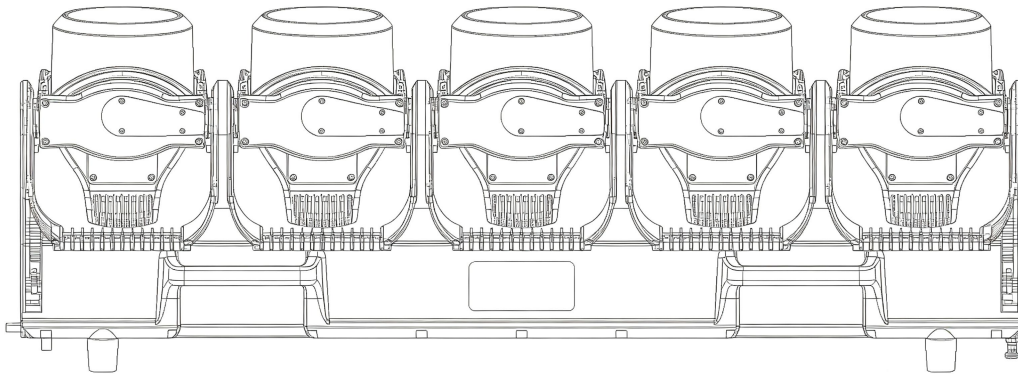


# TORNADO IP



## USER MANUAL

**KEEP THIS USER MANUAL FOR FUTURE NEEDS**



Thank you for your patronage!

We are confident that our excellent products and service can satisfy you.

For your own safety, please read this user manual carefully before installing the device.

In order to install, operate, and maintain the lighting safety correctly.

We suggest that the installation and operation should be done by the verified technician and follow the instruction strictly.



**CAUTION!**

Keep this device away from rain and moisture!



**CAUTION!**

Unplug mains lead before device's installation, cleaning and maintenance!

Every person involved with the installation, operation and maintenance of device has to:

-be qualified

-follow carefully the instructions of this manual

## **INTRODUCTION**

Thank you for having chosen this professional moving head.

You will see you have acquired a powerful and versatile device.

Unpack the device. Inside the carton box you should find:

1. One power in cable
2. One 3 Pin DMX cable(5 Pin optional)
3. Folding Clamps
4. One safety rope
5. One English user manual

(Flight case is optional, please contact your dealer)

Please check carefully that there is no damage caused by transportation. Should there be any questions, please consult your dealer and don't install this device.

## **GENERAL GUIDELINES**

This device is a lighting effect for a professional use on stages, TV, in discotheques, theaters, etc., The device was designed for indoor use only.

This fixture is only allowed to be operated with the max alternating current which stated in the technical specifications in 6<sup>th</sup> page of this manual.

Lighting effects are not designed for permanent operation. Consistent operation breaks may ensure that the device will serve you for a long time without defects.

Do not shake the device. Avoid brute force when installing or operating the device.

While choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. Please don't project the beam onto combustible substances. The minimum distance between light-output from the projector and the illuminated surface must be more than 0,5 meter.

If you use the quick lock cam in hanging up the fixture, please make sure the quick lock

fasteners turned in the quick lock holes correctly.

Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation.

Please use the original packaging if the device is to be transported.

For safety reasons, please be aware that all modifications on the device are forbidden. If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to short-circuit, burns, electric shock, crash, etc.

## SAFETY INSTRUCTIONS



### CAUTION!

Be careful with your operations. With a dangerous voltage you can suffer a dangerous electric shock when touching wires!

This device has left the factory in perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

1. In order to guarantee the product's life, please don't put it in the damp places or even the environment over 60degrees.
2. Always mount this unit in safe and stable matter.

The qualified professionals are allowed to carry out the lamp installation, operation and maintenance, but they must guarantee to operate in strict accordance with the instructions referred to.

#### ▲ Important:

**Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.**

If the device has been exposed to temperature changes due to environmental changes, do not switch it on immediately. The arising condensation could damage the device. Leave the device switched off until it has reached room temperatures.

This device falls under protection-class I. Therefore it is essential that the device be earthed.

The electric connection must carry out by qualified person.

Make sure the power cord is never crimped or damaged by sharp edges. If this would be the case, replacement of the cable must be done by an authorized dealer.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power cord by the plug. Never pull out the plug by tugging the power cord. During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, it should decrease gradually.

Please don't project the beam onto combustible substances.

If the external flexible cable or cord of this luminaire is damaged, it shall be exclusively replaced by the manufacturer or his service agent or a similar qualified person in order to avoid a hazard.



**CAUTION!**

Never touch the device during operation!  
The housing may heat up!



**CAUTION!**

Never look directly into the light source,  
As sensitive persons may suffer an epileptic shock.

**Please be aware that damages caused by manual modifications to be the device are not subject to warranty. Keep away from children and non-professionals.**

## **CLEANING AND MAINTENANCE**

1. To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.
2. Do not spill water or other liquids into or on to your unit.
3. During long periods of non-use, disconnect the unit's main power.
4. It should be installed in a well-ventilated place, at a distance of 50 centimeters or more with the walls. At the same time, please check if the fan and ventilation holes are unobstructed.

The following points have to be considered during the inspection

- 1) All screws for installing the devices or parts of the device have to be tightly connected and must not be corroded.
- 2) There must not be any deformations on the housing. Fixations and installations spots(ceiling, suspension, trussing).
- 3) Mechanically moved parts must not show any traces of wearing and must not rotate with unbalances.
- 4) The electric power supply cables must not show any damage, material fatigue or sediments. Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.



**CAUTION!**

Disconnect from mains before starting maintenance operation!

In order to make the lights in good condition and extend the life time, we suggest a regular cleaning to the lights.

- 1) Clean the inside and outside lens each week to avoid the weakness of the lights due to accumulation of dust.
- 2) Clean the fan each week.
- 3) A detailed electric check by approved electrical engineer each three month, make sure that the circuit contacts are in good condition, prevent the poor contact of circuit from overheating.

We recommend a frequent cleaning of the device.

Please use a moist, lint-free cloth. Never use alcohol or solvents !

# TECHNICAL PARAMETERS

## LIGHT SOURCE & OPTIC

Light source: 5x120W RGBWL LED + 120x0.5W RGB LED

Beam angle: 3°-30°

Filed Angle:4°-35°

## EFFECTS

5 individual heads

Each head has one led ring(24 leds)that can be individuallycontrolled

Choice offour dimming curves

Variable color temperature control

Outstanding color mixing

Motorized zoom

Strobe: 0-100% strobe

Dimming: 0-100% smooth dimming

## CONTROL & PROGRAM

LCD Display

4 touch buttons

Control: DMX512/RDM optional Artnet/CRMX

DMX Channel: 21CH/41CH/71CH/75CH/85CH/170CH

## POWER SUPPLY

Input voltage: AC100-240V 50/60Hz

Consumed Power: 800W

Power connectors: Seetronic PowerCon True1 IN/OUT

DMX connectors: Seetronic 3-Pin XLR IN/OUT Optional 5Pin

## MOVEMENT

Pan: 59 degrees

Tilt: 221 degrees

P/T position: Auto correction

P/T: 16bit scanning

## WEIGHT & SIZE

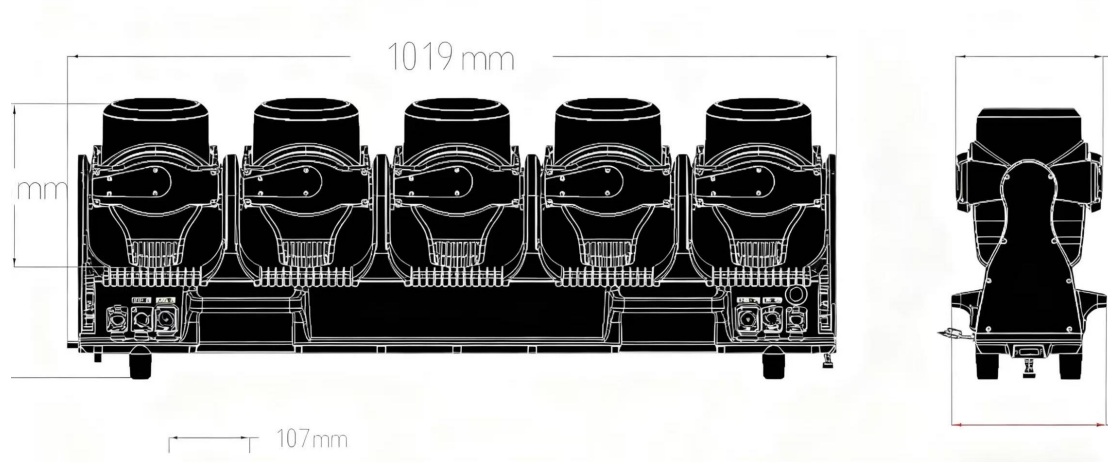
NW: 30kg(Not including clamps)

Carton box 1in1:1140\*470\*320mm/35KG

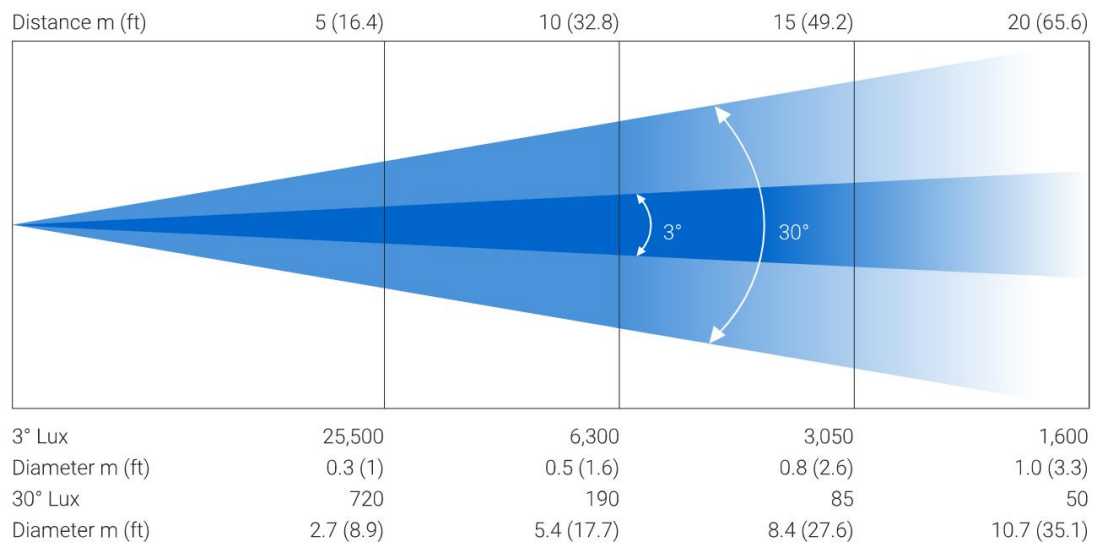
Flight case 2in1:1200\*450\*620mm/87KG

Fixture size: 1019\*206\*396mm(L\*W\*H)

