



THE

user manual

Mark-II

rev. 18/07/2023

How to...	Settings	White 50-100-200	White 300-700	Tunable white	RGBW	6C	8C	Safety instructions	Logistics Weight & sizes
---------------------------	--------------------------	----------------------------------	-------------------------------	-------------------------------	----------------------	--------------------	--------------------	-------------------------------------	--

Part 1. Safety instructions

This manual contains all the safety information required for the appropriate use of the fixture. It shall be carefully read and stored for future requirements.




Spotlight sc will not be responsible for any damage to the fixture itself, to other objects or people due to improper installation or use of the fixture either than hereinafter specified. Additionally, you are required to download the User Manual from www.spotlight.it for a comprehensive knowledge at each and all functions.

UNPACKING

Remove the fixture from its package and make sure no damage incurred during transport. In the event of damages, a report or claim shall be issued to the transport agent and the seller to start the repair or replacement process.

PRINTED NOTES ON THE FIXTURES

A label of the fixture' side displays the following information:

- Model part number
- Mains a.c.~ voltage (V)
- Power (W)
- Frequency (Hz)
- Protection rate (IP 20)
- ta max: maximum ambient temperature allowed (°C)
- t max: external surface temperature at thermal regime (°C)
-X m minimum recommended distance between the fixture and the lighted object (m)
-  **Risk Group 2**, in compliance with EN62471. Do not face directly the light source as it might damage your eyesight.
-  **Photo-Biological safety**: do not stare at the light source while functioning
-  **Dispose of waste**: in compliance to 2012/19/EU, this fixture shall be disposed according to proper waste-class regulation

INSTALLATION

- This fixture is designed only for professional use, not for domestic use or handling
- This fixture can be either hung from top or fitted onto a tripod
- Make sure the hanging point is safe and stable. Additionally add a safety rope if required by local safety regulation
- Do not focus the light beam straight onto somebody's eyes

ELECTRICAL CONNECTION

Electrical wiring, plugging and cabling shall be made by professional or qualified technicians. Before and during installation, attend to the following procedures:

- Check that Mains Voltage and Frequency comply with what printed on the fixture's label
- Always check the Mains line is properly grounded
- Check the working power of the fixture, as printed on its label, to prevent from line overload
- This fixtures is foreseen for indoor use: it shall be protected from rain and humidity if used under different conditions (IP 20)

MAINTENANCE

Do not open the fixture before disconnecting from the mains: an electrical shock might occur. A complete inspection shall be made once a year to check the electrical and mechanical parts' integrity and the software upgrades. Repairs shall be made by the manufacturer only or its appointed after-sale service center. After cleaning, the lenses shall be re-assembled and, if scratched or ruined, they shall be replaced with original parts.

COMPLIANCE

This products complies with the European Directives:

- 2014/35/EU: Safety on Low Voltage Directive LVD
- 2014/30/EU: Electromagnetic Compatibility EMC
- 2011/65/EU: Restriction of Hazardous Substances Directive RoHS



Part 2. General info

All Spotlight lights, depending on the LED source installed and power, can be grouped into 6 groups (represented by 6 colours).

LED Power	Powercon daisy chain	Cold start Inrush current	Type	LED Source				
				White	Tunable White	RGBW	6C	8C
50W	Total load max 16A - 3,5KW	60A/230VAC	Fresnel PC Profile	1A Mark-II Firmware 1.01 DMX chart 1A				
85W			Downlight					
100W			Fresnel PC Profile					
200W			Fresnel PC Profile					
300W		80A/230VAC	Cyclorama			3 Firmware 1.01 DMX chart 3		
			Fresnel PC Profile Followspot	1B Mark-II Firmware 1.03 DMX chart 1B	2 Mark-II Firmware 1.01 DMX chart 2		4 Mark-II Firmware 1.01 DMX chart 4	
700W		40A/230VAC	Fresnel PC Profile Followspot					5 Mark-II Firmware 1.07 DMX chart 5

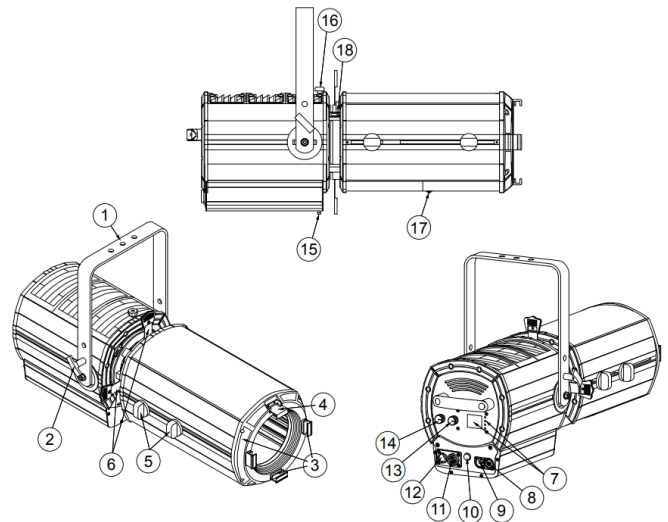
HARDWARE

Fresnel and PC:

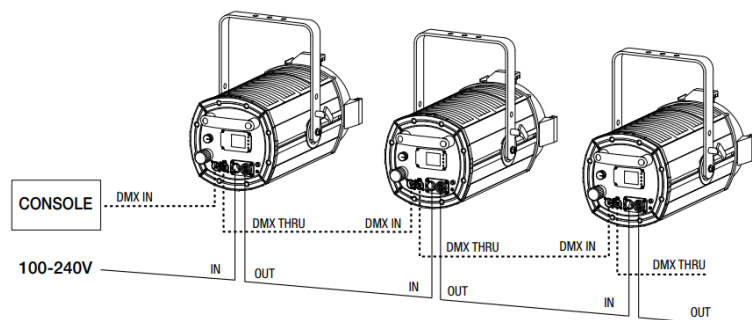
- Suspension yoke
- Handle for tilt regulation
- Accessory slot
- Accessory locking and releasing guide
- Display and menu buttons
- DMX IN connector
- DMX THRU connector
- Fuse
- Power IN (Powercon connector)
- Power OUT (Powercon connector)
- Light intensity adjustment knob
- CCT / Colour wheel adjustment knob

Profile and Followspot have also:

- Handles for lens adjustment (zoom and focus)
- Lever for framing shutters adjustment
- Screw for front housing removal
- Front housing rotation stop knob
- Front housing access door screw for lenses cleaning
- Gobo slot sliding cover

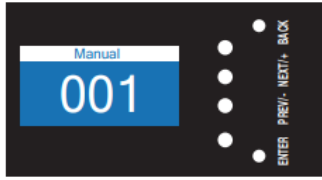


ELECTRICAL AND DMX CONNECTIONS



DISPLAY

When switched on, the installed software version is displayed, followed by the display of the default settings, ie the currently set operating mode.

	White	White	TW	RGBW	6C	8C																							
<p>If the luminaire is DMX controlled, after 3 seconds the display will show the mode and DMX address.</p> <p>Otherwise it will show the potentiometers status.</p> <p>By pressing the ENTER (or SETUP) button you access the SETTINGS.</p> <p>With the PREV and NEXT buttons you can scroll the items list which in case of value type entries will have the function of increasing (+) or decreasing (-) the values.</p> <p>The ENTER button allows to access the submenu and change the values which can be confirmed by pressing ENTER or canceled with the BACK button, which can be used also to exit the submenu and go back to the main menu.</p>		<table border="1"> <tr> <td>MANUAL-PRESET</td> <td>ESC</td> </tr> <tr> <td>LEE-735</td> <td>UP</td> </tr> <tr> <td>VELVET GREEN</td> <td>DOWN</td> </tr> <tr> <td>036 014%</td> <td>ENTER</td> </tr> </table>					MANUAL-PRESET	ESC	LEE-735	UP	VELVET GREEN	DOWN	036 014%	ENTER															
MANUAL-PRESET	ESC																												
LEE-735	UP																												
VELVET GREEN	DOWN																												
036 014%	ENTER																												
<p>Display Mark-II</p> <p>Red band: the working list of PRESET. There are 3 lists:</p> <ul style="list-style-type: none"> MANUAL PRESET: CCT (9) + LEE FILTERS (66) + custom (10) MANUAL COLOUR: LEE filters (66) + custom (19) MANUAL CCT: CCT (36) <p>To move from one list of presets to another use the arrows</p> <ul style="list-style-type: none"> Filter name + filter code CCT Dimmer value 0 – 100% Dimmer value 0 – 255 <p>When switched on, the fixture recalls the last <u>saved</u> dimmer and preset value.</p> <p><u>How to save a preset:</u></p> <ol style="list-style-type: none"> select the desired dimmer and preset values press and hold the red encoder (CCT/COLOUR WHEEL) for 3 seconds saving will be confirmed by the red color of the text <p>Note:</p> <ul style="list-style-type: none"> if you change the <u>dimmer</u>, the color goes from red to yellow (and when you go back to the saved value it goes back to red) if you change the <u>preset</u>, the color goes from red to white <p>If the fixture is connected to a DMX console, the encoders are automatically disabled. If you need to activate the encoders without disconnecting the fixture from the console, press and hold the first button from the top for 2 seconds. To exit this mode, just hold down the same button for 2 seconds.</p>	<table border="1"> <tr> <td>MANUAL-COLOUR</td> <td>ESC</td> </tr> <tr> <td>LEE-071</td> <td>UP</td> </tr> <tr> <td>TOKYO BLUE</td> <td>DOWN</td> </tr> <tr> <td>105 041%</td> <td>ENTER</td> </tr> </table> <table border="1"> <tr> <td>MANUAL-COLOUR</td> <td>ESC</td> </tr> <tr> <td>LEE-071</td> <td>UP</td> </tr> <tr> <td>TOKYO BLUE</td> <td>DOWN</td> </tr> <tr> <td>167 065%</td> <td>ENTER</td> </tr> </table> <table border="1"> <tr> <td>MANUAL-PRESET</td> <td>ESC</td> </tr> <tr> <td>LEE-735</td> <td>UP</td> </tr> <tr> <td>VELVET GREEN</td> <td>DOWN</td> </tr> <tr> <td>036 014%</td> <td>ENTER</td> </tr> </table>					MANUAL-COLOUR	ESC	LEE-071	UP	TOKYO BLUE	DOWN	105 041%	ENTER	MANUAL-COLOUR	ESC	LEE-071	UP	TOKYO BLUE	DOWN	167 065%	ENTER	MANUAL-PRESET	ESC	LEE-735	UP	VELVET GREEN	DOWN	036 014%	ENTER
MANUAL-COLOUR	ESC																												
LEE-071	UP																												
TOKYO BLUE	DOWN																												
105 041%	ENTER																												
MANUAL-COLOUR	ESC																												
LEE-071	UP																												
TOKYO BLUE	DOWN																												
167 065%	ENTER																												
MANUAL-PRESET	ESC																												
LEE-735	UP																												
VELVET GREEN	DOWN																												
036 014%	ENTER																												

