MOVING HEAD

EXPOLITE
DRAGON CMY 350

COMPACT AND
POWERFUL

VIBRANT CMY
COLOR MIXING

ULTRA FAST
ZOOM OPTIC

MANUAL

TABLE OF CONTENTS

All specifications are subject to change without notice.

THANK YOU FOR PURCHASING OUR PRODUCTS

Every unit has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the outer and inner packaging for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your fixture for any damage and be sure all accessories necessary to operate the unit have arrived intact. In case damage has been found or parts are missing, please contact the distributor or your dealer for further instructions. Do not return this unit to your dealer without first contacting them.

1. SAFETY INFORMATION

⚠	Before operating this unit, please carefully read this manual and keep for usage in the future. It is necessary to respect the following rules.
🗑	Disposal of the device after its life cycle can damage the environment. Take it to a recycling company or return it to the authorized dealer.
CE	The products referred to in this manual conform to the guidelines of the European Community and are therefore marked with the CE logo.
⚠	Keep this device away from children and unauthorized users. The dealer is not liable for damage as a result of ignoring the information in this manual and incorrect operation.
⚠	Before operating this unit, please make sure the housing is in good condition and ensure pan and tilt can rotate in full range.
5 m	Ensure that a minimum distance of 5 m is maintained between the fixture and any flammable material.
	The device can only function with 100-240v voltage, 50 / 60Hz power. Do not connect to any other power supply. Disconnect the device from the power supply before opening it or before maintenance.
IP20	For indoor events
	Never look directly into the projecting lens when the fixture is switched on. The light can cause epileptic seizures for light-sensitive people or people with epilepsy. Extreme caution and compliance with these safety instructions are required, especially with beam effects.
⚠	Do not place or install the device on a surface that is exposed to vibration or any movement.
-15°C +45°C	The device should operate in temperature range -15 °C and + 45 °C. Do not use the device if the temperature exceeds this range.
	The lens shield must be replaced if it is broken. Never use the device if the shield is not fully closed.
⏚	Safety I class device must be earthed.
	When the fixture is mounted overhead, the safety rope must be attached to the correct mounting location on the bottom of the device.
⚠	Please note that damage caused by manual changes to the device is not covered by the warranty.
♻	If possible, recycle all packaging material.

2. TECHNICAL INFORMATION

POWER

Voltage:	AC100~240v,50/60Hz
Source:	350W white LED
Power consumption:	420W
CT:	7200K
Life:	>20,000H

MOVEMENT

Pan movement:	540° (16 bit)
Tilt movement:	270° (16 bit)
Advanced motion system:	Auto repositioning, fast, quiet and smooth
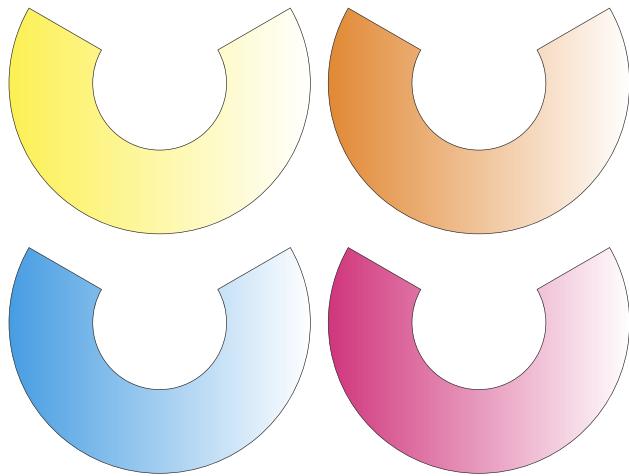
COLORS

