ROBIN®Promotion

ROBIN®Promotion ADM
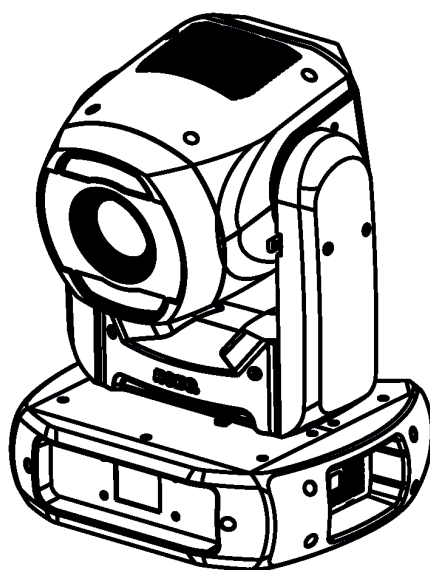
ROBE
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USER MANUAL

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Robin ProMotion

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FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE POWERING OR INSTALLING YOUR ROBIN ProMotion !
Save it for future reference.

This device has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

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

The Robin ProMotion was designed for indoor use and it is intended for professional application only. It is not for household use.

1. Safety instructions

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

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

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

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

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

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

Refer servicing to qualified service personnel.

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

Do not connect this fixture to a dimmer pack.

LED light emission. Risk of eye injury. Do not look into the beam at short distance from the product. Do not view the light output with optical instruments or any device that may concentrate the beam

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

Do not shake the fixture. Avoid brute force when installing or operating the fixture.
This fixture was designed for indoor use only, do not expose this unit to rain or use near water.

When choosing the installation spot, please make sure that the fixture is not exposed to extreme heat, moisture, dust or entertainment smoke (haze)
Air vents and slots in the fixture head and base are provided for ventilation to ensure reliable operation of the device and to protect it from overheating.

Do not block the light output with any object when the fixture is under operation.

The openings should never be covered with cloth or other materials, and never must be blocked.

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

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

Always use a secondary safety cable when mounting this fixture.

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

The fixture becomes very hot during operation. Allow the fixture to cool approximately 20 minutes prior to manipulate with it.

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

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

Please consider that unauthorized modifications on the fixture are forbidden due to safety reasons!

Potential flare pixels (max. 4 pixels) do not influence function of the fixture and do not subject to complaint.

To avoid damage of the internal optical system of the fixture, never let the sunlight or other fixture lights directly to the front lens , even when the fixture is not working !

Warning for the ProMotion ADM (ADM = Automatic Distance Meter) only:
LASER DEVICE CLASS 1
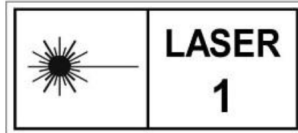
The product (covers and cables) must not be exposed to a high frequency electromagnetic field higher than 3V/m.

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.

2. Fixture exterior view
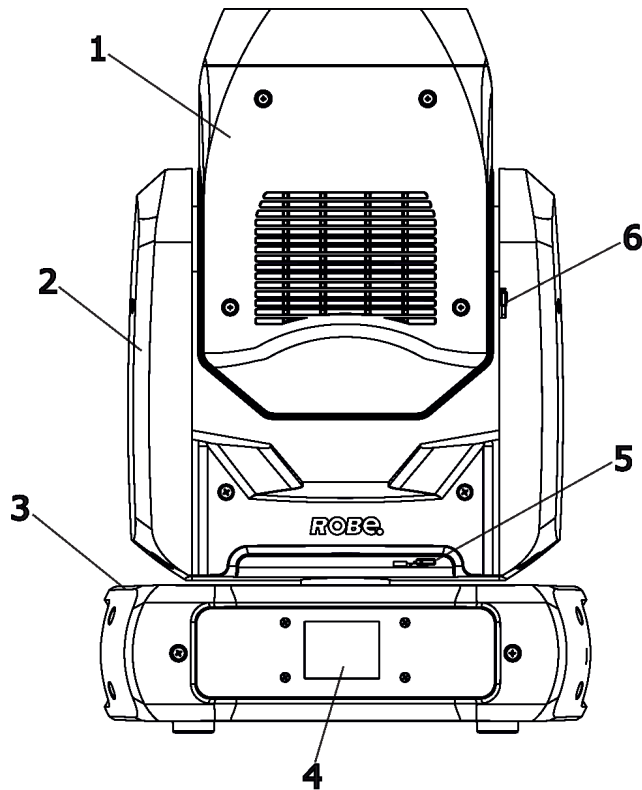
1 - Moving head
2 - Arm
3 - Base
4 - Display
5 - Pan lock
6 - Tilt lock

Note: the Robin Promotion ADM is equipped with an automatic distance meter which enables autofocus of the fixture.
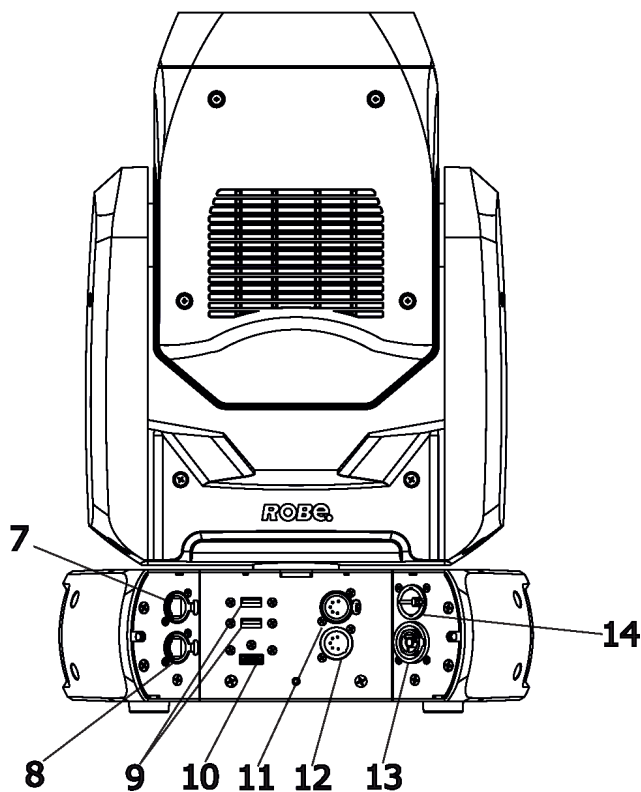
7 - Ethernet OUT (RJ45)
8 - Ethernet IN (RJ45)
9 - 2x USB input
10 - HDMI input
11 - DMX OUT (5-pin XLR)
12 - DMX IN (5-pin XLR)
13 - Power OUT (PowerCon True 1)
14 - Power IN (PowerCon True 1)

The head has to be locked for transportation - the pan lock (5) and the tilt lock (6) have to be in locked positions. To unlock the head, move these latches to unlock positions before operating the fixture.

3. Installation

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

3.1 Connection to the mains

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

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

Install a suitable plug on the power cord (if it is needed), note that the cores in the power cord are coloured according to the following table. The earth has to be connected!
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	⏚

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

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

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

CE	cETLus
24 fixtures at power supply= 230V	14 fixtures at power supply= 230V
22 fixtures at power supply= 208V	13 fixtures at power supply= 208V
12 fixtures at power supply= 120V	7 fixtures at power supply= 120V

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

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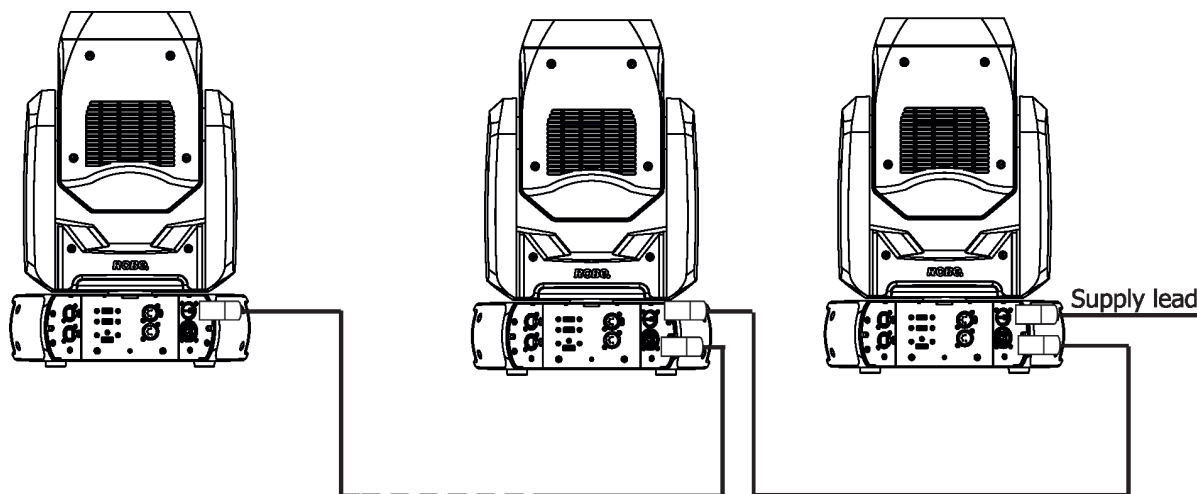
Wiring and connection work must be carried out by qualified staff!

3.2 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 regulation.

> **For overhead installation, the fixture must be always secured with a safety wire**

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 materials 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.

> **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.**
> **Follow the instructions mentioned at the bottom of the base.**
> **Make sure that the device is fixed properly! Ensure that the structure (truss) to which you are attaching the fixtures is secure.**

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

For securing the fixture a truss install a safety wire that can hold at least 10 times the weight of the fixture. Use only the safety wire with snap hooks with screw lock gates. **Fasten the safety cable in the attachment point and around the truss as shown on the picture.**

Rigging via two omega holders:

1-Clamp
2-Omega holders with quarter-turn loks
3-Truss
4- Safety wire
5-Attachment point for safety wire
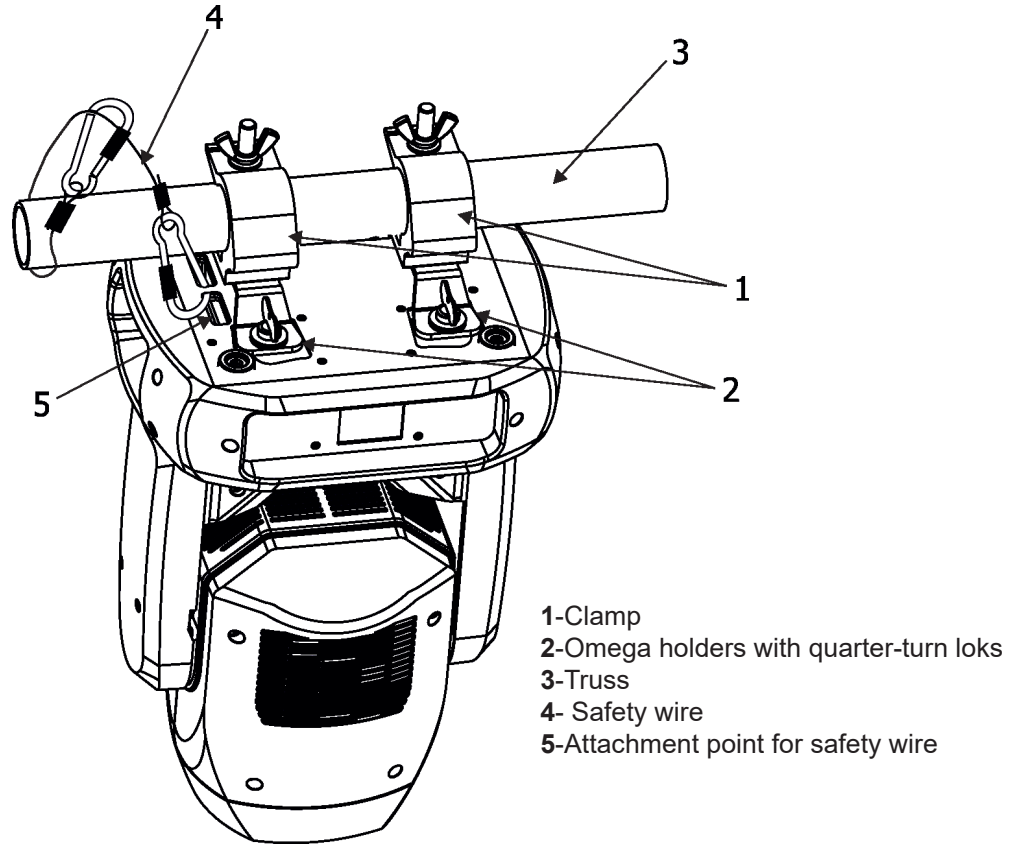
> **When installing fixtures side-by-side, avoid illuminating one fixture with another!**

3.3 Ceiling mounting kit installation

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

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

Ceiling mounting kit installation
1. Fasten the mounting plate (1) on the non-flammable flat surface (ceiling or the wall) by means of the six screws via six holes of diameter of 7.5mm. Type and length of screws choose according to the material of the ceiling (wall).

All dimensions in mm
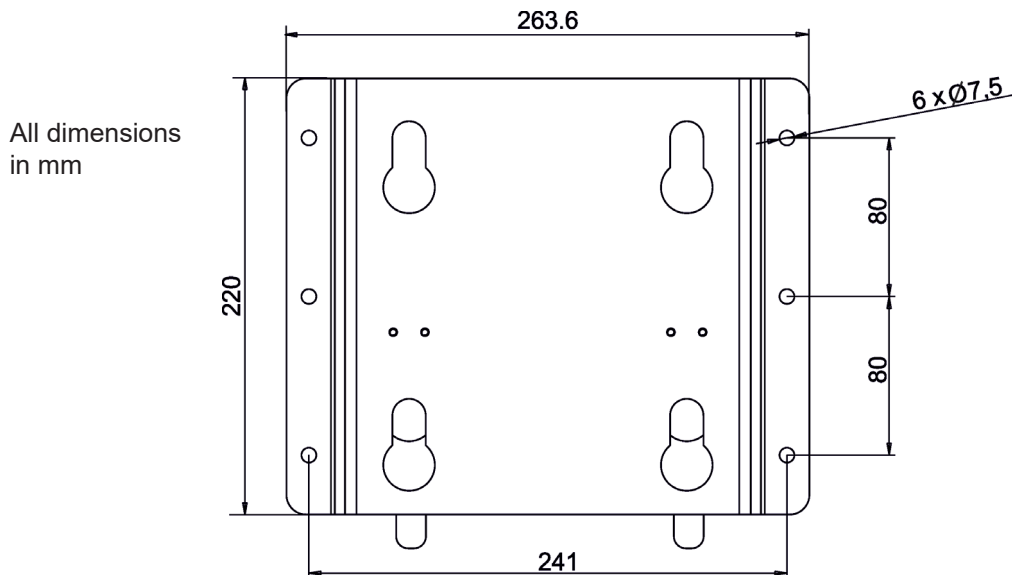
2. Insert the four quick-lock fasteners (2) to the openings in the fixture base and tighten them fully clockwise.
3. Slide the Promotion onto mounting plate (1) and move it in direction as shown on the picture below until securing blades (3) snap into grooves in the quick-lock fasteners.
4. Check the fixture is safely fastened on the mounting plate.
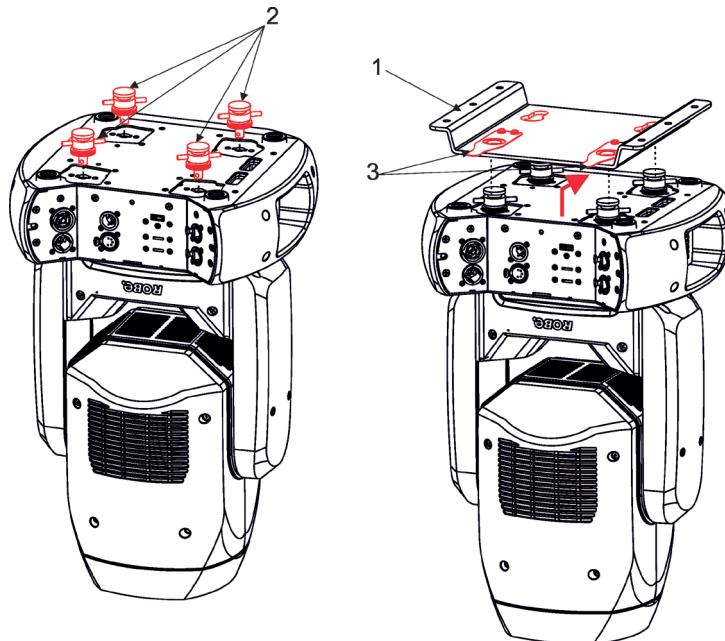
In case the fixture has to be fastened on the wall, the mounting plate <u>must</u> be oriented by securing blades (3) up (towards the ceiling) as shown on the picture below.
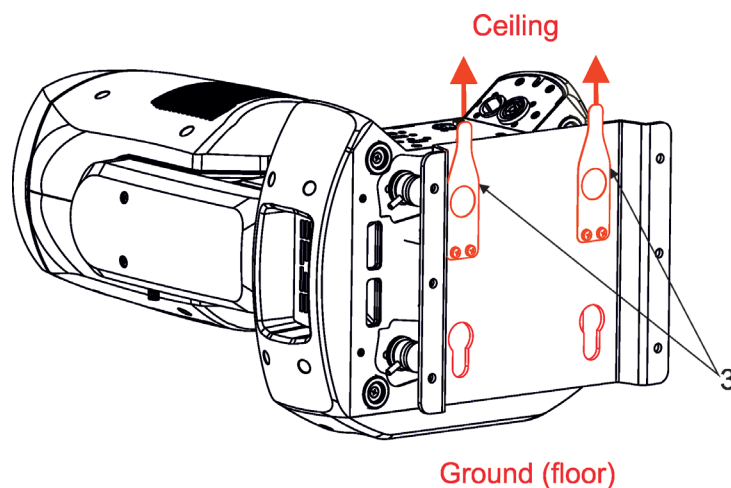
3.4 Positioning the Robin ProMotion

The Robin ProMotion is designed to be installed in one of four possible installation locations:
1. Front Table - the fixture is placed near the floor in front of the screen.

2. Front Ceiling - the fixture is suspended upside-down from the ceiling (truss) in front of the screen.
Set Ceiling Projection at On in the menu Personality ("Personality--->"LED Engine" --->"Ceiling Projection"--->"On").

3. Rear Table - the fixture is placed near the floor behind the screen. Set Rear Projection at On in the menu Personality ("Personality--->"LED Engine" --->"Rear Projection "--->"On")
Note that a special rear projection screen is required.

4. Rear Ceiling - the fixture is suspended upside-down from the ceiling (truss) behind the screen.
Set Rear Projection in the menu Personality ("Personality--->"LED Engine" --->"Ceiling Projection"--->"On") and Ceiling Projection at On ("Personality--->"LED Engine" --->"Rear Projection"--->"On")
Note that a special rear projection screen is required.

When determining the position of the fixture and projection screen, you will need to account for the projected image size, which is directly proportional to the projection distance.

There is a chart of throw distance ratio of 3.5 : 1 to assist you in determining the ideal location for your fixture.

