LUMI⟳LINK™ COMMAND CENTER
Installation Guide

Please read the following pages before attempting installation to ensure complete understanding of the LUMISHORE Lumi-Link Command Center

PARTS INCLUDED

1 x DMX TERMINATOR

1 x FIELD INSTALL RJ45 IP67 COVER KIT (39-0235)

Lumi-Link Command Center Installation Instructions

Before you start…

- Always ensure that the vessel's power source and battery are disconnected or isolated prior to installation.
- A qualified professional should carry out both the electrical and mechanical installation.
- The Lumi-Link Eos and / or Lux lighting system should be fully installed before connecting the Lumi-Link Command Center.
- The Lumi-Link Command Center must be mounted in a dry location and on a flat (not curved) surface away from any sources of heat or vibration
- The Lumi-Link Command Center works with the Lumi-Link Display and or compatible Multi-function Displays (MFD). - check the compatibility of your MFD prior to installing the Lumi-Link Command Center. The MFD may require a software update.
- The Lumi-link Command center has an accessible SD card slot for future software upgrades. When mounting, future access to this SD card slot should be taken into consideration.

Connection Options…

The Lumi-Link Command Center is a cross platform device. Via ethernet, it can connect to a single or multiple MFD network, connect to a Lumishore Lumi-link display or be controlled by a smart Phone/tablet (via Wi-Fi).

Compatible MFD's include the following…

MFD COMPATABILITY	- Garmin (OneHelm Enabled)
	- Raymarine - Axiom (Lighthouse Partner App)
	- Navico - Simrad (NSO EVO3 and EVO2,
	   NSS EVO3 and Go**), B&G (Zeus3 Glass Helm,
	   Zeus3 and Vulcan)
	- Furuno Navnet TZ Touch 3 Series (Requires
	Furuno Specific SD Card - Part Number 60-0377)

The Lumi-link Display can be used if there are no MFD's on the vessel or if additional access points are required around the vessel. For full details of the Lumi-link Display see Lumi-Link Display installation instructions.

Via an on-board Wi-Fi network (either through the MFD Wi-Fi or through the Lumi-Link Display on-board Wi-Fi) the Lumi-link app can be controlled from a smart device. Full instructions for this are included in the Lumi-Link Command Center user manual.

Single MFD Connection

Lumi-Link Display Connection

Multiple MFD/Lumi-link Display Device connection

PORT EXPANDER

Note: use a MFD manufacture specific Network expansion port – consult with your MFD installation guide or contact a dealer for further advice.

Connecting the Lumi-Link Command Center to the Lumi-Link Display or MFD.

For direct connection to the Lumishore Lumi-Link Display any standard ethernet network cable can be used. Connection to the various brands of MFD's are brand specific. The following diagrams show the components required to connect the Lumi-Link Command Center to each brand.

The length of network cable depends on where the Lumi-link command centre has been installed relative to the Display or MFD. Each MFD manufacturer offers different lengths of network cable, check your installation length before ordering.

Lumishore supplies a Field install RJ45 IP67 cover to make your connections to the Lumi-link Command Center waterproof. The cover should be used on all installations. Note: The internal support may or may not be required depending on the type of Ethernet connector molding.

Field install IP67 RJ45 Cover Assembly

PLEASE REFER TO RJ45 IP67 ASSEMBLY INSTRUCTIONS SUPPLIED WITH RJ45 COVER KIT (39-0235)
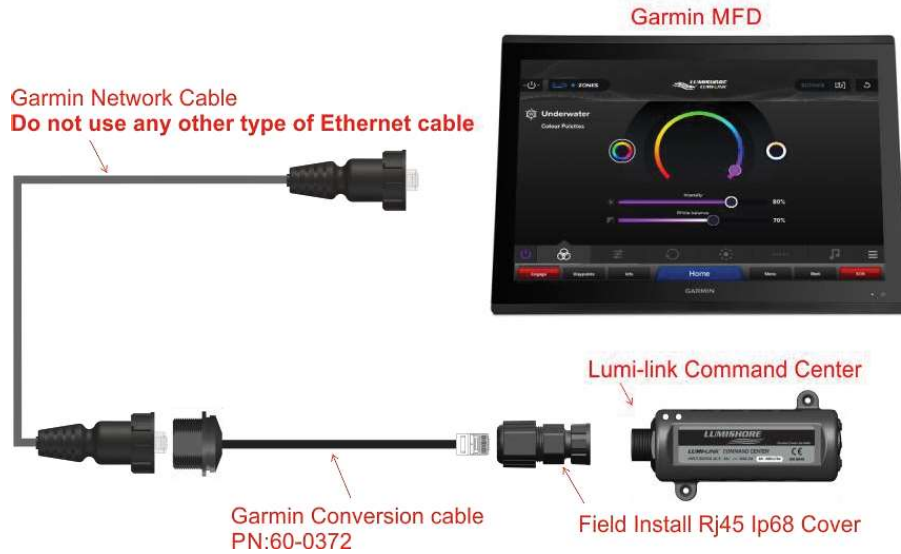
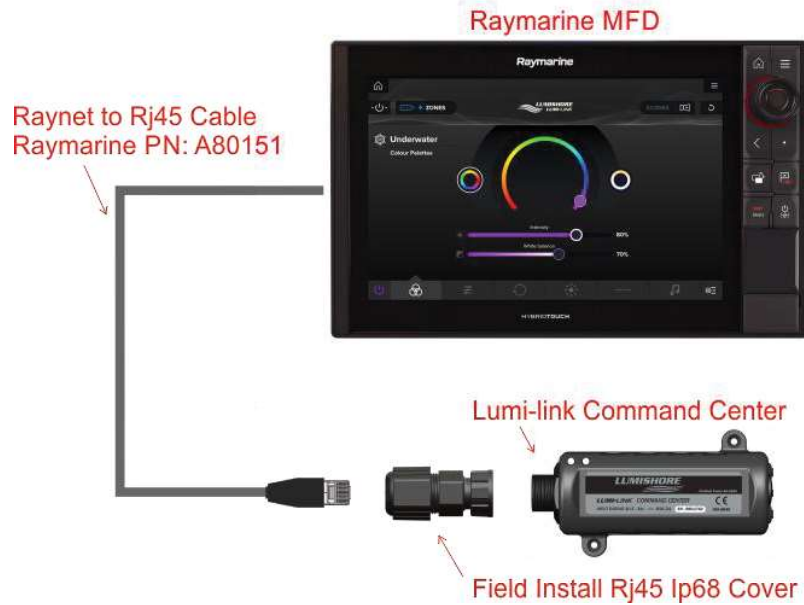**Lumi-Link Display – Use standard Ethernet Cat5e Cable**

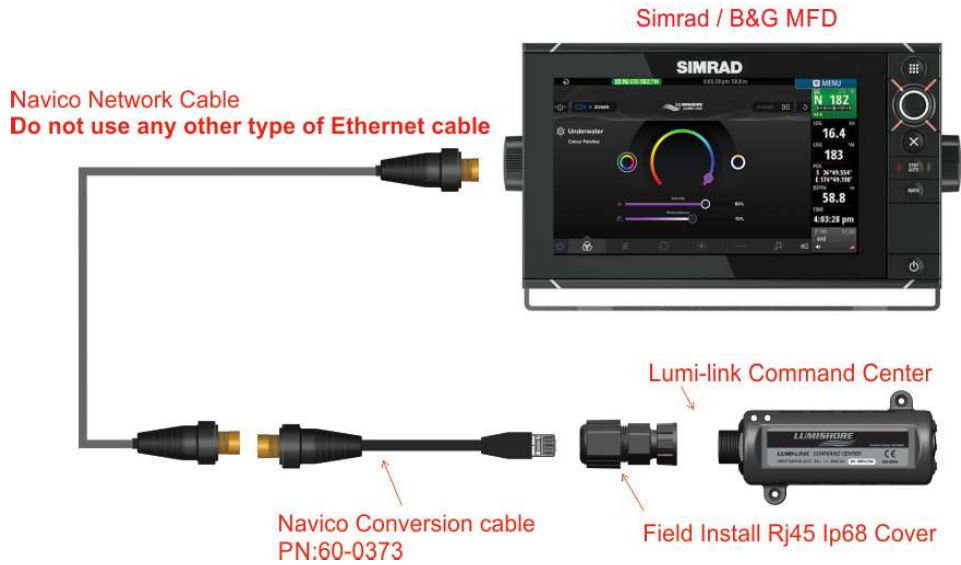**Garmin MFD Install - Use Garmin Conversion Cable PN: 60-0372 and Garmin Network Cable.**

