DMX REFERENCE

P800-IP

Krypton P800-IP

Krypton



Manufacturer	Krypton
GDTF file	Krypton_P800-IP_78918.gdtf
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1 About this manual

This document describes the Krypton P800-IP by Krypton. It was compiled from the GDTF file Krypton_P800-IP_78918.gdtf from the GDTF-Share library.

File revision: “20112024”.

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 Krypton; 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
Power consumption	850 W
Weight	49.5 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
Standard 36CH	36	14	1, 37, 73, 109, ...
Extend 52CH	52	9	1, 53, 105, 157, ...

No light? Check these channels

- Standard 36CH: CH 5 Dimmer above 0; CH 7 Shutter at 32–63 “open”
- Extend 52CH: CH 5 Dimmer above 0; CH 7 Shutter at 32–63 “open”



Read the manual before use



Risk of electric shock



Do not stare into the light

3 Safety instructions



Read the manual before use



Risk of electric shock



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.

⚠ WARNING

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 100–240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

⚠ 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.

⚠ CAUTION

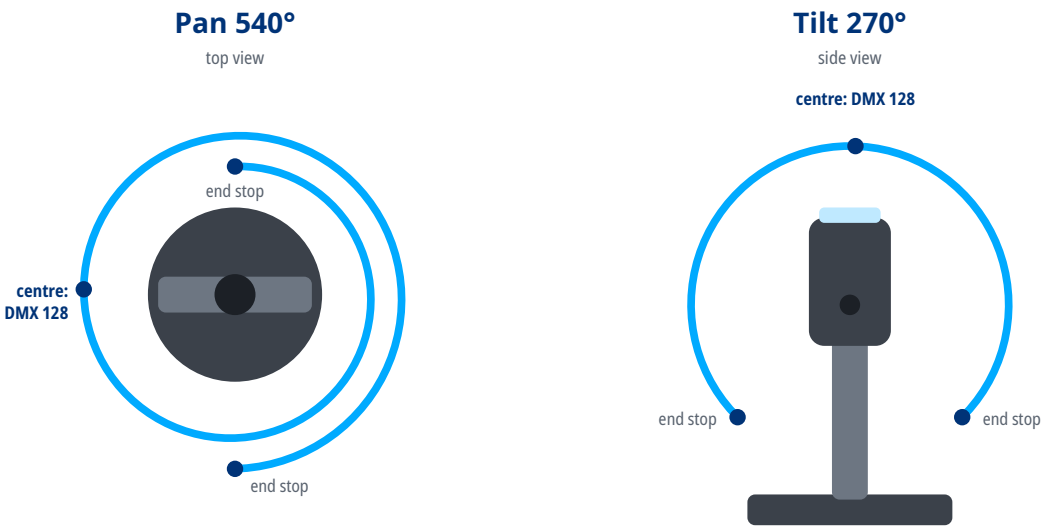
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them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

⚠ WARNING

- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
- Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

4 Product description

Range of movement



5 Installation

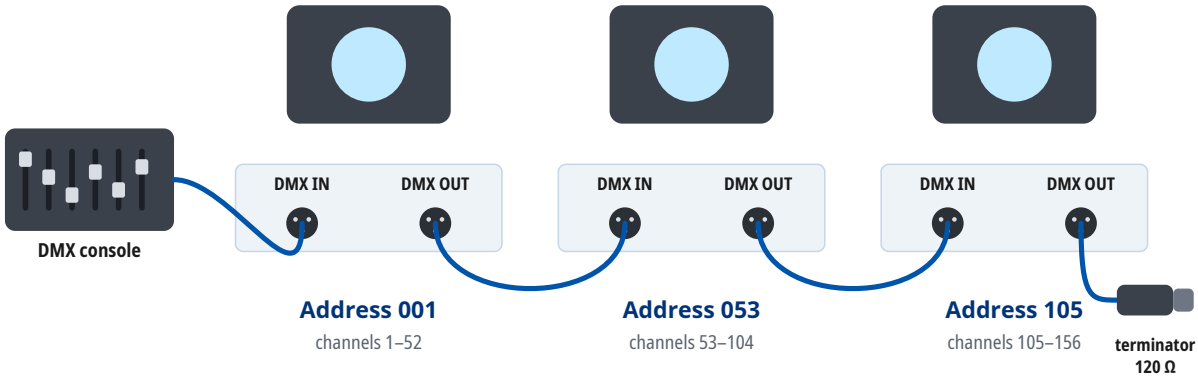
⚠ **WARNING**

- 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: 49.5 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 Extend 52CH: every unit occupies 52 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 “Extend 52CH”: 52.
- 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 “Extend 52CH”, you can use, for example, the start addresses 1, 53, 105, 157.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

