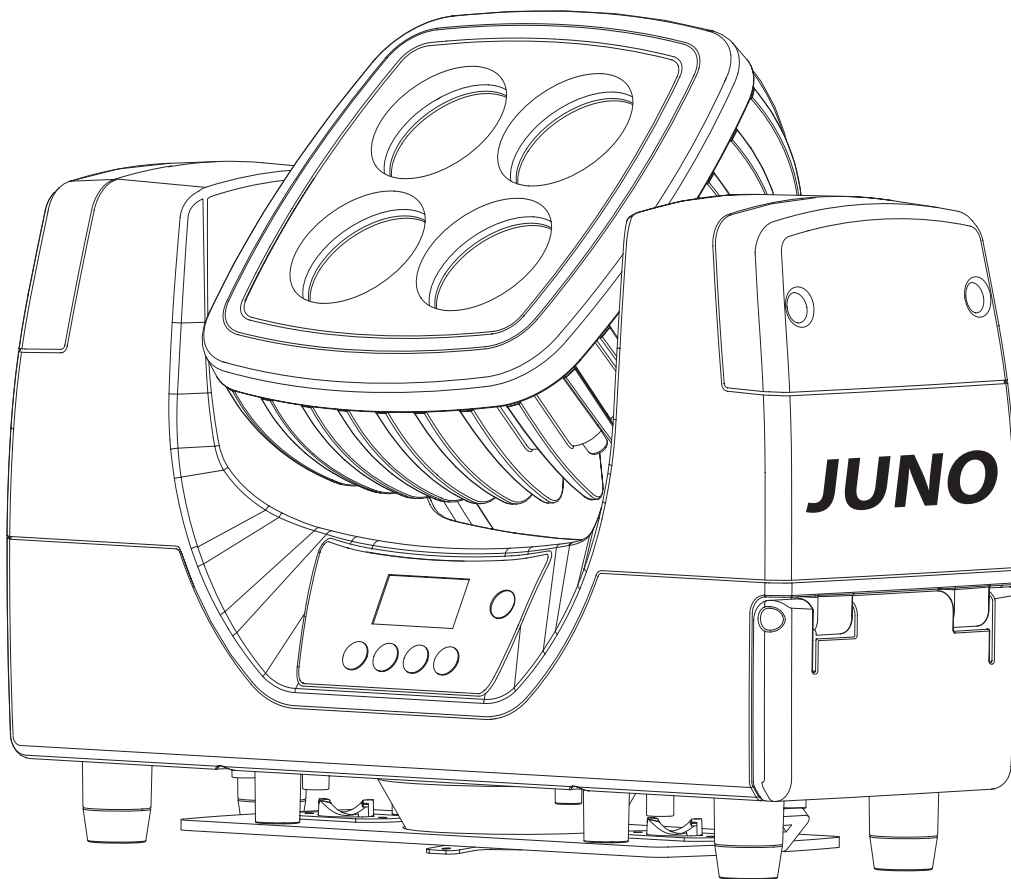# CLF JUNO

Dimensions

All dimensions are in millimeters

CLF JUNO
 # 156500

312

250.3

JUNO

199

JUNO

108

G Clamp with
Quicklock # 875760
(Optional)
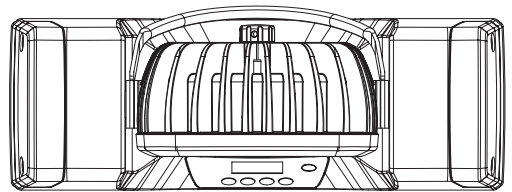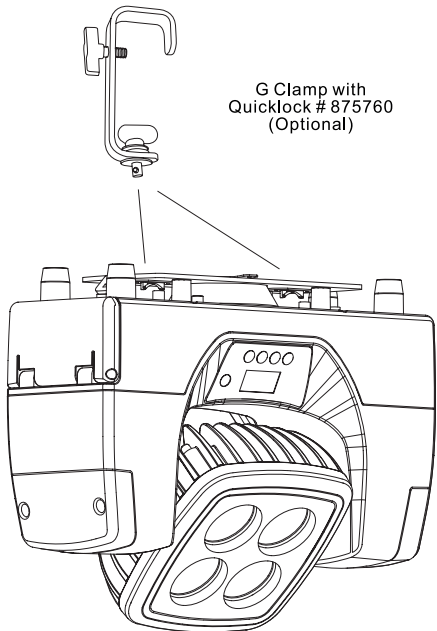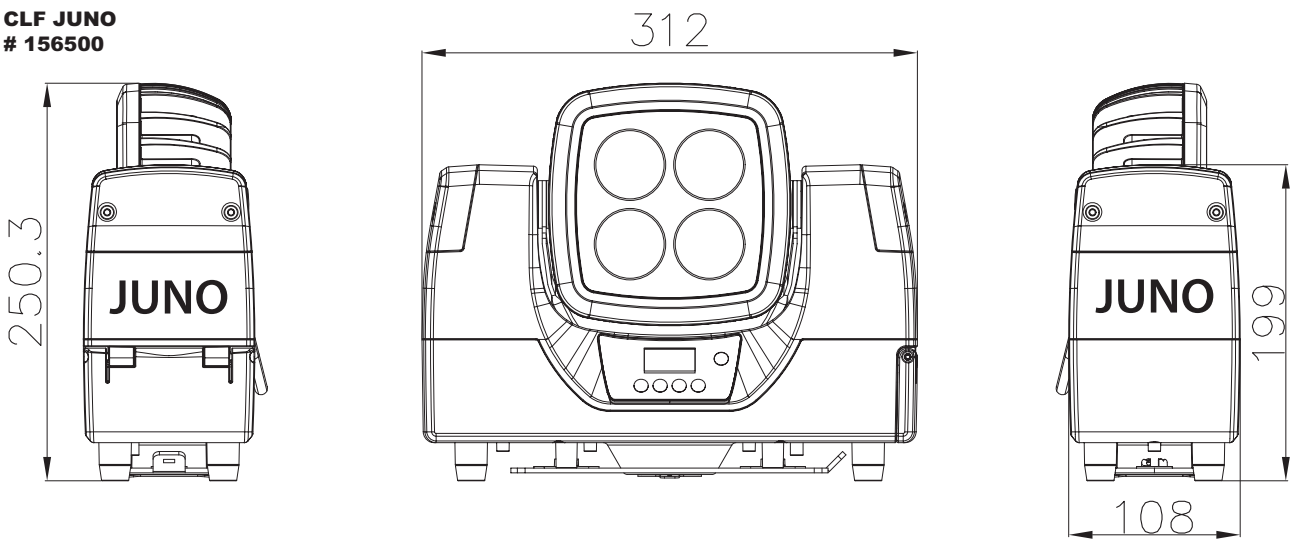
Safety Information

<table>
<tr><td>

WARNING!
Read the safety precautions in this section before installing, powering, operating or servicing this product

</td></tr>
</table>

The following symbols are used to identify important safety information on the product and in this manual:

DANGER!
Safety hazard.
Risk of severe
injury or death.

DANGER!
Hazardous
voltage. Risk of
lethal or severe
electric shock.

WARNING!
Fire hazard.

WARNING!
LED light
emission. Risk of
eye injury.

WARNING!
Burn hazard. Hot
surface. Do not
touch.

WARNING!
Wear protective
eyewear.

WARNING!
Refer to user
manual.

Warning! Risk Group 3 (high risk) LED product according to EN 62471. Do not look into the beam at a distance of less than 4 meters from the front surface of the product. Do not view the light output with optical instruments or any device that may concentrate the beam.

This product is for professional use only. It is not for household use.

This product presents risks of severe injury or death due to fire and burn hazards, electric shock and falls.

Read this manual before installing, powering or servicing the fixture, follow the safety precautions listed below and observe all warnings in this manual and printed on the fixture. If you have questions about how to operate the fixture safely, please contact your supplier.

PROTECTION FROM ELECTRIC SHOCK

• Disconnect the fixture from AC power before removing or installing any cover or part and when not in use.

• Always ground (earth) the fixture electrically.

• 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.

• 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.

• Power input cables must be 3-conductor, rated 20 A minimum, 1.5 mm² (16 AWG) minimum conductor size, Power input cables must be 3-conductor, rated 20 A minimum, 1.5 mm² (16 AWG) minimum conductor size ,extra hard usage type (ST or equivalent). The cable must be heat-resistant to 90° C minimum.

• Use only PowerCon cable connectors to connect to power input sockets.

• 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.

Refer any service operation not described in this manual to a qualified technician.
Socket outlets used to supply fixture fixtures with power or external power switches must be located near the fixtures and easily accessible so that the fixtures can easily be disconnected from power.