All the luminaires are designed to be used in different operating modes:

- LOCAL ENCODER
- DMX
- [RDM](#)
- [STAND ALONE](#) (only for RGBW, 6C, 8C)

Input priority is given:

- in absence of the DMX signal the value set with the potentiometer will be active
- when there is the DMX signal the relevant signal is followed and the potentiometer will be ignored
- if the DMX signal is eliminated or lost, the DMX set level is kept until you act on the potentiometer, which will set the new value

All the fixtures are equipped with a temperature control of the LED and of the driver motherboard, which, to avoid an early deterioration in case of overtemperature, regulates the light intensity.

Some parameters can be modified directly into the fixture by using the [SETTINGS](#) menu or by using a console thanks to the DMX PERSONALITIES and related channels.

How to...	Settings	White 50-100-200	White 300-700	Tunable white	RGBW	6C	8C	Safety instructions	Logistics Weight & sizes
---------------------------	--------------------------	----------------------------------	-------------------------------	-------------------------------	----------------------	--------------------	--------------------	-------------------------------------	--

Part 3. Settings

This section lists all the menu functions, highlighting, for each of them, in which group they are present.

		Values	White 50-200	White 300-700	TW	RGBW	6C	8C	How to...	
DMX SETTINGS	DMX ADDRESS	1 (default) - ... - xxx	YES	YES	YES	YES	YES	YES	How to set the DMX address and DMX personality	
	DMX PERSONALITY		See related table	DMX chart 1A	DMX chart 1B	DMX chart 2	DMX chart 3	DMX chart 4		DMX chart 5
	WIRELESS DMX Mark-II	ACTIVATION	ON OFF (default)	YES	YES	YES	-	YES	YES	
		SHoW ID	24100 - ... - 24300 (default) - ... - 24359	YES	YES	YES	-	YES	YES	
SHoW KEY		000 (default) - ... - 500	YES	YES	YES	-	YES	YES		
STAND ALONE	STANDALONE SET		DISABLED (default) STDALONE MANUAL STDALONE AUTO SCENE MASTER MANUAL MASTER AUTO SCENE SLAVE	-	-	-	YES	YES	How to set the stand alone and master-slave functions	
	MANUAL MODE									
	AUTO SCENE MODE									
	CUSTOM PRESETS									
OPTIONS	LED DELAY	OFF - 50 - ... - 1000 (default) - ... - 2000ms	YES	YES	YES	YES	YES	YES	How to emulate the performance of halogen lamp	
	DIMMING CURVE	LINEAR (1) HALO (2) QUADRATIC (default) (3) GAMMA 2.6 (4) Mark-II GAMMA 2.8 (5) Mark-II S (6) Mark-II	YES	YES	YES	YES 1-2-3	YES	YES		
	AMBER SHIFT	ON OFF (default)	-	-	-	-	YES	YES		
	OUTPUT FREQUENCY	500 - 501 - ... - 1200 (default) - ... - 20000 Hz	YES	YES	YES	YES	YES	YES	How to remove flickering	
	LED BOOST	ON OFF (default)	YES	-	YES	YES	YES	YES	How to increase +20% light output	
	FAN MODE	AUTO (default) STANDARD SILENT	YES	YES	YES	YES	YES	YES	How to set the silent mode	
	DISPLAY ROTATION	STANDARD (default) ROTATED	YES	YES	YES	YES	YES	YES	How to set the display	
	DISPLAY ON/OFF	ON (default) OFF	YES	YES	YES	YES	YES	YES		
	MANUAL CONTROL Mark-II	ON (default) OFF	YES	YES	YES	-	YES	YES	Abilita/disabilita il funzionamento degli encoder	
	LED CALIBRATION	RED	0..255 (default)	-	-	-	YES	YES	YES	How to set LED calibration
		GREEN	0..255 (default)	-	-	-	YES	YES	YES	
		BLU	0..255 (default)	-	-	-	YES	YES	YES	
		WHITE	0..255 (default)	-	-	-	YES	-	-	
		AMBER	0..255 (default)	-	-	-	-	YES	YES	
CYAN		0..255 (default)	-	-	-	-	YES	YES		
DEFAULT SET*		YES	YES	YES	YES	YES	YES	How to back to the default settings		
FACTORY SETTINGS**		YES	YES	YES	YES	YES	YES			
INFO	LED TEMPERATURE	°C	YES	YES	YES	YES	YES	YES		
	BOARD TEMPERATURE Mark-II		YES	YES	YES	-	YES	YES		
	CHIP TEMPEARURE Mark-II		-	YES	YES	-	YES	YES		
	LED TIME		YES	YES	-	-	-	-		
	RED LED TIME	hr - min	-	-	-	YES	YES	YES		
	GREEN LED TIME	hr - min	-	-	-	YES	YES	YES		
	BLU LED TIME	hr - min	-	-	-	YES	YES	YES		
	WHITE LED TIME	hr - min	-	-	-	YES	-	-		
	AMBER LED TIME	hr - min	-	-	-	-	YES	YES		
	CYAN LED TIME	hr - min	-	-	-	-	YES	YES		
	LIME LED TIME	hr - min	-	-	-	-	YES	YES		
	WARM WHITE TIME	hr - min	-	-	YES	-	-	YES		
	COLD WHITE TIME	hr - min	-	-	YES	-	-	YES		
	UNIT TIME	hr - min	YES	YES	YES	YES	YES	YES		
SOFTWARE VERSION	V. Release date	YES	YES	YES	YES	YES	YES			

*DEFAULT SET: It brings the parameters back to the "original built-in settings" (i.e. fan speed, dimming curve, delay...) as they came out from factory

**FACTORY SETTINGS: Password-protected menu, used by Spotlight Tech. Dept to apply special settings (limit the current, working hours reset, limit the power consumption, ...).

These parameters do NOT affect the "default settings" NOTE: Not for final users

Part 4. DMX personalities

The following sections present the **Personalities**, also called **DMX charts**, available for each group to allow the lighting designer to choose which mode to operate the fixture in based on the parameters he decides to control and the number of channels available on the console he is using.

WHITE 50-100-200W

8 bit	1CH		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)

8 bit	2CH		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	STROBO	0 1..255	OFF from slow (3,86 s) to fast (30 ms)

16 bit	3CH		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	STROBO	0 1..255	OFF from slow (3,86 s) to fast (30 ms)

WHITE 300-700W

8 bit	1CH		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)

8 bit	3CH		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	STROBO & STORE		See related table
3 ch	SERVICE	0..255	See related table

16 bit	6CH		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	DELAY		See related table
4 ch	FAN	0..255	from minimum to maximum
5 ch	STROBO & STORE		See related table
6 ch	SERVICE		See related table

CURRENT MODULATION **Mark-II**

This is an operating mode to eliminate flickering disturbances, caused by PWM driving of the LED, and acoustic disturbances, generated by electronic components.

This mode is specifically indicated for applications in TV Studios or acoustic sheels where maximum silence of the devices and the absence of flicker are required.

