



User Manual for DigitaLinxIP  
5000 Series System

**ARRANGER**  
BUILD | CONTROL | MANAGE

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# Status

The *Status* tab contains information about how an encoder or decoder is currently functioning. By default this is the first screen you will see when logging onto the Arranger server application.

## Device Stats

Arranger will detect all Digi IP devices on the AV LAN and will display all the current and up-to-date stats for each encoder and decoder by default. To expand individual information on a device, click on the *EXPAND* button on the desired encoder or decoder.

The screenshot displays the 'Status' tab in the Arranger application. The interface includes a top navigation bar with tabs: Status, Device Settings, Matrix, Video Wall, Tools, and Global Settings. Below the navigation bar, there is a 'Select' dropdown menu set to 'ALL DEVICES', an 'Export Status Report' button, and a 'Group Health' button. The main content area is divided into two sections: 'ENCODER' and 'DECODER'. Each section contains a list of device cards. Each card displays the following information: NAME, GROUP, ALIAS, IP ADDRESS, MAC, and STATUS. An 'Expand' button is located at the bottom of each card. The 'ENCODER' section shows three cards: 'InRoomPC', 'MEDIA', and 'PC2'. The 'DECODER' section shows two cards: 'DELL' and 'VIZIO'. The 'PC2' card in the 'ENCODER' section has its 'Expand' button highlighted with a red box.

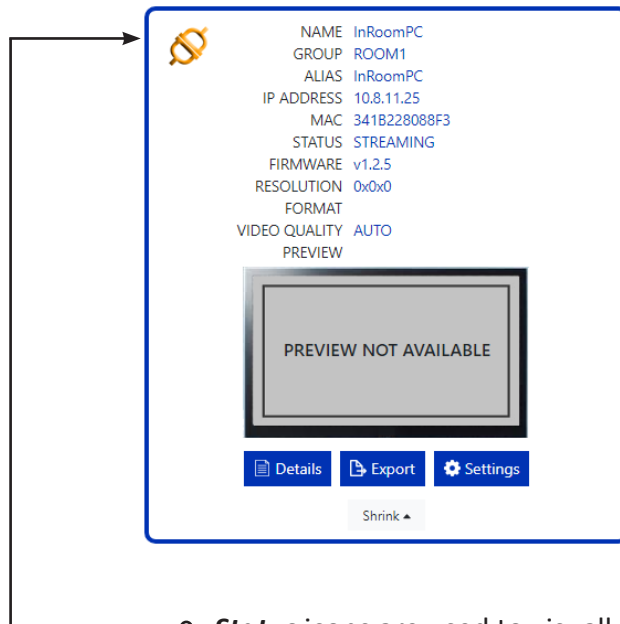
Section	Device Name	Group	Alias	IP Address	MAC	Status
ENCODER	InRoomPC	ROOM1	InRoomPC	10.8.11.25	341B22808F3	STREAMING
	MEDIA		MEDIA	10.8.11.96	341B2280CF12	STREAMING
	PC2	ROOM1	PC2	10.8.11.7	341B2280631D	STREAMING
DECODER	DELL		DELL	10.8.11.65	341B22806156	STREAMING
	VIZIO	ROOM1	VIZIO	10.8.11.74	341B228061C2	STREAMING

### Device Stats continued.....

The expanded menu provides up-to-date information on the device such as alias / device name, group name, IP address, MAC address, streaming status, firmware version, resolution/format type, and video quality and will also show a preview of the video feed being ingested (encoder) or routed (decoder).

Expanded menu also provides quick access to device streams / subscriptions, access to deeper device settings, export details for device via JSON formatted string and identify decoder locations on screen to a connected display.

Below is an expanded menu for an encoder; the legend below explains the **status** icons shown in the menu.



**Note:** Device video previews are turned OFF by default.

See *Device Settings > HDMI Input* of this manual for more info on turning on preview.

○ **Status** icons are used to visually indicate the status of a device as follows:



Encoder with video source connected



Decoder with monitor / display connected



Encoder / decoder is connected to the network; no source or display connected



Encoder / decoder is disconnected from the network



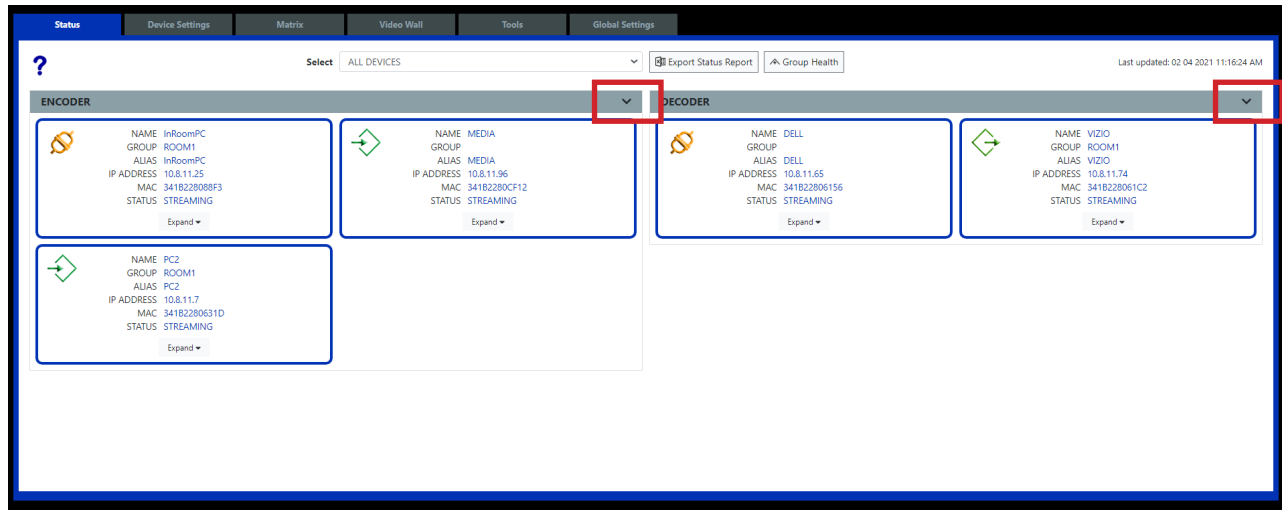
Encoder / decoder has a network issue and has timed out



Device has an error

*Device Stats continued.....*

To display all details for ALL devices, click the up/down arrow button as shown below

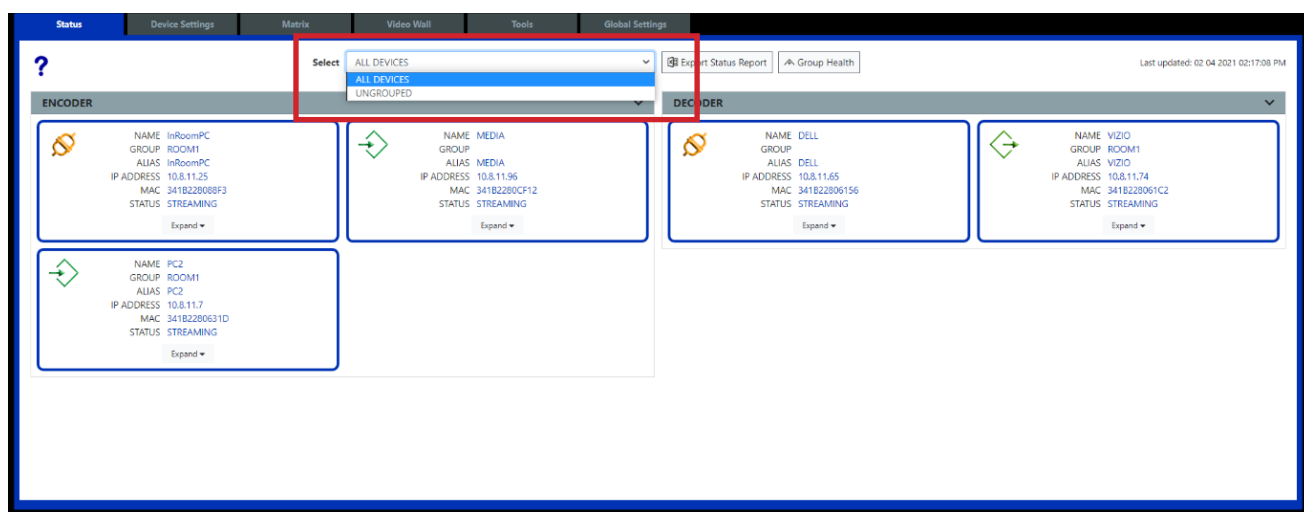


## Groups

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

To filter by group, select the group from the drop-down menu below. When a group is selected only the devices in that group will be edited by the various menus.

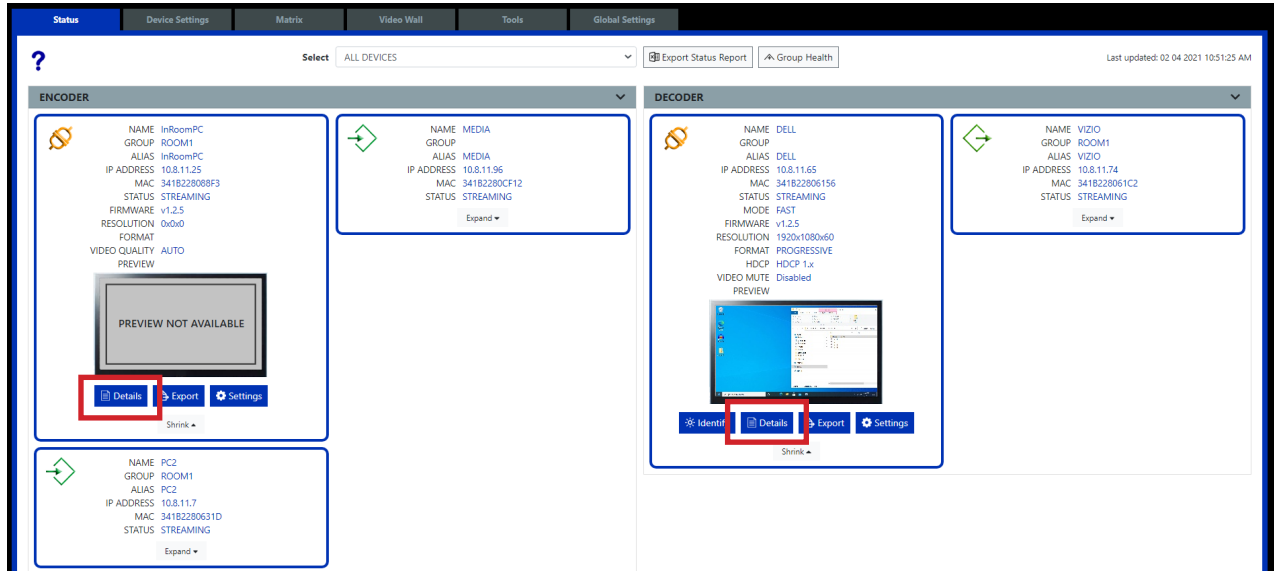
**Note:** By default all encoders and decoders are grouped in the *UNGROUPED* category, when devices are sectioned into user-defined groups this file will eventually be empty and cannot be deleted as it is default file for new devices found on a network. The *ALL DEVICES* selection will select all devices regardless of what group they may be associated with.



To learn how to set up devices in a group, see *Global Settings > Groups*

## Streams and Subscriptions

*Details* option under the encoder / decoder contains information regarding the streams and subscriptions to those streams.



### Encoder

The *Streams* tab of an encoder will show the status of all streams along with their multicast address. From here you can stop or start all streams.

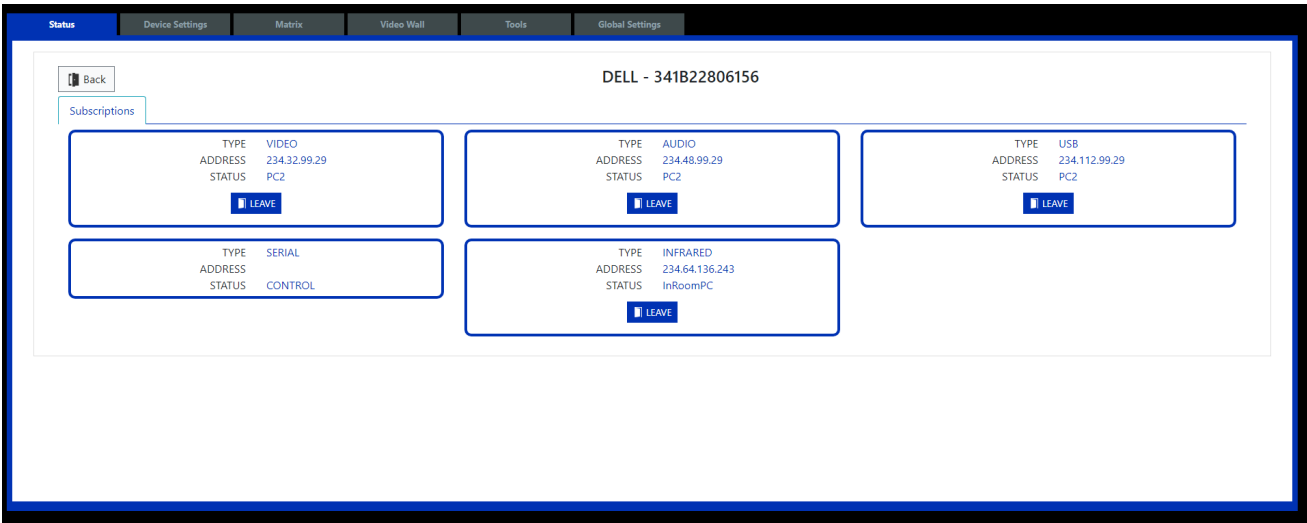


Streams and Subscriptions continued.....

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.

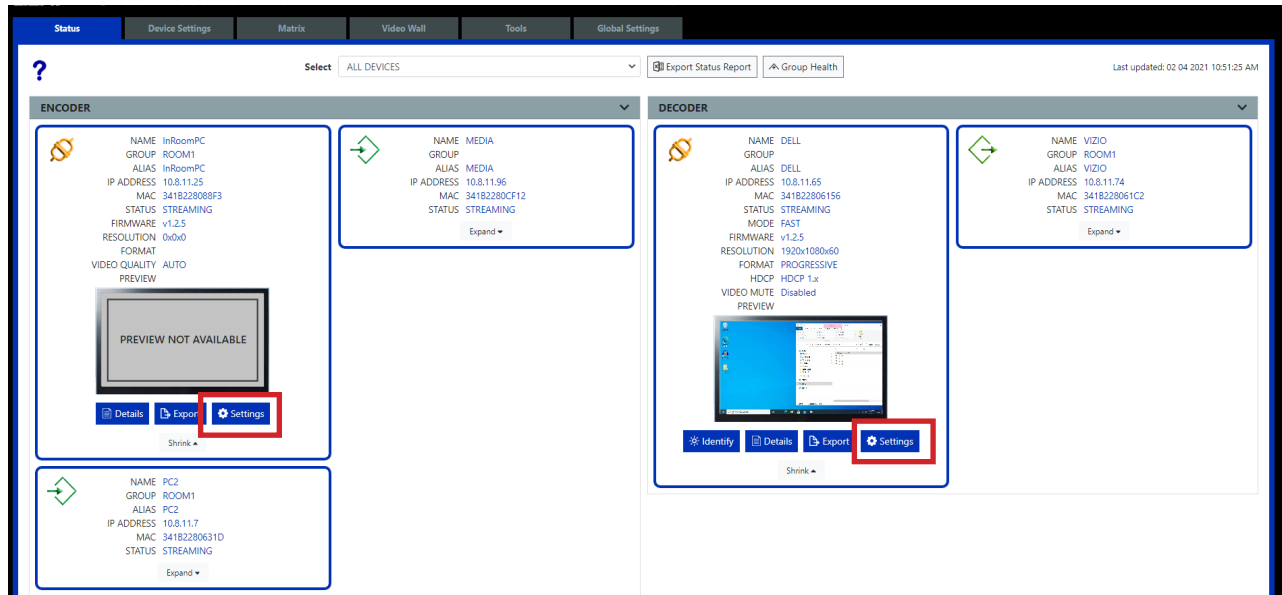
From here you can leave any of the streams.



## Device Settings Access

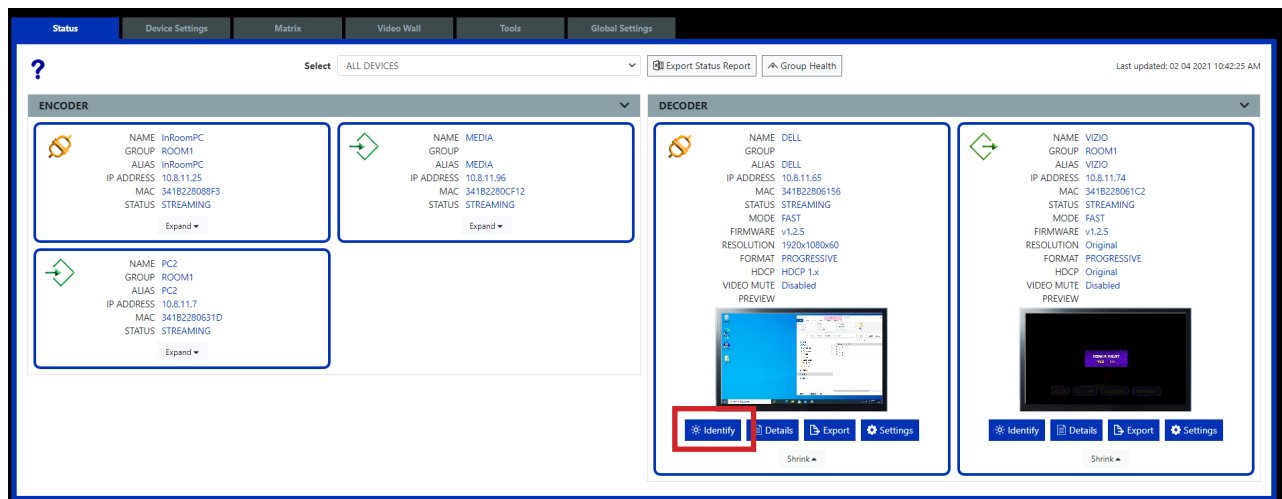
Clicking the *Settings* button on a device will send you directly to the device settings tab so device settings can be changed quickly.

To learn more about settings, see *Device Settings*



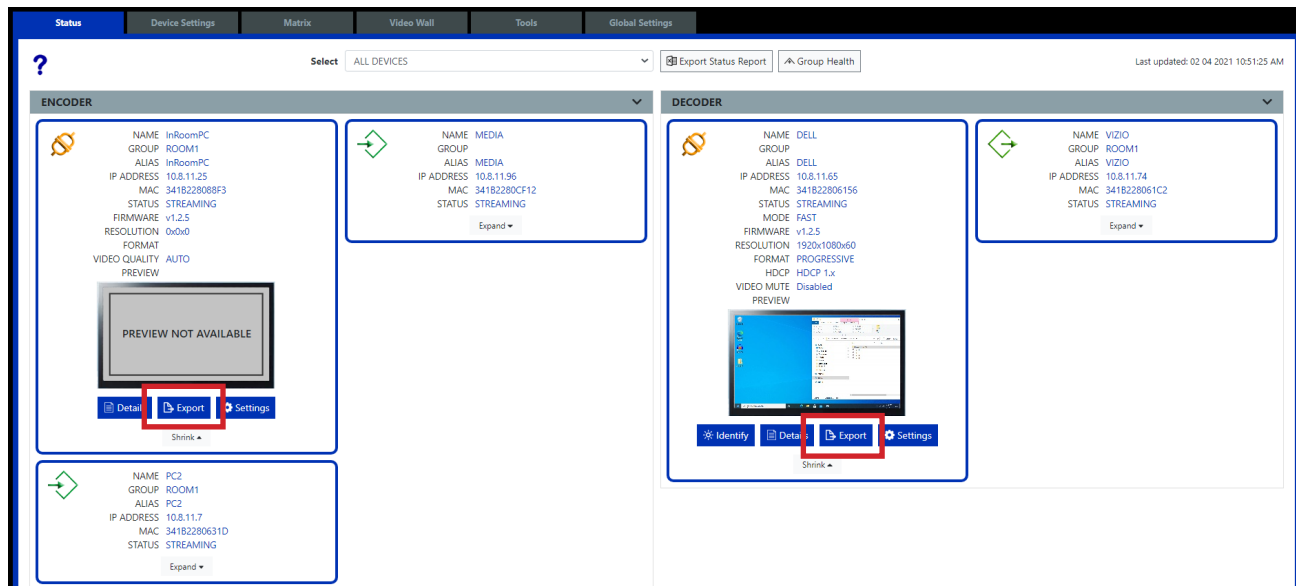
## On-Screen Decoder Identify

*Identify* button in device details on a decoder allows you to display the decoder's name on the connected display or monitor. Device name will be displayed on screen for 30 seconds.



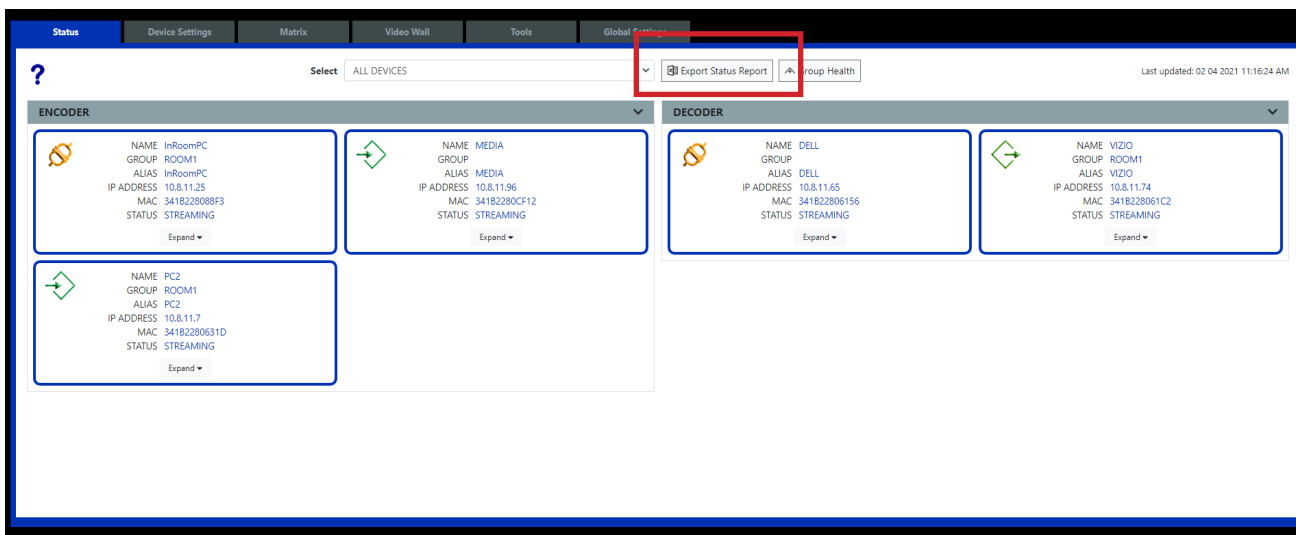
## Export Device Info

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 on your PC.



## Export All Device Info

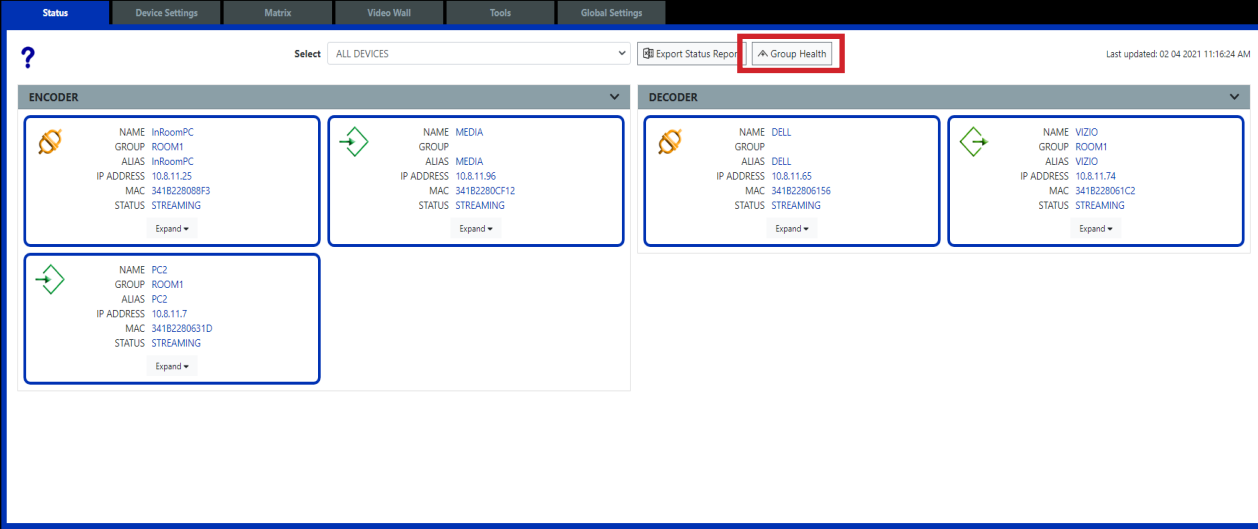
Export Status Report will save a csv formatted file with all the status details from this section.





## Health Check

*Group Health* will report the up-to-date 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.



The screenshot shows the Arranger Digi IP 5000 web interface. The top navigation bar includes tabs for Status, Device Settings, Matrix, Video Wall, Tools, and Global Settings. The 'Status' tab is active. Below the navigation bar, there is a 'Select' dropdown menu set to 'ALL DEVICES'. To the right of the dropdown is a button labeled 'Export Status Report' and a button labeled 'Group Health', which is highlighted with a red box. The 'Group Health' button has a small icon of a group of people. The main content area is divided into two sections: 'ENCODER' and 'DECODER'. Each section contains a list of devices with their status icons and details. The 'ENCODER' section has three devices: 'InRoomPC', 'MEDIA', and 'PC2'. The 'DECODER' section has two devices: 'DELL' and 'VIZIO'. Each device card displays its name, group, alias, IP address, MAC address, and status. The status is 'STREAMING' for all devices. Each card also has an 'Expand' button.

Section	Name	Group	Alias	IP Address	MAC	Status
ENCODER	InRoomPC	ROOM1	InRoomPC	10.8.11.25	341B22808F3	STREAMING
	MEDIA		MEDIA	10.8.11.96	341B2280CF12	STREAMING
	PC2	ROOM1	PC2	10.8.11.7	341B2280631D	STREAMING
DECODER	DELL		DELL	10.8.11.65	341B22806156	STREAMING
	VIZIO	ROOM1	VIZIO	10.8.11.74	341B228061C2	STREAMING

# Device Settings

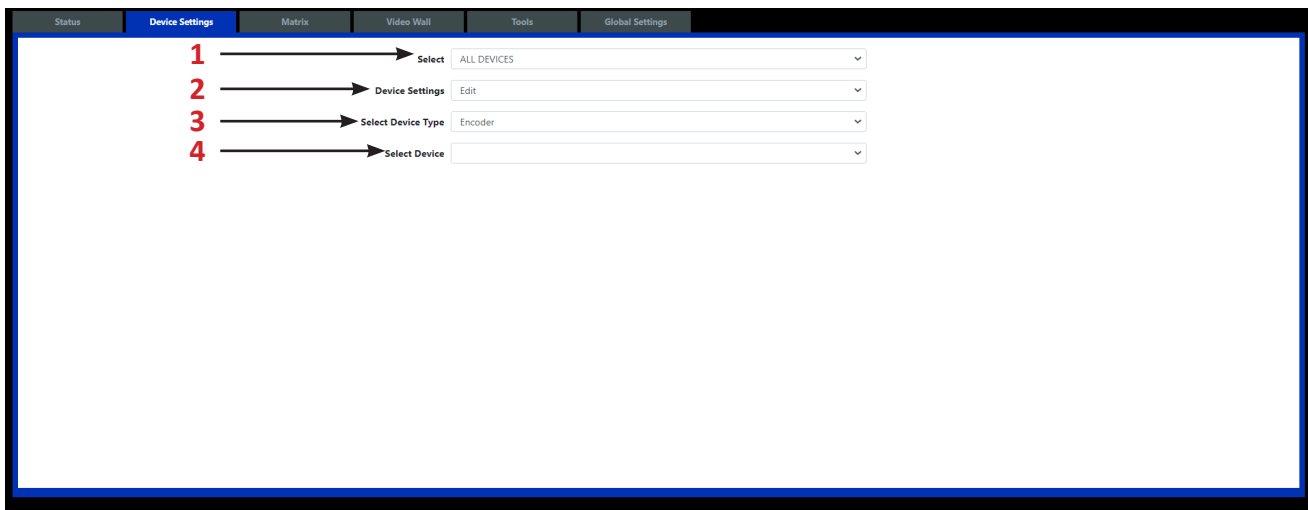
This is where all the encoder and decoder device settings are configured in the system. encoders and decoders can be individually configured or configured in batches to save time for setting up standardized equipment.

For settings that can be applied to all encoders or decoders, the option is given to update ALL or you can select which devices to apply the global setting to. If there is no *apply to all* or *group apply* option given then that is a specific setting for that device; for instance you cannot name all decoders the same name so that is not an option to apply to all or multiple selected devices.

Device settings can also be exported to 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.

## Edit Settings

Here you can change the device settings for encoders and decoders on the system.



1. *Select* allows you to filter out devices by groups or you can select ALL devices.
2. Select *Edit* from *Device Settings*
3. Select *Device Type* to filter between encoder and decoder type.
4. Select a *Device*.

## Device Name

The name of a device is used for control purposes. This is the device name used in API commands. Device and alias names have a maximum of 19 characters and no spaces are allowed.

1. Enter *Name*.
2. Enter *Alias*.
3. Tick *Update Alias* to update the alias name of the device.
4. Click *Save* or *Default* to return to factory default name of device.

**NOTE:** The following device names cannot be used:

- 'all'
- 'all\_rx'
- 'all\_tx'
- 'ungrouped'
- 'all\_devices'
- Any Group name
- Any Preset name

## Device Groups

Encoders and decoders can be assigned to groups. These groups are created from the *Global Settings* tab. Once an encoder or decoder has been placed in a group, an alias name and an icon can be assigned to it. This alias name and icon will then be used on the *Matrix* tab / page once a group is selected.

Group names have a maximum of 19 characters and no spaces are allowed.

1. Assign device to *Group* by ticking the desired box; in this example we have built two groups; Group 1 and Group 2.

To learn how to build *Groups* see *Global Settings > Groups*.

2. Select an appropriate icon.
3. Click *Clear* to clear selection or click *Save*.

## Network

Click on *Network* to change network settings for device(s).

1. Select *IP mode*; AUTO, MANUAL or DEFAULT

- AUTO - DHCP, this mode will allow the IP address to be set automatically by a third-party router or DHCP server.
- MANUAL - Static address mode, enter in user-specified IP address, subnet and gateway.
- DEFAULT - resets to factory default, device will be set to 169.254.0.0/16 Network ID range.

2. Click *Save* to save individual device settings.

OR

Click *Save to Devices* to apply this setting to multiple devices.

**Note:** Only *MANUAL* and *DEFAULT* mode will save multiple devices.

## HDMI Input (Encoder)

Click *HDMI Input* to adjust settings to the video input of an encoder. Here you can enable / disable the devices preview stream, decide video quality and set EDID table to HDMI input.

The screenshot displays the 'Device Settings' tab for an 'Encoder' device. The 'HDMI Input' section is active, showing the following settings:

- Select:** ALL DEVICES
- Device Settings:** Edit
- Select Device Type:** Encoder
- Select Device:** PC2
- Name:**
- Group:**
- Network:**
- HDMI Input:**
  - Preview:** Enabled (indicated by red number 1)
  - Video Quality:** AUTO (indicated by red number 2)
  - EDID:** 1080P 2CH (indicated by red number 3)
  - External File:** Button to upload an external EDID file (indicated by red number 4)
  - Save:** Button to save settings (indicated by red number 5)
  - Save To Devices:** Button to save settings to the device (indicated by red number 5)
  - EDID Table:** A hex table representing the EDID data (indicated by red number 5)
  - EDID Details:** A scrollable area showing EDID version, validity, manufacturer information, and preferred timing (indicated by red number 6)
  - Save EDID to File:** Button to save the EDID table to a file (indicated by red number 6)
  - Copy to Clipboard:** Button to copy the EDID table to the clipboard (indicated by red number 6)
- Audio Output:**
- RS232 Serial Parameters:**

### HDMI Input (Encoder) In continued.....

1. Select enable / disable option in *Preview* drop-down menu, by default all previews are set to *DISABLED*.
2. Select *Video Quality* setting by selecting quality rating 0 - 5, 0 with 5 being the best quality.  
**Note:** This option applies more compression to further decrease the variable bit rate.
3. Select a desired EDID table to the HDMI input, by default EDID is set to 4K 2 channel audio with HDR. Below is a list of all EDID options in the EDID drop-down menu.
  - 4K 2ch, 6ch, 8ch audio with and without HDR10
  - 1080p 2ch, 6ch, 8ch audio
  - 1920 x 1200 2 ch audio
  - Copy and apply EDID from a display or another device connected to a decoder.
4. Click on *External File* to load an external EDID file (must be .edid format).
5. Click *Save* to save individual device settings.

OR

Click *Save to Devices* to apply this setting to multiple devices.

6. Click *Save EDID to file* as an external .edid formatted file; click *Copy to Clipboard* to copy the current displayed EDID file characters.

## HDMI Output (Decoder)

Click *HDMI Output* to adjust settings to the video output of a decoder.

Select ALL DEVICES

Device Settings Edit

Select Device Type Decoder

Select Device Decoder1

Name

Group

Network

HDMI Output

Preview

1

2 Resolution Original

3 HDCP HDCP 1.x

4 Video Mute Disabled

5 Detect Video Loss Disable

5a Timeout (seconds) 10

5b Turn Video Off Disable

6 Rotation None

Aspect Ratio Fit To Display

7 Save Save To Devices

EDID No Display Connected

Audio Output

RS232 Serial Parameters

Display Control

Idle Image

6



*HDMI Output (Decoder) continued.....*

1. Display Preview.
2. Select output *Resolution*.
3. Select *HDCP*.
4. Enable / Disable *Video Mute*.
5. Enable / Disable *Video Loss*.
  - 5a. Select *Video Timeout*.
  - 5b. Select *Enable/Disable* to black the display.
6. Select display *Rotation*.
  - 6a. Select *Aspect Ratio*.
6. Click *Save* to save individual device settings.

OR

Click *Save to Devices* to apply this setting to multiple decoders.

## Audio Output (Encoder)

Click on the *Audio Output* menu to configure the 3.5mm analog audio output jack of an encoder. By default the audio output is set to HDMI embedded audio, 2 channel only.

Select: ALL DEVICES

Device Settings: Edit

Select Device Type: Encoder

Select Device: PC2

Name

Group

Network

HDMI Input

Audio Output

1. Audio Source: HDMI

2. Analog Audio Output Volume: 0

3. Save Save To Devices

RS232 Serial Parameters

1. Select *Audio Source*; AUTO, HDMI or ANALOG.

- AUTO - Will automatically switch between the analog audio input on the encoder and the HDMI 2 channel embedded audio.
- HDMI - Sets audio output to HDMI 2 channel embedded audio.
- ANALOG - Sets 3.5mm audio input on encoder as the default output.

2. Set the *Analog Audio Output Volume*.

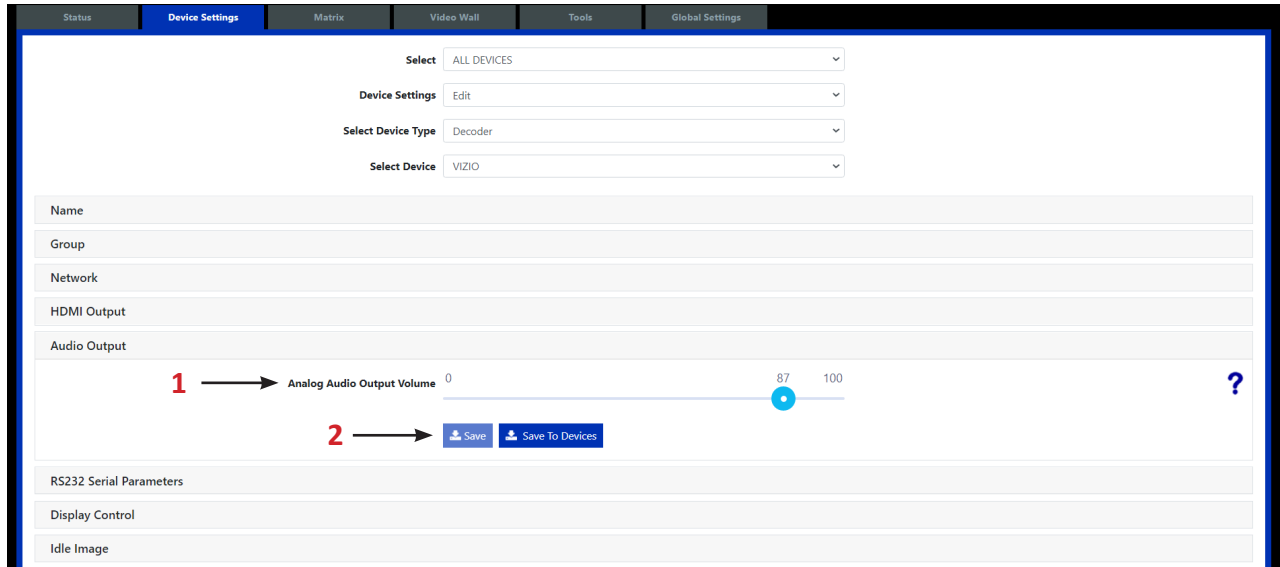
3. Click *Save* to save individual device settings.

OR

Click *Save to Devices* to apply this setting to multiple encoders.

### Audio Output (Decoder)

The 3.5mm analog audio output jack of a decoder is an output of embedded HDMI audio. The analog output level can be adjusted here.



1. Set desired level for the *Analog Audio Output Volume*.
2. Click *Save* to save individual device settings.

OR

Click *Save to Devices* to apply this setting to multiple decoders.

## RS232 Serial

Here you configure the parameters for the serial RS232 port of a device so third-party devices using RS232 can be controlled with Arranger.

Select: ALL DEVICES

Device Settings: Edit

Select Device Type: Encoder

Select Device: PC2

Name

Group

Network

HDMI Input

Audio Output

RS232 Serial Parameters

1 → Baud Rate: 9600

2 → Data Bits: 8

3 → Stop Bits: 1

4 → Parity: NONE

5 → Mode: MATRIX

6 → Feedback Timeout (seconds): 1

7 → Save Save To Devices

### *RS232 Serial continued...*

**Note:** If you are setting up the RS232 serial port to control a third-party device, be sure the RS232 settings match that of the controllable device.

1. Select *Baud Rate*.
2. Select *Data Bits*.
3. Select *Stop Bits*.
4. Select *Parity*.
5. Select *Mode*; MATRIX or CONTROL.
  - MATRIX - Device will appear in the serial *Matrix* menu and can be routed.
  - CONTROL - Device will not appear in the *Matrix* menu and can be used to send and receive from external serial peripherals.
6. Select Feedback Timeout.

*Feedback Timeout* is an encoder-only setting in *MATRIX* mode. The *Timeout* sets the time an encoder will only respond to the decoder sending data and not broadcast to all connected decoders. After the timeout an encoder's data is sent to all connected decoders.

7. Click *Save* to save individual device settings.

OR

Click *Save to Devices* to apply this setting to multiple encoders or decoders.

### Display Control (Decoder Only)

Here you can turn the display's power ON or OFF with CEC or RS232.

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

The screenshot shows the 'Device Settings' tab in the Arranger Digi IP 5000 web interface. The 'Select' dropdown is set to 'ALL DEVICES', 'Device Settings' is 'Edit', 'Select Device Type' is 'Decoder', and 'Select Device' is 'VIZIO'. Below these are fields for Name, Group, Network, HDMI Output, Audio Output, RS232 Serial Parameters, and Display Control. In the Display Control section, the 'Method' dropdown is set to 'CEC'. Below the dropdown are two rows of buttons: the first row has 'Save' and 'Save To Devices' buttons, and the second row has 'ON' and 'OFF' buttons. Red numbers '1' and '2' with arrows point to the 'Save' and 'ON' buttons respectively. A blue question mark icon is visible on the right side of the Display Control section. At the bottom, there is an 'Idle Image' field.

1. Click *Save* to save individual device settings.

OR

Click *Save to Devices* to apply this setting to multiple decoders.

2. Press ON to power display ON; press OFF to power display OFF.

*Display Control (Decoder Only) continued...*

With RS232 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 *ON Command* and *OFF Command*, then save. Now the power buttons are functional.

The screenshot shows the 'Device Settings' page for a VIZIO decoder. The 'Display Control' section is expanded, showing the 'Method' set to 'RS232'. Below this are fields for 'On Command' and 'Off Command'. At the bottom of the section are two buttons: 'Save' and 'Save To Devices'. Red numbers 1 and 2 with arrows point to these buttons respectively. Below the buttons are 'ON' and 'OFF' power buttons.

1. Click *Save* to save individual device settings.

OR

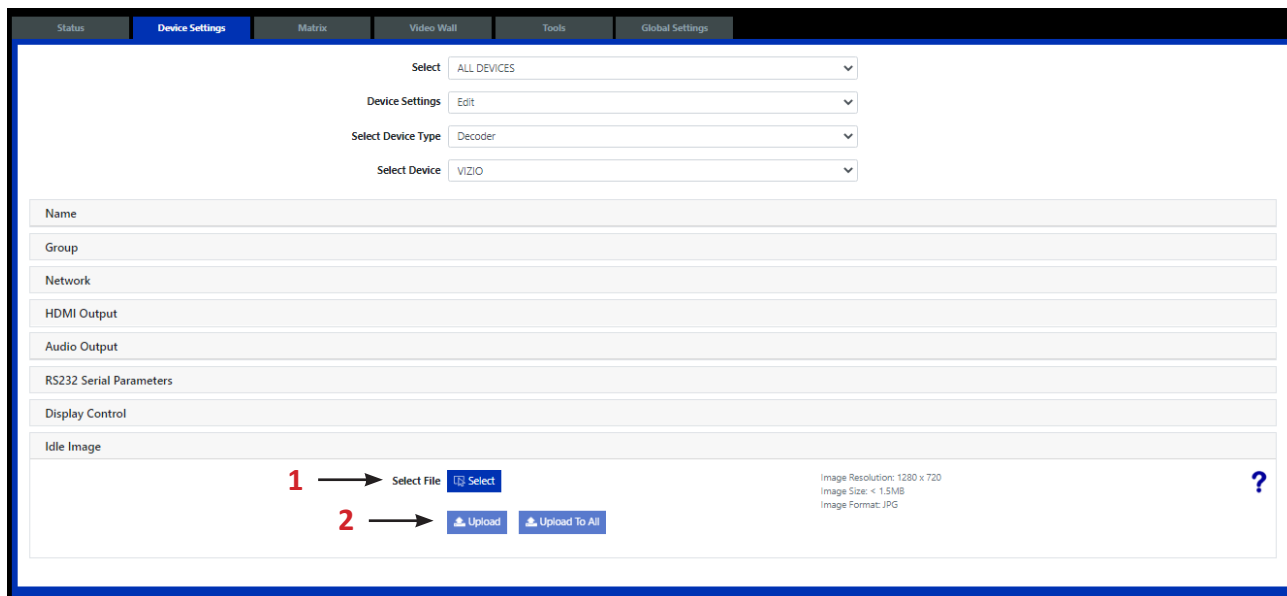
Click *Save to Devices* to apply this setting to multiple decoders.

2. Press ON to power display ON, press OFF to power display OFF.

### Idle Image (Decoder Only)

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 1280x720 and a maximum size of 1.5MB.



1. *Select File* from local folder on your PC to upload to decoder.

2. Click *Upload* to upload file into individual device.

OR

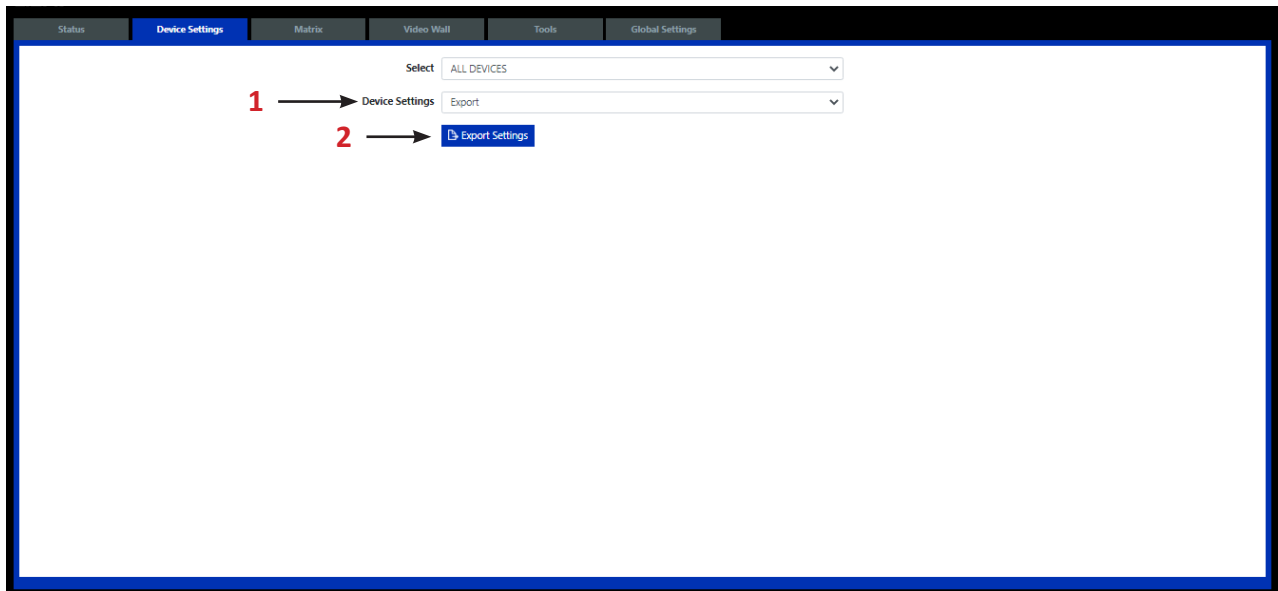
Click *Upload to All* to apply this setting to multiple decoders.



## 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 Arranger controller.

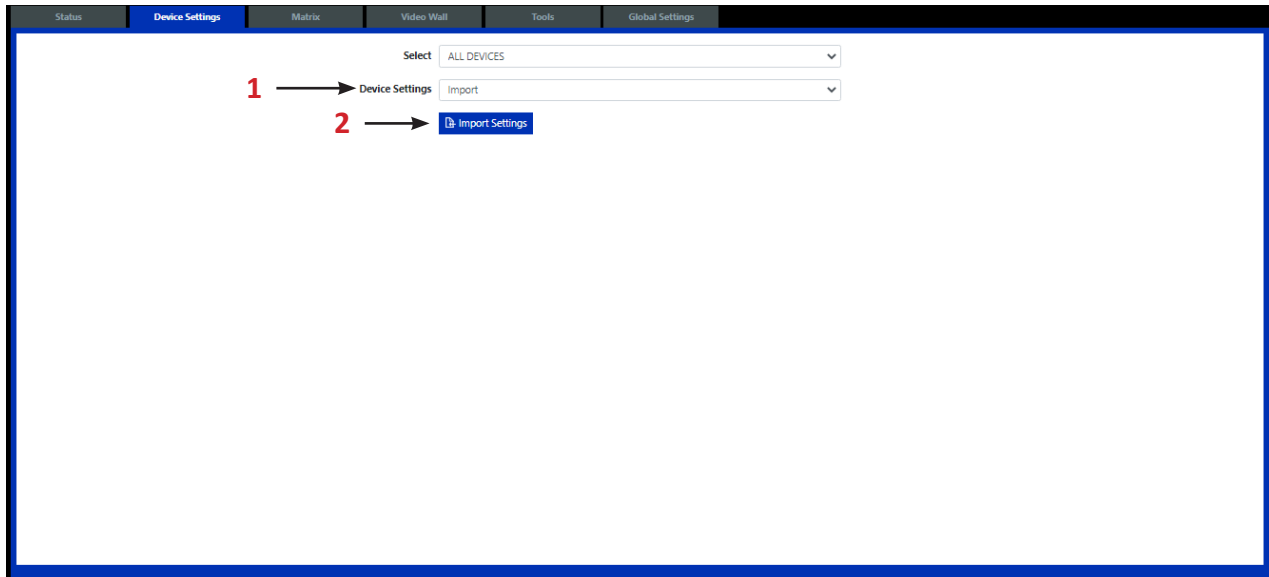
A file named “DeviceExport.csv” will be exported to your downloads folder.



