

RGBW Beam • Wash • FX
with 4°-32° linear zoom

R2 USER MANUAL

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SAFETY

MAINTENANCE

MAINTENANCE

MAINTENANCE AND CLEANING THE UNIT

- Make sure the area below the installation place is free from unwanted persons during setup.
- Switch off the unit, unplug the main cable and wait until the unit has cooled down.
- All screws used for installing the device and any of its parts should be tightly fastened and should not be corroded.
- Housings, fixations and installation spots (ceiling, trusses, suspensions) should be totally free from any deformation.
- The main cables must be in impeccable condition and should be replaced immediately even when a small problem is detected.
- It is recommended to clean the front at regular intervals, from impurities caused by dust, smoke, or other particles to ensure that the light is radiated at maximum brightness. For cleaning, disconnect the main plug from the socket. Use a soft, clean cloth moistened with a mild detergent. Then carefully wipe the part dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate the unit and cause damage to it.

TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Fixture does not light up	<ul style="list-style-type: none"> • No mains supply • Dimmer fader set to 0 • All color faders set to 0 • Faulty LED • Faulty LED board 	<ul style="list-style-type: none"> • Check the power supply voltage • Increase the value of the dimmer channels • Increase the value of the color channels • Replace the LED board • Replace the LED board
General low light intensity	<ul style="list-style-type: none"> • Dirty lens assembly • Misaligned lens assembly 	<ul style="list-style-type: none"> • Clean the fixture regularly • Install lens assembly properly
Fixture does not power up	<ul style="list-style-type: none"> • No power • Loose or damaged power cord • Faulty internal power supply 	<ul style="list-style-type: none"> • Check for power on power outlet • Check power cord • Replace internal power supply
Fixture does not respond to DMX	<ul style="list-style-type: none"> • Wrong DMX addressing • Damaged DMX cables • Bouncing signals 	<ul style="list-style-type: none"> • Check control panel and unit addressing • Check DMX cables • Install terminator as suggested

Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.




WARNING! Before carrying out any operations with the unit, carefully read this instruction manual and keep it with care for future reference. It contains important information about the installation, usage and maintenance of the unit.



SAFETY

General instruction

- The products referred to in this manual conform to the European Community Directives and are therefore marked with **CE**.
- The unit is supplied with hazardous network voltage (230V~). Leave servicing to skilled personnel only. Never make any modifications on the unit not described in this instruction manual, otherwise you will risk an electric shock.
- Connection must be made to a power supply system fitted with efficient earthing (Class I appliance according to standard EN 60598-1). It is, moreover, recommended to protect the supply lines of the units from indirect contact and/or shorting to earth by using appropriately sized residual current devices.
- The connection to the main network of electric distribution must be carried out by a qualified electrical installer. Check that the main frequency and voltage correspond to those for which the unit is designed as given on the electrical data label.
- This unit is not for home use, only professional applications.
- Never use the fixture under the following conditions:
 - in places subject to vibrations or bumps;
 - in places with a temperature of over 40 °C.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Do not dismantle or modify the fixture.
- All work must always be carried out by qualified technical personnel. Contact the nearest sales point for an inspection or contact the manufacturer directly.
- If the unit is to be put out of operation definitively, take it to a local recycling  plant for a disposal which is not harmful to the environment.

Warnings and installation precautions

- If this device will be operated in any way different to the one described in this manual, it may suffer damage and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short circuit, burns, electric shock, etc.
- Before starting any maintenance work or cleaning the projector, cut off power from the main supply.
- Always additionally secure the projector with the safety rope. When carrying out any work, always comply scrupulously with all the regulations (particularly regarding safety) currently in force in the country in which the fixture's being used.
- Install the fixture in a well ventilated place.
- Keep any inflammable material at a safe distance from the fixture.
- Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
- The lamp (LED) shall be changed if it has become damaged or thermally deformed.
- Never look directly at the light beam. Please note that fast changes in lighting, e. g. flashing light, may trigger epileptic seizures in photosensitive persons or persons with epilepsy.
- Do not touch the product's housing when operating because it may be very hot.

FEATURES

- 4∞-32∞ linear zoom
- Aerial (3D) and graphic (2D) effects
- Individual LED control, built-in color and effects macros
- Layer effects (background/foreground)
- Independent channel for CT correction
- White color temp presets from 2700K ~ 8000K
- Hue / Saturation / Tint adjustment (green ~ magenta)
- Flawless 16-bit 540∞/270∞ motorized pan/tilt movement
- Selectable PWM frequency for flicker-free video with any camera
- Locking pan and tilt for secure transportation
- DMX, RDM, ArtNet, sACN control

SPECIFICATIONS

PHOTOMETRICS

Light Source:	19 x 40W RGBW LEDs
Linear zoom:	4° - 32°
Output (lux):	38000lux @ 5 meters

POWER

Mains:	100 - 240 VAC, 50/60 Hz
Consumption:	910W/120V, 858W/230V
Power connections:	PowerCon In/Out

KEY FEATURES

Color mixing:	RGBW
Macros:	Colors (+ crossfade), Patterns (+ crossfade), Strobe, Pan/Tilt
Layers:	Background layer dimming, strobe, patterns, colors, CT, tints and macros

Strobe:	1 ~ 20Hz + strobe effect macros
Dimming:	0-100% with 4 dimming curve modes
Pan/Tilt movement:	540°/270°

CONTROL

Protocol:	DMX, RDM
DMX channels:	16 / 43 / 86
Data connections:	XLR In/Out for DMX, RJ45 In/Out for ArtNet
Onboard menu:	TFT display with 4-button navigation

