DMX REFERENCE

RISE 500

tarm AG



Manufacturer	tarm AG
GDTF file	tarm_AG_RISE_500_137723.gdtf
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1 About this manual

This document describes the RISE 500 by tarm AG. It was compiled from the GDTF file tarm_AG_RISE_500_137723.gdtf from the GDTF-Share library.

File revision: “0001”.

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 tarm AG; 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	35 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
EXTEND_38CH	38	13	1, 39, 77, 115, ...
STANDARD_33CH	33	15	1, 34, 67, 100, ...
BASIC_26CH	26	19	1, 27, 53, 79, ...


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

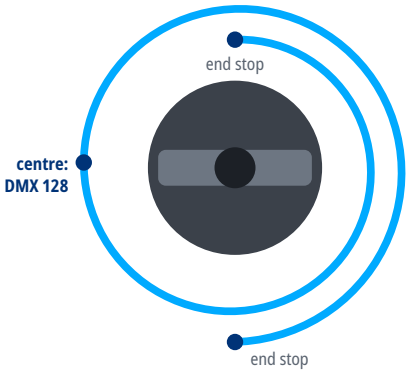
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, 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

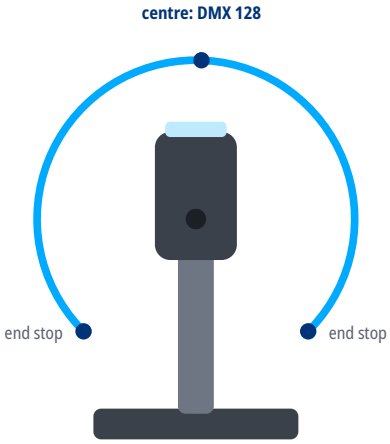
Pan 540°

top view



Tilt 270°

side view



5 Installation

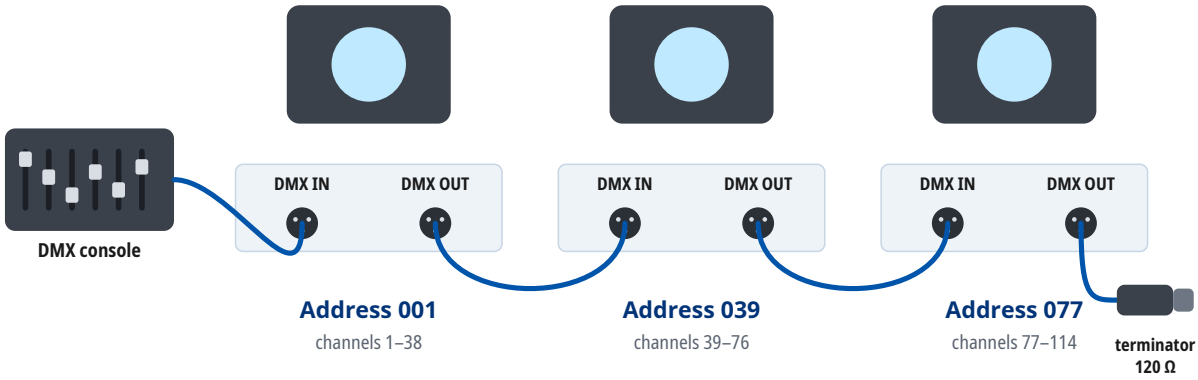
⚠ **WARNING**

- 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: 35 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_38CH: every unit occupies 38 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_38CH”: 38.
- 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_38CH”, you can use, for example, the start addresses 1, 39, 77, 115.
- 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.

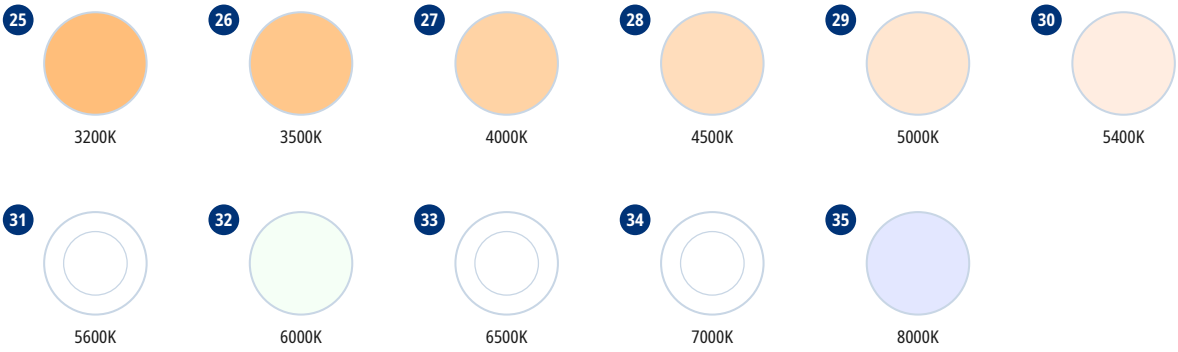
8 Functions at a glance

Functions in each DMX mode

	EXTEND_38CH 38 channels	STANDARD_33CH 33 channels	BASIC_26CH 26 channels
Pan / Tilt	1, 3, 6	1, 3, 6	1, 2, 4
Pan / Tilt resolution	16 bit	16 bit	8 bit
Dimmer	35	30	24
Dimmer resolution	16 bit	16 bit	8 bit
Shutter / strobe	37	32	25
Color mixing	7, 9, 11	7–9	5–7
Color temperature	13	10	8
Color wheel	17	13	11
Gobo wheel	19, 22	14, 17	12, 14
Gobo rotation	20, 22, 24	15, 17, 19	13, 14, 16
Prism	25–28	20–23	17–20
Zoom	29	24	21
Focus	31, 33	26, 28	22, 23
Effects / macros	15	11	9