PROTECTION FROM BURNS AND FIRE
Do not operate the fixture if the ambient temperature (Ta) exceeds 40° C.
The exterior of the fixture becomes hot during use. Avoid contact by persons and materials. Allow the fixture to cool for at least 10 minutes before handling.
Keep all combustible materials (e.g. fabric, wood, paper) at least 100 mm away from the head.
Keep flammable materials well away from the fixture.
Ensure that there is free and unobstructed airflow around the fixture.
Do not illuminate surfaces within 200 mm of the fixture.
Do not attempt to bypass thermostatic switches or fuses.
If you relay power from one fixture to another using power throughput sockets, do not connect more than ten fixture fixtures in total to each other in an interconnected chain.
Connect only other fixture fixtures to fixture power throughput sockets. Do not connect any other type of device to these sockets.
Do not stick filters, masks or other materials onto any optical component.
Do not modify the fixture in any way not described in this manual

PROTECTION FROM INJURY
Do not look continuously at LEDs from a distance of less than 4 meters from the front surface of the fixture without protective eyewear such as shade 4-5 welding goggles. At less than this distance, the LED emission can cause eye injury or irritation. At distances of 4 meters and above, light output is harmless to the naked eye provided that the eye's natural aversion response is not overcome.

Do not look at LEDs with magnifiers, telescopes, binoculars or similar optical instruments that may concentrate the light output.

Ensure that persons are not looking at the LEDs from within 4 meters when the product lights up suddenly. This can happen when power is applied, when the product receives a DMX signal, or when SERVICE menu items are selected.

Fasten the fixture securely to a fixed surface or 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.

Allow enough clearance around the head to ensure that it cannot collide with an object or another fixture when it moves.

Check that all external covers and rigging hardware are securely fastened.

Block access below the work area and work from a stable platform whenever installing, servicing or moving the fixture.

Do not operate the fixture with missing or damaged covers, shields or any optical component.

CONTENTS

AC power

Warning! Read "Safety Information" starting on page 3 before connecting the fixtures to AC mains power.

Warning! For protection from electric shock, the fixture must be grounded (earthed). The powerdistribution circuit must be equipped with a fuse or circuit breaker and ground-fault (earth-fault) protection.

Warning! 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 fixtures can easily be disconnected from power.

Important! Do not insert or remove live PowerCon connectors to apply or cut power, as this may cause arcing at the terminals that will damage the connectors.

Important! Do not use an external dimming system to supply power to the fixture, as this may cause damage to the fixture that is not covered by the product warranty.

The fixture can be hard-wired to a building electrical installation if you want to install it permanently, or a power plug that is suitable for the local power outlets can be installed on the power cable.

Power voltage

Warning! Check that the voltage range specified on the fixtures serial number label matches the local AC mains power voltage before applying power to the fixture.

The fixtures accept AC mains power at 100-240 V nominal, 50/60 Hz. Do not apply AC mains power to the fixture at any other voltage than that specified on the fixture's serial number label.

Power cables and power plug

Power input cables must be rated 20 A minimum, have three conductors 1.5 mm² (16 AWG) minimum conductor size and an outer cable diameter of 5 - 15 mm. Cables must be hard usage type (SJT or equivalent) and heat-resistant to 90° C minimum. In the EU the cable must be HAR approved or equivalent. If you install a power plug on the power cable, install a grounding-type (earthed) plug that is rated 20 A minimum. Follow the plug manufacturer's instructions. Table 1 shows standard wire color-coding schemes and some possible pin identification schemes; if pins are not clearly identified, or if you have any doubts about proper installation, consult a qualified electrician.

Wire Color (EU models)	Conductor	Symbol
brown	live	L
blue	neutral	N
yellow/green	ground (earth)	⏚ or ⏚

Table 1: Wire color-coding and power connections

Data link

A DMX 512 data link is required in order to control a fixture via DMX.
The fixture has 3-pin XLR connectors for DMX data input and output. The pin-out on all connectors is
pin 1 = shield, pin 2 = cold (-), and pin 3 = hot (+).
Or the fixture has 5-pin XLR connectors for DMX data input and output. The pin-out on all connectors is
pin 1 = shield, pin 2 = cold (-), and pin 3 = hot (+). Pins 4 and 5 in the 5-pin XLR connectors are not used.

Connecting the data link

To add more fixtures or groups of fixtures when the above limit is reached, add a DMX universe and another
daisy-chained link.
Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control
data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters. Heavier gauge cable and/or an
amplifier is recommended for longer runs.

