GDTF Fixture Reference · by SOH

DMX REFERENCE

FINE 120LS BEAM IP

Fine Art



Manufacturer	Fine Art
GDTF file	Fine_Art_FINE_120LS_BEAM_IP_122633.gdtf
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1 About this manual

This document describes the FINE 120LS BEAM IP by Fine Art. It was compiled from the GDTF file Fine_Art_FINE_120LS_BEAM_IP_122633.gdtf from the GDTF-Share library.

File revision: “FINE 120LS BEAM IP”.

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 Fine Art; 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	40.4 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
EXTN	21	24	1, 22, 43, 64, ...
16BT	17	30	1, 18, 35, 52, ...
stnd	15	34	1, 16, 31, 46, ...

No light? Check these channels

- EXTN: CH 1 Shutter at 6–10 or 106–110 or 180–185 or 254–255
- 16BT: CH 1 Shutter at 6–10 or 106–110 or 180–185 or 254–255
- stnd: CH 1 Shutter at 6–10 or 106–110 or 180–185 or 254–255


Read the manual before use


Do not stare into the light


Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ 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

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ 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

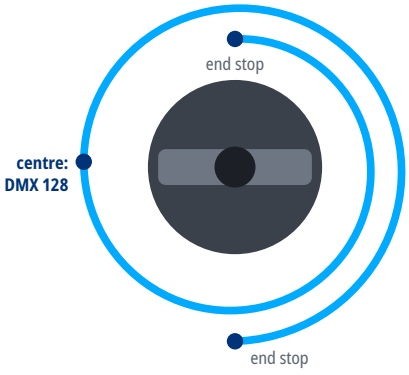
Description in the GDTF file

“FINE 120LS BEAM IP是一款革命性的全天候激光摇头光束灯, 配备强劲的120W白色激光光源模组和高效大口径出光前镜头, 瞬间释放出惊人的光束效果。其IP66防护等级设计, 确保无惧恶劣天气, 完美适应户外使用, 而其创新结构设计则保持了与室内灯具相同的轻便体积。内置NFC近场通信功能, 无需通电即可轻松设置和查询灯具功能, 彻底打破传统防水灯具的使用限制。FINE 120LS BEAM IP是您的室内外演出绝佳伙伴, 让每一场活动都闪耀夺目！”

Range of movement

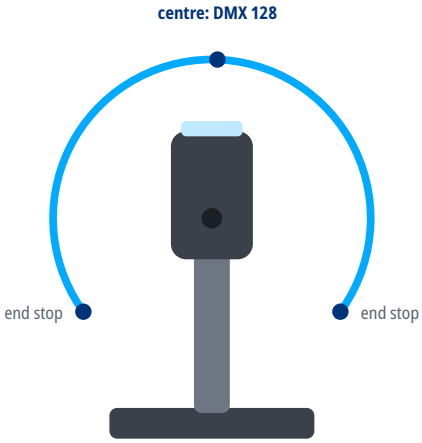
Pan 540°

top view



Tilt 252°

side view



5 Installation

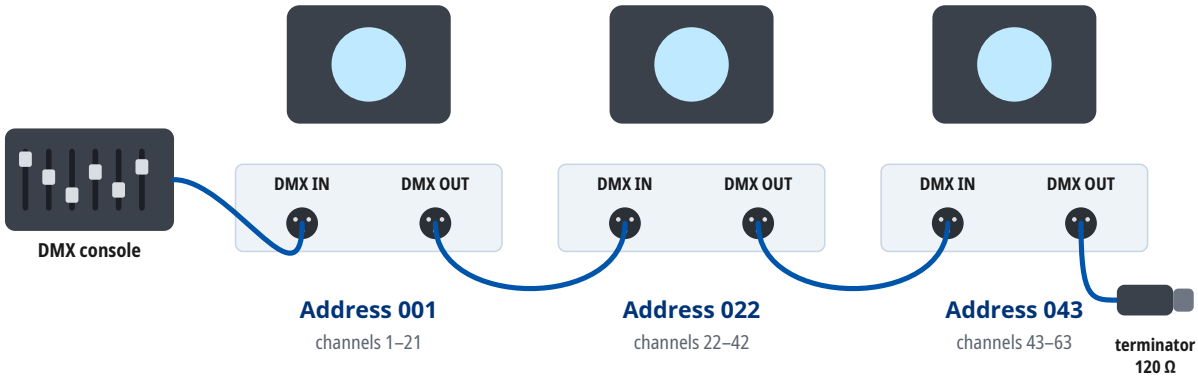
⚠ WARNING

- 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: 40.4 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 EXTN: every unit occupies 21 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 “EXTN”: 21.
- 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 “EXTN”, you can use, for example, the start addresses 1, 22, 43, 64.
- 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

