DMX REFERENCE

600BSW

LED600BSW

SGT



Manufacturer	SGT
GDTF file	SGT_600BSW_142616.gdtf
GDTF revision	official · 2026-05-14
Generated	2026-11-24

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1 About this manual

This document describes the LED600BSW by SGT. It was compiled from the GDTF file SGT_600BSW_142616.gdtf from the GDTF-Share library.

File revision: “official”.

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 SGT; 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	17.4 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
26CH	26	19	1, 27, 53, 79, ...
36CH	36	14	1, 37, 73, 109, ...

No light? Check these channels

- 26CH: CH 6 Shutter at 3, 104–107, 208–212 or 252–255 “open”; CH 7 Dimmer above 0
- 36CH: CH 6 Shutter at 3, 104–107, 208–212 or 252–255 “open”; CH 7 Dimmer above 0


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

3 Safety instructions


Read the manual before use


Risk of electric shock


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

- 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.

⚠ 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.

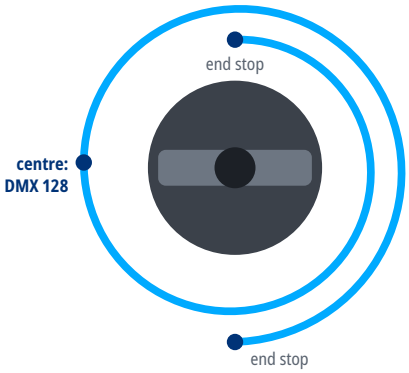
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do 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

Range of movement

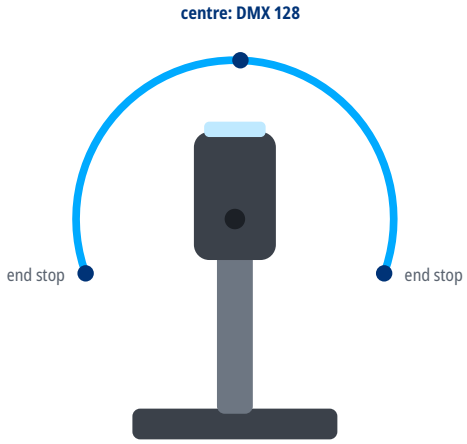
Pan 540°

top view



Tilt 220°

side view



5 Installation

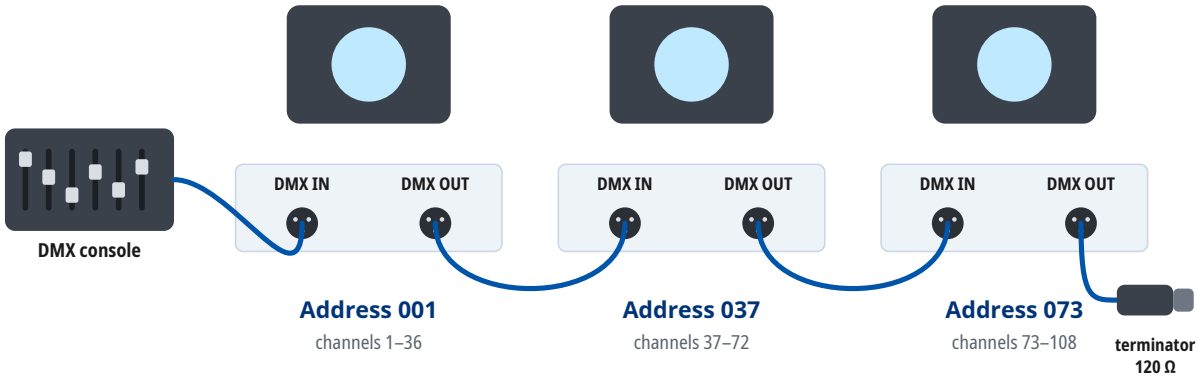
⚠ **WARNING**

- 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: 17.4 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 36CH: every unit occupies 36 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 “36CH”: 36.
- 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 “36CH”, you can use, for example, the start addresses 1, 37, 73, 109.
- 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