Functions in each DMX mode

	Standard 36CH 36 channels	Extend 52CH 52 channels
Pan / Tilt	1, 3	1, 3
Dimmer	5	5
Shutter / strobe	7	7
Color mixing	8–10	8, 10, 12
Color temperature	11	14
Color wheel	12	16
Gobo wheel	14, 17	18, 21
Gobo rotation	14, 15, 17	18, 19, 21
Prism	21, 22	27, 28
Frost	23, 24	29, 30
Zoom	18	22
Focus	19	24
Iris	20	26
Animation wheel	25	31

Color wheel



1 Color: Open
DMX 116–120

2 Deep Red
DMX 121–130

3 Medium Blue
DMX 131–140

4 Deep Green
DMX 141–150

5 Amber
DMX 151–160

6 Congo Blue
DMX 161–170

7 CTB
DMX 171–180

Gobo wheel 1



1 Gobo 1: Open
DMX 0–5

2 Gobo 1
DMX 6–20

3 Gobo 2
DMX 21–35

4 Gobo 3
DMX 36–50

5 Gobo 4
DMX 51–65

6 Gobo 5
DMX 66–80

7 Gobo6
DMX 81–96

Gobo wheel 2

1
Gobo 2: open
DMX 0–5

2 
Gobo 1
DMX 6–18

3 
Gobo 2
DMX 19–31

4 
Gobo 3
DMX 32–44

5 
Gobo 4
DMX 45–57

6 
Gobo 5
DMX 58–70

7 
Gobo 6
DMX 71–83

8 
Gobo7
DMX 84–97

Prism

1
No Prism
DMX 0–5

2 
6 facets
6 liner Prism
DMX 6–130

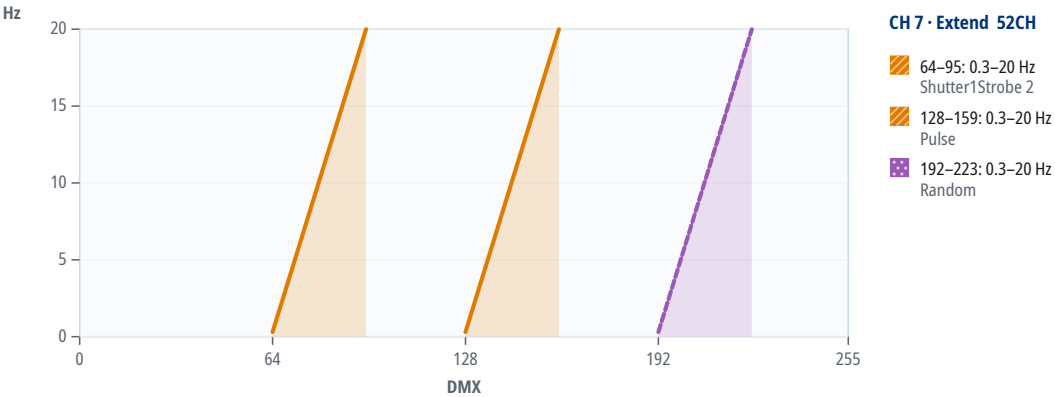
3 
4 facets
4 Facet Prism
DMX 131–255

Animation wheel

1
Open

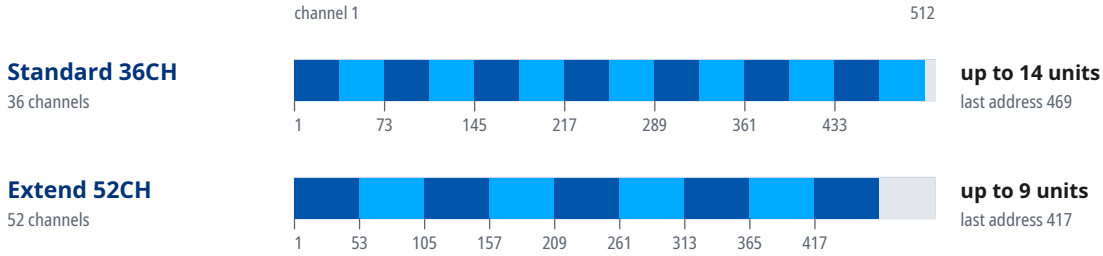
2 
Animation1

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extend 52CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	261	11	U2 · 53	16	U2 · 313
2	53	7	313	12	U2 · 105	17	U2 · 365
3	105	8	365	13	U2 · 157	18	U2 · 417
4	157	9	417	14	U2 · 209	19	U3 · 1
5	209	10	U2 · 1	15	U2 · 261	20	U3 · 53

