LEAHUA

Raptor Max

LH -R031

This manual contains important information. Please read before operating fixture.

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Accessories

Name	Quantity	Remark
User manual	1pc	
Folding clamp	1set	
Power cable	1pc	
DMX signal cable	1pc	
Safety cord	1pc	Optional

1. Safety Instructions

WARNING!!! To reduce the risk of fire, electric shock, or injury to persons, follow these important safety instructions:

- Check before use

Before operation, inspect the fixture for transportation damage. Do not use it if damaged. Unauthorized modification or improper use is not covered by warranty.

- Environment

The fixture is IP65-rated, suitable for indoor/outdoor use, and can operate in humid or dusty areas. Keep it away from excessive heat, fire, vibration, electrical surges, and strong light.

- Personnel & operation

Installation and operation must be performed by qualified personnel. Ensure all covers are securely in place, wear protective gear, and do not open the housing or attempt self-maintenance.

- Optical safety

Do not look directly into the light source. Do not use with dimmer packs. Maintain a minimum distance of 20 m from illuminated surfaces, and replace damaged optical components immediately.

- Electrical safety

Ensure correct voltage, proper grounding, and compliant power cords. Do not use damaged cables, and unplug by holding the plug. Avoid operating under heavy rain or extreme humidity, and avoid frequent on/off switching.

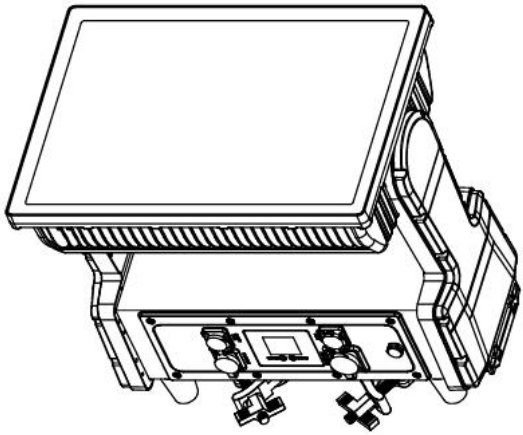
- Installation

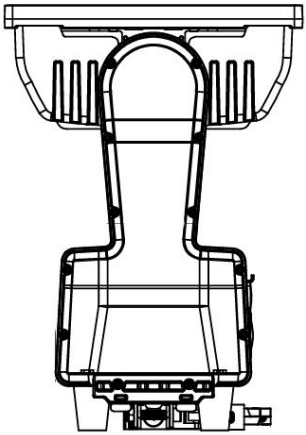
Use the safety cord through the provided safety holes. Keep at least 50 cm ventilation clearance and do not mount on flammable surfaces or aim the beam at combustible objects (minimum 20 m).

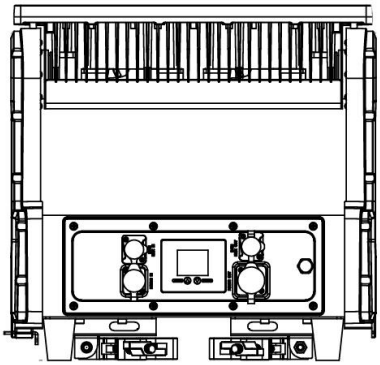
- Temperature & normal conditions

Housing temperature may reach 45–75° C during operation. Slight smoke or odor may occur at first ignition and is considered normal.

2. Appearance







3. Technical Specifications

Power
Input Voltage Range: AC100-240 V, 50/ 60 Hz
Power Consumption: 2000W

Light Source
Main Light Section: 84×8 W White LED
Strip Light Section: 1728×1.5W RGB LED
Life Expectancy: About 50000 hours (factory rated)

Beam Angle
Beam Angle for White LED: 65°
Field Angle for White LED: 93°
Field Angle for RGB LED: 100°

Other Function
Wash, beam, strobe effect
wide range of different pattern pre-programmed effect

Head Movement
Tilt: 184°, 16bit movement resolution

Control
Display: LCD display
Control Mode: DMX512, master-slave, auto, sound, Art-Net, RDM
Control Channel: 24/ 46/ 91/ 127/ 68CH

Housing
Housing: Die-casting aluminum, plastic
Working Environment: -10°C - 45°C
Protection Rate: IP65