	26CH 26 channels	36CH 36 channels
Pan / Tilt	1, 3	1, 3
Dimmer	7	7
Shutter / strobe	6	6
Color mixing	8–10	8, 10, 12
Color temperature	11	14
Color wheel	12	16
Gobo wheel	13–15	18, 19, 21
Gobo rotation	14	19
Prism	22–24	30, 31, 33
Frost	25	35
Zoom	19	26
Focus	17, 21	24, 29
Animation wheel	16	22

Color wheel

1 Color: open
DMX 0–4

2 C1
DMX 10–14

3 C2
DMX 20–24

4 C3
DMX 30–34

5 C4
DMX 40–44

6 C5
DMX 50–54

7 C6
DMX 60–64

8 color8

9 color3

Gobo wheel 1

1 Gobo 1: open
DMX 0–9

2 G1
DMX 10–19

3 G2
DMX 20–29

4 G3
DMX 30–39

5 G4
DMX 40–49

6 G5
DMX 50–59

7 G6
DMX 60–69

8 gobo7
DMX 70–80

Gobo wheel 2



1. Gobo 2 index: OPEN — DMX 0–9
2. G1 — DMX 10–19
3. G2 — DMX 20–29
4. G3 — DMX 30–39
5. G4 — DMX 40–49
6. gobo5 — DMX 50–60

Prism



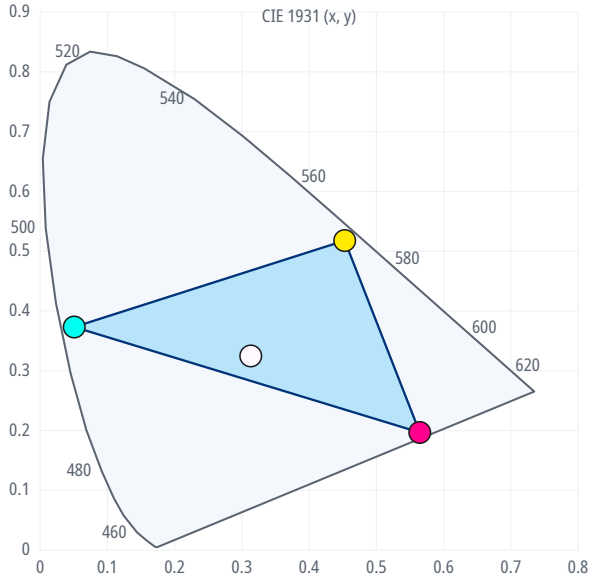
1. Open — DMX 0–63
2. 8 facets, P1 — DMX 64–127
3. 5 facets, P2 — DMX 128–191
4. 16 facets, P1+P2 — DMX 192–255

