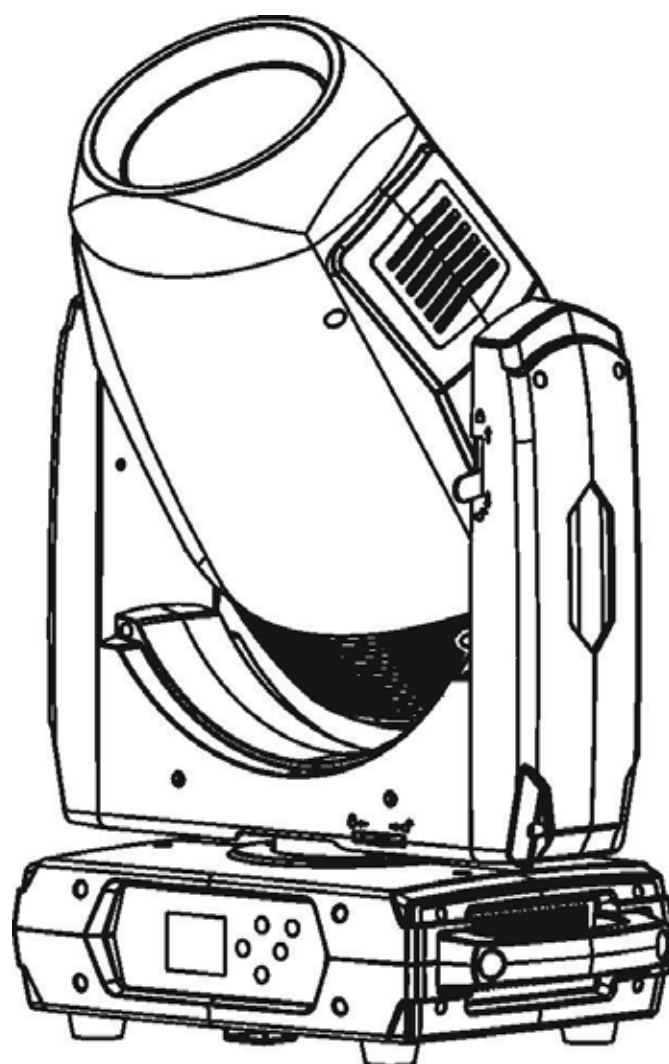


350W Hybrid Moving Head Light with CMY and CTO User Manual

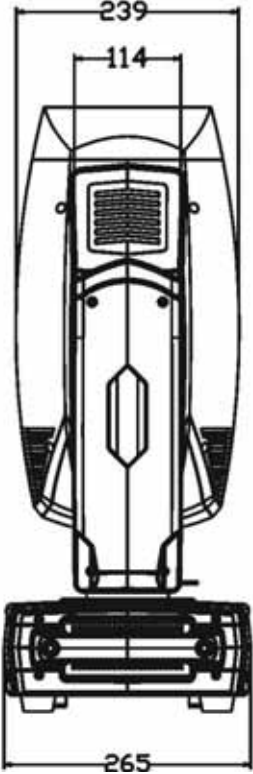
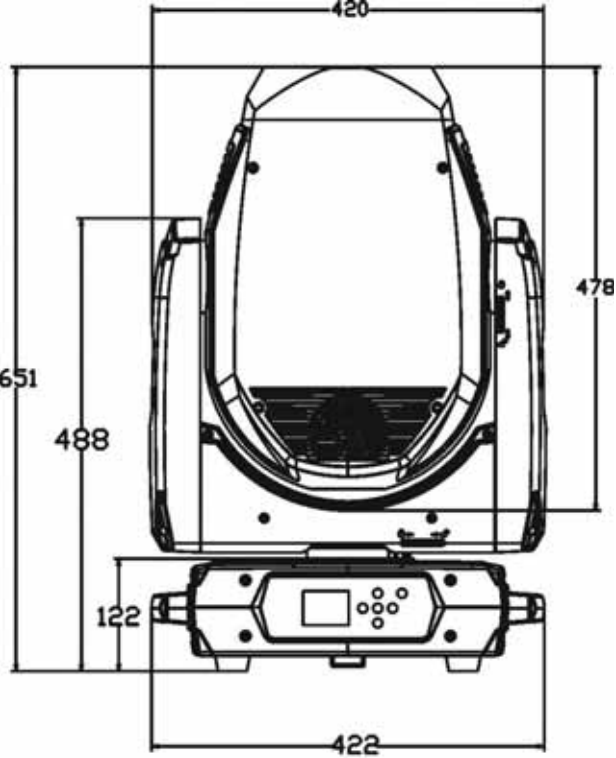


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Dimensions

All dimensions are in millimeters



Before Using

What's inside

- Equipment x 1
- Power cable with Plug x 1
- User manual x 1
- Iron holder x 2

Open Instruction



Help preserve the environment! Ensure that this product is recycled at the end of its life. Your supplier can give details of local arrangements for the disposal of products.

Please open the equipment carefully ,and check all the spare parts are included or not.If any part of the cause of the failure due to improper transportation or carton,please keep the packing materials and immediately inform the shipper to check.If the equipment must be returned to the factory,the equipment should be use the original carton and packaging.

AC Power Supply

The equipment power supply is able to adapt to the wide input voltage.Please confirm the input voltage is in the scale of rated voltage 。 The equipment can adapt to100V-240V AC voltage , Frequency50-60HZ。 It can not run a rheostat(variable resistor) or dimmer circuits.

Safety Instruction

This product is I level protection equipment,so it is must be connected well and connected by the professional people.

- Make sure the voltage don't be above or below which the user manual rated values.
- Confirm the power cord is not a sword cut or damaged.
- Must be cut off the power supply in the condition of no using or

cleaning.

- Only allowed with the power cord plug connection. Please do not force when unplug the power cord to pull the plug.◦
- Be careful in the process of installation of equipment. Avoid touching the bare wire, otherwise it will suffer fatal shocks.◦
- Don't look the light source directly, otherwise it will hurts the eyes.
- When choosing installation position of equipment and the equipment must be more than 0.5m distance between objects.
- Please use the equipment wires appropriate.
- Without the manufacturer's authorization or laypeople don't remove, repair and modification of equipment.
- The maximum operating temperature is 40°C, don't operate the equipment when it is over 40°C
- Do not connect the equipment to the dimmer equipment
- Under 120V voltage, output power don't series more than 3 pcs equipment, voltage 230V. Output power don't series more than 5 pcs

Introduction

Optics

- LED : 1x350W white light LED, 25,000lm
- Illumination at 5 meters can reach 92,000Lux @ 5 °
- Beam angle: 5-35 ° zoom
- Lens caliber: 150mm
- Life span : 50000H, low power consumption, energy saving and environmental protection

Scanning

- Pan / tilt operation:
 - 16bit fine-tuning
 - Smooth and precise positioning
 - Pan: 540 ° or 640 °, tilt 270 °
 - Adjustable pan and tilt I speed
 - The scanning position can be memorized, and it will be reset

automatically after no expected operation.

- Pan and tilt with error correction function

Colour

- CMY + CTO color mixing system
- One color plate, 8 fixed color plates + white light, half-color effect, color plates can be positioned arbitrarily, with two-way rotating rainbow

Gobo

- One fixed gobo: 11 gobos + white circle, with gobo dithering function
- A rotating gobo: 7 plug-in gobos + white light, with gobo and pattern positioning

Specification

- 2 DMX channel modes: 25CH / 31CH international standard DMX512 channels
- 3 control modes: DMX512, Artnet, master-slave
- Prism disc: 5 prisms rotating in both directions
- Focusing: electronic focusing, ultra smooth adjustment
- Dimming: 0-100% 16bit dimming
- Frose: 0-100% linear frose
- Zoom: 5-35 ° linear zoom
- Strobe effect :Puls Random、 Ramp up Random、 Ramp down Random、 Random strobe、 Strobe Breakeffect, 5s.....1s、 Strobe0-20Hz
- Dimming: 0-100% 16bit dimming, which can control the change of light and dark and close light

Display

- 2.4-inch TFT color display
- High anti-interference four-button touch button
- The display board can be reversed by 180 °, which is suitable for installation in unreasonable positions.