Color wheel





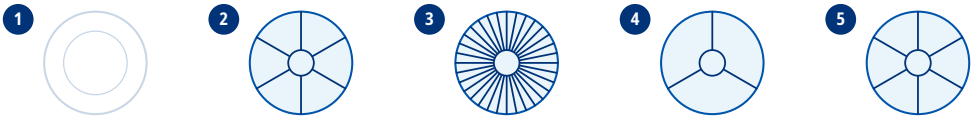
Gobo wheel 1

1	ROT Gobo 1: WHITE	DMX 0–10	6 ROT_GOBO 5	DMX 27–30	11 ROT_GOBO 10	DMX 50
2	ROT_GOBO 1	DMX 11–14	7 ROT_GOBO 6	DMX 31–34	12 ROT_GOBO 11	DMX 54
3	ROT_GOBO 2	DMX 15–18	8 ROT_GOBO 7	DMX 36–38	13 ROT_GOBO 12	DMX 58–59
4	ROT_GOBO 3	DMX 19–22	9 ROT_GOBO 8	DMX 41–42		
5	ROT_GOBO 4	DMX 23–26	10 ROT_GOBO 9	DMX 46		

Prism 1



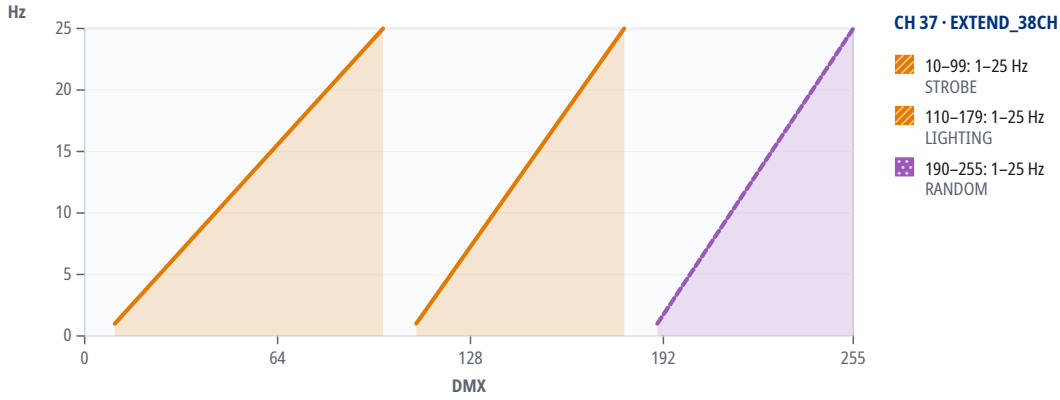
Prism 2



Gobo wheel 2

1	Gobo 2: WHITE	DMX 0–10	10 Gobo 2: FIX GOBO 9	DMX 35–37	19 Gobo 2: FIX GOBO 18	DMX 62–64
2	Gobo 2: FIX GOBO 1	DMX 11–13	11 Gobo 2: FIX GOBO 10	DMX 38–40	20 FIX GOBO 19	DMX 65–68
3	FIX GOBO 2	DMX 14–16	12 Gobo 2: FIX GOBO 11	DMX 41–43	21 FIX GOBO 20	
4	Gobo 2: FIX GOBO 3	DMX 17–19	13 Gobo 2: FIX GOBO 12	DMX 44–46	22 FIX GOBO 21	
5	Gobo 2: FIX GOBO 4	DMX 20–22	14 Gobo 2: FIX GOBO 13	DMX 47–49	23 FIX GOBO 22	
6	Gobo 2: FIX GOBO 5	DMX 23–25	15 Gobo 2: FIX GOBO 14	DMX 50–52	24 FIX GOBO 23	
7	Gobo 2: FIX GOBO 6	DMX 26–28	16 Gobo 2: FIX GOBO 15	DMX 53–55	25 FIX GOBO 24	
8	Gobo 2: FIX GOBO 7	DMX 29–31	17 Gobo 2: FIX GOBO 16	DMX 56–58	26 FIX GOBO 25	
9	Gobo 2: FIX GOBO 8	DMX 32–34	18 Gobo 2: FIX GOBO 17	DMX 59–61		

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “EXTEND_38CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	191	11	381	16	U2 · 77
2	39	7	229	12	419	17	U2 · 115
3	77	8	267	13	457	18	U2 · 153
4	115	9	305	14	U2 · 1	19	U2 · 191
5	153	10	343	15	U2 · 39	20	U2 · 229