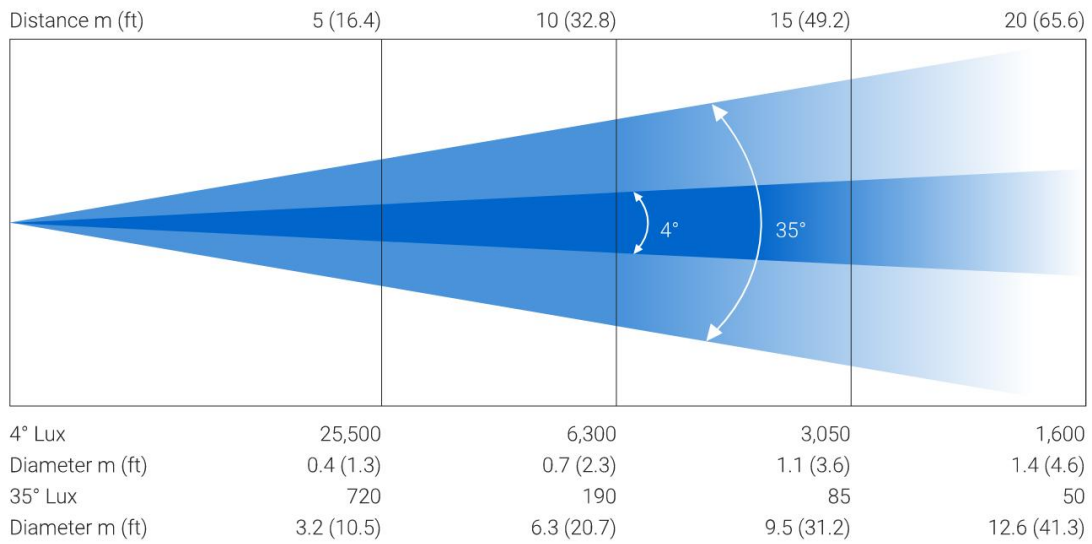
## PHOTOMEREICS DIAGRAM



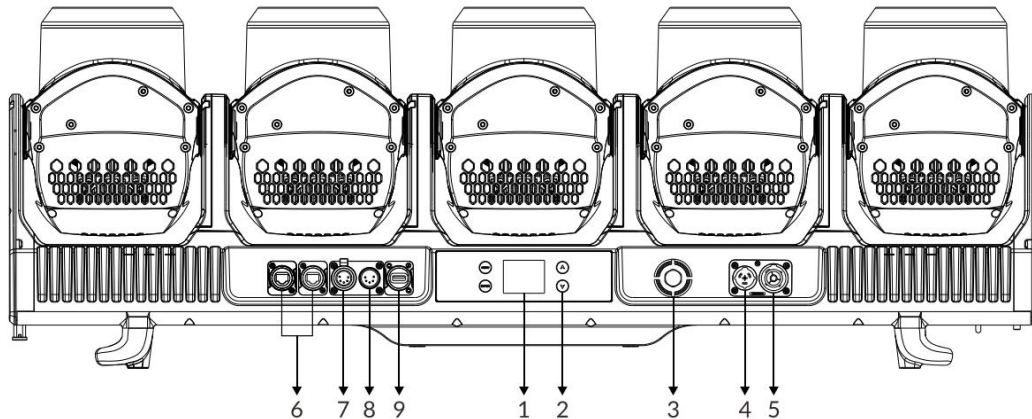
## Photometric Diagram (Beam Angle):



## Photometric Diagram (Field Angle):



## Overview



1. Display - To show the various menus and the selected function

2. Buttons

MENU - To enter into, move backward or leave the menu

UP - To go backward or move up in the menu

DOWN - To go forward or move down in the menu

ENTER - To go forward or move down in the menu

3.RELEASE VALVE

4.POWER IN - To connect to supply power

5.POWER OUT - To connect to the next fixture

6.ETHERNET - For use with sACN or Art-Net controls

7.DMX OUT - For DMX512 link, use 5-pin XLR cable to link the next units to output DMX signal (optional with 3-pin IP XLR)

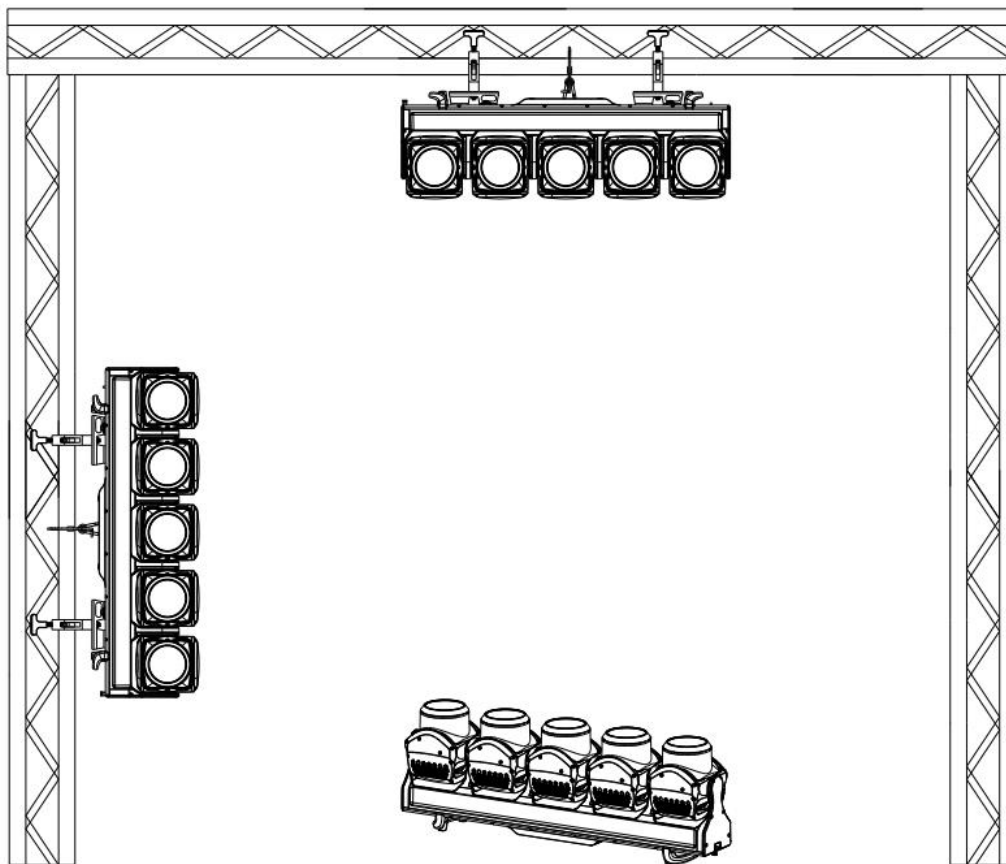
8.DMX IN - For DMX512 link, use 5-pin XLR cable to link the unit and DMX controller to input DMX signal (optional with 3-pin IP XLR)

