ROBE.

ROBIN® T11
Profile

ROBIN® T11
Profile EP

ROBIN®
Innovative Technology

USER MANUAL

ROBE® lighting s.r.o. • Czech Republic • www.robe.cz

Version 3.5

Robin T11 Profile
Robin T11 Profile EP

Table of contents

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

FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOU INITIAL START - UP!

1. Safety instructions

> *Please use only an original ROBE packaging (paper box, loader case or foam shell) for transporting the device, otherwise potential damage of the device during its transport will not subject to warranty.*

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

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.

Make sure that the available voltage is not higher than stated on the rear panel.

> **This device falls under class one and must be earthed!**

WARNING! This unit does not contain an ON/OFF switch. Always disconnect power input cable to completely remove power from unit when not in use or before cleaning or servicing the unit.

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

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power cord.

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth. The electric connection, repairs and servicing must be carried out by a qualified employee.

Do not connect this device to a dimmer pack.

During the initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective.

Do not touch the device's housing bare hands during its operation (housing becomes hot)!

For replacement use fuses of same type and rating only.

> **LED light emission. Risk of eye injury.**
> **Do not look straight at the fixture´s LED source during operation. The intense light beam may damage your eyes. Sensitive persons may suffer an epileptic shock.**
> **Provide advance notice that strobe lighting is in use.**

> **Do not view the light output with optical instruments or any device that may concentrate the beam.**
> **The light source contains blue LEDs.**

> *CAUTION! Risk group 2, RG-2* ⚠

2. Operating determination

This device is a moving head for creating decorative effects and was designed for indoor use only.
This device is for professional use only. It is not for household use.

If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.

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

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

Always fix the fixture with an appropriate safety wire. Fix the safety wire at the correct hole only.

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

The maximum ambient temperature 45°C must never be exceeded.

> **CAUTION!**
> **The front lens has to be replaced when it is obviously damaged,**
> **so that its function is impaired, e. g. due to cracks or deep scratches!**

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

Do not block the front objective lens with any object when the fixture is under operation.

The fixture housing never must be covered with cloth or other materials.

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

Please consider that unauthorized modifications on the device are forbidden due to safety reasons!
If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock, burns etc.

> **CAUTION!**
> **To avoid damage of the internal parts of the fixture head, never let the sunlight lights directly to the front lens , even when the fixture is not working !**

The product (covers and cables) must not be exposed to a high frequency electromagnetic field higher than 3V/m.

Immunity of the equipment is designed according to the standard EN 55035 Electromagnetic compatibility of multimedia equipment - Immunity requirements

Emission of the equipment complies with the standard EN55032 Electromagnetic compatibility of multimedia equipment – Emission Requirements according to class B.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1)

This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The [Device] wireless operation is safe and complies to RF Exposure requirements

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Important!
Frost stick – movement only **UP** and **DOWN**!
Do not move it in the direction of longitudinal axis of the device- risk of damage of the focus system.
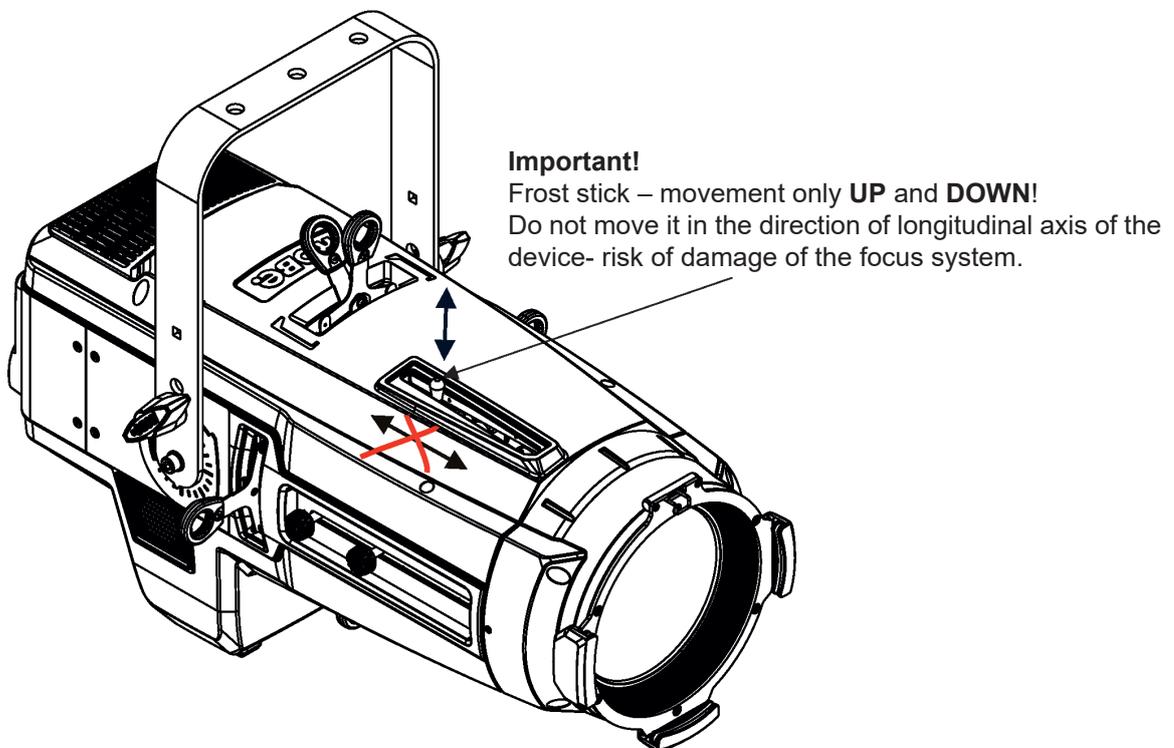
3. Fixture exterior view and control elements
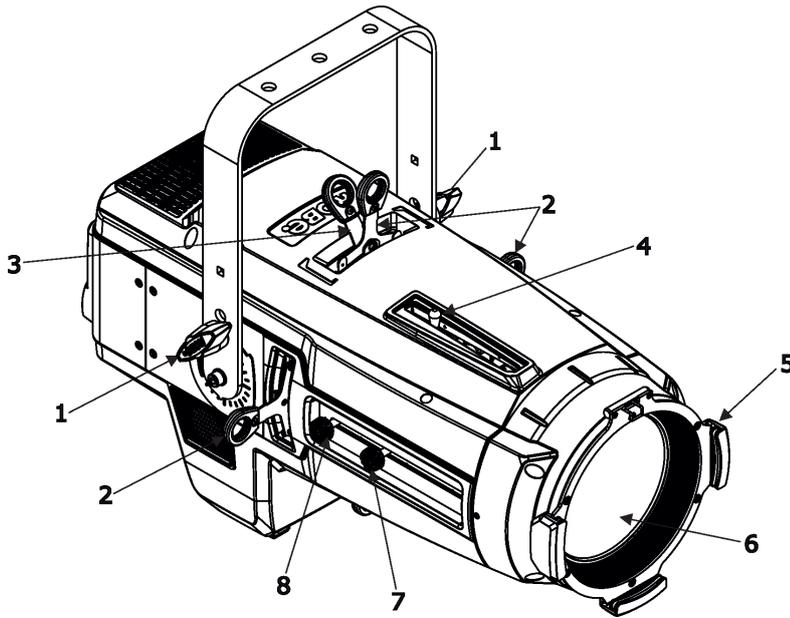
1 - Tilt locks
2 - Framing shutters
3 - Static gobo holder
4 - Frost stick
5 - Gel frame adaptor
6 - Front lens
7 - Focus
8 - Zoom
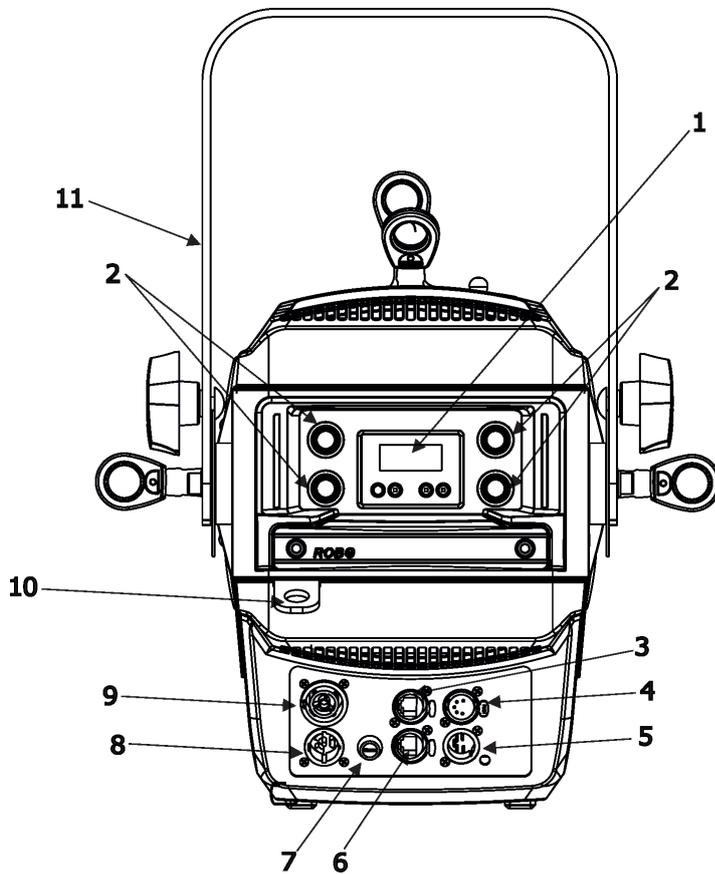
Rear side of the fixture
1 - Display with four control buttons
2 - control knobs
3 - Ethernet Out (EP version only)
4 - 5-pin DMX Out
5 - 5-pin DMX In
6 - Ethernet In
7 - Fuse holder
8 - Power In (PowerCon True 1)
9 - Power Out (PowerCon True 1)
10 - Attachment point for safety wire
11 - Yoke
12 - Framing shutters lock
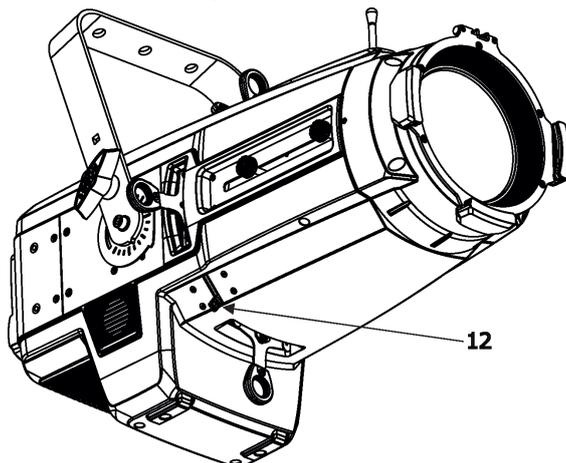
4. Installation

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

4.1 Connection to the mains

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

The Robin T11 Profile is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.

Power cable is enclosed to the fixture. If you need to install a power plug 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	PE/GND

This device falls under class one and must be earthed (grounded).

Design of the ROBIN T11Profiles allows you to connect several fixtures to AC mains power in one interconnected daisy chain using power input and throughput connectors. Needed daisy chain cords are stated in the chapter "Technical specifications "

Maximum number of linked fixtures depends on input voltage:

CE:
7 fixtures at power supply= 230V
6 fixtures at power supply= 208V
4 fixtures at power supply= 120V

US:
5 fixtures at power supply= 230V
5 fixtures at power supply= 208V
3 fixtures at power supply= 120V

Real 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 the fixtures installation Do not overload the supply line and connecting leads.

4.2 Replacing gobos

> ***Unplug the fixture from mains before replacing gobos!***

Rotating gobos

1. Disconnect the fixture from mains and allow it to cool.
2. Remove the plastic cover of the head by loosening the four quarter-turn fasteners on the cover.
3. Gently pull up the gobo holder (3) from the rotation gobo wheel.
4. Remove the spring lock (1) with an appropriate tool (e.g. small-bladed screwdriver) and remove it.
   Do not touch the surface of the pattern of the glass gobo with bare fingers.
5. Remove the original gobo (2) and insert the new one (glossy side towards the light source).
   The Robe gobo has a small position point (8) at its edge which has to aim at the position point (4) on
   the gobo holder (4). Insert the spring lock to secure correct gobo position in the gobo holder.
6. Insert he gobo holder back until it reaches the stop (6) in the rotating gobo wheel in this way, that its
   position point (4) has to aim at a small toothlike projection (5) on the edge of the rotating gobo wheel.

Important! When inserting the gobo holder back to the rotating gobo wheel, one of the adjacent gobo holder has to be oriented according to the same rule, it means that its position point (4) has to aimed at the toothlike projection (5) on the edge of the rotating gobo wheel. You have to keep both marks (4) and (5) side by side when rotating the gobo wheel to the position allows inserting the gobo holder back.

5. Replace the plastic cover before applying power.
6. Use the menu Service to fine adjust replaced gobo (Service -> Calibration -> Calibrate effects -> R. Gobo Index 1 ...R. Gobo Index 2).

Note. The magnet (9) of the gobo holder has the same function as the position point (4) on the rest of gobo holders.
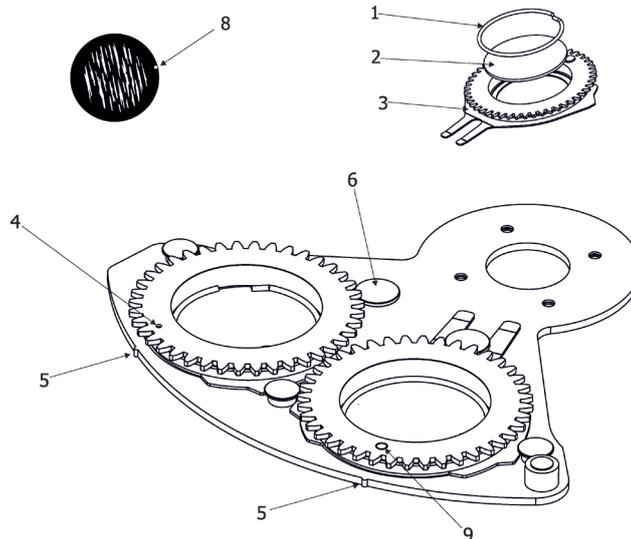

Static gobos

1. Disconnect the fixture from mains and allow it to cool.
2. Remove the plastic cover of the head by loosening the four quarter-turn fasteners on the cover.
3. Gently pull up the gobo holder (1) from the static gobo wheel.
4. Remove the spring gobo-lock (3) with an appropriate tool (e.g. small-bladed screwdriver) and remove it.
   Do not touch the surface of the pattern of the glass gobo.
5. Remove the original gobo (2) and insert the new one (glossy side towards the light source). Insert the
   spring-gobo lock (3) to secure it in the gobo holder (1).
6. Insert the gobo holder back to the static gobo wheel until it reaches the stop (4) in the static gobo wheel.
5. Replace the plastic cover of the head before applying power.
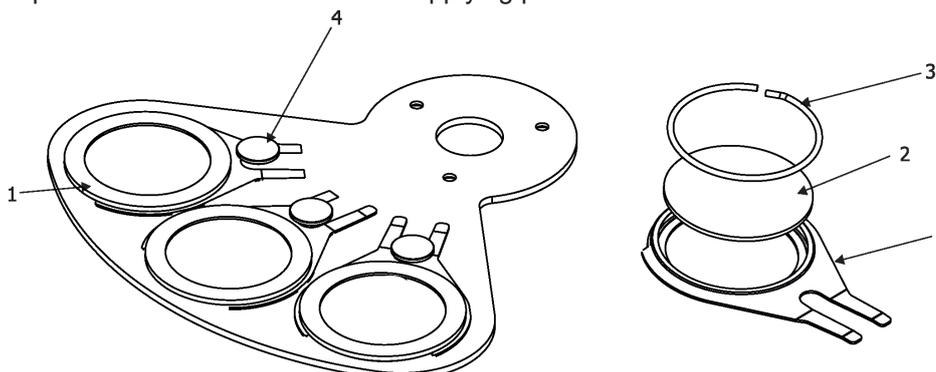
4.3 Replacing frost

Unplug the fixture from mains before replacing frost!

1. Disconnect the fixture from mains and allow it to cool.
2. Remove the top cover (1) by loosening the four quarter-turn locks on it to get access to the frost module (1).
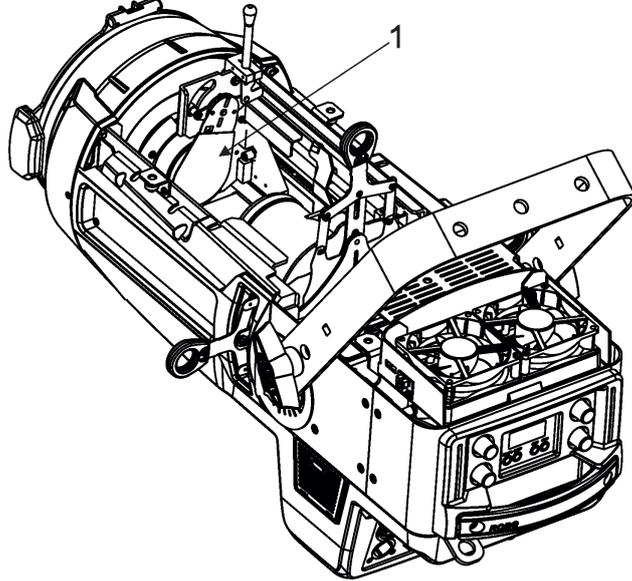
3. The holder (2) of the frost foil is fastened to the frost holder (3) by means of the four magnets (4). Grip the holder (2) and carefully tilt it out to break a force of magnets (4) on the frost holder (3).
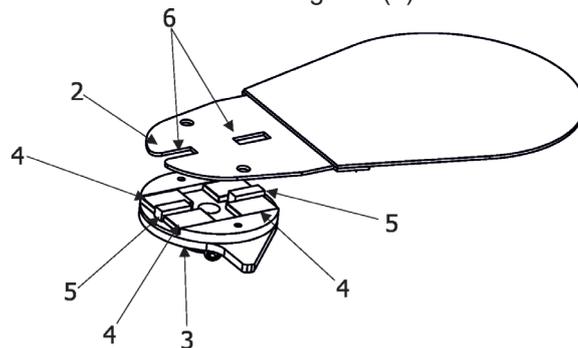
4. Place a new frost module on the frost holder (3). Check, that both slots (6) snapped correctly into two protrusions (5) in the holder (3).
5. Put the top cover back on the fixture, fasten securing wire and secure the cover by means of the four quarter-turn locks.

Note: There is another frost holder (7) placed on the inside of the fixture and serves as a holder for frost module which is not currenly in use.
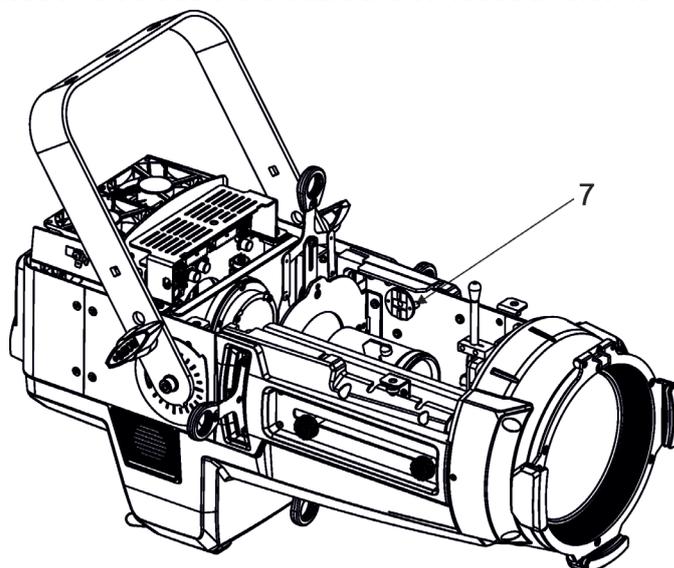
4.4 Drop-in gobo and iris module installation

Unplug the fixture from mains before installing drop-in gobo and iris module!

1. Disconnect the fixture from mains and allow it to cool.
2. Slide the static gobo holder (1) up and remove the top cover (2) by loosening the four quarter-turn locks on it.
3. Remove the gripping module for gobo Holder R size (3) from the Robin T11 by unscrewing two screws (4).
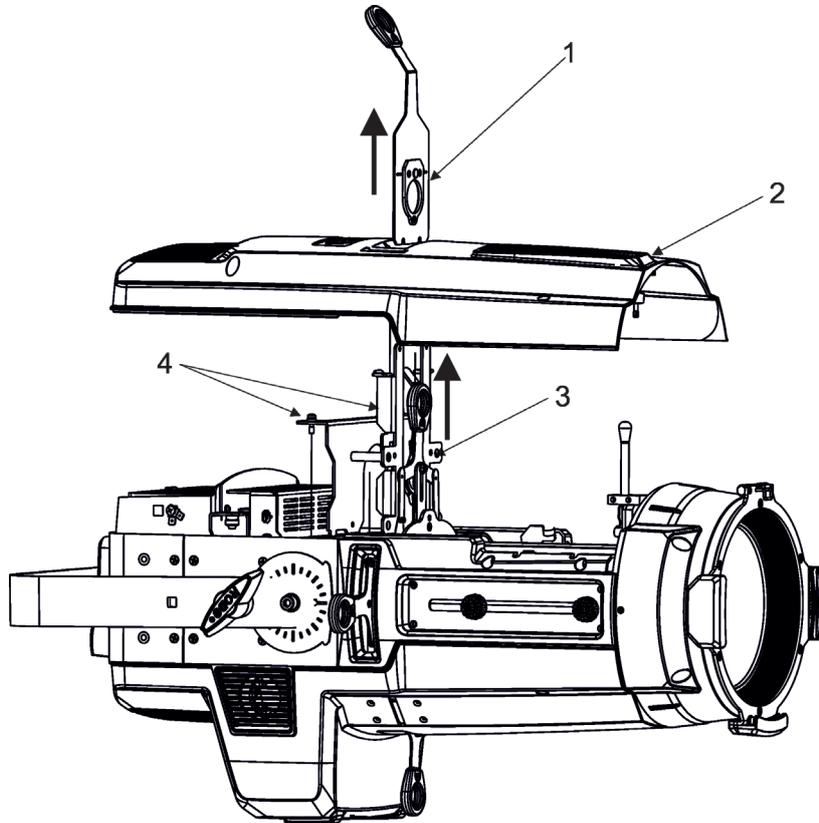
4. Insert the gobo and iris module (5) to the Robin T11.
5. Secure the gobo and iris module (5) in the Robin T11 by means of two screws (6).
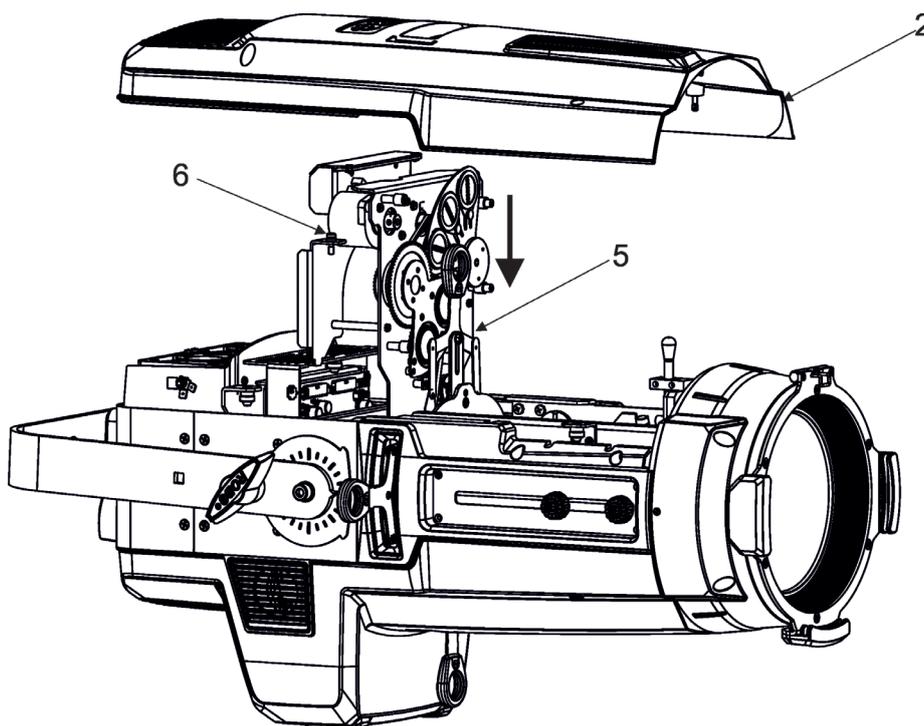
6. Connect cable from gobo and iris module to the to the Robin T11.
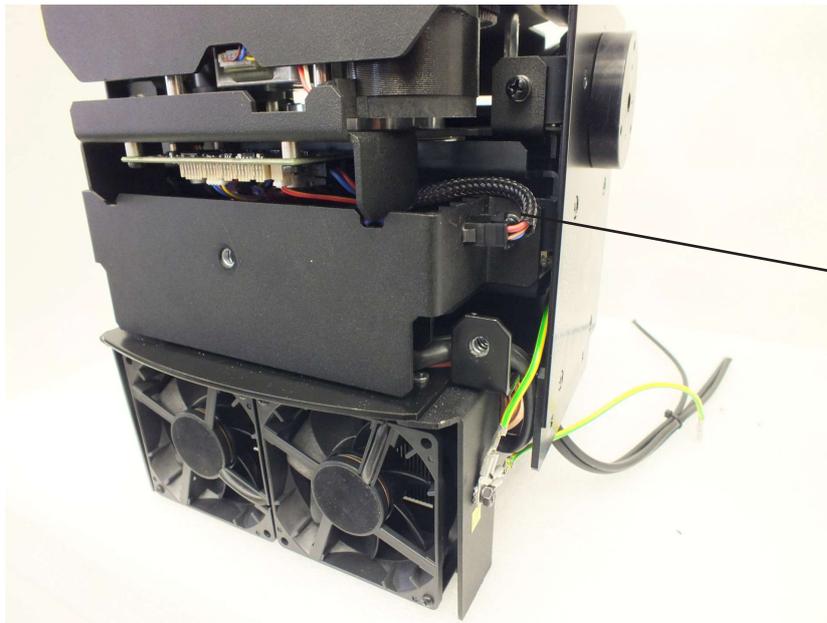
Cable from Drop-in gobo and iris module

7. Put the top cover (2) back on the Robin T11, fasten securing wire and secure the cover by means of the four quarter-turn locks.

