ROBe.

ROBIN®Promotion

ROBIN®Promotion ADM
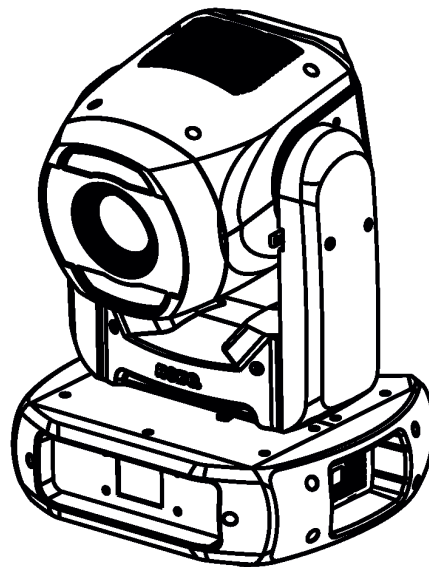
ROBE
Innovative
Technology

USER MANUAL

Version 1.6

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!

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

Immunity of the equipment is designed for electromagnetic environments E1, E2, E3 according to the standard EN55103-2 ed.2 Electromagnetic compatibility. Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2: Immunity.
The product (covers and cables) must not be exposed to a high frequency electromagnetic field higher than 3V/m

The installation company should check levels of possible interferences above the tested levels E1,E2,E3 given by this standard (e.g. transmitters in surrounding area) before installing the equipment.
Emission of the equipment complies with the standard EN55032 Electromagnetic compatibility of multimedia equipment – Emission Requirements according to class B.

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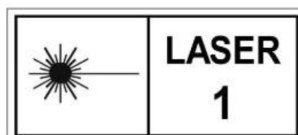
2. Fixture exterior view
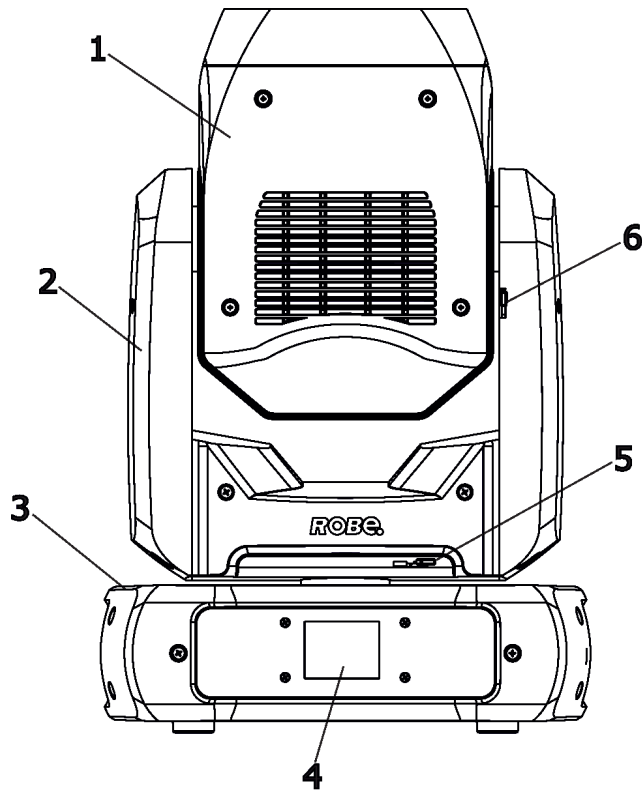
1 - Moving head
2 - Arm
3 - Base
4 - Display
5 - Pan lock
6 - Tilt lock

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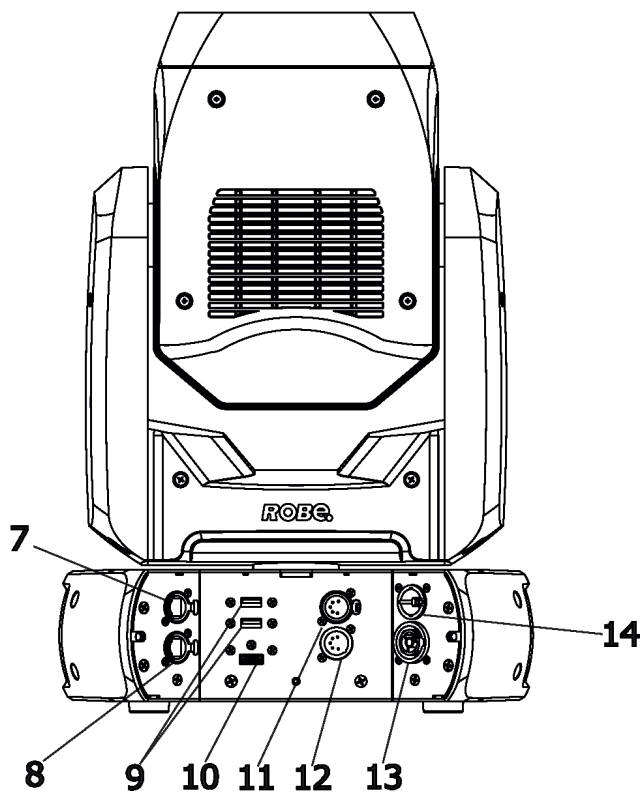
 7 - Ethernet OUT (RJ45)
 8 - Ethernet IN (RJ45)
 9 - 2x USB input
10 - HDMI input
11 - DMX OUT (5-pin XLR)
12 - DMX IN (5-pin XLR)
13 - Power OUT (PowerCon True 1)
14 - Power IN (PowerCon True 1)

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

 24 fixtures at power supply= 230V
 22 fixtures at power supply= 208V
 12 fixtures at power supply= 120V

cETLus

 14 fixtures at power supply= 230V
 13 fixtures at power supply= 208V
  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
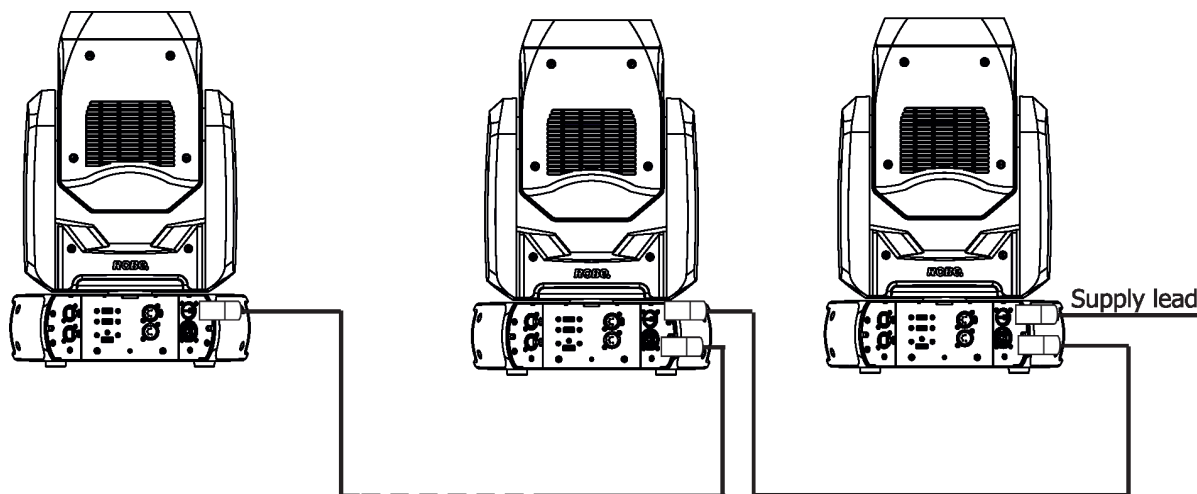
Wiring and connection work must be carried out by qualified staff!