1 color wheel with 8 colors + white
- Interchangeable, indexable, bidirectional infinite color rotation effect
- CMY color mixing
- Linear CTO (3200K - 7200K)
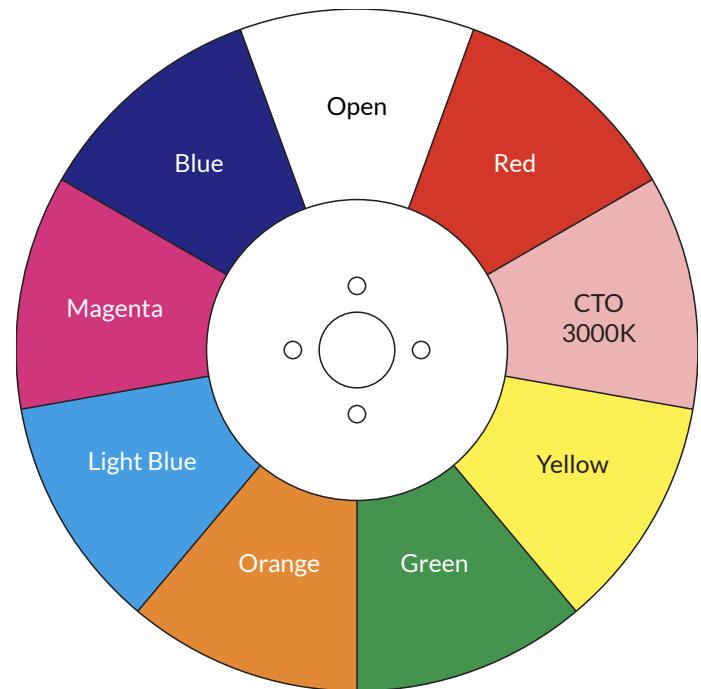
GOBOS

1 Rotating gobo wheel:	7 interchangeable gobo's + open, indexable and gobo shaking effect Inside diameter: 13mm. Outside diameter: 22.8mm
1 Fixed gobo wheel:	10 fixed gobo's + open, with gobo shaking effect
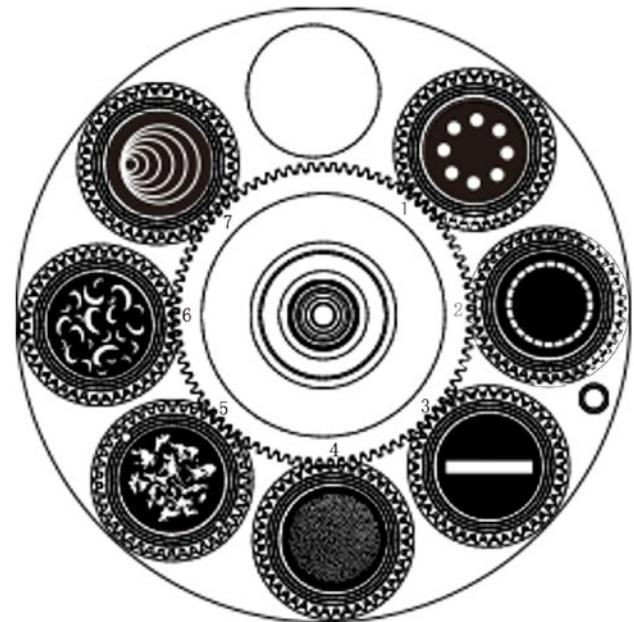
FEATURES

DMX channels: 25/36CH

Prism: 5 facet circular prism +
6 facet linear prism
Rotates in both directions at
variable speed

Motorized Focus

Motorized zoom: 3°- 48° linear zoom

Various strobe

0-100% linear heavy frost

Dimming: 0-100% linear dimming

Isolated signal input

Optional ArtNET control

RDM compatible

Temperature controlled cooling system

Overheating protection

DISPLAY

2.8 inch LCD display with English/Chinese menu
Auto lock and display flip

CONTROL

DMX, Auto, Manual

DIMENSIONS AND WEIGHT

Dimensions: 368 x 210 x 597mm
Packing Dimensions: 505 x 415 x 620mm
Net Weight: 21 KG
Gross Weight: 24 KG

