DMX REFERENCE

SS9183SC-P6

Silver Star



Manufacturer	Silver Star
GDTF file	Silver_Star_SS9183SC-P6_81074.gdtf
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1 About this manual

This document describes the SS9183SC-P6 by Silver Star. It was compiled from the GDTF file Silver_Star_SS9183SC-P6_81074.gdtf from the GDTF-Share library.

File revision: “SS9183SC”.

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 Silver Star; product names and trademarks belong to their owners.

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

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

2 Quick reference

Parameter	Value
Power consumption	850 W
Weight	35.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
29CH	29	17	1, 30, 59, 88, ...

No light? Check these channels

- 29CH: CH 26 Dimmer above 0; CH 28 Shutter at 0–9, 100–109 or 180–189 “Open”


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

3 Safety instructions


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

⚠ WARNING

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

⚠ WARNING

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 100–240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

⚠ WARNING

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

⚠ CAUTION

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

⚠ CAUTION

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

⚠ WARNING

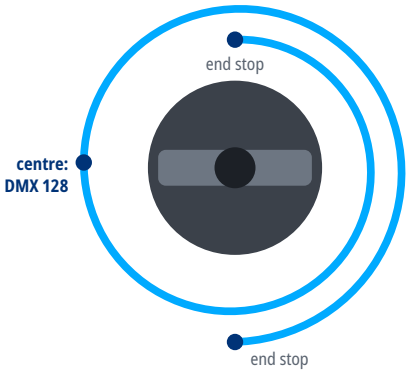
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
- Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

4 Product description

Range of movement

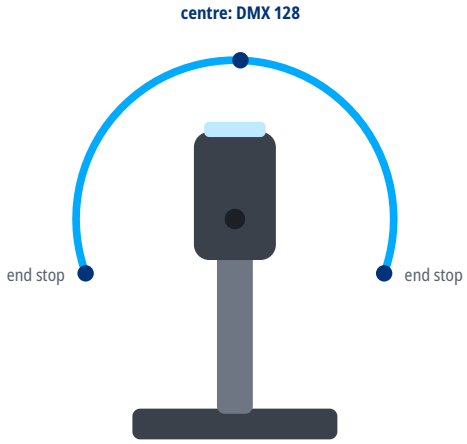
Pan 540°

top view



Tilt 220°

side view



5 Installation

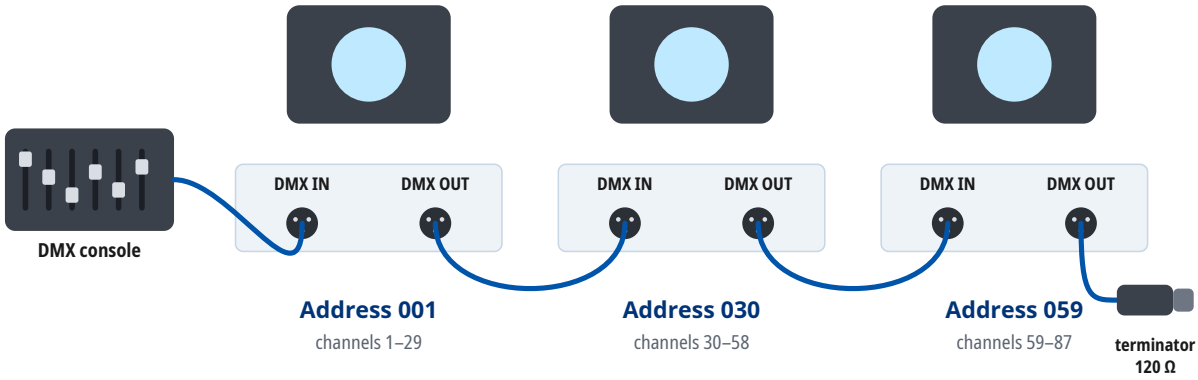
⚠ **WARNING**

- 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: 35.5 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 29CH: every unit occupies 29 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 “29CH”: 29.
- 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 “29CH”, you can use, for example, the start addresses 1, 30, 59, 88.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

