



DIABLO R5 USER MANUAL

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Congratulations on choosing our company product! We thank you for your custom.

◆ Please note that this product, as all the others in the rich my company range, has been designed and made with total quality to ensure excellent performance and best meet your expectations and requirements.

◆ Carefully read this user manual in its entirety and keep it safe for future reference. It is essential to know the information and comply with the instructions given in this manual to ensure the fitting is installed, used and serviced correctly and safely.

◆ My company disclaims all liability for damage to the fitting or to other property or persons deriving from installation, use and maintenance that have not been carried out in conformity with this user manual, which must always accompany the fitting.

◆ My company reserves the right to modify the characteristics stated in this user manual at any time and without prior notice.



SAFETY INFORMATION

• Installation

Make sure all parts for fixing the projector are in a good state of repair.
Make sure the point of anchorage is stable before positioning the projector.
The safety chain must be properly hooked onto the fitting and secured to the framework, so that, if the primary support system fails, the fitting falls as little as possible.
If the safety chain gets used, it needs to be replaced with a genuine spare.

• MINIMUM DISTANCE OF ILLUMINATED OBJECTS

The projector needs to be positioned so that the objects hit by the beam of light are at least 12 metres from the lens of the projector.

• Minimum distance from flammable materials

The projector must be positioned so that any flammable materials are at least 0.2 metres from every point on the surface of the fitting.

• Mounting surfaces

It is permissible to mount the fitting on normally flammable surfaces.

• Maximum ambient temperature

Do not operate the fixture if the ambient temperature (T_a) exceeds 38°C.

• Protection against electrical shock

Connection must be made to a power supply system fitted with efficient earthing (Class I appliance according to standard EN 60598-1).

It is, moreover, recommended to protect the supply lines of the projectors from indirect contact and/or shorting to earth by using appropriately sized residual current devices.

• Connection to mains supply

Connection to the electricity mains must be carried out by a qualified electrical installer.
Check that the mains frequency and voltage correspond to those for which the projector is designed as given on the electrical data label.

This label also gives the input power to which you need to refer to evaluate the maximum number of fittings to connect to the electricity line, in order to avoid overloading.

Don't use the power cable when the insulation is damaged.

It must be the manufacturer or distributor or the professional person to change the damaged power cable in order to avoid any dangerous.

• Temperature of the external surface

The maximum temperature that can be reached on the external surface of the fitting, in a thermally steady state, is 100°C.

• Maintenance

Before starting any maintenance work or cleaning the projector, cut off power from the mains supply.
After switching off, do not remove any parts of the fitting, to avoid getting burnt for at least 30 minutes.
After this time the likelihood of the lamp exploding is virtually nil.

The fitting is designed to hold in any splinters produced by a lamp exploding. The lenses must be mounted and, if visibly damaged, they have to be replaced with genuine spares.

• Lamp

The fitting mounts a high-pressure lamp that needs an external igniter. This igniter is fitted onto the apparatus.

-Carefully read the "operating instructions" provided by the lamp manufacturer.

-Immediately replace the lamp if damaged or deformed by heat.

• Battery

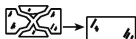
This product contains a rechargeable lead-acid battery. To preserve the environment, please dispose the battery at the end of its life according to the regulation in force.



t, 38°C



t, 100°C



The products referred to in this manual conform to the European Community Directives to which they are subject:

- Low Voltage 2006/95/CE
- Electromagnetic Compatibility 2004/108/CE

TECHNICAL INFORMATION

Power supplies available

AC90~240V/50~60Hz
Power:320W(lamp230);250W(lamp189W)

Lamp:

- Brand:OSRAM, PHILIPS
- Lamp power: 230W,190W,189W,180W(Apolegamic)
- Colour temperature 8000K
- Average life 3000h
- Any working position

Motors:

13 stepper motors, operating with microsteps,
Totally Microprocessor controlled.

Channels:

Standard 16 control channels,Max 20 control channels.

Zoom:

0° - 3.8°

Inputs:

- DMX 512/WIRELESS DMX 512(Apolegamic)

Movable body:

- Movement by means of two stepper motors,
Controlled by microprocessor.
- Automatic repositioning of PAN and TILT after accidental
Movement not controlled by control Unit.
- Travel:
 - PAN = 540°
 - TILT = 250°
- Maximum speeds:
 - PAN = 3.5S (normal)/ 2.7S (fast)
 - TILT = 2.1S (normal)/ 1.6S (fast)
- Resolution:
 - PAN = 2.11°
 - PAN FINE = 0.008°
 - TILT = 0.98°
 - TILT FINE = 0.004°

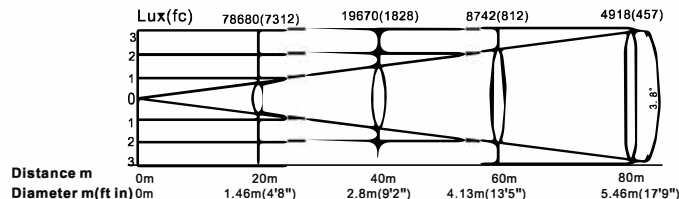
IP20 protection rating:

- Protected against the entry of solid bodies larger than 12mm.
- No protection against the entry of liquids.

