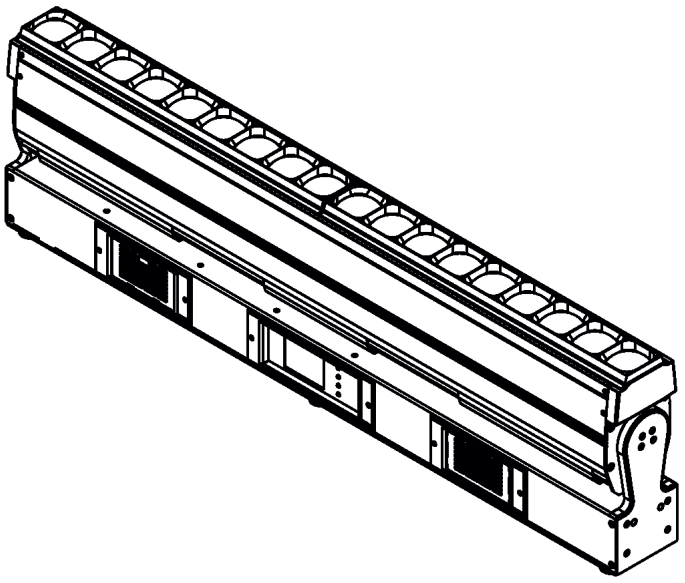
Tetra2™ RGBA



ROBE Innovative Technology

QR code for user manual

USER MANUAL

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Version 1.4

Robin Tetra 2 RGBA

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

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

1. Safety instructions

Every person involved with installation and maintenance of this device have to:
- be qualified
- follow the instructions of this manual

CAUTION!
Disconnect the fixture from mains before you remove 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!

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

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

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

Make sure that the available voltage is not higher than stated on the bottom side of the fixture.

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

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

This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

The electric connection, repairs and servicing must be carried out by a qualified employee.

Do not connect this device to a dimmer pack.
For replacement use fuses of same type and rating only.

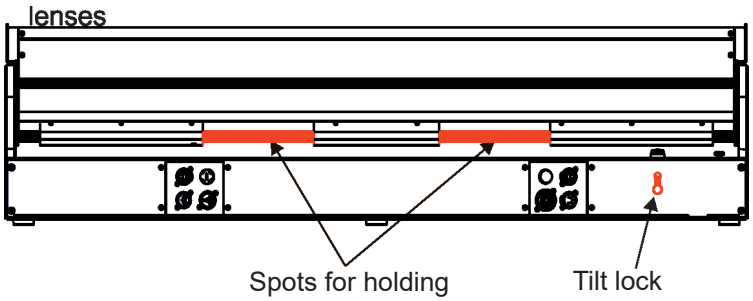
The fixture becomes very hot during operation. Do not touch the device's housing bare hands during its operation. Allow the fixture to cool approximately 30 minutes prior to manipulate with it.

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

CAUTION! Risk group 2, RG-2

Immunity of the equipment is designed for electromagnetic environments E1, E2, E3 according to the standard EN55103-2 ed.2 Electromagnetic compatibility. Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2: Immunity.
The installation company should check levels of possible interferences above the tested levels E1,E2,E3 given by this standard (e.g. transmitters in surrounding area) before installing the equipment.
Emission of the equipment complies with the standard EN55032 Electromagnetic compatibility of multimedia equipment – Emission Requirements according to class B.

Prior to manipulate the fixture, lock its moving head in a vertical position by means of the tilt lock.
Hold the fixture by the spots between fan covers.
Do not hold the fixture by fan covers!



2. Operating determination

This device is a moving line for creating decorative effects and was designed for indoor use only.

This device is for professional use only. It is not for household use.

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

Avoid brute force when installing or operating the device.

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

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

Always secure the fixture with an appropriate safety wire.

The maximum ambient temperature 40°C must never be exceeded.

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

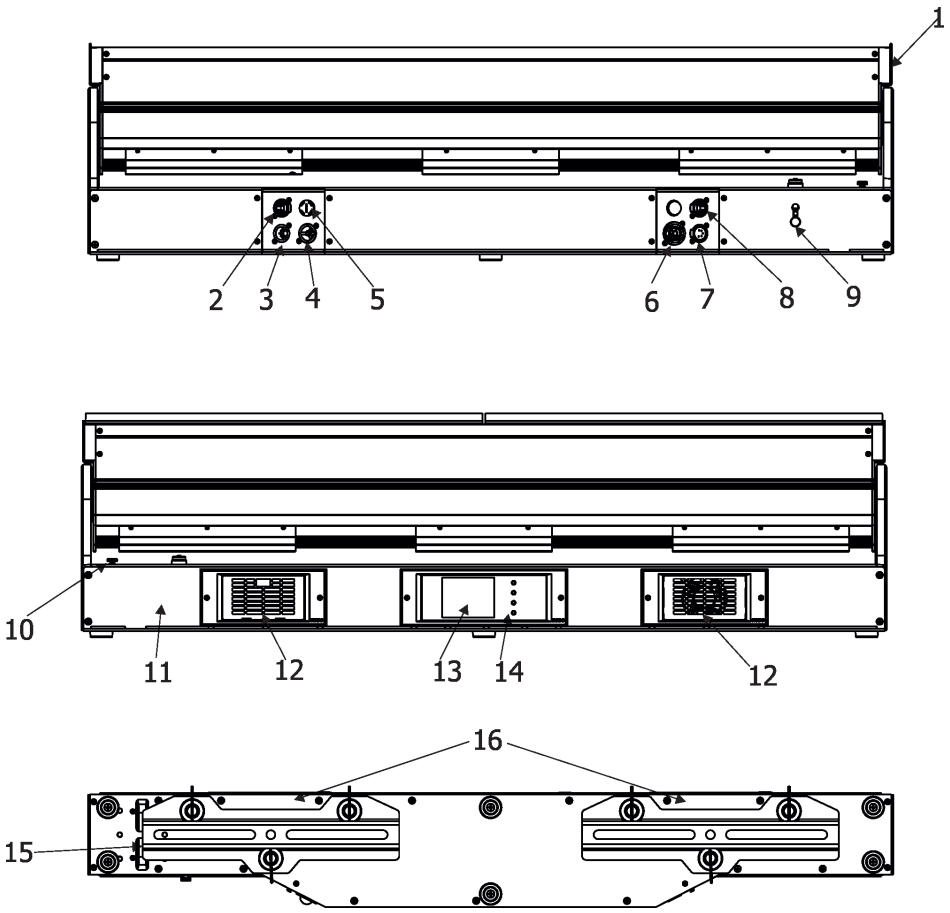
Operate the device only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the device!

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

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

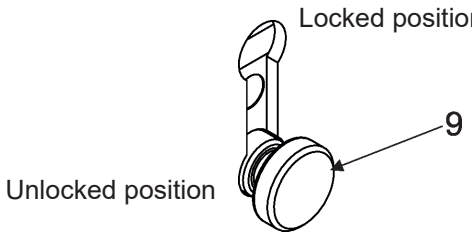
If this device will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short-circuit, burns, electric shock etc.

3. Fixture exterior view



1 - Moving head with lens array
2 - Ethernet
3 - 5-pin DMX IN
4 - Power IN
5 - Fuse holder
6 - Power OUT
7 - 5-pin DMX OUT
8 - Ethernet
9 - Tilt lock
10 - Side lock
11 - Base
12- Cooling openings
13- QVGA touch screen
14- Control buttons
15- Attachment point for safety wire
16- Mounting adaptors

The moving head has to be locked for transportation or inserting into case - the moving head has to be oriented vertically (optics up) and the tilt lock button (9) has to be in the locked position. To unlock the head, press and move the lock button to the unlocked position before operating the fixture.



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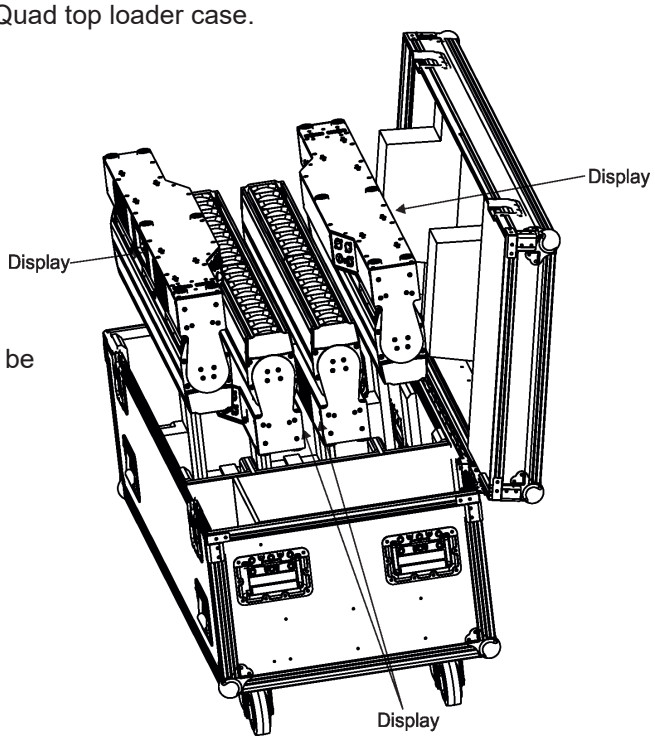
Position of fixtures in the Quad top loader case.



All fixtures heads have to be secured by means of the tilt locks.

4. Installation

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

4.1 Connection to the mains

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

The Robin Tetra 2 is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.

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

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

This device falls under class one and must be earthed (grounded)!
To apply power, first check that the tilt locks is released.
Design of the ROBIN Tetra 2 allows to connect several fixtures to AC mains power in one interconnected daisy chain using power input and throughput connectors. Needed daisy chain cords are stated in the chapter "Technical specifications "
The max. number of connected fixtures depends on the AC mains power voltage:

CE:	ETL:
5 fixtures at power supply= 230V	4 fixtures at power supply= 230V
5 fixtures at power supply= 208V	4 fixtures at power supply= 208V
3 fixtures at power supply= 120V	2 fixture at power supply= 120V

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

4.2 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 30 minutes before handling.

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.

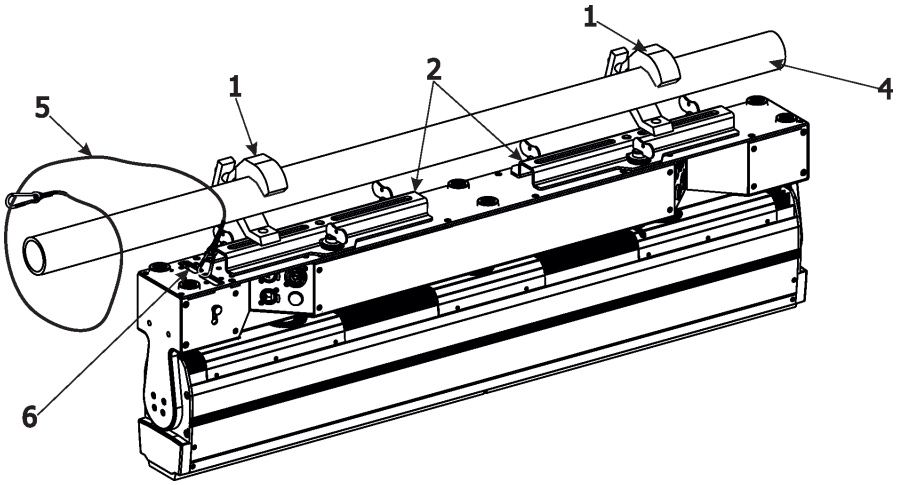
The fixture must never be fixed swinging freely in the room.

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.

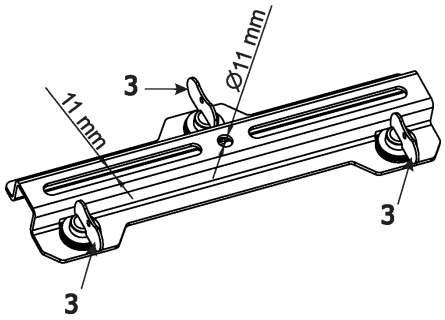
CAUTION!
Use 2 appropriate clamps to rig the fixture on the truss.
Make sure that the device is fixed properly!
Ensure that the structure (truss) to which you are attaching the fixtures is secure.

The fixture can be placed directly on the stage floor or rigged in any orientation on a truss without altering its operation characteristics .
For securing the fixture to the truss, install a safety wire which can hold at least 10 times the weight of the fixture. Use only the safety wire with a snap hook with screw lock gate.

Truss installation
1. Bolt the clamps (1) to the two mounting adaptors (2) by means of M6 bolts and lock nuts through openings in the mounting adaptors.
2. Fasten the mounting adaptors to the bottom side of the base by means of the three quick-lock fasteners (3) on each adaptor.
3. Clamp the fixture on a truss (4) and tighten the rigging clamps.
4. Pull the safety wire (5) around the truss and lock the snap hook with screw lock gate. Fasten the second snap hook through the attachment point (6) on the bottom side of the base and lock the snap hook with screw lock gate.

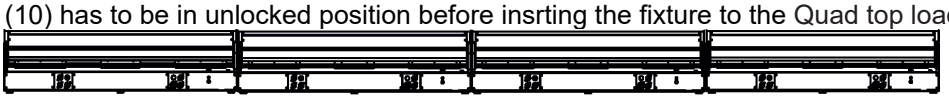


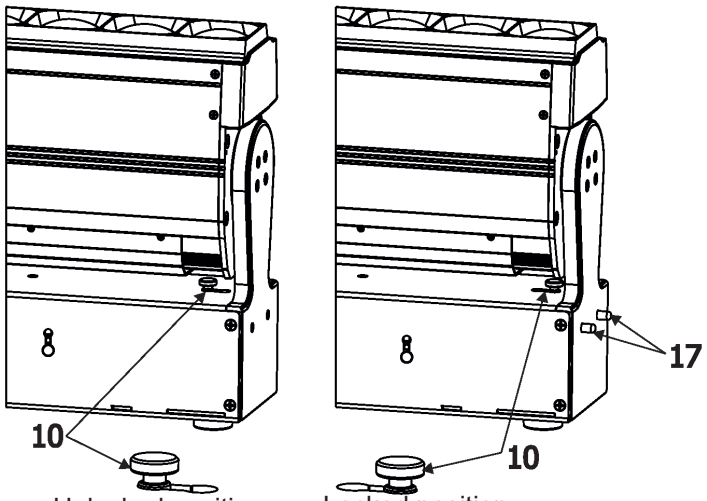
Mounting adaptor



Floor installation

The side lock (10) allows you to interlock fixtures in a row when fixtures are installed side-by-side. If the side lock (10) is in a locked position, two pins (17) stick out of the fixture housing and snap into holes in the housing of the adjacent fixture. Do not forget to unlock side locks before dismantling the row of interlocked fixtures. The side lock (10) has to be in unlocked position before insrting the fixture to the Quad top loader case.





Avoid illuminating one fixture with another!

In order to protect the internal parts of the head from the sun, the function PARKING POSITION must be switched ON before switching the fixture off.

