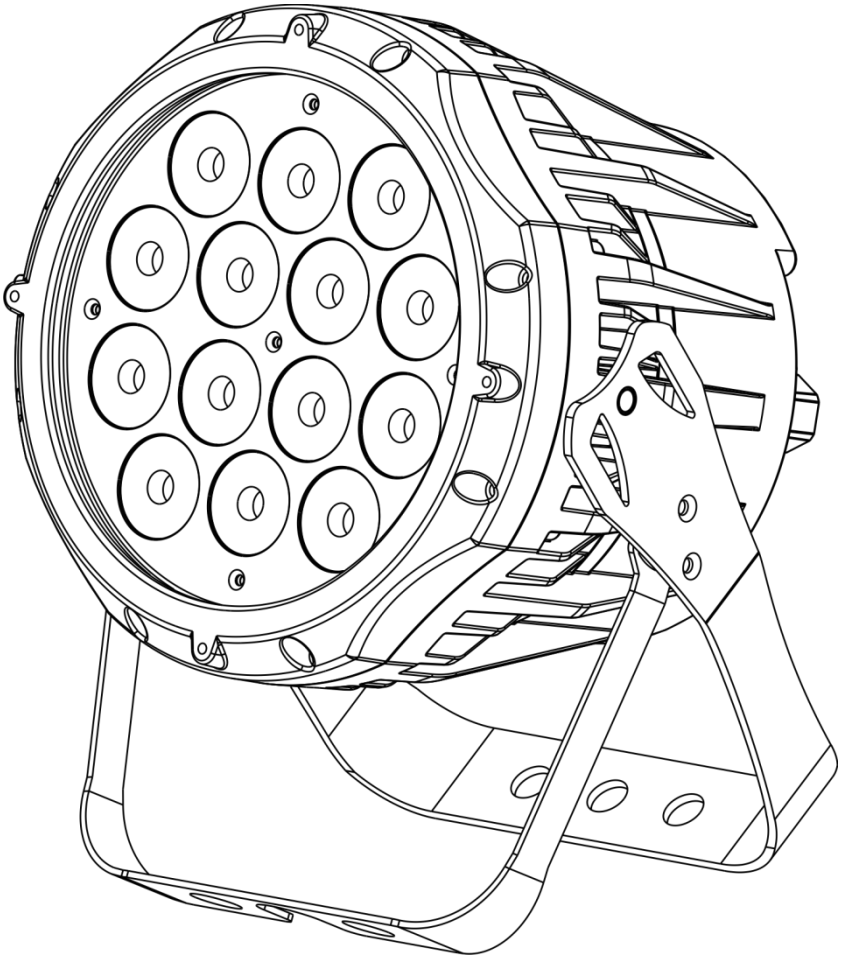
MANUAL



ENGLISH

Spectral M800 MKII V1

Ordercode: 43530

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Warning

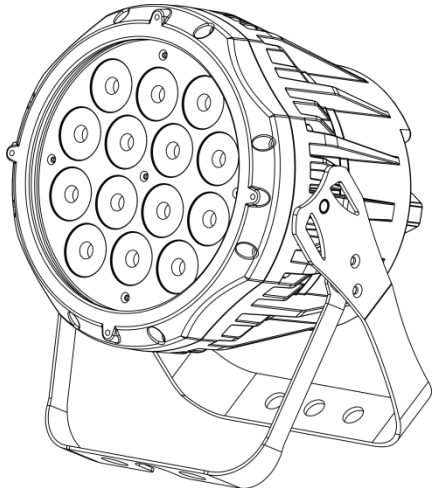
For your own safety, please read this user manual carefully before your initial start-up!

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 Spectral M800 MKII
- Powercon power cable (1,5 m)
- Safety cable
- User manual



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. If improving the lifespan is of 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 the 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 contained 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 lift the fixture holding it by the projector-head, as the mechanics may be damaged. Always hold the fixture by the transport handles.
- Never place any material over the lens.
- Never look directly into the light source.
- Never leave any cables lying around.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this will reduce the device's life.
- Do not touch the device's housing bare-handed during its operation (housing becomes very hot). Allow the fixture to cool for at least 5 minutes before handling.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use the device indoors, avoid contact with water or other liquids.
- Only operate the fixture after having checked if the housing is firmly closed and all screws are tightly fastened.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- Always keep the case closed while operating.
- Always allow a 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 holding it 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.
- If the lens is obviously damaged, it has to be replaced.
- If device was 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 the 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 fixture must be installed beyond the reach of children. Never leave the unit running unattended.
- Never attempt to bypass the thermostatic switch or fuses.
- The user is responsible for correct positioning and operating of the Spectral. 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.

CAUTION! Eyedamages!!!
Avoid looking directly into the lightsource!!!
(meant especially for epileptics)!!!

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 bigger than 1 meter.
- The maximum ambient temperature t_a = 40°C must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40° 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!

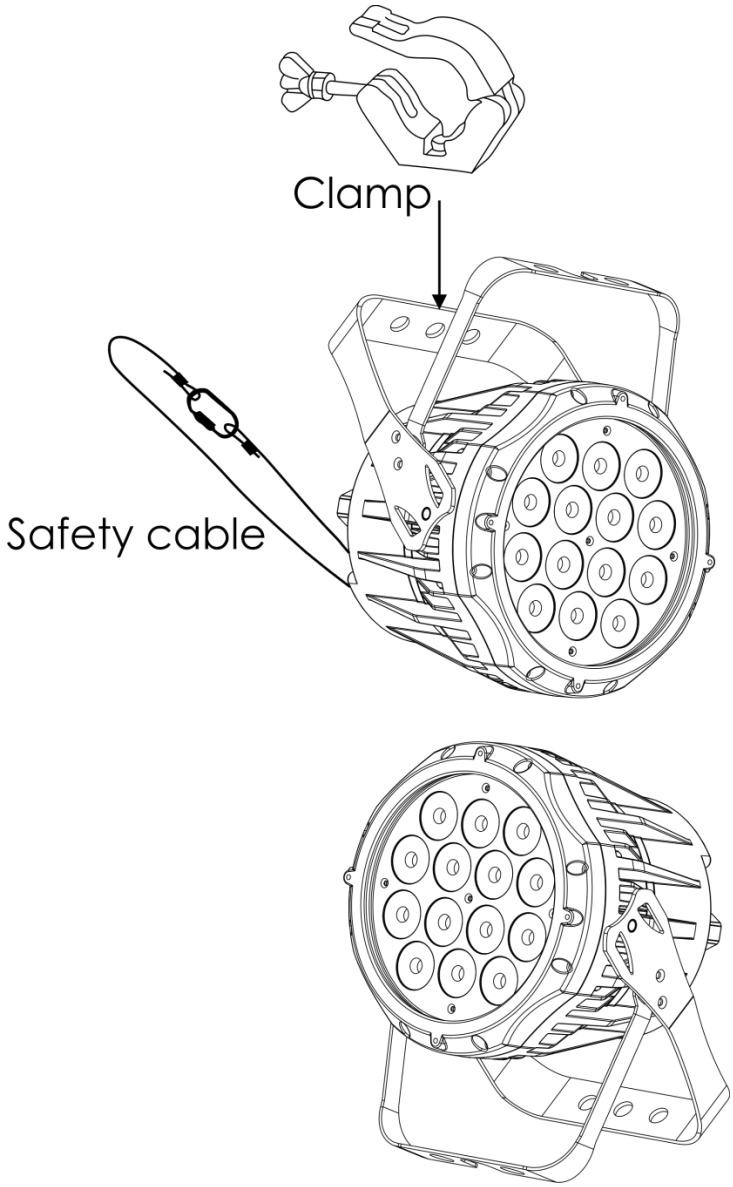
Rigging

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 projector is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use a clamp to mount the projector, with the mounting bracket, to the trussing system.
- The projector 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 projector, always make sure, that the area below the installation site is secured and that there are not any unauthorized people around.



