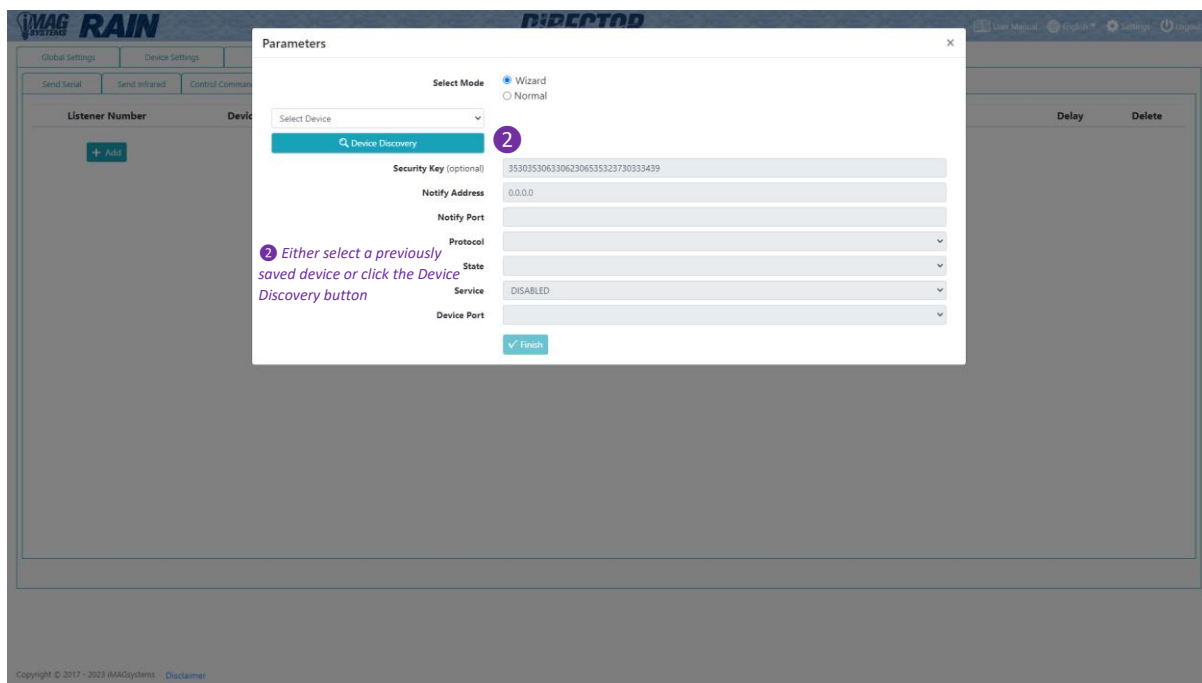
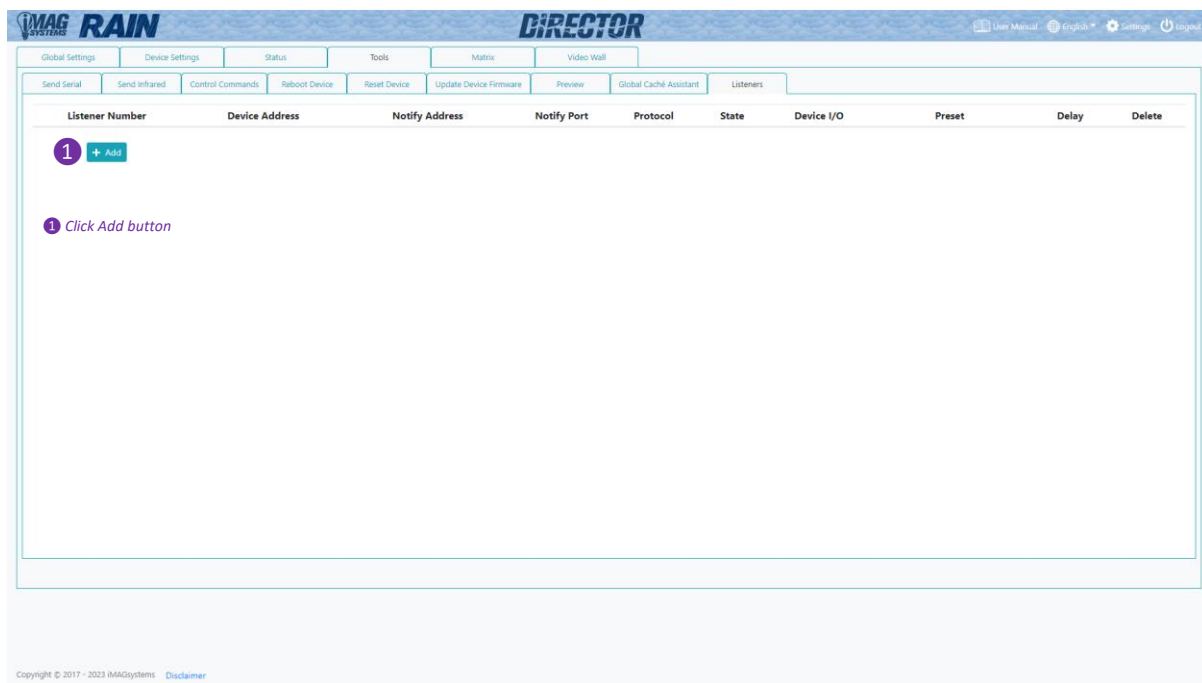


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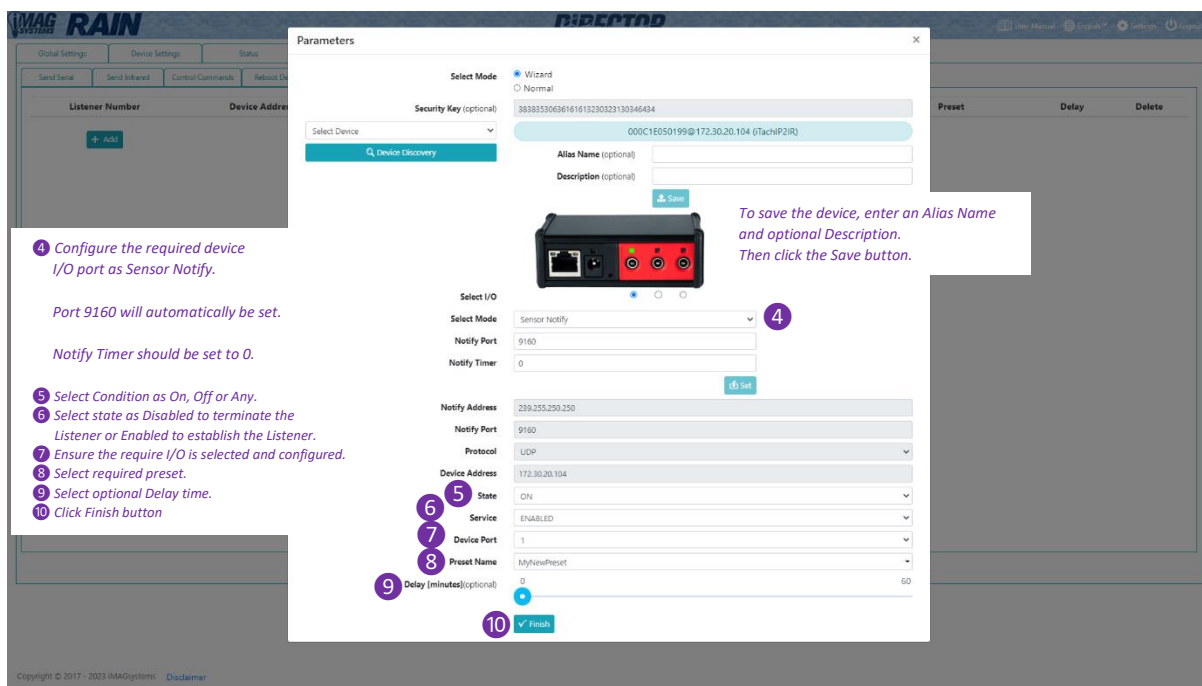
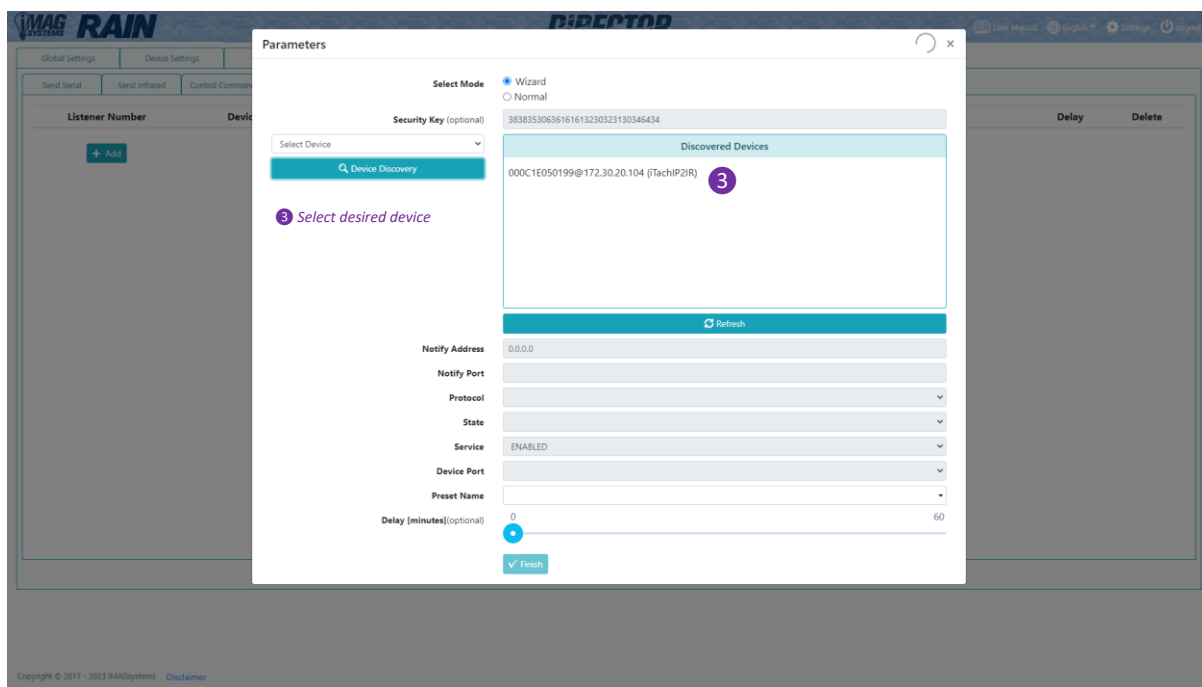
4.9 Listeners

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.

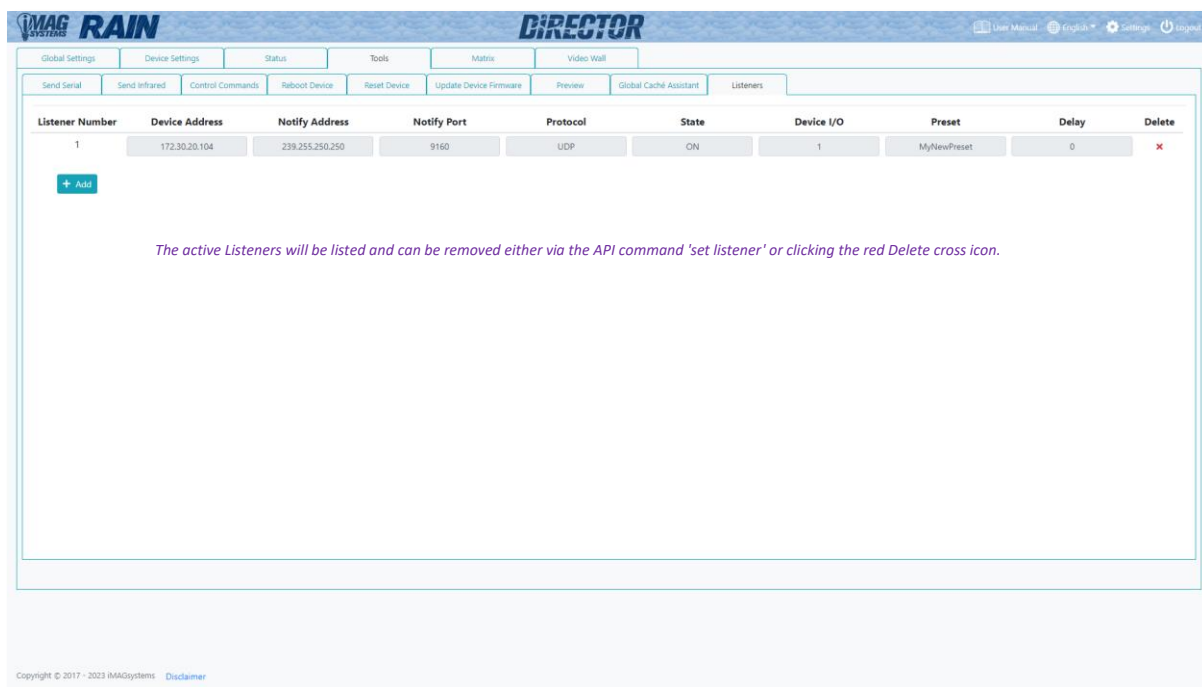
The listeners can be established either via the API command 'set listener' or directly from here.




4.9 Listeners continued...



4.9 Listeners continued...



Listener Number	Device Address	Notify Address	Notify Port	Protocol	State	Device I/O	Preset	Delay	Delete
1	172.30.20.104	239.255.250.250	9160	UDP	ON	1	MyNewPreset	0	

[+ Add](#)

The active Listeners will be listed and can be removed either via the API command 'set listener' or clicking the red Delete cross icon.

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.

