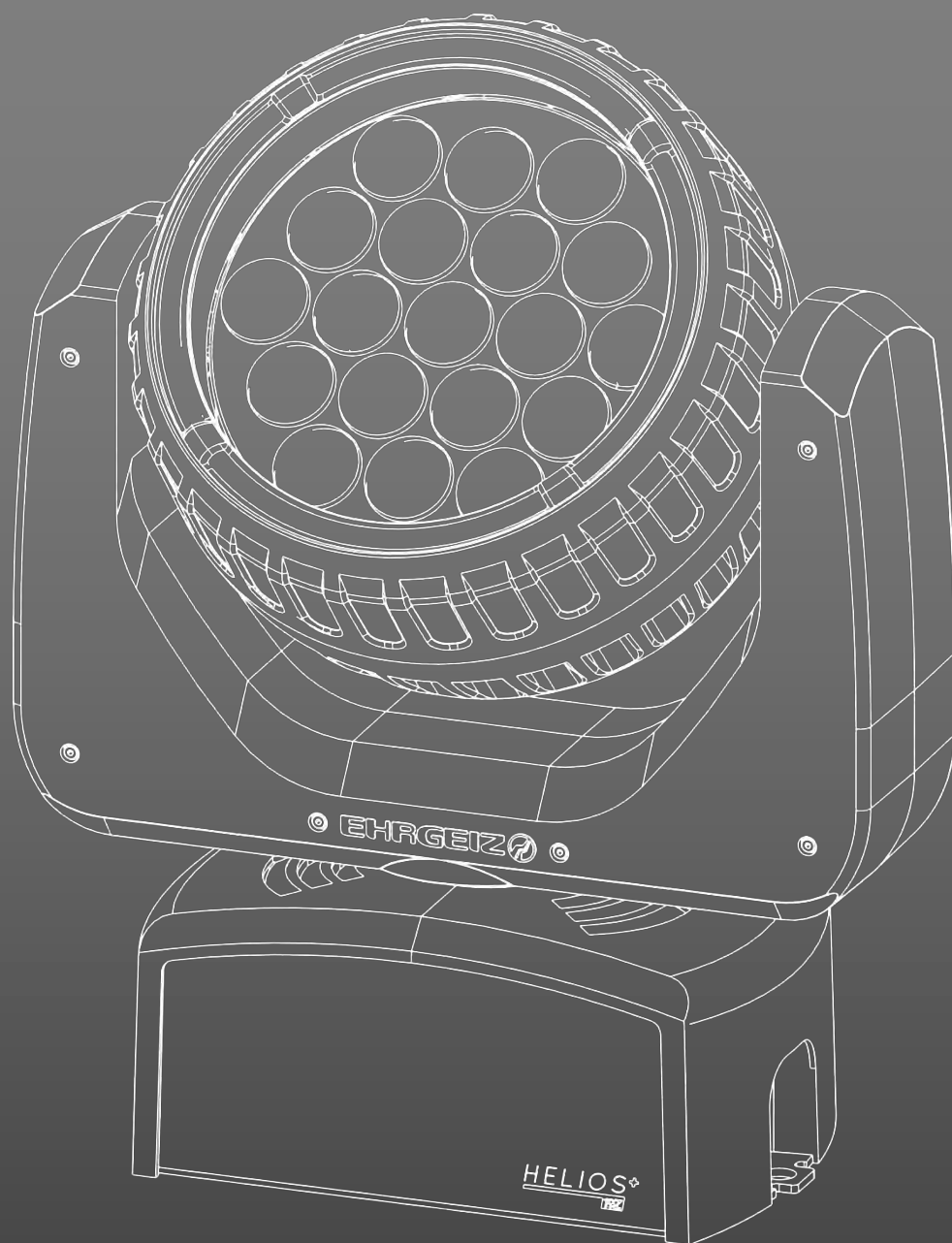
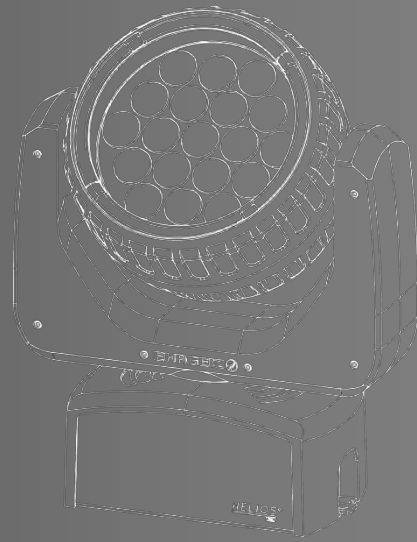


EHRGEIZ 



HELIOS+

USER MANUAL **19Z**



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## Introduction

Thank you for your purchase and usage of the Ehrgeiz Helios+ 19z.

You have chosen a reliable product with outstanding features like the unique 8 segment ring. The device is easy to use and is made of high quality components.

Every Ehrgeiz Product is checked before shipping to secure you are able to receive a great product without compromise. This is not a toy. Our ambitious aim is to get you a reliable working tool.

## Safety Instructions

### IP20 protection rating

The fitting is protected against penetration by solid bodies of over 12,5 mm (0.47") in diameter (first digit 2), but not against dripping water, rain, splashes or jets of water (second digit 0).

### Prevention from electrical shock

Make sure to ground (earth) the fixture electrically. (It's essential to connect the yellow/green conductor to earth)

### Main Connection

Do not apply any AC mains power to the fixture at any other voltage than that specified.

Never let the power-cord come into contact with other cables. Treat the power cord and all connections with the mains with particular caution.

Make sure the power-cord is never crimped or damaged by sharp edges.

### Rigging

Check that all external covers and rigging hardware are securely fastened.

When choosing the installation-location, please make sure that the fixture is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others.

Make sure that the area below the installation place is cordoned off when rigging, de-rigging or servicing the fixture.

If suspending from a rigging structure, fasten the fixture to a rigging clamp with an M10 bolt screwed into the threaded hole in the center of the base of the fixture. The bolt must be screwed at least 20–25mm into the fixture. If the fixture is suspended by any other method, an M10 bolt must be screwed into this hole so that it is at least 20–25mm into the fixture.

Make sure all fixtures are operated and installed by qualified electrician with the relevant national certifications.

In order to maintain the condition and to ensure a safe operation, it is important for all users to follow the safety instructions and warning notes written in this manual.

Do not operate the fixture with missing or damaged covers, shields or any optical component.



## Introduction → Safety Instructions

Please consider that unauthorized modifications to the device are forbidden due to safety reasons.

If the device is operated in any way that's not described in this manual, the product may suffer damage and the guarantee will become void. Furthermore, misuse may lead to dangers like short-circuit, burns, electric shock, burns due to ultraviolet radiation, lamp explosion, crash, etc.

### Liability

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification or repair to the fixture.

### Minimum distance to illuminate objects

The fixture must be positioned at least 0.2m minimum distance to illuminate objects.

### Minimum distance from inflammable materials:

Keep all inflammable materials at least 0.2m from this fixture.

### Positioning:

Allow to place the fitting on an inflammable surface.

### Maximum ambient temperature of unit location

The maximum ambient temperature of 45°C may not be exceeded.

Install as described in this manual a secondary attachment such as a safety wire that is approved by an official body. The safety wire must comply with EN 60598-2-17 Section 17.6.6 and be capable of bearing a static suspended load ten times the weight of the fixture.

### Exterior surface temperature:

The exterior of this fixture can reach an untouchable temperature during operation. Avoid contact by persons and materials.

### Maintenance:

This fixture is for professional use only. It is not for household use.

Always unplug the mains for any maintenance.

### Risk of eye injury:

Do not stare directly into the light when it is switch on. (Do not look at LEDs with magnifying glasses, telescopes, binoculars, or similar optical instruments that may concentrate the light output.