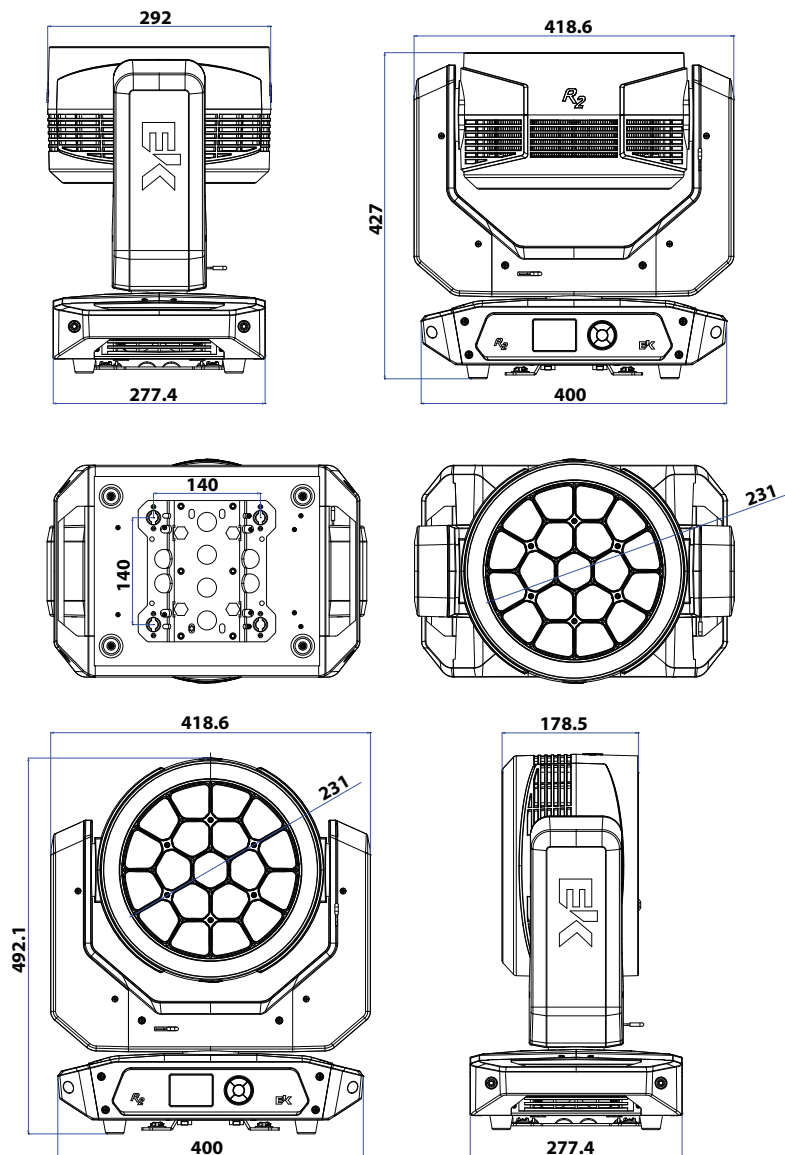
PHYSICAL

Material:	Plastic and aluminium
Finish:	Matte black
IP rating:	IP20
Cooling:	Active (variable speed fan + silent mode)
Dimensions:	419 x 277 x 510 mm
Weight:	20 KG
Mounting:	Omega Bracket (included)

Package contents

- R2
- Power cable
- User manual
- Mounting brackets (2)
- Warranty card

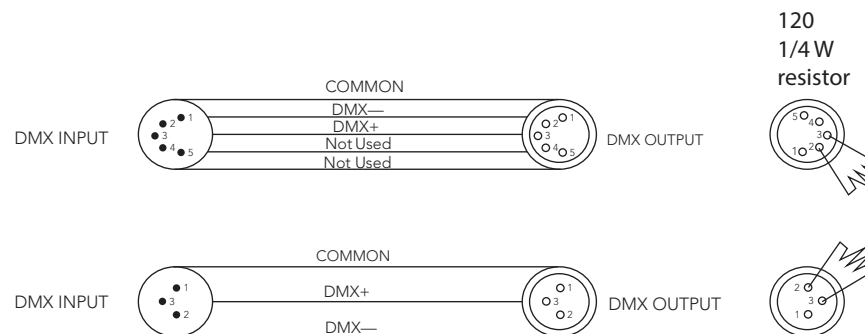
DIMENSIONS



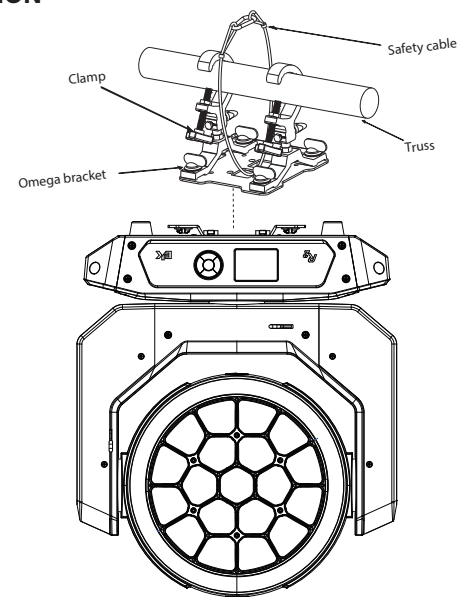
DMX CABLE PIN-OUTS and TERMINATION

Depending on the length of the DMX cable run, or other factors, it may be advisable to install a terminator at the last fixture in the run.

The illustration below shows the correct placement of a 120 0.25W resistor in a terminator, as well as the standard DMX signal pin-outs.