Connection

Power Connection: Powercon in/ out

Signal Connection: DMX 3-pin + RJ45 in/ out

Dimensions

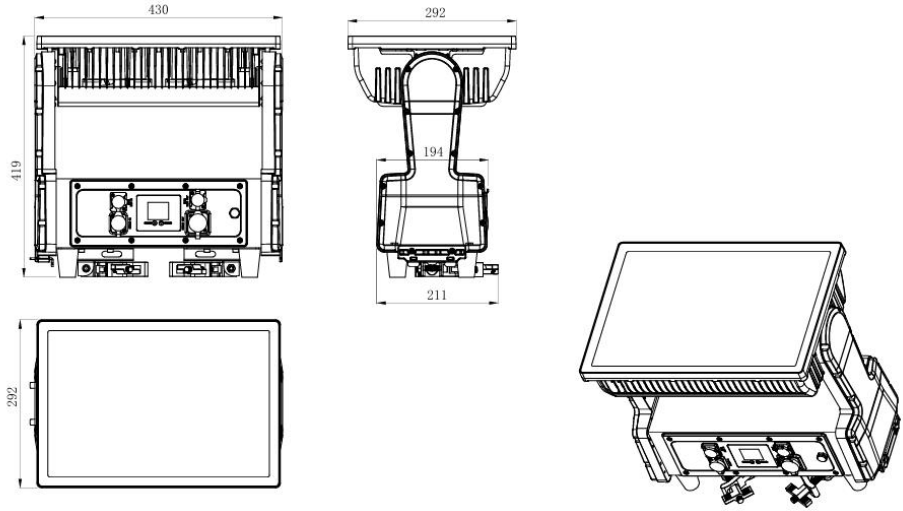
Product Dimensions: 430×292×419mm

Net Weight: 18.9kg

Net weight

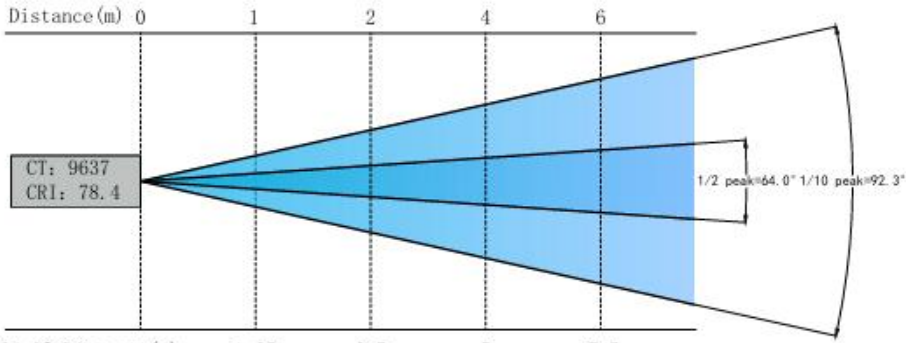
18.9kg

Dimensions:



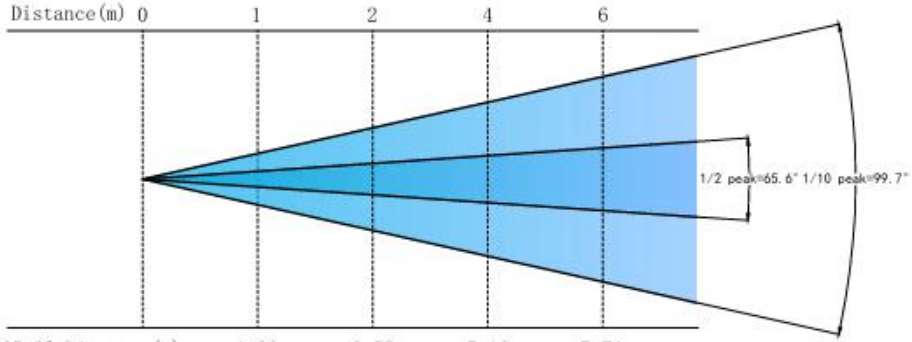
Light output:

Key Light



64.0° Diameter(m)	1.25	2.5	5	7.5
92.3° Diameter(m)	2.08	4.16	8.32	12.48
W(Lux)		4024	1258	515