5 Matrix

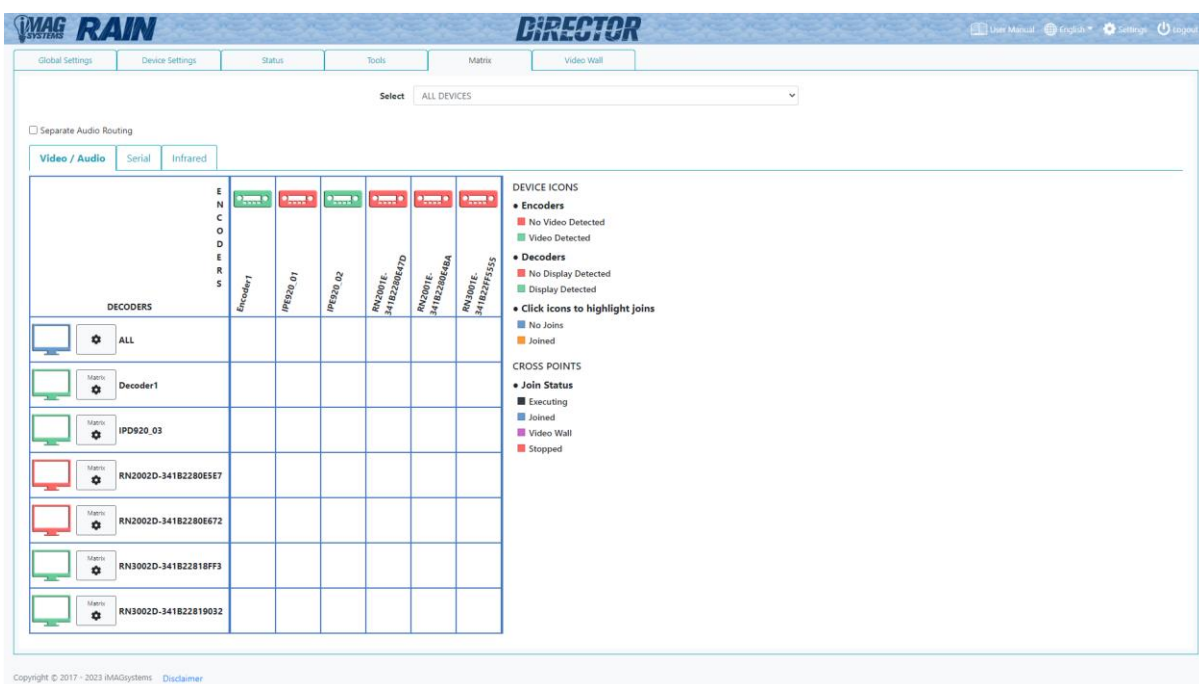
The Matrix tab contains up to 4 individual matrix tabs for each of the signal types, Video, Audio, Serial and Infrared. Here you can create or stop joins between Encoders and Decoders. The video modes of Decoders can also be changed by clicking the individual Decoder ⚙ settings buttons.

Click a white square to make a join.

Click a blue square to remove a join.

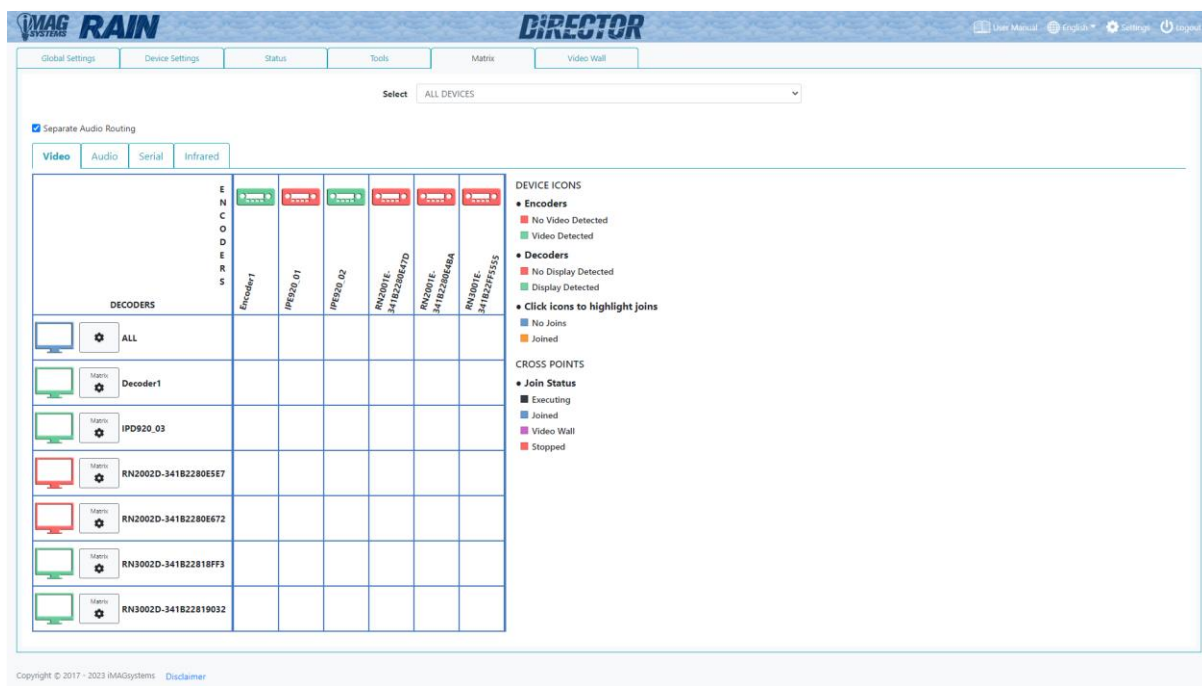
5.1 Video / Audio

Here the Video and Audio are combined so they are both joined to the destination device.



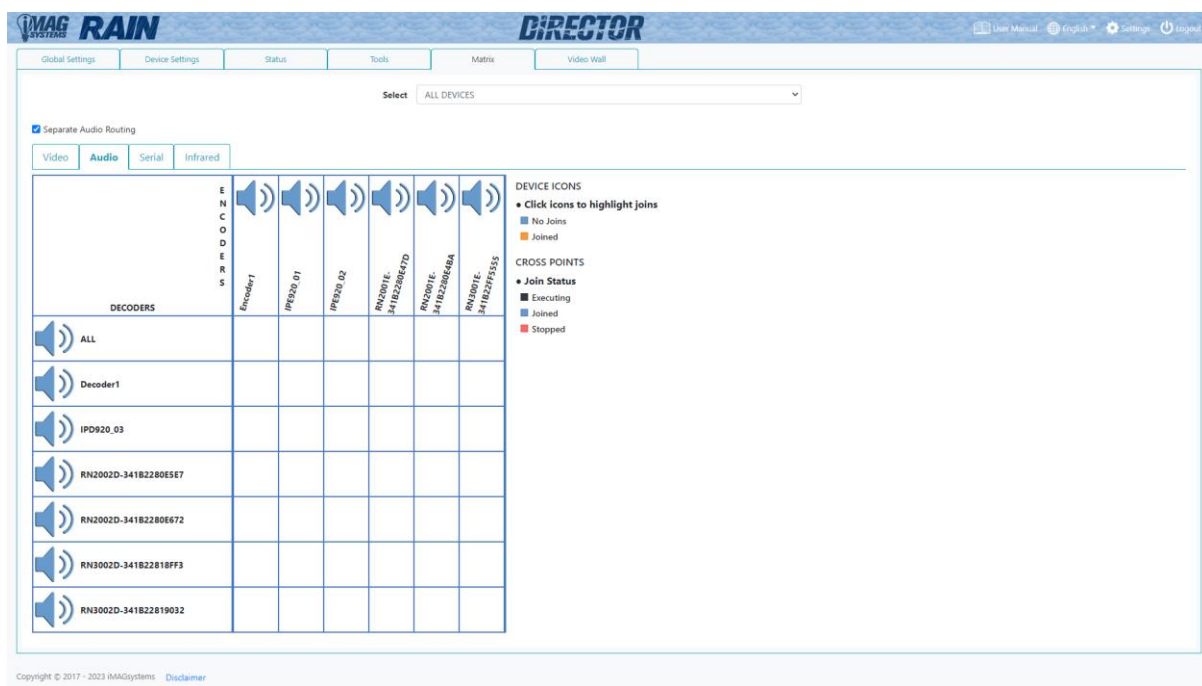
5.2 Video

When independent routing of the Video and Audio is required select the Separate Audio Routing checkbox. Now the Video and Audio will appear in separate independent matrix tabs.



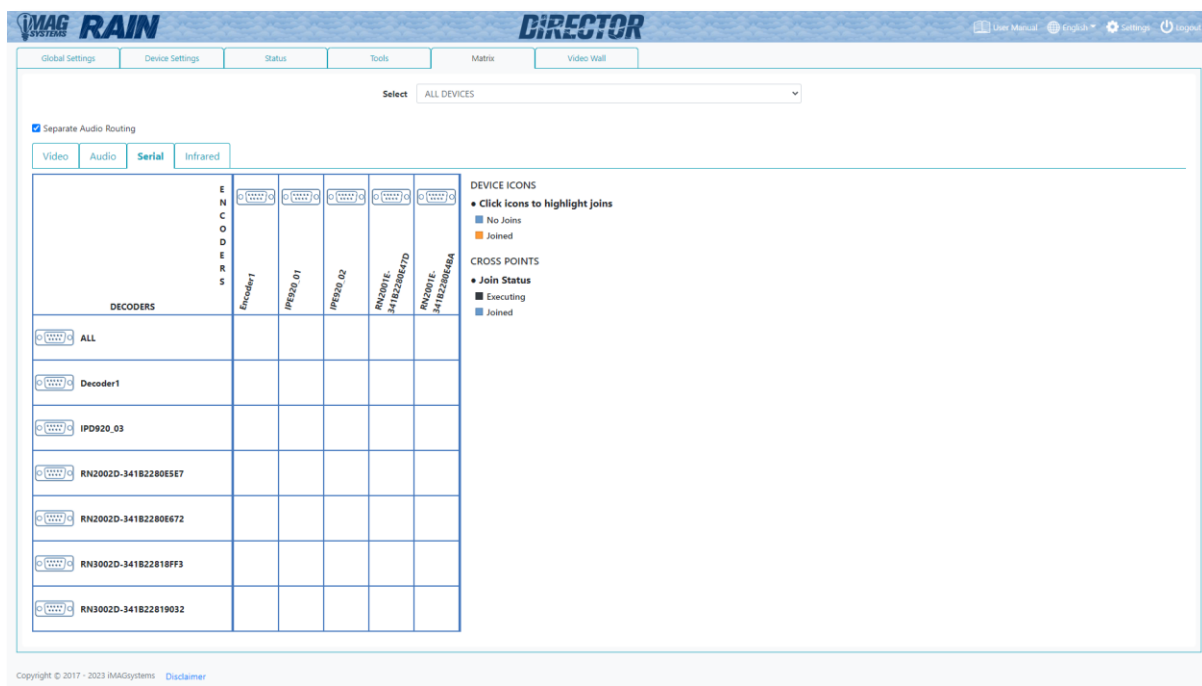
5.3 Audio

When independent routing of the Video and Audio is required select the Separate Audio Routing checkbox. Now the Video and Audio will appear in separate independent matrix tabs.



5.4 Serial

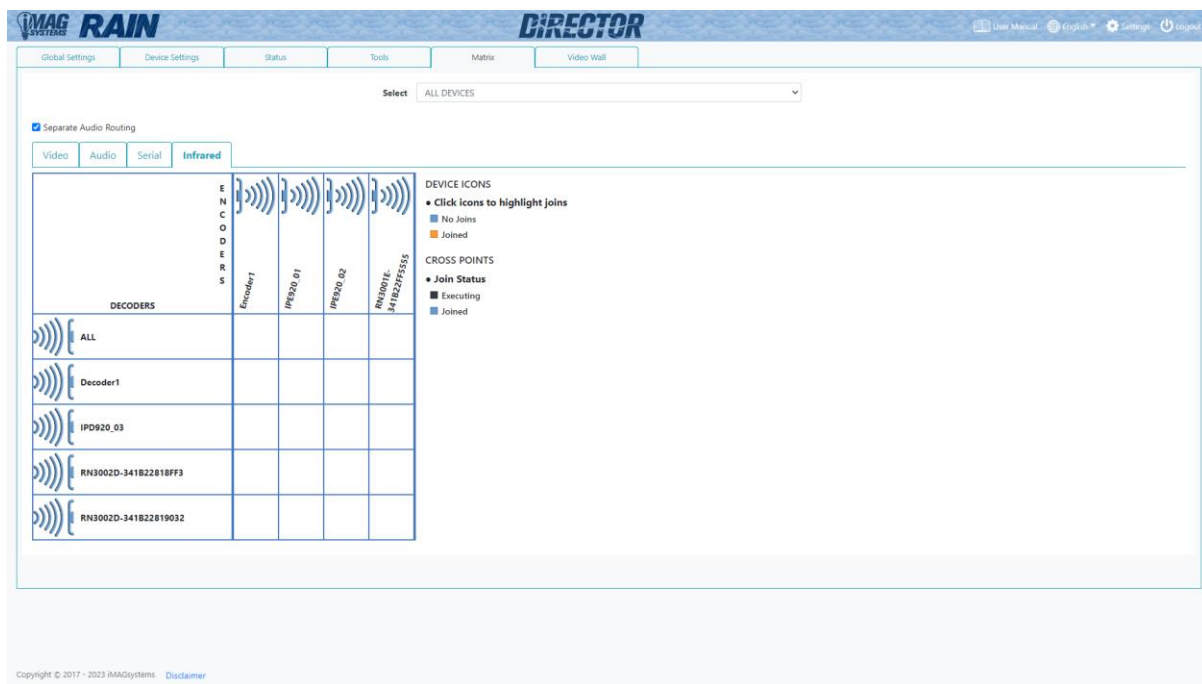
The matrix Serial tab is intended for making pass-through serial joins between Encoders and Decoders for devices set to serial MATRIX mode. Devices set to CONTROL mode will not be seen in the matrix.



