

W09

19 × 40 W LED Bee Eye Moving Head Eco

USER MANUAL

Professional LED moving-head wash, beam and effect fixture



READ BEFORE USE Keep this manual with the fixture. Installation, operation and service must be performed by qualified personnel.

English Edition · Specifications subject to change without notice

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MODEL IDENTIFICATION This manual is organized for model W09. Before connecting power or selecting a DMX personality, verify the model, electrical rating and firmware shown on the actual fixture.

Thank you for choosing the W09. Read this manual completely before installation or operation. Follow all safety instructions and retain the manual for future reference.

1 Safety Information

DANGER Disconnect the fixture from AC power before cleaning, inspection, installation or service. The fixture contains no user-serviceable internal parts.

- Use the fixture indoors in a dry location unless the product label explicitly states a different environmental rating.
- Connect only to a grounded Class I supply. The protective earth conductor must never be interrupted.
- Use only the voltage and frequency marked on the fixture. The technical rating in this manual is AC 100–240 V, 50/60 Hz.
- Allow the fixture to reach room temperature after transport or exposure to a large temperature change. Condensation can damage internal components.
- Inspect the power cable regularly. Do not use a cable that is pinched, cut, abraded or otherwise damaged.
- Do not modify the fixture. Installation, maintenance and repair must be performed by qualified personnel.
- Do not stare into the light output. Do not operate the fixture if a lens, guard or enclosure is missing or damaged.
- Keep children and unauthorized persons away from the fixture. Do not apply excessive force during installation or operation.

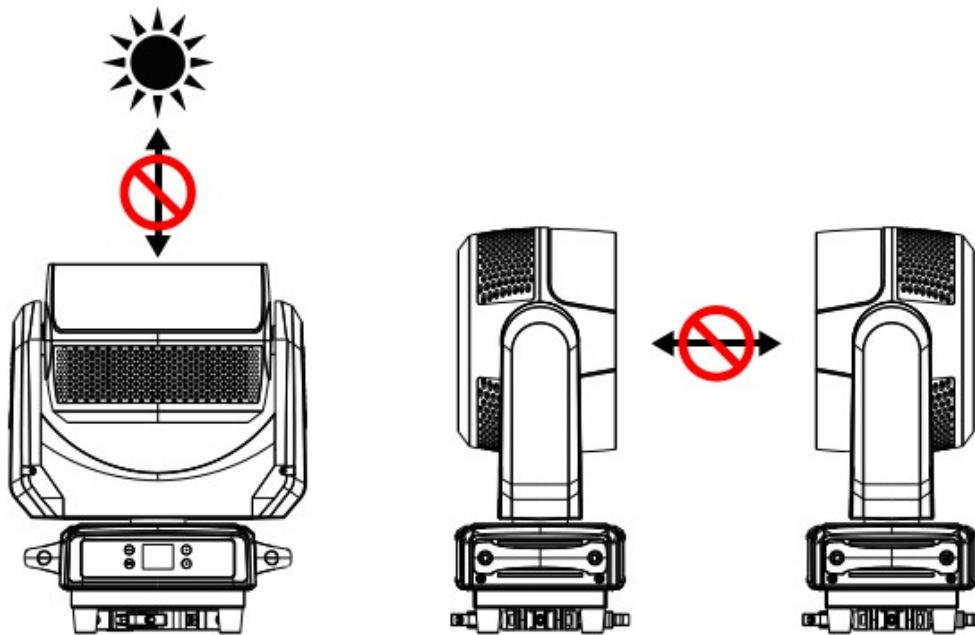


Figure 1. Protect the front lens from concentrated external light.

OPTICAL HAZARD Direct sunlight or another powerful beam entering the front lens can cause severe internal damage. Never expose the lens to direct sunlight during unpacking, installation, operation, transport or storage. Never aim one fixture directly into another.

2 Product Overview

The W09 combines a 19-pixel RGBW LED array with motorized pan, tilt, zoom and a continuously rotating front lens. It supports DMX512, sound-active and automatic operation for concerts, theaters, studios, clubs, bars and similar entertainment venues.

2.1 Package Contents

Item	Quantity
W09 fixture	1
User manual	1
Power cable	1
DMX signal cable	1

Unpack carefully and inspect the fixture and accessories for shipping damage. If anything is missing or damaged, stop and contact the supplier before use.

2.2 Technical Specifications

Parameter	Specification
Input power	AC 100–240 V, 50/60 Hz
Maximum power	800 W
Light source	19 × 40 W RGBW 4-in-1 LEDs
Color temperature	2,800–8,500 K
Rated LED life	50,000 hours (nominal)
Beam angle	3.5°–50°
Control	DMX512, sound-active, Auto 1, Auto 2
DMX personalities	21 / 30 / 35 / 78 / 92 / 97 / 99 channels
Effects	CTO, wash, beam, vortex, kaleidoscope, pixel control
Front lens	Bidirectional continuous rotation
Dimensions	390 × 223 × 531 mm (W × D × H)

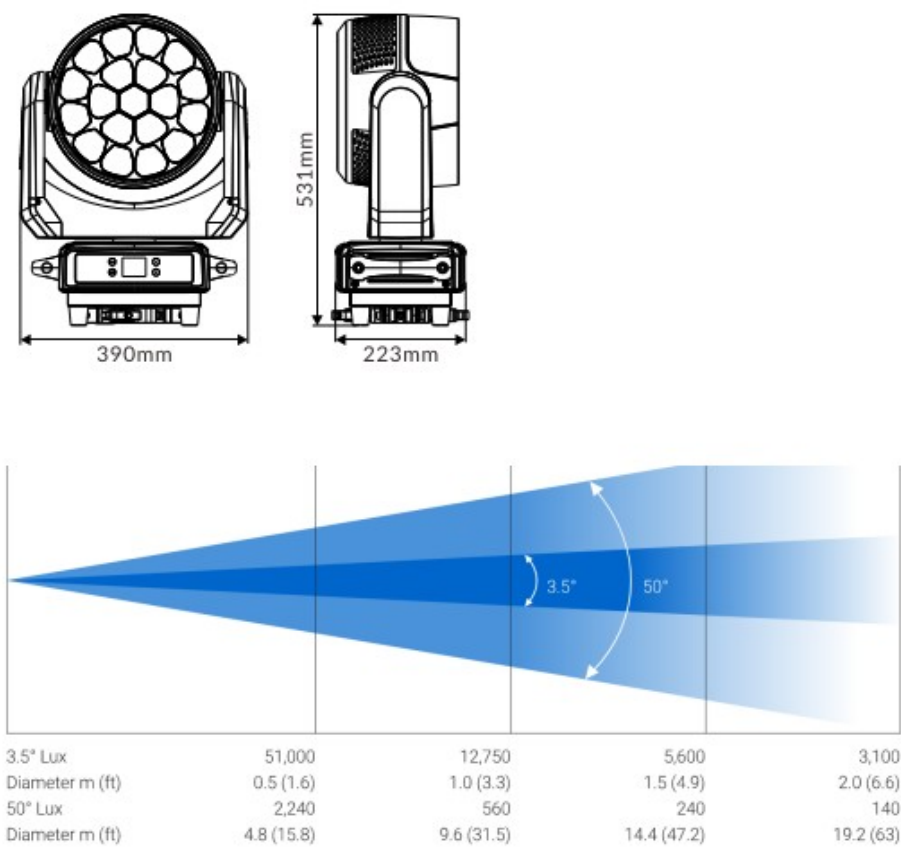


Figure 2. Dimensions and beam-angle reference. Photometric values are nominal.