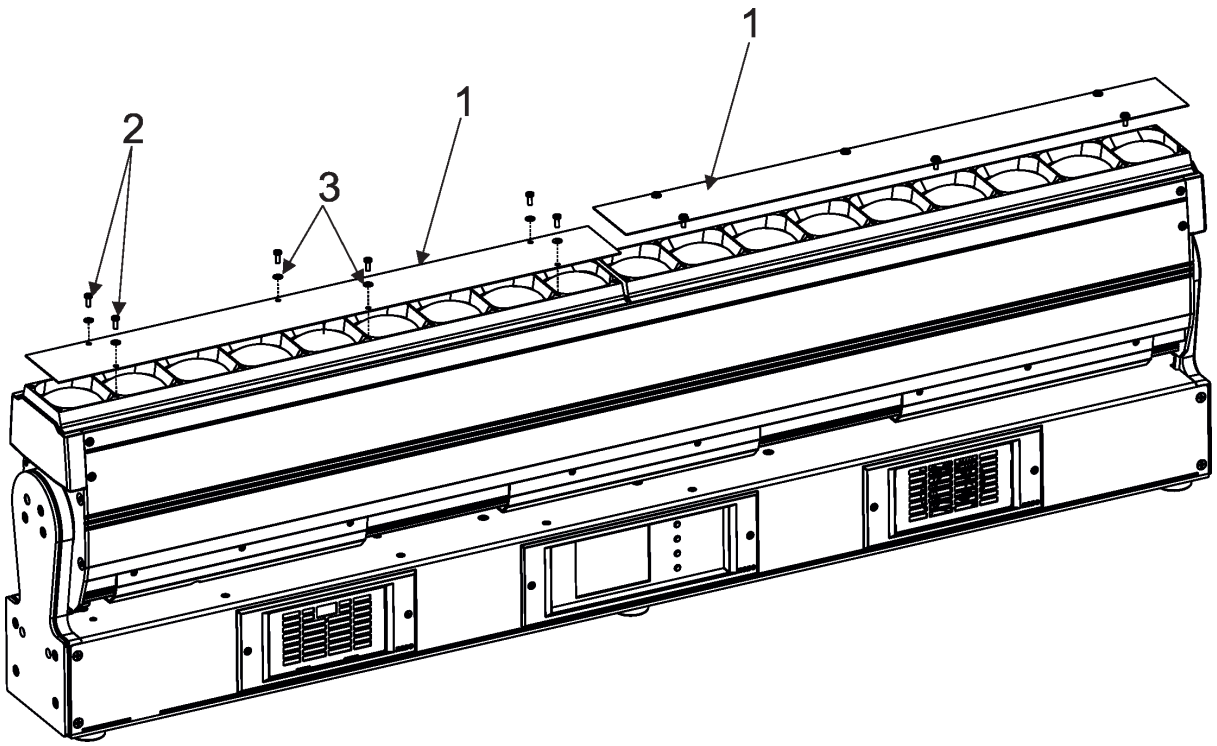
The PARKING POSITION function is located on the Power/Special functions channel (120-129 DMX). If the function is on, the fixture will automatically detect via G-sensor whether the fixture is on the floor or hangs on the truss and tilts the moving head to the position in which the moving head will always face down. Owing this position of the moving head, there is not chance to burn internal parts of the LEDs array by the sun light.

4.3 Diffuser and clear lens cover installation

Disconnect the fixture from mains before diffuser or clear lens cover installation.

Diffuser.
Screw both diffusers (1) on both zoom modules by means of 12 screws M3x8 (2) with washers (3). Matt sides of diffusers have to be oriented to the lens.

Clear lens cover.
Screw both covers (1) on both zoom modules by means of 12 screws M3x8 (2) with rubber rings (3).

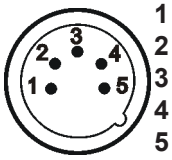


4.4 DMX-512 connection

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

DMX output

XLR socket:



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

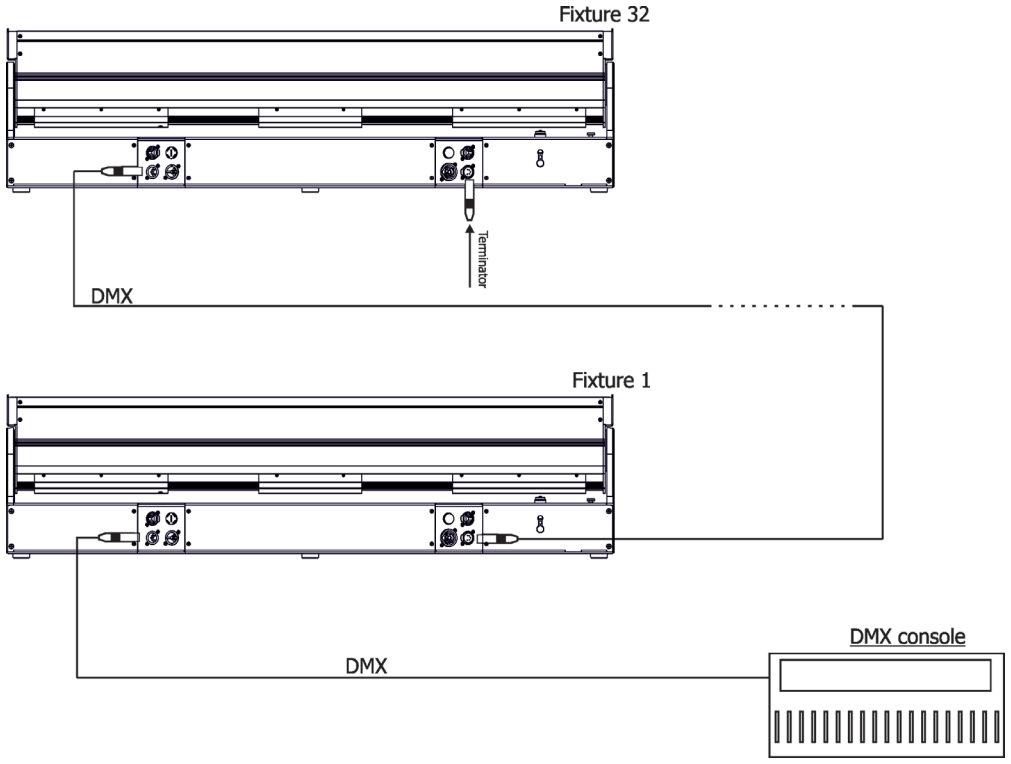
DMX input

XLRplug:

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

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 3-pin (5-pin) XLR-plug and plug it in the DMX output of the last fixture.



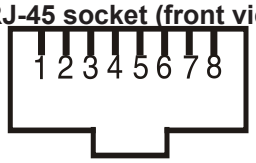
4.5 Ethernet connection

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.

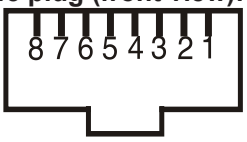
The Robin Tetra 2 is equipped with 8-pin RJ- 45 sockets for Ethernet connection. Use a network cable category 5 (with four “twisted” wire pairs) and standard RJ-45 plugs in order to connect the fixture to the network.

RJ-45 socket (front view):



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

RJ-45 plug (front view):



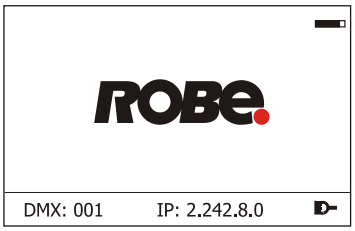
Patch cables that connect fixtures to the hubs or LAN sockets are wired 1:1,that is,pins with the same numbers are connected together:

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:

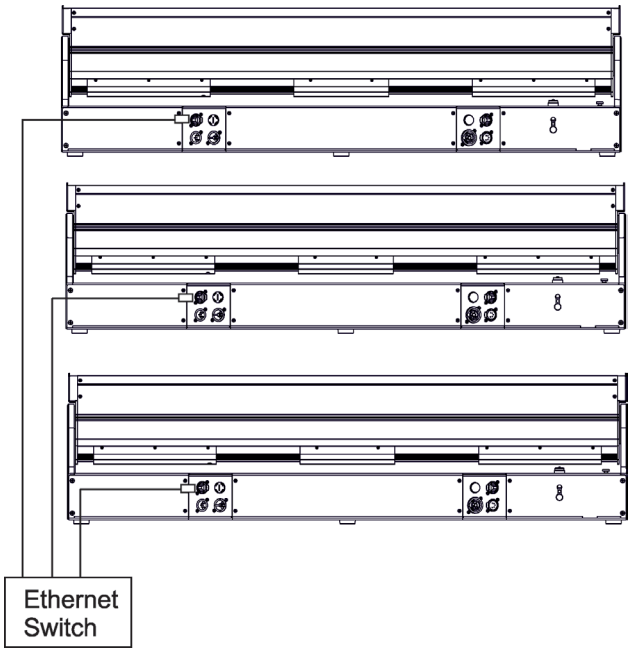
1-3	2-6	3-1	4-8	5-7	6-2	7-5	8-4

If the fixture is connected with active Ethernet socket (e.g. switch) the network icon will appear at the bottom right corner of the screen:



Ethernet operation

Connect the Ethernet inputs of all fixtures with the Ethernet network.
Option “Artnet (gMaI or gMA2 or sACN)" has to be selected from “Ethernet Mode” menu in the fixture. display.
Set IP address (002.xxx.xxx.xxx / 010.xxx.xxx.xxx) and the Universe.
Example of connection:



An advised PC setting: IP address: 002.xxx.xxx.xxx / 010.xxx.xxx.xxx (Different from fixture IP addresses)
NET mask: 255.0.0.0

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

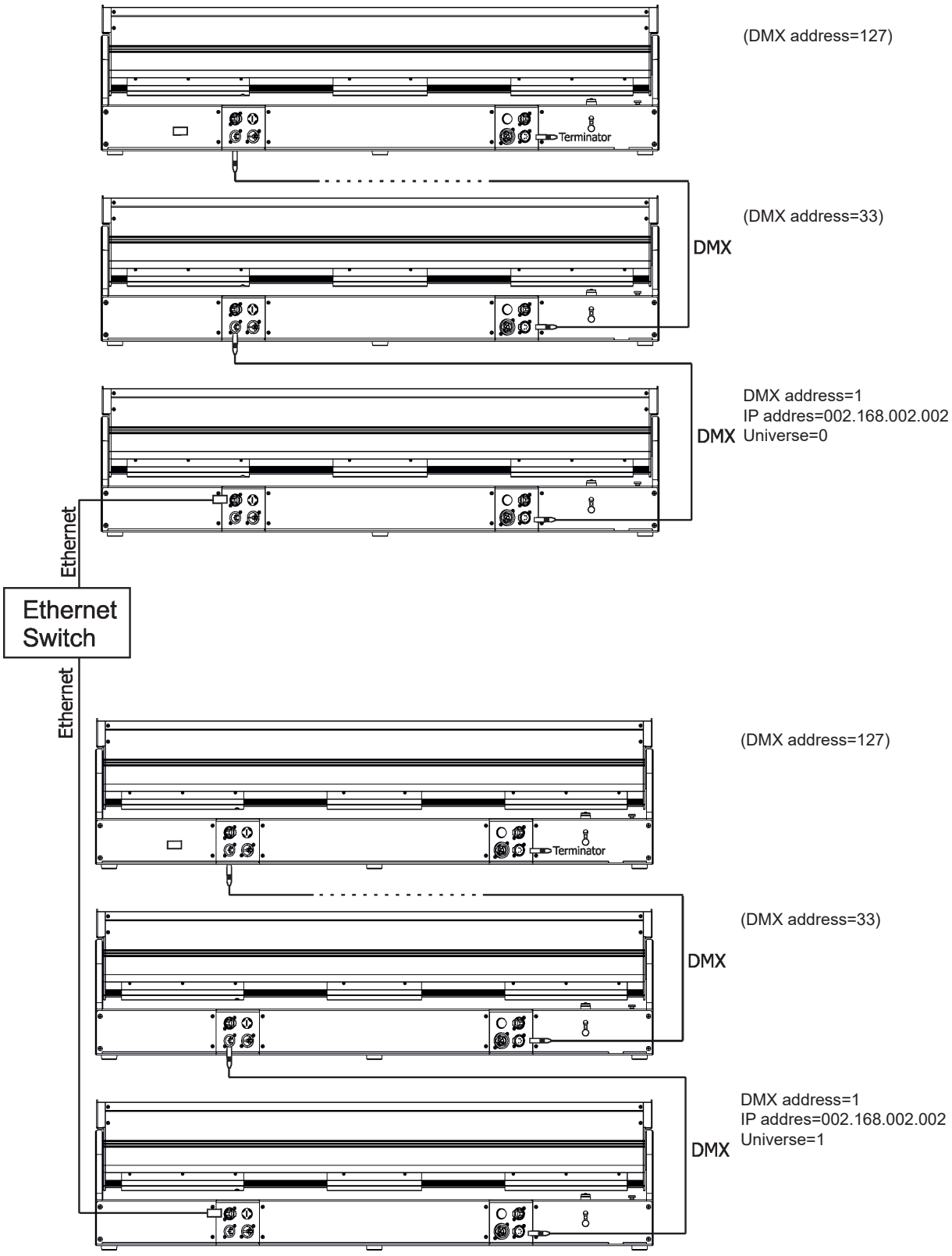
Ethernet / DMX operation

Option “Ethernet to DMX” has to be selected from the “Ethernet Settings" menu on the first fixture (connected to the Ethernet) in the fixture chain, next fixtures have standard DMX setting.

Connect the Ethernet-input of the first fixture in the data chain with the network. Connect the DMX output of this fixture with the input of the next fixture until all fixtures are connected to the DMX chain.

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

Example:



4.6 Wireless DMX operation

The wireless version of the Robin Tetra 2 is equipped with the Lumen Radio CRMX module and antenna for receiving DMX signal. CRMX module operates on the 2.4 GHz band.

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.

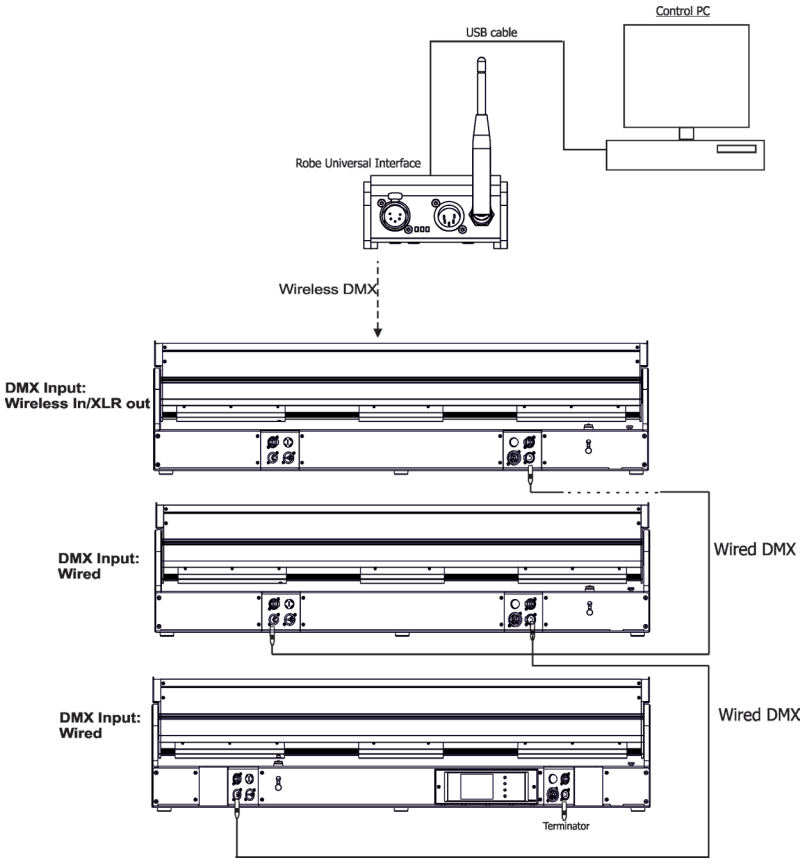
2. For the next 5 seconds the fixture receives wireless DMX signal and again detects if the Power/Special functions channel is set at some DMX input option, if not, the fixture will take option which is set in the fixture menu "DMX Input".

