ZAP Lighting

Monster LED

User Manual

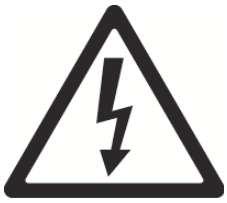
Rev. 02

Table of contents

SAFETY INFORMATION

WARNING!
Read the safety precautions in this manual before
Installing, powering, operating or servicing this product.

Respect all locally applicable laws, codes and regulations when installing, operating or servicing the fixture.



Protection from electric shock

Do not expose the fixture to rain or moisture.
Disconnect the fixture from AC power before carrying out any installation or maintenance work and when the fixture is not in use.
Ensure that the fixture is electrically connected to ground (earth).
Use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
Socket outlets or external power switches used to supply the fixture with power must be located near the fixture and easily accessible so that the fixture can easily be disconnected from power.
Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other component is damaged, defective, deformed, wet or showing signs of overheating. Do not reapply power until repairs have been completed
Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
Use only Neutrik PowerCon cable connectors to connect to the fixture's power sockets.
Do not connect devices to power in a chain that will exceed the electrical ratings of any cable or connector used in the chain.
The supplied power input cable is rated 32 A and can safely supply only one fixture with mains power.
If you replace this cable must also have three conductors 18 AWG or 0.75 mm² minimum conductor
size, have an outer cable diameter of 6 - 15 mm (0.2 - 0.6 in.) and be temperature-rated to suit the application.

Protection from burns and fire

Do not use the fixture to illuminate surfaces within 1000 mm of the fixture.
Operate the fixture with ambient temperature between –5° C to + 45° C / 14° F to 113° F.
The surface of the product casing can reach up to 120° C (248° F) during operation. Avoid contact by persons and materials. Allow the fixture to cool for at least 15 minutes

before handling.Keep flammable materials well away from the fixture. Keep all combustible materials (e.g. fabric, wood, paper) at least 200 mm away from the fixture housing.
Ensure that there is free and unobstructed airflow around the fixture. Provide a minimum clearance of 100 mm around fans and air vents.
Do not stick filters, masks or other materials onto any optical component.

Protection from eye injury
Do not stare directly in to the light output.
Do not look at LEDs with magnifiers, telescopes, binoculars or similar optical instruments that may concentrate the light output.
To minimize the risk of eye irritation or injury, disconnect the fixture from power at all times when the fixture is not in use, and provide well-lit conditions to reduce the pupil diameter of anyone working on or near the fixture.

Protection from injury
Fasten the fixture securely to either a fixed surface or fixed structure when in use. The fixture is not portable when installed.
Ensure that any supporting structure and/or hardware used can hold at least 10 times the weight of all the devices they support.
If suspending from a rigging structure, fasten the fixture to a rigging clamp. Do not use safety cables as the primary means of support.
In case the fixture is hanged up on trellis and its position may cause injuries or damage if it falls, install as indicated in this manual a secondary attachment such as a safety cable that will hold the fixture if a primary attachment fails. The secondary attachment must be approved by an official body such as TÜV as a safety attachment for the weight that it secures, must comply with EN
8 RUSH PAR 2 RGBW Zoom User Manual
60598-2-17 Section 17.6.6 and must be capable of bearing a static suspended load that is ten times the weight of the fixture and all installed accessories.
Check that all external covers and rigging hardware are securely fastened.
Do not operate the fixture with missing or damaged covers, shields or any optical component.
Block access below the work area and work from a stable platform whenever installing, servicing or moving the fixture.
In the event of an operating problem, stop using the fixture immediately and disconnect it from power. Do not attempt to use a fixture that is obviously damaged.Do not modify the fixture or install other than genuine Zap Lighting parts. Refer any service operation not described in this manual to a qualified technician.

Thank you for choosing Zap Lighting Monster LED!
We have designed this product to give you reliable operation over many years.
Please, take a few moments to read these instructions carefully, as we want you to enjoy your new Monster LED products quickly and to the fullest.

