



ZQ02109 – 7x40W 4in1 Bee Eye Mover Unofficial Manual

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Date: 15/2/26

Technical Specs

Model:	ZQ02109
Shell Color:	Black
Material:	Aluminum alloy + Plastic Housing + Flame Retardant Materials
Voltage:	AC110V-240V 50/60Hz
Rated Power:	175W
Light Source:	7x30W (RGBW) + 30x0.5W (RGB) LEDs (outer Ring)
Color Temperature:	2000K-8000K
CRI Index:	Ra≥90
Best Projection Distance:	8m
Strobe:	1-25Hz
Focusing:	Linear Electronic Focus
Zooming Range:	4.5° to 45°
X-Axis:	540° with 16BIT Fine-Tuning
Y-Axis:	250° with 16BIT Fine-Tuning
Control Mode:	Automatic/Sound Activated/Master-Slave/DMX
Control Channel:	30CH/42CH/58CH
Protocol:	Standard DMX512 protocol, RDM protocol
Service life:	50000hrs
Data Connection:	3-Core XLR Input/Output
Power Connection:	Powercon Input/Output
Display:	1.7" LCD Display
Protection Grade:	IP20
Working Environment:	-20°C to 40°C

Fixture Notes

Power

Idle: 20W

Idle + Fan: 22W

Full RGBW + Ring: 173W

Red: 70W – Minus Idle+Fan: 48W

Green: 86W – Minus Idle+Fan: 64W

Blue: 83W – Minus Idle+Fan: 61W

White: 82W – Minus Idle+Fan: 60W

Running each colour individually, total power per LED: 33W

Running all together, total power per LED: 21W

Sound

Idle: 47dB

Fans Up: 51dB

RDM

Device Model Description: Mini 740BeeEye

Manufacturer Label: Jiawei

Device Label: Mini 740BeeEye

Software Version Label: 13.05.00

Allows Selecting DMX Personality and Address through RDM

Extra Notes

This light is almost identical to the ZQ02356. You can use the same fixture profile and just leave a gap of 7 channels after it if you don't want to use the (somewhat useless) LED Ring.

Menu Settings

Arrow Keys to move around

Middle Button to enter a menu, right arrow or middle button to select things. Up/Down to change settings.

Menu Item	Sub Menu	Options
Address	NA	DMX Address (001-512)
Set	Run Mode	DMX Sound Auto1 Auto2
	Channel (DMX)	30CH 42CH 58CH
	Invert Pan	On/Off
	Invert Tilt	On/Off
	Hall Crct	On/Off
	Encoder Crct	On/Off
	Signal Keep	On/Off
	Screensaver	On/Off
	Invert Screen	On/Off/Auto
	Update Slave	On/Off
	Language	En/CN
	Dimmer Curve	Curve1/Curve2/Curve3/Curve4
	Speed Mode	Normal/Fast (Only makes movement a little quicker)
	Load Default	
Manual	Manual Controls for Everything NOTE: The unit will move as soon as you enter this menu!	
Calibrate	Calibration Options	
Reset	Reset to Factory Defaults	
Note	System Information – Software/Hardware Versions etc	

System Info

Hardware: 01.09.00.0

Software: 13.05.00.0

DMX Channel List – 30 Channel

DMX Channel	Function	DMX Value	Description
1	Pan	0-255	0-540° Pan
2	Pan (Fine)	0-255	16 Bit Pan
3	Tilt	0-255	0-250° Tilt
4	Tilt (Fine)	0-255	16 Bit Tilt
5	Pan/Tilt Speed	0-255	Fast -> Slow
6	Zoom	0-255	4.5° to 45° Zoom
7	Lens Rotate	0-127	0-60° Lens Rotate
		128-191	Anticlockwise Fast -> Slow
		200-255	Clockwise Slow -> Fast
8	Dimmer	0-255	Intensity (Whole Fixture)
9	Strobe	0-3	Strobe Off
		4-103	Synchronous Strobe 1Hz to 25Hz
		104-107	Light On
		108-207	“BiSection Strobe” 1Hz to 25Hz
		208-212	Light On
		213-225	Random Strobe Slow
		226-238	Random Strobe Medium
		239-251	Random Strobe High
		252-255	Light On
10	Red	0-255	Main Red Colour
11	Green	0-255	Main Green Colour
12	Blue	0-255	Main Blue Colour
13	White	0-255	Main White Colour
14	Colour Temperature	0-9	No Effect
		10-255	8000K to 2000K
15	Colour	0-255	Random Colours (See “Colour Effect 1”)
16	Static Pixel Mask	0-255	Assorted Static Effects (See “Colour Effect 2”)
17	Dynamic Pixel Mask	0-7	Off
		8-124	BG/FG Pixel Mask Effects
		125-255	Assorted Colours Pixel Mask Effects
18	Dynamic Effect Speed	0-63	Pattern Freeze Frame (Index)
		64-158	Pattern Effect Forward Fast -> Slow
		159-160	Pattern Freeze
		161-255	Pattern Effect Backward Slow -> Fast
19	Effect Red	0-255	Effect Red Colour
20	Effect Green	0-255	Effect Green Colour
21	Effect Blue	0-255	Effect Blue Colour
22	Effect White	0-255	Effect White Colour
23	Reset	0-25	NA
		26-76	Reset Effect Motors (Hold 5 Sec)
		77-127	Reset Pan/Tilt Motors (Hold 5 Sec)
		128-255	Reset All Motors (Hold 5 Sec)
24	Light Ring Intens	0-255	Light Ring Intens
25	Light Ring Strobe	0-4	No Function
		5-250	Strobe from Slow to Fast
		251-255	No Function
26	Light Ring Red	0-255	Light Ring – Red
27	Light Ring Green	0-255	Light Ring – Green
28	Light Ring Blue	0-255	Light Ring – Blue
29	Light Ring Effect	0-51	Light Ring – Dimming Mode
		52-255	Light Ring Effect
30	Light Ring Effect Speed	0-255	Light Ring Effect Speed

