

***Ksmart***

USER MANUAL



## 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, use 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

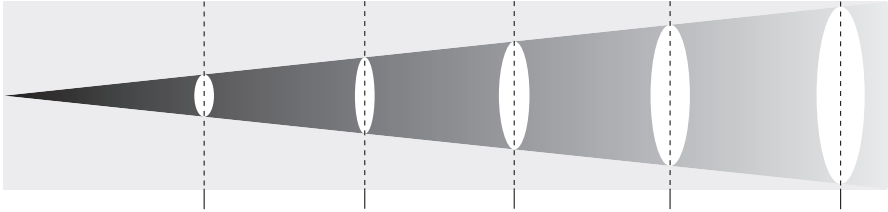
### FEATURES

- 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:	30000hrs
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:	760W/120V; 740W/230V
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

## 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



CRI

Congo Blue

Orange

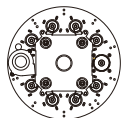
Amber

Deep Green

Blue Brillante

Dark Red

## FRAMING SHUTTER



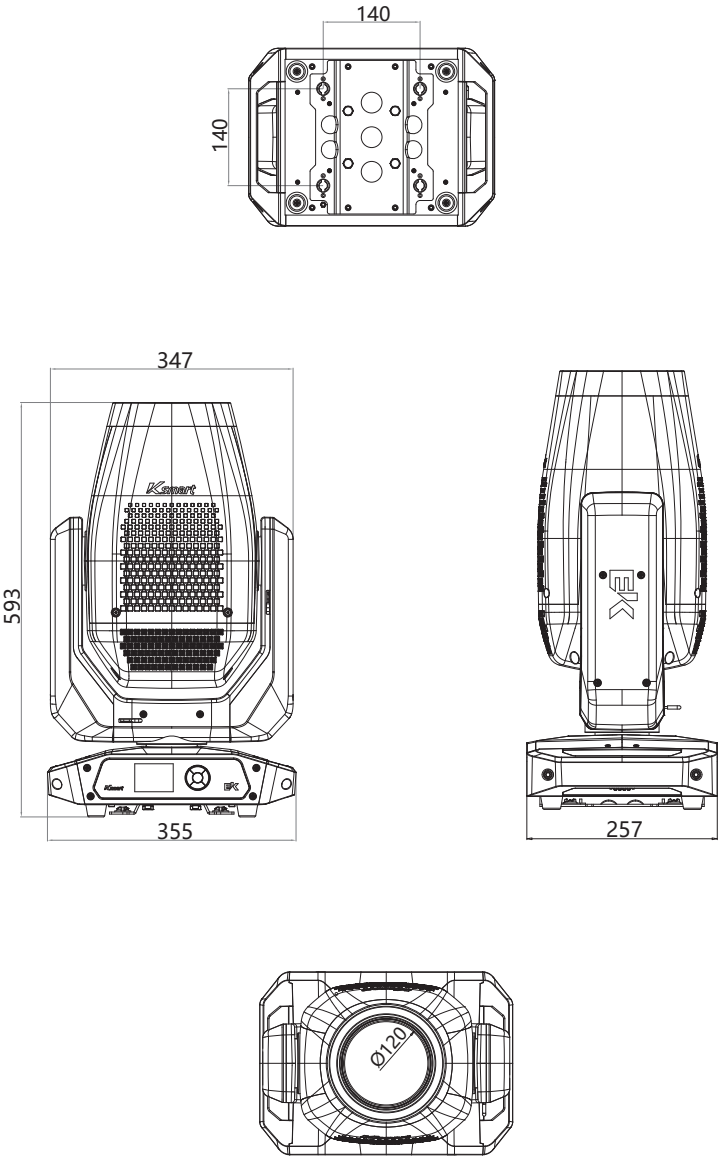
## ANIMATION



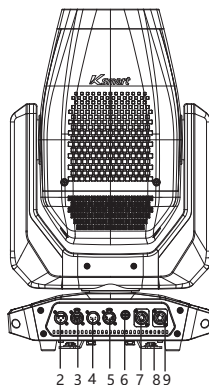
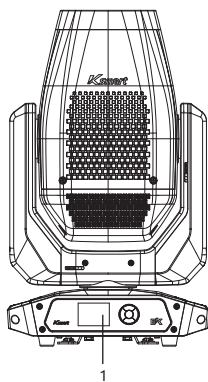
## CMY



