maritime

MCL 4X4 PIXEL LED CONTROLLER

USER MANUAL

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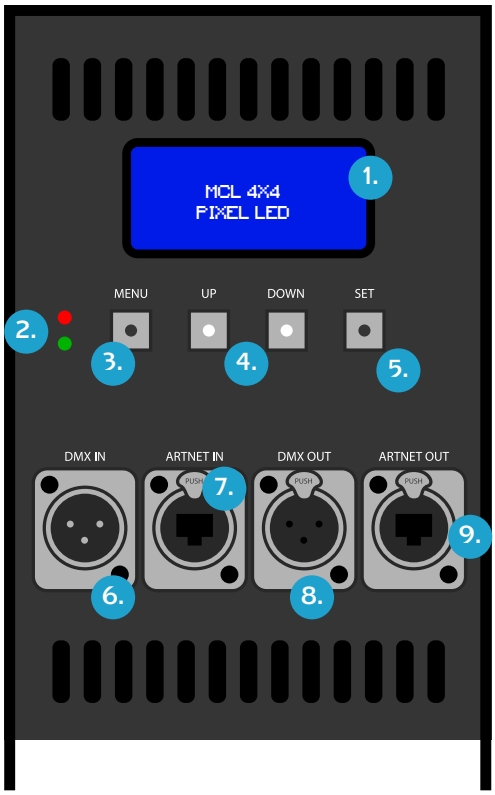
1.0 hardware & specs



1.1 controller front

1. LCD DISPLAY
Displays relevant information and allows menu navigation.

2. LED INDICATORS
Indicate the connection staus between external controller and LED PSU. Sparse flashes indicate non-connection and a solid light indicates connection. Red for DMX and Green for ArtNet.

3. MENU BUTTON
Long press to save and exit Controller Mode and Parameter menus. Short press to cycle through individual parameter digits.

4. UP & DOWN BUTTONS
Long press simultaneously to enter Controller Mode menu. Short press to navigate menus and cycle digit values.

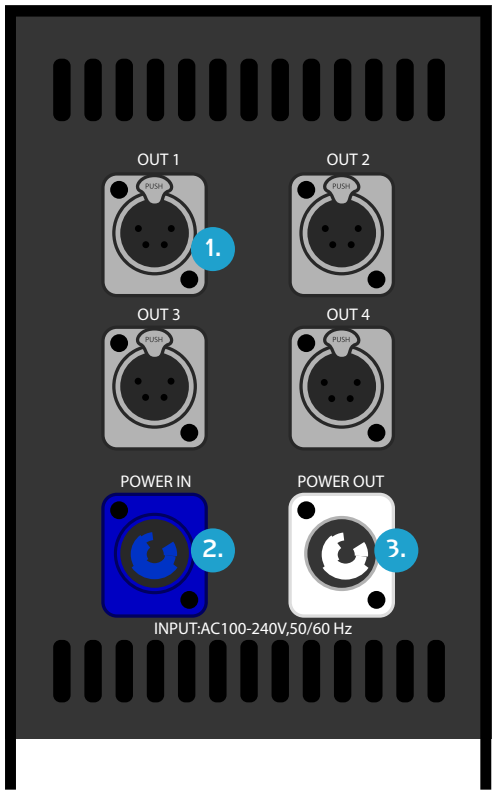
5. SET BUTTON
Short press to enter and exit/save individual parameter menus.

6. DMX XLR INPUT PORT
Port for receiving DMX protocol signals via 3-pin XLR cable.

7. DMX XLR OUTPUT PORT
Port for sending DMX protocol signals via 3-pin XLR cable. Used to link PSU's together via XLR.

8. ARTNET RJ45 INPUT PORT
Port for receiving ARTNET/sACN protocol signals via RJ45 cable.

9. ARTNET RJ45 OUTPUT PORT
Port for sending ARTNET/sACN protocol signals via RJ45 cable. Used to link PSU's together via RJ45.



1.2 controller back

1. 4-PIN OUTPUT PORTS 1-4
Four individual output ports for LED fixtures. Each port supports a maximum of 680 pixels.

2. POWER IN PORT
The blue POWERcon port is used for device power input with Input Voltage auto-switching between 110V or 220V | 50/60Hz.

