

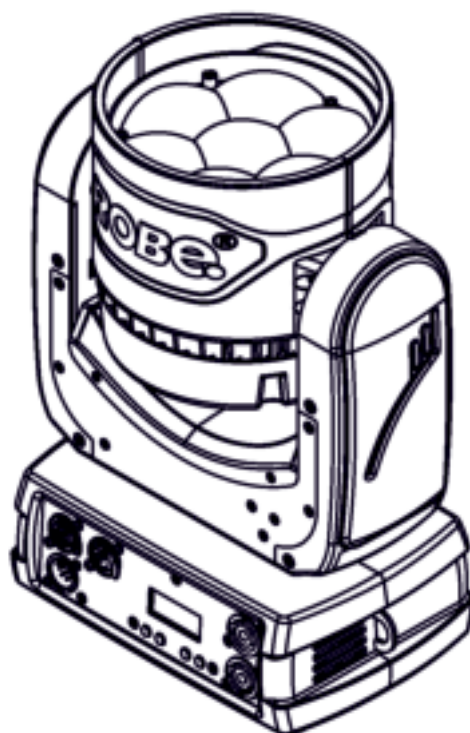
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# **ROBE**

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## **ROBIN<sup>®</sup> LEDBeam 150 FWQ**

### **ETH**



QR code for user manual



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## **USER MANUAL**

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**ROBE<sup>®</sup> lighting s.r.o. • Czech Republic • [www.robe.cz](http://www.robe.cz)**

*Version 1.2*

# ROBIN LEDBeam 150 FWQ ETH

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**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY  
BEFORE POWERING OR INSTALLING YOUR ROBIN LEDBeam 150 FWQ !**

**Save it for future reference.**

This device has left our premises in absolutely perfect condition. In order to maintain this 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.

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.

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

**The ROBIN LEDBeam 150 FWQ was designed for indoor use and it is intended for professional application only. It is not for household use.**

## **1. Safety instructions**

**DANGEROUS VOLTAGE CONSTITUTING A RISK OF ELECTRIC SHOCK IS PRESENT WITHIN THIS UNIT!**

Make sure that the available voltage is not higher than stated on the rear panel of the fixture. This fixture should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied, consult your authorized distributor or local power company.

Always disconnect the fixture from AC power before cleaning, removing or installing any part of the fixture.

The power plug has to be accessible after installing the fixture. Do not overload wall outlets and extension cords as this can result in fire or electric shock.

Do not allow anything to rest on the power cord. Do not locate this fixture where the cord may be damaged by persons walking on it.

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

Refer servicing to qualified service personnel.

**This fixture falls under protection class I. Therefore this fixture has to be connected to a mains socket outlet with a protective earthing connection.**

Do not connect this fixture to a dimmer pack.

**Warning! Risk Group 2 LED product according to EN 62471.  
LED light emission. Risk of eye injury. Do not look into the beam at short distance of the of the product.  
Do not view the light output with optical instruments or any device that may concentrate the beam.  
The light source contains blue LEDs.**

If the fixture 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.

Avoid brute force when installing or operating the fixture.

This fixture was designed for indoor use only, do not expose this unit to rain or use near water.

When choosing the installation spot, please make sure that the fixture is not exposed to extreme heat, moisture or dust.

**Do not block the lens array with any object when the fixture is under operation.**

The cooling openings in head and base of the fixture should never be covered with cloth or other materials, and never must be blocked.

This fixture should not be placed in a built-in installation unless proper ventilation is provided.

Only operate the fixture after having checked that the housing is firmly closed and all screws are tightly fastened.

Always use a secondary safety wire for overhead installation of the fixture.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

The fixture becomes hot during operation. Allow the fixture to cool approximately 15 minutes prior to manipulate with it.

**To avoid damage of an internal optical system of the fixture, never let the sunlight (or other light source) lights directly to the lens array, even when the fixture is not working**

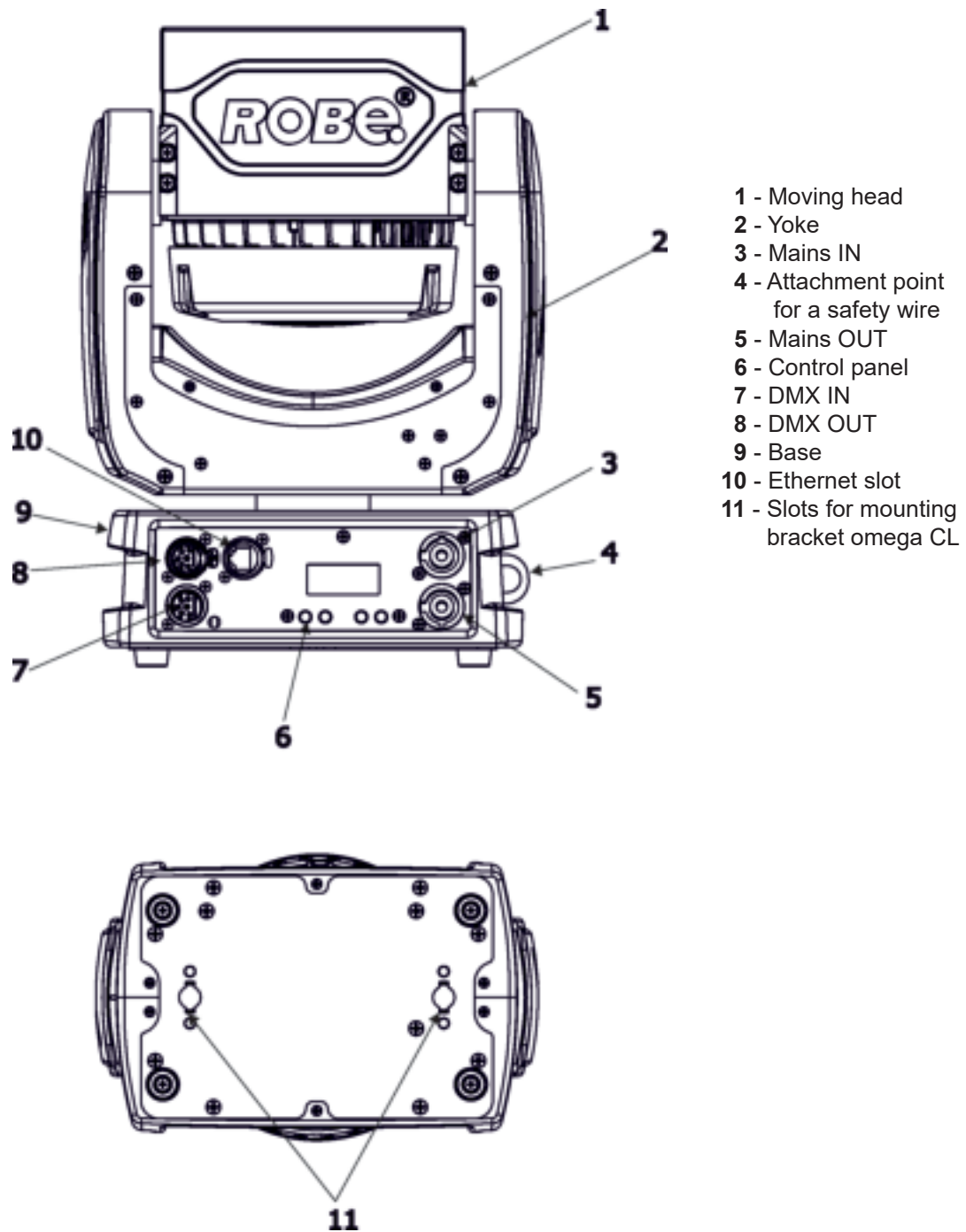
Operate the fixture only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the fixture. Most damages are the result of unprofessional operation!

Please use the original packaging if the fixture is to be transported.

Please consider that unauthorized modifications on the fixture 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, crash etc.

## 2. Fixture exterior view



### 3. Installation



**Fixtures must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.**

#### 3.1 Connection to the mains

**For protection from electric shock, the fixture must be earthed!**

The ROBIN LEDBeam 150 FWQ is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.

If you install a cord cap on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions.

If you have any doubts about proper installation, consult a qualified electrician.

| Core (EU)    | Core (US) | Connection | Plug Terminal Marking |
|--------------|-----------|------------|-----------------------|
| Brown        | Black     | Live       | L                     |
| Light blue   | White     | Neutral    | N                     |
| Yellow/Green | Green     | Earth      |                       |

**The device falls under class one and must be earthed (grounded)!**

Design of the ROBIN LEDBeam 150 FWQ allows to connect several fixtures to AC mains power in one inter-connected daisy chain using power input and throughput connectors. Needed daisy chain cords are stated in the chapter "Technical specifications"

The max. number of connected fixtures depends on the AC mains power voltage:

CE:

15 fixtures at power supply= 230V

13 fixtures at power supply= 208V

7 fixtures at power supply= 120V

US:

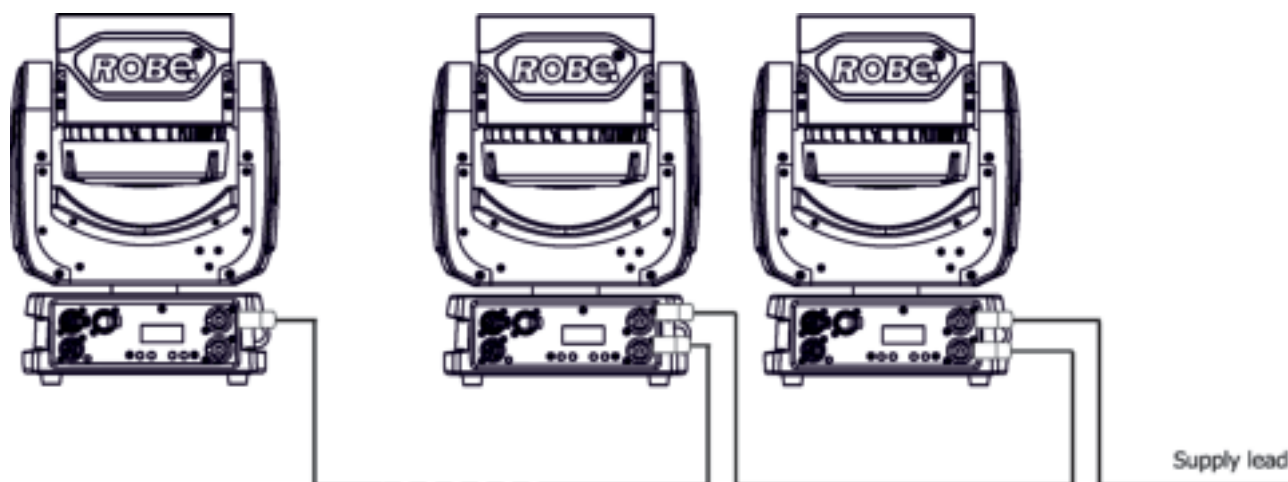
9 fixtures at power supply= 230V

8 fixtures at power supply= 208V

4 fixtures at power supply= 120V

Actual numbers of fixtures may differ from values stated above as you have to take into account the length of supply cables, circuit breaker etc. at projecting of the fixtures installation Do not overload the supply line and the connecting leads.

Do not overload the supply line and the connecting leads.



Wiring and connection work must be carried out by qualified staff!

## 3.2 Rigging the fixture

The installation of the fixture has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

The installation must always be secured with a secondary safety attachment, e.g. an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

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

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

The fixture should be installed outside areas where persons may walk by or be seated.

**IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE**, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury or damage to property. The fixture has to be installed out of the reach of people.

If the fixture shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The fixture must never be fixed swinging freely in the room.

**Caution:** Fixture may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do not install the moving head!

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

**When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in a distance of min. 0.4 m.**

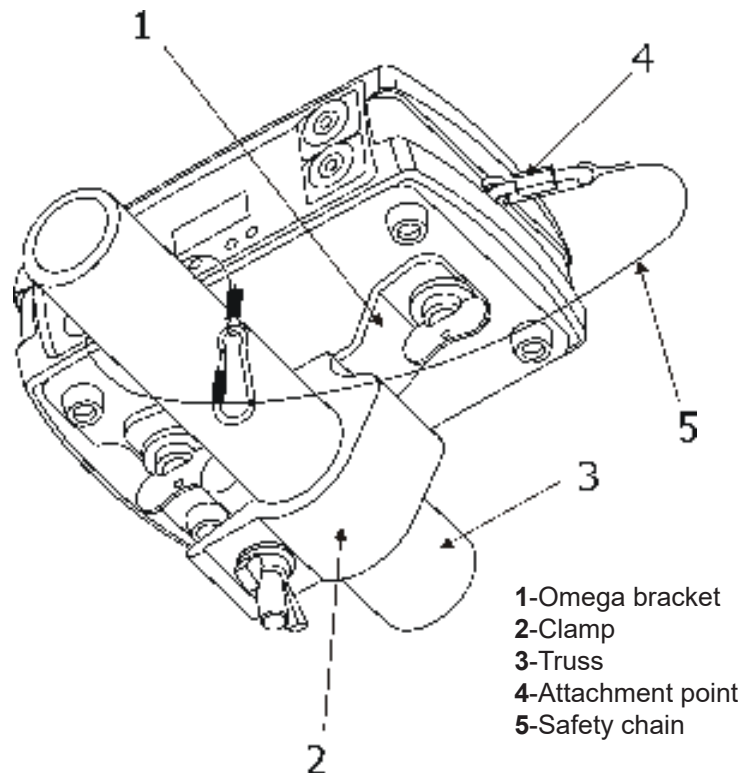
### **CAUTION!**

**Use an appropriate clamp to rig the fixture on the truss.  
Follow the instructions mentioned at the bottom of the base.  
Make sure that the device is fixed properly! Ensure that the structure (truss) to which you are attaching the fixtures is secure.**

The fixture can be placed directly on the stage floor or rigged on a truss without altering its operation characteristics .

For securing the fixture to the truss, install a safety wire which can hold at least 10 times the weight of the fixture. Use only the safety wire with a snap hook with screw lock gate. Fasten the safety cable in the attachment point and around the truss as shown on the picture below.

Rigging via omega bracket:

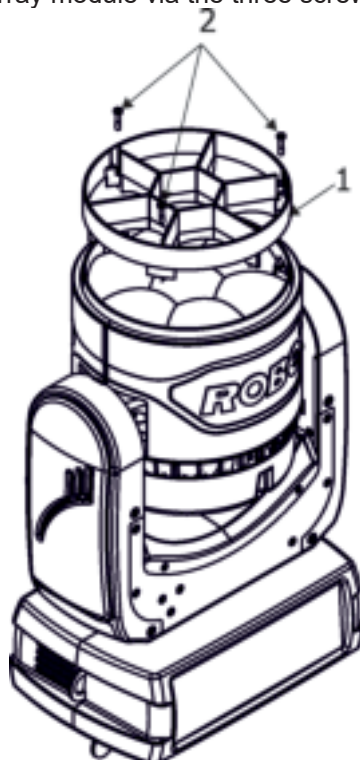


**When installing fixtures side-by-side, avoid illuminating one fixture with another!**

### 3.3 Eggcrate installation

**Disconnect the fixture from mains before installing the eggcrate .**

Screw the eggcrate (1) on the lens array module via the three screws (2).

