

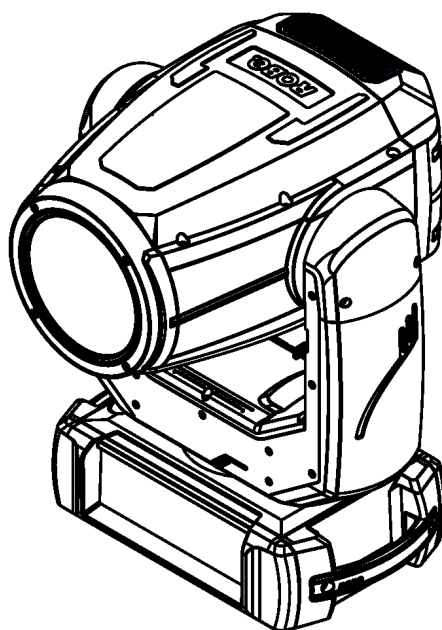


iPromotion™ LS

iPromotion™ PT

iPromotion™ LS ADM

iPromotion™ PT ADM



ROBE
Innovative
Technology

QR code for user manual



USER MANUAL

iPromotion LS/iPromotion LS ADM

iPromotion PT/iPromotion PT ADM

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

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 warnings 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 iPromotion was designed for outdoor use and it is intended for professional application only. It is not for household use.

1. Safety instructions and operating determinations

CAUTION!

***Disconnect the fixture from mains before removing any cover of the fixture.
With a high voltage you can suffer a dangerous electric shock when touching
alive wires and electrical parts under covers!***

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 servicing any part of the fixture.

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

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

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

Refer servicing to qualified service personnel.

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

Do not connect this fixture to a dimmer pack.

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

***LED light emission. Risk of eye injury.
Do not look straight at the fixture's LED source during operation. The intense light
beam may damage your eyes. Sensitive persons may suffer an epileptic shock.***

CAUTION! Risk group 2, RG-2
Avoid looking directly into the light source.



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

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 iProMotion LS ADM / iProMotion PT ADM (ADM = Automatic Distance Meter):
LASER DEVICE CLASS 1



CLASS 1
Laser product

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

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

The fixture becomes very hot during operation. Allow the fixture to cool approximately 30 minutes prior to manipulate with it.

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

Always use a safety wire for overhead installation.

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

The maximum ambient temperature must never be exceeded.

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

For replacement use fuse of the same type and rating only.

The fixture housing never must be covered with cloth or other materials during its operation. Do not block fans or fans ventilation slots with any object. Fans and ventilation slots must remain clean.

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

CAUTION!
The front glass cover has to be replaced when it is obviously damaged,
e. g. due to cracks or deep scratches!

CAUTION!
To avoid damage of the internal parts of the fixture head, never let the sunlight
(or other light source) lights directly to the front glass cover, even when the fixture
is not in operation !

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

***The fixture must not come into contact with sea water (salt water).
Damages or corrosion issues resulting from salt water will void
the manufactures warranty and will not be subject to any warranty
claims or repairs.***

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

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

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

Contains FCC ID: 2A6PL-DMXRDMRW001

Contains IC: 29573-DMXRDMRW001

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

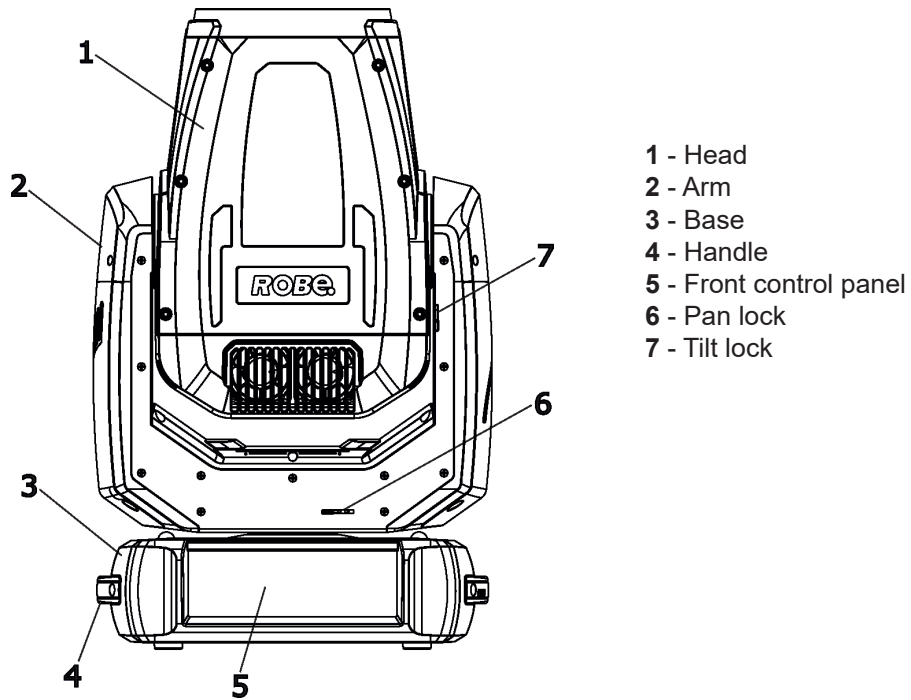
The [Device] wireless operation is safe and complies to RF Exposure requirements

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

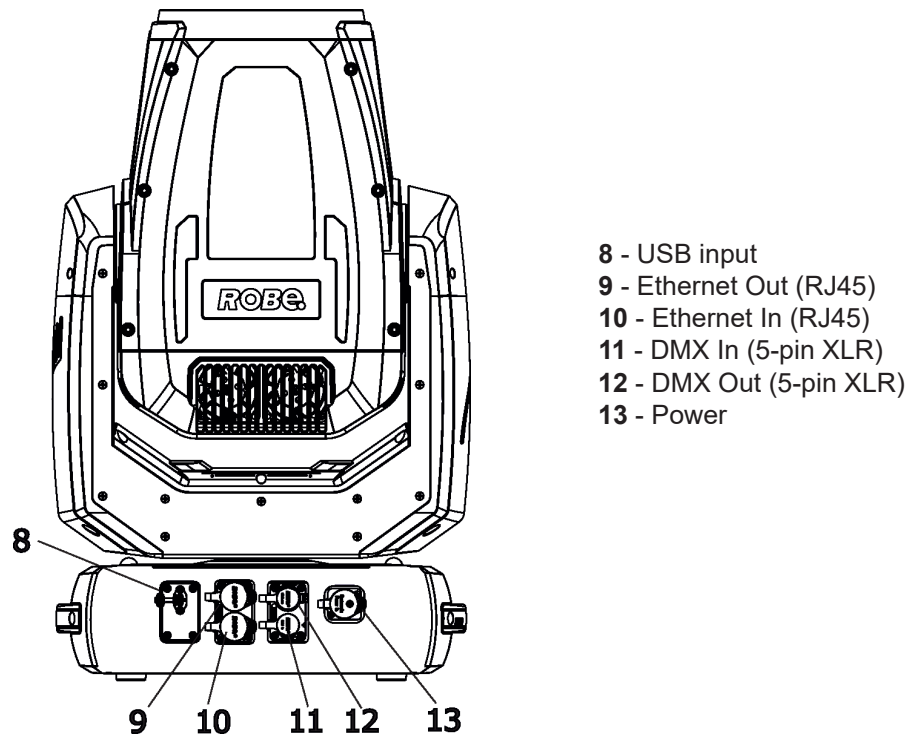
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

2. Fixture exterior view



The head has to be locked for transportation - the tilt lock latch (7) and the pan lock latch (6) have to be in the locked positions. To unlock the head, move these latches to unlock position before operating the fixture.



Note: the Robin Promotion ADM is equipped with an automatic distance meter which enables autofocus of the fixture.

3. Installation



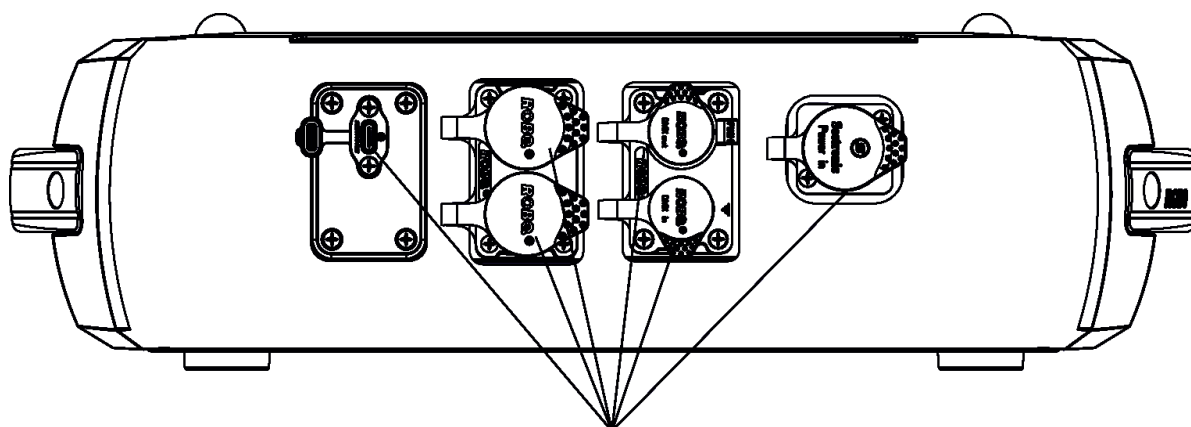
Fixtures must be installed by a qualified electrician in accordance with all national and local electrical and construction codes and regulations.

The Robin iPromotion's panel connectors are dust and water protected according to IP 65 by mating with related cable connectors. They cannot stay disconnected outdoor.

All unused panel connectors have to be sealed by the rubber caps.

Visually check panel connectors on accidental water leaks before connecting related cable connectors.

If some water will appear in panel connectors, do not connect cable connectors, especially power!



The rubber caps have to be placed on unused connectors.

The fixture must not come into contact with sea water (salt water).

3.1 Connection to the mains

To apply power, first check that the head pan and tilt locks are released.

**For protection from electric shock, the fixture must be earthed!
The fixture has to be connected to an electric outlet which is equipped with
a residual-current device (residual-current circuit breaker)!**

Wiring and connection work must be carried out by a qualified electrician.

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

Mains cable powerCON TRUE1 In/open ended is enclosed to the fixture. We recommend to install cord end-sleeves 1.5 x 8 (cross section in mm² x length in mm) on the cords of the mains cable. If you need to install a power plug on the mains cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions. If you have any doubts about proper installation, consult a qualified electrician. Connection to mains has to keep IP 65 protection rating.

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

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

Ensure all connections and the power plug on the cable are properly sealed.

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 regulations.

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

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

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

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

Allow the fixture to cool for ten minutes before handling.

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

IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE, including calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but use a help of professional companies.

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

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

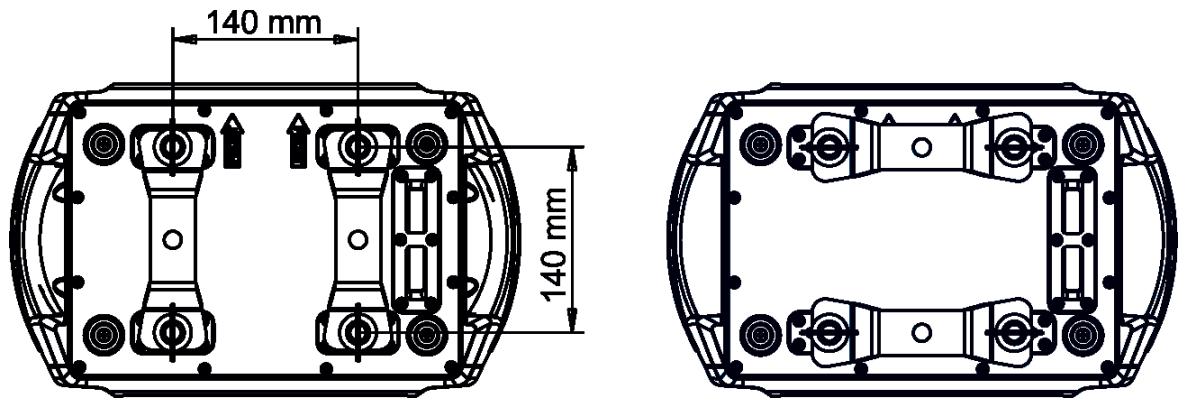
The fixture must never be fixed swinging freely in the room.

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

***CAUTION!
Use 2 appropriate clamps 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.***

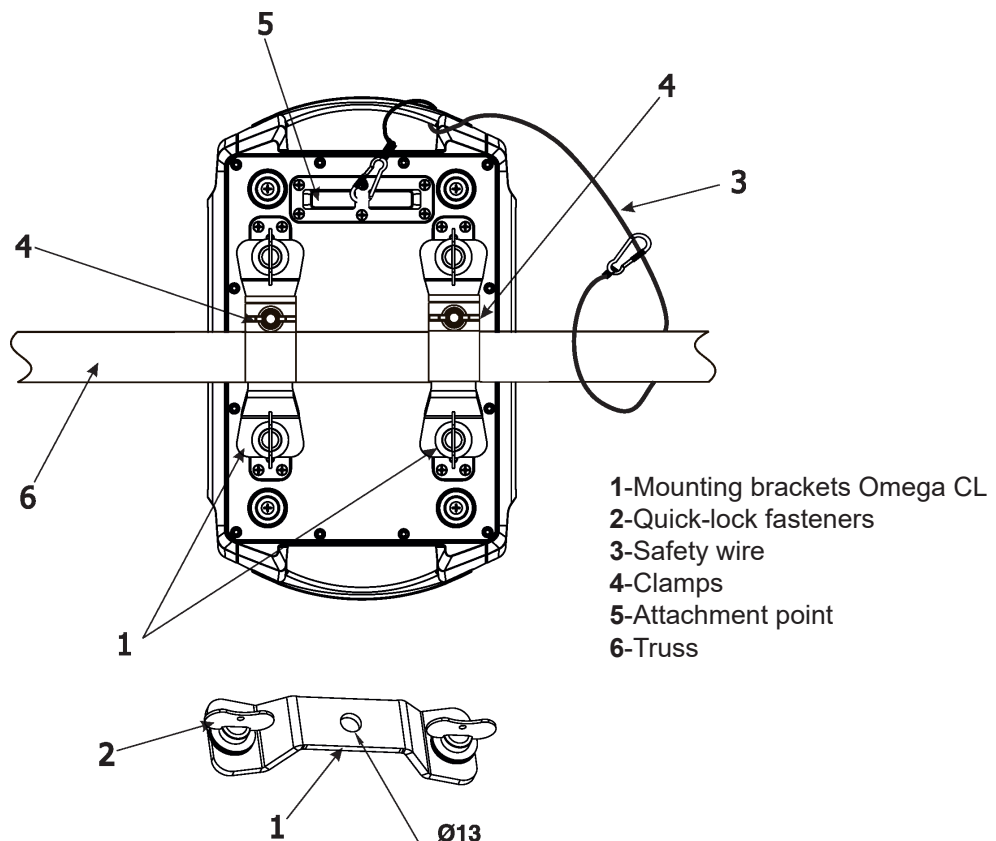
For securing the fixture to the truss, install a safety wire which can hold at least 10 times the weight of the fixture. Use only the safety wire with a snap hook with screw lock gate.

Omega holders positions



Truss installation

1. Bolt Clamps (4) to the brackets Omega CL (1) with M12 bolts and lock nuts through the hole in the bracket Omega CL.
2. Fasten the brackets Omega CL on the bottom of the base by means of the quick-lock fasteners (2) and tighten them fully clockwise.
3. Install the fixture on the truss.
4. Pull a safety wire (3) through the carrying handle and the truss (6) as shown on the picture below in a suitable position so that the maximum fall of the fixture will be 20 cm. Fasten a snap hook in the attachment point (5). Use only the safety wire with a snap hooks with screw lock gates.

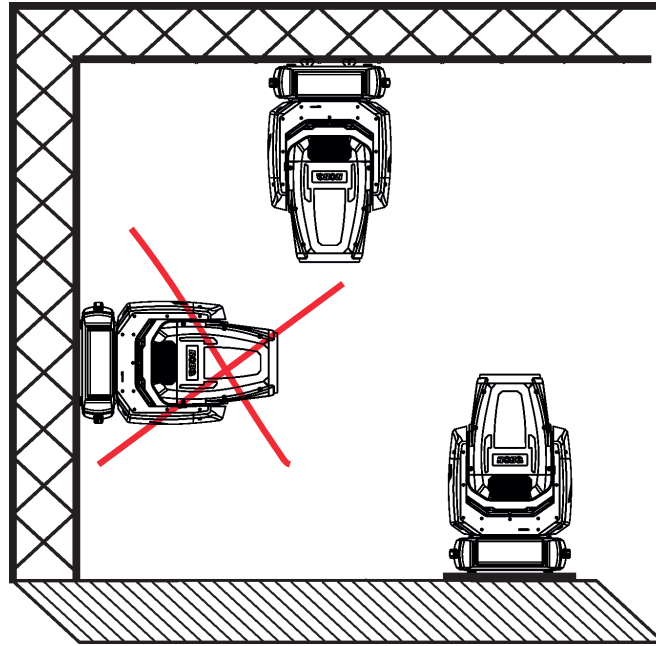


***When installing fixtures side-by-side,
avoid illuminating one fixture with another!***

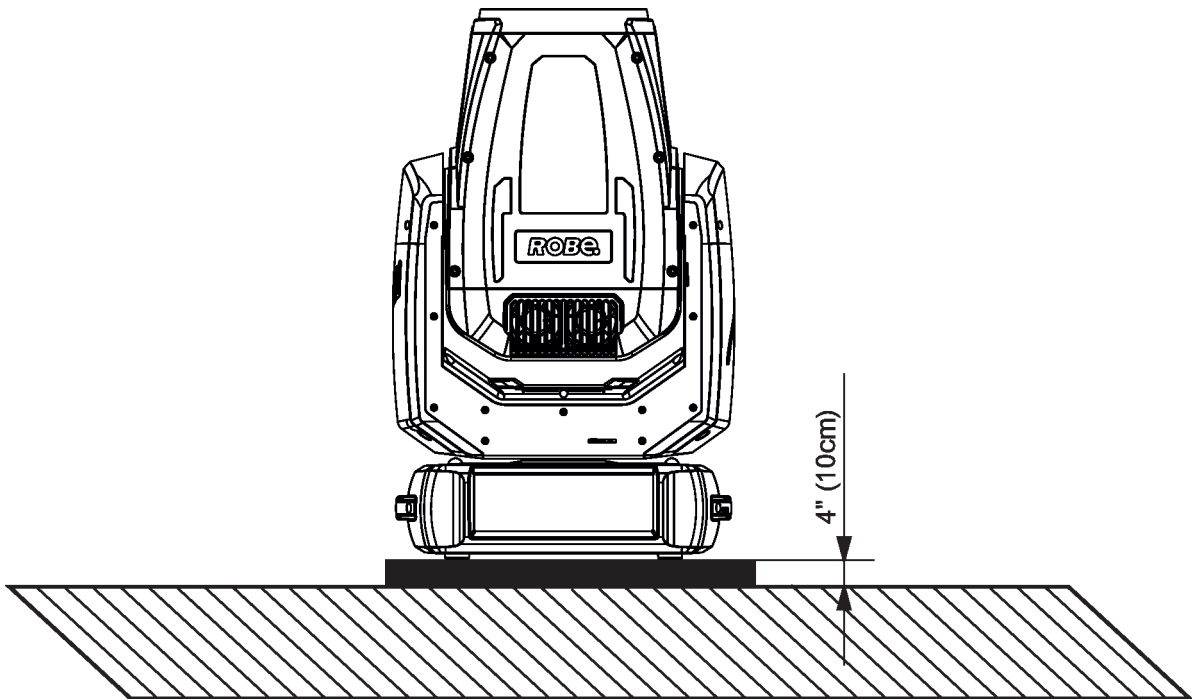
DANGER TO LIFE!

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

Allowed installation positions of the iPromotion:



Note for open-air installation: if the fixture has to stand on the ground, min. distance of 4" (10cm) between the fixture base and the ground has to be kept.

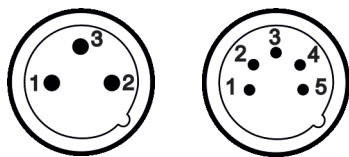


3.3 DMX-512 connection

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



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

DMX input

XLR sockets (male)

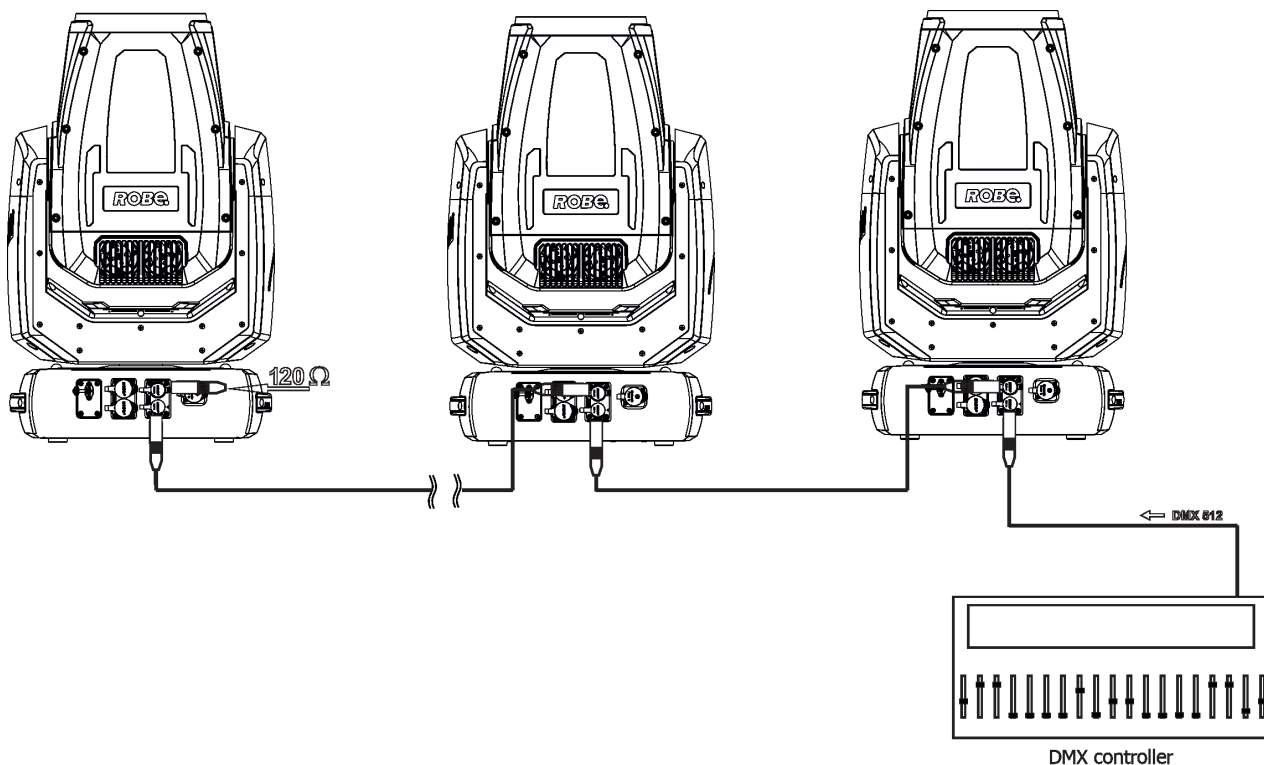


If you are using the standard DMX controllers, you can connect the DMX output of the controller directly with the DMX input of the first fixture in the DMX chain. If you wish to connect DMX controllers with other XLR outputs, you need to use adaptor cables.