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 receiver via the menu item “ Unlink Wireless Adapter“ (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:



5. Remotely controllable functions

Virtual colour wheel
This wheel contains 66 preset colours, rainbow effect with/without fade time.

Colour temperarature correction (CTC)
This channel allows to set calibrated white colour from range of 8000K-2700K.

RGBA or CMY colour mixing system
The RGBA colour mixing system is based on red, green, blue and amber high power LEDs. Option for switching the fixture to the CMY colour mixing system is also available.

Colour Mix control
The Colour Mix control channel defines relation between global colours (RGBA, CTO, Virtual colour wheel) and individual RGB pixels or Kling-Net.

Global = Global Colours (RGBA, CTO, Virtual Colour Wheel)
Pixel = Pixel Colors (RGB individual pixels or Kling-Net)

DMX value	Function
0-9	Global colours (Global has priority)
10-19	Maximum mode (highest values have priority)
20-29	Minimum mode (lowest values have priority)
30-39	Multiply mode (multiply Global and Pixel)
40-49	Addition mode (Global + Pixel) - default
50-59	Subtraction mode (Global – Pixel)
60-69	Inverted Subtraction mode (Pixel – Global)
70-79	Coloured background
80-127	Reserved
128	Global colours (Global has priority)
129-254	Crossfade (crossfade between Global and Pixel)
255	Pixel colours (Pixel has priority)

E.g. If you wish to control RGBA channels, set the Colour Mix Control channel to 0 DMX, if you need to use pixel effects, set the Colour Mix Control channel to 255 DMX.

Multi-Coloured Flower Effects
Two Multi-Coloured Flower Effects rotating in both directions at variable speed create spectacular multicolour beam effects in the air.

Zoom
Motorized zoom offers beam range of 4° - 45°. The fixture allows you to control the zoom as a master zoom (all lenses together) or divided into two sections (zoom 1, zoom 2) with 9 lenses per section. The master zoom has priority to the zoom 1/zoom 2.

Pixel control
18 RGB pixels allow you to create many effects or use pre-defined pixel effects.

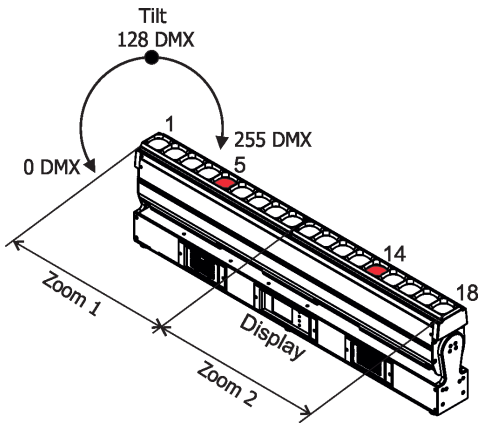
Dimmer/Shutter system
Imperceptible 18 bit dimming 0 - 100 % for ultra smooth fade to black Strobe effects with variable speed.

Tilt
Precise tilt movement in range of 191°.

Direction of tilt movement and pixel order/zoom order:

The relation between Master zoom and Zoom 1/Zoom2 is LTP (Latest Takes Precedence). If you send the change of the zooms within the same DMX frame, the Zoom 1/Zoom 2 will have priority.

Multi-coloured flower effects are placed at pixel positions 5 and 14.



6. Control menu map

Default settings=Bold print

Tab	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Addressing	Settings	DMX Address	001-512			
		DMX Preset	**Mode 1**, Mode 2, Mode 3, Mode 4 Mode 5, Mode 6			
		Ethernet Settings	Ethernet Mode	Disable		
				ArtNet		
				gMAI		
				gMA2		
				sACN		
			Ethernet To DMX	**Off**, On		
			IP Address/Net Mask	Default IP Address		
				Custom IP Address		
				Net Mask		
			ArtNet Universe	0-255		
			MANet settings	MANetI/II Universe	01-256	
				MANet Session ID	01-32	
			sACN Settings	sACN Universe	00001-32000	
				sACN Priority	0-255	
			Klingnet Settings	**Disable**		
				Enable		
Information	Fixture Times	Power On Time	Total Hours			
			Resetable Hours			
		Air Filters	Elapsed Time			
			Alert Period	10-300		
	Fixture Temperatures	LEDs Temperature	Current			
			Maximum NonRes.			
			Maximum Res.			
		Base Temperature	Current			
			Maximum NonRes.			
			Maximum Res.			
	DMX Values	Tilt				
		:				
		Amber Pixel 18				
	Wireless State	Signal Quality				
		Unlink Wireless Adapter				
	Power Channel State					
	Software Versions	Display System				
		Module M				
		Module DR				
		Module PX				
	Product IDs	Mac Address				
		RDM UID				
		RDM Label				
	View Logs	Fixture Errors				
		Fixture States	Power On			
			Power Off			
		Fixture Position				
		Fixture Temperatures	LEDs Temperature			
			Base Temperature			

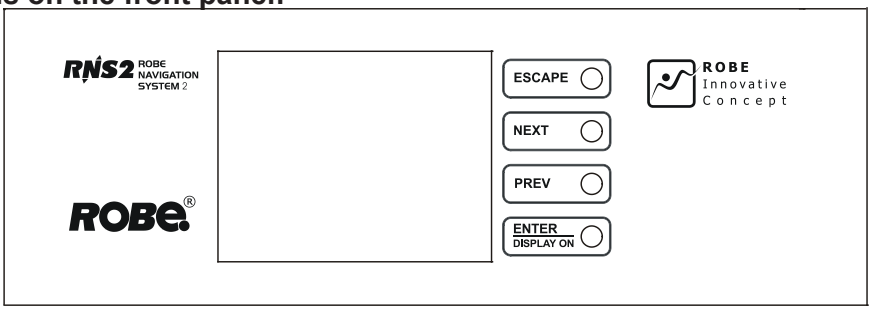
Tab	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Personality						
	DMX Presets	**Mode 1**				
		Mode 2				
		:				
		Mode 6				
		View Selected Preset				
	DMX Input	**Wired Input**				
		Wireless Input				
		Wireless In/XLR Out				
	Tilt Settings	Tilt Reverse	**Off**, On			
		Tilt Feedback	Off, **On**			
		Tilt mode	Time			
			Speed			
	Pan/Tilt EMS	**On**, Off				
	Pixel Control	Pixel Index	**0**-17			
		Pixel Mirror	On, **Off**			
		Reset to default				
	Microphone Sensitivity	1-**10**-20				
	Blackout Settings	Blackout During M.C.	**Off**, On			
		Blackout while:	Pan/Tilt moving	**Off**, On		
	Colour Mixing Mode	**RGBA**				
		CMY				
	White Point 8000K	Off, **On**				
	Automatic Amber pixel On/Off	**Off,** On				
	Tungsten Eff. Sim.	**Off**				
		750W				
		1000W				
		1200W				
		2000W				
		2500W				
	Dimmer Curve	Linear				
		Square Law				
	LEDS Output Frequency	**Standard** High				
	LEDs Frequency Adjust	-6....0....+6				
	Init Effect Positions	Tilt	0-255			
		:				
		Dimmer Fine	0-255			
	Screen Settings	Display Intensity	1-**10**			
		Screen Saver Delay	**Off**-10min.			
		Touchscreen Lock	**Off**-10min.			
		Recalibrate Touchscreen				
		Display Orientation	Normal			
			Inverted			
			Auto			
	Temperature Unit	**°C**,°F				
	Fan settings	Fan Mode	**Auto**			
			High			
			Quiet			
		Quiet-Blackout Fan Off	**Off**, On			
	Date & Time Settings					
	Default Settings					

Tab	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Manual Control	Reset Functions	Total System reset				
		Tilt reset				
		Zoom Reset				
		Flower E. Reset				
	Manual Effect Control	Tilt	0-255			
		:				
		Amber Pixel 18	0-255			
Stand -Alone	Test Sequences	Dynamic Mode				
		Static Mode	Tilt	0-255		
			Zoom	0-255		
	MusicTrigger	**Off**, On				
	Preset Playback	**None**				
		Test				
		Prog. 1				
		Prog. 2				
		Prog. 3				
	Play Program	Play Program 1				
		Play Program 2				
		Play Program 3				
	Edit Program	Edit Program 1	Start Step	1-88		
			End Step	1-88		
			Edit Program Steps	Step 1	Tilt	0-255
				:	:	
				:	Dimmer Fine	0-255
				:	Step Time	0-25,5 sec.
				Step 88	Tilt	0-255
					:	
					Dimmer Fine	0-255
					Step Time	0-25,5 sec.
Service	Adjust DMX Values	Tilt	0-255			
		:				
		Amber Pixel 18	0-255			
	Calibrations	Calibrate Effects	Tilt	0-255		
			FE I Rotation	0-255		
			FE 2 Rotation	0-255		
		Calibrate colours	Red	0-255		
			Green	0-255		
			Blue	0-255		
			Amber	0-255		
			Red Intensity	0-255		
			Green Intensity	0-255		
			Blue Intensity	0-255		
			Amber intensity	0-255		
		Pixel Correction	Red 1	0-255		
			Green 1	0-255		
			Blue 1	0-255		
			Amber 1	0-255		
			:			
			Red 18	0-255		
			Green 18	0-255		
			Blue 18	0-255		
			Amber 18	0-255		
		Load Default Calibrations				
	Update Software					

7. Control menu

The Robin Tetra 2 is equipped with the QVGA Robe touch screen with battery backup which allows you to set the fixture´s behaviour according to your needs, obtain information on its operation, test its various parts and lastly program it, if it has to be used in a stand-alone mode.
The fixture´s menu can be controlled either by the control buttons or directly by touching the icon.

Control buttons on the front panel:

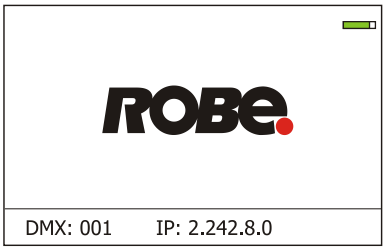


[ESCAPE] button used to leave the menu without saving changes.
[NEXT] , [PREV] buttons for moving between menu items and symbols, adjusting values.
[ENTER/Display On] button used to enter the selected menu (menu item) and to confirm adjusted value.
If the fixture is disconnected from mains, the button switches the touch screen on.

Icons used in the touch screen menu:

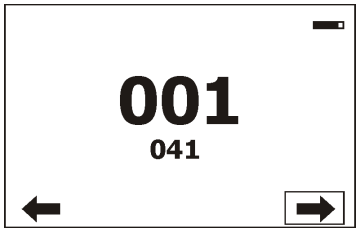
- [back arrow] used to move back to the previous screen (menu).
- [up arrow] used to move up on the previous page.
- [down arrow] used to move down on the next page.
- [confirm] used to save adjusted values, to leave menu or to perform desired action.
- [cancel] used to leave menu item without saving changes.
- [confirm+copy] used to save adjusted values and copy them to the next prog. step.
- [warning icon] used to indicate some error which has occurred in the fixture.
- [Ethernet] used to indicate Ethernet connected.
- [display turn] used to turn the display by 180°.
- [slider control] used to recall slider system for setting desired value.
- [keyboard control] used to recall keyboard system for setting desired value.
- [air filters cleaning] used to signal that cleaning period of the air filters elapsed.

The menu page displays icons for each function that you can perform from the touch screen.



After switching the fixture on, the touch screen shows the screen with the ROBE logo:
Note: The green icon at the top right corner of the screen indicates the level of the display battery charging. If the whole icon is green, the battery is fully charged while the red icon indicates exhausted battery. The battery charges during fixture operation, its charging lasts cca 6 hours.
We recommend that the fixture should be in operation at least 7 hours per week to keep the battery fully charged.
If you switch the fixture on and this screen will not appear till 1 minute, switch the fixture off and on again. If the screen lights, the battery is exhausted. In case the screen still does not light, the battery is faulty.
This is also indicated by an error message "Faulty battery" and if such an error message appears the battery should be replaced immediately. The lifetime of the battery is highly dependent on ambient temperature (and consequently on base temperature). If the maximum ambient temperatures (as recorded and displayed in menu: Information -> Fixture Temperatures -> Ambient Temperature -> Maximum NonRes.) are kept within the specified limits, the battery should last for at least two years. Shell the ambient temperatures exceed the specified maximum temperature, the lifetime of the batteries could be considerably shortened even up to just one year or less and also result in physical damage (battery leakage) or unreliable fixture functions.
Damage caused by batteries failed due to exceeded maximum ambient temperature cannot be claimed under warranty terms.

Touch any part of the screen or press the [ENTER/Display On] button to display the initial screen with the current stored DMX address:



Touch the green arrow at the bottom right corner of the screen or press the [ENTER/Display On] button to enter the " Address" menu.
Each item (such as a Tab, menu item, text box, icon) may be selected from a screen by simply touching the item in the list or by pressing the [NEXT] or [PREV] buttons to scroll through items. With each press, the next item is highlighted. Press [ENTER/Display On] to select the highlighted item.

Before first fixture operation, set current date and time in the menu "Date &Time Settings" (menu path: Personality--> Date &Time Settings).

7.1 Tab " Address"

DMX Address - Select the menu to set the DMX start address.

DMX Preset - Use the menu to select desired channel mode.
View Selected Preset - Use the menu to display channels included in the selected 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
gMAI - Fixture receives MANet I protocol
gMA2 - Fixture receives MANet 2 protocol
sACN - Fixture receives sACN protocol

Ethernet To DMX - Fixture receives protocol from the Ethernet input and sends DMX data to its DMX output (fixture works as an "Ethernet/DMX converter", next fixture can be connected to its DMX output and you can build a standard DMX chain by connecting another fixtures.

Only one fixture has to be connected to the Ethernet.

IP Address/Net Mask - Select this menu to set IP address. IP address is the Internet protocol address. The IP uniquely identifies any node (fixture) on a network.
There cannot be 2 fixtures with the same IP address on the network!

Default IP Address -Preset IP address, you can set up only first byte of IP address (2 or 10) e.g. **002**.019.052.086.

Custom IP Address - The option enables to set up all bytes of IP address.

Net Mask - The option enables to set up all bytes of Net Mask.

ArtNet Universe - Use this item to set a Universe (0-255). The Universe is a single DMX 512 frame of 512 channels.

MANet Settings - Use this menu to set parameters for MANet operation.

MANet Universe I/II - The value of this item can be set in range 1-256.

MANet Session ID - The value of this item can be set in range 1-32.

sACN Settings - Use this menu to set parameters for sACN operation.

sACN Universe - The value of this item can be set in range 1-32000.

sACN Priority - The value of this item can be set in range 0-255.

Klingnet Settings - Use this menu to enable or disable Klingnet protocol.

7.2 Tab "Information"

Fixture Times - The menu provides readouts of fixture operation hours and air filters using hours.

Power On Time Hours - Select this menu to read the number of fixture operation hours.

Total Hours - The item shows the total number of the operation hours since the Robin Tetra 2 has been fabricated.

Resetable Hours - The item shows the number of the operation hours that the Robin Tetra 2 has been powered on since the counter was last reset.
In order to reset this counter to 0, touch the text box next to the item "Resetable Hours:"

Air Filter - Regular cleaning of the air filter in the fixture base is very important for the fixture´s life and performance.
The two items of this menu help you to keep cleaning period of the air filters.

Alert period - Cleaning schedule for the fixture depends on the operating environment. It is therefore impossible to specify accurate cleaning interval. This item allows you to change the cleaning interval of the air filter. This "alert" value is 300 hours and it is set as default. Inspect the fixture within its 300 hours of operation to see whether cleaning is necessary. If cleaning is required, clean air filter and change the value in this menu on acceptable level. Min. level of alert period is 10 hours, max. is 300 hours.