The screenshot shows the DIRECTOR RAIN interface with the 'Serial' tab selected. The interface includes a top navigation bar with 'Global Settings', 'Device Settings', 'Status', 'Tools', 'Matrix', and 'Video Wall'. A 'Select' dropdown menu is set to 'ALL DEVICES'. Below the navigation bar, there are tabs for 'Video', 'Audio', 'Serial', and 'Infrared'. The 'Serial' tab is active, displaying a matrix of connections between encoders and decoders. The matrix has columns for encoders (Encoder1, IP920 01, IP920 02, RN2001E-341B220E67D, RN2001E-341B220E68A) and rows for decoders (ALL, Decoder1, IPD920_03, RN2002D-341B220E6E7, RN2002D-341B220E672, RN3002D-341B22018FF3, RN3002D-341B22019032). To the right of the matrix, there are instructions for 'DEVICE ICONS' and 'CROSS POINTS'. The 'DEVICE ICONS' section includes a legend for 'Click icons to highlight joins' (No Joins, Joined) and 'Join Status' (Executing, Joined). The 'CROSS POINTS' section includes a legend for 'Join Status' (Executing, Joined).

5.5 Infrared

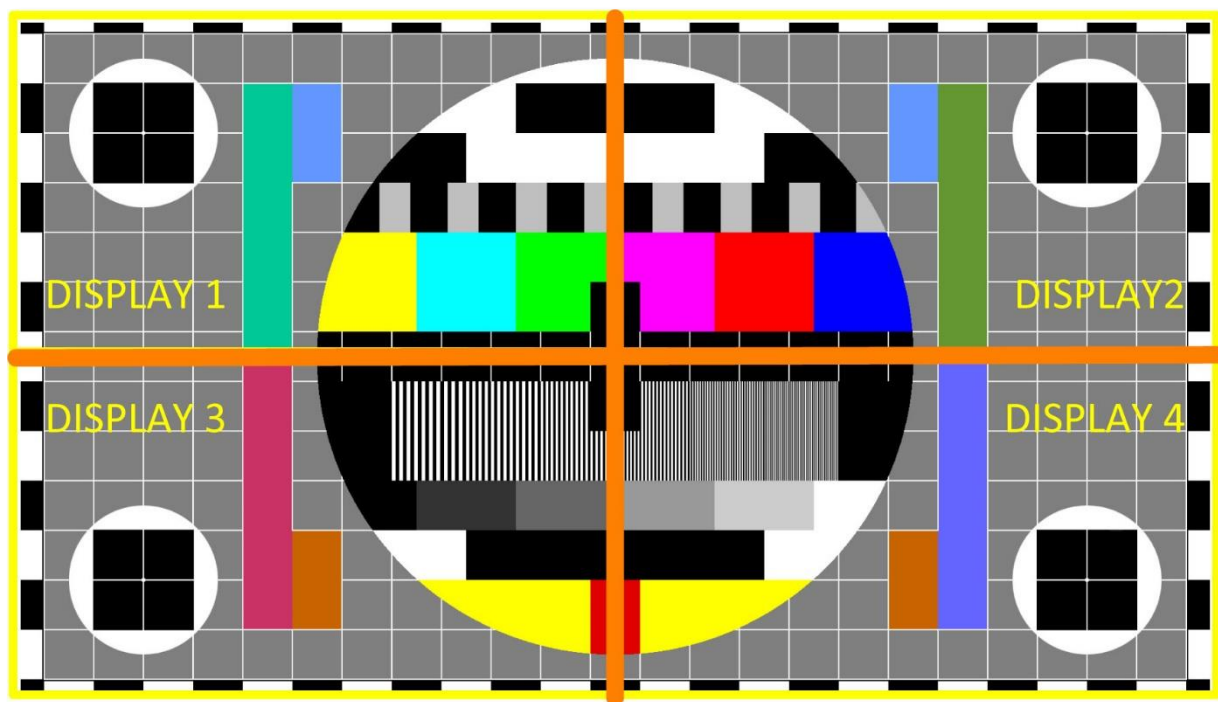
The matrix Infrared tab is intended for making pass-through infrared joins between Encoders and Decoders.



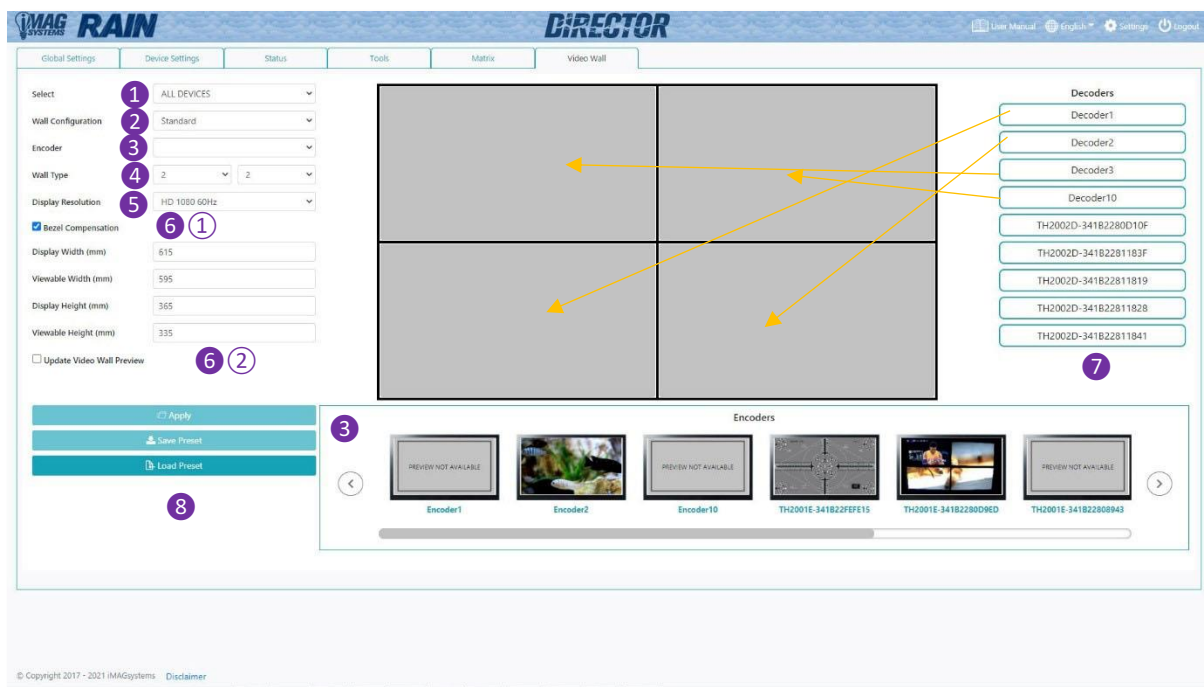
The screenshot shows the DIRECTOR RAIN interface with the 'Infrared' tab selected. The interface is similar to the Serial tab, but the 'Infrared' tab is active. The matrix displays connections between encoders and decoders using infrared icons. The columns for encoders are the same as in the Serial tab. The rows for decoders are the same as in the Serial tab. The 'DEVICE ICONS' and 'CROSS POINTS' sections are also present, with the same legends as in the Serial tab.

6 Video Wall (Licensed feature)

Standard mode allows for standard video wall configurations while Advanced mode will allow mosaic style video walls.



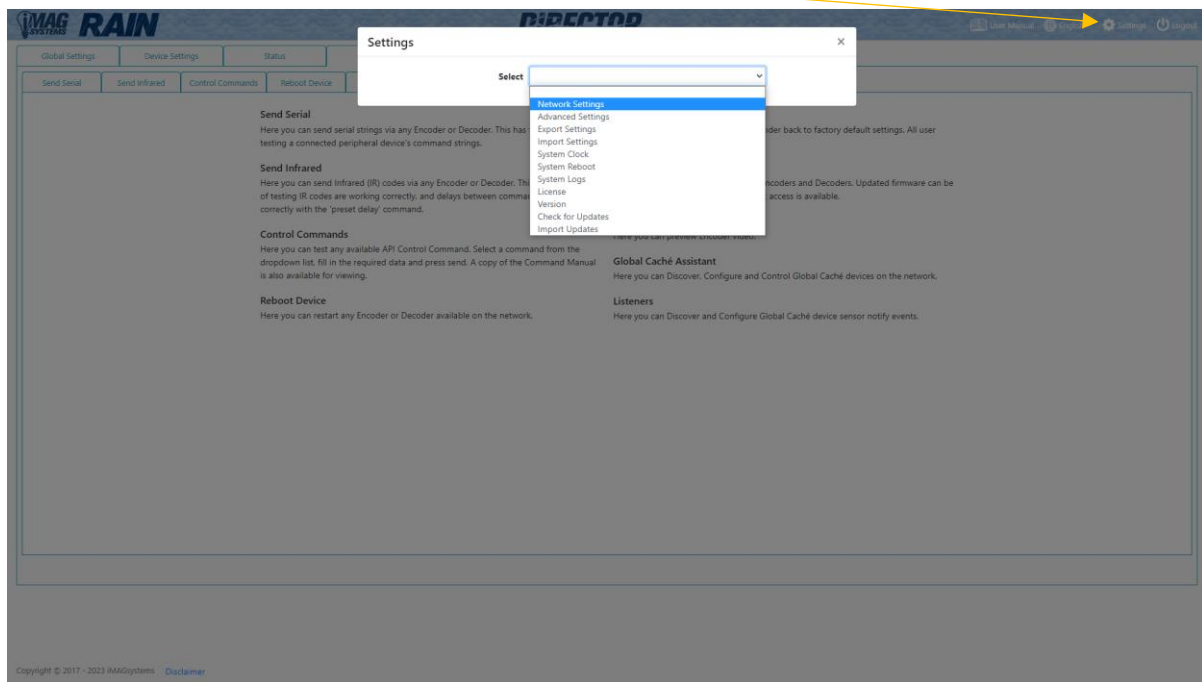
6.1 Video Wall Standard



- 1 Select the group of Encoders and Decoders to be available.
- 2 Select either Standard or Advanced mode, in this case Standard.
Advanced mode provides options for Mosaic style
- 3 Select the source Encoder for the video to be displayed from the dropdown list or drag from the preview window.
- 4 Select the video wall layout up to 8 x 5.
- 5 Select the resolution of the displays
*The cropped video area from the original source content will be scaled to a display resolution.
So if the cropped area is only 960x540, in this case it will be scaled to 1920x1080 for the display.*
- 6 1 Select Bezel Compensation to automatically compensate for the bezel widths.
- 6 2 Enter the physical width and height of the display in mm.
Enter the physical viewable width and height of the display in mm.
- 7 Drag Decoders to positions.
- 8 Save or apply the layout. The layout can be saved as a preset to be recalled via the “preset load” command or loaded back into the Video Wall tab.

7 System Settings

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



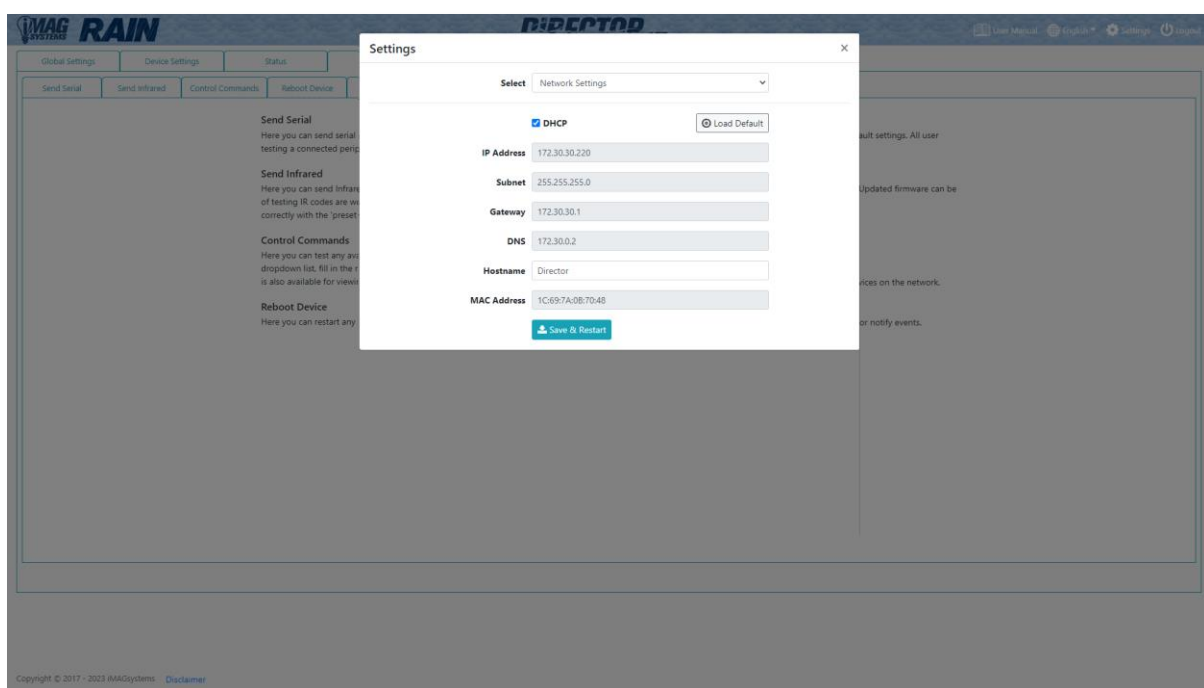
7.1 Network Settings

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. This address must be set in the same range as the AV Endpoints.