The Spectral can be placed on a flat stage floor or mounted to any kind of truss with a clamp.

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 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:

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 short-comings 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 report 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 agreed otherwise in writing.

Complaints against us must be prepared in writing or sent 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 from which the obligation is resulting.

Description of the device

Features

The Spectral M800 MKII is a LED fixture with high output and great effects.

- Input voltage: 100-240V AC, 60/50Hz
- Power consumption: 55W
- Light source: 14 x 3W RGB LED
- Light output: 1094 lumen
- Color range: 16,7 million additive colors
- Control protocol: DMX-512
- DMX personalities: 9, 13, 3, 3, 4, 5 channels
- 4-digit LED display
- Peak intensity: 10094 cd
- Dimmer: 0-100%
- Strobe: 0-20Hz
- Beam Angle: 16°
- Control: Static Colors, Auto, Master/Slave, DMX-512
- Housing: Die-cast aluminum
- Connections: Neutrik Powercon IN/OUT, 3 & 5-pin XLR IN/OUT
- Cooling: Convection
- IP Rating: IP-20
- Dimensions: 180 x 235 x 320 mm (LxWxH)
- Weight: 4,2 kg

Frontside

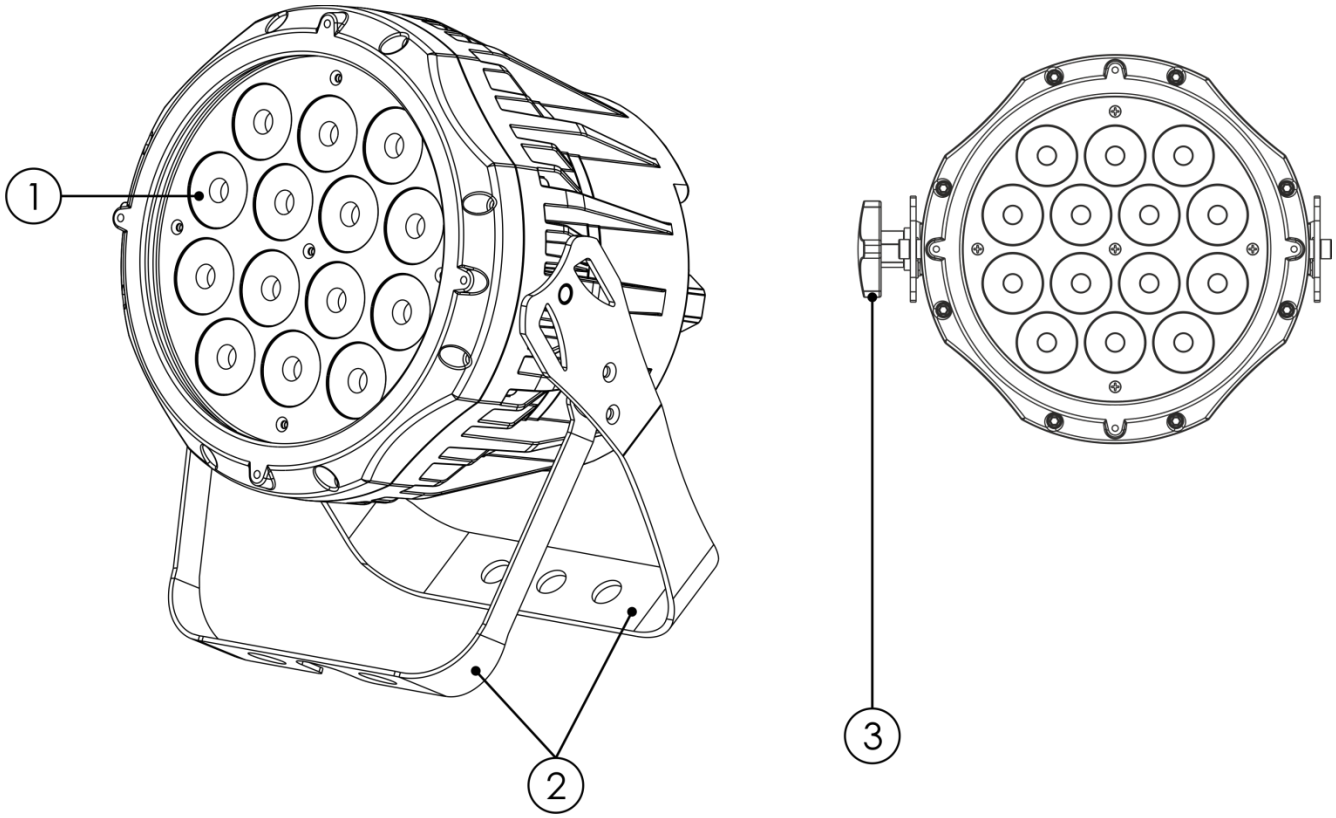


Fig. 01

01) 14 x 3W RGB LED
02) Mounting brackets with inclination screw
03) Adjustment screw

Backside

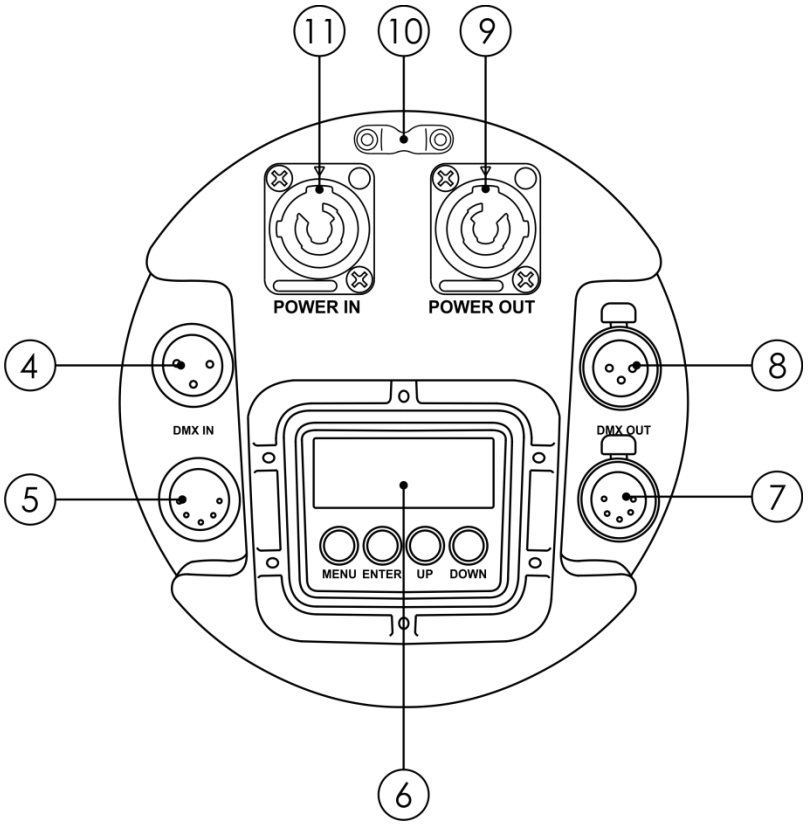


Fig. 02

04) 3-pin DMX signal connector IN
05) 5-pin DMX signal connector IN
06) 4-digit LED display + menu buttons
07) 5-pin DMX signal connector OUT
08) 3-pin DMX signal connector OUT
09) Powercon power connector 100-240V OUT
10) Safety eye
11) Powercon power connector 100-240V IN

Installation

Remove all packing materials from the Spectral M800 MKII. 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.

