



Powerline 18 RGB IP65

ORDERCODE 41315



SHOWELECTRONICS FOR PROFESSIONALS

Congratulations!

You have bought a great, innovative product from Showtec.

The Showtec Powerline 18 RGB brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated DMX show, this product provides the effect you need.

You can rely on Showtec, for more excellent lighting products.

We design and manufacture professional light equipment for the entertainment industry.

New products are being launched regularly. We work hard to keep you, our customer, satisfied.

For more information: iwant@showtec.info

You can get some of the best quality, best priced products on the market from Showtec.

So next time, turn to Showtec for more great lighting equipment.

Always get the best -- with Showtec !

Thank you!



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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:

- LED Powerline 18 RGB
- DMX cable: on the device 70cm, connected to the extension cable: total 150cm
- Powercable length: on the device 60cm, connected to the extension cable: total 140 cm
- 2X Brackets
- User manual
- Extra Display Front
- 8x M8 Bolts



LED Expected Lifespan

LEDs gradually decline in brightness over time. HEAT is the dominant factor that leads to the acceleration of this decline. Packaged in clusters, LEDs exhibit higher operating temperatures than in ideal or singular optimum conditions. For this reason when all color LEDs are used at their fullest intensity, life of the LEDs is significantly reduced. It is estimated that a viable lifespan of 40,000 to 50,000 hours will be achieved under normal operational conditions. If improving on this lifespan expectancy is of a higher priority, place care in providing for lower operational temperatures. This may include climatic-environmental and the reduction of overall projection intensity.



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 remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never look directly into the light source.
- Never leave any cables lying around.
- 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 insert objects into air vents.
- Do not open the device and do not modify the device.
- Do not connect this device to a dimmerpack.
- 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.
- Only use device indoor, avoid contact with water or other liquids.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- 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 no side forces can impact on the truss system.
- The cable insert or the female part in the device must never be strained. There must always be sufficient cable to the device. Otherwise, the cable may be damaged which may lead to deadly electrical shocks.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- If the lens is obviously damaged, it has to be replaced. So that its functions are not impaired, due to cracks or deep scratches.
- 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 Powerline. 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.
- For replacement use fuses of same type and rating only.
- 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.

The minimum distance between light-output and the illuminated surface must be more than 1.5 meter.

The maximum ambient temperature $t_a = 45^\circ\text{C}$ must never be exceeded.

The relative humidity must not exceed 50 % with an ambient temperature of 45°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, lamp explosion, 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 Powerline 18 RGB is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use a clamp to mount the Powerline 18 RGB, with the mounting-bracket, to the trussing system.
- The Powerline 18 RGB 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 Powerline 18 RGB, always make sure, that the area below the installation place is blocked and staying in the area is forbidden.

The Powerline 18 RGB can be placed on a flat stage floor or mounted to any kind of truss by a clamp.

Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.

Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	FASE
N	BLUE	BLACK	SILVER	NUL
	YELLOW/GREEN	GREEN	GREEN	EARTH

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

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 aftersales@highlite.nl 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:

- 1) Your name
- 2) Your address
- 3) Your phone number
- 4) 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 Powerline 18 RGB is a LED system from Showtec.
LED Refresh-rate 400Hz suitable for use in TV studio

- RGB color mixing
- 4 modes: Auto, Sound active, DMX, Program
- 5 DMX modes: 7CH, 11CH, 20CH, 29Ch, 56CH
- 13 pre-set colors, 18 built-in programs, 10 editable programs
- Onboard programming functionality enables programming without external DMX controller
- Thermal management system ensures long life of LEDs
- Electronic protection against short circuit
- DMX Input: 3-pin Male/Female connector (Please use the DMX-input adapter to connect to a DMX line)
- Power failure memory
- Set Slave ID
- Protection IP65
- Dimmer 0-100%
- Strobe 1-30 fps
- Power In/Out for daisy-chain
- Voltage : 230V/50Hz (CE)
- Power consumption: Max. 130W
- Audio trigger: Built-in Mic
- Beam angle: 40°
- Source life: >50,000 hours
- Color range: Single color or multi-color, 16.7 million colors
- **Refresh-rate: 400Hz suitable for use in TV studio**
- LCD display will switch off automatically after 15 seconds
- Housing: Precision aluminum

NOTE: Knowledge of DMX is required to fully utilize this unit.