3 Setup and Installation

3.1 DMX512 Data Connection

Connect fixtures in a daisy chain using shielded twisted-pair DMX cable. Connect the controller to DMX IN on the first fixture, then connect each DMX OUT to the next DMX IN. Do not use a star connection without a suitable DMX splitter.

3-pin XLR	Signal
Pin 1	Shield / Ground
Pin 2	Data -
Pin 3	Data +

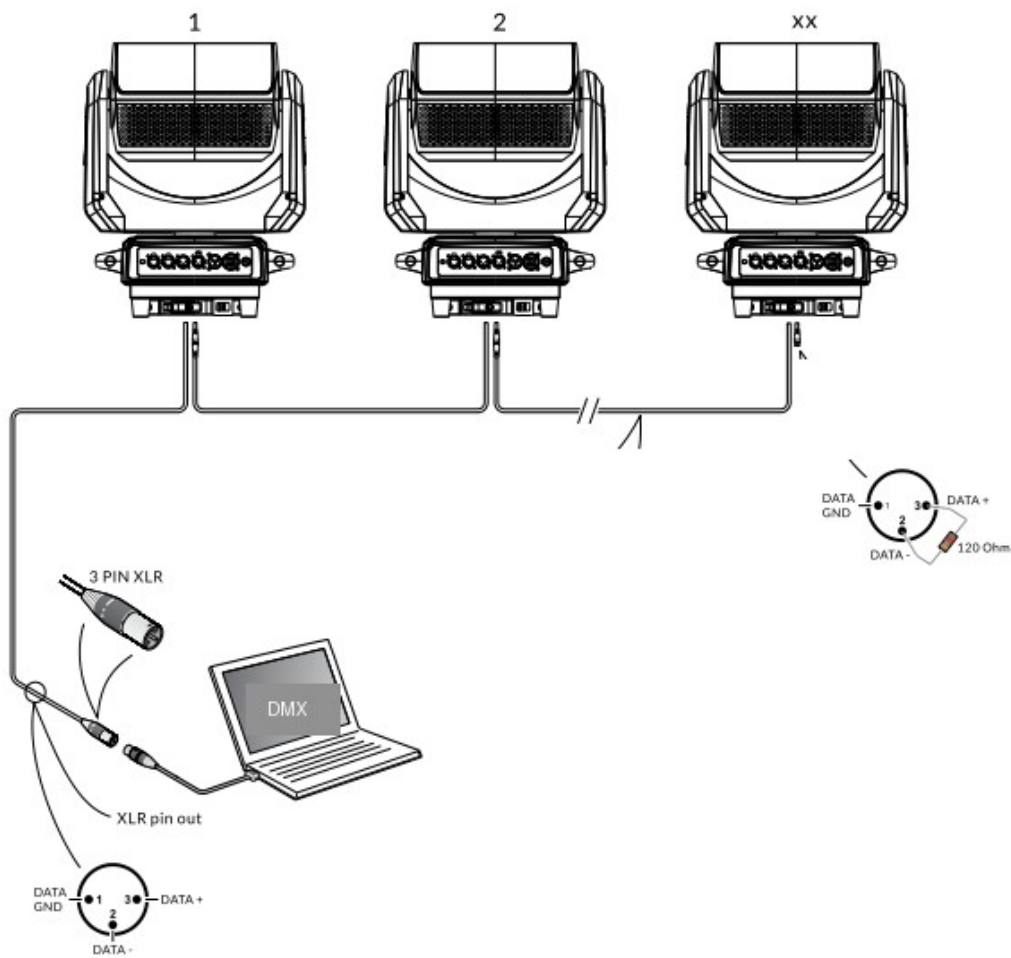


Figure 3. DMX512 daisy-chain wiring and termination.

TERMINATION Install a 120 Ω , 1 W resistor between pins 2 and 3 of a 3-pin XLR plug and connect it to DMX OUT on the final fixture.

3.2 DMX Start Address

Assign each fixture a unique start address. The next non-overlapping address equals the current start address plus the channel count of the selected personality.

Example: 21-channel mode	Start address
Fixture 1	A001
Fixture 2	A022
Fixture 3	A043

CONTROLLER CAPACITY The controller must provide enough channels for every addressed fixture. Addressing rules can vary with the console and fixture profile.

3.3 Rigging

The fixture may be placed upright, mounted at an angle or suspended upside down. The supporting structure, clamps, fasteners and safety cable must be rated for the installation and installed according to local regulations.

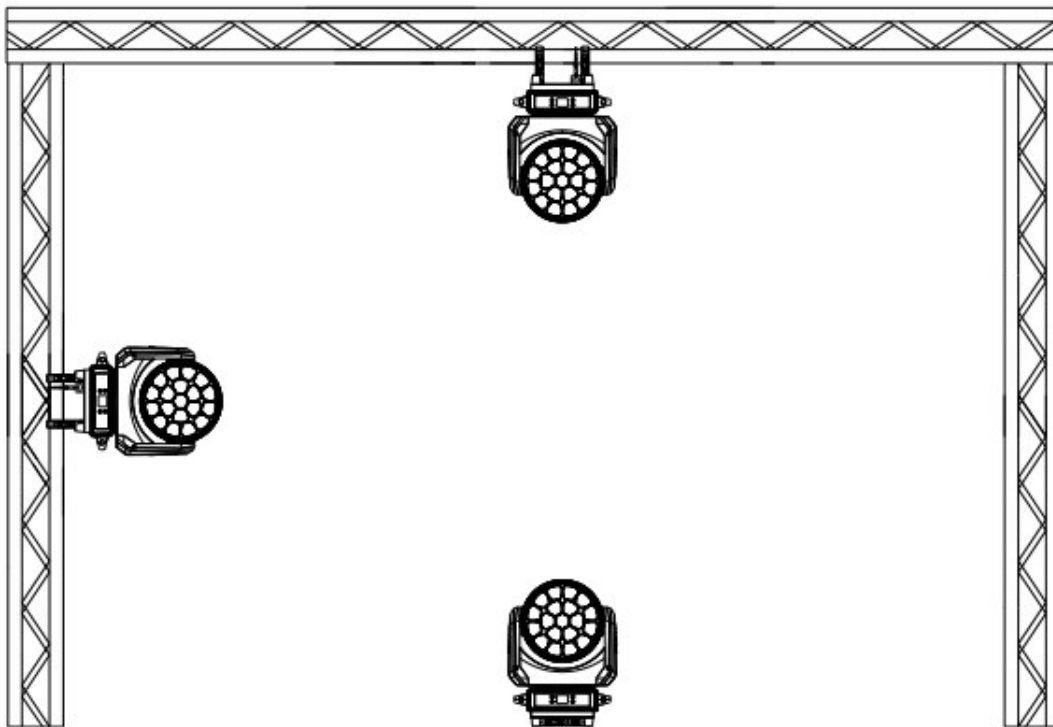


Figure 4. Typical mounting orientations.

