DMX REFERENCE

S4 Series 3 Lustr X8 90Deg

Source Four LED Series 3 Lustr X8 90 Degree

ETC



Manufacturer	ETC
GDTF file	ETC_S4_Series_3_Lustr_X8_90Deg_128862.gdtf
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Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 4
5 Installation 5
6 Connections 5
7 Operation 6
8 Functions at a glance 6
9 DMX channels 7
Mode Direct 8
Mode Expanded 10
Mode Studio 11
Mode 3ch RGB 11
Mode 1ch 12
Mode HSIC 12
10 Technical specifications 13
11 Maintenance and cleaning 13
12 Troubleshooting 14
13 Disposal 14

1 About this manual

This document describes the Source Four LED Series 3 Lustr X8 90 Degree by ETC. It was compiled from the GDTF file ETC_S4_Series_3_Lustr_X8_90Deg_128862.gdtf from the GDTF-Share library.

File revision: “Ver 1”.

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 ETC; 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	8.9 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Direct	12	42	1, 13, 25, 37, ...
Expanded	11	46	1, 12, 23, 34, ...
Studio	7	73	1, 8, 15, 22, ...
3ch RGB	3	170	1, 4, 7, 10, ...
1ch	1	512	1, 2, 3, 4, ...
HSIC	8	64	1, 9, 17, 25, ...

No light? Check these channels

- Direct: CH 10 Shutter at 0, 201–240 or 255 “Open”
- Expanded: CH 9 Shutter at 0, 201–240 or 255 “Open”
- Studio: CH 5 Shutter at 0, 201–240 or 255 “Open”
- HSIC: CH 6 Shutter at 0, 201–240 or 255 “Open”


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.

4 Product description

Description in the GDTF file

“Electronic Theatre Controls Inc. Source Four LED Series 3 Lustr X8 with 90 Degree XDLT lens tube Official File”

5 Installation

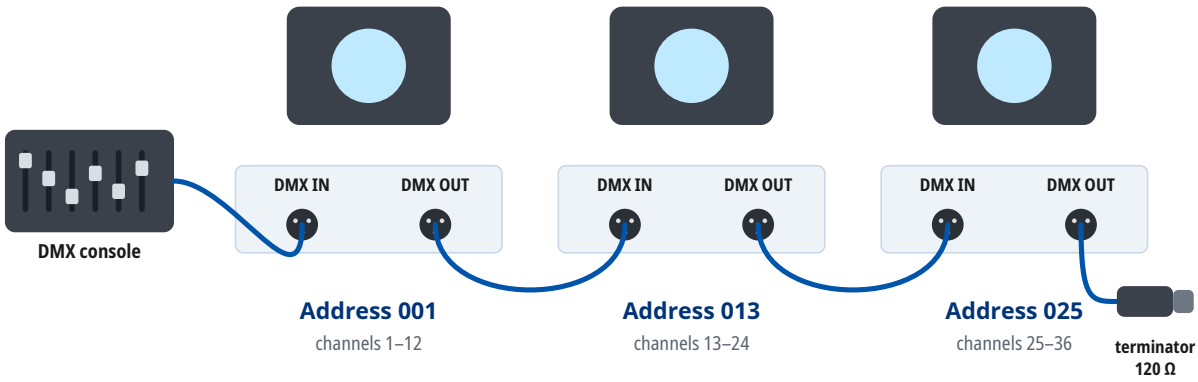
⚠ WARNING

- 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: 8.87 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 Direct: every unit occupies 12 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

