DMX REFERENCE

AB06 RGBW Par

ATON

Manufacturer	ATON
GDTF file	ATON_AB06_RGBW_Par_69664.gdtf
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1 About this manual

This document describes the AB06 RGBW Par by ATON. It was compiled from the GDTF file ATON_AB06_RGBW_Par_69664.gdtf from the GDTF-Share library.

File revision: “Created by Anthony G. at Christie Lites, Uploaded to GDTF Share.”.

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 ATON; 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

DMX modes

Mode	Channels	Units in one universe	First start addresses
8 Channel	8	64	1, 9, 17, 25, ...
11 Channel	11	46	1, 12, 23, 34, ...
5 Channel	5	102	1, 6, 11, 16, ...
3 Channel	3	170	1, 4, 7, 10, ...
2 Channel	2	256	1, 3, 5, 7, ...

No light? Check these channels

- 8 Channel: CH 2 Shutter at 0–9, 190–199 or 250–255 “open”
- 11 Channel: CH 2 Shutter at 0–9, 190–199 or 250–255 “open”



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.

4 Product description

Description in the GDTF file

“4-in-1 RGBW LED Par Light - 70W Battery Powered, Versatile Lighting”

5 Installation

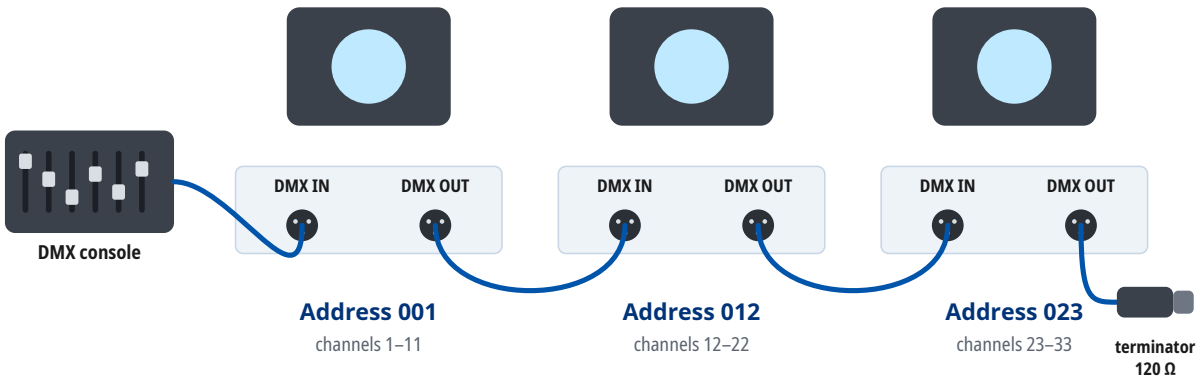
⚠ WARNING

- 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.
- 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 11 Channel: every unit occupies 11 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

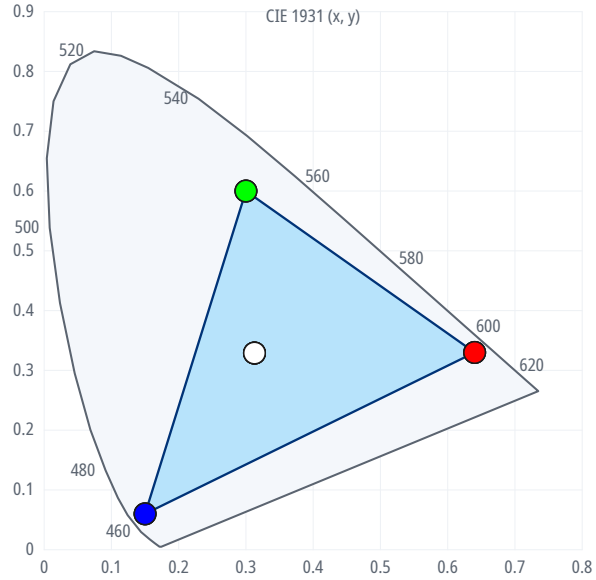
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “11 Channel”: 11.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “11 Channel”, you can use, for example, the start addresses 1, 12, 23, 34.
- 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

	8 Channel 8 channels	11 Channel 11 channels	5 Channel 5 channels	3 Channel 3 channels	2 Channel 2 channels
Dimmer	1	1	1	✓	✓
Shutter / strobe	2	2			
Color mixing	3–6	3–6	2–5		
Effects / macros	7, 8	9, 10			

