GDTF Fixture Reference · by SOH

DMX REFERENCE

TS6

CKC Lighting



Manufacturer	CKC Lighting
GDTF file	CKC_Lighting_TS6_150763.gdtf
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1 About this manual

This document describes the TS6 by CKC Lighting. It was compiled from the GDTF file CKC_Lighting_TS6_150763.gdtf from the GDTF-Share library.

File revision: “Revision 2”.

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 CKC Lighting; 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	730 W
Weight	36.6 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Standard 41CH	41	12	1, 42, 83, 124, ...
Extended 57CH	57	8	1, 58, 115, 172, ...
RGB Standard 39CH	39	13	1, 40, 79, 118, ...
RGB Extended 53CH	53	9	1, 54, 107, 160, ...
CMY Standard 39CH	39	13	1, 40, 79, 118, ...
CMY Extended 53CH	53	9	1, 54, 107, 160, ...


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: 90–240 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

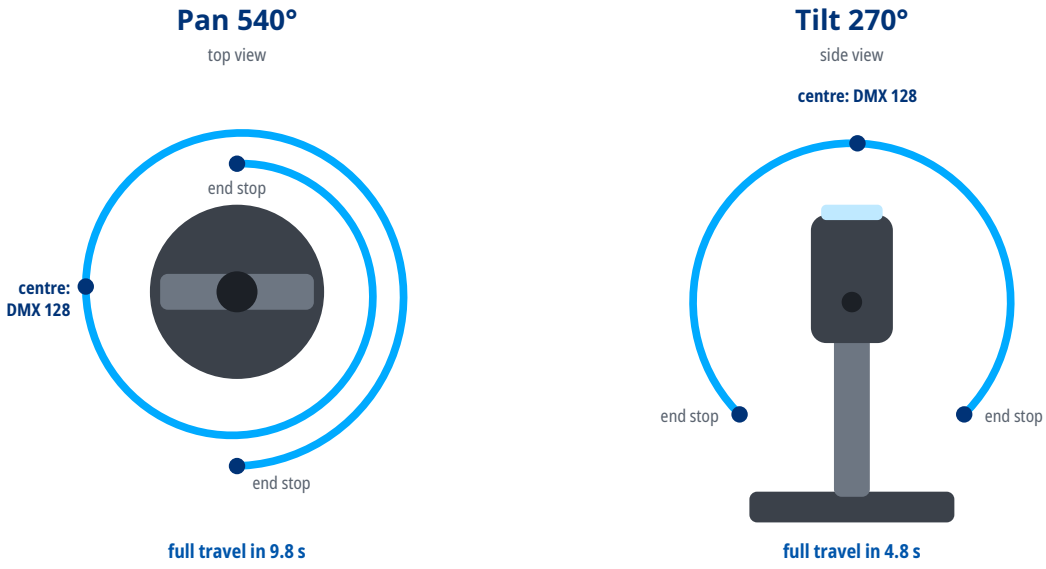
- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do 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



Full-travel times as stated in the GDTF file.

5 Installation

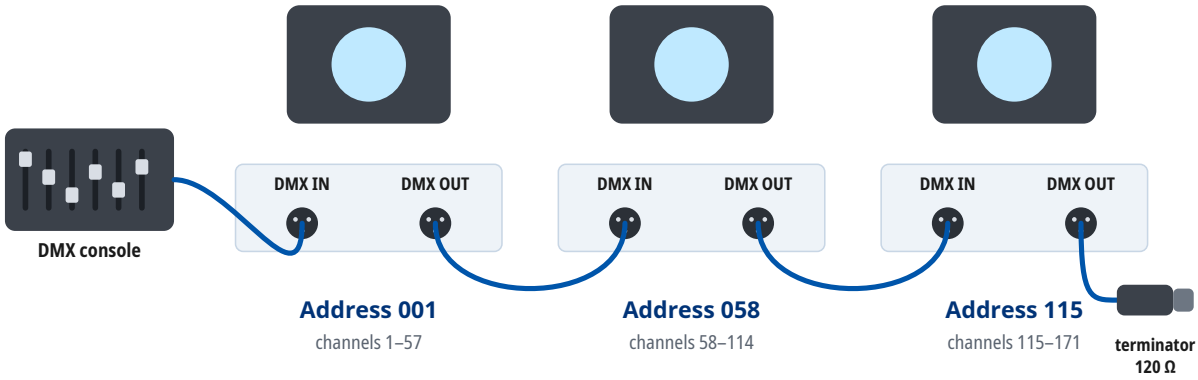
⚠ **WARNING**

- 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: 36.6 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 Extended 57CH: every unit occupies 57 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

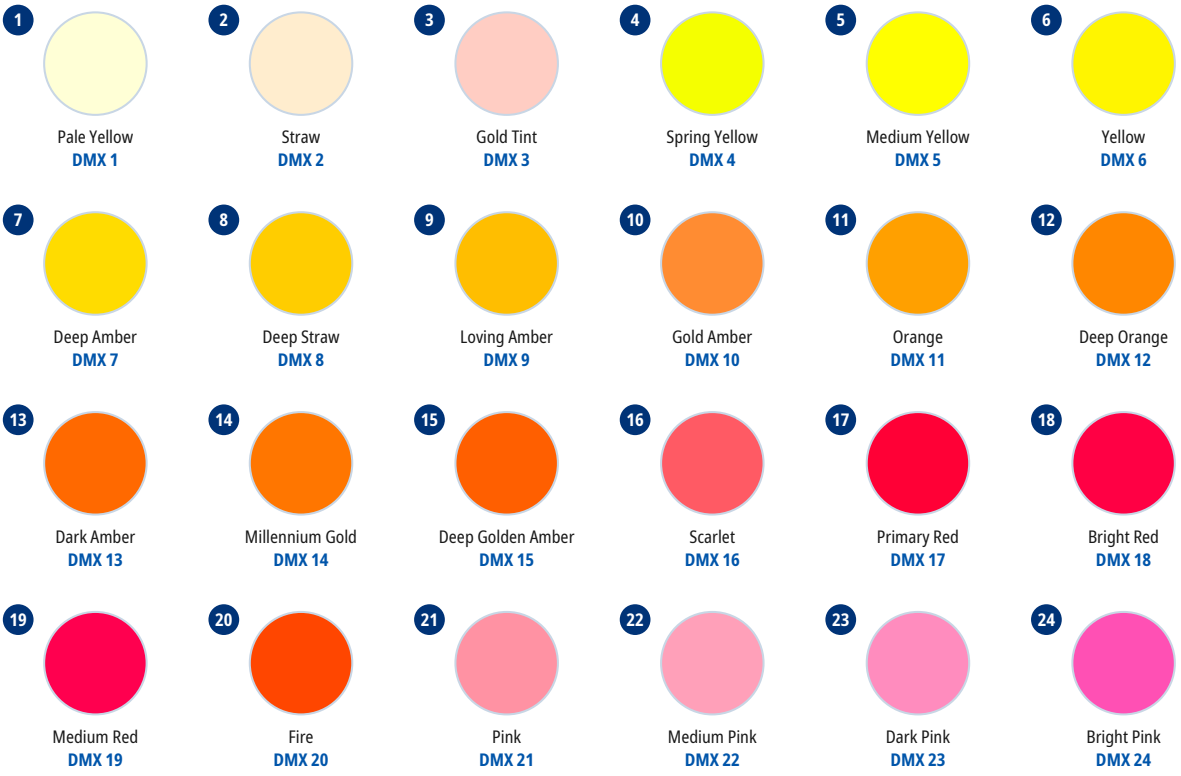
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Extended 57CH”: 57.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “Extended 57CH”, you can use, for example, the start addresses 1, 58, 115, 172.
- 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

