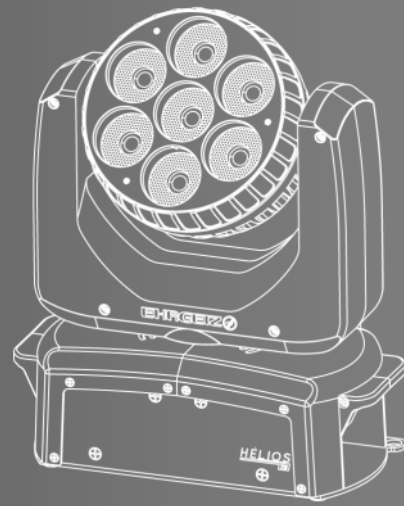


HELIOS

USER MANUAL 7B



HELIOS
USER MANUAL 7B

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Introduction

Thank you for your purchase and usage of the Ehrgeiz Helios 7B.

You have chosen a reliable product with outstanding features, which 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).

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.

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.

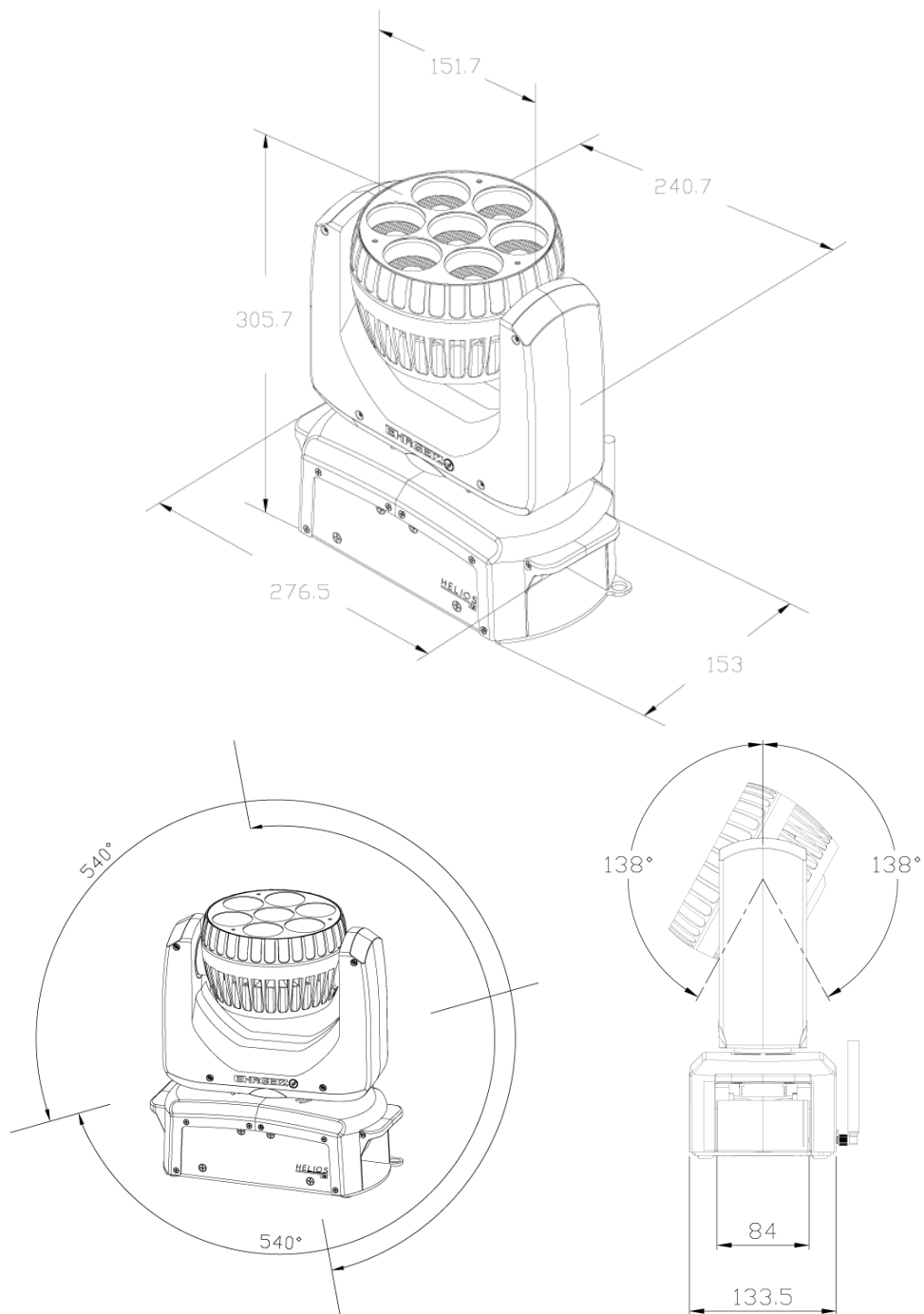
Introduction → Delivery Contents

Delivery Contents

You received your Helios 7B with the following content

- Helios 7B 7x 15W Moving Head
- Powercord Powercable with Neutrik powerCON plug
- 2 Diffusion Filters 18° as well as 58°
- 3 spare Screws Plastic Screw for attaching the Frost Filters