Building a serial DMX chain:

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

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.



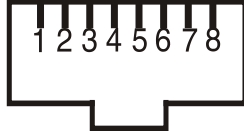
3.4 Ethernet connection

The fixtures on a data link are connected to the Ethernet with appropriate communication protocol (e.g. Art-Net). 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.

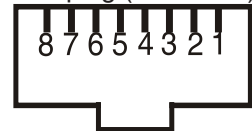
The Robin iPromotion is equipped with 8-pin RJ-45 sockets for Ethernet connection. Use a network cable category 5 (with four "twisted" wire pairs) and standard RJ-45 plugs in order to connect the fixture to the network.

RJ-45 socket (front view):



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

RJ-45 plug (front view):



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

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

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

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

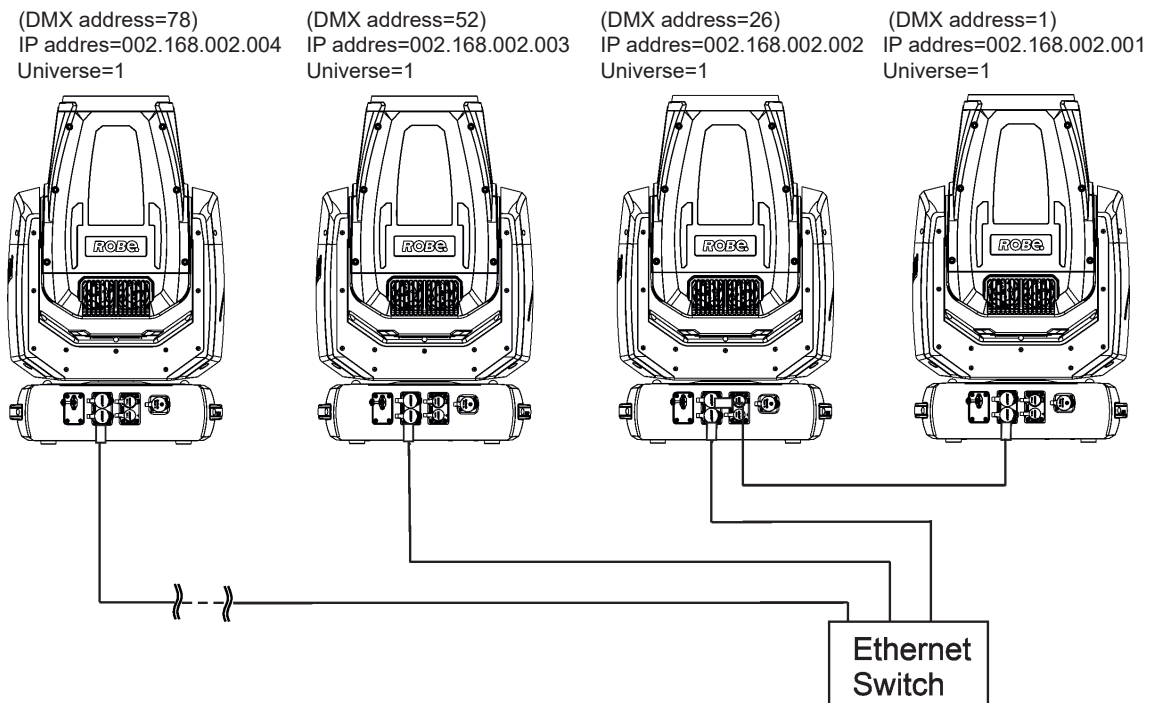
Connect the Ethernet inputs of all fixtures with the Ethernet network.

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.

Connect the Ethernet inputs of all fixtures with the Ethernet network.

Option "Artnet" (gMa1 or gMA2 or sACN) has to be selected from "Ethernet Mode" menu at each fixture. Set IP address (002.xxx.xxx.xxx / 010.xxx.xxx.xxx) and the Universe at each fixture.

Example:



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

The fixture is equipped with Ethernet Pass through switch which sustains Ethernet integrity, when the fixture has no power, it automatically maintains network connectivity.

If you use the Ethernet IN-OUT way for the Ethernet connection, max. 8 fixtures can be connected in the IN-OUT line.

3.5 Wireless DMX operation

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

The item " Wireless " from the menu "DMX Input" allows you to activate receiving of wireless DMX (Personality--> DMX Input -->Wireless.). First two options from the "DMX Input" menu are stated in DMX chart as well (channel Power/Special functions , range of 10-19 DMX). If DMX input option is changed by DMX command, the change is permanently written into fixture's memory.

DMX range of 10-19 switching fixture to the wired/wireless operation 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 Power/Special functions channel 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 Power/Special functions channel is set at some DMX input option, if not, the fixture will take option which is set in the fixture menu "DMX Input".

To link the fixture with DMX transmitter.

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

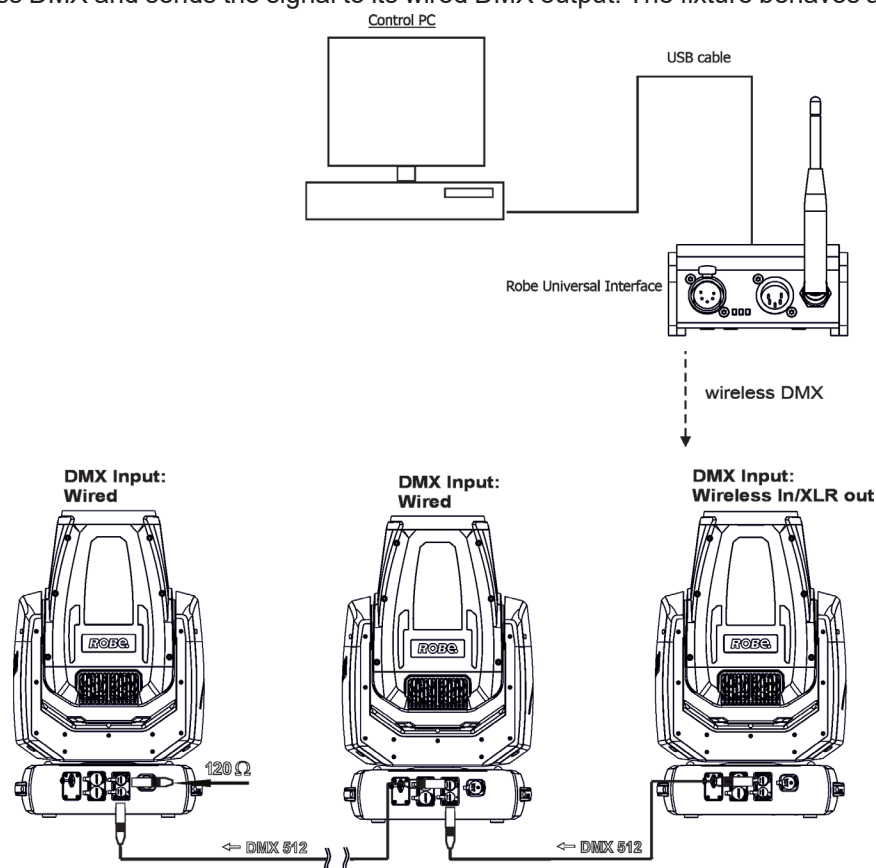
After linking , the level of DMX signal (0-100 %) is displayed in the menu item "Wireless State" (Information -->Wireless State).

To unlink the fixture from DMX transmitter.

The fixture can be unlinked from transmitter via the menu item " Unlink Wireless Adaptor" (Information--> Wireless State --> Unlink Wireless Adaptor).

Note: If the option "Wireless In/XLR Out" is selected (Personality--> DMX Input -->Wireless In/XLR Out), the fixture receives wireless DMX and sends the signal to its wired DMX output. The fixture behaves as " Wireless/ Wired" adaptor.

Example
of connection:



4. Checking the IP65 integrity of the fixture.

The Robin iPromotion is IP65 rated lighting fixture which has been designed to be protected against the ingress of dust and pressure water jets from any direction.

1. Smart pressure test - for this test serves the function "Pressure Test" in the menu Service. Unique testing procedure allows you easy testing of the IP65 integrity of the fixture. You do not need any external device connected to the fixture for running the test.

The fixture has to be connected to mains (must not be in Standby mode) and a head temperature (at pressure sensor) cannot be higher than 45°C. The pressure test takes about 7 minutes. The pressure test can be repeated at earliest 2 minutes after last pressure test.

The function "Pressure Test" should be run after the following actions:

- **unscrewing/screwing back any watertight cover** (e.g. due to gobos or frosts change)
- **replacing pan or tilt motor**
- **replacing desiccants in the fixture arm (two tubes with silica gel).**

The pressure test can be also run by DMX command (channel Power/Special function, DMX values 126-127) or from web interface REAP (Robe Ethernet Access Portal). During the pressure test fixture does not respond to DMX commands (except DMX values 128-129 on the channel Power/Special functions).

Examples of screens (front panel display) of the smart pressure test:

Test in progress

Pressure Test	
Remaining Time 06:10 41°C/ delta 1.13 hPa Pressure state: 16.1%	<div><input type="checkbox"/></div> <div><input checked="" type="checkbox"/></div>

Legend:

06:10Remaining Time (minutes) to finish of pressure test.
41°C.....Temperature at pressure sensor.
delta 1.13 hPa...Pressure difference.
The pressure difference has to be ≥ 7 hPa for successful test.
16.1% - state of pressure difference, 100%= pressure difference is 7 hPa.

Fixture waits for 2 minutes period elapsing (pressure test was repeated too early)

Pressure Test	
Measure Initialization Delay 01:55	<div><input type="checkbox"/></div> <div><input checked="" type="checkbox"/></div>

Test passed

Pressure Test	
Pressure Test OK	<div><input type="checkbox"/></div> <div><input checked="" type="checkbox"/></div>

Test failed

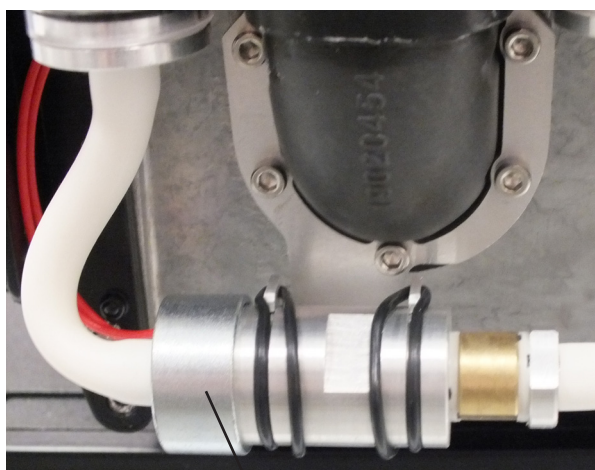
Pressure Test	
Pressure Test Failed	<div><input type="checkbox"/></div> <div><input checked="" type="checkbox"/></div>

The message "**Valve Seal Error**" means that valve or coil in the valve is defective or there is a connection problem.

Check the connection between the valve and head, especially cable connector. Other reason can be faulty coil in the valve or faulty valve.



Cable connector
(arm without tilt lock)



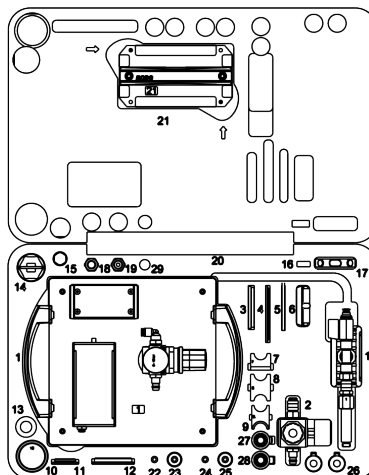
Valve
(arm without tilt lock)

If the first pressure test failed and the second is OK, the fixture complies with IP65 integrity.

If the pressure test twice fails despite checking of correct tightening of the cover screws and gaskets under covers, the fixture has to be tested by means of "Enhanced pressure test". For this type of pressure test is needed the Pressure IP Testing Set ROBE (P/N 10980659). Please ask your ROBE distributor for help.

2. Enhanced pressure test - a special equipment Pressure IP Testing Set ROBE (P/N 10980659) is intended for this kind of pressure test. Only trained technician should handle the equipment.

Pressure IP Testing Set ROBE
in case:



If this equipment is used for pressure test of the fixture, the following values of pressure have to be kept:

Underpressure test.

300 mbar for 1 minute, pressure fall can be to 10 mbar maximally.

Overpressure test

150 mbar maximally!

5. Operating the fixture at ambient temperatures below 0°C

Design of the iPromotion allows its operation at ambient temperature up to -30°C, but you have to take some specific into account before operating the fixture.

1.Fixture is not in Standby mode.

iPromotion - ambient temperatures from 0°C to -10°C.

The fixture can be switched off but after powered it on, fixture reset can be delayed in range of 0 - 30 minutes depending on ambient temperature (max. delay is at low ambient temperature). This delay is caused by heating fixture effects on operating temperature. The fixture does not respond to DMX during heating the fixture on operating temperature.

We recommend to switch the fixture on at least 30 minutes before show.

iPromotion - ambient temperatures from -11°C to -30°C.

The fixture should be permanently powered on in order to keep operating temperature of fixture's inside.

If the fixture is switched off, reset of the fixture will last long time (up to 1 hour depending on ambient temperature) until fixture effects reach their operating temperature.

2.Fixture is in Standby mode.

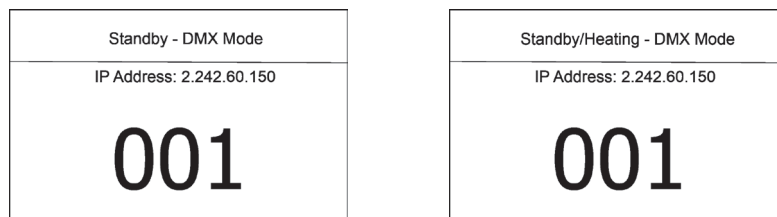
If the fixture is switched to Standby mode (fixture has to be connected to mains), the fixture keeps internal temperature on a level suitable for operation of fixture's effects without delay, heating up of the fixture inside is done automatically.

6. Standby mode

The fixture can be switched to Standby mode by means of web interface REAP or DMX command (channel Power/Special functions, DMX values 6-7).

Standby mode can be cancelled by means of web interface REAP, DMX command (channel Power/Special functions, DMX values 8-9) or by switching the fixture off and on.

Standby mode helps conserve power when a fixture is not in use, without fully powering it off. The max. power consumption of the fixture in Standby mode does not exceed 20 W (if the fixture is heated, power consumption is higher). Standby mode is indicated by a notice on the fixture display.



In the Standby mode, the fixture display is functional and can be used for setting of the fixture, but all motors and fans are deactivated, light output is closed.

As the fixture motors are deactivated, the fixture does not respond to DMX values controlling effects but the channel Power /Special functions can be used for fixture settings.

The fixture in Standby mode provides information for RDM and REAP and also can be set its behaviour by means of the RDM and REAP.

Main benefits of Standby mode:

- there is not time delay of fixture reset at ambient temperatures below 0°C.
- By means of REAP user has current information about fixture (settings, temperatures, state of desiccants in the fixture arm).

7. Control menu map

Default settings=**Bold print**

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

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
			Time Mode			
		Pan/Tilt Feedback	Off, On,			
	Blackout Settings	Blackout DMC	Off, On			
		Blackout While	Pan/Tilt Moving	Off, On		
	Colour Mixing Mode	CMY Mode				
		RGB Mode				
	Init Effect position	Pan	0-255			
		:				
		Dimmer	0-255			
	Screen Settings	Display Intensity	0-9			
		Screensaver Delay	0-10			
		Display Orientation	Normal, Inverted			
	Temperature Unit	°C				
		°F				
	LED Engine	Ceiling Projection	Off, On,			
		Rear Projection	Off, On,			
		Colour Temperature	3200K, 4200K, 5000K, 5500K, 5600K, 6500K, 7500K , 8000K, 9050K Max. Brightness			
		Gamma Curve	1.8, 2.2 , 2.4, B&W, Linear			
	Graphics Engine	Image Aspect Ratio	Fill Screen			
			Keep Aspect Ratio			
		Edge Antialiasing	Off, On			
		Gobo Selection Mode	Alphabetical Order			
			Numerical Order			
		Gobo Synchro Mode	Off, On,			
		Slideshow Timer	1s... 3s ...30.0s			
		Optics Module	None			
			Wide Angle Lens			
		Projector Orientation	Landscape Orient.			
			Portrait Orient.			
		Refresh Rate	1280x720 30 Hz			
			1280x720 25 Hz			
			1280x720 60 Hz			
			1280x720 50 Hz			
			1920x1080 30 Hz			
			1920x1080 25 Hz			
			1920x1080 60 Hz			
			1920x1080 50 Hz			
	Fan Mode	Auto , High, Quiet				
	Date& Time Settings					
	WEB Server	Activate Password	Off, On			
		Set Password	2479			
	Wifi Access Point	Activate	Off			
			On			
		Channel ID	1-11			
	NAS Client	Activate	Off , On			
		IP Address				
		Synchro Time	10-600			
		On PowerUp Sync.	Off			
			No Wait For Sync			
			Wait For Sync			
	Default Settings					
	Reset Timers					

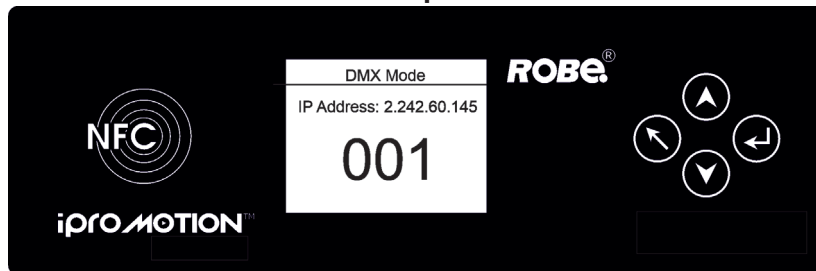
Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
	Stand Alone	Input Overtake	Off , On			
Manual Control	Reset Functions	Total System Reset				
		Pan/Tilt Reset				
		Focus Reset				
		Grap. Engine Reset				
	Manual Effect Control	Pan	0-255			
		:				
		Dimmer.	0-255			
Stand Alone	Test Sequences	Dynamic Mode				
		Static Mode	Pan	0-255		
			Tilt	0-255		
			Focus	0-255		
			Run			
	Preset Playback	None				
		Program 1				
		:				
		Program 9				
	Play Program	Program 1				
		:				
		Program 9				
	Record Program	Program 1				
		:				
		Program 9				
	Edit Program	Program 1	Step 1	Pan	0-255	
		:	:	:		
		Program 9	Step	Dimmer	0-255	
				Step Time (s)	0.1-999.9s	
				Add New Step		
				Delete Step		
	Input Overtake	Off , On				
	Timer Playback	Timer 1	Activate Timer	Off, On		
		Timer 2	Select program	Program 1- Program 9		
		Timer 3	Start Time	Date Settings		
		Timer 4		Time Settings		
			Program Duration	Hours		
				Minutes		
				Seconds		
			Repeat Interval	Repeat Time	Hours	
					Minutes	
					Seconds	
				Dayes of the week	Monday	
					:	
					Sunday	
User Media	Initiaize USB					
	Mirror Media					
	Mirror NAS					
	Mirror Programs					
	Re-encode Internal Media					
	Delete Internal Media					

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Service	Pressure Test					
	Calibration	Calibrate Effects	Pan Calibration	0-255		
			Tilt Calibration	0-255		
			Focus Calibration	0-255		
			Grey Box calibration	0--255		
			Store			
		Calibrate Pan/Tilt Reset				
	Reinit Inner Flash Drive					

8. Control menu

The Robin iProMotion is equipped with graphic screen (50x40mm / 1.97" x 1.57") and four control buttons which allow you to set the fixture's behaviour according to your needs, obtain information on its operation, test its various parts and program it, if it has to be used in a stand-alone mode.
The fixture supports NFC (Near-Field Communication).

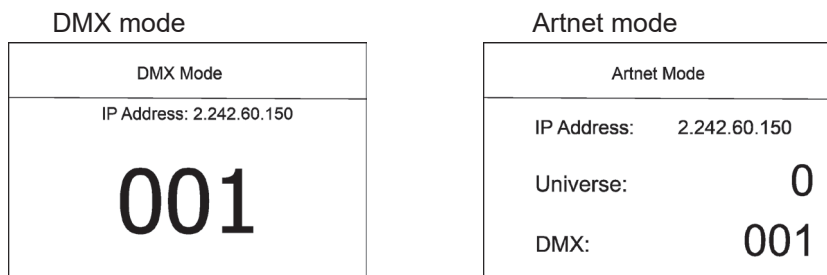
NFC interface and control buttons on the front panel



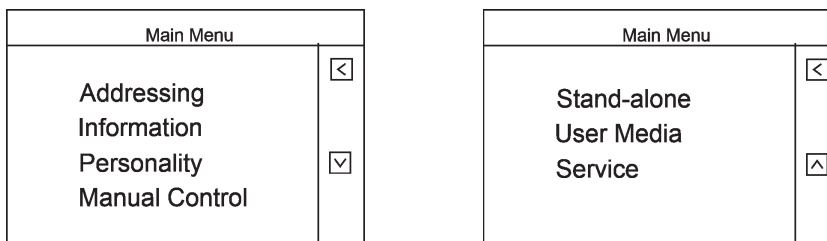
Control buttons on the front panel:

- ↖ - [ESCAPE] button used to leave the menu without saving changes.
- ⬆ ⬇ - [NEXT] , [PREV] buttons for moving between menu items and symbols, adjusting values.
- ⬅ - [ENTER] button used to enter the selected menu item and to confirm adjusted value.

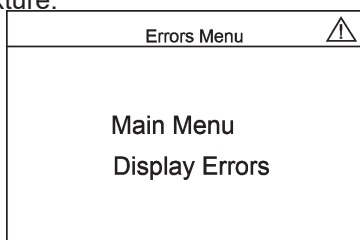
After switching the fixture on and performing fixture reset, the following screen with DMX address will appear.



Touch the [ENTER] button and the screen with the following menu items will be displayed.

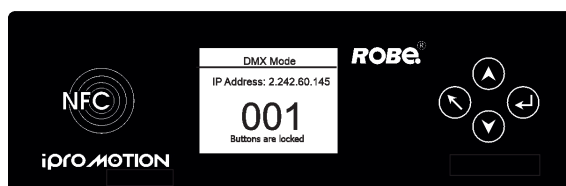


The item "Display Errors" will appear only in case if some error(s) occurred. Touch the Main Menu to enter main menu of the fixture.