CE Marking:

In conformity with the European Union Low Voltage.
Directive 2006/95/CE and Electromagnetic compatibility
Directive 2004/108/CE.

Photometric Data:



Safety Devices:

- Bipolar circuit breaker with thermal protection.
- Automatic break in power supply in case of overheating or failed operation of cooling system.

Cooling:

Forced ventilation with axial fans.

Body:

- Aluminium structure with die-cast plastic cover.
- Two side handles for transportation.
- Device locking PAN and TILT mechanisms for transportation and maintenance.

Working position

Functioning in any position.

Weights and size

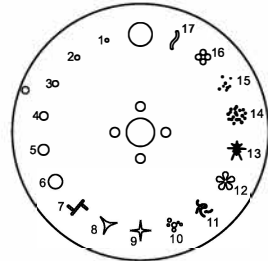
Box Size: 450x430x530(mm) N.W.:17.5kg G.W.:21.3kg

Flycase Size:

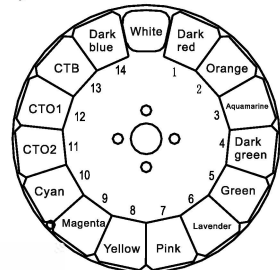
2PCS:790x650x680(mm) N.W.:35kg G.W.:76kg

4PCS:1025x810x680(mm) N.W.:70kg G.W.:135kg

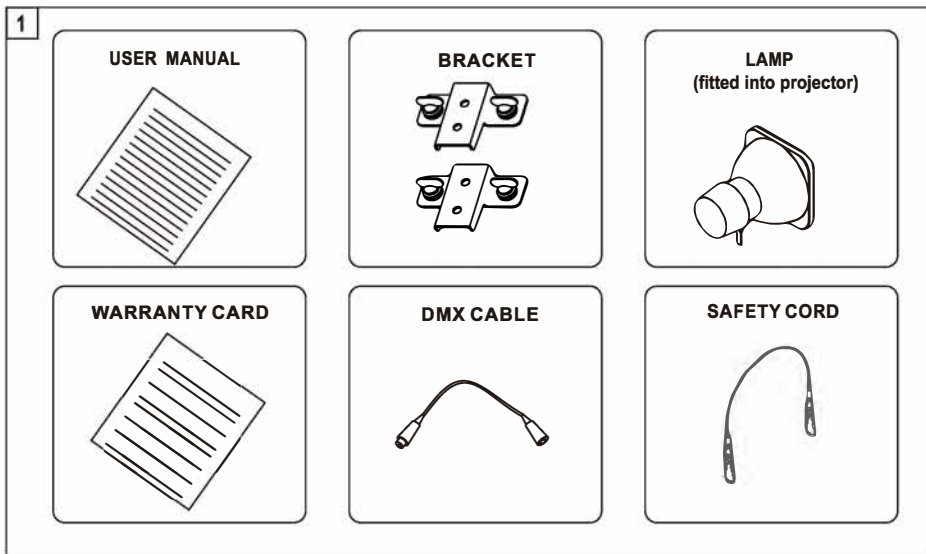
Gobo Wheel(please refer to the actual material):



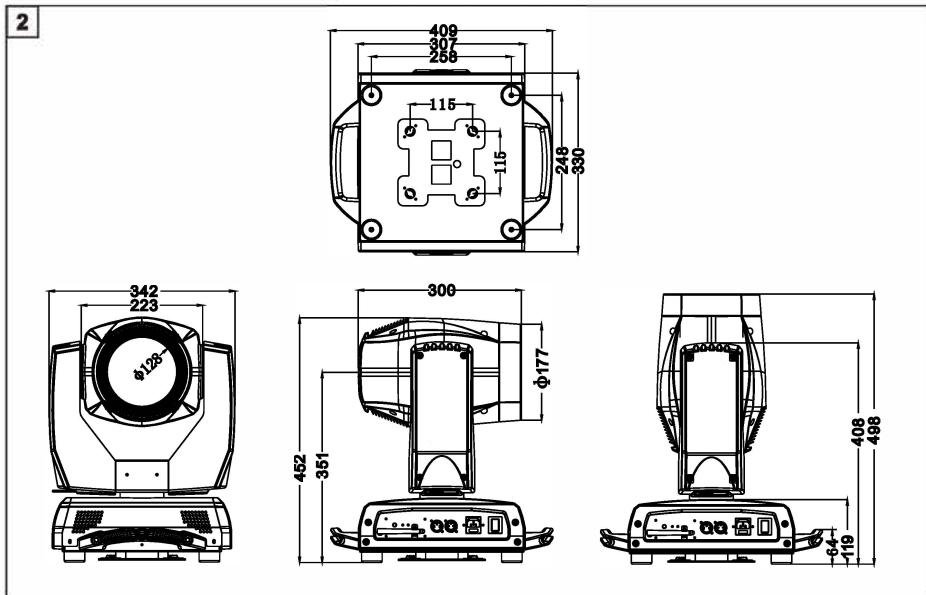
Color Wheel:(please refer to the actual material):