Illuminance - centre (white output: Max. Brightness)		Image Size
118 lx / 11 fc	14m (46')	X=4.0m (13.12') / Y=2.25m (7.38')
137 lx / 13 fc	13m (43')	X=3.71m (12.10') / Y=2.08m (6.82')
161 lx / 15 fc	12m (39')	X=3.43m (11.25') / Y=1.93m (6.33')
192 lx / 18 fc	11m (36')	X=3.14m (10.31') / Y=1.78m (5.84')
232 lx / 22 fc	10m (33')	X=2.86m (9.37') / Y=1.61m (5.28')
286 lx / 27 fc	9m (30')	X=2.57m (8.44') / Y=1.45m (4.76')
362 lx / 34 fc	8m (26')	X=2.29m (7.05') / Y=1.29m (4.23')
473 lx / 44 fc	7m (23')	X=2.0m (6.56') / Y=1.13m (3.71')
643 lx / 60 fc	6m (20')	X=1.71m (5.62') / Y=0.96m (3.15')
927 lx / 86 fc	5m (16')	X=1.43m (4.69') / Y=0.80m (2.62')
1448 lx / 135 fc	4m (13')	X=1.14m (3.75') / Y=0.64m (2.10')
2575 lx / 239 fc	3m (10')	X=0.86m (2.81') / Y=0.48m (1.57')
5794 lx / 538 fc	2m (7')	X=0.57m (1.87') / Y=0.32m (1.05')

Y
X
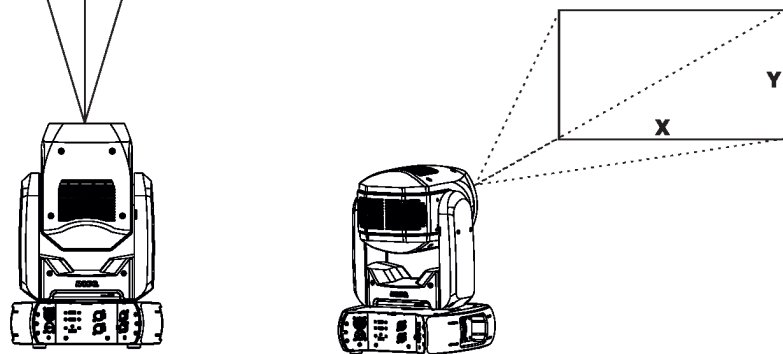
Note: There is a tolerance among these numbers due to optical component variations. We recommend that if you intend to permanently install the Robin ProMotion, you should physically test the projection size and distance using the actual fixture before permanent installation.

3.5 Additional base covers installation

The additional base covers cover connectors and the display of the fixture´s base.

Disconnect the fixture from mains before base covers installing.

To install the base covers:
1. Remove the display cover (1) by loosening the two quarter-turn locks (2) on the cover.
2. Fasten the additional cover (3) on the base by means of the two quarter-turn locks (4) instead of the display cover (1).
3. Fasten the additional cover (5) (this cover is open from its bottom side) on the rear side of the base by means of the two quarter-turn locks (6).

Detail A

Nut for safety wire of cover

Detail B

Nut for safety wire of cover
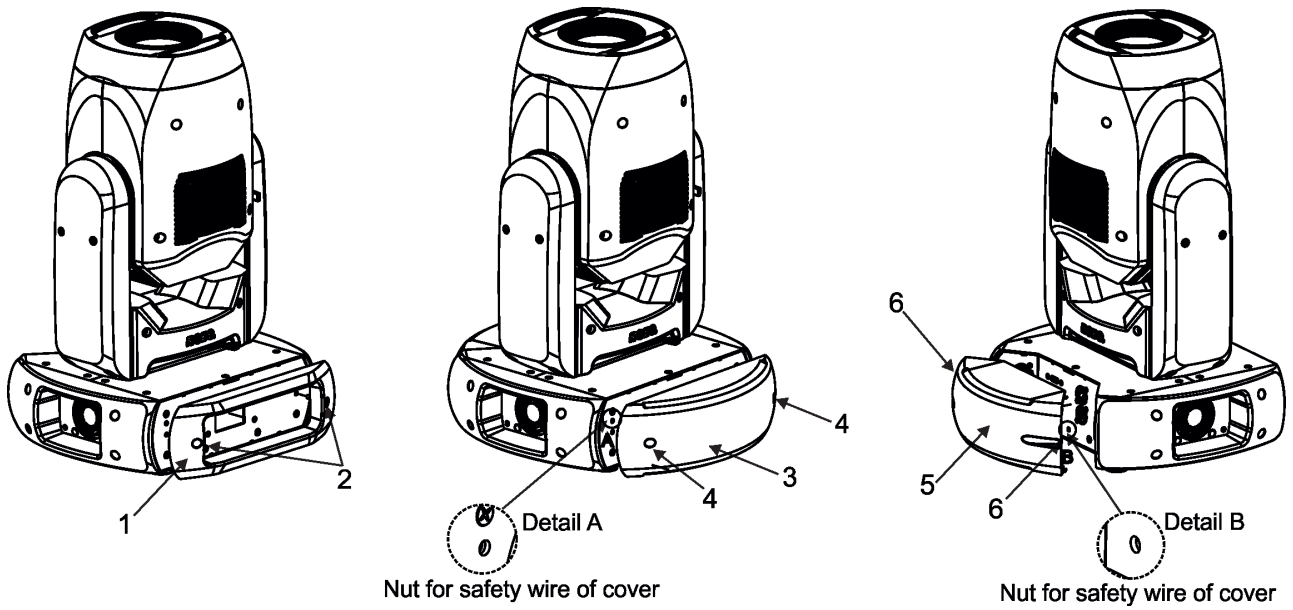
3.6 Installing the wide-angle lens

Disconnect the fixture from mains before the wide-angle module installing.

To install the wide-angle lens:
1. Remove both covers (1) by loosening the four quarter-turn locks (2) on each cover.
2. Remove the front part (3) of the head by unscrewing the four screws M4x8 (4) and disconnecting cables.
3. Screw the module of Wide-angle lens (5) to the tube (11) by means of the three screws M3x10 (6) with nuts (7).
4. Unscrew the screw (8) and screw the screw M3x25 (10) with spacer (9) instead of the screw (8).
5. Place back the front part (3) of the head and screw it by means of the four screws M4x8 (4) and connect cables.
6. Place back both covers (1) and secure them by means of the four quarter-turn locks (2) on each cover.

Detail A
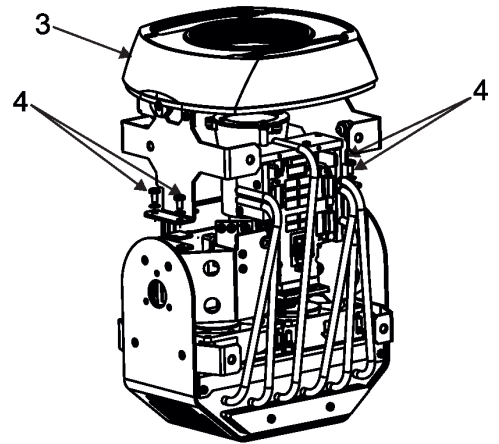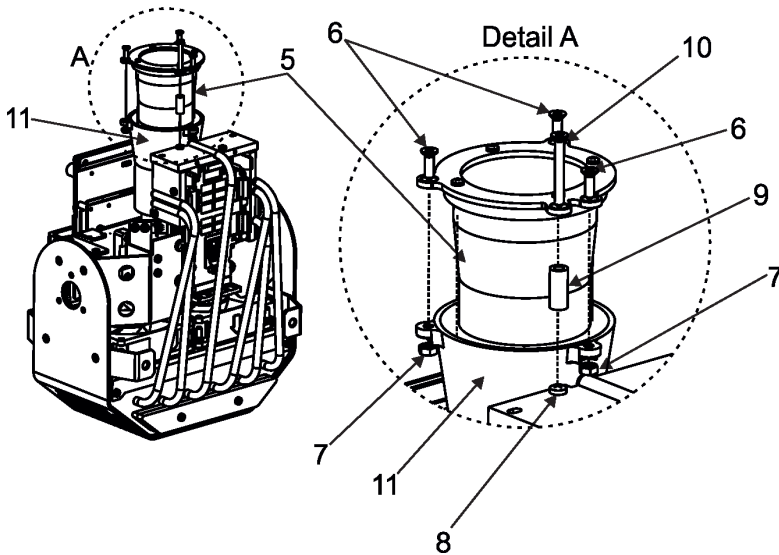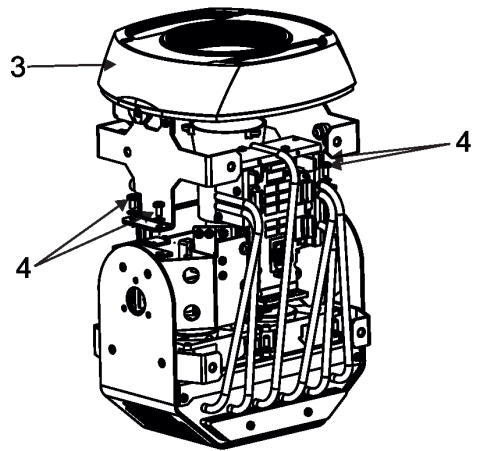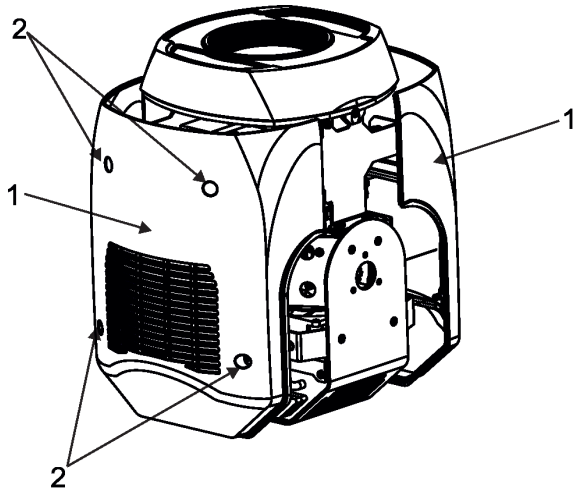
3.7 Installing the Automatic Distance Meter (ADM)

Disconnect the fixture from mains before installing ADM.

To install the ADM
1. Remove both covers (1) by loosening the four quarter-turn locks (2) on each cover.
2. Remove the front part (3) of the head by unscrewing the four screws M4x8 (4) and disconnecting cables from the control PCB (11)
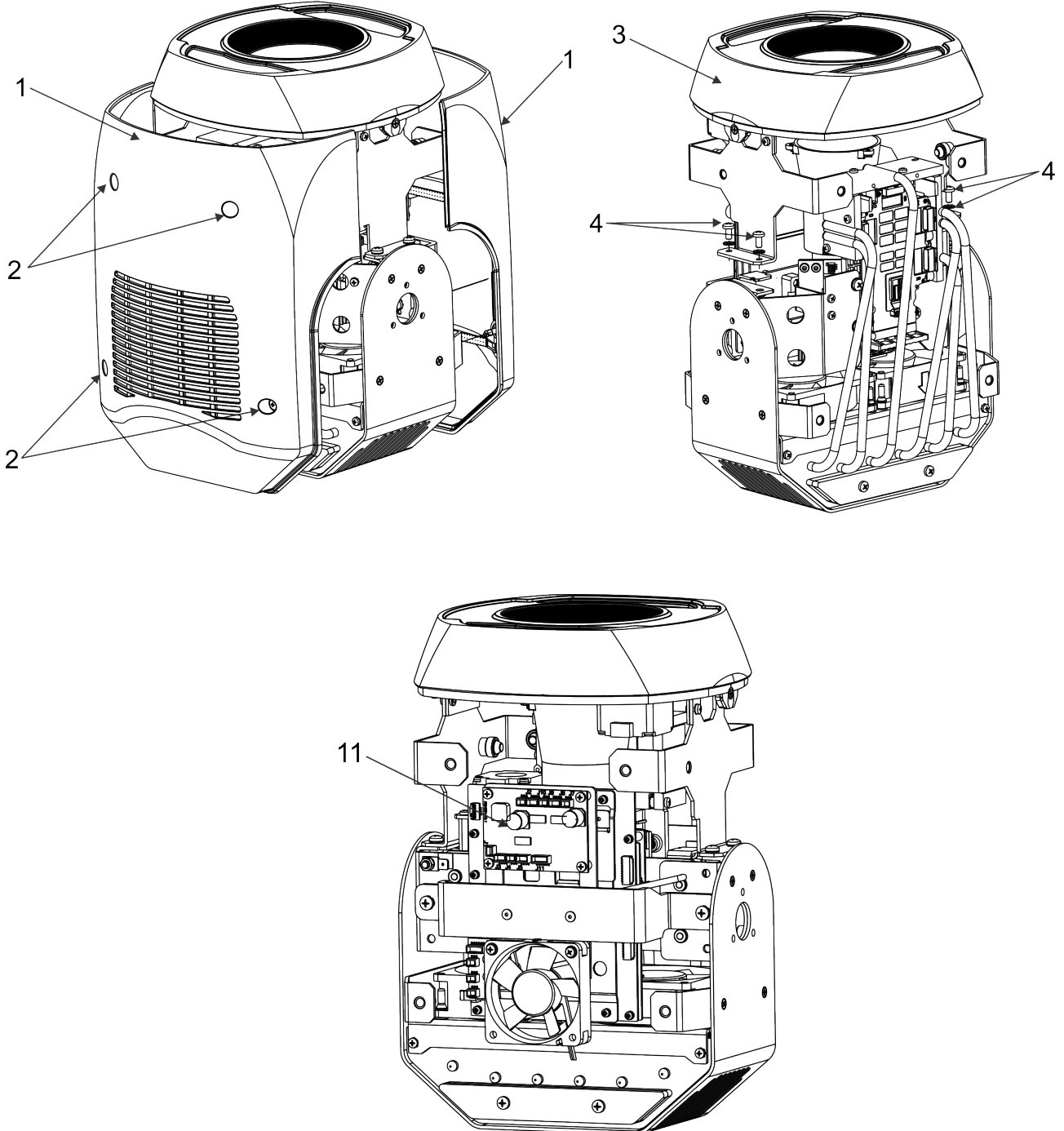
3. Remove the grey box module (5) of the head by unscrewing the four screws M4x8 (6).

DETAIL A
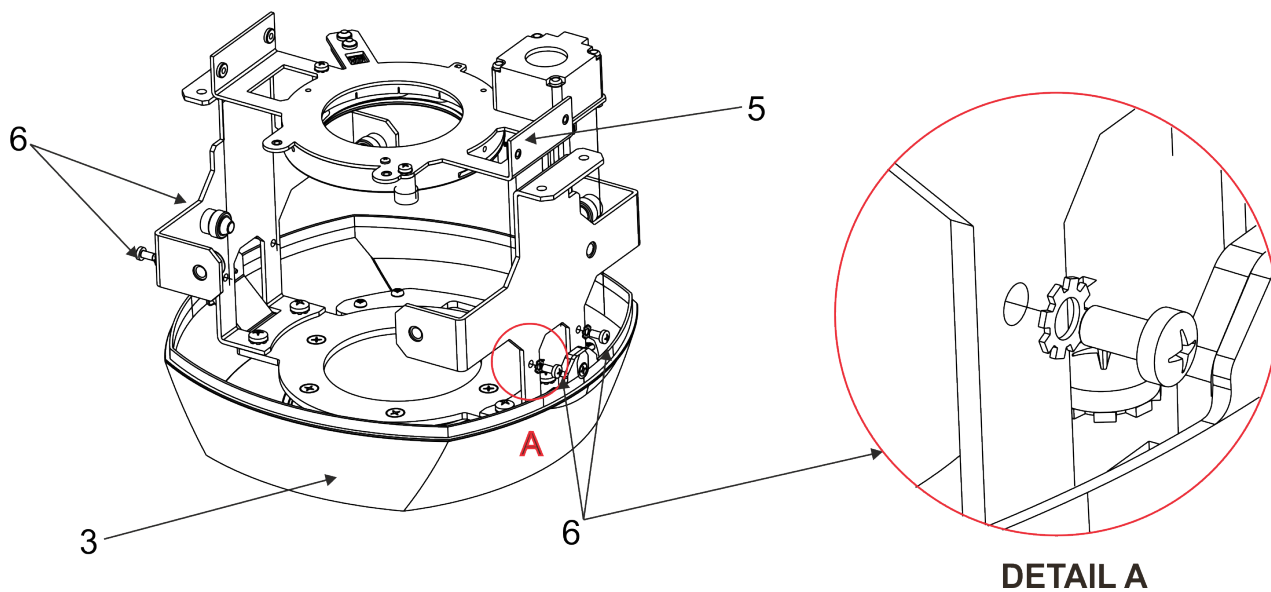
4. Remove the black glass (7) by unscrewing its glass holder with four screws 3x8 (8).
5. Place a new glass with two apertures and secure it by means of the glass holder with four screws 3x8 (8).
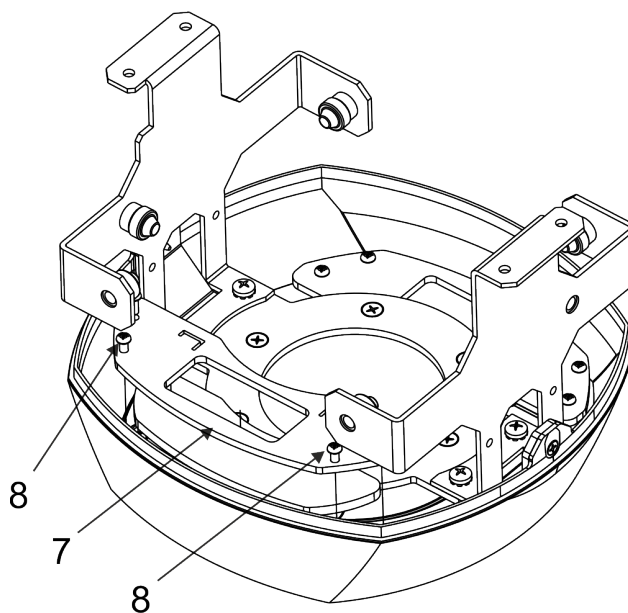
6. Place the ADM (9) on the grey box module (5) and screw it by means of two screws M3x18 (10) and one spacer (11) .
7. Screw the grey box module (5) back to the front part (3) of the head by means of the four screws M4x8 (6).
8. Screw the front part (3) of the head by means of the four screws M4x8 (4) and connect disconnected cables.
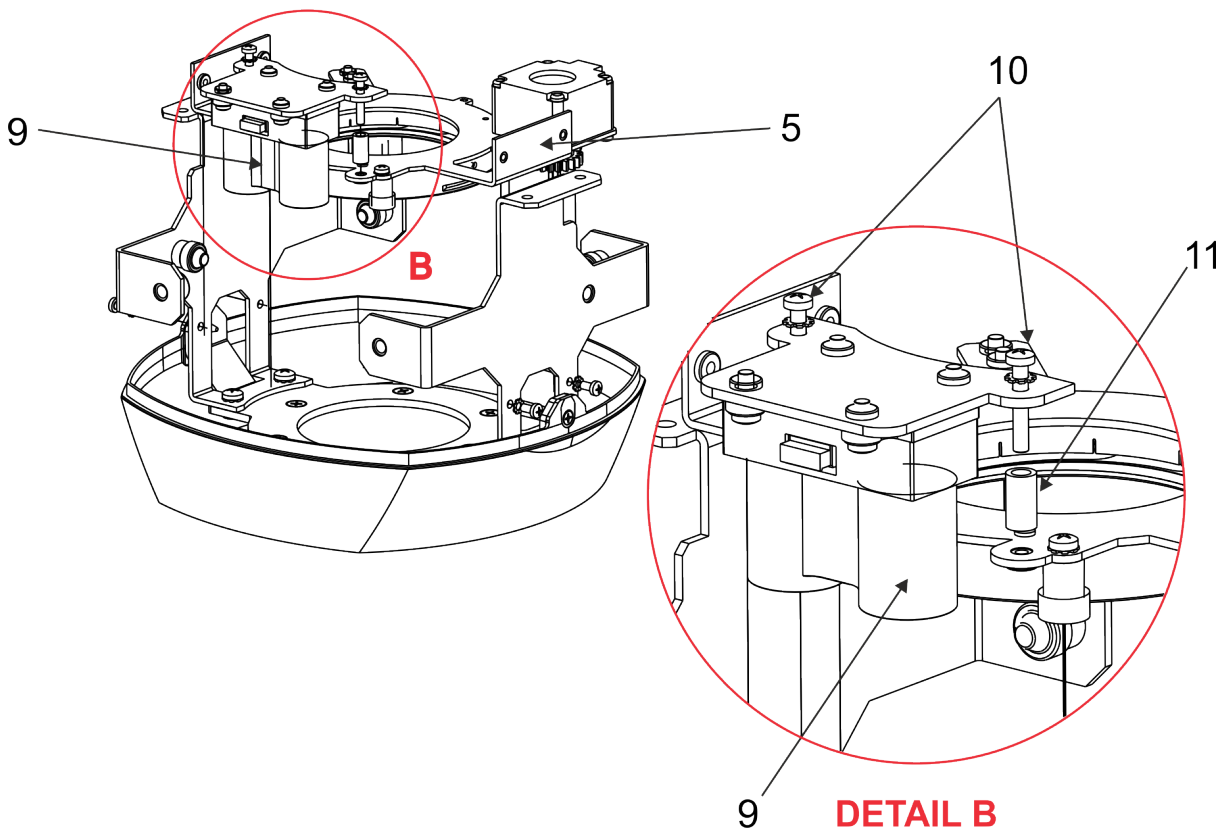
9. Connect the cable from the Automatic Distance Meter to the connector J3 of the PCB RB4061.
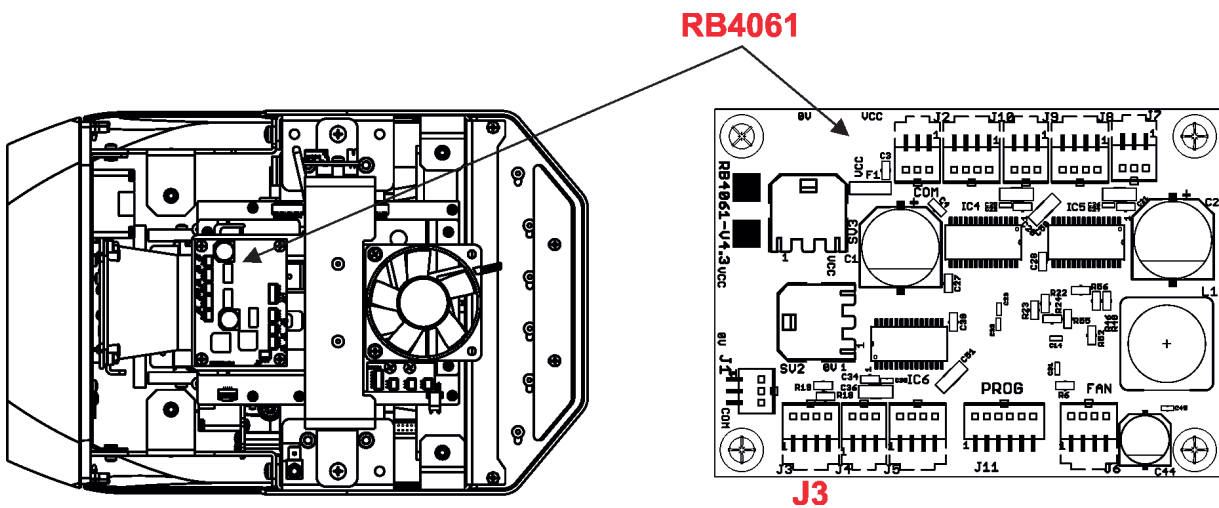
The Automatic Distance Meter (ADM) allows you to keep the image on the screen (wall, ceiling) permanently focused during Promotion´s head movement.