Set Up 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

There are 4 modes:

- Static Colors (Manual)
- Built-in programs (Auto)
- Master/Slave
- DMX-512 (9CH, 13CH, 3CH, 3CH, 4CH, 5CH)

One Spectral (Static Colors)

01) Fasten the effect light to a firm trussing. Leave at least 0,5 meter on all sides for air circulation.
02) Plug the end of the electric mains power cord into a proper electric power supply socket.
03) When the Spectral is not connected with a DMX cable, it functions as a stand-alone device. Please see page 15 for more information about the static colors.

One Spectral (Built-in programs)

04) Fasten the effect light to a firm trussing. Leave at least 0,5 meter on all sides for air circulation.
05) Plug the end of the electric mains power cord into a proper electric power supply socket.
06) When the Spectral is not connected with a DMX cable, it functions as a stand-alone device. Please see page 16 for more information about the built-in programs.

Multiple Spectrals (Master/Slave control)

01) Fasten the effect light onto firm trussing. Leave at least 0,5 meter on all sides for air circulation.
02) Use a 3-pin/5-pin XLR cable to connect the Spectral.

The pins:

01) Earth
02) Signal -
03) Signal +

03) Link the units as shown in fig. 03. Connect the first unit's DMX "out" socket with the second unit's "in" socket, using a DMX-signal cable. Repeat this process to link the second, third, and fourth units. You can use the same functions on the master device as described on pages 15-16 (Static colors or Built-in programs). This means that you can set your desired operation mode on the master device and all slave devices will react the same as the master device.

Multiple Spectrals (Master/Slave control)

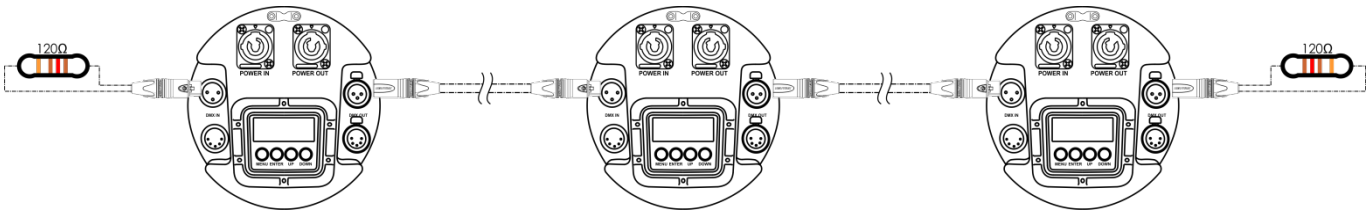
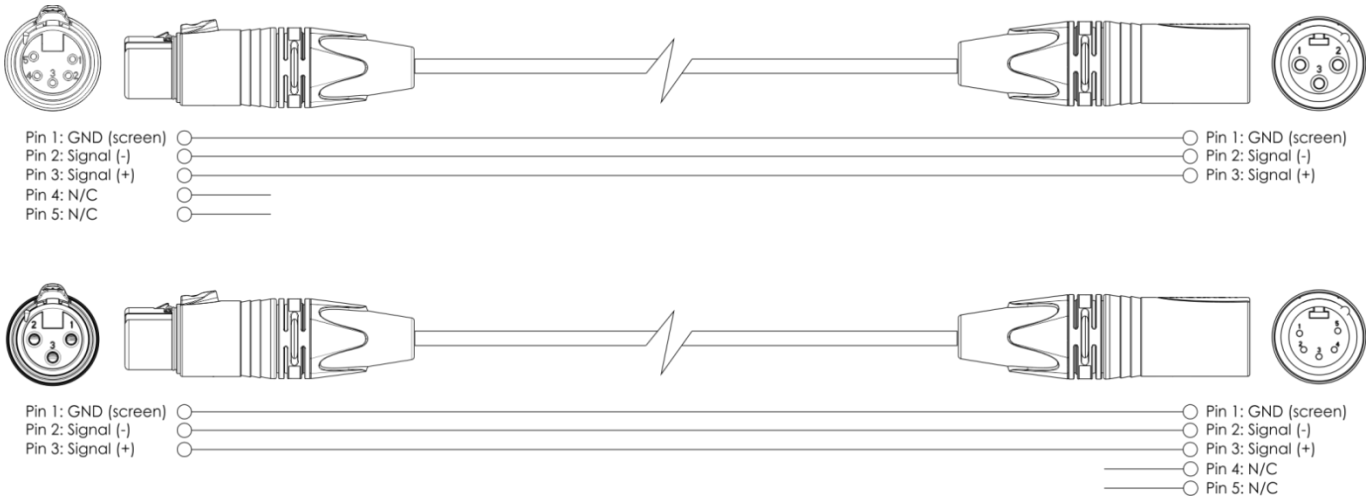


Fig. 03

Multiple Spectrals (DMX Control)

01) Fasten the effect light to a firm trussing. Leave at least 0,5 meter on all sides for air circulation.
02) Always use a safety cable (ordercode 70140 / 70141).
03) Use a 3-pin/5-pin XLR cable to connect the Spectrals and other devices.



04) Link the units as shown in fig. 04. Connect the first unit's DMX "out" socket with the second unit's "in" socket, using a DMX-signal cable. Repeat this process to link the second, third, and fourth units.
05) Supply electric power: Plug electric mains power cords into each unit's PowerCON socket, then plug the other end of the 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 Spectrals DMX Set Up

