OceanLED

OceanDMX Pro Series Kit	OceanDMX Xtreme DMX Series Kit
For use with Colours TH HD Gen2 / XFM Colours HD Gen2	For use with Xtreme XP8-DMX / XP16-DMX
Product kit includes: DMX Controller / Connection Cable and Terminator	**Product kit includes:** DMX Controller / DMX Junction Box / Connection Cable

OceanDMX

FREE APP for download:
iOS App Store / Android Play Store

OceanLED

IMPORTANT: Please read the instructions completely before proceeding with the installation. These instructions supersede any other pre dated instructions if they differ.

WARRANTY COVERAGE
2 year warranty from time of purchase, regardless of installation date.

IMPORTANT PRECAUTIONS!

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.

WARNING - Before installing your DMX Controller, read and follow all warning notices and instructions which are included. Failure to follow safety warnings and instructions can result in severe injury, death, or property damage.

WARNING - Before installing your DMX Controller, check local laws for restrictions regarding the use of coloured lights in your area.

DANGER! Risk of Electrical Shock or Electrocution!
Must be installed by a licensed or certified electrician in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to installers or others due to electrical shock, and may also cause damage to property. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL.
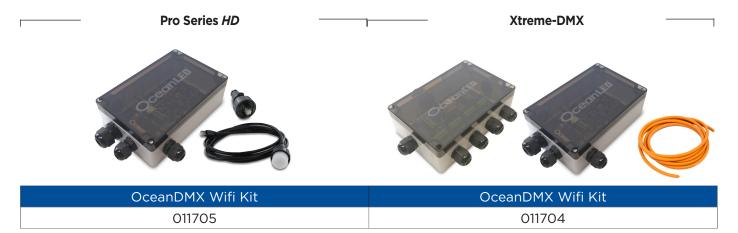
WARNING
Salt is an inherently corrosive material. Metal parts and certain natural and man-made surfaces are particularly susceptible to corrosion and deterioration when used in and around salt water. Some OceanLED lights contain combinations of plastic and polymer products which are impervious to salt water corrosion, however, screws and fasteners used for the installation must be of a marine grade type stainless steel or equivalent and monitored annually to ensure the lights remain in service for years to come.

Chapter 1: Overview

Pro Series *HD*	Xtreme-DMX
OceanDMX Wifi Kit	OceanDMX Wifi Kit
011705	011704

This handbook provides instructions to assist you in the installation and set up of the OceanDMX Pro Series and OceanDMX Xtreme Series Kits.

• For use with the all DMX COLOURS systems.

• Use to change the colour and lighting effects of the above lights and choose between a spectrum of colours to suit your mood.

• The wifi controller can be easily programmed to create individual colour scenes, which can then be selected at the touch of a button using your iPhone, iPad, or Android device.

1.1 Tools and Materials

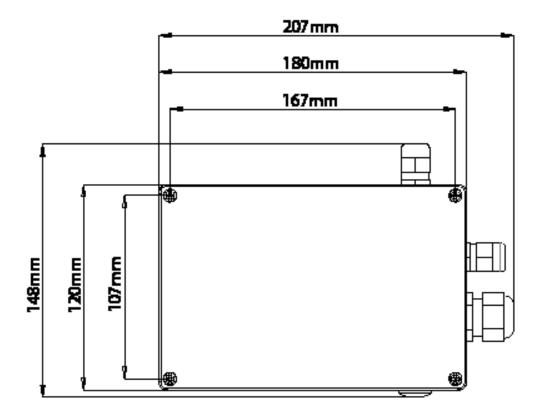**WARNING: NEVER USE POWER TOOLS; HAND TIGHTEN ONLY!**

WARNING: OCEANLED RECOMMENDS DRY FITTING ALL PRODUCTS. WHEN INSTALLING, BESURE THAT THE CONTROLLER FITS THE AREA AND SECURES TO THE MOUNTING LOCATION USING THE APPROPRIATE HARDWARE BEFORE INSTALLING.
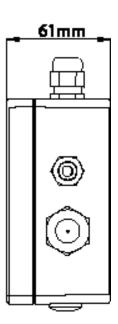
• Drill & Drill Bits.

• Screw Driver, Phillips #2

• Wire Strippers.

• Marking Utensil (Pencil, Sharpie Magic Marker, etc)

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1.2 Specifications DMX WiFi Controller

Technical info	DMX Wifi Controller
Supply Voltage	12/24v DC
Input Current	0.3A max input
DMX Output	1x DMX 512 Output
Power indication	LED power on/off indicator
Audio input	3.5mm stereo audio jack
Cable Connection	Cable glands. Push and fit terminals
Wifi	Onboard WiFi access point or connect to existing WiFi network
IP Rating	IP66
Firmware	Upgradeable
Physical Specifications	
Dimensions	207 x 148 x 61mm
Weight	0.48kg (1.06 lbs)
Construction	Robust polycarbonate with semi transparent lid

1.3 Finding The Mounting Location

WARNING: **UNITS ARE SPLASH PROOF ONLY. NOT TO BE EMERSED IN WATER. MOUNTING LOCATION SHOULD BE DRY DURING INSTALLATION.**

Mounting Location

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

1. Consider the wiring routing / connections:

    • The unit requires a 12 / 24 V DC power source
    • The distance to the first DMX device (i.e. check length of DMX cable)

2. Select flat surface in a dry location away from sources of heat.

3. The unit should be mounted as high as possible in the vessel, and away from metal objects to ensure good Wi-Fi coverage. Avoid areas surrounded by metallic insulation or coverings as this may interfere or restrict the Wi-Fi signal.

4. 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) Mounted away from the rotational centre of the vessel – e.g. mount to one side of the vessel, and either towards the bow or stern of the vessel. (This maximises the accelerations the unit can detect due to wave motion).
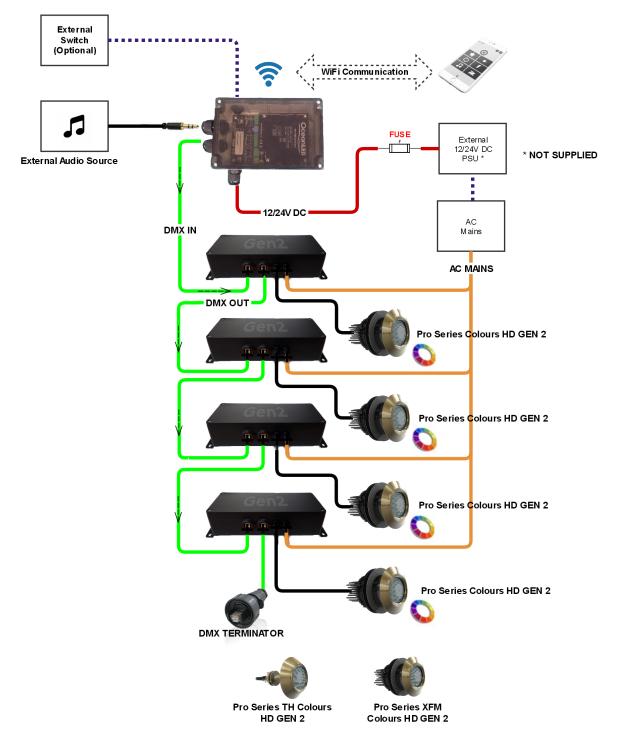
Chapter 2: Installation - OceanDMX Pro Series Kit

2.1 Configuration

See below example of a typical installation using 4x Pro Series Colours HD Gen2

External Switch (Optional)

