

PROFESSIONAL LED EFFECT FIXTURE

AL0580T

5 x 80 W LED TORNADO

USER MANUAL

English Edition | Professionally edited from the supplied manual



5 independent RGBW heads | 5 RGB aura rings | Motorized focus

Main LEDs	Input	Control	DMX Modes
5 x 80 W RGBW	AC 100-240 V	DMX / Auto / Sound	28 / 32 / 85 / 88 CH

IMPORTANT Read this manual completely before installing, powering, operating, or servicing the fixture. Retain it for future reference.

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EDITORIAL NOTE The model and 5 x 80 W designation were supplied by the user. Terminology, grammar, menu labels, and DMX descriptions have been standardized for professional lighting use; unsupported legacy lamp content has been removed.

1 Product Information & Safety

1.1 Intended Use

The AL0580T is an indoor professional effect fixture with five independently moving RGBW heads, five RGB aura rings, motorized focus, and continuous Pan/Tilt rotation effects. It supports DMX512, two automatic programs, sound-active operation, and manual control from the display.

Inspect the fixture and accessories immediately after unpacking. Do not operate a product that appears damaged in transit.

1.2 Package Contents

Item	Quantity
AL0580T fixture	1
Power cable	1
DMX signal cable	1
User manual	1

1.3 Safety Instructions

- This fixture is intended for professional indoor use and must be installed and serviced by qualified personnel.
- Connect only to a properly grounded Protection Class I circuit within the rated AC input range shown on the fixture label.
- Disconnect mains power before cleaning, servicing, connecting data cables, or when the fixture is not in use. Pull the plug, never the cable.
- Keep the fixture dry. Do not expose it to rain, water, condensation, or high humidity.
- After a severe temperature change, allow the fixture to reach room temperature and let condensation evaporate before applying power.

- Do not operate the fixture if its power cable, housing, lens, mounting hardware, or safety attachment is damaged.
- Keep ventilation openings unobstructed and maintain the clearances shown on the product label or required by local regulations.
- Do not look directly into the light source. Strobe lighting may trigger photosensitive seizures; follow venue and local warning requirements.
- Stop operation immediately if the fixture overheats, emits abnormal noise, reports repeated sensor errors, or behaves unexpectedly.

WARNING Never stand directly below the fixture during installation, removal, or service. Always use a correctly rated independent secondary safety attachment.

1.4 Technical Specifications

Parameter	Specification
Input voltage	AC 100-240 V; frequency not stated in the supplied source
Main light sources	5 x 80 W RGBW LEDs (red, green, blue, white)
Aura light sources	5 x RGB LED aura rings
Optical control	Independent motorized Focus channels for heads 1-5
Pan / Tilt	0-540 degrees plus continuous rotation; 16-bit fine adjustment
Dimming	0-100% electronic dimming
Color functions	RGBW mixing, cool-to-warm color-temperature control, color macro
Effect functions	Main LED macros, aura macros, synchronized and random strobe
Control modes	DMX512, Auto 1, Auto 2, Sound-active, manual control
DMX personalities	28 CH / 32 CH / 85 CH / 88 CH
Operating environment	Indoor, dry locations only; formal IP rating not stated

RATING-LABEL CHECK The supplied source does not state total fixture power, mains frequency, IP rating, beam angle, dimensions, or weight. Verify these items on the fixture rating label or current manufacturer data before installation.

2 Installation & Data Connections

2.1 Rigging

The fixture may be installed horizontally, at an angle, or inverted. Before mounting, verify that the supporting structure and all hardware can support at least ten times the fixture weight, or the higher load required by local regulations. Complete all rigging before connecting mains power.

- Use correctly rated clamps and M10 mounting hardware where specified by the fixture mounting points.
- Attach a correctly rated safety cable to a designated safety attachment point. Do not use a carrying handle as the safety anchor.
- Keep the area below the fixture clear while it is being installed, removed, or serviced.
- Inspect clamps, fasteners, mounting points, safety cables, and the supporting structure before every use.

2.2 DMX512 Data Connection

Use shielded twisted-pair DMX cable with a nominal 120 ohm characteristic impedance, low capacitance, and 22-24 AWG conductors. Connect the controller output to the first fixture input, then connect each fixture output to the next fixture input.

XLR Contact	Signal
Pin 1	Ground / shield
Pin 2	Data -
Pin 3	Data +

TERMINATION For long cable runs or electrically noisy environments, connect a 120 ohm, 1/4 W resistor between pins 2 and 3 in a male XLR plug and install it at the DMX output of the final fixture.

2.3 RDM Connection Notes

The supplied source includes RDM operating guidance. Confirm that RDM is supported by the installed fixture firmware before relying on remote discovery or configuration.