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

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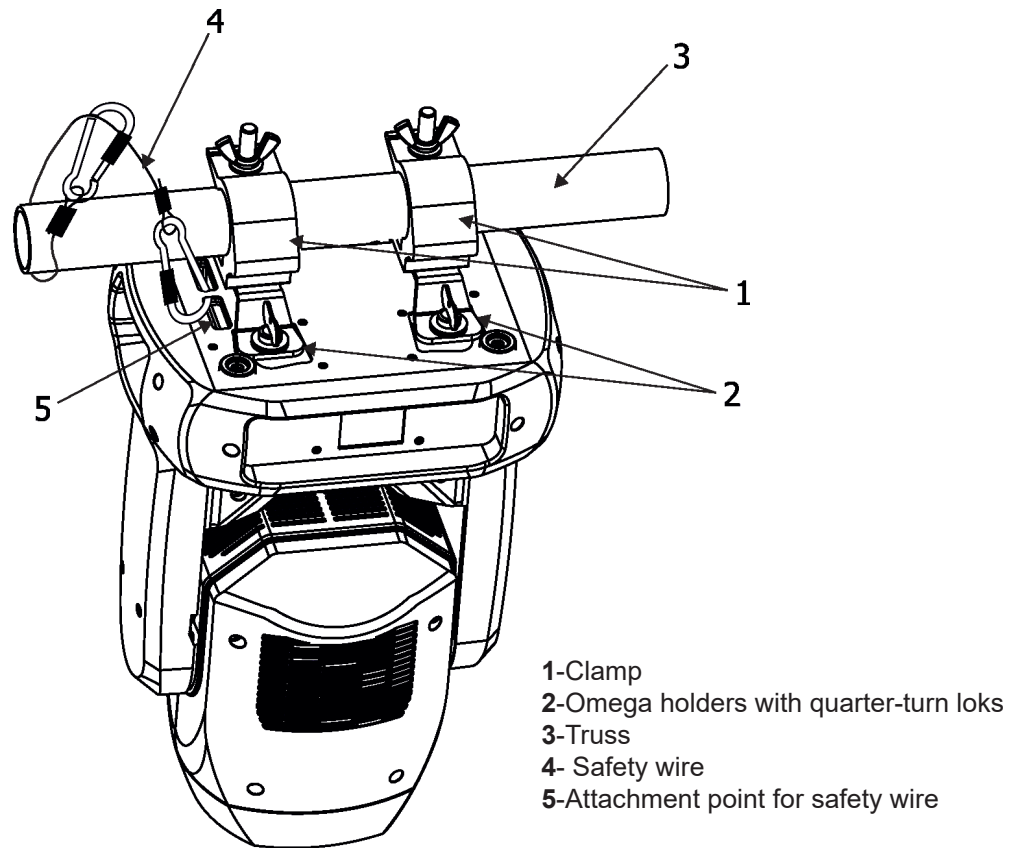
When installing fixtures side-by-side, avoid illuminating one fixture with another!

3.3 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')
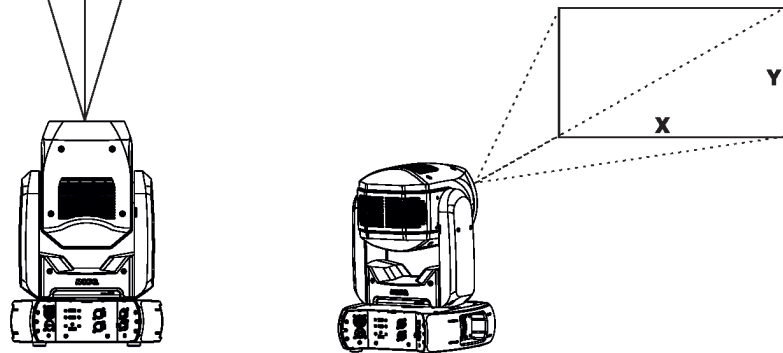
Note: There is a tolerance among these numbers due to optical component variations. We recommend that if you intend to permanently install the Robin ProMotion, you should physically test the projection size and distance using the actual fixture before permanent installation.

3.4 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
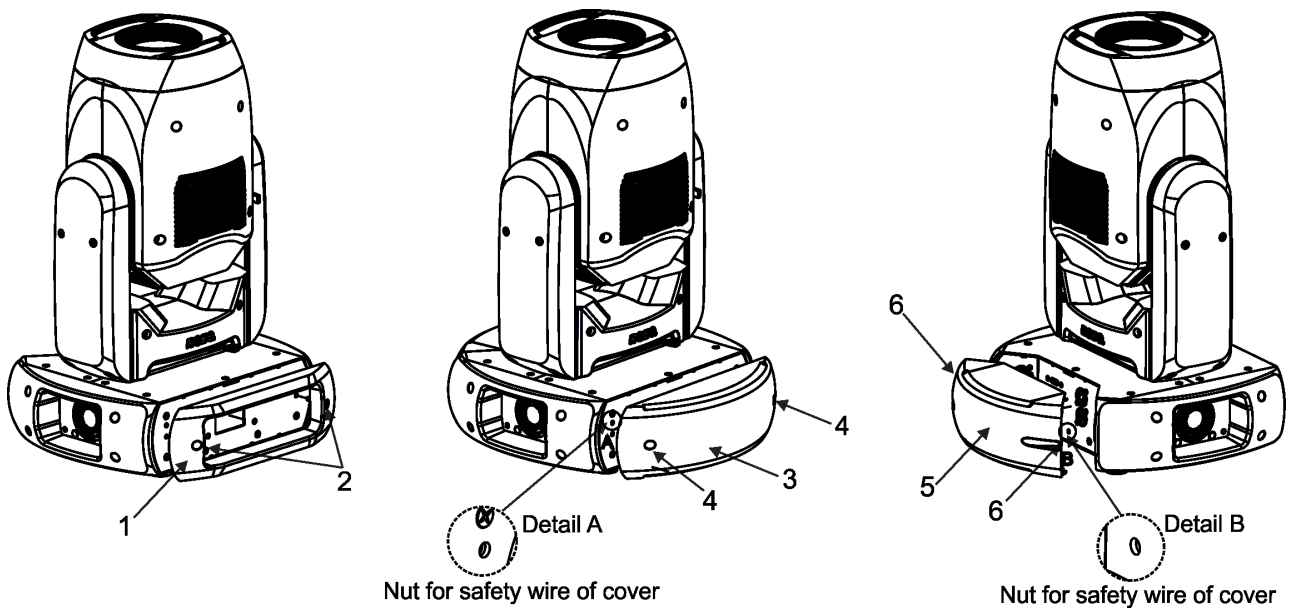
3.5 Installing the wide-angle lens

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.
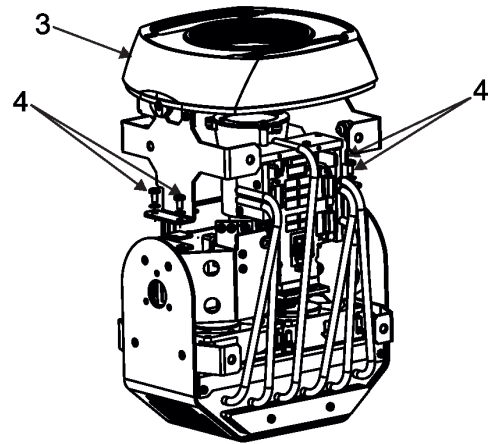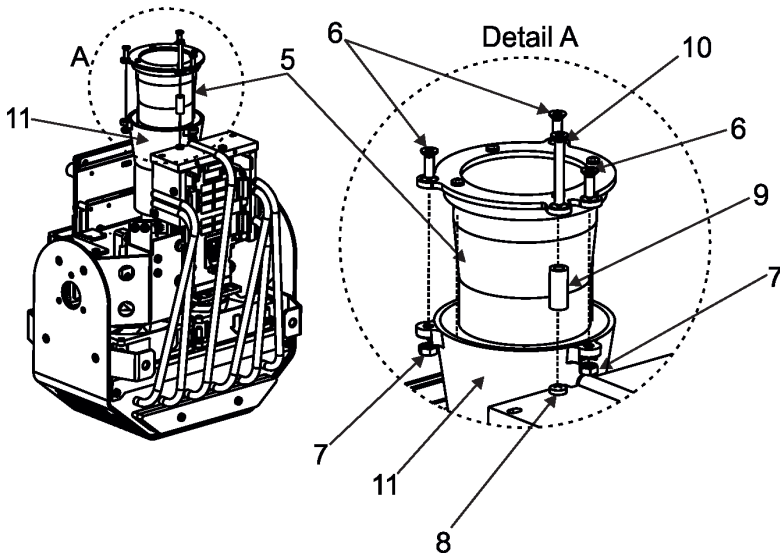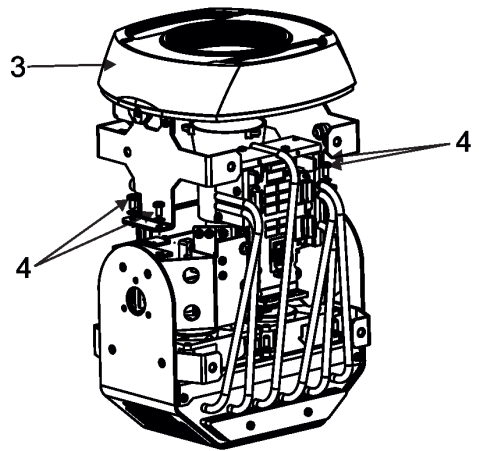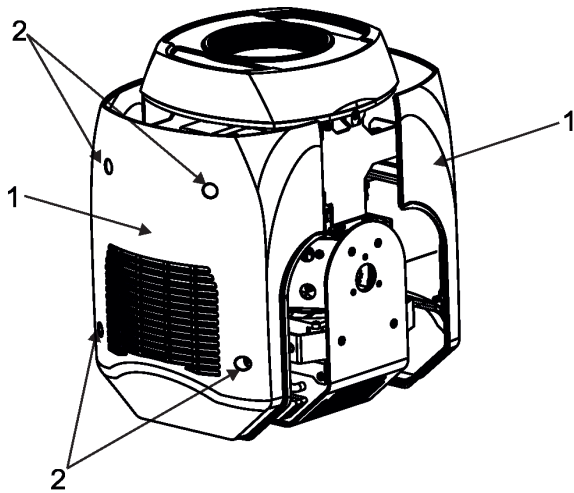
3.6 Installing the Automatic Distance Meter (ADM)