1. Select *Export* option in *Device Settings* drop-down menu.
2. Click *Export Settings*.

## 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.



1. Select *Import* option in *Device Settings* drop-down menu.
2. Click *Import Settings*.

# Matrix

The *Matrix* tab contains up to 5 individual matrix tabs for each of the signal types; video, audio, serial, infrared and USB. Here you can create or stop joins between encoders and decoders.

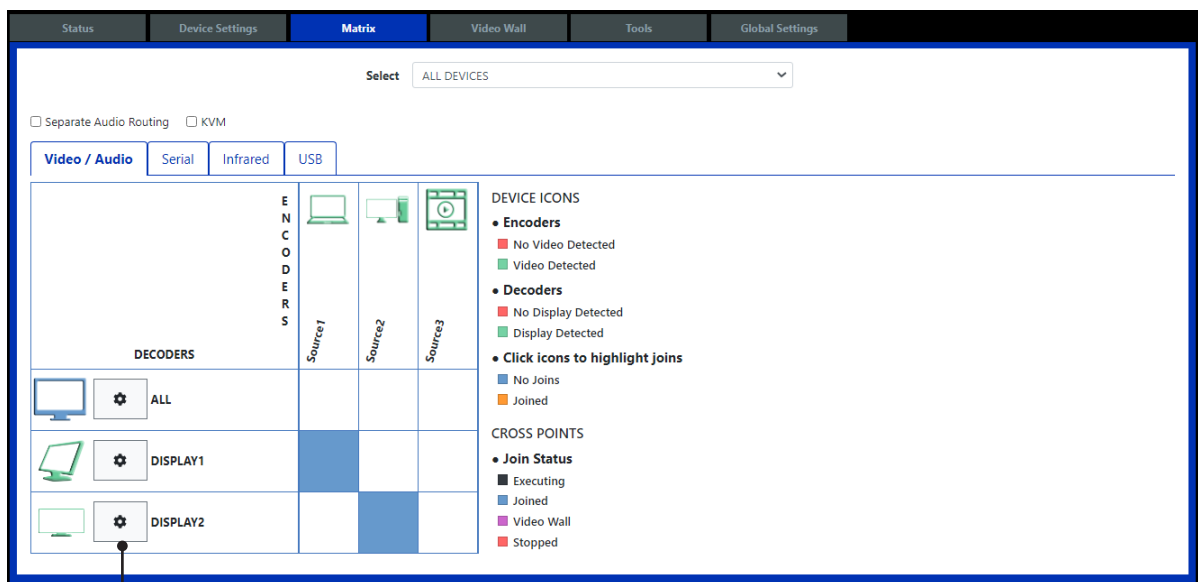
Click a white square to make a join.

Click a blue square to remove a join.

Click *ALL* square to make a join from an encoder to ALL decoders.

## Video / Audio

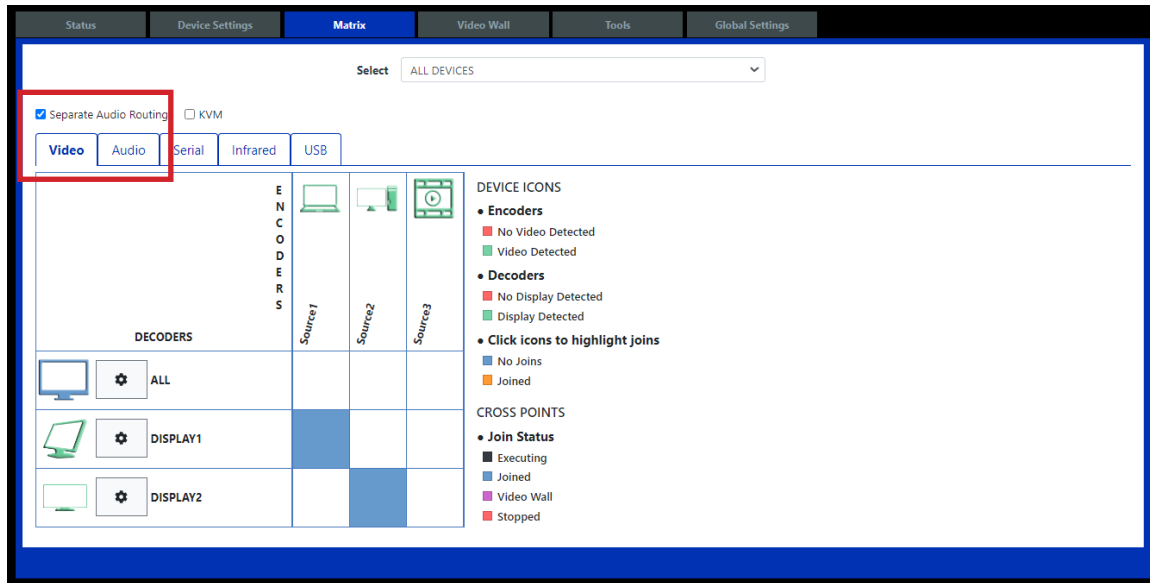
Here the video and audio are combined so they are both joined to the destination device.



The scaled video resolution of a decoder's HDMI output can also be changed by clicking the individual decoder settings buttons.

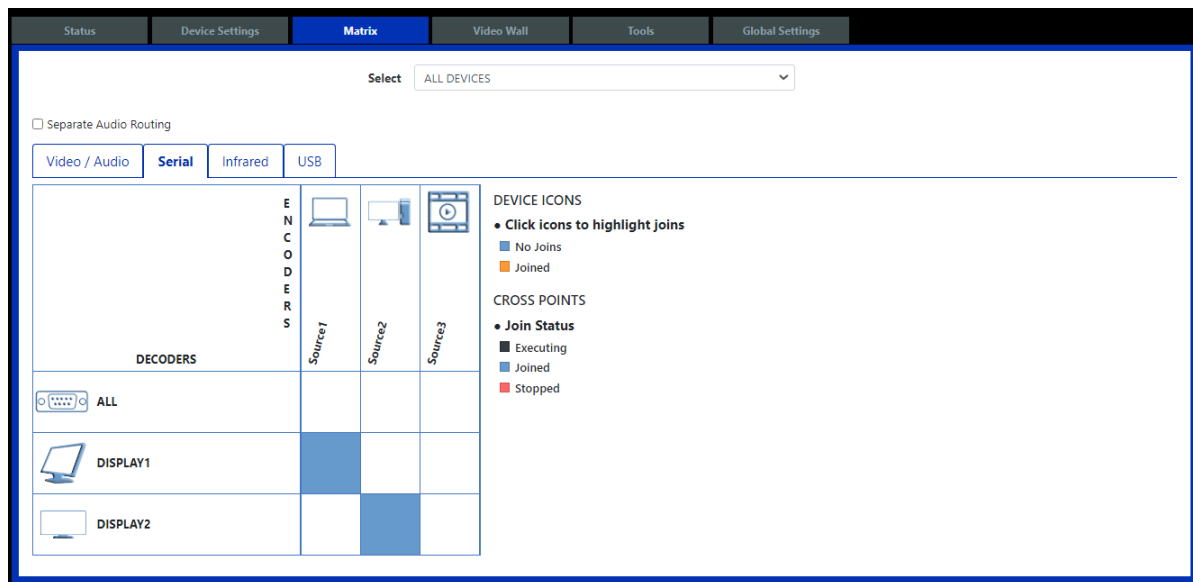
## Video / Audio continued.....

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.`



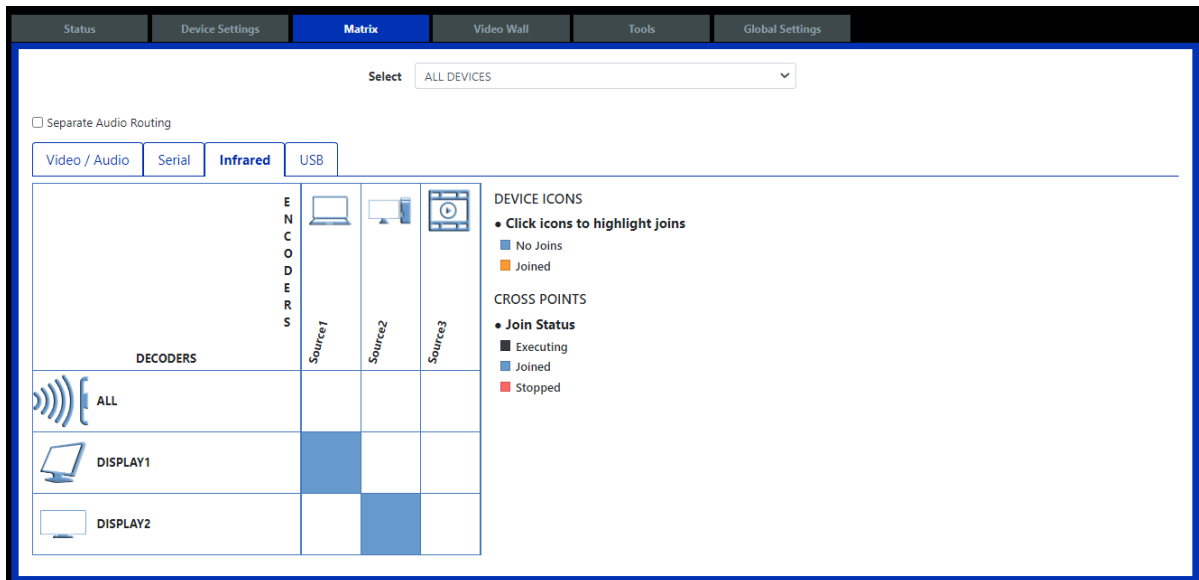
## Serial

The matrix *Serial* tab is intended for making 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. To change serial modes see *Devices Settings > RS232 Serial*.



## Infrared

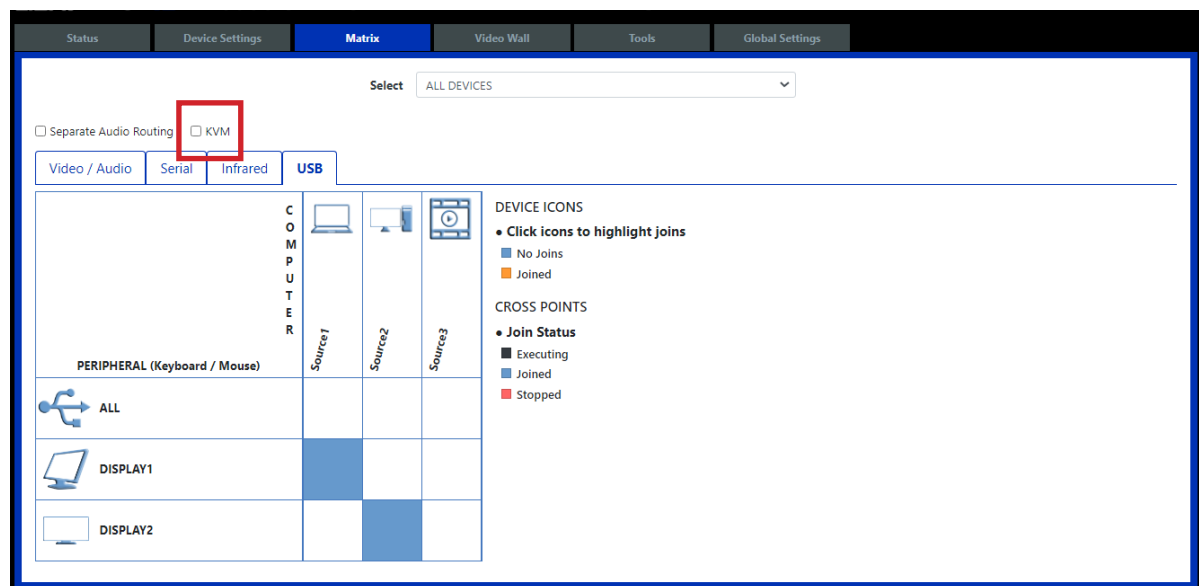
The matrix Infrared tab is intended for making infrared joins between encoders and decoders.



## USB

The matrix USB tab is intended for making USB joins between encoders and decoders.

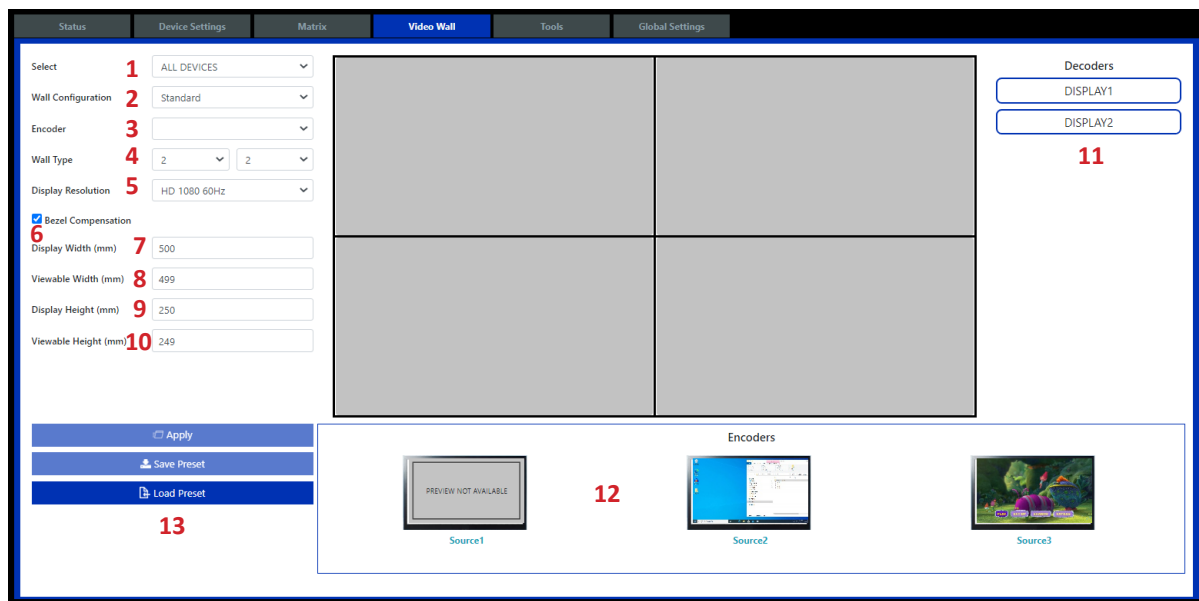
The matrix has a KVM (keyboard video mouse) checkbox that will control USB along with video/audio routing.



# Video Wall

In the *Video Wall* tab, multiple decoders can be grouped together to form a video wall. Each display requires a decoder and at least one encoder source is required. In a view wall configuration, the decoder's frame buffer is now locked with multiple frame buffers of other decoders. All the decoders working in tandem are receiving the same video stream. Each decoder crops the feed according to relative position within the video wall array and then scaled to a specified resolution.

Here decoders can be assigned to a video layout and an encoder can be routed to the joined video wall. You can also adjust parameters such as resolution and bezel control.



1. Select the group of encoders and decoders to be used in configuration.
2. Select mode (only *Standard* is available for now).
3. Select the video wall layout up to 8 x 5.
4. Select the source encoder for the video to be displayed in the layout.
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. Select *Bezel Compensation* to automatically compensate for the bezel widths.

*Video Wall continued...*

7. Enter total display width in millimeters (mm).
8. Enter display's viewable screen width in millimeters (mm).
9. Enter total display height in millimeters (mm).
10. Enter display's viewable screen height in millimeters (mm).
11. Drag and drop displays into desired video wall quadrants.
12. Drag and drop encoder to video wall to display video source.
13. Click *Apply* to apply current video wall configuration, click *Save Preset* to save as a recallable preset or click *Load Preset* to load an existing video wall preset. When clicking on *Load Preset* a pop-up window will open with a list of your current video wall presets.

# Tools

The *Tools* tab contains many utilities to assist in the installation and updating process.

## Send Serial

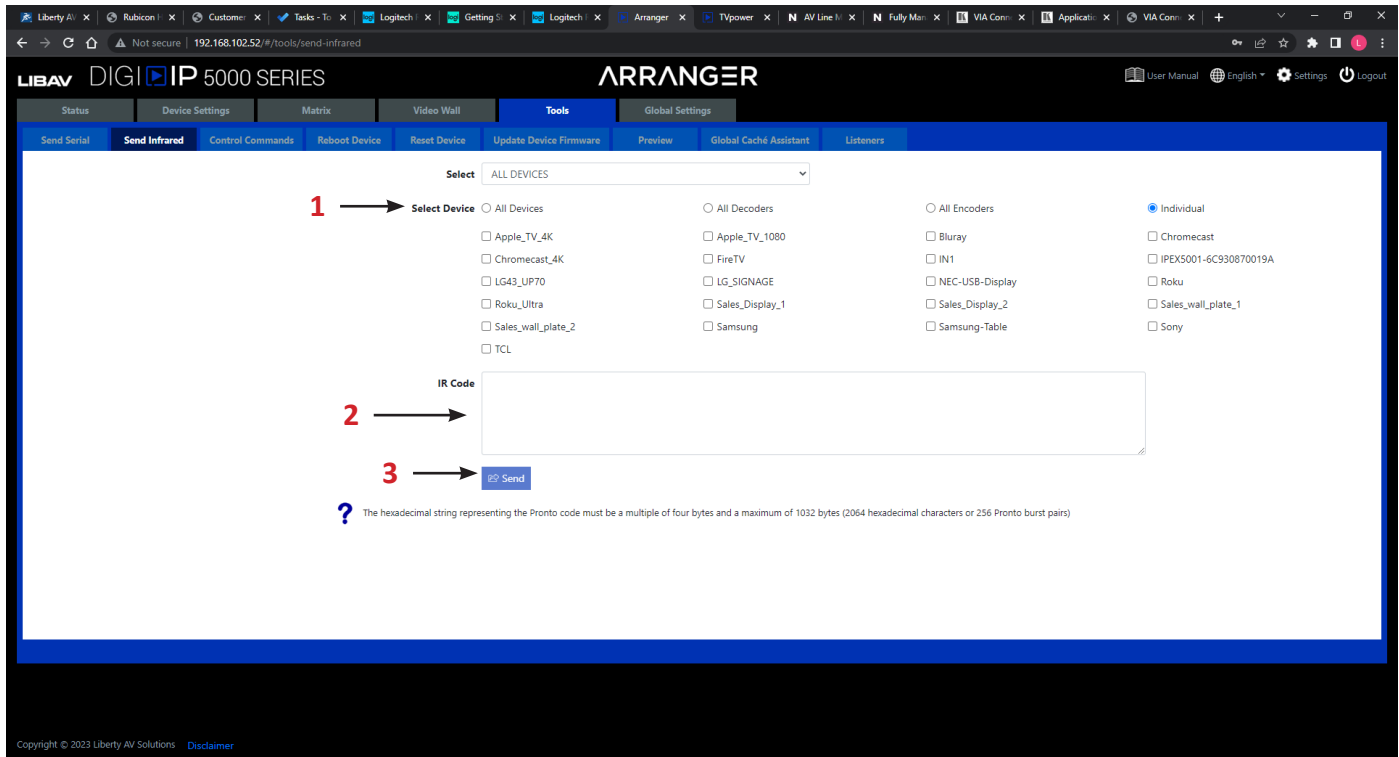
The *Send Serial* tab is used to test serial strings being sent from an encoder or decoder to third-party peripheral devices such as projectors. The Receive mode will indicate the feedback format of the selected device(s).

1. Select device(s) from the group drop-down menu and select the appropriate device(s).
2. Select either *ASCII* or *HEX* as the input format of the string.
3. Enter the desired data string.
4. Select <CR> and/or <LF> terminator if required.
5. Click *Send*.



## Send Infrared

The *Send Infrared* tab is used to test IR strings being sent from an encoder or decoder to third-party peripheral devices such as cable boxes.



1. Select device(s) from the group drop-down menu and select the appropriate device(s).
2. Enter in the IR code.
3. Click *Send*.

## Control Commands

The *Control Command* is used to send any of the API commands available to the system for testing purposes.

1 → Select Control Command

2 → Assistant

Data String

3 → Send

Receive

Clear

? View Command Manual

1. Select a command from the *Select Control Command* drop-down menu.

**Note:** Click on the *View Command Manual* link next to the ? for system command definitions.

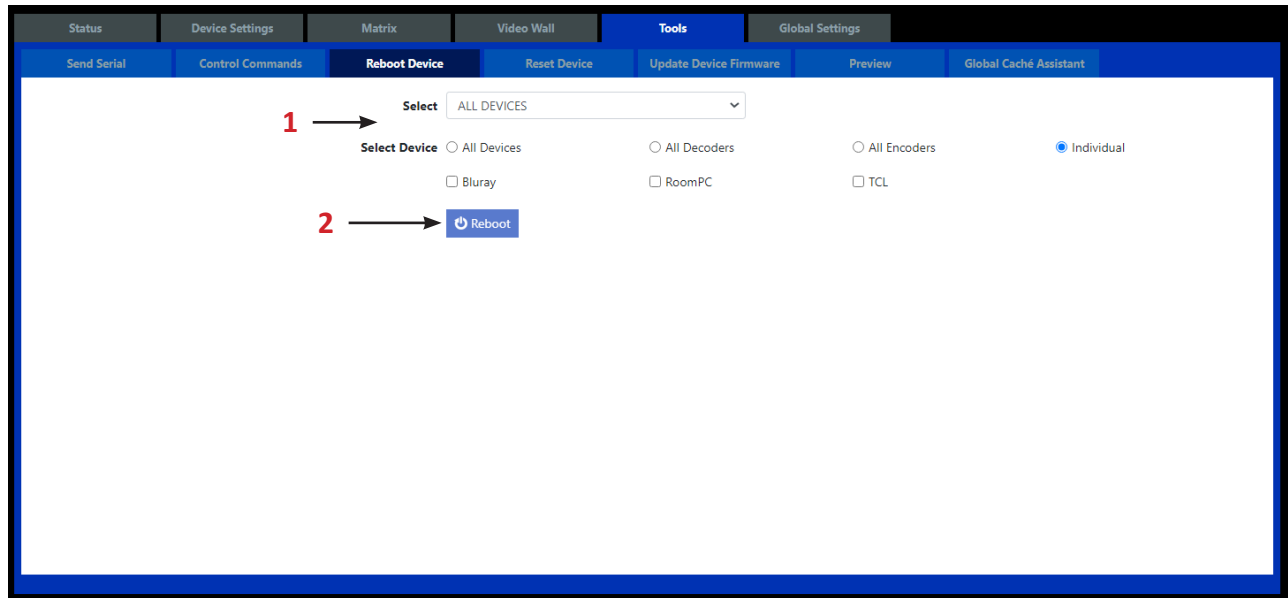
2. *Assistant* is a command wizard that will allow you to easily input the information required for the command in order to render the finished code correctly.

Use *Assistant* to configure the command or change the parameters manually in the *Data String* field surrounded with "<" & ">"

3. Click *Send*.

## Reboot Device

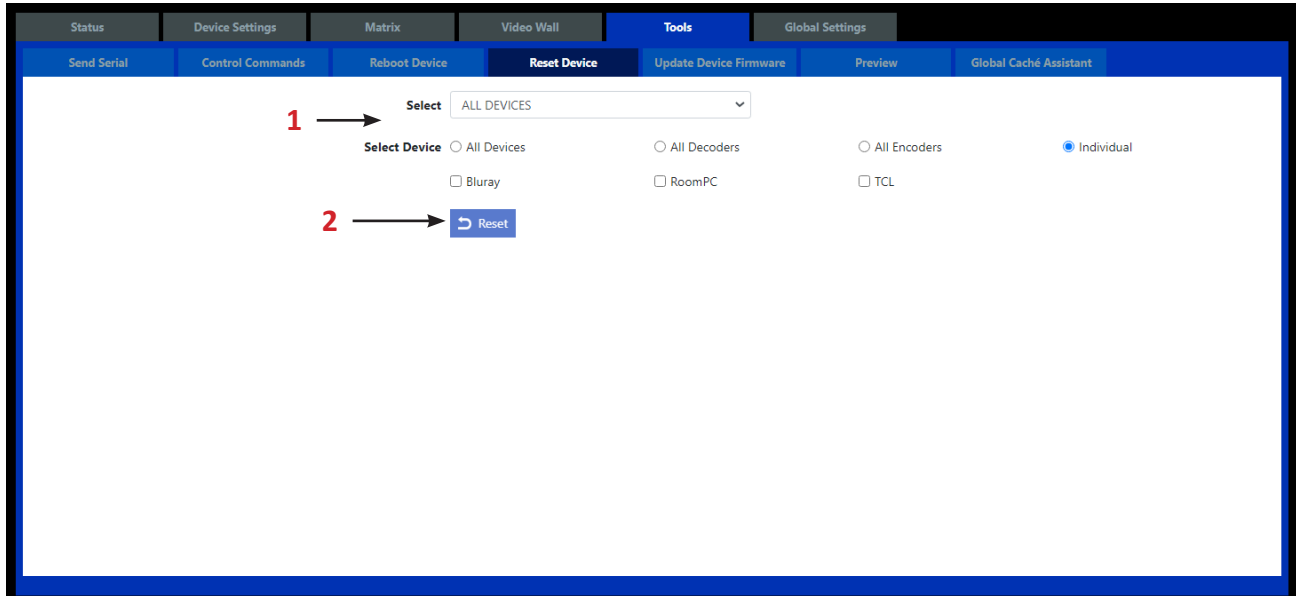
The *Reboot Device* tab is used to reboot the selected device(s).



1. Select device(s) from the group drop-down menu and select the appropriate device(s).
2. Click *Reboot*.

## Reset Device

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



1. Select device(s) from the group drop-down menu and select the appropriate devices(s).
2. Click *Reset*.

## Update Device Firmware

The *Update Device Firmware* tab is used to update the encoders and decoders.

**Note:** An Internet connection is required to obtain the latest firmware update available.

1 → Select ALL DEVICES

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

☐ Bluray ( 5.0.26 ) ☐ RoomPC ( 5.0.26 ) ☐ TCL ( 5.0.26 )

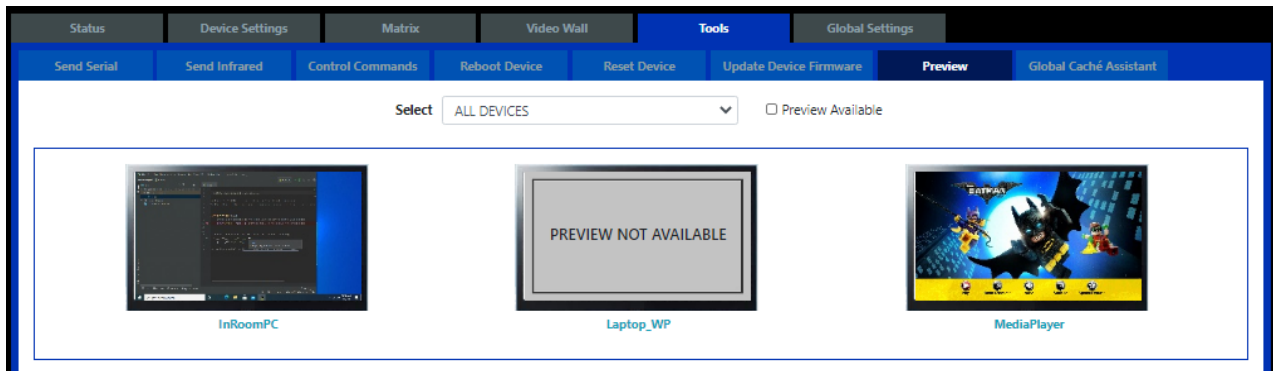
Device Type	Local Version	Previous Version	Firmware Available
IPEX2101			No
IPEX2102			No

2 → [Update Firmware](#)  
[Rollback Firmware](#)

1. Select device(s) from the group drop-down menu and select the appropriate devices(s) to be updated from the firmware options available.
2. Click *Update Firmware*.

## 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.





## Global Cache Assistant

The *Global Cache Assistant* tab is used to configure and communicate with Global Cache endpoints to communicate with third-party devices over a network via serial, infrared (IR), contact closures, and relays using the API control command ***send gc.***

### ***Sending Serial Signals***

The following wired and wireless Global Cache devices can be used to send serial signals to 3rd party devices from Arranger.



iTach Flex PoE  
PN: FLEXIP-IP



iTach Flex WiFi  
PN: FLEXIP-IP

The following Global Cache accessories can be used on all devices listed above for serial endpoint communication.



FLC-SL-232



FLC-SL-485



FLC-SL-MJ



### *Sending Serial Signals continued.....*

The following wired Global Cache devices can be used to send serial signals to 3rd party devices from Arranger and does not require proprietary cabling for serial / RS232 connections.



iTach Ethernet to Serial  
PN: IP2SL



iTach Ethernet to Serial  
PN: IP2SL-P (PoE)



iTach Ethernet to Serial  
PN: WF2SL (WiFi)



#### GC-100 Products

- GC-100-06
- GC-100-12
- GC-100-18
- GC-100-18R

## *Sending Serial Signals continued.....*

In this example we will configure the iTach IP2SL TCP/IP to serial endpoint which will allow us to send a serial command string to a third-party device connected to the IP2SL via DB9 / RS232 connection.

In order to communicate with a 3rd party device, gather device details for the serial connection of the device, i.e. baud rate, parity, stop bits and ASCII control commands that you wan to use. This unit will not generate those commands or settings for you automatically.

**NOTE:** The Global Cache Assistant is also used in the *PRESETS* menu so you can save the generated strings for future use

LIBAV UI CREATOR ARRANGER

Global Settings UI Creator Global Cache Assistant

Select Mode ☒ Wizard ☐ Normal

Security Key (optional) 31303534373030333662346663303039

Select Device

Device Discovery

1

IP Address 0.0.0.0

Port 4998

Disconnect (optional) ☐

Global Cache Command

Finish

Data String send gc [key:<security\_key>] <ip> <port> <gc\_api>

Send

Receive

Clear

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1. To identify Global Cache devices on your network, click *Device Discovery*; this will search for the Global Cache devices and will return a list like below.

*Sending Serial Signals continued.....*

2. After initial discovery of Global Cache devices click on the iTachIP2SL in the menu below. Click on the desired Global Cache device to configure.

**LIBAV UI CREATOR** **ARRANGER**

Global Settings | UI Creator | **Global Cache Assistant**

Select Device

**Device Discovery**

**Discovered Devices**

- 000C1E054F80@10.8.11.85 (iTachIP2SL)
- 000C1E054917@10.8.11.100 (iTachIP2IR)
- 000C1E055003@10.8.11.40 (iTachIP2CC)

**Refresh**

**Select Mode**

- ☒ Wizard
- ☐ Normal

**Security Key (optional)** 31303534373030333662346663303039

**IP Address** 0.0.0.0

**Port** 4998

**Disconnect (optional)** ☐

**Global Cache Command**

**Finish**

**Data String** send gc [key:<security\_key>] <ip> <port> <gc\_api>

**Send**

**Receive**

**Clear**

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*Sending Serial Signals continued.....*

The following menus appear after the iTach device is selected. This menu is referred to as *Wizard mode*; to enter information in manually select *Normal* as the *Select Mode* option.

The screenshot displays the 'Global Caché Assistant' configuration page in the Arranger Digi IP 5000 interface. The top navigation bar includes 'Status', 'Device Settings', 'Matrix', 'Video Wall', 'Tools', and 'Global Settings'. The 'Tools' tab is active, showing sub-tabs: 'Send Serial', 'Control Commands', 'Reboot Device', 'Reset Device', 'Update Device Firmware', 'Preview', and 'Global Caché Assistant'. The 'Global Caché Assistant' sub-tab is selected. On the left, a 'Serial' dropdown menu is visible, with options 'Device Discovery', 'Wizard', and 'Config Page'. The 'Wizard' option is highlighted with a red '1', and the 'Config Page' option is highlighted with a red '2'. The main configuration area includes a 'Select Mode' section with 'Wizard' selected (radio button) and 'Normal' unselected. Below this is a 'Security Key (optional)' field with the value '31303534373030333662346663303039'. A blue bar displays 'Serial@10.8.11.85 (iTachIP2SL)'. The 'Alias Name (optional)' and 'Description (optional)' fields are empty. A 'Save' button is present. The 'IP Address' field is '10.8.11.85' and the 'Port' is '4999'. The 'Disconnect (optional)' checkbox is unchecked. The 'Global Caché Command' field is empty, with a 'Finish' button below it. The 'Data String' field contains the template 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'. A 'Send' button is below the 'Data String' field. The 'Receive' section is empty, with a 'Clear' button at the bottom.

1. The *Wizard* menu provides access to configure the device to send serial strings.
2. The *Config Page* will direct you to the Global Caches internal web server; this will pop-up in another browser menu.
3. Apply an alias name and description of the device and click *Save* so the device can be accessed more quickly in the future, otherwise you will need to discover the device again. These named devices will appear via drop-down above the *Device Discovery* menu.

### *Sending Serial Signals continued.....*

The following appears after the *Wizard* menu is selected in the previous step. Here we will configure the serial command to send.

The screenshot displays the 'Wizard' configuration screen for the Arranger Digi IP 5000. On the left, a sidebar contains 'Device Discovery', 'Wizard' (highlighted with a red box), and 'Config Page'. The main configuration area is titled 'Select Mode' with 'Wizard' selected. Below this, a 'Security Key (optional)' field contains '31303534373030333662346663303039'. A light blue bar shows 'Serial@10.8.11.85 (iTachiIP2SL)'. A central image of the device has two tabs: 'Network' (1) and 'Serial' (2). The 'Serial' tab is active, showing various settings: 'Mode' is set to 'ASCII' (3); 'String to Send' (4) is an empty text field; 'Append CR (optional)' (5) and 'Append LF (optional)' are unchecked; 'Feedback (optional)' (6) is set to 'NONE'; a 'Set' button (7) is present; 'IP Address' (8) is '10.8.11.85' and 'Port' is '4999'; 'Disconnect (optional)' is unchecked; 'Global Cache Command' (9) is an empty field; 'Data String' contains 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'; and a 'Send' button (10) is at the bottom. A 'Receive' area is at the very bottom, and a 'Clear' button is in the bottom right corner.

1. *Network* option allows you to update the Global Caches devices network settings; by default the IP2SL is set to DHCP and falls back on APIPA 169.254.0.0/16 Network ID in absence of a DHCP server / router.

2. *Serial* option allows you to update the serial communication parameters of the device i.e. baud rate.

3. Apply an *alias name* and *description* of the device and click *Save* so the device can be accessed more quickly in the future otherwise you will need to discover the device again. These named devices will appear via drop-down above the *Device Discovery* menu.

*Sending Serial Signals continued.....*

4. Enter in the serial string you would like to transmit (see 3rd party device documentation for commands)
5. Add terminator <CR> and/or <LF> if required.
6. Enter desired *Feedback* (optional).
7. Once all the above parameters are entered click *Set*; this will format the entered command in the *Global Cache Command* field automatically for use.
8. Select port and disconnect if required (optional).
9. Once the information above has been entered in click *Finish*.
10. Click *Send* to test the code.

You can now use this generated command in a preset to be used with UI control, scheduling and automation OR send this command from a 3rd party control system to the Arranger controller to activate the current configuration. Arranger controller listens on TCP port 6980.

### ***Sending IR Signals***

The following wired and wireless Global Cache devices can be used to send IR signals to 3rd party devices from Arranger.



iTach Flex PoE  
PN: FLEXIP-IP



iTach Flex WiFi  
PN: FLEXIP-IP

The following Global Cache accessories can be used on all devices listed above for IR endpoint communication.



FLC-1E



FLC-3E



FLC-SL-MJ



FLC-BL



FLC-T3

### *Sending IR Signals continued.....*

The following wired Global Cache devices can be used to send IR signals to 3rd party devices from Arranger.



iTach WiFi to IR  
PN: WF2IR



iTach Ethernet to IR  
PN: IP2SL-P (PoE)



iTach Ethernet to IR  
PN: IP2SL



#### GC-100 Products

- GC-100-06
- GC-100-12
- GC-100-18
- GC-100-18R



## *Sending IR Signals continued.....*

In this example we will configure the iTach IP2IR TCP/IP to IR endpoint. The IP2IR can connect, monitor, and control infrared devices over a network.

After initial discovery of Global Cache devices click on the iTach IP2IR in the menu below.

The screenshot displays the 'Global Cache Assistant' interface within the Arranger Digi IP 5000 software. The interface is divided into two main sections. On the left, a 'Discovered Devices' list shows three devices: '000C1E054F80@10.8.11.85 (iTachIP2SL)', '000C1E054917@10.8.11.100 (iTachIP2IR)' (highlighted with a red box), and '000C1E055003@10.8.11.40 (iTachIP2CC)'. A 'Refresh' button is located below the list. On the right, the configuration section includes a 'Select Mode' dropdown with 'Wizard' selected, a 'Security Key (optional)' field containing a long alphanumeric string, an 'IP Address' field set to '0.0.0.0', a 'Port' dropdown set to '4998', a 'Disconnect (optional)' checkbox, a 'Global Cache Command' field, a 'Data String' field containing the command 'send gc [key:<security\_key>] <ip> <port> <gc\_api>', and a 'Receive' area. Buttons for 'Device Discovery', 'Refresh', 'Finish', 'Send', and 'Clear' are visible.

## Sending IR Signals continued.....

The follow menus appear after the iTach device is selected. This menu is referred to as *Wizard mode*; to enter information in manually select *Normal* as the *Select Mode* option.

The screenshot shows the 'Global Caché Assistant' interface within the 'ARRANGER UI CREATOR' application. The interface is divided into a sidebar and a main content area. The sidebar contains three buttons: 'Device Discovery', 'Wizard', and 'Config Page'. The main content area is titled 'Global Caché Assistant' and contains the following fields and controls:

- Select Mode:** Radio buttons for 'Wizard' (selected) and 'Normal'.
- Security Key (optional):** A text field containing '31303534373030333662346663303039'.
- Relay\_1\_2:** A dropdown menu showing 'Relay\_1\_2'.
- Alias Name (optional):** A text field with a red '3' overlaid on it.
- Description (optional):** A text field.
- Save:** A blue button.
- IP Address:** A text field containing '10.8.11.40'.
- Port:** A dropdown menu showing '4998'.
- Disconnect (optional):** A checkbox.
- Global Caché Command:** A text field.
- Finish:** A blue button.
- Data String:** A text field containing 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'.
- Send:** A blue button.
- Receive:** A large text area.
- Clear:** A yellow button.

Red numbers 1, 2, and 3 are overlaid on the 'Wizard' button, 'Config Page' button, and 'Alias Name' field respectively.

1. The *Wizard* menu provides access to configure the device to send serial strings.
2. The *Config Page* will direct you to the Global Caches internal web server; this will pop-up in another browser menu.
3. Apply an alias name and description of the device and click *Save* so the device can be accessed more quickly in the future otherwise you will need to discover the device again. These named devices will appear via drop-down above the *Device Discovery* menu.

### *Sending IR Signals continued.....*

The following appears after the *Wizard* menu is selected in the previous step. Here we will configure the serial command to send.

The screenshot displays the Arranger Digi IP 5000 configuration interface. At the top, the 'Select Mode' section has 'Wizard' selected. Below it, the 'Security Key (optional)' field contains '31303534373030333662346663303039'. The 'TV\_IR@10.8.11.100 (iTachiIP2IR)' label is visible. On the left, a menu bar shows 'TV\_IR', 'Device Discovery', 'Wizard' (highlighted with a red box), and 'Config Page'. The main area shows the 'Network' configuration page with a red box around the 'Select I/O' dropdown. The 'Select I/O' dropdown is set to 'Infrared'. The 'Acquire Mode' dropdown is set to 'Manual'. The 'HEX Code' field is empty. The 'Set' and 'Stop' buttons are visible. The 'IP Address' field is '10.8.11.100'. The 'Port' dropdown is '4998'. The 'Disconnect (optional)' checkbox is unchecked. The 'Global Cache Command' field is empty. The 'Finish' button is visible. The 'Data String' field contains 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'. The 'Send' button is visible. The 'Receive' field is empty. The 'Clear' button is visible.

1. *Network* option allows you to update the Global Caches devices network settings; by default the IP2IR is set to DHCP and falls back on APIPA 169.254.0.0/16 Network ID in absence of a DHCP server / router.

2. *Select I/O* option allows you to select the IR port you wish to use.

### *Sending IR Signals continued.....*

3. *Select Mode* drop-down menu gives you the following options:

**Infrared**

- *The selected connection will be used as an IR output.*

**Sensor**

- *The selected connection will be used as a sensor input such as an occupancy sensor.*

**Sensor Notify**

- *The selected connection will be used as sensor input for notification purposes.*

**LED Lighting**

- *The selected connection will be used as output to control LED lighting.*

4. *Acquire Mode* drop-down menu gives you the following options:

**Manual**

- *Enter IR HEX codes manually.*

**Cloud Based**

- *Use the Global Cache Device IR Cloud Database.*

**NOTE:** *This option requires the Arranger controller to have an Internet connection.*

**Learn**

- *Use the Global Cache IP2IR IR learner to learn codes from remotes*

5. Enter desired IR HEX code in this field if using the *Infrared Mode* from step 3.

6. Once all the above parameters are entered in click *Set/Stop*.

7. Select port and disconnect if required (optional).

8. Once the information above has been entered in click *Finish*.

9. Click *Send* to set or test.

You can now use this generated command in a preset to be used with UI control, scheduling and automation OR send this command from a 3rd party control system to the Arranger controller to activate the current configuration. Arranger controller listens on TCP port 6980.

## Controlling Contact Closures

The following wired Global Cache devices can be used to open/close contact closures connected to 3rd party devices from Arranger.



iTach WiFi to IR  
PN: WF2IR



iTach Ethernet to IR  
PN: IP2SL-P (PoE)



iTach Ethernet to IR  
PN: IP2SL



### GC-100 Products

- GC-100-12
- GC-100-18
- GC-100-18R

*Contact Closures continued.....*

In this example we will configure the iTach IP2CC TCP/IP to contact closure endpoint.

After initial discovery of Global Cache devices click on the iTach IP2CC in the menu below.

LIBAV UI CREATOR ARRANGER

Global Settings UI Creator Global Cache Assistant

Select Device

Device Discovery

Discovered Devices

000C1E054F80@10.8.11.85 (iTachIP2SL)

000C1E054917@10.8.11.100 (iTachIP2IR)

000C1E055003@10.8.11.40 (iTachIP2CC)

Refresh

Select Mode

Wizard

Normal

Security Key (optional)

31303534373030333662346663303039

IP Address

0.0.0.0

Port

4998

Disconnect (optional)

Global Cache Command

Finish

Data String

send gc [key:<security\_key>] <ip> <port> <gc\_api>

Send

Receive

Clear

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Contact Closures continued.....

The following menus appear after the iTach device is selected. This menu is referred to as *Wizard mode*; to enter information in manually select *Normal* as the *Select Mode* option.

The screenshot displays the 'Global Cache Assistant' interface within the 'LIBAV UI CREATOR ARRANGER' application. The interface is divided into three main sections: 'Global Settings', 'UI Creator', and 'Global Cache Assistant'. The 'Global Cache Assistant' section is active and contains the following elements:

- Select Mode:** Radio buttons for 'Wizard' (selected) and 'Normal'.
- Security Key (optional):** A text field containing '31333331306339326330373066613065'.
- Select Device:** A dropdown menu with 'Device Discovery', 'Wizard' (labeled 1), and 'Config Page' (labeled 2) options.
- Alias Name (optional):** A text field with a 'Save' button next to it (labeled 3).
- Description (optional):** A text field.
- IP Address:** A text field containing '10.8.11.40'.
- Port:** A dropdown menu with '4998' selected.
- Disconnect (optional):** A checkbox.
- Global Cache Command:** A text field with a 'Finish' button.
- Data String:** A text field containing 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'.
- Send:** A button.
- Receive:** A large text area for receiving data.
- Clear:** A button.

At the bottom of the interface, there is a copyright notice: 'Copyright © 2021 Liberty AV Solutions. Disclaimer'.

1. The *Wizard* menu provides access to configure the device to send serial strings.
2. The *Config Page* will direct you to the Global Caches internal web server, this will pop-up in another browser menu.
3. Apply an alias name and description of the device and click *Save* so the device can be accessed more quickly in the future, otherwise you will need to discover the device again. These named devices will appear via drop-down above the *Device Discovery* menu.

*Contact Closures continued.....*

The following appears after the *Wizard* menu is selected in the previous step. Here we will configure which contact closure to open or close.

Select Mode: ☒ Wizard, ☐ Normal

Security Key (optional): 31333331306339326330373066613065

000C1E055003@10.8.11.40 (iTachIP2CC)

Select Device:  Device Discovery, **Wizard**, Config Page

1: Network

2: Select Relay

3: Select State

4: Set, Get

IP Address: 10.8.11.40

Port: 4998

Disconnect (optional): ☐

Global Cache Command:

5: Finish

Data String: send gc [key:<security\_key>] <ip> <port> <gc\_api>

6: Send

Receive:

Clear

1. *Network* option allows you to update the Global Caches devices network settings; by default the IP2CC is set to DHCP and falls back on APIPA 169.254.0.0/16 Network ID in absence of a DHCP server / router.

2. *Select Relay* option allows you to select the port you wish to use.

3. *Select State* allows you to select open or closed status of selected port.



*Contact Closures continued.....*

4. Once all the above parameters are entered in click *Set/Get* (**Set** will configure the port as desired, **Get** will retrieve current status of selected port).
5. Once the information above has been entered in click *Finish*.
6. Click *Send*.

You can now use this generated command in a preset to be used with UI control, scheduling and automation OR send this command from a 3rd party control system to the Arranger controller to activate the current configuration. Arranger controller listens on TCP port 6980.

## Controlling Relays

The following wired and wireless Global Cache devices, paired with the FLC-RS adapter, can control relay outputs connect to device from Arranger.



iTach Flex PoE  
PN: FLEXIP-IP



iTach Flex WiFi  
PN: FLEXIP-IP



FLC-RS

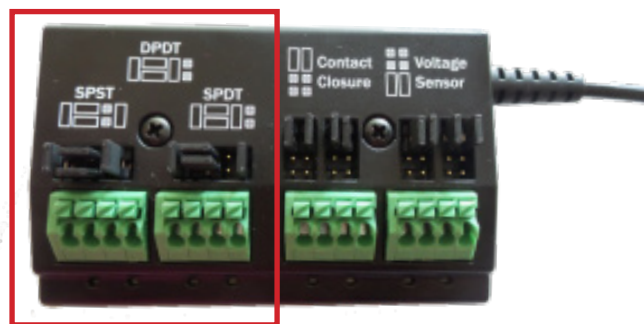
## Controlling Relays continued.....

In this example we will configure the iTach Flex PoE TCP/IP endpoint coupled with the Global Cache FLC-RS cable that supports four configurable relay outputs.

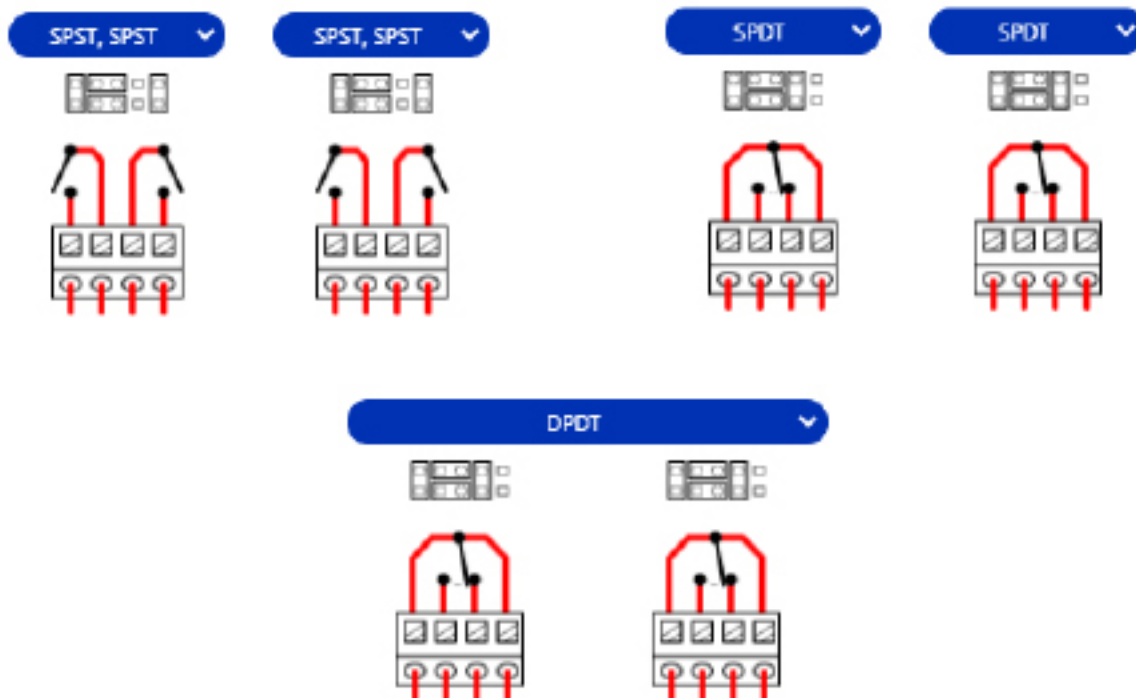
Relay outputs are configurable into common relay types

- Single Pole Single Throw (SPST)
- Single Pole Double Throw (SPDT)
- Double Pole Double Throw (DPDT)

When using the FLC-RS relay cable, be sure to set the pins on the relays for the desired configuration



Wiring and jumper configuration examples...