INTRODUCTION

The **Monster Led** is a led studio light with an automated yoke designed exclusively for professional use. It must be operated only by technicians with expertise in DMX technology.

This user guide must be read entirely before any use.

It is essential to know the information and comply with the instructions given in this manual to ensure the fitting is installed, used and serviced correctly and safely.

Before using the product for the first time
1. Read 'Safety information' on page 3 before installing, powering, operating or servicing the fixture.
2. Unpack and ensure that there is no transportation damage before using the fixture. Never attempt to operate a damaged fixture.
3. If the fixture is not going to be hard-wired to an AC mains power source, install a local power plug (not supplied) on the end of the supplied power cable.
4. Before operating, ensure that the voltage and frequency of the local power source match the mains power requirements of the fixture.

IMPORTANT: The MonsterLED is mounted on a VipONE Yoke.

Please refer to the VipONE user and installation manual for further mounting and connecting instructions.

Control functions

DMX512 control
Separate control of the colors, dimmer, dimmer colors red, green, and blue
Separate control white hot and cold

Features

484 LEDs
LED panel
RGBWW
Mix of cold and warm white
Color Mixing Up to 65.000 colors
Maximum brightness out 95.000 lumens (In RGBWW full ON)
Lifetime more than 30.000 hours
Strobe effect 1-25 Hz
DMX protocol DMX512
Data input XLR – 5 pins
PAN (Yoke version only) 600 ° Linear command
Tilt (Yoke version only) 270° Linear command
Mechanical mounting Any position Upright or truss mounted with EZ clamps.
Primary zoom 34° - 70°
Dimensions (including Yoke) H 1227 mm x W 802 mm x L 918 mm
Stand alone version (W/o yoke) Available
Weight (Including Yoke VipONE) 130 Kg 287 lbs
Power 100-240VAC 50/60 Hz 3.200 W Max
Input current MAX (@230 VAC) 14,5 A

Color Gamut Color	x	y
Red (Amber)	0,6880	0,3116
Green	0,2287	0,6968
Blue	0,1401	0,0265
Pure white	0,3120	0,3150
RGB white	0,1954	0,1450
Full power RGBWW	0,2425	0,2112

Operation

The Zap Lighting are DMX-512 controllable LED spotlights with RGB color mixing, which excel with highly efficient, extra-bright LEDs. The intensity of the three color groups (red, green, blue) can be controlled independently of one another, thus permitting an unlimited number of different colors.

PHYSICAL INSTALLATION

Read 'Safety information' on page 3 before installing the fixture.
The fixture is designed for indoor use only and must be used in a dry location with adequate ventilation. Ensure that none of the fixture's ventilation slots are blocked.
Fasten the fixture to a secure structure or surface. Do not stand it on a surface or leave it where it can be moved or fall over. If you install the fixture in a location where it may cause injury or damage if it falls, secure it as directed in this user manual using a securely anchored safety cable that will hold the fixture if the primary fastening method fails.

Fastening the fixture to a flat surface

The fixture can be fastened to a hard, fixed, flat surface that is oriented at any angle. Ensure that the surface can support at least 10 times the weight of all fixtures and equipment to be installed on it.
Fasten the fixture securely. If you install the fixture in a location where it may cause injury or damage if it falls, install a safety cable.

Mounting the fixture on a truss

The fixture can be clamped to a truss or similar rigging structure in any orientation. When installing the fixturehanging vertically down, you can use an open-type clamp such as a G-clamp. When installing in any other orientation, you must use a half-coupler clamp that completely encircles the truss chord.

To clamp the fixture to a truss:

1. Check that the rigging structure can support at least 10 times the weight of all fixtures and equipment to be installed on it.
2. Block access under the work area.
3. Fold the legs of the mounting bracket together and bolt a rigging clamp securely to the mounting bracket. The bolt used must be M12, grade 8.8 steel minimum. It must pass through both mounting bracket legs and be fastened with a self-locking nut.
4. Working from a stable platform, hang the fixture with its clamp on the truss and fasten the clamp securely.