- Verify that the mounting point and support structure are stable before installation.
- For suspended installation, attach an independently rated safety cable through a designated safety point.
- Keep the area below the fixture clear during installation and adjustment.
- Inspect the safety cable, clamps and fasteners regularly for wear, deformation and loosening.

4 Control Panel and Menu

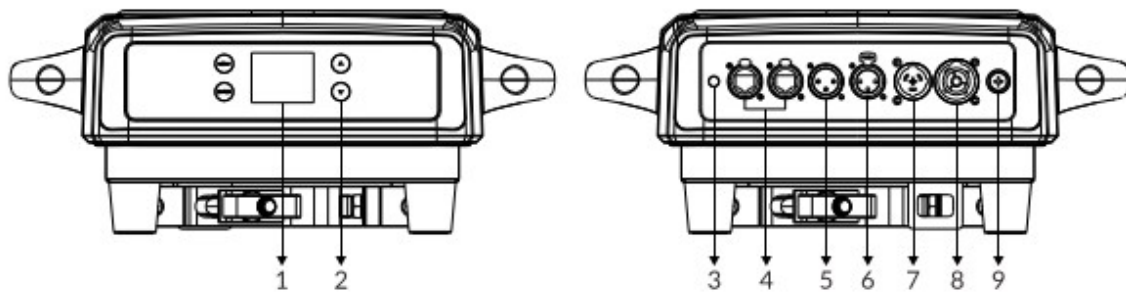


Figure 5. Display and connection panel layout. Follow the markings on the actual fixture.

4.1 Display Status and Keys

Indicator / Key	Operation
DMX indicator	Blue when a valid controller signal is present; off in normal stand-alone operation.
Error indicator	Red when the fixture reports a fault; off in normal operation.
Temperature	Shows LED-board temperature. “--- °C” may indicate an open sensor circuit; “*** °C” or an implausible value may indicate a short circuit.
Address	Displays the DMX start address from 001 to 512.
UP / DOWN	Move through menu items or change the selected value.
ENTER	Open a menu, enter edit mode or confirm and save a value.
MENU	Return to the previous screen or leave edit mode without saving.

DISPLAY CARE Do not press the display with a sharp or pointed object.

4.2 Main Menu

Main Menu	Item	Options / Notes
Address	DMX address	001–512
Settings	Run mode	DMX / Sound / Auto 1 / Auto 2
Settings	Channel mode	21CH / 35CH / 78CH / 92CH / 97CH / 30CH / 99CH
Settings	Pan invert	On / Off
Settings	Tilt invert	On / Off
Settings	Hall correction	On / Off
Settings	Optical correction	On / Off
Settings	Signal hold	On / Off
Settings	Screen saver	On / Off
Settings	Screen orientation	On / Off / Auto
Settings	Synchronized update	On / Off
Settings	Language	Chinese / English
Settings	Factory reset	Restore factory defaults
Manual	Channel control	Set the current channel value from 0–255
Calibration	Password	Enter the protected fixture-calibration menu
Reset	Effect motors	Reset effect motors except pan/tilt
Reset	Movement motors	Reset pan and tilt
Reset	All motors	Reset the complete fixture
Information	Diagnostics	Reset errors, DMX monitor, Hall sensor, X/Y optical sensor
Information	Versions	Hardware and software versions

4.3 Manual Control

Select a channel and press ENTER to edit. Use UP or DOWN to change the value. Press ENTER again to save, or press MENU to leave edit mode without saving.

4.4 Calibration

Calibration Group	Parameter	Range / Reference
Home position	Pan / Tilt / Zoom	0–255; 127 = no offset
Travel	Pan / Tilt / Zoom	0–255; 127 = no offset
Drive strength	Pan / Tilt and other motors	0–255; 127 = nominal
Other	Microphone sensitivity	Adjust to suit the environment
Security	Password	Restricted to qualified service personnel

CALIBRATION Incorrect calibration can cause abnormal movement or mechanical stress. Record original values before adjustment and restrict this menu to qualified personnel.

4.5 Reset and Information

Use RESET to initialize the effect motors, pan/tilt motors or the entire fixture. The INFORMATION menu provides reset-error records, live DMX data, sensor status and hardware/software version data. A red ERR indication means that the corresponding subsystem requires inspection.

5 DMX Channel Reference

The W09 provides seven DMX personalities. To reduce repetition, the charts below show two common channel cores followed by the extensions used by each personality. Pixel channels are expanded in full for direct fixture-profile programming.

Mode	Common Core	Extension
21CH	Channels 1–21 · Core A	None
35CH	Channels 1–21 · Core A	Built-in effects, Channels 22–35
78CH	Channels 1–21 · Core A	19-pixel RGB, Channels 22–78
92CH	Channels 1–21 · Core A	Effects 22–35 + 19-pixel RGB 36–92
97CH	Channels 1–21 · Core A	19-pixel RGBW, Channels 22–97
30CH	Channels 1–23 · Core B	Auxiliary strip, Channels 24–30
99CH	Channels 1–23 · Core B	19-pixel RGBW, Channels 24–99

FIRMWARE Channel functions can change with firmware revision. Compare this chart with the fixture display and controller personality before programming.

5.1 Core A · Channels 1–21

Used by 21CH, 35CH, 78CH, 92CH and 97CH personalities.