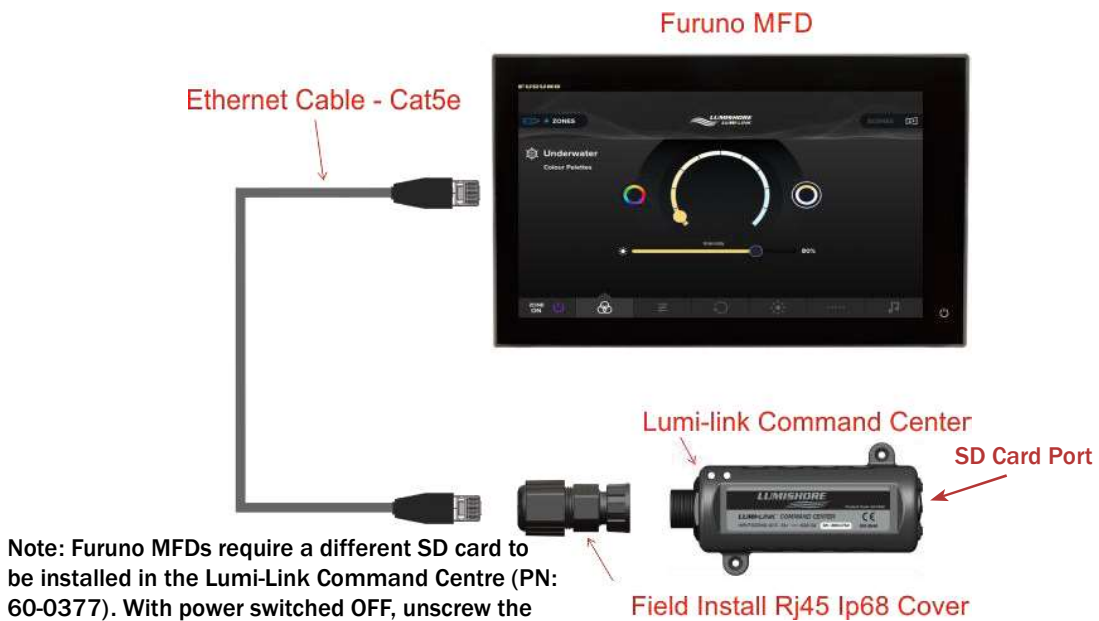(Note: the Garmin Conversion cable M**ust** be installed – only use **Garmin network cables**)

Raymarine MFD Install - Use Raynet to RJ45 Cable, Raymarine PN: A80151

Simrad & B&G MFD Install - Use Navico Conversion cable PN: 60-0373

Simrad / B&G MFD

Navico Network Cable
Do not use any other type of Ethernet cable

Lumi-link Command Center

Navico Conversion cable
PN:60-0373

Field Install Rj45 Ip68 Cover

Furuno MFD Install – Use Standard Ethernet Cat5e cable

Furuno MFD

Ethernet Cable - Cat5e

Lumi-link Command Center

SD Card Port

Field Install Rj45 Ip68 Cover

Note: Furuno MFDs require a different SD card to be installed in the Lumi-Link Command Centre (PN: 60-0377). With power switched OFF, unscrew the SD card port cover. Remove the old SD card using tweezers. Fit the Furuno SD Card and replace the port cover.

Lumi-Link Command Center Connections

The Command Center uses a proprietary form of DMX to communicate between the lights and controller. Whilst Lumishore EOS lights can be controlled by any DMX controller (with limited feature set), the Lumi-Link Command Center can only be used to control Lumishore products.

The Lumi-Link Command Center is plugged into the first Driver, Hub or Light Module in the series. The installation is terminated using a DMX Terminator plugged into the last light, driver, hub or module in the series. (see example diagrams on the following pages)

• The Lumi-Link Command Center is for 12/24volt DC operation (10-31volt input). Under no circumstances should the Controller be connected directly to Mains AC voltage.

• Always use a suitable fuse or circuit breaker to protect the Lumi-Link Command Center and each element of the system.
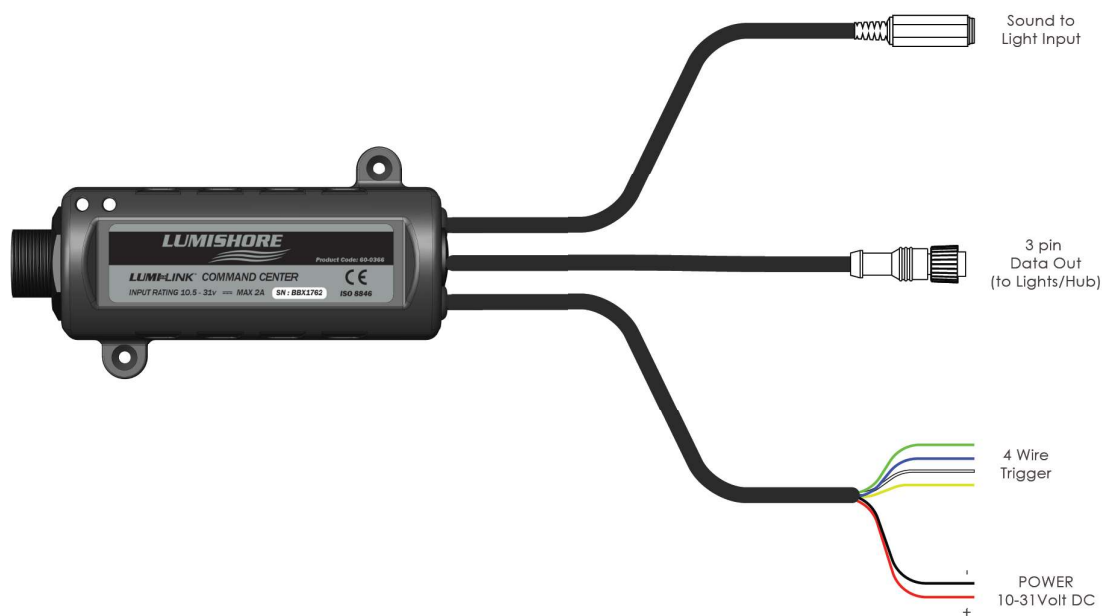
3 Pin M12 Lumi-Link Data out connector:

1. Using Lumi-Link DMX cable extensions connect one end to the 3 pin connector on the back of the Lumi-Link Command Center. Connect the other end to the first light, driver, hub or module in the series.

2. Use a Lumi-link DMX extension cable to link the next Driver or lighting module. Do not cut or extend the DMX link cable.

Pre-molded Lumi-link DMX cables are available in 1 meter, 5 meter and 15 meter lengths as required. Multiple cables can be combined if a further distance is required.

3.   Plug the supplied DMX terminator into the DMX output connector of the last light, driver or module in the chain.

DMX Extension cables (NOTE: Do Not Cut and Splice DMX cables)

Length	Part Number
1m	60-0403
5m	60-0404
15m	60-0405

Sound to Light Connection:

A 3.5mm Jack Socket is included. Use a "Jack to Jack" cable or "Jack to Phono" cable as required to plug the "Line out" from a stereo or iPad/iPhone.
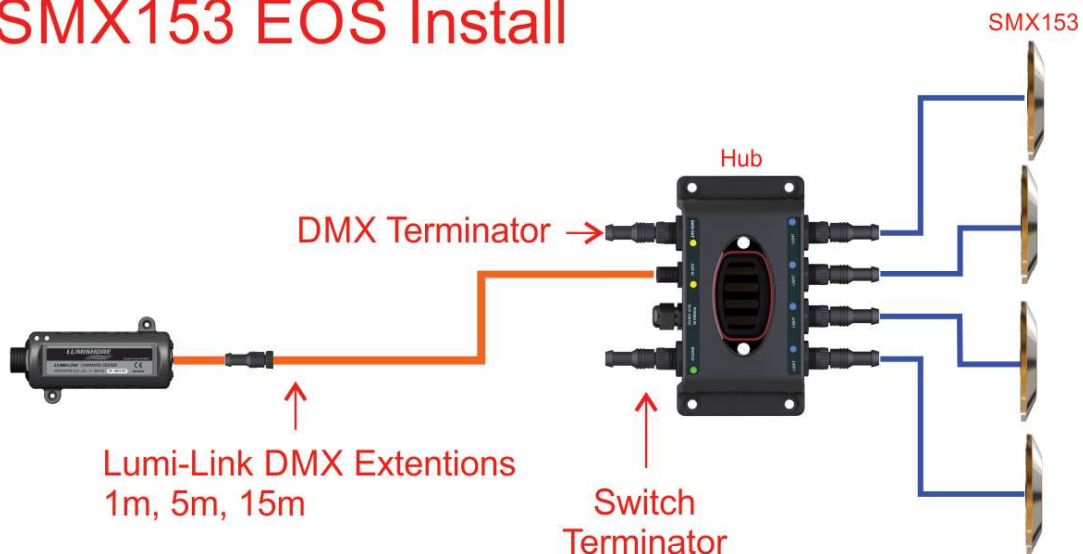
For best results use a stereo output that has constant output irrespective of volume, i.e. when using an iPad or iPhone use the line out rather than the headphone socket. That way the sensitivity of the controller will not need continuous adjustment when changing volume.

3rd Party Trigger Input (Optional):

Contact Lumishore to discuss optional 3rd party triggers for Scenes and Zones.

