

***Ksmart***

USER MANUAL

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## MAINTENANCE

### MAINTENANCE AND CLEANING THE UNIT

- Make sure the area below the installation place is free from unwanted person during setup.
- Switch off the unit,unplug the main cable and wait until the unit has cooled down.
- All screws used for installing the device and any of its parts should be tightly fastened and should not be corroded.
- Housings,fixations and installation spots (ceiling,trusses,suspensions) should be totally free from any deformation.
- The main cables must be in impeccable condition and should be replaced immediately even when a small problem is detected.
- It is recommended to clean the front at regular intervals,from impurities caused by dust,smoke,or other particles to ensure that the ligh is radiated at maximum brightness.For cleaning,disconnect the main plug from the socket.Use a soft,clean cloth moistened with a mild detergent.Then carefully wipe the party dry. For cleaning other housing parts use only a soft,clean cloth.Never use a liquid,it might pernetrate the unit and cause damage to it.

### FUSE REPLACEMENT

- 1.Disconnect this product from the power outlet.
- 2.Using a screwdriver,unscrew the fuse holder cap from the housing.
- 3.Remove the blown fuse and replace with a good fuse of the same type and rating (250V/T10A).
- 4.Screw the fuse holder cap back in place and reconnect power.



## TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Fixture does not light up	<ul style="list-style-type: none"> <li>• No mains supply</li> <li>• Dimmer fader set to 0</li> <li>• Faulty LED</li> <li>• Faulty LED board</li> </ul>	<ul style="list-style-type: none"> <li>• Check the power supply voltage</li> <li>• Increase the value of the dimmer channels</li> <li>• Replace the LED board</li> <li>• Replace the LED board</li> </ul>
General low light intensity	<ul style="list-style-type: none"> <li>• Dirty lens assembly</li> <li>• Misaligned lens assembly</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the fixture regularly</li> <li>• Install lens assembly properly</li> </ul>
Fixture does not power up	<ul style="list-style-type: none"> <li>• No power</li> <li>• Loose or damaged power cord</li> <li>• Faulty internal power supply</li> </ul>	<ul style="list-style-type: none"> <li>• Check for power on power outlet</li> <li>• Check power cord</li> <li>• Replace internal power supply</li> </ul>

Contact an authorized service center in case of technical problems or not reported in th table can not be resolved by the procedure given in the table.

## DMX CHART

29	Framing Shutter 3 movent	000-255	Movement from outward to inward
30	Framing Shutter 3 swivelling	000-127	Swivelling from -25 degrees towards 0 degrees
		128	0 degrees
		129-255	Swivelling from 0 degrees to +25 degrees
31	Framing Shutter 4 movent	000-255	Movement from outward to inward
32	Framing Shutter 4 swivelling	000-127	Swivelling from -25 degrees towards 0 degrees
		128	0 degrees
		129-255	Swivelling from 0 degrees to +25 degrees
33	Function	000-020	TBD
		021-025	Dimmer speed Off
		026-030	Dimmer speed mode1
		031-035	Dimmer speed mode2
		036-040	Dimmer speed mode3
		041-050	TBD
		051-055	Linear
		056-060	Square
		061-065	Inverse Square
		066-070	S-Curve
		071-125	TBD
		126-130	Fan Auto
		131-135	Fan Silent
		136-200	TBD
		201-205	Complete Reset(Hold 5S)
		206-210	Pan/Tilt Reset (Hold 5S)
		211-215	Head Reset (Hold 5S)
216-255	TBD		

## SAFETY



WARNING! Before carrying out any operations with the unit, carefully read this instruction manual and keep it with care for future reference. It contains important information about the installation, usage and maintenance of the unit.