WiFi Communication

External Audio Source

FUSE F

External 12/24V DC PSU *

* NOT SUPPLIED

12/24V DC

DMX IN

AC Mains

AC MAINS

DMX OUT

Pro Series Colours HD GEN 2

Pro Series Colours HD GEN 2

Pro Series Colours HD GEN 2

Pro Series Colours HD GEN 2

DMX TERMINATOR

Pro Series TH Colours HD GEN 2

Pro Series XFM Colours HD GEN 2

2.2 Mounting the controller

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

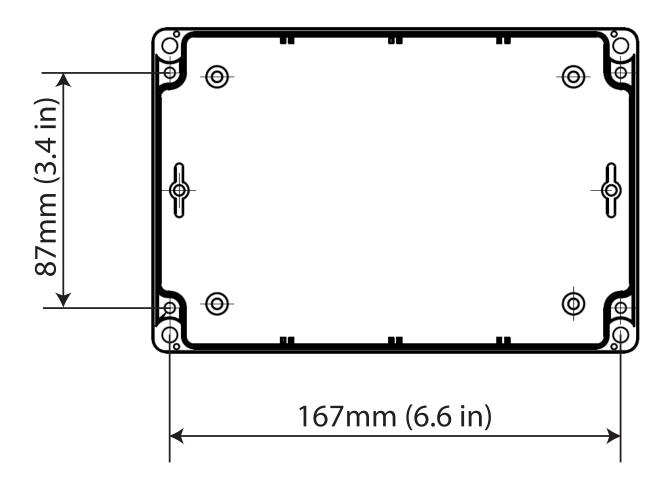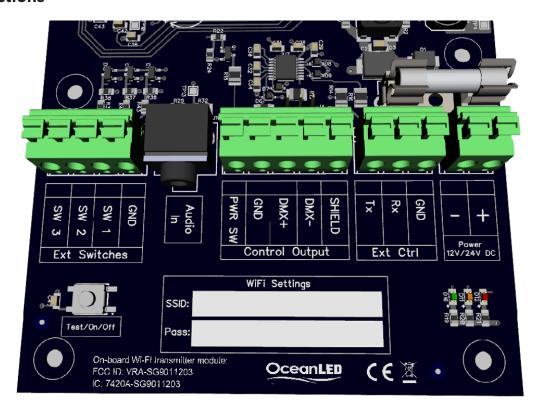1. Unscrew the 4 case screws on the box, and remove the lid.

2. The mounting holes for the unit are located inside the box, near to each corner - see diagram below.

3. The mounting screws that are provided should be suitable for most surfaces (such as wood / fibreglass). Mark out the required mounting hole centres and drill piolet holes as required – being careful to check for obstructions such as cables / pipes behind the area being drilled.

4. Screw the unit to the surface using the screws provided. DO NOT OVERTIGHTEN OR USE POWER TOOLS

87mm (3.4 in)

167mm (6.6 in)

2.3 Connections

OceanDMX Controller Terminal Connections

NAME		FUNCTION	CONNECTION
DC POWER	+	DC POWER +VE	CONNECT TO FUSED +12/+24 VDC FROM FUSE PANEL / BATTERY
	-	DC POWER –VE / GND	CONNECT TO BATTERY GND RETURN
EXT CTRL	GND	CURRENTLY UNUSED*	DO NOT CONNECT*
	RX		
	TX		
CONTROL OUTPUT	SHIELD	CABLE SHIELD CONNECTION	NOT USED FOR PRO SERIES INSTALLATIONS
	DMX-	DMX CONTROL SIGNAL –VE	CONNECT TO DMX- (ORANGE)
	DMX+	DMX CONTROL SIGNAL +VE	CONNECT TO DMX+ (ORANGE/WHITE)
	GND	DMX GROUND	CONNECT TO DMX GROUND (BROWN & BROWN/WHITE)
	PWR SW	EXTERNAL POWER ENABLE	NOT USED FOR PRO SERIES INSTALLATIONS
AUDIO	AUDIO IN	AUDIO LINE-IN	3.5MM STEREO JACK – CONNECT TO LINE OUT FROM AUDIO SOURCE
EXT SWITCHES	GND	COMMON SWITCH GROUND	SWITCH COMMON
	SW 1	SWITCH 1 (SELECT PRE-SET FUNCTION)	EXTERNAL SWITCH INPUT 1
	SW 2	SWITCH 2	CURRENTLY NOT USED*
	SW 3	SWITCH 3	CURRENTLY NOT USED*

*Reserved - to be implemented in future firmware releases

2.4 Making the connections

All the connections (excluding the audio input) are made using push-type spring terminals. Maximum cable size is 2.5mm2 (14 AWG). To make a connection:

1. If required, strip back the wire – leaving approximately 4mm (5/32") of the bare conductor. Twist together ensuring that there are no stray strands.

2. Push & hold the plunger of the terminal down fully using a small terminal screwdriver.

3. Insert the bare end of the cable into the terminal.

4. Release the terminal plunger

5. Test the terminal has clamped correctly by gently pulling on the wire

6. Check for stray strands that may cause shorts

2.5 Power

NOTE: 12 / 24 V DC operation only – @12v DC max current draw = 300mA
A suitably fused 12 / 24 v DC supply is required to power the OceanDMX controller. DO NOT CONNECT TO MAINS AC! This can be sourced either directly from on-board batteries or via a mains AC to 12V or 24 V DC converter. A minimum of 18 gauge (AWG) cable is recommended. **THIS CABLE MUST BE PROTECTED WITH A SUITABLE FUSE OR BREAKER (1 AMP RECOMMENDED). 0.3A MAX @ 12V DC**

1. Select the required cable gland insert – two are provided, one suitable for a multicore single jacket cable (already fitted inside the gland), the other for two single wire conductors (provided in accessory kit)

2. Thread the cable / wires through the cable gland.

3. Connect the +VE terminal to a +12/24V fused power source

4. Connect the –VE terminal to the battery – (Ground) supply

5. Tighten the cable gland

2.6 DMX

1. Loosen the cable gland, and feed the cable end through

2. Connect as follows:

DMX TERMINAL	WIRE COLOUR
DMX-	ORANGE
DMX+	ORANGE/WHITE
DMX GND	BROWN & BROWN/WHITE

3. Tighten the cable gland.

2.7 Audio Input

3.5mm stereo input jack socket input:

NOTE: For best results use the 'line-out' connection from an audio source, rather than a headphone outlet, as levels should not change with volume.
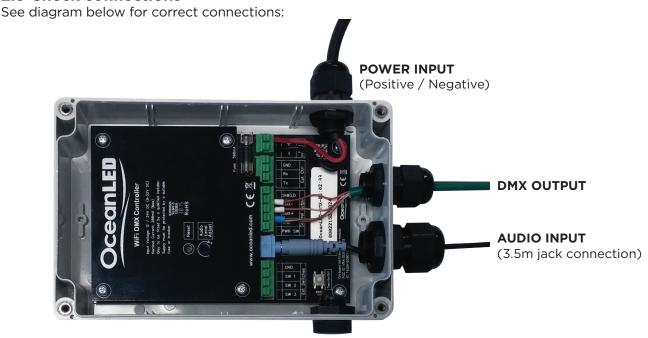
If required, audio level can be manually adjusted using a small screwdriver through the top plate of the unit (box lid needs to be removed). However we generally advise to leave this on maximum setting, and only adjust if required.

1.	Undo the large (M20) cable gland, and thread the audio cable (not supplied) through the gland and gland nut. Using the suppled split grommet, place over the cable and re-assemble the gland. Do not tighten at this stage.

