



B300



User Manual

Please keep read this manual carefully for further use!

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1. Introduction

Thank you for purchasing our professional moving head fixture.

This user manual includes important information regarding installation and operation. Please read this manual carefully before installation and operation, and keep it safe for future reference.

To ensure the safety and correct maintenance of the lighting fixture, we suggest that installation and operation be performed by a qualified technician, strictly following the instructions provided.

Spare Parts List

Please check carefully that there is no damage caused during transportation. Should there be any damage, consult your local dealer immediately.

Name	Quantity	Unit
Fixture	1	PC
User Manual	1	PC
Power Cable	1	PC
DMX Signal Cable	1	PC
Mounting Bracket	2	PC

2. Safety Instructions & Cautions

Before delivery, this device has passed strict inspection. Please follow the user manual strictly. If the fixture is damaged by improper operation, the warranty will be void, and the

<https://freecolor.lighting>
manufacturer or dealer will not be responsible.

CAUTION!



Keep this device away from rain and moisture!



Unplug mains lead before opening the housing!



Warning!

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or

Silkscreen Symbols:

-  - CE Compliant
-  - This fixture is designed for indoor use.
-  - RoHS Certificate
-  - Minimum distance from lighted objects (meters).
-  - Not suitable for direct installation on combustible material surfaces.

Safety Warnings:

- Inspection: Open and check for transport damage immediately upon receipt. If damaged, do not use; contact the dealer.
- Temperature: The maximum ambient temperature (T_a) is 40°C. Do not operate if the temperature exceeds this limit.
- Distance: The minimum distance between light and the

illuminated surface must be more than 1 meter.

- **Environment:** Keep the device clean. Avoid prolonged use in overheating or dusty environments.
- **Hazards:** Prevent contact with chemical liquids. Be cautious of fire, heat, electrical shock, and falling hazards that could cause injury.
- **Maintenance:** Do not open the fixture yourself. Repairs must be done by a professional technician.
- **Operation:** Do not turn on the fixture before installation is complete. To prolong the lifespan, turn off the light after 8 hours of continuous work.
- **Eye Safety:** Never look directly into the light source to avoid eye injury.
- **Glass:** If the lens or dust-proof glass breaks or cracks, replace it immediately.

WARNING: Always disconnect power before repair, maintenance, or cleaning!

3. Installation & Rigging



CAUTION!

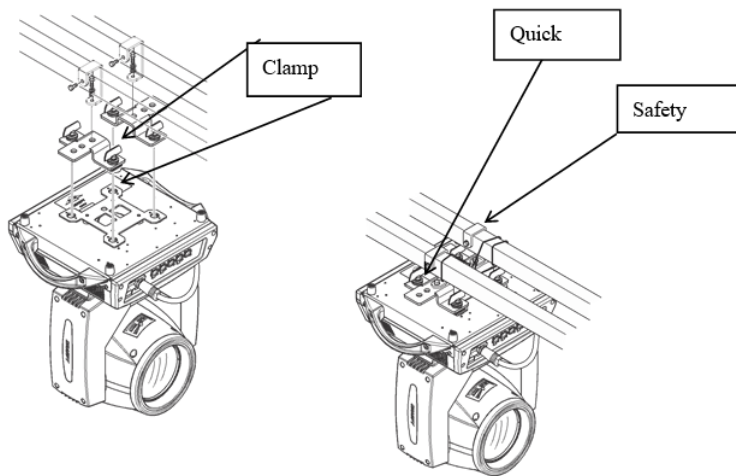
Please consider the GB7000.15/EN60598-2-17 and the other respective national norms during The installation. The installation must only be carried out by a qualified person.

- **Clearance:** Keep the fixture surface at least 0.5m away from any combustible material.
- **Quick Locks:** Ensure quick-lock fasteners are turned fully into the quick-lock holes.
- **Temperature Range:** Operating range is -25°C to 45°C.

