

# RAIDEN SOFTWARE MANUAL



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## ▼ Chapter 1: Getting Started

### 1-1. Minimum System Requirements

**CPU:** 1 GHz Processor or higher.

**RAM:** 1 GB RAM.

**HDD:** 40MB available space.

**OS:** Microsoft Windows® 7, Windows 8/8.1, and Windows 10

**Screen Resolution:** 1024 x 768 or higher (Recommend Resolution 1920 x 1080).

**Others:** .NET Framework 4.5

### 1-2. Installation

#### ***Administrator Privileges***

When installing the client software, make sure that the user account has administrator privileges to correctly install the software. Otherwise, right-click on the software icon and then click "Run as administrator". When prompted for an administrator password, input an applicable administrator username and password before continuing. If the above case is not possible, contact your system administrator or IT personnel before installation.

#### ***Disabling Anti-Virus Programs***

Before installing the client software, you should disable your anti-virus programs (e.g., Windows Defender) or allow exclusion before and during the installation.

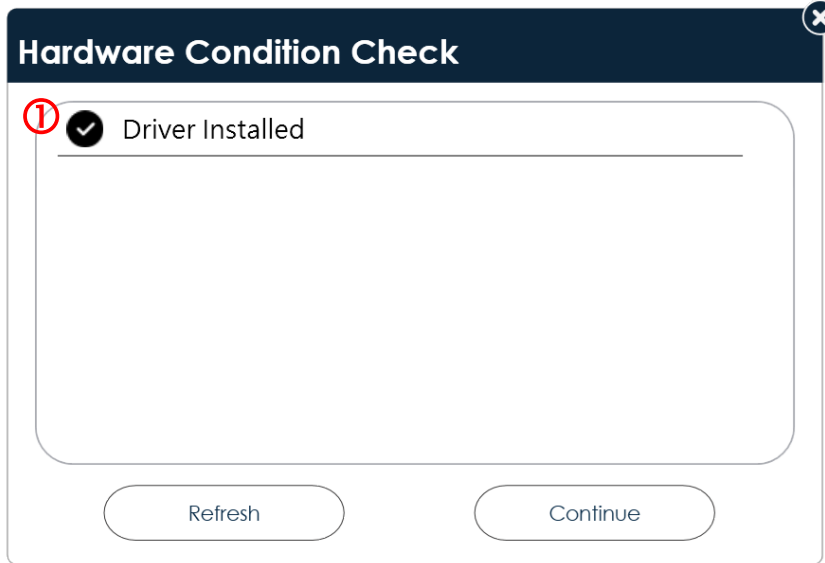
Anti-virus programs will often detect false positives and will automatically quarantine or delete files that they suspect as malwares. If the anti-virus programs accidentally delete a part or a complete file during the installation, the client software may not be properly installed.

You can usually disable an anti-virus program by right clicking the taskbar icon and selecting "Disable" from the shortcut menu. For more information about disabling your anti-virus program, refer to the vendor of that software. After you have finished installing the client software, be sure to restart your anti-virus software.

If the above case is not possible due to system administration lock-down, contact your system administrator or IT personnel before installation.

### 1-3. Hardware Condition Check

When starting the Configuration Tool, the software will check current hardware condition. You may confirm the driver status in this page or continue without installing the driver.



#### ① Driver Check

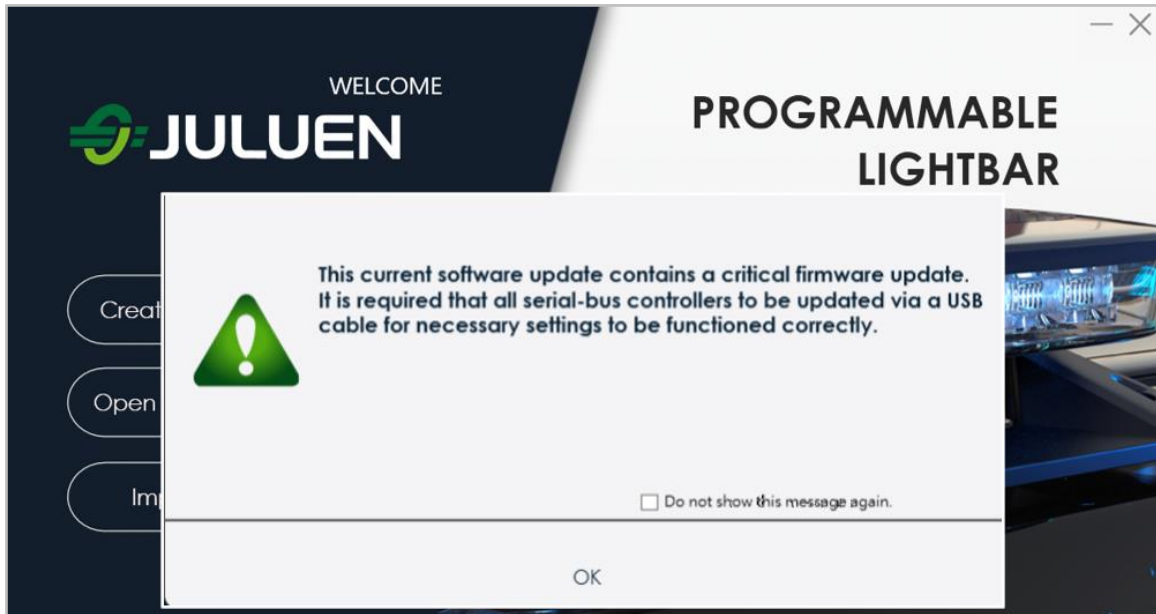
If applicable driver is not yet installed, **[INSTALL DRIVER]** button will be shown. User **must** first connect the Lightbar Unit to the PC via a USB cable, and then click **[INSTALL DRIVER]** to install the driver for the controller module. User may require administrator permission on the PC in order to install the driver. Contact your IT administrator if you are unable to install.

- The **[INSTALL DRIVER]** button is not shown if the driver has been installed already.

## 1-4. Critical Firmware Update Check

If this current software update contains a critical firmware update. Message will prompt to remind that it is required that all serial-bus controllers to be updated for necessary settings to be functioned correctly.

Click “Do not show this message again.” to disable the prompt until next software update.

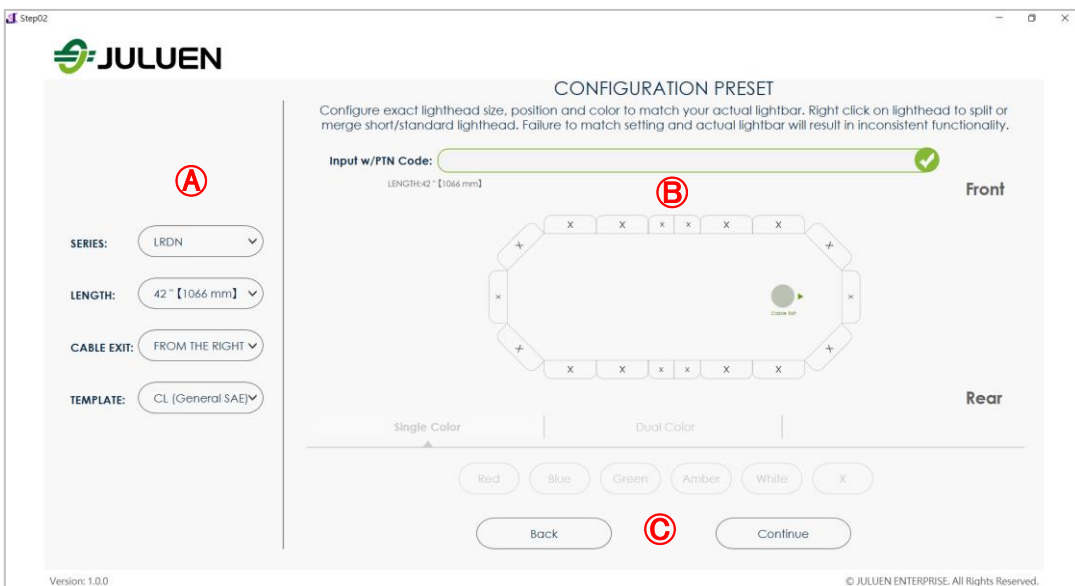


## 1-5. Overview



### ① Create New Configuration

- Click to start with a new configuration of lightheades for a lightbar.



### A. Lightbar Specs

#### a. Series

- Select your product series.

#### b. Length

- Select the length of your lightbar.

#### c. Cable Exit

- Select the side of the cable exit. (The cable exit side define the Front and Rear side of the lightbar.)

#### c. Template

- Select a function template to start your setting.
  1. CL - General SAE
  2. CE - General ECE
  3. CS - General STT

## B. Lighthouse / Colour Configuration

Configure exact lighthouse size, position, and colour to match your actual lightbar. Failure to match setting and actual lightbar will result in inconsistent functionality.

### a. Input using PTN Code:

- If you have the PTN code (aka Pattern Code) for your lightbar, simply input the PTN code into the blank and click on the Check Mark. The correct configuration should automatically fill up for you.