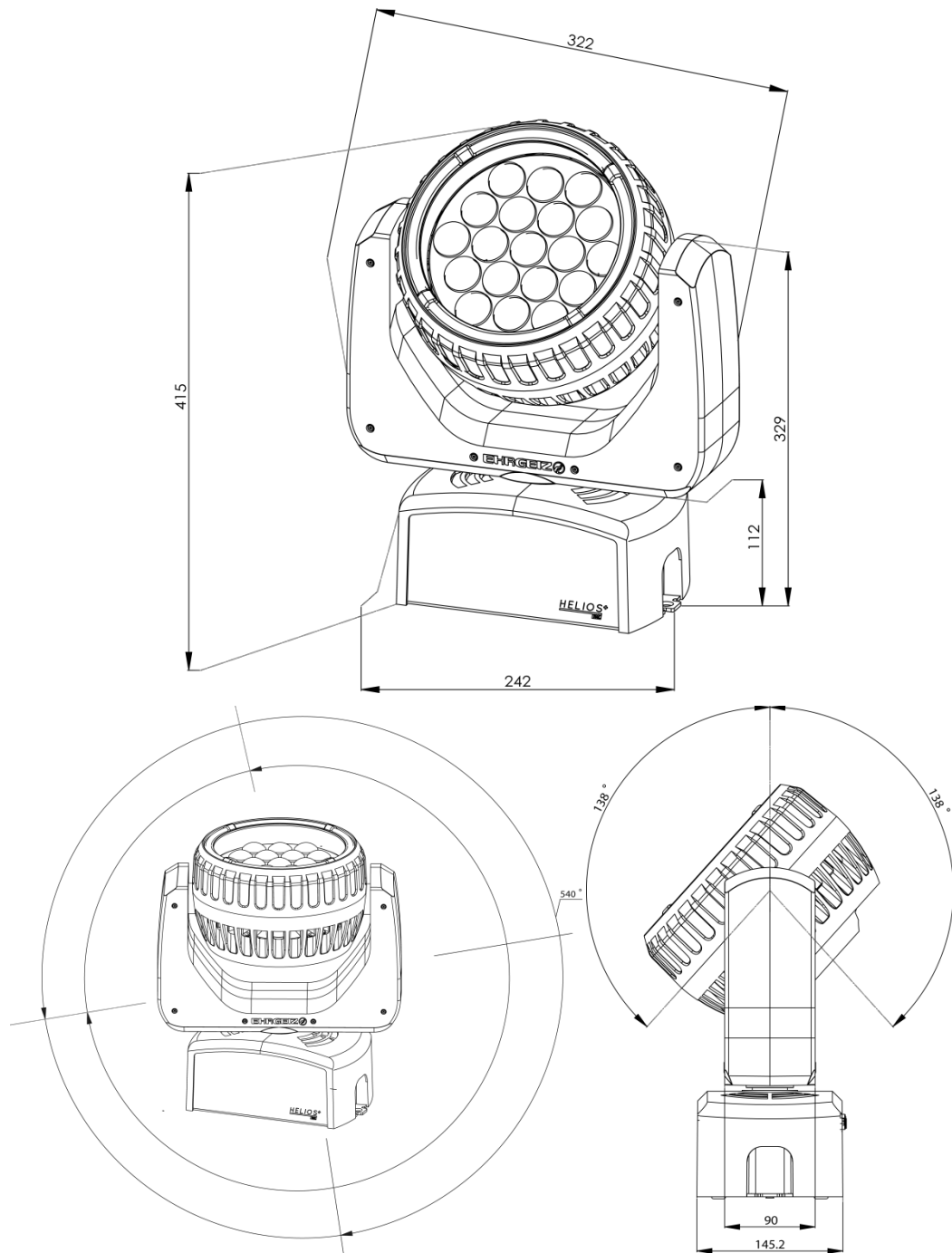
Introduction → Delivery Contents

## Delivery Contents

You received your Helios+ 19z with the following content

- Helios+ 19z
  - Powercord
- 7x 15W Moving Head
  - Powercable with Neutrik powerCON plug

## Fixture Dimensions



Dimensions in mm



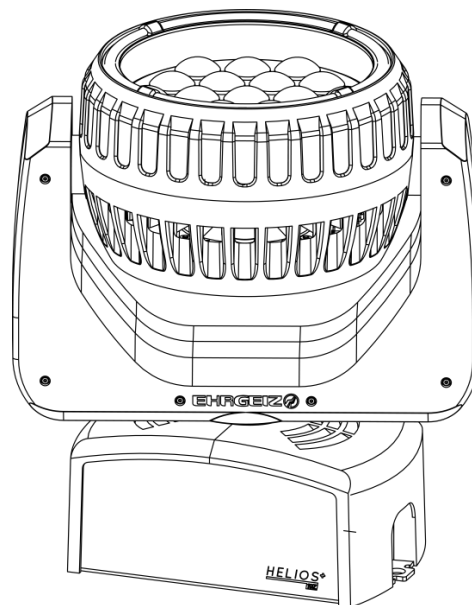
floor

## Installations

Your Helios+ 19z can be installed in every kind of following positions. Please see the explanations and rely to the Instructions for a safe operation and secure handling.

### Installation on the floor

You could place the Helios+ 19z on the floor. Please make sure the surface is plane and the reliability of the floor is sufficient.

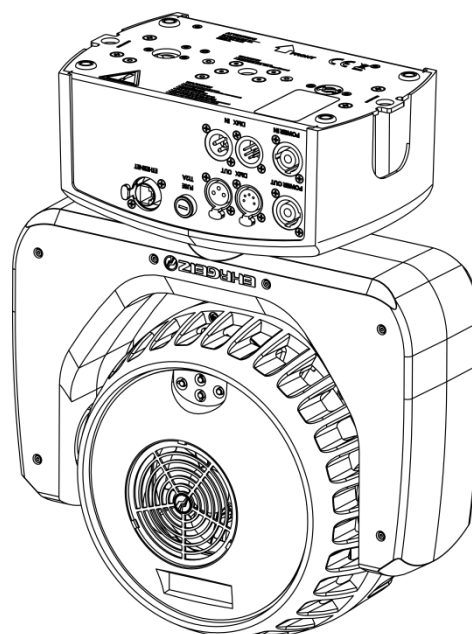


### Installation hanging

You can attach the Helios+ 19z to a Truss or Pipe facing down.

If you wish to install the fixture using a Clamp, make sure that the length of the M10 bolt does not exceed 25mm!

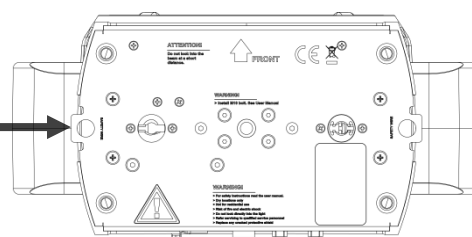
When installing the fixtures one to another the distance between the middle of the installation clamps has to be more than 270 mm.



### Safety attachment

Please attach the Safety rope to one of the two safety eyelets on the base of the housing.

Safety



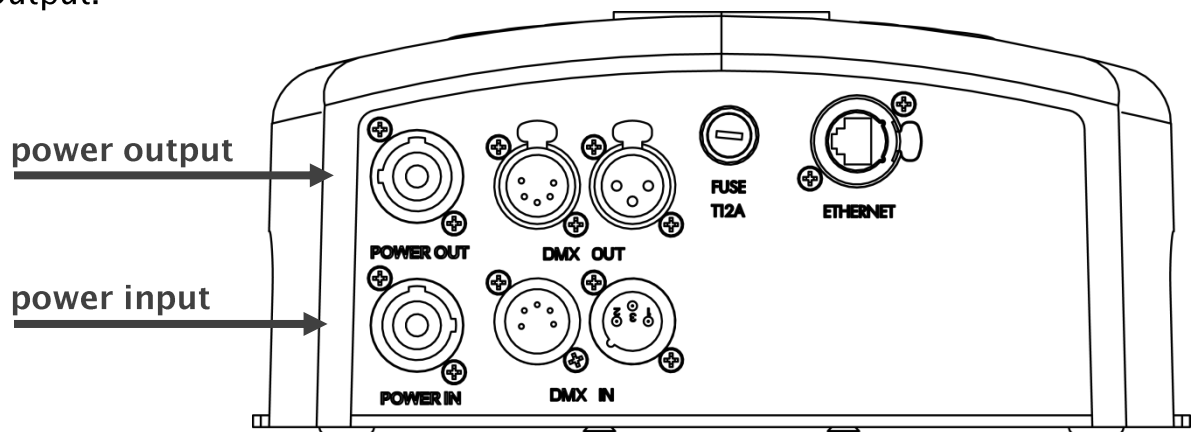
Connections → Mains

## Connections

### Mains

The connection of the Powersupply has to be done by qualified personnel only. Do not connect the Helios+ 19z if you are not able to survey the consequences.

