

2019 INSTALL & OPERATION MANUAL

OCEANDMX CONTROLLER KITS



WWW.OCEANLED.COM

2019 INSTALL & OPERATION MANUAL

Preface

READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL



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

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

Do not operate lights out of water for a period longer than 5 minutes followed by an OFF period of at least 1 hour. Exceeding this may cause damage to the light unit.

Salt is an inherently corrosive material. Natural and man-made surfaces are susceptible to corrosion and deterioration when used in and around salt water. Some combinations of plastic and polymer products 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 controller remains in service for years to come.

Never Use Solvents! Cleaners, fuel, and other products that may contain strong solvents, such as acetone, that attack many plastics greatly reducing their strength and can cause irreversible damage.



DANGER

RISK OF ELECTRIC SHOCK OR ELECTROCUTION

This 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 installers, or others due to electrical shock, and may also cause damage to property. Always disconnect the power to the light at the circuit breaker before servicing the light. Failure to do so could result in death or serious injury to serviceman, or others due to electrical shock.



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PRETEST

Always test the system prior to installation. Failure to do this may result in additional installation time and could invalidate the warranty.

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

2 year warranty from time of purchase, regardless of installation date. Please refer to www.oceanled.com/downloads for full warranty statement. 2019 INSTALL & OPERATION MANUAL

Overview

Units are not waterproof. You must mount in a dry location. When installing, be sure that the controller fits the area and secures to the mounting location using the appropriate hardware before installing.

1.1 TOOLS AND MATERIALS



DceanLED

Never use power tools. Hand tighten only!

• Drill & Drill Bits.

- Screw Driver, Phillips #2
- Wire Strippers.
- Tape measure and Ruler or Straight Edge.
- Marking Utensil (Pencil, Sharpie Magic Marker, etc)

1.2 SPECIFICATIONS

Technical Information	Detail
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	Detail
Total weight	0.48kg (1.06 lbs)
Extension cable length (standard)	9.84' (3m)
Material	Robust polycarbonate with semi transparent lid

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2 <u>Mounting</u>

2.1 FINDING THE 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 / DMX Junction Box (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 WiFi coverage. Avoid areas surrounded by metallic insulation or coverings as this may interfere or restrict the WiFi 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).



Mounting

2.1 MOUNTING THE CONTROLLER

Once a suitable location has been found, use 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 pilot 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.



Never use power tools. Hand tighten only!





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Installation (Explore Series)

See the following example of Explore Series connections.





3.1 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		
	GND				
EXT CTRL	RX	CURRENTLY UNUSED*	DO NOT CONNECT*		
	ТХ				
	SHIELD	CABLE SHIELD CONNECTION	CONNECT TO CABLE SHIELD		
	DMX-	DMX CONTROL SIGNAL -VE	CONNECT TO DMX- (BROWN)		
CONTROL OUTPUT	DMX+	DMX CONTROL SIGNAL +VE	CONNECT TO DMX+ (YELLOW)		
	GND	DMX GROUND	CONNECT TO DMX GROUND (BLACK)		
	PWR SW	EXTERNAL POWER ENABLE	NOT USED FOR EXPLORE SERIES INSTALLATIONS		
AUDIO	AUDIO IN	AUDIO LINE-IN	3.5MM STEREO JACK - CONNECT TO LINE OUT FROM AUDIO SOURCE		
	GND	COMMON SWITCH GROUND	SWITCH COMMON		
EXT	SW 1	SWITCH 1 (SELECT PRE-SET FUNCTION)	EXTERNAL SWITCH INPUT 1		
SWITCHES	SW 2	SWITCH 2	CURRENTLY NOT USED*		
	SW 3	SWITCH 3	CURRENTLY NOT USED*		

* Reserved - to be implemented in future firmware releases



3.2 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
- **3.3 POWER**



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 onboard batteries or via a mains AC to 12V or 24V 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.



3.4 DMX

Loosen the cable gland, feed the cable end through and connect as follows:



3.5 AUDIO INPUT

3.5mm stereo input jack socket input:





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 (M2O) 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.

3.6 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:

3.9 FINALISE YOUR INSTALLATION (EXPLORE E6):

1. Plug the Terminator to the Control Out of the last light. See diagram on P7.

Always check the connections and test the system BEFORE the boat goes back into the water. Typical OceanLED light installs require the boat to be hauled out of the water to replace light units

The DMX standard recommends a maximum of 32 devices to be connected in one chain. If installation requires more lights than this, please contact OceanLED for advice.



