DMX REFERENCE

Mercury

X-Laser



Manufacturer	X-Laser
GDTF file	X-Laser_Mercury_133239.gdtf
GDTF revision	V1_2 · 2026-03-12
Generated	2026-11-24

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1 About this manual

This document describes the Mercury by X-Laser. It was compiled from the GDTF file X-Laser_Mercury_133239.gdtf from the GDTF-Share library.

File revision: “V1_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 X-Laser; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Weight	5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Master	6	85	1, 7, 13, 19, ...
Basic Builder	28	18	1, 29, 57, 85, ...
Advanced Builder	85	6	1, 86, 171, 256, ...

No light? Check these channels

- Master: CH 2 Dimmer above 0
- Basic Builder: CH 4 Dimmer above 0
- Advanced Builder: CH 4 Dimmer above 0


Read the manual before use


Do not stare into the light


Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

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

⚠ WARNING

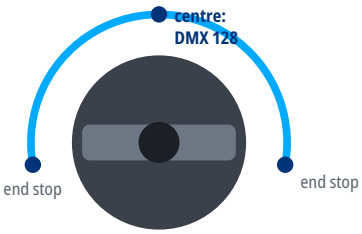
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

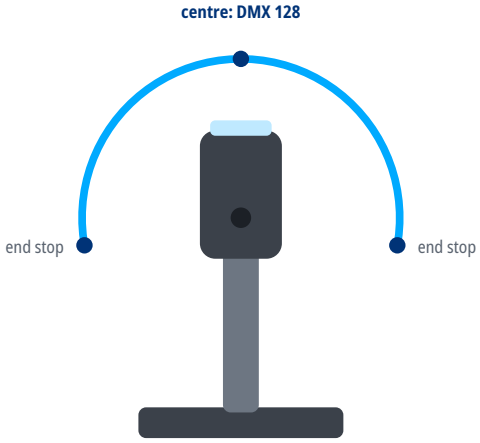
Pan 200°

top view



Tilt 200°

side view



5 Installation

⚠ **WARNING**

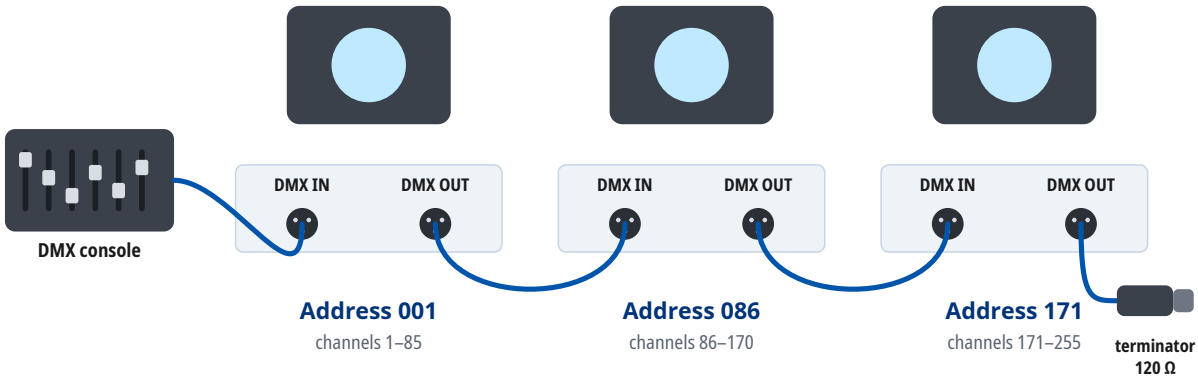
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 5 kg.
- 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 Advanced Builder: every unit occupies 85 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 “Advanced Builder”: 85.
- 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 “Advanced Builder”, you can use, for example, the start addresses 1, 86, 171, 256.
- 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.

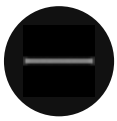
8 Functions at a glance

Functions in each DMX mode

	Master 6 channels	Basic Builder 28 channels	Advanced Builder 85 channels
Pan / Tilt	**5, 6**	**20, 22**	**4 channels (31–45)**
Pan / Tilt resolution	8 bit	16 bit	16 bit
Dimmer	**2**	**4**	**4**
Color mixing		**7–12**	**16–21**
Prism		**14–17**	**37–40**

Gobo wheel 1

1 
Circles
DMX 0

2 
Lines
DMX 1

3 
Dangerous Curves
DMX 2

4 
Triangles
DMX 3

5 
Squares
DMX 4

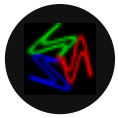
6 
Polygons
DMX 5

7 
Points
DMX 6

8 
Abstract
DMX 7

9 
Mixed
DMX 8

10 
Alpha

11 
Alpha
DMX 9

12 
Mike Dunn
DMX 10

13 
Optimized Test patterns
DMX 254

Gobo wheel 2

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

13
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

16
3 Cocentric Circles
DMX 15

17
Rgb 3 Cocentric Circles 1
DMX 16

18
Rgb 3 Cocentric Circles 2
DMX 17

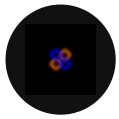
19 
Rgb 3 Cocentric Circles 3
DMX 18

20 
3 Circles
DMX 19

21 
Rgb 3 Circles
DMX 20

22
Traffic Light
DMX 21

23 
4 Circles
DMX 22

24 
Color 4 Circles
DMX 23

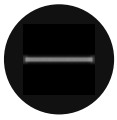
25 
Eclipse
DMX 24

26 
Shrinking Circles
DMX 25

27 
Xxx
DMX 26

Gobo wheel 3

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

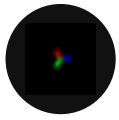
13 
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

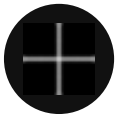
15 
Color 2 Circles
DMX 14

16 
3 Cocentric Circles
DMX 15

17 
Rgb 3 Cocentric Circles 1
DMX 16

18 
Rgb 3 Cocentric Circles 2
DMX 17

19 
Rgb 3 Cocentric Circles 3
DMX 18

20 
3 Circles
DMX 19

21 
Rgb 3 Circles
DMX 20

22 
Traffic Light
DMX 21

23 
4 Circles
DMX 22

24 
Color 4 Circles
DMX 23

25 
Eclipse
DMX 24

26 
Shrinking Circles
DMX 25

27 
Xxx
DMX 26

28 
5 Lines
DMX 27

29 
5 Color Lines
DMX 28

30 
Lattice
DMX 29

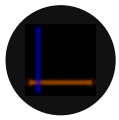
31 
Rgb Lattice
DMX 30

32 
Pick Up Sticks
DMX 31

33 
Tic Tac Toe Grid
DMX 32

34 
Square Wave
DMX 33

35 
Ramp Wave
DMX 34

36 
Offset Cross
DMX 35

37 
Dense Point Array
DMX 36

Gobo wheel 4

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

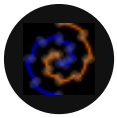
9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

13 
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

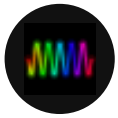
16 
3 Cocentric Circles
DMX 15

17 
Rgb 3 Cocentric Circles 1
DMX 16

18 
Rgb 3 Cocentric Circles 2
DMX 17

19 
Rgb 3 Cocentric Circles 3
DMX 18

20 
3 Circles
DMX 19

21 
Rgb 3 Circles
DMX 20

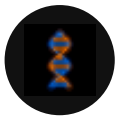
22 
Traffic Light
DMX 21

23 
4 Circles
DMX 22

24 
Color 4 Circles
DMX 23

25 
Eclipse
DMX 24

26 
Shrinking Circles
DMX 25

27 
Xxx
DMX 26

28 
5 Lines
DMX 27

29 
5 Color Lines
DMX 28

Gobo wheel 5

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

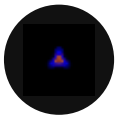
3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

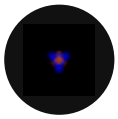
5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12
Segmented Circle
DMX 11

13
Segmented Circle With Spines
DMX 12

14
2 Cocentric Circles
DMX 13

Gobo wheel 6

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

13 
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

16 
3 Cocentric Circles
DMX 15

Gobo wheel 7

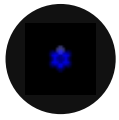
1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

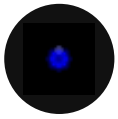
5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

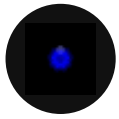
7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