9.FIRMWAREUPGRADE - Used to upgrade fixture's firmwar

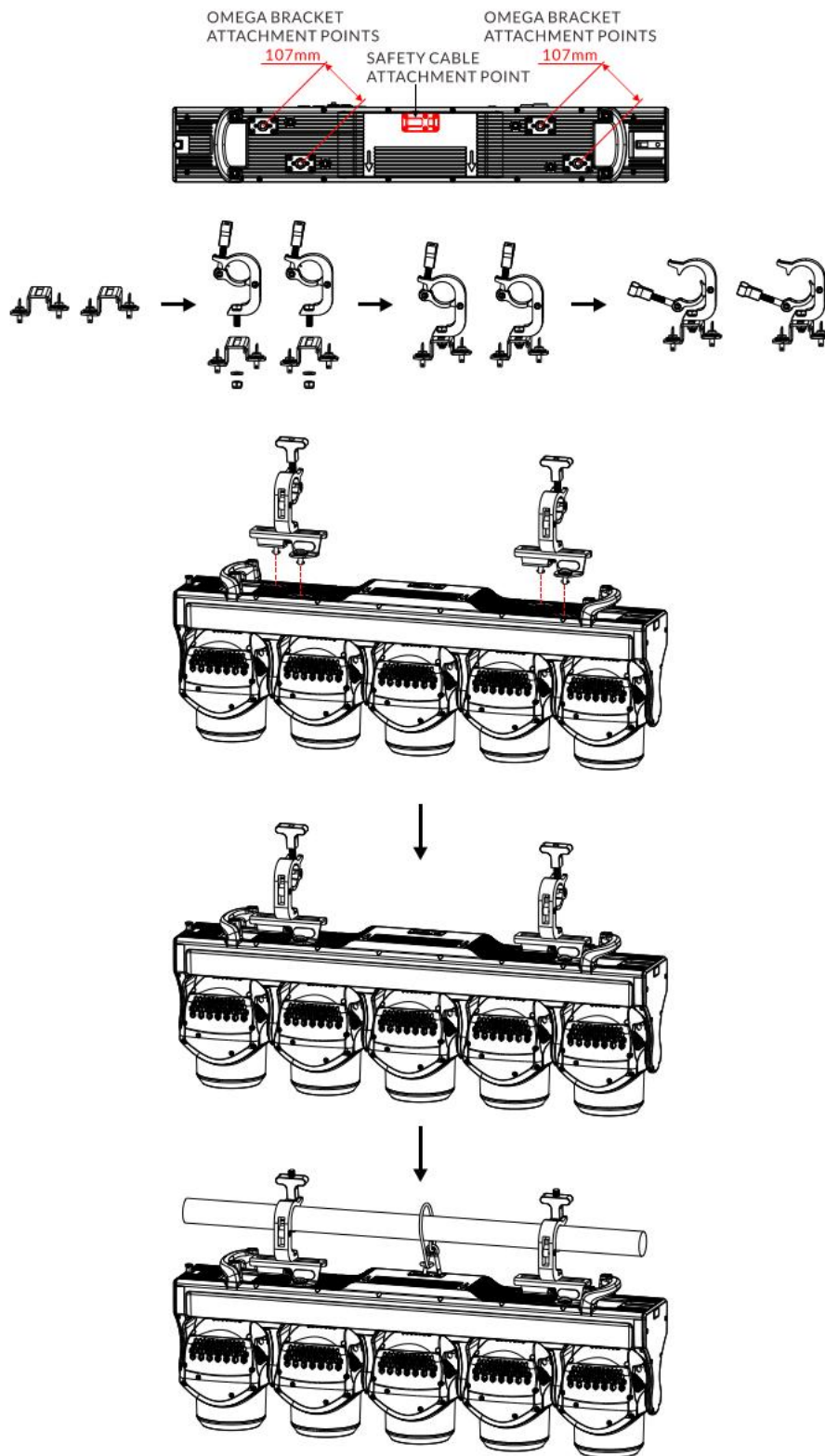
## Fixture installation

DO install and operate by qualified operator. Fixture(s) should be installed in areas outside walking paths, seating areas, or away from areas where unauthorized personnel might reach the fixture by hand. NEVER stand directly below the fixture(s) when rigging, removing or servicing.

Always ensure that the unit is firmly fixed to avoid vibration and slipping off during operation. Ensure that the trussing or area of installation must be able to hold 10 times the weight without any deformation. Always attach a safety cable (made of steel, min. diameter 4.0mm) that can hold at least 12 times the weight of the fixture whenever installing this fixture in an suspended environment to ensure that the fixture will not fall if the clamp fails. This fixture is fully operational in three different mounting positions: hanging upside-down, mounted sideways on truss, or base positioned on floor. Always use and install a safety cable as a safety measure to prevent accidental damage and/or injury in the event the clamp fails.



## **Hanging the Fixture**



<b>CHANNEL</b>	<b>VALUE</b>	<b>FUNCTION</b>
<b>1</b>	<b>000-255</b>	<b>PAN</b> <b>0°→59°</b>
<b>2</b>	<b>000-255</b>	<b>PAN 1 FINE</b>
<b>3</b>	<b>000-255</b>	<b>TILT</b> <b>0°→221°</b>
<b>4</b>	<b>000-255</b>	<b>TILT 1 FINE</b>
<b>5</b>	<b>000-255</b>	<b>ZOOM 1</b> <b>Wide→Narrow</b>
<b>6</b>	<b>000-255</b>	<b>RED</b> <b>0%→100%</b>
<b>7</b>	<b>000-255</b>	<b>GREEN</b> <b>0%→100%</b>
<b>8</b>	<b>000-255</b>	<b>BLUE</b> <b>0%→100%</b>
<b>9</b>	<b>000-255</b>	<b>LED LIME</b> <b>0%→100%</b>
<b>10</b>	<b>000</b> <b>001-004</b> <b>005-009</b> <b>010-013</b> <b>014-018</b> <b>019-022</b> <b>023-027</b> <b>028-031</b> <b>032-036</b> <b>037-040</b> <b>041-045</b> <b>046-049</b> <b>050-054</b>	<b>LED CCT</b> <b>Null</b> <b>8000K</b> <b>7900K</b> <b>7800K</b> <b>7700K</b> <b>7600K</b> <b>7500K</b> <b>7400K</b> <b>7300K</b> <b>7200K</b> <b>7100K</b> <b>7000K</b> <b>6900K</b>

<b>055-058</b>	<b>6800K</b>
<b>059-063</b>	<b>6700K</b>
<b>064-067</b>	<b>6600K</b>
<b>068-072</b>	<b>6500K</b>
<b>073-076</b>	<b>6400K</b>
<b>077-081</b>	<b>6300K</b>
<b>082-085</b>	<b>6200K</b>
<b>086-090</b>	<b>6100K</b>
<b>091-094</b>	<b>6000K</b>
<b>095-099</b>	<b>5900K</b>
<b>100-103</b>	<b>5800K</b>
<b>104-108</b>	<b>5700K</b>
<b>109-112</b>	<b>5600K</b>
<b>113-117</b>	<b>5500K</b>
<b>118-121</b>	<b>5400K</b>
<b>122-126</b>	<b>5300K</b>
<b>127-130</b>	<b>5200K</b>
<b>131-135</b>	<b>5100K</b>
<b>136-139</b>	<b>5000K</b>
<b>140-144</b>	<b>4900K</b>
<b>145-148</b>	<b>4800K</b>
<b>149-153</b>	<b>4700K</b>
<b>154-157</b>	<b>4600K</b>
<b>158-162</b>	<b>4500K</b>
<b>163-166</b>	<b>4400K</b>
<b>167-171</b>	<b>4300K</b>
<b>172-175</b>	<b>4200K</b>
<b>176-180</b>	<b>4100K</b>
<b>181-184</b>	<b>4000K</b>
<b>185-189</b>	<b>3900K</b>
<b>190-193</b>	<b>3800K</b>
<b>194-198</b>	<b>3700K</b>
<b>199-202</b>	<b>3600K</b>
<b>203-207</b>	<b>3500K</b>
<b>208-211</b>	<b>3400K</b>
<b>212-216</b>	<b>3300K</b>
<b>217-220</b>	<b>3200K</b>
<b>221-225</b>	<b>3100K</b>

	<b>226-229</b>	<b>3000K</b>
	<b>230-234</b>	<b>2900K</b>
	<b>235-238</b>	<b>2800K</b>
	<b>239-243</b>	<b>2700K</b>
	<b>244-247</b>	<b>2600K</b>
	<b>248-255</b>	<b>2500K</b>
		<b>LED COLOR</b>
	<b>000-009</b>	<b>Null</b>
	<b>010-016</b>	<b>LEE 790 – Moroccan Pink</b>
	<b>017-023</b>	<b>LEE 157 – Pink</b>
	<b>024-030</b>	<b>LEE 332 – Special Rose Pink</b>
	<b>031-037</b>	<b>LEE 328 – Follies Pink</b>
	<b>038-044</b>	<b>LEE 345 – Fuchsia Pink</b>
	<b>045-051</b>	<b>LEE 194 – Surprise Pink</b>
	<b>052-058</b>	<b>LEE 181 – Congo Blue</b>
	<b>059-065</b>	<b>LEE 071 – Tokyo Blue</b>
	<b>066-072</b>	<b>LEE 120 – Deep Blue</b>
	<b>073-079</b>	<b>LEE 079 – Just Blue</b>
	<b>080-086</b>	<b>LEE 132 – Medium Blue</b>
	<b>087-093</b>	<b>LEE 200 – Double CT Blue</b>
	<b>094-100</b>	<b>LEE 161 – State Blue</b>
	<b>101-107</b>	<b>LEE 201 – Full CT Blue</b>
	<b>108-114</b>	<b>LEE 202 – Half CT Blue</b>
	<b>115-121</b>	<b>LEE 117 – Steel Blue</b>
	<b>122-128</b>	<b>LEE 353 – Lighter Blue</b>
	<b>129-135</b>	<b>LEE 118 – Light Blue</b>
	<b>136-142</b>	<b>LEE 116 – Medium Blue Green</b>
	<b>143-149</b>	<b>LEE 124 – Dark Green</b>
	<b>150-156</b>	<b>LEE 139 – Primary Green</b>
	<b>157-163</b>	<b>LEE 089 – Moss Green</b>
	<b>164-170</b>	<b>LEE 122 – Fern Green</b>
	<b>171-177</b>	<b>LEE 738 – JAS Green</b>
	<b>178-184</b>	<b>LEE 088 – Lime Green</b>
	<b>185-191</b>	<b>LEE 100 – Spring Yellow</b>
	<b>192-198</b>	<b>LEE 104 – Deep Amber</b>
	<b>199-205</b>	<b>LEE 179 – Chrome Orange</b>
	<b>206-212</b>	<b>LEE 105 – Orange</b>
	<b>213-219</b>	<b>LEE 021 – Gold Amber</b>

	220-226 227-233 234-255	LEE 778 – Millennium Gold LEE 135 – Deep Gold Amber LEE 164 – Flame Red
12	000-255	RING RED 0%→100%
13	000-255	RING GREEN 0%→100%
14	000-255	RING BLUE 0%→100%
15	000-015 016-031 032-047 048-063 064-079 080-095 096-111 112-127 128-143 144-159 160-175 176-191 192-207 208-223 224-239 240-255	RING MACRO EFFECT & SPEED Null Macro Effect 1, Fast to Slow Macro Effect 2, Fast to Slow Macro Effect 3, Fast to Slow Macro Effect 4, Fast to Slow Macro Effect 5, Fast to Slow Macro Effect 6, Fast to Slow Macro Effect 7, Fast to Slow Macro Effect 8, Fast to Slow Macro Effect 9, Fast to Slow Macro Effect 10, Fast to Slow Macro Effect 11, Fast to Slow Macro Effect 12, Fast to Slow Macro Effect 13, Fast to Slow Macro Effect 14, Fast to Slow Macro Effect 15, Fast to Slow
16	000-255	DIMMER 0%→100%
17	000-255	DIMMER FINE
18	000-007 008-015 016-131 132-139 140-181 182-189 190-231	LED STROBE Close Open Strobe from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Slow Open Fast Close from Slow to

