DMX REFERENCE

7P Hex IP

ADJ



Manufacturer	ADJ
GDTF file	ADJ_7P_Hex_IP_94522.gdtf
GDTF revision	25-23-04 Release · 2025-04-23
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1 About this manual

This document describes the 7P Hex IP by ADJ. It was compiled from the GDTF file ADJ_7P_Hex_IP_94522.gdtf from the GDTF-Share library.

File revision: “25-23-04 Release”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by ADJ; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Weight	3.3 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
13CH	13	39	1, 14, 27, 40, ...
8CH	8	64	1, 9, 17, 25, ...
7CH	7	73	1, 8, 15, 22, ...
6CH	6	85	1, 7, 13, 19, ...



Read the manual before use



Do not stare into the light

3 Safety instructions



Read the manual before use



Do not stare into the light

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ CAUTION

- The device is rated IP65 and may be used outdoors within the limits of this rating.
- This protection is effective only when all connectors are mated or closed with their protective caps and all seals are intact. Use cables and connectors with the same or a higher protection rating.
- Do not open the housing; opening it breaks the seals and the protection rating can no longer be guaranteed.
- Install the device so that water cannot collect around connectors and cable glands, and inspect seals and cables regularly.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

⚠ WARNING

- This device emits ultraviolet (UV) radiation, which can harm the eyes and skin.
- Do not look directly into the light source and avoid prolonged exposure of the eyes and skin at close range. Install the device so that people are not exposed at close range.
- People with increased sensitivity to light, including those taking medication that increases this sensitivity, should avoid UV exposure.

⚠ **CAUTION**

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

4 Product description

Description in the GDTF file

“The ADJ 7P HEX IP is a versatile, heavy duty Par with HEX LEDs, a 30-degree beam angle, and all metal construction. It is IP65 outdoor rated to protect against, rain, snow and dust for temporary outdoor events.”

5 Installation

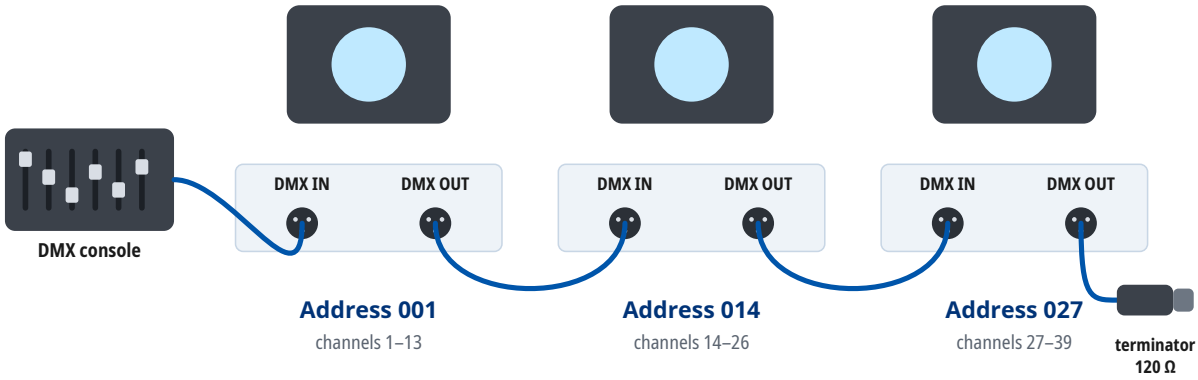
⚠ **WARNING**

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 3.3 kg.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.
- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

6 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

DMX line



Mode 13CH: every unit occupies 13 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

7 Operation

Setting the DMX address

- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “13CH”: 13.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “13CH”, you can use, for example, the start addresses 1, 14, 27, 40.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

8 Functions at a glance

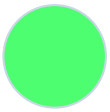
Functions in each DMX mode

	13CH 13 channels	8CH 8 channels	7CH 7 channels	6CH 6 channels
Dimmer	7	7	7	
Shutter / strobe	8	8		
Color mixing	1–6	1–6	1–6	1–6
Color wheel	9			
Effects / macros	10–12			