Software

- Software update :Update via DMX link
- Display the lamp usage time, which is convenient for customers to understand the lamp usage in time
- LED refresh frequency: 800Hz / 1200/2000/3600 / 25000hz optional
- 4 kinds of dimming curve:Linear Dimmer、Square Dimmer、.Square Dimmer、S-Curve Dimmer

Other functions

- Setting and addressing: RDM
- ArtNet control: RJ45 input and output
- Fan cooling (fan changes speed with temperature change)
- LED temperature detection system to protect the life of light

Power / DMX connection

- Power connection: PowerCON power cable input and output
- DMX XLR socket : 3 Pin& 5 Pin XLR socket input and output

Power

- AC100-240V 50 / 60HZ
- Power consumption : 480W

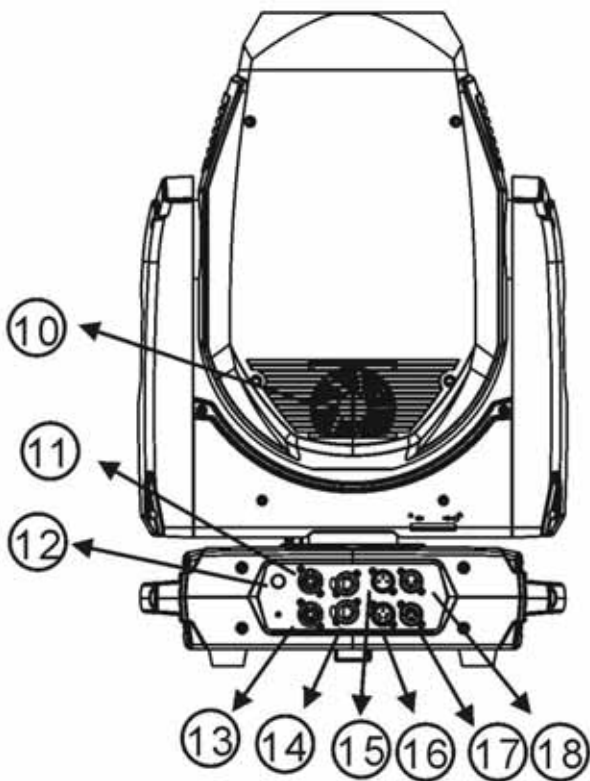
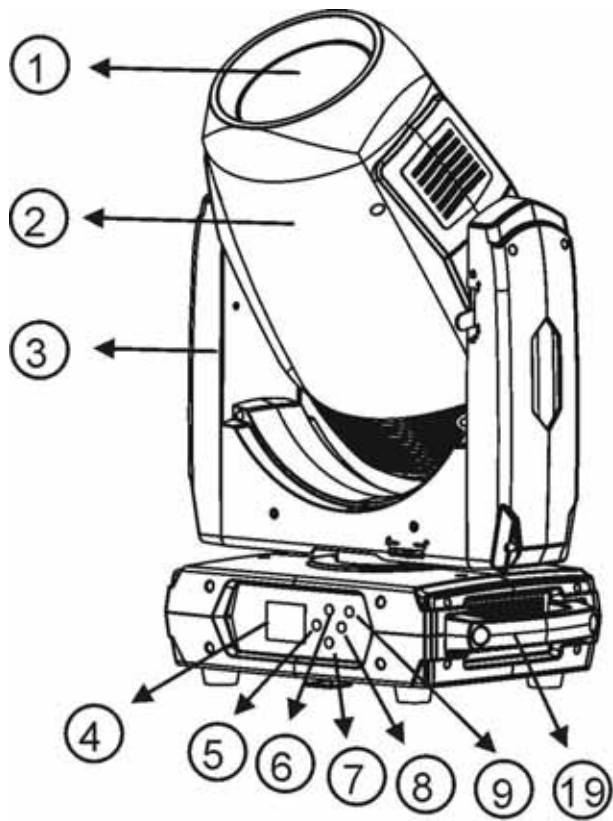
Protection class

- Housing material: ABS plastic fireproof material
- Waterproof level: IP20

Working environment

- Indoor working temperature: -20 ° C ~ + 40 ° C

Product Introduction

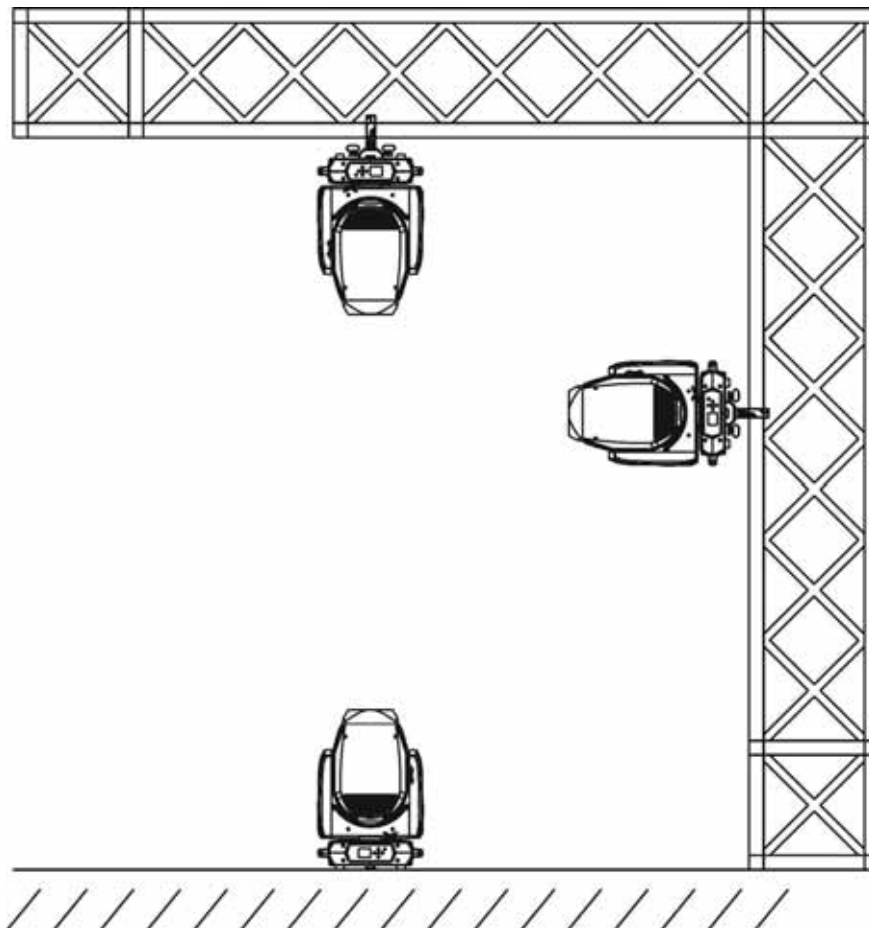


- ① Lens
- ② Head
- ③ Arm
- ④ LCD Display
- ⑤ Menu-button
- ⑥ UP-button
- ⑦ Down-button
- ⑧ Enter-button
- ⑨ Display Rev
- ⑩ Fan
- ⑪ Power input
- ⑫ Fuse
- ⑬ Power output
- ⑭ Rj45
- ⑮ 3 pin DMX input
- ⑯ 5 pin DMX input
- ⑰ 5 pin DMX output
- ⑱ 3 pin DMX output
- ⑲ Carrying handls

Installation


Installation Requirements

- This equipment can be used in many places, it can hang and put on the ground.
- Choosing a suitable place to put or hang the equipment when installation. Must be use the special screws and hook to make sure the lamp's weight is in the weight range.
- When installing the equipment, ensure no inflammable and explosive goods at 0.5 meter distance.
- Please ask the professionals to install the equipment, any improper installation will cause personal injury or material damage.
- To prevent others entering the working areas below, the installation or maintenance of equipment with suitable and stable platform
- The equipment must be placed in ventilated place, at least 50 cm from the ground, please ensure that the vent without clogging.