Channel	Function	DMX Value	Description
1	Red	0–255	Red linear dimming from dark to full
2	Red Fine	0–255	Red fine dimming
3	Green	0–255	Green linear dimming from dark to full
4	Green Fine	0–255	Green fine dimming
5	Blue	0–255	Blue linear dimming from dark to full
6	Blue Fine	0–255	Blue fine dimming
7	White	0–255	White linear dimming from dark to full
8	White Fine	0–255	White fine dimming
9	Color Temperature	0–255	Linear color-temperature adjustment
10	Color Macro	0–255	Built-in color macros
11	Strobe	0–3	Blackout
11	Strobe	4–103	Synchronized strobe, slow to fast (1–25 Hz)
11	Strobe	104–107	Open
11	Strobe	108–207	Pulse strobe, slow to fast (1–25 Hz)
11	Strobe	208–212	Open
11	Strobe	213–225	Slow random strobe
11	Strobe	226–238	Medium random strobe
11	Strobe	239–251	Fast random strobe
11	Strobe	252–255	Open
12	Master Dimmer	0–255	Linear dimming from dark to full
13	Master Dimmer Fine	0–255	Fine master-dimmer control
14	Pan	0–255	0–540°
15	Pan Fine	0–255	16-bit fine adjustment

Channel	Function	DMX Value	Description
16	Tilt	0–255	0–205°
17	Tilt Fine	0–255	16-bit fine adjustment
18	Macro Function	0–255	Reserved
19	Reset	0–25	No function
19	Reset	26–76	Head reset; hold value for 5 s
19	Reset	77–127	Pan/tilt reset; hold value for 5 s
19	Reset	128–255	Full reset; hold value for 5 s
20	Zoom	0–255	Linear zoom from narrow to wide
21	Rotating Lens	0–127	0–60°
21	Rotating Lens	128–188	Counterclockwise rotation, fast to slow
21	Rotating Lens	189–193	Stop
21	Rotating Lens	194–255	Clockwise rotation, slow to fast

5.2 Effect Extension · Channels 22–35

Used by 35CH and 92CH personalities. In 35CH mode this extension completes the personality. In 92CH mode, pixel RGB channels follow at Channel 36.

Channel	Function	DMX Value	Description
22	Built-in Effect (with Effect Color)	0–7	None
22	Built-in Effect (with Effect Color)	8	Static Effect 1
22	Built-in Effect (with Effect Color)	9	Static Effect 2
22	Built-in Effect (with Effect Color)	10	Static Effect 3
22	Built-in Effect (with Effect Color)	11	None
22	Built-in Effect (with Effect Color)	12	Static Effect 4
22	Built-in Effect (with Effect Color)	13	Static Effect 5
22	Built-in Effect (with Effect Color)	14	None
22	Built-in Effect (with Effect Color)	15	Dynamic Effect 1
22	Built-in Effect (with Effect Color)	16	Dynamic Effect 2
22	Built-in Effect (with Effect Color)	17	Dynamic Effect 3
22	Built-in Effect (with Effect Color)	18	Dynamic Effect 4
22	Built-in Effect (with Effect Color)	19	Single-color random effect
22	Built-in Effect (with Effect Color)	20	Full-color random effect
22	Built-in Effect (with Effect Color)	21	Rainbow Effect 1
22	Built-in Effect (with Effect Color)	22	Rainbow Effect 2
22	Built-in Effect (with Effect Color)	23	Dynamic Effect 5
22	Built-in Effect (with Effect Color)	24	Dynamic Effect 6
22	Built-in Effect (with Effect Color)	25	Dynamic Effect 7
22	Built-in Effect (with Effect Color)	26	Dynamic Effect 8
22	Built-in Effect (with Effect Color)	27	Dynamic Effect 9
22	Built-in Effect (with Effect Color)	28	Dynamic Effect 10
22	Built-in Effect (with Effect Color)	29	Dynamic Effect 11
22	Built-in Effect (with Effect Color)	30	Dynamic Effect 12
22	Built-in Effect (with Effect Color)	31	Dynamic Effect 13
22	Built-in Effect (with Effect Color)	32	Dynamic Effect 14
22	Built-in Effect (with Effect Color)	33	None
22	Built-in Effect (with Effect Color)	34	None
22	Built-in Effect (with Effect Color)	35	Dynamic Effect 15
22	Built-in Effect (with Effect Color)	36	Dynamic Effect 16
22	Built-in Effect (with Effect Color)	37	Dynamic Effect 17
22	Built-in Effect (with Effect Color)	38	Dynamic Effect 18

Channel	Function	DMX Value	Description
22	Built-in Effect (with Effect Color)	39	Dynamic Effect 19
22	Built-in Effect (with Effect Color)	40	Dynamic Effect 20
22	Built-in Effect (with Effect Color)	41	None
22	Built-in Effect (with Effect Color)	42	Dynamic Effect 21
22	Built-in Effect (with Effect Color)	43	None
22	Built-in Effect (with Effect Color)	44	Dynamic Effect 22
22	Built-in Effect (with Effect Color)	45	Dynamic Effect 23
22	Built-in Effect (with Effect Color)	46	Dynamic Effect 24
22	Built-in Effect (with Effect Color)	47	Dynamic Effect 25
22	Built-in Effect (with Effect Color)	48	Dynamic Effect 26
22	Built-in Effect (with Effect Color)	49	Dynamic Effect 27
22	Built-in Effect (with Effect Color)	50	Dynamic Effect 28
22	Built-in Effect (with Effect Color)	51	Dynamic Effect 29
22	Built-in Effect (with Effect Color)	52	Dynamic Effect 30
22	Built-in Effect (with Effect Color)	53	Dynamic Effect 31
22	Built-in Effect (with Effect Color)	54	Dynamic Effect 32
22	Built-in Effect (with Effect Color)	55	Dynamic Effect 33
22	Built-in Effect (with Effect Color)	56	Dynamic Effect 34
22	Built-in Effect (with Effect Color)	57	Dynamic Effect 35
22	Built-in Effect (with Effect Color)	58	Dynamic Effect 36
22	Built-in Effect (with Effect Color)	59	Dynamic Effect 37
22	Built-in Effect (with Effect Color)	60	Dynamic Effect 38
22	Built-in Effect (with Effect Color)	61	Random Position 1
22	Built-in Effect (with Effect Color)	62	Random Position 2
22	Built-in Effect (with Effect Color)	63	Random Position 3
22	Built-in Effect (with Effect Color)	64	None
22	Built-in Effect (with Effect Color)	65	Random Position 4
22	Built-in Effect (with Effect Color)	66	Random Position 5
22	Built-in Effect (with Effect Color)	67	Dynamic Effect 39
22	Built-in Effect (with Effect Color)	68	Dynamic Effect 40
22	Built-in Effect (with Effect Color)	69	None
22	Built-in Effect (with Effect Color)	70	Dynamic Effect 41
22	Built-in Effect (with Effect Color)	71–255	None
23	Effect Speed	0–63	Static effect
23	Effect Speed	64–158	Forward, fast to slow
23	Effect Speed	159–160	Stop
23	Effect Speed	161–255	Reverse, slow to fast
24	Effect Fade	0–255	Dynamic-effect fade
25	Effect Red	0–255	Dynamic-effect red
26	Effect Green	0–255	Dynamic-effect green
27	Effect Blue	0–255	Dynamic-effect blue
28	Effect White	0–255	Dynamic-effect white
29	Effect Dimmer	0–255	Pattern dimmer, 0–100%
30	Background Dimmer	0–255	Background dimmer, 0–100%
31	Effect Transition	0–255	Pattern transition control
32	Effect Translation	0–255	Pattern translation
33	Foreground Strobe	0–255	Foreground strobe; behavior follows Channel 11
34	Background Strobe	0–255	Background strobe; behavior follows Channel 11
35	Background Selection	0–255	Background selection