## General instruction

- The products referred to in this manual conform to the European Community Directives and are therefore marked with CE.
- The unit is supplied with hazardous network voltage (230V~). Leave serving to skilled personnel only. Never make any modifications on the unit not described in this instruction manual, otherwise you will risk an electric shock.
- Connection must be made to power supply system fitted with efficient earthing (Class I appliance according to standard EN60598-1). It is moreover, recommended to protect the supply lines of the units from indirect contact and/or shorting to earth by using appropriately sized residual current devices.
- The connection to the main network of electric distribution must be carried out by a qualified electrical installer. Check that the main frequency and voltage correspond to those for which the unit is designed as given on the electrical data label.
- This unit is not for home use, only professional applications.
- Never use the fixture under the following conditions:
  - in places subject to vibrations or bumps;
  - in places with a temperature of over 40 °C.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Do not dismantle or modify the fixture.
- All work must always be carried out by qualified technical personnel. Contact the nearest sales point for an inspection or contact the manufacturer directly.
- If the unit is to be put out of operation definitively, take it to a local recycling plant for a disposal which is not harmful to the environment.



## Warnings and installation precautions

- If this device will be operated in any way different to the one described in this manual, it may suffer damage and the guarantee becomes void. Furthermore, any operation may lead to dangers like short circuit, burns, electric shock, etc.
- Before starting any maintenance work or cleaning the projector, cut off power from the main supply.
- Always additionally secure the projector with the safety rope. When carrying out any work, always comply scrupulously with all the regulations (particularly regarding safety) currently in force in the country in which the fixture is being used.
- Install the fixture in a well ventilated place.
- Keep any inflammable materials at a safe distance from the fixture.
- Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
- The lamp (LED) shall be changed if it has become damaged or thermally deformed.
- Never look directly at the light beam. Please note that fast changes in lighting, e.g. flashing light, may trigger epileptic seizures in photosensitive persons or persons with epilepsy.
- Do not touch the product's housing when operating because it may be very hot.

## INTRODUCTION

### FEATURES

- 600W 6000K LED engine
- 20,320 lumen high output
- Extremely even spot with flawless field consistency
- CMY + CTO for precious control and smooth adjustment on color mixing
- CRI>90 (HR filter)
- Animation wheel, adjustable frost,dual gobo wheel
- Bi-directional 4-facet prism with variable speed
- 16-bit dimming with SPWM control
- Fast ,smooth PAN/TILT movement
- DMX and RDM control

### SPECIFICATIONS

Light source :	600W LED
Beam angle:	6°~50°
Output:	20322Lm(50°)/12208Lm(6°)
Color temperature:	6000K
CRI:	70/90(CRI filter)
LED life:	20000hrs
PAN/TILT:	540°/270°
Color:	CMY+color wheel(7+open)+CTO
CTO:	3200K~6000K, linear
Gobos(rotating):	7 interchangeable+open
Animation:	1 animation wheel
Framing System:	4 independent blades (+/- 35°),rotatable (+/- 60°)
Iris:	15leaves 10%~100% motorized linear iris
Focus:	Motorized
Zoom:	6~50°(8x +)
Strobe:	0-30Hz
Dimming:	4 dimming curves, 0~100% linear dimming
Prism:	Rotating bi-directional 4-facet prism with variable speed
Mains:	100~240VAC, 50/60Hz
Consumption:	730W@230V/782W@120V
Power connections:	PowerCon IN/OUT
Data connections:	3pin and 5pin DMX IN/OUT
Power linking:	2pcs@230V
Data linking:	up to 25pcs
Control protocol:	DMX512/RDM
DMX channels:	33CH
Onboard menu:	TFT display
Dimension:	355*257*593mm
Weight:	24KG

