DMX REFERENCE

Vizi Beam RXOne

ADJ Vizi RXOne

ADJ



Manufacturer	ADJ
GDTF file	ADJ_Vizi_Beam_RXONE_62257.gdtf
GDTF revision	rev2.0 · 2024-04-20
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1 About this manual

This document describes the ADJ Vizi RXOne by ADJ. It was compiled from the GDTF file ADJ_Vizi_Beam_RXONE_62257.gdtf from the GDTF-Share library.

File revision: “rev2.0”.

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 ADJ; 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	9.2 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
15 Channel	15	34	1, 16, 31, 46, ...
17 Channel	17	30	1, 18, 35, 52, ...

No light? Check these channels

- 15 Channel: CH 5 Shutter at 8–15 or 248–255 “open”; CH 6 Dimmer above 0
- 17 Channel: CH 7 Shutter at 8–15 or 248–255 “open”; CH 8 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.

⚠ 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

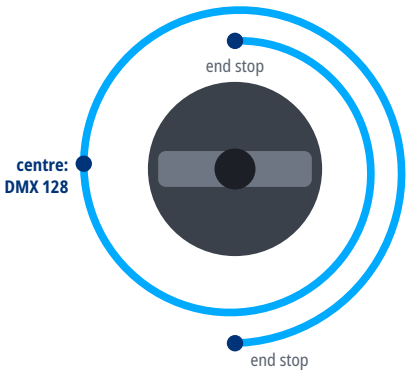
Description in the GDTF file

“Part of ADJ’s popular Vizi Series, the Vizi Beam RXONE, is a compact and quick moving head with a potent Osram® Sirius HRI 100W discharge long life lamp (6,000 hrs.) that produces a super sharp 3-degree beam of light that travels up to 100 meters. This 16-bit, nimble mover also includes a frost filter to give the beam a wash effect of 21-degrees making this fixture very useful for a variety of portable and permanent applications. Under the hood the Vizi Beam RXONE boasts a 16-facet prism to break apart the solid beam into 16 mini beams, 14 color + white and 15 static, fixed GOBOs. The RXONE has 2 DMX modes (15 or 17 channel mode), 3-pin DMX In/Out, Locking power In/Out connections plus a low power consumption of only 199W at max power.”

Range of movement

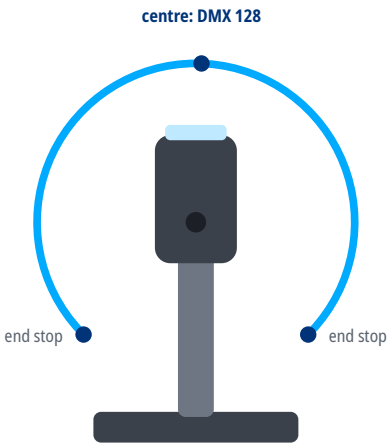
Pan 540°

top view



Tilt 270°

side view



5 Installation

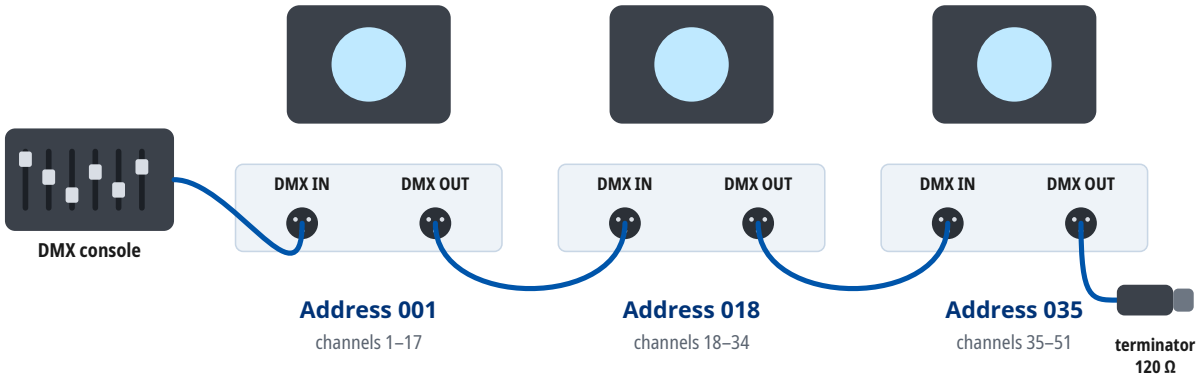
⚠ **WARNING**

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 9.2 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 17 Channel: every unit occupies 17 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