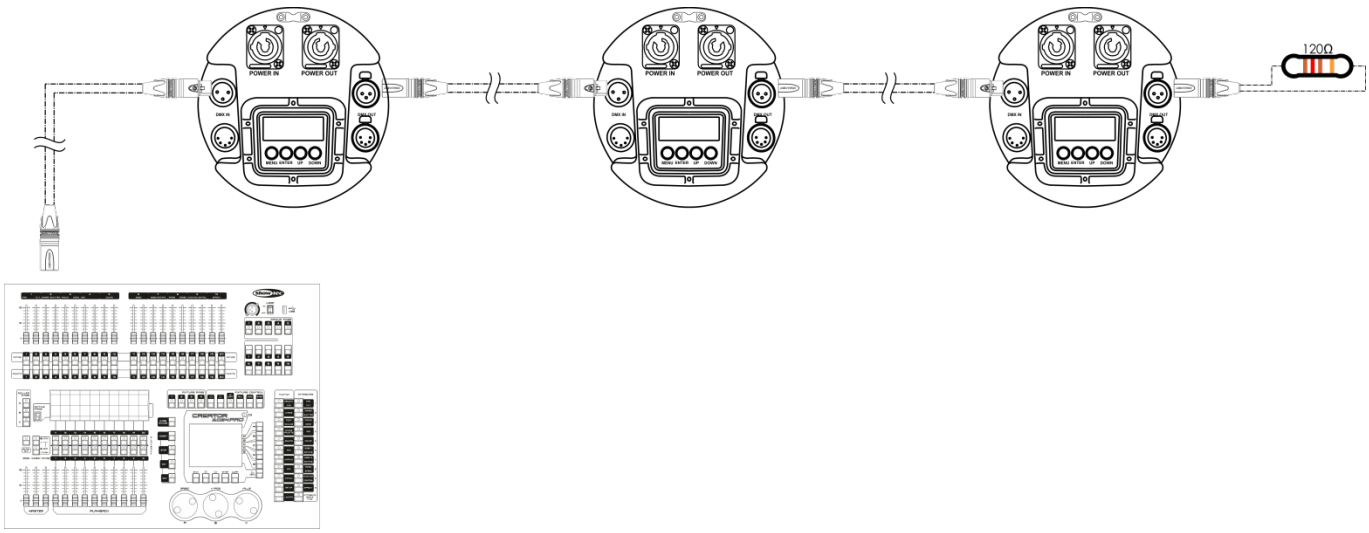


Fig. 04

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
Maximum recommended number of fixtures on a power link: @110V: 12 fixtures
Maximum recommended number of fixtures on a power link: @240V: 24 fixtures

Data Cabling

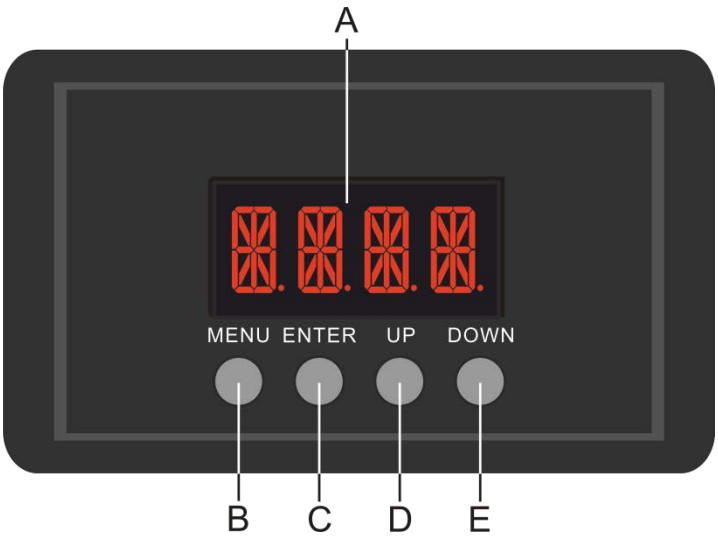
To link fixtures together, you must obtain data cables. You can purchase DAP Audio certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable, please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic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

DAP Audio DMX Data Cables

- DAP Audio Basic microphone cable for allround use. bal. XLR/M 3-pin > XLR/F 3-pin. **Ordercode** 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. **Ordercode** 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®. **Ordercode** 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®. **Ordercode** 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. **Ordercode** FL0975 (0,75 m), FL09150 (1,5 m), FL093 (3 m), FL096 (6 m), FL0910 (10 m), FL0915 (15 m), FL0920 (20 m).

The Spectral M800 MKII can be operated with a controller in **control mode** or without the controller in **stand-alone mode.**

Control Panel



A) LED display
B) MENU button
C) ENTER button
D) UP button
E) DOWN button

Fig. 05

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. (When you select the DMX address and save it, the controller will display the saved DMX address, next time.)

DMX Addressing

The control panel on the front side of the base allows you to assign DMX fixture addresses, which is the first channel with which the Spectral will respond to the controller.
Please note, when you use the controller, the unit has **13** channels.
When using multiple Spectrals, make sure you set the DMX addresses right.
Therefore, the DMX address of the first Spectral should be **1(001)**; the DMX address of the second Spectral should be **1+13=14 (014)**; the DMX address of the third Spectral should be **14+13=27 (027)**, etc.
Please, be sure that you do not have any overlapping channels in order to control each Spectral correctly. If two or more Spectrals are addressed similarly, they will work similarly.

Controlling:

After having addressed all Spectral fixtures, you may now start operating these via your lighting controller.
Note: After switching on, the Spectral will automatically detect whether DMX 512 data is received or not.
If there is no data received at the DMX-input, the "**LED** " on the control panel will not flash.
If not, the problem may be:

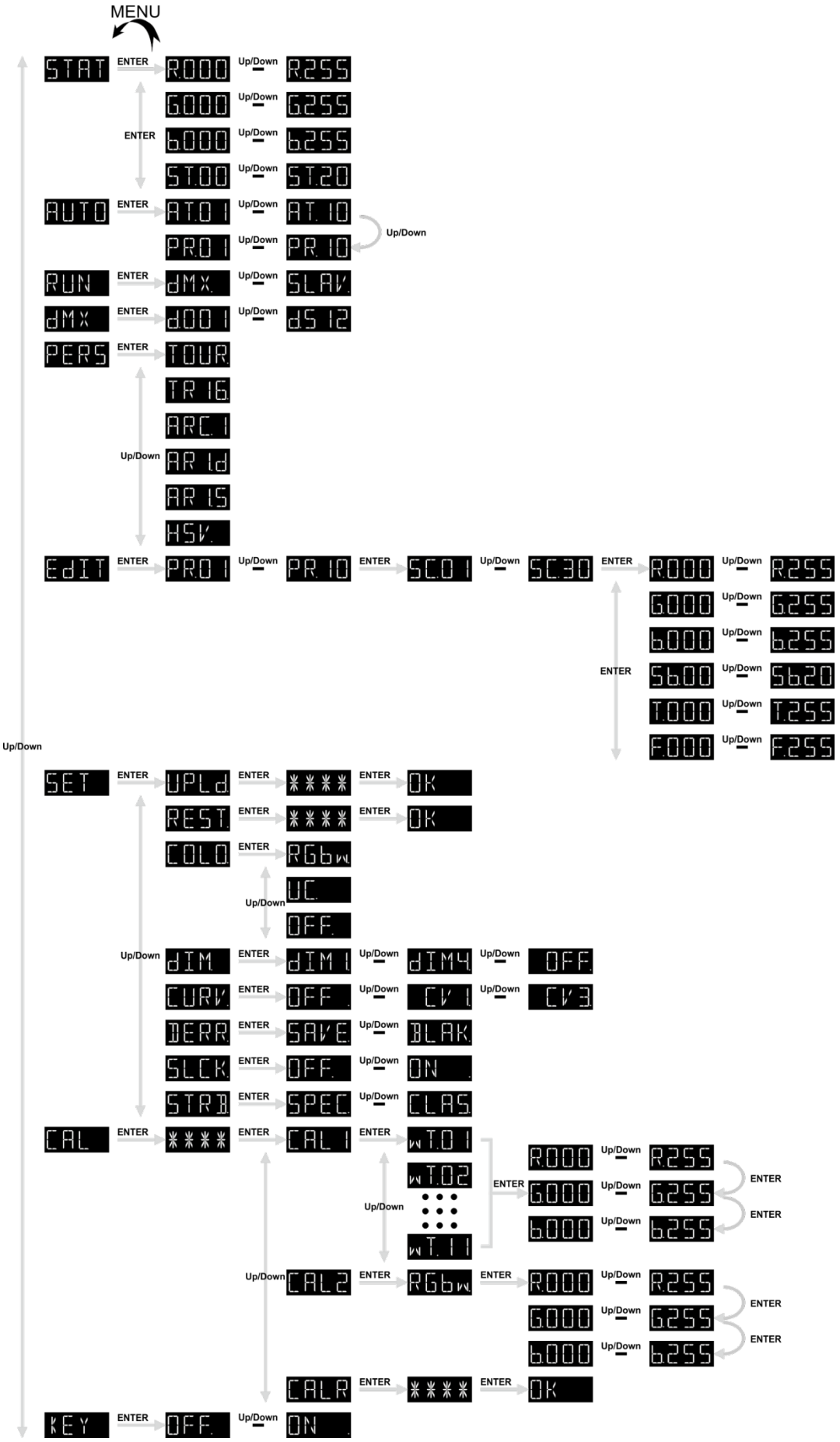
- The XLR cable from the controller is not connected with the input of the Spectral M800 MKII.
- The controller is switched off or defective, the cable or connector is detective, or the signal wires are swapped in the input connector.