ATTACHMENT AND BODY SIZE



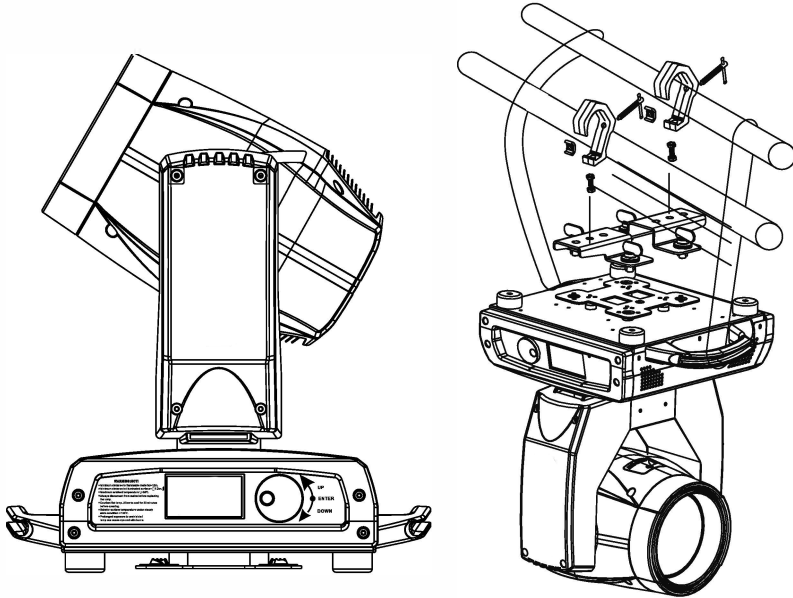
Attachmentcontents- Fig. 1



Body Size---Fig 2

INSTALLATION AND CONNECTING

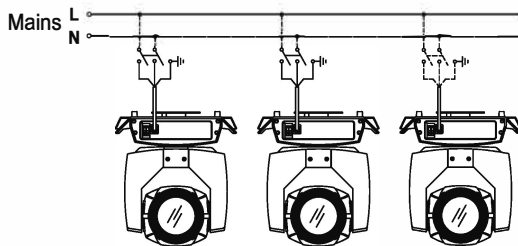
3



Installing the projector- Fig. 3

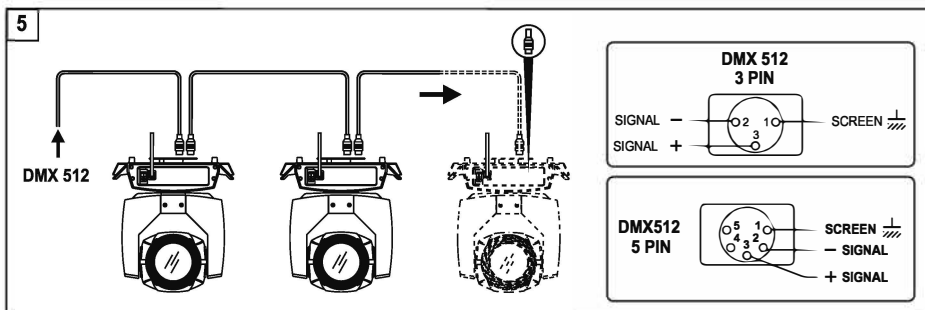
The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.
WARNING:with the exception of when the projector is positioned on the floor, the safety cable must be fitted. This must be securely fixed to the support structure of the projector and then connected to the fixing point at the centre of the base.

4



Connecting to the mains supply ---Fig 4

5



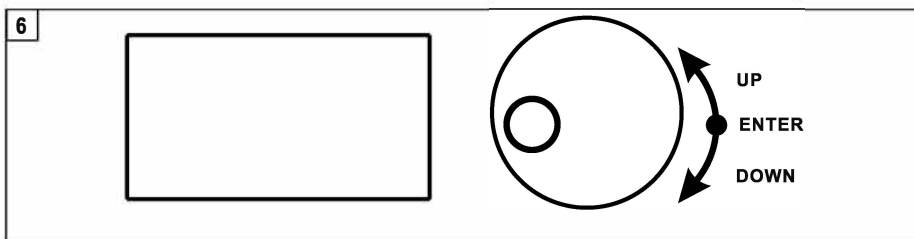
Connecting to the control signal line (DMX) - Fig. 5