	Standard 41CH 41 channels	Extended 57CH 57 channels	RGB Standard 39CH 39 channels	RGB Extended 53CH 53 channels	CMY Standard 39CH 39 channels	CMY Extended 53CH 53 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3	1, 3	1, 3
Dimmer	25	32	23	28	23	28
Shutter / strobe	24	31	22	27	22	27
Color mixing	5–9	5× (5–13)	5–7	5, 7, 9	5–7	5, 7, 9
Color temperature	10	15	8	11	8	11
Color wheel	11	16	9	12	9	12
Gobo wheel	14, 15, 17, 18	19, 20, 22, 23	12, 13, 15, 16	15, 16, 18, 19	12, 13, 15, 16	15, 16, 18, 19
Gobo rotation	14, 15, 17, 18	19, 20, 22, 23	12, 13, 15, 16	15, 16, 18, 19	12, 13, 15, 16	15, 16, 18, 19
Prism	20, 21	25, 26	18, 19	21, 22	18, 19	21, 22
Frost	29, 30	36, 37	27, 28	32, 33	27, 28	32, 33
Zoom	23	29	21	25	21	25
Focus	22	27	20	23	20	23
Iris	28	35	26	31	26	31
Animation wheel	31	38	29	34	29	34

Color wheel



25 Bright Rose **DMX 25**

26 Special Rose Pink **DMX 26**

27 Vanity Fair **DMX 27**

28 Magenta **DMX 28**

29 Dark Magenta **DMX 29**

30 Rose Purple **DMX 30**

31 Mauve **DMX 31**

32 Medium Purple **DMX 32**

33 Lavender **DMX 33**

34 Palace blue **DMX 34**

35 Dark Blue **DMX 35**

36 Medium Blue **DMX 36**

37 Deep Blue **DMX 37**

38 Daylight Blue **DMX 38**

39 Slate Blue **DMX 39**

40 Light Blue **DMX 40**

41 Sky Blue **DMX 41**

42 Pale Navy Blue **DMX 42**

43 Marine Blue **DMX 43**

44 Peacock Blue **DMX 44**

45 Lagoon Blue **DMX 45**

46 Medium Blue Green **DMX 46**

47 Dark Yellow Green **DMX 47**

48 Primary Green **DMX 48**

49 Fern Green **DMX 49**

50 Moss Green **DMX 50**

51 Dark Green **DMX 51**

52 Lime Green **DMX 52**

53 Pale Green **DMX 53**

54 Quarter CT Blue **DMX 54**

55 Half CT Blue **DMX 55**

56 Full CT Blue **DMX 56**

57 Double CT Blue **DMX 57**

58 Quarter CT Orange **DMX 58**

59 Half CT Orange **DMX 59**

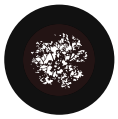
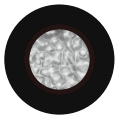
60 LEE 204 - Full C T Orange **DMX 60–61**

61 open **DMX 0–1**

Gobo wheel 1

1.
   Gobo: Open
   DMX 0–9
2. 
   Rotating Gobo 1
   DMX 10–19
3. 
   Rotating Gobo 2
   DMX 20–29
4. 
   Rotating Gobo 3
   DMX 30–39
5. 
   Rotating Gobo 4
   DMX 40–49
6. 
   Rotating Gobo 5
   DMX 50–59
7. 
   Gobo 6
   DMX 60–70

Gobo wheel 2

1.
   Gobo: Open
   DMX 0–9
2. 
   Gobo 1
   DMX 10–19
3. 
   Gobo 2
   DMX 20–29
4. 
   Gobo 3
   DMX 30–39
5. 
   Gobo 4
   DMX 40–49
6. 
   Gobo 5
   DMX 50–59
7. 
   Gobo 6
   DMX 60–70

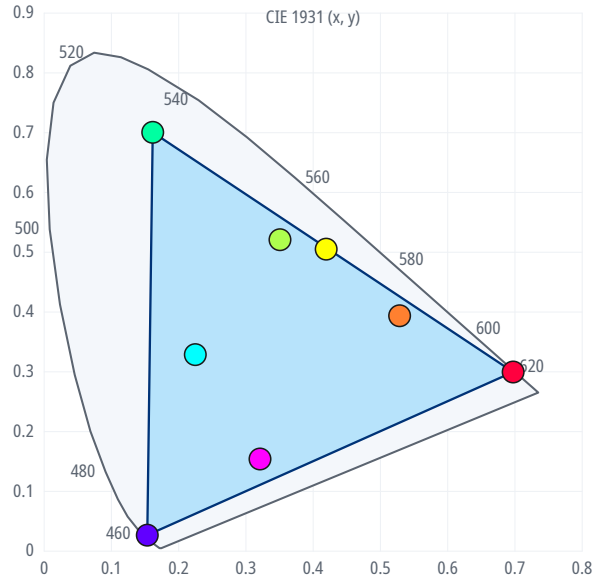
Prism

1.
   Open
   DMX 0–5
2. 
   4 facets
   Prism 1
   DMX 6–130
3. 
   4 facets
   Prism 2
   DMX 131–255

Animation wheel

1. 
   Animation Wheel

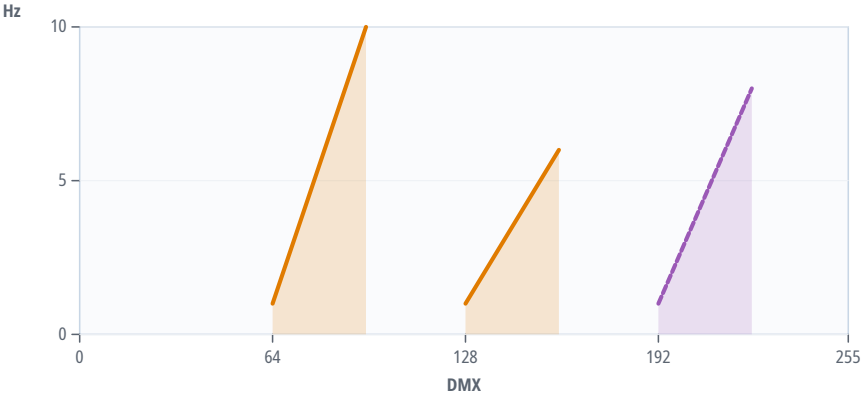
LED colors and the colors they mix



LED	x	y
Red	0.697	0.300
Green	0.161	0.701
Blue	0.153	0.027
Mint	0.351	0.521
Amber	0.528	0.394
Cyan	0.225	0.329
Magenta	0.321	0.154
Yellow	0.419	0.505