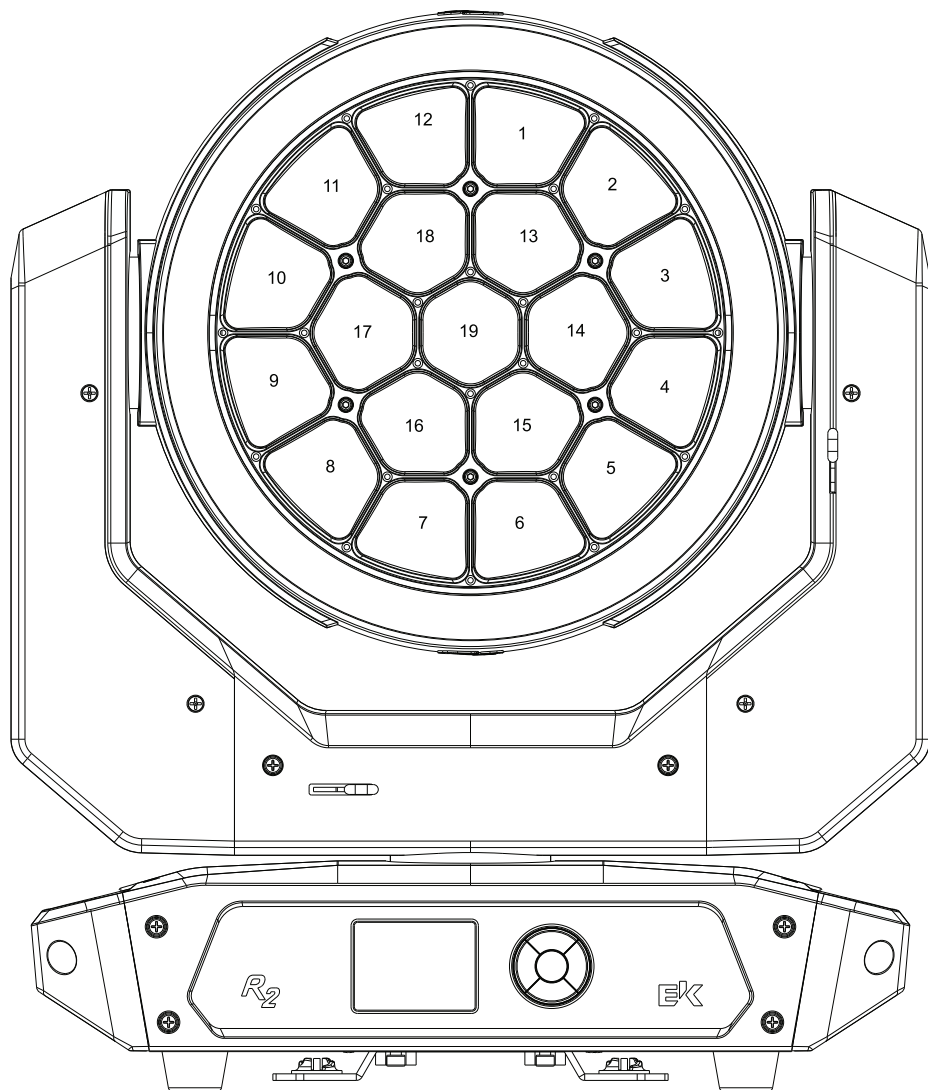


INSTALLATION

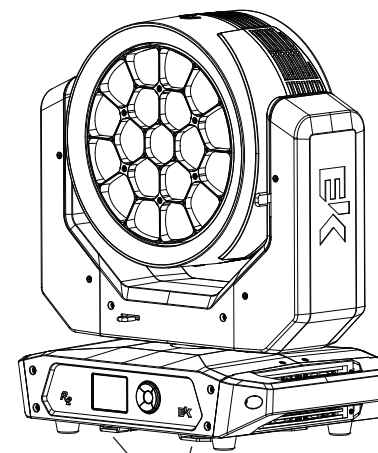


PIXEL MAP

PIXEL ORDER : Refer to below illustration for programming order of the R2 LEDs

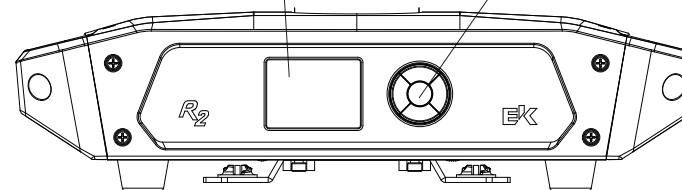


OVERVIEW

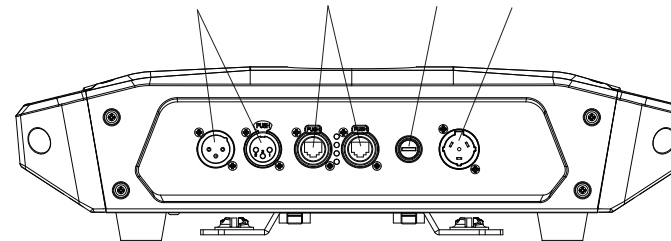


Omega bracket mounting plate

Menu Display Menu navigation buttons



DMX In/Out Artnet In/Out Fuse Power In



FUNCTIONS and OPERATION

POWER ON/OFF

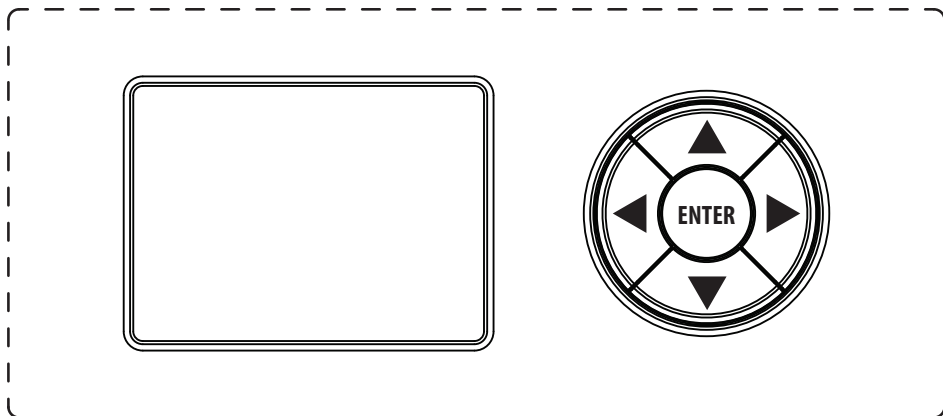
The fixture is powered on by connecting the included power cable to mains power (100 - 240 VAC, 50/60 Hz). Upon receiving power, the fixture will cycle through a motor reset program. To power on, disconnect the power cable or turn on power remotely using a switch.