Overview



Fig. 1

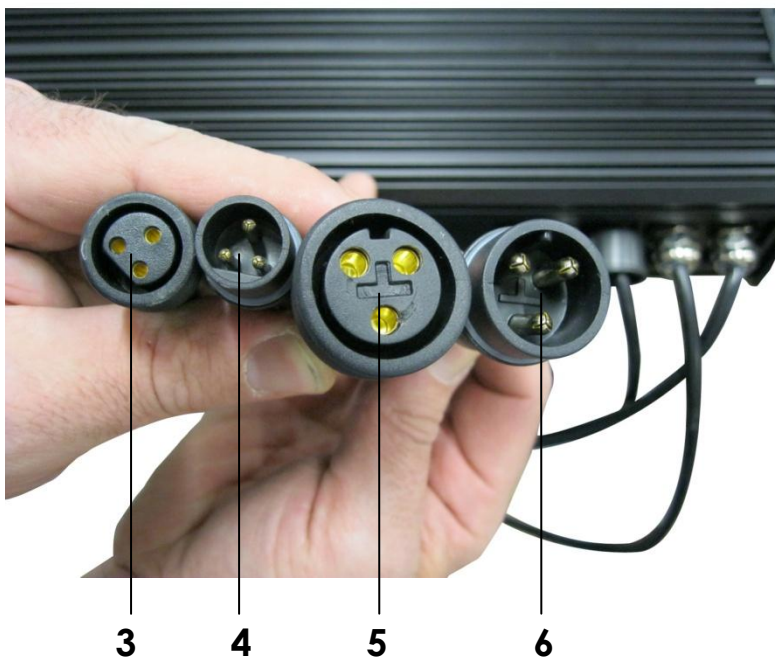
- 1) 18x 3W high intensity power 3-in-1 (Red, Green, Blue) LEDs
2) LCD Display and Menu buttons (Menu, Enter, Up, Down)



Backside



Fig. 2



- 3) DMX OUT
- 4) DMX IN
- 5) Doorlink Power
- 6) Power IN

Installation

Remove all packing materials from the Powerline 18 RGB. Check that 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.



After prolonged periods of operation, the fixture may reach high temperatures and dim due to thermalmanagement. After a while of cool down, output will recover



Set Up and Operation

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. The display will shut down if no button is pressed for 15 seconds, and it will exit sleep mode if one of the 4 buttons is pressed. The refresh-rate of 400Hz, is ideal for TV approval.

Control Modes

There are 4 Modes:

- 1) Built-in Programs
- 2) Sound-controlled
- 3) Master/Slave
- 4) DMX512

One Powerline 18 RGB (Built-in Programs)

1. Fasten the effect light onto firm trussing. Leave at least 0,5 meter on all sides for air circulation.
2. When the LED Tunnel Flower is not connected by a DMX-cable, it functions as a stand-alone device. Please see page 12 (**Auto Mode**) for more information about the built-in programs.

One Powerline 18 RGB (Sound-control)

1. Plug the end of the electric mains power cord into a proper electric power supply socket.
2. Turn on the music. If the device is set to Sound Program [1-16], then the Powerline 18 RGB will react to the beat of the music. (also see page 12)

Multiple Powerline 18 RGB (Master/Slave control)

1. Fasten the effect light onto firm trussing. Leave at least 0,5 meter on all sides for air circulation.
2. Use a 3-p XLR cable to connect the LED Tunnel Flower. The pins:



1. Earth
2. Signal -
3. Signal +

3. Link the units as shown in (Fig. 3), Connect a DMX signal cable from the first unit's DMX "out" socket to the second unit's "in" socket. Repeat this process to link the second, third, and fourth units. The first Slave device connected to the Master is Slave ID [1], the next Slave units are Slave ID [2], Slave ID [3], etc. You can use the same functions on the master device as described on this page (Built-in Programs and Music control). This means on the master device you can set your desired operation Mode and all slave devices will react the same as the master device. (also see page 11)

Multiple Powerline 18 RGB (Master/Slave control)

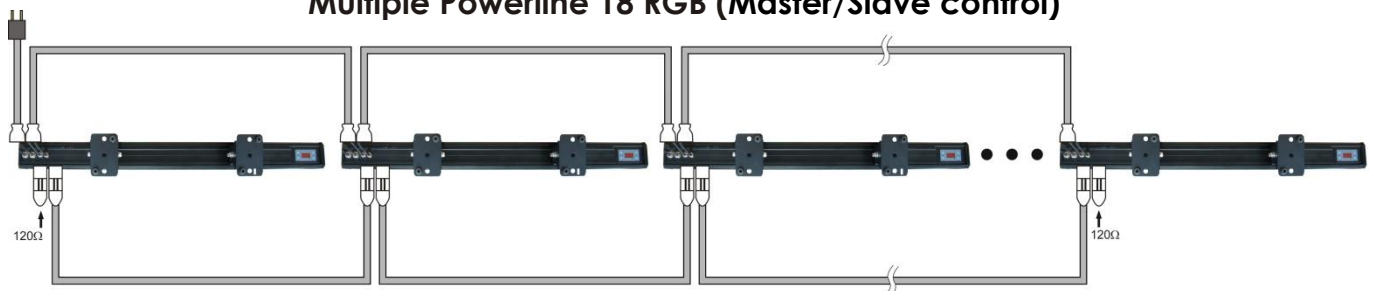
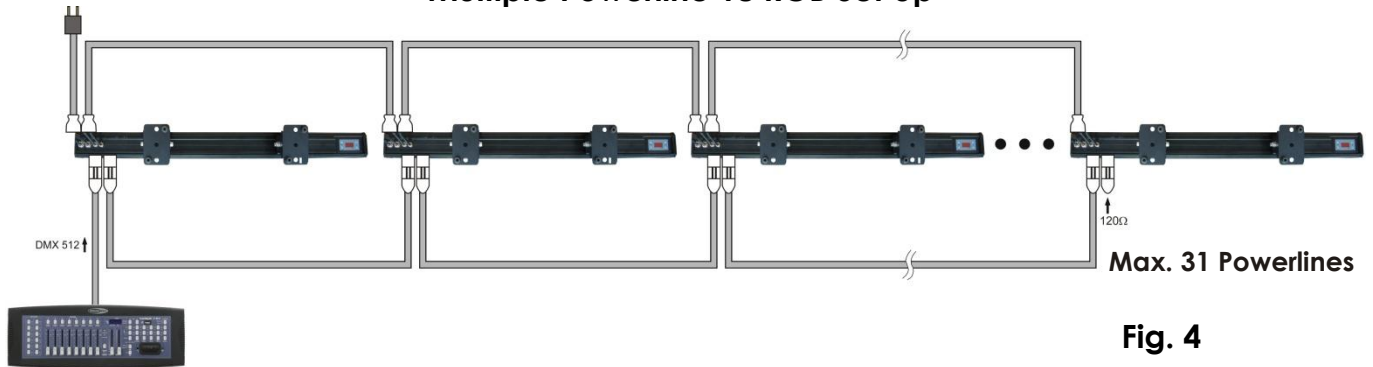