- Use an RDM-compatible controller and bidirectional RDM splitters. A conventional one-way DMX splitter blocks return data.
- Set all fixtures on the data line to DMX mode and allow only one controller to act as the bus master.
- Terminate the final fixture with 120 ohms between Data - and Data +.
- If DMX control works but RDM discovery fails, check the splitter first, then inspect pins 2 and 3 throughout the data line.

3 Display Menu & Service Functions

3.1 Panel Controls & Indicators

Control / Indicator	Function
MENU / Back	Open the main menu or return to the previous menu.
UP	Move upward or increase the selected value.
DOWN	Move downward or decrease the selected value.
ENTER	Open the selected item, confirm a value, or save a setting.
DMX indicator (blue)	Shows DMX data reception.
Error indicator (red)	Shows a detected fixture fault. Open Information for details.

DISPLAY CARE Operate the panel only with a fingertip. Do not press the display with sharp or hard objects.

The temperature field normally shows a numeric value. A display such as --- degrees C may indicate an open sensor circuit; *** degrees C or an implausible value may indicate a short circuit. Stop operation and have the fixture inspected by qualified service personnel.

3.2 Menu Map

Menu	Option	Setting / Function
Address	DMX Address	001-512
Settings	Run Mode	DMX / Auto 1 / Auto 2 / Sound
Settings	Channel Mode	28 CH / 32 CH / 85 CH / 88 CH
Settings	Pan Reverse	Off / On
Settings	Tilt Reverse	Off / On
Settings	Hall Sensor Correction	Off / On
Settings	Optical Sensor Correction	Off / On; Pan/Tilt position correction
Settings	DMX Signal Hold	Off: return to post-reset state / On: hold last DMX frame
Settings	Screen Saver	Off / On
Settings	Display Invert	Off / On / Auto orientation
Settings	Synchronized Update	Off / On; transfer settings through the DMX line
Settings	Language	Chinese / English
Settings	MCU ID	Off / X1-X5 / Y1-Y5 / Z1-Z5; service use
Settings	Factory Reset	Cancel / Confirm
Manual	Channel Values	Current personality channels; 000-255
Calibration	Service Calibration	Authorized technicians only
Reset	Effect Motor Reset	Run reset
Reset	Pan/Tilt Reset	Run reset
Reset	Full Fixture Reset	Run reset
Information	Error / Reset Information	Communication and position-sensor errors
Information	DMX Data Monitor	View live channel data
Information	Sensor Information	View sensor status
Information	Hardware / Software Version	Read-only version information

FIRMWARE NOTE A shortened source menu lists only 28 CH and 85 CH, while the detailed settings text and channel charts also define 32 CH and 88 CH. Confirm the available personalities on the installed firmware.

3.3 Service Calibration

SERVICE ONLY Calibration changes can alter movement limits, LED balance, and maximum output. This menu is intended only for authorized technicians.

Calibration Group	Range / Function
Home Position	Pan, Tilt, and Focus: 000-255; 127 = neutral compensation
Travel / Output	Pan, Tilt, Focus, and RGBW LED 1-5 calibration: 000-255; 127 = neutral
Maximum Output	000-255; 255 = maximum configured output
Password	Service password management

3.4 Error Information

The Information menu can report X1-X5 and Y1-Y5 motion-board communication errors, Z1-Z5 LED-driver communication errors, and optical or Hall sensor errors for the corresponding head. Record the exact error, power the fixture down safely, and arrange qualified service if the error returns after reset.

4 DMX512 Control

Set the fixture DMX start address and select the required personality. Channel values are shown as decimal DMX values from 000 to 255. Function availability can vary with firmware revision.

OUTPUT NOTE To produce light output, set the relevant dimmer above zero and place the applicable strobe channel in an Open range.

4.1 28 CH Mode

Channel	DMX Value	Function
1	000-255	Pan, 0-540 degrees
2	000-255	Pan Fine, 16-bit adjustment
3	000-255	Pan Speed, fast to slow
4	000-255	Pan Macro; mapping not specified in source
5	000-255	Tilt, 0-540 degrees
6	000-255	Tilt Fine, 16-bit adjustment
7	000-255	Tilt Speed, fast to slow
8	000-255	Tilt Macro; mapping not specified in source
9	000-255	Pan Continuous Rotation; mapping not specified
10	000-255	Tilt Continuous Rotation; mapping not specified
11	000-255	Focus, far to near
12	000-255	Master Dimmer, 0-100%
13	000-255	Main LED Strobe; see 4.5
14	000-255	Aura Ring Strobe; see 4.5
15	000-255	Main LED Red, 0-100%
16	000-255	Main LED Green, 0-100%
17	000-255	Main LED Blue, 0-100%
18	000-255	Main LED White, 0-100%
19	000-255	Color Temperature, cool to warm
20	000-255	Color Macro; mapping not specified in source
21	000-255	Aura Ring Red, 0-100%
22	000-255	Aura Ring Green, 0-100%
23	000-255	Aura Ring Blue, 0-100%
24	000-255	Main LED Macro; see 4.6
25	000-255	Main Macro Speed / Fade; see 4.6
26	000-255	Aura Ring Macro; see 4.7
27	000-255	Aura Macro Speed / Direction; see 4.7
28	000-255	Reset; see 4.5