DIMENSION



## OVERVIEW



1. CONTROL PANEL

2. 3pin DMX IN

3. 3pin DMX OUT

4. 5pin DMX IN

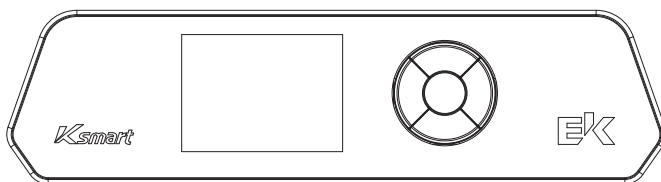
5. 5pin DMX OUT

6. FUSE

7. POWER IN

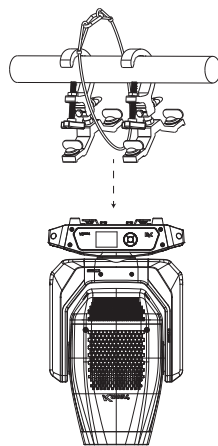
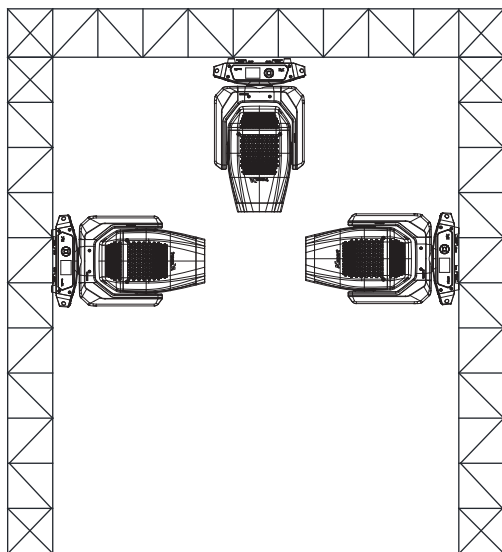
8. POWER OUT

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 activevates the displayed functions, or enter the sucessive menu

## INSTALLATION

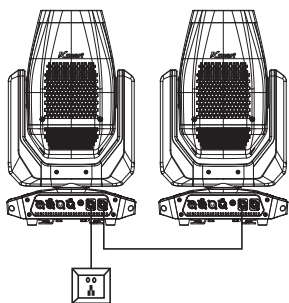


The K Smart may be set up on a solid and even surface. By means of the fixing facilities of the baseplate, the unit can also be mounted upside down to a cross arm. For fixing, stable mounting clips are required. The bolts of the brackets are placed into the openings provided in the base plate and turned 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



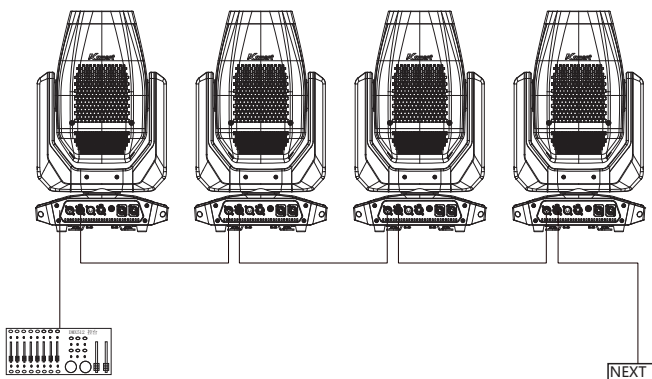
Power IN



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 addressed as indicated.

## 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	
		Linear Square Inverse Square S-Curve			Square		
		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			

## 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		
		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		
		Factory Reset	No		No	
			Yes			

## 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

## 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
		193-255	Slow to Fast(Forward Spin)
14	RGobo	000-191	Positioning from 0-360 degrees(Indexing)
		192-221	Fast to Slow (Forward Spin)
		222-225	Stop
		226-255	Slow to Fast(Revers Spin)
15	Effect	000-003	Open/No Function
		004-127	Fast to Slow (Forward Spin)
		128-131	Stop (Stop Rotation)
		132-255	Slow to Fast(Revers Spin)
16	Prism	000-127	Prism Out
		128-255	Prism into the light beam
17	RPrism	000-127	0 - 540 Position
		128-190	Fast to Slow (Forward 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
		000-127	Sw ivelling from -25 degrees tow ards 0 degrees
		128	0 degrees
28	Framing Shutter 2 sw ivelling	129-255	Sw ivelling from 0 degrees to +25 degrees

## DMX CHART

<b>29</b>	Framing Shutter 3 movent	000-255	Movement from outw ard to inw ard
<b>30</b>	Framing Shutter 3 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
<b>31</b>	Framing Shutter 4 movent	000-255	Movement from outw ard to inw ard
<b>32</b>	Framing Shutter 4 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
<b>33</b>	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

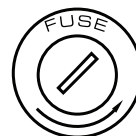
## MAINTENANCE

### 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 light is radiated at maximum brightness.For cleaning,disconnect the main plug from the socket.Use a soft,clear cloth moistened with a mild detergent.Then carefully wipe the party dry. For cleaning other housing parts use only a soft,clear 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 the table can not be resolved by the procedure given in the table.