Color wheel

1
Color Macro 1
DMX 1–4

2
Color Macro 2
DMX 5–8

3 
Color Macro 3
DMX 9–12

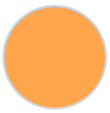
4 
Color Macro 4
DMX 13–16

5
Color Macro 5
DMX 17–20

6
Color Macro 6
DMX 21–24

7
Color Macro 7
DMX 25–28

8
Color Macro 8
DMX 29–32

9 
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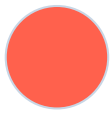
DMX 33–36

10 
Color Macro 10
DMX 37–40

11 
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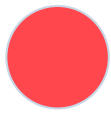
DMX 41–44

12 
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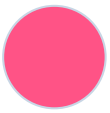
DMX 45–48

13 
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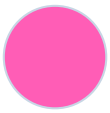
DMX 49–52

14 
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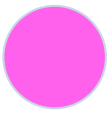
DMX 53–56

15 
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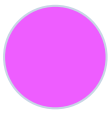
DMX 57–60

16 
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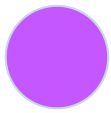
DMX 61–64

17 
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DMX 65–68

18 
Color Macro 18
DMX 69–72

19 
Color Macro 19
DMX 73–76

20 
Color Macro 20
DMX 77–80

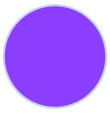
21 
Color Macro 21
DMX 81–84

22 
Color Macro 22
DMX 85–88

23 
Color Macro 23
DMX 89–92

24
Color Macro 24
DMX 93–96

25
Color Macro 25
DMX 97–100

26 
Color Macro 26
DMX 101–104

27 
Color Macro 27
DMX 105–108

28 
Color Macro 28
DMX 109–112

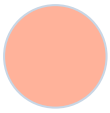
29 
Color Macro 29
DMX 113–116

30 
Color Macro 30
DMX 117–120

31 
Color Macro 31
DMX 121–124

32
Color Macro 32
DMX 125–128

33
Color Macro 33
DMX 129–132

34 
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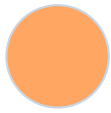
DMX 133–136

35
Color Macro 35
DMX 137–140

36 
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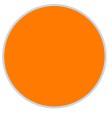
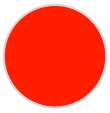
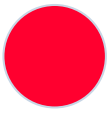
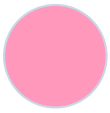
DMX 141–144