Elapsed Time - The item allows you to read the time which remains to cleaning air filter. The time period is set in the menu mentioned above.
Expired time period is signalled by a negative mark (-) at the time value and a warning icon on the display.
Clean the filter and reset this menu item (by touching the text box next to the item "Elapsed Time").

Fixture Temperatures - The menu is used to view temperatures of the fixture´s inside.

LEDs temperature - The menu shows temperature on the LEDs PCB .

Cur. - A current temperature of the LEDs PCB.

Max. - A maximum temperature of the LEDs PCB since the fixture has been fabricated.

Max. Res. - A maximum temperature of the LEDs PCB since the counter was last reset.
In order to reset some counter to 0, touch desired text box under item "Max.Res."

Base Temperature - The menu shows temperature in the fixture base (on the display PCB).

Current - A current temperature in the fixture base.

Maximum NonRes. - A maximum temperature in the fixture base since the fixture has been fabricated.

Maximum Res. - A maximum temperature in the fixture base since the counter was last reset.
In order to reset this counter to 0, touch the text box next to the item "Maximum Res."

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

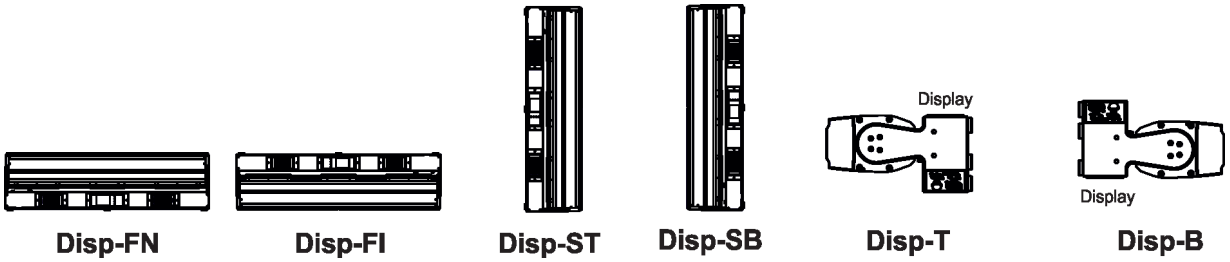
Wireless State - The menu serves for reading of the wireless operation status.
Unlink Wireless Adapter - The item serves for unlinking the fixture from DMX transmitter.

Power Channel State - The menu item shows state of the Power/Special functions switches.

Software Version - Select this item to read the software version of the fixture modules:
Display System - A display processor on the display board in the fixture base
Module M - A pan/Tilt processors
Module DR - A LEDs driver
Module PX - Pixels + zooms control

Product IDs - The menu is used to read the MAC Address ,RDM UID and RDM Label.

View Logs - Use this menu to read fixture´s data which have been recorded during fixture operation. This colected data allows easier troubleshooting.
Fixture Errors - Use this menu to read fixture errors which have occurred during fixture operation.
Fixture States - Recorded following actions: Fixture On, Fixture Off.
Fixture Position - Recorded installation positions of the fixture:



Fixture Temperatures - Recorded temperatures which have exceeded defined levels.

Note: The log buffer can contain 8000 records max. If the buffer is full, old data will be overwritten.

7.3 Tab "Personality"

DMX Preset - Use the menu to select desired channel mode.
View Selected Preset - Use the menu to display channels included in the selected mode.

DMX Input- Use the menu to select mode of DMX signal receiving.
Wired - DMX signal is received by means of the standard DMX cable.
Wireless - DMX signal is received by means of the inbuilt wireless module.
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.
The options "Wired" and "Wireless" are also stated in DMX chart (channel Power/Special functions).
Note. If the wireless module is not installed in the fixture, the following message will appear:
DMX Input Set to Wired
Wireless Module Missing
If the fixture is not connected to mains, the message "Not Available In Offline Mode" will appear after entering the menu DMX Input. To enter this menu, the fixture has to be connected to mains.

Tilt Settings - Use the menu set behaviour of the tilt movement.
Tilt Reverse - The item allows to invert tilt movement.
Tilt Feedback - The item allows to return the LED module to the required tilt position after changing the position by an external force if this option is set on.
Note. Be careful, the Tilt Feedback should be permanent On, the option Off is not suitable for standard

operation and the head of the fixture can be damaged!

Tilt mode - Use this menu to set the Time mode or Speed mode of the tilt movement. Value of time (0-25,5sec. max) or speed can be set by means of the channel "Tilt speed, Tilt time".

Pixel Control - Use the menu to index or mirror pixels.

Pixel Index - The item allows you to choose needed position of turned pixels.

Pixel Mirror - The item allows mirroring of pixels along a vertical axis.

Both functions you can also find on the channel Power/Special functions (210-237 DMX).

Important: If you use DMX commands to set values for both Pixel Index and Pixel Mirror functions, set values will be lost after switching the fixture off. In order to save the values to the fixture, go to DMX value of 237 and stay in it for 3 sec. The set values will be saved to the fixture and will not be lost by switching the fixture off and on.

Reset to default - The item sets items "Pixel Index" and "Pixel Mirror" to default (factory) values.

Microphone Sensitivity - Enter the menu if you want to adjust the microphone sensitivity from 1 (max.) to 20 (min.).

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 LED module goes to its correct position, which has been changed by an external force.

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

Tilt Moving - The menu item enables to close light output while the tilt is moving.

White Point 8000K - If the function is on, the CTC channel allows to set desired white in range of 8000K-2700K (0 DMX=8000K, 255 DMX=2700K). Necessary condition is , that RGBA channels have to be set at the same DMX values, e.g. 255.

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

Automatic amber pixel On/Off - In pixel control DMX modes, this function allows automatic activation of the amber LEDs, based on levels of RGB pixels.

Colour Mixing Mode - This item allows switching into RGBA or CMY mode. In the CMY mode, the amber (8bit)/ ambere (16) bit channels are not active.

Tungsten Effect Sim. - This function simulates behaviour of a halogen lamp during dimming at calibrated whites 2700K, 3200K. You can select from various lamp wattage simulation: 750W, 1000W, 1200W, 2000W, 2500W.

Dimmer Curve - You can select desired dimmer curve: Linear or Square Law.

LEDs Output Frequency - The function allows you to set the PWM (Pulse Width Modulation) output frequency of LEDs to Standard (300Hz) or High (1200Hz).

LEDs Frequency Adjust - The function allows you to change the selected PWM output frequency of LEDs in 6 levels up and down around the selected frequency in the menu “LEDs Output Frequency”.

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

00 - Selected frequency (Standard or High)

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

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

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

Display Intensity - The item allows to control the intensity of the screen (1-min., 10-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).

Touchscreen Lock - The item allows you to lock the screen after last touch (or pressing any button on the control panel). The time delay can be set in range of 1-10 minutes. To unlock the screen, press the [ENTER/Display On] button.

Recalibrate Touchscreen - The item starts calibration of the touchscreen. Follow the instructions on the screen.

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 - This function rotates menu 180 degrees from current orientation.
Auto - The option activates a gravitation sensor for automatic screen orientation.

Note: **Auto** option is set as default. You change the display orientation by touching the icon on the display, an the option set in the "Display Orientation" menu is temporarily overridden.

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

Fan Settings - Use the menu to set fans operation mode.

Fan Mode - Use the menu to set the fixture fans to max. power mode (option "**High**") or to the auto-control mode (option "**Auto**"). The third option "**Quiet**" allows you to set desired fan noise. The light output of the fixture is reduced at low speeds of fans.

Quiet - Blackout Fan Off - The menu item allows you to stop all fans in the fixture (option "**On**") when its light output is closed (shutter in range of 0-31 DMX or dimmer in 0 DMX). The menu item does not influence fans in the "**High**" mode.

Date & Time Settings - Use this menu to set current date and time for the fixture log system (menu "View Logs"). Set this menu item before first fixture operation.

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

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

7.4 Tab "Manual Control"

Reset Functions - The menu allows to reset the fixture either per function modules or all modules together.

Total System Reset - The item resets all function modules.
Tilt Reset - The item resets a tilt.
Zoom Reset - The item resets a zoom system.
Flower E. Reset - The item resets Flower effects.

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

7.5 Tab "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 Robin Tetra 2.

Dynamic Mode - This mode uses all Robin Tetra 2 functions including tilt movement and therefore is good for a complete introduction of the fixture.
Static Mode - This mode is suitable for projections on the wall, ceiling or ground without any tilt movement. Adjust the tilt , zoom to desired position and start test sequences by touching the green ▶ icon.

Music Trigger - Use the item to activate the sound control of the running program via the built-in microphone.
Preset Playback - This menu allows you to select the program which will be played in a loop after switching the fixture on (the option is commonly used in a stand-alone operation without an external controller).

None - The option disables “Presetting playback” function.
Test - The option starts the test sequences.
Prog. 1 - The option starts user program No. 1.
Prog. 2 - The option starts user program No. 2.
Prog. 3 - The option starts user program No. 3.

Play program - Use the menu to run desired program in a loop.

Play Program 1 - The option starts user program No.1.
Play Program 2 - The option starts user program No. 2.

Play Program 3 - The option starts user program No. 3.

Edit Program - Use the menu to create or to edit desired program. The Robin Tetra 2 offers 3 free programs, each up to 88 steps.

Edit Program 1 - The option allows to edit user program No.1.

Edit Program 2 - The option allows to edit user program No.2.

Edit Program 3 - The option allows to edit user program No.3

To edit program:

1. Touch the item which you want to edit (“Edit Program 1” - “Edit Program 3”).
2. Touch the item "Edit Program Steps".
3. Touch the item "Step 1".
4 From the list of effects touch desired effect and set its value. Browse throw the list by touching the [up arrow] and [down arrow] and set all desired effects.

An item "Step Time" (value of 0-25.5 sec.) is the time during which effects last in the current step

5. Save adjusted effects to the current step by touching the [confirm] or save and copy them to the following step by touching the [confirm+copy]. By touching the text box "Preview" next to the current program step you can view created scene.
6. Repeat the steps 4 and 5 for next program steps.
7. After editing desired program steps, adjust the length of the program by touching the text boxes "Start Step" and "End Step".

Meaning of the icons used in the "Edit Program" menu:

- moves down on the next page
- moves up on the previous page
- saves adjusted values and leaves menu
- saves values to the current step and copy them to the following prog. step
- leaves menu without saving values

7.6 Tab "Service"

Adjust DMX Values - The menu allows you to set all effects to desired positions before fine calibration of the effects .

Calibrations - This menu enables fine calibration of fixture effects and download default calibration values.

Calibrate Effects - The menu allows the fine adjustment of effects.

Tilt - a tilt position fine adjustment
FE I Rotation - a flower effect 1 fine rotation
FE 2 Rotation - a flower effect 1 fine rotation

Calibration of the effects via the control board

1. Disconnect DMX controller from the fixture and enter the "Calibrate Effects" menu.
2. Use the [up arrow] and [down arrow] to find "Tilt" and touch it to enter the fine effect adjustment screen.
3. Set desired value and save it by touching the [confirm].
4. Repeat steps 2 and 3 for next items.
5. After calibrating all effects, touch the [confirm] to save all adjusted values and reset the fixture.

Calibrate Colours - The menu serves for adjusting of LEDs saturation to achieve uniform colours

The items **Red**,**Green**, **Blue** and **Amber** serve for adjustment of white 5600K.

Calibration of white colour 5600K via the control board:

1. Disconnect DMX controller from the fixture , open shutter and dimmer and set the CTC channel to DMX=64 (white 5600K), RGBA channels to 255 DMX and Zoom channel to 128 DMX.
2. Set the following items in the menu Personality:
   White Point 8000K =On
   Colour Mixing Mode=RGBA
3. Aim the light beam on the lux meter (e.g. Minolta CL-500A Chroma meter) which is placed at min. distance of 3 m from the fixture.
4. Enter the menu Calibrate Colours.
5. By means of the Red, green, Blue and Amber items adjust the 5600K colour temperature as exactly as possible ($\Delta u'v' = 0$).

6. After adjusting 5600K colour temperature, touch the [confirm] to save all adjusted values and reset the fixture.

The items **Red Intensity** ,**Green Intensity**, **Blue Intensity** and **Amber Intensity** serve for correction of intensity of red, green, blue and amber colour on desired level (during fixture calibration in the factory).

Pixel Correction - The menu serves for colour calibration of fixture pixels in order to get uniform colours all over pixels.

Note:User can do the calibration of white 5600K only, other colour calibrations should be done in the factory.

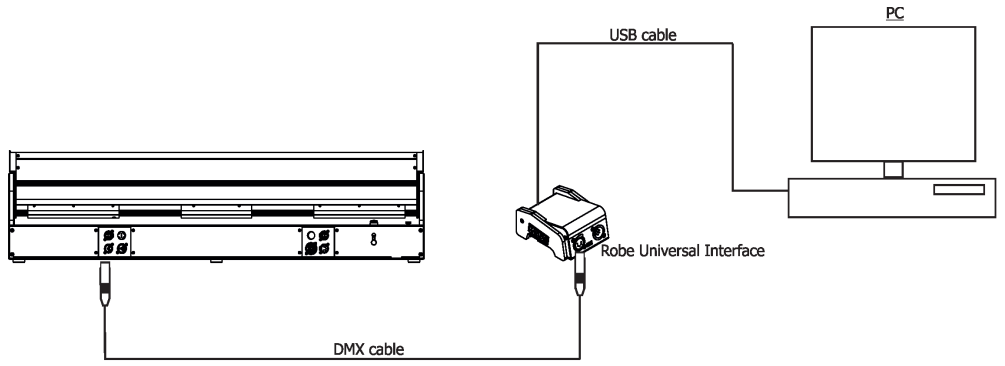
Calibration protocol:

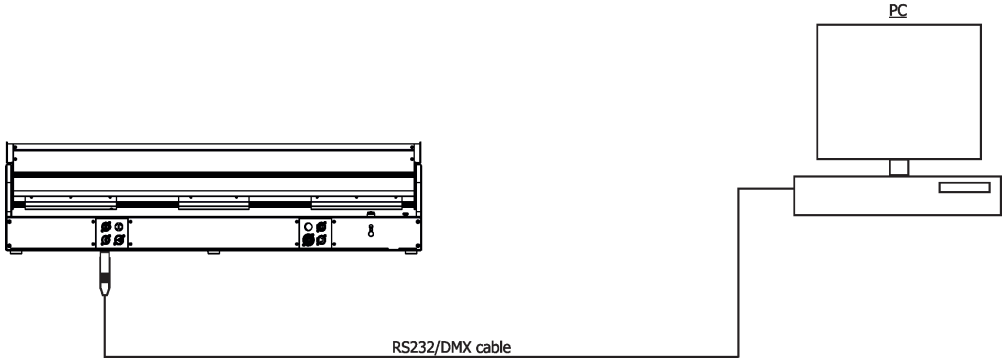
Effect	*Mode 1*	*Mode 2*	*Mode 3*	*Mode 4*	*Mode 5*
Tilt - fine adjustment	channel 35	channel 57	channel 98	channel 116	channel 111
FE I Rotation	channel 36	channel 58	channel 99	channel 117	channel 112
FE 2 Rotation	channel 37	channel 59	channel 100	channel 118	channel 113
Red - red saturation	channel 38	channel 60	channel 101	channel 119	channel 114
Green- green saturation	channel 39	channel 61	channel 102	channel 120	channel 115
Blue - blue saturation	channel 40	channel 62	channel 103	channel 121	channel 116
Amb. - amber saturation	channel 41	channel 63	channel 104	channel 122	channel 117

Load Default Calibrations - The item loads default (factory) calibration values.