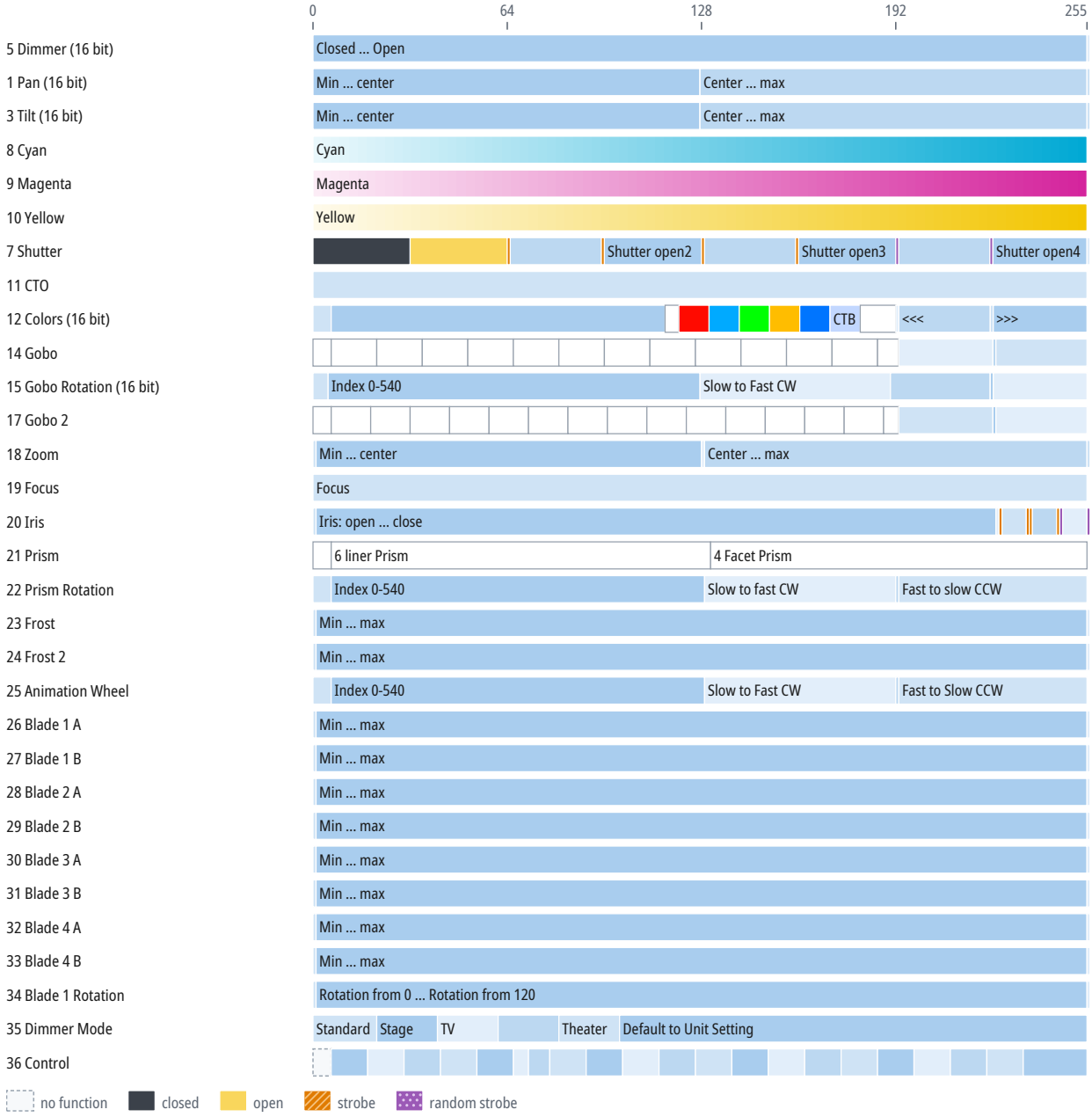
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Standard 36CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 5 Dimmer above 0; CH 7 Shutter at 32–63 “open”. The GDTF file gives these values for a console's Highlight function: CH 5 Dimmer 255, CH 7 Shutter 32, CH 8 Cyan 0, CH 9 Magenta 0, CH 10 Yellow 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Min ... center
		128–255	Center ... max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Min ... center

