



INSTALLATION & OPERATION MANUAL

OceanBridge



Preface

READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL

IMPORTANT NOTICE

Attention Installer: This manual contains important information about the installation, operation and safe use of this product. This information should be given to the owner and/ or operator of this equipment.

WARRANTY COVERAGE

Please refer to www.oceanled.com/warranty for full warranty statement.

SAFETY NOTICES



Warning: Product installation and operation

Before installing OceanBridge, read and follow all warning notices and instructions included. Failure to follow safety warnings and instructions can result in property damage, severe injury, or even death.

Warning: Power supply voltage

Connecting this product to a voltage supply greater than the specified maximum rating may cause permanent damage to the unit. Refer to the Technical specification section for voltage rating.

Warning: Hazardous or flammable atmospheres

This product is **NOT** approved for use in hazardous or flammable atmospheres. **DO NOT** install it in areas with hazardous or flammable atmospheres, such as engine rooms or near fuel tanks.



Danger: Risk of electric shock or electrocution

This OceanBridge unit must be installed by a licensed or certified electrician in accordance with all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to swimmers, installers, or others due to electrical shock, and may also cause damage to property.

Warning: Switch off power supply

Ensure the vessel's power supply is switched **OFF** before starting to install this product. **Do NOT** connect or disconnect equipment with the power switched on.

IMPORTANT INFORMATION

CAUTION: Power supply protection

When installing this product and using the OceanLED power cable, make sure the power source is adequately protected by using a suitably-rated fuse or automatic circuit breaker.

Water ingress disclaimer

While the waterproof rating capacity of this product meets IP66 standards, water intrusion and subsequent equipment failure may occur if the product is subjected to activities such as, but not limited to, high-pressure washing and/or submersion/flooding. OceanLED will not warranty products if the cause of failure exceeds the requirements for an IP66 rating.

EMC installation guidelines

OceanLED equipment and accessories conform to the appropriate Electromagnetic Compatibility (EMC) regulations, to minimize electromagnetic interference between equipment and minimize the effect such interference could have on the performance of your system.

FCC Compliance

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment should be installed and operated keeping the radiator at least 20cm or more from the person's body.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

This device complies with below part 15 of the FCC Rules.

- Part 15 Subpart C
- Part 15 Subpart E

Warning: USB connection

The OceanBridge product is equipped with a USB data connection specifically intended for the connection of USB memory storage devices. Please DO NOT connect devices with AC power sources, such as PCs or Laptops, to the OceanBridge product using the USB port. This port is exclusively designed for USB memory storage devices only to ensure safe and optimal functionality.

Product disposal

Dispose of this product in accordance with the WEEE Directive.



Caution: Service and maintenance

This product does not contain user-serviceable components. Please direct all maintenance and repair inquiries to authorized OceanLED dealers. Unauthorized repairs could impact your warranty.

Unit cleaning instructions

The unit does not require regular cleaning. However, if you find it necessary to clean the unit, please follow the steps below:

1. Ensure power is switched off.
2. Wipe unit clean with a damp cloth.
3. If necessary, use a mild detergent solution to remove grease marks.

Changing settings of the device using remote device via Wi-Fi

When changing the Wi-Fi settings, performing a factory reset, or restoring a backup using a remote device connected via Wi-Fi, be aware that the unit will need to reboot to apply the changes. This reboot will result in the temporary loss of the Wi-Fi connection with the OceanBridge unit, which will need to be manually restored based on the applied changes. Additionally the reboot will cause a temporary loss of the DMX output.

Technical accuracy

To the best of our knowledge, the information in this document was correct at the time it was produced. However, OceanLED cannot accept liability for any inaccuracies or omissions it may contain. Please check the OceanLED website (www.oceanled.com) to ensure you have the most up-to-date version(s) of the documentation for your product. Specifications are subject to change without notice.

FIRMWARE UPDATE

Register your OceanBridge Multizone Lighting Controller to receive the latest firmware updates. Visit <https://www.oceanled.com/downloads/> or scan the QR code below:



PRODUCT REGISTRATION

Contents

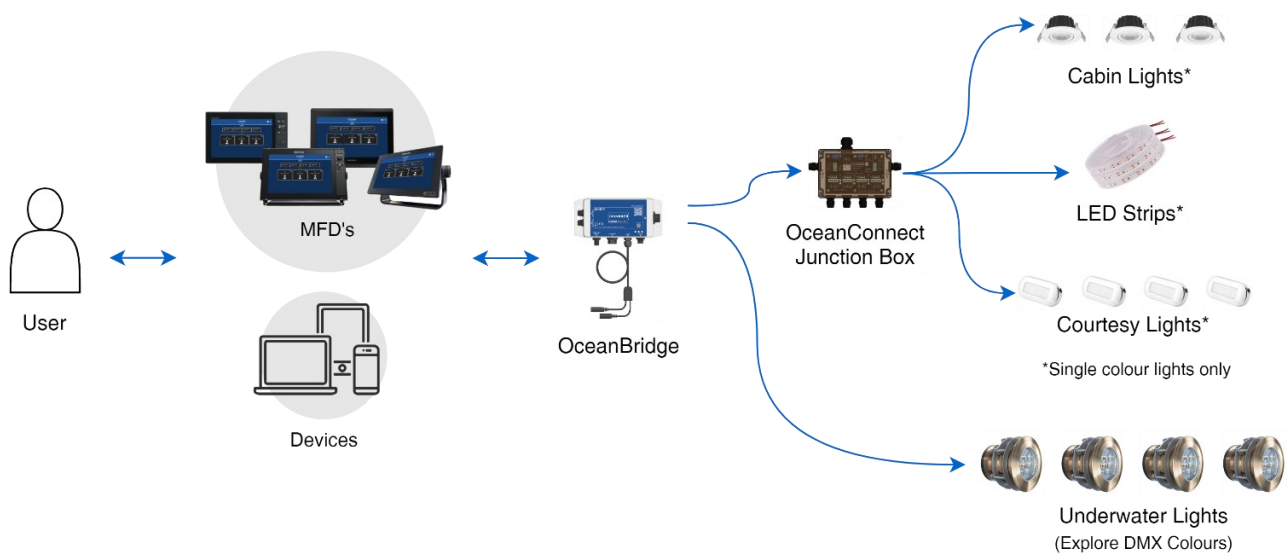
Preface.....	1
1 Introduction.....	6
1.1 Product Overview	6
1.2 Connections Overview	10
1.3 Diagnostic LEDs and Test/Reset Switch	10
1.4 System Configuration Examples	11
2 Planning The Installation.....	12
2.1 Parts Supplied	12
3 Mounting	13
3.1 Finding the Mounting Location	13
3.2 Mounting the OceanBridge Unit	14
4 Electrical Installation / Wiring	15
4.1 Power Connection (without NMEA2000)	15
4.2 Connecting via NMEA2000	16
4.3 MFD Install – Ethernet Connection	17
4.4 LAN Ethernet Connection - No MFD	19
4.5 Audio Connections	19
4.6 DMX Connections	21
4.7 External DMX Controller Connection	25
4.8 External Switches Connections	26
4.9 Final Installation Checks	27
5 System Setup.....	28
5.1 First Time Startup	28
5.2 How to Setup the Equipment	33
5.3 Quick Start Launch - Preloaded Simple Setup	36
5.4 Device Setup	37
5.5 Zone Setup	41
5.6 Sweep Setup	47
5.7 Audio Source Setup	48
5.8 Timer Setup	48
5.9 External Trigger Setup - Switch Functionality	51
6 System options.....	52
6.1 Network Settings	52
6.1.1. Ethernet	52
6.1.2. Wi-Fi AP Mode	53
6.1.3. Wi-Fi Client Mode	54

6.1.4. Bluetooth.....	57
6.1.5. DMX.....	58
6.2 Backup & Restore.....	58
6.3 How to Perform Factory Reset.....	61
6.4 Background Image.....	62
6.5 Firmware Update.....	63
6.6 Security.....	64
7 General User Guide.....	66
7.1 Home Page.....	66
7.2 Menu Options.....	66
7.3 Adjusting Lights Settings and Effect.....	67
7.4 How to Activate the Zone, Change Colour, and Apply Effects.....	72
7.5 How to Save / Delete a Scene.....	74
7.6 Sweep Effects.....	75
7.7 How to Activate the Sweep, Change Sweep Effect, and Save as Scene.....	76
7.8 NMEA2000 Lighting PGN.....	78
8 Troubleshooting.....	80
8.1 Troubleshooting Problems and Solutions.....	80
9 Appendix.....	82
9.1 Technical Specifications.....	82
9.2 OceanBridge Connectors Pinout.....	83
9.3 Dimensions.....	84
9.4 RJ45 Waterproof Cover Kit Assembly.....	85
9.5 Optional Accessories.....	86
9.6 Furuno MFD – Installing the .enc file.....	89
9.7 OceanBridge System Installation Diagrams.....	91
10 Warranty.....	92

1 Introduction

1.1 Product Overview

The OceanBridge is a control unit designed to enable the management of OceanLED lights and third-party lights through a Multi-Function Display (MFD) commonly used on marine vessels. Furthermore, it also offers the ability to manage and control the lighting systems via a Wi-Fi network using various devices such as smartphones, tablets, laptops, etc.



Compatibility

The OceanLED OceanBridge is compatible with selected MFD units from four main brands: Garmin, Raymarine, Furuno, and the Navico group (including Simrad, Lowrance, and B&G products). The MFD units must support HTML app integration and/or NMEA 2000 (N2K) lighting PGNs.

Control Methods

Control of the OceanLED lights can be achieved through multiple methods:

- **HTML5 App:** Control through an HTML5 app integrated with the MFD unit.
- **NMEA 2000** Lighting PGNs: Control via the newly released NMEA 2K lighting PGNs, provided the MFD unit supports this feature (at the time of writing this document: Simrad, Lowrance, and B&G products only).
- **Web Browser** Interface: Control through a web-based interface accessible via a Wi-Fi connected device such as a phone, tablet, or PC.

Supported Lighting Configurations

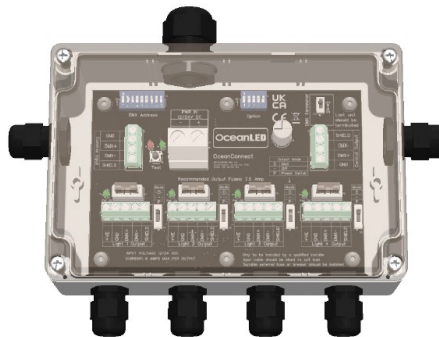
The OceanLED OceanBridge allows for the configuration of lighting setups, including the setup of zones and addresses of connected lights via Remote Device Management (RDM). The lighting setup configuration can be performed through the web-based interface accessible via the Wi-Fi link or the MFD unit.

The OceanBridge supports the following lighting configurations:

- Zone Addressing: Support for **up to 10 zones** with the following light types:
 - Four Channel: RGBW lights
 - Three Channel: RGB lights
 - Two Channel: Dual-colour lights
 - Single Channel: Dimmable lights
 - Single Channel: Switchable lights
 - 2010/3010 Single Colour (legacy OceanLED lights)
 - Power Toggle Single (requires OceanConnect JB)
 - Power Toggle Dual (requires OceanConnect JB)

DC Switch Lights Support

Basic DC switch lights are supported through an additional DMX-controlled IP66 rated OceanConnect Junction Box. Please refer to the Appendix for more info.



OceanConnect Junction Box

Audio Support / Integration

The OceanLED MFD Bridge offers support for audio integration. The following audio-related features are included:

- External Audio Input: Support for an external audio (line) input.
- Bluetooth Connectivity: Capability to connect audio devices via Bluetooth.
- Modulation: Ability to modulate the intensity and/or colour of the lights based on an audio source.
- Audio Output: An audio out interface is provided for pass-through of the audio signal or output of the Bluetooth-connected audio. This interface can be connected to a stereo system or amplifier.

With a zone running in audio mode, the OceanBridge device supports passthrough functionality. This means that audio signals received through the Audio In connector are passed through to the Audio Out connector. This allows for seamless audio passthrough without any modifications or processing by the OceanBridge device.

Furthermore, when the OceanBridge device is connected to a Bluetooth audio source, the audio can also be routed to the Audio Out connector. This means that if the unit is connected to a Bluetooth audio device, users can choose to listen to the audio output by connecting external audio devices via the Audio Out connector.

Bluetooth Connectivity for Dynamic Audio Mode

The Bluetooth connectivity feature of the OceanBridge device allows for seamless integration with Bluetooth-enabled audio devices, such as smartphones, tablets, or other compatible devices. This feature enables the OceanBridge device to synchronize its lighting effects with the audio playing on the connected Bluetooth device, creating an immersive sound-to-light experience.

Wi-Fi Connection

The OceanBridge Wi-Fi connection supports either of the following modes:

- **Direct Access Point (AP) Mode (default):** In this mode, the OceanBridge device acts as an access point itself, creating its own Wi-Fi network. Users can connect their devices (such as smartphones, tablets, or laptops) directly to the OceanBridge Wi-Fi network to access its features and functionalities.
- **Client Mode:** In this mode, the OceanBridge device functions as a client and can connect to an existing Wi-Fi network created by a separate router or access point. Users can configure the OceanBridge to connect to their preferred Wi-Fi network, enabling the device to communicate with other devices on that network.

By supporting both Direct Access Point (AP) mode and Client mode, the OceanBridge device offers flexibility in how it connects to Wi-Fi networks. Users have the option to either connect directly to the OceanBridge Wi-Fi network or integrate it into their existing Wi-Fi infrastructure, depending on their specific needs and network setup.

External Switch Control

The OceanBridge device supports up to four external switch inputs, specifically momentary push-to-make type switches. These switches can be connected to the OceanBridge device to control various functionalities, such as selecting scenes or controlling the lights.

Key Features:

- **External Switch Inputs:** The OceanBridge device offers support for up to four external switch inputs, allowing users to connect momentary push-to-make type switches.
- **LED Drive Feedback:** The device provides LED drive feedback, enabling compatibility with switches that have internally illuminated LEDs. This feature ensures that the LEDs on the connected switches function properly and provide visual feedback.
- **Scene Control:** The connected external switches can be used to control the lights and select different scenes. Users can configure the switches to trigger specific lighting configurations or switch between pre-defined scenes, enhancing the versatility and customization options of the OceanBridge device.

Firmware Upgradability

The OceanBridge device includes USB connectivity, which allows for convenient in-field firmware updates.

- **Update from USB Drive:** The OceanBridge device supports firmware updates initiated through the graphical user interface (GUI), such as on your mobile device or MFD. Users can update the device's firmware by connecting a USB drive containing the updated firmware. Simply insert the USB drive into the appropriate USB port on the OceanBridge and follow the on-screen instructions to initiate the update process.
- **USB Connection Accessibility:** The USB connection is typically accessed through a USB connector with a removable cap on the device's housing. This design ensures easy access to the USB port when required for firmware updates. Users can easily remove the cap, connect the USB drive, and proceed with the firmware update process.

DMX Interfaces

The OceanBridge offers two DMX interfaces which can be configured as:

- **Dual Mirror /Output** - where both DMX connections are outputs
- **DMX Merge (Values takes precedence)** – where one DMX connection is used as an input, and the other as an output. The output DMX values are a 'merge' between the incoming DMX from the input and the OceanBridge generated values. The higher value from either source will be passed to the output.
- **DMX Pass Through** – where one DMX connection is used as input and the other as an output. The DMX signal from the input is passed through the output without modification.

Onboard Test / Reset switch

The OceanBridge device includes on-board Test/Reset switch that provide convenient functionalities for system testing, resetting, and restoring default settings.

Switch Modes:

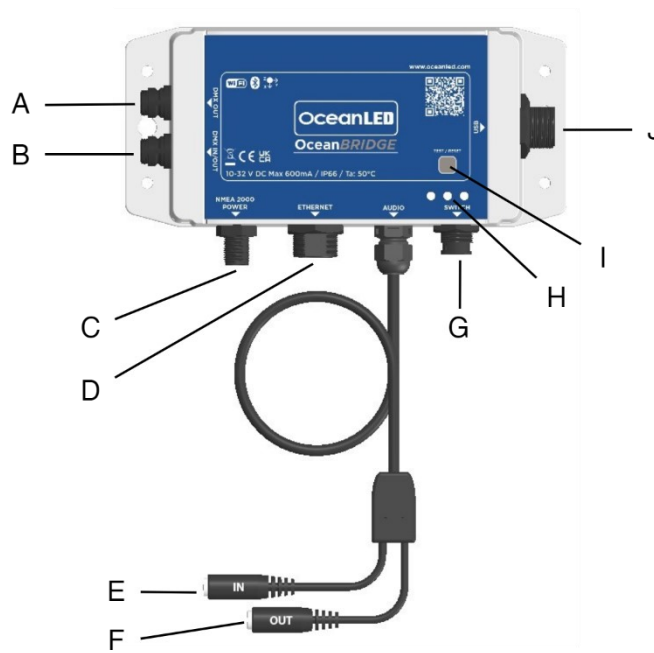
- **Test Mode:** OceanBridge outputs a predefined DMX sequence. This test sequence is specifically designed to allow users to test the system and observe the behaviour of connected lights or fixtures. By activating the test mode, users can assess the functioning and connectivity of the system components.
- **Reboot:** This option enables users to restart the OceanBridge device.
- **System/Factory Reset Mode:** This option enables users to perform a complete reset, erasing all settings and configurations stored in the device. By initiating a factory reset, users can start afresh with the device, eliminating any customized settings or configurations that might have been applied. This action erases all customized settings and configurations, returning the device to its default state.

Onboard sensors

Gyroscope & Accelerometer Sensor

The OceanBridge device incorporates a gyroscope and accelerometer sensor within its hardware, allowing it to detect and respond to the vessel's movement. By utilizing the data from these sensors, the device adjusts the lighting effects to enhance the visual experience. The gyroscope and accelerometer sensor play a crucial role in creating dynamic lighting effects that synchronize with the vessel's forward/backward movement (pitch) and left/right movement (roll).

1.2 Connections Overview



ITEM	FUNCTION
A	DMX Out
B	DMX In/Out
C	NMEA2000 / Power (12/24V)
D	Ethernet
E	Audio In
F	Audio Out
G	Switch Input
H	Diagnostic LEDs
I	Test/Reset Switch
J	USB Port (Memory Stick only)

1.3 Diagnostic LEDs and Test/Reset Switch

Diagnostic LEDs (H):

ID	LEDs	STATUS
1	Green - ON	Unit operating properly
2	Amber - ON	Reading Devices (RDM mode)
3	Red - ON	Overheating
4	Amber, Green, Red - ON	Loading System
5	Green, Red - ON	Factory Reset Initialized

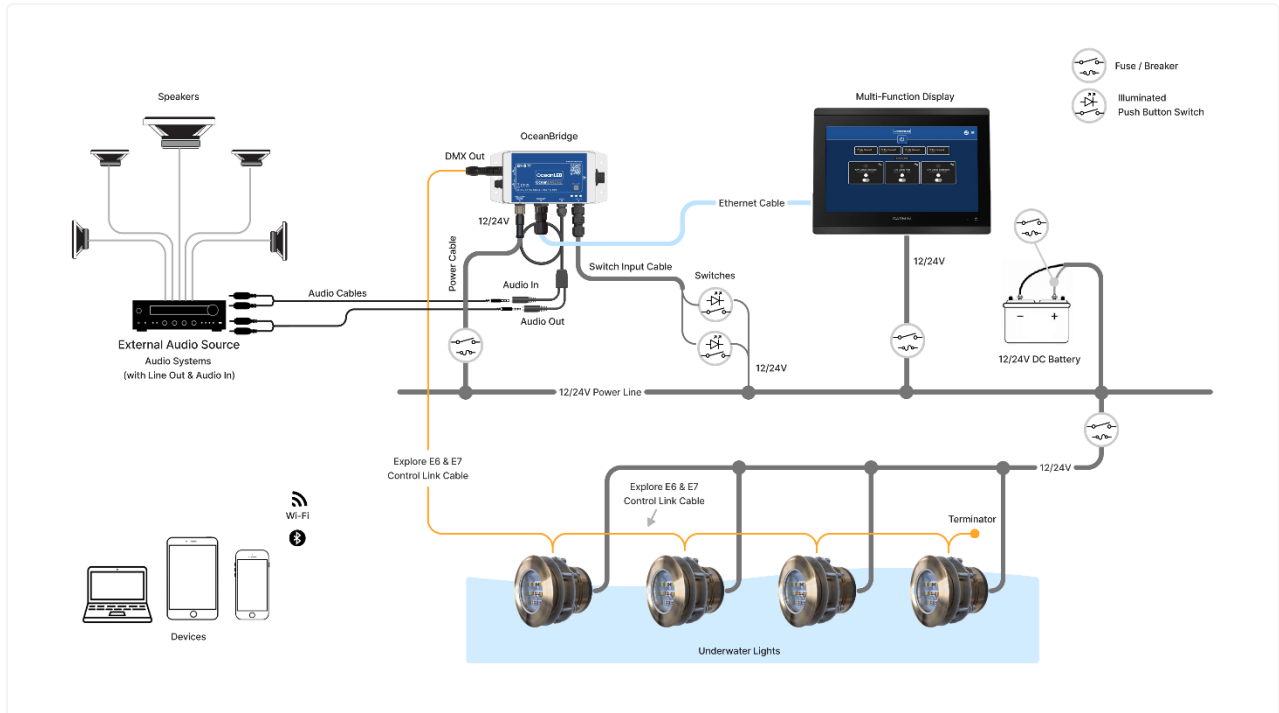
Test/Reset Switch (I):

ID	SWITCH	FUNCTION
1	Press once (short press; less than 1s)	Test Mode – The unit will execute power on sequence on all connected devices
2	Press and hold until Amber LED ON (approx. 5s)	Reboot/Reload the OceanBridge App
3	Press and hold until Red LED ON (approx. 30s)	Factory Reset – All data and settings will be erased

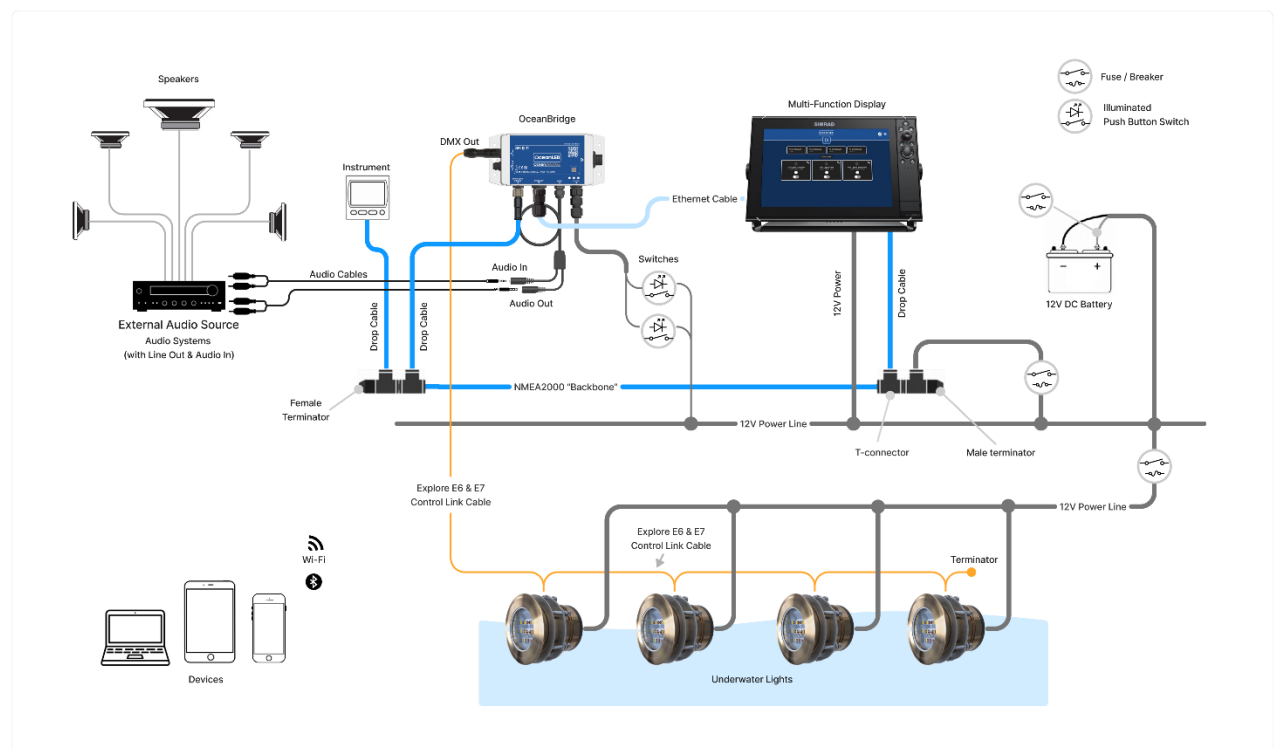
1.4 System Configuration Examples

A schematic diagram showing the locations of all components and cables is an essential aspect of planning any installation. Furthermore, it proves useful for potential future system additions or maintenance. Below, you can find examples of basic OceanBridge system installations. See [Appendix 9.7](#) for more examples.

OceanBridge System Configuration Example



OceanBridge System Configuration Example Using NMEA2000 Network




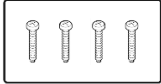



2 Planning The Installation

INSTALLATION CHECKLIST

1. Plan your installation.
2. Obtain all required equipment and tools.
3. Mount the system components.
4. Route all cables.
5. Drill holes for cable routing and mounting as required.
6. Make all the necessary connections to the equipment.
7. Secure all equipment in place.
8. Complete the post-installation check.

2.1 Parts Supplied

PRODUCT CODE: 013201

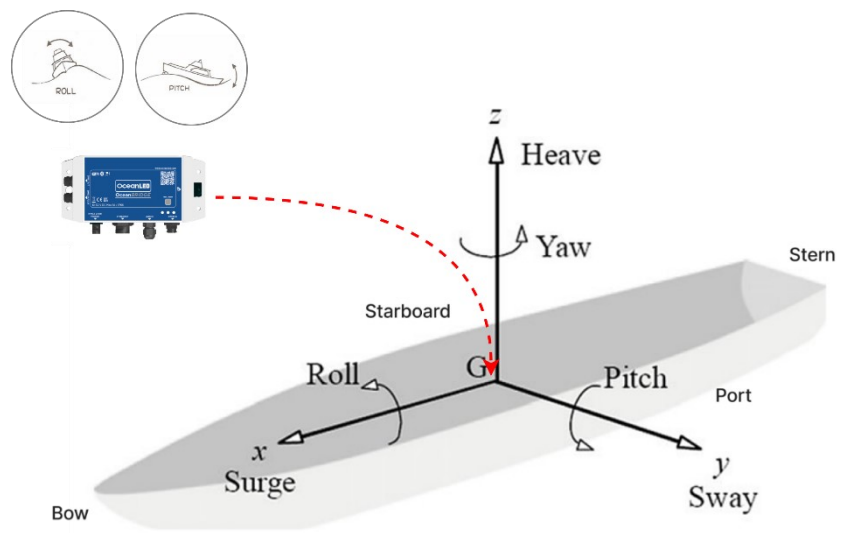
OceanBridge Unit	4x Fixing Screws	RJ45 IP67 Cable Mount Housing	Quick Install Guide	USB Memory Stick
				

3 Mounting

3.1 Finding the Mounting Location

When choosing a mounting location for the OceanBridge the following recommendations need to be followed:

- Consider the wiring routing / connections:
 - The distance to the 12 / 24 V DC power source (or NEMA 2000 connection point/ backbone).
 - The distance to the MFD unit or local LAN network depending on configuration.
 - The distance to the first DMX device/ DMX Junction Box/ OceanConnect JB (i.e. check length of DMX cable).
- For optimum function of the Wave Motion mode, please consider mounting location and position of the OceanBridge device, see the illustration below. The unit should be mounted in or as close as possible to the rotational centre of the vessel – to maximise the accelerations the unit can detect due to wave motion.



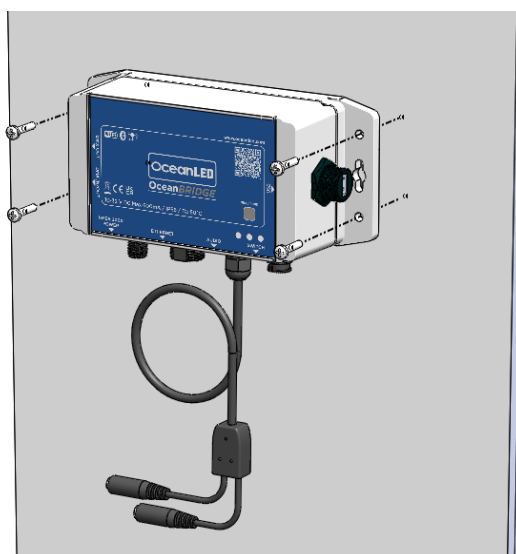
OceanBridge Mounting Alignment with Vessel's Axis

- Select flat surface in a dry location away from sources of heat.
- If planning to use the Wi-Fi / Bluetooth functionality, the unit should be mounted away from metal objects to ensure good Wi-Fi / Bluetooth coverage. Avoid areas surrounded by metallic insulation or coverings as this may interfere or restrict the Wi-Fi / Bluetooth signal.
- To improve the responsiveness of the movement function the unit should be firmly mounted to a solid surface directly connected to the vessels structure. (i.e. not mounted to a structure that will move or vibrate).
- For maintenance and checking purposes, leave sufficient space around the unit and some slack in cables. Minimum recommended space is shown in the outline drawing for the OceanBridge unit – please see [Appendix 9.3 – Dimensions](#).

3.2 Mounting the OceanBridge Unit

Once a suitable location has been found, use the following steps to mount the unit:

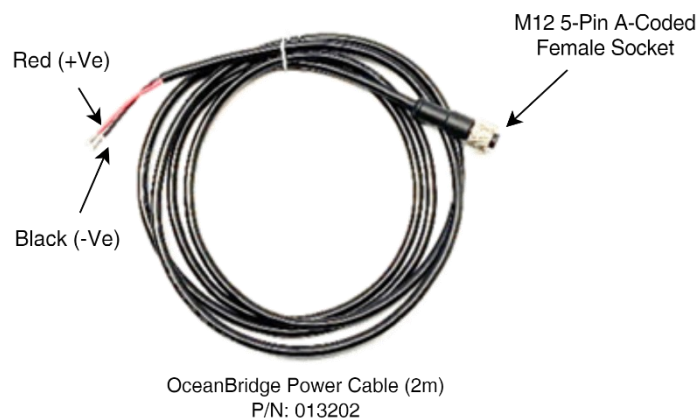
1. The unit's mounting holes are located at the four corners of the lid.
2. The provided mounting screws are designed to be compatible with various surfaces, such as wood or fibreglass. Before mounting, mark the desired hole positions and drill pilot holes accordingly. Take caution to verify the absence of any obstructions, such as cables or pipes, behind the drilling area.
3. Screw the unit to the surface using the screws provided. Never use power tools to mount the unit. Hand tighten only!



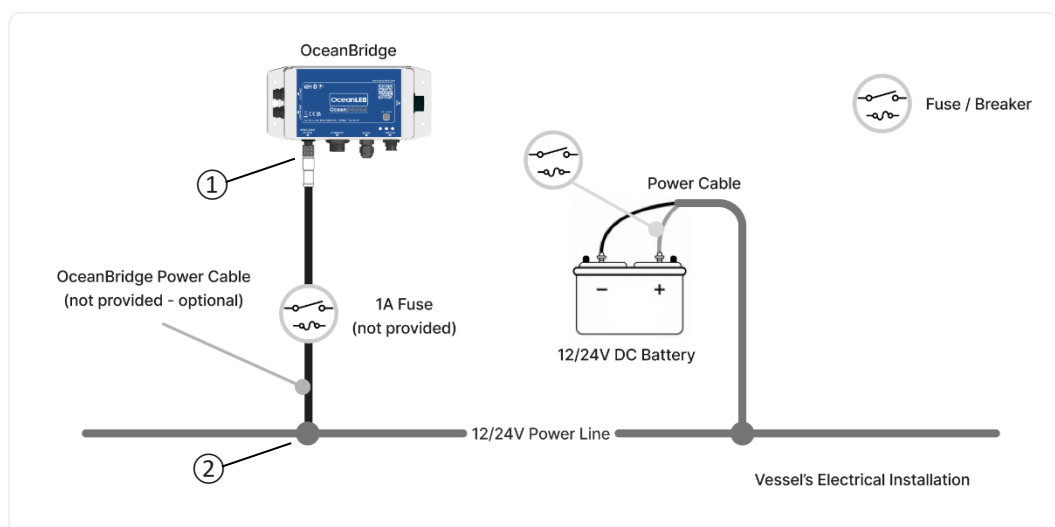
4 Electrical Installation / Wiring

4.1 Power Connection (without NMEA2000)

- For a straightforward power connection, use the OceanBridge Power Cable (p/n: 013202; not included with OceanBridge – p/n: 013201). Connect the end with the socket to the OceanBridge NMEA2000/Power port ① and link the other end to the 12/24V DC power source ② typically from the onboard battery. Utilize waterproof butt splices or IP66 waterproof junction boxes to create watertight connections. This cable must be protected with a suitable fuse or breaker (1A recommended).



- Connect the +VE Red wire to a +12/24V fused power source.
- Connect the -VE Black wire to the battery - (Ground) supply.



OceanBridge Power Connection

4.2 Connecting via NMEA2000

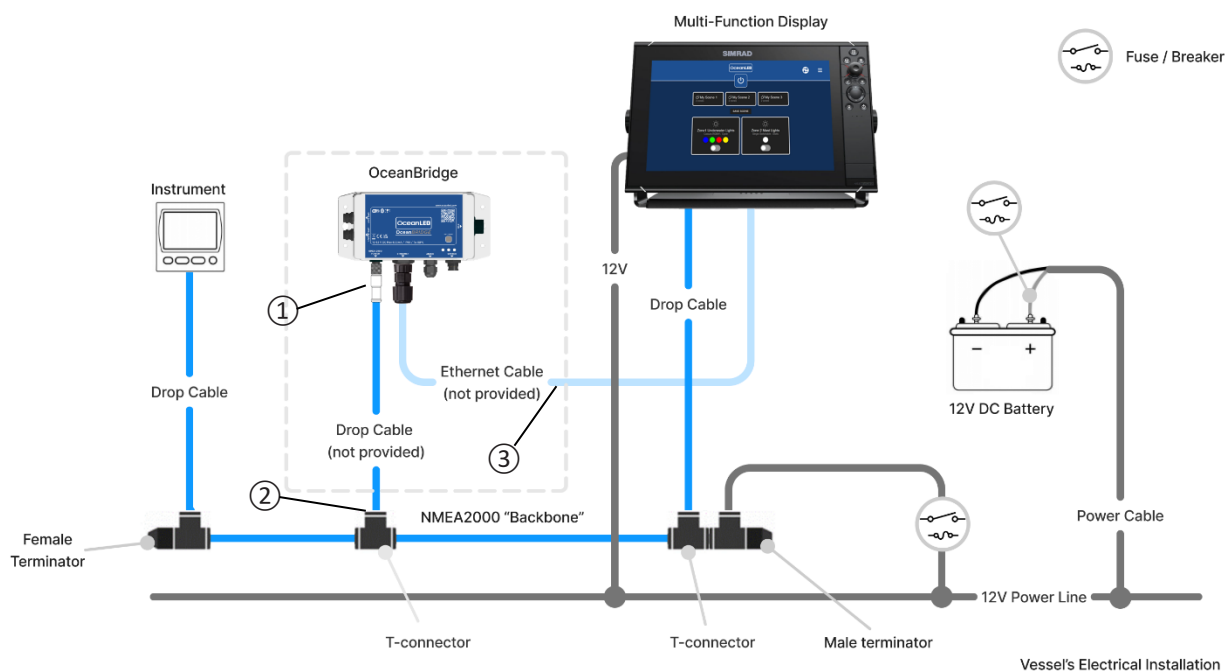
To connect to the existing NMEA2000 system, acquire a NMEA2000 drop cable (not provided). If there is no free port on the backbone, you will need to extend it by adding an additional T-connector (not provided). Connect the female end of the drop cable to the OceanBridge NMEA2000/Power port ① and the male end to the NMEA2000 installation backbone ② (T-connector female port). Power for the unit will be supplied through the NMEA2000 network (Bus Powered).



NMEA2000 (N2K) Drop Cable
(not provided)



The maximum drop cable length should not exceed 6 meters. To access the full functionality of OceanBridge, ensure that the MFD unit is also connected to the OceanBridge unit via an Ethernet cable ③. For detailed instructions on setting up the MFD Ethernet connection, please consult [paragraph 4.3](#).



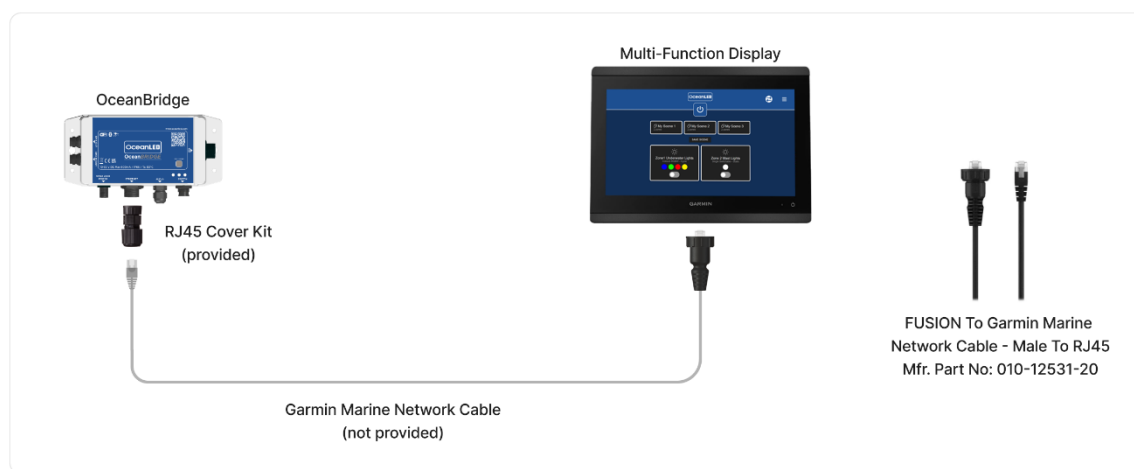
OceanBridge NMEA2000 Connection

4.3 MFD Install – Ethernet Connection

 Please refer to the [Appendix](#) for instructions on assembling the RJ45 waterproof cover kit.

GARMIN

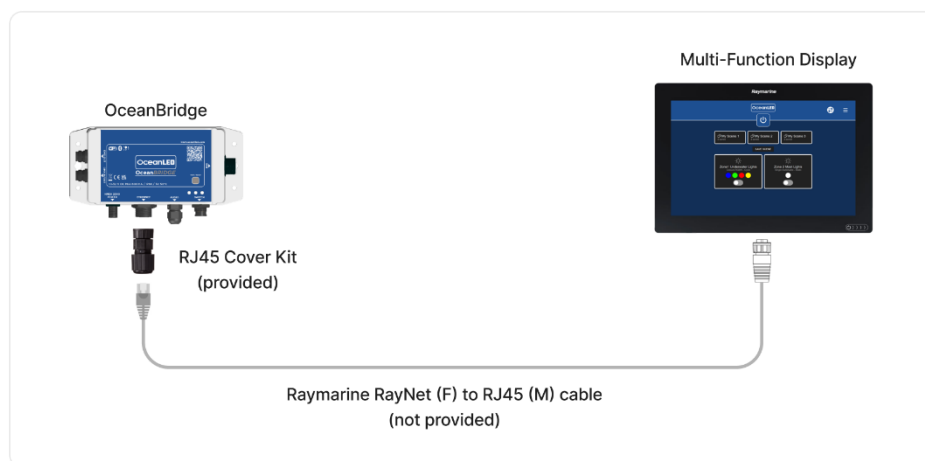
Obtain the Garmin Ethernet cable (not provided). Fit the RJ45 Cover Kit supplied with the OceanBridge over the RJ45 plug of the Garmin Ethernet cable and connect to OceanBridge Ethernet port. Connect the other end of Garmin Ethernet cable to the Garmin MFD device (RJ45 socket).



