SHOWPRO

K SMART PROFILE

MANUAL

LEDMOV440
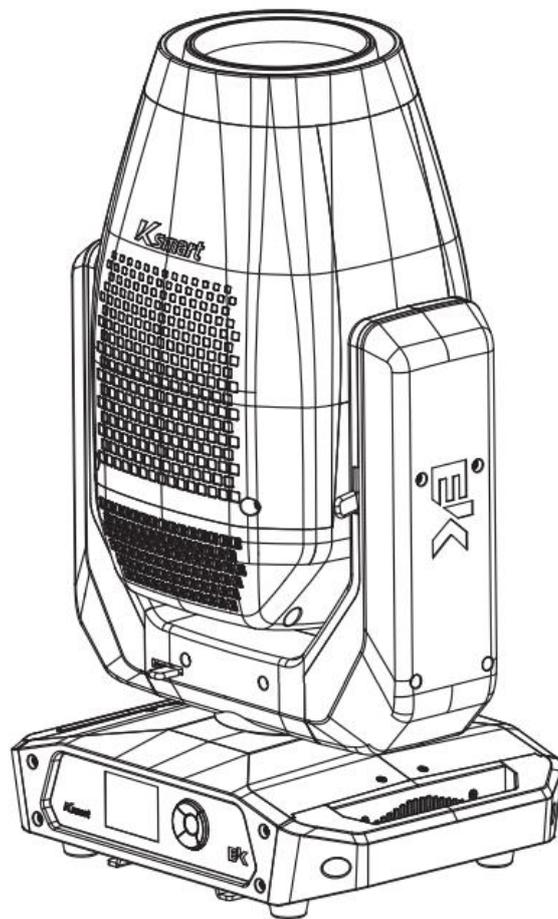
K smart

CONTENTS

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 instructions

- 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 servicing to skilled personnel only. Never make any modifications on the unit not described in this instruction manual, otherwise you risk an electric shock.

- Connection must be made to a power supply system fitted with efficient earthing (Class I appliance according to standard EN60598-1). It is recommended to protect the supply lines of the units from indirect contact and/or shorting 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 mains 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 use for 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 ℃.

- Make certain that no flammable 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 is operated in any way different to the way described in this manual, it may suffer damage and the warranty becomes void. Any unauthorized operation may lead to dangers like short circuit, burns, electric shock, etc.

- Before starting any maintenance work or cleaning the fixture, cut off power from the main supply.

- Always additionally secure the fixture with a safety chain. 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 flammable 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. Note that fast changes in lighting, e.g. flashing lights, 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 output

• Extremely even spot with flawless field consistency

• CMY + CTO for precise control and smooth adjustment on colour 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 + colour 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:	15 leaves 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

PHOTOMETRICS
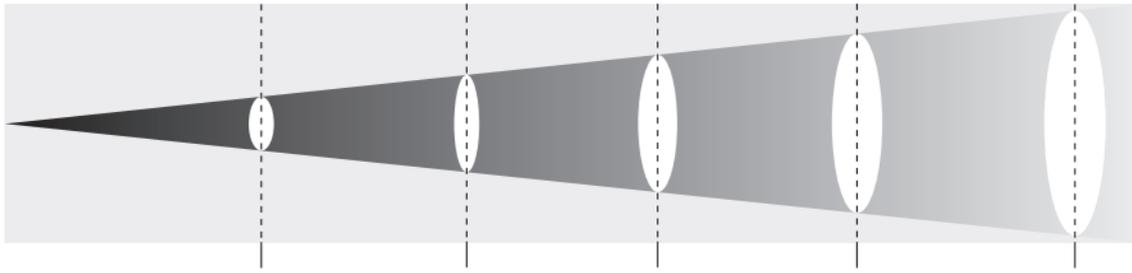
6°	Distance(M)	5	7	10	15	20
	Illuminance(lux)	74300	37908	18575	8255	4643
	Diameter(CM)	52.4	73.3	104	156	208

50°	Distance(M)	1	3	5	7	10
	Illuminance(lux)	47619	5291	1905	972	476
	Diameter(CM)	93	279	466	651	930