The Helios+ 19z is equipped with original NEUTRIK powerCON In- and Output.



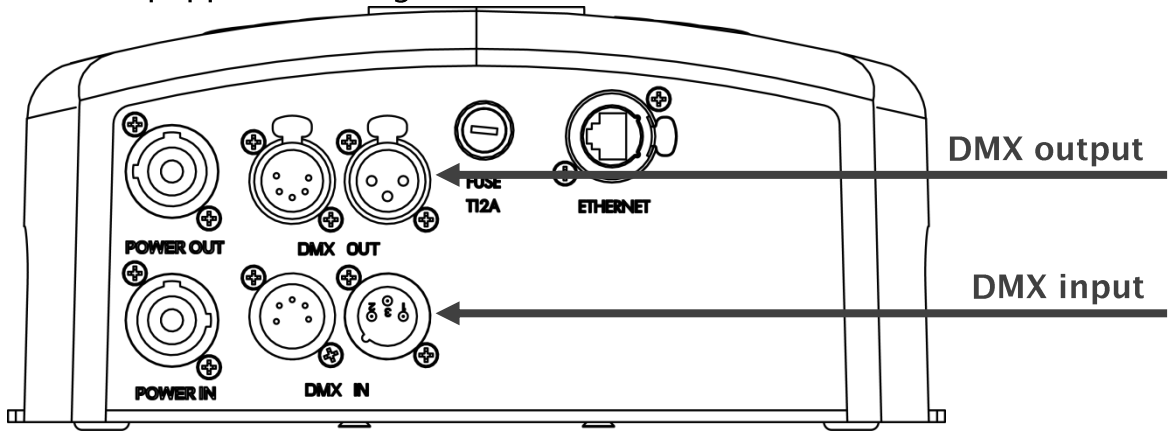
Do not try to connect another Type of Plug than an original NEUTRIK powerCON. Do not use any force to connect the powerCON plug. You could use the outlet for connecting additional devices. The internal wiring is done with a cable cross section of 2,5mm<sup>2</sup>.



## Connections → DMX

### DMX

Your Helios+ 19z is equipped with original NEUTRIK XLR connectors for In- and Output.



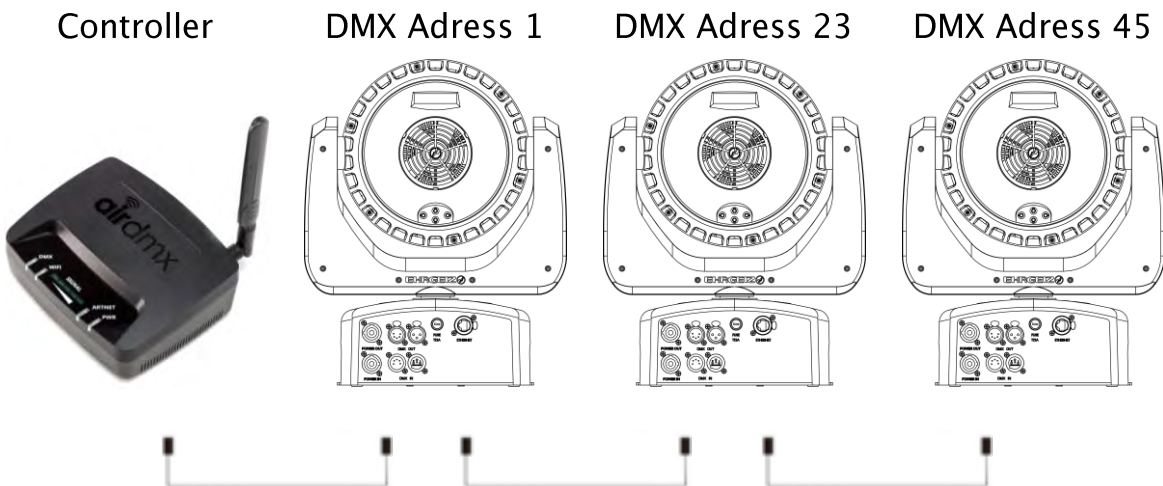
We recommend the use of High quality XLR connectors like original NEUTRIK. Please use real DMX cable with a surge impedance of 110 Ω.

You could choose one input and output 3 or 5 pin; please don't use the device as a splitter.

Please notice that the USITT DMX Standard does allow the use a max of 32 DMX fixtures in one line. You should terminate the signal by a 120 Ω resistor.

In the Standard mode the Helios+ 19z uses 22 DMX channels.

Connect the devices and increase the value of the DMX channel by 22 from one device to another



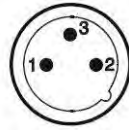


Connections → DMX Pin definition:

### DMX Pin definition:



1: Ground  
2: Signal -  
3: Signal +



### Artnet

Your Helios+ 19z is equipped with an Artnet input.

Although there are a lot of possibilities for this protocol the “normal” setup is not that complicated.

According to the standard the Address should be in a Range of 2.X.X.X or 10.X.X.X

Just set your controller to an IP Address like 2.0.0.XXX choose another address for your Helios+ 19z devices. Keep in mind that none of the devices should wear the same IP address, even if you would like them to behave the same way.

Set the controller and your Helios+ 19z to the same Subnet and Universe. Patch your Console and select the same DMX start address on the device.

For more information on using Artnet see the Artistic License Page:

<http://www.artisticlicence.com/>

You will be able to find a lot of information, as well as some useful software tools for Network analysis like the DMX-Workshop there.

