VARYTEC

Hero Wash 640FX

moving head

Table of contents

1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under _www.thomann.de_.

1.1 Further information

On our website (_www.thomann.de)_ you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: _[VOLUME]_ control, _[Mono]_ button.

Displays

Texts and values displayed on the device are marked by quotation marks and italics.

Examples: _'24ch'_ , _'OFF'_ .

Cross-references
References to other locations in this manual are identified by an arrow and the speci-fied page number. In the electronic version of the manual, you can click the cross-reference to jump to the specified location.

Example: See ↯ *'Cross-references' on page 6*.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in mate-rial and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – high-voltage.
	Warning – dangerous optical radiation.
	Warning – suspended load.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended for use as a freely moving multifunctional spotlight. The device is designed for professional use and is not suitable for use in households. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Extend the operating life of the device by regular breaks and by avoiding frequent switching on and off. The device is not suitable for continuous operation.

Safety

DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard! Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke! Never let children unattended use electrical devices.

DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device if covers, protectors or optical components are missing or damaged.

DANGER!

Electric shock caused by short-circuit

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.

WARNING!

Eye damage caused by high light intensity

Never look directly into the light source.

WARNING!

Risk of epileptic shock

Strobe lighting can trigger seizures in photosensitive epilepsy. Sensitive persons should avoid looking at strobe lights.

WARNING!

Risk of injury caused by falling objects

Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain. The load capacity of trusses or other fixtures must be sufficient for the intended number of devices. Not that the movement of the head places additional loads on the load-bearing parts.

CAUTION!

Risk of injury due to movements of the device

The head of the device can move quickly (pan, tilt) and can produce very bright light. This is also valid immediately after you turn on the device, when the device operates in automatic mode or under remote control and when you turn off a DMX controller that is connected to the device. Persons staying near the device could be injured or frightened. Before you turn on the device and during the operation, always ensure that nobody stays close to the device. If work has to be performed in the area of movement or in the near vicinity of the device, it must remain turned off.

NOTICE!

Risk of fire

Do not block areas of ventilation. Do not install the device near any direct heat source. Keep the device away from naked flames.

NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations. Only operate the device within the ambient conditions specified in the chapter 'Technical specifications' of this user manual. Avoid heavy temperature fluctuations and do not switch the device on immediately after it was exposed to temperature fluctuations (for example after transport at low outside temperatures). Dust and dirt inside can damage the unit. When operated in harmful ambient conditions (dust, smoke, nicotine, fog, etc.), the unit should be maintained by qualified service personnel at regular intervals to prevent overheating and other malfunction. The device must not be moved during use.

NOTICE!

Power supply

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user. Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

NOTICE!

Possible staining

The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains. In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.

NOTICE!

Risk of overheating

The distance between light output and the illuminated surface must be more than 1.5 m (19.7in). Provide sufficient ventilation. The ambient temperature must always be below 40 °C (104 °F).

NOTICE!

Possible damage due to installation of a wrong fuse

The use of different types of fuses can cause serious damage to the unit. Fire hazard! Only fuses of the same type may be used.

3 Features

Special features of the device:

- 6 four-colour LEDs 4in1 (RGBW, each 40 W)
- 3 segments with each two LEDs separately controllable
- Adjustable beam angle from 4° to 60° with motorised zoom
- Continuous FX rotation
- Adjustable pan and tilt range with selectable start and end point
- Control via DMX (13 or 25 channels) and via buttons and display on the unit
- Built-in automatic show programmes
- Sound control
- Master / Slave mode
- Strobe effect
- Electronic dimmer with four selectable dimmer curves
- Robust metal and plastic housing

For technological reasons, the light output of LEDs decreases over their lifetime. This effect increases with higher operating temperature. You can extend the service life of the illuminants by providing adequate ventilation and operating the LEDs with the lowest possible brightness.

4   Installation

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Lift the device only at the base. When lifted at the rotatable mounting, the device may be damaged.

You can install the device standing or hanging. When in use, the device must be mounted at a solid surface or clamped to an approved truss.

Work from a stable platform whenever you install or move the device or when you perform any kind of maintenance. Block access under the work area.

> **WARNING!**
> **Risk of injury caused by falling objects**
>
> Make sure that the installation complies with the standards and rules that apply in your country. Always secure the device with a secondary safety attachment, such as a safety cable or a safety chain.
>
> The load capacity of trusses or other fixtures must be sufficient for the intended number of devices. Not that the movement of the head places additional loads on the load-bearing parts.