GOBOS

COLOURS

| CRI | Congo Blue | Orange | Amber | Deep Green | Blue Brillante | Dark Red |

FRAMING SHUTTER   ANIMATION   CMY

6

DIMENSIONS

140

140

347

593

355

257

Ø120

7
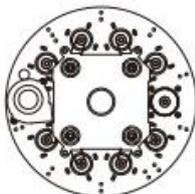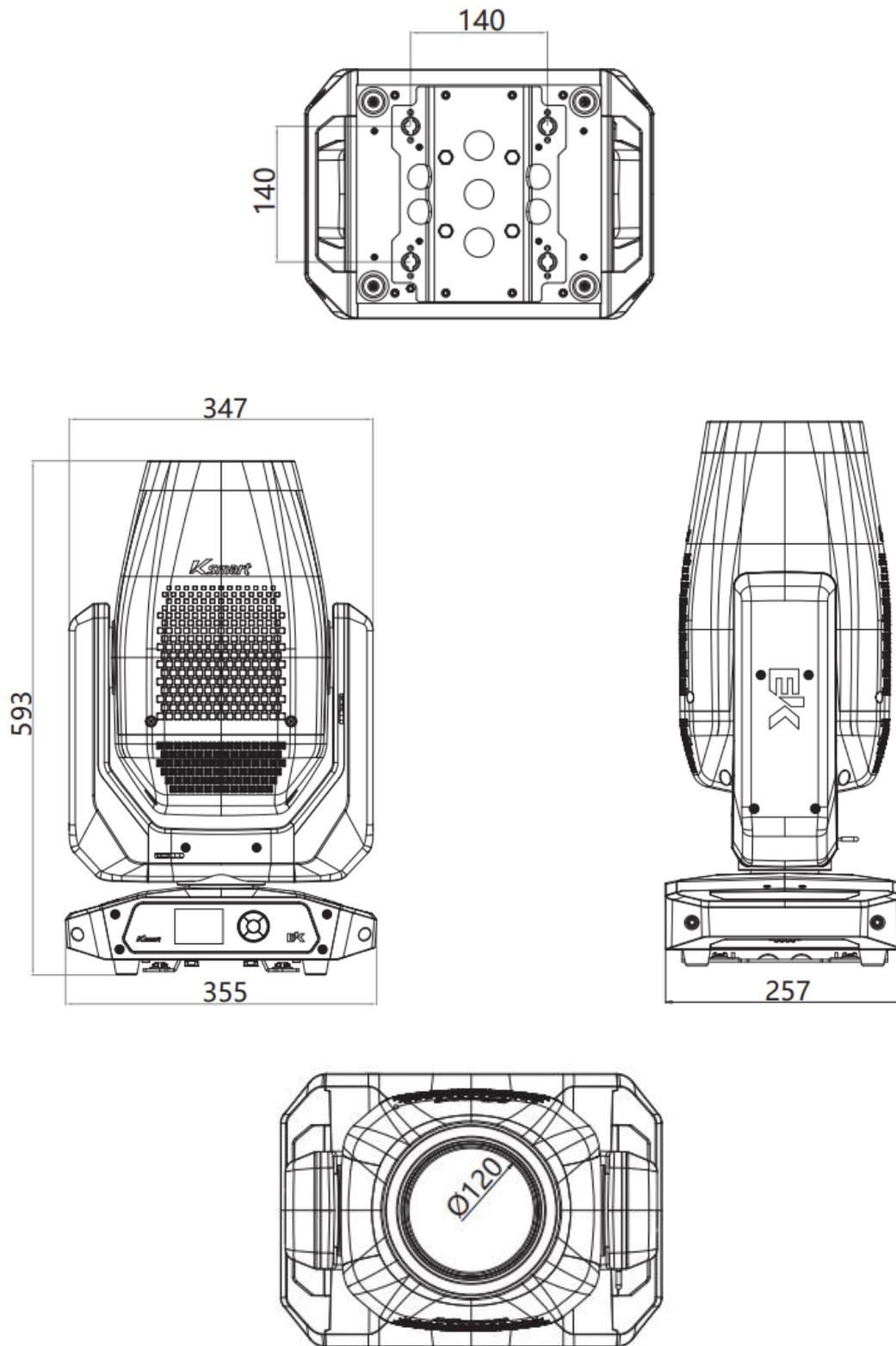
OVERVIEW