2.	Plug in the jack to the jack socket

3.	Tighten the cable gland.

2.8 Switch inputs (optional):

1.	Remove the blanking plug in the side of the box.

2.	Obtain a suitable M16 cable gland (not supplied) and fit into the hole the blanking plug was removed from

3.	Connect a switch between the required switch output (Note that only SW1 implemented at this stage), and the switch ground connection:

2.9 Check connections

See diagram below for correct connections:

POWER INPUT
(Positive / Negative)

DMX OUTPUT

AUDIO INPUT
(3.5m jack connection)

2.10 Driver connections

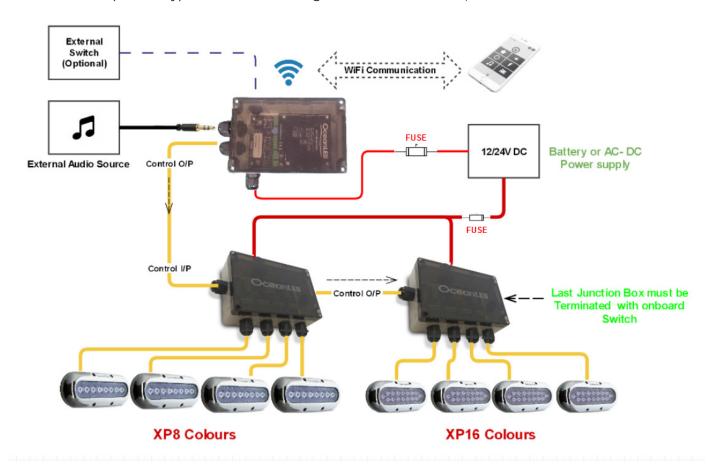For instructions on wiring your Pro Series HD drivers, please refer to the Pro Series installation manual

Chapter 3: Installation - OceanDMX Xtreme DMX Series Kit

3.1 Configuration
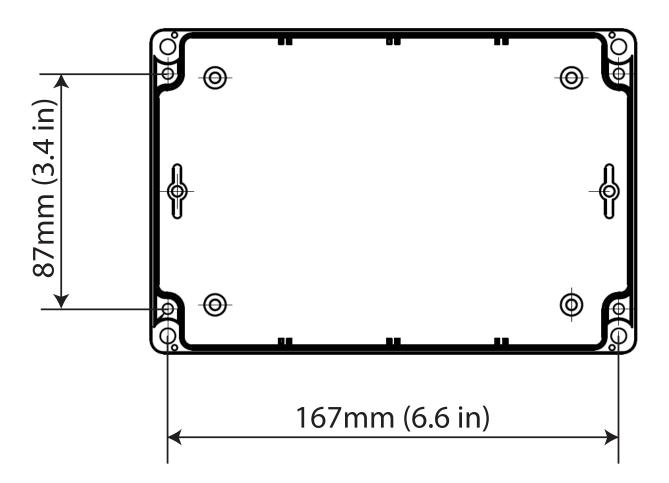See below example of a typical installation using 4x XP8-DMX Colours / 4x XP16-DMX Colours

3.2 Mounting the controller / DMX junction box(s)
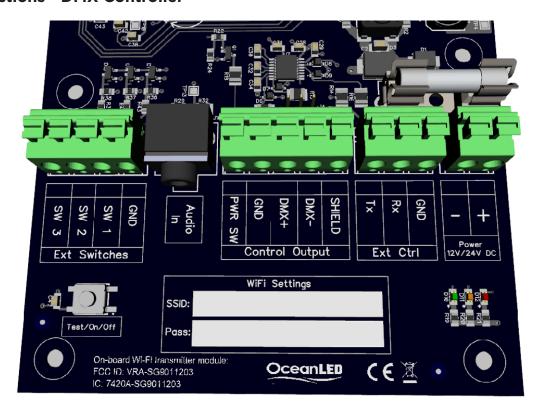
Once a suitable location has been found, follow the following steps to mount the unit:

1. Unscrew the 4 case screws on the box, and remove the lid.

2. The mounting holes for the unit are located inside the box, near to each corner - see diagram below.

3. The mounting screws that are provided should be suitable for most surfaces (such as wood / fibreglass). Mark out the required mounting hole centres and drill piolet holes as required – being careful to check for obstructions such as cables / pipes behind the area being drilled.

4. Screw the unit to the surface using the screws provided. DO NOT OVERTIGHTEN OR USE POWER TOOLS

87mm (3.4 in)

167mm (6.6 in)

3.3 Connections - DMX Controller

OceanDMX Controller Terminal Connections

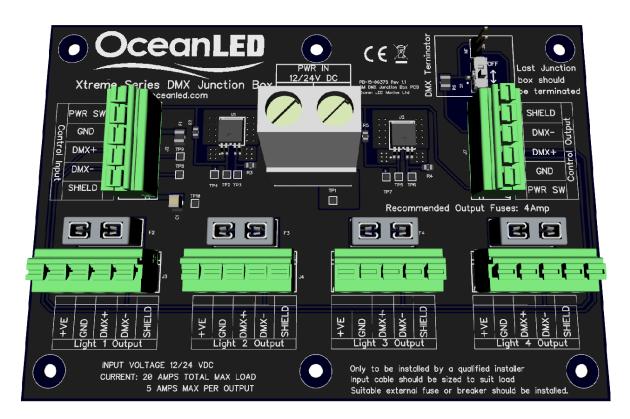| NAME		FUNCTION	CONNECTION
DC POWER	+	DC POWER +VE	CONNECT TO FUSED +12/+24 VDC FROM FUSE PANEL / BATTERY
	-	DC POWER –VE / GND	CONNECT TO BATTERY GND RETURN
EXT CTRL	GND	CURRENTLY UNUSED*	DO NOT CONNECT*
	RX		
	TX		
CONTROL OUTPUT	SHIELD	CABLE SHIELD CONNECTION	CONNECT TO CABLE SCREEN
	DMX-	DMX CONTROL SIGNAL –VE	CONNECT TO DMX- (BROWN)
	DMX+	DMX CONTROL SIGNAL +VE	CONNECT TO DMX+ (YELLOW)
	GND	DMX GROUND	CONNECT TO DMX GROUND (BLACK)
	PWR SW	EXTERNAL POWER ENABLE	CONNECT TO POWER ENABLE (RED)
AUDIO	AUDIO IN	AUDIO LINE-IN	3.5MM STEREO JACK – CONNECT TO LINE OUT FROM AUDIO SOURCE
EXT SWITCHES	GND	COMMON SWITCH GROUND	SWITCH COMMON
	SW 1	SWITCH 1 (SELECT PRE-SET FUNCTION)	EXTERNAL SWITCH INPUT 1
	SW 2	SWITCH 2	CURRENTLY NOT USED*
	SW 3	SWITCH 3	CURRENTLY NOT USED*

*Reserved - to be implemented in future firmware releases

3.4 Connections - DMX Juntion Box

OceanDMX DMX Junction Box Connections

NAME	FUNCTION		CONNECTION
PWR IN	+	DC POWER +VE	CONNECT TO A FUSED +12/+24 VDC FROM FUSE PANEL / BATTERY
	-	DC POWER -VE	CONNECT TO BATTERY GND RETURN
CONTROL INPUT / OUTPUT	PWR SW	POWER SWITCH	CONNECT TO OCEAN DMX CONTROLLER/OTHER DMX JUNCTION BOX – PWR SW PORT (RED)
	GND	DMX GND	CONNECT TO DMX GND (BLACK)
	DMX+	DMX CONTROL SIGNAL +VE	CONNECT TO DMX+ (YELLOW)
	DMX-	DMX CONTROL SIGNAL -VE	CONNECT TO DMX- (BROWN)
	SHIELD	CABLE SHIELD CONNECTION	CONNECT TO CABLE SHIELD / SCREEN IF AVAILABLE
LIGHT 'X' OUTPUT ('X' CAN RANGE FROM 1- 4)	+VE	LIGHT 'X' +VE	CONNECT TO LIGHT +VE (RED)
	GND	LIGHT 'X' -VE	CONNECT TO LIGHT -VE (BLACK)
	DMX+	DMX CONTROL SIGNAL +VE	CONNECT TO LIGHT DMX+ (YELLOW)
	DMX-	DMX CONTROL SIGNAL -VE	CONNECT TO LIGHT DMX- (BROWN)
	SHIELD	CABLE SHIELD CONNECTION	CONNECT TO LIGHT CABLE SHIELD / SCREEN IF AVAILABLE
DMX TERMINATOR	ON	DMX TERMINATION ON	SWITCH ON TO TERMINATE DMX SIGNAL (LAST JUNCTION BOX IN CHAIN)
	OFF	DMX TERMINATION OFF	SWITCH OFF TO CONTINUE DAISYCHAINING OTHER JUNCTION BOXES

3.5 Making the connections

All the connections (excluding the audio input) are made using push-type spring terminals. Maximum cable size is 2.5mm2 (14 AWG). To make a connection:

1. If required, strip back the wire – leaving approximately 4mm (5/32") of the bare conductor. Twist together ensuring that there are no stray strands.

