

AL150WX

150 W LED Wash ONE-effect Moving Head

RGBL 4-IN-1 - DYNAMIC ZOOM - USER MANUAL

High-output wash fixture with a 24-pixel RGB auxiliary effect array



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

Contents

Section	Topic
1	Safety Information
2	Product Overview and Specifications
3	Setup and Installation
4	Control Panel and Menu
5	DMX512 Channel Reference
6	Routine Maintenance
7	Troubleshooting and Service

MODEL IDENTIFICATION This manual is for model AL150WX. Confirm the model, voltage, firmware and product-label ratings before installation or programming.

1 Safety Information

DANGER Disconnect AC power and allow the fixture to cool before opening, cleaning, inspection, fuse replacement or service.

- This professional fixture must be installed, operated and serviced by qualified personnel.
- Use only AC 100-240 V, 50/60 Hz. Connect the yellow/green conductor to protective earth.
- The maximum ambient temperature is 40°C. Stop operation if the environment exceeds this limit.
- Do not connect the fixture to an external dimmer. Do not operate it with damaged cables, housing, lens, mounting points or protective parts.
- Keep the fixture dry and indoors. Prevent liquids, flammable substances and metal objects from entering the housing.
- Keep at least 0.5 m clearance around the fixture and never block ventilation openings.
- For overhead installation, use rated clamps and an independently rated safety cable. Never lift the fixture by its moving head.
- Do not touch wiring during operation. Keep power and data cables separated and free from tangles.
- If a serious fault occurs, disconnect power immediately. Do not repeatedly cycle power or attempt unauthorized repairs.
- Use only a replacement fuse of the same type and rating. Internal service must be performed by qualified personnel.

FIRST USE A small amount of smoke or odor may occur during the first few minutes of operation and should disappear. Disconnect power if the condition persists or appears abnormal.

2 Product Overview and Specifications

The AL150WX is a compact moving-head wash built around a 150 W RGBL four-in-one source. Its red, green, blue and lemon emitters provide broad color mixing, while twenty-four individually controlled RGB auxiliary pixels create animated ONE-effect looks around the main optic. A motorized 19°-27° zoom includes continuous dynamic pulse effects.

2.1 Technical Specifications

Parameter	Specification
Input voltage	AC 100-240 V, 50/60 Hz
Main light source	150 W RGBL 4-in-1 LED: red, green, blue and lemon
Auxiliary source	24 high-brightness RGB LEDs; individual pixel control in 108CH mode
Total power	200 W
Dimming	16-bit, 0-100% smooth linear dimming
Zoom	Motorized 19°-27°; continuous forward/reverse zoom-pulse effect
Control	DMX512 / Auto / Sound-active / Master-Slave / RDM
DMX personalities	20CH / 36CH / 108CH / 20aCH / 24CH
Pan	540°
Tilt	200°
Maximum ambient	40°C
Net weight	4.4 kg
Fixture dimensions	252.85 x 188.1 x 358.4 mm
Environment	Indoor use; dry location

2.2 Main Functions

- RGBL main wash with 16-bit dimmer and 16-bit color control in compact modes.
- Motorized zoom with narrow-to-wide positioning and forward/reverse pulse animation.
- Twenty-four RGB auxiliary pixels with strobe, dimmer, macro and speed controls.
- Color-temperature, green/magenta tint and virtual LEE filter functions in supported modes.
- DMX512, automatic, sound-active, master-slave and RDM operation.

2.3 Supplied Items

Package contents: AL150WX fixture x 1; 3-pin DMX signal cable x 1; power cable x 1; mounting clamps x 2; user manual x 1.

3 Setup and Installation

3.1 AC Power

Before connecting power, verify that the product-label voltage and frequency match the local supply. Complete mounting and data connections before applying power. Disconnect by holding the plug, not by pulling the cable.

3.2 Rigging

STRUCTURAL RATING The support, clamps, hardware and safety attachment must meet local load and safety requirements. Keep people clear of the area below during installation and service.

1. Inspect the fixture, clamps, fasteners, mounting points, safety cable and supporting structure.
2. Attach two correctly rated clamps to the fixture mounting points and secure them to the structure.
3. Attach an independently rated safety cable to the designated point and the supporting structure.
4. Confirm at least 0.5 m ventilation clearance and unobstructed pan, tilt and zoom movement.
5. Recheck every attachment before applying power. Inspect the installation regularly.