MENU NAVIGATION

The control panel features five-button navigation of the onboard menu.

If the panel is password-protected, go to the Advanced menu, in the Menu locking submenu, enter the Unlock code using the navigation buttons:

1234



UP	DOWN	LEFT	RIGHT	ENTER
Increase the displayed value, or scroll thru previous menu items	Decrease the displayed value, or scroll thru next menu items	Return to higher menu levels	Advance displayed unit values by 10x and 100x	Confirm displayed values, or activate displayed functions, or enter submenus

PROTOCOL SETUP MENU

ï ONLY DMX

ï ONLY ART-NET

ï ONLY sACN

ï ART-NET + DMX

ï sACN + DMX

NETWORK SETTINGS

Sets parameters for:

- Network mode
- IP address
- Subnet Mask
- Universe
- Universe Group
- DMX Out

INFORMATION MENU

Displays stored data and values for:

- Firmware versions
- Temperature of LED, Head, Base
- Select temperature unit display (°C or °F)
- Operating hours
- RDM ID
- Error codes

RDM INFORMATION

SETTINGS MENU (continued)**COLOR CALIBRATION :**

- Red
 Green
 Blue
 White

PAN REVERSE : On / Off

TILT REVERSE : On / Off

FEEDBACK : Fixture auto-returns to position after accidental collision

FAN SET : Select standard or silent fan operating modes

LED FREQUENCY: Select PWM frequency to match cameras used for video recording, in order to avoid flicker during video playback

- 800Hz
 1200Hz
 2000Hz
 3600Hz
 12KHz
 25KHz

MOVEMENT BLACKOUT : Set fixture to blackout light output during pan/tilt movement

TEST : Run auto-test program or manual test of fixture functions

AUTO LOCK UNIT : Set fixture to auto-lock menu after 60 seconds

To unlock the menu, use the navigation buttons:

Press and hold Up+Down buttons at the same time for 3 seconds

RESET : Select to reset Head, Pan, Tilt and All

FACTORY RESET : Select to return fixture to default factory settings

SERVICE MENU : Advanced menu for adjusting pan, tilt and zoom offsets

And for resetting runtime and temperature clocks

Main Menu	Sub menu	Sub menu	Values	Default	
DMX Address			001-512		
DMX Mode	16CH			14CH	
	43CH				
	86CH				
Settings	Display Reverse		On/ Off	Off	
	Display	Backlight	On/ 30S	On	
	DMX Fail	DMX Fail	Hold/ Blackout	Hold	
	Dimmer Curve	Dimmer Curve	Linear	Linear	
			Exp		
			Log		
			S-Curve		
	Dim Resp	Dimmer Response	LED/ Halogen	LED	
	Color Calibration	RAW			
		User Calibration	Red	000-255	255
			Green	000-255	255
			Blue	000-255	255
			White	000-255	255
	Factory Calibration				
	Pan Reverse	Pan Reverse	On/ Off	Off	
Tilt Reverse	Tilt Reverse	On/ Off	Off		
Feedback	Feedback	On/ Off	On		
Fan Set	Fan Set	Regular/ Silent			
LED Frequency	LED Frequency	800 Hz	1200 Hz		
		1200 Hz			
		2000 Hz			
		3600 Hz			
		12 KHz			
		25 KHz			

Main Menu	Sub menu	Sub menu	Values	Default	
Settings	Mov Blackout	Movement Blackout	On / Off		
	Test	Auto Test			
		Manual Test	Pan	000-255	0
			Tilt	000-255	0
			Dimmer	000-255	0
			Red	000-255	0
			Green Fine	000-255	0
			Blue Fine	000-255	0
			White	000-255	0
	Zoom	000-255	0		
	Auto Lock Unit	Auto Lock Unit		Off / 60s	OFF
		Pass word: Press UP + DOWN for 3 seconds to unlock			
	Reset	Reset	Head / Pan & Tilt / All		
	Factory Reset	Reset now!			
	Service Menu	Offset Menu	Pan		0-255
			Tilt		
			Zoom		
		Runtime Reset		Reset Now?	
		Temperature	Max Time		
			Temperature		
			Time		
			XXX ∞C		
		Service Menu Password Codes			
PW: 50 opens Service Menu Calibrate					
PW: 60 opens Service Menu Runtime Reset					
PW: 70 opens Service Menu Temperature					

SET UP MENU

DMX ADDRESS : Set starting address value

DMX CHANNEL : Select 14-, 43-, or 86-channel mode

SETTINGS MENU

DISPLAY REVERSE : Select On or Off to select display orientation

 DISPLAY BACKLIGHT : On = display always on
 30S = display auto blackout after 30 seconds

DMX FAIL : Set behavior of fixture if dmx signal is lost:

 Hold last position
 Blackout light output

DIMMER CURVE : Select four different dimming curves:

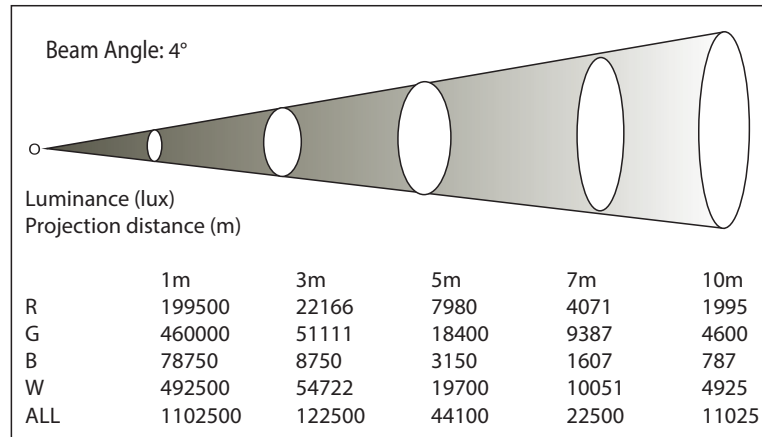
 Linear
 Exponential
 Logarithmic
 S-Curve

