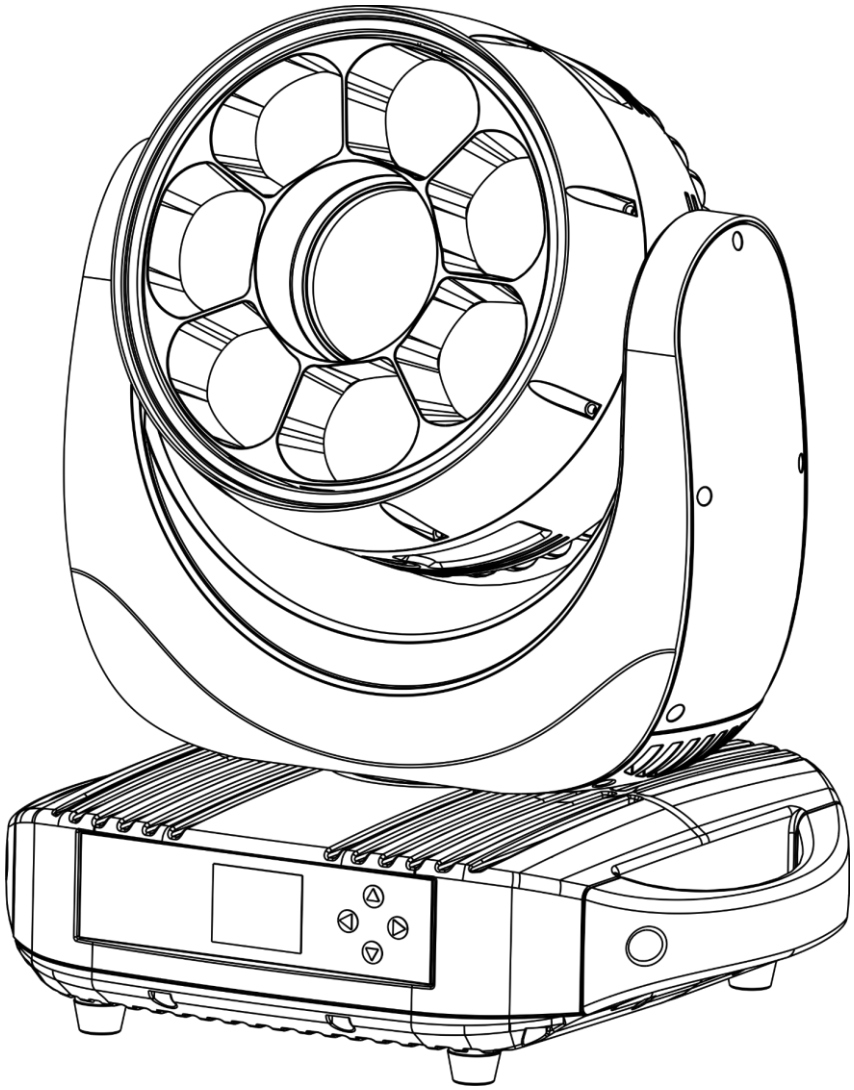
MANUAL



ENGLISH

Polar 340 WashFX IP65 Moving Head V1

Order code: 40101

Table of contents

Warning 3
Safety Instructions 3
Operating Determinations 5
Rigging 5
Connection with the Mains 7
Return Procedure 7
Claims 7

Description of the Device 8
Features 8
Photometric Diagrams 9
Front View 10
Back View 10
Base Plate 11

Installation 11

Setup and Operation 11
Control Modes 11
One Polar (Auto Program, Custom Programs) 11
One Polar (Manual) 12
Multiple Polars (Master/Slave Control) 12
Multiple Polars (DMX/RDM Control) 13
Multiple Polars (Art-Net/sACN Control) 14
Multiple Polars (Wireless DMX Control) 15
Connect the Polar to the Wireless DMX Signal Transmitter 16
Disconnect the Polar from the Wireless DMX Signal Transmitter 16
Connecting to a Network 17
Art-Net Settings 17
sACN Settings 17
How to Make a Data Cable 18
Fixture Linking 19
Data Cabling 19
Control Panel 20
DMX Addressing 20
Menu Overview 21
Start-up 25
No Reset Start-up 25
Main Menu Options 26
1. DMX Address 26
2. Person (DMX Channel Modes) 26
3. Run Mode 27
4. Option 27
4.1. LED PWM 28
4.2. Display Lock 28
4.3. Settings 29
4.3.1. Recovery 29
4.3.2. Clean Edit 1 29
4.3.3. Clean Edit 2 29
4.3.4. WDMX Hide 29
4.4. Network 29
4.4.1. IP Mode 30
4.4.2. Custom IP 30
4.5. Signal 30
5. Edit 31
6. Manual 32
6.1. Auto Test 32

