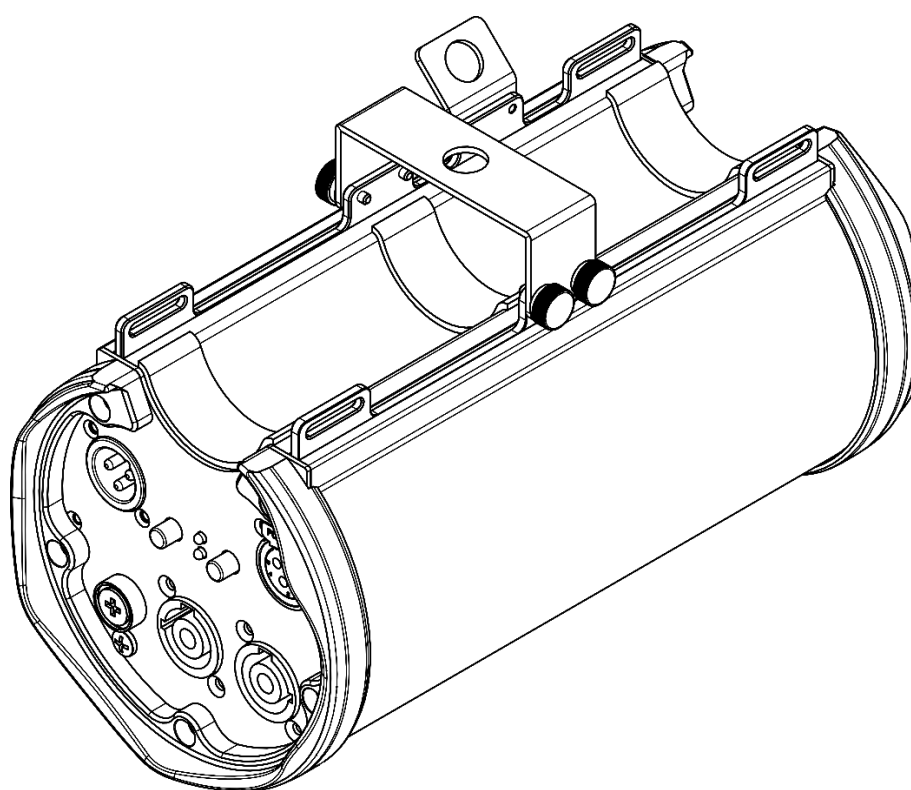




**MANUAL**



**ENGLISH**

# **Truss Booster RDM 1-6 V1**

**Ordercode: 50793**

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## Warning



**For your own safety, please read this user manual carefully  
before your initial start-up!**

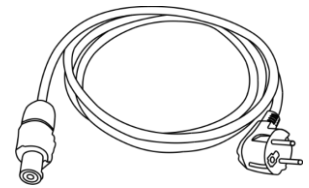
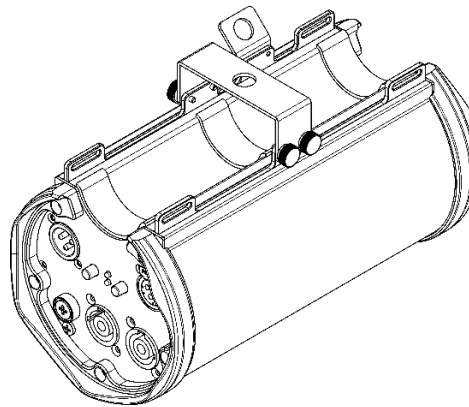


## Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

## Your shipment includes:

- Showtec Truss Booster RDM 1-6
- Pro power cable (1,5 m)
- 1 x mounting bracket
- 2 x Velcro strap
- User manual



**CAUTION!**  
**Keep this device away from rain and moisture!**  
**Unplug mains lead before opening the housing!**



## Safety Instructions

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual



**CAUTION! Be careful with your operations.**  
**With a dangerous voltage you can suffer  
a dangerous electric shock when touching the wires!**