Fixture Dimensions



Dimensions in mm



/Installations → Installation on the

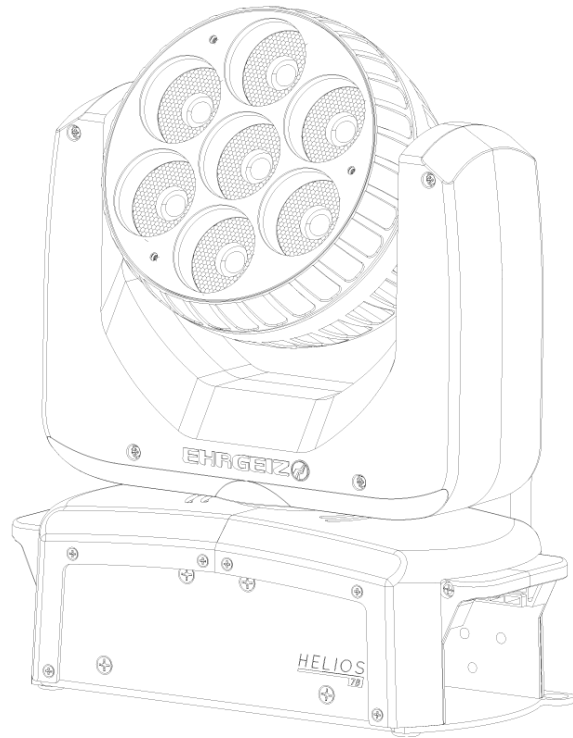
floor

Installations

Your Helios 7B 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 7B on the floor. Please make sure the surface is plane and the reliability of the floor is sufficient.

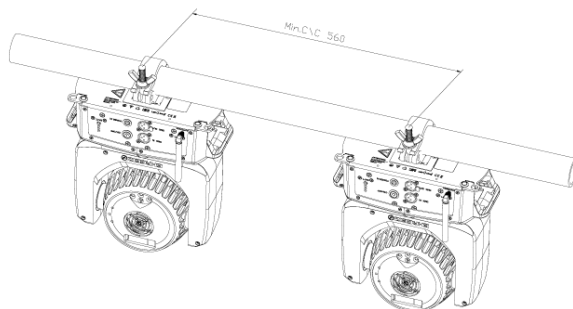
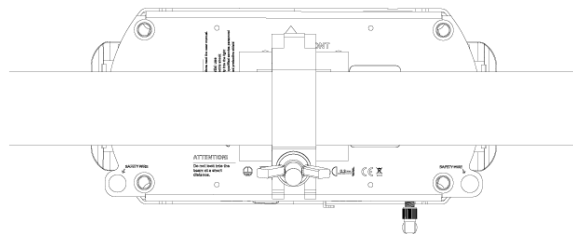


Installation hanging

You can attach the Helios 7B 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!

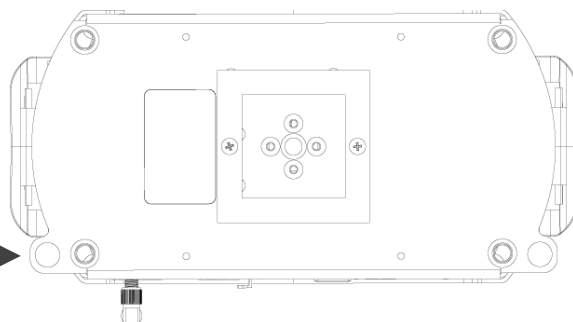
When installing the fixtures one to another the distance between the middle of the installation clamps has to be more than 560 mm.