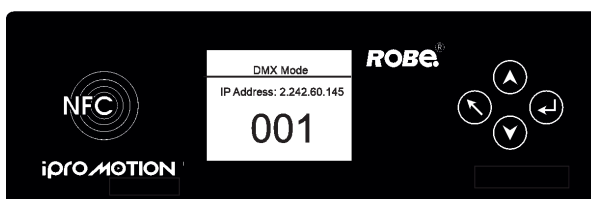
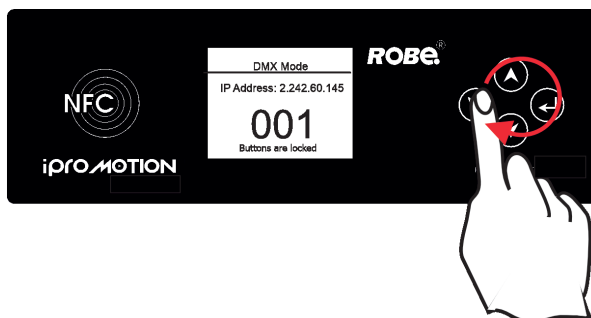


Locking/unlocking the screen.

To lock the screen, display the screen with ROBE logo, touch the [ESCAPE] button and slide your finger clockwise in a circular track of 360° across buttons [ESCAPE] --> [NEXT] --> [ENTER/Display On] --> [PREV]--> [ESCAPE]. The sign "Buttons are locked" will appear on the screen. If this sign will not appear, repeat finger sliding again with a different speed.



To unlock the screen, touch the [ESCAPE] button and slide your finger clockwise in a circular track of 360° across buttons [ESCAPE] --> [NEXT] --> [ENTER/Display On] --> [PREV]--> [ESCAPE]. The sign "Buttons are locked" will disappear from the screen. If this sign still remains on the screen, repeat finger sliding again with a different speed.



As the fixture can be operated at wide range of ambient temperatures, suitable environment has to be maintained in inside of the fixture. The following messages on the top line of the screen inform you about fixture status.

Heating - DMX Mode
IP Address: 2.242.60.150
001

The fixture is waiting for reaching operating temperature of the fixture inside (inside temperature is below 0°C).
Fixture does not respond to DMX.

Standby - DMX Mode
IP Address: 2.242.60.150
001

The fixture is in standby mode.
Fixture effects does not respond to DMX, but display is active. Fixture sends its statuses and recorded physical values (temperature, humidity, pressure) to the REAP.

Standby/Heating - DMX Mode
IP Address: 2.242.60.150
001

The fixture is in standby mode and inside of the fixture is heated (ambient temperature is below 0°C).
Fixture does not respond to DMX, but display is active. Fixture sends its statuses and recorded physical values (temperature, humidity, pressure) to the REAP.

8.1 Addressing

DMX Address - Use the menu item to set desired DMX start address of the fixture, which is defined as the first channel from which the Robin iProMotion will respond to the controller.

If you set, for example, the address 27, the Robin iProMotion will use channels 27 - 52 for control. Please, be sure that you do not have any overlapping channels in order to control each Robin iProMotion correctly and independently from any other fixture on the DMX data link.

Blinking DMX address means that the fixture is either not receiving DMX data or that the set DMX address is higher than allowed, exceeding the DMX footprint of the set DMX mode.

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

Ethernet Mode

Disable - The option disables Ethernet operation.

Artnet - Fixture receives Artnet protocol

ACN - Fixture receives ACN protocol

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

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

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

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

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

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

8.2 Information

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

Total

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

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

Resettable

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

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.

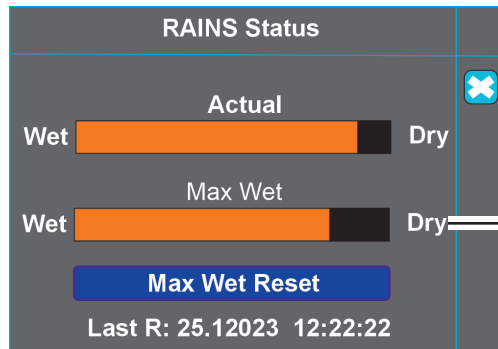
CPU - A maximum temperature of the Raspberry since the counter was last reset.

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.

RAINS Status - The menu item gives you information about environment in the fixture.

RAINS (Robe Automatic Ingress Neutralization System) manages humidity, temperature and pressure control using an active monitoring system to automatically remove any moisture detected within the fixture and provides permanent monitoring to ensure peak performance of the fixture.



Silica gel desiccants in the fixture arm



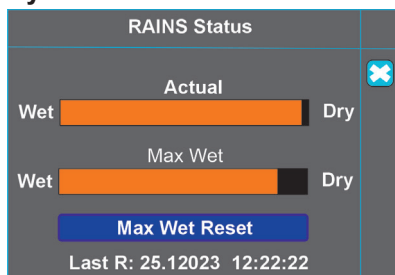
The bar chart **Actual** informs you about current humidity in the fixture. The bar chart changes depending on humidity, temperature and pressure in the fixture. The bar chart depends on current conditions in the fixture and can be different at start of fixture operation, after 10 minutes of its operating, after closing fixture dimmer etc.

The bar chart **MAX WET** informs you about maximum humidity achieved in the fixture since the chart was last reset. The bar chart also informs you about saturation of silica gel desiccants in the fixture arm with water and is deciding indicator for their checking and replacement.

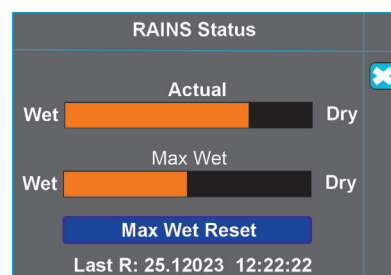
The option **MAX WET reset** resets the bar chart MAX WET. Date and time of last reset is displayed below the option.

Examples of RAINS statuses:

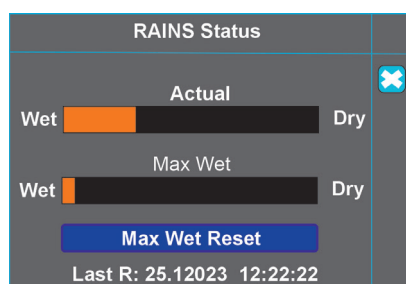
Dry desiccants in the fixture arm



Desiccants in the fixture arm partially saturated with water



Desiccants in the fixture arm fully saturated with water



Silica gel desiccants in the fixture arm are saturated with water and should be replaced.

After replacing them, reset the item MAX WET.

It is not necessary to replace silica gels desiccants in plastic boxes in the fixture head and base.

These desiccants should be checked (and replaced if it is needed) at removing head or base covers, e.g. at some service intervention.

Sensors Info - The menu items shows you current conditions in the fixture head (at pressure sensor): temperature, relative humidity and pressure.

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

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

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

Unlink Wireless - The item serves for unlinking the fixture from a DMX transmitter.

If the fixture is unlinked from a DMX transmitter, the message "Wireless Module is Unlinked" will be displayed.

If the wireless module is not installed in the fixture, message "Wireless Module Not Installed" will appear.

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

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

Module MT - a DMX and communication control module.

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

Module Optics - a focus/grey box control module

Module Display - a display control module

Module Fan - a fans control module

Module DL - a datalogger

Graphic Engine - a graphic engine.

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.

8.3 Personality

DMX Preset - Use the menu to select desired channel mode.

Mode 1 - 25 control channels

Mode 2 - 33 control channels

DMX Input - Use the menu to select mode of DMX signal receiving.

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

Wireless - DMX signal is received by means of the inbuilt wireless DMX module.

Pan/Tilt Settings - Use the menu set behaviour of both pan and tilt movements.

Pan Reverse - Use the item to invert pan movement.

Tilt Reverse - Use the item to invert tilt movement.

Pan/Tilt Mode - Use the menu to set mode of the pan/tilt movement.

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

Time Mode - The pan and tilt will move with different speeds and they will come at the same time to the end point of their tracks (pan and tilt use their optimal speeds).

Time of the pan/tilt movement (25.5 sec. max.) can be set by the channel "Pan/Tilt speed, Pan/Tilt time".

Pan /Tilt Feedback . The menu item allows to return the moving head to the required pan/tilt position after changing the position by an external force if this option is set On.

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

Blackout Settings - Use the menu if you need to close the light output under certain conditions which are described below

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

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

Pan/Tilt Moving - The menu item enables to close light output while the pan or tilt DMX values are changing.

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

Init Effect Positions - Use the menu to set all effects to the desired positions at which they will stay after switching the fixture on without DMX signal received.

Screen Settings - Use this menu to change the touch screen settings.

Display Intensity - The item allows to control the intensity of the screen (0-min., 9-max.).

Screen saver Delay - The item allows you to keep the screen on or to turn it off automatically after 1-10 minutes after last touch (or pressing any button on the control panel).

Display Orientation - The menu allows to change display orientation.

Normal - Standard display orientation if the fixture is placed horizontally (e.g. on the ground).

Inverted - Inverted orientation (needed if the fixture is hanging on the truss).

LED Engine - Use the menu if you want to set special options for LEDs engine.

Ceiling Projection - This function enables to project image on a screen if the fixture is suspended upside-down from the ceiling (truss) in front of the screen.

Rear Projection - The function enables to project the image to a rear projection screen if the fixture is placed behind the screen. Note that a special rear projection screen is required.

Colour Temperature - The function allows you to select a white colour from the following whites: 3200K, 4200K, 5000K, 5500K, 5600K, 6500K, 7500K (default), 8000K, 9500K, Maximum Brightness.

Gamma Curve - The menu item allows you to select a gamma curve from the following curvatures: 1.8, 2.2 (default), 2.4, B&W, Linear.

Graphics Engine - use the menu if you want to set options for graphic engine.

Image Aspect Ratio - The menu offers two options:

Fill Screen - All pictures (videos) are displayed (played) on the whole screen regardless of native aspect ratio of each picture (video).

Keep Aspect ratio - the fixture keeps native aspect ratio of played pictures (videos).

Edge Antialiasing - The function "smooths out" edges of the image during its rotation.

Gobo Selection Mode - The menu allows you to select from two options of media files assigning to DMX values.

Alphabetical Order - The media files assigned to DMX values are sorted in alphabetical order.

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

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

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

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

Projector Orientation - The item has to be set according to position of the projector in the iPromotion. For iPromotion LS has to be set "Landscape Orient." and for iPromotion PT has to be set "Portrait Orient."

Refresh Rate - The menu allows you to select desired refresh rate. For video files saved on the internal USB flash drive and the external USB memory stick is recommended refresh rate: 1280x720@30Hz.

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

Date & Time Settings - The fixture includes real-time clock and this menu item allows you to set current date and time in the fixture.

WEB Server - The menu item allows you to set some item (s) regarding the WEB interface operation.

Activate Password - If the option is On, the password is required at entering the WEB interface.

Set Password - The option allows you to set a password for access on the Web server (default password: 2479, user: robe).

Wifi Access Point - The menu allows you to switch 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 IPromotion) and allows synchronization of NAS client with the NAS server.

IP Address - The menu item allows you to set an IP address of the IPromotion 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).

Default Settings - The menu item allows to set all fixture parameters in this menu to the default (factory) values except item "DMX Input".

8.4 Manual Control

Reset Functions - This option allows you to reset function modules and effects and return them to their standard values (positions).

Total System Reset - The item resets all fixture modules.

Pan/Tilt Reset - The item resets the pan/tilt module.

Focus Reset - The item resets the focus module.

Grap. Engine Reset - The item resets the graphic engine module.

Manual Effect Control - The menu allows you to manually control each effect channel of the fixture.

8.5 Stand- alone

Test Sequences -Use the menu to run a test/demo sequences without an external controller, which will show you some possibilities of using the fixture.

Dynamic Mode - This mode uses all fixture functions including pan/tilt movement and therefore is suitable for a complete introduction of the fixture.

Static Mode - This mode is suitable for projections on the wall, ceiling or ground without any pan/tilt movement. Adjust the pan, tilt, and focus to desired positions and start test sequences by the button Run.

Preset Playback - This menu allows you to select the program which will be played in a loop after switching the fixture on without connected DMX controller.

None - The option disables "Preset playback" function.

Program. 1- Program 9 - The options start user program 1-9. Selected program will be played continuously in a loop

Play Program - Select this menu to run one of 9 programs which have been created or recorded via the menu "Record Program".

Note: connected DMX signal pauses a program running, after disconnecting DMX signal the program continues is running.

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

Edit Program - the menu allows you to edit existing program or to create a new program.

Each program can have up to 999 steps.


After entering the menu "Edit Program", select desired program (1-9) and enter it. Select desired step and enter it. Now use menu items to set fixture channels to desired values.

The item "Step Time" means a step time (0.1-999.9 seconds).

The item "Add New Step" inserts a new step behind the current step.

The item "Delete Step" deletes the current step.

Note: DMX values are displayed at every channel only in the step 1. In the next steps (2, 3...) the channel value is displayed only in case, that this value was changed.

The icon  serves for displaying a created step.

Input Overtake -If the option is On, the currently running program is interrupted in case that DMX signal from external DMX controller has been received, the fixture behaves according to DMX signal.

Timer Playback -The option allows you to select and set four timers (Timer 1, Timer 2, Timer 3, Timer 4) and assign programs to these timers.

Menu items in each timer menu:

Activate Timer - The menu item allows you to activate current timer.

Select program - The menu item allows you to assign program (Program 1- Program 9) to the current timer.

Start Time - The menu allows you to set the time and date for first running of assigned program.

Program Duration - The menu allows you to set the time of program running. Selected program will be played in a loop.

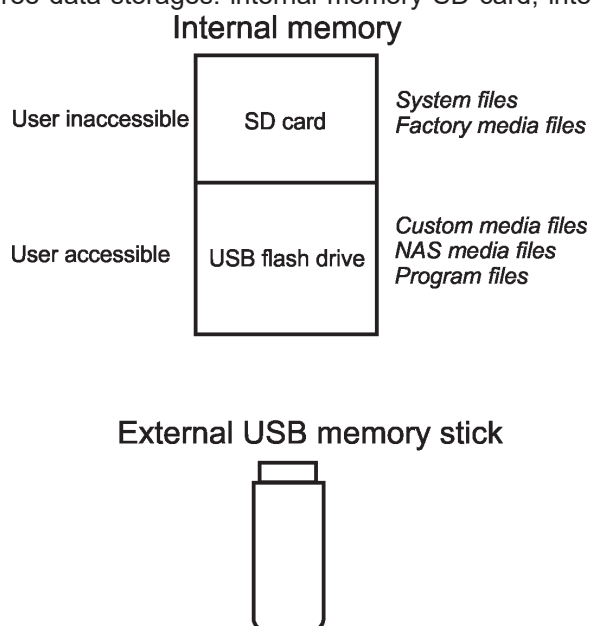
Repeat Interval - The menu allows you to set the time interval for program running:

Repeat Time - The menu allows you to set the time after which selected program will start to run. The time is counted from the moment the program is started.

Days of the week - The menu item allows you to select days on which program will be played.

8.6 User Media

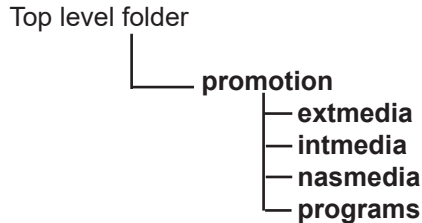
The Robin iPromotion uses three data storages: internal memory SD card, internal USB flash drive and an external USB stick.



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.



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 iProMotion 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 to 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 external USB 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 Robe iProMotion 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.

* USB stick has to be connected.

Re-encode Internal Media - The option converts custom pictures (only) in the fixture into optimal resolution (1280x720 pixels) for the Robe iProMotion. 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.

8.7 Service

Pressure Test - The menu item runs a procedure which checks the IP65 integrity of the fixture. The fixture has to be connected to mains and the head temperature (at pressure sensor) cannot be higher than 55°C. The pressure test lasts about 10 minutes. The pressure test can be repeated at earliest 2 minutes after last pressure test. For more details of pressure test please see the chapter Checking the IP65 integrity of the fixture.

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

Calibrate Effects - 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

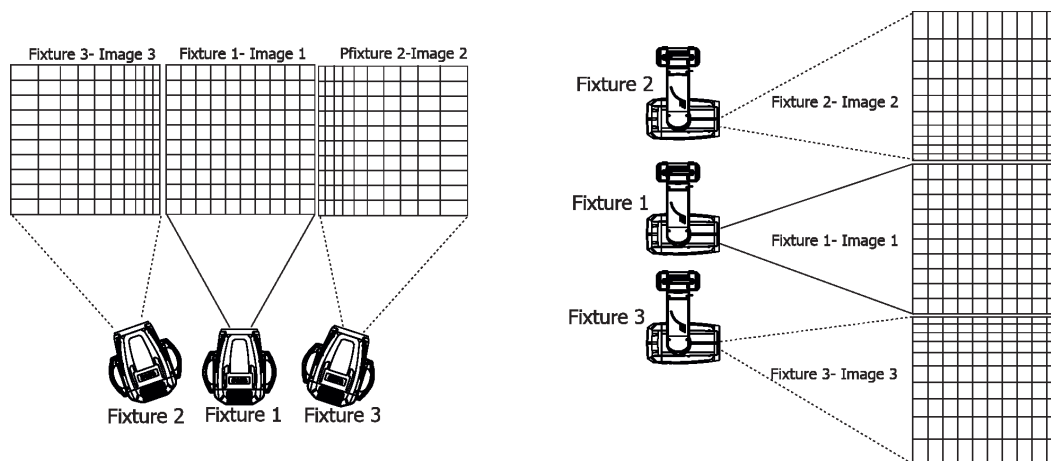
Calibrate Pan/Tilt Reset - The menu item is used for calibration of pan/tilt reset in factory and also has to be used in case of change of pan or tilt motor or pan/tilt control PCB RB3138 in the fixture yoke.

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

Warning: all user data will be deleted!

9. Keystones

If an image output from the Robin ProMotion is at an angle, the image may be skewed.



Two keystone channels Vertical Keystoning and Horizontal Keystoning in DMX chart allows you to adjust the image shape, aspect ratio 16:9 (19:6) is kept. DMX values of both channels can be set in range of 1-255, value 0 deactivates corresponding keystone channel.

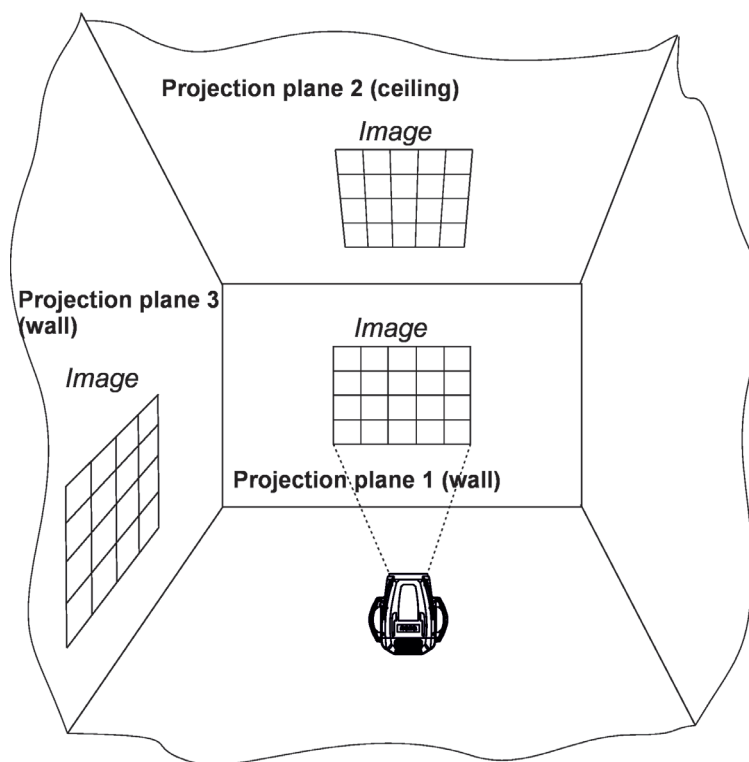
The channel "Vertical keystone" turns image along vertical axis.

The channel "Horizontal keystone" turns image along horizontal axis.

These channels take priority over 8 corner keystone channels.

The channel "Keystone orientation" allows you orientation of keystones in a range of 0°-360°.

127-->1 DMX= 127°-->0° counterclockwise, 128 DMX= 128°(center), 129-->255 DMX = 129°-->360° clockwise.



DMX protocol
channel "**Special functions**"

DMX	Function
230	Start of measuring projection plane 1
231	Start of measuring projection plane 2
232	Start of measuring projection plane 3
233-234	Reserved
235	Load projection plane 1
236	Load projection plane 2
237	Load projection plane 3

iPromotion without ADM (Automatic Distance Meter).

Adjusted positions of Horizontal/Vertical keystones and Keystone orientation can be saved to the fixture using the channel "Special functions (6)" staying on DMX value 230 (for Projection plane 1) for a while and then leaving the value 230. By this way you can save adjusted horizontal and vertical keystones on the projection plane 2 (231 DMX) and the projection plane 3 (232 DMX). Only values on the channels Vertical keystone and Horizontal keystone can be saved, eight corner keystone channels (12-19) cannot be saved to the Projection Plane 1, Projection Plane 2, or Projection plane 3.

Saved values of horizontal/vertical keystones can be loaded by means of options "Load projection plane 1"- "Load projection plane 3".

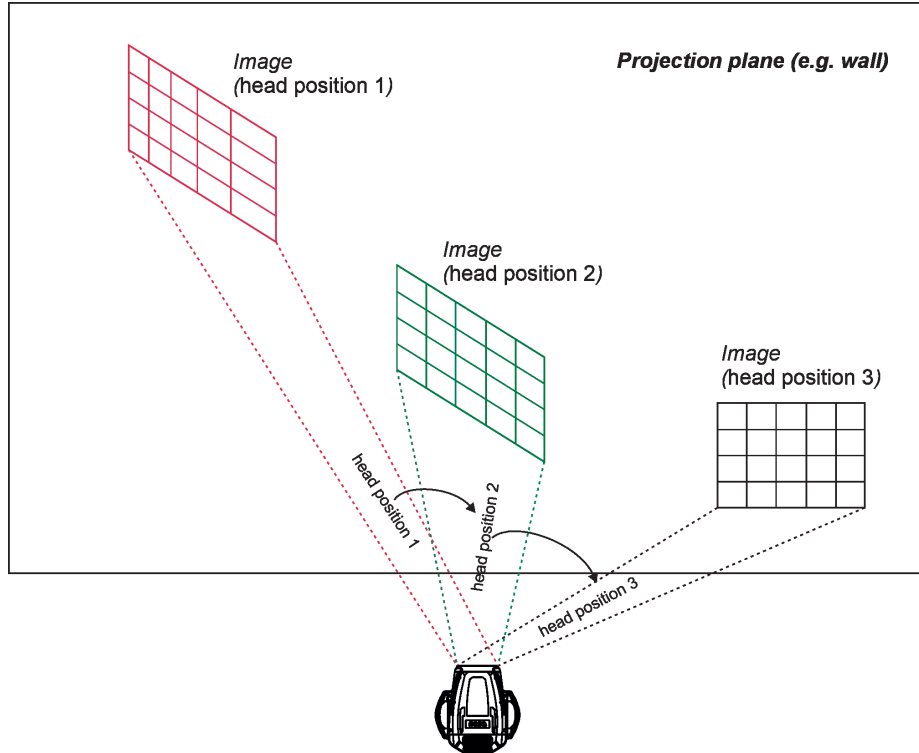
Note: value on the channel "Keystone orientation" is not saved to the projection plane 1-3.

iPromotion with ADM (Automatic Distance Meter).