DIMENSIONS

Beam Angle

3° Lux	114000	27800	12200
Diameter(m)	0.26	0.52	0.78

Beam Angle

48° Lux	1160	310	170
Diameter(m)	4.4	8.9	13. 3
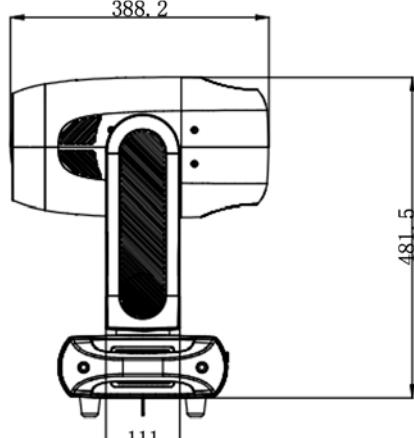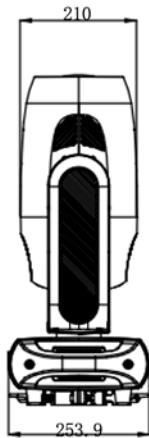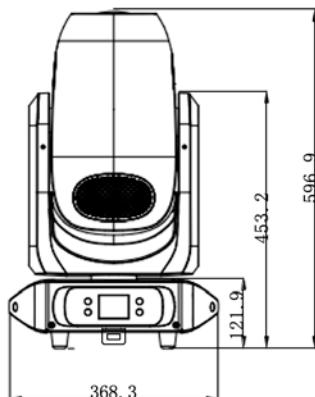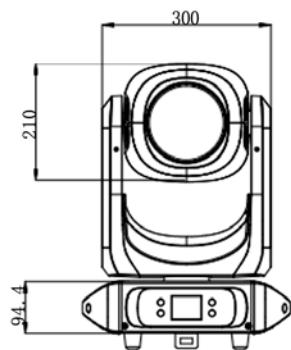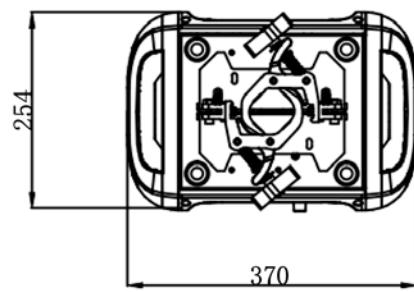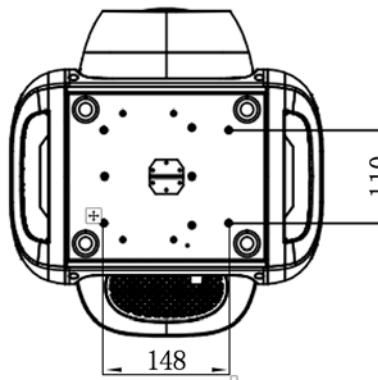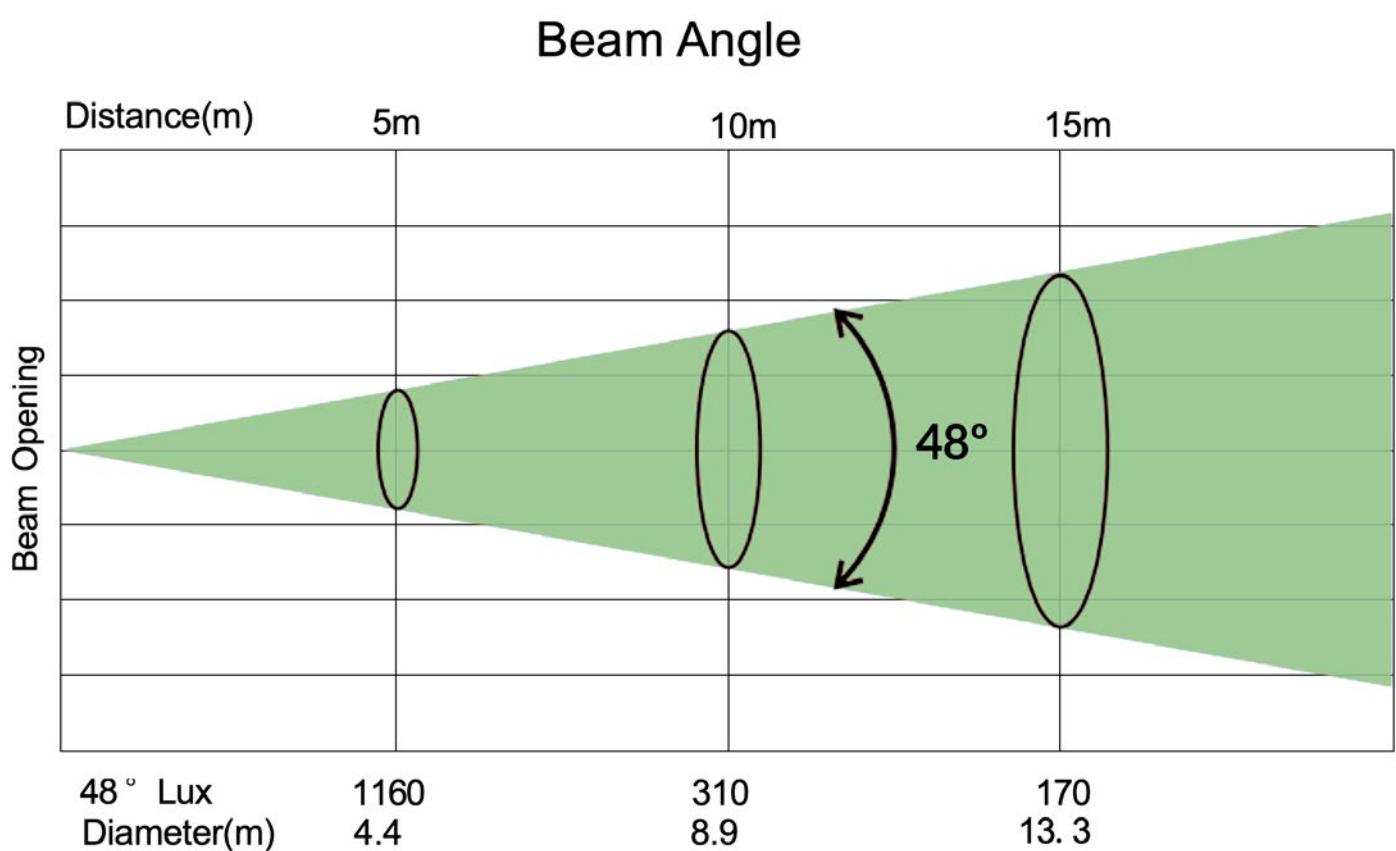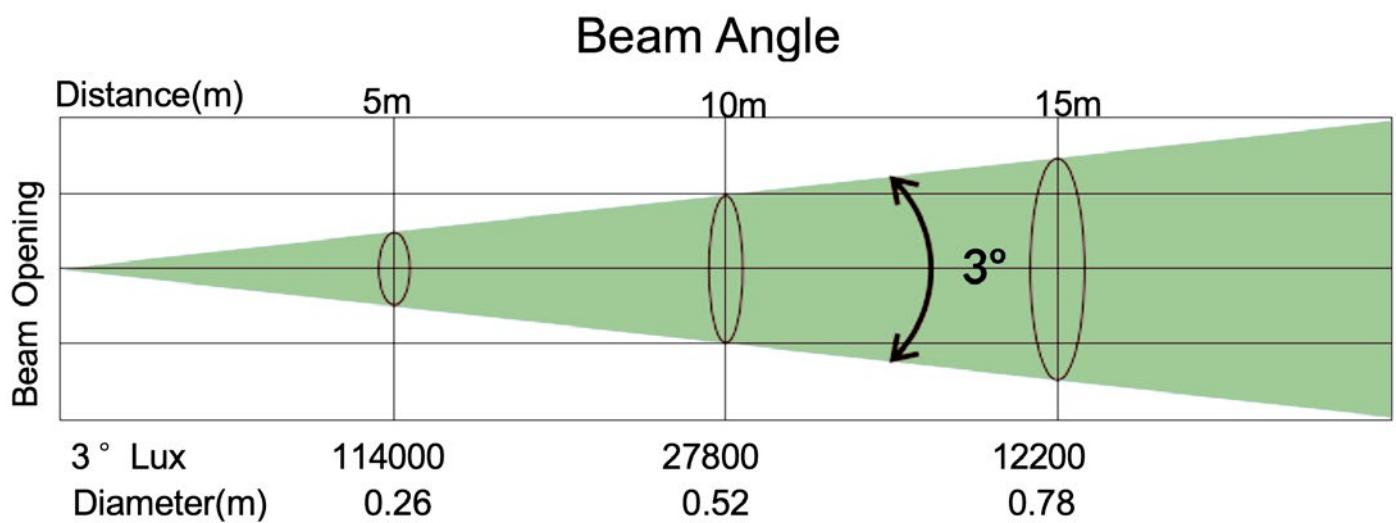
4. DISPLAY