> **NOTICE!**
> **Risk of overheating**
>
> The distance between light output and the illuminated surface must be more than 1.5 m (19.7in).
>
> Provide sufficient ventilation.
>
> The ambient temperature must always be below 40 °C (104 °F).

> **NOTICE!**
> **Possible data transmission errors**
>
> For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.
>
> Never connect the DMX input or output to audio devices such as mixers or amplifiers.

Mounting options
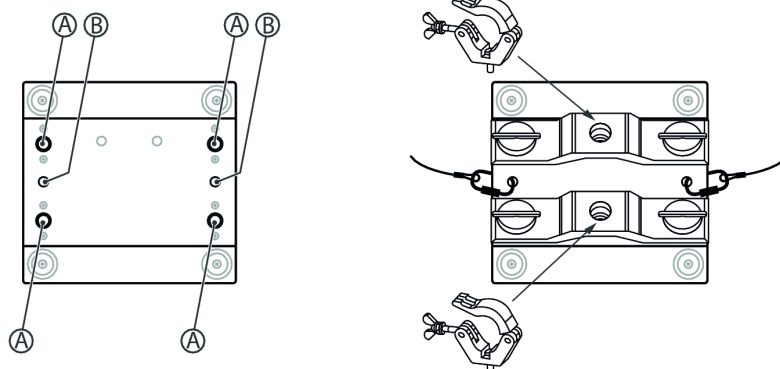
The Quick Lock mounts on the bottom side of the housing (A) allow the secure attachment of the included mounting brackets. There, you can fasten adapters such as half couplers, trigger clamps, c-hooks etc. Safety cables are being threaded through the safety eyelets (B) on the bottom side of the housing.

ⓘ   *Please note that this device must not be connected to a dimmer.*

5   Starting up

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

Connections in DMX mode

Connect the DMX input of the device to the DMX output of a DMX controller or another DMX device. Connect the output of the first DMX device to the input of the second one, and so on to form a daisy chain. Always ensure that the output of the last DMX device in the daisy chain is terminated with a resistor (110 Ω, ¼ W).
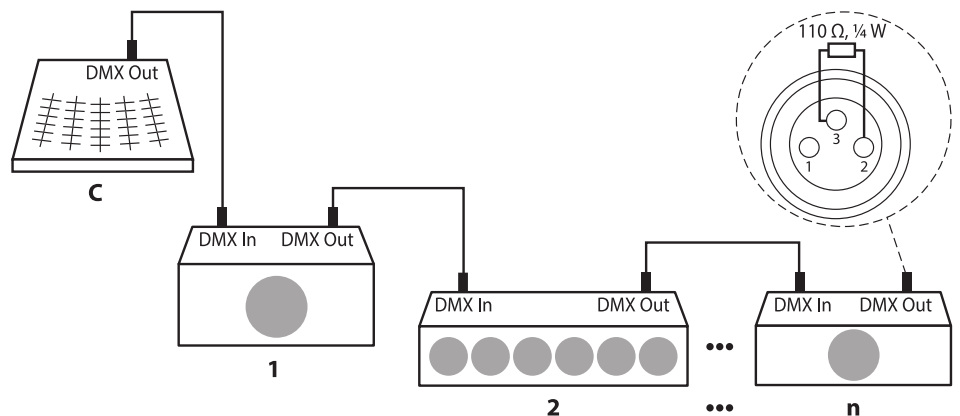
Connections in master/slave mode

When you configure a group of devices in master/slave mode, the first unit will control the other units for an automatic, sound-activated, synchronized show. This function is ideal when you want to start a show immediately. Connect the DMX output of the master device to the DMX input of the first slave device. Then connect the DMX output of the first slave device to the DMX input of the second slave device and so on.