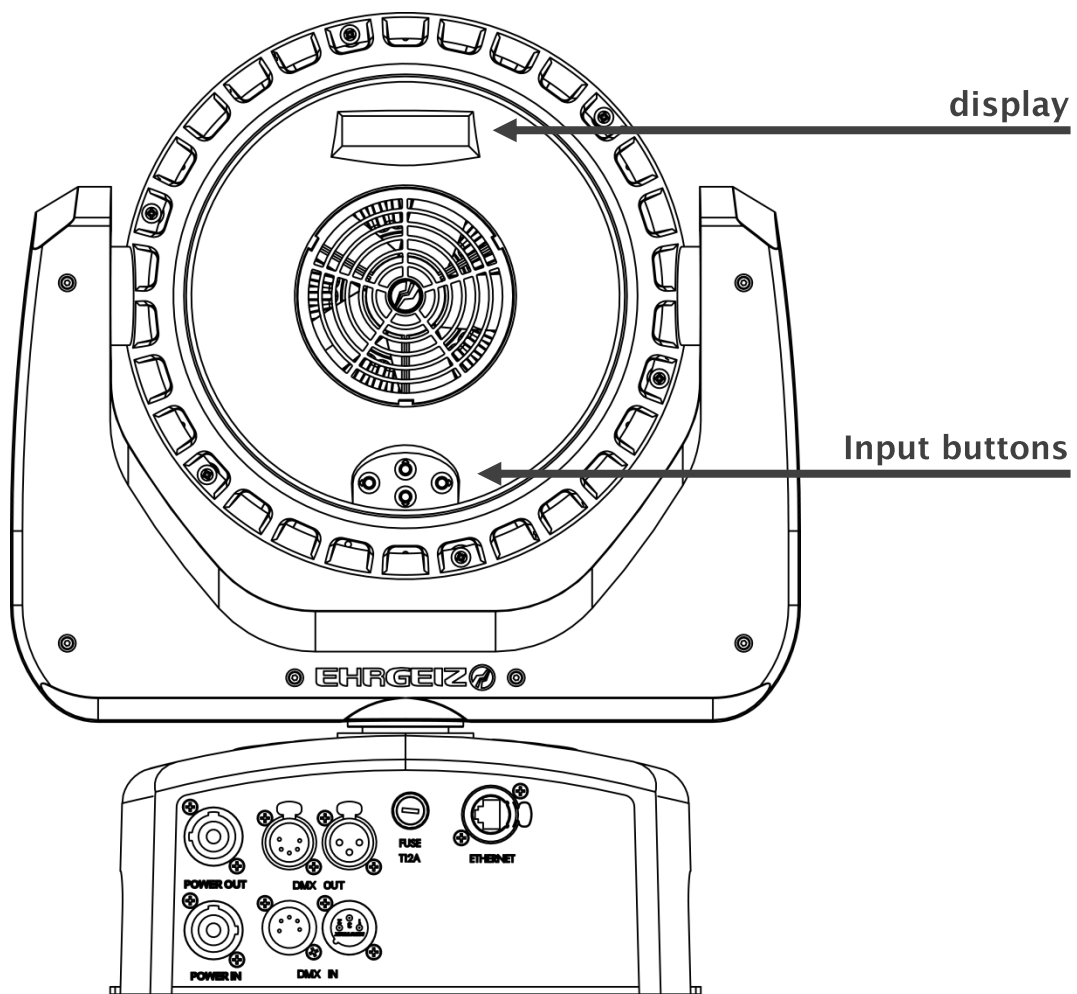


## Operations

### Menu control

Your Helios+ 19z uses an innovative way to change the menu settings.

The display, as well as the input buttons, are aligned in the head of the device. This allows you to do your settings in every way you are able to approach the device. Simply press any button 2 times and the motors are free. Do your Settings and the motors will go back to controlled mode after 10 seconds. (Motor free can be disabled in the Personality Settings)



The Menu of the Helios+ 19z is very intuitive. You will find a menu map on the following pages. The four buttons are used to scroll the values, select a setting or hop back in the menu structure:

- ◀ Go back in the menu structure or leave a value as it is
- ▶ Go forward in the menu structure or confirm the selected value
- ▲▼ Scroll up / down in the menu structure or scroll the selected value

Operations → Menu map

### Menu map

DMX ADDRESS	Address + / -	1 - 512	▶ Choose your DMX address	
Personality	DMX Mode	Standard Mode	▶ 16 channels with most effects included	
		Advanced Mode	▶ 20 channels with 16 bit colour mixing	
		Pixel Mapping	▶ 58 channels with RGBW control for every pixel	
		Compressed RGB	▶ 10 channels with RGB control only	
		Compressed RGBW	▶ 11 channels with RGBW control only	
	Remote DMX Add.	On	▶ Enable the Remote DMX addressing	
		Off		
	P / T Setting	P / T Speed	Normal / Fast / Slow	▶ choose PAN / TILT speed
		PAN Invert	On / Off	▶ invert the PAN control
		Tilt Invert	On / Off	▶ invert the TILT control
		Feedback	On / Off	▶ Turn off the error correction
		P / T Release	On / Off	▶ release the P/T motors while in setup
	Dimmer Curve	Linear	▶ Set up the Dimmer Curve; see Appendix / page XXX	
		Theatrical		
		Square Law		
		Inverse Square Law		
	Dimmer Speed	Fast	▶ Set up the speed of the dimmer	
		Smooth		
	Cooling Mode	Auto	▶ Regulate the fan according the fixtures temp.	
		Standard	▶ Medium Fan speed	
		Silent	▶ light output will lower if device get's too warm	
		High Power	▶ Fan always spins at highest level	
	MIC Enable	Disable / Enable	▶ Enable the build in Mic	
Mic Sensitivity	Low	▶ Set the sensitivity for "Sound Active Mode"		
	Normal			
	High			
Reset via DMX	On	▶ Choose if device can be reset via DMX		
	Off			
Display Setting	Intensitiy	0 - 10	▶ set Display intensity	
	Shutoff Time	2m - 60 m / off	▶ set time when display light turns off	
	No Signal Flash	On / Off	▶ display flashes if no DMX input	



## Operations → Menu map

Stand Alone	Test Sequences	Dynamic Mode	Run / Cancel	▶ Test Sequence without movement	
		Static Mode	Run / Cancel	▶ Test Sequence including movement	
	Master / Slave	Alone	▶ Set unit to Alone (No Master or Slave)		
		Master	▶ Set unit to Master (in Program Mode)		
		Slave	▶ Set unit to slave (in Program Mode)		
	Program Edit	Program 1	Prog 1 Max Step (01 - 30)	Select Step	01 - 30 ▶ Select amount of Steps
				Capture DMX	▶ Capture and Safe the actual DMX input
				Hold Time	▶ Select hold time in seconds (0 - 999)
				Fade Time	▶ Select fade time in seconds (0 - 999)
		Program 2	▶ see above		
	Program 3	▶ see above			
	Program Play	Program 1	No / Yes	▶ Play Program 1	
		Program 2	No / Yes	▶ Play Program 2	
Program 3		No / Yes	▶ Play Program 3		
Program All		No / Yes	▶ Play Program 1, 2 & 3 in a Loop		
Service	Reset	Reset All	No / Yes	▶ Reset all Motors	
		PAN / TILT	No / Yes	▶ Reset PAN / TILT	
	Factory default	Load	No / Yes	▶ Set device back to factory defaults	
INFORMATION	Fixture Time	Resettable	XXX hours	▶ see the resettable fixture time	
		Total	XXX hours	▶ see total working time of the device	
		Clear resetable	Clear / Cancel	▶ clear the resettable fixture time	
	Fixture Temp	Head LED	Actual	▶ see temp. measured at LED's	
			Max	▶ see max. temp. Till last reset	
			Reset	No / Yes	▶ reset max. temp.
		Head Driver	Actual	▶ see temp. measured at Driver Board	
			Max	▶ see max. temp. Till last reset	
			Reset	No / Yes	▶ reset max. temp.
	Version	V. XXXX.XX	▶ See the installed Firmware Version		
Serial Number	XXXXXXX	▶ See the Serial Number off this device			

## Operations → Software updates

DMX Live	Refresh Rate	XX Hz	▶ See the refresh rate of the received DMX signal
	PAN	0 – 255	▶ input value of PAN channel
	PAN Fine	0 – 255	▶ input value of PAN fine channel
	TILT	0 – 255	▶ input value of TILT channel
	TILT Fine	0 – 255	▶ input value of TILT fine channel
	Control	0 – 255	▶ input value of control channel
	CTO	0 – 255	▶ input value of CTC channel
	Color Wheel	0 – 255	▶ input value of Color Wheel channel
	Red	0 – 255	▶ input value of Red channel
	Green	0 – 255	▶ input value of Green channel
	Blue	0 – 255	▶ input value of Blue channel
	White	0 – 255	▶ input value of White channel
	Dimmer	0 – 255	▶ input value of Dimmer channel
	Strobe	0 – 255	▶ input value of Strobe channel

## Software updates

Your Helios+ 19z can be updated via the XLR connection, so no need to open it.

If you experience issues which could probably be solved by an Firmware Update please contact your Ehrgeiz Dealer for further instructions.



