

OB1 LASER BIRD DETERRENT PRODUCT MANUAL



Important: This product uses a high-power green laser. Do not aim the laser at people, vehicles, aircraft, reflective surfaces, or animal eyes. Install and operate the product only in accordance with local regulations and site safety requirements.

Contents

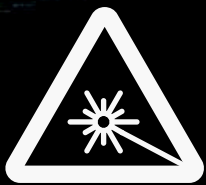
- 1. Product Overview
- 2. Safety Instructions
- 3. Product Specifications
- 4. Package Contents and Product Structure
- 5. Installation Guide
- 6. Remote Control and Operating Modes
- 7. Limit Stop Adjustment
- 8. LED Display Menu Reference
- 9. DMX 12-Channel Reference
- 10. Recommended Use in Bird Deterrence Sites
- 11. Cleaning and Maintenance
- 12. Troubleshooting
- 13. Storage, Warranty, and Support

Product Overview

The OB1 is an IP65-rated outdoor green laser bird deterrent designed for wide-area bird control in orchards, vineyards, farms, warehouses, bridges, tunnels, highways, fishponds, and other open infrastructure zones. It uses a single green semiconductor laser source to project moving grid/circle patterns across the target area, creating visual motion that discourages birds from landing, feeding, and staying in the protected zone. The system combines a laser projector, a weather-resistant housing, a pan/tilt rotating platform, adjustable mechanical limit stops, and a long-distance remote controller. Compared with noise-based deterrents, OB1 is designed for visual coverage without consumables and can run in automatic scanning mode after installation.

2. Safety Instructions

Laser Safety Warning: This device is not a toy and must not be used for entertainment audience scanning. Do not look directly into the laser aperture or place eyes in the beam path. Keep the beam away from aircraft, roads, drivers, pedestrians, homes, mirrors, water surfaces, metal surfaces, windows, and other reflective objects.



STARSHINE LIGHTS PRODUCT MANUAL

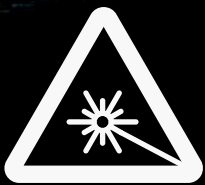




- Only trained personnel should install, adjust, and operate the product.
- Confirm the working voltage before power connection. Do not connect the unit to an incorrect power supply.
- Power off the system before wiring, cleaning, moving, or servicing the product.
- Use reliable grounding and weatherproof outdoor power protection for outdoor installations.
- Do not remove the mechanical limit blocks. Removing them may damage the rotating platform.
- Do not allow the pan/tilt platform to cruise continuously for 24 hours every day without inspection or rest intervals.
- Do not exceed the rated load of the pan/tilt platform.
- Install the unit where children, unauthorized persons, and animals cannot touch the equipment.
- Do not operate the unit if the housing, cable, lens window, power connector, or mounting base is damaged.
- Comply with all local laser-use, agricultural, aviation, road, and environmental regulations before operation.

3. Product Specifications

Item	Specification
Product Name	Outdoor Single Green Laser Bird Deterrent / Multi-Purpose Scanning Laser Projector
Model	OB1
Laser Source	Semiconductor laser generator
Laser Color	Single green
Wattage Options	2W / 3W / 4W / 5W
Laser Pattern / Effect	Green grid/circle pattern for bird deterrence and wide-area visual coverage
Waterproof Rating	IP65
Material	Die-cast aluminum alloy
Fixture Weight	Approx. 8 kg
Pan Range	0°–350° horizontal coverage
Tilt Range	±35° vertical adjustment
Constant Pan Speed	Approx. 9°/s
Constant Tilt Speed	Approx. 1°/s
Limit Stops	External adjustable limit posts
Load Capacity	Up to 5 kg for the platform configuration used with this product
Operating Modes	Jog control, horizontal auto pan, horizontal auto pan + vertical jog
Power-Off Memory	Yes. Restores the previous operating state after power returns.
Remote Distance	≥400 m in open unobstructed areas; remote-platform reference may reach longer distances in ideal environments
Working Temperature	Fixture reference: -20°C to 45°C; system environment reference: -25°C to +55°C
Input Voltage	AC100V–230V regional configuration; confirm the voltage label before use
Recommended Applications	Orchards, vineyards, farms, warehouses, bridges, highways, tunnels, fishponds, and open outdoor sites



STARSHINE LIGHTS PRODUCT MANUAL





STARSHINE LIGHTS PRODUCT MANUAL



4. Package Contents and Product Structure

Check all parts immediately after opening the carton. If anything is missing or damaged, stop installation and contact your supplier before powering on the unit.