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

Strobe rate



CH 31 · Extended 57CH

- 64–95: 1–10 Hz Strobe
- 128–159: 1–6 Hz Pulse
- 192–223: 1–8 Hz Random

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended 57CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	286	11	U2 · 115	16	U2 · 400
2	58	7	343	12	U2 · 172	17	U3 · 1
3	115	8	400	13	U2 · 229	18	U3 · 58
4	172	9	U2 · 1	14	U2 · 286	19	U3 · 115
5	229	10	U2 · 58	15	U2 · 343	20	U3 · 172

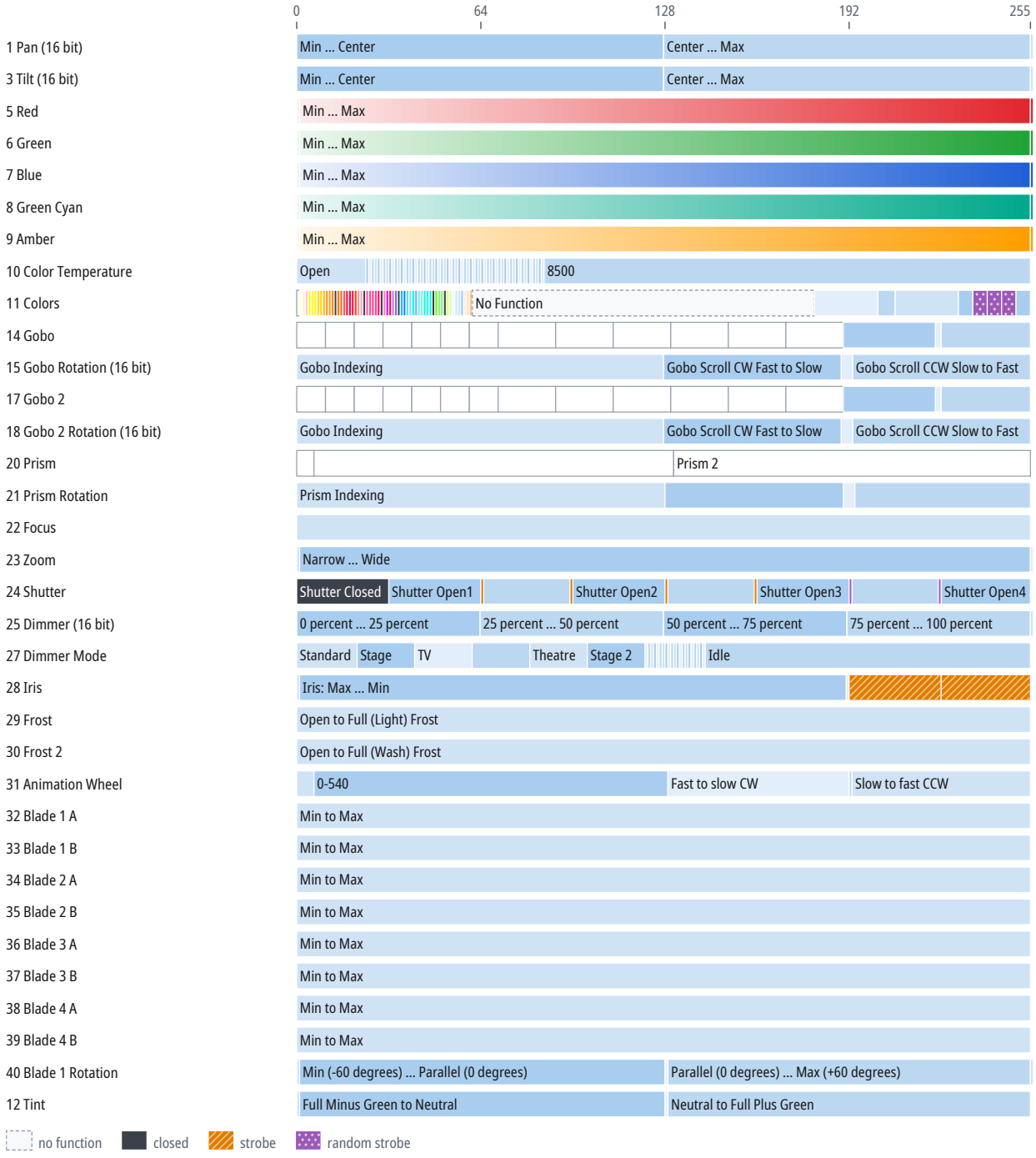
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Standard 41CH

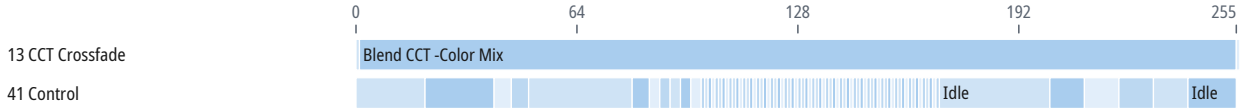
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 5 Red 255, CH 6 Green 255, CH 7 Blue 255, CH 8 Green Cyan 255, CH 9 Amber 255, CH 11 Colors 0, CH 24 Shutter 50, CH 25 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Min … Center
		128–255	Center … Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Min … Center
		128–255	Center … Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Red	0	Min
		1–254	Min … Max
		255	Max
6	Green	0	Min
		1–254	Min … Max
		255	Max
7	Blue	0	Min
		1–254	Min … Max
		255	Max
8	Green Cyan	0	Min
		1–254	Min … Max
		255	Max
9	Amber	0	Min
		1–254	Min … Max
		255	Max
10	Color Temperature	0–23	Open
		24	2400
		25	2500
		26	2600
		27	2700
		28	2800
		29	2900
		30	3000
		31	3100
		32	3200
		33	3300
		34	3400
		35	3500
		36	3600

CH	Function	DMX	Description
10	Color Temperature (continued)	37	3700
		38	3800
		39	3900
		40	4000
		41	4100
		42	4200
		43	4300
		44	4400
		45	4500
		46	4600
		47	4700
		48	4800
		49	4900
		50	5000
		51	5100
		52	5200
		53	5300
		54	5400
		55	5500
		56	5600
		57	5700
		58	5800
		59	5900
		60	6000
		61	6100
		62	6200
		63	6300
		64	6400
		65	6500
		66	6600
		67	6700
		68	6800
		69	6900
		70	7000
		71	7100
		72	7200
		73	7300
		74	7400
		75	7500
		76	7600
		77	7700
		78	7800