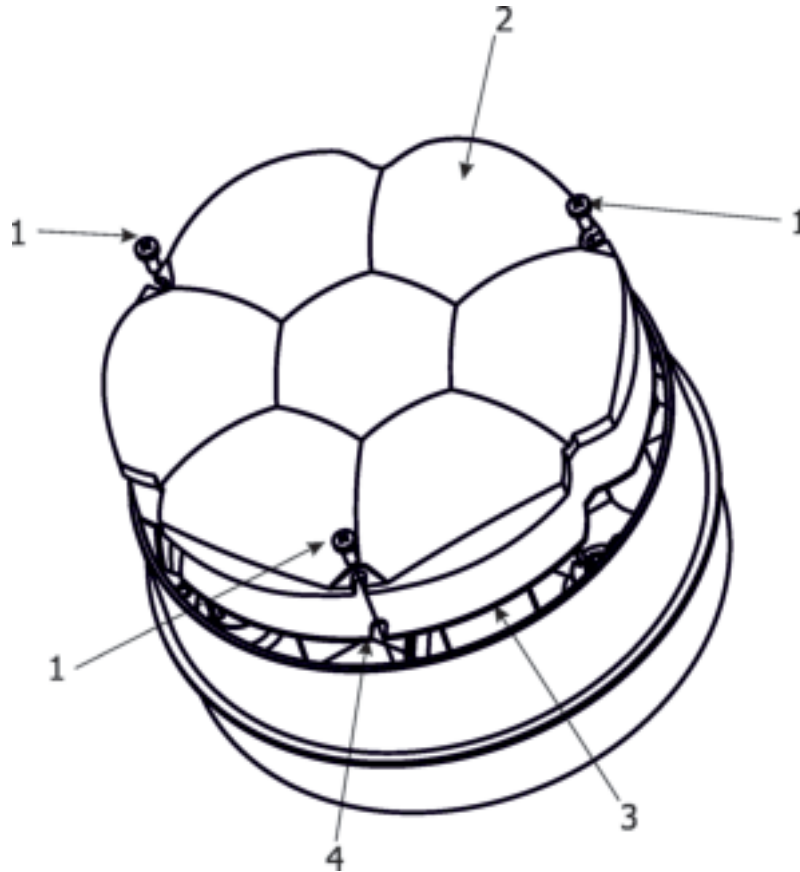




### 3.4 Diffuser 2° installation

**Disconnect the fixture from mains before installing the diffuser.**

1. Unscrew three screws (1) from fixture head and remove the plastic lens (2).
2. Place the diffuser 2° (3) to the fixture head, glossy side towards LEDs (correctly aim apertures (4) for screws).
3. Screw the diffuser 2° (3) back to the head by means of the three screws (1)



#### **Warning**

**Installation of the Diffuser 2° is one-time matter as the screws (1) are screwed into the plastic.**

**You cannot install and uninstall the Diffuser 2° several times.**

### 3.5 Ceiling mount kit installation

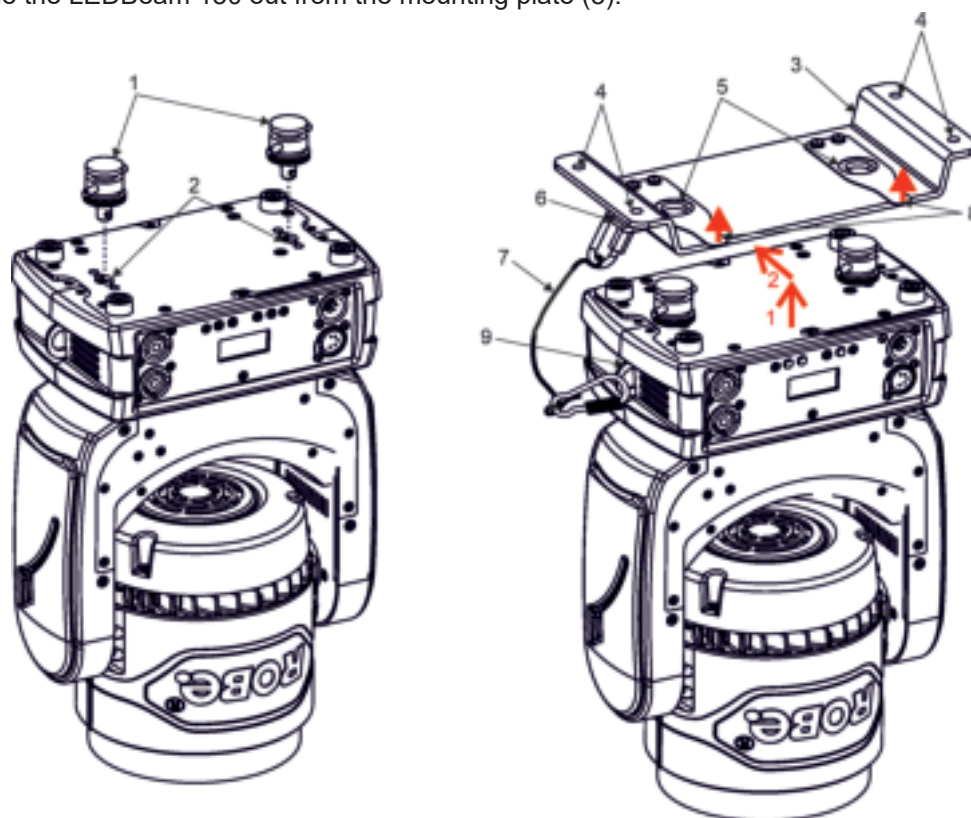
The ceiling mount kit (optional) allows you to fasten the Robin LEDBeam 150 directly on the ceiling or the wall. The ceiling mount kit includes mounting plate and two quick-lock fasteners.

**The ceiling (wall) intended for installation of the fixture(s) must safely hold weight of the fixture(s) placed on it.**

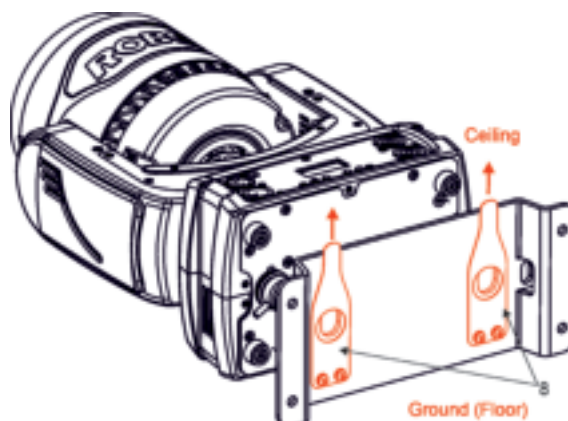
#### Ceiling mount kit installation

1. Insert two quick-lock fasteners (1) to the openings (2) in the fixture base and tighten them fully clockwise.
2. Fasten the mounting plate (3) on the non-flammable flat surface (ceiling or the wall) by means of the four holes (4) of diameter of 7.5mm. Type and length of screws choose according to the material of the ceiling (wall).
3. Insert the LEDBeam 150 into openings (5) in the mounting plate and move it in direction as shown on the picture below until securing blades (8) snap into grooves in the quick-lock fasteners.
4. Check the LEDBeam 150 is securely fastened in the mounting plate.
5. For securing the fixture to the mounting plate, install a safety wire (7) which can hold at least 10 times the weight of the fixture. Use only the safety wire with a snap hook with screw lock gate. Fasten the safety wire in the attachment point (6) of the mounting plate and in the attachment point (9) of the LEDBeam 150 base.

Note: to remove the LEDBeam 150 from the mounting plate (3), put both securing blades (8) up at the same time and slide the LEDBeam 150 out from the mounting plate (3).



**Important.** In case the fixture has to be fastened on the wall, the mounting plate must be oriented by securing blades (8) up (towards the ceiling) as shown on the picture below.



### 3.6 DMX-512 connection

The fixture is equipped with 5-pin XLR sockets for DMX input and output. Only use a shielded twisted-pair cable designed for RS-485 and 5-pin XLR-plugs and connectors in order to connect the controller with the fixture or one fixture with another.

#### DMX output

##### XLR socket:



- 1 - Shield
- 2 - Signal (-)
- 3 - Signal (+)
- 4 - Used for wireless DMX
- 5 - Used for wireless DMX

#### DMX input

##### XLR plug:



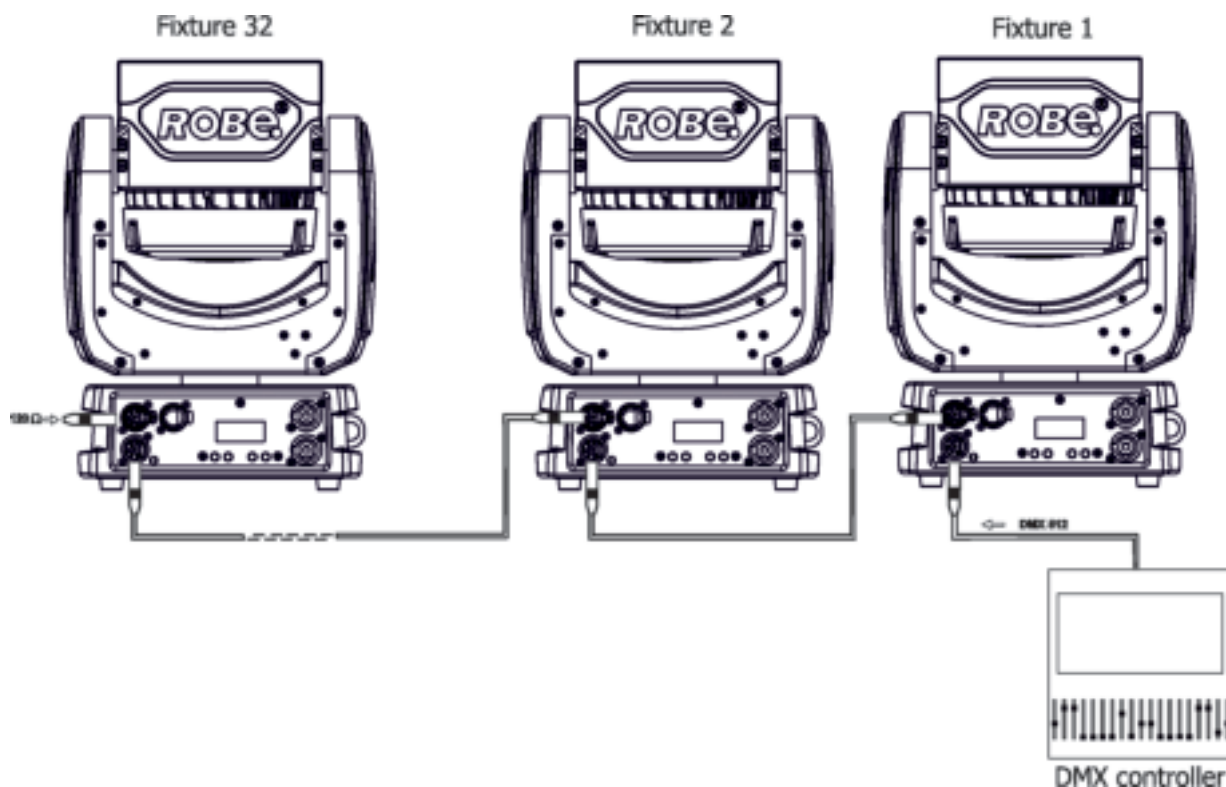
- 1 - Shield
- 2 - Signal (-)
- 3 - Signal (+)
- 4 - Used for wireless DMX
- 5 - Used for wireless DMX

If you are using the standard DMX controllers, you can connect the DMX output of the controller directly with the DMX input of the first fixture 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 fixture in the DMX-chain with the DMX-input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected. Up to 32 fixtures can be interconnected.

**Caution:** At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120  $\Omega$  resistor between Signal (-) and Signal (+) into a 5-pin XLR-plug and plug it in the DMX-output of the last fixture.



### 3.7 Ethernet connection

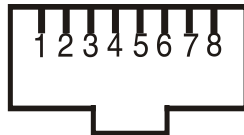
The fixtures on a data link are connected to the Ethernet with appropriate communication protocol (e.g. ArtNet). The control software running on your PC (or light console) has to support this communication protocol. Art-Net communication protocol is a 10 Base T Ethernet protocol based on the TCP/IP. Its purpose is to allow transfer of large amounts of DMX 512 data over a wide area using standard network technology.

**The IP address** is the Internet protocol address. The IP uniquely identifies any node (fixture) on a network.

**The Universe** is a single DMX 512 frame of 512 channels.

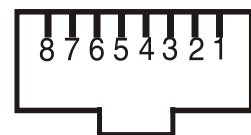
The Robin LEDBeam 150 FWQ ETH is equipped with 8-pin RJ-45 socket for Ethernet connection. Use a network cable category 5 (with four "twisted" wire pairs) and standard RJ-45 plugs in order to connect the fixture to the network.