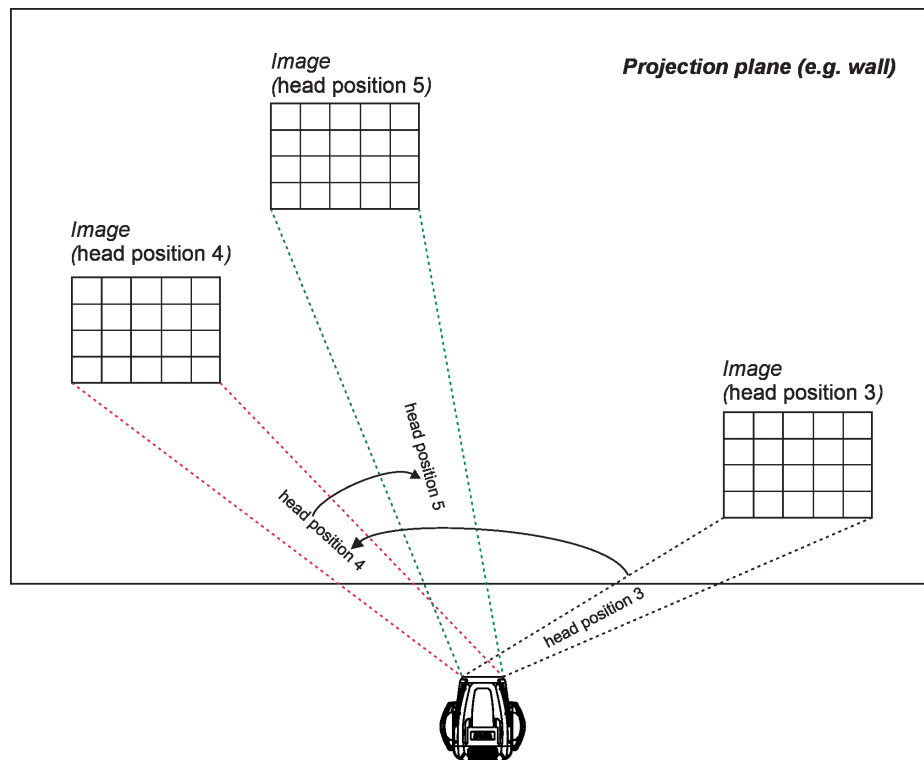
Select projection plane (plane 1-DMX 230, plane 2-DMX 231, plane 3-DMX 232) on the channel "Special functions" and by means of Pan/Tilt channels move the fixture's head to at least three different positions on the projection plane.

During pan/tilt movement the fixture will calculate optimal keystone values and will adjust correct image shape on the projection plane. The calculated keystone values will be saved automatically to the fixture when leaving DMX value (230,231,232) for selected plane. A necessary condition for automatic keystone is that at least one of these two channels (Vertical keystone, Horizontal keystone) is different from 0 DMX.

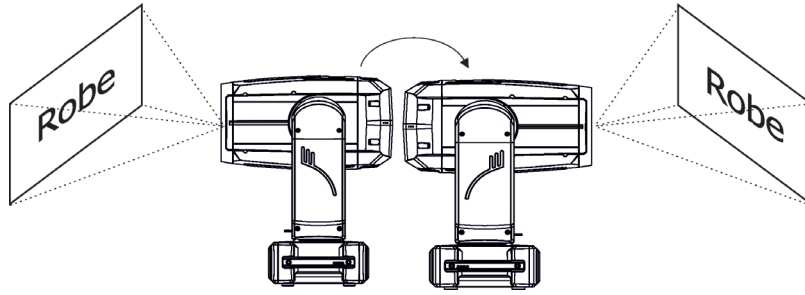
Note: value on the channel "Keystone orientation" is not saved to the projection planes 1-3.



Saved keystone values for plane 1 (plane 2, plane 3) can be loaded by means of options "Load projection plane1", "Load projection plane 2" and "Load projection plane3" (235,236, 237 DMX) on the channel "Special functions". If you load desired projection plane, the values of the keystone channels will be corrected automatically when head position is changed:



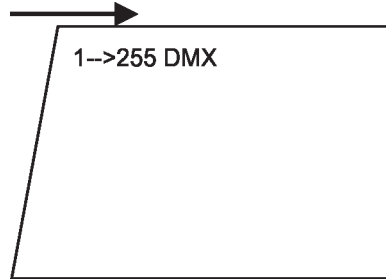
If at least one of the keystone channels (Vertical keystone, Horizontal keystone) is active (different from 0 DMX), the image shape will be automatically corrected and the image will not be turned if you move the head in a tilt into the opposite position - see the picture:



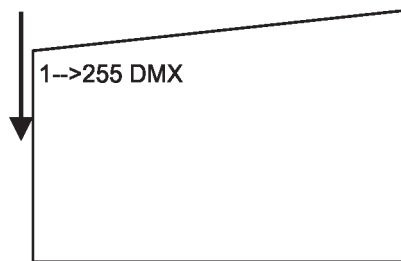
Besides channels Vertical Keystone and Horizontal Keystone described above you can use 8 keystone channels to control each corner of the image individually (in DMX mode 2 only). In order to activate the eight corner keystones, both channels Vertical Keystone and Horizontal Keystone have to be set at 0 DMX otherwise the channels Vertical Keystone and Horizontal Keystone will have priority over the corner keystones.

Note: values of the eight corner keystone channels cannot be saved to the Projection plane 1-Projection plane 3.

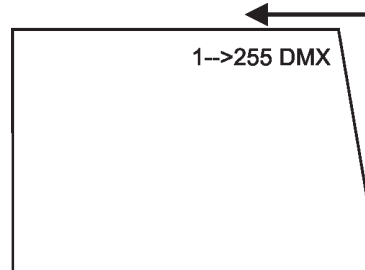
KeyStone Top Left X



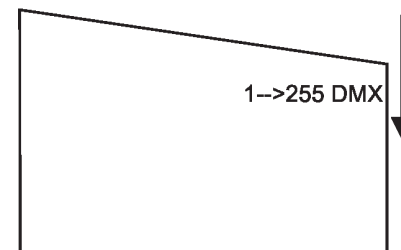
KeyStone Top Left Y



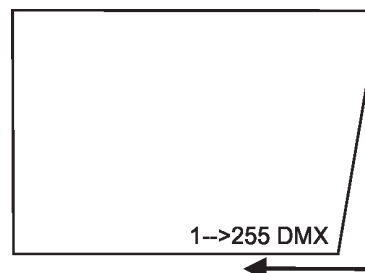
KeyStone Top Right X



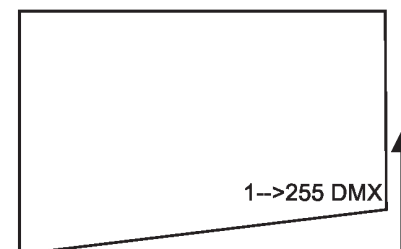
KeyStone Top Right Y



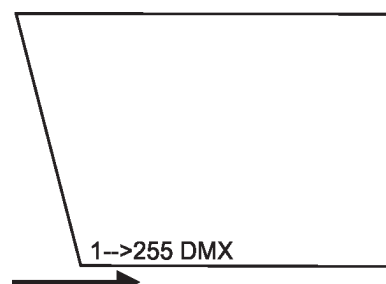
KeyStone Bottom Right X



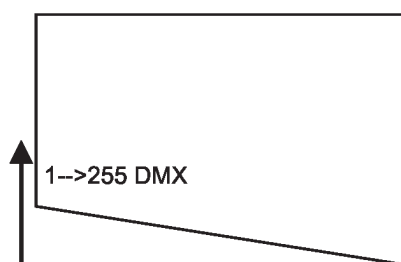
KeyStone Bottom Right Y



KeyStone Bottom Left X



KeyStone Bottom Left Y



10. Ways of file transfer from/to the iPromotion

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 iPromotion 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 iPromotion.
6. Copy files into the iPromotion via the menu item "Mirror Media" ("Mirror NAS" for NAS files, Mirror Programs" for program files).
7. Unplug the USB stick from the iPromotion .

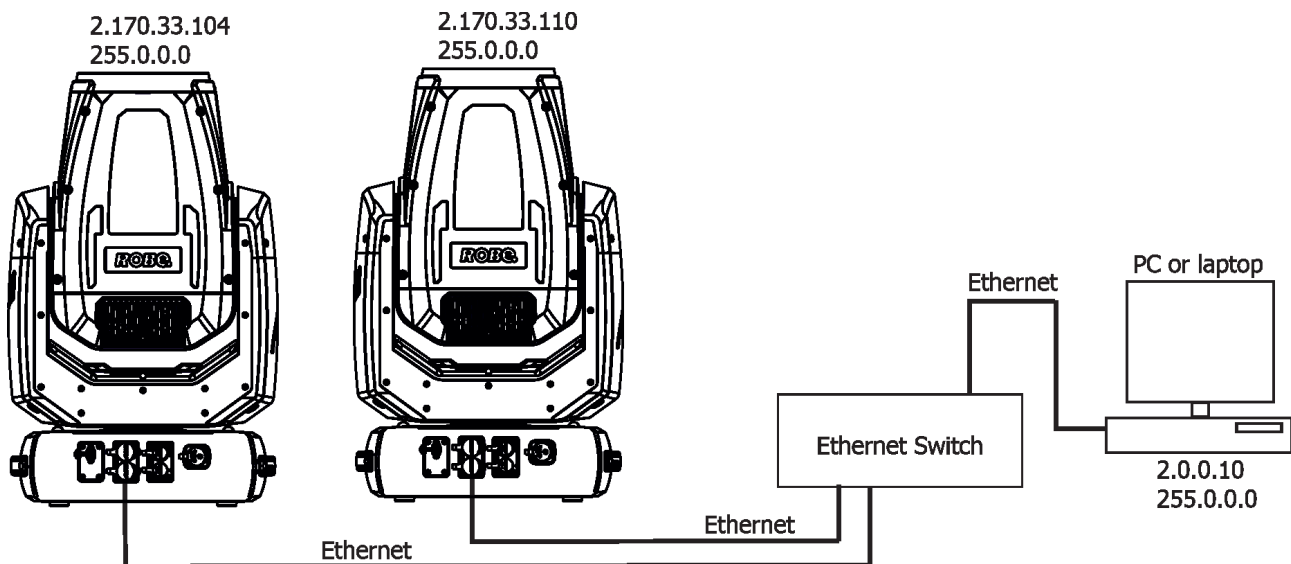
To copy custom files (NAS files, programs) from the fixture

1. Connect the iPromotion 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 iProMotion 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 iProMotion.

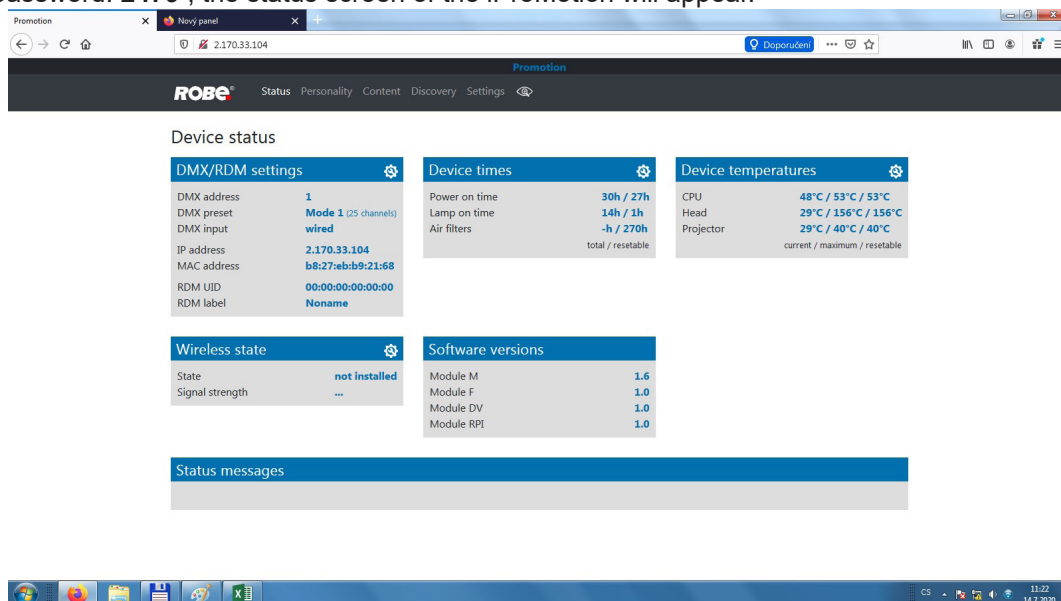
2. Robe Ethernet Acces Portal (REAP)


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 iPromotion(s).

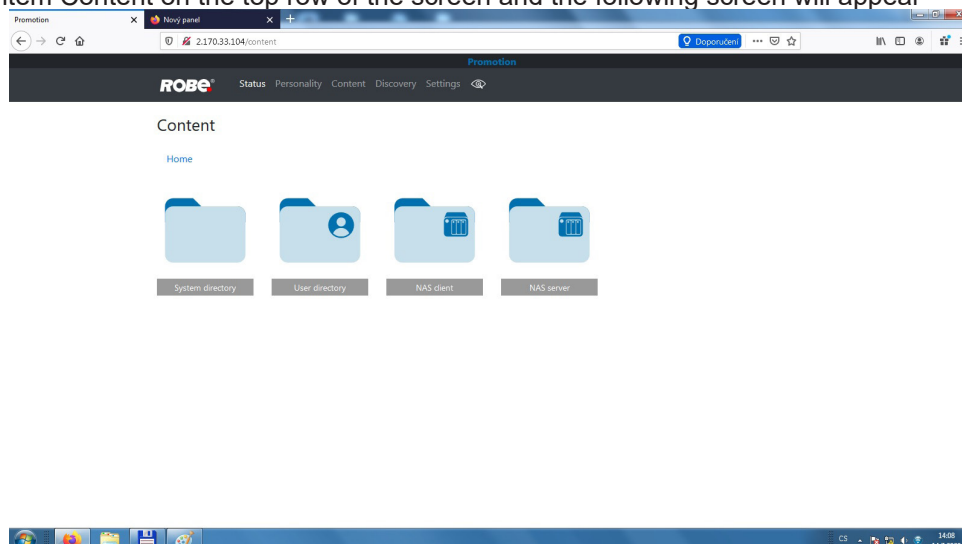


Type the IP address of the iPromotion to your web browser, e.g. <http://2.170.33.104>, enter the user name: **robe** and the password: **2479**, the status screen of the iProMotion will appear.



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



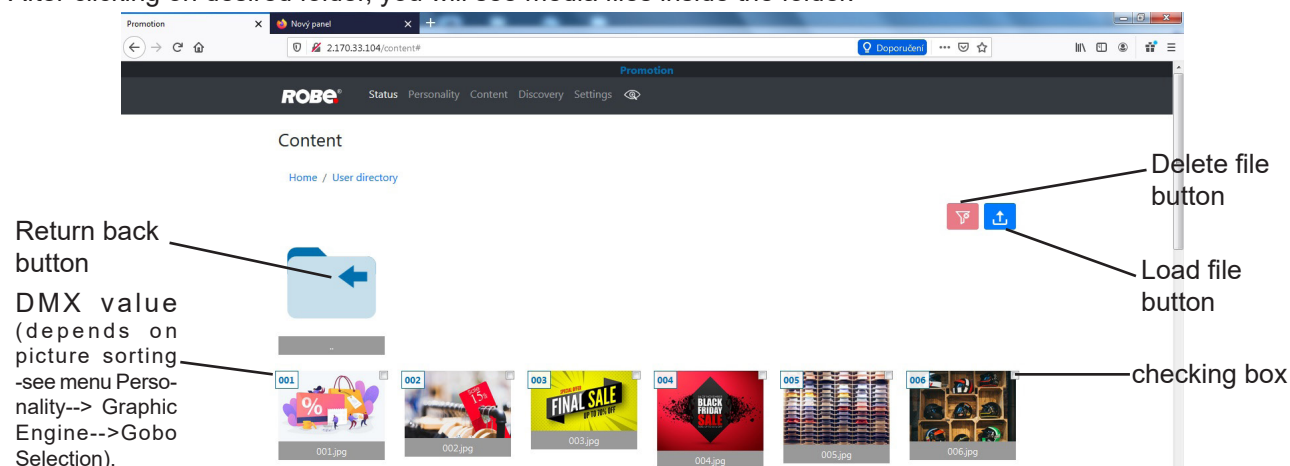
System directory- folder for system files and factory media files. The folder is inaccessible for user.

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.

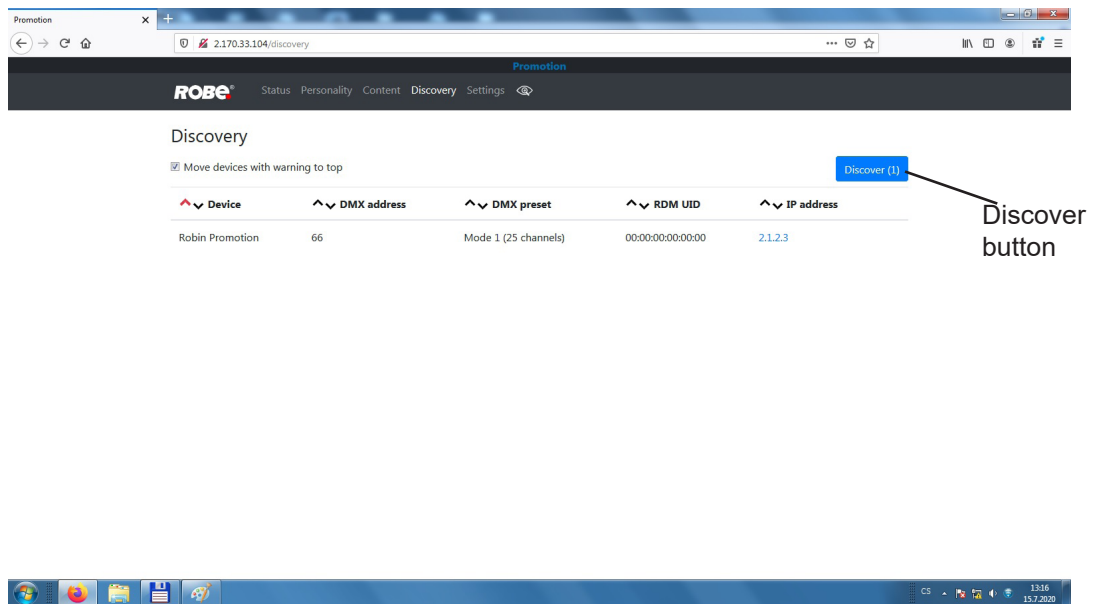
NAS client- folder for client NAS media files.

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

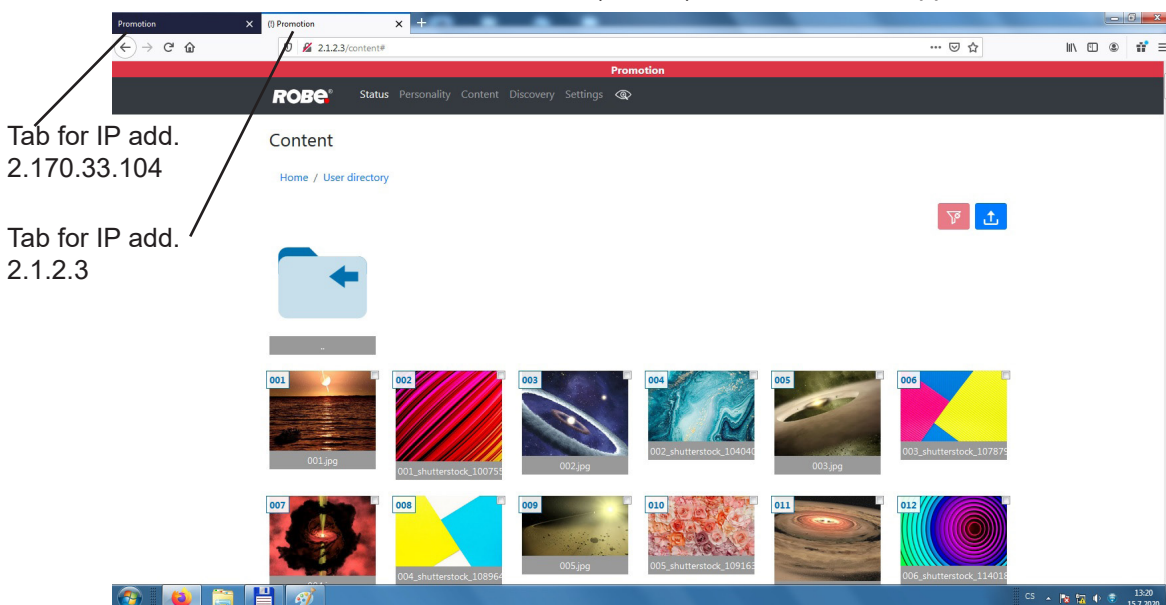


If you have two and more iPromotions, the item Discovery allows you to show all connected iPromotions. Click on the button Discovery and fixtures connected in the network will be displayed.

Example for two connected fixtures with IP addresses 2.170.33.104 and 2.1.2.3

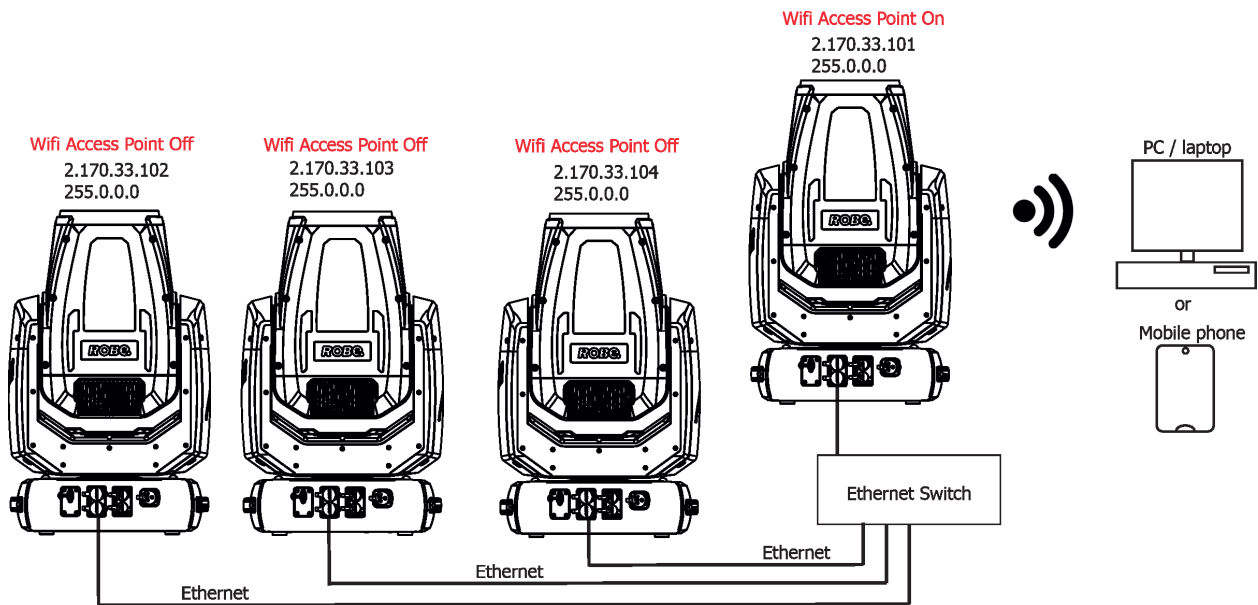


To switch over next fixture, click on its IP address (2.1.2.3) and two tabs will appear.