4.5 Drop-in manual iris installation

Unplug the fixture from mains before manual iris installation!

1. Disconnect the fixture from mains and allow it to cool.
2. Slide the static gobo holder (1) up and remove the top cover (2) by loosening the four quarter-turn locks on it.
3. Remove the gripping module for gobo holder R size (3) from the Robin T11 by unscrewing two screws (4).
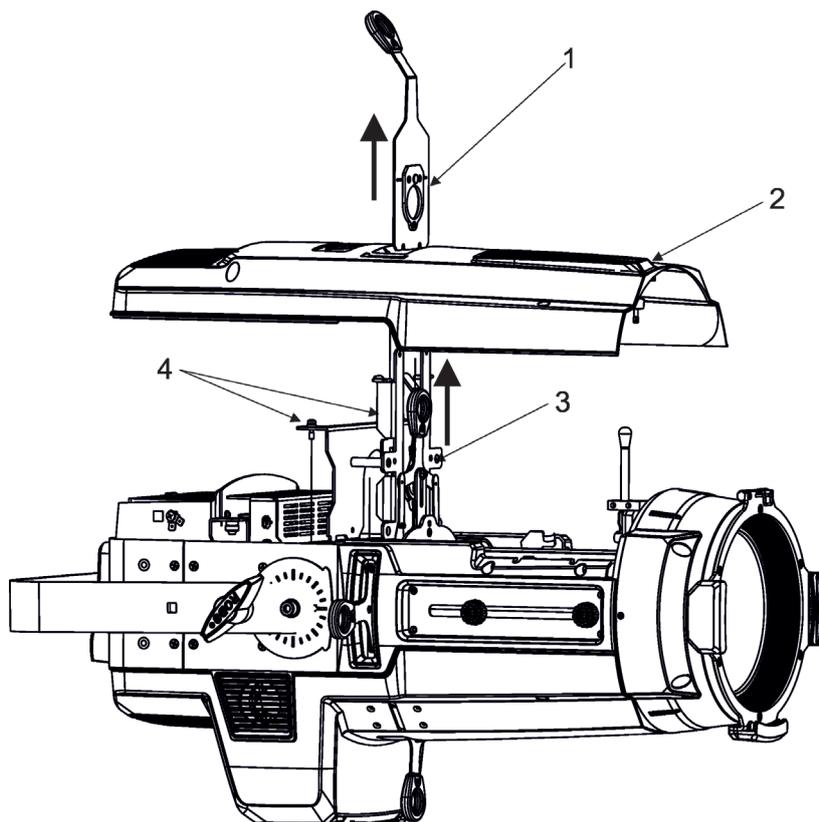
4. Insert the manual iris module (5) to the Robin T11.
5. Secure the manual iris module (5) in the Robin T11 by means of two screws (6).
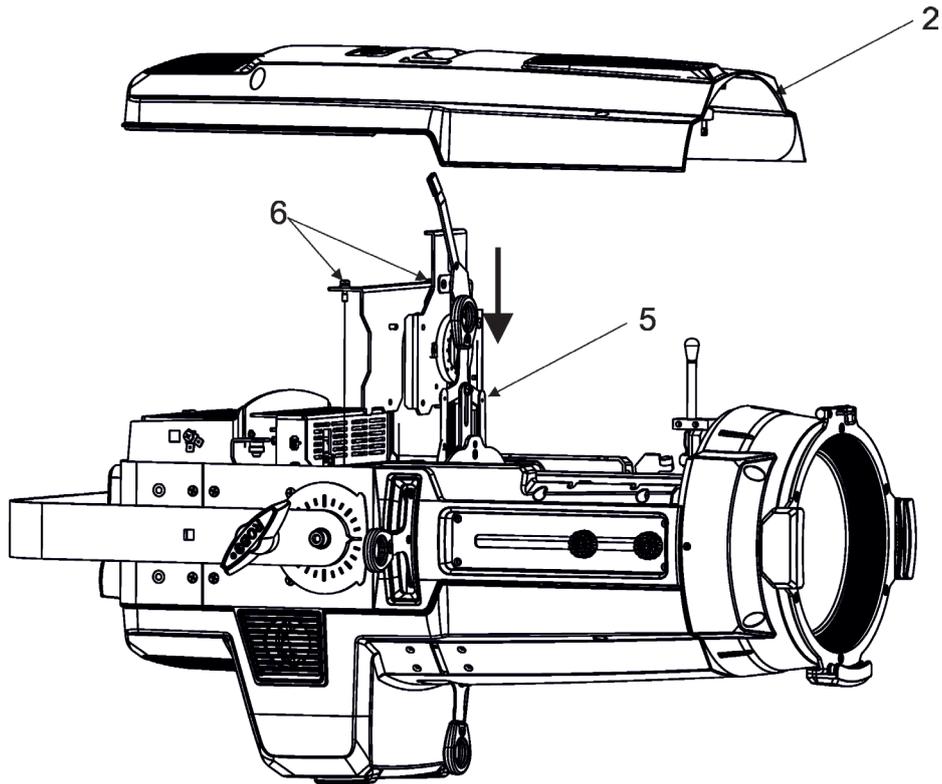
6. Put the top cover (2) back on the Robin T11, fasten securing wire and secure the cover by means of the four quarter-turn locks.

Note: the optional iris lever extension (P/N 10980889) allows you to lengthen the iris lever. Slide the iris lever extension (8) onto iris lever (7) and secure it by means of the screw (9).
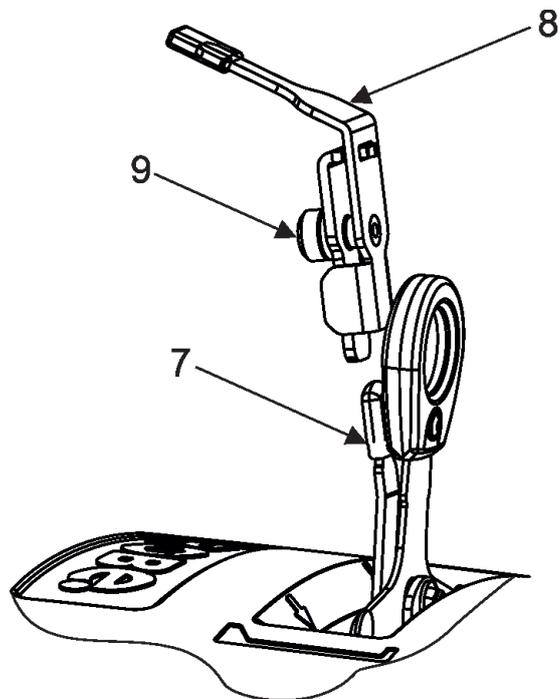
4.6 Gobo holder R size installation

> *Unplug the fixture from mains before gobo holder installation!*

1. Disconnect the fixture from mains and allow it to cool.
2. Slide the static gobo holder out from the fixture and insert the rotating gobo holder R size with gobo instead of it. The rotation gobo can be indexed by rotating the wheel (11).

Note. If the gripping module for gobo holder R size (3) is not installed in the fixture, remove the top cover (2) and install the gripping module for gobo holder R size (3) to which the rotating gobo holder R size will be inserted and secure it by means of two screws (4).

Put the top cover (2) back on the fixture, fasten securing wire and secure the cover by means of the four quarter-turn locks.

DETAIL

DETAIL

Rotating gobo utside diameter: 26.8$^{+0,1}$ mm, image diameter=21.4 mm

10 Rotating gobo holder R size (P/N 10981237)

set Gobo Holder R size with gobo for Robin T11 (P/N 10980655)
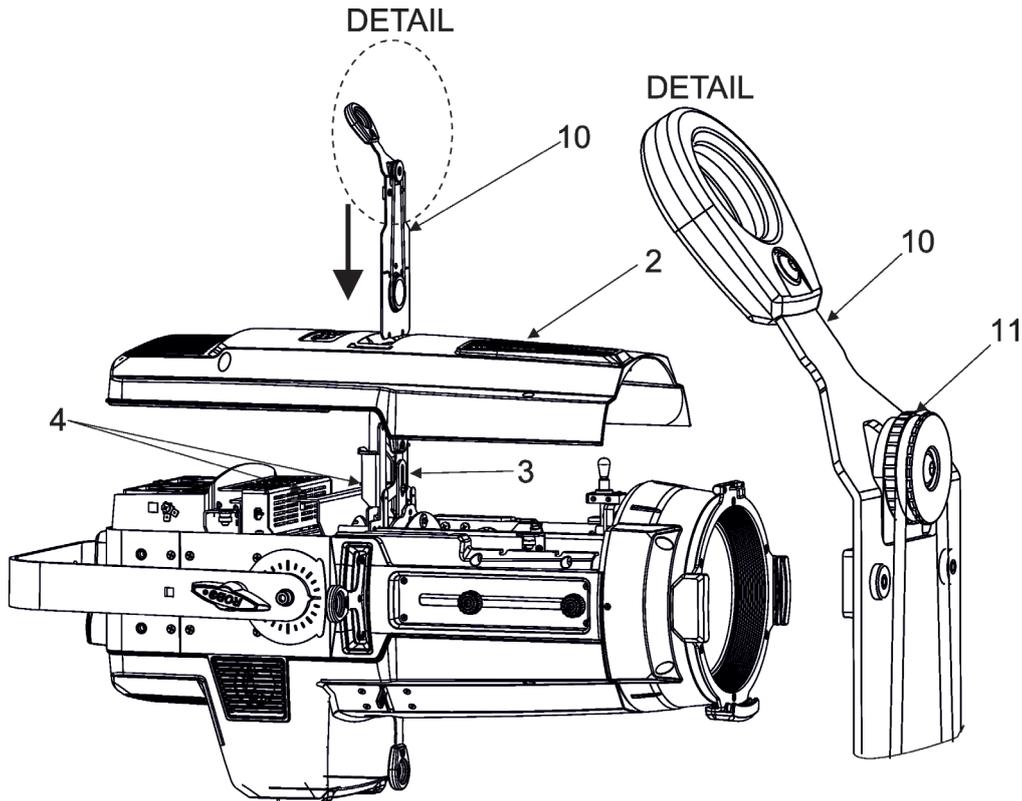
3 Gripping module for gobo Holder R size (P/N 10981250)
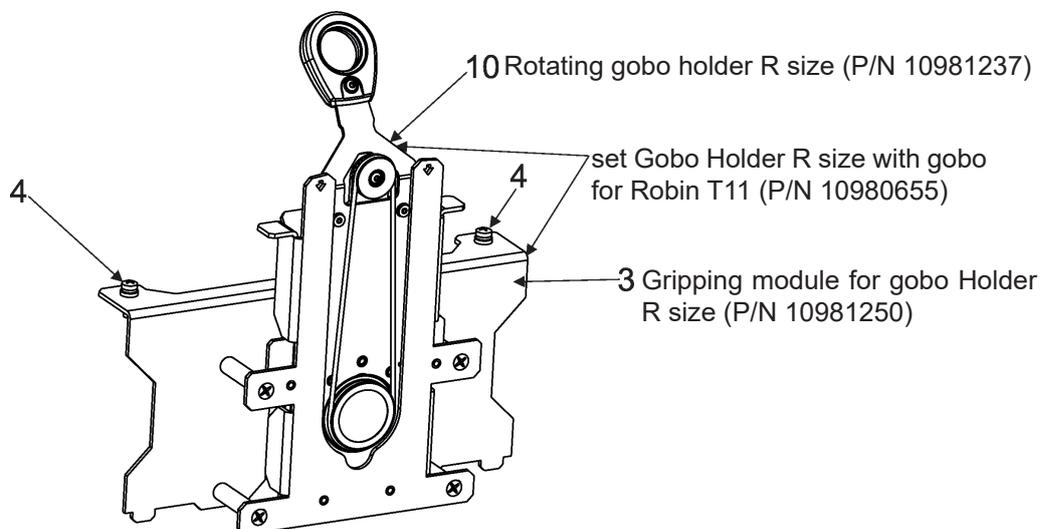
Gripping module for gobo Holder R size (P/N 10981250) + Rotating gobo holder R size (P/N 10981237) creates set Gobo Holder R size with gobo for Robin T11 (P/N 10980655).

4.7 Yoke length change

Unplug the fixture from mains before yoke installation!

The yoke of the fixture can be "shortened " about 70 mm by means of fastening the fixture via the hole B instead of the hole A (default).

Note: fixing the yoke to the fixture through the hole B results in limiting the tilt of the fixture because of handles of framing shutters.

Handle of framing shutter
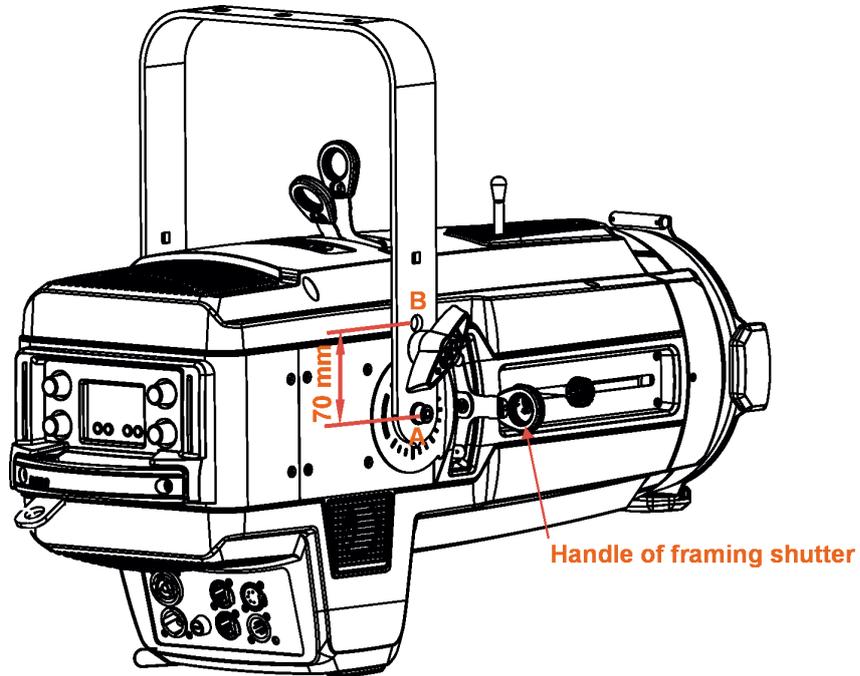
To install the yoke via the hole position B
1. Disconnect the fixture from mains and allow it to cool.
2. Remove the yoke (1) from the fixture by unscrewing two tilt locks (2) and two hexagon socket screws M8x16 (5) with washers (4) and spacers (3)
3. Install the yoke (1) to the fixture via the hole B. Proceed in the reverse order of uninstallation the yoke (1).

DETAIL A
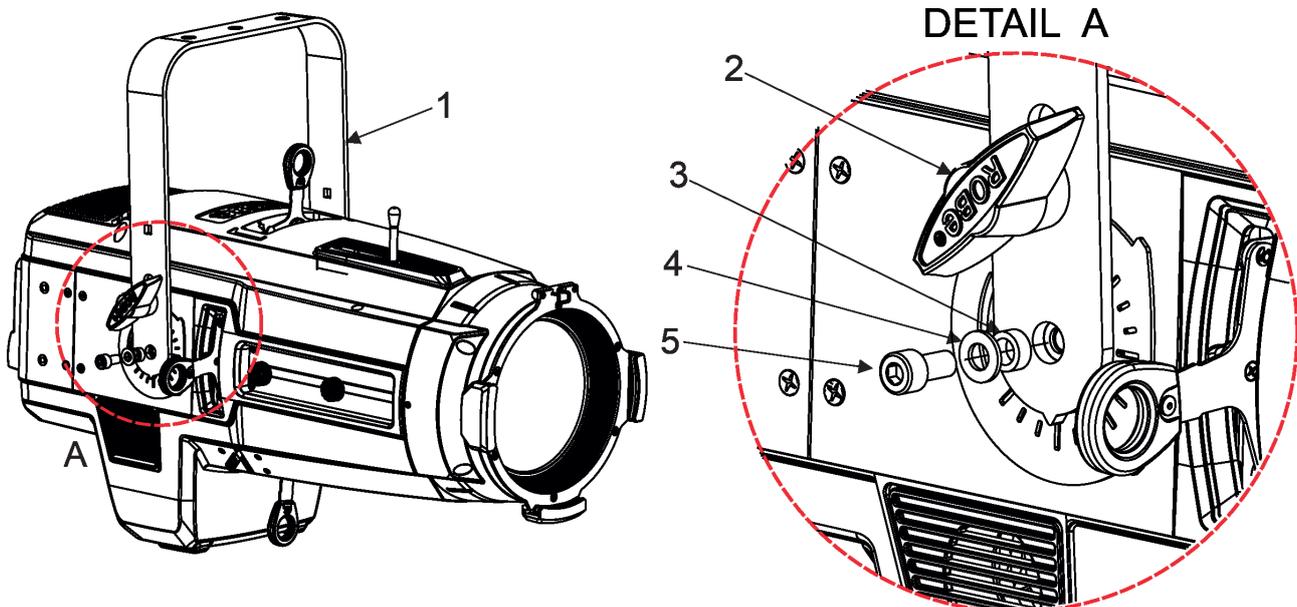
4.8 Pole operated yoke installation

Unplug the fixture from mains before pole operated yoke installation!

1. Disconnect the fixture from mains and allow it to cool.
2. Remove the original yoke (1) from the fixture by unscrewing two tilt locks (2) and two hexagon socket screws M8x16 (5) with washers (4) and spacers (3)
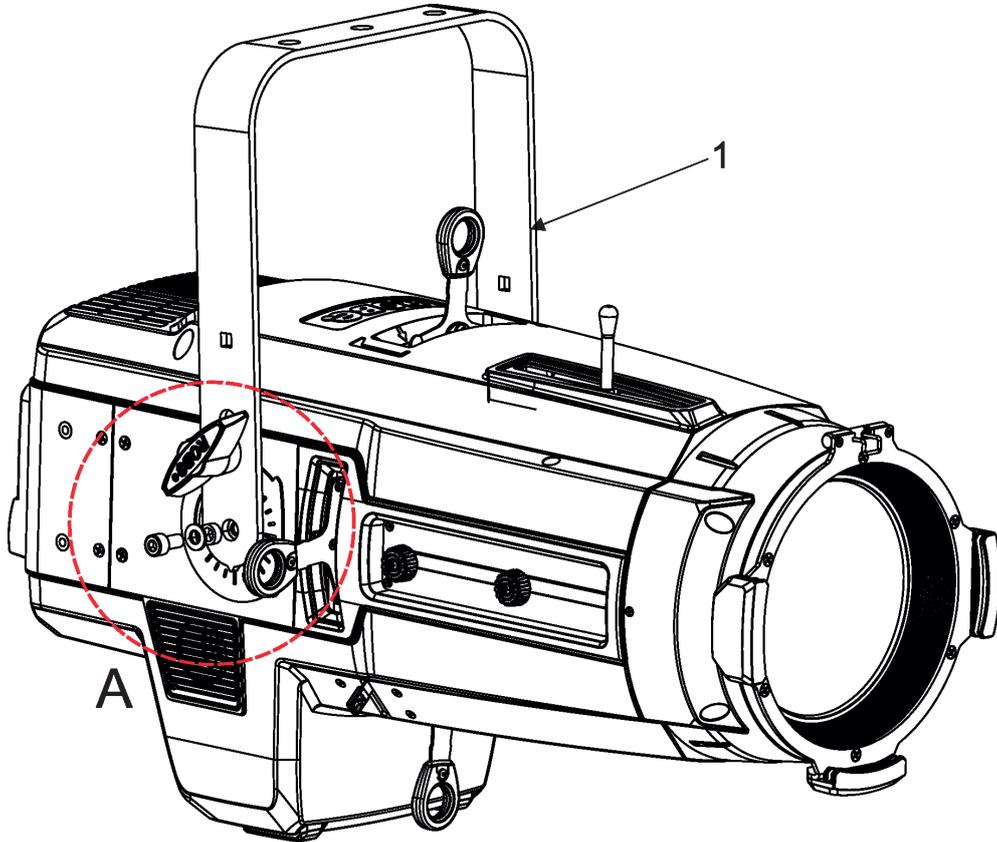
DETAIL A
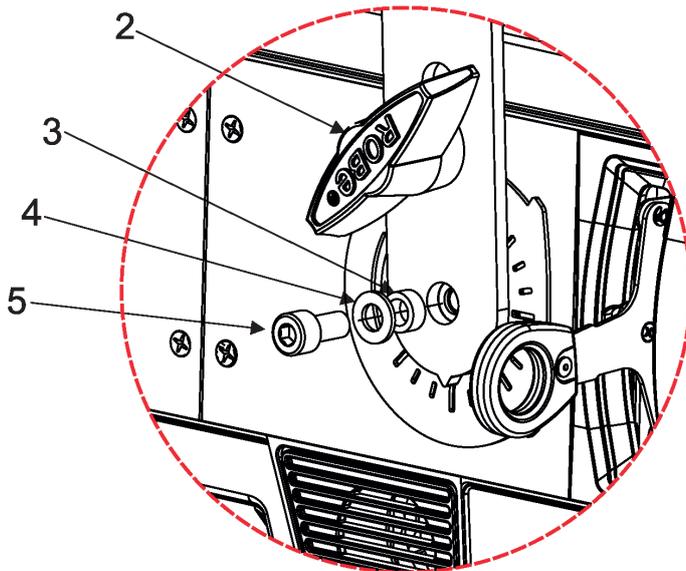
3. Remove circular holders (6) by unscrewing four flat head crews M3x6 (7) on each holder.