For correct function of the ADM do not use a fog in the room where the Promotion is operating and do not block the space between the screen and the Promotion (e.g. by walking persons).
The channel Focus (8) has to be set at 0 DMX.

3.8 DMX-512 connection

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

DMX output
XLR sockets:

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

DMX input
XLR plug:

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

If you are using the standard DMX controllers, you can connect the DMX output of the controller directly with the DMX input of the first fixture in the DMX chain.

Building a serial DMX chain:
Connect the DMX output of the first fixture in the DMX chain with the DMX input of the next fixture. Always connect one output with the input of the next fixture until all fixtures are connected. Up to 32 fixtures can be interconnected.

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

Fixture 32   Fixture 2   Fixture 1
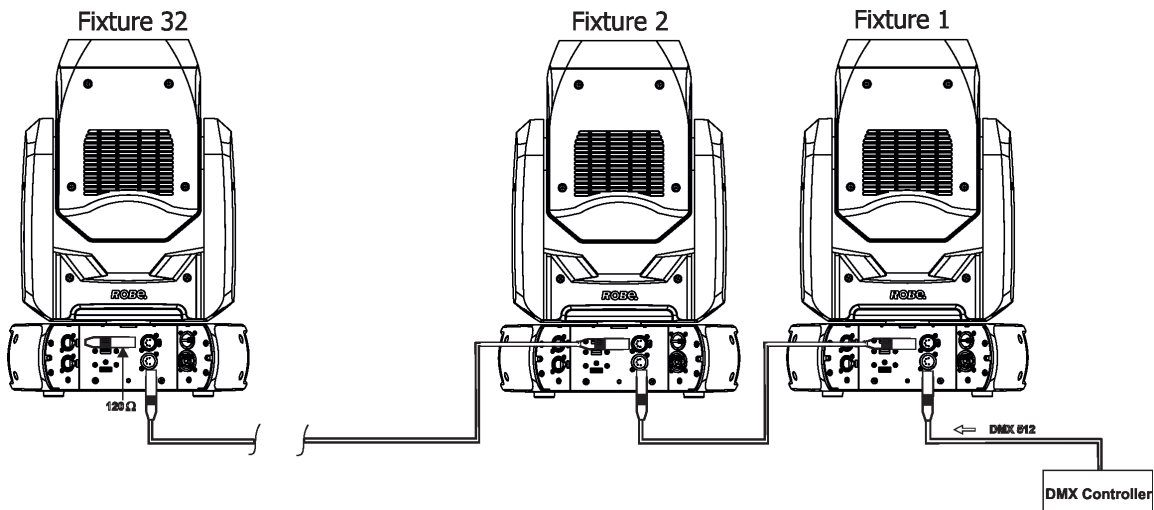
3.9 Ethernet connection

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 ProMotion is equipped with 8-pin RJ- 45 socket for Ethernet input.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):   **RJ-45 plug (front view):**

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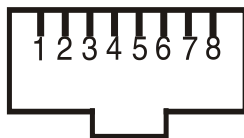
1- TD+	5- Not connected
2- TD-	6- RX-
3- RX+	7- Not connected
4- Not connected	8- Not connected

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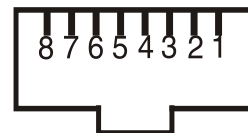
Patch cables that connect fixtures to the hubs or LAN sockets are wired 1:1,that is,pins with the same numbers are connected together:

        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

Connect the Ethernet inputs of all fixtures with the Ethernet network.
The option "ArtNet" has to be selected from the menu "Mode" at the fixture (DMXA 001-->Mode-->ArtNet).
Set IP address, NetMask and the Universe.

(DMX address=144)	(DMX address=25)	(DMX address=1)
IP addres=002.168.002.006	IP addres=002.168.002.003	IP addres=002.168.002.002
Universe=1	Universe=1	Universe=1

Art-Net

Art-Net

Art-Net
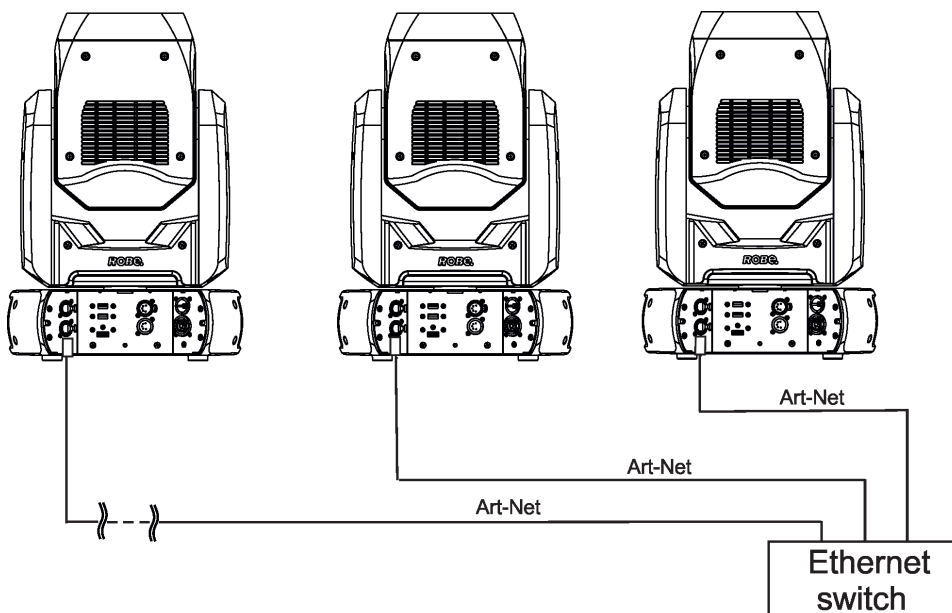
Ethernet switch

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

The Robin ProMotion is equipped with an internal Ethernet switch which allows Ethernet IN-OUT connection. If you use the IN-OUT line for the Ethernet connection without an external Ethernet switch, max. 8 fixtures can be connected in this case.

3.10 Wireless DMX operation

The wireless version of the fixture is equipped with the Lumen Radio CRMX module and antenna for receiving DMX signal. CRMX module operates on the 2.4 GHz band.

To switch the fixture to the wireles DMX operation, select the option "Wireless DMX" from the menu "Receiving Mode" (Fixture Address--> Receiving Mode--> Wireless DMX).
The option is also available in a DMX chart on the channel 6 (channel "Special functions", the range of 15-19 DMX, the range of 10-14 DMX is designated for wired DMX). If DMX receiving option is changed by DMX command, the change is permanently written into the fixture memory.

DMX range of 10-19 DMX of the channel "Special functions" switches fixture to the wired/wireless operation and is active only during first 10 seconds after switching the fixture on.

After switching the fixture on, the fixture checks both modes of receiving DMX in the following order:

1. For the first five seconds, the fixture receives DMX signal from the wired input. If the channel "Special functions" is set at some DMX input option, the fixture will receive DMX value according to this option. If DMX input option is set to the wired input , this option is saved and checking procedure is finished. If DMX input option is not set, the fixture continues next 5 seconds in scanning wireless DMX signal-see point 2.

2. For the next 5 seconds the fixture receives wireless DMX signal and again detects if the Special functions channel is set at some DMX input option, if not, the fixture will take option which is set in the fixture menu "Receiving mode".

4. Control menu map

Default settings=Bold print

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Addressing	DMX Address	1-255				
	Ethernet Settings	Ethernet Mode	**Disable**			
			ArtNet			
			ACN			
		Artnet Universe	0-255			
		sACN Universe	1-63999			
		IP Address				
		IP NetMask				
		IP Gateway				
		Default Address				
Information	Fixture Times	Total	Power On Time			
			Lamp On Time			
		Resettable	Power On Time			
			Lamp On Time			
			Air Filt. Remains.	10-300		
	DMX Values	Pan	0-255			
		:				
		Dimmer	0-255			
	Temperatures	Current	CPU			
			Head			
			Projector			
		Highest	CPU			
			Head			
			Projector			
		High Res.	CPU			
			Head			
			Projector			
	DMX Values	Pan				
		:				
		Dimmer				
	Wireless State	Signal Quality				
		Unlink Wireless				
	Power Channel State					
	Software Versions	Graphic Engine				
		Module Pan/Tilt				
		Module Optics				
		Module Display				
	Space Usage	Free				
		Used				
	Product IDs					
Personality	DMX Presets	**Mode 1**				
		Mode 2				
	DMX Input	**Wired Input**				
		Wireless Input				
	Pan/Tilt Settings	Pan Reverse	**Off,** On			
		Tilt Reverse	**Off,** On			
		Pan/Tilt Mode	**Speed Mode**			
			Time Mode			
		Pan/Tilt Feedback	Off, **On,**			
	Blackout Settings	Blackout DMC	**Off,** On			

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
		Blackout While	Pan/Tilt Moving	**Off,** On		
	Colour Mixing Mode	**CMY Mode**				
		RGB Mode				
	Init Effect position	Pan	0-255			
		:				
		Dimmer	0-255			
	Screen Settings	Display Intensity	0-**9**			
		Screensaver Delay	**0**-10			
		Display Orientation	**Normal,** Inverted			
	LED Engine	Ceiling Projection	**Off,** On,			
		Rear Projection	**Off,** On,			
		Colour Temperature	3200K, 4200K, 5000K, 5500K, 5600K,6500K, **7500K**, 8000K,9050K Max. Brightness			
		Gamma Curve	1.8, **2.2**, 2.4, B&W, Linear			
	Gaphics Engine	Image Aspect Ratio	**Fill Screen**			
			Keep Aspect Ratio			
		Edge Antialiasing	Off, **On**			
		Gobo Selection Mode	**Alphabetical Order**			
			Numerical Order			
		Gobo Synchro Mode	Off, **On**,			
		Slideshow Timer	1s...**3s**...30.0s			
		Optics Module	**None**			
			Wide Angle Lens			
	Fans	**Auto**, High, Quiet				
	Stand Alone	Input Overtake	**Off** , On			
	WEB Server	Activate Password	Off, **On**			
		Set Password	**2479**			
	Wifi Access Point	Activate	**Off**			
			On			
		Channel ID	1-11			
	NAS Client	Activate	**Off** , On			
		IP Address				
		Synchro Time	10-600			
		On PowerUp Sync.	Off			
			No Wait For Sync			
			Wait For Sync			
	Default Settings					
Manual Control	Reset Functions	Total System Reset				
		Pan/Tilt Reset				
		Focus Reset				
		Grap. Engine Reset				
	Manual Effect Control	Pan	0-255			
		:				
		Dimmer.	0-255			
	LED Engine	External Input	**Off,** On			
		Keystone Horizontal	0...**128**....255			
		Keystone Vertical	0...**128**....255			
		Led On/Off	**Off,** On			
Stand Alone	Test Sequences	Dynamic Mode				
		Static Mode	Pan	0-255		
			Tilt	0-255		

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
			Focus	0-255		
			Run			
	Preset Playback	None				
		Program 1				
		:				
		Program 9				
	Play Program	Program 1				
		:				
		Program 9				
	Record Program	Program 1				
		:				
		Program 9				
	Edit Program	Program 1	Step 1	Pan	0-255	
		:	:	:		
		Program 9	Step	Dimmer	0-255	
				Step Time (s)	0.1-999.9s	
				Add New Step		
				Delete Step		
User Media	Initiaize USB					
	Mirror Media					
	Mirror Program					
	Re-encode Internal Media					
	Delete Internal Media					
Service	Calibration	Pan Calibration	0-255			
		Tilt Calibration	0-255			
		Focus Calibration	0-255			
		Grey Box calibration	0--255			
		Store				
	Reinit Inner Flash Drive					

5. Control menu

The Robin ProMotion is equipped with Robe Graphic Touch Screen (50x40mm / 1.97" x 1.57") which allows you to set the fixture´s behaviour according to your needs, obtain information on its operation and program it, if it has to be used in a stand-alone mode.

After switching the fixture on and performing fixture reset, the following screen with DMX address will appear.

```
┌─────────────────────────┐
│        DMX Mode         │
├─────────────────────────┤
│  IP Address: 2.242.60.145│
│                         │
│         001             │
│                         │
│                         │
└─────────────────────────┘
```
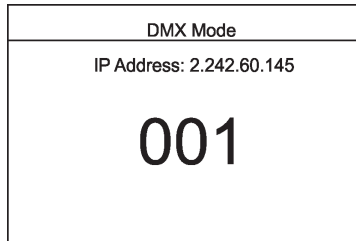
Touching and holding finger on the display rotates menu 180 degrees from current orientation.

Touch the screen and the following menu items will be displayed.

```
┌─────────────────────────────┐
│          Main Menu          │
├──────────────────────┬──────┤
│ IP Address: 2.242.60.145 │ [<] │
│                          │     │
│       Main Menu          │     │
│       Display Errors     │     │
│                          │     │
└──────────────────────┴──────┘
```
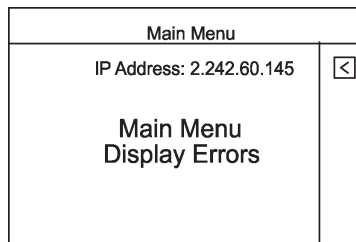
The item "Display Errors" will apear only in case if some error(s) occured. Touch the Main Menu to enter main menu of the fixture.

```
┌─────────────────────────────┐       ┌─────────────────────────────┐
│          Main Menu          │       │          Main Menu          │
├──────────────────────┬──────┤       ├──────────────────────┬──────┤
│ IP Address: 2.242.60.145 │ [<] │     │ IP Address: 2.242.60.145 │ [<] │
│                          │     │     │                          │     │
│    Addressing            │     │     │    Stand-alone           │     │
│    Information           │     │     │    User Media            │     │
│    Personality           │     │     │    Service               │     │
│    Manual Control        │     │     │                          │     │
└──────────────────────┴──────┘       └──────────────────────┴──────┘
```
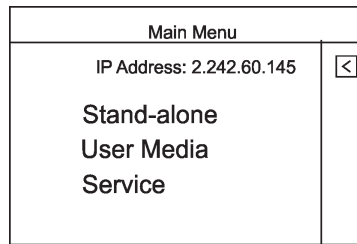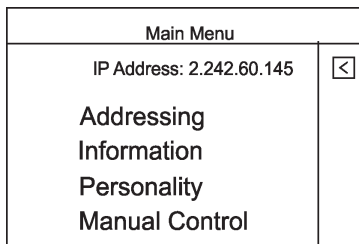
5.1 Addressing

DMX Address - Use the menu item to set desired DMX start address of the fixture, which is defined as the first channel from which the Robin ProMotion will respond to the controller.
If you set, for example, the address 26, the Robin ProMotion will use channels 26 - 50 for control. Please, be sure that you do not have any overlapping channels in order to control each Robin ProMotion correctly and independently from any other fixture on the DMX data link.

Ethernet Settings - The menu allows all needed settings for the Ethernet operation

    Ethernet Mode
        Disable - The option disables Ethernet operation.
        Artnet - Fixture receives Artnet protocol
        ACN - Fixture receives ACN protocol

    ArtNet Universe - Use the menu item to set desired ArtNet Universe (0-255).

    sACN Universe - Use the menu item to set desired sACN Universe. (1-63999)

    IP Address - Use this menu to set desired IP address of the fixture.

    IP NetMask - Use the menu item to set desired NetMask of the fixture.

    IP Gateway - Use the menu item to set et desired Gateway.

    Default Address - Use the menu item to set IP address, netmask and Artnet universe to default values.