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

⚠ Display Off after 25 seconds ⚠

When no button is pressed for 25 seconds, the display will turn off.
To light up the display, you have to **press the buttons in the following order: UP, DOWN, UP, DOWN, ENTER**.
Once you have pressed the buttons, the display will light up.

Menu Overview

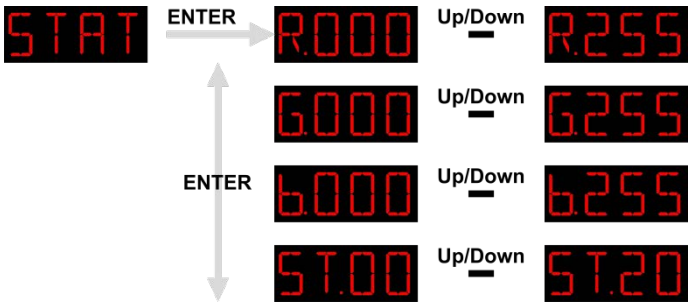


Main Menu Options

STAT	Static Colors
AUTO	Built-in programs
RUN	Master/Slave Mode
dMX	DMX-512 Mode
PERS	DMX channel modes (personalities)
EdIT	Edit Mode
SET	Settings
CAL	Calibration
KEY	Safety lock

1. Static Colors

With this menu, you can set the static colors.



01) Press the **UP/DOWN** buttons until the display shows STAT.
02) Press the **ENTER** button to open the menu.
03) Press the **ENTER** button to toggle between the static colors (Red, Green, Blue) and Strobe.
04) Once you have chosen the desired color, press the **UP/DOWN** buttons to adjust the color intensity. The adjustment range is between 0-255, from dark to brightest.
05) When the display shows ST.00 Up/Down ST.20, press the **UP/DOWN** buttons to increase/decrease the strobe frequency. The adjustment range is between 0-20, from OFF to high strobe frequency.
06) You can combine RED, GREEN, and BLUE to create an infinite range of colors (0-255).

2. Built-in programs
With this menu, you can set the built-in programs.

01) Press the **UP/DOWN** buttons until the display shows AUTO and press the **ENTER** button to open the menu.
02) Press the **UP/DOWN** buttons to choose one of the 10 uneditable built-in programs (AT.01-AT.10) and 10 editable presets (PR.01-PR.10) which can be edited in Edit mode (see page 17).
03) Press the **ENTER** button to activate.
04) The device will now run the desired built-in program.

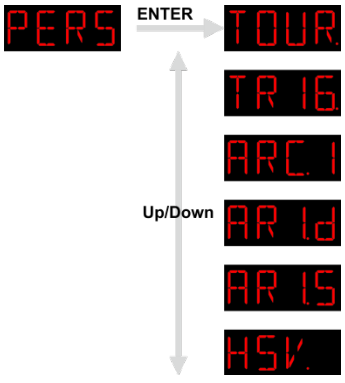
3. Master/Slave Mode
With this menu, you can set the device as a slave.

01) Press the **UP/DOWN** buttons until the display shows RUN.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to toggle between the 2 following options:
dMX. DMX/Master Mode
SLAV. Slave Mode
04) When the display shows dMX., the display is operating in DMX/Master Mode.
05) When the display shows SLAV, the device is operating in Slave Mode. It means that it will react the same as the master device.

4. DMX-512 Mode
With this menu, you can set the DMX address.

01) Press the **UP/DOWN** buttons until the display shows dMX.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to choose the desired DMX address. There are 512 available DMX addresses to choose from.

5. DMX channel modes
With this menu, you can set the desired DMX channel mode (personality).



01) Press the **UP/DOWN** buttons until the display shows PERS.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to toggle between the following DMX channel modes:

TOUR:	9 channels	**AR1.d:**	4 channels
TR16:	13 channels	**AR1.S:**	5 channels
ARC.1:	3 channels	**HSV:**	3 channels

6. Edit Mode

With this menu, you can create your own custom shows.

01) Press the **UP/DOWN** buttons until the display shows EdIT.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to choose the desired custom program: PR.01 – PR.10.
04) Each custom program has 30 scenes, which can be edited.
05) Once you have chosen the desired scene, press the **ENTER** button to enter the settings.
06) Press the **ENTER** button to toggle between RED, GREEN, BLUE, STROBE, STEP TIME and FADE options.
07) When the display shows RED, GREEN and BLUE, press the **UP/DOWN** buttons to increase/decrease the LED intensity. The adjustment range is between 0-255, from OFF to FULL ON.
08) When the display shows STROBE, press the **UP/DOWN** buttons to set the strobe frequency. The adjustment range is between 0-20, from OFF to high frequency.
09) When the display shows TIME, press the **UP/DOWN** buttons to set the duration of a scene. The adjustment range is between 0-255, from 0 to 255 seconds.
10) When the display shows FADE, press the **UP/DOWN** buttons to set the fade time between particular scenes. The adjustment range is between 0-255, from 0 to 255 seconds.

6.1. How to make your own custom program

01) First, start with PR.01 and add the desired settings in scene 1 (SC.01), then scene 2 (SC.02) , etc.
02) In this way you can add a maximum of 30 scenes.
03) After that, you can start with PR.02 and create a maximum of 30 scenes again.
04) You can repeat these steps, until you've reached PR.10, step 30.
05) It is possible to create 300 separate scenes.

7. Settings

With this menu you can set the device's settings.

01) Press the **UP/DOWN** buttons until the display shows .
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to toggle between the following menus: Upload, Reset, Color, Dimmer, Dimming curve, DMX Error, Settings Lock, Strobe Settings, Calibration and Safety Lock.

