DMX REFERENCE

VANQUISH

tarm AG



Manufacturer	tarm AG
GDTF file	tarm_AG_Vanquish_137725.gdtf
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1 About this manual

This document describes the Vanquish by tarm AG. It was compiled from the GDTF file tarm_AG_Vanquish_137725.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	750 W
Weight	61 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
BASIC	21	24	1, 22, 43, 64, ...
STANDARD	26	19	1, 27, 53, 79, ...
EXTEND	30	17	1, 31, 61, 91, ...

No light? Check these channels

- BASIC: CH 19 Dimmer above 0; CH 20 Shutter at 0–9, 100–109 or 180–189 “NO FUNCTION”
- STANDARD: CH 23 Dimmer above 0; CH 25 Shutter at 0–9, 100–109 or 180–189 “NO FUNCTION”
- EXTEND: CH 27 Dimmer above 0; CH 29 Shutter at 0–9, 100–109 or 180–189 “NO FUNCTION”


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

Description in the GDTF file

“Hybrid moving head featuring a native RGB laser light source for saturated, intense colors and a precise beam.”

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: 61 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.

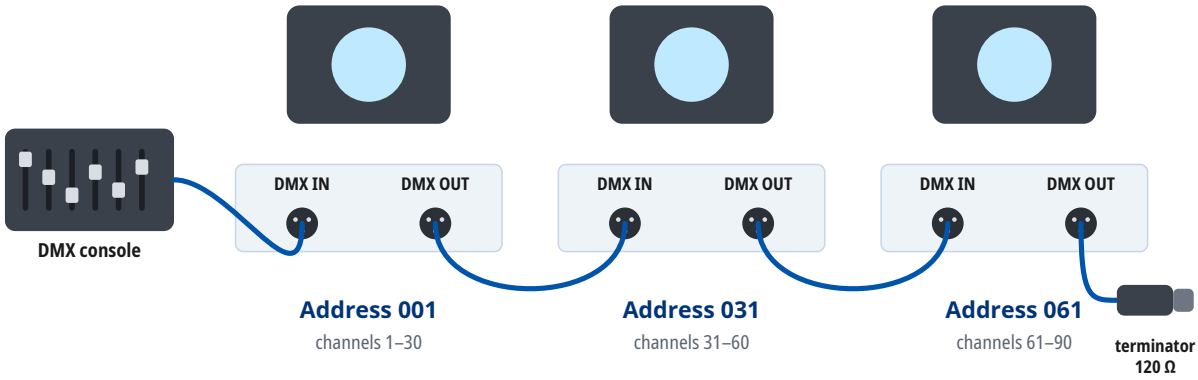
6 Connections

- 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: every unit occupies 30 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”: 30.
- 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”, you can use, for example, the start addresses 1, 31, 61, 91.
- 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

	BASIC 21 channels	STANDARD 26 channels	EXTEND 30 channels
Pan / Tilt	1, 2	1, 3	1, 3
Pan / Tilt resolution	8 bit	16 bit	16 bit
Dimmer	19	23	27
Dimmer resolution	8 bit	16 bit	16 bit
Shutter / strobe	20	25	29
Color mixing	5–7	7–9	7, 9, 11
Color temperature	8	10	13
Gobo wheel	10, 12	12, 14	15, 18
Gobo rotation	11	13	16
Prism	13–16	15–18	19–22
Zoom	17	19	23
Focus	18	21	25
Effects / macros	9	11	14