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)
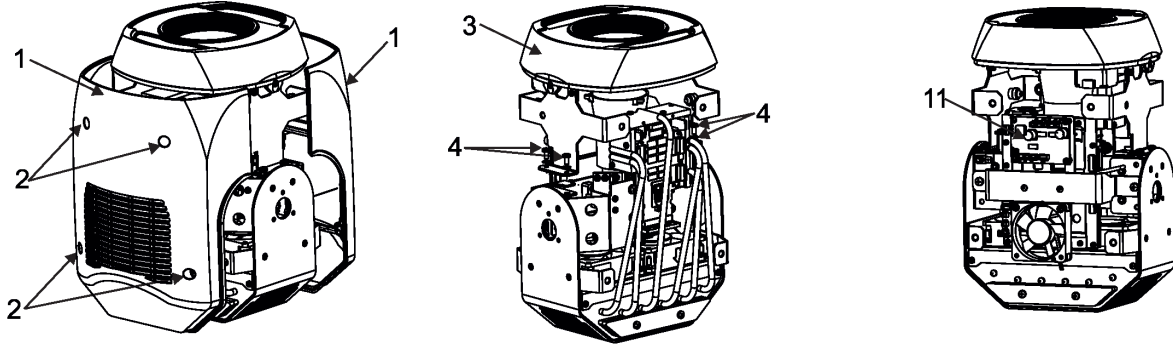
3. Remove the grey box module (5) of the head by unscrewing the four screws M4x8 (6).
4. Remove the black glass (7) by unscrewing its glass holder with four screws 3x8 (8).
5. Place a new glass with two apertures and secure it by means of the glass holder with four screws 3x8 (8).
6. Place the ADM (9) 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.
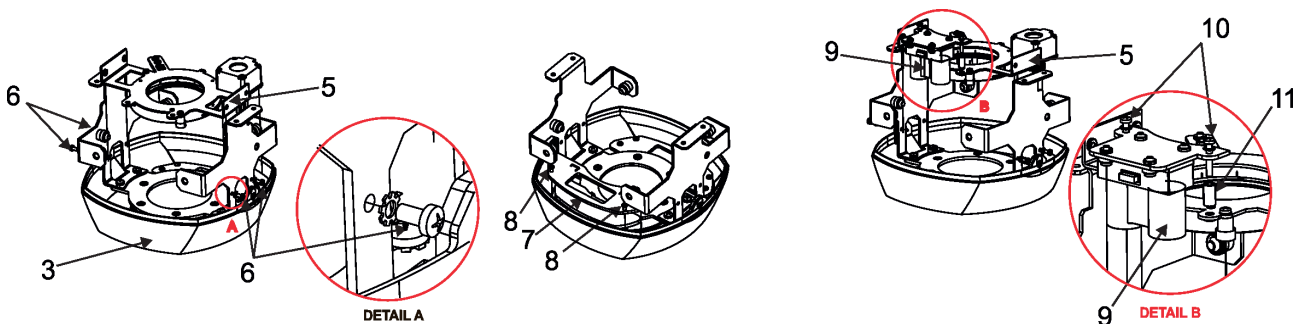
The Automatic Distance Meter (ADM) allows you to keep the image on the screen (wall, ceiling) permanently focused during Promotion´s head movement.

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.

3.7 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.
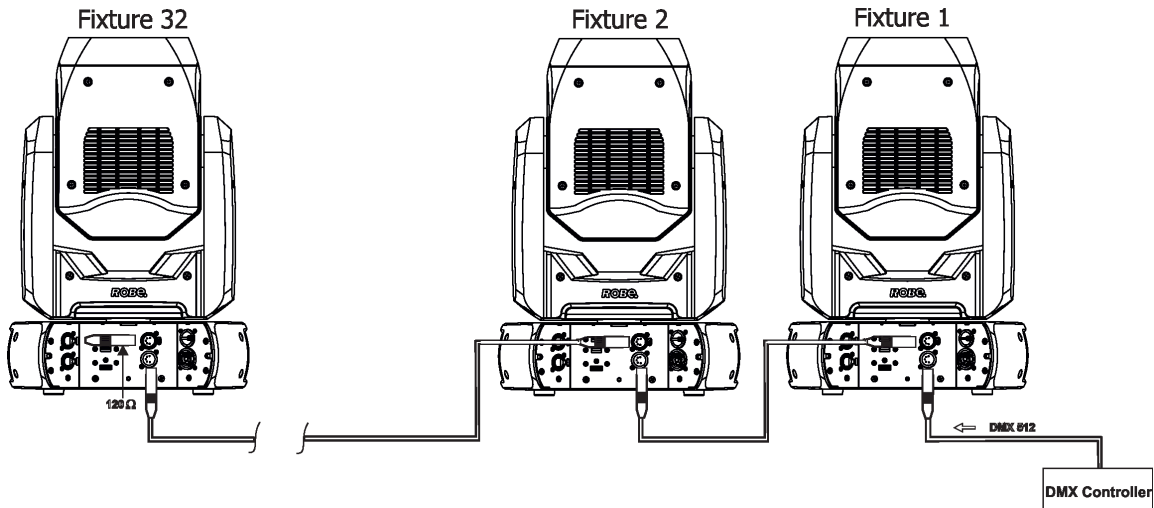
3.8 Ethernet connection

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):

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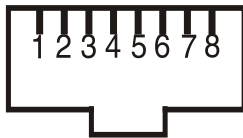
1- TD+	5- Not connected
2- TD-	6- RX-
3- RX+	7- Not connected
4- Not connected	8- Not connected

RJ-45 plug (front view):

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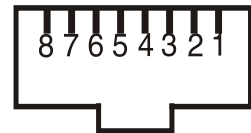
Patch cables that connect fixtures to the hubs or LAN sockets are wired 1:1,that is,pins with the same numbers are connected together:

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

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

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

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
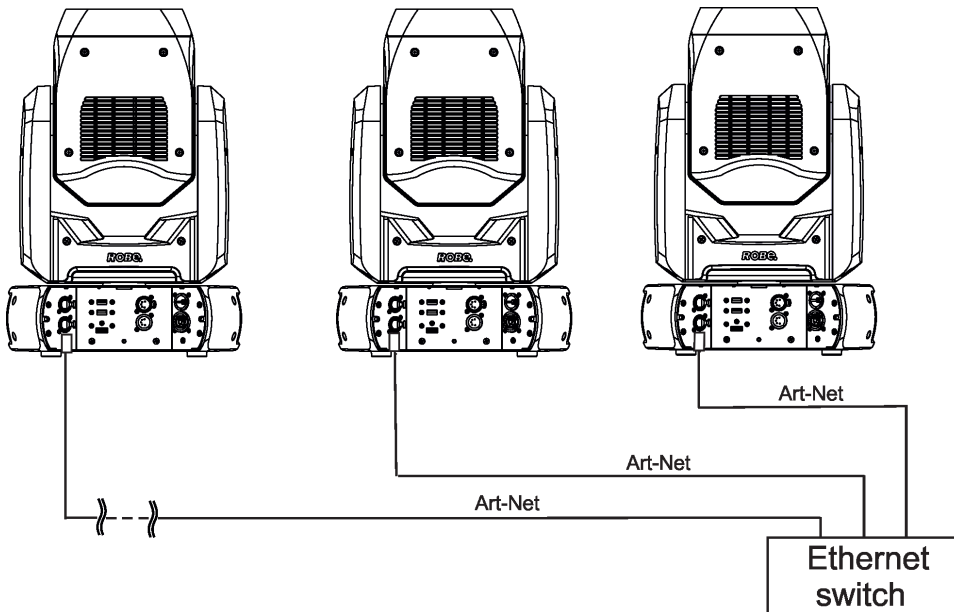
Ethernet switch

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.