Animation wheel



1. Wheel Slot 1
2. Wheel Slot 2

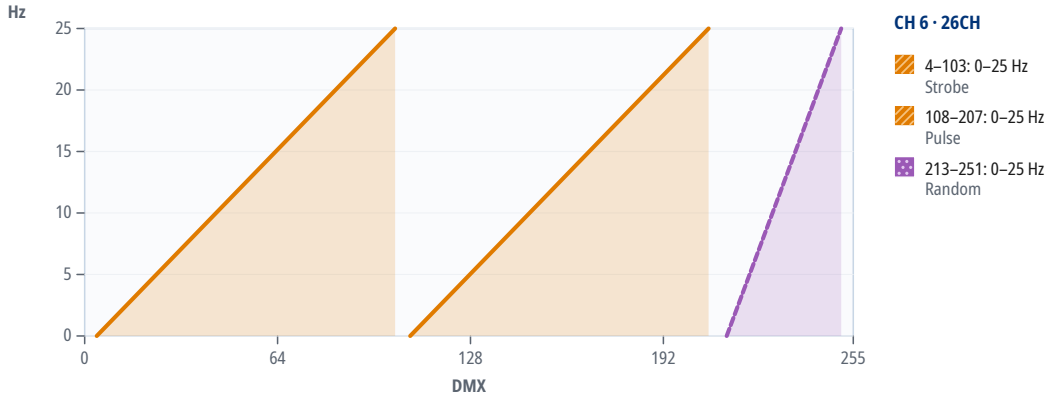
LED colors and the colors they mix



LED	x	y
White	0.313	0.325
C	0.051	0.373
M	0.564	0.197
Y	0.453	0.518

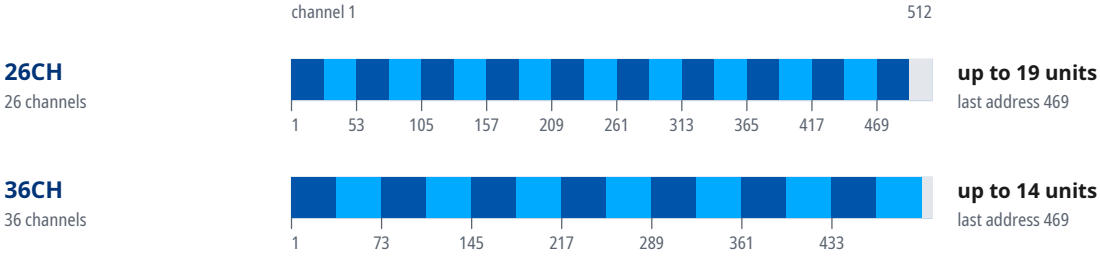
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “36CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	181	11	361	16	U2 · 37
2	37	7	217	12	397	17	U2 · 73
3	73	8	253	13	433	18	U2 · 109
4	109	9	289	14	469	19	U2 · 145
5	145	10	325	15	U2 · 1	20	U2 · 181

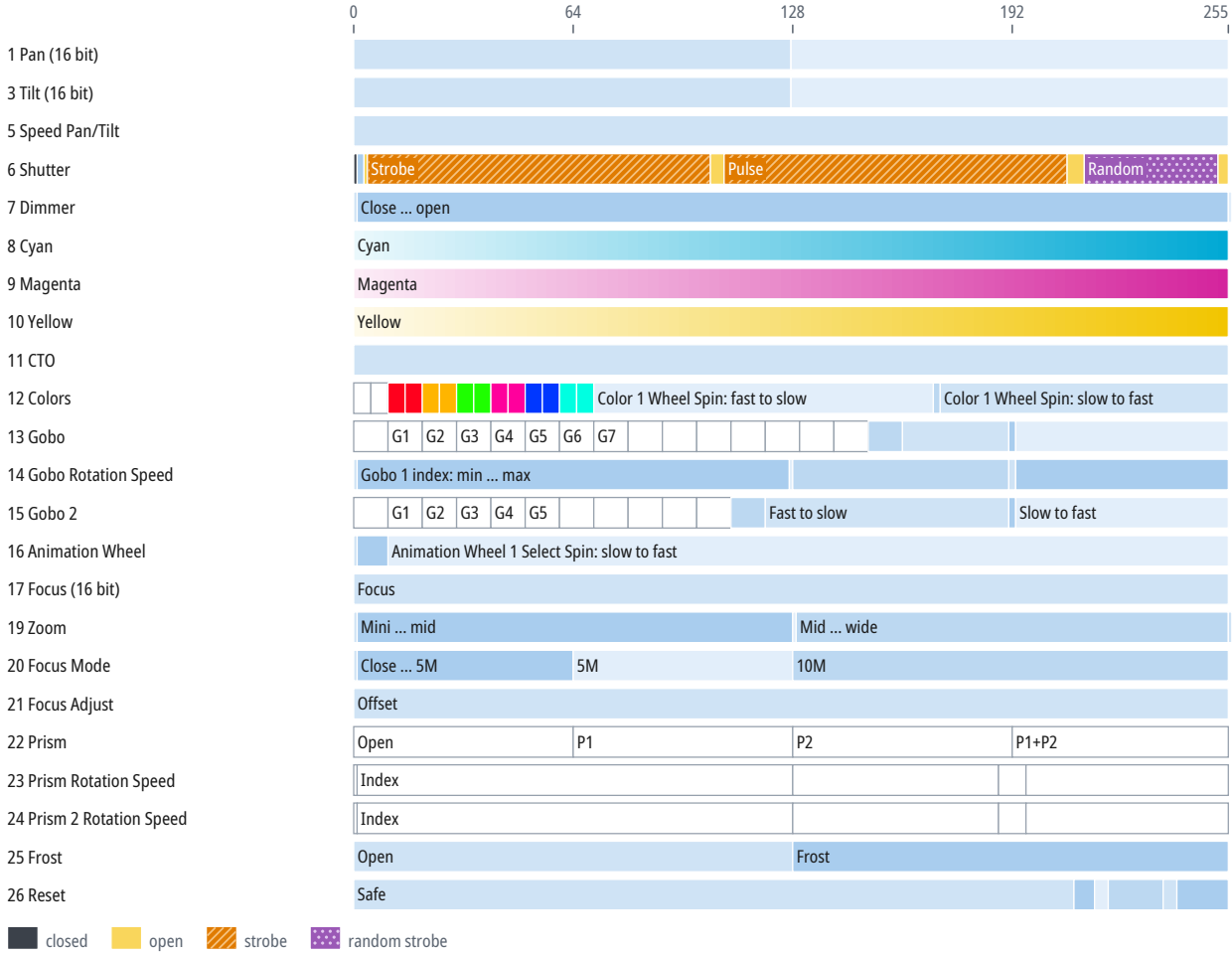
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 26CH