Garmin MFD Install - Ethernet Connection

RAYMARINE

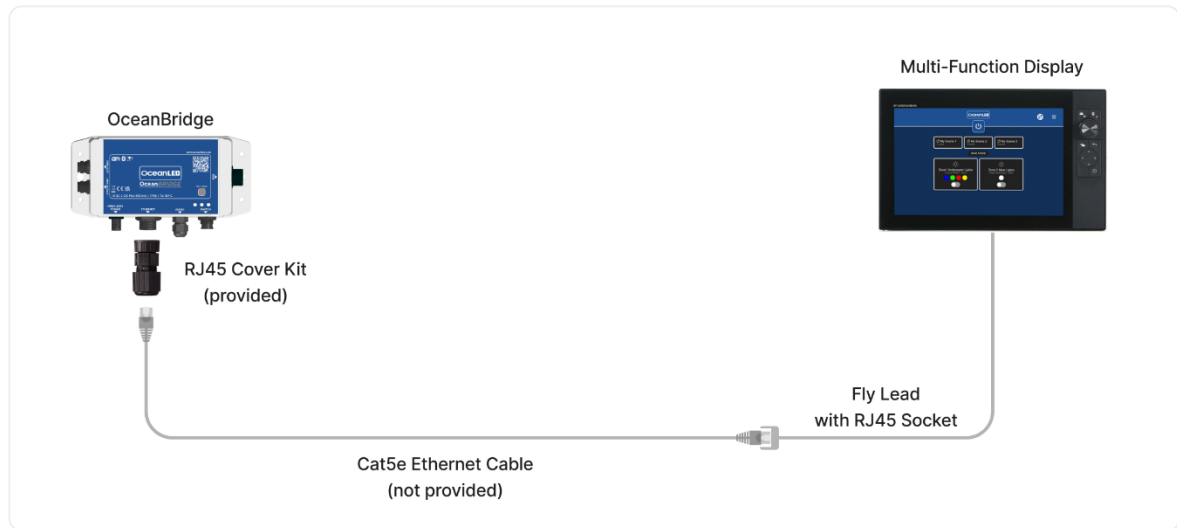
Obtain the Raymarine RayNet (F) to RJ45 (M) cable (not provided). Pull back or remove the RJ45 connector boot from the cable and install the RJ45 Cover Kit supplied with the OceanBridge. Connect the RJ45 plug with the fitted cover kit to the OceanBridge Ethernet port and connect the other end to the Raymarine MFD device.



Raymarine MFD Install - Ethernet Connection

FURUNO

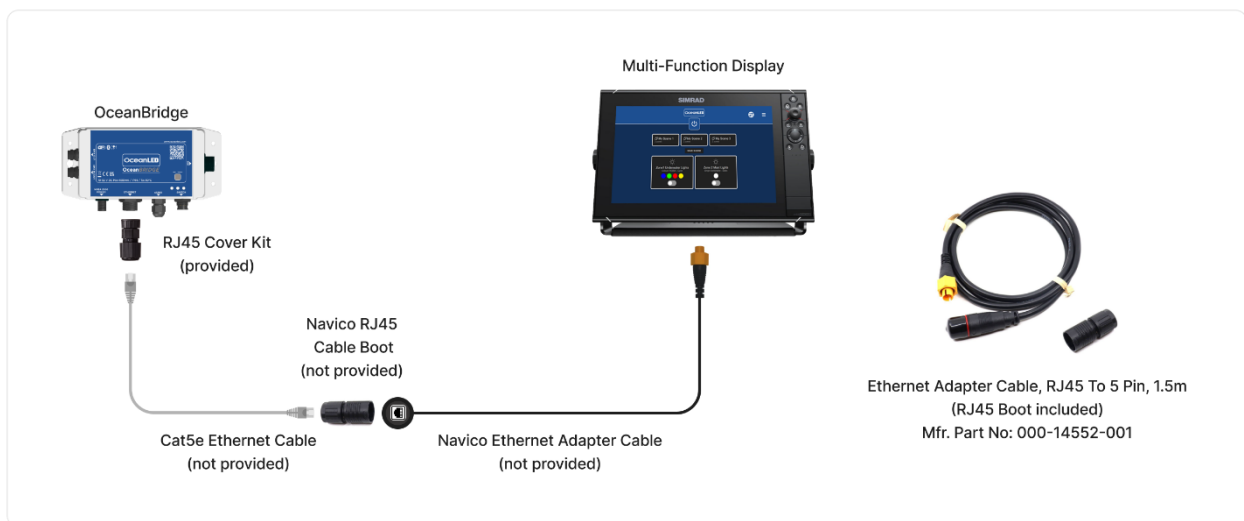
Obtain Shielded Ethernet cable (min Cat5e, not provided). Fit the RJ45 Cover Kit supplied with the OceanBridge over one of the RJ45 plugs and connect to OceanBridge Ethernet port. Connect the other end of the Ethernet cable to the Furuno MFD fly lead RJ45 socket.



Furuno MFD Install - Ethernet Connection

NAVICO GROUP - SIMRAD

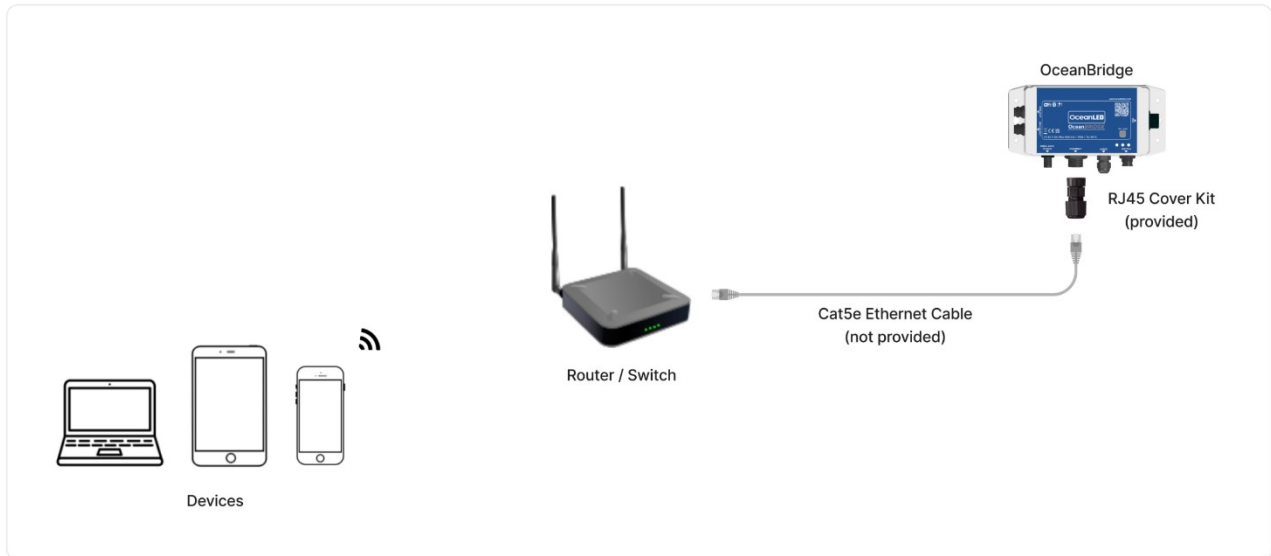
Obtain the Navico Ethernet Adapter and Shielded Ethernet cable (min Cat5e, not provided). Fit the RJ45 Cover Kit supplied with the OceanBridge over one end of the Ethernet cable's RJ45 plug and fit the Navico RJ45 cable boot over the other end. Connect the RJ45 plug to the OceanBridge Ethernet port and connect the other end to Navico Ethernet Adapter Cable RJ45 connector. Finally, connect the yellow 5-pin male plug to the SIMRAD Ethernet yellow 5-pin female socket.



Simrad (Navico Group) MFD Install - Ethernet Connection

4.4 LAN Ethernet Connection - No MFD

The OceanBridge unit can connect directly to the local vessel's LAN network (switch/router) without the need for the MFD unit. All functionalities can be accessed using devices such as a laptop/PC, smartphone, or tablet, as long as they are connected to the same network via an Ethernet cable (for PCs) or Wi-Fi. Please obtain a Shielded Ethernet cable (min Cat5e, not provided). Use the RJ45 Cover Kit supplied with the OceanBridge to cover one end of the Ethernet cable's RJ45 plug. Connect the covered end to the OceanBridge Ethernet port and the other end to the Router/Switch.



OceanBridge Ethernet Connection with Router/ Switch

4.5 Audio Connections

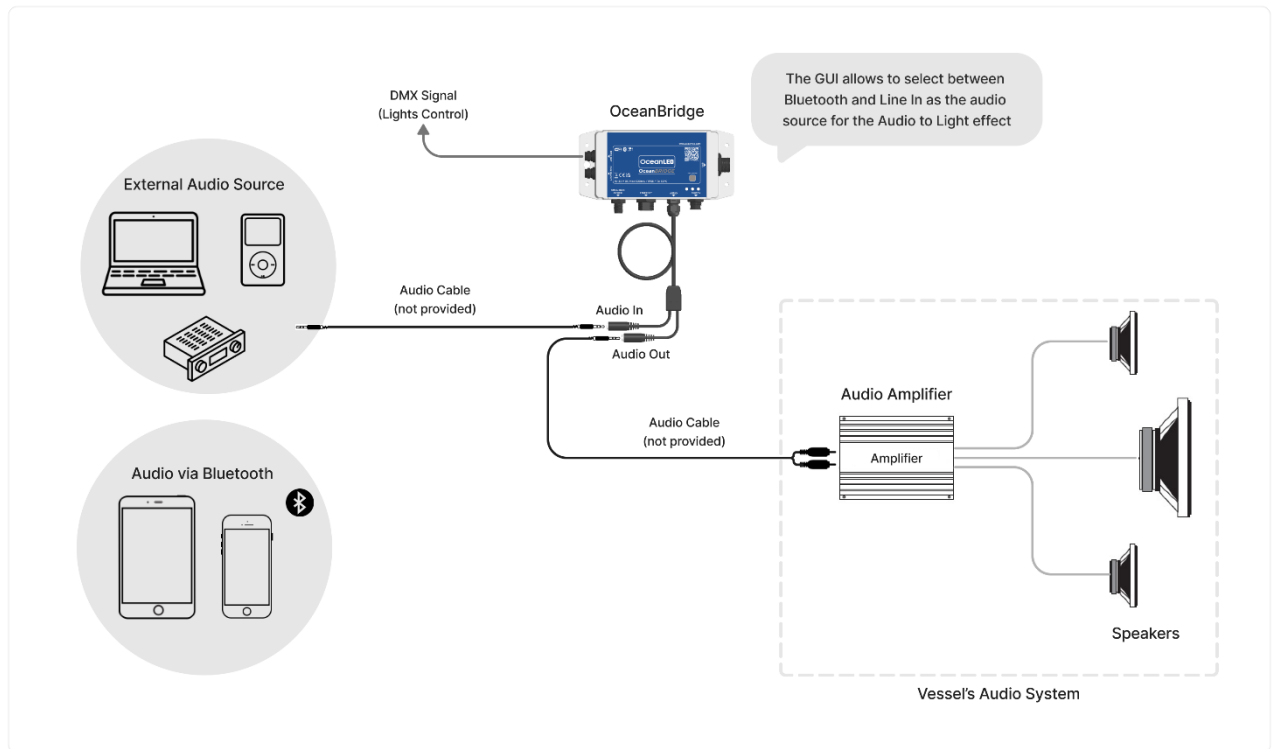
The OceanBridge device includes the following audio connectors:

- 1 x Audio In 3.5mm stereo connector : This connector allows for the input of audio line-in signals from external sources. Users can connect devices such as smartphones, MP3 players, or other audio devices to play audio through the OceanBridge.
- 1 x Audio Out 3.5mm stereo connector : This connector serves as an output for audio line-out signals. It enables users to connect external audio systems to enjoy the audio output from the OceanBridge device.

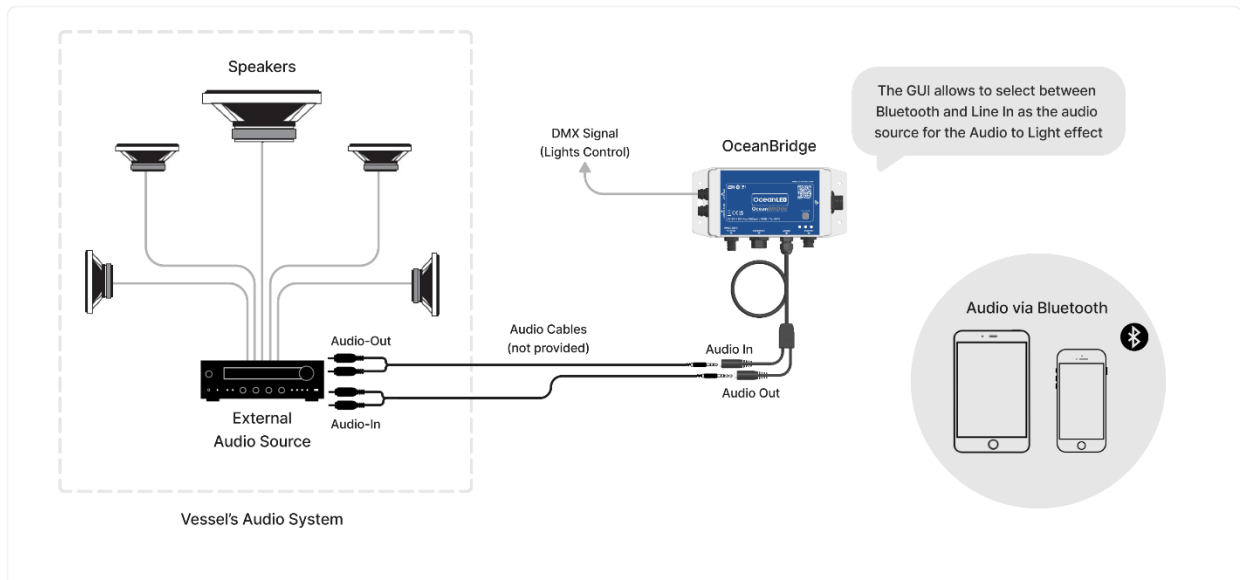
Use the 'Audio In' input when connecting an external device as the source of the audio signal. Depending on your audio device, you will need the appropriate extension cable (not provided). Connect the 3.5mm stereo input jack to the OceanBridge 'Audio In' fly lead input jack socket and connect the other end to the external audio source. Ensure to waterproof the audio connection. Damage to the OceanBridge unit through poor installation of third party cables will void your warranty.

 **For best results use the 'line-out' connection from an audio source, rather than a headphone outlet, as levels should not change with volume.**

Below, you can find examples of typical OceanBridge Audio system connections:




OceanBridge Simple Audio Setup



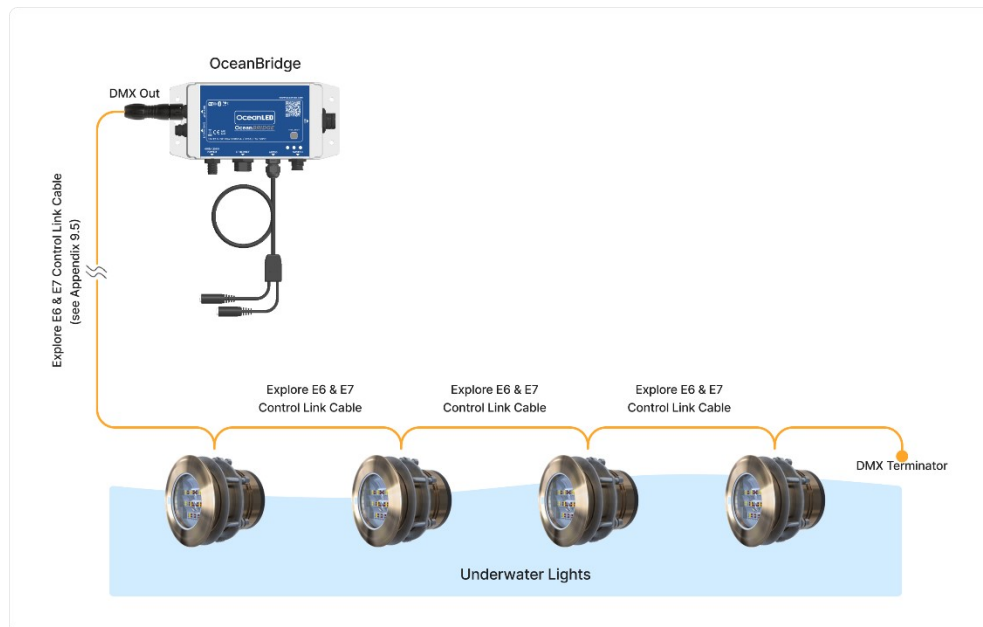
OceanBridge Audio Setup with an Advanced Audio System

4.6 DMX Connections

 The DMX standard recommends a maximum of 32 devices and a maximum network length of 300m/980ft to be connected in one chain without using additional DMX signal splitters. The OceanBridge supports up to 32 devices per channel, allowing for a total maximum of 64 devices to be connected using both DMX channels. If your installation requires more lights than this, please contact OceanLED for advice.

EXPLORE Series E6 & E7 DMX

For the straightforward connection with the Explore E6 & E7 lights use Explore E6 & E7 Control Link Cable (see [Appendix 9.5](#)). Connect the male plug of the cable with the OceanBridge DMX OUT port and connect the other end to the first light in the DMX chain. Ensure to terminate the last device in the DMX chain with the DMX terminator (not provided; p/n: 011044).



OceanBridge Explore DMX Series Connection Diagram

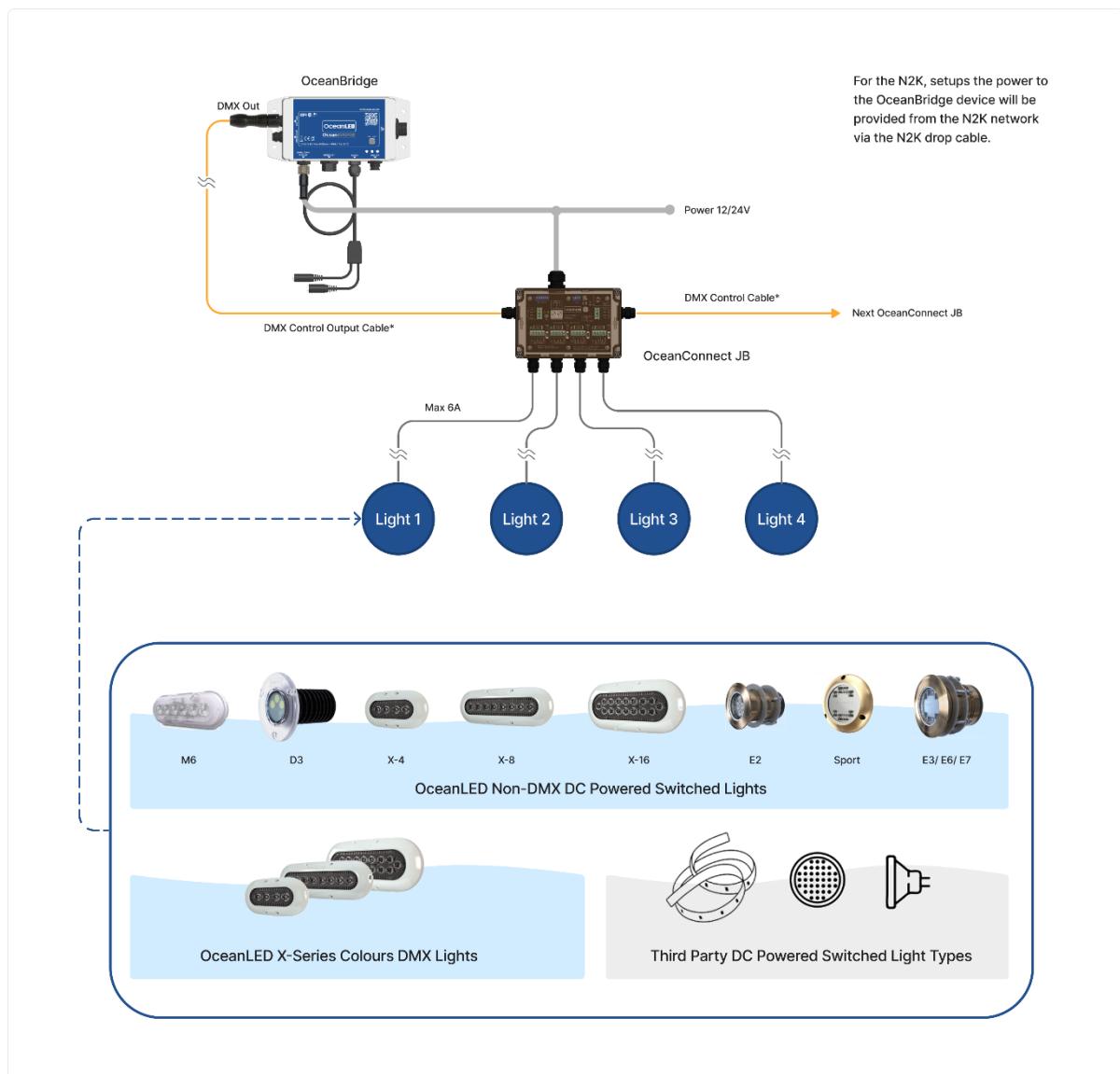
DC Powered Switched Lights – OceanConnect Junction Box

The OceanConnect Junction Box (JB) (p/n: 013204) allows to control any DC-powered switched light types where the maximum current does not exceed 6A. It can also be used to split the power and DMX signal to X-Series DMX lights.

OceanConnect converts the DMX signal from OceanBridge to control non-DMX lights, allowing to assign different DMX addresses for each light if required. Furthermore, in configuration with X-series DMX colour lights, it allows to assign a unique DMX address for each light if necessary (by default, the X-series DMX address is set to 1 and cannot be changed within the device).

For the connection with the OceanConnect JB, use the DMX Control Output Cable*. Connect the male plug of the cable with the OceanBridge DMX OUT port and connect the bare end to the first OceanConnect JB. If only one OceanConnect JB has been used, ensure to switch ON the onboard terminator in the OceanConnect JB. For more than one OceanConnect JB installation use the DMX Control Cable* to link the OceanConnect JB or use Control Input Cable* to link with the Explore series lights. Please refer to the OceanConnect Installation Manual for instructions on connecting the lights.

* not included with OceanBridge – see [Appendix 9.5](#)

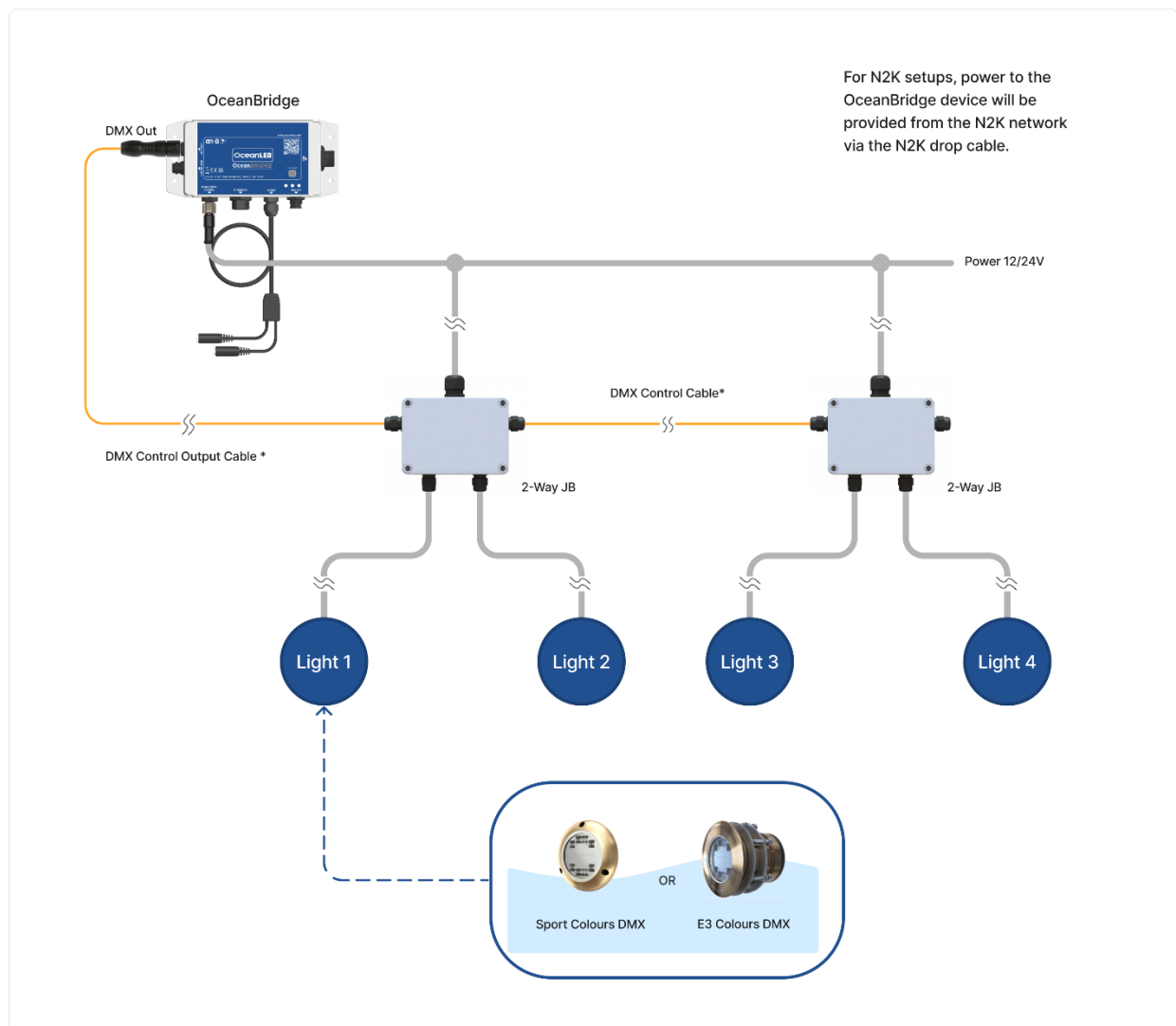


OceanBridge and OceanConnect JB Connection Diagram

2-WAY Junction Box

For the connection with the 2-Way Junction Box (JB) (p/n: 013205) use the DMX Control Output Cable*. Connect the male plug of the DMX Control Output Cable* with the OceanBridge DMX OUT port and connect the bare end to the first 2-Way JB. If only one 2-Way JB has been used, ensure to switch ON the onboard terminator inside the 2-Way JB. For more than one 2-Way JB installation use the DMX Control Cable* to link the Junction Boxes. Please refer to the 2-Way JB Installation Manual for instructions on connecting the lights.

* not included with OceanBridge – see [Appendix 9.5](#)

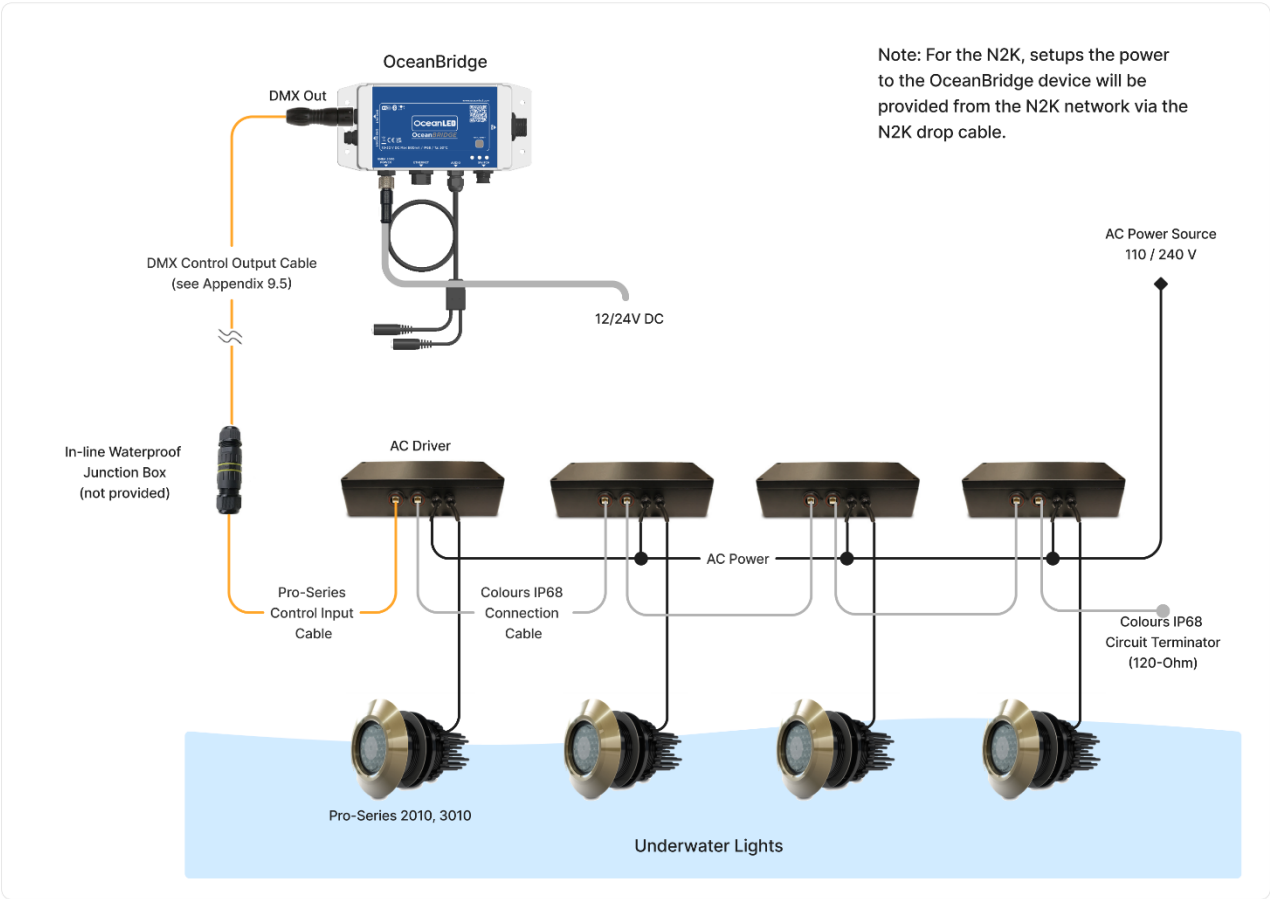


OceanBridge and 2-Way Junction Box Connection Diagram

2010, 3010 Single Colour/ Colours (Legacy Lights)

To connect the Pro-Series AC Underwater Light Installation, use the DMX Control Output Cable* and a Waterproof 3-Way In-line Junction Box (not provided). Connect the male plug of the DMX Control Output Cable* to the OceanBridge DMX OUT port. Then, using the In-line Junction Box, connect the exposed end of the DMX Control Output Cable* to the corresponding end of the Pro-Series Control Input Cable*.

* not included with OceanBridge – see [Appendix 9.5](#)



OceanBridge DMX Connection - Pro-Series 2010, 3010 (AC Drivers)



Function	DMX Control Output Cable Wire Colour	Pro-Series Control Input Wire Colour
GND	BLACK	BROWN/ BROWN-WHITE
DMX+	YELLOW	ORANGE
DMX-	BROWN	ORANGE-WHITE
SHIELD	SCREEN	N/C
Not Used	RED	N/C

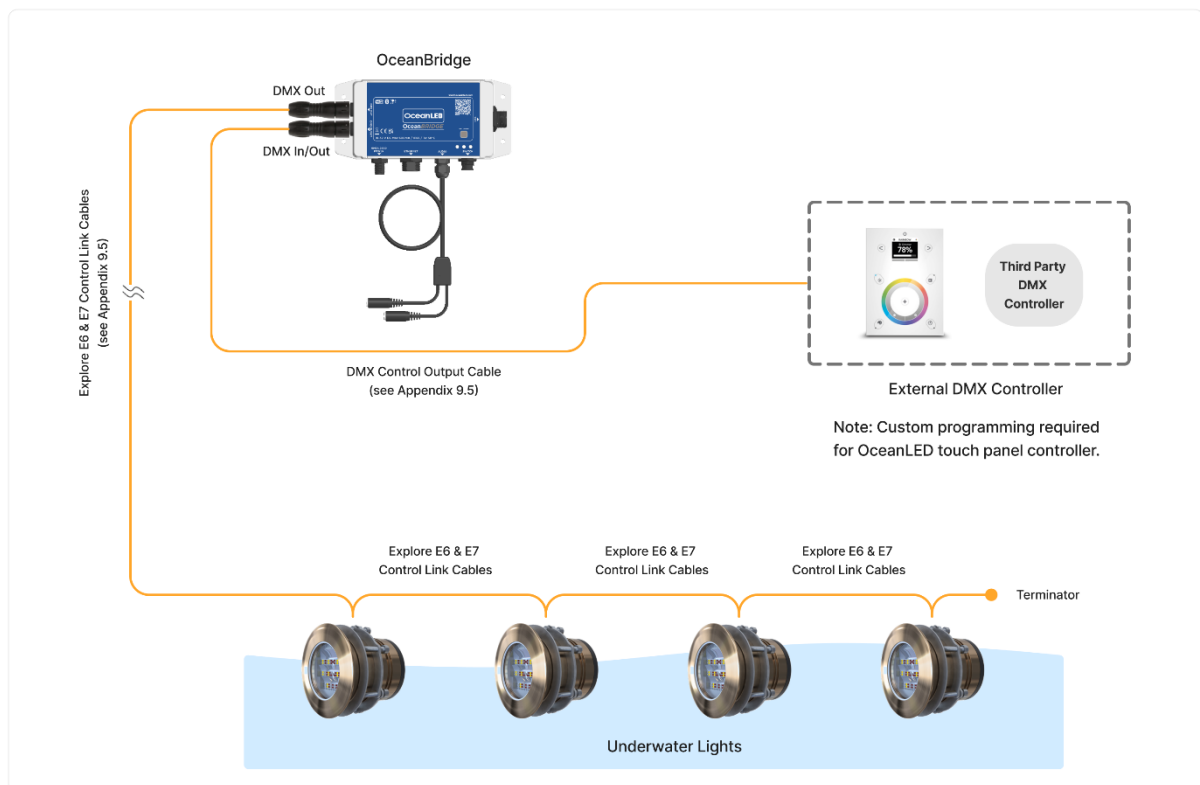
4.7 External DMX Controller Connection

OceanBridge has the capability to work with an additional external DMX controller, where the external DMX signal can either be mixed with OceanBridge own output or passed through the device. The OceanBridge GUI allows users to select the required functionality.

To connect the external DMX controller, wire the bare end of the DMX Control Output Cable (not included see [Appendix 9.5](#)) to the DMX output of the control device and connect the other end to the OceanBridge DMX In/Out. Please refer to the controller's own Installation Manual for instructions on connecting the control cable.

Control Output Cable Wiring:

DMX In	Control Cable Wire Colour
GND	BLACK
DMX+	YELLOW
DMX-	BROWN
SHIELD	SCREEN
Not Connected	RED

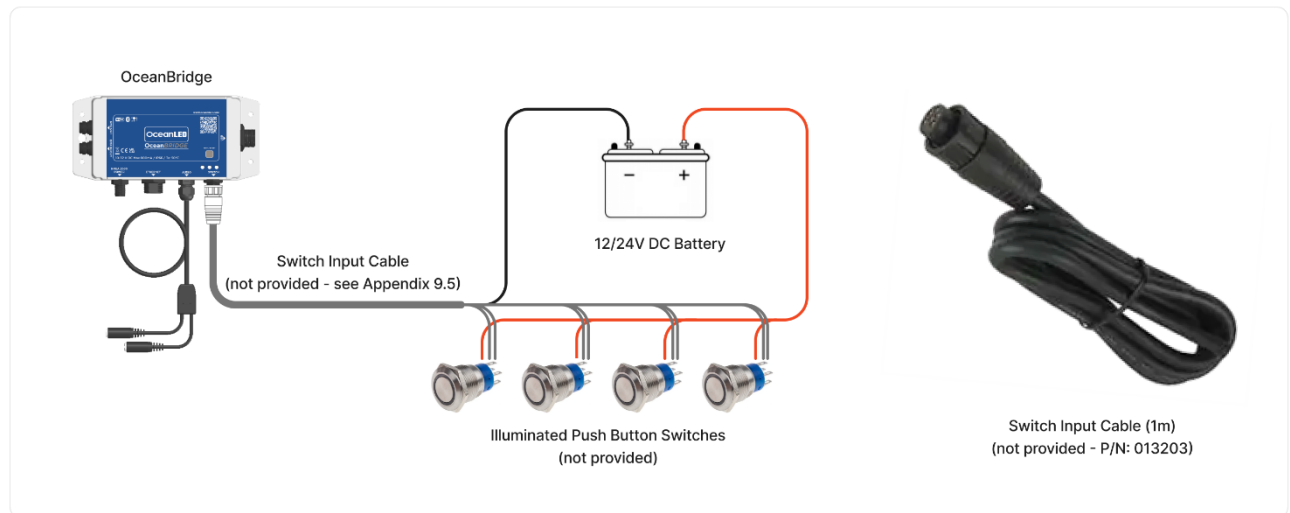


OceanBridge External DMX Controller Connection Diagram

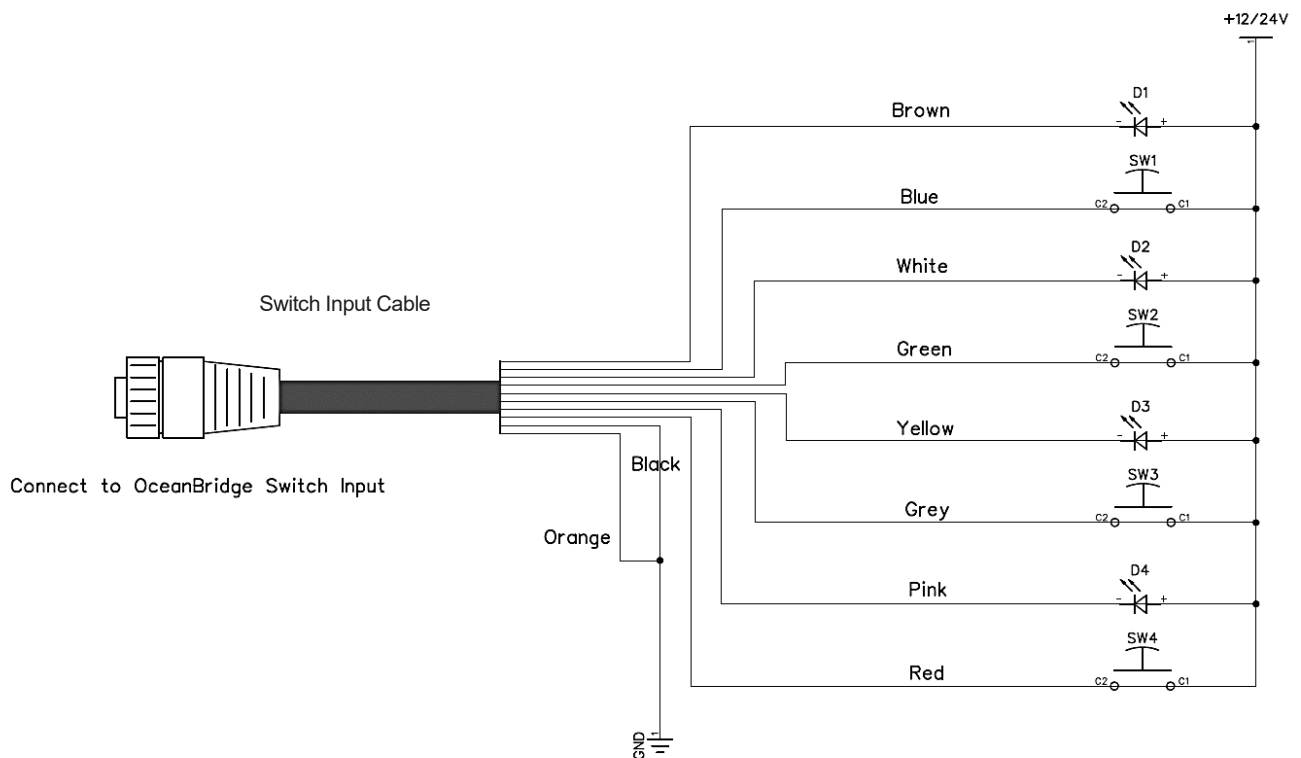
4.8 External Switches Connections

Switch Input Cable

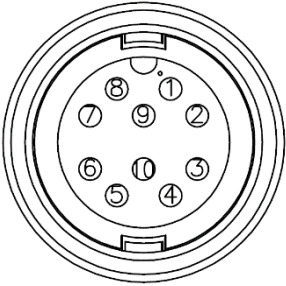
To connect external switches, wire the push button switches to the OceanBridge Switch Input Cable (p/n: 013203 – see [Appendix 9.5](#)) according to the diagram below. Then, connect the Switch Input Cable plug to the OceanBridge Switch Input Connector. Keep in mind that supplementary wiring will be needed to establish the connection for the 12/24V DC power to the switch installation.