- © Please use the round 3 or 5-pin XLR plugs & sockets offered by menu factory to connect the first projector's output to the second projector's input and connect the second projector's output to the third projector's input. And in the same way for the rest, eventually connect the last projector's output, all the projectors are together.
- © The projectors's control signal output or input by using the 3 or 5-pin XLR plug and socket. If need to lengthen the communication cable, please make sure the both side of 3 or 5-pin plug is one to one. (one to one, two to two, three to three). Otherwise, the communication cable will be interrupted. The communication cable is 2-core screened cable 75 Ω resistance with each core is at least a 0.5mm diameter. (**Caution:** All the inside leading wire of 3 or 5-pin XLR plug couldn't touch each other or plinth).
- © Recommend to use the DMX signal terminator for the installation to avoid the electronic noise damage the digital control signal. Simply speaking, DMX terminator is an XLR connector with a 120 Ω 1/2W resistor connected across pin 2 and 3. Which is then plugged into the output socket on the last projector in the chain. Refer to the connection.

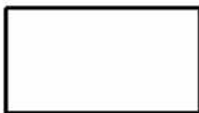
CONTROL PANEL

LCD series:

6

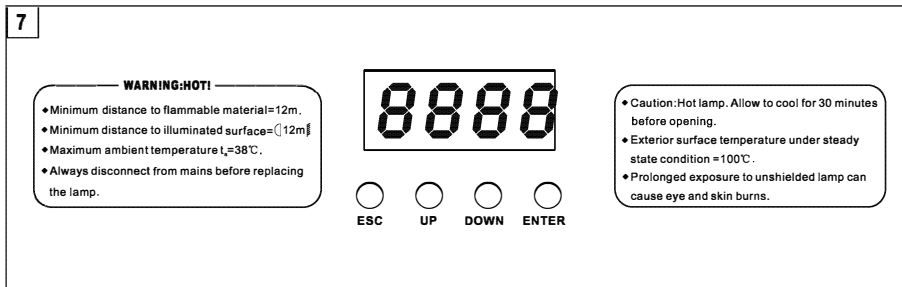


Press the switch. The projector starts resetting the effects. At the same time, the following information scrolls on the display:



- UP: Page up or increase;
- DOWN: Page down or reduce;
- ENTER: OK Function
- RETURN: Exit (In the choice screen)

Number series:



ESC: Exit Button;

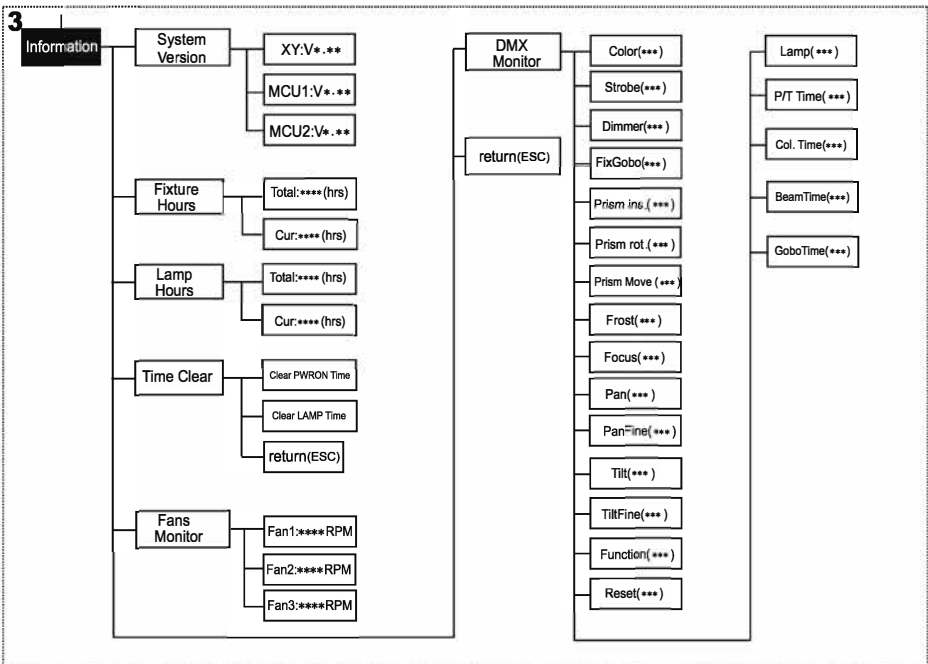
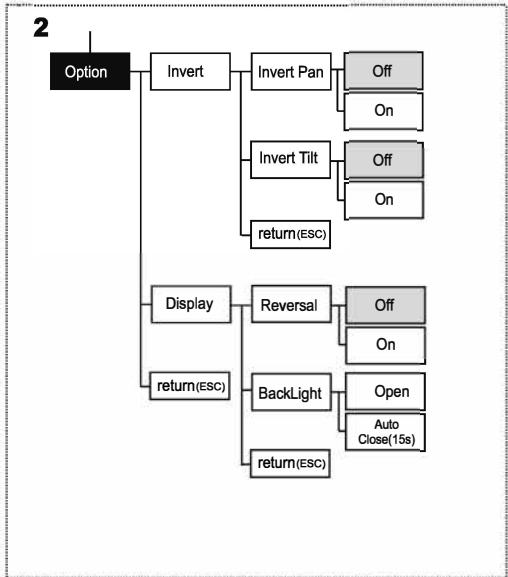
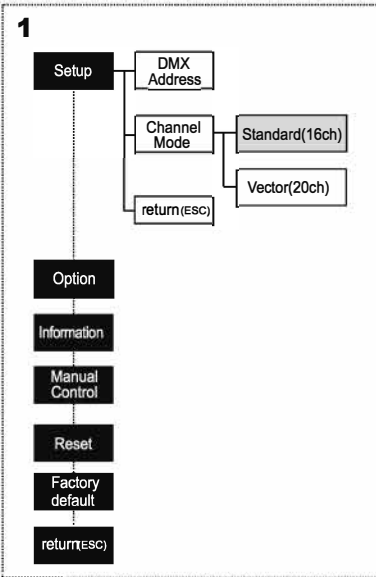
UP: Page up or increase;