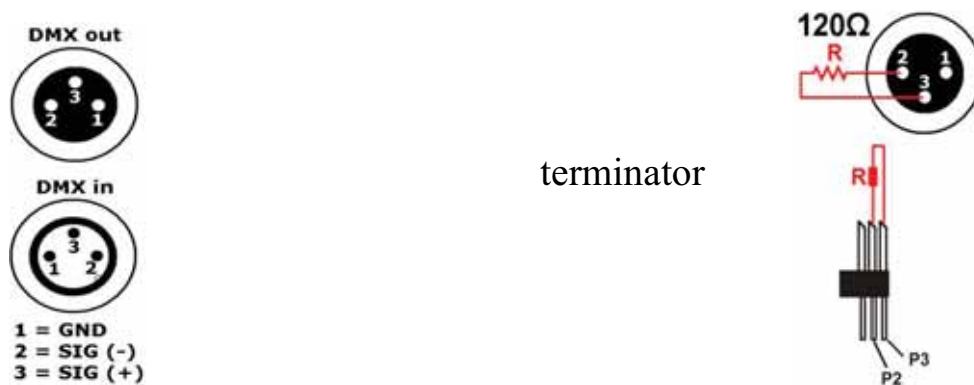
Power supply connection

The equipment can be used in the wide voltage input. Please make sure the voltage is the scale of rated voltage when connecting the power. The equipment can adapt to 100V to 240 V AC voltage and 50-60 Hz.

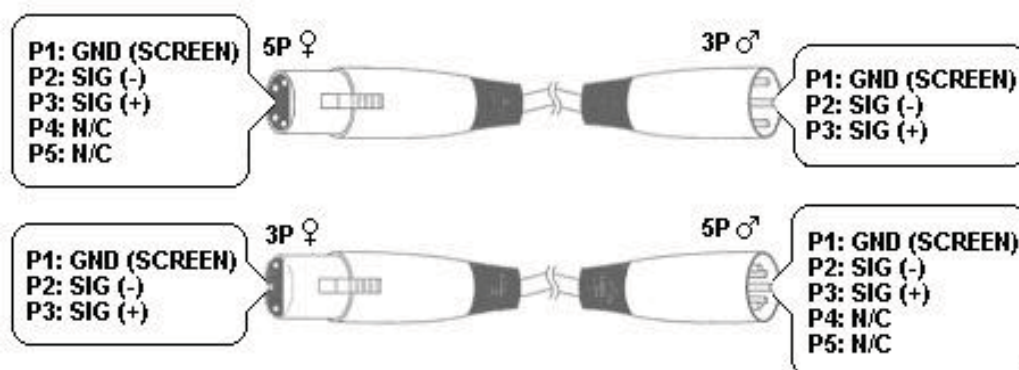
Core (EU)	Core (US)	Connection	Plug Terminal Marking
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	

DMX Signal Connection

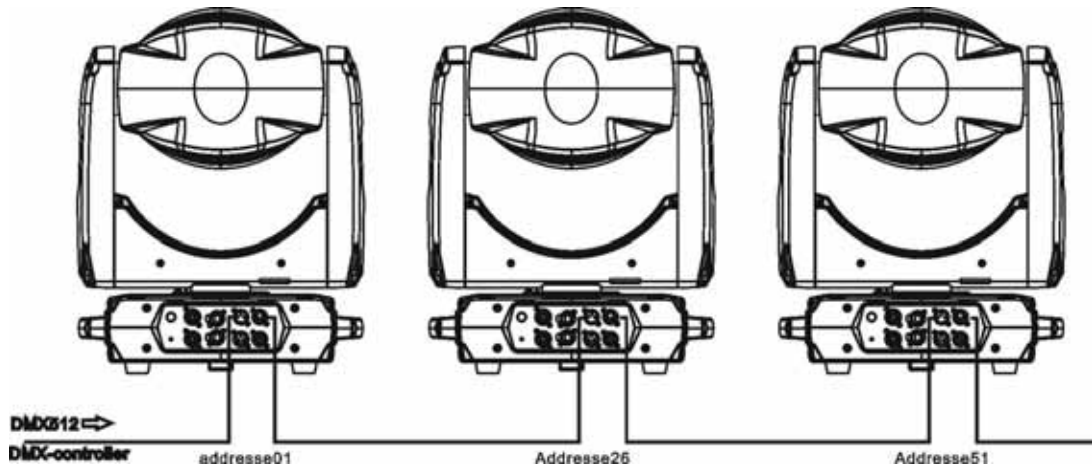
1. Use DMX512 controller, use the DMX signal (male) to plug into the first light(female) 3 pin.
2. Put out of the equipment of the first signal wire(head),connected to the equipment of the next 3 pin plug(female),so on.See belowed pictures.



How to turn the controller line from 3-pins into 5-pins (plug and socket).