Fixture Illustration
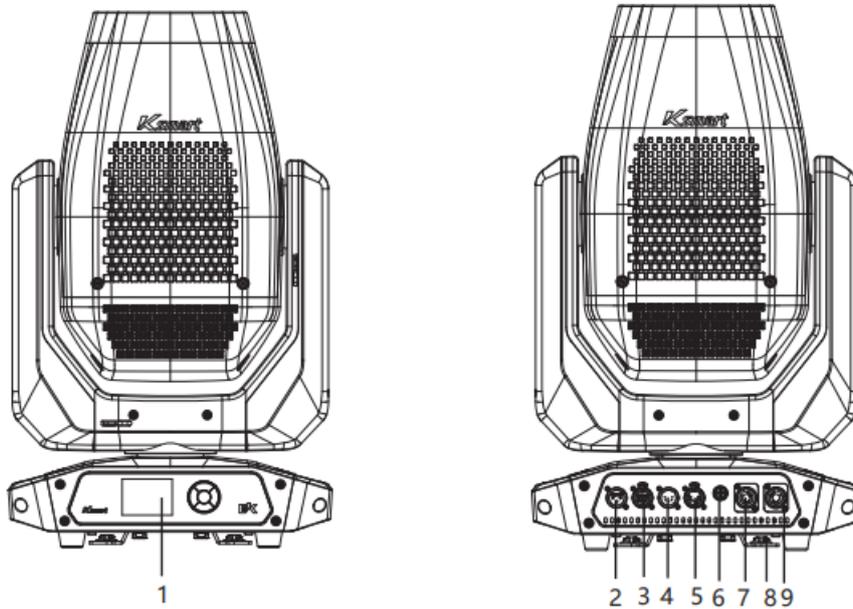
1. Control Panel
2. 3 Pin DMX In
3. 3 Pin DMX Out
4. 5 Pin DMX In
5. 5 Pin DMX Out
6. Fuse
7. PowerCon In
8. PowerCon Out
9. Omega Bracket

Control Panel
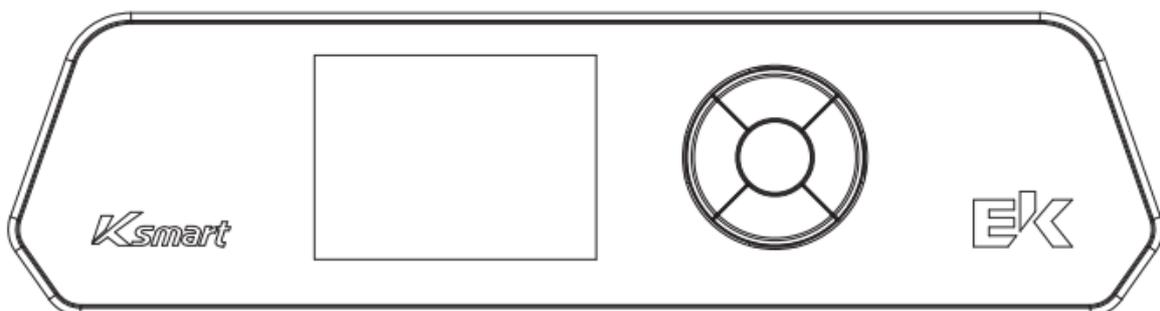
UP:	Increase value or previous menu item
DOWN:	Decrease value or next menu item
LEFT:	Return to top level menu
RIGHT:	Select units, tens, hundreds
ENTER:	Confirm, step through menu, activate display