2. Push & hold the plunger of the terminal down fully using a small terminal screwdriver.

3. Insert the bare end of the cable into the terminal.

4. Release the terminal plunger

5. Test the terminal has clamped correctly by gently pulling on the wire

6. Check for stray strands that may cause shorts

3.6 Power

OceanDMX
A suitably fused 12 / 24 v DC supply is required to power the OceanDMX controller. DO NOT CONNECT TO MAINS AC! This can be sourced either directly from on-board batteries or via a mains AC to 12V or 24 V DC converter. A minimum of 18 gauge (AWG) cable is recommended. **THIS CABLE MUST BE PROTECTED WITH A SUITABLE FUSE OR BREAKER (1 AMP RECOMMENDED). 0.3A MAX @ 12V DC**

OceanDMX Junction box(s):
The OceanDMX junction box(s) require a 12 / 24v DC supply. **DO NOT CONNECT TO MAINS AC!** The power requirements vary depending on the type and number of DMX Xtreme lights connected to the junction box.

The tables below show the nominal maximum current draw for each junction box depending on the number of connected lights (ensure the correct table is used depending on the supply voltage).
For example; the supply current to a junction box with three X16's and one X8 connected would be 11.6 Amps with a 12V DC supply.

NUMBER OF X8'S	12V DC SUPPLY					24V DC SUPPLY				
	NUMBER OF X16'S					NUMBER OF X16'S				
	0	1	2	3	4	0	1	2	3	4
0	N/A	3.3 A	6.6 A	9.9 A	13.2 A	N/A	1.6 A	3.2 A	4.8 A	6.4 A
1	1.7 A	5.0 A	8.3 A	11.6 A	N/A	0.8 A	2.4 A	4.0 A	5.6 A	N/A
2	3.4 A	6.7 A	10.0 A	N/A	N/A	1.6 A	3.2 A	4.8 A	N/A	N/A
3	5.1 A	8.4 A	N/A	N/A	N/A	2.4 A	4.0 A	N/A	N/A	N/A
4	6.8 A	N/A	N/A	N/A	N/A	3.2 A	N/A	N/A	N/A	N/A

The required supply cable gauge will depend on the current draw (from the tables above) and the length of the cable run from the fuse / breaker panel to the junction box.

The table below should be used to select the required cable conductor size per junction box. If in doubt always select the next larger conductor size up (i.e. the next lower AWG number). Note for long runs using the thicker gauges it may be necessary to drop down to a slightly smaller gauge cable near to the OceanDMX junction box to allow connection into the unit (keeping the long run in the thicker gauge cable to avoid voltage drops). Ensure all connections / joints are watertight, and suitable for the current load.
NOTE: THE SUPPLY CABLE MUST BE PROTECTED BY A SUITABLE FUSE OR BREAKER.

SUPPLY CABLE CONDUCTOR SIZE CHART								
CABLE LENGTH (FEET)	CIRCUIT CURRENT							
	2 AMP	4 AMP	6 AMP	8 AMP	10 AMP	12 AMP	14 AMP	16 AMP
0-5	18 AWG	18 AWG	16 AWG	16 AWG	16 AWG	14 AWG	14 AWG	14 AWG
10-15	18 AWG	18 AWG	16 AWG	16 AWG	14 AWG	14 AWG	14 AWG	14 AWG
15-20	18 AWG	18 AWG	16 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG
20-25	18 AWG	16 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	10 AWG
25-30	18 AWG	16 AWG	14 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG
30-35	18 AWG	14 AWG	14 AWG	12 AWG	10 AWG	10 AWG	10 AWG	8 AWG
35-40	18 AWG	14 AWG	12 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG
40-45	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	8 AWG
45-50	16 AWG	14 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	8 AWG
50-55	16 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	8 AWG	4 AWG
55-60	16 AWG	12 AWG	10 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG
60-65	14 AWG	12 AWG	10 AWG	8 AWG	8 AWG	8 AWG	4 AWG	4 AWG
65-70	14 AWG	12 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	4 AWG
70-75	14 AWG	12 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	4 AWG
75-80	14 AWG	10 AWG	10 AWG	8 AWG	4 AWG	4 AWG	4 AWG	2 AWG
80-85	14 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	4 AWG	2 AWG
85-90	14 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	2 AWG	2 AWG
90-95	14 AWG	10 AWG	8 AWG	8 AWG	4 AWG	4 AWG	2 AWG	2 AWG
95-100	12 AWG	10 AWG	8 AWG	4 AWG	4 AWG	4 AWG	2 AWG	2 AWG

1. Select the required cable gland insert – two are provided, one suitable for a multicore single jacket cable (already fitted inside the gland), the other for two single wire conductors (provided in accessory kit)

2. Thread the cable / wires through the cable gland.

3. Connect the +VE terminal to a +12/24 V power source

4. Connect the –VE terminal to the battery – (Ground) supply

5. Tighten the cable gland

3.7 DMX Controller

1. Loosen the cable gland, and feed the cable end through

2. Connect as follows:

DMX TERMINAL	WIRE COLOUR
DMX-	BROWN
DMX+	YELLOW
DMX GND	BLACK
POWER SWITCH	RED

3. Tighten the cable gland.

3.8 Audio Input
3.5mm stereo input jack socket input:

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

If required, audio level can be manually adjusted using a small screwdriver through the top plate of the unit (box lid needs to be removed). However we generally advise to leave this on maximum setting, and only adjust if required.
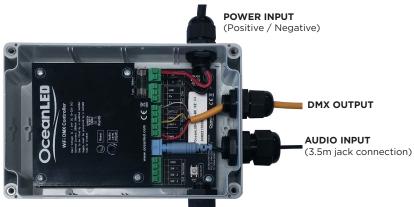
1. Undo the large (M20) cable gland, and thread the audio cable (not supplied) through the gland and gland nut. Using the supplied split grommet, place over the cable and re-assemble the gland. Do not tighten at this stage.