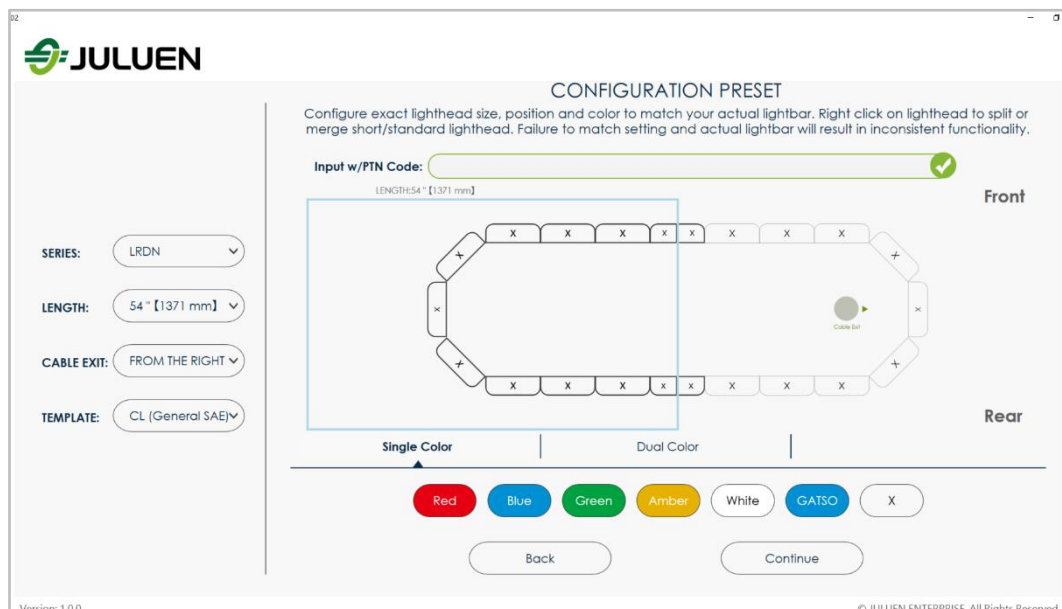
### b. Input configuration manually.

#### 1. Lighthouse Configuration:

- Select and create a configuration of lighthouses that matches your actual lightbar.

#### 2. Colour Configuration

- Select and create a configuration of colours and types that matches your actual lightbar.
- Click one or drag to select a range of lighthouse(s) then select a colour / type to configure it.
- Select Single, Dual for the lighthouse(s). Click on **[Single Colour]** or **[Dual Colour]** to show the relevant page and select the option.



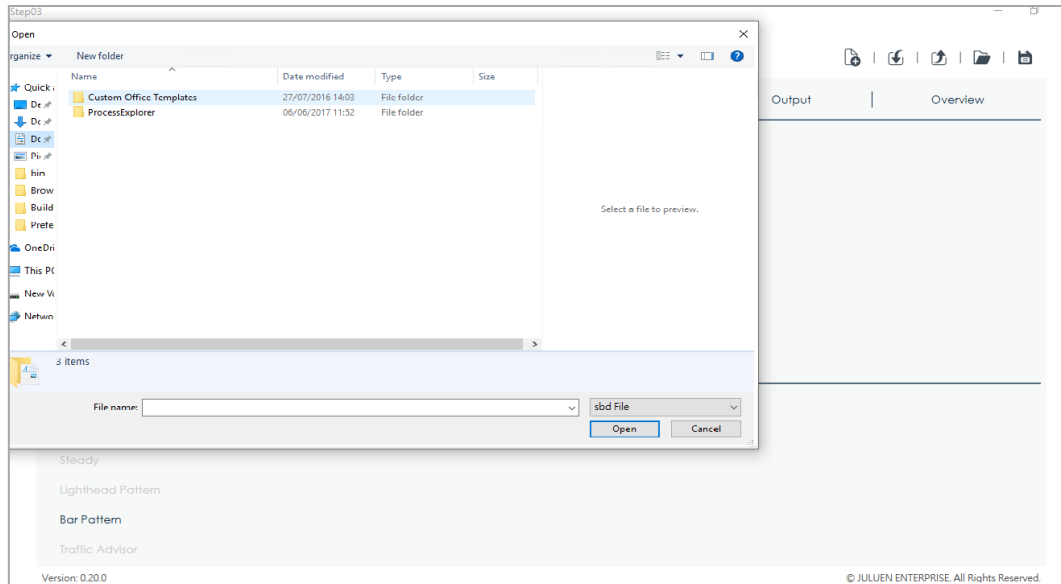
**NOTE:** The correct availability of the colour(s) depends on the actual product you have. Incorrect colour setting may still be uploaded to a lightbar but may not function properly as wanted.

### C. Back / Continue

- Click **[Back]** to go back to the Getting Started page.
- Click **[Continue]** to move forward to Main Setting Panel.

### ② Open Existing Configuration

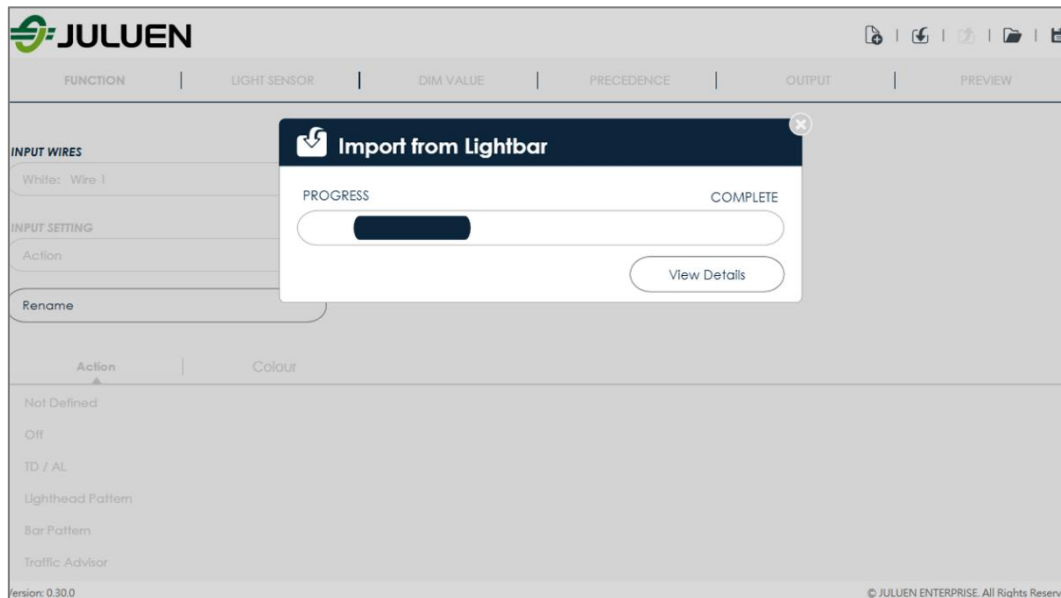
- Click to select an existing configuration and setting file from the host PC.



**NOTE:** Only the supported file format (.plb) is available for configuration.

### ③ Import from Lightbar

- Connect your Controller Module to the host PC with a USB cable (user supplied).
- Click **[Import from Lightbar]** to read and load its configuration and settings to the host PC.

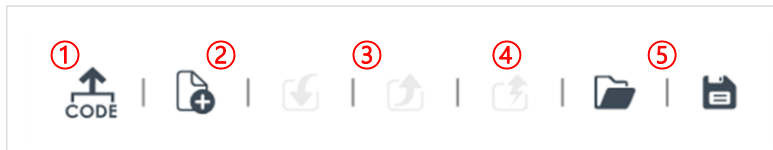


**NOTE:** DO NOT disconnect the USB cable during the process.



## ▼ Chapter 2: Main Setting Panel

### 2-1. File Centre

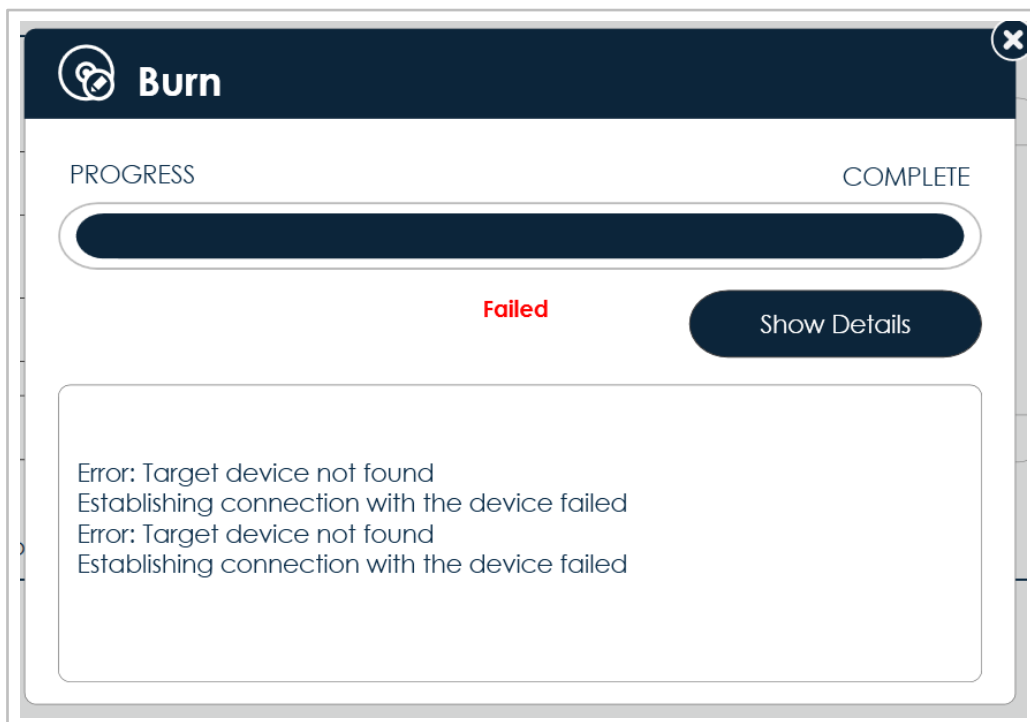


#### ① **Create New Configuration**

- Click to re-start with a new configuration of lightheads (see 1.1).