External Switches Connection Diagram



Switch Input Cable Connections Electrical Schematic

Function	Cable Wire Colour	Pin	Switch Input Cable Plug Pinout
LED 1	Brown	1	 <p style="text-align: center;">Front View</p>
Switch 1	Blue	2	
LED 2	White	3	
Switch 2	Green	4	
LED 3	Yellow	5	
Switch 3	Grey	6	
LED 4	Pink	7	
Switch 4	Red	8	
Common/ GND	Black	9	
Common/ GND	Orange	10	



Note: Please double-check all connections to ensure their accuracy.

4.9 Final Installation Checks

Wiring and Connections:

- Double-check that all wiring and connections are secure and properly insulated to prevent short circuits.

Circuit Protection:

- Ensure that circuit protection devices such as fuses, or circuit breakers are installed to prevent overcurrent situations.

Waterproofing:

- Check that all components are adequately protected against moisture and water ingress, as marine environments can be harsh.
- All unused connectors and cable ends should be covered for protection with supplied cover caps.

Functionality Testing:

- Apply the power to the OceanBridge unit and to the lights.
- Wait for the startup procedure to complete (approx. 18 seconds), the Green LED should be ON.
- Test the OceanBridge unit device by short-pressing the test/reset button (approx. less than 1s) located on the front of the device to power on the connected lights. No prior setup in the User Interface (UI) is required for this quick test.

5 System Setup

TURNING THE SYSTEM ON AND OFF

The system is turned on by applying power to the OceanBridge unit device. Wait for the startup procedure to complete (approximately 18 seconds); the Green LED on the unit should be ON. To turn off the system, turn off the power to the device.

5.1 First Time Startup



When first installed or after a factory reset, the system needs to be set up. The setup process allows the discovery (auto), or manual addition of lights connected to the DMX network and enables the user to group the lights either into a single zone or multiple zones. The setup is a quick and easy process and is only performed upon initial installation or after a factory reset. The setup can be done either from the MFD via the OceanBridge App or via the external devices using the Wi-Fi connection. OceanLED recommends using external device such as laptop or mobile phone for the initial setup.

MFD Device

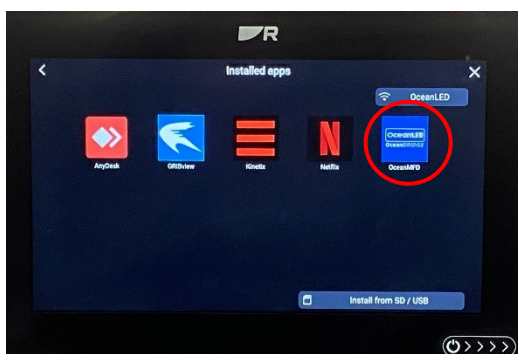
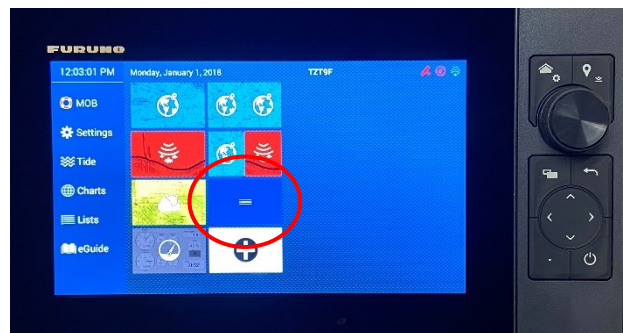
Power on the OceanBridge unit and start the MFD device. The OceanBridge device is recognized, and the OceanLED icon is displayed on the main screen. For different MFD devices, there will be different ways to access the app (see MFD manufacturers manual). Tap the icon to start the OceanBridge App. Upon successful connection, the OceanBridge App home page should load on the screen.



Before using the Furuno MFD device with the OceanBridge app, the user must install the “OceanLED.enc” configuration file. Please refer to the [Appendix](#) for instructions on how to do this.



The minimum supported software version for the Raymarine MFD's is Version 4.5.56.

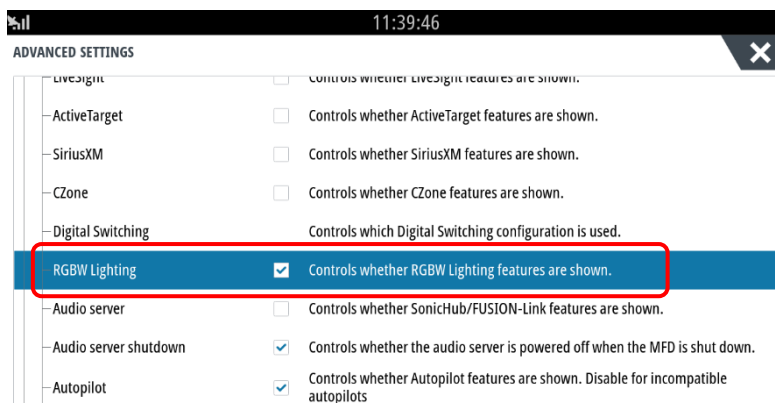


MFD Device - NMEA2000 Lighting PGN (Navico MFDs only)



The NMEA2000 Lighting PGN enables control of the lights to a certain extent; however, the initial setup can only be accomplished through the OceanBridge App. The minimum supported software version for the lighting PGN is Version 22.2. If your current Navico MFD's software version is below 22.2, please upgrade it to meet the required version.

The lighting PGN must be activated in the settings. Go to: *Settings > System > Advanced > RGBW Lighting* and ensure the "Controls whether RGBW Lighting features are shown" option is ticked.



Ensure that the OceanBridge device is recognized by the MFD device. Go to: *Settings > Network > Device List* to check if the OceanBridge device is listed. If there is no OceanBridge device ensure that the MFD unit and the OceanBridge device are connected to the NMEA2000 Backbone.



Model ID	Serial No.
NSS3S 9 Echo CH1	This device
NSS3S 9 MFD	This device
NSS3S 9 Navigator	This device
NSS3S 9 Pilot Controller	This device
NSS3S 9 iGPS	This device
OceanBridge	00000001

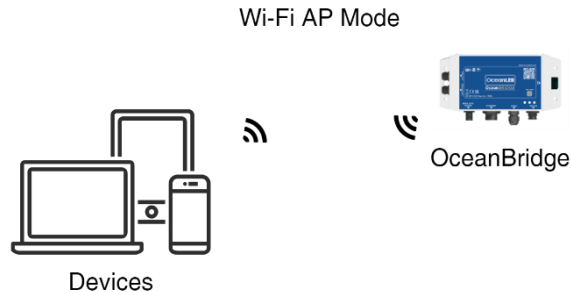
When first connected to OceanBridge before the initial setup, the lighting PGN will show no devices or zones for control. Proceed to the initial setup procedure to add devices and zones.



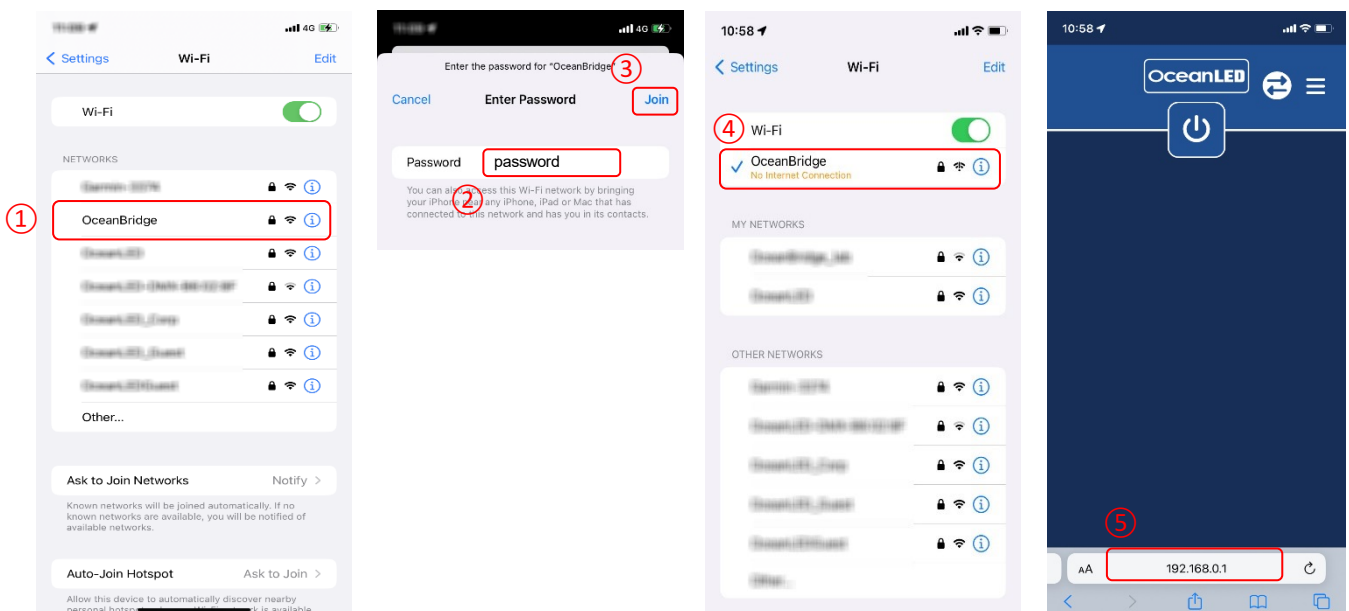
Wi-Fi Direct Access Point



When first installed, once powered on, the OceanBridge device will have an active Direct Access Point (AP) Mode, allowing connections from external devices such as a laptop/ PC, smartphone and tablets using the Wi-Fi connection.

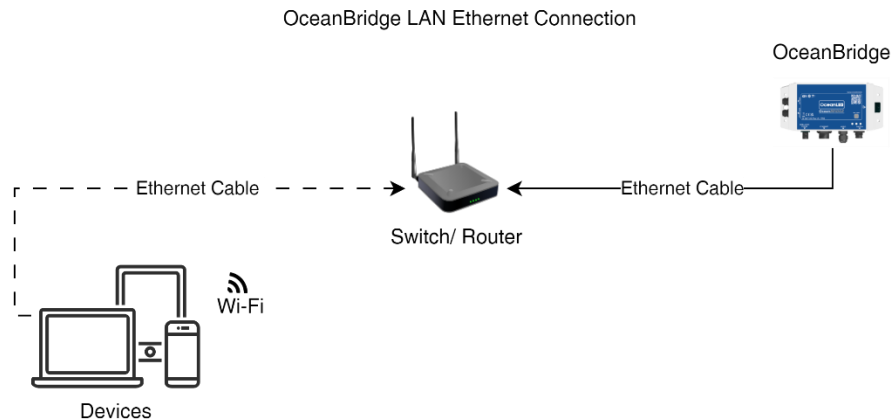


1. On your device, open the Wi-Fi settings, and the OceanBridge device should appear in the list of available networks.
2. Select the **OceanBridge** Network and type in the password '**password**' when requested.
3. Once the connection has been established, open the installed web browser for your type of device and, in the address bar, type **http://192.168.0.1** to connect with the OceanBridge controller. Upon successful connection, the OceanBridge App home page should load on the screen.



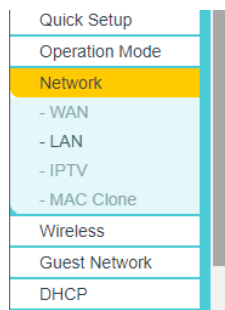
Note: The password should be changed to prevent unauthorized access. Please refer to Chapter 6.1.2 for instructions on editing the network name or changing the password.

LAN Ethernet Connection



If you opt to connect the OceanBridge device to your local LAN network via an Ethernet cable, ensure that the control device, such as a laptop/PC, tablet, or smartphone, is also connected to the same local network, either through a wired Ethernet connection (PC) or Wi-Fi.

When setting up a router it's important to choose a subnet for the IP address range that differs from '192.168.0.xxx', as this subnet is reserved for the OceanBridge Wi-Fi connection. In the example below, the LAN Network IP address has been changed from the router's default '192.168.0.1' to '192.168.1.1'. As a result, both the OceanBridge device and other connected devices will receive automatic assignments within the DHCP range: 192.168.1.100 – 192.168.1.199. This procedure ensures that the OceanBridge Ethernet IP address won't conflict with the OceanBridge Wi-Fi IP address.



LAN Settings

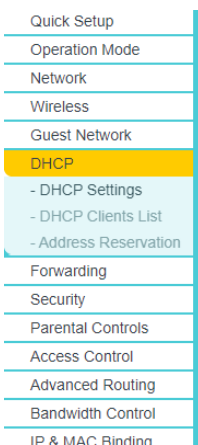
MAC Address: 9C:53:22:6F:2A:A6

IP Address: 192.168.1.1

Subnet Mask: 255.255.255.0

Save

Router LAN Settings Example



DHCP Settings

DHCP Server: ☐ Disable ☒ Enable

Start IP Address: 192.168.1.100

End IP Address: 192.168.1.199

Lease Time: 120 minutes (1~2880 minutes, the default value is 120)

Default Gateway: 192.168.1.1 (optional)

Default Domain: (optional)

DNS Server: 0.0.0.0 (optional)

Secondary DNS Server: 0.0.0.0 (optional)

Save

Router DHCP Settings Example

Accessing the OceanBridge HTML5 App:

- For laptop/PC connections, type ***http://oceanled-bridge*** in the device's browser address bar.
- For mobile device connections, the user will need to know the OceanBridge IP address, which has been automatically assigned to the device by the DHCP server:
 1. Connect to the OceanBridge device using the direct Wi-Fi method described in the previous paragraph.
 2. Read the IP address from the Ethernet section: *Menu > System > Network > Ethernet*.



3. Terminate the OceanBridge Wi-Fi device connection on your device and connect to Router Wi-Fi.
4. Type the IP address in the device's browser address bar to connect with the OceanBridge HTML5 App (e.g., *http://192.168.1.100*). Be aware that the IP address may change after power cycling the connected devices due to the nature of the DHCP server.

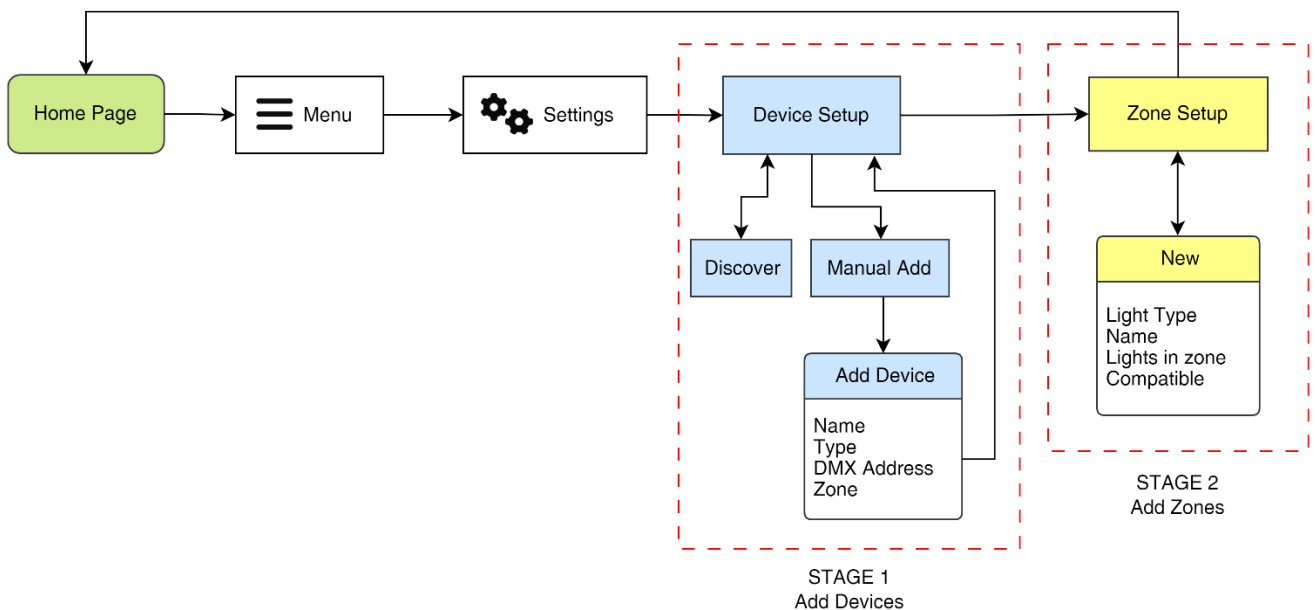
5.2 How to Setup the Equipment



The setup can be done either from the MFD or via external devices using the Wi-Fi connection. The process is exactly the same for both methods. Users can interact with the interface by touching the screen on a touch panel device or clicking with a mouse on the PC, depending on the used device.

The main setup process will include adding the devices (lights) to the system (Stage 1) and setting up a single zone or multiple zones depending on the requirements (Stage 2). Perform these steps on the first use or if new lights have been added or deleted from the DMX network.

Overview of Setup Sequence



Methods of Adding the Devices

There are two ways to add lights to the system:

- Discover method**
 The Discover method is employed in setups where all lights are of the DMX type supporting the RDM protocol, including OceanConnect setups. This is a fully automated process in which the OceanBridge device will search and automatically add the devices attached to the DMX network. In this case, the user's role will be limited to making any necessary changes to the name (e.g. adding a location/ number) or DMX address after the completion of the discovery process.
- Manual Add method**
 The Manual Add method is employed in setups where the lights do not support the RDM protocol. In most cases, this includes third-party DMX drivers or DMX-controlled lights with fixed or manually configurable DMX addresses, such as DMX controlled relays and LED strip DMX drivers, which will be directly connected to the DMX network. This is a fully manual process where the user needs to provide basic information about the device, such as its name, light type, and DMX address. This information should be available beforehand to facilitate a smooth setup process.

Both methods mentioned above can be used together to add lights to the system. The Device Setup page enables users to identify a device (with a blink/flash), edit the name/DMX address/light type/zone and delete the device from the system, regardless of the method used to add it.

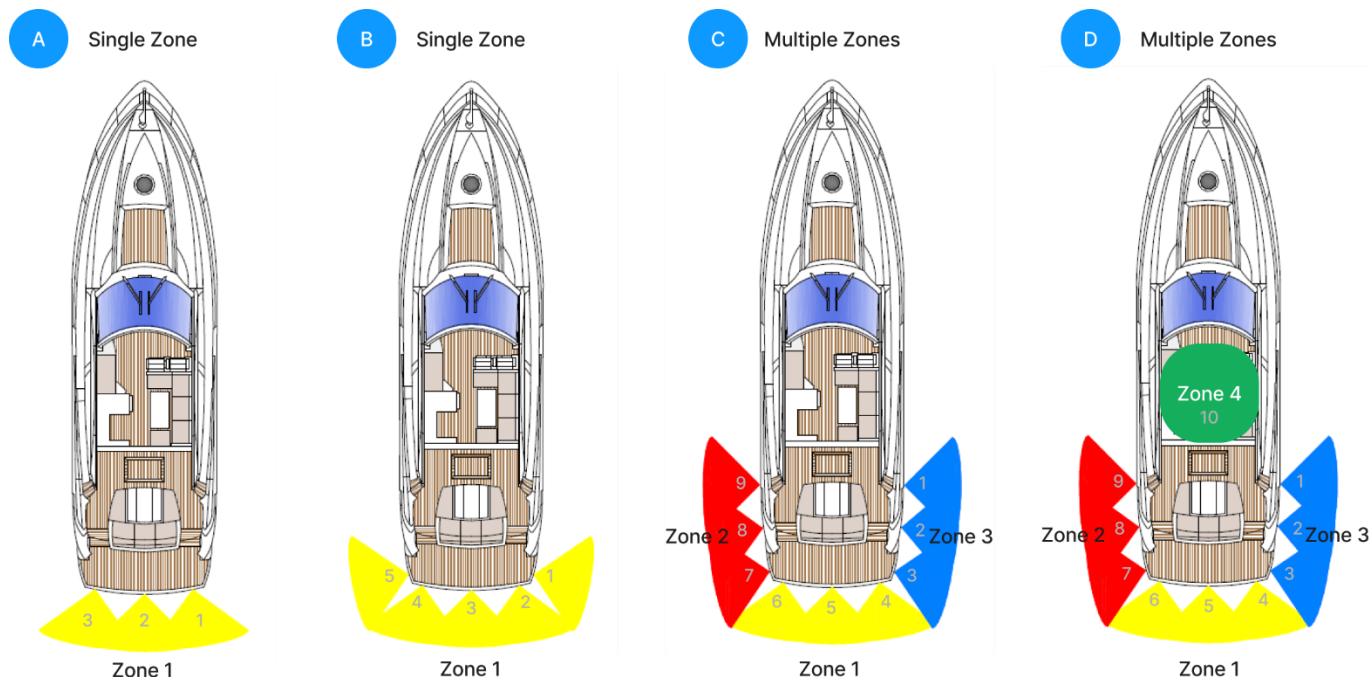
Note: Including the device location/number in the name during the initial setup will help identify which light should go to which zone and establish the order when setting up the Sweep effect.

Lighting Zones Explained

Lighting zones can be configured for various areas of the vessel. A zone may include underwater lights, strip lights, downlights, courtesy lights, or any combination of these, as long as they are the same light type*. The Zone Setup page allows users to identify (blink) the zone, edit the name/light type, include devices, and delete the zone. Users can save up to 10 zones.

*** Please note that the RGB and RGBW light types are interchangeable and can be grouped together in one zone.**

Zone Configuration Examples:



- A.** Simple single zone setup - one light type where all three lights are configured as one zone e.g.: Zone1: Transom (single colour switchable lights: 1,2,3).
- B.** Single zone setup – one light type where all five lights are configured as one zone, e.g.: Zone1: Transom (RGBW lights 1,2,3,4,5).
- C.** Multiple Zones setup – one light type where lights are configured as three zones with three lights in each zone e.g.:Zone1: Transom (lights 4,5,6), Zone2: Port (lights: 7,8,9), Zone3: Starboard (lights: 1,2,3).
- D.** Multiple Zones setup – two light types (RGBW, single switchable) where lights are configured as four zones e.g.: Zone1: Transom (RGBW lights 4,5,6), Zone2: Port (RGBW lights: 7,8,9), Zone3: Starboard (RGBW lights: 1,2,3), Zone4 (single switchable light/s: 10)

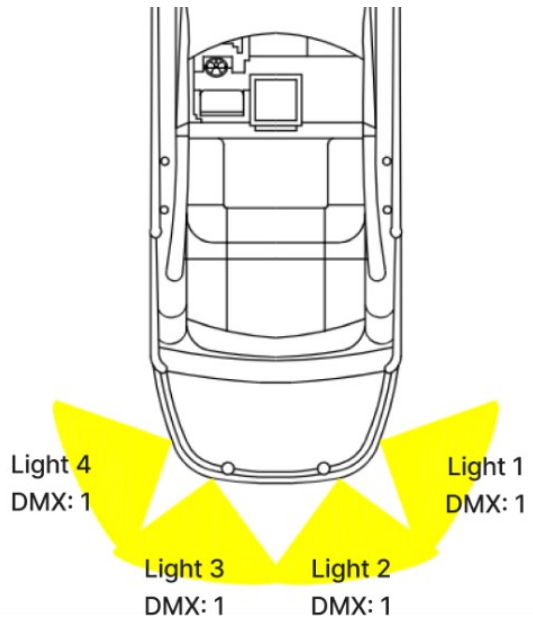
DMX Address Settings when Setting Up Devices



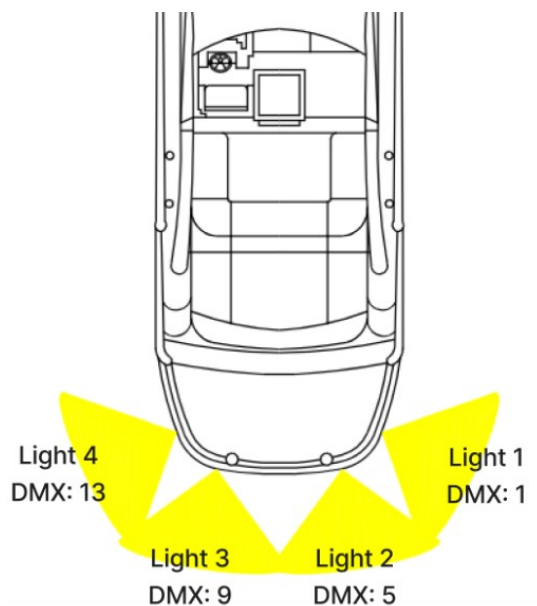
When using the fully RDM-compatible DMX device, the internal DMX address of the device can be changed from the OceanBridge user interface during the setup process.

Note: The Sweep function effect requires the lights to have unique/individual DMX addresses.

For the single zone most basic setup where no Sweep effect will be used all the devices can be set to default *DMX* address: 1.



For multiple zones installations, or if you planning to use the Sweep effect in a single zone setup it is recommended to assign a unique/individual DMX address to each light, incrementing by 4.





5.3 Quick Start Launch - Preloaded Simple Setup

The USB stick supplied with the device contains two files with preloaded setups for two types of lights:

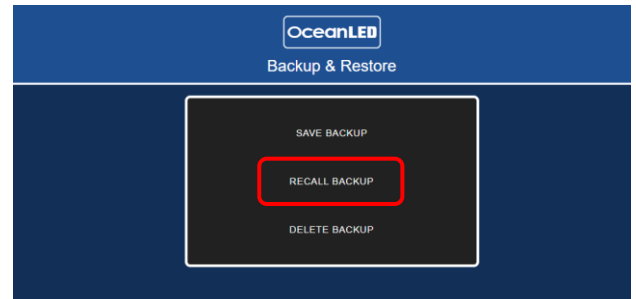
- RGBW - single zone
- Dual E6-E7 – single zone

The setups can be used for simple system setups where there is only one type of light in the single zone, and no sweep effect is required (e.g., all lights set to DMX address: 1). To skip the entire setup process and start using the lights, load one of the setups related to the installed light type. Follow the steps described below:

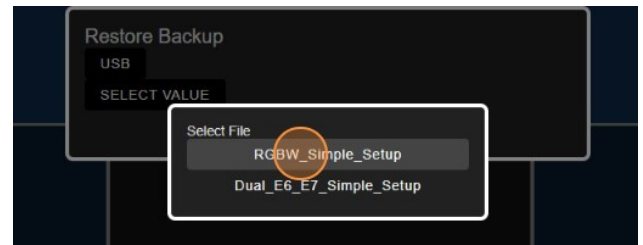
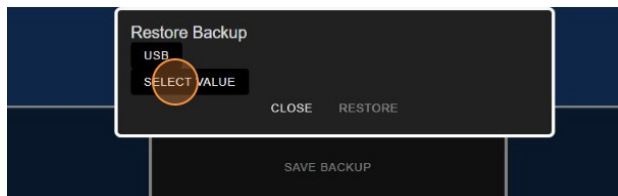
Procedure:

1. Insert the USB stick with the setup files into the OceanBridge USB port.
2. From the home page, navigate to Menu (☰) > System > Backup & Restore, and select 'RECALL BACKUP'.

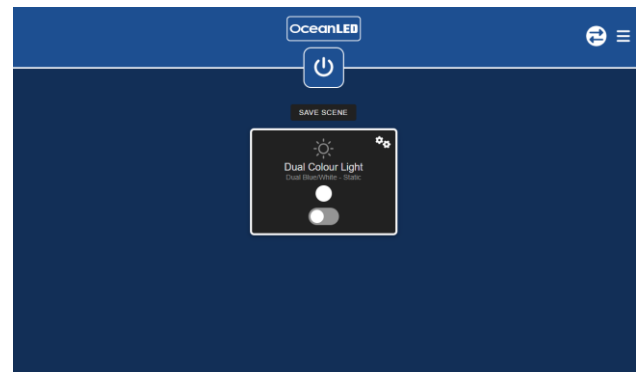
Name	Date modified	Type
Dual_E6_E7_Simple_Setup	30/11/2023 09:35	Data Base File
RGBW_Simple_Setup	30/11/2023 09:33	Data Base File
OceanLED.enc	24/11/2023 13:01	ENC File
background	02/10/2023 16:16	PNG File



3. Within the pop-up window, select the USB stick as the file location, and then tap on 'SELECT VALUE' to display the files.
4. From the list of files select the file related to the installed light type.



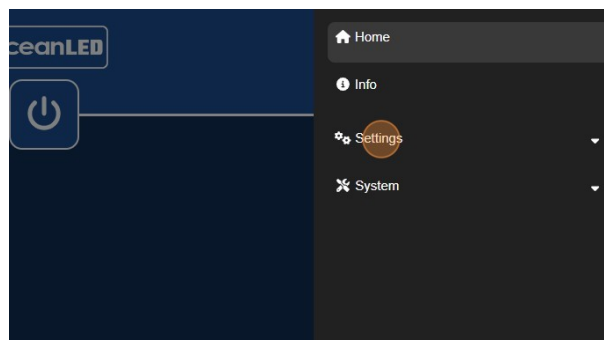
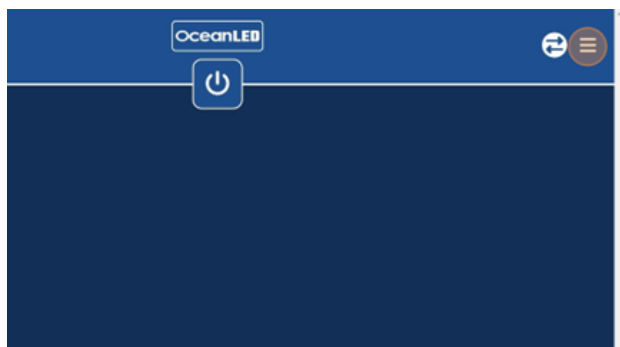
5. Select 'RESTORE' to restore the setup file. The unit will reboot, and the settings will be applied. If this action was performed via the Wi-Fi control device, the connection with the OceanBridge unit will be terminated and will need to be restored.
6. The home page should now show the zone card, allowing you to control the lights. Please refer to the other paragraphs in this document for a guide on how to use the OceanBridge app.



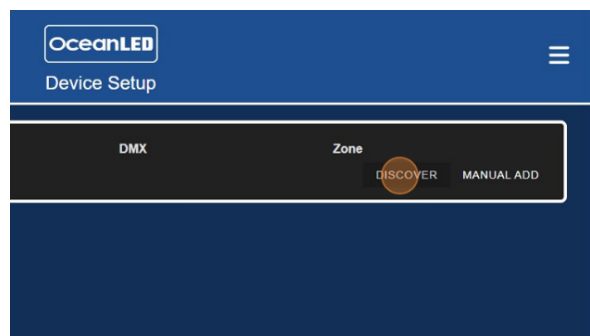
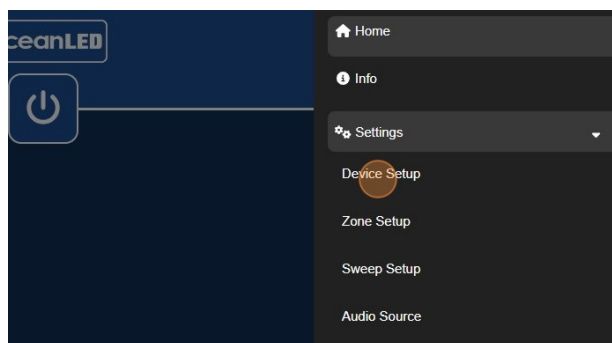
5.4 Device Setup

Adding Devices - Discover Method

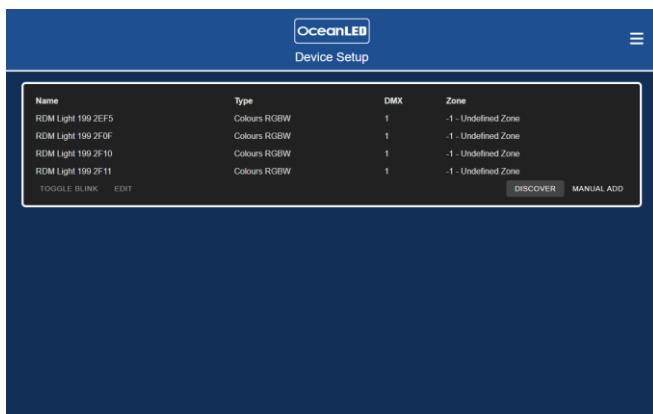
1. From the main page select the three horizontal lines icon "≡" to open the menu.
2. Select 'Settings' from the menu to open the submenu.



3. Select "Device Setup".
4. Tap on the 'DISCOVER' button to automatically search and add the lights.

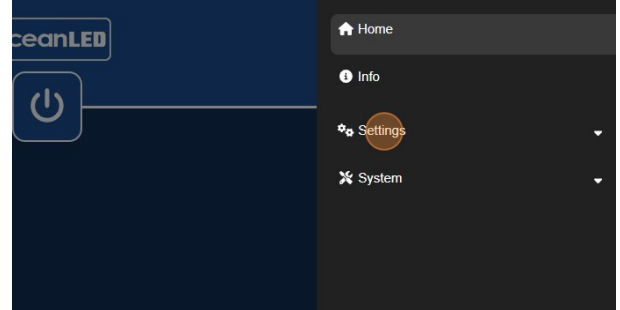
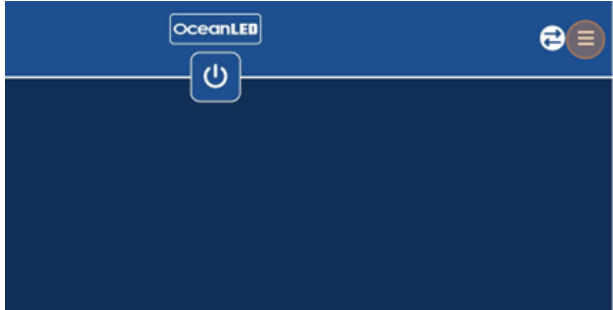


5. The added lights will be listed on the screen.
Note: If the number of lights found does not match the expected number, please check the connections and ensure that each light has power. Or that they are RDM compatible.
6. To identify the light, select it from the list and tap on 'START BLINK'. To edit the name, change the DMX address, or delete the light from the system, choose 'EDIT'. Otherwise, follow the Zone Setup procedure to include the lights in a single zone or multiple zones.

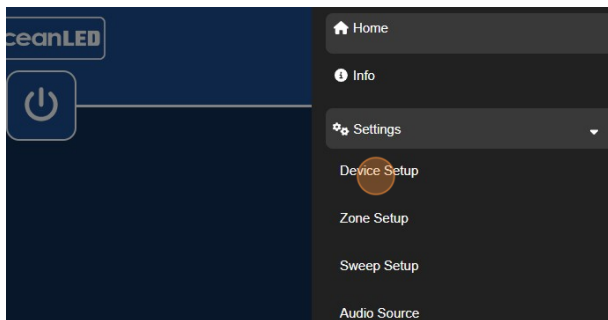


Adding Devices - Manual Add Method

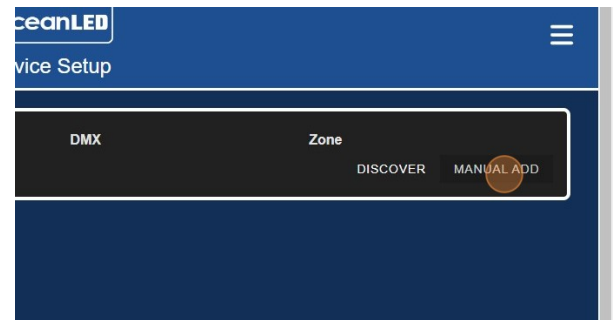
1. From the main page select the three horizontal lines icon "≡" to open the menu.
2. Select 'Settings' from the menu to open the submenu.



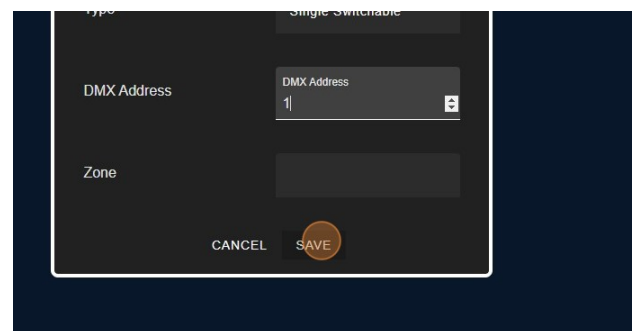
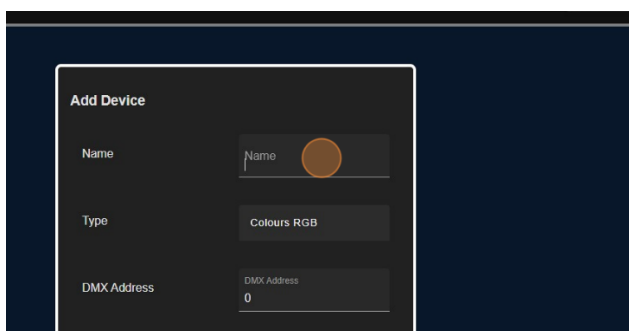
3. Select "Device Setup".



4. Select the 'MANUAL ADD' button to add the lights.

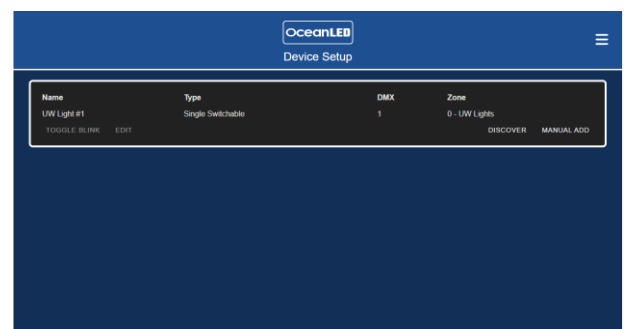


5. In the pop-up window, choose the necessary field to add/edit values. Assign a name, select the type, and input the accurate DMX address. The zone field can be omitted at this stage if it was not set up previously, as it can be added later.
6. Select 'SAVE' to add the light to the system.