**RJ-45 socket (front view):**



- |                  |                  |
|------------------|------------------|
| 1- TD+           | 5- Not connected |
| 2- TD-           | 6- RX-           |
| 3- RX+           | 7- Not connected |
| 4- Not connected | 8- Not connected |

**RJ-45 plug (front view):**



Patch cables that connect fixtures to the hubs or LAN sockets are wired 1:1, that is, pins with the same numbers are connected together:

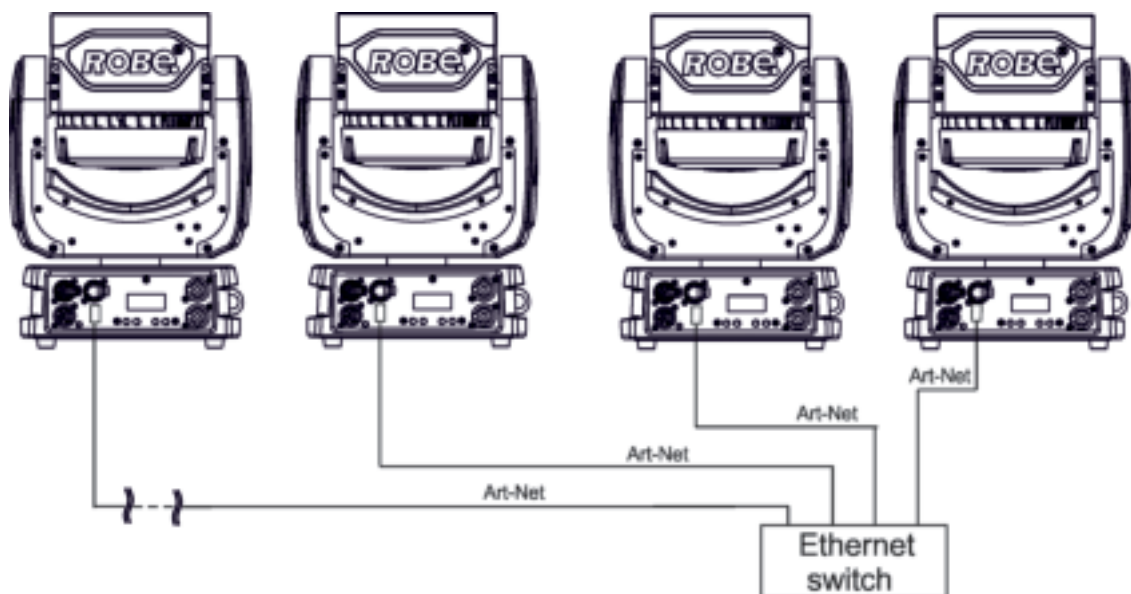
1-1    2-2    3-3    4-4    5-5    6-6    7-7    8-8

If only the fixture and the computer are to be interconnected, no hubs or other active components are needed. A cross-cable has to be used:

1-3    2-6    3-1    4-8    5-7    6-2    7-5    8-4

Connect the Ethernet inputs of all fixtures to the Ethernet network. Set their IP addresses and Net Masks. Correct communication protocol (e.g. "ArtNet") has to be selected from the menu "Eth Mode" in the fixtures (Pers-->Ethernet -->Eth Mode). Set Universe according to communication protocol.

Example of connection:

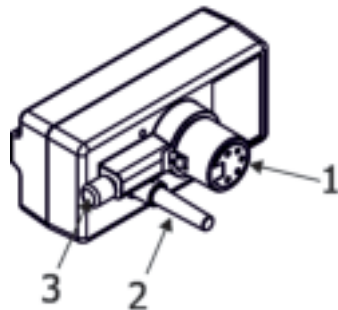


An advised PC setting: IP address: 002.xxx.xxx.xxx (Different from fixtures IP addresses)  
NET mask: 255.0.0.0

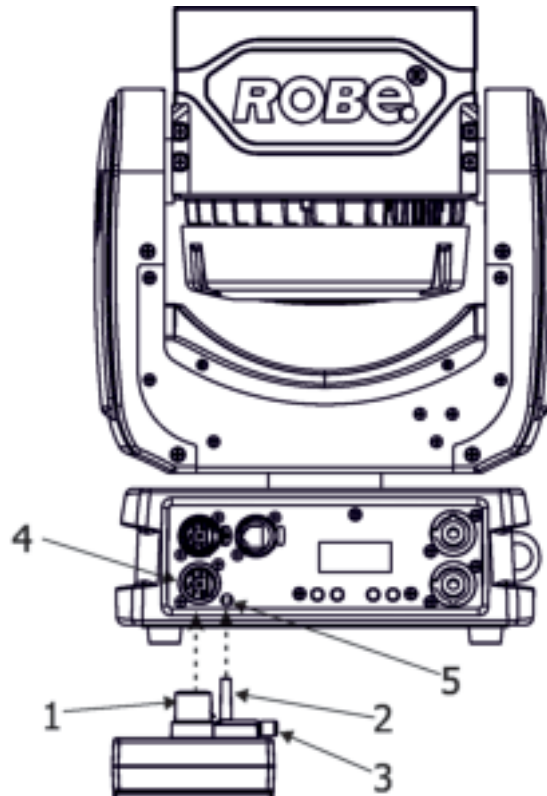
### 3.8. Wireless DMX operation

The external ROBE Wireless CRMX Dongle allows receiving wireless DMX. This device is equipped with the Lumen Radio CRMX module and antenna for receiving DMX signal. CRMX module operates on the 2.4 GHz band.

ROBE Wireless CRMX Dongle



- 1 - 5-pin XLR (female)
- 2 - Locating pin
- 3 - Lock



Push in the 5-pin XLR plug (1) into 5-pin XLR socket (4) and simultaneously locating pin (2) into hole (5) in the fixture. In this way the wireless DMX module is connected with the fixture.

NOTE: when you disconnect the DMX wireless module from fixture, press and hold lock (5) during getting the wireless module out.

#### To link the fixture with DMX transmitter.

The fixture can be only linked with the transmitter by running the link procedure at DMX transmitter .

After linking , the level of DMX signal ( 0-100 %) is displayed in the menu item "Stat" (Special -->Vireless -->Stat).

#### To unlink the fixture from DMX transmitter.

The fixture can be unlinked from receiver via the menu item " Unlink" (Special-->Vireless -->Unlink.).

## 4. Control menu map

Default settings=**Bold print**

| Level 1     | Level 2  | Level 3       | Level 4     | Level 5 | Level 6 | Level 7 |
|-------------|----------|---------------|-------------|---------|---------|---------|
| <b>DMXA</b> | Set DMXA | 001-512       |             |         |         |         |
|             | DMX Pres | <b>Mode 1</b> |             |         |         |         |
|             |          | Mode 2        |             |         |         |         |
|             | IP Addr  | Def addr      | Apply       |         |         |         |
|             |          | Cus addr      | IP 1        | 0-255   |         |         |
|             |          |               | IP 2        | 0-255   |         |         |
|             |          |               | IP 3        | 0-255   |         |         |
|             |          |               | IP 4        | 0-255   |         |         |
|             |          |               | Set Address |         |         |         |
|             | Net Mask | N.M. 1        | 0-255       |         |         |         |
|             |          | N.M. 2        | 0-255       |         |         |         |
|             |          | N.M. 3        | 0-255       |         |         |         |
|             |          | N.M. 4        | 0-255       |         |         |         |
|             |          | Set Net M.    |             |         |         |         |
|             |          |               |             |         |         |         |
| <b>Info</b> | PO Time  | Total         |             |         |         |         |
|             |          | Reset         |             |         |         |         |
|             | DMX In   | Pan           | 0-255       |         |         |         |
|             |          | :             |             |         |         |         |
|             |          | Dimm F        | 0-255       |         |         |         |
|             | Temps    | Base Tmp      | Current     |         |         |         |
|             |          |               | Highest     |         |         |         |
|             |          |               | High Res    |         |         |         |
|             |          | LEDs Tmp      | Current     |         |         |         |
|             |          |               | Highest     |         |         |         |
|             |          |               | High Res    |         |         |         |
|             | IP Addr  | IP A. 1       |             |         |         |         |
|             |          | IP A. 2       |             |         |         |         |
|             |          | IP A. 3       |             |         |         |         |
|             |          | IP A. 4       |             |         |         |         |
|             | MAC Addr | MAC A. 1      |             |         |         |         |
|             |          | MAC A. 2      |             |         |         |         |
|             |          | MAC A. 3      |             |         |         |         |
|             |          | MAC A. 4      |             |         |         |         |
|             |          | MAC A. 5      |             |         |         |         |
|             |          | MAC A. 6      |             |         |         |         |
|             | RDM UID  | RDM U.1       |             |         |         |         |
|             |          | RDM U.2       |             |         |         |         |
|             |          | RDM U.3       |             |         |         |         |
|             |          | RDM U.4       |             |         |         |         |
|             |          | RDM U.5       |             |         |         |         |
|             |          | RDM U.6       |             |         |         |         |
|             | Sw Ver   | IC-D          |             |         |         |         |
|             |          | IC-DE         |             |         |         |         |
|             |          | IC-M          |             |         |         |         |
|             |          | IC-L          |             |         |         |         |
|             |          |               |             |         |         |         |
| <b>Pers</b> | DMX Pres | <b>Mode 1</b> |             |         |         |         |
|             |          | Mode 2        |             |         |         |         |
|             | DMX In   | <b>Wired</b>  |             |         |         |         |
|             |          | Ethernet      |             |         |         |         |
|             |          |               |             |         |         |         |

| Level 1          | Level 2   | Level 3             | Level 4        | Level 5 | Level 6 | Level 7 |
|------------------|-----------|---------------------|----------------|---------|---------|---------|
|                  | Ethernet  | Eth Mode            | ArtNet         |         |         |         |
|                  |           |                     | sACN           |         |         |         |
|                  |           |                     | gMA I          |         |         |         |
|                  |           |                     | gMA II         |         |         |         |
|                  |           | ArtNet              | Uni            | 0-255   |         |         |
|                  |           | sACN                | Uni            | 1-63999 |         |         |
|                  |           | MANet               | Uni            | 1-256   |         |         |
|                  |           | MANet               | IsIDi          | 1-32    |         |         |
|                  |           | IGMP r              | Off, 1-10s     |         |         |         |
|                  |           | Eth Back            | On, <b>Off</b> |         |         |         |
|                  | P/T Cfg   | Pan Rev             | On, <b>Off</b> |         |         |         |
|                  |           | Tilt Rev            | On, <b>Off</b> |         |         |         |
|                  |           | P/T Mode            | <b>Speed</b>   |         |         |         |
|                  |           |                     | Time           |         |         |         |
|                  |           | P/T Feed            | On, Off        |         |         |         |
|                  | Display   | Turn                |                |         |         |         |
|                  |           | On/Off T            | On, <b>Off</b> |         |         |         |
|                  |           | Contrast            | 0-100%         |         |         |         |
|                  |           | Backlight           | 0-100%         |         |         |         |
|                  | Blackouts | BLC DMC             | On, <b>Off</b> |         |         |         |
|                  |           | BLC P/T             | On, <b>Off</b> |         |         |         |
|                  | Mic Sens  | 0...10...19         |                |         |         |         |
|                  | Fans      | Fans Mode           | <b>Auto</b>    |         |         |         |
|                  |           |                     | High           |         |         |         |
|                  |           |                     | Quiet          |         |         |         |
|                  |           | Noise L             | %-100%         |         |         |         |
|                  | Tungsten  | On, <b>Off</b>      |                |         |         |         |
|                  | C Mix M   | <b>RGB</b> , CMY    |                |         |         |         |
|                  | White P   | On, Off             |                |         |         |         |
|                  | Dimmer C  | <b>Squa</b> , Line  |                |         |         |         |
|                  | Temp Uni  | °C, °F              |                |         |         |         |
|                  | LED Freq  | <b>Stnd</b>         |                |         |         |         |
|                  |           | High                |                |         |         |         |
|                  | LED Fadj  | -06,-05..00..05, 06 |                |         |         |         |
|                  | I Ef Pos  | Pan                 |                |         |         |         |
|                  |           | :                   |                |         |         |         |
|                  |           | Dim F               |                |         |         |         |
|                  |           | Store               |                |         |         |         |
|                  | Defaults  |                     |                |         |         |         |
|                  |           |                     |                |         |         |         |
| <b>Manual</b>    | Pan       | 0-255               |                |         |         |         |
|                  | :         |                     |                |         |         |         |
|                  | Dimm F    | 0-255               |                |         |         |         |
|                  |           |                     |                |         |         |         |
| <b>Test Prg</b>  | Static    | Pan                 | 0-255          |         |         |         |
|                  |           | Tilt                | 0-255          |         |         |         |
|                  |           | Run                 |                |         |         |         |
|                  | Dynamic   |                     |                |         |         |         |
| <b>Sta Alone</b> | Music T   | On, <b>Off</b>      |                |         |         |         |
|                  | Auto Run  | <b>Off</b>          |                |         |         |         |
|                  |           | Test                |                |         |         |         |
|                  |           | Prog 1              |                |         |         |         |
|                  |           | Prog 2              |                |         |         |         |
|                  |           | Prog 3              |                |         |         |         |
|                  | Pr Play   | Test Prg            |                |         |         |         |
|                  |           | Prog 1              |                |         |         |         |

| Level 1 | Level 2   | Level 3 | Level 4  | Level 5 | Level 6 | Level 7 |
|---------|-----------|---------|----------|---------|---------|---------|
|         |           | Prog 2  |          |         |         |         |
|         |           | Prog 3  |          |         |         |         |
|         | Pr Edit   | Prog 1  | Step 1   | Pan     |         |         |
|         |           | Prog 2  | :        | :       |         |         |
|         |           | Prog 3  | Step 40  | F.Tim   | 0-25.5  |         |
|         |           |         |          | S.Tim   | 0-25.5  |         |
|         |           |         |          | COPY    |         |         |
|         |           |         |          | Prg End | 1-40    |         |
|         |           |         |          |         |         |         |
| Reset   |           |         |          |         |         |         |
|         |           |         |          |         |         |         |
| Special | RDM Low   |         |          |         |         |         |
|         | RDM Hight |         |          |         |         |         |
|         | Wireless  | Stat    |          |         |         |         |
|         |           | Unlink  |          |         |         |         |
|         | Adjust    | DMX Val | Pan      | 0-255   |         |         |
|         |           |         | :        |         |         |         |
|         |           |         | Dimm F   | 0-255   |         |         |
|         |           |         |          |         |         |         |
|         |           | Clalib  | Cal Mech | Pan C   | 0-255   |         |
|         |           |         |          | Tilt C  | 0-255   |         |
|         |           |         |          | Zoom C  | 0-255   |         |
|         |           |         |          | Store   |         |         |
|         |           |         | Cal Col  | Red C   | 0-255   |         |
|         |           |         |          | Gre C   | 0-255   |         |
|         |           |         |          | Blu C   | 0-255   |         |
|         |           |         |          | Whi C   | 0-255   |         |
|         |           |         |          | Red I   | 0-255   |         |
|         |           |         |          | Gre I   | 0-255   |         |
|         |           |         |          | Blu I   | 0-255   |         |
|         |           |         |          | Whi I   | 0-255   |         |
|         |           |         |          | Store   |         |         |
|         |           |         | Cal Load |         |         |         |
|         | Sw Upd    | On, Off |          |         |         |         |



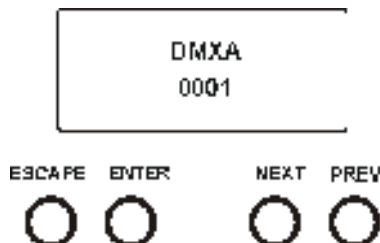
## 5. Control menu

The ROBIN LEDBeam 150 FWQ is equipped with 2-row LCD display which allows to set the fixture's behaviour according to your needs, obtain information on its operation, test its various parts and lastly program it, if it has to be used in a stand-alone mode.