*Controlling Relays continued.....*

After initial discovery of Global Cache devices click on the iTach Flex PoE in the menu below.

The screenshot shows the 'Global Cache Assistant' tab in the 'UI CREATOR' application. On the left, a 'Discovered Devices' list contains one entry: '000C1E0561EA@10.8.11.68 (iTachFlexEthernetPoe)', which is highlighted with a red border. Below the list is a 'Refresh' button. On the right, the 'Select Mode' section has 'Wizard' selected. The 'Security Key (optional)' field contains a long alphanumeric string. The 'IP Address' field is '0.0.0.0' and the 'Port' dropdown is '4998'. There is an unchecked 'Disconnect (optional)' checkbox. The 'Global Cache Command' section has a 'Finish' button. The 'Data String' field contains a template: 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'. Below it is a 'Send' button. A 'Receive' area with a 'Clear' button is at the bottom. The footer shows 'Copyright © 2021 Liberty AV Solutions. Disclaimer'.

LIBAV UI CREATOR ARRANGER

Global Settings UI Creator Global Cache Assistant

Select Mode ☒ Wizard ☐ Normal

Security Key (optional) 32363733353235323239303466323031

Select Device

Device Discovery

Discovered Devices

000C1E0561EA@10.8.11.68 (iTachFlexEthernetPoe)

Refresh

IP Address 0.0.0.0

Port 4998

Disconnect (optional) ☐

Global Cache Command

Finish

Data String send gc [key:<security\_key>] <ip> <port> <gc\_api>

Send

Receive

Clear

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## Controlling Relays continued.....

The follow menus appear after the iTach device is selected. This menu is referred to as *Wizard mode*; to enter information in manually select *Normal* as the *Select Mode* option.

The screenshot displays the 'Global Caché Assistant' interface within the 'UI CREATOR' application. The interface is divided into several sections:

- Top Bar:** Includes 'LIBAV UI CREATOR' and 'ARRANGER' logos, along with navigation icons.
- Navigation Tabs:** 'Global Settings', 'UI Creator', and 'Global Caché Assistant' (active).
- Select Mode:** Radio buttons for 'Wizard' (selected) and 'Normal'.
- Security Key (optional):** A text field containing '32363733353235323239303466323031'.
- Select Device:** A dropdown menu on the left with options: 'Device Discovery', 'Wizard' (marked with a red '1'), and 'Config Page' (marked with a red '2').
- Form Fields:**
  - Alias Name (optional):** A text field (marked with a red '3').
  - Description (optional):** A text field.
  - Save:** A blue button.
  - IP Address:** A text field with '10.8.11.68'.
  - Port:** A dropdown menu with '4998'.
  - Disconnect (optional):** A checkbox.
  - Global Caché Command:** A text field.
  - Finish:** A blue button with a checkmark.
  - Data String:** A text field containing 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'.
  - Send:** A blue button.
  - Receive:** A large text area for receiving data.
  - Clear:** A yellow button.

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1. The *Wizard* menu provides access to configure the device to send serial strings.
2. The *Config Page* will direct you to the Global Caches internal web server; this will pop-up in another browser menu.
3. Apply an alias name and description of the device and click *Save* so the device can be accessed more quickly in the future otherwise you will need to discover the device again. These named devices will appear via drop-down above the *Device Discovery* menu.

## Controlling Relays continued.....

The following appears after the *Wizard* menu is selected in the previous step. Here we will configure which relay to open or close.

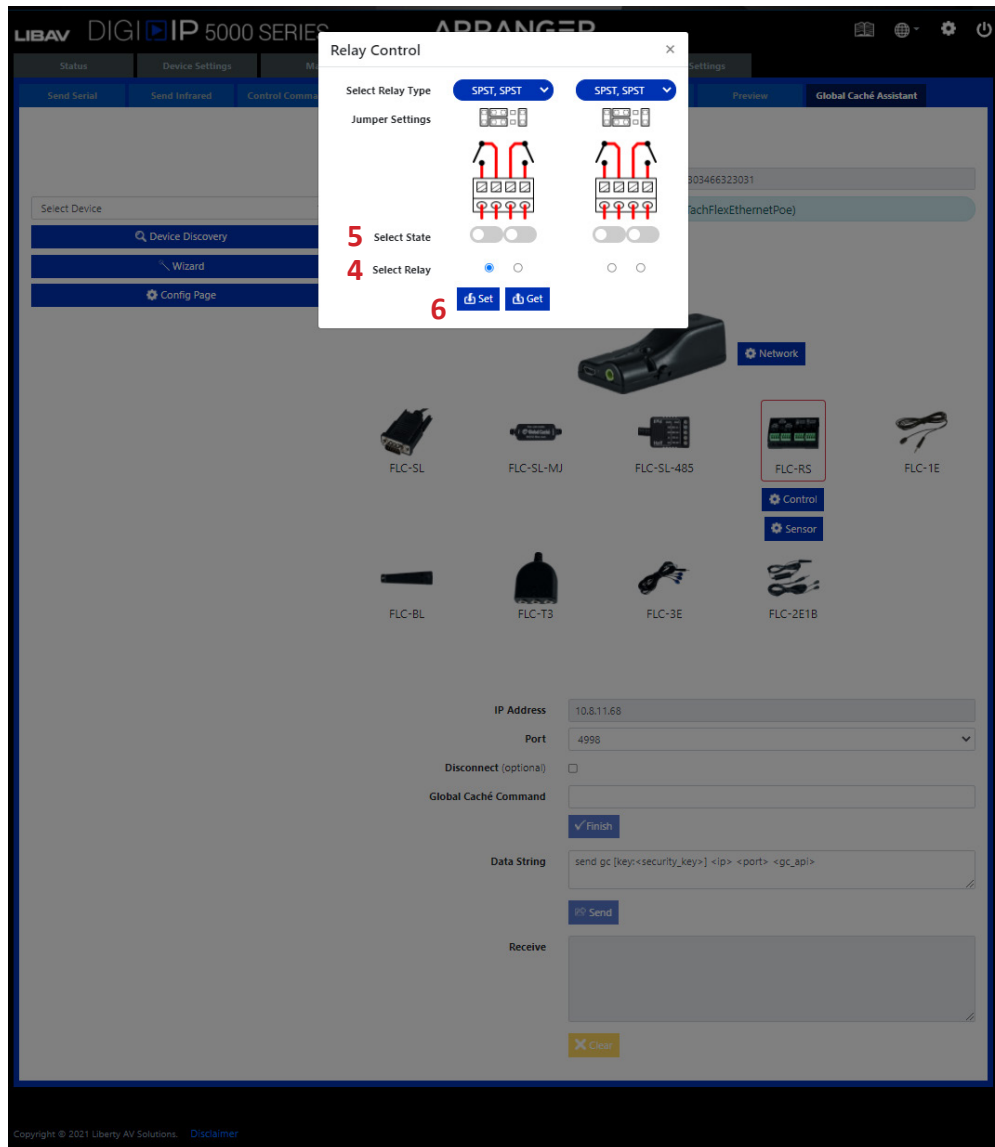
The screenshot displays the configuration wizard for the Arranger Digi IP 5000. At the top, the 'Select Mode' is set to 'Wizard'. Below it, the 'Security Key (optional)' is shown as '32363733353235323239303466323031'. A status bar indicates the device ID '000C1E0561EA@10.8.11.68 (iTachFlexEthernetPoe)'. On the left, a sidebar contains 'Device Discovery', 'Wizard' (highlighted with a red box), and 'Config Page'. The main area shows a grid of relay options: FLC-SL, FLC-SL-MJ, FLC-SL-485, FLC-RS (highlighted with a red box and labeled '2'), FLC-1E, FLC-BL, FLC-T3, FLC-3E, and FLC-2E1B. Above the grid, there is a 'Network' option (labeled '1') and a 'Control' button (labeled '3'). Below the grid, the 'IP Address' is '10.8.11.68' and the 'Port' is '4998'. There is a 'Disconnect (optional)' checkbox and a 'Global Cache Command' field. A 'Data String' field contains the command 'send gc [key]<security\_key> <ip> <port> <gc\_api>'. A 'Send' button is highlighted, and a 'Receive' area is shown below it. A 'Clear' button is at the bottom right.

1. *Network* option allows you to update the Global Caches devices network settings; by default the IP2CC is set to DHCP and falls back on APIPA 169.254.0.0/16 Network ID in absence of a DHCP server / router.

2. Select the *FLC-RS relay cable* in the accessories option.

3. Click on the *Control* settings

## Controlling Relays continued.....



4. Select *Relay* that you wish to control.
5. Select desired *State*.
6. Once all the above parameters are entered in click *Set/Get* (**Set** will configure the port as desired, **Get** will retrieve current status of selected port).
7. Once the information above has been entered in click *Finish*.

*Controlling Relays continued.....*

The screenshot shows the 'Wizard' mode of the Arranger Digi IP 5000 configuration interface. The 'Select Mode' section has 'Wizard' selected. The 'Security Key (optional)' field contains '32363733353235323239303466323031'. Below this, a light blue bar displays '000C1E0561EA@10.8.11.68 (iTachFlexEthernetPoe)'. On the left, a 'Select Device' dropdown is followed by three buttons: 'Device Discovery', 'Wizard', and 'Config Page'. The main area displays a grid of device icons: FLC-SL, FLC-SL-MJ, FLC-SL-485, FLC-RS (highlighted with a red box), FLC-1E, FLC-BL, FLC-T3, FLC-3E, and FLC-2E1B. To the right of the grid are buttons for 'Network', 'Control', and 'Sensor'. Below the grid, the 'IP Address' is '10.8.11.68' and the 'Port' is '4998'. The 'Disconnect (optional)' checkbox is unchecked. The 'Global Cache Command' field contains 'setstate,1;1,1'. A red '7' is next to a 'Finish' button. The 'Data String' field contains 'send gc [key:<security\_key>] <ip> <port> <gc\_api>'. A red '8' is next to a 'Send' button. Below the 'Send' button is a 'Receive' text area and a 'Clear' button.

8. Click *Send*.

You can now use this generated command in a preset to be used with UI control, scheduling and automation OR send this command from a 3rd party control system to the Arranger controller to activate the current configuration. Arranger controller listens on TCP port 6980.



## Configuring Sensor and Contact Closure Triggers

The following wired and wireless Global Cache devices, paired with the FLC-RS adapter allows configuration of sensor and contact closure input triggers in Arranger



iTach Flex PoE  
PN: FLEXIP-IP



iTach Flex WiFi  
PN: FLEXIP-IP



FLC-RS

The following wired Global Cache devices, paired with sensor accessories, can be used to configure sensor and contact closure input triggers.



iTach WiFi to IR  
PN: WF2IR



iTach Ethernet to IR  
PN: IP2SL-P (PoE)



iTach Ethernet to IR  
PN: IP2SL



IT-SP1 AC/DC Voltage Sensor



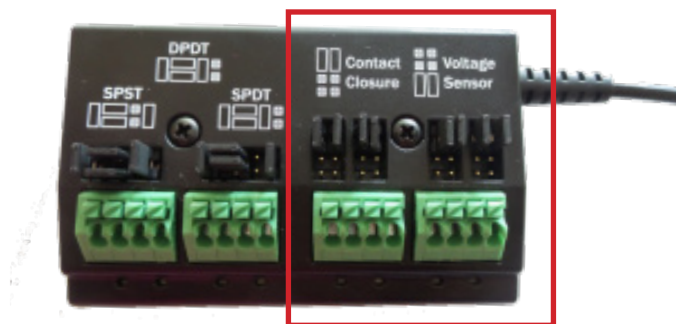
IT-SC1 Contact Closure Sensor

## Contact Closure and Sensor Triggers continued.....

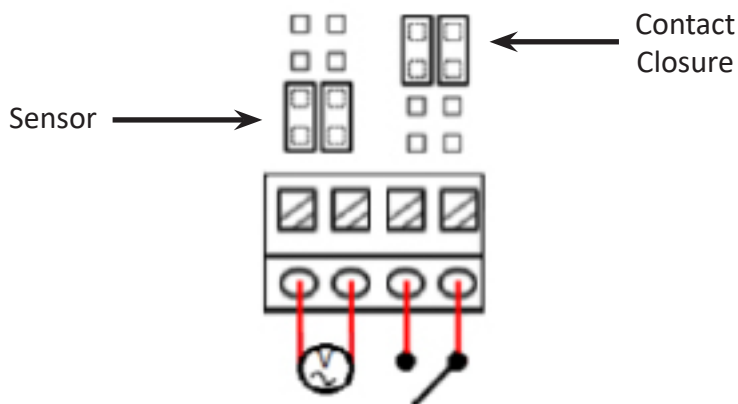
In this example we will configure the iTach Flex PoE TCP/IP endpoint coupled with the Global Cache FLC-RS cable to set up sensor and contact closure input triggers.

Once the wiring configuration is complete we will set up the Arranger API command [set listener] that will 'listen' for the sensor or contact closures to activate, this event can then trigger a *PRESET* in Arranger. See *Global Settings > Presets* for more information on creating Presets in Arranger.

When using the FLC-RS relay cable, be sure to set the pins on the closures are set for the desired configuration .



Wiring and jumper configuration examples for both a sensor and a contact closure.....



## Contact Closure and Sensor Triggers continued.....

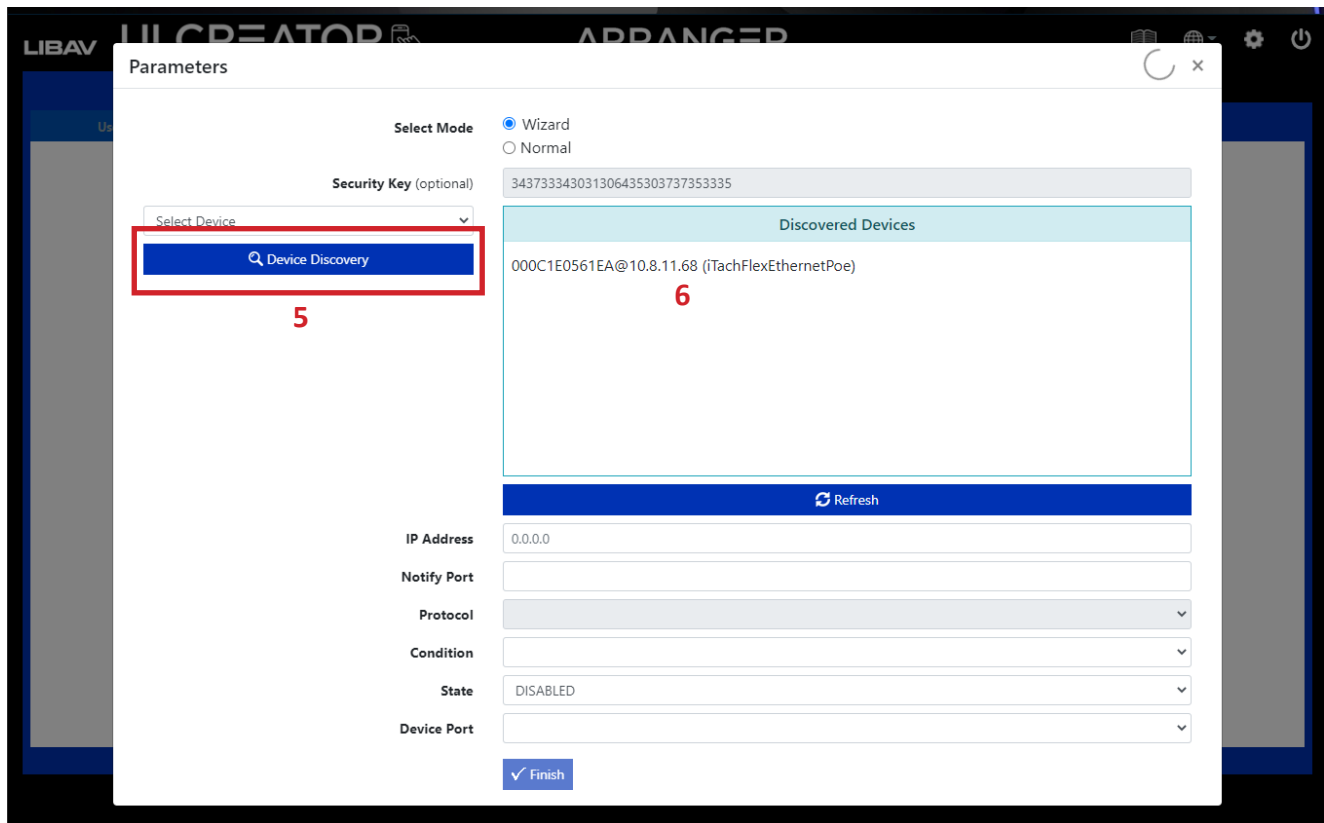
Navigate to *Global Settings*, then click on the *Presets* sub menu

The screenshot shows the 'ARRANGER UI CREATOR' interface. The top navigation bar includes 'LIBAV UI CREATOR' and 'ARRANGER'. The sub-navigation bar has 'Global Settings', 'UI Creator', and 'Global Cache Assistant'. The main content area is divided into sections: 'Global Settings' (selected), 'Users', 'Security Keys', 'Analytics', 'Notifications', 'Presets' (selected), 'Control Commands', and 'Scheduler'. The 'Presets' section contains the following form elements:

- Select Option:** A dropdown menu with 'New' selected. (Labeled 1)
- Preset Name:** A text input field containing 'MyPreset1'. (Labeled 2)
- Select Control Command:** A dropdown menu with 'set listener' selected. (Labeled 3)
- Assistant:** A button with a person icon. (Labeled 4)
- Add Control Command:** A section with a text area containing a command template: `set listener [key:<security_key>] <ip> <notify_port> <protocol> <condition> <state> <device_port> <preset_name> [<delay>]`. Below the text area are an 'Add' button, a 'Delay (ms)' input field with '1000', and a 'Preset Commands' text area.
- Buttons:** 'Save' and 'Apply' buttons at the bottom.
- Link:** A link with a question mark icon and text 'View Command Manual'.

1. Choose *New* preset.
2. Name the preset.
3. Choose the command [set listener] from the drop down list.
4. Click on *Assistant*.

*Contact Closure and Sensor Triggers continued.....*



5. Click *Device Discovery* to locate Global Cache devices on the network.
6. Click on the Flex device in the list once discovered.

## Contact Closure and Sensor Triggers continued.....

**Parameters**

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional)  
 343733343031306435303737353335

Select Device

000C1E0561EA@10.8.11.68 (iTachFlexEthernetPoe)

Alias Name (optional)  
 14

Description (optional)  
 14

Select I/O  
 7 ☒ ☐ ☐ ☐

Notify Port  
 101 8

Notify Timer  
 0

9

IP Address  
 239.255.250.250

Notify Port  
 101

Protocol  
 UDP

10 Condition  
 ON

11 State  
 ENABLED

12 Device Port  
 1

13 Preset Name  
 TVon

Delay [minutes](optional)  
 0 60

15

7. Select the input port you wish to use, in this example we chose the first input option which is set for a contact closure according to the physical pin-out configuration on the FLC-RS.
8. Configure the *Notify Port*, numbers start at 101.
9. Click *Set*.
10. Choose *ON* for the *Condition*.
11. Choose *ENABLED* for the *State*.
12. Change the *Device Port* (I/O port if you want to change the port number in the configuration)
13. Choose the appropriate *Preset Name* you want to execute when the contact closure closes.
14. Apply an alias name and description of the device and click *Save* so the device can be accessed more quickly in the future, otherwise you will need to discover the device again. These named devices will appear via drop-down above the *Device Discovery* menu.
15. Click *Finish*.

## Contact Closure and Sensor Triggers continued.....

16. Click *ADD* to add the generated code to the preset.

17. Click *Apply* to test, then click *Save*.

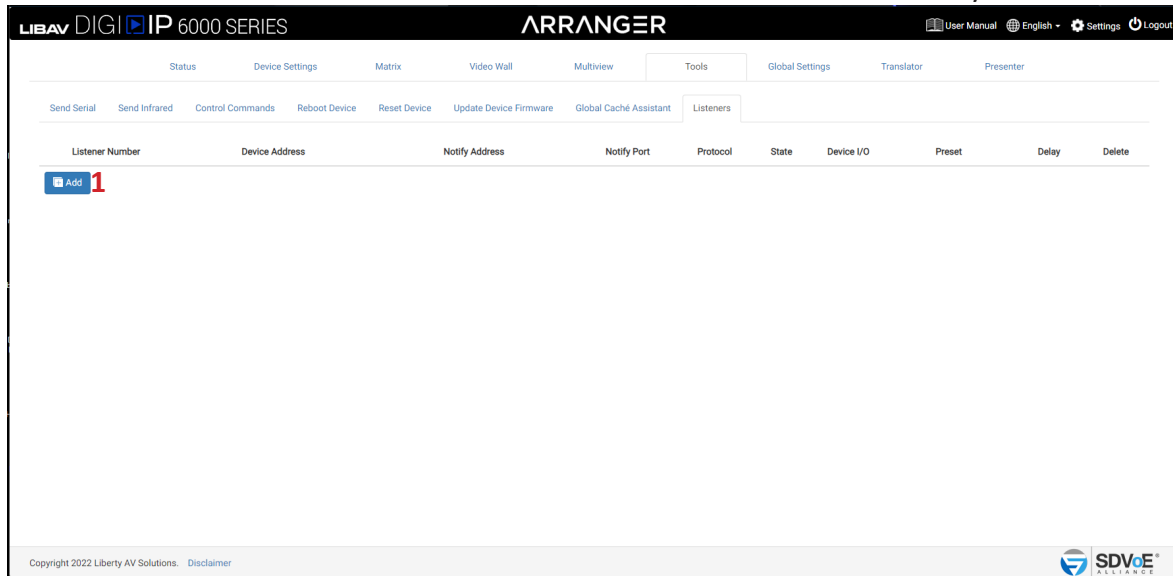
The configuration for using sensors, like a PIR sensor, to execute a preset in Arranger is the SAME as above accept the input ports physical configuration will need to be set to *VOLTAGE SENSOR*.

You can now schedule this preset to always be ON and listening when the Arranger controller is on or has been rebooted. See *Global Settings > Scheduler* for more information on how to use the *System Start* scheduler option.

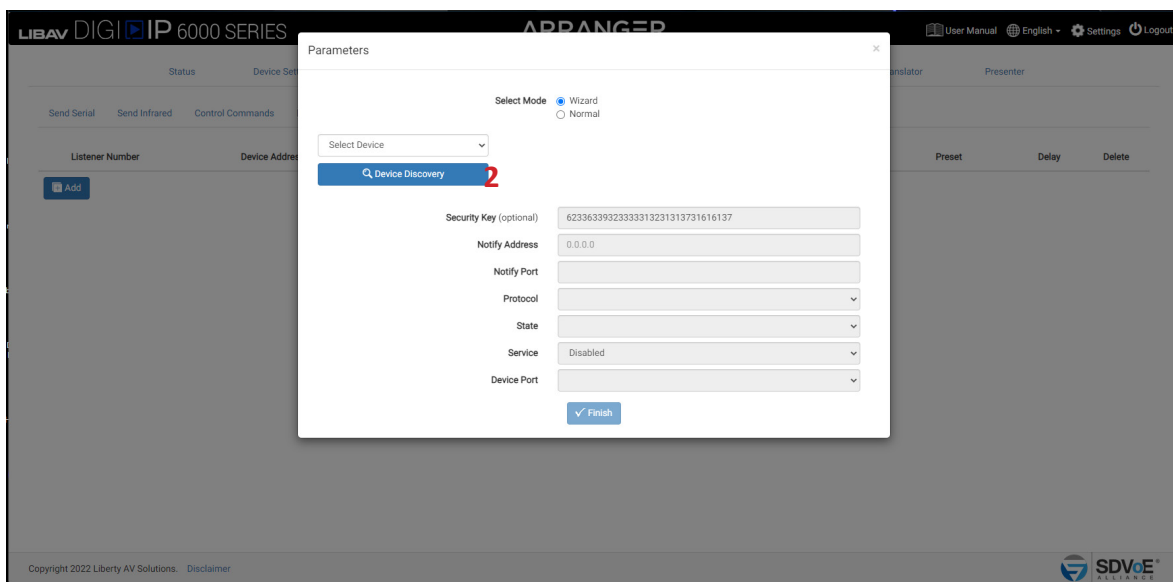
# Listeners

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

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

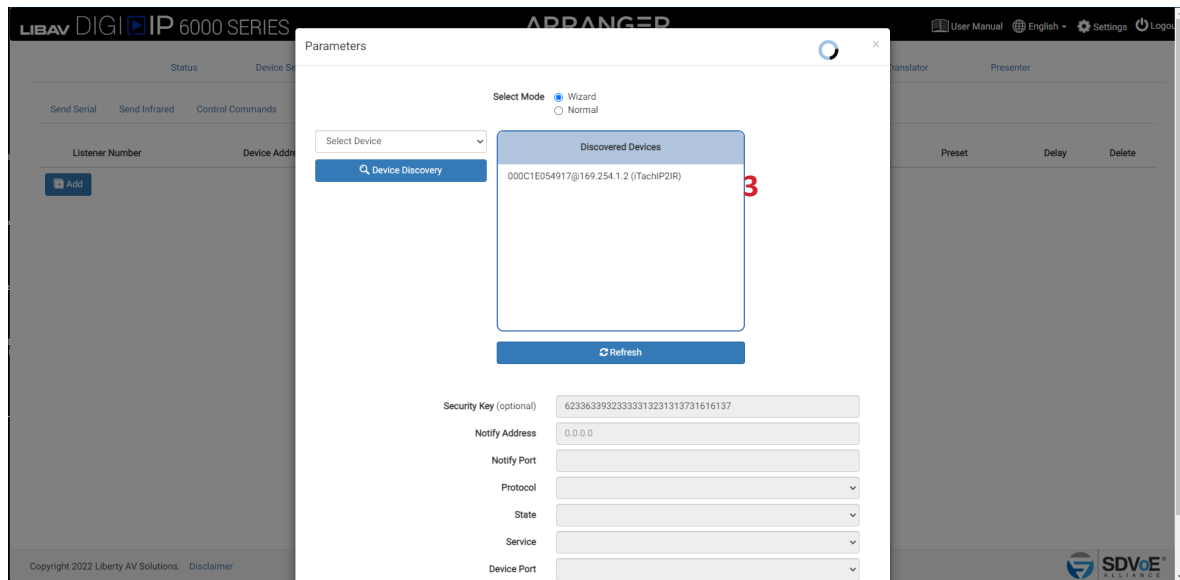


1. Choose New preset.



2. Either select a previously saved device or click the *Device Discovery* button

## Listeners continued.....



### 3. Select desired device.

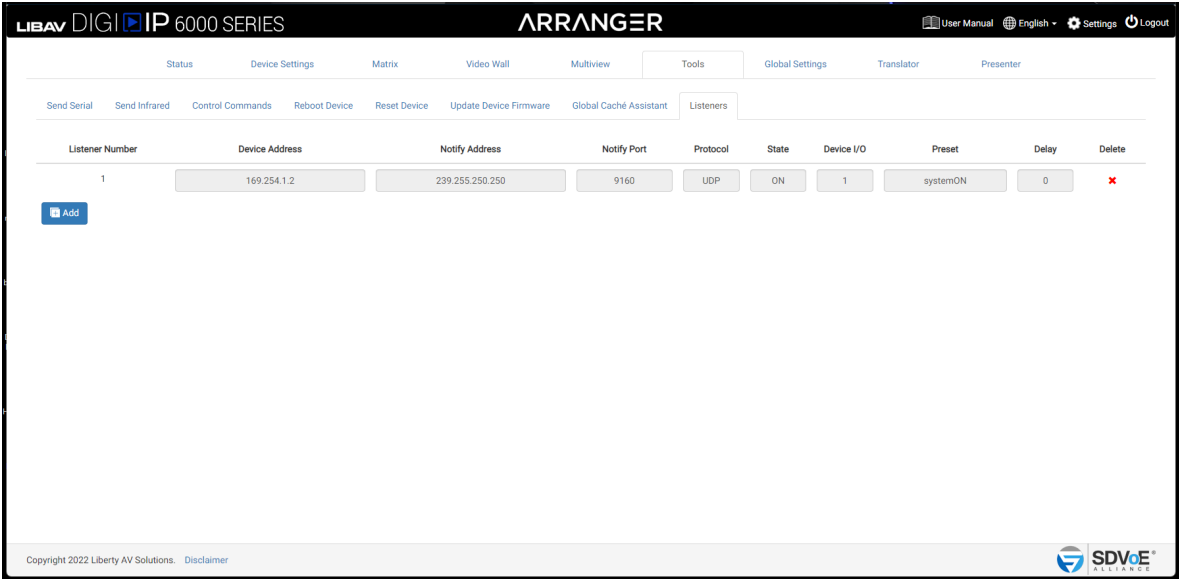
In this example, we will use the Global Cache IP2IR product to set an I/O port to configure a sensor input.



*Listeners continued.....*

4. Configure the selected I/O port as *Sensor Notify*.  
Set the *Notify Port* to 9160.  
Set *Notify Timer* to 0.
5. Select *State*: On, Off, Any
6. Determine Listener *Service* status: Disabled or Enabled.
7. Select the *Device Port* currently selected in step 4.
8. Select the desired *Preset Name*
9. Optional: Set the *Delay Time* of the selected preset
10. Click *Finish* when done.

Listeners continued.....



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

# Global Settings

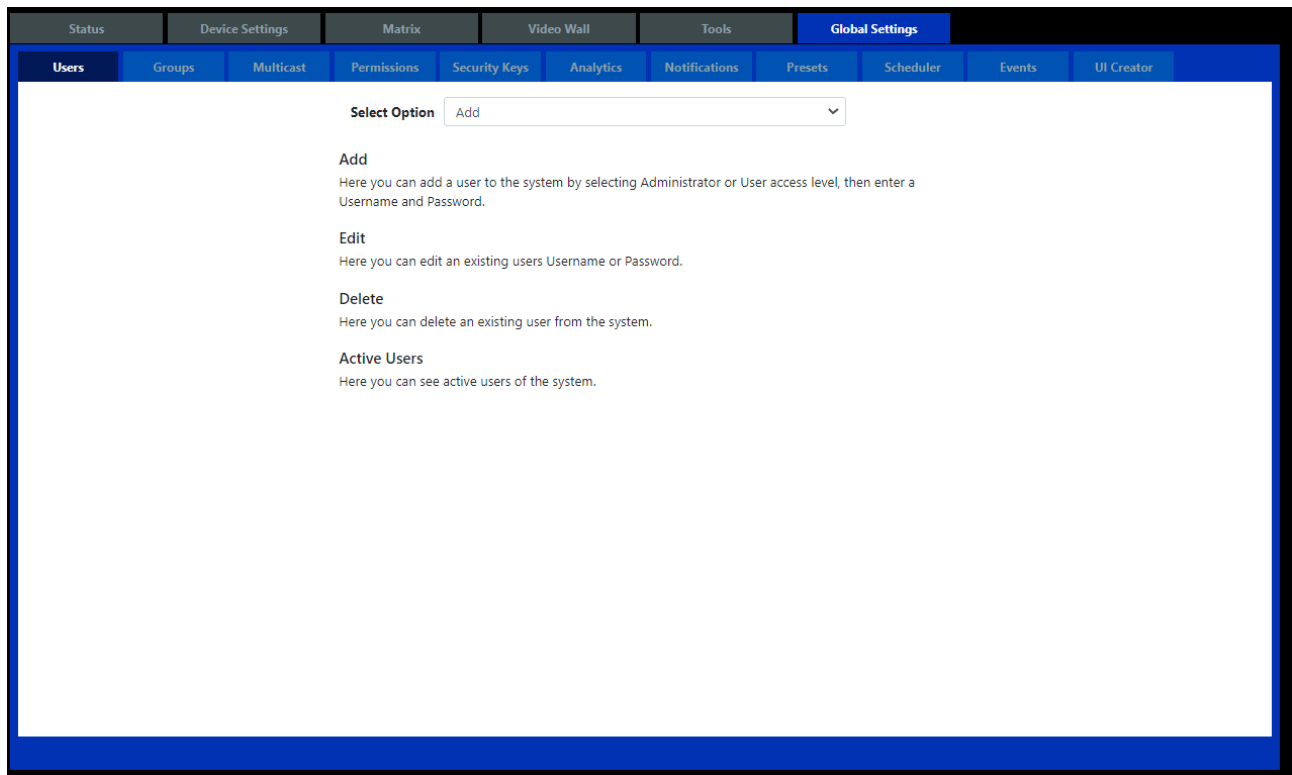
In the *Global Settings* tab you will find all the global settings of the software.

## 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.



## 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.

The screenshot shows the 'Add User' form in the Arranger Digi IP 5000 web interface. The form is titled 'Add User' and is part of the 'Global Settings' section. It contains several fields and checkboxes for user configuration. Red numbers 1 through 6 are overlaid on the form, pointing to specific elements:

1. Select Option: Add
2. Level: ☐ Administrator, ☒ User
3. Username, Password, Confirm Password
4. Group: ☒ All
5. Functions: ☒ Status, ☒ Matrix, ☒ Video Wall
6. Save

1. Select *Add*.
2. Select *Level*.
3. Enter in *username*, *password* and then *confirm password*.
4. Select *Group*.
5. Select *Function*.
6. Click *Save*.

## Edit User

Here you can edit an existing user's username, password, allocated groups, and functions.

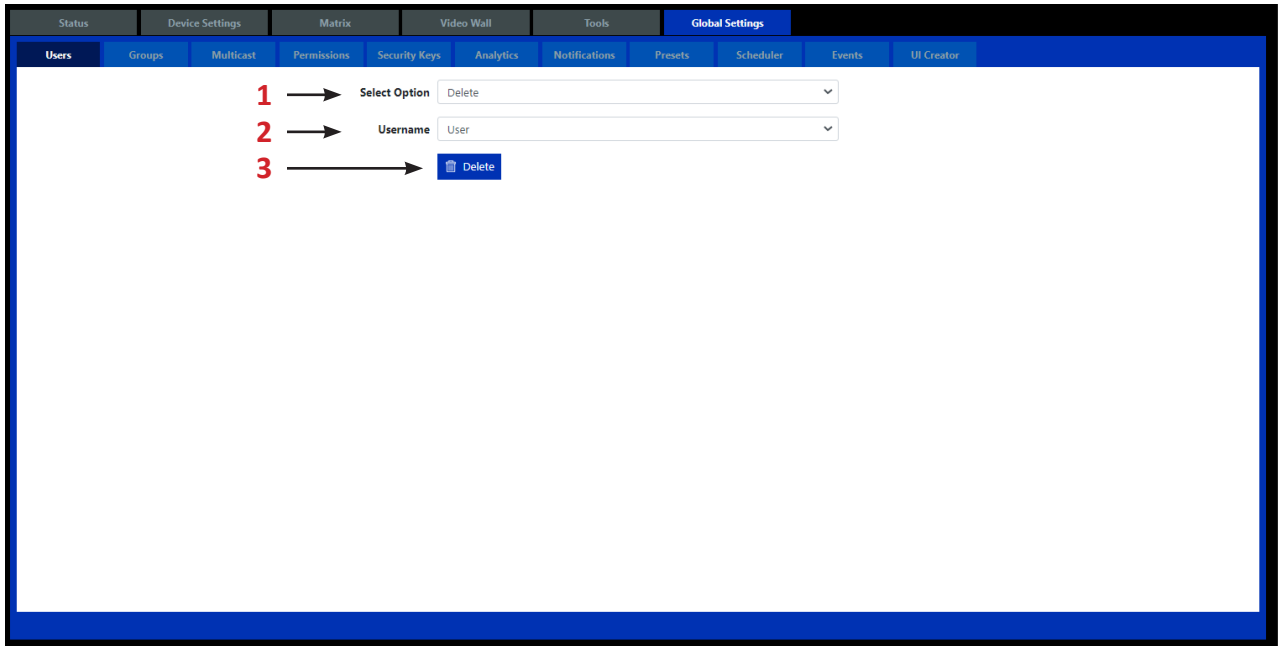
The screenshot shows the 'Edit User' form within the 'Global Settings' tab. The form includes the following elements:

- 1** → Select Option: A dropdown menu with 'Edit' selected.
- 2** → Edit: A dropdown menu with 'User' selected.
- 3** → New Password: A text input field.
- 3** → Confirm Password: A text input field.
- 4** → Group: A checkbox labeled 'All' which is checked.
- 5** → Functions: Checkboxes for 'Status' (checked), 'Video Wall' (checked), and 'Matrix' (unchecked).
- 6** → Save: A blue button with a save icon.

1. Select *Edit*.
2. Select *User*.
3. Enter in *new password* and then *confirm password*.
4. Select *Group*.
5. Select *Function*.
6. Click *Save*.

## Delete User

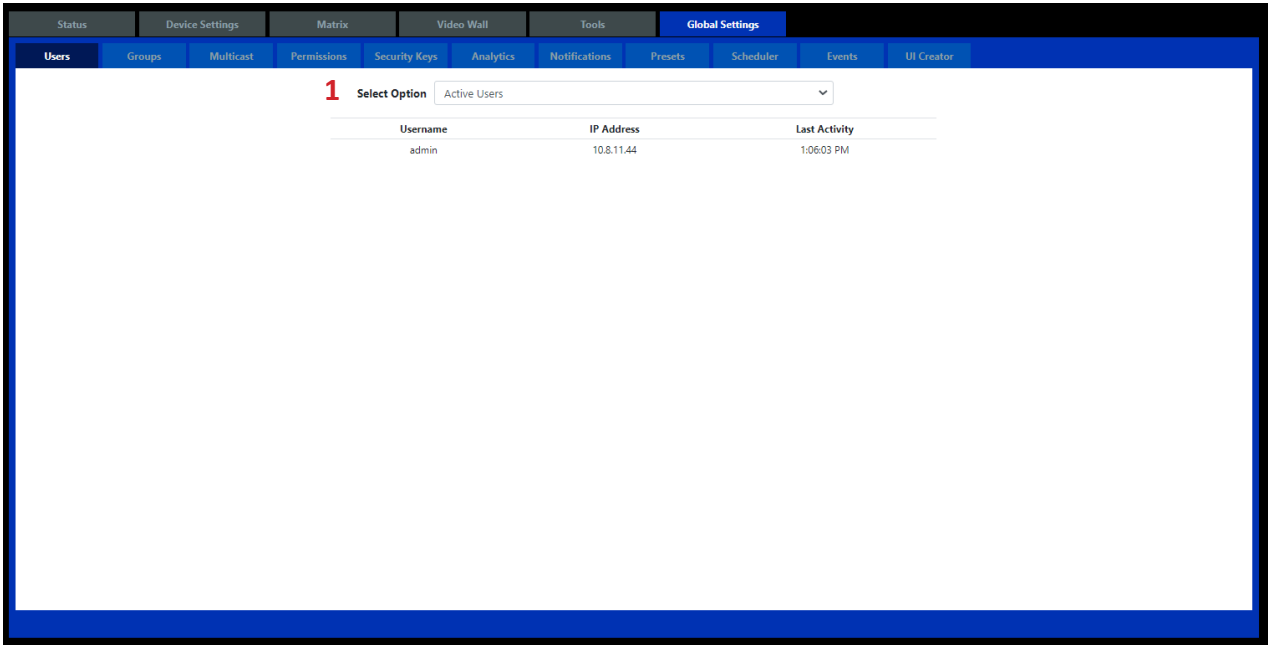
Here you can delete an existing user from the system.



1. Select *Delete*.
2. Select *Username*.
3. Click *Delete*.

## Active Users

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



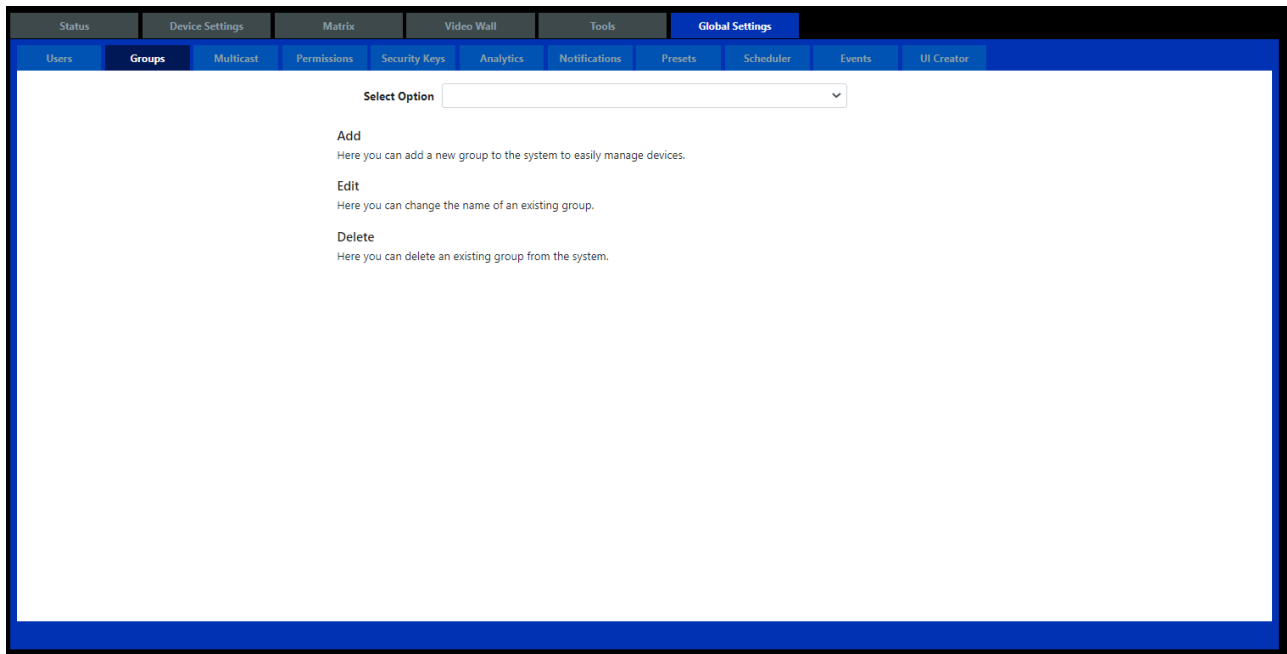
The screenshot displays the 'Active Users' section of the Arranger Digi IP 5000 web interface. The interface features a top navigation bar with tabs for Status, Device Settings, Matrix, Video Wall, Tools, and Global Settings. Below this is a secondary navigation bar with tabs for Users, Groups, Multicast, Permissions, Security Keys, Analytics, Notifications, Presets, Scheduler, Events, and UI Creator. The 'Users' tab is selected, and a dropdown menu is open, showing 'Active Users' as the selected option. Below the dropdown, a table lists active users with columns for Username, IP Address, and Last Activity. The table contains one entry for the user 'admin' with IP address '10.8.11.44' and last activity at '1:06:03 PM'.

Username	IP Address	Last Activity
admin	10.8.11.44	1:06:03 PM

1. Select *Active Users*.

## 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.



**NOTE:** The following group names cannot be used:

- 'all'
- 'all\_rx'
- 'all\_tx'
- 'ungrouped'
- 'all\_devices'
- Any Device name
- Any Preset name



## 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*.

The screenshot shows the 'Add Group' form in the Arranger Digi IP 5000 interface. The form is titled 'Groups' and is part of the 'Global Settings' section. It contains four numbered steps:

1. Select Option (Add)
2. Group (text input)
3. Select Device (radio buttons for All Devices, All Decoders, All Encoders, and Individual, with checkboxes for Dell, Laptop\_WP, Nec, InRoomPC, MediaPlayer, and TCL)
4. Save (button)

1. Select *Add*.
2. Enter a group name.
3. Select *Devices*.
4. Click Save.

## Edit Group

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

1 → Select Option Edit

2 → Group

3 → New Name

\* deviceNameCharLimit

4 → Select Device

☐ All Devices ☐ All Decoders ☐ All Encoders ☒ Individual

☐ Dell ☐ InRoomPC

☐ Laptop\_WP ☐ MediaPlayer

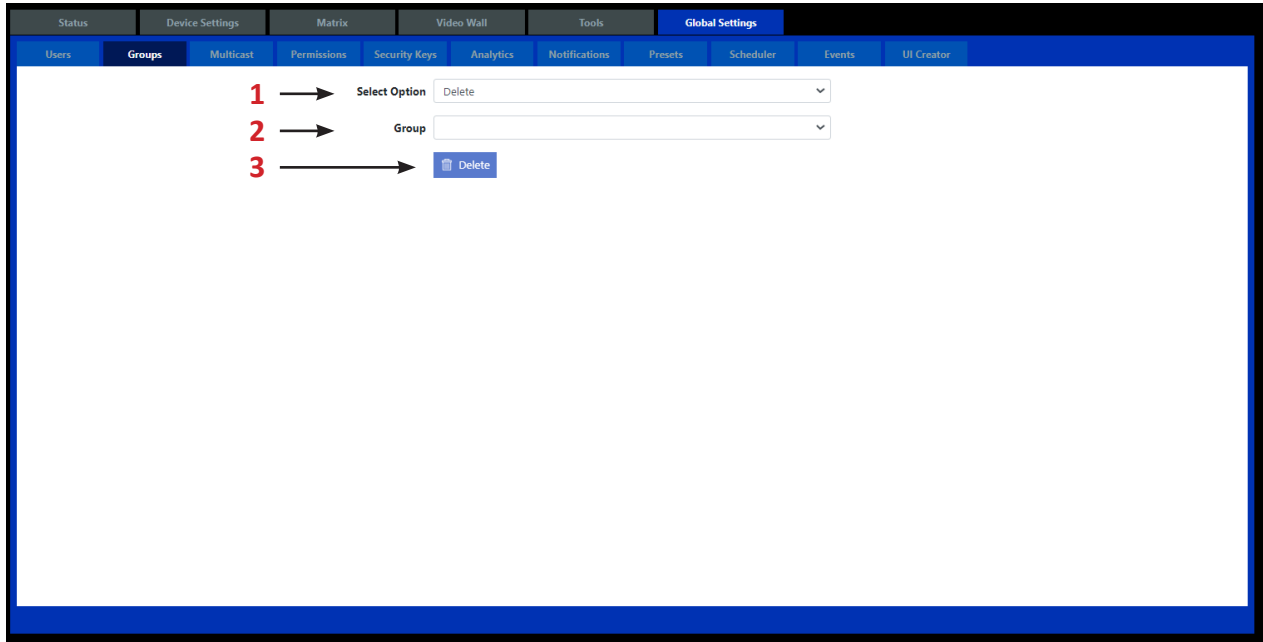
☐ Nec ☐ TCL

5 → Save

1. Select *Edit*.
2. Select *Group*.
3. Enter in new name.
4. Select *Devices*.
5. Click *Save*.

## Delete Group

Here you can delete an existing user from the system.

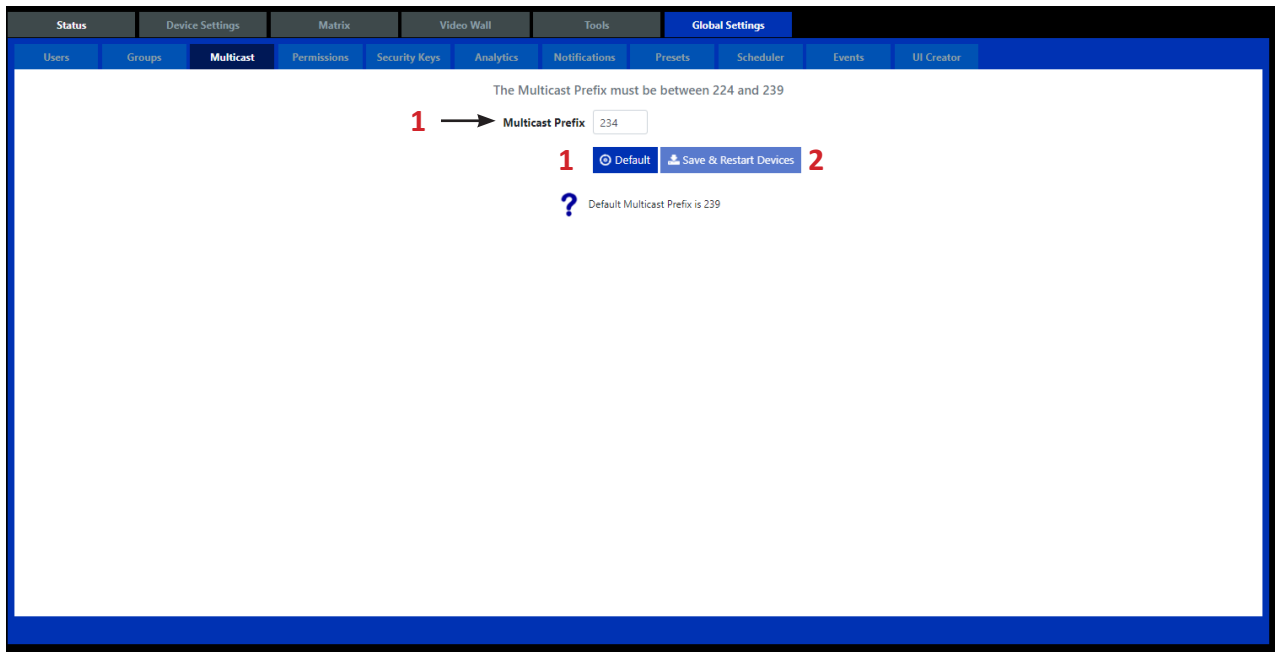


1. Select *Delete*.
2. Select *Group*.
3. Click *Delete*.

## Multicast

The Multicast section is used to configure the multicast range of the devices from between 224.x.x.x and 239.x.x.x with a default of 239.x.x.x.