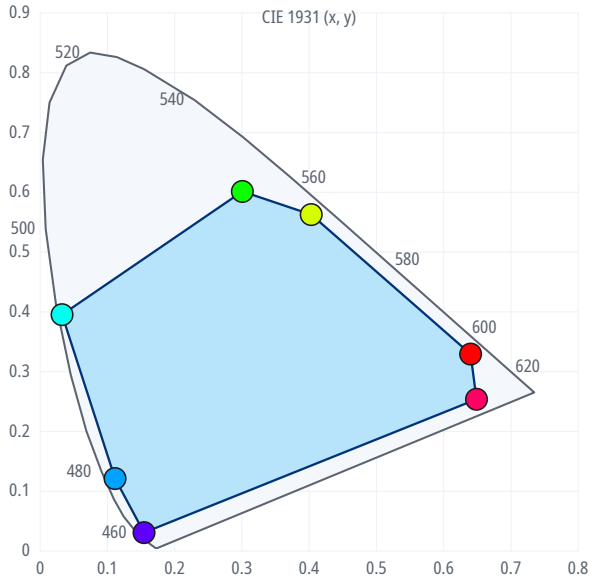
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Direct”: 12.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “Direct”, you can use, for example, the start addresses 1, 13, 25, 37.
- 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

	Direct 12 channels	Expanded 11 channels	Studio 7 channels	3ch RGB 3 channels	1ch 1 channel	HSIC 8 channels
Dimmer	1	1	1	✓	1	
Color mixing	2–9	4, 6–8	4	1–3		
Color temperature		2	2			5

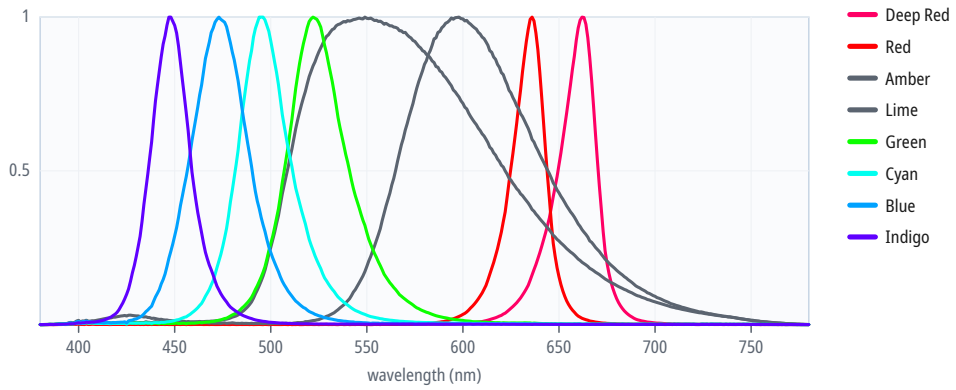
LED colors and the colors they mix



LED	x	y	nm
Deep Red	0.649	0.254	665
Red	0.640	0.330	640
Lime	0.403	0.563	548
Green	0.301	0.602	526
Cyan	0.033	0.395	506
Blue	0.111	0.121	
Indigo	0.154	0.031	

