DMX REFERENCE

Hyperstar Trifusion

High End Systems



Manufacturer	High End Systems
GDTF file	High_End_Systems_Hyperstar_Trifusion_47903.gdtf
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1 About this manual

This document describes the Hyperstar Trifusion by High End Systems. It was compiled from the GDTF file High_End_Systems_Hyperstar_Trifusion_47903.gdtf from the GDTF-Share library.

File revision: “v1.0.1 rev1, Uploaded to GDTF Share.”.

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 High End Systems; 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	21.3 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Trifusion	39	13	1, 40, 79, 118, ...

No light? Check these channels

- Trifusion: CH 35 Dimmer above 0



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

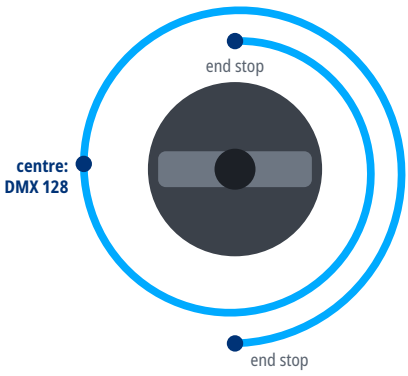
Description in the GDTF file

“High End Systems Hyperstar Trifusion Official File”

Range of movement

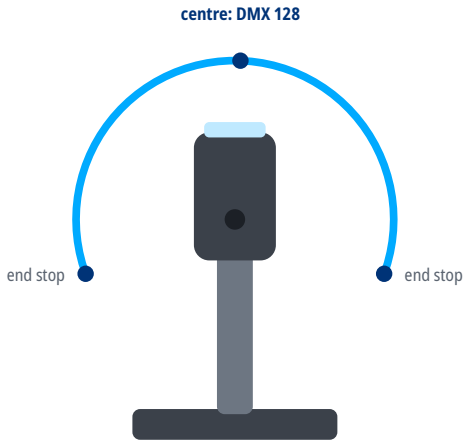
Pan 540°

top view



Tilt 220°

side view



5 Installation

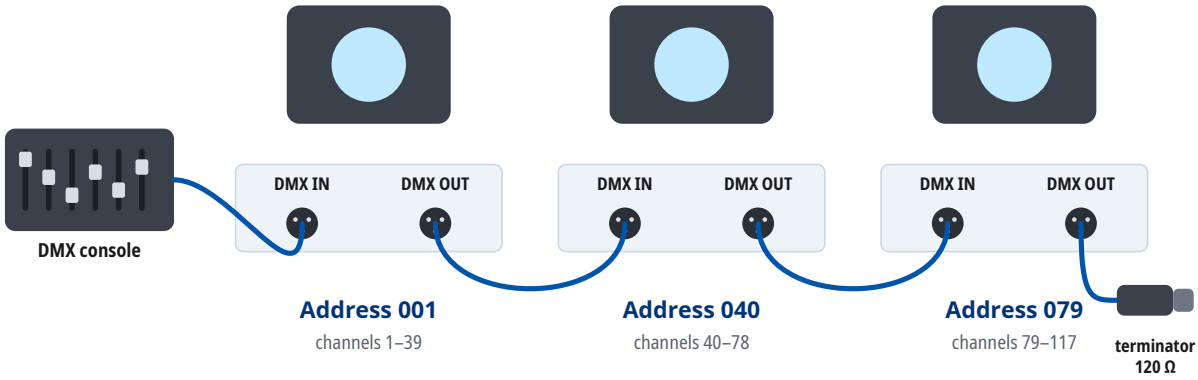
⚠ WARNING

- 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: 21.3 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 Trifusion: every unit occupies 39 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 “Trifusion”: 39.
- 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 “Trifusion”, you can use, for example, the start addresses 1, 40, 79, 118.
- 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.

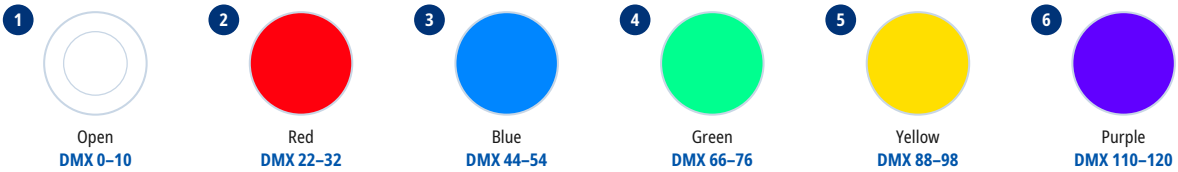
8 Functions at a glance

Functions in each DMX mode

	Trifusion 39 channels
Pan / Tilt	1, 3
Dimmer	35
Shutter / strobe	34 *
Color mixing	6–8
Color temperature	9
Color wheel	11 *
Gobo wheel	13, 18 *
Gobo rotation	15 *
Prism	22 *
Frost	25, 27, 28
Zoom	31
Focus	29
Animation wheel	19, 20

* The function works only when another channel switches it on; see the DMX table.

