

280W 3IN1 Moving Head



User Manual

Please read the instruction carefully before use

CONTENTS

1. Safety Instruction	.2
2. Technical Parameters	.5
3. How to set the Unit	.11
3.1 Fixture Overview	11
3.2 Main Function	9
4.How To Control The Unit	21
4.1 DMX 512 Connection	21
4.2 DMX Address Setting	23
5.DMX Mode	24
6. Troubleshooting	32

1. Safety Instruction



Please read the instruction carefully which includes important information about the installation, usage and maintenance.

WARNING

Please keep this User Guide for future consultation. If you sell th e unit to another user, be sure that they also receive this instructio n manual.

Unpack and check carefully there is no transportation damage befo re using the unit.

Before operating, ensure that the voltage and frequency of power s upply match the power requirements of the unit.

It's important to ground the yellow/green conductor to earth in orde r to avoid electric shock. The unit is for indoor use only. Use only i n a dry location.

The unit must be installed in a location with adequate ventilation, a t least 50cm from adjacent surfaces. Be sure that no ventilation slo ts are blocked. Disconnect main power before replacement or serv

icing.

Make sure there are no flammable materials close to the unit whil e operating as it is fire hazard.

Use safety cable when fixes this unit. DO NOT handle the unit by t aking its head only, but always by taking its base.

Maximum ambient temperature is Ta: 40° C. DO NOT operate it wh ere the temperature is higher than this.

Unit surface temperature may reach up to 85°C. DO NOT touch th e housing bare-hand during itsoperation. Turn off the power and all ow about 15 minutes for the unit to cool down before replacing or s erving.

In the event of serious operating problem, stop using the unit imme diately. Never try to repair the unit by yourself. Repairs carried ou t by unskilled people can lead to damage or malfunction.

Please contact the nearest authorized technical assistance cente r. Always use the same type spare parts.

DO NOT touch any wire during operation as high voltage might b e causing electric shock.

Warning

To prevent or reduce the risk of electrical shock or fire, do not expo se the unit to rain or moisture. DO NOT open the unit within five mi



nutes after switching off.

The housing, the lenses, or the ultraviolet filter must be replaced if t hey are visibly damaged.

For AC 120V, 60Hz power supply, maximum fixtures that can be connected together from the same mains outlet is 4pcs;

For AC 230V, 50Hz power supply, maximum fixtures that can be connected together from the same mains outlet is 8pcs;

Caution

There are no user serviceable parts inside the unit. DO NOT open t he housing or attempt any repairs yourself. In the unlikely event yo ur unit may require service, please contact your nearest dealer. Installation

The unit should be mounted via its screw holes on the bracket. Alw ays ensure that the unit is firmly fixed to avoid vibration and slippin g while operating. And make sure that the structure to which you ar e attaching the unit is secure and is able to support a weight of 10 t imes of the unit's weight. Also always use a safety cable that can h old 12 times of the weight of the unit when installing the fixture. The equipment must be fixed by professionals. And it must be fixe d at a place where is out of the touch of people and has no one pas s by or under it.

BRightsun

2. TECHNICAL PARAMETERS

- Light source model: 280W(10R)
- Maximum power: 470W
- Power supply: 100v-240v 50-60Hz
- Lamp life: 2000hrs (Stand mode) 3000hrs (Eco mode)
- Color temperature: 2800k-8500k
- Control mode: DMX512, master-slave operation, sound control
- Channel mode: 16/24 ch mode
- Optical System:

High luminous-efficiency glass reflector Beam angel : 5°- 20°(spot application) 2.5°- 10°(beam application)

- Color Wheel:one color wheel, 14 kinds of color chips in one color wheel
- Static Gob Wheel:10 metal gobos & 4 beam reducers
- Rotation Gob Wheel:9 Glass gobos can be indexed and rotated in both directions at different speeds Gobo wheels continuous rotation Glass gobos: outside diameter=15.9mm, image diametPrisms:
- Rotation 6-facet linear prism with continuous rotation in both directions Rotation 16-facet circular prism with continuous rotation in bo th directionser=12.5mm, thickness=1.1mm
- Frost filter :Separate, variable frost filter
- Zoom:linear motorized zoom
- Strobe:Strobe effect with variable speed (max.15 flashes/sec)
- Pan: 540 degree + fine
- Tilt: 270 degree + fine
- Display: color LCD, Chinese and English display, reverse display
- Control: graphic touch screen for fixture setting and addressing Gravitation sen



sor for auto screen positioning

Battery backup of the touch screen

Readout fixture and lamp usage, receiving DMX values, temperatures. Etc Built-in analyzer for easy fault finding, error messages

