

01 OUTDOOR LASER LIGHT PRODUCT MANUAL

STARSHINE
— LIGHTS —



1. Introduction & Package Contents

Thank you for choosing the Starshine O1 waterproof full-color laser projector. For your safety and the best performance, read this manual before use and follow all instructions. Improper operation may cause injury or product damage.

1) Package Contents

Please check the carton immediately upon receipt.

- O1 Waterproof RGB Laser Projector × 1
- AC Power Cable × 1
- User Manual × 1

2) Technical Specifications (Model: O1)

- Power Supply: AC 100–240 V, 50/60 Hz
- Rated Power: 100 W
- Laser Output: 2–4 W RGB (full-color)
- Light Sources: Red / Green / Blue
- Output Color: Full-color (RGB)
- Housing: Aluminum, black, corrosion-resistant
- Scanning System: Galvanometer 15 kpps @ ±25°, with ~256 + 11 built-in laser effects
- Control Modes: DMX-512, Sound-Active, Auto (Run), Master/Slave
- DMX Channel Sets: 6-channel (Easy) / 34-channel (Pro)
- Cooling: Passive / natural convection
- Environment: Indoor & Outdoor
- Ingress Protection: IP65 (dust-tight, water-jet resistant)
- Power / Signal: IEC power cable; DMX in/out (XLR)
- Recommended Venues: Bars, clubs, dance halls, KTV rooms, home parties
- Product Size: 25.7 × 20.5 × 25.3 cm
- Inner Box: 28 × 27 × 22 cm
- Outer Carton: 57 × 29 × 47 cm (4 units/carton)
- Net Weight: 3.45 kg (w/o handle) / 3.65 kg (with handle)
- Gross Weight: 4.30 kg (single unit)

STARSHINE LIGHTS
PRODUCT MANUAL

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service@starshinelights.com



3) Before You Power On (Inspection & Safety)

- Unpack & inspect: Check for transport damage (loose screws, cracked lens/optics).
- Mounting: Place/mount the O1 on a stable surface or rig; confirm orientation and aim.
- Mains check: Verify venue voltage is AC 100–240 V.
- Grounding: The O1 is Class I; the PE/ground must be connected. Installation should be performed by a qualified technician.
- Pre-run: Confirm line voltage is normal; verify cables and fittings are secure.

4) Installation & Rigging

- Supported installs: hung, truss-mounted, ceiling-mounted, or flat placement.
- Mandatory secondary safety: In addition to the primary clamp, always use a safety cable/secondary retention for suspended or overhead installs. Installs without secondary safety cannot pass acceptance.
- Keep ventilation paths clear; do not block vents or press insulation against the chassis.
- Aim beams above eye level and away from roads, public pathways, mirrors, and reflective glass.



Warning! Do not look directly at the light beam at close range to avoid eye damage!

5) Quick Start (No Console)

- Power on the O1.
- On the display, choose a gallery (SE1/SE2/SE3) and press Enter to start Auto.
- Press Enter again to toggle Sound-Active (● appears).
- Adjust speed/brightness to taste; add light haze for visible aerial beams.

6) Onboard Display / Addressing

Code	Purpose	Notes
A001–A512	Console Mode 1 (Pro)	DMX start address for 34-channel mode
E001–E512	Console Mode 2 (Easy)	DMX start address for 6-channel mode
SE 1	Gallery No.1	Auto; Enter toggles Sound (●)
SE 2	Gallery No.2	Auto; Enter toggles Sound (●)
SE 3	Gallery No.3	Auto; Enter toggles Sound (●)



7) DMX Channel Functions

DMX values: 0 → 255. "Static" = not changing; "Dynamic" = animated.

Select E001 (6ch) or A001 (34ch) on the display before use.

CH	Function	Range (summary)
1	Master mode	0=Blackout; 1-255=Auto Run
2	Library / mode	0-127=Gallery 1 Auto; 128-255=Gallery 2 Sound
3	Gallery 3 Auto	240-255=Gallery 3 Auto
4	Pattern group select	1-255 step through groups
5	Color	0-31=Full-color; 32-255=7 single colors
6	Speed	1-255 slow → fast

Pattern A (CH1-17)

A1) Base & Library

CH	Function	Value Range	Action
1	Run mode A	0	Blackout
		1-99	Auto
		100-199	Sound
		200-254	Reserved
		255	Pattern A blackout
2	Boundary & Size A*	0-49	Boundary pass-through (higher value → smaller pattern)
		50-99	Boundary bounce
		100-149	Boundary fade
		150-199	Boundary fade (higher value → larger pattern)
		200-255	Reserved
3	Gallery select A	0-239	Gallery 1
		240-255	Gallery 0
4	Pattern select A	1-255	Steps through patterns (beyond last = holds last)

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A2) Zoom, Rotation & Movement (unified view of ranges)