2. Plug in the jack to the jack socket

3. Tighten the cable gland.

3.9 Switch inputs (optional)

1. Remove the blanking plug in the side of the box.

2. Obtain a suitable M16 cable gland (not supplied) and fit into the hole the blanking plug was removed from

3. Connect a switch between the required switch output (Note that only SW1 implemented at this stage), and the switch ground connection:

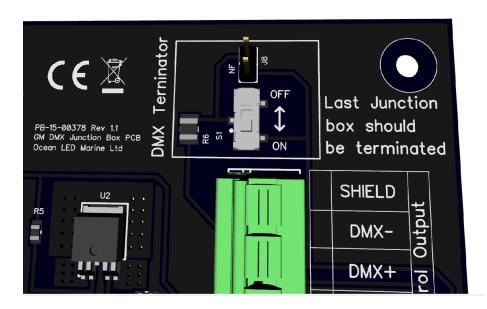## 2.9 Check connections
See diagram below for correct connections:

POWER INPUT
(Positive / Negative)

DMX OUTPUT

AUDIO INPUT
(3.5m jack connection)

3.10 DMX Junction Box(s)

1. Loosen the cable gland, and feed the cable end through

2. Connect as follows:

DMX TERMINAL	WIRE COLOUR
DMX-	BROWN
DMX+	YELLOW
DMX GND	BLACK
POWER SWITCH	RED

3. Tighten the cable gland.

4. Repeat steps 1-3 for each OceanDMX junction box in the system, connecting in a 'daisy chain' fashion (see example connection diagram in section 3.1)

5. Turn on the terminator switch in the last OceanDMX junction box in the chain (the other junction boxes if fitted should have the switch turned off):

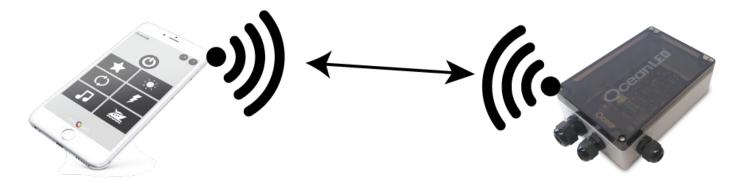# Chapter 4: WiFi operation

4.1 Power up sequence - DMX Controller

NOTE: Before powering up the system, ensure the necessary connections are made and suitable fuses are installed.

1. Upon powerup, all three diagnostic LEDs (Red, Amber and Green) will light up for 1 to 2 seconds.

2. After this, they will flash 3 times and switch OFF.

3. Immediately after they switch OFF, the Green LED will stay ON for approx.. 5-8 seconds, after which it will start flashing. This indicates that the unit has booted up completely and is transmitting DMX data.

4.2 WiFi operation (via OceanDMX controller access point)

The Wi-Fi on the OceanDMX Wi-Fi App Controller can be configured to work in two ways. As default the controller is configured to be used in 'direct connect' mode, where once powered the unit provides a Wi-Fi Access Point (AP) to which phones / tablets may be connected:

This would suit installations that did not have an existing on-board Wi-Fi network, or where the system was required to work independently. OceanLED recommends that the controller be initially setup and tested using this default method.

4.3 Test Mode

Test mode may be enabled by pressing the "test mode" switch on the controller.
RED > GREEN > BLUE > WHITE

Chapter 5: Installing and Operating the OceanDMX APP

5.1 Installing the OceanDMX App - Android device

1. Tap the Apps icon in the bottom-right of the home screen.

2. Swipe left and right until you find the Play Store icon. Tap it.

3. Tap the magnifying glass in the top-right, type oceanled, and tap the magnifying glass in the bottom right.

4. Tapping the three dots on the right side of each entry will provide options to install right away or add the app to a wishlist for future reference.

5. Tapping the box itself will provide more details for that app, including screenshots, video, a description, and reviews from users like you. Tap the Install button at the top to start downloading. You will be prompted to provide certain device permissions for the installation to continue.

6. Ongoing downloads and installations will show as icons in the notification bar at the top of the screen. Swipe down from the top for a detailed look.

7. Once the download and installation are complete, you can tap the Open button in the Play Store listing, or tap the icon from the notification tray to open your app. Otherwise, the app will be accessible by tapping the Apps icon in the bottom of your home screen, assuming an icon hasn't already been put on your home screen.

5.2 Installing the OceanDMX App - iOS device

1. From your handset, find the 'App Store' icon and tap it to access the store. Use the Search button at the bottom left of the screen to look for OceanLED / OceanDMX

2. A new icon depicting you're downloading the app will be displayed on your device's desktop, along with a progress bar. Once the download is complete, the app is available to use..

5.3 Specifications - mobile APP

OceanLED Colours App Specifications		No of Colours	Brightness	Sensitivity	Speed
Mode 1	Static Colour	1	x		
Mode 2	Cycle Colour	4	x		x
Mode 3	Strobe Colour	4	x		x
Mode 4	Dynamic Audio Control	3	x	x	
Mode 5	Dynamic Motion Control	2	x	x	
Mobile platforms	iOS ver 8.1 and above / Android version 4.1 (Jellybean) and above				
Availablity	Free download via Google Play / iTunes App Store				
Presets	6x storeable scene / colour settings				
Colour Control	Large colour wheel and selected colour indicator				
Help mode	on screen menu information				

5.4 Operating the Mobile App

Connect your mobile device to the Controller WiFi network. Your unique SSID Password is printed on the circuit board of the controller box as below.

Once WiFi connection is established, start the mobile app.

Navigate the easy to use menu structure between standard static, cycle or strobe modes. Alternatively, use audio or wave motion modes to control the colour scheme of your choice. To use audio control, simply attach your vessels sound system to the DMX controller via a standard audio jack. In wave motion mode, you can create a dramatic display whilst on the move upon wave impact. Swipe the screen to the right to return to homescreen.

OceanDMX App Operation		No of Colour Options	Brightness	Sensitivity	Speed
☀	**Static Colour** Choose ANY Colour from Colour Wheel Save Favorite Settings	1	Use slider to adjust		
↻	**Cycle Colour** Choose ANY Colour from Colour Wheel Save Favorite Settings	4	Use slider to adjust		Use slider to adjust
⚡	**Strobe Colour** Choose ANY Colour from Colour Wheel Save Favorite Settings	4	Use slider to adjust		Use slider to adjust
♫	**Dynamic Audio mode** Choose ANY Colour from Colour Wheel Save Favorite Settings	3	Use slider to adjust	Use slider to adjust	
🚤	**Wave Motion mode** Choose ANY Colour from Colour Wheel Save Favorite Settings	2	Use slider to adjust	Use slider to adjust	
★	Presets 5 favourite presets - click the preset icon on each of the above screens to store your selection				

Chapter 6: Advanced WiFi setup (via local wireless network)

For more advanced users the OceanDMX App controller can also be configured to automatically connect to a local wireless network, allowing phones / tablets to communicate with the controller via the vessels existing Wi-Fi.
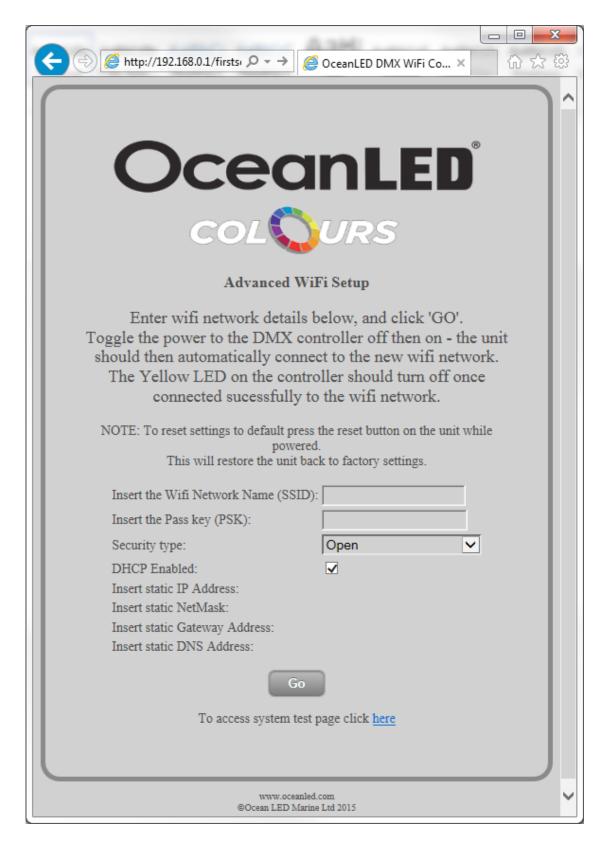
6.1 Setup

To setup the OceanDMX App controller to automatically connect to a local Wi-Fi network follow the following steps:

1. Power on the OceanDMX App Controller. Once powered the green led should be flickering, and the red & orange indicator LEDs should be off. (If either the red or orange indicators stay illuminated, then reset the unit by pressing the reset button)

2. Using either a smart phone, tablet or laptop connect to the App Controller Wi-Fi network:

   • Locate your devices Wi-Fi settings, and the controller Wi-Fi network should be visible (The network should be called "OceanLED-DMX-xx:xx:xx" – where xx:xx:xx are numbers unique to your controller).