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.



7.1 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.

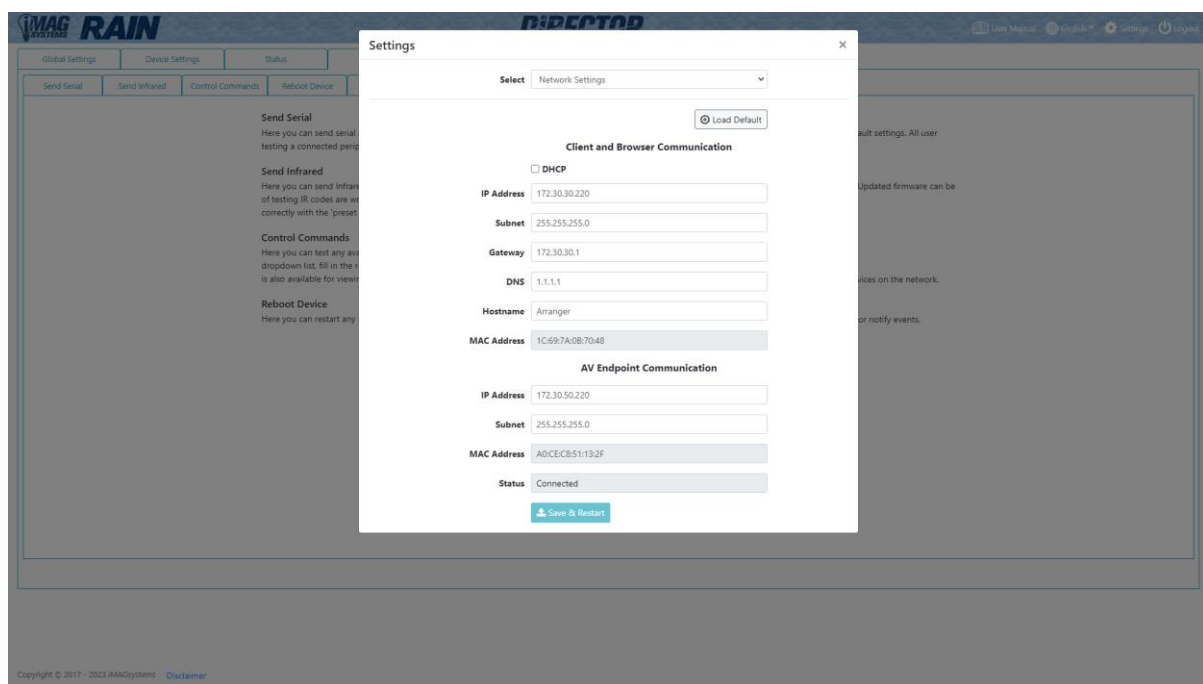
By default the Director Controller will be found on the primary NIC at 192.168.1.1 while maintaining 169.254.1.1 for the second network.

The primary NIC is dedicated for Client and Browser Communication while the secondary NIC dedicated for AV Endpoint Communication. 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.

All AV Endpoints must be connected to secondary NIC and set in the same IP range.

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.

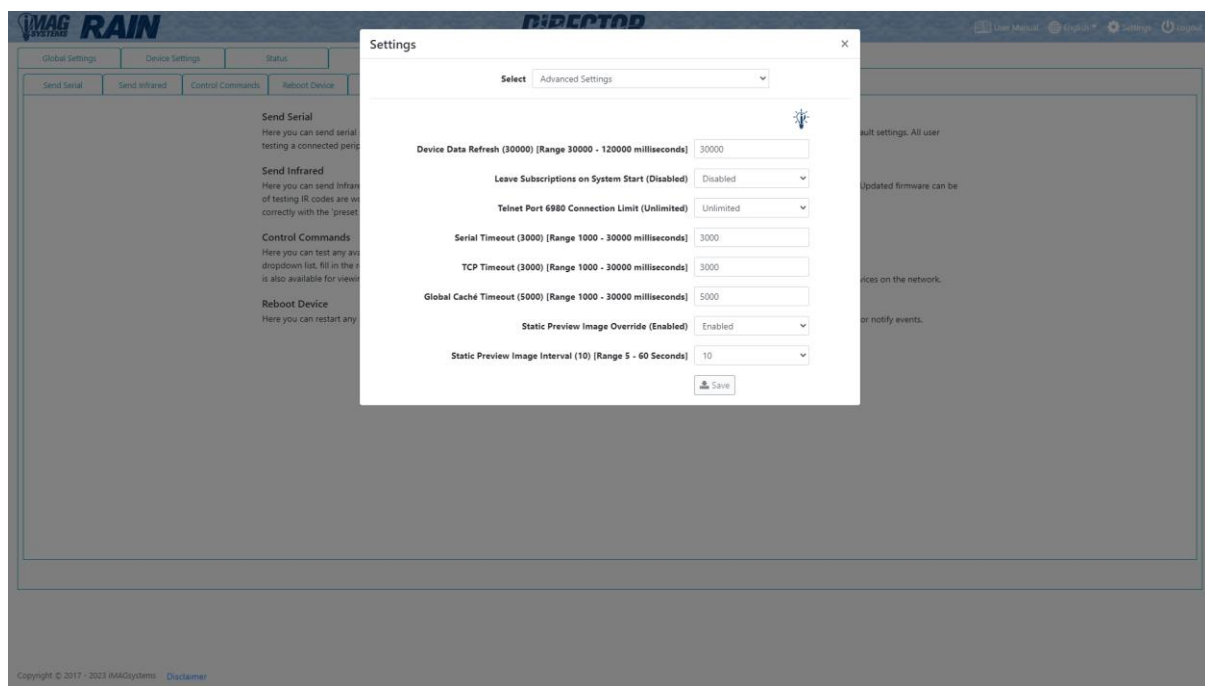


Installation of the USB to Gigabit Ethernet NIC Network Adapter

1. Power on the Director Controller and wait for at least 1 minute before continuing.
2. Plug the USB to Gigabit Ethernet NIC Network Adapter into a USB port of the controller.
3. Perform a Factory Reset.
4. Browse to the controllers default IP address at 192.168.1.1 and configure the controllers network settings as required.

7.2 Advanced Settings

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



7.2.1 Device Data Refresh

Device Data Refresh is the time in milliseconds the Director Controller requests information about the Encoders and Decoders. This keeps the UI up-to-date with any changes that have occurred that do not cause an event which would automatically update data. The default is 30000 = 30 seconds with a range of 30000 – 120000.

7.2.2 Leave Subscriptions on system start

Leave Subscriptions on system start is an optional condition of the system whereby all Decoders will leave their subscription to a Encoder streams when the system starts. The default is disabled.

7.2.3 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.

7.2.4 Serial Timeout

Serial Timeout is the maximum time in milliseconds the Director Controller will wait for a response from a RS232 serial controlled device. The default is 3000 = 3 seconds with a range of 1000 – 30000.

7.2.5 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.

7.2.6 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.

7.2.7 Static Preview Image Override

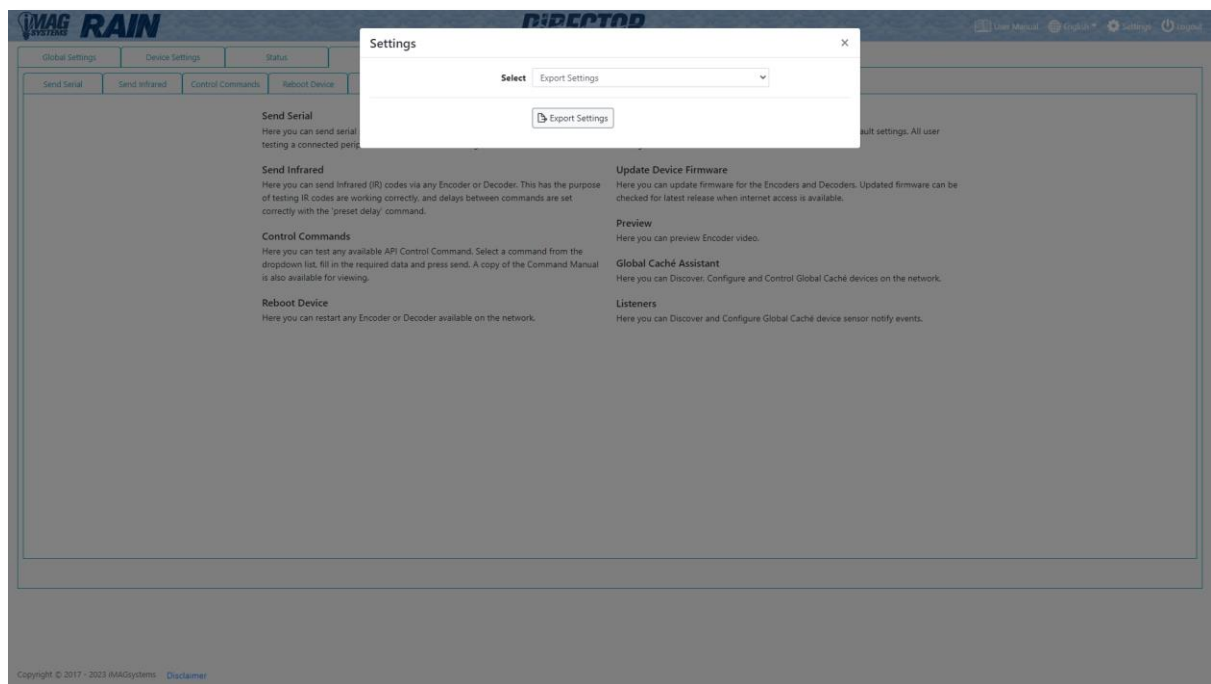
Static Preview Image Override enables the use of static JPG preview images rather than a MJPEG stream provided by the endpoints. A stream requires a direct connection to the endpoint which is not always possible when the client side is working over a remote URL or different subnet. Using static images instead overcomes this issue by caching the images on the server and pushing them out to clients.

7.2.8 Static Preview Image Interval

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.

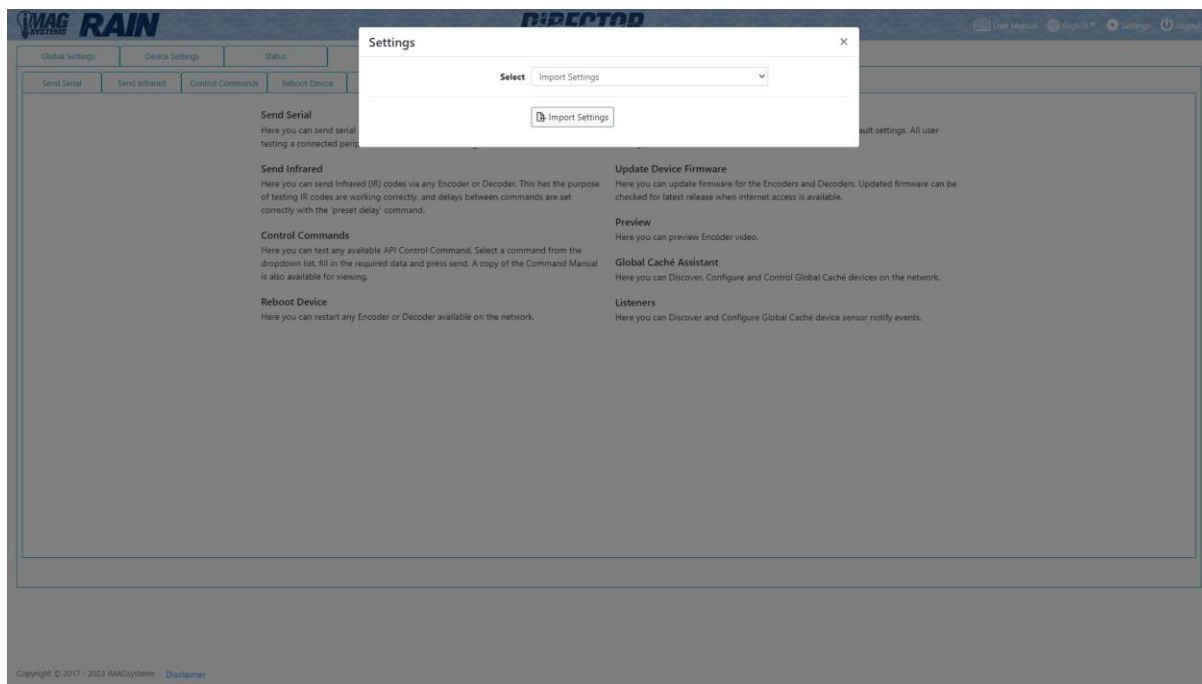
7.3 Export Settings

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.