EOS Underwater Light installation Example diagrams: -

SMX153 EOS Install

TIX403 EOS Install

TIX403

Hub

DMX Terminator →

Lumi-Link DMX Extentions
1m, 5m, 15m

Switch
Terminator

TIX803 / 1603 Eos Install

DMX Terminator →

Lumi-Link DMX Extentions
1m, 5m, 15m
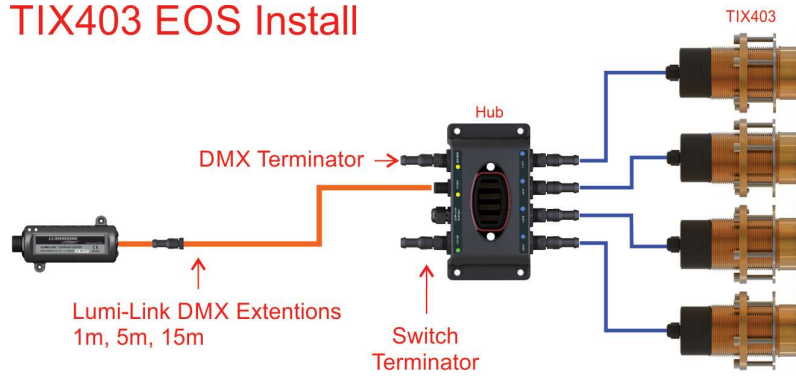
THX403 / 803 / 1603 EOS Install

External Driver

DMX Terminator →

Lumi-Link DMX Extentions
1m, 5m, 15m

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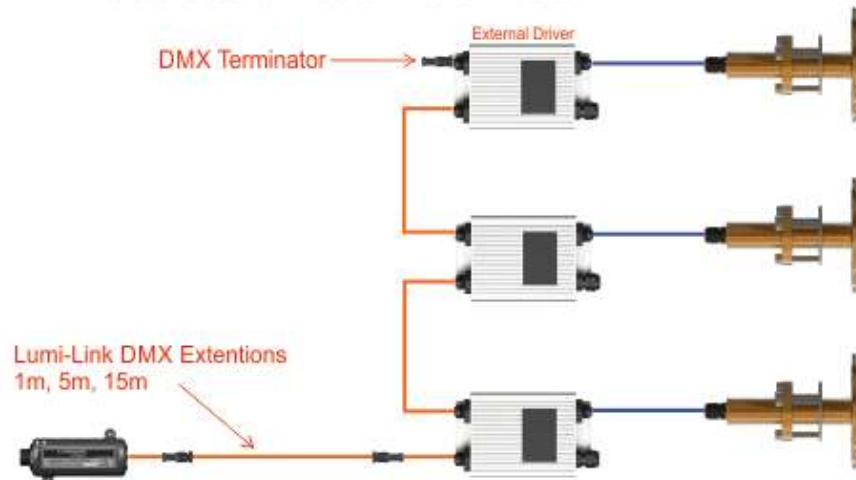
System Diagram for Lumi-Link System including both EOS (underwater lights) and LUX (above water Lights)…
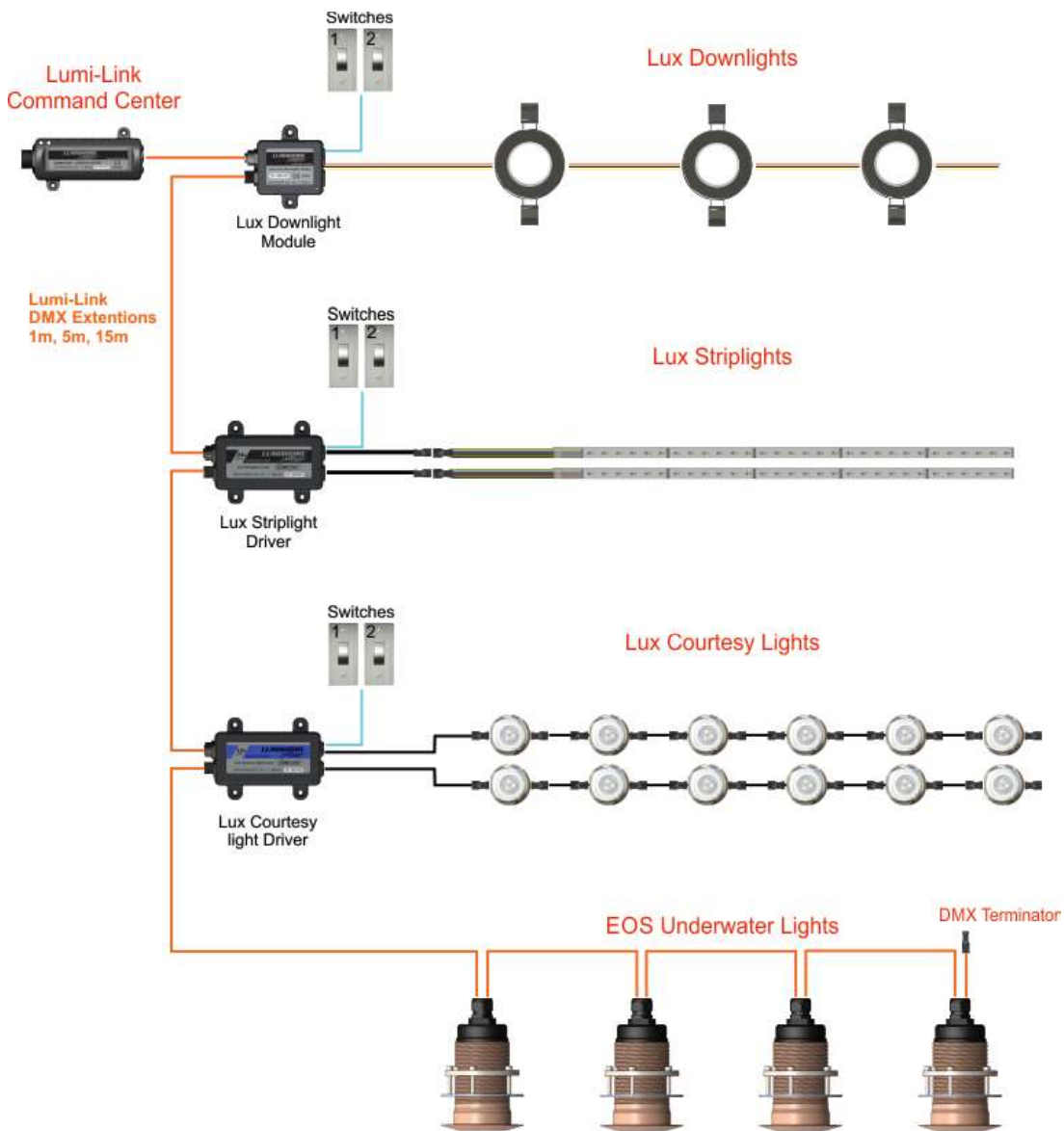
Independent Switches (1,2)

Each LUX module can be controlled from independent momentary switches mounted in the room or dash board. When pressed, the switch removes control from the Lumi-link command centre and offers independent On/off control, dimming or pre-set colour selection. To let the Lumi-link command centre regain control the associate zone should be powered off and on again at the MFD, smart device or Lumi-Link display.

Mom Switch 1: ON/Off, Press and hold to Dim.

Mom Switch 2 (optional): Can be wired to control pre-set colours; Cold White, Mid White, Warm White, Red, Blue, Green, Cyan, Magenta or alternatively wired to control Cold White, Mid White and Warm White only.

Lumi-Link Command Center - Status Leds

LED Status	Power LED	Data LED
Solid ON	Healthy	Healthy - Data Being Received
OFF	No Power	No Power
Flashing	N/A	Healthy - Ready For Data

If power to the Lumi-Link Command Center is lost temporarily then the system may not fully function until you exit to the Home screen on the MFD, and then re-select the Lumi-Link Screen.

If there are multiple MFDs in use, and one of the MFDs is used to access a set-up mode (e.g. Light Set-Up), then the other MFDs will be locked out and will display a message. If this message is seen then exit to the home screen. Once the set-up is completed the system can be used as normal.

Warranty

LUMISHORE Ltd warrants the **Lumi-Link Command Center** to be free from defects in workmanship and materials for a period of two years, starting from the date of original purchase. Misuse, abuse, improper installation, neglect, improper shipping, damage caused by disasters such as fire, flood, and lightning, installation by unqualified personnel, unauthorized repair or modification will void this warranty. For the avoidance of confusion and doubt, non-compliance with all installation, maintenance and operating instructions in this document constitute non-conformance with warranty terms.

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* FOR FIRMWARE VERSION 1.9 AND ABOVE *

Lumi-Link Command Center - Setup and User Guide

First Time use…

When first installed the system needs to be setup. Setup is a quick and easy process and is only performed upon initial installation or after a system SD card change.

Setup discovers lights that are attached to the network and allows the user to select between a Single Zone or Multi Zone mode display.

Underwater lights can be setup as a "**Single Zone**" or as a "**Multi Zone**"

For **underwater and above water** installations choose **Multi Zone mode** as per the following examples.