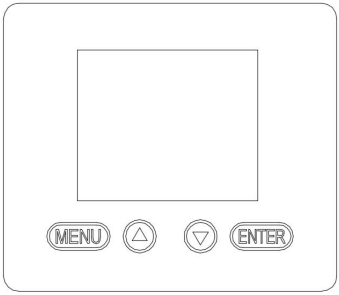
Fill Light



65.6° Diameter(m)	1.29	2.58	5.16	7.74
99.7° Diameter(m)	2.37	4.74	9.48	14.22
RGB(Lux)		5561	1440	699
R(Lux)		1370	386	170
G(Lux)		3908	1023	521
B(Lux)		431	108	55

4. Operation

4.1 Front panel operation:



MENU	To enter into move backward or leave the menu
UP	To go backward to move up in the menu
DOWN	To go forward to move down in the menu
ENTER	To perform the desired functions

Pressing any button from the home screen will show the selectable menu items from the menu map. When a menu function is selected, the display will immediately show the first available option for the selected menu function. To select a menu item, press <ENTER>.
Use the <UP> and <DOWN> buttons to navigate the menu options. Press the <ENTER> button to select the menu function currently displayed, or to enable a menu option. To return to the previous option or menu without changing the value, press the <MENU> button.

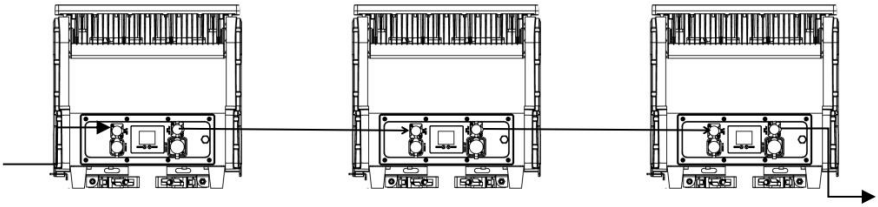
4.2 Board instruction:

Address	001-512
RUN	DMX512
	Auto
	Artnet
DMX MODE	24/46/91/127/68ch

TEST	ALL	
SET	DISPLAY	No/Yes
	Tilt Reverse	No/Yes
	Signal Keep	No/Yes
	Slave	No/Yes
	English	Yes/否
	ANet-Port	
	ANet-Gate	
	ANet-MASK	
	ANet-IP	
INFO	Version	V1.12
MANUAL	Tilt	0-255
	Red	0-255
	Green	0-255
	Blue	0-255
	White	0-255
	Strobe	0-02
RESET	All Reset	No/Yes

4.3 DMX address setting:

Each fixture must be assigned a unique DMX start address within the 001 – 512 range. The start address represents the first channel the fixture occupies. This product provides one DMX modes 24 channels,therefore, the next fixture's start address must be calculated according to the number of channels used in the selected mode to avoid overlapping addresses. when operating in 24-channel mode, set Fixture 1 to 001, Fixture 2 to 025, Fixture 3 to 049, Fixture 4 to 073, etc.



DMX Input

DMX Output

5. DMX Protocol

24 CH	46 CH	91 CH	127 CH	68 CH	DMX Value	FUNCTION
1	1	1	1	1	000 - 255	**TILT**
2	2	2	2	2	000 - 255	**TILT FINE**
3	3	3	3	7		**FUNCTION**
					000 - 009	Unused range
					010 - 019	No function
					020 - 021	Dimmer Curve: Linear
					022 - 023	Dimmer Curve: S-Curve (Default)
					024 - 025	Dimmer Curve: Square
					026 - 027	Dimmer Curve: Square1
					026 - 045	Unused range
					046 - 047	No Signal: Blackout **(Default)**
					048 - 049	No Signal: Hold
					050 - 057	Unused range
					058 - 059	Fan Mode: Regulated **(Default)**
					060 - 061	Fan Mode: High
					062 - 063	Fan Mode : Medium
					064 - 065	Fan Mode: Low
					066 - 069	Unused range
					070 - 071	Pixel Mirror: Off **(Default)**
					072 - 073	Pixel Mirror: x-mirror
					074 - 075	Pixel Mirror: y-mirror
					076 - 077	Pixel Mirror: x;y-mirror
					078 - 097	Unused range
					098 - 099	Tilt invert OFF **(Default)**
					100 - 101	Tilt invert ON
					102 - 110	Unused range
					111 - 112	Dark Mode: Fast (Default)
					113 - 114	Dark Mode: Fast