6 Connections and controls
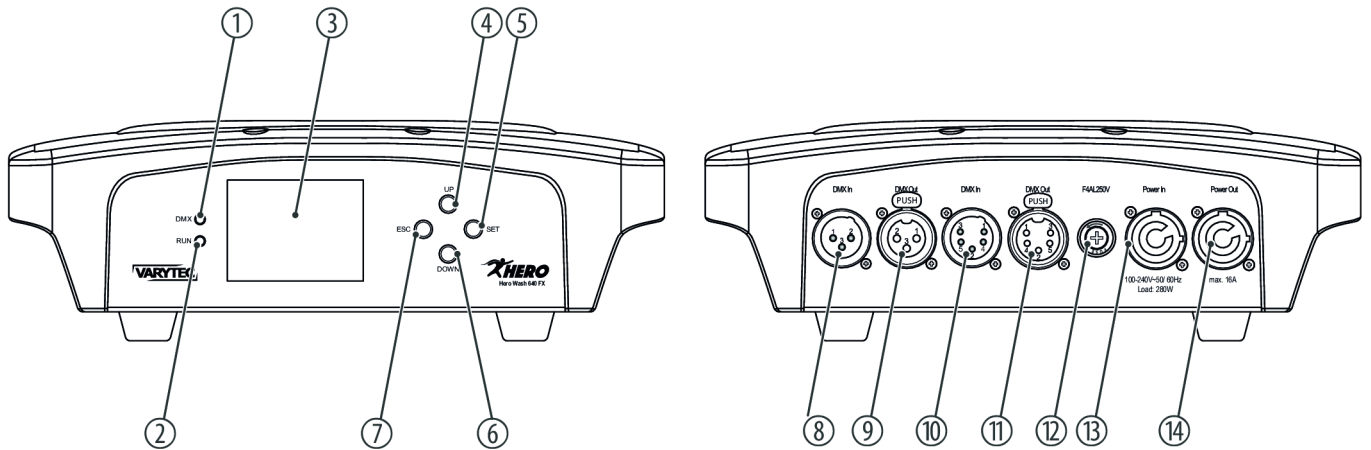
1	*[DMX]*
	LED lights up when the unit is controlled via a DMX controller.
2	*[RUN]*
	LED lights up when the device is in operation.
3	Display
4	*[UP]*
	Increases the displayed value by one.
5	*[SET]*
	Activates the main and settings menu.
	Selects an option of the respective operating mode, confirms the set value.
6	*[DOWN]*
	Decreases the displayed value by one.
7	*[ESC]*
	Closes an open submenu without saving any changes.
8	*[DMX In]*
	DMX input, designed as XLR panel plug, 3-pin
9	*[DMX Out]*
	DMX output, designed as XLR panel socket, 3-pin
10	*[DMX In]*
	DMX input, designed as XLR panel plug, 5-pin

11	*[DMX Out]*
	DMX output, designed as XLR panel socket, 5-pin
12	Fuse holder
13	*[Power In]*
	Lockable input socket (Power Twist) for mains power supply
14	*[Power Out]*
	Lockable output socket (Power Twist) for powering a connected device

7 Operating

7.1 Starting the device

> **⚠ CAUTION!**
>
> **Risk of injury due to movements of the device**
>
> The head of the device can move quickly (pan, tilt) and can produce very bright light. This is also valid immediately after you turn on the device, when the device operates in automatic mode or under remote control and when you turn off a DMX controller that is connected to the device. Persons staying near the device could be injured or frightened.
>
> Before you turn on the device and during the operation, always ensure that nobody stays close to the device. If work has to be performed in the area of movement or in the near vicinity of the device, it must remain turned off.

Connect the device to the power supply to start operation. After a few seconds, the fans start to work, the head moves to the home positions for rotation (pan) and inclination (tilt). After a few more seconds, the display shows *'001'*. The device is now ready for operation.

7.2 Main menu

1. ▸ Press *[SET]* to activate the main menu.

2. ▸ Press *[UP]* or *[DOWN]* to change the respectively indicated value.

3. ▸ When the display shows the desired value press *[SET]*.

4. ▸ To exit a menu item without making changes, press *[ESC]*.

If you don't press any button for 30 seconds the display turns off. Then press *[ESC]*, *[SET]*, *[UP]* or *[DOWN]* briefly to turn it on again.

All previous settings are retained even when you switch the device off and disconnect it from the mains.

Setting the DMX address

Use the *'DMX Address'* menu to set the DMX address. This setting is only relevant if the device is controlled via a DMX controller.

1. ▶ Press *[SET]* to activate the main menu.

2. ▶ Press *[UP]* or *[DOWN]* until the display shows *'DMX Address'* and confirm the selection with *[SET]*.

3. ▶ Press *[UP]* or *[DOWN]* to select a value between 1 and 512 for the desired DMX address (display shows *'001'* … *'512'*) and confirm the selection with *[SET]*.

   Make sure that this number matches the configuration of your DMX controller. The following table shows the respective highest possible DMX address for the various DMX modes.

Mode	Highest possible DMX address
13-channel mode	500
25-channel mode	488

7.3 Operating modes

Use the *'Running Mode'* menu to set the operating modes.

Setting the DMX mode

In this mode the device is controlled via a DMX controller.

1. ▶ Press *[SET]* to activate the main menu.