Shows the various menu options and selected functions.

Button:

ENTER	Choose the selected function
DOWN	Move down in the menu
MENU	To enter into, or leave the menu
UP	To go back or move up in the menu

ETHERNET: Transfers fixture's information to a main controller. *
DMX input: For DMX 512 operation, use 3/5-pin XLR plug cable to link the units together
DMX output: For DMX 512 operation, use 3/5-pin XLR plug cable to link the units together

5. MENU

Turn on the unit, press the **MENU** button into menu mode, and press the **UP/DOWN** button until the required function is shown on the monitor.

Select the function with the **ENTER** button, use the **UP/DOWN** button to choose the sub-menu, press the **ENTER** button to save and automatically return to the previous menu.

Press the **MENU** button or wait one minute to automatically exit menu mode.

The main functions are shown below:

Menu	Address	001		
		....		
		512		
	Mode	Signal Select	DMX	
		DMX Mode	25CH	
			25CH	
		Slave		
		Auto	Auto Speed	000 - 255
		Sound	Sensitivity	000 - 255
		Manual Control	Pan	000 - 255
			Pan Fine	000 - 255
			Tilt	000 - 255
			Tilt Fine	000 - 255
			Pan / Tilt Speed	000 - 255
			Strobe	000 - 255
			Dimmer	000 - 255
			Zoom	000 - 255
			Focus	000 - 255
			Auto Focus	000 - 255
			Auto Focus Fine	000 - 255
			Colour Wheel	000 - 255
			Cyan	000 - 255

* Optional

7
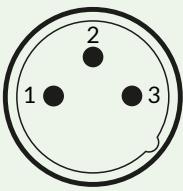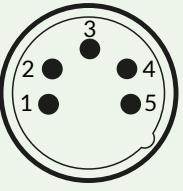
Menu	Mode	Manual Control	Magenta	000 - 255
			Yellow	000 - 255
			CTO	000 - 255
			Rot. Gobo wheel	000 - 255
			Gobo Rotation	000 - 255
			Fix Gobo Wheel	000 - 255
			Prism 1	000 - 255
			Prism Rot 1	000 - 255
			Prism 2	000 - 255
			Prism Rot 2	000 - 255
			Frost	000 - 255
			Control	000 - 255
	Set	Display Reverse	On	
			Off	
			Auto	
		Display	On	
			Off	
		Keylock	On	
			Off	
		Temp Unit	Celsius	
			Fahrenheit	
		DMX Fail	Hold	
			Blackout	
		Dimmer Curve	Square Law	
			Inverse Square Law	
			Linear	
			S Curve	
		Dimmer Frequency	800 Hz	
			1200 Hz	
			3600 Hz	
			5000 Hz	
			10 KHz	
			15 KHz	
			20 KHz	
			25 KHz	
		Dimmer Mode	Standard	
			Stage	
			TV	
			Architecture	
			Theatre	
		Pan Reverse	On	
			Off	
		Tilt Reverse	On	
			Off	
		Encoders	On	
			Off	
		Fan Set	Auto	
			High	
			Silent	

Menu	Set	Calibrate	Password / 8	Pan
				Tilt
				Colour Wheel
				Cyan
				Magenta
				Yellow
				CTO
				Rot. Gobo wheel
				Gobo Rot.
				Fix Color wheel
				Zoom
				Focus
				Prism
				Prism Rot.
				Prism
				Prism Rot.
				Frost
		Motor Reset	All	
			Pan / Tilt	
			Color	
			Gobo	
			Other	
		Reset Default	On	
			Off	
		Language	Chinese	
			English	
		User Time	Password	
	Ethernet *	Set IP	000.000.000.000	
		Set Mask IP	000.000.000.000	
		Set Universe	001-512	
	Info	Software Version	V1.00	
		Time Info	Current Time	
			Total Runtime	
			LED Runtime	
		IP Info	000.000.000.000 000.000.000.000	

* Optional

6. WIRING CHART

Connect the DMX input (XLR connector) cable of the fixture to the DMX output
(female XLR connector) of your controller. You can connect multiple fixtures to this same DMX line in a daisy chain. The DMX cable must be a shielded, twisted pair that is equipped with male and female XLR connectors.

