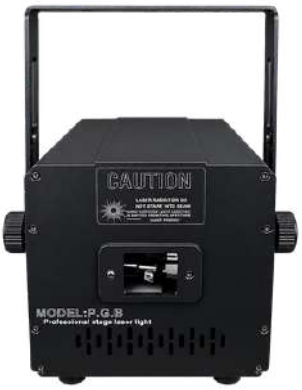
STARSHINE LIGHTS PRODUCT MANUAL

A16 APP LASER LIGHT PRODUCT MANUAL



Dear User,

This product integrates advanced technologies in optics, electronics, and digital graphic processing. It is specially designed and manufactured for dance halls, DISCO venues, clubs, and entertainment spaces.

The built-in beam programs can be triggered by music rhythm. When used together with haze or fog, the laser effects can create impressive visual scenes such as laser light curtains, tunnel effects, and dynamic spatial beam effects. These effects help build a powerful and unique lighting atmosphere, bringing users into a colorful and vivid laser world.

Packing List

- Laser Show System: 1 unit
- International Power Cable: 1 piece
- Computer Connection Cable: 1 piece
- User Manual: 1 copy
- Product Warranty Card: 1 copy

1.1 Product Specifications and Features

1. This product uses the latest high-brightness color laser technology. It features a compact structure, lightweight design, stable performance, reliable operation, and long service life.
2. The animated laser show system uses a high-capacity microcontroller control system and high-performance optical scanning galvanometers to create vivid laser text, graphics, patterns, and animation effects.
3. The unit includes 128 built-in beam effects specially designed for Disco and entertainment applications.
4. Multiple playback modes are available, including:
    - Sound-activated mode
    - Manual console control
    - DMX512 signal control
    - PC control
    - Laser control software system
5. These control options allow the product to meet the operating requirements of different venues and application scenarios.
6. The product is fully compatible with the international standard DMX512 signal protocol and provides 21 DMX control channels for flexible operation.
7. Through master-slave configuration, multiple units can operate synchronously to create coordinated laser show effects.

STARSHINE LIGHTS

PRODUCT MANUAL

Technical Specifications

Item	Specification
Control Signal	International standard DMX-512 signal
Control Modes	DMX-512 control, Auto mode, Sound-activated mode, Master-Slave mode
Power Supply	AC110–240V, 50/60Hz
Scanning Angle	±30°
Operating Temperature	-20°C to 40°C
Control Options	Sound control, Auto mode, DMX control
DMX Channels	21 channels

Maintenance and Care

Regular maintenance is required to keep the product in good working condition.
After long-term use, dust may accumulate on the surface of the optical lens at the laser output aperture. This can reduce laser output power and affect the final lighting effect. To maintain optimal laser performance, clean the lens with lens cleaning paper or a cotton swab dipped in alcohol.
Do not clean the lens with a wet cloth or other chemical solvents.
The cleaning frequency depends on the operating time and the surrounding environment. It is recommended to clean the lens approximately once every 20 days.
Please also clean the outer surface of the housing regularly with a clean dry towel. Check and clean the cooling fan periodically to ensure proper heat dissipation and stable operation.

Troubleshooting Guide

Fault	Main Cause Analysis and Solutions
The fixture does not emit light or does not work	1. Check whether the power cable is properly connected to the fixture and whether the power fuse is blown.2. Check whether the input voltage matches the rated voltage specified for the fixture.
No response in sound-activated mode	1. The sensitivity potentiometer may be adjusted to the minimum level. Try increasing the sensitivity setting.
The fixture emits light normally but cannot be controlled by the controller	1. Check whether the DIP switch starting address is set correctly.2. Check whether the XLR signal cable is damaged or improperly connected.
In Master-Slave synchronization mode, the master unit works normally but the slave unit	1. Make sure there is only one master unit. The master unit should not be connected to a DMX controller and should be set to Sound-Activated mode or Auto mode.2. If the master unit is correctly configured but the
Buttons do not work or have no response	1. Check whether any button is stuck or has not returned to its normal position.
The beam is dim and the brightness has noticeably decreased	1. Check whether the lamp or laser diode has reached the end of its service life.2. Check whether the internal and external optical lenses are dirty, and keep all optical components clean.

STARSHINE LIGHTS PRODUCT MANUAL

Declaration

This product has been fully and strictly inspected at the factory. It is confirmed to be in good operating condition and delivered with complete packaging.
All users must strictly follow the safety warnings, operating instructions, and maintenance requirements stated in this manual. Any damage, malfunction, or personal injury caused by misuse, improper operation, unauthorized modification, negligence, failure to follow this manual, or operation beyond the specified working conditions is not covered by the warranty.
The manufacturer and distributor shall not be responsible for any product damage, operational failure, or injury caused by incorrect installation, improper handling, careless use, or failure to comply with the safety instructions. Users must ensure that the laser fixture is installed, operated, and maintained by qualified personnel and used only within the permitted operating range.