   • Select the network, and enter the password located on the sticker inside the controller box.

3. Open a web browser on your device, and type into the address bar:
http://192.168.0.1/
The following screen should be displayed:

4. Now enter the Wi-Fi network details that the controller should connect to.
   - SSID – the network name of the required Wi-Fi network (ensure this matches exactly).
   - PSK – the password for the network (leave blank if open network).

NOTE: The SSID & PSK can only contain upper and lower case letters, numbers and the following characters only:
$! _ - + / * \ { } [ ] @ : ; , . ?

There cannot be any spaces or any other characters other than those shown above.

If the existing Wi-Fi network name (SSID) does contain spaces or special characters other than those above then the name of this network will need to be changed in order to be able to configure the controller to connect.

Security type
   - Open – select for open un-secured networks (leave PSK blank)
   - WEP – for Wired Equivalent Privacy secured networks – (an older outdated standard)
   - Wpa & Wpa2 Personal - Wi-Fi Protected Access – (common standard used on most secured networks – choose this if unsure)

DHCP Enabled – Dynamic Host Configuration Protocol – Select if your Wi-Fi router supports DHCP to automatically assign IP address etc. Most routers nowadays use this method.

If DHCP is not selected (recommended for advanced use only) then the following will need to be entered:

   - IP address – the static IP address of the controller

   - IP Netmask – the Netmask

   - Gateway address – the Gateway address (usually the address of the router)

   - DNS address – the Dynamic Name Server address

5. Once all the required information is entered click on the GO button, you will be asked to confirm this – click on OK. Once configured, turn off the power to the junction box for 30 seconds, and then re-power the unit.

6. On power up, the orange LED should light and then go out once the unit has successfully connected to the Wi-Fi network.

   - The unit should now be setup to auto connect to your local network.

   - With the phone / tablet connected to the same local network, the APP should then locate the controller on start-up (the first time this is done there may be a delay in locating the device).

7. If the orange light stays illuminated then check the following:

   - The Wi-Fi network is available in the location of the controller unit – use a phone or tablet near to the unit to confirm

   - Were the details you entered correct? Try entering the details again. The unit will need to be reset to re-enable the Wi-Fi – remove the lid of the unit and press the 'reset' button through the hole in the top plate using a suitable thin non-conducting implement (e.g. plastic inner tube of a ball-point pen). Once reset, follow from step 1 above.

NOTE: the controller requires that port 80 be open on the network and not blocked by the router. Please ensure that this port is open.

Chapter 7: App/Firmware updates and troubleshooting

7.1 Firmware updates

Periodically OceanLED will issue firmware updates for the App controller to add improvements and extra features. To ensure the controller had the latest firmware, make sure that the app on your device(s) is the latest version from the app store.

When a new firmware update is available an option of applying the update will be given once the app is started up.

7.2 Update process

The update process is automatic, and once started should take a few minutes to complete. During the first part of the update the orange indicator LED on the controller PCB will remain illuminated - this shows the firmware download is in progress. Once this is complete the red indicator LED will then illuminate, and the orange led start to flash – this shows that the update is being stored to internal memory. Finally, the green & red indicator LEDs will stay illuminated for a few seconds while the internal memory is verified. The controller will then re-boot with the new firmware. If an error occurs at any time during the download, the red led will illuminate, and stay illuminated until the controller power is removed and re-applied. (see below for info on update failure)

NOTE: iOS (Apple) App

After the update has completed it will be necessary to fully close the OceanLED app. Do this by pressing the home button quickly two times, swiping left/right to find the OceanLED app, and then swipe up on the app preview to close.

Then re-connect to the Wi-Fi network (NOTE: that this may need to be done by first disabling Wi-Fi on your device, re-enabling and then re-selecting the required network).

Finally re-start the OceanLED app.

7.3 Firmware Update failure

In the event of a firmware update failure the red led on the OceanDMX Controller PCB will stay illuminated. To recover from this, remove power from the controller, then re-power the controller. The controller will automatically revert back to the previous firmware version. Reconnect your device to the Wi-Fi network (by disabling Wi-Fi, re-enabling and then re-connecting to the network), and re-try the update. (NOTE: that on an iOS device it may be necessary to fully close the OceanLED app. Do this by pressing the home button quickly two times, swiping left/right to find the OceanLED app, and then swipe up on the app preview to close.)

7.4 Troubleshooting problems and their solutions

OceanDMX Wifi Controller			
Problem	**Check**	**Result**	**Fix**
Unit is not powering up	Check that the unit is connected to a suitable DC power supply	Poor electrical connection	Connect the unit to a suitable DC power supply
	Check if the fuse is blown	Replace the fuse.	If fuse keeps blowing, then there is a short circuit in the unit that must be traced and rectified. If no external short can be located, contact your local OceanLED representative.
	Check that the wiring polarity is correct	Polarity Incorrect	Check the wiring polarity.
	Check that the voltage applied to the unit is not below 9 Volts	Low Voltage	The voltage needs to be with 9 Volts and 36 Volts
After the diagnostic LEDs flash 3 times (during power up), the green LED is solid for 4-6 seconds and this keeps repeating (unit is not transmitting DMX data – green LED not flashing)	Check that the voltage applied to the unit is not below 9 Volts.	Low Voltage.	The voltage needs to be with 9 Volts and 36 Volts
			Switch the unit OFF and ON while pressing the Reset button. After power up, release the Reset button. If this issue persists, please contact your Ocean LED representative.
Cannot connect to the Wifi unit via phone/tablet	Check if you can see the WiFi network	WiFi Network not visible	If you don't see the WiFi network in your WiFi list, press the "Reset" button on the controller and after a few seconds, you should see the WiFi network.
	Check that you are connected to the unit's WiFi network or that the unit and your phone is connected to the same network	Connect to the correct Network	If you want to connect to the WiFi controller's network, you should make sure that your phone or tablet is connected to that network (OceanLED-DMX-xxxx). If you want to use an external WiFi network, make sure you follow the WiFi setup procedure detailed in Put section here and connect your phone and WiFi controller to that network.
Phone is connected to the WiFi controller, but cannot control light	Check that the wires are making good contact with the Control Output connector	Poor electrical connection	You need to ensure that the wires are connected properly to the connector and any breaks in the cable rectified.
	Check that the DMX+ and DMX- lines are not swapped	Wires connected wrong way around.	Ensure that you follow the correct wiring procedure and colour combination. When connecting to a junction box, connect the DMX+ from the controller to the DMX+ on the Junction box. Do the same for the DMX-.