DMX output 3-pin XLR Socket	DMX input 3-pin XLR Socket	DMX output 5-pin XLR Socket	DMX input 5-pin XLR Socket
	1:Ground 2:Signal(-) 3:signal(+)		1:Ground 2:Signal(-) 3:signal(+) 4: N.A. 5: N.A.

USING DMX VIA ART-NET *

To control the fixture via ART-NET, the fixtures must be interconnected with a RJ45 cable. Be sure to set all necessary information regarding the ART-NET configuration, with the universe being used and specify in the menu that the fixture is being controlled through ART-NET (see OPTION DETAILS in the « OPTIONS » menu).

DRAGON CMY 350 DMX ADDRESS SETTING

All DRAGON CMY 350 fixtures must have a DMX start address correctly set when using a DMX signal to control them. The DMX start address is the channel from which the DRAGON CMY 350 "listens" to the digital control information sent by the DMX controller.

The start address must conform to the one set on the DMX controller to control the fixture. This address is the DMX value that appears on the fixture's display. You can set the same address for all the fixtures, or some of them, but you can also set a different address for each fixture, as needed.

If you do set the same address for all the fixtures, they will all "listen" from the DMX channel you have set. The instructions sent by the DMX controller will affect all fixtures at the same time. If you set a different address per fixture, the DMX controller can control each independently. If, for instance, the fixtures are preset in 19-channel DMX mode (required for full control), you will need to adjust the DMX address for the luminaires as follows: The first unit with DMX address 001, the second with DMX address 020(19 + 1), the third with DMX address 039 (020+19), etc.

* Optional

7. DMX CHART

Please refer to below configurations to control the fixtures Attention:
1. The unit will maintain the last condition until reset if you cut off the DMX signal.
2. For the channel function, keep the value for about 5 seconds then the corresponding function will take into effect.

DMX Mode		Value	Function
25CH	36CH		
1	1		**Pan Movement 8 bit**
		0-255	Pan Movement
2	2		**Pan Fine 16bit**
		0-255	Fine control of Pan movement
3	3		**Tilt Movement 8bit**
		0-255	Tilt Movement
4	4		**Tilt Fine 16bit**
		0-255	Fine control of Tilt movement
5	5		**Speed Pan/Tilt movement:**
		0-255	max to min speed
6	6		**Shutter, strobe**
		0-10	Shutter closed
		11-21	Shutter open
		22-126	Strobe effectslow to fast
		127-137	Shutter open
		138-201	Pulse-effect in sequences
		202-212	Shutter open
		213-244	Random strobe effectslow to fast
		245-255	Shutter open
7	7		**Dimmer intensity:**
		0-255	Intensity 0 to 100%
	8		**Dimmer intensity Fine:**
		0-255	Dimmer intensity fine
8	9		**Zoom:**
		0-255	Zoom adjustment from small to big
	10		**Zoom Fine:**
		0-255	Zoom adjustment Fine
9	11		**Focus:**
		0-255	Continuous adjustment from near to far
	12		**Focus Fine:**
		0-255	Continuous adjustment Fine
10	13		**Reserved**
11	14		**Reserved**
12	15		**Color Wheel:**
		0-19	Open
		20-25	Open/Red
		26-31	Red
		32-37	Red/CTO 3200K
		38-43	CTO 3000K
		44-49	CTO 3000K /Yellow
		50-55	Yellow