DMX Channel Function Table
16 channel

Channel	Function	DMX Value	Description
CH1	Shutter	0–5	Blackout / Laser off
		6–128	Laser on. Applies to CH6 forward color chase. The higher the value, the faster the color changing speed.
		129–249	Laser on. Applies to CH6 reverse color chase. The higher the value, the faster the color changing speed.
		250–255	Laser on. CH6 is active and the color remains unchanged.
CH2	Mode Selection	0–49	Auto mode. The higher the value, the faster the running speed.
		50–99	Sound-activated mode. The higher the value, the faster the running speed.
		100–149	Stored file sequential playback. The higher the value, the faster the playback speed.
		150–199	SD file loop playback. The higher the value, the faster the playback speed.
		200–255	DMX manual mode
CH3	Pattern / File Selection	0–249	Auto mode: one effect for every 2 values. Sound-activated mode: one effect for every 2 values. Stored mode: one stored playback file for every 10 values. SD mode: one program list item for every 10 values. DMX manual mode: one pattern for every 2 values.
		250–255	Loop playback in Auto mode, Sound-activated mode, Stored mode, SD mode, and DMX manual mode.

CH4	Pattern Group / Folder Selection	0–10	Auto mode: one effect group for every 10 values. Sound-activated mode: one effect group for every 10 values. Stored mode: one stored playback group for every 20 values. SD mode: one file for every 20 values. DMX manual mode: one pattern group for every 10 values.
		11–199	Reserved / no function specified
		200–249	Reserved / no function specified
		250–255	Loop playback in Auto mode, Sound-activated mode, Stored mode, and SD mode.
CH5	Color Strobe	0	Constant on
		1–255	Strobe from 0% to 100%, from slow to fast
CH6	Color Selection	0–20	White, red, blue, pink, cyan, yellow, and green
		21–23	Primary colors
		24–255	Color segment table
CH7	X Movement	0–255	Manual position adjustment
CH8	X Auto Movement	0–75	Automatic left-right loop movement
		76–145	Automatic left-right jump loop movement
		146–215	Automatic random jump movement
		216–255	Sound-activated random jump movement
CH9	Y Movement	0–255	Manual position adjustment
CH10	Y Auto Movement	0–75	Automatic up-down loop movement
		76–145	Automatic up-down jump loop movement
		146–215	Automatic random jump movement
		216–255	Sound-activated random jump movement
CH11	Zoom	0–10	No zoom
		11–87	Manual size adjustment
		88–150	Zoom in
		151–200	Zoom out
		201–255	Loop zoom

CH12	X Rotation	0	No rotation
		1–128	Manual adjustment
		129–255	Automatic rotation
CH13	Y Rotation	0	No rotation
		1–128	Manual adjustment
		129–255	Automatic rotation
CH14	Center Rotation	0	No rotation
		1–128	Manual adjustment
		129–192	Automatic clockwise rotation
		193–255	Automatic counterclockwise rotation
CH15	Drawing / Gradual Drawing	0–10	No gradual drawing effect
		10–74	Manual gradual drawing adjustment
		75–104	Automatic gradual drawing, increasing
		105–144	Automatic gradual drawing, decreasing
		145–184	Automatic loop gradual drawing
		185–224	Head-to-tail connected loop gradual drawing, increasing
		225–255	Head-to-tail connected loop gradual drawing, decreasing
CH16	X Wave	0–9	No wave effect
		10–69	Small-amplitude wave
		70–129	Medium-amplitude wave
		130–189	Large-amplitude wave
		190–255	Maximum-amplitude wave

STARSHINE LIGHTS PRODUCT MANUAL

20 channel

Channel	Function	DMX Value	Control Description
CH1	Master Dimmer	0–255	Master on/off and dimming. Dimming function is effective when analog modulation is supported.
CH2	Red Dimmer	0–255	Linear dimming for the red laser.
CH3	Green Dimmer	0–255	Linear dimming for the green laser.
CH4	Blue Dimmer	0–255	Linear dimming for the blue laser.
CH5	Strobe	0–9	No strobe.
		10–255	Strobe speed from slow to fast.
CH6	Color	0–34	Fixed color selection: white, red, blue, purple, cyan, yellow, and green.
		35–39	Full-color changing effect. The chase speed is controlled by CH7.
		40–44	Initial pattern color. The chase speed is controlled by CH7.
		45–46	Rainbow color effect. The chase speed is controlled by CH7.
		47–66	2-segment color selection with 4-value steps. The chase speed is controlled by CH7.
		67–96	3-segment color selection with 4-value steps. The chase speed is controlled by CH7.
		97–126	4-segment color selection with 4-value steps. The chase speed is controlled by CH7.
		127–150	8-segment color selection with 4-value steps. The chase speed is controlled by CH7.
		151–174	16-segment color selection with 4-value steps. The chase speed is controlled by CH7.
		175–214	32-segment color selection with 4-value steps. The chase speed is controlled by CH7.
		215–247	Analog color mixing, with 32 analog mixed colors available. Effective when analog modulation is supported.
		248–255	Color drawing effect. The chase speed is controlled by CH7.