Safety attachment

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

Safety

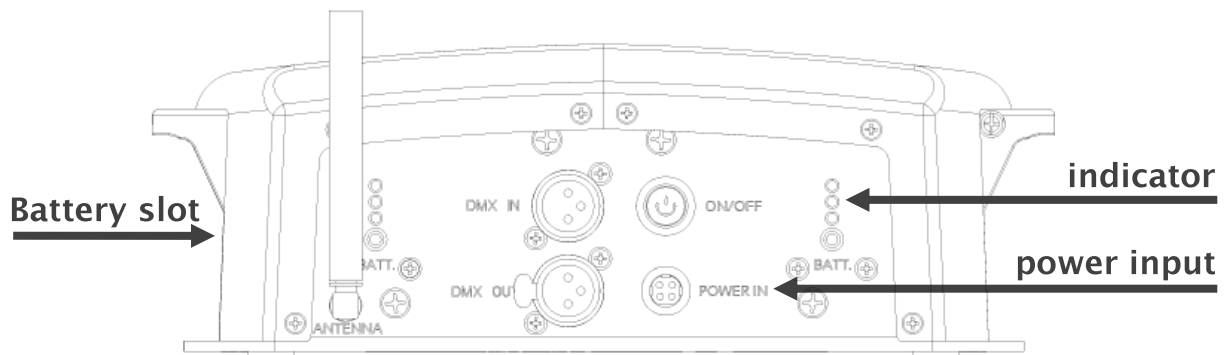


Connections

Mains

The connection of the Powersupply has to be done by qualified personnel only. Do not connect the Helios 7B if you are not able to survey the consequences.

The Helios 7B can be used with the optional Power supply.



The Helios 7B can of course also be used with the optional Makita batteries. You could use both batterie slots. The Batteries will be discharged one after the other.

The indicator will show you the state of charge. Replace the Batteries if the red LED is blinking.

Do not try to connect another Type of Battery than the Original Makita 18V Batteries (Makita Product Code BL1840 / BL1850). We highly recommend the usage of 5Ah Batteries. Based on Measurements with different profiles of usage, two fully charged 5 Ah batteries could run the Helios 7B from 2.5 (RGBW full on, always fast moving) up to 8 hours (normal colour fading with 1 to 3 colours, normal movements)

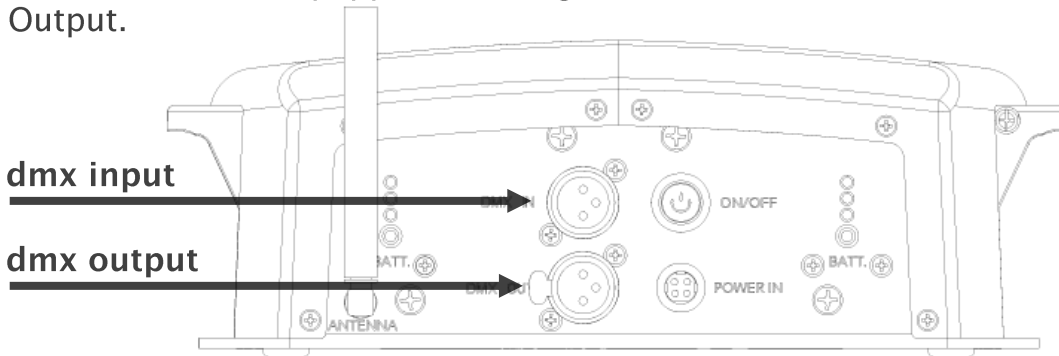
If you want to use the device with a constant power supply make sure to use the optional power supply (Code 113830). Do not use any force to connect the power plug.



Connections → DMX

DMX

Your Helios 7B 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.

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 7B uses 16 DMX channels.

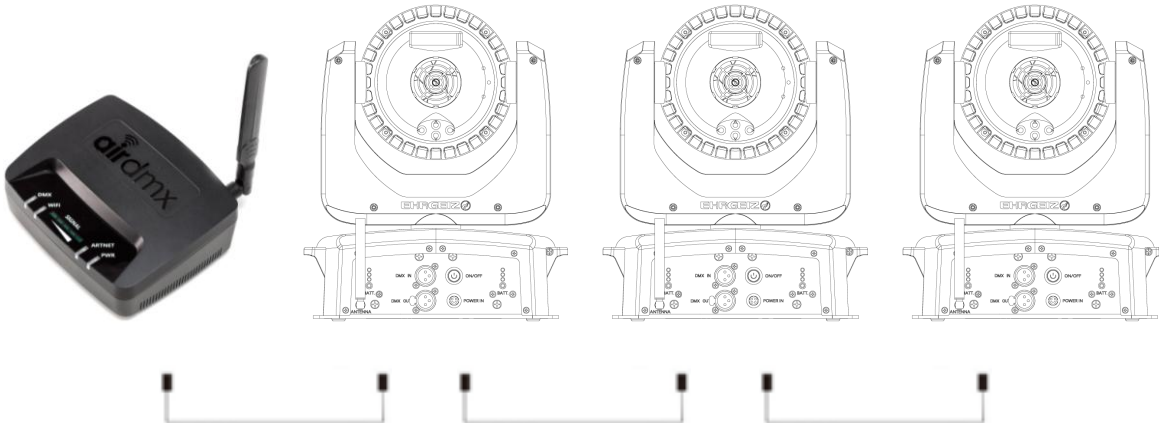
Connect the devices and increase the value of the DMX channel by 16 from one device to another