Color wheel



25 
R332

26
RESERVED

27
COLOR WHELL1 RAINBOW EFFECT (SPEED 100%->1)

28
STOP

29
COLOR WHELL1 RAINBOW EFFECT(SPEED 1->100%)

Gobo wheel 1

1
Pinhole Medium
DMX 0–5

2
White/Open
DMX 6

3 
Vertical Line
DMX 7

4 
Horizontal Line
DMX 8

5 
Dot Square
DMX 9

6 
Circle
DMX 10

7 
Radioactive
DMX 11

8 
Square
DMX 12

9 
Wave
DMX 13

10 
Three Lines
DMX 14

11 
Triangle
DMX 15

12 
Square Outline
DMX 16

13 
Asterisk
DMX 17

14 
Radioactive 2
DMX 18

15 
Star
DMX 19

16 
Triangular Lines
DMX 20

17 
Drum Brake
DMX 21

18 
Three Swirl
DMX 22

19 
Cross
DMX 23

20 
Oval
DMX 24

21 
Double Moon
DMX 25

22 
Half Moon
DMX 26

23 
Five Star
DMX 27

24 
Dot Triangle
DMX 28

25 
Pinhole Small
DMX 29

26 
Pinhole Super Small
DMX 30

27
Pinhole Medium Shake
DMX 31–33

28
Open Shake
DMX 34–36

29 
Vertical Line Shake
DMX 37–39

30 
Horizontal Line Shake
DMX 40–42

31 
Dot Square Shake
DMX 43–45

32 
Circle Shake
DMX 46–48

33 
Radioactive Shake
DMX 49–51

34 
Square Shake
DMX 52–54

35 
Wave Shake
DMX 55–57

36 
Three Lines Shake
DMX 58–60

37 
Triangle Shake
DMX 61–63

38 
Square Outline Shake
DMX 64–66

39 
Asterisk Shake
DMX 67–69

40 
Radioactive 2 Shake
DMX 70–72

41 
Star Shake
DMX 73–75

42 
Triangular Lines Shake
DMX 76–78

43 
Drum Brake Shake
DMX 79–81

44 
Three Swirl Shake
DMX 82–84

45 
Cross Shake
DMX 85–87

46 
Oval Shake
DMX 88–90

47 
Double Moon Shake
DMX 91–93

48 
Half Moon Shake
DMX 94–96

49 
Five Star Shake
DMX 97–99

50 
Dot Triangle Shake
DMX 100–102

51 
Pinhole Small Shake
DMX 103–105

52 
Pinhole Super Small Shake
DMX 106–127

53
All Gobos Rotation (CCW) 1
DMX 128–190

54
Stop All Gobos Rotation
DMX 191–192

55
All Gobos Rotation (CW)
DMX 193–255

Gobo wheel 2

1 ROTATING WHITE
DMX 0–5

2 Rotating Pinhole Medium

3 ROTATING GOBO 1
DMX 6–10

4 ROTATING GOBO 2
DMX 11–15

5 ROTATING GOBO 3
DMX 16–20

6 ROTATING GOBO 4
DMX 21–25

7 ROTATING GOBO 5
DMX 26–30

8 ROTATING GOBO 6
DMX 31–35

9 ROTATING GOBO 7
DMX 36–40

10 ROTATING GOBO 8
DMX 41–45

11 ROTATING GOBO 9
DMX 46–50

12 ROTATING GOBO 10
DMX 51–55

13 ROTATING GOBO 11
DMX 56–60

14 ROTATING GOBO 12
DMX 61–65

15 Rotating Sun Shake 1

16 Rotating Rotor Shake

17 Rotating Six Dot Line Shake

18 Rotating Dot Circle Shake

19 Rotating Flower Shake

20 Rotating Scythe Shake

21 Rotating Mosaic Shake

22 Rotating Organic Shake

23 Rotating Fire Blaze Shake

24 Rotating Ocean Shake

25 Rotating Drops Shake

26 Rotating Honeycomb Shake

27 Pinhole Medium

28 All Gobos Rotation (CCW)

29 Stop Water Effect

30 All Gobos Rotation (CW)

Prism 1

1 Open
DMX 0–10

2 12 facets
12 Facet Radial Prism
DMX 11–50

3 6 facets
6 Facet Linear Prism
DMX 51–100

4 2 facets
2 Facet Prism
DMX 101–150

5 Light Frost
DMX 151–200

6 Medium Frost
DMX 201–255

Prism 2

1 Open
DMX 0–10

2 6 facets
6 Facet Radial Prism
DMX 11–50

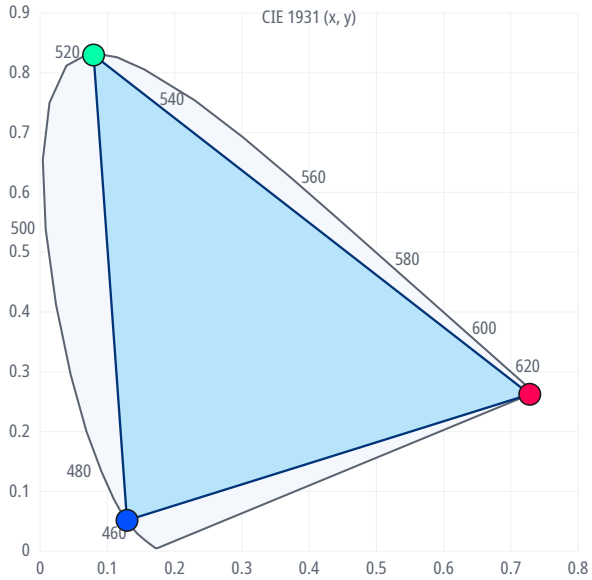
3 24 facets
24 Facet Radial Prism
DMX 51–100