37 
Color Macro 37
DMX 145–148

38 
Color Macro 38
DMX 149–152

39 
Color Macro 39
DMX 153–156

40 
Color Macro 40
DMX 157–160

41
Color Macro 41
DMX 161–164

42
Color Macro 42
DMX 165–168

43
Color Macro 43
DMX 169–172

44
Color Macro 44
DMX 173–176

45
Color Macro 45
DMX 177–180

46
Color Macro 46
DMX 181–184

47
Color Macro 47
DMX 185–188

48
Color Macro 48
DMX 189–192

49 Color Macro 49
DMX 193–196

50 Color Macro 50
DMX 197–200

51 Color Macro 51
DMX 201–204

52 Color Macro 52
DMX 205–208

53 Color Macro 53
DMX 209–212

54 Color Macro 54
DMX 213–216

55 Color Macro 55
DMX 217–220

56 Color Macro 56
DMX 221–224

57 Color Macro 57
DMX 225–228

58 Color Macro 58
DMX 229–232

59 Color Macro 59
DMX 233–236

60 Color Macro 60
DMX 237–240

61 Color Macro 61
DMX 241–244

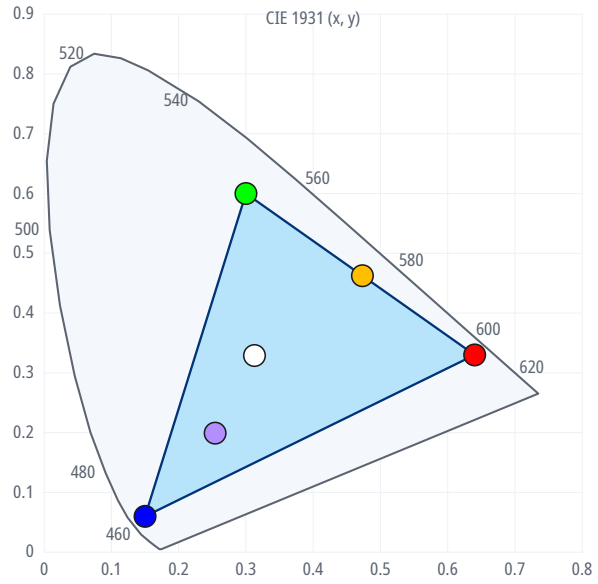
62 Color Macro 62
DMX 245–248

63 Color Macro 63
DMX 249–252

64 Color Macro 64
DMX 253–255

65 Off
DMX 0

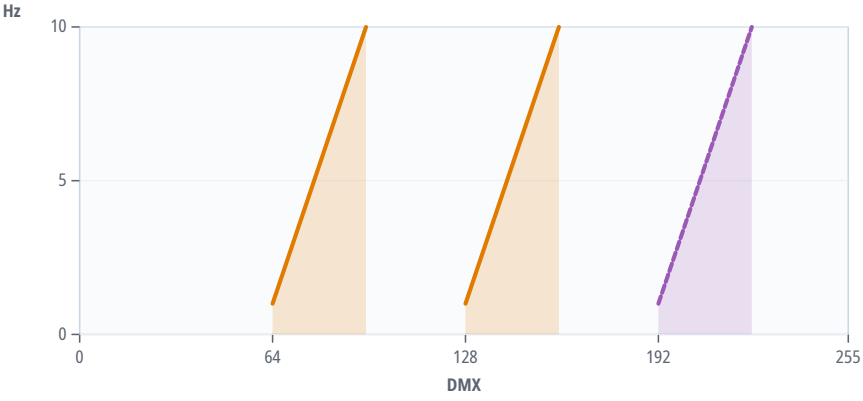
LED colors and the colors they mix



LED	x	y	nm
Red	0.640	0.330	623
Green	0.300	0.600	530
Blue	0.150	0.060	463
White	0.313	0.329	
Amber	0.473	0.463	592
UV	0.254	0.199	420

The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Strobe rate



CH 8 · 13CH

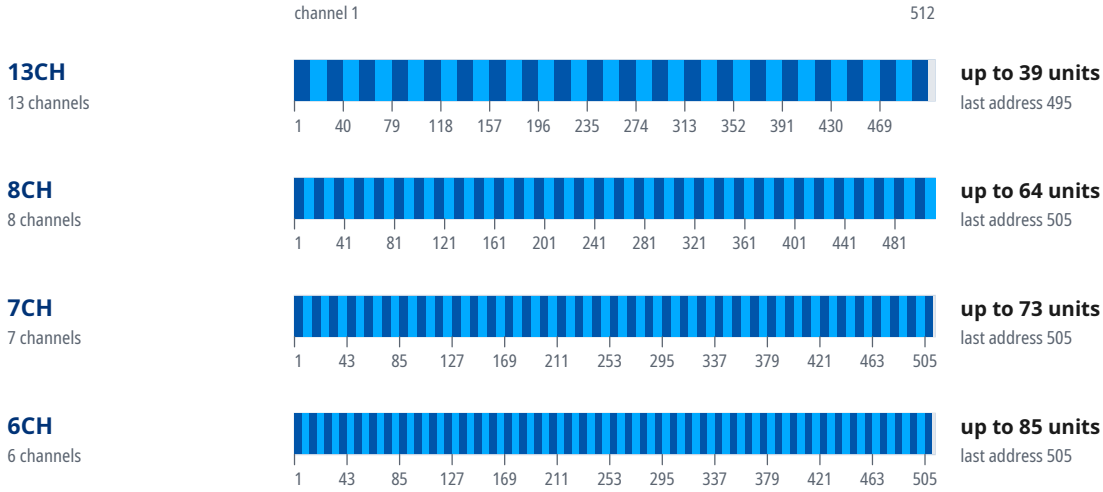
64–95: 1–10 Hz
Strobe Effect Slow to Fast