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

### IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Never modify, bend, mechanically strain, put pressure on, pull or heat up the power cord.
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never leave any cables lying around.
- Never strain the cable. There must always be sufficient cable going to the device. Otherwise, the cable will be damaged, which can cause serious damage.
- Never use the device during thunderstorms, unplug the device immediately.
- Never leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach, as they are potential sources of danger.
- Do not open the device and do not modify the device.
- Do not connect this device to a dimmer pack.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Do not switch the device on and off in short intervals, as this would reduce the system's life.
- Do not touch the device's housing bare-handed during its operation.
- Only use device indoors, avoid contact with water or other liquids.
- Only operate the device after having familiarized with its functions.
- Only install the device with the hanging bracket or the Velcro straps.
- Avoid flames and do not put close to flammable liquids or gases.
- Always keep case closed while operating.
- Always allow free air space of at least 50 cm around the unit for ventilation.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power cord by the plug. Never pull out the plug by tugging the power cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power cord is never crimped or damaged. Check the device and the power cord from time to time.
- Make sure that the core diameter of extension cords and power cords is sufficient for the required power consumption of the device.
- Make sure that no side forces can impact on the truss system.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. The device must be installed out of the reach of children. Never leave the unit running unattended.
- For replacement use fuses of same type and rating only.
- The user is responsible for correct positioning and operating of the Truss Booster. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

### Operating Determinations

- This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- To eliminate wear and improve lifespan, during periods of non-use, completely disconnect from power via breaker or by unplugging.
- The maximum ambient temperature  $t_a = 40\text{ °C}$  must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of  $40\text{ °C}$ .
- If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
- Any other operation may lead to dangers like short-circuit, burns, electric shock, crash, etc.

*You endanger your own safety and the safety of others!*

*Improper installation can cause serious damage to people and property!*

### Rigging

*Please follow the European and national guidelines concerning rigging, trussing and all other safety issues.*

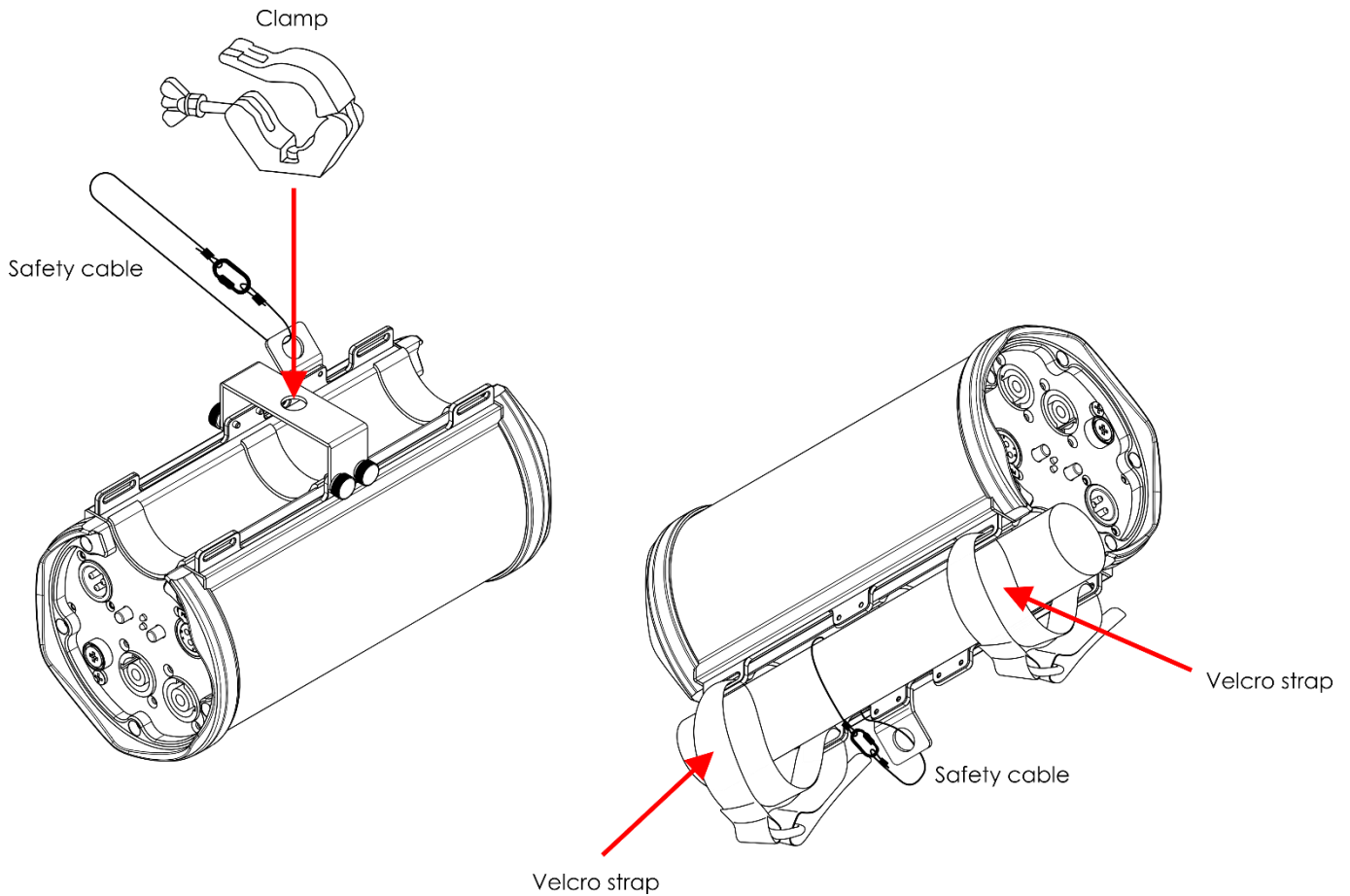
*Do not attempt the installation yourself !*