6.2. Channel....33
6.3. Reset....34
7. Info....34
7.1. System Error....35
8. Service....35
8.1. CCT (Correlated Color Temperature Control)....36
DMX Channels....37
SSP (25 channels), TOUR (30 channels), TR16 (37 channels)....37
HSIC (27 channels), CMY (31 channels), PIXEL (52 channels)....43

Maintenance....50
Replacing the Fuse....50
Draining Condensation Water....50

Troubleshooting....51
No Light....51
No Response to DMX....51

Product Specifications....53

Dimensions....54

Warning

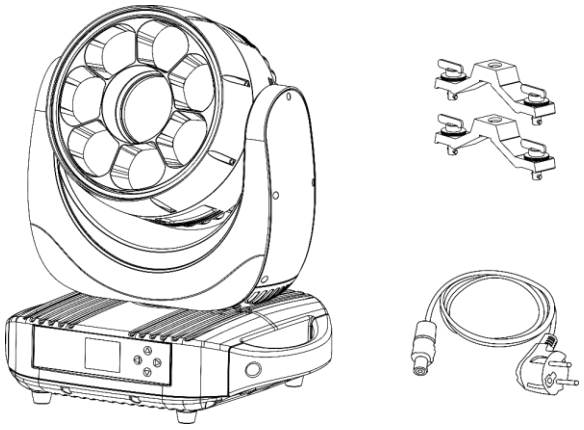
For your own safety, please read this user manual carefully before your initial start-up!

Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture will be returned in the original factory box and packing.

Your shipment includes:

- Showtec Polar 340 WashFX IP65 Moving Head
- Schuko to PowerCON True1 power cable (1,5 m)
- 2 x quick-lock brackets
- User manual



LED Expected Lifespan

LEDs gradually decline in brightness over time. HEAT is the dominant factor that leads to the acceleration of this decline. Packaged in clusters, LEDs exhibit higher operating temperatures than in ideal or singular optimum conditions. For this reason, when all color LEDs are used at their fullest intensity, life of the LEDs is significantly reduced. If improving the lifespan is of higher priority, place care in providing for lower operational temperatures. This may include climatic-environmental and the reduction of overall projection intensity.

Safety Instructions

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual

CAUTION! Be careful with your operations. With a dangerous voltage you can suffer a dangerous electric shock when touching the wires!

Before the initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes contained in this manual.

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

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

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.

- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution!
- Never modify, bend, mechanically strain, put pressure on, pull or heat up the power cord.
- Never strain the cable. There must always be sufficient cable going to the device. Otherwise, the cable will be damaged, which can cause serious damage.
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never lift the device holding it by the projector head, as the mechanics may be damaged. Always hold the device by the transport handles.
- Never place any material over the LEDs or lens.
- Never look directly into the light source.
- Never leave any cables lying around.
- Never use the device during thunderstorms, unplug the device immediately.
- Never leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach, as they are potential sources of danger.
- Do not insert objects into air vents.
- Do not open the device and do not modify the device.
- Do not connect this device to a dimmer pack.
- Do not switch the device on and off in short intervals, as this will reduce the device's life.
- Do not touch the device's housing bare-handed during its operation (housing becomes very hot). Allow the device to cool for at least 5 minutes before handling.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only operate the device after having checked if the housing is firmly closed and all screws are tightly fastened.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- Always allow a free air space of at least 1,3 m around the unit for ventilation.
- Always disconnect power from the mains, when device is not used or before cleaning! Only handle the power cord holding it by the plug. Never pull out the plug by tugging the power cord.
- Make sure that the device is not exposed to extreme heat or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power cord is never crimped or damaged. Check the device and the power cord from time to time.
- Make sure that the core diameter of extension cords and power cords is sufficient for the required power consumption of the device.
- If the lens or LEDs are obviously damaged, they need to be replaced to prevent their functions from being impaired, due to cracks or deep scratches.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- If device was dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- 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.
- If your Showtec device fails to work properly, discontinue the use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. The device must be installed beyond the reach of children. Never leave the unit running unattended.
- Never attempt to bypass the thermostatic switch or fuses.
- For replacement use fuses of same type and rating only.
- The user is responsible for correct positioning and operating of the device. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

CAUTION! Eyedamages!!!
Avoid looking directly into the lightsource!!!
(meant especially for epileptics)!!!