All devices must be set to the same multicast prefix.



1. Select *Default* or enter a preferred *Multicast Prefix*.
2. Click *Save & Restart* to apply the changes.

## Permissions

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.

Select Encoder	Select Decoder	Permissions
Encoder1	Decoder1	Allow
Encoder2	Decoder2	Deny

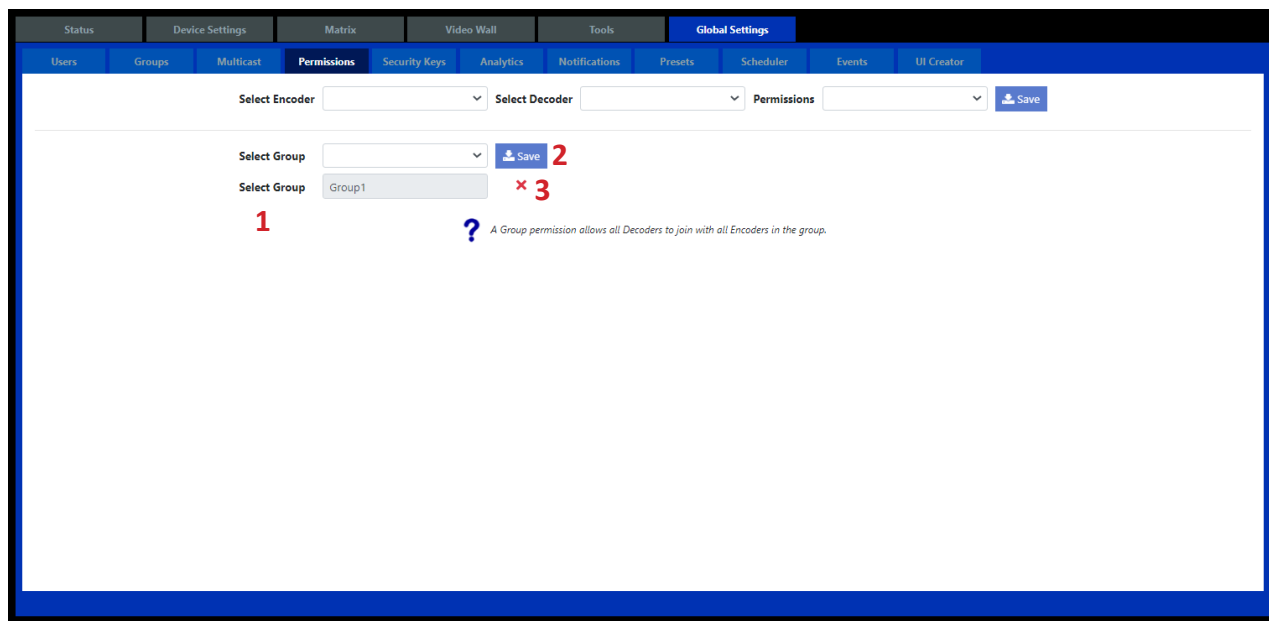
Select Group:  Save

? A Group permission allows all Decoders to join with all Encoders in the group.

1. Select encoder.
2. Select decoder.
3. Select Permission as either *Allow* or *Deny*.
4. Click *Save*.
5. Select the cross icons to delete.

*Permissions continued.....*

Below, the decoders in Group1 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.



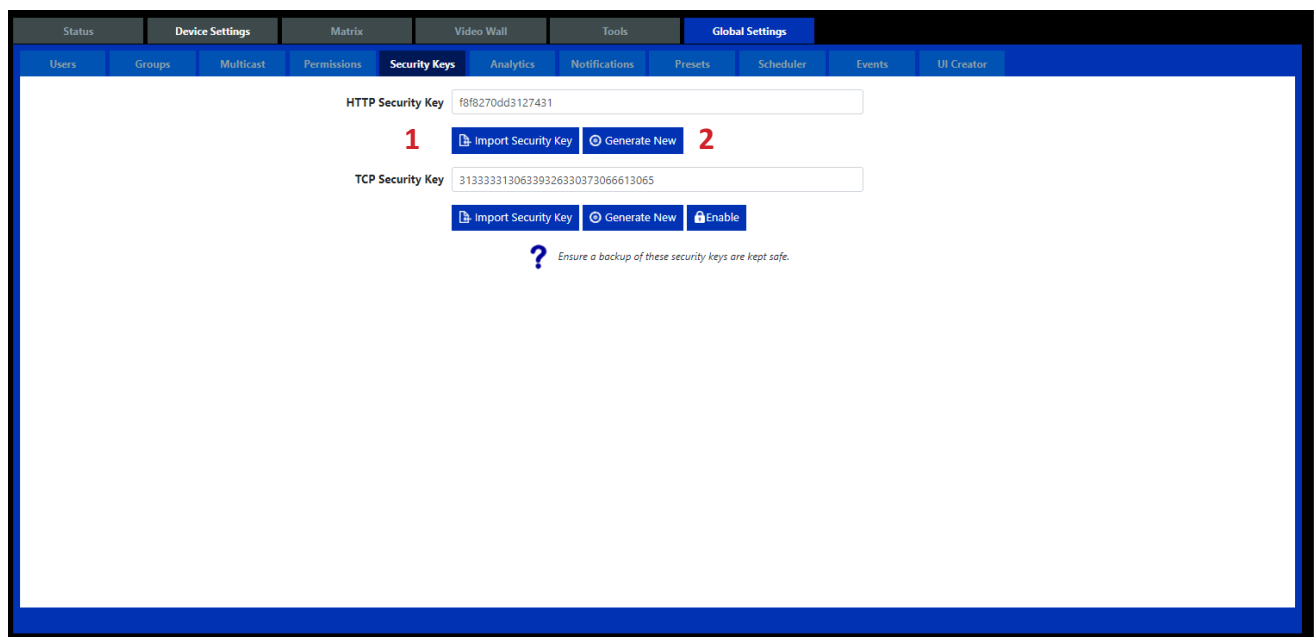
1. Select Group.
2. Click *Save*.
3. Select the cross icons to delete.

## 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.

### HTTP API Security Key

The Arranger 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.



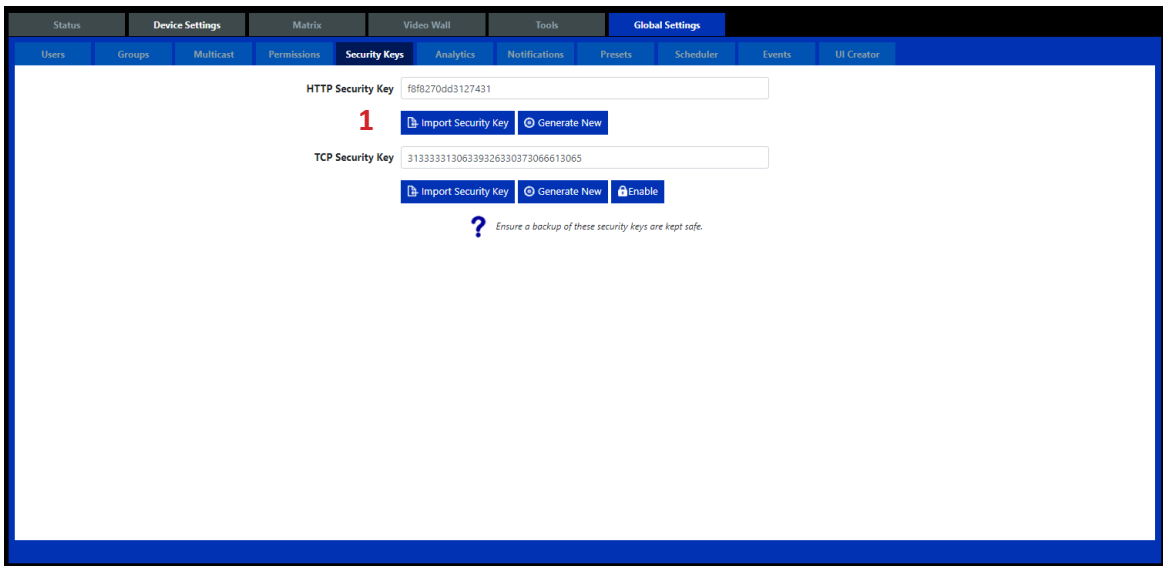
1. Select *Import Security Key* button.

OR

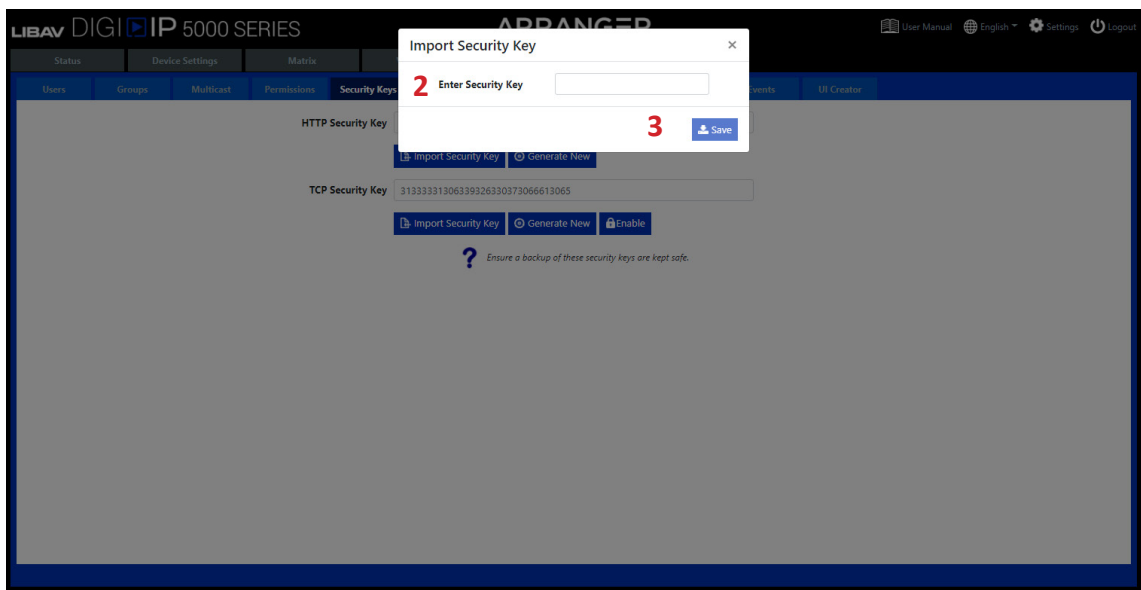
2. Select *Generate New* button.

## Security Keys continued.....

### Importing a HTTP API Security Key



1. Select *Import Security Key* button.



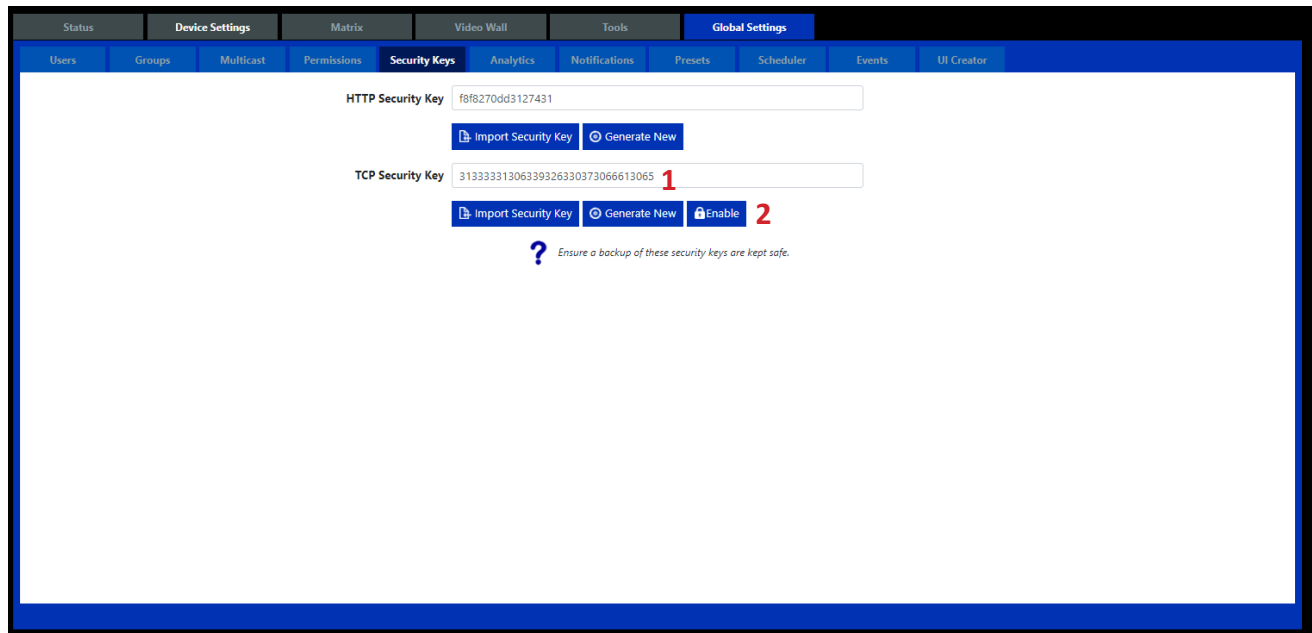
2. Enter Security Key.
3. Click *Save*.



Security Keys continued.....

### TCP Security Key

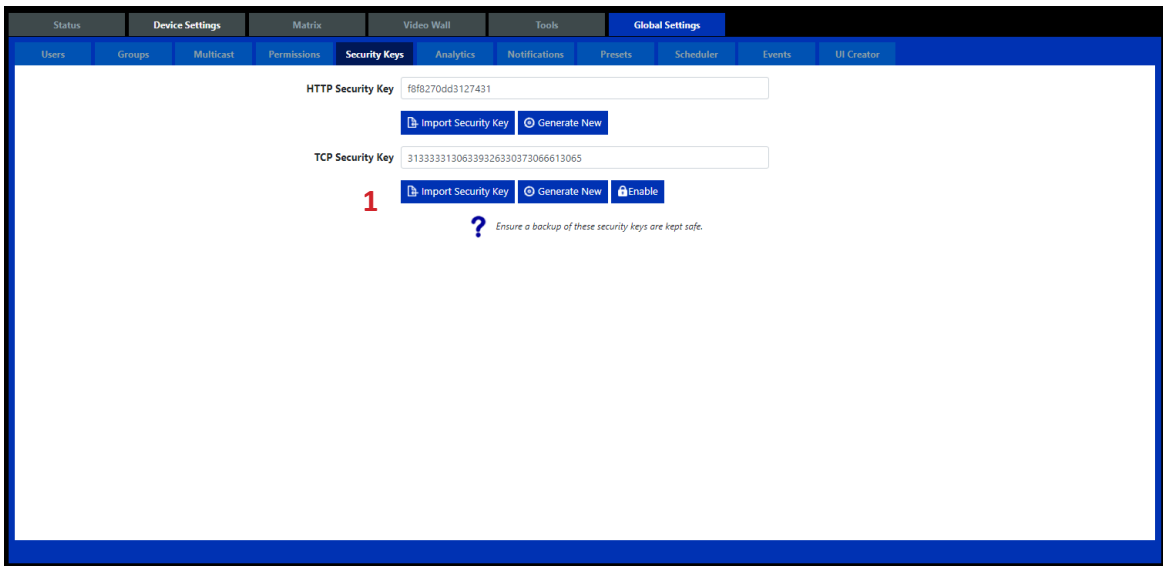
The Arranger Controller API can be accessed via Telnet requests on TCP port 6980. To ensure security over the network a TCP security key can be passed with all such commands. Here you can generate a new key or import a saved key that had been previously generated. As the TCP security key is optional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



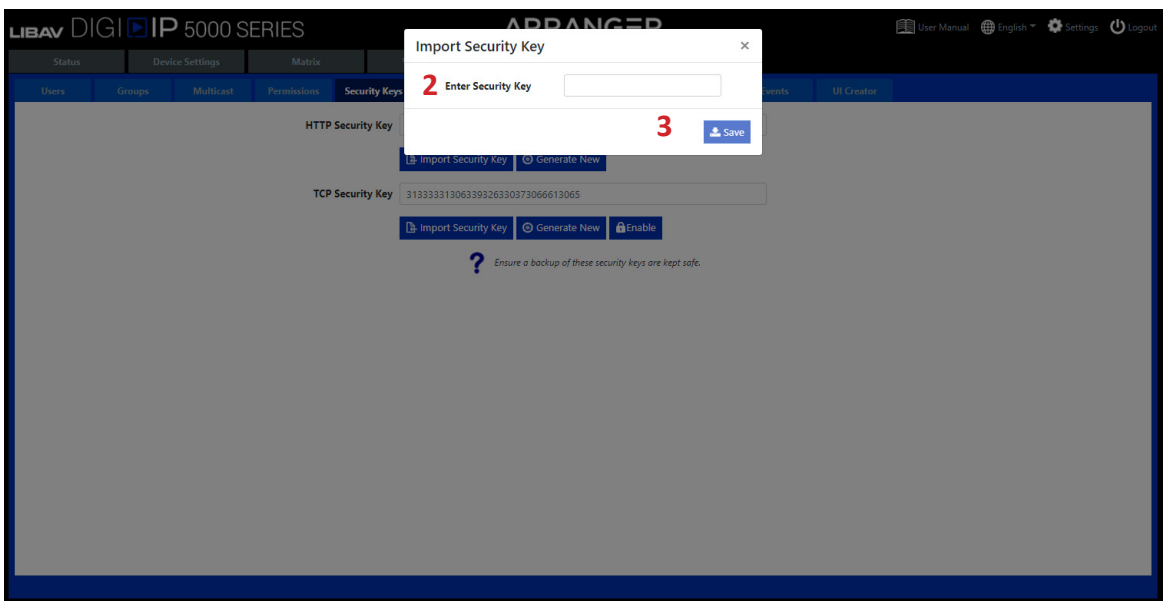
1. Select *Generate New* button.
2. Click *Enable*.

## Security Keys continued.....

### Importing a TCP API Security Key



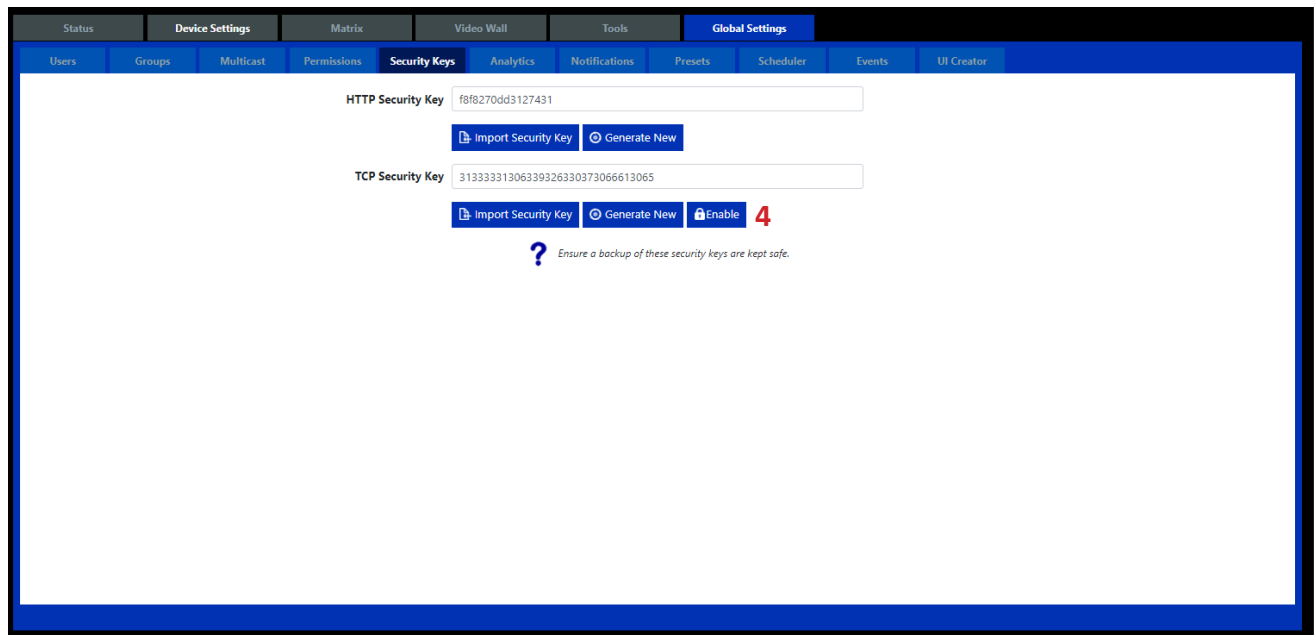
1. Select *Import Security Key* button.



2. Enter Security Key.
3. Click *Save*.

Security Keys continued.....

Importing a TCP API Security Key Continued....



4. Click *Enable*.

## ***Analytics***

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

Various types of information are stored and can be exported for use in a third-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.

### ***UI Creator***

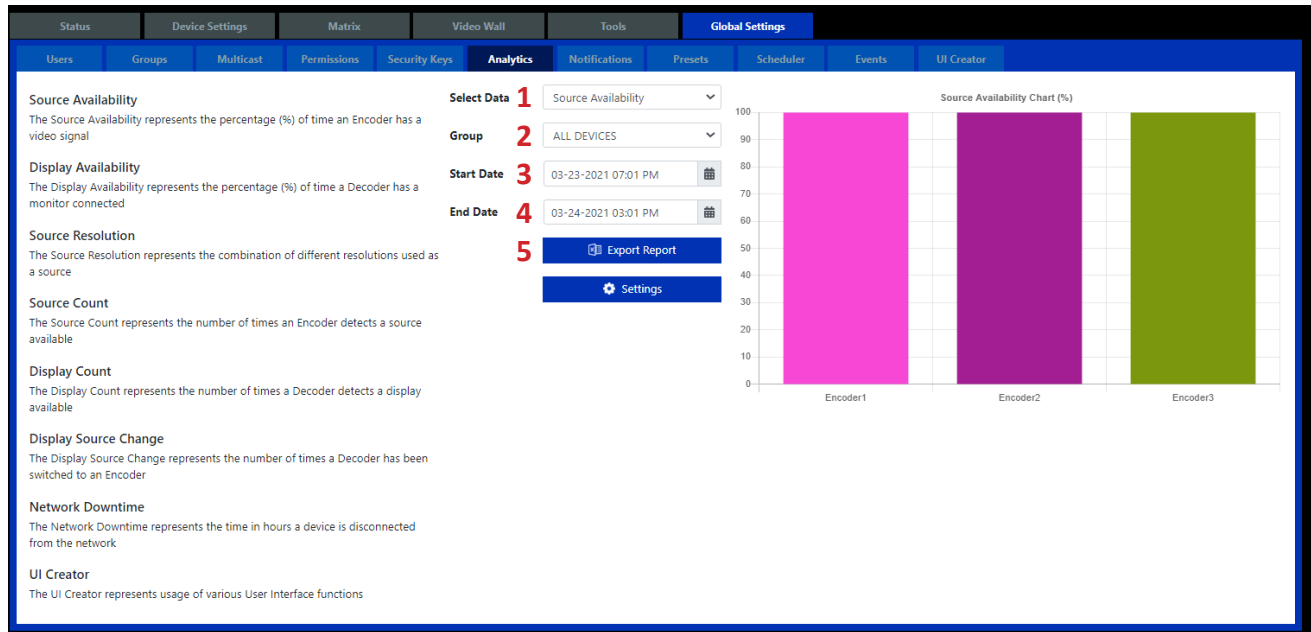
*UI Creator* represents usage of various user interface function.

**Note:** *Analytics* is a licensed required feature. If you do not have access to this option contact your Liberty AV sales rep to upgrade.

*Analytics continued.....*

## Source Availability

The *Source Availability* metric represents the time in hours an encoder has video signal.

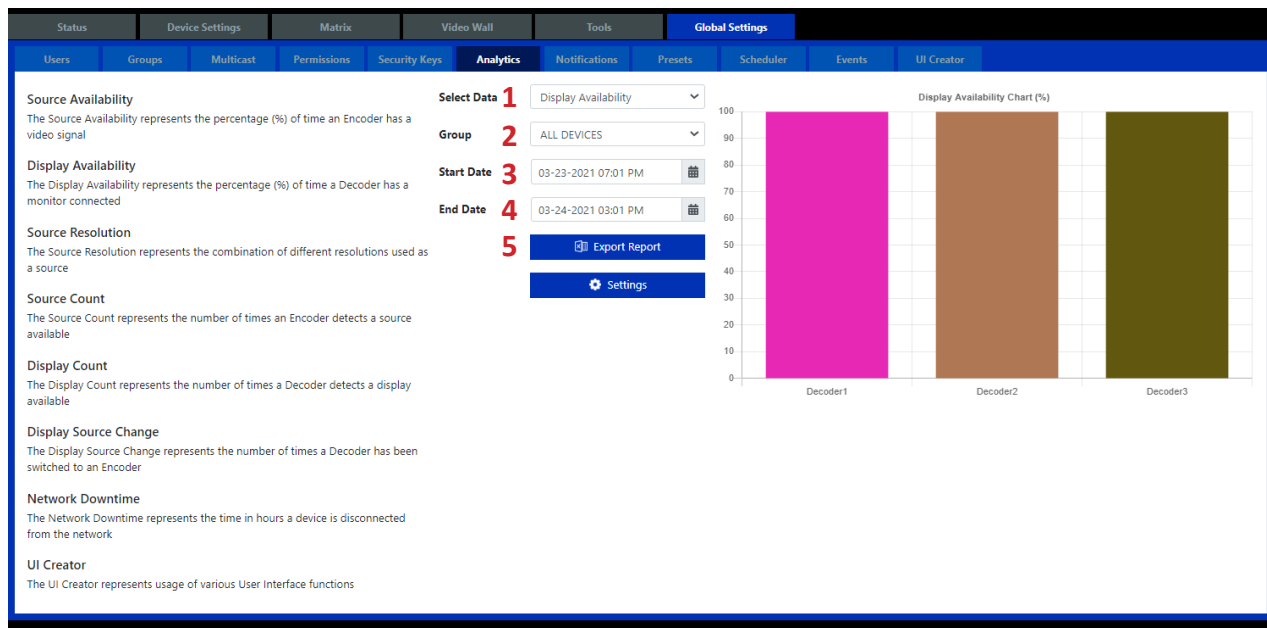


1. Select *Source Availability* from the *Select Data* drop-down.
2. Select *Group*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.

*Analytics continued.....*

## **Display Availability**

The *Display Availability* metric represents the time in hours a decoder has a monitor connected.

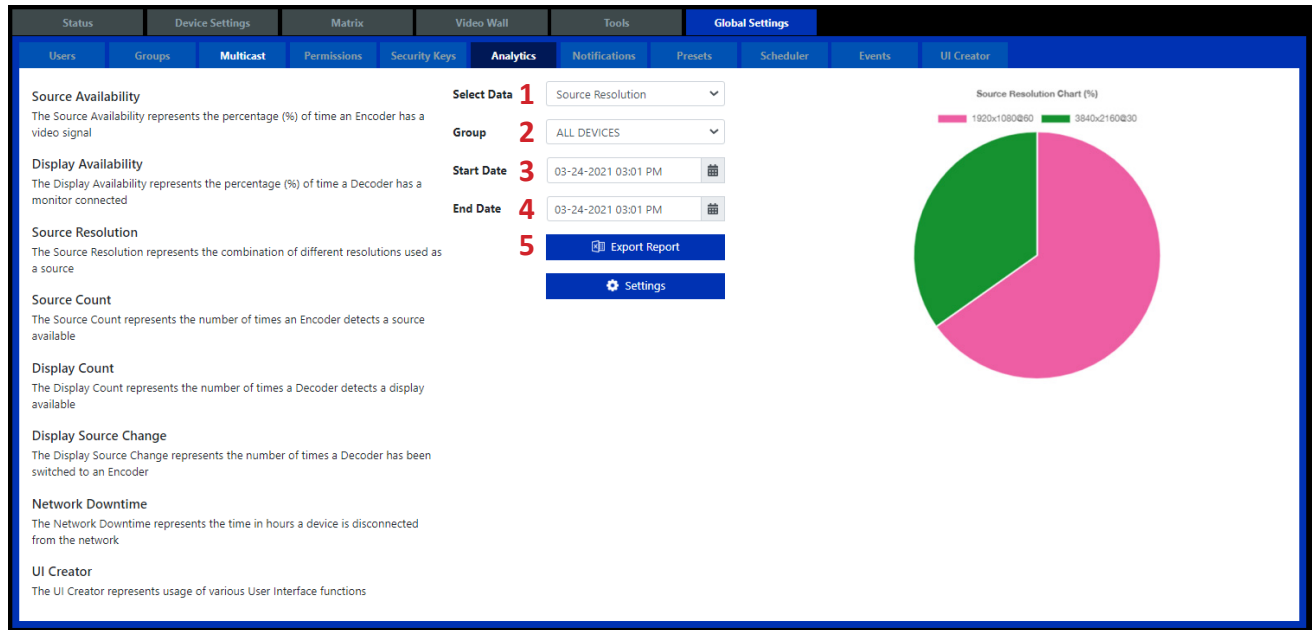


1. Select *Display Availability* from the *Select Data* drop-down.
2. Select *Group*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.

*Analytics continued.....*

## Source Resolution

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

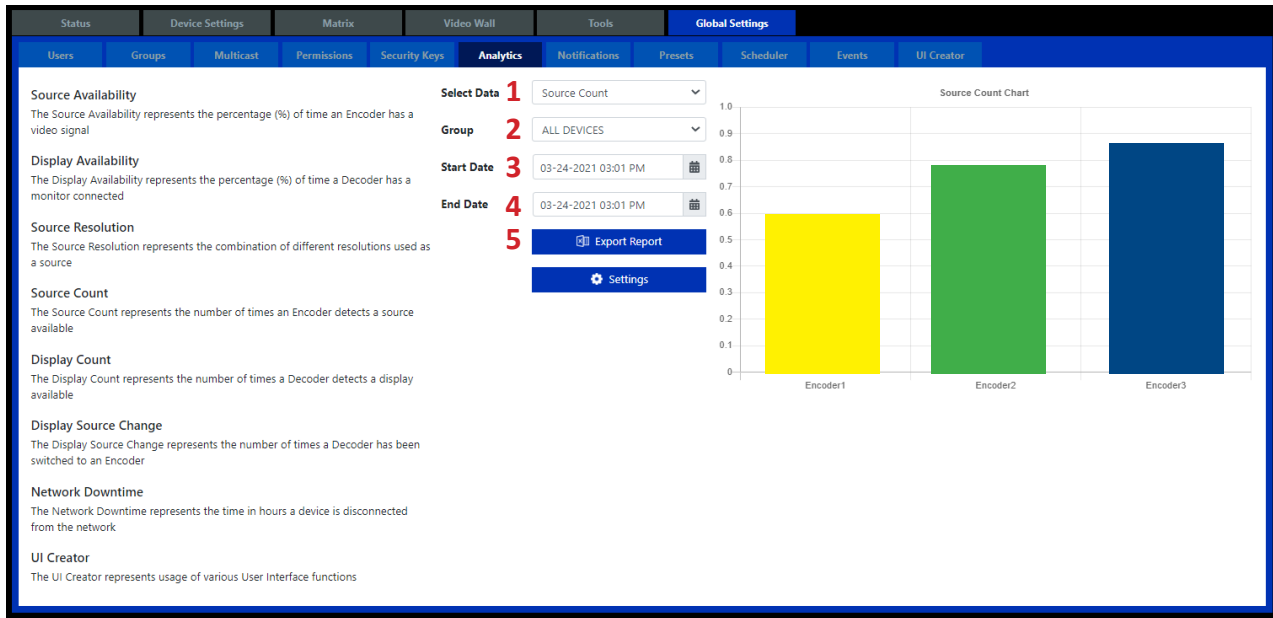


1. Select *Source Resolution* from the *Select Data* drop-down.
2. Select *Group*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.

*Analytics continued.....*

## Source Count

The *Source Count* metric represents the number of times an encoder detects a source available.



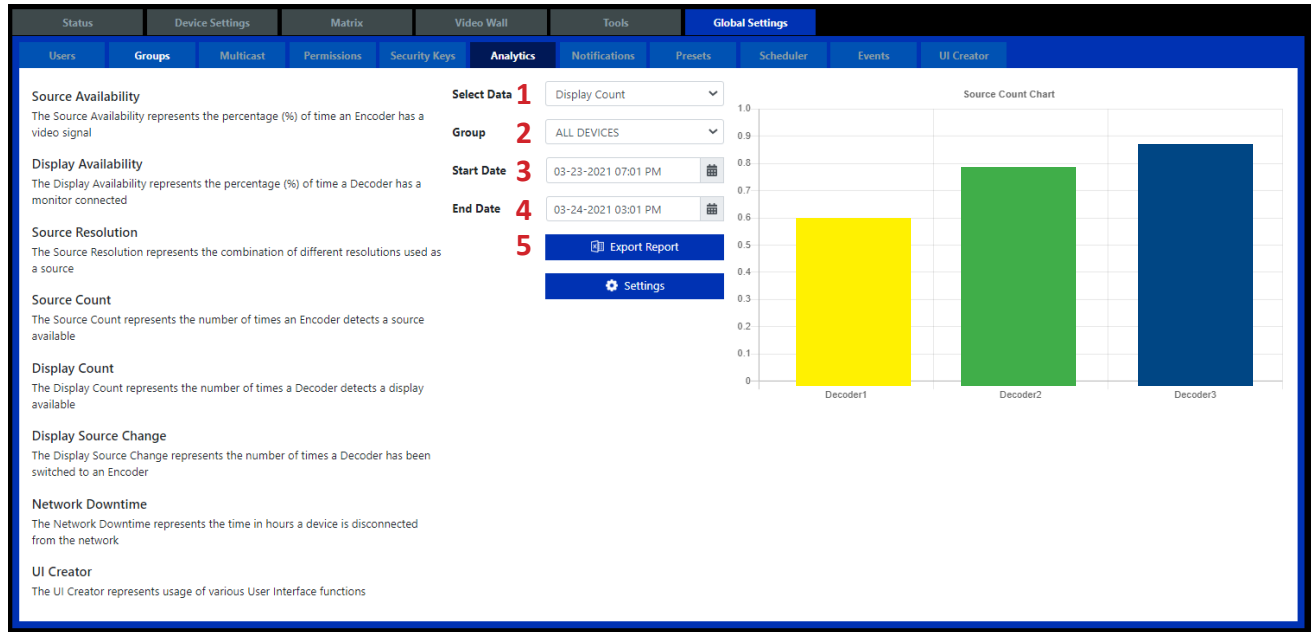
1. Select *Source Count* from the *Select Data* drop-down.
2. Select *Group*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.



*Analytics continued.....*

## Display Count

The *Display Count* metric represents the number of times a decoder detects a display available.

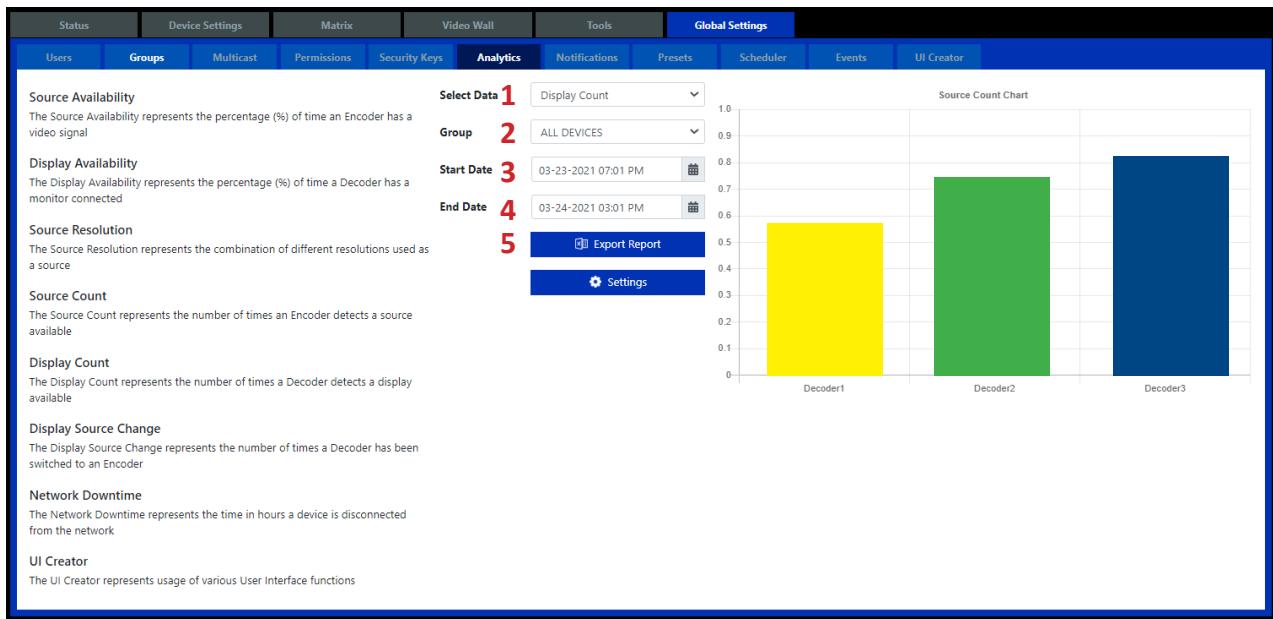


1. Select *Display Count* from the *Select Data* drop-down.
2. Select *Group*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.

*Analytics continued.....*

## **Display Source Change**

The *Display Source Change* metric represents the number of times a decoder has been switched to an encoder.

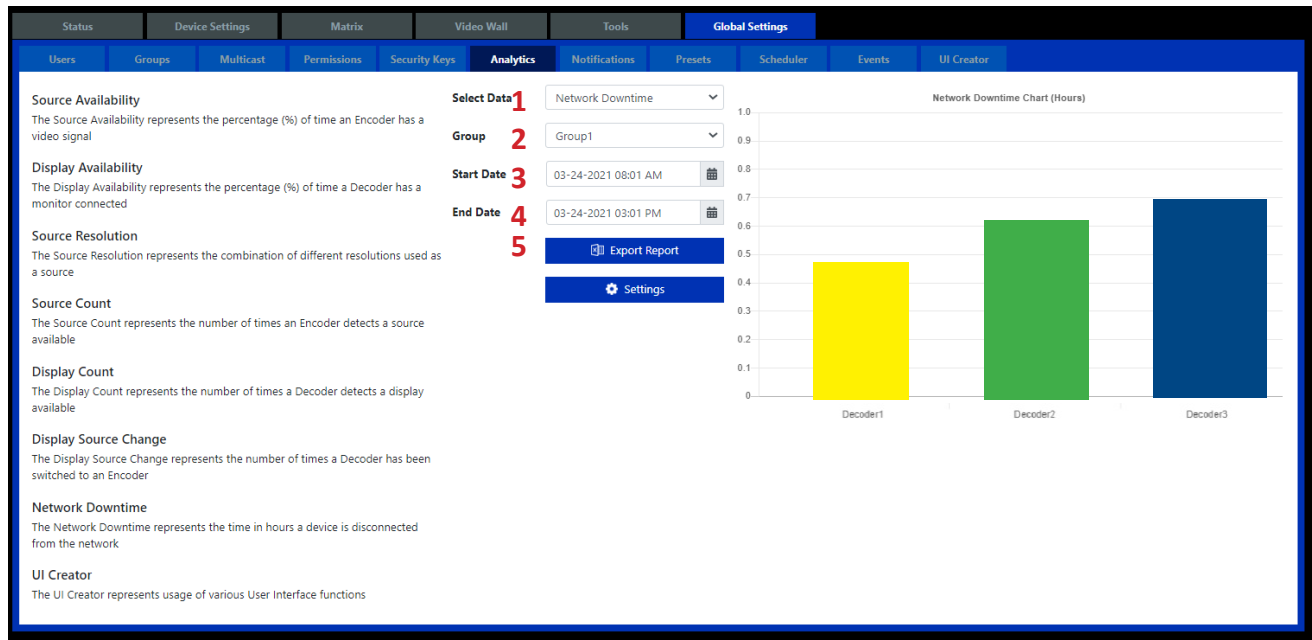


1. Select *Display Source Change* from the *Select Data* drop-down.
2. Select *Group*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.

*Analytics continued.....*

## Network Downtime

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

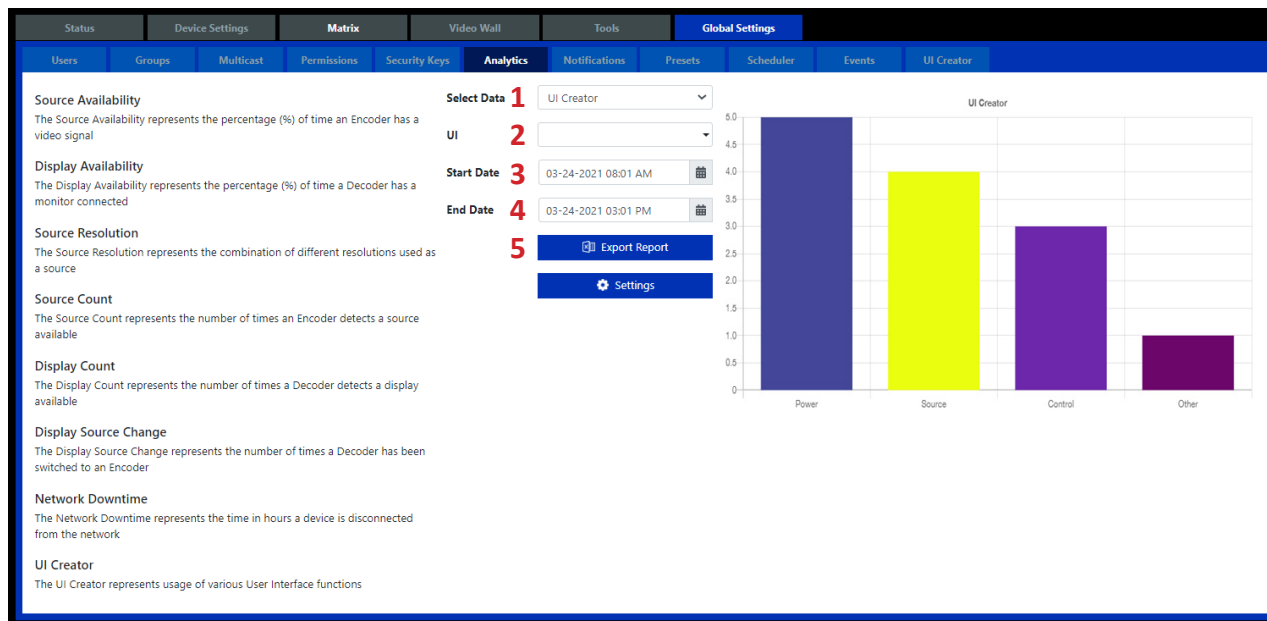


1. Select *Network Downtime* from the *Select Data* drop-down.
2. Select *Group*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.

*Analytics continued.....*

## UI Creator

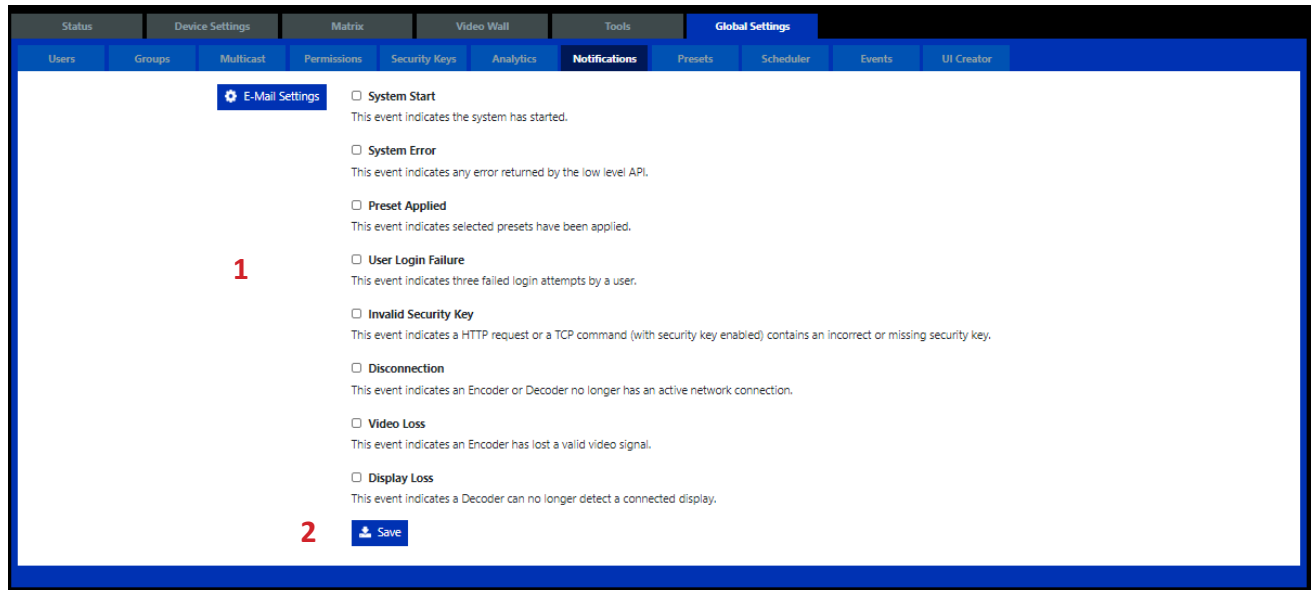
The *UI Creator* metric represents usage of various user interface functions.



1. Select *UI Creator* from the *Select Data* drop-down.
2. Select *User Interface*.
3. Select *Start Date*.
4. Select *End Date*.
5. Click *Export Report*.

## Notifications

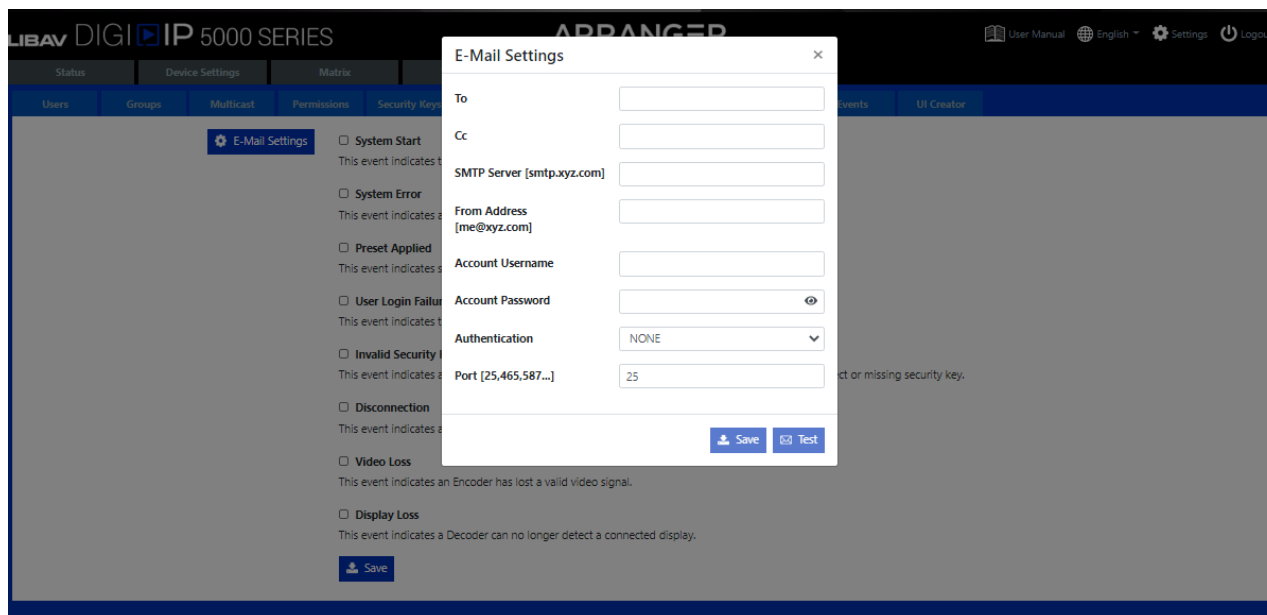
Notifications will send e-mail alerts whenever a selected event occurs on the system.