INSTALLATION
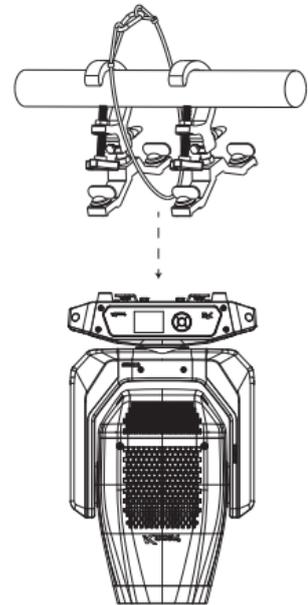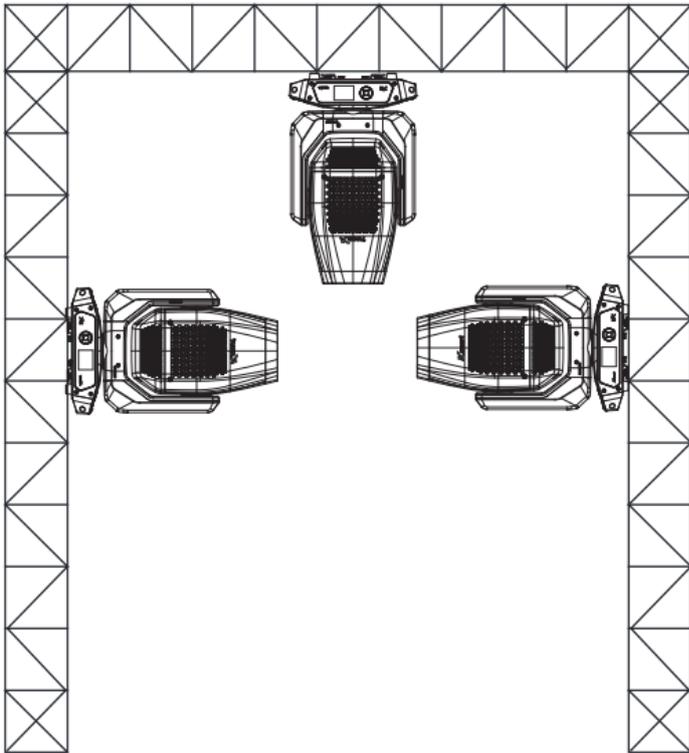
The K Smart must be set up on a solid and even surface.

By means of the brackets on the baseplate, the unit can also be mounted upside down to a cross arm. For mounting, strong, stable clamps are required.

The bolts of the brackets are placed into the openings provided in the base plate and turned clockwise until they lock.

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 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 is being used.

Always additionally secure the fixture with a safety chain. For this purpose, fasten the safety chain in a suitable position so that the maximum fall of the fixture will be 20 cm.

CONNECTION

Power Connection
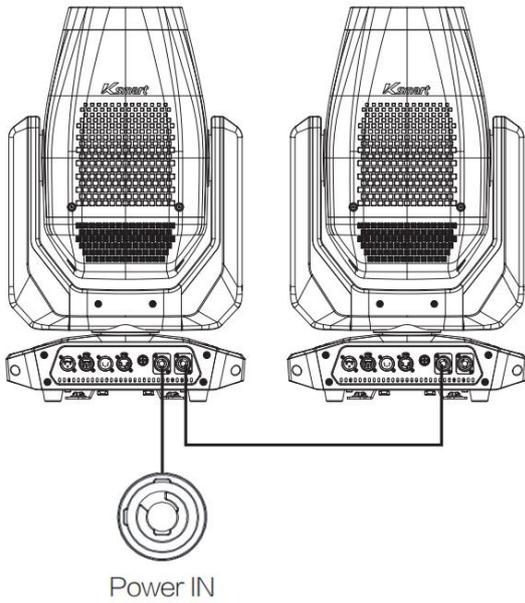
Using PowerCon In/Out. Power cables connected in series.

Attention: due to power rating, one 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 with damaged power cable.

Power off the fixture when not in use.