Color wheel



1 Open DMX 0–10
2 Red DMX 22–32
3 Blue DMX 44–54
4 Green DMX 66–76
5 Yellow DMX 88–98
6 Purple DMX 110–120
7 TM-30 DMX 132–142
8 Lavender DMX 154–164
9 Half CTO DMX 176–186
10 Full CTO DMX 198–208
11 Dark Blue DMX 220–230

Gobo wheel 1



1 Open DMX 0–15
2 Bar DMX 16–31
3 Starvolver DMX 32–47
4 Fracked DMX 48–63
5 Broken Tunnel DMX 64–79
6 Seashell DMX 80–95
7 Glacial DMX 96–111
8 Shower DMX 112–127
9 Ice DMX 128–143
10 Branch Out DMX 144–159

Animation wheel

1



Animation

Prism 1

1

5 Facet Star

Prism 2

1

4 Facet Linear

Gobo wheel 2

1

Open
DMX 0–19

2



Shattered
DMX 20–39

3



MiscSpots
DMX 40–59

4



Light Organic
DMX 60–79

5



Thatch
DMX 80–99

6



Across
DMX 100–119

7



Triangles
DMX 120–139

8



Daisey
DMX 140–159

9



Small Aperture
DMX 160–179

10



25% Aperture
DMX 180–199

11



50% Aperture
DMX 200–219

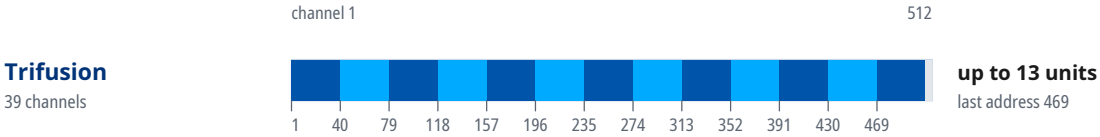
12



75% Aperture
DMX 220–239

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Trifusion”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	196	11	391	16	U2 · 79
2	40	7	235	12	430	17	U2 · 118
3	79	8	274	13	469	18	U2 · 157
4	118	9	313	14	U2 · 1	19	U2 · 196
5	157	10	352	15	U2 · 40	20	U2 · 235

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 Trifusion

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 35 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 5 Color Mix Mode 0, CH 6 Cyan 255, CH 7 Magenta 255, CH 8 Yellow 255, CH 10 Colors Mode 0, CH 11 Colors 0, CH 33 Strobe Mode 0, CH 34 Strobe 255, CH 35 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Min ... Home
		127	Home
		128–255	Home ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1

CH	Function	DMX	Description
3	Tilt	0–127	Min … Home
		127	Home
		128–255	Home … Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Mix Mode	0–31	Full Speed Control: Pure Mix
		32–47	Full Speed Control: Cycle
		48–63	Full Speed Control: Random
		64–79	Full Speed Control: Pure Mix Fast
		80–95	Full Speed Control: Cycle Fast
		96–111	Full Speed Control: Random Fast
		112–127	Full Speed Control
		128–159	m Speed Control: Pure Mix
		160–175	m Speed Control: Cycle
		176–191	m Speed Control: Random
		192–207	m Speed Control: Pure Mix Fast
		208–223	m Speed Control: Cycle Fast
		224–239	m Speed Control: Random Fast
		240–255	m Speed Control
6	Cyan		When CH 5 is 0–31:
		0	Open
		1–254	Open … Full Saturation
		255	Full Saturation
			When CH 5 is 32–47:
		0	Fast
		1–254	Fast … Slow
		255	Slow
			When CH 5 is 48–63:
		0	Fast
		1–254	Fast … Slow
		255	Slow
			When CH 5 is 64–79:
		0	Open
		1–254	Open … Full Saturation
		255	Full Saturation
			When CH 5 is 80–95:
		0	Fast
		1–254	Fast … Slow
		255	Slow
			When CH 5 is 96–111:
		0	Fast
		1–254	Fast … Slow