5.2 Information

Fixture Times - Use the menu to read a number of fixture operation hours.

      Total

            Power On Time - The menu item shows a total number of operation hours since the Robin ProMotion has been fabricated.

            Lamp On Time - The menu item shows a total number of LED source operation hours since the Robin ProMotion has been fabricated.

      Resettable

            Power On Time - The item shows a total number of operation hours when the Robin ProMotion has been powered on since the counter was last reset.
In order to reset this counter to 0, touch the item.

            Lamp On Time - The item shows a total number of operation hours of LED source when the Robin ProMotion has been powered on since the counter was last reset.
In order to reset this counter to 0, touch the item.

            Air Filt. remains -The item allows you to read the time which remains to cleaning air filter.The time period can be set in a interval of 10-300 hrs.
Regular cleaning of the air filter (placed in fixture base) is very important for the fixture´s life and performance. Dust, dirt and fog fluid residues reduces the fixture´s light output and cooling ability.

Temperatures - The menu shows temperatures in the fixture.

      Current

            CPU- A current temperature of the Raspberry in the fixture base.

            Head - A current temperature in the fixture head.

            Projector - A current temperature in the projector.

      Highest

            CPU- A maximum temperature of the Raspberry since the fixture has been fabricated.

            Head - A maximum temperature in the fixture head since the fixture has been fabricated.

            Projector - A maximum temperature in the projector since the fixture has been fabricated.

      High Res.

            CPU- A maximum temperature of the Raspberry since the counter was last reset.

            Head - A maximum temperature in the fixture head since the counter was last reset.

            Projector - A maximum temperature in the projector since the counter was last reset.
To reset desired temperature, touch its item on the screen.

DMX Values -Use the menu item to read DMX values of each channel received by the fixture.

Wireless State - The menu serves for reading of the wireless operation status.

            Signal Quality - The item shows level of wireless DMX signal.

            Unlink Wireless - The item serves for unlinking the fixture from a DMX transmitter.
If the fixture is unlinked from a DMX transmitter, the message "Wireless Module is Unlinked" will be displayed.
If the wireless module is not installed in the fixture, message" Wireless Module Not Installed" will appear.

Power Channel State - Select this item to see current setting of the functions, which can be set by menu items in "Personality" as well as by DMX command at the channel "Special functions".

Software Versions - Use the menu item to read software versions of the fixture modules.

            Graphic Engine - A graphic engine.

            Module Pan/Tilt - A pan/tilt/control module.

            Module Optics - A focus/grey box control module

            Module Display - A display control module

Space Usage - Use this item to read free and used space on the internal USB flash drive.

            Free- A free space (MB).

            Used - A used space (MB).

Product IDs - Use this item to read Mac address, RDM UID and LED Engine (version of LED module).

5.3 Personality

DMX Preset - Use the menu to select desired channel mode.
    Mode 1 - 25 control channels
    Mode 2 - 33 control channels

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 of the inbuilt wireless DMX module.

Pan/Tilt Settings - Use the menu set behaviour of both pan and tilt movements.
        Pan Reverse - Use the item to invert pan movement.
        Tilt Reverse - Use the item to invert tilt movement.
        Pan/Tilt Mode - Use the menu to set mode of the pan/tilt movement.
            Speed Mode - Both pan and tilt will move with the same speed as adjusted at the channel 5 "Pan/Tilt speed, Pan/Tilt time".
            Time Mode – The pan and tilt will move with different speeds and they will come at the same time to the end point of their tracks (pan and tilt use their optimal speeds). Time of the pan/tilt movement (25.5 sec. max.) can be set by the channel "Pan/Tilt speed, Pan/Tilt time".
        Pan /Tilt Feedback . The menu item allows to return the mowing head to the required pan/tilt position after changing the position by an external force if this option is set On.
Note. The Pan/Tilt Feedback should be permanent On, the option Off is not suitable for standard operation and the head of the fixture can be damaged.

Blackout Settings - Use the menu if you need to close the light output under certain conditions which are described below
        Blackout DMC - Blackout during movement correction. Set this option On if you wish to close light output during the time when the head goes to its correct position from which has been changed by an external force.
        Blackout While - Use this menu if you wish to close the light output during effect changes.
            Pan/Tilt Moving - The menu item enables to close light output while the pan or tilt DMX values are changing.

Colour Mixing Mode - . The menu item allows you to switch colour channels into CMY or RGB mode.

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 received.

Screen Settings - Use this menu to change the touch screen settings.
        Display Intensity - The item allows to control the intensity of the screen (0-min., 9-max.).
        Screen saver Delay - The item allows you to keep the screen on or to turn it off automatically after 1-10 minutes after last touch (or pressing any button on the control panel).
        Display Orientation - The menu allows to change display orientation.
            Normal - Standard display orientation if the fixture is placed horizontally (e.g. on the ground).
            Inverted - Inverted orientation (needed if the fixture is hanging on the truss).

LED Engine - Use the menu if you want to set special options for LEDs engine.
        Ceiling Projection - This function enables to project image on a screen if the fixture is suspended upside-down from the ceiling (truss) in front of the screen.
        Rear Projection - The function enables to project the image to a rear projection screen if the fixture is placed behind the screen.Note that a special rear projection screen is required.
        Colour Temperature - The function allows you to select a white colour from the following whites: 3200K, 4200K, 5000K, 5500K, 5600K, 6500K, 7500K (default), 8000K, 9500K, Maximum Brightness.
        Gamma Curve - The menu item allows you to select a gamma curve from the following curvatures: 1.8, 2.2 (default), 2.4, B&W, Linear.

Graphics Engine - use the menu if you want to set options for graphic engine.
        Image Aspect Ratio -The menu offers two options:
            Fill Screen- All pictures (videos) are displayed (played) on the whole screen regardless of native aspect ratio of each picture (video).
            Keep Aspect ratio - the fixture keeps native aspect ratio of played pictures (videos).

Edge Antialiasing -The function "smooths out" edges of the image during its rotation.
Gobo Selection Mode - The menu allows you to select from two options of media files
assigning to DMX values.

   Alphabetical Order- The media files assigned to DMX values are sorted in alphabetical order.
   Numerical Order- The media files assigned to DMX values are sorted in a numerical order.
   Default assigning is the alphabetical order.

Gobo Synchro Mode -The function switches on/off algorithm for synchronic switching gobos.
If you use only one fixture, the function should be off (gobo switching is faster). For two or more
fixtures the function has to be on.

Slide Show Timer -The option sets time period (0 - 30 sec.) during which a gobo stay in
a position before changing during "Gobos presentation" function (channel 17/ Digital gobo
wheel/ DMX range of 251-252).

   Optics Module -Select the option " Wide Angle Lens" if an additional wide angle lens is installed

Fans - **Fan mode**. Use the menu item to set the fixture fans to the auto-control mode ("Auto"), max. fans power
("High") and quiet mode ("Quiet").

Stand Alone - The menu item allows you to customise playing of programs in the Stand Alone mode.
   Input Overtake -If the option is On and DMX signal from an external DMX controller has been
   received,the currently played program is interrupted and fixture behaves according to DMX
   signal.

WEB Server - The menu item allows you to set some item (s) regarding the WEB interface operation.
   Activate Password -If the option is On, the password is required at entering the WEB interface.
   Set Password -The option allows you to set a password for access on the Web server
   (default password: 2479, user: robe).

Wifi Access Point - The menu allows you to witch On/Off access point .
   Activate
      Off - The menu item switches the Access point off
      On - The menu item switches Access point on. The option allows you
      a remote control of the fixture via a mobile phone or laptop.
      The name of Wi-Fi network is **PromotionAP** , password is **promotion**.
   Channel ID - The menu item allows you to select desired channel.

NAS Client - The menu item allows you to set a NAS client.
   Activate - The menu item "On" activated access to the NAS server (intended Promotion)
   and allows synchronization of NAS client with the NAS server.
   IP Address - The menu item allows you to set an IP address of the Promotion which serves
   as the NAS server.
   Synchro Time -The menu item allows you to set a time period (1 minute -600 minutes)
   after which media content of the NAS client will be synchronized with the NAS server.
   If the item is set at 0, no synchronization will run.
   On PowerUp Sync -The menu allows you to set a way of media content
   synchronization on the client fixture during its powering up.
      Off - The synchronization during fixture powering up is disabled.
      No Wait For Sync - The synchronization runs on background, the fixture will respond
      to a DMX controller during synchronization.
      Wait For Sync - The fixture waits for finishing of the synchronization and will not
      respond to the DMX controller until the synchronization is finished.

Note: During the media content synchronization, files from the internal USB flash drive of the NAS server are
copied to the internal USB flash drive of the NAS client (new or changed files only).

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

5.4 Manual Control

Reset Functions - This option allows you to reset function modules and effects and return them to their stand-
ard values (positions).
   Total System Reset - The item resets all fixture modules.

Pan/Tilt Reset - The item resets the pan/tilt module.
Focus Reset - The item resets the focus module.
Grap, Engine Reset - The item resets the graphic engine module.

Manual Effect Control - The menu allows you to manually control each effect channel of the fixture.
LED Engine - The menu allows you to set some parameters for the LED Engine.
External Input - Via the menu option is possible to activate the external input (HDMI).
Keystone Horizontal - The item allows you to use LED engine horizontal keystoning when the external input is active.
Keystone Vertical - The item allows you to use LED engine vertical keystoning when the external input is active.
Led On/Off - The item allows you to switch the LED engine off when the external input is active.

5.5 Stand- alone

Test Sequences -Use the menu to run a test/demo sequences without an external controller, which will show you some possibilities of using the fixture.
Dynamic Mode - This mode uses all fixture functions including pan/tilt movement and therefore is suitable for a complete introduction of the fixture.
Static Mode - This mode is suitable for projections on the wall, ceiling or ground without any pan/tilt movement. Adjust the pan, tilt, and focus to desired positions an start test sequences by touching the button Run.

Preset Playback - This menu allows you to select the program which will be played in a loop after switching the fixture on without connected DMX controller.
None - The option disables "Preset playback" function.
Program. 1- Program 9 - The options start user program 1-9. Selected program will be played continuously in a loop

Play Program - Select this menu to run one of 9 programs which have been created or recorded via the menu "Record Program".
Note: connected DMX signal pauses a program running, after disconnecting DMX signal the program continues is running.

Record Program - The menu allows you to record DMX data that receives the fixture and then replay them again via the menu "Play Program". There is a list of 9 programs which can be used for recording DMX data.
Touch desired program to start recording. To stop recording, touch the Stop Recording.
Recorded programs can be copied to the USB memory stick (menu item "User Media") and after that loaded into another fixture.

Edit Program - the menu allows you to edit existing program or to create a new program.
Each program can have up to 999 steps.
After entering the menu "Edit Program", select desired program (1-9) and enter it . Select desired step and enter it.
Now use menu items to set fixture channels to desired values.
The item "Step Time" means a step time (0.1-999.9 seconds).
The item " Add New Step" inserts a new step behind the current step.
The item " Delete Step" deletes the current step.
Note: DMX values are displayed at every channel only in the step 1. In the next steps (2, 3...) the channel value is displayed only in case, that this value was changed.

The icon serves for displaying a created step.

5.6 User Media

The Robin Promotion uses three data storages: internal memory SD card, internal USB flash drive and an external USB stick.

Internal memory

User inaccessible	SD card	*System files* *Factory media files*
User accessible	USB flash drive	*Custom media files* *NAS media files* *Program files*

External USB memory stick

Custom media files can be played directly from the external USB stick or can be loaded to the internal USB flash drive. The user do not have access to the SD memory card which is intended for system files and factory media files.

No USB - This item will appear if no USB stick is connected.

Initialize USB - This item will appear if an USB stick without folders structure is connected. Press [ENTER] to start initialization. Initialization process creates folder called 'promotion' in the root folder of the USB stick. Inside this folder are four subfolders: extmedia, intmedia, nasmedia and programs.

Top level folder

```
    └── promotion
            ├── extmedia
            ├── intmedia
            ├── nasmedia
            └── programs
```
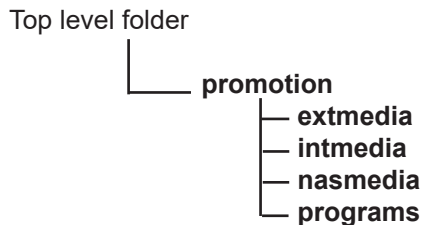
Supported filesystem on the USB stick is FAT16 and FAT 32.

exmedia - the folder serves for user media files which will be played directly from this folder.
intmedia - the folder serves for user media files which can be loaded into fixture memory (option Mirror Media).
nasmedia - the folder serves for user media files which can be loaded into fixture memory
          (option Mirror NAS) and will be used for NAS server.
programs - the folder serves for recorded programs by the menu item Record Program (Stand Alone--> Record
          Program). The programs can be loaded into fixture memory (option Mirror Programs).

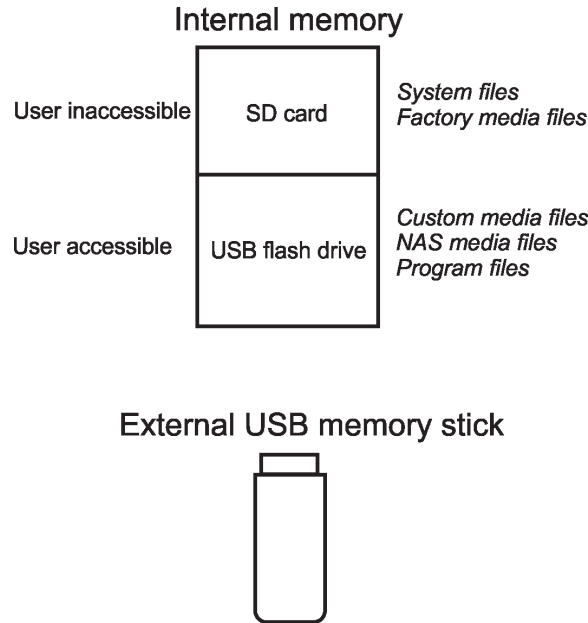The folders structure on the USB memory stick may be also created by means of computer, but exactly the same names, order and small letters have to be kept.

The Robin ProMotion sorts media files in alphabetical or numerical order and assigns them to DMX values.
See the menu item Gobo Selection Mode (Personality-->Graphic Engine -->Gobo selection Mode).
 Max. number of media files in the folder is 250.
We recommend to follow the 3-digit conventions for media files, where a 3-digit number is followed by an underscore and a name e.g.: 001_mountains.jpg, 002_landscape.jpg.......
The numerical order is suitable in the case that you need to assign certain media files to specified DMX values.

Example: *The table below show differences in file DMX assignment between the alphabetical and numerical sorting.*
The table also includes file names without a 3-digit convention to illustrate their behaviour in the numerical sorting.

Media file name	DMX value at Alphabetical Sorting	DMX value at Numerical Sorting
001_testfile1.jpg	1	1
020_testfile2.jpg	2	20
19_testfile3.jpg	3	19
3_testfile4.jpg	4	3
460_testfile5.jpg	5	Not Assigned*
testfile.jpg	6	Not Assigned**

The 3-digit number has to be in the range of 001-250.
**The media file name does not contain any digit.*

To use custom media files, you have tu set relevant DMX values on the channel 16 (Digital gobo wheel selection).

DMX	Function
0-31	Factory Digital gobo wheel (media files on internal SD card, default)
32-63	Internal Custom Digital gobo wheel (media files on internal USB flash drive)
64-95	External Custom Digital gobo wheel (media files on externalUSB memory stick)
96-127	NAS content (NAS media files on internal USB flash drive)

Supported file formats are:

jpg for pictures (resolution up to 4096 x 4096 pixels)
H264 for videos (resolution up to 1280x720 pixels)

Note: AVI, MOV etc. is a container with video and audio in it. For example, you can have AVI file with audio encoded as mp3, video as mpeg2. This file cannot be played. Another AVI file can have audio as ogg vorbis and video as h264. This file can be played. Whether the Robin ProMotion can play the file or not depends on its encoding, not on the container.

Mirror Media - This menu allows you to load files from the USB memory stick (folder intmedia) into the fixture and vice versa.

From Light - the option copies custom media files from the fixture to the USB memory stick (custom files only).

To Light - the option copies custom media files from USB memory drive (folder intmedia) into the fixture.
Warning: Custom media files in the fixture memory will be overwritten.
Factory files stay without change.

Mirror NAS - This menu allows you to load files for NAS server from the USB memory stick (folder nasmedia) into the fixture and vice versa.

From Light - the option copies NAS media files from the fixture to the USB memory stick (NAS files only).

To Light - the option copies NAS media files from USB memory drive (folder nasmedia) into the fixture.
There is 29 GB free space available for custom content in the fixture.
Warning: NAS media files in the fixture memory will be overwritten.

Mirror Programs - This menu allows you to load programs from the USB memory stick (folder programs) into the fixture and vice versa.

From Light - the option copies created programs from the fixture to the USB memory stick.
To Light - the option copies programs from the USB memory drive (folder programs) into the fixture.
Warning: Created programs in the fixture will be overwritten.

Note: There is 29 GB of free space in the fixture available for custom media files, NAS files and programs.

Re-encode Internal Media - The option converts custom pictures (only) in the fixture into optimal resolution (1280x720 pixels) for the Robe ProMotion. These converted pictures can be copied back on the USB stick (option "Mirror Media").

Delete Internal Media - This menu delete custom media files on the internal USB flash drive.

5.7 Service

Calibration - The menu allows you a fine adjustment of mechanical parts of the fixture:

        Pan Calibration - fine calibration of the pan position

        Tilt Calibration - fine calibration of the tilt position

        Focus Calibration - fine calibration of the focus position

        Grey Box Calibration - fine calibration of the grey box position

        Store - the option saves adjusted values into memory

Reinit Inner Flash Drive - The menu item formats internal USB flash drive.

        Warning: all user data will be deleted!