7.4 Troubleshooting problems and their solutions

OceanDMX Wifi Controller			
Problem	**Check**	**Result**	**Fix**
Lights are not changing according to music.	Check that the audio cable is good contact with the Audio In connector	Poor electrical connection and/or broken cable	You need to ensure that the wires are connected properly to the connector and any breaks in the cable rectified.
	Check that an audio signal is present.	No audio available	You need to make sure that an audio signal is present on the cable being used by connecting it to an external speaker or any other audio monitor.
	Check that the sensitivity level (on the WiFi controller) is not turned down low.	Low sensitivity	You need to adjust the sensitivity level to suit your needs. Slowly turn the sensitivity high (Clockwise) with a suitable tool until you are satisfied with the result.
	Check that the sensitivity level (on the WiFi controller) is not turned up high.	High sensitivity	You need to adjust the sensitivity level to suit your needs. Slowly turn the sensitivity low (counter clockwise) with a suitable tool until you are satisfied with the result.
Lights are not changing colour in dynamic mode	Check that the wires are making good contact with the Control Output connector	Poor electrical connection	You need to ensure that the wires are connected properly to the connector and any breaks in the cable rectified.
The lights are very dim/off	Check the brightness levels are set properly	Brightness not set properly	You can control the brightness of the lights for the particular mode via the app.
	Check that the PWR SW wire (on the WiFi controller control output) is connected to the PWR SW port on the junction box control Input	PWR SW not connected properly	The WiFi controller controls the junction boxes and via the PWR SW line. If this cable is not connected properly, then the junction box will not turn the lights ON even if the junction box is powered. You need to make sure that the connections are made properly.
Cannot control lights with presets	Check that the switches are connected properly to the "Ext Switches" port on the WiFi controller	Switches not connected properly	You need to make sure that the external switches are connected properly to the WiFi controller. You should wire it in such a way that when the switch "makes" the connection, it should make it to GND to toggle the presets.
iOS / Android App			
Problem	**Check**	**Result**	**Fix**
App does not open/start correctly.	WiFi not connected to controller WiFi access point	App cannot find signal	Close App, connect to Controller WiFi access point and re start App
	Controller is not powered	App cannot find controller	Close App, power on Controller, connect mobile device to Controller WiFi access point and restart App.
	Controller has timed out.	App cannot find controller	Close App, power on Controller, connect mobile device to Controller WiFi access point and restart App.
	WiFi has lost connection	App is un-responsive	Reconnect to WiFi Controller access point.
	Device has crashed	Device un-responsive	Restart device and restart WiFi/App load procedure.

For further enquiries, please contact your local OceanLED representative.

Chapter 8: Warranty Statement:

This warranty statement is for those products supplied to and sold from all territories internationally

OceanLED stands by its products. In general terms, the company gives a full 2 year's manufacturer's warranty on all of its products from date of sale from OceanLED.

Warranty replacements shall be covered for a period of 2 years from the date of the original product sale from OceanLED.

To claim, please contact an authorized OceanLED dealer and complete the troubleshooting guidelines and warranty claim form (available from www.oceanled.com). Claims may be disputed if the troubleshooting guidelines are not completed or no defect is found with the product. The detailed terms and conditions of this warranty are set out below.

However; please note that all metal parts corrode in salt water. The primary factors affecting corrosion are not directly related to our products and accordingly OceanLED cannot be held responsible for corrosion-related defects this includes where water has been allowed to enter the cable as a result of immersion in water during the installation or improper sealing of connections. Please note corrosion will be particularly aggressive if installation and/or bonding have not been undertaken properly; or if stray currents are active in the vicinity of a boat.

Colour variation occurs within the LED manufacture. While we make every effort to match the colour of any lights there may be a noticeable difference. OceanLED does not warrant this colour variation on lights.

OceanLED reserves the right to change the design, range and components without any prior notification either written or verbal.

OceanLED does not cover any charges incurred for hauling of vessels.

1: WARRANTY OF QUALITY

1.1   In the case of goods manufactured and sold by Ocean LED Marine LTD, a company incorporated in England and Wales (registered number 08927130) and whose registered office is at Unit 1 Jacknell Road, Dodwells Bridge Ind. Est. Hinckley, Leicestershire, LE10 3BS (the "Goods" and the "Company", respectively), the Company warrants to the purchaser of the Goods (the "Buyer") Conditions and unless otherwise notified) upon delivery (whether installed or not), and for a period of 2 years, that goods supplied shall be of satisfactory quality within the meaning of the Sale of Goods Act of 1979.

1.2   the Company shall not liable for a breach of the warranty in Condition 1.1 unless:

1.2.1   the Buyer gives written notice of the defect to the Company, and to the carrier if the defect is as a result of damage in transit, within 14 days of the time when the Buyer discovers or ought to have discovered the defect; and

1.2.2   the Buyer has the obligation to provide all the requested information where is reasonably possible and provided a truthful statement of all information requested in relation to the claim.

1.2.3   the Buyer returns such Goods to the Company's place of business at the Buyers cost, regardless of the outcome of the claim.

1.2.4   the Company is given a reasonable opportunity after receiving the returned Goods for the examination to take place at the Company's place of business.

1.3   the Company shall not be liable for a breach of the warranty in Condition 1.1 if:

1.3.1   the Buyer makes any further use of such Goods after giving such notice; or

1.3.2   the defect arises because the Buyer failed to follow the Company's oral or written instructions as to storage, transportation, installation, commissioning, modification, use or maintenance of the Goods or (if there are none) good trade practice; or the defect arises from the corrosion of metal parts or the failure of the Buyer to ensure that Goods are installed correctly, bonded correctly and that there are no active stray currents in the vicinity; or

1.3.3   the defect arises as a result of any default of, or caused by, the Buyer or (without limitation) as a result of misuse, abuse, improper installation, neglect, improper shipping by a party other than the Company; or

1.3.4   the Buyer alters, repairs or modifies such Goods without written consent of the Company; or

1.3.5   the defect arises due to a cause beyond the Company's reasonable control, such as: act of God, explosion, flood, tempest, fire or accident, including without limitation lightning; war or threat of war, national emergency, sabotage, terrorism, insurrection, protest, riot, epidemic, civil disturbance or requisition; Acts, restrictions, regulations, by-laws, prohibitions or measures of any kind on the part of any governmental, parliamentary or local authority; import or export regulations or embargoes; strikes, lock-outs or other industrial actions or trade disputes (whether involving employees of the Company or of a third party); restraints or delays affecting carriers or inability or delay in obtaining supplies of adequate or suitable materials; or power failure or breakdown in machinery.

1.3.6   where the Company has notified the Customer directly of in service modification(s) deemed necessary to further protect the Goods from damage have not been followed.

1.3.7   where a claim has been made where the Goods ownership is in dispute.

1.3.8   where the parts where not purchased from an authorized outlet.

1.3.9   where the goods where purchased via the internet from the United States but were not shipped to an address or fitted in the United States.

1.4   Subject to Conditions 1.2 and Condition 1.3, if any of the Goods do not conform with the warranty in Condition 1.1 the Company shall at its option repair or replace such Goods (or the defective part) without charge for labor or parts or refund the price of such Goods at the original purchase price. The Company shall pay for the return transportation to the Buyer of such repaired or replaced Goods.

1.5   Any Goods replaced shall belong to the Company and any such repaired or replacement Goods shall be guaranteed on these terms for the unexpired portion of the warranty period of the warranty in Condition 1.1.

2: LIMITATION OF LIABILITY

2.   These Conditions set out the entire financial liability of the Company (including any liability for the acts or omissions of its employees, agents and sub-contractors) to the Buyer in respect of:

2.1.1.   Any breach of these Conditions;

2.1.2   any defect in the Goods;

2.1.3   any use made or resale by the Buyer of any Goods, or of any product incorporating any of Goods; and

2.1.4   any representation, statement or tortuous act or omission including negligence arising or in connection with the contract with the Buyer.

2.2.   All warranty, conditions and other terms implied by both UK law are, to the fullest extent permitted by law, excluded from the contract with the Buyer.