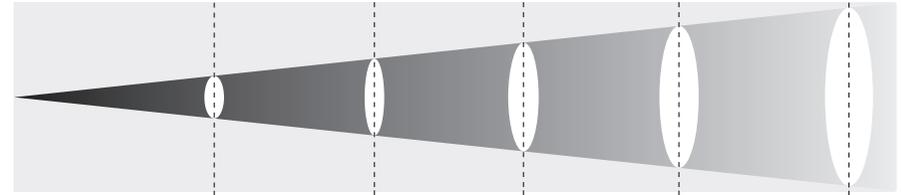
## DMX CHART

13	Gobo	028-031	Gobo7
		032-045	Gobo1 Shaking Slow to Fast
		046-059	Gobo2 Shaking Slow to Fast
		060-073	Gobo3 Shaking Slow to Fast
		074-087	Gobo4 Shaking Slow to Fast
		088-101	Gobo5 Shaking Slow to Fast
		102-114	Gobo6 Shaking Slow to Fast
		115-127	Gobo7 Shaking Slow to Fast
		128-190	Fast to Slow (Revers Spin)
		191-192	Stop
14	RGobo	193-255	Slow to Fast(Forw ard Spin)
		000-191	Positioning from 0-360 degrees(Indexing)
		192-221	Fast to Slow (Forw ard Spin)
		222-225	Stop
15	Effect	226-255	Slow to Fast(Revers Spin)
		000-003	Open/No Function
		004-127	Fast to Slow (Forw ard Spin)
		128-131	Stop (Stop Rotation)
16	Prism	132-255	Slow to Fast(Revers Spin)
		000-127	Prism Out
17	RPrism	128-255	Prism into the light beam
		000-127	0 - 540 Position
		128-190	Fast to Slow (Forw ard Spin)
		191-192	
193-255	Slow to Fast(Revers Spin)		
18	Frost	000-255	Frost moves linearly into the light beam
19	Focus	000-255	Focus
20	Focus Fine	000-255	Focus Fine
21	Zoom	000-255	Zoom
22	Zoom Fine	000-255	Zoom Fine
23	Iris	000-063	From large to small
		064-127	Open and close by arrive slow to fast (Effects)
		128-191	Open from slow to fast (Effects)
		192-255	Close from slow to fast (Effects)
24	Framing Shutters Rotation	000-127	Rotation from left to center
		128	Center
		129-255	Rotation from center to right
25	Framing Shutter 1 movent	000-255	Movement from outw ard to inw ard
26	Framing Shutter 1 sw ivelling	000-127	Sw ivelling from -25 degrees tow ards 0 degrees
		128	0 degrees
		129-255	Sw ivelling from 0 degrees to +25 degrees
27	Framing Shutter 2 movent	000-255	Movement from outw ard to inw ard
28	Framing Shutter 2 sw ivelling	000-127	Sw ivelling from -25 degrees tow ards 0 degrees
		128	0 degrees
		129-255	Sw ivelling from 0 degrees to +25 degrees

### DMX CHART

33CH	Function	Value	Percent/Setting
1	Pan	000-255	Pan Coarse
2	Pan Fine	000-255	Pan Fine
3	Tilt	000-255	Tilt Coarse
4	Tilt Fine	000-255	Tilt Fine
5	Strobe	000-010	No function (shutter close)
		011-082	Shutter effect slow to fast
		083-093	No function (shutter open)
		094-163	Pulse-effect in sequences
		164-174	No function (shutter open)
		175-244	Random Shutter effect slow to fast
		245-255	No function (shutter open)
6	Dimmer	000-255	Dimmer 0%-100%
7	Dimmer Fine	000-255	Dimmer Fine
8	Cyan	000-255	
9	Magenta	000-255	
10	Yellow	000-255	
11	CTO	000-255	
12	Color	000-007	Open
		008-015	Open+Color1
		016-023	Color 1
		024-031	Color 1 + Color 2
		032-039	Color 2
		040-047	Color 2 + Color 3
		048-055	Color 3
		056-063	Color 3 + Color 4
		064-071	Color 4
		072-079	Color 4 + Color 5
		080-087	Color 5
		088-095	Color 5 + Color 6
		096-103	Color 6
		104-111	Color 6 + Color 7
		112-119	Color 7 (CR>90)
		120-127	Color 7 (CR>90) + Open
		128-190	Fast to Slow (Forward Spin)
191-192	Stop (Stop Rotation)		
193-255	Slow to Fast(Reverse Spin)		
13	Gobo	000-003	White
		004-007	Gobo1
		008-011	Gobo2
		012-015	Gobo3
		016-019	Gobo4
		020-023	Gobo5
		024-027	Gobo6

### PHOTOMETRICS



6° Distance(M)	5	7	10	15	20
Illuminance(lux)	74300	37908	18575	8255	4643
Diameter(CM)	52.4	73.3	104	156	208
50° Distance(M)	1	3	5	7	10
Illuminance(lux)	47619	5291	1905	972	476
Diameter(CM)	93	279	466	651	930