3.9. 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
Fixture Address	DMX Address	1-255				
	ArtNet Universe	0-255				
	sACN Universe	1-63999				
	Receiving Mode	DMX				
		ArtNet				
		ACN				
		Wireless DMX				
	IP Address					
	IP Net Mask					
	Reset Address					
Fixture Information	Fixture Times	Total	Power On Time			
			Lamp On Time			
		Resettable	Power On Time			
			Lamp On Time			
			Air Filt. Remain.	10-300		
	DMX Values	Pan	0-255			
		:				
		Dimmer	0-255			
	Temperatures	Current	CPU			
			Head			
			Projector			
		Highest	CPU			
			Head			
			Projector			
		High Res.	CPU			
			Head			
			Projector			
	Power Channel State					
	Software Versions	Graphic Engine				
		Module Pan/Tilt				
		Module Optics				
		Module Display				
	Space Usage	Free				
		Used				
	Product IDs					
	Wireless State	Signal Quality				
		Unlink Wireless				
Personality	Pan Reverse	On, **Off**				
	Tilt Reverse	On, **Off**				
	Pan/Tilt Mode	**Speed Mode**				
		Time Mode				
	Pan/Tilt Feedback	**On**, Off				
	Blackout DMC	**On**, Off				
	Blackout While	Pan/Tilt Moving	On, **Off**			
	Colour Mixing Mode	**CMY Mode**				
		RGB Mode				
	Init Effect position	Pan	0-255			
		:				
		Dimmer	0-255			
	Display	Orientation	**Normal,** Inverted			

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
		Screen Delay	**0**-10			
		Intensity	0-**9**			
	LED Engine	Ceiling Projection	On, **Off**			
		Rear Projection	On**, Off**			
		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	**On**			
			Off			
		Gobo Selection Mode	**Alphabetical Order**			
			Numerical Order			
		Gobo Synchro Mode	**On**, Off			
		Slideshow Timer	**0...3**...300			
		Optics Module	**None**			
			Wide Optics			
	Fans	**Auto**, High				
	Stand Alone	Input Overtake	**Off** , On			
	WEB Server	Activate Password	Off, **On**			
		Set Password	**2479**			
	Wifi Access Point	Activate	**Off**			
			On			
		Channel ID	1-9			
	NAS Client	Activate	**Off** , On			
		IP Address				
		Synchro Time	10-600			
		On PowerUp Sync.	Off			
			No Wait For Sync			
			Wait For Sync			
	Reset to Defaults					
Manual Control	Manual DMX Control	Pan	0-255			
		:				
		Dimmer.	0-255			
	LED Engine	External Input	On, **Off**			
		Keystone Horizontal	0...**128**....255			
		Keystone Verical	0...**128**....255			
		LED On/Off	On, **Off**			
Test Program	Static	Pan	0-255			
		Tilt	0-255			
		Focus	0-255			
		Run				
	Dynamic					
Stand Alone	Auto Run	**Play Off**				
		Program 1-Program 9				
	Play Program	Program 1-Program 9				
	Record Program	Program 1-Program 9				
	Edit Program	Program 1-Program 9	Step 1	Pan	0-255	
			:	:		
			Step	Dimmer	0-255	
				Step Time	0.1-999.9s	

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
				Add New Step		
Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**	**Level 7**
				Delete Step		
Reset Functions	Reset Grap. Engine					
	Reset Pan/Tilt					
	Reset Focus					
	Reset All					
User Media	Initiaize USB					
	Mirror Media					
	Mirror Program					
	Re-encode Internal Media					
	Delete Internal Media					
Special Functions	Reinit Inner Flash Drive					
	Calibration	Pan Calibration	0-255			
		Tilt Calibration	0-255			
		Focus Calibration	0-255			
		Grey Box calibration	0--255			
		Store				

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              |
|                             |
|                             |
+-----------------------------+
```
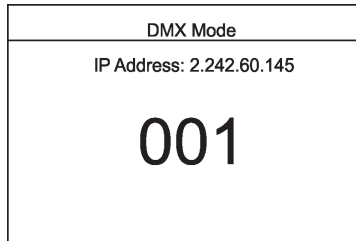
Touching and holding finger on the display rotates menu 180 degrees from current orientation.

Touch the screen to display main menu of the fixture.

```
+-----------------------------+
|          Main Menu          |
+-----------------------+-----+
|  IP Address: 2.242.60.145 | < |
|                           |   |
|        Main Menu          |   |
|                           |   |
|                           |   |
+---------------------------+---+
```
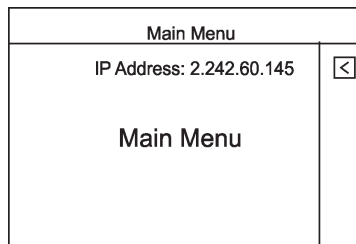
Touch the Main Menu to enter main menu of the fixture.

```
+-----------------------------+
|          Main Menu          |
+-----------------------+-----+
|  IP Address: 2.242.60.145 | < |
|                           |   |
|   Fixture Address         |   |
|   Fixture Information      |   |
|   Personality             |   |
|   Manual Control          |   |
+---------------------------+---+
```
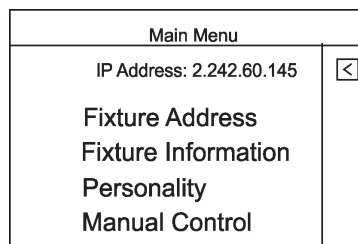
5.1 Fixture Address

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.

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)

Receiving Mode - Use the menu item to set DMX operating mode (" DMX"), ArtNet operation mode ("ArtNet"), sACN operating mode ("ACN") or wireless DMX ("Wireless DMX").

IP Addr - **Set 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.

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

5.2 Fixture 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.

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

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.

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).

Wireless State - The menu serves for reading of the wireless operation status.
If the fixture is linked to a DMX transmitter, the information about signal quality will be displayed and the option Unlink Wireless 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.
  Unlink Wireless Adapter - The item serves for unlinking the fixture from DMX transmitter.

5.3 Personality

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

Blackout While... - Use the menu if you wish to close the light output during effect changes.

>**Pan/Tilt Moving** - If the item is On, the light output is closed during pan movement or tilt movement.

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.

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

>**Orientation** - Use the function to rotate menu 180 degrees from current orientation.
>**ScreenSaver Delay** - The item allows you to keep the screen on or to turn it off automatically after 1-10 minutes after last touch of the screen.
>**Intensity** - Use this function to adjust intensity of the display (0- min. intensity, 9- max. intensity)

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 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 - 300 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") or to the max. fans power ("High").

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 -If the option is On, the passwor

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

Manual DMX 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

Auto Run - This function allows you to select the program which will be played in the stand-alone mode after switching the fixture on. Selected program (1-9) 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 🔘 serve for displaying a created step.

5.6 Reset Functions

This option allows you to reset function modules and effects and return them to their standard values (positions).
Reset Grap, Engine - The item resets the graphic engine module.
Reset Pan/Tilt - The item resets the pan/tilt module.
Reset Focus - The item resets the focus module.
Reset All - The item resets all fixture modules.

5.7 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
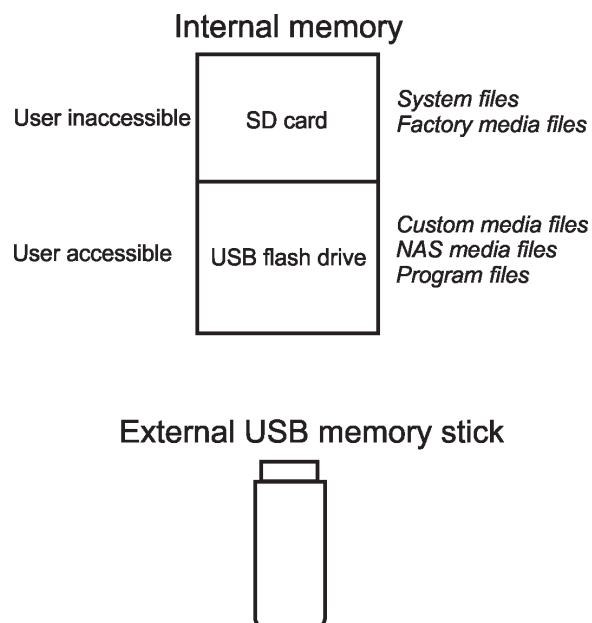
Custom media files can be played directly from the external USB stick or can be loaded to the internal USB

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
```
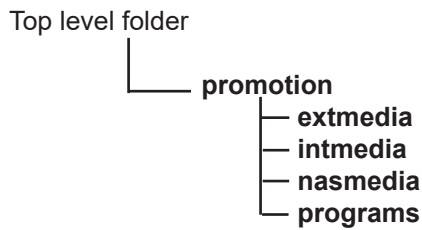
Supported filesystem on the USB stick is FAT16 and FAT 32.

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.

5.8 Special functions

Reinit Inner Flash Drive - The menu item formats internal USB flash drive.
    Warning: all user data will be deleted!