Operations → DMX Modes

## DMX Modes

You can set up your Helios+ 19z in 6 different DMX Modes:

Operations → DMX Modes

**Standard Mode**

Page 13; Uses 22 DMX channels

**Advanced Mode**

Page 14; Uses 31 DMX channels

**Full Control Mode**

Page 15; Uses 165 DMX channels

**Pixel Mapping Mode**

Page 17; Uses 137 DMX channels

**Pattern Control Mode**

Page 19; Uses 59 DMX channels

**Compressed RGBW Mode**

Page 21; Uses 15 DMX channels

**Standard Mode**

CH	Value	Function
1	0 – 255	<b>Pan</b>
2	0 – 255	<b>Pan fine</b>
3	0 – 255	<b>Tilt</b>
4	0 – 255	<b>Tilt fine</b>
5	0 – 255	<b>Colour Wheel</b> (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	<b>Red</b>
7	0 – 255	<b>Green</b>
8	0 – 255	<b>Blue</b>
9	0 – 255	<b>White</b>
10	0 – 255	<b>Shuttereffects</b> (see Shuttereffects chart / Appendix Page VI)
11	0 – 255	<b>Dimmer</b>
12	0 – 255	<b>CTO</b>
13	0 – 255	<b>Zoom</b>
14	0 – 255	<b>LED Ring Colour wheel</b> (see Colour Wheel chart / App. Page IV)
15	0 – 255	<b>LED Ring Shutter</b> (see Shuttereffects chart / Appendix Page VI)
16	0 – 255	<b>LED Ring Dimmer</b>
17	0 – 255	<b>Pattern</b> (see Patterneffects table / Appendix Page VII)
18	0 – 255	<b>Pattern Speed</b>
19	0 – 255	<b>LED Ring Pattern</b>
20	0 – 255	<b>LED Ring Pattern Speed</b>
21	0 – 255	<b>Control</b> (see Control chanel table / Appendix Page V)
22	0 – 255	<b>Remote DMX adress</b>



Operations → DMX Modes

**Advanced Mode**

CH	Value	Function
1	0 – 255	<b>Pan</b>
2	0 – 255	<b>Pan fine</b>
3	0 – 255	<b>Tilt</b>
4	0 – 255	<b>Tilt fine</b>
5	0 – 255	<b>Colour Wheel</b> (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	<b>Red</b>
7	0 – 255	<b>Red fine</b>
8	0 – 255	<b>Green</b>
9	0 – 255	<b>Green fine</b>
10	0 – 255	<b>Blue</b>
11	0 – 255	<b>Blue fine</b>
12	0 – 255	<b>White</b>
13	0 – 255	<b>White fine</b>
14	0 – 255	<b>Shuttereffects</b> (see Shuttereffects chart / Appendix Page VI)
15	0 – 255	<b>Dimmer</b>
16	0 – 255	<b>Dimmer fine</b>
17	0 – 255	<b>CTO</b>
18	0 – 255	<b>Zoom</b>
19	0 – 255	<b>Zoom fine</b>
20	0 – 255	<b>LED Ring colour wheel</b> (see Colour Wheel chart / App. Page IV)
21	0 – 255	<b>LED Ring red</b>
22	0 – 255	<b>LED Ring green</b>
23	0 – 255	<b>LED Ring blue</b>
24	0 – 255	<b>LED Ring Shutter</b> (see Shuttereffects chart / Appendix Page VI)
25	0 – 255	<b>LED Ring Dimmer</b>
26	0 – 255	<b>Pattern</b> (see Patterneffects table / Appendix Page VII)
27	0 – 255	<b>Pattern Speed</b>
28	0 – 255	<b>LED Ring Pattern</b>
29	0 – 255	<b>LED Ring Pattern Speed</b>
30	0 – 255	<b>Control</b> (see Control chanel table / Appendix Page V)
31	0 – 255	<b>Remote DMX adress</b>

**Full Control Mode**

CH	Value	Function
1	0 – 255	<b>Pan</b>
2	0 – 255	<b>Pan fine</b>
3	0 – 255	<b>Tilt</b>
4	0 – 255	<b>Tilt fine</b>
5	0 – 255	<b>Colour Wheel</b> (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	<b>Red</b>
7	0 – 255	<b>Red fine</b>
8	0 – 255	<b>Green</b>
9	0 – 255	<b>Green fine</b>
10	0 – 255	<b>Blue</b>
11	0 – 255	<b>Blue fine</b>
12	0 – 255	<b>White</b>
13	0 – 255	<b>White fine</b>
14	0 – 255	<b>Shuttereffects</b> (see Shuttereffects chart / Appendix Page VI)
15	0 – 255	<b>Dimmer</b>
16	0 – 255	<b>Dimmer fine</b>
17	0 – 255	<b>CTO</b>
18	0 – 255	<b>Zoom</b>
19	0 – 255	<b>Zoom fine</b>
20	0 – 255	<b>LED Ring colour wheel</b> (see Colour Wheel chart / App. Page IV)
21	0 – 255	<b>LED Ring red</b>
22	0 – 255	<b>LED Ring green</b>
23	0 – 255	<b>LED Ring blue</b>
24	0 – 255	<b>LED Ring Shutter</b> (see Shuttereffects chart / Appendix Page VI)
25	0 – 255	<b>LED Ring Dimmer</b>
26	0 – 255	<b>LED 1 Red</b>
27	0 – 255	<b>LED 1 Green</b>
28	0 – 255	<b>LED 1 Blue</b>
29	0 – 255	<b>LED 1 White</b>
30	0 – 255	<b>LED 1 Shutter</b>
31	0 – 255	<b>LED 1 Dimmer</b>
..	0 – 255	<b>LED X Red</b>
..	0 – 255	<b>LED X Green</b>
..	0 – 255	<b>LED X Blue</b>
..	0 – 255	<b>LED X White</b>
..	0 – 255	<b>LED X Shutter</b>
..	0 – 255	<b>LED X Dimmer</b>

Operations → DMX Modes

CH	Value	Function
134	0 - 255	LED 19 Red
135	0 - 255	LED 19 Green
136	0 - 255	LED 19 Blue
137	0 - 255	LED 19 White
138	0 - 255	LED 19 Shutter
139	0 - 255	LED 19 Dimmer
140	0 - 255	LED Ring Segment 1 red
141	0 - 255	LED Ring Segment 1 green
142	0 - 255	LED Ring Segment 1 blue
..	0 - 255	LED Ring Segment X red
..	0 - 255	LED Ring Segment X green
..	0 - 255	LED Ring Segment X blue
161	0 - 255	LED Ring Segment 8 red
162	0 - 255	LED Ring Segment 8 green
163	0 - 255	LED Ring Segment 8 blue
164	0 - 255	Control (see Control channel table / Appendix Page V)
165	0 - 255	Remote DMX adress

**Pixel Mapping Mode**

CH	Value	Function
1	0 – 255	<b>Pan</b>
2	0 – 255	<b>Pan fine</b>
3	0 – 255	<b>Tilt</b>
4	0 – 255	<b>Tilt fine</b>
5	0 – 255	<b>Colour Wheel</b> (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	<b>Red</b>
7	0 – 255	<b>Green</b>
8	0 – 255	<b>Blue</b>
9	0 – 255	<b>White</b>
10	0 – 255	<b>Shuttereffects</b> (see Shuttereffects chart / Appendix Page VI)
11	0 – 255	<b>Dimmer</b>
12	0 – 255	<b>CTO</b>
13	0 – 255	<b>Zoom</b>
14	0 – 255	<b>LED Ring colour wheel</b> (see Colour Wheel chart / App. Page IV)
15	0 – 255	<b>LED Ring red</b>
16	0 – 255	<b>LED Ring green</b>
17	0 – 255	<b>LED Ring blue</b>
18	0 – 255	<b>LED Ring Shutter</b> (see Shuttereffects chart / Appendix Page VI)
19	0 – 255	<b>LED Ring Dimmer</b>
20	0 – 255	<b>LED 1 Red</b>
21	0 – 255	<b>LED 1 Green</b>
22	0 – 255	<b>LED 1 Blue</b>
23	0 – 255	<b>LED 1 White</b>
24	0 – 255	<b>LED 1 Shutter</b>
25	0 – 255	<b>LED 1 Dimmer</b>
..	0 – 255	<b>LED X Red</b>
..	0 – 255	<b>LED X Green</b>
..	0 – 255	<b>LED X Blue</b>
..	0 – 255	<b>LED X White</b>
..	0 – 255	<b>LED X Shutter</b>
..	0 – 255	<b>LED X Dimmer</b>
128	0 – 255	<b>LED 19 Red</b>
129	0 – 255	<b>LED 19 Green</b>
130	0 – 255	<b>LED 19 Blue</b>
131	0 – 255	<b>LED 19 White</b>
132	0 – 255	<b>LED 19 Shutter</b>
133	0 – 255	<b>LED 19 Dimmer</b>