13 
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

16 
3 Cocentric Circles
DMX 15

17 
Rgb 3 Cocentric Circles 1
DMX 16

18 
Rgb 3 Cocentric Circles 2
DMX 17

19 
Rgb 3 Cocentric Circles 3
DMX 18

20 
3 Circles
DMX 19

21 
Rgb 3 Circles
DMX 20

22 
Traffic Light
DMX 21

23 
4 Circles
DMX 22

24 
Color 4 Circles
DMX 23

25
Eclipse
DMX 24

26
Shrinking Circles
DMX 25

27
Xxx
DMX 26

28
5 Lines
DMX 27

29
5 Color Lines
DMX 28

Gobo wheel 8

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

13 
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

16 
3 Cocentric Circles
DMX 15

17 
Rgb 3 Cocentric Circles 1
DMX 16

18 
Rgb 3 Cocentric Circles 2
DMX 17

19 
Rgb 3 Cocentric Circles 3
DMX 18

20 
3 Circles
DMX 19

21 
Rgb 3 Circles
DMX 20

22 
Traffic Light
DMX 21

23 
4 Circles
DMX 22

24 
Color 4 Circles
DMX 23

25 
Eclipse
DMX 24

26 
Shrinking Circles
DMX 25

27 
Xxx
DMX 26

28 
5 Lines
DMX 27

29 
5 Color Lines
DMX 28

30 
Lattice
DMX 29

31 
Rgb Lattice
DMX 30

32 
Pick Up Sticks
DMX 31

33 
Tic Tac Toe Grid
DMX 32

34 
Square Wave
DMX 33

35 
Ramp Wave
DMX 34

36 
Offset Cross
DMX 35

37 
Dense Point Array
DMX 36

38 
Rgb Dense Point Array
DMX 37

39 
Light Point Burst
DMX 38

40 
Medium Point Burst
DMX 39

41
Dense Point Burst
DMX 40

42
Light Disordered Point Burst
DMX 41

43
Medium Disordered Point Burst
DMX 42

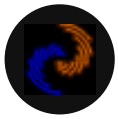
44
Dense Disordered Point Burst
DMX 43

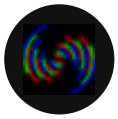
45
Bright Idea
DMX 44

Gobo wheel 9

1
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

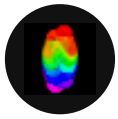
6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

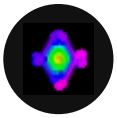
8 
Color 3 Points In Circle
DMX 7

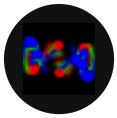
9 
Color 6 Points In Circle
DMX 8

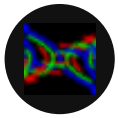
10 
Fading Circle
DMX 9

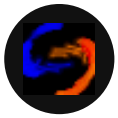
11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

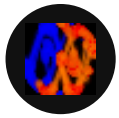
13 
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

16 
3 Cocentric Circles
DMX 15

17 
Rgb 3 Cocentric Circles 1
DMX 16

18 
Rgb 3 Cocentric Circles 2
DMX 17

19 
Rgb 3 Cocentric Circles 3
DMX 18

20 
3 Circles
DMX 19

21 
Rgb 3 Circles
DMX 20

Gobo wheel 10

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

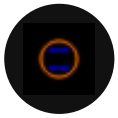
11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

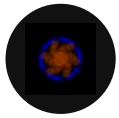
13 
Segmented Circle With Spines
DMX 12

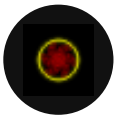
14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

16 
3 Cocentric Circles
DMX 15

17 
Rgb 3 Cocentric Circles 1
DMX 16

18 
Rgb 3 Cocentric Circles 2
DMX 17

19 
Rgb 3 Cocentric Circles 3
DMX 18

20
3 Circles
DMX 19

21
Rgb 3 Circles
DMX 20

22
Traffic Light
DMX 21

23
4 Circles
DMX 22

24
Color 4 Circles
DMX 23

25 
Eclipse
DMX 24

26 
Shrinking Circles
DMX 25

27 
Xxx
DMX 26

28 
5 Lines
DMX 27

29 
5 Color Lines
DMX 28

30 
Lattice
DMX 29

31 
Rgb Lattice
DMX 30

32 
Pick Up Sticks
DMX 31

33 
Tic Tac Toe Grid
DMX 32

Gobo wheel 11

1 
Circle
DMX 0

2 
Rgb Circle
DMX 1

3 
3 Spine Circle
DMX 2

4 
4 Spine Circle
DMX 3

5 
6 Spine Circle
DMX 4

6 
1 Point In Circle
DMX 5

7 
Color 1 Point In Circle
DMX 6

8 
Color 3 Points In Circle
DMX 7

9 
Color 6 Points In Circle
DMX 8

10 
Fading Circle
DMX 9

11 
Fading Quadrant Circle
DMX 10

12 
Segmented Circle
DMX 11

13 
Segmented Circle With Spines
DMX 12

14 
2 Cocentric Circles
DMX 13

15 
Color 2 Circles
DMX 14

16 
3 Cocentric Circles
DMX 15

17 
Rgb 3 Cocentric Circles 1
DMX 16

18 
Rgb 3 Cocentric Circles 2
DMX 17

19 
Rgb 3 Cocentric Circles 3
DMX 18

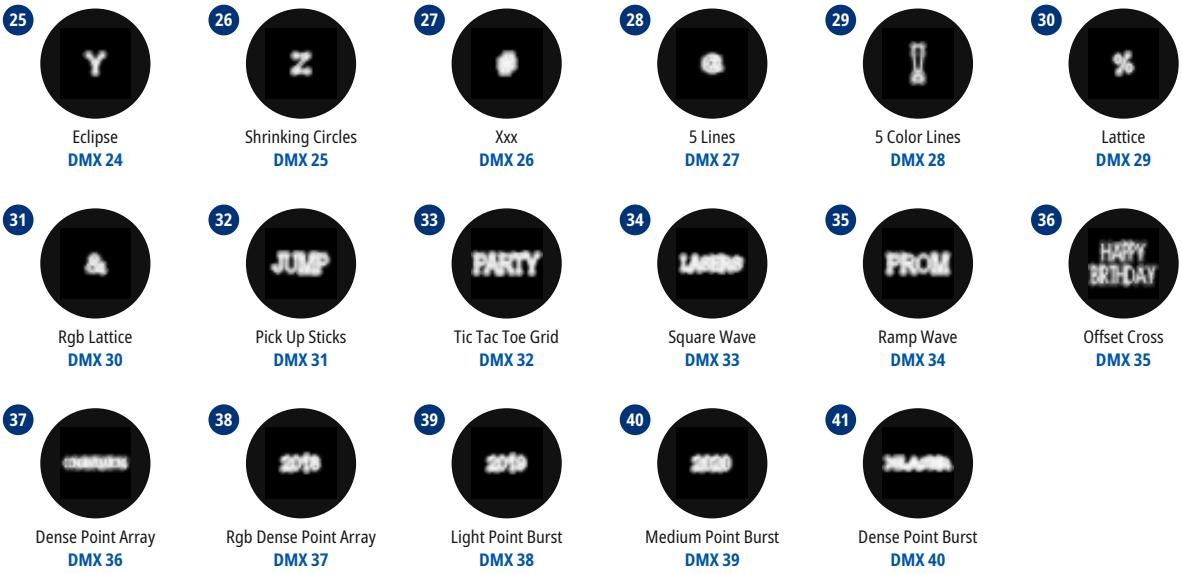
20 
3 Circles
DMX 19

21 
Rgb 3 Circles
DMX 20

22 
Traffic Light
DMX 21

23 
4 Circles
DMX 22

24 
Color 4 Circles
DMX 23



25 Eclipse DMX 24
26 Shrinking Circles DMX 25
27 Xxx DMX 26
28 5 Lines DMX 27
29 5 Color Lines DMX 28
30 Lattice DMX 29
31 Rgb Lattice DMX 30
32 Pick Up Sticks DMX 31
33 Tic Tac Toe Grid DMX 32
34 Square Wave DMX 33
35 Ramp Wave DMX 34
36 Offset Cross DMX 35
37 Dense Point Array DMX 36
38 Rgb Dense Point Array DMX 37
39 Light Point Burst DMX 38
40 Medium Point Burst DMX 39
41 Dense Point Burst DMX 40