2. ▶ Press *[UP]* or *[DOWN]* until the display shows *'Running Mode'* and confirm the selection with *[SET]*.

3. ▶ Press *[UP]* or *[DOWN]* to select the desired DMX mode and confirm the selection with *[SET]*.

   The following DMX modes are available:

Menu level 2	Description
'13CH'	13-channel mode
'25CH'	25-channel mode

Auto programmes

In this operating mode you select one of the automatic programmes and adjust the running speed of the automatic programme.

1. ▷ Press *[SET]* to activate the main menu.

2. ▷ Press *[UP]* or *[DOWN]* until the display shows *'Running Mode'* and confirm the selection with *[SET]*.

3. ▷ Press *[UP]* or *[DOWN]* until the display shows *'Auto'* and confirm the selection with *[SET]*.

4. ▷ Press *[UP]* or *[DOWN]* to select the desired submenu or the desired value and confirm the selection with *[SET]*.

The following sub menus are available:

Menu level 3	Menu level 4	Description
'Program 1… Program 8'		Automatic programme 1…8
'Speed'	*'0…100'*	Running speed from slow to fast
'Master Brightness'	*'0…100 %'*	Master brightness

Sound control

In this mode, the unit follows the rhythm of the background music or sounds detected by the built-in microphone.

1. ▷ Press *[SET]* to activate the main menu.

2. ▷ Press *[UP]* or *[DOWN]* until the display shows *'Sound'* and confirm the selection with *[SET]*.

3. ▷ Use *[UP]* or *[DOWN]* to select one of the programmes *'Program 1'* … *'Program 8'* and confirm the selection with *[SET]*.

4. ▷ Use *[UP]* or *[DOWN]* to select a microphone sensitivity between *'Sensitivity 000'* (sound control off) … *'Sensitivity 100'* (high microphone sensitivity) and confirm the selection with *[SET]*.

⇨ The sound control is activated.

Manual control

This setting is only relevant if the device is not controlled via a DMX controller and not working as slave in a master / slave configuration. In this operating mode pan, tilt, zoom, effects and colours can be set.

1. ▶ Press *[SET]* to activate the main menu.

2. ▶ Press *[UP]* or *[DOWN]* until the display shows *'Running Mode'* and confirm the selection with *[SET]*.

3. ▶ Press *[UP]* or *[DOWN]* until the display shows *'Manual Control'* and confirm the selection with *[SET]*.

4. ▶ Press *[UP]* or *[DOWN]* to select the desired submenu or the desired value and confirm the selection with *[SET]*.

The following sub menus are available:

Menu level 3	Menu level 4	Description
'PAN'	*'000…255'*	Adjusts the rotation angle.
'TILT'	*'000…255'*	Adjusts the tilt angle.
'Pan/Tilt Speed'	*'000…255'*	Adjusts the speed of pan and tilt.
'Zoom'	*'000…255'*	Adjusts the initial setting of the light bundling.
'Effect Motor'	*'000…255'*	Adjusts the motor speed of the rotatable lens unit.
'Dimmer'	*'000…255'*	Adjusts the dimmer intensity.
'Strobe'	*'000…255'*	Adjusts the strobe speed.
'Red'	*'000…255'*	Adjusts the intensity for red.
'Green'	*'000…255'*	Adjusts the intensity for green.
'Blue'	*'000…255'*	Adjusts the intensity for blue.
'White'	*'000…255'*	Adjusts the intensity for white.

7.4 Settings

Use the *'Setting'* menu to adjust the device parameters.

1. ▸ Press *[SET]* to activate the main menu.

2. ▸ Press *[UP]* or *[DOWN]* until the display shows *'Setting'* and confirm the selection with *[SET]*.

3. ▸ Press *[UP]* or *[DOWN]* to select the desired submenu or the desired value and confirm the selection with *[SET]*.

The following sub menus are available:

Menu level 2	Menu level 3	Menu level 4	Description
'Pan Reverse'	*'YES'*		Pan reversal in opposite direction of rotation is activated.
	'NO'		Pan reversal in normal direction of rotation is activated.
'Tilt Reverse'	*'YES'*		Tilt reversal in opposite direction of rotation is activated.
	'NO'		Tilt reversal in normal direction of rotation is activated.
'Pan Limit'	*'Starting point'*	*'0…540'*	Sets the starting point of the rotation angle.
	'Ending point'	*'0…540'*	Sets the ending point of the rotation angle.
'Tilt Limit'	*'Starting point'*	*'0…220'*	Sets the starting point of the tilt angle.
	'Ending point'	*'0…220'*	Sets the ending point of the tilt angle.
'Reset Motor'	*'YES'*		Motor reset is triggered.
	'NO'		The motor is not reset.
'Factory Reset'	*'YES'*		The device is reset to factory default settings.
	'NO'		The device settings are not reset.
'Home Position'			Setting the start parameters
			Detailed information about this menu item can be found under ♨ *'Setting the start parameters' on page 22*.
'DMX Fail'	Behaviour on DMX control failure		
	'Hold'		If the DMX control fails, the last setting is retained.