CH	Function	DMX	Description
10	Color Temperature (continued)	79	7900
		80	8000
		81	8100
		82	8200
		83	8300
		84	8400
		85–255	8500
11	Colors	0	Open
		1	Pale Yellow
		2	Straw
		3	Gold Tint
		4	Spring Yellow
		5	Medium Yellow
		6	Yellow
		7	Deep Amber
		8	Deep Straw
		9	Loving Amber
		10	Gold Amber
		11	Orange
		12	Deep Orange
		13	Dark Amber
		14	Millennium Gold
		15	Deep Golden Amber
		16	Scarlet
		17	Primary Red
		18	Bright Red
		19	Medium Red
		20	Fire
		21	Pink
		22	Medium Pink
		23	Dark Pink
		24	Bright Pink
		25	Bright Rose
		26	Special Rose Pink
		27	Vanity Fair
		28	Magenta
		29	Dark Magenta
		30	Rose Purple
		31	Mauve
		32	Medium Purple
		33	Lavender
		34	Palace blue

CH	Function	DMX	Description
11	Colors (continued)	35	Dark Blue
		36	Medium Blue
		37	Deep Blue
		38	Daylight Blue
		39	Slate Blue
		40	Light Blue
		41	Sky Blue
		42	Pale Navy Blue
		43	Marine Blue
		44	Peacock Blue
		45	Lagoon Blue
		46	Medium Blue Green
		47	Dark Yellow Green
		48	Primary Green
		49	Fern Green
		50	Moss Green
		51	Dark Green
		52	Lime Green
		53	Pale Green
		54	Quarter CT Blue
		55	Half CT Blue
		56	Full CT Blue
		57	Double CT Blue
		58	Quarter CT Orange
		59	Half CT Orange
		60	Full CT Orange
		61–179	No Function
		180–201	Clockwise fast to slow (180–25.7 °/s)
		202–207	Color 1 Wheel Spin: Stop
		208–229	Counter-clockwise slow to fast (25.7–180 °/s)
		230–234	Open
		235–239	Color 1 Wheel Random: Fast
		240–244	Medium
		245–249	Color 1 Wheel Random: Slow
		250–255	Open
12	Tint	0	Idle
		1–127	Full Minus Green to Neutral
		128	Neutral White
		129–255	Neutral to Full Plus Green
13	CCT Crossfade	0	CCT
		1–254	Blend CCT -Color Mix
		255	Color Mix

CH	Function	DMX	Description
14	Gobo	0–9	Gobo: Open
		10–19	Rotating Gobo 1
		20–29	Rotating Gobo 2
		30–39	Rotating Gobo 3
		40–49	Rotating Gobo 4
		50–59	Rotating Gobo 5
		60–69	Rotating Gobo 6
		70–89	Gobo 1 Shake (1–5 Hz)
		90–109	Gobo 2 Shake (1–5 Hz)
		110–129	Gobo 3 Shake (1–5 Hz)
		130–149	Gobo 4 Shake (1–5 Hz)
		150–169	Gobo 5 Shake (1–5 Hz)
		170–189	Gobo 6 Shake (1–5 Hz)
		190–221	Gobo Wheel Scroll CW Fast to Slow (360–30 °/s)
		222–223	Gobo 1 Select Spin: Stop
		224–255	Gobo Wheel Scroll CCW Slow to Fast (30–360 °/s)
15	Gobo Rotation	0–127	Gobo Indexing (360°)
		128–189	Gobo Scroll CW Fast to Slow (360–30 °/s)
		190–193	No Rotation
		194–255	Gobo Scroll CCW Slow to Fast (up to 360 °/s (60 rpm))
16	Gobo Rotation Fine	0–255	Fine adjustment of CH 15
17	Gobo 2	0–9	Gobo: Open
		10–19	Gobo 1
		20–29	Gobo 2
		30–39	Gobo 3
		40–49	Gobo 4
		50–59	Gobo 5
		60–69	Gobo 6
		70–89	Gobo 2 Select Shake: Gobo 1 (1–5 Hz)
		90–109	Gobo 2 Select Shake: Gobo 2 (1–5 Hz)
		110–129	Gobo 2 Select Shake: Gobo 3 (1–5 Hz)
		130–149	Gobo 2 Select Shake: Gobo 4 (1–5 Hz)
		150–169	Gobo 2 Select Shake: Gobo 5 (1–5 Hz)
		170–189	Gobo 2 Select Shake: Gobo 6 (1–5 Hz)
		190–221	Gobo Wheel Rotation CW Fast to Slow (360–30 °/s)
		222–223	Gobo 2 Select Spin: Stop
		224–255	Gobo Wheel Rotation CCW Slow to Fast (up to 360 °/s (60 rpm))
18	Gobo 2 Rotation	0–127	Gobo Indexing (360°)
		128–189	Gobo Scroll CW Fast to Slow (360–30 °/s)
		190–193	No Rotation

CH	Function	DMX	Description
18	Gobo 2 Rotation (continued)	194–255	Gobo Scroll CCW Slow to Fast (up to 360 °/s (60 rpm))
19	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 18
20	Prism	0–5	Open
		6–130	Prism 1
		131–255	Prism 2
21	Prism Rotation	0–127	Prism Indexing (540°)
		128–189	Prism Rotation CW Fast to Slow (180–6 °/s)
		190–193	No Rotation
		194–255	Prism Rotation CCW Slow to Fast (up to 180 °/s (30 rpm))
22	Focus	0–255	
23	Zoom	0	Narrow
		1–254	Narrow ... Wide
		255	Wide
24	Shutter	0–31	Shutter Closed
		32–63	Shutter Open1
		64	Min Strobe
		65–94	Min Strobe ... Max Strobe
		95	Max Strobe
		96–127	Shutter Open2
		128	Min Pulse
		129–158	Min Pulse ... Max Pulse
		159	Max Pulse
		160–191	Shutter Open3
		192	Min Random
		193–222	Min Random ... Max Random
		223	Max Random
		224–255	Shutter Open4
25	Dimmer	0–63	0 percent ... 25 percent
		63	25 percent
		64–127	25 percent ... 50 percent
		127	50 percent
		128–191	50 percent ... 75 percent
		191	75 percent
		192–255	75 percent ... 100 percent
		255	100 percent
26	Dimmer Fine	0–255	Fine adjustment of CH 25
27	Dimmer Mode	0–20	Standard
		21–40	Stage
		41–60	TV
		61–80	Architectural
		81–100	Theatre

CH	Function	DMX	Description
27	Dimmer Mode (continued)	101–120	Stage 2
		121	0s
		122	0*1s
		123	0*2s
		124	0*3s
		125	0*4s
		126	0*5s
		127	0*6s
		128	0*7s
		129	0*8s
		130	0*9s
		131	1s
		132	1*5s
		133–141	2...10s
		142–255	Idle
28	Iris	0	Iris: Max
		1–190	Iris: Max ... Min
		191	Iris: Min
		192–223	Pulse Opening Fast to Slow
		224–255	Pulse Closing Slow to Fast
29	Frost		Frost 1 (Light)
		0–255	Open to Full (Light) Frost
30	Frost 2		Frost 2 (Wash)
		0–255	Open to Full (Wash) Frost
31	Animation Wheel	0–5	Rot Off
		6–128	0-540
		129–191	Fast to slow CW
		192	Rotate: Stop
		193–255	Slow to fast CCW
32	Blade 1 A	0–255	Min to Max
33	Blade 1 B	0–255	Min to Max
34	Blade 2 A	0–255	Min to Max
35	Blade 2 B	0–255	Min to Max
36	Blade 3 A	0–255	Min to Max
37	Blade 3 B	0–255	Min to Max
38	Blade 4 A	0–255	Min to Max
39	Blade 4 B	0–255	Min to Max
40	Blade 1 Rotation	0	Min (-60 degrees)
		1–127	Min (-60 degrees) ... Parallel (0 degrees)
		128	Parallel (0 degrees)
		129–254	Parallel (0 degrees) ... Max (+60 degrees)