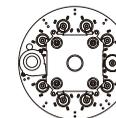
#### GOBO



#### COLOR



#### FRAMING SHUTTER



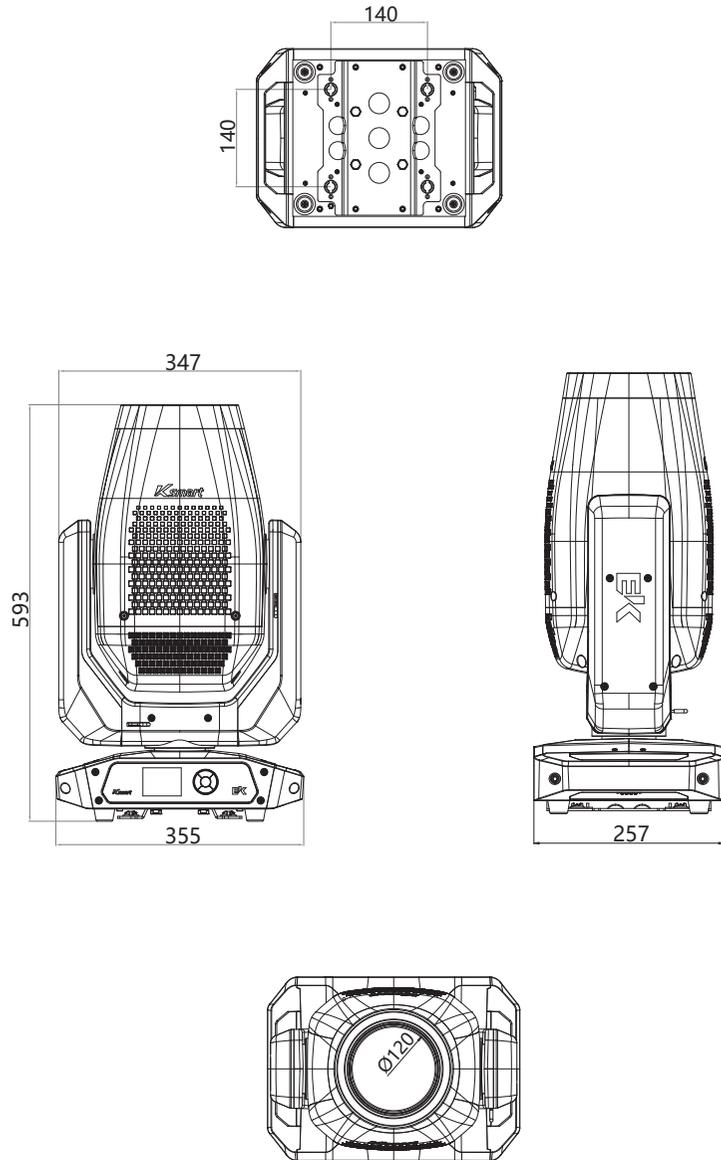
#### ANIMATION



#### CMY



**DIMENSION**



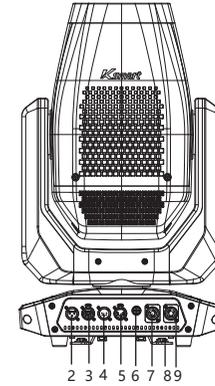
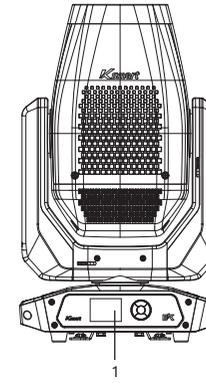
**MENU**