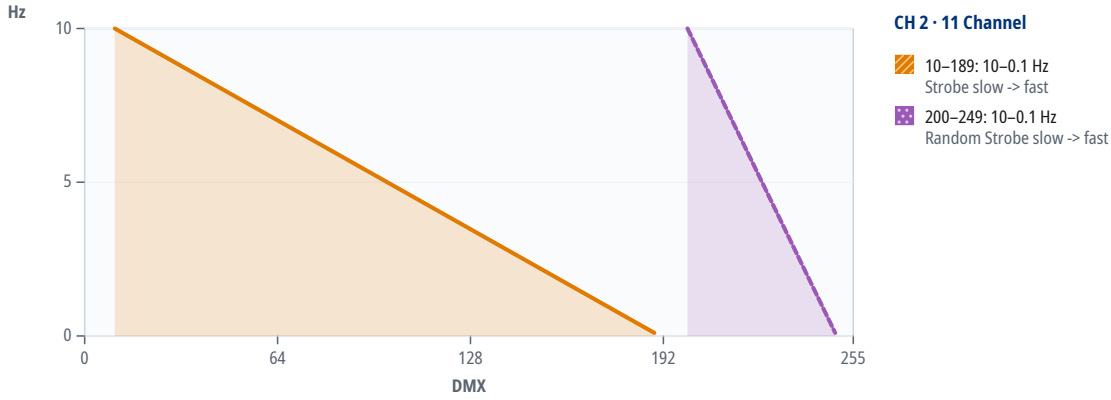
LED colors and the colors they mix



LED	x	y
Red_8 Channel	0.640	0.330
Green_8 Channel	0.300	0.600
Blue_8 Channel	0.150	0.060
White_8 Channel	0.313	0.329
Red_11 Channel	0.640	0.330
Green_11 Channel	0.300	0.600
Blue_11 Channel	0.150	0.060
White_11 Channel	0.313	0.329
Red_5 Channel	0.640	0.330
Green_5 Channel	0.300	0.600
Blue_5 Channel	0.150	0.060
White_5 Channel	0.313	0.329

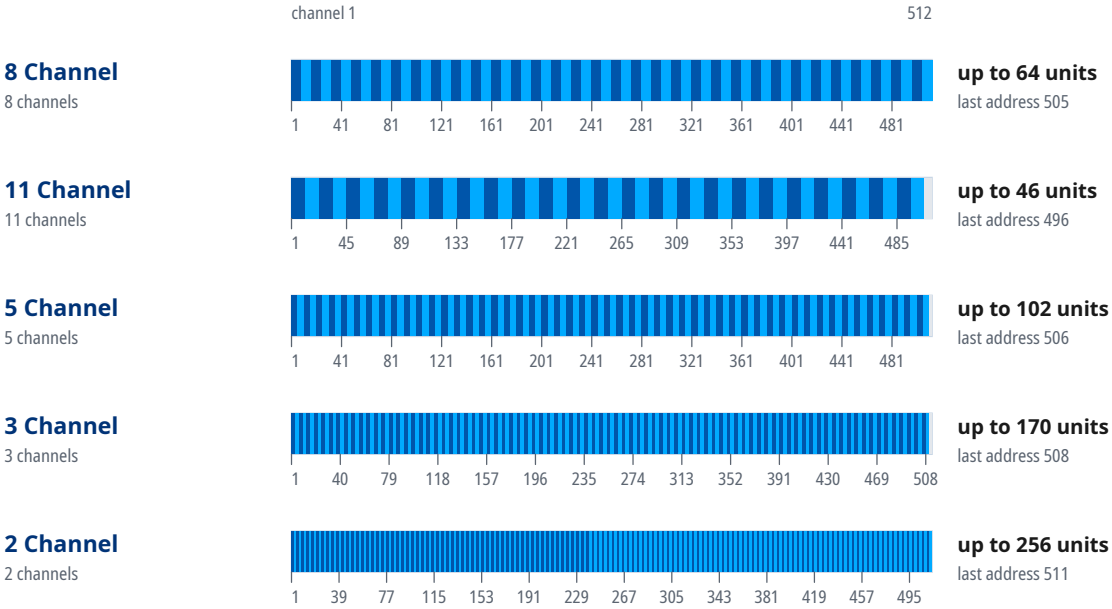
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Strobe rate