	232-239	Fast
	240-247	Open
	248-255	Random Strobe from Slow to Fast
		Open
19		<b>RING STROBE</b>
	000-007	Close
	008-015	Open
	016-131	Strobe from Slow to Fast
	132-139	Open
	140-181	Fast Open Slow Close from Slow to Fast
	182-189	Open
	190-231	Slow Open Fast Close from Slow to Fast
	232-239	Open
	240-247	Random Strobe from Slow to Fast
	248-255	Open
20	000-255	<b>PAN/TILT SPEED</b> Fast to Slow
21		<b>FUNCTION</b> (To activate following functions, stop in DMX value for at least 3 seconds.)
	000-029	Null
	030-039	Dimmer Curve: Linear
	040-049	Dimmer Curve: Square Law
	050-059	Dimmer Curve: Inv SQ Law
	060-069	Dimmer Curve: S Curve
	070-079	Fan Mode: Standard
	080-089	Fan Mode: Quiet
	090-099	Null
	100-109	Led Frequency Setting Enable
	110-119	Led Frequency Setting Disable
	120-122	Null
	123	900Hz
	124	1000Hz

125	1100Hz
126	1200Hz
127	1300Hz
128	1400Hz
129	1500Hz
130	2500Hz
131	4000Hz
132	5000Hz
133	6000Hz
134	10KHz
135	15KHz
136	20KHz
137	25KHz
138-139	Null
140-149	Pan/Tilt Reset
150-159	Effect Reset
160-169	Head Invert: Yes
170-179	Head Invert: No
180-189	CCT Calibration: On
190-199	CCT Calibration: Off
200-209	All Reset
210-219	Dimmer Speed: Fast
220-229	Dimmer Speed: Smooth
230	Dimming Start Mode: High
231	DimmingStart Mode: Low
232-233	InvertPixel Order: Yes
234-235	Invert Pixel Order: No
236-237	Pan Invert: Yes
238-239	Pan Invert: No
240-241	Tilt Invert: Yes
242-243	Tilt Invert: Nol
244-255	Nul

<b>CHANNEL</b>	<b>VALUE</b>	<b>FUNCTION</b>
<b>1</b>	<b>000-255</b>	<b>PAN 1</b> <b>0°→59°</b>
<b>2</b>	<b>000-255</b>	<b>PAN 1 FINE</b>
<b>3</b>	<b>000-255</b>	<b>TILT 1</b> <b>0°→221°</b>
<b>4</b>	<b>000-255</b>	<b>TILT 1 FINE</b>
<b>5</b>	<b>000-255</b>	<b>ZOOM 1</b> <b>Wide→Narrow</b>
<b>6</b>	<b>000-255</b>	<b>PAN 2</b> <b>0°→59°</b>
<b>7</b>	<b>000-255</b>	<b>PAN 2 FINE</b>
<b>8</b>	<b>000-255</b>	<b>TILT 2</b> <b>0°→221°</b>
<b>9</b>	<b>000-255</b>	<b>TILT 2 FINE</b>
<b>10</b>	<b>000-255</b>	<b>ZOOM 2</b> <b>Wide→Narrow</b>
<b>11</b>	<b>000-255</b>	<b>PAN 3</b> <b>0°→59°</b>
<b>12</b>	<b>000-255</b>	<b>PAN 3 FINE</b>
<b>13</b>	<b>000-255</b>	<b>TILT 3</b> <b>0°→221°</b>
<b>14</b>	<b>000-255</b>	<b>TILT 3 FINE</b>
<b>15</b>	<b>000-255</b>	<b>ZOOM 3</b> <b>Wide→Narrow</b>
<b>16</b>	<b>000-255</b>	<b>PAN 4</b> <b>0°→59°</b>

17	000-255	PAN 4 FINE
18	000-255	TILT 4 0°→221°
19	000-255	TILT 4 FINE
20	000-255	ZOOM 4 Wide→Narrow
21	000-255	PAN 5 0°→59°
22	000-255	PAN 5 FINE
23	000-255	TILT 5 0°→221°
24	000-255	TILT 5 FINE
25	000-255	ZOOM 5 Wide→Narrow
26	000-255	LED RED 0%→100%
27	000-255	LED GREEN 0%→100%
28	000-255	LED BLUE 0%→100%
29	000-255	LED LIME 0%→100%
30	000 001-004 005-009 010-013 014-018 019-022	LED CCT Null 8000K 7900K 7800K 7700K 7600K

<b>023-027</b>	<b>7500K</b>
<b>028-031</b>	<b>7400K</b>
<b>032-036</b>	<b>7300K</b>
<b>037-040</b>	<b>7200K</b>
<b>041-045</b>	<b>7100K</b>
<b>046-049</b>	<b>7000K</b>
<b>050-054</b>	<b>6900K</b>
<b>055-058</b>	<b>6800K</b>
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<b>100-103</b>	<b>5800K</b>
<b>104-108</b>	<b>5700K</b>
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<b>122-126</b>	<b>5300K</b>
<b>127-130</b>	<b>5200K</b>
<b>131-135</b>	<b>5100K</b>
<b>136-139</b>	<b>5000K</b>
<b>140-144</b>	<b>4900K</b>
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<b>149-153</b>	<b>4700K</b>
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<b>158-162</b>	<b>4500K</b>
<b>163-166</b>	<b>4400K</b>
<b>167-171</b>	<b>4300K</b>
<b>172-175</b>	<b>4200K</b>
<b>176-180</b>	<b>4100K</b>
<b>181-184</b>	<b>4000K</b>
<b>185-189</b>	<b>3900K</b>
<b>190-193</b>	<b>3800K</b>

	194-198	3700K
	199-202	3600K
	203-207	3500K
	208-211	3400K
	212-216	3300K
	217-220	3200K
	221-225	3100K
	226-229	3000K
	230-234	2900K
	235-238	2800K
	239-243	2700K
	244-247	2600K
	248-255	2500K
		<b>LED COLOR</b>
	000-009	Null
	010-016	LEE 790 – Moroccan Pink
	017-023	LEE 157 – Pink
	024-030	LEE 332 – Special Rose Pink
	031-037	LEE 328 – Follies Pink
	038-044	LEE 345 – Fuchsia Pink
	045-051	LEE 194 – Surprise Pink
	052-058	LEE 181 – Congo Blue
	059-065	LEE 071 – Tokyo Blue
	066-072	LEE 120 – Deep Blue
	073-079	LEE 079 – Just Blue
	080-086	LEE 132 – Medium Blue
	087-093	LEE 200 – Double CT Blue
	094-100	LEE 161 – State Blue
	101-107	LEE 201 – Full CT Blue
	108-114	LEE 202 – Half CT Blue
	115-121	LEE 117 – Steel Blue
	122-128	LEE 353 – Lighter Blue
	129-135	LEE 118 – Light Blue
	136-142	LEE 116 – Medium Blue Green
	143-149	LEE 124 – Dark Green
	150-156	LEE 139 – Primary Green
	157-163	LEE 089 – Moss Green
	164-170	LEE 122 – Fern Green
31		

	171-177 178-184 185-191 192-198 199-205 206-212 213-219 220-226 227-233 234-255	LEE 738 – JAS Green LEE 088 – Lime Green LEE 100 – Spring Yellow LEE 104 – Deep Amber LEE 179 – Chrome Orange LEE 105 – Orange LEE 021 – Gold Amber LEE 778 – Millennium Gold LEE 135 – Deep Gold Amber LEE 164 – Flame Red
32	000-255	RING RED 0%→100%
33	000-255	RING GREEN 0%→100%
34	000-255	RING BLUE 0%→100%
35	000-015 016-031 032-047 048-063 064-079 080-095 096-111 112-127 128-143 144-159 160-175 176-191 192-207 208-223 224-239 240-255	<b>RING MACRO EFFECT &amp; SPEED</b> Null Macro Effect 1, Fast to Slow Macro Effect 2, Fast to Slow Macro Effect 3, Fast to Slow Macro Effect 4, Fast to Slow Macro Effect 5, Fast to Slow Macro Effect 6, Fast to Slow Macro Effect 7, Fast to Slow Macro Effect 8, Fast to Slow Macro Effect 9, Fast to Slow Macro Effect 10, Fast to Slow Macro Effect 11, Fast to Slow Macro Effect 12, Fast to Slow Macro Effect 13, Fast to Slow Macro Effect 14, Fast to Slow Macro Effect 15, Fast to Slow
36	000-255	DIMMER 0%→100%
37	000-255	DIMMER FINE
38	000-007	LED STROBE Close

	<b>008-015</b> <b>016-131</b> <b>132-139</b> <b>140-181</b> <b>182-189</b> <b>190-231</b> <b>232-239</b> <b>240-247</b> <b>248-255</b>	<b>Open</b> <b>Strobe from Slow to Fast</b> <b>Open</b> <b>Fast Open Slow Close from Slow to Fast</b> <b>Open</b> <b>Slow Open Fast Close from Slow to Fast</b> <b>Open</b> <b>Random Strobe from Slow to Fast</b> <b>Open</b>
<b>39</b>	<b>000-007</b> <b>008-015</b> <b>016-131</b> <b>132-139</b> <b>140-181</b> <b>182-189</b> <b>190-231</b> <b>232-239</b> <b>240-247</b> <b>248-255</b>	<b>RING STROBE</b> <b>Close</b> <b>Open</b> <b>Strobe from Slow to Fast</b> <b>Open</b> <b>Fast Open Slow Close from Slow to Fast</b> <b>Open</b> <b>Slow Open Fast Close from Slow to Fast</b> <b>Open</b> <b>Random Strobe from Slow to Fast</b> <b>Open</b>
<b>40</b>	<b>000-255</b>	<b>PAN/TILT SPEED</b> <b>Fast to Slow</b>
<b>41</b>	<b>000-029</b> <b>030-039</b> <b>040-049</b> <b>050-059</b> <b>060-069</b> <b>070-079</b> <b>080-089</b>	<b>FUNCTION</b> <b>(To activate following functions, stop in DMX value for at least 3 seconds.)</b> <b>Null</b> <b>Dimmer Curve: Linear</b> <b>Dimmer Curve: Square Law</b> <b>Dimmer Curve: Inv SQ Law</b> <b>Dimmer Curve: S Curve</b> <b>Fan Mode: Standard</b> <b>Fan Mode: Quiet</b>