CH	Function	0–127	128–159	160–191	192–223	224–255
5	Zoom A	Static size	Dynamic zoom-in	Dynamic zoom-out	Dynamic zoom in/out	Flip + zoom
6	Rotation A	Static	Dynamic 2-rev F/B	Dynamic 1-rev F/B	CW	CCW
7	Horizontal move A	Static	Up-push wave	Down-push wave	Left	Right
8	Vertical move A	Static	Right-push twist	Left-push twist	Down	Up
9	Y-flip A	Static	Up-push twist	Down-push twist	Normal flip	Reverse flip
10	X-flip A	Static	Right-push twist	Left-push twist	Normal flip	Reverse flip

A2) Zoom, Rotation & Movement (unified view of ranges)

CH	Function	Key Ranges & Actions
11	Forced color A	0 Original · 1–255 Change color every n points
12	Color change A	0–7 Original · 8–15 Red · 16–23 Yellow · 24–31 Green · 32–39 Indigo · 40–47 Blue · 48–55 Purple · 56–63 White · 64–95 RGB cycle · 96–127 Yellow–Indigo–Purple cycle · 128–159 7-color · 160–191 Rainbow · 192–223 Color chase · 224–255 Reverse chase
13	Point / blanking A	0–63 Normal · 64–127 Broken-stroke · 128–159 Retrace · 224–255 Reserved
14	Node expand A	0–255 If CH15 ≤127: expand points; if CH15 ≥128: hold time after full expand
15	Progressive draw A	0–63 Manual Fwd (amt = CH14) · 64–127 Manual Rev · 128–159 Prog A · 160–191 Prog B · 192–223 Prog C · 224–255 Prog D
16	Distortion A	0–255 Distortion amount (higher value → smaller distortion)
17	Filter A	0–19 Filter 1 · 20–39 ... 240–255 Filters 2...13 (higher value → smaller frame)



Pattern B (CH18–34)

Pattern B mirrors Pattern A one-to-one (same functions, applied to Pattern B instead of A).
Mapping: CH18 ↔ CH1, 19 ↔ 2, 20 = Reserved, 21 ↔ 4, 22 ↔ 5, ..., 34 ↔ 17.

CH (B)	Mirrors A	Function (same behavior as A)
18	1	Run mode B (Blackout / Auto / Sound / Reserved / Pattern B blackout)
19	2	Boundary & Size B (same boundary modes and size rules)
20	—	Reserved
21	4	Pattern select B
22	5	Zoom B
23	6	Rotation B
24	7	Horizontal move B
25	8	Vertical move B
26	9	Y-flip B
27	10	X-flip B
28	11	Forced color B
29	12	Color change B (same palette & ranges)
30	13	Point/blanking B
31	14	Node expand B (threshold depends on CH32)
32	15	Progressive draw B (Manual Fwd/Rev; A-D)
33	16	Distortion B (higher value → smaller distortion)
34	17	Filter/Frame B (0–19 = frame size; 20–255 = Reserved)

Programming tips (at a glance):

- Start with A-block to get the look, then copy values to B-block for layering.
- Unsure about motion? Keep CH5–10/22–27 in 0–127 (static) first, then add movement.
- Quick color baseline: set CH12/29 = 56–63 (White) or 0–7 (Original) before testing cycles.



8) Best-Practice Tips

- **Surfaces:** Aim at dark, matte surfaces for maximum contrast.
- **Haze:** A light haze reveals aerial beams and increases perceived brightness on camera.
- **DMX planning:** Give each fixture a unique start address; in Master/Slave, assign one Master only.
- **Camera-friendly:** Start with moderate speed and brightness, then adjust to taste.

9) Maintenance

- Keep the operating environment clean and dry. Prevent dust, dirt, and fog-fluid residue from entering the housing.
- Clean optics monthly with professional glass cleaner to maintain peak output and extend optical life.
- Never stare into the laser aperture; avoid direct eye exposure.

10) Safety & Compliance

- **Laser class:** Treat as high-power/Class 4—no audience scanning.
- **Above-eye mounting:** Always mount above eye level; aim away from roads and public sightlines.
- **Secondary safety:** Always use a safety cable for suspended/overhead installs.
- **Grounding:** As a Class I device, the PE/ground must be connected.
- **Keep clear** of sprinklers and HVAC blasts; maintain airflow around the chassis.
- Follow all **local regulations** for laser displays and electrical installation.

11) Troubleshooting (Quick Checks)

- **No output:** Verify mains power and fuse; ensure CH1 isn't at blackout; confirm mode (Auto/Sound/DMX).
- **No DMX response:** Check address (A001/E001), XLR polarity, terminator, controller universe.
- **Dim/soft beams:** Clean optics; reduce ambient light; add light haze; reset zoom/color.
- **Distorted patterns:** Reset distortion/filters (CH16–17/CH33–34) to default; check scan angle.

12) Storage & Transport

- Use the original inner box and outer carton (4-pack option) for shipping.
- Store in a dry, ventilated place; avoid corrosive or high-humidity environments.

13. Warranty Period & Coverage

- Standard Warranty: 2 years from the purchase date on the invoice.
- Scope: Defects in materials and workmanship under normal, intended use.
- Remedy: At Starshine's discretion, repair or replace defective parts/units with new or refurbished equivalents.

14. Support Contacts

- Tech / RMA: service@starshinelights.com
- Website: www.starshinelights.com
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