DIMMING RESPONSE MODE: Select LED or Halogen simulation

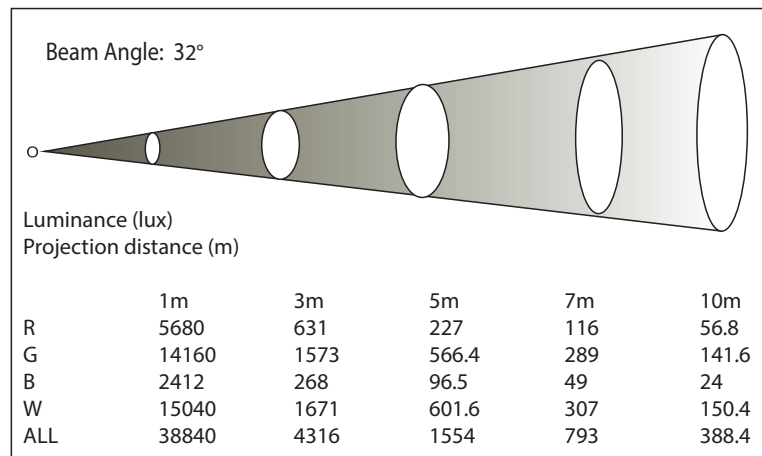
86 CH	Function	Value	Percent/Setting
86	Device Settings	160-161	LED direction normal (Hold 3s) (Standard)
		162-163	LED direction mirrored (Hold 3s)
		164-165	Dimmer Curve Linear(hold 1s)
		166-167	Dimmer Curve Exponential (Hold 1s)
		168-169	Dimmer Curve Logarithmic (Hold 1s)
		170-171	Dimmer Curve S-Curve (Hold 1s)
		172-201	Spare
		202-203	RAW-Mode (Hold 3s)
		204-205	User Calibrated-Mode (Hold 3s)
		206-207	Factory Calibrated-Mode (Hold 3s)
		208-221	Spare
		222-223	Reset Pan / Tilt (Hold 3s)
		224-227	Spare
		228-229	Reset Zoom (Hold 3s)
		230-235	Spare
		236-237	Reset All Functions (Hold 3s)
		238-245	Spare
246-255	No function		

Main Menu	Sub menu	Sub menu	Values	Default	
Protocol Setup	Only DMX				
	Only Art-Net	Universe	0-255	0	
		Universe Group	0-127	0	
	Only sACN	Universe	1-256	1	
		Universe Group	0-249	0	
	Art-Net + DMX	Universe	0-255	0	
		Universe Group	0-127	0	
		DMX Address	1-512	1	
	sACN + DMX	Universe	1-256	1	
		Universe Group	0-249	0	
2.DMX Address		1-512	1		
Network Settings	IP Address	IP Address	XXX.XXX.XXX.XXX		
	Subnet Mask	Subnet Mask	XXX.XXX.XXX.XXX		
	DMX Out	DMX Out	XXX On / Off		
System Info	Firmware	DISP-V1.0			
		NET-V1.0			
		CTR1-XY-V1.0			
		CTR2-LEDDRV-V1.0			
		CTR3-MOTOR-V1.0			
	Temperature	LED		LED XXX ∞C/∞F	
		HEAD		HEAD XXX ∞C/∞F	
		BASE		BASE XXX ∞C/∞F	
		∞C/∞F		Unit XX	
		Unit		∞C/∞F	∞C
	Operating Hours	24:05h			
	UID	030F052****			
	Error Info			Error Flag XXX	

PHOTOMETRICS (4° RGBW Beam)



PHOTOMETRICS (32° RGBW Wash)



86 CH	Function	Value	Percent/Setting
84	Zoom	000-255	narrow-wide
85	Zoom Fine	000-255	0% to 100 %
86	Device Settings	000-005	No Function
		006-007	Blackout while Moving on (Hold 3s)
		008-009	Blackout while Moving off (Hold 5s)
		010-041	Spare
		042-043	Invert Pan on (Hold 3s)
		044-045	Invert Pan off (Hold 5s)
		046-047	Invert Tilt on (Hold 3s)
		048-049	Invert Tilt off (Hold 5s)
		050-073	Spare
		074-075	Dimmer Response LED (Hold 3s)
		076-077	Dimmer Response Halogen (Hold 3s)
		078-097	Spare
		098-099	Silent Fan on (Hold 3s)
		100-101	AutoFan (Hold 3s)
		102-119	Spare
		120-121	LED Frequency 800 Hz (Hold 3s)
		122-123	LED Frequency 1200 Hz (Hold 3s)
		124-125	LED Frequency 2000 Hz (Hold 3s)
		126-127	LED Frequency 3000 Hz (Hold 3s)
		128-129	LED Frequency 4000 Hz (Hold 3s)
130-131	LED Frequency 5000 Hz (Hold 3s)		
132-139	Spare		
140-141	Display On (Hold 1s)		
142-143	Display Off (Hold 1s)		
144-159	Spare		

86 CH	Function	Value	Percent/Setting
1	Pan	000-255	0~100%
2	Pan Fine	000-255	0~100%
3	Tilt	000-255	0~100%
4	Tilt Fine	000-255	0~100%
5	Dimmer	000-255	0~100%
6	Dimmer Fine	000-255	0~100%
7	Strobe	000-005	Strobe open
		006-010	Strobe closed
		011-033	Pulse Random,slow to fast
		034-056	Ramp up Random, slow to fast
		057-079	Ramp down Random, slow to fast
		080-102	Random Strobe Effect, slow to fast
		103-127	Strobe Break Effect, 5s:::1s (Short burst with break)
		128-250	Strobe slow to fast (1Hz20 Hz)
		251-255	Strobe open
8	Red1	000-255	0~100%
9	Green1	000-255	0~100%
10	Blue1	000-255	0~100%
11	White1	000-255	0~100%
12	Red2	000-255	0~100%
13	Green2	000-255	0~100%
14	Blue2	000-255	0~100%
15	White2	000-255	0~100%
...
80	Red19	000-255	0~100%
81	Green19	000-255	0~100%
82	Blue19	000-255	0~100%
83	White19	000-255	0~100%