7. The added light will be listed on the screen. Repeat this process for the remaining lights until all of them are added to the system.

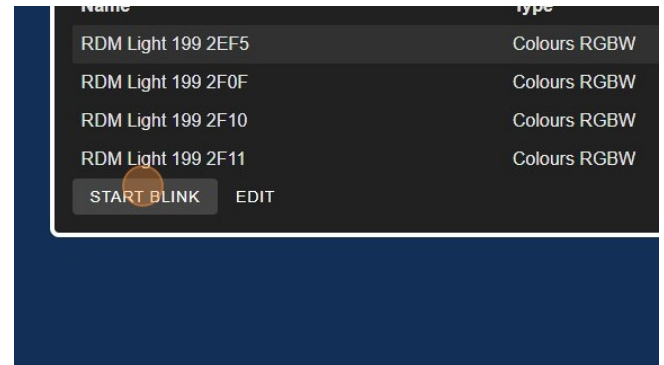
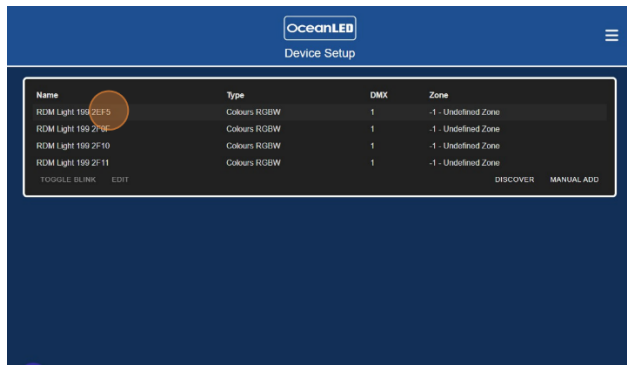
To identify the light, select it from the list and tap on 'START BLINK'. To edit the name, change the DMX address, or delete the light from the system, choose 'EDIT'. Otherwise, follow the Zone Setup procedure to include the lights in a single zone or multiple zones.



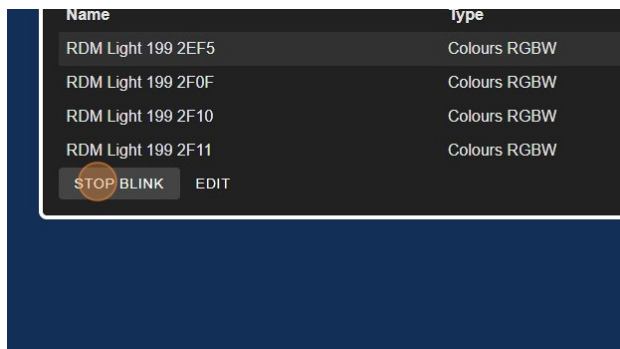
Identify Device

The 'Identify Device' function allows the user to 'blink' the light to physically identify its location on the vessel, and this location can be added to the device name. This feature proves to be useful when setting up zones or configuring the order for the sweep effect.

1. To identify devices, navigate to: *Menu (≡) > Settings > Device Setup*.
2. Select the name from the list and select 'START BLINK'.

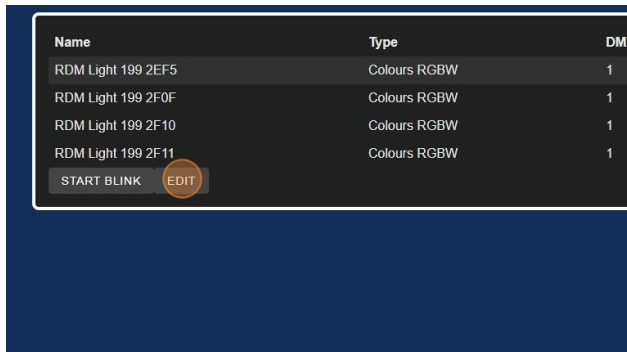


3. Once the light has been identified, select 'STOP BLINK.' If you want to make changes to the name or other values, choose 'EDIT'.

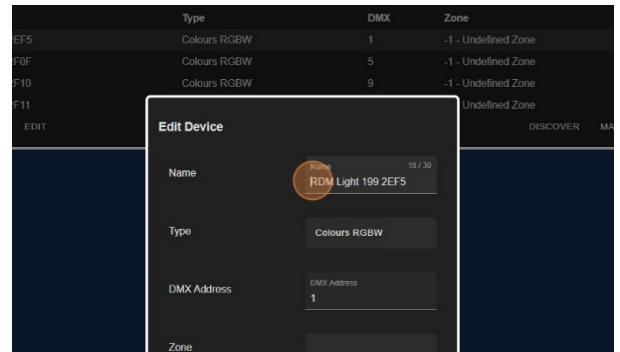


Edit / Delete Device

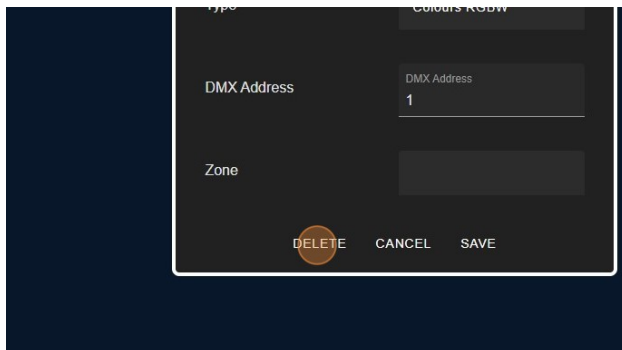
- To edit device, navigate to: *Menu (☰) > Settings > Device Setup*.
To make changes to the light's name, type, DMX address, zone, or delete it, select 'EDIT' to open the editing pop-up page.



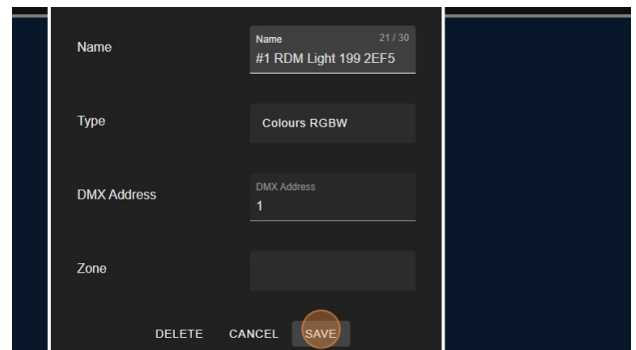
- In the Edit Device pop-up, you can make necessary changes by selecting the required fields and editing the values.



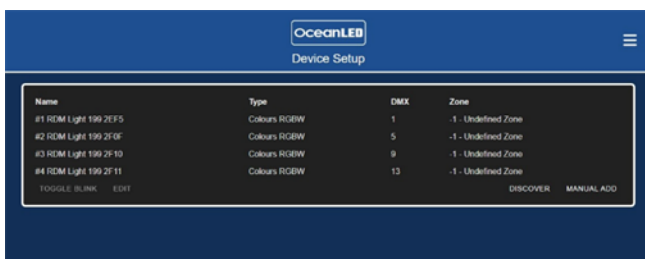
- You can also delete the device by selecting 'DELETE' button. The pop-up will close, and the list of the devices will update.



- If any of the fields have been edited, select 'SAVE' to confirm the changes. The pop-up will close, and the updated values will be saved.



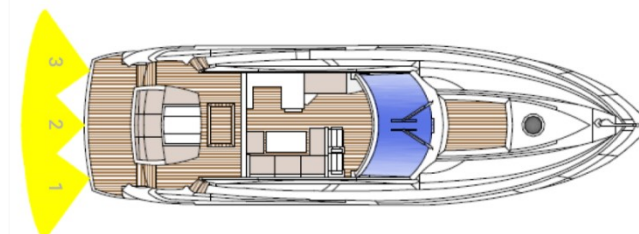
- To return to the home page, select the OceanLED logo or choose 'Home' from the menu.



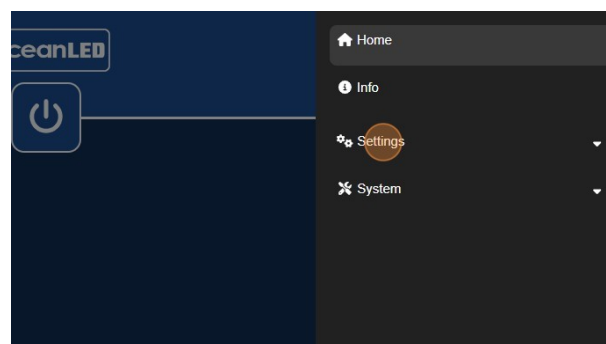
5.5 Zone Setup

Creating Single Zone

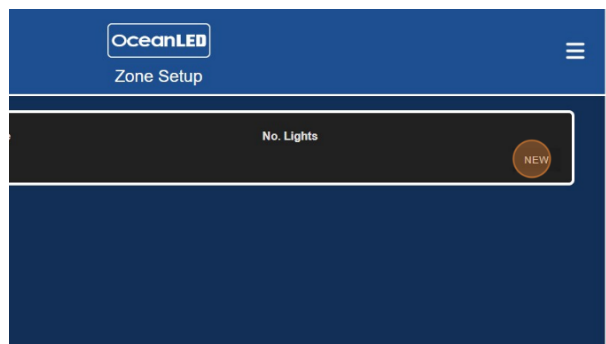
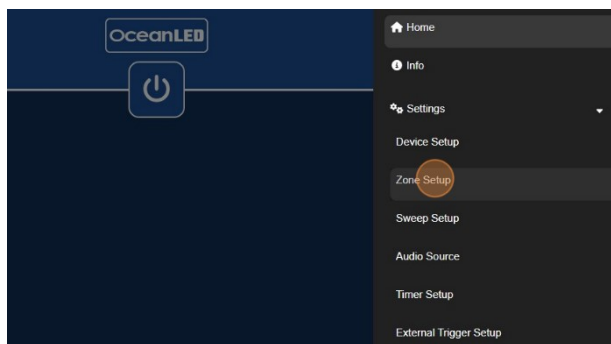
Zone 1
UW Lights



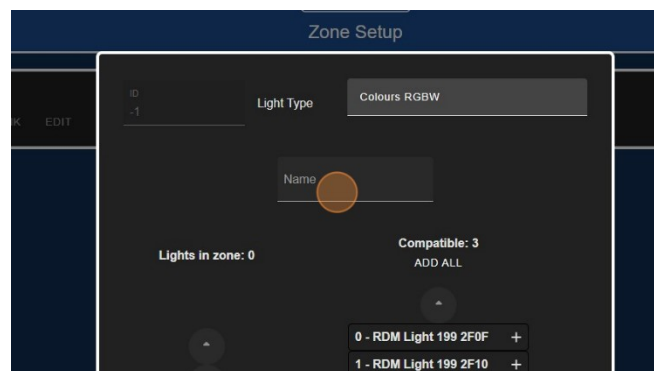
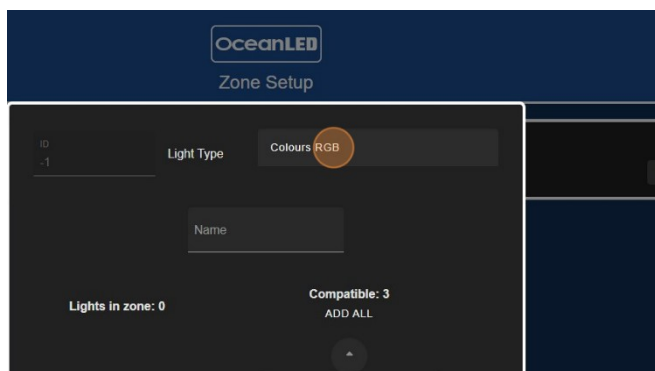
1. From the home page select the three horizontal lines “≡” icon to open the menu.
2. Select 'Settings' from the menu to open the submenu.



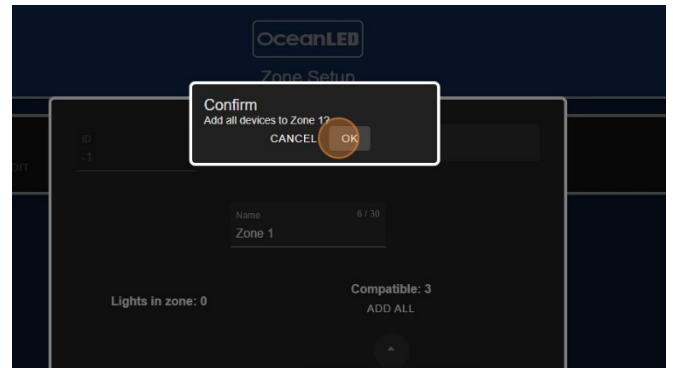
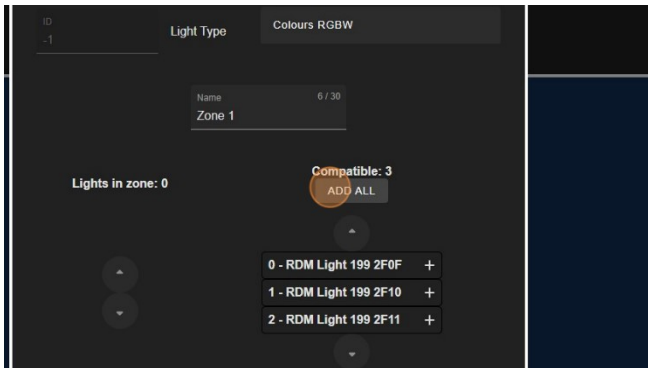
3. Select 'Zone Setup'.
4. Choose 'NEW' to open the pop-up.



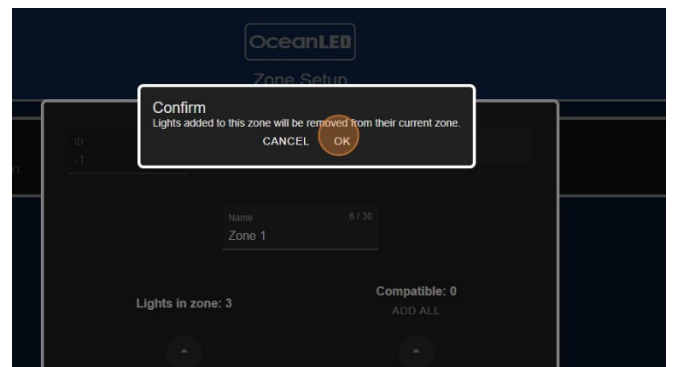
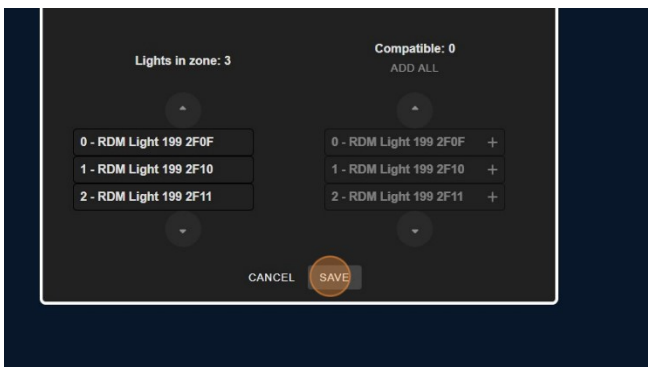
5. Select the correct light type from the pop-up list.
6. Add zone name.



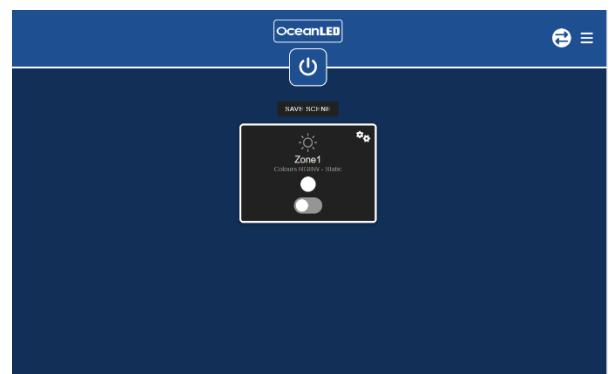
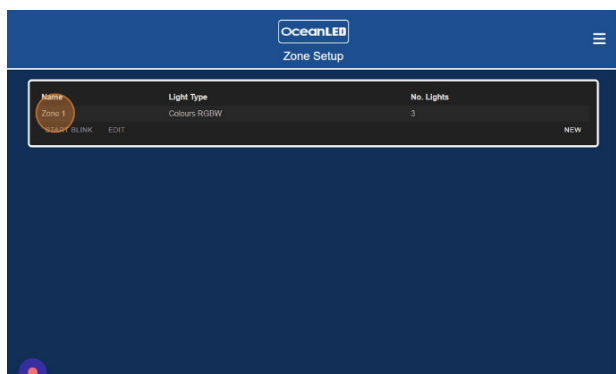
- For a single zone, select 'ADD ALL' to add all lights to the zone.
- Select 'OK' to confirm.



- Once all required lights were included in zone select 'SAVE' to save the changes and create the zone.
- Select 'OK' to confirm the changes.

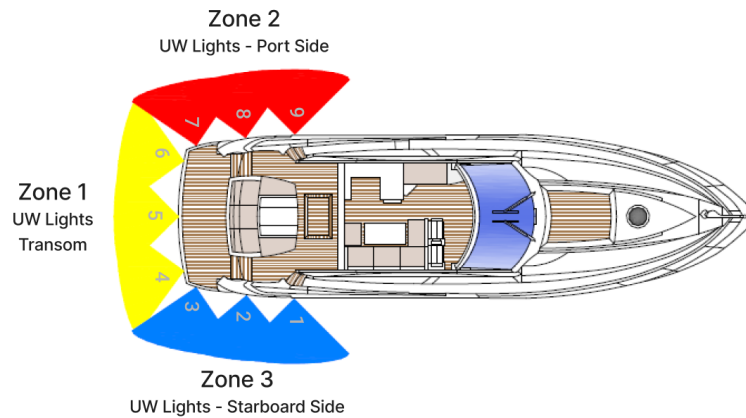


- The zone will be listed on the screen and added to the home page as a zone card.
- To identify the zone, select it from the list and tap on 'START BLINK.' To edit the name or delete the zone from the system, choose 'EDIT.' Alternatively, select the OceanLED logo or choose 'Home' from the menu to return to the home page, where the zone card will be displayed.

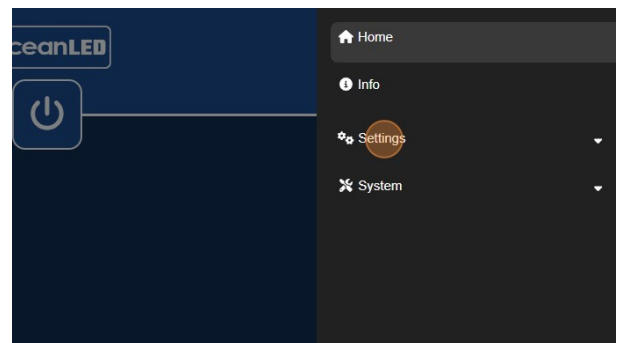
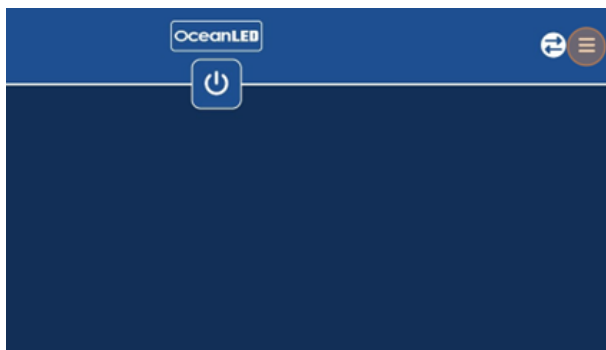


Note: The RGB and RGBW light types are interchangeable, enabling both types to be used within the same zone. This allows for simultaneous control of both types.

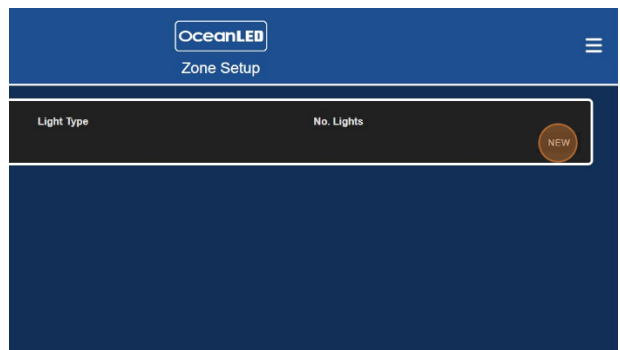
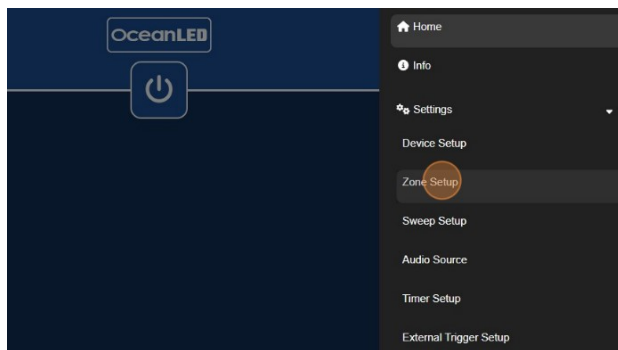
Creating Multiple Zones



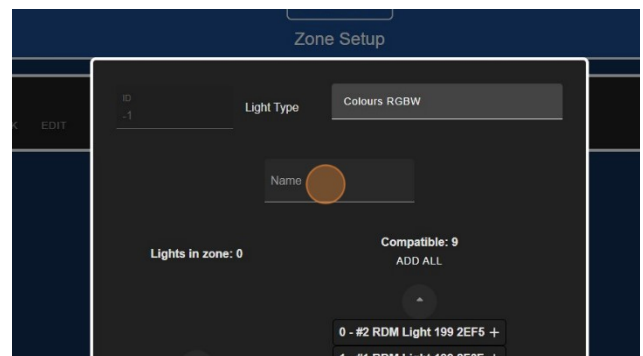
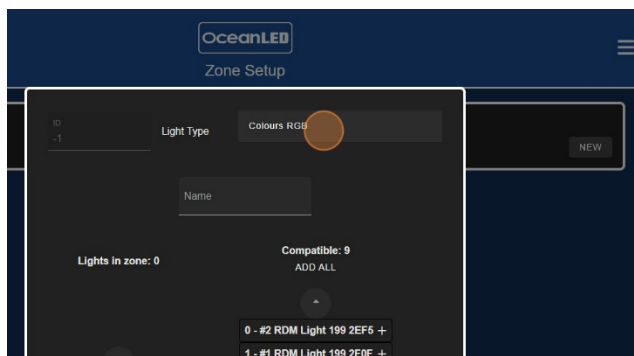
1. From the home page select the three horizontal lines “≡” icon to open the menu.
2. Select 'Settings' from the menu to open the submenu.



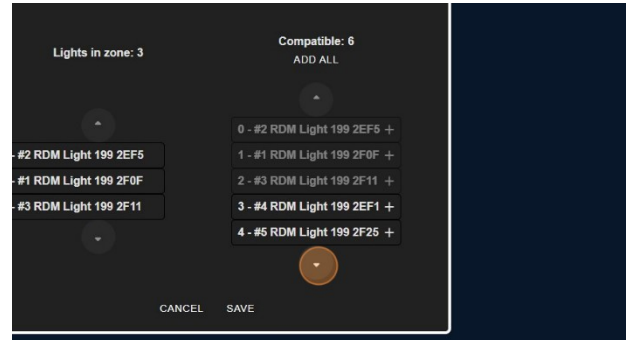
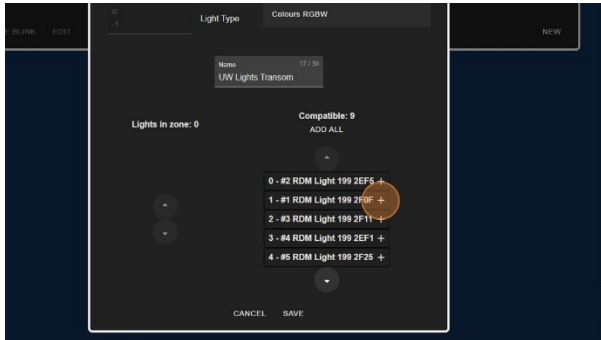
3. Select 'Zone Setup'.
4. Choose 'NEW' to open the pop-up and create 1st zone.



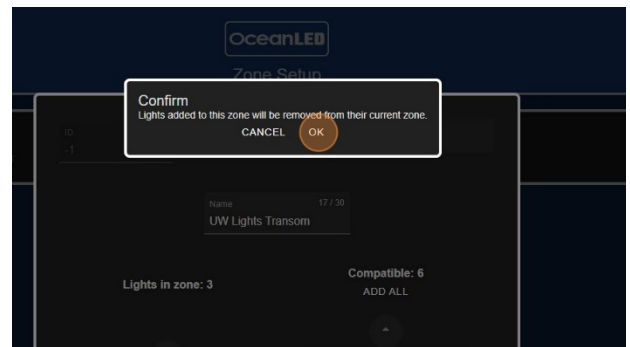
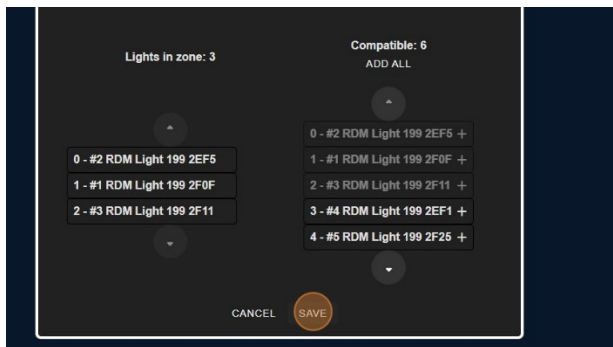
5. Select the correct light type (referring to the added device type).
6. Add zone name e.g.: UW Lights Transom.



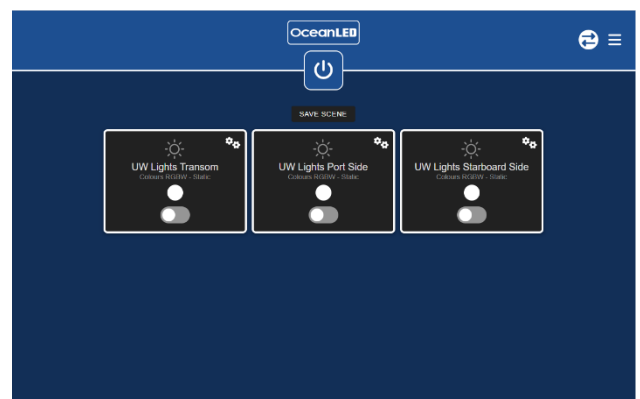
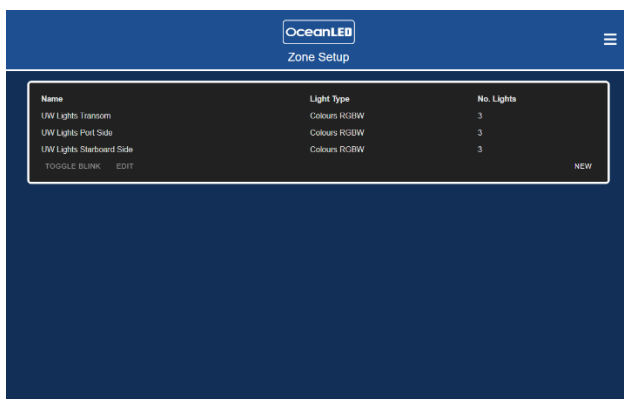
- From the 'Compatible' list of devices select the "+" icon next to device name to add it to the zone. Repeat the process for all required lights. Select the lights by referring to the light positions saved during the device setup as a guide for which lights should be included in the zone.
- Use the up and down arrow buttons to display more devices if necessary.



- Once all required lights were included in zone select 'SAVE' to save the changes and create the zone. Select 'OK' to confirm.



- Repeat the process for the remaining zones. The zones will be listed on the screen and added to the home page as zone cards.
- To identify the zone, select it from the list and tap on 'START BLINK.' To edit the name or delete the zone from the system, choose 'EDIT.' Alternatively, select the OceanLED logo or choose 'Home' from the menu to return to the home page, where the zone cards will be displayed.

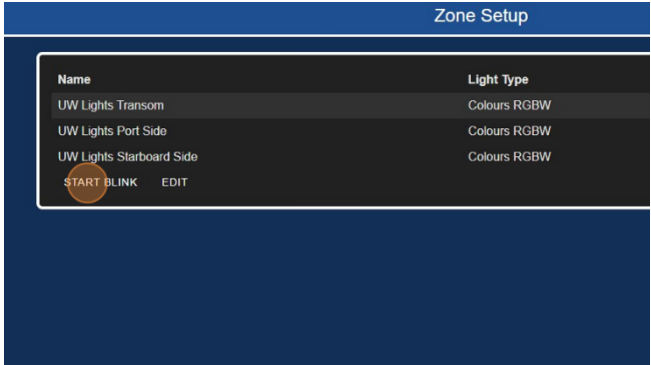
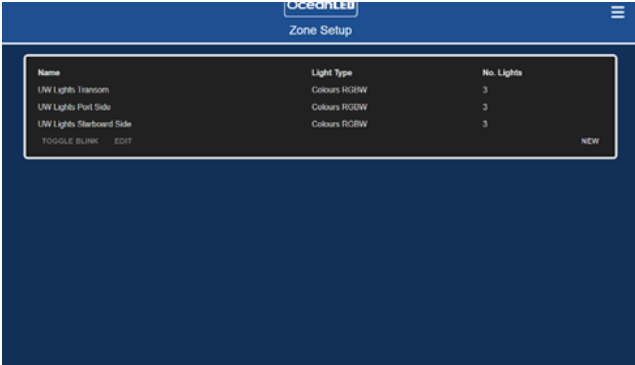


Note: The RGB and RGBW light types are interchangeable, enabling both types to be used within the same zone. This allows for simultaneous control of both types.

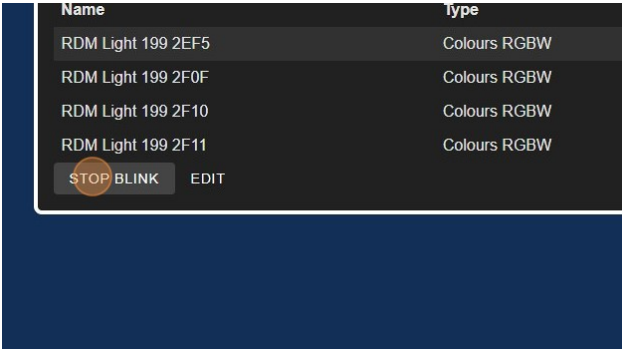
Identify Zone

The 'Identify Zone' function allows the user to 'blink' the group of lights included in the zone, helping them physically identify the locations on the vessel and ensuring that the correct lights were added to the zone.

1. To identify zone, navigate to: *Menu (≡)> Settings > Zone Setup.*
2. Select the zone name from the list and select 'START BLINK'.



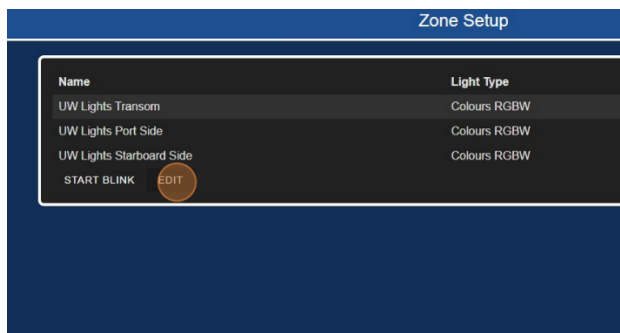
3. Once the zone has been identified, select 'STOP BLINK.' To change the name or adjust the lights in the zone, choose 'EDIT.'



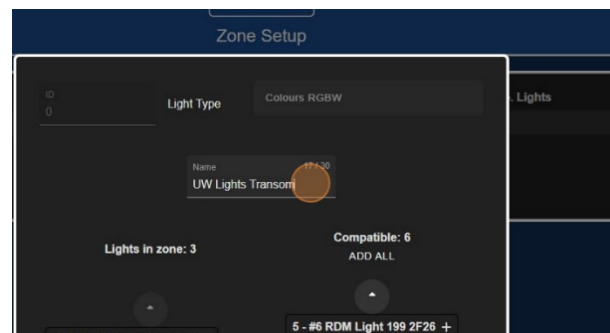
Edit / Delete Zone

- To edit zone, navigate to: *Menu (≡) > Settings > Zone Setup*. To make changes to the zone's name, add more lights, or delete it, select zone name from the list and choose 'EDIT' to open the editing pop-up page.

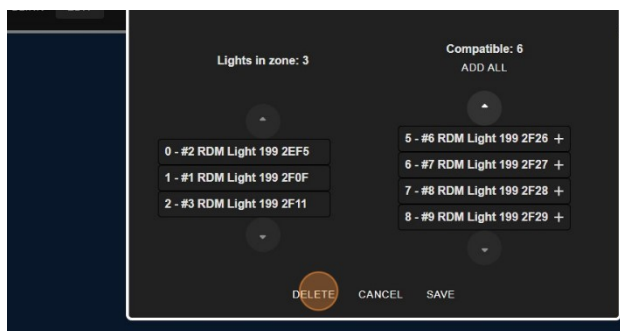
Note: To remove the device (exclude) from the zone the device would need to be added to different zone or deleted. Go to Menu > Settings > Device Setup to move the device to different zone or to delete it.



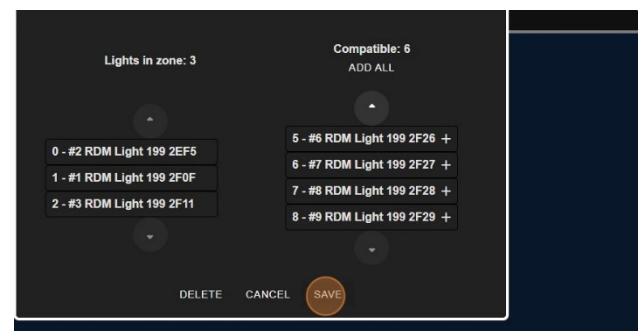
- In the zone edit pop-up, the user can edit the name of the zone or add more devices to the zone. Select the name field to edit the name or select the "+" sign next to the device name to add more devices, as in the zone setup process. The zone edit page will always show all available devices, even if they were already added to different zones. If the lights you are trying to add were previously assigned to a different zone, they will be removed from that zone and included in this one.



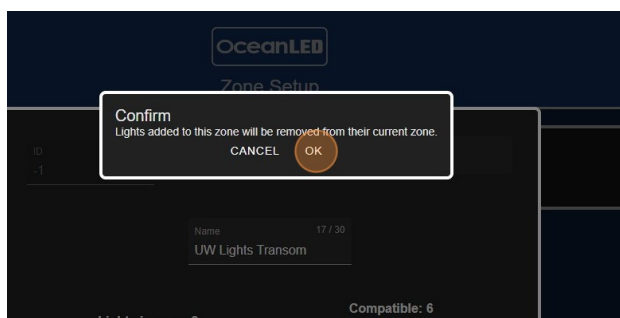
- You can also delete the zone by selecting the 'DELETE' button. Confirm the warning message; the pop-up will close, and the list of zones will update. Be aware that after deleting the zone, the lights that were included in this zone will become unassigned, meaning they won't belong to any zones.



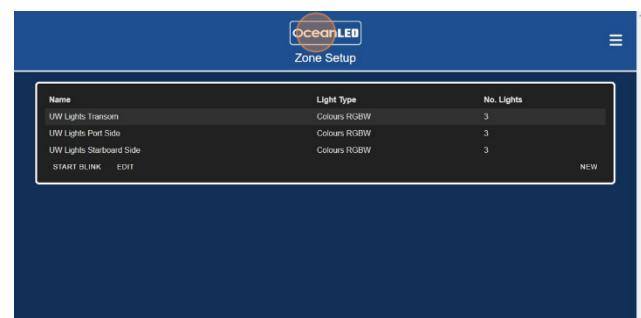
- If changes have been made either to a name or devices, select 'SAVE' to confirm the changes. The pop-up will close, and the updated values will be saved.



- If more lights have been added to a zone, there will be a warning pop-up message. Select 'OK' to confirm your choice or 'CANCEL' to cancel the change.



- To return to the home page, select the OceanLED logo or choose 'Home' from the menu ≡.

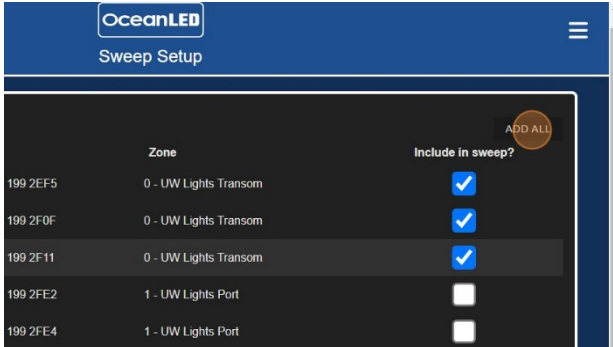
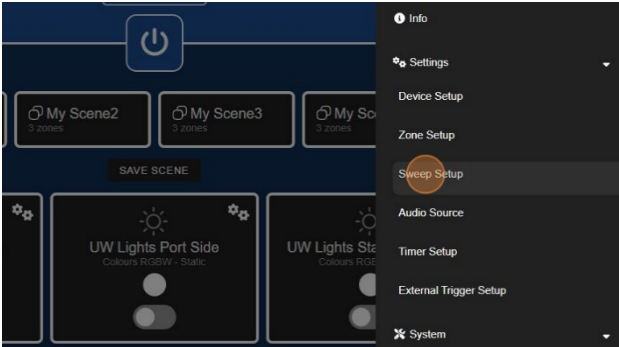


5.6 Sweep Setup

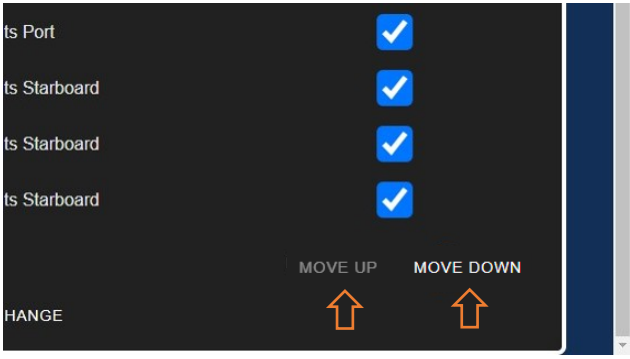
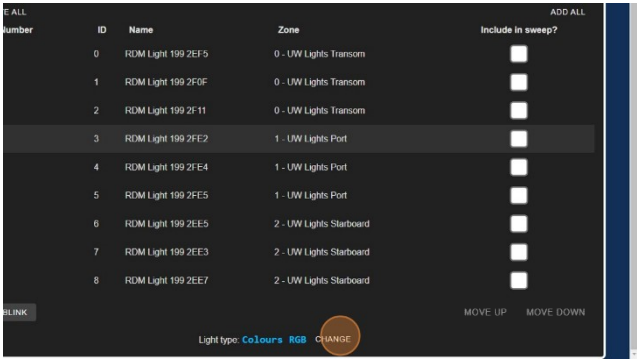


The sweep setup should only be performed after all devices have been added to the system. Please note that the sweep effect can only be set for one light type (e.g. Colours RGBW or Single Dimmable). Additionally, it's important to be aware that the RGB and RGBW light types are interchangeable. Therefore, selecting either light type will display both types, and both can be used in the sweep.