Gobo wheel 12

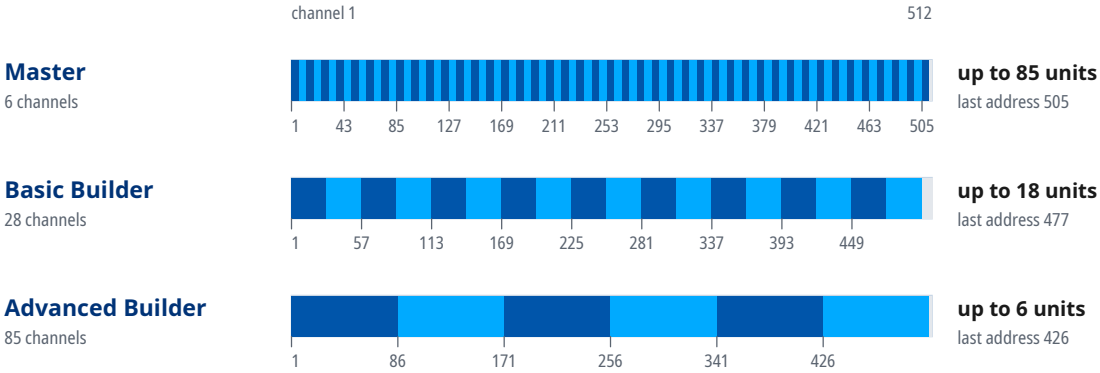
1	Circle	DMX 0	21	Rgb 3 Circles	DMX 20	41	Dense Point Burst	DMX 40
2	Rgb Circle	DMX 1	22	Traffic Light	DMX 21	42	Light Disordered Point Burst	DMX 41
3	3 Spine Circle	DMX 2	23	4 Circles	DMX 22	43	Medium Disordered Point Burst	DMX 42
4	4 Spine Circle	DMX 3	24	Color 4 Circles	DMX 23	44	Dense Disordered Point Burst	DMX 43
5	6 Spine Circle	DMX 4	25	Eclipse	DMX 24	45	Bright Idea	DMX 44
6	1 Point In Circle	DMX 5	26	Shrinking Circles	DMX 25	46	Quackers	DMX 45
7	Color 1 Point In Circle	DMX 6	27	Xxx	DMX 26	47	Penrose	DMX 46
8	Color 3 Points In Circle	DMX 7	28	5 Lines	DMX 27	48	Long Road Ahead	DMX 47
9	Color 6 Points In Circle	DMX 8	29	5 Color Lines	DMX 28	49	Mike Dunn 49	DMX 48
10	Fading Circle	DMX 9	30	Lattice	DMX 29	50	Mike Dunn 50	DMX 49
11	Fading Quadrant Circle	DMX 10	31	Rgb Lattice	DMX 30	51	Mike Dunn 51	DMX 50
12	Segmented Circle	DMX 11	32	Pick Up Sticks	DMX 31	52	Mike Dunn 52	DMX 51
13	Segmented Circle With Spines	DMX 12	33	Tic Tac Toe Grid	DMX 32	53	Mike Dunn 53	DMX 52
14	2 Cocentric Circles	DMX 13	34	Square Wave	DMX 33	54	Mike Dunn 54	DMX 53
15	Color 2 Circles	DMX 14	35	Ramp Wave	DMX 34	55	Mike Dunn 55	DMX 54
16	3 Cocentric Circles	DMX 15	36	Offset Cross	DMX 35	56	Mike Dunn 56	DMX 55
17	Rgb 3 Cocentric Circles 1	DMX 16	37	Dense Point Array	DMX 36	57	Mike Dunn 57	DMX 56
18	Rgb 3 Cocentric Circles 2	DMX 17	38	Rgb Dense Point Array	DMX 37	58	Mike Dunn 58	DMX 57
19	Rgb 3 Cocentric Circles 3	DMX 18	39	Light Point Burst	DMX 38	59	Mike Dunn 59	DMX 58
20	3 Circles	DMX 19	40	Medium Point Burst	DMX 39	60	Mike Dunn 60	DMX 59

Gobo wheel 13

1	Circle	DMX 0	17	Rgb 3 Cocentric Circles 1	DMX 16	33	Tic Tac Toe Grid	DMX 32
2	Rgb Circle	DMX 1	18	Rgb 3 Cocentric Circles 2	DMX 17	34	Square Wave	DMX 33
3	3 Spine Circle	DMX 2	19	Rgb 3 Cocentric Circles 3	DMX 18	35	Ramp Wave	DMX 34
4	4 Spine Circle	DMX 3	20	3 Circles	DMX 19	36	Offset Cross	DMX 35
5	6 Spine Circle	DMX 4	21	Rgb 3 Circles	DMX 20	37	Dense Point Array	DMX 36
6	1 Point In Circle	DMX 5	22	Traffic Light	DMX 21	38	Rgb Dense Point Array	DMX 37
7	Color 1 Point In Circle	DMX 6	23	4 Circles	DMX 22	39	Light Point Burst	DMX 38
8	Color 3 Points In Circle	DMX 7	24	Color 4 Circles	DMX 23	40	Medium Point Burst	DMX 39
9	Color 6 Points In Circle	DMX 8	25	Eclipse	DMX 24	41	Dense Point Burst	DMX 40
10	Fading Circle	DMX 9	26	Shrinking Circles	DMX 25	42	Light Disordered Point Burst	DMX 41
11	Fading Quadrant Circle	DMX 10	27	Xxx	DMX 26	43	Medium Disordered Point Burst	DMX 42
12	Segmented Circle	DMX 11	28	5 Lines	DMX 27	44	Dense Disordered Point Burst	DMX 43
13	Segmented Circle With Spines	DMX 12	29	5 Color Lines	DMX 28	45	Bright Idea	DMX 44
14	2 Cocentric Circles	DMX 13	30	Lattice	DMX 29	46	Quackers	DMX 45
15	Color 2 Circles	DMX 14	31	Rgb Lattice	DMX 30	47	Penrose	DMX 46
16	3 Cocentric Circles	DMX 15	32	Pick Up Sticks	DMX 31	48	Long Road Ahead	DMX 47–255

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Advanced Builder”

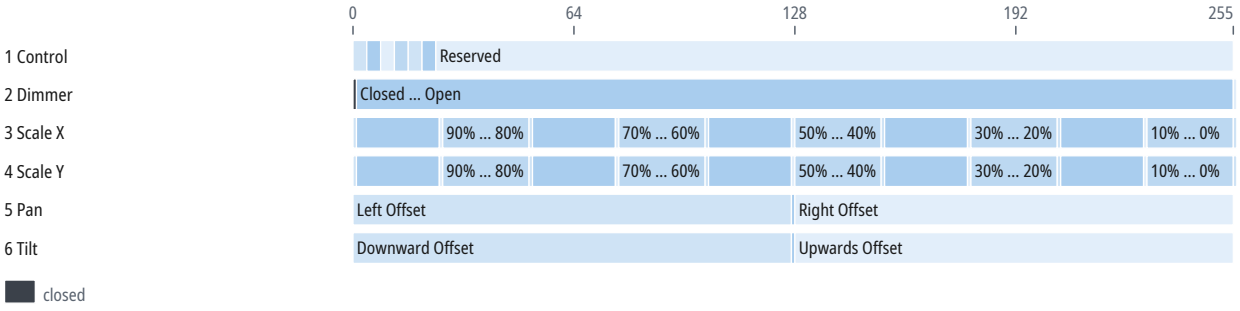
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	426	11	U2 · 341	16	U3 · 256
2	86	7	U2 · 1	12	U2 · 426	17	U3 · 341
3	171	8	U2 · 86	13	U3 · 1	18	U3 · 426
4	256	9	U2 · 171	14	U3 · 86	19	U4 · 1
5	341	10	U2 · 256	15	U3 · 171	20	U4 · 86

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 Master

If the device receives DMX in this mode but gives no light, check these channels: CH 2 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Control	0–3	Disabled
		4–7	External Input
		8–11	Reserved
		12–15	Builders Enabled
		16–19	External Input RAW
		20–23	Etherdream
		24–255	Reserved

CH	Function	DMX	Description
2	Dimmer	0	Closed
		1–254	Closed … Open
		255	Open
3	Scale X		X Scale
		0	100%
		1–24	100% … 90%
		25	90%
		26–50	90% … 80%
		51	80%
		52–75	80% … 70%
		76	70%
		77–101	70% … 60%
		102	60%
		103–126	60% … 50%
		127	50%
		128–152	50% … 40%
		153	40%
		154–177	40% … 30%
		178	30%
		179–203	30% … 20%
		204	20%
		205–228	20% … 10%
		229	10%
		230–254	10% … 0%
		255	0%
4	Scale Y		Y Scale
		0	100%
		1–24	100% … 90%
		25	90%
		26–50	90% … 80%
		51	80%
		52–75	80% … 70%
		76	70%
		77–101	70% … 60%
		102	60%
		103–126	60% … 50%
		127	50%
		128–152	50% … 40%
		153	40%
		154–177	40% … 30%
		178	30%
		179–203	30% … 20%