DMX STARTING ADDRESS

To set the starting address of each fixture:

- i Press the ENTER button and use the UP/DOWN buttons to scroll the menu
- i Select the DMX ADDRESS menu and press ENTER
- i Use the UP/DOWN buttons to scroll to the preferred address value
- i Press ENTER to confirm the chosen DMX address
- i Press the MENU button to save changes and exit

EXAMPLE OF DMX ADDRESSING

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

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

DMX ALLOCATION	1st Fixture	2nd Fixture	3rd Fixture	4th Fixture
16 channels	001	017	033	049

16 CH	Function	Value	Percent/Setting
1	Pan	000-255	Pan Coarse
2	Pan Fine	000-255	Pan Fine
3	Tilt	000-255	Tilt Coarse
4	Tilt Fine	000-255	Tilt Fine
5	Dimmer	000-255	0~100%
6	Dimmer Fine	000-255	0~100%
7	Red	000-255	0~100%
8	Green	000-255	0~100%
9	Blue	000-255	0~100%
10	White	000-255	0~100%
11	Color Temperature	000-010	off
		011-040	2700K
		041-070	3200K
		071-100	4000K
		101-130	5600K
		131-160	6500K
		161-190	7000K
		191-220	7500K
		221-255	8000K
12	Tint	000-127	define the target point correction from Magenta to off
		128-128	off
		129-255	define the target point correction from OFF to Green
13	Zoom	000-255	0~100%
14	Running Effect Colour Pattern (Pattern turning only if Pattern Speed CH13 is on or automatic colour run)	000-005	Off
		006-010	Effect 1 (Cross CW)
		011-015	Effect 2 (Circle 2 Step in > out)
		016-020	Effect 3 (Circle 2 Step Colour Change in > out)
		021-025	Effect 4 (Clock hand - CW)
		026-030	Effect 5 (Ventilator - CW)
		031-035	Effect 6 (Bow runs left >)
		036-040	Effect 7 (Bow runs down >)
		041-045	Effect 8 (3-line to 2-line)
		046-050	Effect 9 (diamond change)
		051-055	Effect 10 (Small circle 2 Dots run)
056-060	Effect 11 (Circle 3step in > out)		

43 CH	Function	Value	Percent/Setting
43	Device Settings	120-121	LED Frequency 800Hz (Hold 3s)
		122-123	LED Frequency 1200Hz (Hold 3s)
		124-125	LED Frequency 2000Hz (Hold 3s)
		126-127	LED Frequency 3600Hz (Hold 3s)
		128-129	LED Frequency 12KHz (Hold 3s)
		130-131	LED Frequency 25KHz (Hold 3s)
		132-139	Spare
		140-141	Display On(Hold 3s)
		142-143	Display Off(Hold 3s)
		144-159	Spare
		160-161	LED direction normal (Hold 3s) (Standard)
		162-163	LED direction mirrored (Hold 3s)
		164-165	Dimmer Curve Linear(Hold 3s)
		166-167	Dimmer Curve Exponential(Hold 3s)
		168-169	Dimmer Curve Logarithmic(Hold 3s)
		170-171	Dimmer Curve S-Curve(Hold 3s)
		172-201	Spare
		202-203	RAW-Mode (Hold 3s)
		204-205	User Calibrated-Mode (Hold 3s)
		206-207	Factory Calibrated-Mode (Hold 3s)
		208-221	Spare
		222-223	Reset Pan / Tilt (Hold 3s)
		224-227	Spare
		228-229	Reset Zoom (Hold 3s)
		230-235	Spare
		236-237	Reset All Functions (Hold 3s)
		238-245	Spare
246-255	No function		

43 CH	Function	Value	Percent/Setting	Remark
39	Background Color Macro Crossfade	000-005	0s	Transition Time between Color Macros - effects only Color Macros if active between the Colors
		006-255	0,1s - 10s	
40	Background Colour Temperature	000-010	OFF	(affects RGBW and Colour Macros)
		011-040	2700K	
		041-070	3200K	
		071-100	4000K	
		101-130	5600K	
		131-160	6500K	
		161-190	7000K	
		191-220	7500K	
41	Background Tint	000-127	Magenta correction to OFF	Linear Tint setting,
		128-128	OFF	Only effect at active Colour Temperature
		129-255	OFF to Green correction	
42	Pan/Tilt Speed	000-005	Pan/Tilt Movement Fast to Slow	
43	Device Settings	000-005	No Function	
		006-007	Blackout while Moving on (Hold 3s)	
		008-009	Blackout while Moving off (Hold 3s)	
		010-041	Spare	
		042-043	Invert Pan on (Hold 3s)	
		044-045	Invert Pan off (Hold 3s)	
		046-047	Invert Tilt on (Hold 3s)	
		048-049	Invert Tilt off (Hold 3s)	
		050-073	Spare	
		074-075	Dimmer Response LED (Hold 3s)	
		076-077	Dimmer Response Halogen (Hold 3s)	
		078-097	Spare	
		098-099	Silent Fan on (Hold 3s)	
		100-101	Auto Fan (Hold 3s)	
		102-119	Spare	