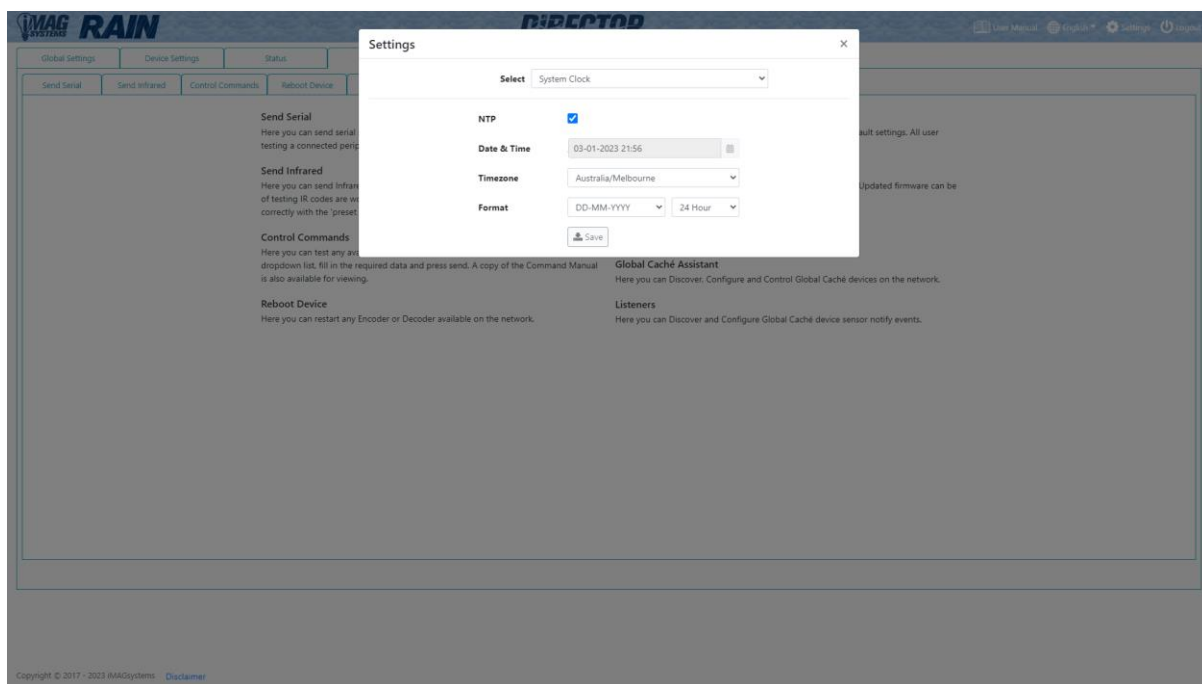
7.4 Import Settings

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



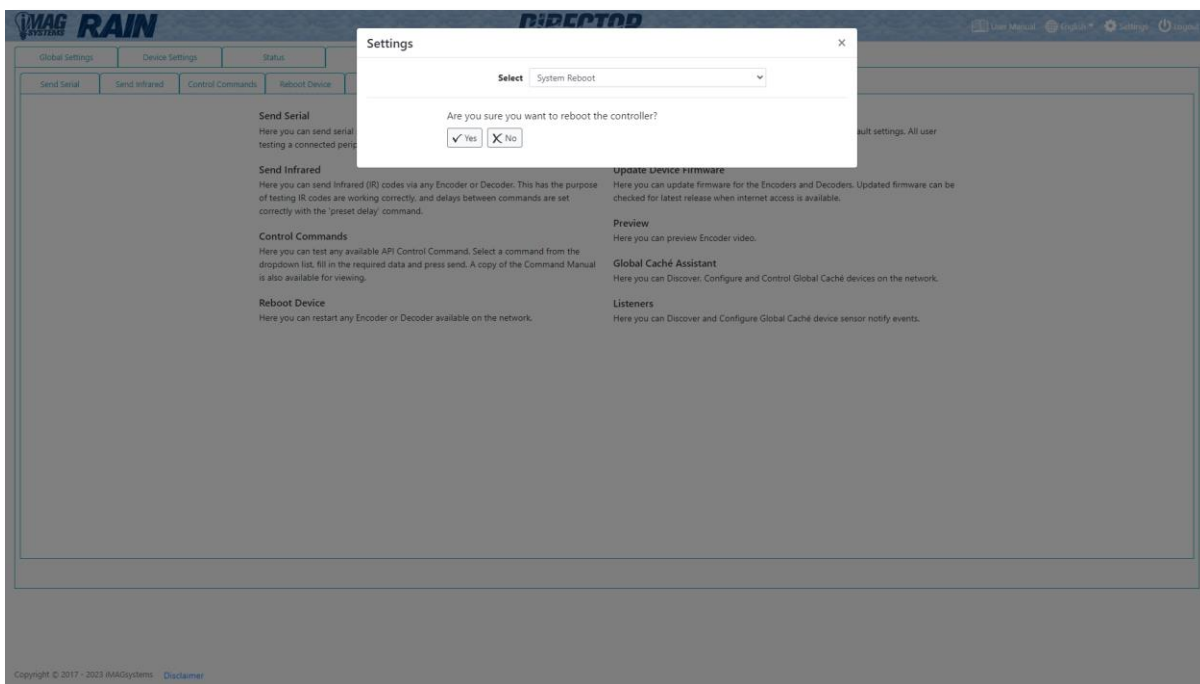
7.5 System Clock

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.



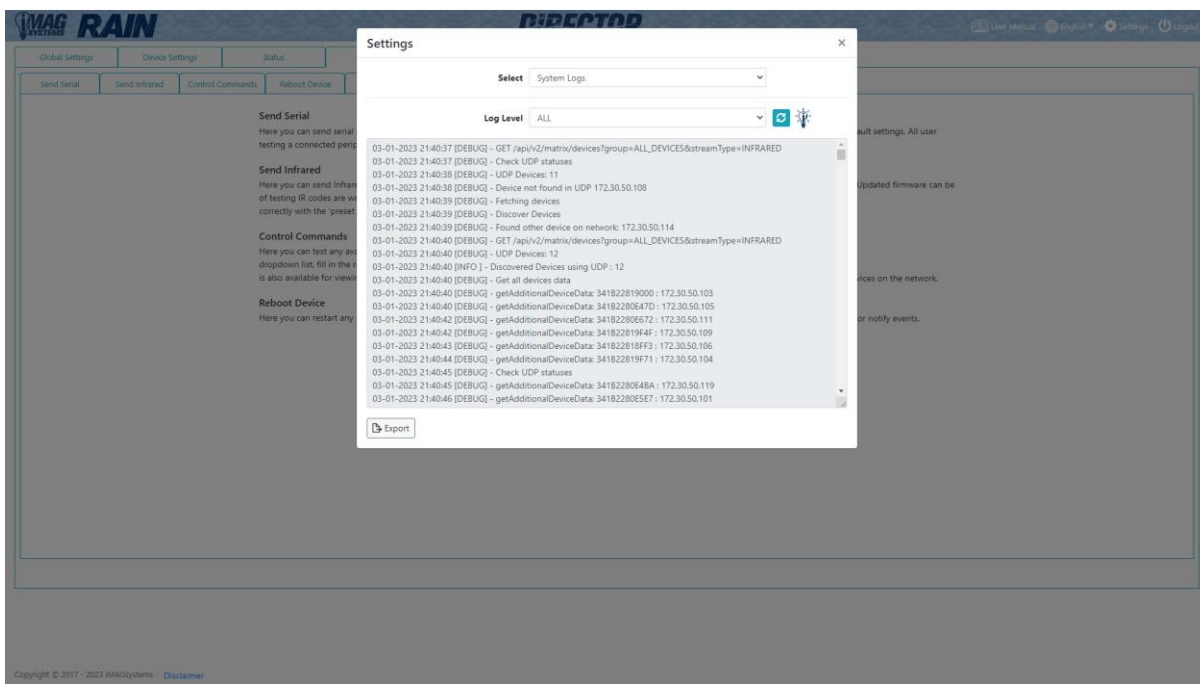
7.6 System Reboot

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



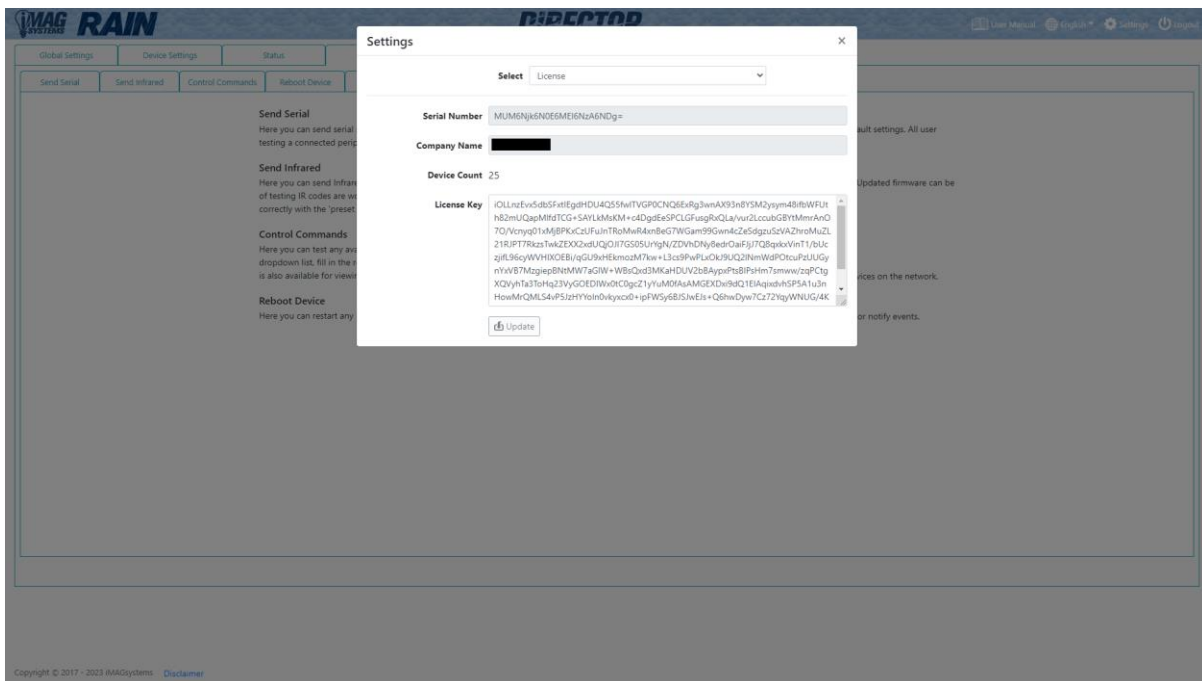
7.7 System Logs

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.



7.8 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.



7.8 License continued...

The table below indicates standard features in green and optional licensed features in red.
A special Monitoring only licence is also available which provides system status only.

Global Settings	
	Users
	Presets
	Groups
	Multicast
	HTTP Security Key
	Permissions
	Events
	Notifications
	Analytics
	Scheduler
	Control UI
Device Settings	
Status	
Tools	
	Send Serial
	Send Infrared
	Send Control Command
	Reboot Device
	Reset Device
	Update Device Firmware
	Preview
	Global Caché Assistant
	Listeners
Matrix	
Video Wall	
Translator	
Presenter	

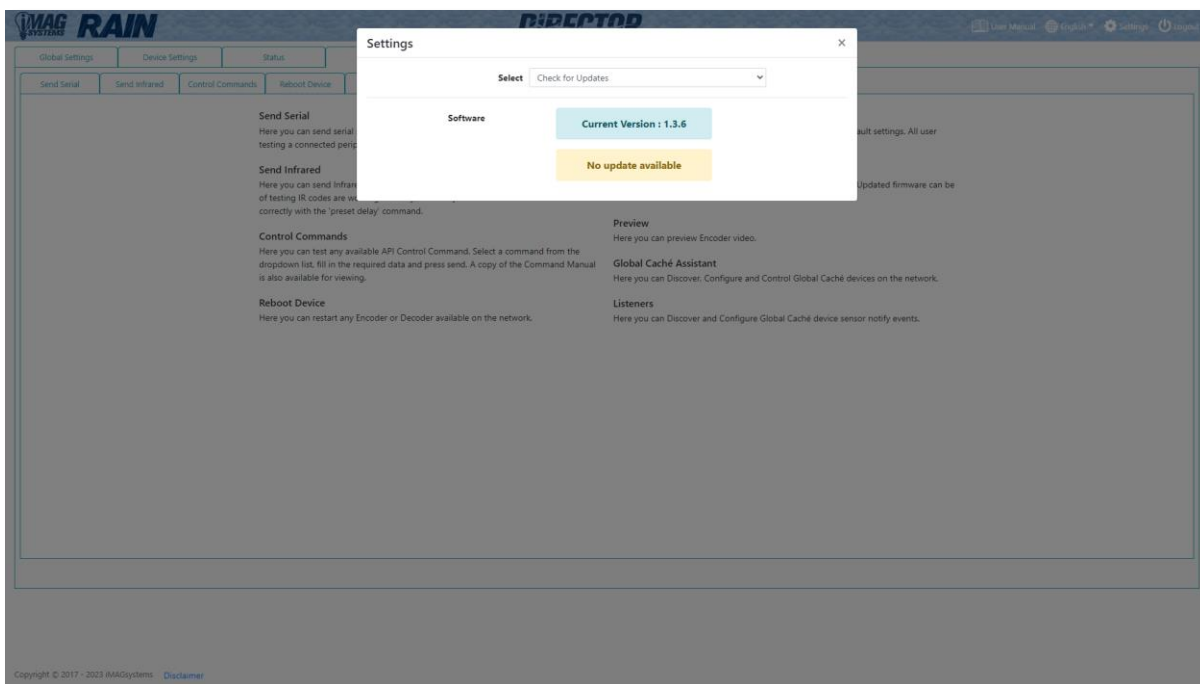
7.9 Version

Here you can find the current software version.