Menu level 2	Menu level 3	Menu level 4	Description
	'Blackout'		If the DMX control fails, the device is blacked out.
	'Auto Mode'		If the DMX control fails, the "Automatic programmes" mode is activated.
	'Manual Control'		If the DMX control fails, manual control is activated on the device.
	'Sound Mode'		If the DMX control fails, the "Sound control" mode is activated.
'Dimmer Curve'	Setting the dimmer curve		
	' Linear'		Linear course
	'Exponential'		Exponential course (Square curve with a flat course at the beginning and a steep course at the end)
	'Logarithmic'		Logarithmic course (Inverted quadratic curve with a steep course at the beginning and a flat course at the end)
	'S Curve'		S-curve shaped course (Non-linear curve with a distinctive flat course at the beginning and end)
'Fan Mode'	Fan setting		
	'Max'		maximum speed
	'Automatic'		auto speed
	'Silent'		low speed possibly with reduced light output (silent operation)
'Blackout'	Blackout		
	'No'		Blackout off
	'If XY run'		Blackout during pan and tilt movements
'PWM'	Pulse-width modulation		
	'650Hz'		650 Hz
	'1530Hz'		1530 Hz

Menu level 2	Menu level 3	Menu level 4	Description
	'3600Hz'		3600 Hz
	'25KHz'		25 kHz
'Auto Correction'	'ON'		Auto correction on pan and tilt activated. The device returns to its starting position if the moving head is unintentionally adjusted.
	'OFF'		Auto-correction of pan and tilt deactivated (not recommended).
'Display Backlight'	'ON'		The display illumination is permanently on.
	'OFF'		The display illumination is switched off after 60 seconds.
'Display Reverse'	'ON'		Display reversal is activated. The display of the device is rotated by 180 °.
	'OFF'		The display reversal is deactivated. The display of the device is in the standard orientation.
'Autolock'	'ON'		The key lock is activated. All buttons have no function after 5 seconds. To cancel the key lock, press *[SET]* for 5 seconds.
	'OFF'		The key lock is deactivated.

Setting the start parameters

1. ▶ Press *[SET]* to activate the main menu.

2. ▶ Press *[UP]* or *[DOWN]* until the display shows *'Setting'* and confirm the selection with *[SET]*.

3. ▶ Press *[UP]* or *[DOWN]* until the display shows *'Home Position'* and confirm the selection with *[SET]*.

   ⇨ The device prompts you to enter a password.

4. ▶ Press *[UP]* or *[DOWN]* until the display shows *'018'* and confirm the selection with *[SET]*.

5. ▶ Use *[UP]* or *[DOWN]* to select the desired parameter to be adjusted and confirm your selection with *[SET]*.

Menu level 3	Menu level 4	Description
'PAN'	*'−128…127'*	Sets the home position of the rotation.
'TILT'	*'−128…127'*	Sets the home position of the inclination movement.
'Focus'	*'−128…127'*	Determines the initial setting for the focus.
'Effect Motor'	*'−128…127'*	Determines the initial setting for the motor of the rotatable lens unit.
'Dimmer'	*'000…255'*	Sets the initial dimmer intensity.
'Red'	*'000…255'*	Sets the initial intensity for red.
'Green'	*'000…255'*	Sets the initial intensity for green.
'Blue'	*'000…255'*	Sets the initial intensity for green.
'White'	*'000…255'*	Sets the initial intensity for white.

7.5 System information

1. ▶ Press *[SET]* to activate the main menu.

2. ▶ Press *[UP]* or *[DOWN]* until the display shows *'System Info'* and confirm the selection with *[ESC]*.

3. ▶ Press *[UP]* or *[DOWN]* to select the desired submenu and confirm the selection with *[ESC]*.

4. ▶ The following sub menus are available:

Menu level 2	Description
'Current Time'	Displays the current running time of the device.
'Total Time'	Displays the total running time of the device.
'LED on Time'	Displays the total running time of the LED.
'Current Mode'	Displays the current operating mode.
'Temperature Head'	Displays the current head temperature.
'Temperature Base'	Displays the current temperature of the device base.
'Software Version'	Displays the current software version.