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
    Load Factory - the option loads factory values

6. Keystones

If an image output from the Robin ProMotion is at an angle, the image may be skewed.
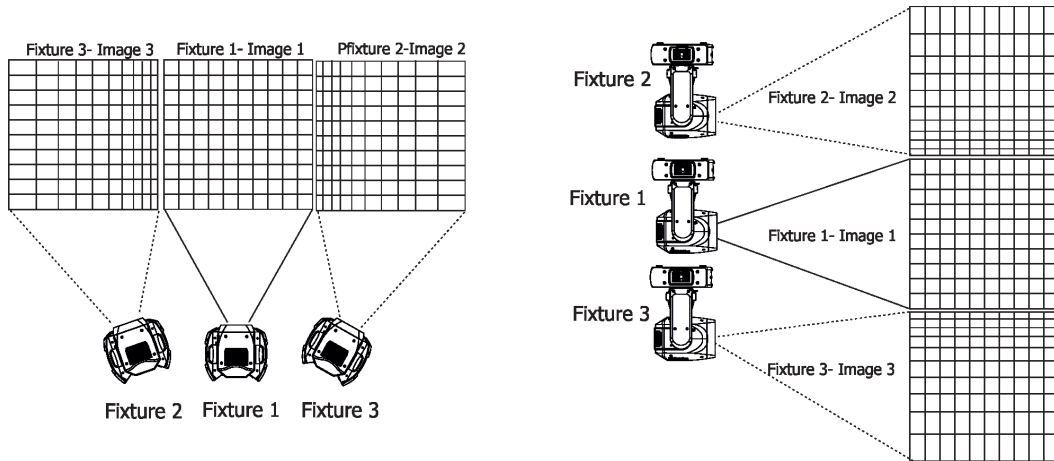
Two keystone channels (Keystoning Vertical, Keystoning Horizontal) in DMX chart adjust the image shape, aspect ratio is kept. Default DMX value for both channels is 128, it means that no keystone correction has been used.

Vertical keystoning

| 127-->1 DMX | 128 DMX | 129-->255 DMX |

Horizontal keystoning

| 127-->1 DMX | 128 DMX | 129-->255 DMX |
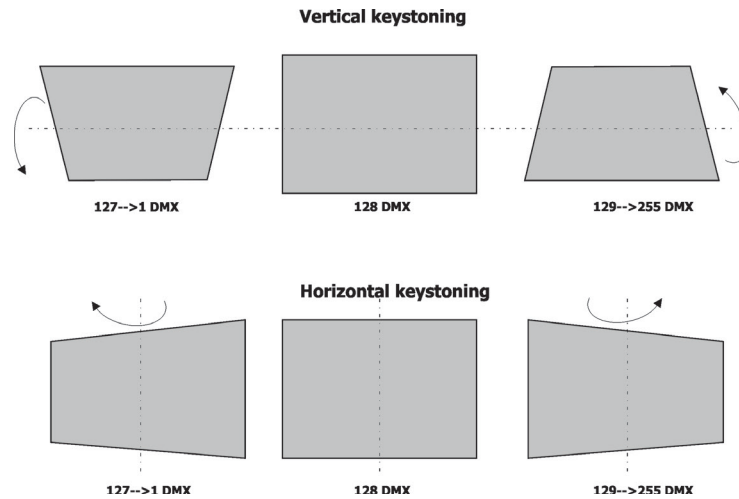
The channel " KeyStoning Vertical" turns image along X-axis.
The channel " KeyStoning Horizontal" turns image along Y-axis.
The keystone values can also be used to create interesting skewing effects.

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 Keystoning Vertical channel and the Kyestoning Horizontal 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:
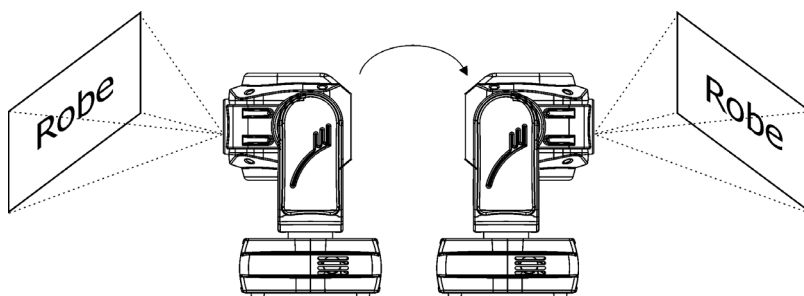
Note: DMX keystone channels 9/10 (Keystoning Vertical/ Keystoning Horizontal) can be used for both HDMI inputs - internal and extenal.

The keystone options from fixture´s menu (Manual Control --> LED Engine) can be used for external HDM 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).
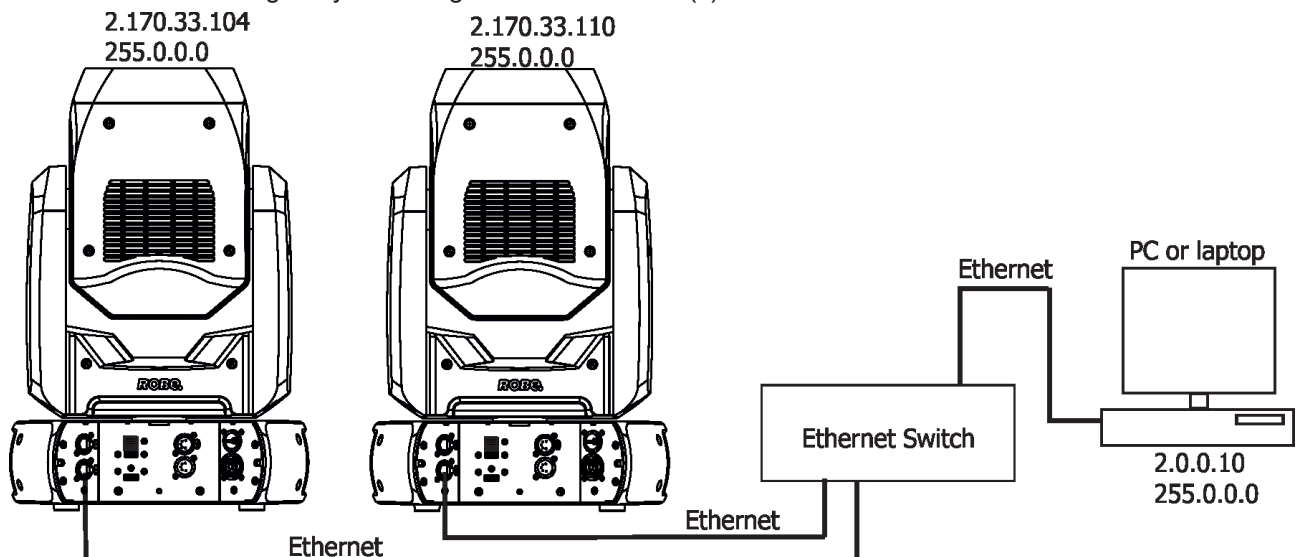
Type the IP address of the Promotion to your web browser, e.g. http://2.170.33.104, enter the user name: robe and the password: 2479 , the status screen of the ProMotion will appear.
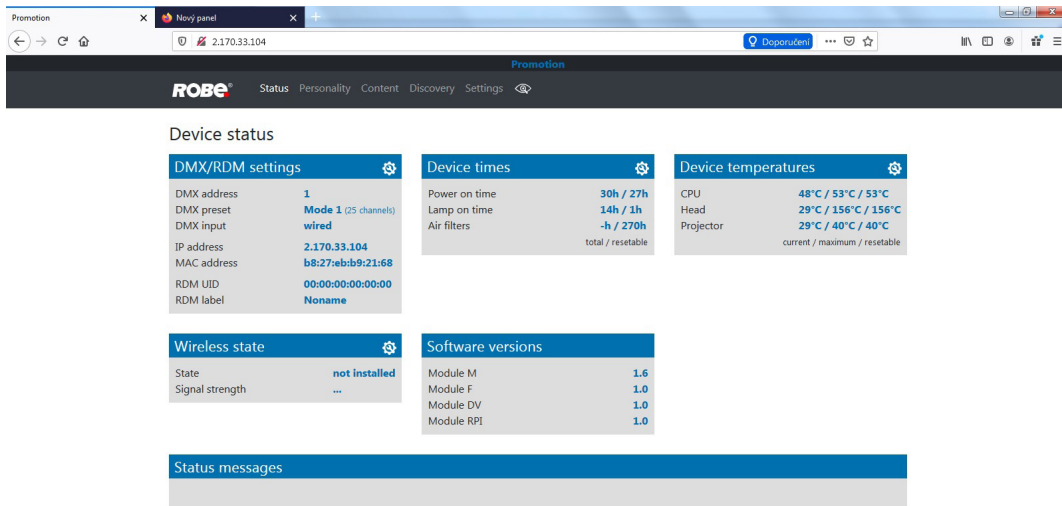
This screen gives you fast overview of fixture setting and its statuses. The icon allows you to change some values in a corresponding table.

