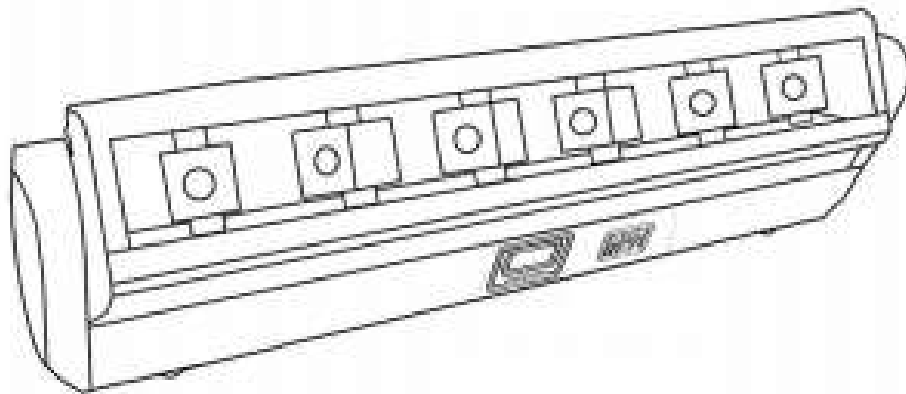


# Rayon

*6-Head RGB Moving Head Laser Light*



*User Manual*

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# 1. Introduction and Setup

## Unpacking and In the Box

Thank you for choosing our Rayon. For your own safety, please read this manual before installing or using the device. This manual covers the important information on installation and applications. Please install and operate the fixture with following instructions. Meanwhile, please keep this manual for future needs.

In the box you will find:

- Rayon Fixture: 1
- PowerCon Cable: 1
- DMX Signal Cable 1
- Omega Mounting Clamps 2

## Mounting and Operation

**Clamp Mounting:** The Rayon moving head provides a unique mounting bracket assembly that integrates the bottom of the base, and the safety cable rigging point in one unit.

When mounting this fixture to truss be sure to secure an appropriately rated clamps to the included omega brackets using a M10 screw fitted through the center hole of the “omega brackets”.

As an added safety measure be sure to attached at least one properly rated safety cable to the fixture using on of the safety cable rigging point integrated in the base assembly.

## Features

The Rayon laser fixture features 2 sets of Red, Green, and Blue Lasers that can pan together and tilt independently for dynamic effects.

## Safety Precautions

**Before connecting or disconnecting the power turn off power of the LASER diode to avoid any damage to it.**

**Turn off the system for 25 minutes after running continuously for three hours; ensure the system is able to cool down in a suitable environment.**

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

Caution: For added protection mount the fixtures in areas outside walking paths, seating areas, or in areas where the fixture might be reached by unauthorized personnel.

Before mounting the fixture to any surface, make sure that the installation area can hold a minimum point load of 10 times the device's weight.

Fixture installation must always be secured with a secondary safety attachment, such as an appropriate safety cable.

Never stand directly below the device when mounting, removing, or servicing the fixture.

From a ceiling, or set on a flat level surface (see illustration below). Be sure this fixture is kept at least 0.5m (1.5ft) away from any flammable materials (decoration etc.).

Always use and install the supplied safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.

DO NOT connect the device to any dimmer pack.

During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.

·Don't try to modify the fixture without any instruction by the manufacturer.

·Warranty is voided if there are any malfunctions from not following the user manual while operating or any hazardous operation, like shock short circuit, electronic shock, lamp broken, etc.

## Customer Support

### WARRANTY POLICY

GAMMA LED Vision warrants its products for the periods set below from the date of purchase to be free of manufacturer and workmanship defects. Warranty does not cover normal wear and tear caused by force, negligence or misuse of products. GAMMA LED Vision is not responsible for any damages or injury caused by misuse or improper handling of the products and in accordance with instructions and specifications of manual.

Warranty terms are as follows:

LED Fixtures:

Indoor: 2 Years

Outdoor (IP 54 or higher): 1 Year

Lamp Fixtures: 1 year / excludes the lamp

LED Video Products:

Indoor: 2 Years

Outdoor (IP 54 or higher): 1 Year

Controllers: 2 years

Batteries: 6 months

All Trussing Related Products and Accessories: 1 Year

Please visit [WWW.GAMMALEDVISION.COM](http://WWW.GAMMALEDVISION.COM) for complete Limited Warranty terms and contact information.