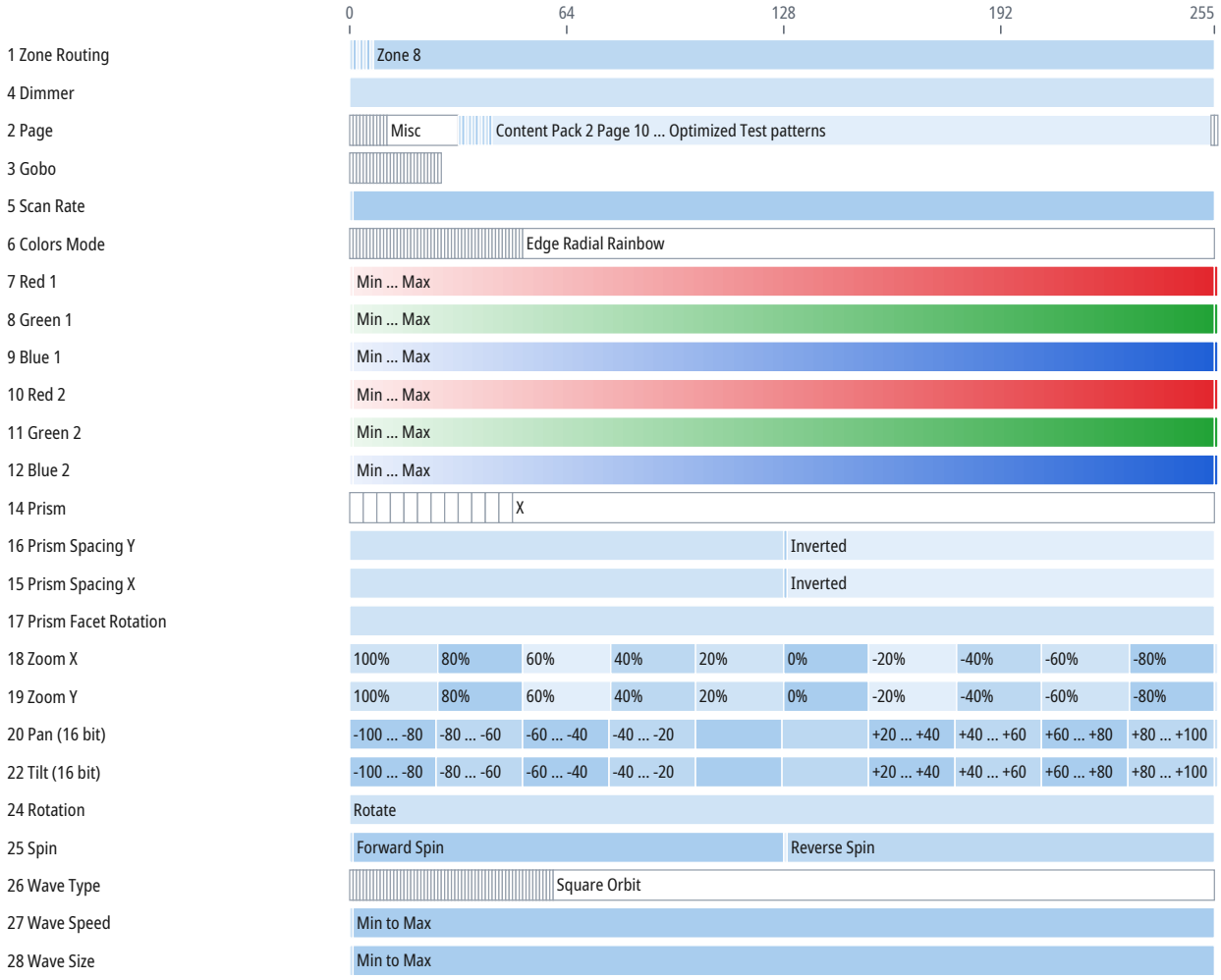
CH	Function	DMX	Description
4	Scale Y (continued)	204	20%
		205–228	20% … 10%
		229	10%
		230–254	10% … 0%
		255	0%
5	Pan		X Offset
		0–126	Left Offset
		127	Center
		128–255	Right Offset
6	Tilt		Y Offset
		0–126	Downward Offset
		127	Center
		128–255	Upwards Offset

Mode Basic Builder

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 4 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Zone Routing	0–6	Zone 1...7
		7–255	Zone 8
2	Page	0	Circles
		1	Lines
		2	Dangerous Curves
		3	Triangles
		4	Squares
		5	Polygons
		6	Points
		7	Abstract
		8	Mixed
		9	Alpha

CH	Function	DMX	Description
2	Page (continued)	10	Mike Dunn
		11–31	Misc
		32	Content Pack 2 Page 1
		33	Content Pack 2 Page 2
		34	Content Pack 2 Page 3
		35	Content Pack 2 Page 4
		36	Content Pack 2 Page 5
		37	Content Pack 2 Page 6
		38	Content Pack 2 Page 7
		39	Content Pack 2 Page 8
		40	Content Pack 2 Page 9
		41	Content Pack 2 Page 10
		42–253	Content Pack 2 Page 10 ... Optimized Test patterns
		254	Optimized Test patterns
		255	Unoptimized test patterns
3	Gobo		When CH 2 is 0:
		0	Circle
		1	Rgb Circle
		2	3 Spine Circle
		3	4 Spine Circle
		4	6 Spine Circle
		5	1 Point In Circle
		6	Color 1 Point In Circle
		7	Color 3 Points In Circle
		8	Color 6 Points In Circle
		9	Fading Circle
		10	Fading Quadrant Circle
		11	Segmented Circle
		12	Segmented Circle With Spines
		13	2 Cocentric Circles
		14	Color 2 Circles
		15	3 Cocentric Circles
		16	Rgb 3 Cocentric Circles 1
		17	Rgb 3 Cocentric Circles 2
		18	Rgb 3 Cocentric Circles 3
		19	3 Circles
		20	Rgb 3 Circles
		21	Traffic Light
		22	4 Circles
		23	Color 4 Circles
		24	Eclipse
		25	Shrinking Circles

CH	Function	DMX	Description
3	Gobo (continued)	26–255	Olympic Rings
			When CH 2 is 1:
		0	Line
		1	Big Line
		2	Big Line With Accents
		3	2 Spine Line
		4	3 Spine Line
		5	5 Spine Line
		6	A Big Fan
		7	V
		8	Color V
		9	Spine V
		10	Dense Spine V
		11	Broken V
		12	N
		13	Broken N
		14	3 Lines
		15	3 Spine Lines
		16	120 Degree Lines
		17	Rgb 120 Degree Lines
		18	Power 3
		19	Big +
		20	Color Big +
		21	X
		22	Color X
		23	Color X 2
		24	Rgb X
		25	Spine X
		26	Xxx
		27	5 Lines
		28	5 Color Lines
		29	Lattice
		30	Rgb Lattice
		31	Pick Up Sticks
		32	Tic Tac Toe Grid
		33	Square Wave
		34	Ramp Wave
		35	Offset Cross
		36–255	Brackets
			When CH 2 is 2:
		0	1 Coil Spiral
		1	2 Coil Spiral

CH	Function	DMX	Description
3	Gobo (continued)	2	3 Coil Spiral
		3	4 Coil Spiral
		4	5 Coil Spiral
		5	3 Broken Arcs
		6	6 Broken Arcs
		7	Simple Arc
		8	Parentheses
		9	Sliced Circle
		10	2 Arcs
		11	Concave Square
		12	The Downward Spiral
		13	Color Downward Spiral
		14	Now In Stereo
		15	Color Now In Stereo
		16	Squiggles
		17	Color Squiggles
		18	Feeling A Little Wavy
		19	Feelin Pretty Wavy
		20	Feeling Really Wavy
		21	Sproing
		22	Color Sproing
		23	Light Mess
		24	Medium Mess
		25	Dense Mess
		26	Dna
		27	Fat Swirl
		28–255	Dangerous Curves Sign
			When CH 2 is 3:
		0	Triangle
		1	Big Triangle
		2	1 Point In Triangle
		3	Concave Triangle
		4	3 Spine Triangle
		5	6 Spine Triangle
		6	2 Cocentric Triangles
		7	Color 2 Cocentric Triangles
		8	Inverted 2 Cocentric Triangles
		9	Color Inverted 2 Cocentric Triangles
		10	Power Triangle
		11	Hourglass
		12	Triforce
		13–255	Rgb Triforce

CH	Function	DMX	Description
3	Gobo (continued)		When CH 2 is 4:
		0	Square
		1	4 Spine Square
		2	8 Spine Square
		3	Fading Quadrant Square
		4	2 Cocentric Boxes
		5	Color 2 Cocentric Boxes
		6	Double Diamond
		7	Color Double Diamond
		8	Squarepocalypse
		9	Squareception
		10	Square Cascade
		11	3 Squares
		12	2 Not Squares
		13	Segmented Square
		14	Breakup Square
		15–255	Looking Into The Box
			When CH 2 is 5:
		0	4 Point Star
		1	8 Spine Star
		2	5 Point Star
		3	10 Spine Star
		4	6 Point Star
		5	12 Spine Star
		6	7 Point Star
		7	14 Spine Star
		8	8 Point Star
		9	16 Spine Star
		10	9 Point Star
		11	18 Spine Star
		12	10 Point Star
		13	20 Spine Star
		14	Pentagon
		15	5 Spine Pentagon
		16	Hexagon
		17	6 Spine Hexagon
		18	Septagon
		19	7 Spine Septagon
		20	Octagon
		21	8 Spine Octagon
		22	Nonagon
		23	9 Spine Nonagon

CH	Function	DMX	Description
3	Gobo (continued)	24	Decagon
		25	10 Spine Decagon
		26	Nested Hexagons
		27	Nested Hexagons 2
		28–255	Hexagonal Hallway
			When CH 2 is 6:
		0	1 Point
		1–8	3...10 Point Line
		9	16 Point Line
		10	Point Pentagon
		11	Point Hexagon
		12	Point Septagon
		13	Point Octagon
		14	Point Nonagon
		15	Point Decagon
		16	Light Point Circle
		17	Rgb Light Point Circle
		18	Medium Point Circle
		19	Rgb Medium Point Circle
		20	Dense Point Circle
		21	Rgb Dense Point Circle
		22	Light Point Triangle
		23	Rgb Light Point Triangle
		24	Medium Point Triangle
		25	Rgb Medium Point Triangle
		26	Dense Point Triangle
		27	Rgb Dense Point Triangle
		28	Light Point Square
		29	Rgb Light Point Square
		30	Medium Point Square
		31	Rgb Medium Point Square
		32	Dense Point Square
		33	Rgb Dense Point Square
		34	Light Point Array
		35	Medium Point Array
		36	Dense Point Array
		37	Rgb Dense Point Array
		38	Light Point Burst
		39	Medium Point Burst
		40	Dense Point Burst
		41	Light Disordered Point Burst
		42	Medium Disordered Point Burst