TUNABLE WHITE

8 bit	EASY		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	CCT LINEAR	See related table	

8 bit	SPLIT		
	Function	DMX value	Description
1 ch	DIMMER	0..255	GM - GENERAL MASTER
2 ch	WARM WHITE	0..255	from OFF (0) to full (255)
3 ch	COLD WHITE	0..255	from OFF (0) to full (255)
4 ch	STROBO & STORE	See related table	
5 ch	SERVICE	See related table	

16 bit	STUDIO		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	CCT PRESET	See related table	
4 ch	WW +/- correzione live del CCT STEP selezionato (= "zero point")	0..15	OFF
		6..111	from minimum to standard
		112..144	CCT STEP
		145..239	from standard to maximum
5 ch	CW +/- correzione live del CCT STEP selezionato (= "zero point")	0..15	OFF
		6..111	from minimum to standard
		112..144	CCT STEP
		145..239	from standard to maximum
240..255	OFF		
6 ch	DELAY	See related table	
7 ch	FAN	0..255	from minimum to maximum
8 ch	STROBO & STORE	See related table	
9 ch	SERVICE	See related table	

16 bit	SPLIT		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	WARM WHITE	0..255	from OFF (0) to full (255)
4 ch	WARM WHITE FINE	0..255	from OFF (0) to full (255)
5 ch	COLD WHITE	0..255	from OFF (0) to full (255)
6 ch	COLD WHITE FINE	0..255	from OFF (0) to full (255)
7 ch	DELAY	See related table	
8 ch	FAN	0..255	from minimum to maximum
9 ch	STROBO & STORE	See related table	
10 ch	SERVICE	See related table	

16 bit	THEATRE FULL		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	CCT LINEAR	See related table	
4 ch	DELAY	See related table	
5 ch	FAN	0..255	from minimum to maximum
6 ch	STROBO & STORE	See related table	
7 ch	SERVICE	See related table	

RGBW

8 bit	EASY		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	CCT PRESET	See related table	
3 ch	COLOUR PRESET	See related table	

Note: CCT PRESET has priority over COLOUR PRESET

8 bit	HSI		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	HUE	0..255	Sequence: R, R+G, G, G+B, B, B+R, R
3 ch	HUE FINE	0..255	Selection of the colour - fine
4 ch	SATURATION	0..255	from OFF (0) to full (255)
6 ch	STROBO & STORE	See related table	
7 ch	SERVICE	See related table	

8 bit	CMY		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	CYAN	0..255	from OFF (0) to full (255)
3 ch	MAGENTA	0..255	from OFF (0) to full (255)
4 ch	YELLOW	0..255	from OFF (0) to full (255)
5 ch	STROBO & STORE	See related table	
6 ch	SERVICE	See related table	

8 bit	RGBW		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	RED	0..255	from OFF (0) to full (255)
3 ch	GREEN	0..255	from OFF (0) to full (255)
4 ch	BLUE	0..255	from OFF (0) to full (255)
5 ch	WHITE	0..255	from OFF (0) to full (255)
6 ch	CCT PRESET	See related table	
7 ch	COLOUR PRESET	See related table	
8 ch	STROBO & STORE	See related table	
9 ch	SERVICE	See related table	

16 bit	FULL		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	RED	0..255	from OFF (0) to full (255)
4 ch	RED FINE	0..255	from OFF (0) to full (255)
5 ch	GREEN	0..255	from OFF (0) to full (255)
6 ch	GREEN FINE	0..255	from OFF (0) to full (255)
7 ch	BLUE	0..255	from OFF (0) to full (255)
8 ch	BLUE FINE	0..255	from OFF (0) to full (255)
9 ch	WHITE	0..255	from OFF (0) to full (255)
10 ch	WHITE FINE	0..255	from OFF (0) to full (255)
11 ch	COLOUR PRESET	See related table	
12 ch	CCT PRESET	See related table	
13 ch	DELAY	See related table	
14 ch	FAN	0..255	from minimum to maximum
15 ch	STROBO & STORE	See related table	
16 ch	SERVICE	See related table	

6 COLOURS

8 bit	EASY		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	ROSCO FILTERS Mark-II	See related table	
3 ch	LEE FILTERS Mark-II	See related table	
4 ch	CCT PRESET	See related table	

Note: CCT PRESET has priority over COLOUR PRESET

8 bit	HSIC		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	HUE	0..255	Sequence: R, R+L, R+G+L, G+L, G, G+C, G+B+C, B+C, B, B+A, R+B+A, R+A, R
3 ch	HUE FINE	0..255	Selection of the colour - fine
4 ch	SATURATION	0..255	from OFF (0) to full (255) → to dim the channel of CCT LINEAR
5 ch	CCT LINEAR	See related table	
6 ch	STROBO & STORE	See related table	
7 ch	SERVICE	See related table	

8 bit	RGBACL		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	RED	0..255	from OFF (0) to full (255)
3 ch	GREEN	0..255	from OFF (0) to full (255)
4 ch	BLUE	0..255	from OFF (0) to full (255)
5 ch	AMBER	0..255	from OFF (0) to full (255)
6 ch	CYAN	0..255	from OFF (0) to full (255)
7 ch	LIME	0..255	from OFF (0) to full (255)
8 ch	STROBO & STORE	See related table	
9 ch	SERVICE	See related table	

16 bit	STUDIO		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	RED	0..255	from OFF (0) to full (255)
4 ch	RED FINE	0..255	from OFF (0) to full (255)
5 ch	GREEN	0..255	from OFF (0) to full (255)
6 ch	GREEN FINE	0..255	from OFF (0) to full (255)
7 ch	BLUE	0..255	from OFF (0) to full (255)
8 ch	BLUE FINE	0..255	from OFF (0) to full (255)
9 ch	AMBER	0..255	from OFF (0) to full (255)
10 ch	AMBER FINE	0..255	from OFF (0) to full (255)
11 ch	CYAN	0..255	from OFF (0) to full (255)
12 ch	CYAN FINE	0..255	from OFF (0) to full (255)
13 ch	LIME	0..255	from OFF (0) to full (255)
14 ch	LIME FINE	0..255	from OFF (0) to full (255)
15 ch	ROSCO FILTERS Mark-II	See related table	
16 ch	LEE FILTERS Mark-II	See related table	
17 ch	CCT STEPS	See related table	
18 ch	GREEN +/-	0..15 16..126 127..144 145..255	OFF MINUS GREEN - ZERO POINT-CENTER PLUS GREEN +
19 ch	DELAY	See related table	
20 ch	FAN	0..255	from minimum to maximum
21 ch	STROBO & STORE	See related table	
22 ch	SERVICE	See related table	
23 ch	FREE 1 Mark-II	(for future use)	
24ch	FREE 2 Mark-II	(for future use)	

16 bit	THEATRE		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	RED	0..255	from OFF (0) to full (255)
4 ch	RED FINE	0..255	from OFF (0) to full (255)
5 ch	GREEN	0..255	from OFF (0) to full (255)
6 ch	GREEN FINE	0..255	from OFF (0) to full (255)
7 ch	BLUE	0..255	from OFF (0) to full (255)
8 ch	BLUE FINE	0..255	from OFF (0) to full (255)
9 ch	AMBER	0..255	from OFF (0) to full (255)
10 ch	AMBER FINE	0..255	from OFF (0) to full (255)
11 ch	CYAN	0..255	from OFF (0) to full (255)
12 ch	CYAN FINE	0..255	from OFF (0) to full (255)
13 ch	LIME	0..255	from OFF (0) to full (255)
14 ch	LIME FINE	0..255	from OFF (0) to full (255)
15 ch	ROSCO FILTERS Mark-II	See related table	
16 ch	LEE FILTERS Mark-II	See related table	
17 ch	SATURATION	0..255	from OFF (0) to full (255) → to dim the channel of CCT LINEAR
18 ch	CCT LINEAR	See related table	
19 ch	GREEN +/-	0..15 16..126 127..144 145..255	OFF MINUS GREEN - ZERO POINT - CENTER PLUS GREEN +
20 ch	DELAY	See related table	
21 ch	FAN	0..255	from minimum to maximum
22 ch	STROBO & STORE	See related table	
23 ch	SERVICE	See related table	
24 ch	FREE 1 Mark-II	(for future use)	
25 ch	FREE 2 Mark-II	(for future use)	

Note: CCT LINEAR has priority over COLOUR PRESET has priority over manual selected colours (from channel 3 to 14)

16 bit	RGBACL Mark-II		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	RED	0..255	from OFF (0) to full (255)
4 ch	RED FINE	0..255	from OFF (0) to full (255)
5 ch	GREEN	0..255	from OFF (0) to full (255)
6 ch	GREEN FINE	0..255	from OFF (0) to full (255)
7 ch	BLUE	0..255	from OFF (0) to full (255)
8 ch	BLUE FINE	0..255	from OFF (0) to full (255)
9 ch	AMBER	0..255	from OFF (0) to full (255)
10 ch	AMBER FINE	0..255	from OFF (0) to full (255)
11 ch	CYAN	0..255	from OFF (0) to full (255)
12 ch	CYAN FINE	0..255	from OFF (0) to full (255)
13 ch	LIME	0..255	from OFF (0) to full (255)
14 ch	LIME FINE	0..255	from OFF (0) to full (255)

8 COLOURS

8 bit	EASY		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	ROSCO FILTERS Mark-II	See related table	
3 ch	LEE FILTERS Mark-II	See related table	
4 ch	CCT PRESET	See related table	

Note: CCT PRESET has priority over COLOUR PRESET

8 bit	HSIC		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	HUE	0..255	Sequence: R, R+L, R+G+L, G+L, G, G+C, G+B+C, B+C, B, B+A, R+B+A, R+A, R
3 ch	HUE FINE	0..255	Selection of the colour - fine
4 ch	SATURATION	0..255	from OFF (0) to full (255) → to dim the channel of CCT LINEAR
5 ch	CCT LINEAR	See related table	
6 ch	STROBO & STORE	See related table	
7 ch	SERVICE	See related table	