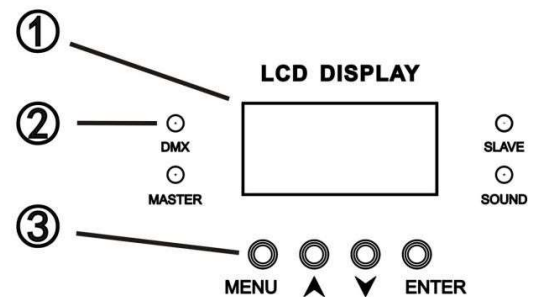
## 2. Setup and Operation

### Using the LCD Menu and Buttons

Turn on the light, press the **MENU** button to enter the menu mode, use the **UP** and **DOWN** buttons to find the menu,

When the preset menu is displayed on the display screen, press the **ENTER** button to confirm, use the **UP** and **DOWN** buttons to select the sub menu, press the **ENTER** button to save the settings or automatically return to the previous menu.

Press the **MENU** button to return, or wait for one minute and then exit the menu mode automatically.



## Menu Operation

MENU	ADDR	Address	1-512
	SLND, MAST, SLAV	Mode	Standalone, Master and Slave Modes
	SHND	Sound-active Mode	SOUND, AUTO
	SOUD ON, OFF	Sound-active Mode Sensitivity	0-100
	BLND	Standby-Mode	YES, NO
	LED ON, OFF	Screen On or OFF	
	DISP YES, NO	Reverse Display	
	PAN	YES, NO	Reverse Pan
	1TIL	YES, NO	Reverse Tilt, Motor 1
	2TIL	YES, NO	Reverse Tilt, Motor 2
	3TIL	YES, NO	Reverse Tilt, Motor 3
	4TIL	YES, NO	Reverse Tilt, Motor 4
	5TIL	YES, NO	Reverse Tilt, Motor 5
	6TIL	YES, NO	Reverse Tilt, Motor 6
	TEST	-	Automatic Fixture Test
	HOUR	-	Number of hours on fixture
	VER	-	Software Version Number
	RELD	-	Restore to Factory Defaults

# DMX Setup

## DMX Basics

DMX512 stands for digital multiplex 512. This means that 512 channels are controlled digitally through 1 data cable.

A channel is a set of 255 steps that are assigned to control attributes in each light. This may be a color like red, green or blue, and intensity, strobe, pan/tilt or other attributes.

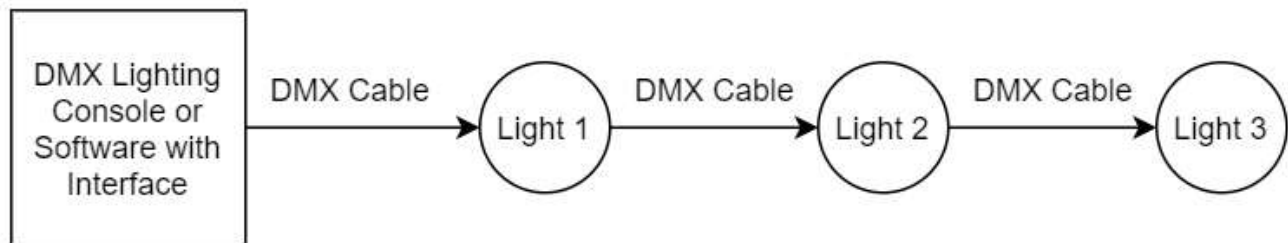
Multiple sets of 512 “universes” may be used. Only 1 universe will travel on a DMX cable, but through networked DMX (Art-Net or sACN E1.31), many universes can travel over a network.

## DMX Wiring

DMX works by connecting 1 or multiple lights to the output of a DMX lighting console or software with a DMX interface.

DMX lights connect in what is called a “daisy-chain”. Your first DMX cable will plug its male DMX connector into the female DMX connector on your lighting console. The remaining female connector will then connect to the DMX input on your first light.

You may then connect your next fixture to the output of your first light, and continue the chain.



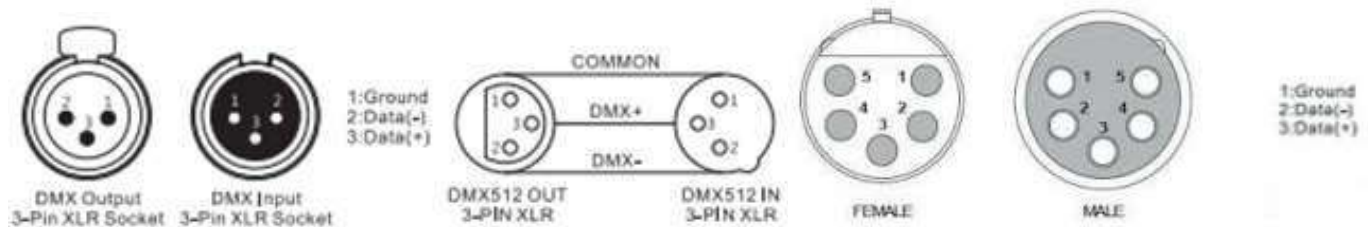
**In the case of the PENN Series, we use terminal blocks for ease of connection. To insert wires, first loosen the screw of the terminal block. Then, insert the wire and tighten down.**

**32 Fixture Rule** – DMX only allows you to connect up to 32 fixtures in a single daisy chain for signal strength. Sometimes, depending on the fixtures and cable length, this number is less (or more).