Configuration Examples…

Example 1; Single Zone – UW lights only

Example 2; Multi Zone – UW lights, Starboard, Port, Transom.

Example 3; Multi Zone – UW lights & Lumishore LUX (e.g, downlights, strip lights and courtesy lights).

ZONE 1

ZONE 1

ZONE 3

ZONE 2

ZONE 5 (CABIN)

ZONE 4 (BRIDGE)

ZONE 3 (COCKPIT)

ZONE 2 (STRIP LIGHT)

ZONE 1 (UNDERWATER)

Example positions transom only
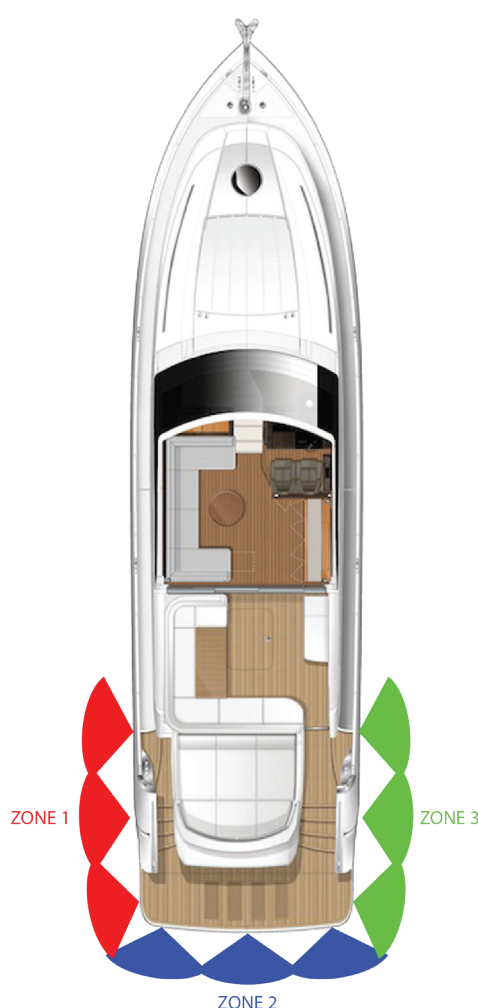
Position 3   Position 2   Position 1
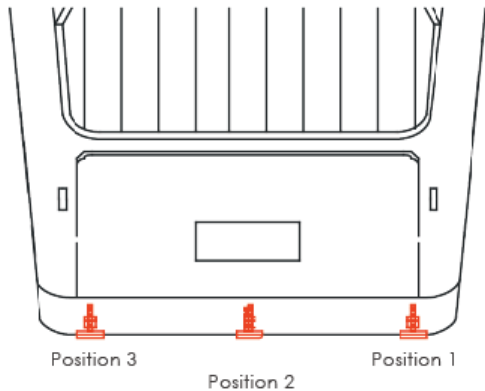
The position of the lights around the vessel can also be setup. This ensures that sweep mode works in the correct order.

Above water zones do not require position information but can be set if desired.

Light Discovery Process…

Upon first installation and before choosing single vs multi zone, the lights connected to the Lumi-Link network need to be discovered. **NOTE: Default Password = "0000"**

Perform these steps on first use or if new lights have been added or deleted from the Lumi-Link network.

Select Setup icon
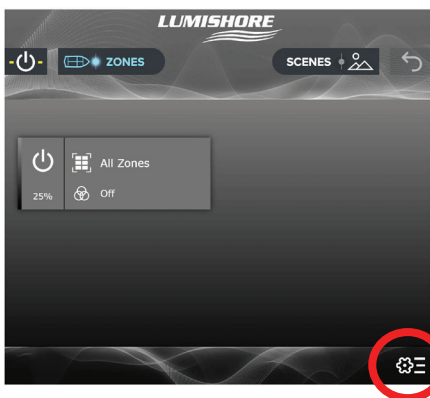
Select "Preferences"
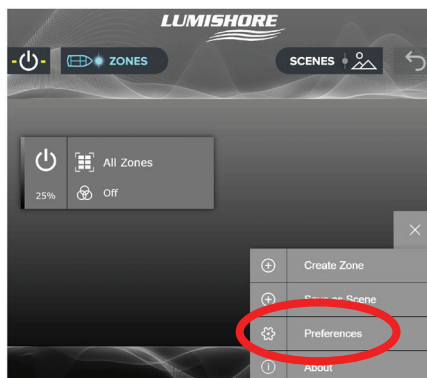
Enter default password = 0000
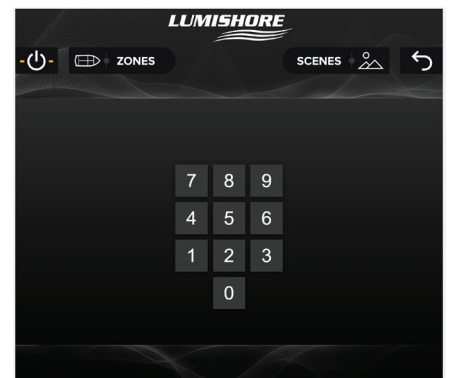
Select "Light Setup"
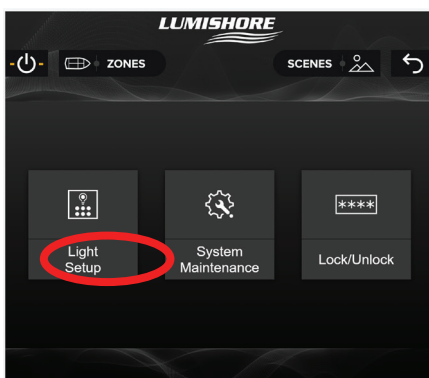
Select "Light Discovery"
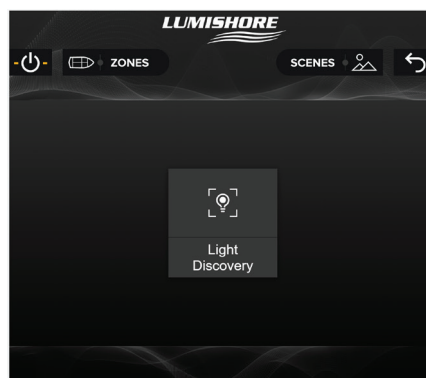
Check that all lights have been found
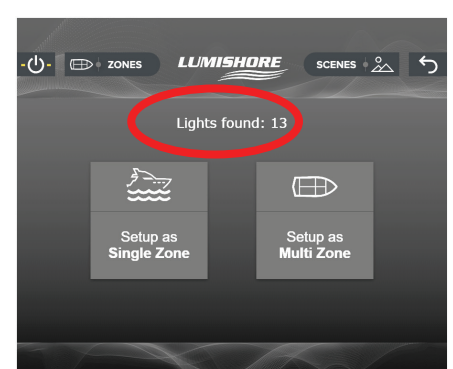
Lights found: 13

Note – if the number of lights found does not match the expected number, check connections and that each light has power.
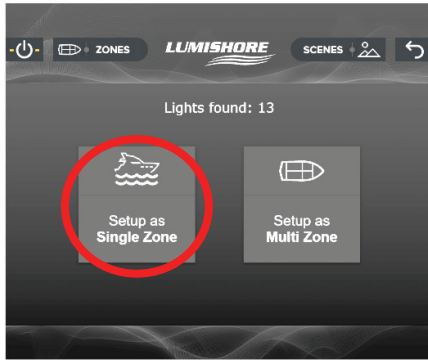
Single Zone setup…(Skip if setting up as Multi Zone)

Select "Setup as Single Zone"

The next step allows the position of the underwater lights to be set around the vessel. This ensures the lights are sent information in the correct order and color change in the correct sequence. This ensures that sweep mode operates in the desired sequence.

To set the positions use the following steps and the example positions shown below.

Example positions transom only

Example positions for 5 lights
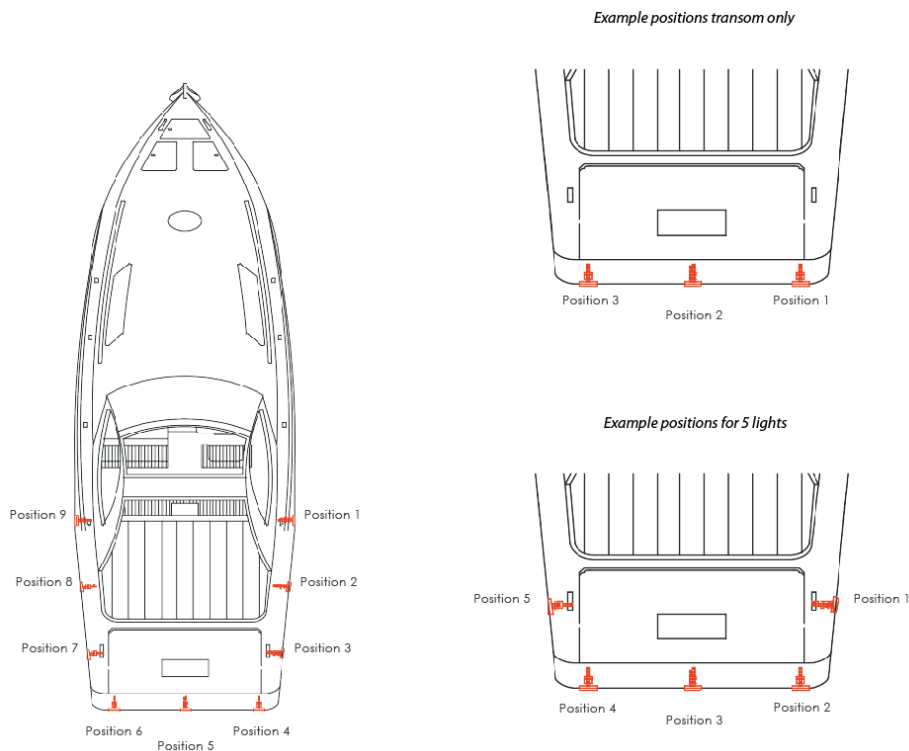
"Wink Light" to identify it on the vessel – the light will flash RGB

Use the diagram above as a guide, edit the light position relative to the vessel.