DMX Address setting



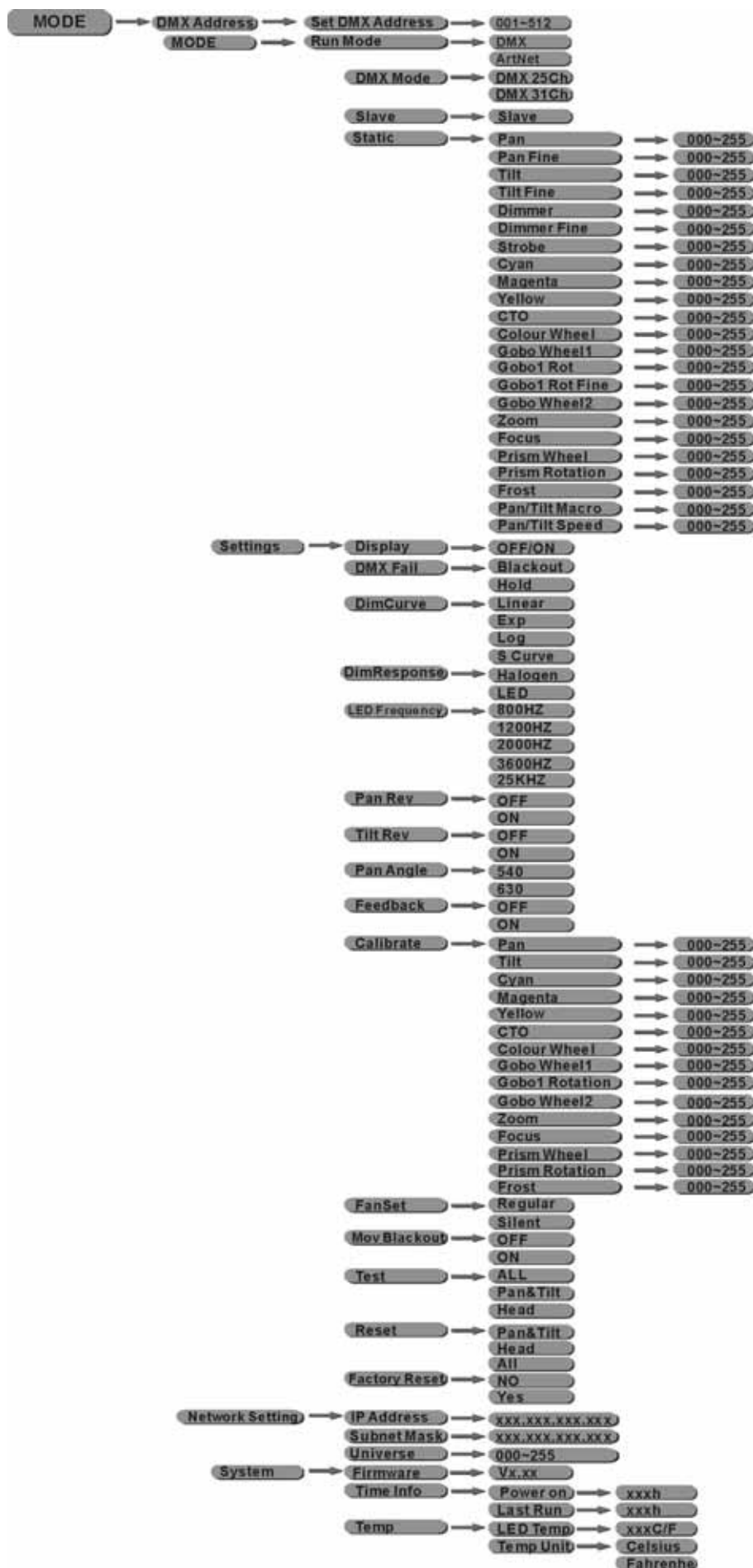
Operating Instruction

Control board function

Button	Function
Mode	Choose mode or function exit
ENTER	Current show menu or enter into the current selected function
UP	Increase the value
DOWN	Decrease the value

- When the spotlight is properly connected to the mains, “Software Update ,Please Wait” (only for internal purposes), “Welcome to LED Moving head”, the model name and software version appear successively on the display during the start-up process. After this operation, the spotlight is ready for use and starts in the mode that was previously selected.
- If one of the DMX operating modes is activated and there is no DMX signal at the DMX input, the display starts to flash after a few seconds.
- After approximately 30 seconds of inactivity, the display will automatically show the currently active operating mode.
- Fast Access Feature: In order to simplify the menu guide, the device has an intelligent menu structure which allows menu and sub-menu items that were last selected to be accessed directly. 1. Pressing MODE and ENTER simultaneously will take you directly to the sub-menu item that was last edited and allows you to instantly change the corresponding value as desired (DMX start address and all operating modes). 2. Pressing MODE will take you directly to the menu item that was last selected and edited; now press ENTER to instantly access the sub-menu item that was selected and edited last (DMX start address and all operating modes).

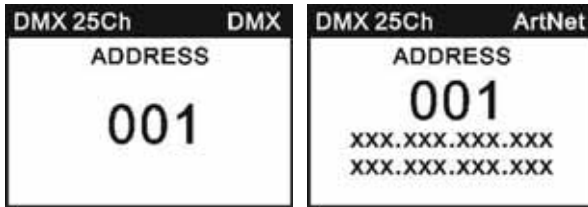
Menu Map



Menu Instruction:

MAIN DISPLAY DMX MODE

In the upper line of the display,the DMX (DMX 25CH,31CH)is display and the DMX start address is prominently shown in the centre(for example DMX25Ch and ADDRESS 001).As soon as the DMX signal is interrupted,the display starts flashing; if the DMX signal is present again,the display stops flashing.



MAIN DISPLAY SLAVE MODE

In the upper line the display,the preset DMX is displayed and “SALVE” is prominently shown in the center. As soon as the control signal is interrupted, the display starts flashing;if the control signal is present again, the display stops flashing.



MAIN DISPLAY STANDALONE MODE

In the upper line of display,the preset DMX mode is displayed and the currently activated Auto mode, static mode STATIC.



SETTING THE DMX START ADDRESS(ADDRESS)

Pressing MODE will take you the selection menu for system setting.Using UP and DOWN,select the menu item“ADDRESS”(colored background)and confirm with ENTER.This is followed by the display of the menu item “Set DMX Address” .Press ENTER again to select the DMX start address as desired button using the UP and DOWM button. If the start address is changed,the address color changes to red. Confirm with ENTER and Press MODE twice to return to the main display.The main display is automatically activated if no input is made within about 30 seconds.

DMX 25Ch	DMX
DMX Address	001
MODE	Yes
Settings	
Network Setting	
System Info	

DMX 25Ch	DMX
Set DMX Address	001

DMX 25Ch	DMX
Set DMX Address	
^	
001	
v	

SETTING THE DMX SIGNAL SELECT(DMX SIGNAL SELECT)

Pressing MODE will take you to the selection menu for system settings. Using UP and DOWN, select the menu item "MODE" (colored background) and confirm with ENTER. Now use the UP and DOWN buttons once more to select the "DMX SIGNAL SELECT" sub-menu item and confirm button pressing ENTER. Using UP and DOWN, select the desired DMX mode (DMX, ArtNet) and confirm with ENTER. Press MODE twice to return to the main display. The main display is automatically activated if no input is made within about 30 seconds. You will find tables with the channels of the different DMX Signal in this manual under DMX SIGNAL CONTROL.

DMX 25Ch	DMX
DMX Address	001
MODE	Yes
Settings	
Network Setting	
System Info	

DMX 25Ch	DMX
Run Mode	
DMX Mode	DMX 25Ch
Slave	
Static	

DMX 25Ch	DMX
DMX	Yes
ArtNet	

DMX 25Ch	ArtNet
DMX	
ArtNet	Yes

SETTING THE DMX MODE(DMX MODE)

Pressing MODE will take you to the selection menu for system settings. Using UP and DOWN, select the menu item "MODE" (colored background) and confirm with ENTER. Now use the UP and DOWN buttons once more to select the "DMX MODE" sub-menu item and confirm button pressing ENTER. Using UP and DOWN, select the desired DMX mode (DMX 25Ch, DMX 31Ch) and confirm with ENTER. Press MODE twice to return to the main display. The main display is automatically activated if no input is made within about 30 seconds. You will find tables with the channels of the different DMX modes in this manual under DMX CONTROL.

DMX 25Ch	DMX
DMX Address	001
MODE	Yes
Settings	
Network Setting	
System Info	

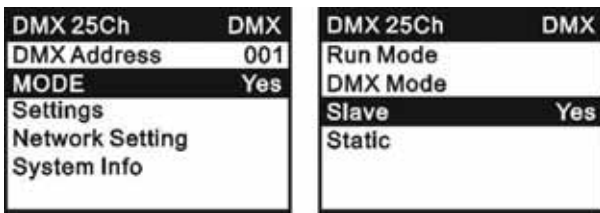
DMX 25Ch	DMX
Run Mode	
DMX Mode	Yes
Slave	
Static	

DMX 25Ch	DMX
DMX 25Ch	Yes
DMX 31Ch	

SETTING THE SLAVE MODE(Slave)

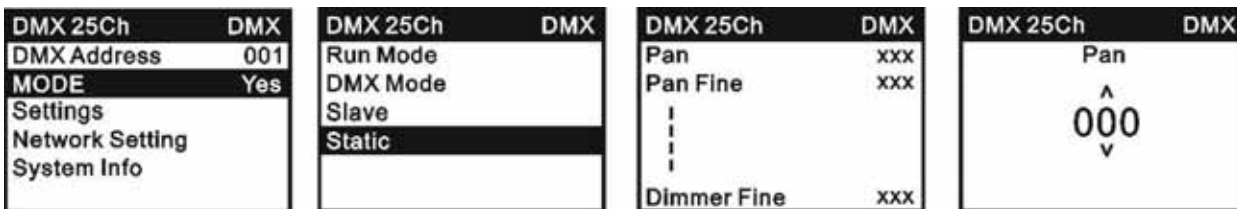
Pressing MODE will take you to the selection menu for system settings. Using UP and DOWN, select the menu item "MODE" (colored background) and confirm with ENTER. Now use the UP and DOWN buttons

once more to select the “DMX MODE” sub-menu item and confirm button pressing ENTER and press MODE twice to return to the main display. The main display is automatically activated if no input is made within about 30 seconds. Connect the slave and the master unit (same model) with a DMX cable and activate one of the standalone modes (Static) on the master unit. Now the slave unit follows the master unit.