Tips for reliable data transmission

To connect the fixture to data:
1. Connect the DMX data output from the controller to the closest fixture's male 5-pin XLR DMX input connector.
2. Connect the DMX output of the fixture closest to the controller to the DMX input of the next fixture and
   continue connecting fixtures output to input.

Tips for wireless DMX control

To turn on wireless control:
Go to Wireless setting,Go to Receive, press Enter.
Set to ON with the Up key, then press Enter. Juno indicates a 📶
Then go to Wireless setting Reset , Press Enter.
Reset blinks, and the display on the JUNO indicates a 📶
Then push the red button on the wireless transmitter for 1-2 seconds . The JUNO indicates the 📶
in the display and starts to respond to the signal, press Menu to go back to main menu

JUNO Wireless icon legend

📶✕   Wireless switched off

📶   Connected with Transmitter

📶   2 seconds: Authorization with transmitter
        Continuous: No previous connected transmitter found

📶   No wireless connection
        Free to connect with any transmitter

📶   Connection lost

Physical installation

⚠️ *Warning! The fixture must be either fastened to a flat surface such as a stage or wall, or clamped to a truss or similar structure in any orientation using a rigging clamp. Do not apply power to the fixture if it is standing freely or the fixture can be moved.*
Warning! If the fixture can cause injury or damage it if falls, attach an approved safety cable to one of the safety cable attachment points on the base (see "Fixture overview" on page 2).
Check that all surfaces to be illuminated are minimum 200 mm. from the fixture, that combustible materials (wood, fabric, paper, etc.) are minimum 100 mm. from the head, that there is free airflow around the fixture and that there are no flammable materials nearby.

⚠️ *Warning! Always use the rubber plug (To cover the charging adapter) when using the fixture indoor and outdoor.*

Fastening the fixture to a flat surface

The fixture can be fastened to a fixed flat surface that is oriented at any angle. Check that the surface can support at least 10 times the weight of all fixtures and equipment to be installed on it.
⚠️ *Warning! The supporting surface must be hard and flat or air vents in the base may be blocked, which will cause overheating. Fasten the fixture securely. Do not stand it on a surface or leave it where it can be moved or can fall over. Attach a securely anchored safety cable to the safety cable attachment point (see "Fixture overview" on page 2) if the fixture is to be installed in any location where it may fall and cause injury or damage if the primary attachment fails.*

3. Block access under the work area. Working from a stable platform, hang the fixture on the truss with the arrow on the base towards the area to be illuminated. Tighten the rigging clamp.
4. Secure the fixture against clamp failure with a secondary attachment such as an approved safety cable that is rated for the weight of the fixture using one of the attachment points at the edges of the base (see "Fixture overview" on page 6). Do not use any other part of the fixture as a safety cable attachment point.
5. Check that the head will not collide with other fixtures or objects.

Onboard control menus

Main Menu	Menu level 2	Menu level 3	Remark
Auto Show	Auto	Speed	Default ：Auto 0
	<Auto 0>	0~100	
	<Auto 1>	0~100	
	<Auto 2>	0~100	
	<Auto 3>	0~100	
	<Auto 4>	0~100	
Static	<Fixed Color>	Fixed Color	Default ：RGBW
		<R>	
		<G>	
		<B>	
		<W>	
		<GB>	
		<RB>	
		<RG>	
		<RGB>	
		<RW>	
		<GW>	
		<BW>	
		<RGW>	
		<RBW>	
		<GBW>	
		<RGBW>	
	<Manual Color>	Value	Default ：RGBW= 255
		<R= 255>	
		<G= 255>	
		<B= 255>	
		<W= 255>	
Dimmer Mode	<Off>		Default ：Off
	<Dimmer 1>		
	<Dimmer 2>		
	<Dimmer 3>		
Back Light	<On>		Default ：On
	<10S>		
	<20S>		
	<30S>		
Information	Auto Test	Test	
	Fixture Hours	<9999>	
	Version	<V 1.0>	
DMX Address	001-512		Default ：001
DMX Channel	<4Ch>		Address：1-509
	<6Ch>		Address：1-507
	<10Ch>		Address：1-503
	<HSV>		Address：1-510
	<HSI>		Address：1-510
Master/Slave	<Master>		Default ：Slave
	<Slave>		
Wireless Setting	Receive	On	Default ：Off
		Off	
	Reset	Reset	
White Balance	Balance	Value	Default ：RGB= 255
	<R= 255>	<R= 255>	R：125 -255
	<G= 255>	<G= 255>	G：125 -255
	<B= 255>	<B= 255>	B：125 -255

