

USER MANUAL
LED Q9 DMX RGB Spot



**Important:**

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

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.

Please make sure that there are no obvious transport damages. Should you notice any damages on the A/C connection cable or on the casing, do not take the device into operation and immediately consult your local dealer.

This device falls under protection-class I. The power plug must only be plugged into a protection class I outlet. The voltage and frequency must exactly be the same as stated on the device. Wrong voltages or power outlets can lead to the destruction of the device and to mortal electrical shock.

Always plug in the power plug last. The power plug must always be inserted without force. Make sure that the plug is tightly connected with the outlet.

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 touch them with wet hands, as this could lead to mortal electrical shock.

Never modify, bend, strain mechanically, put pressure on, pull or heat up the power cord. Never operate next to sources of heat or cold. Disregard can lead to power cord damages, fire or mortal electrical shock.

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 mortal damage.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

If extension cords are used, make sure that the core diameter is sufficient for the required power consumption of the device. All warnings concerning the power cords are also valid for possible extension cords.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord. Otherwise, the cable or plug can be damaged leading to mortal electrical shock. If the power plug or the power switch is not accessible, the device must be disconnected via the mains.

If the power plug or the device is dusty, the device must be taken out of operation, disconnected and then be cleaned with a dry cloth. Dust can reduce the insulation which may lead to mortal electrical shock. More severe dirt in and at the device should only be removed by a specialist.

There must never enter any liquid into power outlets, extension cords or any holes in the housing of the device. If you suppose that also a minimal amount of liquid may have entered the device, it must immediately be disconnected. This is also valid, if the device was exposed to high humidity. Also if the device is still running, the device must be checked by a specialist if the liquid has reduced any insulation. Reduced insulation can cause mortal electrical shock.

There must never be any objects entering into the device. This is especially valid for metal parts. If any metal parts like staples or coarse metal chips enter into the device, the device must be taken out of operation and disconnected immediately. Malfunction or short-circuits caused by metal parts may cause mortal injuries.

Never leave this device running unattended.

OPERATING DETERMINATIONS

This device is a lighting effect for creating decorative effects. This product is only allowed to be operated with an alternating voltage of 230 V, 50 Hz and was designed for indoor use only.

Lighting effects are not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

Never put any liquids close to the device. Should any liquid enter the device nevertheless, disconnect from mains immediately. Please let the device be checked by a qualified service technician before you operate it again. Any damages caused by liquids having entered the device are not subject to warranty!

Do not shake the device. Avoid brute force when operating the device.

When choosing the installation-spot, please make sure that the device is not exposed to extreme heat, moisture or dust. There should not be any cables lying around. You endanger your own and the safety of others!


This device must never be operated or stockpiled in surroundings where splash water, rain, moisture or fog may harm the device. Moisture or very high humidity can reduce the insulation and lead to mortal electrical shocks. When using smoke machines, make sure that the device is never exposed to the direct smoke jet and is installed in a distance of 0.5 meters between smoke machine and device. The room must only be saturated with an amount of smoke that the visibility will always be more than 10 meters.

The ambient temperature must always be between -5°C and $+45^{\circ}\text{C}$. Keep away from direct insulation (particularly in cars) and heaters.

The relative humidity must not exceed 50 % with an ambient temperature of 45°C .

This device must only be operated in an altitude between -20 and 2000 m over NN.

Never use the device during thunderstorms. Over voltage could destroy the device. Always disconnect the device during thunderstorms.

The symbol  determines the minimum distance from lighted objects. The minimum distance between light-output and the illuminated surface must be more than 0.1 meters.

The housing must never touch surrounding surfaces or objects.

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

Operate the device only after having become familiarized with its functions. Do not permit operation by persons not qualified for operating the device. Most damages are the result of unprofessional operation!

Never use solvents or aggressive detergents in order to clean the device! Rather use a soft and damp cloth.