Control panel:

[ESCAPE] button used to leave the menu without saving changes.

[NEXT] , [PREV] buttons for moving between menu items and for value adjusting.



[ENTER] button used to enter the selected menu (menu item) and to confirm adjusted value.

After switching the fixture on, display shows current DMX address.

### 5.1 Addressing (DMXA)

**Set DMXA**- Use this menu item to set the DMX start address of the fixture, which is defined as the first channel from which the ROBIN LEDBeam 150 FWQ will respond to the controller.

If you set, for example, the address 23, the ROBIN LEDBeam 150 FWQ will use channels 23 - 44 for control (if Mode 1 is selected).

Please, be sure that you do not have any overlapping channels in order to control each ROBIN LEDBeam 150 FWQ correctly and independently from any other fixture on the DMX data link.

If there is no data received at the DMX input, the display will start to flash "0001" with actually stored DMX address.

**DMX Pres** - **DMX preset**. Use the menu to select desired channel mode.

**Mode 1** - 22 control channels (default)

**Mode 2** - 16 control channels

**IP Addr** - **IP address**. Use the menu item to set desired IP address. IP address is the Internet protocol address. The IP uniquely identifies any node (fixture) on a network. There cannot be 2 fixtures with the same IP address on the network!

**Def addr** - **Default IP address**. This address is derived from fixture's MAC address and cannot be changed. Confirm the item "**Apply**" to select this address.

**Cus addr** - **Custom address**. IP address consists of four decimal numbers, each ranging from 0 to 255, separated by dots, e.g. 2.16.254.1. Each part represents a group of 8 bits (octet) of the address. The following items "**IP 1**", "**IP 2**", "**IP 3**", "**IP 4**" allow you to set each part (number) of the address. After setting desired IP address, confirm the item "**Set Address**" to save this address.

**Net Mask** - **Network mask**. Use the menu item to set desired network mask. A network mask is a 32-bit mask used to divide an IP address into subnets and specify the networks available hosts.

The following items "**N. M.1**", "**N.M.2**", "**N.M.3**", "**N.M.4**" serve for setting of each part (number) of net mask. After setting desired network mask, confirm the item "**Set Net M.**" to save adjusted values.

### 5.2 Fixture information (Info)

**POn Time** - **Power on time**. Select this menu to read the number of fixture operation hours.

**Total** - The item shows the total number of the operation hours since the ROBIN LEDBeam 150 FWQ has been fabricated.

**Reset** - The item shows the number of the operation hours that the ROBIN LEDBeam 150 FWQ has been powered on since the counter was last reset. In order to reset this counter to 0, press and hold both [NEXT] and [PREV] buttons and the [Enter] button at the same time.

**DMX In** - **DMX readout**. The menu is used to read DMX values of each channel received by the fixture.

**Temps** - Used the menu to view temperatures of the fixture's inside.

**LEDs Temp** - **LEDs Temperature**. The menu shows temperature on the LED module.

**Current** - A current temperature of the LED module.

**Highest** - A maximum temperature of the the LED module since the fixture has been fabricated.

**High Res** - A maximum temperature of the the LED module since the counter was last reset.

In order to reset this counter, press and hold both [NEXT] and [PREV] buttons and the [Enter] button at the same time.

**Base Temp** - **Base Temperature**. The menu shows temperature in the fixture base.

**Current** - A current temperature in the fixture base.

**Highest** - A maximum temperature in the fixture base since the fixture has been fabricated.

**High Res** - A maximum temperature in the fixture base since the counter was last reset.

In order to reset this counter, press and hold both [NEXT] and [PREV] buttons and the [Enter] button at the same time.

**IP Addr** - **IP address**. Select this menu item to read the IP address of the fixture.

**MAC Addr** - **MAC address**. The menu allows you to read the MAC address of the fixture.

**RDM UID** - **RDM UID**. The menu allows you to read RDM UID of the fixture.

**Sw Ver** - **Software versions**. Select this item to read the software version of the fixture modules.

**IC-D** - A display control processor.

**IC-DE** - An Eeprom.

**IC-M** - A pan/tilt control processor.

**IC-L** - A LEDs control processor.

## 5.3 Personality (Pers)

**DMX Pres** - **DMX preset**. Use the menu to select desired channel mode.

**Mode 1** - 22 control channels

**Mode 2** - 16 control channels

**DMX Int** - **DMX input**. Use the menu to select mode of DMX signal receiving.

**Wired** - DMX signal is received by means of the standard DMX cable.

**WEthernet** - DMX signal is received by means of Ethernet cable.

**Ethernet** - **Ethernet settings**. Use the menu item to select and set desired operating mode.

**Eth mode** - use the menu to select a protocol.

**Artnet** - fixture will receive Artnet protocol.

**sACN** - fixture will receive sACN protocol.

**gMAI** - fixture will receive MANet I protocol.

**gMAII** - fixture will receive MANet 2 protocol.

**ArtNet** - the menu allows you to set parameter for ArtNet operation.

**Uni** - selection of ArtNet Universe (0-255).

**sACN** - the menu allows you to set parameter for sACN operation.

**Uni** - selection of sACN Universe (1-63999).

**MANet** - the menu allows you to set parameters for MANet operation.

**Uni** - selection of MANet Universe (1-63999).

**sID** - selection of the MANet I(II) session ID (1-32)

**IGMP r** - the menu allows you to set repeating time for Internet Group Management Protocol (Off, 1s-10s)

**Eth Back** - Ethernet Back-up. If the function is On, the fixture automatically switches to the Ethernet input for signal receiving in case of DMX signal loss. Correct protocol has to be

set in the menu "Eth Mode" and the option Wired or Wireless\* has to be set in the menu "DMX In".

\* If Wireless DMX module is installed.

**P/T Cfg - Pan/Tilt configuration.** The menu item allows you to set behaviour of the pan/tilt.

**Pan Rev - Pan reverse.** The item allows to invert pan movement.

**Tilt Rev - Tilt reverse.** The item allows to invert tilt movement.

**P/T Mode - Pan and Tilt movement mode.** Use this menu to set mode of the pan/tilt movement.

**Speed** - Both Pan and tilt will move with the same speed as adjusted at the channel 5 "Pan/Tilt speed, Pan/Tilt time".

**Time** - The pan and tilt will move with different speeds and they will come at the same time to the end point of their tracks (pan and tilt use their optimal speeds). Time of the pan/tilt movement (25.5 sec. max.) is set by the channel "Pan/Tilt speed, Pan/Tilt time".

**P/T Feed - Pan and Tilt Feedback.** The menu item allows to return the moving head to the required pan/tilt position after changing the position by an external force if this option is set on.

Note. The Pan/Tilt Feedback should be permanent On, the option Off is not suitable for standard operation and the head of the fixture can be damaged!

**Display - Display adjusting.** This menu allows you to adjust the display behaviour.

**Turn** - This function turns the display by 180°.

**On/Off T** - This function allows you to keep the display permanent on or turn it off two minutes after last pressing any button on the control panel.

**Contrast** - Use this function to adjust contrast of the display (0-100%).

**Backlight** - Use this function to adjust backlight of the display (0-100%).

**Blackouts - Blackouts setting.** Use the menu if you need to close the light output under certain conditions which are described below

**BLC DMC - Blackout during movement correction.** Set this option on if you wish to close the light output during the time when the head goes to its correct position, which has been changed by an external force.

**BLC P/T - Active blackout.** The menu item allows to close light output while the pan/tilt DMX values are changing.

**C Mix M - Colour mixing mode.** This item allows switching into RGBW or CMY mode. In the CMY mode, the white(8bit)/white (16) bit channels are not active.

**White P - White Point 8000K.** If the function is on, the CTC channel allows to set desired white in range of 8000K-2700K

(0 DMX=8000K, 255 DMX=2700K). Necessary condition is , that RGBW channels have to be full or set at the same DMX values, e.g. 150.

If this function is off, the range of whites is not uniform and may be different for each fixture.

**Dimmer C - Dimmer curve.** Use the menu to select desired dimmer curve.

**Line** - a linear curve.

**Squa** - a square law curve.

**Mic Sens - Microfon sensitivity.** Enter the menu if you want to adjust the microphone sensitivity ( 1-max., 19-min.).

**Fans - Fans setting.** Use the menu to set behaviour of fixture fans.

**FansMode** - the menu allows you to select desired power of fans:

**Auto** - Auto-control mode offans

**High** - Max. speed of fans

**Quiet** - If the options is selected, power of fans can be set in the menu "Noise L."

**Noise L.** - The menu item allows you to set speed of fans. At low speed of fans the light output may be reduced.

**LED Freq - LEDs frequency setup.** The function allows you to set the PWM (Pulse Width Modulation) output frequency of LEDs to Standard or High.

**Stand** - a standard frequency (300Hz), default setting.

**High** - a high frequency (600Hz)

**LED Fadj - LEDs frequency fine adjustment.** The function allows you to change the selected PWM output frequency of LEDs in 6 levels up and down around the selected frequency in the menu "LED Freq".

-06...-01 - Frequency levels 1-6 under selected frequency.

00 - Selected frequency (Standard or High)

01...06 - Frequency levels 1-6 above selected frequency.

**Temp Uni - Temperature unit.** Use the menu item to change temperature unit from °C to °F.

**I Ef Pos - Init effect positions.** Use the menu to set all effects to the desired positions at which they will stay after switching the fixture on without DMX signal connected.

**Defaults** - The menu item allows to set all fixture parameters to the default (factory) values.

## 5.4 Manual Control (Manual)

Use the menu to control all fixture channels by means of the control panel.

## 5.5 Test program (Test Prg)

Use this menu to to run a special demo-test sequences without an external controller, which will show you some possibilities of using ROBIN LEDBeam 150 FWQ.

**Static - Static mode.** This mode is suitable for projections on the wall, ceiling or ground without any head movement.

**Dynamic - Dynamic mode.** This mode uses all ROBIN LEDBeam 150 FWQ functions including pan/tilt movement and therefore is good for a complete introduction of the fixture.

## 5.6 Stand-alone (St Alone)

**Music T - Music trigger.** Select this function to enable the sound control of the running program via the built-in microphone.

**Auto Run - Presetting playback.** This function allows you to select the program which will be played in the stand-alone mode after switching the fixture on. Selected program will be played continuously in a loop.

**Off** - The option disables „Auto Run” function.

**Test** - The option will start built-in test program.

**Prog 1** - The option will start user-created program 1

**Prog 2** - The option will start user-created program 2

**Prog 3** - The option will start user-created program 3

**Pr Play - Playing program.** Select this menu to run a user-created program in a loop.

**Test Prg** - The option runs built-in test program.

**Prog 1** - The option runs user-created program 1

**Prog 2** - The option runs user-created program 2

**Prog 3** - The option runs user-created program 3

Select the program you wish and press [ENTER]. The selected program starts running. By Pressing [ENTER] again, program pauses running.

**Pr Edit - Editing program.** Select this menu to edit or create the program. The ROBIN LEDBeam 150 FWQ has one built-in program and one user-editable program up to 40 steps. Each program step has a step time - during which effects last in the current step and a fade time- during which effects move to new positions.

To edit program:

**Procedure:**

1. Press [NEXT] or [PREV] to select the menu "Edit" and press [ENTER].

2. Press [NEXT] or [PREV] to select the desired program step and press [ENTER] button.

3. Press [NEXT] or [PREV] to select the desired item and press [ENTER] button. Now you can edit by [NEXT] or [PREV] buttons the DMX value (0-255) for selected item:

Prg End. a total number of the program steps (value 1-40). This value you should be set before starting of programming (e.g. if you want to create program with the 10 steps, set Prg End=10).

|         |                                                       |
|---------|-------------------------------------------------------|
| PAn     | a coarse pan movement                                 |
| PAn F   | a fine pan movement                                   |
| Tilt    | a coarse tilt movement                                |
| Tilt F  | a fine tilt movement                                  |
| P/T Sp  | a pan/tilt speed                                      |
| Powr    | power/special functions                               |
| Virt C  | a virtual colour wheel                                |
| Red     | a red colour coarse                                   |
| Red F   | a red colour fine                                     |
| Green   | a green colour coarse                                 |
| Green F | a green colour fine                                   |
| Blue    | a blue colour coarse                                  |
| Blue F  | a blue colour fine                                    |
| White   | a white colour                                        |
| White F | a white colour fine                                   |
| CTC     | a colour temperature correction                       |
| C Mix C | a colour mix control                                  |
| Zoom    | a zoom function                                       |
| Zoom F  | a zoom function fine                                  |
| Stro    | a strobe/shutter function                             |
| Dimm    | a dimmer function coarse                              |
| Dim F   | a dimmer function fine                                |
| F.Tim   | a fade time (0-25.5 sec)                              |
| S.Tim   | a step time (0-25.5 sec)                              |
| COPY    | copying the current prog. step to the next prog. step |

4. Press [ENTER] button to confirm adjusted value .

5. Press [ESCAPE] button, select next prog. step, press [ENTER] button and repeat steps 3 - 5).

## 5.7 Reset

This option enables the ROBIN LEDBeam 150 FWQ to index all effects and return to their standard positions.

## 5.8 Special functions (Special)

**RDM Low** - This menu item shows the first part of the RDM identification code.

**RDM High** - This menu item shows the second part of the RDM identification code.

**Wireless** - **Wireless DMX information.** The menu allows to read some information about Wireless DMX operation for fixtures equipped with wireless DMX module.

**Stat** - **Wireless status.** Use the menu to read wireless DMX status.

**Unlink** - use this item to unlink fixture from wireless DMX.

**Adjust** - **Adjustment.** The menu allows the fine adjustment of effects.

**DMX Val**- **DMX values.** Use the menu to set DMX values of fixture's channels.

**Calib** - calibration of white colour.

**Cal Mech** - Use this menu to calibrate pan/tilt/zoom position.

**Cal Col** - Items **Red C**, **Gre C**, **Blu C** and **Whi C** serve for setting white colour 5600K.

Note. Items **Red I**, **Gre I**, **Blu I** and **Whi I** serve for factory calibration and user should not change them.

*Calibration of the pan/tilt/zoom via the control board*

1. Disconnect DMX controller from the fixture and enter the "Cal Mech" menu.

2. Use the [PREV] and [NEXT] to find "Pan C" and press [ENTER].

3. Set desired value and save it by pressing [ENTER].

4. Repeat steps 2 and 3 for "Tilt C" and "Zoom C".

5. After calibrating both effects, find item "Store" and press [ENTER]. to save all adjusted values and reset the fixture.