<b>090-099</b>	<b>Null</b>
<b>100-109</b>	<b>Led Frequency Setting Enable</b>
<b>110-119</b>	<b>Led Frequency Setting Disable</b>
<b>120-122</b>	<b>Null</b>
<b>123</b>	<b>900Hz</b>
<b>124</b>	<b>1000Hz</b>
<b>125</b>	<b>1100Hz</b>
<b>126</b>	<b>1200Hz</b>
<b>127</b>	<b>1300Hz</b>
<b>128</b>	<b>1400Hz</b>
<b>129</b>	<b>1500Hz</b>
<b>130</b>	<b>2500Hz</b>
<b>131</b>	<b>4000Hz</b>
<b>132</b>	<b>5000Hz</b>
<b>133</b>	<b>6000Hz</b>
<b>134</b>	<b>10KHz</b>
<b>135</b>	<b>15KHz</b>
<b>136</b>	<b>20KHz</b>
<b>137</b>	<b>25KHz</b>
<b>138-139</b>	<b>Null</b>
<b>140-149</b>	<b>Pan/Tilt Reset</b>
<b>150-159</b>	<b>Effect Reset</b>
<b>160-169</b>	<b>Head Invert: Yes</b>
<b>170-179</b>	<b>Head Invert: No</b>
<b>180-189</b>	<b>CCT Calibration: On</b>
<b>190-199</b>	<b>CCT Calibration: Off</b>
<b>200-209</b>	<b>All Reset</b>
<b>210-219</b>	<b>Dimmer Speed: Fast</b>
<b>220-229</b>	<b>Dimmer Speed: Smooth</b>
<b>230</b>	<b>Dimming Start Mode: High</b>
<b>231</b>	<b>DimmingStart Mode: Low</b>
<b>232-233</b>	<b>InvertPixel Order: Yes</b>
<b>234-235</b>	<b>Invert Pixel Order: No</b>
<b>236-237</b>	<b>Pan Invert: Yes</b>
<b>238-239</b>	<b>Pan Invert: No</b>

	240-241	Tilt Invert: Yes
	242-243	Tilt Invert: NoI
	244-255	Nul

**71 ch (Mode 3) / 75 ch (Mode 4) / 85 ch (Mode 5):**

CHANNEL			VALUE	FUNCTION
71ch	75ch	85ch		
1	1	1	000-255	PAN 1 0°→59°
2	2	2	000-255	PAN 1 FINE
3	3	3	000-255	TILT 1 0°→221°
4	4	4	000-255	TILT 1 FINE
5	5	5	000-255	LED 1 RED 0%→100%
6	6	6	000-255	LED 1 GREEN 0%→100%
7	7	7	000-255	LED 1 BLUE 0%→100%
8	8	8	000-255	LED 1 LIME 0%→100%
		9	000-255	LED 1 DIMMER 0%→100%
		10	000-255	LED 1 DIMMER FINE
	9	11	000-007	LED 1 STROBE Close
			008-015	Open
			016-131	Strobe from Slow to Fast

			132-139	Open
			140-181	Fast Open Slow Close from Slow to Fast
			182-189	Open
			190-231	Slow Open Fast Close from Slow to Fast
			232-239	Open
			240-247	Random Strobe from Slow to Fast
			248-255	Open
9	10	12	000-255	ZOOM 1 Wide→Narrow
10	11	13	000-255	RING 1 RED 0%→100%
11	12	14	000-255	RING 1 GREEN 0%→100%
12	13	15	000-255	RING 1 BLUE 0%→100%
13	14	16	000-015	RING 1 MACRO EFFECT & SPEED Null
			016-031	Macro Effect 1, Fast to Slow
			032-047	Macro Effect 2, Fast to Slow
			048-063	Macro Effect 3, Fast to Slow
			064-079	Macro Effect 4, Fast to Slow
			080-095	Macro Effect 5, Fast to Slow
			096-111	Macro Effect 6, Fast to Slow
			112-127	Macro Effect 7, Fast to Slow
			128-143	Macro Effect 8, Fast to Slow
			144-159	Macro Effect 9, Fast to Slow
			160-175	Macro Effect 10, Fast to Slow
			176-191	Macro Effect 11, Fast to Slow

			192-207	Macro Effect 12, Fast to Slow
			208-223	Macro Effect 13, Fast to Slow
			224-239	Macro Effect 14, Fast to Slow
			240-255	Macro Effect 15, Fast to Slow
14	15	17	000-255	PAN 2 0°→59°
15	16	18	000-255	PAN 2 FINE
16	17	19	000-255	TILT 2 0°→221°
17	18	20	000-255	TILT 2 FINE
18	19	21	000-255	LED 2 RED 0%→100%
19	20	22	000-255	LED 2 GREEN 0%→100%
20	21	23	000-255	LED 2 BLUE 0%→100%
21	22	24	000-255	LED 2 LIME 0%→100%
		25	000-255	LED 2 DIMMER 0%→100%
		26	000-255	LED 2 DIMMER FINE
	23	27	000-007	LED 2 STROBE Close
			008-015	Open
			016-131	Strobe from Slow to Fast
			132-139	Open
			140-181	Fast Open Slow Close from Slow to Fast
			182-189	Open
			190-231	Slow Open Fast Close from Slow

			232-239	to Fast
			240-247	Open
			248-255	Random Strobe from Slow to Fast
				Open
22	24	28	000-255	ZOOM 2
				Wide→Narrow
23	25	29	000-255	RING 2 RED
				0%→100%
24	26	30	000-255	RING 2 GREEN
				0%→100%
25	27	31	000-255	RING 2 BLUE
				0%→100%
				RING 2 MACRO EFFECT & SPEED
			000-015	Null
			016-031	Macro Effect 1, Fast to Slow
			032-047	Macro Effect 2, Fast to Slow
			048-063	Macro Effect 3, Fast to Slow
			064-079	Macro Effect 4, Fast to Slow
			080-095	Macro Effect 5, Fast to Slow
			096-111	Macro Effect 6, Fast to Slow
26	28	32	112-127	Macro Effect 7, Fast to Slow
			128-143	Macro Effect 8, Fast to Slow
			144-159	Macro Effect 9, Fast to Slow
			160-175	Macro Effect 10, Fast to Slow
			176-191	Macro Effect 11, Fast to Slow
			192-207	Macro Effect 12, Fast to Slow
			208-223	Macro Effect 13, Fast to Slow
			224-239	Macro Effect 14, Fast to Slow
			240-255	Macro Effect 15, Fast to Slow

27	29	33	000-255	<b>PAN 3</b> 0°→59°
28	30	34	000-255	<b>PAN 3 FINE</b>
29	31	35	000-255	<b>TILT 3</b> 0°→221°
30	32	36	000-255	<b>TILT 3 FINE</b>
31	33	37	000-255	<b>LED 3 RED</b> 0%→100%
32	34	38	000-255	<b>LED 3 GREEN</b> 0%→100%
33	35	39	000-255	<b>LED 3 BLUE</b> 0%→100%
34	36	40	000-255	<b>LED 3 LIME</b> 0%→100%
		41	000-255	<b>LED 3 DIMMER</b> 0%→100%
		42	000-255	<b>LED 3 DIMMER FINE</b>
				<b>LED 3 STROBE</b>
			000-007	Close
			008-015	Open
			016-131	Strobe from Slow to Fast
			132-139	Open
	37	43	140-181	Fast Open Slow Close from Slow to Fast
			182-189	Open
			190-231	Slow Open Fast Close from Slow to Fast
			232-239	Open
			240-247	Random Strobe from Slow to Fast
			248-255	Open

<b>35</b>	<b>38</b>	<b>44</b>	<b>000-255</b>	<b>ZOOM 3</b> <b>Wide→Narrow</b>
<b>36</b>	<b>39</b>	<b>45</b>	<b>000-255</b>	<b>RING 3 RED</b> <b>0%→100%</b>
<b>37</b>	<b>40</b>	<b>46</b>	<b>000-255</b>	<b>RING 3 GREEN</b> <b>0%→100%</b>
<b>38</b>	<b>41</b>	<b>47</b>	<b>000-255</b>	<b>RING 3 BLUE</b> <b>0%→100%</b>
<b>39</b>	<b>42</b>	<b>48</b>	<b>000-015</b> <b>016-031</b> <b>032-047</b> <b>048-063</b> <b>064-079</b> <b>080-095</b> <b>096-111</b> <b>112-127</b> <b>128-143</b> <b>144-159</b> <b>160-175</b> <b>176-191</b> <b>192-207</b> <b>208-223</b> <b>224-239</b> <b>240-255</b>	<b>RING 3 MACRO EFFECT &amp; SPEED</b> <b>Null</b> <b>Macro Effect 1, Fast to Slow</b> <b>Macro Effect 2, Fast to Slow</b> <b>Macro Effect 3, Fast to Slow</b> <b>Macro Effect 4, Fast to Slow</b> <b>Macro Effect 5, Fast to Slow</b> <b>Macro Effect 6, Fast to Slow</b> <b>Macro Effect 7, Fast to Slow</b> <b>Macro Effect 8, Fast to Slow</b> <b>Macro Effect 9, Fast to Slow</b> <b>Macro Effect 10, Fast to Slow</b> <b>Macro Effect 11, Fast to Slow</b> <b>Macro Effect 12, Fast to Slow</b> <b>Macro Effect 13, Fast to Slow</b> <b>Macro Effect 14, Fast to Slow</b> <b>Macro Effect 15, Fast to Slow</b>
<b>40</b>	<b>43</b>	<b>49</b>	<b>000-255</b>	<b>PAN 4</b> <b>0°→59°</b>
<b>41</b>	<b>44</b>	<b>50</b>	<b>000-255</b>	<b>PAN 4 FINE</b>
<b>42</b>	<b>45</b>	<b>51</b>	<b>000-255</b>	<b>TILT 4</b>