CH	Function	DMX	Description
3	Gobo (continued)	43	Dense Disordered Point Burst
		44–255	Point Cascade
			When CH 2 is 7:
		0	Shredder
		1	Hex C
		2	Broken Spiral
		3	Color Warp
		4	Sickle Circle
		5	Shards
		6	Shards 2
		7	Shards 3
		8	Shards 4
		9	Spaghetti
		10	Gradient Spaghetti
		11	Big Wave
		12	Starting To Unravel
		13	Infinitely Broken
		14	I Don'T Know What To Call This One
		15	Feathers
		16	Art
		17	Abstract Laundry Pod
		18	Crumpled Triangle
		19	Polar Opposites
		20–255	Bad Hair
			When CH 2 is 8:
		0	Io
		1	Power
		2	Ioi
		3	Deathly Hallows
		4	Circle And Square 1
		5	Circle And Square 2
		6	Circle And Square 3
		7	Circle And Square 4
		8	Circle And Square 5
		9	Circle And Triangles 1
		10	Circle And Triangles 2
		11	Circle And Triangles 3
		12	Circle And A Squiggle
		13	Circle And Squiggles
		14	Bisected Circle
		15	Circle With Two Lines
		16	Circle With Three Lines

CH	Function	DMX	Description
3	Gobo (continued)	17	Copper Core
		18	Ferrite Core
		19	2 Half Circles
		20	Wifi
		21	Circle And 120 Degree Lines
		22	Color Circle And 120 Degree Lines
		23	Triangle And 120 Degree Lines
		24	Color Triangle And 120 Degree Lines
		25	Dmx
		26	Aperture
		27	Throwing Star
		28	Spiral Star
		29	Cracked Square
		30	Jack
		31	Stack Of Pennies
		32–255	Peace
			When CH 2 is 9:
		0	Alpha A
		1	Alpha B
		2	Alpha C
		3	Alpha D
		4	Alpha E
		5	Alpha F
		6	Alpha G
		7	Alpha H
		8	Alpha I
		9	Alpha J
		10	Alpha K
		11	Alpha L
		12	Alpha M
		13	Alpha N
		14	Alpha O
		15	Alpha P
		16	Alpha Q
		17	Alpha R
		18	Alpha S
		19	Alpha T
		20	Alpha U
		21	Alpha V
		22	Alpha W
		23	Alpha X
		24	Alpha Y

CH	Function	DMX	Description
3	Gobo (continued)	25	Alpha Z
		26	Alpha #
		27	Alpha @
		28	Alpha Exclamation
		29	Alpha %
		30	Alpha Ampersand
		31	Alpha Jump
		32	Alpha Party
		33	Alpha Lasers
		34	Alpha Prom
		35	Alpha Happy Birthday
		36	Alpha Congratualtions
		37	Alpha 2018
		38	Alpha 2019
		39	Alpha 2020
		40	Alpha X-Laser
		41–255	Alpha Space
			When CH 2 is 10:
		0–58	Mike Dunn 1...59
		59–255	Mike Dunn 60
			When CH 2 is 11:
		0	Sunrise
		1	Cash
		2	Circuit Traces
		3	Clock Hour Hand
		4	Clock Minute Hand
		5	Clock Second Hand
		6	Lightning
		7	Prism
		8	Splat
		9	Pac Person
		10	Star Eyed
		11	Adam Can'T Draw
		12	Laser Warning
		13	Mr Yuck
		14	Fallout
		15	The Eye
		16	Red Eye
		17	5 Stars
		18	Sunflower
		19	Remulak
		20	Chevrons

CH	Function	DMX	Description
3	Gobo (continued)	21	Arrow
		22	Ghost
		23	Invader
		24	Animal Trap
		25	Cursor
		26	3D Box
		27	Notched Wheel
		28	A Maze Ing
		29	Icicle
		30	Star Of Bethlehem
		31	Shooting Star
		32	The More You Know
		33	Puzzle Piece
		34	Cause Ribbon
		35	Heart
		36	Spiderweb
		37–43	Tetris1...7
		44	Bright Idea
		45	Quackers
		46	Penrose
		47–255	Long Road Ahead
4	Dimmer	0–255	
5	Scan Rate	0	Default
		1–255	Scan Rate
6	Colors Mode		Color Mode
		0	No Color Effect
		1	Color Override
		2	Hard Linear Pre
		3	Hard Linear 90 Degrees Pre
		4	Medium Linear Pre
		5	Medium Linear 90 Degrees Pre
		6	Soft Linear Pre
		7	Soft Linear 90 Degrees Pre
		8	Hard Linear Post
		9	Hard Linear 90 Degrees Post
		10	Medium Linear Post
		11	Medium Linear 90 Degrees Post
		12	Soft Linear Post
		13	Soft Linear 90 Degrees Post
		14	Angular Pre
		15	Angular Post
		16	Hard Center Radial Pre

CH	Function	DMX	Description
6	Colors Mode (continued)	17	Medium Center Radial Pre
		18	Soft Center Radial Pre
		19	Hard Center Radial Post
		20	Medium Center Radial Post
		21	Soft Center Radial Post
		22	Hard Corner Radial
		23	Medium Corner Radial
		24	Soft Corner Radial
		25	Hard Edge Radial
		26	Medium Edge Radial
		27	Soft Edge Radial
		28	Thin Horizontal Bands
		29	Medium Horizontal Bands
		30	Thick Horizontal Bands
		31	Unbalanced Horizontal Bands
		32	Thin Vertical Bands
		33	Medium Vertical Bands
		34	Thick Vertical Bands
		35	Unbalanced Vertical Bands
		36	Thin Radial Bands Pre
		37	Medium Radial Bands Pre
		38	Thick Radial Bands Pre
		39	Thin Radial Bands Post
		40	Medium Radial Bands Post
		41	Thick Radial Bands Post
		42	Single Radial Band Pre
		43	Single Radial Band Post
		44	Horizontal Linear Rainbow
		45	45 Degree Linear Rainbow
		46	Vertical Linear Rainbow
		47	Angular Rainbow
		48	Center Radial Rainbow Pre
		49	Center Radial Rainbow Post
		50	Corner Radial Rainbow
		51–255	Edge Radial Rainbow
7	Red 1	0	Min
		1–254	Min ... Max
		255	Max
8	Green 1	0	Min
		1–254	Min ... Max
		255	Max
9	Blue 1	0	Min

CH	Function	DMX	Description
9	Blue 1 (continued)	1–254	Min ... Max
		255	Max
10	Red 2	0	Min
		1–254	Min ... Max
		255	Max
11	Green 2	0	Min
		1–254	Min ... Max
		255	Max
12	Blue 2	0	Min
		1–254	Min ... Max
		255	Max
14	Prism	0–3	No Prism
		4–7	1x2
		8–11	1x3
		12–15	1x4
		16–19	1x5
		20–23	1x6
		24–27	3x triangle
		28–31	2x2
		32–35	Pentagonal
		36–39	Hexagonal
		40–43	2x3
		44–47	3x2
		48–255	X
15	Prism Spacing X	0–128	Prism Spacing X 1
		129–255	Inverted
16	Prism Spacing Y	0–128	Prism Spacing Y
		129–255	Inverted
17	Prism Facet Rotation	0–255	
18	Zoom X	0–25	100%
		26–50	80%
		51–76	60%
		77–101	40%
		102–127	20%
		128–152	0%
		153–178	-20%
		179–203	-40%
		204–229	-60%
		230–254	-80%
		255	-100%
19	Zoom Y	0–25	100%
		26–50	80%

CH	Function	DMX	Description
19	Zoom Y (continued)	51–76	60%
		77–101	40%
		102–127	20%
		128–152	0%
		153–178	-20%
		179–203	-40%
		204–229	-60%
		230–254	-80%
		255	-100%
20	Pan	0–25	-100 … -80
		25–51	-80 … -60
		51–76	-60 … -40
		76–102	-40 … -20
		102–127	-20 … Center
		128–153	Center … +20
		153–179	+20 … +40
		179–204	+40 … +60
		204–230	+60 … +80
		230–255	+80 … +100
		255	+100
21	Pan Fine	0–255	Fine adjustment of CH 20
22	Tilt	0–25	-100 … -80
		25–51	-80 … -60
		51–76	-60 … -40
		76–102	-40 … -20
		102–127	-20 … Center
		128–153	Center … +20
		153–179	+20 … +40
		179–204	+40 … +60
		204–230	+60 … +80
		230–255	+80 … +100
		255	+100
23	Tilt Fine	0–255	Fine adjustment of CH 22
24	Rotation	0–255	Rotate
25	Spin	0	No Spin Zone
		1–127	Forward Spin
		128	No Spin Zone
		129–255	Reverse Spin
26	Wave Type	0	No Motion Effect
		1	Light Sine Wave (Before Prism)
		2	Medium Sine Wave (Before Prism)
		3	Dense Sine Wave (Before Prism)