#### *Calibration of the white 5600K via the control board*

1. Disconnect DMX controller from the fixture, set the shutter, dimmer and RGBW channels at 255 DMX, zoom at 128 DMX and the CTC channel at DMX=64 (white 5600K). Aim the light beam on the lux meter (e.g. Minolta CL-500 A Chroma meter) which is placed cca 5m from the fixture.
2. Set the menu items Colour Mix Mode to RGBW and "White Point 8000K to On (Pers-> C Mix M -> RGBW, Pers-> White P -> On).
3. Enter the menu "Cal Col".
4. By means of the "Red C, Gre C, Blu C and Whi C" items adjust the 5600K colour temperature as exactly as possible ( $\Delta u'v' = 0$ ).
5. After adjusting 5600K colour temperature, select item Store and press the [ENTER] button to save all adjusted values.

Note: you can also use DMX controller for both calibrations stated above, calibration protocol is the following:

| <b>Effect</b>            | <b>Mode 1</b> | <b>Mode 2</b> |
|--------------------------|---------------|---------------|
| Pan-fine adjustment      | channel 23    | channel 17    |
| Tilt - fine adjustment   | channel 24    | channel 18    |
| Zoom -fine adjustment    | channel 25    | channel 19    |
| Red - red saturation     | channel 26    | channel 20    |
| Green- green saturation  | channel 27    | channel 21    |
| Blue - blue saturation   | channel 28    | channel 22    |
| White - white saturation | channel 29    | channel 23    |

**Cal Load** - Loads default (factory) calibration.

**Sw Upd** - **Software update.** The menu item allows you to update software in the fixture via either serial or USB port of PC.

The following items are required in order to update software:

- PC running Windows or Linux or macOS
- DSU file
- Flash cable RS232/DMX, P/N13050624 (if you want to use a serial port of PC)
- Robe Universal Interface or Robe Universal interface WTX (if you want to use an USB port of PC)

After the software updating the fixture will be set to default (factory) values.

To update software in the fixture:

1. DSU file is available from Robe web site at [WWW.robe.cz](http://WWW.robe.cz).  
File with extension zip is intended for Windows (used and tested from XP to W10 on 32/64bit systems).  
File with extension tbz is intended for Linux (used and tested on Debian and Ubuntu 32/64bit).  
File with extension dmg is intended for macOS (used and tested on OSX up to Sierra) XQuartz required, install it from <https://www.xquartz.org/>  
Save the download file to a folder on your computer.  
In case that you use windows, extract files in the zip file (e.g. DSU\_RobinLedBeam150\_18041738.zip)
2. Disconnect the fixture from DMX controller.
3. If you use the flash cable RS232/DMX, connect a serial port of your computer with DMX input of the fixture by means of the cable.  
If you use the Robe Universal Interface, connect a USB port of your computer with the Robe Universal Interface by means of the USB cable and DMX input of the fixture with the DMX output of the Robe Universal Interface via a DMX cable.
4. Switch the fixture to the update mode (Special --> SW Upd).  
Note: If you do not want to continue in the software update, you have to switch off and on the fixture to escape from the updating mode.  
We recommend to cancel all running programs on your computer before starting the software update.
5. Double-click the software uploader file (e.g. DSU\_RobinLedBeam150\_18041738.exe) in the extracted files. The Software Uploader program will start running.





6. Select correct "COM " number if you use a Flash cable RS232/DMX or select "Robe Universal Interface 1 " if you use the Robe Universal Interface/Robe Universal Interface WTX and then click on the "Connect" button.
7. If the connection is OK, click the "Start Uploading" button to start software uploading. It will take several minutes to perform software update.

If the option "Incremental Update" is not checked, all processors will be updated (including processors with the same software version).

If you wish to update only processors with new version of software, check the "Incremental Update box".

Avoid interrupting the process. Update status is being displayed in the "Info Box" window.

When the update is finished, the line with the text "Fixture is successfully updated" will appear in this window.

In case upload process is interrupted (e.g. power loss), the fixture stays in "Updating mode" and you will have to repeat the software update again.

Another way, how to update software in the fixtures (especially large installation of fixtures) is to use the ROBE Uploader. It is a software for automatized software update of Robe fixtures. It takes advantage of RDM support).

For more information please see <https://www.robe.cz/robe-uploader/>.

## 6. RDM

This fixture supports RDM operation. RDM (Remote Device Management) is a bi-directional communications protocol for use in DMX512 control systems, it is the new open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without adversely affecting existing non-RDM equipment. By using a special „Start Code,“ and by complying with the timing specifications for DMX512, the RDM protocol allows a console or dedicated RDM controller to send commands to and receive messages from specific moving lights.

RDM allows explicit commands to be sent to a device and responses to be received from it.

The list of commands for ROBIN LEDBeam 150 FWQ is the following.

| Parameter ID             | Discovery command | SET command | GET command |
|--------------------------|-------------------|-------------|-------------|
| DISC_UNIQUE_BRANCH       | *                 |             |             |
| DISC_MUTE                | *                 |             |             |
| DISC_UN_MUTE             | *                 |             |             |
| DEVICE_INFO              |                   |             | *           |
| SUPPORTED_PARAMETERS     |                   |             | *           |
| SOFTWARE_VERSION_LABEL   |                   |             | *           |
| DMX_START_ADDRESS        |                   | *           | *           |
| IDENTIFY_DEVICE          |                   | *           | *           |
| DEVICE_MODEL_DESCRIPTION |                   |             | *           |
| MANUFACTURER_LABEL       |                   |             | *           |
| DEVICE_LABEL             |                   | *           | *           |

|                             |  |   |   |
|-----------------------------|--|---|---|
| SENSOR_DEFINITION           |  |   | * |
| SENSOR_VALUE                |  |   | * |
| DISPLAY_INVERT              |  | * | * |
| DISPLAY_LEVEL               |  | * | * |
| PAN_INVERT                  |  | * | * |
| TILT_INVERT                 |  | * | * |
| DEVICE_RESET                |  | * |   |
| DMX_PERSONALITY             |  | * | * |
| DMX_PERSONALITY_DESCRIPTION |  |   | * |
| STATUS_MESSAGES             |  |   | * |
| STATUS_ID_DESCRIPTION       |  |   | * |
| DEVICE_HOURS                |  |   | * |
| PARAMETER_DESCRIPTION       |  |   | * |
| ROBE_DMX_INPUT              |  | * | * |
| ROBE_WIRELESS_UNLINK        |  | * |   |

RDM model ID for the Robin 150 LEDBeam FWQ ETH is 0x012d

## 7. Error and information messages

### Short Err

The message informs you that short circuit has occurred on the LED PCB.

### Tilt Err

This message will appear after reset of the fixture if the head's indexing circuit malfunctions (sensor failed) or the stepping motor or its driving PCB is defective. The head is not located in the default tilt position after fixture reset.

### Pan Err

This message will appear after reset of the fixture if the head's indexing circuit malfunctions (sensor failed) or the stepping motor or its driving PCB is defective. The head is not located in the default pan position after fixture reset.



## 8. Technical Specifications

### Electrical

Power supply:.....electronic auto-ranging  
Input voltage range:..... supply 100-240V, 50-60Hz  
Fuse:.....T 3.15A  
Max. power consumption .....220W (I=0.98A, power factor=0.97)  
Mains input: - max. 16A (US 13A)  
Mains output: - max. 12A (US 9A)

### Optic

Light source: 7 x high power RGBW multichip LEDs  
Min LED life expectancy: 20.000 hours  
RGBW/CMY colour mixing  
Variable CTO 2700K-8000K

### Virtual colour wheel

66 preset colours  
Halogen lamp effect at whites 2700K and 3200K  
Rainbow effect with in both directions with variable speed

### Zoom range

3.8°-60°

### Strobe

Strobe effect with variable speed (0.3 - 20Hz)  
Random strobe pulse-effect with variable speed  
Opening/closing pulse effect with variable speed

### Dimmer

Smooth dimmer from 0 - 100 %

### Pan/Tilt

Max. pan movement range: 450°  
Max. tilt movement range: 228°  
16 bit movement resolution  
Automatic Pan/Tilt position correction  
Remotely controllable speed of pan/tilt movement for easy programming

### Control

2-row LCD display & 4 buttons  
Readout fixture usage, receiving DMX values, temperatures, etc  
Built-in analyzer for easy fault finding, error messages  
Built-in demo sequences  
Silent fans cooling,  
Stand-alone operation  
3 user editable programs, each up to 40 steps  
Supported protocols: USITT DMX 512, RDM,  
Support of RDM (Remote Device Management)  
2 DMX modes (22, 16 control channels)

### External Wireless DMX/RDM module (optional)

Compliance with USITT DMX-512 (1986 & 1990) and 512-A  
Full DMX fidelity and frame integrity

Auto sensing of DMX frame rate and frame size  
<5ms DMX latency  
Operational frequency range of 2402-2480 MHz  
Producer: LumenRadio

## Connection

DMX data in/out: Locking 5-pin XLR  
Ethernet: RJ 45  
AC power input: Chassis connector Neutrik PowerCon, A-type, NAC3MPA  
AC power output: Chassis connector Neutrik PowerCon, B-type, NAC3MPB

## Rigging

Mounting points: pair of 1/4-turn locks  
Mounting horizontally or vertically via Omega bracket

## Temperatures

Maximum ambient temperature : 45° C  
Maximum housing temperature : 80° C

## Distances

Min. distance from flammable surfaces: 0.4 m  
Min. distance of illuminated objects: 0.8 m

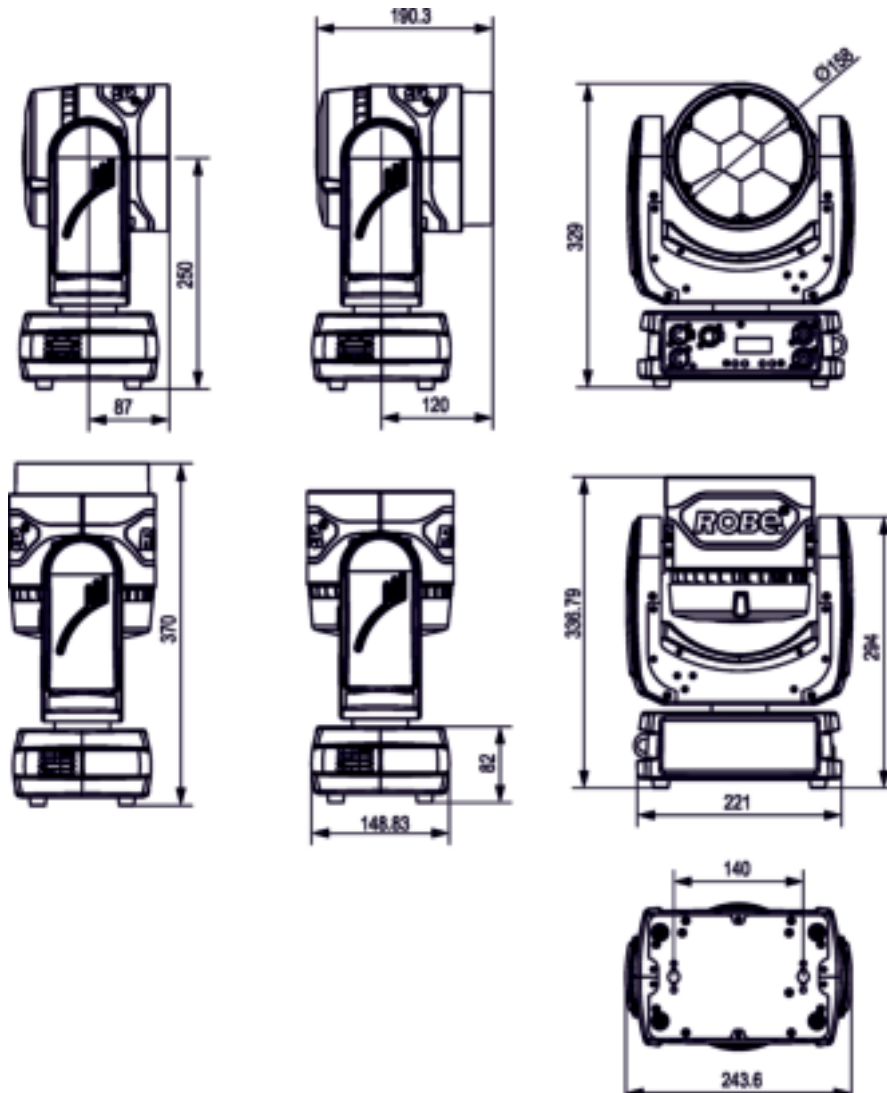
## Total heat dissipation

562 BTU/h (calculated)

## Weight:

5.7 kg

## Dimensions (mm)



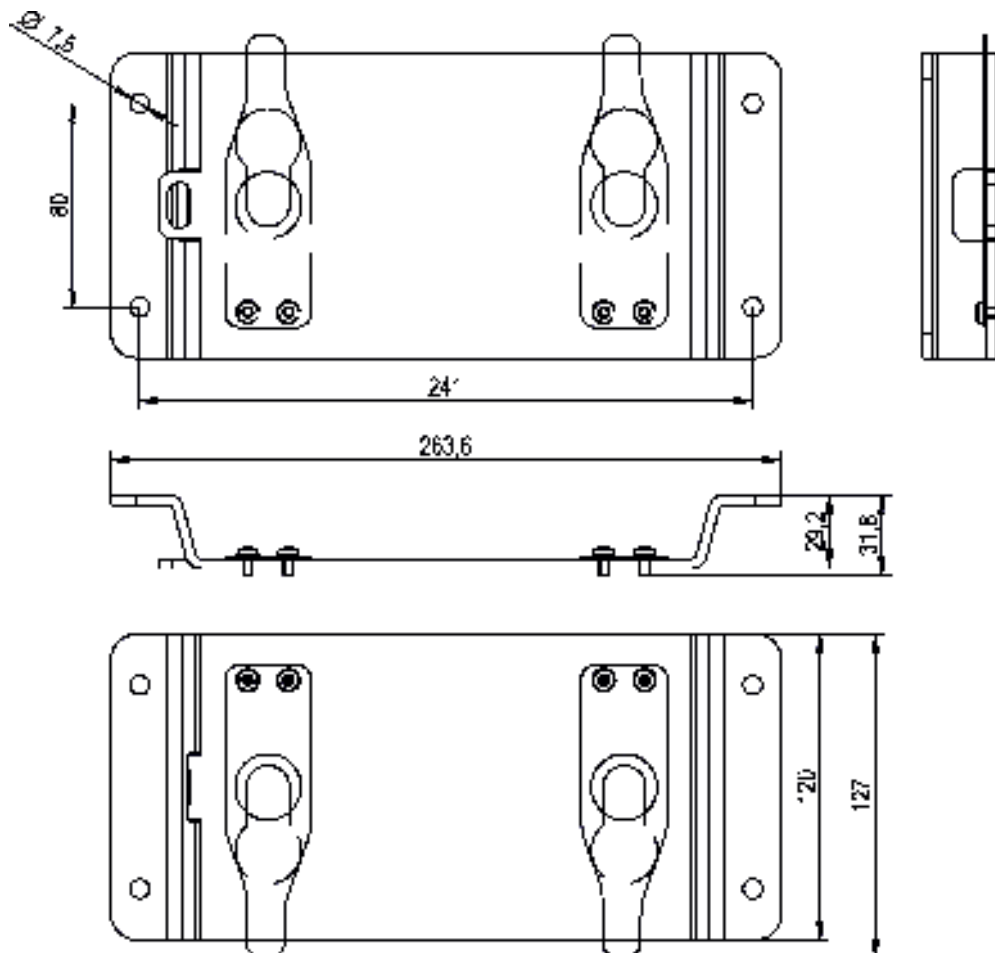
## Accessories

1x Mounting bracket Omega CL assembled (P/N 99010420)

## Optional accessories

(P/N 10980127) ROBE Wireless CRMX Dongle  
(P/N1305 1731) Mains Cable PowerCon In/open ended, 2m  
(P/N 1305 1724) Mains Cable PowerCon In/Schuko, 2m  
(P/N 1305 1725) Mains Cable PowerCon In/CEE 16A, 2m  
(P/N 1305 1726) Mains Cable PowerCon In/US, 2m  
(P/N 1305 1727) Daisy Chain PowerCon In/Out, EU, 2m  
(P/N 1305 1728 ) Daisy Chain PowerCon In/Out, US, 2m  
(P/N 10980346 ) EggCrate for Robin LEDBeam 150  
(P/N 10980496) EggCrate for Robin LEDBeam 150 RAL9003 glossy  
(P/N 10980445) EggCrate for Robin LEDBeam 150, ParFect 150 white  
(P/N 17030386) Doughty Trigger Clamp  
(P/N 99011963) Safety wire 35 kg  
(P/N 10981158) Ceiling Mount Kit for Led Beam 150 FWQ RAL9010matt

Dimensions (mm) of the mounting plate of the Ceiling Mount Kit for Led Beam 150 FWQ.