					115 - 251	Unused range
					252 - 253	Reset Tilt
					254 - 255	Reset ALL
4	4	4	4			**Mix Prio**
					000 - 009	Main Module & Sub Module (HTP)
					010 - 019	Main Module Only
					020 - 029	Sub Module Only
					030 - 039	Main Module + Sub Module additive
					040 - 049	Main Module - Sub Module subtractive
					050 - 059	Sub Module - Main Module subtractive
					060 - 069	True Color 1
					070 - 079	True Color 2
					080 - 089	True Color 3
					090 - 099	True Color 4
					100 - 255	Unused range
5	5	5	5	3	000 - 255	**LEDW DIM**
6	6	6	6		000 - 255	**LEDW DIM FINE**
7	7	7	7	4	000 - 255	**LEDW DURATION**
8	8	8	8	5		**LEDW RATE**
					000 - 004	Close
					005 - 250	slow -> fast
					251 - 255	Open
9	9	9	9	6		**LEDW STROBE EFFECT**
					000 - 004	Unused range
					005 - 032	Single Strobe
					033 - 060	Random Strobe
					061 - 088	Pulse Strobe
					089 - 116	slow up fast Down
					117 - 144	fast up slow Down
					145 - 172	Double Strobe
					173 - 200	Triple Strobe
					201 - 228	Lightning
					229 - 255	Spikes

	10	10	10	19		**LEDW Shape select**
					000 - 009	Unused range
					010 - 011	Dynamic Shape 01
					012 - 013	Dynamic Shape 02
					014 - 015	Dynamic Shape 03
					016 - 017	Dynamic Shape 04
					018 - 225	...
					226 - 227	Dynamic Shape 109
					228 - 249	Unused range
					250 - 255	Random Pixel
	11	11	11	18		**LEDW Shape Step / Speed**
					000 - 002	Stop
					003 - 063	Shape Run from fast to slow (CW)
					064 - 066	Stop at current position
					067 - 127	Shape Run from slow to fast (CCW)
					128 - 129	Shape Step 001
					130 - 131	Shape Step 002
					132 - 133	Shape Step 003
					134 - 253	...
					254 - 255	Shape Step 064
	12	12	12			**LEDW FADE**
						Unused range
					000 - 009	Fade in and fade out time is identical
					010 - 127	Unused range
					128 - 137	Fade-In time is shorter than Fade out
					138 - 255	time - this creates a
						shadow effect
	13	13	13			**LEDW Transition**
					000 - 009	Unused range
					010 - 063	Normal Transition
					064 - 073	Unused range
					074 - 127	FOB Transition / Fade over Blackout
					128 - 137	Unused range

					138 - 191 192 - 255	FOF Transition / Fade over Full Unused range
10	14	14	14	8	000 - 255	**LEDR/G/B DIM**
11	15	15	15		000 - 255	**LEDR/G/B DIM FINE**
12	16	16	16	9	000 - 255	**LEDR/G/B DURATION**
13	17	17	17	10		**LEDR/G/B RATE**
					000 - 004 005 - 250 251 - 255	Close Strobe linear from slow (1Hz) to fast (25Hz) Open
14	18	18	18	11		**LEDR/G/B STROBE EFFECT**
					000 - 004	Unused range
					005 - 032	Single Strobe
					033 - 060	Random Strobe
					061 - 088	Pulse Strobe
					089 - 116	slow up fast Down
					117 - 144	fast up slow Down
					145 - 172	Double Strobe
					173 - 200	Triple Strobe
					201 - 228	Lightning
					229 - 255	Spikes
15	19	19	19			**LEDR/G/B CTC**
					000 - 009 010 - 255	Unused range CTC 2500K -> CTC 10000K
	20	20	20		000 - 255	**BACKGROUND RED**
	21	21	21		000 - 255	**BACKGROUND GREEN**
	22	22	22		000 - 255	**BACKGROUND BLUE**
16	23	23	23	12	000 - 255	**SHAPE COLOUR RED**
17	24	24	24	13	000 - 255	**SHAPE COLOUR GREEN**
18	25	25	25	14	000 - 255	**SHAPE COLOUR BLUE**
	26	26	26		000 - 255	**DigiFX Presets**（This feature will be available in a future firmware update）
	27	27	27	17		**LEDR/G/B DigiFX/NDI Select**