CH	Function	DMX	Description
3	Tilt (continued)	128–255	Center … max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Dimmer	0–255	Closed … Open
		255	Open
6	Dimmer Fine	0–255	Fine adjustment of CH 5
7	Shutter	0–31	Shutter 1: close
		32–63	Shutter 1: open
		64	Shutter 1 Strobe: min
		65–94	Shutter 1 Strobe: min … max
		95	Shutter 1 Strobe: max
		96–127	Shutter open2
		128	Pulse: min
		129–158	Pulse: min … max
		159	Pulse: max
		160–191	Shutter open3
		192	Random: min
		193–222	Random: min … max
		223	Random: max
		224–254	Shutter open4
		255	Shutter 4
8	Cyan	0–255	Cyan
9	Magenta	0–255	Magenta
10	Yellow	0–255	Yellow
11	CTO	0–255	6500–2900 K
12	Colors	0–6	Color 1 1
		6–116	Color 1 Wheel Index 2
		116–120	Color: Open
		121–130	Deep Red
		131–140	Medium Blue
		141–150	Deep Green
		151–160	Amber
		161–170	Congo Blue
		171–180	CTB
		181–192	Color off (open)
		192–193	Color 2
		193–223	<<<
		224	Color 1 Wheel Spin: stop
		225–255	>>>
13	Colors Fine	0–255	Fine adjustment of CH 12
14	Gobo	0–5	Gobo 1: Open
		6–20	Gobo 1

CH	Function	DMX	Description
14	Gobo (continued)	21–35	Gobo 2
		36–50	Gobo 3
		51–65	Gobo 4
		66–80	Gobo 5
		81–95	Gobo 6
		96–110	Gobo 1 shake
		111–125	Gobo 2 shake
		126–140	Gobo 3 shake
		141–155	Gobo 4 shake
		156–170	Gobo 5 shake
		171–185	Gobo 6 shake
		186–192	Gobo 1 Select Shake: open
		193–223	Slow to Fast CW
		224	Gobo 1 Select Spin: stop
		225–255	Fast to Slow CCW
15	Gobo Rotation	0–5	Rot Off
		5–128	Index 0-540
		128–191	Slow to Fast CW
		191–223	Slow to Fast CW ... stop
		224	Gobo 1 Pos Rotate: stop
		224	Stop ... Fast to Slow CCW
		225–255	Fast to Slow CCW
16	Gobo Rotation Fine	0–255	Fine adjustment of CH 15
17	Gobo 2	0–5	Gobo 2: open
		6–18	Gobo 1
		19–31	Gobo 2
		32–44	Gobo 3
		45–57	Gobo 4
		58–70	Gobo 5
		71–83	Gobo 6
		84–96	Gobo 7
		97–109	Gobo 1 shake
		110–122	Gobo 2 shake
		123–135	Gobo 3 shake
		136–148	Gobo 4 shake
		149–161	Gobo 5 shake
		162–174	Gobo 6 shake
		175–187	Gobo 7 shake
		188–192	Gobo 1 Select Shake: open
		193–223	Slow to Fast CW
		224	Gobo 1 Select Spin: stop
		225–255	Fast to Slow CCW

CH	Function	DMX	Description
18	Zoom	0	Min
		1–127	Min ... center
		128	Center
		129–254	Center ... max
		255	Max
19	Focus	0–255	Focus
20	Iris	0	Iris: open
		1–224	Iris: open ... close
		225	Iris: close
		226	Pulse up slow
		227–234	Pulse up slow ... Pulse up fast
		235	Pulse up fast
		236	Pulse dowm slow
		237–244	Pulse dowm slow ... Pulse dowm fast
		245	Pulse dowm fast
		246	Random fast
		247–254	Random fast ... Random slow
		255	Random slow
21	Prism	0–5	No Prism
		6–130	6 liner Prism
		131–255	4 Facet Prism
22	Prism Rotation	0–5	Rot Off
		6–128	Index 0-540
		129–191	Slow to fast CW
		192	Prism 1 Pos Rotate: STOP
		193–255	Fast to slow CCW
23	Frost	0	Min
		1–254	Min ... max
		255	Max
24	Frost 2	0	Min
		1–254	Min ... max
		255	Max
25	Animation Wheel	0–5	Rot Off
		6–128	Index 0-540
		129–191	Slow to Fast CW
		192	Animation Wheel 1 Select Spin: stop
		193–255	Fast to Slow CCW
26	Blade 1 A	0	Min
		1–254	Min ... max
		255	Max
27	Blade 1 B	0	Min
		1–254	Min ... max