7.10 Check for Updates

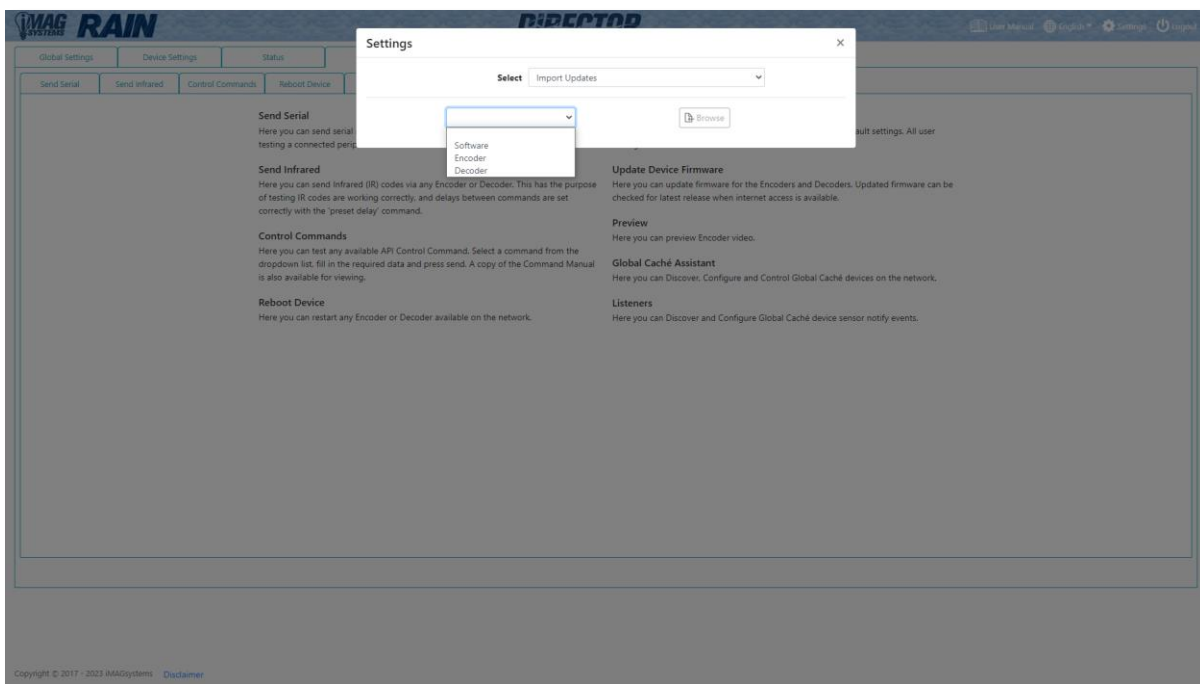
Check for Updates will contact an ftp server over the internet to obtain the latest releases.



7.11 Import Updates

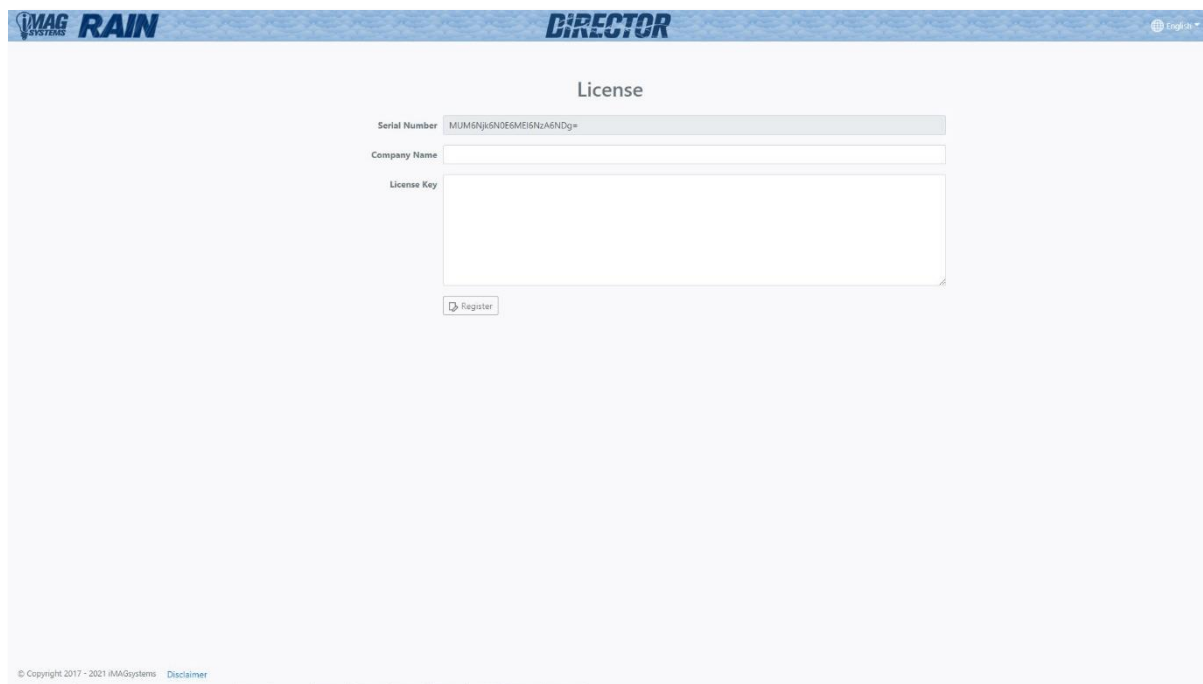
When no internet access is available or a specific update is required, the files will be provided to manually update the system.

Select the type of update being performed by either selecting Software, Encoder or Decoder. Then click the browse button to select the required file from the file dialog popup.



8 UI Overview

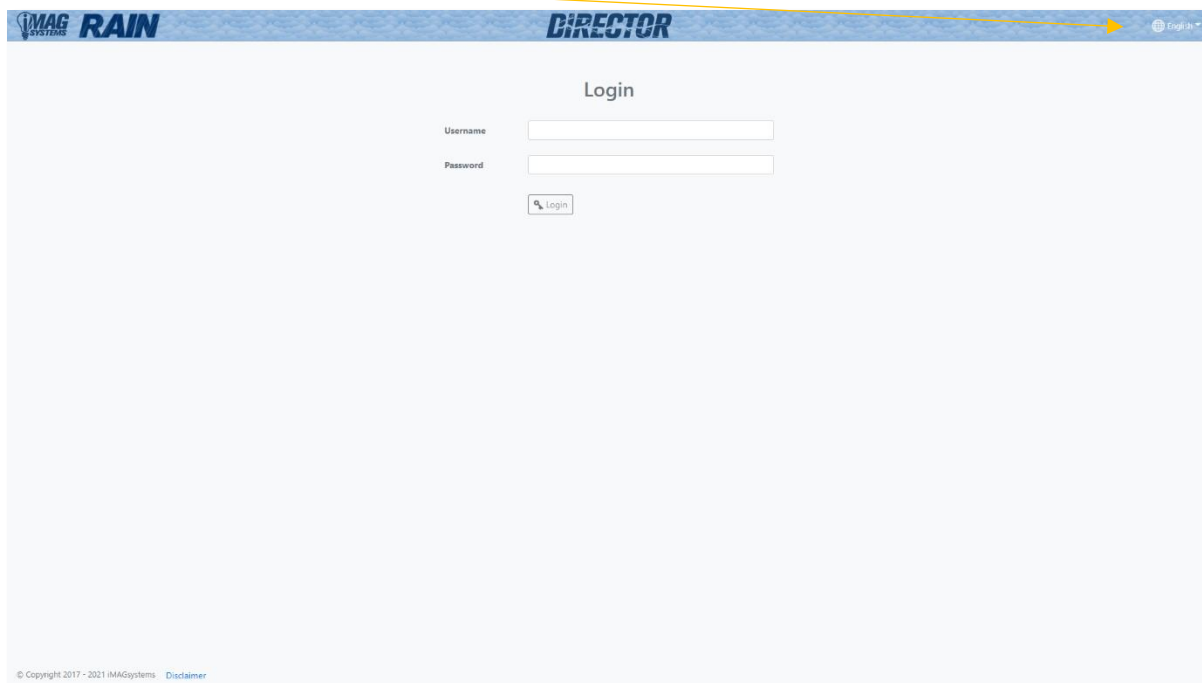
Director is accessed by using Google Chrome or Safari to browse to the controllers IP address. Initially when the Director Controller is first used you will be prompted to enter a Registration Key obtained from your distributor. The controllers Serial Number (as shown) along with a company name will 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 Encoders and Decoders.



The screenshot shows the 'License' registration page of the Director RAIN interface. The page has a blue header with the 'iMAG SYSTEMS RAIN' logo on the left and the 'DIRECTOR' title on the right. Below the header, the title 'License' is centered. The form contains three input fields: 'Serial Number' with the value 'MUM8NjK9NDE6ME8N0A8NDg=', 'Company Name', and 'License Key'. A 'Register' button is located below the 'License Key' field. At the bottom left, there is a copyright notice: '© Copyright 2017 - 2021 iMAG Systems' and a link to 'Disclaimer'.

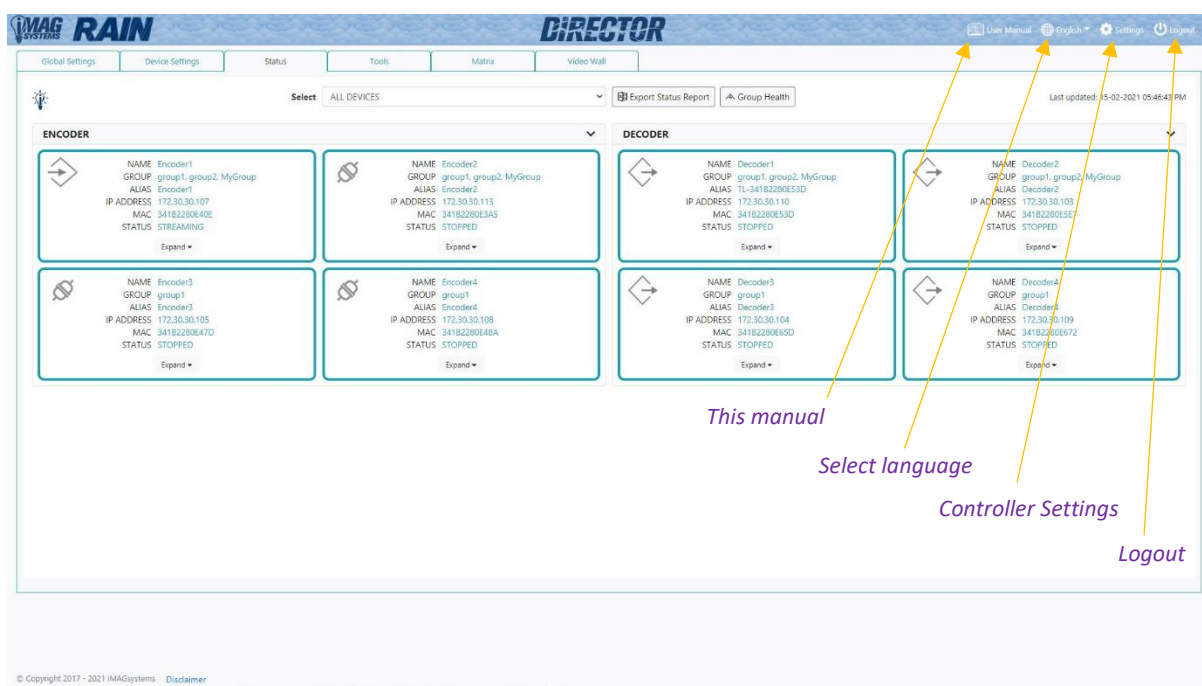
8 UI Overview – continued...

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.



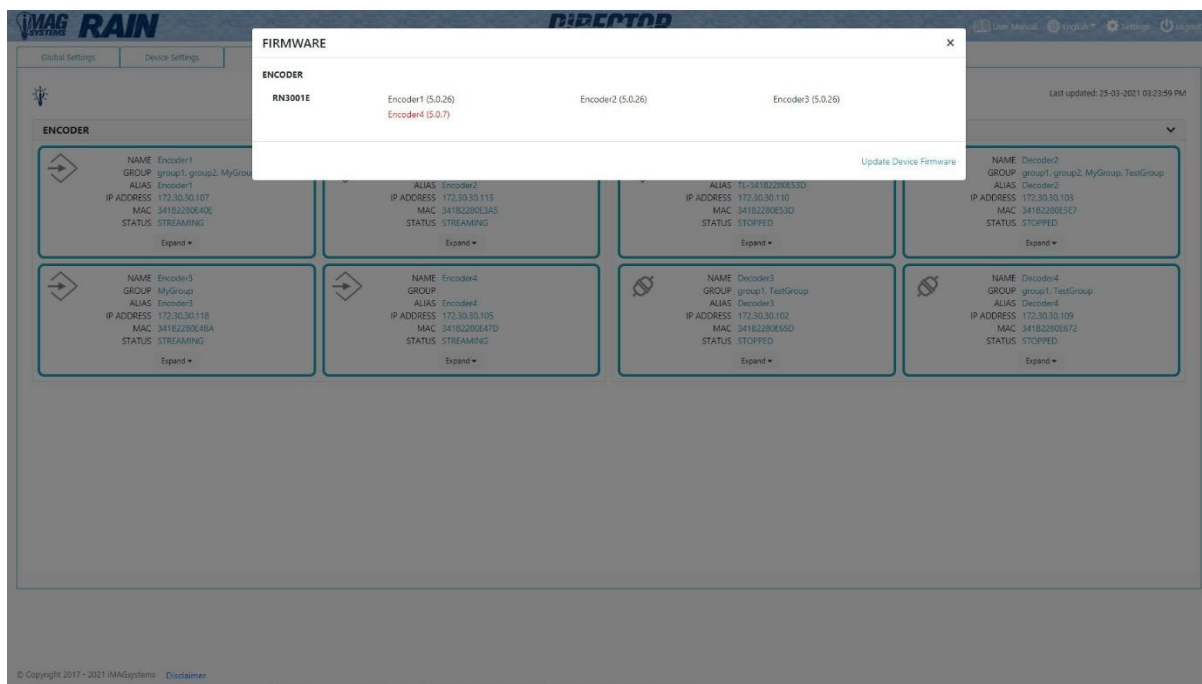
Once logged into the system the Status tab will be displayed by default.

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



8 UI Overview – continued...

Devices with older version of firmware will be indicated after login.



9 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.