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 3, 104–107, 208–212 or 252–255 “open”; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 255, CH 7 Dimmer 255, 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	Pan 1
		128	Home
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt 1
		128	Home
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Shutter	0	Shutter: closed
		1–2	Shutter: closed ... open
		3	Shutter: open

CH	Function	DMX	Description
6	Shutter (continued)	4–103	Strobe (0–25 Hz)
		104–107	Open
		108–207	Pulse (0–25 Hz)
		208–212	Open
		213–251	Random (0–25 Hz)
		252–255	Open
7	Dimmer	0	Close
		1–254	Close … open
		255	Open
8	Cyan	0–255	Cyan
9	Magenta	0–255	Magenta
10	Yellow	0–255	Yellow
11	CTO	0–255	6500–2700 K
12	Colors	0–4	Color: open
		5–9	O+C1
		10–14	C1
		15–19	C1+C2
		20–24	C2
		25–29	C2+C3
		30–34	C3
		35–39	C3+C4
		40–44	C4
		45–49	C4+C5
		50–54	C5
		55–59	C5+C6
		60–64	C6
		65–69	C6+O
		70–168	Color 1 Wheel Spin: fast to slow (360–0 °/s)
		169–170	Color 1 Wheel Spin: stop
		171–255	Color 1 Wheel Spin: slow to fast (0–360 °/s)
13	Gobo	0–9	Gobo 1: open
		10–19	G1
		20–29	G2
		30–39	G3
		40–49	G4
		50–59	G5
		60–69	G6
		70–79	G7
		80–89	G1 shake
		90–99	G2 shake
		100–109	G3 shake
		110–119	G4 shake