Controller

DMX Adres 1

DMX Adres 17

DMX Adres 33



DMX Pin definition:



1: Ground
2: Signal -
3: Signal +

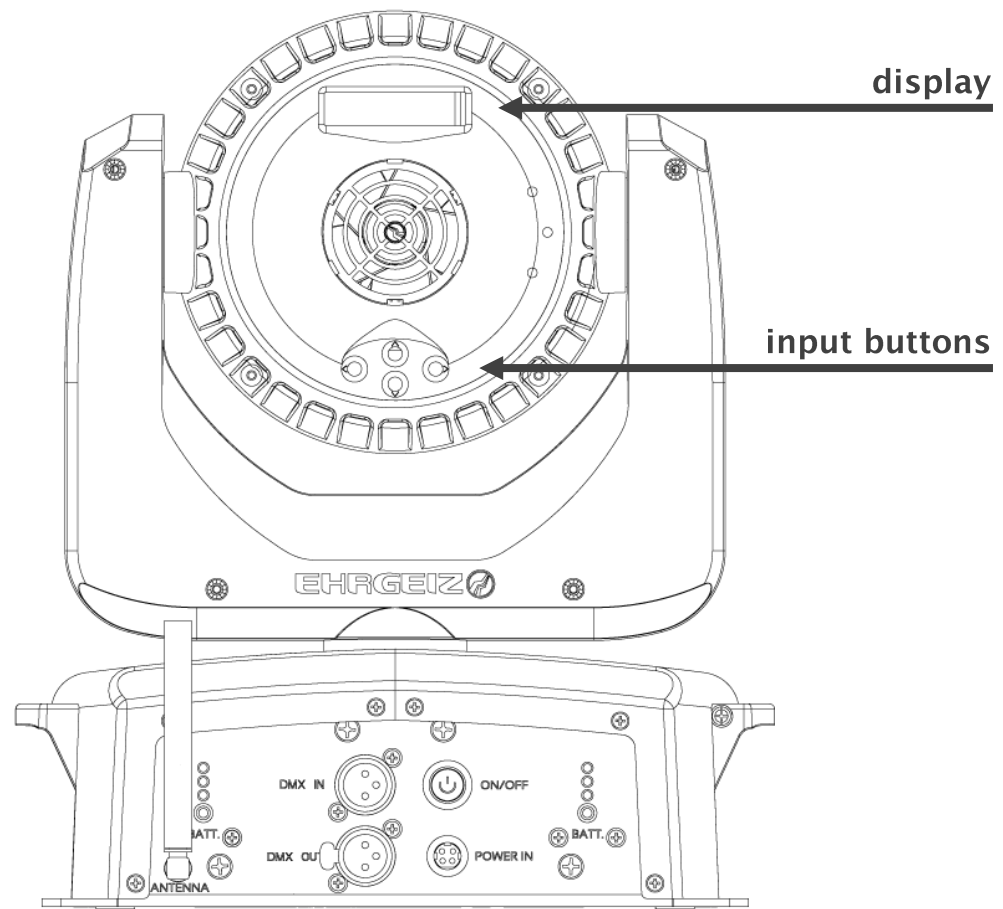


Operations

Menu control

Your Helios 7B 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 7B 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

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		
		Theatrical		
		Square Law	▶ Set up the Dimmer Curve; see Appendix / page XXX	
		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		
		Normal	▶ Set the sensitivity for "Sound Active Mode"	
		High		
	Reset via DMX	On	▶ Choose if device can be reset via DMX	
		Off		
	Display Setting	Intensity	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
	W-DMX	Enable	Yes / No	▶ Enable the W-DMX receiver
Link		Yes / No	▶ Link to a W-DMX Transmitter	

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 Save 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	Resetable	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 7B 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.