Remotely switching on/off the lamp Built-in demo sequences

Black-out while head moving, color or gobo changing. Self-resettable thermos-fuse

- Focus: linear adjustment
- Dimmer: 0-100% linear dimmer(16bit)
- Working environment temperature: 0 ° C-45 ° C
- Package size:460*360*490mm
- Net weight: 14KG

Minimum Distances:

Min distance from flammable surface :1m Min distance to lit objects (Stand Mode-280W):10m Min distance to lit objects (Eco Mode-230W):7.5m

 Total Heat Dissipation: 1600 BTU/h (calculated) 469 Wh (calculated)

Photometric diagrams



Min. Zoom (Beam application)





Min. Zoom (Spot application)







3.How To Set The Unit 3.1 Fixture Overview



1. Display:

To show the various menus and the selected functions

2. Button:



MENU To select the programming functions		
V DOWN	To go backward in the selected functions	
▲ UP	To go forward in the selected functions	
ENTER To confirm the selected functions		

3. DMX IN:

DMX512 link, use 3/5-pin XLR cable to link the fixture and th

e DMX controller

4.DMX OUT:

DMX512 link, use 3/5-pin XLR cable to link the next fixture

5. Power Cable: IN/OUT

6. Fuse (T 6.3A):

Protects the unit from over-voltage or short circuit



3.2 MAIN FUNCTION

To select any of the given functions, press the **MENU** button up to where the required function is showing on the display. Select the function by pressing the **ENTER** button and the display will blink. Use the **DOWN** and **UP** buttons to change the mode. Once the required mode has been selected, press the **ENTER** button to confirm. To go back to the functions without any changes, press the **MENU** button again. Press and hold the **MENU** button for one second or wait for one minute to go back to the main menu.

Panel operation

1. Brief

The light panel diagram show as Figure 1, Left area is TFT Displayer, support touch, and right area is encoder button, both of touch and coder button can operate light and setting.

Display & operation just like 'Android operation system', touch the item will set or modify setting



Note: Prevent damage the touch or TFT displayer, Can not use sharp objects chick displayer.



Figure 1 Panel diagram

1. Operation

1. Operate light with touch or encoder button

- The left area is TFT Displayer and touch, chick item or value with finger will to complete operation of set light setting(parameters) or view light state.
- The area on the right hand side is rotary encoder with button, As auxiliary input interface, if disable touch function, the encoder can been choose to set or view the item, and then press the encoder button to confirm the selection, rotary encoder again set the parameter value, finally, Press encoder button one again to save value or setting.

2. Parameter value setting

When the selected item is value need to been modified, the dialog shown in



Figure 2 will popup.



Figure 2 Dialog of value setting

- **Modify value:** Can quickly modify value via pull the slider to the desired position, or click the button of 'up' or 'down' whit finger on the right side to set the exact desired value, another way is roll encoder on the right hand side of panel.
- **Apply value:** When Value had been modified, Then press the bottom of 'apply' in the left corner to apply to the light, but hav't saved;
- **Save Value:** Any time, click on the lower right corner of the "OK" button, the setting will been saved into internal memory.

3. Boolean parameter setting

- when the selected parameters is a Boolean value (such as ON or OFF), can directly modify setting by chick corresponding item, the setting will been saved right now.
- When the parameter is a key item, chick corresponding item, a dialog shown in Figure 3 will been popup ask for the confirm. Chick 'sure' to confirm.



Figure 3 Dialog of confirm



4. Sub Menu (Parameter)

Chick item of main menu, enter corresponding sub menu, shown in Figure 4, total 6 sub menu, includes class of parameter and status:

- ADDRESS: Set light DMX address.
- WORKMOD: Set light work mode, master or slave mode when in auto run mode.
- DISPLAY: Set display parameter, eg. select language.
- TEST: Used for test light, modify DMX channel data to test function, the corresponding function of reference channel function table.
- ADVANCE: Set light running parameter.
- STATUS: view light current status.