DMX Mode		Value	Function
25CH	36CH		
12	15	56-61	Yellow/Green
		62-67	Green
		68-73	Green/Orange
		74-79	Orange
		80-85	Orange/Light blue
		86-91	Light blue
		92-97	Light blue/Magenta
		98-103	Magenta
		104-109	Magenta/Blue
		110-115	Blue
		116-121	Blue/Open
		122-127	Open
		128-189	Forwards rainbow effect from fast to slow
		190-193	No rotation
		194-255	Backwards rainbow effect from slow to fast
		104-109	Magenta/Blue
		110-115	Blue
		116-121	Blue/Open
		122-127	Open
		128-189	Forwards rainbow effect from fast to slow
		190-193	No rotation
		194-255	Backwards rainbow effect from slow to fast
	16		**Reserved**
13	17		**Cyan Color**
		0-255	Cyan (0-white,255-100% Cyan)
	18		**Cyan Color Fine**
		0-255	Cyan Fine
14	19		**Magenta Color**
		0-255	Magenta (0-white,255-100% Magenta)
	20		**Magenta Color Fine**
		0-255	Magenta Fine
15	21		**Yellow Color**
		0-255	Yellow (0-white,255-100% Yellow)
	22		**Yellow Color Fine**
		0-255	Yellow Fine
16	23		**CTO Color**
		0-255	CTO (0-white,255-100% CTO)
	24		**CTO Color Fine**
		0-255	CTO Fine
17	25		**Rotating gobos, cont. rotation 1**
		0-7	Open
		8-20	Rot. gobo 1
		21-33	Rot. gobo 2
		34-46	Rot. gobo 3
		47-59	Rot. gobo 4
		60-72	Rot. gobo 5

DMX Mode		Value	Function
25CH	36CH		
17	25	73-85	Rot. gobo 6
		86-98	Rot. gobo 7
		99-111	Gobo 1 shake slow to fast
		112-124	Gobo 2 shake slow to fast
		125-137	Gobo 3 shake slow to fast
		138-150	Gobo 4 shake slow to fast
		151-163	Gobo 5 shake slow to fast
		164-176	Gobo 6 shake slow to fast
		177-189	Gobo 7 shake slow to fast
		190-221	Gobo wheel rotation forwards from fast to slow
		222-223	No rotation
		224-255	Gobo wheel rotation backwards from slow to fast
18	26		**Rotating gobo index, rotating gobo rotation 1**
		0-127	Gobo indexing
		128-189	Forwards gobo rotation from fast to slow
		190-193	No rotation
		194-255	Backwards gobo rotation from slow to fast
	27		**Rotating gobo indexing Fine 1**
		0-255	Fine indexing
19	28		**Fixed Gobo 2**
		0-9	Open
		10-17	Beam reducer 1
		18-25	Beam reducer 2
		26-33	Gobo 1
		34-41	Gobo 2
		42-49	Gobo 3
		50-57	Gobo 4
		58-65	Gobo 5
		66-73	Gobo 6
		74-81	Gobo 7
		82-89	Gobo 8
		90-99	Beam reducer 1 shake slow to fast
		100-109	Beam reducer 2 shake slow to fast
		110-119	Gobo 1 shake slow to fast
		120-129	Gobo 2 shake slow to fast
		130-139	Gobo 3 shake slow to fast
		140-149	Gobo 4 shake slow to fast
		150-159	Gobo 5 shake slow to fast
		160-169	Gobo 6 shake slow to fast
		170-179	Gobo 7 shake slow to fast
		180-189	Gobo 8 shake slow to fast
		190-221	Gobo wheel rotation forwards from fast to slow
		222-223	No rotation
		224-255	Gobo wheel rotation backwards from slow to fast

DMX Mode		Value	Function
19CH	25CH		
20	29		**Prism 1**
		0-127	Open
		128-255	Prism
21	30		**Rotating prism 1 index, rotating prism rotation**
		0-127	Prism indexing
		128-189	Forwards prism rotation from fast to slow
		190-193	No rotation
		194-255	Backwards prism rotation from slow to fast
	31		**Rotating prism 1 indexing Fine**
		0-255	Fine indexing
22	32		**Prism 2**
		0-127	Open
		128-255	Prism
23	33		**Rotating prism 2 index,rotating prism rotation**
		0-127	Prism indexing
		128-189	Forwards prism rotation from fast to slow
		190-193	No rotation
		194-255	Backwards prism rotation from slow to fast
	34		**Rotating prism 2 indexing Fine**
		0-255	Fine indexing
24	35		**Frost**
		0 -255	0-100% Linear Frost
25	36		**Reset, LCD, Fans**
		0-9	unused
		10-19	Display Off
		20-29	Display On
		30-36	Display Invert Off
		37-43	Display Invert On
		44-49	Display Invert Auto
		50-59	Auto fan control mode
		60-69	High fan control mode
		70-79	Silent fan control mode
		80-82	Square Law
		83-85	Inv SQ Law
		86-88	Linear
		89-91	S Curve
		92-94	800Hz Refresh rate
		95-97	1200Hz Refresh rate
		98-100	3600Hz Refresh rate
		101-103	5000Hz Refresh rate
		104-106	10KHz Refresh rate
		107-109	15KHz Refresh rate
		110-112	20KHz Refresh rate
		113-115	25KHz Refresh rate
		116-118	Standard
		119-121	Stage