Please use the original packaging if the device is to be transported.
Please consider that unauthorized modifications on the device are forbidden due to safety reasons!

If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, etc.

INSTALLATION

Before attaching the device, make sure that the installation area can hold a minimum point load of 10 times the device's weight.

The device must only be installed absolutely planar at a vibration-free, oscillation-free and fire-resistant location. Make sure that the device is installed absolutely planar by using a water-level.

Please note: The device must be installed out of the reach of people.

The device must always be installed via all fixation holes. Do only use appropriate screws and make sure that the screws are properly connected with the ground.

The durability of the installation depends very much on the material used at the installation area (building material) such as wood, concrete, gas concrete, brick etc. This is why the fixing material must be chosen to suit the wall material. Always ask a specialist for the correct plug/screw combination indicating the maximum load and the building material.

Procedure:

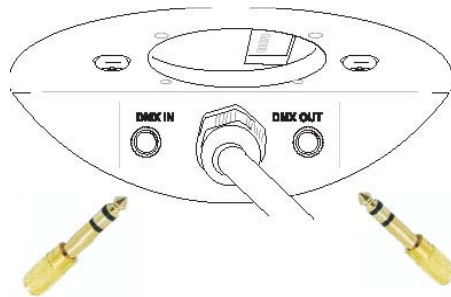
Step 1: The hole for the installation is on the mounting bracket.

Step 2: Hold the mounting bracket onto the location where the device is to be installed.

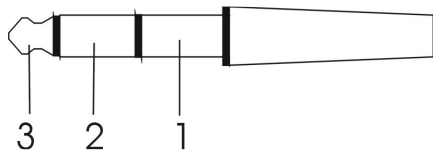
Step 3: Mark the borehole with a pen or a suitable tool.

Step 4: Drill the hole.

Step 5: Hold the mounting bracket in the desired position and fix it.



Occupation of the XLR connection when using stereo jacks:



3: Signal (+) - Tip 2: Signal (-) - Middle ring 1: Ground - Rear ring

If you are using controllers with this occupation, you can connect the DMX output of the controller directly with the DMX input of the first device in the DMX chain. If you wish to connect DMX controllers with other XLR outputs, you need to use adapter cables.

Building a serial DMX chain:


Connect the DMX output of the first device in the DMX chain with the DMX input of the next device. Always connect one output with the input of the next device until all devices are connected.

Caution: At the last fixture, the DMX-cable has to be terminated. Plug the terminator with a 120 Ω resistor between Signal (-) and Signal (+) in the DMX-output of the last fixture.

Connection with the mains

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

The occupation of the connection-cables is as follows:

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	

The earth has to be connected!

If the device will be directly connected with the local power supply network, a disconnection switch with a minimum opening of 3 mm at every pole has to be included in the permanent electrical installation.

The device must only be connected with an electric installation carried out in compliance with the IEC-standards. The electric installation must be equipped with a Residual Current Device (RCD) with a maximum fault current of 30 mA.

Lighting effects must not be connected to dimming-packs.

OPERATION

After connecting the Spot to the mains, the LED 9W RGB DMX Spot starts running.

The device has two operating modes. It can be operated via DIP Switches or it can be run in DMX-controlled mode.

DIP-SWITCH CONTROLLED OPERATION

Function:	Dip 1	Dip 2	Dip 3	Dip 4	Dip 5	Dip 6	Dip 7	Dip 8	Dip 9	Dip 10
Red 100% on	1	X	X	0	0	0	0	X	0	0
Yellow 100% on	1	1	X	0	0	0	0	X	0	0
Green 100% on	X	1	X	0	0	0	0	X	0	0
Cyan 100% on	X	1	1	0	0	0	0	X	0	0
Blue 100% on	X	X	1	0	0	0	0	X	0	0
Magenta 100% on	1	X	1	0	0	0	0	X	0	0
White 100% on	1	1	1	0	0	0	0	X	0	0
Program1: Random 3-color switch	X	X	X	1	0	0	0	X	0	0
Program2: random 3-color fade	X	X	X	0	1	0	0	X	0	0
Program 3: random 7-color switch	X	X	X	0	0	1	0	X	0	0
Program4: Random 7-color fade	X	X	X	0	0	0	1	X	0	0
Strobe (10 Hz)	X	X	X	X	X	X	X	1	0	0
Slave	1	X	X	X	X	X	X	X	0	1
DMX	X	X	X	X	X	X	X	X	X	1