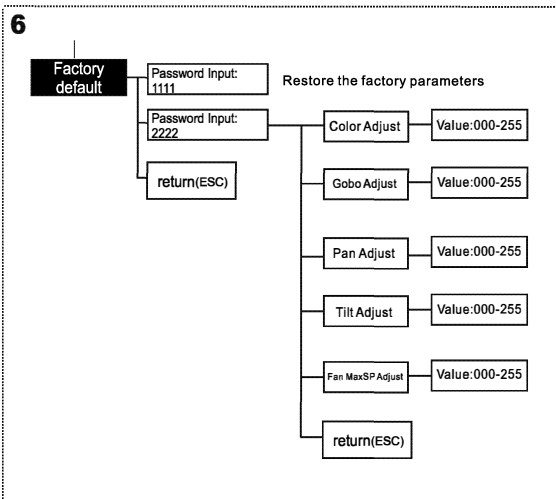
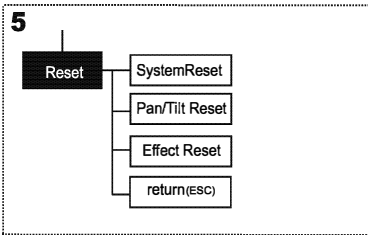
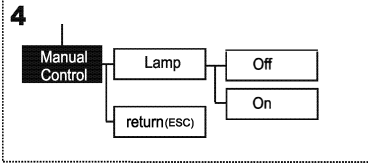
DOWN: Page down or reduce;

ENTER: OK button

MENU SETTING(V1.0)

LCD series:





- 1. When the dmx signal is fine, it shows " DMX Input OK".**
- 2. When no dmx signal, it shows " DMX Input Fail".**

LED series:

Main Menu	I Menu	II Menu	III Menu	IV Menu	Function	
DMX.S	ADDR →	A.001 ↓ A.512	Adjusting DMX addressing data			
		MODE →	20CH	Default		
	16CH					
PERS	L.DMX →	OFF	Close control of DMX console			
		ON	Open DMX console control			
	INV →	INV.P →	OFF	Invert Pan		
			ON			
	INV →	INV.T →	OFF	Invert Tilt		
			ON			
	SHT.C →	COL.W →	OFF	Color Wheel shortcut		
			ON			
		GOB.W →	OFF	Gobo Wheel shortcut		
			ON			
	DISP →	REV.S →	OFF	Reverse Display		
			ON			
BACK →		OPEN	BackLight			
		CLS	Auto Close(15s)			
INFO	VERS →	XY →	V**. **	CPU Version Number		
		MCU1 →	V**. **	CPU Version Number		
		MCU2 →	V**. **	CPU Version Number		
	FAN.M →	FAN1	Fan1 Speed			
		FAN2	Fan2 Speed			
		FAN3	Fan3 Speed			

Main Menu	I Menu	II Menu	III Menu	IV Menu	Function	
INFO	→ DMX.M	C.***	1ch controller dmx value			
		S.***	2ch controller dmx value			
		D.***	3ch controller dmx value			
		G.***	4ch controller dmx value			
		5.***	5ch controller dmx value			
		6.***	6ch controller dmx value			
		M.***	7ch controller dmx value			
		8.***	8ch controller dmx value			
		F.***	9ch controller dmx value			
		P.***	10ch controller dmx value			
		p.***	11ch controller dmx value			
		T.***	12ch controller dmx value			
		t.***	13ch controller dmx value			
		F.***	14ch controller dmx value			
		R.***	15ch controller dmx value			
		L.***	16ch controller dmx value			
		7.***	17ch controller dmx value			
		8.***	18ch controller dmx value			
		9.***	19ch controller dmx value			
		0.***	20ch controller dmx value			
MANU	→ LAMP	ON				
		OFF				
LOAD	→ 0000	INPUT:2222	COL.A	→	C.000-C.255	Adjusting color
			GOB.A	→	G.000-G.255	Adjusting gobo
			PAN.A	→	P.000-P.255	Adjusting pan
			TIL.A	→	T.000-T.255	Adjusting tilt

