DMX REFERENCE

OUTBACK180B

Event Lighting

Manufacturer	Event Lighting
GDTF file	Event_Lighting_OUTBACK180B_117044.gdtf
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Contents

1 About this manual 2
2 Quick reference 2
3 Safety instructions 3
4 Product description 4
5 Installation 4
6 Connections 4
7 Operation 5
8 Functions at a glance 6
9 DMX channels 8
Mode Standard 8
10 Technical specifications 13
11 Maintenance and cleaning 13
12 Troubleshooting 13
13 Disposal 14

1 About this manual

This document describes the OUTBACK180B by Event Lighting. It was compiled from the GDTF file Event_Lighting_OUTBACK180B_117044.gdtf from the GDTF-Share library.

File revision: “Rev 1”.

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 Event Lighting; product names and trademarks belong to their owners.

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

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

2 Quick reference

Parameter	Value
Weight	16.5 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
Standard	22	23	1, 23, 45, 67, …

No light? Check these channels

- Standard: CH 6 Shutter at 4–7 or 216–255; CH 7 Dimmer above 0



Read the manual before use



Do not stare into the light

3 Safety instructions



Read the manual before use



Do not stare into the light

⚠ 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.

⚠ CAUTION

- The device is rated IP65 and may be used outdoors within the limits of this rating.
- This protection is effective only when all connectors are mated or closed with their protective caps and all seals are intact. Use cables and connectors with the same or a higher protection rating.
- Do not open the housing; opening it breaks the seals and the protection rating can no longer be guaranteed.
- Install the device so that water cannot collect around connectors and cable glands, and inspect seals and cables regularly.

⚠ 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

“The OUTBACK180B features a powerful 180W white LED source with an impressive 191,301 lux output at 5m (1.8° beam angle) delivering exceptional brightness with a crisp 7,000K colour temperature. Versatile colour capabilities include dual colour wheels offering a wide spectrum with 14 colours plus open on the first wheel and 8 colours plus open on the second wheel. The dual gobo wheels (one fixed, one rotating) offer extensive pattern options with indexing and shaking functions for dynamic effects. Further effects include motorised focus, two prisms (24-facet circular and 5-facet linear) with overlap and indexing, and a frost filter. Control options include 3 and 5 pin DMX as well as optional wireless DMX capabilities, all housed in an IP65 rated enclosure.”

5 Installation

⚠ **WARNING**

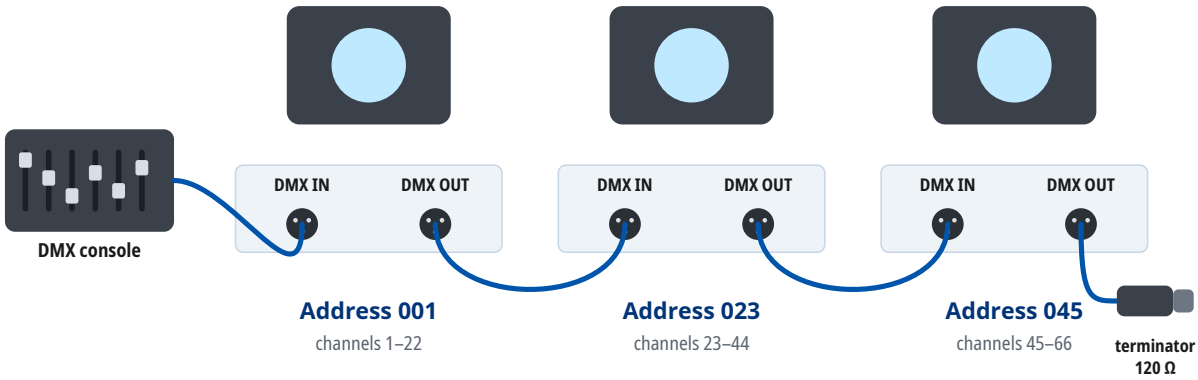
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 16.5 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 Standard: every unit occupies 22 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 “Standard”: 22.
- 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 “Standard”, you can use, for example, the start addresses 1, 23, 45, 67.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