## 9. Maintenance and cleaning

It is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on or within the fixture. Otherwise, the fixture's light output will be significantly reduced. Regular cleaning will not only ensure the maximum light output, but will also allow the fixture to function reliably throughout its life. A soft lint-free cloth moistened with any weak detergent solution is recommended for cleaning fixture's covers, under no circumstances should alcohol or solvents be used!

***DANGER !***  
***Disconnect from the mains before starting any  
maintenance and cleaning work***

The interior of the fixture should be cleaned at least annually using a vacuum cleaner or compressed air. The cooling fans should be cleaned at least twice a year.

**Important! Never use alcohols (ethanol, methanol, isopropyl alcohol), acetone and another aggressive solvents for cleaning the front lens array.  
Do not immerse lenses in liquid (e.g. water) during cleaning.**

Recommended steps for cleaning the front lens array:

1. Use low-pressure compressed air to remove coarse dust from lenses.
2. Use distilled water with weak detergent solution and lint-free small cloth for further cleaning of lenses.
3. Use an antistatic, alcohol-free screen cleaner (we recommend the Lyreco Screen Cleaner) and polish lenses until they are dry.
4. Check the lenses are dry before reapplying power.

Note: potential foggy front lens array does not influence function of the fixture and does not subject to complaint

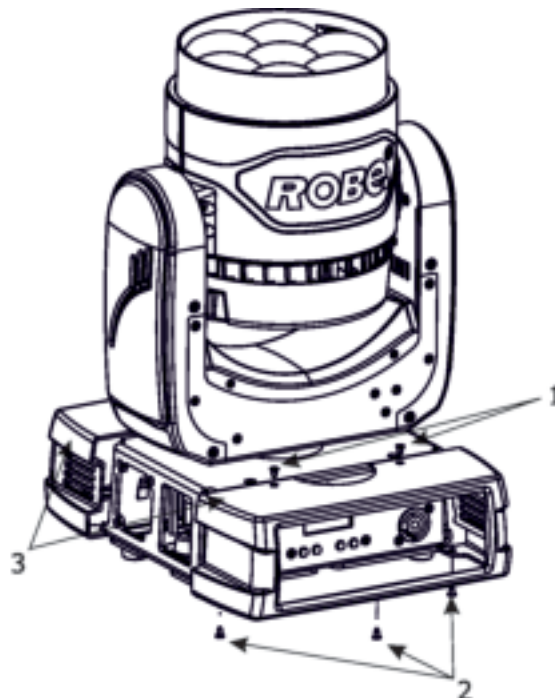
More complicated maintenance and service operations are only to be carried out by authorized distributors.

## 9.1 Replacing fuse

1. Replace the fuse by a fuse of the same type and rating only.

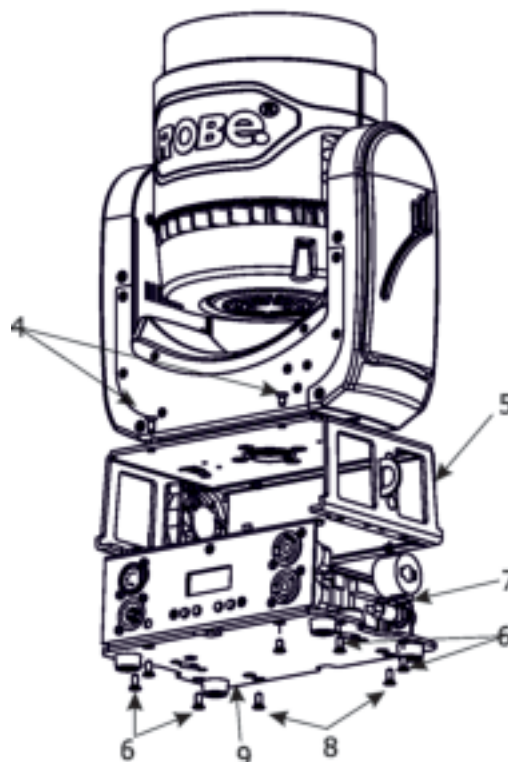
**Before replacing the fuse, unplug mains lead!**

2. Remove the plastic covers of the base (3) by unscrewing 5 fastening screws (1) and (2) on each cover.



3. Unscrew four screws (4) on the top chassis (5). Lay down the fixture and unscrew four screws (6) on the bottom plate (9) to push out inside module of the base.

4. Unscrew two screws (8) on the bottom plate to remove rear panel of the fixture (7).

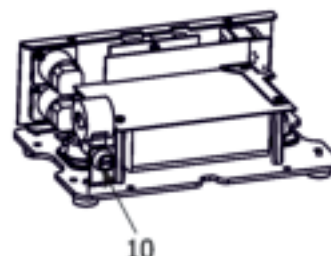


5. Now you have access for the fuse holder (10) in the inside module of the base.

6. Remove the old fuse from the fuseholder.

7. Install the new fuse into the fuseholder.

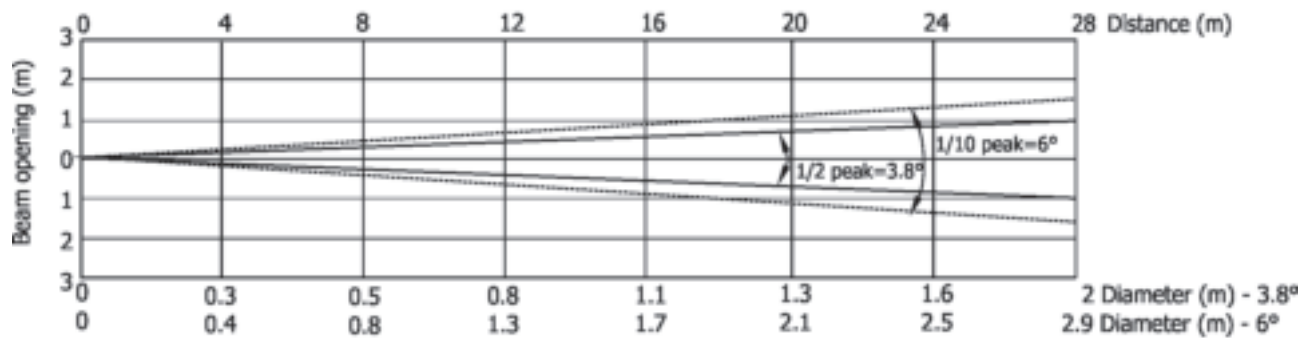
8. Assemble the base of the fixture.



## 10. Photometric diagrams

### Min. Zoom

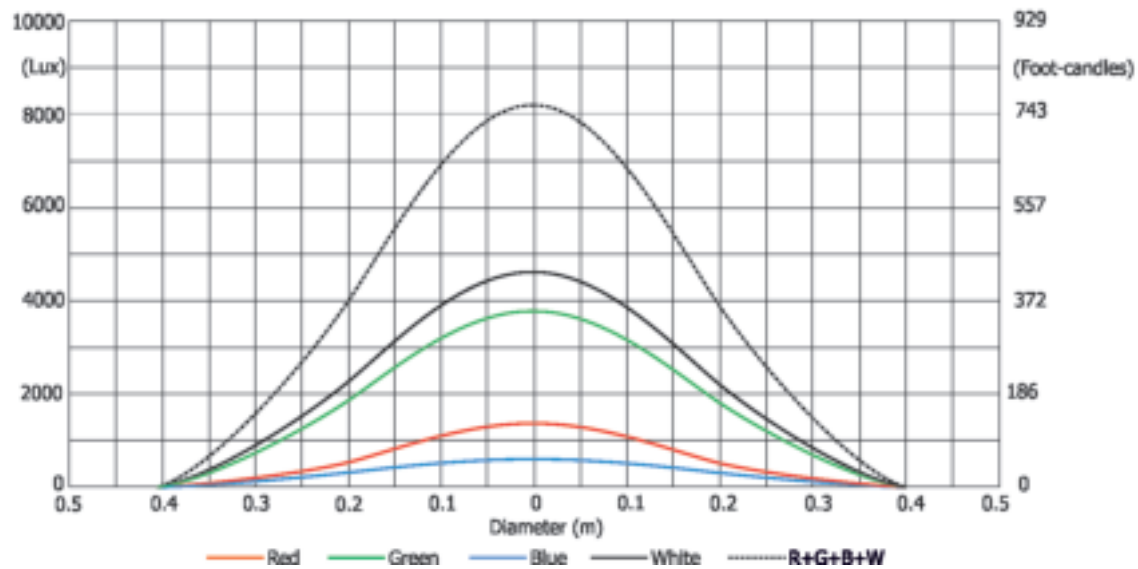
Total Output: 1136 lumens



| Distance (m)   | 4          | 5        | 8        | 12       | 16     | 20     | 24     | 28     | Intensity (center)<br>Lux/foot-candles |
|----------------|------------|----------|----------|----------|--------|--------|--------|--------|----------------------------------------|
| Red            | 2609/242   | 1670/155 | 652/61   | 290/27   | 163/15 | 104/10 | 73/7   | 53/5   |                                        |
| Green          | 6000/557   | 3840/357 | 1500/139 | 666/62   | 375/35 | 240/22 | 166/16 | 122/11 |                                        |
| Blue           | 875/82     | 560/52   | 219/20   | 97/9     | 55/5   | 35/3.3 | 24/2.3 | 18/1.7 |                                        |
| White          | 7234/672   | 4630/430 | 1809/168 | 803/75   | 452/42 | 289/27 | 201/19 | 147/14 |                                        |
| <b>R+G+B+W</b> | 12797/1189 | 8190/761 | 3200/297 | 1422/132 | 800/74 | 511/48 | 355/33 | 261/24 |                                        |

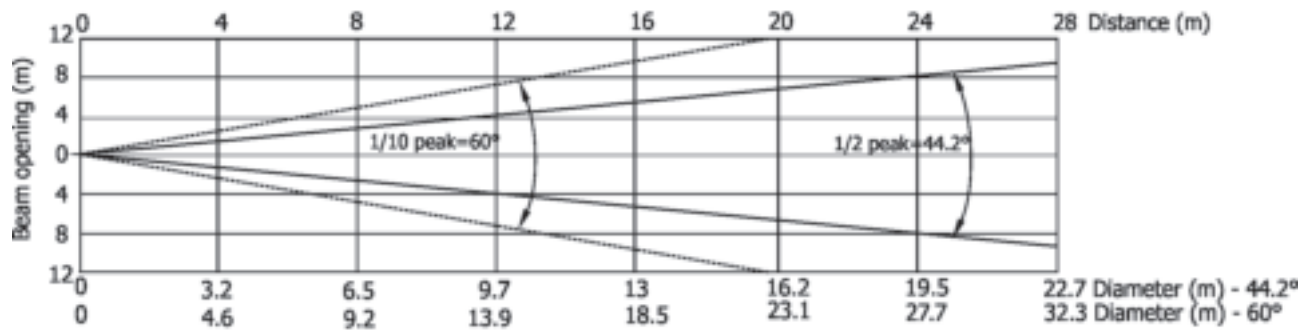
### Illuminance distribution

Distance=5m



## Max. Zoom

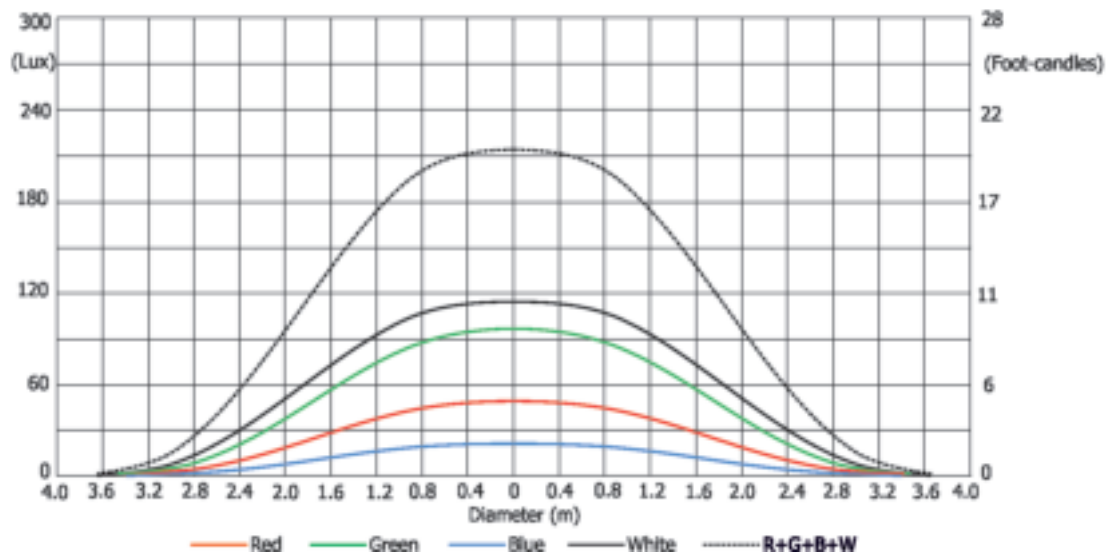
Total Output: 2288 lumens



| Distance (m)   | 4      | 5      | 8      | 12      | 16       | 20      | 24      | 28       |                                       |
|----------------|--------|--------|--------|---------|----------|---------|---------|----------|---------------------------------------|
| Red            | 73/5.8 | 47/4.4 | 18/1.7 | 8/0.8   | 5/0.4    | 3/0.3   | 2/0.2   | 1.5/0.1  | Intensity (center)<br>Lux/footcandles |
| Green          | 148/14 | 95/9   | 37/3.4 | 17/1.5  | 9/1      | 6/0.6   | 4/0.4   | 3/0.3    |                                       |
| Blue           | 20/2   | 13/1.2 | 5/0.5  | 2.3/0.2 | 1.3/0.1  | 0.8/0.1 | 0.6/0.1 | 0.4/0.08 |                                       |
| White          | 181/17 | 116/11 | 45/4.2 | 20/1.9  | 11.3/1.1 | 7/0.7   | 5/0.5   | 4/0.3    |                                       |
| <b>R+G+B+W</b> | 333/31 | 215/20 | 84/8   | 37/3.5  | 21/2     | 13/1.2  | 9/1     | 7/0.6    |                                       |