Fig. 3

Multiple Powerline 18 RGB (DMX Control)

1. Plug the end of the electric mains power cord into a proper electric power supply socket.
2. Use a 3-p XLR cable to connect the Powerlines.
3. Link the units as shown in (figure 3), Connect a DMX signal cable from the first unit's DMX "out" socket to the second unit's "in" socket. Repeat this process to link the second, third, and fourth units.
4. Supply electric power: Plug the end of the mains power cord into proper electric power supply sockets. Do so for all units and the controller.

Multiple Powerline 18 RGB Set Up



Note : Link all DMX cables and set dip switches before connecting electric power

5. Do not supply power before the whole system is set up and connected properly.
Design your show according to your DMX controller functions. (also see page 12)

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 on 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.

The Powerline uses 7, 11, 20, 29 or 56 channels (Mode 1, Mode 2, Mode 3, Mode 4 or Mode 5).

Important: Fixtures on a serial data link must be daisy chained in one 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 Powerline 18 RGB on a DMX data link: 30 fixtures
Maximum recommended number of Powerline 18 RGB on a IEC link: 8 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 Certified DMX Data Cables

- DAP Audio Basic microphone cable for allround use. bal. XLR/M 3 p. > XLR/F 3 p.
Ordercode FL01150 (1,5m.), FL013 (3m.), FL016 (6m.), FL0110 (10m.), FL0115 (15m.), FL0120 (20m.).
- DAP Audio cable for the demanding user with exceptional audio-qualities and connector made by Neutrik®. **Ordercode** FL71150 (1,5m.), FL713 (3m.), FL716 (6m.), FL7110 (10m.).

Accessories

- 41420 : Power Extensioncable IP65 2m
- 41421 : Power Extensioncable IP65 5m
- 41422 : Power Extensioncable IP65 10m
- 41423 : Power Extensioncable IP65 20m
- 41424 : Data Extensioncable IP65 2m
- 41425 : Data Extensioncable IP65 5m
- 41426 : Data Extensioncable IP65 10m
- 41427 : Data Extensioncable IP65 20m

Control Panel

When the red LED indicator light is on, means the Powerline 18 RGB is working.

When the green LED indicator light is on, means the Powerline 18 RGB is receiving a DMX signal.

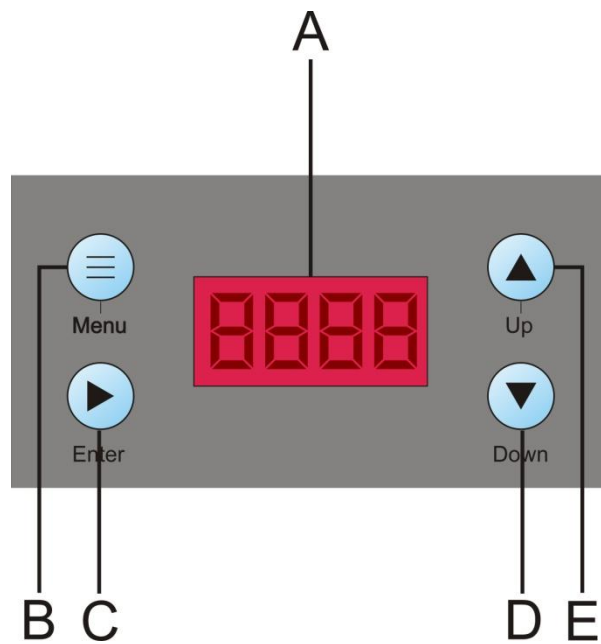


Fig. 5

A. LED Display

B. MENU Button

C. ENTER Button

D. Up Button

E. Down Button

Control Mode

The fixtures are individually addressed on a data-link and connected to the controller.

The fixtures respond to the DMX signal from the controller.

DMX Addressing

The control panel on the front side of the base allows you to assign the DMX fixture address, which is the first channel from which the Powerline 18 RGB will respond to the controller.

Please note when you use the controller, the unit has max. **56** channels.

When using multiple Powerlines, make sure you set the DMX addresses right.

Therefore, the DMX address of the first Powerline should be **1(001)**; the DMX address of the second Powerline should be **1+56=57**; the DMX address of the third Powerline should be **57+56=113**, etc.