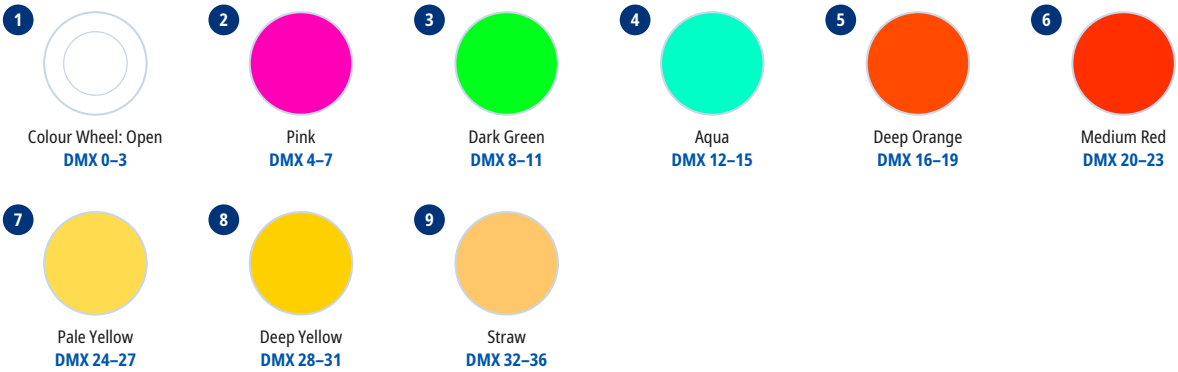
Functions in each DMX mode

	Standard 22 channels
Pan / Tilt	1, 3
Dimmer	7
Shutter / strobe	6
Color wheel	9, 10
Gobo wheel	11
Gobo rotation	12
Prism	15–18
Frost	20
Focus	13

Color wheel 1



Color wheel 2



Gobo wheel

1	Gobo Wheel: Open	DMX 0–1	6	Gobo Wheel: Gobo 5	DMX 10–11	11	Gobo Wheel: Gobo 10	DMX 20–21
2	Gobo Wheel: Gobo 1	DMX 2–3	7	Gobo Wheel: Gobo 6	DMX 12–13	12	Gobo Wheel: Gobo 11	DMX 22–23
3	Gobo Wheel: Gobo 2	DMX 4–5	8	Gobo Wheel: Gobo 7	DMX 14–15	13	Gobo Wheel: Gobo 12	DMX 24–25
4	Gobo Wheel: Gobo 3	DMX 6–7	9	Gobo Wheel: Gobo 8	DMX 16–17	14	Gobo Wheel: Gobo 13	DMX 26–27
5	Gobo Wheel: Gobo 4	DMX 8–9	10	Gobo Wheel: Gobo 9	DMX 18–19	15	Gobo 14	DMX 28–30

Prism 1

1



24 facets

Prism On

DMX 128–255

Prism 2

1



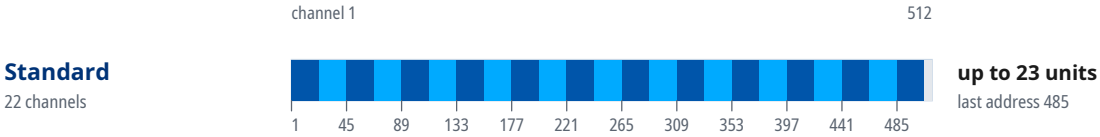
5 facets

Prism On

DMX 128–255

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Standard”