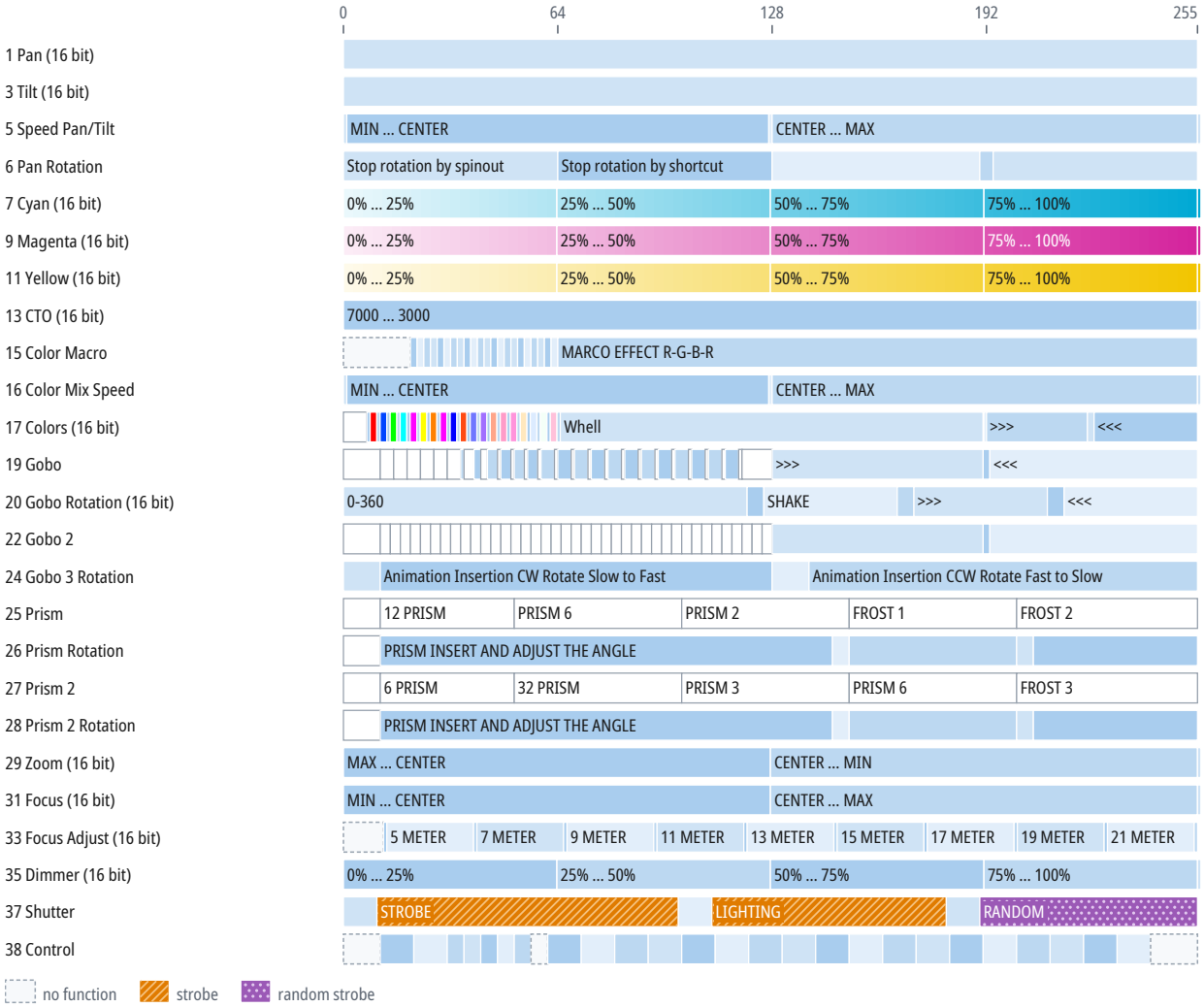
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode EXTEND_38CH

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

The GDTF file gives these values for a console's Highlight function: CH 7 Cyan 0, CH 9 Magenta 0, CH 11 Yellow 0, CH 35 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	270°
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0	MIN
		1–126	MIN ... CENTER
		127	CENTER
		128–254	CENTER ... MAX
		255	MAX
6	Pan Rotation		PAN Motor continuous rotation
		0–63	Stop rotation by spinout

CH	Function	DMX	Description
6	Pan Rotation (continued)	64–127	Stop rotation by shortcut
		128–189	Forwards Pan rotation from fast to slow
		190–193	No rotation
		194–255	Backwards Pan rotation from slow to fast
7	Cyan	0–63	0% … 25%
		63	25%
		64–127	25% … 50%
		127	50%
		128–191	50% … 75%
		191	75%
		192–255	75% … 100%
		255	100%
8	Cyan Fine	0–255	Fine adjustment of CH 7
9	Magenta	0–63	0% … 25%
		63	25%
		64–127	25% … 50%
		127	50%
		128–191	50% … 75%
		191	75%
		192–255	75% … 100%
		255	100%
10	Magenta Fine	0–255	Fine adjustment of CH 9
11	Yellow	0–63	0% … 25%
		63	25%
		64–127	25% … 50%
		127	50%
		128–191	50% … 75%
		191	75%
		192–255	75% … 100%
		255	100%
12	Yellow Fine	0–255	Fine adjustment of CH 11
13	CTO	0–255	7000 … 3000
		255	3000
14	CTO Fine	0–255	Fine adjustment of CH 13
15	Color Macro	0–19	NO FUNCTION
		20–21	3000K
		22–23	3200K
		24–25	3500K
		26–27	4000K
		28–29	4500K
		30–31	5000K
		32–33	5400K