1=on

0=off

X=changeable

3-fold color change sequence: red > green > blue

7-fold color change sequence: red>yellow>green>cyan>blue>magenta>white

In order to select the **desired program** and **speed**, set dipswitch 9 and 10 to OFF.

Programs can be selected via dipswitches 4 – 7.

Speed can be adjusted via dipswitches 1 – 3 (see below).

DIP-Switch 1, 2, 3 OFF, (desired program chosen via DIP-Switch 4,5,6 or 7),color change every second.

DIP-Switch 1 ON, desired program chosen, color change every 5 second.

DIP-Switch 2 ON, desired program chosen, color change every 10 second.

DIP-Switch 1 & 2 ON, desired program chosen, color change every 15 second.

DIP-Switch 3 ON, desired program chosen, color change every 20 second.

DIP-Switch 1 & 3 ON, desired program chosen, color change every 25 second.

DIP-Switch 2 & 3 ON, desired program chosen, color change every 30 second.

DIP-Switch 1, 2 & 3 ON, desired program chosen, color change every minute.

DMX-CONTROLLED OPERATION

You can control the spots individually via your DMX-controller. Every DMX-channel has a different occupation with different features.

Set the dipswitch 10 to ON.

Addressing

Each device occupies 5 channels. To ensure that the control signals are properly directed to each device, the device requires addressing. This is to be adjusted for every single device by changing the DIP-switches as set out in the table below.

The starting address is defined as the first channel from which the device will respond to the controller.

Please make sure that you do not have any overlapping channels in order to control each device correctly and independently from any other fixture on the DMX data link. If two, three or more devices are addressed similarly, they will work similarly.

Controlling:

After having addressed all LED Q9 RGB DMX, you may now start operating these via your lighting controller.

DMX-protocol

Channel:	Value:	Function:
1	000 – 255	Red (0-100%)

Channel:	Value:	Function:
2	000 – 255	Green (0-100%)

Channel:	Value:	Function:
3	000 – 255	Blue (0-100%)

Channel:	Value:	Function:
4	000 – 255	Master Dimmer

Channel:	Value:	Function:
----------	--------	-----------

5	000 – 000	On
	001 – 005	Off
	006 – 010	On
	011 – 255	Strobe(increasing)

CLEANING AND MAINTENANCE

We recommend a frequent cleaning of the device. Please use a soft lint-free and moistened cloth. Never use alcohol or solvents!

There are no serviceable parts inside the device. Maintenance and service operations are only to be carried out by authorized dealers.

Should you need any spare parts, please use genuine parts.

If the power supply cable of this device becomes damaged, it has to be replaced by authorized dealers only in order to avoid hazards.

Should you have further questions, please contact your dealer.

TECHNICAL SPECIFICATIONS

Power supply:	230 V AC, 50 Hz ~
Power consumption:	26 W
Number of DMX channels:	5
DMX-512 connection:	3.5 mm stereo jack plug
Maximum ambient temperature Ta :	45 °C
Maximum housing temperature TB:	50 °C
Min. distance from flammable surfaces:	0.5 m
Min. distance to lighted object:	0.1 m
Number of 9W Tri Color LEDs:	1
LED beam angle:	6°
Dimensions (LxWxH):	135 x 165 x 170 mm
Weight:	0.5 kg

Please note: Every information is subject to change without prior notice. 03.10.2009 ©