1. From the main Menu (☰), navigate to *Settings > Sweep Setup*.
2. Select a light from the list “✓” to include in the sweep or choose ‘ADD ALL’ to include all of them.



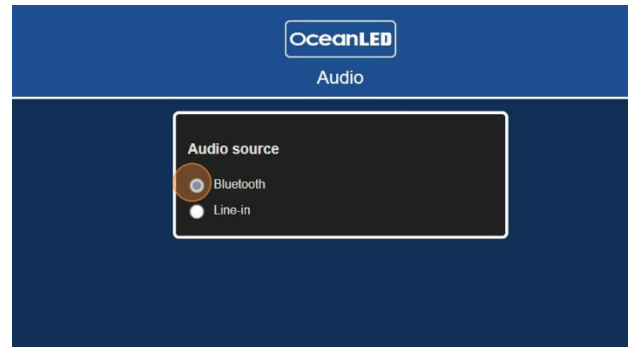
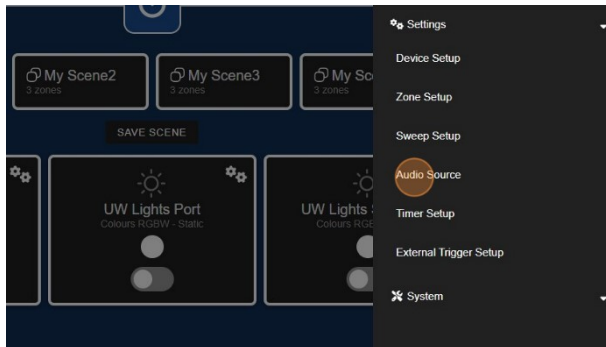
3. If you need to change the light type select ‘CHANGE’ from the bottom of the pop-up.
4. Adjust the lighting order by selecting the light and using the ‘MOVE UP’ or ‘MOVE DOWN’ options. If necessary use ‘START BLINK’ option to identify the light. Tap logo to return to home page. Follow the general user guide how to activate the sweep.



5.7 Audio Source Setup

1. To change audio source, navigate to: *Menu (≡) > Settings > Audio Source*.
2. Choose between the two options:
 - Bluetooth
 - Line In

Tap the OceanLED logo or home button in the menu to return to the home page; the selection will be automatically saved.

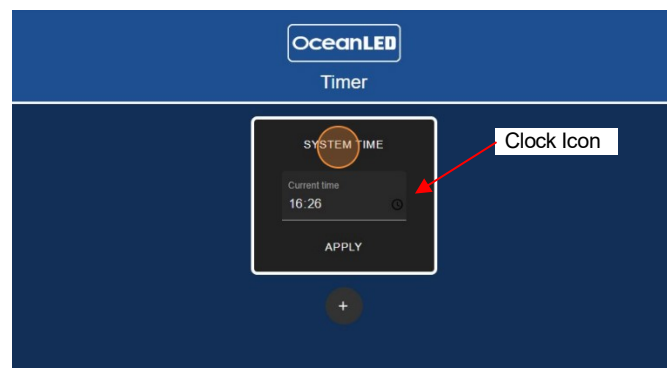
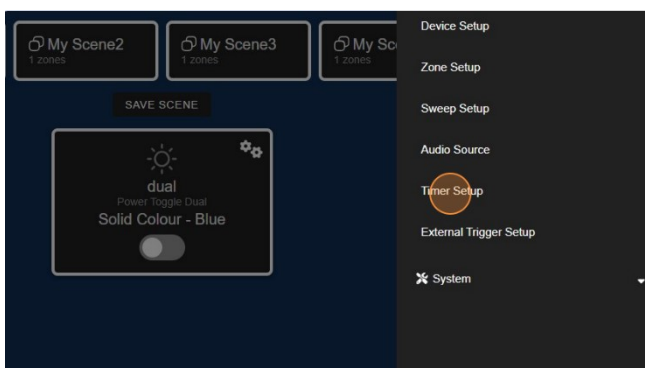


5.8 Timer Setup

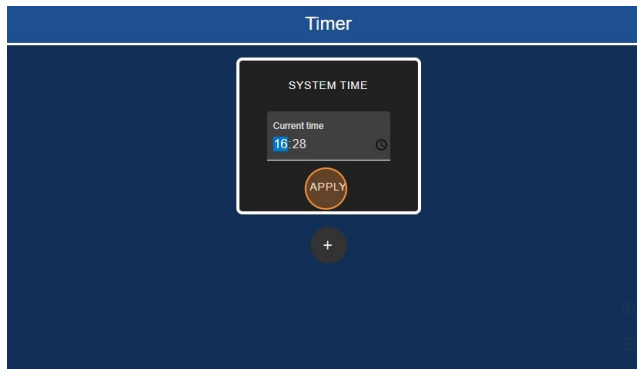
The timer function allows to power on or off the saved scene at the user specified time. Prior to setting the timer there have to be saved scenes in the system. User can add up to 20 timers.

1. To add timer, navigate to: *Menu (≡) > Settings > Timer Setup*.
2. Set the current time: select 'SYSTEM TIME' button to automatically update the time from the connected device or select the "clock" icon to manually set the time.

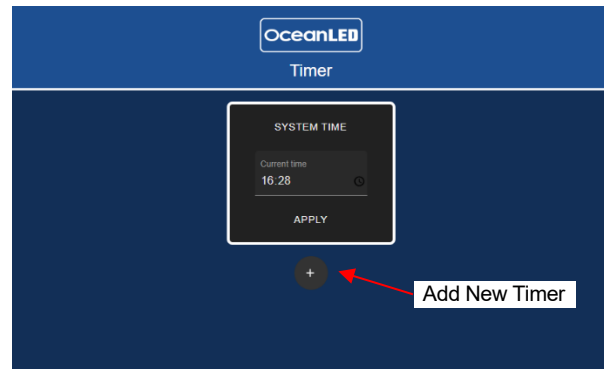
Note: The displayed time does not update in real-time on the screen; refresh the page to see the current time.



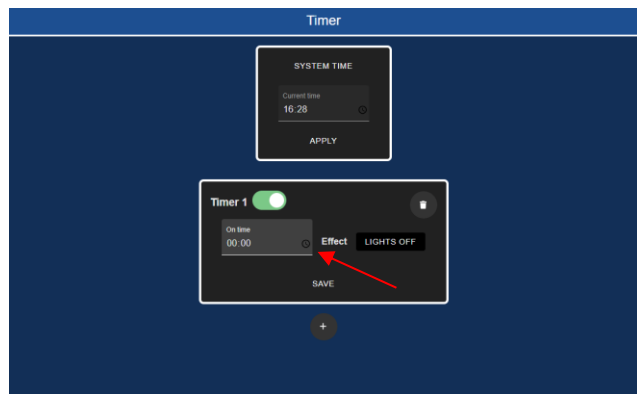
3. Select 'APPLY' to save/update the current time.



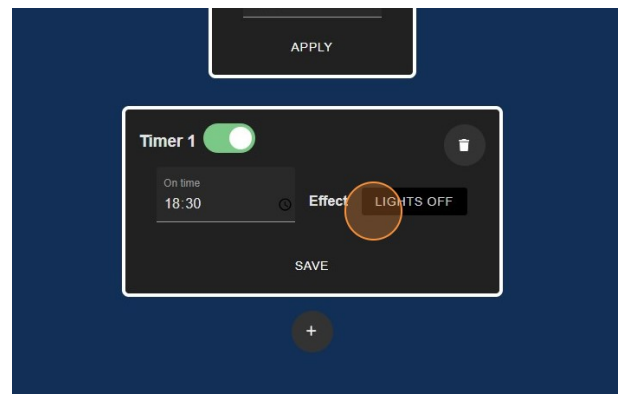
4. Select "+" icon to add new timer.



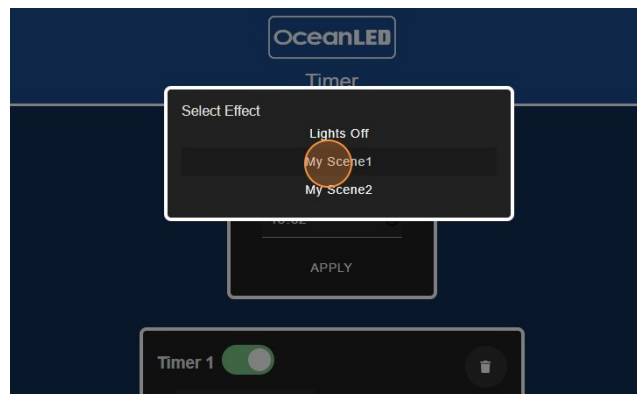
5. Select 'clock' icon to edit the time.



6. Tap on the field next to 'Effect' to change the effect/assign a scene.



7. Select the desired option.



8. Confirm the settings with 'SAVE'.

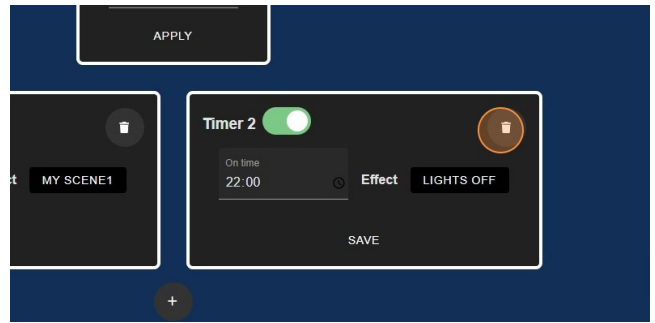


9. Repeat steps 4 – 8 to add another timer e.g.: Lights Off.



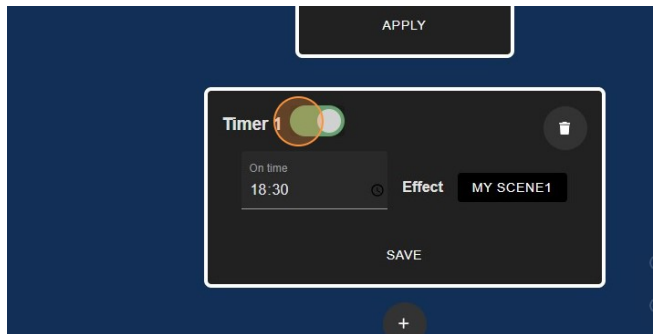
Delete the timer:

To delete the timer select the 'bin' icon.

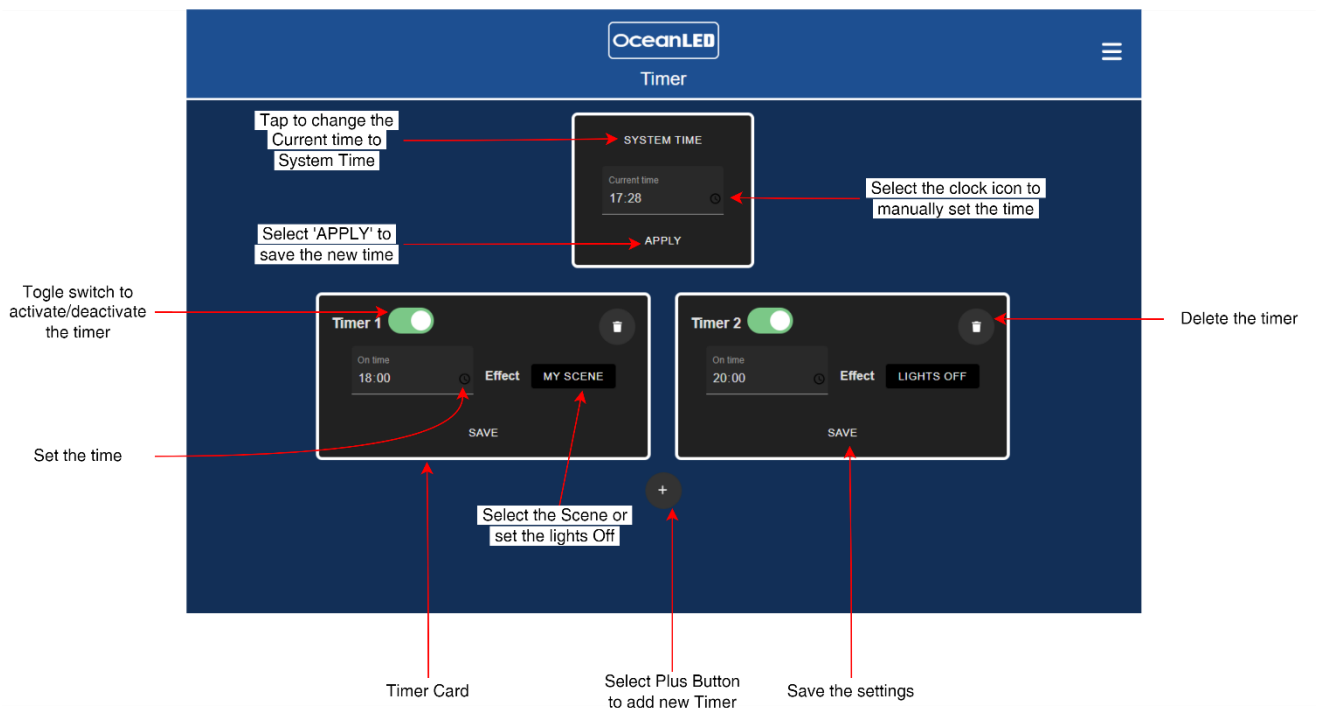


Deactivate the timer:

To deactivate the timer tap the toggle switch on top of the timer card.



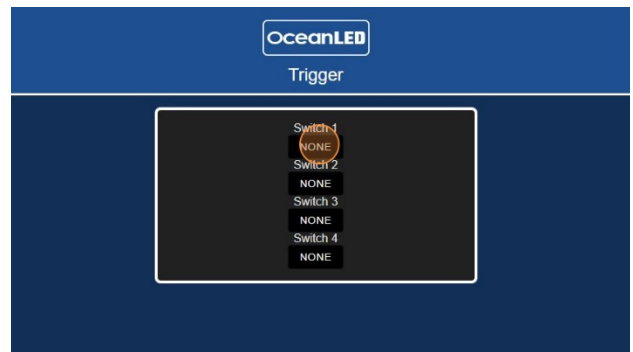
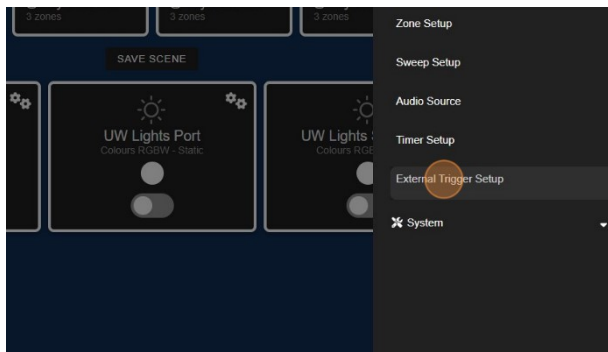
Timer settings overview



5.9 External Trigger Setup - Switch Functionality

Prior to assigning the functionality to the external switches/buttons there have to be saved scenes in the system.

1. To assign functionality to the buttons/switches, navigate to: *Menu (≡) > Settings > External Trigger Setup.*
2. From the list, select the field below the switch name to assign the scene or switch the lights off.



3. The saved scenes will be listed along with other options. Select the desired function.
4. Repeat for each switch. The settings will be automatically saved. If you delete the scene which was used in this setup, the switch function will default to 'NONE'.



Switch operation:

Switch Operation	
Short press	Triggers the set scene
Long press (above 3s)	Powers off the scene (turns off all zones included in the assigned scene)

6 System options

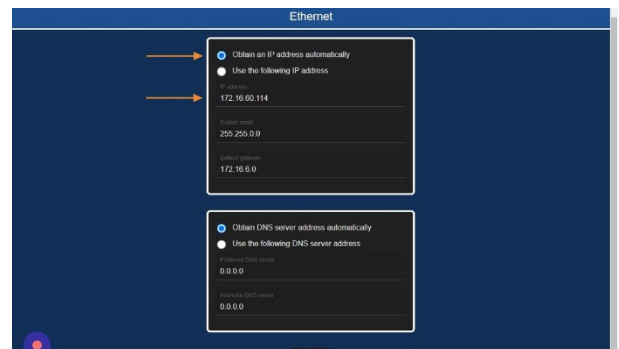
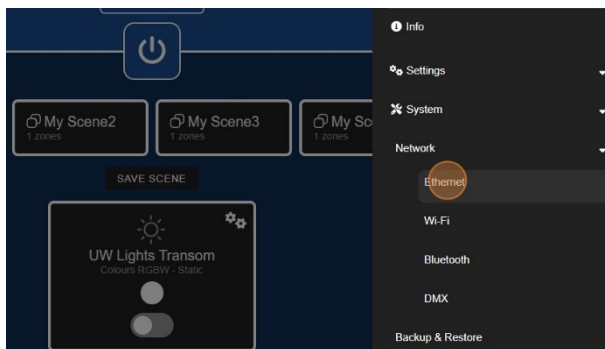
6.1 Network Settings

6.1.1. Ethernet

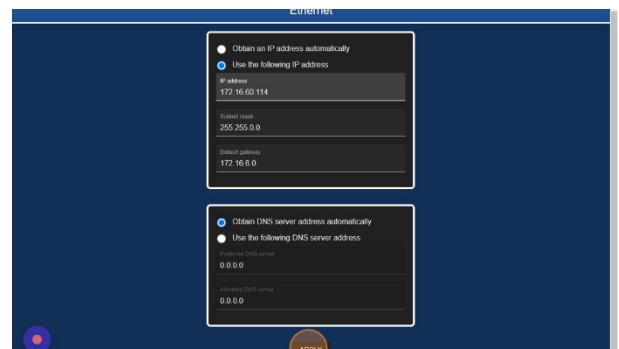
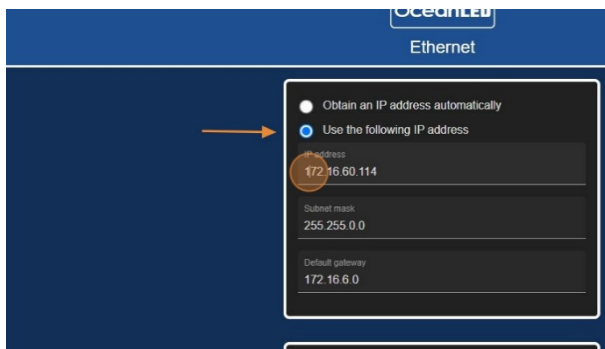
! To ensure compatibility with the MFD, keep the OceanBridge unit's IP address set to: 'Obtain an IP address automatically'.

Ethernet Configurations: Setting a Fixed IP Address

1. To view or edit the ethernet settings, navigate to: *Menu (≡) > System > Network > Ethernet.*
2. By default, the Ethernet is set to 'Obtain an IP address automatically.' This setting should not be changed unless the OceanBridge unit will be used with third-party systems that require a fixed IP address. Changing this settings will affect the compatibility with MFD device.

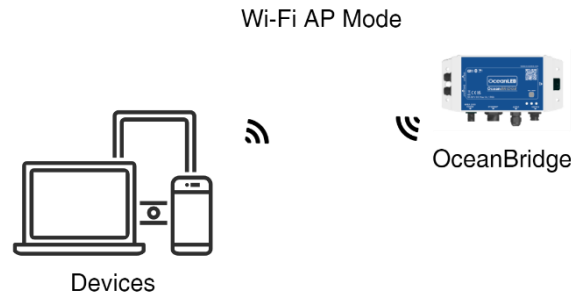


3. To set a fixed IP address, select 'Use the following IP address' and change the IP address and other related field values to the required ones.
4. Select apply to save the settings.

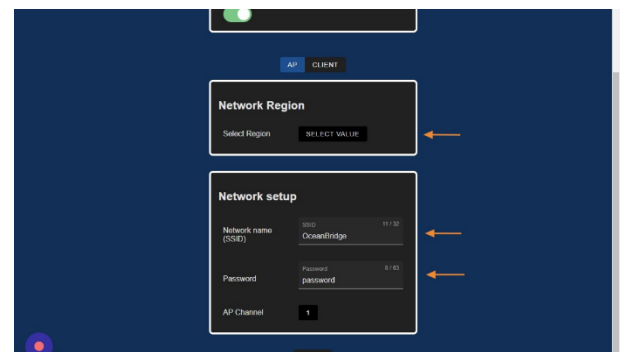
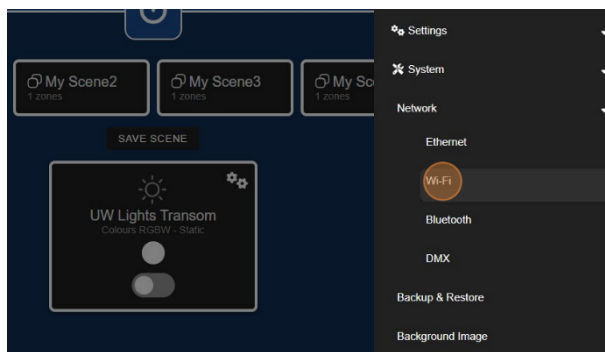


6.1.2. Wi-Fi AP Mode

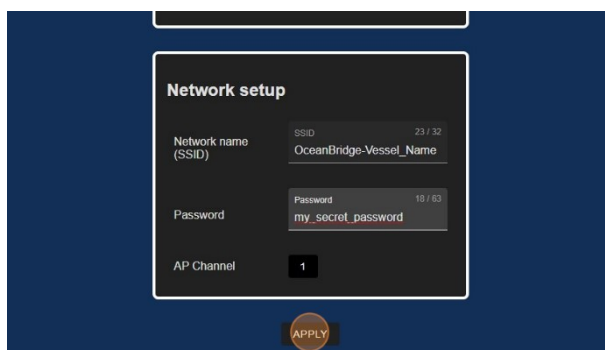
Direct Access Point (AP) Mode (default): In this mode, the OceanBridge device acts as an access point itself, creating its own Wi-Fi network. Users can connect their devices (such as smartphones, tablets, or laptops) directly to the OceanBridge Wi-Fi network to access its features and functionalities.



1. To view and edit the Wi-Fi settings navigate to: *Menu (≡) > System > Network > Wi-Fi.*
2. The Wi-Fi is initially set to 'AP' (access point) mode by default, with the default name '**OceanBridge**' and password '**password**'. To secure your Wi-Fi connection, please choose your region and update the default name and password to something else.



3. Select 'Apply' to save the settings. Depending on the changes, the unit may reboot to initiate the new settings. The Wi-Fi connection to the OceanBridge device will be lost due to the reboot.
4. Connecting control device using the Wi-Fi AP Mode:

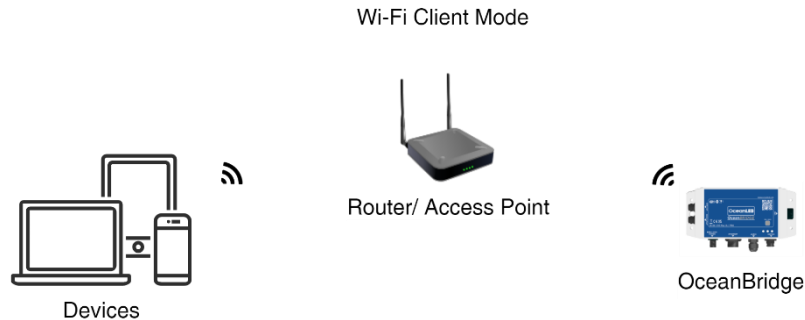


- On your device, open the Wi-Fi settings, and the "OceanBridge" device should appear in the list of available networks.
- Select the "OceanBridge" Network and type in the saved password when requested.
- Once the connection has been established, open the installed web browser for your type of device and, in the address bar, type **http://192.168.0.1** to connect with the OceanBridge controller. Upon successful connection, the OceanBridge App home page should load on the screen.

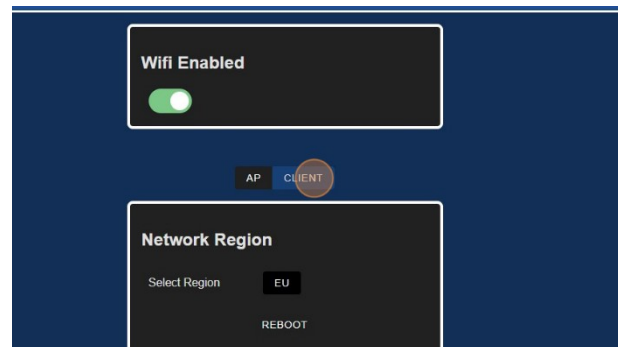
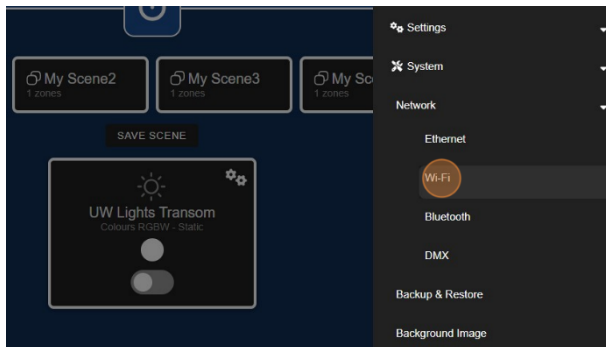
Note: Changing the Network Region from MFD will start an automatic reboot on the unit to apply the new settings. However, when using a control device connected via Wi-Fi, the 'REBOOT' option must be activated manually. This precaution is taken to avoid disrupting the Wi-Fi connection, providing users with the flexibility to decide when to initiate the reboot.

6.1.3. Wi-Fi Client Mode

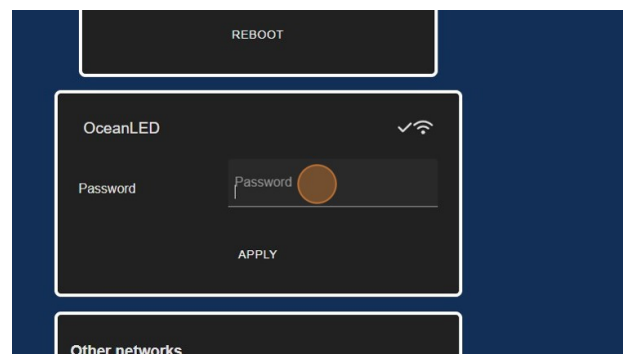
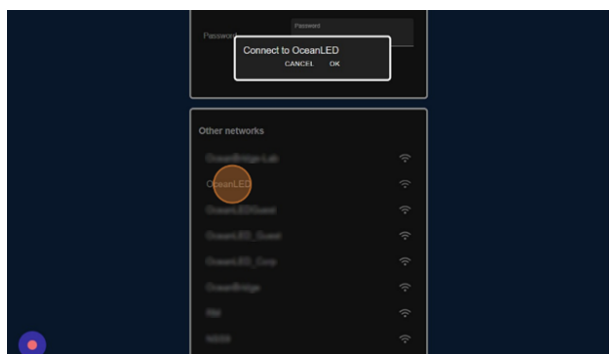
Client Mode: In this mode, the OceanBridge device functions as a client and can connect to an existing Wi-Fi network created by a separate router or access point. Users can configure the OceanBridge to connect to their preferred Wi-Fi network, enabling the device to access the local network and communicate with other devices on that network.



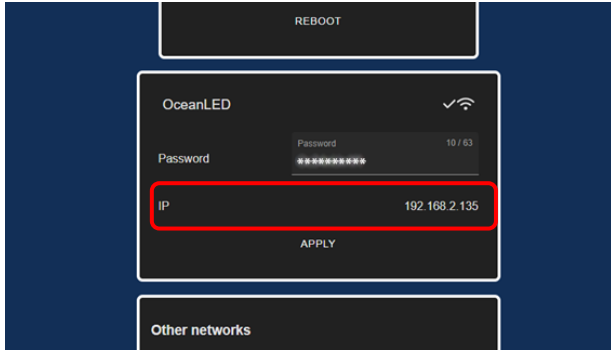
1. To view or edit the Wi-Fi settings, navigate to: *Menu (≡) > System > Network > Wi-Fi.*
2. To open the Client editing page and activate the Client mode, select the 'CLIENT' tab. In the 'Network Region' settings, choose the Region code associated with your location (if not set earlier).



3. The list of available Wi-Fi devices will be displayed in "Other networks" pane. Please select the network device from the list to connect.
4. Once the selected device appears in the edit page, type in the password and choose 'APPLY' to save the settings. Depending on the changes, the unit may reboot to initiate the new settings. The Wi-Fi connection to the OceanBridge device will be lost due to reboot.



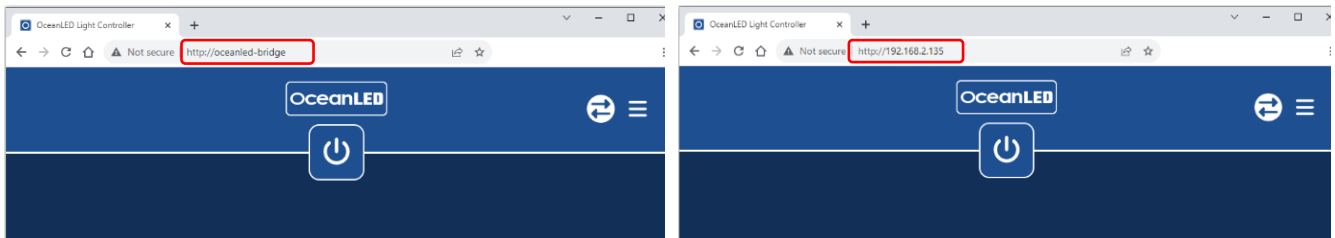
- After the reboot return to Wi-Fi settings: *Menu > System > Network > Wi-Fi* to read the newly assign IP address. Make a note of the IP address as from now on this will be the address used to connect all the remote devices.



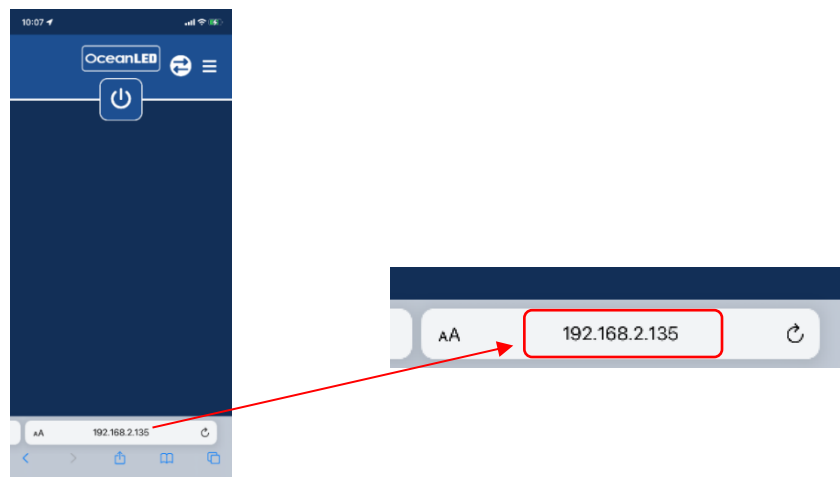
Note: Be aware that changing to Client Mode using Wi-Fi remote connection will result in the OceanBridge device rebooting to apply new changes. At this point, you won't be able to connect to the OceanBridge device due to the change of the IP address. The IP address can be retrieved from the OceanBridge app, either via the MFD, or if not using the MFD, the best method is to connect with a laptop and attempt to connect via the <http://oceanled-bridge> route.

Connecting control device using the Wi-Fi Client Mode

To connect via PC web browser, ensure the PC is connected to the same network as the OceanBridge device. Open the web browser and, in the address bar, type: **<http://oceanled-bridge>** or the IP address obtained from the Client Wi-Fi setup page.

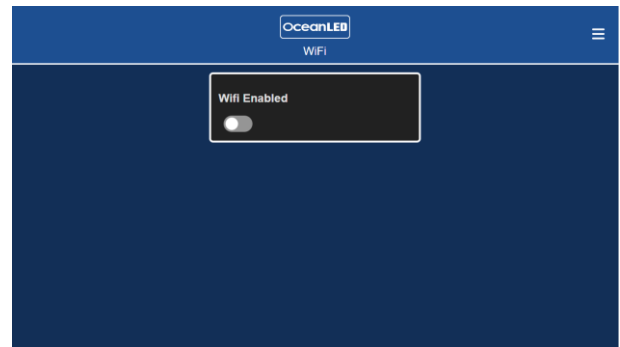
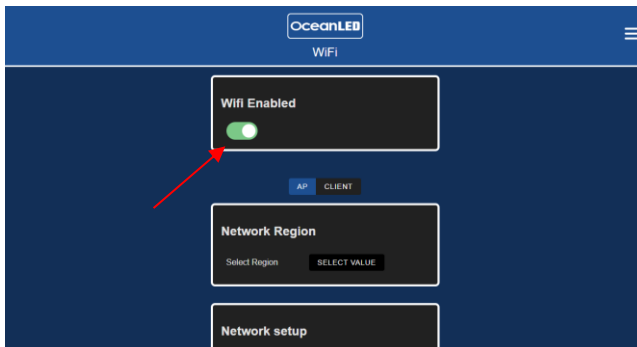


To connect via smartphone or tablet, connect the device to the same wi-fi network as the OceanBridge device. Open the web browser and, in the address bar, type the IP address obtained from the Client Wi-Fi setup page e.g.: <http://192.168.2.135>.



Disabling/Enabling Wi-Fi

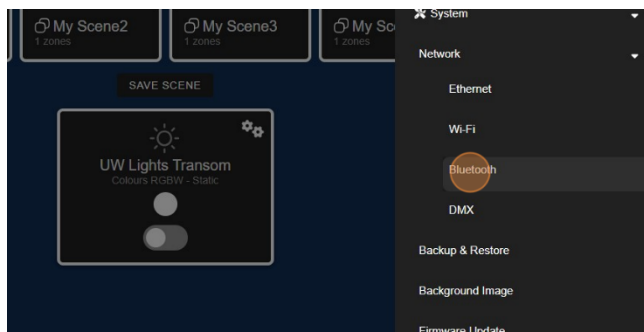
To disable/enable the Wi-Fi select the toggle switch on top of the page.



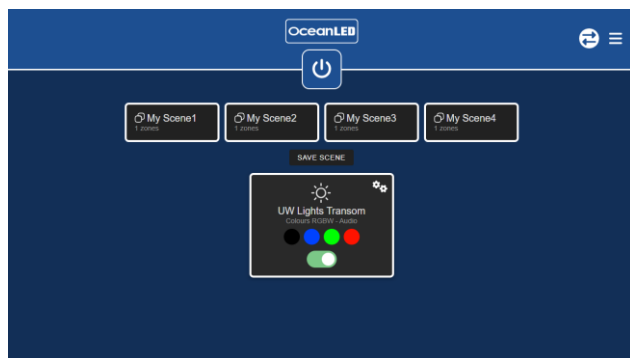
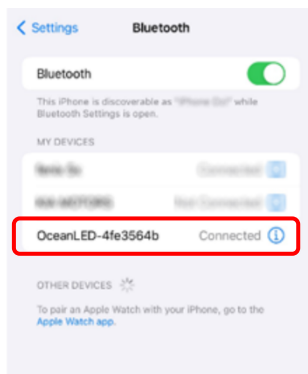
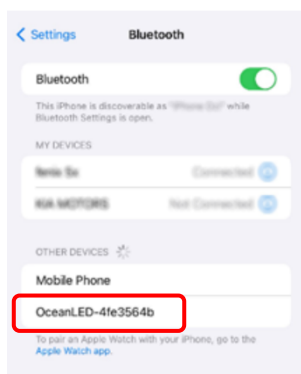
6.1.4. Bluetooth

Connecting Bluetooth device to OceanBridge device:

1. On the OceanBridge app navigate to: *Menu (≡) > System > Network > Bluetooth.*
2. Select 'START PAIRING' to pair with your device.

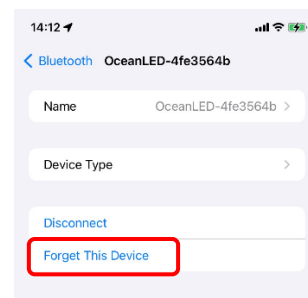


3. On your device, navigate to Bluetooth settings, where the 'OceanLED-xxxxxxx' device should appear in the list of discovered devices. Select the device to establish a connection. Once the Bluetooth connection is established, set your audio signal source to Bluetooth in Menu ≡ > Settings > Audio Source > Bluetooth.
4. To operate the lights, go to the home page of the OceanBridge app, toggle on the desired zone/s, set the zone effect to audio, and start playing music on your device using the app of your choice.



Disconnecting the Bluetooth device:

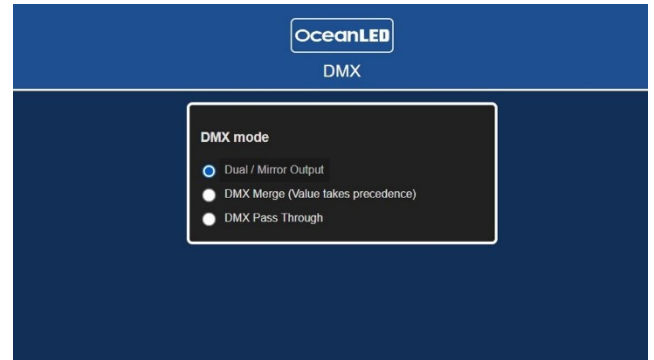
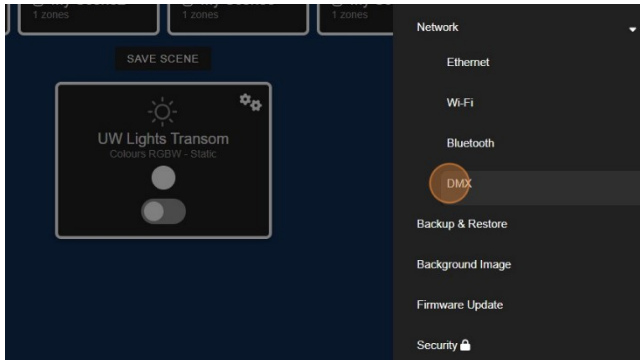
To disconnect the Bluetooth device from the OceanBridge system, follow these steps: navigate to the Bluetooth settings in the OceanBridge app and choose 'STOP PAIRING.' This action will remove the device from the system. Additionally, on your device, open the connection options and select 'Forget This Device' to eliminate the connection.



6.1.5. DMX

In addition to the standard dual output, the OceanBridge device enables the connection of an external DMX controller. This allows the external DMX signal to either merge with the OceanBridge's own output or pass through, thereby disabling the functionality of the OceanBridge device.