STATIC MODE(Static)

In the same way as with a DMX control unit, the static mode allows you to adjust functions such as Pan, Pan fine, Tilt, Tilt fine, Dimmer and pan&tilt speed directly on the device with values from 000 to 255. Thus, an individual scene can be created without an additional DMX controller. Pressing MODE will take you to the selection menu for system settings. Using UP and Down, select the menu item “Static” (colored background) and confirm with ENTER. Use the UP and DOWN buttons to select the function of the LED Moving head that you wish to edit and confirm button pressing ENTER. The value (Pan, Pan fine, Tilt, Tilt fine, Dimmer and pan&tilt speed, etc., see list) of the corresponding function can now be set from 000-255 and press ENTER to confirm the input. Once all of the parameters have been set as desired, press MODE three times to the main display. The main display is automatically activated if no input is made within 30 seconds.



STATIC				
Pan	000	-	255	0% to 100%
Pan fine	000	-	255	0% to 100%
Tilt	000	-	255	0% to 100%
Tilt fine	000	-	255	0% to 100%
Dimmer	000	-	255	0% to 100%
Dimmer fine	000	-	255	0% to 100%
Strobe	000	-	005	Strobe open
	006		010	Strobe closed
	011	-	033	Plus Random, slow->fast
	034	-	056	Ramp up Random, slow -> fast
	057-	-	079	Ramp down Random, slow -> fast

	080	-	102	Random Strobe Effect, slow -> fast
	103	-	127	Strobe Break Effect, 5s.....1s (Short burst with break)
	128	-	250	Strobe slow -> fast <1Hz - 20Hz
	251	-	255	Strobe open
Cyan	000	-	255	0% to 100%
Magenta	000	-	255	0% to 100%
Yellow	000	-	255	0% to 100%
CTO	000	-	255	0% to 100%
Colour Wheel	000	-	005	Open
	006	-	015	Open/Dark Red
	016	-	025	Dark Red
	026	-	035	Dark Red / Deep orgnge
	036	-	045	Deep orgnge
	046	-	055	Deep orgnge / Deep blue
	056	-	065	Deep blue
	066	-	075	Deep blue / Yellow
	076	-	085	Yellow
	086	-	095	Yellow / Deep green
	096	-	105	Deep green
	106	-	115	Deep green / Lavender
	116	-	125	Lavender
	126	-	135	Lavender / Cyan
	136	-	145	Cyan
	146	-	155	Cyan /Pink
	156	-	165	Pink
	166	-	175	Pink/ Open
	176	-	185	Colour off (open)
	186	-	218	Colour Wheel rot. Slow -> Fast, CW
	219	-	222	Colour Wheel rot. Stop
	223	-	255	Colour Wheel rot. Fast -> Slow, CCW
Gobo Wheel 1	000	-	005	Open
	006	-	017	Gobo 1
	018	-	029	Gobo 2
	030	-	041	Gobo 3
	042	-	053	Gobo 4
	054	-	065	Gobo 5
	066	-	077	Gobo 6
	078	-	089	Gobo 7

	090	-	101	Gobo 1 shake (slow-fast)
	102	-	113	Gobo 2 shake (slow-fast)
	114	-	125	Gobo 3 shake (slow-fast)
	126	-	137	Gobo 4 shake (slow-fast)
	138	-	149	Gobo 5 shake (slow-fast)
	150	-	161	Gobo 6 shake (slow-fast)
	162	-	173	Gobo 7 shake (slow-fast)
	174	-	185	Open
	186	-	218	Gobo Wheel rot. Slow -> Fast, CW
	219	-	222	Gobo Wheel rot. Stop
	223	-	255	Gobo Wheel rot. Fast -> Slow, CCW
Gobo 1 Rotation	000	-	005	Gobo1 Rot. Off
	006	-	128	Gobo Position 0° ... 540°
	129	-	191	Gobo Rotation, Slow -> Fast, CW
	192	-	192	Gobo Rotation Stop
	193	-	255	Gobo Rotation, Fast -> , CCW
Gobo 1 Rotation fine	000	-	255	Gobo indexing fine
Gobo Wheel 2	000	-	005	Open
	006	-	013	Gobo 1
	014	-	021	Gobo 2
	022	-	029	Gobo 3
	030	-	037	Gobo 4
	038	-	045	Gobo 5
	046	-	053	Gobo 6
	054	-	061	Gobo 7
	062	-	069	Gobo 8
	070	-	077	Gobo 9
	078	-	085	Gobo10
	086	-	093	Gobo 11
	094	-	101	Open Snake Slow->Fast
	102	-	109	Gobo 1 shake (slow-fast)
	110	-	117	Gobo 2 shake (slow-fast)
	118	-	125	Gobo 3 shake (slow-fast)
	126	-	133	Gobo 4 shake (slow-fast)
	134	-	141	Gobo 5 shake (slow-fast)
	142	-	149	Gobo 6 shake (slow-fast)
	150	-	157	Gobo 7 shake (slow-fast)
158	-	165	Gobo 8 shake (slow-fast)	

	166	-	173	Gobo 9 shake (slow-fast)
	174	-	181	Gobo 10 shake (slow-fast)
	182	-	189	Gobo 11 shake (slow-fast)
	190	-	197	Open
	198	-	225	Gobo Wheel rot. Slow -> Fast, CW
	226	-	227	Gobo Wheel rot. Stop
	228	-	255	Gobo Wheel rot. Fast -> Slow, CCW
Zoom	000	-	255	narrow to wide
Focus	000	-	255	0% to 100%
Prism Wheel	000	-	005	no Prism
	006	-	255	Prism (5 Facet)
Prism Rotation	000	-	005	Prism Rot. Off
	006	-	128	Prism Position 0 ... 540°
	129	-	191	Prism Rotation, Slow -> Fast, CW
	192	-	192	Prism Rotation Stop
	193	-	255	Prism Rotation, Fast -> Slow, CCW
Frost	000	-	255	0% to 100%
Pan/Tilt Macro	000	-	005	off
	006	-	040	PAN „small > big“
	041	-	075	TILT „small > big“
	076	-	110	PAN / TILT „small > big“
	111	-	145	PAN / TILT (invers) „small > big“
	146	-	180	Circle „small > big“
	181	-	215	Circle (invers) „small > big“
	216	-	255	Random „small > big“
Pan/Tilt Speed	000	-	255	Pan/Tilt Fast -> Slow

DEVICE SETTINGS(Setting)

Pressing MODE will take you to the selection menu for system settings. Using UP and DOWN, select the menu item “ Setting ” (colored background) and confirm with ENTER. You will then be taken to the sub-menu to set the sub-menu items(set list).The main display is automatically activated if no input is made within about 30 seconds.