*Always let the installation be carried out by an authorized dealer !*

### Procedure:

- If the Truss Booster is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use a clamp to mount the Truss Booster, with the mounting bracket, to the trussing system.
- The Truss Booster must never be fixed swinging freely in the room.
- The installation must always be secured with a safety attachment, e.g. an appropriate safety net or safety cable.
- When rigging, derigging or servicing the Truss Booster, always make sure, that the area below the installation site is secured and that there are not any unauthorized people around.

*Improper installation can cause serious injuries and/or damage of property!*



The Truss Booster RDM 1-6 can be mounted to any kind of truss with a clamp or with the included Velcro straps.

*Improper installation can cause serious injuries and/or damage of property!*

### Connection with the mains

Connect the device to the mains with the power-plug.  
Always check if the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	PHASE
N	BLUE	BLACK	SILVER	NEUTRAL
⊕	YELLOW/GREEN	GREEN	GREEN	PROTECTIVE GROUND

*Make sure that the device is always properly connected to the earth!*

*Improper installation can cause serious injuries and/or damage of property!*



### **Return Procedure**

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail [offersales@highlite.com](mailto:offersales@highlite.com) and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

**Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:**

- 01) Your name
- 02) Your address
- 03) Your phone number
- 04) A brief description of the symptoms

### **Claims**

The client has the obligation to check the delivered goods immediately upon delivery for any shortcomings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.

It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.

Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.

Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.

Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

## Description of the device

### Features

The Truss Booster RDM 1-6 is a compact and nifty solution for splitting/boosting DMX and RDM signals. It can be mounted to a truss or pipes with the included bracket or Velcro straps. The rubber protection-rings on each side of the rugged housing makes this booster ideal for road productions.

- Input voltage: 100–240 V AC, 50/60 Hz
- Power consumption: 5 W
- Housing: Metal & flame-retardant plastic
- Connections: Pro power connector IN(Blue)/OUT(Gray), 1 x 3-pin DMX/RDM IN, 1 x 3-pin DMX/RDM THRU, 6 x 3-pin DMX/RDM OUT
- Fuse: T1AL/250V
- Dimensions: 240 x 124 x 150 mm (LxWxH)
- Weight: 1,6 kg