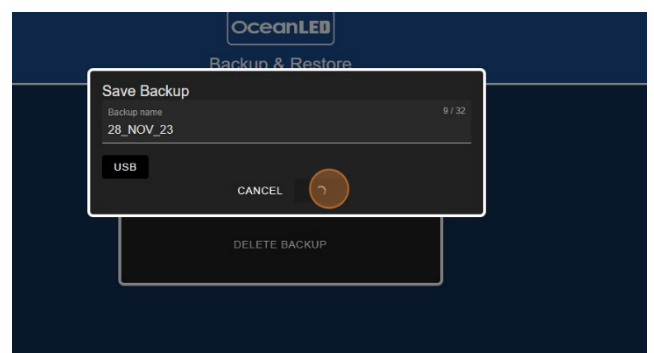
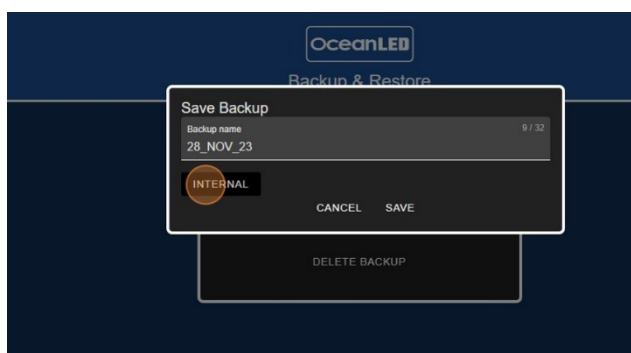
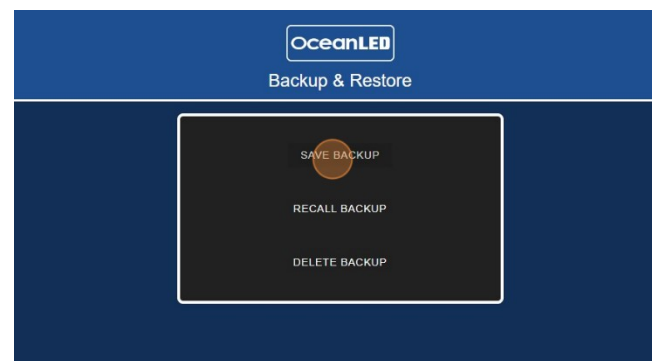
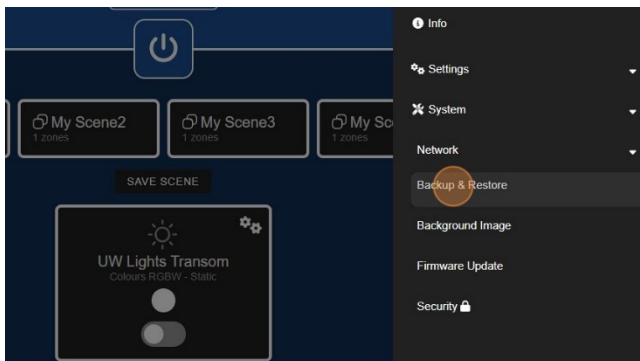
1. To change the DMX functionality navigate to: *Menu (≡) > System > Network > DMX*
2. Select the required option from the list. The settings will be automatically saved. Please see the paragraph [1.1 DMX Interfaces](#) for more details.



6.2 Backup & Restore

Save a backup

1. Navigate to: *Menu (≡) > System > Backup & Restore*.
2. Select 'SAVE BACKUP'
3. Add a name and choose the preferred location, either Internal or USB, where you would like to save the backup.
4. Choose 'SAVE' to save the backup.

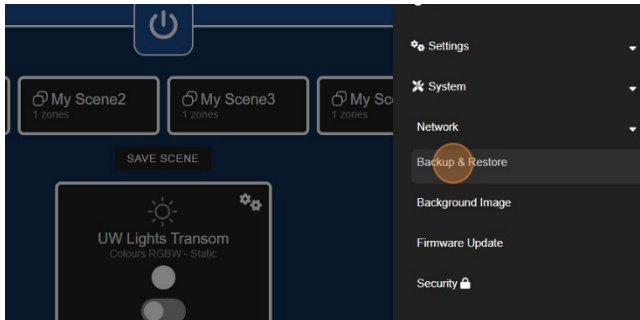


Restore a backup

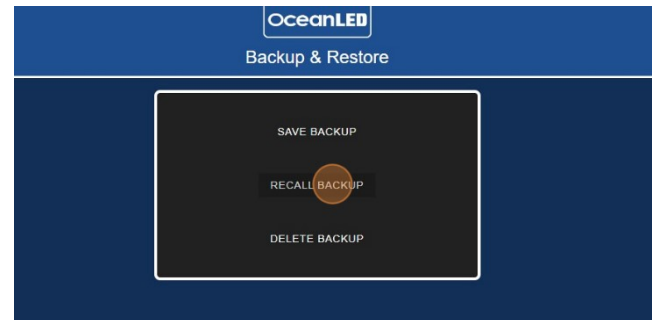


Note: When changing the Wi-Fi settings, performing a factory reset, or restoring a backup using a remote device connected via Wi-Fi, be aware that the unit will need to reboot to apply the changes. This reboot will result in the temporary loss of the Wi-Fi connection with the OceanBridge unit, which will need to be manually restored based on the changes using the new credentials.

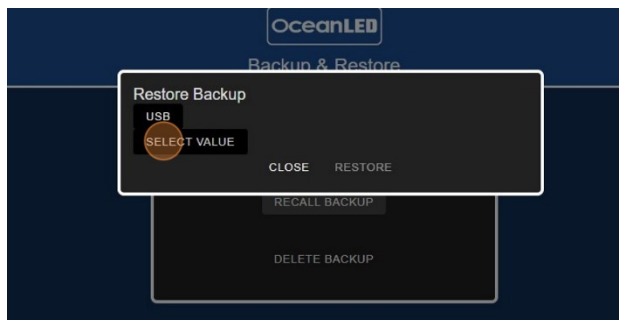
1. Navigate to: *Menu (≡) > System > Backup & Restore*.



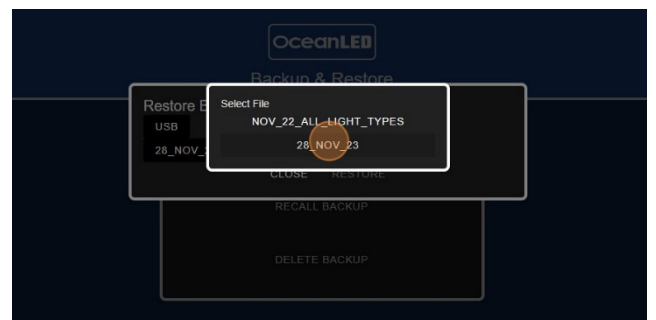
2. Select 'RECALL BACKUP'



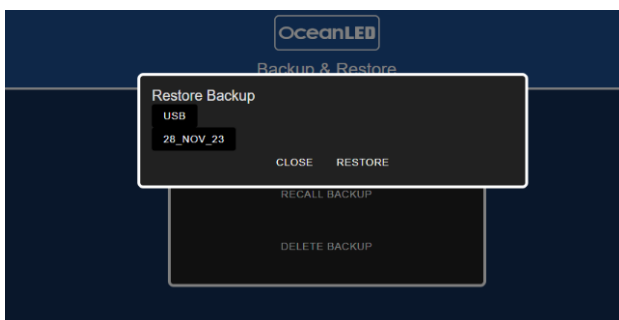
3. Select the location the backup was saved, either Internal or USB. Choose 'SELECT VALUE' to open the list of backups.



4. Select the backup name and confirm the pop-up message.



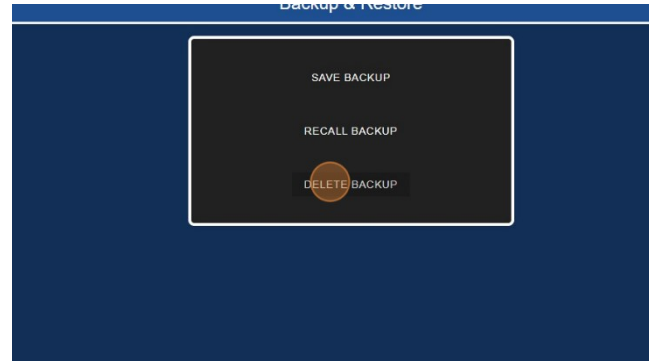
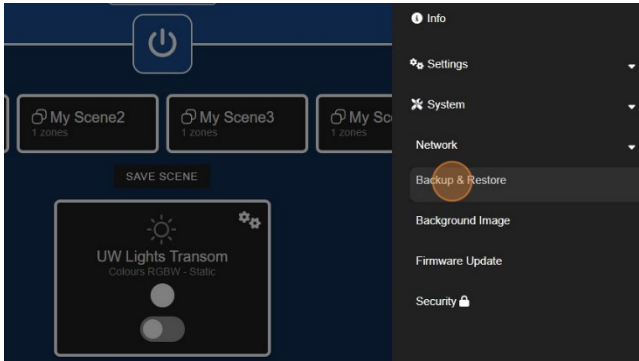
6. Select 'Restore' to restore the saved backup. The settings will be restored, and the restore backup window will close



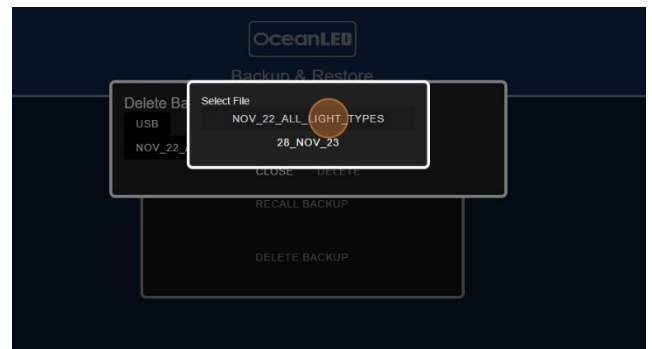
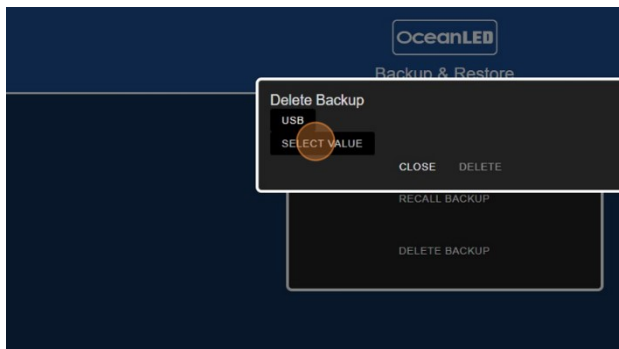
7. Depending on the settings, the OceanBridge unit may reboot to apply the changes. If a reboot is initiated, the Wi-Fi connection to the OceanBridge device will be lost.

Delete a backup

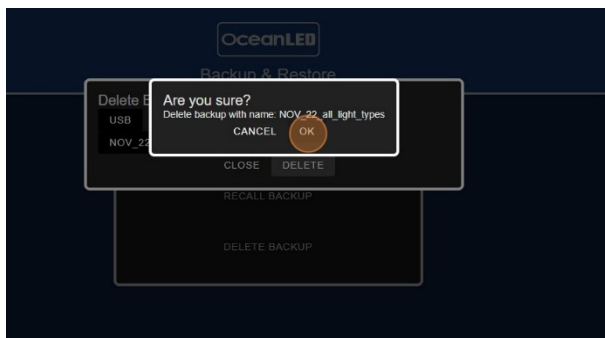
1. Navigate to: *Menu (≡) > System > Backup & Restore.*
2. Select 'DELETE BACKUP'



3. Select the location the backup was saved, either Internal or USB. Choose 'SELECT VALUE' to open the list of backups.
4. Select the backup name and confirm the pop-up message.



5. Select 'DELETE' to remove the saved backup. Confirm the pop-up message, and the backup file will be removed, closing the window.



6.3 How to Perform Factory Reset

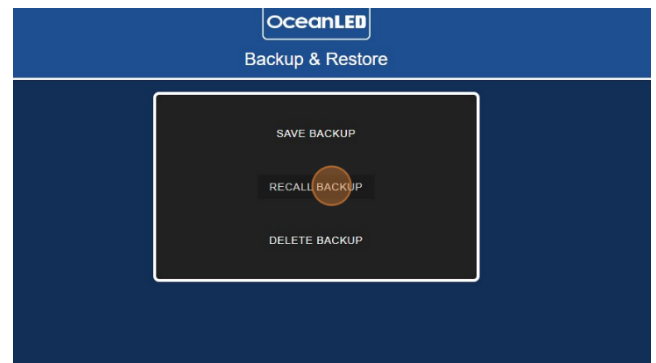
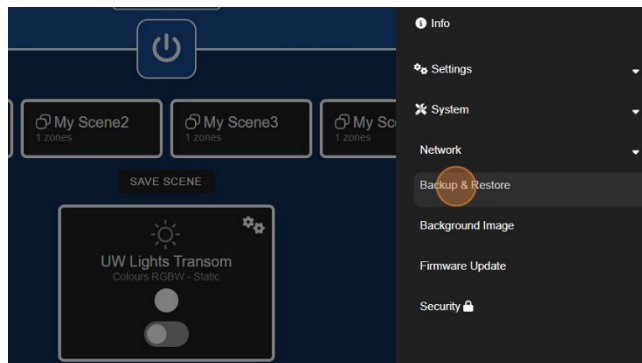
Method 1: Hardware Reset

Press and hold the 'TEST/RESET' button on the front of the OceanBridge device until Red LED ON (approx. 30s).

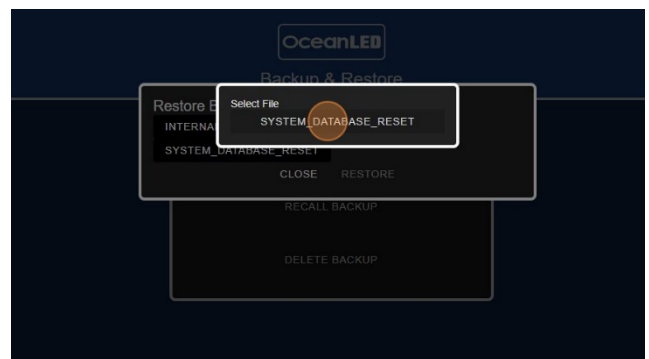
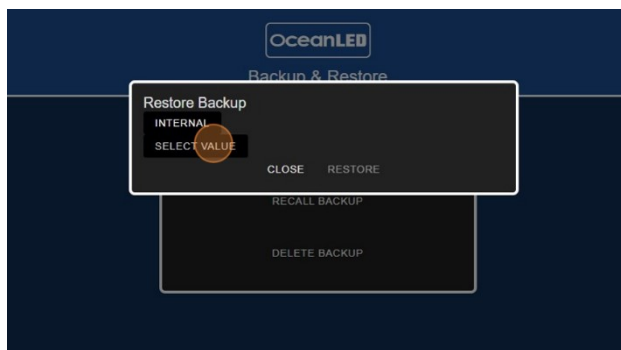
OR

Method 2: User Interface

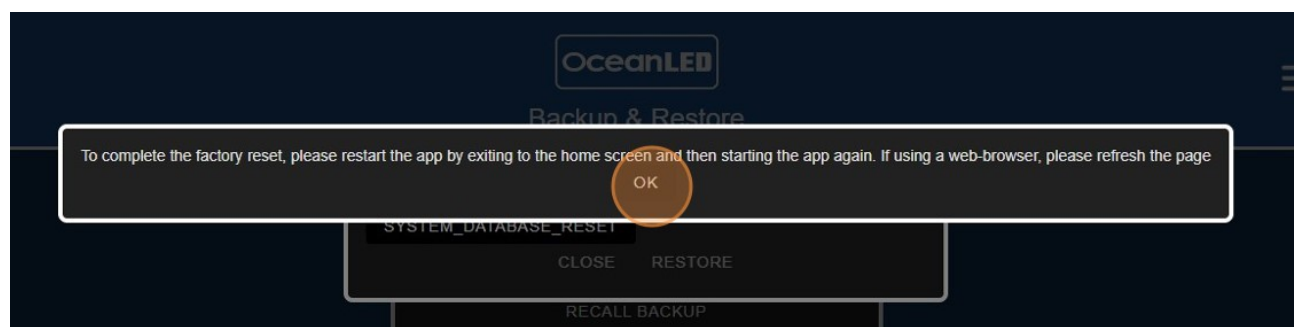
1. Navigate to: *Menu (≡) > System > Backup & Restore.*
2. Select 'RECALL BACKUP'



3. Select the "INTERNAL" location and choose 'SELECT VALUE' to open the list of backups.
4. Select the "System_Database_Reset" and confirm the pop-up message.



5. Select 'Restore' to initiate the factory reset. All data, including locally stored files, will be erased, except for the 'System_Database_Reset' file. Please note that if the process is performed from a remote device connected by Wi-Fi, the connection with the device will be lost, and the user will need to reconnect with the OceanBridge device.

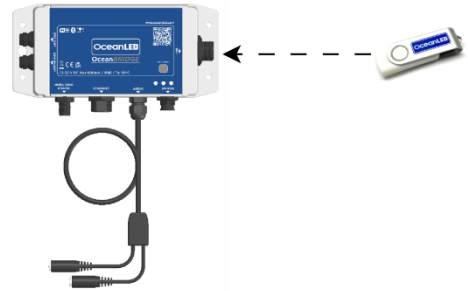


6.4 Background Image

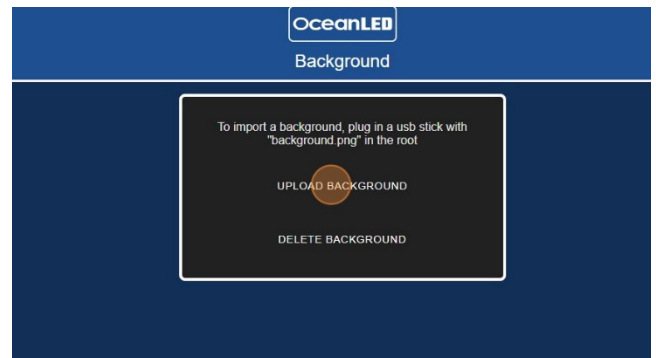
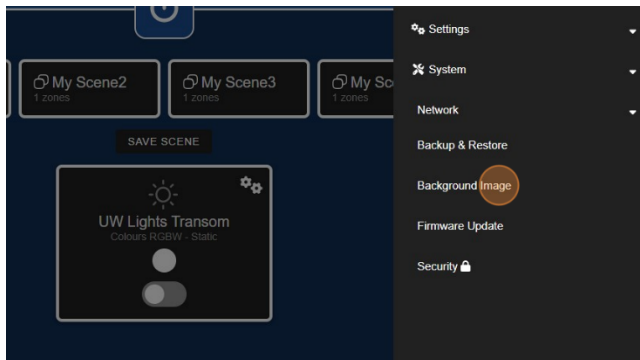
To change the OceanBridge App background:

1. Prepare the graphic file in the PNG format, rename it to "background.png" and copy to the root of the USB stick.
2. Plug the USB stick into the OceanBridge USB port.

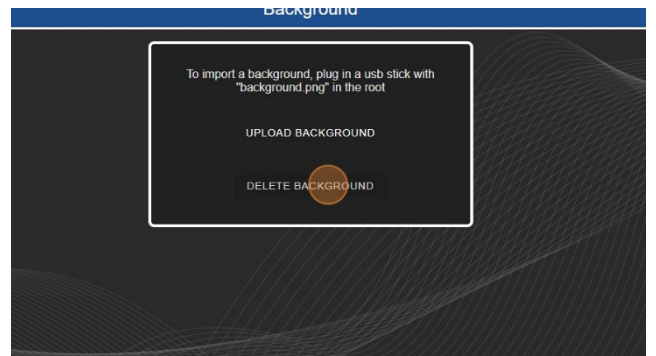
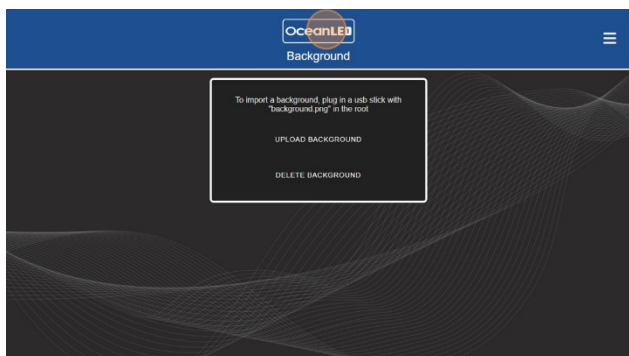
Name	Date modified	Type
Dual_E6_E7_Simple_Setup	30/11/2023 09:35	Data Base File
RGBW_Simple_Setup	30/11/2023 09:33	Data Base File
OceanLED.enc	24/11/2023 13:01	ENC File
background	02/10/2023 16:16	PNG File



3. Navigate to: *Menu (≡) > System > Background Image.*
4. Select 'UPLOAD BACKGROUND'



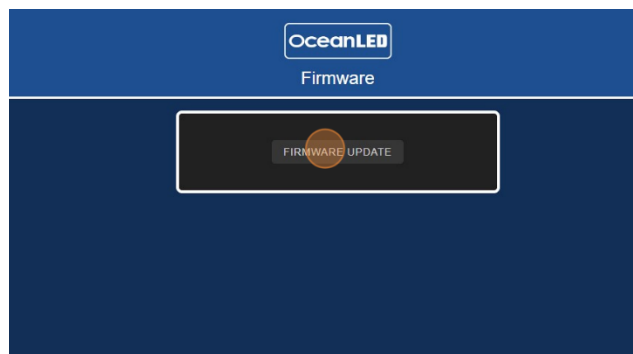
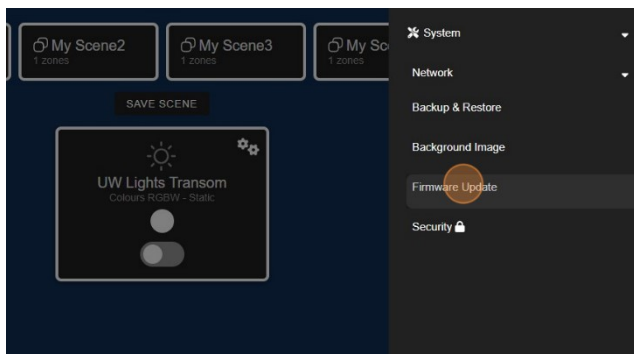
5. The background will change.
6. To delete the background select 'DELETE BACKGROUND'.



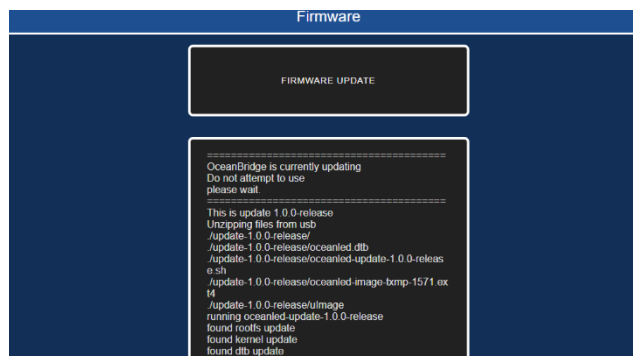
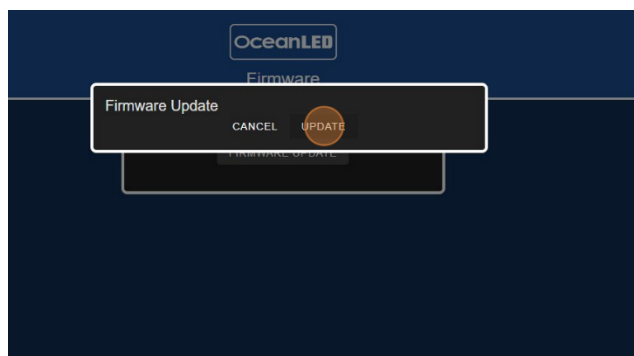
6.5 Firmware Update

Download the [latest OceanBridge app firmware version](#) (update-x.x.x-release.tar.gz) and transfer it to the root directory of the provided USB stick. Insert the USB stick into the OceanBridge USB port and follow the firmware upgrade procedure outlined below.

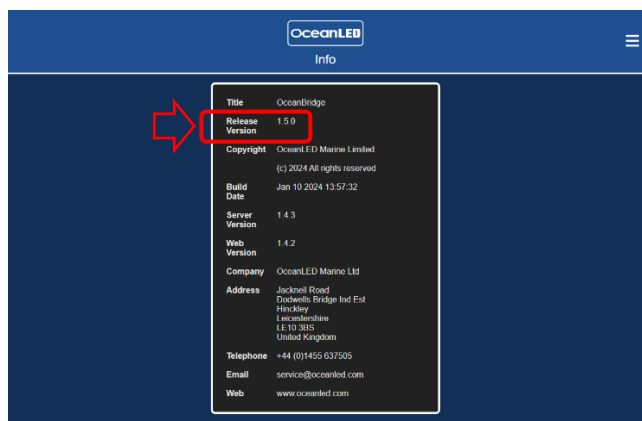
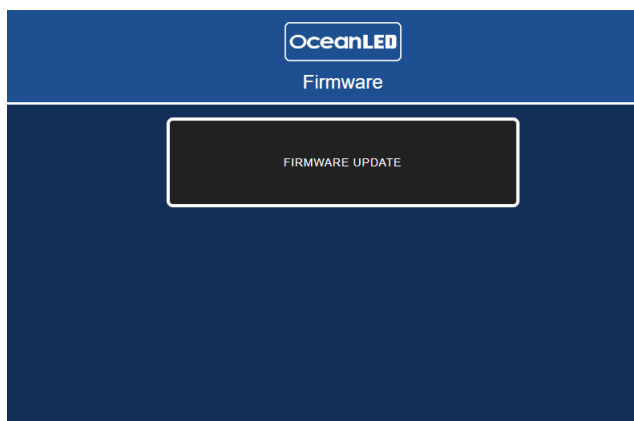
1. Navigate to: *Menu (≡) > System > Firmware Update.*
2. Select 'FIRMWARE UPDATE' button.



3. If firmware is found a pop-up message will show. Select 'UPDATE' to initiate the firmware update process.
4. The screen will show an update message, and the updating process is expected to take approximately 6-7 minutes.



5. Once the firmware update is complete, the update message screen will close.
8. Navigate to: *Menu (≡) > Info* to confirm whether the correct firmware version has been installed.



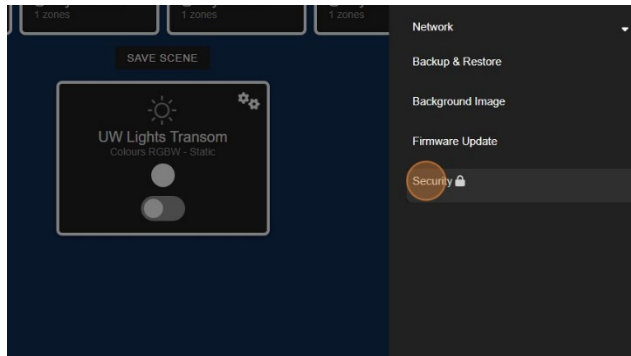
6.6 Security

The Security section enables the user to lock the access to selected settings of the OceanBridge device, preventing unauthorized users from making changes.

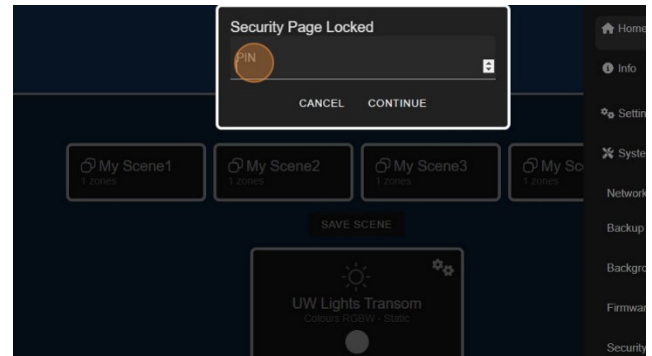


Note: Default PIN to access the Security Settings: “1234”.

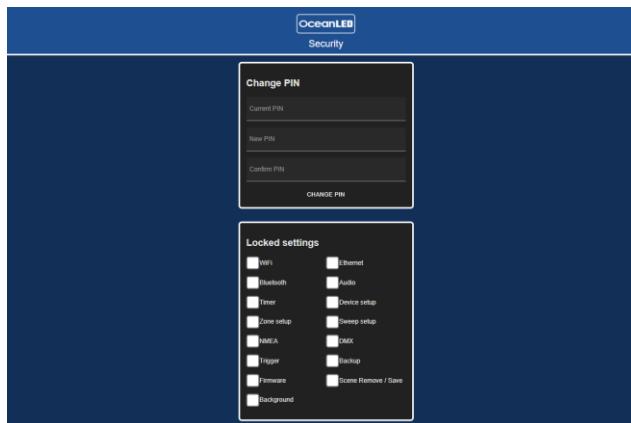
1. Navigate to: *Menu (≡) > System > Security*



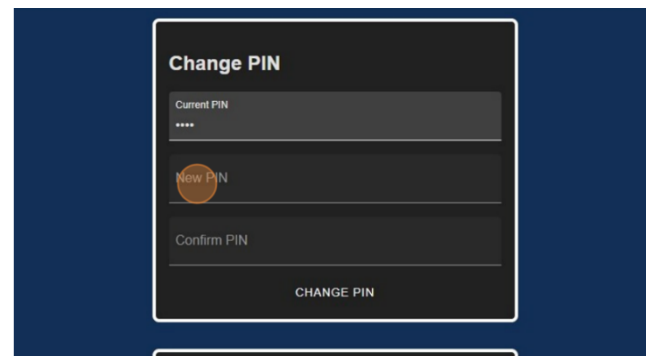
2. Type in the PIN: “1234” (default).



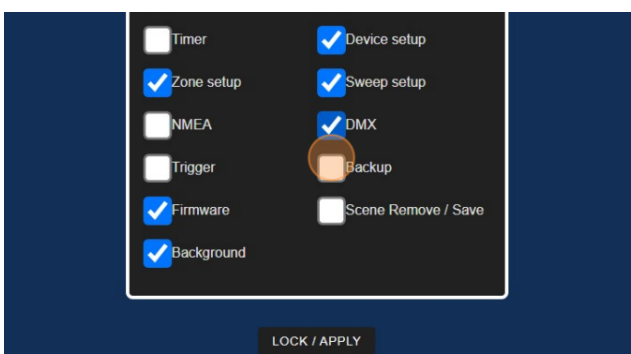
3. The page will show two sections: Change PIN and Locked settings.



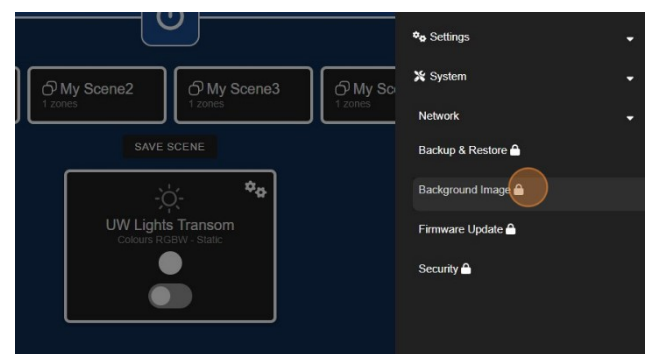
4. To change the PIN, navigate to the 'Change PIN' pane. Enter the current PIN and the new PIN in the respective fields, then select 'CHANGE PIN' to apply the changes.



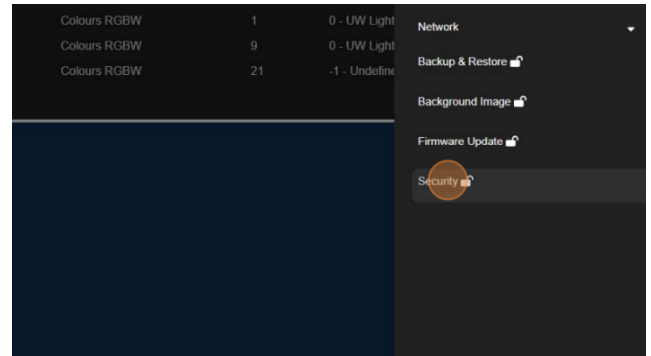
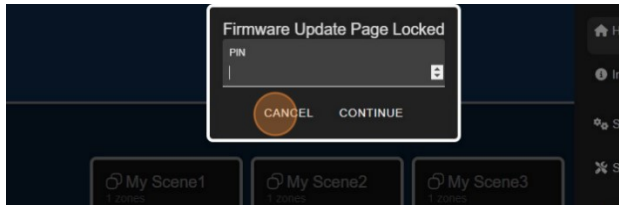
5. To lock the settings select the required option/s from the list and choose “LOCK / APPLY”. Confirm the pop-up message. The app will default to home page.



6. Open the menu to confirm the changes. Any locked items in the menu will now be marked with a padlock icon.



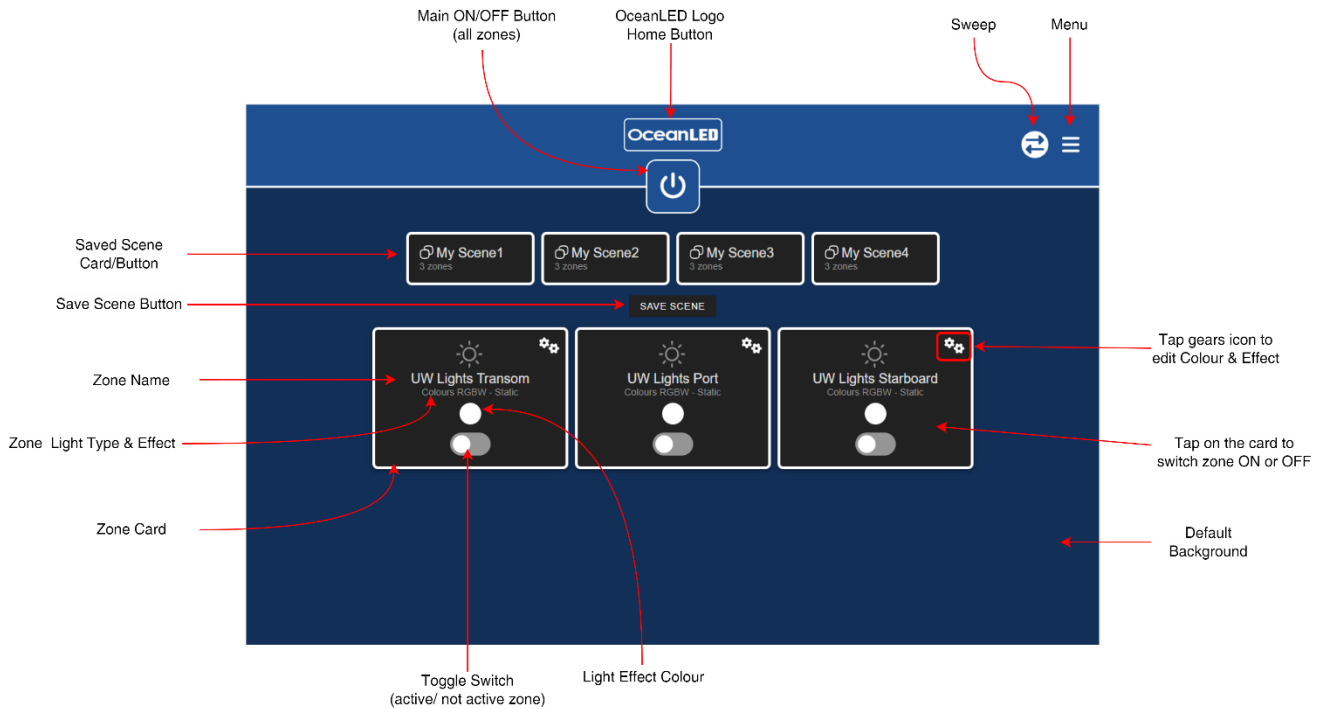
7. If the user attempts to access the item from the menu, a pop-up window will appear, prompting for the PIN code. Access will not be granted with an incorrect PIN.
8. Upon entering the correct PIN, access will be granted to the user, globally applying to all items previously locked in the menu until the user secures the settings in the 'Security' section. Now, all previously locked items in the menu will be marked with an open padlock icon.



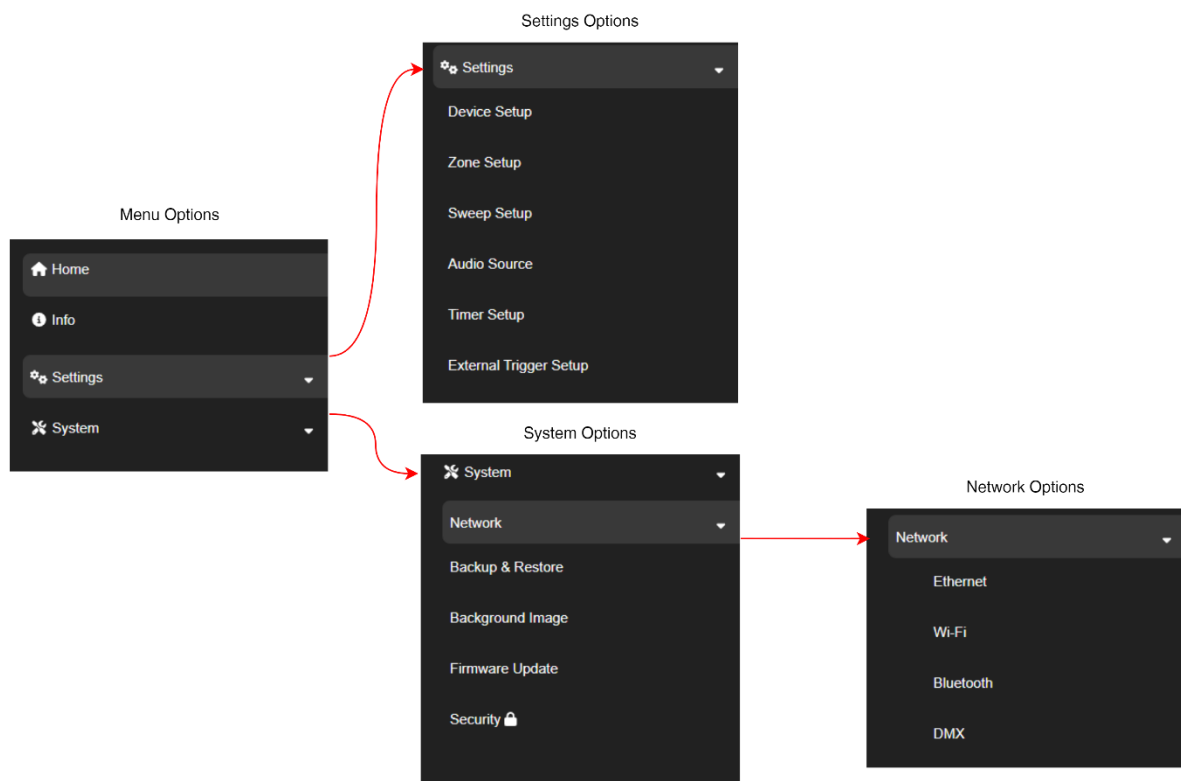
If you forget the PIN, you can reset it to the default '1234' using a factory reset. Please refer to the 'Factory Reset' chapter or contact OceanLED technical support for assistance.