DMX Modes

You can set up your Helios 7B in 5 different DMX Modes:

Standard Mode

Page 11; Uses 16 DMX channels

Advanced Mode

Page 12; Uses 21 DMX channels

Pixel Mapping Mode

Page 13; Uses 58 DMX channels

Compressed RGB Mode

Page 14; Uses 10 DMX channels

Compressed RGBW Mode

Page 14; Uses 11 DMX channels

Standard Mode

CH	Value	Function
1	0 – 255	Pan
2	0 – 255	Pan fine
3	0 – 255	Tilt
4	0 – 255	Tilt fine
5	0 – 255	Colour Wheel (see Colour Wheel table / Appendix Page IV)
6	0 – 255	Red
7	0 – 255	Green
8	0 – 255	Blue
9	0 – 255	White
10	0 – 255	Shuttereffects (see Shuttereffects table / Appendix Page VI)
11	0 – 255	Dimmer
12	0 – 255	CTO
13	0 – 255	Pattern
14	0 – 255	Pattern (see Patterneffects table / Appendix Page VII)
15	0 – 255	Control (see Control chanel table / Appendix Page V)
16	0 – 255	Remote DMX adress

**Advanced Mode**

CH	Value	Function
1	0 - 255	Pan
2	0 - 255	Pan fine
3	0 - 255	Tilt
4	0 - 255	Tilt fine
5	0 - 255	Colour Wheel (see Colour Wheel table / Appendix Page IV)
6	0 - 255	Red
7	0 - 255	Red fine
8	0 - 255	Green
9	0 - 255	Green fine
10	0 - 255	Blue
11	0 - 255	Blue fine
12	0 - 255	White
13	0 - 255	White fine
14	0 - 255	Shuttereffects (see Shuttereffects table / Appendix Page VI)
15	0 - 255	Dimmer
16	0 - 255	Dimmer fine
17	0 - 255	CTO
18	0 - 255	Pattern (see Patterneffects table / Appendix Page VII)
19	0 - 255	Pattern speed fine
20	0 - 255	Control (see Control chanel table / Appendix Page V)
21	0 - 255	Remote DMX adress

Operations → DMX Modes

Pixel Mapping Mode

CH	Value	Function
1	0 – 255	Pan
2	0 – 255	Pan fine
3	0 – 255	Tilt
4	0 – 255	Tilt fine
5	0 – 255	Colour Wheel (see Colour Wheel table / Appendix Page IV)
6	0 – 255	Red
7	0 – 255	Green
8	0 – 255	Blue
9	0 – 255	White
10	0 – 255	Shuttereffects (see Shuttereffects table / Appendix Page VI)
11	0 – 255	Dimmer
12	0 – 255	CTO
13	0 – 255	Pattern (see Patterneffects table / Appendix Page VII)
14	0 – 255	Pattern speed
15	0 – 255	Red 1
16	0 – 255	Green 1
17	0 – 255	Blue 1
18	0 – 255	White 1
19	0 – 255	Shutter 1
20	0 – 255	Dimmer 1
...	...	Red X
...	...	Green X
...	...	Blue X
...	...	White X
...	...	Shutter X
...	...	Dimmer X
51	0 – 255	Red 7
52	0 – 255	Green 7
53	0 – 255	Blue 7
54	0 – 255	White 7
55	0 – 255	Shutter 7
56	0 – 255	Dimmer 7
57	0 – 255	Control (see Control chanel table / Appendix Page V)
58	0 – 255	Remote DMX adress



Compressed RGB Mode

CH	Value	Function
1	0 - 255	Pan
2	0 - 255	Pan fine
3	0 - 255	Tilt
4	0 - 255	Tilt fine
5	0 - 255	Colour Wheel (see Colour Wheel table / Appendix Page IV)
6	0 - 255	Red
7	0 - 255	Green
8	0 - 255	Blue
9	0 - 255	Shuttereffects (see Shuttereffects table / Appendix Page VI)
10	0 - 255	Dimmer

Compressed RGBW Mode

CH	Value	Function
1	0 - 255	Pan
2	0 - 255	Pan fine
3	0 - 255	Tilt
4	0 - 255	Tilt fine
5	0 - 255	Colour Wheel (see Colour Wheel table / Appendix Page IV)
6	0 - 255	Red
7	0 - 255	Green
8	0 - 255	Blue
9	0 - 255	White
10	0 - 255	Shuttereffects (see Shuttereffects table / Appendix Page VI)
11	0 - 255	Dimmer

Services

Trouble Shooting

Problem	Causes	Solutions
No Display / Not switched on	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 8)
	Incorrect DMX mode	Check fixture is set to correct DMX mode (See Page 11)
Fixture does not respond to DMX correctly.	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
LC-Display works but no light outputs can be generated.	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 8)</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>
Cooling Fan does not spin*.	Broken Fans	Have the Fan replaced by an Ehrgeiz service technician

Maintenance

There are no serviceable Part inside your Helios 7B. 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 7B.



