

AL1240WZ

12 x 40 W RGBW Zoom Wash Moving Head

INDIVIDUAL PIXELS - 5° TO 60° ZOOM - USER MANUAL

Professional RGBW wash fixture with independent LED control



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
3	Setup and Installation
4	Control Panel and Menu
5	Photometric Data
6	DMX Channel Reference
7	Routine Maintenance
8	Troubleshooting and Service

MODEL IDENTIFICATION This manual is organized for model AL1240WZ. Confirm the model, voltage rating and firmware shown on the actual fixture before installation or programming.

The source PDF identifies the product as a 12 x 40 W RGBW zoom wash. This edition uses the complete model designation AL1240WZ supplied with the product files.

1 Safety Information

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

- Use the fixture only with the voltage and frequency marked on its product label. Connect it to a properly grounded supply; this is a Class I appliance.
- Protect the power cable from crushing, sharp edges, heat and other damage. A damaged flexible cable must be replaced by the manufacturer, an authorized service agent or similarly qualified personnel.
- If the fixture has been exposed to a large temperature change, leave it disconnected until it reaches room temperature and all condensation has evaporated.
- Keep at least 0.5 m clearance from walls and combustible materials, and keep fans and ventilation openings unobstructed.
- Do not look directly into the light output at close range. The LEDs can produce intense visible light.
- Do not lift or carry the fixture by the moving head. Protect it from shock, moisture, excessive heat and heavy dust.
- Installation, operation and service must be performed by trained personnel. Do not modify the fixture.
- For suspended installation, use rated clamps, omega brackets and an independently rated safety cable attached only to the designated safety point.

SOURCE OPERATING LIMIT The source manual advises against operating all RGBW emitters at full output continuously for more than 10 minutes. Follow this limit unless the current product label or manufacturer documentation states otherwise.

INITIAL OPERATION A slight odor or trace of smoke may occur during the first warm-up. It should decrease gradually. Disconnect the fixture and inspect it if the condition persists or appears abnormal.

2 Product Overview

The AL1240WZ is a professional RGBW wash moving head with twelve 40 W four-in-one LEDs, motorized zoom and independent pixel control. Built-in color and dynamic effects support stage, theater, studio, club and live-event applications.

2.1 Package Contents

Item	Quantity
AL1240WZ fixture	1
Power cable	1
3-pin DMX signal cable	1
Safety cable	1
Omega bracket	2
User manual	1

2.2 Technical Specifications

Parameter	Specification
Input voltage	AC 90-240 V, 50/60 Hz
Maximum power	550 W
Light source	12 x 40 W RGBW 4-in-1 LEDs
LED lifetime	20,000 hours average (source specification)
Dimmer	0-100% linear dimming
Strobe	1-25 flashes per second
Zoom	5°-60°, motorized
Pan / tilt	540° / 270°, both with 16-bit fine control
DMX personalities	19CH / 67CH
Control modes	DMX512 / Master-Slave / Auto / Sound
Display	LCD; English/Chinese menu
Ingress protection	IP20 - indoor use
Dimensions	338 x 264 x 470 mm
Net weight	14.2 kg
Cooling	Temperature-controlled forced-air cooling

2.3 Main Functions

- Smooth RGBW color mixing with linear master dimming and color-temperature control.
- Motorized 5°-60° zoom for beam-to-wash coverage.
- Built-in color macros, dynamic effects and independently dimmable background color.
- Independent RGBW control of all twelve LEDs in the 67-channel personality.
- Three-phase pan and tilt motors for fast movement.

3 Setup and Installation

3.1 AC Power

Before connecting power, verify that the product-label rating matches the local supply. Complete all rigging and installation work before connecting the mains cable. Always disconnect by holding the plug, not by pulling the cable.

3.2 Rigging

STRUCTURAL RATING The mounting structure and attachment point must support at least 10 times the fixture weight. Keep people clear of the area below the fixture during installation and service.

1. Inspect the fixture, omega brackets, clamps, fasteners, safety cable and support structure.
2. Attach an appropriately rated clamp to an omega bracket using a correctly fitted M10 fastener.
3. Lock the omega bracket into the fixture base and secure all fasteners.
4. Attach an independently rated safety cable to the designated safety point; never attach it to a carrying handle.
5. Confirm adequate clearance for the complete pan, tilt and zoom range, then recheck all hardware before applying power.

3.3 DMX Data Connection

Use shielded, two-conductor twisted-pair cable intended for RS-485/DMX512. Connect the controller to DMX IN, then link DMX OUT to the next fixture. Five-pin wiring follows the same data-pair principle when fitted.

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

TERMINATION At the last 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 MENU to move through the menu, ENTER/OK to open or save an item, and UP/DOWN to change a value. Menu wording may vary slightly with firmware revision.