Operating Determinations

- This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.
- The minimum distance between light output and the illuminated surface must be bigger than 1,3 m.
- To eliminate wear and improve lifespan, during periods of non-use, completely disconnect from power via breaker or by unplugging.
- The minimum ambient temperature t_a = -5 °C and the maximum ambient temperature t_a = 40 °C must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C.
- If this device is operated in any other way than the one described in this manual, the product may suffer damages and the warranty becomes void.
- Any other operation may lead to dangers like short-circuit, burns, electric shock, crash, etc.

You endanger your own safety and the safety of others!

Rigging

Please follow the European and national guidelines concerning rigging, trussing and all other safety issues.

Do not attempt the installation yourself!
Always let the installation be carried out by an authorized dealer!

Procedure:

- If the Polar is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use clamps to mount the Polar with the mounting brackets to the trussing system.
- The Polar must never be fixed swinging freely in the room.
- The installation must always be secured with a safety attachment, e.g. an appropriate safety net or safety cable.
- When rigging, derigging or servicing the Polar, always make sure, that the area below the installation site is secured and that there are not any unauthorized people around.

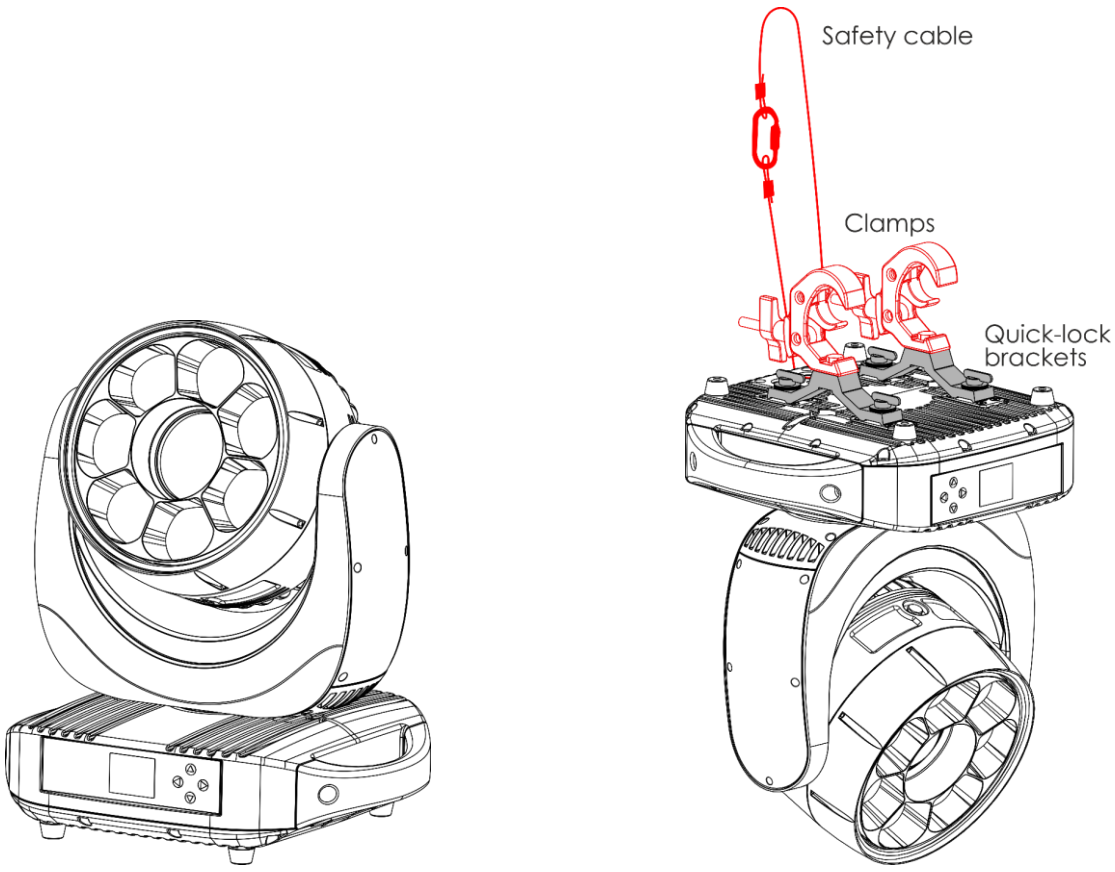


Fig. 01

The Polar can be placed on a flat stage floor or mounted to any kind of truss with quick-lock brackets and clamps (see Fig. 01).