## Operations → DMX Modes

CH	Value	Function
134	0 - 255	LED Ring Pattern
135	0 - 255	LED Ring Pattern Speed
136	0 - 255	Control (see Control channel table / Appendix Page V)
137	0 - 255	Remote DMX address

**Pattern Control Mode**

CH	Value	Function
1	0 - 255	<b>Pan</b>
2	0 - 255	<b>Pan fine</b>
3	0 - 255	<b>Tilt</b>
4	0 - 255	<b>Tilt fine</b>
5	0 - 255	<b>Colour Wheel</b> (see Colour Wheel chart / Appendix Page IV)
6	0 - 255	<b>Red</b>
7	0 - 255	<b>Green</b>
8	0 - 255	<b>Blue</b>
9	0 - 255	<b>White</b>
10	0 - 255	<b>Shuttereffects</b> (see Shuttereffects chart / Appendix Page VI)
11	0 - 255	<b>Dimmer</b>
12	0 - 255	<b>CTO</b>
13	0 - 255	<b>Zoom</b>
14	0 - 255	<b>LED Ring colour wheel</b> (see Colour Wheel chart / App. Page IV)
15	0 - 255	<b>LED Ring red</b>
16	0 - 255	<b>LED Ring green</b>
17	0 - 255	<b>LED Ring blue</b>
18	0 - 255	<b>LED Ring Shutter</b> (see Shuttereffects chart / Appendix Page VI)
19	0 - 255	<b>LED Ring Dimmer</b>
20		<b>Pattern 1 Red</b>
21		<b>Pattern 1 Green</b>
22		<b>Pattern 1 Blue</b>
23		<b>Pattern 1 White</b>
24		<b>Pattern 1 Shutter</b>
25		<b>Pattern 1 Dimmer</b>
26		<b>Pattern 1 Pattern</b>
27		<b>Pattern 1 Pattern Speed</b>
28		<b>Pattern 2 Red</b>
29		<b>Pattern 2 Green</b>
30		<b>Pattern 2 Blue</b>
31		<b>Pattern 2 White</b>
32		<b>Pattern 2 Shutter</b>
33		<b>Pattern 2 Dimmer</b>
34		<b>Pattern 2</b>
35		<b>Pattern 2 Pattern Speed</b>
36		<b>Pattern 3 Red</b>
37		<b>Pattern 3 Green</b>
38		<b>Pattern 3 Blue</b>

Operations → DMX Modes

39		Pattern 3 White
40		Pattern 3 Shutter
41		Pattern 3 Dimmer
42		Pattern 3 Pattern
43		Pattern 3 Pattern Speed
44		LED Ring Pattern 1 Red
45		LED Ring Pattern 1 Green
46		LED Ring Pattern 1 Blue
47		LED Ring Pattern 1 Shutter
48		LED Ring Pattern 1 Dimmer
49		LED Ring Pattern 1 Pattern
50		LED Ring Pattern 1 Pattern Speed
51		LED Ring Pattern 2 Red
52		LED Ring Pattern 2 Green
53		LED Ring Pattern 2 Blue
54		LED Ring Pattern 2 Shutter
55		LED Ring Pattern 2 Dimmer
56		LED Ring Pattern 2 Pattern
57		LED Ring Pattern 2 Pattern Speed
58	0 - 255	Control (see Control channel table / Appendix Page V)
59	0 - 255	Remote DMX address

**Compressed RGBW Mode**

CH	Value	Function
1	0 – 255	<b>Pan</b>
2	0 – 255	<b>Pan fine</b>
3	0 – 255	<b>Tilt</b>
4	0 – 255	<b>Tilt fine</b>
5	0 – 255	<b>Colour Wheel</b> (see Colour Wheel chart / Appendix Page IV)
6	0 – 255	<b>Red</b>
7	0 – 255	<b>Green</b>
8	0 – 255	<b>Blue</b>
9	0 – 255	<b>White</b>
10	0 – 255	<b>Shuttereffects</b> (see Shuttereffects chart / Appendix Page VI)
11	0 – 255	<b>Dimmer</b>
12	0 – 255	<b>Zoom</b>
13	0 – 255	<b>LED Ring Colour wheel</b> (see Colour Wheel chart / App. Page IV)
14	0 – 255	<b>LED Ring Shutter</b> (see Shuttereffects chart / Appendix Page VI)
15	0 – 255	<b>LED Ring Dimmer</b>



## Services

### Trouble Shooting

Problem	Causes	Solutions
<b>No Display / Not switched on</b>	No power to fixture	<p>Check AC mains power and connections</p> <p>Inspect connections and cables. Correct poor connections. Repair or replace damaged cables</p> <p>Check the power supply voltage.</p>
	Incorrect fixture DMX addressing	Check the fixture is assign to correct DMX address (See Page 9)
	Incorrect DMX mode	Check fixture is set to correct DMX mode (See Page 12)
<b>Fixture does not respond to DMX correctly.</b>	Fault on data link	check for the data link is correctly linked from the DMX source if all cables are in good condition
	Other device on DMX link defective.	Unplug XLR IN and OUT connectors and connect them directly together to bypass one fixture at a time until normal operation is regained
	Data transmission lines should be terminated.	Insert termination plug in OUTPUT of the last fixture on the link.
	Faulty DMX link	Run built-in test mode or OBD control mode to verify if LEDs are illuminated
<b>LC-Display works but no light outputs can be generated.</b>	Broken parts / wires / LEDs	Have fixtures serviced by an Ehrgeiz service technician
	Fixture is set to Auto cooling mode and fixture is still cool	<p>Set the cooling mode to other modes other than Auto mode (See Menu Map on Page 9)</p> <p>Set the fixture to generate light output, the fan will start to work when temperature reached 35 deg. Celsius (95 deg. Fahrenheit)</p>
<b>Cooling Fan does not spin*.</b>	Broken Fans	Have the Fan replaced by an Ehrgeiz service technician

### Maintenance

There are no serviceable Part inside your Helios+ 19z. If problems occur contact your Ehrgeiz dealer or an qualified Ehrgeiz Service technician.

Use a slightly moist and smooth cloth to clean the device. Do not use any aggressive detergents.

If you want to replace the fuse make sure to use a fuse of the recommended type. Do not use any other kind of fuse as this might result in a damage of the device or even serious injuries of persons.

We are sure you will have a sophisticated experience with your Helios+ 19z.



## Appendix

### Specifications

#### Light source

- 19x 15 Watt class RGBW LED
- Rated lumen output : 7.600 lm
- LED Life Expectancy: approx. 50.000 hours

#### Optical system

- ConsistentColor™ Zoom Optics
- Rapid Zoom with 0.8s maximum speed
- Beam angle 11°– 58°

#### Functions

- RGBW, 8 or 16 bit color mixing
- SteadyColor™ Dimming
- Seamless CTO
- Virtual color wheel with 39 colors including whites
- (2.700 K, 3.200 K, 4.200 K, 5.600 K, 7.200 K and 8.000 K)
- Individual LED colors control
- Individual shutter/dimmer for each LED
- Pattern effects with variable speed
- High resolution dimmer 0–100%Selectable dimmer curves
- Strobe with variable speed (max. 20Hz )
- Pre-programmed random strobe & pulse effects

#### Movement

- High precision 2 phase stepping motors
- 16-bit Pan/Tilt control
- Position feedback
- Pan and Tilt movement range: 540°/270°

#### Thermal

- Maximum ambient temperature: 45° C (113° F)
- Intelligent fan control
- 4 fan modes