				<b>0°→221°</b>
<b>43</b>	<b>46</b>	<b>52</b>	<b>000-255</b>	<b>TILT 4 FINE</b>
<b>44</b>	<b>47</b>	<b>53</b>	<b>000-255</b>	<b>LED 4 RED 0%→100%</b>
<b>45</b>	<b>48</b>	<b>54</b>	<b>000-255</b>	<b>LED 4 GREEN 0%→100%</b>
<b>46</b>	<b>49</b>	<b>55</b>	<b>000-255</b>	<b>LED 4 BLUE 0%→100%</b>
<b>47</b>	<b>50</b>	<b>56</b>	<b>000-255</b>	<b>LED 4 LIME 0%→100%</b>
		<b>57</b>	<b>000-255</b>	<b>LED 4 DIMMER 0%→100%</b>
		<b>58</b>	<b>000-255</b>	<b>LED 4 DIMMER FINE</b>
				<b>LED 4 STROBE</b>
			<b>000-007</b>	<b>Close</b>
			<b>008-015</b>	<b>Open</b>
			<b>016-131</b>	<b>Strobe from Slow to Fast</b>
			<b>132-139</b>	<b>Open</b>
	<b>51</b>	<b>59</b>	<b>140-181</b>	<b>Fast Open Slow Close from Slow to Fast</b>
			<b>182-189</b>	<b>Open</b>
			<b>190-231</b>	<b>Slow Open Fast Close from Slow to Fast</b>
			<b>232-239</b>	<b>Open</b>
			<b>240-247</b>	<b>Random Strobe from Slow to Fast</b>
			<b>248-255</b>	<b>Open</b>
<b>48</b>	<b>52</b>	<b>60</b>	<b>000-255</b>	<b>ZOOM 4 Wide→Narrow</b>
<b>49</b>	<b>53</b>	<b>61</b>	<b>000-255</b>	<b>RING 4 RED 0%→100%</b>

<b>50</b>	<b>54</b>	<b>62</b>	<b>000-255</b>	<b>RING 4 GREEN 0%→100%</b>
<b>51</b>	<b>55</b>	<b>63</b>	<b>000-255</b>	<b>RING 4 BLUE 0%→100%</b>
<b>52</b>	<b>56</b>	<b>64</b>	<b>000-015</b>	<b>RING 4 MACRO EFFECT &amp; SPEED</b> <b>Null</b>
			<b>016-031</b>	<b>Macro Effect 1, Fast to Slow</b>
			<b>032-047</b>	<b>Macro Effect 2, Fast to Slow</b>
			<b>048-063</b>	<b>Macro Effect 3, Fast to Slow</b>
			<b>064-079</b>	<b>Macro Effect 4, Fast to Slow</b>
			<b>080-095</b>	<b>Macro Effect 5, Fast to Slow</b>
			<b>096-111</b>	<b>Macro Effect 6, Fast to Slow</b>
			<b>112-127</b>	<b>Macro Effect 7, Fast to Slow</b>
			<b>128-143</b>	<b>Macro Effect 8, Fast to Slow</b>
			<b>144-159</b>	<b>Macro Effect 9, Fast to Slow</b>
			<b>160-175</b>	<b>Macro Effect 10, Fast to Slow</b>
			<b>176-191</b>	<b>Macro Effect 11, Fast to Slow</b>
			<b>192-207</b>	<b>Macro Effect 12, Fast to Slow</b>
			<b>208-223</b>	<b>Macro Effect 13, Fast to Slow</b>
			<b>224-239</b>	<b>Macro Effect 14, Fast to Slow</b>
<b>240-255</b>	<b>Macro Effect 15, Fast to Slow</b>			
<b>53</b>	<b>57</b>	<b>65</b>	<b>000-255</b>	<b>PAN 5</b> <b>0°→59°</b>
<b>54</b>	<b>58</b>	<b>66</b>	<b>000-255</b>	<b>PAN 5 FINE</b>
<b>55</b>	<b>59</b>	<b>67</b>	<b>000-255</b>	<b>TILT 5</b> <b>0°→221°</b>
<b>56</b>	<b>60</b>	<b>68</b>	<b>000-255</b>	<b>TILT 5 FINE</b>
<b>57</b>	<b>61</b>	<b>69</b>	<b>000-255</b>	<b>LED 5 RED</b> <b>0%→100%</b>

58	62	70	000-255	<b>LED 5 GREEN</b> 0%→100%
59	63	71	000-255	<b>LED 5 BLUE</b> 0%→100%
60	64	72	000-255	<b>LED 5 LIME</b> 0%→100%
		73	000-255	<b>LED 5 DIMMER</b> 0%→100%
		74	000-255	<b>LED 5 DIMMER FINE</b>
	65	75	000-007 008-015 016-131 132-139 140-181 182-189 190-231 232-239 240-247 248-255	<b>LED 5 STROBE</b> Close Open Strobe from Slow to Fast Open Fast Open Slow Close from Slow to Fast Open Slow Open Fast Close from Slow to Fast Open Random Strobe from Slow to Fast Open
61	66	76	000-255	<b>ZOOM 5</b> Wide→Narrow
62	67	77	000-255	<b>RING 5 RED</b> 0%→100%
63	68	78	000-255	<b>RING 5 GREEN 0%→100%</b>
64	69	79	000-255	<b>RING 5 BLUE 0%→100%</b>
65	70	80		<b>RING 5 MACRO EFFECT &amp; SPEED</b>

			000-015	Null
			016-031	Macro Effect 1, Fast to Slow
			032-047	Macro Effect 2, Fast to Slow
			048-063	Macro Effect 3, Fast to Slow
			064-079	Macro Effect 4, Fast to Slow
			080-095	Macro Effect 5, Fast to Slow
			096-111	Macro Effect 6, Fast to Slow
			112-127	Macro Effect 7, Fast to Slow
			128-143	Macro Effect 8, Fast to Slow
			144-159	Macro Effect 9, Fast to Slow
			160-175	Macro Effect 10, Fast to Slow
			176-191	Macro Effect 11, Fast to Slow
			192-207	Macro Effect 12, Fast to Slow
			208-223	Macro Effect 13, Fast to Slow
			224-239	Macro Effect 14, Fast to Slow
			240-255	Macro Effect 15, Fast to Slow
66	71	81	000-255	DIMMER 0%→100%
67	72	82	000-255	DIMMER FINE
68				LED STROBE
			000-007	Close
			008-015	Open
			016-131	Strobe from Slow to Fast
			132-139	Open
			140-181	Fast Open Slow Close from Slow to Fast
			182-189	Open
			190-231	Slow Open Fast Close from Slow to Fast
			232-239	Open
240-247	Random Strobe from Slow to Fast			

			<b>248-255</b>	<b>Open</b>
<b>69</b>	<b>73</b>	<b>83</b>		<b>LED STROBE</b>
			<b>000-007</b>	<b>Close</b>
			<b>008-015</b>	<b>Open</b>
			<b>016-131</b>	<b>Strobe from Slow to Fast</b>
			<b>132-139</b>	<b>Open</b>
			<b>140-181</b>	<b>Fast Open Slow Close from Slow to Fast</b>
			<b>182-189</b>	<b>Open</b>
			<b>190-231</b>	<b>Slow Open Fast Close from Slow to Fast</b>
			<b>232-239</b>	<b>Open</b>
			<b>240-247</b>	<b>Random Strobe from Slow to Fast</b>
			<b>248-255</b>	<b>Open</b>
<b>70</b>	<b>74</b>	<b>84</b>	<b>000-255</b>	<b>PAN/TILT SPEED Fast to Slow</b>
<b>71</b>	<b>75</b>	<b>85</b>		<b>FUNCTION (To activate following functions, stop in DMX value for at least 3 seconds.)</b>
			<b>000-029</b>	<b>Null</b>
			<b>030-039</b>	<b>Dimmer Curve: Linear</b>
			<b>040-049</b>	<b>Dimmer Curve: Square Law</b>
			<b>050-059</b>	<b>Dimmer Curve: Inv SQ Law</b>
			<b>060-069</b>	<b>Dimmer Curve: S Curve</b>
			<b>070-079</b>	<b>Fan Mode: Standard</b>
			<b>080-089</b>	<b>Fan Mode: Quiet</b>
			<b>090-099</b>	<b>Null</b>
			<b>100-109</b>	<b>Led Frequency Setting Enable</b>
			<b>110-119</b>	<b>Led Frequency Setting Disable</b>
			<b>120-122</b>	<b>Null</b>
			<b>123</b>	<b>900Hz</b>
			<b>124</b>	<b>1000Hz</b>
<b>125</b>	<b>1100Hz</b>			

			<b>126</b>	<b>1200Hz</b>
			<b>127</b>	<b>1300Hz</b>
			<b>128</b>	<b>1400Hz</b>
			<b>129</b>	<b>1500Hz</b>
			<b>130</b>	<b>2500Hz</b>
			<b>131</b>	<b>4000Hz</b>
			<b>132</b>	<b>5000Hz</b>
			<b>133</b>	<b>6000Hz</b>
			<b>134</b>	<b>10KHz</b>
			<b>135</b>	<b>15KHz</b>
			<b>136</b>	<b>20KHz</b>
			<b>137</b>	<b>25KHz</b>
			<b>138-139</b>	<b>Null</b>
			<b>140-149</b>	<b>Pan/Tilt Reset</b>
			<b>150-159</b>	<b>Effect Reset</b>
			<b>160-169</b>	<b>Head Invert: Yes</b>
			<b>170-179</b>	<b>Head Invert: No</b>
			<b>180-189</b>	<b>CCT Calibration: On</b>
			<b>190-199</b>	<b>CCT Calibration: Off</b>
			<b>200-209</b>	<b>All Reset</b>
			<b>210-219</b>	<b>Dimmer Speed: Fast</b>
			<b>220-229</b>	<b>Dimmer Speed: Smooth</b>
			<b>230</b>	<b>Dimming Start Mode: High</b>
			<b>231</b>	<b>DimmingStart Mode: Low</b>
			<b>232-233</b>	<b>InvertPixel Order: Yes</b>
			<b>234-235</b>	<b>Invert Pixel Order: No</b>
			<b>236-237</b>	<b>Pan Invert: Yes</b>
			<b>238-239</b>	<b>Pan Invert: No</b>
			<b>240-241</b>	<b>Tilt Invert: Yes</b>
			<b>242-243</b>	<b>Tilt Invert: Nol</b>
			<b>244-255</b>	<b>Nul</b>