1. Select Event.
2. Select *Save*.

## Email 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.



## **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 – Preset Logic for further details.*

The following preset names cannot be used:

- ‘all’
- ‘all\_rx’
- ‘all\_tx’
- ‘ungrouped’
- ‘all\_devices’
- Any Device name
- Any Group name

## Make a New Preset

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* wizard.

1. Select *New*.
2. Enter a name for the preset.
3. Select a command from the drop-down menu.

**Note:** Click on the *View Command Manual* link next to the ? for command definitions.

4. *Assistant* is a command wizard that will allow you to easily input the information required for the command in order to render the finished code correctly.

Click on *Assistant* to build the command or enter the command in manually in the *Add Control Command* field.

5. Click *Add*.

Notice that the command is now entered into the field labeled *Preset Commands*. If you need to enter in more commands to the preset repeat steps 3-5.

**Best practice!** When using multiple commands in a preset, add the *preset delay* command to the preset. *Preset delay* will allow you to separate each command execution in a preset in milliseconds.

6. Click *Save* or *Apply* to test the preset.



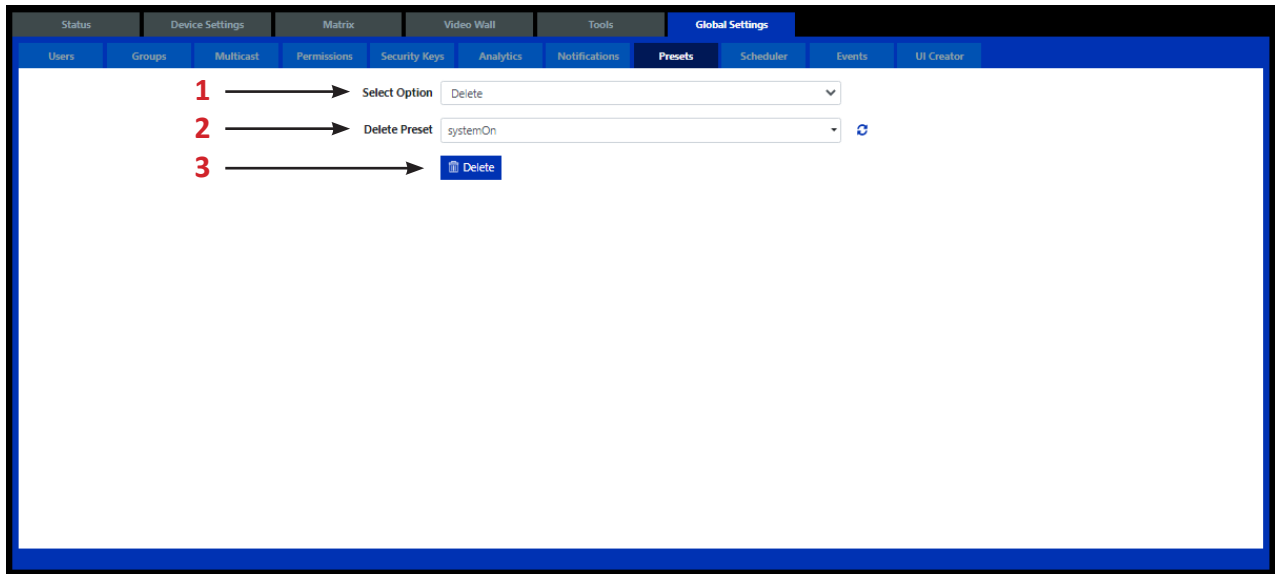
## Edit a Preset

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

1. Select *Edit*.
2. Select *Preset*.
3. Click *Load*.  
Notice that the commands in the current preset have now populated in the *Preset Commands* field which can be edited manually.
4. Change *preset name*.
5. Select a system command from the *Select Control Command* drop-down menu.  
**Note:** Click on the *View Command Manual* link next to the ? for command definitions.
6. *Assistant* is a command wizard that will allow you to easily input the information required for the command in order to render the finished code correctly.  
Click on *Assistant* to build the command or enter the command in manually in the *Add Control Command* field.
7. Click *Add*.
8. Commands can be edited manually here.
9. Click *Save* or *Apply* to test the edited preset.

## Delete a Preset

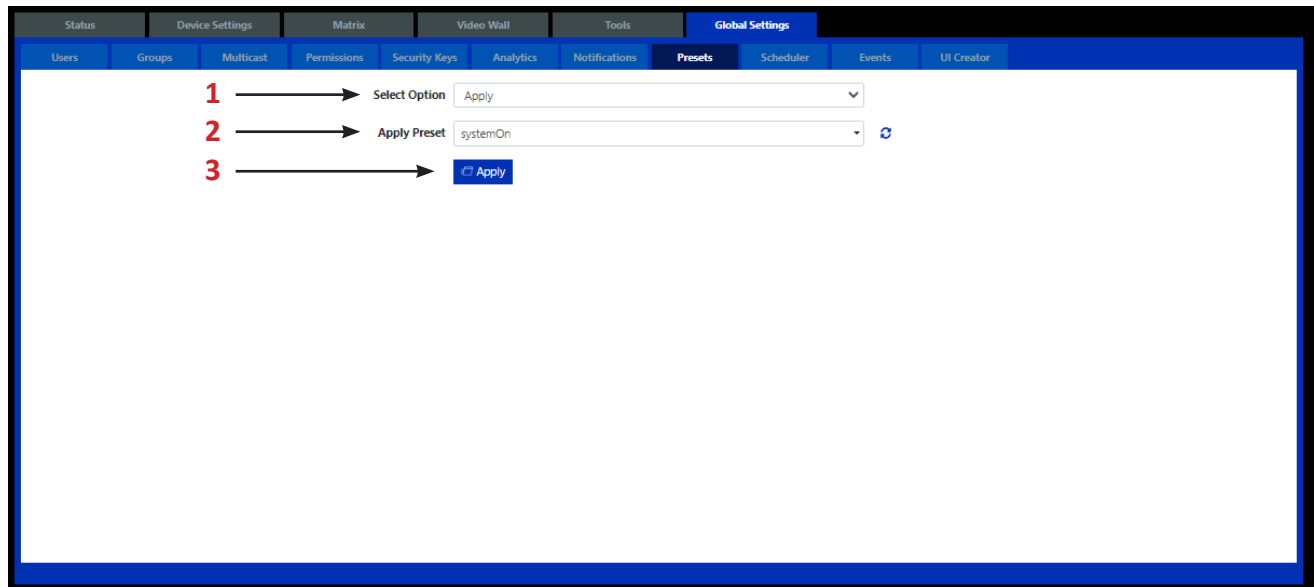
Here you can delete any existing preset from the system.



1. Select *Delete*.
2. Select *Preset*.
3. Click *Delete*.

## Apply a Preset

Here you can apply any existing preset on the system.

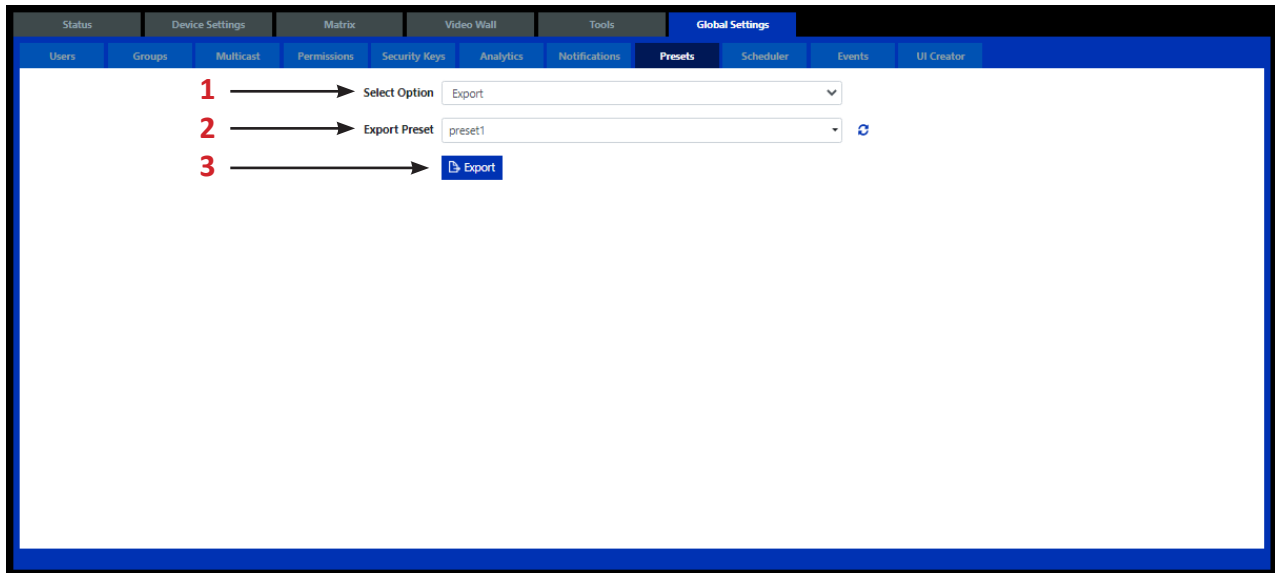


1. Select *Apply*.
2. Select *Preset*.
3. Click *Apply*.

**NOTE:** To initiate a *Preset* using API commands use the command ***preset load [PRESET NAME]***.

### ***Export a Preset***

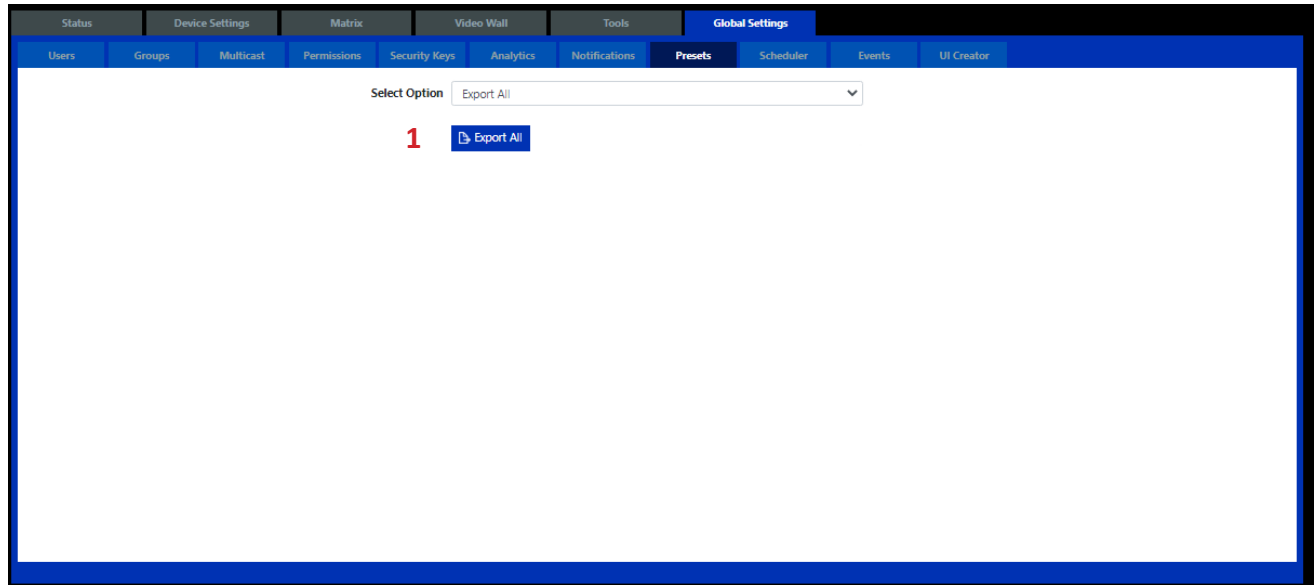
Here you can export an existing preset on the system which can then be used as a backup or edited. The preset will be saved to your Downloads folder on your PC as an ini file, example; *preset1.ini*. The export preset can be edited with an application like Notepad++; right click the file and select “Open with...”



1. Select *Apply*.
2. Select *Preset*.
3. Click *Export*.

### ***Export ALL Presets***

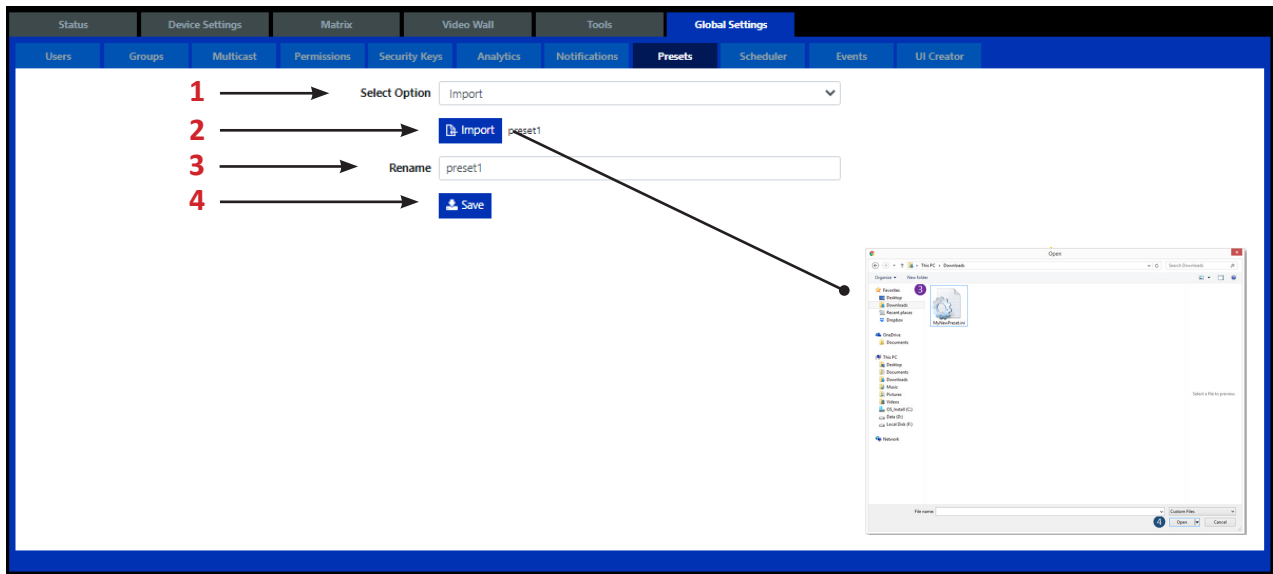
Here you can export all existing presets on the system which can then be used as a backup or edited. The presets will be saved to your Downloads folder as an exp file:presets.exp.



1. Click *Export All*.

## Import a Preset

Here you can import a preset into the system.



1. Select *Import*.

2. Click *Import*.

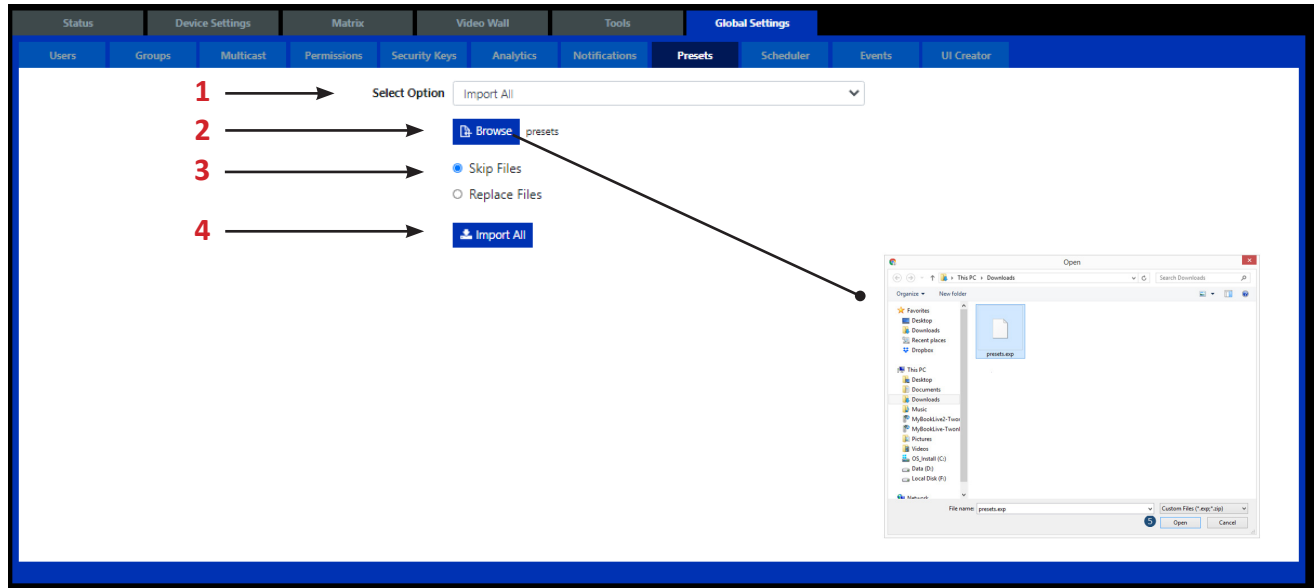
*A pop-up window on your PC will appear; find the appropriate .ini file to import from your PC.*

3. Rename the preset if required.

4. Click *Save*.

## Import ALL Presets

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



1. Select *Import ALL*.

2. Click *Browse*.

*A pop-up window on your PC will appear; find the appropriate .exp file to import from your PC.*

3. Select *Skip files* or *Replace Files*.

4. Click *Import All*.

## QR Code Preset

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 user's default web browser.

Here you can set how the result of a preset when scanned from a QR code will be displayed on the user's browser. This includes QR code buttons used in UI Creator.

The QR result can be *Text* for a standard API text response. Select *Static Image* to display a user uploaded image on success or failure of the preset. Or, select *User Interface* to be redirected to a *QR Results User Interface*. See *Global Settings > UI Creator > QR Code Result mode* for more information.

The below will provide a text response: *preset load preset1 success*.

1. Select *QR Code*.
2. Select *Preset*.
3. Select *Text* from the *QR Result* drop-down menu.
4. Click *Save* button.
5. Enter *Remote URL* if QR must be accessed over the Internet.
6. Enter *QR Graphics Size*.
7. Click either *Remote* or *Local QR Code* button.
8. Click *Download* button.



QR Code Preset continued....

The below will provide a static image response:

The screenshot displays the 'Global Settings' - 'Presets' configuration page. The interface includes a top navigation bar with tabs like 'Status', 'Device Settings', 'Matrix', 'Video Wall', 'Tools', 'Global Settings', 'Users', 'Groups', 'Multicast', 'Permissions', 'Security Keys', 'Analytics', 'Notifications', 'Presets', 'Scheduler', 'Events', and 'UI Creator'. The 'Presets' tab is active. The main content area shows configuration options for a QR Code preset. Red numbers 1 through 10 are overlaid on the interface with arrows pointing to specific elements: 1 points to 'Select Option' (set to 'QR Code'), 2 points to 'Preset' (set to 'preset1'), 3 points to 'QR Result' (set to 'Static Image'), 4 points to 'Success Image' (with a 'Browse' button), 5 points to 'Error Image' (with a 'Browse' button), 6 points to the 'Save' button, 7 points to 'Remote URL' (empty), 8 points to 'Size' (set to 150), 9 points to the 'Remote QR Code' button, and 10 points to the 'Download' button. Below the 'Download' button is a QR code and a URL: <http://10.8.11.50:80/api/v2/public/preset/qr/preset1/f8f8270dd3127431>.

1. Select *QR Code*.
2. Select *Preset*.
3. Select *Static Image* from the *QR Result* drop-down menu.
4. Select *Success Image*.
5. Select *Error Image*.
6. Click *Save* button.
7. Enter *Remote URL* if QR must be accessed over the Internet.
8. Enter *QR Graphics Size*.
9. Click either *Remote* or *Local QR Code* button.
10. Click *Download* button.

## QR Code Preset continued....

The below will provide a QR Results user interface response:

1 Select Option QR Code

2 Preset preset1

3 QR Result User Interface

4 Select User Interface TouchScreen1

5 Save

6 Remote URL

7 Size 150

8 Remote QR Code Local QR Code

9 Download

QR Code

<http://10.8.11.50:80/api/v2/public/preset/qr/preset1/f8f8270dd3127431>

1. Select *QR Code*.
2. Select *Preset*.
3. Select *User Interface* from the *QR Result* drop-down menu.
4. Select *User Interface*.
5. Click *Save* button.
6. Enter *Remote URL* if QR must be accessed over the Internet.
7. Enter *QR Graphics Size*.
8. Click either *Remote* or *Local QR Code* button.
9. Click *Download* button.

## Scheduler

The scheduler is used to apply presets at a particular time of a given day or on system start.

The screenshot shows the 'Scheduler' tab in the Arranger software. The interface includes a top navigation bar with tabs like Status, Device Settings, Matrix, Video Wall, Tools, Global Settings, Users, Groups, Multicast, Permissions, Security Keys, Analytics, Notifications, Presets, Scheduler, Events, and UI Creator. The Scheduler tab is active, displaying a table with columns: Event Name, System Start, Event Time, Event Day(s), and Event Preset. There are three rows: 'System On' (08:00 AM, Mon-Fri), 'System Off' (05:00 PM, Mon-Fri), and an empty row. Red numbers 1 through 7 are overlaid on the interface to indicate steps: 1 points to the Event Name input field; 2 points to the Event Time dropdown; 3 points to the Event Day(s) checkboxes; 4 points to the Event Preset dropdown; 5 points to the Save button; 6 points to the edit (pen) icon; and 7 points to the delete (cross) icon. A blue question mark icon with the text 'Ensure the system clock is set correctly.' is also visible below the Event Time dropdown.

1. Enter *Event Name*.
2. Select a time.
3. Select day(s).
4. Select *Preset*.
5. Click *Save*.
6. Once saved, the pen icon is used to edit the event.
7. Click the cross icon to delete the event

## Events

Events is a button-less 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. See example below.

Event Name	Select Encoder	Select Trigger	Select Preset	Disconnect to OFF Delay (min)	OFF to ON Delay (sec)
Display ON	Encoder1	Source Connected	systemOn	0	0

Repeat Connected Preset: Disabled

Save

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

1. Enter *Event Name*.
2. Select an encoder.
3. Select *Source Connected* trigger.
4. Select an 'ON' preset.
5. Click *Save*.
6. Set *Repeat Connected Preset* option

## 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 canceled each time an encoder source becomes available.

The OFF to ON delay will prevent the source connected event for the delay duration.

The screenshot shows the 'Events' configuration page in the Arranger Digi IP 5000 interface. The page has a top navigation bar with tabs for Status, Device Settings, Matrix, Video Wall, Tools, Global Settings, Users, Groups, Multicast, Permissions, Security Keys, Analytics, Notifications, Presets, Scheduler, Events, and UI Creator. The 'Events' tab is selected. Below the navigation bar, there is a 'Repeat Connected Preset' dropdown set to 'Enabled' (labeled 6). The main area contains a table for configuring events. The table has columns: Event Name (labeled 1), Select Encoder (labeled 2), Select Trigger (labeled 3), Select Preset (labeled 4), Disconnect to OFF Delay (min) (labeled 5), and OFF to ON Delay (sec) (labeled 6). The first row shows 'System Off' as the event name, 'Encoder1' as the encoder, 'Source Disconnected' as the trigger, 'systemOff' as the preset, 5 minutes for the disconnect delay, and 5 seconds for the OFF to ON delay. A 'Save' button is next to this row. The second row shows 'System On' as the event name, 'Encoder1' as the encoder, 'Source Connected' as the trigger, 'systemOn' as the preset, 0 minutes for the disconnect delay, and 0 seconds for the OFF to ON delay. A 'Delete' button is next to this row. A red number 7 is overlaid on the 'Save' button. Below the table, there is a blue question mark icon and a note: 'Enable Repeat Connected Preset to trigger the Source Connected preset each time a source is applied to the Encoder.'

1. Enter *Event Name*.
2. Select an encoder.
3. Select *Source Disconnected* trigger.
4. Select an 'ON' preset.
5. Select a *Disconnect to OFF* duration.
6. Select an *OFF to ON* duration.
7. Click *Save*

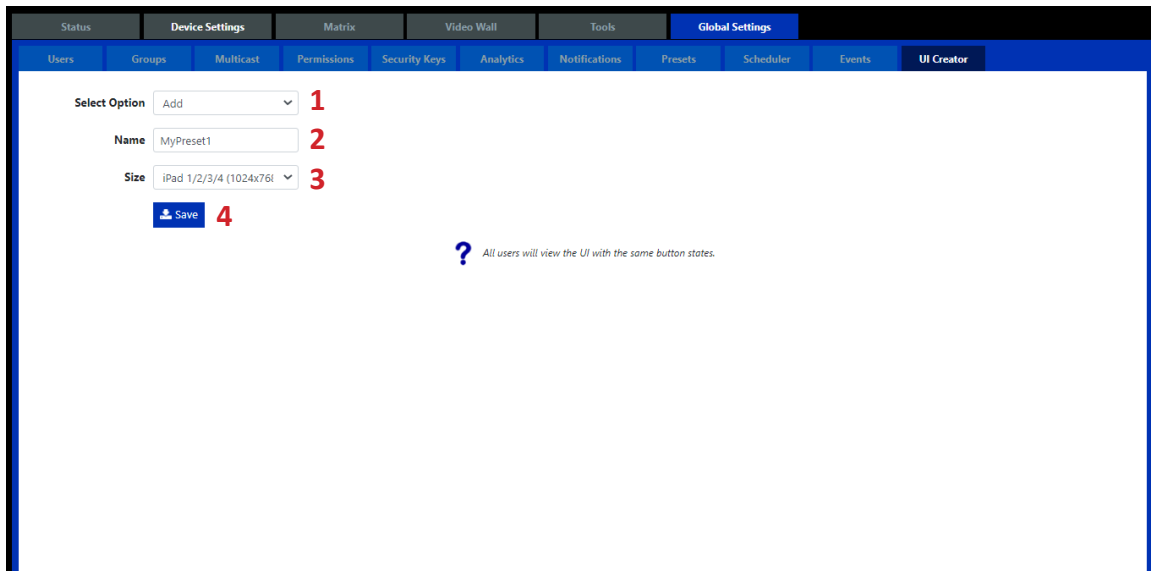
## UI Creator

*UI Creator* can be used instead of a third-party control system to fully control the functions of the system and much more. Here you can design your own user interface (UI) to recall functions that have been saved as presets.

*UI Creator* lets you create a virtually unlimited number of UI's which can be viewed on any device's supported web browser such as Google Chrome or Safari.

### Create a New User Interface

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.

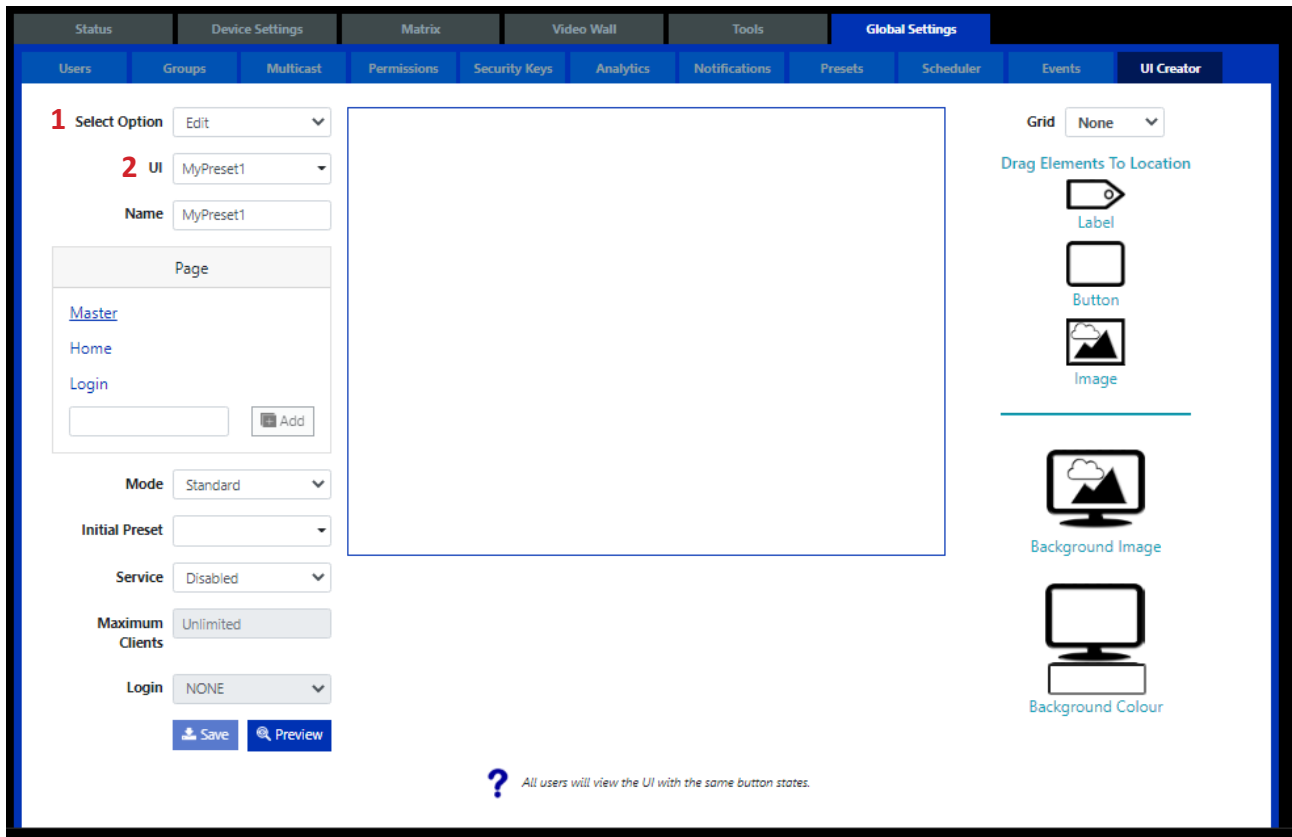
The screenshot shows the 'UI Creator' section of a software interface. At the top, there is a navigation bar with tabs: Status, Device Settings, Matrix, Video Wall, Tools, Global Settings, Users, Groups, Multicast, Permissions, Security Keys, Analytics, Notifications, Presets, Scheduler, Events, and UI Creator. The 'UI Creator' tab is active. Below the navigation bar, there is a form to create a new UI preset. The form has four numbered steps: 1. 'Select Option' with a dropdown menu set to 'Add'. 2. 'Name' with a text input field containing 'MyPreset1'. 3. 'Size' with a dropdown menu set to 'iPad 1/2/3/4 (1024x768)'. 4. 'Save' with a blue button labeled 'Save'. Below the form, there is a question mark icon and the text 'All users will view the UI with the same button states.'

1. Select *Add*.
2. Enter UI *Name*.
3. Select UI *Size*.
4. Click *Save*.

You can now *edit* this preset to build the UI.

## Edit a User Interface

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 Select Option Edit

2 UI MyPreset1

Name MyPreset1

Page

[Master](#)

[Home](#)

[Login](#)

Add

Mode Standard

Initial Preset

Service Disabled

Maximum Clients Unlimited

Login NONE

Save Preview

Grid None

Drag Elements To Location

Label

Button

Image

Background Image

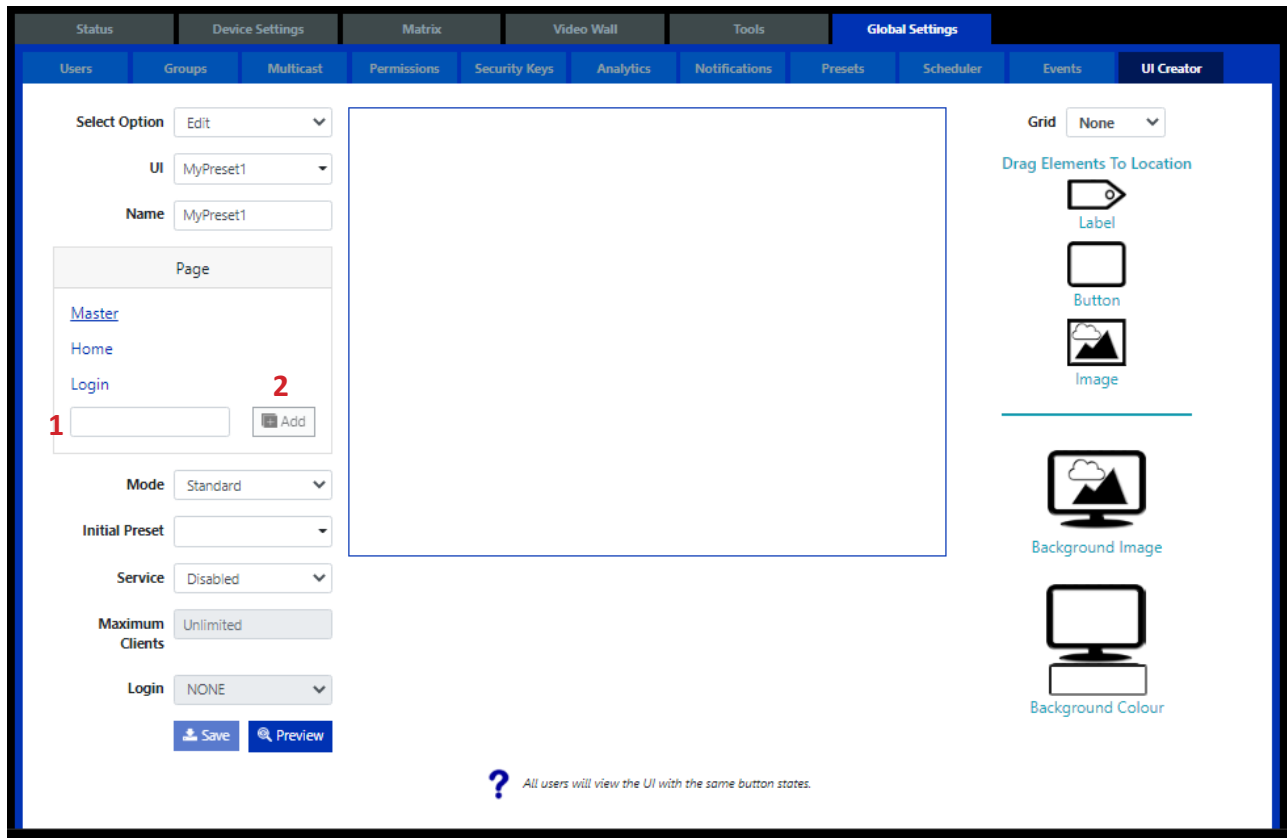
Background Colour

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

1. Select *Edit*.
2. Select UI *Name*.

*Edit a User continued.....*

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



1. Enter new page name
2. Click *Add*



## UI Modes

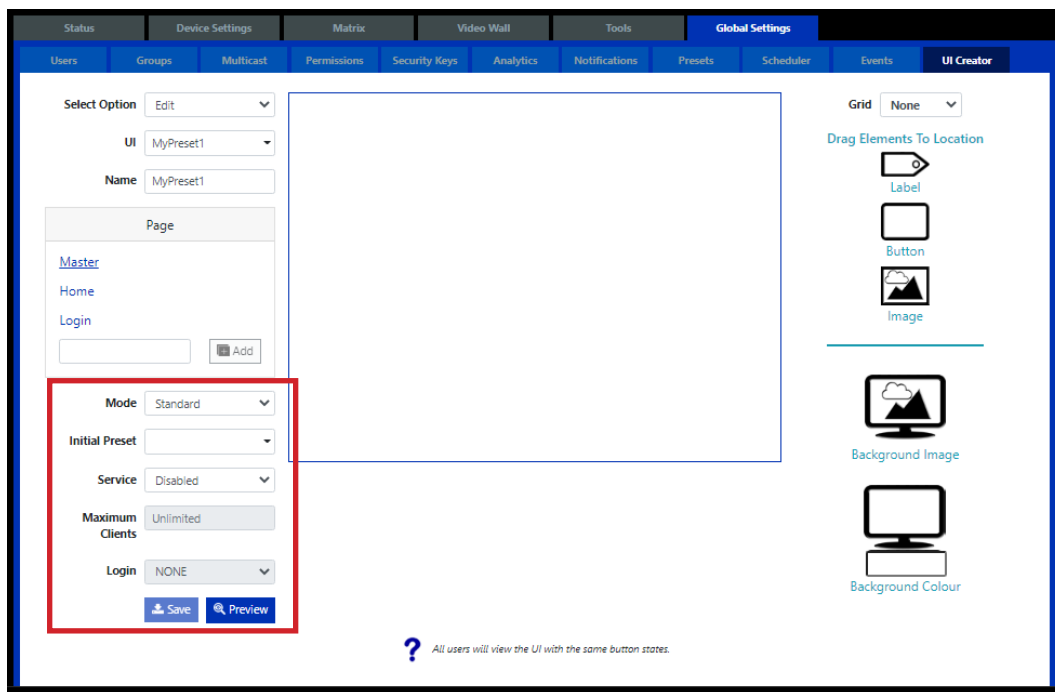
In the highlighted section below is how you will define your UI mode.

There are two modes:

1) Standard - *Standard* mode provides the default pages *Master Page*, *Home Page* and *Login Page*. The *Master Page* is used to display the elements on all other pages without a background applied. The *Home Page* is the initial page to be displayed. The *Login page* is shown when a login code is required. *Standard mode* provides options for limiting the maximum allowed clients and login with fixed or random number with a session timeout.

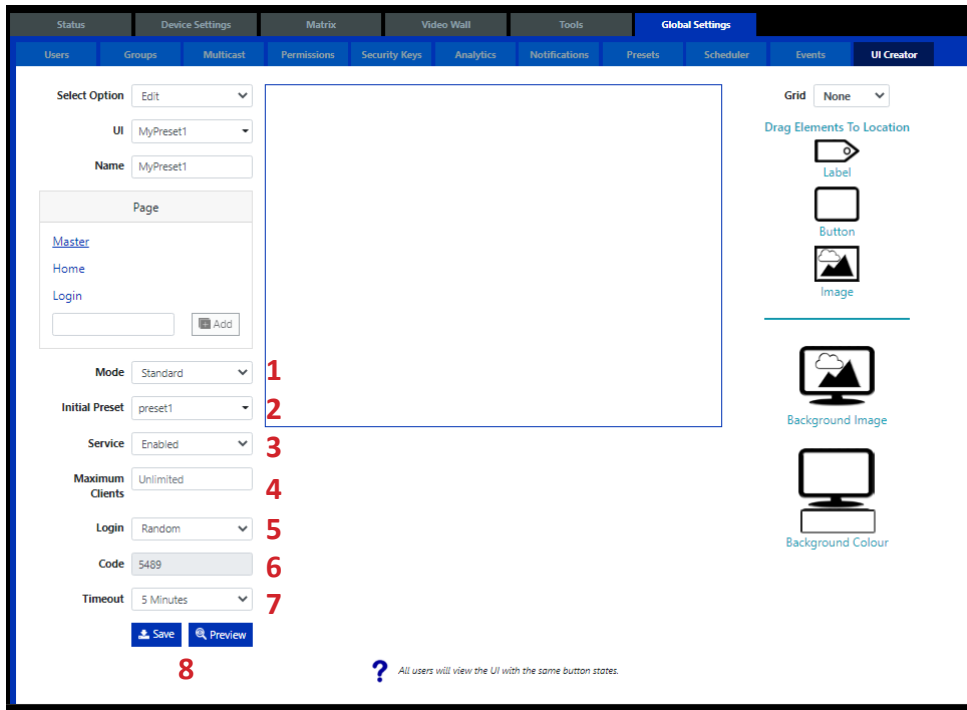
2) QR Code Result - *QR Code Result* mode provides the default pages *Master*, *Success* and *Error*. The *Master* page is used to display the elements on all other pages without a background applied. The *Success page* is shown after a scanned QR code preset is executed successfully. The *Error page* is shown after a scanned QR Code preset is executed with an error. The resulting user interface can be used to display a single page message or a multipage user interface with the same abilities as standard mode.

See *Global Settings > Presets > QR Code Preset* or more details.



## Standard Mode

In the section below a standard configuration has been made.



1. Select *Standard* mode.
2. Select a *Preset* from the Initial Preset drop-down.  
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 the user interface initial button states. The control command **set ui** can be used to toggle the service state.
3. Select *Enable* from *Service* drop-down.  
When *Service* is *disabled* the UI will not be able to be accessed by a client.
4. Select a maximum number of control clients that can access the UI simultaneously.
5. Select *Login* option; *NONE*, *Random*, *User defined 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.
6. If the *Random* login code option is selected in Step 5, a random number will be displayed here, this is the login code. If *User Defined option* was selected in Step 5 then you will be able to define the code in this field.
7. A *timeout* can also be applied here when using a login pin code that will prevent the client access after the selected time has elapsed.
8. Click *Save* to save UI or *Preview* to preview your UI in a web browser.

## QR Code Result Mode

In the section below a *QR Code Result* configuration has been made.

See *Global Settings > Presets > QR Code Preset* for more information on linking QR Code presets to a QR Code Result UI.

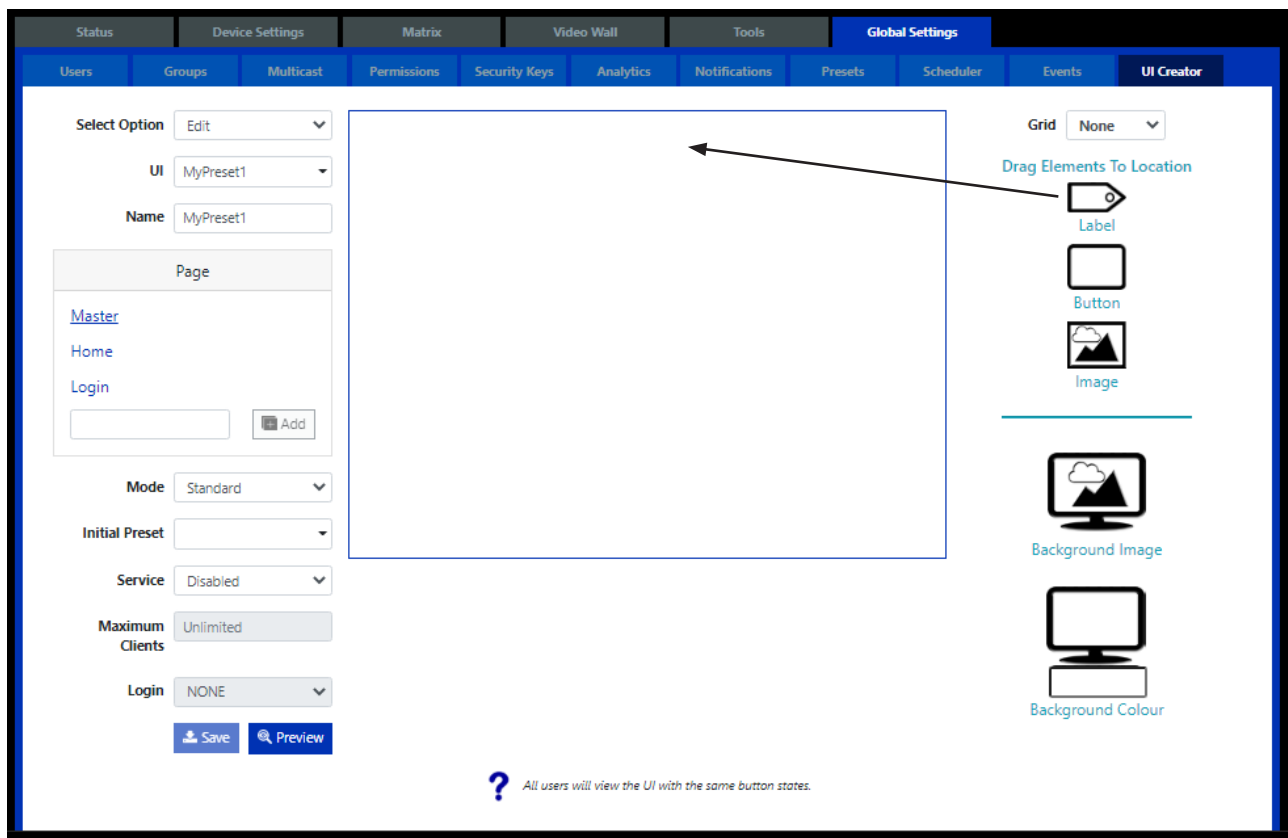
The screenshot shows the 'UI Creator' interface in the 'Global Settings' section. The 'Presets' tab is active. On the left, the 'Select Option' dropdown is set to 'Edit'. Below it, the 'UI' dropdown is set to 'MyPreset1' and the 'Name' field contains 'MyPreset1'. Under the 'Page' section, there are links for 'Master', 'Success', and 'Error'. Below these, there is an 'Add' button. At the bottom left, there are two numbered steps: '1 Mode' set to 'QR Code Result' and '2 Service' set to 'Enabled'. There are 'Save' and 'Preview' buttons. In the center is a large empty box for the UI design. On the right, there is a 'Grid' dropdown set to 'None' and a section titled 'Drag Elements To Location' with icons for 'Label', 'Button', 'Image', 'Background Image', and 'Background Colour'. At the bottom center, there is a blue question mark icon and the text: 'All users will view the UI with the same button states.'

1. Select *QR Code Result* mode.
2. Select *Enable* from *Service* drop-down.  
When *Service* is *disabled* the UI will not be able to be accessed by a client.

## Adding Labels

A *label* can be dragged to any location and used as a heading, label or wherever text is required on the UI. The label must be given a name to change the color, text and visibility via the control command ***set ui\_label***.

Here we are adding a title for the UI on the *master page* by dragging and dropping the label icon into the UI layout.



### Adding Labels continued....

Once a label has been added the *Label Settings* will load to the right of the screen, see highlighted section below.

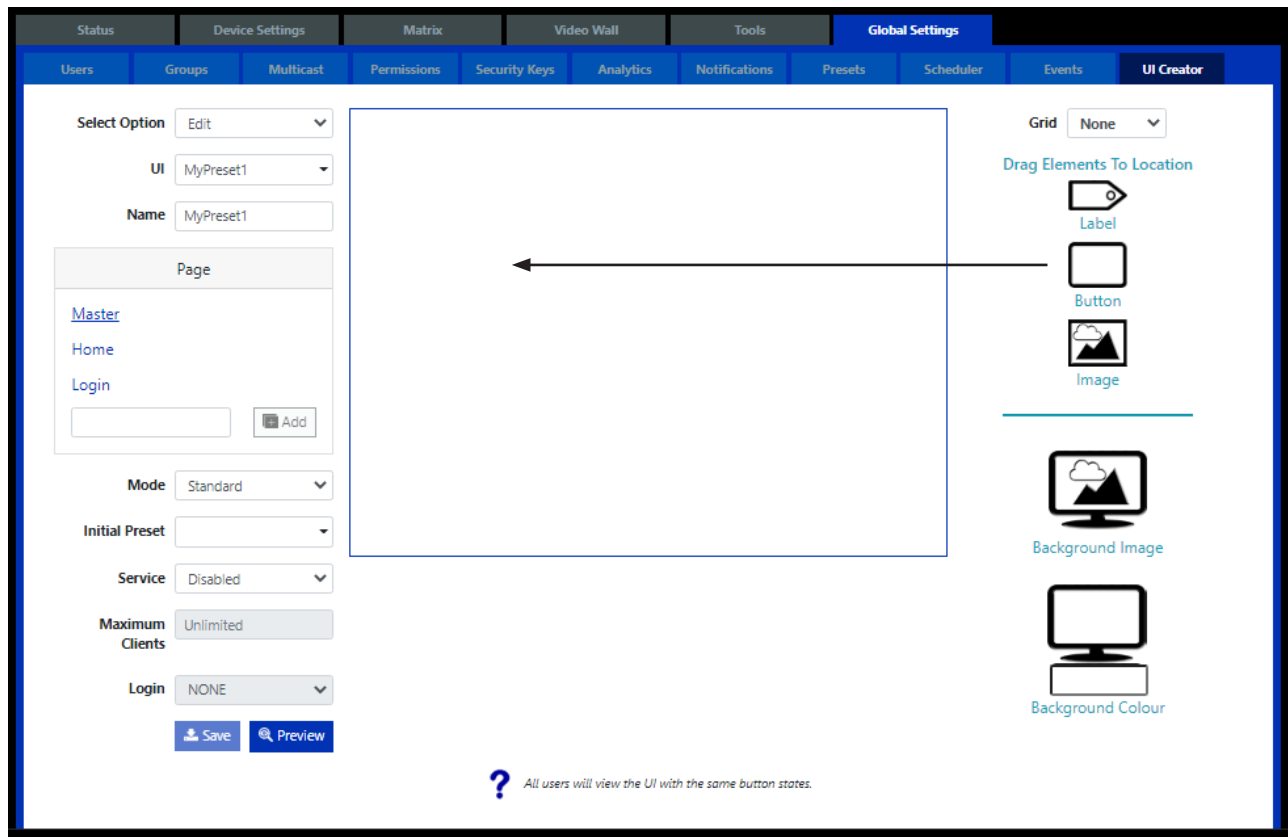
From here you can edit the text font, size, style, alignment and position, given the label a name or remove it from the UI.