The quick-lock brackets can be positioned on the base of the Polar in two ways, as shown on Fig. 02.

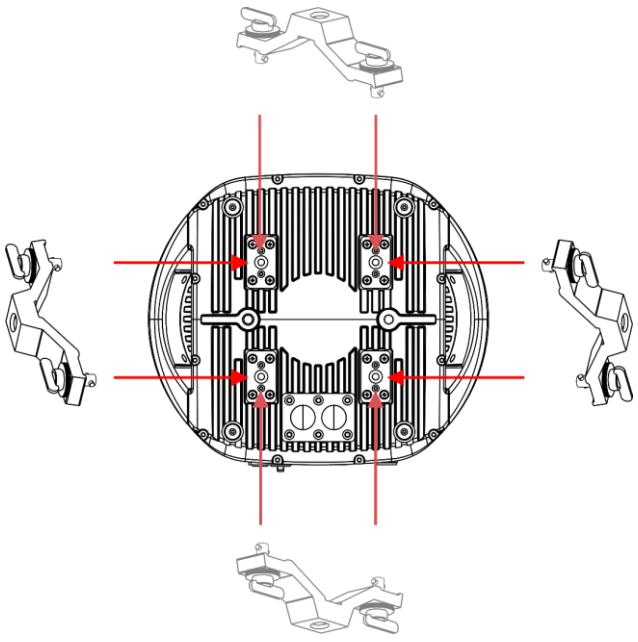


Fig. 02

Improper installation can cause serious injuries and/or damage of property!

Connection with the Mains

Connect the device to the mains with the power plug.
Always check if the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	PHASE
N	BLUE	BLACK	SILVER	NEUTRAL
⏚	YELLOW/GREEN	GREEN	GREEN	PROTECTIVE GROUND

Make sure that the device is always properly connected to the earth!

Improper installation can cause serious injuries and/or damage of property!

Return Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.com and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:

01) Your name
02) Your address
03) Your phone number
04) A brief description of the symptoms

Claims

The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.
It is the customer's responsibility to report and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.
Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless agreed otherwise in writing.
Complaints against us must be prepared in writing or sent by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.
Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement from which the obligation is resulting.

Description of the Device

Features

The Polar 340 WashFX is a versatile wash moving head suitable for outdoor venues. It features pixel control and a separate LED ring with creative effects.

- Input voltage: 100–240 V AC, 50/60 Hz (auto-ranging)
- Power consumption: 350 W (max)
- Light source: 7 LED modules x 40 W (RGBW) and 1 LED module x 60 W (RGBW)
- Light output: 300000 Lux @ 1 m (4,5°); 15000 Lux @ 1 m (35°)
- Dimmer: 0–100 % (16 bit)
- Strobe: 0–25 Hz
- Zoom range: 4,5°–35°
- Control protocol: DMX-512, Art-Net, sACN, RDM, W-DMX
- Control personality: HSIC (27 channels), SSP (25 channels), Tour (30 channels), TR16 (37 channels), Pixel (52 channels), CMY (31 channels)
- Pan: 0°–540°
- Tilt: 0°–270°
- Pan/Tilt resolution: 8–16 bit
- Special: Pan/Tilt movement blackout, user selectable Pan/Tilt ranges, reverse Pan/Tilt movement
- Control modes: Stand alone, Manual, Master/Slave, DMX-512/RDM, Art-Net/sACN, W-DMX
- Prism: 8-facet prism
- Prism functions: Bidirectional rotation, adjustable speed
- Display: LCD, battery-powered
- Housing: Die-cast aluminum
- Color: Black
- Cooling: Forced convection
- IP rating: IP-65
- Connections: IP-65 rated power connector True1 IN, IP-65 rated 5-pin DMX IN/OUT connectors, 2 x IP-65 rated RJ45 connectors
- Fuse: T6,3 A/250 V
- Dimensions: 489 x 416 x 356 mm (L x W x H)
- Weight: 23,24 kg