Repeat for all lights and then press "Save"
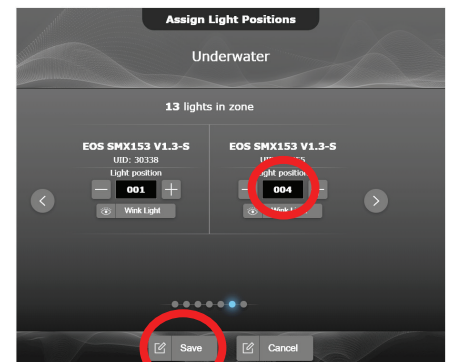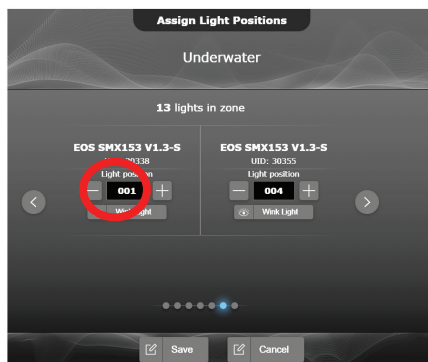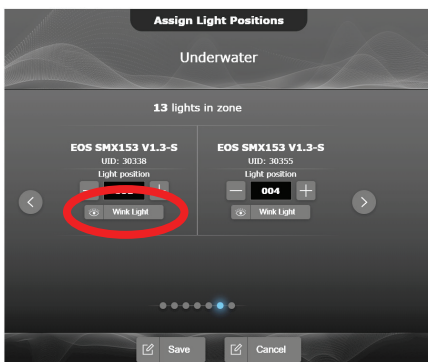
Light setup is now complete! The lights can be controlled from the Lumi-Link control panel.

System Power

Zone Homepage

Back Button

Scenes Homepage

Zone On/Off

Function Bar;
- Colour Palettes
- Preset Colour & Favourites
- Cycle
- Strobe
- Sweep
- Sound to Light

Setup Menu
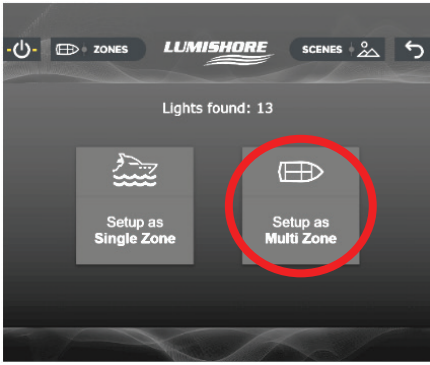
Multi-Zone Setup and Create new Zone…

Select "Setup as Multi Zone"

Lighting zones can be created for different areas of the vessel. A zone could contain underwater lights, strip lights, downlights, courtesy lights or a mixture of the above. The zone names can be edited and an icon selected for easy identification.

Select Setup icon
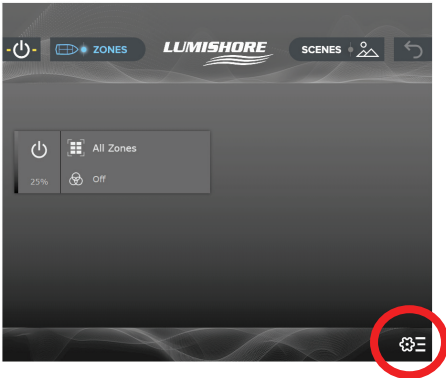
Select "Create Zone"
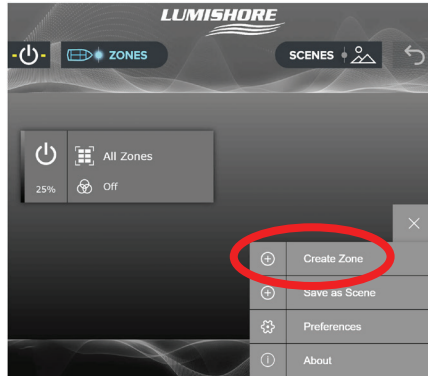
Rename the zone and choose a suitable icon
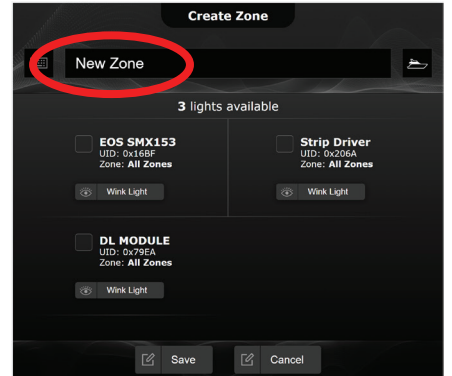
Use the name of the light or "Wink Light" to identify each light on the network. Select which lights to allocate to the zone and then save the selection.

(Optional) – Light positions can be assigned. This ensures the sweep mode will work in the correct sequence. E.g. , for underwater lights.

The lights in this zone will appear, change their position as required and then press save.
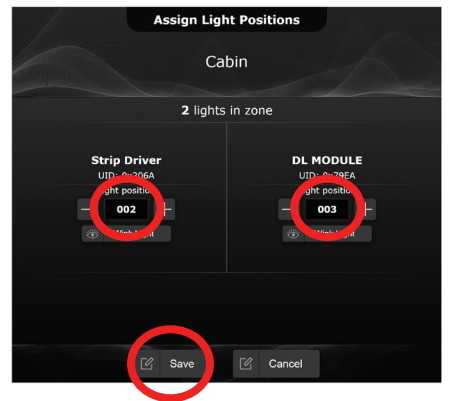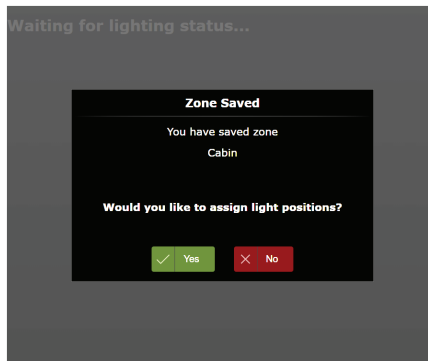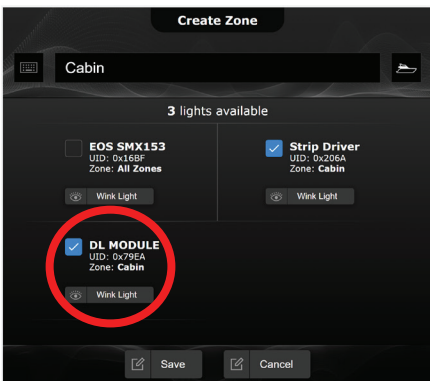
NOTE: A light can exist in one zone only, it cannot be placed in multiple zones.

The new zone will appear on the zone home screen.

Press the power icon to turn each zone on/off press the right hand side of tab to enter main control page.