CH	Function	DMX	Description
40	Blade 1 Rotation (continued)	255	Max (+60 degrees)
41	Control	0–19	Wheel Snap
		20–39	Wheel Fade
		40–44	Ultra Quiet (default)
		45–49	Best Speed
		50–79	Performance Mode: Idle
		80–84	All Rest
		85–87	Pan/Tilt
		88–90	Gobo
		91–93	Focus and Zoom
		94–96	Others
		97–99	Reset: Idle
		100	900
		101	910
		102	920
		103	930
		104	940
		105	950
		106	960
		107	970
		108	980
		109	990
		110	1000
		111	1010
		112	1020
		113	1030
		114	1040
		115	1050
		116	1060
		117	1070
		118	1080
		119	1090
		120	1100
		121	1110
		122	1120
		123	1130
		124	1140
		125	1150
		126	1160
		127	1170
		128	1180

CH	Function	DMX	Description
41	Control (continued)	129	1190
		130	1200(default)
		131	1210
		132	1220
		133	1230
		134	1240
		135	1250
		136	1260
		137	1270
		138	1280
		139	1290
		140	1300
		141	1310
		142	1320
		143	1330
		144	1340
		145	1350
		146	1360
		147	1370
		148	1380
		149	1390
		150	1400
		151	1410
		152	1420
		153	1430
		154	1440
		155	1450
		156	1460
		157	1470
		158	1480
		159	1490
		160	1500
		161	2500
		162	4000
		163	5000
		164	6000
		165	10000
		166	15000
		167	20000
		168	25000
		169–200	Idle
		201–210	Dimmer Curve Linear (default)

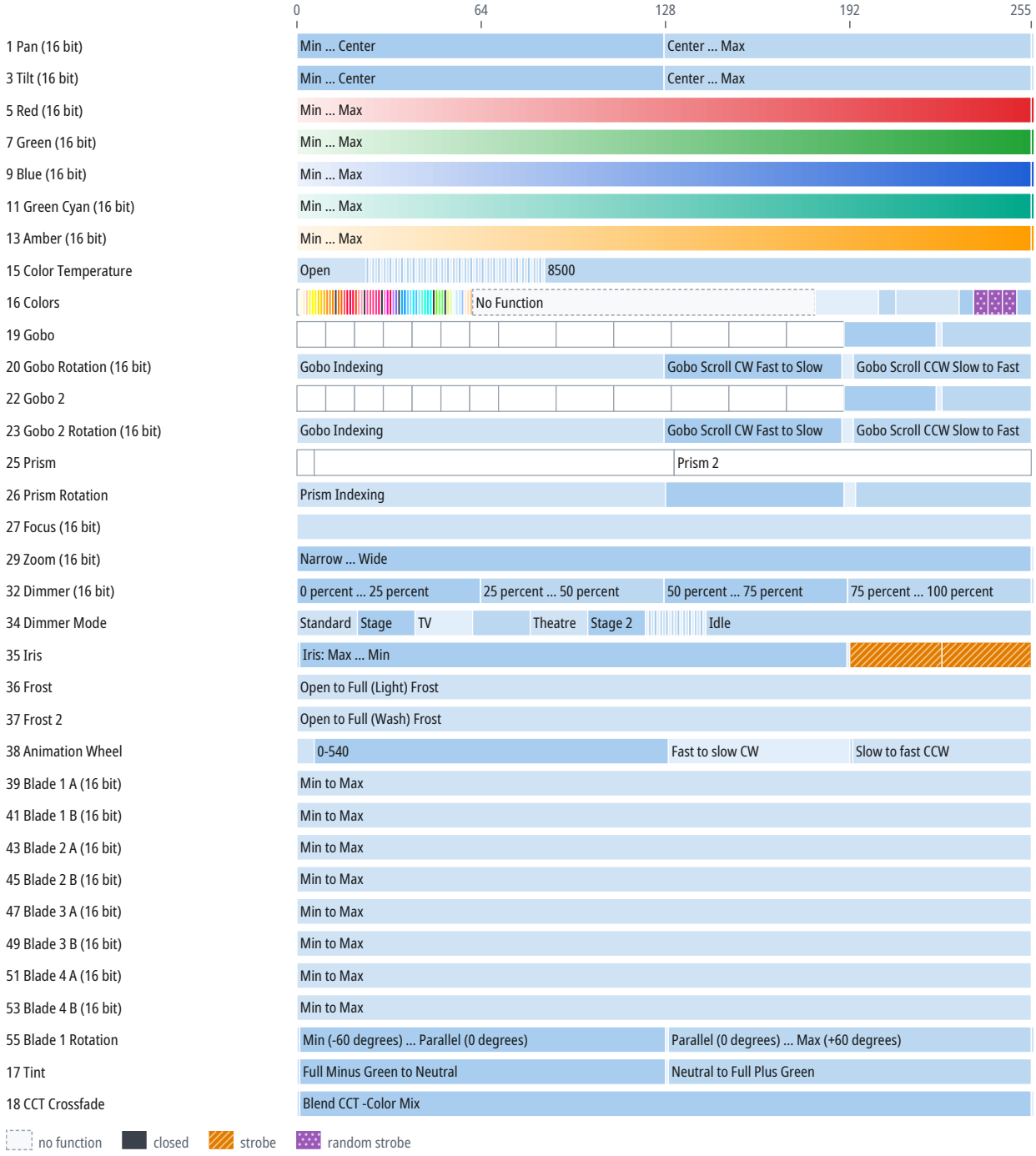
CH	Function	DMX	Description
41	Control (continued)	211–220	Dimmer Curve Square
		221–230	Dimmer Curve Inverse Square
		231–240	Dimmer Curve S-Curve
		241–255	Idle