CH	Function	DMX	Description
26	Wave Type (continued)	4	Ultra Light Sine Wave (After Prism)
		5	Light Sine Wave (After Prism)
		6	Medium Sine Wave (After Prism)
		7	Dense Sine Wave (After Prism)
		8	Light Ramp Wave (Before Prism)
		9	Medium Ramp Wave (Before Prism)
		10	Dense Ramp Wave (Before Prism)
		11	Ultra Light Ramp Wave (After Prism)
		12	Light Ramp Wave (After Prism)
		13	Medium Ramp Wave (After Prism)
		14	Dense Ramp Wave (After Prism)
		15	Light Triangle Wave (Before Prism)
		16	Medium Triangle Wave (Before Prism)
		17	Dense Triangle Wave (Before Prism)
		18	Light Triangle Wave (After Prism)
		19	Medium Triangle Wave (After Prism)
		20	Dense Triangle Wave (After Prism)
		21–30	Moving Wave 1...10
		31	Radial Sine Wave (Before Prism)
		32	Radial Ramp Wave (Before Prism)
		33	Radial Square Wave (Before Prism)
		34	Radial Sine Wave (After Prism)
		35	Radial Ramp Wave (After Prism)
		36	Radial Square Wave (After Prism)
		37–46	Radial Morph 1...10
		47	Party Mode 1
		48	Party Mode 2
		49	Orbit
		50	Orbit And Rotate
		51	Scroll Left To Right
		52	Scroll Right To Left
		53	Scroll 45
		54	Scroll Up
		55	Scroll Down
		56	Ping Pong Vertical
		57	Ping Pong 45
		58	Ping Pong Horizontal
		59	Triangle Orbit
		60–255	Square Orbit

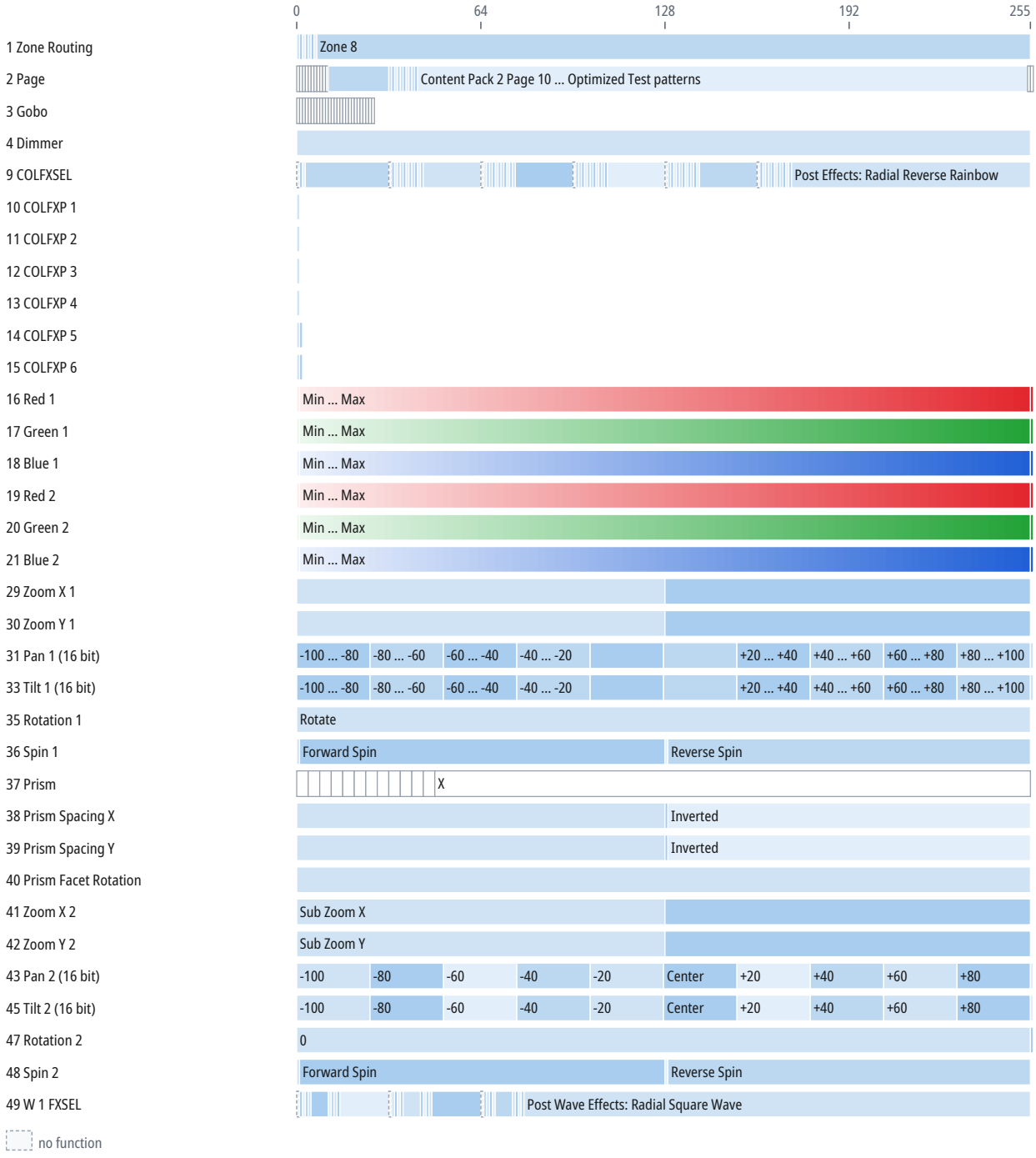
CH	Function	DMX	Description
27	Wave Speed	0	Default
		1–255	Min to Max
28	Wave Size	0	Default
		1–255	Min to Max

Mode Advanced Builder

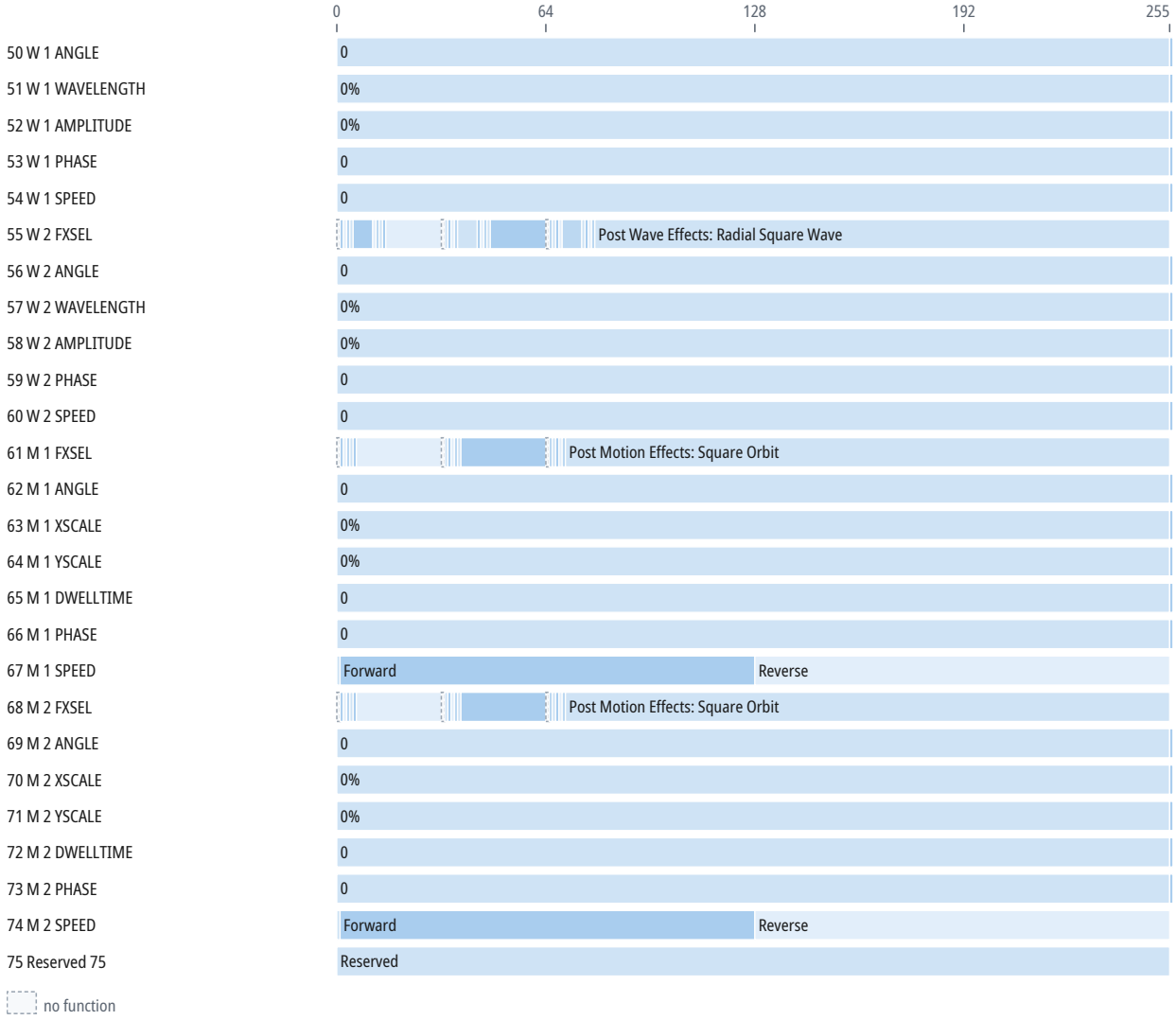
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 4 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Zone Routing		Same as CH 1 in the mode “Basic Builder” (p. 19)
2	Page	0	Circles
		1	Lines
		2	Dangerous Curves
		3	Triangles
		4	Squares
		5	Polygons
		6	Points
		7	Abstract
		8	Mixed
		9	Alpha
		10	Mike Dunn
		11–31	Mike Dunn ... Content Pack 2 Page 1
		32	Content Pack 2 Page 1