9 DMX channels

Units in one DMX universe



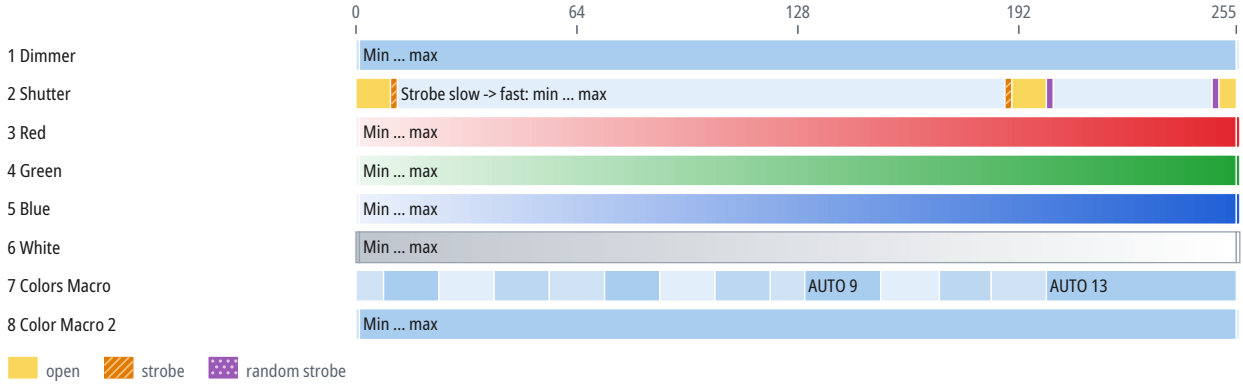
Start addresses of 20 units in the mode “11 Channel”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	56	11	111	16	166
2	12	7	67	12	122	17	177
3	23	8	78	13	133	18	188
4	34	9	89	14	144	19	199
5	45	10	100	15	155	20	210

Mode 8 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 2 Shutter at 0–9, 190–199 or 250–255 “open”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Red 255, CH 4 Green 255, CH 5 Blue 255, CH 6 White 255.

Channel functions at a glance



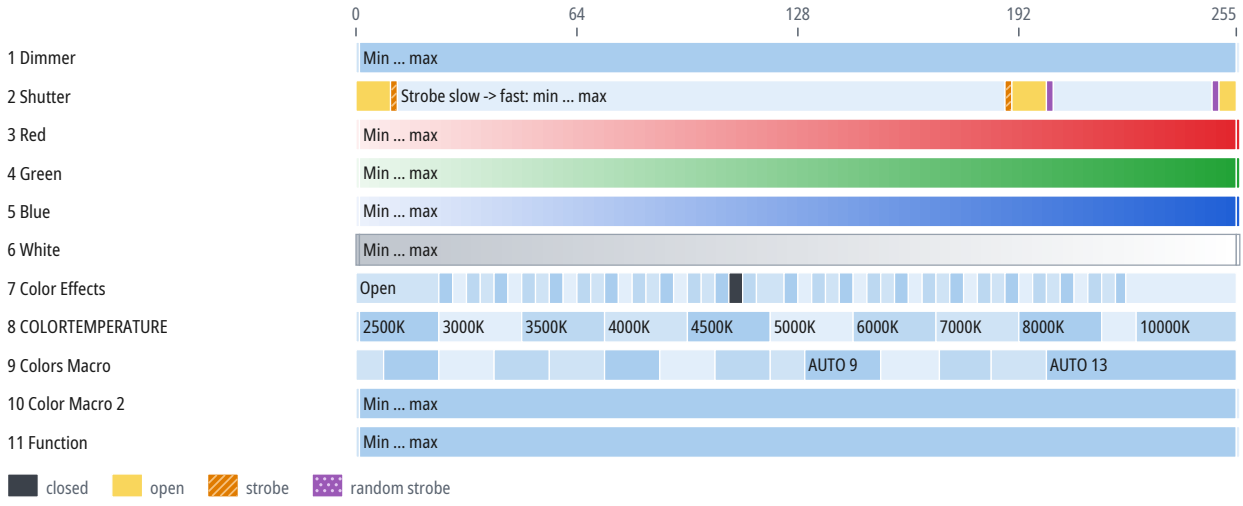
CH	Function	DMX	Description
1	Dimmer	0	Min
		1–254	Min ... max
		255	Max
2	Shutter	0–9	Open
		10–11	Strobe slow -> fast: min
		12–187	Strobe slow -> fast: min ... max
		188–189	Strobe slow -> fast: max
		190–199	Open#2: open
		200–201	Random Strobe slow -> fast: min
		202–247	Random Strobe slow -> fast: min ... max
		248–249	Random Strobe slow -> fast: max
		250–255	Open#3: open
3	Red		Color RGB_R 1
		0	Min
		1–254	Min ... max
		255	Max
4	Green		Color RGB_G 1
		0	Min
		1–254	Min ... max
		255	Max
5	Blue		Color RGB_B 1
		0	Min
		1–254	Min ... max
		255	Max
6	White		Color RGB_W 1
		0	Min