	EXTN 21 channels	16BT 17 channels	stnd 15 channels
Pan / Tilt	4, 6	4, 6	4, 6
Dimmer	2	2	2
Shutter / strobe	1	1	1
Color wheel	9	9	9
Gobo wheel	8	8	8
Prism	11, 12	11, 12	11, 12
Frost	16	16	14
Focus	14	14	13
Effects / macros	13	13	

Gobo wheel 1

1 Linear
DMX 0–110

2 
Color 1
DMX 111–112

3 
Color 2
DMX 113–114

4 
Color 3
DMX 115–116

5 
Color 4
DMX 117–118

6 
Color 5
DMX 119–120

7 
Color 6
DMX 121–122

8 
Color 7
DMX 123–124

9 
Color 8
DMX 125–126

10 
Color 9
DMX 127–128

11 
Color 10
DMX 129–130

12 
Color 11
DMX 131–132

13 
Color 12
DMX 133–134

14 
Color 13
DMX 135–136

15 
Color 14
DMX 137–138

16 
Color 15
DMX 139–140

17 
Color 16
DMX 141–142

18 
Color 17
DMX 143–144

19 
Color 18
DMX 145–146

20 
Color 19
DMX 147–148

21 
Color 20
DMX 149–150

22 
Color 21
DMX 151–152

23 
Color 22
DMX 153–154

24 
Color 23
DMX 155–156

25 
Color 24
DMX 157–158

Gobo wheel 2

1 Open

2 
Gobo 1

3 
Gobo 2

4 
Gobo 3

5 
Gobo 4

6 
Gobo 5

7 
Gobo 6

8 
Gobo 7

9 
Gobo 8

Gobo wheel 3

1
Gobo: Open
DMX 0–14

2 
Gobo 1
DMX 15–18

3 
Gobo 2
DMX 19–22

4 
Gobo 3
DMX 23–26

5 
Gobo 4
DMX 27–29

6 
Gobo 5
DMX 30–32

7 
Gobo 6
DMX 33–35

8 
Gobo 7
DMX 36–38

9 
Gobo 8
DMX 39–41

10 
Gobo 9
DMX 42–44

11 
Gobo 10
DMX 45–47

12 
Gobo 11
DMX 48–50

13 
Gobo 12
DMX 51–53

14 
Gobo 13
DMX 54–56

15 
Gobo 14
DMX 57–59

16 
Gobo 15
DMX 60–62

17 
Gobo 16
DMX 63–65

18 
Gobo 17
DMX 66–68

19 
Gobo 18
DMX 69–71

20 
Gobo 19
DMX 72–74

21 
Gobo 20
DMX 75–77

22 
Gobo 21
DMX 78–80

23 
Gobo 22
DMX 81–83

24 
Gobo 23
DMX 84–86

25 
Gobo 24
DMX 87–90

Prism

1
Open
DMX 0–10

2 
4 facets
Prism
DMX 11–59

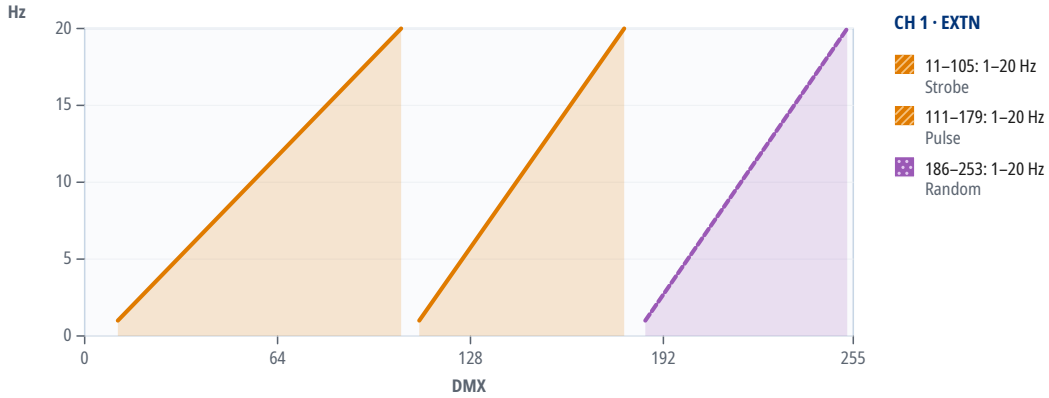
3 
6 facets
Prism2
DMX 60–108

4 
12 facets
Prism1+2
DMX 109–255

Animation wheel

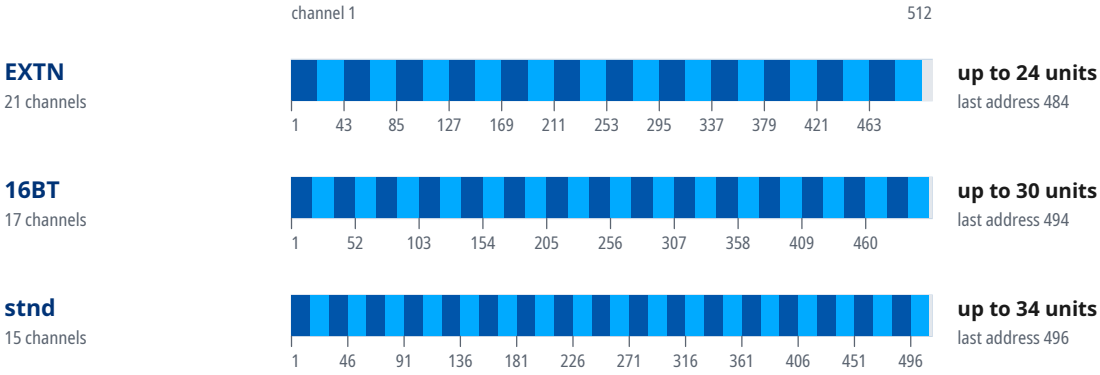