DMX 25Ch	DMX
DMX Address	001
MODE	Yes
Settings	
Network Setting	
System Info	

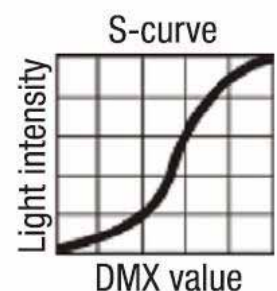
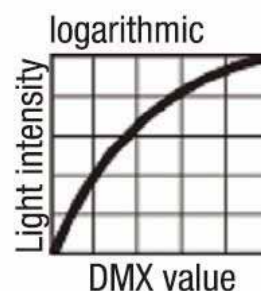
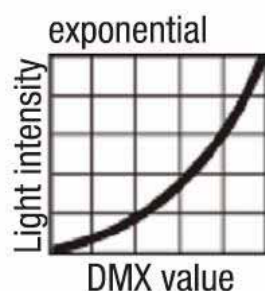
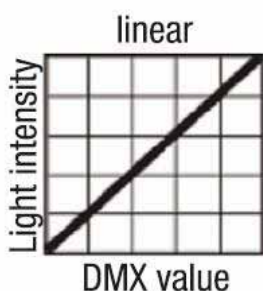
DMX 25Ch	DMX
Display	xxx
DMX Fail	xxx
DimCurve	xxx
DimRespe	xxx
Pan Rev	xxx
Tilt Rev	xxx

DMX 25Ch	DMX
ON	Yes
OFF	

setting				
Display	=	Display lighting	ON	=permanently on
			OFF	=deactivation after approx.1 minutes of inactivity
DMX Fail	=	Operation status with DMX signal interruption	Hold	=last command is held
			Blackout	=activates Blackout
Dimmer Curve	=	Dimmer Curve	Linear	=The light intensity increases linearly with the DMX value
			Exp	=Adjustment of the light intensity is finer in the lower DMX value range and coarser in the upper DMX value range
			Log	=Adjustment of the light intensity is coarser in the lower DMX value range and finer in the upper DMX value range
			S Curve	=Adjustment of the light intensity is finer in the lower and upper DMX value ranges and coarser in the middle DMX value range
Dimmer Response	=	Dimmer response	LED	=The spotlight responds abruptly to changes in the DMX value
			Halogen	=The spot behaves in a manner similar to that of a halogen lamp with gentle changes in brightness
LED Frequency	=	LED PWM frequency	800Hz/1 200Hz/2 000Hz/3 600Hz/2 5KHZ	Setting the LED PWM frequency
Pan Rev	=	Pan Reverse	ON	=Reversal of the Pan direction
			OFF	=no reversal of the Pan direction
Tilt Rev	=	Tilt Reverse	ON	=Reversal of the Tilt direction

			OFF	=no reversal of the Tilt direction
Pan Angle	=	Pan Angle	540	=Pan angle 540°
			630	=Pan angle 630°
Feedback	=	Position correction	ON	=activates automatic position correction
			OFF	=deactivates automatic position correction
Calibrate	=	Correction the position of Pan, Tilt, Cyan, Magenta, Yellow, CTO, Colour wheel, Gobo wheel1, Gobo Rotation, Gobo wheel2, Zoom, Focus, Prism wheel, Prism Rotation, Frost adjust		
Fan Set	=	Fan speed	Regular	=maximum brightness at normal fan function
			Silent	=if necessary, reduced brightness with silent fan
Test	=	Function test	ALL	=Test all functions
			Pan&Tilt	= Test the Pan&Tilt
			Head	= Test the Head motors
Reset	=	Reset	All	= Resetting all motors
			Pan&Tilt	= Resetting of the Tilt motors
			Head	= Resetting of the Zoom motors
Factory Reset	=	Reset to factory set	OFF	=do not perform reset
			ON	= Reset to factory setting

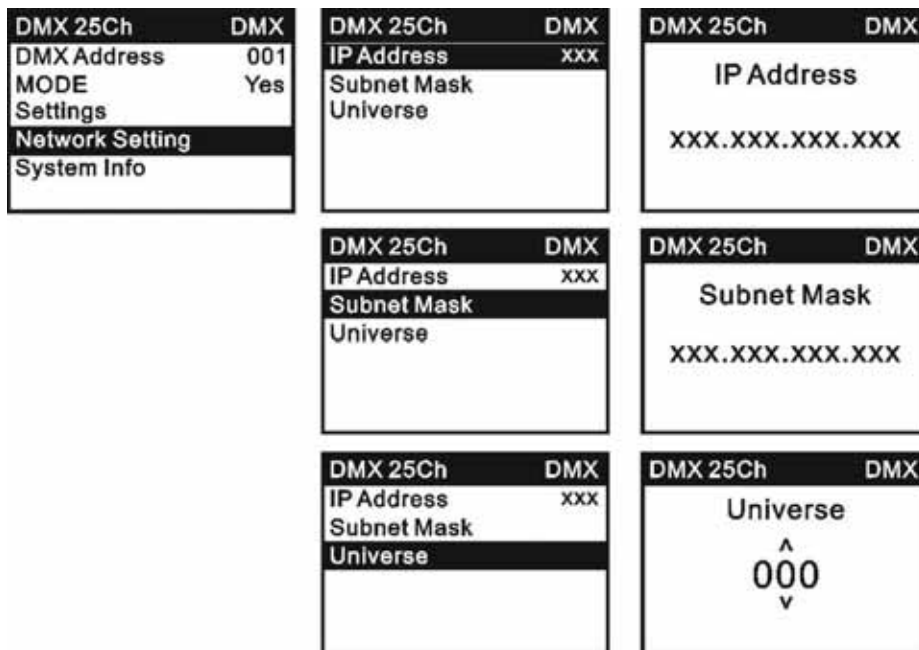
DIMMER CURVES



NETWORK SETTINGS (Network Setting)

Pressing the MODE button will take you to the selection menu for system settings. Using the arrow buttons,

select the menu item “Network Setting”(dark background) and confirm by pressing ENTER. You will then be taken to the sub-menu to set the following sub-menu items (select the submenu items with +, -, set with ENTER, +, -, ENTER)



DEVICE INFORMATION(System Info)

Pressing MODE will take you to the selection menu for system settings. Using UP and DOWN, select the menu item “System Info” (colored background)and confirm with ENTER. You will then be taken to the sub-mune to display the device information. Use the UP and DOWN panels again to select the desired sub-menu item and then press ENTER to retrieve the information.

System Info				
Software Ver	=	Display the device software version		Vx.xx,
Temp info	=	Temperature display of the LED unit	LED Temp	XxC/xxF
			Temp Unit	Celsius(=display in degrees Celsius)
				Fahrenheit(=display in degrees Fahrenheit)
Time info	=	Operating time display	Power on	Displays the total operating time in hours
			Last run hrs	Displays the operating time since the last operation

Press the MODE button repeatedly to return to the main display. The main display id automatically activated if no input within about 30 seconds.