Services → Maintenance

Appendix

Specifications

Light source

- 7x 15 Watt Class RGBW LED
- Rated lumen output : 7.600 lm
- LED Life Expectancy: approx. 50.000 hours

Optical system

- ConsistentColor™ Optics
- Beam angle 8°

Functions

- RGBW, 8 or 16 bit color mixing
- SteadyColor™ Dimming
- Seamless CTO
- Virtual color wheel with 39 colours 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. 20 Hz)
- 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
- Protocol: USITT DMX-512
- Control channels: 10, 11, 16, 20, 60
- 5 DMX protocol modes
- 3-editable programs, each up to 25 steps
- Stand-alone mode
- Firmware update via DMX-line
- DMX In/Out: XLR-5

Electrical Specification

- Current In: 4-Pin 12V connector
- Redundant power supply with two Makita lithium-ion – Batteries with 5.0 Ah and 18V
- Max. power consumption: 135 Watt

Mechanical Specification

- Height: 305 mm (12.0")
- Width: 277 mm (10.9")
- Depth: 153 mm (6.0")
- Weight: 4.0 kg (8.8 lbs)

Rigging

- Centered M10 insert nut
- 2 attachment points for safety wire

Included accessories

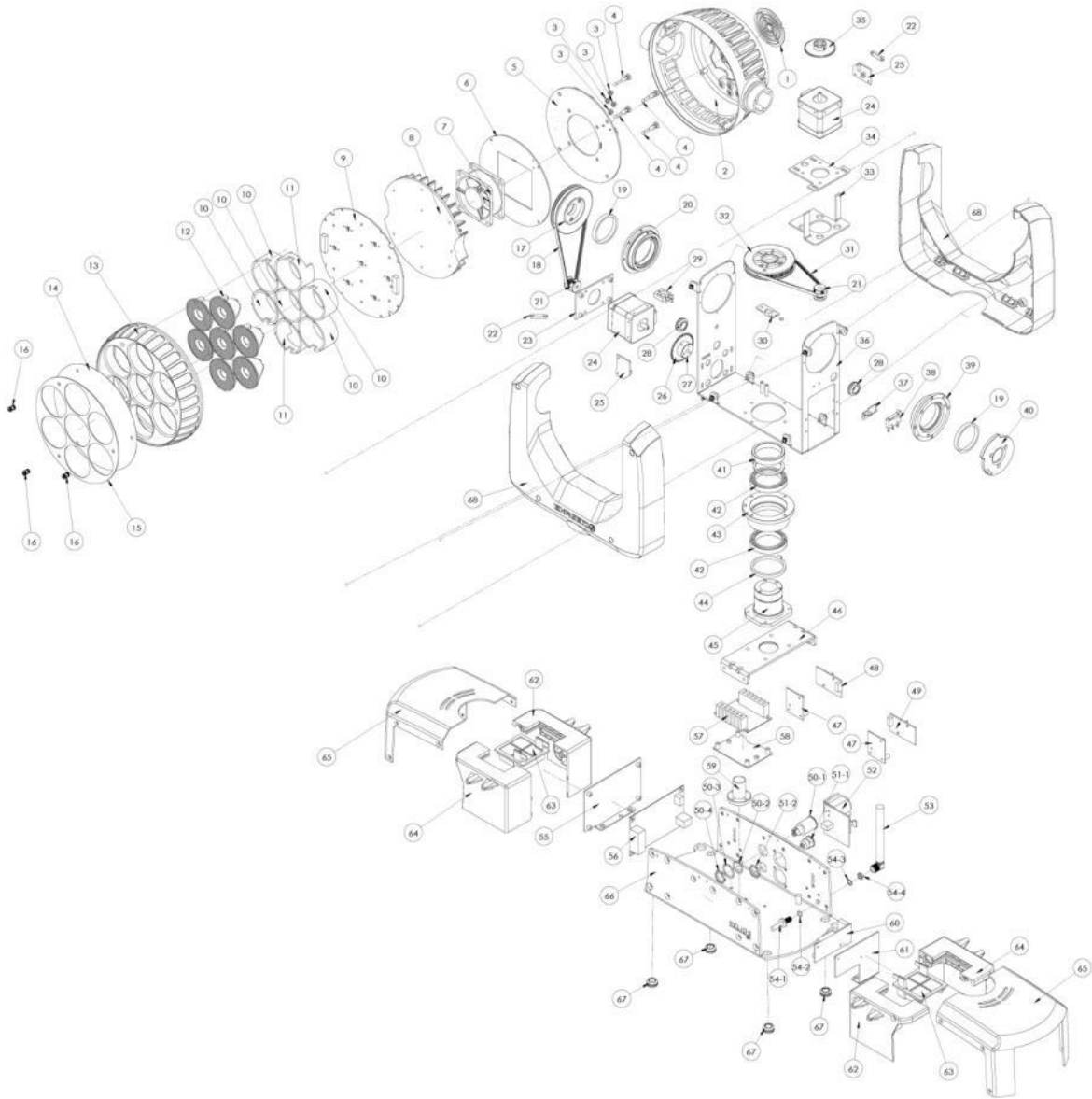
- Diffusion filter 18° & 58°
- Diffusion filter holder with 3 mountings screws
- Cable powerCON