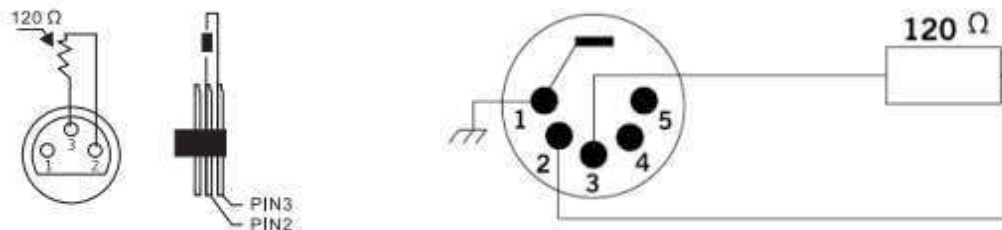


DMX Cables can be 3-pin or 5-pin. These use the same type of data, and in the 5-pin only pins 1, 2, and 3 are used. The cable should be a 2 conductor, shielded cable of at least 110 ohms resistance. Microphone cable is not DMX cable.

Please refer to the diagram below:



For installations where the DMX cable has to run a long distance or is in an electrically noisy environment, it is recommended to use a DMX terminator. This helps in preventing corruption of the digital control signal by electrical noise and reflections. The DMX terminator is simply an XLR plug with a 120  $\Omega$  resistor connected between pins 2 and 3, which is then plugged into the output XLR socket of the last fixture in the chain. Please see illustrations below:



## DMX Modes and Configuration

The Rayon has a single 19-channel DMX mode that allows you to get great control of the fixture.

***DMX Channel Mode Sheet:***

On the left side of the sheet you will see the different modes and which channel corresponds to each function listed on the right in the given mode.

19CH	Function	Channel Value	Description
1	Pan	0-255	Pan Entire Head
2	Pan Speed	0-255	Fast to Slow
3	Tilt Head 1	0-255	
4	Tilt Head 2	0-255	
5	Tilt Head 3	0-255	
6	Tilt Head 4	0-255	
7	Tilt Head 5	0-255	
8	Tilt Head 6	0-255	
9			
10			
11			
12	Intensity – Head 1 (Red)	0-255	
13	Intensity – Head 2 (Green)	0-255	
14	Intensity – Head 3 (Blue)	0-255	
15	Intensity – Head 4 (Red)	0-255	
16	Intensity – Head 5 (Green)	0-255	
17	Intensity – Head 6 (Blue)	0-255	
18	Macros	1-55	OFF
		56-180	Static Macros
		181-205	OFF
		206-255	Movement Macros
19	Macro Speed	0-255	

## **3. Maintenance**

### **Routine Maintenance**

The cleaning of lens must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smokey, or particularly dirty surrounding can cause greater accumulation of dirt on the fixture's optics.

- Clean with a damp, soft cloth..
- Always dry the parts carefully.
- Clean the external optics at least every 20 days in demanding environments.

### **Troubleshooting Problems**

The following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

#### **A. The unit does not work:**

- Check that the unit is plugged in to a working power connector.
- Press the menu button to confirm that the unit is powered on. If the screen does not light up, the unit has no power.

#### **B. Not Responding to the DMX Controller**

- Check DMX cables to verify that they are plugged in and functional.
- Check the DMX address and mode – does it match the address and mode patched in the lighting console or software?
- Plug the light directly into the DMX controller with a cable that you know is good. Unplug all other lights – does it work?
- Try to use another DMX controller.

## 4. Technical Specifications

- Input voltage: 120V-240V
- Total power: 150W
- Control mode: automatic / sound-active / DMX512
- Control channels: 19 channel modes
- Rotation angle:
  - X axis: 270 degrees
  - Y axis 145 degrees
- Dot distance: 15
- Power stability: 5%
- Laser output wavelength (nm):
  - Green 532, Red 638, Blue 447
- Output spot diameter (mm): > 10
- Spot ellipticity: > 0.9
- Preheating time (min): < 15
- Use temperature: -1C to 35C
- Storage temperature: 40C to -10C
- Modulation mode: TTL
- Laser output power 200mW\*6PCS (1.2W total)
- Gross (KG): net weight 13KG, gross 15KG