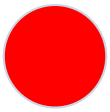
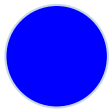
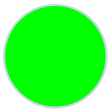
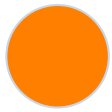
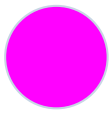
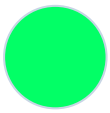
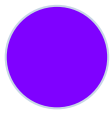
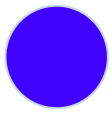
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “17 Channel”: 17.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “17 Channel”, you can use, for example, the start addresses 1, 18, 35, 52.
- 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

	15 Channel 15 channels	17 Channel 17 channels
Pan / Tilt	1, 2	1, 3
Pan / Tilt resolution	8 bit	16 bit
Dimmer	6	8
Shutter / strobe	5	7
Color wheel	3	5
Gobo wheel	4	6
Prism	7, 8	9, 10
Frost	9	11
Effects / macros	7	9

Color wheel

1.
   Color 1: white
   DMX 0–2
2. 
   Red
   DMX 5–6
3. 
   Blue
   DMX 9–10
4. 
   Green
   DMX 13–14
5.
   Light yellow
   DMX 17–18
6. 
   Orange
   DMX 22–23
7. 
   Magenta
   DMX 26–27
8. 
   Light blue
   DMX 30–31
9.
   Yellow
   DMX 34–35
10. 
    Ligth green
    DMX 38–39
11. 
    Purple
    DMX 43–44
12. 
    Pink
    DMX 47–48
13.
    Medium yellow
    DMX 51–52
14.
    CTB
    DMX 55–56
15. 
    UV
    DMX 59–60

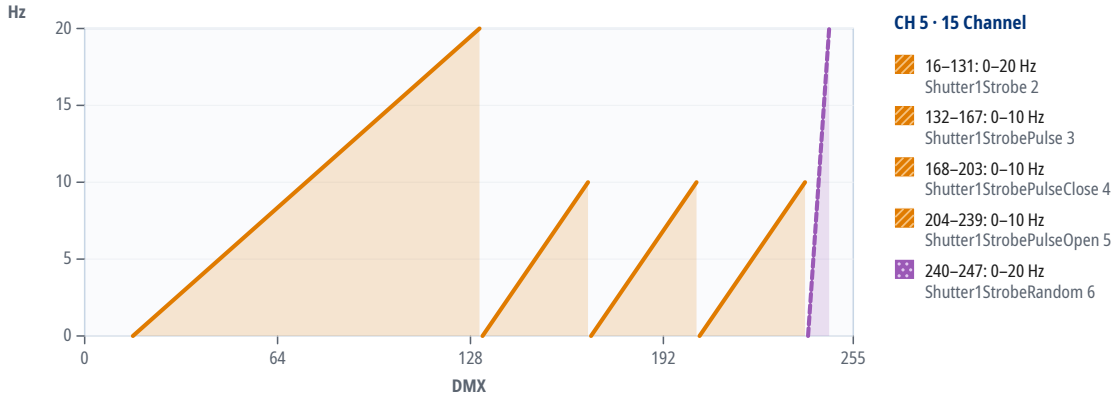
Gobo wheel

1.
   Gobo 1: open
   DMX 0–3
2. 
   Gobo 1
   DMX 4–7
3. 
   Gobo 1: Gobo 2
   DMX 8–11
4. 
   Gobo 1: Gobo 3
   DMX 12–15
5. 
   Gobo 1: Gobo 4
   DMX 16–19
6. 
   Gobo 1: Gobo 5
   DMX 20–23
7. 
   Gobo 1: Gobo 6
   DMX 24–27
8. 
   Gobo 1: Gobo 7
   DMX 28–31
9. 
   Gobo 1: Gobo 8
   DMX 32–35
10. 
    Gobo 1: Gobo 9
    DMX 36–39
11. 
    Gobo 10
    DMX 40–43
12. 
    Gobo 11
    DMX 44–47
13. 
    Gobo 12
    DMX 48–51
14. 
    Gobo 13
    DMX 52–55
15. 
    Gobo 14
    DMX 56–59
16. 
    Gobo 15
    DMX 60–64