Figure 4 Parameter menu

2. Operation and parameter instruction

Via following operation, enter sub menu(parameter menu) shown in Figure 4

- In main menu, chick 1/6 function button into corresponding parameter menu.
- In sub menu(page), chick main item on the left side of displayer, can shift



to corresponding sub menu(page) quickly.

1. Set DMX Address

Click and select the "ADDR", can enter the page of DMX address setting, range from 1 to 512, the address code shouldn't is not greater than (512-channels quantity), otherwise the light will not been controlled. Following is the operation:

Enter the page of DMX address, as shown in Figure 5, click the blank area in right side of display will pop-up diglog as in Fig. 4, modify value, then click 'ENTER' to confirm and save DMX address code.



Figure 5 page of DMX Address

2. Set Light work mode

Enter the page of 'WORK MOD' as shown in Figure 6 and modify setting. Can set light work mode, control lamp and DMX channel mode..

Light includes 3 work mode: DMX MODE, AUTO RUN and SOUND MODE, Parameter definition as following:

- **DMX Mode:** Under this mode, the light receive data from the DMX controller and move.
- **AUTO RUN:** Under this mode, light will run with inside code(data), ignore data from DMX controller.



- SOUND Ctrl: Under this mode, light ignore data from DMX controller., When there is a strong sound in stage, the light will run a scene, otherwise it will keep the last scene.
- M/S Choose: 'M/S Choose' is available when light just in 'AUTO RUN' or 'SOUND Ctrl' mode. If this item is set as 'OFF', the light don't send data to other light via DMX Cable. When 'ON', the data will send to other slave light immediately.
- **Lamp control**: Turn on lamp when this item is set 'ON', otherwise, turn off lamp. The gap between operation is limited to 30 second.
- Channel mode : Light support 2 DMX Channel mode: sample or extend.

Address	DMX Ctrl	\checkmark
WorkMode	Auto Run	
Display	Sound Ctrl	
Test	M/S choose	0FF
Test	Lamp On	0FF
Advance	Channel Mode	sample
Status		
Escape		

Figure 6 page of work mode

3. Set display

Light support 2 language, rotation display, Enter page as shown in Figure7 to set parameter following:

- Language: Select display as simplified Chinese or English.
- Screen Saver: when panel is idle(these is no operation in 10 second), displayer will enter saver status. When set as 'mode 1', saver status is close display, as 'mode 2' saver status will display DMX address code(DMX MODE) or display LOGO(AUTO RUN or SOUND CTRL). As 'OFF', keep light up displayer and show main menu.



- Screen Rotation: rotate displayer.
- **Touch enable:** Disable or enable touch function, when disable, use encoder to operate light and set parameter.
- **Touch adjust:** adjust touch function, normally, not enter this item.

Address	Langudge	中文
WorkMode	Screen saver	mode 1
Display	Screen rotation	OFF
Test	Touch Enable	ON
Advance	Touch adjust	
Status		
Escape	6	

Figure7 page of display

4. Test light

Enter the page as shown in Figure 8, Light will into test mode, in this mode, the light does not receive the data for DMX controller.:

- PAN: range for 0 to 255;
- TILT: range for 0 to 255;
- FOCUS: range for 0 to 255;
- COLOR: range for 0 to 255;
- GOBO: range for 0 to 255;
- PRISM: range for 0 to 255;
- FROST: range for 0 to 255;;
- STROBE: range for 0 to 255; .

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Address	PAN	000
WorkMode	TILT	000
Display	FOCUS	000
Teet	COLOR	000
Test	GOBO	000
Advance	PRISM	000
Status	FROST	000
Escape	STROBE	000

Figure 8 page of Test

5. Set light run parameter

Enter the page as shown in Figure 8, set the parameter of light:

- Pan Invert: Reverse PAN move.
- Tilt Invert: Reverse TILT mover.
- Rectify enable: set as 'OFF', PAN or TILT will disable position rectify function. As 'ON', when PAN or TILT lose steps, light will rectify auto.
- Pan Offset: Set PAN original position.
- Tilt Offset: Set TILT original position.
- Lamp up when: Select lamp on mode, includes 3 mode: power on, after reset done and manual;
- Factory setting: restore all parameter to factory setting.