DMX 25Ch	DMX
DMX Address	001
MODE	Yes
Settings	
Network Setting	
System Info	

DMX 25Ch	DMX
Firmware	xxx
Temperature	
Time Info	

DMX 25Ch	DMX
Software Version	
	XXX

DMX 25Ch	DMX
Firmware	xxx
Temperature	
Time Info	

DMX 25Ch	DMX
LED Temp	
Temp Unit	

DMX 25Ch	DMX
LED Temp	
	xxx°C

DMX 25Ch	DMX
LED Temp	
Temp Unit	

DMX 25Ch	DMX
Fahrenheit	Yes
Celsius	

DMX 25Ch	DMX
Firmware	xxx
Temperature	
Time Info	

DMX 25Ch	DMX
Power on	
Last Run Hrs	

DMX 25Ch	DMX
Power on	
	xxx(Hours)

DMX 25Ch	DMX
Power on	
Last Run Hrs	

DMX 25Ch	DMX
Last Run Hrs	
	xxx(Hours)

DMX Channel Table

25Ch mode						
Ch.	Function	Values				Sub-group
1	Pan	000	-	255	0% to 100%	Pan
2	Pan fine	000	-	255	0% to 100%	
3	Tilt	000	-	255	0% to 100%	Tilt
4	Tilt fine	000	-	255	0% to 100%	
5	Dimmer	000	-	255	0% to 100%	Dimmer
6	Dimmer fine	000	-	255	0% to 100%	
7	Strobe Functions	000	-	005	Strobe open	Multifunctional Strobe
		006	-	010	Strobe closed	
		011	-	033	Pulse Random, slow -> fast	
		034	-	056	Ramp up Random, slow -> fast	

		057	-	079	Ramp down Random, slow -> fast	
		080	-	102	Random Strobe Effect, slow -> fast	
		103	-	127	Strobe Break Effect, 5s.....1s (Short burstwith break)	
		128	-	250	Strobe slow -> fast <1Hz - 20Hz	
		251	-	255	Strobe open	
8	Cyan	000	-	255	0% to 100%	Cyan
9	Magenta	000	-	255	0% to 100%	Magenta
10	Yellow	000	-	255	0% to 100%	Yellow
11	CTO	000	-	255	0% to 100%	CTO
12	Colour Wheel	000	-	005	Open	Colour Wheel
		006	-	015	Open/Dark Red	
		016	-	025	Dark Red	
		026	-	035	Dark Red / Deep orgnge	
		036	-	045	Deep orgnge	
		046	-	055	Deep orgnge / Deep blue	
		056	-	065	Deep blue	
		066	-	075	Deep blue / Yellow	
		076	-	085	Yellow	
		086	-	095	Yellow / Deep green	
		096	-	105	Deep green	
		106	-	115	Deep green / Lavender	
		116	-	125	Lavender	
		126	-	135	Lavender / Cyan	
		136	-	145	Cyan	
		146	-	155	Cyan /Pink	
		156	-	165	Pink	
		166	-	175	Pink/ Open	
		176	-	185	Colour off (open)	
		186	-	218	Colour Wheel rot. Slow -> Fast, CW	
219	-	222	Colour Wheel rot. Stop			

		223	-	255	Colour Wheel rot. Fast -> Slow, CCW	
13	Gobo Wheel 1	000	-	005	Open	Gobo
		006	-	017	Gobo 1	
		018	-	029	Gobo 2	
		030	-	041	Gobo 3	
		042	-	053	Gobo 4	
		054	-	065	Gobo 5	
		066	-	077	Gobo 6	
		078	-	089	Gobo 7	
		090	-	101	Gobo 1 shake (slow-fast)	
		102	-	113	Gobo 2 shake (slow-fast)	
		114	-	125	Gobo 3 shake (slow-fast)	
		126	-	137	Gobo 4 shake (slow-fast)	
		138	-	149	Gobo 5 shake (slow-fast)	
		150	-	161	Gobo 6 shake (slow-fast)	
		162	-	173	Gobo 7 shake (slow-fast)	
		174	-	185	Open	
		186	-	218	Gobo Wheel rot. Slow -> Fast, CW	
		219	-	222	Gobo Wheel rot. Stop	
		223	-	255	Gobo Wheel rot. Fast -> Slow, CCW	
14	Gobo 1 Rotation	000	-	005	Gobo1 Rot. Off	
		006	-	128	Gobo Position 0° ... 540°	
		129	-	191	Gobo Rotation, Slow -> Fast, CW	
		192	-	192	Gobo Rotation Stop	
		193	-	255	Gobo Rotation, Fast -> , CCW	
15	Gobo 1 Rotation fine	000	-	255	Gobo indexing fine	
16	Gobo Wheel 2	000	-	005	Open	
		006	-	013	Gobo 1	
		014	-	021	Gobo 2	
		022	-	029	Gobo 3	
		030	-	037	Gobo 4	

		038	-	045	Gobo 5	
		046	-	053	Gobo 6	
		054	-	061	Gobo 7	
		062	-	069	Gobo 8	
		070	-	077	Gobo 9	
		078	-	085	Gobo10	
		086	-	093	Gobo 11	
		094	-	101	Open Snake Slow->Fast	
		102	-	109	Gobo 1 shake (slow-fast)	
		110	-	117	Gobo 2 shake (slow-fast)	
		118	-	125	Gobo 3 shake (slow-fast)	
		126	-	133	Gobo 4 shake (slow-fast)	
		134	-	141	Gobo 5 shake (slow-fast)	
		142	-	149	Gobo 6 shake (slow-fast)	
		150	-	157	Gobo 7 shake (slow-fast)	
		158	-	165	Gobo 8 shake (slow-fast)	
		166	-	173	Gobo 9 shake (slow-fast)	
		174	-	181	Gobo 10 shake (slow-fast)	
		182	-	189	Gobo 11 shake (slow-fast)	
		190	-	197	Open	
		198	-	225	Gobo Wheel rot. Slow -> Fast, CW	
		226	-	227	Gobo Wheel rot. Stop	
		228	-	255	Gobo Wheel rot. Fast -> Slow, CCW	
17	Zoom	000	-	255	narrow to wide	Zoom
18	Focus	000	-	255	0% to 100%	Focus
19	Prism Wheel	000	-	005	no Prism	Prism
		006	-	255	Prism (5 Facet)	
20	Prism Rotation	000	-	005	Prism Rot. Off	Prism Rotation
		006	-	128	Prism Position 0 ... 540°	
		129	-	191	Prism Rotation, Slow -> Fast, CW	
		192	-	192	Prism Rotation Stop	

		193	-	255	Prism Rotation, Fast -> Slow, CCW	
21	Frost	000	-	255	0% to 100%	Frost
22	Pan/Tilt Macro	000	-	005	off	Auto Movement
		006	-	040	PAN „small > big“	
		041	-	075	TILT „small > big“	
		076	-	110	PAN / TILT „small > big“	
		111	-	145	PAN / TILT (invers) „small > big“	
		146	-	180	Circle „small > big“	
		181	-	215	Circle (invers) „small > big“	
		216	-	255	Random „small > big“	
23	Pan/Tilt Speed	000	-	255	Pan/Tilt Fast -> Slow	Pan/Tilt Speed
24	Set Dimmer Curve	000	-	005	no function	Set Dimmer Curve
		006	-	063	Linear Dimmer Curve	
		064	-	127	Exponential Dimmer Curve	
		128	-	191	Logarithmic Dimmer Curve	
		192	-	255	S-Curve Dimmer Curve	
25	Device Settings	000	-	005	no function	Device Settings
		006	-	020	Blackout while Moving on (Hold 3s)	
		021	-	035	Blackout while Moving off (Hold 5s)	
		036	-	050	Invert Pan on (Hold 3s)	
		051	-	065	Invert Pan off (Hold 5s)	
		066	-	080	Invert Tilt on (Hold 3s)	
		081	-	095	Invert Tilt off (Hold 5s)	
		096	-	110	Fan Auto (Hold 3s)	
		111	-	125	Fan Silent (Hold 5s)	
		126	-	140	Led PWM Freq. 800 Hz (hold 3s)	
		141	-	155	Led PWM Freq. 1200 Hz (hold 3s)	
		156	-	170	Led PWM Freq. 2000 Hz (hold 3s)	
		171	-	185	Led PWM Freq. 3600 Hz (hold 3s)	
		186	-	200	Led PWM Freq. 25KHz (hold 3s)	
		201	-	215	Reset Pan/Tilt (Hold 3s)	

		216	-	230	Reset only Head (Hold 3s)	
		231	-	255	Reset All Functions (Hold 3s)	