DMX Connection

NEXT
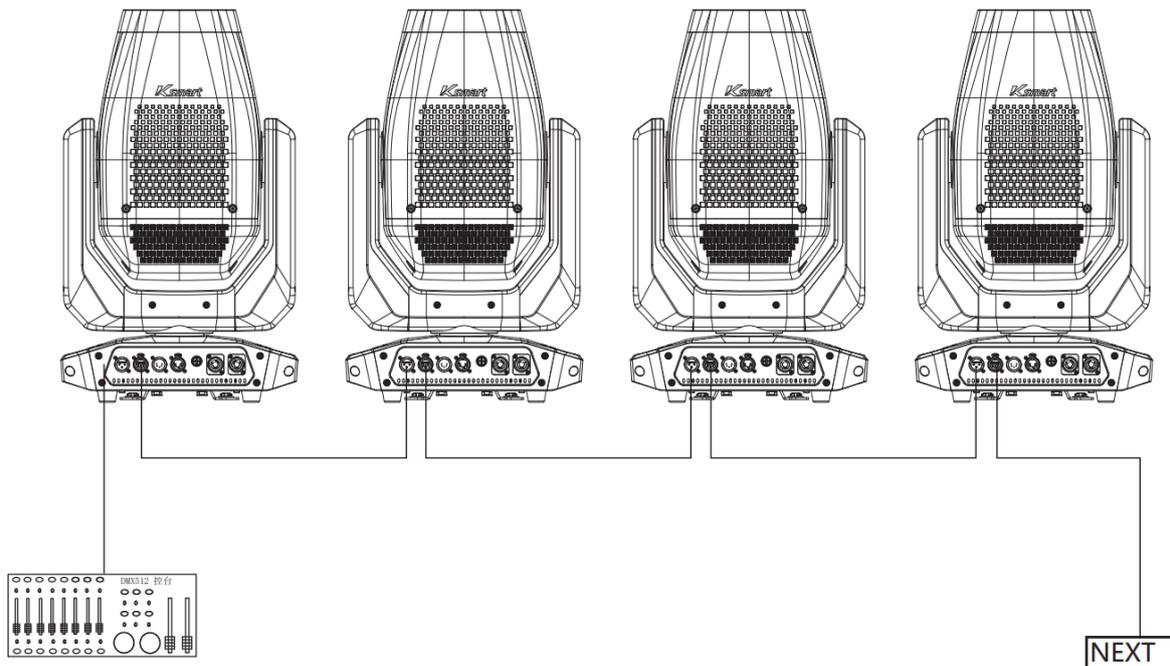
DMX Connection

- Depending on the length of the DMX cable run, or other factors, it may be advisable to install a terminator at the last fixture in the run.
- The illustration below shows the correct placement of a 120Ω 0.25W resistor in a terminator, as well as the standard DMX signal pin connections
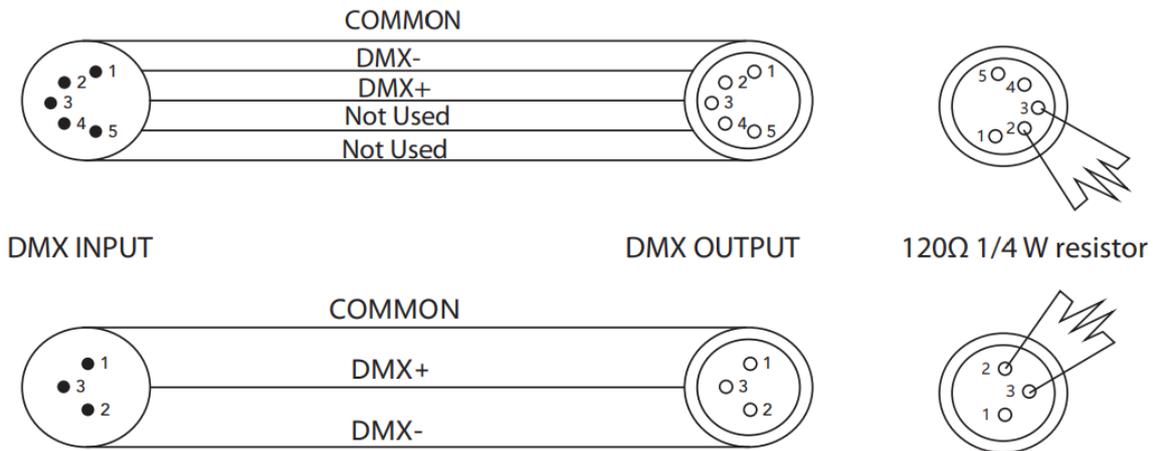
Example of DMX Addressing

The below table shows an example of starting addresses for four fixtures assuming a first fixture with starting address of 001.

The actual starting addresses will be determined by the operator as needed to match external controller settings.

MODE	ALLOCATION	ADDRESS 1st Fixture	ADDRESS 2nd Fixture	ADDRESS 3rd Fixture	ADDRESS 4th Fixture
33CH	001 – 033	001	034	067	100

Follow above method for subsequent fixtures, calculating addresses as indicated.