## Illuminance distribution

Distance=5m





## 11. ChangeLog

This section summarizes changes in the user manual.

| Version of the manual | Date of issue | Description of changes  |
|-----------------------|---------------|-------------------------|
| 1.1                   | 10/06/2022    | Ethernet back-up added  |
| 1.2                   | 06/01/2025    | Ceiling mount kit added |

January 6, 2025

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Made in ROBE Lighting s.r.o., Palackého 416, 757 01 Valašské Meziříčí, Czech Republic

# DMX protocol

| Robin LEDdBeam 150/LEDBeam 150 FW/LEDBeam 150Q/LEDBeam 150 FWQ - DMX protocol |   |           |                                                                                                                                                                                                                                         |                 |
|-------------------------------------------------------------------------------|---|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| Version: 1.7 Mode 1-Standard 16-bit, Mode 2 -Reduced 8-bit                    |   |           |                                                                                                                                                                                                                                         |                 |
| Mode/channel                                                                  |   | DMX Value | Function                                                                                                                                                                                                                                | Type of control |
| 1                                                                             | 2 |           |                                                                                                                                                                                                                                         |                 |
| 1                                                                             | 1 |           | <b>Pan (8 bit)</b>                                                                                                                                                                                                                      |                 |
|                                                                               |   | 0 - 255   | Pan movement by 450° (128=default)                                                                                                                                                                                                      | proportional    |
| 2                                                                             | 2 |           | <b>Pan Fine (16 bit)</b>                                                                                                                                                                                                                |                 |
|                                                                               |   | 0 - 255   | Fine control of pan movement (0=default)                                                                                                                                                                                                | proportional    |
| 3                                                                             | 3 |           | <b>Tilt (8 bit)</b>                                                                                                                                                                                                                     |                 |
|                                                                               |   | 0 - 255   | Tilt movement by 228° (128=default)                                                                                                                                                                                                     | proportional    |
| 4                                                                             | 4 |           | <b>Tilt fine (16 bit)</b>                                                                                                                                                                                                               |                 |
|                                                                               |   | 0 - 255   | Fine control of tilt movement (0=default)                                                                                                                                                                                               | proportional    |
| 5                                                                             | 5 |           | <b>Pan/Tilt speed , Pan/Tilt time</b>                                                                                                                                                                                                   |                 |
|                                                                               |   | 0         | Standard mode (0=default)                                                                                                                                                                                                               | step            |
|                                                                               |   | 1         | Max. Speed Mode                                                                                                                                                                                                                         | step            |
|                                                                               |   |           | <b>Pan/Tilt speed mode</b>                                                                                                                                                                                                              |                 |
|                                                                               |   | 2 - 255   | Speed from max. to min.                                                                                                                                                                                                                 | proportional    |
|                                                                               |   |           | <b>Pan/Tilt time mode</b>                                                                                                                                                                                                               |                 |
|                                                                               |   | 2 - 255   | Time from 0.2 sec. to 25.5 sec.                                                                                                                                                                                                         | proportional    |
| 6                                                                             | 6 |           | <b>Power/Special functions</b>                                                                                                                                                                                                          |                 |
|                                                                               |   | 0 -19     | Reserved (0=default)                                                                                                                                                                                                                    |                 |
|                                                                               |   |           | <i>To activate following functions, stop in DMX value for at least 3 s and shutter must be closed at least 3 sec. („Shutter,Strobe“ channel 20/15 must be at range: 0-31 DMX). Corresponding menu items are temporarily overridden.</i> |                 |
|                                                                               |   | 20-24     | Display ON                                                                                                                                                                                                                              | step            |
|                                                                               |   | 25-29     | Display OFF                                                                                                                                                                                                                             | step            |
|                                                                               |   | 30-34     | RGBW colour mixing mode                                                                                                                                                                                                                 | step            |
|                                                                               |   | 35-39     | CMY colour mixing mode                                                                                                                                                                                                                  | step            |
|                                                                               |   | 40-44     | Pan/Tilt speed mode                                                                                                                                                                                                                     | step            |
|                                                                               |   | 45 - 49   | Pan/Tilt time mode                                                                                                                                                                                                                      | step            |
|                                                                               |   | 50 -54    | Blackout while pan/tilt moving                                                                                                                                                                                                          | step            |
|                                                                               |   | 55 -59    | Disabled blackout while pan/tilt moving                                                                                                                                                                                                 | step            |
|                                                                               |   | 60 - 64   | Dimmer curve - square law                                                                                                                                                                                                               | step            |
|                                                                               |   | 65 - 69   | Dimmer curve - linear                                                                                                                                                                                                                   | step            |
|                                                                               |   | 70 - 74   | Fans mode: Auto                                                                                                                                                                                                                         | step            |
|                                                                               |   | 75 - 79   | Fans mode: High                                                                                                                                                                                                                         | step            |
|                                                                               |   | 80-84     | White point 8000K ON                                                                                                                                                                                                                    | step            |
|                                                                               |   | 85-89     | White point 8000K OFF                                                                                                                                                                                                                   | step            |
|                                                                               |   | 90-94     | Fans mode: Quiet                                                                                                                                                                                                                        | step            |
|                                                                               |   | 95 -129   | Reserved                                                                                                                                                                                                                                |                 |
|                                                                               |   |           | <i>To activate following functions, stop in DMX value for at least 3 seconds. Corresponding menu items are temporarily overridden.</i>                                                                                                  |                 |
|                                                                               |   | 130 - 139 | Reserved                                                                                                                                                                                                                                |                 |
|                                                                               |   | 140 - 149 | Pan/Tilt reset                                                                                                                                                                                                                          | step            |
|                                                                               |   | 150 - 159 | Zoom reset                                                                                                                                                                                                                              | step            |
|                                                                               |   | 160 - 169 | Reserved                                                                                                                                                                                                                                | step            |
|                                                                               |   |           | <i>Tungsten effect simulation for whites 2700K and 3200K</i>                                                                                                                                                                            |                 |
|                                                                               |   | 170-171   | Tungsten effect simulation (750W) On                                                                                                                                                                                                    | step            |
|                                                                               |   | 172-173   | Tungsten effect simulation (1000W) On                                                                                                                                                                                                   | step            |

# DMX protocol

| Mode/channel |          | DMX Value | Function                                                                                                                                                                | Type of control |
|--------------|----------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1            | 2        |           |                                                                                                                                                                         |                 |
|              |          | 174-175   | Tungsten effect simulation (1200W) On                                                                                                                                   | step            |
|              |          | 176-177   | Tungsten effect simulation (2000W) On                                                                                                                                   | step            |
|              |          | 178-179   | Tungsten effect simulation (2500W) On                                                                                                                                   | step            |
|              |          | 180-181   | Tungsten effect simulation Off                                                                                                                                          | step            |
|              |          | 182-184   | Reserved                                                                                                                                                                |                 |
|              |          | 185       | PWM output frequency of LEDS: Standard (300Hz)**                                                                                                                        | step            |
|              |          | 186       | PWM output frequency of LEDS: High (600Hz)**                                                                                                                            | step            |
|              |          |           | ** You can adjust selected frequency in 6 steps Up or Down around selected frequency - see table below . Default value of PWM frequency set in the fixture is Standard. |                 |
|              |          | 187       | LED Frequency (step -6)                                                                                                                                                 | step            |
|              |          | 188       | LED Frequency (step -5)                                                                                                                                                 | step            |
|              |          | 189       | LED Frequency (step -4)                                                                                                                                                 | step            |
|              |          | 190       | LED Frequency (step -3)                                                                                                                                                 | step            |
|              |          | 191       | LED Frequency (step -2)                                                                                                                                                 | step            |
|              |          | 192       | LED Frequency (step -1)                                                                                                                                                 | step            |
|              |          | 193       | LED Frequency (Standard or High)                                                                                                                                        | step            |
|              |          | 194       | LED Frequency (step +1)                                                                                                                                                 | step            |
|              |          | 195       | LED Frequency (step +2)                                                                                                                                                 | step            |
|              |          | 196       | LED Frequency (step +3)                                                                                                                                                 | step            |
|              |          | 197       | LED Frequency (step +4)                                                                                                                                                 | step            |
|              |          | 198       | LED Frequency (step +5)                                                                                                                                                 | step            |
|              |          | 199       | LED Frequency (step +6)                                                                                                                                                 | step            |
|              |          | 200 - 209 | Total fixture reset                                                                                                                                                     | step            |
|              |          | 210 - 218 | Reserved                                                                                                                                                                |                 |
|              |          |           | The following RoboSpot related commands are only applicable when the RoboSpot is connected:                                                                             |                 |
|              |          | 219 - 220 | RoboSpot enabled                                                                                                                                                        | step            |
|              |          | 221 - 222 | RoboSpot disabled - except handle faders and pan/tilt                                                                                                                   | step            |
|              |          | 223 - 224 | RoboSpot fully disabled                                                                                                                                                 | step            |
|              |          | 225 - 255 | Reserved                                                                                                                                                                |                 |
| <b>7</b>     | <b>7</b> |           | <b>Virtual colour wheel</b>                                                                                                                                             |                 |
|              |          | 0         | No function (0=default)                                                                                                                                                 | step            |
|              |          | 1-2       | Filter 4 (Medium Bastard Amber)                                                                                                                                         | step            |
|              |          | 3-4       | Filter 25 (Sunset Red)                                                                                                                                                  | step            |
|              |          | 5-6       | Filter 19 (Fire)                                                                                                                                                        | step            |
|              |          | 7-8       | Filter 26 (Bright Red)                                                                                                                                                  | step            |
|              |          | 9-10      | Filter 58 (Lavender)                                                                                                                                                    | step            |
|              |          | 11-12     | Filter 68 (Sky Blue)                                                                                                                                                    | step            |
|              |          | 13-14     | Filter 36 (Medium Pink)                                                                                                                                                 | step            |
|              |          | 15-16     | Filter 89 (Moss Green)                                                                                                                                                  | step            |
|              |          | 17-18     | Filter 88 (Lime Green)                                                                                                                                                  | step            |
|              |          | 19-20     | Filter 90 (Dark Yellow Green)                                                                                                                                           | step            |
|              |          | 21-22     | Filter 49 (Medium Purple)                                                                                                                                               | step            |
|              |          | 23-24     | Filter 52 (Light Lavender)                                                                                                                                              | step            |
|              |          | 25-26     | Filter 102 (Light Amber)                                                                                                                                                | step            |
|              |          | 27-28     | Filter 103 (Straw)                                                                                                                                                      | step            |
|              |          | 29-30     | Filter 140 (Summer Blue)                                                                                                                                                | step            |
|              |          | 31-32     | Filter 124 (Dark Green)                                                                                                                                                 | step            |
|              |          | 33-34     | Filter 106 (Primary Red)                                                                                                                                                | step            |
|              |          | 35-36     | Filter 111 (Dark Pink)                                                                                                                                                  | step            |

DMX protocol

| Mode/channel |   | DMX Value | Function                               | Type of control |
|--------------|---|-----------|----------------------------------------|-----------------|
| 1            | 2 |           |                                        |                 |
|              |   | 37-38     | Filter 115 (Peacock Blue)              | step            |
|              |   | 39-40     | Filter 126 (Mauve)                     | step            |
|              |   | 41-42     | Filter 117 (Steel Blue)                | step            |
|              |   | 43-44     | Filter 118 (Light Blue)                | step            |
|              |   | 45-46     | Filter 122 (Fern Green)                | step            |
|              |   | 47-48     | Filter 182 (Light Red)                 | step            |
|              |   | 49-50     | Filter 121 (Filter Green)              | step            |
|              |   | 51-52     | Filter 128 (Bright Pink)               | step            |
|              |   | 53-54     | Filter 131 (Marine Blue)               | step            |
|              |   | 55-56     | Filter 132 (Medium Blue)               | step            |
|              |   | 57-58     | Filter 134 (Golden Amber)              | step            |
|              |   | 59-60     | Filter 135 (Deep Golden Amber)         | step            |
|              |   | 61-62     | Filter 136 (Pale Lavender)             | step            |
|              |   | 63-64     | Filter 137 (Special Lavender)          | step            |
|              |   | 65-66     | Filter 138 (Pale Green)                | step            |
|              |   | 67-68     | Filter 798 (Chrysalis Pink)            | step            |
|              |   | 69-70     | Filter 141 (Bright Blue)               | step            |
|              |   | 71-72     | Filter 147 (Apricot)                   | step            |
|              |   | 73-74     | Filter 148 (Bright Rose)               | step            |
|              |   | 75-76     | Filter 152 (Pale Gold)                 | step            |
|              |   | 77-78     | Filter 154 (Pale Rose)                 | step            |
|              |   | 79-80     | Filter 157 (Pink)                      | step            |
|              |   | 81-82     | Filter 143 (Pale Navy Blue)            | step            |
|              |   | 83-84     | Filter 162 (Bastard Amber)             | step            |
|              |   | 85-86     | Filter 164 (Flame Red)                 | step            |
|              |   | 87-88     | Filter 165 (Daylight Blue)             | step            |
|              |   | 89-90     | Filter 169 (Lilac Tint)                | step            |
|              |   | 91-92     | Filter 170 (Deep Lavender)             | step            |
|              |   | 93-94     | Filter 172 (Lagoon Blue)               | step            |
|              |   | 95-96     | Filter 194 (Surprise Pink)             | step            |
|              |   | 97-98     | Filter 180 (Dark Lavender)             | step            |
|              |   | 99-100    | Filter 181 (Congo Blue)                | step            |
|              |   | 101-102   | Filter 197 (Alice Blue)                | step            |
|              |   | 103-104   | Filter 201 (Full C.T. Blue)            | step            |
|              |   | 105-106   | Filter 202 (Half C.T. Blue)            | step            |
|              |   | 107-108   | Filter 203 (Quarter C.T. Blue)         | step            |
|              |   | 109-110   | Filter 204 (Full C.T. Orange)          | step            |
|              |   | 111-112   | Filter 219 (Fluorescent Green)         | step            |
|              |   | 113-114   | Filter 206 (Quarter C.T. Orange)       | step            |
|              |   | 115-116   | Filter 247 (Filter Minus Green)        | step            |
|              |   | 117-118   | Filter 248 (Half Minus Green)          | step            |
|              |   | 119-120   | Filter 281 (Three Quarter C.T. Blue)   | step            |
|              |   | 121-122   | Filter 285 (Three Quarter C.T. Orange) | step            |
|              |   | 123-124   | Filter 352 (Glacier Blue)              | step            |
|              |   | 125-126   | Filter 353 (Lighter Blue)              | step            |
|              |   | 127-128   | Filter 507 (Madge)                     | step            |
|              |   | 129-130   | Filter 778 (Millennium Gold)           | step            |
|              |   | 131-132   | Filter 793 (Vanity Fair)               | step            |
|              |   | 133-235   | Raw DMX                                | proportional    |