5.3 78CH Pixel Extension · Channels 22–78

Channel	Pixel	Color	DMX Value / Description
22	1	Red	0–255 · Linear dimming from dark to full
23	1	Green	0–255 · Linear dimming from dark to full
24	1	Blue	0–255 · Linear dimming from dark to full
25	2	Red	0–255 · Linear dimming from dark to full
26	2	Green	0–255 · Linear dimming from dark to full
27	2	Blue	0–255 · Linear dimming from dark to full
28	3	Red	0–255 · Linear dimming from dark to full
29	3	Green	0–255 · Linear dimming from dark to full
30	3	Blue	0–255 · Linear dimming from dark to full
31	4	Red	0–255 · Linear dimming from dark to full
32	4	Green	0–255 · Linear dimming from dark to full
33	4	Blue	0–255 · Linear dimming from dark to full
34	5	Red	0–255 · Linear dimming from dark to full
35	5	Green	0–255 · Linear dimming from dark to full
36	5	Blue	0–255 · Linear dimming from dark to full
37	6	Red	0–255 · Linear dimming from dark to full
38	6	Green	0–255 · Linear dimming from dark to full
39	6	Blue	0–255 · Linear dimming from dark to full
40	7	Red	0–255 · Linear dimming from dark to full
41	7	Green	0–255 · Linear dimming from dark to full
42	7	Blue	0–255 · Linear dimming from dark to full
43	8	Red	0–255 · Linear dimming from dark to full
44	8	Green	0–255 · Linear dimming from dark to full
45	8	Blue	0–255 · Linear dimming from dark to full
46	9	Red	0–255 · Linear dimming from dark to full
47	9	Green	0–255 · Linear dimming from dark to full
48	9	Blue	0–255 · Linear dimming from dark to full
49	10	Red	0–255 · Linear dimming from dark to full
50	10	Green	0–255 · Linear dimming from dark to full
51	10	Blue	0–255 · Linear dimming from dark to full
52	11	Red	0–255 · Linear dimming from dark to full
53	11	Green	0–255 · Linear dimming from dark to full
54	11	Blue	0–255 · Linear dimming from dark to full
55	12	Red	0–255 · Linear dimming from dark to full
56	12	Green	0–255 · Linear dimming from dark to full
57	12	Blue	0–255 · Linear dimming from dark to full
58	13	Red	0–255 · Linear dimming from dark to full
59	13	Green	0–255 · Linear dimming from dark to full
60	13	Blue	0–255 · Linear dimming from dark to full
61	14	Red	0–255 · Linear dimming from dark to full
62	14	Green	0–255 · Linear dimming from dark to full
63	14	Blue	0–255 · Linear dimming from dark to full
64	15	Red	0–255 · Linear dimming from dark to full
65	15	Green	0–255 · Linear dimming from dark to full
66	15	Blue	0–255 · Linear dimming from dark to full
67	16	Red	0–255 · Linear dimming from dark to full
68	16	Green	0–255 · Linear dimming from dark to full
69	16	Blue	0–255 · Linear dimming from dark to full
70	17	Red	0–255 · Linear dimming from dark to full
71	17	Green	0–255 · Linear dimming from dark to full

Channel	Pixel	Color	DMX Value / Description
72	17	Blue	0-255 · Linear dimming from dark to full
73	18	Red	0-255 · Linear dimming from dark to full
74	18	Green	0-255 · Linear dimming from dark to full
75	18	Blue	0-255 · Linear dimming from dark to full
76	19	Red	0-255 · Linear dimming from dark to full
77	19	Green	0-255 · Linear dimming from dark to full
78	19	Blue	0-255 · Linear dimming from dark to full

5.4 92CH Pixel Extension · Channels 36-92

Channel	Pixel	Color	DMX Value / Description
36	1	Red	0-255 · Linear dimming from dark to full
37	1	Green	0-255 · Linear dimming from dark to full
38	1	Blue	0-255 · Linear dimming from dark to full
39	2	Red	0-255 · Linear dimming from dark to full
40	2	Green	0-255 · Linear dimming from dark to full
41	2	Blue	0-255 · Linear dimming from dark to full
42	3	Red	0-255 · Linear dimming from dark to full
43	3	Green	0-255 · Linear dimming from dark to full
44	3	Blue	0-255 · Linear dimming from dark to full
45	4	Red	0-255 · Linear dimming from dark to full
46	4	Green	0-255 · Linear dimming from dark to full
47	4	Blue	0-255 · Linear dimming from dark to full
48	5	Red	0-255 · Linear dimming from dark to full
49	5	Green	0-255 · Linear dimming from dark to full
50	5	Blue	0-255 · Linear dimming from dark to full
51	6	Red	0-255 · Linear dimming from dark to full
52	6	Green	0-255 · Linear dimming from dark to full
53	6	Blue	0-255 · Linear dimming from dark to full
54	7	Red	0-255 · Linear dimming from dark to full
55	7	Green	0-255 · Linear dimming from dark to full
56	7	Blue	0-255 · Linear dimming from dark to full
57	8	Red	0-255 · Linear dimming from dark to full
58	8	Green	0-255 · Linear dimming from dark to full
59	8	Blue	0-255 · Linear dimming from dark to full
60	9	Red	0-255 · Linear dimming from dark to full
61	9	Green	0-255 · Linear dimming from dark to full
62	9	Blue	0-255 · Linear dimming from dark to full
63	10	Red	0-255 · Linear dimming from dark to full
64	10	Green	0-255 · Linear dimming from dark to full
65	10	Blue	0-255 · Linear dimming from dark to full
66	11	Red	0-255 · Linear dimming from dark to full
67	11	Green	0-255 · Linear dimming from dark to full
68	11	Blue	0-255 · Linear dimming from dark to full
69	12	Red	0-255 · Linear dimming from dark to full
70	12	Green	0-255 · Linear dimming from dark to full
71	12	Blue	0-255 · Linear dimming from dark to full
72	13	Red	0-255 · Linear dimming from dark to full
73	13	Green	0-255 · Linear dimming from dark to full
74	13	Blue	0-255 · Linear dimming from dark to full