6. Keystones

If an image output from the Robin ProMotion is at an angle, the image may be skewed.
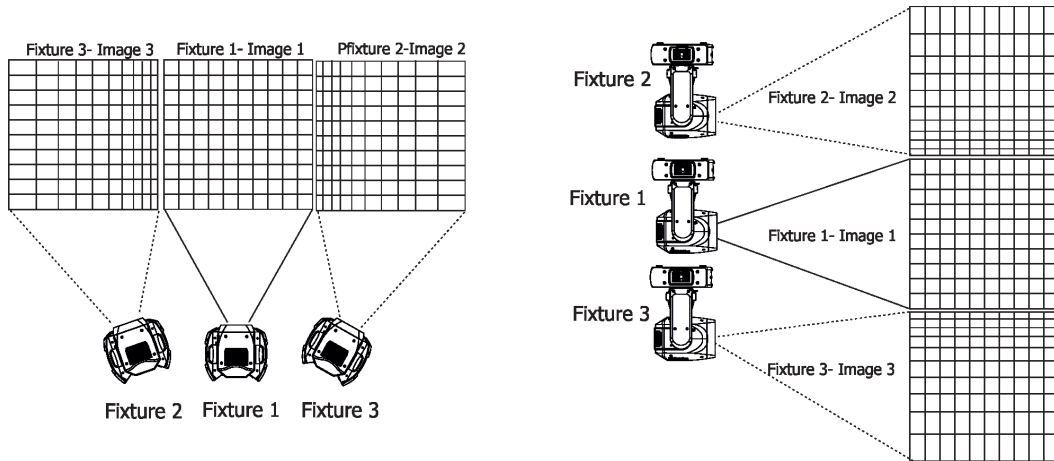
Two keystone channels (Vertical Keystoning, Horizontal Keystoning) in DMX chart adjust the image shape, aspect ratio is kept. Default DMX value for both channels is 128, it means that no keystone correction has been used.
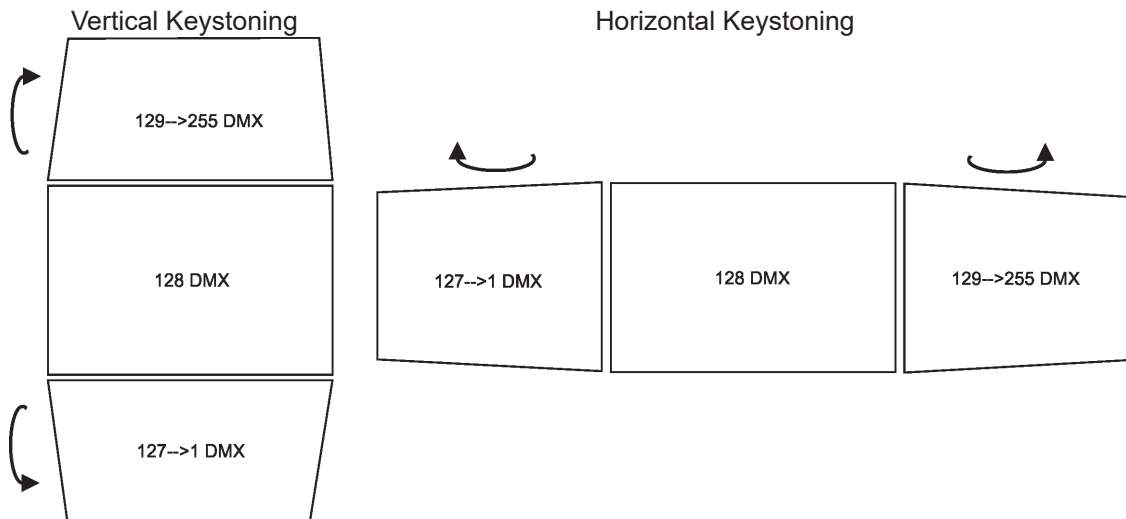
The channel " Vertical KeyStoning" turns image along X-axis.
The channel " Horizontal KeyStoning I" turns image along Y-axis.
The channels take priority over 8 corner keystoning channels described below.

The option "Save AutoKeystoning" from DMX chart (channel Special functions, range 230-234) allows you to save adjusted values of the keystone channels and correct them automatically when head position is changed: First use the Vertical Keystoning channel and the Horizontal Kyestoning channel to adjust image shape, after that go to "Save AutoKeystoning" and stay at this DMX range for 3 seconds to write keystoning values into memory.

To activate AutoKeystoning, set channels Horizontal and Vertical Keystoning to 0. Now, if you move the fixture head on another place in the same plane, the image shape will be automatically corrected.
 If you move the head in a tilt into opposite position, the image shape will be automatically corrected again and the image will not be turned.
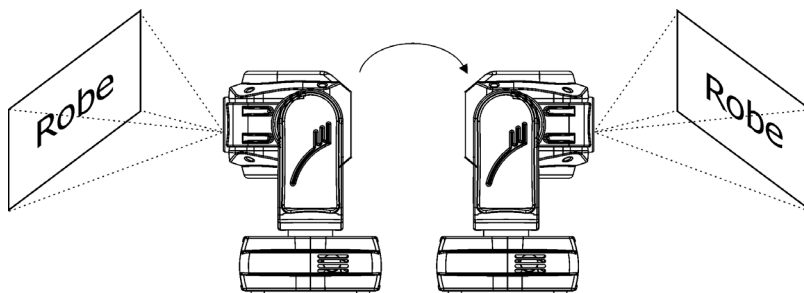
Note: DMX keystone channels Vertical Keystoning and Horizontal Keystoning can be used for both HDMI inputs - internal and external.
The keystone options from fixture´s menu (Manual Control --> LED Engine) can be used for external HDM input only.

Besides two channels Vertical Keystoning and Horizontal Keystoning described above you can use
8 keystoning channels to control each corner of the image individually (in DMX mode 2 only).
In order to activate the 8 corner keystones, <u>both</u> channels Vertical Keystoning and Horizontal Keystoning have to be set at 128 DMX otherwise the channels Vertical Keystoning and Horizontal Keystoning have priority over the corner keystones.

KeyStone Top Left X

1-->255 DMX

KeyStone Top Left Y

1-->255 DMX

KeyStone Top Right X

1-->255 DMX

KeyStone Top Right Y

1-->255 DMX

KeyStone Bottom Right X

1-->255 DMX

KeyStone Bottom Right Y

1-->255 DMX

KeyStone Bottom Left X

1-->255 DMX

KeyStone Bottom Left Y

1-->255 DMX
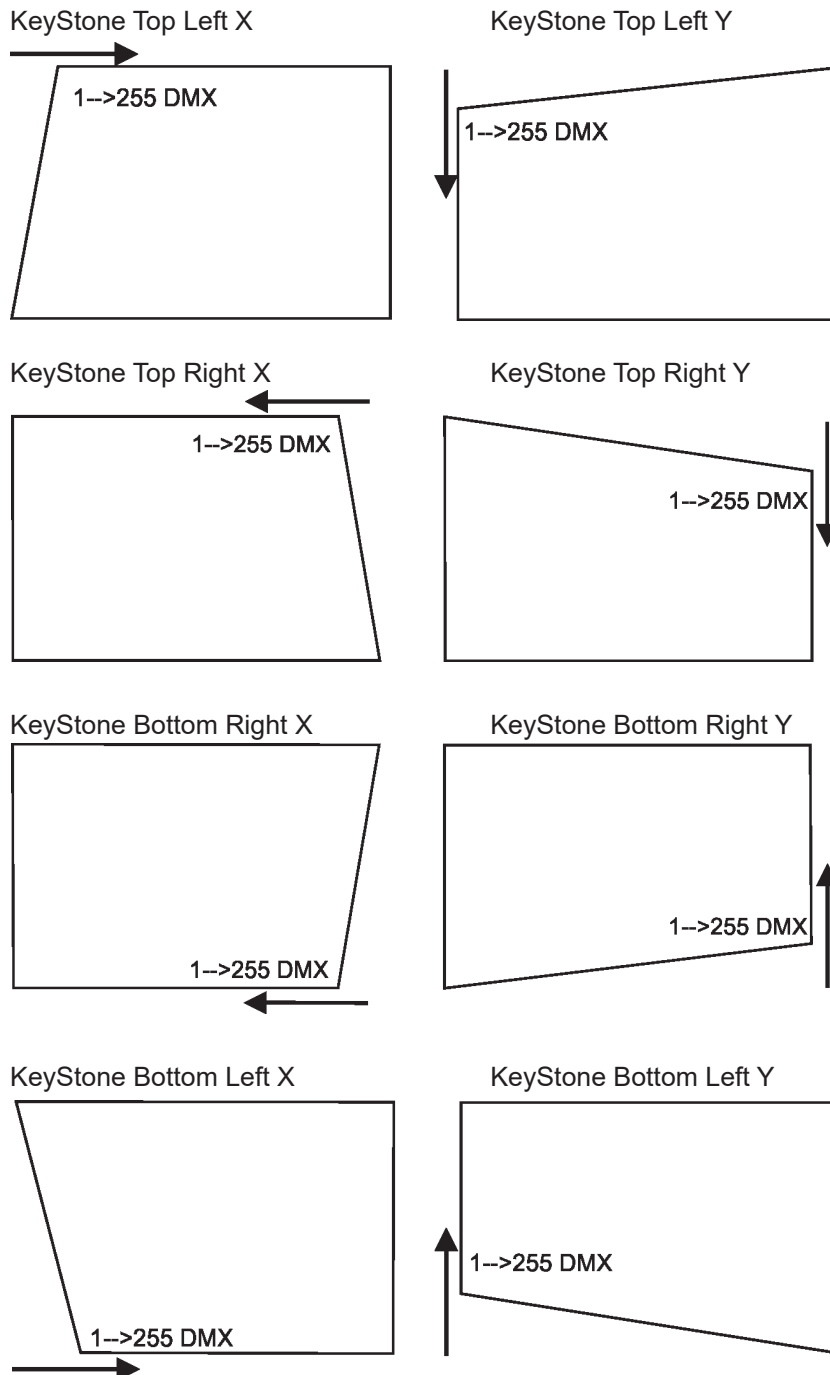
The 8 corner keystoning channels can be used for internal HDMI input only.

7. Using external HDMI input

If you want to use the external HDMI input of the fixture, you have to activate the external HDMI input via setting DMX value into range of 220-229 on the channel 6 (Special functions). If you want to return back to the internal HDMI , set DMX value into range of 210-219 on this channel. Stay in desired DMX value for at least 3 seconds.

8. Ways of file transfer from/to the ProMotion

You can use several ways how to transfer custom media files to and from fixture.

1.USB stick
To copy custom files (NAS files, programs) into the fixture
      1. Connect the ProMotion to the mains.
      2. If you have a USB stick without created folders structure:
            A. Plug the USB stick into the fixture.
            B. Initialize the USB stick via menu "Initialize USB".

      3. Plug the USB stick into computer.
      4. Upload content into the folder **intmedia** (**nasmedia** for NAS files, **programs** for programs) and
        unplug the USB stick from computer.
      5. Plug the USB stick back into the ProMotion.
      6. Copy files into the ProMotion via the menu item "Mirror Media" ("Mirror NAS" for NAS files, Mirror
        Programs" for program files).
      7. Unplug the USB stick from the ProMotion .

To copy custom files (NAS files, programs) from the fixture
      1. Connect the ProMotion to the mains.
      2. Plug the USB stick into the fixture.
      3. Initialize the USB stick via menu "Initialize USB" (if you use USB stick without folders structure).
      4. Copy files from the ProMotion via the menu item "Mirror Media" ("Mirror NAS" for NAS files, Mirror
        Programs" for program files) on the USB stick
      5. Unplug the USB stick from the ProMotion.

2. Web interface.
Fixtures and computer has to be connected to the Ethernet network, the computer IPv4 address has to be set to 2.x.x.x network (for example 2.0.0.10) with netmask 255.0.0.0.
You do not need change any IP settings on the Promotion(s).
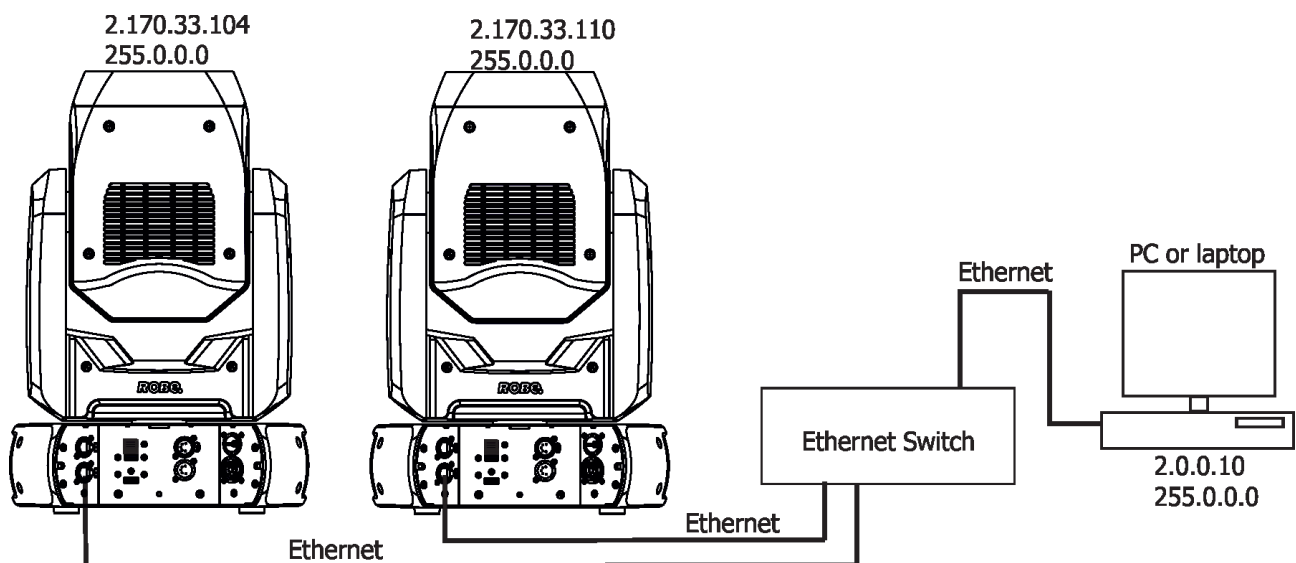
Type the IP address of the Promotion to your web browser, e.g. http://2.170.33.104, enter the user name: robe and the password: 2479 , the status screen of the ProMotion will appear.
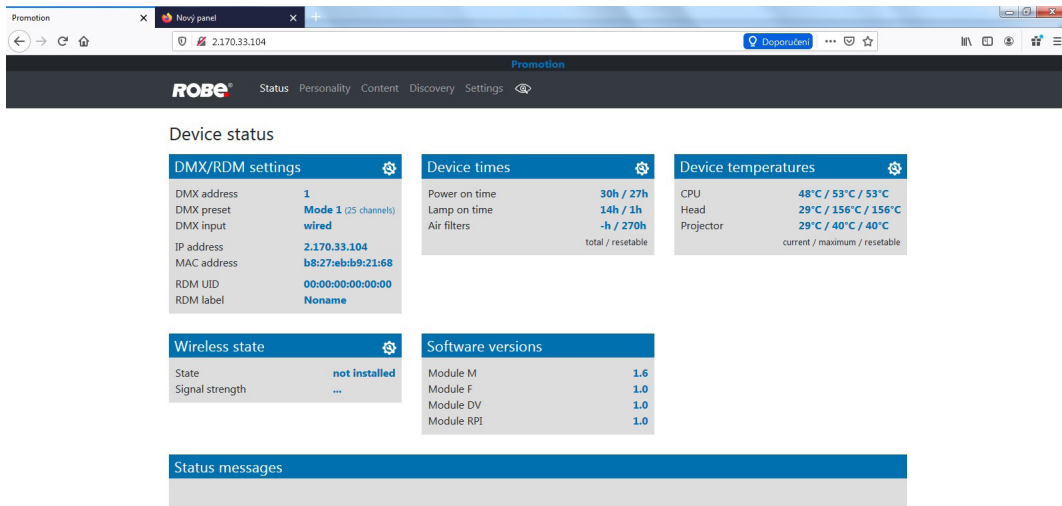
This screen gives you fast overview of fixture setting and its statuses. The icon allows you to change some values in a corresponding table.

Click on the item Content on the top row of the screen and the following screen will appear
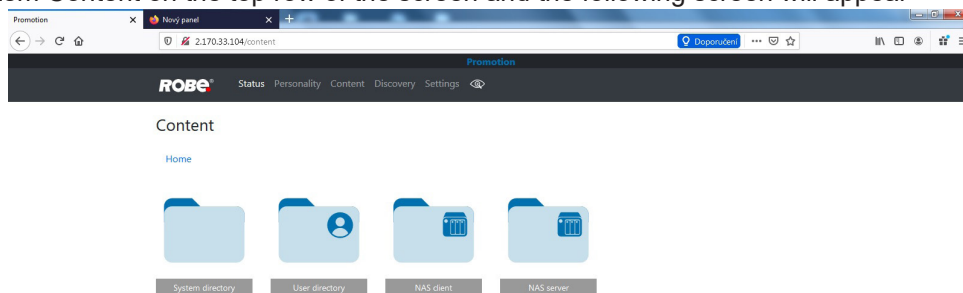
System directory- folder for system files and factory media files. The folder is inaccessible for user.
User directory- folder for user media files.
NAS server- folder for NAS media files. If the fixture runs as a NAS server, media files from this folder are copied to the folder NAS client in the client fixtures.
NAS client- folder for client NAS media files.

After clicking on desired folder, you will see media files iside the folder.

Return back button

DMX value (depends on picture sorting -see menu Personality--> Graphic Engine-->Gobo Selection).

Delete file button

Load file button

checking box
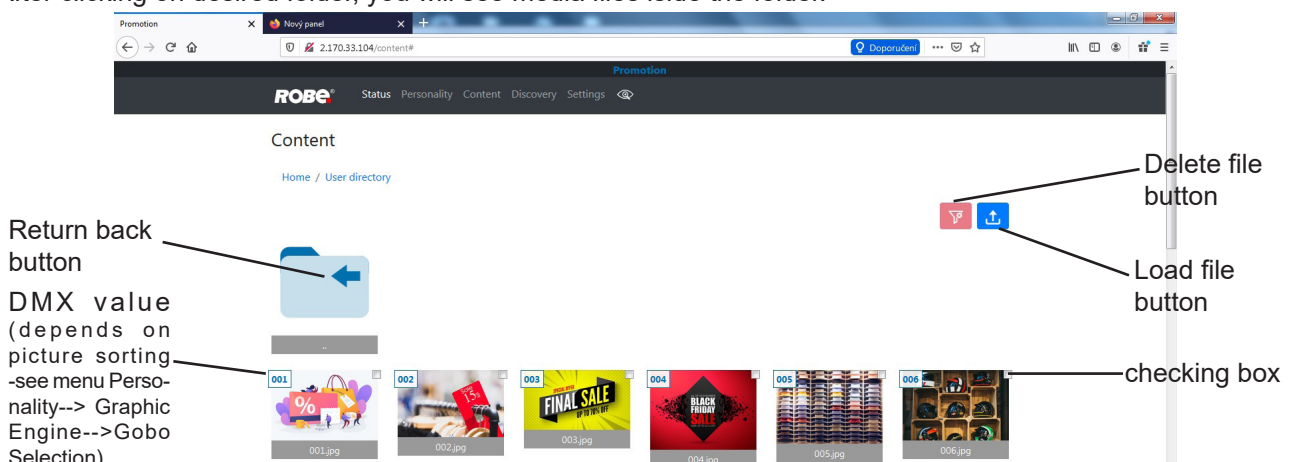
If you have two and more Promotions, the item Discovery allows you to show all connected Promotions. Click on the button Discovery and fixtures connected in the network will be displayed.