### Overview

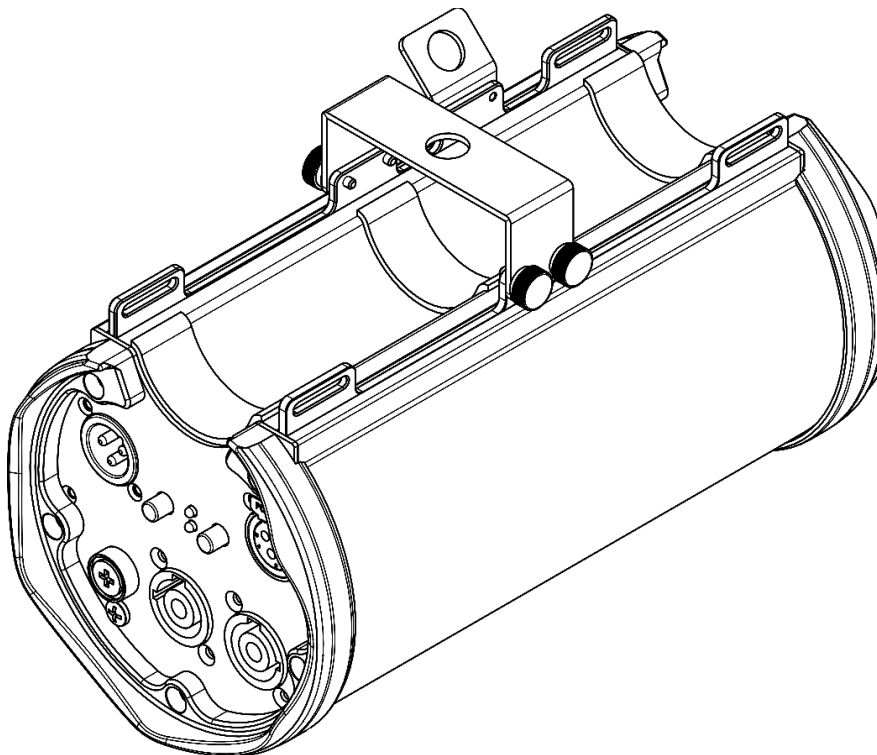


Fig. 01



Front

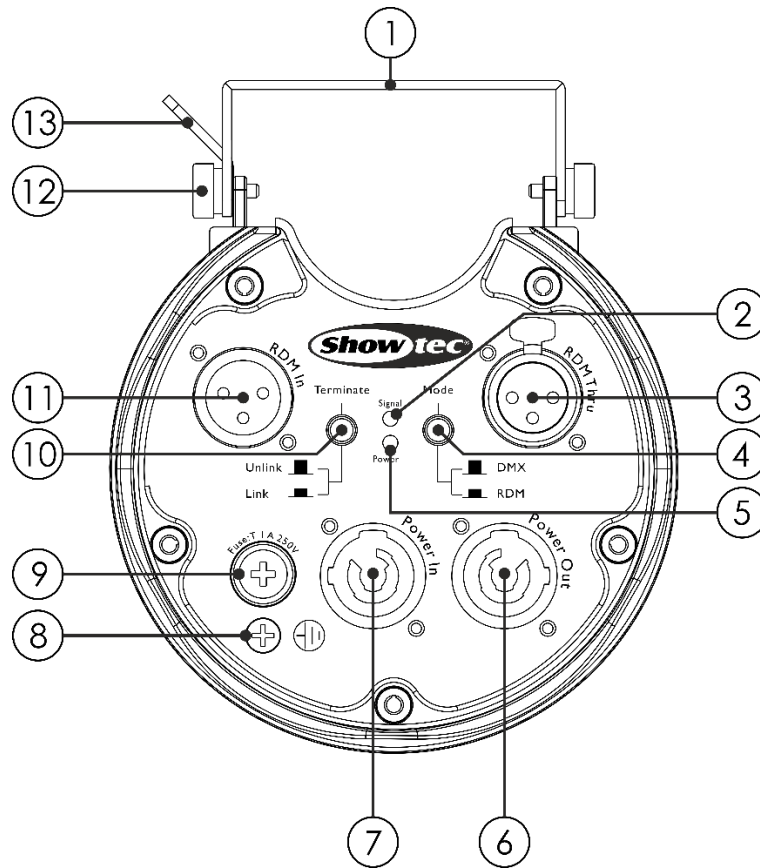


Fig. 02

- 01) Mounting bracket
- 02) LED signal indicator
- 03) 3-pin DMX/RDM signal connector THRU
- 04) DMX/RDM mode selection button  
Press the button to choose between DMX and RDM.

**Note:** RDM is an enhancement of DMX-512 protocol that allows bi-directional communication between a lighting controller and RDM compliant devices.

- 05) LED power indicator
- 06) 100–240 V pro power connector OUT (Gray)
- 07) 100–240 V pro power connector IN (Blue)
- 08) Ground/earth connection
- 09) Fuse T1A/250V
- 10) Terminate button  
Press the button to activate the termination resistor on the last Truss Booster in a daisy chain.
- 11) 3-pin DMX/RDM signal connector IN
- 12) Mounting screw
- 13) Safety eye