4.2 32 CH Mode

Channel	DMX Value	Function
1	000-255	Pan, 0-540 degrees
2	000-255	Pan Fine, 16-bit adjustment
3	000-255	Pan Speed, fast to slow
4	000-255	Pan Macro; mapping not specified in source
5	000-255	Tilt, 0-540 degrees
6	000-255	Tilt Fine, 16-bit adjustment
7	000-255	Tilt Speed, fast to slow
8	000-255	Tilt Macro; mapping not specified in source
9	000-255	Pan Continuous Rotation; mapping not specified
10	000-255	Tilt Continuous Rotation; mapping not specified
11	000-255	Head 1 Focus, far to near
12	000-255	Head 2 Focus, far to near
13	000-255	Head 3 Focus, far to near
14	000-255	Head 4 Focus, far to near
15	000-255	Head 5 Focus, far to near
16	000-255	Master Dimmer, 0-100%
17	000-255	Main LED Strobe; see 4.5
18	000-255	Aura Ring Strobe; see 4.5
19	000-255	Main LED Red, 0-100%
20	000-255	Main LED Green, 0-100%
21	000-255	Main LED Blue, 0-100%
22	000-255	Main LED White, 0-100%
23	000-255	Color Temperature, cool to warm
24	000-255	Color Macro; mapping not specified in source
25	000-255	Aura Ring Red, 0-100%
26	000-255	Aura Ring Green, 0-100%
27	000-255	Aura Ring Blue, 0-100%
28	000-255	Main LED Macro; see 4.6
29	000-255	Main Macro Speed / Fade; see 4.6
30	000-255	Aura Ring Macro; see 4.7
31	000-255	Aura Macro Speed / Direction; see 4.7
32	000-255	Reset; see 4.5

4.3 85 CH Mode

Channels 4-83 contain five identical 16-channel head blocks. The table below provides a deterministic mapping for every channel.

Channel	DMX Value	Function
1	000-255	Master Dimmer, 0-100%
2	000-255	Main LED Strobe; see 4.5
3	000-255	Aura Ring Strobe; see 4.5
84	000-255	Pan/Tilt Speed, fast to slow
85	000-255	Reset; see 4.5

Head	Channel Range	Start Channel
Head 1	4-19	4
Head 2	20-35	20
Head 3	36-51	36
Head 4	52-67	52
Head 5	68-83	68

Relative Position	Function
1	Pan, 0-540 degrees
2	Pan Fine
3	Pan Continuous Rotation
4	Tilt, 0-540 degrees
5	Tilt Fine
6	Tilt Continuous Rotation
7	Focus, far to near
8	Main LED Red
9	Main LED Green
10	Main LED Blue
11	Main LED White
12	Aura Ring Red
13	Aura Ring Green
14	Aura Ring Blue
15	Aura Ring Macro; see 4.7
16	Aura Macro Speed / Direction; see 4.7

MAPPING RULE Add the relative position minus 1 to the head start channel. Unless a detailed value table is referenced, the parameter uses 000-255.

4.4 88 CH Mode

Channels 4-88 contain five identical 17-channel head blocks. Unlike 85 CH mode, 88 CH mode adds an individual dimmer to every head and places Reset at channel 3.

Head	Channel Range	Start Channel
Head 1	4-20	4
Head 2	21-37	21
Head 3	38-54	38
Head 4	55-71	55
Head 5	72-88	72

Relative Position	Function
1	Pan, 0-540 degrees
2	Pan Fine
3	Tilt, 0-540 degrees
4	Tilt Fine
5	Pan Continuous Rotation
6	Tilt Continuous Rotation
7	Focus, far to near
8	Head Dimmer, 0-100%
9	Main LED Red
10	Main LED Green
11	Main LED Blue
12	Main LED White
13	Aura Ring Red
14	Aura Ring Green
15	Aura Ring Blue
16	Aura Ring Macro; see 4.7
17	Aura Macro Speed / Direction; see 4.7

MAPPING RULE Add the relative position minus 1 to the head start channel. Unless a detailed value table is referenced, the parameter uses 000-255.