- Load Capacity: The truss must handle 10 times the weight of the fixture without deformation.
- Safety Area: Do not stand under the fixture during installation, removal, or repair.
- Electrical Check: A professional should confirm electrical data before installation.
- Safety Rope: Mandatory usage of a safety rope to prevent the fixture from falling.

Rigging Steps:

- Insert the quick-lock fasteners of the brackets into the respective holes on the bottom of the device.
- Tighten the quick-lock fasteners fully clockwise.
- Fix the clamp onto the truss or fixture bracket.
- Pull the safety rope through the holes on the bottom of the base and fasten it to the truss/fixing point.



Description: Diagram showing the bottom of the base, quick-lock insertion points, and safety rope attachment.

4. Product Specifications

- Rated Voltage: AC100V~240V, 50/60Hz
- Light Source: 300W White LED Module
- Rated Lifespan: 20,000 hours
- Color Temperature: 9000K
- Beam Angle: Zoom 0° - 45° (Linear magnification)
- Net Weight: 12.35 KG
- Gross Weight: 15 KG
- Package Size: 55.5 x 40.5 x 41 CM

Optical & Effects:

- Color Wheel: 9 colors + white (Open). Features: Half-color, linear color, variable speed bidirectional rainbow effect.
- Fixed Gobo Wheel: 6 patterns + 1 flowing water effect section + White. Bidirectional variable speed rotation.
- Rotating Gobo Wheel: 6 customized glass patterns + 1 water pattern. Interchangeable and rotatable.
- Prism: 8-facet prism with bidirectional rotation, indexing, and shaking effect.
- Frost: Independent soft light mirror (0-100% linear).
- Focus/Zoom: DMX linear focus with auto-focus function; High-precision glass optical lens.
- Strobe: Electronic strobe (0.3 - 25 Hz), synchronous or random.
- Dimming: 0-100% linear electronic dimming (Gamma curve 1.2K to 25K adjustable). Flicker-free for video.

Movement:

- Pan: 540° (16-bit precision)
- Tilt: 270° (16-bit precision)
- Motors: High-speed silent 3-phase motors with magnetic encoding positioning (auto-correction).

Control:

- Modes: 16 Channel (Simplified) / 19 Channel (Standard).
- Protocols: DMX512, RDM.
- Display: 1.77-inch LCD, bilingual (Chinese/English). Gravity sensor flip.

5. Display & Menu Operation

The fixture features a 1.77-inch TFT LCD. The system is optimized for speed and stability.

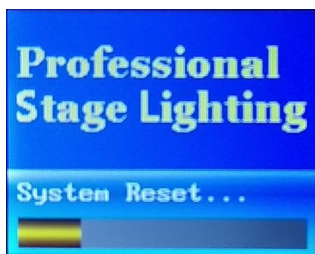
- Key Navigation: UP, DOWN, LEFT (Return), RIGHT, ENTER (Confirm).
- RDM Function: Allows remote address setting via console.



Button Functions:

- UP: Move selection up or increase a parameter value.
- DOWN: Move selection down or decrease a parameter value.
- LEFT (Return): Go back to the previous menu or exit the current option.
- RIGHT: Enter a submenu or move selection to the right.
- ENTER: Confirm a selection or save the current setting.

System Reset Behavior



When powered on, the system enters reset mode. The interface will show the boot screen. It automatically checks functions. If a function fails, the Square Icon turns «Red». If all checks pass, it remains «Green».

Menu Map

Press any button to enter the system menu.