MENU

NO.	Main Menu	Menu Level 1	Menu Level 2	Menu Level 3	Default
1	CONNECT	DMX Address	1-480		1
2	OPTION	Movement Setting	Pan Invert	Off	Off
				On	
			Tilt Inert	Off	Off
				On	
			Encoder Pan/Tilt	Off	On
				On	
		Display Setting	Warn Cue	Off	On
				On	
			Backlight	Off	Off
				On	
			Display Reverse	Off	Off
				On	
				Auto	
			Key Lock	Off	Off
				On	
			Temperature	°C	°C
				°F	
		Dimmer Setting	Dimmer Mode	Off	Off
				Dimmer 1	
				Dimmer 2	
				Dimmer 3	
			Dimmer Curve	Linear	Square
				Square	
				Inverse Square	
				S-Curve	
		Fixture Setting	Fan Mode	Auto	Auto
				Silent	
		Reset Setting	All	No	No
				Yes	
			Pan/Tilt	No	No
				Yes	
			Head	No	No
				Yes	
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*****		
4	TEST	Channel	1.Pan	0 – 255	
			2.Pan Fine	0 – 255	
			3.Tilt	0 – 255	
			4.Tilt Fine	0 – 255	
			5.Strobe	0 – 255	
			6.Dimmer	0 – 255	
			7.Dimmer Fine	0 – 255	
			8.Cyan	0 – 255	
			9.Magenta	0 – 255	
			10.Yellow	0 – 255	
			11.CTO	0 – 255	
			12.Colour	0 – 255	
			13.Gobo	0 – 255	
			14.RGobo	0 – 255	
			15.Prism	0 – 255	
			16.RPrism	0 – 255	
			17.Frost	0 – 255	
			18.Focus	0 – 255	
			19.Focus Fine	0 – 255	
			20.Zoom	0 – 255	
			21.Zoom Fine	0 – 255	
			22.Effect	0 – 255	
			23.Iris	0 – 255	
			24.Shutters Rot.	0 – 255	
			25.Fr. Shutter 1 Move	0 – 255	
			26.Fr. Shutter 1 Swiv.	0 – 255	
			27.Fr. Shutter 2 Move	0 – 255	
			28.Fr. Shutter 2 Swiv.	0 – 255	
			29.Fr. Shutter 3 Move	0 – 255	
			30.Fr. Shutter 3 Swiv.	0 – 255	
			31.Fr. Shutter 4 Move	0 – 255	

NO.	Main Menu	Menu Level 1	Menu Level 2	Menu Level 3	Default
4	TEST	Channel	32.Fr. Shutter 4 Swiv.	0 – 255	
			33.Function	0 – 255	
		Auto	Pan/Tilt		
			Colour		
			Beam		
			Gobo		
			Shutter		
			All		
5	ADVANCED (Code:050)	Calibration	Pan	0 – 255	
			Tilt	0 – 255	
			Cyan	0 – 255	
			Magenta	0 – 255	
			Yellow	0 – 255	
			CTO	0 – 255	
			Gobo	0 – 255	
			RGobo	0 – 255	
			Prism	0 – 255	
			RPrism	0 – 255	
			Frost	0 – 255	
			Focus	0 – 255	
			Zoom	0 – 255	
			Effect	0 – 255	
			Iris	0 – 255	
			Fr. Shutters Rot.	0 – 255	
			Fr. Shutter 1 M1	0 – 255	
			Fr. Shutter 1 M2	0 – 255	
			Fr. Shutter 2 M1	0 – 255	
			Fr. Shutter 2 M2	0 – 255	
			Fr. Shutter 3 M1	0 – 255	
			Fr. Shutter 3 M2	0 – 255	
			Fr. Shutter 4 M1	0 – 255	
			Fr. Shutter 4 M2	0 – 255	
		Factory Reset	No		No
			Yes		