3. POWER OUT PORT
This white POWERcon port can be used to link devices together via a POWERcon patch.

1.3 controller specs

Working Voltage	110V/220V
Power Consumption	1000W
Number of Output Ports	4 Ports
Output Voltage	24V
Port Pixel Count	170px - 680px (per Port)
Supported IC Types	CL05, CL16, WS2811, SK6812, UCS1903,
	UCS8903, UCS9812, DMX512
Controller Modes	ARTNET, DMX, sACN, SD Card Mode, Ring Mode
Weight	4.1kg
Dimensions	245mm x 225mm x 125mm

2.0 controller mode

2.1 mode menu

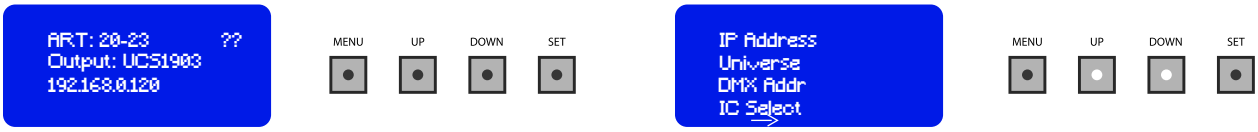
From Once booted into the main screen, hold the "UP" and "DOWN" buttons simultaneously to enter the Control Mode menu. You can select between three main modes: ArtNet, SD Mode, and Ring Mode. Ring Mode will not be covered in this manual. Use the "UP" and "DOWN" buttons to select a control mode. Long press "MENU" to save the setting and return to the main menu.

ArtNet mode allows for external control from a computer or lighting console. The MCL 4x4 accepts ArtNert ad sACN via the RJ45 Input Port. Once ArtNet Mode is selected with the selector arrow, long-press the "MENU" button to save the setting and return to the main menu. From the main menu long press "menu" again to set IP and Universe parameters.

SD Mode allows you to read pre-recorded files from the controllers internal micro-SD card. The controller comes with 31 pre-recorded lighting effects that can be recorded over with your own lighting content. (see RECORD parameter)

2.11 Art-Net mode

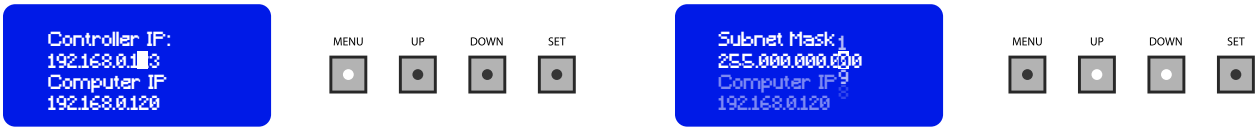
After Art-Net mode is selected the controller will reboot into Art-Net mode. If this is not the case enter the Mode Switch Menu by long-pressing the "UP" and "DOWN" buttons, selecting Art-Net mode and long-pressing "MENU" button to save and return to the main screen (See CONTROLLER MODES MENU). The main screen will display your universe range (you will see ART or ACN depending on protocol selected in MODE SWITCH menu), IC Type, and the Controller's IP address. Long-press the "MENU" button to enter the parameter menu. This menu contains all control parameters for Art-Net mode.



Use "UP" and "DOWN" buttons to navigate the menu and "SET" to enter and exit individual parameter menus. Hold "MENU" to save and exit the parameter menu to the main screen. Keep in mind each port is an independent output with a maximum of 680* pixels per port (IC UCS8903 has a maximum of 340 pixels).

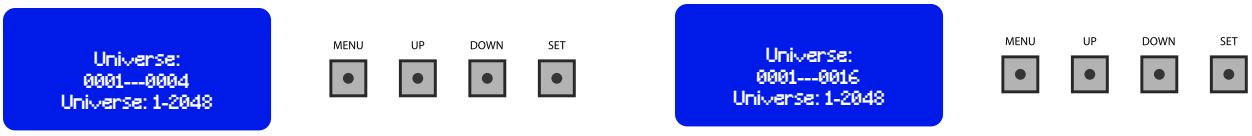
2.12 IP address

IP ADDRESS: Use this menu to set the LED controller's IP, external lighting console or computer controller's IP, and the subnet. Press "MENU" to cycle through digits (there is no way to go back you must completely cycle through all digits to return to a previous number) and use the "UP" and "DOWN" buttons to cycle a digit 0-9. Press "SET" to save setting and return to parameter menu. Chevrons ">>" indicate connection on front screen.