Category	Function/ Sub-menu	Value/ Option	Description
Standard	Default set	Enter?	Factory default reset
	Address	001-512	DMX address setting

Standard	DMX mode	Mode 1 (19CH) / Mode 2 (16CH)	Channel mode selection
	Effect mode	No/Yes	Effect wheel auto finds shortest distance to rotate
	Started lamp	Off/On	Lamp state when fixture is powered on
	Switch lamp	Off/On	Manual lamp on/off control
	No signal	Clear/ Hold	Store DMX data (Hold) or clear data when no signal
	Show time	No/Yes	Display fixture running time
	Brightness	000-255	Adjust display brightness
	Effect sync	OFF	Normal mode
	Fan Speed 1	-	Noise reduction by 30%
	Fan Speed 2	-	Noise reduction by 60%
	Fan Speed 3	-	Noise reduction by 90%

Standard	Screensaver	Off/On	Close display without touch/press buttons
	XY encoder	No/Yes	XY Auto error correction open or closed
	X inversion	No/Yes	Pan clockwise or anti-clockwise driving
	Y inversion	No/Yes	Tilt clockwise or anti-clockwise driving
	Focus inversion	No/Yes	Focus clockwise or anti-clockwise driving
	Zoom inversion	No/Yes	Zoom clockwise or anti-clockwise driving
Advanced	(Settings)	-	Setting for fixture's main parameters (Needs authority/password)
Info	Error List	No error/View	View error logs or "No error"
	System ver	Vxxxxxxx	System version
	Serial NO.	xxxxxxx	Fixture serial number

Info	SYS timer	00000.0H	System running time (hours)
	Run timer	000:00	Current running time from power on (hours)
	Lamp timer	00000.0H	Lamp light on time (hours)
	Equip TEMP	000	Main parts temperature (if supported)
	Head TEMP	000	Head temperature (if supported)
	FAN 1 Speed	0000 RPM	Fan 1 speed (if supported)
	FAN 2 Speed	0000 RPM	Fan 2 speed (if supported)
Perform	Run mode	Auto/ Sound	Select Auto run or Sound control
	Run speed	255	Speed adjustment for Auto mode
	Run cross	255	Setting run cross of auto or sound (if supported)
	Built-in 1	Off/On	Built-in program 1 testing

	Built-in 2	Off/On	Built-in program 2 testing
	User PRO 1	Off/On	User self-made program 1
	User PRO 2	Off/On	User self-made program 2
	User PRO 3	Off/On	User self-made program 3
	User PRO 4	Off/On	User self-made program 4
	Circle shape	Off/On	(Hold/Reserved function)
	Shape shape	Off/On	(Hold/Reserved function)
	Shape range	000	(Hold/Reserved function)
	Sound DB	000	Sound sensitivity adjustment
Program	(See Section 6)	-	Manual programming interface
Reset	Reset	-	System Reset

6. Function instruction

Manual control or programming function instruction

This function can edit up to 4 user programmes. These 4 programmes can run in tandem connection. Under <Testing running>, they can switch on at the same time: first running

programme 1, then 2, 3 and 4, finally cycle back to programme 1, cycle running all the time. Single running is also available.

Programme function buttons operation:



Select programme, read programme, select procedure, delete procedure, manual or console input, copy procedure, paste on the selected procedure, clear procedure, save it to selected programme space.

Manual control

Manual/console operation buttons: press Left/Right/Up/Down/Enter, lets mode into Manual.



Press Left/Right/Up/Down/Enter, make the matched channels to Red color, press Up/Down to manually control.



Manual control programming

Select need store programme PRO1-4, setting channel values by manual control, press <Procedure>, see below photo show. The next step cycles again it.



Delete procedure

Can delete the back procedure if programming procedures are too many. Select PROCEDURE, press DOWN, back to no need PROCEDURE, number display >0XX, press ENTER 3secs, the back procedure that can be deleted, display=0XX.

Copy procedure

Press Copy, copy all DMX channels values, store on Paste board.

Paste procedure

Finished Copy, can select any procedure, paste DMX channels values to the selected procedure channel.

Clear procedure

Press CLEAR, can clear at present DMX channel values.

Console control programming

This fixture supports console programming, see below photo select mode as CONS.



Under this mode, all values are controlled by DMX console, manual invalid, paste and clear invalid too. All values display DMX data. At present, just console input or running built-in programme. This fixture here need press DOWN number, press UP that enter programming.