#### ② **Import from and Export to Lightbar**

- Click to read and load its configuration and settings to the host PC (see 1.1).
- Click to export current configuration and settings to the connected Controller Module.
- Do not disconnect the Controller Module while burning is in progress.
- If burning failed, click on **[Show Details]** to see error message.



#### ③ **Serial-bus Controller Firmware Upgrade**

- Click to load new firmware onto the Serial-bus Controller.

#### ④ **Open Existing Configuration**

- Click to select an existing configuration and setting file (.plb) from the host PC (see 1.1).

#### ⑤ **Save**

- Click to save current configuration and setting file (.plb) to the host PC or USB drive for later use.

## 2-2. Setting Centre



### ① **Function**

- Change settings of each lighthouse action for function wires (see Chapter 3).

### ② **Light Sensor**

- Change settings of your light sensor (see Chapter 4).

### ③ **Dim Value**

- Change settings for dimming function (see Chapter 5).

### ④ **Precedence**

- Change the order of precedence for each control wires (see Chapter 6).

### ⑤ **Output**

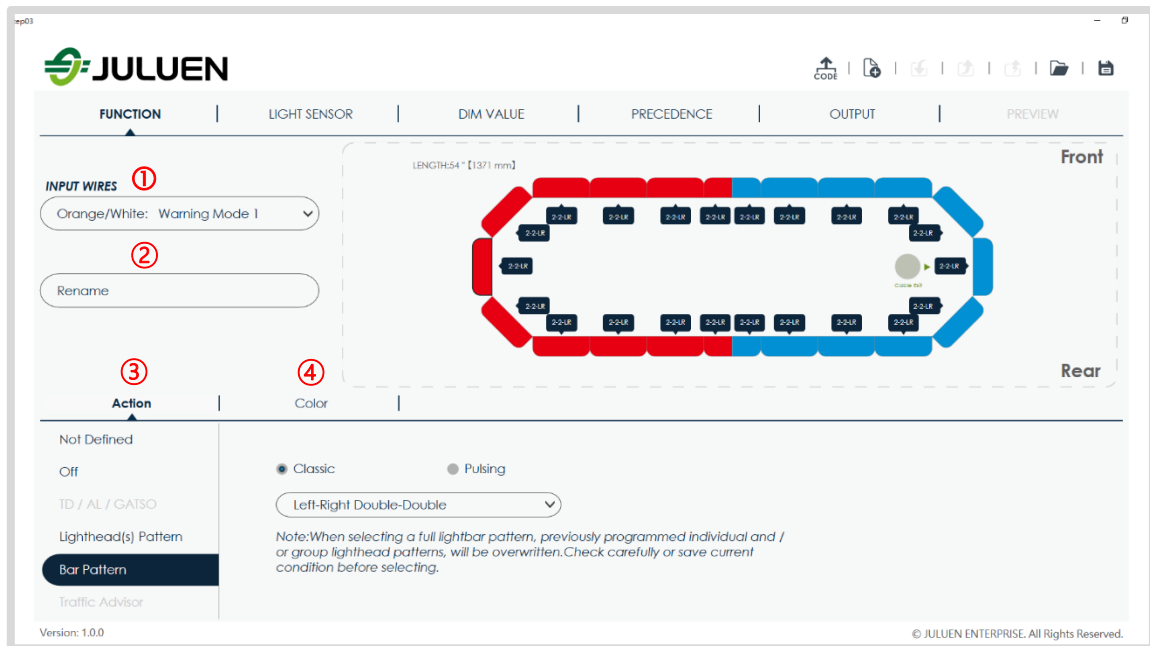
- Change settings for signal outputs (see Chapter 7).

### ⑥ **Preview**

- Preview set functions for the selected function wires (see Chapter 8).

## Chapter 3: FUNCTION

### 3-1. Overview



#### ① Input Wires

- Click and select an input wire for setting (see 3-2).

#### ② Input Setting

- Click [Rename] to change the name of this input wire for easy memory (see 3-3).

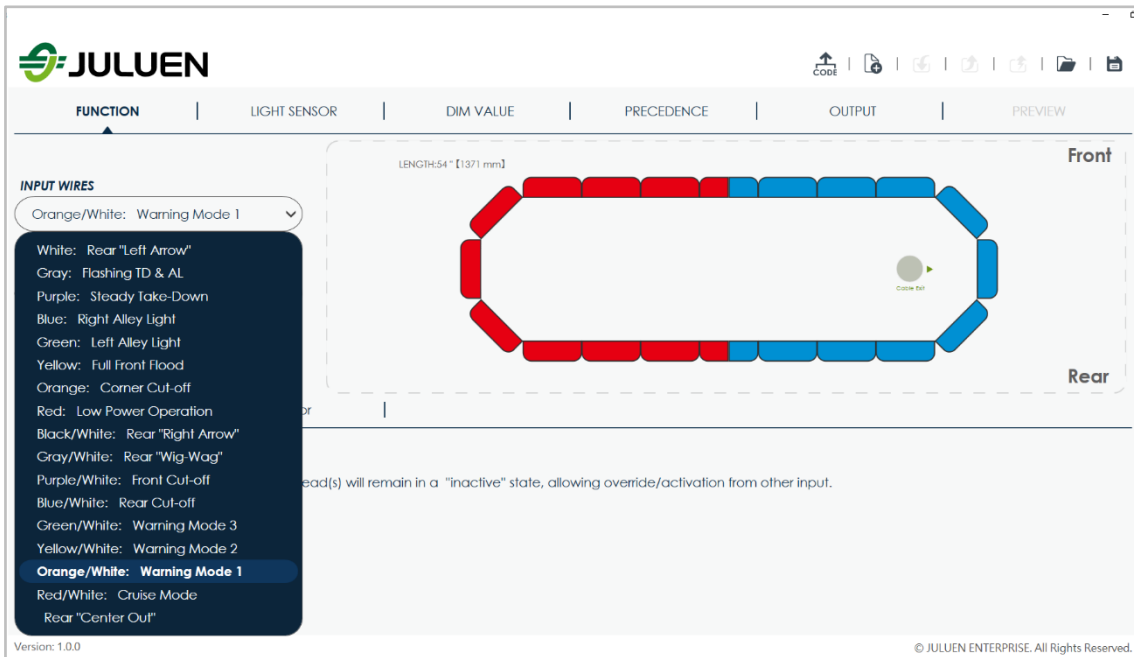
#### ③ Action

- Drag to select a range of lighthoods and set desired action for the lighthouse(s) (see 3-4) when the wire is activated.

#### ④ Colour

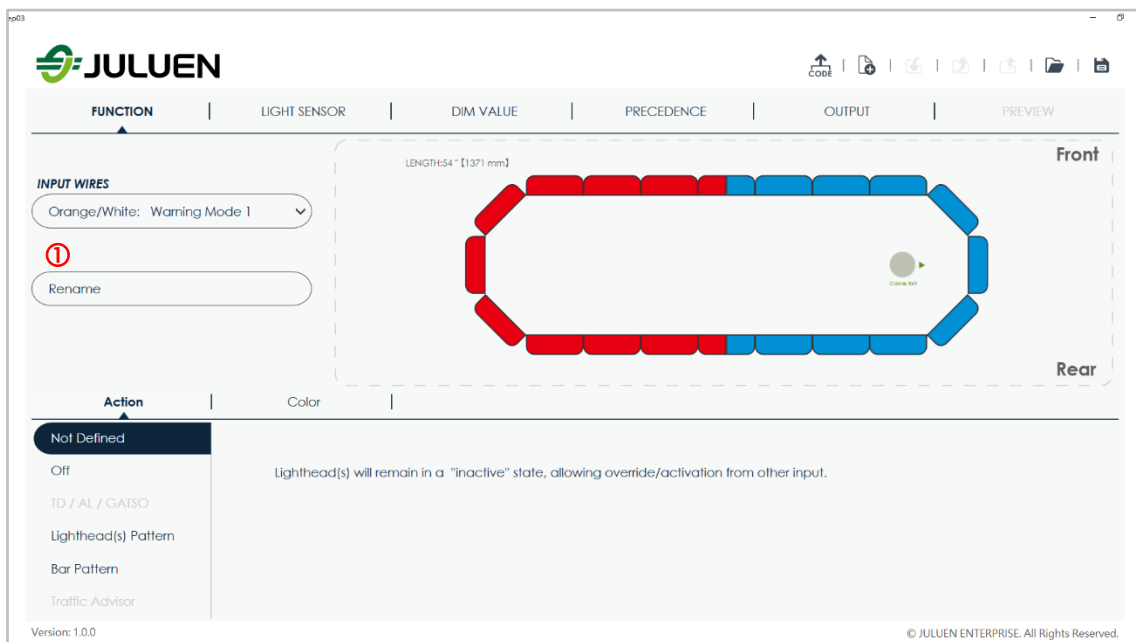
- Drag to select a range of lighthoods and set a desired colour(s) for the lighthouse(s) when the wire is activated (see 3-5).

## 3-2. Input Wires



- Click to show the list of all available wires and select an input wire for setting.
- The colour of the wire will show on the left-hand side of the wire name.