Main control page.
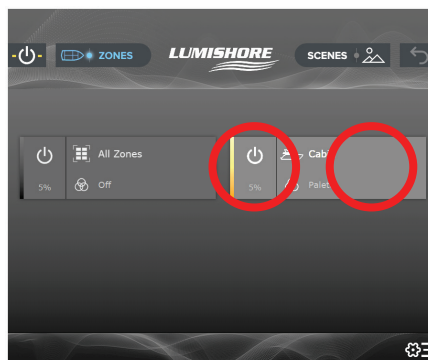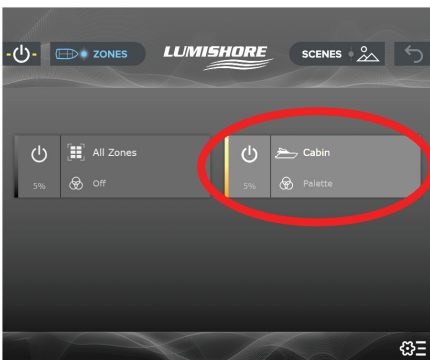
To Edit or Delete a Zone…

To edit or delete this zone long press (>3sec) the zone tab.
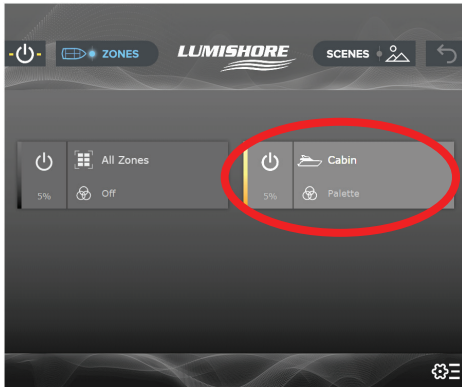
Rename, change icon, re-assign lights, save, cancel or delete zone.
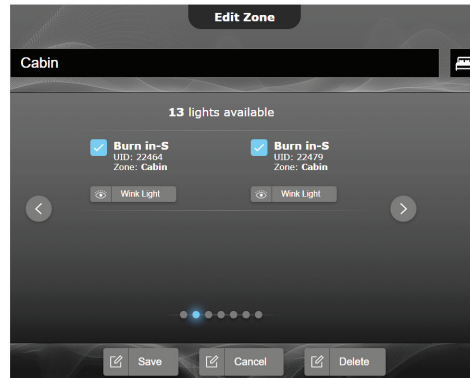
Note: When a zone is created, edited or deleted all zones default to green at 25% intensity. This indicates that any changes have been successful.

Creating Lighting Scenes…

Once each zone has been setup the user can select the colour, effect and intensity for each of these lighting zones. These preferences can then be saved as a lighting "Scene".

Scenes can include a single zone or multiple zones, they can also include a zone "set to off".
More than one scene can be active at a time, if zones are shared between scenes, the zones will follow the last scene command.

In the example below each of the five zones has been allocated a different colour and zone 5 is set to off. To create this as a new scene e.g. "Docking Mode" follow the steps below…
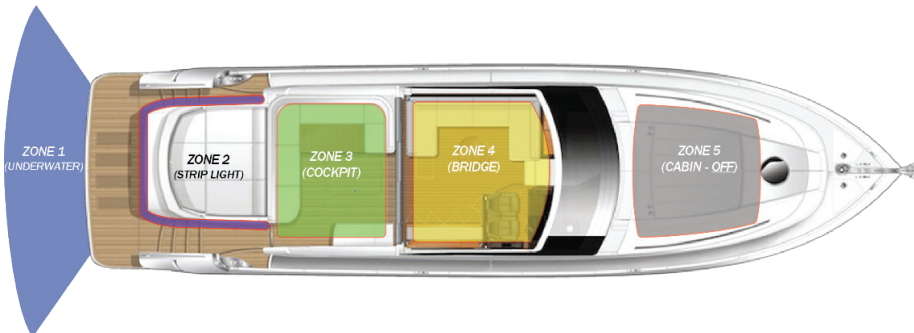
Create the five separate lighting zones and select the desired color and intensity for each one.
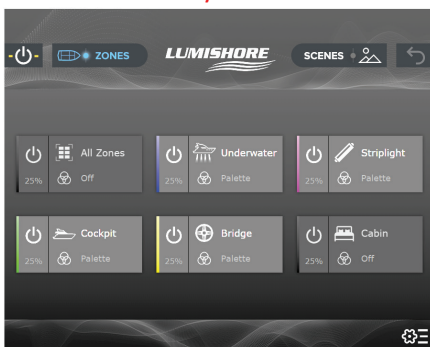
Select "Save as Scene" from the setup menu
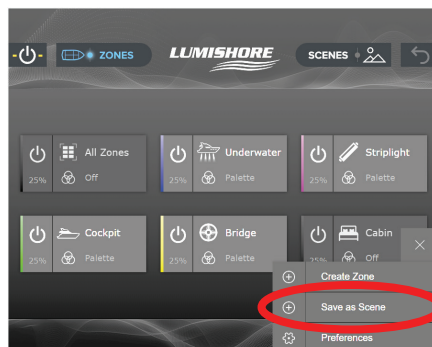
Rename the scene and select an icon. Ensure the zones to be included are checked.

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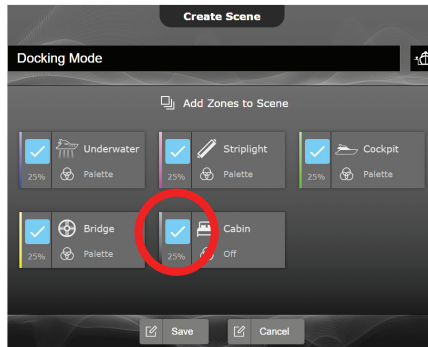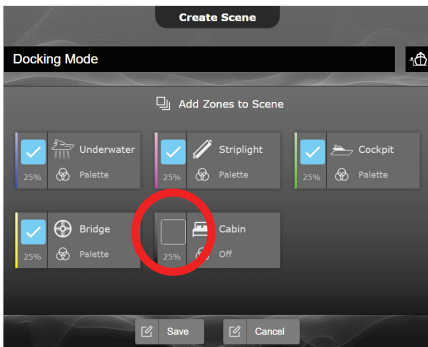
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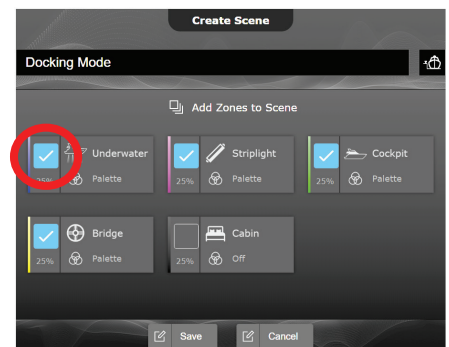
Note: Zones that are off are not automatically included in the scene
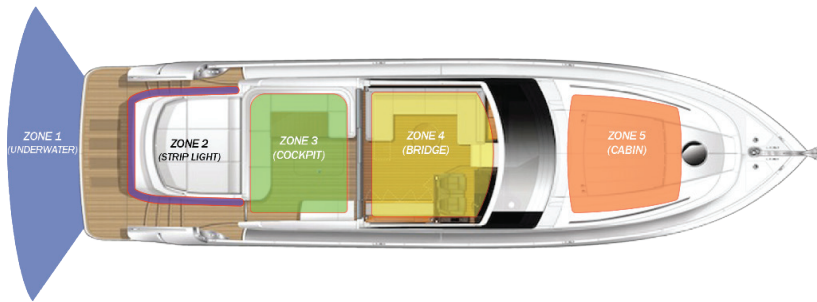
Tick the zone to include it in its "Off" state. Then save the scene.
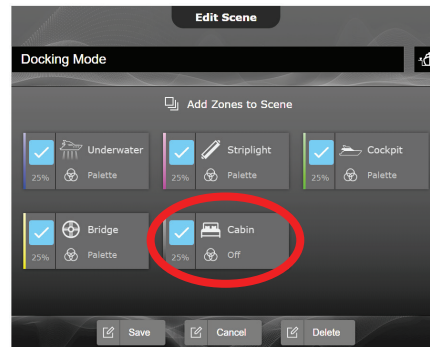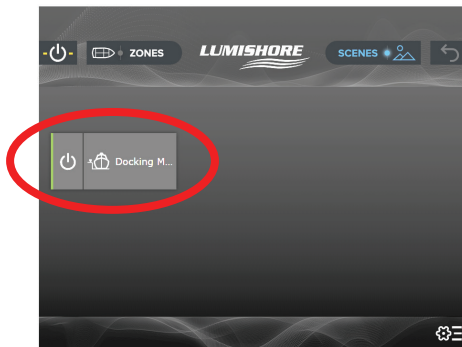
The new scene will appear on the scenes home page.
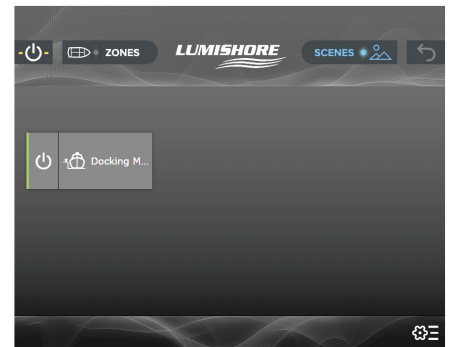
Editing a lighting scene...