25	36	122-124	TV
		125-127	Architecture
		128-130	Theatre
		131-133	Gobo in + CTB Correction Off
		134-136	Gobo in + CTB Correction On
		137-149	unused
		150-159	All motor reset
		160-169	Scan motor reset
		170-179	Colors motor reset
		180-189	Gobo motor reset
		190-199	Other motor reset
		200-255	unused

8. ERROR MESSAGES

When you turn on your DRAGON CMY 350, it will first perform an automatic reset.
The display may show "Err channel is XX" indicating there is a problem with one or more of the channels.
"XX"represents channel 1, 2, 3, 4, 5 or 6, which contain the testing sensor for positioning.
For example, the message, "Err channel is Pan movement", indicates an error in channel 1.
If there is an error on channel 1 and channel 3 at the same time, the following error message may appear:
"Err channel is Pan movement", "Err channel is Tilt movement". The system will flash twice, and the fixture will generate a second reset. If the error message persists after more than two resets, the channels showing errors will not work properly but the other channels will function normally.

Please contact your authorized dealer or Light-Inc for service and do not attempt to repair the fixture yourself.

PAN- movement Er
(PAN-yoke movement error): This message will appear after the reset if the yoke's magnetic-indexing circuit malfunctions (failed sensor or magnet missing) or the stepping-motor is defective (also caused by its driving IC on the main PCB). The PAN- movement does not return to the default position after the reset.

TILT- movement Er
(TILT- head movement error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions ((Optical Sensor or Magnetic Sensor fails)) or the stepper motor is defective (or its driving IC on the main PCB). The TILT-movement is not located in the default position after the reset.

Zoom Er
(Zoom error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (Optical Sensor or Magnetic Sensor fails) or the stepper motor is defective (or its driving IC on the main PCB). The Zoom -movement is not located in   the default position after the reset.

Focus Er
(Focuswheel error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (Optical Sensor or Magnetic Sensor fails) or the stepper motor is defective (or its driving IC on the main PCB). The Focus -movement is not located in the default position after the reset.

Color wheel Er
(Color wheel- error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the steppermotor is defective (or its driving IC on the main PCB). The Color - movement is not located in the default   position after the reset.

Rot_Gobo wheel Er

(Rot_Gobo1wheel - error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the steppermotor is defective (or its driving IC on the main PCB). The Rot_Gobo1 - movement is not located in the default position after the reset.

Fix_Gobo wheel Er

(Fix_Gobowheel - error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the steppermotor is defective (or its driving IC on the main PCB). The Fix_Gobo - movement is not located in the default position after the reset.

Prism Er

(Prism error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the steppermotor is defective (or its driving IC on the main PCB). The Prism_5 - movement is not located in the default position after the reset.

Frost Er

(Frost - error) This message will appear after the reset of the fixture if the head's magnetic-indexing circuit malfunctions (sensor failed or magnet missing) or the steppermotor is defective (or its driving IC on the main PCB).The Frost 1 - movement is not located in the default position after the reset.

9. CLEANING AND MAINTENANCE

The following points have to be considered during 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 to the housing, lenses, rigging and installation points (ceiling, suspension, truss).
3.   Motorized parts must not show any signs of wear and must move smoothly without issue.
4.   The power supply cables must not show any damage, material fatigue or sediment.

Further instructions depending on the installation location and usage have to be adhered to by a qualified installer and any safety concerns have to be removed.

10. NOTES

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DRAGON CMY 350