16 CH	Function	Value	Percent/Setting
14	Running Effect Colour Pattern (Pattern turning only if Pattern Speed CH13 is on or automatic colour run)	061-065	Effect 12 (2 Dots running on outer circle)
		066-070	Effect 13 (4 Dots - running on outer circle)
		071-075	Effect 14 Even/Odd
		076-080	Effect 15 Random Single Dots Jump
		080-085	Effect 16 Random Single Dots Fade
		086-090	Effect 17 Raindrop Jump
		091-095	Effect 18 Raindrop Fade
		096-100	Effect 19 All Effects
15	Pattern Speed	101-255	All LEDs On
		000-005	Effect Pattern Speed Stop
		006-127	Effect Pattern Speed, slow > fast, forward
16	Device Settings	128-255	Effect PatternSpeed, fast > slow, back
		000-005	No Function
		006-007	Blackout while Moving on (Hold 3s)
		008-009	Blackout while Moving off (Hold 3s)
		010-041	Spare
		042-043	Invert Pan on (Hold 3s)
		044-045	Invert Pan off (Hold 3s)
		046-047	Invert Tilt on (Hold 3s)
		048-049	Invert Tilt off (Hold 3s)
		050-073	Spare
		074-075	Dimmer Response LED (Hold 3s)
		076-077	Dimmer Response Halogen (Hold 3s)
		078-097	Spare
		098-099	Silent Fan on (Hold 3s)
		100-101	Auto Fan (Hold 3s)
		102-119	Spare
		120-121	LED Frequency 800Hz (Hold 3s)
		122-123	LED Frequency 1200Hz (Hold 3s)
		124-125	LED Frequency 2000Hz (Hold 3s)
		126-127	LED Frequency 3600Hz (Hold 3s)
128-129	LED Frequency 12KHz (Hold 3s)		
130-131	LED Frequency 25KHz (Hold 3s)		
132-139	Spare		

16 CH	Function	Value	Percent/Se tting
16	Device Settings	140-141	Display On (Hold 3s)
		142-143	Display Off (Hold 3s)
		144-159	Spare
		160-161	LED direction normal (Hold 3s) (Standard)
		162-163	LED direction mirrored (Hold 3s)
		164-165	Dimmer Curve Linear (Hold 3s)
		166-167	Dimmer Curve Exponential (Hold 3s)
		168-169	Dimmer Curve Logarithmic (Hold 3s)
		170-171	Dimmer Curve S-Curve (Hold 3s)
		172-201	Spare
		202-203	RAW-Mode (Hold 3s)
		204-205	User Calibrated-Mode (Hold 3s)
		206-207	Factory Calibrated-Mode (Hold 3s)
		208-221	Spare
		222-223	Reset Pan / Tilt (Hold 3s)
		224-227	Spare
		228-229	Reset Zoom (Hold 3s)
		230-235	Spare
		236-237	Reset All Functions (Hold 3s)
		238-245	Spare
246-255	No function		

43 CH	Function	Value	Percent/Se tting
38	Background Colour Macro (override RGBW)	106-109	738 Jas Green
		110-113	89 Moss Green
		114-117	139 Primary Green
		118-121	124 Dark Green
		122-125	323 Jade
		126-129	354 Special Steel Blue
		130-133	116 Medium Blue-Green
		134-137	183 Moonlight Blue
		138-141	132 Medium Blue
		142-145	119 Dark Blue
		146-149	716 Mikkel Blue
		150-153	71 Tokyo Blue
		154-157	181 Congo Blue
		158-161	799 Special KH Lavender
		162-165	707 Ultimate Violet
		166-169	343 Special Medium Lavender
		170-173	798 Chrysalis Pink
		174-177	701 Provence
		178-181	797 Deep Purple
		182-185	48 Rose Purple
		186-189	345 Fuchsia Pink
		190-193	795 Magical Magenta
		194-197	128 Bright Pink
		198-201	2 Rose Pink
		202-204	Colour Jumping Stop
		205-230	Colour Jumping Speed slow -> fast / Colour 1 -> 49
		231-255	Colour Fading Speed slow -> fast / Colour 1 -> 49

43 CH	Function	Value	Percent/Setting
38	Background Colour Macro (override RGBW)	000-005	no function
		006-009	46 Dark Magenta
		010-013	29 Plasma Red
		014-017	26 Bright Red
		018-021	127 Smokey Pink
		022-025	36 Medium Pink
		026-029	19 Fire
		030-033	135 Deep Golden Amber
		034-037	778 Millennium Gold
		038-041	21 Gold Amber
		042-045	157 Pink
		046-049	110 Middle Rose
		050-053	109 Light Salmon
		054-057	35 Light Pink
		058-061	134 Golden Amber
		062-065	17 Surprise Peach
		066-069	746 Brown
		070-073	105 Orange
		074-077	20 Medium Amber
		078-081	768 EggYolkYellow
		082-085	15 Deep Straw
		086-089	767 Nectarine
		090-093	101 Yellow
		094-097	100 Spring Yellow
		098-101	88 Lime Green
		102-105	121 LEE Green

43 CH	Function	Value	Percent/Setting
1	Pan	000-255	0~100 %
2	Pan Fine	000-255	0~100 %
3	Tilt	000-255	0~100 %
4	Tilt Fine	000-255	0~100 %
5	Dimmer	000-255	0~100 %
6	Dimmer Fine	000-255	0~100 %
7	Strobe	000-005	Strobe open
		006-010	Strobe closed
		011-033	Pulse Random, slow to fast
		034-056	Ramp up Random, slow to fast
		057-079	Ramp down Random, slow to fast
		080-102	Random Strobe Effect, slow to fast
		103-127	Strobe Break Effect, 5s~:1s (Short burst with break)
		128-250	Strobe slow to fast (1Hz-20Hz)
		251-255	Strobe open
8	Red	000-255	0~100 %
9	Red Fine	000-255	0~100 %
10	Green	000-255	0~100 %
11	Green Fine	000-255	0~100 %
12	Blue	000-255	0~100 %
13	Blue Fine	000-255	0~100 %
14	White	000-255	0~100 %
15	White Fine	000-255	0~100 %

43 CH	Function	Value	Percent/Setting
16	Colour Macro (override RGBW)	000-005	no function
		006-009	46 Dark Magenta
		010-013	29 Plasma Red
		014-017	26 Bright Red
		018-021	127 Smokey Pink
		022-025	36 Medium Pink
		026-029	19 Fire
		030-033	135 Deep Golden Amber
		034-037	778 Millennium Gold
		038-041	21 Gold Amber
		042-045	157 Pink
		046-049	110 Middle Rose
		050-053	109 Light Salmon
		054-057	35 Light Pink
		058-061	134 Golden Amber
		062-065	17 Surprise Peach
		066-069	746 Brown
		070-073	105 Orange
		074-077	20 Medium Amber
		078-081	768 EggYolkYellow
		082-085	15 Deep Straw
		086-089	767 Nectarine
		090-093	101 Yellow
		094-097	100 Spring Yellow
		098-101	88 Lime Green
		102-105	121 LEE Green
		106-109	738 Jas Green