Example for two connected fixtures with IP addresses 2.170.33.104 and 2.1.2.3
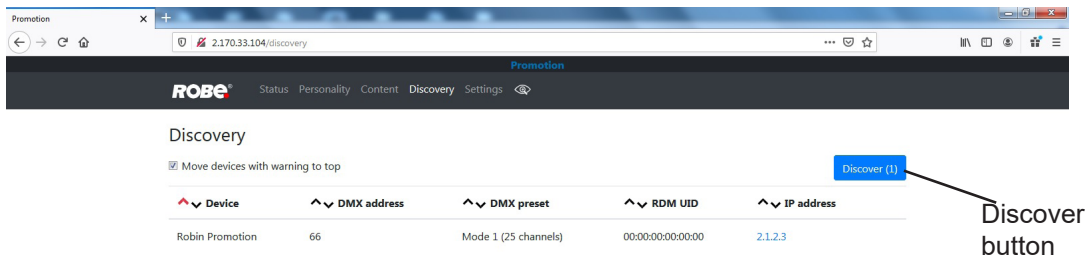
To switch over next fixture, click on its IP address (2.1.2.3) and two tabs will appear.
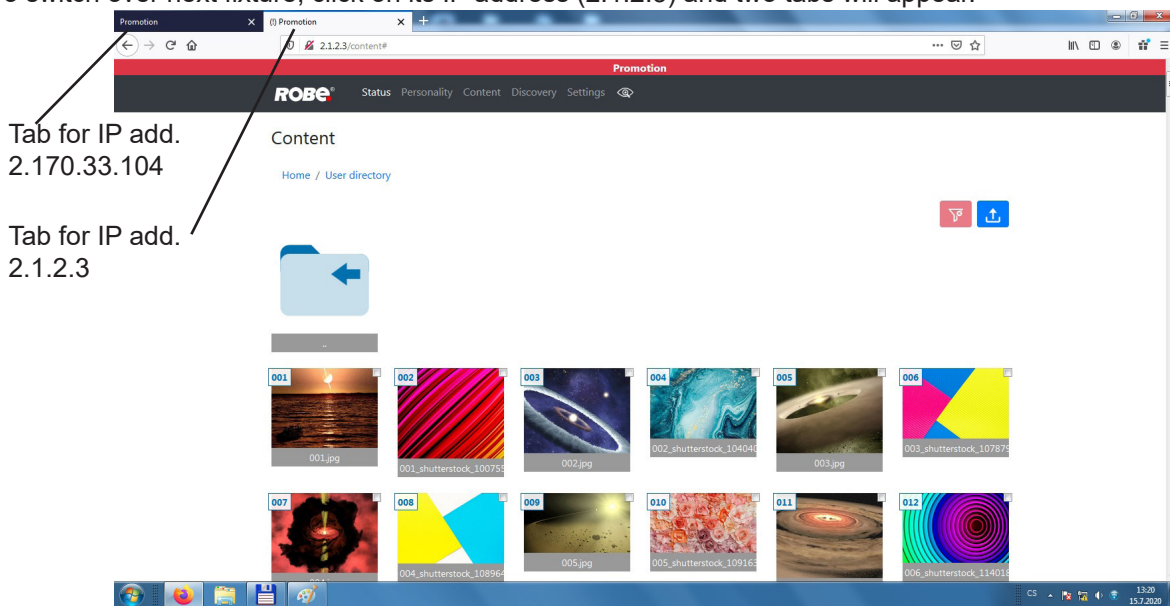
The Web interface can be also used on the PC or mobile phone connected to the fixture by means of Wi-Fi. The Wi-Fi access point in the fixture has to be activated (Wifi Access Point-->Turn AP On/Off --> Access Point On)
Wifi network name: PromotionAP
Password: promotion

Note: If you have more Robin Promotions, only one fixture may work as a Wi-Fi access point at the same time. In this case is more advantageous to connect fixtures to the Ethernet network and one fixture set as the Wi-Fi access point . The rest of fixtures will be accessible via the Ethernet network in the Web inerface- see picture below.

Wifi Access Point On
2.170.33.101
255.0.0.0

Wifi Access Point Off
2.170.33.102
255.0.0.0

Wifi Access Point Off
2.170.33.103
255.0.0.0

Wifi Access Point Off
2.170.33.104
255.0.0.0

PC / laptop

or

Mobile phone

Ethernet Switch
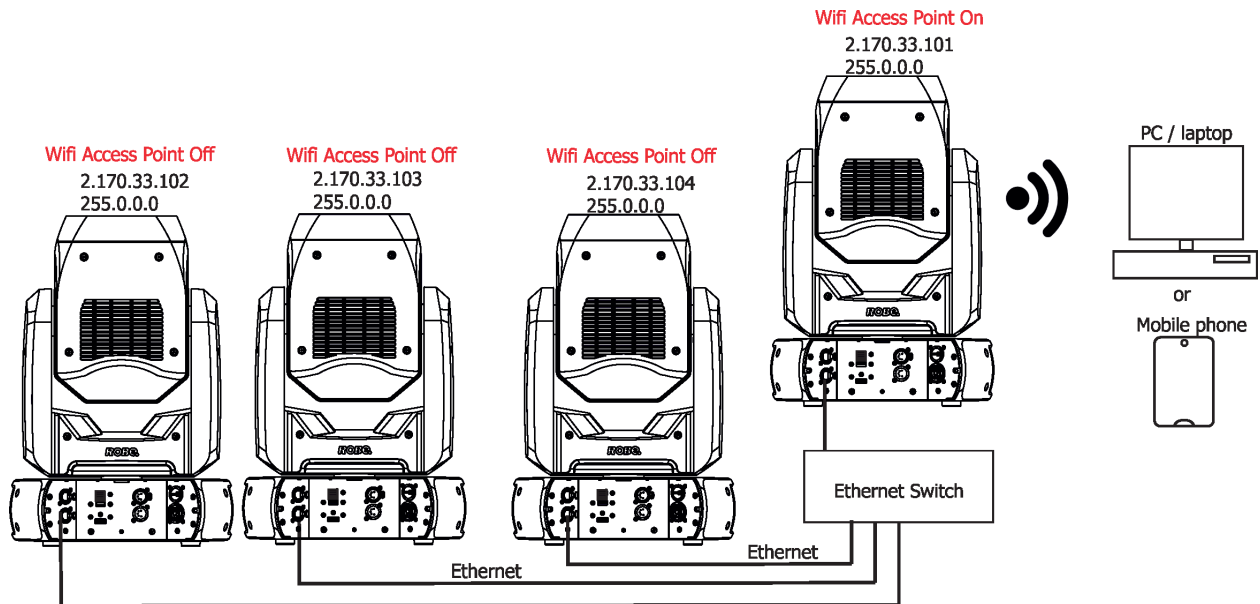
Ethernet

Ethernet

3. File Transfer Protocol (FTP)

Fixtures and computer has to be connected to the Ethernet network at the same way as for Web interface.
The FTP server is permanetly running in the fixture, you will need install FTP client on your laptop (PC).
Login entry for ftp relation:
Host name: IP address of the fixture
User name: ftp
Password: ftp

The FTP can be also used on the PC or mobile phone (with installed FTP client) connected to the fixture by means of Wi-Fi.
The Wi-Fi access point in the fixture has to be activated (Wifi Access Point-->Activate --> On)
Wifi network name: PromotionAP
Password: promotion

9. Real Time Streaming Protocol (RTSP)

Real Time Streaming Protocol (RTSP) is an application-level network communication system that transfers re-al-time data from multimedia to an endpoint device by communicating directly with the server streaming the data. The fixtures and streaming server has to be connected to the Ethernet network, the server IPv4 address has to be set to 2.x.x.x network (for example 2.0.0.10) with netmask 255.0.0.0.
You do not need change any IP settings on the Promotion(s).

Type the IP address of the Promotion to your web browser, e.g. http://2.170.33.104, enter the user name: robe and the password: 2479 , the status screen of the ProMotion will appear.

Click on the item Streams on the top row of the screen and the Streams screen will appear.
Type address of streaming server to the field " Stream 1 DMX 1, Stream 2 DMX 2.......Stream 20 DMX 20.
Example: **rtsp://2.1.1.5:854/promotion**

Protocol   IP address   Port

Example of Streams screen

Max 20 streams can be saved by means of the button "Save".
Supported Codec: H264, max. resolution 1280x720.

RTSP can be enabled by DMX command (128-159 DMX) on the channel Digital Gobo Wheel Selection (16/24).
Select desired stream (1,2,3...20 DMX) on the channel Digital Gobo Wheel (17/25).

10. NAS operation

NAS = Network-Attached Storage is a file data storage server (intended Promotion) connected to a computer network providing data access to a group of clients devices (another Promotions).
Fixtures have to be connected to the Ethernet network. The media files intended for NAS operation have to be copied to the folder NAS server on the NAS server fixture, to the NAS client fixtures will be copied automatically by means of synchronization between NAS server and NAS clients folders.
The NAS server fixture does not need another settings.
The NAS client fixtures require correct settings of items in the menu NAS Client (Activate: On, IP address: address of NAS server, suitable synchronization).

Example of connection and NAS client settings.
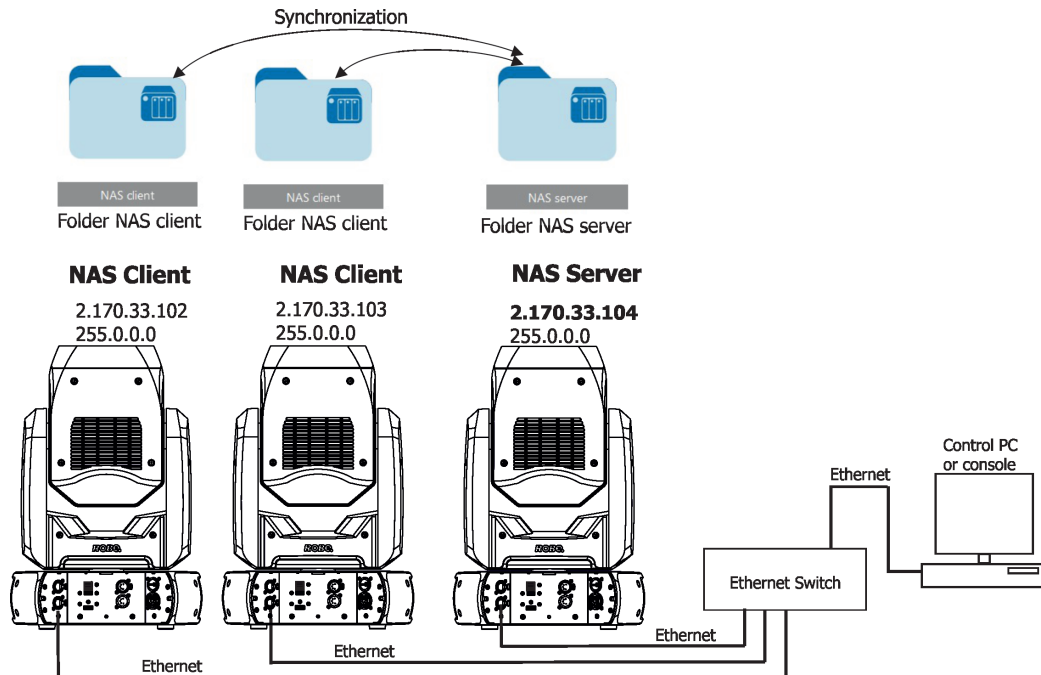
Example of NAS Clients setting
Personality-->NAS Client:
Activate: On
IP Address**: 2.170.33.104**
Synchro Time: 60
On PoweUp Sync: No Wait For Sync

11. Software update of the fixture

The Robin ProMotion software update is done only via an Ethernet connection between a computer running a ROBE Uploader software and the ProMotion.
The ROBE Uploader is a software for automatized software update of ROBE fixtures. The ROBE Uploader switches the ProMotion to update mode automatically.
Please see https://www.robe.cz/robe-uploader/ for more information about the ROBE Uploader and control PC setting.
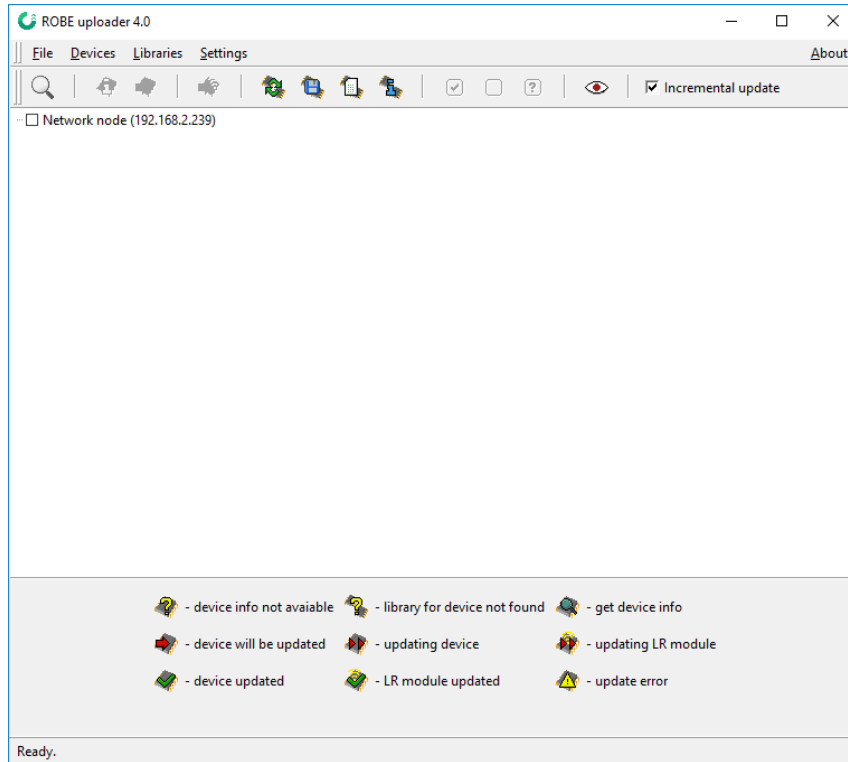
Example of connection:
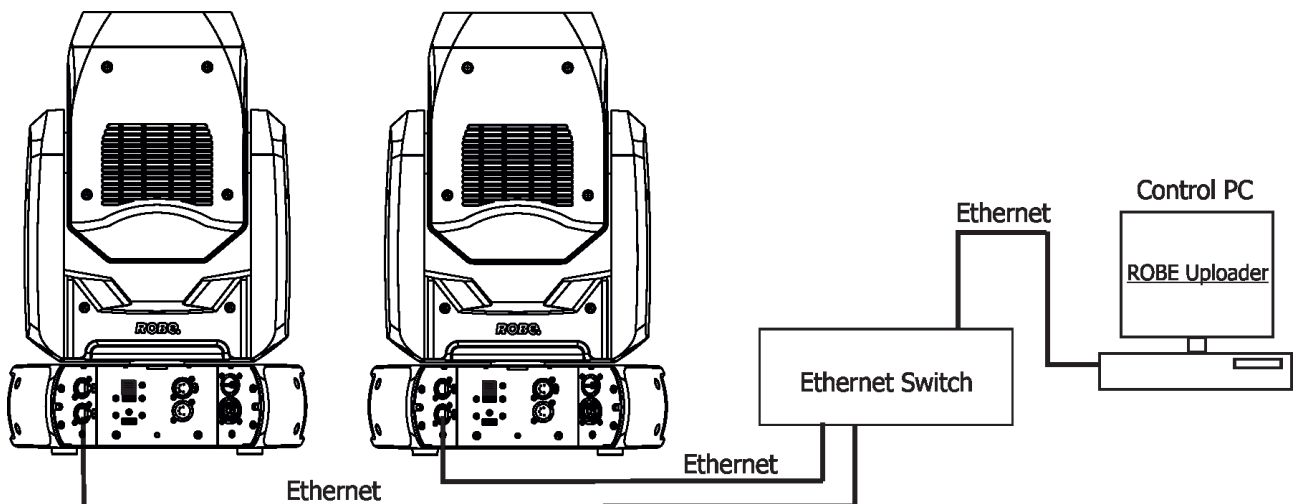
It is important to note, that Ethernet network connection (Local LAN) typically needs to be set to 2.x.x.x address, for example 2.0.0.10, assuming that no other computer on the network contains such an address while keeping all ROBE fixtures in default IP settings. Network mask of the computer should be 255.0.0.0

12. 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 ProMotion is the following.

Parameter ID	Discovery command	SET command	GET command
DISC_UNIQUE_BRANCH	*		
DISC_MUTE	*		
DISC_UN_MUTE	*		
DEVICE_INFO			*
SUPPORTED_PARAMETERS			*
SOFTWARE_VERSION_LABEL			*
DMX_START_ADDRESS		*	*
IDENTIFY_DEVICE		*	*
DEVICE_MODEL_DESCRIPTION			*
MANUFACTURER_LABEL			*
DEVICE_LABEL		*	*
SENSOR_DEFINITION			*
SENSOR_VALUE			*
DISPLAY_INVERT		*	*
DISPLAY_LEVEL		*	*
PAN_INVERT		*	*
TILT_INVERT		*	*
DEVICE_RESET		*	
DMX_PERSONALITY		*	*
DMX_PERSONALITY_DESCRIPTION			*
STATUS_MESSAGES			*
STATUS_ID_DESCRIPTION			*
DEVICE_HOURS [1]			*

[1]...Commands relative resetable values

RDM model ID for the Robin Promotion is 0x010d.

13. Error and information messages

In case that some error occurred during fixture reset, the warning icon will appear in the top right corner of the screen.

```
┌─────────────────────────────┐
│   DMX Mode          ⚠        │
│   IP Address: 2.242.60.145   │
│                              │
│         001                  │
│                              │
│                              │
└─────────────────────────────┘
```
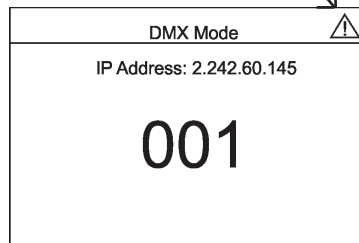
In this case the following menu items will appear after touching the screen.

```
┌─────────────────────────────┐
│   DMX Mode          ⚠        │
│                              │
│                              │
│      Main Menu               │
│      Display Errors          │
│                              │
└─────────────────────────────┘
```
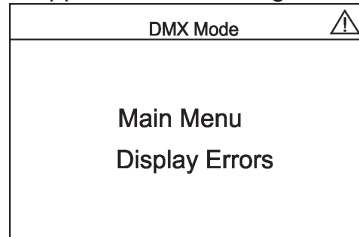
Main menu - standard main menu
Display errors - touch the item to see error message (s).

DMX address blinks

```
┌─────────────────────────────┐
│       DMX Mode               │
│   IP Address: 2.242.60.145   │
│                              │
│         001                  │
│                              │
└─────────────────────────────┘
```
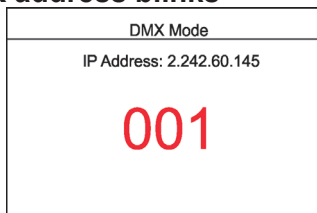
It means that no DMX signal is received. Check DMX connectors and cables, check connection between the fixture and the control desk.

14. Technical Specifications

Electrical

Power supply:.........................electronic auto-ranging
Input voltage range:............... 100-240V, 50-60Hz
Fuse:.....................................T 3.15A/250V ~

Power consumption :...............140W

Mains input: CE - max. 16A
              cETLus - max. 10 A
Mains output: CE - max. 15A
              cETLus - max. 9 A

Light engine

Light source: RGB LED device
Light output: 1000 ANSI lumens
Light source lifetime: 20000 hours

Digital gobo/image/video projection output

Aspect ratio: 16:9
Throw ratio: 3.5:1
Contrast ratio: 500:1
Display colours: 16.7 million colours
Projector resolution: 1920 x 1080

Hardware

Raspberry Pi Model 3B+ 1GB RAM

Operating system

Linux

Graphic engine

Digital gobo wheel with gobos, images and videos
Gobo rotation and indexing
Video speed control
RGB or CMY colour mixing
Virtual colour wheel with pre-programmed 234 colours including white
Colour effect wheel with wide range of built-in colour effects (colour transitions and cross-fades, multiple colour images, rainbow effects)
Effect wheel with wide range of graphic effects
Effect speed control
Horizontal/Vertical keystoning
Smooth dimmer
Shutter and strobe effects
RTSP support
Video bitrate used in original content: 2000-12000 kbit/s (video codec H264, 25fps, resolution 1024x576)
Supported Image Format: JPG (up to 4096 x 4096 pixels), non progressive/non interpolated
Supported Video Format: H264
Recommended refresh rate: 1280x720@30Hz*

* for video files saved on the internal USB flash drive and the external USB memory stick.