Photometric Diagrams

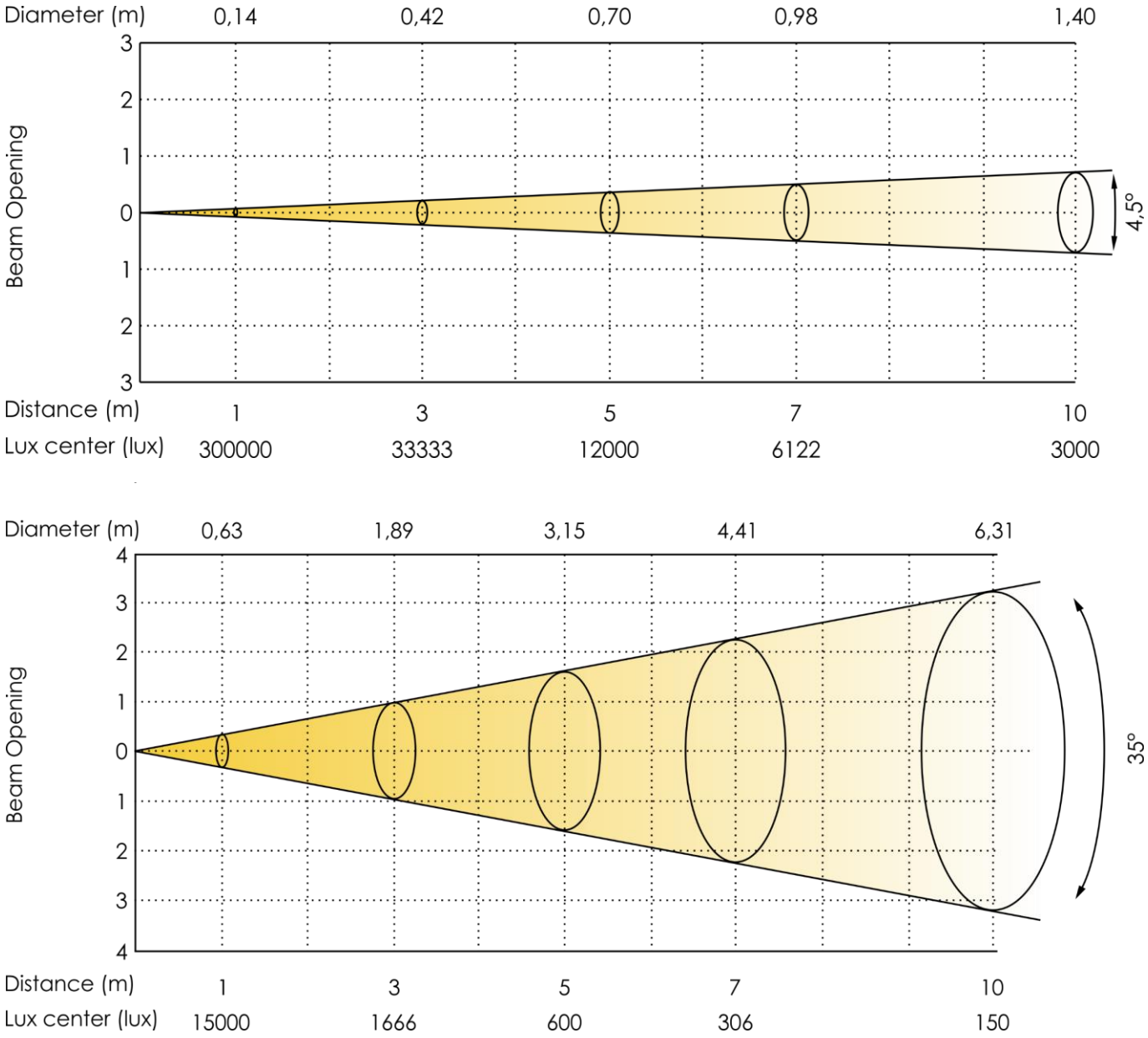


Fig. 03

Front View

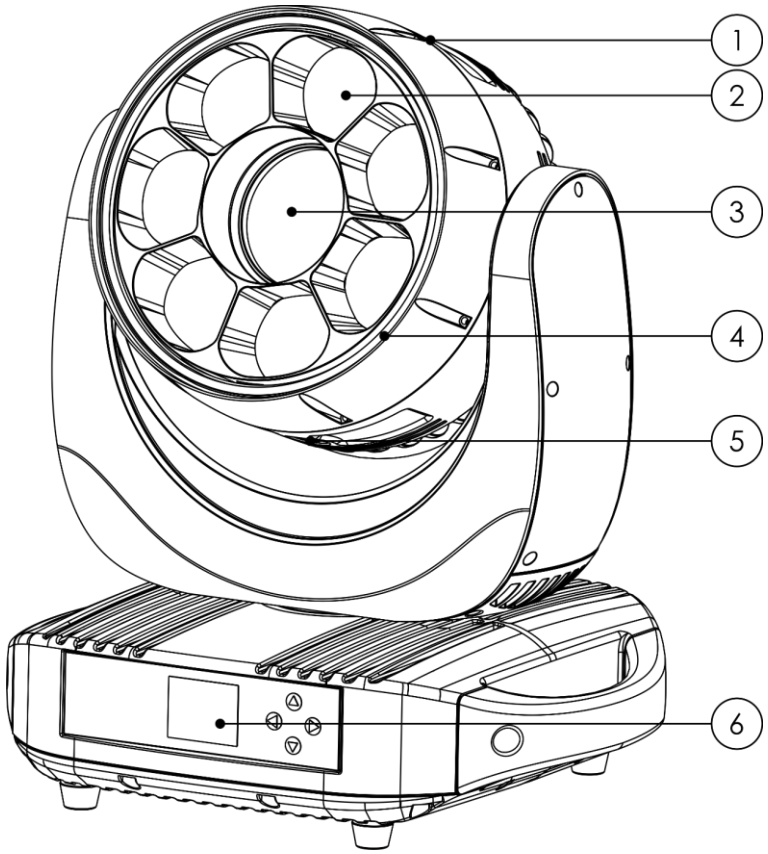


Fig. 04

01) Water drainage plug
02) 7 peripheral (Beam) LED modules x 40 W (RGBW)
03) 1 center LED module x 60 W (RGBW)
04) LED ring
05) M12 GORE® valve
06) Control panel: LCD display and control buttons

Back View

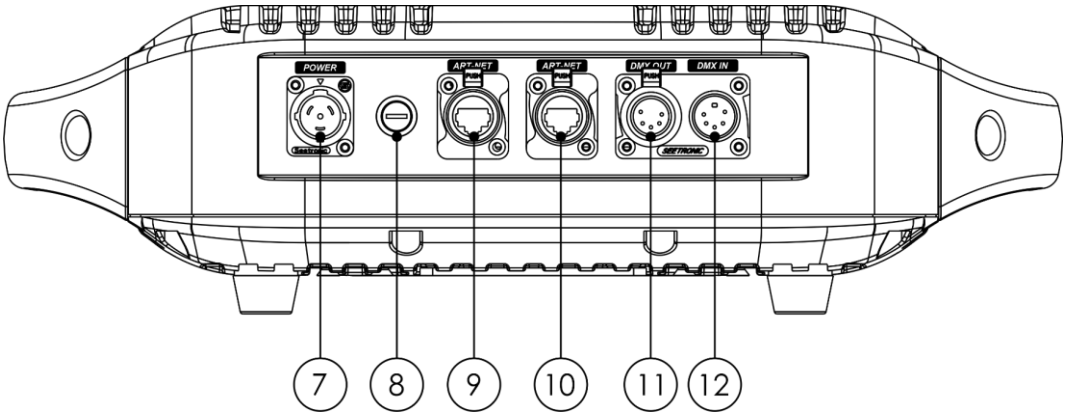


Fig. 05

07) IP-65 rated power connector True1 IN
08) Fuse T6,3 A/250 V
09) IP-65 rated RJ45 connector
10) IP-65 rated RJ45 connector
11) IP-65 rated 5-pin DMX signal connector OUT