IMPORTANT: The MonsterLED is mounted on a VipONE Yoke.

Please refer to the VipONE user and installation manual for mounting instructions.

CONNECTIONS

Power

Description		Voltage range	Fuse protection
Power supply transformer (150VA)	Primary	208 V-230 V	
	Secondary	22 V	
Power input	Input fuse holder		FA 16 A (230V)

Operating power

Zone	Voltage	Connection	Electrical Absorption
Europe	230V	1 PH + N + E	14,5
USA	208V	2 PH + E	16

Cabling

US Powercon

EU Powercon

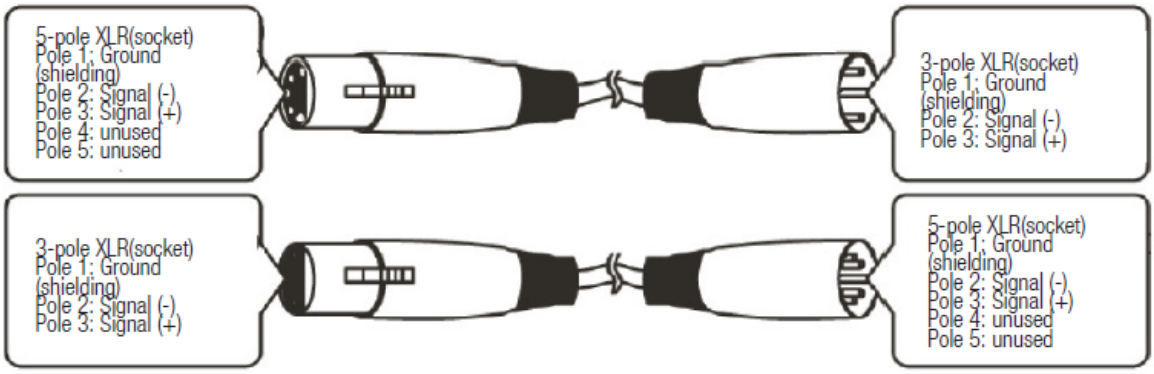
DMX

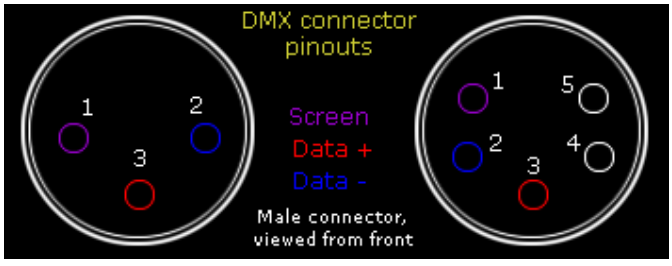
5-pole socket for connection of a DMX controller.

After the reset sequence is completed, DMX signal connection can be controled by checking the flashing green LED on the display panel.

DMX pinouts

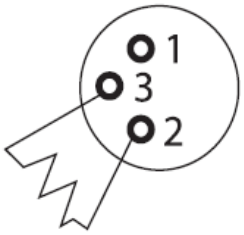
XLR Pin Number	DMX 512 Application	Function
1	Common	Common Reference
2	DMX Data 1-	Primary Data link
3	DMX Data 1+	
4	DMX Data 2-	Secondary (Optional) Data link (Unimplemented for 3 pin XLR connector)
5	DMX Data 2+	





DMX chain

With extended cable runs, the last device in the chain may require a terminating resistor in order to prevent system malfunctions.



Use of a terminating resistor (termination) reduces interference and other problems during signal transmission. It is always advisable to connect a DMX termination module (resistance 120 ohms, 1/4 W) between pole 2 (DMX-) and pole 3 (DMX+) of the last device in the chain.