7.1. Upload

With this menu, you can export current programs from the master device to the connected slave devices.

01) Press the **UP/DOWN** buttons until the display shows .
02) Press the **ENTER** button to open the menu.
03) Insert the password: **UP>DOWN>UP>DOWN** and press the **ENTER** button to confirm.
04) The display will show .
05) Press the **ENTER** button again, to confirm.
06) While **exporting**, the slave devices will light up **yellow**.
07) If there are any **problems with exporting**, the master and the slave devices will light up **red**.
08) If the operation was **completed successfully**, the master and the slave devices will light up **green**.

7.2. Reset

With this menu, you can reset the custom programs.

01) Press the **UP/DOWN** buttons until the display shows .
02) Press the **ENTER** button to open the menu.
03) Insert the password: **UP>DOWN>UP>DOWN** and press the **ENTER** button to confirm.
04) The display will show and the custom programs will have been reset.

7.3. Color

With this menu, you can adjust the color calibration functions.

01) Press the **UP/DOWN** buttons until the display shows .
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to toggle between the following 3 options:

RGB to White

Off

Adjusted output

04) When the display shows , RGB to White is active. This means RGB = 255, 255, 255. The color displayed is the specific color which you have calibrated in **CAL2 → RGBw** menu.
05) When the display shows , the RGB settings are: 255, 255, 255. The RGB values are not adjusted and the output is the most powerful.
06) When the display shows , the RGB output is adjusted to a standard preset universal color. In this way, different Spectral versions are color-balanced in order to match each other.

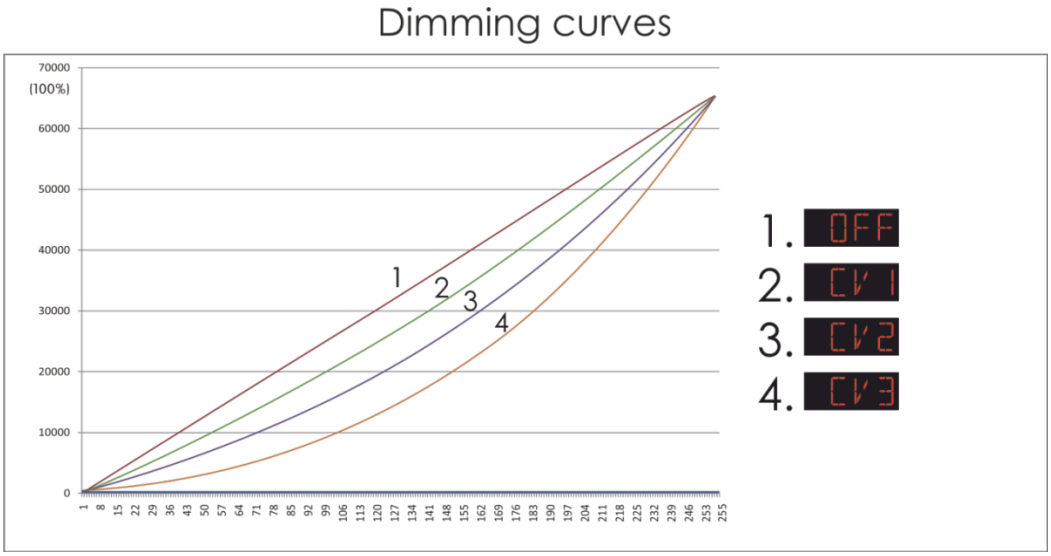
7.4. Dimmer

With this menu, you can adjust the dimmer.

01) Press the **UP/DOWN** buttons until the display shows .
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to choose one of the 4 dimmer speed options (DIM1-DIM4, from fast to slow) and OFF.
04) If you choose OFF, then RGBW and the master dimmer are linear.
05) The dimmer settings do not have any influence on the device's performance in DMX **TOUR** mode. The DMX settings override the dimmer settings.

7.5. Dimming curve settings

01) Press the **UP/DOWN** buttons until the display shows CURV.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to choose the desired dimming curve out of the 4 available options:



7.6. DMX Error

With this menu, you can determine the device's behaviour in case of a DMX signal error.

01) Press the **UP/DOWN** buttons until the display shows DERR.
02) Press the **UP/DOWN** buttons to toggle between the 2 options:

BLAK Blackout

SAVE DMX data save

03) If the display shows BLAK, the Spectral will black the output out, in case of a DMX signal error.
04) If the display shows SAVE, the Spectral will fall back on the last working DMX signal, which will ensure undisrupted performance.

7.7. Settings Lock

With this menu you can determine whether Settings menu is locked or unlocked.

01) Press the **UP/DOWN** buttons until the display shows SLCK.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to choose ON or OFF.
04) If the display shows ON, you will need to insert the password (press **UP>DOWN>UP>DOWN** and press the **ENTER** button) to enter Settings menu.

7.8. Strobe Settings

With this menu you can choose the desired strobe mode.

01) Press the **UP/DOWN** buttons until the display shows STRB.
02) Press the **ENTER** button to open the menu.
03) Press the **UP/DOWN** buttons to toggle between the following 2 options:

CLAS Classic strobe

SPEC Special strobe

04) If you have chosen SPEC, strobe will be active only if you operate the device in one of the following DMX channel modes/personalities: **TOUR**, **AR1.S** and **TR16**.

8. Calibration

With this menu, you can adjust the characteristics of the white color or set the RGB calibration.

01) Press the **UP/DOWN** buttons until the display shows CAL.
02) Press the **ENTER** button to open the menu.
03) Insert the password: **UP>DOWN>UP>DOWN** and press the **ENTER** button to confirm.
04) Now you have gained 3 additional options.
05) Press the **UP/DOWN** buttons until the display shows one of the following 3 options:

CAL 1 White color calibration

CAL2 RGB calibration

CALR Calibration reset

8.1. White color calibration

With this menu you can adjust the temperature of the built-in white color presets.

01) When the display shows CAL 1, press the **ENTER** button to open the menu.
02) Press the **UP/DOWN** buttons to choose one of the 11 white color presets: WT.01 – WT.11.
03) Once you have chosen the desired preset, press the **ENTER** button to open the submenu.
04) Press the **ENTER** button to toggle between RED, GREEN and BLUE.
05) Press the **UP/DOWN** buttons to increase/decrease the intensity of the chosen color. The adjustment range of each color is between 0-255, from OFF to FULL ON.

8.2. RGB calibration

With this menu you can adjust the temperature of the white color.

01) If the display shows CAL2, press the **ENTER** button to open the menu. The display shows RGbW.
02) Press the **ENTER** button to open the submenu.
03) Press the **ENTER** button to toggle between the RED, GREEN and BLUE.
04) Once you have chosen the desired color, press the **UP/DOWN** buttons to set the color intensity. The adjustment range is between 0-255, OFF to FULL ON.

8.3. Calibration reset

With this menu you can reset the calibration settings.

01) If the display shows CALR, press the **ENTER** button to open the menu. The display shows RGbW.
02) Press the **ENTER** button to open the menu.
03) Insert the password: **UP>DOWN>UP>DOWN** and press the **ENTER** button to confirm.
04) The display will show OK and the calibration settings will have been reset.