Please, be sure that you don't have any overlapping channels in order to control each Powerline correctly. If two or more Powerlines are addressed similarly, they will work similarly.

For address settings, please refer to the instructions under "Addressing" (menu 001)

Controlling:

After having addressed all Powerlines, you may now start operating these via your lighting controller.

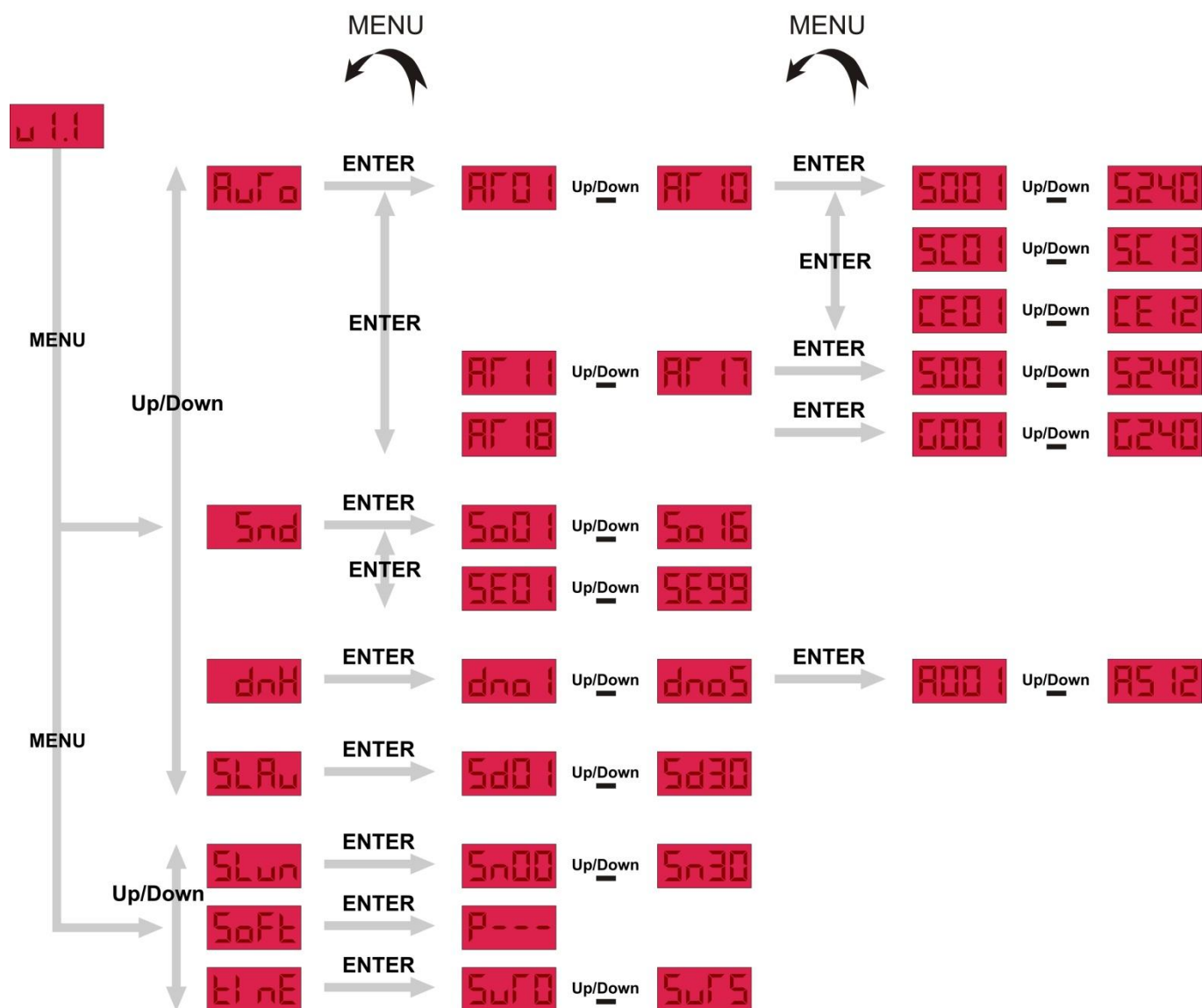
Note: After switching on, the Powerline will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the **Green LED** on the control panel will not flash.

The problem may be:

- The XLR cable from the controller is not connected with the input of the Powerline.
- The controller is switched off or defective, the cable or connector is defective, or the signal wires are swapped in the input connector.

Note: It's necessary to insert a XLR termination plug (with 120 Ohm) in the last fixture in order to ensure proper transmission on the DMX data link.