# DMX protocol

| Mode/channel |    | DMX Value | Function                                                                                                                 | Type of control |
|--------------|----|-----------|--------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1            | 2  |           |                                                                                                                          |                 |
|              |    | 236-245   | Rainbow effect (with fade time) from slow-> fast                                                                         | proportional    |
|              |    | 246-255   | Rainbow effect (without fade time) from slow-> fast                                                                      | proportional    |
| 8            | 8  |           | <b>Red/Cyan (8 bit)*</b>                                                                                                 |                 |
|              |    | 0 - 255   | Colour saturation control - coarse 0-100% (255=default)                                                                  | proportional    |
| 9            | *  |           | <b>Red/Cyan (16bit)*</b>                                                                                                 |                 |
|              |    | 0 - 255   | Colour saturation control - fine (255=default)                                                                           | proportional    |
| 10           | 9  |           | <b>Green/Magenta (8 bit) *</b>                                                                                           |                 |
|              |    | 0 - 255   | Colour saturation control - coarse 0-100% (255=default)                                                                  | proportional    |
| 11           | *  |           | <b>Green/Magenta (16bit) *</b>                                                                                           |                 |
|              |    | 0 - 255   | Colour saturation control - fine (255=default)                                                                           | proportional    |
| 12           | 10 |           | <b>Blue/Yellow (8 bit) *</b>                                                                                             |                 |
|              |    | 0 - 255   | Colour saturation control - coarse 0-100% (255=default)                                                                  | proportional    |
| 13           | *  |           | <b>Blue/ Yellow (16bit) *</b>                                                                                            |                 |
|              |    | 0 - 255   | Colour saturation control - fine (255=default)                                                                           | proportional    |
| 14           | 11 |           | <b>White (8 bit)</b>                                                                                                     |                 |
|              |    |           | <i>If RGBW mode is selected:</i>                                                                                         |                 |
|              |    | 0-255     | Colour saturation control - coarse 0-100% (255=default)                                                                  | proportional    |
|              |    |           | <i>If CMY mode is selected:</i>                                                                                          |                 |
|              |    | 0 - 255   | No function                                                                                                              |                 |
| 15           | *  |           | <b>White (16 bit)</b>                                                                                                    |                 |
|              |    | 0 - 255   | Colour saturation control - fine (255=default)                                                                           | proportional    |
| 16           | 12 |           | <b>CTC</b>                                                                                                               |                 |
|              |    |           | <i>If function "White Point 8000K" is ON</i>                                                                             |                 |
|              |    | 0-255     | Col. temperature correction from 8000K to 2700K -for whites only<br>(0=8000K, 64=5600K, 128=4200K, 192=3200K, 255=2700K) | proportional    |
|              |    |           | To get colour temperatures stated above, RGBW channels have to be set at the same value e.g. 255DMX (0=default)          |                 |
|              |    |           | (To activate Tungsten effect at 2700K and 3200K , set DMX value at "Power/Special functions" channel)                    |                 |
|              |    |           | <i>If function "White Point 8000K" is OFF</i>                                                                            |                 |
|              |    | 0-255     | Colour temperature correction for from cool white to 2700K                                                               | proportional    |
| 17           | 13 |           | <b>Colour Mix control</b>                                                                                                |                 |
|              |    |           | <i>Defines relation between colour channels</i>                                                                          |                 |
|              |    |           | "Virtual" = Virtual Colours (Virtual Colour Wheel)                                                                       |                 |
|              |    |           | "Colour mix" = Colour channels (RGBW/CMY)                                                                                |                 |
|              |    | 0-9       | Virtual colors ("Virtual" has priority)                                                                                  | step            |
|              |    | 10-19     | Maximum mode (highest values have priority)                                                                              | step            |
|              |    | 20-29     | Minimum mode (lowest values have priority)                                                                               | step            |
|              |    | 30-39     | Multiply mode (multiply Virtual and Colour Mix)                                                                          | step            |
|              |    | 40-49     | Addition mode (Virtual + Colour mix) (45=default)                                                                        | step            |
|              |    | 50-59     | Subtraction mode (Virtual – Colour mix)                                                                                  | step            |
|              |    | 60-69     | Inverted Subtraction mode (Virtual – Colour mix)                                                                         | step            |
|              |    | 70-128    | Reserved                                                                                                                 |                 |
|              |    | 129       | Virtual colors (virtual has priority)                                                                                    | step            |
|              |    | 130-254   | Crossfade (crossfade between Virtual and Colour mix)                                                                     | proportional    |
|              |    | 255       | Colour channels ("Colour mix" has priority)                                                                              | step            |
| 18           | 14 |           | <b>Zoom</b>                                                                                                              |                 |
|              |    | 0-255     | Zoom from max. to min.beam angle (128=default)                                                                           | proportional    |
| 19           | *  |           | <b>Zoom - fine</b>                                                                                                       |                 |
|              |    | 0-255     | Fine zooming (0=default)                                                                                                 | proportional    |

# DMX protocol

| Mode/channel                                                          |           | DMX Value | Function                                     | Type of control |
|-----------------------------------------------------------------------|-----------|-----------|----------------------------------------------|-----------------|
| 1                                                                     | 2         |           |                                              |                 |
| <b>20</b>                                                             | <b>15</b> |           | <b>Shutter/ strobe</b>                       |                 |
|                                                                       |           | 0 - 31    | Shutter closed                               | step            |
|                                                                       |           | 32 - 63   | Shutter open (32=default)                    | step            |
|                                                                       |           | 64 - 95   | Strobe-effect from slow to fast              | proportional    |
|                                                                       |           | 96 - 127  | Shutter open                                 | step            |
|                                                                       |           | 128 - 143 | Opening pulse in sequences from slow to fast | proportional    |
|                                                                       |           | 144 - 159 | Closing pulse in sequences from fast to slow | proportional    |
|                                                                       |           | 160 - 191 | Shutter open                                 | step            |
|                                                                       |           | 192 - 223 | Random strobe-effect from slow to fast       | proportional    |
|                                                                       |           | 224 - 255 | Shutter open                                 | step            |
| <b>21</b>                                                             | <b>16</b> |           | <b>Dimmer intensity (8 bit)</b>              |                 |
|                                                                       |           | 0 - 255   | Dimmer intensity from 0% to 100% (0=default) | proportional    |
| <b>22</b>                                                             | <b>*</b>  |           | <b>Dimmer intensity - fine (16 bit)</b>      |                 |
|                                                                       |           | 0 - 255   | Fine dimming (0=default)                     | proportional    |
| *Select RGB or CMY mixing mode on channel "Power/Special functions" . |           |           |                                              |                 |
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| All Specifications subject to change without notice                   |           |           |                                              |                 |

| Colours on Virtual Colour Wheel |              |                |               |                |
|---------------------------------|--------------|----------------|---------------|----------------|
| Colour name                     | Red<br>(DMX) | Green<br>(DMX) | Blue<br>(DMX) | White<br>(DMX) |
| Filter 4 (Medium Bastard Amber) | 255          | 118            | 0             | 109            |
| Filter 25 (Sunset Red)          | 255          | 47             | 0             | 3              |
| Filter 19 (Fire)                | 255          | 13             | 0             | 0              |
| Filter 26 (Bright Red)          | 255          | 0              | 0             | 0              |
| Filter 58 (Lavender)            | 117          | 0              | 97            | 155            |
| Filter 68 (Sky Blue)            | 31           | 219            | 105           | 6              |
| Filter 36 (Medium Pink)         | 255          | 74             | 8             | 24             |
| Filter 89 (Moss Green)          | 69           | 245            | 0             | 3              |
| Filter 88 (Lime Green)          | 187          | 226            | 0             | 0              |
| Filter 90 (Dark Yellow Green)   | 2            | 255            | 0             | 0              |
| Filter 49 (Medium Purple)       | 255          | 0              | 27            | 0              |
| Filter 52 (Light Lavender)      | 232          | 88             | 6             | 166            |
| Filter 102 (Light Amber)        | 223          | 164            | 0             | 0              |
| Filter 103 (Straw)              | 191          | 144            | 0             | 28             |
| Filter 140 (Summer Blue)        | 0            | 149            | 3             | 220            |
| Filter 124 (Dark Green)         | 29           | 255            | 0             | 12             |
| Filter 106 (Primary Red)        | 242          | 1              | 1             | 0              |
| Filter 111 (Dark Pink)          | 255          | 67             | 11            | 49             |
| Filter 115 (Peacock Blue)       | 0            | 255            | 29            | 43             |
| Filter 126 (Mauve)              | 255          | 0              | 39            | 0              |
| Filter 117 (Steel Blue)         | 179          | 255            | 14            | 197            |
| Filter 118 (Light Blue)         | 0            | 255            | 76            | 30             |
| Filter 122 (Fern Green)         | 98           | 255            | 0             | 4              |
| Filter 182 (Light Red)          | 255          | 16             | 2             | 0              |
| Filter 121 (Filter Green)       | 165          | 255            | 0             | 0              |
| Filter 128 (Bright Pink)        | 255          | 0              | 13            | 32             |
| Filter 131 (Marine Blue)        | 73           | 245            | 27            | 30             |
| Filter 132 (Medium Blue)        | 0            | 230            | 120           | 0              |
| Filter 134 (Golden Amber)       | 166          | 83             | 0             | 0              |
| Filter 135 (Deep Golden Amber)  | 255          | 50             | 0             | 0              |
| Filter 136 (Pale Lavender)      | 140          | 101            | 25            | 40             |
| Filter 137 (Special Lavender)   | 110          | 60             | 45            | 102            |
| Filter 138 (Pale Green)         | 241          | 255            | 4             | 48             |
| Filter 798 (Chrysalis Pink)     | 49           | 0              | 98            | 26             |
| Filter 141 (Bright Blue)        | 0            | 225            | 62            | 5              |
| Filter 147 (Apricot)            | 190          | 107            | 0             | 15             |
| Filter 148 (Bright Rose)        | 255          | 3              | 0             | 37             |
| Filter 152 (Pale Gold)          | 179          | 119            | 0             | 39             |
| Filter 154 (Pale Rose)          | 214          | 118            | 0             | 48             |
| Filter 157 (Pink)               | 255          | 56             | 5             | 43             |
| Filter 143 (Pale Navy Blue)     | 0            | 193            | 67            | 148            |
| Filter 162 (Bastard Amber)      | 211          | 153            | 6             | 36             |
| Filter 164 (Flame Red)          | 255          | 27             | 0             | 4              |
| Filter 165 (Daylight Blue)      | 23           | 236            | 93            | 81             |
| Filter 169 (Lilac Tint)         | 185          | 123            | 0             | 109            |
| Filter 170 (Deep Lavender)      | 235          | 123            | 41            | 37             |
| Filter 172 (Lagoon Blue)        | 0            | 255            | 63            | 5              |



| <b>Colour name</b>                     | <b>Red<br/>(DMX)</b> | <b>Green<br/>(DMX)</b> | <b>Blue<br/>(DMX)</b> | <b>White<br/>(DMX)</b> |
|----------------------------------------|----------------------|------------------------|-----------------------|------------------------|
| Filter 194 (Surprise Pink)             | 110                  | 0                      | 21                    | 255                    |
| Filter 180 (Dark Lavender)             | 136                  | 43                     | 181                   | 120                    |
| Filter 181 (Congo Blue)                | 24                   | 0                      | 255                   | 9                      |
| Filter 197 (Alice Blue)                | 79                   | 193                    | 154                   | 36                     |
| Filter 201 (Full C.T. Blue)            | 153                  | 223                    | 66                    | 156                    |
| Filter 202 (Half C.T. Blue)            | 255                  | 248                    | 34                    | 116                    |
| Filter 203 (Quarter C.T. Blue)         | 245                  | 213                    | 14                    | 147                    |
| Filter 204 (Full C.T. Orange)          | 230                  | 131                    | 3                     | 3                      |
| Filter 219 (Fluorescent Green)         | 99                   | 148                    | 16                    | 50                     |
| Filter 206 (Quarter C.T. Orange)       | 199                  | 152                    | 0                     | 60                     |
| Filter 247 (Filter Minus Green)        | 255                  | 79                     | 0                     | 187                    |
| Filter 248 (Half Minus Green)          | 255                  | 138                    | 0                     | 112                    |
| Filter 281 (Three Quarter C.T. Blue)   | 225                  | 255                    | 99                    | 189                    |
| Filter 285 (Three Quarter C.T. Orange) | 181                  | 121                    | 0                     | 15                     |
| Filter 352 (Glacier Blue)              | 0                    | 161                    | 49                    | 90                     |
| Filter 353 (Lighter Blue)              | 0                    | 115                    | 21                    | 97                     |
| Filter 507 (Madge)                     | 255                  | 31                     | 0                     | 0                      |
| Filter 778 (Millennium Gold)           | 255                  | 65                     | 0                     | 0                      |
| Filter 793 (Vanity Fair)               | 255                  | 0                      | 13                    | 16                     |
|                                        |                      |                        |                       |                        |