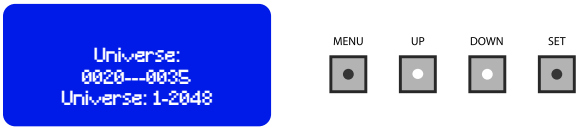


2.13 universe

UNIVERSE: Use this menu to set the range of universes for the LED controller ports. Each port can variably host 1-4 universes (see LED/PIXEL parameter) which will change the range you see in the Universe parameter with a maximum range of 16 universes between 4 ports.

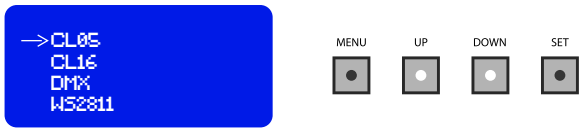


Use the "UP" and "DOWN" buttons to change the starting point of the port universes. Press set to save and return to parameter menu.



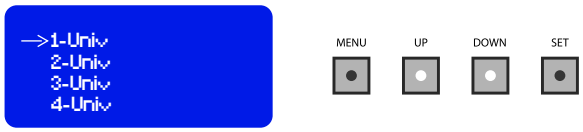
2.14 IC select

IC SELECT: Use this menu to set the Integrated Circuit Type to match your connected LED fixtures.
Supported IC Types include: CL05, CL16, DMX, WS2811, UCS1903, GS8208, CL08H, TM1914. Use "UP" and "DOWN" buttons to cycle through selections. Press "SET" button to save and return to parameter menu.



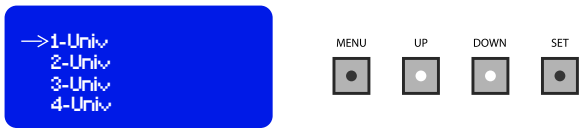
2.15 pixel

PIXEL: Use this menu to set the amount of universes on each. Each port can host up to 1, 2, 3 or 4 universes at a time. Selecting a number 1-4 in this menu will set number of universes for each port simultaneously for a maximum of 16 universes between all ports. This setting effects the end of the range seen in the UNIVERSE parameter menu. Use "UP" and "DOWN" buttons to cycle through selections. Press "SET" button to save and return to parameter menu.



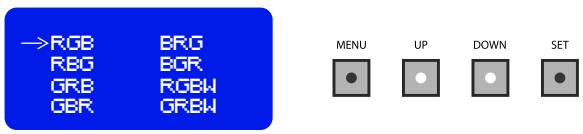
2.16 led/pixel

LED/PIXEL: Use this menu to set pixel grouping ratio. This menu allows you to group pixels in up to groups of 4. This reduces the amount of pixel addresses by sending the same signal to all of the group. For example: A 64 pixel LED bar would become a 16 pixel LED bar when set to "4-Univ" or a 32 pixel bar when set to "3-Univ". 64 pixels would still be active but with less addressable resolution. Use "UP" and "DOWN" buttons to cycle through selections. Press "SET" button to save and return to parameter menu.



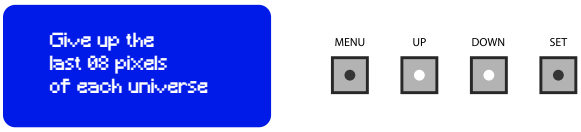
2.17 channels

CHANNELS: Use this menu to set the color channel order to match your fixture. Use "UP" and "DOWN" buttons to cycle through selections. Press "SET" button to save and return to parameter menu.



2.18 give up

GIVE UP: Use this menu to skip a set number of pixels at the end of each universe. Use "UP" and "DOWN" buttons to change the number of pixels given up. You can give up to a maximum of 45 pixels. Press "SET" button to save and return to parameter menu.

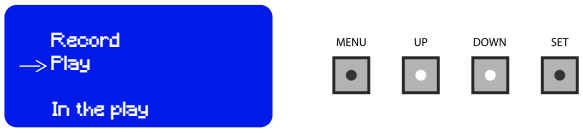


2.19 record

RECORD: Use this menu to record lighting effects and save them to memopry for playback. Once in the RECORD parameter menu use the "UP" and "DOWN" buttons to select a save file slot. Selecting a slot will save over the previously stored lighting effect. Once a file 1-31 is selected tap menu to enter the Recording menu.