## 3-3. Input Setting

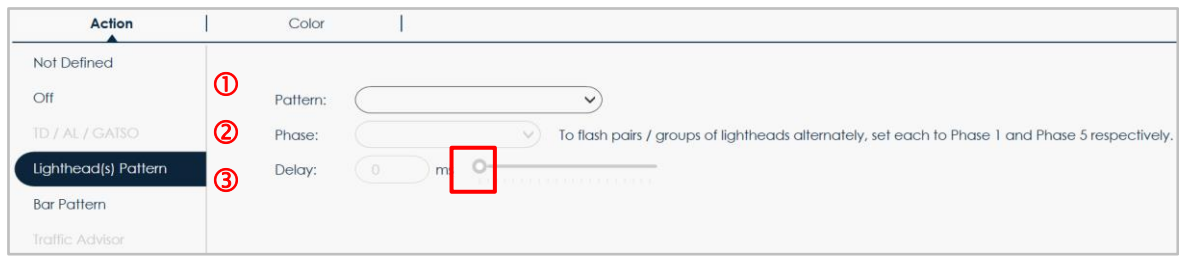


### ①Rename

- Click **[Rename]** to change the name of an input wire.
- Enter a new name for the input wire.
- Click **[OK]** to apply your change.
- Click **[Cancel]** to abort the action.



### 3-4-4. Lighthouse Pattern



#### ① Pattern

- Click to select a flash pattern for the lighthoods.

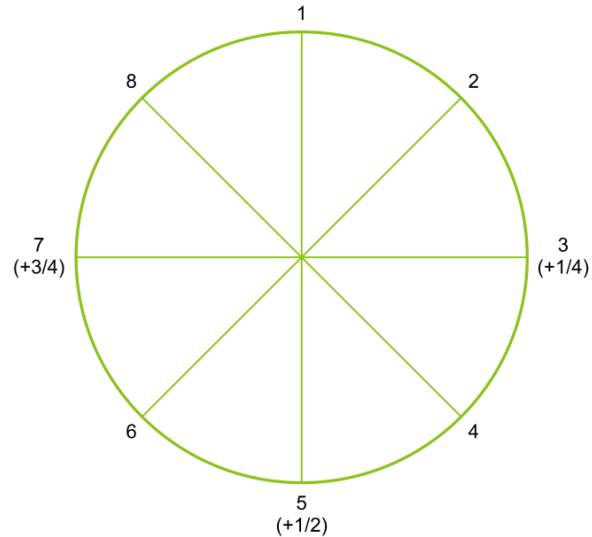
#	Flash Pattern	Abbreviation	Note
1	Double-R65	2E	
2	Single-R65	1E	
3	Triple-R65	3E	
4	Quad-R65	4E	
5	Single-SAE	1	
6	Double-SAE	2	
7	Triple-SAE	3	
8	Quad-SAE	4	
9	Quint-SAE	5	
10	Mega	M	
11	Giga	G	
12	Ultra-SAE	U	
13	Single-Quad	1-4	
14	Single H/L	1HL	
15	Single-Triple-Quint	1-3-5	
16	Single-Single	1-1	
17	Double Double	2-2	
18	Triple-Triple Fast	3-3	
19	Triple-Triple Mid	3-3'	
20	Quint-Triple	5-3	
21	7-1 Flash	7-1	
22	Quad-Single	4-1	
23	Quint-Quint	5-5	
24	ICAO Flash	ICAO	
25	Random	RDM	
26	Steady Max	StdyMX	150% brightness activation; does not affect by other dimming function. This pattern will automatically revert to 100% brightness after 15min to prevent overheating. Do not run this pattern continuously by turning ON and OFF manually after 15 min.
27	Steady 100%	Stdy100	100% brightness activation; does not affect by other dimming function.
28	Steady 75%	Stdy75	75% brightness activation; does not affect by other dimming function.
29	Steady 50%	Stdy50	50% brightness activation; does not affect by other dimming function.
30	Steady 25%	Stdy25	25% brightness activation; does not affect by other dimming function.
31	Steady 5%	Stdy05	
32	Steady 1%	Stdy01	
33	Brake (Aux.)-SAE/ECE	Brke	50% brightness activation; does not affect by other dimming function.
34	Tail (Aux.) - SAE/ECE	Tail	15% brightness activation; does not affect by other dimming function. This is also the steady-burn pattern with the lowest dimming value.
35	Turn (Aux.) - SAE/ECE	Turn	50% brightness activation; does not affect by other dimming function.
36	Reverse (Aux.) - SAE/ECE	Rvrse	25% brightness activation; does not affect by other dimming function.

**CAUTION:** Lighthoods with the Brake (stop) / Tail / Turn flash pattern must not be used to replace the original Brake (stop) / Tail / Turn Indicator lamp(s) of the vehicle.


**NOTE:** Actual compliance and approval will be based on your lightbar configuration.

## ② Phase

- Click to select a phase order (#1 to #8) for the flash pattern. Each phase adds 1/8 activation time to the action.
- To have a lightbar flashing left and right alternatingly, set one half to “#1” and the other half to “#5(+1/2)”
- The phase setting does not affect ending time when the wire is deactivated.

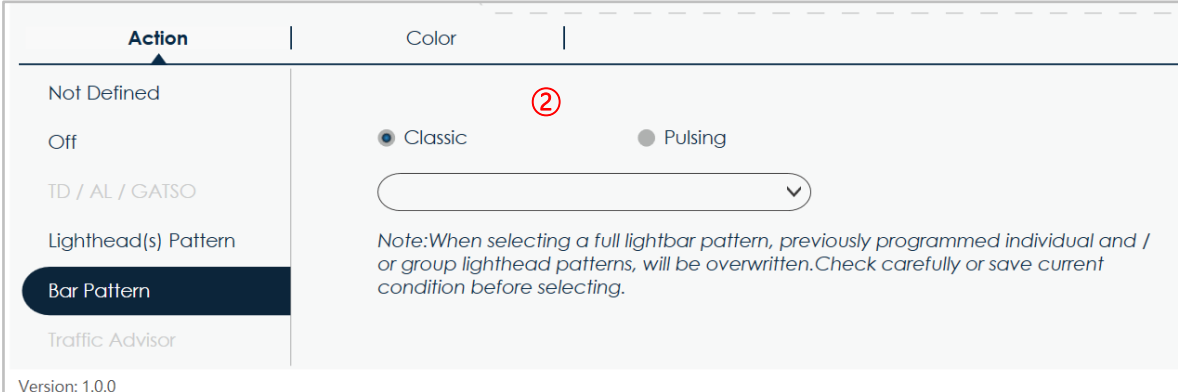


## ③ Delay

- Drag on the slider  or key in a number in the cell to set a delay activation time to the action from 0 to 1000ms
- This delay will stack with the previously set phase time.

### 3-4-5. Bar Pattern

- ① Select a range of lighthoods.
- ② Then click to apply a set lightbar pattern.



①

Version: 1.0.0

## Classic Bar Patterns:

#		Bar Pattern	Abbreviation	Note
1	Left-Right	Single-Single	1-1-LR	
2	Left-Right	Double-Double	2-2-LR	
3	Left-Right	Double-Single	2-1-LR	
4	Left-Right	Triple-Triple	3-3-LR	
5	Left-Right	Triple-Single	3-1-LR	
6	Left-Right	Quad-Quad	4-4-LR	
7	Left-Right	Quad-Single	4-1-LR	
8	Left-Right	Single H/L	1HL'-LR	
9	Left-Right	Double-Double II	2-2'-LR	
10	Left-Right	Double-Blast	2-B-LR	
11	Left-Right	Swing I	Sw-LR	
12	Left-Right	Triple-Blast	3-B-LR	
13	Left-Right	Swing II	Sw'-LR	
14	Left-Right	Swing III	Sw''-LR	
15	Left-Right	Triple H/L	3HL-LR	
16	In-Out	Single-Single	1-1-IO	
17	In-Out	Double-Double	2-2-IO	
18	In-Out	Double-Single	2-1-IO	
19	In-Out	Triple-Triple	3-3-IO	
20	In-Out	Triple-Single	3-1-IO	
21	In-Out	Quad-Quad	4-4-IO	
22	In-Out	Quad-Single	4-1-IO	
23	In-Out	Single H/L	1HL'-IO	
24	In-Out	Double-Double	2-2'-IO	
25	In-Out	Double-Blast	2-B-IO	
26	In-Out	Swing I	Sw-IO	
27	In-Out	Triple-Blast	3-B-IO	
28	In-Out	Swing II	Sw'-IO	
29	In-Out	Swing III	Sw''-IO	
30	In-Out	Triple H/L	3HL-IO	



## Pulsing Bar Patterns:

#		Bar Pattern	Abbreviation	Note
1	All	Pulsing	P	
2	All	Pulsing Fast	PF	
3	Left-Right	Pulsing	P-LR	
4	Left-Right	Pulsing Fast	PF-LR	
5	All	Pulsing Tremor	PT	
6	All	Pulsing Tremor Fast	PTF	
7	Left-Right	Pulsing Tremor	PT-LR	
8	Left-Right	Pulsing Tremor Fast	PTF-LR	
9	Clockwise	Pulsing Chaser	PC-C	
10	Anti-Clockwise	Pulsing Chaser	PC-AC	
11	Clockwise	Pulsing Chaser Fast	PCF-C	
12	Anti-Clockwise	Pulsing Chaser Fast	PCF-AC	
13	Clockwise	Pulsing Scan	PS-C	
14	Anti-Clockwise	Pulsing Scan	PS-AC	
15	Clockwise	Pulsing Scan Fast	PSF-C	
16	Anti-Clockwise	Pulsing Scan Fast	PSF-AC	
17	Clockwise	Pulsing Comet	PCM-C	
18	Anti-Clockwise	Pulsing Comet	PCM-AC	
19	Clockwise	Pulsing Comet Fast	PCMF-C	
20	Anti-Clockwise	Pulsing Comet Fast	PCMF-AC	
21	Split	Pulsing Chaser	PC-LR	
22	Split	Pulsing Chaser Fast	PCF-LR	
23	Split	Pulsing Scan	PS-LR	
24	Split	Pulsing Scan Fast	PSF-LR	
25	Split	Pulsing Comet	PCM-LR	
26	Split	Pulsing Comet Fast	PCMF-LR	
27	In-Out	Pulsing Scan Wig-Wag	PSW-IO	
28	In-Out	Pulsing Scan Wig-Wag	PSWF-IO	
29	Left-Right	Pulsing Scan Wig-Wag	PSW-LR	
30	Left-Right	Pulsing Scan Wig-Wag	PSWF-LR	
31	Butterfly	Pulsing Scan	PS-BF	
32	Butterfly	Pulsing Scan Fast	PSF-BF	

### 3-4-6. Traffic Advisor

#### ① Traffic Arrow Mode

- Click to select a Traffic Arrow direction for the lighthoods.