Channel	Pixel	Color	DMX Value / Description
75	14	Red	0-255 · Linear dimming from dark to full
76	14	Green	0-255 · Linear dimming from dark to full
77	14	Blue	0-255 · Linear dimming from dark to full
78	15	Red	0-255 · Linear dimming from dark to full
79	15	Green	0-255 · Linear dimming from dark to full
80	15	Blue	0-255 · Linear dimming from dark to full
81	16	Red	0-255 · Linear dimming from dark to full
82	16	Green	0-255 · Linear dimming from dark to full
83	16	Blue	0-255 · Linear dimming from dark to full
84	17	Red	0-255 · Linear dimming from dark to full
85	17	Green	0-255 · Linear dimming from dark to full
86	17	Blue	0-255 · Linear dimming from dark to full
87	18	Red	0-255 · Linear dimming from dark to full
88	18	Green	0-255 · Linear dimming from dark to full
89	18	Blue	0-255 · Linear dimming from dark to full
90	19	Red	0-255 · Linear dimming from dark to full
91	19	Green	0-255 · Linear dimming from dark to full
92	19	Blue	0-255 · Linear dimming from dark to full

5.5 97CH Pixel Extension · Channels 22-97

Channel	Pixel	Color	DMX Value / Description
22	1	Red	0-255 · Linear dimming from dark to full
23	1	Green	0-255 · Linear dimming from dark to full
24	1	Blue	0-255 · Linear dimming from dark to full
25	1	White	0-255 · Linear dimming from dark to full
26	2	Red	0-255 · Linear dimming from dark to full
27	2	Green	0-255 · Linear dimming from dark to full
28	2	Blue	0-255 · Linear dimming from dark to full
29	2	White	0-255 · Linear dimming from dark to full
30	3	Red	0-255 · Linear dimming from dark to full
31	3	Green	0-255 · Linear dimming from dark to full
32	3	Blue	0-255 · Linear dimming from dark to full
33	3	White	0-255 · Linear dimming from dark to full
34	4	Red	0-255 · Linear dimming from dark to full
35	4	Green	0-255 · Linear dimming from dark to full
36	4	Blue	0-255 · Linear dimming from dark to full
37	4	White	0-255 · Linear dimming from dark to full
38	5	Red	0-255 · Linear dimming from dark to full
39	5	Green	0-255 · Linear dimming from dark to full
40	5	Blue	0-255 · Linear dimming from dark to full
41	5	White	0-255 · Linear dimming from dark to full
42	6	Red	0-255 · Linear dimming from dark to full
43	6	Green	0-255 · Linear dimming from dark to full
44	6	Blue	0-255 · Linear dimming from dark to full
45	6	White	0-255 · Linear dimming from dark to full
46	7	Red	0-255 · Linear dimming from dark to full
47	7	Green	0-255 · Linear dimming from dark to full
48	7	Blue	0-255 · Linear dimming from dark to full
49	7	White	0-255 · Linear dimming from dark to full

Channel	Pixel	Color	DMX Value / Description
50	8	Red	0-255 · Linear dimming from dark to full
51	8	Green	0-255 · Linear dimming from dark to full
52	8	Blue	0-255 · Linear dimming from dark to full
53	8	White	0-255 · Linear dimming from dark to full
54	9	Red	0-255 · Linear dimming from dark to full
55	9	Green	0-255 · Linear dimming from dark to full
56	9	Blue	0-255 · Linear dimming from dark to full
57	9	White	0-255 · Linear dimming from dark to full
58	10	Red	0-255 · Linear dimming from dark to full
59	10	Green	0-255 · Linear dimming from dark to full
60	10	Blue	0-255 · Linear dimming from dark to full
61	10	White	0-255 · Linear dimming from dark to full
62	11	Red	0-255 · Linear dimming from dark to full
63	11	Green	0-255 · Linear dimming from dark to full
64	11	Blue	0-255 · Linear dimming from dark to full
65	11	White	0-255 · Linear dimming from dark to full
66	12	Red	0-255 · Linear dimming from dark to full
67	12	Green	0-255 · Linear dimming from dark to full
68	12	Blue	0-255 · Linear dimming from dark to full
69	12	White	0-255 · Linear dimming from dark to full
70	13	Red	0-255 · Linear dimming from dark to full
71	13	Green	0-255 · Linear dimming from dark to full
72	13	Blue	0-255 · Linear dimming from dark to full
73	13	White	0-255 · Linear dimming from dark to full
74	14	Red	0-255 · Linear dimming from dark to full
75	14	Green	0-255 · Linear dimming from dark to full
76	14	Blue	0-255 · Linear dimming from dark to full
77	14	White	0-255 · Linear dimming from dark to full
78	15	Red	0-255 · Linear dimming from dark to full
79	15	Green	0-255 · Linear dimming from dark to full
80	15	Blue	0-255 · Linear dimming from dark to full
81	15	White	0-255 · Linear dimming from dark to full
82	16	Red	0-255 · Linear dimming from dark to full
83	16	Green	0-255 · Linear dimming from dark to full
84	16	Blue	0-255 · Linear dimming from dark to full
85	16	White	0-255 · Linear dimming from dark to full
86	17	Red	0-255 · Linear dimming from dark to full
87	17	Green	0-255 · Linear dimming from dark to full
88	17	Blue	0-255 · Linear dimming from dark to full
89	17	White	0-255 · Linear dimming from dark to full
90	18	Red	0-255 · Linear dimming from dark to full
91	18	Green	0-255 · Linear dimming from dark to full
92	18	Blue	0-255 · Linear dimming from dark to full
93	18	White	0-255 · Linear dimming from dark to full
94	19	Red	0-255 · Linear dimming from dark to full
95	19	Green	0-255 · Linear dimming from dark to full
96	19	Blue	0-255 · Linear dimming from dark to full
97	19	White	0-255 · Linear dimming from dark to full

5.6 Core B · Channels 1–23

Used by 30CH and 99CH personalities.