To edit a lighting scene, long press (>3sec) the scenes tab from the home page. In the example below zone 5 will be edited in the scene to turn on in "warm white".
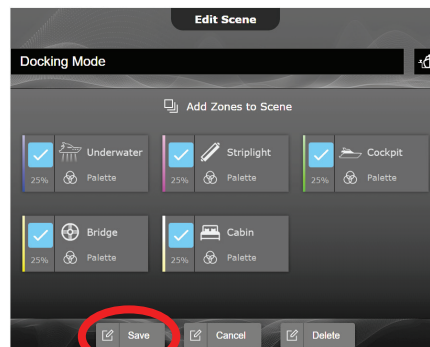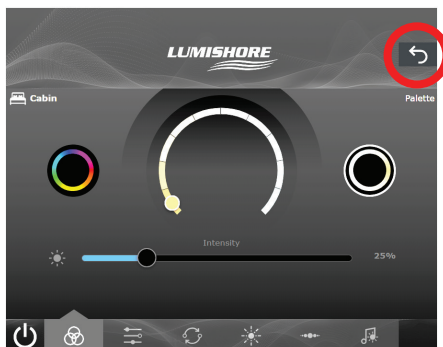

Long press (>3sec) the scene tab

Press the zone to edit

Change the color and intensity for this zone, press the back button when done.

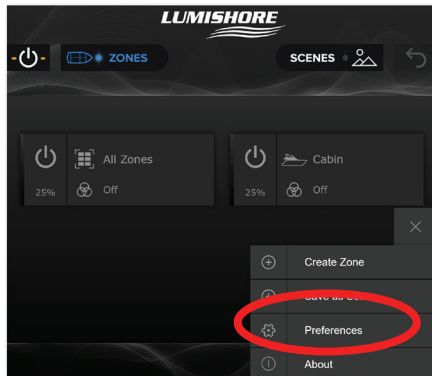The updated color and intensity will display on the tab – press save to finish.
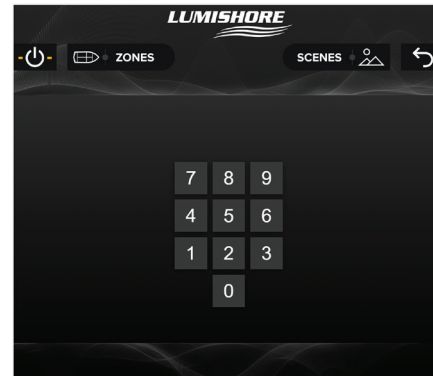
Password Protect (Optional)…

Once setup, zones and scenes have been created, they can be password protected to prevent accidental editing or deletion. Default password is "0000"

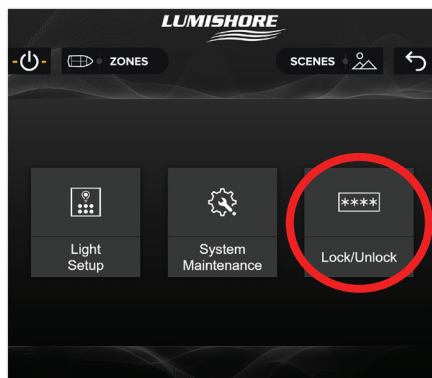There are two levels of password protection, "Full Lock" and "Partial Lock" as explained below;
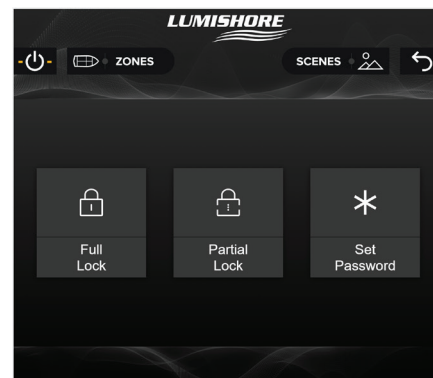
Choose "Preferences"

Enter password

Select "Lock/Unlock"

Choose "Full Lock", "Partial Lock" or "Set Password"

Full Lock: This disables the zone edit / zone create / scene edit scene create features.

Partial Lock: This will disable the zone edit / zone create features but will still allow the user to create or edit lighting scenes.

Set Password: change the default password "0000" to a custom 4 digit number.
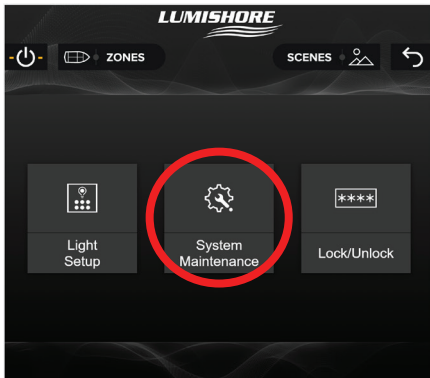
Backup & Restore...

The system backup and restore feature allows you to make a copy of the current zone or scene configuration to return to at a later time. All zone or scene changes made after this can be reverted back to the backup configuration.
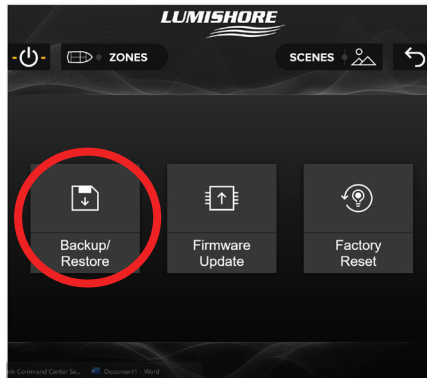
The backup can also be exported to a smart device or laptop as an off site copy or downloaded to another Command Center to make a replica of the configuration. This feature is useful for boat builders who wish to make multiple copies of the same boat model.

To create a local backup or restore from backup go to the preferences menu, enter the password and then choose System Maintenance...
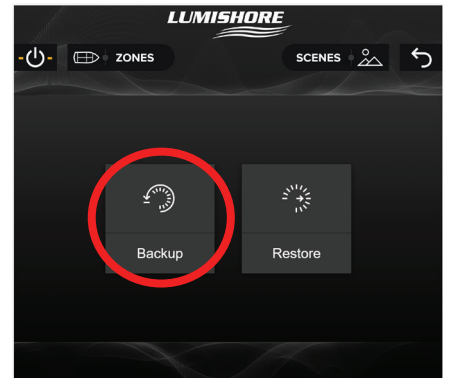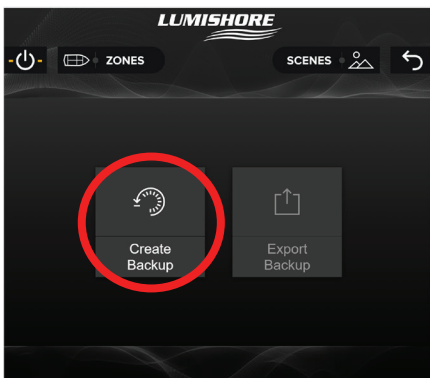
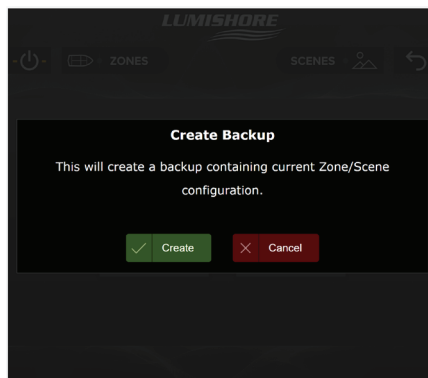Select "System Maintenance" Select "Backup / Restore" Select "Backup"

Select "Create Backup" Select "Create" to save a local copy

Note : To Restore from local Backup follow these steps but select "Restore" followed by "Restore Backup".

To export or import this backup on a smart device or laptop first follow the instructions **Control from Smart Device or Web Browser** to connect your device to the Command Center via Wi-Fi.

Using the connected device navigate to the backup menu and select "Export Backup"

This will save a file called "Backup.rpp" this file can be renamed and stored in a folder for future use or transferred to another Command Center.

To import a backup from an external device, "Restore" followed by "Import Backup" followed by "Restore Backup"

Note: If transferring to another Lumi-Link Command Center the backup feature copies the zone and scene information only. As every light has a unique ID, a system discovery would still be required with lights allocated to the zones.
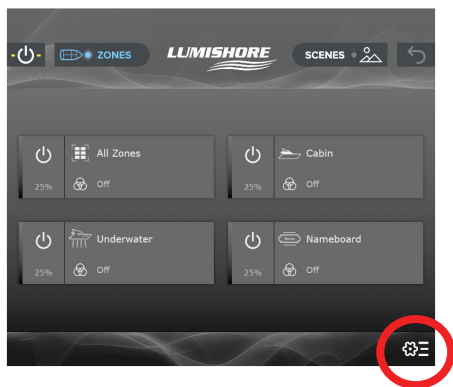
Control from Smart Device or Web Browser…

Ensure your smart device is connected to the same network as the Lumi-Link Command Centre. Depending on installation this may be the vessels on-board Wi-Fi, the MFD Wi-Fi or the Lumishore Lumi-Link Display Wi-Fi. The following example shows the Lumi-Link Command Center connected to the MFD Wi-Fi.

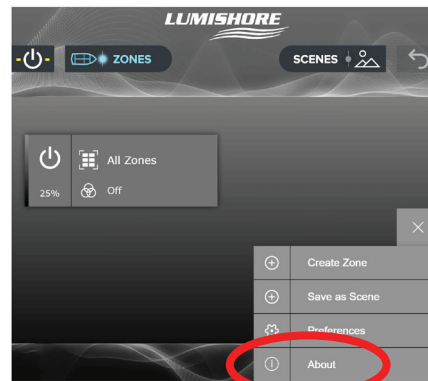Ensure the MFD Wi-Fi is switched on and the smart device or laptop is connected to it.