8 bit	RGBACL+WW+CW		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	RED	0..255	from OFF (0) to full (255)
3 ch	GREEN	0..255	from OFF (0) to full (255)
4 ch	BLUE	0..255	from OFF (0) to full (255)
5 ch	AMBER	0..255	from OFF (0) to full (255)
6 ch	CYAN	0..255	from OFF (0) to full (255)
7 ch	LIME	0..255	from OFF (0) to full (255)
8 ch	WARM WHITE	0..255	from OFF (0) to full (255)
9 ch	COLD WHITE	0..255	from OFF (0) to full (255)
10 ch	STROBO & STORE	See related table	
11 ch	SERVICE	See related table	

16 bit	RGBACL+WW+CW		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	RED	0..255	from OFF (0) to full (255)
4 ch	RED FINE	0..255	from OFF (0) to full (255)
5 ch	GREEN	0..255	from OFF (0) to full (255)
6 ch	GREEN FINE	0..255	from OFF (0) to full (255)
7 ch	BLUE	0..255	from OFF (0) to full (255)
8 ch	BLUE FINE	0..255	from OFF (0) to full (255)
9 ch	AMBER	0..255	from OFF (0) to full (255)
10 ch	AMBER FINE	0..255	from OFF (0) to full (255)
11 ch	CYAN	0..255	from OFF (0) to full (255)
12 ch	CYAN FINE	0..255	from OFF (0) to full (255)
13 ch	LIME	0..255	from OFF (0) to full (255)
14 ch	LIME FINE	0..255	from OFF (0) to full (255)
15 ch	WARM WHITE	0..255	from OFF (0) to full (255)
16 ch	WARM WHITE FINE	0..255	from OFF (0) to full (255)
17 ch	COLD WHITE	0..255	from OFF (0) to full (255)
18 ch	COLD WHITE FINE	0..255	from OFF (0) to full (255)

16 bit	STUDIO		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	RED	0..255	from OFF (0) to full (255)
4 ch	RED FINE	0..255	from OFF (0) to full (255)
5 ch	GREEN	0..255	from OFF (0) to full (255)
6 ch	GREEN FINE	0..255	from OFF (0) to full (255)
7 ch	BLUE	0..255	from OFF (0) to full (255)
8 ch	BLUE FINE	0..255	from OFF (0) to full (255)
9 ch	AMBER	0..255	from OFF (0) to full (255)
10 ch	AMBER FINE	0..255	from OFF (0) to full (255)
11 ch	CYAN	0..255	from OFF (0) to full (255)
12 ch	CYAN FINE	0..255	from OFF (0) to full (255)
13 ch	LIME	0..255	from OFF (0) to full (255)
14 ch	LIME FINE	0..255	from OFF (0) to full (255)
15 ch	WARM WHITE	0..255	from OFF (0) to full (255)
16 ch	WARM WHITE FINE	0..255	from OFF (0) to full (255)
17 ch	COLD WHITE	0..255	from OFF (0) to full (255)
18 ch	COLD WHITE FINE	0..255	from OFF (0) to full (255)
19 ch	ROSCO FILTERS Mark-II	See related table	
20 ch	LEE FILTERS Mark-II	See related table	
21 ch	CCT STEPS	See related table	
22 ch	GREEN +/-	0.15 16..126 127..144 145..255	OFF MINUS GREEN - ZERO POINT - CENTER PLUS GREEN +
23 ch	DELAY	See related table	
24 ch	FAN	0..255	from minimum to maximum
25 ch	STROBO & STORE	See related table	
26 ch	SERVICE	See related table	
27 ch	FREE 1 Mark-II	(for future use)	
28 ch	FREE 2 Mark-II	(for future use)	

16 bit	THEATRE		
	Function	DMX value	Description
1 ch	DIMMER	0..255	from OFF (0) to full (255)
2 ch	DIMMER FINE	0..255	from OFF (0) to full (255)
3 ch	RED	0..255	from OFF (0) to full (255)
4 ch	RED FINE	0..255	from OFF (0) to full (255)
5 ch	GREEN	0..255	from OFF (0) to full (255)
6 ch	GREEN FINE	0..255	from OFF (0) to full (255)
7 ch	BLUE	0..255	from OFF (0) to full (255)
8 ch	BLUE FINE	0..255	from OFF (0) to full (255)
9 ch	AMBER	0..255	from OFF (0) to full (255)
10 ch	AMBER FINE	0..255	from OFF (0) to full (255)
11 ch	CYAN	0..255	from OFF (0) to full (255)
12 ch	CYAN FINE	0..255	from OFF (0) to full (255)
13 ch	LIME	0..255	from OFF (0) to full (255)
14 ch	LIME FINE	0..255	from OFF (0) to full (255)
15 ch	WARM WHITE	0..255	from OFF (0) to full (255)
16 ch	WARM WHITE FINE	0..255	from OFF (0) to full (255)
17 ch	COLD WHITE	0..255	from OFF (0) to full (255)
18 ch	COLD WHITE FINE	0..255	from OFF (0) to full (255)
19 ch	ROSCO FILTERS Mark-II	See related table	
20 ch	LEE FILTERS Mark-II	See related table	
21 ch	SATURATION	0..255	from OFF (0) to full (255) → to dim the channel of CCT LINEAR
22 ch	CCT LINEAR	See related table	
23 ch	GREEN +/-	0.15 16..126 127..144 145..255	OFF MINUS GREEN - ZERO POINT - CENTER PLUS GREEN +
24 ch	DELAY	See related table	
25 ch	FAN	0..255	from minimum to maximum
26 ch	STROBO & STORE	See related table	
27 ch	SERVICE	See related table	
28 ch	FREE 1 Mark-II	(for future use)	
29 ch	FREE 2 Mark-II	(for future use)	

Note: CCT LINEAR has priority over COLOUR PRESET has priority over manual selected colours (from channel 3 to 14)

Part 5. Related tables

SERVICE CHANNEL

This channel allows to change via console all the settings that are normally set manually from the STAND ALONE and OPTIONS menu of the fixture

					White	White	TW	RGBW	6C	8C
SERVICE 1 (RGBW, 6C, 8C)	STAND ALONE (here you create)	CUSTOM PRESETS	0..5	OFF	-	-	-	-	-	-
			6..18	CUSTOM PRESET 1	-	-	-	-	-	-
			19..31	CUSTOM PRESET 2	-	-	-	-	-	-
			32..44	CUSTOM PRESET 3	-	-	-	-	-	-
			45..57	CUSTOM PRESET 4	-	-	-	-	-	-
			58..70	CUSTOM PRESET 5	-	-	-	-	-	-
			71..83	CUSTOM PRESET 6	-	-	-	-	-	-
			84..96	CUSTOM PRESET 7	-	-	-	-	-	-
			97..109	CUSTOM PRESET 8	-	-	-	-	-	-
			110..122	CUSTOM PRESET 9	-	-	-	-	-	-
			123..135	CUSTOM PRESET 10	-	-	-	YES	YES	YES
			136..148	CUSTOM PRESET 11 Mark-II	-	-	-	-	-	-
			149..161	CUSTOM PRESET 12 Mark-II	-	-	-	-	-	-
			162..174	CUSTOM PRESET 13 Mark-II	-	-	-	-	-	-
			175..187	CUSTOM PRESET 14 Mark-II	-	-	-	-	-	-
			188..200	CUSTOM PRESET 15 Mark-II	-	-	-	-	-	-
			201..213	CUSTOM PRESET 16 Mark-II	-	-	-	-	-	-
			214..226	CUSTOM PRESET 17 Mark-II	-	-	-	-	-	-
			227..239	CUSTOM PRESET 18 Mark-II	-	-	-	-	-	-
240..255	CUSTOM PRESET 19 Mark-II	-	-	-	-	-	-			
SERVICE (White, TW) or SERVICE 2 (RGBW, 6C, 8C)	OPTIONS (here you set)		0..5	INACTIVE	-	-	-	YES	YES	YES
			6..11	OFF	-	-	-	-	-	-
			12..17	50 ms	-	-	-	-	-	-
			18..23	100 ms	-	-	-	-	-	-
			24..29	240 ms	-	-	-	-	-	-
			30..35	400 ms	-	-	-	-	-	-
			36..41	600 ms	-	YES	YES	YES	YES	YES
			42..47	800 ms	-	YES	YES	YES	YES	YES
			48..53	1000 ms (default)	-	YES	YES	YES	YES	YES
			54..59	1200 ms	-	YES	YES	YES	YES	YES
			60..65	1600 ms	-	YES	YES	YES	YES	YES
			66..71	2000 ms	-	YES	YES	YES	YES	YES
			72..77	LINEAR	-	YES	YES	YES	YES	YES
			78..81	QUADRATIC	-	YES	YES	YES	YES	YES
82..83	S Mark-II	-	YES	YES	YES	YES	YES			
84..85	HALO (default)	-	YES	YES	YES	YES	YES			
86..87	GAMMA 2.6 Mark-II	-	YES	YES	YES	YES	YES			
88..89	GAMMA 2.8 Mark-II	-	YES	YES	YES	YES	YES			
90..95	600 Hz	-	YES	YES	YES	YES	YES			
96..101	900 Hz	-	YES	YES	YES	YES	YES			
102..107	1200 Hz (default)	-	YES	YES	YES	YES	YES			
108..113	2100 Hz	-	YES	YES	YES	YES	YES			
114..119	4200 Hz	-	YES	YES	YES	YES	YES			
120..125	6000 Hz	-	YES	YES	YES	YES	YES			
126..131	10200 Hz	-	YES	YES	YES	YES	YES			
132..137	15600 Hz	-	YES	YES	YES	YES	YES			
138..143	19800 Hz	-	YES	YES	YES	YES	YES			
144..149	ON	-	YES	YES	YES	YES	YES			
150..155	OFF (default)	-	YES	YES	YES	YES	YES			
156..161	AUTO (default)	-	YES	YES	YES	YES	YES			
162..167	STANDARD	-	YES	YES	YES	YES	YES			
168..173	SILENT	-	YES	YES	YES	YES	YES			
174..179	STANDARD (default)	-	YES	YES	YES	YES	YES			
180..185	ROTATED	-	YES	YES	YES	YES	YES			
186..191	OFF	-	YES	YES	YES	YES	YES			
192..197	ON (default)	-	YES	YES	YES	YES	YES			
198..203	COLOUR CALIBRATION (for all) NO FUNCTION (for White 300-700)	-	YES	YES	YES	YES	YES			
DEFAULT SETTINGS	204..209	DEFAULT SETTINGS	-	YES	YES	YES	YES	YES		
(for future use)	210..255	FREE	-	YES	YES	YES	YES	YES		