<b>CHANNEL</b>	<b>VALUE</b>	<b>FUNCTION</b>
<b>1</b>	<b>000-255</b>	<b>PAN 1</b> <b>0°→59°</b>
<b>2</b>	<b>000-255</b>	<b>PAN 1 FINE</b>
<b>3</b>	<b>000-255</b>	<b>TILT 1</b> <b>0°→221°</b>
<b>4</b>	<b>000-255</b>	<b>TILT 1 FINE</b>
<b>5</b>	<b>000-255</b>	<b>LED 1 RED</b> <b>0%→100%</b>
<b>6</b>	<b>000-255</b>	<b>LED 1 GREEN</b> <b>0%→100%</b>
<b>7</b>	<b>000-255</b>	<b>LED 1 BLUE</b> <b>0%→100%</b>
<b>8</b>	<b>000-255</b>	<b>LED 1 LIME</b> <b>0%→100%</b>
<b>9</b>	<b>000-255</b>	<b>ZOOM 1</b> <b>Wide→Narrow</b>
<b>10</b>	<b>000-255</b>	<b>RING 1 BLOCK 1 RED</b> <b>0%→100%</b>
<b>11</b>	<b>000-255</b>	<b>RING 1 BLOCK 1 GREEN</b> <b>0%→100%</b>
<b>12</b>	<b>000-255</b>	<b>RING 1 BLOCK 1 BLUE</b> <b>0%→100%</b>
<b>13</b>	<b>000-255</b>	<b>RING 1 BLOCK 2 RED</b> <b>0%→100%</b>
<b>14</b>	<b>000-255</b>	<b>RING 1 BLOCK 2 GREEN</b> <b>0%→100%</b>
<b>15</b>	<b>000-255</b>	<b>RING 1 BLOCK 2 BLUE</b> <b>0%→100%</b>

16	000-255	<b>RING 1 BLOCK 3 RED</b> 0%→100%
17	000-255	<b>RING 1 BLOCK 3 GREEN</b> 0%→100%
18	000-255	<b>RING 1 BLOCK 3 BLUE</b> 0%→100%
19	000-255	<b>RING 1 BLOCK 4 RED</b> 0%→100%
20	000-255	<b>RING 1 BLOCK 4 GREEN</b> 0%→100%
21	000-255	<b>RING 1 BLOCK 4 BLUE</b> 0%→100%
22	000-255	<b>RING 1 BLOCK 5 RED</b> 0%→100%
23	000-255	<b>RING 1 BLOCK 5 GREEN</b> 0%→100%
24	000-255	<b>RING 1 BLOCK 5 BLUE</b> 0%→100%
25	000-255	<b>RING 1 BLOCK 6 RED</b> 0%→100%
26	000-255	<b>RING 1 BLOCK 6 GREEN</b> 0%→100%
27	000-255	<b>RING 1 BLOCK 6 BLUE</b> 0%→100%
28	000-255	<b>RING 1 BLOCK 7 RED</b> 0%→100%
29	000-255	<b>RING 1 BLOCK 7 GREEN</b> 0%→100%

<b>30</b>	<b>000-255</b>	<b>RING 1 BLOCK 7 BLUE</b> <b>0%→100%</b>
<b>31</b>	<b>000-255</b>	<b>RING 1 BLOCK 8 RED</b> <b>0%→100%</b>
<b>32</b>	<b>000-255</b>	<b>RING 1 BLOCK 8 GREEN</b> <b>0%→100%</b>
<b>33</b>	<b>000-255</b>	<b>RING 1 BLOCK 8 BLUE</b> <b>0%→100%</b>
<b>34</b>	<b>000-255</b>	<b>PAN 2</b> <b>0°→59°</b>
<b>35</b>	<b>000-255</b>	<b>PAN 2 FINE</b>
<b>36</b>	<b>000-255</b>	<b>TILT 2</b> <b>0°→221°</b>
<b>37</b>	<b>000-255</b>	<b>TILT 2 FINE</b>
<b>38</b>	<b>000-255</b>	<b>LED 2 RED</b> <b>0%→100%</b>
<b>39</b>	<b>000-255</b>	<b>LED 2 GREEN</b> <b>0%→100%</b>
<b>40</b>	<b>000-255</b>	<b>LED 2 BLUE</b> <b>0%→100%</b>
<b>41</b>	<b>000-255</b>	<b>LED 2 LIME</b> <b>0%→100%</b>
<b>42</b>	<b>000-255</b>	<b>ZOOM 2</b> <b>Wide→Narrow</b>
<b>43</b>	<b>000-255</b>	<b>RING 2 BLOCK 1 RED</b> <b>0%→100%</b>
<b>44</b>	<b>000-255</b>	<b>RING 2 BLOCK 1 GREEN</b> <b>0%→100%</b>

45	000-255	<b>RING 2 BLOCK 1 BLUE</b> 0%→100%
46	000-255	<b>RING 2 BLOCK 2 RED</b> 0%→100%
47	000-255	<b>RING 2 BLOCK 2 GREEN</b> 0%→100%
48	000-255	<b>RING 2 BLOCK 2 BLUE</b> 0%→100%
49	000-255	<b>RING 2 BLOCK 3 RED</b> 0%→100%
50	000-255	<b>RING 2 BLOCK 3 GREEN</b> 0%→100%
51	000-255	<b>RING 2 BLOCK 3 BLUE</b> 0%→100%
52	000-255	<b>RING 2 BLOCK 4 RED</b> 0%→100%
53	000-255	<b>RING 2 BLOCK 4 GREEN</b> 0%→100%
54	000-255	<b>RING 2 BLOCK 4 BLUE</b> 0%→100%
55	000-255	<b>RING 2 BLOCK 5 RED</b> 0%→100%
56	000-255	<b>RING 2 BLOCK 5 GREEN</b> 0%→100%
57	000-255	<b>RING 2 BLOCK 5 BLUE</b> 0%→100%
58	000-255	<b>RING 2 BLOCK 6 RED</b> 0%→100%

<b>59</b>	<b>000-255</b>	<b>RING 2 BLOCK 6 GREEN</b> <b>0%→100%</b>
<b>60</b>	<b>000-255</b>	<b>RING 2 BLOCK 6 BLUE</b> <b>0%→100%</b>
<b>61</b>	<b>000-255</b>	<b>RING 2 BLOCK 7 RED</b> <b>0%→100%</b>
<b>62</b>	<b>000-255</b>	<b>RING 2 BLOCK 7 GREEN</b> <b>0%→100%</b>
<b>63</b>	<b>000-255</b>	<b>RING 2 BLOCK 7 BLUE</b> <b>0%→100%</b>
<b>64</b>	<b>000-255</b>	<b>RING 2 BLOCK 8 RED</b> <b>0%→100%</b>
<b>65</b>	<b>000-255</b>	<b>RING 2 BLOCK 8 GREEN</b> <b>0%→100%</b>
<b>66</b>	<b>000-255</b>	<b>RING 2 BLOCK 8 BLUE</b> <b>0%→100%</b>
<b>67</b>	<b>000-255</b>	<b>PAN 3</b> <b>0°→59°</b>
<b>68</b>	<b>000-255</b>	<b>PAN 3 FINE</b>
<b>69</b>	<b>000-255</b>	<b>TILT 3</b> <b>0°→221°</b>
<b>70</b>	<b>000-255</b>	<b>TILT 3 FINE</b>
<b>71</b>	<b>000-255</b>	<b>LED 3 RED</b> <b>0%→100%</b>
<b>72</b>	<b>000-255</b>	<b>LED 3 GREEN</b> <b>0%→100%</b>
<b>73</b>	<b>000-255</b>	<b>LED 3 BLUE</b> <b>0%→100%</b>

74	000-255	<b>LED 3 LIME</b> 0%→100%
75	000-255	<b>ZOOM 3</b> Wide→Narrow
76	000-255	<b>RING 3 BLOCK 1 RED</b> 0%→100%
77	000-255	<b>RING 3 BLOCK 1 GREEN</b> 0%→100%
78	000-255	<b>RING 3 BLOCK 1 BLUE</b> 0%→100%
79	000-255	<b>RING 3 BLOCK 2 RED</b> 0%→100%
80	000-255	<b>RING 3 BLOCK 2 GREEN</b> 0%→100%
81	000-255	<b>RING 3 BLOCK 2 BLUE</b> 0%→100%
82	000-255	<b>RING 3 BLOCK 3 RED</b> 0%→100%
83	000-255	<b>RING 3 BLOCK 3 GREEN</b> 0%→100%
84	000-255	<b>RING 3 BLOCK 3 BLUE</b> 0%→100%
85	000-255	<b>RING 3 BLOCK 4 RED</b> 0%→100%
86	000-255	<b>RING 3 BLOCK 4 GREEN</b> 0%→100%
87	000-255	<b>RING 3 BLOCK 4 BLUE</b> 0%→100%

88	000-255	<b>RING 3 BLOCK 5 RED</b> 0%→100%
89	000-255	<b>RING 3 BLOCK 5 GREEN</b> 0%→100%
90	000-255	<b>RING 3 BLOCK 5 BLUE</b> 0%→100%
91	000-255	<b>RING 3 BLOCK 6 RED</b> 0%→100%
92	000-255	<b>RING 3 BLOCK 6 GREEN</b> 0%→100%
93	000-255	<b>RING 3 BLOCK 6 BLUE</b> 0%→100%
94	000-255	<b>RING 3 BLOCK 7 RED</b> 0%→100%
95	000-255	<b>RING 3 BLOCK 7 GREEN</b> 0%→100%
96	000-255	<b>RING 3 BLOCK 7 BLUE</b> 0%→100%
97	000-255	<b>RING 3 BLOCK 8 RED</b> 0%→100%
98	000-255	<b>RING 3 BLOCK 8 GREEN</b> 0%→100%
99	000-255	<b>RING 3 BLOCK 8 BLUE</b> 0%→100%
100	000-255	<b>PAN 4</b> 0°→59°
101	000-255	<b>PAN 4 FINE</b>
102	000-255	<b>TILT 4</b> 0°→221°