COMMAND

The Monster Led is DMX managed according to USITT standards

Monster Led – DMX Protocol
The Monster Led is considered as an individual DMX machine.

At the end of the yoke DMX parameters are added the dedicated head DMX parameters;

It will make a single unique DMX machine.

From a DMX console

Any type of DMX console or controller can control the Monster Led as long as it follows DMX standards.

The DMX distribution (cabling – splitter) should be made with XLR 5 points connectors.

As the Monster Led is designed for bi-directionnal datacommunication, Zap Technology recommands using only double pair shield cabling.

Monster Led DMX chart

Name	Channel	Definitions	Value
Pan High	1	Most significant byte of Pan 16-bit (greater movement) 0-255	0-32768
Pan Low	2	Least significant byte of Pan 16-bit (least movement) 0-255	
Tilt High	3	Most significant byte of Tilt 16-bit (greater movement) 0-255	0-32768
Tilt Low	4	Least significant byte of Tilt 16-bit (least movement) 0-255	
Zoom	5	CDE of 0-255 zoom of your specifications 6mm minimum distance running compared to LED 3mm	0-255
Dimmer	6	Brightness CDE	
Red	7	Red dimmer channel	0-255
Green	8	Green dimmer channel	0-255
Blue	9	Blue dimmer channel	0-255
Cold White	10	Cold White dimmer channel	0-255
Hot White	11	Hot White dimmer channel	0-255
Strobe intensity	12	Strobe dimmer channel <10 strobe inactive, dimmer channel controls the level RVBWW >=10 strobe active, dimmer strobe intensity controls the level RVBWW	0-255
Time On Strobe	13	RGBWW time ON in strobe mode	0-255
Time Off Strobe	14	RGBWW time OFF in strobe mode	0-255
Preset Color	15	sends predetermined colors 0-11 no active preset 12-255 active preset RGB, not for WW WW can be controlled	0-255
Group	16	Activate different preset led groups 0-3 inactive group 4-255 active group	0-255

MAINTENANCE

Read 'Safety information' on page 3 before servicing the fixture.
Refer any service operation not described in this user manual to a qualified service technician.
Disconnect mains power before cleaning or servicing the fixture.
Service the fixture in an area where there is no risk of injury from falling parts, tools or other materials.

Cleaning

Excessive dust, smoke fluid, and particle buildup degrades performance, causes overheating and will damage the fixture. Damage caused by inadequate cleaning or maintenance is not covered by the product warranty.
The cleaning of external optical lenses must be carried out periodically to optimize light output. Cleaning schedules for lighting fixtures vary greatly depending on the operating environment. It is therefore impossible to specify precise cleaning intervals for the fixture. Environmental factors that may result in a need for frequent cleaning include:

- Use of smoke or fog machines.
- High airflow rates (near air conditioning vents, for example).
- Presence of cigarette smoke.
- Airborne dust (from stage effects, building structures and fittings or the natural environment at outdoor events, for example).

If one or more of these factors is present, inspect fixtures within their first 100 hours of operation to see whether cleaning is necessary. Check again at frequent intervals.
This procedure will allow you to assess cleaning requirements in your particular situation.
If in doubt, consult your Cinemeccanica dealer about a suitable maintenance schedule.
Use gentle pressure only when cleaning, and work in a clean, well-lit area.
Do not use any product that contains solvents or abrasives, as these can cause surface damage.
To clean the fixture:
1. Disconnect the fixture from power and allow it to cool for at least 15 minutes.
2. Vacuum or gently blow away dust and loose particles from the outside of the fixture and the air vents with low-pressure compressed air.
3. Clean the LED lenses by wiping gently with a soft, clean lint-free cloth moistened with a weak detergent solution. Do not rub the surface hard: lift particles off with a soft repeated press.
Dry with a soft, clean, lint-free cloth or low-pressure compressed air. Remove stuck particles with an unscented tissue or cotton swab moistened with glass cleaner or distilled water.
4. Check that the fixture is dry before reapplying power.