Click on the item Content on the top row of the screen and the following screen will appear
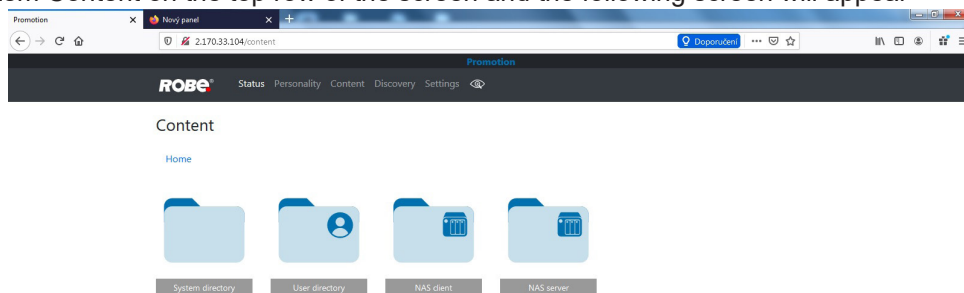
System directory- folder for system files and factory media files. The folder is inaccessible for user.
User directory- folder for user media files.
NAS server- folder for NAS media files. If the fixture runs as a NAS server, media files from this folder are copied to the folder NAS client in the client 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
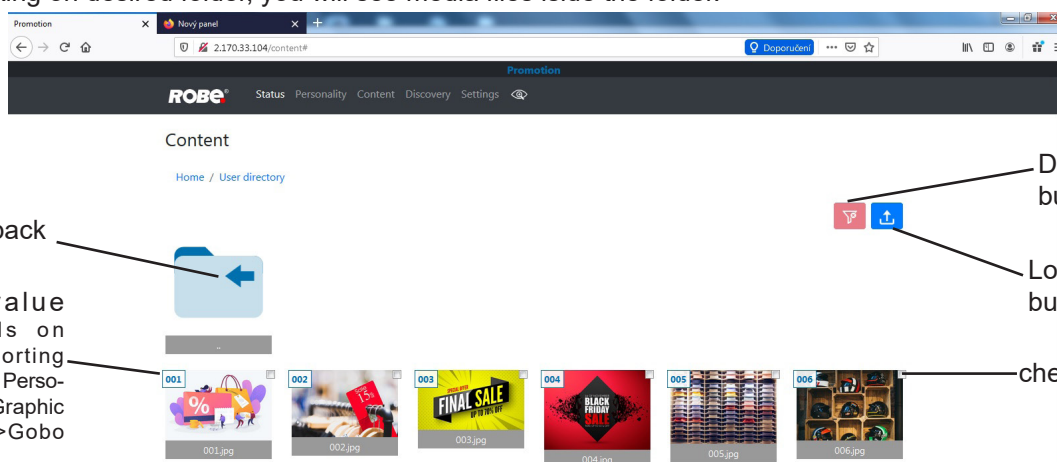
If you have two and more Promotions, the item Discovery allows you to show all connected Promotions. Click on the button Discover and fixtures connected in the network will be displayed.

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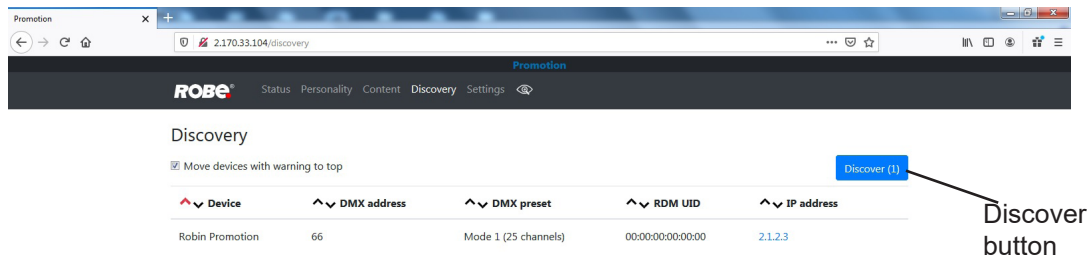
To switch over next fixture, click on its IP address (2.1.2.3) and two tabs will appear.
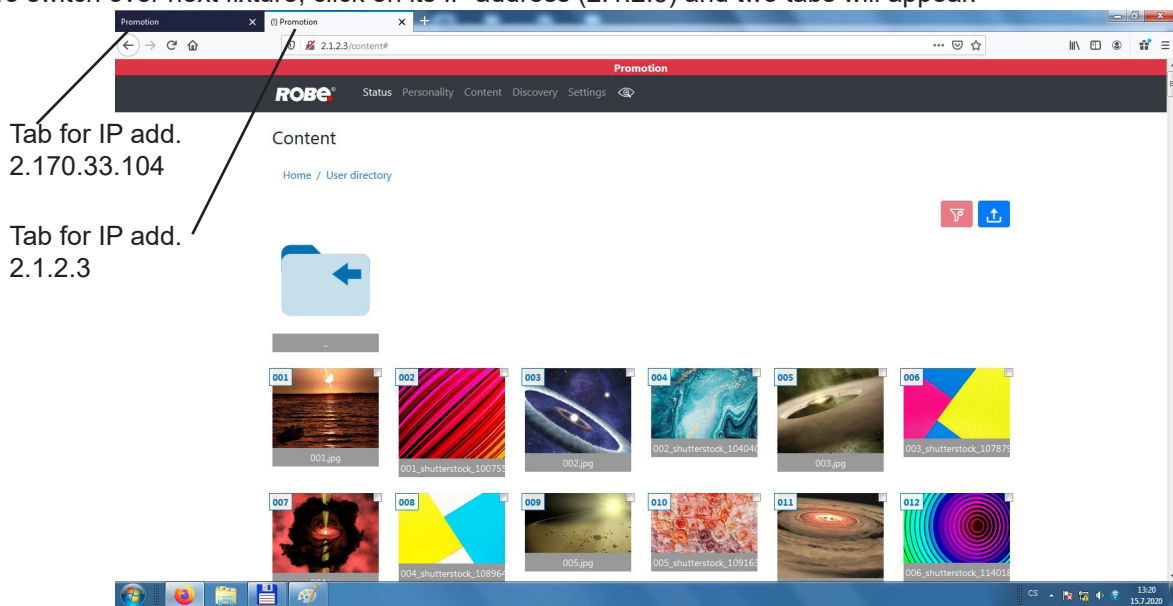
The Web interface can be also used on the PC or mobile phone connected to the fixture by means of Wi-Fi. The Wi-Fi access point in the fixture has to be activated (Wifi Access Point-->Turn AP On/Off --> Access Point On)
Wifi network name: PromotionAP
Password: promotion

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
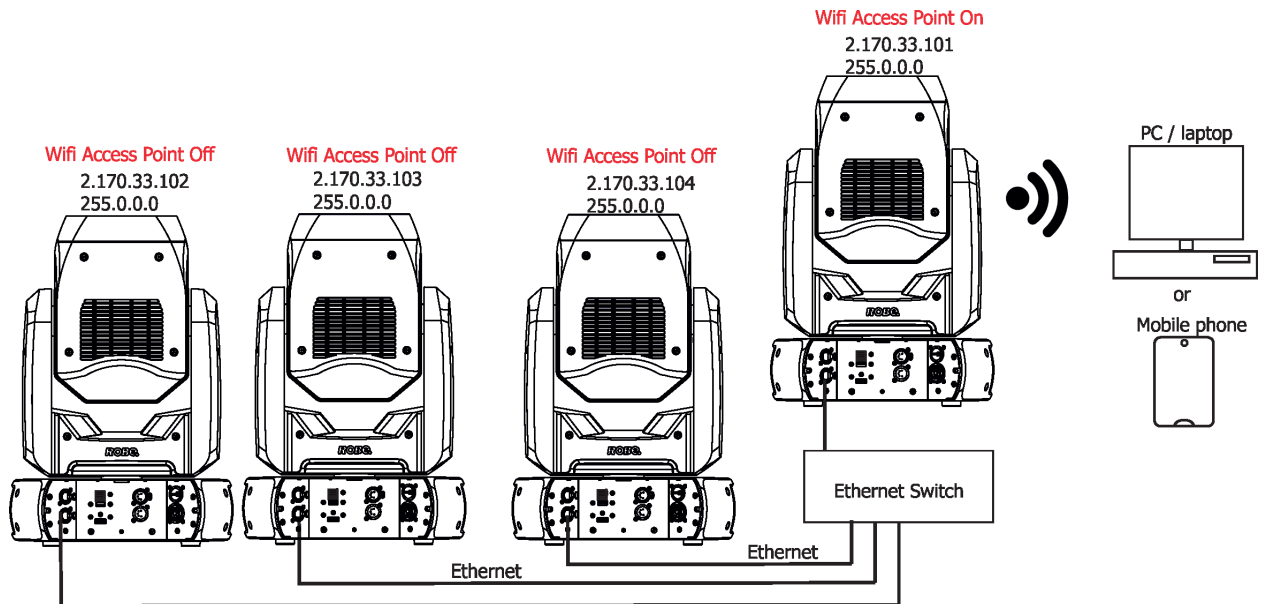
Ethernet