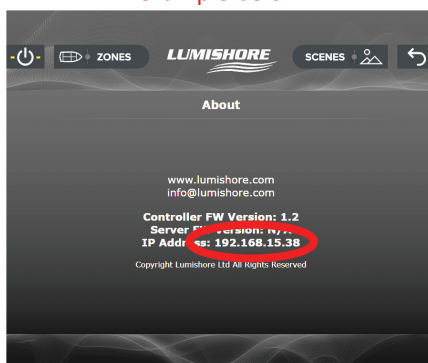Using the MFD – launch the Lumi-Link app

Select "Setup" icon   Select "About"

Make a note of the IP address   Type the IP address into the browser   You can now control the lights
Note: it may be different to the   on the smart device or laptop.   remotely using the Lumi-Link app.
example below.

Note - from time to time the MFD or network router may change the IP address automatically. If the Lumi-Link app does not display, ensure you are connected to the correct Wi-Fi network and that you have entered the correct IP address.

Update via SD card...

WARNING – Lumi-Link Command Center firmware updates via SD card will erase ALL user settings and setup information. The system setup procedure described at the start of this manual will be required after the firmware update. All zones and scenes will need to be recreated or restored from backup.

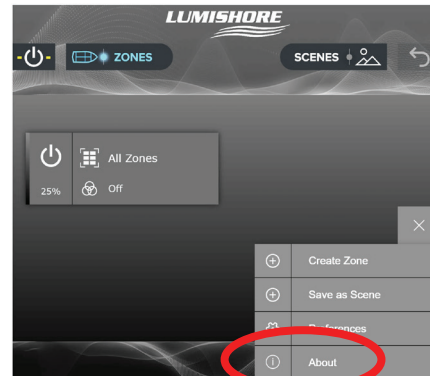**To update the system without errasing the system settings please refer to "Update OVER THE AIR (OTA)"**

Check that the latest firmware is installed on the Lumi-Link Command Center.

To find the server and controller firmware version on the Lumi-Link Command Center follow the steps below...
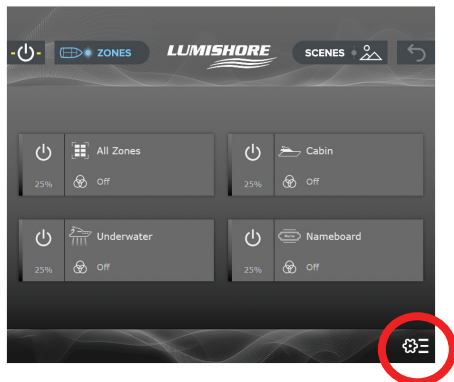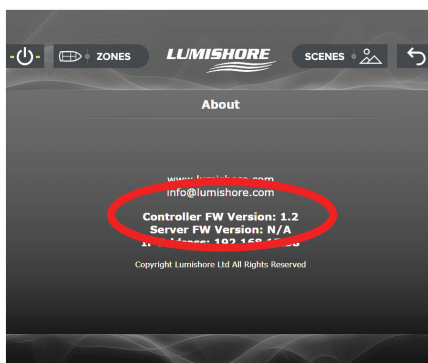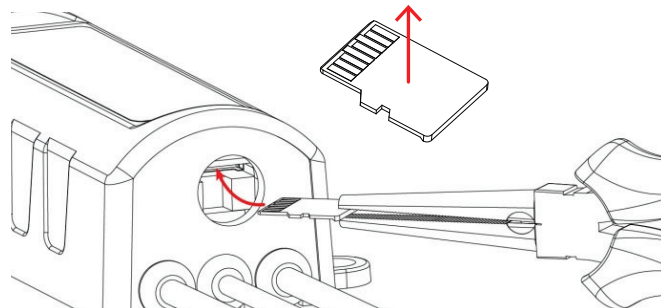
<div align="center">Select "Setup" icon   Select "About"</div>

<div align="center">Make a note of the Controller FW Version number and the Server FW Version number</div>

Contacts up

Contact Lumishore for the latest SD card.

NOTE: Do not remove or replace SD card with power connected. Disconnect power before removing the SD card from the Lumi-Link Command Center.

With power disconnected, unscrew the SD card cover then use long nose pliers to remove the SD card. Replace with the new card and ensure the waterproof cap is put back in place. Please note orientation of SD when reinstalling. Gold contact should be pointing upwards when inserting into SD slot.

Re connect power and the firmware update is complete.

Update OVER THE AIR (OTA)...

The OTA feature allows the system to update using a connected laptop or PC. The system can be updated without the loss of settings and user data. Note: Lumishore recommends using a laptop or PC for this feature with power saving features and screen saver turned off.

To update the firmware using a laptop or PC, first contact Lumishore for the latest firmware and save this file to the desktop.

Next, follow the instructions **Control from Smart Device or Web Browser** to connect your device to the Lumi-Link Command Center via Wi-Fi.
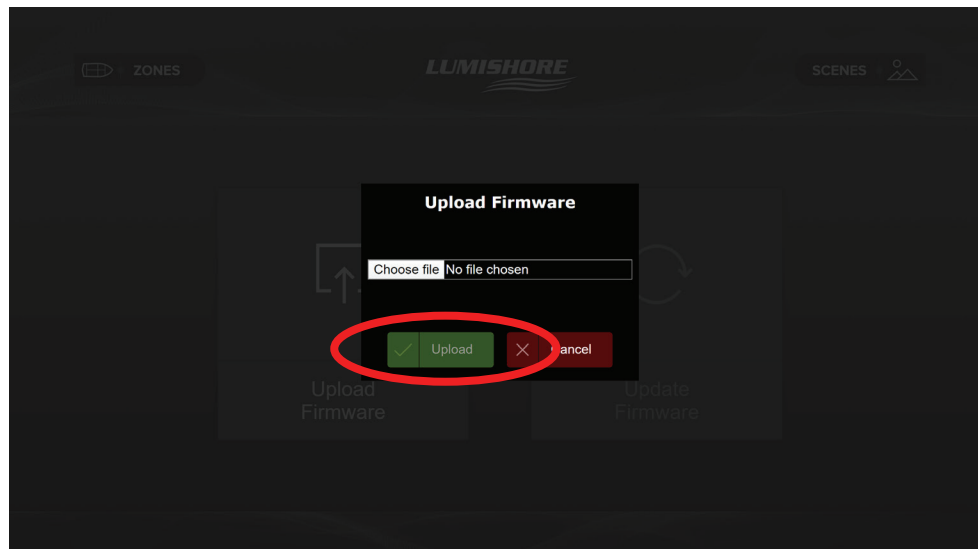

Using the connected device navigate to the "System Maintenance" menu and select "Firmware Update"
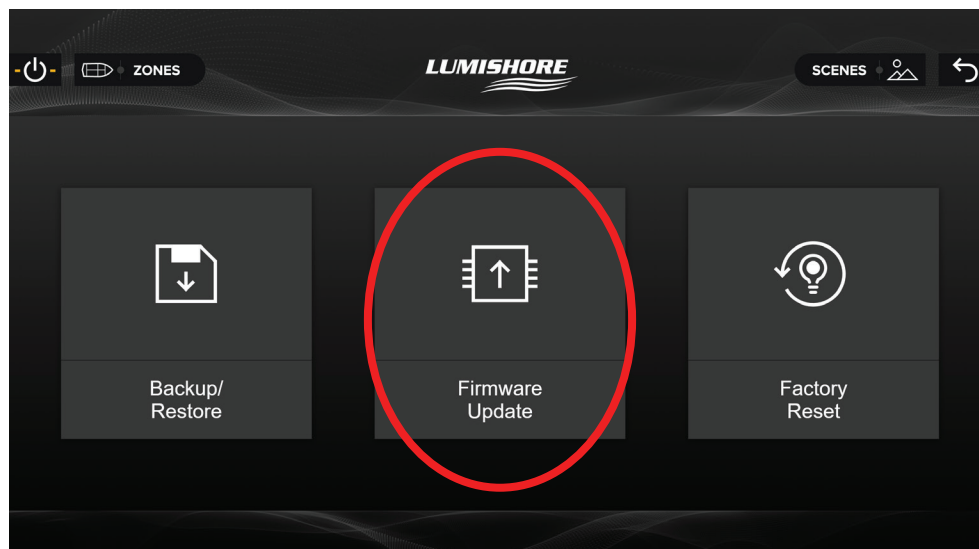
Next select "Upload Firmware" and then choose the saved file from your desktop.

Select "Upload" (the upload process can take 40-60 minutes), please ensure the PC or laptop and Lumi-Link Command Center are left uninterrupted during this time.

Once the file has uploaded you can choose to install now or install at a later time. Select install now to complete the firmware update. (the process can take 30-50 minutes), please ensure the PC or laptop and Lumi-Link Command Center are left uninterrupted during this time.