CH	Function	DMX	Description
6	White (continued)	1–254	Min ... max
		255	Max
7	Colors Macro		Auto Mode Select
		0–7	Open
		8–23	AUTO 1
		24–39	AUTO 2
		40–55	AUTO 3
		56–71	AUTO 4
		72–87	AUTO 5
		88–103	AUTO 6
		104–119	AUTO 7
		120–129	AUTO 8
		130–151	AUTO 9
		152–168	AUTO 10
		169–183	AUTO 11
		184–199	AUTO 12
		200–255	AUTO 13
8	Color Macro 2		Auto Modes Speed
		0	Min
		1–254	Min ... max
		255	Max

Mode 11 Channel

If the device receives DMX in this mode but gives no light, check these channels: CH 2 Shutter at 0–9, 190–199 or 250–255 “open”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Red 255, CH 4 Green 255, CH 5 Blue 255, CH 6 White 255.

Channel functions at a glance



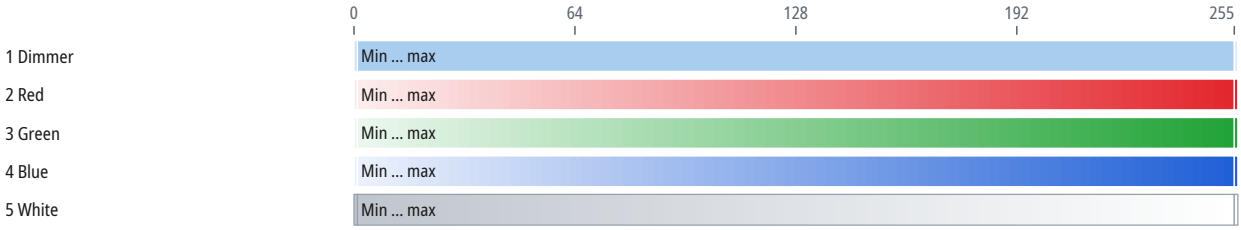
CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “8 Channel” (p. 8)
2	Shutter		Same as CH 2 in the mode “8 Channel” (p. 8)
3	Red		Same as CH 3 in the mode “8 Channel” (p. 8)
4	Green		Same as CH 4 in the mode “8 Channel” (p. 8)
5	Blue		Same as CH 5 in the mode “8 Channel” (p. 8)
6	White		Same as CH 6 in the mode “8 Channel” (p. 8)
7	Color Effects	0–23	Open
		24–27	Red
		28–31	Green
		32–35	Blue
		36–39	Orange
		40–43	Cyan
		44–47	Magenta
		48–51	White
		52–55	Yellow
		56–59	Pink
		60–63	Violet
		64–67	Aquamarine
		68–71	Pale Blue
		72–75	Full White
		76–79	Cool White
		80–83	Daylight
		84–87	Warm White
		88–91	Tungsten
		92–95	Medium Amber
		96–99	Straw
		100–103	Spring Yellow
		104–107	Light Rose
		108–111	Dark Pink
		112–115	Magenta 2
		116–123	Med Blue Green
		124–127	Blue 2
		128–131	Bright Pink
		132–135	Medium Blue
		136–139	Violet
		140–143	Medium Yellow
		144–147	Apricot
		148–151	Pale Yellow
		152–155	Pale Lavender
		156–159	Pale Yellow 2