7.6   Menu overview

DMX Address
- 001
- ⋮
- 512

Running Mode
- DMX 13CH Mode
- DMX 25CH Mode
- Auto
  - Program 1-8
    - 1
    - ⋮
    - 8
  - Speed
    - 00
    - ⋮
    - 100
  - Master Brightness
    - 00
    - 100

Sound
- Program 1
- ⋮
- Program 8
- Sensitivity 000
- Sensitivity 100

Manual Control
- PAN
  - 0
  - ⋮
  - 540
- TILT
  - 0
  - ⋮
  - 220
- Pan/Tilt Speed
  - slow
  - ⋮
  - fast
- Zoom
  - 0
  - ⋮
  - 255
- Effect Motor
  - 0
  - ⋮
  - 255
- Dimmer
  - 0
  - ⋮
  - 255
- Strobe
  - 0
  - ⋮
  - 255
- Red
  - 0
  - ⋮
  - 255
- Green
  - 0
  - ⋮
  - 255
- Blue
  - 0
  - ⋮
  - 255

Setting
- Pan Reverse
  - YES
  - NO
- Tilt Reverse
  - YES
  - NO
- Pan Limit
  - starting point
    - 0
    - ⋮
    - 540
  - Ending point
    - 0
    - ⋮
    - 540
- Tilt Limit
  - starting point
    - 0
    - ⋮
    - 220
  - Ending point
    - 0
    - ⋮
    - 220
- Display Reverse
  - YES
  - NO
- Reset Motor
  - YES
  - NO
- Factory Reset
  - YES
  - NO
- Home Position
  - Password
    - 018
  - PAN
    - 0
    - ⋮
    - 540
  - TILT
    - 0
    - ⋮
    - 220
- Focus
  - 0
  - ⋮
  - 255
- Effect Motor
  - 0
  - ⋮
  - 255
- Dimmer
  - 0
  - ⋮
  - 255
- Red
  - 0
  - ⋮
  - 255
- Green
  - 0
  - ⋮
  - 255
- Blue
  - 0
  - ⋮
  - 255
- White
  - 0
  - ⋮
  - 255
- DMX Fail
  - Hold
  - Blackout
  - Auto Mode
  - Manual Control
  - Sound Mode
- Dimmer Curve
  - Linear
  - Exponential
  - Logarithmic
  - S-Curve

Fan Mode
- Max
- Automatic
- Silent

Blackout
- No
- If XY run

PWM
- 650Hz
- 1530Hz
- 3600Hz
- 12KHz
- 25KHz

AutoCorrection
- ON
- OFF

Display Backlight
- ON
- OFF

Display Reverse
- ON
- OFF

Autolock
- ON
- OFF

System Info
- Current Time
- Total Time
- LED on Time
- Current Mode
- Temperature Head
- Temperature Base
- Software Version

7.7 Functions in 13-channel DMX mode

Channel	Value	Function
1	000…255	Rotation (pan) (0° up to the maximum value of the Pan range)
2	000…255	Inclination (tilt) (0° up to the maximum value of the Tilt area)
3	000…255	Dimmer intensity from dark (0) to bright (255)
4	Stroboscope	
	000…010	Shutter closed
	011…080	Constant ramp up from slow to fast rate (dimming to bright and fast black)
	081…140	Constant ramp down from slow to fast rate (fast bright, dimming to black)
	141…200	Pulse effect from slow to fast rate (dimming up, dimming down)
	201…250	Strobe (regular constant strobing effect, 0.5 … 20 Hz)
	251…255	Shutter open
5	000…255	Intensity red, 0 to 100%
6	000…255	Intensity green, 0 to 100%
7	000…255	Intensity blue, 0 to 100%
8	000…255	Intensity white, 0 % to 100%
9	000…255	Zoom, 0 % to 100%
10	000…099	Static position of the rotatable lens unit (0 to 60 °)
	100…133	Pulsating effect of the rotatable lens unit from small to wide deflection
	134…194	Clockwise rotation, decreasing speed
	195…255	Counter-clockwise rotation, increasing speed
11	000…005	No function
	006…235	Colour macros 1 to 46, overwrites channels 5…8
	236…245	Colour change, increasing speed
	246…255	Slow colour change, increasing speed
12	000…009	No function
	010…255	Automatic zoom program, decreasing speed
13	000…007	No function
	008…032	Pan-Tilt auto programme 1
	033…058	Pan-Tilt auto programme 2
	059…084	Pan-Tilt auto programme 3
	085…110	Pan-Tilt auto programme 4
	111…136	Pan-Tilt auto programme 5