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

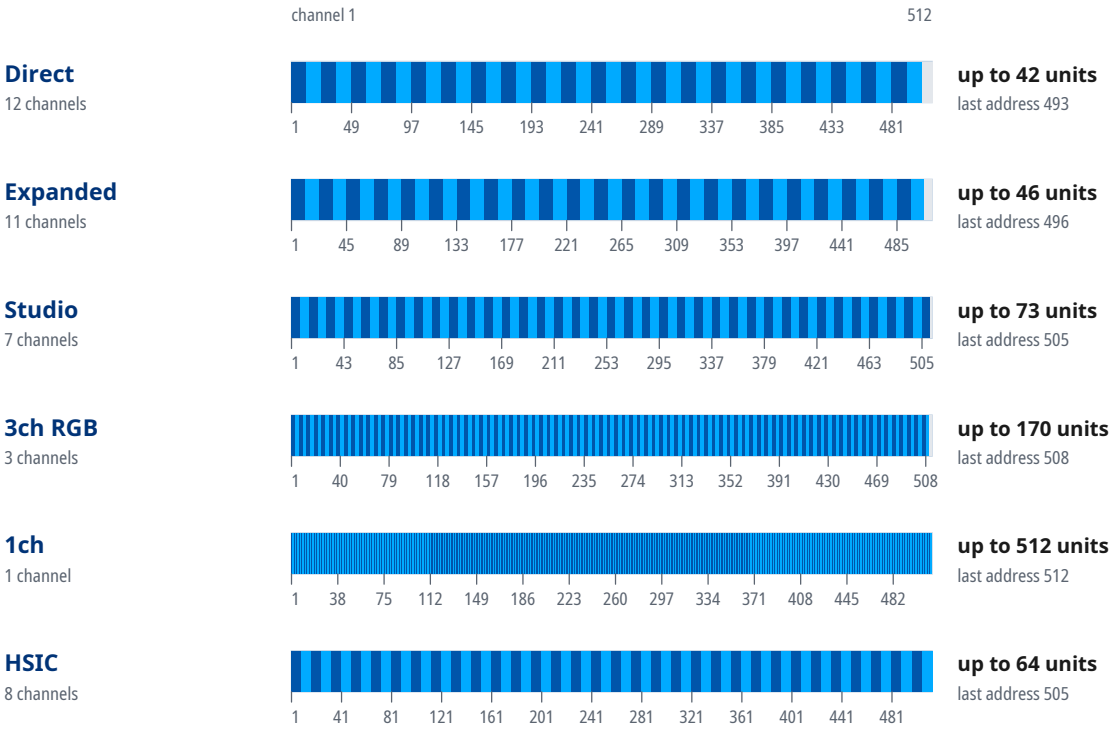
Spectra of the light sources



Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

9 DMX channels

Units in one DMX universe



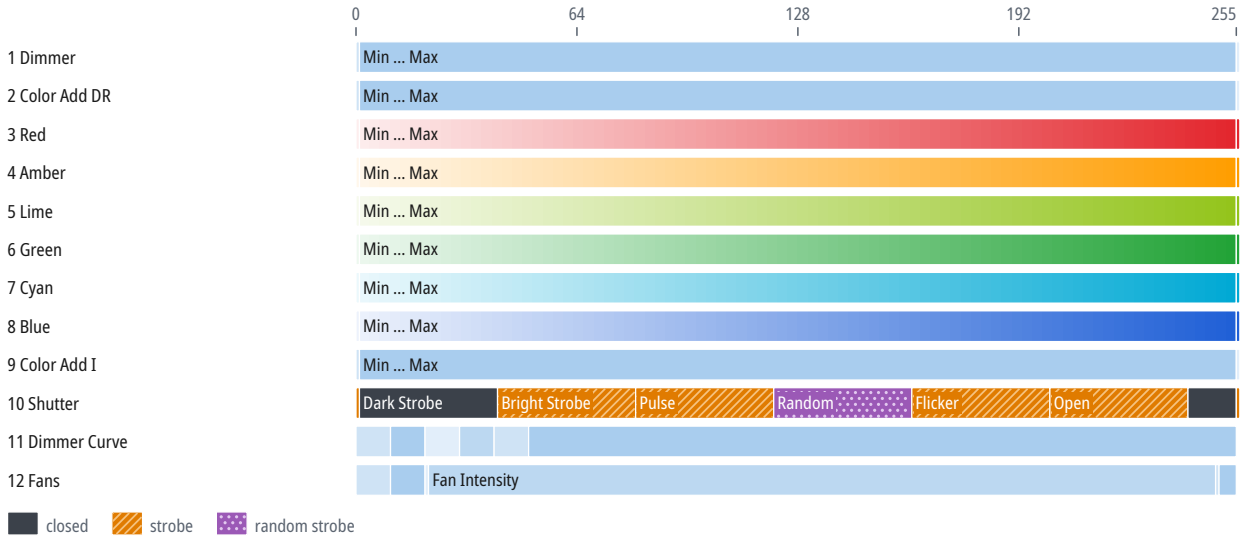
Start addresses of 20 units in the mode “Direct”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	61	11	121	16	181
2	13	7	73	12	133	17	193
3	25	8	85	13	145	18	205
4	37	9	97	14	157	19	217
5	49	10	109	15	169	20	229