Free space available for custom content

29 GB

Focus

Motorized focus

Gray box correction

Gray box correction from max. diameter to min. diameter of the light beam

Strobe

Independent strobe effect with variable speed (0.3 - 20Hz)
Random strobe effect

Dimmer

Smooth dimmer from 0 - 100 %

Pan/Tilt

Max. pan movement range: 540°
Max. tilt movement range: 260°
16 bit movement resolution
Automatic Pan/Tilt position correction
Remotely controllable speed of pan/tilt movement for easy programming

Control

Upload and projection of custom artwork, photographs and videos
Live input via external HDMI
Setting & Addressing: two-row LCD display & 4 control buttons
Protocols: USITT DMX-512-A, RDM, ArtNet
Optional wireless external module available: CRMX™ technology from Lumen Radio
DMX modes: 2 (25 and 33 control channels)
Ethernet port: Art-Net, ready for ACN
Recommended and supported filesystem on USB memory devices: FAT16, FAT 32

External Wireless DMX/RDM module (optional)

Compliance with USITT DMX-512 (1986 & 1990) and 512-A
Full DMX fidelity and frame integrity
Auto sensing of DMX frame rate and frame size
<5ms DMX latency
Operational frequency range of 2402-2480 MHz
Producer: LumenRadio

Connection

DMX IN/OUT: Locking 5-pin XLR
2 x USB 2.0 connector (series A)
ArtNet IN/OUT: RJ 45 (Neutrik Ethercon)
External video input: 1 x HDMI
AC power IN/Out: Chassis connector Neutrik PowerCon TRUE 1, NAC3PX-TOP

Max. number of fixtures in Ethernet IN/Out line

8

Rigging

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

Temperatures

Ambient operating temperature : 0 - 40° C
Maximum housing temperature : 60° C

Distances

Min. distance from flammable surfaces: 0.5 m
Min. distance to projection surface: 0.8 m

Total heat dissipation

360 BTU/h (calculated)

Weight

12 kg

Dimensions (mm)
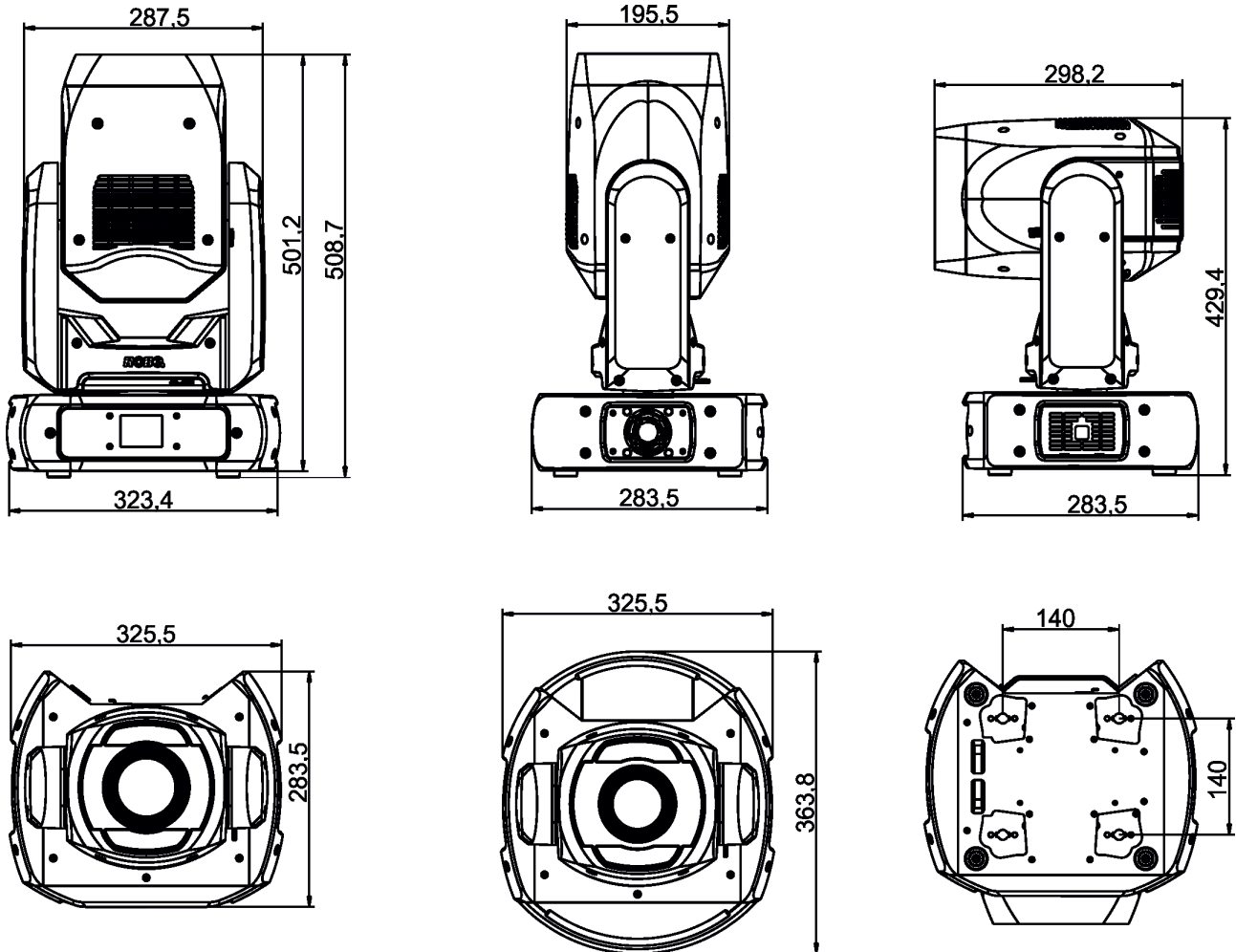
With additional base covers

Accessories

1 x Mounting adaptor CL-regular 2pcs in box (P/N 10980033)
1 x Power cable including powerCON TRUE1 In connector

Optional accessories

ADM - Automatic Distance Meter (P/N 10980549)
Wide angle lens for Robin ProMotion black (P/N 10980547)
Installation base covers for Robin Promotion (P/N 10980548)
Installation base covers for ProMotion RAL9016 mat (P/N 10980616)
Ceiling mounting kit for Robin ProMotion black (P/N 10980551)
Daisy Chain powerCON TRUE1 In/Out, EU, 2m, Indoor (P/N 13052439)
Daisy Chain powerCON TRUE1 In/Out, US, 2m, Indoor (P/N 13052440)
Daisy Chain powerCON TRUE1 In/Out, EU, 5m, Indoor (P/N 13052444)
Safety wire 35 kg (P/N 99011963)
Ceiling Mounting Kit for ROBIN ProMotion (P/N 10980551)
Ceiling mounting kit for ProMotion RAL9016 (P/N 10980617)
CRMX Black RDM OE-BRX1-R (P/N13030894)

Illuminance/Image size chart for optional Wide angle lens

Throw distance ratio 2.3:1

Illuminance - centre (white output: Max. Brightness)		Image Size
50 lx 4.6 fc	14m (46′)	X=6.14m (20.15′) Y=3.45m (11.32′)
57 lx 5.3 fc	13m (43′)	X=5.7m (18.71′) Y=3.20m (10.50′)
67 lx 6.3 fc	12m (39′)	X=5.26m (17.27′) Y=2.96m (9.71′)
80 lx 7.4 fc	11m (36′)	X=4.82m (15.83′) Y=2.71m (8.89′)
97 lx 9 fc	10m (33′)	X=4.39m (14.39′) Y=2.47m (8.10′)
120 lx 11.1 fc	9m (30′)	X=3.95m (12.95′) Y=2.22m (7.28′)
152 lx 14 fc	8m (26′)	X=3.51m (11.51′) Y=1.97m (6.46′)
198 lx 18.4 fc	7m (23′)	X=3.07m (10.07′) Y=1.73m (5.68′)
270 lx 25 fc	6m (20′)	X=2.63m (8.63′) Y=1.48m (4.86′)
388 lx 36 fc	5m (16′)	X=2.19m (7.19′) Y=1.23m (4.04′)
606 lx 56 fc	4m (13′)	X=1.75m (5.76′) Y=0.98m (3.22′)
1078 lx 100 fc	3m (10′)	X=1.32m (4.32′) Y=0.74m (2.43′)
2125 lx 225 fc	2m (7′)	X=0.88m (2.88′) Y=0.50m (1.64′)
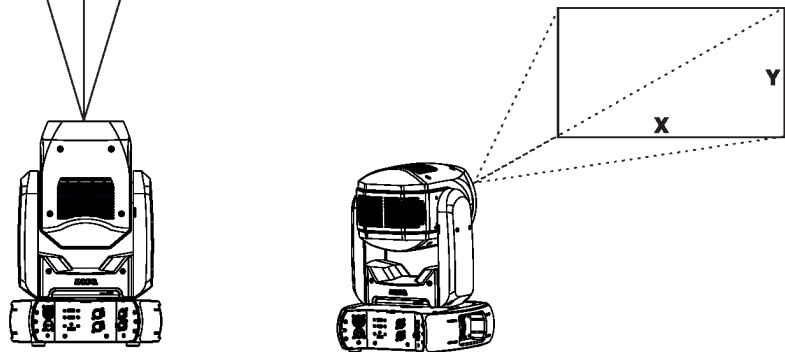
15. Maintenance and cleaning

DANGER !
Disconnect from the mains before starting any maintenance work

---

Important! Never use alcohols (ethanol, methanol, isopropyl alcohol), acetone and another aggressive solvents for cleaning the optical parts of the fixture.

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.
Use low-pressure compressed air to remove coarse dust from optical components.
Use distilled water with weak detergent solution and lint-free small cloth for further cleaning of front glass.
The cooling fans should be cleaned according to the situation (at least annually).
The interior of the base should be cleaned at least annually using a vacuum-cleaner or an air-jet.

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

Important! Check the air filters periodically and clean before it become clogged!

Clean air filters placed in both covers of the head and one in the fixture base. The filters in head covers are fastened by means of velcro fastener and the filter in the base is placed under a grille, which is fastened by means of two magnets.
Use a vacuum cleaner, compressed air or you can wash them and put back dry.
After replacing the air filters, set the remaining time counter in the menu "Fixture Information" (Fixture Information--->Fixture Times--->Resettable Times--->Air Filt. Remains).

15.1 Replacing a fuse

This replacement has to be realized by a qualified person or ROBE service worker only.

Disconnect the fixture from mains before replacing a fuse.

To replace the fuse.
1. Disconnect the fixture from mains
2. Remove the front panel plastic cover (1) by unscrewing two screws (2).
3. Remove the display panel (3) by unscrewing 7 screws M4x10 (4) to get access to the fuse holder (5).
4. Open the fuse holder by means of the fitting screwdriver (anti-clockwise).
5. Remove the old fuse from the fuse holder.
6. Install the new fuse to the fuse holder (only the same type and rating).
7 Screw the display panel (3) and the front plastic cover (3) back on the base.
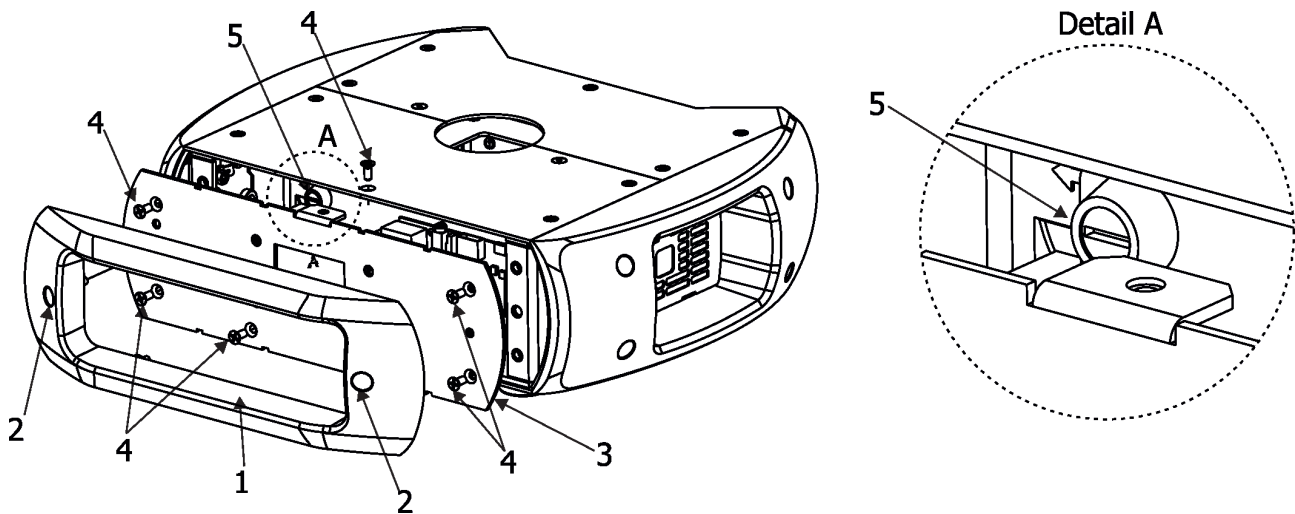
16. ChangeLog

This section summarizes all types of changes in the user manual.

Version of the manual	Date of issue	Description of changes
1.1	25/09/2020	DMX chart ver. 1.2
1.2	27/10/2020	DMX chart ver. 1.3
1.3	04/12/2020	DMX chart ver. 1.4
1.4	09/12/2020	DMX chart ver. 1.5
1.5	08/01/2021	Menu items changed
1.6	18/01/2021	DMX chart ver. 1.6
1.7	03/02/2021	RDM ID added
1.8	06/04/2021	DMX chart ver. 1.7
1.9	22/04/2021	Display menu changed, DMX chart ver. 1.8
2.0	17/05/2021	Menu changed
2.1	12/10/2021	DMX chart ver. 1.9
2.2	25/10/2021	Ceiling mounting kit added
2.3	19/11/2021	DMX chart ver. 2.0
2.4	19/01/2022	Accessories in RAL 9016
2.5	30/08/2022	RTSP support added
2.6	24/03/2023	Notes about EMC added
2.7	11/07/2023	Quiet mode added, DMX chart ver.2.2

Mode/Total channels			DMX Value	Function	Type of control
1/25	**2/33**				
1	**1**			**Pan**	
			0 - 255	Pan movement by 540° (128=default)	proportional
2	**2**			**Pan fine**	
			0 - 255	Fine control of pan movement (0=default)	proportional
3	**3**			**Tilt**	
			0 - 255	Tilt movement by 260° (128=default)	proportional
4	**4**			**Tilt fine**	
			0 - 255	Fine control of tilt movement (0=default)	proportional
5	**5**			**Pan/Tilt speed , Pan/Tilt time**	
			0	Standard mode (0=default)	step
			1	Max. Speed Mode	step
				Pan/Tilt speed mode	
			2 - 255	Speed from max. to min.	proportional
				Pan/Tilt time mode	
			2 - 255	Time from 0.2 s to 25.5 sec.	proportional
6	**6**			**Special functions**	
				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 24/32 must be at range: 0-31 DMX). Corresponding menu items are temporarily overriden (unless otherwise stated).	
			0 -9	Reserved (0=default)	
			10-14	DMX input: Wired DMX	step
			15-19	DMX input: Wireless DMX *	step
			20-24	Graphic display: On	step
			25-29	Graphic display: Off	step
			30-31	Colour temperature: 3200K	step
			32-33	Colour temperature: 4200K	step
			34-35	Colour temperature: 5000K	step
			36-37	Colour temperature: 5500K	step
			38-39	Colour temperature: 5600K	step
			40-41	Colour temperature: 6500K	step
			42-43	Colour temperature: 7500K	step
			44-45	Colour temperature: 8000K	step
			46-47	Colour temperature: 9500K	step
			48-49	Maximum brightness	step
			50 - 59	Pan/Tilt speed mode	step
			60 - 69	Pan/Tilt time mode	step
			70 - 79	Blackout while pan/tilt moving	step
			80 - 89	Disabled blackout while pan/tilt moving	step
			90-94	Ceiling projection On	step
			95-99	Ceiling projection Off	step
			100-104	Rear projection On	step
			105-109	Rear projection Off	step
			110-114	Fans mode: Auto	step
			115-119	Fans mode: High	step
			120-121	Colour mixing mode: CMY	step
			122-123	Colour mixing mode: RGB	step

Mode/Total channels		DMX Value	Function	Type of control
1/*25*	**2**/*33*			
		124-125	Fans mode: Quiet	step
		126 -129	Reserved	
			To activate following functions, stop in DMX value for at least 3 seconds.	
		130-134	Keep aspect ratio On	step
		135-139	Keep aspect ratio Off	step
		140 - 149	Pan/Tilt reset	step
		150 - 179	Reserved	
		180 - 189	Focus reset	step
		190 - 199	Graphic engine reset(software update executing)	step
		200 - 209	Total reset	step
		210 -219	Internal HDMI	step
		220 -229	External HDMI	step
		230 -234	Save AutoKeystoning	step
		235 -239	Reserved	
		240 -244	Synchronization of the Local NAS content with NAS	step
			The following RoboSpot related commands are only applicable when the RoboSpot is connected:	
		245 - 246	RoboSpot enabled	step
		247 - 248	RoboSpot disabled - except handle faders and pan/tilt	step
		249 - 250	RoboSpot fully disabled	step
		251 - 255	Reserved	
7	**7**		**Digital zoom**	
		0-127	Zoom from min. -->real size	proportional
		128	Real size (128=default)	step
		129-255	Zoom from real size -->max.	proportional
8	**8**		**Focus**	
		0 - 255	Continuous adjustment from far to near (128=default)	proportional
			Fixture equipped with ADM: Focus has to be set at 0 DMX	
9	**9**		**Vertical keystoning**	
		0	Vertical autoKeystoning, Corner keystones Off	step
		1-127	Vertical keystoning correction, Corner keystones Off	proportional
		128	Vertical keystoning Off, Corner keystones On (128=default)	step
		129-255	Vertical keystoning correction - oppozite direction, Corner keystones Off	proportional
10	**10**		**Horizontal keystoning**	
		0	Horizontal autoKeystoning, Corner keystones Off	step
		1-127	Horizontal keystoning correction, Corner keystones Off	proportional
		128	Horizontal keystoning Off, Corner keystones On (128=default)	step
		129-255	Horizontal keystoning correction - oppozite direction, Corner keystones Off	proportional
			To activate the following corner Keystones below, both channels above (Verical keystoning, Horizontal keystoning) have to be set at 128 DMX	
*****	**11**		**KeyStone Top Left X**	
		0	Keystone Off (0=default)	step
		1-255	Movement of the top left corner X coordinate to center	proportional
*****	**12**		**KeyStone Top Left Y**	
		0	Keystone Off (0=default)	step
		1-255	Movement of the top left corner Y coordinate to center	proportional
*****	**13**		**KeyStone Top Right X**	