CH	Function	DMX	Description
13	Gobo (continued)	120–129	G5 shake
		130–139	G6 shake
		140–149	G7 shake
		150–159	Gobo 1 Wheel Spin: fast to slow (180–0 °/s)
		160–190	Gobo 1 Wheel Spin: fast to slow ... stop
		191–192	Gobo 1 Wheel Spin: stop
		193–255	Gobo 1 Wheel Spin: slow to fast (0–180 °/s)
14	Gobo Rotation Speed	0	Gobo 1 index: min
		1–126	Gobo 1 index: min ... max
		127	Gobo 1 index: max
		128–190	Gobo 1 Select Spin>>: fast to slow (360–0 °/s)
		191–192	Stop
		193–255	Gobo 1 Select Spin<<: slow to fast
15	Gobo 2	0–9	Gobo 2 index: OPEN
		10–19	G1
		20–29	G2
		30–39	G3
		40–49	G4
		50–59	G5
		60–69	G1 shake
		70–79	G2 shake
		80–89	G3 shake
		90–99	G4 shake
		100–109	G5 shake
		110–119	Gobo 2 Select Shake>>
		120–190	Fast to slow
		191–192	NO rotation
		193–255	Slow to fast
16	Animation Wheel	0	Animation Wheel 1: open
		1–9	Animation Wheel 1 1
		10–255	Animation Wheel 1 Select Spin: slow to fast (3.6–360 °/s)
17	Focus	0–255	Focus
18	Focus Fine	0–255	Fine adjustment of CH 17
19	Zoom	0	Mini
		1–127	Mini ... mid
		128	Mid
		129–254	Mid ... wide
		255	Wide
20	Focus Mode	0	Close
		1–63	Close ... 5M
		64–127	5M
		128–255	10M

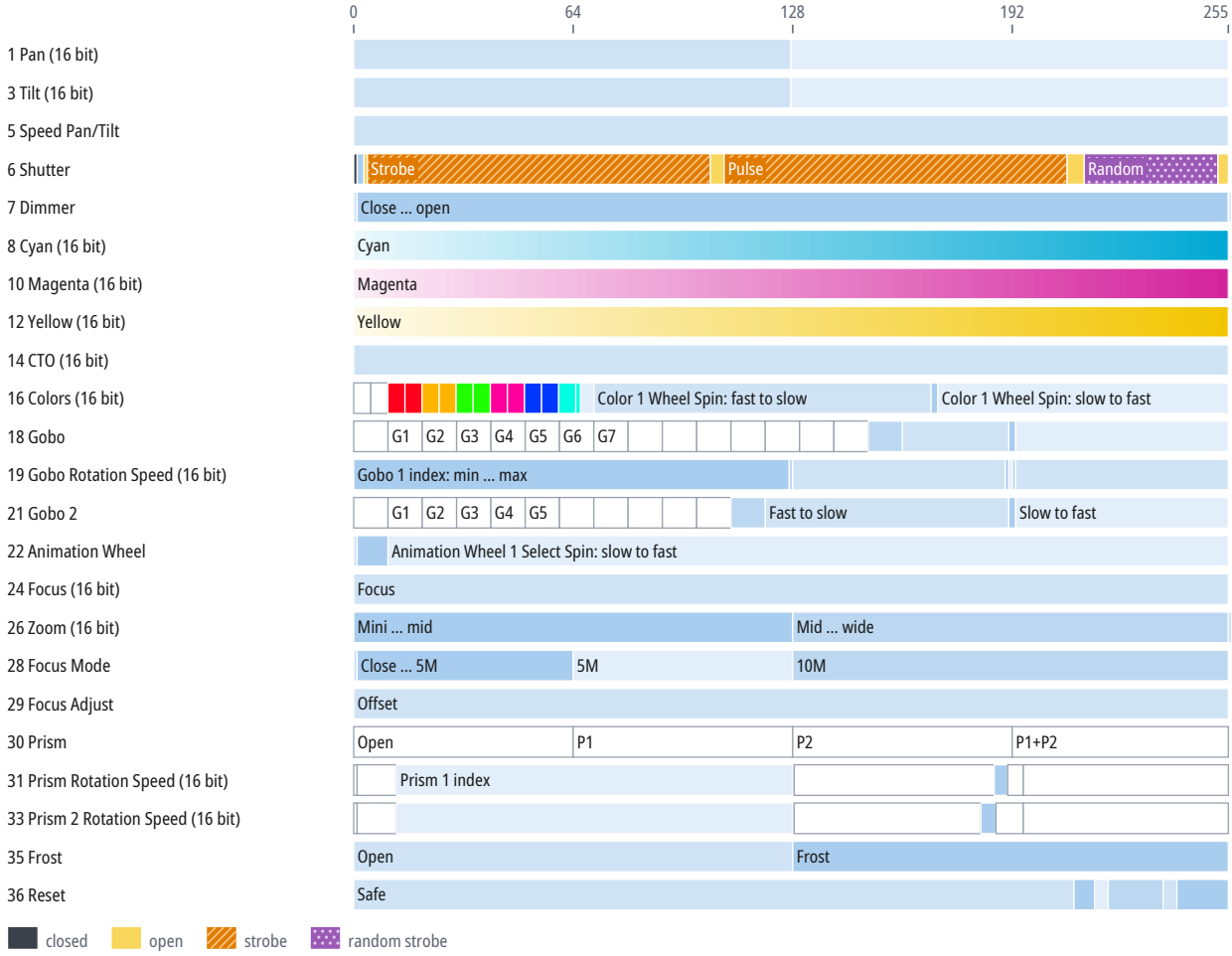
CH	Function	DMX	Description
21	Focus Adjust	0–255	Offset
22	Prism	0–63	Open
		64–127	P1
		128–191	P2
		192–255	P1+P2
23	Prism Rotation Speed	0	Prism 1 index: open
		1–127	Index
		128–187	Prism 1 Pos Rotate: fast to slow (360–3.6 °/s)
		188–195	No rot
		196–255	Prism 1 Pos Rotate: slow to fast (3.6–360 °/s)
24	Prism 2 Rotation Speed	0	Prism 2: open
		1–127	Index
		128–187	Prism 2 Pos Rotate: fast to slow (360–0 °/s)
		188–195	No rot
		196–255	Prism 2 Pos Rotate: slow to fast (0–360 °/s)
25	Frost	0–127	Open
		128–255	Frost
26	Reset	0–209	Safe
		210–215	PT reset
		216–219	PT reset … EF reset
		220–235	EF reset
		236–239	EF reset … ALL reset
		240–255	ALL reset