STROBE & STORE CHANNEL

This channel allows to save what has been created/set in the related SERVICE channel

					White	White	TW	RGBW	6C	8C
STROBE & STORE	STROBE	0 1..150 151..200	OFF from slow (3,86 s) to fast (30 ms) OFF	-	YES	YES	YES	YES	YES	YES
	STORE 1	201..210 211..230	Once created the desired CUSTOM PRESET, keep on hold for 5 seconds to store the new value. OFF	-	-	-	YES	YES	YES	YES
	STORE 2	231..240 241..255	Once set the desired OPTION, keep on hold for 5 seconds to store the new value. OFF	-	YES	YES	YES	YES	YES	YES

CCT CHANNEL

	TW		RGBW	6C			8C		
	LINEAR	PRESET	PRESET	LINEAR	STEP	PRESET	LINEAR	STEP	PRESET
NONE			0..15	-	0..4	0..4	-	0..4	0..4
1500K				0..0	5..7	5..11	0..0	5..7	5..11
1500K-1600K				1..7	8..11	-	1..7	8..11	-
1600K				8..8	12..14	12..18	8..8	12..14	12..18
1600K-1700K				9..15	15..18	-	9..15	15..18	-
1700K				16..16	19..21	19..25	16..16	19..21	19..25
1700K-1800K				17..23	22..25	-	17..23	22..25	-
1800K				24..24	26..28	26..32	24..24	26..28	26..32
1800K-1900K				25..31	29..32	-	25..31	29..32	-
1900K				32..32	33..35	33..39	32..32	33..35	33..39
1900K-2000K				33..39	36..39	-	33..39	36..39	-
2000K				40..40	40..42	40..46	40..40	40..42	40..46
2000K-2100K				41..47	43..46	-	41..47	43..46	-
2100K				48..48	47..49	47..53	48..48	47..49	47..53
2100K-2200K				49..55	50..53	-	49..55	50..53	-
2200K				56..56	54..56	54..60	56..56	54..56	54..60
2200K-2300K				57..63	57..60	-	57..63	57..60	-
2300K				64..64	61..63	61..67	64..64	61..63	61..67
2300K-2400K				65..71	64..67	-	65..71	64..67	-
2400K				72..72	68..70	68..74	72..72	68..70	68..74
2400K-2500K				73..79	71..74	-	73..79	71..74	-
2500K				80..80	75..77	75..81	80..80	75..77	75..81
2500K-2600K				81..86	78..81	-	81..86	78..81	-
2600K				87..87	82..84	82..88	87..87	82..84	82..88
2600K-2700K				88..93	85..88	-	88..93	85..88	-
2700K	0	0.35	16..45	94..94	89..91	89..95	94..94	89..91	89..95
2700K-3000K	2700K-2800K	1.41	-	95..100	92..95	-	95..100	92..95	-
	2800K			101..101	96..98	96..102	101..101	96..98	96..102
	2800K-2900K			102..107	99..102	-	102..107	99..102	-
	2900K			108..108	103..105	103..109	108..108	103..105	103..109
	2900K-3000K			109..114	106..109	-	109..114	106..109	-
3000K	42	36..70	46..75	115..115	110..112	110..116	115..115	110..112	110..116
3000K-3200K	3000K-3100K	43..83	-	116..121	113..116	-	116..121	113..116	-
	3100K			122..122	117..119	117..123	122..122	117..119	117..123
	3100K-3200K			123..128	120..123	-	123..128	120..123	-
3200K (default)	84	71..105	76..105	129..129	124..126	124..130	129..129	124..126	124..130
3200K-3500K	3200K-3300K	85..125	-	130..135	127..130	-	130..135	127..130	-
	3300K			136..136	131..133	131..137	136..136	131..133	131..137
	3300K-3400K			137..142	134..137	-	137..142	134..137	-
	3400K			143..143	138..140	138..144	143..143	138..140	138..144
	3400K-3500K			144..149	141..144	-	144..149	141..144	-
3500K	126	106..140	106..135	150..150	145..147	145..151	150..150	145..147	145..151
3500K-4000K	127..168	-	-	151..156	148..151	-	151..156	148..151	-
4000K	169	141..175	136..165	157..157	152..154	152..158	157..157	152..154	152..158
4000K-5600K	4000K-5000K	170..211	-	158..163	155..158	-	158..163	155..158	-
	5000K			164..164	159..161	159..165	164..164	159..161	159..165
	5000K-5600K			165..170	162..165	-	165..170	162..165	-
5600K	212	176..210	166..195	171..171	166..168	166..172	171..171	166..168	166..172
5600K-6500K	5600K-6000K	213..254	-	172..177	169..172	-	172..177	169..172	-
	6000K			178..178	173..175	173..179	178..178	173..175	173..179
	6000K-6500K			179..184	176..179	-	179..184	176..179	-
6500K	255	211..225	196..225	185..185	180..182	180..186	185..185	180..182	180..186
6500K-8000K				186..191	183..186	-	186..191	183..186	-
8000K			226..255	192..192	187..189	187..193	192..192	187..189	187..193
8000K-10000K				193..198	190..193	-	193..198	190..193	-
10000K				199..199	194..196	194..200	199..199	194..196	194..200
10000K-12000K				200..205	197..200	-	200..205	197..200	-
12000K				206..206	201..203	201..207	206..206	201..203	201..207
12000K-14000K				207..212	204..207	-	207..212	204..207	-
14000K				213..213	208..210	208..214	213..213	208..210	208..214
14000K-15000K				214..219	211..214	-	214..219	211..214	-
15000K				220..220	215..217	215..221	220..220	215..217	215..221
15000K-16000K				221..226	218..221	-	221..226	218..221	-
16000K				227..227	222..224	222..228	227..227	222..224	222..228
16000K-17000K				228..233	225..228	-	228..233	225..228	-
17000K				234..234	229..231	229..235	234..234	229..231	229..235
17000K-180000K				235..240	232..235	-	235..240	232..235	-
18000K				241..241	236..239	236..242	241..241	236..239	236..242
18000K-190000K				242..247	240..243	-	242..247	240..243	-
19000K				248..248	244..247	243..249	248..248	244..247	243..249
19000K-20000K				249..254	248..251	-	249..254	248..251	-
20000K				255..255	252..255	250..255	255..255	252..255	250..255