4 3 facets
3 Facet Line Prism
DMX 101–150

5 6 facets
6 Facet Line Prism
DMX 151–200

6 Heavy Frost
DMX 201–255

LED colors and the colors they mix

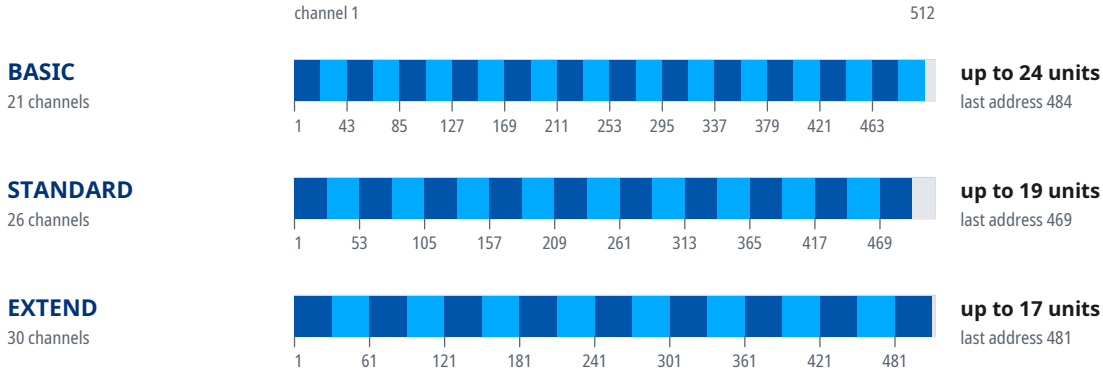


LED	x	y
RED	0.728	0.262
GREEN	0.079	0.830
BLUE	0.129	0.052

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

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “EXTEND”

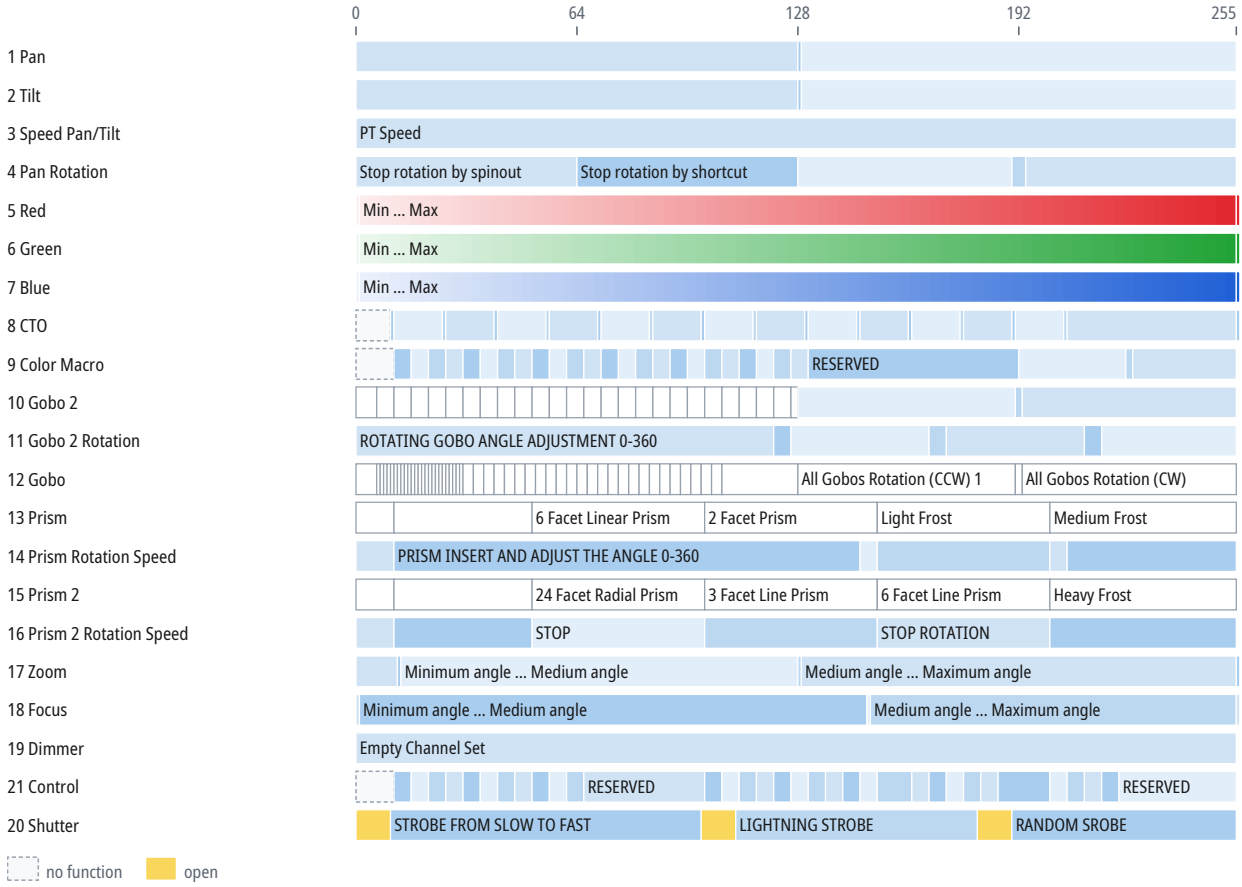
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	151	11	301	16	451
2	31	7	181	12	331	17	481
3	61	8	211	13	361	18	U2 · 1
4	91	9	241	14	391	19	U2 · 31
5	121	10	271	15	421	20	U2 · 61