Channel	DMX Value	Function
1	000-255	Master Dimmer, 0-100%
2	000-255	Main LED Strobe; see 4.5
3	000-255	Reset; see 4.5

4.5 Shared Strobe & Reset Tables

Main LED Strobe

DMX Value	Function
000-007	Blackout
008-015	Open
016-131	Synchronous strobe
132-139	Open
140-181	Pulse strobe: slow open / fast close, slow to fast
182-189	Open
190-231	Pulse strobe: fast open / slow close, slow to fast
232-239	Open
240-247	Random strobe
248-255	Open

Aura Ring Strobe

DMX Value	Function
000-004	Open
005-250	Synchronous strobe
251-255	Open

Reset

DMX Value	Function
000-214	No function / not defined in the supplied source
215-225	Head / effect motor reset
226-229	No function / not defined in the supplied source
230-240	Pan/Tilt motor reset
241-244	No function / not defined in the supplied source
245-255	Full fixture reset

RESET CAUTION Reset commands interrupt movement and may temporarily interrupt output. Use only when the fixture can move safely.

4.6 Main LED Macro

DMX Value	Main LED Macro
000-007	No function
008-015	Macro 1
016-023	Macro 2
024-031	Macro 3
032-039	Macro 4
040-047	Macro 5
048-055	Macro 6
056-063	Macro 7
064-071	Macro 8
072-079	Macro 9
080-087	Macro 10
088-095	Macro 11
096-103	Macro 12
104-111	Macro 13
112-119	Macro 14
120-127	Macro 15
128-135	Macro 16
136-143	Macro 17
144-151	Macro 18
152-159	Macro 19
160-167	Macro 20
168-175	Macro 21
176-183	Macro 22
184-191	Macro 23
192-199	Macro 24
200-207	Macro 25
208-215	Macro 26
216-223	Macro 27
224-231	Macro 28
232-239	Macro 29
240-255	No macro / main LEDs off (verify with installed firmware)

DMX Value	Main Macro Speed / Fade
000-127	Macro speed, slow to fast
128-255	Macro fade, slow to fast

4.7 Aura Ring Macro

DMX Value	Aura Ring Macro
000-015	No function
016-031	Macro 1
032-047	Macro 2
048-063	Macro 3
064-079	Macro 4
080-095	Macro 5
096-111	Macro 6
112-127	Macro 7
128-143	Macro 8
144-159	Macro 9
160-175	Macro 10
176-191	Macro 11
192-207	Macro 12
208-223	Macro 13
224-239	Macro 14
240-255	Macro 15

DMX Value	Aura Macro Speed / Direction
000-127	Forward, slow to fast
128-255	Reverse, slow to fast

4.8 Personality Summary

Mode	Control Resolution
28 CH	Shared Pan/Tilt movement and focus; shared RGBW, color, aura, strobe, macro, and dimmer control.
32 CH	As 28 CH, with independent Focus control for heads 1-5.
85 CH	Independent Pan/Tilt, continuous rotation, Focus, RGBW, and aura control for every head; global dimmer and strobe.
88 CH	Independent Pan/Tilt, continuous rotation, Focus, dimmer, RGBW, and aura control for every head.

5 Troubleshooting, Inspection & Maintenance

5.1 Troubleshooting

Symptom	Checks / Corrective Action
Fixture does not power on	Verify the AC source, plug, cable, protective device, and all accessible connectors. Disconnect power before inspection.
Fixture resets but does not respond to DMX	Confirm the start address and personality; check DMX polarity and cable continuity; add a 120 ohm terminator at the final fixture.
Output is dim or uneven	Check dimmer, strobe, color, and macro channels; clean the lenses and ventilation system; review reported temperature or driver errors.
Intermittent operation or overheating	Stop operation. Check fans, ventilation openings, ambient conditions, and accumulated dust. Arrange qualified service if the problem returns.
Movement or Focus error	Remove obstructions, run the appropriate reset, and review sensor/error information. Do not force the mechanism by hand.
DMX works but RDM discovery fails	Use an RDM-compatible controller and bidirectional splitter; inspect pins 2 and 3 and verify one bus master.

5.2 Inspection

- Confirm that all installation screws, clamps, and fasteners are tight and free from corrosion.
- Check the housing, lenses, mounting points, brackets, and secondary safety attachment for deformation, cracks, or other damage.
- Check moving parts for excessive wear, imbalance, abnormal noise, or restricted travel.
- Inspect power and data cables for cuts, crushing, heat damage, material fatigue, or contamination.
- Correct every safety issue before returning the fixture to service.

5.3 Cleaning

- Disconnect mains power and allow the fixture to cool before cleaning.
- Clean lens surfaces regularly with a soft, lint-free cloth to prevent output loss.
- Remove dust from fans and ventilation openings regularly. Cleaning frequency depends on the operating environment.
- Use a cloth lightly moistened with water. Do not use alcohol, solvents, abrasives, or pressurized liquid.
- There are no user-serviceable parts inside. Internal service must be performed by qualified personnel.

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