- 1 × OB1 outdoor green laser projector with pan/tilt base
- 1 × Wireless remote controller
- 1 × Power cable or configured power lead
- 1 × Mounting base / hardware set according to order configuration
- 1 × User manual

5. Installation Guide

5.1 Installation Position

- Choose a stable mounting point that covers the intended bird activity zone without aiming at public roads, nearby homes, aircraft routes, or reflective surfaces.
- For orchards and vineyards, mount the unit along the row direction where the green beam can scan across the top and side of the tree/vine canopy.
- Avoid installation near high-power wireless signal towers, high-voltage transformers, or other strong interference sources.
- Outdoor chassis water immersion height must not exceed 10 mm to keep drainage clear.
- Install the pan/tilt platform in horizontal pedestal mounting only. Do not hoist it upside down and do not side-mount it.

5.2 Mounting Steps

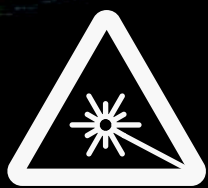
1. Place the base on a flat, strong, vibration-resistant surface or pole-mount plate.
2. Use the base holes to secure the platform with suitable screws, washers, and lock nuts.
3. Confirm that the platform can rotate freely within the selected left/right limit range.
4. Adjust the projector tilt angle according to the target area height and terrain.
5. Route the power cable downward with a drip loop to reduce water ingress risk.
6. Check that the laser output window is clean and not blocked.
7. After all wiring and mounting are complete, connect power and test operation with the remote controller.

Mounting Restriction: The PTZ platform must be installed horizontally. Lifting, upside-down mounting, and side mounting are not supported.

6. Remote Control and Operating Modes

The wireless remote controls the pan/tilt platform and laser switch. Hold a directional key to move the platform; release the key to stop that movement.

Key	Function	Operation
1	Up	Tilt the laser head upward while the button is held.
2	Down	Tilt the laser head downward while the button is held.
3	Left	Pan the platform left while the button is held. Pressing Left during auto cruise stops auto cruise.
4	Right	Pan the platform right while the button is held. Pressing Right during auto cruise stops auto cruise.
5	Auto / Stop	Press once to start left-right automatic cruise between the limit stops. Press again to stop automatic cruise.
6	Laser On / Off	Press once to turn the laser on. Press again to turn the laser off.



6.1 Operating Modes

Manual Jog Control: Use Up / Down / Left / Right to aim the beam manually during setup or spot adjustment.

Horizontal Auto Pan: Use Auto / Stop to make the platform scan automatically between the left and right limit stops.

Auto Pan + Tilt Jog: Keep horizontal auto scanning active while using Up / Down jog adjustments to fine-tune vertical coverage.

Power-Off Memory: After a power outage, the unit restores the previous working state when power returns.

7. Limit Stop Adjustment

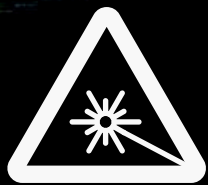
The adjustable left/right limit stops define the automatic scan boundary. Correct limit setting keeps the laser inside the intended protection area and prevents unnecessary scanning into roads, buildings, or sensitive sightlines.

- Power off the device before changing mechanical limit settings.
- Loosen the limit block carefully and move it to the desired left or right boundary position.
- Tighten the limit block securely after adjustment.
- Power on and test Auto / Stop mode to verify that the scan stays inside the target zone.
- Never remove the limit blocks. Removing them can damage the platform.