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 BASIC

If the device receives DMX in this mode but gives no light, check these channels: CH 19 Dimmer above 0; CH 20 Shutter at 0–9, 100–109 or 180–189 “NO FUNCTION”.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Center
		129–255	Pan
2	Tilt	0–127	Tilt
		128	Center
		129–255	Tilt
3	Speed Pan/Tilt		PT Speed
		0–255	PT Speed
4	Pan Rotation		Pan control
		0–63	Stop rotation by spinout
		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
5	Red	0	Min

CH	Function	DMX	Description
5	Red (continued)	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	CTO	0–9	NO FUNCTION
		10	1800K
		11–24	1800K … 2200K
		25	2200K
		26–39	2200K … 2700K
		40	2700K
		41–54	2700K … 3000K
		55	3000K
		56–69	3000K … 3200K
		70	3200K
		71–84	3200K … 4000K
		85	4000K
		86–99	4000K … 4500K
		100	4500K
		101–114	4500K … 5000K
		115	5000K
		116–129	5000K … 5600K
		130	5600K
		131–144	5600K … 6000K
		145	6000K
		146–159	6000K … 6500K
		160	6500K
		161–174	6500K … 7000K
		175	7000K
		176–189	7000K … 8000K
		190	8000K
		191–204	8000K … 10000K
		205	10000K
		206–254	CTO 1
		255	10000K
9	Color Macro	0–10	No Function
		11–15	R40
		16–20	L24
		21–25	L164

CH	Function	DMX	Description
9	Color Macro (continued)	26–30	L08
		31–35	L25
		36–40	L237
		41–45	R321
		46–50	L652
		51–55	L765
		56–60	L513
		61–65	L90
		66–70	R92
		71–75	L728
		76–80	L117
		81–85	L354
		86–90	L501
		91–95	L174
		96–100	L142
		101–105	L794
		106–110	L328
		111–115	L127
		116–120	L192
		121–125	L157
		126–130	R332
		131–191	RESERVED
		192–222	COLOR WHELL1 RAINBOW EFFECT(SPEED 100%->1)
		223–224	STOP
		225–255	COLOR WHELL1 RAINBOW EFFECT(SPEED 1->100%)
10	Gobo 2	0–5	ROTATING WHITE
		6–10	ROTATING GOBO 1
		11–15	ROTATING GOBO 2
		16–20	ROTATING GOBO 3
		21–25	ROTATING GOBO 4
		26–30	ROTATING GOBO 5
		31–35	ROTATING GOBO 6
		36–40	ROTATING GOBO 7
		41–45	ROTATING GOBO 8
		46–50	ROTATING GOBO 9
		51–55	ROTATING GOBO 10
		56–60	ROTATING GOBO 11
		61–65	ROTATING GOBO 12
		66–70	ROTATING GOBO 1 SHAKE
		71–75	ROTATING GOBO 2 SHAKE
		76–80	ROTATING GOBO 3 SHAKE
		81–85	ROTATING GOBO 4 SHAKE