CHANNEL FUNCTION

CHANNEL

CHANNEL	CHANNEL MODE	
	STANDARD	VECTOR
1	COLOUR WHEEL	COLOUR WHEEL
2	STOP/STROBE	STOP/STROBE
3	DIMMER	DIMMER
4	FIXGOBO	FIXGOBO
5	PRISM INSERTION	PRISM INSERTION
6	PRISM ROTATION	PRISM ROTATION
7	PRISM MOVE	PRISM MOVE
8	FROST	FROST
9	FOCUS	FOCUS
10	PAN	PAN
11	PAN FINE	PAN FINE
12	TILT	TILT
13	TILT FINE	TILT FINE
14	FUNCTION	FUNCTION
15	RESET	RESET
16	LAMP CONTROL	LAMP CONTROL
17		PAN/TILT TIME
18		COLOUR TIME
19		BEAM TIME
20		GOBO TIME

Remark: The simplified version and digital tube display has no the "PRISM MOVE" function.

• COLOUR WHEEL- channel 1

BIT	EFFECT
255	FAST ROTATION
128	SLOW ROTATION
124-127	DARK BLUE+WHITE
120-123	DARK BLUE
116-119	CTB+DARK BLUE
111-115	CTB
107-110	CTO 1+CTB
103-106	CTO 1
99-102	CTO 2+CTO 1
94-98	CYAN+CTO 2
90-93	CYAN
86-89	MAGENTA+CYAN
82-85	MAGENTA
77-81	YELLOW + MAGENTA
73-76	YELLOW
69-72	PINK+YELLOW
64-68	PINK
60-63	LAVENDER+PINK
56-59	LAVENDER
52-55	GREEN+LAVENDER
47-51	GREEN
43-46	DARK GREEN+GREEN
39-42	DARK GREEN
35-38	AQUAMARINE+DARK GREEN
30-34	AQUAMARINE
26-29	ORANGE+AQUAMARINE
22-25	ORANGE
18-21	DARK RED+ORANGE
13-17	DARK RED
9-12	WHITE+DARK RED
5-8	WHITE
0-4	WHITE



• STOP/STROBE- channel 2

BIT	EFFECT
252 - 255	OPEN
239 - 251	RANDOM FAST STROBE
226 - 238	RANDOM MEDIUM STROBE
213 - 225	RANDOM SLOW STROBE
208 - 212	OPEN
207	FAST PULSATION
108	SLOW PULSATION
104 - 107	OPEN
103	FAST STROBE
4	SLOW STROBE
0 - 3	CLOSED

MACRO



• DIMMER- channel 3

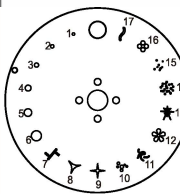


BIT	EFFECT
255	From slow to fast dimmer
0	

• FixGOBO - channel 4

BIT	EFFECT
255	GOBO 16 SHAKE FAST SPEED
250	GOBO 16 SHAKE, SLOWS PEED
249	GOBO 15 SHAKE, FAST SPEED
244	GOBO 15 SHAKE, SLOWS PEED
243	GOBO 14 SHAKE, FAST SPEED
237	GOBO 14 SHAKE, SLOW SPEED
236	GOBO 13 SHAKE, FAST SPEED
231	GOBO 13 SHAKE, SLOW SPEED
230	GOBO 12 SHAKE, FAST SPEED
224	GOBO 12 SHAKE, SLOW SPEED
223	GOBO 11 SHAKE, FAST SPEED
218	GOBO 11 SHAKE, SLOW SPEED
217	GOBO 10 SHAKE, FAST SPEED
212	GOBO 10 SHAKE, SLOW SPEED
211	GOBO 9 SHAKE, FAST SPEED
205	GOBO 9 SHAKE, SLOW SPEED
204	GOBO 8 SHAKE, FAST SPEED
199	GOBO 8 SHAKE, SLOW SPEED
198	GOBO 7 SHAKE, FAST SPEED
192	GOBO 7 SHAKE, SLOW SPEED
191	GOBO 6 SHAKE, FAST SPEED
186	GOBO 6 SHAKE, SLOW SPEED
185	GOBO 5 SHAKE, FAST SPEED
180	GOBO 5 SHAKE, SLOW SPEED
179	GOBO 4 SHAKE, FAST SPEED
173	GOBO 4 SHAKE, SLOW SPEED
172	GOBO 3 SHAKE, FAST SPEED
167	GOBO 3 SHAKE, SLOW SPEED
166	GOBO 2 SHAKE, FAST SPEED
160	GOBO 2 SHAKE, SLOW SPEED
159	FAST FORWARDS ROTATION
118	SLOW FORWARDS ROTATION
114-117	STOP
113	SLOW BACKWARDS ROTATION
72	FAST BACKWARDS ROTATION
68-71	GOBO 17
64-67	GOBO 16
60-63	GOBO 15
56-59	GOBO 14
52-55	GOBO 13
48-51	GOBO 12
44-47	GOBO 11
40-43	GOBO 10
36-39	GOBO 9
32-35	GOBO 8
28-31	GOBO 7
24-27	GOBO 6
20-23	GOBO 5
16-19	GOBO 4
12-15	GOBO 3
8-11	GOBO 2
4-7	GOBO 1
0-3	WHITE