**Note:** You can always populate the *Label Settings* by clicking on any label in the UI.

The screenshot displays the Arranger UI Creator interface. The top navigation bar includes tabs for Status, Device Settings, Matrix, Video Wall, Tools, Global Settings, and UI Creator. The Global Settings tab is active, and the UI Creator sub-tab is selected. The main workspace shows a canvas with a label named 'Label' positioned in the center. To the left of the canvas is a sidebar with various settings, including 'Select Option' (Edit), 'UI' (MyPreset1), 'Name' (MyPreset1), 'Page' (Master, Home, Login), 'Mode' (Standard), 'Initial Preset', 'Service' (Disabled), 'Maximum Clients' (Unlimited), and 'Login' (NONE). To the right of the canvas is the 'Label Settings' panel, which is highlighted with a red border. This panel contains fields for 'Left' (424), 'Top' (61), 'Width' (100), 'Height' (50), 'Layer' (1), 'Visibility' (True), and 'Name'. Below these fields are buttons for 'Copy Element', 'Verdana' font, '20' size, and formatting options (Bold, Italic, Underline, Text Color, Background Color, Stroke Color). The 'Vertical Alignment' is set to 'Middle', and the 'Text' field contains 'Label'. A 'Delete' button is at the bottom of the panel. At the bottom of the interface, a note states: '? All users will view the UI with the same button states.'

## Adding Buttons

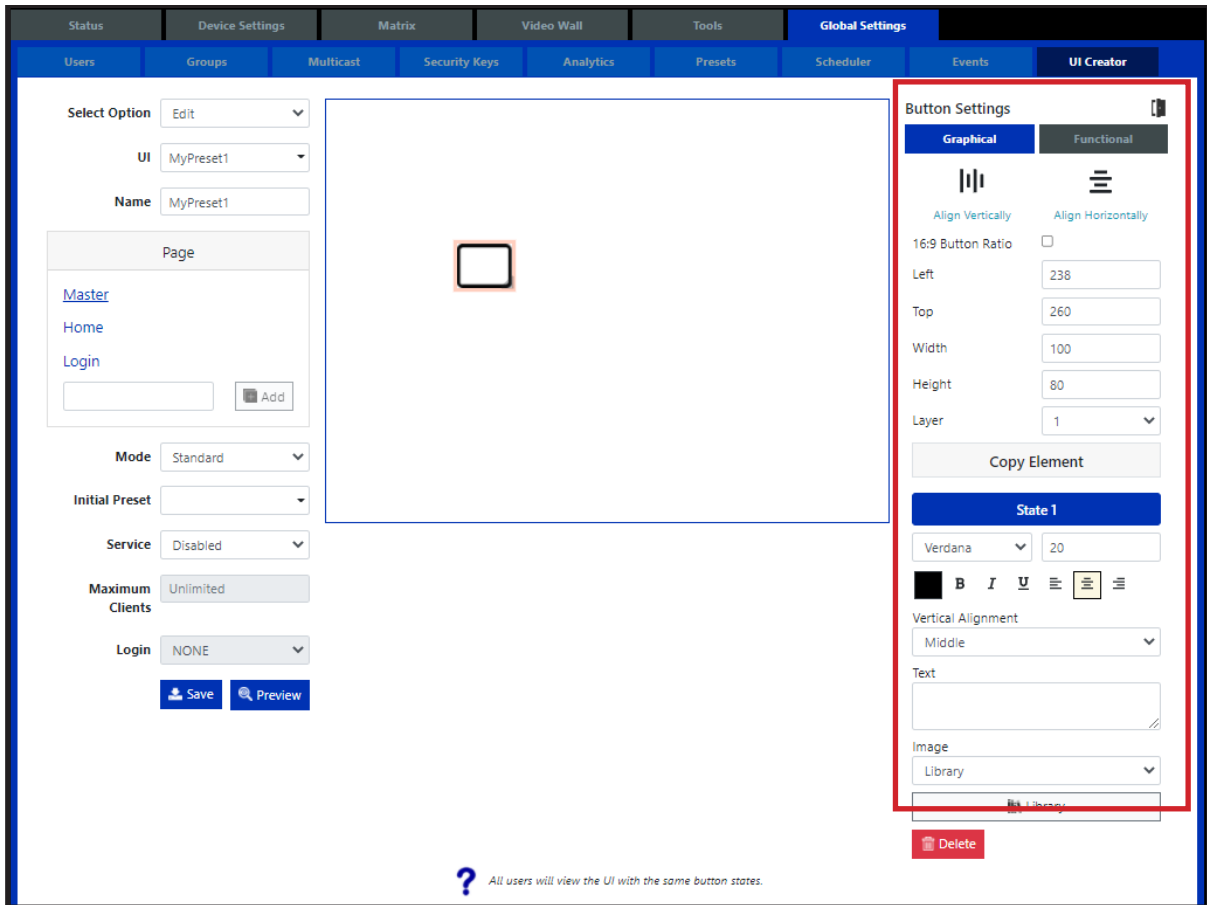
A *button* can be dragged to any location and used as a press button, QR Code or an indicator.



### Adding buttons continued....

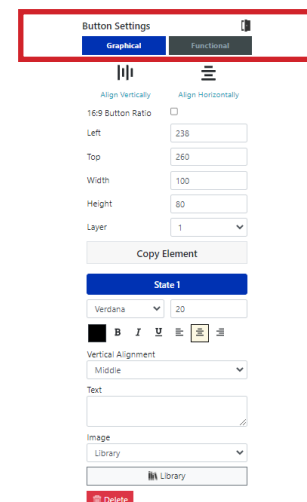
Once a button has been placed in the UI the *Button Settings* will populate to right of the UI Creator. See highlighted section below.

**Note:** You can always populate the *Button Settings* by clicking on any button in the UI.



**Note:** There are two selectable menus in *Button Settings*.

1. Graphical - Will allow you to edit the button size, position, text font, size, style and alignment, or remove the button from the UI altogether.
2. Functional - Allows you to configure the *Preset* triggers once a button has been pressed.

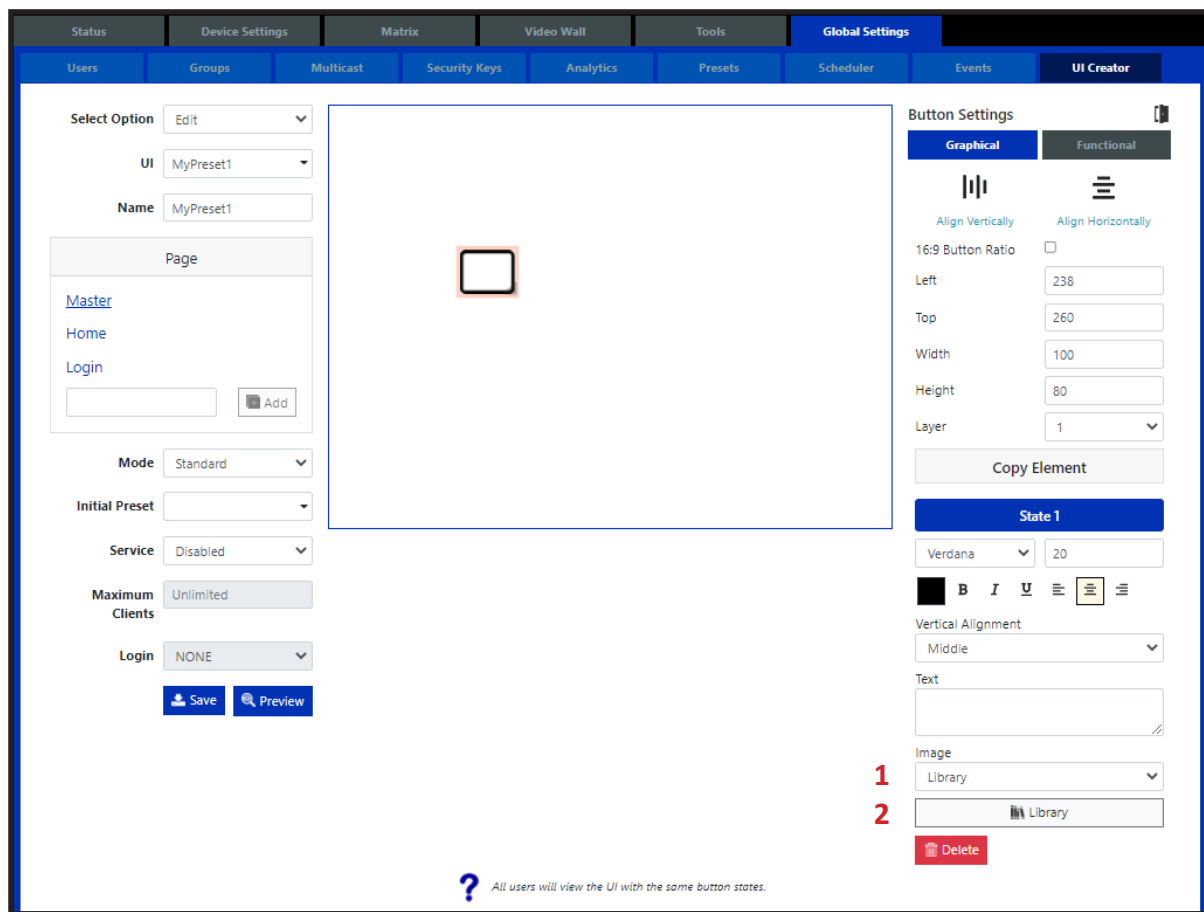


## Adding buttons continued....

There are three choices for a button image:

- 1) Use an external pre made button image (External File)
- 2) Use internal Arranger button image (Library)
- 3) Use a static or streamed preview image from the specified endpoint (Preview)

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.

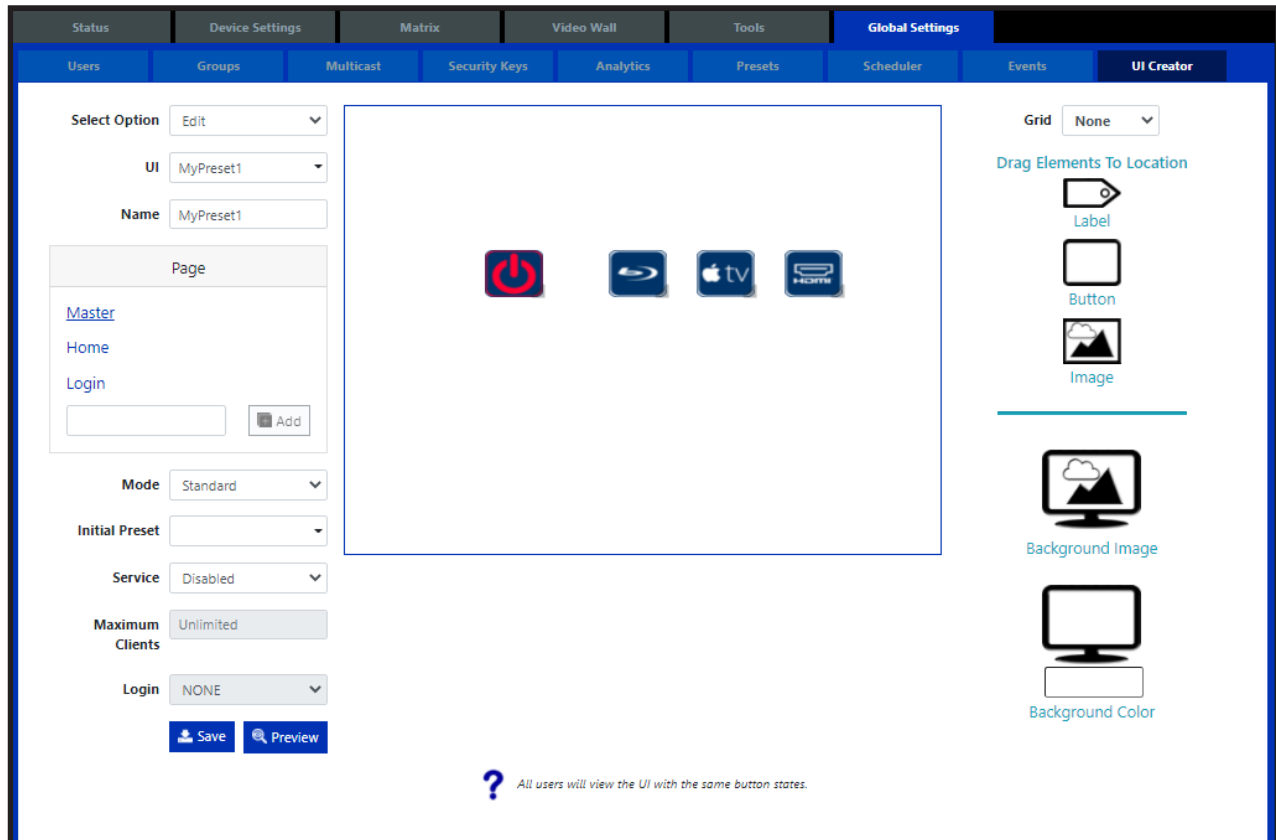


1. Select *Library*, *External File* or *Preview* from image drop-down.
2. If you select *Library* from Step 1, click *Library* to access the internal library of button graphics. If you select *External File* from Step 1, click *Browse* to access your files on your PC to use as the button graphic. If you choose *Preview* then you will need to select the *Device* and *Function* associated with the preview in the *Graphical* and *Functional Properties*.



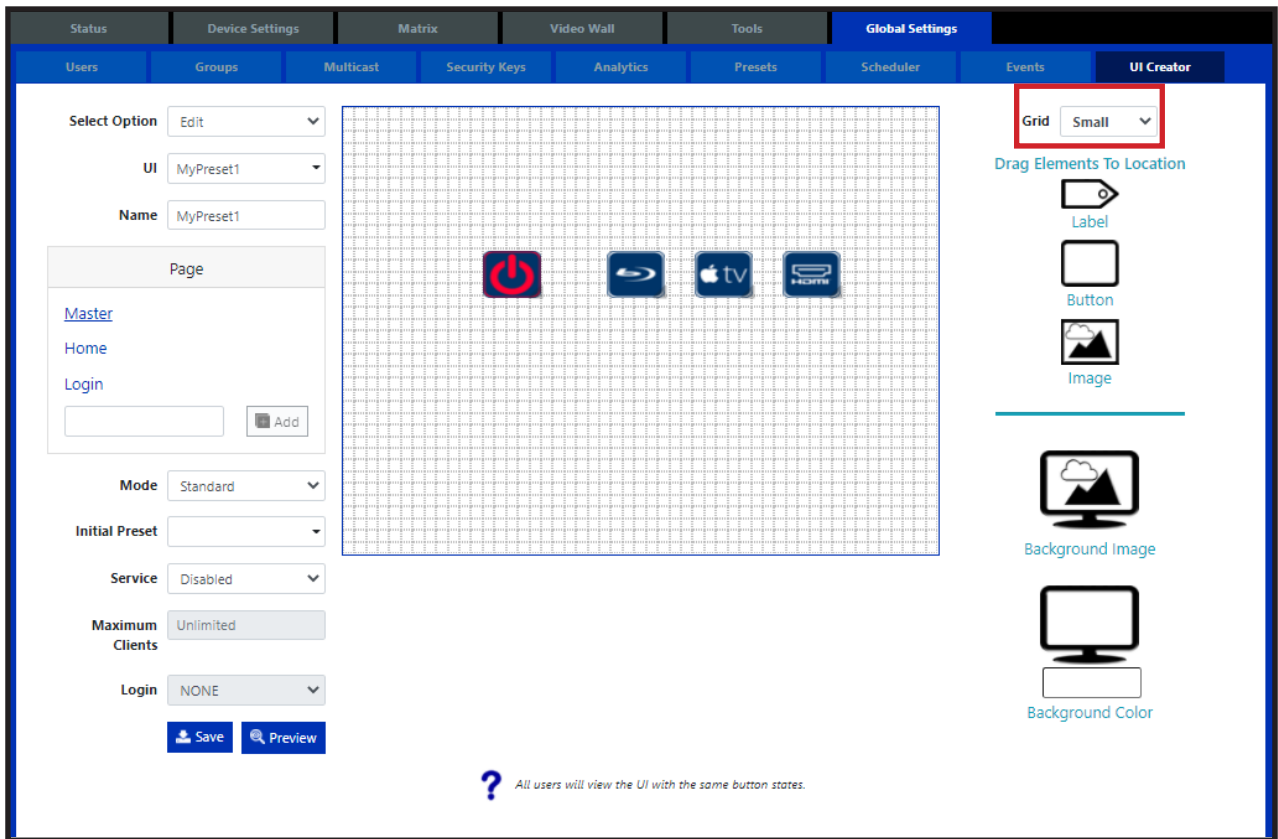
*Adding buttons continued....*

In the examples below, common buttons from the internal graphical library have been used.



## Adding buttons continued....

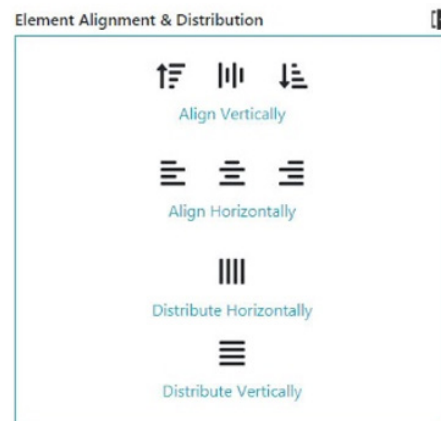
**Note:** To help align buttons on the UI layout, click on any open and unused space in the UI and select *Grid* type near the top right of UI Creator. The buttons will align with the grid selections you have made. In the example to the right, small grid size has been used.



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.



## Button Logic

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

1. **Momentary button** - A *Momentary* button will operate in a push-button single-state fashion where a preset is executed once for every press.
2. **Repeat button** - A *Repeat* button will operate in a momentary 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.
3. **Toggle button** - A *Toggle* button will operate in a *push on, push off* fashion so a preset can be assigned to both state 1 and state 2. First press of the button executes state 1 preset and puts the button into state 2 showing a state 2 button image. Second press of the button then executes state 2 preset and returns the button back to state 1.
4. **Radio Toggle button (Exclusive Toggle button)** - A *Radio Toggle* group of buttons will operate in an exclusive toggle fashion and must be assigned to a *Button Group*. When you want a group of buttons to work together as radio toggle buttons where only one button of the group can be in state 2 (down), such as a radio station selector or source selection, then define the same button group name for each of those buttons.
5. **Split button** - A *Split* group of buttons 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.
6. **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.

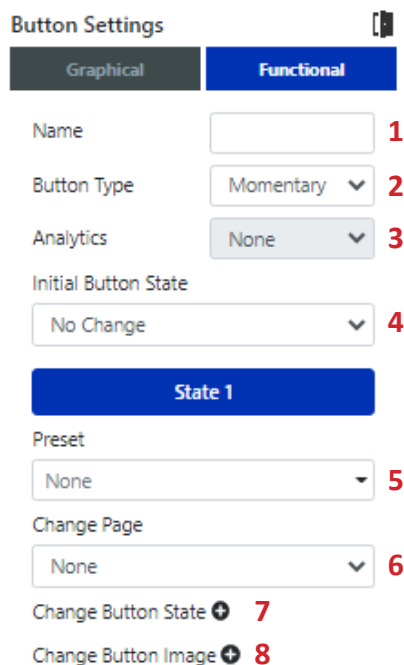
Button logic options can be accessed and set in the *Functional* menu of *Button Settings* under *Button Type* for the selected button in the UI layout.

The screenshot shows the 'Button Settings' window with the 'Functional' tab selected. The 'Button Type' dropdown is open, showing options: Momentary, Toggle, Radio Toggle, Split, Repeat, and QR Code. Other visible settings include Name, Analytics, Initial Button State (No Change), Preset (None), Change Page (None), Change Button State, and Change Button Image.

### **Button Logic - Momentary**

A *Momentary* button will operate in a push-button single-state fashion where a preset is executed once for every press.

Select a button in the UI layout to populate the *Button Settings*, then navigate to the *Functional* menu.



Button Settings

Graphical Functional

Name 1

Button Type Momentary 2

Analytics None 3

Initial Button State

No Change 4

State 1

Preset

None 5

Change Page

None 6

Change Button State 7

Change Button Image 8

1. Enter a *Name* for the button. A button name is required as a reference for *Analytics* or when manipulating the button from another buttons functionality or via the API. See *Global Settings > Analytics > UI Creator* for reference.
2. Select *Momentary*.
3. Select a button function from the *Analytics* list that best matches the operation of the button.
4. Select *Initial Button State*: This is the initial state of the button when the UI is loaded.
5. Select the *Preset* to be executed on button press.
6. Change Page: This allows you to change to another page.
7. Change Button State: This allows you to change the state of a button.
8. Change Button Image: This allows you to change the image of a button.

## Button Logic - Toggle

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

Button Settings

Graphical Functional

Name  1

Button Type Toggle ▼ 2

Analytics None ▼ 3

Initial Button State

No Change ▼ 4

State 1 State 2

Preset

None ▼ 5

Change Page

None ▼ 6

Change Button State + 7

Change Button Image + 8

1. Enter a *Name* for the button. A button name is required as a reference for analytics or when manipulating the button from another buttons functionality or via the API. See *Global Settings > Analytics > UI Creator for reference*.
2. Select *Toggle*.
3. Select a button function from the *Analytics* list that best matches the operation of the button.
4. Select *Initial Button State*: This is the initial state of the button when the UI is loaded.
5. 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.

## Button Logic - Radio Toggle

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.

Button Settings

Graphical Functional

Name  1

Button Type  2

Analytics  3

Button Group  4

\* Radio Toggle button needs a Button Group

Initial Button State  5

State 1

Preset  6

Change Page  7

Change Button State (+) 8

Change Button Image (+) 9

1. Enter a *Name* for the button. A button name is required as a reference for analytics or when manipulating the button from another buttons functionality or via the API. See *Global Settings > Analytics > UI Creator for reference*.
2. Select *Radio Toggle*.
3. Select a button function from the *Analytics* list that best matches the operation of the button.
4. *Button Group*: A group name must be provided to combine individual buttons to function together.
5. Select *Initial Button State*: This is the initial state of the button when the UI is loaded.
6. Select the *Preset* to be executed on button press.
7. Change Page: This allows you to change to another page.
8. Change Button State: This allows you to change the state of a button.
9. Change Button Image: This allows you to change the image of a button.

### **Button Logic - Split**

A *Split* group of buttons 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.


Special presets have to be created for this decoder button. 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.

Preset example:

```
join av <<Encoder>> <<Decoder>>  
set volume <<Decoder>> 0
```

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 toggle state, enabled state, text or be virtually pressed.

Here you can see the functionality of an encoder split button.

**Button Settings** 

Graphical

Functional

Name  1

Button Type  2

Analytics  3

Button Group  4

\* Split button needs a Button Group


Initial Button State  5


Function  6

Group  7

Select Device  8

**State 1**

Change Button State  9

Change Button Image  10

1. Enter a *Name* for the button. A button name is required as a reference for analytics or when manipulating the button from another button's functionality or via the API. *See Global Settings > Analytics > UI Creator for reference.*
2. Select *Split*.
3. Select a button function from the *Analytics* list that best matches the operation of the button.
4. Enter *Button Group* name: A group name must be provided to combine individual buttons to function together.
5. Select *Initial Button State*: This is the initial state of the button when the UI is loaded.
6. Function: Select the button to operate the encoder.
7. Group: Allows you to filter the encoders by group.
8. Select Device: Select the required encoder.
9. Change Page: This allows you to change to another page.
10. Change Button State: This allows you to change the state of a button.



## Button Logic - Split continued....

Here you can see the functionality of a decoder split button.

Button Settings

Graphical Functional

Name  1

Button Type Split ▼ 2

Analytics None ▼ 3

Button Group ▼ 4

\* Split button needs a Button Group

Initial Button State

No Change ▼ 5

Function

Decoder ▼ 6

Group

ALL DEVICES ▼ 7

Select Device

None ▼ 8

State 1 State 2

Preset

None ▼

Change Button State + 9

Change Button Image + 10

1. Enter a *Name* for the button. A button name is required as a reference for analytics or when manipulating the button from another button's functionality or via the API. See *Global Settings > Analytics > UI Creator* for reference.
2. Select *Split*.
3. Select a button function from the analytics list that best matches the operation of the button.
4. Enter *Button Group* name: A group name must be provided to combine individual buttons to function together.
5. Select *Initial Button State*: This is the initial state of the button when the UI is loaded.
6. Function: Select the button to operate the decoder.
7. Group: Allows you to filter the decoders by group.
8. Select Device: Select the required decoder.
9. 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.

## Button Logic - Repeat

A *Repeat* button will operate in a momentary 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.

Button Settings

Graphical Functional

Name  1

Button Type Repeat 2

Analytics None 3

Initial Button State No Change 4

5 ☐ Continue On Error

Repeating Interval 100 1000 6

Repeat Delay 500 1000 2000 7

State 1

Preset None 8

Change Page None 9

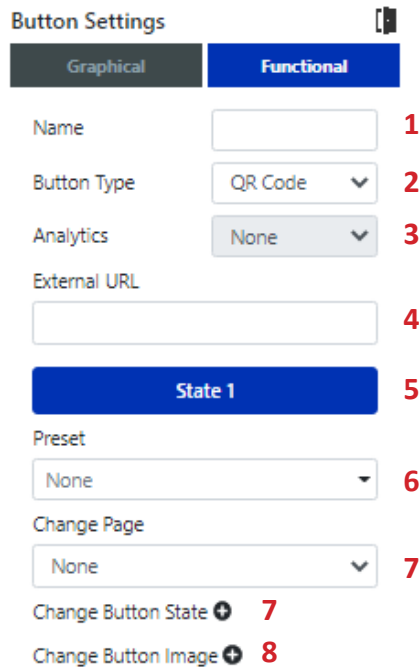
Change Button State 10

Change Button Image 11

1. Enter a *Name* for the button. A button name is required as a reference for analytics or when manipulating the button from another button's functionality or via the API. *See Global Settings > Analytics > UI Creator for reference.*
2. Select *Repeat*.
3. Select a button function from the *Analytics* list that best matches the operation of the button.
4. Select *Initial Button State*: This is the initial state of the button when the UI is loaded.
5. Continue On Error: This is an option to continue executing the preset if it returns failed.
6. Repeating Interval: This is the time delay in milliseconds the button preset repeats while being held down.
7. Repeat Delay: This is the time in milliseconds the button must remain held down before the preset starts repeating.
8. Preset: Select the preset to be executed on button press.
9. Change Page: This allows you to change to another page.
10. Change Button State: This allows you to change the state of a button.
11. Change Button Image: This allows you to change the image of a button.

### Button Logic - QR Code

Adds touchless functionality to a touchscreen control panel. A *QR Code* button will operate in a momentary 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.



**Button Settings**

**Graphical** **Functional**

Name  1

Button Type  2

Analytics  3

External URL  4

**State 1** 5

Preset  6

Change Page  7

Change Button State + 7

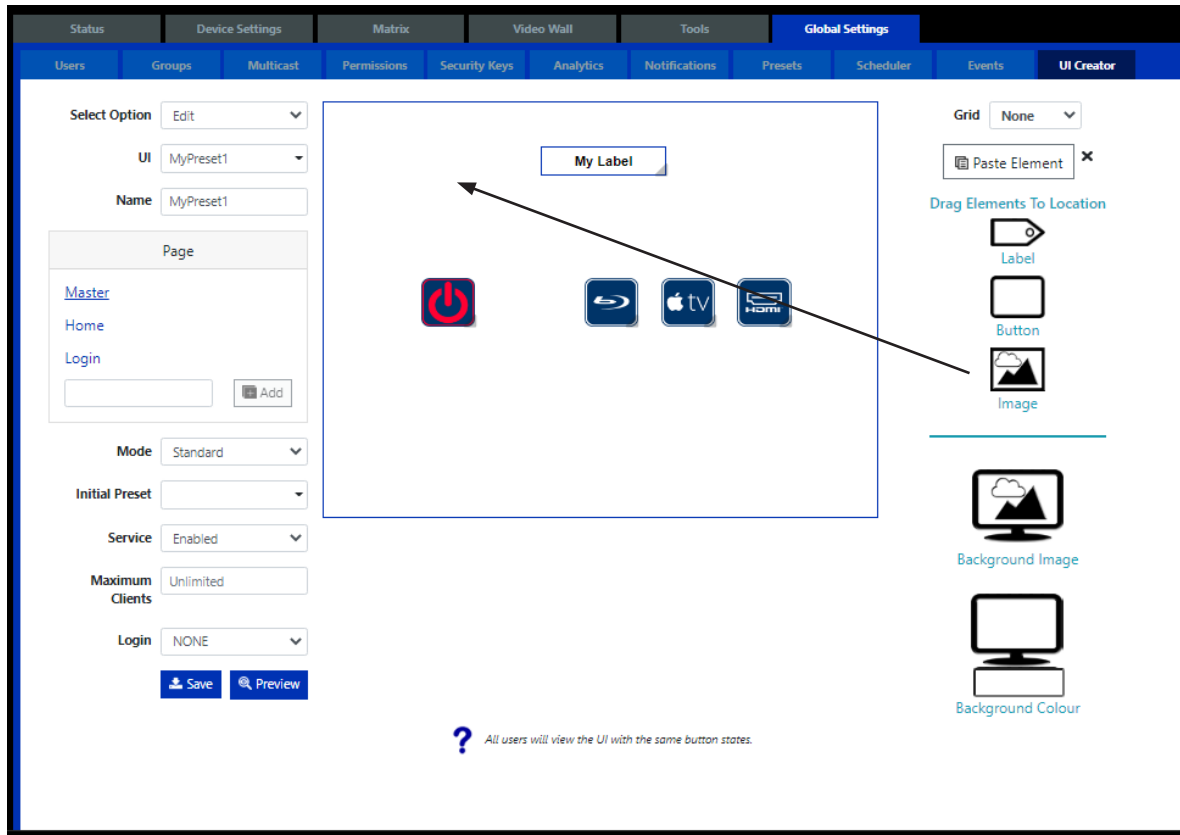
Change Button Image + 8

1. Enter a *Name* for the button. A button name is required as a reference for analytics or when manipulating the button from another button's functionality or via the API. See *Global Settings > Analytics > UI Creator* for reference.
2. Select *Repeat*.
3. Select a button function from the *Analytics* list that best matches the operation of the button.
4. External URL: Enter the controller's external URL if working outside of the local network.
5. Preset: Select the preset to be executed on button press.
6. Change Page: This allows you to change to another page.
7. Change Button State: This allows you to change the state of a button.
8. Change Button Image: This allows you to change the image of a button.

## Adding an 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.

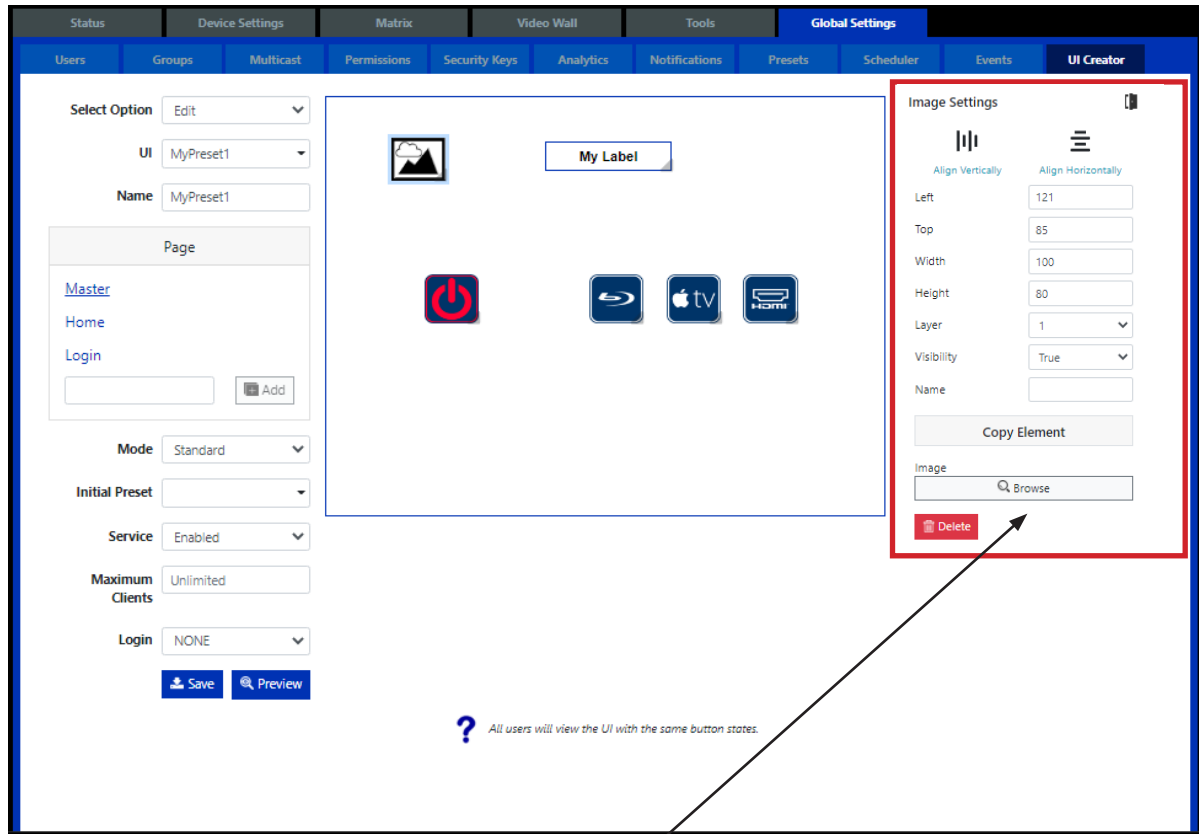
The image must be given a name to change the visibility via the control command ***set ui\_image***.



### Adding an Image continued....

Once an image has been placed in the UI the *Image Settings* will populate to right of the UI Creator. Image settings gives you the ability to size and name the image as required. See highlighted section below.

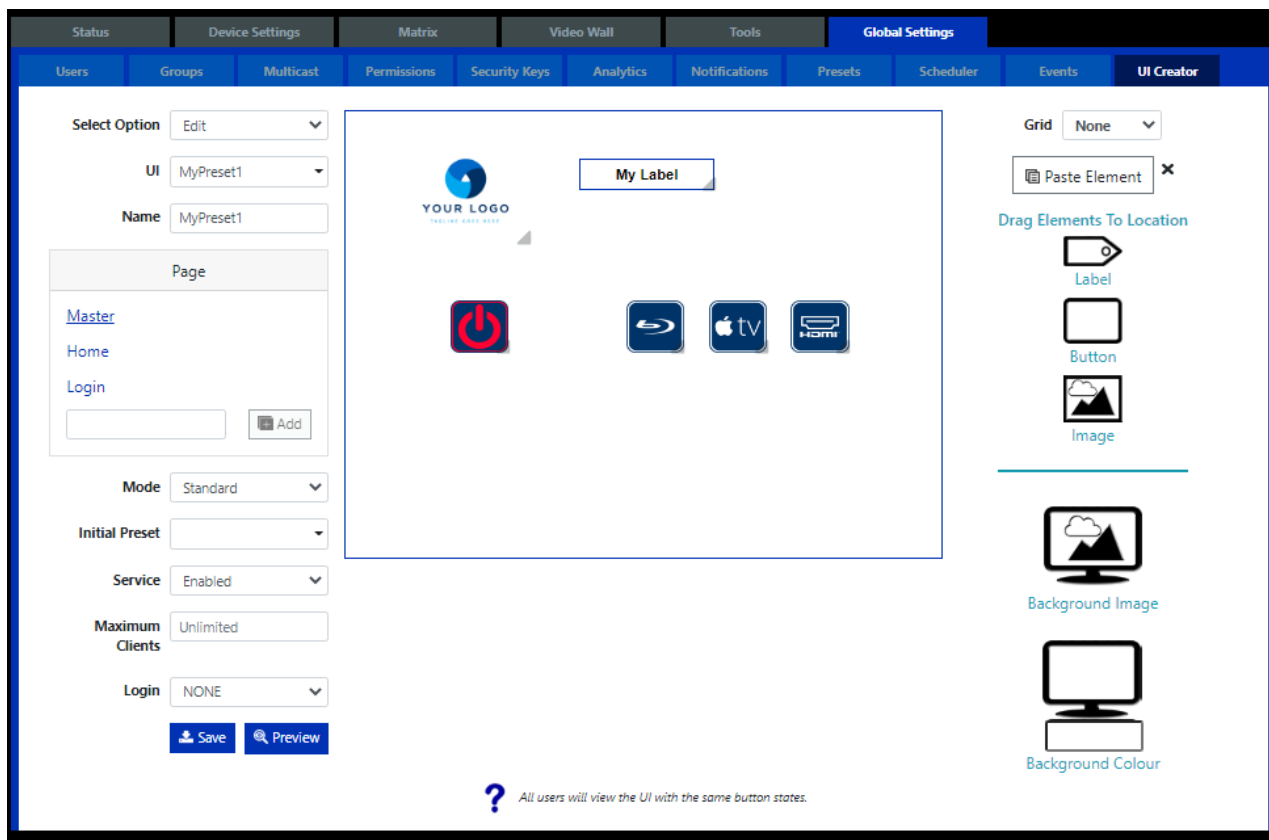
**Note:** You can always populate the *Image Settings* by clicking on any image in the UI.



To select an image from your PC, select the *Image > Browse* button to browse local folders on your PC.

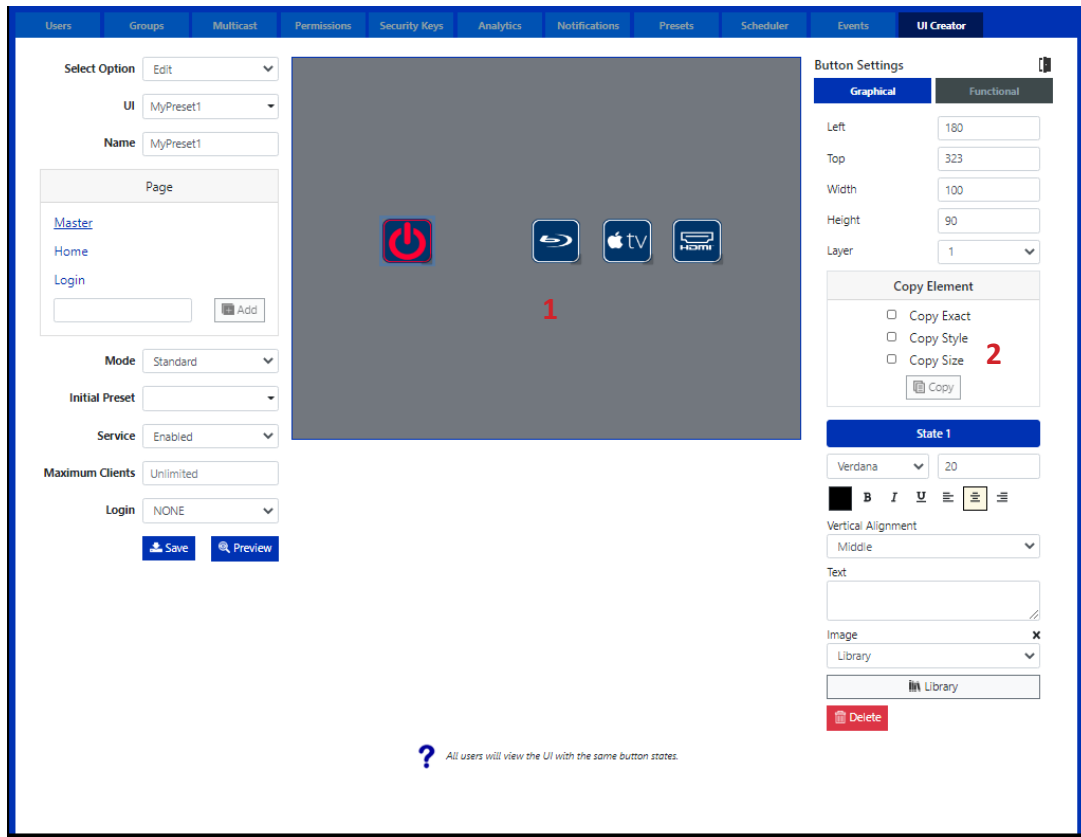
*Adding an Image continued....*

Here a logo image has now been assigned.



## Copying and Pasting Elements

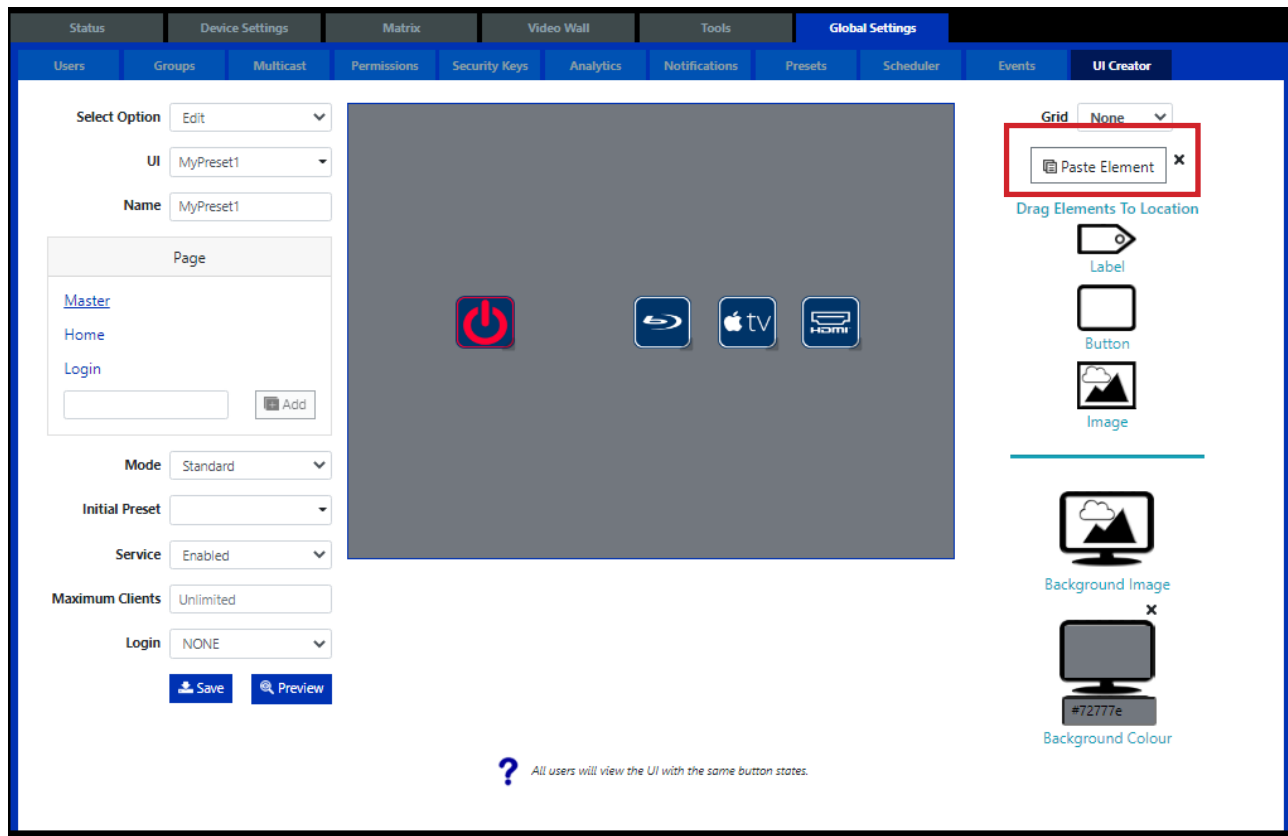
Any button label or image can be copied and pasted onto the UI. You copy the style, size or the element exactly.



1. Click on any button, label or image element in the UI.
2. Click *Copy Element*, then choose what copy type and click *Copy*.

### Copying and Pasting continued.....

Once an element has been copied, you will now see in the upper right-hand corner of the UI Creator an icon that says *Paste Element*. Click this icon to paste the copy type selection into the UI.

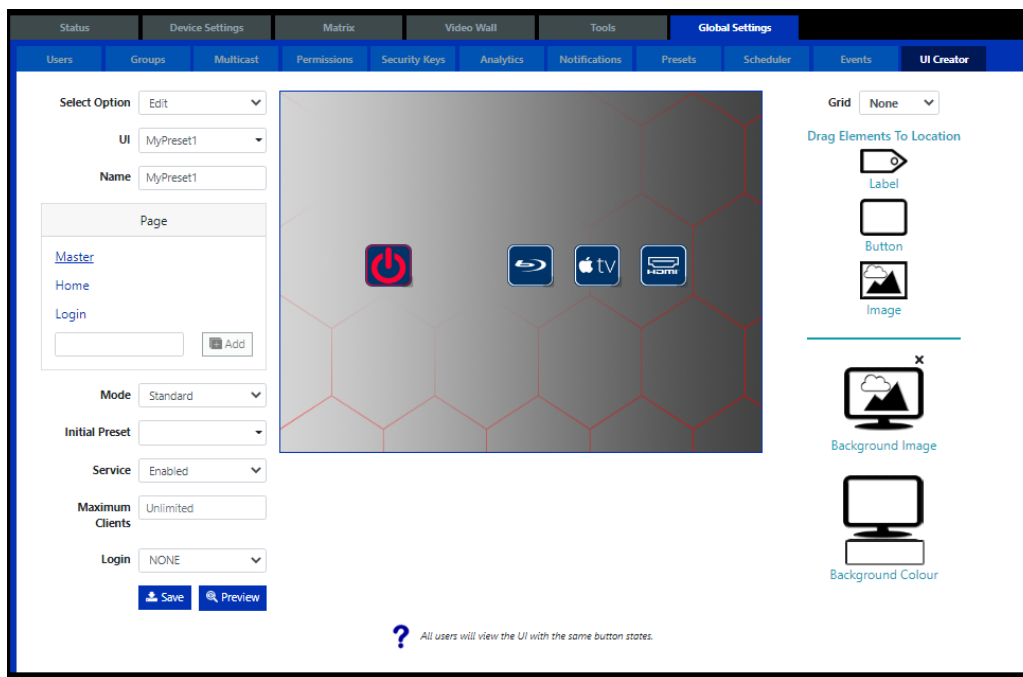




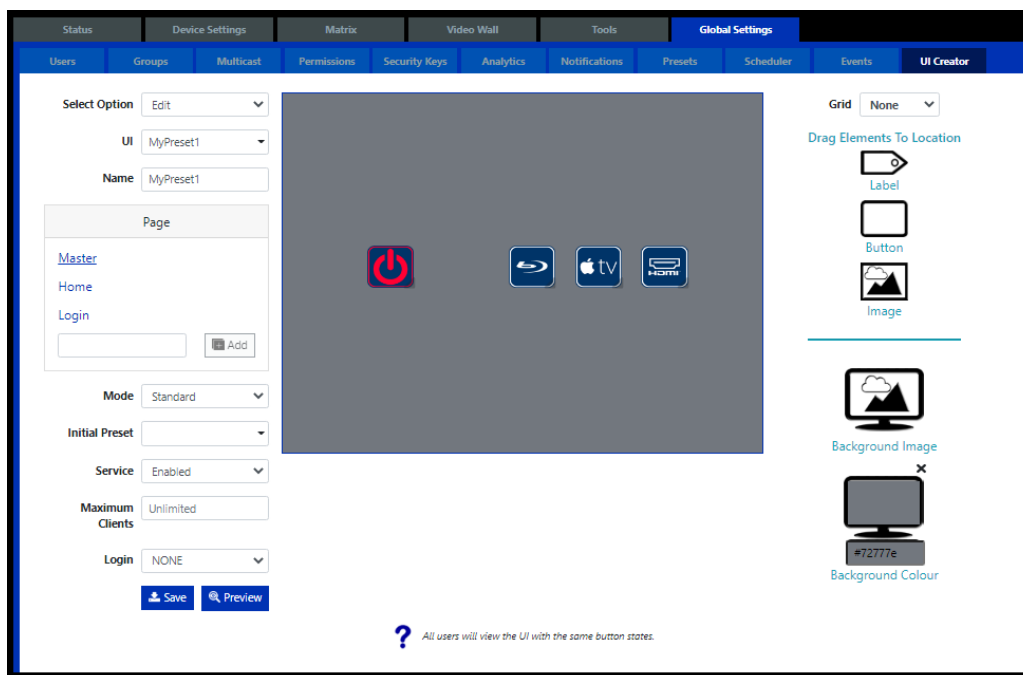


## Adding a Background continued.....

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



Here a background color has been applied to the *Master Page*.