CH	Function	DMX	Description
10	Gobo 2 (continued)	86–90	ROTATING GOBO 5 SHAKE
		91–95	ROTATING GOBO 6 SHAKE
		96–100	ROTATING GOBO 7 SHAKE
		101–105	ROTATING GOBO 8 SHAKE
		106–110	ROTATING GOBO 9 SHAKE
		111–115	ROTATING GOBO 10 SHAKE
		116–120	ROTATING GOBO 11 SHAKE
		121–125	ROTATING GOBO 12 SHAKE
		126–127	WHITE
		128–190	ROTATING GOBO FLOWING WATER EFFECT
		191–192	STOP WATER EFFECT
		193–255	ROTATING GOBO FLOWING WATER EFFECT
11	Gobo 2 Rotation	0–120	ROTATING GOBO ANGLE ADJUSTMENT 0-360
		121–125	STOP
		126–165	ROTATING GOBO SHAKE SPEED 1-100
		166–170	STOP
		171–210	ROTATING GOBO SHAKE SPEED 100-1
		211–215	STOP
		216–255	ROTATING GOBO REVERSE ROTATION SPEED 1-100
12	Gobo	0–5	Pinhole Medium
		6	White/Open
		7	Vertical Line
		8	Horizontal Line
		9	Dot Square
		10	Circle
		11	Radioactive
		12	Square
		13	Wave
		14	Three Lines
		15	Triangle
		16	Square Outline
		17	Asterisk
		18	Radioactive 2
		19	Star
		20	Triangular Lines
		21	Drum Brake
		22	Three Swirl
		23	Cross
		24	Oval
		25	Double Moon
		26	Half Moon
		27	Five Star

CH	Function	DMX	Description
12	Gobo (continued)	28	Dot Triangle
		29	Pinhole Small
		30	Pinhole Super Small
		31–33	Pinhole Medium Shake
		34–36	Open Shake
		37–39	Vertical Line Shake
		40–42	Horizontal Line Shake
		43–45	Dot Square Shake
		46–48	Circle Shake
		49–51	Radioactive Shake
		52–54	Square Shake
		55–57	Wave Shake
		58–60	Three Lines Shake
		61–63	Triangle Shake
		64–66	Square Outline Shake
		67–69	Asterisk Shake
		70–72	Radioactive 2 Shake
		73–75	Star Shake
		76–78	Triangular Lines Shake
		79–81	Drum Brake Shake
		82–84	Three Swirl Shake
		85–87	Cross Shake
		88–90	Oval Shake
		91–93	Double Moon Shake
		94–96	Half Moon Shake
		97–99	Five Star Shake
		100–102	Dot Triangle Shake
		103–105	Pinhole Small Shake
		106–127	Pinhole Super Small Shake
		128–190	All Gobos Rotation (CCW) 1
		191–192	Stop All Gobos Rotation
		193–255	All Gobos Rotation (CW)
13	Prism	0–10	Open
		11–50	12 Facet Radial Prism
		51–100	6 Facet Linear Prism
		101–150	2 Facet Prism
		151–200	Light Frost
		201–255	Medium Frost
14	Prism Rotation Speed	0–10	WHITE
		11–145	PRISM INSERT AND ADJUST THE ANGLE 0-360
		146–150	STOP
		151–200	PRISM INSERT AND POSITIVE ROTATION SPEED 100-1

CH	Function	DMX	Description
14	Prism Rotation Speed (continued)	201–205	STOP ROTATION
		206–255	PRISM INSERT AND POSITIVE ROTATION SPEED 1-100
15	Prism 2	0–10	Open
		11–50	6 Facet Radial Prism
		51–100	24 Facet Radial Prism
		101–150	3 Facet Line Prism
		151–200	6 Facet Line Prism
		201–255	Heavy Frost
16	Prism 2 Rotation Speed	0–10	WHITE
		11–50	PRISM INSERT AND ADJUST THE ANGLE 0-360
		51–100	STOP
		101–150	PRISM INSERT AND POSITIVE ROTATION SPEED 100-1
		151–200	STOP ROTATION
		201–255	PRISM INSERT AND POSITIVE ROTATION SPEED 1-100
17	Zoom	0–11	Zoom 1
		12	Minimum angle
		13–127	Minimum angle ... Medium angle
		128	Medium angle
		129–254	Medium angle ... Maximum angle
		255	Maximum angle
18	Focus	0	Minimum angle
		1–147	Minimum angle ... Medium angle
		148	Medium angle
		149–254	Medium angle ... Maximum angle
		255	Maximum angle
19	Dimmer	0–255	Empty Channel Set
20	Shutter	0–9	NO FUNCTION
		10–99	STROBE FROM SLOW TO FAST
		100–109	NO FUNCTION
		110–179	LIGHTNING STROBE
		180–189	NO FUNCTION
		190–255	RANDOM SROBE
21	Control	0–10	NO FUNCTION
		11–15	PAN/TILT BLACK ACTIVATED
		16–20	PAN/TILT BLACK DEACTIVATED
		21–25	PAN INVERT
		26–30	TILT INVERT
		31–35	PAN/TILT INVERT OFF
		36–40	PAN DEGREE 630
		41–45	PAN DEGREE 540
		46–50	Sun Protection On
		51–55	Sun Protection Off