8. LED Display Menu Reference

Some configurations include an LED digital display and touch-button menu. Use UP / DOWN to select a function, ENTER to confirm, and EXIT to return to the previous menu.



STARSHINE LIGHTS PRODUCT MANUAL



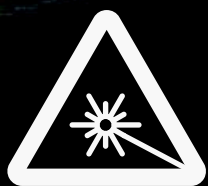
Menu	Function	Description
A001	DMX-512 Mode	Set address code from 001.
AUto	Auto Mode	Run built-in automatic effects. Select All or list L001.
SoUd	Sound Mode	Run voice-activated effects. Select All or list L001.
SPEd	Effect Speed	Adjust effect speed; reference value 50.
SEt > 1-db	Sound Sensitivity	Adjust acoustic sensitivity; reference value 50.
SEt > 2-SC	Scanning Speed	Adjust scanning speed; reference value 20.
SEt > 3-Co	Color Setting	1 single/mono, 2 RGY, 3 RBP, 4 GBC, 5 RGB, 6 WYPC. For OB1, use green/single-color configuration as applicable.
SEt > 4-In	Inversion	1 normal XY, 2 inverted X, 3 inverted Y, 4 inverted XY.
SEt > 5-SE	Size Setting	Adjust scanning range; reference value 100.
SEt > 6-CH	Channel Mode	1 STD normal mode, 2 PRO professional mode.
SEt > 7-BE	Safety Closure	ON open, OFF close.
SEt > 8-AS	Host Setting	ON / OFF.
SEt > 9-LH	LED Display	ON normally illuminated.

Configuration Note: Menu names may vary slightly by production batch or laser engine configuration. Use the printed label and supplied controller version as the final reference.

9. DMX 12-Channel Reference

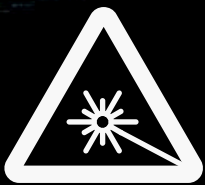
The following table is an advanced DMX reference for configurations equipped with DMX-512 control. If your OB1 version is remote-control only, this section can be used as a technical reference but may not apply to daily operation.

Channel	Value	Control Content
CH1	0-255	Laser total on/off: 0 laser closed; 1-255 laser open.
CH2	0-255	Pattern library selection. Every 8 values selects one library. The final built-in line library can be selected at value 255.
CH3	0-255	Pattern selection and dynamic effect selection inside the selected pattern library.
CH4	0-24 / 25-199 / 200-224 / 225-255	Fixed color / color selection / color change effect / flowing color change effect.
CH5	0-127 / 128-191 / 192-255	Gobo rotation angle / reverse rotation speed / forward rotation speed.
CH6	0-127 / 128-255	Horizontal flip position / horizontal flip speed.
CH7	0-127 / 128-255	Vertical flip position / vertical flip speed.
CH8	0-127 / 128-255	Horizontal move position / horizontal travel speed.
CH9	0-127 / 128-255	Vertical move position / vertical moving speed.
CH10	0-63 / 64-127 / 128-191 / 192-255	Pattern size / large-to-small zoom / small-to-large zoom / zoom speed.
CH11	0-127 / 128-255	Gobo scanning speed / pattern point length selection.
CH12	1-127 / 128-255	Self-propelled dynamic effect speed from normal to slow to fast / voice-activated dynamic effects.



STARSHINE LIGHTS PRODUCT MANUAL





STARSHINE LIGHTS PRODUCT MANUAL



10. Recommended Use in Bird Deterrence Sites

10.1 Site Setup Recommendations

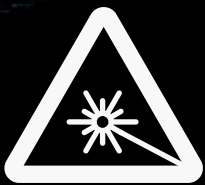
- Best visible results usually occur at dawn, dusk, overcast conditions, shaded areas, and lower ambient light environments.
- Set the scan boundary tightly around the target area instead of scanning the entire surroundings.
- For orchards and vineyards, align the beam with rows and canopy surfaces so the moving pattern crosses typical landing zones.
- For fishponds, warehouses, and open yards, mount the unit high enough to avoid obstacles while keeping the beam below restricted sightlines.
- Change scan angle, height, timing, or placement periodically if birds become accustomed to a fixed pattern.
- For large sites, use multiple units with overlapping but safely controlled coverage zones.