## Duplicate a User Interface

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.

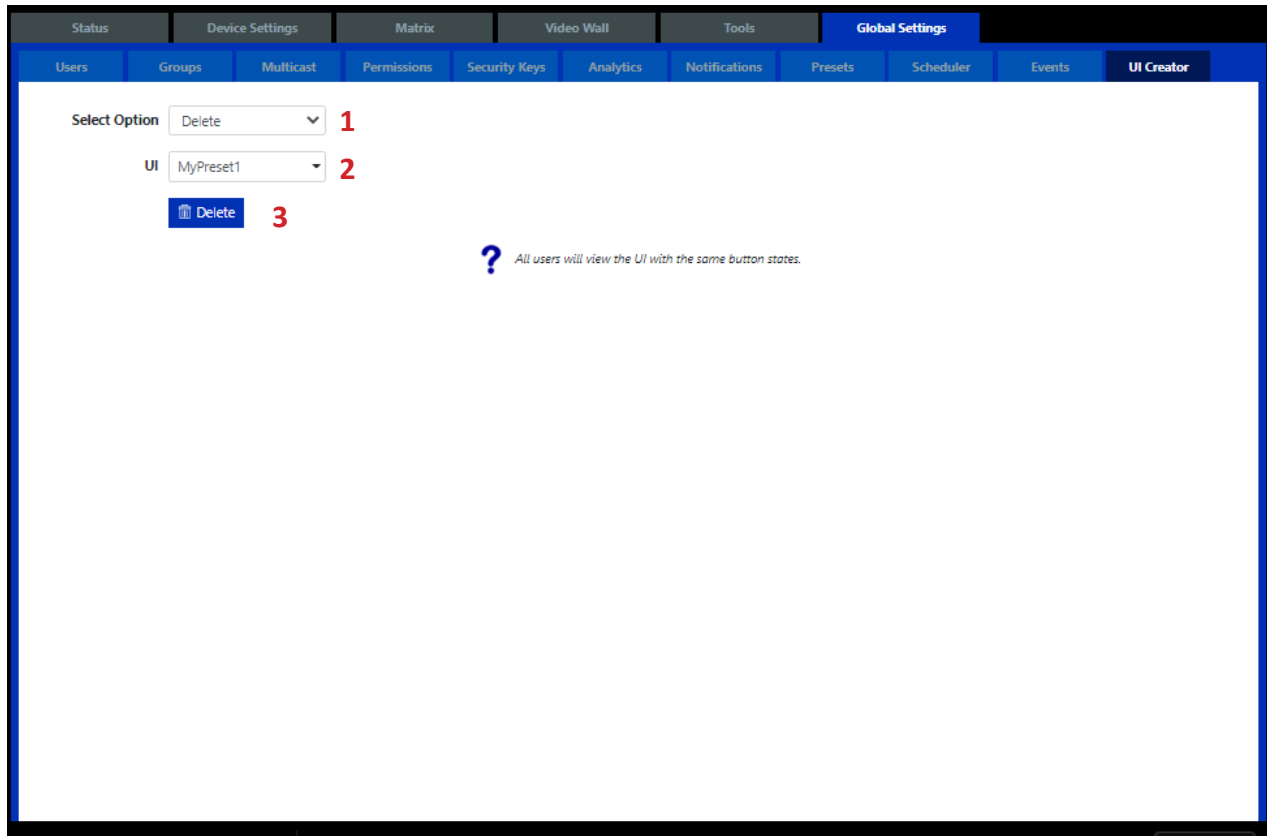
The screenshot shows the 'UI Creator' section of the Arranger Digi IP 5000 interface. The top navigation bar includes 'Status', 'Device Settings', 'Matrix', 'Video Wall', 'Tools', 'Global Settings', and 'UI Creator'. The 'Global Settings' tab is active, and the 'UI Creator' sub-tab is selected. The main content area contains the following elements:

- Select Option:** A dropdown menu with 'Duplicate' selected. A red number '1' is next to it.
- UI:** A dropdown menu with 'MyPreset1' selected. A red number '2' is next to it.
- Name:** An empty text input field. A red number '3' is next to it.
- Save:** A blue button with a save icon and the text 'Save'. A red number '4' is next to it.
- Help:** A blue question mark icon followed by the text 'All users will view the UI with the same button states.'

1. Select *Duplicate*.
2. Select *UI*.
3. Enter name of duplicate UI.
4. Click *Save*.

## Delete a User Interface

To delete an existing UI select option *Delete*, select the user interface and then click the delete button.



1. Select *Delete*.
2. Select *UI*.
3. Click *Save*.

### Generating a Local UI QR Code and URL

QR codes and URL links 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. Select *Generate QR Code*.
2. Select *UI*.
3. Enter QR code *Size*.
4. Click *Local QR Code*.
5. **Click *Download*.**

The URL for the UI is displayed under the QR code.

## Generating a Remote UI QR Code and URL

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.

The screenshot shows the 'UI Creator' section of the Arranger Digi IP 5000 interface. The top navigation bar includes 'Status', 'Device Settings', 'Matrix', 'Video Wall', 'Tools', and 'Global Settings'. The 'Global Settings' sub-menu is open, showing 'Users', 'Groups', 'Multicast', 'Permissions', 'Security Keys', 'Analytics', 'Notifications', 'Presets', 'Scheduler', 'Events', and 'UI Creator'. The 'UI Creator' page has a 'Select Option' dropdown set to 'Generate QR Code' (labeled 1). Below it, the 'UI' dropdown is set to 'MyPreset1' (labeled 2). The 'Remote URL' text box contains 'remote.url' (labeled 3). The 'Size' text box contains '150' (labeled 4). There are two buttons: 'Remote QR Code' (labeled 5) and 'Local QR Code'. To the right, a QR code is displayed (labeled 6). Below the QR code, the URL 'http://remote.url/controlui/#/MyPreset1' is shown. A 'Download' button is at the bottom right. A note at the bottom states: '? All users will view the UI with the same button states.'

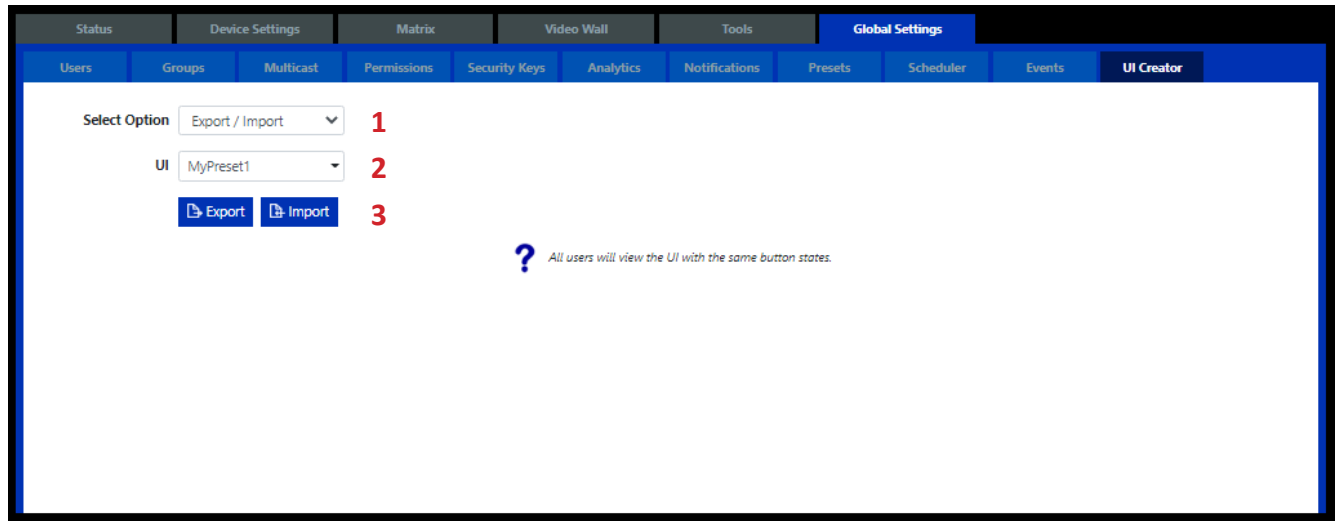
1. Select *Generate QR Code*.
2. Select *UI*.
3. Enter *Remote URL*.
4. Enter QR code *Size*.
5. Click *Remote QR Code*.
6. Click *Download*.

The URL for the UI is displayed under the QR code.

## Exporting / Importing User Interface

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. Select *Export / Import*.
2. Select *UI*.
3. Click *Export* to export .exp file to your Downloads folder.

OR

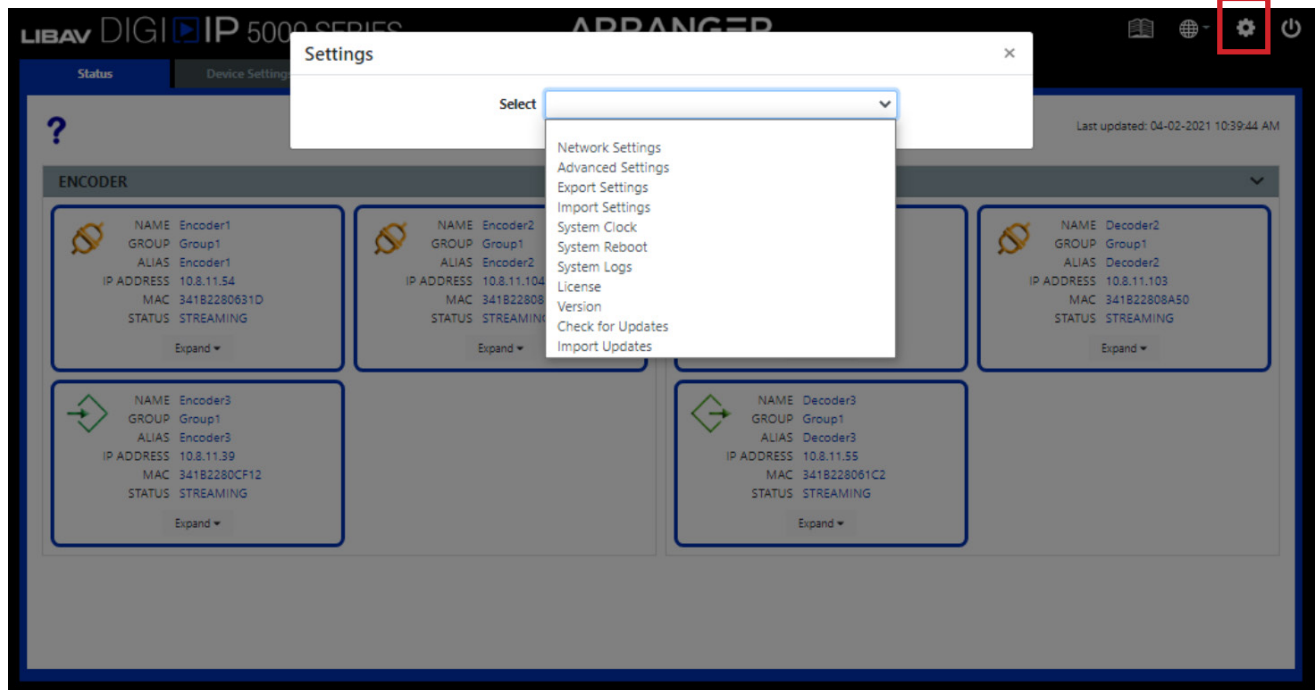
Click *Import* to import an .exp file from your local PC.





## System / Controller Settings

All the controller's system level settings can be accessed by admin level users via drop-down menu by clicking the gear icon on the top right of the Arranger software banner.

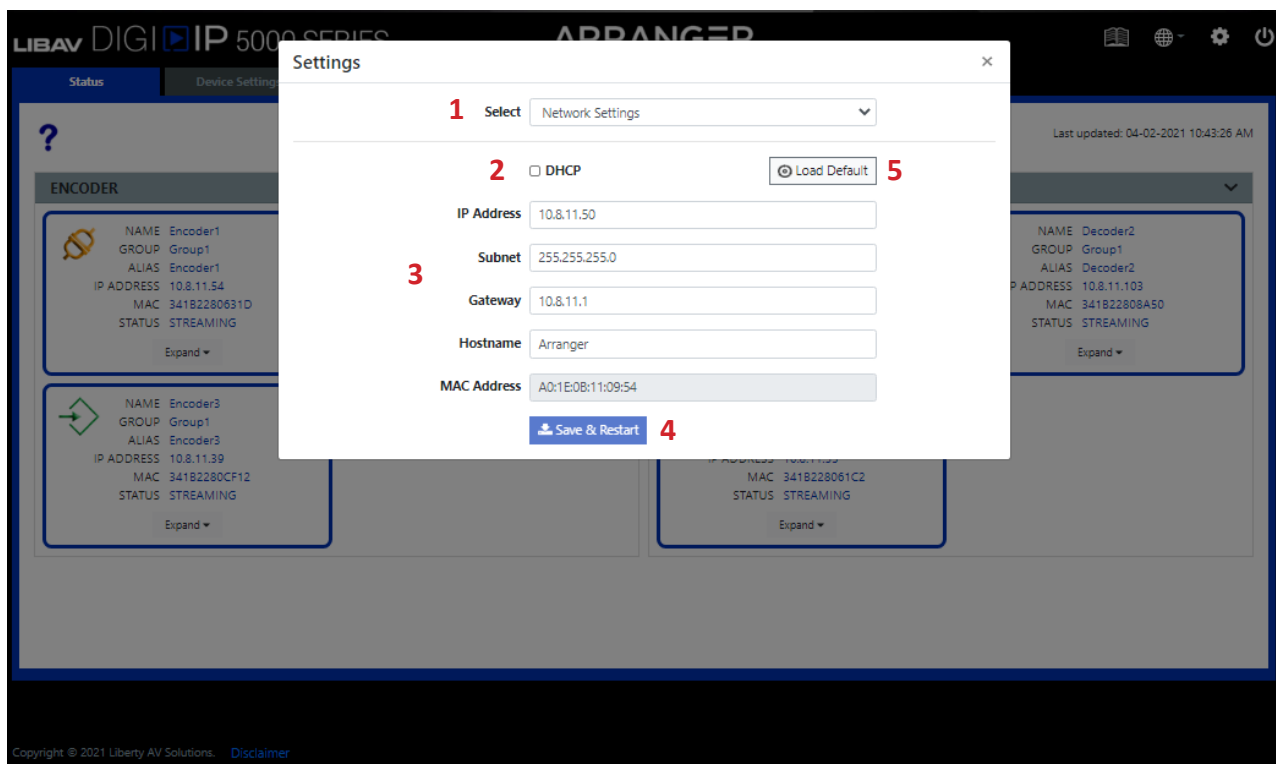


## Network Settings

### Single Network Mode

**NOTE:** By default the Arranger controller operates in *Single Network Mode*. Connect the RJ45 connection of the Arranger controller directly to the AV LAN for this operation. See next page for *Dual Network Mode*.

Here you can change the network configuration of the Arranger controller. This address must be set in the same range as the encoders and decoders. By default the Arranger controller will be found at 169.254.1.1. To locate the IP address of the Arranger controller at any time, connect the HDMI output of the controller into any display; the IP address will show on the on-screen display upper left-hand corner.



1. Select *Network Settings*.
2. DHCP - check this box if you want the IP address for the controller to be set automatically by a third-party router or DHCP server.
3. If using a static IP address simply enter the static address, subnet, gateway and name of hostname if required.
4. Click *Save and Restart*.
5. Click *Load Default* to reset device to the factory default IP address of 169.254.1.1.

## Network Settings continued.....

### Dual Network Mode

When using *Dual Network Mode* you can use the Arranger controller to bridge a Client or primary LAN to access or control the AV LAN without converging the two networks. This allows for a physical dedicated network for the AV components so multicast doesn't have to be managed on the Client or primary LAN.

A USB to Gigabit Ethernet NIC Network Adapter can be attached to the controller providing a second dedicated AV Endpoint network. Approved adapters include Insignia NS-PU98505, Tripp-Lite U236-000-GBW and Cable Matters 202013.

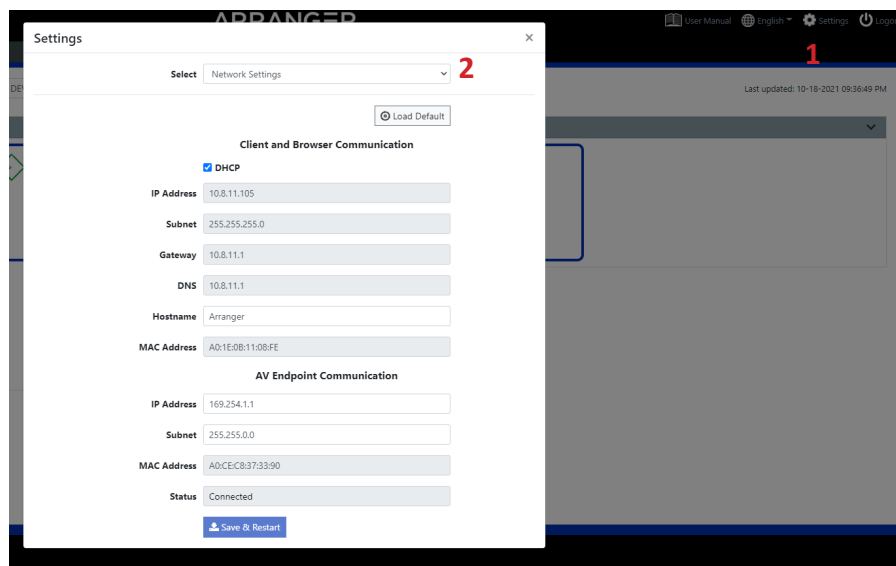
The controllers NIC (RJ45) can be dedicated to Client LAN Communication while the secondary NIC (USB) is dedicated to Digi IP endpoint communication / subnet. Peripheral TCP devices can be controlled from either.

By default the Arranger Controller will be found on the primary NIC (RJ45) at 192.168.1.1 while maintaining 169.254.1.1 IP for the Digi IP LAN via USB / Ethernet adapter.

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

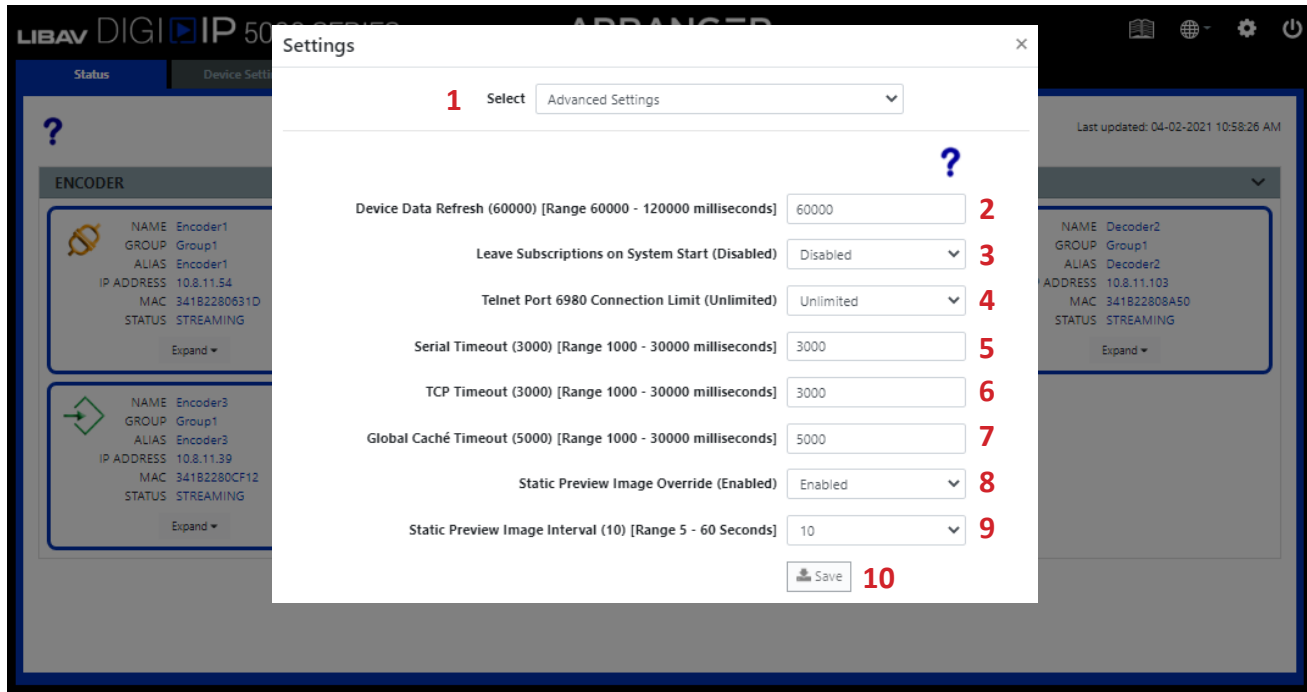
All Digi IP Endpoints must be connected to secondary NIC and set in the same IP range.

1. Power on the Arranger 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: Insert a USB key into the Arranger controller with ONLY a text file titled *factoryreset.txt* for 10 seconds, then remove the USB key.
4. Browse to the controllers default IP address at 192.168.1.1 and configure the controllers network by navigating to 1) the settings icon on Arranger 2) choose Network Settings from drop down menu



## Advanced Settings

The *Advanced Settings* section contains the timing, leave subscriptions and Telnet port restriction settings of the controller.

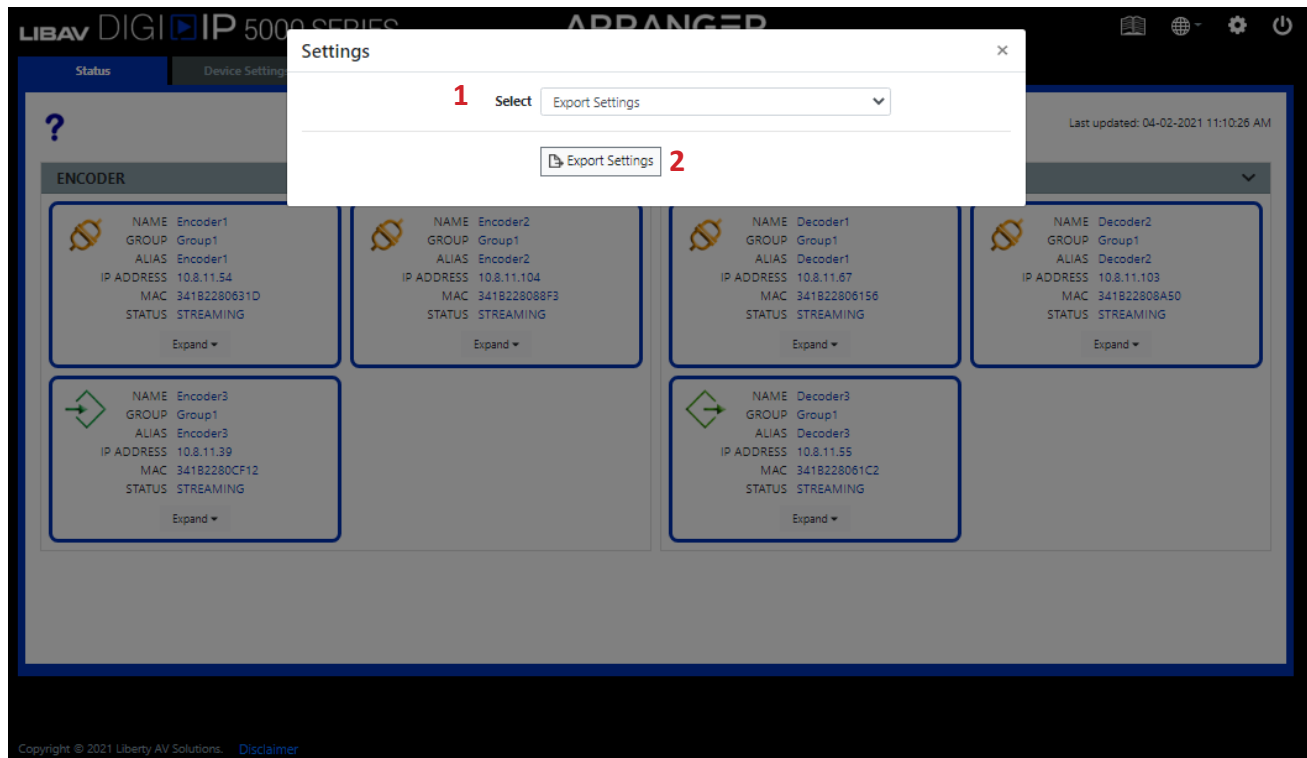


*Advanced Settings continued.....*

1. Select *Advanced Settings*
2. **Device Data Refresh** - *Device Data Refresh* is the time in milliseconds the Arranger 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 60000 = 60 seconds with a range of 10000 – 120000.
3. **Leave Subscriptions on System Start** - *Leave Subscriptions* on system start is an optional condition of the system whereby all decoders will leave their assigned encoder subscription when the system starts. The default is disabled.
4. **Telnet Port 6980 Connection limitation** - Here you can set the number of simultaneous connections to the Telnet TCP control port 6980 to unlimited or from 1 to 10 connections.
5. **Serial Timeout** - *Serial Timeout* is the maximum time in milliseconds the Arranger Controller will wait for a response from a RS232 serial controlled device. The default is 3000 = 3 seconds with a range of 1000 – 30000.
6. **TCP Timeout** - *TCP Timeout* is the maximum time in milliseconds the Arranger controller will wait for a response from a TCP-controlled device. The default is 3000 = 3 seconds with a range of 1000 – 30000.
7. **Global Cache Timeout** - *Global Cache Timeout* is the maximum time in milliseconds the Arranger controller will wait for a response from a Global Cache device. The default is 5000 = 5 seconds with a range of 1000 – 30000.
8. **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.
9. **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.
10. Click **Save**.

## Export Settings

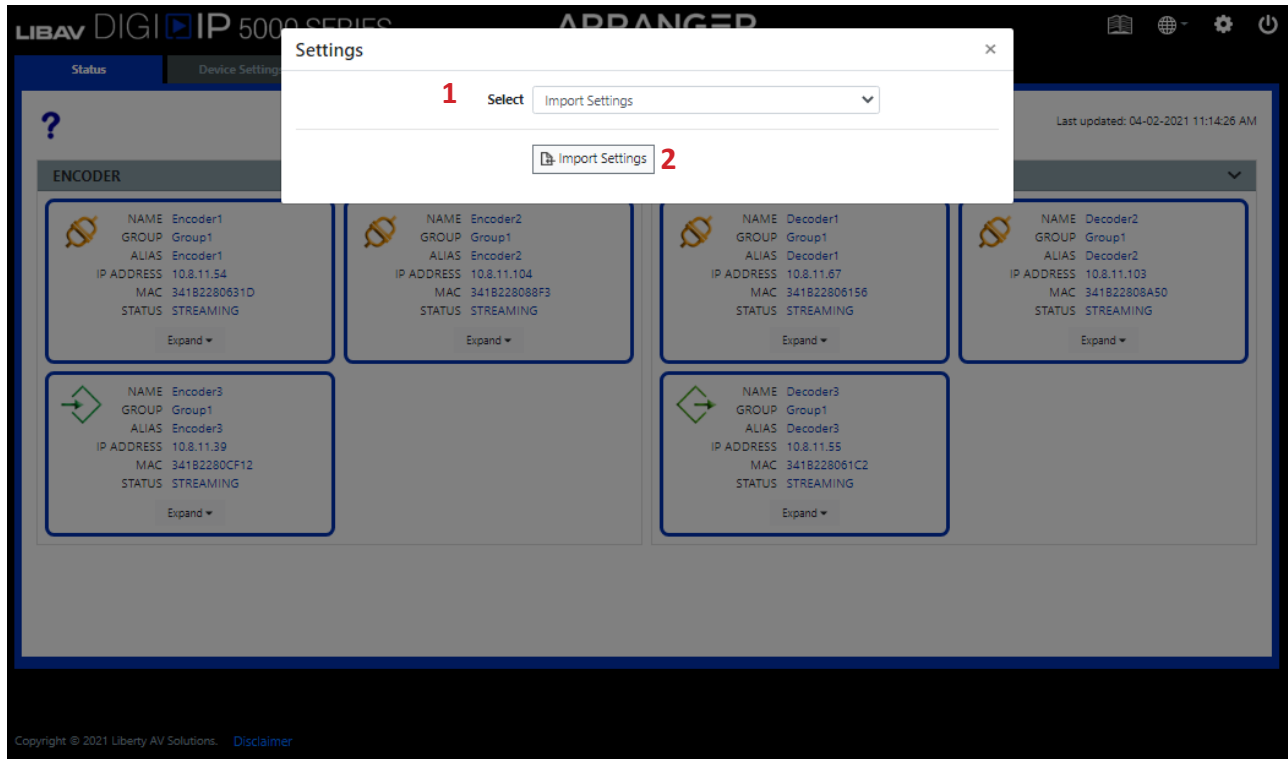
Export Settings will save a file named UIsettings.exp to your downloads folder. This file contains all the settings of the Arranger controller. Use this exported file as a configuration backup that can be imported back into the system to restore the current configuration.



1. Select *Export Settings*.
2. Click *Export Settings*.

## Import Settings

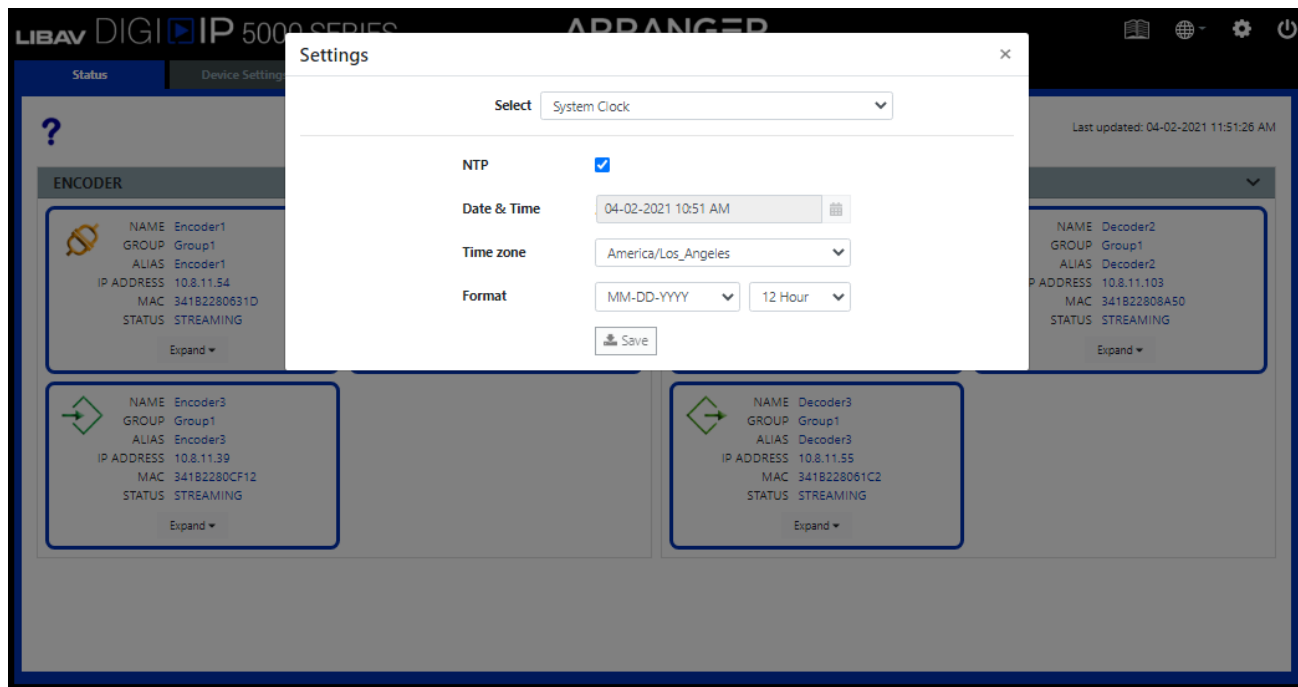
Use Import Settings to load an exported UIsettings.exp file which will restore the Arranger controller's settings.



1. Select *Import Settings*.
2. Click *Import Settings*.

## System Clock

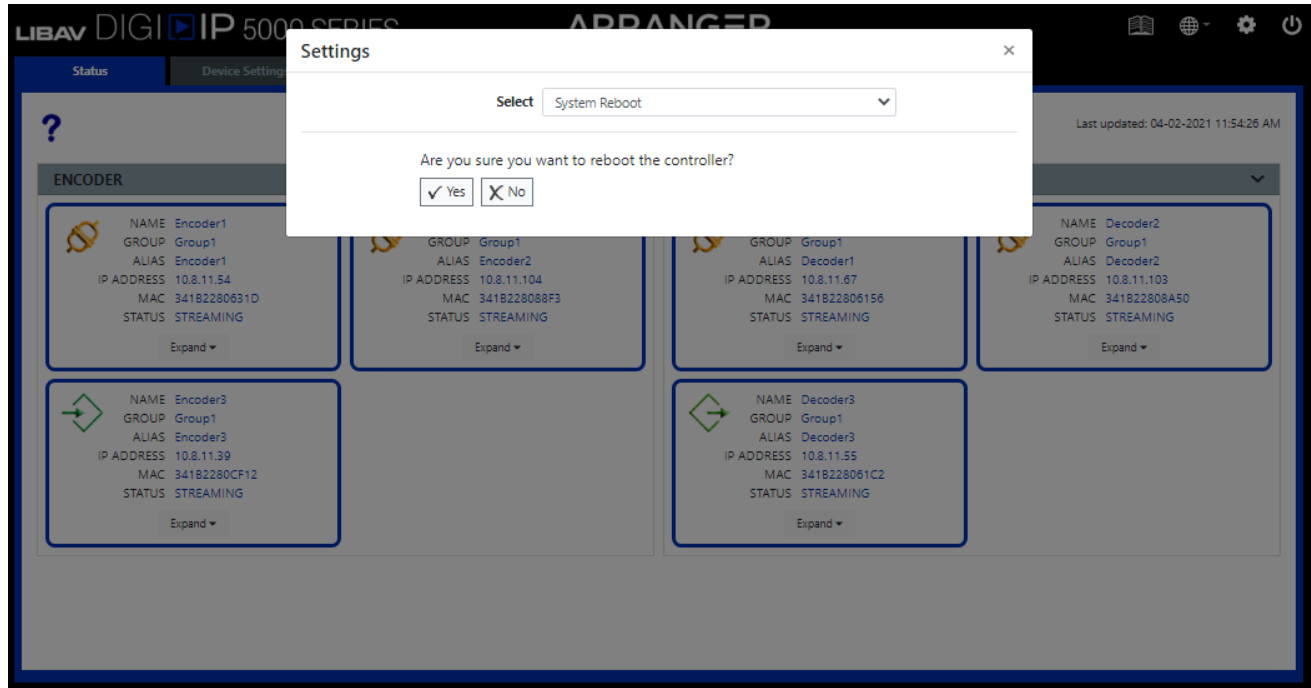
The Arranger controller contains a RTC (Real Time Clock) to maintain the correct time and date. Set your local time and date here and click the Save button to apply the changes. The system clock is used for the scheduler and also time stamping the log entries.





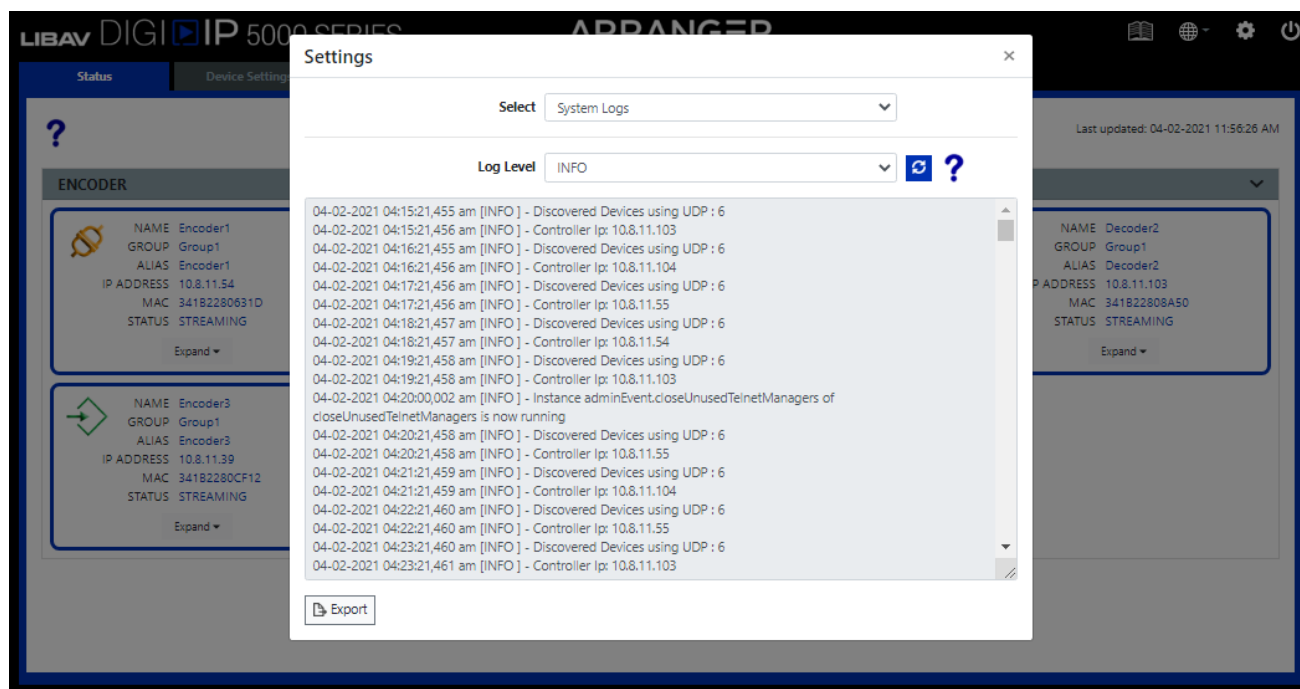
## System Reboot

Here you can reboot the Arranger controller. It takes 90 seconds for the controller to reboot.



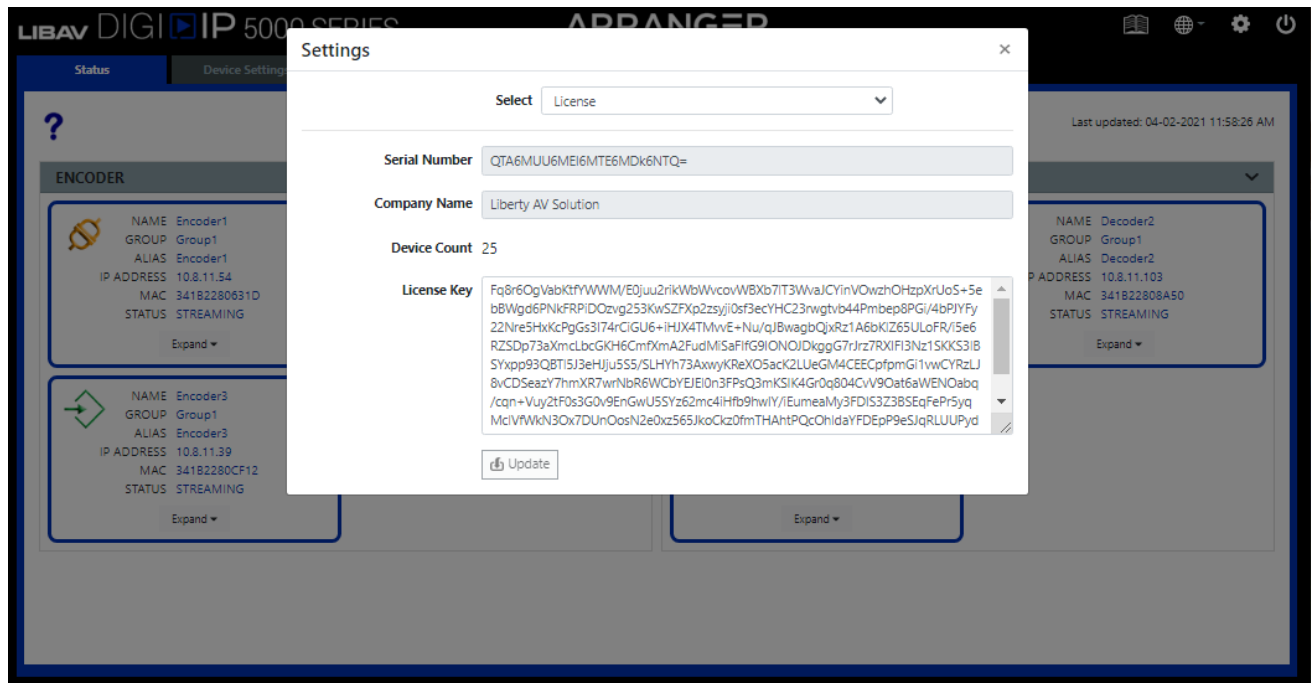
## System Logs

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.



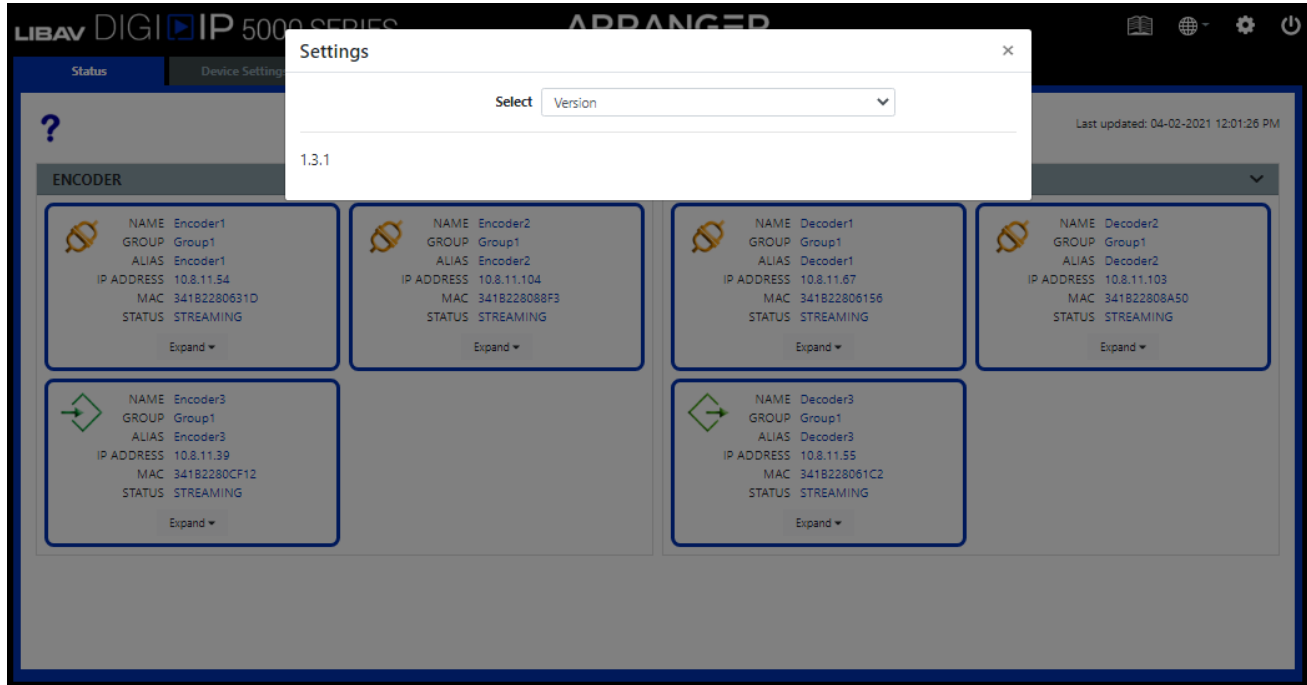
## License

The Arranger controller will not operate without a valid license. When the Arranger 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 Liberty AV sales rep or distributor for all licensing requirements.



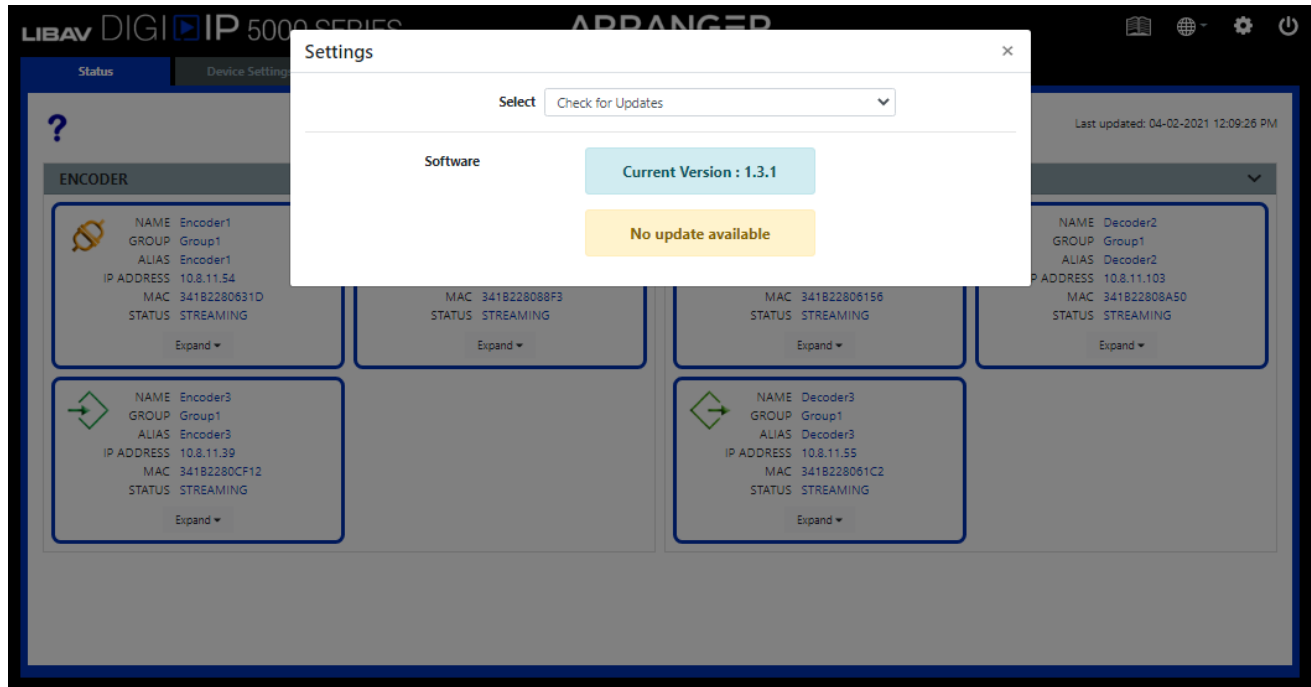
## Software Version

Here you can find the current software version.



## Check for Updates

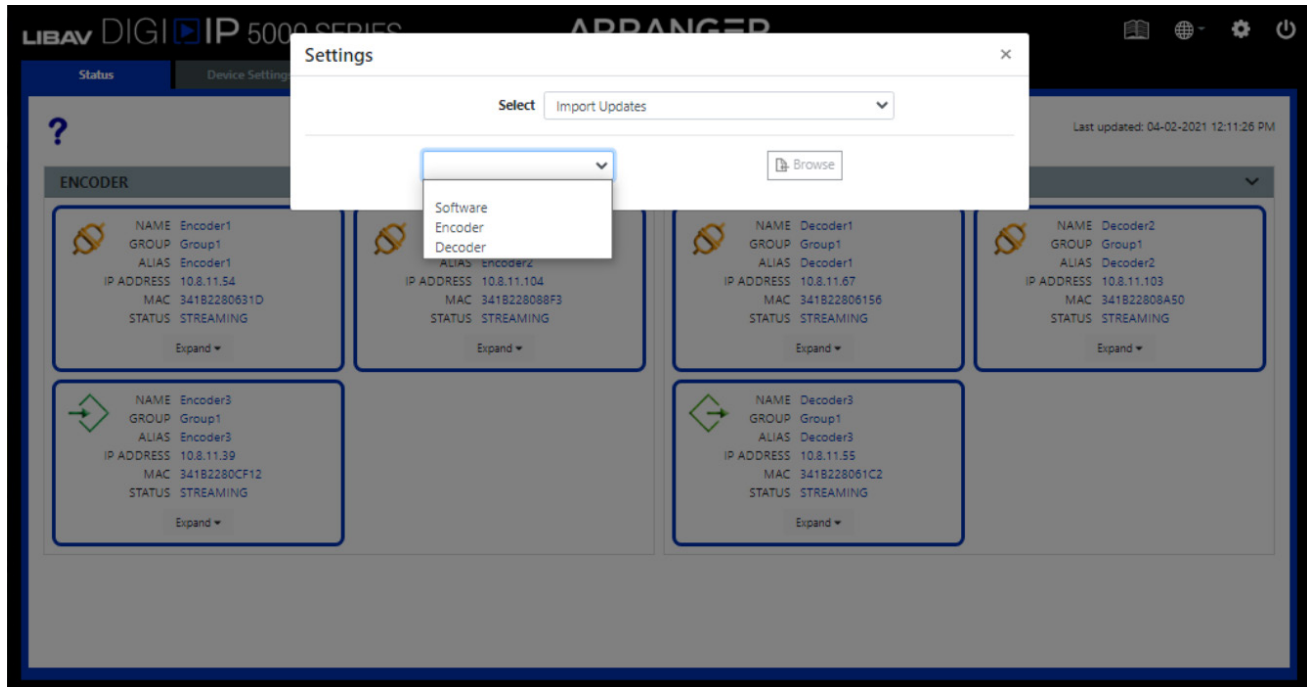
*Check for Updates* will contact an ftp server over the Internet to obtain the latest releases.