2.3.   Nothing in these conditions excludes or limits the liability of the Company;

2.3.1.   for death or personal injury caused by the Company's negligence;

2.3.2   under both UK law;

2.3.3   for any matter which it would be illegal for the Company to exclude or attempt to exclude its liability; or

2.3.4   for fraud or fraudulent misrepresentation.

2.4.   Subject to the above Condition 2.3:

2.4.1   the Company's total liability in contract, (including without limitation negligence or breach of statutory duty), misrepresentation, restitution or otherwise, arising in connection with the performance or contemplated performance of the contract with the Buyer or (without limitation) in respect of the Goods shall be limited to the original purchase; and

2.4.2   the Company shall not be liable to the Buyer for any pure economic loss, loss of profits, loss of business, loss of contracts, damage to property, depletion of goodwill or otherwise, in each case whether direct, indirect or consequential, or any claims for consequential whatsoever (however caused) which arise out of or in connection with the contract with the Buyer or (without limitation) the Goods.

3: THIRD PARTY RIGHTS

No term of any Contract formed between the Buyer and the Company shall be enforceable by virtue of the Contracts (Rights of Third Parties) Act 1999 by any person that is not a party to it.

4: APPLICABLE LAW

Each of (a) the sale of the Goods to the Buyer, (b) these conditions, and (c) any disputes or claims arising there from or in connection therewith shall be governed by and construed in accordance with the law of England; and the Buyer and the Company irrevocably agree that the Courts of England have exclusively jurisdiction to settle any dispute or claim that arises out of or in connection with the foregoing.

5: GREY MARKET INTERNET POLICY

Grey marketed products continue to be a threat to our worldwide distribution and dealer network. In order to proactively discourage this activity by Internet resellers of our product, OceanLED will not honor the warranty

of products purchased via the grey market through internet resellers. The following notice will be added to OceanLED's warranty cards, website and all internet sellers will be required to post the same notice.

WARRANTY NOTIFICATION: OceanLED products purchased by an end-user from a United States dealer via the Internet are covered by this warranty, only if the products are delivered and installed within the United States. The warranty is void if the product is delivered or installed outside the United States. Proof of purchase and installation will be required. Product installed by OEM will be warranted when shipped as part of a new boat package.

6: MAKING A CLAIM

6.1   Irrespective of how the products where fitted or by whom when you discover that there may be a problem with the products you must notify either your local dealer or ourselves within 14 days.

6.1.1   When you discover a problem we ask that the products that have a problem are not used. This will minimize any further damage. We recommend (especially with the pro series) that the product be disconnected to prevent accidental use by removing the power feed from the driver box and covering the end of the power lead with a waterproof solution (e.g. a taped up plastic bag) to prevent water entering the cable connectors.

6.1.2   If a claim is accepted the part will be replaced on a "like for like basis". No refunds will be given.

6.1.3   If you feel unhappy with any part of the process of claiming please let us know.

6.2   Products supplied and fitted by a dealer

6.2.1   If you had the products installed by one of our dealers we ask that you contact them and ask that they check the installation and establish the cause of the problem. If you are not local to the installer please visit our website (www.oceanled.com) to find the authorized dealer closest to you. This is because many problems are due to issues with the installation or the electrical aspects external to the lighting system, and can be resolved without the need for the removal of the product.

6.2.2   You should locate your purchase invoice for the products when you believe there is a problem and contact the dealer you purchased the products and / or who fitted them.

6.2.3   Your dealer will contact us and together we will resolve your issues and together we will investigate.

6.2.4 If the problem is found not to be due to the manufacture of the product, this will fall outside of the warranty cover and the buyer will be liable for all costs.

6.3   Products supplied by a dealer but fitted by the Buyer

6.3.1   If you installed the products yourself, before making contact we ask that you follow the troubleshooting chart for your product, when following the appropriate troubleshooting chart we find that it is helpful to complete the appropriate warranty claim information sheet. Copies can be found in the troubleshoot section of the manual included with the product or alternatively it can be download from our website (www.oceanled.com/documents).

6.3.2   If after following the troubleshoot guide, you still believe that the problem still exists with our product you will need to contact the dealer that you purchased the product(s) from, however if you are unable to do this you may contact any dealer / distributor in your local area (a list can be obtained either from our website (www.oceanled.com) or by contacting our Head Office.

6.3.3   When will be required to provide the information recorded on the warranty claim information sheet and have the copy of your purchase invoice for the products.

6.3.4 When contacting your dealer you will be asked for the details from the warranty claim information sheet. During this time the dealer will complete the appropriate warranty claim form that will be returned along with the part.

6.3.5   When you have made contact with the dealer please follow their instructions.

6.3.6   If you are unable to contact a dealer you may wish to contact OceanLED directly. To contact the Service Manager either call our UK office on +44 1455637505 or email sales@oceanled.com.

6.4   If you are unable to locate a dealer close by or purchased directly from OceanLED.

6.4.1   Before making contact we ask that you follow the troubleshooting chart for your product, when following the appropriate troubleshooting chart we find that it is helpful to complete the appropriate warranty claim information sheet. Copies can be found in the troubleshoot section of the manual included with the product or alternatively it can be download from our website (www.oceanled.com).

6.4.2 If after following the troubleshoot guide, you still believe that the problem still exists with our product you will need to contact the Service Manager at OceanLED for your region.

If you are located in either North, Central or South America please contact the Warranty Department at:

    OceanLED USA LLC
    778 South Military Trail
    Deerfield Beach
    Florida
    FL 33442-3025
    United States
    Tel:+1(954) 523-2250
    Fax:+1(954) 523-2249
    Email sales@oceanledusa.com

Or if you are located in any other area please contact the Warranty Department at our UK Head Office at:

    Ocean LED Marine LTD
    Unit 1 Jacknell Road
    Dodwells Bridge Industrial Estate
    Hinckley
    Leicestershire LE10 3BS
    United Kingdom
    Tel: +44 1455 637505
    Fax: +44 1455 238553
    Email sales@oceanled.com

6.4.3 When you contact you will be required to provide the information recorded on the warranty claim information sheet and have the copy of your purchase invoice for the products where you believe there is a problem. The Service team will review with you your problem and where possible advise on any further checks that may be required to be done. If from the test results you do appear to have a problem you will be issued with a Warranty Claim number. The Claim number is unique to your claim and should be used in all correspondence and attached to the returned parts.

6.4.4 You will be required to return the faulty part with the attached WC number to the appropriate address in section 6.4.2. The return of the part is at your expense.

6.4.5 The part will be investigated and if the cause is established to be a manufacturing error or a problem with the components we will return a replacement part to you.

6.4.6 If you require a part urgently from us, you would be required to purchase a new one from us. You then have a maximum of 30 days to return the faulty part to us. We will investigate and if the product has a problem due to our manufacturing will provide a full refund. If you do not think that you can return the part to us within the 30 days please contact the Service Manager. If the product is not returned within the time limit the claim will be closed and no refund given.

6.4.7 If we are unable to find a problem with the part, we will inform you of the outcome. We can provide guidance to possible reasons for the fault. Unfortunately we are not liable for or can fix problems with equipment & installations that are not purchased from OceanLED. The returned product can be returned to you at your request.

NOTES

NOTES

Please remove this page and keep for your files

For technical assistance:

Europe: service@oceanled.com

The Americas: warranty@oceanledusa.com

Warranty Serial Code(s):

Ocean LED Marine LTD
Unit 1 Jacknell Road
Dodwells Bridge Industrial Estate
Hinckley,
Leicestershire LE10 3BS
United Kingdom
Tel: +44 (0) 1455 637505
Fax: +44 (0) 1455 238553
sales@oceanled.com

Ocean LED USA LLC
778 South Military Trail
Deerfield Beach
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FL 33442-3025
United States
Tel: +1 954.523.2250
Fax: +1 954.523.2249
sales@oceanledusa.com