CH	Function	DMX	Description
27	Blade 1 B (continued)	255	Max
28	Blade 2 A	0	Min
		1–254	Min ... max
		255	Max
29	Blade 2 B	0	Min
		1–254	Min ... max
		255	Max
30	Blade 3 A	0	Min
		1–254	Min ... max
		255	Max
31	Blade 3 B	0	Min
		1–254	Min ... max
		255	Max
32	Blade 4 A	0	Min
		1–254	Min ... max
		255	Max
33	Blade 4 B	0	Min
		1–254	Min ... max
		255	Max
34	Blade 1 Rotation	0	Rotation from 0
		1–254	Rotation from 0 ... Rotation from 120
		255	Rotation from 120
35	Dimmer Mode	0–20	Standard
		21–40	Stage
		41–60	TV
		61–80	Architectural
		81–100	Theater
		101–255	Default to Unit Setting
36	Control	0–5	No function
		6–17	Invert Pan on(hold 3s)
		18–29	Invert Pan off(hold 3s)
		30–41	Invert Tilt on(hold 3s)
		42–53	Invert Tilt off (hold 3s)
		54–65	Fan Auto (hold 3s)
		66–70	Fan Silent(hold 3s)
		71–77	Fan High(hold 3s)
		78–89	Linear Dimmer Curve(hold 3s)
		90–101	Square Dimmer Curve (hold 3s)
		102–113	Inv-Square Dimmer Curve(hold 3s)
		114–125	S - Dimmer Curve(hold 3s)
		126–137	1200 Hz(hold 3s)
		138–149	3600 Hz (hold 3s)

CH	Function	DMX	Description
36	Control (continued)	150–161	5000Hz(hold 3s)
		162–173	10000Hz(hold 3s)
		174–185	15000 Hz(hold 3s)
		186–197	20000Hz(hold 3s)
		198–209	25000 Hz (hold 3s)
		210–221	Reset Pan/Tilt(hold 3s)
		222–233	Reset only Head(hold 3s)
		234–255	Reset All Functions (hold 3s)

Mode Extend 52CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 5 Dimmer above 0; CH 7 Shutter at 32–63 “open”. The GDTF file gives these values for a console's Highlight function: CH 5 Dimmer 255, CH 7 Shutter 32, CH 8 Cyan 0, CH 10 Magenta 0, CH 12 Yellow 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard 36CH” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard 36CH” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3

CH	Function	DMX	Description
5	Dimmer		Same as CH 5 in the mode “Standard 36CH” (p. 12)
6	Dimmer Fine	0–255	Fine adjustment of CH 5
7	Shutter		Same as CH 7 in the mode “Standard 36CH” (p. 12)
8	Cyan	0–255	Cyan
9	Cyan Fine	0–255	Fine adjustment of CH 8
10	Magenta	0–255	Magenta
11	Magenta Fine	0–255	Fine adjustment of CH 10
12	Yellow	0–255	Yellow
13	Yellow Fine	0–255	Fine adjustment of CH 12
14	CTO	0–255	6500–2900 K
15	CTO Fine	0–255	Fine adjustment of CH 14
16	Colors		Same as CH 12 in the mode “Standard 36CH” (p. 12)
17	Colors Fine	0–255	Fine adjustment of CH 16
18	Gobo		Same as CH 14 in the mode “Standard 36CH” (p. 12)
19	Gobo Rotation		Same as CH 15 in the mode “Standard 36CH” (p. 13)
20	Gobo Rotation Fine	0–255	Fine adjustment of CH 19
21	Gobo 2		Same as CH 17 in the mode “Standard 36CH” (p. 13)
22	Zoom	0–127	Min … center
		128–255	Center … max
		255	Max
23	Zoom Fine	0–255	Fine adjustment of CH 22
24	Focus	0–255	Focus
25	Focus Fine	0–255	Fine adjustment of CH 24
26	Iris		Same as CH 20 in the mode “Standard 36CH” (p. 14)
27	Prism		Same as CH 21 in the mode “Standard 36CH” (p. 14)
28	Prism Rotation		Same as CH 22 in the mode “Standard 36CH” (p. 14)
29	Frost		Same as CH 23 in the mode “Standard 36CH” (p. 14)
30	Frost 2		Same as CH 24 in the mode “Standard 36CH” (p. 14)
31	Animation Wheel		Same as CH 25 in the mode “Standard 36CH” (p. 14)
32	Blade 1 A	0–255	Min … max
		255	Max
33	Blade 1 A Fine	0–255	Fine adjustment of CH 32
34	Blade 1 B	0–255	Min … max
		255	Max
35	Blade 1 B Fine	0–255	Fine adjustment of CH 34
36	Blade 2 A	0–255	Min … max
		255	Max
37	Blade 2 A Fine	0–255	Fine adjustment of CH 36
38	Blade 2 B	0–255	Min … max
		255	Max
39	Blade 2 B Fine	0–255	Fine adjustment of CH 38
40	Blade 3 A	0–255	Min … max