DETAIL B

6

7

7
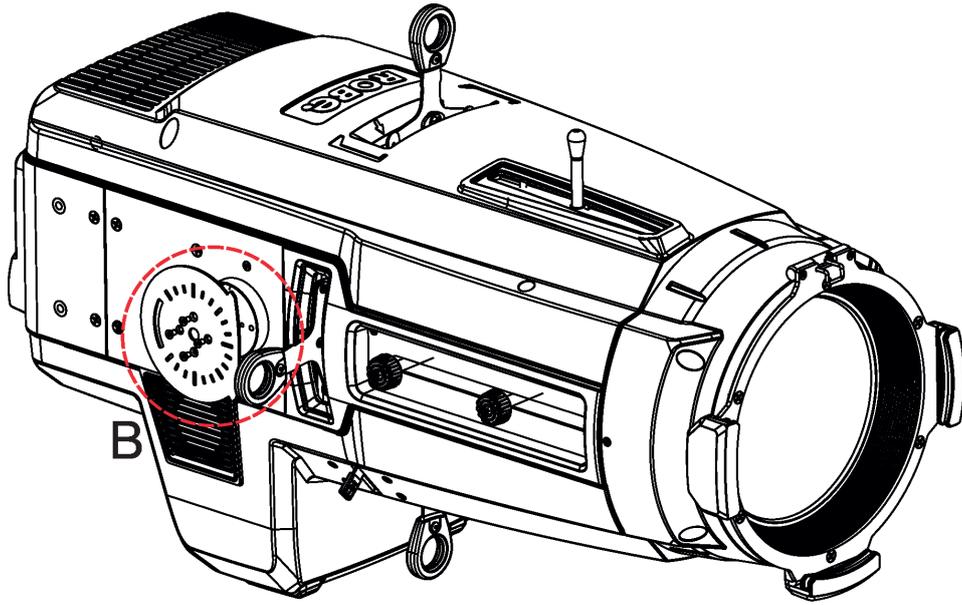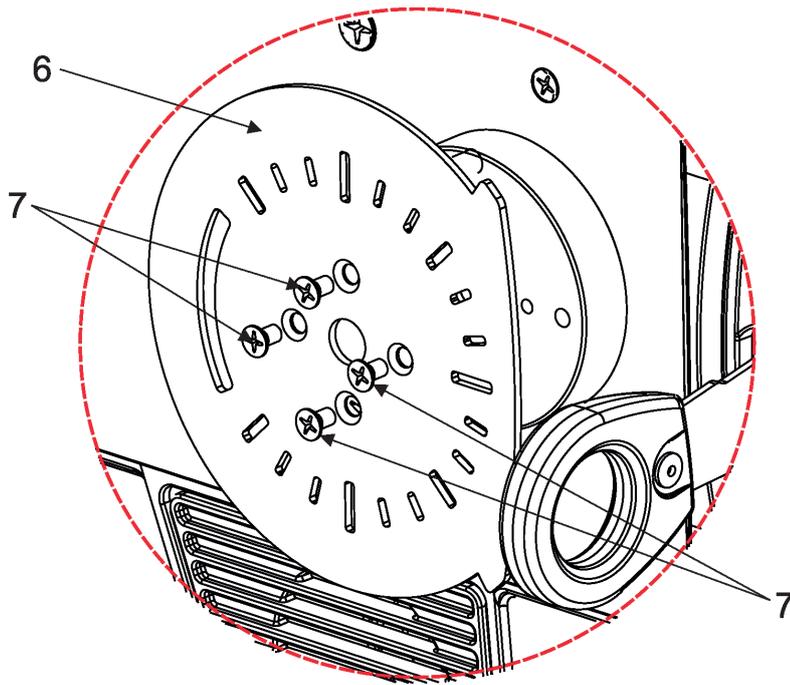
4. Screw one side of the pole operated yoke (8) on the side of the fixture by means of the hexagon socket screw M8x16 (9) with washer (10) and by means of three flat head crews M4x8 (11).
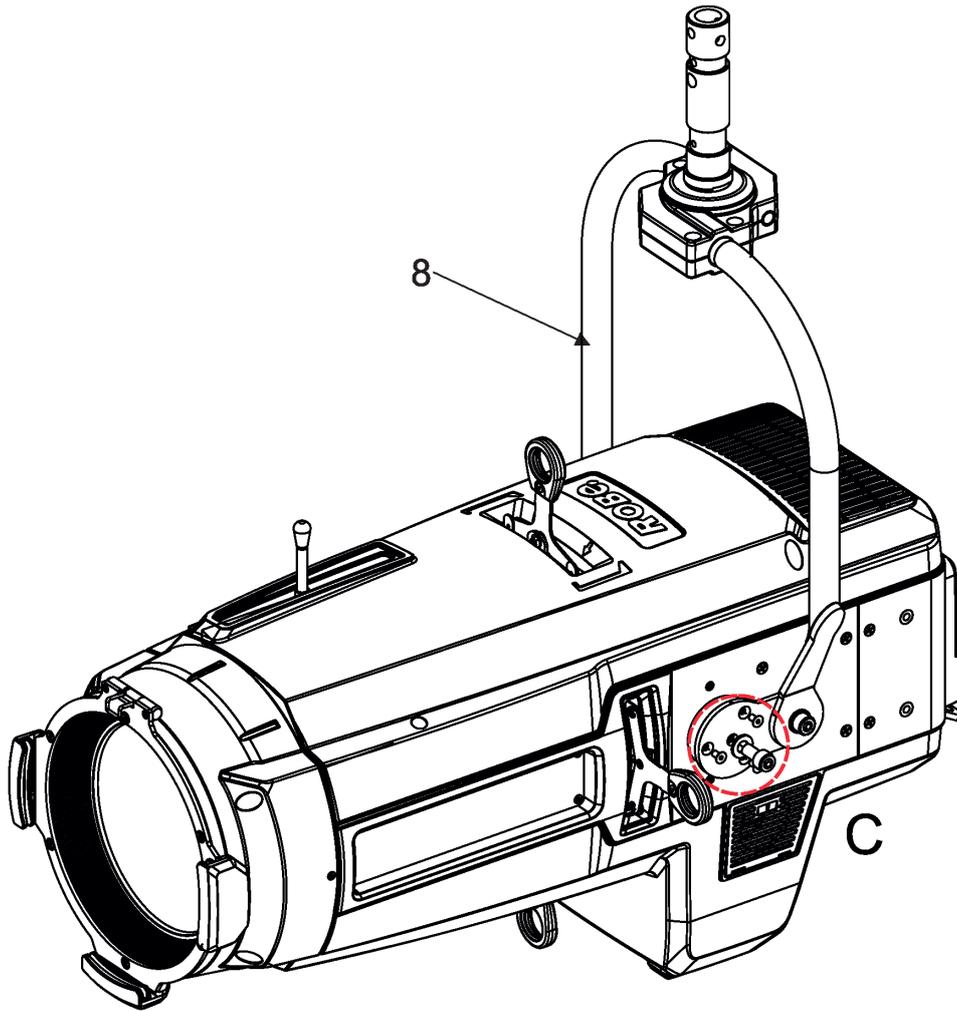
DETAIL C
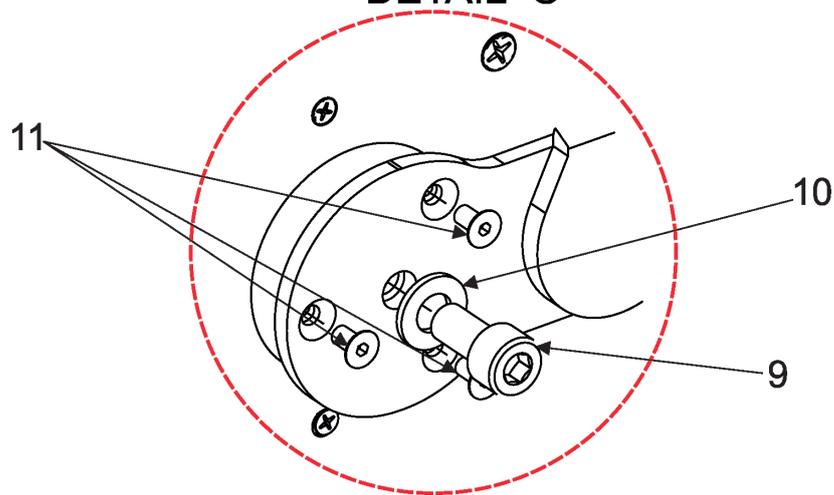
5. Screw the second side of the pole operated yoke (8) on the side of the fixture by means of the hexagon socket screw M8x16 (9) with washer (10) and by means of three flat head crews M4x8 (11).

Note: The hexagon socket screws M8x16 (9) with washer (10) and flat head crews M4x8 (6) are parts of the pole operated yoke delivery.

Check the all screws are firmly tightened before taking the fixture to operation with the pole operated yoke.
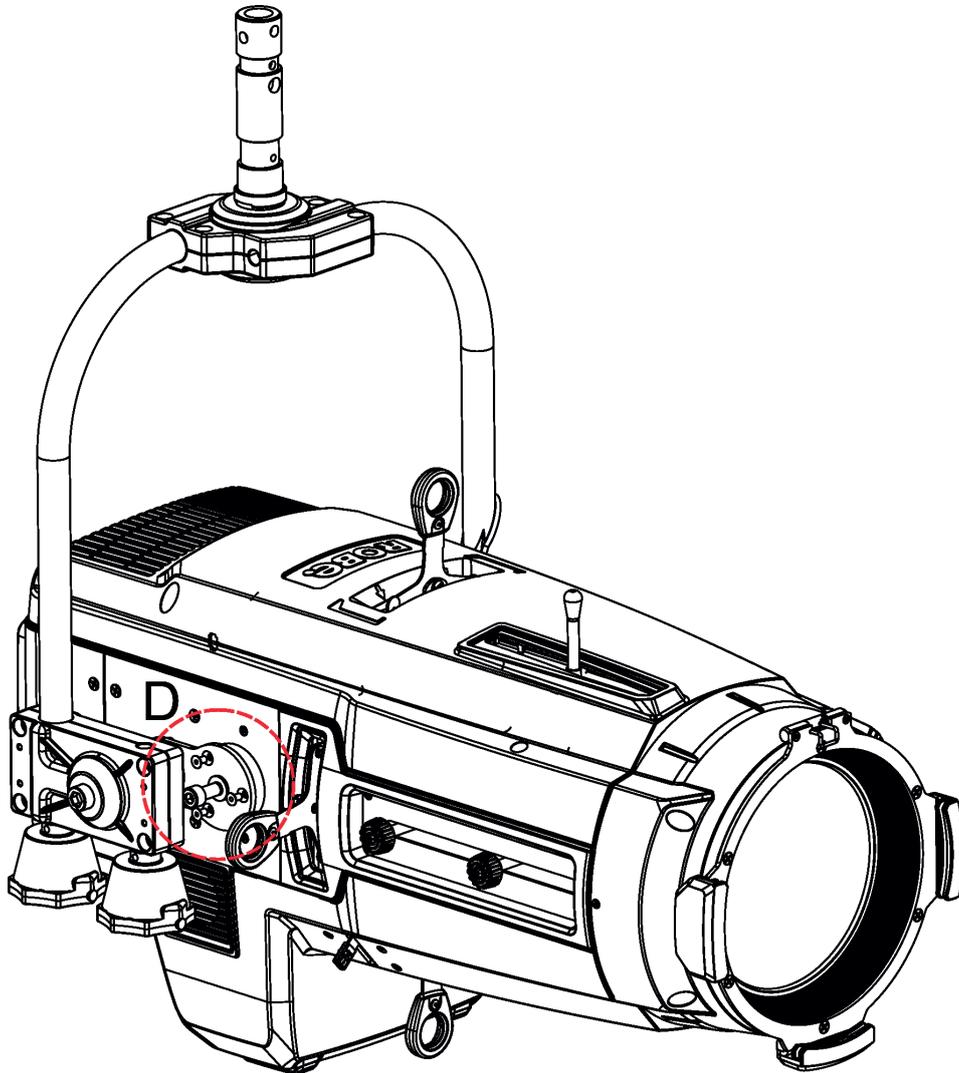
DETAIL D
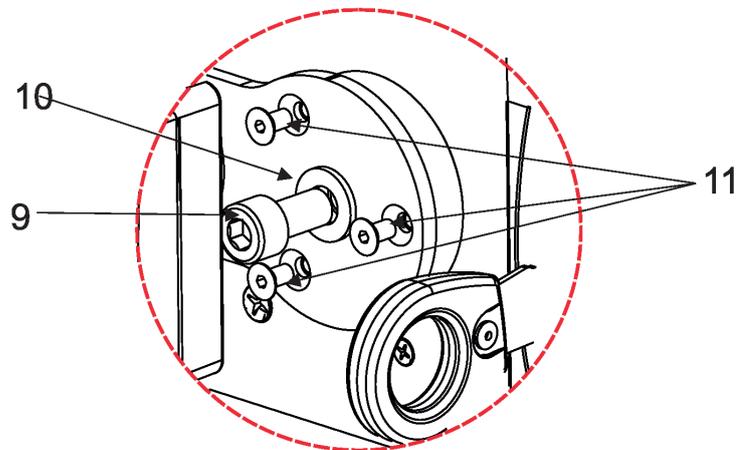
4.9 Barndoors module installation

Unplug the fixture from mains before barndoors module installation!

1. Disconnect the fixture from mains and allow it to cool.
2. Move the lock (1) to unlock position .
3. Insert the barndoors module (2) into grooves in the holders (3).
4. Secure the barndoor module in the grooves by the barndoor lock (1).
5. Check the barndoor lock (1) is fully in the locked position.

Lock for barndoor module rotation
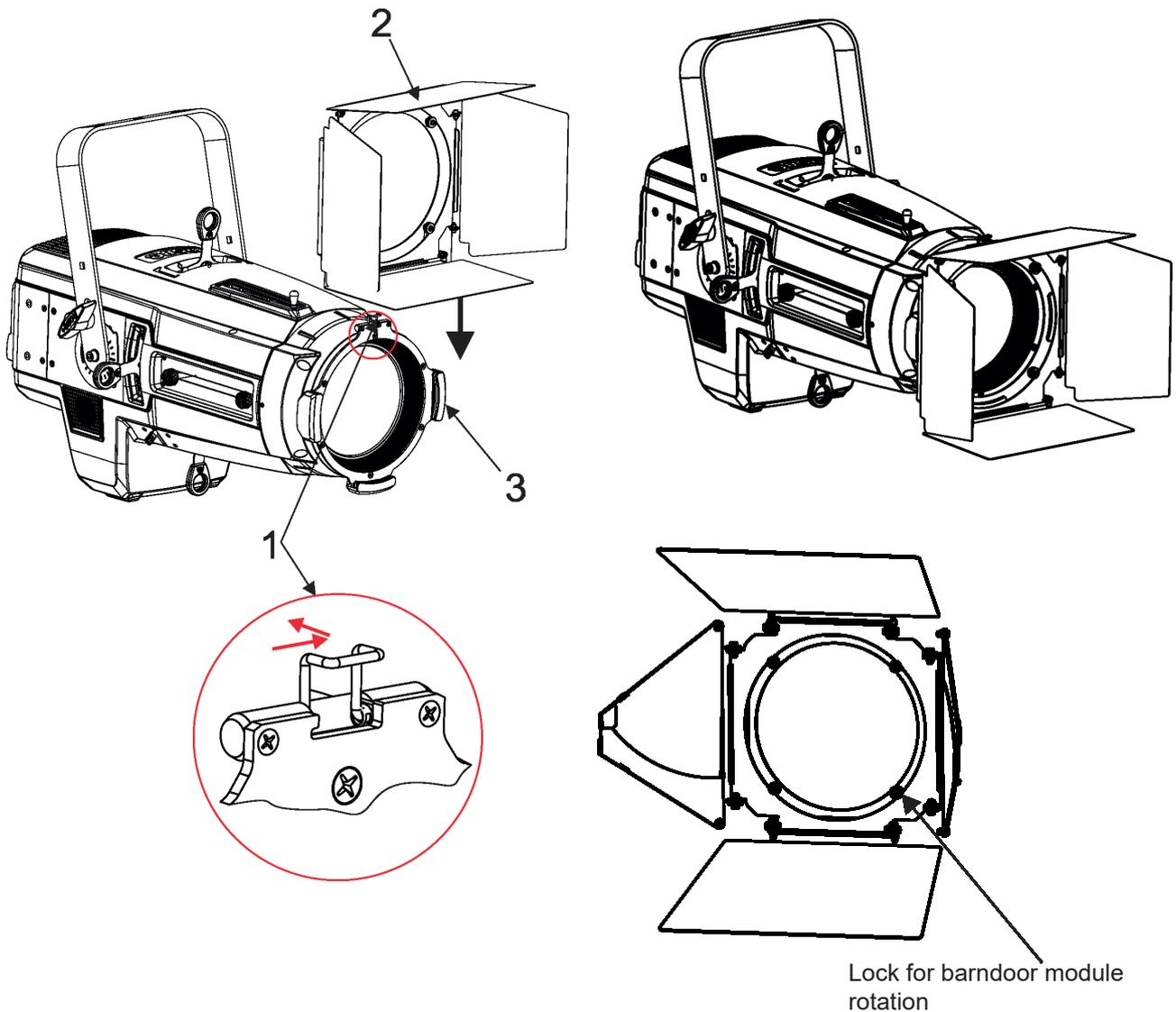
4.10 Rigging the fixture

A structure intended for installation of the fixture(s) must safely hold weight of the fixture(s) placed on it. The structure has to be certificated to the purpose.

The fixture (fixtures) must be installed in accordance with national and local electrical and construction codes and regulations.

> *For overhead installation, the fixture must be always secured with a safety wire that can bear at least 10 times the weight of the fixture*

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 a skilled person once a year.

Allow the fixture to cool for ten minutes before handling.

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

IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE, including 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 use a help of professional companies.

CAUTION: Fixtures may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do not install the fixture!

The fixture has to be installed out of the reach of public.

The fixture must never be fixed swinging freely in the room.

> *Danger of fire !*
> *When installing the device, make sure there is no highly inflammable material (decoration articles, etc.) in a distance of min. 0.5 m.*

> *CAUTION!*
> *Use an appropriate clamp to rig the fixture on the truss.*
> *Make sure that the device is fixed properly!*
> *Ensure the structure (truss) to which you are attaching the fixtures is secure.*

The fixture can be placed directly on the stage floor or rigged in any orientation 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.

Truss installation

1. Bolt clamp (1) to the yoke (2) with M12 bolt and lock nut through the hole in the yoke.
3. Clamp the fixture on a truss (3) and tighten the rigging clamp (1).
4. Pull one safety wire (4) around the truss (2) and lock it. Lock the second end of the safety wire in the attachment point (5) as shown on the picture below. Use only the safety wire with a snap hooks with screw lock gates.
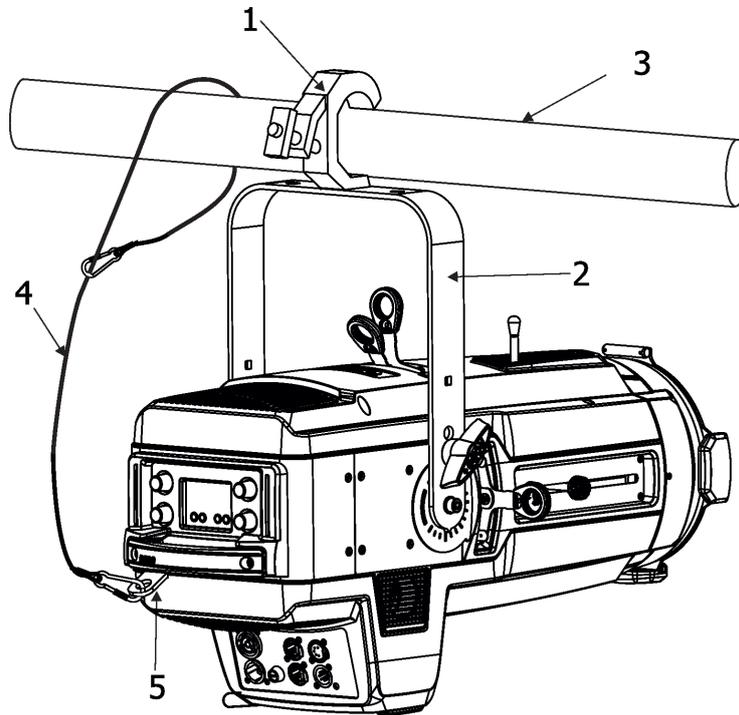
***When installing fixtures side-by-side,
avoid illuminating one fixture with another!***

***DANGER TO LIFE!
Before taking into operation for the first time,the installation has to be approved by
an expert!***

4.11 DMX-512 connection

The fixture is equipped with 5-pin XLR sockets for DMX input and output.The sockets are wired in parallel. 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 (female)

1 - Shield
2 - Signal (-)
3 - Signal (+)
4 - Not connected
5 - Not connected

DMX input
XLR socket (male)
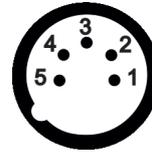
1 - Shield
2 - Signal (-)
3 - Signal (+)
4 - Not connected
5 - Not connected

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 adaptor 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 conected.
Caution: At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120 Ω resistor between Signal (−) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX output of the last fixture.

DMX controller
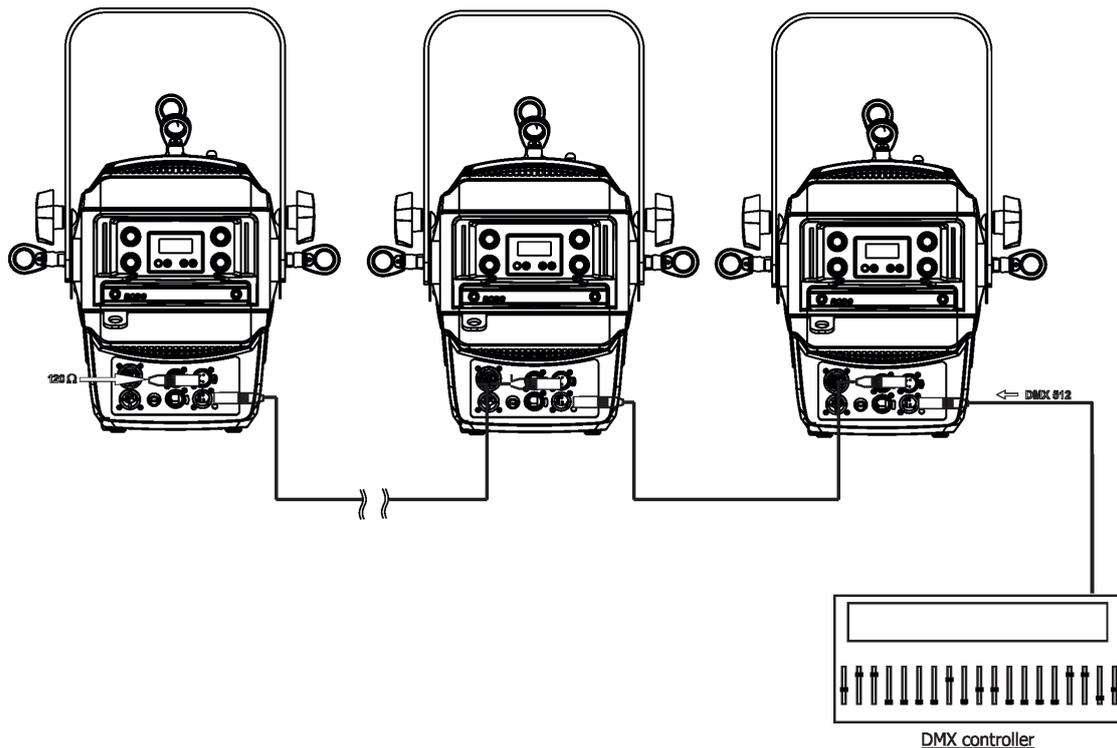
4.12 Ethernet connection

The fixtures on a data link are connected to the Ethernet with ArtNet communication protocol.The control software running on your PC (or light console) has to support Art-Net 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.