DMX Channel List – 42 Channel

DMX Channel	Function	DMX Value	Description
1	Red	0-255	Main Red Colour
2	Red (Fine)	0-255	16 Bit Red Colour
3	Green	0-255	Main Green Colour
4	Green (Fine)	0-255	16 Bit Green Colour
5	Blue	0-255	Main Blue Colour
6	Blue (Fine)	0-255	16 Bit Blue Colour
7	White	0-255	Main White Colour
8	White (Fine)	0-255	16 Bit White Colour
9	Colour Temperature	0-255	2000K to 8000K
10	Colour	0-255	Random Colours (See “Colour Effect 1”)
11	Strobe	0-3	Off
		4-103	Synchronous Strobe (1-25HZ)
		104-107	On
		108-207	Divide Strobe (1-25HZ)
		208-212	On
		213-225	Random Strobe (Slow)
		226-238	Random Strobe (Mid)
		239-251	Random Strobe (Fast)
		252-255	On
12	Dimmer	0-255	Intensity (Whole Fixture)
13	Dimmer (Fine)	0-255	16Bit Intensity (Whole Fixture)
14	Pan	0-255	0-540° Pan
15	Pan (Fine)	0-255	16 Bit Pan
16	Tilt	0-255	0-250° Tilt
17	Tilt (Fine)	0-255	16 Bit Tilt
18	Function	0-255	Reserved (Does nothing)
19	Reset	0-25	NA
		26-76	Effect Motor Reset (Hold 5s)
		77-127	XY Motor Reset (Hold 5s)
		128-255	All Motors Reset (Hold 5s)
20	Zoom	0-255	4.5° to 45° Zoom
21	Lens Rotate	0-127	0-60° Lens Rotate
		128-188	Anticlockwise Fast -> Slow
		189-193	Pause Rotation
		194-255	Clockwise Slow -> Fast
22	Dynamic Pixel Mask	0-255	Dynamic Pattern
23	Dynamic Pixel Mask Speed (22)	0-63	Steps through animation frame by frame
		64-158	Animate Speed Forward (Fast -> Slow)
		159-160	Pause animation
		161-255	Animate Speed Backwards (Slow -> Fast)
24	Dynamic Pixel Mask Fade (22)	0-255	Fades between animation frames
25	Background Red (22 or 23)	0-255	Effect Red Colour
26	Background Green (22 or 23)	0-255	Effect Green Colour
27	Background Blue (22 or 23)	0-255	Effect Blue Colour

28	Background White (22 or 23)	0-255	Effect White Colour
29	Foreground Intensity (22 or 23)	0-255	Foreground Intensity
30	Background Intensity (22 or 23)	0-255	Background Intensity
31	Pattern Transition (22 or 23)	0-255	Fades between Changing Dynamic Pixel Maps (Very subtle.)
32	Static Pixel Map	0-255	See Page: Colour Effect 2
33	Foreground Strobe (22 or 23)	0-255	Foreground Strobe. Same as Ch11 Strobe
34	Background Strobe (22 or 23)	0-255	Background Strobe. Same as Ch11 Strobe.
35	Background Selection	0-255	Changes Dynamic Pixel Mask Effect – Unpredictable.
36	Light Ring Intens	0-255	Light Ring Intens
37	Light Ring Strobe	0-4	No Function
		5-250	Strobe from Slow to Fast
		251-255	No Function
38	Light Ring Red	0-255	Light Ring – Red
39	Light Ring Green	0-255	Light Ring – Green
40	Light Ring Blue	0-255	Light Ring – Blue
41	Light Ring Effect	0-51	Light Ring – Dimming Mode
		52-255	Light Ring Effect
42	Light Ring Effect Speed	0-255	Light Ring Effect Speed