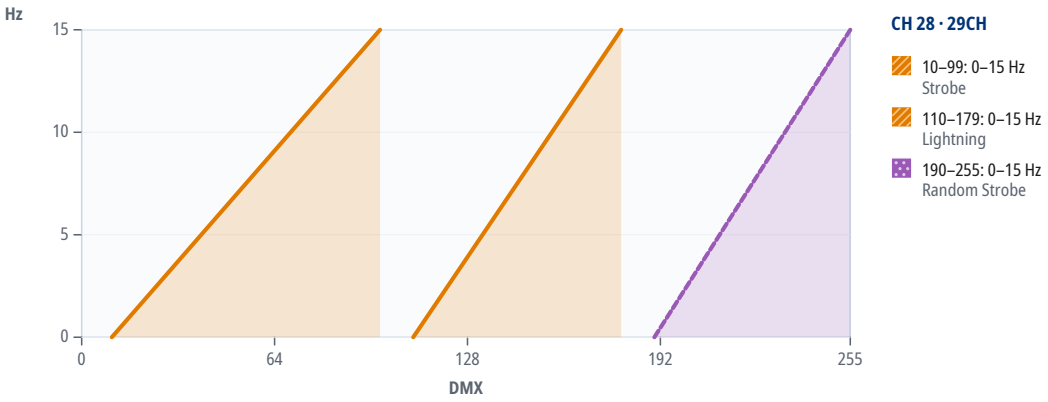
Functions in each DMX mode

	29CH 29 channels
Pan / Tilt	1, 3
Dimmer	26
Shutter / strobe	28
Color mixing	6–8
Color temperature	9
Gobo wheel	11
Gobo rotation	12
Frost	13
Zoom	24
Focus	25
Iris	14
Effects / macros	10

Gobo wheel

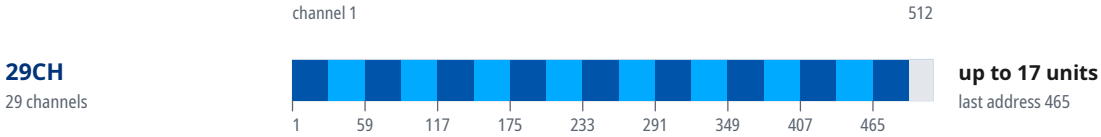
1 Gobo: Open	DMX 0–10	3 Gobo 2	DMX 19–26	5 Gobo 4	DMX 35–42
2 Gobo 1	DMX 11–18	4 Gobo 3	DMX 27–34	6 Gobo 5	DMX 43–50

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “29CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	146	11	291	16	436
2	30	7	175	12	320	17	465
3	59	8	204	13	349	18	U2 · 1
4	88	9	233	14	378	19	U2 · 30
5	117	10	262	15	407	20	U2 · 59