Prism

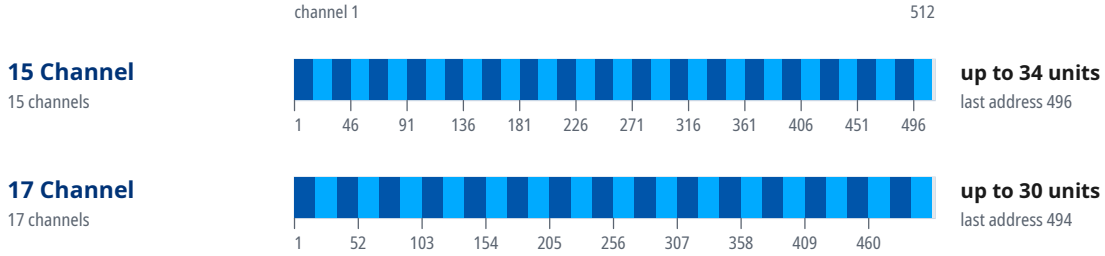
1.
   Wheel Slot 1
   DMX 0–7
2. 
   16 facets
   16-facet rotating circular prism
   DMX 8–128

Strobe rate



9 DMX channels

Units in one DMX universe



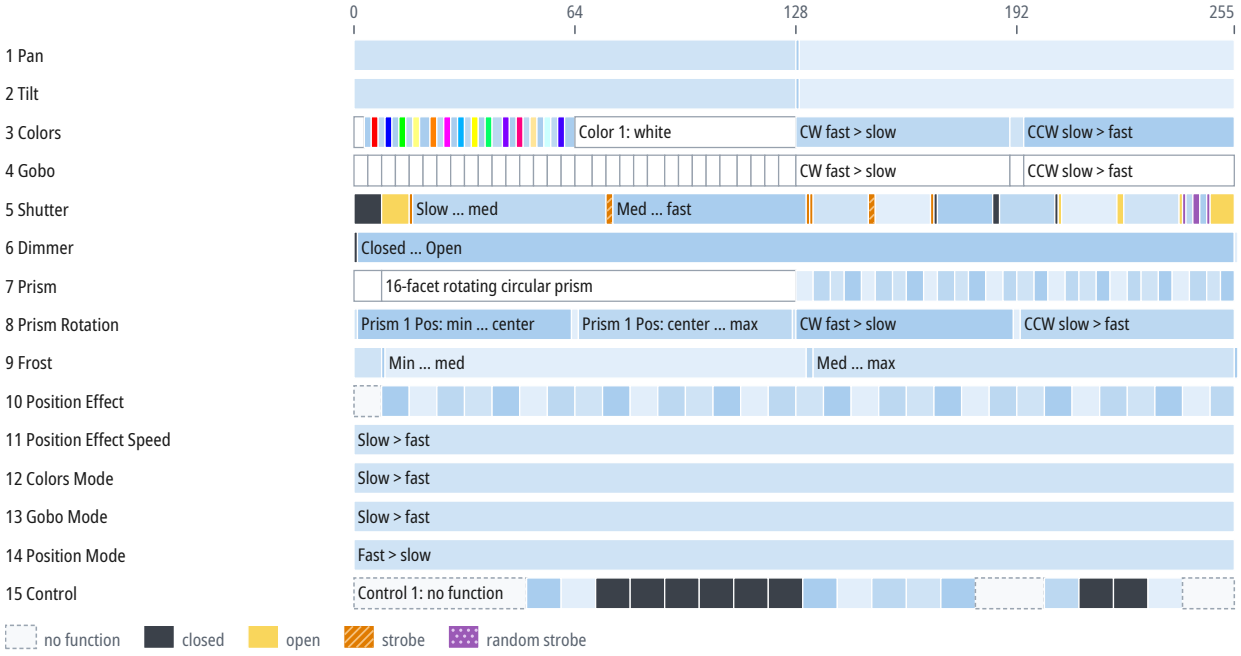
Start addresses of 20 units in the mode “17 Channel”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	86	11	171	16	256
2	18	7	103	12	188	17	273
3	35	8	120	13	205	18	290
4	52	9	137	14	222	19	307
5	69	10	154	15	239	20	324