1 
Animation Wheel

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “EXTN”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	106	11	211	16	316
2	22	7	127	12	232	17	337
3	43	8	148	13	253	18	358
4	64	9	169	14	274	19	379
5	85	10	190	15	295	20	400

Mode EXTN

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 1 Shutter at 6–10 or 106–110 or 180–185 or 254–255. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 6.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter	0–5	Shutter: Close
		6–10	Shutter: Open 1
		11–105	Strobe (1–20 Hz)
		106–110	Open 2
		111–179	Pulse (1–20 Hz)
		180–185	Open 3
		186–253	Random (1–20 Hz)
		254–255	Open 4
2	Dimmer	0–255	Min ... Max
		255	Max
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Pan	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
5	Pan Fine	0–255	Fine adjustment of CH 4
6	Tilt	0–127	Min ... Center

CH	Function	DMX	Description
6	Tilt (continued)	127	Center
		128–255	Center … Max
		255	Max
7	Tilt Fine	0–255	Fine adjustment of CH 6
8	Gobo 2	0–14	Gobo: Open
		15–18	Gobo 1
		19–22	Gobo 2
		23–26	Gobo 3
		27–29	Gobo 4
		30–32	Gobo 5
		33–35	Gobo 6
		36–38	Gobo 7
		39–41	Gobo 8
		42–44	Gobo 9
		45–47	Gobo 10
		48–50	Gobo 11
		51–53	Gobo 12
		54–56	Gobo 13
		57–59	Gobo 14
		60–62	Gobo 15
		63–65	Gobo 16
		66–68	Gobo 17
		69–71	Gobo 18
		72–74	Gobo 19
		75–77	Gobo 20
		78–80	Gobo 21
		81–83	Gobo 22
		84–86	Gobo 23
		87–89	Gobo 24
		90–94	Gobo sele: Gobo 1
		95–99	Gobo sele: Gobo 2
		100–104	Gobo sele: Gobo 3
		105–109	Gobo sele: Gobo 4
		110–114	Gobo sele: Gobo 5
		115–119	Gobo sele: Gobo 6
		120–124	Gobo sele: Gobo 7
		125–129	Gobo sele: Gobo 8
		130–134	Gobo sele: Gobo 9
		135–139	Gobo sele: Gobo 10
		140–144	Gobo sele: Gobo 11
		145–149	Gobo sele: Gobo 12
		150–154	Gobo sele: Gobo 13