CH	Function	DMX	Description
6	Cyan (continued)	255	Slow
			When CH 5 is 128–159:
		0	Open
		1–254	Open ... Full Saturation
		255	Full Saturation
			When CH 5 is 160–175:
		0	Fast
		1–254	Fast ... Slow
		255	Slow
			When CH 5 is 176–191:
		0	Fast
		1–254	Fast ... Slow
		255	Slow
			When CH 5 is 192–207:
		0	Open
		1–254	Open ... Full Saturation
		255	Full Saturation
			When CH 5 is 208–223:
		0	Fast
		1–254	Fast ... Slow
		255	Slow
			When CH 5 is 224–239:
		0	Fast
		1–254	Fast ... Slow
		255	Slow
7	Magenta	0	Open
		1–254	Open ... Full Saturation
		255	Full Saturation
8	Yellow	0	Open
		1–254	Open ... Full Saturation
		255	Full Saturation
9	CTO	0	Open
		1–254	Open ... Full Saturation
		255	Full Saturation
10	Colors Mode	0–15	Full Speed Control: Indexed
		16–31	Full Speed Control: Forward Spin
		32–47	Full Speed Control: Reverse Spin
		48–63	Full Speed Control: Continuous
		64–79	Full Speed Control: Scan
		80–95	Full Speed Control: Random
		96–127	Full Speed Control
		128–143	m Speed Control: Indexed

CH	Function	DMX	Description
10	Colors Mode (continued)	144–159	m Speed Control: Forward Spin
		160–175	m Speed Control: Reverse Spin
		176–191	m Speed Control: Continuous
		192–207	m Speed Control: Scan
		208–239	m Speed Control: Random
		240–255	m Speed Control
11	Colors		When CH 10 is 0–15:
		0–10	Open
		11–21	Open/Red
		22–32	Red
		33–43	Red/Blue
		44–54	Blue
		55–65	Blue/Green
		66–76	Green
		77–87	Green/Yellow
		88–98	Yellow
		99–109	Yellow/Purple
		110–120	Purple
		121–131	Purple/TM-30
		132–142	TM-30
		143–153	TM-30/Lavender
		154–164	Lavender
		165–175	Lavender/Half CTO
		176–186	Half CTO
		187–197	Half CTO/Full CTO
		198–208	Full CTO
		209–219	Full CTO/Dark Blue
		220–230	Dark Blue
		231–241	Dark Blue/Open
		242–255	Open
			When CH 10 is 64–79:
		0–21	Open/Red
		22–43	Red/Blue
		44–59	Red/Blue ... Blue/Green
		60–65	Blue/Green
		66–87	Green/Yellow
		88–109	Yellow/Purple
		110–131	Purple/TM-30
		132–153	TM-30/Lavender
		154–175	Lavender/Half CTO
		176–197	Half CTO/Full CTO
		198–219	Full CTO/Dark Blue

CH	Function	DMX	Description
11	Colors (continued)	220–255	Dark Blue/Open
			When CH 10 is 16–31:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 10 is 32–47:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 10 is 80–95:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 10 is 48–63:
		0–10	Open
		11–21	Open ... Red
		22–32	Red
		33–43	Red ... Blue
		44–54	Blue
		55–65	Blue ... Green
		66–76	Green
		77–87	Green ... Yellow
		88–98	Yellow
		99–109	Yellow ... Purple
		110–120	Purple
		121–131	Purple ... TM-30
		132–142	TM-30
		143–153	TM-30 ... Lavender
		154–164	Lavender
		165–175	Lavender ... Half CTO
		176–186	Half CTO
		187–197	Half CTO ... Full CTO
		198–208	Full CTO
		209–219	Full CTO ... Dark Blue
		220–230	Dark Blue
		231–255	Full Speed Control Continuous

CH	Function	DMX	Description
11	Colors (continued)		When CH 10 is 128–143:
		0–10	Open
		11–21	Open/Red
		22–32	Red
		33–43	Red/Blue
		44–54	Blue
		55–65	Blue/Green
		66–76	Green
		77–87	Green/Yellow
		88–98	Yellow
		99–109	Yellow/Purple
		110–120	Purple
		121–131	Purple/TM-30
		132–142	TM-30
		143–153	TM-30/Lavender
		154–164	Lavender
		165–175	Lavender/Half CTO
		176–186	Half CTO
		187–197	Half CTO/Full CTO
		198–208	Full CTO
		209–219	Full CTO/Dark Blue
		220–230	Dark Blue
		231–241	Dark Blue/Open
		242–255	Open
			When CH 10 is 192–207:
		0–21	Open/Red
		22–43	Red/Blue
		44–59	Red/Blue ... Blue/Green
		60–65	Blue/Green
		66–87	Green/Yellow
		88–109	Yellow/Purple
		110–131	Purple/TM-30
		132–153	TM-30/Lavender
		154–175	Lavender/Half CTO
		176–197	Half CTO/Full CTO
		198–219	Full CTO/Dark Blue
		220–255	Dark Blue/Open
			When CH 10 is 144–159:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast

CH	Function	DMX	Description
11	Colors (continued)	255	Fast
			When CH 10 is 160–175:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 10 is 208–239:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 10 is 176–191:
		0–10	Open
		11–21	Open ... Red
		22–32	Red
		33–43	Red ... Blue
		44–54	Blue
		55–65	Blue ... Green
		66–76	Green
		77–87	Green ... Yellow
		88–98	Yellow
		99–109	Yellow ... Purple
		110–120	Purple
		121–131	Purple ... TM-30
		132–142	TM-30
		143–153	TM-30 ... Lavender
		154–164	Lavender
		165–175	Lavender ... Half CTO
		176–186	Half CTO
		187–197	Half CTO ... Full CTO
		198–208	Full CTO
		209–219	Full CTO ... Dark Blue
		220–230	Dark Blue
		231–255	m Speed Control Continuous
12	Gobo Wheel Mode	0–15	Full Speed Control: Indexed
		16–31	Full Speed Control: Forward Spin
		32–47	Full Speed Control: Reverse Spin
		48–63	Full Speed Control: Scan
		64–79	Full Speed Control: Random
		80–127	Full Speed Control

CH	Function	DMX	Description
12	Gobo Wheel Mode (continued)	128–143	m Speed Control: Indexed
		144–159	m Speed Control: Forward Spin
		160–175	m Speed Control: Reverse Spin
		176–191	m Speed Control: Scan
		192–207	m Speed Control: Random
		208–255	m Speed Control
13	Gobo Wheel		When CH 12 is 0–15:
		0–15	Open
		16–31	Bar
		32–47	Starvolver
		48–63	Fracked
		64–79	Broken Tunnel
		80–95	Seashell
		96–111	Glacial
		112–127	Shower
		128–143	Ice
		144–159	Branch Out
		160–255	Open
			When CH 12 is 48–63:
		0–15	Open
		16–31	Bar
		32–47	Starvolver
		48–63	Fracked
		64–79	Broken Tunnel
		80–95	Seashell
		96–111	Glacial
		112–127	Shower
		128–143	Ice
		144–159	Branch Out
		160–255	Open
			When CH 12 is 16–31:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 12 is 32–47:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast

CH	Function	DMX	Description
13	Gobo Wheel (continued)		When CH 12 is 64–79:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 12 is 128–143:
		0–15	Open
		16–31	Bar
		32–47	Starvolver
		48–63	Fracked
		64–79	Broken Tunnel
		80–95	Seashell
		96–111	Glacial
		112–127	Shower
		128–143	Ice
		144–159	Branch Out
		160–255	Open
			When CH 12 is 176–191:
		0–15	Open
		16–31	Bar
		32–47	Starvolver
		48–63	Fracked
		64–79	Broken Tunnel
		80–95	Seashell
		96–111	Glacial
		112–127	Shower
		128–143	Ice
		144–159	Branch Out
		160–255	Open
			When CH 12 is 144–159:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 12 is 160–175:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast

CH	Function	DMX	Description
13	Gobo Wheel (continued)		When CH 12 is 192–207:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
14	Gobo Mode		Gobo 1 Mode
		0–15	Continuous
		16–31	Forward Spin
		32–47	Reverse Spin
		48–63	Forward Animate
		64–79	Reverse Animate
		80–255	Gobo 1 Mode
15	Gobo		When CH 14 is 0–15:
		0–127	0 ... 180
		127	180
		128–255	180 ... 359
		255	359
			When CH 14 is 16–31:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
			When CH 14 is 32–47:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
			When CH 14 is 48–63:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
			When CH 14 is 64–79:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
16	Gobo Fine	0–255	Fine adjustment of CH 15
17	Gobo Wheel 2 Mode	0–15	Full Speed Control: Indexed
		16–31	Full Speed Control: Forward Spin
		32–47	Full Speed Control: Reverse Spin
		48–63	Full Speed Control: Scan
		64–79	Full Speed Control: Random
		80–127	Full Speed Control
		128–143	m Speed Control: Indexed