CH	Function	DMX	Description
15	Color Macro (continued)	34–35	5600K
		36–37	6000K
		38–39	6500K
		40–41	7000K
		42–43	L106
		44–45	L194
		46–47	L019
		48–49	R08
		50–51	L213
		52–53	R80
		54–55	L202
		56–57	L328
		58–59	R3314
		60–61	L101
		62–63	L768
		64–255	MARCO EFFECT R-G-B-R
16	Color Mix Speed		CMYK SPEED
		0	MIN
		1–126	MIN ... CENTER
		127	CENTER
		128–254	CENTER ... MAX
		255	MAX
17	Colors	0–7	WHITE
		7	WHITE ... COLOR 1
		8–10	COLOR 1
		10	COLOR 1 ... COLOR 2
		11–13	COLOR 2
		13	COLOR 2 ... COLOR 3
		14–16	COLOR 3
		16	COLOR 3 ... COLOR 4
		17–19	COLOR 4
		19	COLOR 4 ... COLOR 5
		20–22	COLOR 5
		22	COLOR 5 ... COLOR 6
		23–25	COLOR 6
		25	COLOR 6 ... COLOR 7
		26–28	COLOR 7
		28	COLOR 7 ... COLOR 8
		29–31	COLOR 8
		31	COLOR 8 ... COLOR 9
		32–34	COLOR 9
		34	COLOR 9 ... COLOR 10

CH	Function	DMX	Description
17	Colors (continued)	35–37	COLOR 10
		37	COLOR 10 ... COLOR 11
		38–40	COLOR 11
		40	COLOR 11 ... COLOR 12
		41–43	COLOR 12
		43	COLOR 12 ... COLOR 13
		44–46	COLOR 13
		46	COLOR 13 ... COLOR 14
		47–49	COLOR 14
		49	COLOR 14 ... COLOR 15
		50–52	COLOR 15
		52	COLOR 15 ... COLOR 16
		53–55	COLOR 16
		55	COLOR 16 ... COLOR 17
		56–58	COLOR 17
		58	COLOR 17 ... COLOR 18
		59–61	COLOR 18
		61	COLOR 18 ... COLOR 19
		62–64	COLOR 19
		65–191	Whell
		192–222	>>>
		223–224	RAINBOW: STOP
		225–255	<<<
18	Colors Fine	0–255	Fine adjustment of CH 17
19	Gobo	0–10	ROT Gobo 1: WHITE
		11–14	ROT_GOBO 1
		15–18	ROT_GOBO 2
		19–22	ROT_GOBO 3
		23–26	ROT_GOBO 4
		27–30	ROT_GOBO 5
		31–34	ROT_GOBO 6
		35	ROT_GOBO 6 ... ROT_GOBO 7
		36–38	ROT_GOBO 7
		39–40	ROT_GOBO 7 ... ROT_GOBO 8
		41–42	ROT_GOBO 8
		43–45	ROT_GOBO 8 ... ROT_GOBO 9
		46	ROT_GOBO 9
		47–49	ROT_GOBO 9 ... ROT_GOBO 10
		50	ROT_GOBO 10
		51–53	ROT_GOBO 10 ... ROT_GOBO 11
		54	ROT_GOBO 11
		55–57	ROT_GOBO 11 ... ROT_GOBO 12

CH	Function	DMX	Description
19	Gobo (continued)	58	ROT_GOBO 12
		59–62	Shake
		63	SHAKE_1
		64–67	SHAKE_1 ... SHAKE_2
		68	SHAKE_2
		69–72	SHAKE_2 ... SHAKE_3
		73	SHAKE_3
		74–77	SHAKE_3 ... SHAKE_4
		78	SHAKE_4
		79–82	SHAKE_4 ... SHAKE_5
		83	SHAKE_5
		84–87	SHAKE_5 ... SHAKE_6
		88	SHAKE_6
		89–92	SHAKE_6 ... SHAKE_7
		93	SHAKE_7
		94–97	SHAKE_7 ... SHAKE_8
		98	SHAKE_8
		99–102	SHAKE_8 ... SHAKE_9
		103	SHAKE_9
		104–107	SHAKE_9 ... SHAKE_10
		108	SHAKE_10
		109–112	SHAKE_10 ... SHAKE_11
		113	SHAKE_11
		114–117	SHAKE_11 ... SHAKE_12
		118	SHAKE_12
		119–127	Shake: WHITE
		128–190	>>>
		191–192	Gobo 1 Select Effects: STOP
		193–255	<<<
20	Gobo Rotation	0–120	0-360
		121–125	Gobo 1 Pos: STOP1
		126–165	SHAKE
		166–170	Shake: STOP2
		171–210	>>>
		211–215	Rot: STOP3
		216–255	<<<
21	Gobo Rotation Fine	0–255	Fine adjustment of CH 20
22	Gobo 2	0–10	Gobo 2: WHITE
		11–13	Gobo 2: FIX GOBO 1
		14–16	FIX GOBO 2
		17–19	Gobo 2: FIX GOBO 3
		20–22	Gobo 2: FIX GOBO 4