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 T11 Profile is equipped with 8-pin RJ- 45 sockets 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 2 3 4 5 6 7 8
```

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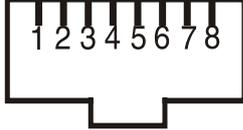
5- Not connected
6- RX-
7- Not connected
8- Not connected

RJ-45 plug (front view):

```
8 7 6 5 4 3 2 1
```
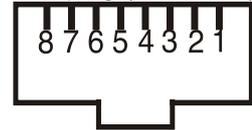
Patch cables that connect fixtures to the hubs or LAN sockets are wired 1:1,that is,pins with the same numbers are connected together:

| 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 |

Ethernet operation
Connect the Ethernet inputs of all fixtures with the Ethernet network.
Option " Artnet" (gMaI or gMA2 or sACN) has to be selected from "Ethernet Mode" menu at each fixture.
Set IP address (002.xxx.xxx.xxx / 010.xxx.xxx.xxx) and the Universe at each fixture.

Example:

(DMX address=225)
IP addres=002.168.002.004
Universe=1

(DMX address=25)
IP addres=002.168.002.003
Universe=1

(DMX address=1)
IP addres=002.168.002.002
Universe=1
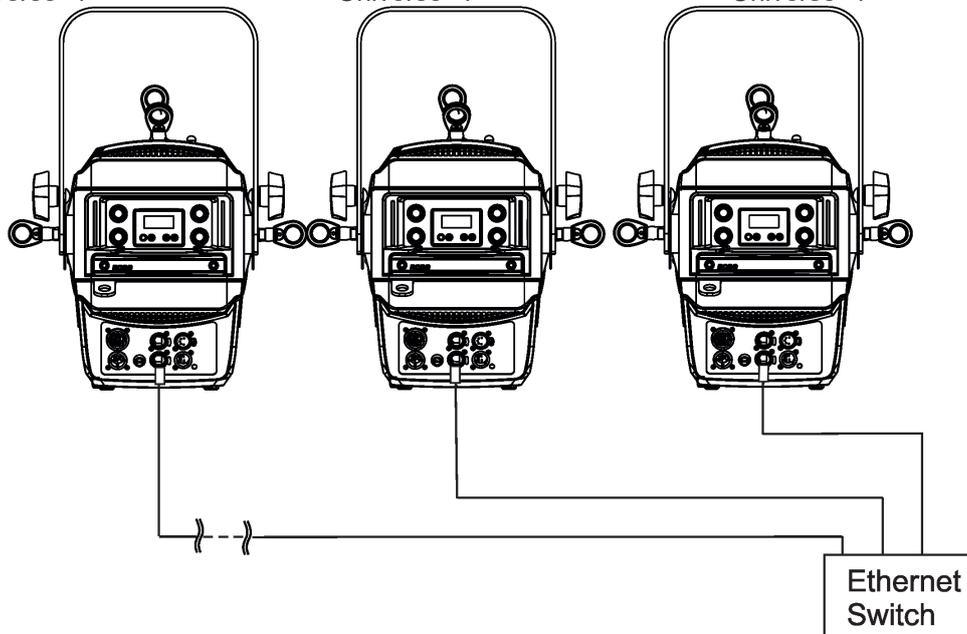
Ethernet Switch

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

The EP version of the fixture is equipped with two RJ 45 sockets and Ethernet Pass Through Switch which sustains Ethernet integrity, when the fixture has no power, it automatically maintains network connectivity.
If you use the Ethernet IN-OUT way for the Ethernet connection, max. 8 fixtures can be connected in the IN-OUT line.

4.13 Wireless DMX operation

The external ROBE Wireless DMX/RDM module allows receiving wireless DMX. The ROBE wireless DMX/RDM module has full support for wireless communication protocols at entertainment market. Modul is based on well known LumenRadio RF technology, with implemented wire interface for connection with Robe products. RF output for MCX interface antenna as standard output.

ROBE Wireless DMX/RDM module
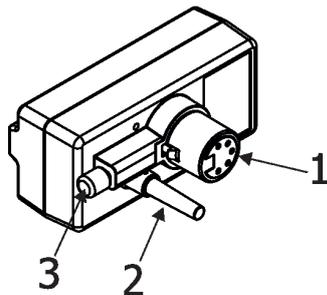
1 - 5-pin XLR (female)
2 - Locating pin
3 - Lock
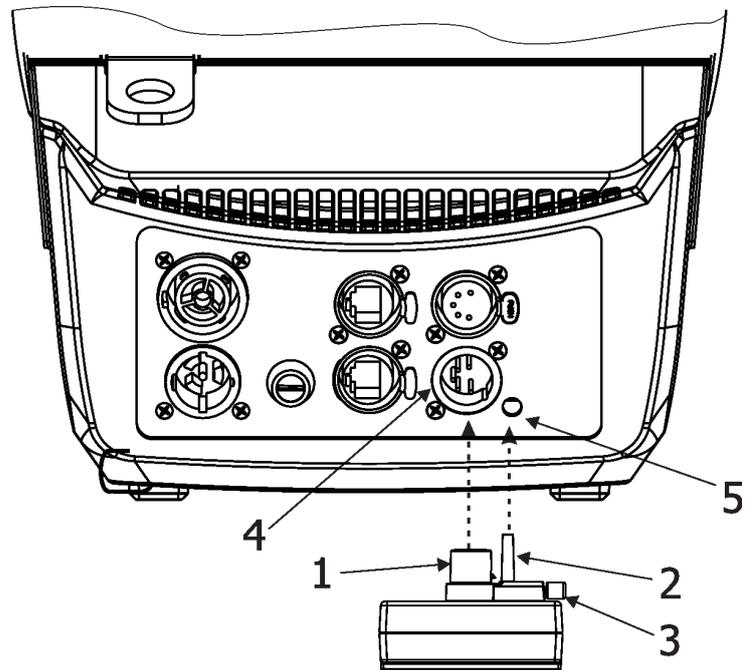
Push in the 5-pin XLR plug (1) into 5-pin XLR sockit (4) and simultaneously locating pin (2) into hole (5) in the fixture. In this way the wireless DMX module is connected with the fixture.
NOTE: when you disconnect the DMX wireless module from fixture, press and hold lock (5) during getting the wireless 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 transmitter via the menu item " Unlink" (Special-->Vireless -->Unlink.).

5. Remotely controllable functions

5.1 Colour influencing functions

Factory setting of menu functions (channels) which influence behaviour of colour channels is the following:

Function	Factory setting	Function	Factory setting
DMX mode	1	Uniformity	Off
Colour calibration mode	On	Colour mix control	0 DMX
Colour mixing mode	CMY	CTC	8000K,(110 DMX= 5600K)
Dimmer curve	Square law	CRI Selection	Low (0 DMX)
Tungsten effect simulation	Off	Green correction	Uncorrected (128 DMX)
Chromatic white	Off	Shutter/Strobe	Open (32 DMX)
Light output stability	Off	Dimmer	Closed (0 DMX)

Colour calibration mode *(menu "Pers-->Col. Cal.")*
The function switches on/off an internal control of colours. For a standard operation of the fixture the option should be switched on. Option off has to be set during colour calibration of the fixture (in this mode some functions e.g. Tungsten effect, Virtual colour wheel are disabled).

Colour mixing system *(menu "Pers-->Col. Mix", DMX channel "Colour functions")*
This item allows selection between RGB and CMY mode. In 3-colour controlling modes (Mode 1,Mode 2, Mode 6, Mode 7) all internal 5 colours are always utilized where possible.

Dimmer curve *(menu "Pers-->Dimmer C". DMX channel "Colour functions")*
The fixture allows you to select a linear dimmer curve or a square law curve.

Tungsten effect simulation *(menu "Pers-->Tungsten", DMX channel "Colour functions")*
The function simulates behaviour of a halogen lamp during dimming at calibrated white colours 2700K - 4200K.
You can select from various lamp wattage simulation: 750W, 1000W, 1200W, 2000W, 2500W.
If the function Chromatic white is on, the Tungsten effect will influence also mixed colours.

Saving user colours *(DMX channel "Colour functions")*
To save user colours:
1.Set the function White Point to off (Channel Colour Mix Control, range 70-79 DMX).
1.Mix desired colour on colour channels.
2.Stay in desired position of user colours (216-235 DMX) on the Virtual colour wheel for 1 sec.
3.Leave the range of user colours (216-235 DMX) on the Virtual colour wheel.
4. Repeat steps 2-4 for next user colour.
5.To permanently save user colours, stay for 3 sec. at DMX range of 110-114 on the channel Colour functions. After that the colour system will be reset (this action can last about 2 minutes). Previous user colours will be overwritten.

Chromatic white *(menu "Pers-->Chro. W.", DMX channel "Colour functions")*
If the function is on, the CTC channel influences calibrated white colours and mixed colours (also colours on Virtual colour wheel).
If the function is off, the CTC channel influences calibrated whites only.

Light output stability *(menu "Pers-->Li O.S.", DMX channel "Colour functions")*
If the function is on, the light output from the fixture is immediately reduced to a value corresponding to a thermal drop of the light intensity from the LED engine (the thermal drop of light intensity - decreasing of the light intensity on circa 90 % of starting level after first 5 minutes, then is the thermal drop of light intensity inconsiderable).

Output Uniformity *(menu "Pers-->O. Uni.", DMX channel "Colour functions")*
If the function is on, the light intensity from the fixture is corrected in order to get approximately the same light intensity as from another fixture which has also the function on. Thanks to the function, light outputs from more fixtures will have approximately the same light intensity.

Colour Mix control *(DMX channel "Colour Mix control")*

The Colour Mix control channel defines relation between colour channels (Cyan, Magenta, Yellow, Red, Green, Blue, Amber, Lime and CTC) and the colours on the virtual colour wheel:

DMX value	Function
0 - 9	Virtual colour wheel has priority over colour channels (default setting)
10-19	Maximum mode (highest values have priority)
20-29	Minimum mode (lowest values have priority)
30-39	Multiply mode (multiply virtual colour wheel and colour channels)
40-49	Addition mode (virtual colour wheel + colour channels)
50-59	Subtraction mode (virtual colour wheel – colour channels)
60-69	Inverted Subtraction mode (virtual colour wheel – colour channels)
70-79	White Point Off (CTC+green correction+virtual col. wheel deactivated)
80-128	Reserved
129	Crossfade Virtual colour wheel only
130-254	Crossfade between virtual colour wheel and colour channels
255	Crossfade colour channels only

CTC *(DMX channel " CTC ")*

The CTC channel allows you to change a colour temperature of calibrated white colours in range of 8000K-2700K or 10000K-1800K (depends on display menu setting "Pers-->Ext CTC" or DMX channel "Colour functions" setting) and also can influence mixed colours including colours on the Virtual colour wheel.

For correct function of the CTC channel on calibrated white colours, the following conditions have to be kept:

1.The Colour calibration mode has to be set on *(menu "Pers-->Col. Cal. -->On").*
 If the Chromatic white is set off, the CTC channel influences white colours only.
 If the Chromatic white is set on, the CTC channel influences white colours and mixed colours including colours on the Virtual colour wheel.

2. The following channels have to be set at:
        Virtual colour wheel at 0 DMX
        Green correction at 128 DMX
        Colour mix control channel at 0 DMX

3. Colour channels have to be set depending on the colour mixing mode and the DMX mode.
<u>CMY colour mixing mode.</u>
DMX modes 1 and 6:
Channels Cyan/Red, Magenta/Green and Yellow/Blue (both 8-bit and 16-bit channels for each colour) have to be set at 0 DMX or at the same DMX value (except 255 DMX).
DMX modes 2 and 7:
Channels Cyan/Red, Magenta/Green and Yellow/Blue have to be set at 0 DMX or at the same DMX value (except 255 DMX) .
DMX modes 3 and 8:
The modes are not intended for CMY colour mixing mode.

<u>RGB(A,LG) colour mixing mode</u>
DMX modes 1 and 6:
Channels Cyan/Red, Magenta/Green and Yellow/Blue (both 8-bit and 16-bit channels for each colour) have to be set at 255 DMX or at the same DMX value (except 0 DMX).
DMX mode 2 and 7:
Channels Cyan/Red, Magenta/Green and Yellow/Blue have to be set at 255 DMX or at the same DMX value (except 0 DMX).
DMX mode 3 and 8:
Channels Red, Green, Blue, Amber and Lime (both 8-bit and 16-bit channels for each colour) have to be set at 255 DMX or at the same DMX value (except 0 DMX).

4. Shutter and dimmer have to be open.

CRI correction *(DMX channel " CRI Selection")*
The channel allows you to set CRI from Low (80) to High (90+). Default setting is 0 DMX (Low CRI).

Green correction *(DMX channel "Green correction ")*
The channel allows you a fine correction of colours (whites, mixed colours, colours on the Virtual colour wheel).
E.g. white colour from red to green tint.

Virtual colour wheel *(DMX channel " Virtual colour wheel")*
The virtual colour contains 67 preset colours and 10 user colours.

Dimmer/Shutter *(DMX channels " Shutter/Strobe" and "Dimmer Intensity")*
Smooth 0 - 100 % dimming is provided by the electronic control unit of the light source. The control of the light source also allows strobe effects with variable speed.

5.2 Effect functions

Static gobo

One static gobo can be manually inserted into light beam.

Frost

Manual 1° frost filter provides variable frost. The frost filter is replaceable.

Zoom

Manual zoom in range of 4.8 °- 51.9°.

Focus

Manual focus allows to focus beam from approx. 2 meters to infinity.

Framing system

Manual framing system consists of four framing shutters which allow you to control each shutter blade position and angle. Adjusted positions of framing shutters can be locked.

Gobo wheels (optional)

The drop-in gobo and iris module is equipped with three static glass gobos and two rotating glass gobos rotating in both directions, indexable, replaceable by means of "SLOT&LOCK" system.

Iris (optional)

The drop-in gobo and iris module includes iris with wide range of variable pulse effects.

6. Control menu map

Default settings=Bold print

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
DMXA	Set DMXA	001-512				
	DMX Pres.	Mode 1				
		:				
		Mode 8				
	IP Addr	Def addr	Set Address			
		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.				
	GateWay	Gw 1				
		Gw 2				
		Gw 3				
		Gw 4				
		Set GateW.				
Info	PO Time	Total				
		Reset				
	L OTi	R LOT				
		G LOT				
		B LOT				
		A LOT				
		L LOT				
	DMX Val	Powr				
		:				
		Dimm F				
	Temps	Base Tmp	Current			
			Highest			
			High Res			
		LB1 Tmp	Current			
			Highest			
			High Res			
		LB2 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. 6				
	RDM UID	RDM U. 1				
		:				
		RDM U. 6				

| Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
	Sw Ver	IC-D				
		IC-DE				
		IC-L1				
		IC-L2				
		IC-L3				
Pers	DMX Pres	**Mode 1**				
		:				
		Mode 8				
	DMX In	Wired				
		Ethernet				
	Ethernet	Eth Mode	ArtNet			
			sACN			
			gMA I			
			gMA II			
		ArtNet	Uni	0-255		
		sACN	Uni	1-63999		
		MANet	Uni	1-256		
			sID	1-32		
		IGMP r	Off			
			1-10s			
		Eth Back	**Off**, On			
	Display	Turn				
		On/Off T	**On**, Off			
		Contrast	0-100%			
		Backlight	0-100%			
	Gobo Ind.	**MsaS**				
		FsaD				
		MsFd				
	Blackout	BlcGob	**Off**, On			
	Mic Sens.	0-**10**-19				
	Fans	Fans Mode	**Auto**			
			Quiet			
		BLC Fans	On, **Off**			
		Noise L.	0%-100%			
	Tungsten	**Off**				
		750W				
		1000W				
		1200W				
		2000W				
		2500W				
	Col Mix	RGB				
		CMY				
	Col. Cal..	**On**, Off				
	Ext. CTC	On, **off**				
	Dimmer C	Sqrl				
		SuSql				
		Line				
	Li. O.s..	**Off**, On				
	Chro. W.	On, **Off**				
	O. Uni	On, **Off**				
	LED Freq.	300				
		600				
		1200				
		2400				

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
		High				
	LED F.adj	....-126-1, 0, **1**...126				
	Temp Uni	**°C**, °F				
	I Ef Pos	Powr				
		:				
		Dimm F				
		Store				
	Res Wpas					
	Defaults					
Manual		Powr	0-255			
		:				
		Dimm F	0-255			
Test Prg						
St Alone	Music T	On, **Off**				
	Auto Run	**Off**				
		Test				
		Prog 1				
		Prog 2				
		Prog 3				
	Pr Play	Test Prg				
		Prog 1				
		Prog 2				
		Prog 3				
	Pr Edit	Prog 1	Step 1	Powr		
		Prog 2	:	:		
		Prog 3	Step 40	F.Tim	0-25.5	
				S.Tim	0-25.5	
				COPY		
				Prg En	1-40	
Reset						
Special	RDM Low					
	RDM Hight					
	*Wireless	Stat				
		Unlink				
	Adjust	DMX Val	Powr	0-255		
			:			
			Dimm F	0-255		
		Calib	Cal Mech	Gobo C	0-255	
				GobR C	0-255	
				GoR2 C	0-255	
				StaG C	0-255	
				Iris C	0-255	
				Store		
			Cal. Col.	Red C.	R X,R Y, R I,R T	
				Gre C.	G X,G Y, G I,G T	
				Blu C.	B X,B Y, B I,B T	
				Amb C.	A X,A Y, A I,A T	
				LiG C.	L X,L Y, L I,L T	
				Green Corr	2700K I-8000K I	100-155
					2700K C-8000K C	100-155
				Store		
			LEDs Cur			
			Cal Load	**No**, Yes		
	Sw Upd	**No**, Yes				

* with Wireless DMX/RDM module only

7. Control menu

The Robin T11 Profile is equipped with the two-row LCD display & 4 control buttons which allow you to set fixture´s behaviour according to your needs, control all range of effects and program it in the stand-alone mode. The four control knobs have functions according to selected screen in the Simple mode.
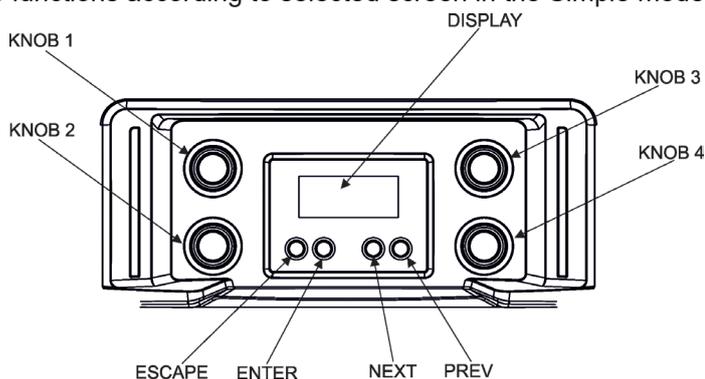
Control buttons on the front panel:
ESCAPE button used to leave the menu without saving changes.
NEXT and PREV buttons for moving between menu items and symbols, adjusting values.
ENTER button used to enter the selected menu item and to confirm adjusted value.

7.1 Simple mode

In the Simple mode, the fixture is controlled by means of four control knobs and the fixture´s effects cannot be controlled by DMX.
To enter the Simple mode, press any control knob for two seconds and the first page of the Simple mode will be displayed on the screen with controllable items next to corresponding knobs. After pressing desired knob, its blinking value will be displayed and can be changed by the knob. Adjusted value can be saved by pressing the knob.
To switch to the second page, press the NEXT button. To return back, press the PREV button.
Control pages overview:

Page 1
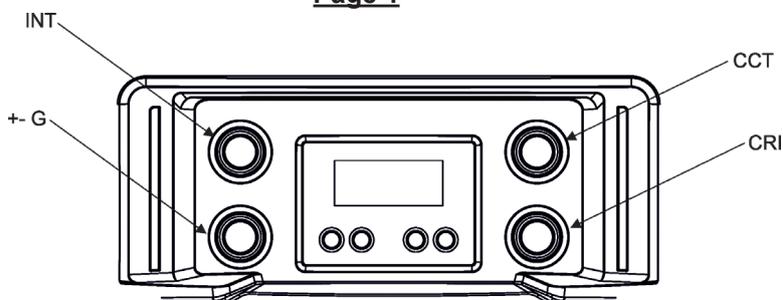
INT (Light Intensity), values: 0%-99%, MAX
Default = MAX
+- G (Green correction), values: -99 - +99
Default=0

CTC (Colour Temperature Correction), values: 2700-8000
Default=2700
CRI (Colour Rendering Index), values: MIN, MAX, OPT
Default=MIN

Page 2
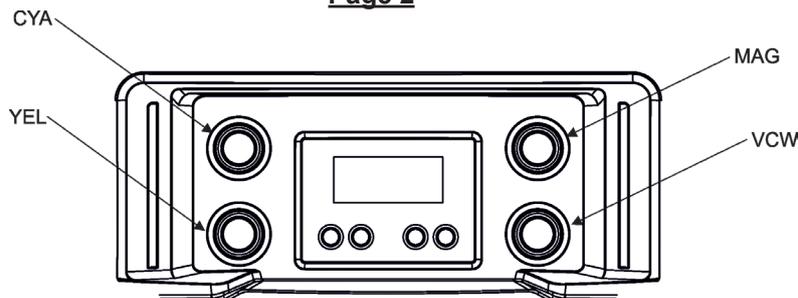
CYA (Cyan), values:0%-99%, MAX
Default=0%
YEL (Yellow), values:0%-99%, MAX
Default =0%

MAG (Magenta), values:0%-99%, MAX
Default =0%
VCW (Virtual Colour Wheel), values: 4, 10, 19...793, NOF
Default=NOF (no function)

Page 3
(If Drop-in gobo and iris module is used)
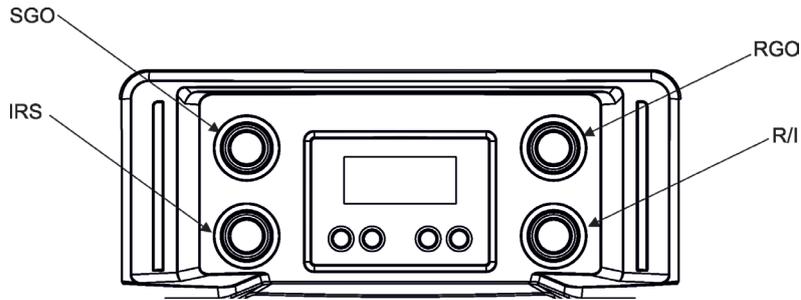
SGO (Static Gobo), values: OPEN, 1,2,3
Default=OPEN

IRS (Iris), values: OPEN, 1%-99%, CLSD
Default=OPEN

RGO (Rotating Gobo), values: OPEN , IN1, IN2, RT1, RT2
Default =OPEN
Note: IN1- gobo 1 indexing, RT1- gobo 1 rotation
      IN2- gobo 2 indexing, RT2- gobo 2 rotation

R/I (Gobo Rotation/Indexing), values: LMAX, L1%-L99%, STOP, R1%-R99%, RMAX
Default =STOP
Note: LMAX, L1%-L99% - rotation counterclockwise
      RMAX, R1%-R99% - rotation clockwise

Page 4
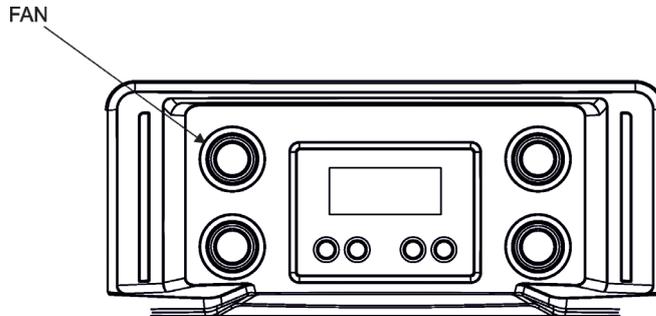
FAN (Fans Operating Mode), values: 1%-99%, MAX
Default=AUTO

To set values on pages stated above to the default (factory) values, press and hold any two knobs simultaneously for two seconds. During the action you have to be in the Simple mode.