Mode 15 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 5 Shutter at 8–15 or 248–255 “open”; CH 6 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Home
		129–255	Pan 1
2	Tilt	0–127	Tilt 1
		128	Home
		129–255	Tilt 1
3	Colors	0–2	Color 1: white
		3–4	White ... red
		5–6	Red
		7–8	Red ... blue
		9–10	Blue
		11–12	Blue ... green
		13–14	Green
		15–16	Green ... light yellow
		17–18	Light yellow
		19–21	Light yellow ... orange
		22–23	Orange
		24–25	Orange ... magenta
		26–27	Magenta
		28–29	Magenta ... light blue

CH	Function	DMX	Description
3	Colors (continued)	30–31	Light blue
		32–33	Light blue ... yellow
		34–35	Yellow
		36–37	Yellow ... ligth green
		38–39	Ligth green
		40–42	Ligth green ... purple
		43–44	Purple
		45–46	Purple ... pink
		47–48	Pink
		49–50	Pink ... medium yellow
		51–52	Medium yellow
		53–54	Medium yellow ... CTB
		55–56	CTB
		57–58	CTB ... UV
		59–60	UV
		61–63	Color 1 1
		64–127	Color 1: white
		128–189	CW fast > slow
		190–193	No rotation
		194–255	CCW slow > fast
4	Gobo	0–3	Gobo 1: open
		4–7	Gobo 1
		8–11	Gobo 1: Gobo 2
		12–15	Gobo 1: Gobo 3
		16–19	Gobo 1: Gobo 4
		20–23	Gobo 1: Gobo 5
		24–27	Gobo 1: Gobo 6
		28–31	Gobo 1: Gobo 7
		32–35	Gobo 1: Gobo 8
		36–39	Gobo 1: Gobo 9
		40–43	Gobo 10
		44–47	Gobo 11
		48–51	Gobo 12
		52–55	Gobo 13
		56–59	Gobo 14
		60–63	Gobo 15
		64–68	Gobo 1 Wheel Shake: Gobo 1
		69–72	Gobo 1 Wheel Shake: Gobo 2
		73–76	Gobo 1 Wheel Shake: Gobo 3
		77–80	Gobo 1 Wheel Shake: Gobo 4
		81–84	Gobo 1 Wheel Shake: Gobo 5
		85–89	Gobo 1 Wheel Shake: Gobo 6

CH	Function	DMX	Description
4	Gobo (continued)	90–93	Gobo 1 Wheel Shake: Gobo 7
		94–97	Gobo 1 Wheel Shake: Gobo 8
		98–101	Gobo 1 Wheel Shake: Gobo 9
		102–105	Gobo 1 Wheel Shake: Gobo 10
		106–110	Gobo 1 Wheel Shake: Gobo 11
		111–114	Gobo 1 Wheel Shake: Gobo 12
		115–118	Gobo 1 Wheel Shake: Gobo 13
		119–122	Gobo 1 Wheel Shake: Gobo 14
		123–127	Gobo 1 Wheel Shake: Gobo 15
		128–189	CW fast > slow
		190–193	No rotation
		194–255	CCW slow > fast
5	Shutter	0–7	Shutter 1: closed
		8–15	Shutter 1: open
		16	Shutter 1 Strobe: slow
		17–72	Slow ... med
		73–74	Med
		75–130	Med ... fast
		131	Shutter 1 Strobe: fast
		132	Pulse slow
		133–148	Pulse slow ... pulse med
		149–150	Pulse med
		151–166	Pulse med ... pulse fast
		167	Pulse fast
		168	Pulse Close slow
		169–184	Pulse Close slow ... Pulse Close med
		185–186	Pulse Close med
		187–202	Pulse Close med ... Pulse Close fast
		203	Pulse Close fast
		204	Pulse Open slow
		205–220	Pulse Open slow ... Pulse Open med
		221–222	Pulse Open med
		223–238	Pulse Open med ... Pulse Open fast
		239	Pulse Open fast
		240	RND slow
		241–242	RND slow ... RND med
		243–244	RND med
		245–246	RND med ... RND fast
		247	RND fast
		248–255	Shutter 1: open
6	Dimmer	0	Closed
		1–254	Closed ... Open