The Web interface can be also used on the PC or mobile phone connected to the fixture by means of Wi-Fi. The Wi-Fi access point in the fixture has to be activated (Wifi Access Point-->Turn AP On/Off--> Access Point On)
 Wifi network name: iPromotionAP
 Password: ipromotion

Note: If you have more Robin iPromotions, only one fixture may work as a Wi-Fi access point at the same time. In this case it 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 REAP- see picture below.



3. File Transfer Protocol (FTP)

Fixtures and computer has to be connected to the Ethernet network at the same way as for Robe Ethernet Access Portal.

The FTP server is permanently 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: iPromotionAP

Password: ipromotion

11. Real Time Streaming Protocol (RTSP)

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

Type the IP address of the iPromotion 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 iProMotion will appear.

ROBE® Promotion

Status Personality Content Discovery Streams Settings

Device status

DMX/RDM settings	
DMX address	1
DMX preset	Mode 2 (33 channels)
DMX input	wired
IP address	2.170.33.104
MAC address	b8:27:eb:b9:21:68
RDM UID	52:53:01:0d:0d:00
RDM label	Noname

Device times	
Power on time	81h / 81h
Lamp on time	147h / 147h
Air filters	-h / 219h
total / resetable	

Device temperatures	
CPU	51°C / 54°C / 54°C
Head	38°C / 39°C / 39°C
Projector	37°C / 38°C / 38°C
current / maximum / resetable	

Wireless state	
State	linked
Signal strength	19.0%

Software versions	
Module M	1.4
Module F	1.3
Module DV	1.1
Module RPI	1.9

Status messages

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

rtsp://2.1.1.5:854/promotion

Protocol IP address Port

Example of Streams screen

ROBE® Promotion

Status Personality Content Discovery Streams Settings

Streams

Save

Stream 1 - DMX 1

☒ rtsp://2.188.200.134/profile2/media.smp

Stream 2 - DMX 2

☒ rtsp://2.1.1.5:854/promotion

Stream 3 - DMX 3

☒ rtsp://2.1.1.5:854/mammamia

Stream 4 - DMX 4

☐

Stream 5 - DMX 5

☐

Stream 6 - DMX 6

☐

Stream 7 - DMX 7

☐

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

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

12. NAS operation

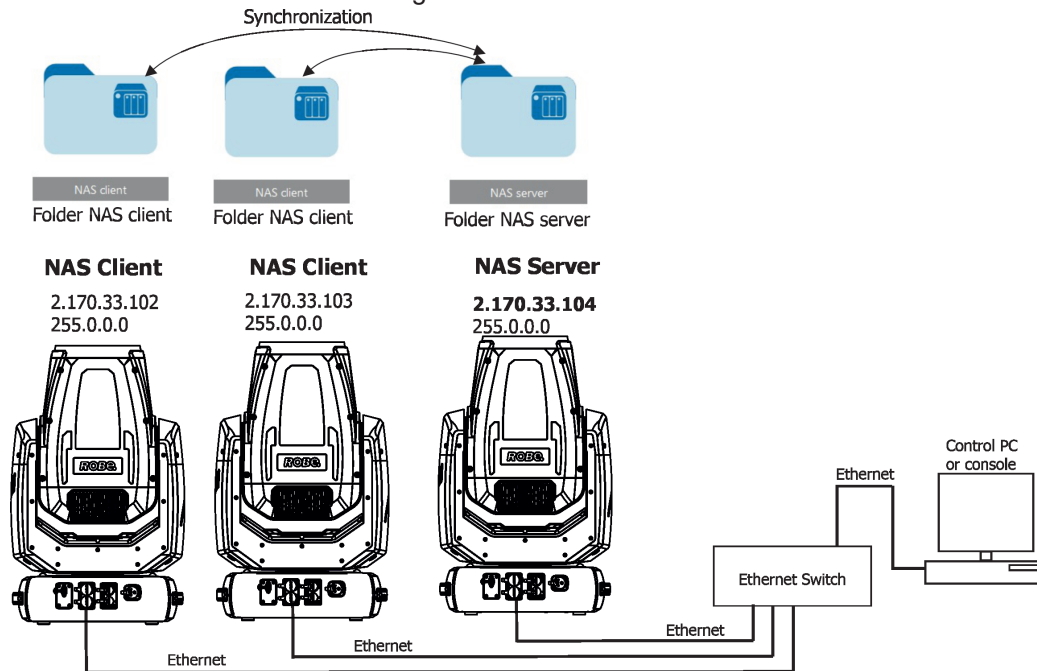
NAS = Network-Attached Storage is a file data storage server (intended iPromotion) connected to a computer network providing data access to a group of clients devices (another iPromotions).

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

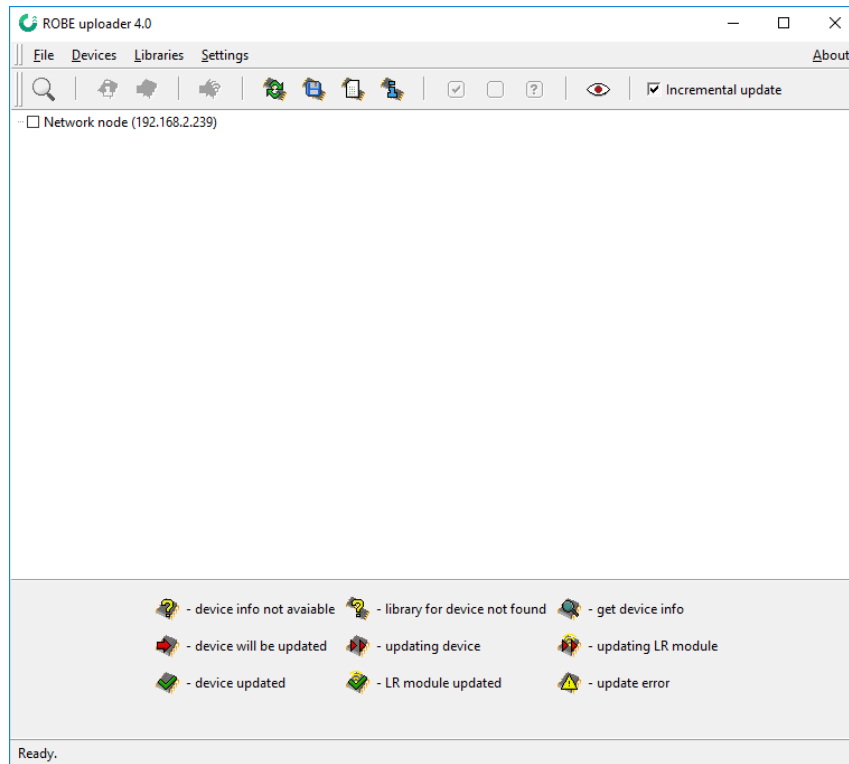
On PoweUp Sync: No Wait For Sync

13. Software update of the fixture

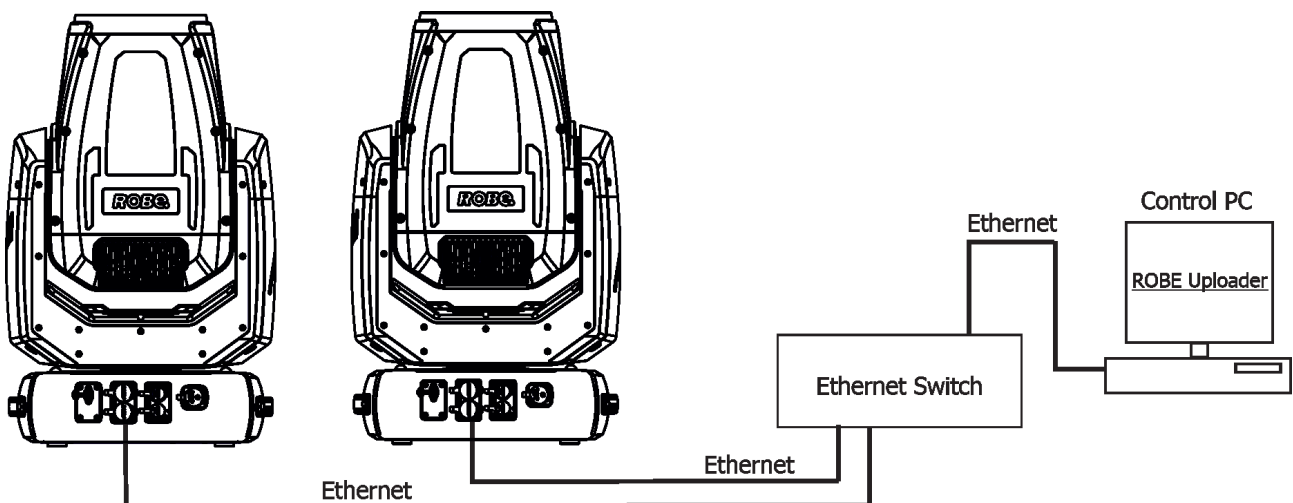
The Robin iProMotion software update is done only via an Ethernet connection between a computer running a ROBE Uploader software and the iProMotion.

The ROBE Uploader is a software for automatized software update of ROBE fixtures. The ROBE Uploader switches the iProMotion to update mode automatically.

Please see <https://www.robe.cz/robe-uploader/> for more information about the ROBE Uploader and control PC setting.



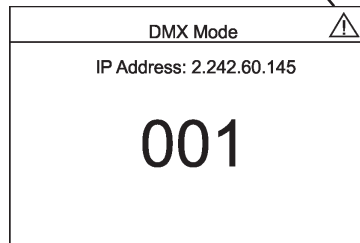
Example of connection:



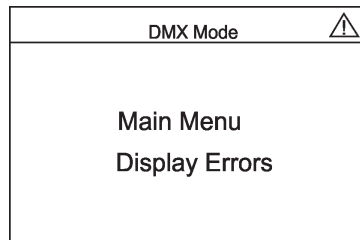
It is important to note, that Ethernet network connection (Local LAN) typically needs to be set to 2.x.x.x address, for example 2.0.0.10, assuming that no other computer on the network contains such an address while keeping all ROBE fixtures in default IP settings. Network mask of the computer should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

14. 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.



In this case the following menu items will appear after pressing Enter button



Main menu - standard main menu
Display errors - enter the item to see error message(s).

DMX address blinks

Blinking DMX address means that the fixture is either not receiving DMX data or that the set DMX address is higher than allowed, exceeding the DMX footprint of the set DMX mode.

Too Much Humidity in Device

To remove the message, reset the bar chart Max.Wet in the menu RAINS Status (menu Information) and check the silica gel desiccants in the fixture arm.

Valve Seal Error

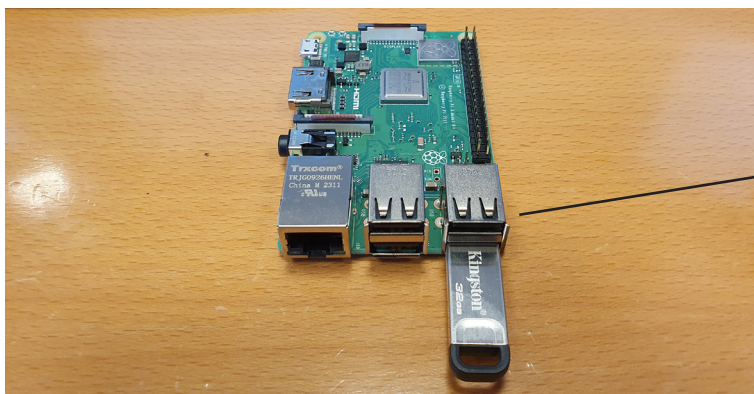
The valve in fixture arm or coil in the valve is defective or there is a connection problem between the valve and head, check cable connector at valve.

Inner Flash Drive Error

Internal USB flash drive is missing or is inserted in incorrect port or is not formatted.

Flash Drive Init Error: 12

Internal USB flash drive is not inserted in the correct USB port on the Raspberry and you try to format internal USB flash drive (menu Service -->Reinit Inner Flash Drive).

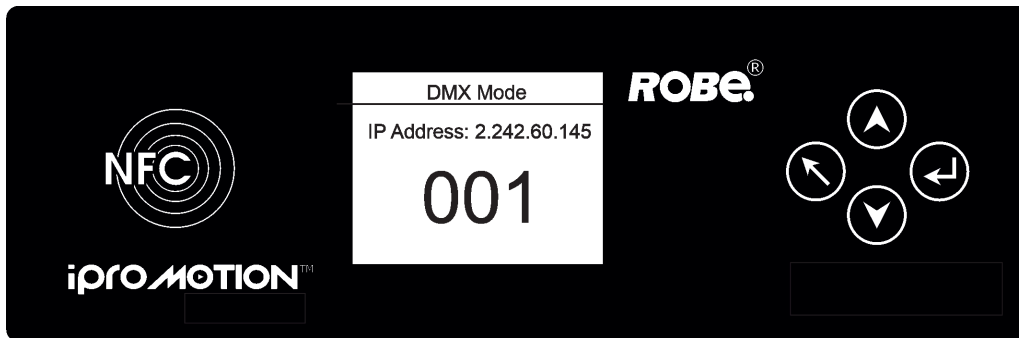


Correct USB port for
Internal USB flash
drive

15. NFC

The fixture supports NFC (Near-Field Communication). Using the mobile phone application ROBE COM you can read and set the Robin iPromotion parameters (DMX address, IP address...etc.), get information about temperatures, operation hours, RDM identification etc.

The NFC point is situated on the front panel of fixture's base.



Download and install the ROBE COM from Google Play (for Android 5.0 and higher) or App Store (for iOS 12.0 and higher) to your mobile phone. Your mobile phone has to support NFC.

Hold the mobile phone on the side of the fixture base, if NFC connection is OK, discovered fixture will appear on the screen, after touching the fixture name the following menu items will appear:

- DMX/RDM settings
- Ethernet settings
- Blackout settings
- Colour settings
- Display settings
- Standalone settings
- Pan/Tilt settings
- Other settings
- Software versions
- Device hours
- Device temperatures

Touch desired menu item to enter its sub-menu.

16. RDM

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

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

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

The list of commands for Robin iPromotion is the following:

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

RDM model ID for the Robin iPromotion is 0x0146.

17. Cleaning

DANGER !

Always disconnect the fixture from mains before starting any cleaning work.

Regular cleaning will not only ensure the maximum light output, but will also allow the fixture to function reliably throughout its life.

The frequency of cleaning depends on the environment in which the fixture operates: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the fixture housing.

The front glass cover of the head will require cleaning on a monthly basis. A soft lint-free cloth dampened with a solution of water and a mild detergent is recommended, under no circumstances should alcohol, solvents or abrasives be used!

Stains caused by hard water (water that has high mineral content) can be effectively removed by means of non - abrasive descaler (e.g. EverStar descaler).

18. Maintenance

Do not do maintenance in a damp environment (e.g. rain, snowfall)!

DANGER !

Always disconnect the fixture from mains before starting any maintenance work.

In order to ensure the fixture remains in good condition and does not fail prematurely, we recommend regular maintenance.

The following points have to be considered during fixture inspection:

- All outside covers and screws should be checked for damages, scratches or corrosion.
- All connectors and its rubber caps should be checked for damages or sediments.
- All screws and fasteners has to be securely tightened. Check for any deformation on the housing and rigging points. Damaged rigging points or unsecured rigging could cause the fixture to fall and seriously injure people.
- Electric power supply cable must not show any damage or material fatigue.
- Fans and heatsink should be checked for sediments or dirt/debris accumulation.

User can do the following operations:

- Silica gel desiccants replacement
- Main fuse replacement

Another maintenance and service operations should be carried out by trained technician only. If you need any spare parts, please order genuine parts from your local Robe distributor.

Fixture metal covers are made of material resistant to corrosion, potential damages of covers (like scratches, abrasions) are only appearance defects and will not cause corrosion of covers.

To repair small damages of fixture metal covers (e.g. scratches), you can use a paint intended for non-rusting metal surfaces (like aluminium, copper...). The paint can be applied to surface by means of a small brush or by spraying.

Use the paint with the same colour and sheen as has your cover. The paint can perform as undercoat or top-coat, it doesn't matter.

Do not remove fixture covers in smoky or particularly dirty environment (e.g. with fog machines)

IMPORTANT The fixture head should be uncovered as short time as possible (about 1-2 hours depending on air humidity) otherwise silica gel in small boxes in the fixture head may become damp.

If you have removed head cover and you need to interrupt your work for longer time (hours, days),we

recommend to place the head cover on the head and fasten it provisionally by means of two screws, next possibility is unscrewing small boxes with silica gel from the head and put it to a sealed container with limited access of air (e.g. sealed plastic bag).

The same rule should be kept for silica gel desiccants in the fixture base in case of service intervention (at removing bottom base cover).

Replacing the main fuse.

Before replacing the fuse, disconnect the fixture from mains.

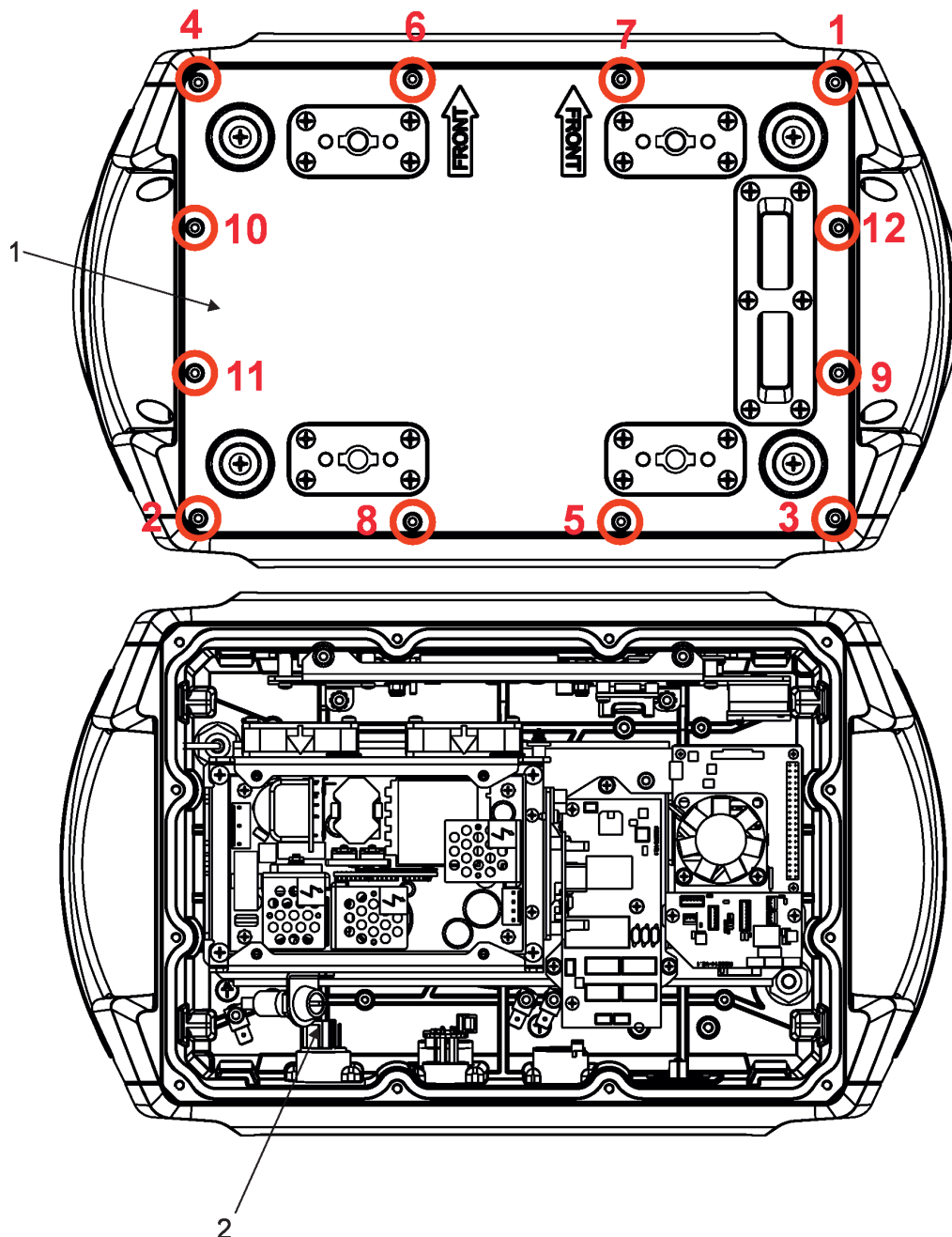
1. Remove the bottom cover (1) of the fixture base by unscrewing 12 screws with spring washers.
2. Using a flat-blade screwdriver, unscrew (anti-clockwise) the fuse holder (2) from the base.
3. Remove the blown fuse from the fuse holder.
4. Place a good fuse (only the same type and rating) into the fuse holder (2) and screw (clockwise) the fuse holder (2) back to the base of the fixture

5. Place the cover (1) back on the base and fasten it by means of 12 screws with washers.

Tighten screws crosswise (in order 1-->12) in two steps:

Step 1 - use tightening torque 0.5Nm (pre-tightening)

Step 2 - use tightening torque 2.2-2.5Nm (final tightening)

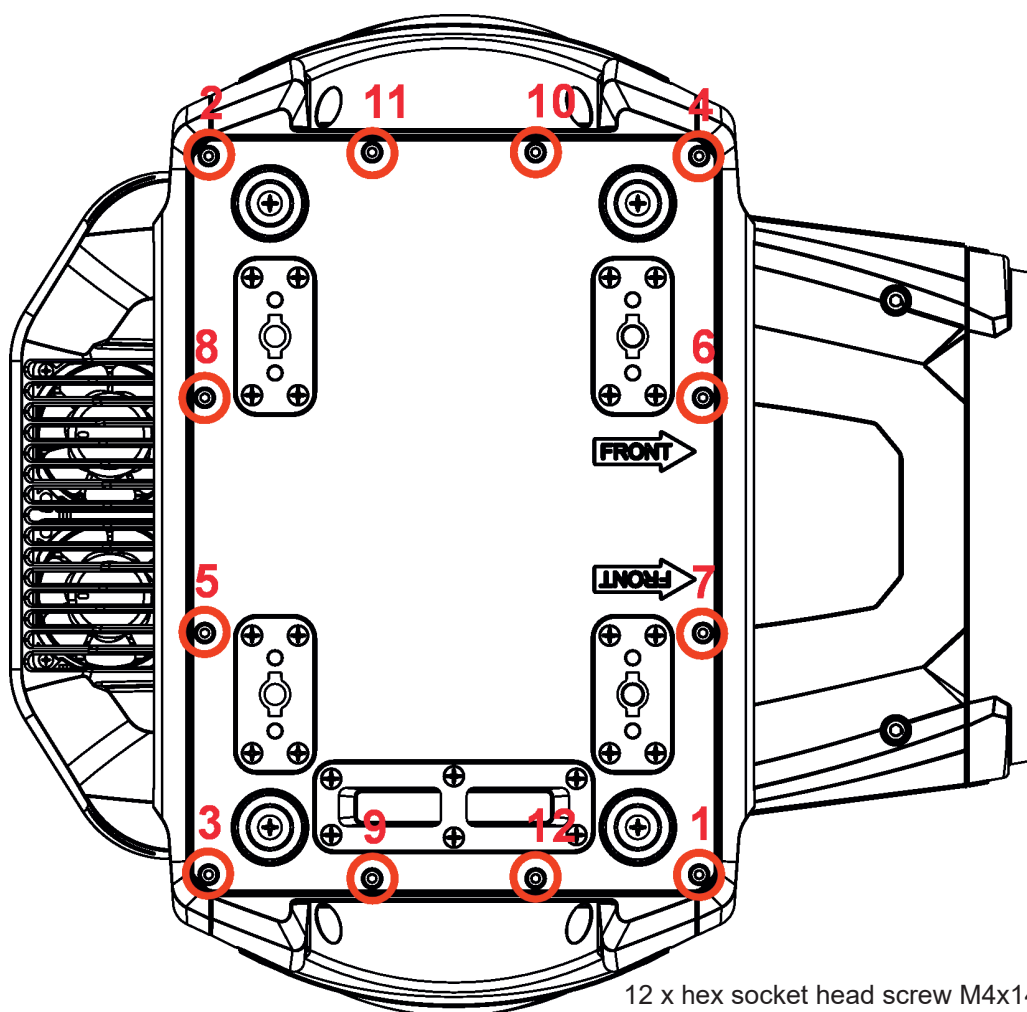


18.1 Fixture watertight covers and torques of covers screws

Keep values of torques as stated on pictures below otherwise leakage issues can occur!