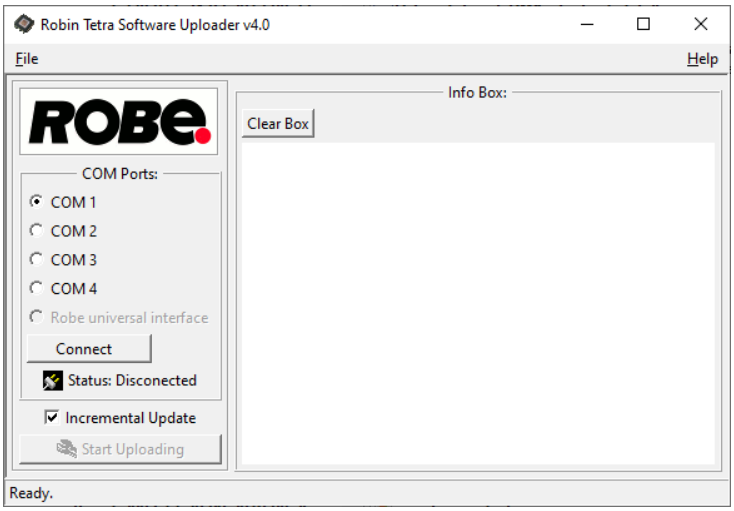
Update software - The menu item allows you to update software in the fixture via either serial or USB port of PC.
The following items are required in order to update software:
- PC running Windows or Linux or macOS
- DSU file
- Flash cable RS232/DMX (P/N13050624) or Robe Universal Interface / Robe Universal interface WTX.

To update software in the fixture:
1. DSU file is available from Robe web site at WWW.robe.cz.
   File with extension zip is intended for Windows (used and tested from XP to W10 on 32/64bit systems).
   File with extension tbz is intended for Linux (used and tested on Debian and Ubuntu 32/64bit).
   File with extension dmg is intended for macOS (used and tested on OSX up to Sierra) XQuartz required, install it from https://www.xquartz.org/
   Save the download file to a folder on your computer.
   In case that you use windows, extract files in the zip file (e.g. DSU_RobinTetra 2_18051835.zip)
2. Disconnect the fixture from DMX controller.





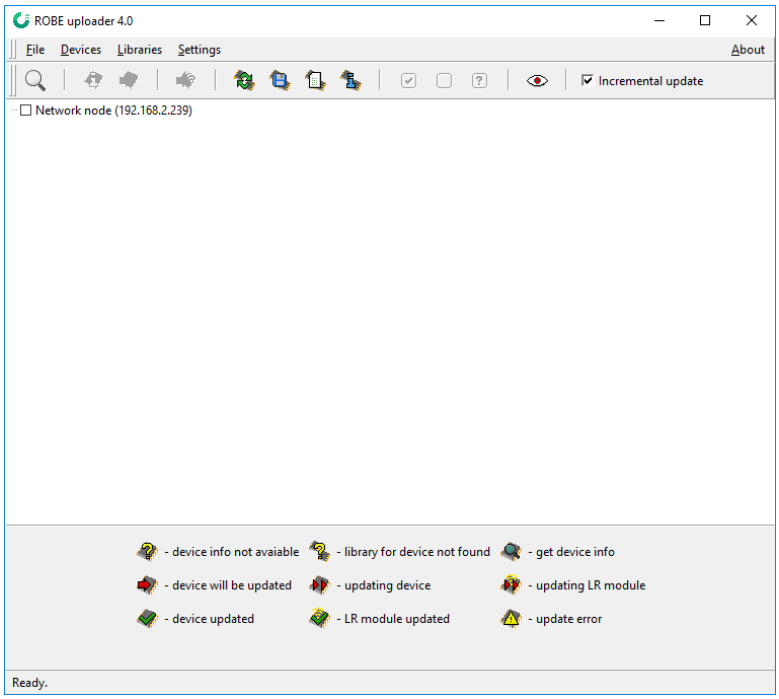
3. If you use the flash cable RS232/DMX, connect a serial port of your computer with DMX input of the fixture by means of the cable (probably you will need some USB to RS 232 converter if your computer has USB ports only).
   If you use the Robe Universal Interface, connect a USB port of your computer with the Robe Universal Interface by means of the USB cable and DMX input of the fixture with the DMX output of the Robe Universal Interface via a DMX cable.
4. Switch the fixture to the update mode (Tab "Service" --> Update software).
   Note: If you do not want to continue in the software update, you have to switch off and on the fixture to escape from the updating mode.
   We recommend to cancel all running programs on your computer before starting the software uploader.
5. Double-click the software uploader file (e.g. DSU_RobinTetra 2_18051835.exe) in the extracted files. The Software Uploader program will start running.



6. Select correct "COM " number if you use a Flash cable RS232/DMX or select "Robe Universal Interface " if you use the Robe Universal Interface/Robe Universal Interface WTX and then click on the "Connect" button.
7. If the connection is OK, click the “Start Uploading" button to start software uploading. It will take several minutes to perform software update.
   If the option "Incremental Update" is not checked, all processors will be updated (including processors with the same software version).
   If you wish to update only processors with new version of software, check the “Incremental Update box“.
   Avoid interrupting the process. Update status is being displayed in the "Info Box" window.
   When the update is finished, the line with the text “Fixture is successfully updated“ will appear in this window.

Note: After all processors updating, the fixture will be set to default values. If you use the Incremental update, setting the fixture to default values depends on type of updated processors.
In case upload process is interrupted (e.g. power loss), the fixture stays in “Updating mode” and you will have to repeat the software update again.

Another way, how to update software in the fixtures (especially large installation of fixtures) is to use the ROBE Uploader. It is a software for automatized software update of Robe fixtures. It can take advantage of RDM support and Ethernet ports if present in the units.
For more information please see https://www.robe.cz/robe-uploader/.



8. RDM

This fixture supports RDM operation. RDM (Remote Device Management) is a bi-directional communications protocol for use in DMX512 control systems, it is the new open standard for DMX512 device configuration and status monitoring.
The RDM protocol allows data packets to be inserted into a DMX512 data stream without adversely affecting existing non-RDM equipment. By using a special „Start Code," and by complying with the timing specifications for DMX512, the RDM protocol allows a console or dedicated RDM controller to send commands to and receive messages from specific moving lights.
RDM allows explicit commands to be sent to a device and responses to be received from it.
The list of commands for Robin Tetra 2 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		*	*
TILT_INVERT		*	*
DEVICE_RESET		*	
DMX_PERSONALITY		*	*
DMX_PERSONALITY_DESCRIPTION			*
STATUS_MESSAGES			*
STATUS_ID_DESCRIPTION			*
DEVICE_HOURS [2]			*
ROBE_DMX_INPUT		*	*
ROBE_WIRELESS_UNLINK		*	

[2]...Commands relative resetable values

RDM model ID for the Robin Tetra 2 is 0x0108.

9. Robe Ethernet Access Portal (REAP)

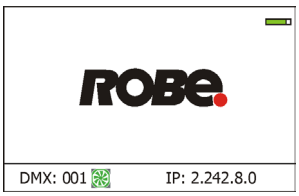
The REAP allows you to display on your computer information about some fixture settings, operating conditions (e.g. temperature in the fixture) and error messages which were generated during fixture operation.
Your computer needs to be connected to the fixture(s) through the means of Ethernet wired network and a network switch.
The Ethernet network connection (Local LAN) typically needs to be set to 2.x.x.x address, assuming that no other computer on the network contains such an address while keeping all ROBE fixtures in default IP settings.

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

9. Error and information messages

Information icon

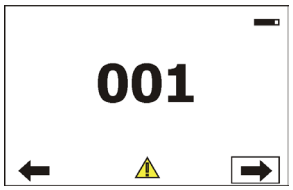
- Air Filters Cleaning



This icon signalizes that cleaning period of the air filters has elapsed and you have to clear air filters and reset the menu item "Elapsed Time".

Errors

Error in the fixture is signalled by the yellow warning icon at the bottom line of the screen:



Touch the warning icon or press the [ESCAPE] button to display error messages.
List of error and information messages:

Temperature Sensor Error

The message informs you that the communication between the head temperature sensor and the main processor failed.

Tilt Error 1 *(Tilt Error 2)*

This message will appear after the reset of the fixture if the head´s magnetic-indexing circuit malfunctions (sensor failed or magnet is missing) or the stepping motor is defective or its driving IC on the PCB. The head is not located in the default position after the reset.

EEprom Error

Hardware error of the EEprom.

Recharge The battery

The battery on the display board needs to be charged. Let the fixture on about 6 hrs.

Battery faulty. Replace it.

The battery on the display board is exhausted and should be replaced immediately.

Clean Air Filters

The message informs that the item "Elapsed Time" in the "Fixture Information" menu is at 0 value. Clean air filter in the fixture base and reset this counter.

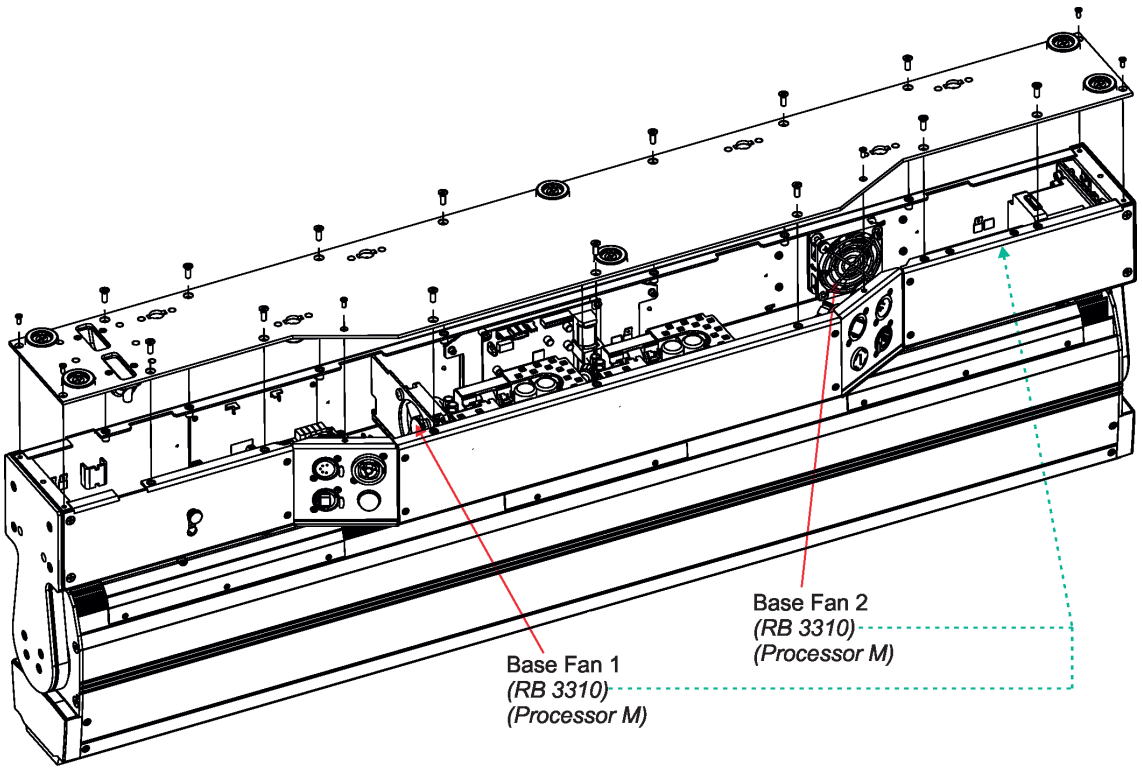
Base Fan 1 - Blackout

The suction fan 1 in the fixture base is disconnected from its control PCB or is faulty and has to be replaced.

Base Fan 2 - Blackout

The exhaust fan 2 in the fixture base is disconnected from its control PCB or is faulty and has to be replaced.

Fans positions in the fixture base:



10. Technical Specifications

Electrical

Power supply: electronic auto-ranging
Input voltage range: 100-240V, 50-60Hz
Fuse: T 8 A
Max. power consumption: 600W (power factor= 0.98)
Mains input: max. 16A (US 13A)
Mains output: max. 12A (US 9A)

Optic

Light source: 18 RGBA LED multichips
RGBA or CMY colour mixing
18 controllable LED multichips (pixels)
LED life expectancy: min. 20.000 hours

Colour effects

Virtual colour wheel (66 preset colours)
Rainbow effect with in both directions with variable speed
CTC in range of 2700K-8000K
Halogen lamp effect at whites 2700K and 3200K

Zoom

Linear motorized zoom can be controlled as one-piece (master)
or divided into to sections (zoom 1, zoom 2)
Min. beam angle: 4°
Max. beam angle:45°

Multi-Coloured Flower Effects

Two Multi-Coloured Flower Effects rotate in both directions at variable speed.

Strobe

Strobe effect with variable speed (0.3 - 20Hz)

Dimmer

Imperceptible 18 bit dimming for ultra smooth fade to black

Control

Graphic touch screen for fixture setting and addressing
Gravitation sensor for auto screen positioning
Battery backup of the touch screen
Readout fixture and LED module usage, receiving DMX values, temperatures, etc
Built-in analyzer for easy fault finding, error messages
Built-in demo sequences
Individual pixel control of each LED
Stand-alone operation
3 user editable programs, each up to 88 steps
Supported protocols: USITT DMX 512, RDM, ArtNet, MANet, MANet2, sACN, Kling-Net
Support of RDM (Remote Device Management)
6 DMX modes (34, 56, 97, 115, 110, 128 control channels)

Wireless DMX/RDM module (only for Wireles DMX version)

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

Tilt

Tilt movement range 191°
Continual pan/tilt rotation
16 bit movement resolution
Automatic Tilt position correction
Remotely controllable speed of tilt movement for easy programming
Tilt-lock mechanism

Connection

DMX data in/out: Locking 5-pin XLR
AC power IN/Out : Neutrik power CON TRUE 1
Ethernet: RJ45

Max. number of fixtures in Ethernet IN/Out line

8

Mounting

Attachment horizontally or vertically via two mounting adaptors
Interlocking of row of the fixtures