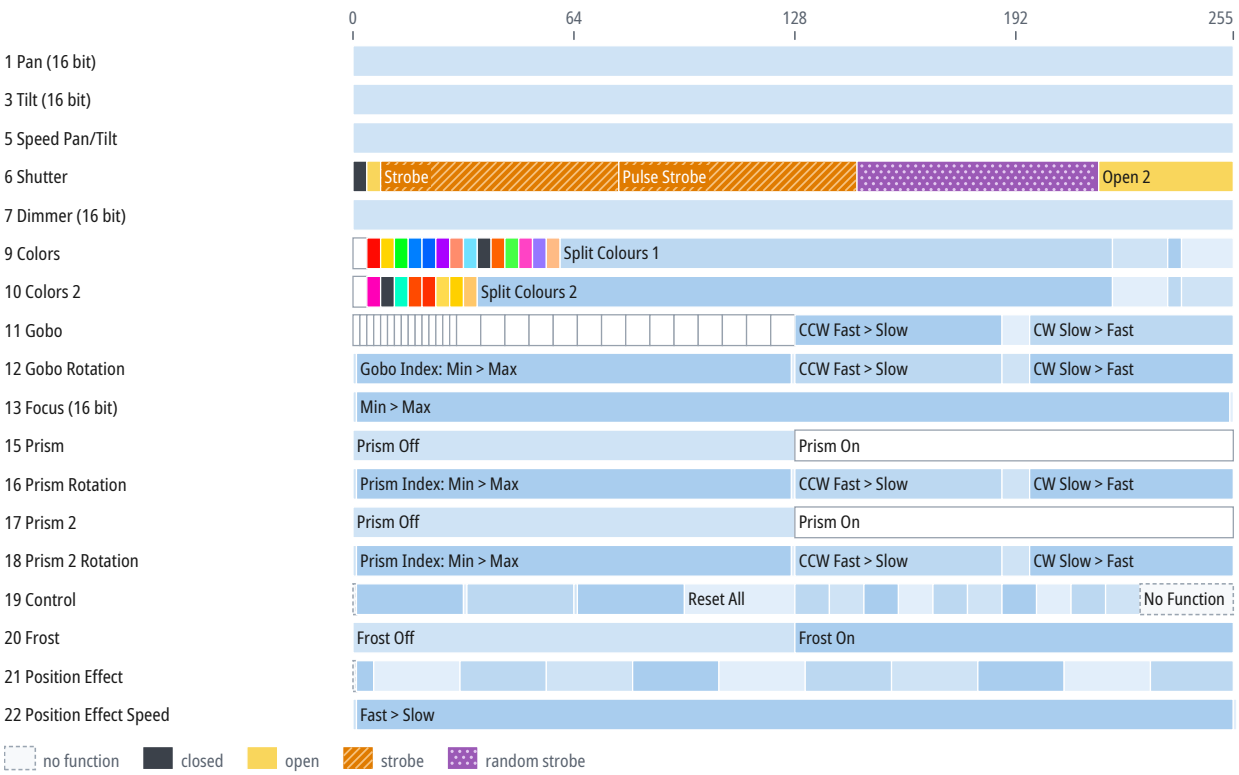
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	111	11	221	16	331
2	23	7	133	12	243	17	353
3	45	8	155	13	265	18	375
4	67	9	177	14	287	19	397
5	89	10	199	15	309	20	419

Mode Standard

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

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 4–7 or 216–255; CH 7 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Shutter	0–3	Closed
		4–7	Open 1
		8–76	Strobe
		77–145	Pulse Strobe
		146–215	Strobe Mode Random 5
		216–255	Open 2
7	Dimmer	0–255	
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Colors	0–3	Colour Wheel: Open
		4–7	Red
		8–11	Yellow
		12–15	Green
		16–19	Light Blue
		20–23	Blue
		24–27	Magenta
		28–31	CTO 3200K
		32–35	CTB
		36–39	Dark Blue
		40–43	Orange
		44–47	Light Green
		48–51	Light Pink
		52–55	Lavender
		56–59	CTO 3800K
		60–219	Split Colours 1
		220–235	CCW Fast > Slow
		236–239	Colour Wheel Spin: Stop
		240–255	CW Slow > Fast
10	Colors 2	0–3	Colour Wheel: Open
		4–7	Pink
		8–11	Dark Green
		12–15	Aqua
		16–19	Deep Orange
		20–23	Medium Red
		24–27	Pale Yellow
		28–31	Deep Yellow