Run the procedure Pressure Test (Service --> Pressure Test) after replacing any watertight cover!

Bottom base cover



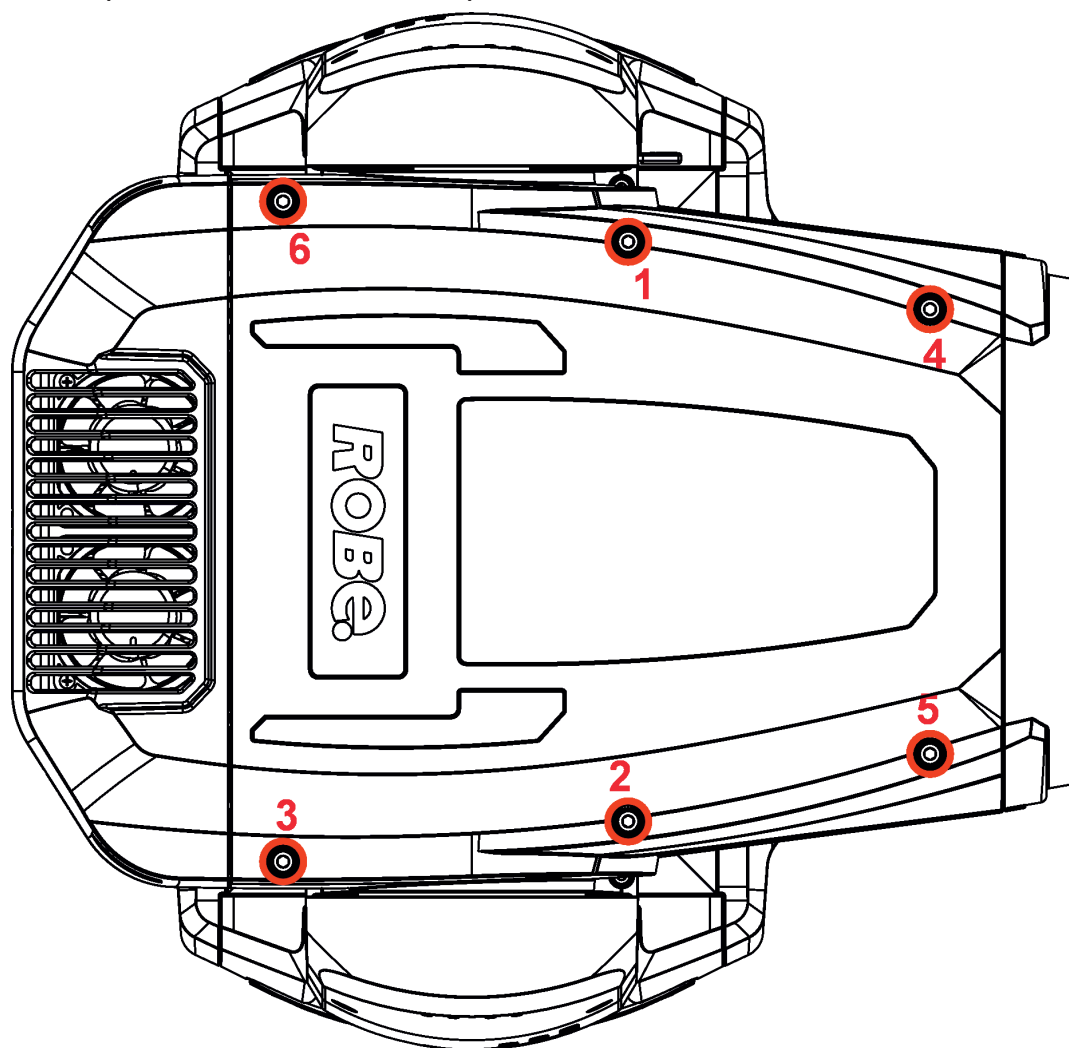
Screws must be tightened in the order 1-->12

12 x hex socket head screw M4x14
12x Spring washer
Tightening torque: 2.2-2.5 Nm*

* Tighten all screws in two steps:
Step 1 - use tightening torque 0.5Nm (pre-tightening)
Step 2- use tightening torque 2.2-2.5Nm (final tightening)

Carefully check the gasket for signs of deformities or damages and if it is correctly placed before screwing the bottom base cover back. The gasket is part of the base.
Do not forget to connect grounding wire between chassis and base cover.

Head covers (on both sides of the head)



Screws must be tightened
in the order 1-->6

6 x hex socket head screw M5x16
Tightening torque*: 2.5 Nm

* Tighten all screws in two steps:

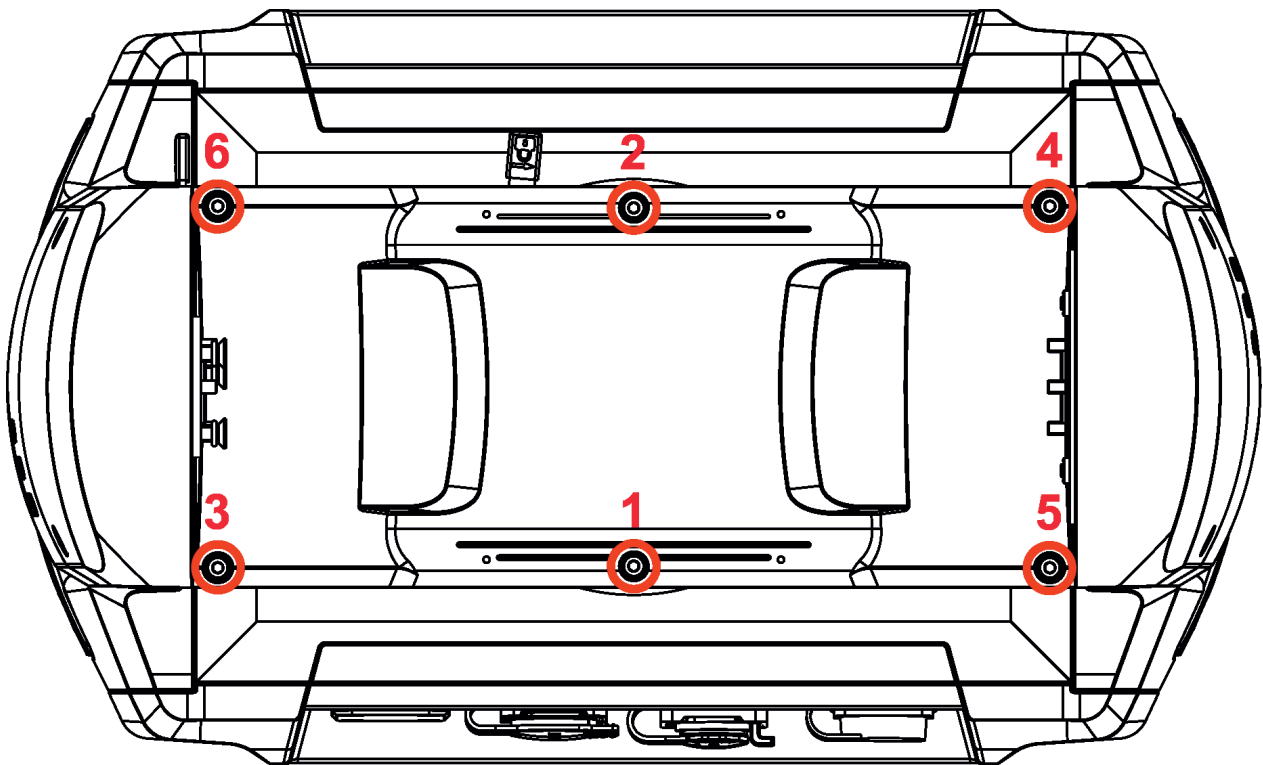
Step 1 - use tightening torque 0.5Nm (pre-tightening)

Step 2- use tightening torque 2.5Nm (final tightening)

Carefully check the gasket for signs of deformities or damages and if it is correctly placed before screwing head covers back. The gasket is part of the head cover.

Do not forget to connect grounding wire between chassis and head cover.

Yoke cover



Screws must be tightened
in the order 1-->6,

6 x hex socket head screw M4x8
Tightening torque*: 2.5 Nm

* Tighten all screws in two steps:

Step 1 - use tightening torque 0.5Nm (pre-tightening)

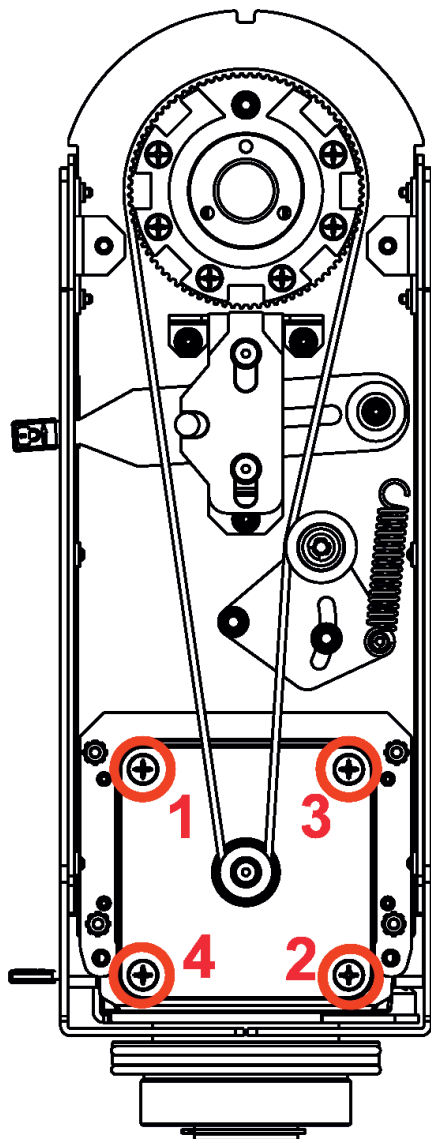
Step 2- use tightening torque 2.5Nm (final tightening)

Carefully check the gasket for signs of deformities or damages and if it is correctly placed before screwing the yoke cover back. The gasket is part of the yoke cover.

Do not forget to connect grounding wire between chassis and base cover.

18.2 Torques of Pan/Tilt motors screws

Tilt motor

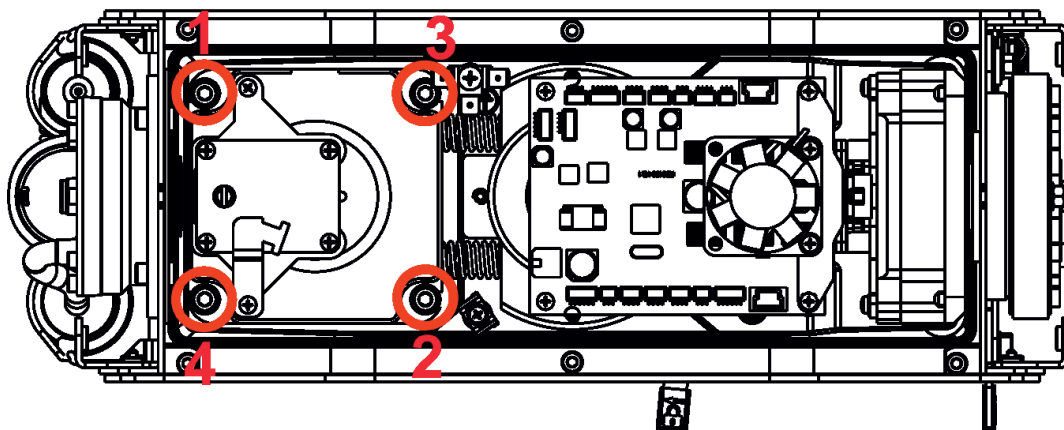


4 x flat head screw M5x16 (stainless)
with sealing ring 5x1.5
Tightening torque*: 2.5 Nm

Screws must be tightened in the order 1-->4,
Use LOXEAL 55.03 (nut locking threadsealing)
on each screw

* Tighten all screws in two steps:
Step 1 - use tightening torque 0.5Nm
(pre-tightening)
Step 2- use tightening torque 2.5Nm
(final tightening)

Pan motor



4 x hex socket head screw M5x20 (stainless) with
washer

Tightening torque*: 2.5 Nm

Screws must be tightened in the order 1-->4.
Use LOXEAL 55.03 (nut locking threadsealing)
on each screw

* Tighten all screws in two steps:
Step 1 - use tightening torque 0.5Nm (pre-tightening)
Step 2- use tightening torque 2.5Nm (final tightening)

18.3 Checking and replacing the silica gel desiccants

The silica gel desiccants are used for humidity indication in the fixture. Dry silica gel has an orange colour, if it is saturated with water, its colour changes to dark grey. If most of silica gel changed colour to dark grey, it has to be replaced.

***Unplug the fixture from mains before checking/replacing silica gel desiccant!
Do not check/replace silica gel desiccant in a damp environment (e.g. rain, snowfall)!***

***Spare desiccants from factory are packaged in a protective foil. Take desiccants out of the protective foil immediately before replacing them in the fixture!
Silica gel may become damp if it is exposed to wet air for longer time.***

Silica gel is not under warranty!

Desiccants are placed in the fixture on the following places:

fixture head - 2 x small box with silica gel

fixture arm (without tilt lock) - 2 x tube with silica gel

fixture base - 2 x small box with silica gel in the base cover

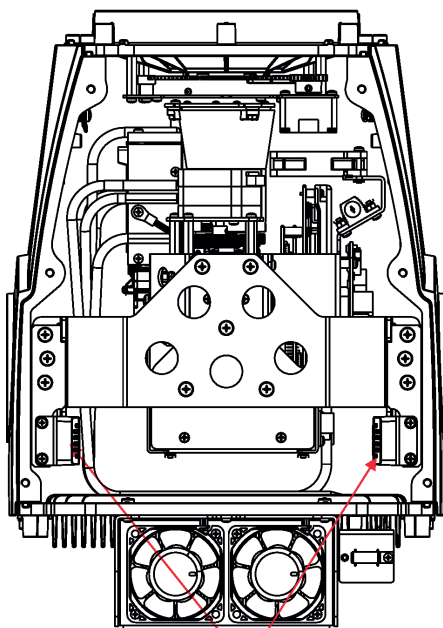
Total weight of silica gel fillings in the fixture is 106 g.

T

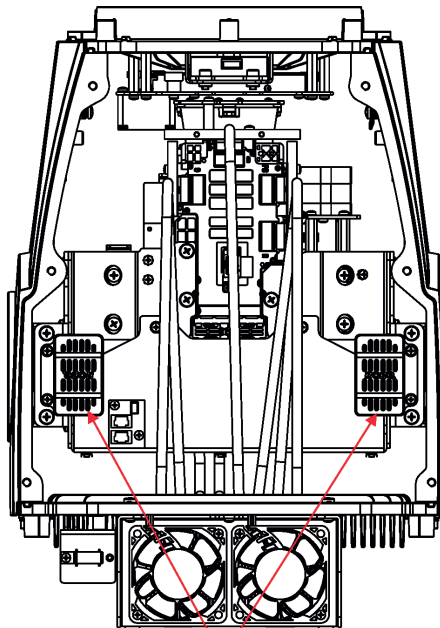
iPromotion PT

iPromotion LS

Fixture head

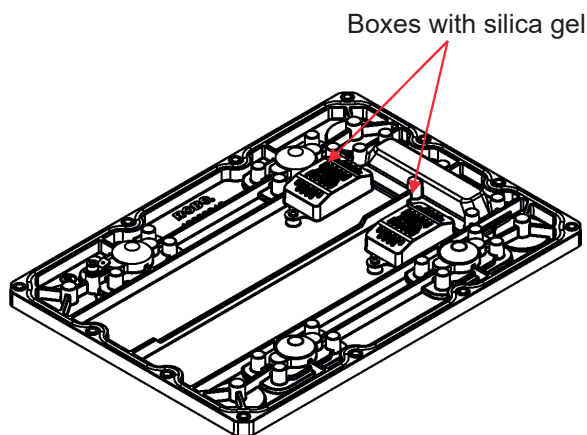
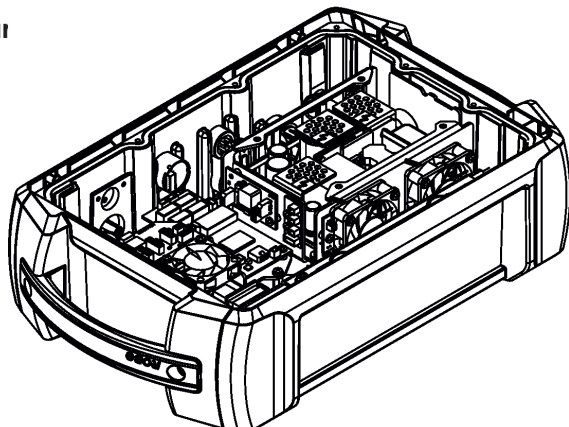


Boxes with silica gel



Boxes with silica gel

Fixtur

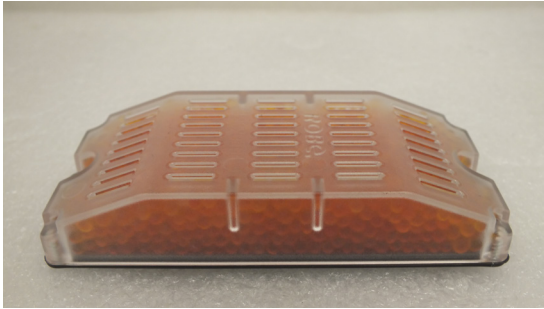


Boxes with silica gel

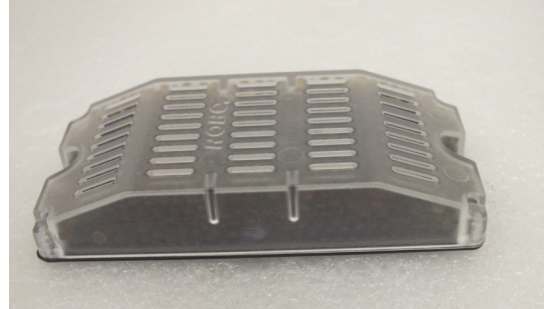
Each silica gel box is fastened in the fixture by means of two screws.

Example of dry and wet silica gel:

Dry silica gel



Silica gel saturated with water



The silica gel desiccants in the fixture head should be checked (and alternatively replaced) at removing head covers, e.g. at service intervention.

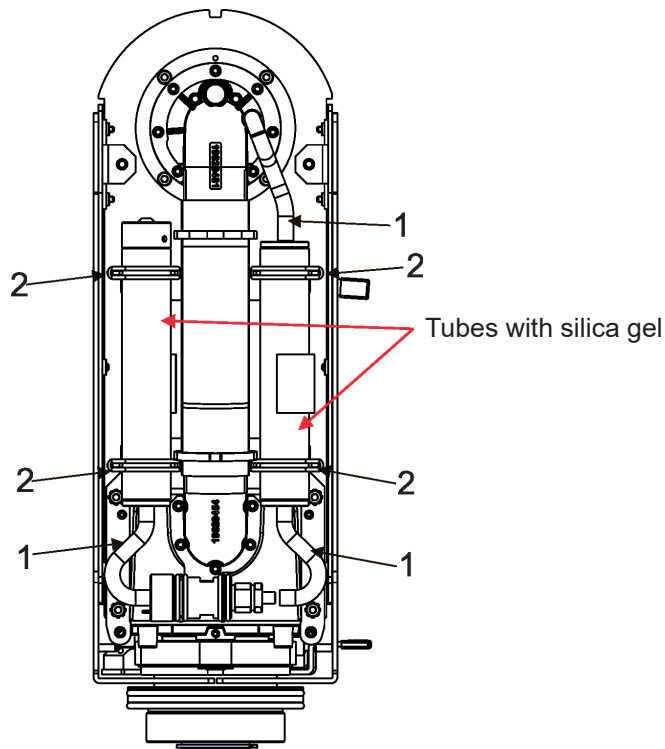
The silica gel desiccants in the fixture base should be checked (and alternatively replaced) at removing bottom cover e.g. at service intervention.

After checking/replacing boxes with silica gel do not forget to connect grounding wire between chassis and base cover (head cover) at placing the covers back.

After checking/replacing boxes with silica gel, run the procedure Pressure Test (Service -->Pressure Test).

If the pressure test is not OK, check if all screws of head covers (base cover) are correctly tightened.

Fixture arm



To change the tube with silica gel:

1. Disconnect the fixture from mains.
2. Remove the arm cover.
3. Disconnect the hosepipe(s) (1) from the tube with silica gel.
4. Stick out the rubber rings (2) and remove the tube with silica gel.
5. Insert the new tube with silica gel and secure it by means of the rubber rings (2).
6. Connect the hosepipe(s) (1) to the tube with silica gel.
7. Screw the arm cover back.
8. **After connecting the fixture to mains, reset the MAX WET chart (Information-->RAINS Status) and run the procedure Pressure Test (menu Service -->Pressure Test).**

If the pressure test failed, check if hose-pipes are correctly put on the tubes with silica gel.