128–159: 1–10 Hz
Pulse-Effect in Sequences

192–223: 1–10 Hz
Random Strobe Effect Slow to Fast

9 DMX channels

Units in one DMX universe



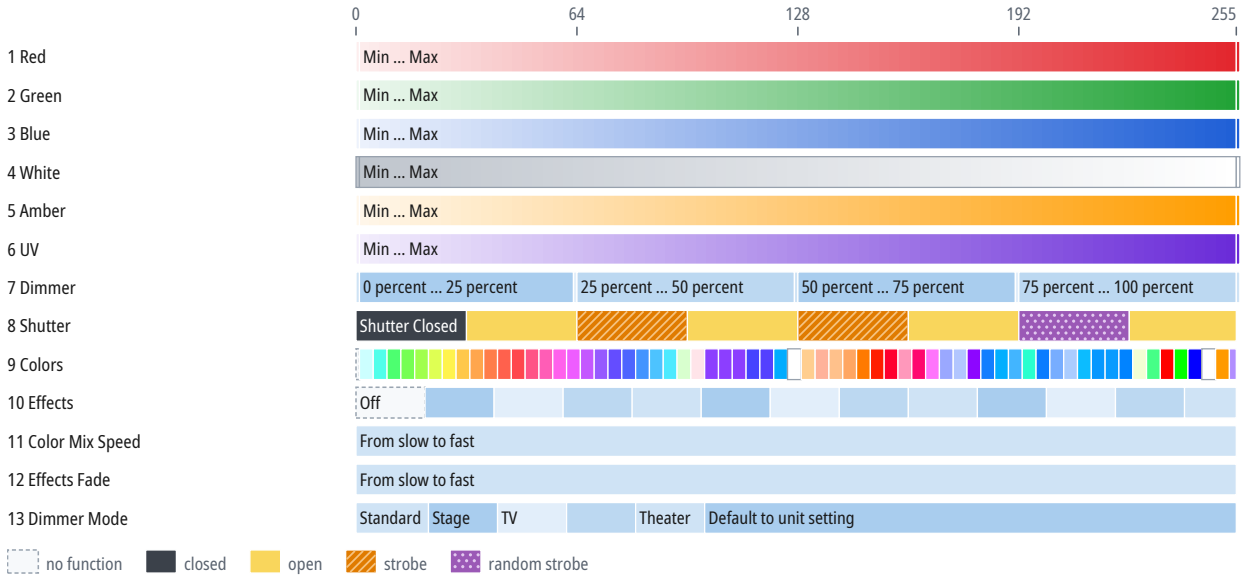
Start addresses of 20 units in the mode “13CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	66	11	131	16	196
2	14	7	79	12	144	17	209
3	27	8	92	13	157	18	222
4	40	9	105	14	170	19	235
5	53	10	118	15	183	20	248

Mode 13CH

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255, CH 4 White 255, CH 7 Dimmer 255, CH 8 Shutter 47.