Mode 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 6 Shutter at 3, 104–107, 208–212 or 252–255 “open”; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 255, CH 7 Dimmer 255, 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 “26CH” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “26CH” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Shutter		Same as CH 6 in the mode “26CH” (p. 11)
7	Dimmer		Same as CH 7 in the mode “26CH” (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

CH	Function	DMX	Description
13	Yellow Fine	0–255	Fine adjustment of CH 12
14	CTO	0–255	6500–2700 K
15	CTO Fine	0–255	Fine adjustment of CH 14
16	Colors	0–4	Color: open
		5–9	O+C1
		10–14	C1
		15–19	C1+C2
		20–24	C2
		25–29	C2+C3
		30–34	C3
		35–39	C3+C4
		40–44	C4
		45–49	C4+C5
		50–54	C5
		55–59	C5+C6
		60–64	C6
		65–66	C6+O
		66–70	Color
		70–168	Color 1 Wheel Spin: fast to slow (360–0 °/s)
		169–170	Color 1 Wheel Spin: stop
		171–255	Color 1 Wheel Spin: slow to fast (0–360 °/s)
17	Colors Fine	0–255	Fine adjustment of CH 16
18	Gobo		Same as CH 13 in the mode “26CH” (p. 12)
19	Gobo Rotation Speed	0–127	Gobo 1 index: min ... max
		127	Gobo 1 index: max
		127–128	Gobo 1 index
		128–190	Gobo 1 Select Spin>>: fast to slow (360–0 °/s)
		190–191	Gobo 1 Select Spin>>
		191–193	Stop
		193–255	Gobo 1 Select Spin<<: slow to fast
20	Gobo Rotation Speed Fine	0–255	Fine adjustment of CH 19
21	Gobo 2		Same as CH 15 in the mode “26CH” (p. 13)
22	Animation Wheel		Same as CH 16 in the mode “26CH” (p. 13)
24	Focus	0–255	Focus
25	Focus Fine	0–255	Fine adjustment of CH 24
26	Zoom	0–128	Mini ... mid
		128–255	Mid ... wide
		255	Wide
27	Zoom Fine	0–255	Fine adjustment of CH 26
28	Focus Mode		Same as CH 20 in the mode “26CH” (p. 13)
29	Focus Adjust	0–255	Offset
30	Prism		Same as CH 22 in the mode “26CH” (p. 14)