CH	Function	DMX	Description
6	Dimmer (continued)	255	Open
7	Prism	0–7	Wheel Slot 1
		8–127	16-facet rotating circular prism
		128–132	Prism Rotation Effect 1
		133–137	Prism Rotation Effect 2
		138–141	Prism Rotation Effect 3
		142–146	Prism Rotation Effect 4
		147–150	Prism Rotation Effect 5
		151–155	Prism Rotation Effect 6
		156–159	Prism Rotation Effect 7
		160–164	Prism Rotation Effect 8
		165–168	Prism Rotation Effect 9
		169–173	Prism Rotation Effect 10
		174–177	Prism Rotation Effect 11
		178–182	Prism Rotation Effect 12
		183–187	Prism Rotation Effect 13
		188–191	Prism Rotation Effect 14
		192–196	Prism Rotation Effect 15
		197–200	Prism Rotation Effect 16
		201–205	Prism Rotation Effect 17
		206–209	Prism Rotation Effect 18
		210–214	Prism Rotation Effect 19
		215–218	Prism Rotation Effect 20
		219–223	Prism Rotation Effect 21
		224–227	Prism Rotation Effect 22
		228–232	Prism Rotation Effect 23
		233–236	Prism Rotation Effect 24
		237–241	Prism Rotation Effect 25
		242–246	Prism Rotation Effect 26
		247–250	Prism Rotation Effect 27
		251–255	Prism Rotation Effect 28
8	Prism Rotation	0	Prism 1 Pos: min
		1–62	Prism 1 Pos: min ... center
		63–64	Prism 1 Pos: center
		65–126	Prism 1 Pos: center ... max
		127	Prism 1 Pos: max
		128–190	CW fast > slow
		191–192	No rotation
		193–255	CCW slow > fast
9	Frost	0–7	No Frost
		8	Min
		9–130	Min ... med

CH	Function	DMX	Description
9	Frost (continued)	131–132	Med
		133–254	Med ... max
		255	Max
10	Position Effect	0–7	Off
		8–15	Macro 1
		16–23	Macro 2
		24–31	Macro 3
		32–39	Macro 4
		40–47	Macro 5
		48–55	Macro 6
		56–63	Macro 7
		64–71	Macro 8
		72–79	Macro 9
		80–87	Macro 10
		88–95	Macro 11
		96–103	Macro 12
		104–111	Macro 13
		112–119	Macro 14
		120–127	Macro 15
		128–135	Macro 16
		136–143	Macro 17
		144–151	Macro 18
		152–159	Macro 19
		160–167	Macro 20
		168–175	Macro 21
		176–183	Macro 22
		184–191	Macro 23
		192–199	Macro 24
		200–207	Macro 25
		208–215	Macro 26
		216–223	Macro 27
		224–231	Macro 28
		232–239	Macro 29
		240–247	Macro 30
		248–255	Macro 31
11	Position Effect Speed	0–255	Slow > fast
12	Colors Mode	0–255	Slow > fast
13	Gobo Mode	0–255	Slow > fast
14	Position Mode	0–255	Fast > slow
15	Control	0–49	Control 1: no function
		50–59	Pan/Tilt Fast Mode
		60–69	Pan/Tilt Normal Mode