## Back

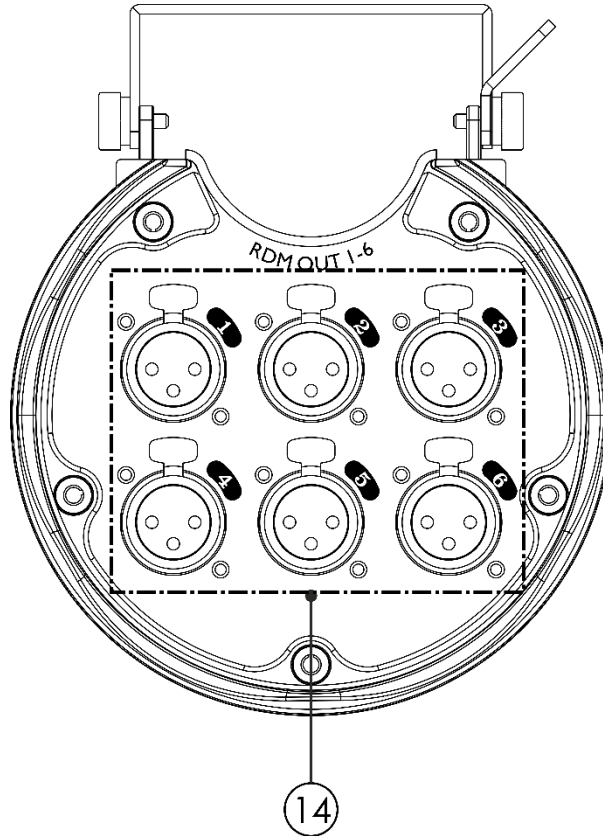


Fig. 03

14) 6 x 3-pin DMX/RDM signal connector OUT

## Installation

Remove all packing materials from the Truss Booster RDM 1-6. Check if all foam and plastic padding is removed. Connect all cables.

**Do not supply power before the whole system is set up and connected properly.**

**Always disconnect from electric mains power supply before cleaning or servicing.**

**Damages caused by non-observance are not subject to warranty.**

## Setup and Operation

Follow the directions below, as they pertain to your preferred operation mode.

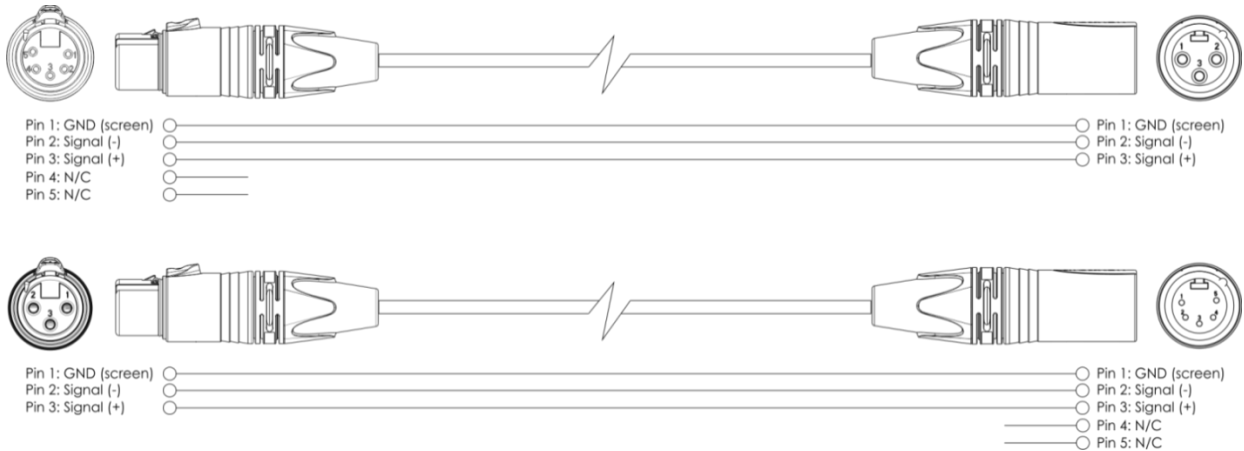
Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

Connect the device to the main power supply.

## Control Modes

### Multiple Truss Boosters (DMX/RDM control)

- 01) Fasten the Truss Boosters to a truss.
- 02) Always use a safety cable (ordercode 70140 / 70141).
- 03) Use a 3-pin XLR cable to connect the Truss Boosters and other devices.



- 04) Connect the first unit's "in" socket to a light controller.
- 05) Link the units as shown in Fig. 04. Connect the first unit's DMX "thru" socket with the second unit's "in" socket, using a DMX signal cable. Repeat this process to link the second, third, and fourth unit.
- 06) Connect light fixtures to the unit's DMX/RDM "out" sockets.
- 07) Supply electric power: Plug the unit's mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly.