MENU OVERVIEW



Press the MENU button to scroll through 3 options of the menu:

v1.1

AuTo / Snd / dmX / SLAv

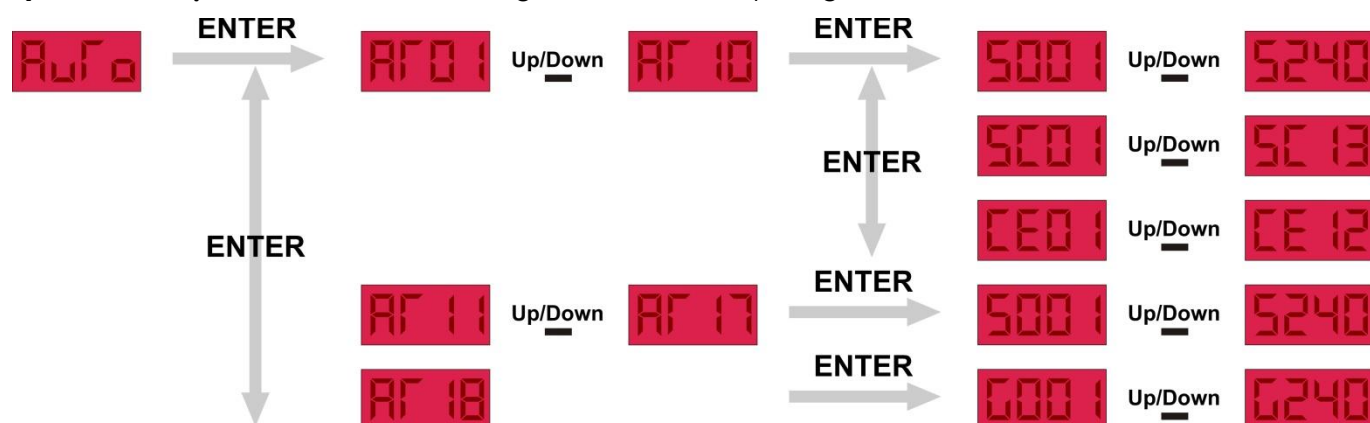
SLun / SoFt / tInE

1. Auto, 2. Sound, 3. DMX, 4. Slave (Page 11+12)

5. Slave Number, 6. Set Software, 7. Wait Time (Page 12)

1. Auto Mode

- Enter the Auto menu by pressing the ENTER button.
- Press the MENU button to go one step back.
- You can adjust the desired Color Program from 01-18 by using the UP/DOWN buttons.



- When Color Program is set from 01-10, you can adjust:

Color Speed	001-240	5001	Up/Down	5240
Select Color	01-13	5C01	Up/Down	5C13
Color Effect	01-12	CE01	Up/Down	CE12

- Use the ENTER button to scroll through these 3 options (Color Speed, Select color and Color Effect)

- When Color Program is set from 11-17, you can adjust:

Color Speed	001-240	5001	Up/Down	5240
-------------	---------	------	---------	------

- When Color Program is set to 18, you can adjust:

Program Gap	001-240	6001	Up/Down	6240
-------------	---------	------	---------	------

Autoc program	Speed [001-240]	Color [01-13]	Effect [01-12]	Prog.gap [001-240]
01-10	X	X	X	
11-17	X			
18				X

2. Sound Mode

- Enter the Sound menu by pressing the ENTER button.
- Press the MENU button to go one step back.
- You can adjust the desired Sound Program from 01-16 by using the UP/DOWN buttons.
- When you press the ENTER Button a second time you can change the sensitivity of each Sound Program.



- Use the UP/DOWN buttons to change the value from 01-99.

3. DMX Mode

The Powerline's built-in controller will automatically detect the presence of a DMX signal. In order to receive a DMX signal, the built-in controller must be attached to a DMX controller by a 3-pin DMX cable and the DMX controller must be turned on.

a) Enter the DMX menu by pressing the ENTER button.

b) Press the MENU button to go one step back.



c) You can adjust the desired DMX Address from 001-512 by using the UP/DOWN buttons.

d) When you press the ENTER Button a second time you can change the Mode.

e) Use the UP/DOWN buttons to change the Mode value from 1-5.

Mode 1: 7 channels

Mode 2: 11 channels

Mode 3: 20 channels

Mode 4: 29 channels

Mode 5: 56 channels

Mode 1-5



4. Slave ID Mode

a) Enter the Slave menu by pressing the ENTER button.

b) Press the MENU button to go one step back.

c) You can adjust the Slave ID from 01-30 by using the UP/DOWN buttons.



5. Slave Number



a) Enter the Slave Number menu by pressing the ENTER button.

b) Press the MENU button to go one step back.

c) You can adjust the Slave Number from 00-30 by using the UP/DOWN buttons.

6. Set Software



a) Enter the Set Software menu by pressing the ENTER button.

b) Press the MENU button to go one step back.

c) You can reset the entire system to its factory settings.

7. Wait Time



a) Enter the Wait Time menu by pressing the ENTER button.

b) Press the MENU button to go one step back.

c) You can adjust the Wait Time from 0-5 Sec. by using the UP/DOWN buttons.