CH	Function	DMX	Description
2	Page (continued)	33	Content Pack 2 Page 2
		34	Content Pack 2 Page 3
		35	Content Pack 2 Page 4
		36	Content Pack 2 Page 5
		37	Content Pack 2 Page 6
		38	Content Pack 2 Page 7
		39	Content Pack 2 Page 8
		40	Content Pack 2 Page 9
		41	Content Pack 2 Page 10
		42–253	Content Pack 2 Page 10 … Optimized Test patterns
		254	Optimized Test patterns
		255	Unoptimized test patterns
3	Gobo		Same as CH 3 in the mode “Basic Builder” (p. 20)
4	Dimmer	0–255	
9	COLFXSEL	0	Color Effects: None
		1	Overall Color
		2	HSI Manipulation
		3–31	Pointwise Gradient
		32	Pre 1 Effects: None
		33	Pre 1 Effects: Linear Gradient
		34	Pre 1 Effects: Angular Gradient
		35	Pre 1 Effects: Radial Gradient
		36	Pre 1 Effects: Linear Bands
		37	Pre 1 Effects: Angular Bands
		38	Pre 1 Effects: Radial Bands
		39	Pre 1 Effects: Linear Rainbow
		40	Pre 1 Effects: Linear Reverse Rainbow
		41	Pre 1 Effects: Angular Rainbow
		42	Pre 1 Effects: Angular Reverse Rainbow
		43	Pre 1 Effects: Radial Rainbow
		44–63	Pre 1 Effects: Radial Reverse Rainbow
		64	Pre 2 Effects: None
		65	Pre 2 Effects: Linear Gradient
		66	Pre 2 Effects: Angular Gradient
		67	Pre 2 Effects: Radial Gradient
		68	Pre 2 Effects: Linear Bands
		69	Pre 2 Effects: Angular Bands
		70	Pre 2 Effects: Radial Bands
		71	Pre 2 Effects: Linear Rainbow
		72	Pre 2 Effects: Linear Reverse Rainbow
		73	Pre 2 Effects: Angular Rainbow
		74	Pre 2 Effects: Angular Reverse Rainbow

CH	Function	DMX	Description
9	COLFXSEL (continued)	75	Pre 2 Effects: Radial Rainbow
		76–95	Pre 2 Effects: Radial Reverse Rainbow
		96	Mid 1 Effects: None
		97	Mid 1 Effects: Linear Gradient
		98	Mid 1 Effects: Angular Gradient
		99	Mid 1 Effects: Radial Gradient
		100	Mid 1 Effects: Linear Bands
		101	Mid 1 Effects: Angular Bands
		102	Mid 1 Effects: Radial Bands
		103	Mid 1 Effects: Linear Rainbow
		104	Mid 1 Effects: Linear Reverse Rainbow
		105	Mid 1 Effects: Angular Rainbow
		106	Mid 1 Effects: Angular Reverse Rainbow
		107	Mid 1 Effects: Radial Rainbow
		108–127	Mid 1 Effects: Radial Reverse Rainbow
		128	Mid 2 Effects: None
		129	Mid 2 Effects: Linear Gradient
		130	Mid 2 Effects: Angular Gradient
		131	Mid 2 Effects: Radial Gradient
		132	Mid 2 Effects: Linear Bands
		133	Mid 2 Effects: Angular Bands
		134	Mid 2 Effects: Radial Bands
		135	Mid 2 Effects: Linear Rainbow
		136	Mid 2 Effects: Linear Reverse Rainbow
		137	Mid 2 Effects: Angular Rainbow
		138	Mid 2 Effects: Angular Reverse Rainbow
		139	Mid 2 Effects: Radial Rainbow
		140–159	Mid 2 Effects: Radial Reverse Rainbow
		160	Post Effects: None
		161	Post Effects: Linear Gradient
		162	Post Effects: Angular Gradient
		163	Post Effects: Radial Gradient
		164	Post Effects: Linear Bands
		165	Post Effects: Angular Bands
		166	Post Effects: Radial Bands
		167	Post Effects: Linear Rainbow
		168	Post Effects: Linear Reverse Rainbow
		169	Post Effects: Angular Rainbow
		170	Post Effects: Angular Reverse Rainbow
		171	Post Effects: Radial Rainbow
		172–255	Post Effects: Radial Reverse Rainbow
10	COLFXP 1		When CH 9 is 2:

CH	Function	DMX	Description
10	COLFXP 1 (continued)	0–255	Hue Offset
11	COLFXP 2		When CH 9 is 2:
		0–255	Saturation Offset
12	COLFXP 3		When CH 9 is 2:
		0–255	Intensity Offset
13	COLFXP 4		When CH 9 is 34:
		0–255	Repeat
			When CH 9 is 36–38:
		0–255	Band 2 Width
			When CH 9 is 41–42:
		0–255	Repeat
14	COLFXP 5		When CH 9 is 33–35:
		0	Default
		1–255	Fade Offset
			When CH 9 is 36–38:
		0	Default
		1–255	Band Offset
			When CH 9 is 39–40:
		0	Default
		1–255	Fade Offset
			When CH 9 is 41–44:
		0–255	Angle Offset
15	COLFXP 6		When CH 9 is 33–44:
		0	Default
		1–255	Fade Offset
16	Red 1		Same as CH 7 in the mode “Basic Builder” (p. 29)
17	Green 1		Same as CH 8 in the mode “Basic Builder” (p. 29)
18	Blue 1		Same as CH 9 in the mode “Basic Builder” (p. 29)
19	Red 2		Same as CH 10 in the mode “Basic Builder” (p. 30)
20	Green 2		Same as CH 11 in the mode “Basic Builder” (p. 30)
21	Blue 2		Same as CH 12 in the mode “Basic Builder” (p. 30)
29	Zoom X 1	0–255	Zoom X
30	Zoom Y 1	0–255	Zoom Y
31	Pan 1	0–25	-100 ... -80
		25–51	-80 ... -60
		51–76	-60 ... -40
		76–102	-40 ... -20
		102–127	-20 ... Center
		128–153	Center ... +20
		153–179	+20 ... +40
		179–204	+40 ... +60
		204–230	+60 ... +80

CH	Function	DMX	Description
31	Pan 1 (continued)	230–255	+80 … +100
		255	+100
32	Pan 1 Fine	0–255	Fine adjustment of CH 31
33	Tilt 1	0–25	-100 … -80
		25–51	-80 … -60
		51–76	-60 … -40
		76–102	-40 … -20
		102–127	-20 … Center
		128–153	Center … +20
		153–179	+20 … +40
		179–204	+40 … +60
		204–230	+60 … +80
		230–255	+80 … +100
		255	+100
34	Tilt 1 Fine	0–255	Fine adjustment of CH 33
35	Rotation 1	0–255	Rotate
36	Spin 1	0	No Spin Zone
		1–127	Forward Spin
		128	No Spin Zone
		129–255	Reverse Spin
37	Prism		Same as CH 14 in the mode “Basic Builder” (p. 30)
38	Prism Spacing X		Same as CH 15 in the mode “Basic Builder” (p. 30)
39	Prism Spacing Y		Same as CH 16 in the mode “Basic Builder” (p. 30)
40	Prism Facet Rotation	0–255	
41	Zoom X 2	0–255	Sub Zoom X
42	Zoom Y 2	0–255	Sub Zoom Y
43	Pan 2	0–25	-100
		25–51	-80
		51–76	-60
		76–102	-40
		102–127	-20
		128–153	Center
		153–179	+20
		179–204	+40
		204–230	+60
		230–255	+80
		255	+100
44	Pan 2 Fine	0–255	Fine adjustment of CH 43
45	Tilt 2	0–25	-100
		25–51	-80
		51–76	-60
		76–102	-40