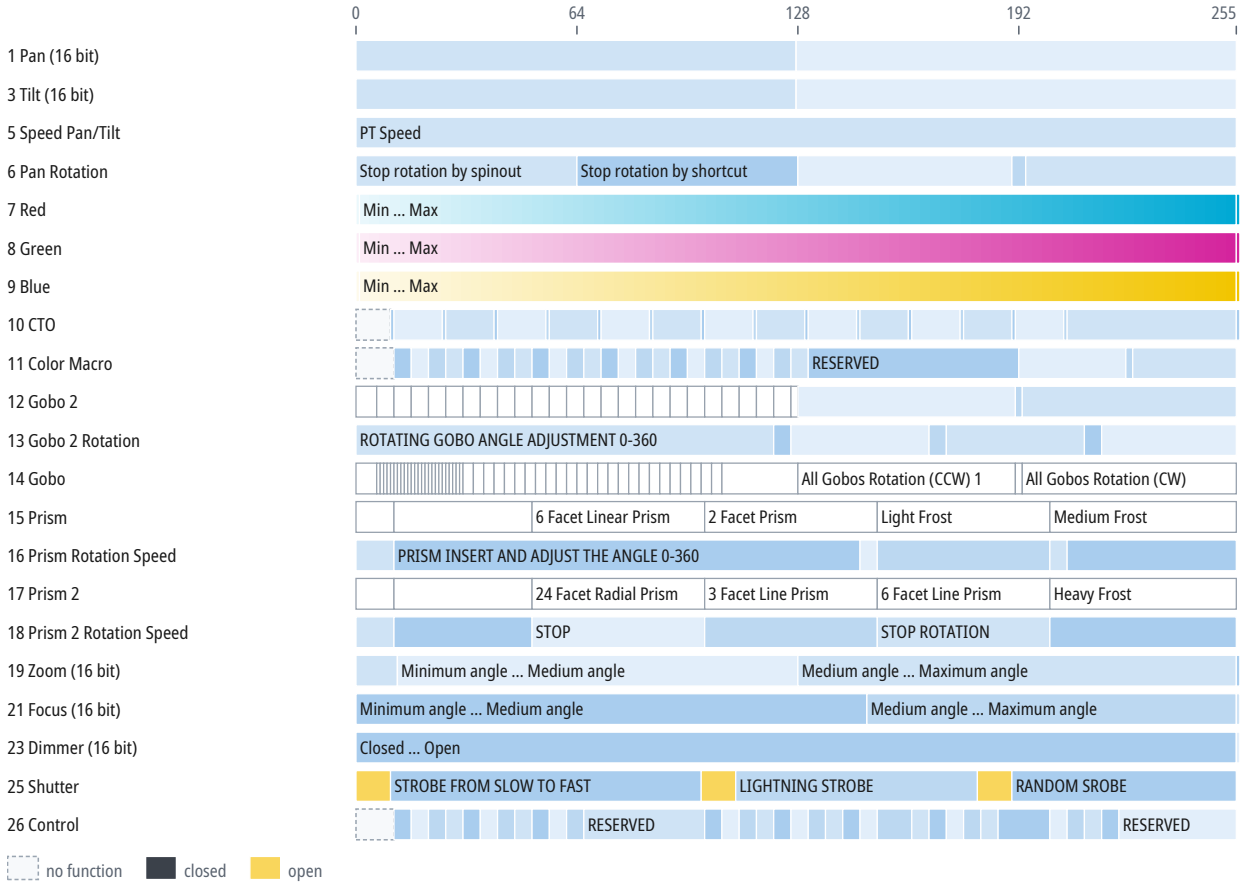
CH	Function	DMX	Description
21	Control (continued)	56–60	STAGE MODE
		61–65	SKY MODE
		66–100	RESERVED
		101–105	STUDIO
		106–110	POWER
		111–115	LIVE
		116–120	RESERVED
		121–125	DIMMER SPEED Halogen
		126–130	DIMMER SPEED LED
		131–135	DIMMER CURVE LINEAR
		136–140	DIMMER CURVE SQUARE LAW
		141–145	DIMMER CURVE INV SQUARE LAW
		146–150	DIMMER CURVE S-CURVE
		151–160	E S-CURVE RESERVED
		161–165	1200Hz
		166–170	2400Hz
		171–175	4000Hz
		176–180	6000Hz
		181–185	25000Hz
		186–200	RESERVED
		201–205	ALL RESET
		206–210	XY RESET
		211–215	GOBO PRISM SYS
		216–220	FOCUS ZOOM RESET
		221–255	RESERVED