Channel	Value	Function
	137…162	Pan-Tilt auto programme 6
	163…188	Pan-Tilt auto programme 7
	189…214	Pan-Tilt auto programme 8
	215…240	Pan-Tilt auto programme 9
	241…255	Sound control Pan and Tilt

7.8 Functions in 25-channel DMX mode

Channel	Value	Function
1	000…255	Rotation (pan) (0° up to the maximum value of the Pan range)
2	000…255	Fine adjustment rotation (pan)
3	000…255	Inclination (tilt) (0° up to the maximum value of the Tilt area)
4	000…255	Fine adjustment inclination (tilt)
5	000…255	Speed of rotation (pan) and inclination (tilt), fast (0) to slow (255)
6	000…255	Dimmer intensity from dark (0) to bright (255)
7	Stroboscope	
	000…010	Shutter closed
	011…080	Constant ramp up from slow to fast rate (dimming to bright and fast black)
	081…140	Constant ramp down from slow to fast rate (fast bright, dimming to black)
	141…200	Pulse effect from slow to fast rate (dimming up, dimming down)
	201…250	Strobe (regular constant strobing effect, 0.5 … 20 Hz)
	251…255	Shutter open
8	000…255	Intensity red segment 1, 0 % to 100%
9	000…255	Intensity green segment 1, 0 % to 100%
10	000…255	Intensity blue segment 1, 0 % to 100%
11	000…255	Intensity white segment 1, 0 % to 100%
12	000…255	Intensity red segment 2, 0 % to 100%
13	000…255	Intensity green segment 2, 0 % to 100%
14	000…255	Intensity blue segment 2, 0 % to 100%
15	000…255	Intensity white segment 2, 0 % to 100%
16	000…255	Intensity red segment 3, 0 % to 100%

Channel	Value	Function
17	000…255	Intensity green segment 3, 0 % to 100%
18	000…255	Intensity blue segment 3, 0 % to 100%
19	000…255	Intensity white segment 3, 0 % to 100%
20	000…255	Zoom, narrow to wide
21	000…099	Static position of the rotatable lens unit (0 to 60 °)
	100…133	Pulsating effect of the rotatable lens unit from small to wide deflection
	134…194	Clockwise rotation, decreasing speed
	195…255	Counter-clockwise rotation, increasing speed
22	000…005	No function
	006…235	Colour macros 1 to 46
	236…245	Colour change, increasing speed
	246…255	Colour change with fading, increasing speed
23	000…009	No function
	010…255	Automatic zoom program, decreasing speed
24	000…007	No function
	008…032	Pan-Tilt auto programme 1
	033…058	Pan-Tilt auto programme 2
	059…084	Pan-Tilt auto programme 3
	085…110	Pan-Tilt auto programme 4
	111…136	Pan-Tilt auto programme 5
	137…162	Pan-Tilt auto programme 6
	163…188	Pan-Tilt auto programme 7
	189…214	Pan-Tilt auto programme 8
	215…240	Pan-Tilt auto programme 9
	241…255	Sound control Pan and Tilt
25	000…189	No function
	190…210	Reset, if the value is transmitted for at least 10 seconds
	211…255	No function

7.9 Colour macros

Colour macro	Colour mixture R/G/B/W		Colour macro	Colour mixture R/G/B/W
1	255/0/0/0		24	50/0/255/0
2	255/15/0/0		25	95/0/255/0
3	255/35/0/ 0		26	130/0/255/0
4	255/70/0/0		27	190/0/255/0
5	255/125/0/0		28	225/0/255/0
6	255/170/0/0		29	255/0/255/0
7	255/210/0/0		30	255/0/220/0
8	255/255/0/0		31	255/0/170/0
9	200/255/0/0		32	255/0/95/0
10	160/255/0/0		33	255/0/70/0
11	110/255/0/0		34	0/0/40/0
12	70/255/0/0		35	255/0/20/0
13	0/255/0/0		36	255/0/7/0
14	0/255/10/0		37	0/0/0/255
15	0/255/25/0		38	255/0/0/255
16	0/255/45/0		39	125/0/0/255
17	0/255/70/0		40	0/255/0/255
18	0/255/120/0		41	0/120/0/255
19	0/255/255/0		42	0/0/255/255
20	0/180/255/0		43	0/0/100/255
21	0/70/255/0		44	0/0/50/255
22	0/0/255/0		45	198/145/15/0
23	20/0/255/0		46	198/145/17/255