Example of dry silica gel and silica gel saturated with water:

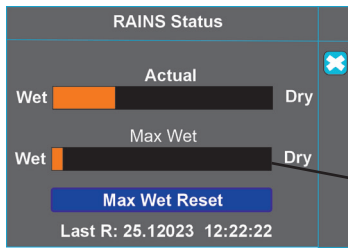


Silica gel saturated with water

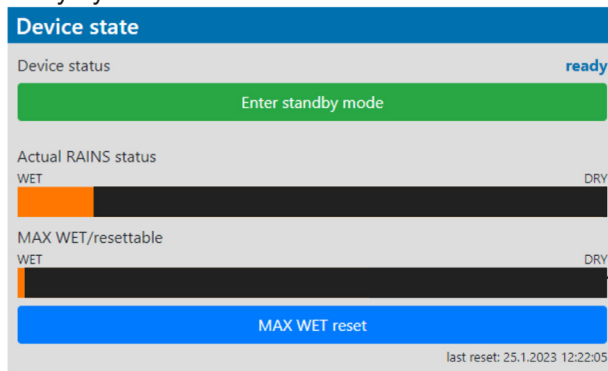
Dry silica gel

State of desiccants in the fixture arm can be checked:

- visually by unscrewing the cover of fixture arm
- via fixture display (menu Information, option RAINS Status):



- remotely by means of the Robe Ethernet Access Portal (REAP):



The chart MAX WET is decisive for replacing dessicants in the fixture arm. If the chart has changed to black colour, dessicants have to be replaced.

It is not necessary to replace silica gels dessicants in plastic boxes in the fixture head and base. These dessicants should be checked (and replaced if it is needed) at removing head or base covers, e.g. at some service intervention.

In case that silica gel in the fixture arm is fully saturated with water, the warning message "**Too Much Humidity in Device**" will appear on the fixture display and also in the Robe Ethernet Access Portal (Logs screen).

Example

Status messages
Too Much Humidity In Device

18.4 Disposing of the product

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


19. Robe Ethernet Access Portal (REAP)

Before running the REAP, your computer needs to be connected to the fixture (s) through the means of Ethernet wired network and a network switch. The computer needs to have configured network settings in order to be able to communicate with the fixture(s) through the network. The Ethernet network connection (Local LAN) typically needs to be set to 2.x.x.x address, the computer IP address has to be set to 2.x.x.x (for example 2.247.136.20) with netmask 255.0.0.0. On the fixture make sure to use the default 2.x.x.x IP address as provided. You do not need change any IP settings on the fixture, there is no need to set the fixture into Art-Net mode.

Type the IP address of the iPromotion to your web browser, e.g. <http://2.247.196.37>, enter the user name: **robe** and the password: **2479**, the **Status screen** of the iPromotion will appear.

The screenshot displays the Robe Ethernet Access Portal (REAP) Status screen. The top navigation bar includes links for Status, Personality, Logs, RAINS logs, Discovery, and Settings. The main content area is divided into several sections:

- Device status:**
 - DMX/RDM settings:** DMX address (221), DMX preset (Mode 1 (44 channels)), DMX input (wired), IP address (2.247.196.37), MAC address (00:0d:19:06:c4:25), RDM UID (52:53:01:35:00:25), RDM label (iPainte).
 - Device times:** Power on time (131h / 128h total / resettable, adaptive), LED on time total (48h), LED on time adaptive (40h).
 - Device temperatures:** LEDs (29°C / 65°C / 65°C), Driver (30°C / 80°C / 80°C), Base (33°C / 53°C / 53°C). Current / maximum / resettable.
 - Wireless state:** State (linked), Signal strength (0.0%).
 - Software versions:** Display System (1.2), Module M (1.2), Module L (1.0), Module O (1.1), Module F-A (1.1), Module F-B (1.1), Module G (1.0), Module C (1.0), Module P (1.1), Module DL (1.1).
 - Device state:** Device status (active), Enter standby mode button, Current RAINS status (WET / DRY), MAX WET/resettable (WET / DRY), MAX WET reset button, last reset: 14.4.2023 15:24:48.
- Status messages:** A section for displaying status messages.

This screen gives you a fast overview of fixture settings and environment in the fixture. The icon  allows you to change some values in a corresponding table.

Example for DMX/RDM settings:

The screenshot shows the Robe Ethernet Access Portal (REAP) Status screen with the DMX/RDM settings modal open. The modal contains the following fields:

- DMX address:** 221
- DMX preset:** Mode 1
- DMX input:** wired
- RDM label:** iPainte
- Save** button

The background shows the same Status screen as the previous image, but with the settings modal overlaid.

Note.

The background colour of the top row of the Status screen with the name and RDM label of the fixture denotes state of the fixture:

	fixture is ready for operation
	fixture does not communicate with computer
	fixture with error message(s)

The table "Device state" gives you information about fixture and environment in the fixture.

Device status: **ready** - all fixture resets successfully passed and the fixture is ready for operation.

initialization - fixture is waiting for fixture reset

heating - fixture is waiting for reaching operating temperature of the fixture inside (temperature in the fixture is below 0°C).

standby - the fixture is in standby mode

standby/heating - the fixture is in standby mode and inside of the fixture is heated

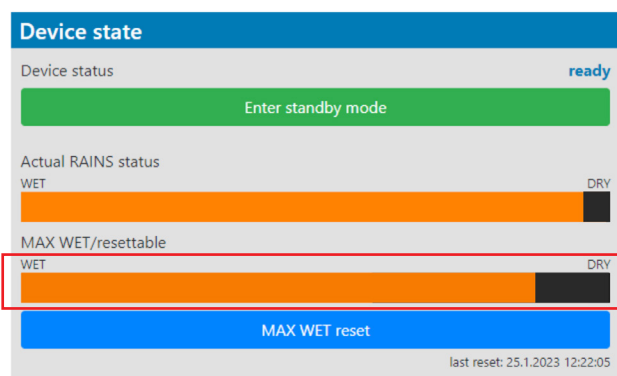
The bar chart **Actual RAINS status** informs you about current humidity in the fixture. The bar chart changes depending on humidity, temperature and pressure in the fixture. The bar chart depends on current conditions in the fixture and can be different at start of fixture operation, after 10 minutes of its operating, after closing fixture dimmer etc.

RAINS (Robe Automatic Ingress Neutralization System) manages humidity, temperature and pressure control using an active monitoring system to automatically remove any moisture detected within the fixture and provides permanent monitoring to ensure peak performance of the fixture.

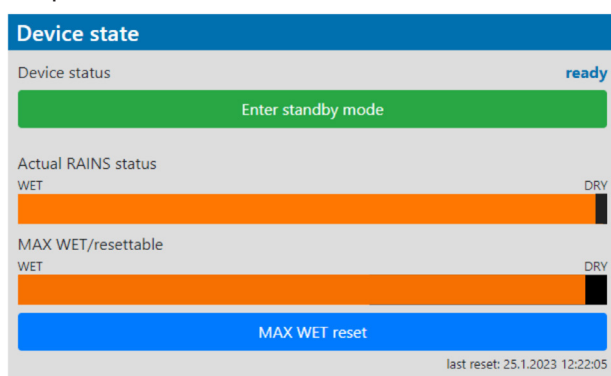
The bar chart **MAX WET/resettable** informs you about maximum humidity achieved in the fixture since the chart was last reset. The bar chart also informs you about saturation of silica gel desiccants in the fixture arm with water and is deciding indicator for their checking and replacement.

The blue button **MAX WET reset** resets the bar chart MAX WET/resettable. Date and time of last reset is displayed below this button.

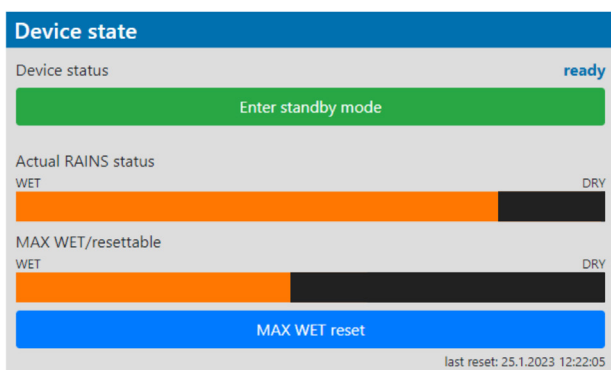
Silica gel desiccants
in the fixture arm



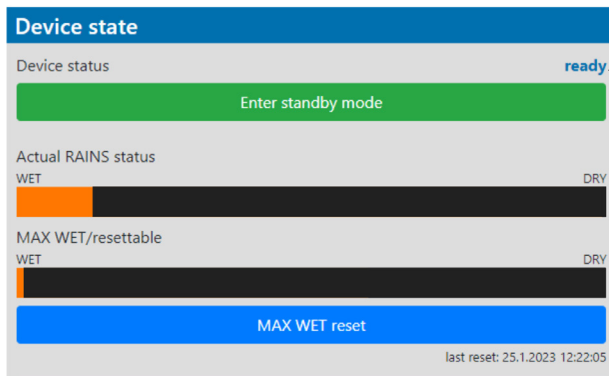
Examples of the table "Device state":



Dry desiccants



Desiccants partially saturated with water



Device status **ready** means, that all fixture resets are OK and the fixture is ready for operation. It does not assess state of desiccants or result of pressure test!

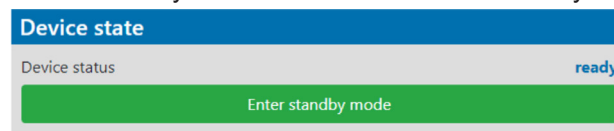
Desiccants fully saturated with water

Silica gel desiccants in the fixture arm should be replaced.

After replacing them, reset MAX WET resettable bar chart.

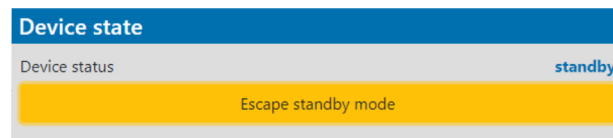
It is not necessary to replace silica gels desiccants in plastic boxes in the fixture head and base. These desiccants should be checked (and replaced if it is needed) at removing head or base covers, e.g. at gobo replacement or some service intervention.

The option **Enter standby mode** allows you to switch the fixture to Standby mode.



Note: Standby mode helps conserve power when a fixture is not in use, without fully powering it off. In the Standby mode, all fixture motors and fans are deactivated and light output is closed. For more information about Standby mode please see the chapter Standby mode.

The option **Escape standby mode** allows you to switch the fixture to standard operating mode.



The **Personality** screen allows you to set fixture behaviour and run a pressure test.

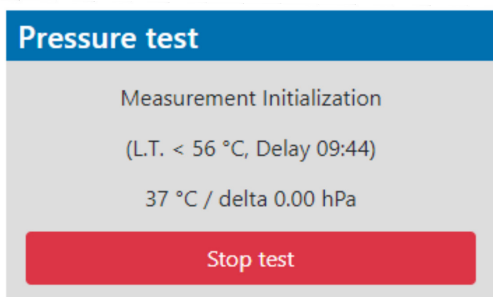
The icon  allows you to change values in a corresponding table.

Example for Pan/Tilt settings:

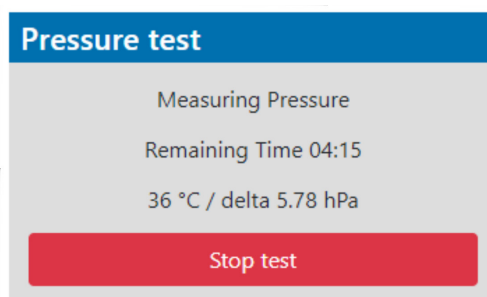
The table "Pressure test" with green button **Start test** allows you to run a procedure which checks IP65 integrity of the fixture. The fixture has to be connected to mains and the head temperature (at pressure sensor) cannot be higher than 45°C. The pressure test lasts about 7 minutes and can be repeated at earliest 2 minutes after last pressure test.

Examples of pressure test messages:

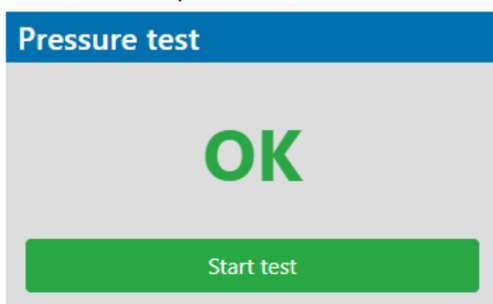
Pressure test is delayed due to fixture cooling



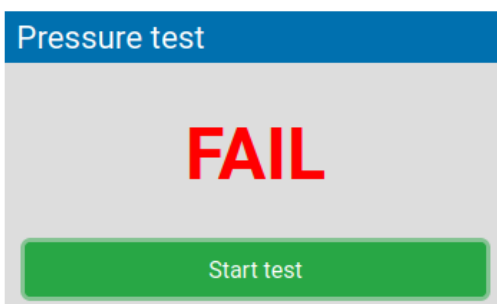
Pressure test is running



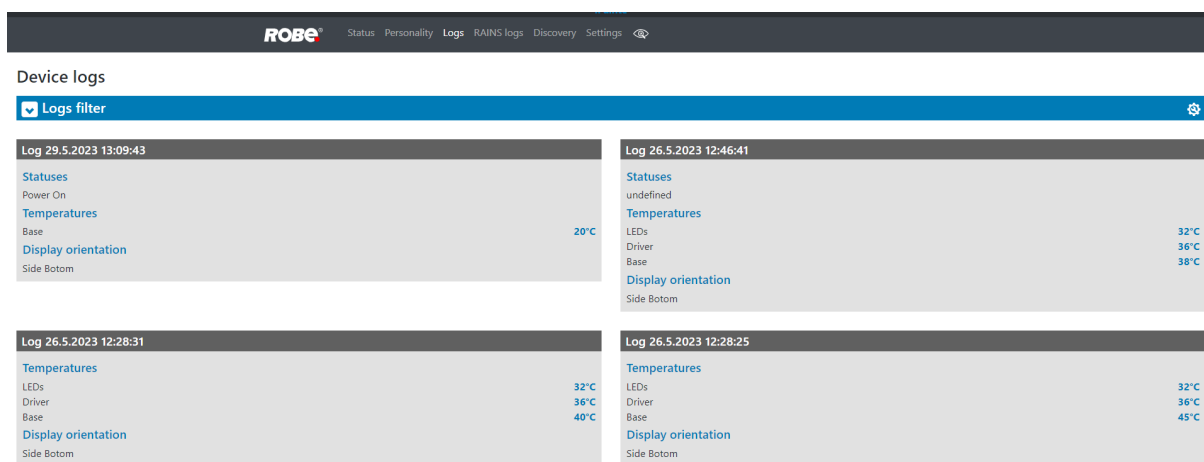
Pressure test passed



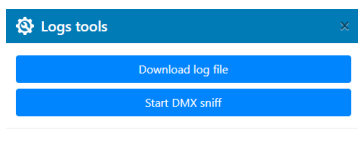
Pressure test failed



The **screen Logs** displays operating information of the fixture which have been saved.



The icon  offers you two options:



"Download log file" - the option allows you to download the log file to computer, name of the log file is: file-abcd.log, where abcd is a fixture ID (e.g. file-015e.log).

"Start DMX sniff" - the option starts saving coming DMX values to the file, the file name is DMX_sniffer.log).

The option **Logs filter** allows you to select desired group of recorded errors and recorded operating values.

ROBE®

Status

Personality

Logs

RAINS logs

Discovery

Settings

Device logs

Logs filter

☒ Mechanical errors

☐ all must pass

☒ System errors

☐ all must pass

☒ Statuses

☐ all must pass

☒ Temperatures

☐ all must pass

☒ Start date/time

☒ Sorting,filter pass

Apply filter

Clear filter

Log 29.5.2023 13:09:43

Statuses

Power On

Temperatures

Base20°C

Display orientation

Side Bottom

Log 26.5.2023 12:46:41

Statuses

undefined

Temperatures

LEDs32°C

Driver36°C

Base38°C

Display orientation

Side Bottom

Log 26.5.2023 12:28:31

Temperatures

LEDs32°C

Log 26.5.2023 12:28:25

Temperatures

LEDs32°C

Expanded menu **Logs filter**

Logs filter

☒ Mechanical errors

☐ all must pass

☐ Pan error

☐ Tilt error

☐ Static Gobo error

☐ Gobo Carousel error

☐ Gobo Rotation error

☐ Prism error

☐ Focus error

☐ Zoom error

☐ Iris error

☐ Fr. Shutter Rot. error

☐ Fr. Shutter 1 error

☐ Fr. Shutter 2 error

☐ Fr. Shutter 3 error

☐ Fr. Shutter 4 error

☐ Color error

☐ Prism Rot. error

☒ System errors

☐ all must pass

☐ Fans failure

☐ Vcc 5v failure

☐ Overheated

☐ Temperature sensor error

☐ Vcc 48v failure

☐ Eeprom error

☐ Recharge the battery

☐ Battery faulty, replace it

☐ Pan/tilt EMS cal. error

☐ Pan/tilt EMS error

☐ Internal error 1

☐ Internal error 2

☒ Statuses

☐ all must pass

☐ Power on

☐ Lamp off

☒ Temperatures

☐ all must pass

LEDs

-

°C

Driver

-

°C

Base

-

°C

☒ Start date/time

Date

dd.mm.yyyy

Time

--:--:--

☒ Sorting,filter pass

Sorting

descending

Filter pass

single groups

Apply filter

Clear filter

If the option "all must pass" is checked, only logs which contain all selected errors will be displayed.
Menu "Sorting filter pass" --> option "single groups" means that logs which contain at least one selected error will be displayed.
Menu "Sorting, filter pass" option "all groups" means that logs which contain all selected error will be displayed.

The **screen RAINS Logs** offers you a list of physical values recorded by sensors inside the head.

ROBE®

Status

Personality

Logs

RAINS logs

Discovery

Settings

RAINS logs

Sensors

Pressure measurements

Logs filter

Download log file

Date / Time	Temperature [°C]	Relative humidity [%]	Pressure [hPa]
29.5.2023 13:26:41	37	20.0	984
29.5.2023 13:25:09	39	20.5	984
29.5.2023 13:24:53	38	21.0	984
29.5.2023 13:24:41	37	21.0	984
29.5.2023 13:24:29	36	21.5	984
29.5.2023 13:18:50	35	21.0	984
29.5.2023 13:14:36	34	21.0	984
29.5.2023 13:12:38	33	21.5	984
29.5.2023 13:11:28	32	22.5	984
29.5.2023 13:10:46	31	23.5	984

You can select range of temperature, humidity and pressure in desired time interval.

ROBE® Status Personality Logs **RAINS logs** Discovery Settings

RAINS logs

Sensors Pressure measurements

Logs filter

Start date dd.mm.rrrr End date dd.mm.rrrr

Temperature °C

Relative humidity %

Pressure hPa

Apply filter Clear filter

Download log file

Date / Time	Temperature [°C]	Relative humidity [%]	Pressure [hPa]
29.5.2023 13:26:41	37	20.0	984
29.5.2023 13:25:09	39	20.5	984
29.5.2023 13:24:53	38	21.0	984

Tab Pressure measurements shows history of pressure tests.

ROBE® Status Personality Logs **Sensors** Discovery Settings

Sensors

Sensors logs Pressure measurements

Download measurements file

Date / Time	Temperature [°C]	Relative humidity [%]	Pressure [hPa]	Pressure difference [hPa]	Duration [m:s]	Result
11.1.2023 14:59:17	47	8.5	991	7.03	03:26	OK
10.1.2023 09:45:47	27	11.0	988	7.28	02:32	OK

If you have two and more iPromotions, the **Discovery** screen allows you to show all connected iPromotions in network.

Click on the blue button Discover and fixtures connected in the network will be displayed.

ROBE® Status Personality Logs **Discovery** Settings

Discovery

☒ Move devices with warning to top

Columns selection (max. 7 items)

☒ DMX address ☒ DMX preset ☒ RDM UID ☒ IP address ☐ Head temperature [°C] ☐ Relative humidity [%] ☒ RAINS (max wet) ☐ Last pressure test ☒ Device status

Discover (5)

Apply selection

Device	DMX address	DMX preset	RDM UID	IP address	RAINS (max wet)	Device status
iPainte	221	Mode 1 (44 channels)	52:53:01:35:00:25	2.247.196.37	<div style="width: 100%; height: 10px; background-color: orange;"></div>	active
iForte - iForte 1	1	Mode 1 (54 channels)	52:53:01:2c:00:13	2.247.136.19	<div style="width: 100%; height: 10px; background-color: orange;"></div>	active
iForte - iForte 3	1	Mode 1 (54 channels)	52:53:01:2c:00:1a	2.247.136.26	<div style="width: 100%; height: 10px; background-color: orange;"></div>	active
iSlider	1	Mode 1 (49 channels)	52:53:01:1c:00:0e	2.246.236.14	<div style="width: 100%; height: 10px; background-color: orange;"></div>	active
iSlider	1	Mode 1 (49 channels)	52:53:01:1c:03:d8	2.246.239.216	<div style="width: 100%; height: 10px; background-color: orange;"></div>	active

Hledat

6°C Slunečno 13:33 29.05.2022


The background colour in the device row denotes state of the fixture:

- indicates "server fixture"(fixture of which IP address you have written to your WEB browser).
- indicates fixture ready for operation.
- indicates fixture which does not communicate with computer or "server fixture".
- indicates fixture with error messages.

Example: Fixture which do not communicate with computer are indicated by yellow background.

Device	DMX address	DMX preset	RDM UID	IP address	RAINS (max wet)	Device status
iPainte	221	Mode 1 (44 channels)	52:53:01:35:00:25	2.247.196.37	<div><div></div></div>	disconnected
iSlider	1	Mode 1 (49 channels)	52:53:01:1c:00:0e	2.246.236.14	<div><div></div></div>	active
iSlider	1	Mode 1 (49 channels)	52:53:01:1c:03:d8	2.246.239.216	<div><div></div></div>	active
iForte - iForte 3	1	Mode 1 (54 channels)	52:53:01:2c:00:1a	2.247.136.26	<div><div></div></div>	active
iForte - iForte 1	1	Mode 1 (54 channels)	52:53:01:2c:00:13	2.247.136.19	<div><div></div></div>	active

If the option Move devices with warning to top is checked, fixtures with some error will be displayed on the top of fixture list.

The option Columns selection allows you to check desired items which will be displayed in columns. Max. 6 items can be selected. After checking desired items, click on the blue button Apply selection to activate selection. Icons  allows you to order values in the column in descending or ascending order.