Accessories

- Case for 8x Helios 7



Exploded drawing



Appendix → Spareparts

Spareparts

#	Description (EN)	Q'TY	Item No	#	Description (EN)	Q'TY	Item No
1	Fan grille-fixture top	1	106912	35	Encoder	1	111033
2	Fixture head housing-base	1	106913	36	Fixture arm bracket	1	111041
3	Input button rubber cap	4	106914	37	Limit switch mount	1	111042
4	Head cooling fan rubber rivet	4	106915	38	Limit switch	1	111043
5	Helios 7 Control / Motor Board	1	105716	39	Bearing seat ass'y-X axle	1	111044
6	Helios 7 Driver Board	1	114225	40	Y axle angular plate limiter	1	111045
7	Head cooling fan 12V	1	106916	41	Center Shaft Top Ring	1	114248
8	Heat Sink	1	106917	42	X-axle bearing	2	111050
9	Helios 7 LED board	1	105714	43	X-axle Shaft Sleeve-H7B	1	114249
10	Lens holder type-A	5	106918	44	Reset collar-X axle	1	111053
11	Lens holder type-B	2	106923	45	Center shaft-Helios 7B	1	114250
12	Optical lens	7	106919	46	Center shaft mount-Helios 7B	1	114251
13	Fixture head housing-top	1	106920	47	Battery Display PCB mount	2	114231
14	Helios 7 diffusor 18 deg.	1	106296	48	Battery Display PCB-Right	1	114232
14	Helios 7 diffusor 58 deg.	1	106297				
15	Diffusor holder plate	1	114226	49	Battery Display PCB-Left	1	114233
16	Diffusor screw	6	106922	50	Power Switch	1	114234
17	65 teeth timing gear-Right	1	106924	51	Power Socket	1	114235
18	Timing belt 354L	1	106925	52	5-Pin XLR PCB A	1	114236
19	Arm bearing collar	2	111034	53	Dipole Antenna-Helios 7B	1	114237
20	Bearing seat ass'y-Y axle	1	111035	54	Antenna cable & mount	1	114238
21	13 teeth timing gear	2	111029	55	Helios 7B Base CTRL PCB Mount	1	114239
22	Cable guide	2	111036	56	Helios 7B Base CTRL PCB-A	1	114240
23	Stepping motor bracket-Y axle	1	111031	57	Helios 7B Power Booster	1	114252
24	Stepping motor-Helios series	2	111032	58	Helios 7B Power Booster Mount	1	114253
25	Encoder board	2	105715	59	Helios 7B-M10 mounting insert	1	114254
26	Encoder Plate-Y axle	1	114227	60	Lumenradio OE-BRX1 wireless DMX Receiver	1	114255
27	Encoder plate mount-Y axle	1	114228	61	Lumenradio OE-BRX1 wireless DMX Receiver Bracket	1	114256
28	Snap bushing	2	111037	62	Battery Housing-Left	2	114242
29	Cable clip	1	114229	63	Battery Contact Pin mount	2	114257
30	HALL SENSOR BOARD	1	105720	64	Battery Housing-Right	2	114244
31	Timing belt 306L	1	111038	65	Helios 7B Base Cover	2	114245
32	65 teeth timing gear	1	106924	66	Helios 7B Base Housing	1	114246
33	Stepping motor bracket-X axle	1	111048	67	Base rubber feet	4	114247
34	Adjustable belt-tension mount	1	111047	68	Fixture housing-arm	2	111066



Appendix → Colourwheel table

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)
41 – 45	Must work with "Remote DMX Add." channel to set with value for 1+ Reserved
46 – 50	Remote DMX Address–High (257–512)
51 – 55	Must work with "Remote DMX Add." channel to set with value for 257+ 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