Channel	Function	DMX Value	Description
1	Pan	0–255	0–540°
2	Pan Fine	0–255	16-bit fine adjustment
3	Tilt	0–255	0–205°
4	Tilt Fine	0–255	16-bit fine adjustment
5	Pan/Tilt Speed	0–255	Pan/tilt speed, fast to slow
6	Zoom	0–255	Linear zoom from narrow to wide
7	Rotating Lens	0–127	0–60°
7	Rotating Lens	128–188	Counterclockwise rotation, fast to slow
7	Rotating Lens	189–193	Stop
7	Rotating Lens	194–255	Clockwise rotation, slow to fast
8	Dimmer	0–255	Linear dimming from dark to full
9	Strobe	0–3	Open
9	Strobe	4–200	Synchronized strobe, slow to fast (1–25 Hz)
9	Strobe	201–215	Slow random strobe
9	Strobe	216–234	Medium random strobe
9	Strobe	235–255	Fast random strobe
10	Red	0–255	Red linear dimming from dark to full
11	Green	0–255	Green linear dimming from dark to full
12	Blue	0–255	Blue linear dimming from dark to full
13	White	0–255	White linear dimming from dark to full
14	Color Temperature	0–255	Linear color-temperature adjustment
15	Color Macro	0–255	Built-in color macros
16	Static Effect	0–9	None
16	Static Effect	10–14	Static Effect 1
16	Static Effect	15–19	Static Effect 2
16	Static Effect	20–24	Static Effect 3
16	Static Effect	25–29	Static Effect 4
16	Static Effect	30–34	Static Effect 5
16	Static Effect	35–39	Static Effect 6
16	Static Effect	40–44	Static Effect 7
16	Static Effect	45–49	Static Effect 8
16	Static Effect	50–54	Static Effect 9
16	Static Effect	55–59	Static Effect 10
16	Static Effect	60–64	Static Effect 11
16	Static Effect	65–69	Static Effect 12
16	Static Effect	70–74	Static Effect 13
16	Static Effect	75–79	Static Effect 14
16	Static Effect	80–84	Static Effect 15
16	Static Effect	85–89	Static Effect 16
16	Static Effect	90–94	Static Effect 17
16	Static Effect	95–99	Static Effect 18
16	Static Effect	100–104	Static Effect 19
16	Static Effect	105–109	Static Effect 20
16	Static Effect	110–114	Static Effect 21
16	Static Effect	115–119	Static Effect 22
16	Static Effect	120–124	Static Effect 23
16	Static Effect	125–129	Static Effect 24
16	Static Effect	130–134	Static Effect 25

Channel	Function	DMX Value	Description
16	Static Effect	135–139	Static Effect 26
16	Static Effect	140–144	Static Effect 27
16	Static Effect	145–149	Static Effect 28
16	Static Effect	150–154	Static Effect 29
16	Static Effect	155–159	Static Effect 30
16	Static Effect	160–164	Static Effect 31
16	Static Effect	165–169	Static Effect 32
16	Static Effect	170–174	Static Effect 33
16	Static Effect	175–179	Static Effect 34
16	Static Effect	180–184	Static Effect 35
16	Static Effect	185–255	Static Effect 36
17	Dynamic Effect	0–9	None
17	Dynamic Effect	10–14	Foreground and background colors adjustable
17	Dynamic Effect	15–19	Foreground and background colors adjustable
17	Dynamic Effect	20–24	Foreground and background colors adjustable
17	Dynamic Effect	25–29	Foreground and background colors adjustable
17	Dynamic Effect	30–34	Foreground and background colors adjustable
17	Dynamic Effect	35–39	Foreground and background colors adjustable
17	Dynamic Effect	40–44	Foreground and background colors adjustable
17	Dynamic Effect	45–49	Foreground and background colors adjustable
17	Dynamic Effect	50–54	Foreground and background colors adjustable
17	Dynamic Effect	55–59	Foreground and background colors adjustable
17	Dynamic Effect	60–64	Foreground and background colors adjustable
17	Dynamic Effect	65–69	Foreground and background colors adjustable
17	Dynamic Effect	70–74	Foreground and background colors adjustable
17	Dynamic Effect	75–79	Foreground and background colors adjustable
17	Dynamic Effect	80–84	Single-pixel, single-color random effect
17	Dynamic Effect	85–89	Foreground and background colors adjustable
17	Dynamic Effect	90–94	Foreground and background colors adjustable
17	Dynamic Effect	95–99	Foreground and background colors adjustable
17	Dynamic Effect	100–104	Foreground and background colors adjustable
17	Dynamic Effect	105–109	Foreground and background colors adjustable
17	Dynamic Effect	110–114	Foreground and background colors adjustable
17	Dynamic Effect	115–119	Foreground and background colors adjustable
17	Dynamic Effect	120–124	Foreground and background colors adjustable
17	Dynamic Effect	125–129	Foreground and background colors adjustable
17	Dynamic Effect	130–134	Foreground and background colors adjustable
17	Dynamic Effect	135–139	Foreground and background colors adjustable
17	Dynamic Effect	140–144	Foreground and background colors adjustable
17	Dynamic Effect	145–149	Foreground and background colors adjustable
17	Dynamic Effect	150–154	Multicolor dynamic effect
17	Dynamic Effect	155–159	Multicolor dynamic effect
17	Dynamic Effect	160–164	Multicolor dynamic effect
17	Dynamic Effect	165–169	Multicolor dynamic effect
17	Dynamic Effect	170–174	Multicolor dynamic effect
17	Dynamic Effect	175–179	Multicolor dynamic effect
17	Dynamic Effect	180–184	Multicolor dynamic effect
17	Dynamic Effect	185–189	Multicolor dynamic effect
17	Dynamic Effect	190–194	Multicolor dynamic effect
17	Dynamic Effect	195–199	Multicolor dynamic effect
17	Dynamic Effect	200–204	Multicolor dynamic effect
17	Dynamic Effect	205–209	Multicolor dynamic effect

Channel	Function	DMX Value	Description
17	Dynamic Effect	210–214	Multicolor dynamic effect
17	Dynamic Effect	215–219	Multicolor dynamic effect
17	Dynamic Effect	220–224	Multicolor dynamic effect
17	Dynamic Effect	225–229	Multicolor dynamic effect
17	Dynamic Effect	230–255	Multicolor dynamic effect
18	Effect Speed	0–126	Forward, fast to slow
18	Effect Speed	127–128	Stop
18	Effect Speed	129–255	Reverse, slow to fast
19	Background Red	0–255	Effect background red
20	Background Green	0–255	Effect background green
21	Background Blue	0–255	Effect background blue
22	Background White	0–255	Effect background white
23	Reset	0–26	None
23	Reset	27–76	Head reset; hold value for 5 s
23	Reset	77–127	Pan/tilt reset; hold value for 5 s
23	Reset	128–255	Full reset; hold value for 5 s

5.7 30CH Strip Extension · Channels 24–30

Channel	Function	DMX Value	Description
24	Strip Dimmer	0–255	Strip dimmer, 0–100%
25	Strip Strobe	0–4	None
25	Strip Strobe	5–250	Synchronized strobe
25	Strip Strobe	251–255	None
26	Strip Red	0–255	Strip red dimmer, 0–100%
27	Strip Green	0–255	Strip green dimmer, 0–100%
28	Strip Blue	0–255	Strip blue dimmer, 0–100%
29	Strip Macro	0–13	None
29	Strip Macro	14–51	Static colors
29	Strip Macro	52–255	Dynamic effects
30	Effect Speed	0–255	Strip effect speed, slow to fast