DMX CHART

33CH	Function	Value	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 Closed)
		011 – 082	Shutter Effect Slow to Fast
		083 – 093	No Function (Shutter Open)
		094 – 163	Pulse Effect in Sequence
		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	Cyan 0% - 100%
9	Magenta	000 – 255	Magenta 0% - 100%
10	Yellow	000 – 255	Yellow 0% - 100%
11	CTO	000 – 255	
12	Colour	000 – 007	Open
		008 – 015	Open + Colour 1
		016 – 023	Colour 1
		024 – 031	Colour 1 + Colour 2
		032 – 039	Colour 2
		040 – 047	Colour 2 + Colour 3
		048 – 055	Colour 3
		056 – 063	Colour 3 + Colour 4
		064 – 071	Colour 4
		072 – 079	Colour 4 + Colour 5
		080 – 087	Colour 5
		088 – 095	Colour 5 + Colour 6
		096 – 103	Colour 6
		104 – 111	Colour 6 + Colour 7 (CRI>90)
		112 – 119	Colour 7 (CRI>90)
		120 – 127	Colour 7 (CRI>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	Open
		004 – 007	Gobo 1
		008 – 011	Gobo 2
		012 – 015	Gobo 3
		016 – 019	Gobo 4
		020 – 023	Gobo 5
		024 – 027	Gobo 6
		028 – 031	Gobo 7
		032 – 045	Gobo 1 Shaking Slow to Fast
		046 – 059	Gobo 2 Shaking Slow to Fast
		060 – 073	Gobo 3 Shaking Slow to Fast
		074 – 087	Gobo 4 Shaking Slow to Fast
		088 – 101	Gobo 5 Shaking Slow to Fast
		102 – 114	Gobo 6 Shaking Slow to Fast
		115 – 127	Gobo 7 Shaking Slow to Fast
		128 – 190	Fast to Slow (Reverse Spin)
		191 – 192	Stop
		193 – 255	Slow to Fast (Forward Spin)
14	RGobo	000 – 191	Positioning from 0 – 360° (Indexing)
		192 – 221	Fast to Slow (Forward Spin)
		222 – 225	Stop
		226 – 255	Slow to Fast (Reverse 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 (Reverse Spin)
16	Prism	000 – 127	Prism Out
		128 – 255	Insert Prism
17	RPrism	000 – 127	Positioning from 0 – 540° (Indexing)
		128 – 190	Fast to Slow (Forward Spin)
		191 – 192	Stop
		193 – 255	Slow to Fast (Reverse Spin)
18	Frost	000 – 255	Insert Frost, Linear
19	Focus	000 – 255	Focus Coarse
20	Focus Fine	000 – 255	Focus Fine
21	Zoom	000 – 255	Zoom Coarse
22	Zoom Fine	000 – 255	Zoom Fine

33CH	Function	Value	Setting
23	Iris	000 – 063	From Large to Small
		064 – 127	Rapid Open/Close Slow to Fast
		128 – 191	Rapid Open Slow to Fast
		192 – 255	Rapid Close Slow to Fast
24	Framing Shutters Rotation	000 – 127	Rotation from Left to Centre
		128	Centre
		129 – 255	Rotation from Centre to Right
25	Framing Shutter 1 Movement	000 – 255	Movement outward to inward
26	Framing Shutter 1 Swivel	000 – 127	Swivel from -25° to 0°
		128	0°
		129 – 255	Swivel from 0° to 25°
27	Framing Shutter 2 Movement	000 – 255	Movement outward to inward
28	Framing Shutter 2 Swivel	000 – 127	Swivel from -25° to 0°
		128	0°
		129 – 255	Swivel from 0° to 25°
29	Framing Shutter 3 Movement	000 – 255	Movement outward to inward
30	Framing Shutter 3 Swivel	000 – 127	Swivel from -25° to 0°
		128	0°
		129 – 255	Swivel from 0° to 25°
31	Framing Shutter 4 Movement	000 – 255	Movement outward to inward
32	Framing Shutter 4 Swivel	000 – 127	Swivel from -25° to 0°
		128	0°
		129 – 255	Swivel from 0° to 25°
33	Function	000 – 020	TBD
		021 – 025	Dimmer Speed Off
		026 – 030	Dimmer speed Mode 1
		031 – 035	Dimmer speed Mode 2
		036 – 040	Dimmer Speed Mode 3
		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 there are no persons standing below the unit when taking down/setting up.

- Switch off the unit, unplug the main cable and wait till 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, fixings and installation spots (celling, trusses, suspensions) should be totally free from any deformation.

 - The main cables must be in impeccable condition and should be replaced immediately when even 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 operates 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 parts dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate 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

Problem	Possible Causes	Checks and Remedies
Fixture does not light up	- No mains supply - Dimmer fader set to 0 - Faulty LED - Faulty LED board	- Check the power supply voltage - Increase value of the dimmer channels - Replace the LED board
General low light intensity	- Dirty lens assembly - Misaligned LED assembly	- Clean the fixture regularly - Install lens assemble properly
Fixture does not power up	- No power - Loose of damaged power cord - Faulty internal power supply	- Check for power on power outlet - Check power cord - Replace internal power supply

Contact an authorized service centre in case of technical problems, issues not reported in the above table, or problems that cannot be resolved by the procedure given in the table.