CH	Function	DMX	Description
8	Gobo 2 (continued)	155–159	Gobo sele: Gobo 14
		160–164	Gobo sele: Gobo 15
		165–169	Gobo sele: Gobo 16
		170–174	Gobo sele: Gobo 17
		175–179	Gobo sele: Gobo 18
		180–184	Gobo sele: Gobo 19
		185–189	Gobo sele: Gobo 20
		190–194	Gobo sele: Gobo 21
		195–199	Gobo sele: Gobo 22
		200–204	Gobo sele: Gobo 23
		205–209	Gobo sele: Gobo 24
		210–231	CW (70–20 °/s)
		232–233	Gobo 2 Spin: Stop
		234–255	CCW (20–70 °/s)
9	Colors	0–110	Linear
		111–112	Color 1
		113–114	Color 2
		115–116	Color 3
		117–118	Color 4
		119–120	Color 5
		121–122	Color 6
		123–124	Color 7
		125–126	Color 8
		127–128	Color 9
		129–130	Color 10
		131–132	Color 11
		133–134	Color 12
		135–136	Color 13
		137–138	Color 14
		139–140	Color 15
		141–142	Color 16
		143–144	Color 17
		145–146	Color 18
		147–148	Color 19
		149–150	Color 20
		151–152	Color 21
		153–154	Color 22
		155–156	Color 23
		157–158	Color 24
		159–160	Color: open
		161–200	CW (46.7–3.67 °/s)
		201–203	Color 1 Spin: Stop

CH	Function	DMX	Description
9	Colors (continued)	204–243	CCW (3.67–46.7 °/s)
		244–247	Random >>>
		248–251	Random >>
		252–255	Random >
10	reeserved	0–255	
11	Prism	0–10	Open
		11–59	Prism
		60–108	Prism2
		109–255	Prism1+2
12	Prism Rotation	0	0
		1–126	0 ... 360
		127	360
		128–190	CW (600–0.2 °/s)
		191–192	Prism 1 Pos Rotate: Stop
		193–255	CCW (0.2–600 °/s)
13	Color Macro	0–255	
14	Focus	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
15	Focus Fine	0–255	Fine adjustment of CH 14
16	Frost	0	Min
		1–126	Min ... Center
		127	Center
		128–254	Center ... Max
		255	Max
17	Control	0–9	None
		10–14	Reset
		15–29	Beam Reset
		30–34	Position Reset
		35–49	Reserved 1
		50–54	1`2KHz
		55–59	2`4KHz
		60–64	12KHz
		65–69	24KHz
		70–74	S
		75–79	Parabola
		80–84	Anti-parabola
		85–89	Dimming
		90–124	Reserved 1
		125–129	Highlight
		130–134	Standard

CH	Function	DMX	Description
17	Control (continued)	135–139	Theater
		140–255	None
18	Speed Pan/Tilt	0–255	
19	Color Mix Speed	0–255	
20	Global Speed	0–255	
21	Gobo Wheel Speed	0	GoboWheel1MSpeed
		1–255	Gobo Wheel 1 MSpeed 1

Mode 16BT

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 1 Shutter at 6–10 or 106–110 or 180–185 or 254–255. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 6.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter		Same as CH 1 in the mode “EXTN” (p. 11)
2	Dimmer		Same as CH 2 in the mode “EXTN” (p. 11)
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Pan		Same as CH 4 in the mode “EXTN” (p. 11)
5	Pan Fine	0–255	Fine adjustment of CH 4
6	Tilt		Same as CH 6 in the mode “EXTN” (p. 11)
7	Tilt Fine	0–255	Fine adjustment of CH 6
8	Gobo 2		Same as CH 8 in the mode “EXTN” (p. 12)
9	Colors		Same as CH 9 in the mode “EXTN” (p. 13)
10	reeserved	0–255	
11	Prism		Same as CH 11 in the mode “EXTN” (p. 14)
12	Prism Rotation		Same as CH 12 in the mode “EXTN” (p. 14)