DMX protocol

4-CH	Function	Value	Percent/Setting	Remark
1	Red	000-255	0~100%	
2	Green	000-255	0~100%	
3	Blue	000-255	0~100%	
4	White	000-255	0~100%	

6-CH	Function	Value	Percent/Setting	Remark
1	Dimmer	000-255	0~100%	
2	Red	000-255	0~100%	
3	Green	000-255	0~100%	
4	Blue	000-255	0~100%	
5	White	000-255	0~100%	
6	Strobe	000-019	Closed	
		020-024	Open	
		025-064	Strobe(Fast -> Slow)	
		065-069	Open	
		070-084	Opening Pulse(Fast -> Slow)	
		085-089	Open	
		090-104	Closing Pulse(Fast -> Slow)	
		105-109	Open	
		110-124	Random Strobe	
		125-129	Open	
		130-144	Random Opening Pulse(Fast -> Slow)	
		145-149	Open	
		150-164	Random Closing Pulse(Fast -> Slow)	
		165-169	Open	
		170-184	Burst pulse	
		185-189	Open	
		190-204	Random burst pulse	
		205-209	Open	
		210-224	Sine wave(Fast -> Slow)	
		225-229	Open	
		230-244	burst	
		245-255	Open	

10CH	Function	Value	Percent/Setting	Remark
1	Dimmer	000-255	0~100%	
2	Red	000-255	0~100%	
3	Green	000-255	0~100%	
4	Blue	000-255	0~100%	
5	White	000-2550	0~100%	
6	Strobe	000-019	Closed	
		020-024	Open	
		025-064	Strobe(Fast -> Slow)	
		065-069	Open	
		070-084	Opening Pulse(Fast -> Slow)	
		085-089	Open	
		090-104	Closing Pulse(Fast -> Slow)	
		105-109	Open	
		110-124	Random Strobe	
		125-129	Open	
		130-144	Random Opening P ulse(Fast -> Slow)	
		145-149	Open	
		150-164	Random Closing Pulse(Fast -> Slow)	
		165-169	Open	
		170-184	Burst pulse	
		185-189	Open	
		190-204	Random burst pulse	
		205-209	Open	
		210-224	Sine wave(Fast -> Slow)	
		225-229	Open	
		230-244	burst	
		245-255	Open	

7	Color Macro+ White Balance	000-010	No Function	This channel is valid when the value of CH6 is over than 19. While CH6 is in "Open" status, this channel is in vain if the value of CH8 is over than 51, but it is worked if the value is less than 52.
		011-030	R 100% G 0~100% B 0	
		031-050	R 100%~0 G 100% B 0	
		051-070	R 0 G 100% B 0~100%	
		071-090	R 0 G 100%~0 B 100%	
		091-110	R 0~100% G 0 B 10 0%	
		111-130	R 100% G 0 B 100%~0	
		131-150	R 100% G 0~100% B 0~100%	
		151-170	R 100%~0 G 100%~0 B 100%	
		171-200	R 100% G 100% B 100% W 100%	
		201-205	White 1	
		206-210	White 2	
		211-215	White 3	
		216-220	White 4	
		221-225	White 5	
		226-230	White 6	
		231-235	White 7	
		236-240	White 8	
		241-245	White 9	
		246-250	White 10	
		251-255	White 11	
8	Auto programs	000-051	No Function	This channel is valid just when CH6 is in " open".
		052-101	Auto Program 1	
		102-152	Auto Program 2	
		153-203	Auto Program 3	
		204-254	Auto Program 4	
		255	Auto Program 5	
9	Auto speed	000-255	Auto speed slow to fast	
10	Dimmer Speed	000-051	Menu Setting dimmer mode	
		052-101	Dimmer mode off	
		102-152	Dimmer mode1	
		153-203	Dimmer mode2	
		204-255	Dimmer mode3	

HSV	Function	Value	Percent/Setting	Remark
1	H	000-255	Hue	
2	S	000-255	Staturation	
3	V	000-255	Value(Brightness)	

HSI	Function	Value	Percent/Setting	Remark
1	H	000-255	Hue	
2	S	000-255	Staturation	
3	I	000-255	Intensity	