					000 - 009	Unused range
					010 - 011	DigiFX 01
					012 - 013	DigiFX 02
					014 - 015	DigiFX 03
					016 - 167	...
					168 - 169	DigiFX 80
					170 - 255	Unused range
						LEDR/G/B DigiFX Speed
					000 - 005	Idle Original Speed
	28	28	28	16	006 - 009	Stop at current position
					010 - 251	Shape Run from fast to slow
					252 - 255	Stop at current position
						LEDR/G/B Position X coarse
	29	29	29		000 - 003	Unused range
					004 - 255	Position X coarse
	30	30	30		000 - 255	**LEDR/G/B Position X fine**
						LEDR/G/B Position Y coarse
	31	31	31		000 - 003	Unused range
					004 - 255	Position Y coarse
	32	32	32		000 - 255	**LEDR/G/B Position Y fine**
	33	33	33		000 - 255	**LEDR/G/B DigiFX/NDI Scale**
	34	34	34		000 - 255	**LEDR/G/B DigiFX Rotation**
	35	35	35		000 - 255	**LEDR/G/B DigiFX Shape FX1**
	36	36	36		000 - 255	**LEDR/G/B DigiFX Shape FX2**
	37	37	37		000 - 255	**LEDR/G/B DigiFX Shape FX3**
	38	38	38		000 - 255	**LEDR/G/B DigiFX Shape FX4**
						LEDR/G/B Transition
					000 - 009	Unused range
					010 - 063	Normal Transition
	39	39	39	15	064 - 073	Unused range
					074 - 127	FOB Transition / Fade over Blackout
					128 - 137	Unused range
					138 - 191	FOF Transition / Fade over Full

					192 - 255	Unused range
	40	40	40		000 - 255	**MASTER LEDW DIM**
	41	41	41		000 - 255	**MASTER LEDW DIM FINE**
	42	42	42		000 - 255	**MASTER LEDR/G/B DIM**
	43	43	43		000 - 255	**MASTER LEDR/G/B DIM FINE**
19				20	000 - 255	**MASTER DIMMER**
20					000 - 255	**MASTER DIMMER FINE (16 bit)**
21					000 - 255	**MASTER White**
22	44				000 - 255	**MASTER RED**
23	45				000 - 255	**MASTER GREEN**
24	46				000 - 255	**MASTER BLUE**
		44	44	57	000 - 255	**PIXEL LEDW 01**
		45	45	58	000 - 255	**PIXEL LEDW 02**
		46	46	59	000 - 255	**PIXEL LEDW 03**
		47	47	60	000 - 255	**PIXEL LEDW 04**
		48	48	61	000 - 255	**PIXEL LEDW 05**
		49	49	62	000 - 255	**PIXEL LEDW 06**
		50	50	63	000 - 255	**PIXEL LEDW 07**
		51	51	64	000 - 255	**PIXEL LEDW 08**
		52	52	65	000 - 255	**PIXEL LEDW 09**
		53	53	66	000 - 255	**PIXEL LEDW 10**
		54	54	67	000 - 255	**PIXEL LEDW 11**
		55	55	68	000 - 255	**PIXEL LEDW 12**
		56	56	21	000 - 255	**PIXEL LEDR 01**
		57	57	22	000 - 255	**PIXEL LEDG 01**
		58	58	23	000 - 255	**PIXEL LEDB 01**
		59	59	24	000 - 255	**PIXEL LEDR 02**
		60	60	25	000 - 255	**PIXEL LEDG 02**
		61	61	26	000 - 255	**PIXEL LEDB 02**
		62	62	27	000 - 255	**PIXEL LEDR 03**
		63	63	28	000 - 255	**PIXEL LEDG 03**
		64	64	29	000 - 255	**PIXEL LEDB 03**
						...