12) IP-65 rated 5-pin DMX signal connector IN

Base Plate

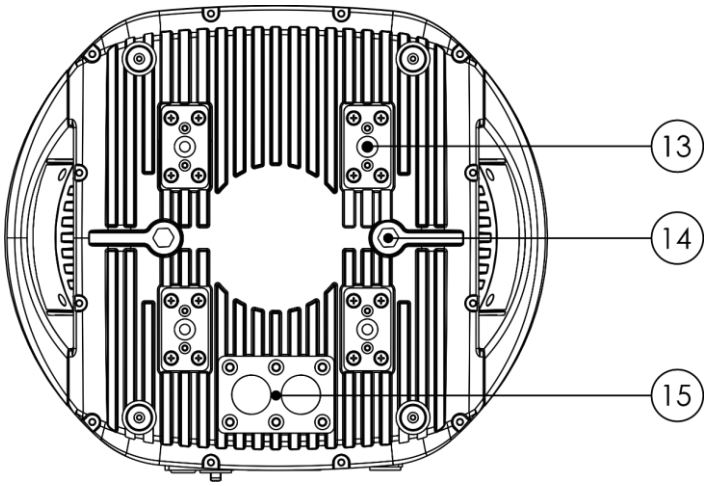


Fig. 06

13) 4 x mounting holes for the quick-lock brackets
14) M12 GORE® valve
15) Safety eye

Installation

Remove all packing materials from the Polar 340 WashFX Moving Head. Check if all foam and plastic padding is removed. Connect all cables.
Do not supply power before the whole system is set up and connected properly.
Always disconnect from electric mains power supply before cleaning or servicing.
Damages caused by non-observance are not subject to warranty.