Temperatures

Maximum ambient temperature : 40° C
Maximum housing temperature : 70° C

Minimum distances

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

Total heat dissipation

Maximum: 1535 BTU/hr

Protection factor

IP2X

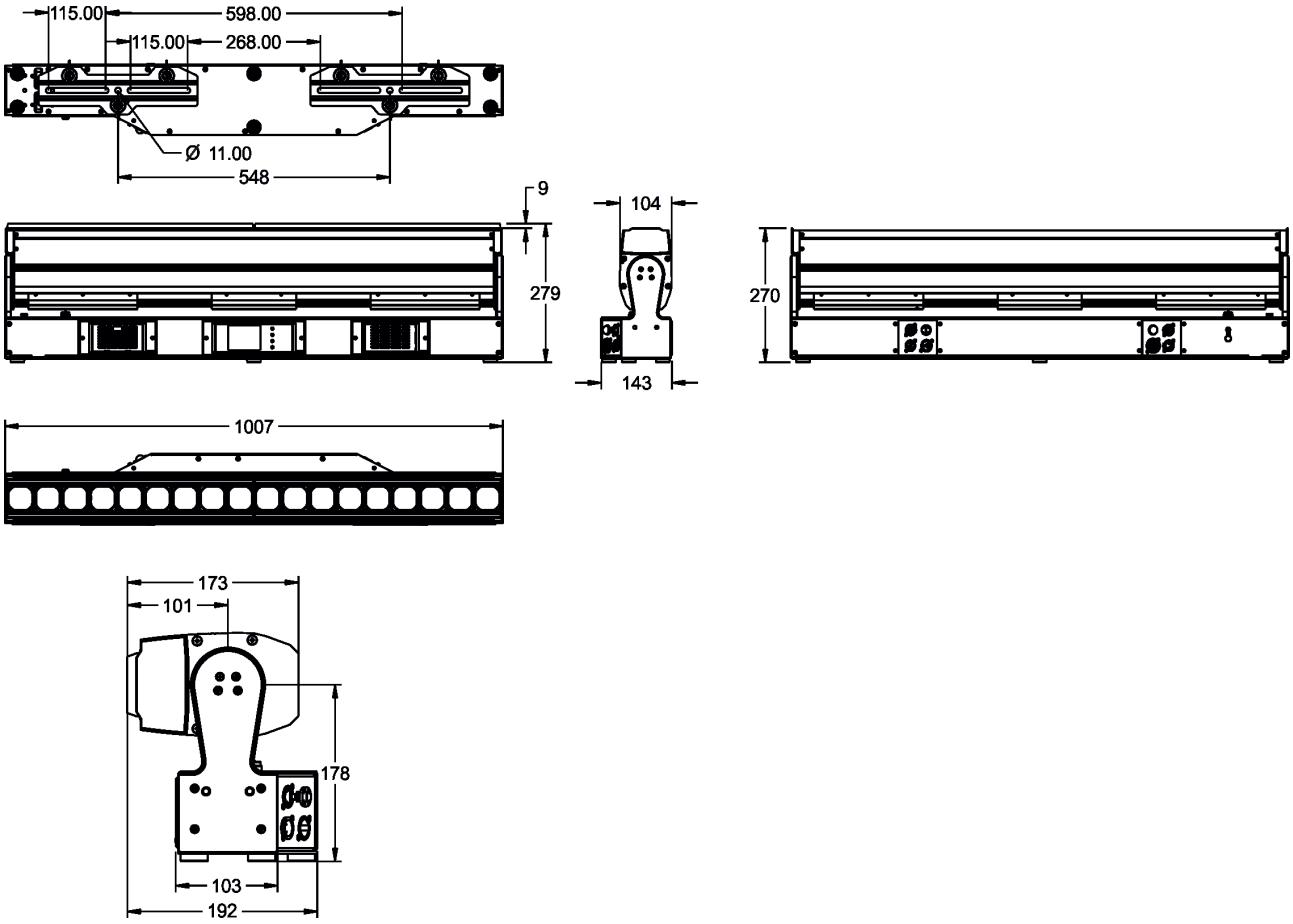
Accessories

1 x Power cable including powerCON TRUE1 In connector
2 x mounting adaptor
1 x user manual

Weight

18.1 kg (39.9 lbs)

Dimensions (mm)



Optional accessories

Upgrade kit CRMX Universal 260 (P/N 99030100)
Safety wire 35 kg (P/N 99011963)
Daisy Chain powerCON TRUE1 In/Out, EU, 2m, Indoor (P/N 13052439)
Daisy Chain powerCON TRUE1 In/Out, US, 2m, Indoor (P/N 13052440)
Daisy Chain powerCON TRUE1 In/Out, EU, 5m, Indoor (P/N 13052444)
Omega Adaptor CL- variable 2pcs in box (P/N 10980550)
Diffuser 2° for Robin Tetra 2 (P/N 10980593)
Clear lens cover Tetra 2 (P/N 10980606)

11. Maintenance and cleaning

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

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

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

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

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

Important! Check the air filter in the fixture base periodically and clean before they become clogged!

Periodically clean air filter placed in the fixture´s base. The air filter cover is fastened by means of magnets. Use a vacuum cleaner, compressed air or you can wash them and put back dry.
After replacing the air filter, reset the elapsed time counter in the menu "Information" (Information--->Air Filters---> Elapsed Time).

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

Checking plastic parts of the fixture.
The plastic parts of the fixture should be checked for damages and beginning cracks at least every two months. If hint of a crack is found on some plastic part, do not use the fixture until the damaged part will be replaced. Cracks or another damages of the plastic parts can be caused by the fixture transportation or manipulation and also ageing process may influence plastic materials.
This checking is necessary for both fixed installations and preparing fixtures for renting. Any free moving parts inside of the fixture, cracked plastic or any plastic part not sitting properly in place need to be immediately replaced.

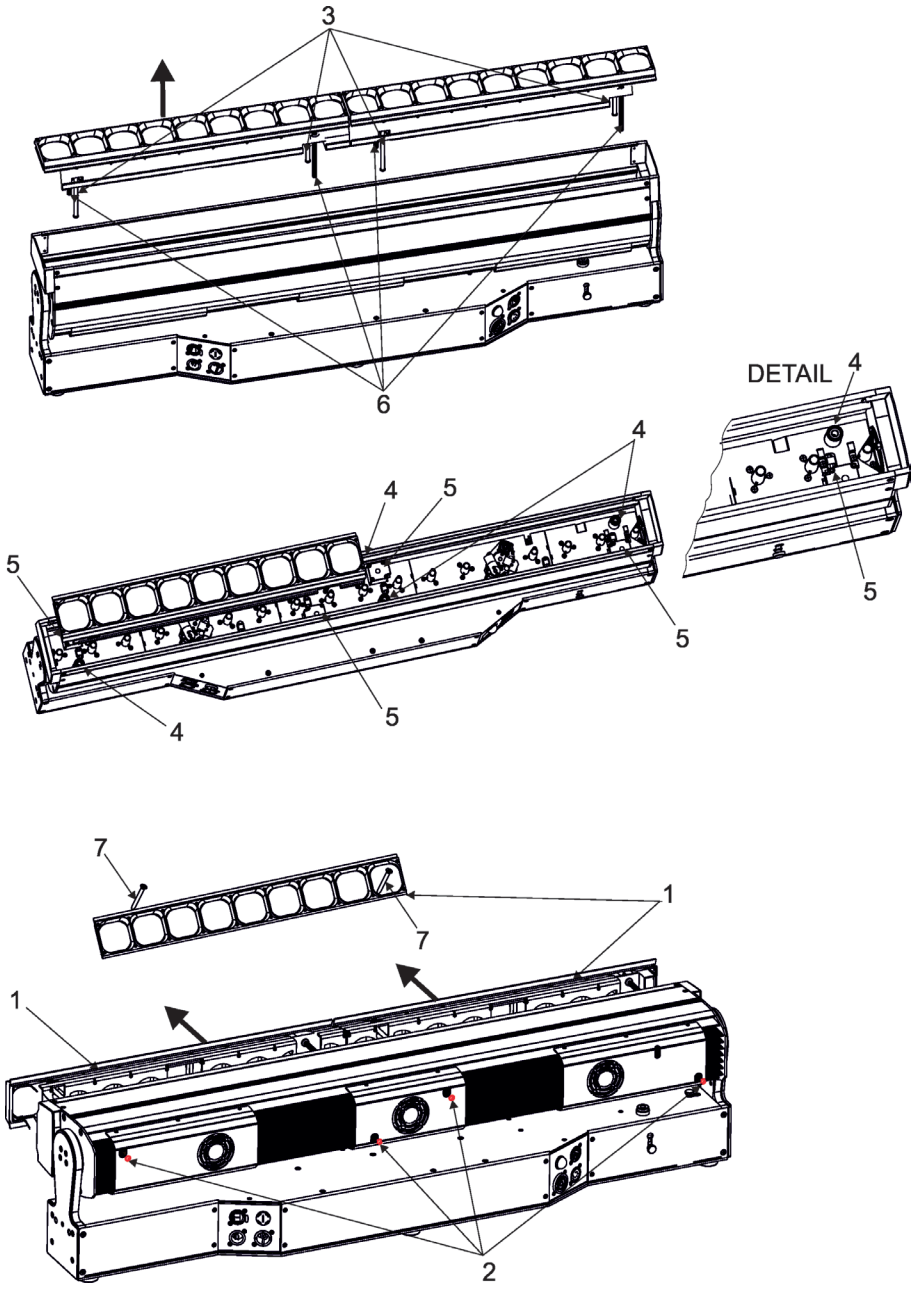
11.1 Removing the optical modules

The following instructions are intended for service purposes only.

To remove the optical module from moving head
1.Connect the fixture to mains and after fixture reset go to the tab Manual Control, select item Master Zoom and set it at 0 DMX (both optical modules (1) have to be slid into the moving head).
2.Disconnect the fixture from mains.
3.Unscrew the four securing screws (2) on the guide-pins (3) which prevent the optical modules from sliding from the moving head. If you do not have access to the securing screws, carefully push the optical modules (1) to the head. **Do not touch the plastic lenses bare hands**!
4. To make easier pulling the optical module (1) out of the moving head, screw two screws M3 (e.g. 30 mm long) (7) to the holes with M3 thread as shown on the picture below. The two screws help you to hold the optical module.
5. Carefully take the optical modules (1) out of the guide-tubes (4) and motors (5).

To insert the optical modules back to the moving head
1. Connect the fixture to mains and after fixture reset go to the tab Manual Control, select item the Tilt and set it at 128 DMX and Master Zoom at 255 DMX.
2. Put one optical module (1) to the head in such a way that two guide-pins (3) aim into guide-tubes (4) and two lead screws (6) aim into motors (5).
3. Hold the optical module (1) in this position and slowly change the item Master Zoom from 255 DMX to 0 DMX. Motors "are pulling" the optical module in the head. I the optical module is not fully pulled into the head, carefully push the optical module into the head until you feel a stop. The optical module has to lay horizontally (it must not be askew).
To check the optical module movement, set the Master Zoom at 255 - 0 DMX a few times. The optical

module has to move smoothly in both directions.
4. Set the Master Zoom at 255 DMX and repeat steps 2 and 3 for the second optical module.
5. Set the Master Zoom at 0 DMX and disconnect the fixture from mains.
6. Screw the four securing screws (2) to the guide-pins (3) to secure optical modules in the moving head.
DO NOT FORGET TO SCREW THE SECURING SCREWS (2) AND TO UNSCREW AUXILIARY SCREWS (7)! BEFORE CONNECTING FIXTURE TO MAINS!



11.2 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.

12. ChangeLog

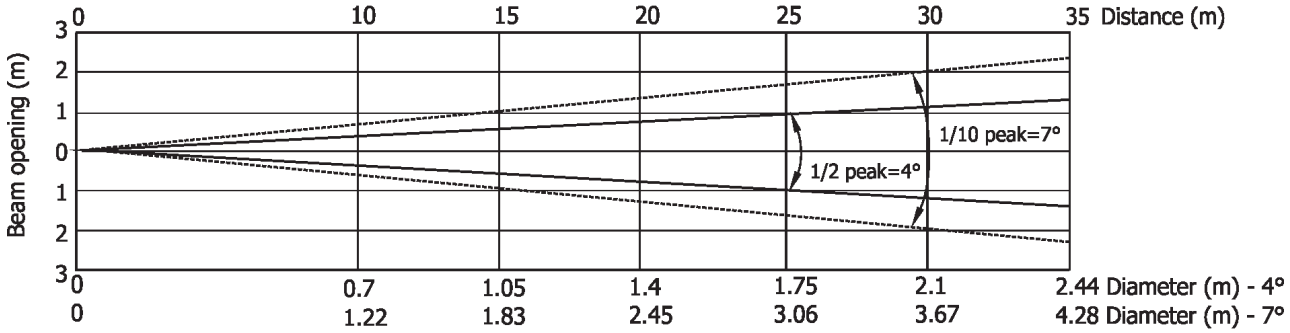
This section summarizes changes in the user manual.

Version of the manual	Date of issue	Description of changes
1.1	20/07/2021	Photometric diagrams added
1.2	28/01/2022	Number of fixtures in Ethernet IN-OUT line changed to 8.
1.3	08/02/2023	Tilt movement range corrected
1.4	02/03/2023	Pixel calibration added

13. Photometric diagrams

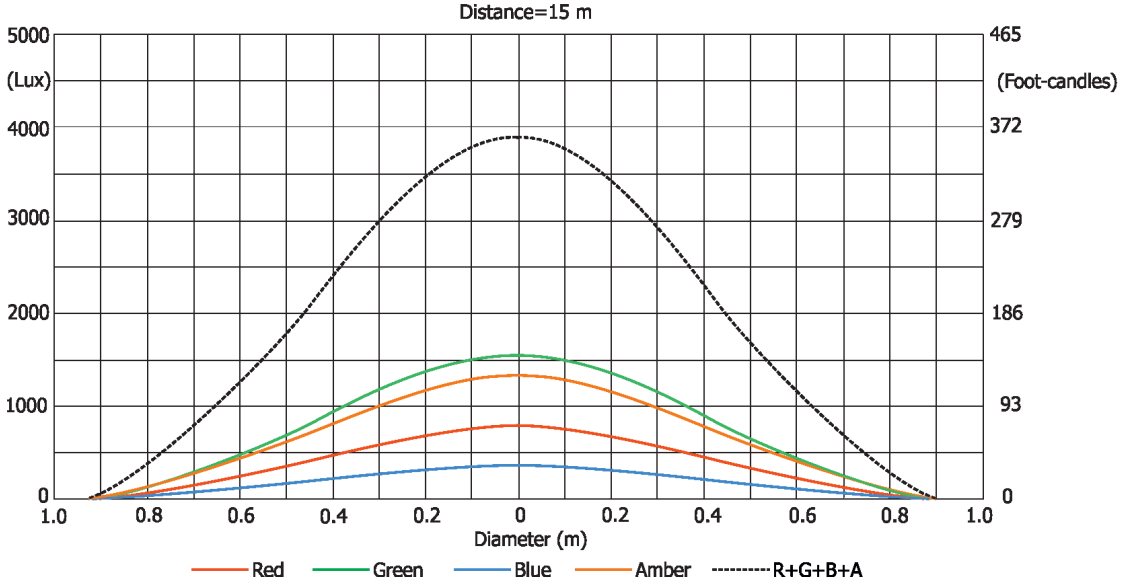
Min. Zoom

Total Output: 4952 lumens



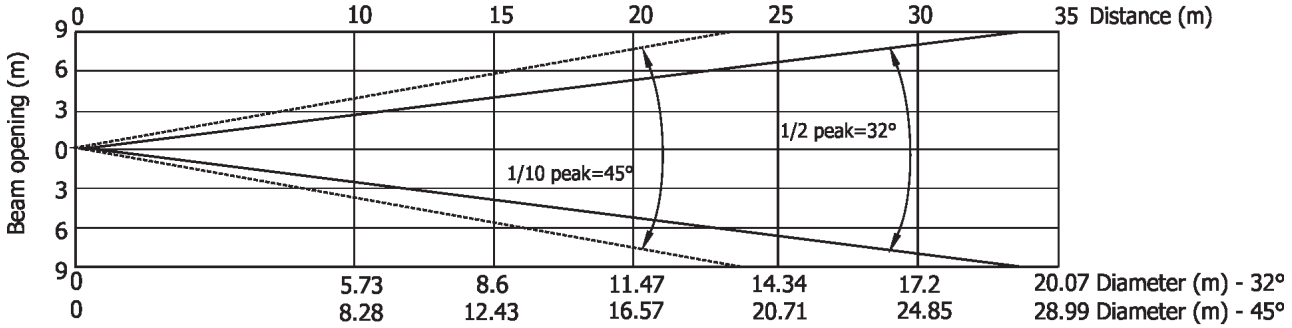
Distance (m)	5	10	15	20	25	30	35	
Red	2430/226	1745/162	776/72	436/41	279/26	194/18	142/13	Intensity (center) Lux/Footcandles
Green	4940/459	3496/325	1554/144	874/81	559/52	388/36	285/27	
Blue	1200/112	846/79	376/35	212/20	135/13	94/8.7	69/6.4	
Amber	4300/400	3061/284	1360/126	765/71	490/45	340/32	250/23	
R+G+B+A	12400/1152	8724/810	3877/360	2181/203	1395/130	969/90	712/66	