CH	Function	DMX	Description
17	Gobo Wheel 2 Mode (continued)	144–159	m Speed Control: Forward Spin
		160–175	m Speed Control: Reverse Spin
		176–191	m Speed Control: Scan
		192–207	m Speed Control: Random
		208–255	m Speed Control
18	Gobo Wheel 2		When CH 17 is 0–15:
		0–19	Open
		20–39	Shattered
		40–59	MiscSpots
		60–79	Light Organic
		80–99	Thatch
		100–119	Across
		120–139	Triangles
		140–159	Daisey
		160–179	Small Aperture
		180–199	25% Aperture
		200–219	50% Aperture
		220–239	75% Aperture
		240–255	Open
			When CH 17 is 16–31:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 17 is 32–47:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 17 is 64–79:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 17 is 48–63:
		0–21	Open/Shattered
		22–43	Shattered/MiscSpots
		44–65	MiscSpots/Light Organic
		66–87	Light Organic/Thatch

CH	Function	DMX	Description
18	Gobo Wheel 2 (continued)	88–109	Thatch/Across
		110–131	Across/Triangles
		132–153	Triangles/Daisey
		154–175	Daisey/Small Aperture
		176–197	Small Aperture/25% Aperture
		198–219	25% Aperture/50% Aperture
		220–241	50% Aperture/75% Aperture
		242–255	75% Aperture/Open
			When CH 17 is 128–143:
		0–19	Open
		20–39	Shattered
		40–59	MiscSpots
		60–79	Light Organic
		80–99	Thatch
		100–119	Across
		120–139	Triangles
		140–159	Daisey
		160–179	Small Aperture
		180–199	25% Aperture
		200–219	50% Aperture
		220–239	75% Aperture
		240–255	Open
			When CH 17 is 144–159:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 17 is 160–175:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 17 is 192–207:
		0	Stop
		1–3	Stop ... Slow
		4	Slow
		5–254	Slow ... Fast
		255	Fast
			When CH 17 is 176–191:
		0–21	Open/Shattered

CH	Function	DMX	Description
18	Gobo Wheel 2 (continued)	22–43	Shattered/MiscSpots
		44–65	MiscSpots/Light Organic
		66–87	Light Organic/Thatch
		88–109	Thatch/Across
		110–131	Across/Triangles
		132–153	Triangles/Daisey
		154–175	Daisey/Small Aperture
		176–197	Small Aperture/25% Aperture
		198–219	25% Aperture/50% Aperture
		220–241	50% Aperture/75% Aperture
		242–255	75% Aperture/Open
19	Animation Insertion	0	Removed
		1–254	Removed ... Inserted
		255	Inserted
20	Animation Wheel	0	Forward Spin: Stop
		1	Forward Spin: Slow
		2–62	Forward Spin: Slow ... Fast
		63	Forward Spin: Fast
		64	Reverse Spin: Stop
		65	Reverse Spin: Slow
		66–126	Reverse Spin: Slow ... Fast
		127	Reverse Spin: Fast
		128	Forward Animate: Stop
		129	Forward Animate: Slow
		130–190	Forward Animate: Slow ... Fast
		191	Forward Animate: Fast
		192	Reverse Animate: Stop
		193	Reverse Animate: Slow
		194–254	Reverse Animate: Slow ... Fast
		255	Reverse Animate: Fast
21	Prism Mode		Prism 1 Mode 1
		0–15	Removed
		16–31	Continuous
		32–47	Forward Spin
		48–63	Reverse Spin
		64–79	Forward Animate
		80–95	Reverse Animate
		96–255	Prism 1 Mode 1
22	Prism		When CH 21 is 16–31:
		0–127	0 ... 180
		127	180
		128–255	180 ... 359

CH	Function	DMX	Description
22	Prism (continued)	255	359
			When CH 21 is 32–47:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
			When CH 21 is 48–63:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
			When CH 21 is 64–79:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
			When CH 21 is 80–95:
		0–4	Stop ... Slow
		4–255	Slow ... Fast
		255	Fast
			When CH 21 is 0–15:
		0–255	Removed
23	Prism Fine	0–255	Fine adjustment of CH 22
25	Frost		Diffusion Light
		0	Removed
		1–254	Removed ... Soft Edge
		255	Soft Edge
27	Frost 2		Diffusion Medium
		0	Removed
		1–254	Removed ... Soft Edge
		255	Soft Edge
28	Frost 3		Diffusion Heavy
		0	Removed
		1–254	Removed ... Soft Edge
		255	Soft Edge
29	Focus	0–127	Min ... Home
		127	Home
		128–255	Home ... Max
		255	Max
30	Focus Fine	0–255	Fine adjustment of CH 29
31	Zoom	0–127	Min ... Home
		127	Home
		128–255	Home ... Max
		255	Max
32	Zoom Fine	0–255	Fine adjustment of CH 31