MACRO



• PRISM INSERTION - channel 5

BIT	EFFECT
255	PRISM INSERTED
128	
127	
0	PRISM EXCLUDED

• FOCUS-channel 9



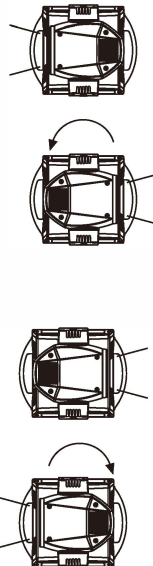
BIT	EFFECT
255	NEAR
0	DISTANT

• PRISM ROTATION - channel 6



BIT	EFFECT
255	FAST FORWARDS ROTATION
193	SLOW FORWARDS ROTATION
191-192	STOP
190	SLOW BACKWARDS ROTATION
128	FAST BACKWARDS ROTATION
127	POSITION 180°
0	POSITION 0°

• PAN-channel 10



BIT	EFFECT
255	540°
0	

• PRISM MOVE- channel 7

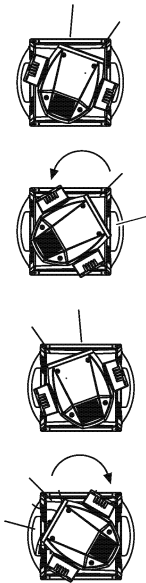
BIT	EFFECT
255	FROM MAX. TO MIN.
0	

• FROST-channel 8



BIT	EFFECT
255	FROST INSERTED
0	FROST EXCLUDED

• PAN FINE-channel 11



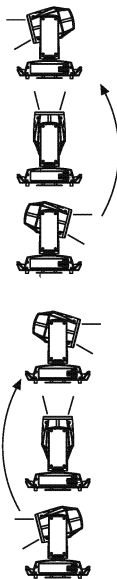
BIT	EFFECT
255	
.....	
0	

• TILT FINE- channel 13



BIT	EFFECT
255	
.....	
0	

• TILT- channel 12



BIT	EFFECT
255	
.....	
128	250°
.....	
0	

•FUNCTION- channel 14 (UNUSED)

BIT	EFFECT
	UNUSED

•RESET -channel 15

BIT	EFFECT
255 128	COMPLETE RESET
127 77	
76 26	PAN / TILT MOTOR RESET
25 0	HEAD RESET
	UNUSED RANGE

•LAMP CONTROL - channel 16



BIT	EFFECT
255 101	LAMP ON
100 26	
25 0	LAMP OFF(3S)
	UNUSED RANGE

TIMING CHANNELS

NO.	TIMING CHANNEL	CHANNEL FUNCTION
17	X / Y time	0 Unused Range
		1-255 X Yspeed from fast to slow
18	Colour time	0 Unused Range
		1-255 colour speed from fast to slow (colour bit:5-127)
19	Beam time	0 Unused Range
		1-255 dimmer-prism-frost speed from fast to slow(gobo bit:5-71)
20	Gobo time	0 Unused Range
		1-255 gobo speed from fast to slow

CLEANING AND MAINTENANCES

- In order to ensure the projector could work normally. It should be kept clean always. It is recommended that the fans and ventilation in let should be cleaned every 15 days. The lens and dichroic colour filters should also be regularly cleaned to maintain an optimum light output. Do not use any type of solvent on dichroic colour filters. It will damage the projector.
- Suggestion: The continue usage of the light don't exceed 4 hours. Or it will shorter the usage of the lamp. Please use the alternative operation to solve this problems.
- Please disconnect the power supply when begin to maintenance or takedown the light. Please let the parts cool down 10 minute at least then begin to install. If need to replace the lamp, please wait 10 minute again at least to let the lamp cool down completely or which maybe burned down.
- Please inspect the lens or other moving parts timing and keep them clear and static. If find anything damaged or looseness, must change a lamp or fix the lamp in order to avoid the accident.
- The light use the strong cool system. It is easy for the dirty to be collected. Please do clear the hot-sak one time two week at least.
- After you use the light, please check the intake place whether there are some wastepaper, please clean it up, or the windmill will break down and causing fire.