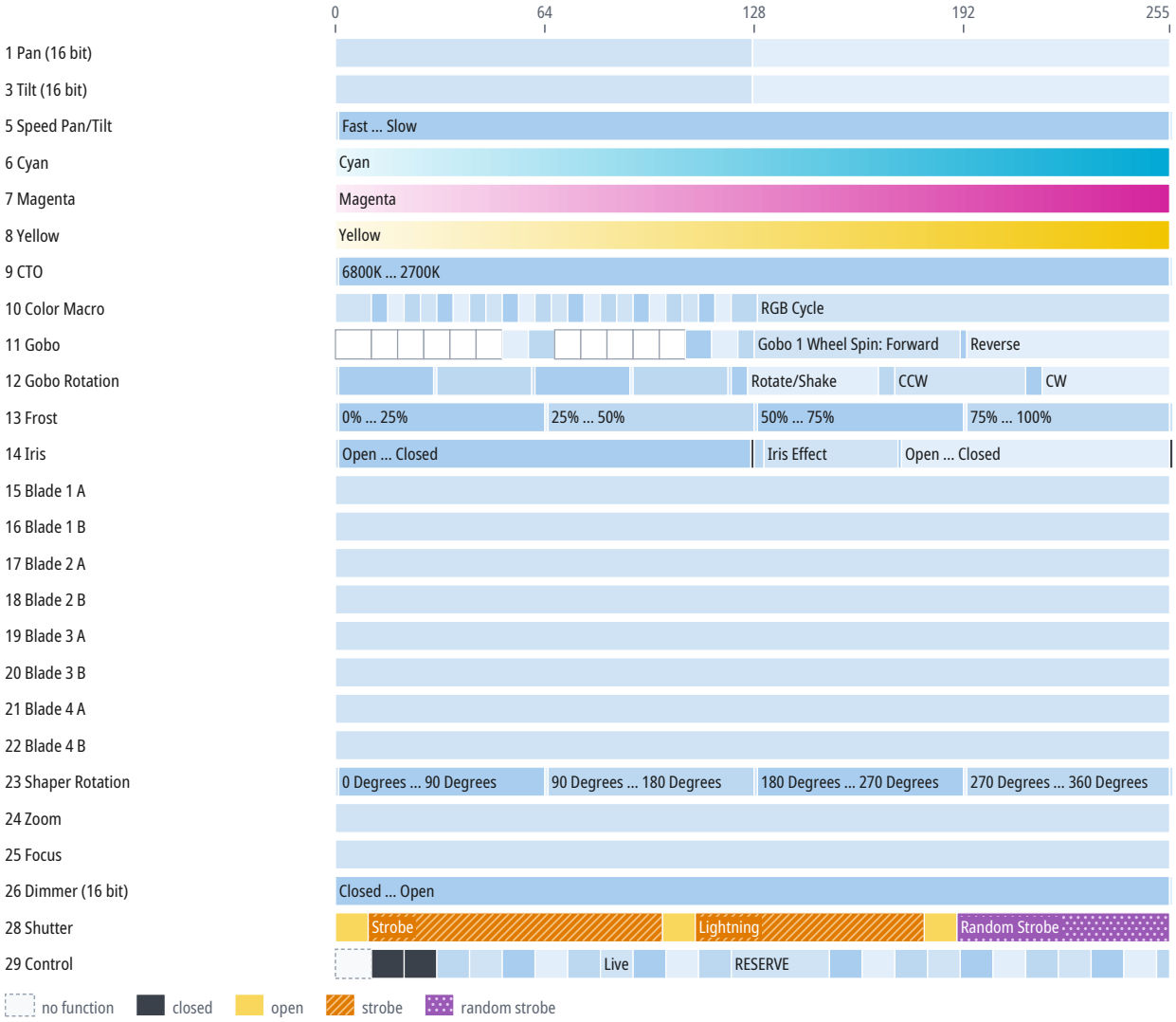
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 29CH

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 26 Dimmer above 0; CH 28 Shutter at 0–9, 100–109 or 180–189 “Open”. The GDTF file gives these values for a console's Highlight function: CH 6 Cyan 0, CH 7 Magenta 0, CH 8 Yellow 0, CH 9 CTO 0, CH 10 Color Macro 0, CH 26 Dimmer 255, CH 28 Shutter 0.

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

CH	Function	DMX	Description
5	Speed Pan/Tilt	0	Fast
		1–254	Fast ... Slow
		255	Slow
6	Cyan	0–255	Cyan
7	Magenta	0–255	Magenta
8	Yellow	0–255	Yellow
9	CTO	0	6800K
		1–254	6800K ... 2700K
		255	2700K
10	Color Macro	0–10	Open
		11–15	3000K
		16–20	3200K
		21–25	3500K
		26–30	4000K
		31–35	4500K
		36–40	5000K
		41–45	5400K
		46–50	5600K
		51–55	6000K
		56–60	6500K
		61–65	6800K
		66–70	L106
		71–75	L194
		76–80	L019
		81–85	R08
		86–90	L213
		91–95	R80
		96–100	L202
		101–105	L328
		106–110	R3314
		111–115	L101
		116–120	L768
		121–128	L768 ... RGB Cycle
		129–255	RGB Cycle
11	Gobo	0–10	Gobo: Open
		11–18	Gobo 1
		19–26	Gobo 2
		27–34	Gobo 3
		35–42	Gobo 4
		43–50	Gobo 5
		51–58	Gobo 6
		59–66	Gobo 7