9 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. Leave Subscriptions on new Decoder detection

Without this feature there is a possibility that connecting a Decoder to the network could receive video and audio if already subscribed (joined) to a used Encoder's multicast address.

To eliminate this possibility any newly discovered Decoder will be issued a leave all command which will cause the Decoder to leave all video and audio subscriptions (remove joins). This feature is active only after system start and connected Encoders and Decoders are detected.

4. Leave Subscriptions on System Start

This is an optional feature which can be enabled or disabled from the Settings – Advanced Settings tab. Without this feature all Decoders will still be subscribed (joined) to the same Encoders as before the system was powered off.

Some systems will be required to power on in the same state with the same joins as when powered off, while other situations this could be a security risk.

To eliminate this possibility when the feature is enabled a leave all command will be sent to all Decoders automatically on system start.

5. Permissions

Permissions has the ability to only allow certain Encoders to be joined with certain Decoders. Example: Encoder1 is only allowed to be joined with Decoder1, and Encoder2 can be joined with any Decoder except for Decoder2. Multiple conditions can be applied.

6. 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.

7. 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 join all – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder or Group name

4 Select Exclusive (optional)

5 Select Video Mode (optional)

6 Click Finish button

Select Mode

☐ Wizard
☒ Normal

1

Security Key (optional)

2

Encoder Device Name

3

Decoder / Group

4

Exclusive (optional)

5

Video Mode

6

✓ Finish

Command join all – Wizard Mode

Parameters

1 Select Encoder Device Name

2 1 Select Device(s)

2 2 Select Decoder or Group name

3 Select Exclusive (optional)

4 Select Video Mode (optional)

5 Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31393031336333333431613264333465

1

Encoder Device Name

2 1

Select

2 2

3

Exclusive (optional)

4

Video Mode

5

✓ Finish

Command join av – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder or Group name

4 Select Exclusive (optional)

5 Select Video Mode (optional)

6 Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

Encoder Device Name

Decoder / Group

Exclusive (optional)

☐

Video Mode

No Change

6

Command join av – Wizard Mode

Parameters ×

1 Select Encoder Device Name

2 1 Select Device(s)

2 2 Select Decoder or Group name

3 Select Exclusive (optional)

4 Select Video Mode (optional)

5 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

Encoder Device Name

Select

☒ Decoder Device Name

☐ Group Name

☐ All

Exclusive (optional)

☐

Video Mode

No Change

5

Command join video – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder or Group name

4 Select Exclusive (optional)

5 Select Video Mode (optional)

6 Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

Encoder Device Name

Decoder / Group

Exclusive (optional)

☐

Video Mode

No Change

✓ Finish

Command join video – Wizard Mode

Parameters ×

1 Select Encoder Device Name

2 1 Select Device(s)

2 2 Select Decoder or Group name

3 Select Exclusive (optional)

4 Select Video Mode (optional)

5 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

Encoder Device Name

Select

☒ Decoder Device Name

☐ Group Name

☐ All

Exclusive (optional)

☐

Video Mode

No Change

✓ Finish

Command join audio – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder or Group name

4 Select options

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

Encoder Device Name

Decoder / Group

Exclusive (optional)

☐

5

Command join audio – Wizard Mode

Parameters ×

1 Select Encoder Device Name

2 1 Select Device(s)

2 2 Select Decoder or Group name

3 Select options

4 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

Encoder Device Name

2 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

2 2

3 Exclusive (optional)

☐

4

Command join serial – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder or Group name

4 Select options

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

Encoder Device Name

Decoder / Group

Exclusive (optional)

☐

5

Command join serial – Wizard Mode

Parameters ×

1 Select Encoder Device Name

2 1 Select Device(s)

2 2 Select Decoder or Group name

3 Select options

4 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

Encoder Device Name

2 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

2 2

3 Exclusive (optional)

☐

4

Only devices in serial Matrix mode will be seen in the device lists.

Command join ir – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder or Group name

4 Select options

5 Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

Encoder Device Name

Decoder / Group

Exclusive (optional)

☐

5

Command join ir – Wizard Mode

Parameters ×

1 Select Encoder Device Name

2 1 Select Device(s)

2 2 Select Decoder or Group name

3 Select options

4 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

Encoder Device Name

2 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

2 2

3 Exclusive (optional)

☐

4

Command join wall – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder Device Name

4 Select Wall Type
eg 2x2

5 Select Display Position

6 Optionally change display resolution and framerate
6.1 Enter Resolution Width
6.2 Enter Resolution Height
6.3 Enter Framerate

7 Optionally apply bezel compensation
7.1 Enter Display Width
7.2 Enter Viewable Height
7.3 Enter Display Height
7.4 Enter Viewable Height

8 Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional) 1

Encoder Device Name 2

Decoder Device Name 3

Wall Type 4

Display Position 5

Width (optional) 6 1

Height (optional) 6 2

Frame Rate (optional) 6 3

Display Width (mm) (optional) 7 1

Viewable Width (mm) (optional) 7 2

Display Height (mm) (optional) 7 3

Viewable Height (mm) (optional) 7 4

8

Command join wall – Advanced Mode

Parameters ×

1 Select Encoder Device Name

2 Select Decoder Device Name

3 Select Wall Type
eg 2x2

4 Select Display Position

5 Select Video Mode

6 Optionally apply bezel compensation
6 1 Enter Display Width
6 2 Enter Viewable Height
6 3 Enter Display Height
6 4 Enter Viewable Height

7 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional) 31393031336333333431613264333465

Encoder Device Name 1

Decoder Device Name 2

Wall Type 3

Display Position 4

Video Mode (optional) 5

Display Width (mm) (optional) 6 1

Viewable Width (mm) (optional) 6 2

Display Height (mm) (optional) 6 3

Viewable Height (mm) (optional) 6 4

7

Command leave all – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder or Group name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder / Group

3

Command leave all – Wizard Mode

1 1 Select Device(s)

1 2 Select Decoder or Group name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

1 2

2

Command leave av – Normal Mode

1 Enter optional Security Key

2 Enter Decoder or Group name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder / Group

3

Command leave av – Wizard Mode

1 1 Select Device(s)

1 2 Select Decoder or Group name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

1 2

2

Command leave video – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder or Group name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder / Group

3

Command leave video – Wizard Mode

1 1 Select Device(s)

1 2 Select Decoder or Group name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

1 2

2

Command leave audio – Normal Mode

1 Enter optional Security Key

2 Enter Decoder or Group name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder / Group

3

Command leave audio – Wizard Mode

1 1 Select Device(s)

1 2 Select Decoder or Group name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

1 2

2

Command leave serial – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder or Group name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder / Group

3

Command leave serial – Wizard Mode

1 1 Select Device(s)

1 2 Select Decoder or Group name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

1 2

2

Only devices in serial Matrix mode will be seen in the device lists.

Command leave ir – Normal Mode

1 Enter optional Security Key

2 Enter Decoder or Group name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder / Group

3

Command leave ir – Wizard Mode

1 1 Select Device(s)

1 2 Select Decoder or Group name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 1 Select

☒ Decoder Device Name

☐ Group Name

☐ All

1 2

2

Command stop – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Encoder / Group

3 ✓ Finish

Command stop – Wizard Mode

Parameters ×

1 Select Encoder(s)

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

35303530633062306535323730333439

1 Select

☒ Encoder Device Name

☐ Group Name

☐ All Encoders

2 ✓ Finish

Command start – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Encoder / Group

3 ✓ Finish

Command start – Wizard Mode

Parameters ×

1 Select Encoder

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

35303530633062306535323730333439

1 Select

☒ Encoder Device Name

☐ Group Name

☐ All Encoders

2 ✓ Finish

Command reboot – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Device or Group name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Device / Group

3

✓ Finish

Command reboot – Wizard Mode

Parameters

1 1 Select Device(s)

1 2 Select Device or Group name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 1 Select

1 2

2

33633730313431623063353037643064

☒ Device Name

☐ Group Name

☐ All

☐ All Decoders

☐ All Encoders

✓ Finish

Command set audio_a_mute – Normal Mode

Parameters ×

- Enter optional Security Key
- Enter Device Name
- Select Mute Enabled / Disabled
- Click Finish button

Select Mode

☐ Wizard
☒ Normal

1 Security Key (optional)

2 Device Name

3 Mute

4

✓ Finish

Command set audio_a_mute – Wizard Mode

Parameters ×

- Select Device Name
- Select Mute Enabled / Disabled
- Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

1 Select

2 Mute

3

✓ Finish

Command set audio_d_mute – Normal Mode

Parameters ×

- Enter optional Security Key
- Enter Decoder Device Name
- Select Mute Enabled / Disabled
- Click Finish button

Select Mode

☐ Wizard
☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Mute

4

✓ Finish

Command set audio_d_mute – Wizard Mode

Parameters ×

- Select Decoder Device Name
- Select Mute Enabled / Disabled
- Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

1 Decoder Device Name

2 Mute

3

✓ Finish

Command set edid – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Encoder or Group name

3 Enter EDID string

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Encoder / Group

3 EDID

4

✓ Finish

Command set edid – Wizard Mode

Parameters

1 Select Encoder or Group name

2 Select EDID type

2 1 Select:

Default EDID

Decoder EDID

User Defined

2 2 Select External EDID

2 3 Enter User Defined EDID

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Select

2 1 EDID

2 2

2 3 EDID

33633730313431623063353037643064

☒ Encoder Device Name

☐ Group Name

☐ All Encoders

User Defined

External File

3

✓ 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

Notify Address

239.255.250.250

Notify Port

9160

Protocol

UDP

Device Address

172.30.10.107

1

Device Discovery

2

Select the device port being used

3

Select Sensor Notify

4

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

5

Set Notify Timer to 0

6

Click Set button

7

Select Condition ON, OFF or ALL

8

Select listener service ENABLED

9

Select the preset to be executed

10

Select an optional delay

11

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
☐ 4
☐ 5

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

State

ON

Service

DISABLED

Device Port

1

Finish

3 Select the device port being used

4 Select Condition ON, OFF or ALL

5 Select listener service DISABLED

6 Click Finish button

Command set overlay – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Enter Horizontal Offset

4 Enter Vertical Offset

5 Select State
Enabled / Disabled

6 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Horizontal Offset (optional)

4 Vertical Offset (optional)

5 State

6

Command set overlay – Wizard Mode

Parameters ×

1 Select Decoder Device Name

2 Select Horizontal Offset

3 Select Vertical Offset

4 Select State
Enabled / Disabled

5 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

333934303431396433303030633564

1 Decoder Device Name

2 Horizontal Offset (optional)

3 Vertical Offset (optional)

4 State

5

1 1920

1 1080

Command set rotation – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Select Rotation

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Rotation

4 ✓ Finish

Command set rotation – Wizard Mode

Parameters ×

1 Select Decoder Device Name

2 Select Rotation

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Decoder Device Name

2 Rotation

3 ✓ Finish

Command set scaler – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Select Mode

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Mode

4 ✓ Finish

Command set scaler – Wizard Mode

Parameters ×

1 Select Decoder Device Name

2 Select Mode

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Decoder Device Name

2 Mode

3 ✓ Finish

Command set sync – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Enter Decoder Device Name(s) or Group Name

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Encoder Device Name

3 Decoder(s) / Group Name

4

Command set sync – Normal Mode

Parameters ×

1 Select Encoder Device Name

2 Select Decoders or Group or ALL

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

333934303431396433303030633564

1 Encoder Device Name

2 Select

Decoder Device Name(s)

☐ RN3002D-341B2280E5E7 ☐ RN3002D-341B2280E53D ☐ RN3002D-341B2280E65D

☐ RN3002D-341B2280E672

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 set video_mode – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Select Video Mode
High Quality / Low Delay

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Mode

4

Command set video_mode – Wizard Mode

Parameters ×

1 Select Decoder Device Name

2 Select Video Mode
High Quality / Low Delay

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Decoder Device Name

2 Mode

3

Command set volume – Normal Mode

Parameters ×

- Enter optional Security Key
- Enter Decoder Device Name
- Select Audio Source
HDMI / ANALOG
- Select Volume level
- Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Audio Source

4 Level

-100 0 12

5

Command set volume – Wizard Mode

Parameters ×

- Select Device Name
- Select Decoder Device Name
- Select Audio Source
HDMI / ANALOG
- Select Volume level

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Decoder Device Name

2 Audio Source

3 Level

-100 0 12

4

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 get audio_a_mute – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Device Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Device Name

3

Command get audio_a_mute – Wizard Mode

1 Select Device Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

333934303431396433303030633564

1 Device Name

2

Command get audio_d_mute – Normal Mode

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3

Command get audio_d_mute – Wizard Mode

1 Select Decoder Device Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

333934303431396433303030633564

1 Decoder Device Name

2

Command get devices – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Select Device
ALL / ALL DECODEDRS / ALL ENCODERS

3 Click Finish button

Select Mode

☐ Wizard
☒ Normal

1 Security Key (optional)

2 Select Device

3

Command get devices – Wizard Mode

Parameters ×

1 Select Device
ALL / ALL DECODEDRS / ALL ENCODERS

2 Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

1 Select Device

2

Command get display_status – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Click Finish button

Select Mode

☐ Wizard
☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3

Command get display_status – Wizard Mode

Parameters ×

1 Select Decoder Device Name

2 Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

1 Decoder Device Name

2

Command get edid – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3

✓ Finish

Command get edid – Wizard Mode

Parameters

1 Select Decoder Device Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Decoder Device Name

2

33633730313431623063353037643064

✓ Finish

Command get overlay – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3

Command get overlay – Wizard Mode

Parameters

1 Select Decoder Device Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

333934303431396433303030633564

1 Decoder Device Name

2

Command get preferred – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Select Resolution
WIDTH / HEIGHT /
FRAME RATE