CH	Function	DMX	Description
45	Tilt 2 (continued)	102–127	-20
		128–153	Center
		153–179	+20
		179–204	+40
		204–230	+60
		230–255	+80
		255	+100
46	Tilt 2 Fine	0–255	Fine adjustment of CH 45
47	Rotation 2	0–254	0
		255	360
48	Spin 2	0	No Spin Zone
		1–127	Forward Spin
		128	No Spin Zone
		129–255	Reverse Spin
49	W 1 FXSEL	0	Pre Wave Effects: None
		1	Pre Wave Effects: Linear Sine Wave
		2	Pre Wave Effects: Linear Ramp Wave
		3	Pre Wave Effects: Linear Ramp Reverse
		4	Pre Wave Effects: Linear Triangle
		5–10	Pre Wave Effects: Linear Square Wave
		11	Pre Wave Effects: Radial Sine Wave
		12	Pre Wave Effects: Radial Ramp Wave
		13	Pre Wave Effects: Radial Ramp Reverse
		14	Pre Wave Effects: Radial Triangle
		15–31	Pre Wave Effects: Radial Square Wave
		32	Mid Wave Effects: None
		33	Mid Wave Effects: Linear Sine Wave
		34	Mid Wave Effects: Linear Ramp Wave
		35	Mid Wave Effects: Linear Ramp Reverse
		36	Mid Wave Effects: Linear Triangle
		37–42	Mid Wave Effects: Linear Square Wave
		43	Mid Wave Effects: Radial Sine Wave
		44	Mid Wave Effects: Radial Ramp Wave
		45	Mid Wave Effects: Radial Ramp Reverse
		46	Mid Wave Effects: Radial Triangle
		47–63	Mid Wave Effects: Radial Square Wave
		64	Post Wave Effects: None
		65	Post Wave Effects: Linear Sine Wave
		66	Post Wave Effects: Linear Ramp Wave
		67	Post Wave Effects: Linear Ramp Reverse
		68	Post Wave Effects: Linear Triangle
		69–74	Post Wave Effects: Linear Square Wave

CH	Function	DMX	Description
49	W 1 FXSEL (continued)	75	Post Wave Effects: Radial Sine Wave
		76	Post Wave Effects: Radial Ramp Wave
		77	Post Wave Effects: Radial Ramp Reverse
		78	Post Wave Effects: Radial Triangle
		79–255	Post Wave Effects: Radial Square Wave
50	W 1 ANGLE		Wave 1 Axis Angle
		0–254	0
		255	360
51	W 1 WAVELENGTH		Wave 1 Wavelength
		0–254	0%
		255	100%
52	W 1 AMPLITUDE		Wave 1 Amplitude
		0–254	0%
		255	100%
53	W 1 PHASE		Wave 1 Phase Offset
		0–254	0
		255	360
54	W 1 SPEED		Wave 1 Speed
		0–254	0
		255	100
55	W 2 FXSEL	0	Pre Wave Effects: None
		1	Pre Wave Effects: Linear Sine Wave
		2	Pre Wave Effects: Linear Ramp Wave
		3	Pre Wave Effects: Linear Ramp Reverse
		4	Pre Wave Effects: Linear Triangle
		5–10	Pre Wave Effects: Linear Square Wave
		11	Pre Wave Effects: Radial Sine Wave
		12	Pre Wave Effects: Radial Ramp Wave
		13	Pre Wave Effects: Radial Ramp Reverse
		14	Pre Wave Effects: Radial Triangle
		15–31	Pre Wave Effects: Radial Square Wave
		32	Mid Wave Effects: None
		33	Mid Wave Effects: Linear Sine Wave
		34	Mid Wave Effects: Linear Ramp Wave
		35	Mid Wave Effects: Linear Ramp Reverse
		36	Mid Wave Effects: Linear Triangle
		37–42	Mid Wave Effects: Linear Square Wave
		43	Mid Wave Effects: Radial Sine Wave
		44	Mid Wave Effects: Radial Ramp Wave
		45	Mid Wave Effects: Radial Ramp Reverse
		46	Mid Wave Effects: Radial Triangle
		47–63	Mid Wave Effects: Radial Square Wave

CH	Function	DMX	Description
55	W 2 FXSEL (continued)	64	Post Wave Effects: None
		65	Post Wave Effects: Linear Sine Wave
		66	Post Wave Effects: Linear Ramp Wave
		67	Post Wave Effects: Linear Ramp Reverse
		68	Post Wave Effects: Linear Triangle
		69–74	Post Wave Effects: Linear Square Wave
		75	Post Wave Effects: Radial Sine Wave
		76	Post Wave Effects: Radial Ramp Wave
		77	Post Wave Effects: Radial Ramp Reverse
		78	Post Wave Effects: Radial Triangle
		79–255	Post Wave Effects: Radial Square Wave
56	W 2 ANGLE		Wave 2 Axis Angle
		0–254	0
		255	360
57	W 2 WAVELENGTH		Wave 2 Wavelength
		0–254	0%
		255	100%
58	W 2 AMPLITUDE		Wave 2 Amplitude
		0–254	0%
		255	100%
59	W 2 PHASE		Wave 2 Phase Offset
		0–254	0
		255	360
60	W 2 SPEED		Wave 2 Speed
		0–254	0
		255	100
61	M 1 FXSEL	0	Pre Motion Effects: None
		1	Pre Motion Effects: Elliptical Orbit
		2	Pre Motion Effects: Elliptical Orbit + Rotate
		3	Pre Motion Effects: Linear Scroll
		4	Pre Motion Effects: Linear Ping Pong
		5	Pre Motion Effects: Triangle Orbit
		6–31	Pre Motion Effects: Square Orbit
		32	Mid Motion Effects: None
		33	Mid Motion Effects: Elliptical Orbit
		34	Mid Motion Effects: Elliptical Orbit + Rotate
		35	Mid Motion Effects: Linear Scroll
		36	Mid Motion Effects: Linear Ping Pong
		37	Mid Motion Effects: Triangle Orbit
		38–63	Mid Motion Effects: Square Orbit
		64	Post Motion Effects: None
		65	Post Motion Effects: Elliptical Orbit

CH	Function	DMX	Description
61	M 1 FXSEL (continued)	66	Post Motion Effects: Elliptical Orbit + Rotate
		67	Post Motion Effects: Linear Scroll
		68	Post Motion Effects: Linear Ping Pong
		69	Post Motion Effects: Triangle Orbit
		70–255	Post Motion Effects: Square Orbit
62	M 1 ANGLE		Motion 1 Angle
		0–254	0
		255	360
63	M 1 XSCALE		Motion 1 X Scale
		0–254	0%
		255	100%
64	M 1 YSCALE		Motion 1 Y Scale
		0–254	0%
		255	100%
65	M 1 DWELLTIME		Motion 1 Dwell Time
		0–254	0
		255	100
66	M 1 PHASE		Motion 1 Phase
		0–254	0
		255	360
67	M 1 SPEED		Motion 1 Speed
		0	Stopped
		1–127	Forward
		128–255	Reverse
68	M 2 FXSEL	0	Pre Motion Effects: None
		1	Pre Motion Effects: Elliptical Orbit
		2	Pre Motion Effects: Elliptical Orbit + Rotate
		3	Pre Motion Effects: Linear Scroll
		4	Pre Motion Effects: Linear Ping Pong
		5	Pre Motion Effects: Triangle Orbit
		6–31	Pre Motion Effects: Square Orbit
		32	Mid Motion Effects: None
		33	Mid Motion Effects: Elliptical Orbit
		34	Mid Motion Effects: Elliptical Orbit + Rotate
		35	Mid Motion Effects: Linear Scroll
		36	Mid Motion Effects: Linear Ping Pong
		37	Mid Motion Effects: Triangle Orbit
		38–63	Mid Motion Effects: Square Orbit
		64	Post Motion Effects: None
		65	Post Motion Effects: Elliptical Orbit
		66	Post Motion Effects: Elliptical Orbit + Rotate
		67	Post Motion Effects: Linear Scroll

CH	Function	DMX	Description
68	M 2 FXSEL (continued)	68	Post Motion Effects: Linear Ping Pong
		69	Post Motion Effects: Triangle Orbit
		70–255	Post Motion Effects: Square Orbit
69	M 2 ANGLE		Motion 2 Angle
		0–254	0
		255	360
70	M 2 XSCALE		Motion 2 X Scale
		0–254	0%
		255	100%
71	M 2 YSCALE		Motion 2 Y Scale
		0–254	0%
		255	100%
72	M 2 DWELLTIME		Motion 2 Dwell Time
		0–254	0
		255	100
73	M 2 PHASE		Motion 2 Phase
		0–254	0
		255	360
74	M 2 SPEED		Motion 2 Speed
		0	Stopped
		1–127	Forward
		128–255	Reverse
75	Reserved 75	0–255	Reserved

CH 75–85: 11 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 75); the table below gives each cell's channel numbers.

Cell	Reserved	Cell	Reserved	Cell	Reserved	Cell	Reserved	Cell	Reserved	Cell	Reserved
1	75	2	76	3	77	4	78	5	79	6	80
7	81	8	82	9	83	10	84	11	85		

10 Technical specifications

Parameter	Value
Movement	
Pan	200°
Tilt	200°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45
RDM	yes (manufacturer ID 0x584C, device model ID 0x0001)
Electrical	
Power connectors	powerCONTRUE1TOP IN
Dimensions and construction	
Weight	5 kg
Operating environment	
Operating temperature	0 to 40 °C

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.

Problem	Remedy
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.