Use the "UP" and "DOWN" buttons to select between the Record and Play menu options. The bottom text will display 'waiting' until a recording or playback is started. With the Record option selected, press the "MENU" button to start the recording. Make sure you are actively sending the effect you want to record from your computer or lighting console. Once the Cap reaches about 003.00%, press menu again to end the recording and save it to the controller.

To immediately playback the recording you made select the Play option with the "UP" "DOWN" buttons and press the "MENU" button to begin playback. Press "SET" twice to save and return to parameter menu. Switch to SD Mode and select the corresponding file number to playback your recording.

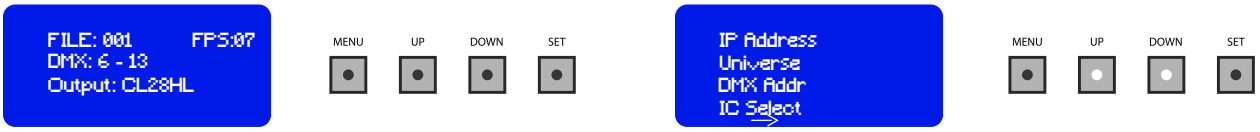


2.2 mode switch

MODE SWITCH: This menu allows you to switch between Artnet and sACN protocols. Use "UP" and "DOWN" buttons to cycle through selections. Press "SET" button to save and return to parameter menu.

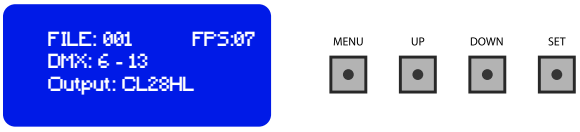
2.3 sd mode

After SD mode is selected the controller will reboot into SD mode. If this is not the case enter the Mode Switch Menu by long-pressing the "UP" and "DOWN" buttons, selecting SD mode and long-pressing "MENU" button to save and return to the main screen (See CONTROLLER MODES MENU). The main screen will display a file select parameter "FILES XX", IC Type, and the Controller's IP address. Select preset files with "UP" & "DOWN" buttons. Long-press the "MENU" button to enter the parameter menu. This menu contains all control parameters for SD mode.



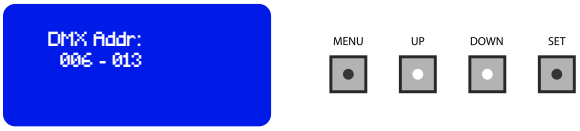
Use "UP" and "DOWN" buttons to navigate the menu and "SET" to enter and exit individual parameter menus. Hold "MENU" to save and exit the parameter menu to the main screen. Keep in mind each port is an independent output with a maximum of 680* pixels per port (IC UCS8903 has a maximum of 340 pixels).

On the main screen, "FILE:XXX" represents which preset on the SD card you are accessing. "FPS:XX" represents the playback speed for the selected effect. Use the "SET" button to cycle through 00-45 FPS. "DMX:XXX-XXX" represents the controller's DMX address which can be changed in the Parameter Menu. "OUTPUT:" represents the IC type which can be selected in the Parameter Menu.



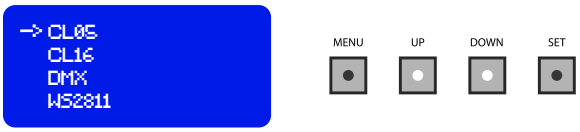
2.31 DMX address

IP ADDRESS: Use this menu to set the LED controller's IP, external lighting console or computer controller's IP, and the subnet. Press "MENU" to cycle through digits (there is no way to go back you must completely cycle through all digits to return to a previous number) and use the "UP" and "DOWN" buttons to cycle a digit 0-9. Press "SET" to save setting and return to parameter menu.



2.32 IC select

IC SELECT: Use this menu to set the LED controller's IC Type. Press "UP" & "DOWN" to select the correct IC Type. Press "SET" to save setting and return to parameter menu.



2.33 Luminance

LUMINANCE: Use this menu to set luminance value between 000% - 100%. This controls all ports at once, they cannot be set individually.