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Resolution

4

Command get preferred – Wizard Mode

Parameters

1 Select Decoder Device Name

2 Select Resolution
WIDTH / HEIGHT / FRAME RATE

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Decoder Device Name

2 Resolution

3

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Command get rotation – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3

Command get rotation – Wizard Mode

1 Select Decoder Device Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Decoder Device Name

2

Command get scaler – Normal Mode

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Select Option
ALL / WIDTH /
HEIGHT / FRAME RATE

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3 Option

4

Command get scaler – Wizard Mode

1 Select Decoder Device Name

2 Select Option
ALL / WIDTH /
HEIGHT / FRAME RATE

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Decoder Device Name

2 Option

3

Command get status – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Device Name

3 Select Streams
VIDEO / AUDIO / SERIAL / IR

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Device Name

3 Streams (optional)

4 ✓ Finish

Command get status – Wizard Mode

Parameters

1 Select Device Name

2 Select Streams
VIDEO / AUDIO / SERIAL / IR

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Device Name

2 Streams (optional)

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

Command get var – Wizard Mode

Parameters ×

1 Enter / Select Variable Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

3139303133633333431613264333465

1 Variable Name

2

Command get ver – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Select Device
ALL / ALL DECODEDRS / ALL ENCODERS

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Device Name

3

Command get ver – Wizard Mode

Parameters ×

1 Select Device
ALL / ALL DECODEDRS / ALL ENCODERS

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Device Name

2

Command get video – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Select Option
ALL / WIDTH / HEIGHT
FRAME RATE / SCAN MODE

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Encoder Device Name

3 Option

4

Command get video – Wizard Mode

Parameters ×

1 Select Encoder Device Name

2 Select Option
ALL / WIDTH / HEIGHT
FRAME RATE / SCAN MODE

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Encoder Device Name

2 Option

3

Command get video_mode – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Decoder Device Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Decoder Device Name

3

Command get video_mode – Wizard Mode

Parameters ×

1 Select Decoder Device Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Decoder Device Name

2

Command get video_status – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Enter Encoder Device Name

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Encoder Device Name

3

Command get video_status – Wizard Mode

Parameters ×

1 Select Encoder Device Name

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Encoder Device Name

2

Command get volume – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Select Device

3 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Device Name

3

Command get volume – Wizard Mode

Parameters ×

1 Select Device

2 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

1 Device Name

2

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 joins – Normal Mode

Parameters

1 Enter optional Security Key

2 Enter Subscription type

3 Enter Decoder Device Name

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Subscription

3 Decoder Device Name

4

✓ Finish

Command get joins – Wizard Mode

Parameters

1 Select Subscription type

2 Select Decoder

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 Subscription

2 Decoder Device Name

3

✓ Finish

Command send cec – Normal Mode

Parameters ×

1 Enter optional Security Key

2 Select Device

3 Enter CEC code

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Device / Group

3 CEC Code

4

Command send cec – Wizard Mode

Parameters ×

1 Select Device

2 Select / Enter CEC code

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

33633730313431623063353037643064

Select

☒ Device Name

☐ All

☐ All Decoders

☐ All Encoders

1

2 CEC Code

3

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

Alias Name (optional)

Description (optional)

Save

IP Address

172.30.10.138

Port

4998

Disconnect (optional)

☐

Global Caché Command

Finish

000C1EC01DB1@172.30.10.138 (GC-100-12)

** 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.*

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.

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Command send gc – Wizard Mode continued...

This example shows setting relay #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)


1 Select I/O for relay 1

2 Select relay State

3 Click Set button

4 Click Finished button

Network



Select I/O 1

2

Select State

3

Set

Get

IP Address

172.30.10.138

Port

4998

Disconnect (optional)

☐

Global Cache Command

setstate,3:1,1

4

Finish

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Command send gc – Wizard Mode continued...

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.

The Director Controller must have internet access to access the online Global Caché cloud IR database.

This example shows sending an Infrared signal from I/O #3 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



Select I/O 1

1 Select I/O

2 Select I/O mode of operation

3 1 Select Acquire mode available

3 2 Navigate the IR database

4 Click Set button

5 Click Finished button

Select Mode

Infrared 2

Acquire Mode

Cloud Database

Global Caché

3 2 Manufacturer

Samsung

Device Type

TV

Device

Most Models

Function

POWER ON

4

Set Stop

IP Address

172.30.10.138

Port

4998

Disconnect (optional)

☐

Global Caché Command

sendir,4:3,1,38000,1,1,172,172,22,64,22,64,22,64,22,21,22,21,22,21,22,21,22,21,22,64,22,64,22,64,22,21,22,21

5

Finish

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 Caché Command

Finish

Command send ir – Normal Mode

Parameters

1 Enter optional Security Key

2 Select Device

3 Enter IR code

4 Click Finish button

Select Mode

☐ Wizard

☒ Normal

1 Security Key (optional)

2 Device / Group

3 IR Code

4

Command send ir – Wizard Mode

Parameters

1 Select Device

2 Enter IR code

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

35303530633062306535323730333439

Select

1 ☒ Device Name

☐ Group Name

☐ All

☐ All Decoders

☐ All Encoders

2 IR Code

3

Command send serial – 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

3 Enter Device
4 Enter Data String
5 Leave NONE selected (when no feedback required)
6 Click Finish button

Select Mode
☐ Wizard
☒ Normal

1 Security Key (optional)

2 1 Select Device

2 2 Alias Name (optional)

2 3 Description (optional)

Save

3 Device / Group

4 Data String

5 Feedback (optional) NONE

6 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

3 Enter Device
4 Enter Data String
5 Select Reply (when feedback required)
6 Click Finish button

Select Mode
☐ Wizard
☒ Normal

1 Security Key (optional)

2 1 Select Device

2 2 Alias Name (optional)

2 3 Description (optional)

Save

3 Device / Group

4 Data String

5 Feedback (optional) Reply

6 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

3 Enter Device
4 Enter Data String
5 Select Contains (when part feedback compared)
6 Enter Feedback string
7 Click Finish button

Select Mode
☐ Wizard
☒ Normal

1 Security Key (optional)

2 1 Select Device

2 2 Alias Name (optional)

2 3 Description (optional)

Save

3 Device / Group

4 Data String

5 Feedback (optional) Contains

6 Feedback String

7 Finish

Command send serial – Normal Mode continued...

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

2 2 Alias Name (optional)

4 Enter Data String

2 3 Description (optional)

5 Select Equals (when full feedback compared)

Save

6 Enter Feedback string

3 Device / Group

7 Click Finish button

4 Data String

5 Feedback (optional)

6 Feedback String

7 Finish

Command send serial – 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

① ① Select Device

Select Device

② Select Device

① ② Alias Name (optional)

Alias Name

③ Select string format

① ③ Description (optional)

Description

When Device Protocol HEX:
HEX or ASCII

When Device Protocol ASCII:
ASCII only

④ Enter Data String

② Select

☒ Device Name

☐ All

☐ All Decoders

☐ All Encoders

Decoder1

⑤ Leave None selected
(when no feedback required)

③ Protocol

ASCII

⑥ Click Finish button

④ Data String

Data String

Append CR (optional)

☐

Append LF (optional)

☐

⑤ Feedback (optional)

NONE

⑥ 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

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31393031336333333431613264333465

① ① Select Device

Select Device

② Select Device

① ② Alias Name (optional)

Alias Name

③ Select string format

① ③ Description (optional)

Description

When Device Protocol HEX:
HEX or ASCII

When Device Protocol ASCII:
ASCII only

④ Enter Data String

② Select

☒ Device Name

☐ All

☐ All Decoders

☐ All Encoders

Decoder1

⑤ Select Reply
(when feedback required)

③ Protocol

ASCII

⑥ Click Finish button

④ Data String

Data String

Append CR (optional)

☐

Append LF (optional)

☐

⑤ Feedback (optional)

Reply

⑥ Finish

Command send serial – Wizard Mode continued...

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
Select Device

1
2
Alias Name (optional)

1
3
Description (optional)

3
Select string format

When Device Protocol HEX:
HEX or ASCII

When Device Protocol ASCII:
ASCII only

4
Enter Data String

5
Select Contains
(when part feedback compared)

6
Enter Feedback string

7
Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31393031336333333431613264333465

1
1
Select Device

2
Select

☒ Device Name

☐ All

☐ All Decoders

☐ All Encoders

Decoder1

3
Protocol

ASCII

4
Data String

Append CR (optional)

☐

Append LF (optional)

☐

5
Feedback (optional)

Contains

6
Feedback String HEX

Append CR (optional)

☐

Append LF (optional)

☐

7
Finish

Command send serial – Wizard Mode continued...

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
Select Device

1
2
Alias Name (optional)

1
3
Description (optional)

3
Select string format

When Device Protocol HEX:
HEX or ASCII

When Device Protocol ASCII:
ASCII only

4
Enter Data String

5
Select Equals

(when full feedback compared)

6
Enter Feedback string

7
Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31393031336333333431613264333465

1
1
Select Device

▼

2
Select

☒ Device Name

☐ All

☐ All Decoders

☐ All Encoders

Decoder1

▼

3
Protocol

ASCII

▼

4
Data String

Append CR (optional)

☐

Append LF (optional)

☐

5
Feedback (optional)

Equals

▼

6
Feedback String HEX

Append CR (optional)

☐

Append LF (optional)

☐

7
Finish

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

3 Enter device IP Address
4 Enter device Port
5 Enter command string
6 Leave NONE selected (when no feedback required)
7 Click Finish button

Select Mode
☐ Wizard
☒ Normal

1 Security Key (optional)

2 1 Select Device

2 2 Alias Name (optional)

2 3 Description (optional)

3 IP Address

4 Port

5 Command

6 Feedback (optional) NONE

7 ✓ Finish

Save

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

3 Enter device IP Address
4 Enter device Port
5 Enter command string
6 Select Reply (when feedback required)
7 Click Finish button

Select Mode
☐ Wizard
☒ Normal

1 Security Key (optional)

2 1 Select Device

2 2 Alias Name (optional)

2 3 Description (optional)

3 IP Address

4 Port

5 Command

6 Feedback (optional) Reply

7 ✓ Finish

Save

Command send tcp – Normal Mode continued...

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

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

6 Select Contains (when part feedback compared)

7 Enter Feedback string

8 Click Finish button

3 IP Address

4 Port

5 Command

6 Feedback (optional)

7 Feedback String (optional)

8 ✓ Finish

Save

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

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

6 Select Equals (when full feedback compared)

7 Enter Feedback string

8 Click Finish button

3 IP Address

4 Port

5 Command

6 Feedback (optional)

7 Feedback String (optional)

8 ✓ Finish

Save

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) 313930313363333333431613264333465

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

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) 313930313363333333431613264333465

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

Command send tcp – Wizard Mode continued...

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

ASCII

5 Command

Append CR (optional)

☐

Append LF (optional)

☐

6 Feedback (optional)

Contains

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 preset add

Parameters ×

- Enter Preset Name
- Enter Preset Command
- Click Finish button

Security Key (optional) 31393031336333333431613264333465

1 Preset Name

2 Preset Data

3 ✓ Finish

Command preset delete

Parameters ×

- Select Preset Name
- Click Finish button

Select Mode ☒ Wizard ☐ Normal

Security Key (optional) 31393031336333333431613264333465

1 Preset Name

2 ✓ Finish

Command preset load

Parameters ×

- Select Preset Name
- Select optional delay time or select Cancel
- 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_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

6

Command set ui_label – Normal Mode

Parameters ×

- Enter optional Security Key
- Enter UI Name
- Enter Label Name
- Select Function
Color / Visibility / Text
- Enter Value
- 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 ×

- Select UI Name
- Select Label Name
- Select Function
Color / Visibility / Text
- Select or Enter Value
- Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

1 UI Name

2 Label Name

3 Function

4 Value

5

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

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

31393031336333333431613264333465

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

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)

1 UI Name

2 Page Name

31393031336333333431613264333465

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)

38383530636161613230323130346434

Enabled

☒ 1 100

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

Disabled

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

Logout

4 ✓ Finish

Command set ui – Wizard Mode

Parameters

1 Select UI Name

2 Select Service > Enabled

3 Select optional UI Timeout (seconds)

4 Enter optional Client Limit (1 – 100)

5 Select optional Login Random / Fixed

6 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31393031336333333431613264333465

1 UI Name

2 Service

Enabled

3 Session Timeout (optional)

☐

4 Client Limit (optional)

☐

5 Login (optional)

NONE

6

✓ Finish

Parameters

1 Select UI Name

2 Select Service > Disabled

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31393031336333333431613264333465

1 UI Name

2 Service

Disabled

3

✓ Finish

Parameters

1 Select UI Name

2 Select Service > Logout

3 Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31393031336333333431613264333465

1 UI Name

2 Service

Logout

3

✓ Finish

Command get ui – Normal Mode

Parameters ×

- Enter optional Security Key
- Enter UI Name
- Click Finish button

Select Mode
☐ Wizard
 ☒ Normal

Security Key (optional) 1

UI Name 2

3

Command get ui – Wizard Mode

Parameters ×

- Select UI Name
- Click Finish button

Select Mode
☒ Wizard
 ☐ Normal

Security Key (optional)

UI Name 1

2

Command get ui_button – Normal Mode

Parameters ×

- Enter optional Security Key
- Enter UI Name
- Enter Button Name
- Enter Function > down
- Click Finish button

Select Mode
☐ Wizard
 ☒ Normal

Security Key (optional) 1

UI Name 2

Button Name 3

Function 4

5

Command get ui_button – Wizard Mode

Parameters ×

- Select UI Name
- Select Button Name
- Select Function > Down
- Click Finish button

Select Mode
☒ Wizard
 ☐ Normal

Security Key (optional)

UI Name 1

Button Name 2

Function 3

4