ROSCO FILTERS CHANNEL MARK-II

								White	White	TW	RGBW	6C	8C	
STANDARD	000	NONE	060	ROSCO R0077	120	ROSCO R4515	180	ROSCO R4730						
	001	ROSCO R0384	061	ROSCO R0075	121	ROSCO R4530	181	ROSCO R0037						
	002	ROSCO R0383	062	ROSCO R0376	122	ROSCO R4560	182	ROSCO R3308						
	003	ROSCO R0085	063	ROSCO R0071	123	ROSCO R0096	183	ROSCO R3309						
	004	ROSCO R0083	064	ROSCO R0092	124	ROSCO R0012	184	ROSCO R4715						
	005	ROSCO R0079	065	ROSCO R3316	125	ROSCO R4590	185	ROSCO R0038						
	006	ROSCO R0080	066	ROSCO R3315	126	ROSCO R0010	186	ROSCO R3313						
	007	ROSCO R2006	067	ROSCO R0087	127	ROSCO R0310	187	ROSCO R0333						
	008	ROSCO R3220	068	ROSCO R3304	128	ROSCO R0313	188	ROSCO R3314						
	009	ROSCO R2007	069	ROSCO R0088	129	ROSCO R0312	189	ROSCO R3318						
	010	ROSCO R0084	070	ROSCO R4415	130	ROSCO R0014	190	ROSCO R0351						
	011	ROSCO R0078	071	ROSCO R0388	131	ROSCO R0011	191	ROSCO R0054						
	012	ROSCO R0081	072	ROSCO R4430	132	ROSCO R2003	192	ROSCO R0051						
	013	ROSCO R0068	073	ROSCO R0086	133	ROSCO R0015	193	ROSCO R0052						
	014	ROSCO R0368	074	ROSCO R0089	134	ROSCO R3441	194	ROSCO R4915						
	015	ROSCO R0069	075	ROSCO R0389	135	ROSCO R3411	195	ROSCO R4930						
	016	ROSCO R0065	076	ROSCO R0386	136	ROSCO R0316	196	ROSCO R0356						
	017	ROSCO R0067	077	ROSCO R4460	137	ROSCO R3401	197	ROSCO R0057						
	018	ROSCO R0367	078	ROSCO R4490	138	ROSCO R3407	198	ROSCO R4960						
	019	ROSCO R0064	079	ROSCO R2004	139	ROSCO R0020	199	ROSCO R0058						
	020	ROSCO R0375	080	ROSCO R0090	140	ROSCO R2002	200	ROSCO R0357						
	021	ROSCO R0370	081	ROSCO R0091	141	ROSCO R0317	201	ROSCO R0059						
	022	ROSCO R0366	082	ROSCO R0122	142	ROSCO R0318	202	ROSCO R0336						
	023	ROSCO R0369	083	ROSCO R0126	143	ROSCO R0021	203	ROSCO R4760						
	024	ROSCO R0072	084	ROSCO R0393	144	ROSCO R0023	204	ROSCO R0044						
	025	ROSCO R0062	085	ROSCO R0094	145	ROSCO R0041	205	ROSCO R0346						
	026	ROSCO R0063	086	ROSCO R3406	146	ROSCO R0040	206	ROSCO R0349						
	027	ROSCO R0060	087	ROSCO R3405	147	ROSCO R0022	207	ROSCO R0344						
	028	ROSCO R3206	088	ROSCO R0099	148	ROSCO R0019	208	ROSCO R0039						
	029	ROSCO R0372	089	ROSCO R0017	149	ROSCO R0032	209	ROSCO R0047						
	030	ROSCO R0373	090	ROSCO R0321	150	ROSCO R4690	210	ROSCO R0348	-	-	-	-	YES	YES
	031	ROSCO R3208	091	ROSCO R0018	151	ROSCO R0042	211	ROSCO R0049						
	032	ROSCO R4315	092	ROSCO R0303	152	ROSCO R0127	212	ROSCO R0048						
	033	ROSCO R3216	093	ROSCO R0030	153	ROSCO R0024	213	ROSCO R0347						
	034	ROSCO R0053	094	ROSCO R4660	154	ROSCO R0325	214	ROSCO R4990						
	035	ROSCO R3204	095	ROSCO R3310	155	ROSCO R0025	215	ROSCO R0358						
	036	ROSCO R0360	096	ROSCO R0031	156	ROSCO R2001	216	ROSCO R0056						
	037	ROSCO R4215	097	ROSCO R0034	157	ROSCO R0324	217	ROSCO R0377						
	038	ROSCO R3203	098	ROSCO R0331	158	ROSCO R0026	218	ROSCO R0385						
	039	ROSCO R0362	099	ROSCO R4630	159	ROSCO R0120	219	ROSCO R2009						
	040	ROSCO R0371	100	ROSCO R0304	160	ROSCO R0124	220	ROSCO R0353						
	041	ROSCO R0364	101	ROSCO R0003	161	ROSCO R0027	221	ROSCO R0055						
	042	ROSCO R3202	102	ROSCO R4615	162	ROSCO R0050	222	ROSCO R4230						
	043	ROSCO R3218	103	ROSCO R0305	163	ROSCO R4890	223	ROSCO R0355						
	044	ROSCO R0365	104	ROSCO R0005	164	ROSCO R0332	224	ROSCO R0378						
	045	ROSCO R0061	105	ROSCO R0016	165	ROSCO R0342	225	ROSCO R4260						
	046	ROSCO R4330	106	ROSCO R3408	166	ROSCO R0045	226	ROSCO R0359						
	047	ROSCO R0363	107	ROSCO R0009	167	ROSCO R0046	227	ROSCO R4290						
	048	ROSCO R0066	108	ROSCO R0002	168	ROSCO R0339	228	ROSCO R0082						
	049	ROSCO R0070	109	ROSCO R0013	169	ROSCO R2010	229	ROSCO R0074						
	050	ROSCO R4360	110	ROSCO R3442	170	ROSCO R4790	230	ROSCO R0381						
	051	ROSCO R4390	111	ROSCO R0008	171	ROSCO R0043	231	ROSCO R2008						
	052	ROSCO R0073	112	ROSCO R3409	172	ROSCO R343	232	ROSCO R0121						
	053	ROSCO R2005	113	ROSCO R3443	173	ROSCO R0036	233	ROSCO R0125						
	054	ROSCO R0374	114	ROSCO R0302	174	ROSCO R4860	234	ROSCO R0382						
	055	ROSCO R0093	115	ROSCO R3444	175	ROSCO R4830	235	ROSCO R0397						
	056	ROSCO R0392	116	ROSCO R3317	176	ROSCO R0035	236	ROSCO R3114						
	057	ROSCO R0095	117	ROSCO R0006	177	ROSCO R0337								
	058	ROSCO R0395	118	ROSCO R3410	178	ROSCO R4815								
059	ROSCO R0076	119	ROSCO R0007	179	ROSCO R0033									
CUSTOM	237	CUSTOM 1	242	CUSTOM 6	247	CUSTOM 11	252	CUSTOM 16						
	238	CUSTOM 2	243	CUSTOM 7	248	CUSTOM 12	253	CUSTOM 17						
	239	CUSTOM 3	244	CUSTOM 8	249	CUSTOM 13	254	CUSTOM 18						
	240	CUSTOM 4	245	CUSTOM 9	250	CUSTOM 14	255	CUSTOM 19						
	241	CUSTOM 5	246	CUSTOM 10	251	CUSTOM 15			-	-	-	-	YES	YES

LEE FILTERS CHANNEL MARK-II

								White	White	TW	RGBW	6C	8C
	000	NONE	061	LEE 131	122	LEE 232	183	LEE 787					
	001	LEE 071	062	LEE 219	123	LEE 147	184	LEE 046					
	002	LEE 713	063	LEE 241	124	LEE 776	185	LEE 113					
	003	LEE 120	064	LEE 242	125	LEE 604	186	LEE 332					
	004	LEE 363	065	LEE 728	126	LEE 207	187	LEE 748					
	005	LEE 085	066	LEE 504	127	LEE 441	188	LEE 127					
	006	LEE 119	067	LEE 730	128	LEE 204	189	LEE 148					
	007	LEE 716	068	LEE 731	129	LEE 236	190	LEE 157					
	008	LEE 195	069	LEE 213	130	LEE 744	191	LEE 192					
	009	LEE 715	070	LEE 245	131	LEE 285	192	LEE 111					
	010	LEE 723	071	LEE 733	132	LEE 013	193	LEE 036					
	011	LEE 721	072	LEE 244	133	LEE 009	194	LEE 107					
	012	LEE 722	073	LEE 138	134	LEE 205	195	LEE 110					
	013	LEE 079	074	LEE 088	135	LEE 442	196	LEE 035					
	014	LEE 714	075	LEE 505	136	LEE 764	197	LEE 247					
	015	LEE 132	076	LEE 243	137	LEE 103	198	LEE 248					
	016	LEE 068	077	LEE 121	138	LEE 206	199	LEE 249					
	017	LEE 075	078	LEE 738	139	LEE 763	200	LEE 169					
	018	LEE 197	079	LEE 122	140	LEE 443	201	LEE 136					
	019	LEE 712	080	LEE 089	141	LEE 223	202	LEE 794					
	020	LEE 525	081	LEE 139	142	LEE 279	203	LEE 170					
	021	LEE 200	082	LEE 090	143	LEE 003	204	LEE 704					
	022	LEE 719	083	LEE 736	144	LEE 444	205	LEE 052					
	023	LEE 500	084	LEE 124	145	LEE 246	206	LEE 702					
	024	LEE 366	085	LEE 735	146	LEE 007	207	LEE 137					
	025	LEE 283	086	LEE 327	147	LEE 513	208	LEE 194					
	026	LEE 174	087	LEE 740	148	LEE 514	209	LEE 058					
	027	LEE 201	088	LEE 643	149	LEE 010	210	LEE 180					
	028	LEE 281	089	LEE 642	150	LEE 100	211	LEE 701					
	029	LEE 501	090	LEE 741	151	LEE 101	212	LEE 345					
	030	LEE 708	091	LEE 746	152	LEE 767	213	LEE 703	-	-	-	YES	YES
	031	LEE 502	092	LEE 511	153	LEE 104	214	LEE 002					
	032	LEE 503	093	LEE 653	154	LEE 765	215	LEE 795					
	033	LEE 218	094	LEE 789	155	LEE 102	216	LEE 328					
	034	LEE 278	095	LEE 512	156	LEE 550	217	LEE 048					
	035	LEE 203	096	LEE 024	157	LEE 015	218	LEE 128					
	036	LEE 202	097	LEE 025	158	LEE 768	219	LEE 793					
	037	LEE 061	098	LEE 652	159	LEE 179	220	LEE 049					
	038	LEE 063	099	LEE 017	160	LEE 770	221	LEE 126					
	039	LEE 725	100	LEE 651	161	LEE 020	222	LEE 797					
	040	LEE 117	101	LEE 134	162	LEE 286	223	LEE 798					
	041	LEE 140	102	LEE 008	163	LEE 208	224	LEE 343					
	042	LEE 353	103	LEE 779	164	LEE 742	225	LEE 700					
	043	LEE 144	104	LEE 237	165	LEE 287	226	LEE 707					
	044	LEE 724	105	LEE 747	166	LEE 105	227	LEE 181					
	045	LEE 118	106	LEE 238	167	LEE 021	228	LEE 799					
	046	LEE 172	107	LEE 176	168	LEE 158	229	LEE 508					
	047	LEE 183	108	LEE 109	169	LEE 777	230	LEE 706					
	048	LEE 141	109	LEE 790	170	LEE 778	231	LEE 199					
	049	LEE 161	110	LEE 108	171	LEE 780	232	LEE 198					
	050	LEE 196	111	LEE 773	172	LEE 022	233	LEE 710					
	051	LEE 165	112	LEE 004	173	LEE 135	234	LEE 711					
	052	LEE 352	113	LEE 152	174	LEE 507	235	LEE 142					
	053	LEE 143	114	LEE 151	175	LEE 781	236	LEE 709					
	054	LEE 727	115	LEE 153	176	LEE 019	237	LEE 053					
	055	LEE 729	116	LEE 154	177	LEE 164	238	LEE 603					
	056	LEE 116	117	LEE 506	178	LEE 182	239	LEE 602					
	057	LEE 354	118	LEE 162	179	LEE 106	240	LEE 600					
	058	LEE 115	119	LEE 650	180	LEE 029	241	LEE 601					
	059	LEE 323	120	LEE 230	181	LEE 026							
	060	LEE 322	121	LEE 156	182	LEE 027							
	242	CUSTOM 1	247	CUSTOM 6	252	CUSTOM 11							
	243	CUSTOM 2	248	CUSTOM 7	253	CUSTOM 12							
	244	CUSTOM 3	249	CUSTOM 8	254	CUSTOM 13							
	245	CUSTOM 4	250	CUSTOM 9	255	CUSTOM 14							
	246	CUSTOM 5	251	CUSTOM 10								YES	YES