3.3 DMX512 Connection

Use shielded twisted-pair cable designed for RS-485/DMX512. Connect the controller to DMX IN, then link DMX OUT to the next fixture. Assign a unique start address to each independently controlled fixture.

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

TERMINATION At the final fixture in a long or electrically noisy DMX chain, connect a 120 ohm resistor between pins 2 and 3 of a male XLR plug and insert it into DMX OUT.

4 Control Panel and Menu

Use the arrow keys to move or change a value and OK to open or save a setting. Menu labels may vary slightly with firmware revision.

Menu	Item	Option / Range	Operation
Address	DMX Address	001-512	Set the fixture start address.
Settings	Channel Mode	20CH / 36CH / 108CH / 20aCH / 24CH	Select the DMX personality.
Settings	XY Correction	Off / On	Enable pan/tilt position correction.
Settings	Pan Reverse	Off / On	Reverse pan direction.
Settings	Tilt Reverse	Off / On	Reverse tilt direction.
Settings	XY Swap	Off / On	Exchange pan and tilt control.
Settings	Sound Sensitivity	01-99	Adjust sound-active sensitivity.
Display	Language	Chinese / English	Select the menu language.
Display	Display Reverse	Off / On	Rotate the display.
Display	Backlight	30 s	Set the backlight timeout.
Settings	Factory Reset	Yes / No	Restore factory defaults.
Settings	Signal Hold	Yes / No; default No	Choose behavior after DMX loss.
Settings	Dimmer Curve	Linear / Square / Inverse Square / S Curve	Select the dimmer curve.
Settings	LEE Mode	Mode 1 / Mode 2	Select virtual-filter behavior; Mode 1 default.
Manual	Manual Channels	Strobe through auxiliary blue	Test individual functions.
Reset	Reset	Yes / No	Reset the fixture.
Motor Calibration	Calibration	Service values	Qualified service only.
Standalone	Run Mode	DMX / Auto / Sound	Select the operating mode.
Information	Status	LED hours / Fixture hours / Software / RDM UID / Diagnostics	View fixture and diagnostic information.

SERVICE SETTINGS Motor calibration and diagnostic items are intended for qualified service personnel. Record original values before making any service adjustment.

5 DMX512 Channel Reference

Select the same personality on the fixture and controller. A 16-bit function uses two adjacent channels and a combined value from 00 000 to 65 535. Fine channels provide the lower eight bits of resolution.

5.1 Compact DMX Mode - 20CH

CH	Function	DMX Value	Description
1	Main Strobe	000-255	000-019 blackout; 020-049 open; 050-200 synchronized slow-fast; 201-210 open; 211-255 random slow-fast
2-3	Master Dimmer	00 000-65 535	0-100%; 16-bit
4-5	Red	00 000-65 535	0-100%; 16-bit
6-7	Green	00 000-65 535	0-100%; 16-bit
8-9	Blue	00 000-65 535	0-100%; 16-bit
10	Color Temperature	000-255	000-010 none; 011-255 about 2000-12 850 K in 50 K steps; 128 = 6500 K
11	Tint	000-255	000 = Δuv -0.05; 001-126 to neutral; 127-128 neutral; 129-254 to +0.05; 255 = +0.05
12	Virtual LEE Filter	000-010 / 011-106 / 107-255	Off / LEE virtual filters / off
13-14	Zoom	00 000-65 535	00 000-51 400 narrow-wide; 51 401-57 825 forward pulse fast-slow; 57 826-59 110 stop; 59 111-65 535 reverse pulse slow-fast
15-16	Pan	00 000-65 535	0-540°; 16-bit
17-18	Tilt	00 000-65 535	0-200°; 16-bit
19	Fixture Control	000-255	000-009 none; 010-014 full reset (hold 5 s); 015-016 none; 017 zoom reset (hold 5 s); 018 pan/tilt reset (hold 5 s); 019-022 none; 023 linear curve (hold 1 s); 024 square; 025 inverse square; 026 S curve; 027-255 none
20	LED Frequency	000-255	Reserved / no function in source firmware