CH	Function	DMX	Description
22	Gobo 2 (continued)	23–25	Gobo 2: FIX GOBO 5
		26–28	Gobo 2: FIX GOBO 6
		29–31	Gobo 2: FIX GOBO 7
		32–34	Gobo 2: FIX GOBO 8
		35–37	Gobo 2: FIX GOBO 9
		38–40	Gobo 2: FIX GOBO 10
		41–43	Gobo 2: FIX GOBO 11
		44–46	Gobo 2: FIX GOBO 12
		47–49	Gobo 2: FIX GOBO 13
		50–52	Gobo 2: FIX GOBO 14
		53–55	Gobo 2: FIX GOBO 15
		56–58	Gobo 2: FIX GOBO 16
		59–61	Gobo 2: FIX GOBO 17
		62–64	Gobo 2: FIX GOBO 18
		65–67	Gobo 2: FIX GOBO 19
		68–70	Gobo 2 Select Shake: FIX GOBO 1
		71–73	Gobo 2 Select Shake: FIX GOBO 2
		74–76	Gobo 2 Select Shake: FIX GOBO 3
		77–79	Gobo 2 Select Shake: FIX GOBO 4
		80–82	Gobo 2 Select Shake: FIX GOBO 5
		83–85	Gobo 2 Select Shake: FIX GOBO 6
		86–88	Gobo 2 Select Shake: FIX GOBO 7
		89–91	Gobo 2 Select Shake: FIX GOBO 8
		92–94	Gobo 2 Select Shake: FIX GOBO 9
		95–97	Gobo 2 Select Shake: FIX GOBO 10
		98–100	Gobo 2 Select Shake: FIX GOBO 11
		101–103	Gobo 2 Select Shake: FIX GOBO 12
		104–106	Gobo 2 Select Shake: FIX GOBO 13
		107–109	Gobo 2 Select Shake: FIX GOBO 14
		110–112	Gobo 2 Select Shake: FIX GOBO 15
		113–115	Gobo 2 Select Shake: FIX GOBO 16
		116–118	Gobo 2 Select Shake: FIX GOBO 17
		119–121	Gobo 2 Select Shake: FIX GOBO 18
		122–124	Gobo 2 Select Shake: FIX GOBO 19
		125–127	Gobo 2 Select Shake: WHITE
		128–190	STATIC GOBO JUMPING WATER EFFECT
		191–192	STOP WATER EFFECT
		193–255	STATIC GOBO FLOWING WATER EFFECT
24	Gobo 3 Rotation	0–10	WHITE
		11–127	Animation Insertion CW Rotate Slow to Fast
		128–138	Rotation STOP
		139–255	Animation Insertion CCW Rotate Fast to Slow

CH	Function	DMX	Description
25	Prism	0–10	WHITE
		11–50	12 PRISM
		51–100	PRISM 6
		101–150	PRISM 2
		151–200	FROST 1
		201–255	FROST 2
26	Prism Rotation	0–10	WHITE
		11–145	PRISM INSERT AND ADJUST THE ANGLE
		146–150	Prism 2 Pos: STOP
		151–200	PRISM INSERT AND POSITIVE ROTATION
		201–205	STOP ROTATION
		206–255	PRISM INSERT AND REVERSE ROTATION
27	Prism 2	0–10	WHITE
		11–50	6 PRISM
		51–100	32 PRISM
		101–150	PRISM 3
		151–200	PRISM 6
		201–255	FROST 3
28	Prism 2 Rotation	0–10	WHITE
		11–145	PRISM INSERT AND ADJUST THE ANGLE
		146–150	Prism 2 Pos: STOP
		151–200	PRISM INSERT AND POSITIVE ROTATION
		201–205	STOP ROTATION
		206–255	PRISM INSERT AND REVERSE ROTATION
29	Zoom	0–127	MAX ... CENTER
		127	CENTER
		128–255	CENTER ... MIN
		255	MIN
30	Zoom Fine	0–255	Fine adjustment of CH 29
31	Focus	0–127	MIN ... CENTER
		128–255	CENTER ... MAX
		255	MAX
32	Focus Fine	0–255	Fine adjustment of CH 31
33	Focus Adjust	0–12	NO FUNCTION
		12	NO FUNCTION ... 5 METER
		13–39	5 METER
		39	5 METER ... 7 METER
		40–66	7 METER
		66	7 METER ... 9 METER
		67–93	9 METER
		93	9 METER ... 11 METER
		94–120	11 METER

CH	Function	DMX	Description
33	Focus Adjust (continued)	120	11 METER ... 13 METER
		121–147	13 METER
		147	13 METER ... 15 METER
		148–174	15 METER
		174	15 METER ... 17 METER
		175–201	17 METER
		201	17 METER ... 19 METER
		202–228	19 METER
		228	19 METER ... 21 METER
		229–255	21 METER
34	Focus Adjust Fine	0–255	Fine adjustment of CH 33
35	Dimmer	0–63	0% ... 25%
		63	25%
		64–127	25% ... 50%
		127	50%
		128–191	50% ... 75%
		191	75%
		192–255	75% ... 100%
		255	100%
36	Dimmer Fine	0–255	Fine adjustment of CH 35
37	Shutter	0–9	NO FUNCTION1
		10–99	STROBE (1–25 Hz)
		100–109	NO FUNCTION2
		110–179	LIGHTING (1–25 Hz)
		180–189	NO FUNCTION3
		190–255	RANDOM (1–25 Hz)
38	Control	0–10	NO FUNCTION
		11–20	PT BLACK ACTIVATED
		21–30	PT BLACK DEACTIVATED
		31–35	PAN INVERT
		36–40	TILT INVERT
		41–45	P T INVERT OFF
		46–50	Sun Protection On
		51–55	Sun Protection Off
		56–60	No function
		61–70	STUDIO
		71–80	POWER
		81–90	LIVE
		91–100	DIMMER SPEED Halogen
		101–110	DIMMER SPEED LED
		111–120	DIMMER CURVE LINEAR
		121–130	DIMMER CURVE SQUARE LAW