9. Safety Lock

01) When the display shows KEY, press the **ENTER** button to open the menu.
02) Press the **UP/DOWN** buttons to choose between ON and OFF.
03) If you have selected ON, press the **ENTER** button to confirm.
04) It will now take 25 seconds for the device to become locked.
05) If this options remains active, the device will always ask for the password upon start-up.
06) In order to unlock the device, press the following buttons in the following order: **UP>DOWN>UP>DOWN** and confirm by pressing the **ENTER** button.

DMX Channels

9 channels (TOUR)

Channel 1 – Dimmer intensity	
0-255	Gradual adjustment, from dark to brightest 0-100%

Channel 2 – Red ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Red, from 0-100%

Channel 3 – Green ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Green, from 0-100%

Channel 4 – Blue ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Blue, from 0-100%

Channel 5 – Macros ⚠ Dimmer must be open ⚠	
0-10	Not functional
11-30	Red 100% / Green Up / Blue 0%
31-50	Red Down / Green 100% / Blue 0%
51-70	Red 0% / Green 100% / Blue Up
71-90	Red 0% / Green Down / Blue 100%
91-110	Red Up / Green 0% / Blue 100%
111-130	Red 100% / Green 0% / Blue Down
131-150	Red 100% / Green Up / Blue Up
151-170	Red Down / Green Down / Blue 100%
171-200	Red 100% / Green 100% / Blue 100% / White 100%
201-205	White 1: 3200K
206-210	White 2: 3400K
211-215	White 3: 4200K
216-220	White 4: 4900K
221-225	White 5: 5600K
226-230	White 6: 5900K
231-235	White 7: 6500K
236-240	White 8: 7200K
241-245	White 9: 8000K
246-250	White 10: 8500K
251-255	White 11: 10000K

Channel 6 – Classic Strobe ⚠ Dimmer must be open and strobe must be set to CLAS (page 19) ⚠	
0-9	Not functional
10-255	Strobe flash frequency, from OFF to high frequency

Channel 6 – Special Strobe ⚠ Dimmer must be open and strobe must be set to SPEC (page 19) ⚠	
0-9	Not functional
10-99	Strobe flash frequency, from slow to fast
100-109	Not functional
110-179	Pulse strobe, from slow to fast
180-189	Not functional
190-255	Random strobe, from slow to fast

Channel 7 – Built-in programs/Custom programs ⚠ Dimmer must be open ⚠	
0-20	Not functional
21-30	Auto 1
31-40	Auto 2
41-50	Auto 3
51-60	Auto 4
61-70	Auto 5
71-80	Auto 6
81-90	Auto 7
91-100	Auto 8
101-110	Auto 9
111-120	Auto 10
121-130	PR.01
131-140	PR.02
141-150	PR.03
151-160	PR.04
161-170	PR.05
171-180	PR.06
181-190	PR.07
191-200	PR.08
201-210	PR.09
211-220	PR.10
221-255	Not functional

Channel 8 – Auto speed ⚠ CH7 must be set between 21-120 ⚠	
0-255	Speed adjustment, from slow to fast

Channel 9 – Dimmer speed	
0-9	Preset dimmer speed from the device's menu
10-29	Linear dimmer
30-69	Non-linear dimmer 1 (fastest)
70-129	Non-linear dimmer 2
130-189	Non-linear dimmer 3
190-255	Non-linear dimmer 4 (slowest)

13 channels (TR16)

Channel 1 – Dimmer intensity	
0-255	Gradual adjustment, from dark to brightest 0-100%

Channel 2 – Fine dimmer ⚠ Dimmer must be open ⚠	
0-255	Fine dimmer adjustment, from dark to brightest 0-100%

Channel 3 – Red ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Red, from 0-100%

Channel 4 – Fine Red ⚠ Dimmer must be open ⚠	
0-255	Fine adjustment Red, from 0-100%

Channel 5 – Green ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Green, from 0-100%

Channel 6 – Fine Green ⚠ Dimmer must be open ⚠	
0-255	Fine adjustment Green, from 0-100%

Channel 7 – Blue ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Blue, from 0-100%

Channel 8 – Fine Blue ⚠ Dimmer must be open ⚠	
0-255	Fine adjustment Blue, from 0-100%

Channel 9 – Macros ⚠ Dimmer must be open ⚠	
0-10	Not functional
11-30	Red 100% / Green Up / Blue 0%
31-50	Red Down / Green 100% / Blue 0%
51-70	Red 0% / Green 100% / Blue Up
71-90	Red 0% / Green Down / Blue 100%
91-110	Red Up / Green 0% / Blue 100%
111-130	Red 100% / Green 0% / Blue Down
131-150	Red 100% / Green Up / Blue Up
151-170	Red Down / Green Down / Blue 100%
171-200	Red 100% / Green 100% / Blue 100% / White 100%
201-205	White 1: 3200K
206-210	White 2: 3400K
211-215	White 3: 4200K
216-220	White 4: 4900K
221-225	White 5: 5600K
226-230	White 6: 5900K
231-235	White 7: 6500K
236-240	White 8: 7200K
241-245	White 9: 8000K
246-250	White 10: 8500K
251-255	White 11: 10000K

Channel 10 – Classic Strobe ⚠ Dimmer must be open and strobe must be set to CLAS (page 19) ⚠	
0-9	Not functional
10-255	Strobe flash frequency, from OFF to high frequency

Channel 10 – Special Strobe ⚠ Dimmer must be open and strobe must be set to SPEC (page 19) ⚠	
0-9	Not functional
10-99	Strobe flash frequency, from slow to fast
100-109	Not functional
110-179	Pulse strobe, from slow to fast
180-189	Not functional
190-255	Random strobe, from slow to fast

Channel 11 – Built-in programs/Custom programs ⚠ Dimmer must be open ⚠	
0-20	Not functional
21-30	Auto 1
31-40	Auto 2
41-50	Auto 3
51-60	Auto 4
61-70	Auto 5
71-80	Auto 6
81-90	Auto 7
91-100	Auto 8
101-110	Auto 9
111-120	Auto 10
121-130	PR.01
131-140	PR.02
141-150	PR.03
151-160	PR.04
161-170	PR.05
171-180	PR.06
181-190	PR.07
191-200	PR.08
201-210	PR.09
211-220	PR.10
221-255	Not functional

Channel 12 – Auto speed ⚠ CH11 must be set between 21-120 ⚠	
0-255	Speed adjustment, from slow to fast

Channel 13 – Dimmer speed	
0-9	Preset dimmer speed from the device's menu
10-29	Linear dimmer
30-69	Non-linear dimmer 1 (fastest)
70-129	Non-linear dimmer 2
130-189	Non-linear dimmer 3
190-255	Non-linear dimmer 4 (slowest)

3 channels (ARC1)

Channel 1 – Red	
0-255	Gradual adjustment Red, from 0-100%

Channel 2 – Green	
0-255	Gradual adjustment Green, from 0-100%

Channel 3 – Blue	
0-255	Gradual adjustment Blue, from 0-100%

4 channels (AR1.D)

Channel 1 – Dimmer intensity	
0-255	Gradual adjustment, from dark to brightest 0-100%

Channel 2 – Red ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Red, from 0-100%

Channel 3 – Green ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Green, from 0-100%

Channel 4 – Blue ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Blue, from 0-100%

5 channels (AR1.S)