5.2 Base DMX Mode - 36CH

CH	Function	DMX Value	Description
1-20	Compact Base	See 20CH	Same functions and values as Compact 20CH mode
21	Reserved	000-255	No function
22	Aux Macro / Source	000-051 / 052-255	No function / auxiliary macro effect
23	Aux Macro Speed	000-255	Slow to fast
24-26	Reserved	000-255	No function
27	Aux Strobe	000-019 / 020-049 / 050-255	Blackout / open / strobe slow-fast
28-29	Aux Dimmer	00 000-65 535	0-100%; 16-bit
30	Aux Red	000-255	0-100%
31	Aux Green	000-255	0-100%
32	Aux Blue	000-255	0-100%
33	Aux Color Temperature	000-255	000-010 none; 011-255 about 2000-12 850 K in 50 K steps; 128 = 6500 K
34	Aux Tint	000-255	000 = Δuv -0.05; 001-126 to neutral; 127-128 neutral; 129-254 to +0.05; 255 = +0.05
35	Aux Virtual LEE Filter	000-010 / 011-255	Off / LEE virtual filters
36	Reserved	000-255	No function

5.3 Base DMX Mode - 108CH

Channels 1-36 are identical to Base 36CH mode. Channels 37-108 provide direct RGB control of all twenty-four auxiliary pixels.

CH	Function	DMX Value	Description
37-39	Aux Pixel 1	000-255 each	Red / Green / Blue; 0-100% per component
40-42	Aux Pixel 2	000-255 each	Red / Green / Blue; 0-100% per component
43-45	Aux Pixel 3	000-255 each	Red / Green / Blue; 0-100% per component
46-48	Aux Pixel 4	000-255 each	Red / Green / Blue; 0-100% per component
49-51	Aux Pixel 5	000-255 each	Red / Green / Blue; 0-100% per component
52-54	Aux Pixel 6	000-255 each	Red / Green / Blue; 0-100% per component
55-57	Aux Pixel 7	000-255 each	Red / Green / Blue; 0-100% per component
58-60	Aux Pixel 8	000-255 each	Red / Green / Blue; 0-100% per component
61-63	Aux Pixel 9	000-255 each	Red / Green / Blue; 0-100% per component
64-66	Aux Pixel 10	000-255 each	Red / Green / Blue; 0-100% per component
67-69	Aux Pixel 11	000-255 each	Red / Green / Blue; 0-100% per component
70-72	Aux Pixel 12	000-255 each	Red / Green / Blue; 0-100% per component
73-75	Aux Pixel 13	000-255 each	Red / Green / Blue; 0-100% per component
76-78	Aux Pixel 14	000-255 each	Red / Green / Blue; 0-100% per component
79-81	Aux Pixel 15	000-255 each	Red / Green / Blue; 0-100% per component
82-84	Aux Pixel 16	000-255 each	Red / Green / Blue; 0-100% per component
85-87	Aux Pixel 17	000-255 each	Red / Green / Blue; 0-100% per component
88-90	Aux Pixel 18	000-255 each	Red / Green / Blue; 0-100% per component
91-93	Aux Pixel 19	000-255 each	Red / Green / Blue; 0-100% per component
94-96	Aux Pixel 20	000-255 each	Red / Green / Blue; 0-100% per component
97-99	Aux Pixel 21	000-255 each	Red / Green / Blue; 0-100% per component
100-102	Aux Pixel 22	000-255 each	Red / Green / Blue; 0-100% per component
103-105	Aux Pixel 23	000-255 each	Red / Green / Blue; 0-100% per component
106-108	Aux Pixel 24	000-255 each	Red / Green / Blue; 0-100% per component

NORMALIZED ENDPOINT The source prints 0-126 for Auxiliary Pixel 1 Blue, while every adjacent RGB pixel component uses 0-255. The table above normalizes this isolated typographical endpoint to 0-255.

5.4 Compact Direct DMX Mode - 20aCH

CH	Function	DMX Value	Description
1	Main Strobe	000-255	000-019 blackout; 020-049 open; 050-200 synchronized slow-fast; 201-210 open; 211-255 random slow-fast
2-3	Master Dimmer	00 000-65 535	0-100%; 16-bit
4-5	Red	00 000-65 535	0-100%; 16-bit
6-7	Green	00 000-65 535	0-100%; 16-bit
8-9	Blue	00 000-65 535	0-100%; 16-bit
10-11	Lemon	00 000-65 535	0-100%; 16-bit
12	Main Virtual LEE Filter	000-010 / 011-106 / 107-255	Off / LEE virtual filters / off
13-14	Zoom	00 000-65 535	00 000-51 400 narrow-wide; 51 401-57 825 forward pulse fast-slow; 57 826-59 110 stop; 59 111-65 535 reverse pulse slow-fast
15-16	Pan	00 000-65 535	0-540°; 16-bit
17-18	Tilt	00 000-65 535	0-200°; 16-bit
19	Fixture Control	000-255	000-009 none; 010-014 full reset (hold 5 s); 015-016 none; 017 zoom reset (hold 5 s); 018 pan/tilt reset (hold 5 s); 019-022 none; 023 linear curve (hold 1 s); 024 square; 025 inverse square; 026 S curve; 027-255 none
20	Reserved	000-255	No function