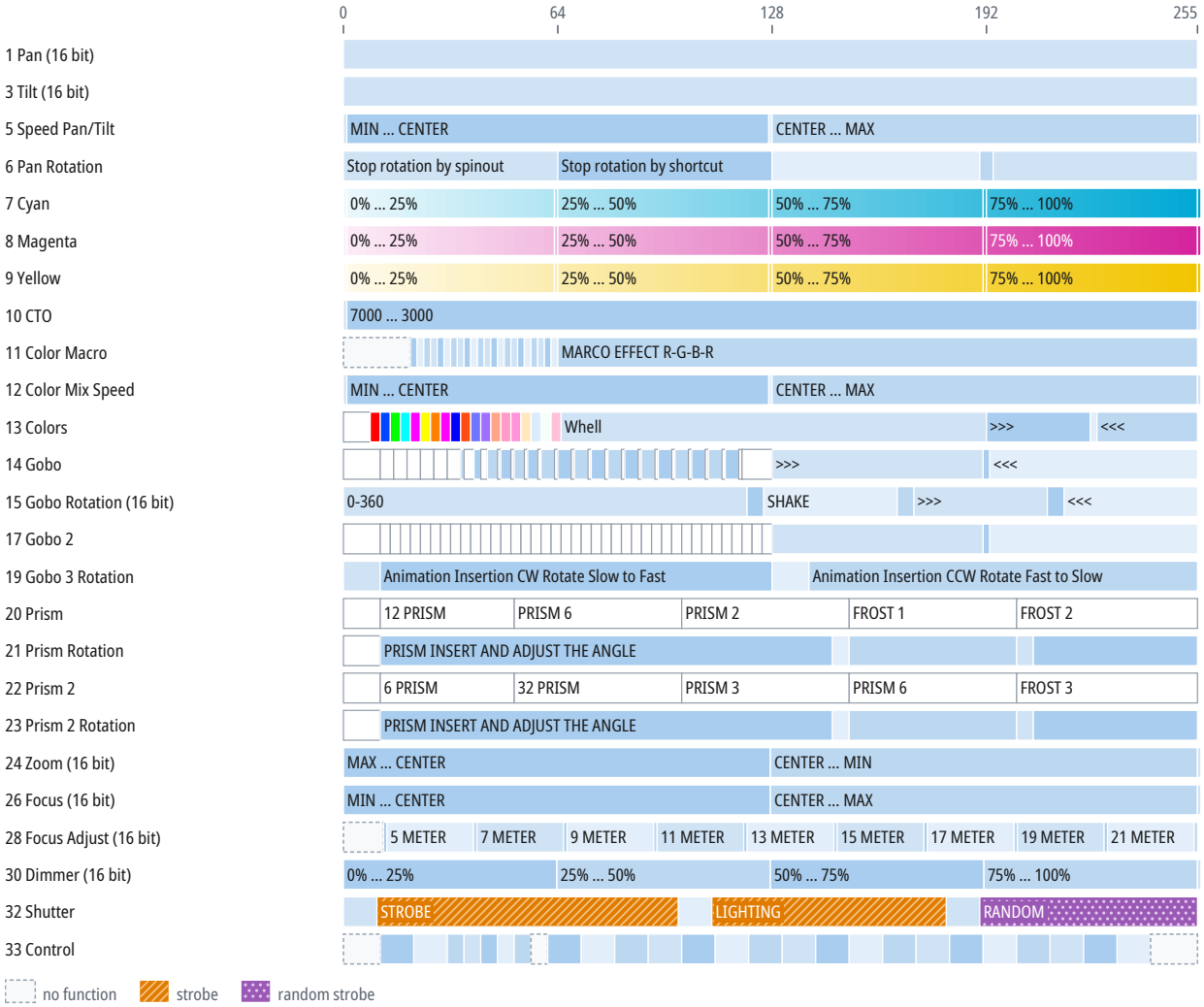
CH	Function	DMX	Description
38	Control (continued)	131–140	DIMMER CURVE INV SQUARE LAW
		141–150	DIMMER CURVE S-CURVE
		151–160	1200Hz
		161–170	2400Hz
		171–180	4000Hz
		181–190	6000Hz
		191–200	25000Hz
		201–210	ALL RESET
		211–220	XY RESET
		221–230	COLOR GOBO PRISM SYS
		231–240	FOCUS ZOOM RESET
		241–255	NO FUNCTION

Mode STANDARD_33CH

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

The GDTF file gives these values for a console's Highlight function: CH 7 Cyan 0, CH 8 Magenta 0, CH 9 Yellow 0, CH 30 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	270°
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “EXTEND_38CH” (p. 11)
6	Pan Rotation		Same as CH 6 in the mode “EXTEND_38CH” (p. 11)
7	Cyan	0	0%
		1–62	0% ... 25%
		63	25%
		64–126	25% ... 50%
		127	50%