DMX Modes

7 DMX Channels (Mode 1)

dmx 1



Channel 1 – Macro

0-7	Shutter closed
8-15	Shutter open
16-151	Strobe frequency from 1 to 20HZ slow to fast
152-159	Pulse close effect low speed
160-167	Pulse close effect medium speed
168-175	Pulse close effect high speed
176-183	Pulse open effect low speed
184-191	Pulse open effect medium speed
192-199	Pulse open effect high speed
200-207	Random strobe effect low speed
208-215	Random strobe effect medium speed
216-223	Random strobe effect high speed
224-255	Shutter open

Channel 2 – Dimmer intensity

0-255	From black to brightest
-------	-------------------------

Channel 3 – Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 4 – Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 5 – Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 6 – Macro

0-7	No macro
8-15	Macro 1 rainbow slow - stand time 5 sec
16-23	Macro 2 rainbow medium - stand time 5 sec
24-31	Macro 3 rainbow fast - stand time 5 sec
32-39	Macro 4 rainbow slow - no stand time
40-47	Macro 5 rainbow medium - no stand time
48-55	Macro 6 rainbow fast - no stand time
56-63	Macro 7 rainbow very slow - no stand time
64-70	Macro 8 random color change slowly
71-79	Macro 9 random color change medium
80-87	Macro 10 random color change fast
88-255	Null (No Function)

Channel 7 – Color Temperature Control

0-255	Continuous color temperature control
-------	--------------------------------------

11 DMX Channels (Mode 2) LEDs divided in 3 sections dno2



Channel 1 – Macro

0-7	Shutter closed
8-15	Shutter open
16-151	Strobe frequency from 1 to 20HZ slow to fast
152-159	Pulse close effect low speed
160-167	Pulse close effect medium speed
168-175	Pulse close effect high speed
176-183	Pulse open effect low speed
184-191	Pulse open effect medium speed
192-199	Pulse open effect high speed
200-207	Random strobe effect low speed
208-215	Random strobe effect medium speed
216-223	Random strobe effect high speed
224-255	Shutter open

Channel 2 – Dimmer intensity

0-255	From black to brightest
-------	-------------------------

Channel 3 – Group 1 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 4 – Group 1 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 5 – Group 1 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 6 – Group 2 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 7 – Group 2 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 8 – Group 2 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 9 – Group 3 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 10 – Group 3 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 11 – Group 3 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

20 DMX Channels (Mode 3) LEDs divided in 6 sections



Channel 1 – Macro

0-7	Shutter closed
8-15	Shutter open
16-151	Strobe frequency from 1 to 20HZ slow to fast
152-159	Pulse close effect low speed
160-167	Pulse close effect medium speed
168-175	Pulse close effect high speed
176-183	Pulse open effect low speed
184-191	Pulse open effect medium speed
192-199	Pulse open effect high speed
200-207	Random strobe effect low speed
208-215	Random strobe effect medium speed
216-223	Random strobe effect high speed
224-255	Shutter open

Channel 2 – Dimmer intensity

0-255	From black to brightest
-------	-------------------------

Channel 3 – Group 1 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 4 – Group 1 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 5 – Group 1 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 6 – Group 2 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 7 – Group 2 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 8 – Group 2 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 9 – Group 3 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 10 – Group 3 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 11 – Group 3 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 12 – Group 4 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 13 – Group 4 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 14 – Group 4 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 15 – Group 5 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 16 – Group 5 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 17 – Group 5 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 18 – Group 6 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 19 – Group 6 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 20 – Group 6 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

29 DMX Channels (Mode 4) LEDs divided in 9 sections dno4



Channel 1 – Macro

0-7	Shutter closed
8-15	Shutter open
16-151	Strobe frequency from 1 to 20HZ slow to fast
152-159	Pulse close effect low speed
160-167	Pulse close effect medium speed
168-175	Pulse close effect high speed
176-183	Pulse open effect low speed
184-191	Pulse open effect medium speed
192-199	Pulse open effect high speed
200-207	Random strobe effect low speed
208-215	Random strobe effect medium speed
216-223	Random strobe effect high speed
224-255	Shutter open

Channel 2 – Dimmer intensity

0-255	From black to brightest
-------	-------------------------

Channel 3 – Group 1 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 4 – Group 1 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 5 – Group 1 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 6 – Group 2 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 7 – Group 2 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 8 – Group 2 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 9 – Group 3 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 10 – Group 3 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 11 – Group 3 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 12 – Group 4 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 13 – Group 4 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 14 – Group 4 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 15 – Group 5 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 16 – Group 5 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 17 – Group 5 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 18 – Group 6 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 19 – Group 6 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 20 – Group 6 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 21 – Group 7 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 22 – Group 7 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 23 – Group 7 Blue

0-255	Gradual adjustment Blue from 0 – 100%
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Channel 24 – Group 8 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 25 – Group 8 Green

0-255	Gradual adjustment Green from 0 – 100%
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Channel 26 – Group 8 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 27 – Group 9 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 28 – Group 9 Green

0-255	Gradual adjustment Green from 0 – 100%
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Channel 29 – Group 9 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

56 DMX Channels (Mode 5) 18 LEDs, each one controlled separately



Channel 1 – Macro

0-7	Shutter closed
8-15	Shutter open
16-151	Strobe frequency from 1 to 20HZ slow to fast
152-159	Pulse close effect low speed
160-167	Pulse close effect medium speed
168-175	Pulse close effect high speed
176-183	Pulse open effect low speed
184-191	Pulse open effect medium speed
192-199	Pulse open effect high speed
200-207	Random strobe effect low speed
208-215	Random strobe effect medium speed
216-223	Random strobe effect high speed
224-255	Shutter open