DMX Channel List – 51 Channel

Same as the 23 Channel Mode, with the 7 LED's individually addressable (Note: Still needs master intensity up)

DMX Channel	Function	DMX Value	Description
1	Pan	0-255	0-540° Pan
2	Pan (Fine)	0-255	16 Bit Pan
3	Tilt	0-255	0-250° Tilt
4	Tilt (Fine)	0-255	16 Bit Tilt
5	Pan/Tilt Speed	0-255	Fast -> Slow
6	Zoom	0-255	4.5° to 45° Zoom
7	Lens Rotate	0-127	0-60° Lens Rotate
		128-191	Anticlockwise Fast -> Slow
		200-255	Clockwise Slow -> Fast
8	Dimmer	0-255	Intensity (Whole Fixture)
9	Strobe	0-3	Strobe Off
		4-103	Synchronous Strobe 1Hz to 25Hz
		104-107	Light On
		108-207	“BiSection Strobe” 1Hz to 25Hz
		208-212	Light On
		213-225	Random Strobe Slow
		226-238	Random Strobe Medium
		239-251	Random Strobe High
		252-255	Light On
10	Red	0-255	Main Red Colour
11	Green	0-255	Main Green Colour
12	Blue	0-255	Main Blue Colour
13	White	0-255	Main White Colour
14	Colour Temperature	0-9	No Effect

		10-255	8000K to 2000K
15	Colour	0-255	Random Colours (See "Colour Effect 1")
16	Static Pixel Mask	0-255	Assorted Static Effects (See "Colour Effect 2")
17	Dynamic Pixel Mask	0-7	Off
		8-124	BG/FG Pixel Mask Effects
		125-255	Assorted Colours Pixel Mask Effects
18	Dynamic Effect Speed	0-63	Pattern Freeze Frame (Index)
		64-158	Pattern Effect Forward Fast -> Slow
		159-160	Pattern Freeze
		161-255	Pattern Effect Backward Slow -> Fast
19	Effect Red	0-255	Effect Red Colour
20	Effect Green	0-255	Effect Green Colour
21	Effect Blue	0-255	Effect Blue Colour
22	Effect White	0-255	Effect White Colour
23	Reset	0-25	NA
		26-76	Reset Effect Motors (Hold 5 Sec)
		77-127	Reset Pan/Tilt Motors (Hold 5 Sec)
		128-255	Reset All Motors (Hold 5 Sec)
24	Light Ring Intens	0-255	Light Ring Intens
25	Light Ring Strobe	0-4	No Function
		5-250	Strobe from Slow to Fast
		251-255	No Function
26	Light Ring Red	0-255	Light Ring – Red
27	Light Ring Green	0-255	Light Ring – Green
28	Light Ring Blue	0-255	Light Ring – Blue
29	Light Ring Effect	0-51	Light Ring – Dimming Mode
		52-255	Light Ring Effect
30	Light Ring Effect Speed	0-255	Light Ring Effect Speed

LED's 1-7 (Repeat this 7x)

Channel Groups: 24-27, 28-31, 32-35, 36-39, 40-43, 44-47, 48-51

DMX Channel	Function	DMX Value	Description
24	Red	0-255	LED Red Colour
25	Green	0-255	LED Green Colour
26	Blue	0-255	LED Blue Colour
27	White	0-255	LED White Colour

LED Ring

DMX Channel	Function	DMX Value	Description
52	Light Ring Intens	0-255	Light Ring Intens
53	Light Ring Strobe	0-4	No Function
		5-250	Strobe from Slow to Fast
		251-255	No Function
54	Light Ring Red	0-255	Light Ring – Red
55	Light Ring Green	0-255	Light Ring – Green
56	Light Ring Blue	0-255	Light Ring – Blue
57	Light Ring Effect	0-51	Light Ring – Dimming Mode
		52-255	Light Ring Effect
58	Light Ring Effect Speed	0-255	Light Ring Effect Speed

Colour Effect 1

Channel 15 (23CH Mode)

Changes through assorted colours, seems semi-random but in groups of similar colours.

DMX Value	Colour	DMX Value	Colour
0-10	Effect Off	110-124	Pinks/Reds
10-19	Random Colours	125-130	Blues
20-44	Yellow/Orange	131-190	Random
45-77	Whites/Oranges	191-206	Almost UV
78-99	Blues	207-255	White
100-109	Greens		

Colour Effect 2

Channel 16 (23CH Mode)

Colours individual pixels. Uses Foreground (F) and Effect (E) Colours. Note the Middle LED for a lot of the effects is kind of broken and will stick on whatever it was set to last (usually a foreground/effect colour... maybe).

DMX Value	Pattern	DMX Value	Pattern
0-29	Effect Off	135-149	
30-45		150-164	
46-59		165-179	
60-74		180-209	
75-89		210-224	
90-104		225-239	
105-119		240-254	
120-134		255	