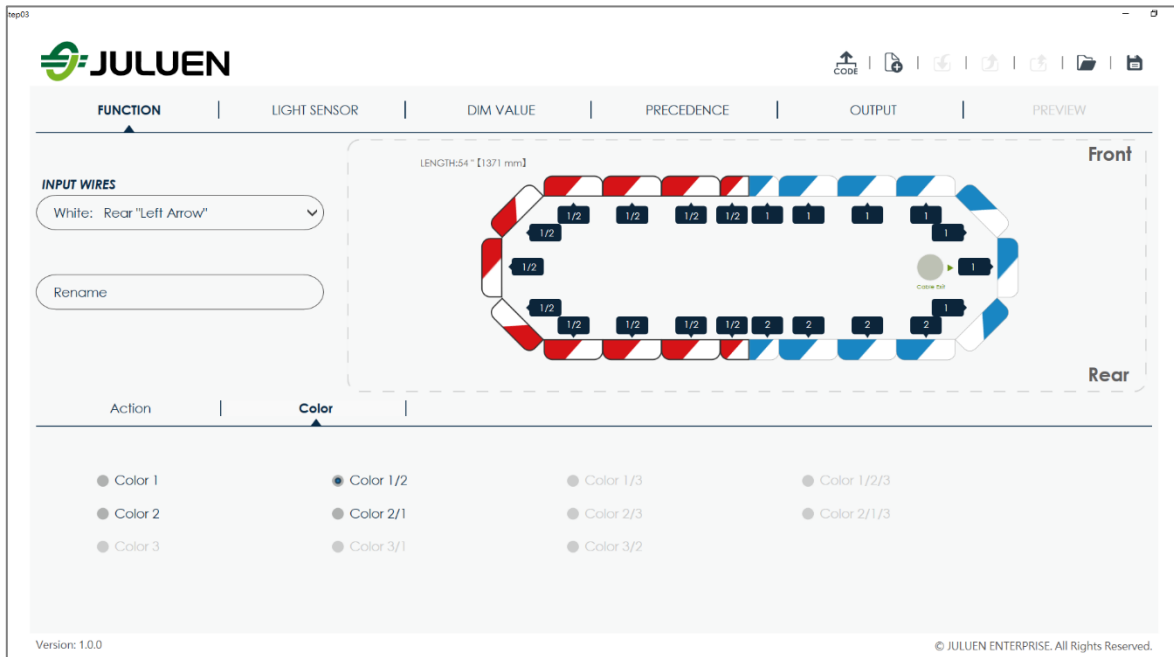
#### ② Flash Pattern

#	TA Pattern	Abbreviation	Note
1	Sweep Single	TA-Sw-1	Does not affected by dimming function
2	Sweep Double	TA-Sw-2	Does not affected by dimming function
3	Sweep Triple	TA-Sw-3	Does not affected by dimming function
4	Sweep Single End x2	TA-Sw-1'	Does not affected by dimming function
5	Solid Single	TA-Sd-1	Does not affected by dimming function
6	Solid End x2	TA-Sd-1'	Does not affected by dimming function
7	Solid Chaser	TA-Sd-C	Does not affected by dimming function
8	Solid Fade	TA-Sd-D	Does not affected by dimming function
9	Blink Double	TA-Bk-2	Does not affected by dimming function
10	Blink Triple	TA-Bk-3	Does not affected by dimming function
11	Blink Solid	TA-Bk-Sd	Does not affected by dimming function

- Click to select a TA Flash Pattern for Left Arrow / Right Arrow Pattern and Centre-out Arrow Pattern respectively.

### 3-5. Colour

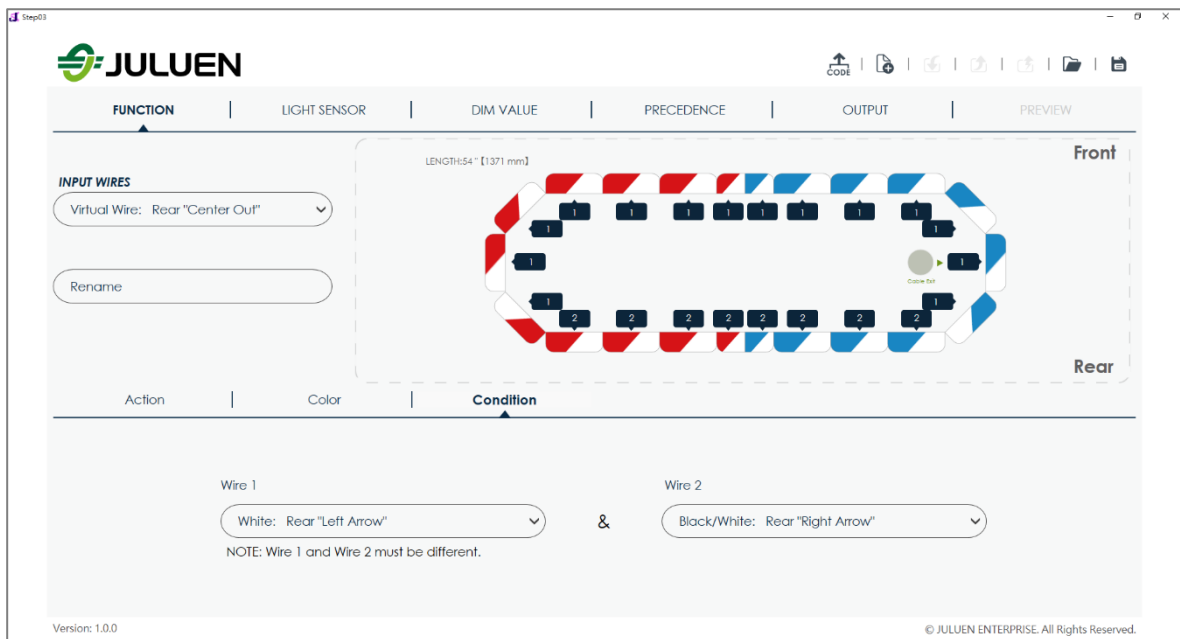
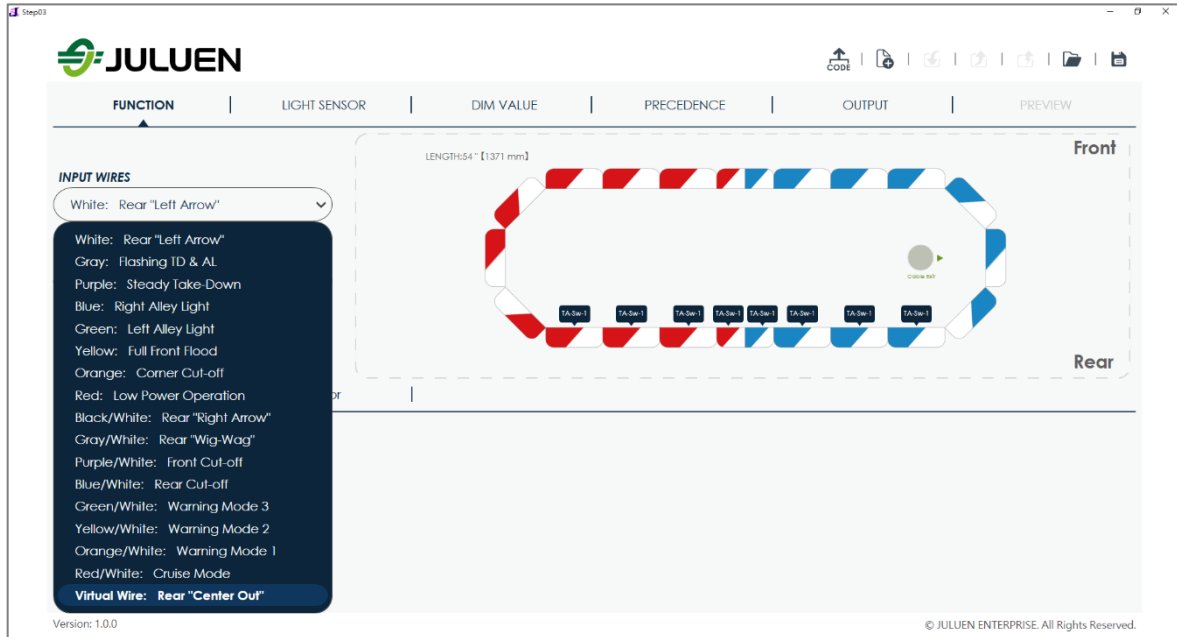
Select one or a range of lighthouse(s) and set a colour for its action.