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Installation (Pro Series)

See the following example of the Pro Series DMX connections:





4.1 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		
	GND				
EXT CTRL	RX	CURRENTLY UNUSED*	DO NOT CONNECT*		
	ТХ				
	SHIELD	CABLE SHIELD CONNECTION	NOT USED FOR PRO SERIES INSTALLATIONS		
	DMX-	DMX CONTROL SIGNAL -VE	CONNECT TO DMX- (ORANGE)		
CONTROL OUTPUT	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		
	GND	COMMON SWITCH GROUND	SWITCH COMMON		
EXT	SW 1	SWITCH 1 (SELECT PRE-SET FUNCTION)	EXTERNAL SWITCH INPUT 1		
SWITCHES	SW 2	SWITCH 2	CURRENTLY NOT USED*		
	SW 3	SWITCH 3	CURRENTLY NOT USED*		

* Reserved - to be implemented in future firmware releases



4.2 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
- **4.3 POWER**



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 onboard batteries or via a mains AC to 12V or 24V 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.



4.4 DMX

Loosen the cable gland, feed the cable end through and connect as follows:



4.5 AUDIO INPUT

3.5mm stereo input jack socket input:



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 (M2O) 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.

4.6 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:

4.8 DRIVER CONNECTIONS (PRO SERIES):

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

4.9 FINALISE YOUR INSTALLATION (PRO SERIES COLOURS):

Always check the connections and test the system BEFORE the boat goes back into the water. Typical OceanLED light installs require the boat to be hauled out of the water to replace light units.

The DMX standard recommends a maximum of 32 devices to be connected in one chain. If installation requires more lights than this, please contact OceanLED for advice.

- 1. Connect the DMX controller DMX output cable to the DMX input of the first driver box. The DMX output of this box should be connected to the input of the next, and so on up to the last driver in the chain.
- 2. Fit the supplied terminator to the output of the last driver box. See example diagram on P12.



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Installation (X Series)

See the following example of X16 x8 DMX connections:





5.1 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		
	GND				
EXT CTRL	RX	CURRENTLY UNUSED*	DO NOT CONNECT*		
	ТХ				
	SHIELD	CABLE SHIELD CONNECTION	CONNECT TO CABLE SHIELD		
	DMX-	DMX CONTROL SIGNAL -VE	CONNECT TO DMX- (BROWN)		
CONTROL OUTPUT	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 SWITCH (RED)		
AUDIO	AUDIO IN	AUDIO LINE-IN	3.5MM STEREO JACK - CONNECT TO LINE OUT FROM AUDIO SOURCE		
	GND	COMMON SWITCH GROUND	SWITCH COMMON		
EXT	SW 1	SWITCH 1 (SELECT PRE-SET FUNCTION)	EXTERNAL SWITCH INPUT 1		
SWITCHES	SW 2	SWITCH 2	CURRENTLY NOT USED*		
	SW 3	SWITCH 3	CURRENTLY NOT USED*		

* Reserved - to be implemented in future firmware releases



5.2 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
- **5.3 POWER**



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 onboard batteries or via a mains AC to 12V or 24V 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.



5.4 DMX

1. Loosen the cable gland, feed the cable end through and connect as follows:



5.5 AUDIO INPUT

3.5mm stereo input jack socket input:



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 (M2O) 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 and re-tighten the cable gland.

5.6 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:

5.8 OCEANDMX 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
	PWR SW	POWER SWITCH	CONNECT TO (RED)
CONTROL	GND	DMX GND	CONNECT TO DMX GND (BLACK)
INPUT /	DMX+	DMX CONTROL SIGNAL +VE	CONNECT TO DMX+ (YELLOW)
OUTPUT	DMX-	DMX CONTROL SIGNAL -VE	CONNECT TO DMX- (BROWN)
	SHIELD	CABLE SHIELD CONNECTION	CONNECT TO CABLE SHIELD / SCREEN IF AVAILABLE
	+VE	LIGHT 'X' +VE	CONNECT TO LIGHT +VE (RED)
LIGHT 'X'	GND	LIGHT 'X' -VE	CONNECT TO LIGHT -VE (BLACK)
OUTPUT	DMX+	DMX CONTROL SIGNAL +VE	CONNECT TO LIGHT DMX+ (YELLOW)
('X' CAN RANGE	DMX-	DMX CONTROL SIGNAL -VE	CONNECT TO LIGHT DMX- (BROWN)
FROM I- 4)	SHIELD	CABLE SHIELD CONNECTION	CONNECT TO LIGHT CABLE SHIELD / SCREEN IF AVAILABLE
DMX	ON	DMX TERMINATION ON	SWITCH ON TO TERMINATE DMX SIGNAL (LAST JUNCTION BOX IN CHAIN)
TERMINATOR	OFF	DMX TERMINATION OFF	SWITCH OFF TO CONTINUE DAISYCHAINING OTHER JUNCTION BOXES