CH7	Color Chase Speed	0–9	No color chase.
		10–127	Forward color chase, speed from slow to fast.
		128–255	Reverse color chase, speed from slow to fast.
CH8	Pattern Selection	0–255	Pattern selection. Pattern groups are controlled by CH9.
CH9	Pattern Group Selection	0–24	Built-in static pattern group 1: basic geometric patterns.
		25–49	Built-in static pattern group 2: basic geometric patterns.
		50–74	Built-in static pattern group 3: edge highlight patterns.
		75–99	Built-in static pattern group 4: dotted patterns.
		100–124	Reserved.
		125–149	ILDA animation group 1.
		150–174	ILDA animation group 2.
		175–199	ILDA animation group 3, currently reserved.
		200–224	ILDA animation group 4.
		225–255	ILDA animation group 5.
CH10	Pattern Size	0–255	Manual pattern size adjustment.
CH11	Auto Pattern Zoom	0–15	Pattern size selection.
		16–55	Zoom from small to large. Speed selection.
		56–95	Zoom from large to small. Speed selection.
		96–135	Zoom in and out. Speed selection.
		136–175	Two-part irregular loop zoom.
		176–215	Three-part irregular loop zoom.
		216–255	Four-part irregular loop zoom.
CH12	Pattern Center Rotation	0–127	Rotation angle selection.
		128–191	Forward rotation speed selection.
		192–255	Reverse rotation speed selection.

CH13	Pattern X-Axis Rotation	0–127	Horizontal flip position selection.
		128–255	Horizontal flip speed selection.
CH14	Pattern Y-Axis Rotation	0–127	Vertical flip position selection.
		128–255	Vertical flip speed selection.
CH15	Horizontal Movement	0–255	Horizontal position selection.
CH16	Vertical Movement	0–255	Vertical position selection.
CH17	X-Axis Wave	0–1	No wave effect.
		2–255	Wave amplitude and speed adjustment. The amplitude increases from small to large, and the speed increases from slow to fast. Every 32 DMX values represent one level, with 8 levels in total.
CH18	Pattern Drawing	0–1	No drawing effect.
		2–63	Manual drawing effect 1.
		64–127	Manual drawing effect 2.
		128–153	Automatic drawing effect, increasing.
		154–179	Automatic drawing effect, decreasing.
		180–205	Automatic drawing effect, increasing then decreasing in reverse direction.
		206–255	Automatic drawing effect, increasing then decreasing in the same direction.
CH19	Built-in Dynamic	0–1	No function.
CH19	Built-in Dynamic Effects	2–202	Built-in effect selection. Color is controlled by CH3. When CH3 = 0, the default color is used. Speed is controlled by CH20.
		203–214	Line effects. Color is controlled by CH3. When CH3 = 0, the default color is used. Speed is controlled by CH20.
		215–224	Animation effects. Color is controlled by CH3. When CH3 = 0, the default color is used. Speed is controlled by CH20.
		225–234	Outdoor landmark effects. Color is controlled by CH3. When CH3 = 0, the default color is used. Speed is controlled by CH20.
		235–255	Random playback of all effects. Color is controlled by CH3. When CH3 = 0, the default color is used. Speed is controlled by CH20.
CH20	Built-in Dynamic Effect Speed	0–1	System default speed.
CH20	Built-in Dynamic Effect Speed	2–255	Manual speed adjustment for built-in effects, from slow to fast.

STARSHINE LIGHTS PRODUCT MANUAL

Operating Instructions

1. Selecting the Operating Mode

This laser system can be controlled by Pangolin software to run professional laser show programs.

When the PC key switch is set to OFF, the system can select different operating modes through the function buttons.

After connecting the laser fixture and the DMX controller to power, the laser color, patterns, changing speed, and other functions can be freely controlled through the DMX console.

Power Connection and Control

Use the dedicated power plug to connect the laser fixture to the main power supply.

Before connection, check whether the voltage and frequency shown on the product label match the local power supply. Incorrect voltage or frequency may cause fixture damage or unstable operation.