Channel 2 – Dimmer intensity

0-255	From black to brightest
-------	-------------------------

Channel 3 – Group 1 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 4 – Group 1 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 5 – Group 1 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 6 – Group 2 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 7 – Group 2 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 8 – Group 2 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 9 – Group 3 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 10 – Group 3 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 11 – Group 3 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 12 – Group 4 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 13 – Group 4 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 14 – Group 4 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 15 – Group 5 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 16 – Group 5 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 17 – Group 5 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 18 – Group 6 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 19 – Group 6 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 20 – Group 6 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 21 – Group 7 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 22 – Group 7 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 23 – Group 7 Blue

0-255	Gradual adjustment Blue from 0 – 100%
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-
-

Channel 51 – Group 17 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 52 – Group 17 Green

0-255	Gradual adjustment Green from 0 – 100%
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Channel 53 – Group 17 Blue

0-255	Gradual adjustment Blue from 0 – 100%
-------	---------------------------------------

Channel 54 – Group 18 Red

0-255	Gradual adjustment Red from 0 – 100%
-------	--------------------------------------

Channel 55 – Group 18 Green

0-255	Gradual adjustment Green from 0 – 100%
-------	--

Channel 56 – Group 18 Blue

0-255	Gradual adjustment Blue from 0 – 100%
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Connection Cables

Take care of the connector cables, always holding them by the connectors and avoiding knots and twists when coiling them: This gives the advantage of increasing their life and reliability, which is always to your advantage. Periodically check that your cables are in good condition, that they are correctly wired and that all their contacts are perfectly efficient: a great number of problems are caused entirely by using unsuitable or faulty cables.

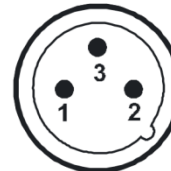
Occupation of the XLR-connection:

DMX-OUTPUT XLR mounting-socket:

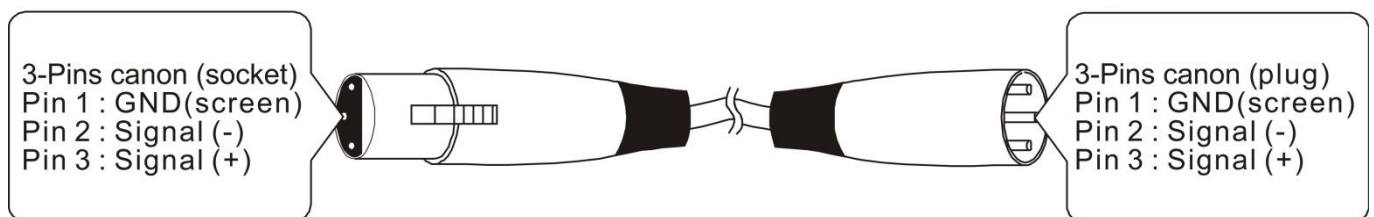


- 1 - Ground
- 2 - Signal (-)
- 3 - Signal (+)

DMX-input XLR mounting-plug



- 1 - Ground
- 2 - Signal (-)
- 3 - Signal (+)



Maintenance

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by an expert after every four years in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are to be inspected by a skilled person once a year.

The following points have to be considered during the inspection:

1. All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
2. There may not be any deformations on housings, fixations and installation spots.
3. Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
4. The electric power supply cables must not show any damages or material fatigue.

The Powerline 18 RGB 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.

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

Troubleshooting

Showtec Powerline 18 RGB

This troubleshooting guide is meant to help solve simple problems.

If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

1. If the device does not operate properly, unplug the device.
2. Check the fuse, power from the wall, all cables etc.
3. If all of the above appears to be O.K., plug the unit in again.
4. If you are unable to determine the cause of the problem, do not open the Powerline 18 RGB, as this may damage the unit and the warranty will become void.
5. Return the device to your Showtec dealer.

No Light

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

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

Response: Suspect two potential problem areas: the power supply or the LEDs.

1. Power supply. Check that the unit is plugged into an appropriate power supply.
2. The LEDs. Return the Powerline 18 RGB to your Showtec dealer.

No Response to DMX

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

1. Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
2. Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products ? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

See next page for more problem solving.

Problem	Probable cause(s)	Remedy
One or more fixtures are completely dead.	No power to the fixture	· Check that power is switched on and cables are plugged in.
	Primary fuse blown.	· Replace fuse.
Fixtures reset correctly, but all respond erratically or not at all to the controller.	The controller is not connected.	· Connect controller.
	3-pin XLR Out of the controller does not match XLR Out of the first fixture on the link (i.e. signal is reversed).	· Install a phase reversing cable between the controller and the first fixture on the link.
Fixtures reset correctly, but some respond erratically or not at all to the controller.	Poor data quality	· 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.
	Bad data link connection	· Inspect connections and cables. Correct poor connections. Repair or replace damaged cables.
	Data link not terminated with 120 Ohm termination plug.	· Insert termination plug in output jack of the last fixture on the link.
	Incorrect addressing of the fixtures.	· Check address setting.
	One of the fixtures is defective and disturbs data transmission on the link.	· Bypass one fixture at a time until normal operation is regained: unplug both connectors and connect them directly together. · Have the defective fixture serviced by a qualified technician.
	3-pin XLR Out on the fixtures does not match (pins 2 and 3 reversed).	· Install a phase-reversing cable between the fixtures or swap pin 2 and 3 in the fixture, that behaves erratically.
No light	The power supply settings do not match local AC voltage and frequency.	· Disconnect fixture. Check settings and correct if necessary.
	LEDs damaged	· Disconnect fixture and return to your dealer.
	The power supply settings do not match local AC voltage and frequency.	· Disconnect fixture. Check settings and correct if necessary.