Address	PAN Insert	0FF
WorkMode	TILT Inset	0FF
Display	Rectify Enable	ON
Teet	PAN Offset	008
Test	TILT Offset	020
Advance	Lamp on when	pwr on
Status	Factory Setting	
Escape		

Figure 9 page of run parameter

6. View status

Enter the page as shown in Figure 10:

- View light current status, version;
- DMXCIr: Click to clear all DMX data to '0'.
- SysRst: Click to reset light.



Figure 10 page of statuse

4.How To Control The Unit 4.1 DMX 512 Connection





1. At last unit, the DMX cable has to be terminated with a termi nator. Solder a 120 ohm 1/4W resistor between pin 2(DMX-) a nd pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-o utput of the last unit.

2. Connect the unit together in a `daisy chain` by XLR plug fro m the output of the unit to the input of the next unit. The cabl e can not branched or split to a `Y` cable. DMX 512 is a very h igh-speed signal. Inadequate or damaged cables, soldered joi nts or corroded connectors can easily distort the signal and sh ut down the system.

3. The DMX output and input connectors are pass-through t o maintain the DMX circuit, when power is disconnected to th e unit.

4. Each lighting unit needs to have an address set to receive t he data sent by the controller. The address number is betwee n 0-511 (usually 0 & 1 are equal to 1).

5. The end of the DMX 512 system should be terminated to re



duce signal errors.

6. 3 pin XLR connectors are more popular than 5 pin XLR.

3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positi ve signal (+)

5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positi ve signal (+)

Pin 4/5: Not used.

4.2 DMX Address Setting

By using a universal DMX controller to control the units, you wi II need to set DMX address from 1 to 512 so that the units ca n receive DMX signal.

Press the MENU button up to when the DMX Address is showi ng on the display. Pressing the ENTER button and the displa y will blink. Use the UP/DOWN buttons to change the DMX ad dress.

Once the address has been selected, press the ENTER butto n to setup, to go back to the functions without any change pre ss the MENU button again. Press and hold the MENU button a bout one second or wait for about one minute to exit the men u mode.

Please refer to the following diagram to address y

our DMX512 channel for the first 4 units:



Channel Mo	Unit 1	Unit 2	Unit 3	Unit 4
de	Address	Address	Address	Address
16CH	1	16	32	48
24CH	1	24	48	72

5.DMX Mode

16CH/24CH Mode

MODE/CHS				
STAND	BASIC	FUNCTION	VALUE	DESCRIPTION
1	1	Pan	0~255	Pan movement by 540
2		Pan Fine	0~255	Fine control of pan movement
3	2	Tilt	0~255	Tilt movement by 270
4		Tilt Fine	0~255	Fine control of tilt movement
5	3	P/T Speed	0~255	Fast to slow

		0~89	none	
		00~00	Blackout when color wheel	
		90~99	moving	
		100~109	Blackout when gobos wheel	
			moving	
			110~119	Blackout when prisms moving

			120~129	Blackout when color, gobos,
			130~139	Lamp on (Over 3 seconds)
		Function	140, 140	Reset Pan/Tilt (Over 3
6	4	Reset	140~149	seconds)
_		Lamp	150~189	Reset Effect motor (Over 3
		_		seconds)
			200~209	Reset All (Over 3 seconds)
			210~229	none
			230~239	Lamp Off (Over 3 seconds)
			240~255	none
			Linear color se	elect
			0~1	White (100%~10%)
			2~9	Color 1 (100%~10%)
			10~19	Color 2 (100%~10%)
			20~28	Color 3 (100%~10%)
			29~37	Color 4 (100%~10%)
7	5	Color	38~47	Color 5 (100%~10%)
			48~55	Color 6 (100%~10%)
			56~65	Color 7 (100%~10%)
			66~74	Color 8 (100%~10%)
			75~83	Color 9 (100%~10%)

	84~92	Color 10 (100%~10%)
	93~101	Color 11 (100%~10%)
	101~110	Color 12 (100%~10%)
	110~119	Color 13 (110%~10%)
	119~129	White