4	TEST	Channel	12.Color	000-255					
			13.Gobo	000-255					
			14.RGobo	000-255					
			15.Prism	000-255					
			16.RPrism	000-255					
			17.Frost	000-255					
			18.Focus Fine	000-255					
			19.Focus Fine	000-255					
			20.Zoom Fine	000-255					
			21.Zoom Fine	000-255					
			22.Effect	000-255					
			23.Iris	000-255					
			24.Shutters Rot.	000-255					
			25.Fr.shutter 1 Move.	000-255					
			26.Fr.shutter 1 Swiv.	000-255					
			27.Fr.shutter 2 Move.	000-255					
			28.Fr.shutter 2 Swiv.	000-255					
			29.Fr.shutter 3 Move.	000-255					
			30.Fr.shutter 3 Swiv.	000-255					
			31.Fr.shutter 4 Move.	000-255					
			32.Fr.shutter 4 Swiv.	000-255					
			33.Function	000-255					
			5	ADVANCED (Code:050)	AUTO	Pan/Tilt			
						Colour			
						Beam			
						Gobo			
						Shutter			
						All			
			5	ADVANCED (Code:050)	Calibration	Pan	000-255		
						Tilt	000-255		
						Cyan	000-255		
						Magenta	000-255		
						Yellow	000-255		
CTO	000-255								
Color	000-255								
Gobo	000-255								
RGobo	000-255								
Prism	000-255								
RPrism	000-255								
Frost	000-255								
Focus	000-255								
Zoom	000-255								
Effect	000-255								
Iris	000-255								
Fr.shutters Rot.	000-255								
Fr.shutter 1 M1	000-255								
Fr.shutter 1 M2	000-255								
Fr.shutter 1 M2	000-255								
Fr.shutter 2 M2	000-255								
Fr.shutter 3 M1	000-255								
Fr.shutter 3 M2	000-255								
Fr.shutter 4 M1	000-255								
Fr.shutter 4 M2	000-255								
5	ADVANCED (Code:050)	Factory Reset	No		No				
			Yes						

## MENU

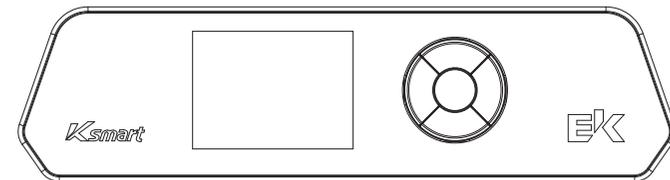
	Main Menu	Menu level 1	Menu level 2	Menu level3	Default	Description for use		
1	CONNECT	DMX Address	1-480		1			
2	OPTION	Movement Setting	Pan Reverse	Off On	Off			
			Tilt Reverse	Off On	Off			
			Encoder Pan/Tilt	Off On	On			
			Display Setting	Warn Cue	Off On	On		
				Backlight	Off On	Off		
				Display Reverse	Off On Auto	Off		
		Key Lock		Off On	Off			
		Temperature unit		°C °F	°C			
		Dimmer Setting	Dimmer Mode	Off	Dimmer 1 Dimmer 2 Dimmer 3	Off		
				Dimmer Curve	Linear	Square	Square	
					Square	Inverse Square		
			S-Curve					
			Fixture Setting		Fan Mode	Auto Silent	Auto	
		Reset Setting	All	No Yes	No			
			Pan/Tilt	No Yes	No			
			Head	No Yes	No			
		3	INFORMATION	System Errors				
				Time	Fixture Hours	0~9999H		
					LED Hours	0~9999H		
				System Version	DISP:V1.0			
CTR1-XY:V1.0								
CTR2-MOTOR:V1.0								
CTR3-MOTOR:V1.0								
CTR4-MOTOR:V1.0								
CTR5-MOTOR:V1.0								
UID	030F06D****							
		1.Pan	000-255					
		2.Pan Fine	000-255					
		3.Tilt	000-255					
		4.Tilt Fine	000-255					
		5.Strobe	000-255					
		6.Dimmer	000-255					
		7.Dimmer Fine	000-255					
		8.Cyan	000-255					
		9.Magenta	000-255					
		10.Yellow	000-255					
		11.CTO	000-255					