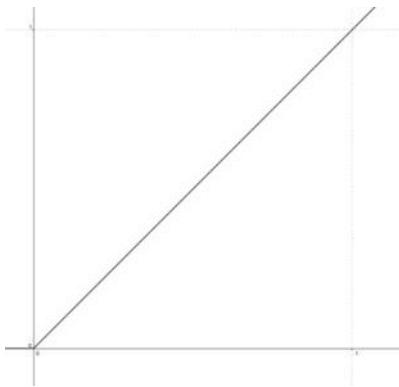


Table

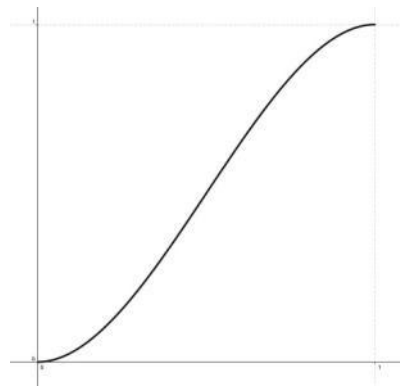
Shutter Channel Table

Value	Function
0 - 15	Shutter Closed
16-47	Random Strobe (slow - fast)
48-79	Ramp Up (slow - fast)
80-111	Ramp Down (slow - fast)
112-143	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

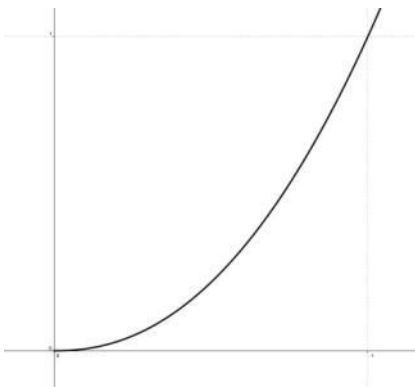
Dimmer Curves



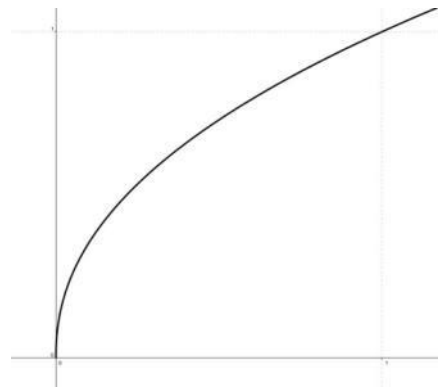
Linear



Theatrical



Square



Inverse square

Appendix → Patterns

Patterns

Helios 7 Animation Pattern

- DMX 000 - 051 = Static
- DMX 052 - 131 = Chase Animation -works with Pattern speed table
- DMX 132 - 211 = Fade Animation -works with Pattern speed table
- value in () = animation runs reversed

Static

value	pattern	value	pattern	value	pattern	value	pattern	value	pattern	value	pattern	value	pattern
0-5		12		19		26		33		40		47	
6		13		20		27		34		41		48	
7		14		21		28		35		42		49	
8		15		22		29		36		43		50	
9		16		23		30		37		44		51	
10		17		24		31		38		45			
11		18		25		32		39		46			

Animated

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
52	132												
(53)	(133)												
054	134												
(55)	(135)												
56	136												
(57)	(137)												
58	138												
(59)	(139)												
60	140												
(61)	(141)												
62	142												
(63)	(143)												
64	144												
65	165												



Appendix → Patterns

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
66	146												
67	147												
68	148												
69	149												
70 (71)	150 (151)												
72	152												
73	153												
74	154												
75	155												
76 (77)	156 (157)												
78 (79)	158 (159)												
80 (81)	160 (161)												
82 (83)	162 (163)												
84 (85)	164 (165)												
86 (87)	166 (167)												
88 (89)	168 (169)												
90 (91)	170 (171)												
92	172												
93	173												

Appendix → Patterns

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
94	174												
95	175												
96	176												
97	177												
98	178												
99	179												
100	180												
101	181												
102	182												
103	183												
104	184												
105	185												
106	186												
107	187												
108 (109)	188 (189)												
110 (111)	190 (191)												
112 (113)	192 (193)												
114 (115)	194 (195)												
116	196												
117	197												
118	198												
119	199												
120	200												



Appendix → Patterns

chase	fade	1	2	3	4	5	6	7	8	9	10	11	12
121	201												
122	202												
123	203												
124 (125)	204 205)												
126 (127)	204 (205)												
128	208												
129	209												
130	210												
131	211												

Appendix → For your notes

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