Mode Extended 57CH

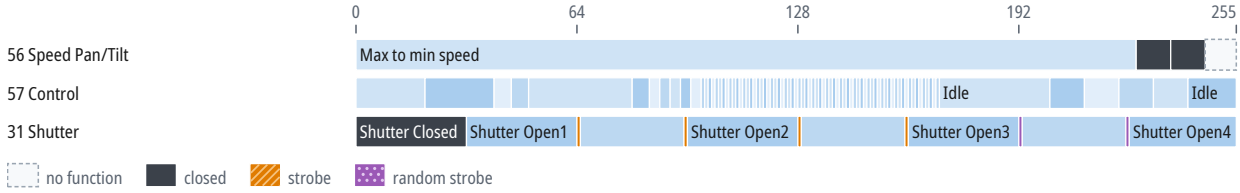
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 5 Red 255, CH 7 Green 255, CH 9 Blue 255, CH 11 Green Cyan 255, CH 13 Amber 255, CH 16 Colors 0, CH 31 Shutter 50, CH 32 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard 41CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard 41CH” (p. 14)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Red	0–255	Min … Max
		255	Max
6	Red Fine	0–255	Fine adjustment of CH 5
7	Green	0–255	Min … Max
		255	Max
8	Green Fine	0–255	Fine adjustment of CH 7
9	Blue	0–255	Min … Max
		255	Max
10	Blue Fine	0–255	Fine adjustment of CH 9
11	Green Cyan	0–255	Min … Max
		255	Max
12	Green Cyan Fine	0–255	Fine adjustment of CH 11
13	Amber	0–255	Min … Max
		255	Max
14	Amber Fine	0–255	Fine adjustment of CH 13
15	Color Temperature		Same as CH 10 in the mode “Standard 41CH” (p. 14)
16	Colors		Same as CH 11 in the mode “Standard 41CH” (p. 16)
17	Tint		Same as CH 12 in the mode “Standard 41CH” (p. 17)
18	CCT Crossfade		Same as CH 13 in the mode “Standard 41CH” (p. 17)
19	Gobo		Same as CH 14 in the mode “Standard 41CH” (p. 18)
20	Gobo Rotation		Same as CH 15 in the mode “Standard 41CH” (p. 18)
21	Gobo Rotation Fine	0–255	Fine adjustment of CH 20
22	Gobo 2		Same as CH 17 in the mode “Standard 41CH” (p. 18)
23	Gobo 2 Rotation		Same as CH 18 in the mode “Standard 41CH” (p. 18)
24	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 23
25	Prism		Same as CH 20 in the mode “Standard 41CH” (p. 19)
26	Prism Rotation		Same as CH 21 in the mode “Standard 41CH” (p. 19)
27	Focus	0–255	
28	Focus Fine	0–255	Fine adjustment of CH 27
29	Zoom	0–255	Narrow … Wide
		255	Wide

CH	Function	DMX	Description
30	Zoom Fine	0–255	Fine adjustment of CH 29
31	Shutter		Same as CH 24 in the mode “Standard 41CH” (p. 19)
32	Dimmer		Same as CH 25 in the mode “Standard 41CH” (p. 19)
33	Dimmer Fine	0–255	Fine adjustment of CH 32
34	Dimmer Mode		Same as CH 27 in the mode “Standard 41CH” (p. 19)
35	Iris		Same as CH 28 in the mode “Standard 41CH” (p. 20)
36	Frost		Same as CH 29 in the mode “Standard 41CH” (p. 20)
37	Frost 2		Same as CH 30 in the mode “Standard 41CH” (p. 20)
38	Animation Wheel		Same as CH 31 in the mode “Standard 41CH” (p. 20)
39	Blade 1 A	0–255	Min to Max
40	Blade 1 A Fine	0–255	Fine adjustment of CH 39
41	Blade 1 B	0–255	Min to Max
42	Blade 1 B Fine	0–255	Fine adjustment of CH 41
43	Blade 2 A	0–255	Min to Max
44	Blade 2 A Fine	0–255	Fine adjustment of CH 43
45	Blade 2 B	0–255	Min to Max
46	Blade 2 B Fine	0–255	Fine adjustment of CH 45
47	Blade 3 A	0–255	Min to Max
48	Blade 3 A Fine	0–255	Fine adjustment of CH 47
49	Blade 3 B	0–255	Min to Max
50	Blade 3 B Fine	0–255	Fine adjustment of CH 49
51	Blade 4 A	0–255	Min to Max
52	Blade 4 A Fine	0–255	Fine adjustment of CH 51
53	Blade 4 B	0–255	Min to Max
54	Blade 4 B Fine	0–255	Fine adjustment of CH 53
55	Blade 1 Rotation		Same as CH 40 in the mode “Standard 41CH” (p. 20)
56	Speed Pan/Tilt	0–225	Max to min speed
		226–235	Blackout by movement
		236–245	Blackout by wheel changes
		246–255	No function
57	Control		Same as CH 41 in the mode “Standard 41CH” (p. 21)

Mode RGB Standard 39CH

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 5 Red 255, CH 6 Green 255, CH 7 Blue 255, CH 9 Colors 0, CH 22 Shutter 50, CH 23 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard 41CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard 41CH” (p. 14)

CH	Function	DMX	Description
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Red		Same as CH 5 in the mode “Standard 41CH” (p. 14)
6	Green		Same as CH 6 in the mode “Standard 41CH” (p. 14)
7	Blue		Same as CH 7 in the mode “Standard 41CH” (p. 14)
8	Color Temperature		Same as CH 10 in the mode “Standard 41CH” (p. 14)
9	Colors		Same as CH 11 in the mode “Standard 41CH” (p. 16)
10	Tint		Same as CH 12 in the mode “Standard 41CH” (p. 17)
11	CCT Crossfade		Same as CH 13 in the mode “Standard 41CH” (p. 17)
12	Gobo		Same as CH 14 in the mode “Standard 41CH” (p. 18)
13	Gobo Rotation		Same as CH 15 in the mode “Standard 41CH” (p. 18)
14	Gobo Rotation Fine	0–255	Fine adjustment of CH 13
15	Gobo 2		Same as CH 17 in the mode “Standard 41CH” (p. 18)
16	Gobo 2 Rotation		Same as CH 18 in the mode “Standard 41CH” (p. 18)
17	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 16
18	Prism		Same as CH 20 in the mode “Standard 41CH” (p. 19)
19	Prism Rotation		Same as CH 21 in the mode “Standard 41CH” (p. 19)
20	Focus	0–255	
21	Zoom		Same as CH 23 in the mode “Standard 41CH” (p. 19)
22	Shutter		Same as CH 24 in the mode “Standard 41CH” (p. 19)
23	Dimmer		Same as CH 25 in the mode “Standard 41CH” (p. 19)
24	Dimmer Fine	0–255	Fine adjustment of CH 23
25	Dimmer Mode		Same as CH 27 in the mode “Standard 41CH” (p. 19)
26	Iris		Same as CH 28 in the mode “Standard 41CH” (p. 20)
27	Frost		Same as CH 29 in the mode “Standard 41CH” (p. 20)
28	Frost 2		Same as CH 30 in the mode “Standard 41CH” (p. 20)
29	Animation Wheel		Same as CH 31 in the mode “Standard 41CH” (p. 20)
30	Blade 1 A	0–255	Min to Max
31	Blade 1 B	0–255	Min to Max
32	Blade 2 A	0–255	Min to Max
33	Blade 2 B	0–255	Min to Max
34	Blade 3 A	0–255	Min to Max
35	Blade 3 B	0–255	Min to Max
36	Blade 4 A	0–255	Min to Max
37	Blade 4 B	0–255	Min to Max
38	Blade 1 Rotation		Same as CH 40 in the mode “Standard 41CH” (p. 20)
39	Control		Same as CH 41 in the mode “Standard 41CH” (p. 21)