### Multiple Truss Boosters DMX Setup

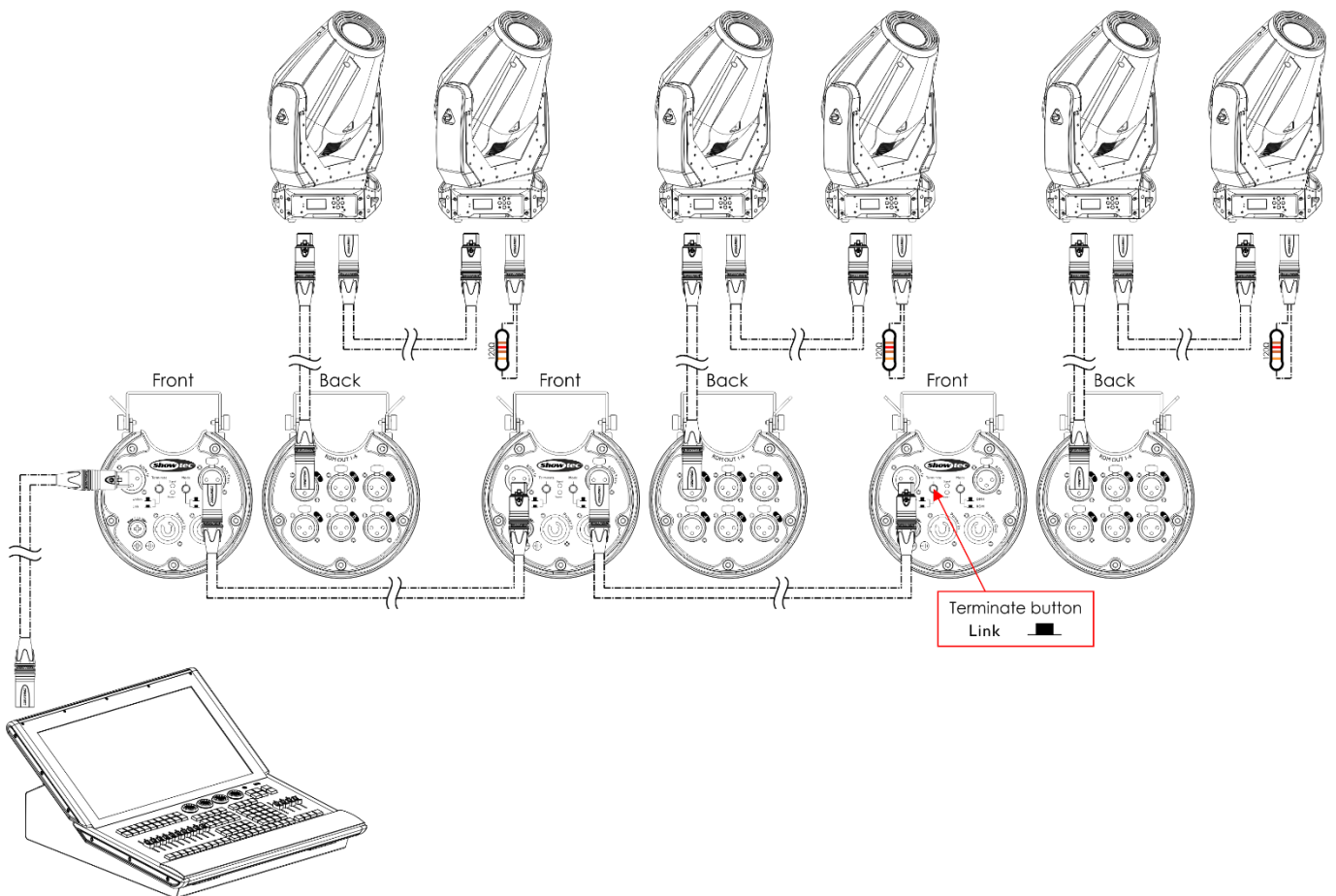


Fig. 04

Note : Link all cables before connecting electric power

### Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows of two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

**Important:** Fixtures on a serial data link must be daisy-chained in a single line. To comply with the EIA-485 standard, no more than 30 devices should be connected on one data link. Connecting more than 30 fixtures on one serial data link without the use of a DMX optically isolated splitter may result in deterioration of the digital DMX signal.  
Maximum recommended DMX data link distance: 100 meters  
Maximum recommended number of fixtures on a DMX data link: 30 fixtures



### Data Cabling

To link fixtures together, you must obtain data cables. You can purchase DAP Audio certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable, please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