5.8 99CH Pixel Extension · Channels 24–99

Channel	Pixel	Color	DMX Value / Description
24	1	Red	0–255 · Linear dimming from dark to full
25	1	Green	0–255 · Linear dimming from dark to full
26	1	Blue	0–255 · Linear dimming from dark to full
27	1	White	0–255 · Linear dimming from dark to full
28	2	Red	0–255 · Linear dimming from dark to full
29	2	Green	0–255 · Linear dimming from dark to full
30	2	Blue	0–255 · Linear dimming from dark to full
31	2	White	0–255 · Linear dimming from dark to full
32	3	Red	0–255 · Linear dimming from dark to full
33	3	Green	0–255 · Linear dimming from dark to full
34	3	Blue	0–255 · Linear dimming from dark to full
35	3	White	0–255 · Linear dimming from dark to full
36	4	Red	0–255 · Linear dimming from dark to full

Channel	Pixel	Color	DMX Value / Description
37	4	Green	0-255 · Linear dimming from dark to full
38	4	Blue	0-255 · Linear dimming from dark to full
39	4	White	0-255 · Linear dimming from dark to full
40	5	Red	0-255 · Linear dimming from dark to full
41	5	Green	0-255 · Linear dimming from dark to full
42	5	Blue	0-255 · Linear dimming from dark to full
43	5	White	0-255 · Linear dimming from dark to full
44	6	Red	0-255 · Linear dimming from dark to full
45	6	Green	0-255 · Linear dimming from dark to full
46	6	Blue	0-255 · Linear dimming from dark to full
47	6	White	0-255 · Linear dimming from dark to full
48	7	Red	0-255 · Linear dimming from dark to full
49	7	Green	0-255 · Linear dimming from dark to full
50	7	Blue	0-255 · Linear dimming from dark to full
51	7	White	0-255 · Linear dimming from dark to full
52	8	Red	0-255 · Linear dimming from dark to full
53	8	Green	0-255 · Linear dimming from dark to full
54	8	Blue	0-255 · Linear dimming from dark to full
55	8	White	0-255 · Linear dimming from dark to full
56	9	Red	0-255 · Linear dimming from dark to full
57	9	Green	0-255 · Linear dimming from dark to full
58	9	Blue	0-255 · Linear dimming from dark to full
59	9	White	0-255 · Linear dimming from dark to full
60	10	Red	0-255 · Linear dimming from dark to full
61	10	Green	0-255 · Linear dimming from dark to full
62	10	Blue	0-255 · Linear dimming from dark to full
63	10	White	0-255 · Linear dimming from dark to full
64	11	Red	0-255 · Linear dimming from dark to full
65	11	Green	0-255 · Linear dimming from dark to full
66	11	Blue	0-255 · Linear dimming from dark to full
67	11	White	0-255 · Linear dimming from dark to full
68	12	Red	0-255 · Linear dimming from dark to full
69	12	Green	0-255 · Linear dimming from dark to full
70	12	Blue	0-255 · Linear dimming from dark to full
71	12	White	0-255 · Linear dimming from dark to full
72	13	Red	0-255 · Linear dimming from dark to full
73	13	Green	0-255 · Linear dimming from dark to full
74	13	Blue	0-255 · Linear dimming from dark to full
75	13	White	0-255 · Linear dimming from dark to full
76	14	Red	0-255 · Linear dimming from dark to full
77	14	Green	0-255 · Linear dimming from dark to full
78	14	Blue	0-255 · Linear dimming from dark to full
79	14	White	0-255 · Linear dimming from dark to full
80	15	Red	0-255 · Linear dimming from dark to full
81	15	Green	0-255 · Linear dimming from dark to full
82	15	Blue	0-255 · Linear dimming from dark to full
83	15	White	0-255 · Linear dimming from dark to full
84	16	Red	0-255 · Linear dimming from dark to full
85	16	Green	0-255 · Linear dimming from dark to full
86	16	Blue	0-255 · Linear dimming from dark to full
87	16	White	0-255 · Linear dimming from dark to full
88	17	Red	0-255 · Linear dimming from dark to full

Channel	Pixel	Color	DMX Value / Description
89	17	Green	0-255 · Linear dimming from dark to full
90	17	Blue	0-255 · Linear dimming from dark to full
91	17	White	0-255 · Linear dimming from dark to full
92	18	Red	0-255 · Linear dimming from dark to full
93	18	Green	0-255 · Linear dimming from dark to full
94	18	Blue	0-255 · Linear dimming from dark to full
95	18	White	0-255 · Linear dimming from dark to full
96	19	Red	0-255 · Linear dimming from dark to full
97	19	Green	0-255 · Linear dimming from dark to full
98	19	Blue	0-255 · Linear dimming from dark to full
99	19	White	0-255 · Linear dimming from dark to full

6 Maintenance

Regular inspection and cleaning preserve optical performance and reduce overheating risk. The required interval depends on dust, haze fluid, ventilation and operating conditions.

- Disconnect AC power and allow the fixture to cool before cleaning or inspection.
- Clean the front lens with a soft, lint-free cloth and a suitable optical cleaner. Do not use abrasive materials.
- Remove dust from ventilation openings without forcing debris into the fixture.
- Inspect the power cable, data connectors, mounting hardware, clamps and safety cable.
- Do not open the fixture unless you are qualified and authorized to service it.

SERVICE If the display reports a temperature-sensor fault, persistent reset error or abnormal motion, stop using the fixture until it has been inspected by qualified personnel.

7 Troubleshooting and Service

Symptom	Possible Cause	Corrective Action
Fixture does not respond	No AC power; damaged plug or cable; defective power switch	Verify the supply, plug and cable. Replace a defective switch through qualified service.
Fixture switches off suddenly	Protection device or circuit breaker tripped	Remove the cause of the overload, then reset or replace the protection device as specified.
Light output is interrupted	Fixture overheating	Read the error information, allow the fixture to cool, clean ventilation paths and reduce ambient temperature.
Fixture stops responding	DMX signal disconnected	Inspect the DMX cable and connections.
Abnormal DMX operation	Incorrect address or personality	Set the correct start address and DMX mode.
Abnormal DMX operation	Missing termination	Install a 120 Ω terminator at the final DMX OUT.
Abnormal DMX operation	Weak or damaged data signal	Inspect and replace damaged data cable; use a proper splitter or amplifier for long runs.
Abnormal DMX operation	A faulty fixture disrupts the daisy chain	Bypass fixtures one at a time to locate the fault; have the faulty unit repaired.
Pan/tilt movement is abnormal	Obstruction in the movement path	Disconnect power and remove the obstruction.
Pan/tilt movement is abnormal	Deformed mechanical part or displaced sensor magnet	Stop operation and have the affected part repaired or replaced by qualified personnel.

7.1 After-Sales Service

Damage caused by incorrect installation, misuse, unauthorized modification or failure to follow this manual is not covered by warranty. Technical consultation is available for the service life of the product. For warranty repair, provide the warranty card and an accurate description of the fault.

END OF MANUAL Retain this manual with the fixture. Before each installation, verify the product label, local electrical code, rigging requirements and venue safety procedures.