Mode STANDARD

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 23 Dimmer above 0; CH 25 Shutter at 0–9, 100–109 or 180–189 “NO FUNCTION”.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Center
		128–255	Pan
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt
		128	Center
		128–255	Tilt
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 3 in the mode “BASIC” (p. 13)
6	Pan Rotation		Same as CH 4 in the mode “BASIC” (p. 13)
7	Red		Same as CH 5 in the mode “BASIC” (p. 13)
8	Green		Same as CH 6 in the mode “BASIC” (p. 14)
9	Blue		Same as CH 7 in the mode “BASIC” (p. 14)
10	CTO		Same as CH 8 in the mode “BASIC” (p. 14)

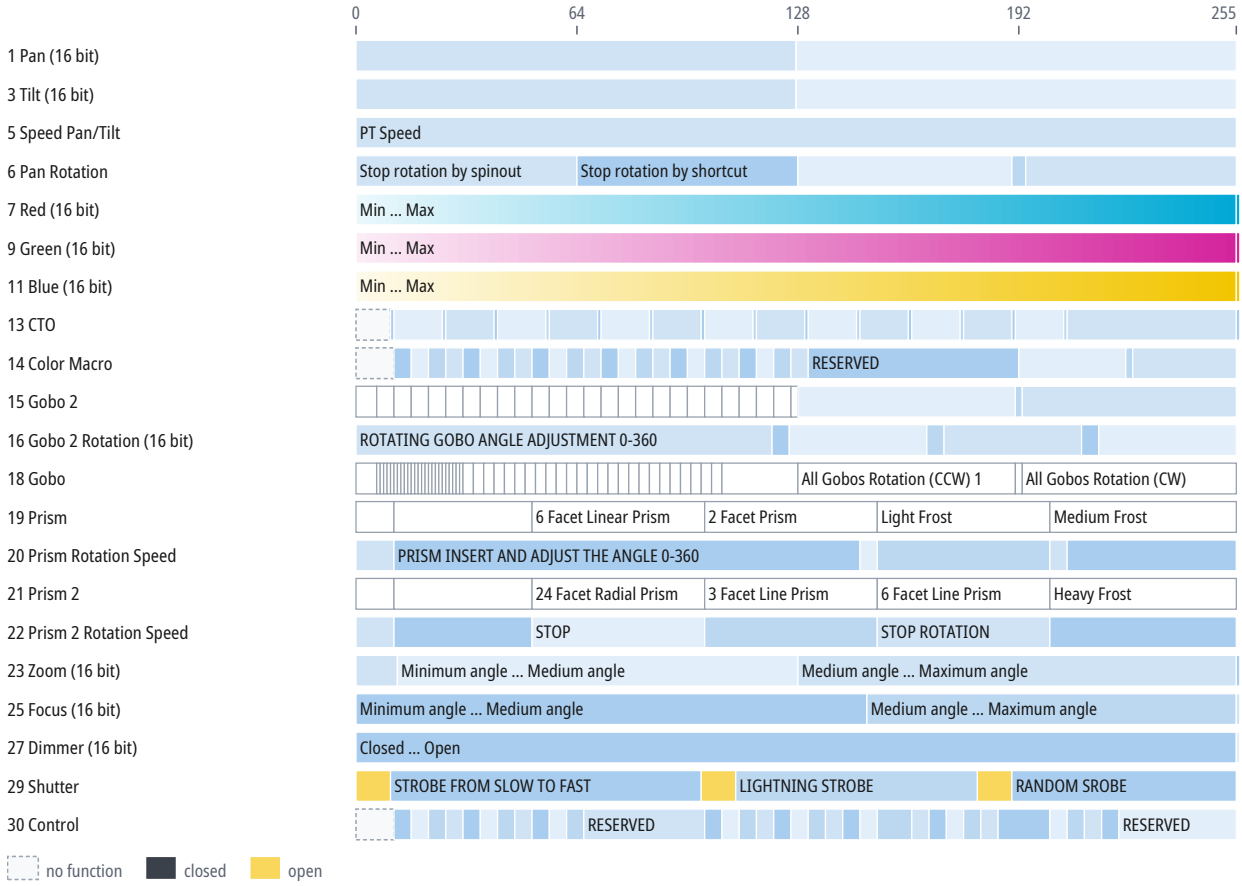
CH	Function	DMX	Description
11	Color Macro		Same as CH 9 in the mode “BASIC” (p. 14)
12	Gobo 2		Same as CH 10 in the mode “BASIC” (p. 15)
13	Gobo 2 Rotation		Same as CH 11 in the mode “BASIC” (p. 16)
14	Gobo		Same as CH 12 in the mode “BASIC” (p. 16)
15	Prism		Same as CH 13 in the mode “BASIC” (p. 17)
16	Prism Rotation Speed		Same as CH 14 in the mode “BASIC” (p. 17)
17	Prism 2		Same as CH 15 in the mode “BASIC” (p. 18)
18	Prism 2 Rotation Speed		Same as CH 16 in the mode “BASIC” (p. 18)
19	Zoom	0–12	Zoom 1
		12–128	Minimum angle ... Medium angle
		128–255	Medium angle ... Maximum angle
		255	Maximum angle
20	Zoom Fine	0–255	Fine adjustment of CH 19
21	Focus	0–148	Minimum angle ... Medium angle
		148–255	Medium angle ... Maximum angle
		255	Maximum angle
22	Focus Fine	0–255	Fine adjustment of CH 21
23	Dimmer	0–255	Closed ... Open
		255	Open
24	Dimmer Fine	0–255	Fine adjustment of CH 23
25	Shutter		Same as CH 20 in the mode “BASIC” (p. 18)
26	Control		Same as CH 21 in the mode “BASIC” (p. 18)