CH	Function	DMX	Description
7	Color Effects (continued)	160–163	Evening Blue
		164–167	Surprise Pink
		168–171	Scarlet
		172–175	Surprise Peach
		176–179	Light Peach
		180–183	Warm White 2
		184–187	Mauve
		188–191	Bright Blue
		192–195	Alice Blue
		196–199	Rose Indigo
		200–203	Urban Blue
		204–207	Cool Blue
		208–211	Light Salmon
		212–215	Mayan Sun
		216–219	Cherry Rose
		220–222	Flesh Pink
		223–255	Skelton Exotic Sangria
8	COLORTEMPERATURE	0	Open
		1–23	2500K
		24–47	3000K
		48–71	3500K
		72–95	4000K
		96–119	4500K
		120–143	5000K
		144–167	6000K
		168–191	7000K
		192–215	8000K
		216–225	9000K
		226–255	10000K
9	Colors Macro		Same as CH 7 in the mode “8 Channel” (p. 9)
10	Color Macro 2		Same as CH 8 in the mode “8 Channel” (p. 9)
11	Function	0	Min
		1–254	Min ... max
		255	Max

Mode 5 Channel

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Red 255, CH 3 Green 255, CH 4 Blue 255, CH 5 White 255.

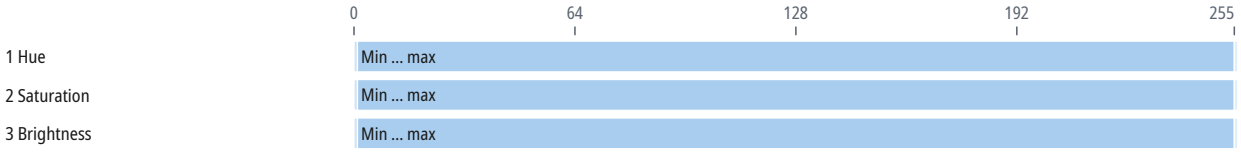
Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “8 Channel” (p. 8)
2	Red		Same as CH 3 in the mode “8 Channel” (p. 8)
3	Green		Same as CH 4 in the mode “8 Channel” (p. 8)
4	Blue		Same as CH 5 in the mode “8 Channel” (p. 8)
5	White		Same as CH 6 in the mode “8 Channel” (p. 8)

Mode 3 Channel

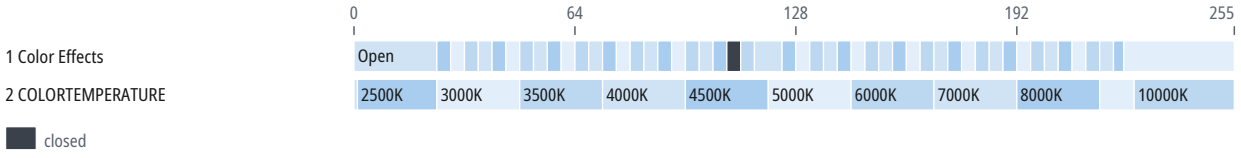
Channel functions at a glance



CH	Function	DMX	Description
1	Hue	0	Min
		1–254	Min ... max
		255	Max
2	Saturation	0	Min
		1–254	Min ... max
		255	Max
3	Brightness	0	Min
		1–254	Min ... max
		255	Max

Mode 2 Channel

Channel functions at a glance



CH	Function	DMX	Description
1	Color Effects		Same as CH 7 in the mode “11 Channel” (p. 10)
2	COLORTEMPERATURE		Same as CH 8 in the mode “11 Channel” (p. 11)

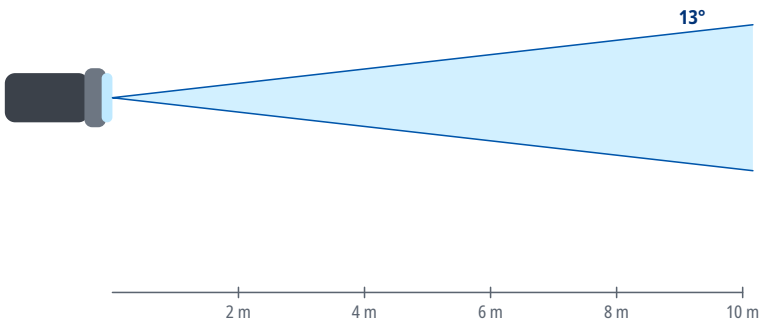
10 Technical specifications

Parameter	Value
Light source	LED
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.1–10 Hz

Spot diameter



Distance	Ø 13°
2 m	0.46 m
4 m	0.91 m
6 m	1.4 m
8 m	1.8 m
10 m	2.3 m
15 m	3.4 m

Spot diameter square to the beam axis, calculated from the beam angle.

11 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

12 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open.

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.