Mode Direct

If the device receives DMX in this mode but gives no light, check these channels: CH 10 Shutter at 0, 201–240 or 255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Color Add DR 255, CH 3 Red 255, CH 4 Amber 255, CH 5 Lime 255, CH 6 Green 255, CH 7 Cyan 255, CH 8 Blue 255, CH 9 Color Add I 255, CH 10 Shutter 0.

Channel functions at a glance



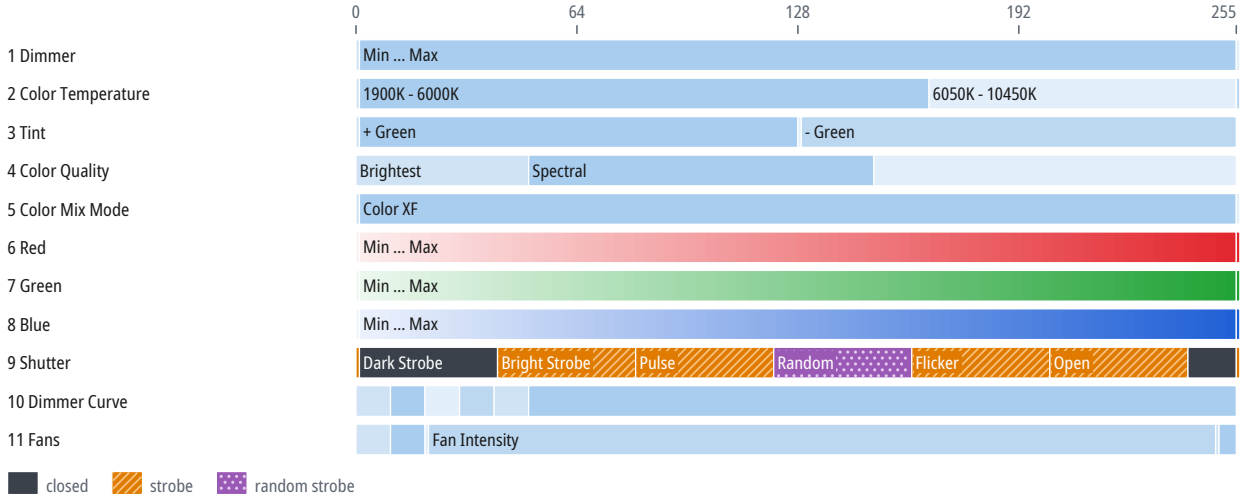
CH	Function	DMX	Description
1	Dimmer	0	Min
		1–254	Min ... Max
		255	Max
2	Color Add DR		Deep Red
		0	Min
		1–254	Min ... Max
		255	Max
3	Red	0	Min
		1–254	Min ... Max
		255	Max
4	Amber	0	Min
		1–254	Min ... Max
		255	Max
5	Lime	0	Min
		1–254	Min ... Max
		255	Max
6	Green	0	Min
		1–254	Min ... Max
		255	Max
7	Cyan	0	Min
		1–254	Min ... Max
		255	Max

CH	Function	DMX	Description
8	Blue	0	Min
		1–254	Min … Max
		255	Max
9	Color Add I	0	Min
		1–254	Min … Max
		255	Max
10	Shutter	0	Open
		1–40	Dark Strobe
		41–80	Bright Strobe
		81–120	Pulse
		121–160	Random
		161–200	Flicker
		201–240	Open
		241–254	Closed
		255	Open
11	Dimmer Curve	0–9	Incandescent
		10–19	Linear
		20–29	Incandescent Red Shift
		30–39	Linear Red Shift
		40–49	Quick
		50–255	Dimmer Curve 1
12	Fans	0–9	Fan Auto
		10–19	Fan Off
		20	Fan Min
		21–248	Fan Intensity
		249	Fan Max
		250–255	Fan Auto

Mode Expanded

If the device receives DMX in this mode but gives no light, check these channels: CH 9 Shutter at 0, 201–240 or 255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 6 Red 255, CH 7 Green 255, CH 8 Blue 255, CH 9 Shutter 0.

