RAINBOW 600

User manual

Thanks for choosing our goods please read this manual carefully before your operating

LAMP SOURCE

Lamp type: OSRAM HRI 420W / Philips MSD420W

Reflector: Lamp and reflector together in one unit
Color temp: 7600K/8000K
Beam angle: 2.8°

COLOR SYSTEM

1 Fixed color wheel with 14 color filters + white
 two-way rotating and rainbow effect

GOBO SYSTEM

1 Gobo wheel with 12 metal gobos + 4 glass gobos

EFFECT EQUIPMENT

2 rotating prisms with moving effect,
(Bi-directional, Rotatable, Speed
adjustable) (1 self-rotating 8 facet
circular prism and 1 self- rotating
8+16 facet circular prism) Creates a
total of 3 prism effect.

MOVING PARAMETER

Angle: PAN=540 degrees, TILT=270 degrees 16-bit precision scan,3 Phases motor, fast movement.

Menu instructions:

Since the product model is numerous, the function is different, and often upgrades, causes the menu content to change frequently, this manual instruction is hard to update in time, therefore only lists part of the important menu items here.

DMX Addr: Use the menu to set desired fixture address setting

Channel Mode: Use the menu to select desired DMX channel mode. The numbers on the menu represents the
number of control channels.

Reset Operating: Reset Motors

Motor power off: Select "Y" to turn off the motors power，and select "N" to turn on the motors power，
it will reset automatically. You can plug the motor and reset it without turn off main power
supply via this menu.

Pan/Tilt: Use the menu to reset Pan and Tilt

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Run: Use the menu to select operational mode

Following is the instructions of the menu options(Note：the "test" mode option may be different according to
product model):

- DMX：Controlled by DMX512 signal。
- Test(factory)：Controlled by built-in program which is for factory test.
- Program：Controlled by User's program。User the menu [Running Cnfg]- [Mixed Scene] and   [Scene Edit]
to set up or edit the scenes。

Lamp: Use the menu to turn on or off the lamp. It will take effect after 3 seconds , if the value was switched back in

3 seconds, the operation will be canceled. If the lamp was turn off，it must wait for 1 to 2 minutes before it can turn on again。You can set the menu value to "on" and it will turn on automatically after 1 to 2 minutes。

An example of the value is shown below :

Manual Control: Set DMX value manually

    CHN1: Set the DMX value of CHN 1.

    CHN2: Set the DMX value of CHN 2.

CHN3: Set the DMX value of CHN 3.

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Running Cnfg: configuration of Running.

      M/S Mode: Slave mode is for receiving external DMX signals and Master mode is for sending DMX signals to external slave fixtures

      Maunual Pan/Tilt: Select "Y" to Manual Pan/Tilt.

      Pan Reverse cnfg:

          Reverse: The item allows to invert Tilt movement

      Tilt Reverse cnfg:

          Reverse: The item allows to invert Tilt movement

      Pan Cnfg:

          Origin: Set desired Origin value to change Pan Movement range (set the DMX value to 0 before changing this value, the tile motor will move when changing this value)

          End: Set desired final stop value to change Pan movement range (set the DMX value to 255 before changing this value, the tile motor will move when changing this value)

      Tilt Cnfg:

          Origin: Set desired Origin value to change Tilt movement range (set the DMX value to 0 before changing this value, the tile motor will move when changing this value)

          End: Set desired final stop value to change Tilt movement range (set the DMX value to 255 before changing this value, the tile motor will move when changing this value)

      Color linear: You can set the color wheel rotate by "half color" or "linear".

      Dim Curves: Select the dim curve (For LED light only).

      DMX Lost:

Advanced:

      Fine Adj: This is the factory adjustment function locked with password.

      DMX Lost: Use the menu to select run mode when external DMX cannot be connected.

          Start Up: Following is the instructions of the menu options：

- Middle: The DMX of pan and tilt are set to 128, all other DMX are set to 0.
- Test (factory/gobo/color) ：Controlled by built-in program. Refer to the menu "Run" for more information.
- Program：Program：Controlled by User's program。User the menu [Running Cnfg]- [Mixed Scene] and [Scene Edit] to set up or edit the scenes.

          Running: Whenever the DMX is lost：

- Keep：Keep the last state when reset finished..
- Shutter Off:.shutter off.

Fan Speed: Set the fan speed mode. This function is only valid on some models, please refer to the specification for more information.

      Language: Use the menu to select desired system language

      Lamp Off: Use the menu to select what the motor should do when lamp is off. If ""No Act"" is selected, lamp doesn't lead to any changes of motors. If "Sleep" is selected, motors except Pan/Tilt will sleep when lamp is off.

Info:

      DMX Monitor: Display the DMX value from controller

          Chn: Use the menu to select desired channel which you need to watch.

          Value: Show the current value of the selected channel

Err State: Error information (If there is any error shown in this menu, a exclamatory mark will show at the top right corner of menu cover)

Storage: This message will appear when Flash goes bad.

Sensor Err: The states of all of the sensors

Pan Raster: Is the position sensor (raster) error.

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Lamp: The communication between CPU and lamp driver. If this communication go out of work, the CPU cannot determine the lamp is on or off, and some functions may be affected.

Bus: This message informs you that the communication between the display PCB in the fixture base and the motor driver PCB in the fixture head failed, and cables may be broken.

Lamp Driver: The communication between CPU and lamp driver. If this communication go out of work, the CPU cannot determine the lamp is on or off, and some functions may be affected.

RAM Err: A memory allocation failure occurs. Please contact your Dealer or Fabricator for repair assistance.

Fan Stalling: Fan stop.

Lamp Service time: Lamp service time

ThisTime (m): The menu shows the total number of the operation hours with the lamp on since the last operation of clear.