7 General User Guide

7.1 Home Page

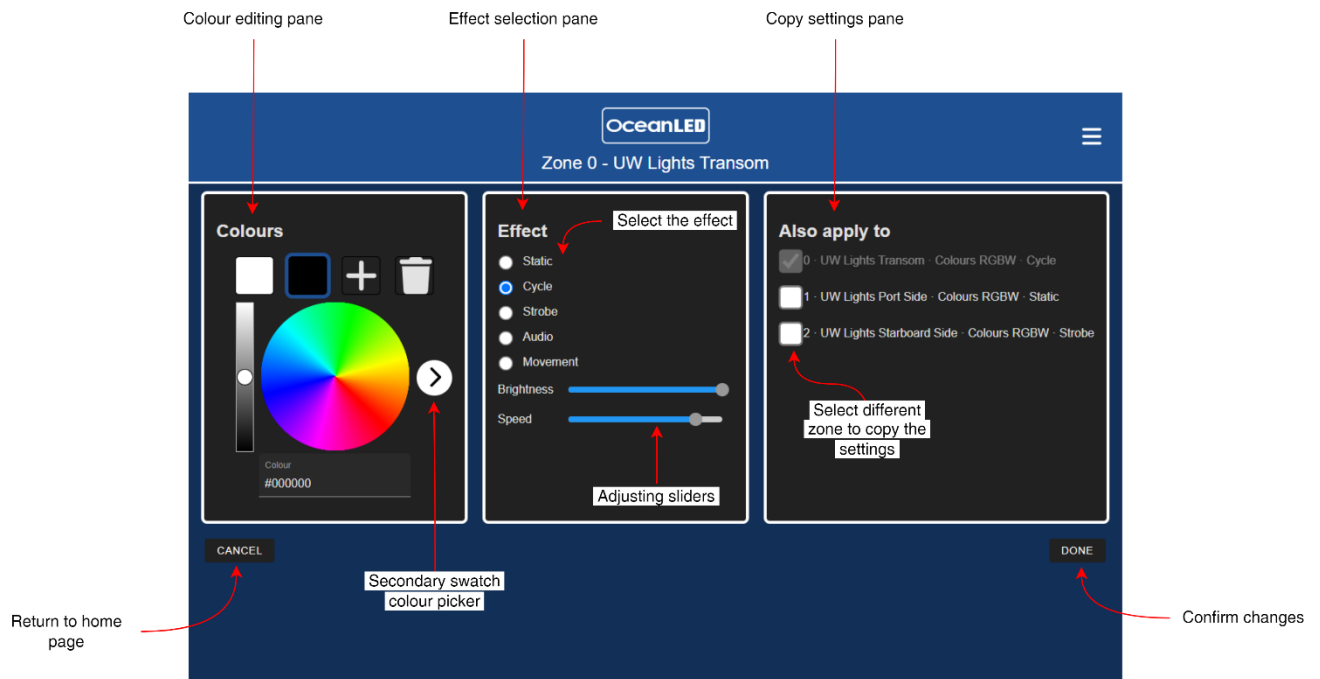


7.2 Menu Options



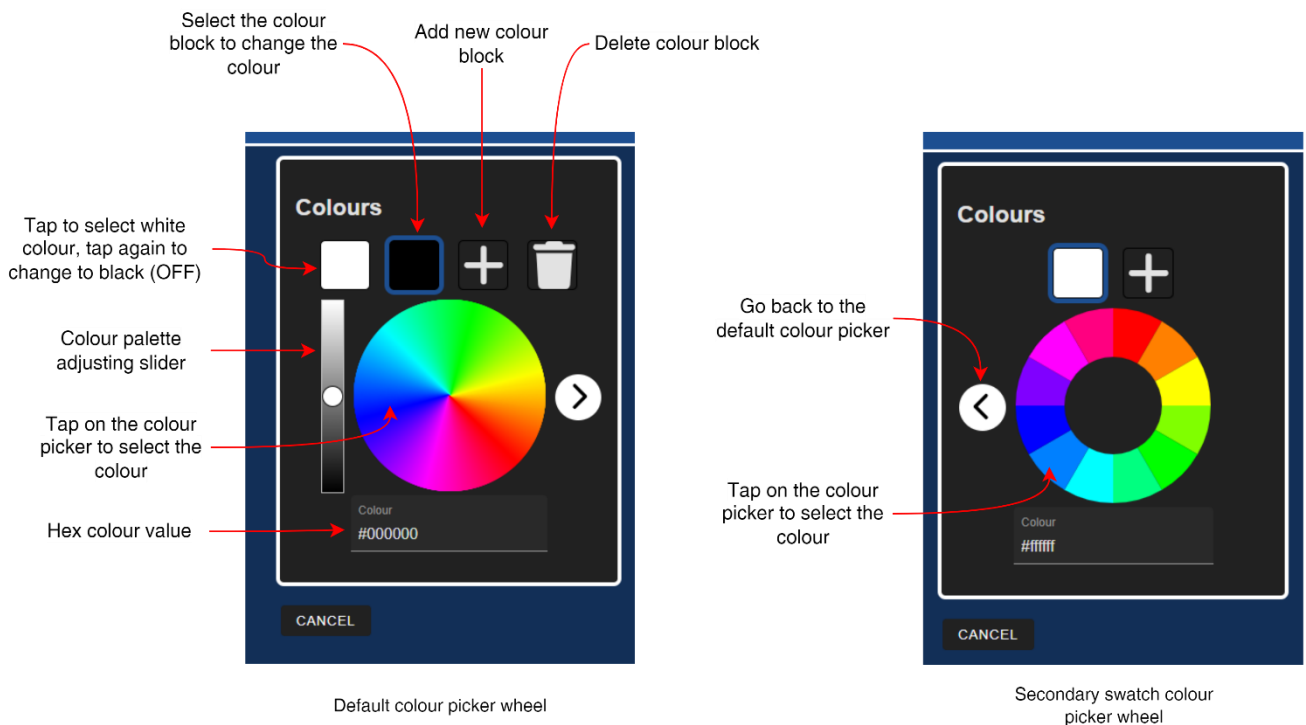
7.3 Adjusting Lights Settings and Effect

The user interface had multiple panes, making it easy to navigate between different functions.

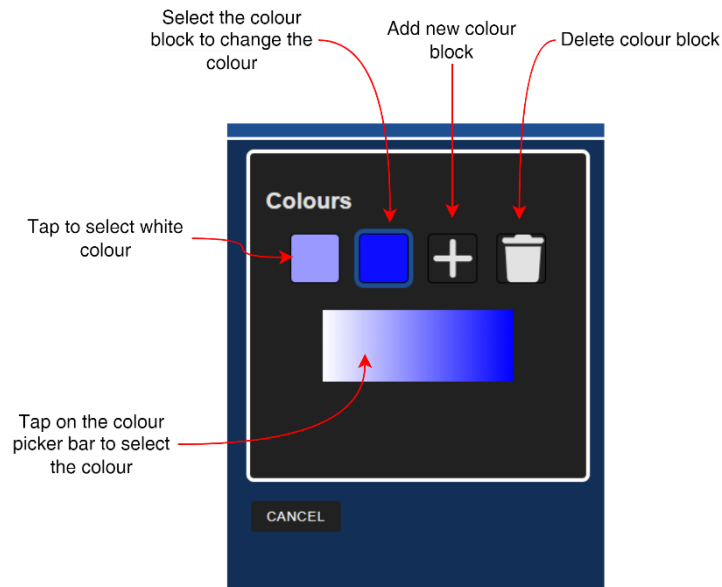


Zone colours and effects adjustment panes

Colours Adjustments – Colour Light Type



Colours Adjustments – Dual Colour Light Type



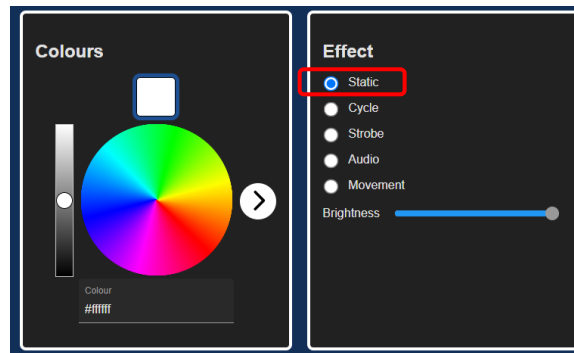
Effects

The OceanBridge allows to select between five different effects (subject to light type).

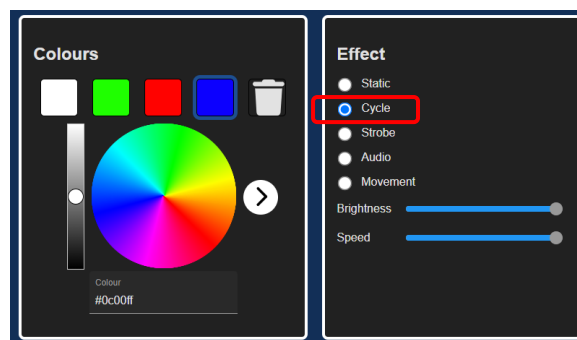
Light type	Effect				
	Static	Cycle	Strobe	Audio	Movement
Colours RGB	✓	✓	✓	✓	✓
Colours RGBW	✓	✓	✓	✓	✓
Dual Blue/White	✓	✓	✓	✓	✓
2010/3010 Single Colour	✓		✓	✓	✓
Single Dimmable	✓		✓	✓	✓
Single Switchable	✓				

Please note that for single colour light types the available effects will be limited to the purchased light colour. Due to nature of the single switchable light type, the functionality is limited to simple on/off states.

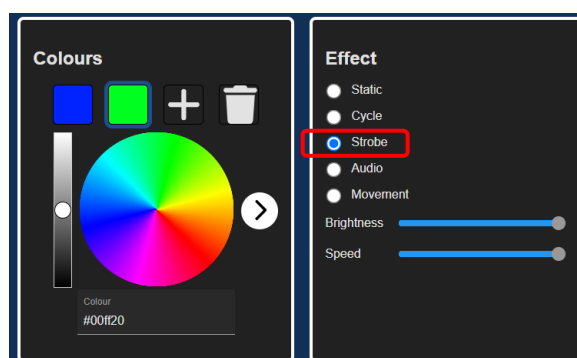
Static Effect - It refers to static colour of the selected light. User can select single colour.



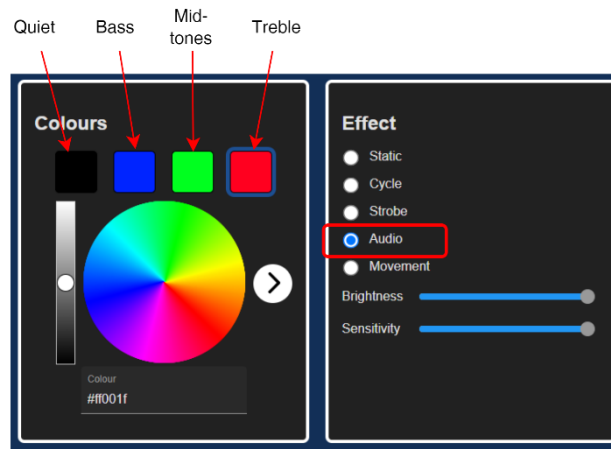
Cycle – Light cycles between the selected colours. Up to four colours can be set for colours and dual-colour light types.



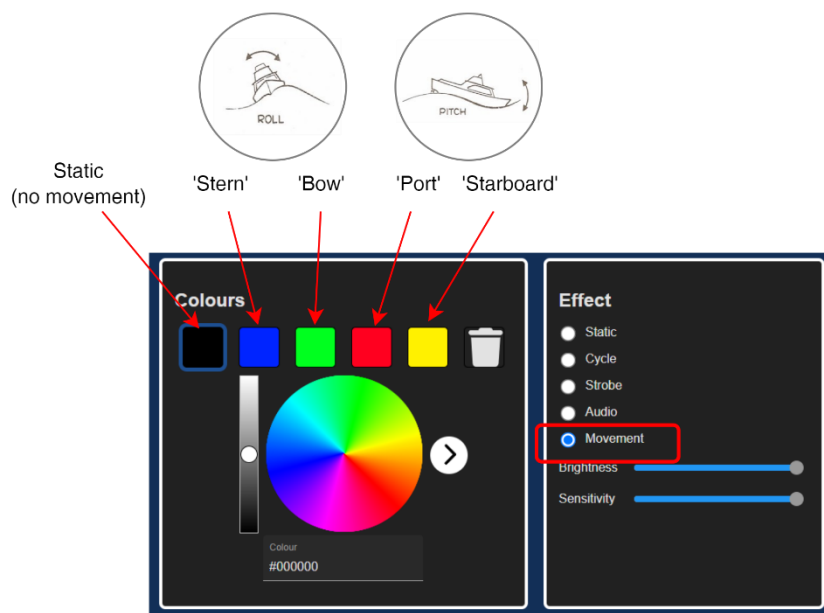
Strobe – The light strobes between the selected colours. Up to four colours can be set for both single-color and dual-colour light types.



Audio – Translating sound into a visual effect – the light responds to audio signals. The four available blocks for colour settings allow you to configure distinct colours for quiet, bass tones, mid-tones and treble tones.



Movement – Transforming the vessel's motion into a visual effect. The five available colour setting blocks enable you to assign distinct colours. The first block corresponds to a static state where no movement has been detected. The following two pairs are associated with the boat's "x" (Stern → Bow) and "y" (Port → Starboard) axis. Please note that the Stern → Bow and Port → Starboard axis settings / orientation will depend on how and where the OceanBridge box was installed in relation to the boat's axis, this is auto set during the startup of the OceanBridge device.



Power Toggle Light Type

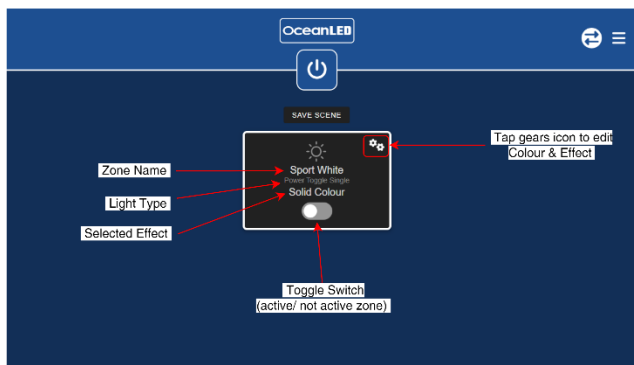
The OceanBridge also supports DC switched OceanLED light models, where toggling the power on/off allows for mode changes. The 'Power Toggle' functionality is only supported with the use of the OceanConnect Junction Box (JB) device. The OceanConnect JB device interprets the signal send from OceanBridge to activate the desired mode of the 'Power Toggle' light model.

Supported functionality:

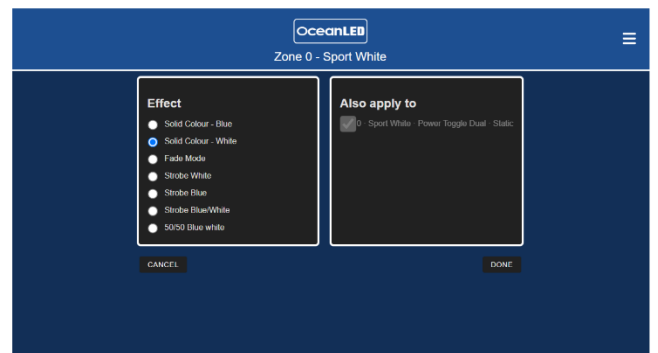
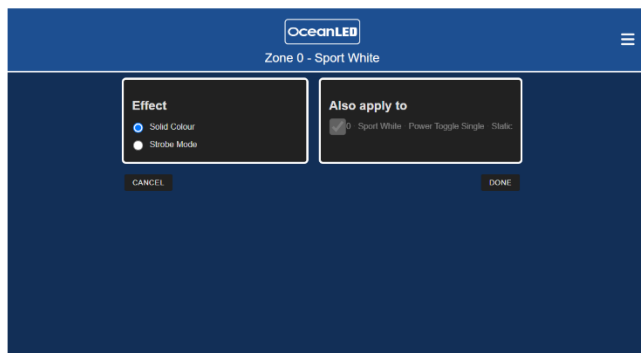
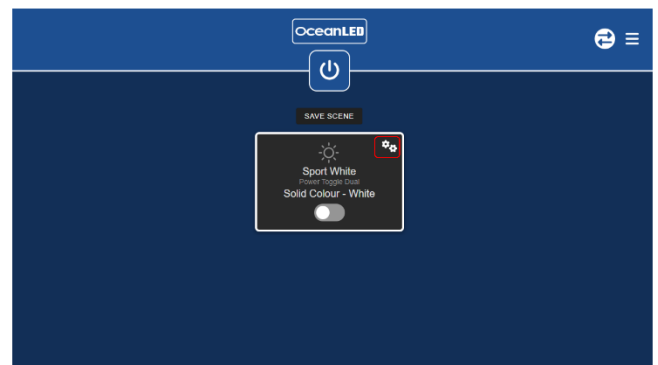
Light type	Effect
Power Toggle Single	Solid Colour Strobe Mode
Power Toggle Dual	Solid Colour - Blue Solid Colour - White 50/50 Blue-White Fade Mode Strobe White Strobe Blue Strobe Blue/White

To access the 'Power Toggle' functionality, select the 'gears icon' on the zone card and choose the desired effect from the effect editing page. Please note that the name of the selected effect will be displayed on the zone card.

Power Toggle Single



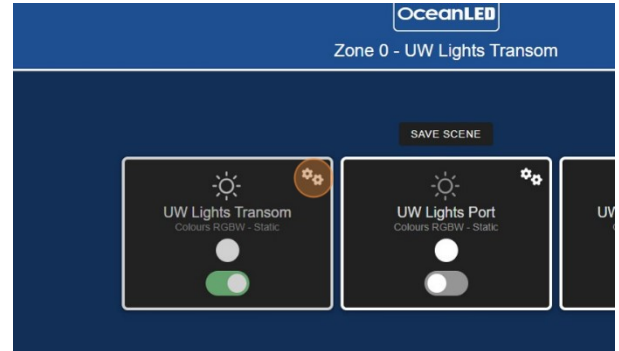
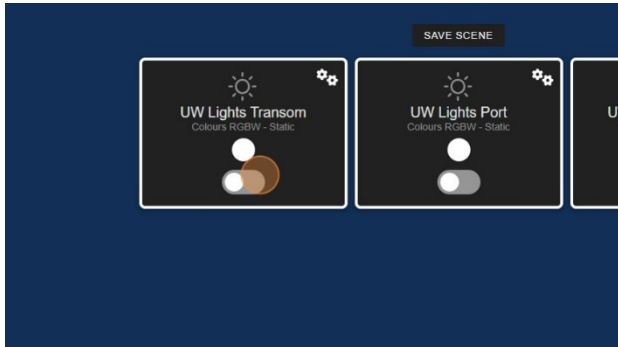
Power Toggle Dual



Power Toggle Modes

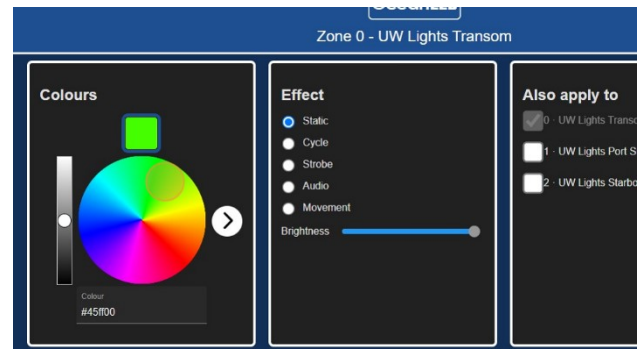
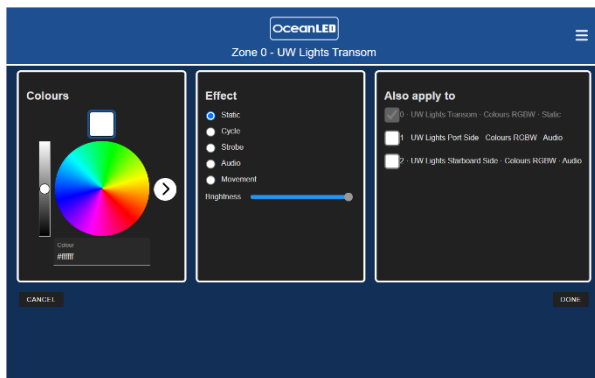
7.4 How to Activate the Zone, Change Colour, and Apply Effects

1. Select the zone cards toggle button to power on the zone.
2. Select the gears icon area in the top right corner of the zone card to access zone settings and modes.

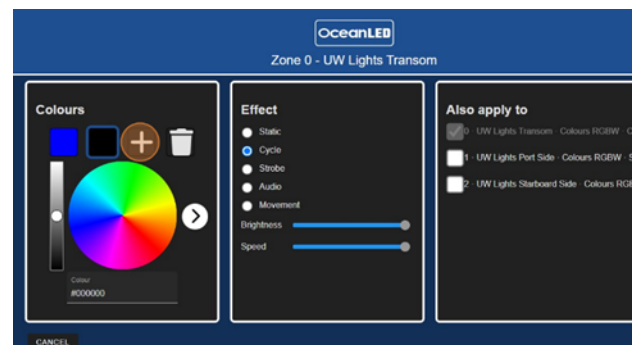
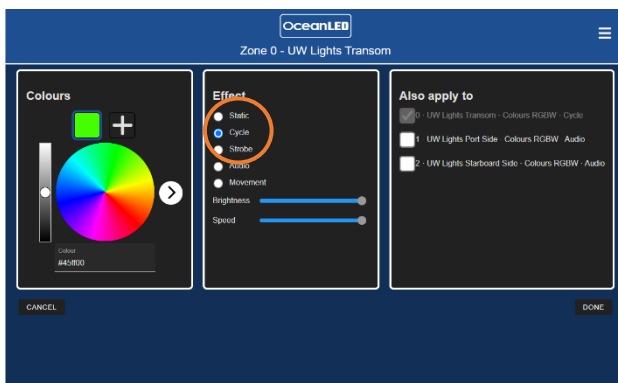


3. The settings page will display options based on the added device/zone type, allowing the user to change the colour, modify the effect, adjust brightness, control the speed or sensitivity of the effect, and copy changes to different zones if necessary.
4. To change the colour select the colour from the colour picker or choose the arrow button to open secondary switch colour picker.

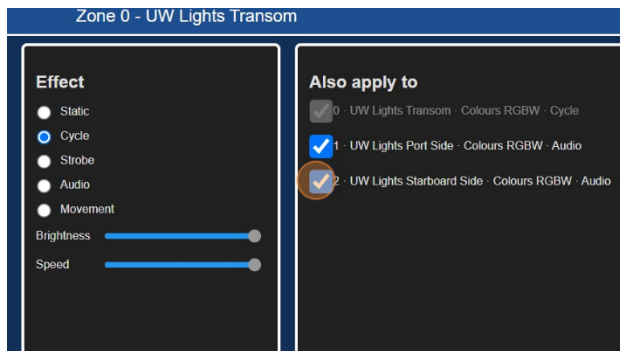
Note: Tap on the colour block to change to white or tap again to change to black (OFF).



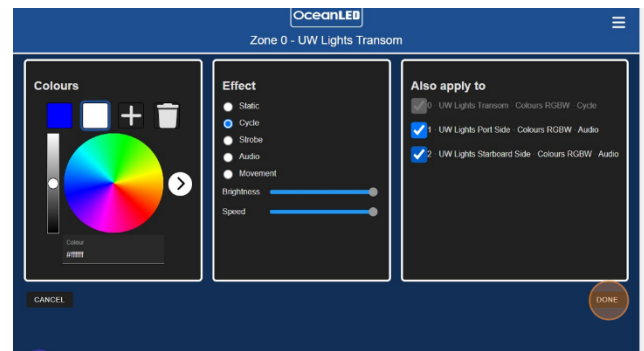
5. To change the effect, select the desired effect.
6. Select the plus icon to add another colour. The number of colour blocks that can be added may vary depending on the chosen effect. Select the bin icon to remove the colour block.



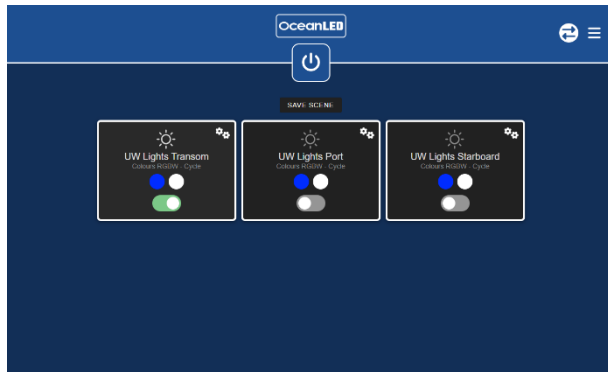
- To copy the effect to different zones, tick the box next to the zone name in the 'Also apply to' pane.



- Confirm the changes with 'DONE' to save it and return to home page.



- The effect will update on the zone cards.

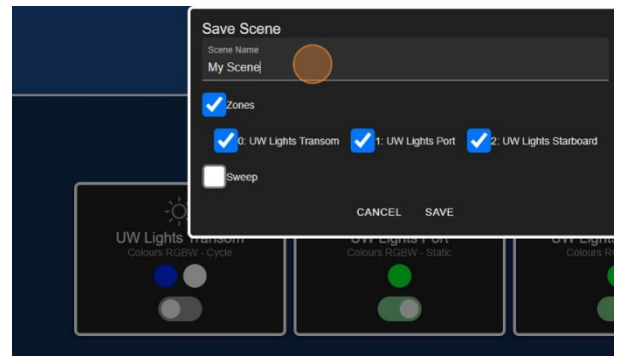
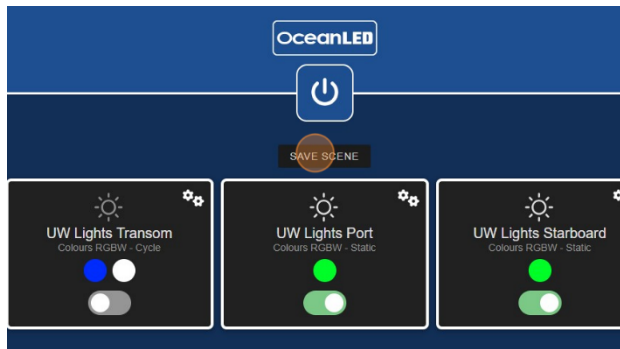


7.5 How to Save / Delete a Scene

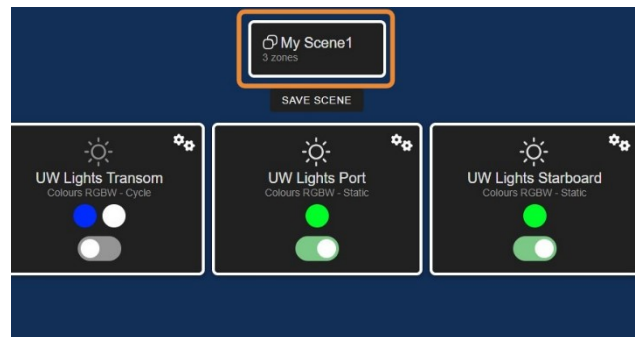
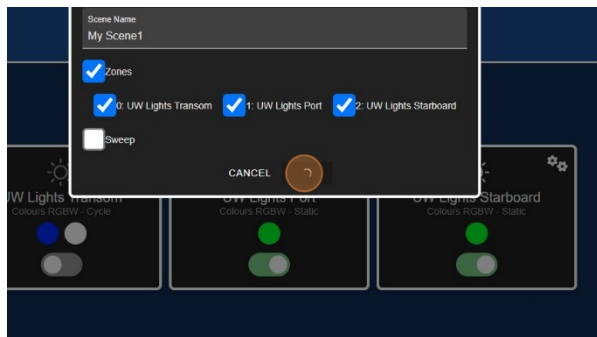
Save Scene

The 'SAVE SCENE' option enables users to save the current zone setup to an action-call button, facilitating the storage and recall of different configurations as needed. Users can save up to 10 scenes.

1. Set your zone/s to the desired effect, toggle the zone on or off – this state will be saved into a scene. Select 'SAVE SCENE' when ready.
2. In the pop-up add new scene name and tick/untick the zones that will be included in the scene. If not using the Sweep effect leave it unticked.

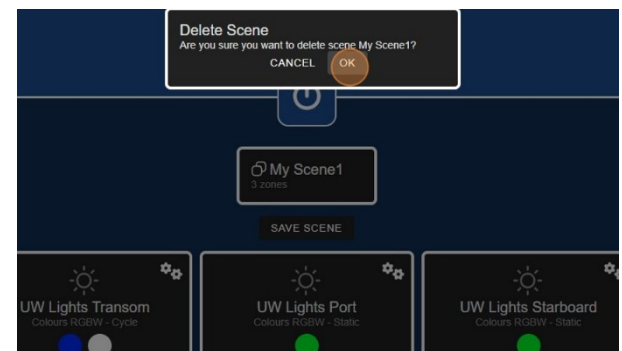
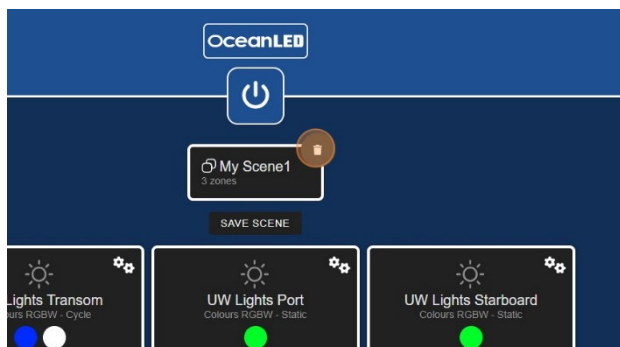


3. Choose 'SAVE' to apply the changes and save the scene.
4. Scene will be added to the home page. To switch off the scene select the main button or toggle off the individual zones.



Delete Scene

1. Select the scene card and tap the bin icon.
2. Confirm the warning pop-up to complete the process. The scene will be removed.

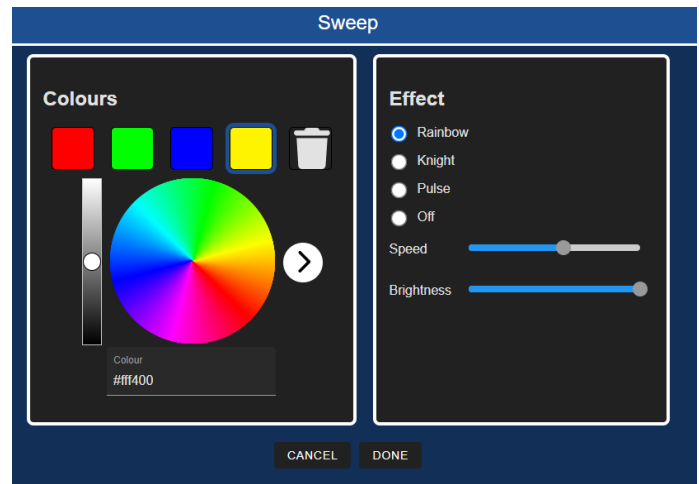


7.6 Sweep Effects

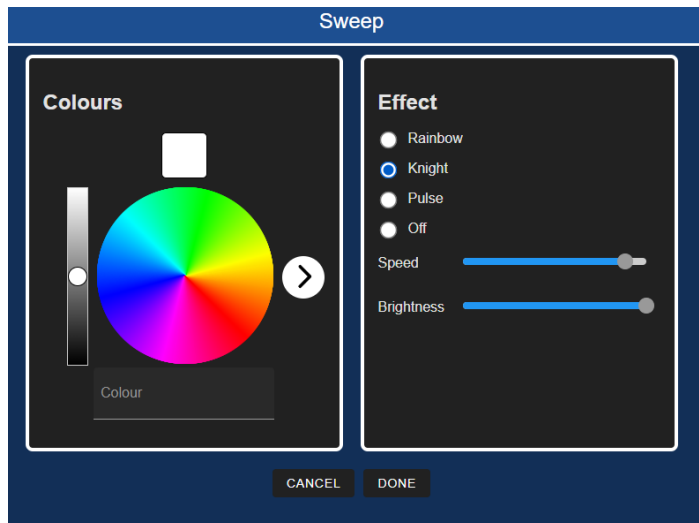
The OceanBridge sweep function entails a lighting effect where the illumination or colour changes gracefully move across the lights. The feature enables the creation of dynamic and visually appealing effects. The OceanBridge sweep function provides users with the ability to choose from three distinct sweep effects.

The available effects:

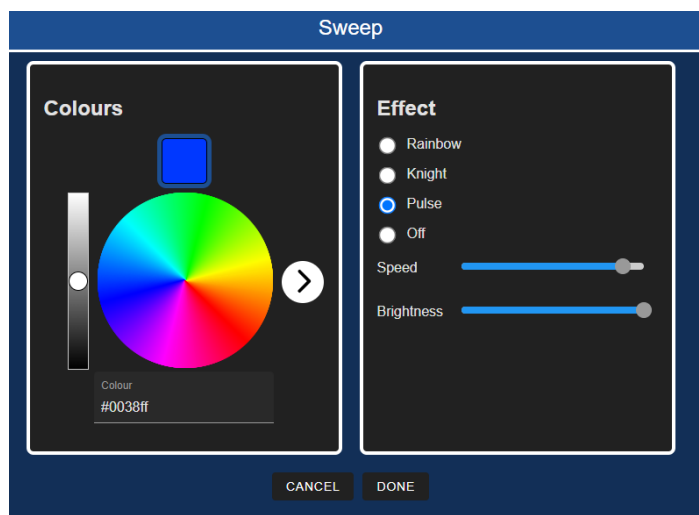
Rainbow – The lights smoothly transition through a sequence of up to four user specified colours, following the predetermined order of these colours. User can choose the speed of the transition to create a slow, gentle sweep or a fast, dynamic effect.



Knight - The lights move in a back and forth “scanning” motion dynamic effect. User can control the speed of the light movement. Single colour setup.

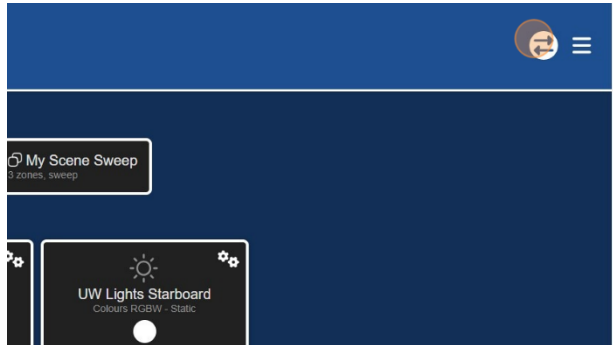


Pulse - The lights move from one side to the other, resembling the motion of a pulse. User can control the speed of the light movement. Single colour setup.

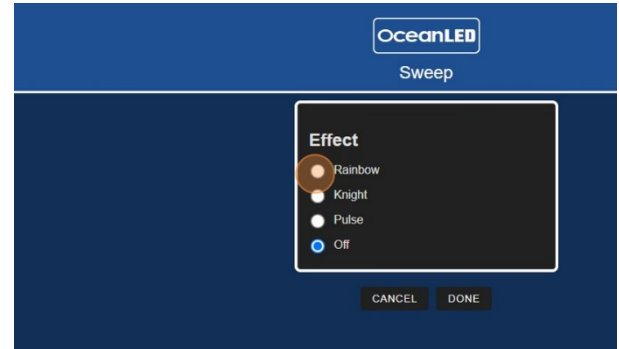


7.7 How to Activate the Sweep, Change Sweep Effect, and Save as Scene

1. Select the Sweep icon from the home page to open Sweep effect settings page.



2. From the new window select the desired effect.

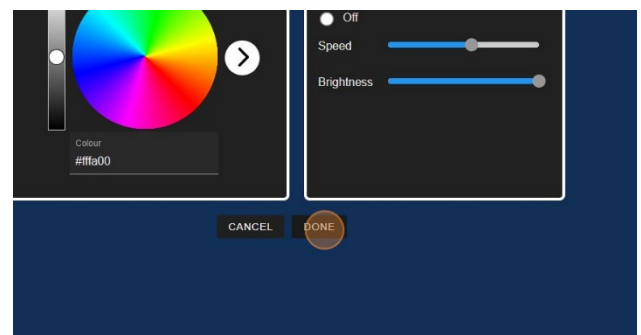


3. The settings page consists of two panes: Colours and Effects. The Colours pane allows the user to add/remove colour blocks and adjust the colour values related to the selected effect. The Effects pane allows users to select the effect, adjust speed, and brightness.

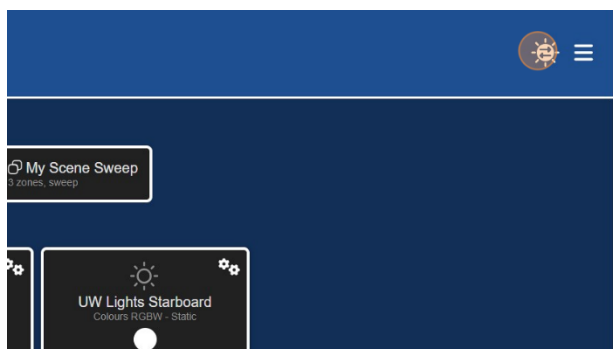
Note: Tap on the colour block to change to white or tap again to change to black (OFF).



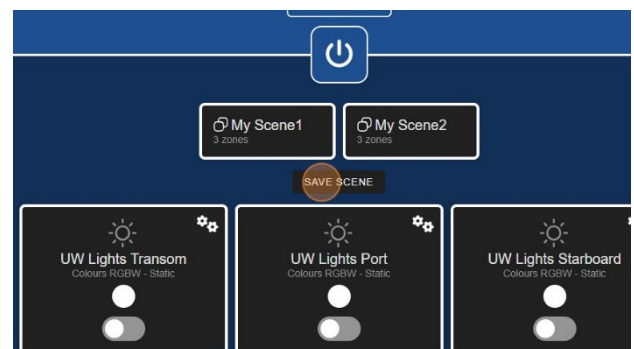
4. Once the effect has been set, select 'Done' to apply the changes.



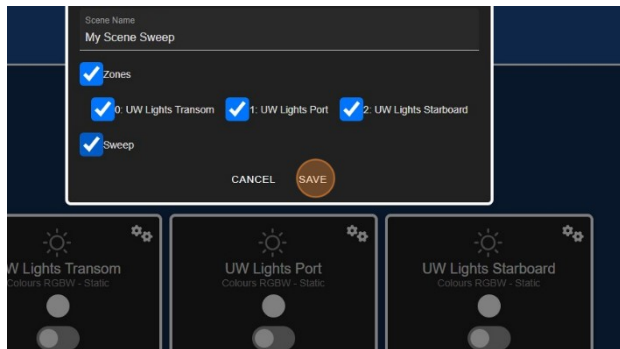
5. The Sweep icon on the home page will change, indicating the active Sweep function.



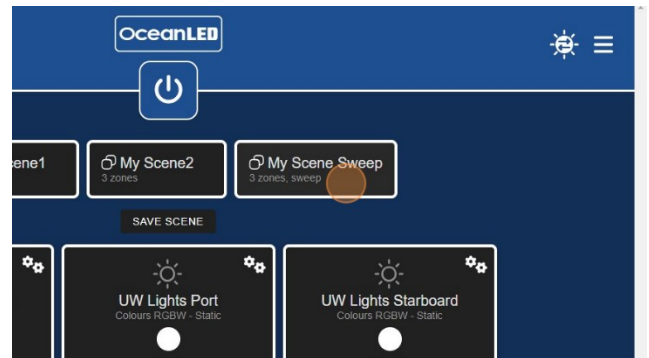
6. To save the selected sweep effect as a scene, tap the 'SAVE SCENE' button.



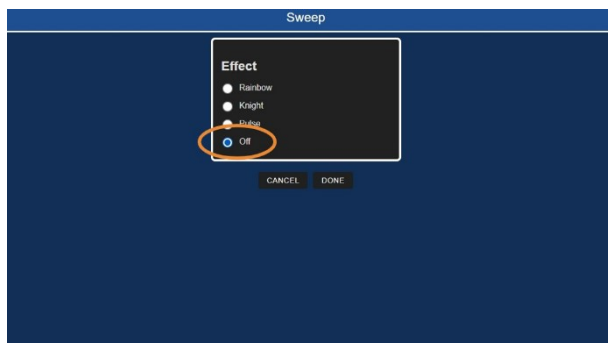
- In the save scene pop-up add the new scene name, select the check box next to Sweep, and choose 'SAVE' to save the scene configuration.



- The new scene will appear on the home screen.