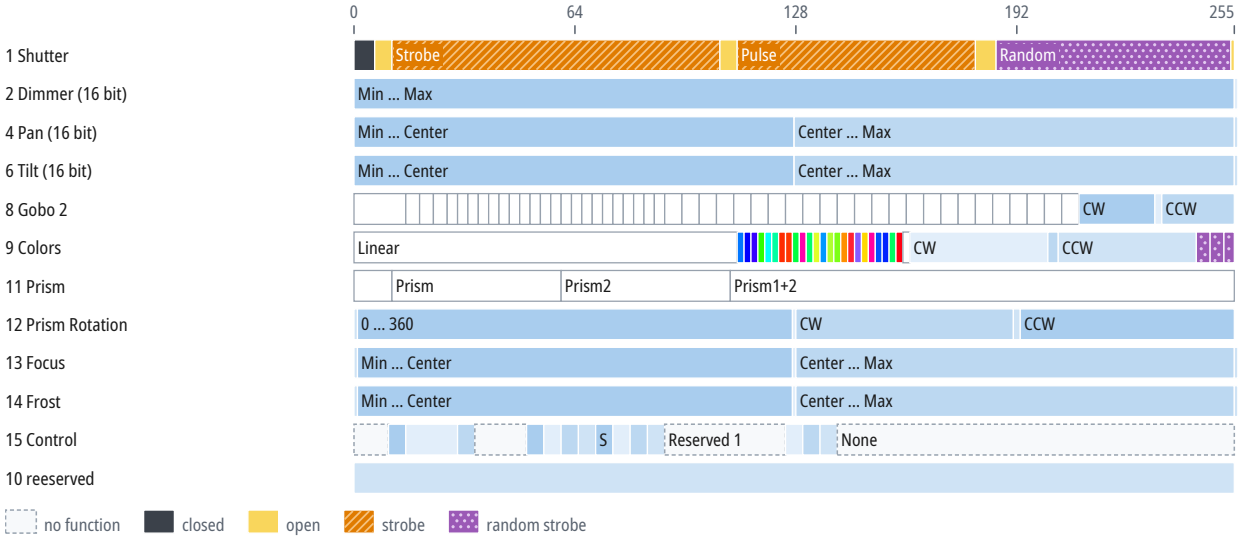
CH	Function	DMX	Description
13	Color Macro	0–255	
14	Focus		Same as CH 14 in the mode “EXTN” (p. 14)
15	Focus Fine	0–255	Fine adjustment of CH 14
16	Frost		Same as CH 16 in the mode “EXTN” (p. 14)
17	Control		Same as CH 17 in the mode “EXTN” (p. 14)

Mode stnd

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 1 Shutter at 6–10 or 106–110 or 180–185 or 254–255. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 6.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter		Same as CH 1 in the mode “EXTN” (p. 11)
2	Dimmer		Same as CH 2 in the mode “EXTN” (p. 11)
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Pan		Same as CH 4 in the mode “EXTN” (p. 11)
5	Pan Fine	0–255	Fine adjustment of CH 4
6	Tilt		Same as CH 6 in the mode “EXTN” (p. 11)
7	Tilt Fine	0–255	Fine adjustment of CH 6
8	Gobo 2		Same as CH 8 in the mode “EXTN” (p. 12)
9	Colors		Same as CH 9 in the mode “EXTN” (p. 13)
10	reeserved	0–255	
11	Prism		Same as CH 11 in the mode “EXTN” (p. 14)
12	Prism Rotation		Same as CH 12 in the mode “EXTN” (p. 14)

CH	Function	DMX	Description
13	Focus	0	Min
		1–126	Min ... Center
		127	Center
		128–254	Center ... Max
		255	Max
14	Frost		Same as CH 16 in the mode “EXTN” (p. 14)
15	Control		Same as CH 17 in the mode “EXTN” (p. 14)

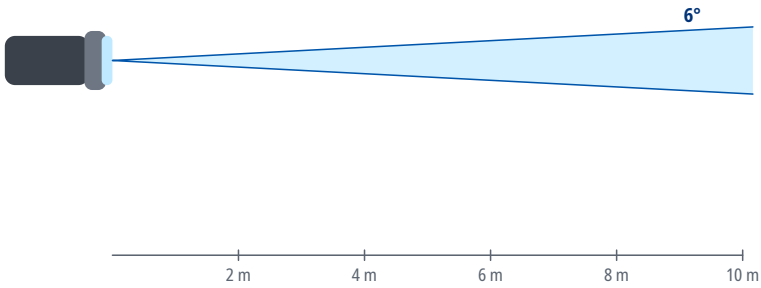
10 Technical specifications

Parameter	Value
Light	
Light source	halogen lamp
Lamp power	1,000 W
Luminous flux	35,000 lm
Color temperature	6,000 K
Color rendering index (CRI)	90
Optics	
Beam angle	6°
Movement	
Pan	540°
Tilt	252°
Dimensions and construction	
Weight	40.4 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–20 Hz
Color wheel 1 rotation	up to 46.7 °/s (7.8 rpm)
Gobo wheel 3 rotation	up to 70 °/s (12 rpm)
Prism rotation	up to 600 °/s (100 rpm)

Spot diameter



Distance	Ø 6°
2 m	0.21 m
4 m	0.42 m
6 m	0.63 m
8 m	0.84 m
10 m	1 m
15 m	1.6 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.