Setup and Operation

Follow the directions below, as they pertain to your preferred operation mode.
Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 110 V specification product on 240 V power, or vice versa.
Connect the device to the main power supply.

Control Modes

There are 5 modes:

- Stand-alone (Auto program, Custom programs)
- Manual
- Master/Slave
- DMX-512/RDM: HSIC (27 channels), SSP (25 channels), Tour (30 channels), TR16 (37 channels), Pixel (52 channels), CMY (31 channels)
- Art-Net/sACN: HSIC (27 channels), SSP (25 channels), Tour (30 channels), TR16 (37 channels), Pixel (52 channels), CMY (31 channels)

One Polar (Auto Program, Custom Programs)

01) Fasten the effect light to a firm trussing or mount it on flat surface. Leave at least 1,3 m on all sides for air circulation.
02) Secure the device with a safety cable (order code 70454 / 70456).
03) Plug the end of the electric mains power cord into a proper electric power supply socket.
04) When the Polar is not connected with a DMX cable, it functions as a stand-alone device.
05) Please see **3. Run Mode** on page 27 for more information.

One Polar (Manual)

01) Fasten the effect light to a firm trussing or mount it on flat surface. Leave at least 1,3 m on all sides for air circulation.
02) Secure the device with a safety cable (order code 70454 / 70456).
03) Plug the end of the electric mains power cord into a proper electric power supply socket.
04) When the Polar is not connected with a DMX cable, it functions as a stand-alone device.
05) Please see **6. Manual** on pages 32–34 for more information.

Multiple Polars (Master/Slave Control)

01) Fasten the effect light onto firm trussing or mount it on flat surface. Leave at least 1,3 m on all sides for air circulation.
02) Secure the device with a safety cable (order code 70454 / 70456).
03) Use a 5-pin DMX cable to connect the Polar to other devices.

The pins:

1. Earth
2. Signal (-)
3. Signal (+)
4. N/C
5. N/C

04) Link the units as shown in Fig. 07. Connect the first unit's DMX "out" socket with the second unit's "in" socket, using a DMX cable. Repeat this process to link the rest of the units. The first connected device will be automatically recognized as master device. To upload custom programs from the master device to the slave devices, see **4. Option** on page 27–31.
05) Supply electric power: Plug electric mains power cords into each unit's power IN socket, then plug the other end of the mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly.