DELAY CHANNEL

			White	White	TW	RGBW	6C	8C
DELAY	0..45	NONE (The LED delay follows the set on the menu display)	-	YES	YES	YES	YES	YES
	46..55	0 ms						
	56..65	50 ms						
	66..75	100 ms						
	76..85	150 ms						
	86..95	200 ms						
	96..105	240 ms						
	106..115	300 ms						
	116..125	350 ms						
	126..135	400 ms						
	136..145	450 ms						
	146..155	500 ms						
	156..165	330 ms						
	166..175	600 ms						
	176..185	800 ms						
	186..195	900 ms						
	196..205	1000 ms						
	206..215	1200 ms						
	216..225	1400 ms						
	226..235	1600 ms						
236..245	1800 ms							
246..255	2000 ms							

Part 6. RDM (Remote Device Management)

This section shows the values that can be queried remotely through the RDM console.

Plasa/ESTA Denomination	Number of Channels
DEVICE_INFO	Reading of the following parameters: - RDM protocol version - Device Model ID - Product category - ID version sw - Number of DMX channels - DMX mode index - DMX address - Number of sub-devices - Number of sensors
IDENTIFY_DEVICE	LED power on - allowing fixture identification
DMX_START_ADDRESS	DMX address setting/reading
SOFTWARE_VERSION_LABEL	Text description version sw
SUPPORTED_PARAMETERS	List of supported parameters
DMX_PERSONALITY	DMX mode setting
DMX_PERSONALITY_DESCRIPTION	Obtaining textual description of DMX mode
DEVICE_MODEL_DESCRIPTION	Text description of the device model
MANUFACTURER_LABEL	Text description manufacturer
SENSOR_DEFINITION	Display of the values read by the temperature sensor, expressed in tenths of Celsius degree
SENSOR_VALUE	




Part 7. Error list (Mark-II)

Error message	What does it mean?	White	White	TW	RGBW	6C	8C
LED NTC SENSOR ERROR	Incorrect sensor operation NTC LED	-	YES	YES	-	YES	YES
LED NTC OVERTEMPERAURE	Overheating of the sensor working temperature NTC LED						
MICRO NTC SENSOR ERROR	Incorrect sensor operation NTC MICRO						
MICRO NTC OVERTEMPERAURE	Overheating of the sensor working temperature NTC MICRO						
DRIVER1 NTC SENSOR ERROR	Incorrect sensor operation NTC DRIVER1						
DRIVER1 NTC VERTEMPERAURE	Overheating of the sensor working temperature NTC DRIVER1						
DRIVER2 NTC SENSOR ERROR	Incorrect sensor operation NTC DRIVER2						
DRIVER2 NTC VERTEMPERAURE	Overheating of the sensor working temperature NTC DRIVER2						
LOW SUPPLY VOLTAGE	The measured main voltage is below the threshold						
HIGH SUPPLY VOLTAGE	The measured main voltage is above the threshold						
OUT LED1 ERROR	Incorrect chain operation LED OUT 1						
OUT LED... ERROR	Incorrect chain operation LED OUT ...						
OUT LED8 ERROR	Incorrect chain operation LED OUT 8						
ENCODER BUS ERROR	Communication error with encoder board						

Part 8. How to...

This section shows the most common needs of a lighting designer and how to set the main functions.

... SET DMX ADDRESS AND CHOOSE DMX PERSONALITY	
<p>In order to control one or more fixtures via console, it is necessary to assign each one a DMX ADDRESS and choose a DMX PERSONALITY based on the parameters of the luminaire you want to control and the channels available on the console.</p> <p>The first fixture is assigned to address channel = 1 and occupies as many channels as indicated in the chosen DMX chart.</p> <ul style="list-style-type: none"> DMX SETTINGS → DMX ADDRESS = 001 DMX SETTINGS → DMX PERSONALITY = EASY / 3CH (example) <p>If the second fixture is given the same address channel and the same personality, it will behave like the first luminaire; otherwise it is necessary to assign it the first free channel as address and choose the desired personality.</p> <ul style="list-style-type: none"> DMX SETTINGS → DMX ADDRESS = 004 (example) DMX SETTINGS → DMX PERSONALITY = HSIC 8bit / 7CH (example) 	
... EMULATE THE PERFORMANCE OF A HALOGEN LAMP	
<p>To satisfy the most nostalgic lighting designers and to guarantee the natural perception that the human eye, it is not enough that a LED source can simulate the static light of a halogen lamp, but it is also important to reproduce its dynamic behavior.</p> <p>First of all choose a DMX PERSONALITY that allows to set CCT = 3200K</p> <p>Then there are three behaviors to guarantee:</p> <ul style="list-style-type: none"> the typical dimming curve of the halogen lamp: OPTIONS → DIMMING CURVE = HALO the standard delay of the halogen lamp: OPTIONS → LED DELAY = 1000 ms the typical dim to warm to which a halogen lamp tends when decreasing the lighting emission (also called amber shift): OPTIONS → AMBER SHIFT = ON 	
... INCREASE THE LIGHT OUTPUT +20%	
<p>All the fixtures are designed to work in a context of balance between luminous efficiency and optimal thermal regime so as not to cause the LED to work under stress. Where available, thanks to the LED BOOST function, the algorithm favors luminous efficiency (+20% in light output) to the detriment of thermal efficiency, giving more current to the LED, but it is exclusively compatible with FAN MODE = AUTO (= the fans are automatically adjusted based on the LED temperature).</p> <p>That means that, even with this function active, the LED TEMPERATURE function regulates the light intensity in case of overtemperature to avoid an early deterioration of the source.</p> <p>It may happen that you need a light emission of the individual channels higher than the factory settings, without exceeding the maximum power of the fixture.</p> <p>When for a tint or a CCT not all LED channels are at full, an algorithm increases the light output to achieve maximum efficiency of the luminaire. A microprocessor monitors the working temperature of all the components and updates the source control parameters in real time.</p> <ul style="list-style-type: none"> OPTIONS → FAN MODE = AUTO OPTIONS → LED BOOST = ON 	
... SET THE FAN MODE	
<p>In order to function properly, the LED requires a cooling system, which can be passive (dissipation of heat by natural convection) or active (forced dissipation of heat using a fan).</p> <p>FAN MODE:</p> <ul style="list-style-type: none"> AUTO: the fans are automatically adjusted based on the LED temperature. (where variable fan noise is not a critical parameter) STANDARD: the fans are always kept at the default value (where a constant background noise is required without varying brightness) SILENT: the fans are always kept at the minimum value and in case of critical temperatures of the LED it automatically reduces the brightness <p>The silent mode function allows to intervene on the speed and therefore on the noise of the fans based on the internal temperatures of work detected by a thermostat</p> <p>OPTIONS → FAN MODE = SILENT</p>	
... SET THE DISPLAY	
<p>To avoid unwanted light emission of the display it is recommended to turn it off:</p> <p>OPTIONS → DISPLAY = OFF</p> <p>If the fixture is mounted "upside down" it is also possible to rotate the display to make it easier to read:</p> <p>OPTIONS → DISPLAY ROTATION = ROTATED</p>	
... REMOVE FLICKERING EFFECT IN CAMERAS	
<p>The flickering effect is manifested in the shooting when the emission frequency of the LED conflicts with the camera brush scan and can be solved by acting on the fixture parameters (or on the camera ones).</p> <p>OPTIONS → OUTPUT FREQUENCY = xxx (find by trial and error - fine adjustment - the value that removes the flicker in the camera)</p>	