Mode/Total channels		DMX Value	Function	Type of control
1/25	**2/33**			
		0	Keystone Off (0=default)	step
		1-255	Movement of the top right corner X coordinate to center	proportional
*	14		**KeyStone Top Right Y**	
		0	Keystone Off (0=default)	step
		1-255	Movement of the top right corner Y coordinate to center	proportional
*	15		**KeyStoneBottom Right X**	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom right corner X coordinate to center	proportional
*	16		**KeyStone Bottom Right Y**	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom right corner Y coordinate to center	proportional
*	17		**KeyStone Bottom Left X**	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom left corner X coordinate to center	proportional
*	18		**KeyStone Bottom Left Y**	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom left corner Y coordinate to center	proportional
11	19		**Cyan (Red)**	
		0 - 255	Cyan (0%-->100%) (0=default for CMY mixing mode)	proportional
		0 - 255	Red (0%-->100%) (255=default for RGB mixing mode)	proportional
12	20		**Magenta (Green)**	
		0 - 255	Magenta (0%-->100%) (0=default for CMY mixing mode)	proportional
		0 - 255	Green (0%-->100%) (255=default for RGB mixing mode)	proportional
13	21		**Yellow (Blue)**	
		0 - 255	Yellow (0%-->100%) (0=default for CMY mixing mode)	proportional
		0 - 255	Blue (0%-->100%) (255=default for RGB mixing mode)	proportional
14	22		**Virtual colour wheel**	
		0-15	White (CTC according to value set at channel Special Function) (0=default)	step
		16	Blue	step
		17-55	Blue ---> Cyan	proportional
		56	Cyan	step
		57-95	Cyan ---> Green	proportional
		96	Green	step
		97-134	Green ---> Yellow	proportional
		135	Yellow	step
		136-174	Yellow ---> Red	proportional
		175	Red	step
		176-214	Red ---> Magenta	proportional
		215	Magenta	step
		216-246	Magenta ---> Blue	proportional
		247	Blue	step
		248-255	Reserved	
15	23		**Colour Effect wheel**	
		0	No function (0=default)	step
			Static effects	
		1	Horizontal linear shade, white-->black	step
		2	Horizontal Linear shade, black-->white	step
		3	Vertical linear shade, black-->white	step
		4	Vertical linear shade, white-->black	step

Mode/*Total channels*		DMX Value	Function	Type of control
1/*25*	**2/***33*			
		5	Diagonal shade, white -->black	step
		6	Diagonal shade, black -->white	step
		7	Horizontal linear shade, white-->red	step
		8	Horizontal Linear shade, red-->white	step
		9	Vertical linear shade, red-->white	step
		10	Vertical linear shade, white-->red	step
		11	Diagonal shade, white -->red	step
		12	Diagonal shade, red -->white	step
		13	Horizontal linear shade, white-->green	step
		14	Horizontal Linear shade, green-->white	step
		15	Vertical linear shade, green-->white	step
		16	Vertical linear shade, white-->green	step
		17	Diagonal shade, white -->green	step
		18	Diagonal shade, green -->white	step
		19	Horizontal linear shade, white-->blue	step
		20	Horizontal Linear shade, blue-->white	step
		21	Vertical linear shade, blue-->white	step
		22	Vertical linear shade, white-->blue	step
		23	Diagonal shade, white -->blue	step
		24	Diagonal shade, blue -->white	step
		25	Horizontal linear shade, white-->cyan	step
		26	Horizontal Linear shade, cyan-->white	step
		27	Vertical linear shade, cyan-->white	step
		28	Vertical linear shade, white-->cyan	step
		29	Diagonal shade, white -->cyan	step
		30	Diagonal shade, cyan -->white	step
		31	Horizontal linear shade, white-->magenta	step
		32	Horizontal Linear shade, magenta-->white	step
		33	Vertical linear shade, magenta-->white	step
		34	Vertical linear shade, white-->magenta	step
		35	Diagonal shade, white -->magenta	step
		36	Diagonal shade, magenta -->white	step
		37	Horizontal linear shade, white-->yellow	step
		38	Horizontal Linear shade, yellow-->white	step
		39	Vertical linear shade, yellow-->white	step
		40	Vertical linear shade, white-->yellow	step
		41	Diagonal shade, white -->yellow	step
		42	Diagonal shade, yellow -->white	step
		43	RGBW shades	step
		44	CMYW shades	step
		45	RGBY shades	step
		46	RMBG shades	step
		47-49	Reserved	
			Dynamic effects	
		50	Colour changing black -->white, slowly	step
		51	Colour changing black -->white, fast	step
		52	Colour changing red -->white, slowly	step
		53	Colour changing red -->white, fast	step
		54	Colour changing green -->white, slowly	step

Mode/Total channels		DMX Value	Function	Type of control
1/25	2/33			
		55	Colour changing green -->white, fast	step
		56	Colour changing blue -->white, slowly	step
		57	Colour changing blue -->white, fast	step
		58	Colour changing yellow -->white, slowly	step
		59	Colour changing yellow -->white, fast	step
		60	Colour changing magenta -->white, slowly	step
		61	Colour changing magenta -->white, fast	step
		62	Colour changing cyan -->white, slowly	step
		63	Colour changing cyan -->white, fast	step
		64	Colour changing (slow) red -->green -->blue -->yellow	step
		65	Colour changing (fast) red -->green -->blue -->yellow	step
		66	Colour changing (fastest) red -->green -->blue -->yellow	step
		67-69	Reserved	
		70	Horizontal linear shade, white-->black and vice versa, slowly	step
		71	Horizontal linear shade, white-->black and vice versa,fast	step
		72	Vertical linear shade, white-->black and vice versa, slowly	step
		73	Vertical linear shade, white-->black and vice versa, fast	step
		74	Diagonal shade, black -->white and vice versa, slowly	step
		75	Diagonal shade, black -->white and vice versa, fast	step
		76	Shade black -->white, slow rotation, clockwise	step
		77	Shade black -->white, fast rotation, clockwise	step
		78	Shade black -->white, slow rotation, anticlockwise	step
		79	Shade black -->white, fast rotation, anticlockwise	step
		80	Horizontal linear shade, white-->red and vice versa, slowly	step
		81	Horizontal linear shade, white-->red and vice versa,fast	step
		82	Vertical linear shade, white-->red and vice versa, slowly	step
		83	Vertical linear shade, white-->red and vice versa, fast	step
		84	Diagonal shade, red -->white and vice versa, slowly	step
		85	Diagonal shade, red -->white and vice versa, fast	step
		86	Shade red -->white, slow rotation, clockwise	step
		87	Shade red -->white, fast rotation, clockwise	step
		88	Shade red -->white, slow rotation, anticlockwise	step
		89	Shade red -->white, fast rotation, anticlockwise	step
		90	Horizontal linear shade, white-->green and vice versa, slowly	step
		91	Horizontal linear shade, white-->green and vice versa,fast	step
		92	Vertical linear shade, white-->green and vice versa, slowly	step
		93	Vertical linear shade, white-->green and vice versa, fast	step
		94	Diagonal shade, green -->white and vice versa, slowly	step
		95	Diagonal shade, green -->white and vice versa, fast	step
		96	Shade green -->white, slow rotation, clockwise	step
		97	Shade green -->white, fast rotation, clockwise	step
		98	Shade green -->white, slow rotation, anticlockwise	step
		99	Shade green -->white, fast rotation, anticlockwise	step
		100	Horizontal linear shade, white-->blue and vice versa, slowly	step
		101	Horizontal linear shade, white-->blue and vice versa,fast	step
		102	Vertical linear shade, white-->blue and vice versa, slowly	step
		103	Vertical linear shade, white-->blue and vice versa, fast	step
		104	Diagonal shade, blue -->white and vice versa, slowly	step
		105	Diagonal shade, blue -->white and vice versa, fast	step

Mode/Total channels		DMX Value	Function	Type of control
1/_25_	**2/**_33_			
		106	Shade blue -->white, slow rotation, clockwise	step
		107	Shade blue -->white, fast rotation, clockwise	step
		108	Shade blue -->white, slow rotation, anticlockwise	step
		109	Shade blue -->white, fast rotation, anticlockwise	step
		110	Horizontal linear shade, white-->cyan and vice versa, slowly	step
		111	Horizontal linear shade, white-->cyan and vice versa,fast	step
		112	Vertical linear shade, white-->cyan and vice versa, slowly	step
		113	Vertical linear shade, white-->cyan and vice versa, fast	step
		114	Diagonal shade, cyan -->white and vice versa, slowly	step
		115	Diagonal shade, cyan -->white and vice versa, fast	step
		116	Shade cyan -->white, slow rotation, clockwise	step
		117	Shade cyan -->white, fast rotation, clockwise	step
		118	Shade cyan -->white, slow rotation, anticlockwise	step
		119	Shade cyan -->white, fast rotation, anticlockwise	step
		120	Horizontal linear shade, white-->magenta and vice versa, slowly	step
		121	Horizontal linear shade, white-->magenta and vice versa,fast	step
		122	Vertical linear shade, white-->magenta and vice versa, slowly	step
		123	Vertical linear shade, white-->magenta and vice versa, fast	step
		124	Diagonal shade, magenta -->white and vice versa, slowly	step
		125	Diagonal shade, magenta -->white and vice versa, fast	step
		126	Shade magenta -->white, slow rotation, clockwise	step
		127	Shade magenta -->white, fast rotation, clockwise	step
		128	Shade magenta -->white, slow rotation, anticlockwise	step
		129	Shade magenta -->white, fast rotation, anticlockwise	step
		130	Horizontal linear shade, white-->yellow and vice versa, slowly	step
		131	Horizontal linear shade, white-->yellow and vice versa,fast	step
		132	Vertical linear shade, white-->yellow and vice versa, slowly	step
		133	Vertical linear shade, white-->yellow and vice versa, fast	step
		134	Diagonal shade, yellow -->white and vice versa, slowly	step
		135	Diagonal shade, yellow -->white and vice versa, fast	step
		136	Shade yellow -->white, slow rotation, clockwise	step
		137	Shade yellow -->white, fast rotation, clockwise	step
		138	Shade yellow -->white, slow rotation, anticlockwise	step
		139	Shade yellow -->white, fast rotation, anticlockwise	step
		140	RGBW shades, slow rotation , clockwise	step
		141	RGBW shades, fast rotation ,clockwise	step
		142	RGBW shades, slow rotation , anticlockwise	step
		143	RGBW shades, fast rotation ,anticlockwise	step
		144	Random colours slowly, black between colours	step
		145	Random colours fast, black between colours	step
		146	Random colours slowly, white between colours	step
		147	Random colours fast, white between colours	step
		148	Random colours slowly	step
		149	Random colours fast	step
		150	Horizontal black shade -->random colour, slowly	step
		151	Horizontal black shade -->random colour, fast	step
		152	Vertical black shade -->random colour, slowly	step
		153	Vertical black shade -->random colour, fast	step
		154	Diagonal black shade -->random colour, slowly	step

Mode/Total channels		DMX Value	Function	Type of control
1/_25_	**2/**_33_			
		155	Diagonal black shade -->random colour, fast	step
		156	Black shade -->random colour, slow rotation ,clockwise	step
		157	Black shade -->random colour, fast rotation ,clockwise	step
		158	Black shade -->random colour, slow rotation ,anticlockwise	step
		159	Black shade -->random colour, fast rotation ,anticlockwise	step
		160	Random colour in two corners, slow rotation, clockwise	step
		161	Random colour in two corners, fast rotation, clockwise	step
		162	Random colour in two corners, slow rotation, anticlockwise	step
		163	Random colour in two corners, fast rotation, anticlockwise	step
		164	Random colour in four corners, slow rotation, clockwise	step
		165	Random colour in four corners, fast rotation, clockwise	step
		166	Random colour in four corners, slow rotation, anticlockwise	step
		167	Random colour in four corners, fast rotation, anticlockwise	step
		168	Horizontal colour transition, slowly, random	step
		169	Horizontal colour transition, fast, random	step
		170	Vertical colour transition, slowly, random	step
		171	Vertical colour transition, fast, random	step
		172	Diagonal colour transition, slowly	step
		173	Diagonal colour transition, fast	step
		174	Horizontal/Vertical/Diagonal colour transition slowly	step
		175	Horizontal/Vertical/Diagonal colour transition fast	step
		176-255	Reserved	
16	**24**		**Digital gobo wheel selection**	
		0-31	Factory Digital gobo wheel (0=default)	step
		32-63	Internal Custom Digital gobo wheel	step
		64-95	External Custom Digital gobo wheel (USB memory stick)	step
		96-127	NAS content	step
		128-159	Enable RTSP (select stream on the channel 17/25, DMX 1-20)	step
		160-255	Reserved	
17	**25**		**Digital gobo wheel**	
		0	Open (0=default)	
			If the RTSP is enabled (channel 16/24, DMX range of 128-159):	
		1-20	Running of Stream 1,2….19,20	proportional
			If the i Factory Digital gobo wheel is activated (channel 16/24, DMX range of 0-31), the following distribution of gobos/pictures/animations goes for Factory Digital gobo wheel only:	
		1 - 103	Colour pictures (by one DMX value: 1,2,3……103)	proportional
		104-149	Black and white gobos (by one DMX value: 104, 105,……149)	proportional
		150-168	Black and white animations (by one DMX value: 150, 151,…..168)	proportional
		169-250	Colour animations (by one DMX value: 169, 170…..250)	proportional
			To activate following two functions, set a transition effect (1-48 DMX) at Effect Wheel - channel 21/29	
		251	Gobos presentation (gobos selected randomly)	step
		252	Gobos presentation (gobos selected in alphabetical order)	step
		253-254	Reserved	
		255	White	step
18	**26**		**Video speed control**	
		0	Optimal speed (0=default)	step

DMX protocol

Mode/*Total channels*		DMX Value	Function	Type of control
1/*25*	**2/***33*			
		1	Pause	step
		2-127	Reserved	
		128-255	Speed from original to max. (4x original speed)	proportional
19	**27**		**Digital gobo indexing and rotation**	
		0 - 127	Gobo indexing (0=default)	proportional
		128-190	Forwards gobo rotation from fast to slow	proportional
		191-192	No rotation	step
		193- 255	Backwards gobo rotation from slow to fast	proportional
20	**28**		**Digital gobo gobo indexing and rotation fine**	
		0-255	Fine indexing (rotation)	proportional
21	**29**		**Effect wheel**	
			The following effects are controlled by means of the "Effect speed/Time" channel below. Type of control is stated in the column on the right.	
		0	Open position-hole (0=default)	step
			***T**ransition effects between two gobos (pictures)*	
		1	Random transition	1
		2	Transition with blending	1
		3	Transition from left --> right, horizontally	1
		4	Transition from right --> left, horizontally	1
		5	Stripe transition from left --> right, horizontally	1
		6	Stripe transition from right -->left, horizontally	1
		7	3-stripe transition from left-->right, horizontally	1
		8	3-stripe transition from right-->left, horizontally	1
		9	6-stripe transition from left-->right, horizontally	1
		10	6-stripe transition from right-->left, horizontally	1
		11	Transition up --> down, vertically	1
		12	Transition down -->up, vertically	1
		13	Stripe transition up --> down, vertically	1
		14	Stripe transition down -->up, vertically	1
		15	3-stripe transition up-->down, vertically	1
		16	3-stripe transition down-->up, vertically	1
		17	6-stripe transition up-->down, vertically	1
		18	6-stripe transition down-->up, vertically	1
		19	Transition 2 from left --> right, horizontally (diffusion edge)	1
		20	Transition 2 from right --> left, horizontally (diffusion edge)	1
		21	Transition 2 up --> down, vertically (diffusion edge)	1
		22	Transition 2 down -->up, vertically (diffusion edge)	1
		23	Iris transition out--> in	1
		24	Iris transition in--> out	1
		25	Iris transition out--> in (Diffusin edge)	1
		26	Iris transition in--> out (Diffusion edge)	1
		27	Iris transition 3 out--> in (more diffusion edge)	1
		28	Iris transition 3 in--> out (more diffusion edge)	1
		29	Moving transition from left --> right	1
		30	Moving transition from left --> right	1
		31	Moving transition up --> down	1
		32	Moving transition from down --> up	1
		33	Drop transition	1
		34	Simple transition	1

Mode/*Total channels*		DMX Value	Function	Type of control
1/*25*	**2/*33***			
		35	Pixel transition	1
		36	Transition via blending	1
		37	Transition with white output	1
		38	Crossing transition	1
		39	Picture in picture transition	1
		40	Direct transition	1
		41	Transition with vertical rotation	1
		42	Transition with horizontal rotation	1
		43	Transition with diagonal rotation	1
		44	Transition with diagonal rotation-opposite direction	1
		45	Zoom out transition	1
		46	Zoom in transition	1
		47	Zoom transition in horizontal direction	1
		48	Zoom transition in vertical direction	1
		49-79	Reserved	
			Effects applied at one gobo (picture)	
		80	Kaleidoscope 1	3
		81	Kaleidoscope 2	3
		82	Kaleidoscope 3	3
		83	Kaleidoscope 4	3
		84	Kaleidoscope 5	3
		85	Sunflower Kaleidoscope (coarse)	3
		86	Sunflower Kaleidoscope (soft)	3
		87	Sunflower kaleidoscope (slow)	4
		88	Sunflower kaleidoscope (faster)	4
		89	Sunflower kaleidoscope (fastest)	4
		90-99	Reserved	
		100	Circle Iris in/out	2
		101	Circle Iris in/out (diffusion edge)	2
		102	Vertical Ellipse Iris in/out	2
		103	Horizontal Ellipse Iris in/out	2
		104	Colour -> Black-and-white -> Colour	2
		105	Colour -> Black-and-white inverted -> Colour	2
		106	Black-and-white ->Black-and-white inverted -> Black-and-white	2
		107	Colour -> Colour inverted -> Colour	2
		108	Pixalation	2
		109-179	Reserved	
			Manual effects	
		180	Circular Iris	5
		181	Elliptical Iris -vertical	5
		182	Elliptical Iris-horizontal	5
		183	Black mask	6
		184	Inverse black mask	6
		185	White mask	6
		186	Inverse white mask	6
		187	Gobo/video movement in horizontal (X) axis	7
		188	Gobo/video movement in vertical (Y) axis	7
		189	Reserved	
		190	Crossfade effect	8

Mode/Total channels		DMX Value	Function	Type of control
1/25	**2/33**			
		191	Addition effect	8
		192	Substraction effect	8
		193	Multiplication effect	8
		194	Minimum effect	8
		195	Maximum effect	8
		196-255	Reserved	
22	**30**		**Effect Speed/Time**	
			Type of control 1	
		0	Presentation* (time=0.8 sec) (0=default)	step
		1-250	Time from 0,1 sec. to 25 sec.	proportional
		251-255	Stop	step
			*Presentation serves for showing effect	
			Type of control 2	
		0	Presentation (time=0.8 sec)	step
		1-126	Time from 0,1 sec. to 12,6 sec.	proportional
		127-128	Stop	step
		129-254	Time from 12.6 sec to 0.1 sec. - opposite direction	proportional
		255	Stop	step
			Type of control 3	
		0	Presentation	step
		1-255	Effect speed from min. to max.	proportional
			Type of control 4	
		0	Presentation (4 corners)	step
		1-255	Number of corners from min. to max.	proportional
			Type of control 5	
		0	Open	step
		1-255	Iris from open to close	proportional
			Type of control 6	
		0	Open	step
		1-255	Mask effect from min. level to max. level	proportional
			Type of control 7	
		0-127	Movement from edge to centre	proportional
		128	Centre	step
		129--255	Movement from centre to edge	proportional
			Type of control 8	
		0-255	Continuous effect changing	proportional
23	**31**		**Grey box correction**	
		0	Open (0=default)	step
		1 - 255	From max.diameter to min.diameter	proportional
24	**32**		**Shutter/ strobe**	
		0 - 15	Shutter closed, LEDs Off	step
		16 - 31	Shutter closed, LEDs On	step

Mode/*Total channels*		DMX Value	Function	Type of control
1/*25*	**2/*33***			
		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
25	**33**		**Dimmer**	
		0	Dimmer closed, LEDs Off (0=default)	step
		1 - 255	Dimmer intensity from min. to max., LEDs On	proportional

* function is active only 10 seconds after switching the fixture on