43 CH	Function	Value	Percent/Setting
27	Background Dimmer (All Background functions are enabled with Pattern enabled)	000-255	Master Dimmer 0-100 %
28	Background Dimmer Fine	000-255	Master Dimmer 0-100 %
29	Background Strobe	000-005	Strobe open
		006-010	Strobe closed
		011-033	Puls Random, slow to fast
		034-056	Ramp up Random, slow to fast
		057-079	Ramp down Random, slow to fast
		080-102	Random Strobe Effect, slow to fast
		103-127	Strobe Break Effect, 5s:::1s (Short burst with break)
		128-250	Strobe slow to fast (1Hz-20Hz)
		251-255	Strobe open
30	Background Red	000-255	0~100%
31	Background Red Fine	000-255	0~100%
32	Background Green	000-255	0~100%
33	Background Green Fine	000-255	0~100%
34	Background Blue	000-255	0~100%
35	Background Blue Fine	000-255	0~100%
36	Background White	000-255	0~100%
37	Background White Fine	000-255	0~100%

43 CH	Function	Value	Percent/Setting
23	Running Effect Colour Pattern (when CH2 = 129-255)	000-005	Off
		006-010	Effect 1 (Cross CW)
		011-015	Effect 2 (Circle 2Step in > out)
		016-020	Effect 3 (Circle 2Step Colour Change in > out)
		021-025	Effect 4 (Clock hand - CW)
		026-030	Effect 5 (Ventilator - CW)
		031-035	Effect 6 (Bow runs left >)
		036-040	Effect 7 (Bow runs down >)
		041-045	Effect 8 (3-line to 2-line)
		046-050	Effect 9 (diamond change)
		051-055	Effect 10 (Small circle 2 Dots run)
		056-060	Effect 11 (Circle 3step in > out)
		061-065	Effect 12 (2 Dots running on outer circle)
		066-070	Effect 13 (4Dots - running on outer circle)
		071-075	Effect 14 Even/Odd
		076-080	Effect 15 Random Single Dots Jump
		080-085	Effect 16 Random Single Dots Fade
		086-090	Effect 17 Raindrop Jump
		091-095	Effect 18 Raindrop Fade
096-100	Effect 19 All Effects		
		101-255	All LEDs On
24	Pattern Speed	000-005	Effect Pattern Speed Stop
		006-127	Effect Pattern Speed, slow > fast, forward
		128-255	Effect Pattern Speed, fast > slow, back
25	Pattern Transition	000-005	Stop
		006-255	0.1s - 5s
26	Running Effect Pattern	000-005	Off
	Fade	006-127	Fade Effect Pattern less -> much
	Wake	128-255	Wake Effect Pattern less -> much

43 CH	Function	Value	Percent/Setting
16	Colour Macro (override RGBW)	110-113	89 Moss Green
		114-117	139 Primary Green
		118-121	124 Dark Green
		122-125	323 Jade
		126-129	354 Special Steel Blue
		130-133	116 Medium Blue-Green
		134-137	183 Moonlight Blue
		138-141	132 Medium Blue
		142-145	119 Dark Blue
		146-149	716 Mikkel Blue
		150-153	71 Tokyo Blue
		154-157	181 Congo Blue
		158-161	799 Special KH Lavender
		162-165	707 Ultimate Violet
		166-169	343 Special Medium Lavender
		170-173	798 Chrysalis Pink
		174-177	701 Provence
		178-181	797 Deep Purple
		182-185	48 Rose Purple
		186-189	345 Fuchsia Pink
		190-193	795 Magical Magenta
		194-197	128 Bright Pink
		198-201	2 Rose Pink
		202-204	Colour Jumping Stop
		205-230	Colour Jumping Speed slow -> fast / Colour 1 -> 49
		231-255	Colour Fading Speed slow -> fast / Colour 1 -> 49

43 CH	Function	Value	Percent/Setting	Remark
17	Color Macro Crossfade	000-005	0s	Transition Time between Color Macros - affects only Color Macros if active between the Colors
		006-255	0,1s - 10s	
18	Colour Temperature	000-010	OFF	(affects RGBW and Colour Macros)
		011-040	2700 K	
		041-070	3200 K	
		071-100	4000 K	
		101-130	5600K	
		131-160	6500K	
		161-190	7000 K	
		191-220	7500 K	
		221-255	8000 K	
		19	Tint	00-127
128-128	OFF			Only effect at active Colour Temperature
129-255	OFF to Green correction			
20	Zoom	000-255	narrow - wide	
21	Zoom Fine	000-255	0% to 100 %	
22	Selection Folder	000-005	OFF	(disable Background functions)
		006-064	Pattern 1	(enable Background functions)
		065-128	Pattern 2	(enable Background functions)
		129-255	Running Effect Pattern	(enable Background functions)

43 CH	Function	Value	Percent/Setting	Remark	
23	Pattern 1	000-005	Off("Wash Mode")	adding with RGBW or Colour Macros & sep. Background functions)	
		006-010	1	(when CH2 = 006-064)	
		011-015	2		
		016-020	3		
		021-025	4		
		026-030	5		
		031-035	6		
		036-040	7		
		041-045	8		
		046-050	9		
	051-055	10			
	056-...	Nov-49			
	251-255	50			
	Pattern 2		000-005	Off("Wash Mode")	Nr. 51 - 99 (adding with RGBW or Colour Macros & sep. Background functions)
			006-010	51	(when CH2 = 065-128)
			011-015	52	
			016-020	53	
			021-025	54	
			026-030	55	
			031-035	56	
036-040			57		
041-045			58		
046-050			59		
051-055	60				
056-...	61-99				
251-255	100				