CH	Function	DMX	Description
11	Gobo (continued)	67–74	Gobo 1 Wheel Shake: Gobo 1
		75–82	Gobo 1 Wheel Shake: Gobo 2
		83–90	Gobo 1 Wheel Shake: Gobo 3
		91–98	Gobo 1 Wheel Shake: Gobo 4
		99–106	Gobo 1 Wheel Shake: Gobo 5
		107–114	Gobo 1 Wheel Shake: Gobo 6
		115–122	Gobo 1 Wheel Shake: Gobo 7
		123–127	Gobo 1 Wheel Spin: Open
		128–190	Gobo 1 Wheel Spin: Forward
		191–192	Gobo 1 Wheel Spin: Stop
		193–255	Reverse
12	Gobo Rotation	0	0 Degrees
		1–29	0 Degrees ... 90 Degrees
		30	90 Degrees
		31–59	90 Degrees ... 180 Degrees
		60	180 Degrees
		61–89	180 Degrees ... 270 Degrees
		90	270 Degrees
		91–119	270 Degrees ... 360 Degrees
		120	360 Degrees
		121–125	Gobo 1 Pos Rotate: Stop
		126–165	Rotate/Shake
		166–170	Gobo 1 Pos Rotate: Stop
		171–210	CCW
		211–215	Gobo 1 Pos Rotate: Stop
		216–255	CW
13	Frost	0	0%
		1–63	0% ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... 100%
		255	100%
14	Iris	0	Open
		1–126	Open ... Closed
		127	Closed
		128–130	Open
		131–171	Iris Effect
		172	Open
		173–254	Open ... Closed

CH	Function	DMX	Description
14	Iris (continued)	255	Closed
15	Blade 1 A	0–255	
16	Blade 1 B	0–255	
17	Blade 2 A	0–255	
18	Blade 2 B	0–255	
19	Blade 3 A	0–255	
20	Blade 3 B	0–255	
21	Blade 4 A	0–255	
22	Blade 4 B	0–255	
23	Shaper Rotation	0	0 Degrees
		1–63	0 Degrees ... 90 Degrees
		64	90 Degrees
		65–127	90 Degrees ... 180 Degrees
		128	180 Degrees
		129–191	180 Degrees ... 270 Degrees
		192	270 Degrees
		193–254	270 Degrees ... 360 Degrees
		255	360 Degrees
24	Zoom	0–255	
25	Focus	0–255	
26	Dimmer	0–255	Closed ... Open
		255	Open
27	Dimmer Fine	0–255	Fine adjustment of CH 26
28	Shutter	0–9	Shutter 1: Open
		10–99	Strobe (0–15 Hz)
		100–109	Open
		110–179	Lightning (0–15 Hz)
		180–189	Open
		190–255	Random Strobe (0–15 Hz)
29	Control	0–10	No Function
		11–20	P/T Blackout On
		21–30	P/T Blackout Off
		31–40	Pan Invert
		41–50	Tilt Invert
		51–60	P/T Invert Off
		61–70	Studio
		71–80	Power
		81–90	Live
		91–100	RESERVE
		101–110	DIM 4
		111–120	DIM OFF
		121–150	RESERVE

CH	Function	DMX	Description
29	Control (continued)	151–160	1200Hz
		161–170	2400Hz
		171–180	4000Hz
		181–190	6000Hz
		191–200	25000Hz
		201–210	All Reset
		211–220	P/T Reset
		221–230	Color Reset
		231–240	GOBO RESET
		241–250	FRAMING RESET
		251–255	RESERVE

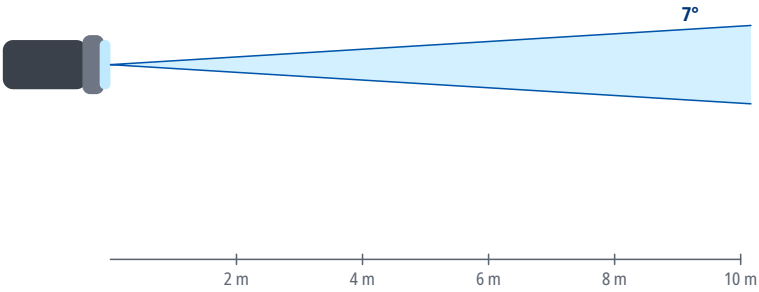
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	820 W
Luminous flux	1,000 lm
Color temperature	6,000 K
Color rendering index (CRI)	70
Optics	
Beam angle	7°
Movement	
Pan	540°
Tilt	220°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45 IN
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	850 W
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	35.5 kg
Operating environment	
Operating temperature	0 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0–15 Hz
Gobo wheel rotation	up to 180 °/s (30 rpm)
Gobo rotation	up to 180 °/s (30 rpm)

Spot diameter



Distance	Ø 7°
2 m	0.24 m
4 m	0.49 m
6 m	0.73 m
8 m	0.98 m
10 m	1.2 m
15 m	1.8 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.

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.