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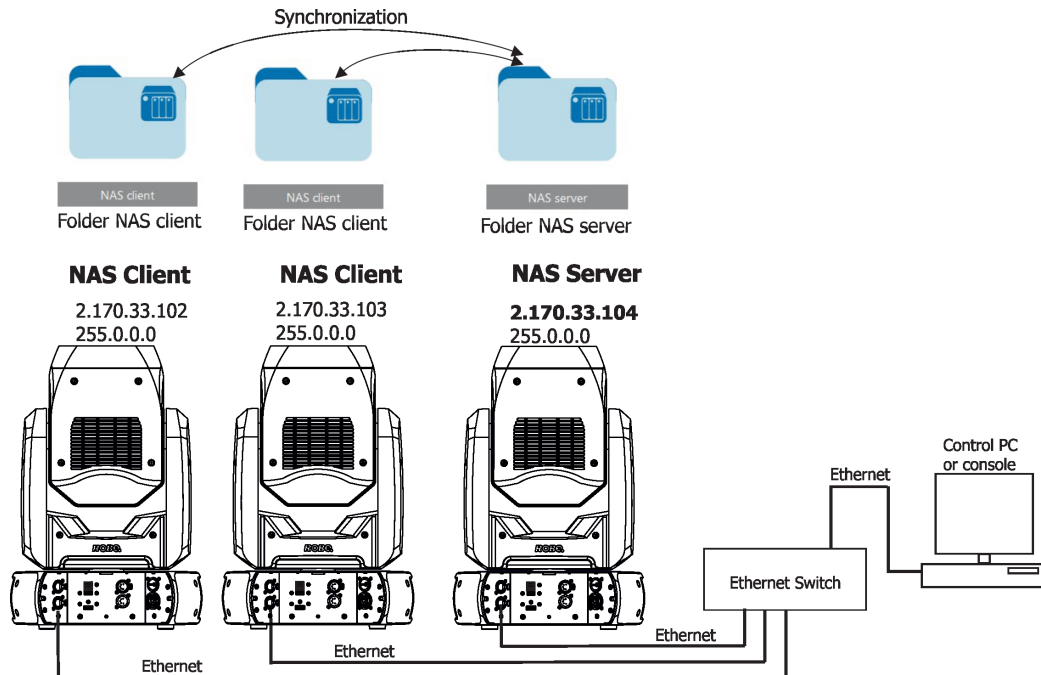
Example of NAS Clients setting
Personality-->NAS Client:
Activate: On
IP Address**: 2.170.33.104**
Synchro Time: 60
On PoweUp Sync: No Wait For Sync

10. 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.
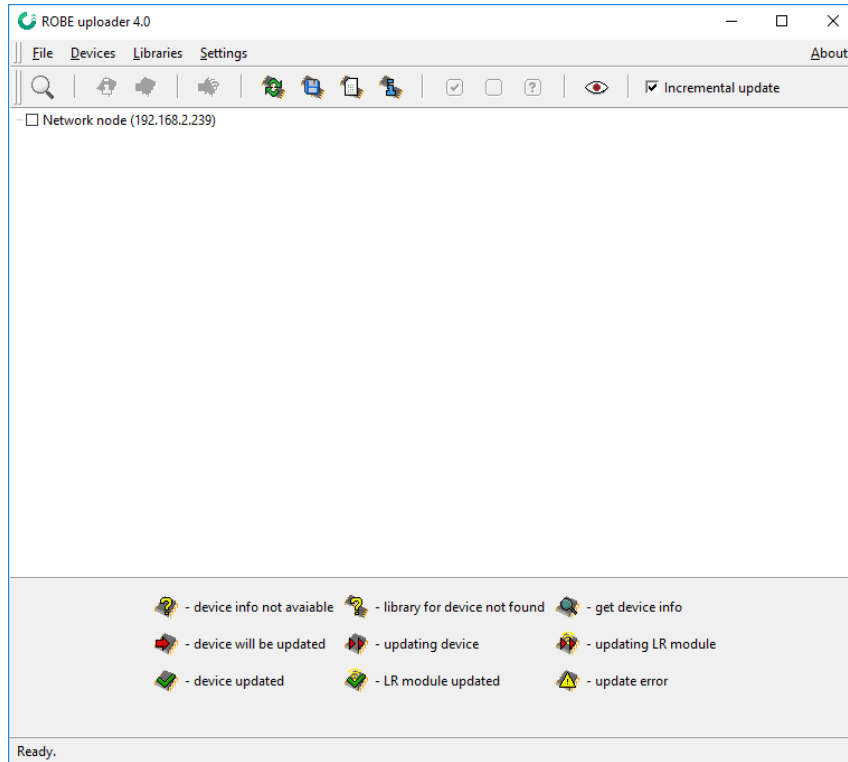
Example of connection:
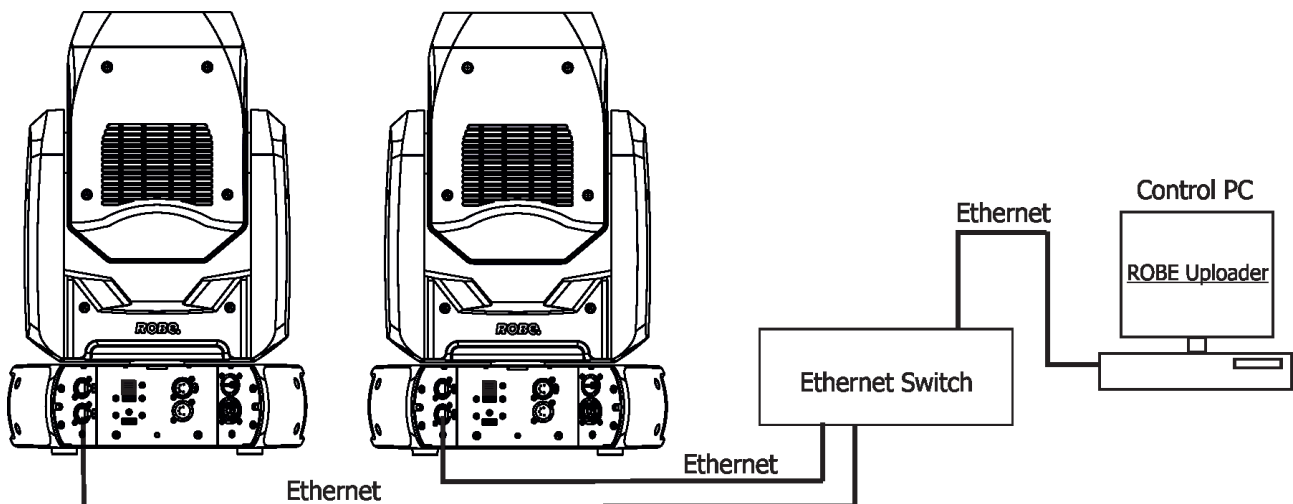
It is important to note, that Ethernet network connection (Local LAN) typically needs to be set to 2.x.x.x address, for example 2.0.0.10, assuming that no other computer on the network contains such an address while keeping all ROBE fixtures in default IP settings. Network mask of the computer should be 255.0.0.0