- If the action is set to “Not Defined”, the colour setting will not be carried down to the next precedence wire(s)
- For Single Colour lighthouse(s), **[Colour 1]** is the only option.
- For Dual Colour lighthouse(s), click one of the following options for colour setting:
  - ✓ **[Colour 1]**
  - ✓ **[Colour 2]**
  - ✓ **[Colour 1/2]**
  - ✓ **[Colour 2/1]**
- The availability of Dual Colour function depends on the product you ordered.
- The exact colour of Colour 1, 2 depends on the colour option(s) for specific lighthouse(s) you ordered.

### 3-6. Virtual Wire and Condition

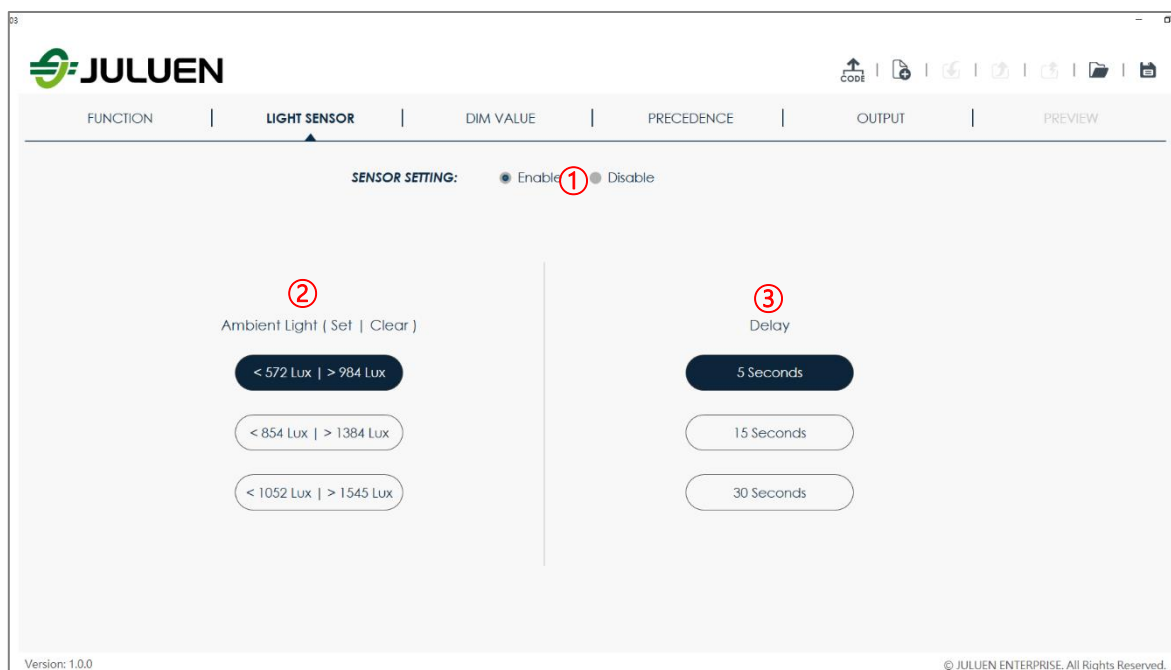
A Virtual wire is activated when a given condition applied; it may be used in application such like Traffic Director Center-out Arrow where Left Arrow and Right Arrow wires need to be activated at the same time to activate Center-out Arrow.



- Select 2 wires that you would like to be the condition of the virtual wire; when these 2 wires are activated, the virtual wire is activated together.

## Chapter 4: Light Sensor

### 4-1. Overview



#### ① Sensor Enabling

- Click **[Enable]** to enable the Auto Dimming function.
- Click **[Disable]** to disable the Auto Dimming function.

**NOTE:** The availability of Auto Dimming depends on the product ordered.

#### ② Settings for Ambient Light (Set | Clear)

- Select the correct lens colour to display the correct lux value for the colour.
- Click to select the activating and deactivating automatic dimming; The left value indicates activation threshold; the right value indicates clear threshold.

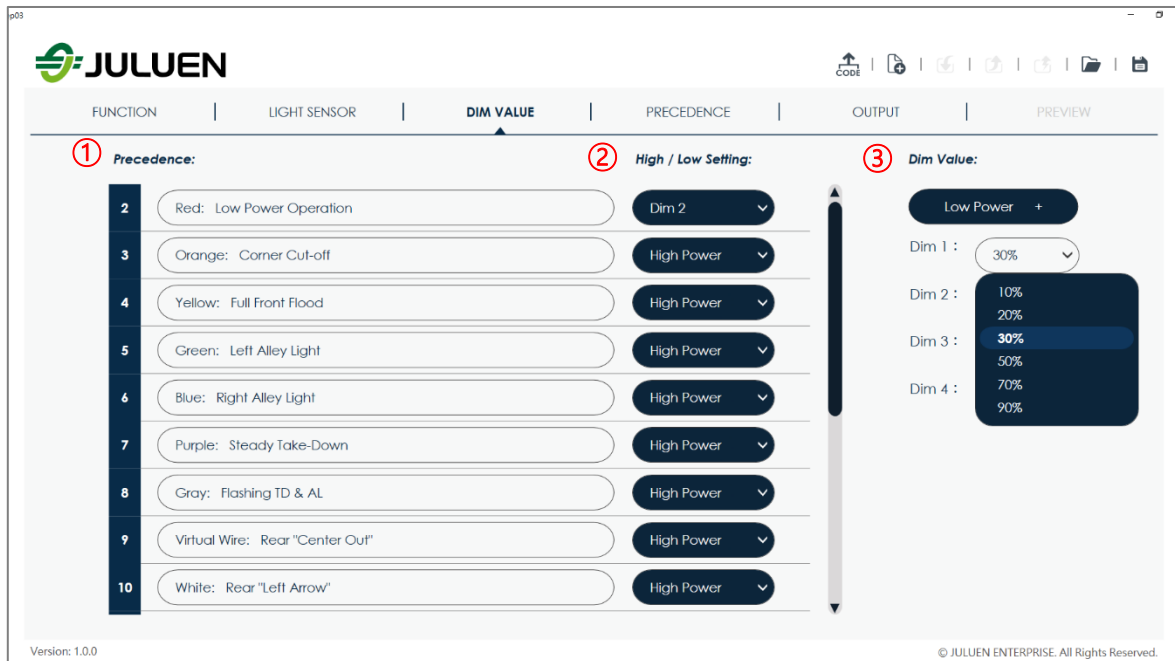
	Clear Lens	
Value 1	<572 Lux	>984 Lux
Value 2	<854 Lux	>1384 Lux
Value 3	<1052 Lux	>1545 Lux

#### ③ Delay

- Click to select one of the delay time setting; above set/clear condition must be met over the delay time to proceed:
  - ✓ **[5 Seconds]**
  - ✓ **[15 Seconds]**
  - ✓ **[30 Seconds]**

## Chapter 5: Dim Value

### 5-1. Overview



#### ① Precedence

- Show the precedence for all control wires of your lightbar (see 5-1-1).

**NOTE:** To change the precedence, click **[Precedence]** to arrange order (see Chapter 6).

#### ② High / Low Setting

- Click on the dropdown menu and select one of the dimming modes (see 5-1-2).

#### ③ Dim Value

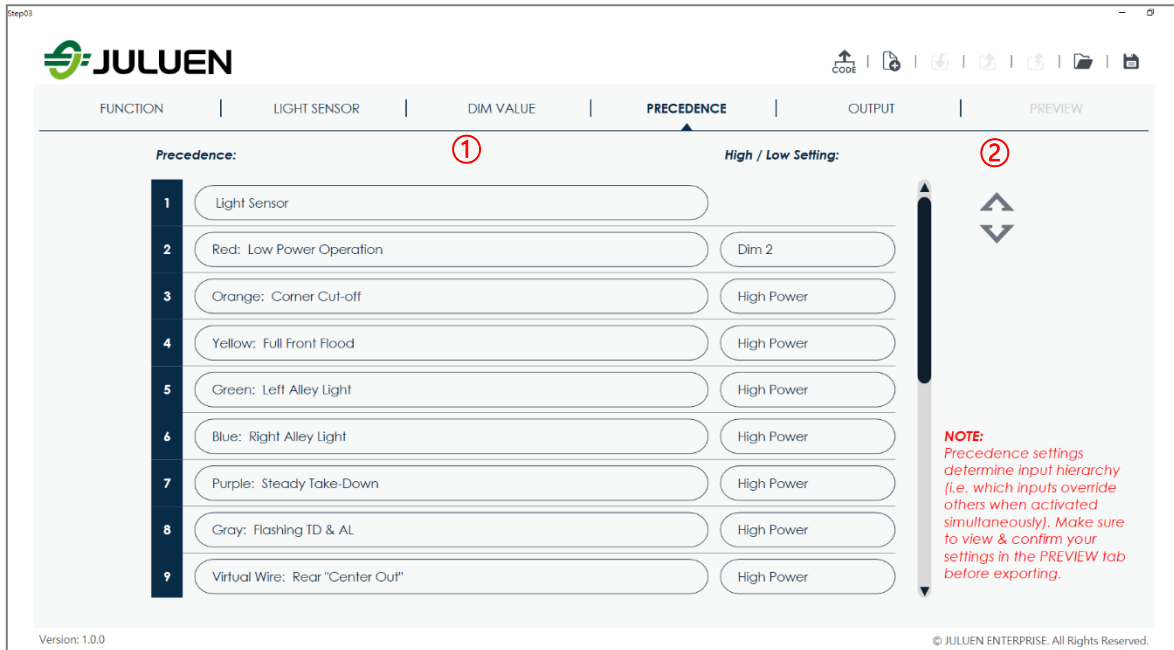
- Click to change the setting for each of 4 dimming modes.
- Select one of the following options for dimming function:
  - ✓ [10%]
  - ✓ [20%]
  - ✓ [30%]
  - ✓ [40%]
  - ✓ [50%]
  - ✓ [60%]
  - ✓ [70%]
  - ✓ [80%]
  - ✓ [90%]

## Chapter 6: PRECEDENCE

### 6-1. Overview

Set the order of precedence for your lightbar.