8   Technical specifications
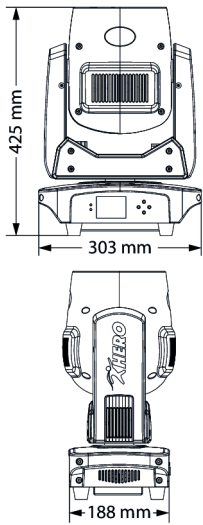
Light source		6 × RGBW 4-in-1 LED, 40 W
Optical properties	Beam angle	4°…60°, adjustable via motorised zoom
	Light output	16,000 lux @ 5m (4°)
Rotation angle (pan), max.		540°
Inclination angle (tilt), max.		220°
Control protocols	DMX512	
Control	DMX	
	Buttons and display	
Number of DMX channels		13, 25
Input connections	Voltage supply	Lockable input socket (Power twist)
	DMX control	XLR chassis plug, 3-pin
		XLR chassis plug, 5-pin
Output connections	Voltage supply	Lockable output socket (Power Twist) for powering further devices
	DMX control	XLR chassis socket, 3-pin
		XLR chassis socket, 5-pin
Power consumption		280 W
Operating supply voltage		100 – 240 V ∼ 50/60 Hz
Fuse		5 mm × 20 mm, 4 A, 250 V, fast-acting
Protection class		IP20
Dimensions (W × H × D)		303 mm × 425 mm × 188 mm
Weight		11 kg
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	50 %, non-condensing

Further information

Illuminant type	LED
Light output	240 W
Colour mixture	RGBW
Motorized focus	No
Motorized zoom	Yes
Static gobos	No
Rotating gobos	No
Iris	No
Prism	No

9 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment so that a perfect light experience is guaranteed.

Please take our tips, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into a socket, the result of an incorrect connection may be a destroyed DMX controller, a short circuit or 'just' a not working light show!
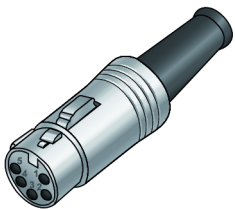
DMX connections

The unit offers a 3-pin XLR socket for DMX output and a 3-pin XLR plug for DMX input. Please refer to the drawing and table below for the pin assignment of a suitable XLR plug.

Pin	Configuration
1	Ground, shielding
2	Signal inverted (DMX−, 'cold signal')
3	Signal (DMX+, 'hot signal')

DMX connections

A five-pin XLR socket serves as DMX output, a five-pin XLR plug serves as DMX input. The drawing below and the table show the pin assignment of a matching coupling.

Pin	Assignment
1	Ground (shielding)
2	Signal inverted (DMX−, 'cold')
3	Signal (DMX+, 'hot')
4	unused / second connection (DMX−)
5	unused / second connection (DMX+)

10   Troubleshooting

> **!** **NOTICE!**
> **Possible data transmission errors**
>
> For error-free operation make use of dedicated DMX cables and do not use ordinary microphone cables.
>
> Never connect the DMX input or output to audio devices such as mixers or amplifiers.

In the following we list a few common problems that may occur during operation. We give you some suggestions for easy troubleshooting:

Symptom	Remedy
The unit does not work, no light, the fan does not run	Check the mains power connection and the main fuse.
No response to the DMX controller	1. The DMX indicator should light up. If it doesn't, check DMX connectors and cables for proper connection.
	2. If the DMX indicator lights up but with no response, check the address settings and DMX polarity.
	3. Try using another DMX controller.
	4. Check whether the DMX cables lie near or adjacent to high voltage cables, which could cause damage or interference with a DMX interface circuit.

If the procedures recommended above do not succeed, please contact our Service Center. You can find the contact information at *www.thomann.de*.

11 Cleaning

Optical lenses

Clean the optical lenses, that are accessible from the outside, regularly in order to optimize the light output. The frequency of cleaning depends on the operating environment: wet, smoky or particularly dirty surroundings can cause more accumulation of dirt on the optics of the device.

- Clean with a soft cloth using our lamp and lens cleaner (item no. 280122).
- Always dry the parts carefully.

Fan grids

The fan grids of the device must be cleaned of any contamination, such as dust, etc. on a regular basis. Before cleaning, switch off the device and disconnect mains-operated devices from the mains. Only use pH-neutral, solvent-free and non-abrasive cleaning agents. Clean the unit with a slightly damp lint-free cloth.

12 Protecting the environment

Disposal of the packaging material

For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of your old device

This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.