Installation

1. Before installation, make sure the power supply voltage matches the rated voltage marked on the fixture.
2. The fixture must be installed by qualified personnel. Secure the fixture safely and firmly with a reliable clamp, then adjust it to the proper projection angle.
3. When installing the fixture, make sure there are no highly flammable or explosive materials, such as decorations, within at least 0.5 meters of the fixture. Keep the fixture at least 30 cm away from the wall.
4. Make sure the cooling fan and ventilation openings are not blocked by other equipment or decorative materials.
5. For safety, use a safety cable capable of supporting at least 10 times the weight of the fixture. Pass the safety cable through the safety cable attachment hole for secondary suspension protection.
6. For safety reasons, proper grounding is very important. Make sure the ground wire is securely connected.

Precautions

1. Operate the fixture strictly according to this user manual. Do not disassemble the fixture without authorization. If any fault occurs, contact qualified service personnel for repair.
2. This product is intended for indoor use only. Keep it away from water, moisture, vibration, and dusty environments.
3. Due to the characteristics of semiconductor laser sources, the recommended stable operating temperature is 15°C to 30°C. After continuous operation for 10 hours, turn off the fixture for 10 minutes to allow the laser source to cool completely before using it again. Failure to do so may shorten the service life of the laser source.
4. For fixed installation, protect the fixture from strong vibration or impact. Do not use the fixture in a shaking or unstable condition. The distance between the fixture and the illuminated object should be more than 500 meters.
5. Prevent foreign objects from entering the fixture, as this may cause malfunction.
6. During operation, make sure the ventilation and exhaust channels are clear and unobstructed.
7. Before powering on the fixture, check that the power plug is firmly inserted. Make sure the power supply is properly grounded to avoid electric shock.
8. Do not switch the fixture on and off frequently, as this may affect the service life of the laser fixture. Avoid leaving the fixture powered on for an excessively long time.
9. Do not remove or damage the warranty label. Otherwise, the warranty will become invalid.
10. Avoid viewing the laser source through telescopes, binoculars, or other optical viewing equipment, as this may increase the danger.
11. Do not touch the product with wet hands. Do not pull the power cable with force.
12. There are no user-serviceable parts inside the fixture. Do not open the fixture housing.
13. If the brightness of the semiconductor laser source decreases noticeably, or if any other damage occurs, contact the dealer promptly.
14. When transporting the fixture again, protect it from vibration and impact. The original packaging is recommended.

STARSHINE LIGHTS PRODUCT MANUAL

Warnings

1. Before carrying out any installation, maintenance, or repair work, make sure the power supply has been disconnected.
2. This fixture is classified as a Class III B laser product. Direct viewing into the laser beam is dangerous. The minimum irradiation distance is 13 cm. An exposure time of less than 10 seconds is considered within the safety range under the specified condition.
3. Keep the fixture at least 100 meters away from flammable materials.
4. The required input voltage is 220V / 110V ±10%. If the voltage exceeds this range, it is recommended to use a voltage stabilizer. Otherwise, the service life of the laser source may be seriously affected.

Warranty Terms

1. The free warranty period is 24 months from the date of purchase, provided that the product is used normally according to the user manual.

If the fixture fails during the warranty period, please contact the sales dealer. When requesting repair service, please present this warranty card. If the warranty card is not provided, the dealer has the right to refuse warranty service.

1. During the warranty period, repair service will still be charged under the following conditions:

- The sealing label on the fixture has been intentionally removed or damaged.
- The fault or damage is caused by failure to follow the user manual or operating precautions.
- The fault or damage is caused by dropping, vibration, or impact during movement after purchase.
- The fault or damage is caused by unauthorized repair, modification, disassembly, cleaning, or maintenance by the user.
- The fault or malfunction is caused by abnormal voltage.
- The fault or damage is caused by fire, natural disasters, earthquake, or other force majeure events after purchase.
- The warranty card does not record the purchase date, user name, dealer name, or dealer stamp, or the information has been altered.
- The fault or damage is caused by connection with other equipment.

2. The manufacturer shall not be responsible for any failure of other connected equipment directly or indirectly caused by a fault in this product.
3. Please keep this warranty card properly. Lost warranty cards will not be reissued.

Additional Laser Safety and Maintenance Notes

1. Due to the working characteristics of all-solid-state laser sources, avoid long continuous operation whenever possible. After continuous operation for 3 hours, turn off the laser fixture for 15 minutes and allow the laser source to cool before using it again.
2. Do not touch the reflective mirrors inside the laser projection window with your hands.
3. High voltage exists inside the fixture. Do not disassemble the laser fixture by yourself. Service and inspection must be carried out under the guidance of qualified professionals.

Please note: Damage caused by human factors or natural disasters is not covered by the warranty.