Save programme

Finished programming by manual or console, can save programme. Confirm save under PRO1--PRO4, and procedure

length =0XX, not >0XX. If more procedure, please delete first, see how to delete procedure, last save.

Read and re-edit programme

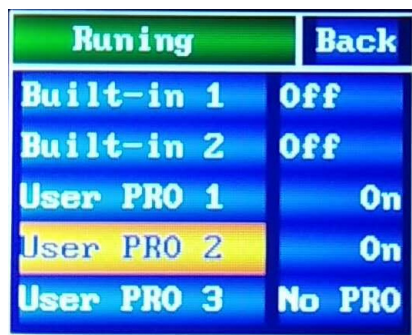
Select PRO1-PRO4, press ENTER, press <Down> till display <Read out>, press <Enter> can read out programme, see below photos. The data is the max of the programme, if programme is empty, display <empty> or <No>.



Re-edit read out programme available. Finished re-edit press <Save> can cover at present programme, or select others space of PRO1-PRO4 to save.

Running programme

If need running the save programme, please back to <test running/Perform> menu, select user programme, open <On>.



7. DMX Channel Protocol

19CH	16CH	Function	Value	Description
1	1	Pan	0-255	0-540°

2	2	Pan Fine	0-255	0-2.1° (Fine adjustment)
3	-	Tilt	0-255	0-270°
4	-	Tilt Fine	0-255	Tilt fine
5	-	Speed	0-255	Fast-Slow
6	3	Strobe	0-3	No function (Closed)
			4-127	Strobe from slow to fast
			128-131	Open
			132-251	Random strobe from slow to fast
			252-255	Open
7	4	Dimmer	0-255	Closed-On (0-100%)
8	5	Color	0-5	White
			6-11	White+Red
			12-17	Red
			18-23	Red+Yellow
			24-29	Yellow
			30-35	Yellow+Blue
			36-41	Blue
			42-47	Blue+Green
			48-53	Green
			54-59	Green+Plum red
			60-65	Plum red
			66-71	Plum red+Light blue

8	5	Color	72-77	Light blue
			78-83	Light blue+Orange
			84-89	Orange
			90-95	Orange+Yellowish green
			96-101	Yellowish green
			102-107	Yellowish green+Pink
			108-113	Pink
			114-119	Pink+White
			120-127	White
			128-191	Rainbow clockwise rotate from slow to fast
			192-255	Rainbow anti-clockwise rotate from slow to fast
9	6	Gobo 1 (Fixed)	0-8	White
			9-17	Fixed gobo 1
			18-26	Fixed gobo 2
			27-35	Fixed gobo 3
			36-44	Fixed gobo 4
			45-62	Fixed gobo 5
			63-127	Rotate forward (slow to fast)
			128-191	Rotate reverse (fast to slow)

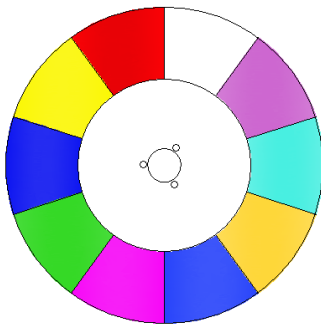
9	6	Gobo 1	192-255	Rotate forward (slow to fast)
10	7	Gobo 2	0-4	White
			5-9	Fixed gobo 1
			10-14	Fixed gobo 2
			15-19	Fixed gobo 3
			20-24	Fixed gobo 4
			25-29	Fixed gobo 5
			30-34	Fixed gobo 6
			35-39	Fixed gobo 7
			40-54	White
			55-69	Shake slow to fast Gobo 1
			70-84	Shake slow to fast Gobo 2
			85-99	Shake slow to fast Gobo 3
			100-114	Shake slow to fast Gobo 4
			115-129	Shake slow to fast Gobo 5
			130-144	Shake slow to fast Gobo 6
			145-159	Shake slow to fast Gobo 7
			160-207	Rotate reverse (fast to slow)
		Gobo 2 (Rot)	208-255	Rotate forward (slow to fast)