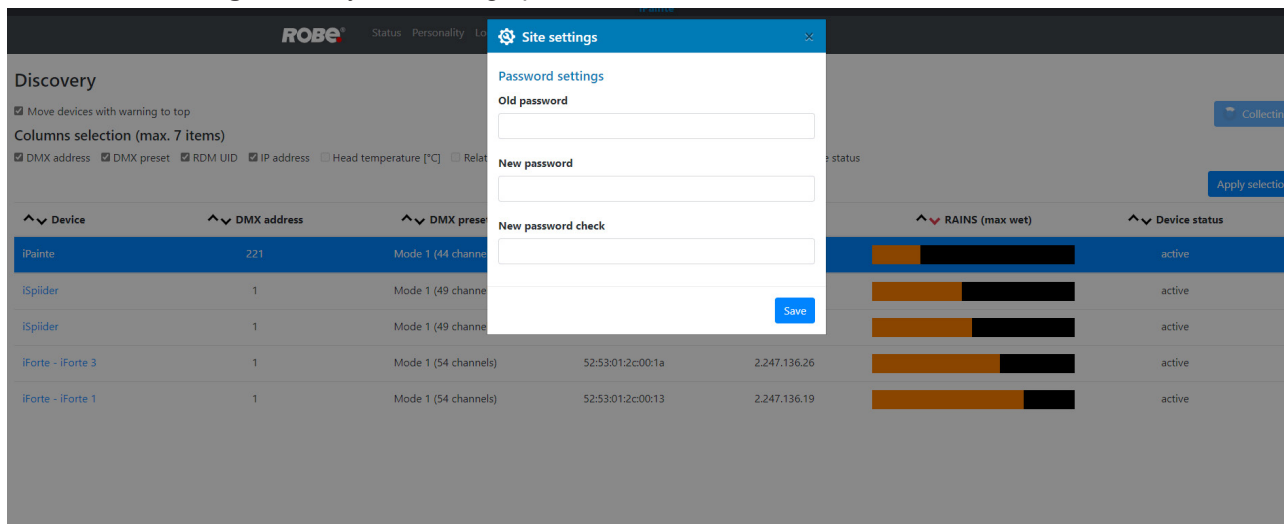
Note: The values of the fixture in the first blue row ("server fixture") will not be included into ordering.


Example.

Device	DMX address	DMX preset	RDM UID	IP address	RAINS (max wet)	Device status
iPainte	221	Mode 1 (44 channels)	52:53:01:35:00:25	2.247.196.37	<div><div></div></div>	active
iSlider	1	Mode 1 (49 channels)	52:53:01:1c:00:0e	2.246.236.14	<div><div></div></div>	active
iSlider	1	Mode 1 (49 channels)	52:53:01:1c:03:d8	2.246.239.216	<div><div></div></div>	active
iForte - iForte 3	1	Mode 1 (54 channels)	52:53:01:2c:00:1a	2.247.136.26	<div><div></div></div>	active
iForte - iForte 1	1	Mode 1 (54 channels)	52:53:01:2c:00:13	2.247.136.19	<div><div></div></div>	active

Item **ready** in the column Device status does not assess state of desiccants or result of pressure test!

The **screen Settings** allows you to change password to REAP.



The icon  serves for identification of the fixture in a group of fixtures. After clicking on the icon, the fixture's head will start to move.

20. Technical Specifications

Electrical

Power supply: electronic auto-ranging
Input voltage range: 100-240V, 50-60Hz
Fuse: T 3.15A/250V ~
Max. power consumption: 160W (power factor 0.97)

Light engine

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

Projector version:

Landscape (iPromotion LS)
Portrait iPromotion PT)

Digital gobo/image/video projection output

Aspect ratio: 16:9 (iPromotion LS), 19:6 (iPromotion PT)
Beam angle: 17°
Throw ratio: 3.5:1
Contrast ratio: 500:1
Display colours: 16.7 million colours
Projector resolution: 1920 x 1080 (iPromotion LS), 1080 x 1920 (iPromotion PT)
Optional wide lens: 26°
Throw ratio wide lens: 2.3:1

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 keystoneing
Smooth dimmer
Shutter and strobe effects
RTSP support
Video bitrate used in original content: 2000-12000 kbit/s (video codec H264, 25fps, resolution 1024x576)
Supported Image Format: JPG (up to 4096 x 4096 pixels), non progressive/non interpolated
Supported Video Format: H264
Recommended refresh rate: 1280x720@30Hz*

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

Free space available for custom content

29 GB

Focus

Motorized focus

Gray box correction

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

Strobe

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

Dimmer

Smooth dimmer from 0 - 100 %

Pan/Tilt

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

Control

Upload and projection of custom artwork, photographs and videos
Setting & Addressing: two-row LCD display & 4 control buttons
Protocols: USITT DMX-512-A, RDM, ArtNet
Optional wireless external module available: CRMX™ technology from Lumen Radio
DMX modes: 2 (26 and 34 control channels)
Ethernet port: Art-Net, ready for ACN
Recommended and supported filesystem on USB memory devices: FAT16, FAT 32
ADM™ - Automatic Distance Meter (on request)
REAP™ - Robe Ethernet Access Portal
RAINS™ - Robe Automatic Ingress Neutralization System

Wireless DMX/RDM module type RW 001

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

Max. number of fixtures in Ethernet IN/Out line

8

Connection

DMX data in/out: 2 x IP65 Locking 5-pin XLR connector Seetronic
Ethernet: 2 x IP65 RJ45 connector Seetronic
Power: IP65 power connector Seetronic
USB: 1x USB C

Rigging

Mounting points: 2 pairs of 1/4-turn locks
Mounting horizontally or vertically via two Omega holders

Temperatures

Minimum/Maximum ambient operating temperature : -30°C/+40°C
Maximum housing temperature : 65° C

Distances

Min. distance from flammable surfaces: 0.5 m
Min. distance to lit object: 1 m

Total heat dissipation

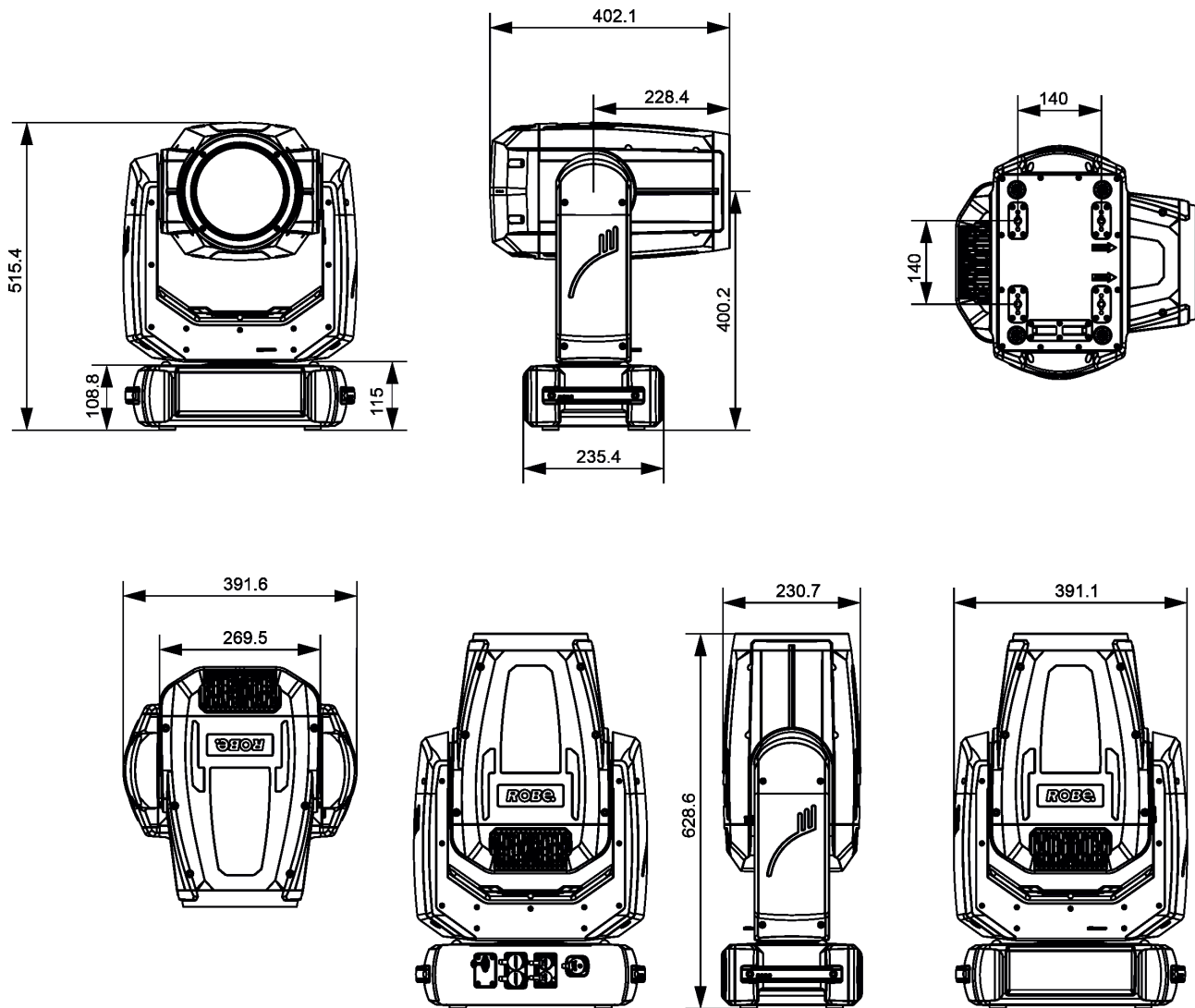
max. 360 BTU/h (calculated)

Ingress protection rating

IP65

Weight

21.3 kg (46.9 lbs)

Dimensions (mm)**Accessories**

- 1 x Omega adaptor CL-regular 2 pcs in box (P/N 10980033)
- 1 x Power cable (open ended) including powerCON TRUE1 In connector (IP65)

Optional accessories

- Safety wire 36 kg (P/N 99011963)
- Ceiling mounting kit for iProMotion black (P/N 10981015)

21. ChangeLog

This section summarizes changes in the user manual.

Version of the manual	Date of issue	Description of changes
1.1	06/07/2024	Weight of silica gels added
1.2	07/08/2024	Description of keystoneing changed
1.3	22/08/2024	Pan/Tilt reset calibration added
1.4	28/08/2024	Error messages changed

August 28, 2024

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All Specifications subject to change without notice

Made in CZECH REPUBLIC by ROBE LIGHTING s.r.o. Palackeho 416/20 CZ 75701 Valasske Mezirici



DMX protocol

Robin iProMotion™ LS / iPromotion™ PT- DMX protocol				
Version 1.2				
Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
1	1		Pan	
		0 - 255	Pan movement by 540° (128=default)	proportional
2	2		Pan fine	
		0 - 255	Fine control of pan movement (0=default)	proportional
3	3		Tilt	
		0 - 255	Tilt movement by 260° (128=default)	proportional
4	4		Tilt fine	
		0 - 255	Fine control of tilt movement (0=default)	proportional
5	5		Pan/Tilt speed , Pan/Tilt time	
		0	Standard mode (0=default)	step
		1	Max. Speed Mode	step
			Pan/Tilt speed mode	
		2 - 255	Speed from max. to min.	proportional
			Pan/Tilt time mode	
		2 - 255	Time from 0.2 s to 25.5 sec.	proportional
6	6		Special functions	
			<i>To activate following functions, stop in DMX value for at least 3 s and shutter must be closed at least 3 sec. („Shutter,Strobe“ channel 24/32 must be at range: 0-31 DMX). Corresponding menu items are temporarily overridden (unless otherwise stated).</i>	
		0 -5	Reserved (0=default)	
			Standby mode: On (fixture effects are deactivated, light output is closed)	step
		6-7		
		8-9	Standby mode: Off	step
		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

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		115-119	Fans mode: High	step
		120-121	Colour mixing mode: CMY	step
		122-123	Colour mixing mode: RGB	step
		124-125	Fans mode: Quiet	step
		126-127	Pressure test: On (fixture does not respond to DMX during the test except values 128-129 (Pressure test Off))	step
		128-129	Pressure test: Off	step
			<i>To activate following functions, stop in DMX value for at least 3 seconds.</i>	
		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 -229	Reserved	
			<i>Adjusted vertical and horizontal keystones will be saved when you leave the following DMX values: 230, 231, 232 (saving of keystones applies for both types of fixtures (with ADM and without ADM))</i>	
		230	Start of measuring projection plane 1 (fixture with ADM only)	step
		231	Start of measuring projection plane 2 (fixture with ADM only)	step
		232	Start of measuring projection plane 3 (fixture with ADM only)	step
		233-234	Reserved	
		235	Load projection plane 1	step
		236	load projection plane 2	step
		237	Load projection plane 3	step
		238-239	Reserved	
		240 -244	Synchronization of the Local NAS content with NAS	step
			<i>The following RoboSpot related commands are only applicable when the RoboSpot is connected:</i>	
		245 - 246	RoboSpot enabled	step
		247 - 248	RoboSpot disabled - except handle faders and pan/tilt	step
		249 - 250	RoboSpot fully disabled	step
		251 - 255	Reserved	
7	7		Digital zoom	
		0-127	Zoom from min. -->real size	proportional
		128	Real size (128=default)	step
		129-255	Zoom from real size -->max.	proportional
8	8		Focus	
		0 - 255	Continuous adjustment from far to near (128=default)	proportional
			Fixture equipped with ADM: Focus has to be set at 0 DMX	
9	9		Vertical keystoneing	
		0	Vertical Keystoneing Off, Corner keystones On (0=default)	step
		1-255	Vertical keystoneing On, Corner keystones Off	proportional
10	10		Horizontal keystoneing	
		0	Horizontal Keystoneing Off, Corner keystones On (0=default)	step
		1-255	Horizontal keystoneing On, Corner keystones Off	proportional
11	11		Keystoneing orientation	
		0	Reserved	

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		1-127	Orientation 0°-127° counterclockwise	proportional
		128	Center 128° (128=default)	step
		129-255	Orientation 129°-360° clockwise	proportional
			<i>To activate the corner Keystones below, channels Vertical keystoneing and Horizontal keystoneing have to be set at 0 DMX</i>	
*	12		KeyStone Top Left X	
		0	Keystone Off (0=default)	step
		1-255	Movement of the top left corner X coordinate to center	proportional
*	13		KeyStone Top Left Y	
		0	Keystone Off (0=default)	step
		1-255	Movement of the top left corner Y coordinate to center	proportional
*	14		KeyStone Top Right X	
		0	Keystone Off (0=default)	step
		1-255	Movement of the top right corner X coordinate to center	proportional
*	15		KeyStone Top Right Y	
		0	Keystone Off (0=default)	step
		1-255	Movement of the top right corner Y coordinate to center	proportional
*	16		KeyStoneBottom Right X	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom right corner X coordinate to center	proportional
*	17		KeyStone Bottom Right Y	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom right corner Y coordinate to center	proportional
*	18		KeyStone Bottom Left X	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom left corner X coordinate to center	proportional
*	19		KeyStone Bottom Left Y	
		0	Keystone Off (0=default)	step
		1-255	Movement of the bottom left corner Y coordinate to center	proportional
12	20		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
13	21		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
14	22		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
15	23		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

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		176-214	Red ---> Magenta	proportional
		215	Magenta	step
		216-246	Magenta ---> Blue	proportional
		247	Blue	step
		248-255	Reserved	
16	24		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

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		42	Diagonal shade, yellow -->white	step
		43	RGBW shades	step
		44	CMYW shades	step
		45	RGBY shades	step
		46	RMBG shades	step
		47-49	Reserved	
			Dynamic effects	
		50	Colour changing black -->white, slowly	step
		51	Colour changing black -->white, fast	step
		52	Colour changing red -->white, slowly	step
		53	Colour changing red -->white, fast	step
		54	Colour changing green -->white, slowly	step
		55	Colour changing green -->white, fast	step
		56	Colour changing blue -->white, slowly	step
		57	Colour changing blue -->white, fast	step
		58	Colour changing yellow -->white, slowly	step
		59	Colour changing yellow -->white, fast	step
		60	Colour changing magenta -->white, slowly	step
		61	Colour changing magenta -->white, fast	step
		62	Colour changing cyan -->white, slowly	step
		63	Colour changing cyan -->white, fast	step
		64	Colour changing (slow) red -->green -->blue -->yellow	step
		65	Colour changing (fast) red -->green -->blue -->yellow	step
		66	Colour changing (fastest) red -->green -->blue -->yellow	step
		67-69	Reserved	
		70	Horizontal linear shade, white-->black and vice versa, slowly	step
		71	Horizontal linear shade, white-->black and vice versa,fast	step
		72	Vertical linear shade, white-->black and vice versa, slowly	step
		73	Vertical linear shade, white-->black and vice versa, fast	step
		74	Diagonal shade, black -->white and vice versa, slowly	step
		75	Diagonal shade, black -->white and vice versa, fast	step
		76	Shade black -->white, slow rotation, clockwise	step
		77	Shade black -->white, fast rotation, clockwise	step
		78	Shade black -->white, slow rotation, anticlockwise	step
		79	Shade black -->white, fast rotation, anticlockwise	step
		80	Horizontal linear shade, white-->red and vice versa, slowly	step
		81	Horizontal linear shade, white-->red and vice versa,fast	step
		82	Vertical linear shade, white-->red and vice versa, slowly	step
		83	Vertical linear shade, white-->red and vice versa, fast	step
		84	Diagonal shade, red -->white and vice versa, slowly	step
		85	Diagonal shade, red -->white and vice versa, fast	step
		86	Shade red -->white, slow rotation, clockwise	step
		87	Shade red -->white, fast rotation, clockwise	step
		88	Shade red -->white, slow rotation, anticlockwise	step
		89	Shade red -->white, fast rotation, anticlockwise	step
		90	Horizontal linear shade, white-->green and vice versa, slowly	step
		91	Horizontal linear shade, white-->green and vice versa,fast	step
		92	Vertical linear shade, white-->green and vice versa, slowly	step
		93	Vertical linear shade, white-->green and vice versa, fast	step

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		94	Diagonal shade, green -->white and vice versa, slowly	step
		95	Diagonal shade, green -->white and vice versa, fast	step
		96	Shade green -->white, slow rotation, clockwise	step
		97	Shade green -->white, fast rotation, clockwise	step
		98	Shade green -->white, slow rotation, anticlockwise	step
		99	Shade green -->white, fast rotation, anticlockwise	step
		100	Horizontal linear shade, white-->blue and vice versa, slowly	step
		101	Horizontal linear shade, white-->blue and vice versa,fast	step
		102	Vertical linear shade, white-->blue and vice versa, slowly	step
		103	Vertical linear shade, white-->blue and vice versa, fast	step
		104	Diagonal shade, blue -->white and vice versa, slowly	step
		105	Diagonal shade, blue -->white and vice versa, fast	step
		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

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		143	RGBW shades, fast rotation ,anticlockwise	step
		144	Random colours slowly, black between colours	step
		145	Random colours fast, black between colours	step
		146	Random colours slowly, white between colours	step
		147	Random colours fast, white between colours	step
		148	Random colours slowly	step
		149	Random colours fast	step
		150	Horizontal black shade -->random colour, slowly	step
		151	Horizontal black shade -->random colour, fast	step
		152	Vertical black shade -->random colour, slowly	step
		153	Vertical black shade -->random colour, fast	step
		154	Diagonal black shade -->random colour, slowly	step
		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	
17	25		Digital gobo wheel selection	
		0-31	Factory Digital gobo wheel (0=default)	step
		32-63	Internal Custom Digital gobo wheel	step
		64-95	External Custom Digital gobo wheel (USB memory stick)	step
		96-127	NAS content	step
		128-159	Enable RTSP (select stream on the channel 17/25, DMX 1-20)	step
		160-255	Reserved	
18	26		Digital gobo wheel	
		0	Open (0=default)	
			<i>If the RTSP is enabled (channel 16/24, DMX range of 128-159):</i>	
		1-20	Running of Stream 1,2.....19,20	proportional
			<i>DMX range of 0-31), the following distribution of gobos/pictures/animations goes for Factory Digital gobo wheel</i>	
		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

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		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
			<i>To activate following two functions, set a transition effect (1-48 DMX) at Effect Wheel - channel 21/29</i>	
		251	Gobos presentation (gobos selected randomly)	step
		252	Gobos presentation (gobos selected in alphabetical order)	step
		253-254	Reserved	
		255	White	step
19	27		Video speed control	
		0	Optimal speed (0=default)	step
		1	Pause	step
		2-127	Reserved	
		128-255	Speed from original to max. (4x original speed)	proportional
20	28		Digital gobo indexing and rotation	
		0 - 127	Gobo indexing (0=default)	proportional
		128-190	Forwards gobo rotation from fast to slow	proportional
		191-192	No rotation	step
		193- 255	Backwards gobo rotation from slow to fast	proportional
21	29		Digital gobo gobo indexing and rotation fine	
		0-255	Fine indexing (rotation)	proportional
22	30		Effect wheel	
			<i>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.</i>	
		0	Open position-hole (0=default)	step
			Transition 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

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		25	Iris transition out--> in (Diffusin edge)	1
		26	Iris transition in--> out (Diffusion edge)	1
		27	Iris transition 3 out--> in (more diffusion edge)	1
		28	Iris transition 3 in--> out (more diffusion edge)	1
		29	Moving transition from left --> right	1
		30	Moving transition from left --> right	1
		31	Moving transition up --> down	1
		32	Moving transition from down --> up	1
		33	Drop transition	1
		34	Simple transition	1
		35	Pixel transition	1
		36	Transition via blending	1
		37	Transition with white output	1
		38	Crossing transition	1
		39	Picture in picture transition	1
		40	Direct transition	1
		41	Transition with vertical rotation	1
		42	Transition with horizontal rotation	1
		43	Transition with diagonal rotation	1
		44	Transition with diagonal rotation-opposite direction	1
		45	Zoom out transition	1
		46	Zoom in transition	1
		47	Zoom transition in horizontal direction	1
		48	Zoom transition in vertical direction	1
		49-79	Reserved	
			Effects applied at one gobo (picture)	
		80	Kaleidoscope 1	3
		81	Kaleidoscope 2	3
		82	Kaleidoscope 3	3
		83	Kaleidoscope 4	3
		84	Kaleidoscope 5	3
		85	Sunflower Kaleidoscope (coarse)	3
		86	Sunflower Kaleidoscope (soft)	3
		87	Sunflower kaleidoscope (slow)	4
		88	Sunflower kaleidoscope (faster)	4
		89	Sunflower kaleidoscope (fastest)	4
		90-99	Reserved	
		100	Circle Iris in/out	2
		101	Circle Iris in/out (diffusion edge)	2
		102	Vertical Ellipse Iris in/out	2
		103	Horizontal Ellipse Iris in/out	2
		104	Colour -> Black-and-white -> Colour	2
		105	Colour -> Black-and-white inverted -> Colour	2
		106	Black-and-white ->Black-and-white inverted -> Black-and-white	2
		107	Colour -> Colour inverted -> Colour	2
		108	Pixalation	2
		109-179	Reserved	
			Manual effects	
		180	Circular Iris	5

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
		181	Elliptical Iris -vertical	5
		182	Elliptical Iris-horizontal	5
		183	Black mask	6
		184	Inverse black mask	6
		185	White mask	6
		186	Inverse white mask	6
		187	Gobo/video movement in horizontal (X) axis	7
		188	Gobo/video movement in vertical (Y) axis	7
		189	Reserved	
		190	Crossfade effect	8
		191	Addition effect	8
		192	Substraction effect	8
		193	Multiplication effect	8
		194	Minimum effect	8
		195	Maximum effect	8
		196-255	Reserved	
23	31		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

DMX protocol

Mode/Total channels		DMX Value	Function	Type of control
1/26	2/34			
			Type of control 8	
		0-255	Continuous effect changing	proportional
24	32		Grey box correction	
		0	Open (0=default)	step
		1 - 255	From max.diameter to min.diameter	proportional
25	33		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
26	34		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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