5.5 Custom DMX Mode - 24CH

CH	Function	DMX Value	Description
1-2	Pan	00 000-65 535	0-540°; 16-bit
3-4	Tilt	00 000-65 535	0-200°; 16-bit
5	Pan / Tilt Speed	000-255	Fast to slow
6	Main Strobe	000-255	000-019 blackout; 020-049 open; 050-200 synchronized slow-fast; 201-210 open; 211-255 random slow-fast
7	Master Dimmer	000-255	0-100%
8	Red	000-255	0-100%
9	Green	000-255	0-100%
10	Blue	000-255	0-100%
11	Lemon	000-255	0-100%
12-13	Zoom	00 000-65 535	00 000-51 400 narrow-wide; 51 401-57 825 forward pulse fast-slow; 57 826-59 110 stop; 59 111-65 535 reverse pulse slow-fast
14	Color Temperature	000-255	000-010 none; 011-255 about 2000-12 850 K in 50 K steps; 128 = 6500 K
15	Tint	000-255	000 = Δuv -0.05; 001-126 to neutral; 127-128 neutral; 129-254 to +0.05; 255 = +0.05
16	Virtual LEE Filter	000-010 / 011-106 / 107-255	Off / LEE virtual filters / off
17	Aux Strobe	000-019 / 020-049 / 050-255	Blackout / open / strobe slow-fast
18	Aux Dimmer	000-255	0-100%
19	Aux Red	000-255	0-100%
20	Aux Green	000-255	0-100%
21	Aux Blue	000-255	0-100%
22	Aux Macro / Source	000-051 / 052-255	No function / auxiliary macro effect
23	Aux Macro Speed	000-255	Slow to fast
24	Fixture Control	000-255	000-009 none; 010-014 full reset (hold 5 s); 015-016 none; 017 zoom reset (hold 5 s); 018 pan/tilt reset (hold 5 s); 019-022 none; 023 linear curve (hold 1 s); 024 square; 025 inverse square; 026 S curve; 027-255 none

6 Routine Maintenance

ATTENTION Disconnect AC power and allow the fixture to cool completely before inspection or cleaning.

Dust, smoke particles, haze-fluid residue and other contamination reduce light output and cooling performance. Cleaning frequency depends on the operating environment. Inspect the fixture within its first operating hours in dusty, smoky or high-airflow locations, then establish a suitable routine.

- Clean only in a dry, well-lit area.
- Wipe gently with a soft, lint-free cloth dampened with water or a mild detergent solution.
- Never use alcohol, solvents or abrasive cleaners. Optical surfaces are fragile and scratch easily.
- Remove dust from ventilation openings and inspect fans, cables, connectors, lenses and mounting hardware.
- Refer internal electrical, thermal, motor and LED service to qualified personnel.

7 Troubleshooting and Service

Symptom	Check
No light output	Verify AC supply, circuit protection, master/aux dimmer, strobe/blackout values, active mode and controller output.
No DMX response	Confirm the start address, selected personality, controller patch, cable polarity, connectors and signal-hold setting.
Unstable DMX	Use shielded twisted-pair cable, separate data from power wiring, inspect connectors and terminate the final fixture with 120 ohms.
Abnormal pan or tilt	Remove obstructions, check correction/reverse/swap settings, reset the fixture and refer persistent motor or encoder faults to service.
Zoom does not move	Check coarse/fine channel pairing and values, remove obstructions, run zoom reset and refer persistent faults to service.
Auxiliary pixels do not respond	Confirm aux dimmer and strobe values, macro/source settings, selected 36/108/24CH mode and controller patch.
Reduced or unstable output	Check ambient temperature, ventilation, fans, optical cleanliness, mains quality and dimmer settings.

SERVICE There are no user-serviceable high-voltage parts inside. Refer internal repair, LED replacement, motor service and calibration to the manufacturer, its service agent or similarly qualified personnel.

7.1 Warranty and Support

Damage caused by misuse, ignored warnings, unauthorized repair, incorrect installation or operation outside the specified conditions may be excluded from warranty coverage. Include the model, serial number, firmware, active personality and a clear fault description when requesting support.

End of manual