Clear Lamp Time: Use the menu to reset the counter of operation hours with the lamp to 0, when a new lamp replaces the old one.

Test mode: for factory test, users do not need to pay attention to it

Product Code: the internal code of the product, which is only for product production and maintenance reference.

DMX Protocol

Mode channel		DMX value	Function	
16	20			
1	1		**Color wheel**	
		0-127	Half step positiong	
		128-255	Rainbow effect from slow to fast	
2	2		**Shutter/Strobe**	
		0-3	Shutter closed	
		4-103	Strobe effect from slow to fast	
		104-107	Shutter open	
		108-207	Open pulse in sequences from slow to fast	
		208-212	Shutter open	
		213-251	Random strobe effect from slow to fast	
		252-255	Shutter open	
3	3		**Dimmer intensity**	
		0-255	Dimmer intensity from 0% to 100%	
4	4		**Static gobo wheel**	
		0-3	Open	
		4-54	Gobos with no shake	
		55-190	Shaking gobos from slow to fast	
		191-201	Open	
		202-227	Forward gobo wheel rotation from fast to slow	
		228-229	Stop	
		230-255	backward gobo wheel rotation from slow to fast	
5	5		**Prisms**	
		0-19	Prism excluded	
		20-75	Prism1 inserted	
		76-127	Prism2 inserted	
		128-255	Prism1 and Prism2 inserted	
6	6		**Prism1 rotation and indexing**	
		0-127	Prism1 indexing	
		128-190	Backward prism rotation from fast to slow	
		191-192	No rotation	
		193-255	Forward prism rotation from slow to fast	
7	7		**Prism2 rotation and indexing**	
		0-127	Prism2 indexing	

		128-191	Forward prism rotation from fast to slow
		192-255	Backward prism rotation from slow to fast
8	8		**Frost and Rainbow**
		0-19	invalid
		20-137	Frost
		138-255	Rainbow
9	9		**Focus**
		0-255	Continuous adjustment from far to near
10	10		**Pan**
		0-255	Pan movement
11	11		**Pan Fine**
		0-255	Fine control of pan movement
12	12		**Tilt**
		0-255	Tilt movement
13	13		**Tilt Fine**
		0-255	Fine control of tilt movement
14	14		**Pan/Tilt speed**
		0	Max speed
			Speed mode
		1-255	Speed from max. to min.
			Time mode
		1-255	Time from 0.1 sec to 25.5 sec
15	15		**Reset**
		0-25	Empty
			To activate following functions, stop in DMX value for at least 4s
		26-76	Effects reset
		77-127	Pan/Tilt reset
		128-255	Total reset
16	16		**Lamp**
			To activate following functions, stop in DMX value for at least 4s
		0-25	Empty
		26-100	Lamp off
		101-255	Lamp on
*	17		**Pan/Tilt time**
		0	Max speed
		1-255	Time from 0.1 sec to 25.5 sec

*	18		**Color time**
		0	Max speed
		1-255	Time from 0.1 sec to 25.5 sec
*	19		**Beam time**
		0	Max speed
		1-255	Time from 0.1 sec to 25.5 sec
*	20		**Gobo time**
		0	Max speed
		1-255	Time from 0.1 sec to 25.5 sec

Service and maintenance

Warning! Disconnect the fixture from AC mains power and allow to cool for at least 10 minutes before handling. Do not view the light output from less than 4 meters without shade 4-5 welding goggles. Be prepared for the fixture to light suddenly if connected to power.

Warning! Refer any service operation not described in this user manual to a qualified service technician.

Important! Excessive dust, smoke fluid, and particle buildup degrades performance, causes overheating and will damage the fixture. Damage caused by inadequate cleaning or maintenance is not covered by the product warranty.

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connect power and main fuse.

2. Measure the mains voltage on the main connector.

3. Check the power on LED to see if it can be light up or not.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if they are linked properly.

2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.

3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the unit or the previous one.

4. Try to use another DMX controller.

5. Check to see if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.

2. The motor's drive IC on the PCB might be out of condition.

D. The lamp is cutting out intermittently

1. The lamp is not working well. Check the mains voltage either too high or too low.

2. Internal temperature may be too high. Check if replacement of fan is needed on the head.

Cleaning

Cleaning schedules for lighting fixtures vary greatly depending on the operating environment. Environmental factors that may result in a need for frequent cleaning include:
• Use of smoke or fog machines.
• High airflow rates (near air conditioning vents, for example).
• Presence of cigarette smoke.
• Airborne dust (from stage effects, building structures and fittings or the natural environment at outdoor events, for example).
If one or more of these factors is present, inspect fixtures within their first 100 hours of operation to see whether cleaning is necessary. Check again at frequent intervals. This procedure will allow you to assess cleaning requirements in your particular situation. If have any question,please contact dealer.
Use gentle pressure only when cleaning, and work in a clean, well-lit area. Do not use any product that contains solvents or abrasives, as these can cause surface damage.
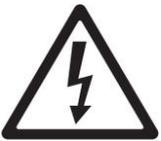
Warning! Disconnect from power and allow to cool before cleaning.
To clean the fixture:
1. Disconnect the fixture from power and allow it to cool for at least 10 minutes.
2. Vacuum or gently blow away dust and loose particles from the outside of the fixture and the air vents at the back and sides of the head and in the base with low-pressure compressed air.
3.Please use the professional cloth to clean the optical lens and soak with low concentration detergent liquid.
Do not rub the surface hard: lift particles off with a soft repeated press. Dry with a soft, clean, lint-free cloth or low-pressure compressed air. Remove stuck particles with an unscented tissue or cotton swab moistened with glass cleaner or distilled water.
4. Check that the fixture is dry before reapplying power.

Specifications subject to change without notice.

If have questions,please contact the dealer