<b>103</b>	<b>000-255</b>	<b>TILT 4 FINE</b>
<b>104</b>	<b>000-255</b>	<b>LED 4 RED</b> <b>0%→100%</b>
<b>105</b>	<b>000-255</b>	<b>LED 4 GREEN</b> <b>0%→100%</b>
<b>106</b>	<b>000-255</b>	<b>LED 4 BLUE</b> <b>0%→100%</b>
<b>107</b>	<b>000-255</b>	<b>LED 4 LIME</b> <b>0%→100%</b>
<b>108</b>	<b>000-255</b>	<b>ZOOM 4</b> <b>Wide→Narrow</b>
<b>109</b>	<b>000-255</b>	<b>RING 4 BLOCK 1 RED</b> <b>0%→100%</b>
<b>110</b>	<b>000-255</b>	<b>RING 4 BLOCK 1 GREEN</b> <b>0%→100%</b>
<b>111</b>	<b>000-255</b>	<b>RING 4 BLOCK 1 BLUE</b> <b>0%→100%</b>
<b>112</b>	<b>000-255</b>	<b>RING 4 BLOCK 2 RED</b> <b>0%→100%</b>
<b>113</b>	<b>000-255</b>	<b>RING 4 BLOCK 2 GREEN</b> <b>0%→100%</b>
<b>114</b>	<b>000-255</b>	<b>RING 4 BLOCK 2 BLUE</b> <b>0%→100%</b>
<b>115</b>	<b>000-255</b>	<b>RING 4 BLOCK 3 RED</b> <b>0%→100%</b>
<b>116</b>	<b>000-255</b>	<b>RING 4 BLOCK 3 GREEN</b> <b>0%→100%</b>
<b>117</b>	<b>000-255</b>	<b>RING 4 BLOCK 3 BLUE</b> <b>0%→100%</b>

118	000-255	<b>RING 4 BLOCK 4 RED</b> 0%→100%
119	000-255	<b>RING 4 BLOCK 4 GREEN</b> 0%→100%
120	000-255	<b>RING 4 BLOCK 4 BLUE</b> 0%→100%
121	000-255	<b>RING 4 BLOCK 5 RED</b> 0%→100%
122	000-255	<b>RING 4 BLOCK 5 GREEN</b> 0%→100%
123	000-255	<b>RING 4 BLOCK 5 BLUE</b> 0%→100%
124	000-255	<b>RING 4 BLOCK 6 RED</b> 0%→100%
125	000-255	<b>RING 4 BLOCK 6 GREEN</b> 0%→100%
126	000-255	<b>RING 4 BLOCK 6 BLUE</b> 0%→100%
127	000-255	<b>RING 4 BLOCK 7 RED</b> 0%→100%
128	000-255	<b>RING 4 BLOCK 7 GREEN</b> 0%→100%
129	000-255	<b>RING 4 BLOCK 7 BLUE</b> 0%→100%
130	000-255	<b>RING 4 BLOCK 8 RED</b> 0%→100%
131	000-255	<b>RING 4 BLOCK 8 GREEN</b> 0%→100%

132	000-255	<b>RING 4 BLOCK 8 BLUE</b> 0%→100%
133	000-255	<b>PAN 5</b> 0°→59°
134	000-255	<b>PAN 5 FINE</b>
135	000-255	<b>TILT 5</b> 0°→221°
136	000-255	<b>TILT 5 FINE</b>
137	000-255	<b>LED 5 RED</b> 0%→100%
138	000-255	<b>LED 5 GREEN</b> 0%→100%
139	000-255	<b>LED 5 BLUE</b> 0%→100%
140	000-255	<b>LED 5 LIME</b> 0%→100%
141	000-255	<b>ZOOM 5</b> Wide→Narrow
142	000-255	<b>RING 5 BLOCK 1 RED</b> 0%→100%
143	000-255	<b>RING 5 BLOCK 1 GREEN</b> 0%→100%
144	000-255	<b>RING 5 BLOCK 1 BLUE</b> 0%→100%
145	000-255	<b>RING 5 BLOCK 2 RED</b> 0%→100%
146	000-255	<b>RING 5 BLOCK 2 GREEN</b> 0%→100%

147	000-255	<b>RING 5 BLOCK 2 BLUE</b> 0%→100%
148	000-255	<b>RING 5 BLOCK 3 RED</b> 0%→100%
149	000-255	<b>RING 5 BLOCK 3 GREEN</b> 0%→100%
150	000-255	<b>RING 5 BLOCK 3 BLUE</b> 0%→100%
151	000-255	<b>RING 5 BLOCK 4 RED</b> 0%→100%
152	000-255	<b>RING 5 BLOCK 4 GREEN</b> 0%→100%
153	000-255	<b>RING 5 BLOCK 4 BLUE</b> 0%→100%
154	000-255	<b>RING 5 BLOCK 5 RED</b> 0%→100%
155	000-255	<b>RING 5 BLOCK 5 GREEN</b> 0%→100%
156	000-255	<b>RING 5 BLOCK 5 BLUE</b> 0%→100%
157	000-255	<b>RING 5 BLOCK 6 RED</b> 0%→100%
158	000-255	<b>RING 5 BLOCK 6 GREEN</b> 0%→100%
159	000-255	<b>RING 5 BLOCK 6 BLUE</b> 0%→100%
160	000-255	<b>RING 5 BLOCK 7 RED</b> 0%→100%

161	000-255	<b>RING 5 BLOCK 7 GREEN</b> 0%→100%
162	000-255	<b>RING 5 BLOCK 7 BLUE</b> 0%→100%
163	000-255	<b>RING 5 BLOCK 8 RED</b> 0%→100%
164	000-255	<b>RING 5 BLOCK 8 GREEN</b> 0%→100%
165	000-255	<b>RING 5 BLOCK 8 BLUE</b> 0%→100%
166	000-255	<b>LED DIMMER</b> 0%→100%
167	000-007	<b>LED STROBE</b> Close
	008-015	Open
	016-131	Strobe from Slow to Fast
	132-139	Open
	140-181	Fast Open Slow Close from Slow to Fast
	182-189	Open
	190-231	Slow Open Fast Close from Slow to Fast
	232-239	Open
	240-247	Random Strobe from Slow to Fast
248-255	Open	
168	000-255	<b>RING DIMMER</b> 0%→100%
169	000-007	<b>RING STROBE</b> Close
	008-015	Open
	016-131	Strobe from Slow to Fast
	132-139	Open
	140-181	Fast Open Slow Close from Slow to Fast
	182-189	Open
	190-231	Slow Open Fast Close from Slow to Fast

	<b>232-239</b>	<b>Open</b>
	<b>240-247</b>	<b>Random Strobe from Slow to Fast</b>
	<b>248-255</b>	<b>Open</b>
		<b>FUNCTION</b>
		<b>(To activate following functions, stop in DMX value for at least 3 seconds.)</b>
	<b>000-029</b>	<b>Null</b>
	<b>030-039</b>	<b>Dimmer Curve: Linear</b>
	<b>040-049</b>	<b>Dimmer Curve: Square Law</b>
	<b>050-059</b>	<b>Dimmer Curve: Inv SQ Law</b>
	<b>060-069</b>	<b>Dimmer Curve: S Curve</b>
	<b>070-079</b>	<b>Fan Mode: Standard</b>
	<b>080-089</b>	<b>Fan Mode: Quiet</b>
	<b>090-099</b>	<b>Null</b>
	<b>100-109</b>	<b>Led Frequency Setting Enable</b>
	<b>110-119</b>	<b>Led Frequency Setting Disable</b>
	<b>120-122</b>	<b>Null</b>
	<b>123</b>	<b>900Hz</b>
	<b>124</b>	<b>1000Hz</b>
	<b>125</b>	<b>1100Hz</b>
	<b>126</b>	<b>1200Hz</b>
	<b>127</b>	<b>1300Hz</b>
	<b>128</b>	<b>1400Hz</b>
	<b>129</b>	<b>1500Hz</b>
	<b>130</b>	<b>2500Hz</b>
	<b>131</b>	<b>4000Hz</b>
	<b>132</b>	<b>5000Hz</b>
	<b>133</b>	<b>6000Hz</b>
	<b>134</b>	<b>10KHz</b>
	<b>135</b>	<b>15KHz</b>
	<b>136</b>	<b>20KHz</b>
	<b>137</b>	<b>25KHz</b>
	<b>138-139</b>	<b>Null</b>
	<b>140-149</b>	<b>Pan/Tilt Reset</b>
	<b>150-159</b>	<b>Effect Reset</b>

170

<b>160-169</b>	<b>Head Invert: Yes</b>
<b>170-179</b>	<b>Head Invert: No</b>
<b>180-189</b>	<b>CCT Calibration: On</b>
<b>190-199</b>	<b>CCT Calibration: Off</b>
<b>200-209</b>	<b>All Reset</b>
<b>210-219</b>	<b>Dimmer Speed: Fast</b>
<b>220-229</b>	<b>Dimmer Speed: Smooth</b>
<b>230</b>	<b>Dimming Start Mode: High</b>
<b>231</b>	<b>DimmingStart Mode: Low</b>
<b>232-233</b>	<b>InvertPixel Order: Yes</b>
<b>234-235</b>	<b>Invert Pixel Order: No</b>
<b>236-237</b>	<b>Pan Invert: Yes</b>
<b>238-239</b>	<b>Pan Invert: No</b>
<b>240-241</b>	<b>Tilt Invert: Yes</b>
<b>242-243</b>	<b>Tilt Invert: Nol</b>
<b>244-255</b>	<b>Nul</b>

## **REMARK**

The product has perfect performance and integrity packing. All users should be strictly comply with the warning

and operating instructions as stated. Or we aren't in charge of any result by misusing.

Any damage resulting by misuse is not within the Company's warranty.

Any fault or problem caused by neglecting the manual is also not in the charge of dealers.

Errors and omissions for every information given in this manual excepted.

All information is subject to change without prior notice.

**Thank you again for your patronage!**  
**We will be offering sincere service as always,**  
**Wish you have a good lighting journey!**