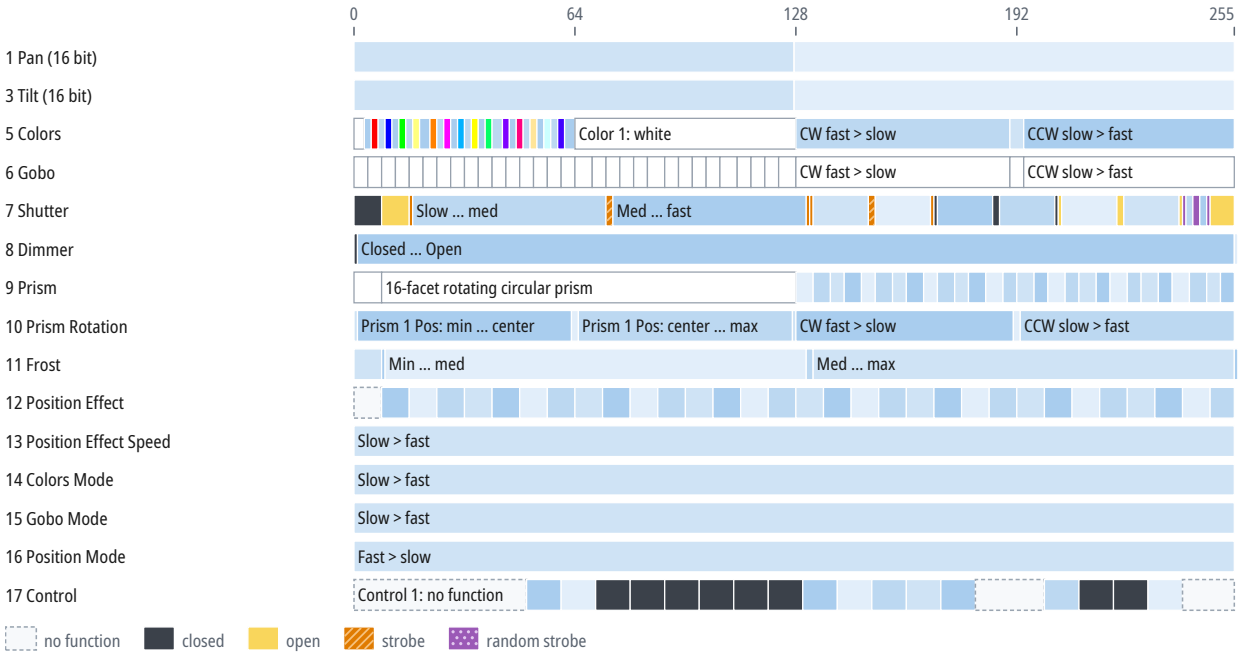
CH	Function	DMX	Description
15	Control (continued)	70–79	Enable Blackout with Pan/Tilt movements
		80–89	Disable Blackout with Pan/Tilt movements
		90–99	Enable Blackout with Color change
		100–109	Disable Blackout with Color change
		110–119	Enable Blackout with Gobo change
		120–129	Disable Blackout with Gobo change
		130–139	Lamp On
		140–149	Pan/Tilt Motor Reset
		150–159	Color Motor Reset
		160–169	Gobo Motor Reset
		170–179	Shutter/Prism/R/Frost Reset
		180–199	Control 1: no function
		200–209	Fixture Global Reset
		210–219	Enable Blackout with P/T/Gobo/Color change
		220–229	Disable Blackout with P/T/Gobo/Color change
		230–239	Lamp Off
		240–255	Control 1: no function

Mode 17 Channel

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 7 Shutter at 8–15 or 248–255 “open”; CH 8 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 8 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Home
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt 1
		128	Home
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Colors		Same as CH 3 in the mode “15 Channel” (p. 10)
6	Gobo		Same as CH 4 in the mode “15 Channel” (p. 11)
7	Shutter		Same as CH 5 in the mode “15 Channel” (p. 12)
8	Dimmer		Same as CH 6 in the mode “15 Channel” (p. 12)
9	Prism		Same as CH 7 in the mode “15 Channel” (p. 13)
10	Prism Rotation		Same as CH 8 in the mode “15 Channel” (p. 13)
11	Frost		Same as CH 9 in the mode “15 Channel” (p. 13)
12	Position Effect		Same as CH 10 in the mode “15 Channel” (p. 14)
13	Position Effect Speed	0–255	Slow > fast
14	Colors Mode	0–255	Slow > fast
15	Gobo Mode	0–255	Slow > fast
16	Position Mode	0–255	Fast > slow
17	Control		Same as CH 15 in the mode “15 Channel” (p. 14)

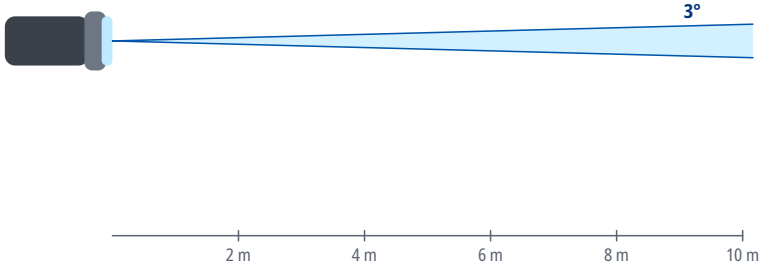
10 Technical specifications

Parameter	Value
Light	
Light source	discharge lamp
Lamp power	100 W
Luminous flux	16,436.5 lm
Color temperature	9,000 K
Color rendering index (CRI)	100
Optics	
Beam angle	3°
Movement	
Pan	540°
Tilt	270°
Dimensions and construction	
Weight	9.2 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0–20 Hz
Prism rotation	up to 180 °/s (30 rpm)

Spot diameter



Distance	Ø 3°
2 m	0.1 m
4 m	0.21 m
6 m	0.31 m
8 m	0.42 m
10 m	0.52 m
15 m	0.79 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.