11. 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                 │
│                             │
│                             │
└─────────────────────────────┘
```
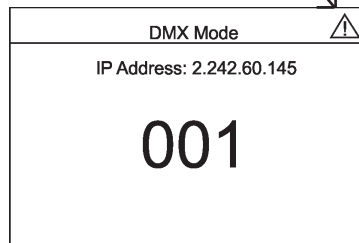
In this case the following menu items will appear after touching the screen.

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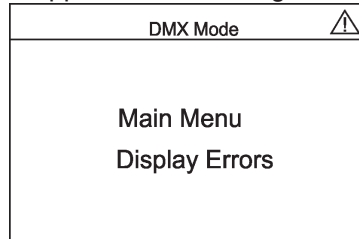
Main menu - standard main menu
Display errors - touch the item to see error message (s).

DMX address blinks

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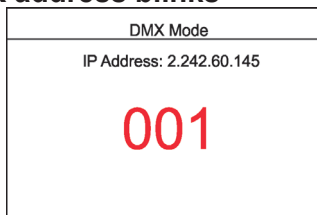
It means that no DMX signal is received. Check DMX connectors and cables, check connection between the fixture and the control desk.

12. Technical Specifications

Electrical

Power supply:........................electronic auto-ranging
Input voltage range:............... 100-240V, 50-60Hz
Fuse:.....................................T 2A/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+B 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
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
Control channels: 25
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 data in/out: Locking 5-pin XLR
2 x USB 2.0 connector (series A)
ArtNet: 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

615 BTU/h (calculated)

Weight

    12 kg

Dimensions (mm)
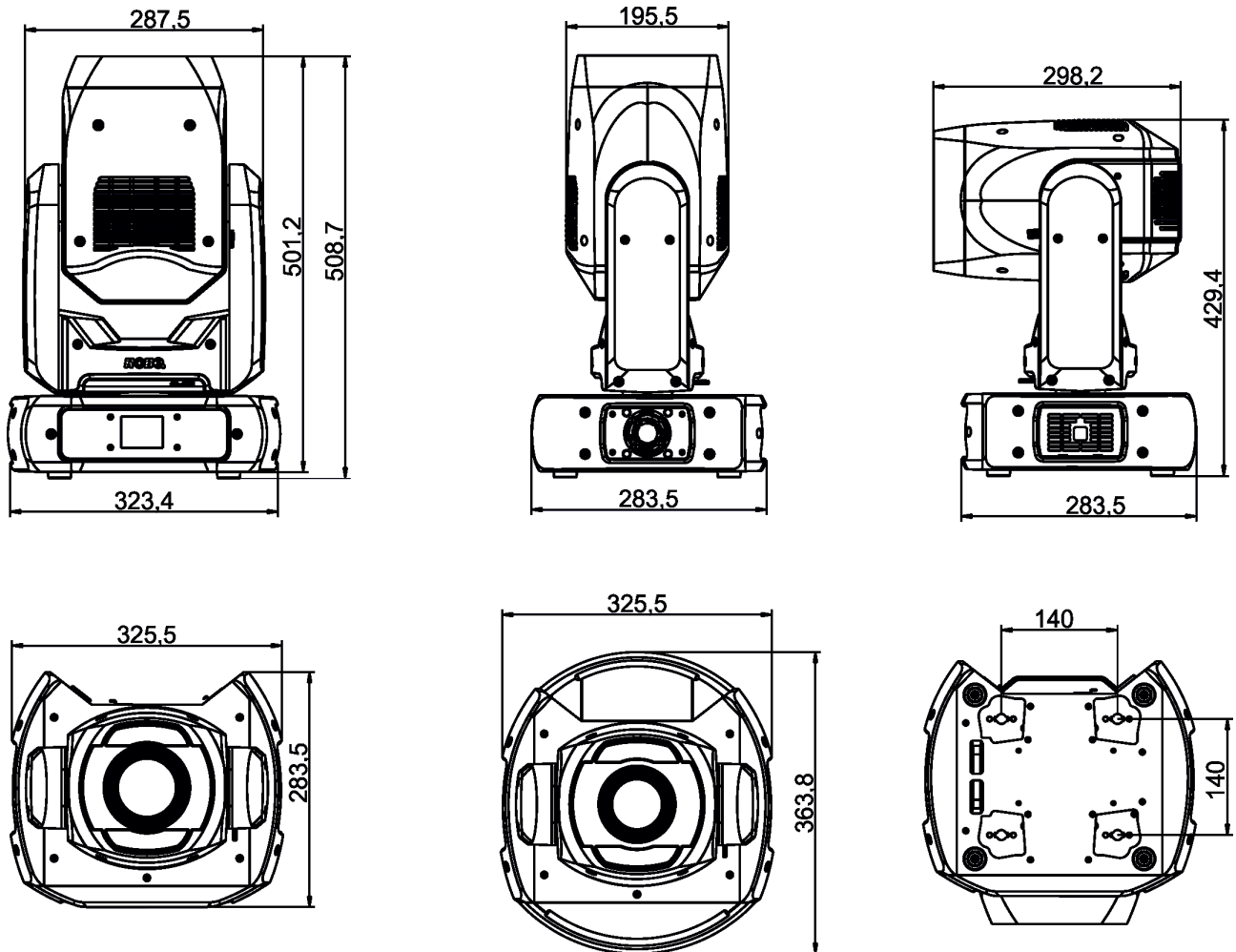
With additional base covers

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 anle lens for Robin ProMotion black (P/N 10980547)
    Aditional Base Covers for Robin ProMotion black (P/N 10980548)
    Distance meter for Robin ProMotion (P/N 10980549)
    Installation base covers black (P/N 10980548)
    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

13. 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).

13.1 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.
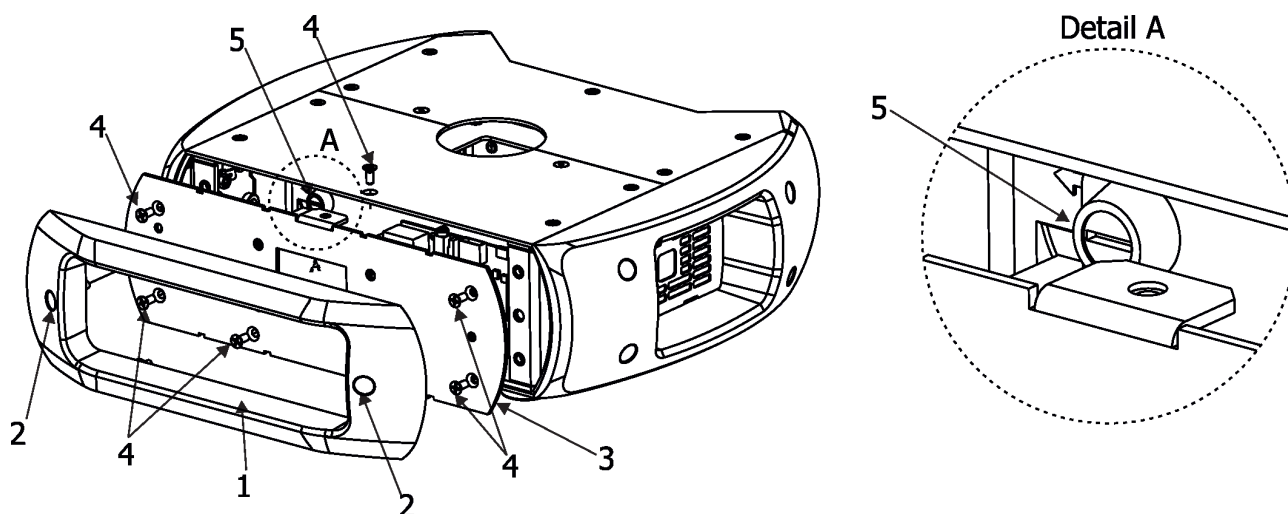
14. ChangeLog

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

Channel	DMX Value	Function	Type of control
		Robin ProMotion - DMX protocol	
Version 1.6			
1		**Pan**	
	0 - 255	Pan movement by 540° (128=default)	proportional
2		**Pan fine**	
	0 - 255	Fine control of pan movement (0=default)	proportional
3		**Tilt**	
	0 - 255	Tilt movement by 260° (128=default)	proportional
4		**Tilt fine**	
	0 - 255	Fine control of tilt movement (0=default)	proportional
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		**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 23 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

Channel	DMX Value	Function	Type of control
	124 - 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
	245 - 255	Reserved	
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		**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		**Keystoning Vertical**	
	0-255	Vertical keystoning (128= Default)	proportional
10		**Keystoning Horizontal**	
	0 - 255	Horizontal keystoning (128= Default)	proportional
11		**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		**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		**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		**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

Channel	DMX Value	Function	Type of control
	247	Blue	step
	248-255	Reserved	
15		**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
	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

Channel	DMX Value	Function	Type of control
	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
	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
	65	Colour changing (fastest) red -->green -->blue -->yellow	step
	66-69	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

Channel	DMX Value	Function	Type of control
	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
	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

Channel	DMX Value	Function	Type of control
	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
	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		**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
	128-143	Reserved	
	144-255	Reserved (for future functions)	
17		**Digital gobo wheel**	
	0	Open (0=default)	step
		The following distribution of gobos/pictures/animations goes for factory gobos/pictures/animations 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) at Effect Wheel - channel 21	
	251	Gobos presentation (gobos selected randomly)	step

Channel	DMX Value	Function	Type of control
	252	Gobos presentation (gobos selected in alphabetical order)	step
	253-254	Reserved	
	255	White	step
18		**Video speed control**	
	0	Optimal speed (0=default)	step
	1	Pause	step
	2-127	Speed from min. (1/4 of original speed) to original speed	proportional
	128-255	Speed from original to max. (4x original speed)	proportional
19		**Digital gobo indexing and rotation**	
	0 - 127	Gobo indexing (0=default)	proportional
	128-191	Forwards gobo rotation from fast to slow	proportional
	192-193	No rotation	step
	194- 255	Backwards gobo rotation from slow to fast	proportional
20		**Digital gobo gobo indexing and rotation fine**	
	0-255	Fine indexing (rotation)	proportional
21		**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

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Channel	DMX Value	Function	Type of control
	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
	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	Reserved	
	105	Positive/negative (black and white)	2
	106	White/negative (black and white)	2
	107	Positive/negative (coloured)	2
	108	Pixeling	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

DMX protocol

Channel	DMX Value	Function	Type of control
	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
	191	Addition effect	8
	192	Substraction effect	8
	193	Multiplication effect	8
	194	Minimum effect	8
	195	Maximum effect	8
	196-255	Reserved	
22		**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		**Grey box correction**	

Channel	DMX Value	Function	Type of control
	0	Open (0=default)	step
	1 - 255	From max.diameter to min.diameter	proportional
24		**Shutter/ strobe**	
	0 - 15	Shutter closed, LEDs Off	step
	16 - 31	Shutter closed, LEDs On	step
	32 - 63	Shutter open (32=default)	step
	64 - 95	Strobe-effect from slow to fast	proportional
	96 - 127	Shutter open	step
	128 - 143	Opening pulse in sequences from slow to fast	proportional
	144 - 159	Closing pulse in sequences from fast to slow	proportional
	160 - 191	Shutter open	step
	192 - 223	Random strobe-effect from slow to fast	proportional
	224 - 255	Shutter open	step
25		**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			
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