CH	Function	DMX	Description
40	Blade 3 A (continued)	255	Max
41	Blade 3 A Fine	0–255	Fine adjustment of CH 40
42	Blade 3 B	0–255	Min ... max
		255	Max
43	Blade 3 B Fine	0–255	Fine adjustment of CH 42
44	Blade 4 A	0–255	Min ... max
		255	Max
45	Blade 4 A Fine	0–255	Fine adjustment of CH 44
46	Blade 4 B	0–255	Min ... max
		255	Max
47	Blade 4 B Fine	0–255	Fine adjustment of CH 46
48	Blade 1 Rotation	0–255	Rotation from 0 ... Rotation from 120
		255	Rotation from 120
49	Blade 1 Rotation Fine	0–255	Fine adjustment of CH 48
50	Speed Pan/Tilt	0–255	Pan/Tilt Fast -> Slow
51	Dimmer Mode		Same as CH 35 in the mode “Standard 36CH” (p. 15)
52	Control		Same as CH 36 in the mode “Standard 36CH” (p. 15)

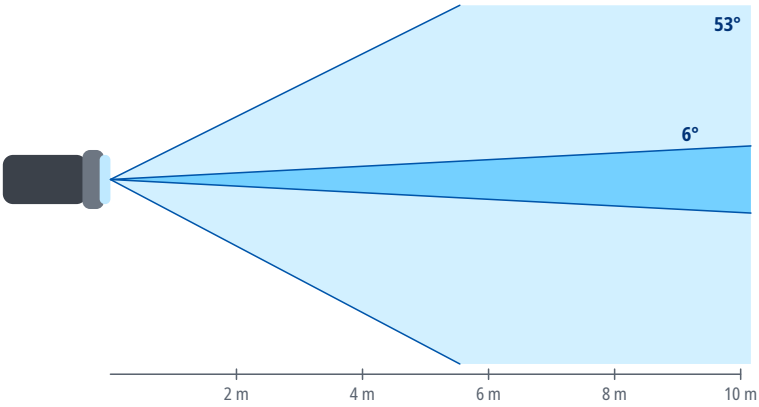
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	800 W
Luminous flux	41,000 lm
Color temperature	6,500 K
Color rendering index (CRI)	72
Optics	
Zoom	6–53°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	850 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	49.5 kg
Operating environment	
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
Operating temperature	-5 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2900–6500 K
Strobe frequency	0.3–20 Hz
Color wheel rotation	up to 180 °/s (30 rpm)
Gobo wheel 1 rotation	up to 180 °/s (30 rpm)
Gobo 1 rotation	up to 180 °/s (30 rpm)
Prism rotation	up to 180 °/s (30 rpm)
Animation wheel rotation	up to 180 °/s (30 rpm)

Spot diameter



Distance	Ø 6°	Ø 53°
2 m	0.21 m	2 m
4 m	0.42 m	4 m
6 m	0.63 m	6 m
8 m	0.84 m	8 m
10 m	1 m	10 m
15 m	1.6 m	15 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.
Movement is reversed	Check whether Pan/Tilt inversion is enabled in the device menu or in the controller.
Moving parts do not reach the correct position after power-on or transport	Switch the device off and on again to reset the position, and make sure the transport lock, if any, is released. If this does not help, contact a service center.
Movement is jerky	Check the value of the Pan/Tilt speed channel, if the device has one, and the stability of the DMX signal.

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.