Menu	Options	Operation
Address	001-512	Set the DMX start address.
Run Mode	DMX / Sound / Auto 1 / Auto 2	Select console, sound-active or automatic operation.
Channel Mode	19CH / 67CH	Select the controller personality.
Invert Pan / Tilt	On / Off	Reverse movement direction for the installation.
Hall Correction	On / Off	Enable Hall-sensor position correction.
Encoder Correction	On / Off	Enable encoder-based movement correction.
Signal Keep	On / Off	Choose whether the last DMX state is retained after signal loss.
Screen Saver	On / Off	Control automatic display blanking.
Invert Screen	Auto / On / Off	Set automatic, inverted or normal display orientation.
Update Slave	On / Off	Enable or disable synchronized slave updating.
Language	EN /	Choose the menu language.
Load Default	Confirm	Restore factory-default settings.

4.1 Manual Control and Calibration

Manual mode provides local control of each channel. Motor Calibration contains pan, tilt, focus/zoom, rotation, individual LED color-balance, power and microphone parameters, plus password management.

Calibration group	Purpose
Pan / Tilt	Movement home and position calibration
Focus / Zoom	Zoom-motor calibration
Rotation	Effect-motor calibration
Balance Red/Green/Blue/White 1...12	Individual LED color-balance calibration
Power / MIC	Output-power and sound-sensitivity parameters
Change password	Update access password for protected calibration

CALIBRATION Do not change protected calibration or balance values unless adjustment is necessary. Record every original value before editing.

4.2 Reset and System Information

Item	Action
Reset Effect	Reset effect motors.
Reset Scan	Reset pan and tilt movement.
Reset All	Perform a complete fixture reset.
System Information	View fixture status and version information.

5 Photometric Data

The following illuminance values are reproduced from the source manual. Measurements are nominal and can vary with LED binning, optical condition, supply voltage and measurement method.

5.1 5° Beam Angle

Color	4 m	6 m	8 m
Red	7,650 lx	3,500 lx	2,100 lx
Green	19,200 lx	8,500 lx	5,050 lx
Blue	2,450 lx	758 lx	465 lx
White	21,150 lx	9,250 lx	5,380 lx
RGBW	47,250 lx	20,500 lx	12,350 lx

5.2 60° Beam Angle

Color	4 m	6 m	8 m
Red	351 lx	156 lx	95 lx
Green	965 lx	425 lx	250 lx
Blue	118 lx	50 lx	30 lx
White	1,020 lx	445 lx	270 lx
RGBW	2,300 lx	1,040 lx	630 lx

MEASUREMENT USE Use these values for comparison and planning only. Verify critical installations with a calibrated meter under the actual operating conditions.

6 DMX Channel Reference

Select 19CH or 67CH on the fixture and use the matching controller personality. Channels 1-19 are common to both modes. The 67CH personality adds four channels for each of the twelve RGBW LEDs.

Mode	Channel map
19CH	1-19 common movement, zoom, color and effects
67CH	1-19 common + 20-67 individual RGBW pixels

6.1 Common Channels 1-19 - 19CH and 67CH

Channel	Function	DMX Value	Description
1	Pan	0-255	Pan movement
2	Pan Fine	0-255	16-bit pan fine adjustment
3	Tilt	0-255	Tilt movement
4	Tilt Fine	0-255	16-bit tilt fine adjustment
5	Pan/Tilt Speed	0-255	Movement speed
6	Zoom	0-255	Narrow to wide
7	Master Dimmer	0-255	Linear dimming, dark to full
8	Strobe	0-255	0-84 standard strobe slow to fast; 85-170 random strobe slow to fast; 171-255 thunder strobe at normal speed
9	Red	0-255	Main red dimmer
10	Green	0-255	Main green dimmer
11	Blue	0-255	Main blue dimmer
12	White	0-255	Main white dimmer
13	CTO	0-255	Color-temperature adjustment
14	Color Macro	0-255	0-127 gradual color change; 128-255 jump color change
15	Dynamic Effect	0-255	0-20 no function; 21-27 effect 1; 28-227 effects 2-26 in 8-value steps; 228-255 effect 27
16	Macro Speed	0-255	Fast to slow
17	Background Dimmer	0-255	Background master dimmer
18	Background Color	0-255	0-30 red; 31-60 green; 61-92 blue; 93-123 white; 124-154 yellow; 155-185 purple; 186-216 light blue; 217-255 RGBW full on
19	Reset	0-255	0-249 no function; 250-255 fixture reset