#### DAP Audio DMX Data Cables

- DAP Audio Basic microphone cable for allround use. bal. XLR/M 3-pin > XLR/F 3-pin. **Order code** FL01150 (1,5 m), FL013 (3 m), FL016 (6 m), FL0110 (10 m), FL0115 (15 m), FL0120 (20 m).
- DAP Audio X-type data cable XLR/M 3-pin > XLR/F 3-pin. **Order code** FLX0175 (0,75 m), FLX01150 (1,5 m), FLX013 (3 m), FLX016 (6 m), FLX0110 (10 m).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Order code** FL71150 (1,5 m), FL713 (3 m), FL716 (6 m), FL7110 (10 m).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Order code** FL7275 (0,75 m), FL72150 (1,5 m), FL723 (3 m), FL726 (6 m), FL7210 (10 m).
- DAP Audio 110 Ohm cable with digital signal transmission. **Order code** FL0975 (0,75 m), FL09150 (1,5 m), FL093 (3 m), FL096 (6 m), FL0910 (10 m), FL0915 (15 m), FL0920 (20 m).
- DAP Audio data cable FL08 DMX/AES-EBU, XLR/M 5-pin > XLR/F 5-pin. **Order code** FL08150 (1,5 m), FL083 (3 m), FL086 (6 m), FL0810 (10 m), FL0820 (20 m).
- DAP Audio DMX adapter: 5-pin/3-pin. **Order code** FLA29.
- DAP Audio DMX adapter: 3-pin/5-pin. **Order code** FLA30.
- DAP Audio DMX Terminator 3-pin. **Order code** FLA42.
- DAP Audio DMX Terminator 5-pin. **Order code** FLA43.

### Maintenance

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The Showtec Truss Booster RDM 1-6 requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.

Keep connections clean. Disconnect electric power, and then wipe the DMX connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

### Replacing the Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below.

- 01) Unplug the unit from electric power source.
- 02) Insert a flat-headed screwdriver into a slot in the fuse cover. Turn the screwdriver to the left, at the same time gently push a bit (Turn and Push). The fuse will come out.
- 03) Remove the used fuse. If brown or unclear, it is burned out.
- 04) Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse holder. Be sure to use a fuse of the same type and specification. See the product specification label for details.

### Troubleshooting

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#### No Light

If the light effect does not operate properly, refer servicing to a technician.

Suspect three potential problem areas as: the power supply, the distributor, the fuse.

- 01) Power supply. Check that the unit is plugged into an appropriate power supply.
- 02) The distributor. Return the Truss Booster to your Showtec dealer.
- 03) The fuse. Replace the fuse. See page 12 for replacing the fuse.
- 04) If all of the above appears to be O.K., plug the unit in again.
- 05) If you are unable to determine the cause of the problem, do not open the Truss Booster, as this may damage the unit and the warranty will become void.
- 06) Return the device to your Showtec dealer.

#### No Response to DMX

Suspect the DMX cable or connectors, a distributor malfunction, a controller malfunction, a light effect DMX card malfunction.

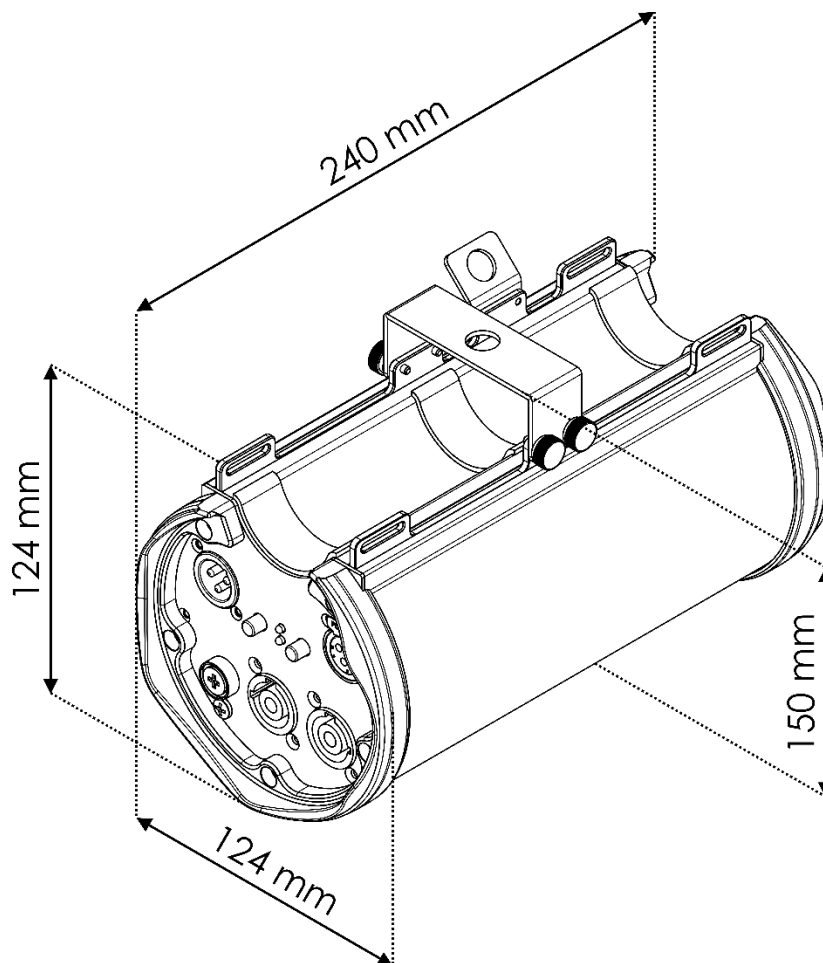
- 01) Check the DMX setting. Make sure that DMX addresses are correct.
- 02) Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
- 03) Determine whether the distributor, controller or light effect is at fault. If the distributor or controller does not operate properly, take the distributor or controller in for repair. Otherwise, take the DMX cable and the light effect to a qualified technician.