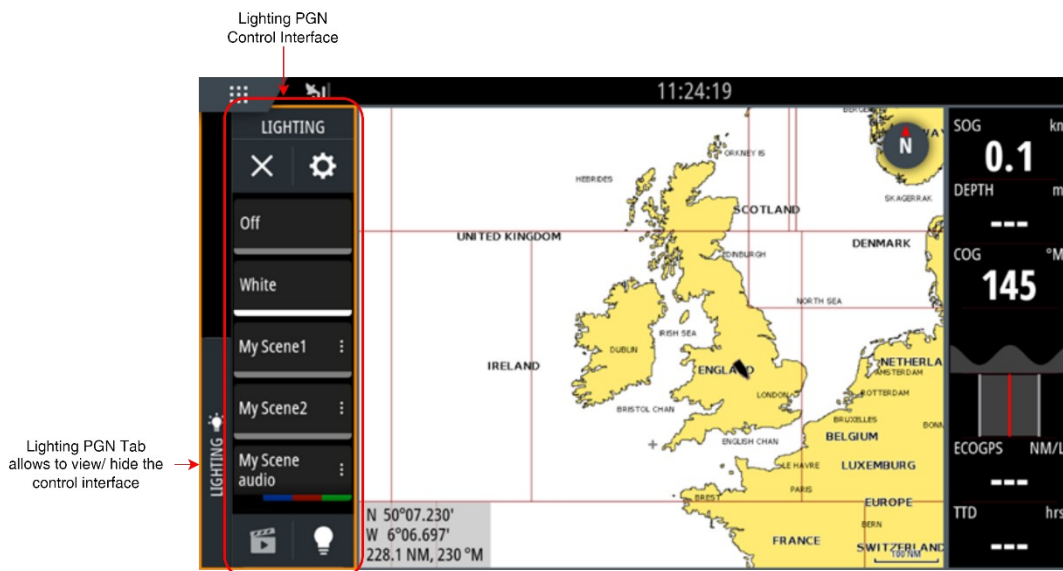
- The Sweep can be switched off by navigating to the Sweep setting page (Sweep icon) and selecting the 'Off' state.



7.8 NMEA2000 Lighting PGN

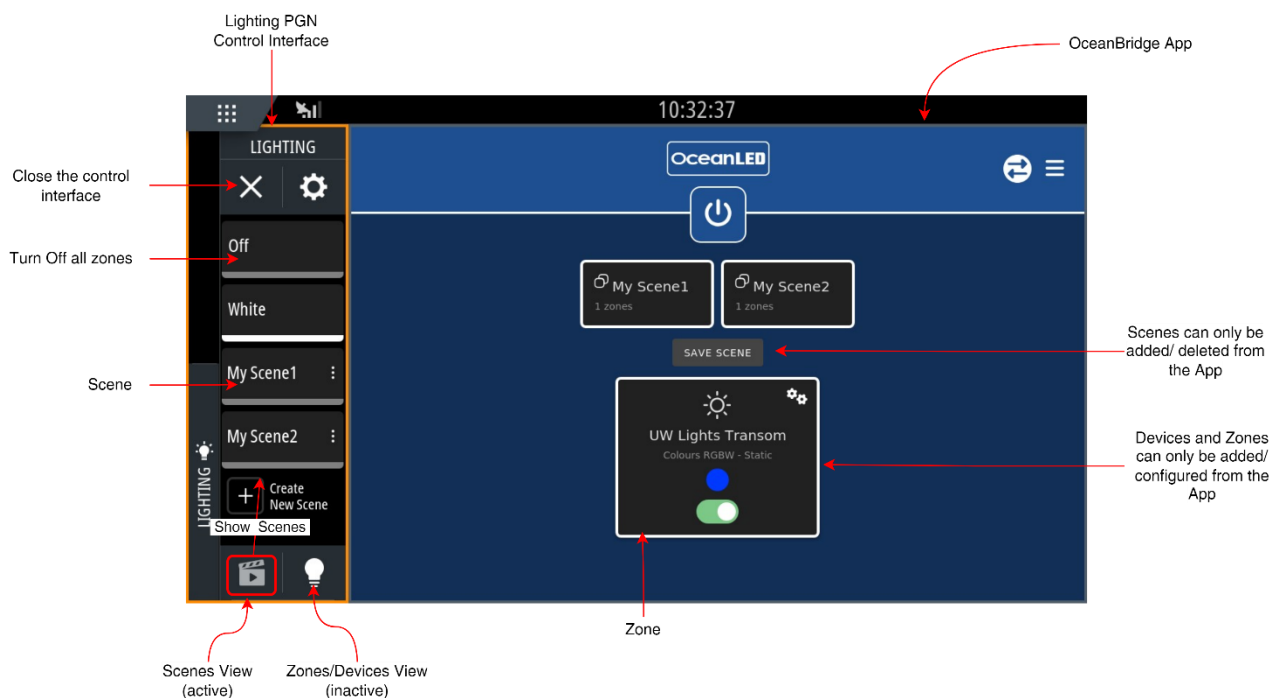
The MFD's lighting PGN* can be opened on top of the running app as a sidebar, allowing you to control the lighting and use the selected app simultaneously. The lighting PGN* can primarily be used to control the lighting, recall saved scenes, and does not allow for saving any settings. All the setups can be done only from the OceanBridge App.

*Navico Group supported MFDs as time of writing.








Lighting PGN Interface Explained

The zones and scenes created in the OceanBridge app will be displayed in the Lighting PGN interface, split into separate views for scenes and zones. All changes made in the OceanBridge app will be reflected in the Lighting PGN interface, and vice versa.

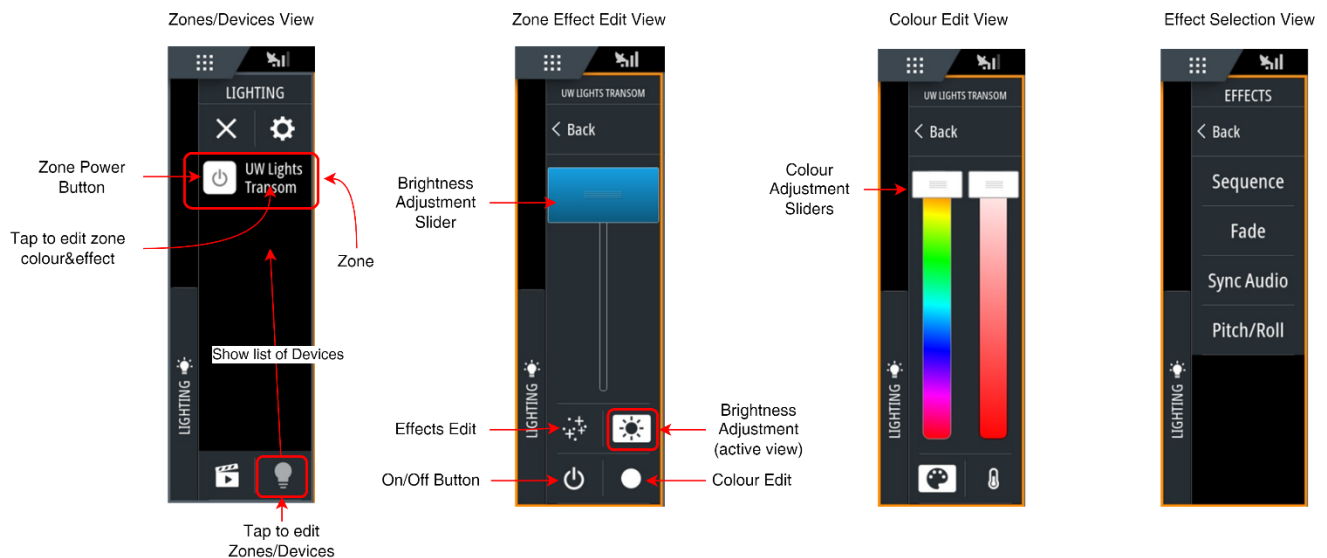


Lighting PGN Main Options

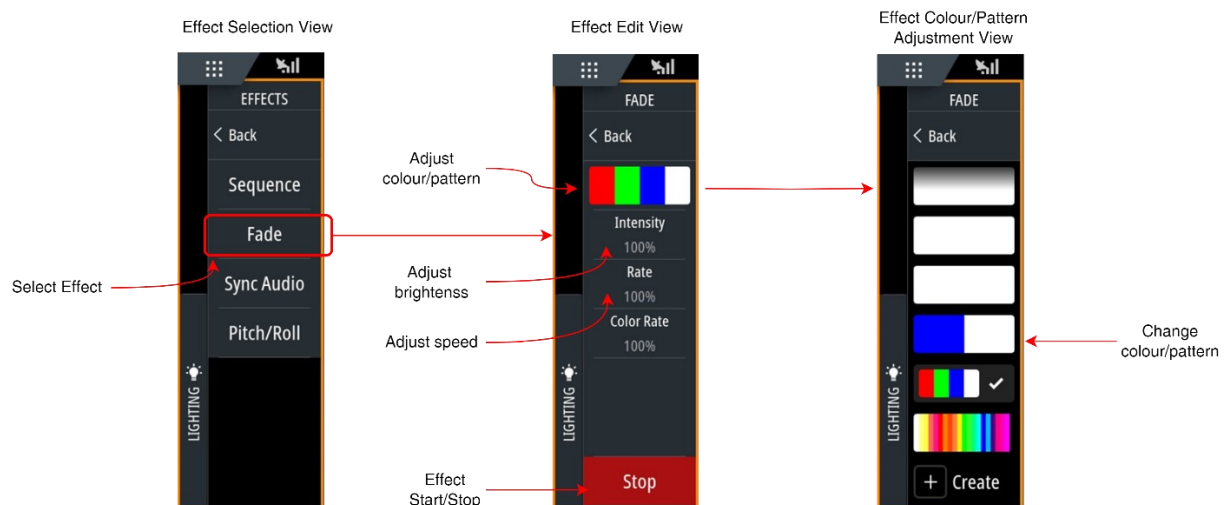
All changes made in the Lighting PGN interface will be reflected in the OceanBridge app; however, the effect functionality support may be limited for some light types. Therefore, OceanLED strongly recommends using the OceanBridge app as the main tool for effect and scenes setup.

To edit the zone settings, such as colour or effect, select the bulb icon  to open the zone list view and tap on the zone name to open the zone effect edit pane. The zone effect edit pane has four main options: effect , brightness , on/off button , and colour . Select the required option to edit the related values.

Zone settings:



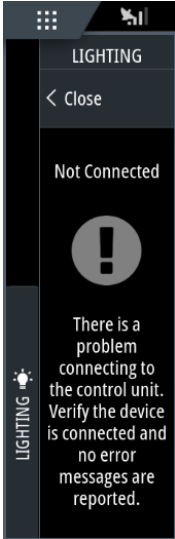
Effect Settings:



8 Troubleshooting

8.1 Troubleshooting Problems and Solutions

OceanBridge			
Problem	Check	Cause	Solution
Unit does not power on	Check power input to the OceanBridge	No power	Check main supply fuse / breaker
			Check power input connections
			If using NMEA2000 Backbone - check connection with the backbone (T-connector)
		Power OK, but the unit does not start, no Green LED	Contact Warranty Department
Lights do not respond to changes in the GUI/controller and/or random flickering of lights	Check the DMX cable connection between OceanBridge Unit and the receiver device (light or JB)	Poor/loose/broken connection	Remake the connection or replace the DMX cable
	Check the DMX settings of OceanBridge device	Incorrect DMX settings	Change the DMX settings to Dual/Mirror Output or DMX Merge according to your setup.

OceanBridge			
Problem	Check	Cause	Solution
<p>Lighting PGN shows Not Connected</p> 	Check drop cables connections for both the OceanBridge unit and MFD device	Not connected	Connect the device to the NMEA2000 backbone
		Wait a bit longer after powering on the MFD unit; it takes some time to establish a connection between the OceanBridge and the Lighting PGN	Lighting PGN successfully connected
	Check if the OceanBridge device appears on the MFD device list in: <i>Settings > Network > Device List</i>	No OceanBridge device listed	Check if OceanBridge device is on
	Check if the bus is "ON" on the MFD device: <i>Settings > Network > Diagnostics</i>	Bus is 'OFF' – backbone power issue	Check backbone power/ voltage level value

9 Appendix

9.1 Technical Specifications

Technical info	OceanBridge Unit
Voltage	12/24V DC (Max 32V DC)
Power Consumption	6W (500mA @ 12V DC), NMEA2000 Bus Powered LEN = 10
Operating temperature	-10°C to 50°C ambient
Network / Interface connections	<ul style="list-style-type: none"> NMEA 2000 connection (N2k compatible connector) supports Navico group only (Simrad, Lowrance, and B&G products) Ethernet connection (IP67 RJ45 connector)
Power Input	It utilise the same NMEA 2000 connector but with optional 2m power cable provided by OceanLED.
Wi-Fi capability	<ul style="list-style-type: none"> Direct Access Point (AP) Mode - Users can connect their devices (such as smartphones, tablets, or laptops) directly to the OceanBridge Wi-Fi network to access its features and functionalities. Client Mode - Users can configure the OceanBridge to connect to their preferred Wi-Fi network, enabling the device to access the internet and communicate with other devices on that network (smartphones, tablets, or laptops).
Bluetooth	Bluetooth Audio Connection: The OceanBridge device can establish a wireless connection with Bluetooth-enabled audio devices (such as phone, tablet), allowing for the transmission of audio signals.
DMX / RDM (RS485 interface)	<ul style="list-style-type: none"> 1 x DMX512-A input (Binder 5-way 720 series connector) 1 x DMX512-A input / output (Binder 5-way 720 series connector) <p>Correct control cable to connect to the lights available from OceanLED.</p>
Audio Line	<ul style="list-style-type: none"> 1 x Audio In 3.5mm stereo connector (46cm/18" long flying lead) 1 x Audio Out 3.5mm stereo connector (46cm/18" long flying lead) <p>Allow passthrough (audio in, to audio out) and also audio out if unit is connected to Bluetooth audio.</p>
External switch inputs	<p>10 way connector. Supports up to four external switch inputs (momentary push to make type), with LED drive feedback (e.g., switches with internally illuminated LEDs). These switches can be connected to the OceanBridge device to control various functionalities, such as selecting scenes or controlling the lights.</p> <p>Optional 1m connection cable available from OceanLED.</p>
USB connectivity	1 x USB port for connecting a USB drive which allows firmware updates and save user settings.

On-board Test / Reset switch	Perform two functions: <ul style="list-style-type: none"> Allow users to test the system and observe the behaviour of connected lights or fixtures. Enables users to perform a complete reset, erasing all settings and configurations stored in the device.
Indicator LEDs	System status, indicate faults, network activity.
On-board sensors	<ul style="list-style-type: none"> Gyroscope/Accelerometer Sensor - enables the OceanBridge device to detect and respond to the movement of the vessel. Based on the vessel's motion, the lighting effects can be adjusted or changed to enhance the visual experience. Thermal Sensor: The OceanBridge device is equipped with a thermal sensor that allows for monitoring the temperature of the printed circuit board (PCB) within the bridge unit. This sensor helps in maintaining optimal operating conditions and monitoring potential overheating issues.

Physical Specifications	
Dimensions:	210mm x 91mm x 65mm (8.3" x 3.6" x 2.6")
Enclosure:	IP66 robust polycarbonate
Weight:	490g

9.2 OceanBridge Connectors Pinout

NMEA2000 / Power Connector Pinout

Pin No.	Function	NMEA2000 Pinout (M12 A-Coded Male Connector 5-Pin)
1	Shield	
2	+Ve	
3	GND	
4	CAN-High	
5	CAN-Low	

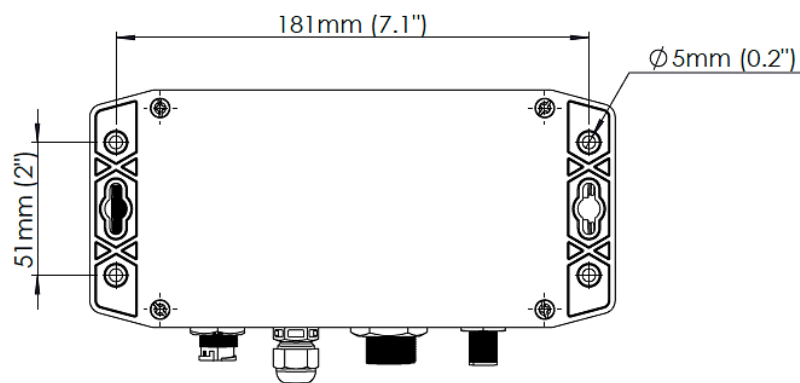
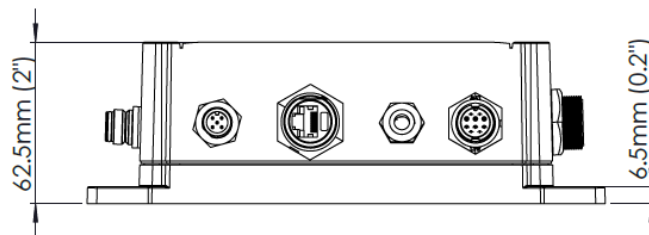
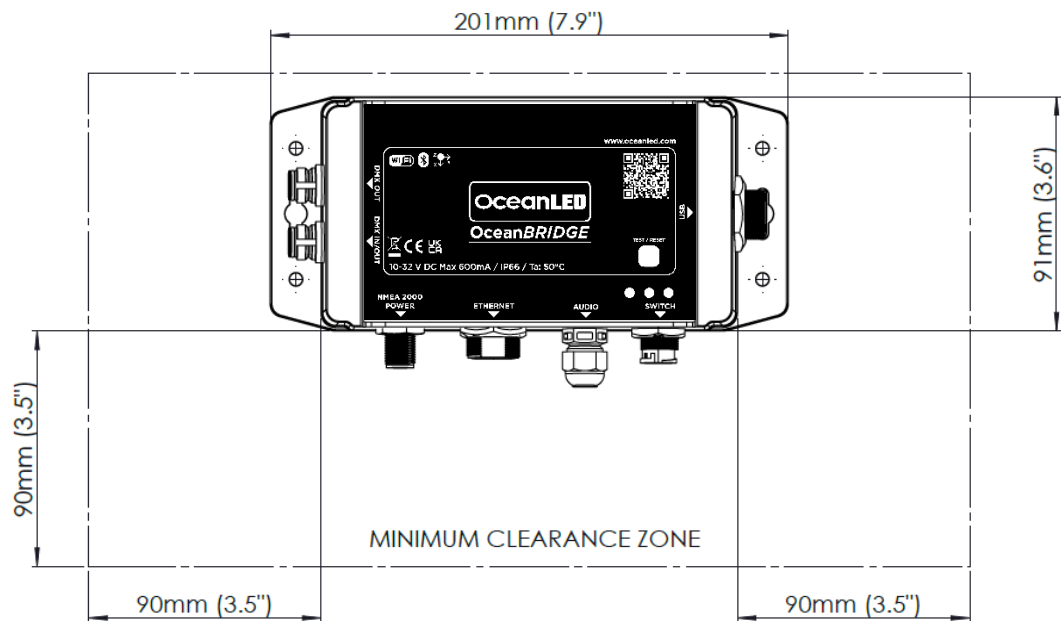
DMX Connector Pinout

Pin No.	Function	DMX In & DMX In/Out Pinout (Binder 5-Way Female)
1	GND	
2	DMX+	
3	DMX-	
4	N/C	
5	Shield	

Switch Input Connector Pinout

Function	Cable Wire Colour	Pin	Switch Connection Cable Pinout (10 Way Connector)
LED 1	Brown	1	
Switch 1	Blue	2	
LED 2	White	3	
Switch 2	Green	4	
LED 3	Yellow	5	
Switch 3	Gray	6	
LED 4	Pink	7	
Switch 4	Red	8	
Common	Black	9	
Common	Orange	10	

9.3 Dimensions



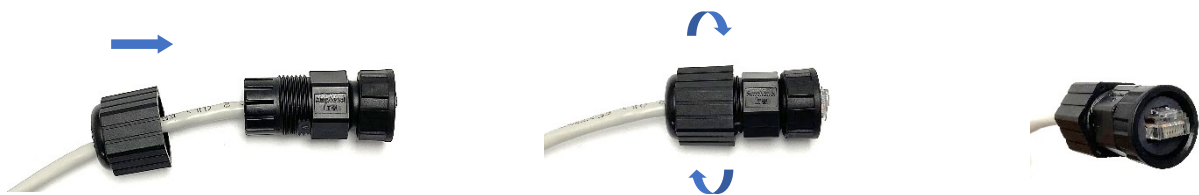
MOUNTING HOLES

9.4 RJ45 Waterproof Cover Kit Assembly




- Slide the cover kit parts (A, B, C) over the interconnection cable. Depending on the plug boot type, use/cut to fit, or discard the provided spacer (C).






- Fit the RJ45 plug into the main part (D) and tighten the cover kit gland (A).



9.5 Optional Accessories

<p>OceanBridge Power Cable P/N: #013202</p> <p>The OceanBridge Power Cable is a 2-meter optional power cable designed for OceanBridge. It provides a reliable power connection when not connected to the NMEA 2000 network.</p> <p>Key Features:</p> <ul style="list-style-type: none"> ➤ 2-Core Cable: 18 AWG tinned copper with red and black wires. ➤ NMEA 2000 M12 5-Pin A-Coded Female socket. ➤ Length: 2 meters (6.6 feet) for flexible installation. 	
<p>OceanBridge Switch Input Cable P/N: #013203</p> <p>The 1-meter Switch Connection Cable with a 10-way connector allows connection of up to four external switch inputs with LED drive feedback (e.g., switches with internally illuminated LEDs) to the OceanBridge device.</p> <p>Product Features:</p> <ul style="list-style-type: none"> ➤ IP67 Waterproof Rate, 26AWG ➤ Length: 1 meter (3.3 feet), for flexible installation options. ➤ Cable diameter: 6mm (0.24") 	
<p>OceanConnect Junction Box (JB) P/N: #013204</p> <p>A Waterproof (IP66) DMX controlled low voltage DC (9-32V) power switch box. Provides for one power input, and four individually fused power outputs (6 Amps max per output) to allow connection of DC powered lights or other DC switched units.</p> <p>The unit also provides support for powering and individual addressing of up to four DMX controlled X-Series lights.</p> <p>The package includes mounting screws and grommets for easy installation. OceanConnect JB Boxes can be linked in chain. Each box has inbuilt on-board DMX terminator which can be turned on or off depending on the installation requirements.</p>	
<p>2-WAY DMX JUNCTION BOX P/N: #013205</p> <p>DMX and Power distribution box for the SPORT Colours DMX and E3 Colours DMX. Distributes power and DMX signals (12/24V DC). Provides 1x DC power input, DMX-In and DMX-Out and two DMX/ Power outputs. Boxes can be linked in chain. Each box has inbuilt on-board DMX terminator which can be turned on or off depending on the installation requirements.</p>	

<p>DMX Control Cables - to link between OceanConnect and / or 2-Way DMX Junction Boxes (both bare ends):</p> <p>DMX Control Cable (3m), P/N: # 011703 DMX Control Cable (5m), P/N: # 011706 DMX Control Cable (10m), P/N: # 011707 DMX Control Cable (15m), P/N: # 011708 DMX Control Cable (20m), P/N: # 011709 DMX Control Cable (25m), P/N: # 011710</p>	
<p>DMX Control Output Cables – to connect OceanBridge with OceanConnect JB, 2-way JB or external DMX controller (male Binder – bare end):</p> <p>DMX Control Output Cable (3m), P/N: #011045 DMX Control Output Cable (5m), P/N: #011046 DMX Control Output Cable (10m), P/N: #011047 DMX Control Output Cable (15m), P/N: #011048 DMX Control Output Cable (20m), P/N: #011049</p>	
<p>DMX Control Input Cable – to connect OceanConnect JB or 2-Way JB with Explore Series Lights (bare end – female Binder)</p> <p>DMX Control Input Cable (3m), P/N: #011050 DMX Control Input Cable (5m), P/N: #011051 DMX Control Input Cable (10m), P/N: #011052 DMX Control Input Cable (15m), P/N: #011053 DMX Control Input Cable (20m), P/N: #011054</p>	
<p>Explore E6 & E7 Control Link Cables – to connect OceanBridge with Explore Series Lights or to link Explore lights (male Binder – female Binder).</p> <p>Explore E6 & E7 Control Link Cable (3m), P/N: #012924 Explore E6 & E7 Control Link Cable (5m), P/N: #012925 Explore E6 & E7 Control Link Cable (10m), P/N: #012926 Explore E6 & E7 Control Link Cable (15m), P/N: #012927 Explore E6 & E7 Control Link Cable (20m), P/N: #012928</p>	
<p>Explore E6 & E7 Terminator P/N: #011044</p>	
<p>4 Way Power Junction Box P/N: #019901</p> <p>A Waterproof (IP66) low voltage DC (9-32V) power distribution box recommended for OceanLED installs. Provides one power input, and four individually fused power outputs (10A max per output) to allow connection of up to four lights. Mounting screws and grommets included.</p>	

<p>Pro-Series Control Input Cable (5m) P/N: #011608 (Pro-Series AC Installations, to connect the DMX controller with the underwater light installation, bare end – Bulgin RJ45)</p>	
<p>Colours IP68 Connection Cable (3m) P/N: # 001-500594 (Pro-Series AC Installations, to link the DMX between AC drivers, Bulgin RJ45 – Bulgin RJ45)</p>	
<p>Colours IP68 Circuit Terminator P/N: # 001-500567 (Pro-Series AC Installations, Bulgin RJ45 type)</p>	

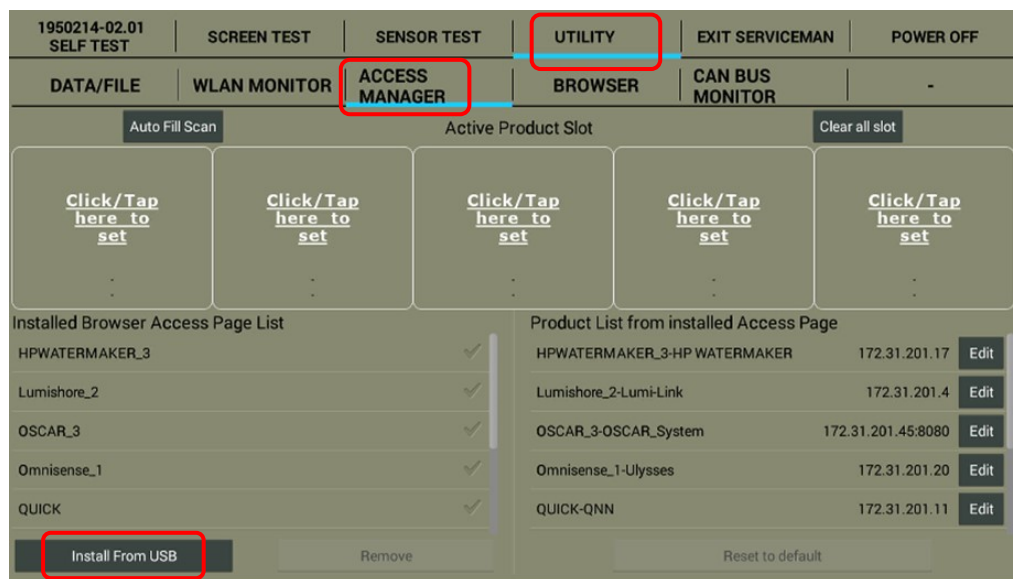
Products may vary from image shown.

9.6 Furuno MFD – Installing the .enc file

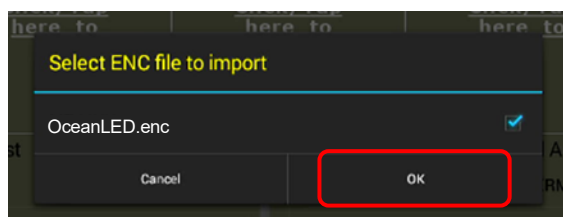
Before using the Furuno MFD device with the OceanBridge app, the user must install the “OceanLED.enc” configuration file. The file is provided on the USB memory stick supplied with the OceanBridge device.

Install the prepared .enc file to the MFD in the Service Menu using the USB stick.

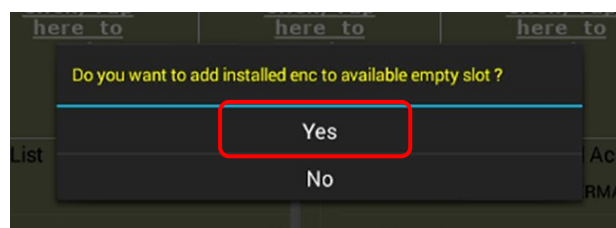
1. Insert the USB stick into the MFD USB port.
2. On the MFD, access the Service Menu. ([Settings] – [Initial Setup] – **[Service]** and enter the password: “FURUNO SERVICE”). Cancel in the pop-up to enter the service mode.
3. In the Service Menu, access the **[UTILITY]** – **[ACCESS MANAGER]** tab and tap **[Install From USB]**.



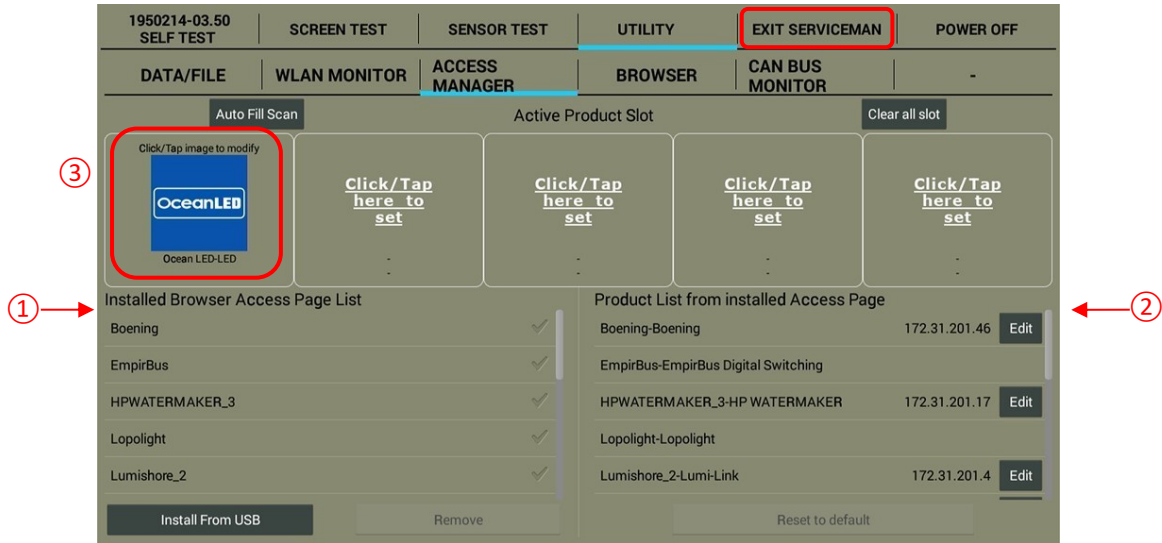
4. In the pop-up message, select the file to install. [✓] mark will appear. Tap **[OK]**.



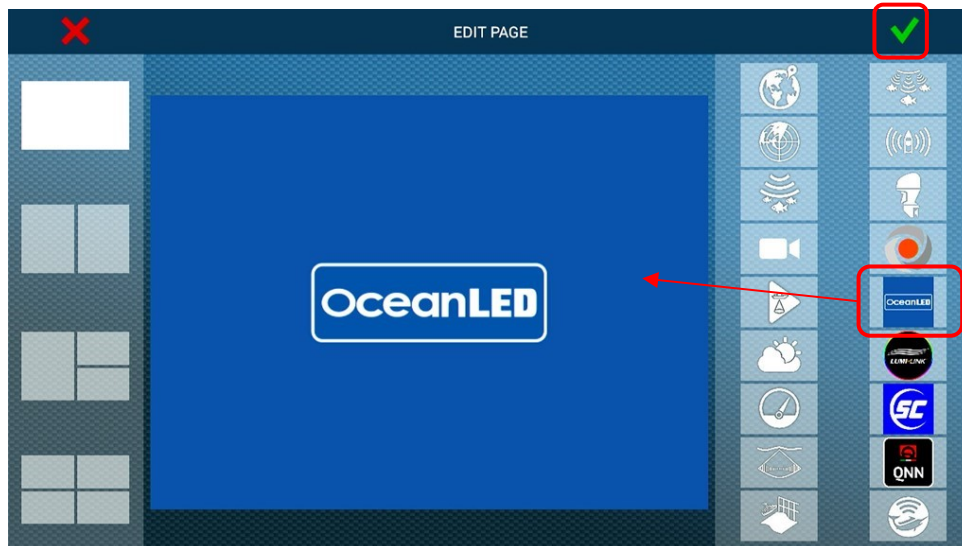
5. The message box [Do you want to add installed enc to available empty slot?] appears. Tap **[Yes]**.



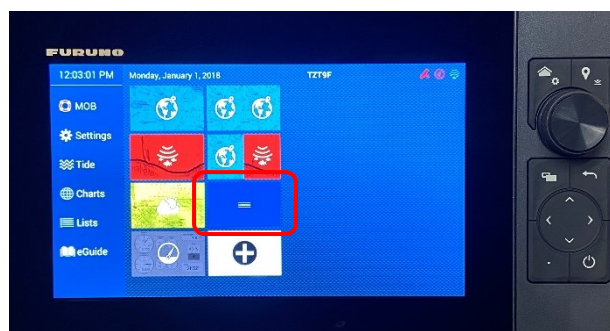
- Check that the target OceanLED.enc file is available in the [Installed Browser Access Page List ①] and [Product List from Installed Access Page ②]. The icon for the partner is also shown on one of the [Click/Tap here to set] boxes ③.



- Exit the Service Menu by tapping [EXIT SERVICEMAN]. The unit will reboot.
- After implementing the OceanLED.enc file on the MFD, power on the OceanBridge device. On the home page, select the 'Add Page' (plus icon) to add the OceanLED Bridge app. In the 'Edit Page' section, choose the OceanLED logo from the menu on the right and move it to the centre of the screen. Select the green checkmark to confirm.

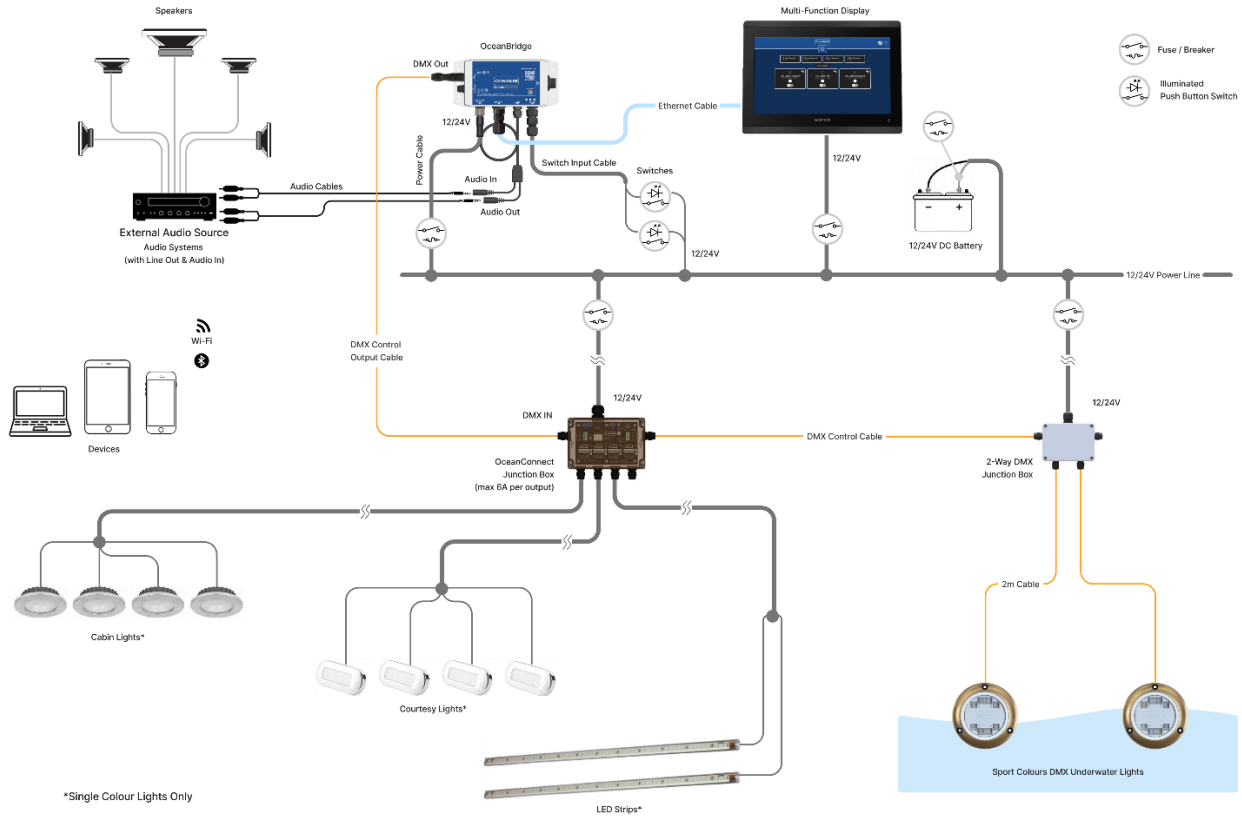


- Open the OceanBridge app.

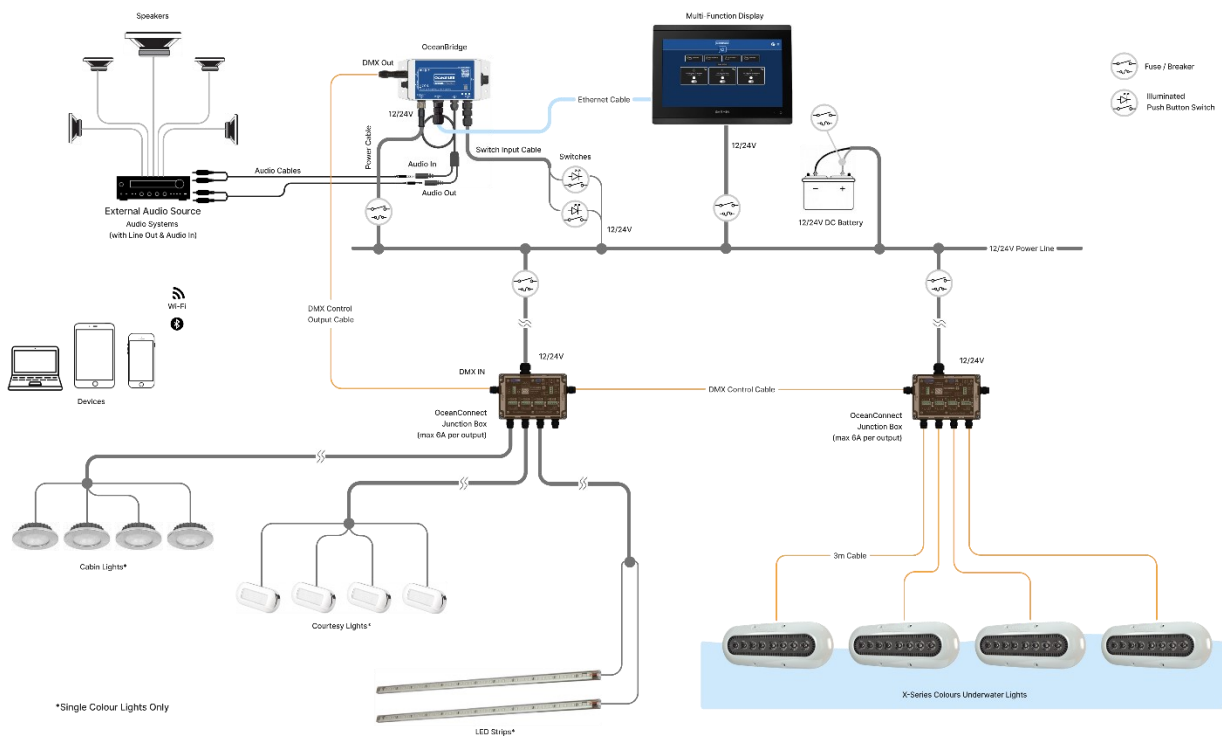


9.7 OceanBridge System Installation Diagrams

Sport Colours DMX and Third Party Lights



X-Series and Third Party Lights



10

Warranty

For technical assistance:

Europe: service@oceanled.com

The Americas: warranty@oceanledusa.com

Warranty Serial Code(s):

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