31Ch mode						
Ch.	Function	Values				Sub-group
1	Pan	000	-	255	0% to 100%	Pan
2	Pan fine	000	-	255	0% to 100%	
3	Tilt	000	-	255	0% to 100%	Tilt
4	Tilt fine	000	-	255	0% to 100%	
5	Dimmer	000	-	255	0% to 100%	Dimmer
6	Dimmer fine	000	-	255	0% to 100%	
7	Strobe Functions	000	-	005	Strobe open	Multifunctional Strobe
		006	-	010	Strobe closed	
		011	-	033	Pulse Random, slow -> fast	
		034	-	056	Ramp up Random, slow -> fast	
		057	-	079	Ramp down Random, slow -> fast	
		080	-	102	Random Strobe Effect, slow -> fast	
		103	-	127	Strobe Break Effect, 5s.....1s (Short burstwith break)	
		128	-	250	Strobe slow -> fast <1Hz - 20Hz	
		251	-	255	Strobe open	
8	Cyan	000	-	255	0% to 100%	Cyan
9	Cyan Fine	000	-	255	0% to 100%	
10	Magenta	000	-	255	0% to 100%	Magenta
11	Magenta Fine	000	-	255	0% to 100%	
12	Yellow	000	-	255	0% to 100%	Yellow
13	Yellow Fine	000	-	255	0% to 100%	
14	CTO	000	-	255	0% to 100%	CTO
15	CTO Fine	000	-	255	0% to 100%	
16	Colour Wheel	000	-	005	Colour off (open)	Colour Wheel

		006	-	015	Open/Dark Red	
		016	-	025	Dark Red	
		026	-	035	Dark Red / Deep orgnge	
		036	-	045	Deep orgnge	
		046	-	055	Deep orgnge / Deep blue	
		056	-	065	Deep blue	
		066	-	075	Deep blue / Yellow	
		076	-	085	Yellow	
		086	-	095	Yellow / Deep green	
		096	-	105	Deep green	
		106	-	115	Deep green / Lavender	
		116	-	125	Lavender	
		126	-	135	Lavender / Cyan	
		136	-	145	Cyan	
		146	-	155	Cyan /Pink	
		156	-	165	Pink	
		166	-	175	Pink/ Open	
		176	-	185	Colour off (open)	
		186	-	218	Colour Wheel rot. Slow -> Fast, CW	
		219	-	222	Colour Wheel rot. Stop	
		223	-	255	Colour Wheel rot. Fast -> Slow, CCW	
17	Gobo Wheel 1	000	-	005	Open	Gobo
		006	-	017	Gobo 1	
		018	-	029	Gobo 2	
		030	-	041	Gobo 3	
		042	-	053	Gobo 4	
		054	-	065	Gobo 5	
		066	-	077	Gobo 6	
		078	-	089	Gobo 7	
		090	-	101	Gobo 1 shake (slow-fast)	
		102	-	113	Gobo 2 shake (slow-fast)	

		114	-	125	Gobo 3 shake (slow-fast)
		126	-	137	Gobo 4 shake (slow-fast)
		138	-	149	Gobo 5 shake (slow-fast)
		150	-	161	Gobo 6 shake (slow-fast)
		162	-	173	Gobo 7 shake (slow-fast)
		174	-	185	Open
		186	-	218	Gobo Wheel rot. Slow -> Fast, CW
		219	-	222	Gobo Wheel rot. Stop
		223	-	255	Gobo Wheel rot. Fast -> Slow, CCW
18	Gobo 1 Rotation	000	-	005	Gobo1 Rot. Off
		006	-	128	Gobo Position 0° ... 540°
		129	-	191	Gobo Rotation, Slow -> Fast, CW
		192	-	192	Gobo Rotation Stop
		193	-	255	Gobo Rotation, Fast -> , CCW
19	Gobo 1 Rotation fine	000	-	255	Gobo indexing fine
20	Gobo Wheel 2	000	-	005	Open
		006	-	013	Gobo 1
		014	-	021	Gobo 2
		022	-	029	Gobo 3
		030	-	037	Gobo 4
		038	-	045	Gobo 5
		046	-	053	Gobo 6
		054	-	061	Gobo 7
		062	-	069	Gobo 8
		070	-	077	Gobo 9
		078	-	085	Gobo10
		086	-	093	Gobo 11
		094	-	101	Open Snake Slow->Fast
		102	-	109	Gobo 1 shake (slow-fast)
		110	-	117	Gobo 2 shake (slow-fast)
		118	-	125	Gobo 3 shake (slow-fast)

		126	-	133	Gobo 4 shake (slow-fast)	
		134	-	141	Gobo 5 shake (slow-fast)	
		142	-	149	Gobo 6 shake (slow-fast)	
		150	-	157	Gobo 7 shake (slow-fast)	
		158	-	165	Gobo 8 shake (slow-fast)	
		166	-	173	Gobo 9 shake (slow-fast)	
		174	-	181	Gobo 10 shake (slow-fast)	
		182	-	189	Gobo 11 shake (slow-fast)	
		190	-	197	Open	
		198	-	225	Gobo Wheel rot. Slow -> Fast, CW	
		226	-	227	Gobo Wheel rot. Stop	
		228	-	255	Gobo Wheel rot. Fast -> Slow, CCW	
21	Zoom	000	-	255	narrow to wide	Zoom
22	Zoom fine	000	-	255	narrow to wide	
23	Focus	000	-	255	0% to 100%	Focus
24	Focus fine	000	-	255	0% to 100%	
25	Prism Wheel	000	-	005	no Prism	Prism
		006	-	255	Prism (5 Facet)	
26	Prism Rotation	000	-	005	Prism Rot. Off	Prism Rotation
		006	-	128	Prism Position 0 ... 540°	
		129	-	191	Prism Rotation, Slow -> Fast, CW	
		192	-	192	Prism Rotation Stop	
		193	-	255	Prism Rotation, Fast -> Slow, CCW	
27	Frost	000	-	255	0% to 100%	Frost
28	Pan/Tilt Macro	000	-	005	off	Auto Movement
		006	-	040	PAN „small > big“	
		041	-	075	TILT „small > big“	
		076	-	110	PAN / TILT „small > big“	
		111	-	145	PAN / TILT (invers) „small > big“	
		146	-	180	Circle „small > big“	
		181	-	215	Circle (invers) „small > big“	

		216	-	255	Random „small > big“	
29	Pan/Tilt Speed	000	-	255	Pan/Tilt Fast -> Slow	Pan/Tilt Speed
30	Set Dimmer Curve	000	-	005	no function	Set Dimmer Curve
		006	-	063	Linear Dimmer Curve	
		064	-	127	Exponential Dimmer Curve	
		128	-	191	Logarithmic Dimmer Curve	
		192	-	255	S-Curve Dimmer Curve	
31	Device Settings	000	-	005	no function	Device Settings
		006	-	020	Blackout while Moving on (Hold 3s)	
		021	-	035	Blackout while Moving off (Hold 5s)	
		036	-	050	Invert Pan on (Hold 3s)	
		051	-	065	Invert Pan off (Hold 5s)	
		066	-	080	Invert Tilt on (Hold 3s)	
		081	-	095	Invert Tilt off (Hold 5s)	
		096	-	110	Fan Auto (Hold 3s)	
		111	-	125	Fan Silent (Hold 5s)	
		126	-	140	Led PWM Freq. 800 Hz (hold 3s)	
		141	-	155	Led PWM Freq. 1200 Hz (hold 3s)	
		156	-	170	Led PWM Freq. 2000 Hz (hold 3s)	
		171	-	185	Led PWM Freq. 3600 Hz (hold 3s)	
		186	-	200	Led PWM Freq. 25K Hz (hold 3s)	
		201	-	215	Reset Pan/Tilt (Hold 3s)	
		216	-	230	Reset only Head (Hold 3s)	
		231	-	255	Reset All Functions (Hold 3s)	