Product Specification

Model: Showtec Powerline 18 RGB

Voltage : 230V/50Hz (CE)

Power consumption: Max. 80W

The Powerline 18 RGB is a LED system from Showtec.

LED Refresh-rate 400Hz suitable for use in TV studio

RGB color mixing

4 modes: Auto, Sound active, DMX, Program

5 DMX modes: 7CH, 11CH, 20CH, 29Ch, 56CH

13 pre-set colors, 18 built-in programs, 10 editable programs

Onboard programming functionality enables programming without external DMX controller

Thermal management system ensures long life of LEDs

Electronic protection against short circuit

DMX Input : 3-pin XLR Male/Female connector

Power failure memory

Set Slave ID

Protection IP65

Dimmer 0-100%

Strobe 1-30 fps

Power In/Out for daisy-chain

Audio trigger: Built-in Mic

Beam angle: 40°

Source life: >50,000 hours

Housing: Precision aluminum

Color range: Single color or multi-color, 16.7 million colors

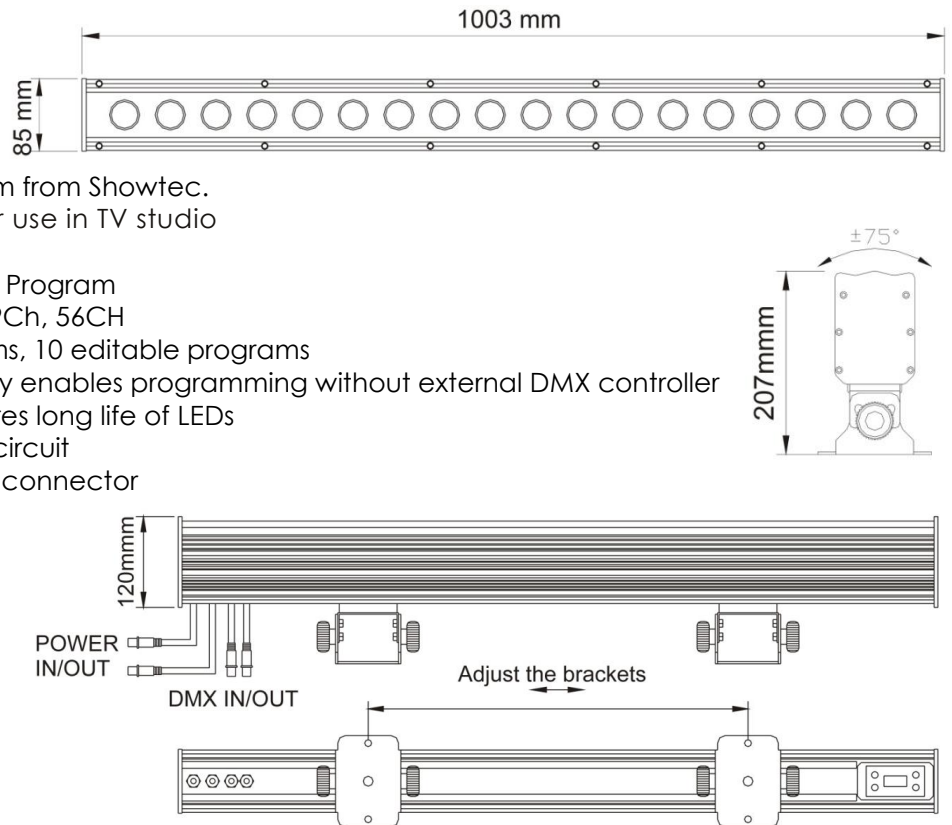
Refresh-rate: 400Hz suitable for use in TV studio

LCD display will switch off automatically after 15 seconds

Operating temperature: -18°C~+50°C (0F~+114F)

Dimensions : 1000 x 85 x 120 mm (LxWxH)

Weight : 8,8 kg



2x Quick-lock Bracket (included)

Dimensions : 120 x 85 x 75 mm (LxWxH)

Accessories

41420 : Power Extensioncable IP65 2m

41421 : Power Extensioncable IP65 5m

41422 : Power Extensioncable IP65 10m

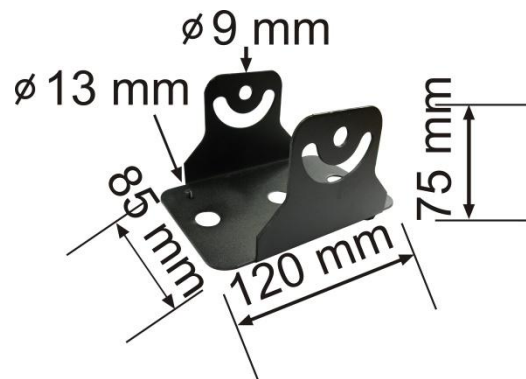
41423 : Power Extensioncable IP65 20m

41424 : Data Extensioncable IP65 2m

41425 : Data Extensioncable IP65 5m

41426 : Data Extensioncable IP65 10m

41427 : Data Extensioncable IP65 20m



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