Illuminance distribution



Max. Zoom

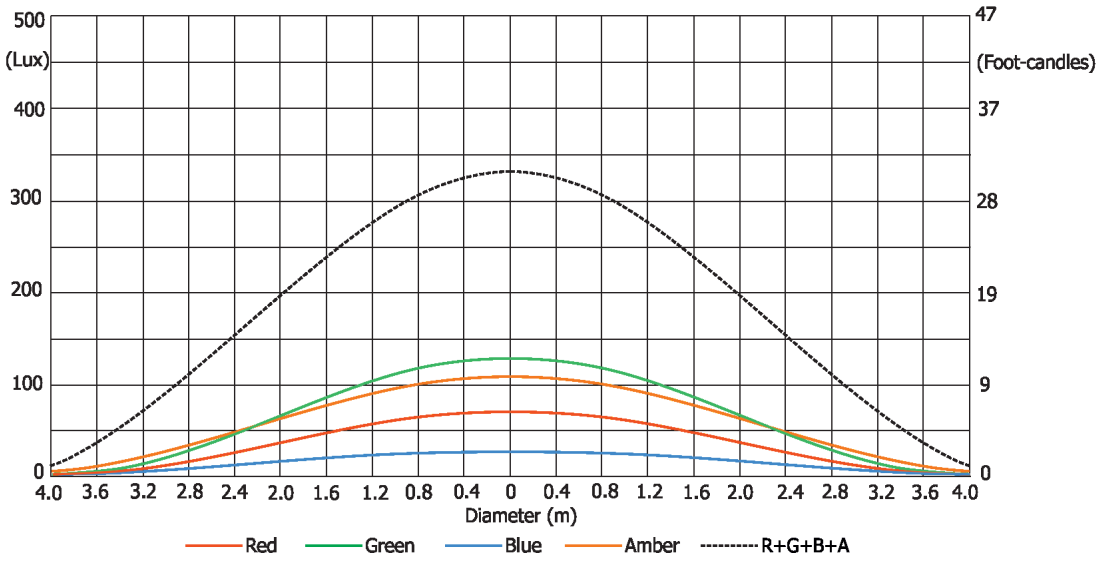
Total Output: 8193 lumens



Distance (m)	5	10	15	20	25	30	35	
Red	291/27	70/6.5	31/2.9	18/1.6	11/1.0	8/0.7	6/0.5	Intensity (center) Lux/Footcandles
Green	509/47	131/12	58/5.4	33/3.0	21/1.9	15/1.4	11/1.0	
Blue	126/11.7	33/3.1	14/1.4	8/0.8	5/0.5	4/0.3	2.7/0.3	
Amber	450/42	114/11	51/5	28/2.6	18/1.7	12/1.2	9/0.9	
R+G+B+A	1310/121	340/32	151/14	85/8	54/5	38/3.5	28/2.6	

Illuminance distribution

Distance=10 m



March 3, 2023
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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

14. Appendix - DMX modes overview

Pixel modes underlined

Mode	DMX Channels	Main Features
Mode 1	34	16-bit tilt Selection of active zone (rings, sectors) 8-bit control of four individual colours (R,G,B,A) and Dimmer Flower effects control Without control of individual pixels.
Mode 2	56	16-bit tilt Selection of active zone (rings, sectors) 16-bit control of four individual colours (R,G,B,A) and Dimmer Pixel patterns control (shape, repeat/size, rotation, transition, fade, crossfade, colour) Flower effects control Without control of individual pixels
Mode 3	97	16-bit tilt Selection of active zone (rings, sectors) 16-bit control of four individual colours (R,G,B,A) and Dimmer Flower effects control Individual control of pixels (R,G,B)
Mode 4	115	16-bit tilt Selection of active zone (rings, sectors) 16-bit control of four individual colours (R,G,B,A) and Dimmer Flower effects control Individual control of pixels (R,G,B,A)
Mode 5	110	16-bit tilt Selection of active zone (rings, sectors) 16-bit control of four individual colours (R,G,B,A) and Dimmer Pixel patterns control (shape, repeat/size, rotation, transition, fade, crossfade, colour) Flower effects control Individual control of pixels (R,G,B)
Mode 6	128	16-bit tilt Selection of active zone (rings, sectors) 16-bit control of four individual colours (R,G,B,A) and Dimmer Pixel patterns control (shape, repeat/size, rotation, transition, fade, crossfade, colour) Flower effects control Individual control of pixels (R,G,B,A)

Tetra2™ RGBA - DMX protocol

Version: 1.1 Mode 1-Wash, Mode 2-Pattern, Mode 3-Pixel RGB, Mode 4-Pixel RGBA, Mode 5-Pattern full RGB, Mode 6-Pattern full RGBA

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
1	**1**	**1**	**1**	**1**	**1**		**Tilt (8 bit)**	
						0 - 255	Tilt movement by 191° (128=default)	proportional
2	**2**	**2**	**2**	**2**	**2**		**Tilt fine (16 bit)**	
						0 - 255	Fine control of tilt movement (0=default)	proportional
3	**3**	**3**	**3**	**3**	**3**		**Tilt speed , Tilt time**	
						0	Standard mode (0=default)	step
						1	Max. Speed Mode	step
							Tilt speed mode	
						2 - 255	Speed from max. to min.	proportional
							Tilt time mode	
						2 - 255	Time from 0.2 s to 25.5 sec.	proportional
4	**4**	**4**	**4**	**4**	**4**		**Power/Special functions**	
						0 -9	Reserved (0=default)	
							To activate following functions, stop in DMX value for at least 3 s and shutter must be closed at least 3 sec. („Master Shutter/Strobe" channel 33/54/41/41/54/54 must be at range: 0-31 DMX). Corresponding menu items are temporarily overriden (unless otherwise stated).	
						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
						30-34	RGBA colour mixing mode	step
						35-39	CMY colour mixing mode	step
						40-44	Tilt speed mode	step
						45-49	Tilt time mode	step
						50-54	Blackout while tilt moving	step
						55-59	Disabled blackout while tilt moving	step
						60-64	Dimmer curve:Square law	step
						65-69	Dimmer curve: Linear	step
						70-74	Fans mode: Auto	step
						75-79	Fans mode: High	step
						80-84	White point 8000K: On	step
						85-89	White point 8000K: Off	step
						90-94	Automatic amber pixel On	step
						95-99	Automatic amber pixel Off	step
						100-104	Quiet mode: Fans On at blackout	step
						105-109	Quiet mode: Fans Off at blackout	step
						110-114	Kling-Net: On	step
						115-119	Kling-Net: Off	step
						120-124	Parking position: On	step
						125-129	Parking position: Off	step
							To activate following functions, stop in DMX value for at least 3 seconds (except Pixel index and Pixel mirror). Corresponding menu items are temporarily overriden.	
						130 - 139	Fixture reset (except pan/tilt)	

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						140 - 149	Tilt reset	step
						150 - 159	Zoom reset	step
						160 - 169	Flower effects reset	step
						170-171	Tungsten effect simulation (750W): On **	step
						172-173	Tungsten effect simulation (1000W): On **	step
						174-175	Tungsten effect simulation (1200W): On **	step
						176-177	Tungsten effect simulation (2000W): On **	step
						178-179	Tungsten effect simulation (2500W): On **	step
						180-181	Tungsten effect simulation: Off	step
						182-199	Reserved	
						200 - 209	Total fixture reset	step
						210-227	Pixel index	proportional
						228-229	Pixel mirror: On	step
						230-231	Pixel mirror: Off	step
						232-236	Reserved	
						237	Save Pixel index and mirror to fixture	step
						238-239	Reserved	
						240	Disabled "Quiet mode"	step
						241 - 255	Quiet mode - fan noise control from min. to max.	proportional
5	**5**	**5**	**5**	**5**	**5**		**LED frequency selection**	
							Factory display menu setting: 300Hz	
							Select PWM output frequency of LEDs. Selected PWM frequency can be fine adjusted in 127 steps up/down around selected PWM frequency on the channel below. Corresponding menu item (Frequency Setup) is temporarily overriden.	
						0-4	PWM frequency from Display menu (fixture utilizes PWM	step
							frequency set in the display menu item Frequency Setup).	
						5-9	300 Hz (5=default)	step
						10-14	Reserved	
						15-19	600 Hz	step
						20-255	Reserved (fixture utilizes PWM frequency set in the display menu item	
							Frequency Setup).	
6	**6**	**6**	**6**	**6**	**6**		**LED frequency fine adjusting**	
							Factory display menu setting: 300Hz	
							Select desired PWM output frequency of LEDs on the channel above.	
						0-121	Selected LED Frequency	step
						122	LED Frequency (step -6)	step
						123	LED Frequency (step -5)	step
						124	LED Frequency (step -4)	
						125	LED Frequency (step -3)	step
						126	LED Frequency (step -2)	step
						127	LED Frequency (step -1)	step
						128	Selected LED Frequency (128=default)	step
						129	LED Frequency (step +1)	step
						130	LED Frequency (step +2)	step
						131	LED Frequency (step +3)	step
						132	LED Frequency (step +4)	
						133	LED Frequency (step +5)	step
						134	LED Frequency (step +6)	step

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						135-255	Selected LED Frequency	step
7	7	7	7	7	7		**Background -Virtual colour wheel**	
						0	No function (0=default)	step
						1-2	Filter 4 (Medium Bastard Amber)	step
						3-4	Filter 25 (Sunset Red)	step
						5-6	Filter 19 (Fire)	step
						7-8	Filter 26 (Bright Red)	step
						9-10	Filter 58 (Lavender)	step
						11-12	Filter 68 (Sky Blue)	step
						13-14	Filter 36 (Medium Pink)	step
						15-16	Filter 89 (Moss Green)	step
						17-18	Filter 88 (Lime Green)	step
						19-20	Filter 90 (Dark Yellow Green)	step
						21-22	Filter 49 (Medium Purple)	step
						23-24	Filter 52 (Light Lavender)	step
						25-26	Filter 102 (Light Amber)	step
						27-28	Filter 103 (Straw)	step
						29-30	Filter 140 (Summer Blue)	step
						31-32	Filter 124 (Dark Green)	step
						33-34	Filter 106 (Primary Red)	step
						35-36	Filter 111 (Dark Pink)	step
						37-38	Filter 115 (Peacock Blue)	step
						39-40	Filter 126 (Mauve)	step
						41-42	Filter 117 (Steel Blue)	step
						43-44	Filter 118 (Light Blue)	step
						45-46	Filter 122 (Fern Green)	step
						47-48	Filter 182 (Light Red)	step
						49-50	Filter 121 (Filter Green)	step
						51-52	Filter 128 (Bright Pink)	step
						53-54	Filter 131 (Marine Blue)	step
						55-56	Filter 132 (Medium Blue)	step
						57-58	Filter 134 (Golden Amber)	step
						59-60	Filter 135 (Deep Golden Amber)	step
						61-62	Filter 136 (Pale Lavender)	step
						63-64	Filter 137 (Special Lavender)	step
						65-66	Filter 138 (Pale Green)	step
						67-68	Filter 798 (Chrysalis Pink)	step
						69-70	Filter 141 (Bright Blue)	step
						71-72	Filter 147 (Apricot)	step
						73-74	Filter 148 (Bright Rose)	step
						75-76	Filter 152 (Pale Gold)	step
						77-78	Filter 154 (Pale Rose)	step
						79-80	Filter 157 (Pink)	step
						81-82	Filter 143 (Pale Navy Blue)	step
						83-84	Filter 162 (Bastard Amber)	step
						85-86	Filter 164 (Flame Red)	step
						87-88	Filter 165 (Daylight Blue)	step
						89-90	Filter 169 (Lilac Tint)	step

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						91-92	Filter 170 (Deep Lavender)	step
						93-94	Filter 172 (Lagoon Blue)	step
						95-96	Filter 194 (Surprise Pink)	step
						97-98	Filter 180 (Dark Lavender)	step
						99-100	Filter 181 (Congo Blue)	step
						101-102	Filter 197 (Alice Blue)	step
						103-104	Filter 201 (Full C.T. Blue)	step
						105-106	Filter 202 (Half C.T. Blue)	step
						107-108	Filter 203 (Quarter C.T. Blue)	step
						109-110	Filter 204 (Full C.T. Orange)	step
						111-112	Filter 219 (Fluorescent Green)	step
						113-114	Filter 206 (Quarter C.T. Orange)	step
						115-116	Filter 247 (Filter Minus Green)	step
						117-118	Filter 248 (Half Minus Green)	step
						119-120	Filter 281 (Three Quarter C.T. Blue)	step
						121-122	Filter 285 (Three Quarter C.T. Orange)	step
						123-124	Filter 352 (Glacier Blue)	step
						125-126	Filter 353 (Lighter Blue)	step
						127-128	Filter 507 (Madge)	step
						129-130	Filter 778 (Millennium Gold)	step
						131-132	Filter 793 (Vanity Fair)	step
						133-235	Raw DMX	proportional
						236-245	Rainbow effect (with fade time) from slow-> fast	proportional
						246-255	Rainbow effect (without fade time) from slow-> fast	proportional
8	**8**	**8**	**8**	**8**	**8**		**Background - Red/Cyan (8 bit)*** **	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	**9**	**9**	**9**	**9**	**9**		**Background - Red/Cyan (16bit)*** **	
						0 - 255	Colour saturation control - fine (255=default)	proportional
9	**10**	**10**	**10**	**10**	**10**		**Background - Green/Magenta (8 bit)*** **	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	**11**	**11**	**11**	**11**	**11**		**Background - Green/Magenta (16bit) *** **	
						0 - 255	Colour saturation control - fine (255=default)	proportional
10	**12**	**12**	**12**	**12**	**12**		**Background - Blue/Yellow (8 bit)*** **	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	**13**	**13**	**13**	**13**	**13**		**Background - Blue/ Yellow (16bit)*** **	
						0 - 255	Colour saturation control - fine (255=default)	proportional
11	**14**	**14**	**14**	**14**	**14**		**Background - Amber (8 bit) - all pixels**	
							If RGBA mode is selected:	
						0-255	Colour saturation control - coarse 0-100% (255=default)	proportional
							If CMY mode is selected:	
						0 - 255	No function	
*	**15**	**15**	**15**	**15**	**15**		**Background - Amber (16 bit) - all pixels**	
						0 - 255	Colour saturation control - fine (255=default)	proportional
12	**16**	**16**	**16**	**16**	**16**		**Background - CTO**	
						0-255	Col. temperature correction from 8000K to 2700K -for whites only	proportional
							(0=8000K, 64=5600K, 128=4200K, 192=3200K, 255=2700K)	