#### Control and programming

- Setting & Addressing: 2x 16 characters LC display & 4 buttons
- Protocols: USITT DMX-512, Art-Net 3
- Control channels: 15, 22, 31, 59, 137, 165
- 6 DMX protocol modes
- 3-editable programs, each up to 25 steps
- Stand-alone mode
- Art-Net Node function
- Firmware update via DMX-line
- DMX In/Out: Neutrik XLR-3, XLR-5
- Power In/Out: Neutrik powerCON®
- Art-Net : Neutrik etherCON®

#### Electrical Specification

- Electronic switching power supply with auto-sensing
- Input voltage: 100–240V AC, 50/60 Hz
- Max. power consumption: 350 W
- Fuse protection : T10A (6.3x 32 mm)

#### Mechanical Specification

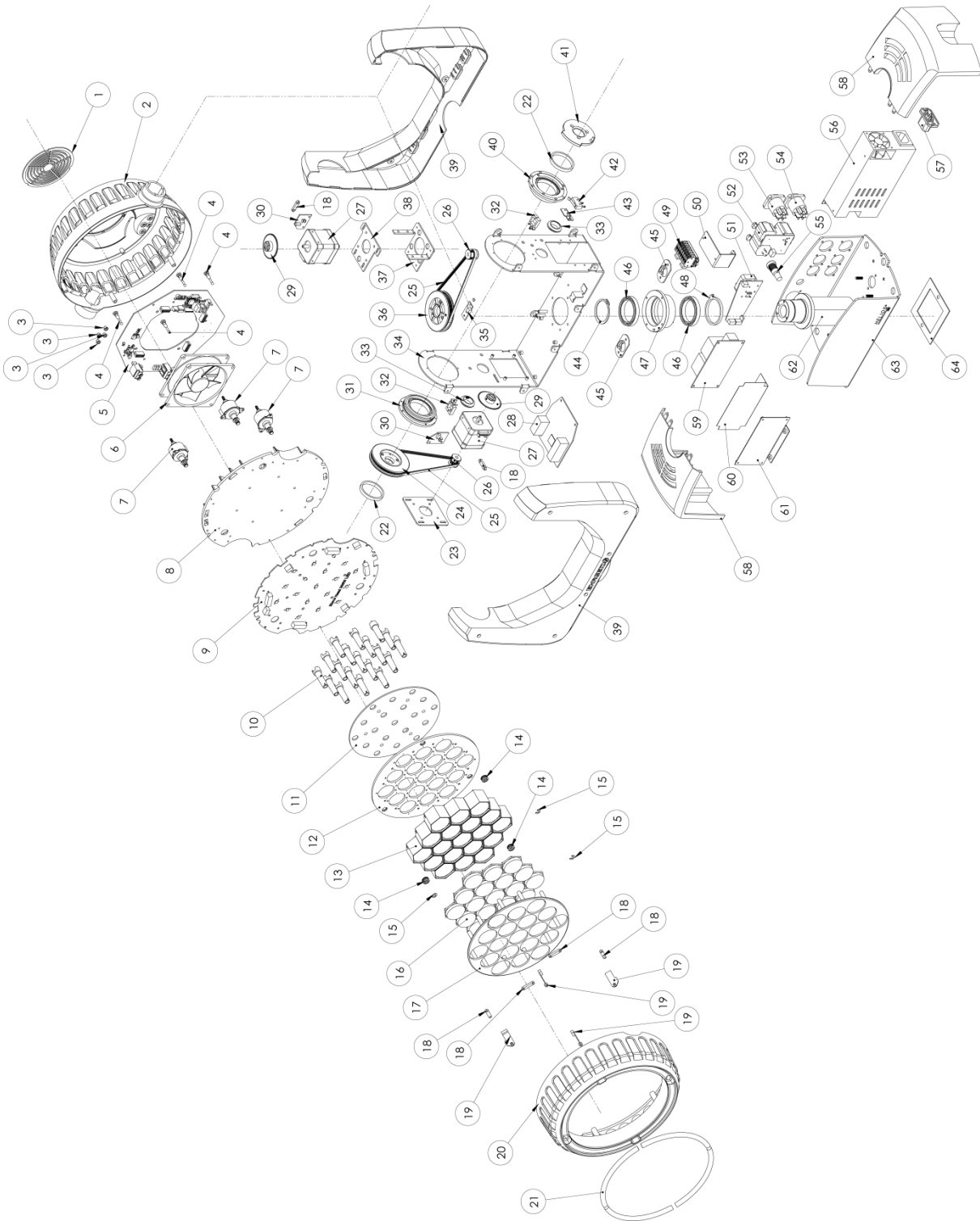
- Height: 398.5 mm (15.68")
- Width: 320 mm (12.59")
- Depth: 158 mm (6.22")
- Weight: 7.4 kg (16.31 lbs)
- Rigging
- Centered M10 insert nut
- Two 1/4th turn mounting inserts for omega bracket
- 2 attachment points for safety wire

#### Available Accessories

- Case for 6x Helios+19Z
- Omega Bracket for Helios+ 19Z



# Exploded drawing



## Appendix → Spareparts

### Spareparts

#	Description (EN)	Q'TY	Item No	#	Description (EN)	Q'TY	Item No
1	Fan grille-fixtue top	1	111068	33	Fixture arm bracket	1	111089
2	Fixture head housing-base	1	111069	34	Hall sensor board	1	105720
3	Input button rubber cap	4	106914	35	Bearing seat ass'y-X axle	1	111044
4	Head cooling fan rubber rivet	4	106915	36	Y axle angular plate limiter	1	111045
5	Control & driver board	1	105721	37	Cable bushing	1	111046
6	Head cooling fan 12V	1	111070	38	Limit switch mount	1	111042
7	Z axle motor	3	111071	39	Limit switch	1	111043
8	Heat sink	1	111072	40	Adjustable belt-tension mount	1	111047
9	LED board	1	105718	41	Stepping motor bracket-X axle	1	111048
10	Light guide ass'y	19	111073	42	C type retaining ring	1	111049
11	Light guide holder plate	1	111074	43	X-axle bearing	2	111050
12	Lens holder plate (base)	1	111075	44	Bearing seat ass'y-X axle	1	111051
13	Z axle motor shaft bushing	3	111076	45	Reset collar-X axle	1	111053
14	E type retaining ring (4mm)	3	111077	46	1/4 Turn fast lock mount	2	111090
15	Lens holder	19	111078	47	Artnet control board	1	105723
16	Optical lens	19	111079	48	Fuse holder	1	111056
17	Lens holder plate (top)	1	111080	49	3 & 5-Pin XLR Board	1	105724
18	Cable guide	6	111081	50	Neutrik powerCON-Input	1	111055
19	Ring LED board	4	111082	51	Neutrik powerCON-Output	1	111057
20	Fixture head housing-top	1	111083	52	Motor control board	1	105722
21	Ring light guide	4	111084	53	7P terminal block	1	111091
22	Timing belt 375L	2	111085	54	Terminal block mount	1	111092
23	13 teeth timing gear	2	111029	55	Center shaft	1	111093
24	Stepping motor bracket-Y axle	1	111086	56	Fixture housing-base	2	111094
25	Stepping motor-Helios series	2	111032	57	Power supply bracket	1	111058
26	Encoder	2	111033	58	Power supply (120W)	1	111095
27	Snap bushing KSS-GMQ-2015	2	111087	59	Fixture base housing	1	111096
28	65 teeth timing gear	2	106924	60	Fixture clamp insert-Helios	1	111063
29	Arm bearing collar	4	111034	61	Power supply (400W)	1	111097
30	Bearing seat ass'y-Y axle	1	111035	62	AC scoket	1	111098
31	Encoder board	2	105715	63	Fixture housing-arm	2	111099
32	Cable tie mount	2	111088				