<h3>... CALIBRATE LED COLORS</h3> <p>When using a group of fixtures it may happen that one or more of them, despite being set with the same DMX values, has a color component (i.e.: RED) to be calibrated to align its tint to the ones of the other luminaires: LED CALIBRATION → RED CALIBRATION</p>		
<h3>... SET THE COLOUR CUSTOM PRESETS</h3> <p>You may want to recall a tint from the factory library or need to create your own tint. In all LED color fixtures there are two libraries:</p> <ul style="list-style-type: none"> • STANDARD PRESETS • CUSTOM PRESETS <p>Both of these presets can be recalled by turning the encoder (CCT/COLOR WHEEL) on the back of the fixture or selecting the corresponding DMX value from the console.</p> <p>To create a CUSTOM PRESET by using the fixture: STANDALONE → CUSTOM PRESETS → CUSTOM PRESET 1 → RED = 255 (i.e.) → CONFIRM</p> <p>To create a CUSTOM PRESET by using a DMX console:</p> <ul style="list-style-type: none"> • First of all choose a DMX PERSONALITY that allows to set the SERVICE channel (i.e. DMX PERSONALITY = RGBACL for a 6C fixture) • to create the CUSTOM PRESET 1: modify the DMX value of the SERVICE channel (ch 9) entering a DMX value 6..30 and create the desired tint by using the other channels (ch 1-7) • to save the tint: modify the DMX value of the STROBE & STORE channel (ch 8) entering a DMX value 201..210 and keep on hold for 5 seconds 		
<h3>... SET STANDALONE AND MASTER-SLAVE FUNCTIONS</h3> <p>May happen the need to control one or more fixtures without using a console. The fixture allows operator to create one or more scenes, both in STANDALONE and MASTER-SLAVE. In case of single fixture, set the fixture according to the number of scenes to be created:</p> <ul style="list-style-type: none"> • STANDALONE → STANDALONE SET → STANDALONE MANUAL (for 1 scene) • STANDALONE → STANDALONE SET → STANDALONE SCENE MODE (for multi scenes) <p>In case of group of fixtures, set the master fixture according to the number of scenes to be created:</p> <ul style="list-style-type: none"> • STANDALONE → STANDALONE SET → MASTER MANUAL (for 1 scene) • STANDALONE → STANDALONE SET → MASTER AUTO SCENE (for multi scenes) <p>and set the slave fixture(s):</p> <ul style="list-style-type: none"> • STANDALONE → STANDALONE SET → SLAVE <p>How to create a single scene: STANDALONE → MANUAL MODE → RED = 020 (i.e.) → CONFIRM</p> <p>How to create and manage multiple scenes:</p> <ul style="list-style-type: none"> • create the first scene STANDALONE → AUTO SCENE MODE → CREATE NEW • and choose the POSITION • then choose the tint (i.e. RED = 100%) STANDALONE → AUTO SCENE MODE → SCENE 1 → SCENE SET → RED = 255 (i.e.) → CONFIRM • create the second scene STANDALONE → AUTO SCENE MODE → CREATE NEW • and choose the POSITION • then choose the tint (i.e. GREEN = 100%) STANDALONE → AUTO SCENE MODE → SCENE 1 → SCENE SET → GRN = 255 (i.e.) → CONFIRM <p>How to customize parameters of a scene: STANDALONE → AUTO SCENE MODE → SCENE 2 → PAUSE TIME = 1.0 s (i.e.) STANDALONE → AUTO SCENE MODE → SCENE 2 → FADE TIME = 2.2 s (i.e.)</p> <p>How to delete a scene: STANDALONE → AUTO SCENE MODE → SCENE 2 → SCENE DELETE</p>		
<h3>FUNZIONI AVANZATE SULLA GESTIONE DEL COLORE</h3> <ul style="list-style-type: none"> • Plus/Minus Green – si tratta di una funzione che consente una regolazione fine della componente verde del CCT selezionato per adeguarlo alle specifiche esigenze dell'applicazione. • Bilanciamento automatico del colore durante l'intera dimmerazione per mantenere la stessa tinta quando diminuisce l'emissione di luce; l'algoritmo consente di: <ul style="list-style-type: none"> ○ mantenere fissa la lunghezza d'onda di ogni singolo chip LED colorato ○ mantenere costante il rapporto delle emissioni luminose tra i LED di diverso colore al variare dell'emissione luminosa • Booster • Calibrazione 		

Part 9. Logistics

The following table shows the weights and dimensions of the fixtures and the relative packaging.

Power	Type	Fixture					Packing				HS Code	
		Code	Weight (kg)	Dimensions (cm)			Weight (kg)	Dimensions (cm)				
				Length	Width	Height		Length	Width	Height		
50W	Fresnel	FN LED 50 CW / WW	3	25	16	27	3,5	40	22	22	94054210	
		FN LED 50 RGBW										
	PC	PC LED 50 CW / WW	4	29	5	51	26	26				
	Profile	PR LED 50 ZS WW / RGBW										
	Accessories	TC MINI	0,1	10	0,4	10	0,1	10	0,4	10		94059900
		PL 4 MIN	0,4	15,5	11,5	3,3	0,5	18	13	4,4		
PGM MIZO		0,1	15,3	6,7	5	0,1	15,3	6,7	5			
100W	Fresnel	FN HY LED 100 CW / WW	3,5	31	22	29	4,1	38,5	22,5	18,5	94054210	
	PC	PC HY LED 100 CW / WW										
	Profile	PR HY LED 100 ZS CW / WW	6,2	54	34	40	7,6	57	27,5	27,5		
		PR HY LED 100 ZW CW / WW	6	45			7,4					
	Accessories	TC S05	0,1	14	0,4	14	0,1	14	0,4	14	94059900	
		PL 4 U05	0,8	22,5	17	3,5	0,9	24,5	19	5,5		
		DIA 05	0,3	8,5	10,5	2,5	0,3	21	13	5		
		PGB R 100	0,1	21	10	0,5	0,1		10	0,5		
200W	Fresnel	FN HY LED 200 CW / WW	6	36	30	35	6,7	46,5	31,5	38	94054210	
		FN HY LED 200 TW / RGBW / 6C	7,5	45			8,7					
	PC	PC HY LED 200 CW / WW	6	36			35					6,7
		PC HY LED 200 TW / RGBW / 6C	7,5	45			39					8,7
	Profile	PR HY LED 200 ZS CW / WW / TW / RGBW / 6C	11,5	76	34	47	13,5	92	36	40		
		PR HY LED 200 ZW CW / WW / TW / RGBW / 6C	11	64			12,5	82	34	37		
	Accessories	TC HY 200	0,1	18,5	0,4	18,5	0,1	18,5	0,4	18,5	94059900	
		PL 4 HY 200	1	28,5	21	4	1,1	34	23	5,5		
		DIA HY	0,2	21,7	12	1,3	0,3	25	18	1,5		
		PGB HY	0,1	24	9,5	0,4	0,1	24	9,5	0,4		
		PR HY OP ZS	6,2	48	25,5	23	7,6	71	36	40		
		PR HY OP ZW	5,2	36			6,5	46,5	31,5	38		
300W	Fresnel	FN HY LED 300 CW / WW / TW / 6C	9,5	48	30	43	10,9	71	36	40	94054210	
	PC	PC HY LED 300 CW / WW / TW / 6C	12,5	57			13,5					
	Profile	PR HY LED 300 ZS CW / WW / TW / 6C	15	76	34	47	18,5	92				
		PR HY LED 300 ZW CW / WW / TW / 6C	14	64			18					
	Followspot	FS HY LED 300 CW	19	100	35	35	22	115	40			
	Cyclorama	CYC LED 300 RGBW	15	57	43	25	18,2	61	57	33		
	Accessories	TC S25	0,3	25	0,4	25	0,3	25	0,4	25	94059900	
		PL 4 U25	1,7	38	27	3,5	1,7	42	29	5,5		
PL 4 HY3 PLUS		2	2									
700W	Fresnel	FN HY LED 700 CW / WW / TW / 8C	18	60	40	50					94054210	
	PC	PC HY LED 700 CW / WW / TW / 8C	20	69								
	Profile	PR HY LED 700 ZS CW / WW / TW / 8C	31	127								47
		PR HY LED 700 ZW CW / WW / TW / 8C	28	92								
	Followspot	FS HY LED 700 CW	36	144	42							
	Accessories	TC HY 700	0,4	30	30	0,4	0,4	30	30	0,4	94059900	
PL 4 HY 700												
DIA HY 700												
PGB HY 700												