CH	Function	DMX	Description
31	Prism Rotation Speed	0	Prism 1 index: open
		1–12	Index
		12–128	Prism 1 index
		128–187	Prism 1 Pos Rotate: fast to slow (360–3.6 °/s)
		187–191	Prism 1 Pos Rotate: fast to slow ... Stop
		191–195	Prism 1 Pos Rotate: Stop
		196–255	Prism 1 Pos Rotate: slow to fast (3.6–360 °/s)
32	Prism Rotation Speed Fine	0–255	Fine adjustment of CH 31
33	Prism 2 Rotation Speed	0	Prism 2: open
		1–12	Index
		12–128	Prism 2 1
		128–183	Prism 2 Pos Rotate: fast to slow (360–0 °/s)
		183–187	Fast to slow ... no rot
		188–195	No rot
		196–255	Prism 2 Pos Rotate: slow to fast (0–360 °/s)
34	Prism 2 Rotation Speed Fine	0–255	Fine adjustment of CH 33
35	Frost		Same as CH 25 in the mode “26CH” (p. 14)
36	Reset		Same as CH 26 in the mode “26CH” (p. 14)

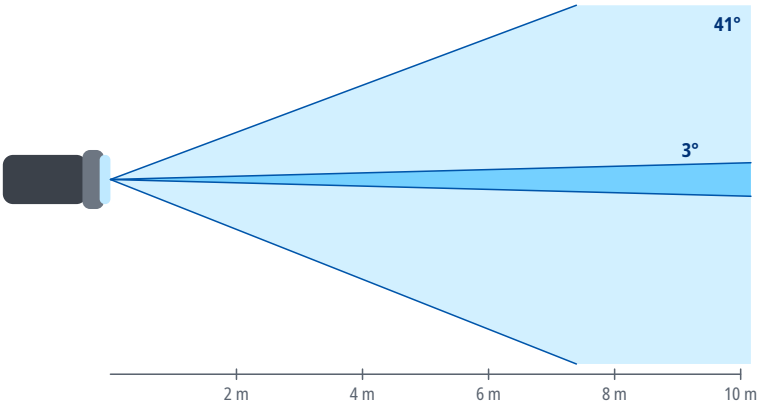
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	420 W
Luminous flux	120,000 lm
Color temperature	7,500 K
Color rendering index (CRI)	85
Optics	
Zoom	3–41°
Movement	
Pan	540°
Tilt	220°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45 IN
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	850 W
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	17.4 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2700–6500 K
Strobe frequency	0–25 Hz
Color wheel rotation	up to 360 °/s (60 rpm)
Gobo wheel 1 rotation	up to 360 °/s (60 rpm)
Prism rotation	up to 360 °/s (60 rpm)
Prism rotation	up to 360 °/s (60 rpm)
Animation wheel rotation	up to 360 °/s (60 rpm)

Spot diameter



Distance	Ø 3°	Ø 41°
2 m	0.1 m	1.5 m
4 m	0.21 m	3 m
6 m	0.31 m	4.5 m
8 m	0.42 m	6 m
10 m	0.52 m	7.5 m
15 m	0.79 m	11.2 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.