Channel functions at a glance

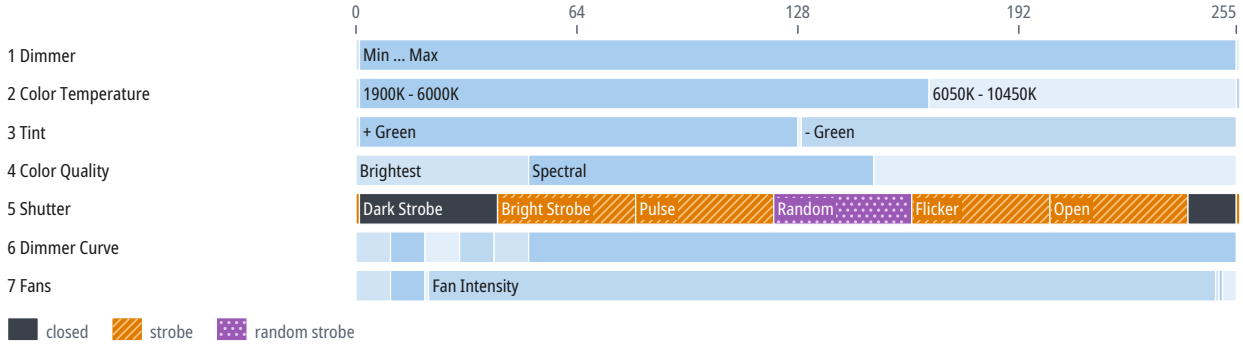


CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “Direct” (p. 8)
2	Color Temperature	0	3200K
		1–165	1900K - 6000K
		166–254	6050K - 10450K
		255	5600K
3	Tint	0	Neutral
		1–127	+ Green
		128	Neutral
		129–255	- Green
4	Color Quality	0–49	Brightest
		50–149	Spectral
		150–255	Color RGB_Quality 1
5	Color Mix Mode	0	Color Temp
		1–254	Color XF
		255	Color Mix
6	Red		Same as CH 3 in the mode “Direct” (p. 8)
7	Green		Same as CH 6 in the mode “Direct” (p. 8)
8	Blue		Same as CH 8 in the mode “Direct” (p. 9)
9	Shutter		Same as CH 10 in the mode “Direct” (p. 9)
10	Dimmer Curve		Same as CH 11 in the mode “Direct” (p. 9)
11	Fans		Same as CH 12 in the mode “Direct” (p. 9)

Mode Studio

If the device receives DMX in this mode but gives no light, check these channels: CH 5 Shutter at 0, 201–240 or 255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 5 Shutter 0.