To leave the Simple mode, press any control knob for two seconds or press the ESCAPE button or send DMX command (130-134 DMX) on the channel Power/Special functions.

After leaving the Simple mode, the fixture´s effects can be controlled by DMX. If you enter the Simple mode again, values saved in last Simple mode will be recalled.
If the fixture is in the Simple mode switched off and on again, it will remain in the Simple mode.

By pressing any two knobs for two seconds at the same time you will open a light output and the sign "Fast On" will be displayed. During the action you have to be in the standard display menu (you have to leave the Simple mode before it). To close the light output, press any two knobs at the same time for two seconds. This function is useful for fast switching the light output on during adjusting the fixture on a truss.

7.2 FollowSpot mode

The T11 device can be switched to the FollowSpot mode to make easier control of the fixture with the ROBIN T11 MFS handles installed on the fixture. In the FollowSpot mode, the fixture is controlled by means of four control knobs and the fixture´s effects cannot be controlled by DMX.

To enter the FollowSpot mode, press any three control knobs at the same time for two seconds and the first page of the FollowSpot mode will be displayed on the screen with controllable items next to corresponding knobs. After pressing any knob, its blinking value will be displayed and can be changed by the knob. Adjusted value can be saved by pressing the knob.

To switch to the second page, press the NEXT button. To return back, press the PREV button.

Control pages overview:

Page 1
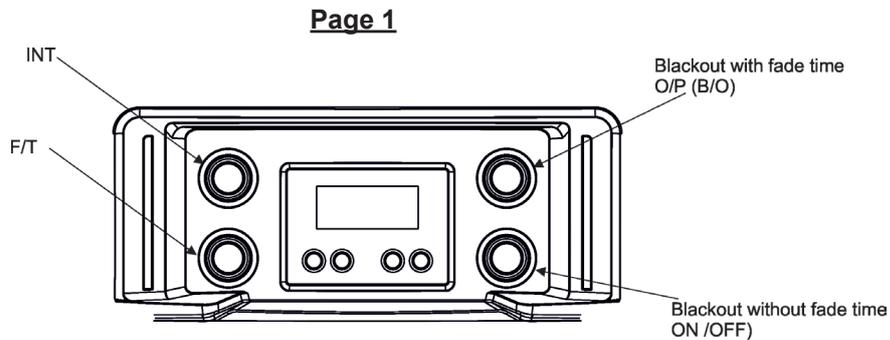
INT (Max. Light Intensity), values: 0%-99%, (open) MAX
Default = MAX
F/T (Fade Time*), values:0; 0.5;1.0....10 sec.
Default=0
* Fade Time - set time will effect the blackout

Blackout on/off with fade time, values: B/O (blackout) O/P
Default=B/O
The knob works as switch - blackout ON, blackout OFF
Blackout on/off without fade time, values: ON, OFF
Default=OFF
knob O/P (B/O) in both directions (from open to close and from close to open).
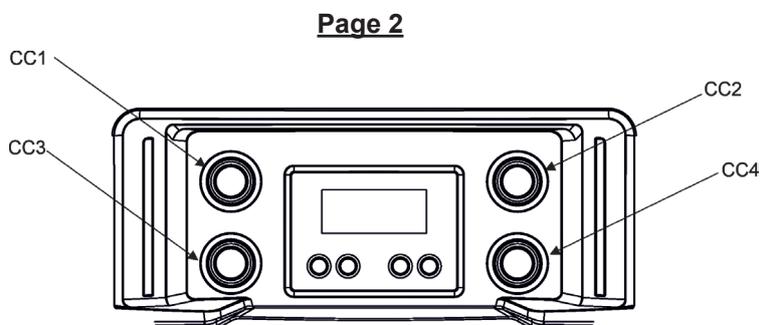
Page 2

CC1/CC2/CC3/CC4 - four knobs for storing and quick recalling four user colours.

To store user colour.
1. Set desired colour by means of knobs (CYA, MAG, YEL,VCW) in the page 4.
2. Go to the page 2 and press and hold desired knob (e.g. CC1) for 5 seconds until the sign "STO" will appear. Desired colour will be assigned to the knob (CC1).
   Note: CTC, +-Green and CRI values are not saved to the user colours.

To recall user colour.
1. Briefly press knobs (e.g. CC1) with stored colour.
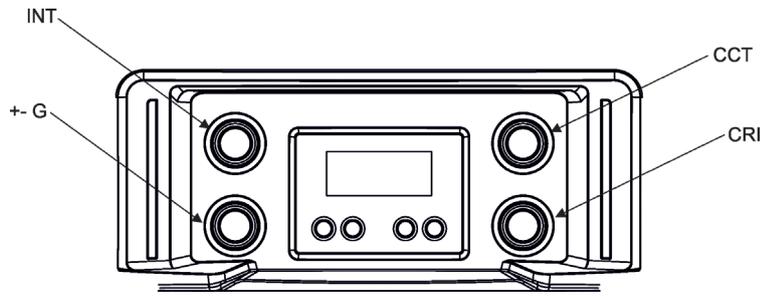
INT - the knob is without function

+- G (Green correction), values: -99 - +99
Default=0

CTC (Colour Temperature Correction), values: 2700K-8000K
Default=2700
CRI (Colour Rendering Index), values: MIN, MAX, OPT
Default=MIN

**Page 4**
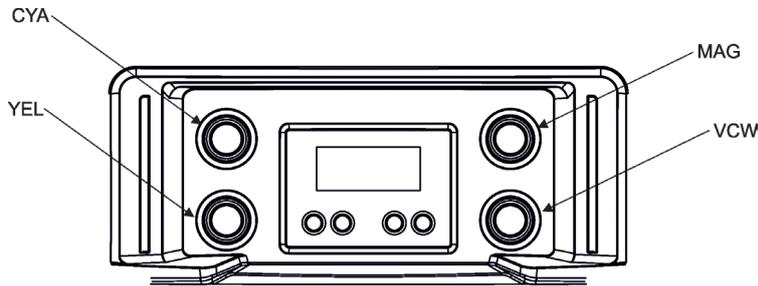
CYA (Cyan), values:0%-99%, MAX
Default=0%
YEL (Yellow), values:0%-99%, MAX
Default =0%

MAG (Magenta), values:0%-99%, MAX
Default =0%
VCW (Virtual Colour Wheel), 4, 10, 19...793, NOF
Default=NOF (no function)

Page 5
(If Drop-in gobo and iris module is used)
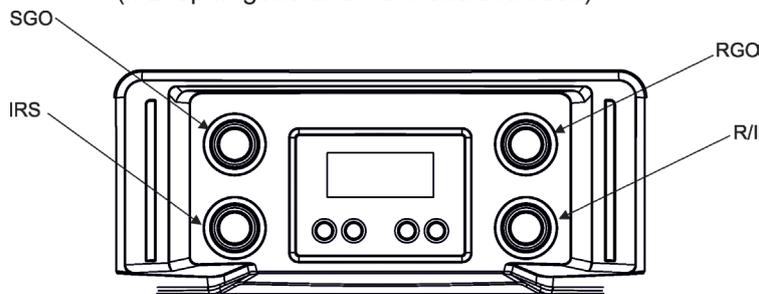
SGO (Static Gobo), values: OPEN, 1,2,3
Default=OPEN

IRS (Iris), values: OPEN, 1%-99%, CLSD
Default=OPEN

RGO (Rotating Gobo), values: OPEN , IN1, IN2, RT1, RT2
Default =OPEN
Note: IN1- gobo 1 indexing, RT1- gobo 1 rotation
       IN2- gobo 2 indexing, RT2- gobo 2 rotation

R/I (Gobo Rotation/Indexing), values: LMAX, L1%-L99%,
STOP, R1%-R99%, RMAX
Default =STOP
Note: LMAX, L1%-L99% - rotation counterclockwise
        RMAX, R1%-R99% - rotation clockwise

FAN
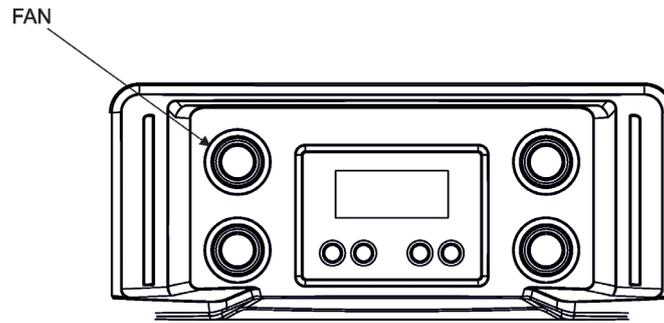
FAN (Fans Operating Mode), values: 1%-99%, MAX
Default=AUTO

To leave the FollowSpot mode, press any three control knobs at the same time for two seconds or press the ESCAPE button.
After leaving the FollowSpot mode, the fixture´s effects can be controlled by DMX. If you enter the FollowSpot mode again, values saved in last FollowSpot mode will be recalled.
If the fixture is in the FollowSpot mode switched off and on again, it will remain in the FollowSpot mode.

7.3 Display lock

The display of the T11 device can be locked in order to prevent unauthorized person from changing setting of the fixture.
To lock the display, press and hold all four control knobs simultaneously for approximately three seconds.
The following message will appear on the screen:
<div align="center">SYSTEM LOCKED</div>

To unlock the display, press and hold all four buttons simultaneously for approximately three seconds.

7.4 Standard mode

The following menu items are accessible in the standard mode only.

7.4.1 DMXA (Addressing)

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 T11 will respond to the controller.
If you set, for example, the address 23, the ROBIN T11 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 T11 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** - 18 control channels
> **Mode 2** - 9 control channels
> **Mode 3** - 22 control channels
> **Mode 4** - 5 control channels
> **Mode 5** - 1 control channels
> **Mode 6** - 24 control channels
> **Mode 7** - 13 control channels
> **Mode 8** - 28 control channels

IP Addr. - **IP address**. Select this menu to set IP address. IP address is the Internet protocol address.The IP address 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.
> **Cus. addr.** - Custom IP address. You can set up IP address according your needs. The address you can set by each octet (IP1. IP2, IP3, IP4). Confirm by "Set Address"

Net Mask - **Network Mask**. The option enables to set up all bytes of Net Mask by each octet (N.M.1, N.M.2, N.M.3, N.M.4). Confirm by "Set Net M."

GateWay - **Gateway address**. The option enables to set up all bytes of the Gateway address octet (Gw1, Gw.2, Gw.3, Gw.4). Confirm by "Set GateW."

7.4.2 Info (Fixture information)

PO Time - **Power on time**. Select the menu to read the number of fixture operation hours.
> **Total** - The item shows the total number of the operation hours since the ROBIN T11 has been fabricated.
> **Reset** - The item shows the number of the operation hours 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.

LOTi - **LEDs on time.** Select the menu item to read the number of operation hours of individual LEDs.
> **R LOT.** - Red LEDs on time.
> **G LOT.** - Green LEDs on time.
> **B LOT.** - Blue LEDs on time.
> **A LOT.** - Amber LEDs on time.
> **L LOT.** - Lime LEDs on time.

DMX Val. - **DMX values.** The menu allows you to read DMX values of each channel received by the fixture.

Temps - **Fixture temperatures**. The menu shows temperatures in the fixture.
> **LEDsTmp.** - The menu shows temperature on the LED PCB in the light source
> > **Current** - The current temperature of the LED PCB.
> > **Highest** - The highest temperature of the LED PCB since the fixture has been fabricated.
> > **High Res.** - The highest temperature of the LED PCB 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.

> **LB1 Tmp.** - The menu shows temperature on the LEDs control PCB (RB 3406-top side) in the fixture.

Current - The current temperature on the LEDs control PCB.
Highest - The highest temperature on the LEDs control PCB since the fixture has been fabricated.
High Res. - The highest temperature on the LEDs control PCB 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.

LB2 Tmp. - The menu shows temperature on the LEDs control PCB (RB 3406-bottom side) in the fixture.
    Current - The current temperature on the LEDs control PCB.
    Highest - The highest temperature on the LEDs control PCB since the fixture has been fabricated.
    High Res. - The highest temperature on the LEDs control PCB 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.

Base Tmp. - The menu shows temperature on the display PCB in the fixture.
    Current - The current temperature on the display PCB.
    Highest - The highest temperature on the display PCB since the fixture has been fabricated.
    Highest Res. - The highest temperature on the display PCB 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.

IP Addr. - **IP address.** The menu allows you 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 fixture modules.
    IC-D - A display processor.
    IC-DE - An EEprom.
    IC-L1 - LEDs control processor 1.
    IC-L2 - LEDs control processor 2.
    IC-L3 - LEDs control processor 3.

7.4.3 Pers(Personality)

DMX Pres - **DMX preset**. Use the menu to select desired channel mode.
    Mode 1 - 18 control channels
    Mode 2 - 9 control channels
    Mode 3 - 22 control channels
    Mode 4 - 5 control channels
    Mode 5 - 1 control channels
    Mode 6 - 24 control channels
    Mode 7 - 13 control channels
    Mode 8 - 28 control channels

DMX In - **DMX input**. Use the menu to select mode of DMX signal receiving.
    Wired - DMX signal is received by means of the standard DMX cable.
    Wireless - DMX signal is received by means on external wireless DMX module
    Ethernet - DMX signal is received by means of ETHERNET cable.

Ethernet - **Ethernet operation**. The menu allows you to set fixture for Ethernet operation.
    Eth Mode - The menu item allows you to select desired protocol:
        ArtNet
        sACN
        gMA I
        gMA II

ArtNet - Use the menu item to select desired universe for ArtNet (Uni), range 0-255
sACN - Use the menu item to select desired universe for sACN (Uni), range 1-63999
MANet - Use the menu item to select desired universe (Uni) for MANet, range 0-256 and
ID session (sID), range 1-32.
IGMP - Use the menu item to set time for connecting to multitask address (1-10sec.) for IGMP protocol.
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.

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%).

Gobo Ind. - **Gobo indexing**. The following three options define transition from gobo rotation to gobo indexing.
MsaS - **Max. Speed & Shortcut** - Gobo goes from its rotation to desired indexed position
with max. speed and via shortest track.
FsaD - **Follow Speed & Direction** - Gobo goes from its rotation to desired indexed position with current
speed and keeps a direction of rotation.
MsFd - **Max. Speed & Follow Direction.** - Gobo goes from its rotation to desired indexed position with
max. speed and keeps a direction of rotation.

Blackout - **Blackout setting**. The menu item allows you to activate blackout during some effect changing.
BLc Gob - the function activates blackout during gobo changing (if the Drop-in gobo and iris module
T11 is installed in the fixture).

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
Quiet - If the options is selected, power of fans can be set in the menu "Noise L."
BLC Fans - The menu item allows you to stop all fans in the fixture (option "On") when its light output
is closed (shutter in range of 0-31 DMX or dimmer in 0 DMX).
Noise L. - The menu item allows you to set speed of fans. At low speed of fans the light output may be
reduced.

Tungsten - **Tungsten effect**. This function simulates behaviour of a halogen lamp during dimming at calibrated
whites 2700K-4200K. You can select from various lamp wattage simulation:
750W
1000W
1200W
2000W
2500W

Col. Mix - **Colour mixing mode**. This menu item allows selection between RGB and CMY mode. In 3-colour
controlling modes (Mode 1, Mode 2, Mode 6, Mode 7) all internal 5 colours are always utilized where possible.

Col. Cal. - **Colour Calibration Mode.** The function switches on/off an internal control of colours. For a standard
operation of the fixture the option should be switched on. Option off has to be set during colour calibration of
the fixture.

Ext CTC. - **Extended CTC.** The function allows you to select range of CTC:
Off - CTC range 8000K-2700K
On - CTC range 10000K -1800K.

Dimmer C - **Dimmer curve**. Use the menu to select desired dimmer curve.
Line - a linear curve.
Sqrl - a square law curve.
SuSql - a super square law curve.

Li. O.S. - **Light output stability.** If the function is on, the light output from the fixture is immediately reduced to a value corresponding to a thermal drop of the light intensity from the LED engine (the thermal drop - decreasing of the light intensity on 90 % of a starting level after first 5 minutes, then is the thermal drop inconsiderable).

Chro. W. - **Chromatic White.** If this function is on, the CTC channel influences colours and calibrated white colours. If this function is off, the CTC channel influences calibrated whites only.

O. Uni. - **Light output uniformity.** If the function is on, the light intensity from the fixture is corrected in order to get approximately the same light intensity as from another fixture which has also the function on. Thanks to the function, light outputs from more fixtures will have approximately the same light intensity.

LED Freq - **LEDs frequency setup**. The function allows you to set the PWM (Pulse Width Modulation) output frequency of LEDs. You can select from the following values:

> **300 Hz**
> **600 Hz**
> **1200 Hz**
> **2400 Hz**
> **High**

LED F.adj - **LEDs frequency fine adjustment**. The function allows you to change the selected PWM output frequency of LEDs in 126 levels up and down around the selected frequency in the menu "LED Freq".

  -126...-001 - Frequence levels 1-126 under selected frequency.
  000 - Selected frequency
  001...126 - Frequence levels 1-126 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. Confirm setting by the item "Store".

Reset WPas. - **Rest Web password**. The menu item allows you to reset a password for access to the REAP (default password: 2479, user: robe).

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

7.4.4 Manual Control (Manual)

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

7.4.5 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 T11.

7.4.6 Stand-alone (St Alone)

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 its running.

Pr Edit - **Editing program**. Select this menu to edit or create the program. The ROBIN T11 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:

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 En.	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 En=10).
Powr	power/special functions
L Fre	a LEd frequency selection
L Fr S	a LEd frequency fine adjusting
Col F	colour functions
CRI S	a CRI selection
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
Amb	an amber colour
Amb F	an amber colour fine
L Gre	a lime green
L Gre F	a lime green fine
CTC	a colour temperature correction
Gre C	a green correction
C Mix C	a colour mix control
Sta G	a static gobo
Rot G	a rot. gobo
RG R	a rotation of rot. gobo
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	copy 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).

7.4.7 Reset

This option enables the ROBIN T11 to index all effects and return to their standard positions.

7.4.8 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 you to read some information about Wireless DMX operation (if wireless DMX/RDM module is connected)

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

      Unlink - use the item to unlink the fixture from wireless DMX transmitter .

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 the fixture.

        Cal Mech - Use this menu to calibrate gobo and iris positions.

Calibration of the gobos and iris 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 "Gobo C" and press [ENTER].
3. Set desired value and save it by pressing [ENTER].
4. Use the [PREV] and [NEXT] to find "GobR C" and press [ENTER].
5. Set desired value and save it by pressing [ENTER].
6. Use the [PREV] and [NEXT] to find "GoR2 C" and press [ENTER].
7. Set desired value and save it by pressing [ENTER].
8. Use the [PREV] and [NEXT] to find "StaG C" and press [ENTER].
9. Set desired value and save it by pressing [ENTER].
10. Use the [PREV] and [NEXT] to find "Iris C" and press [ENTER].