## OVERVIEW



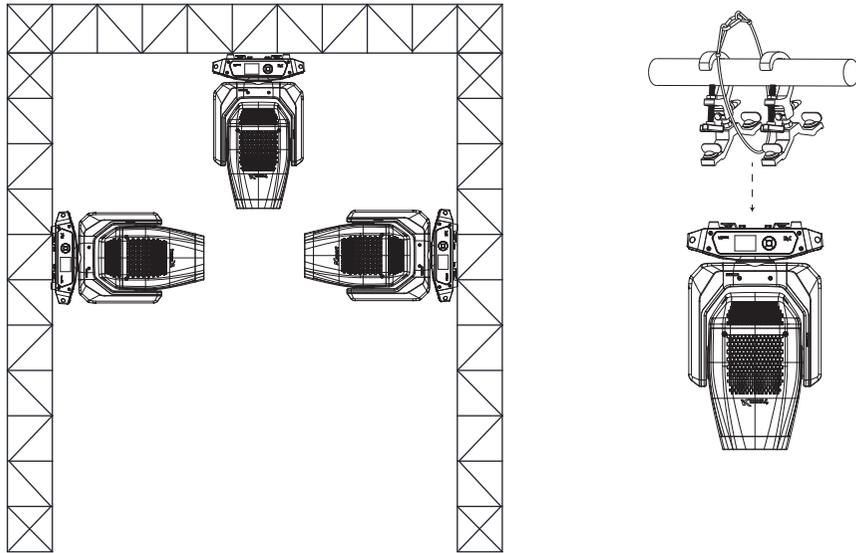
- 1. CONTROL PANEL
- 2. 3pin DMX IN
- 3. 3pin DMX OUT
- 4. 5pin DMX IN
- 5. 5pin DMX OUT

- 6. FUSE
- 7. POWER IN
- 8. POWER OUT
- 9. OMEGA BRACKET



UP	DOWN	LEFT	RIGHT	ENTER
Increase the value display or passes to the previous item in a menu	Decreases the value display or passes to the next item in the menu	Return to the top level	Commute from unites, tens, hundreds in the menu	Confirm the displayed value, or activates the displayed functions, or enter the successive menu

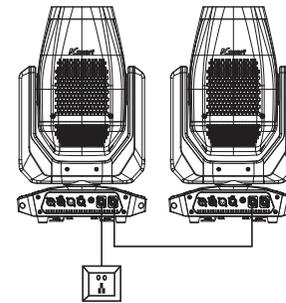
## INSTALLATION



The K Smart may be set up on a solid and even surface. By means of the fixing facilities of the baseplate, the unit can also be mounted upside down to a cross arm. For fixing, stabled mounting clips are required. The bolts of the brackets are placed into the openings provided in the base plate and turned clockwise until they lock (to the stop). Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. The mounting place must be of sufficient stability and be able to support a weight of 10 times of the unit's weight. When carrying out any installation, always comply scrupulously with all the regulations (particularly regarding safety) currently in force in the country in which the fixture's being used. Always additionally secure the projector with the safety rope from falling down. For this purpose, fasten the safety rope at a suitable position so that the maximum fall of the projector will be 20 cm.

## CONNECTIONS

### POWER CONNECTIONS



Power OUT

Using POWER CON In/Out  
Power cable connected in series  
Attention: due to the power rating,  
one 1.5mm<sup>2</sup> power cable can connect 2 units maximum



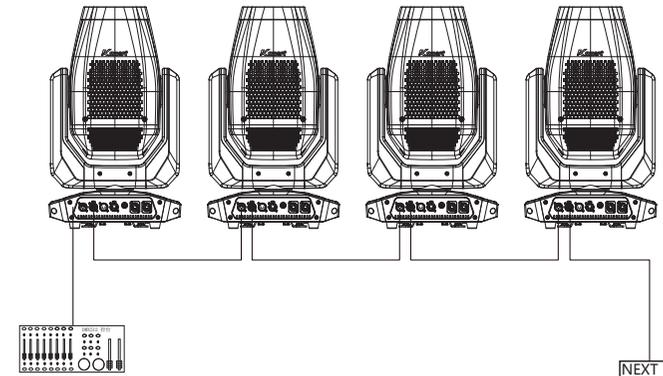
Power IN



WARNING

Do not connect more than 2 units in series with one power cable.  
Do not use damaged power cables  
Turn off the power when the units are not in use.

### DATA CONNECTIONS



Relation between DMX and Address

MODE	ALLOCATION	STARTING ADDRESS 1ST FIXTURE	STARTING ADDRESS 2ND FIXTURE	STARTING ADDRESS 3RD FIXTURE	STARTING ADDRESS 4TH FIXTURE
33CH	001 - 033	001	034	067	100

Follow above method for subsequent fixtures, calculating starting address as indicated.