Channel functions at a glance

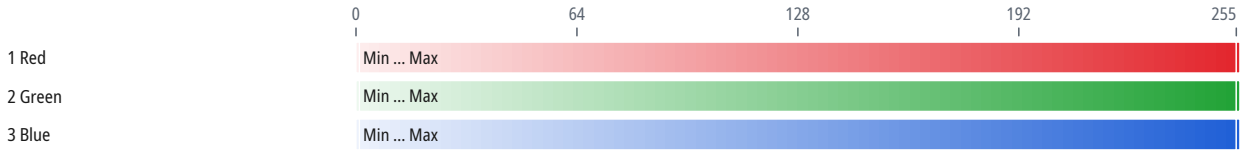


CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “Direct” (p. 8)
2	Color Temperature		Same as CH 2 in the mode “Expanded” (p. 10)
3	Tint		Same as CH 3 in the mode “Expanded” (p. 10)
4	Color Quality		Same as CH 4 in the mode “Expanded” (p. 10)
5	Shutter		Same as CH 10 in the mode “Direct” (p. 9)
6	Dimmer Curve		Same as CH 11 in the mode “Direct” (p. 9)
7	Fans	0–9	Fan Auto
		10–19	Fan Off
		20	Fan Min
		21–248	Fan Intensity
		249	Fan Max
		250	Fan Auto
		251–255	Fans 1

Mode 3ch RGB

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

Channel functions at a glance



CH	Function	DMX	Description
1	Red		Same as CH 3 in the mode “Direct” (p. 8)
2	Green		Same as CH 6 in the mode “Direct” (p. 8)
3	Blue		Same as CH 8 in the mode “Direct” (p. 9)

Mode 1ch

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255.

Channel functions at a glance



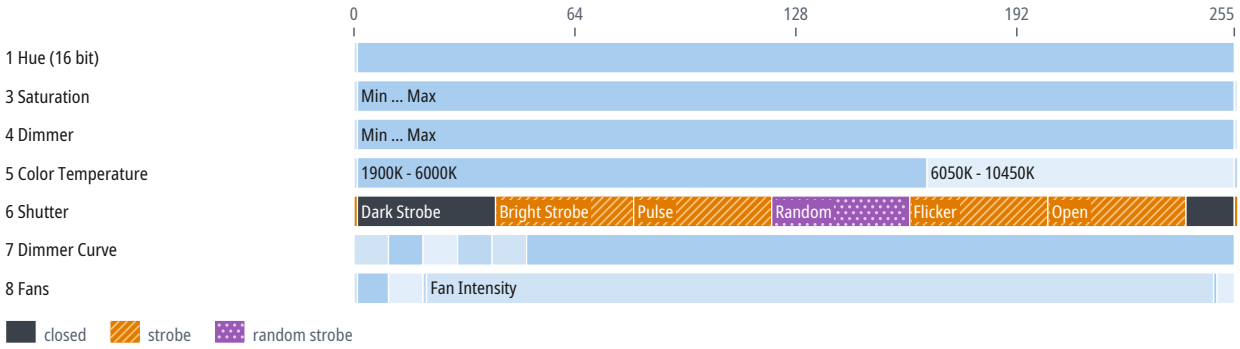
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “Direct” (p. 8)

Mode HSIC

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 6 Shutter at 0, 201–240 or 255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 255, CH 6 Shutter 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Hue	0	Hue 0 to 360
		1–255	HSB_Hue 1
2	Hue Fine	0–255	Fine adjustment of CH 1
3	Saturation	0	Min
		1–254	Min ... Max
		255	Max
4	Dimmer		Same as CH 1 in the mode “Direct” (p. 8)
5	Color Temperature		Same as CH 2 in the mode “Expanded” (p. 10)
6	Shutter		Same as CH 10 in the mode “Direct” (p. 9)
7	Dimmer Curve		Same as CH 11 in the mode “Direct” (p. 9)
8	Fans	0	Fan Auto

CH	Function	DMX	Description
8	Fans (continued)	1–9	Fan Auto … Fan Off
		10–19	Fan Off
		20	Fan Min
		21–248	Fan Intensity
		249	Fan Max
		250–255	Fan Auto

10 Technical specifications

Parameter	Value
Light	
Light source	tungsten lamp
Lamp power	150 W
Luminous flux	10,889 lm
Color temperature	5,600 K
Color rendering index (CRI)	98
Optics	
Beam angle	90°
Control	
RDM	yes (manufacturer ID 0x6574, device model ID 0x0500)
Dimensions and construction	
Weight	8.9 kg
Operating environment	
Operating temperature	0 to 40 °C

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.