11. Set desired value and save it by pressing [ENTER].
12. After calibrating all effects, find item "Store" and press [ENTER]. to save all adjusted values and reset the fixture.

Calibration protocol:

Effect	*Mode 6*	*Mode 7*	*Mode 8*
Rot. gobo carousel-fine adjustment	channel 25	channel 14	channel 29
Rot. gobo 1 - fine adjustment	channel 26	channel 15	channel 30
Rot. gobo 2 - fine adjustment	channel 27	channel 16	channel 31
Static gobo - fine adjustment	channel 28	channel 17	channel 32
Iris - fine adjustment	channel 29	channel 18	channel 33

    Cal Col - The menu items "**Red C**", "**Gre C**", "**Blu C**", "**Amb C**" and "**LiG C**" serve for calibration of colours in the factory. User should not change settings in this menu.
The menu "**Green Corr**" serves for calibration of whites at standard CRI (80) (2700K I, 3200K I, 4200K I,5600K I, 8000K I) and at high CRI (90+) (2700K C,3200K C,4200K C, 5600K C, 8000K C).

    LEDs Cur - Calibration of LEDs current. This process waits about 5 minutes and after its finishing the sign "CurC DONE" will appear on the display.The procedure should be run if some colour nonuniformity has occurred.
Important. The procedure must be run after each LEDs module changing or LEDs driver (PCB RB 3406) changing, otherwise damage of LEDs module may occur! This calibration of LEDs curent must be run before dimmer activation!
Note: Calibration of LEDs current can be also run by means of the RDM manager ver. 1.0.12 and higher (LED Driver -->Start Current Calibration)

    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 values.

To update software in the fixture:
1. DSU file is available from Robe web site at 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_RobinT11Profile_18100828.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 (tab "Service" --> Update Software).

   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_RobinT11Profile_18100828.exe) in the extracted files. The Software Uploader program will start to run.
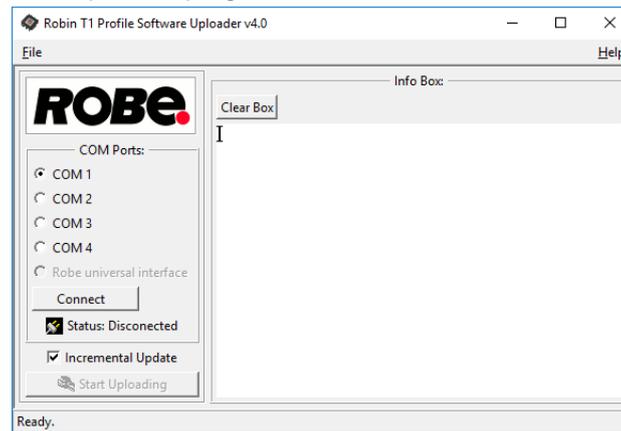

6. Select correct "COM " number if you use a Flash cable RS232/DMX or select "Robe Universal Interface " if you use the Robe Universal Interface/Robe Universal Interface WTX and then click on the "Connect" button.

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/.
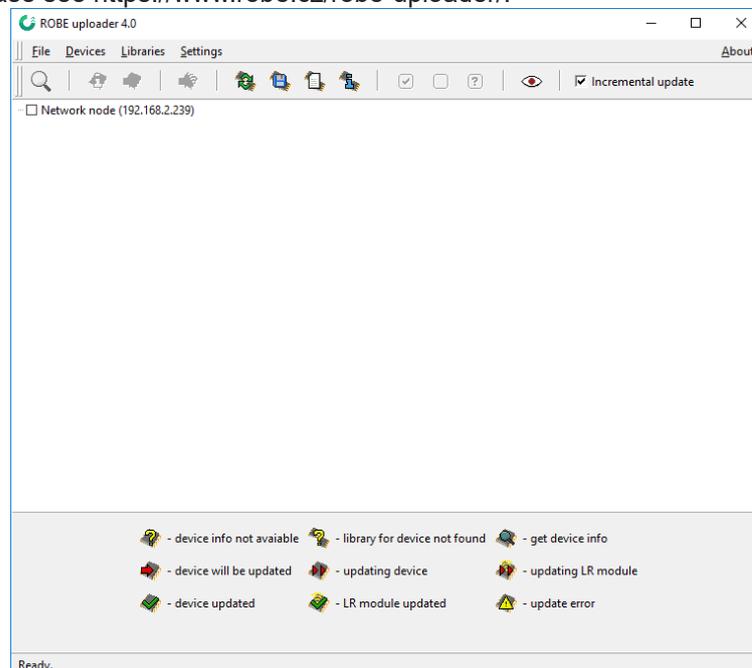
8. RDM

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 T11 Profile 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		*	*
DEVICE_RESET		*	
DMX_PERSONALITY		*	*
DMX_PERSONALITY_DESCRIPTION			*
STATUS_MESSAGES			*
STATUS_ID_DESCRIPTION			*

RDM model ID for the Robin T11 Profile is 0x0123.

9. Robe Ethernet Access Portal (REAP)

The REAP allows you to display on your computer information about some fixture settings, operating conditions (e.g. temperature in the fixture) and error messages which were generated during fixture operation.

Your computer needs to be connected to the fixture(s) through the means of Ethernet wired network and a network switch.

The Ethernet network connection (Local LAN) typically needs to be set to 2.x.x.x address, assuming that no other computer on the network contains such an address while keeping all ROBE fixtures in default IP settings.

For more information about REAP options, computer and fixture settings please see the REAP user manual at https://www.robe.cz/res/downloads/user_manuals/User_manual_REAP.pdf.

10. Error and information messages

Red Shrt
The message informs you that short circuit has occurred in the red LEDs circuit on the LEDs PCB.

Green Shrt
The message informs you that short circuit has occurred in the green LEDs circuit on the LEDs PCB.

Blue Shrt
The message informs you that short circuit has occurred in the blue LEDs circuit on the LEDs PCB.

Amber Shrt
The message informs you that short circuit has occurred in the amber LEDs circuit on the LEDs PCB.

Lime Shrt
The message informs you that short circuit has occurred in the lime LEDs circuit on the LEDs PCB.

Red Unp
The message informs you that red LEDs circuit has been interrupted on the LEDs PCB.

Green Unp
The message informs you that green LEDs circuit has been interrupted on the LEDs PCB.

Blue Unp
The message informs you that blue LEDs circuit has been interrupted on the LEDs PCB.

Amber Unp
The message informs you that amber LEDs circuit has been interrupted on the LEDs PCB.

Lime Unp
The message informs you that lime LEDs circuit has been interrupted on the LEDs PCB.

LEDs Cur Mss (LEDs Current Calibration Missing)
The message informs you that calibration of LEDs current has to be started (menu path: Special --> Adjust --> Calib --> LEDs Cur).
Note: Calibration of LEDs current can be also run by means of the RDM manager ver. 1.0.12 and higher

(LED Driver -->Start Current Calibration)

11. Technical Specifications

Electrical

Power supply: electronic auto-ranging
Input voltage range: 100-240V, 50-60Hz
Fuse: T 6.3 A, 250V
Max. power consumption: 440W (power factor 0.98)
Mains input: max. 16A (US 13A)
Mains output: max. 12A (US 9A)

Optic

Light source: MSL-TE™ 350W LED engine (red, green, blue, amber, lime)
CMY/RGB colour mixing
CRI: Adjustable from 80 to 90+
LED life expectancy: min. 50.000 hours

Virtual colour wheel

67 preset colours
10 user colours
Rainbow effect with variable speed

Colour temperature functions

White light: Variable CTC 2700K – 8000K (standard) , 1800K - 10 000K (extended)
Tungsten lamp effect at whites 2700K- 4200K

Static gobo

One manual static gobo,outside diameter: $26.8^{+0,1}$ mm, image diameter=21.4 mm,
high temperature borofloat or better glass, thickness=1.1 mm

15020426

Note. Steel or aluminium gobo cannot be used due to thermal stress.

Motorized static gobos (optional)

3 replaceable gobos, outside diameter: $26.8^{+0,1}$ mm, image diameter=21.4 mm,
high temperature borofloat or better glass, thickness=1.1 mm
Gobo order:

15020427 15020428 15020429

1 2 3
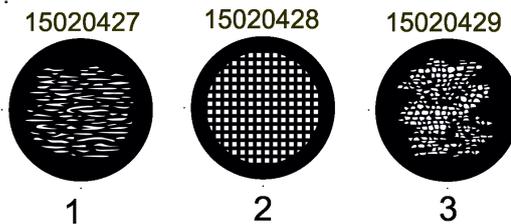
Note. Steel or aluminium gobos cannot be used due to thermal stress.

Motorized rotating gobos (optional)

2 replaceable gobos can be indexed and rotated in both directions at different speeds
Gobos: outside diameter= $26.8^{+0,1}$ mm, image diameter=21.4 mm, thickness=1.1 mm, high
temperature borofloat or better glass. Do not use steel gobos 0.15mm
"Slot&lock" system for easy replacement of gobos
Gobo order:

15020449 15020430

1 2
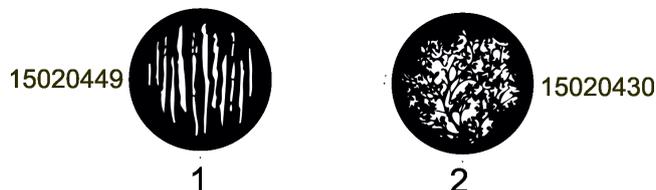
Note. Steel or aluminium gobos cannot be used due to thermal stress.

Motorized iris (optional)

Motorized iris for different beam diameters

Frost filters

Manual frost filter 1° (replaceable), another frost filter 5° enclosed

Framing shutters

Manual framing shutters module with 4 individually positionable blades

Zoom and focus

Manual zoom and focus
Beam angle range: 4.8°-51.9°

Strobe

Strobe effect with variable speed (0.3 - 20Hz)

Dimmer

Smooth dimmer from 0 - 100 %

Control

Setting & Addressing: two-row LCD display & 4 buttons, 4 control knobs
Readout fixture and LEDs 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, ArtNet, MANet, MANet2, sACN
Support of RDM (Remote Device Management)
8 DMX modes (18, 9, 22, 5, 1, 24,13,28 control channels)

External wireless DMX/RDM module RW 001 (optional)

Supported protocols: full RDM support, CRMX , W-DMX™ G2, G3,G4 and G4S
Operational frequency range: 2402-2480 MHz
Output power: 100 mW
Receiver sensitivity (0.1% BER): -93 dBm
Crystal Clock Frequency : 16.0 MHz
Contains FCC ID: 2A6PL-DMXRDMRW001
Contains IC: 29573-DMXRDMRW001

Connection

DMX data IN/OUT: 2x Locking 5-pin XLR
AC power IN/OUT:2x Neutrik PowerCon TRUE 1
Ethernet: 1x RJ45
Ethernet IN/OUT (EP version only): 2 x RJ 45

Max. number of fixtures in Ethernet IN/Out line (EP version only)

8

Rigging

Via mounting bracket (97° tilt range)

Temperatures

Maximum/Minimum ambient operating temperature : +45°C/-5°C
Maximum housing temperature : 70° C

Minimum distances

Min. distance from flammable surfaces: 0.5 m
Min. distance to lighted object: 2 m

Total heat dissipation

1125 BTU/hr (calculated)

Weight

15.7 kg (34.6 lbs)
16.9 kg (37.3 lbs) with optional drop-in gobo module

Dimensions (mm)

293

633

493

320

385

3 x Ø13
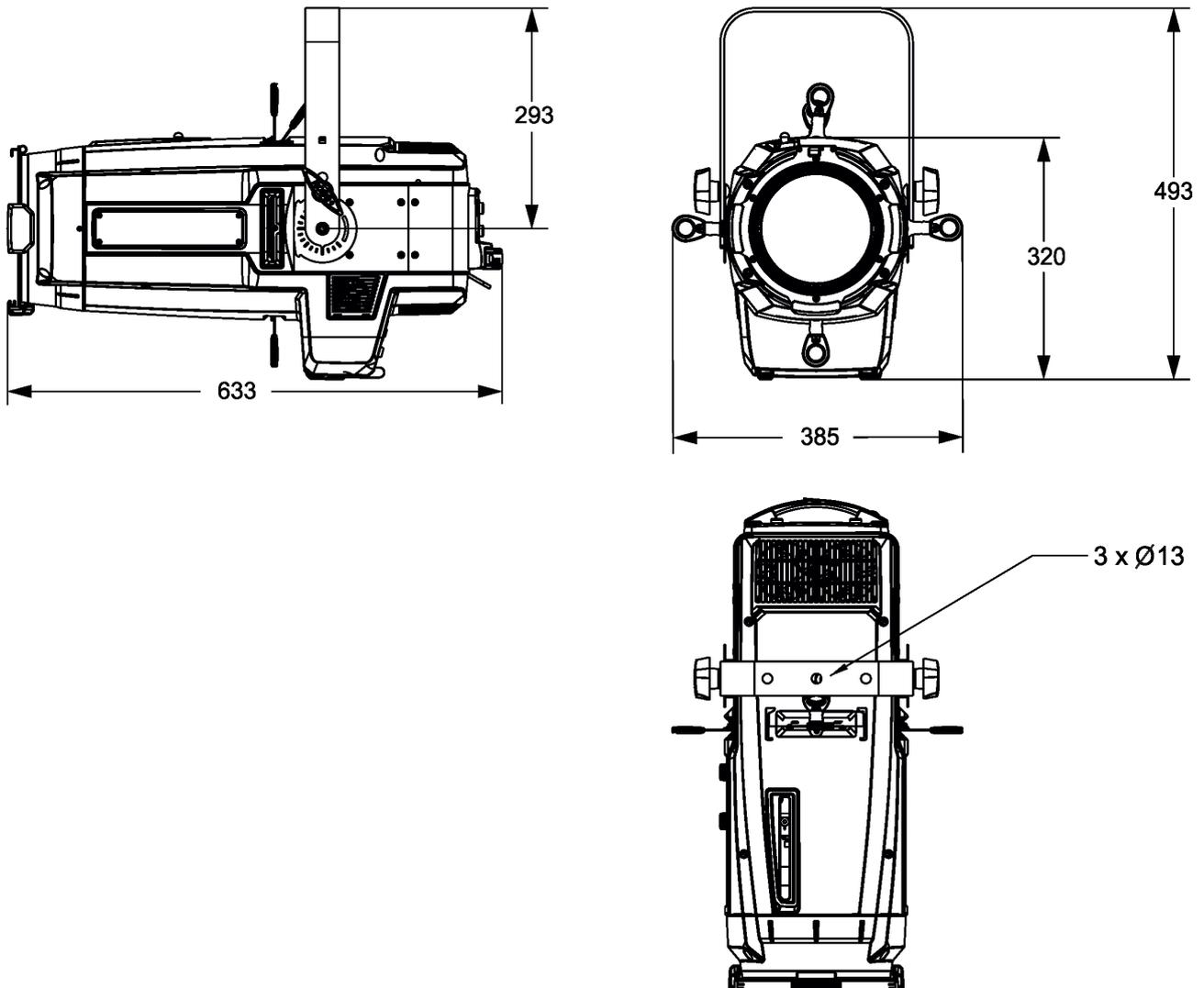
Protection factor

IP20 (CE)
Dry locations only (US)

Included items

Robin T11 Profile:
1x Robin T11 Profile
1 x Gobo Holder R size with gobo for Robin T11 (P/N 10980655)
1x user manual

Robin T11 Profile with Drop-in gobo and iris module T11:
1x Robin T11 Profile with Drop-in gobo and iris module T11 (P/N 10980649)
1x Gobo Holder R size with gobo for Robin T11 (P/N 10980655)
1x user manual

Optional accessories

T11 Fresnel lens module (P/N 10980644)
T11 PC lens module (P/N 10980645)
T11 Profile lens module (P/N 10980647)
Drop-in gobo and iris module T11 (P/N 10980649)
Barndoor module (P/N 10980349)
Hot Spot lens in gobo holder T11 (P/N 10980666)
Gel frame (P/N 10980372)
Frost 0.5° (exchange) T1 Profile/Esprite/T11/TX1 (P/N 10980583)
Frost 5° (exchange) assembled (P/N 10980573)
Frost 3,5° (exchange) (P/N 10980668)
Frost 10° (exchange) T1 Profile/Esprite/T11/TX1 (P/N 10980497)
Frost 20° (exchange) T1 Profile/Esprite/T11/TX1 (P/N 10980574)
Frost 30° (exchange) T1 Profile/Esprite/T11/TX1 (P/N 10980584)
Mains Cable powerCON TRUE1 In/Schuko, 2m, Indoor (P/N 13052405)
Mains Cable powerCON TRUE1 In/US, 2m, Indoor (P/N 13052406)
Daisy Chain powerCON TRUE1 In/Out, EU, 2m, Indoor (P/N 13052439)
Mains Cable powerCON TRUE1 In/CEE 16A, 2m, Indoor (P/N 13052445)
Mains Cable powerCON TRUE1 In/Open ended, 2m, Indoor (P/N 13052407)
Daisy Chain powerCON TRUE1 In/Out, US, 2m, Indoor (P/N 13052440)
Daisy Chain powerCON TRUE1 In/Out, EU, 5m, Indoor (P/N 13052444)
Doughty Trigger Clamp (P/N 17030386)
Safety wire 36 kg (P/N 99011963)
MSL-TE™ LED Engine for T11 (P/N 14080070)
MSL-TE™ LED Engine for T11 in protective case (P/N 14080077)
Pole Operated Yoke T11 (P/N 10980667)
Drop-in manual Iris T11 (P/N 10980677)
Robin T11 MFS handles (P/N 10980717)
Top Hat T11 black 30° (P/N 10980701)
Half Top Hat T11 black 30° (P/N 10980764)
Wireless DMX external module (P/N 10980127)
T11/T15 Incline Adaptor (P/N 10980853)
TE™ DL LED Engine for T11 (P/N 14080089)
TE™ TGW LED Engine for T11 (P/N 14080090)
Mounting bracket T11/T15 short (P/N 10980886)
T11 iris lever extension (P/N 10980889)
Floor Stand T11, T15, iT12 (P/N 10981014)
T11 SoftBox Adaptor (P/N 10980751)
T11 Cyc/Flood Light Module (P/N 10980769)
Mounting bracket short B for Robin T11/T15 (P/N 10981134)
Gobo Holder R size with gobo for Robin T11 (P/N 10980655)
Gripping module for gobo Holder R size (P/N 10981250)
Rotating gobo holder R size (P/N 10981237) -including rot. gobo

12. 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 good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!

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

The front objective lens will require weekly cleaning as smoke-fluid tends to building up residues, reducing the light-output very quickly. The cooling-fans should be cleaned monthly.
The interior of the fixture should be cleaned at least annually using a vacuum-cleaner or an air-jet.
Gobo wheels and the internal lenses should be cleaned monthly.

Replacing the fuse.
Before replacing the fuse, unplug mains lead.
1. Remove the fuse holder on the rear panel of the fixture with a fitting screwdriver from the housing (anti-clockwise).
2. Remove the blown fuse from the fuse holder.
3. Install the new fuse in the fuse holder (only the same type and rating).
4. Replace the fuse holder in the housing and fix it.

Checking plastic parts of the fixture.
The plastic parts of the fixture should be checked for damages and beginning cracks at least every two months. In addition, the plastic part of the front lens has to be checked mechanically (by means of movement by the plastic part) if it is firmly fastened to the fixture. If hint of a crack is found on some plastic part, do not use the fixture until the damaged part will be replaced.
Cracks or another damages of the plastic parts can be caused by the fixture transportation or manipulation and also ageing process may influence plastic materials.

This checking is necessary for both fixed installations and preparing fixtures for renting. Any free moving parts inside of the fixture head, cracked plastic or any plastic part of front lens not sitting properly in place need to be immediately replaced.

12.1 Disposing of the product

To preserve the environment please dispose or recycle this product at the end of its life according to the local regulations and codes.

13. ChangeLog

This section summarizes changes in the user manual.

Version of the manual	Date of issue	Description of changes
1.1	04/11/2021	Simple mode description changed
1.2	08/11/2021	EP version added
1.3	11/11/2021	Display menu changed
1.4	19/11/2021	DMX chart ver.1.3
1.5	22/11/2021	DMX chart ver.1.4
1.6	18/01/2021	Manual iris installlation added
1.7	23/03/2022	Simple mode modified, DMX chart ver. 1.5
1.8	04/04/2022	Pole operated yoke installation added
1.9	09/05/2022	RDM ID corrected
2.0	10/06/2022	Ethernet Back-up added
2.1	15/07/2022	FollowSpot mode screens changed
2.2	21/07/2022	5°frost filter added
2.3	04/10/2022	Barndoors installation added
2.4	02/02/2023	Chapter REAP added
2.5	13/03/2023	Ethernet operation changed
2.6	13/09/2023	Mounting bracket T11 short added to Optional accessories
2.7	25/09/2023	T11 iris lever extension added to Optional accessories
2.8	12/12/2023	DMX chart ver. 1.6, mode 4 corrected
2.9	09/05/2024	Error messages added
3.0	03/09/2024	CTC extended to 10 000K, DMX chart ver. 1.7
3.1	04/10/2024	Shorter installation of fixture yoke.
3.2	29/10/2024	P/N 10981134 Mounting bracket short B for Robin T11 added
3.3	22/11/2024	LED current calibration more specified
3.4	02/12/2024	Screens in the FolloSpot mode described in detail
3.5	08/04/2025	Rotating gobo holder installation added

14. Appendix

## 14.1Changing the LED light source

The Robin T11 allows you to change the LED light source and this way keep a high performance of the fixture.

To change the LED light source.
1. Disconnect the fixture from mains and allow it to cool about 30 minutes.
2. Remove top cover of the fixture and place the fixture a horizontal position in which you will have access to the rear panel with display.


3. Unscrew two screws M4x12 with star washers (1) on both sides the fixture.
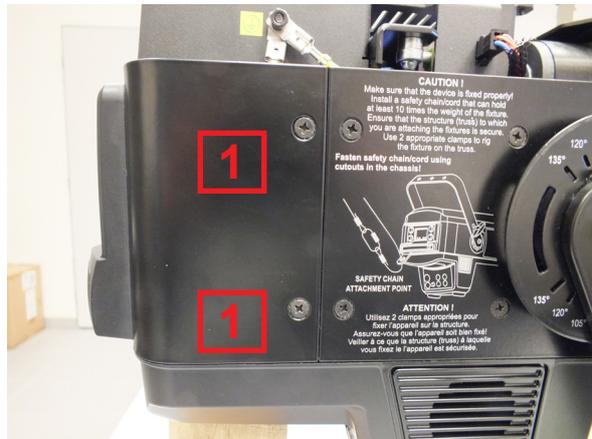
4.Slide the rear cover (2) with display out of the fixture and put it next to the fixture on elevated place. You do not need to disconnect cables.
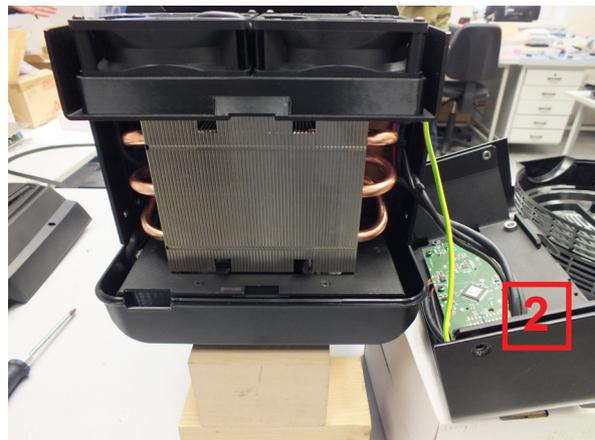
5. Unscrew the four socket head screws M4x16 (3) with plain washers (use Allen key 3) and carefully slide the LED source module (4) out from the fixture. Be careful, do not to damage connectors on LEDs PCB!
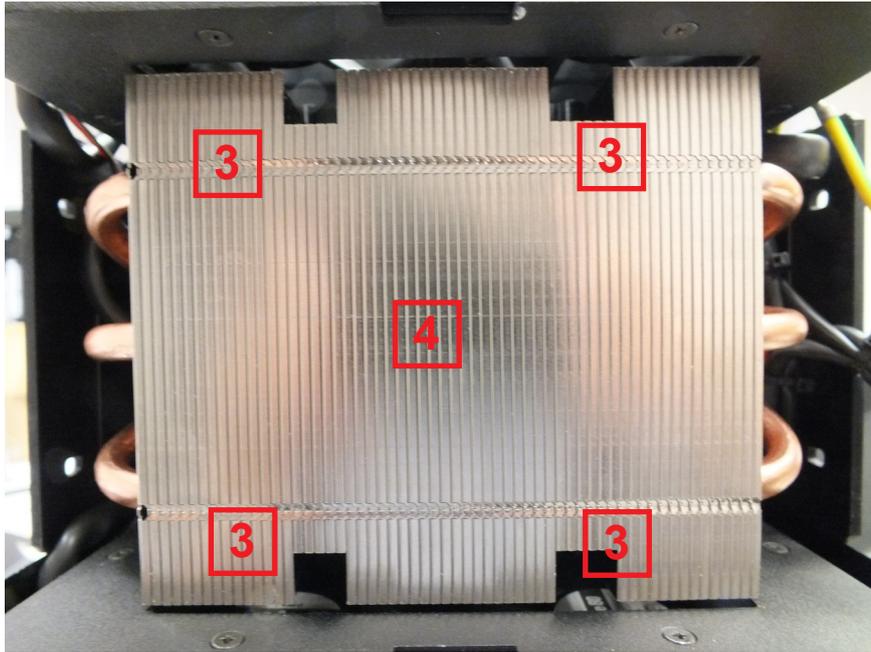
6. Disconnect the cable (5) from black connector on the left side of the fixture.
7. Disconnect two cables (6) from black connector and from white connector on the right side of the fixture.
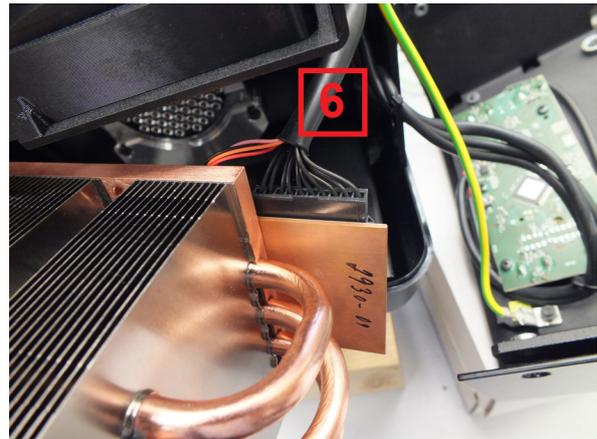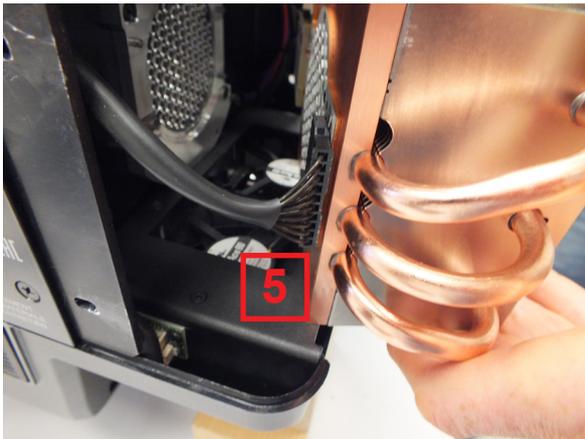
8. Remove the LED light source (4) from the fixture.

The LED light source includes PCB with LEDs and the heat sink.
Handle with care. Do not touch LEDs with bare hands.
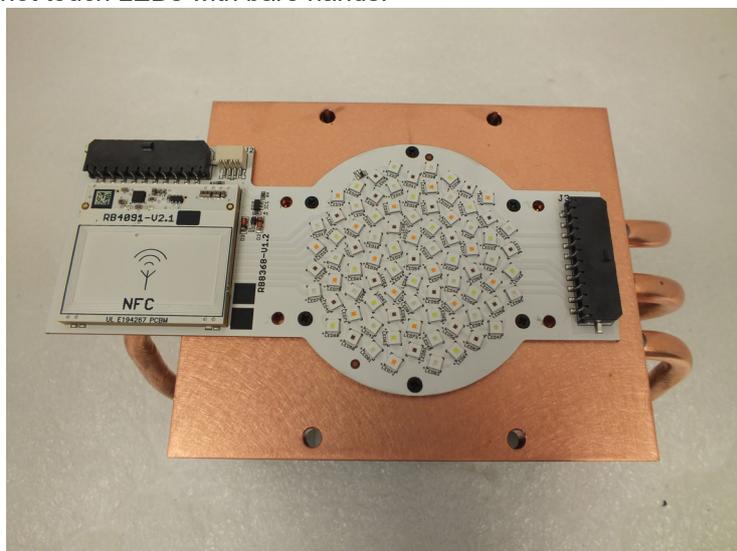
9. Connect two cables (6) to the black and white connectors on the right side of the new LED module.
Connect one cable (5) to the black connector on the left side of the new LED module.
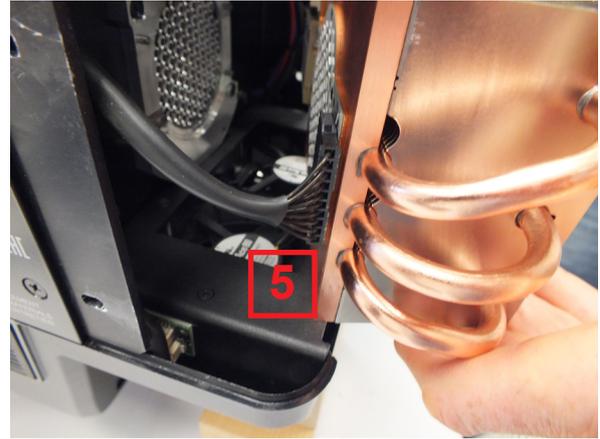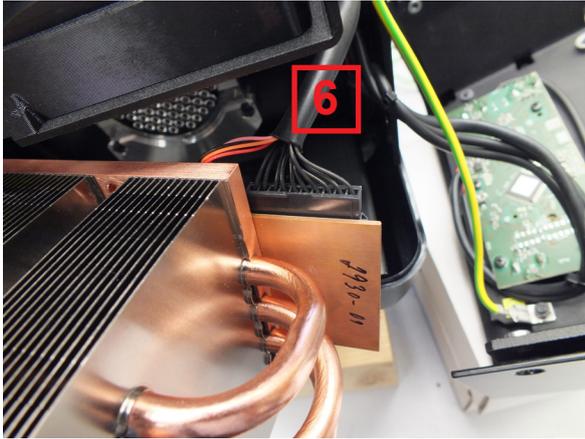
10. Insert the new LED source module (4) to the fixture and screw it by means of four screws M4x16 (3) to the fixture.
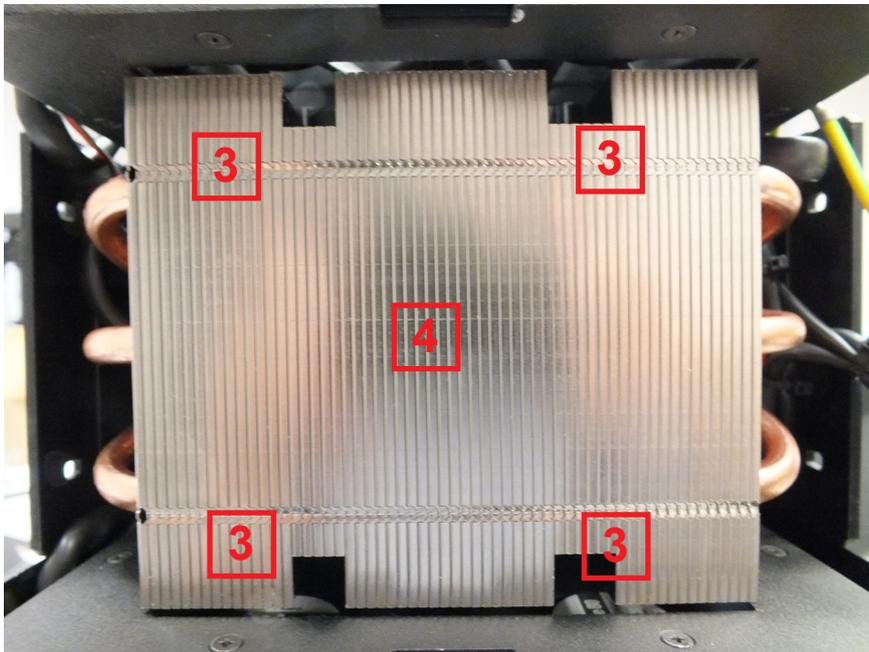
11. Insert the rear cover (2) with display to the fixture.

12. Check the rear cover does not cut wires under the cover.

Right side of the fixture