			130~134	Color 1
			135~138	Color 2
			139~143	Color 3
			144~147	Color 4
			148~152	Color 5
			153~157	Color 6
			158~161	Color 7
			162~166	Color 8
			167~171	Color 9
			172~176	Color 10
			177~180	Color 11
			181~185	Color 12
			186~189	Color 13
			100~215	Forwards rainbow effect from
			190~215	fast to slow
			216~217	Stop, white
		218~243	Backwards rainbow effect from	
			210-243	slow to fast
			244~255	Auto color selection from fast to
			244 200	slow
8		Color Fine	0~255	Fine positioning
a	6	Effect	0~255	Speed of Rotating gobo, fast to
3	0	Speed	0-200	slow
10	7	Static	0~3	Beam(Hole)



	Gobo	4~9	Gobo 1
	Wheel	10~15	Gobo 2
		16~21	Gobo 3
		22~27	Gobo 4
		28~33	Gobo 5
		34~39	Gobo 6
		40~45	Gobo 7
		46~51	Gobo 8
		52~57	Gobo 9
		58~63	Gobo 10
		64~69	Gobo 11
		70~75	Gobo 12
		76~81	Gobo 13
		82~87	Gobo 14
		88~95	Gobo 1 Shake (Slow to fast)
		96~103	Gobo 2 Shake (Slow to fast
		104~111	Gobo 3 Shake (Slow to fast
		112~119	Gobo 4 Shake (Slow to fast
		120~127	Gobo 5 Shake (Slow to fast
		128~135	Gobo 6 Shake (Slow to fast
		136~143	Gobo 7 Shake (Slow to fast
		144~151	Gobo 8 Shake (Slow to fast
		152~159	Gobo 9 Shake (Slow to fast
		160~167	Gobo 10 Shake (Slow to fast
		168~175	Gobo 11 Shake (Slow to fast
		176~183	Gobo 12 Shake (Slow to fast
		184~191	Gobo 13 Shake (Slow to fast
		192~199	Gobo 14 Shake (Slow to fast

			200~201	Beam/hole
				-
			202~221	Forwards gobo rainbow from slow to fast
			222~223	stop
			224~243	Backwards gobo rainbow from fast to slow
			244~255	Auto gobo selection from fast to slow
			Rot.gobo Inde	X
			0~4	White
			5~7	Gobo 1
			8~10	Gobo 2
			11~13	Gobo 3
			14~16	Gobo 4
			17~19	Gobo 5
			20~22	Gobo 6
			23~25	Gobo 7
			26~28	Gobo 8
			29~31	Gobo 9
	8	Rotating Gobo Wheel	Rot. Gobo rotation	
			32~34	Gobo 1
11			35~37	Gobo 2
			38~40	Gobo 3
			41~43	Gobo 4
			44~46	Gobo 5
			47~49	Gobo 6
			50~52	Gobo 7
			53~55	Gobo 8

	56~59	Gobo 9			
	Rot.gobo Inde	X			
	60~67	Gobo 1 Shake (slow to fast)			
	68~75	Gobo 2 Shake (slow to fast)			
	76~83	Gobo 3 Shake (slow to fast)			
	84~91	Gobo 4 Shake (slow to fast)			
	92~99	Gobo 5 Shake (slow to fast)			
	100~107	Gobo 6 Shake (slow to fast)			
	108~115	Gobo 7 Shake (slow to fast)			
	116~123	Gobo 8 Shake (slow to fast)			
	124~129	Gobo 9 Shake (slow to fast)			
	Rot. Gobo rota	ation			
	130~137	Gobo 1 Shake (slow to fast)			
	138~145	Gobo 2 Shake (slow to fast)			
	146~153	Gobo 3 Shake (slow to fast)			
	154~161	Gobo 4 Shake (slow to fast)			
	162~169	Gobo 5 Shake (slow to fast)			
	170~177	Gobo 6 Shake (slow to fast)			
	178~185	Gobo 7 Shake (slow to fast)			
	186~193	Gobo 8 Shake (slow to fast)			
	194~199	Gobo 9 Shake (slow to fast)			
	200~201	White			
	000.004	Forwards gobo rainbow from			
	202~221	slow to fast			
	222~223	stop			
	004 040	Backwards gobo rainbow from			
	224~243	fast to slow			
	244~255	Auto goo selection from fast to			
		slow			