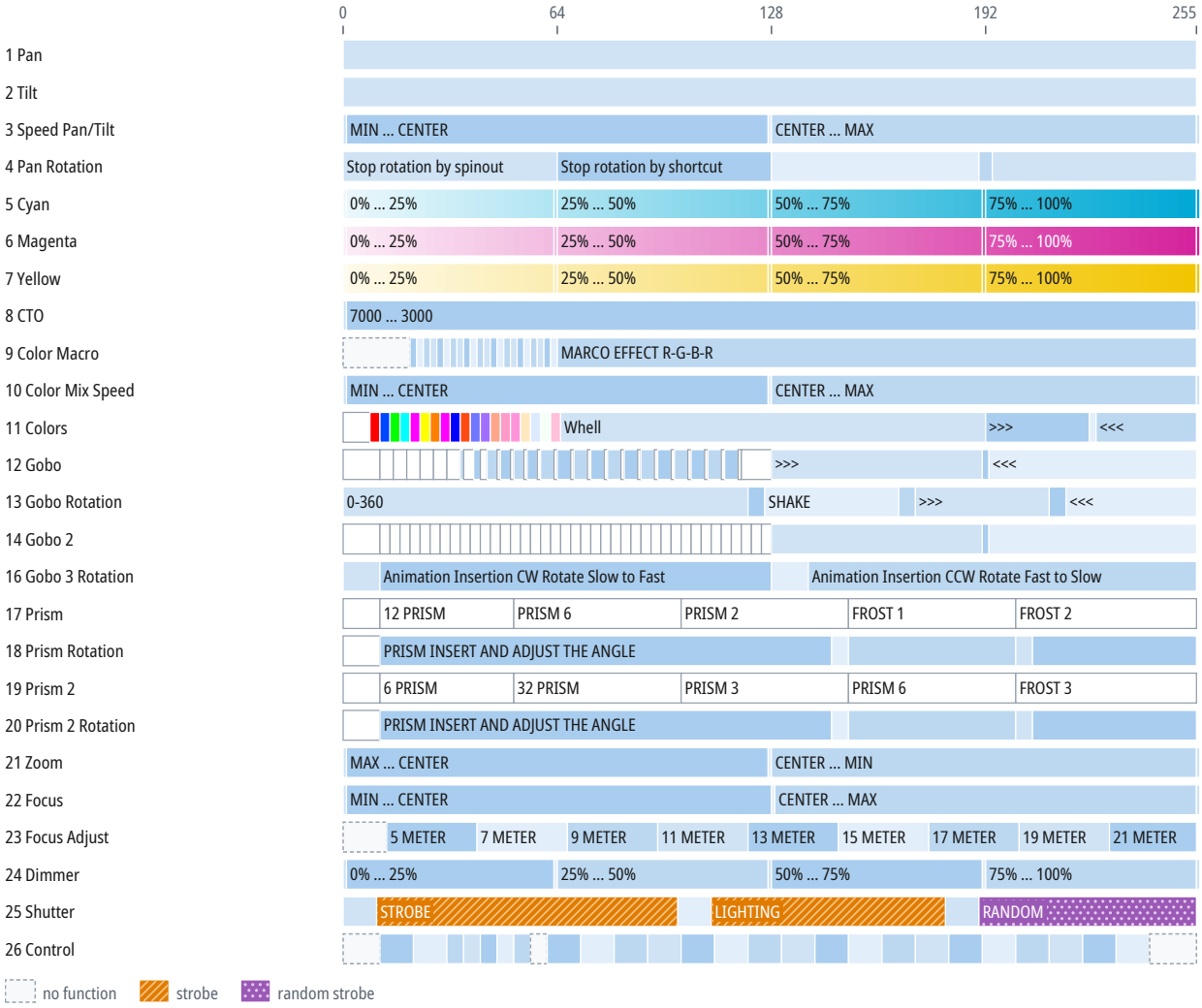
CH	Function	DMX	Description
7	Cyan (continued)	128–190	50% … 75%
		191	75%
		192–254	75% … 100%
		255	100%
8	Magenta	0	0%
		1–62	0% … 25%
		63	25%
		64–126	25% … 50%
		127	50%
		128–190	50% … 75%
		191	75%
		192–254	75% … 100%
		255	100%
9	Yellow	0	0%
		1–62	0% … 25%
		63	25%
		64–126	25% … 50%
		127	50%
		128–190	50% … 75%
		191	75%
		192–254	75% … 100%
		255	100%
10	CTO	0	7000
		1–254	7000 … 3000
		255	3000
11	Color Macro		Same as CH 15 in the mode “EXTEND_38CH” (p. 12)
12	Color Mix Speed		Same as CH 16 in the mode “EXTEND_38CH” (p. 13)
13	Colors	0–7	WHITE
		8–10	COLOR 1
		11–13	COLOR 2
		14–16	COLOR 3
		17–19	COLOR 4
		20–22	COLOR 5
		23–25	COLOR 6
		26–28	COLOR 7
		29–31	COLOR 8
		32–34	COLOR 9
		35–37	COLOR 10
		38–40	COLOR 11
		41–43	COLOR 12
		44–46	COLOR 13
		47–49	COLOR 14

CH	Function	DMX	Description
13	Colors (continued)	50–52	COLOR 15
		53–55	COLOR 16
		56–58	COLOR 17
		59–61	COLOR 18
		62–64	COLOR 19
		65–191	Whell
		192–222	>>>
		223–224	RAINBOW: STOP
		225–255	<<<
14	Gobo		Same as CH 19 in the mode “EXTEND_38CH” (p. 14)
15	Gobo Rotation		Same as CH 20 in the mode “EXTEND_38CH” (p. 15)
16	Gobo Rotation Fine	0–255	Fine adjustment of CH 15
17	Gobo 2		Same as CH 22 in the mode “EXTEND_38CH” (p. 15)
19	Gobo 3 Rotation		Same as CH 24 in the mode “EXTEND_38CH” (p. 16)
20	Prism		Same as CH 25 in the mode “EXTEND_38CH” (p. 17)
21	Prism Rotation		Same as CH 26 in the mode “EXTEND_38CH” (p. 17)
22	Prism 2		Same as CH 27 in the mode “EXTEND_38CH” (p. 17)
23	Prism 2 Rotation		Same as CH 28 in the mode “EXTEND_38CH” (p. 17)
24	Zoom		Same as CH 29 in the mode “EXTEND_38CH” (p. 17)
25	Zoom Fine	0–255	Fine adjustment of CH 24
26	Focus		Same as CH 31 in the mode “EXTEND_38CH” (p. 17)
27	Focus Fine	0–255	Fine adjustment of CH 26
28	Focus Adjust		Same as CH 33 in the mode “EXTEND_38CH” (p. 17)
29	Focus Adjust Fine	0–255	Fine adjustment of CH 28
30	Dimmer		Same as CH 35 in the mode “EXTEND_38CH” (p. 18)
31	Dimmer Fine	0–255	Fine adjustment of CH 30
32	Shutter		Same as CH 37 in the mode “EXTEND_38CH” (p. 18)
33	Control		Same as CH 38 in the mode “EXTEND_38CH” (p. 18)