Mode RGB Extended 53CH

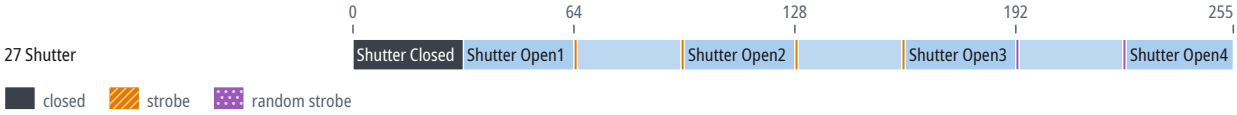
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 5 Red 255, CH 7 Green 255, CH 9 Blue 255, CH 12 Colors 0, CH 27 Shutter 50, CH 28 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard 41CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard 41CH” (p. 14)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Red		Same as CH 5 in the mode “Extended 57CH” (p. 25)
6	Red Fine	0–255	Fine adjustment of CH 5
7	Green		Same as CH 7 in the mode “Extended 57CH” (p. 25)
8	Green Fine	0–255	Fine adjustment of CH 7
9	Blue		Same as CH 9 in the mode “Extended 57CH” (p. 25)
10	Blue Fine	0–255	Fine adjustment of CH 9
11	Color Temperature		Same as CH 10 in the mode “Standard 41CH” (p. 14)
12	Colors		Same as CH 11 in the mode “Standard 41CH” (p. 16)
13	Tint		Same as CH 12 in the mode “Standard 41CH” (p. 17)
14	CCT Crossfade		Same as CH 13 in the mode “Standard 41CH” (p. 17)
15	Gobo		Same as CH 14 in the mode “Standard 41CH” (p. 18)
16	Gobo Rotation		Same as CH 15 in the mode “Standard 41CH” (p. 18)
17	Gobo Rotation Fine	0–255	Fine adjustment of CH 16
18	Gobo 2		Same as CH 17 in the mode “Standard 41CH” (p. 18)
19	Gobo 2 Rotation		Same as CH 18 in the mode “Standard 41CH” (p. 18)
20	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 19
21	Prism		Same as CH 20 in the mode “Standard 41CH” (p. 19)
22	Prism Rotation		Same as CH 21 in the mode “Standard 41CH” (p. 19)
23	Focus	0–255	
24	Focus Fine	0–255	Fine adjustment of CH 23
25	Zoom		Same as CH 29 in the mode “Extended 57CH” (p. 25)
26	Zoom Fine	0–255	Fine adjustment of CH 25
27	Shutter		Same as CH 24 in the mode “Standard 41CH” (p. 19)
28	Dimmer		Same as CH 25 in the mode “Standard 41CH” (p. 19)
29	Dimmer Fine	0–255	Fine adjustment of CH 28
30	Dimmer Mode		Same as CH 27 in the mode “Standard 41CH” (p. 19)
31	Iris		Same as CH 28 in the mode “Standard 41CH” (p. 20)
32	Frost		Same as CH 29 in the mode “Standard 41CH” (p. 20)
33	Frost 2		Same as CH 30 in the mode “Standard 41CH” (p. 20)
34	Animation Wheel		Same as CH 31 in the mode “Standard 41CH” (p. 20)
35	Blade 1 A	0–255	Min to Max
36	Blade 1 A Fine	0–255	Fine adjustment of CH 35

CH	Function	DMX	Description
37	Blade 1 B	0–255	Min to Max
38	Blade 1 B Fine	0–255	Fine adjustment of CH 37
39	Blade 2 A	0–255	Min to Max
40	Blade 2 A Fine	0–255	Fine adjustment of CH 39
41	Blade 2 B	0–255	Min to Max
42	Blade 2 B Fine	0–255	Fine adjustment of CH 41
43	Blade 3 A	0–255	Min to Max
44	Blade 3 A Fine	0–255	Fine adjustment of CH 43
45	Blade 3 B	0–255	Min to Max
46	Blade 3 B Fine	0–255	Fine adjustment of CH 45
47	Blade 4 A	0–255	Min to Max
48	Blade 4 A Fine	0–255	Fine adjustment of CH 47
49	Blade 4 B	0–255	Min to Max
50	Blade 4 B Fine	0–255	Fine adjustment of CH 49
51	Blade 1 Rotation		Same as CH 40 in the mode “Standard 41CH” (p. 20)
52	Speed Pan/Tilt		Same as CH 56 in the mode “Extended 57CH” (p. 26)
53	Control		Same as CH 41 in the mode “Standard 41CH” (p. 21)

Mode CMY Standard 39CH

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 5 Cyan 0, CH 6 Magenta 0, CH 7 Yellow 0, CH 9 Colors 0, CH 22 Shutter 50, CH 23 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard 41CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard 41CH” (p. 14)

CH	Function	DMX	Description
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Cyan	0	Min
		1–254	Min ... max
		255	Max
6	Magenta	0	Min
		1–254	Min ... max
		255	Max
7	Yellow	0	Min
		1–254	Min ... max
		255	Max
8	Color Temperature		Same as CH 10 in the mode “Standard 41CH” (p. 14)
9	Colors		Same as CH 11 in the mode “Standard 41CH” (p. 16)
10	Tint		Same as CH 12 in the mode “Standard 41CH” (p. 17)
11	CCT Crossfade		Same as CH 13 in the mode “Standard 41CH” (p. 17)
12	Gobo		Same as CH 14 in the mode “Standard 41CH” (p. 18)
13	Gobo Rotation		Same as CH 15 in the mode “Standard 41CH” (p. 18)
14	Gobo Rotation Fine	0–255	Fine adjustment of CH 13
15	Gobo 2		Same as CH 17 in the mode “Standard 41CH” (p. 18)
16	Gobo 2 Rotation		Same as CH 18 in the mode “Standard 41CH” (p. 18)
17	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 16
18	Prism		Same as CH 20 in the mode “Standard 41CH” (p. 19)
19	Prism Rotation		Same as CH 21 in the mode “Standard 41CH” (p. 19)
20	Focus	0–255	
21	Zoom		Same as CH 23 in the mode “Standard 41CH” (p. 19)
22	Shutter		Same as CH 24 in the mode “Standard 41CH” (p. 19)
23	Dimmer		Same as CH 25 in the mode “Standard 41CH” (p. 19)
24	Dimmer Fine	0–255	Fine adjustment of CH 23
25	Dimmer Mode		Same as CH 27 in the mode “Standard 41CH” (p. 19)
26	Iris		Same as CH 28 in the mode “Standard 41CH” (p. 20)
27	Frost		Same as CH 29 in the mode “Standard 41CH” (p. 20)
28	Frost 2		Same as CH 30 in the mode “Standard 41CH” (p. 20)
29	Animation Wheel		Same as CH 31 in the mode “Standard 41CH” (p. 20)
30	Blade 1 A	0–255	Min to Max
31	Blade 1 B	0–255	Min to Max
32	Blade 2 A	0–255	Min to Max
33	Blade 2 B	0–255	Min to Max
34	Blade 3 A	0–255	Min to Max
35	Blade 3 B	0–255	Min to Max
36	Blade 4 A	0–255	Min to Max
37	Blade 4 B	0–255	Min to Max
38	Blade 1 Rotation		Same as CH 40 in the mode “Standard 41CH” (p. 20)
39	Control		Same as CH 41 in the mode “Standard 41CH” (p. 21)