Specifications

Optics
Light source . . . . 4x 10W RGBW CREE LEDS, 50.000 Hrs
Beam angle . . . . Zoom from 15º to 30º
Field angle . . . . Zoom from 20º to 40º
Output . . . . .See table below

Control
Control Methods . . . . WDMX or DMX
DMX Channels . . . . 4, 6, 10, HSV, HSI
Build in programs . . . . Yes
Dimming cruves . . . . 4 modes
Dimming resolution . . . . 16 bit
Menu . . . . 1.28 x 64 OLED Display
Data connection . . . . Build-in WDMX receiver, and also with 5-pin XLR in/Out

Electrical
Power . . . . .Built in battery, also with Neutrik PowerCon In
Specs of the Battery . . . . Lithium Battery, 5000 x time charge, 14.8 V, 13.2 AH
Working hours . . . . 9 hours for 4 Colours full on
Charging hours. . . . . 6 hours
Charging from . . . . Flight-case and build-in PowerCon In
Charging during use. . . . . .Yes
AC Voltage range . . . . 100-240 VAC, 50/60 Hz auto ranging
Power consumption . . . . 50 Watt

Physical
Housing. . . . . Die cast Magnesium
Heat management. . . . . Fan free
Dimensions . . . . 312 x 250 x 108 mm
Setting and addressing . . . . Control panel with backlit graphic display
Weigth. . . . . 5.5 kg
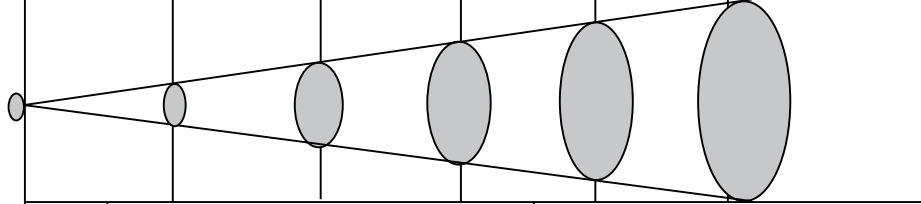
Listings
Certificates . . . . .CE, ROHS, RTTE, FCC, UN38.3
Protection rating . . . . IP44 without plug
                                                                                                      IP64 with plug

Accessories
Power cabling . . . . Neutrik PowerCon cable
Flightcase . . . . Optional
Clamp . . . . .G-Clamp with quicklock #875760