CH	Function	DMX	Description
33	Strobe Mode	0–31	Normal
		32–63	Random
		64–95	Synchronous Random
		96–255	Strobe Mode
34	Strobe		When CH 33 is 0–31:
		0	Closed
		1–23	Closed ... Slow
		24	Slow
		25–228	Slow ... Fast
		229	Fast
		230–254	Fast ... Open
		255	Open
			When CH 33 is 32–63:
		0	Closed
		1–23	Closed ... Slow
		24	Slow
		25–228	Slow ... Fast
		229	Fast
		230–254	Fast ... Open
		255	Open
			When CH 33 is 64–95:
		0	Closed
		1–23	Closed ... Slow
		24	Slow
		25–228	Slow ... Fast
		229	Fast
		230–254	Fast ... Open
		255	Open
35	Dimmer	0–127	Off ... 50%
		127	50%
		128–255	50% ... Full
		255	Full
36	Dimmer Fine	0–255	Fine adjustment of CH 35
37	Global Speed		Global m Speed
		0	Disabled
		1–3	Disabled ... Longest
		4	Longest
		5–254	Longest ... Shortest
		255	Shortest
38	Control	0–15	Idle
		16–19	Pan and Tilt mSpeed Off
		20–31	Pan and Tilt mSpeed Off ... Display Off (Hold 3)

CH	Function	DMX	Description
38	Control (continued)	32–47	Display Off (Hold 3)
		48–63	Display On (Hold 3)
		64–79	Display On (Hold 3) ... Home all (Hold 3)
		80–95	Home all (Hold 3)
		96–111	Shutdown (Hold 9)
		112–127	Disable Pan Tilt Motors (Hold 3)
		128–143	Dimming Mode - 2:4KHz (Hold 3)
		144–159	Dimming Mode - 16KHz (Hold 3)
		160–255	Control
39	Fan	0–15	Idle
		16	Slow
		17–206	Slow ... Fast
		207	Fast
		208–223	Auto
		224–239	Studio
		240–255	Fan

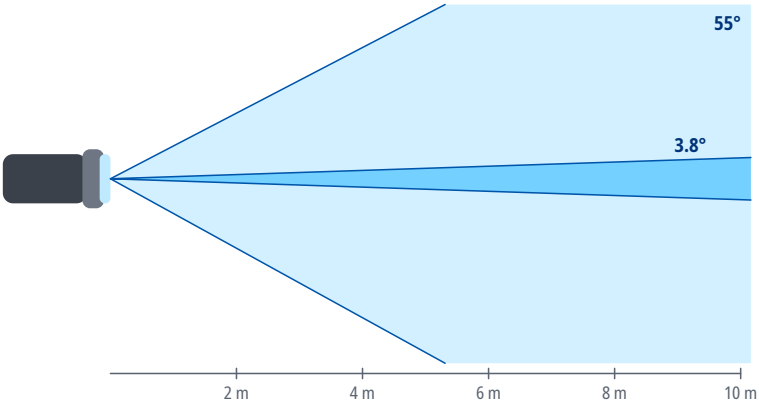
10 Technical specifications

Parameter	Value
Zoom	3.8–55°
Pan	540°
Tilt	220°
RDM	yes (manufacturer ID 0x4C52, device model ID 0x2F0C)
Weight	21.3 kg
Operating temperature	-10 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	3200–5600 K
Color wheel rotation	up to 1800 °/s (300 rpm)
Gobo wheel 1 rotation	up to 1800 °/s (300 rpm)
Gobo wheel 2 rotation	up to 1800 °/s (300 rpm)
Gobo 1 rotation	up to 1800 °/s (300 rpm)
Prism 1 rotation	up to 1800 °/s (300 rpm)
Animation wheel rotation	up to 1800 °/s (300 rpm)

Spot diameter



Distance	Ø 3.8°	Ø 55°
2 m	0.13 m	2.1 m
4 m	0.27 m	4.2 m
6 m	0.4 m	6.2 m
8 m	0.53 m	8.3 m
10 m	0.66 m	10.4 m
15 m	1 m	15.6 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.