Mode CMY Extended 53CH

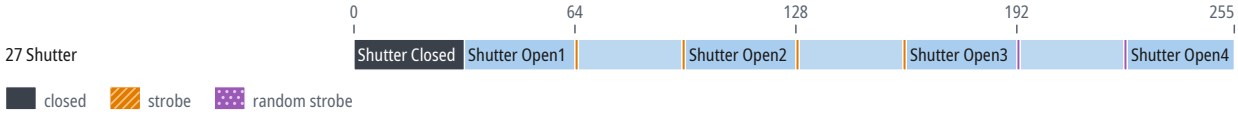
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 5 Cyan 0, CH 7 Magenta 0, CH 9 Yellow 0, CH 12 Colors 0, CH 27 Shutter 50, CH 28 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard 41CH” (p. 14)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard 41CH” (p. 14)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Cyan	0–255	Min … max
		255	Max
6	Cyan Fine	0–255	Fine adjustment of CH 5
7	Magenta	0–255	Min … max
		255	Max
8	Magenta Fine	0–255	Fine adjustment of CH 7
9	Yellow	0–255	Min … max
		255	Max
10	Yellow Fine	0–255	Fine adjustment of CH 9
11	Color Temperature		Same as CH 10 in the mode “Standard 41CH” (p. 14)
12	Colors		Same as CH 11 in the mode “Standard 41CH” (p. 16)
13	Tint		Same as CH 12 in the mode “Standard 41CH” (p. 17)
14	CCT Crossfade		Same as CH 13 in the mode “Standard 41CH” (p. 17)
15	Gobo		Same as CH 14 in the mode “Standard 41CH” (p. 18)
16	Gobo Rotation		Same as CH 15 in the mode “Standard 41CH” (p. 18)
17	Gobo Rotation Fine	0–255	Fine adjustment of CH 16
18	Gobo 2		Same as CH 17 in the mode “Standard 41CH” (p. 18)
19	Gobo 2 Rotation		Same as CH 18 in the mode “Standard 41CH” (p. 18)
20	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 19
21	Prism		Same as CH 20 in the mode “Standard 41CH” (p. 19)
22	Prism Rotation		Same as CH 21 in the mode “Standard 41CH” (p. 19)
23	Focus	0–255	
24	Focus Fine	0–255	Fine adjustment of CH 23
25	Zoom		Same as CH 29 in the mode “Extended 57CH” (p. 25)
26	Zoom Fine	0–255	Fine adjustment of CH 25
27	Shutter		Same as CH 24 in the mode “Standard 41CH” (p. 19)
28	Dimmer		Same as CH 25 in the mode “Standard 41CH” (p. 19)
29	Dimmer Fine	0–255	Fine adjustment of CH 28
30	Dimmer Mode		Same as CH 27 in the mode “Standard 41CH” (p. 19)
31	Iris		Same as CH 28 in the mode “Standard 41CH” (p. 20)
32	Frost		Same as CH 29 in the mode “Standard 41CH” (p. 20)
33	Frost 2		Same as CH 30 in the mode “Standard 41CH” (p. 20)

CH	Function	DMX	Description
34	Animation Wheel		Same as CH 31 in the mode “Standard 41CH” (p. 20)
35	Blade 1 A	0–255	Min to Max
36	Blade 1 A Fine	0–255	Fine adjustment of CH 35
37	Blade 1 B	0–255	Min to Max
38	Blade 1 B Fine	0–255	Fine adjustment of CH 37
39	Blade 2 A	0–255	Min to Max
40	Blade 2 A Fine	0–255	Fine adjustment of CH 39
41	Blade 2 B	0–255	Min to Max
42	Blade 2 B Fine	0–255	Fine adjustment of CH 41
43	Blade 3 A	0–255	Min to Max
44	Blade 3 A Fine	0–255	Fine adjustment of CH 43
45	Blade 3 B	0–255	Min to Max
46	Blade 3 B Fine	0–255	Fine adjustment of CH 45
47	Blade 4 A	0–255	Min to Max
48	Blade 4 A Fine	0–255	Fine adjustment of CH 47
49	Blade 4 B	0–255	Min to Max
50	Blade 4 B Fine	0–255	Fine adjustment of CH 49
51	Blade 1 Rotation		Same as CH 40 in the mode “Standard 41CH” (p. 20)
52	Speed Pan/Tilt		Same as CH 56 in the mode “Extended 57CH” (p. 26)
53	Control		Same as CH 41 in the mode “Standard 41CH” (p. 21)

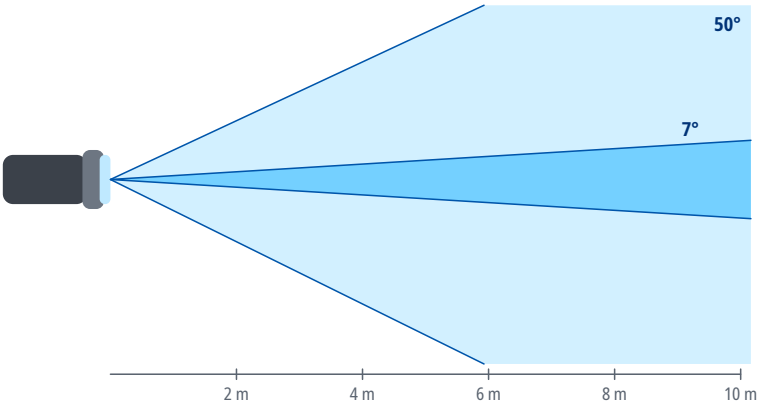
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	480 W
Luminous flux	15,000 lm
Color temperature	6,000 K
Color rendering index (CRI)	92
Optics	
Zoom	7–50°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	3-pin XLR IN/OUT
RJ45 connectors	RJ45 IN/OUT
Electrical	
Power supply	90–240 V, 50/60 Hz
Power consumption	730 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	36.6 kg
Operating environment	
Operating temperature	-20 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2400–8500 K
Strobe frequency	1–10 Hz
LED frequency	1–60 Hz
Color wheel rotation	up to 180 °/s (30 rpm)
Gobo wheel 1 rotation	up to 360 °/s (60 rpm)
Gobo wheel 2 rotation	up to 360 °/s (60 rpm)
Prism rotation	up to 180 °/s (30 rpm)
Animation wheel rotation	up to 180 °/s (30 rpm)

Spot diameter



Distance	Ø 7°	Ø 50°
2 m	0.24 m	1.9 m
4 m	0.49 m	3.7 m
6 m	0.73 m	5.6 m
8 m	0.98 m	7.5 m
10 m	1.2 m	9.3 m
15 m	1.8 m	14 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.