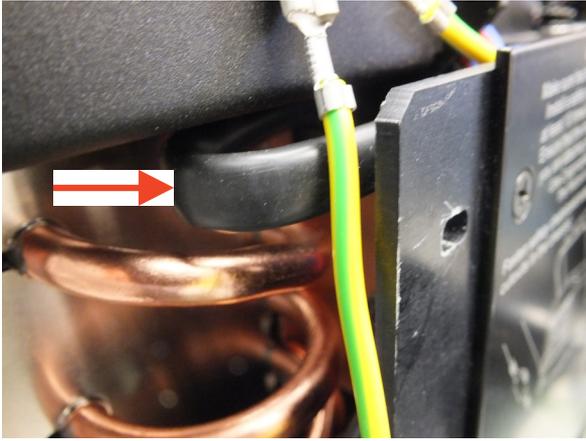
Left side of the fixture
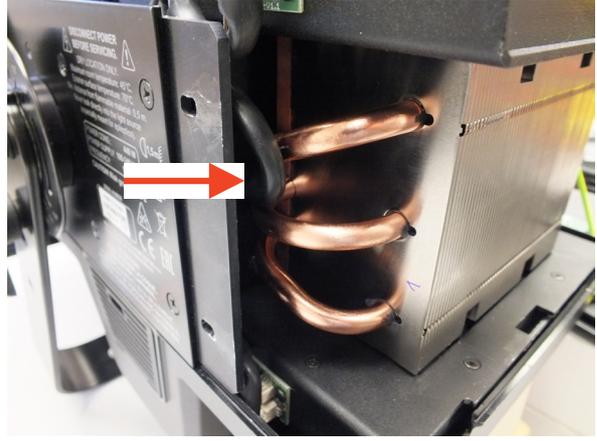
Right side of the fixture
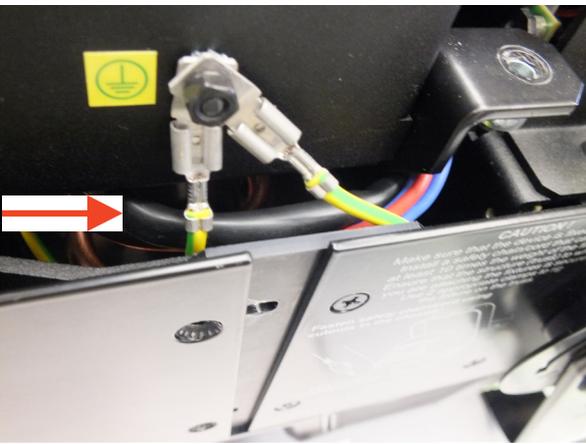
Left side of the fixture
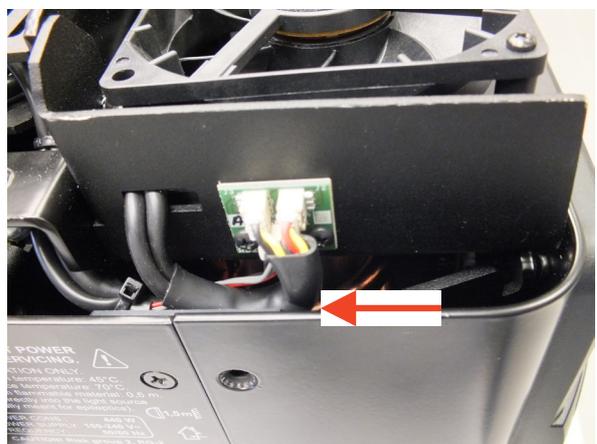
Top side of the fixture
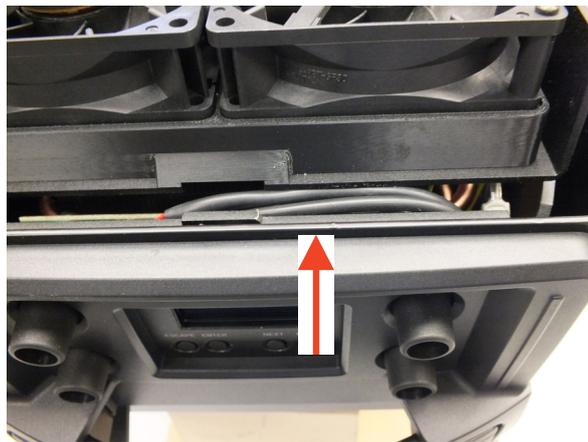
13. Screw the rear cover (2) back to the fixture by means of the two screws M4x12 on each side of the fixture.
14. Fasten the top cover on the fixture.
15. **Connect the fixture to mains and run calibration of LEDs current (menu path: Special --> Adjust --> Calib --> LEDs Cur) before activating dimmer of the fixture.**

14.2. Obtaining information about the LED light source by mobile phone

You can read information about the LED light source by means of the mobile application ROBE COM. The LED light source has to be outside of the fixture.

Download and install the application ROBE COM from Google Play (for Android 7.1 and higher) or App Store (for iOS 15.0 and higher) to your mobile phone. Your mobile phone has to support NFC (Near-Field Communication).

After installing the ROBE COM, run the application by touching the icon ⦿ robe .
The following screen will appear:
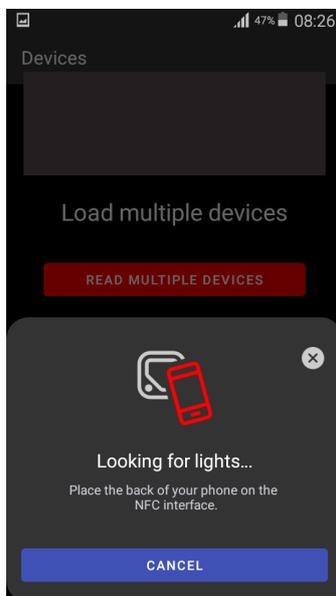
Hold the mobile phone close to the point of the LED light source PCB which is marked with the symbol NFC.
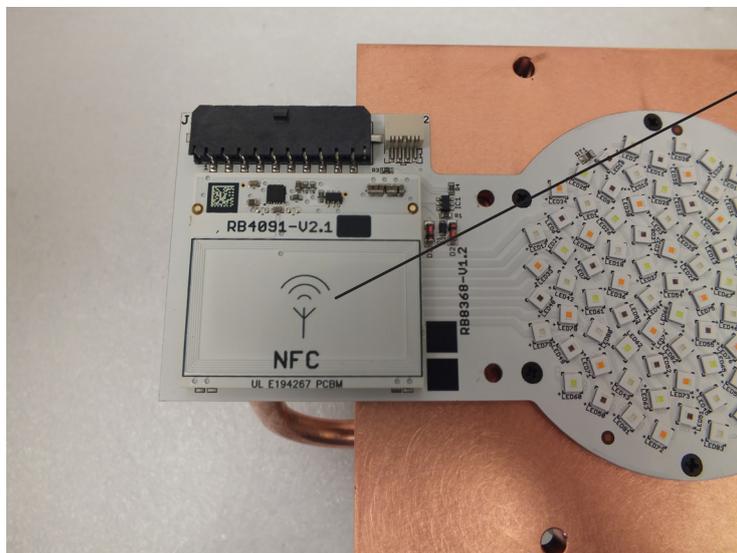
If NFC connection is OK, the following screens will appear.
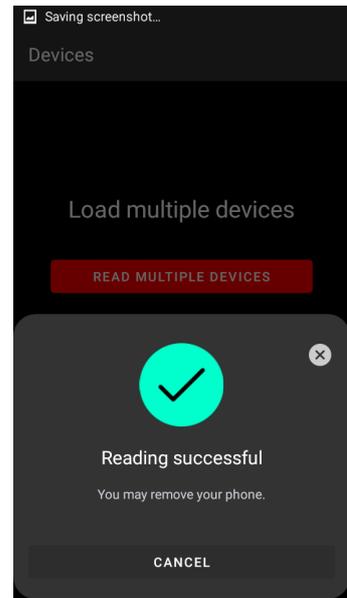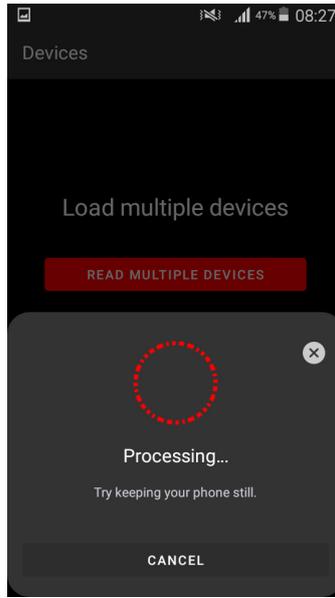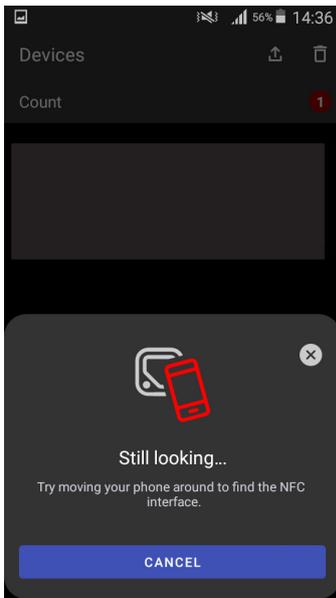
When the following screen will appear, touch the button CANCEL.
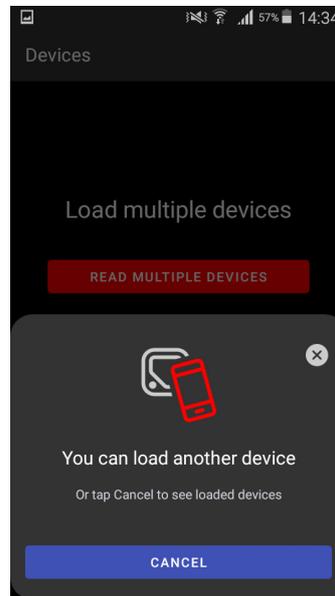
Touch the found LED module ("Robin T11 LED module") and than touch "LED engine" to read information about found LED module.
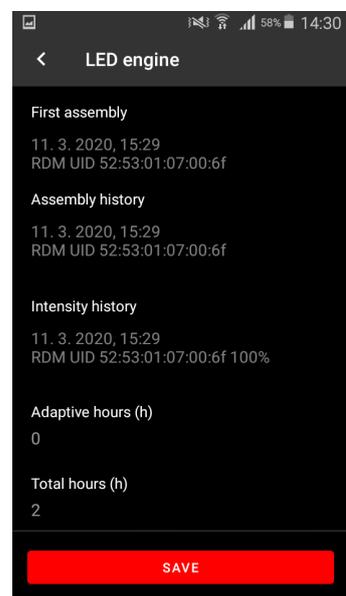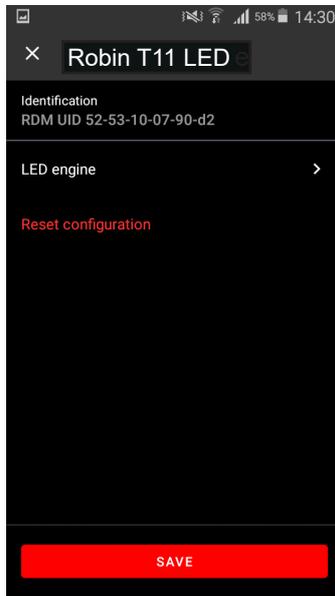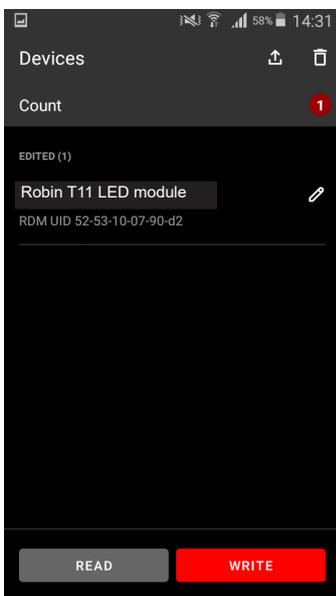
Robin T11 Profile/Fresnel/PC - DMX protocol						
Version: 1.7 (8 modes)						
Short desciption of modes						
Mode	**Description**					
1	16-bit CMY/RGB, 18 channels					
2	8-bit CMY/RGB, 9 channels					
3	16-bit RGBAL, 22 channels					
4	White light+dimmer , 5 channels					
5	Only Dimmer , 1 channel					
6	16-bit CMY/RGB + gobos+iris (for optional drop-in module), 24 channels					
7	8-bit CMY/RGB +gobos+iris (for optional drop-in module), 13 channels					
8	16-bit RGBAL + gobos+iris (for optional drop-in module), 28 channels					

Quick overview of default DMX values for each channel

Mode/channel					Default DMX Value	Function
1	**2**	**3**	**4**	**5**		
1	1	1	*	*	0	Power/Special functions
2	*	2	*	*	10	LED frequency selection
3	*	3	*	*	128	LED frequency fine adjusting
4	2	4	*	*	0	Colour functions
5	3	5	1	*	0	CRI selection
6	*	6	*	*	0	Virtual colour wheel
7	4	*	*	*	0/255	Cyan/Red (8 bit) (0=default for CMY mode, 255=default for RGB mode)
8	*	*	*	*	0/255	Cyan/Red (16 bit) (0=default for CMY mode, 255=default for RGB mode)
9	5	*	*	*	0/255	Magenta/Green (8 bit) (0=default for CMY mode, 255=default for RGB mode)
10	*	*	*	*	0/255	Magenta/Green (16 bit) (0=default for CMY mode, 255=default for RGB mode)
11	6	*	*	*	0/255	Yellow/Blue (8 bit) (0=default for CMY mode, 255=default for RGB mode)
12	*	*	*	*	0/255	Yellow/Blue (16 bit) (0=default for CMY mode, 255=default for RGB mode)
*	*	7	*	*	255	Red (8 bit)
*	*	8	*	*	255	Red (16bit)
*	*	9	*	*	255	Green (8 bit)
*	*	10	*	*	255	Green (16bit)
*	*	11	*	*	255	Blue (8 bit)
*	*	12	*	*	255	Blue (16bit)
*	*	13	*	*	255	Amber (8 bit)
*	*	14	*	*	255	Amber (16bit)
*	*	15	*	*	255	Lime (8 bit)
*	*	16	*	*	255	Lime (16bit)
13	7	17	2	*	110	Colour temperature correction (CTC)
14	*	18	3	*	128	Green correction
15	*	19	*	*	0	Colour mix control
16	8	20	*	*	32	Shutter/ strobe
17	9	21	4	1	0	Dimmer intensity
18	*	22	5	*	0	Dimmer intensity - fine

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
1	1	1	*	*		**Power/Special functions**	
						Factory display menu setting: DMX Input-Wired ,Graphic display-On, Blackout while gobo wheel moving-Off, Fans mode-Auto, Dimmer Curve: Square law	
					0 -19	Reserved (0=default)	
						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 16/8/20 must be at range: 0-31 DMX). Corresponding menu items are temporarily overriden.	
					20-24	Display: On	step
					25-29	Display: Off	step
					30-59	Reserved	
					60-64	Blackout while gobo wheel moving: On	step
					65-69	Blackout while gobo wheel moving: Off	step
					70-74	Fans mode: Auto	step
					75-79	Reserved	
					80-84	Quiet mode: Fans On at blackout	step
					85-89	Quiet mode: Fans Off at blackout	step
					90-129	Reserved	
						To activate following functions, stop in DMX value for at least 3 seconds.	
					130-134	Simple mode off	step
					135 - 159	Reserved	
					160 - 169	Gobos reset (optional module)	step
					170 - 189	Reserved	
					190 - 199	Iris reset (optional module)	step
					200 - 209	Total fixture reset	step
					210 - 218	Reserved	
						The following three commands define transition from gobo rotation to gobo indexing:	
					219 - 220	Gobo indexing: Maximum speed and shortcut	step
					221 - 222	Gobo indexing: Follow speed and direction	step
					223 - 224	Gobo indexing: Maximum speed and follow direction	step
					225-239	Reserved	
					240	Disabled "Quiet mode"	step
					241 - 255	Quiet mode - fan noise control from min. to max.	proportional
2	*	2	*	*		**LED frequency selection**	
						Factory display menu setting: 600Hz	
						Select PWM output frequency of LEDs. Selected PWM frequency can be fine adjusted in 127 steps up/down around selected PWM frequency on the channel below. Corresponding menu item (Frequency Setup) is temporarily overriden.	
					0-4	PWM frequency from Display menu (fixture utilizes PWM frequency set in the display menu item Frequency Setup).	step
					5-9	300 Hz	step
					10-14	600 Hz (10=default)	step
					15-19	1200 Hz	step
					20-24	2400 Hz	step
					25-29	High (25 000 Hz)	step
					30-255	Reserved (fixture utilizes PWM frequency set in the display menu item Frequency Setup).	

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
3	*	3	*	*		**LED frequency fine adjusting**	
						Factory display menu setting: 600Hz	
						Select desired PWM output frequency of LEDs on the channel above.	
					0-1	Selected LED Frequency	step
					2	LED Frequency (step -126)	step
					3	LED Frequency (step -125)	step
					4	LED Frequency (step -124)	step
					:		
					125	LED Frequency (step -3)	step
					126	LED Frequency (step -2)	step
					127	LED Frequency (step -1)	step
					128	Selected LED Frequency (128=default)	step
					129	LED Frequency (step +1)	step
					130	LED Frequency (step +2)	step
					131	LED Frequency (step +3)	step
					:		
					252	LED Frequency (step +124)	step
					253	LED Frequency (step +125)	step
					254	LED Frequency (step +126)	step
					255	Selected LED Frequency	step
4	2	4	*	*		**Colour functions**	
						Factory display menu setting: Colour mixing mode-CMY, Dimmer Curve-Square Law, Tungsten effect simulation-Off, Chromatic white-Off, Light output stability-Off, Uniformity-Off	
					0	No function (0=default)	step
						To activate following functions, stop in DMX value for at least 3 seconds. Corresponding menu items are temporarily overriden	
					1-29	Reserved	
					30-34	Standard CTC range (8000 K-2700 K)	step
					35-39	Extended CTC range (10000 K-1800 K)	step
					40-44	Colour mixing mode: CMY (DMX Mode 1, 2, 6 and 8 only)	step
					45-49	Colour mixing mode: RGB (DMX mode 1,2,6 and 7), RGBAL (DMX mode 3 and 8 only)	step
					50-54	Dimmer curve: Square law	step
					55-59	Dimmer curve: Linear	step
					60-64	Dimmer curve: Super square law	step
					65-79	Raw DMX	proportional
						Tungsten effect simulation for whites 2700K-4200K only:	
					80-84	Tungsten effect simulation (750W/80V): On	step
					85-89	Tungsten effect simulation (1000W/240V): On	step
					90-94	Tungsten effect simulation (1200W/240V): On	step
					95-99	Tungsten effect simulation (2000W/230V): On	step
					100-104	Tungsten effect simulation (2500W/230V): On	step
					105-109	Tungsten effect simulation: Off	step
					110-114	Save user colour (see user manual)	step
					115-119	Chromatic white: On	step
					120-124	Chromatic white: Off	step
					125-129	Light output stability On	step
					130-134	Light output stability Off	step
					135-139	Uniformity On	step

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					140-144	Uniformity Off	step
					145-255	Reserved	
5	3	5	1	*		**CRI selection**	
					0-255	CRI selection from Standard (80) to High (90+) (0=default)	proportional
6	*	6	*	*		**Virtual colour wheel**	
					0	No function (0=default)	step
					1-2	Filter 4 (Medium Bastard Amber)	step
					3-4	Filter 10 (Medium Yellow)	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 71 (Tokyo Blue)	step
					15-16	Filter 79 (Just Blue)	step
					17-18	Filter 88 (Lime Green)	step
					19-20	Filter 90 (Dark Yellow Green)	step
					21-22	Filter 100 (Spring Yellow)	step
					23-24	Filter 101 (Yellow)	step
					25-26	Filter 102 (Light Amber)	step
					27-28	Filter 103 (Straw)	step
					29-30	Filter 104 (Deep Amber)	step
					31-32	Filter 105 (Orange)	step
					33-34	Filter 106 (Primary Red)	step
					35-36	Filter 111 (Dark Pink)	step
					37-38	Filter 115 (Peacock Blue)	step
					39-40	Filter 116 (Medium Blue-Green)	step
					41-42	Filter 117 (Steel Blue)	step
					43-44	Filter 118 (Light Blue)	step
					45-46	Filter 119 (Dark Blue)	step
					47-48	Filter 120 (Deep Blue)	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 139 (Primary Green)	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 158 (Deep Orange)	step
					83-84	Filter 162 (Bastard Amber)	step

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					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 179 (Chrome Orange)	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 205 (Half C.T. Orange)	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 715 (Cabana Blue)	step
					129-130	Filter 778 (Millennium Gold)	step
					131-132	Filter 793 (Vanity Fair)	step
					133-215	Reserved	
					216-217	User colour 1	step
					218-219	User colour 2	step
					220-221	User colour 3	step
					222-223	User colour 4	step
					224-225	User colour 5	step
					226-227	User colour 6	step
					228-229	User colour 7	step
					230-231	User colour 8	step
					232-233	User colour 9	step
					234-235	User colour 10	step
					236-245	Rainbow effect (with fade time) from slow-> fast	proportional
					246-255	Rainbow effect (without fade time) from slow-> fast	proportional
7	4	*	*	*		**Cyan/Red (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (0=default for CMY mode, 255=default for RGB mode)	proportional
8	*	*	*	*		**Cyan/Red (16 bit)**	
					0 - 255	Colour saturation control - fine (0=default for CMY mode, 255=default for RGB mode)	proportional
9	5	*	*	*		**Magenta/Green (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (0=default for CMY mode, 255=default for RGB mode)	proportional
10	*	*	*	*		**Magenta/Green (16 bit)**	
					0 - 255	Colour saturation control - fine (0=default for CMY mode, 255=default for RGB mode)	proportional

| Mode/channel | | | | | DMX | Function | Type of |
1	2	3	4	5	Value		control
11	6	*	*	*		**Yellow/Blue (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (0=default for CMY mode, 255=default for RGB mode)	proportional
12	*	*	*	*		**Yellow/Blue (16 bit)**	
					0 - 255	Colour saturation control - fine (0=default for CMY mode, 255=default for RGB mode)	proportional
*	*	7	*	*		**Red (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	*	8	*	*		**Red (16bit)**	
					0 - 255	Colour saturation control - fine (255=default)	proportional
*		9	*	*		**Green (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		10	*	*		**Green (16bit)**	
					0 - 255	Colour saturation control - fine (255=default)	proportional
*		11	*	*		**Blue (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		12	*	*		**Blue (16bit)**	
					0 - 255	Colour saturation control - fine (255=default)	proportional
*		13	*	*		**Amber (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		14	*	*		**Amber (16bit)**	
					0 - 255	Colour saturation control - fine (255=default)	proportional
*		15	*	*		**Lime (8 bit)**	
					0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		16	*	*		**Lime (16bit)**	
					0 - 255	colour saturation control - fine (255=default)	proportional
13	7	17	2	*		**CTC**	
						Standard CTC range (8000 K-2700 K) - it is a default setting in a display menu	
					0-1	8000 K	step
					2-64	Colour temperature changing 7978 K ->6622 K (22 K /1 DMX)	proportional
					65	6600 K	step
					66-109	Colour temperature changing 657 8K ->5622 K (22 K/1 DMX)	proportional
					110	5600 K (110=default)	step
					111-179	Colour temperature changing 5580 K ->4220 K (20 K/1 DMX)	proportional
					180	4200 K	step
					181-229	Colour temperature changing 4180 K ->3220 K (20 K/1 DMX)	proportional
					230	3200 K	step
					231-254	Colour temperature changing 3180 K ->2720 K (20K /1 DMX)	proportional
					255	2700K	proportional
						Extended CTC range (10000 K-1800 K)	
					0	10 000 K	step
					1-39	Colour temperature changing 9950 K ->8050 K (50 K /1 DMX)	proportional
					40	8000 K	step
					41-99	Colour temperature changing 7960 K ->5640 K (40 K/1 DMX)	proportional
					100	5600 K	step
					101-149	Colour temperature changing 5572 K ->4228 K (28 K/1 DMX)	proportional
					150	4200 K	step
					151-189	Colour temperature changing 4175 K ->3225 K (25 K/1 DMX)	proportiol

Mode/channel					DMX Value	Function	Type of control
1	2	3	4	5			
					190	3200 K	step
					191-209	Colour temperature changing 3175 K ->2725 K (25K /1 DMX)	proportional
					210	2700K	step
					211-254	Colour temperature changing 2680 K ->1820 K (20K /1 DMX)	proportional
					255	1800K	step
14	*	18	3	*		**Green correction**	
					0	Uncorrected white	step
					1-127	Minus green --> uncorrected white	proportional
					128	Uncorrected white (128=default)	step
					129-255	Uncorrected white --> Plus green	proportional
15	*	19	*	*		**Colour mix control**	
						Defines relation between Virtual Colour wheel and colour channels	
						"Virtual" = Virtual Colour Wheel	
						"Colour mix" = Colour channels (CMY/RGBAL/CTC)	
					0-9	"Virtual " has priority over "Colour mix" (0=default)	
					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")	step
					50-59	Subtraction mode ("Virtual" – "Colour mix")	step
					60-69	Inverted Subtraction mode ("Colour mix"-"Virtual")	step
					70-79	White Point Off (CTC+Green Cor.+Virtual Colour Wheel deactivated)	step
					80-128	Reserved	
					129	Crossfade "Virtual" only	step
					130-254	Crossfade between "Virtual" and "Colour mix"	proportional
					255	Crossfade "Colour mix" only	step
16	8	20	*	*		**Shutter/ strobe**	
					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
17	9	21	4	1		**Dimmer intensity**	
					0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
18	*	22	5	*		**Dimmer intensity - fine**	
					0 - 255	Fine dimming (0=default)	proportional

Robin T11 Profile/Fresnel/PC - DMX protocol				
Version: 1.7				
Quick overview of default DMX values for each channel				

Mode/channel			Default	Function
6	**7**	**8**	**DMX Value**	
1	1	1	0	Power/Special functions
2	*	2	10	LED frequency selection
3	*	3	128	LED frequency fine adjusting
4	2	4	0	Colour functions
5	3	5	0	CRI selection
6	*	6	0	Virtual colour wheel
7	4	*	0/255	Cyan/Red (8 bit) (0=default for CMY mode, 255=default for RGB mode)
8	*	*	0/255	Cyan/Red (16 bit) (0=default for CMY mode, 255=default for RGB mode)
9	5	*	0/255	Magenta/Green (8 bit) (0=default for CMY mode, 255=default for RGB mode)
10	*	*	0/255	Magenta/Green (16 bit) (0=default for CMY mode, 255=default for RGB mode)
11	6	*	0/255	Yellow/Blue (8 bit) (0=default for CMY mode, 255=default for RGB mode)
12	*	*	0/255	Yellow/Blue (16 bit) (0=default for CMY mode, 255=default for RGB mode)
*	*	7	255	Red (8 bit)
*	*	8	255	Red (16bit)
*	*	9	255	Green (8 bit)
*	*	10	255	Green (16bit)
*	*	11	255	Blue (8 bit)