Channel 1 – Dimmer intensity	
0-255	Gradual adjustment, from dark to brightest 0-100%

Channel 2 – Red ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Red, from 0-100%

Channel 3 – Green ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Green, from 0-100%

Channel 4 – Blue ⚠ Dimmer must be open ⚠	
0-255	Gradual adjustment Blue, from 0-100%

Channel 5 – Strobe ⚠ Dimmer must be open ⚠	
0-9	Not functional
10-255	Strobe flash frequency, from OFF to high frequency

3 channels (HSV)

Channel 1 – Hue (color variations)	
0-255	Gradual adjustment hue, from 0-100%

Channel 2 – Red color saturation	
0-255	Saturation adjustment, from 0-100%

Channel 3 – Value (dimmer)	
0-255	Gradual adjustment dimmer, from dark to brightest

Maintenance

The operator has to make sure that safety-related and machine-technical installations are to be inspected by an expert after every year in the course of an acceptance test.
The operator has to make sure that safety-related 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:
01) All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
02) There may not be any deformations on housings, fixations and installation spots.
03) Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
04) The electric power supply cables must not show any damages or material fatigue.

The Spectral M800 MKII requires almost no maintenance. However, you should keep the unit clean. Otherwise, the fixture's light output will be significantly reduced. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Wipe lens clean with glass cleaner and a soft cloth. Do not use alcohol or solvents.
The front lens will require weekly cleaning, as smoke-fluid tends to build up residues, reducing the light-output very quickly.
Please clean internal components once a year with a light brush and vacuum cleaner.
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.

Troubleshooting

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.

No Light

If the light effect does not operate properly, refer servicing to a technician.
Suspect two potential problem areas as: the power supply and the LEDs.
01) Power supply. Check that the unit is plugged into an appropriate power supply.
02) The LEDs. Return the Spectral to your Showtec dealer.
03) If both of the above appears to be O.K., plug the unit in again.
04) If you are unable to determine the cause of the problem, do not open the Spectral, as this may damage the unit and the warranty will become void.
05) Return the device to your Showtec dealer.

No Response to DMX

Suspect the DMX cable or connectors, 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 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.

Problem	Probable cause(s)	Solution
One or more fixtures do not function at all	No power to the fixture	• Check if power is switched on and cables are plugged in
	Internal fuse blown	• Return the device to your local Showtec dealer.
Fixtures reset correctly, but all respond erratically or not at all to the controller	The controller is not connected.	• Connect controller.
	3-pin/5-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 restored: unplug both connectors and connect them directly together. • Have the defective fixture serviced by a qualified technician
	3-pin/5-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 or lamp cuts out intermittently	Fixture is too hot	• Allow the fixture to cool down • Make sure air vents in control panel and the front lens are not blocked • Turn up the air conditioning
	LEDs damaged	• Disconnect the fixture and return it to your dealer
	The power supply settings do not match local AC voltage and frequency	• Disconnect fixture. Check settings and correct if necessary

Product Specifications

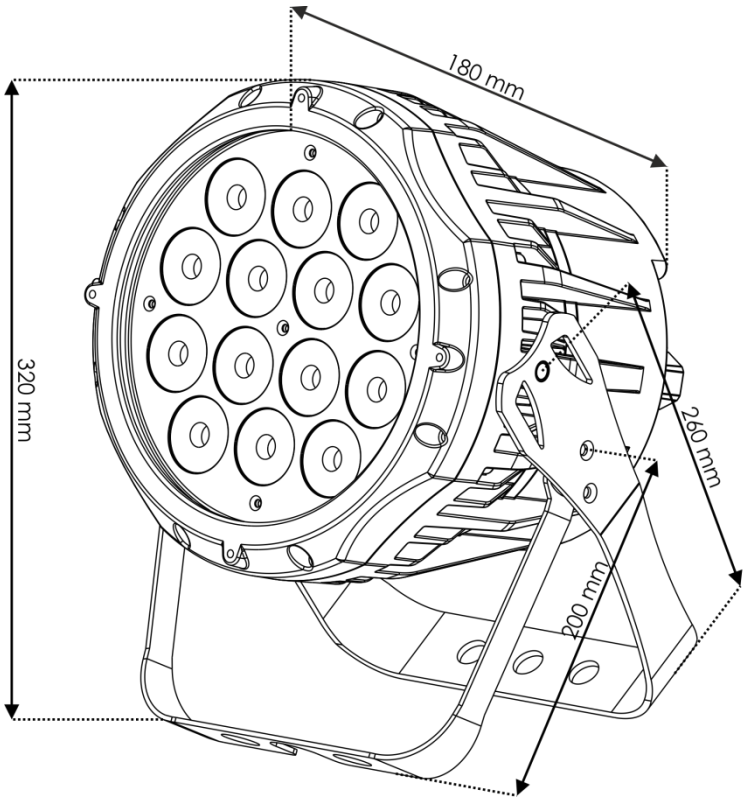
Model:	Showtec Spectral M800 MKII
Input voltage:	100-240V AC, 60/50Hz
Power consumption:	55W (full output)
DMX linking:	30pcs
Dimensions:	180 x 235 x 320 mm (LxWxH)
Weight:	4,2 kg
Operating and Programming:	
Signal pin OUT:	Pin 1 (earth), pin 2 (-), pin 3 (+)
DMX Mode:	9, 13, 3, 3, 4, 5 channels
Signal input:	3-pin/5-pin DMX IN
Signal output:	3-pin/5-pin DMX OUT
Electro-mechanical effects:	
Light source:	14 x 3W RGB LED
Light output:	1094 lumen
Color range:	16,7 million additive colors
Beam angle:	16°
Dimmer:	0-100%
Strobe:	0-20 Hz
Peak intensity:	10094 cd
Housing:	Die-cast aluminum
DMX-control:	via standard DMX-controller
Onboard:	4-digit LED display for easy setup
Control:	Static Colors, Auto, Master/Slave, DMX-512
Connections:	Dedicated Schuko to PowerCON & Data connector
Cooling:	Convection
IP rating:	IP-20
Max. ambient temperature t_a:	40°C
Max. housing temperature t_B:	80°C
Minimum distance:	
Minimum distance from flammable surfaces:	0,5 m
Minimum distance to lighted object:	1 m

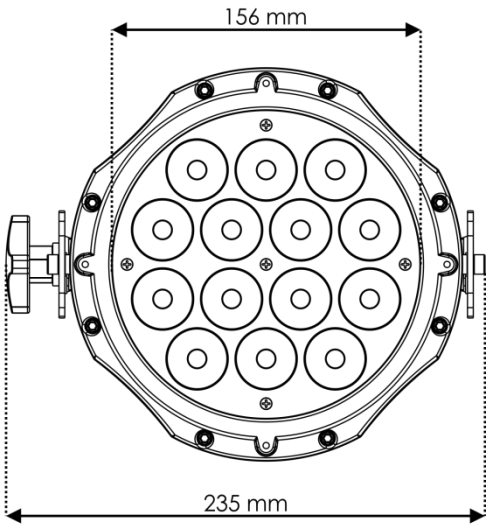
Design and product specifications are subject to change without prior notice.

CE

Website: www.Showtec.info
Email: service@highlite.nl

Dimensions





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