TROUBESHOOTING

It is recommended some solution for some normal trouble shooting. Any unsolved problems should always be handle by the professional person. Disconnect the power supply before maintenance the light.

■ Lamp off:

- Please check if install the suitable lamp.
- Please check the connection of the power supply or switch is ok.
- Please check whether the lamp will reach the end of their life can explode, please replace a same description lamp.
- Please measure if the power supply is enough.
- Please check if the operation is correct. Please wait 30 minutes at least till the lamp cool down enough, then could the connect the power supply, which could be normal work.
- Please check whether the DMX 512 controller pass the "turn on" order.
- Please check the connection of the trigger circuit is loose contact.
- Please check whether the connected point of the trigger point is loose contact, faster the connect cable.
- Check menu **INFORMATION** → **FANS MONITOR** → **FAN1, FAN2, FAN3**, Whether the fan speed in 500RPM above, below 500RPM the lamp does not light, replace with the specifications of the fan.
- Please check if the switch of the temperature is damaged.
- Check the bottom box driver board "WK" socket if the resistance 0 between the two line.

■ The light beam is dark, not inhomogeneous:

- When the lamp is to the usage life, the light is not enough, please change a new one for the same description.
- Please check the reflector parts is dirty. Keep them clear.
- Please measure if the power supply is enough.
- Small adjusting is suitable for change height or screw system till get a ideal light beam.
- TO enter the menu **FANCTORY DEFAULT** input 2222 enter the **COLOR** and **GOBO** regulation, until the optical center.

■ **The light shadow is fogging:**

- ⊙ Please check the data on the DMX 512 controller is suitable for the electric focus.
- ⊙ Please check the mechanical parts is jamming. After cleaning, please add some temperature -durable juice.

■ **The light works interruptly:**

- ⊙ Please check if the fan works normally or mote clogging.
- ⊙ Please check whether the abstract heat have the mote clogging.
- ⊙ Please check if the lamp is to the usage life.
- ⊙ Please check if the power supply is enough, the connection of the power supply or the circuit are good.
- ⊙ Please check if the switch of the sup-temperature is good.

■ **Though the light is lighting, but it couldn't accept the control order:**

- ⊙ Please check the start code address and the function option are correct.
- ⊙ Please check whether the communicate control cable is on good connection or the cable is too long or interrupt.
- ⊙ Please check the control system is not valid, check the signal amplifier of chain connected is valid.
- ⊙ Please check whether the communicate cable is too long or the other equipment is mutually conjugate.
- ⊙ Please arrange the wire well, shorter the signal cable, put the high voltage cable and low voltage cable separately.
- ⊙ Add the signal amplify isolator.
- ⊙ Signal cable is used the excellent screening doublet (Resistance 75 Ω)
- ⊙ The end of the light end and the end resistance.
- ⊙ When the lamp don't cool down enough but do the incorrect operation will let the trigger up to super-high voltage leak. It will damage the electric circuit and communicate IC or CPU. Under this condition, please change the PCB board.

■ **the light can't move:**

- ⊙ Please check if the power supply is suitable for the light voltage data.
- ⊙ Please check the fuse of input voltage is defective.
- ⊙ Please check the light if they are deformatting, inside parts is broken, become wet...etc will lead the loose contact.
- ⊙ Please check if the inside lead wire and the connector is loose.
- ⊙ Please check the electric parts (such as the switch, transformer, ballast, electric capacity, piezoresistor, filter, PCB board, controller to motor) is short-circuit or burn down.

■ **Part of the projector couldn't be responsled to the controlling order:**

- ⊙ Please check the order is correct to the moving.
- ⊙ Please check the mechanical part is deformation or loose.
- ⊙ Please check the function to the motor socket is loose or drive chip is burn down.
- ⊙ Please check the wire of the motor is cut at zig point.
- ⊙ Please check these function to the motor is damaged.

■ **On working, the pan & tilt couldn't work normally:**

- ⊙ Please check according to the above step by step.
- ⊙ Please check the belt of the X.Y is broken.
- ⊙ Please check the X/Y direction data to the receiver is damage.
- ⊙ Re-projector reset.

DUTY EXONERATIVE AND COPYRIGHT PROTECTION

- ◇ The lamp belongs to consumption products that is not guarantee to keep it in good repair.
- ◇ Any products broken that didn't according to the instruction is not guarantee to keep it in good repair.
- ◇ The commentary for all the instruction belongs to the supplier in final.
- ◇ No authorize can't copy.
- ◇ The information in this manual may be changed in the future, the company reserve the right to change the data without any advise.