11	8	Gobo 2 Rot	0-127	0-360 (degree)
			128-191	Rotate reverse (fast to slow)
			192-255	Rotate forward (slow to fast)
12	9	Focus	0-255	Near to far
13	10	Zoom	0-255	Near to far
14	11	Prism	0-31	No prism
			32-255	8 facet prism
15	12	Prism Rotate	0-127	Angle
			128-191	Rotate reverse (fast to slow)
			171-213	Rotate forward (slow to fast)
			214-255	Rotate reverse-forward (slow to fast)
16	13	Frost	0-31	No function
			32-255	Frost
17	14	Auto Amp	0-5	No function
			6-10	Automatic amplification (Fast-slow)
18	15	Auto Rotation	0-63	No function
			64-127	Automatic Pan
			128-191	Automatic Tilt

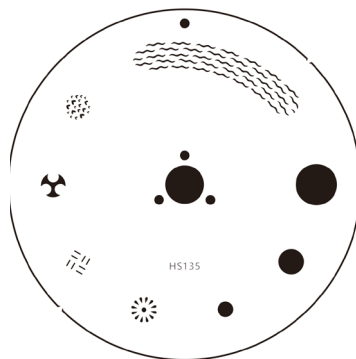
18	15	Auto Rotation	192-255	Automatic Pan+Tilt
19	16	Reset/ Fan	0-251	Fan speed decreases from fast to slow
			252-255	Reset (after 6s)

8. Wheels & DMX Connections

COLOR



GOBO WHEEL



GOBO 2



DMX Connection

Connect the provided XLR cable to the male 3-pin XLR output of your controller and the other side to the female 3-pin XLR input of the light. Chain fixtures from Output to Input.

5-Pin DMX output



5in DMX input



1. Ground
2. Signal -
3. Signal +
4. None
5. None

3-Pin DMX output



3in DMX input



1. Ground
2. Signal -
3. Signal +

DMX Address Setting

Each fixture must set a specific starting address. When receiving signal, fixture will receive channel control signals of this address from the DMX controller.

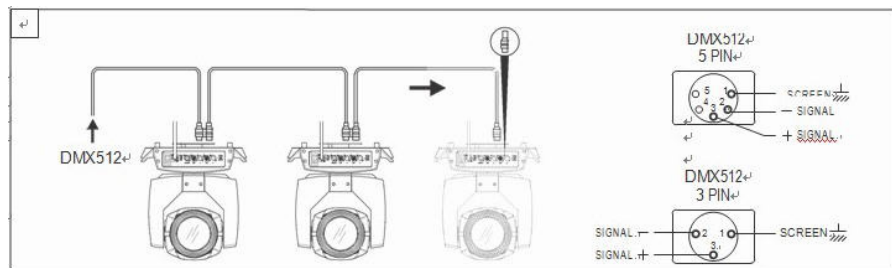
For easy to use, the user can set the same address for several fixtures, also can set up a unique address for every device.

If you set the same address for all fixtures, all the fixtures will receive from the same DMX channels signal. All connecting fixtures are jointly controlled, controller can't separately control a device.

If you set a different address for each fixture, each fixture will receive unique signal and can be controlled by DMX controller separately.

This fixture has 16 channels. You should set the starting address of the first unit to 1, the second unit to 17 (116 + 1), the third

unit to 33 (216 + 1), and so on.



9. Maintenance

Cleaning:

Cleaning should be performed every 15 days.

- Use a soft sponge dipped in alcohol to clean the lenses and mirrors.
- Do not use wet cloths with water or other chemical liquids.
- Dust accumulation reduces light output and can cause overheating.



CAUTION

Cut off power before cleaning and maintenance!



CAUTION!

Never look directly into the light source,
as sensitive persons may suffer an epileptic shock.



CAUTION

Wires connection must be done professional person!