6.2 67CH Pixel Extension - Channels 20-67

Channel	Function	DMX Value	Description
20	LED 1 Red	0-255	LED 1 red dimmer
21	LED 1 Green	0-255	LED 1 green dimmer
22	LED 1 Blue	0-255	LED 1 blue dimmer
23	LED 1 White	0-255	LED 1 white dimmer
24	LED 2 Red	0-255	LED 2 red dimmer
25	LED 2 Green	0-255	LED 2 green dimmer
26	LED 2 Blue	0-255	LED 2 blue dimmer
27	LED 2 White	0-255	LED 2 white dimmer

Channel	Function	DMX Value	Description
28	LED 3 Red	0-255	LED 3 red dimmer
29	LED 3 Green	0-255	LED 3 green dimmer
30	LED 3 Blue	0-255	LED 3 blue dimmer
31	LED 3 White	0-255	LED 3 white dimmer
32	LED 4 Red	0-255	LED 4 red dimmer
33	LED 4 Green	0-255	LED 4 green dimmer
34	LED 4 Blue	0-255	LED 4 blue dimmer
35	LED 4 White	0-255	LED 4 white dimmer
36	LED 5 Red	0-255	LED 5 red dimmer
37	LED 5 Green	0-255	LED 5 green dimmer
38	LED 5 Blue	0-255	LED 5 blue dimmer
39	LED 5 White	0-255	LED 5 white dimmer
40	LED 6 Red	0-255	LED 6 red dimmer
41	LED 6 Green	0-255	LED 6 green dimmer
42	LED 6 Blue	0-255	LED 6 blue dimmer
43	LED 6 White	0-255	LED 6 white dimmer
44	LED 7 Red	0-255	LED 7 red dimmer
45	LED 7 Green	0-255	LED 7 green dimmer
46	LED 7 Blue	0-255	LED 7 blue dimmer
47	LED 7 White	0-255	LED 7 white dimmer
48	LED 8 Red	0-255	LED 8 red dimmer
49	LED 8 Green	0-255	LED 8 green dimmer
50	LED 8 Blue	0-255	LED 8 blue dimmer
51	LED 8 White	0-255	LED 8 white dimmer
52	LED 9 Red	0-255	LED 9 red dimmer
53	LED 9 Green	0-255	LED 9 green dimmer
54	LED 9 Blue	0-255	LED 9 blue dimmer
55	LED 9 White	0-255	LED 9 white dimmer
56	LED 10 Red	0-255	LED 10 red dimmer
57	LED 10 Green	0-255	LED 10 green dimmer
58	LED 10 Blue	0-255	LED 10 blue dimmer
59	LED 10 White	0-255	LED 10 white dimmer
60	LED 11 Red	0-255	LED 11 red dimmer
61	LED 11 Green	0-255	LED 11 green dimmer
62	LED 11 Blue	0-255	LED 11 blue dimmer
63	LED 11 White	0-255	LED 11 white dimmer
64	LED 12 Red	0-255	LED 12 red dimmer
65	LED 12 Green	0-255	LED 12 green dimmer
66	LED 12 Blue	0-255	LED 12 blue dimmer
67	LED 12 White	0-255	LED 12 white dimmer

7 Routine Maintenance

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

- Inspect all mounting screws, brackets, clamps and safety attachments for tightness, corrosion or deformation.
- Inspect the housing, lenses, suspension points and mechanically moving parts for damage, wear or imbalance.
- Inspect power cables and connectors for damage, fatigue, overheating or contamination.
- Clean internal and external optical surfaces regularly with a moist, lint-free cloth suitable for the surface. Never use alcohol or aggressive solvents.
- Remove dust from fans and ventilation openings. The source recommends weekly cleaning in demanding environments.
- Arrange a detailed electrical inspection by a qualified engineer approximately every three months, adjusted to usage and local requirements.

Maintenance frequency must reflect operating hours, dust, fog-fluid residue, airflow and the installation environment. Correct every safety issue before returning the fixture to service.

8 Troubleshooting and Service

Symptom	Check
Fixture does not power on	Verify the supply, protective earth, circuit protection, cable, connector and product-label rating.
No DMX response	Confirm DMX mode, start address, 19CH/67CH personality, controller patch, cable polarity and termination.
Unexpected channel behavior	Confirm that the controller profile matches the selected personality and installed firmware.
Movement or position error	Remove obstructions, run Reset Scan and inspect Hall/encoder correction settings.
Reduced or unstable output	Check the full-output operating limit, temperature, ventilation, fan operation, optical cleanliness and power quality.
Uneven pixel color	Check manual channel values and protected RGBW balance parameters; restore recorded values if necessary.

SERVICE There are no user-serviceable high-voltage parts inside. Refer internal repair, calibration and component replacement to qualified personnel, and use genuine replacement parts.

8.1 Warranty and Support

Damage caused by misuse, unauthorized modification, incorrect installation, impact, short circuit or operation outside the specified conditions may be excluded from warranty coverage. Include the model, serial number, firmware version and a clear fault description when requesting service.

End of manual