		89	89	54	000 - 255	**PIXEL LEDR 12**
		90	90	55	000 - 255	**PIXEL LEDG 12**
		91	91	56	000 - 255	**PIXEL LEDB 12**
						...
			125		000 - 255	**PIXEL LEDR 24**
			126		000 - 255	**PIXEL LEDG 24**
			127		000 - 255	**PIXEL LEDB 24**

6. Installation

6.1 Mounting & Rigging

- Prepare the fixture

Ensure the fixture is in good condition and the ventilation openings are unobstructed.

- Mount using the built-in folding clamp

Hang the fixture directly onto the truss or mounting structure using the integrated folding clamp.

Always lift or carry the fixture using the handles—not the clamp.

- Install the safety cable

Pass the safety cable through the two safety-cable holes on the base and secure it to an independent safety point.

The safety cable must be rated to withstand 10× the fixture's weight.

- Lock / Unlock Pan & Tilt

Lock Pan and Tilt before moving the fixture; unlock them before powering on.

Do not operate the fixture while Pan/Tilt is locked.

- Final Safety Check

Confirm the hook is fully engaged, the safety cable is properly secured, and the mounting structure can safely support the fixture's weight.

6.2 Power connection

Please checking the power equipment supported.

Please put the plug of power source wire connect with the main power source .

(EU)Wire	Wire(America)	Direction of wire	General marks
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	⏚

6.3 DMX Control Connection

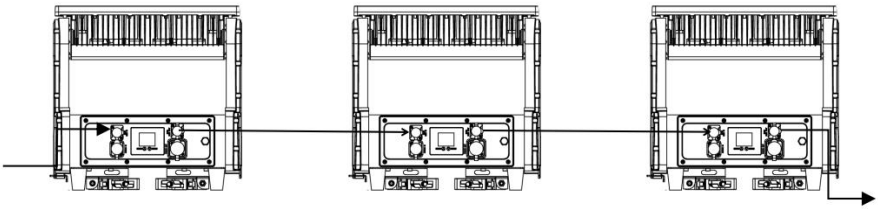
This fixture supports DMX512 (1990) control protocol and is equipped with both 5-pin and 3-pin XLR connectors for data input and output. Use a twin-screened DMX cable with conductors of at least 0.5 mm^2 , ensuring correct wiring for the selected connector type.

Connect the controller's DMX OUT to the first fixture's DMX IN, then link fixtures DMX OUT → DMX IN in a daisy-chain. For optimal signal integrity, install a **DMX terminator** on the DMX OUT of the final fixture.

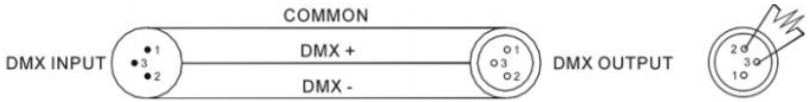
Ensure no pin makes contact with the connector housing or other pins.

Before use, test cables with an ohm meter to verify correct polarity and to ensure no pins or shield are shorted to ground, as this may result in data errors or unstable operation.

For convenience, connect fixtures in the physical order they are installed, rather than by DMX address sequence.



DMX Input DMX Output



7. Maintenance & Cleaning

Regular maintenance is essential to ensure optimal performance and extend the service life of the fixture.

7.1 Cleaning

Disconnect the unit from power before any cleaning work.
Use a soft, lint-free cloth slightly dampened with mild detergent to clean the exterior surfaces.
Gently remove dust from ventilation slots, optical lenses, and cooling components using compressed air or a soft brush.
Avoid using solvents, alcohol, or abrasive materials that may damage the housing or optical elements.

7.2 Lubrication

This fixture is designed with sealed or maintenance-free moving parts. Under normal operating conditions, no additional lubrication is required.
If abnormal noise or movement resistance is observed, contact qualified service personnel before applying any lubricant.

7.3 Troubleshooting

If the fixture does not power on, verify the power supply, cables, and connectors.
For control issues, check DMX addressing, cable integrity, and ensure proper 3-pin/5-pin XLR connections.
Overheating or unexpected shutdown may indicate blocked ventilation; inspect and clean air inlets and outlets.
If problems persist after basic checks, discontinue use and contact authorized service technicians.

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