When more than one wires are activated at the same time, the wire with the higher precedence will affect the lighthouse action of the lower precedence wire.



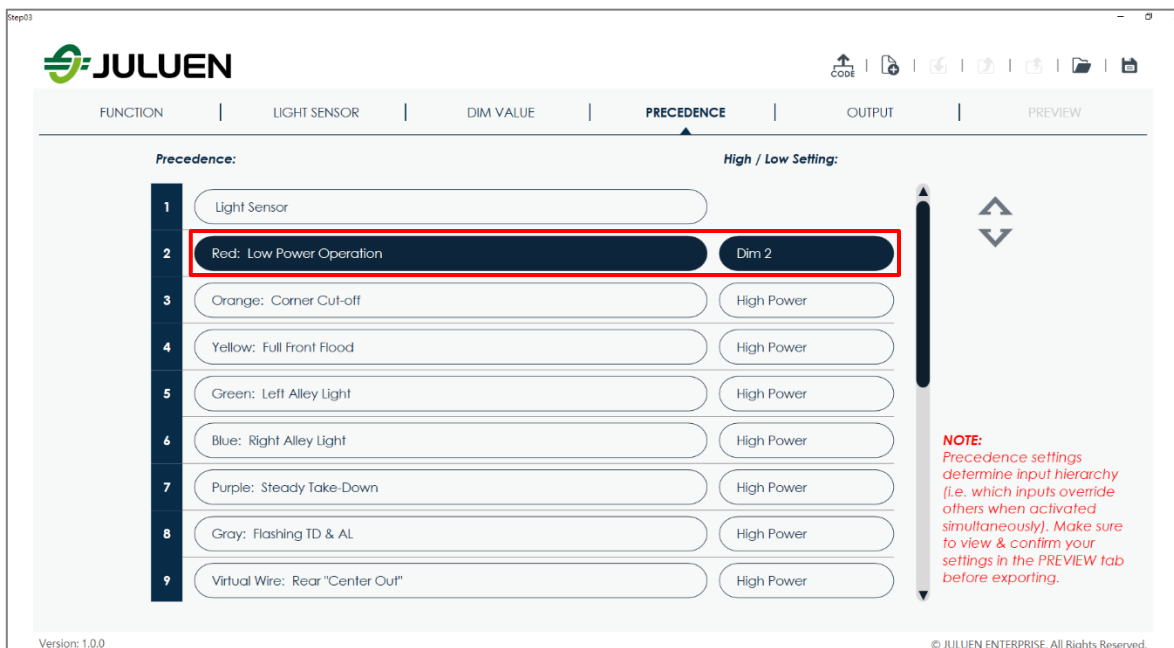
#### ① Precedence Panel



- The Precedence Panel shows the information of each wire with specific precedence.

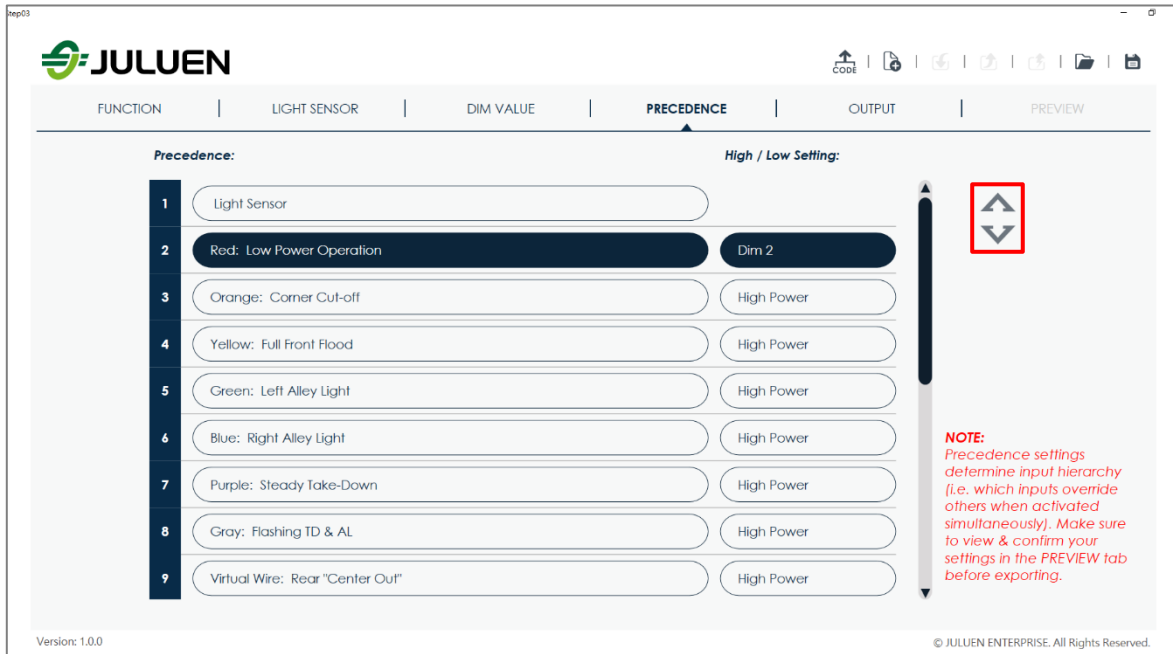
**NOTE:** To change the dimming value, click the [DIM VALUE] tab at the top to change settings (see Chapter 5).

#### ② Up/Down Arrow Button

- First click on the wire to be change. Current selected wire will be highlighted.



2. Change the precedence of the selected wire with the  button (move upward) or the  button (move downward).



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FUNCTION | LIGHT SENSOR | DIM VALUE | **PRECEDENCE** | OUTPUT | PREVIEW

**Precedence:**

		<b>High / Low Setting:</b>
1	Light Sensor	
2	Red: Low Power Operation	Dim 2
3	Orange: Corner Cut-off	High Power
4	Yellow: Full Front Flood	High Power
5	Green: Left Alley Light	High Power
6	Blue: Right Alley Light	High Power
7	Purple: Steady Take-Down	High Power
8	Gray: Flashing TD & AL	High Power
9	Virtual Wire: Rear "Center Out"	High Power

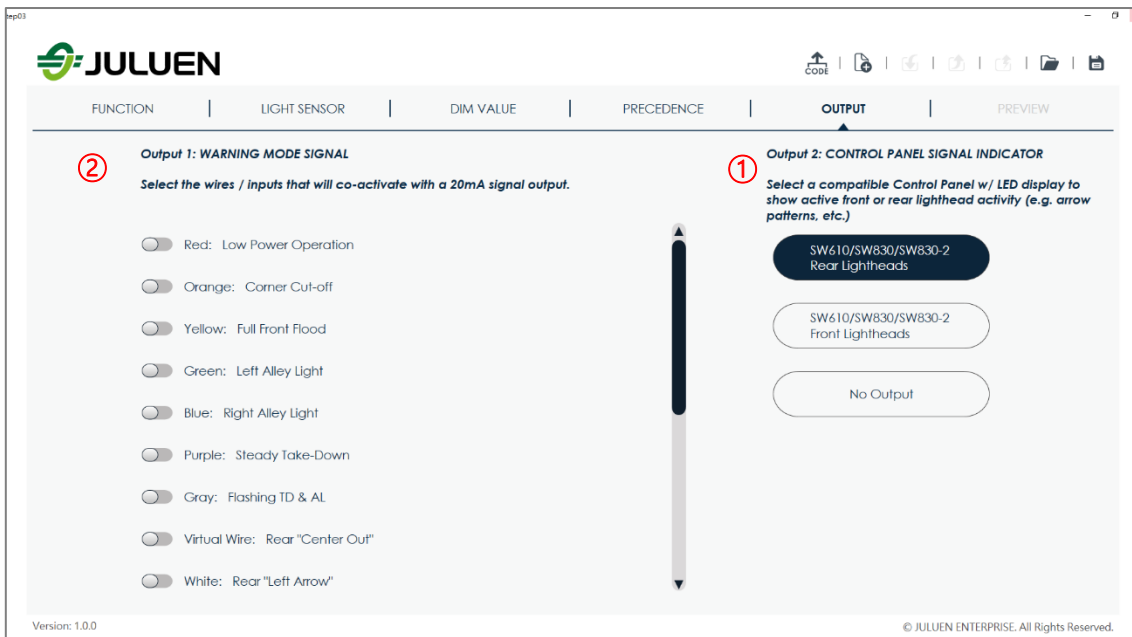
**NOTE:**  
Precedence settings determine input hierarchy (i.e. which inputs override others when activated simultaneously). Make sure to view & confirm your settings in the PREVIEW tab before exporting.