## Colourwheel table

Value	Function
0 - 5	No Function, RGBW Colour mixing
6 - 10	LEE 790-Moroccan Pink
11 - 15	LEE 157-Pink
16 - 20	LEE 332-Special Rose Pink
21 - 25	LEE 328-Follies Pink
26 - 30	LEE 345-Fuchsia Pink
31 - 35	LEE 194-Surprise Pink
36 - 40	LEE 181-Congo Blue
41 - 45	LEE 071-Tokyo Blue
46 - 50	LEE 120-Deep Blue
51 - 55	LEE 079-Just Blue
56 - 60	LEE 132-Medium Blue
61 - 65	LEE 200-Double CT Blue
66 - 70	LEE 161-Slate Blue
71 - 75	LEE 201-Full CT Blue
76 - 80	LEE 202-Half CT Blue
81 - 85	LEE 117-Steel Blue
86 - 90	LEE 353-Lighter Blue
91 - 95	LEE 118-Light Blue
96 - 100	LEE 116-Medium Blue Green
101 - 105	LEE 124-Dark Green
106 - 110	LEE 139-Primary Green
111 - 115	LEE 089-Moss Green
116 - 120	LEE 122-Fern Green
121 - 125	LEE 738-JAS Green
126 - 130	LEE 088-Lime Green
131 - 135	LEE 100-Spring Yellow
136 - 140	LEE 104-Deep Amber
141 - 145	LEE 179-Chrome Orange
146 - 150	LEE 105-Orange
151 - 155	LEE 021-Gold Amber
156 - 160	LEE 778-Mellennium Gold
161 - 165	LEE 135-Deep Golden Amber
166 - 170	LEE 164-Flame Red
Colourwheel rotation effects	
171 - 185	Colourwheel rotation forward (fast - slow)
186 - 190	Colourwheel rotation stop
191 - 205	Colourwheel rotation backward (fast - slow)
206 - 210	Colourwheel rotation stop
Random colours	
211 - 225	Fast - slow
White hue	
226 - 230	Warmwhite - 2700K
231 - 235	Warmwhite - 3200K
236 - 240	Neutralwhite - 4200K
241 - 245	Coldwhite - 5600K
246 - 250	Coldwhite - 7200K
251 - 255	Coldwhite - 8000K

## Appendix → Special control channel

### Special control channel

Value	Function
0 – 10	Reserved
11 – 15	fan Regulated
16 – 20	fan Silent
21 – 25	fan Standard
25 – 30	fan High power
31 – 35	Reserved
36 – 40	Remote DMX Address–Low (001–256)
	Must work with "Remote DMX Add." channel to set with value for 1+
41 – 45	Reserved
46 – 50	Remote DMX Address–High (257–512)
	Must work with "Remote DMX Add." channel to set with value for 257+
51 – 55	Reserved
56 – 60	Dimmer Speed: Smooth
61 – 65	Dimmer Speed: Fast
66 – 70	Reserved
71 – 75	Dimmer Curve: Linear
76 – 80	Dimmer Curve: Theatrical
81 – 85	Dimmer Curve: Sqaure Law
86 – 90	Dimmer Curve: Inverse Sqaure Law
91 – 95	Reserved
96 – 100	P/T speed slow
101 – 105	P/T speed Normal
106 – 110	P/T speed Fast
111 – 115	Reserved
116 – 120	Pan Invert: ON
121 – 125	Pan Invert: OFF
126 – 130	Tilt Invert: ON
131 – 135	Tilt Invert: OFF
136 – 140	Reserved
141 – 145	Position Feedback: ON
146 – 150	Position Feedback: OFF
151 – 155	Reserved
156 – 160	Pan Reset
161 – 165	Tilt Reset
166 – 170	Reserved
171 – 175	All Motors Reset
176 – 180	Fixture Reset
181 – 255	Reserved

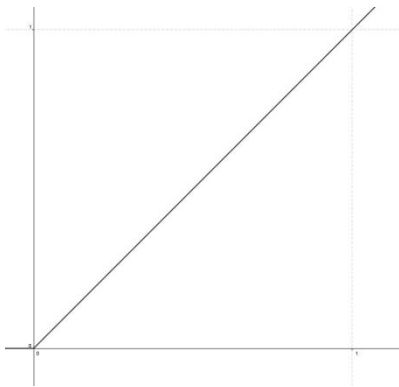


Table

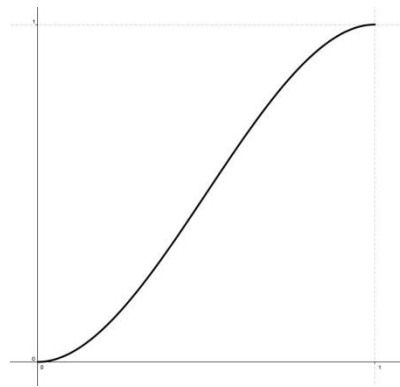
## Shutter Channel Table

Value	Function
0 - 15	Shutter Closed
16-47	Random Strobe (slow - fast)
48-79	Random Ramp Up (slow - fast)
80-111	Random Ramp Down (slow - fast)
112-143	Random Ramp UP & down (slow - fast)
144-199	Strobe Pause 5s - 1s (slow - fast)
200-239	Strobe 1Hz - 20 Hz (slow - fast)
240-255	Shutter Open

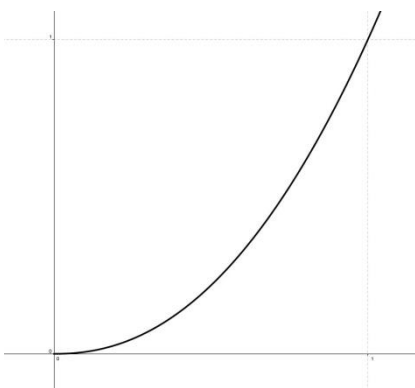
## Dimmer Curves



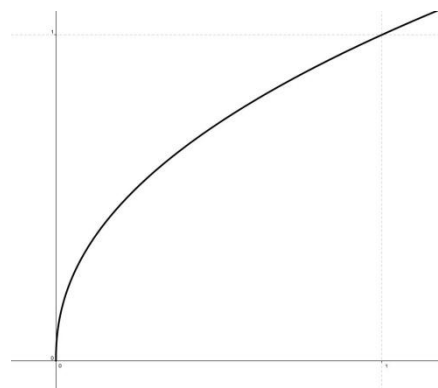
Linear



Theatrical



Square



Inverse square



Appendix → Patterns

### Patterns

Helios+ 19z Animation Pattern

DMX 000 - 115 = Static

DMX 116 - 181 = Chase Animation -works with Pattern speed table

DMX 185 - 250 = Fade Animation -works with Pattern speed table

value after / = animation runs reversed

Static

Value	pattern	Value	pattern	Value	pattern	Value	pattern	Value	pattern	Value	pattern	Value	pattern
000-002		017		032		047		062		077		092	
003		018		033		048		063		078		093	
004		019		034		049		064		079		094	
005		020		035		050		065		080		095	
006		021		036		051		066		081		096	
007		022		037		052		067		082		097	
008		023		038		053		068		083		098	
009		024		039		054		069		084		099	
010		025		040		055		070		085		100	
011		026		041		056		071		086		101	
012		027		042		057		072		087		102	
013		028		043		058		073		088		103	
014		029		044		059		074		089		104	
015		030		045		060		075		090		105	
016		031		046		061		076		091		106-115	



Appendix → Patterns

Animated

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
116/185	117/186												
118/187	119/188												
120/189	121/190												
122/191	123/192												
124/193	125/194												
126/195	127/196												
128/197	129/198												
130/199	131/200												
132/201	133/202												
134/203	135/204												
136/205	137/206												
138/207	139/208												
140/209	141/210												
142/211	143/212												
144/213	145/214												

Appendix → Patterns

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
146/215	147/216												
148/217	149/218												
150/219	151/220												
152/221	153/222												
154/223	155/224												
156/225	157/226												
158/227	159/228												
160/229	161/230												
162/231	163/232												
164/233	165/234												
166/235	167/236												
168/237	169/238												
170/239	171/240												
172/241	173/242												
174/243	175/244												
176/245	177/246												
178/247	179/248												
180/249	181/250												
251-255													



Appendix → For your notes

## For your notes

Appendix → For your notes



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