Channel functions at a glance



CH	Function	DMX	Description
1	Red	0	Min
		1–254	Min ... Max
		255	Max
2	Green	0	Min
		1–254	Min ... Max
		255	Max
3	Blue	0	Min
		1–254	Min ... Max
		255	Max
4	White	0	Min
		1–254	Min ... Max
		255	Max
5	Amber	0	Min
		1–254	Min ... Max
		255	Max
6	UV	0	Min
		1–254	Min ... Max
		255	Max
7	Dimmer	0	0 percent
		1–62	0 percent ... 25 percent
		63	25 percent
		64–126	25 percent ... 50 percent
		127	50 percent
		128–190	50 percent ... 75 percent
		191	75 percent
		192–254	75 percent ... 100 percent
		255	100 percent
8	Shutter	0–31	Shutter Closed
		32–63	No Function (Shutter Open)
		64–95	Strobe Effect Slow to Fast (1–10 Hz)
		96–127	No Function (Shutter Open)
		128–159	Pulse-Effect in Sequences (1–10 Hz)
		160–191	No Function (Shutter Open)
		192–223	Random Strobe Effect Slow to Fast (1–10 Hz)
		224–255	No Function (Shutter Open)
9	Colors		Color Macro
		0	Off
		1–4	Color Macro 1
		5–8	Color Macro 2
		9–12	Color Macro 3
		13–16	Color Macro 4

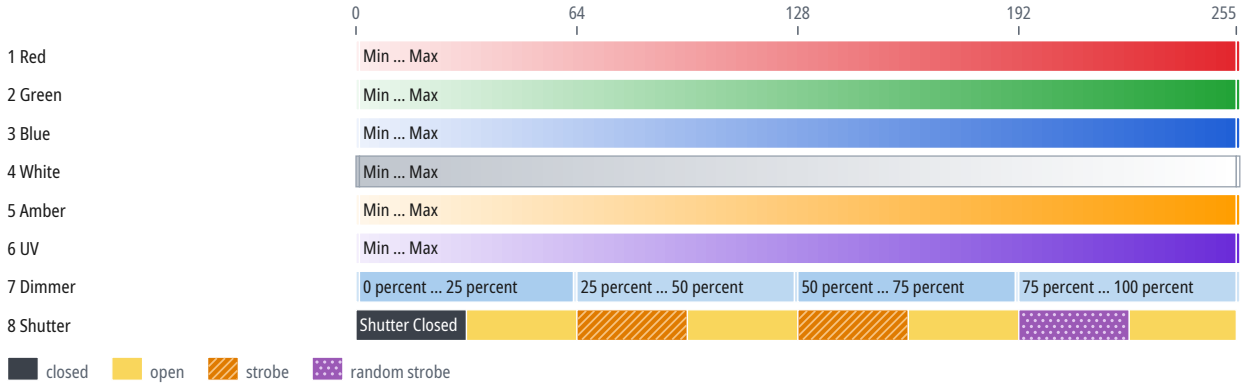
CH	Function	DMX	Description
9	Colors (continued)	17–20	Color Macro 5
		21–24	Color Macro 6
		25–28	Color Macro 7
		29–32	Color Macro 8
		33–36	Color Macro 9
		37–40	Color Macro 10
		41–44	Color Macro 11
		45–48	Color Macro 12
		49–52	Color Macro 13
		53–56	Color Macro 14
		57–60	Color Macro 15
		61–64	Color Macro 16
		65–68	Color Macro 17
		69–72	Color Macro 18
		73–76	Color Macro 19
		77–80	Color Macro 20
		81–84	Color Macro 21
		85–88	Color Macro 22
		89–92	Color Macro 23
		93–96	Color Macro 24
		97–100	Color Macro 25
		101–104	Color Macro 26
		105–108	Color Macro 27
		109–112	Color Macro 28
		113–116	Color Macro 29
		117–120	Color Macro 30
		121–124	Color Macro 31
		125–128	Color Macro 32
		129–132	Color Macro 33
		133–136	Color Macro 34
		137–140	Color Macro 35
		141–144	Color Macro 36
		145–148	Color Macro 37
		149–152	Color Macro 38
		153–156	Color Macro 39
		157–160	Color Macro 40
		161–164	Color Macro 41
		165–168	Color Macro 42
		169–172	Color Macro 43
		173–176	Color Macro 44
		177–180	Color Macro 45
		181–184	Color Macro 46