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## Chapter 7: Output

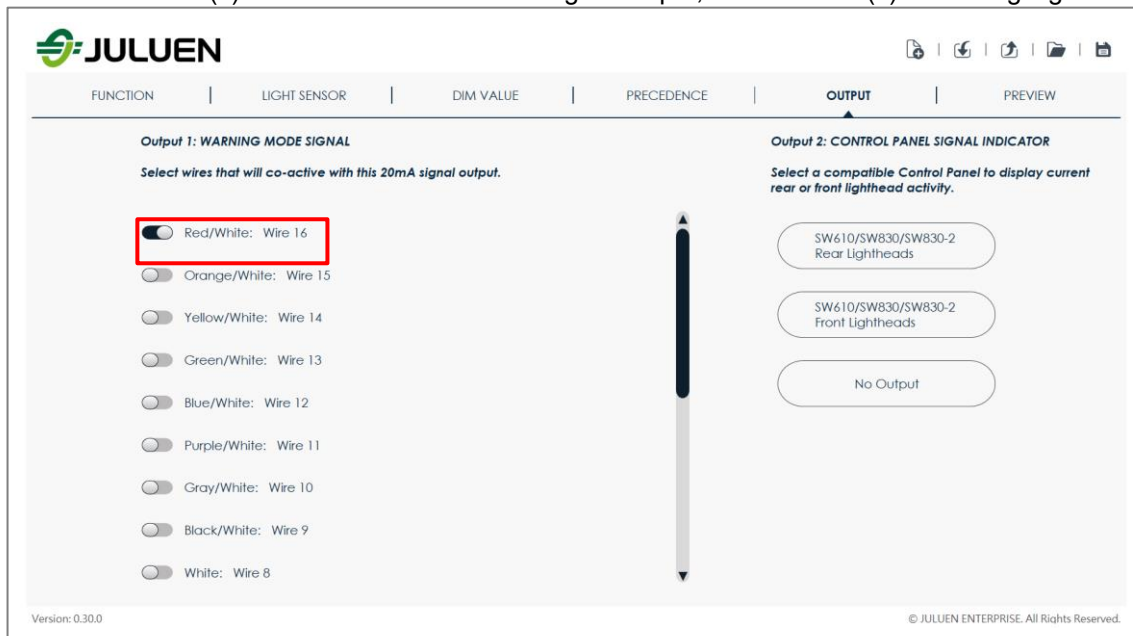
### 7-1. Overview



#### ① Output 1 : WARNING MODE SIGNAL

Output 1 will output a 20mA signal when any of the selected wires is activated.

1. Select the wire(s) that will activate this 20mA signal output; selected wire(s) will be highlighted.



## ② Output 2: CONTROL PANEL SIGNAL INDICATOR

Select a compatible Control Panel to display current rear or front lighthouse activity.

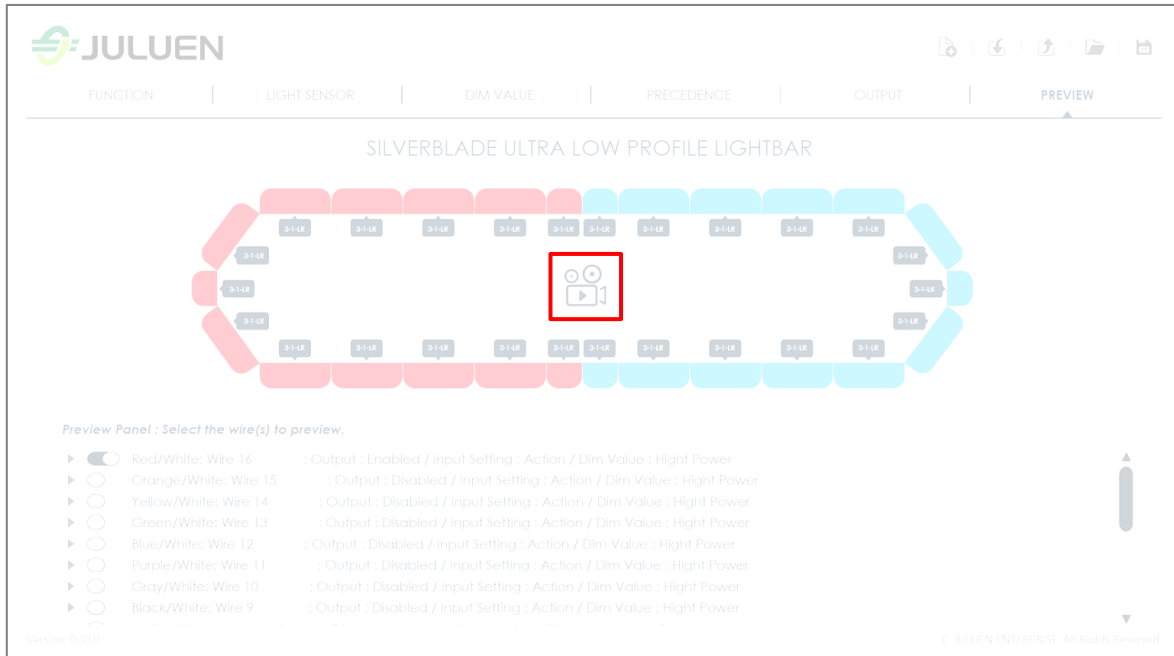
- SW610 / SW830 / SW830-2 Control Panel, displaying Rear Lighthouse Activity
- SW610 / SW830 / SW830-2 Control Panel, displaying Front Lighthouse Activity
- Disable



The screenshot shows the JULUEN configuration interface. At the top, there is a navigation bar with tabs for FUNCTION, LIGHT SENSOR, DIM VALUE, PRECEDENCE, OUTPUT, and PREVIEW. The 'OUTPUT' tab is selected. Below the navigation bar, there are two main sections. The left section is titled 'Output 1: WARNING MODE SIGNAL' and contains a list of color-coded options with toggle switches: Red: Low Power Operation, Orange: Corner Cut-off, Yellow: Full Front Flood, Green: Left Alley Light, Blue: Right Alley Light, Purple: Steady Take-Down, Gray: Flashing TD & AL, Virtual Wire: Rear "Center Out", and White: Rear "Left Arrow". The right section is titled 'Output 2: CONTROL PANEL SIGNAL INDICATOR' and contains a list of control panel options: SW610/SW830/SW830-2 Rear Lighthoods (highlighted with a red box), SW610/SW830/SW830-2 Front Lighthoods, and No Output. The interface also includes a vertical slider in the center and a toolbar at the top right with icons for CODE, save, undo, redo, and other functions. The bottom left corner shows 'Version: 1.0.0' and the bottom right corner shows '© JULUEN ENTERPRISE. All Rights Reserved.'

## Chapter 8: Preview **Coming Soon**

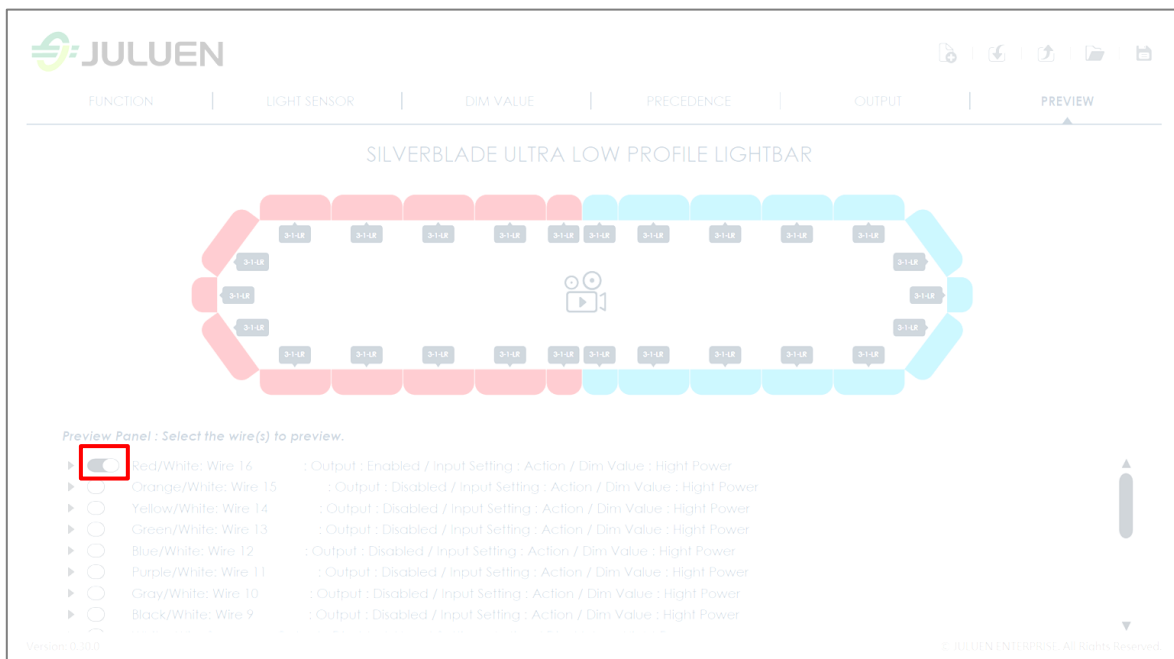
### 8-1. Preview Your Lightbar

This preview page allows users to preview the set actions when one or many wires are activated together. Dimming condition is not shown.



- Click  to preview the set functions for control wires.
- Click  to stop the preview of your lightbar.

### 8-2. Preview Panel



- Turn ON or OFF one or many function wires to preview.
- Actual action and function must be checked and confirmed on the actual lightbar. Special condition such as Left Arrow and Right Arrow wire will activating Centre-out Arrow will not be displayed.

## ***Appendix A. Copyright Notices***

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