Mode BASIC_26CH

The GDTF file gives these values for a console's Highlight function: CH 5 Cyan 0, CH 6 Magenta 0, CH 7 Yellow 0, CH 24 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Tilt	0–255	270°
3	Speed Pan/Tilt		Same as CH 5 in the mode “EXTEND_38CH” (p. 11)
4	Pan Rotation		Same as CH 6 in the mode “EXTEND_38CH” (p. 11)
5	Cyan		Same as CH 7 in the mode “STANDARD_33CH” (p. 20)
6	Magenta		Same as CH 8 in the mode “STANDARD_33CH” (p. 21)
7	Yellow		Same as CH 9 in the mode “STANDARD_33CH” (p. 21)
8	CTO		Same as CH 10 in the mode “STANDARD_33CH” (p. 21)
9	Color Macro		Same as CH 15 in the mode “EXTEND_38CH” (p. 12)
10	Color Mix Speed		Same as CH 16 in the mode “EXTEND_38CH” (p. 13)
11	Colors		Same as CH 13 in the mode “STANDARD_33CH” (p. 21)
12	Gobo		Same as CH 19 in the mode “EXTEND_38CH” (p. 14)

CH	Function	DMX	Description
13	Gobo Rotation		Same as CH 20 in the mode “EXTEND_38CH” (p. 15)
14	Gobo 2		Same as CH 22 in the mode “EXTEND_38CH” (p. 15)
16	Gobo 3 Rotation		Same as CH 24 in the mode “EXTEND_38CH” (p. 16)
17	Prism		Same as CH 25 in the mode “EXTEND_38CH” (p. 17)
18	Prism Rotation		Same as CH 26 in the mode “EXTEND_38CH” (p. 17)
19	Prism 2		Same as CH 27 in the mode “EXTEND_38CH” (p. 17)
20	Prism 2 Rotation		Same as CH 28 in the mode “EXTEND_38CH” (p. 17)
21	Zoom	0	MAX
		1–126	MAX … CENTER
		127	CENTER
		128–254	CENTER … MIN
		255	MIN
22	Focus	0	MIN
		1–127	MIN … CENTER
		128	CENTER
		129–254	CENTER … MAX
		255	MAX
23	Focus Adjust	0–12	NO FUNCTION
		13–39	5 METER
		40–66	7 METER
		67–93	9 METER
		94–120	11 METER
		121–147	13 METER
		148–174	15 METER
		175–201	17 METER
		202–228	19 METER
		229–255	21 METER
24	Dimmer	0	0%
		1–62	0% … 25%
		63	25%
		64–126	25% … 50%
		127	50%
		128–190	50% … 75%
		191	75%
		192–254	75% … 100%
		255	100%
25	Shutter		Same as CH 37 in the mode “EXTEND_38CH” (p. 18)
26	Control		Same as CH 38 in the mode “EXTEND_38CH” (p. 18)

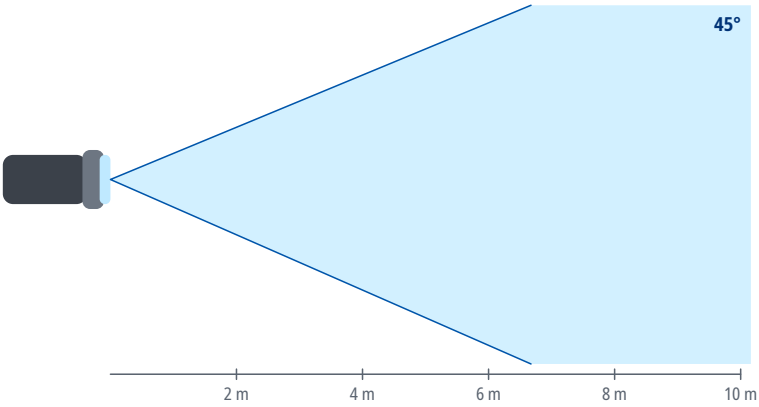
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	500 W
Luminous flux	1,200,000 lm
Color temperature	7,835 K
Color rendering index (CRI)	75
Optics	
Beam angle	45°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45 IN
RDM	yes (manufacturer ID 0x0536, device model ID 0x2E18)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	850 W
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	35 kg
Operating environment	
Operating temperature	-20 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–25 Hz
Color wheel rotation	up to 360 °/s (60 rpm)
Gobo wheel 1 rotation	up to 360 °/s (60 rpm)
Gobo wheel 2 rotation	up to 360 °/s (60 rpm)
Gobo 1 rotation	up to 360 °/s (60 rpm)
Prism 1 rotation	up to 360 °/s (60 rpm)

Spot diameter



Distance	Ø 45°
2 m	1.7 m
4 m	3.3 m
6 m	5 m
8 m	6.6 m
10 m	8.3 m
15 m	12.4 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.