*	*	12	255	Blue (16bit)
*	*	13	255	Amber (8 bit)
*	*	14	255	Amber (16bit)
*	*	15	255	Lime (8 bit)
*	*	16	255	Lime (16bit)
13	7	17	110	CTC
14	*	18	128	Green correction
15	*	19	0	Colour mix control
16	8	20	0	Static gobo wheel (optional module)
17	9	21	0	Rotating gobo wheel (optional module)
18	10	22	128	Rot. gobo indexing and rotation (optional module)
19	*	23	0	Rot. gobo indexing/rotation - fine (optional module)
20	11	24	0	Iris (optional module)
21	*	25	0	Iris - fine (optional module)
22	12	26	32	Shutter/ strobe
23	13	27	0	Dimmer intensity
24	*	28	0	Dimmer intensity - fine

Mode/channel			DMX Value	Function	Type of control
6	7	8			
1	**1**	**1**		**Power/Special functions**	
				Factory display menu setting: DMX Input-Wired ,Graphic display-On, Blackout while gobo wheel moving-Off, Fans mode-Auto, Dimmer Curve: Square law	
			0 -19	Reserved (0=default)	
				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 22/12/26 must be at range: 0-31 DMX). Corresponding menu items are temporarily overriden.	
			20-24	Display: On	step
			25-29	Display: Off	step
			30-59	Reserved	
			60-64	Blackout while gobo wheel moving: On	step
			65-69	Blackout while gobo wheel moving: Off	step
			70-74	Fans mode: Auto	step
			75-79	Reserved	
			80-84	Quiet mode: Fans On at blackout	step
			85-89	Quiet mode: Fans Off at blackout	step
			90-129	Reserved	
				To activate following functions, stop in DMX value for at least 3 seconds.	
			130-134	Simple mode off	step
			135 - 159	Reserved	
			160 - 169	Gobos reset (optional module)	step
			170 - 189	Reserved	
			190 - 199	Iris reset (optional module)	step
			200 - 209	Total fixture reset	step
			210 - 218	Reserved	
				The following three commands define transition from gobo rotation to gobo indexing:	
			219 - 220	Gobo indexing: Maximum speed and shortcut	step
			221 - 222	Gobo indexing: Follow speed and direction	step
			223 - 224	Gobo indexing: Maximum speed and follow direction	step
			225-239	Reserved	
			240	Disabled "Quiet mode"	step
			241 - 255	Quiet mode - fan noise control from min. to max.	proportional
2	*****	**2**		**LED frequency selection**	
				Factory display menu setting: 600Hz	
				Select PWM output frequency of LEDs. Selected PWM frequency can be fine adjusted in 127 steps up/down around selected PWM frequency on the channel below. Corresponding menu item (Frequency Setup) is temporarily overriden.	
			0-4	PWM frequency from Display menu (fixture utilizes PWM frequency set in the display menu item Frequency Setup).	step
			5-9	300 Hz	step
			10-14	600 Hz (10=default)	step
			15-19	1200 Hz	step
			20-24	2400 Hz	step
			25-29	High (25 000Hz)	step
			30-255	Reserved (fixture utilizes PWM frequency set in the display menu item Frequency Setup).	

Mode/channel			DMX Value	Function	Type of control
6	**7**	**8**			
3	*****	**3**		**LED frequency fine adjusting**	
				Factory display menu setting: 600Hz	
				Select desired PWM output frequency of LEDs on the channel above.	
			0-1	Selected LED Frequency	step
			2	LED Frequency (step -126)	step
			3	LED Frequency (step -125)	step
			4	LED Frequency (step -124)	step
			:		
			125	LED Frequency (step -3)	step
			126	LED Frequency (step -2)	step
			127	LED Frequency (step -1)	step
			128	Selected LED Frequency (128=default)	step
			129	LED Frequency (step +1)	step
			130	LED Frequency (step +2)	step
			131	LED Frequency (step +3)	step
			:		
			252	LED Frequency (step +124)	step
			253	LED Frequency (step +125)	step
			254	LED Frequency (step +126)	step
			255	Selected LED Frequency	step
4	**2**	**4**		**Colour functions**	
				Factory display menu setting: Colour mixing mode-CMY, Dimmer Curve-Square Law, Tungsten effect simulation-Off, Chromatic white-Off, Light output stability-Off, Uniformity-Off	
			0	No function (0=default)	step
				To activate following functions, stop in DMX value for at least 3 seconds. Corresponding menu items are temporarily overriden	
			1-29	Reserved	
			30-34	Standard CTC range (8000 K-2700 K)	step
			35-39	Extended CTC range (10000 K-1800 K)	step
			40-44	Colour mixing mode: CMY (DMX Mode 1, 2, 6, 7 only)	step
			45-49	Colour mixing mode: RGB (DMX mode 1,2,6,7) RGBAL (DMX mode 3,8 only)	step
			50-54	Dimmer curve: Square law	step
			55-59	Dimmer curve: Linear	step
			60-64	Dimmer curve: Super square law	step
			65-79	Raw DMX	proportional
				Tungsten effect simulation for whites 2700K-4200K only:	
			80-84	Tungsten effect simulation (750W/80V): On	step
			85-89	Tungsten effect simulation (1000W/240V): On	step
			90-94	Tungsten effect simulation (1200W/240V): On	step
			95-99	Tungsten effect simulation (2000W/230V): On	step
			100-104	Tungsten effect simulation (2500W/230V): On	step
			105-109	Tungsten effect simulation: Off	step
			110-114	Save user colour (see user manual)	step
			115-119	Chromatic white: On	step
			120-124	Chromatic white: Off	step
			125-129	Light output stability On	step
			130-134	Light output stability Off	step
			135-139	Uniformity On	step

Mode/channel			DMX Value	Function	Type of control
6	7	8			
			140-144	Uniformity Off	step
			145-255	Reserved	
5	3	5		**CRI selection**	
			0-255	CRI selection from Standard (80) to High (90+) (0=default)	proportional
6	*	6		**Virtual colour wheel**	
			0	No function (0=default)	step
			1-2	Filter 4 (Medium Bastard Amber)	step
			3-4	Filter 10 (Medium Yellow)	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 71 (Tokyo Blue)	step
			15-16	Filter 79 (Just Blue)	step
			17-18	Filter 88 (Lime Green)	step
			19-20	Filter 90 (Dark Yellow Green)	step
			21-22	Filter 100 (Spring Yellow)	step
			23-24	Filter 101 (Yellow)	step
			25-26	Filter 102 (Light Amber)	step
			27-28	Filter 103 (Straw)	step
			29-30	Filter 104 (Deep Amber)	step
			31-32	Filter 105 (Orange)	step
			33-34	Filter 106 (Primary Red)	step
			35-36	Filter 111 (Dark Pink)	step
			37-38	Filter 115 (Peacock Blue)	step
			39-40	Filter 116 (Medium Blue-Green)	step
			41-42	Filter 117 (Steel Blue)	step
			43-44	Filter 118 (Light Blue)	step
			45-46	Filter 119 (Dark Blue)	step
			47-48	Filter 120 (Deep Blue)	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 139 (Primary Green)	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 158 (Deep Orange)	step
			83-84	Filter 162 (Bastard Amber)	step

Mode/channel			DMX Value	Function	Type of control
6	7	8			
			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 179 (Chrome Orange)	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 205 (Half C.T. Orange)	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 715 (Cabana Blue)	step
			129-130	Filter 778 (Millennium Gold)	step
			131-132	Filter 793 (Vanity Fair)	step
			133-215	Reserved	
			216-217	User colour 1	step
			218-219	User colour 2	step
			220-221	User colour 3	step
			222-223	User colour 4	step
			224-225	User colour 5	step
			226-227	User colour 6	step
			228-229	User colour 7	step
			230-231	User colour 8	step
			232-233	User colour 9	step
			234-235	User colour 10	step
			236-245	Rainbow effect (with fade time) from slow-> fast	proportional
			246-255	Rainbow effect (without fade time) from slow-> fast	proportional
7	4	*		**Cyan/Red (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (0=default for CMY mode, 255=default for RGB mode)	proportional
8	*	*		**Cyan/Red (16 bit)**	
			0 - 255	Colour saturation control - fine (0=default for CMY mode, 255=default for RGB mode)	proportional
9	5	*		**Magenta/Green (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (0=default for CMY mode, 255=default for RGB mode)	proportional
10	*	*		**Magenta/Green (16 bit)**	
			0 - 255	Colour saturation control - fine (0=default for CMY mode, 255=default for RGB mode)	proportional

Mode/channel			DMX Value	Function	Type of control
6	7	8			
11	**6**	*****		**Yellow/Blue (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (0=default for CMY mode, 255=default for RGB mode)	proportional
12	*****	*****		**Yellow/Blue (16 bit)**	
			0 - 255	Colour saturation control - fine (0=default for CMY mode, 255=default for RGB mode)	proportional
*	*****	**7**		**Red (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	*****	**8**		**Red (16bit)**	
			0 - 255	Colour saturation control - fine (255=default)	proportional
*		**9**		**Green (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		**10**		**Green (16bit)**	
			0 - 255	Colour saturation control - fine (255=default)	proportional
*		**11**		**Blue (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		**12**		**Blue (16bit)**	
			0 - 255	Colour saturation control - fine (255=default)	proportional
*		**13**		**Amber (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		**14**		**Amber (16bit)**	
			0 - 255	Colour saturation control - fine (255=default)	proportional
*		**15**		**Lime (8 bit)**	
			0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*		**16**		**Lime (16bit)**	
			0 - 255	colour saturation control - fine (255=default)	proportional
13	**7**	**17**		**CTC**	
				Standard CTC range (8000 K-2700 K) - it is a default setting in display menu	
			0-1	8000 K	step
			2-64	Colour temperature changing 7978 K ->6622 K (22 K /1 DMX)	proportional
			65	6600 K	step
			66-109	Colour temperature changing 657 8K ->5622 K (22 K/1 DMX)	proportional
			110	5600 K (110=default)	step
			111-179	Colour temperature changing 5580 K ->4220 K (20 K/1 DMX)	proportional
			180	4200 K	step
			181-229	Colour temperature changing 4180 K ->3220 K (20 K/1 DMX)	proportional
			230	3200 K	step
			231-254	Colour temperature changing 3180 K ->2720 K (20K /1 DMX)	proportional
			255	2700K	proportional
				Extended CTC range (10000 K-1800 K)	
			0	10 000 K	step
			1-39	Colour temperature changing 9950 K ->8050 K (50 K /1 DMX)	proportional
			40	8000 K	step
			41-99	Colour temperature changing 7960 K ->5640 K (40 K /1 DMX)	proportional
			100	5600 K	step
			101-149	Colour temperature changing 5572 K ->4228 K (28 K/1 DMX)	proportional
			150	4200 K	step
			151-189	Colour temperature changing 4175 K ->3225 K (25 K/1 DMX)	proportional

Mode/channel			DMX Value	Function	Type of control
6	7	8			
			190	3200 K	step
			191-209	Colour temperature changing 3175 K ->2725 K (25K /1 DMX)	proportional
			210	2700K	step
			211-254	Colour temperature changing 2680 K ->1820 K (20K /1 DMX)	proportional
			255	1800K	step
14	*	18		**Green correction**	
			0	Uncorrected white	step
			1-127	Minus green --> uncorrected white	proportional
			128	Uncorrected white (128=default)	step
			129-255	Uncorrected white --> Plus green	proportional
15	*	19		**Colour mix control**	
				Defines relation between Virtual Colour wheel and colour channels	
				"Virtual" = Virtual Colour Wheel	
				"Colour mix" = Colour channels (CMY/RGBAL/CTC)	
			0-9	"Virtual " has priority over "Colour mix" (0=default)	
			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")	step
			50-59	Subtraction mode ("Virtual" – "Colour mix")	step
			60-69	Inverted Subtraction mode ("Colour mix"-"Virtual")	step
			70-79	White Point Off (CTC+Green Cor.+Virtual Colour Wheel deactivated)	step
			80-128	Reserved	
			129	Crossfade "Virtual" only	step
			130-254	Crossfade between "Virtual" and "Colour mix"	proportional
			255	Crossfade "Colour mix" only	step
16	8	20		**Static gobo wheel (optional module)**	
			0-4	Open/hole (0=default)	step
				Positioning	
			5-9	Gobo 1	step
			10-14	Gobo 2	step
			15-19	Gobo 3	step
			20 - 255	Open/hole	step
17	9	21		**Rotating gobo wheel (optional module)**	
				Index - set indexing on channel 18/10/22	
			0-4	Open/hole (0=default)	step
			5-9	Gobo 1	step
			10-14	Gobo 2	step
				Rotation - set rotation on channel 18/10/22	
			15-19	Gobo 1	step
			20-24	Gobo 2	step
			25 - 255	Open/hole	step
18	10	22		**Rot. gobo indexing and rotation (optional module)**	
				Gobo indexing - set position on channel 17/9/21	
			0 - 255	Gobo indexing	proportional
				Gobo rotation - set position on channel 17/9/21	
			0	No rotation	step
			1 - 127	Forwards gobo rotation from fast to slow	proportional

Mode/channel			DMX Value	Function	Type of control
6	7	8			
			128	No rotation (128=default)	step
			129 - 255	Backwards gobo rotation from slow to fast	proportional
19	*	23		**Rot. gobo indexing/rotation - fine (optional module)**	
			0-255	Fine indexing/rotation (0=default)	proportional
20	11	24		**Iris (optional module)**	
			0	Open (0=default)	step
			1 - 179	From max.diameter to min.diameter	proportional
			180 - 191	Closed	step
				Pulse effects with Iris blackout	
			192 -219	Pulse opening from slow to fast	proportional
			220 - 247	Pulse closing from fast to slow	proportional
			248 - 249	Random pulse opening (fast)	step
			250 - 251	Random pulse opening (slow)	step
			252 - 253	Random pulse closing (fast)	step
			254 - 255	Random pulse closing (slow)	step
21	*	25		**Iris - fine (optional module)**	
			0 - 255	Fine iris movement (0=default)	proportional
22	12	26		**Shutter/ strobe**	
			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
23	13	27		**Dimmer intensity**	
			0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
24	*	28		**Dimmer intensity - fine**	
			0 - 255	Fine dimming (0=default)	proportional

T11 - Colours on Virtual Colour Wheel					
Colour name	Red DMX	Green DMX	Blue DMX	Amber DMX	Lime DMX
Filter 4 (Medium Bastard Amber)	255	47	7	255	80
Filter 10 (Medium Yellow)	255	65	0	255	132
Filter 19 (Fire)	255	0	0	186	1
Filter 26 (Bright Red)	255	0	0	25	0
Filter 58 (Lavender)	255	0	68	255	44
Filter 68 (Sky Blue)	132	190	159	0	36
Filter 71 (Tokyo Blue)	0	0	255	0	0
Filter 79 (Just Blue)	123	147	171	0	56
Filter 88 (Lime Green)	255	237	2	198	185
Filter 90 (Dark Yellow Green)	0	255	2	0	169
Filter 100 (Spring Yellow)	255	0	0	255	223
Filter 101 (Yellow)	255	0	0	255	157
Filter 102 (Light Amber)	255	142	4	255	73
Filter 103 (Straw)	255	138	4	255	97
Filter 104 (Deep Amber)	255	0	0	255	124
Filter 105 (Orange)	255	0	0	255	60
Filter 106 (Primary Red)	255	0	0	104	0
Filter 111 (Dark Pink)	255	0	11	255	59
Filter 115 (Peacock Blue)	0	255	31	0	72
Filter 116 (Medium Blue-Green)	0	255	20	0	63
Filter 117 (Steel Blue)	45	255	42	158	183
Filter 118 (Light Blue)	4	255	37	0	77
Filter 119 (Dark Blue)	0	165	118	0	0
Filter 120 (Deep Blue)	3	165	111	0	0
Filter 121 (Filter Green)	84	255	0	235	24
Filter 128 (Bright Pink)	255	0	10	127	0
Filter 131 (Marine Blue)	0	255	75	51	116
Filter 132 (Medium Blue)	0	255	102	0	42
Filter 134 (Golden Amber)	255	51	0	255	42
Filter 135 (Deep Golden Amber)	255	35	0	255	0
Filter 136 (Pale Lavender)	184	7	51	255	60
Filter 137 (Special Lavender)	231	63	43	255	99
Filter 138 (Pale Green)	255	224	6	255	200
Filter 139 (Primary Green)	0	255	0	0	84
Filter 141 (Bright Blue)	0	255	77	0	82
Filter 147 (Apricot)	255	0	4	255	115
Filter 148 (Bright Rose)	255	0	7	255	13
Filter 152 (Pale Gold)	255	0	11	255	112
Filter 154 (Pale Rose)	255	0	16	255	119
Filter 157 (Pink)	255	0	7	255	27
Filter 158 (Deep Orange)	255	0	0	255	30
Filter 162 (Bastard Amber)	255	175	7	255	50
Filter 164 (Flame Red)	255	0	0	142	0
Filter 165 (Daylight Blue)	12	255	158	3	156
Filter 169 (Lilac Tint)	255	12	27	255	61
Filter 170 (Deep Lavender)	255	0	65	255	90
Filter 172 (Lagoon Blue)	0	238	113	0	255

Colour name	Red DMX	Green DMX	Blue DMX	Amber DMX	Lime DMX
Filter 179 (Chrome Orange)	255	0	0	255	112
Filter 180 (Dark Lavender)	92	15	188	76	46
Filter 181 (Congo Blue)	185	0	214	0	0
Filter 197 (Alice Blue)	0	249	163	39	0
Filter 201 (Full C.T. Blue)	38	150	97	36	246
Filter 202 (Half C.T. Blue)	164	13	123	34	255
Filter 203 (Quarter C.T. Blue)	255	203	54	104	255
Filter 204 (Full C.T. Orange)	255	125	0	255	4
Filter 205 (Half C.T. Orange)	255	139	5	255	67
Filter 206 (Quarter C.T. Orange)	255	60	17	255	98
Filter 247 (Filter Minus Green)	255	28	36	255	56
Filter 248 (Half Minus Green)	255	20	45	255	200
Filter 281 (Three Quarter C.T. Blue)	38	255	102	136	227
Filter 285 (Three Quarter C.T. Orange)	255	0	0	255	121
Filter 352 (Glacier Blue)	16	255	119	5	149
Filter 353 (Lighter Blue)	14	255	66	0	157
Filter 715 (Cabana Blue)	0	222	182	0	0
Filter 778 (Millennium Gold)	255	0	0	255	37
Filter 793 (Vanity Fair)	255	0	26	171	0