CH	Function	DMX	Description
9	Colors (continued)	185–188	Color Macro 47
		189–192	Color Macro 48
		193–196	Color Macro 49
		197–200	Color Macro 50
		201–204	Color Macro 51
		205–208	Color Macro 52
		209–212	Color Macro 53
		213–216	Color Macro 54
		217–220	Color Macro 55
		221–224	Color Macro 56
		225–228	Color Macro 57
		229–232	Color Macro 58
		233–236	Color Macro 59
		237–240	Color Macro 60
		241–244	Color Macro 61
		245–248	Color Macro 62
		249–252	Color Macro 63
		253–255	Color Macro 64
10	Effects		Auto Programs
		0–19	Off
		20–39	Auto Program 1
		40–59	Auto Program 2
		60–79	Auto Program 3
		80–99	Auto Program 4
		100–119	Auto Program 5
		120–139	Auto Program 6
		140–159	Auto Program 7
		160–179	Auto Program 8
		180–199	Auto Program 9
		200–219	Auto Program 10
		220–239	Auto Program 11
		240–255	Auto Program 12
11	Color Mix Speed		Auto Program Speed
		0–255	From slow to fast
12	Effects Fade		Auto Program Fade
		0–255	From slow to fast
13	Dimmer Mode	0–20	Standard
		21–40	Stage
		41–60	TV
		61–80	Architectural
		81–100	Theater
		101–255	Default to unit setting

Mode 8CH

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255, CH 4 White 255, CH 7 Dimmer 255, CH 8 Shutter 47.

Channel functions at a glance

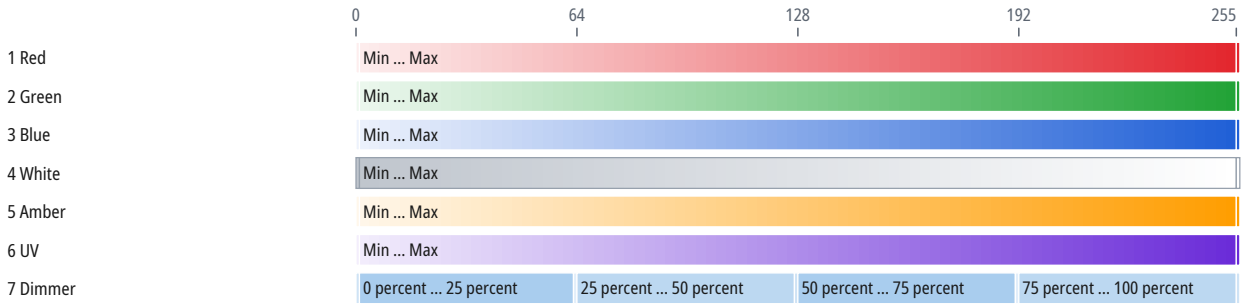


CH	Function	DMX	Description
1	Red		Same as CH 1 in the mode “13CH” (p. 10)
2	Green		Same as CH 2 in the mode “13CH” (p. 10)
3	Blue		Same as CH 3 in the mode “13CH” (p. 10)
4	White		Same as CH 4 in the mode “13CH” (p. 10)
5	Amber		Same as CH 5 in the mode “13CH” (p. 10)
6	UV		Same as CH 6 in the mode “13CH” (p. 10)
7	Dimmer		Same as CH 7 in the mode “13CH” (p. 10)
8	Shutter		Same as CH 8 in the mode “13CH” (p. 10)

Mode 7CH

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255, CH 4 White 255, CH 7 Dimmer 255.