Output table

COLOR	NARROW ANGLE						WIDE ANGLE					
	1m	LUX	2m	LUX	3m	LUX	1m	LUX	2m	LUX	3m	LUX
R	4640		1132		468		1260		375		170	
G	6702		1994		910		2270		695		308	
B	898		255		112		320		91		40	
A												
W	9400		2063		853		2484		698		312	
RGB												
RGBA												
RGBW	15600		4026		1736		4640		1373		625	
RGBAW												
U V												
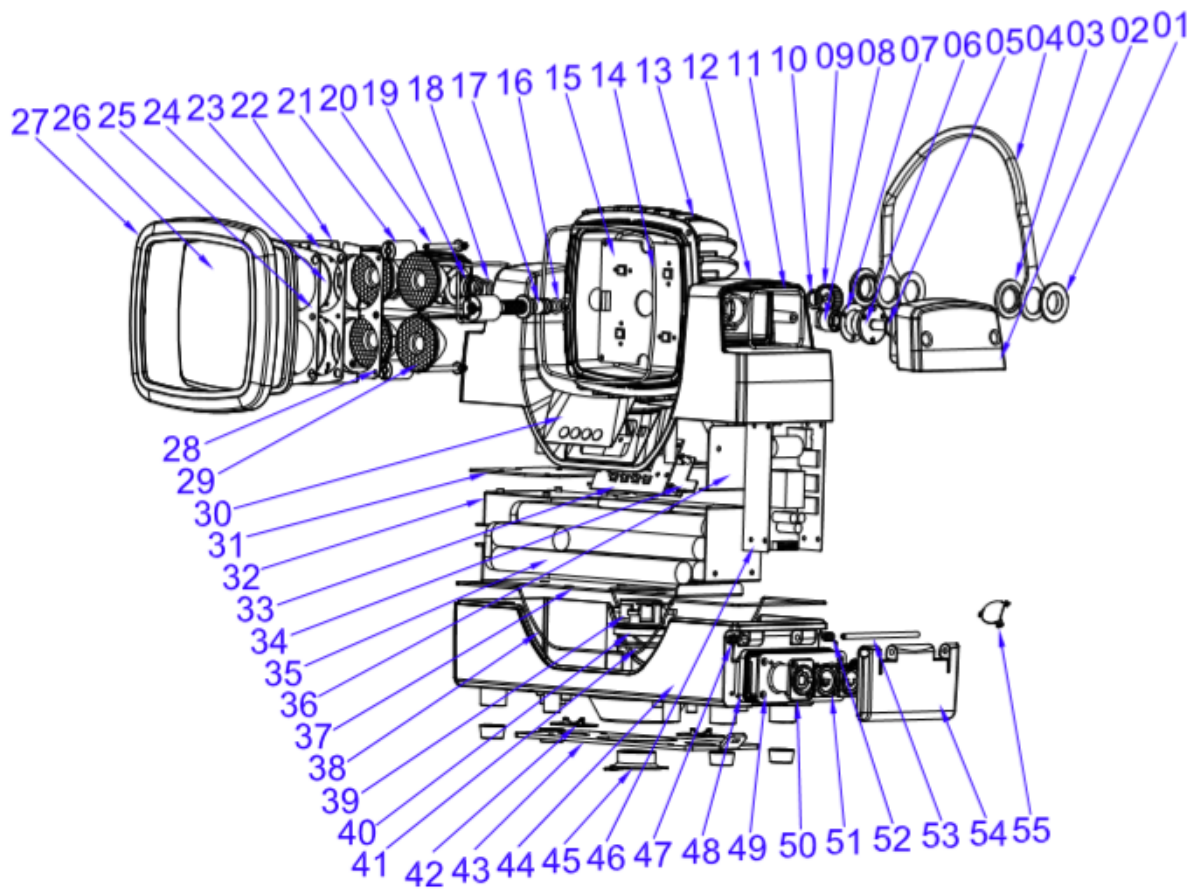
No.	Description	Part number CLF		No.	Description	Part number CLF
1	Plastic ring	CLF-08-141		29	Lens	CLF-08-169
2	Side panel	CLF-08-142		30	Display sticker	CLF-08-170
3	Plastic ring	CLF-08-143		31	Master	CLF-08-171
4	Lifting handle	CLF-08-144		32	Battery holder	CLF-08-172
5	Right inner shaft	CLF-08-145		33	Display pcb	CLF-08-173
6	Right inner shaft-B	CLF-08-146		34	Display holder	CLF-08-174
7	Plastic ring	CLF-08-147		35	Battery	CLF-08-175
8	Right inner shaft-C	CLF-08-148		36	Power supply holder	CLF-08-176
9	Knob	CLF-08-149		37	Battery holder	CLF-08-177
10	Stopper for driver shaft	CLF-08-150		38	Cushion rubber for housing	CLF-08-178
11	Cushion rubber for arm cover	CLF-08-151		39	Male loading adapter	CLF-08-179
12	Top cover	CLF-08-152		40	Aluminium ring	CLF-08-180
13	Head housing	CLF-08-153		41	Cushion rubber for housing	CLF-08-181
14	Cushion rubber for front glass	CLF-08-154		42	Clamp lock	CLF-08-182
15	Led pcb	CLF-08-155		43	Lock plate	CLF-08-183
16	Cushion rubber for drive shaft	CLF-08-156		44	Bottom housing	CLF-08-184
17	Drive shaft	CLF-08-157		45	Rubber cover for loading connector	CLF-08-185
18	Cushion rubber for left inner axle	CLF-08-158		46	Power supply	CLF-08-186
19	Left inner shaft	CLF-08-159		47	Spring	CLF-08-187
20	Slide shaft	CLF-08-160		48	Rubber for socket board	CLF-08-188
21	Slide socket	CLF-08-161		49	Socket board	CLF-08-189
22	Zoom plate 2	CLF-08-162		50	Power in socket	CLF-08-190
23	Zoom plate 3	CLF-08-163		51	XLR pcb 5 pin	CLF-08-191
24	Zoom lens	CLF-08-164		52	Spring	CLF-08-192
25	Zoom plate 2	CLF-08-165		53	Stand off	CLF-08-193
26	Front glass	CLF-08-166		54	Connections cover	CLF-08-194
27	Head cover	CLF-08-167		55	Electric coupling holder	CLF-08-195
28	Lens holder	CLF-08-168				