Problem	Probable cause(s)	Solution
One or more fixtures do not function at all.	No power to the fixture.	<ul style="list-style-type: none"> <li>• Check if power is switched on and cables are plugged in.</li> </ul>
	Primary fuse blown.	<ul style="list-style-type: none"> <li>• Replace fuse.</li> </ul>
Fixtures reset correctly, but all respond erratically or not at all to the controller.	The controller is not connected.	<ul style="list-style-type: none"> <li>• Connect controller.</li> </ul>
	3-pin XLR Out of the controller does not match XLR In of the first fixture on the link (i.e. signal is reversed).	<ul style="list-style-type: none"> <li>• Install a phase reversing cable between the controller and the first fixture on the link.</li> </ul>
Fixtures reset correctly, but some respond erratically or not at all to the controller.	Poor data quality.	<ul style="list-style-type: none"> <li>• Check data quality. If much lower than 100 percent, the problem may be a bad data link connection, poor quality or broken cables, missing termination plug, or a defective fixture disturbing the link.</li> </ul>
	Bad data link connection.	<ul style="list-style-type: none"> <li>• Inspect connections and cables. Correct poor connections. Repair or replace damaged cables.</li> </ul>
	Data link not terminated with 120 Ohm termination plug.	<ul style="list-style-type: none"> <li>• Insert termination plug in output jack of the last fixture on the link.</li> </ul>
	One of the fixtures is defective and disturbs data transmission on the link.	<ul style="list-style-type: none"> <li>• Bypass one fixture at a time until normal operation is restored: unplug both connectors and connect them directly together.</li> <li>• Have the defective fixture serviced by a qualified technician.</li> </ul>
	3-pin XLR Out on the fixtures does not match (pins 2 and 3 reversed).	<ul style="list-style-type: none"> <li>• Install a phase-reversing cable between the fixtures or swap pin 2 and 3 in the fixture that behaves erratically.</li> </ul>
No light or lamps/LEDs cut out intermittently.	Fixture is too hot.	<ul style="list-style-type: none"> <li>• Allow the fixture to cool down.</li> <li>• Turn up the air conditioning.</li> </ul>
	Lamps/LEDs damaged.	<ul style="list-style-type: none"> <li>• Disconnect the defective fixture and return it to the fixture's dealer.</li> </ul>
	The power supply settings do not match local AC voltage and frequency.	<ul style="list-style-type: none"> <li>• Disconnect fixture. Check settings and correct if necessary.</li> </ul>

## Product Specifications

Model:	Showtec Truss Booster RDM 1-6
Input voltage:	100–240 V AC, 50/60 Hz
Power consumption:	5 W
Outputs:	6 x 3-pin DMX/RDM OUT
Control protocols:	DMX-512/RDM
Connections:	Pro power connector IN(Blue)/OUT(Gray), 1 x 3-pin DMX/RDM IN, 1 x 3-pin DMX/RDM THRU, 6 x 3-pin DMX/RDM OUT
Housing:	Metal & flame-retardant plastic
Fuse:	T1AL/250V
Dimensions:	240 x 124 x 150 mm (LxWxH)
Weight:	1,6 kg

## Dimensions



Design and product specifications are subject to change without prior notice.



Website: [www.Showtec.info](http://www.Showtec.info)

Email: [service@highlite.com](mailto:service@highlite.com)



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