X Series light cables must not be extended

1. Loosen the cable glands and feed through the DMX cable from the OceanDMX Controller / DMX cable to next junction box (optional) and connect as follows:



- 3. Tighten the cable glands.
- 4. Loosen the cable glands and feed the light cable ends through and connect as follows:



5. Tighten the cable glands.

- 6. Repeat steps 1-3 for each OceanDMX junction box in the system, connecting in a 'daisy chain' fashion (see diagram P17)
- 7. 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):
- 8. Connect DC power. See below table for supply requirements

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 X8 / X16 Colours 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		12V DC SUPPLY			24V DC SUPPLY					
OF X8'S	NUMBER OF X16'S				NU	MBER OF X1	6'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.

Please use the cable gauge table in the appendix for 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).

The supply cable must be protected by a suitable fuse or breaker.

5.9 FINALISE YOUR INSTALLATION (X SERIES):

Always test the system BEFORE the boat goes back into the water. Typical OceanLED light installs require the boat to be hauled out of the water to replace light units.

The DMX standard recommends a maximum of 32 devices to be connected in one chain. If installation requires more lights than this, please contact OceanLED for advice.



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<u>6</u> <u>Operation</u>

6.1 POWER UP SEQUENCE - DMX CONTROLLER:

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

- 1. Upon power-up, 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.

6.2 WIFI OPERATION (VIA OCEANDMX CONTROLLER ACCESS POINT)

The WiFi on the OceanDMX WiFi 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 WiFi Access Point (AP) to which phones / tablets may be connected:

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





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6.4 INSTALLING THE OCEANDMX APP (ANDROID DEVICE)

- 1. Navigate to the play store app and search for oceanled.
- 2. Tap the Install button at the top to start downloading. You will be prompted to provide certain device permissions for the installation to continue.
- 3. 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.
- 4. 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 from your home screen, assuming an icon hasn't already been put on your home screen.

6.5 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.

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

6.6 MOBILE APP SPECIFICATIONS

6.7 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.



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OceanDMX App Operation		No of Colour Options	Brightness	Sensitivity	Speed
				F	
	Static Colour Choose ANY Colour from Colour Wheel Save Favorite Settings	1	Use slider to adjust		
\Diamond	Cycle Colour Choose ANY Colour from Colour Wheel Save Favorite Settings	4	Use slider to adjust		Use slider to adjust
Ŧ	Strobe Colour Choose ANY Colour from Colour Wheel Save Favorite Settings	4	Use slider to adjust		Use slider to adjust
1	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	
\bigcirc	Presets 5 favourite presets - click the preset icon on each of the above screens to store your selection				



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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.

6.8 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 WiFi.

To setup the OceanDMX App controller to automatically connect to a local WiFi 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 WiFi network:
- Locate your devices WiFi settings, and the controller WiFi 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.
- Open a web browser on your device, and type into the address bar: http://192.168.0.1/ The following screen should be displayed:



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

The SSID & PSK can only contain upper and lower case letters, numbers and the following characters only: 1 - + /

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

If the existing WiFi 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 WiFi Protected Access (common standard used on most secured networks choose this if unsure)

Operation

DHCP Enabled – Dynamic Host Configuration Protocol – Select if your WiFi 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 WiFi 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 WiFi 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 WiFi 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.

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

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7 <u>Firmware</u>

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)

7.3 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 WiFi network (NOTE: that this may need to be done by first disabling WiFi on your device, re-enabling and then re-selecting the required network). Finally re-start the OceanLED app.

7.4 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 WiFi network (by disabling WiFi, 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.)



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	OceanDM>	K WiFi Controlle	r
Problem	Check	Cause	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 groop	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
LED is solid for 4-6 seconds and this keeps repeating (unit is not transmitting DMX data - green LED not flashing)			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.

	OceanDM:	X WiFi Controlle	r
Problem	Check	Cause	Fix
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

	OceanDM)	X WiFi Controlle	r
Problem	Check	Cause	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.

	OceanDMX WiFi Controller					
Problem	Check	Cause	Fix			
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 inquiries, please contact your local OceanLED representative.

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<u>Appendix</u>

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).

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.

SUPPLY CABLE CONDUCTOR SIZE CHART								
CABLE	CIRCUIT CURRENT							
LENGTH (FEET)	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

The supply cable must be protected by a suitable fuse or breaker



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Warranty

Please remove this page and keep for your files

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The Americas: warranty@oceanledusa.com

Warranty Serial Code(s):

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