## 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 pop-up.



# Security Features

The Arranger 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.

# How to HTTP Request

- GET = `http://<controllerURL>/api/command/<ARRANGER_API_COMMAND>/<KEY>`
- POST = `http://<controllerURL>/api/command/{'cmd': '<ARRANGER_API_COMMAND>', 'key': '<KEY>'}`

## Example 1 - POST - ajax

```
<script language='JavaScript' type='text/javascript'>

var controllerIP = '169.254.1.1'; *change this to the same IP address as the
controller var BaseURL = 'http://' + controllerIP + '/api/command/';
var MAXIMUM_WAITING_TIME = 5000; *timeout in milliseconds
var CheckStatusTimer; var key = '123xyz'; *replace this with the generated
security key var command = '123xyz'; *replace with any Arranger API command

$.ajax({
  type: 'POST',
  crossDomain: true,
  contentType: 'application/json; charset=utf-8',
  dataType: 'text',
  url: BaseURL, data: "{ 'cmd': ' + command + ', 'key': ' + key + ' }",
  timeout: MAXIMUM_WAITING_TIME,
  success: function(data, textStatus, XMLHttpRequest){
    console.log(data);
  },

  error: function (XMLHttpRequest, textStatus, errorThrown) {
    console.log('ERROR = ' + errorThrown;
  }
});

</script>
```



**Example 2 - POST - xhr**

```

<script language='JavaScript' type='text/javascript'>

var controllerIP = '169.254.1.1'; *change this to the same IP address as the
controller
var BaseURL = 'http:// ' + controllerIP + '/api/command/';
var key = '123xyz'; *replace this with the generated security key
var command = '123xyz'; *replace with any Arranger API command
var xmlRequest = new XMLHttpRequest(); xmlRequest.open('POST', BaseURL,
true);
var params = "{ 'cmd':' + command + ', 'key':' + key + ' }";
var MAXIMUM_WAITING_TIME = 5000;
xmlRequest.onreadystatechange = function () {

    if (this.readyState == 4) {
        clearTimeout(xmlTimer);
        if(this.status == 200){
            console.log(this.responseText);

        }else{
            console.log('ERROR = ' + this.status + ' ' + this.statusText);
        }
    }else{
        if(this.status != 200){
            console.log('ERROR = ' + this.status + ' ' + this.statusText);
        }
    }
};
xmlRequest.send(params);
var xmlTimer = setTimeout(function() {
    xmlRequest.abort();
    console.log('ERROR = timeout');
}, MAXIMUM_WAITING_TIME);

</script>

```

## Preset Logic

Basic **if else** logic can be applied within a preset to allow you to build some smarts into your system. All get commands can be used as an expression.

The following syntax applies:

```
if (something) {  
    do_something  
    ...  
} else {  
    do_this_instead  
    ...  
}
```

The following get commands will return a string value that can be used with:

- == (equal to)
- != (not equal to)

```
o get audio_source  
o get devices  
o get edid  
o get scaler <encoder_device_name> all  
o get status  
o get var  
o get ver  
o get video <encoder_device_name> all  
o get encoder
```

Example 1:

```
if (get encoder Decoder1 == Encoder1) {  
    join all Encoder2 Decoder1  
} else {  
    join all Encoder1 Decoder2  
}
```

Example 2:

```
if (get audio_source Decoder1 != hdmi) {  
    set audio_source Decoder1 hdmi  
}
```

The following **get** commands will return an integer value that can be used with:

- `==` (equal to)
- `!=` (not equal to)
- `<` (less than)
- `>` (greater than)

```

o get frame_converter
o get preferred
o get rotation
o get scaler <encoder_device_name> width
o get scaler <encoder_device_name> height
o get scaler <encoder_device_name> fps
o get video <encoder_device_name> width
o get video <encoder_device_name> height
o get video <encoder_device_name> fps
o get video <encoder_device_name> sm
o get video quality
o get volume

```

Example:

```

if (get rotation Encoder1 != 0) {
    set rotation Encoder1 0
} else {
    join all Encoder1 Decoder1
}

```

The following **get** commands will return a boolean value that can be used with:

- `!` (not)

```

o get display_status
o get var
o get video_mute
o get video_status
o get ui_button

```

Example 1:

```

if (get video_status Encoder1) {
    join all Encoder1 Decoder1
} else {
    if (get video_status Encoder2) {
        join all Encoder2 Decoder1
    }
}

```

Example 2:

```

if !(get video_status Encoder1) {
    join all Encoder2 Decoder1
}

```

## Using Google Assistant

The Arranger controller can be controlled with voice commands via Google Assistant. In this example we will run through the requirements to do so. An IFTTT account will also be required. Visit [www.ifttt.com](http://www.ifttt.com) for more information.

To find out how to link your Google account with IFTTT visit this Google help page.

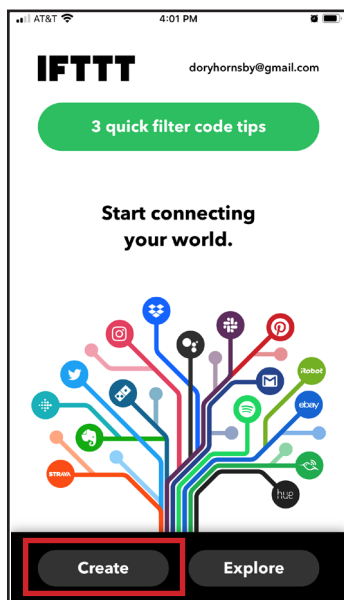
<https://support.google.com/googlenest/answer/7194656>

First step is to set up the Arranger controller so it is accessible from the Internet. Port 80 of the Arranger controller will need to be port-forwarded to an external IP port. For this example we are going to use an external IP address of 123.456.789.100 and a controller IP address of 169.254.1.1. From your router, port forward from internal 169.254.1.1 port 80 to external, say port 9999 (you can use any unused port number here). Every router is configured differently, so consult your router's owner's manual if required.

Now externally you should be able to access the Arranger controller's webpage by entering '123.456.789.100:9999' into a browser.

Now we can set up IFTTT to activate any command on the Arranger controller but we strongly advise that Arranger *Presets* only are specified for this activity.

Open your IFTTT account  
and *Create* a new applet

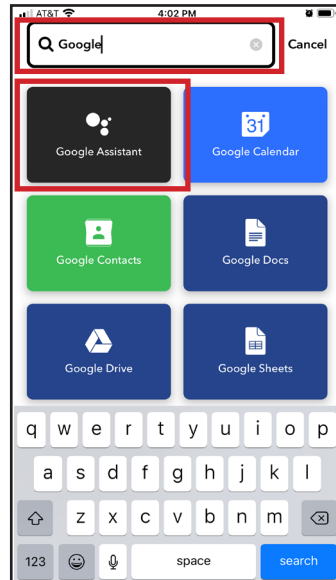


Click *if This Add*

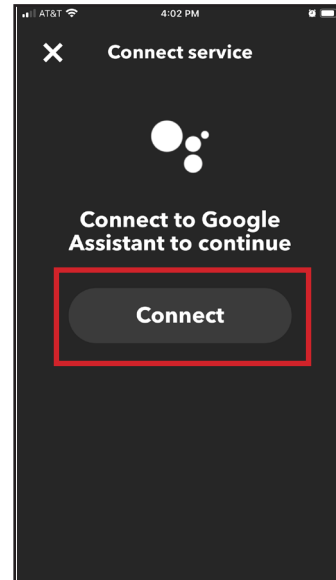


## Using Google Assistant continued....

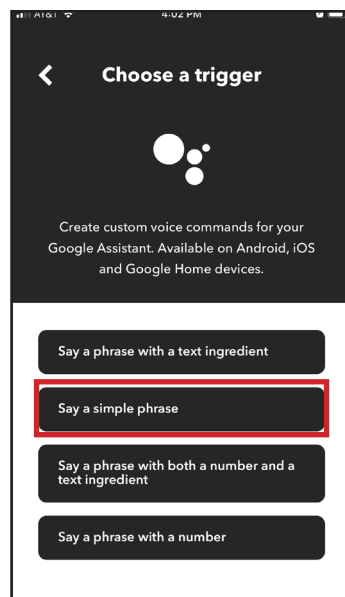
Search and select *Google Assistant* when asked to choose a service in the IFTTT applet wizard



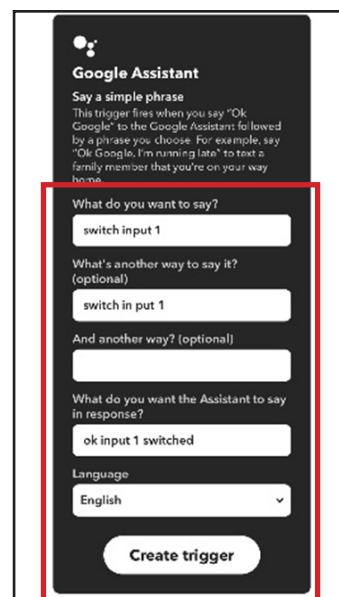
You will be prompted for your Google account login, click *Connect* to proceed



Choose the *Say a Simple Phrase* when asked for a trigger

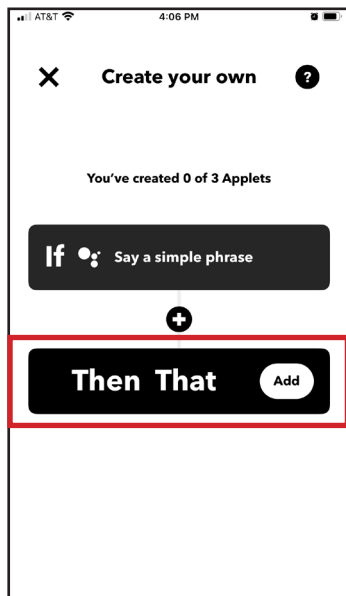


Choose what you will say, the Google response and click *Create Trigger*

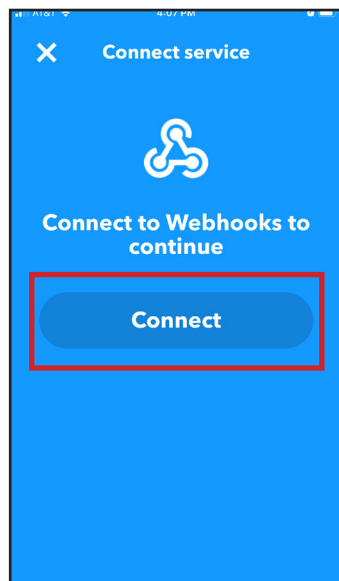


## Using Google Assistant continued....

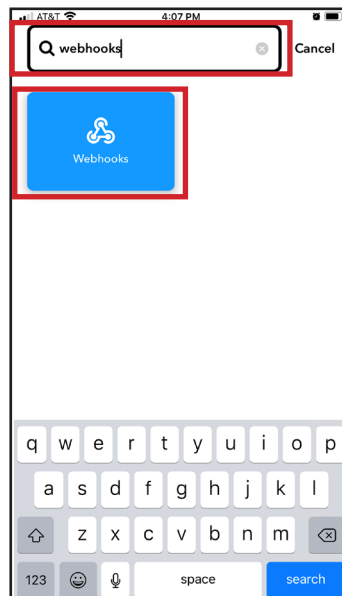
Click *Then That Add*



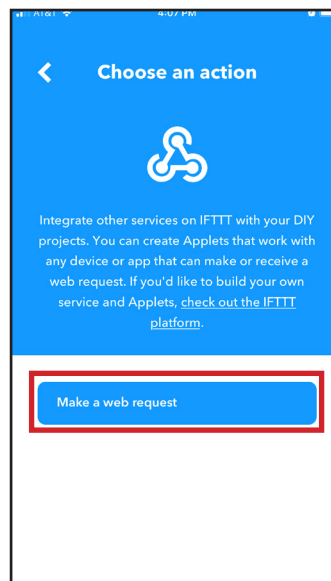
You will be prompted to connect to *Webhooks* click *Connect* to proceed



Search and choose *Webhooks* when asked for a service



Click *Make a web request*



### Using Google Assistant continued....

- Now enter the URL which is the external IP address and port established in the router. In our previous example; '123.456.789.100:9999'
- Select Method: 'POST'
- Select Content Type: 'application/json'
- Enter Body with desired command (see below)
- Click 'Create action'

```
{"cmd":"<command>","key":"<security_key>"}
```

=

```
{"cmd":"preset load <preset>","key":"<security_key>"}
```

where:

\*<preset> = Name given to the preset to be applied

^<security\_key> = HTTP Security key

Example:

```
{"cmd":"preset load MyPreset","key":"ts2Xe1sn1Nk1rm1>l1$P1Tk18q14e"}
```

\*For more information on building and using Presets, see  
*Global Settings > Presets*

^For more information on generating and using HTTP Security keys, see  
*Global Settings > Security Keys > HTTP Security Key*

# Using Command Assistant

When dealing with direct API control commands or creating presets, the *Command Assistant* wizard 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 manually, while in *Wizard* mode parameters are mostly set with drop-down selections to ensure the syntax of the command is correct.

Below are explanations for all commands using *Normal* and *Wizard* mode.

## Command: join all - Normal Mode

The 'Parameters' dialog for the 'join all' command in Normal Mode. It features a list of instructions on the left and input fields on the right. The 'Select Mode' section has 'Normal' selected. The 'Security Key' field is optional and empty. The 'Encoder Device Name' field is required and empty. The 'Decoder / Group' field is required and empty. The 'Exclusive' checkbox is optional and unchecked. The 'Video Mode' dropdown is set to 'No Change'. A 'Finish' button is at the bottom right.

**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) 1

Encoder Device Name 2

Decoder / Group 3

Exclusive (optional) 4 ☐

Video Mode 5 No Change

6

## Command: join all - Wizard Mode

The 'Parameters' dialog for the 'join all' command in Wizard Mode. It features a list of instructions on the left and input fields on the right. The 'Select Mode' section has 'Wizard' selected. The 'Security Key' field is optional and contains a long alphanumeric string. The 'Encoder Device Name' field is required and is a dropdown menu. The 'Select' section has 'Decoder Device Name' selected. The '2a' and '2b' fields are required and are dropdown menus. The 'Exclusive' checkbox is optional and unchecked. The 'Video Mode' dropdown is set to 'No Change'. A 'Finish' button is at the bottom right.

**Parameters**

1. Select Encoder Device Name  
2.a Select Device(s)  
2.b 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) 31333331306339326330373066613065

Encoder Device Name 1

Select ☒ Decoder Device Name  
2a ☐ Group Name  
2b ☐ All

Exclusive (optional) 3 ☐

Video Mode 4 No Change

5



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) 1

Encoder Device Name 2

Decoder / Group 3

Exclusive (optional) 4 ☐

Video Mode 5 No Change

6

Command: join av - Wizard Mode

Parameters

1. Select Encoder Device Name  
2.a Select Device(s)  
2.b 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) 31333331306339326330373066613065

Encoder Device Name 1

Select  
2a ☒ Decoder Device Name  
☐ Group Name  
☐ All

2b

Exclusive (optional) 3 ☐

Video Mode 4 No Change

5

## Command: join video - Normal Mode

Parameters ×

- Enter optional Security Key
- Enter Encoder Device Name
- Enter Decoder or Group name
- Select Exclusive (optional)
- Select Video Mode (optional)
- Click Finish button

Select Mode
☐ Wizard
☒ Normal

Security Key (optional) 1

Encoder Device Name 2

Decoder / Group 3

Exclusive (optional) 4
☐

Video Mode 5

No Change

6

## Command: join video - Wizard Mode

Parameters ×

- Select Encoder Device Name
- a Select Device(s)
- b Select Decoder or Group name
- Select Exclusive (optional)
- Select Video Mode (optional)
- Click Finish button

Select Mode
☒ Wizard
☐ Normal

Security Key (optional)

Encoder Device Name 1

Select
☒ Decoder Device Name
☐ Group Name
☐ All

2a

2b

Exclusive (optional) 3
☐

Video Mode 4

No Change

5

## Command: join audio - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Encoder Device Name

3. Enter Decoder or Group name

4. Select Exclusive (optional)

5. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Encoder Device Name

2

Decoder / Group

3

Exclusive (optional)

4

☐

5

✓ Finish

## Command: join audio - Wizard Mode

Parameters

1. Select Encoder Device Name

2.a Select Device(s)

2.b Select Decoder or Group name

3. Select Exclusive (optional)

4. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name

1

Select

☒ Decoder Device Name

☐ Group Name

☐ All

2a

2b

Exclusive (optional)

3

☐

4

✓ Finish

Command: join serial - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Encoder Device Name

3. Enter Decoder or Group name

4. Select Exclusive (optional)

5. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional) 1

Encoder Device Name 2

Decoder / Group 3

Exclusive (optional) 4

☐

5

✓ Finish

Command: join serial - Wizard Mode

Parameters

1. Select Encoder Device Name

2.a Select Device(s)

2.a Select Decoder or Group name

3. Select Exclusive (optional)

4. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name 1

Select

☒ Decoder Device Name

☐ Group Name

☐ All

2a

2b

Exclusive (optional) 3

☐

4

✓ Finish

**Note:** Only devices in serial *Matrix* mode will be seen in the device lists. To change serial modes see *Devices Settings > RS232 Serial*.

## Command: join ir - Normal Mode

**Parameters** ×

1. Enter optional Security Key

2. Enter Encoder Device Name

3. Enter Decoder or Group name

4. Select Exclusive (optional)

5. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Encoder Device Name

2

Decoder / Group

3

Exclusive (optional)

4

☐

5

☒ Finish

## Command: join ir - Wizard Mode

**Parameters** ×

1. Select Encoder Device Name

2.a Select Device(s)

2.b Select Decoder or Group name

3. Select Exclusive (optional)

4. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name

1

Select

☒ Decoder Device Name

☐ Group Name

☐ All

2a

2b

Exclusive (optional)

3

☐

4

☒ Finish

Command: join usb - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Encoder Device Name  
3. Enter Decoder or Group name  
4. Select Exclusive (optional)  
5. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Encoder Device Name 2

Decoder / Group 3

Exclusive (optional) 4
☐

5

Command: join usb - Wizard Mode

Parameters

1. Select Encoder Device Name  
2.a Select Device(s)  
2.a Select Decoder or Group name  
3. Select Exclusive (optional)  
4. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Encoder Device Name 1

Select  
2a
☒ Decoder Device Name  
☐ Group Name  
☐ All

2b

Exclusive (optional) 3
☐

4

## Command: join kvm - 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) 1

Encoder Device Name 2

Decoder / Group 3

Exclusive (optional) 4 ☐

Video Mode 5

6

## Command: join kvm - Wizard Mode

Parameters

1. Select Encoder Device Name  
2.a Select Device(s)  
2.b 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) 1

Encoder Device Name

Select 2a ☒ Decoder Device Name  
☐ Group Name  
☐ All

2b

Exclusive (optional) 3 ☐

Video Mode 4

5

## 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.a Enter Resolution Width  
6.b Enter Resolution Height  
6.c Enter Framerate  
7. Optionally apply bezel compensation  
7.a Enter Display Width  
7.b Enter Viewable Height  
7.c Enter Display Height  
7.d 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) 6a

Height (optional) 6b

Frame Rate (optional) 6c

Display Width (mm) (optional) 7a

Viewable Width (mm) (optional) 7b

Display Height (mm) (optional) 7c

Viewable Height (mm) (optional) 7d

8 ✓ Finish

## Command: join wall - Wizard 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.a Enter Display Width  
6.b Enter Viewable Height  
6.c Enter Display Height  
6.d Enter Viewable Height  
7. Click Finish button

Select Mode
☒ Wizard
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Encoder Device Name 1

Decoder Device Name 2

Wall Type 3

Display Position 4

Video Mode (optional) 5

Display Width (mm) (optional) 6a

Viewable Width (mm) (optional) 6b

Display Height (mm) (optional) 6c

Viewable Height (mm) (optional) 6d

7 ✓ Finish



## 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

Security Key (optional) **1**

Decoder / Group **2**

**3**

## Command: leave all - Wizard Mode

Parameters ×

1.a Select Device(s)

1.b Select Decoder or Group name

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional) 31333331306339326330373066613065

Select

☒ Decoder Device Name

☐ Group Name

☐ All

**1a**

**1b**

**2**

## Command: leave av - Normal Mode

Parameters ×

1. Enter optional Security Key

2. Enter Decoder or Group name

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional) **1**

Decoder / Group **2**

**3**

## Command: leave av - Wizard Mode

Parameters ×

1.a Select Device(s)

1.b Select Decoder or Group name

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional) 31333331306339326330373066613065

Select

☒ Decoder Device Name

☐ Group Name

☐ All

**1a**

**1b**

**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

Security Key (optional) 1

Decoder / Group 2

3 ✓ Finish

## Command: leave video - Wizard Mode

Parameters

1.a Select Device(s)  
1.b Select Decoder or Group name  
2. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Select  
1a  
1b  
2

☒ Decoder Device Name  
☐ Group Name  
☐ All

✓ Finish

## Command: leave audio - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Decoder or Group name  
3. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Decoder / Group 2

3 ✓ Finish

## Command: leave audio - Wizard Mode

Parameters

1.a Select Device(s)  
1.b Select Decoder or Group name  
2. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Select  
1a  
1b  
2

☒ Decoder Device Name  
☐ Group Name  
☐ All

✓ Finish

## 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

Security Key (optional) **1**

Decoder / Group **2**

**3**

## Command: leave serial - Wizard Mode

**Parameters** ×

1.a Select Device(s)  
1.b Select Decoder or Group name  
2. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional)

Select **1a** ☒ Decoder Device Name  
**1b** ☐ Group Name  
☐ All

**2**

## Command: leave ir - Normal Mode

**Parameters** ×

1. Enter optional Security Key  
2. Enter Decoder or Group name  
3. Click Finish button

Select Mode ☐ Wizard  
☒ Normal

Security Key (optional) **1**

Decoder / Group **2**

**3**

## Command: leave ir - Wizard Mode

**Parameters** ×

1.a Select Device(s)  
1.b Select Decoder or Group name  
2. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional)

Select **1a** ☒ Decoder Device Name  
**1b** ☐ Group Name  
☐ All

**2**

## Command: leave usb - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Decoder or Group name  
3. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Decoder / Group 2

3

Finish

## Command: leave usb - Wizard Mode

Parameters

1.a Select Device(s)  
1.b Select Decoder or Group name  
2. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Select  
1a  
1b  
2

☒ Decoder Device Name  
☐ Group Name  
☐ All

Finish

## Command: leave kvm - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Decoder or Group name  
3. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Decoder / Group 2

3

Finish

## Command: leave kvm - Wizard Mode

Parameters

1.a Select Device(s)  
1.b Select Decoder or Group name  
2. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Select  
1a  
1b  
2

☒ Decoder Device Name  
☐ Group Name  
☐ All

Finish

## Command: stop - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Encoder

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Encoder Device Name

2

3

✓ Finish

## Command: stop - Wizard Mode

Parameters

1. Select Encoder

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name

1

2

✓ Finish

## Command: start - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Encoder

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Encoder Device Name

2

3

✓ Finish

## Command: start - Wizard Mode

Parameters

1. Select Encoder

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name

1

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

Security Key (optional) 1

Device / Group 2

3

## Command: reboot - Wizard Mode

Parameters

1.a Select Device(s)  
1.b Select Decoder or Group name  
2. Click Finish button

Select Mode
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Select 1a
☒ Device Name  
☐ Group Name  
☐ All  
☐ All Decoders  
☐ All Encoders

1b

2

## Command: set audio\_source - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Encoder Device Name  
3. Select Audio Source:  
HDMI / ANALOG  
4. Click Finish button

Select Mode
☐ Wizard  
☒ Normal

Security Key (optional) 1

Encoder Device Name 2

Audio Source 3

4

## Command: set audio\_source - Wizard Mode

Parameters

1. Select Encoder Device Name  
2. Select Audio Source:  
HDMI / ANALOG  
3. Click Finish button

Select Mode
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Encoder Device Name 1

Audio Source 2

3

## 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

Security Key (optional) **1**

Encoder / Group **2**

EDID **3**

**4**

## Command: set edid - Wizard Mode

**Parameters**

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional)

1. Select Encoder or Group name  
2. Select EDID type  
2.a Select one:  
    Default EDID  
    Decoder EDID  
    User Defined  
2.b Select External EDID  
2.c Enter User Defined EDID  
3. Click Finish button

Select **1** ☒ Encoder Device Name  
☐ Group Name  
☐ All Encoders

**2a** EDID

**2b**

**2c** EDID

**3**

## Command: set frame\_converter` - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Encoder Device Name  
3. Enter Frame rate  
4. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Encoder Device Name 2

Frame Rate 3

4 ✓ Finish

## Command: set frame\_converter - Wizard Mode

Parameters

1. Enter Encoder Device Name  
3. Select Frame Rate  
3. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Encoder Device Name 1

Frame Rate 2

3 ✓ Finish

Parameters

1. Select Encoder Device Name  
2. Select Frame Rate User Defined  
3. Select Frame Rate  
4. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Encoder Device Name 1

Frame Rate 2 User Defined

3 1 59

4 ✓ Finish



## Command: set listener - Normal Mode

Listener is OFF (disabled)

1. Enter optional Security Key  
2. Enter Multicast or Device IP  
3. Enter Notify IP Port  
4. Select Protocol UDP or TCP  
5. Select Condition ON, OFF or ALL  
6. Select State of listener  
7. Select the device physically connected port  
8. Click Finish button

Select Mode
☐ Wizard
☒ Normal

Security Key (optional) 1

IP Address 2 0.0.0.0

Notify Port 3

Protocol 4

Condition 5

State 6 DISABLED

Device Port 7

8

Listener is ON (enabled)

1. Enter optional Security Key  
2. Enter Multicast or Device IP  
3. Enter Notify IP Port  
4. Select Protocol UDP or TCP  
5. Select Condition ON, OFF or ALL  
6. Select State of listener  
7. Select the device physically connected port  
8. Select Preset  
9. Set delay time (optional)  
10. Click Finish button

Select Mode
☐ Wizard
☒ Normal

Security Key (optional) 1

IP Address 2 0.0.0.0

Notify Port 3

Protocol 4

Condition 5

State 6 ENABLED

Device Port 7

Preset Name 8

Delay [minutes](optional) 9 0 60

10

## 198

Parameters

2. Select Device

Select Mode

☒ Wizard  
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Device Discovery

Discovered Devices

000C1E054917@10.8.11.100 (iTachIP2IR)

2

Refresh

IP Address

0.0.0.0

Notify Port

Protocol

Condition

State

DISABLED

Device Port

Finish

Command: set listener - Wizard Mode continued...

Listener is ON (enabled)

Parameters

Select Mode

Wizard


Normal

Security Key (optional)

31333331306339326330373066613065

Device Discovery

000C1E054917@10.8.11.100 (iTachIP2IR)



3

•

○

○

Sensor

3. Select the device port being used

4. Select Sensor Notify

5. Enter an unused port number

6. Set Notify Timer to 0

7. Click Set button

8. Select Condition ON, OFF or ALL

9. Select State of listener

10. Select the preset to be executed

11. Select an optional delay

12. Click Finish button

Select I/O

3

•

○

○

Sensor

Select Mode

4

Sensor Notify

Notify Port

5

9133

Notify Timer

6

11

7

Set

IP Address

239.255.250.250

Notify Port

Protocol

UDP

Condition

8

ON

State

9

ENABLED

Device Port

1

Preset Name

10

preset1

Delay [minutes](optional)

0

60

11

•

12

Finish

Command: set listener - Wizard Mode continued...

Listener is OFF (disabled)

Parameters

Select Mode

☒ Wizard  
☐ Normal


Security Key (optional)

31333331306339326330373066613065

Device Discovery

000C1E054917@10.8.11.100 (iTachIP2IR)

3



Select I/O

☒ Sensor

Select Mode

Sensor Notify

Notify Port

9133

Notify Timer

11

7

Set

IP Address

239.255.250.250

Notify Port

9133

Protocol

UDP

Condition

4 ON

State

5 DISABLED

Device Port

1

6

Finish

## Command: set rotation - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Decoder Device Name  
3. Enter Rotation Method  
4. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Decoder Device Name 2

Rotation 3

4

## Command: set rotation - Wizard Mode

Parameters

1. Select Decoder Device Name  
2. Select Rotation Method  
3. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional)

Decoder Device Name 1

Rotation 2

3

## Command: set scaler - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Decoder Device Name  
3. Enter Video Mode  
4. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Decoder Device Name 2

Mode 3

4

## Command: set scaler - Wizard Mode

Parameters

1. Select Decoder Device Name  
2. Select Video Mode  
3. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional)

Decoder Device Name 1

Mode 2

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

Security Key (optional) 1

Variable Name 2

Value 3

4

## Command: set var - Wizard Mode

Parameters

1. Select / Enter Variable Name

\* MAX 256 characters

2. Select Value or select Delete

\* MAX 256 characters

3. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

Variable Name 1

Delete ☐

Value 2

Data String

3

## Command: set video\_mute - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Decoder Device Name

3. Select Option:

Enabled / Disabled

4. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional) 1

Decoder Device Name 2

Option 3

4

## Command: set video\_mute - Wizard Mode

Parameters

1. Select Decoder Device Name

2. Select Option:

Enabled / Disabled

3. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

Decoder Device Name 1

Option 2

3

## Command: set video\_quality - Normal Mode

**Parameters** ✕

1. Enter optional Security Key  
2. Enter Encoder Device Name  
3. Select Option: AUTO / 0..5  
4. Click Finish button

Select Mode ☐ Wizard ☒ Normal

Security Key (optional) 1

Encoder Device Name 2

Option 3

4

## Command: set video\_quality - Wizard Mode

**Parameters** ✕

1. Select Encoder Device Name  
2. Select Option AUTO / 0..5  
3. Click Finish button

Select Mode ☒ Wizard ☐ Normal

Security Key (optional)

Encoder Device Name 1

Option 2

3

## Command: set volume - Normal Mode

**Parameters** ✕

1. Enter optional Security Key  
2. Enter Device Name  
3. Select Volume level  
4. Click Finish button

Select Mode ☐ Wizard ☒ Normal

Security Key (optional) 1

Device Name 2

Analog Audio Output Volume 3   100

4

## Command: set volume - Wizard Mode

**Parameters** ✕

1. Select Device Name  
2. Select Volume level  
3. Click Finish button

Select Mode ☒ Wizard ☐ Normal

Security Key (optional)

Select 1

Analog Audio Output Volume 2   100

3

## Command: get audio\_source - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Encoder Device Name  
3. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 1 31333331306339326330373066613065  
Encoder Device Name 2  
3

## Command: get audio\_source - Wizard Mode

Parameters

1. Select Encoder Device Name  
2. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065  
Encoder Device Name 1  
2

## Command: get devices - Normal Mode

Parameters

1. Enter optional Security Key  
2. Select Device:  
ALL  
ALL DECODERS  
ALL ENCODERS  
3. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1  
Select Device 2  
3

## Command: get devices- Wizard Mode

Parameters

1. Select Device:  
ALL  
ALL DECODERS  
ALL ENCODERS  
2. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065  
Select Device 1  
2



Command: get display\_status - Normal Mode

Parameters

1. Enter optional Security Key

2. Select Decoder

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Decoder Device Name

2

3

✓ Finish

Command: get display\_status - Wizard Mode

Parameters

1. Select Decoder

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Decoder Device Name

1

2

✓ Finish

Command: get edid - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Decoder Device Name

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Decoder Device Name

2

3

✓ Finish

Command: get edid- Wizard Mode

Parameters

1. Select Decoder Device Name

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Decoder Device Name

1

2

✓ Finish

## Command: get encoder - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Decoder Device Name  
3. Select Subscription:  
VIDEO / AUDIO  
4. Click Finish button

Select Mode
☐ Wizard
☒ Normal

Security Key (optional) 1

Decoder Device Name 2

Subscription 3

4

✓ Finish

## Command: get encoder - Wizard Mode

Parameters

1. Select Decoder Device Name  
2. Select Subscription:  
VIDEO / AUDIO  
3. Click Finish button

Select Mode
☒ Wizard
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Decoder Device Name 1

Subscription 2

3

✓ Finish

## Command: get frame\_converter - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Encoder Device Name  
3. Click Finish button

Select Mode
☐ Wizard
☒ Normal

Security Key (optional) 1

Encoder Device Name 2

3

✓ Finish

## Command: get frame\_converter- Wizard Mode

Parameters

1. Select Encoder Device Name  
2. Click Finish button

Select Mode
☒ Wizard
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name 1

2

✓ Finish

## 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

Security Key (optional) 1   
Decoder Device Name 2   
Resolution 3   
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)   
Decoder Device Name 1   
Resolution 2   
3

## Command: get rotation - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Decoder Device Name  
3. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1   
Decoder Device Name 2   
3

## Command: get rotation- Wizard Mode

Parameters

1. Select Decoder Device Name  
2. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional)   
Decoder Device Name 1   
2

## Command: get scaler - Normal Mode

Parameters

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

Security Key (optional) 1

Decoder Device Name 2

Option 3

4

## Command: get scaler - Wizard Mode

Parameters

1. Select Decoder Device Name  
2. Select Option:  
ALL / WIDTH /  
HEIGHT / FRAME RATE  
3. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Decoder Device Name 1

Option 2

3

## Command: get status - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter Device Name  
3. Select Streams:  
VIDEO / AUDIO /  
IR / SERIAL / USB  
4. Click Finish button

Select Mode  
☐ Wizard  
☒ Normal

Security Key (optional) 1

Device Name 2

Streams (optional) 3

4

## Command: get status- Wizard Mode

Parameters

1. Select Device Name  
2. Select Streams:  
VIDEO / AUDIO /  
IR / SERIAL / USB  
3. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Device Name 1

Streams (optional) 2

3

Command: get var - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Variable Name

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Variable Name

2

3

✓ Finish

Command: get var - Wizard Mode

Parameters

1. Enter / Select Variable Name

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Variable Name

1

2

✓ Finish

Command: get ver - Normal Mode

Parameters

1. Enter optional Security Key

2. Select Device:  
ALL  
ALL DECODERS  
ALL ENCODERS

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Device Name

2

3

✓ Finish

Command: get ver- Wizard Mode

Parameters

1. Select Device:  
ALL  
ALL DECODERS  
ALL ENCODERS

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Device Name

1

2

✓ Finish

## 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

Security Key (optional)

1

Encoder Device Name

2

Option

3

4

✓ Finish

## 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)

31333331306339326330373066613065

Encoder Device Name

1

Option

2

3

✓ Finish

## Command: get video\_mute - Normal Mode

Parameters

1. Enter optional Security Key

2. Select Device:  
ALL  
ALL DECODERS  
ALL ENCODERS

3. Click Finish button

Select Mode

☐ Wizard
☒ Normal

Security Key (optional)

1

Decoder Device Name

2

3

✓ Finish

## Command: get video\_mute- Wizard Mode

Parameters

1. Select Device:  
ALL  
ALL DECODERS  
ALL ENCODERS

2. Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Decoder Device Name

1

2

✓ Finish

Command: get video\_quality - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter Encoder Device Name

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Encoder Device Name

2

3

✓ Finish

Command: get video\_quality - Wizard Mode

Parameters

1. Select Encoder Device Name

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name

1

2

✓ Finish

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

Security Key (optional)

1

Encoder Device Name

2

3

✓ Finish

Command: get video\_status- Wizard Mode

Parameters

1. Select Encoder Device Name

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Encoder Device Name

1

2

✓ Finish

Command: get volume - Normal Mode

Parameters

1. Enter optional Security Key

2. Select Device

3. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

Device Name

2

3

✓ Finish

Command: get volume - Wizard Mode

Parameters

1. Select Device

2. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Device Name

1

2

✓ 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

Security Key (optional) **1**

Device / Group **2**

CEC Code **3**

**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)

Select **1** ☒ Device Name  
☐ All  
☐ All Decoders  
☐ All Encoders

CEC Code **2**

**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

Security Key (optional)

1

IP Address

2

0.0.0.0

Port

3

4998

▼

Global Caché Command

4

5

✓ Finish

## Command: send gc - Wizard Mode

Parameters

1. Select Device, Click Device Discover or enter device IP address

2. Select device port

3. Disconnect (optional)

4. Enter command string or select Delete

5. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

Select Device

▼

Device Discovery

1

IP Address

0.0.0.0

Port

2

4998

▼

Disconnect (optional)

3

☐

Global Caché Command

4

5

✓ 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

**Security Key (optional)** **1**

**Device / Group** **2**

**IR Code** **3**

**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)**

**Select** **1** ☒ Device Name  
☐ All  
☐ All Decoders  
☐ All Encoders

**IR Code** **2**

**3**

\_\_\_\_\_

Parameters

1. Enter optional Security Key

2. Enter Device

3. Enter Data String

4. Leave NONE selected  
(when no feedback required)

5. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional) 1

Device / Group 2

Data String 3

Feedback (optional) 4

NONE

5 ✓ Finish

Parameters

1. Enter optional Security Key

2. Enter Device

3. Enter Data String

4. Select Reply  
(when feedback required)

5. Click Finish button

Select Mode

Wizard

Normal

Security Key (optional) 1

Device / Group 2

Data String 3

Feedback (optional) 4

Reply

5

✓

Finish

Parameters

1. Enter optional Security Key

2. Enter Device

3. Enter Data String

4. Select Contains  
(when part feedback compared)

5. Enter compare string

6. Click Finish button

Select Mode

Security Key (optional)

Device / Group

Data String

Feedback (optional)

Feedback String

6 ✓ Finish

☐ Wizard

☒ Normal

Equals

Parameters

1. Enter optional Security Key

2. Enter Device

3. Enter Data String

4. Select Equals  
(when full feedback compared)

5. Enter compare string

6. Click Finish button

Select Mode

Security Key (optional)

Device / Group

Data String

Feedback (optional)

Feedback String

☐ Wizard

☒ Normal

1

2

3

4

5

6

Contains

✓ Finish

## Command: send serial - Wizard Mode

**Parameters** ✕

1. Select Device  
2. Select string format:  
ASCII / HEX  
3. Enter Data String  
4. Leave None selected  
(when no feedback required)  
5. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Select ☒ Device Name  
☐ All  
☐ All Decoders  
☐ All Encoders

1 <<Decoder>> ▼

Format 2 ASCII ▼

Data String 3

Append CR (optional) ☐

Append LF (optional) ☐

Feedback (optional) 4 NONE ▼

5

**Parameters** ✕

1. Select Device  
2. Select string format:  
ASCII / HEX  
3. Enter Data String  
4. Select Reply  
(when feedback required)  
5. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Select ☒ Device Name  
☐ All  
☐ All Decoders  
☐ All Encoders

1 <<Decoder>> ▼

Format 2 ASCII ▼

Data String 3

Append CR (optional) ☐

Append LF (optional) ☐

Feedback (optional) 4 Reply ▼

5

## Command: send serial - Wizard Mode continued...

Parameters

1. Select Device

2. Select string format:  
ASCII / HEX

3. Enter Data String

4. Select Contains  
(when part feedback compared)

5. Enter compare string

6. Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Select

☒ Device Name
☐ All
☐ All Decoders
☐ All Encoders

<<Decoder>>

Format

ASCII

Data String

Append CR (optional)
☐

Append LF (optional)
☐

Feedback (optional)

Equals

Feedback String

Append CR (optional)
☐

Append LF (optional)
☐

6

✓ Finish

Parameters

1. Select Device

2. Select string format:  
ASCII / HEX

3. Enter Data String

4. Select Equals  
(when all feedback compared)

5. Enter compare string

6. Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31333331306339326330373066613065

Select

☒ Device Name
☐ All
☐ All Decoders
☐ All Encoders

<<Decoder>>

Format

ASCII

Data String

Append CR (optional)
☐

Append LF (optional)
☐

Feedback (optional)

Contains

Feedback String

Append CR (optional)
☐

Append LF (optional)
☐

6

✓ Finish

## Command: send tcp - Normal Mode

**Parameters** ×

1. Enter optional Security Key  
2. Enter device IP Address  
3. Enter device Port  
4. Enter command string  
5. Leave NONE selected  
(when no feedback required)  
6. Click Finish button

Select Mode ☐ Wizard ☒ Normal

Security Key (optional) 1

IP Address 2

Port 3

Command 4

Feedback (optional) 5 NONE ▼

6

**Parameters** ×

1. Enter optional Security Key  
2. Enter device IP Address  
3. Enter device Port  
4. Enter command string  
5. Select Reply  
(when feedback required)  
6. Click Finish button

Select Mode ☐ Wizard ☒ Normal

Security Key (optional) 1

IP Address 2

Port 3

Command 4

Feedback (optional) 5 Reply ▼

6

**Parameters** ×

1. Enter optional Security Key  
2. Enter device IP Address  
3. Enter device Port  
4. Enter command string  
5. Select Contains  
(when part feedback compared)  
6. Enter compare string  
7. Click Finish button

Select Mode ☐ Wizard ☒ Normal

Security Key (optional) 1

IP Address 2

Port 3

Command 4

Feedback (optional) 5 Contains ▼

Feedback String (optional) 6

7

**Parameters** ×

1. Enter optional Security Key  
2. Enter device IP Address  
3. Enter device Port  
4. Enter command string  
5. Select Equals  
(when all feedback compared)  
6. Enter compare string  
7. Click Finish button

Select Mode ☐ Wizard ☒ Normal

Security Key (optional) 1

IP Address 2

Port 3

Command 4

Feedback (optional) 5 Equals ▼

Feedback String (optional) 6

7

## Command: send tcp - Wizard Mode

1. Enter device IP Address

2. Enter device Port

3. Select Format:  
ASCII / HEX

4. Enter command string

5. Leave NONE selected  
(when no feedback required)

6. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

IP Address 1

Port 2

Disconnect (optional)

☐

Format 3

ASCII

▼

Command 4

Append CR (optional)

☐

Append LF (optional)

☐

Feedback (optional) 5

NONE

▼

6

✓ Finish

1. Enter device IP Address

2. Enter device Port

3. Select Format:  
ASCII / HEX

4. Enter command string

5. Select Reply  
(when feedback required)

6. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

IP Address 1

Port 2

Disconnect (optional)

☐

Format 3

ASCII

▼

Command 4

Append CR (optional)

☐

Append LF (optional)

☐

Feedback (optional) 5

Reply

▼

6

✓ Finish



Command: send tcp - Wizard Mode continued...

Parameters

1. Enter device IP Address  
2. Enter device Port  
3. Select Format  
ASCII / HEX  
4. Enter command string  
5. Select Contains  
(when part feedback compared)  
6. Enter compare string  
7. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

IP Address 1

Port 2

Disconnect (optional) ☐

Format 3 ASCII

Command 4

Append CR (optional) ☐

Append LF (optional) ☐

Feedback (optional) 5 Contains

Feedback String 6

Append CR (optional) ☐

Append LF (optional) ☐

7 ✓ Finish

Parameters

1. Enter device IP Address  
2. Enter device Port  
3. Select Format  
ASCII / HEX  
4. Enter command string  
5. Select Equals  
(when all feedback compared)  
6. Enter compare string  
7. Click Finish button

Select Mode  
☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

IP Address 1

Port 2

Disconnect (optional) ☐

Format 3 ASCII

Command 4

Append CR (optional) ☐

Append LF (optional) ☐

Feedback (optional) 5 Equals

Feedback String 6

Append CR (optional) ☐

Append LF (optional) ☐

7 ✓ Finish

## Command: preset add

Parameters

1. Enter Preset Name  
2. Enter Preset Command  
3. Click Finish button

Security Key (optional) 31333331306339326330373066613065

Preset Name 1

Preset Data 2

3 ✓ Finish

## Command: preset delete

Parameters

1. Select Preset Name  
2. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Preset Name 1

2 ✓ Finish

## Command: preset load

Parameters

1. Select Preset Name  
2. Select optional delay time or select Cancel  
3. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

Preset Name 1

Cancel ☐

Delay [minutes] (optional) 2 0 60

3 ✓ Finish

Command: set ui\_button - Normal Mode

Parameters

×

1. Enter optional Security Key

2. Enter UI Name

3. Enter Button Name

4. Select Function:  
Position / State / Text / Press

5. Enter Value

6. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

UI Name

2

Button Name

3

Function

4

Value

5

6

✓ Finish

Command: set ui\_button - Wizard Mode

Parameters

×

1. Select UI Name

2. Select Button Name

3. Select Function  
State / Text / Press

4. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

UI Name

1

Button Name

2

Function

3

4

✓ Finish

## Command: set ui\_label - Normal Mode

Parameters

1. Enter optional Security Key

2. Enter UI Name

3. Enter Label Name

4. Select Function  
Color / Visibility / Text

5. Enter Value

6. Click Finish button

Select Mode

☐ Wizard
☒ Normal

Security Key (optional)

1

UI Name

2

Label Name

3

Function

4

Value

5

6

✓ Finish

## Command: set ui\_label - Wizard Mode

Parameters

1. Select UI Name

2. Select Label Name

3. Select Function  
Color / Visibility / Text

4. Click Finish button

Select Mode

☒ Wizard
☐ Normal

Security Key (optional)

31333331306339326330373066613065

UI Name

1

Label Name

2

Function

3

4

✓ Finish

## 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

Security Key (optional)

1

UI Name

2

Image Name

3

Function

4

Value

5

6

✓ Finish

## Command: set ui\_image - Wizard Mode

Parameters

×

1. Select UI Name

2. Select Image Name

3. Select Function  
Visibility

4. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

UI Name

1

Image Name

2

Function

3

4

✓ Finish

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

Security Key (optional)

1

UI Name

2

Page Name

3

4

✓Finish

Command: set ui\_page - Wizard Mode

Parameters

1. Select UI Name

2. Select Page Name

3. Click Finish button

Select Mode

☒ Wizard

☐ Normal

Security Key (optional)

31333331306339326330373066613065

UI Name

1

Page Name

2

3

✓Finish

Command: set ui - Normal Mode

**Parameters** ✕

1. Enter optional Security Key

2. Enter UI Name

3. Select Service > Enabled

4. Enter optional UI Timeout (seconds)

5. Enter optional Client Limit (1 – 100)

6. Enter optional 4 digit code (0000 – 9999)

7. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

UI Name

2

Service

3

Enabled

Session Timeout (optional)

4

Client Limit (optional)

5

Login (optional)

6

7

✓ Finish

**Parameters** ✕

1. Enter optional Security Key

2. Enter UI Name

3. Select Service > Disabled

4. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

UI Name

2

Service

3

Disabled

4

✓ Finish

**Parameters** ✕

1. Enter optional Security Key

2. Enter UI Name

3. Select Service > Logout

4. Click Finish button

Select Mode

☐ Wizard

☒ Normal

Security Key (optional)

1

UI Name

2

Service

3

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)

31333331306339326330373066613065

UI Name 1

Service 2

Enabled

Session Timeout (optional) 3

Client Limit (optional) 4

☐

Login (optional) 5

NONE

6

✓ Finish

Parameters ×

1. Select UI Name  
2. Select Service > Disabled  
3. Click Finish button

Select Mode

☒ Wizard  
☐ Normal

Security Key (optional)

31333331306339326330373066613065

UI Name 1

Service 2

Disabled

3

✓ Finish

Parameters ×

1. Select UI Name  
2. Select Service > Logout  
3. Click Finish button

Select Mode

☒ Wizard  
☐ Normal

Security Key (optional)

31333331306339326330373066613065

UI Name 1

Service 2

Logout

3

✓ Finish



Command: get ui - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter UI Name  
3. Click Finish button

Select Mode ☐ Wizard  
☒ Normal

Security Key (optional) 1

UI Name 2

3

Command: get ui - Wizard Mode

Parameters

1. Select UI Name  
2. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

UI Name 1

2

Command: get ui\_button - Normal Mode

Parameters

1. Enter optional Security Key  
2. Enter UI Name  
3. Enter Button Name  
4. Enter Function > down  
5. Click Finish button

Select Mode ☐ Wizard  
☒ Normal

Security Key (optional) 1

UI Name 2

Button Name 3

Function 4 Position

5

Command: get ui\_button - Wizard Mode

Parameters

1. Select UI Name  
2. Select Button Name  
3. Select Function > Down  
4. Click Finish button

Select Mode ☒ Wizard  
☐ Normal

Security Key (optional) 31333331306339326330373066613065

UI Name 1

Button Name 2

Function 3

4



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