Mode EXTEND

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 27 Dimmer above 0; CH 29 Shutter at 0–9, 100–109 or 180–189 “NO FUNCTION”.

Channel functions at a glance



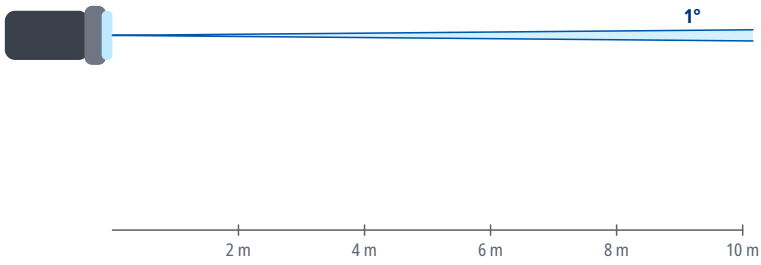
CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “STANDARD” (p. 20)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “STANDARD” (p. 20)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 3 in the mode “BASIC” (p. 13)
6	Pan Rotation		Same as CH 4 in the mode “BASIC” (p. 13)
7	Red	0–255	Min ... Max
		255	Max
8	Red Fine	0–255	Fine adjustment of CH 7
9	Green	0–255	Min ... Max
		255	Max
10	Green Fine	0–255	Fine adjustment of CH 9
11	Blue	0–255	Min ... Max
		255	Max

CH	Function	DMX	Description
12	Blue Fine	0–255	Fine adjustment of CH 11
13	CTO		Same as CH 8 in the mode “BASIC” (p. 14)
14	Color Macro		Same as CH 9 in the mode “BASIC” (p. 14)
15	Gobo 2		Same as CH 10 in the mode “BASIC” (p. 15)
16	Gobo 2 Rotation		Same as CH 11 in the mode “BASIC” (p. 16)
17	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 16
18	Gobo		Same as CH 12 in the mode “BASIC” (p. 16)
19	Prism		Same as CH 13 in the mode “BASIC” (p. 17)
20	Prism Rotation Speed		Same as CH 14 in the mode “BASIC” (p. 17)
21	Prism 2		Same as CH 15 in the mode “BASIC” (p. 18)
22	Prism 2 Rotation Speed		Same as CH 16 in the mode “BASIC” (p. 18)
23	Zoom		Same as CH 19 in the mode “STANDARD” (p. 21)
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Focus		Same as CH 21 in the mode “STANDARD” (p. 21)
26	Focus Fine	0–255	Fine adjustment of CH 25
27	Dimmer		Same as CH 23 in the mode “STANDARD” (p. 21)
28	Dimmer Fine	0–255	Fine adjustment of CH 27
29	Shutter		Same as CH 20 in the mode “BASIC” (p. 18)
30	Control		Same as CH 21 in the mode “BASIC” (p. 18)

10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	500 W
Luminous flux	470,400 lm
Color temperature	9,100 K
Color rendering index (CRI)	70
Optics	
Beam angle	1°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45 IN/OUT
RDM	yes (manufacturer ID 0x0536, device model ID 0x2E1A)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	750 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	61 kg
Operating environment	
Operating temperature	-20 to 45 °C

Spot diameter



Distance	Ø 1°
2 m	0.03 m
4 m	0.07 m
6 m	0.1 m
8 m	0.14 m
10 m	0.17 m
15 m	0.26 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.