CH	Function	DMX	Description
10	Colors 2 (continued)	32–35	Straw
		36–219	Split Colours 2
		220–235	CCW Fast > Slow
		236–239	Colour Wheel Spin: Stop
		240–255	CW Slow > Fast
11	Gobo	0–1	Gobo Wheel: Open
		2–3	Gobo Wheel: Gobo 1
		4–5	Gobo Wheel: Gobo 2
		6–7	Gobo Wheel: Gobo 3
		8–9	Gobo Wheel: Gobo 4
		10–11	Gobo Wheel: Gobo 5
		12–13	Gobo Wheel: Gobo 6
		14–15	Gobo Wheel: Gobo 7
		16–17	Gobo Wheel: Gobo 8
		18–19	Gobo Wheel: Gobo 9
		20–21	Gobo Wheel: Gobo 10
		22–23	Gobo Wheel: Gobo 11
		24–25	Gobo Wheel: Gobo 12
		26–27	Gobo Wheel: Gobo 13
		28–29	Gobo Wheel: Gobo 14
		30–36	Gobo Shake: Gobo 1 (0.067–0.133 Hz)
		37–43	Gobo Shake: Gobo 2 (0.133–0.2 Hz)
		44–50	Gobo Shake: Gobo 3 (0.2–0.267 Hz)
		51–57	Gobo Shake: Gobo 4 (0.267–0.333 Hz)
		58–64	Gobo Shake: Gobo 5 (0.333–0.4 Hz)
		65–71	Gobo Shake: Gobo 6 (0.4–0.467 Hz)
		72–78	Gobo Shake: Gobo 7 (0.467–0.533 Hz)
		79–85	Gobo Shake: Gobo 8 (0.533–0.6 Hz)
		86–92	Gobo Shake: Gobo 9 (0.6–0.667 Hz)
		93–99	Gobo Shake: Gobo 10 (0.667–0.733 Hz)
		100–106	Gobo Shake: Gobo 11 (0.733–0.8 Hz)
		107–113	Gobo Shake: Gobo 12 (0.8–0.867 Hz)
		114–120	Gobo Shake: Gobo 13 (0.867–0.933 Hz)
		121–127	Gobo Shake: Gobo 14 (0.933–1 Hz)
		128–187	CCW Fast > Slow (360–1 °/s)
		188–195	Gobo Wheel Spin: Stop
		196–255	CW Slow > Fast (1–360 °/s)
12	Gobo Rotation	0	Gobo Index: Min
		1–126	Gobo Index: Min > Max
		127	Gobo Index: Max
		128–187	CCW Fast > Slow (360–1 °/s)

CH	Function	DMX	Description
12	Gobo Rotation (continued)	188–195	Gobo Rotate: Stop
		196–255	CW Slow > Fast (1–360 °/s)
13	Focus	0	Min
		1–254	Min > Max
		255	Max
14	Focus Fine	0–255	Fine adjustment of CH 13
15	Prism		Prism 1
		0–127	Prism Off
		128–255	Prism On
16	Prism Rotation	0	Prism Index: Min
		1–126	Prism Index: Min > Max
		127	Prism Index: Max
		128–187	CCW Fast > Slow (360–1 °/s)
		188–195	Prism Rotate: Stop
		196–255	CW Slow > Fast (1–360 °/s)
17	Prism 2	0–127	Prism Off
		128–255	Prism On
18	Prism 2 Rotation	0	Prism Index: Min
		1–126	Prism Index: Min > Max
		127	Prism Index: Max
		128–187	CCW Fast > Slow (360–1 °/s)
		188–195	Prism Rotate: Stop
		196–255	CW Slow > Fast (1–360 °/s)
19	Control	0	No Function
		1–31	No Function … Reset XY
		32	Reset XY
		33–63	Reset XY … Reset Other
		64	Reset Other
		65–95	Reset Other … Reset All
		96–127	Reset All
		128–137	Built-In Program 1
		138–147	Built-In Program 2
		148–157	Built-In Program 3
		158–167	Built-In Program 4
		168–177	Built-In Program 5
		178–187	Built-In Program 6
		188–197	Built-In Program 7
		198–207	Built-In Program 8
		208–217	Built-In Program 9
		218–227	Built-In Program 10
		228–255	No Function

CH	Function	DMX	Description
20	Frost		Frost 1
		0–127	Frost Off
		128–255	Frost On
21	Position Effect		Movement Macro
		0	No Function
		1–5	No Function ... Movement Macro 1
		6–30	Movement Macro 1
		31–55	Movement Macro 2
		56–80	Movement Macro 3
		81–105	Movement Macro 4
		106–130	Movement Macro 5
		131–155	Movement Macro 6
		156–180	Movement Macro 7
		181–205	Movement Macro 8
		206–230	Movement Macro 9
		231–255	Movement Macro 10
22	Position Effect Speed	0	Fast
		1–254	Fast > Slow
		255	Slow

10 Technical specifications

Parameter	Value
Weight	16.5 kg
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Gobo wheel rotation	up to 360 °/s (60 rpm)
Gobo rotation	up to 360 °/s (60 rpm)
Prism 1 rotation	up to 360 °/s (60 rpm)
Prism 2 rotation	up to 360 °/s (60 rpm)

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.

Problem	Remedy
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.