12	0	Rot. Gobo	Gobo index		
	9		0~255	0~200	
			1		
			Gobo rotati	ion	
			0	No rotation	
			1~127	Forwards gobo rotation from fast	
				to slow	
			128~129	No rotation	
			130~255	Backwards gobo rotation from	
			130/233	slow to fast	
12				Rot.gobo indexing androtation-fine	
13			0~255	Fine indexing (rotation)	
			0~19	Open position (hole)	
			20-40	6-facet linear rotating prism	
			20~49	-indexing	
			50~75	6-facet linear rotating prism-	
				rotation	
			76~105	8-facet circular rotating prism-	
			/o~105 Ir	Indexing	
		Prism	106~127 8 p	8-facet circular rotating	
				prism-rotation	
			Prism/Gobo macro		
	10		128~135	Macro 1	
14			136~143	Macro 2	
17			144~151	Macro 3	
			152~159	Macro 4	
			160~167	Macro 5	
			168~175	Macro 6	
			176~183	Macro 7	
			184~191	Macro 8	

			192~199	Macro 9
			200~207	Macro 10
	i	1	1	
			208~215	Macro 11
			216~223	Macro 12
			224~231	Macro 13
			232~239	Macro 14
			240~247	Macro 15
			248~255	Macro 16
			Rot.Prism Inde	ex
			0~255	0~200 degree
			Rot.Prism rota	ation
	11	Rot.Prism	0	No rotation
			4 407	Forwards prism rotation from
15			1~127	fast to slow
			128~129	No rotation
			120~255	Backwards prism rotation from
			150~255	slow to fast
			0	Open
			1~179	Frost from 0% to 100%
			189~189	100% frost
16	12	Frost	190~211	Pulse closing from slow to fast
			212~233	Pulse opening from slow to fast
			234~255	Rambing from fast to slow
17	10	13 Zoom	0~255	Zoom from max. to min.beam
17	15		0 200	angle
18		Zoom Fine	0~255	Fine Zoom
10	14		0~255	Continuous adjustment from far
19	¹⁴ Focus	0~200	to near	
20		Focus Fine	0~255	Fine Focus



21			0~255	Resered
22	15	Strobe	0~31	Shutter closed (Lamp power
			-	
				reduced to 230W)
			32~63	Shutter open, Full lamp power
			64~95	Strobe-effect from slow to fast
			96~127	Shutter open
			129-150	Opening pulse in sequences
			120~159	from slow to fast
			160~191	Shutter open
			100,000	Random strobe-effect from slow
			192~223	to fast
			224~255	Shutter open, full lamp power
00	10	6 Dimmer 0~255	0.255	Dimmer intensity from 0% to
23	10		0~200	100%
24				Reserved

6. Troubleshooting

Following are a few common problems that may occur durin g operation. Here are some suggestions for easy troublesh ooting:

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

1. Check the connection of power and main fuse.

- 2. Measure the mains voltage on the main connector.
- 3. Check the power on LED.



B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cabl es to see if link 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 pin s on connectors or on PCB of theunit or the previous one.

4. Try to use another DMX controller.

5. Check if the DMX cables run near or run alongside to high v oltage cables that may cause

damage or interference to DMX interface circuit.

- C. Some units don't respond to the easy controller
- 1. You may have a break in the DMX cabling. Check the LED f or the response of the master/

slave mode signal.

2. Wrong DMX address in the unit. Set the proper address.

- D. No response to the sound
- 1. Make sure the unit does not receive DMX signal.
- 2. Check microphone to see if it is good by tapping the microp hone
- E. One of the channels is not working well

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

2. The motor's drive IC on the PCB might be out of condition6. Fixture Cleaning

The cleaning of external optical lenses and/or mirrors must b e carried out periodically to optimizelight output. Cleaning freq uency depends on the environment in which the fixture operat es: damp,

smoky or particularly dirty surrounding can cause greater accu mulation of dirt on the unit's optics.

Clean with soft cloth using normal glass cleaning fluid. Always dry the parts carefully.

Clean the external optics at least every 30 days.