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
							To get colour temperatures stated above, RGBA channels have to be set at the same value (e.g. 255DMX) or RGB=0 and White channel > 0 DMX (0=default)	
							(To activate Tungsten effect at 2700K and 3200K , set DMX value at "Power/Special functions" channel)	
13	**17**	**17**	**17**	**17**	**17**		**Background - Shutter/ strobe**	
						0 - 31	Shutter closed	step
						32 - 63	Shutter open (32=default)	step
						64 - 95	Strobe effect from slow to fast	proportional
						96 - 127	Shutter open	step
						128 - 143	Opening pulse in sequences from slow to fast	proportional
						144 - 159	Closing pulse in sequences from fast to slow	proportional
						160 - 191	Shutter open	step
						192 - 223	Random strobe effect from slow to fast	proportional
						224 - 255	Shutter open	step
14	**18**	**18**	**18**	**18**	**18**		**Background - Dimmer intensity (8 bit)**	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
*	**19**	**19**	**19**	**19**	**19**		**Background Dimmer intensity - fine (16 bit)**	
						0 - 255	Fine dimming (255=default)	proportional
15	**20**	**20**	**20**	**20**	**20**		**Colour Mix control**	
							The channel defines relation between color channels	
							IF Flower effect is active, its colour channels always have priority!	
							Global = Global Colours (RGBA colours, Virtual Colour Wheel, CTO)	
							Pixel = Pixel Colours (RGB individual pixels or Kling-Net)	
						0-9	Global colours (Global has priority)	
						10-19	Maximum mode (highest values have priority)	step
						20-29	Minimum mode (lowest values have priority)	step
						30-39	Multiply mode (multiply Global and Pixel)	step
						40-49	Addition mode (Global + Pixel) (45=default)	step
						50-59	Subtraction mode (Global – Pixel)	step
						60-69	Inverted Subtraction mode (Pixel – Global)	step
						70-79	Coloured background	step
						80-127	Raw DMX	proportional
						128	Global colours only (Global has priority)	step
						129-254	Crossfade (crossfade between Global and Pixel)	proportional
						255	Pixel colours (Pixel has priority)	step
16	**21**	**21**	**21**	**21**	**21**		**Flower Effect 1**	
						0	Open position-without Flower Effect (0=default)	step
						1 - 127	Flower Effect forwards rotation from fast to slow	proportional
						128	Flower Effect -without rotation	step
						129-255	Backwards rotation from slow to fast	proportional
17	**22**	**22**	**22**	**22**	**22**		**Flower Effect 1 - Red/Cyan (8 bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
18	**23**	**23**	**23**	**23**	**23**		**Flower Effect 1 - Green/Magenta (8 bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
19	**24**	**24**	**24**	**24**	**24**		**Flower effect 1 - Blue/Yellow (8 bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
20	**25**	**25**	**25**	**25**	**25**		**Flower Effect 1 - Amber (8 bit)**	

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						0-255	Colour saturation control - coarse 0-100% (255=default)	proportional
21	**26**	**26**	**26**	**26**	**26**		**Flower Effect 1 - Shutter/ strobe**	
						0 - 31	Shutter closed	step
						32 - 63	Shutter open (32=default)	step
						64 - 95	Strobe-effect from slow to fast	proportional
						96 - 127	Shutter open	step
						128 - 143	Opening pulse in sequences from slow to fast	proportional
						144 - 159	Closing pulse in sequences from fast to slow	proportional
						160 - 191	Shutter open	step
						192 - 223	Random strobe-effect from slow to fast	proportional
						224 - 255	Shutter open	step
22	**27**	**27**	**27**	**27**	**27**		**Flower Effect 1 - Dimmer intensity (8 bit)**	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
23	**28**	**28**	**28**	**28**	**28**		**Flower Effect 2**	
						0	Open position-without Flower Effect (0=default)	step
						1 - 127	Flower Effect forwards rotation from fast to slow	proportional
						128	Flower Effect -without rotation	step
						129-255	Backwards rotation from slow to fast	proportional
24	**29**	**29**	**29**	**29**	**29**		**Flower Effect 2 - Red/Cyan (8 bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
25	**30**	**30**	**30**	**30**	**30**		**Flower Effect 2 - Green/Magenta (8 bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
26	**31**	**31**	**31**	**31**	**31**		**Flower effect 2 - Blue/Yellow (8 bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
27	**32**	**32**	**32**	**32**	**32**		**Flower Effect 2 - Amber (8 bit)**	
						0-255	Colour saturation control - coarse 0-100% (255=default)	proportional
28	**33**	**33**	**33**	**33**	**33**		**Flower Effect 2 - Shutter/ strobe**	
						0 - 31	Shutter closed	step
						32 - 63	Shutter open (32=default)	step
						64 - 95	Strobe-effect from slow to fast	proportional
						96 - 127	Shutter open	step
						128 - 143	Opening pulse in sequences from slow to fast	proportional
						144 - 159	Closing pulse in sequences from fast to slow	proportional
						160 - 191	Shutter open	step
						192 - 223	Random strobe-effect from slow to fast	proportional
						224 - 255	Shutter open	step
29	**34**	**34**	**34**	**34**	**34**		**Flower Effect 2 - Dimmer intensity (8 bit)**	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
30	**35**	**35**	**35**	**35**	**35**		**Master Zoom**	
							The relation between Master zoom and Zoom 1/Zoom2 is LTP (Latest Takes Precedence). If you send the change of the zooms within the same DMX frame, the Zoom 1/Zoom 2 will have priority.	
						0-255	Zoom from max. to min.beam angle (128=default)	proportional
*	**36**	**36**	**36**	**36**	**36**		**Master Zoom - fine**	
						0-255	Fine zooming (0=default)	proportional
31	**37**	**37**	**37**	**37**	**37**		**Zoom 1**	
						0-255	Zoom from max. to min.beam angle (128=default)	proportional
*	**38**	**38**	**38**	**38**	**38**		**Zoom 1 - fine**	

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						0-255	Fine zooming (0=default)	proportional
32	**39**	**39**	**39**	**39**	**39**		**Zoom 2**	
						0-255	Zoom from max. to min.beam angle (128=default)	proportional
*	**40**	**40**	**40**	**40**	**40**		**Zoom 2- fine**	
						0-255	Fine zooming (0=default)	proportional
*	**41**	*	*	**41**	**41**		**Pattern selection**	
						0-2	No pattern (0=default)	
						3-4	Pattern 1	step
						5-6	Pattern 2	step
						7-8	Pattern 3	step
						9-10	Pattern 4	step
						11-12	Pattern 5	step
						13-14	Pattern 6	step
						15-16	Pattern 7	step
						17-18	Pattern 8	step
						19-20	Pattern 9	step
						21-22	Pattern 10	step
						23-24	Pattern 11	step
						25-26	Pattern 12	step
						27-255	RAW DMX	proportional
*	**42**	*	*	**42**	**42**		**Pattern - Repeat (Size)**	
						0-2	Variant 1 (0=default)	step
						3-4	Variant 2	step
						5-6	Variant 3	step
						7-8	Variant 4	step
						9-10	Variant 5	step
						11-12	Variant 6	step
						13-14	Variant 7	step
						15-16	Variant 8	step
						17-18	Variant 9	step
						19-20	Variant 10	step
						21-22	Variant 11	step
						23-24	Variant 12	step
						25-26	Variant 13	step
						27-28	Variant 14	step
						29-30	Variant 15	step
						31-32	Variant 16	step
						33-34	Variant 17	step
						35-255	Raw DMX	proportional
*	**43**	*	*	**43**	**43**		**Pattern - Movement**	
						0	No movement	step
						1-127	Pattern movement from fast to slow	proportional
						128	Pause - without movement (128=default)	step
						129-255	Backwards pattern movement from slow to fast	proportional
*	**44**	*	*	**44**	**44**		**Pattern - Fade**	
						0	Snap (0=default)	step
						1-255	Fade from min. to max.	proportional
*	**45**	*	*	**45**	**45**		**Pattern -Transition**	

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						0	No fade (0=default)	step
						1	100ms	step
							:	
						255	4 sec	step
*	**46**	*	*	**46**	**46**		**Pattern - Crossfade**	
						0	Background	step
						1-255	Crossfade between Background and Pattern 0-100% (255=default)	proportional
*	**47**	*	*	**47**	**47**		**Pattern - Red (8-bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	**48**	*	*	**48**	**48**		**Pattern - Green (8-bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	**49**	*	*	**49**	**49**		**Pattern - Blue (8-bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	**50**	*	*	**50**	**50**		**Pattern - Amber (8-bit)**	
						0 - 255	Colour saturation control - coarse 0-100% (255=default)	proportional
*	**51**	*	*	**51**	**51**		**Pattern - Colour macro**	
						0-2	No macro (0=default)	step
							Macros 2-23 allow control of colour change speed from max. to min.	
						3-8	Macro 1	step
						9-14	Macro 2	proportional
						15-20	Macro 3	proportional
						21-26	Macro 4	proportional
						27-32	Macro 5	proportional
						33-38	Macro 6	proportional
						39-44	Macro 7	proportional
						45-50	Macro 8	proportional
						51-56	Macro 9	proportional
						57-62	Macro 10	proportional
						63-68	Macro 11	proportional
						69-74	Macro 12	proportional
						75-80	Macro 13	proportional
						81-86	Macro 14	proportional
						87-92	Macro 15	proportional
						93-98	Macro 16	proportional
						99-104	Macro 17	proportional
						105-110	Macro 18	proportional
						111-116	Macro 19	proportional
						117-122	Macro 20	proportional
						123-128	Macro 21	proportional
						129-134	Macro 22	proportional
						135-140	Macro 23	proportional
						141-255	Raw DMX	proportional
*	**52**	*	*	**52**	**52**		**Pattern - Shutter/ strobe**	
						0 - 31	Shutter closed	step
						32 - 63	Shutter open (32=default)	step
						64 - 95	Strobe effect from slow to fast	proportional
						96 - 127	Shutter open	step

Mode/channel						DMX Value	Function	Type of control
1	2	3	4	5	6			
						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
*	53	*	*	53	53		**Pattern - Dimmer intensity (8 bit)**	
						0 - 255	Dimmer intensity from 0% to 100% (255=default)	proportional
33	54	41	41	54	54		**Master Shutter/ strobe**	
						0 - 31	Shutter closed	step
						32 - 63	Shutter open (32=default)	step
						64 - 95	Strobe effect from slow to fast	proportional
						96 - 127	Shutter open	step
						128 - 143	Opening pulse in sequences from slow to fast	proportional
						144 - 159	Closing pulse in sequences from fast to slow	proportional
						160 - 191	Shutter open	step
						192 - 223	Random strobe effect from slow to fast	proportional
						224 - 255	Shutter open	step
34	55	42	42	55	55		**Master Dimmer intensity (8 bit)**	
						0 - 255	Dimmer intensity from 0% to 100% (0=default)	proportional
*	56	43	43	56	56		**Master Dimmer intensity - fine (16 bit)**	
						0 - 255	Fine dimming (0=default)	proportional
*	*	44	44	57	57		**Red pixel 1**	
						0-255	Red LED saturation control 0-100% (0=default)	proportional
*	*	45	45	58	58		**Green pixel 1**	
						0-255	Green LED saturation control 0-100% (0=default)	proportional
*	*	46	46	59	59		**Blue pixel 1**	
						0-255	Blue LED saturation control 0-100% (0=default)	proportional
*	*	*	47	*	60		**Amber pixel 1**	
						0-255	Amber LED saturation control 0-100% (0=default)	proportional
							:	
*	*	95	112	108	125		**Red pixel 18**	
						0-255	Red LED saturation control 0-100% (0=default)	proportional
*	*	96	113	109	126		**Green pixel 18**	
						0-255	Green LED saturation control 0-100% (0=default)	proportional
*	*	97	114	110	127		**Blue pixel 18**	
						0-255	Blue LED saturation control 0-100% (0=default)	proportional
*	*	*	115	*	128		**Amber pixel 18**	
						0-255	Amber LED saturation control 0-100% (0=default)	proportional

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

** In the Tungsten effect simulation the Dimmer channel imitates behaviour of the halogen lamp during dimming

*** Select RGB or CMY mixing mode on channel "Power/Special functions"

****You can adjust selected frequency in 6 steps Up or Down around selected frequency - see table below.

Default value of PWM frequency set in the fixture is 300 Hz.

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Robin Tetra 1/Tetra 2 RGBA - colours on Virtual Colour Wheel				
Colour name	**Red** (DMX)	**Green** (DMX)	**Blue** (DMX)	**Amber** (DMX)
Filter 4 (Medium Bastard Amber)	162	118	17	0
Filter 25 (Sunset Red)	255	50	0	3
Filter 19 (Fire)	255	13	0	0
Filter 26 (Bright Red)	255	0	0	0
Filter 58 (Lavender)	54	30	40	0
Filter 68 (Sky Blue)	42	195	100	0
Filter 36 (Medium Pink)	214	74	9	0
Filter 89 (Moss Green)	69	245	0	3
Filter 88 (Lime Green)	187	226	0	0
Filter 90 (Dark Yellow Green)	0	255	1	0
Filter 49 (Medium Purple)	255	0	27	0
Filter 52 (Light Lavender)	227	172	45	60
Filter 102 (Light Amber)	233	164	0	0
Filter 103 (Straw)	169	137	7	0
Filter 140 (Summer Blue)	0	144	27	73
Filter 124 (Dark Green)	29	255	0	12
Filter 106 (Primary Red)	242	1	1	0
Filter 111 (Dark Pink)	255	105	26	43
Filter 115 (Peacock Blue)	0	255	29	18
Filter 126 (Mauve)	255	0	39	0
Filter 117 (Steel Blue)	165	255	29	0
Filter 118 (Light Blue)	0	250	54	14
Filter 122 (Fern Green)	98	255	3	2
Filter 182 (Light Red)	255	16	2	0
Filter 121 (Filter Green)	165	255	0	0
Filter 128 (Bright Pink)	255	26	14	0
Filter 131 (Marine Blue)	73	245	26	0
Filter 132 (Medium Blue)	0	193	113	0
Filter 134 (Golden Amber)	191	83	0	0
Filter 135 (Deep Golden Amber)	255	52	0	0
Filter 136 (Pale Lavender)	164	128	32	0
Filter 137 (Special Lavender)	135	112	58	0
Filter 138 (Pale Green)	108	192	11	65
Filter 798 (Chrysalis Pink)	49	0	98	10
Filter 141 (Bright Blue)	8	176	62	0
Filter 147 (Apricot)	215	104	0	13
Filter 148 (Bright Rose)	255	37	12	0
Filter 152 (Pale Gold)	161	112	8	0
Filter 154 (Pale Rose)	166	107	10	0
Filter 157 (Pink)	255	90	15	0
Filter 143 (Pale Navy Blue)	12	193	68	55
Filter 162 (Bastard Amber)	181	150	12	0
Filter 164 (Flame Red)	255	27	0	3
Filter 165 (Daylight Blue)	48	217	72	0
Filter 169 (Lilac Tint)	150	144	20	26
Filter 170 (Deep Lavender)	241	149	48	0
Filter 172 (Lagoon Blue)	0	255	54	0

Colour name	Red (DMX)	Green (DMX)	Blue (DMX)	Amber (DMX)
Filter 194 (Surprise Pink)	164	158	52	0
Filter 180 (Dark Lavender)	88	60	102	19
Filter 181 (Congo Blue)	37	0	255	0
Filter 197 (Alice Blue)	107	220	129	0
Filter 201 (Full C.T. Blue)	141	255	58	34
Filter 202 (Half C.T. Blue)	108	255	46	147
Filter 203 (Quarter C.T. Blue)	236	255	30	3
Filter 204 (Full C.T. Orange)	230	125	3	7
Filter 219 (Fluorescent Green)	101	169	23	0
Filter 206 (Quarter C.T. Orange)	211	184	15	0
Filter 247 (Filter Minus Green)	255	199	35	42
Filter 248 (Half Minus Green)	136	233	35	75
Filter 281 (Three Quarter C.T. Blue)	173	255	69	38
Filter 285 (Three Quarter C.T. Orange)	187	134	7	0
Filter 352 (Glacier Blue)	35	141	48	0
Filter 353 (Lighter Blue)	29	115	35	18
Filter 507 (Madge)	255	31	0	0
Filter 778 (Millennium Gold)	255	65	0	0
Filter 793 (Vanity Fair)	255	21	15	0