10.2 Wattage Selection Guide

Power Option	Recommended Scenario
2W	Small orchards, near-field protection, lower ambient light, controlled scan zones
3W	Medium rows, ponds, warehouse edges, general farm use
4W	Larger open areas, longer rows, stronger visibility needs
5W	Wide-area perimeter protection, brighter outdoor environments, longer-range coverage planning

11. Cleaning and Maintenance

- Power off and disconnect the device before cleaning.
- Clean the laser output window with a soft lint-free cloth. Do not use abrasive materials.
- Keep the housing, vents, mounting base, screws, and cable entries clean and dry.
- Inspect mounting screws, limit blocks, and the pan/tilt base regularly after wind, rain, or vibration.
- Check the remote controller battery if the control distance becomes shorter or the indicator light becomes weak.
- Do not open the laser module or pan/tilt electronics unless performed by qualified service personnel.
- After long outdoor operation, check for dust, insects, moisture, corrosion, loose cables, and damaged insulation.



STARSHINE LIGHTS PRODUCT MANUAL



12. Troubleshooting

Problem	Possible Cause	Solution
No response after power-on	No voltage, loose wiring plug, incorrect input voltage, remote battery low, switch not turned on	Confirm power socket voltage, check cable/plug, confirm product voltage label, replace remote battery, try again.
Laser does not turn on	Laser switch off, safety closure active, power issue, module protection	Press remote key 6, check display/menu settings if equipped, power cycle after inspection.
Remote control distance is short	Low remote battery, obstacles, wireless interference, water ingress in remote	Replace battery, move closer, avoid interference source, keep remote dry.
PTZ control is not sensitive	Weak battery, strong wireless signal nearby, unstable power	Replace battery, move installation point, check rated voltage and wiring contact.
PTZ stops during automatic cruise	Power supply below rated voltage or poor terminal contact	Check voltage and terminal wiring, tighten connectors, restart test.
Stop button does not stop cruise	Remote battery too low or indicator dim/flashing	Replace the remote-control battery and test again.
Scan range is wrong	Limit blocks not set correctly or loose	Power off, readjust left/right limit stops, tighten blocks, test again.
Beam looks weak	Dirty output window, strong daylight, wrong aiming, too wide scan zone	Clean lens window, use dawn/dusk settings, narrow scan boundary, improve mounting angle.
Water or condensation found	Cable entry not sealed, drainage blocked, incorrect mounting	Power off immediately, dry/inspect safely, improve weatherproofing and drainage before reuse.

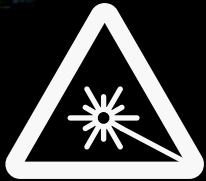
13. Storage, Warranty, and Support

13.1 Storage

- Store the unit in a clean, dry, ventilated location when not in use for long periods.
- Avoid high humidity, corrosive gases, heavy dust, and direct physical impact during storage.
- Remove the remote-control battery for long-term storage to prevent leakage.
- Use protective packaging when transporting the product.

13.2 Warranty and Support

StarshineLights provides product support for selection, setup questions, shipping updates, and order-related assistance. Eligible products include 1-year warranty protection. Warranty service does not cover damage caused by incorrect voltage, unauthorized modification, improper installation, water ingress caused by incorrect mounting, impact, misuse, or violation of local laser-use regulations.



STARSHINE LIGHTS PRODUCT MANUAL



Contact Item	Information
Company	STARSHINE LIGHTS EQUIPMENT CO., LTD
Address	Sanzi Enterprise, Fengxiang North Road, Baiyun District, Guangzhou, Guangdong, China
Website	www.starshinelights.com
Email	sales@starshinelights.com
WhatsApp	+86 135 2139 1704

Source Notes

This manual was prepared from the OB1 product page specifications and the supplied English remote/PTZ/DMX manual content. Some functions may vary by production batch, voltage configuration, and controller version. Always follow the label and configuration supplied with the actual product.