Channel functions at a glance

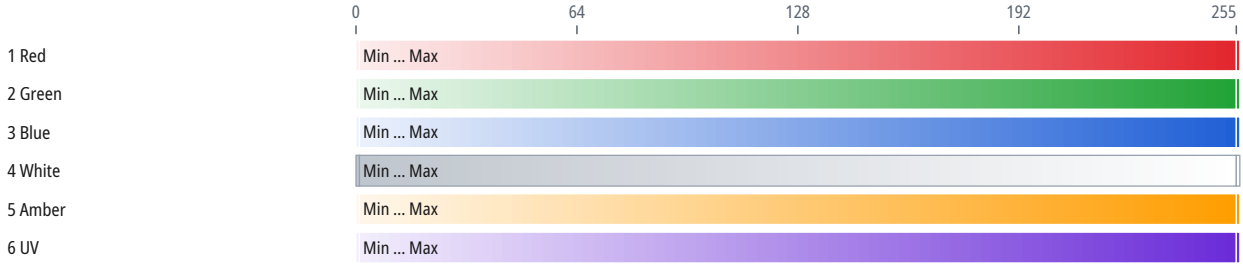


CH	Function	DMX	Description
1	Red		Same as CH 1 in the mode “13CH” (p. 10)
2	Green		Same as CH 2 in the mode “13CH” (p. 10)
3	Blue		Same as CH 3 in the mode “13CH” (p. 10)
4	White		Same as CH 4 in the mode “13CH” (p. 10)
5	Amber		Same as CH 5 in the mode “13CH” (p. 10)
6	UV		Same as CH 6 in the mode “13CH” (p. 10)
7	Dimmer		Same as CH 7 in the mode “13CH” (p. 10)

Mode 6CH

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255, CH 4 White 255.

Channel functions at a glance



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6	UV		Same as CH 6 in the mode “13CH” (p. 10)

10 Technical specifications

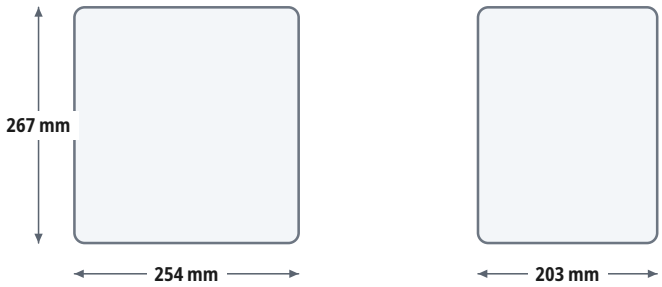
Parameter	Value
Light	
Light source	LED
LED power	59 W
Luminous flux	1,643 lm
Color temperature	6,900 K
Color rendering index (CRI)	65
Optics	
Beam angle	25°
Control	
RDM	yes (manufacturer ID 0x1900, device model ID 0x0021)
Dimensions and construction	
Weight	3.3 kg
Operating environment	
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
Operating temperature	0 to 40 °C

Speeds and ranges

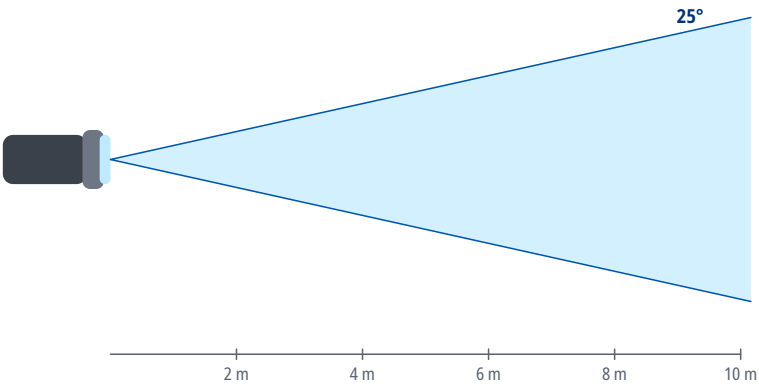
Parameter	Value
Strobe frequency	1–10 Hz

Dimensions

weight 3.3 kg



Spot diameter



Distance	Ø 25°
2 m	0.89 m
4 m	1.8 m
6 m	2.7 m
8 m	3.5 m
10 m	4.4 m
15 m	6.7 m

Spot diameter square to the beam axis, calculated from the beam angle.

11 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

12 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open.

13 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.