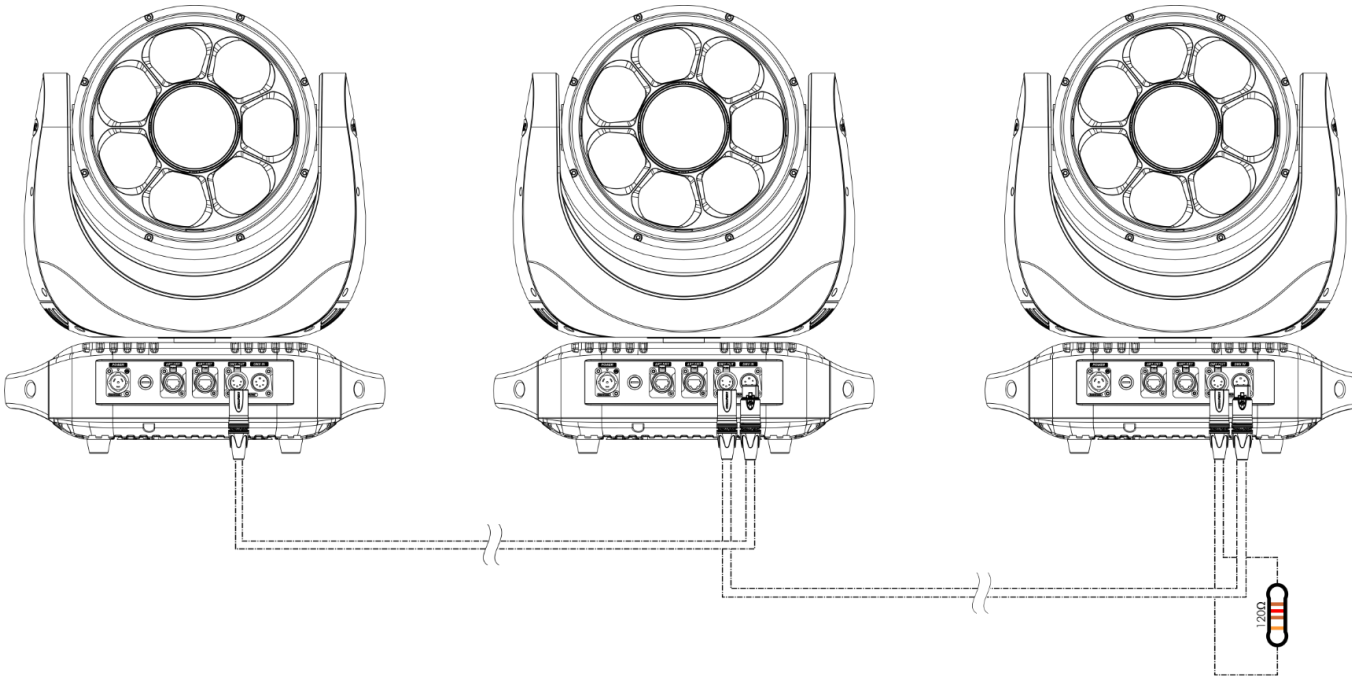
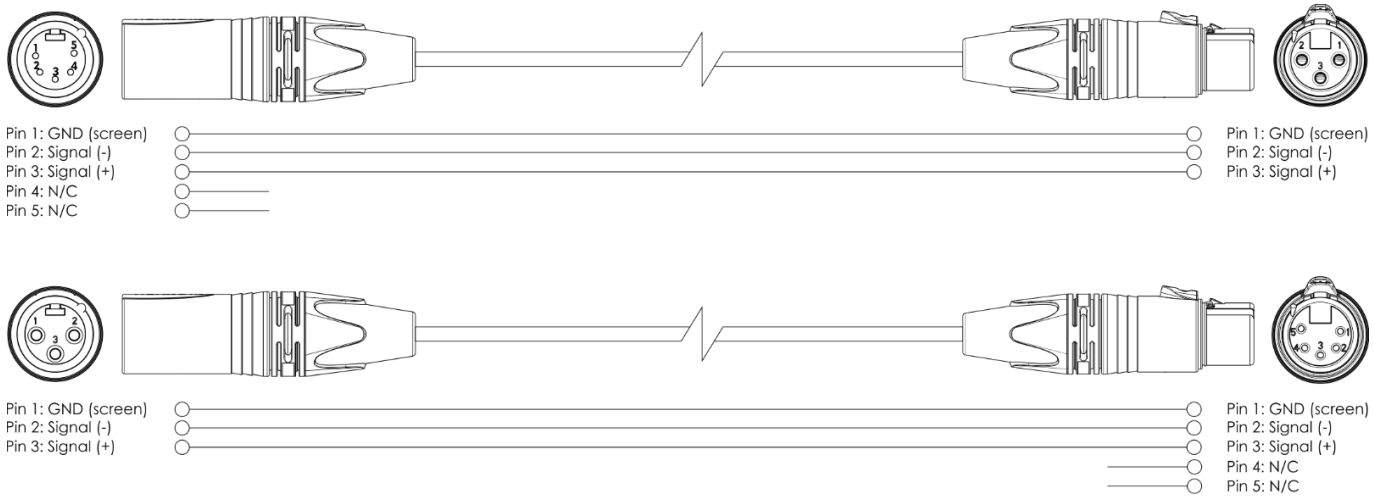


Fig. 07

Note: Link all cables before connecting electric power

Multiple Polars (DMX/RDM Control)

01) Fasten the effect light to a firm trussing or mount it on flat surface. Leave at least 1,3 m on all sides for air circulation.
02) Secure the device with a safety cable (order code 70454 / 70456).
03) Use a 5-pin DMX cable to connect the Polar and other devices.



04) Link the units as shown in Fig. 08. Connect a light controller to the first unit's DMX "in" socket, using a DMX cable. Connect the first unit's "out" socket with the second unit's "in" socket, using a DMX cable. Repeat this process to link the rest of the units.
05) Supply electric power: Plug electric mains power cords into each unit's power IN socket, then plug the other end of the mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly.

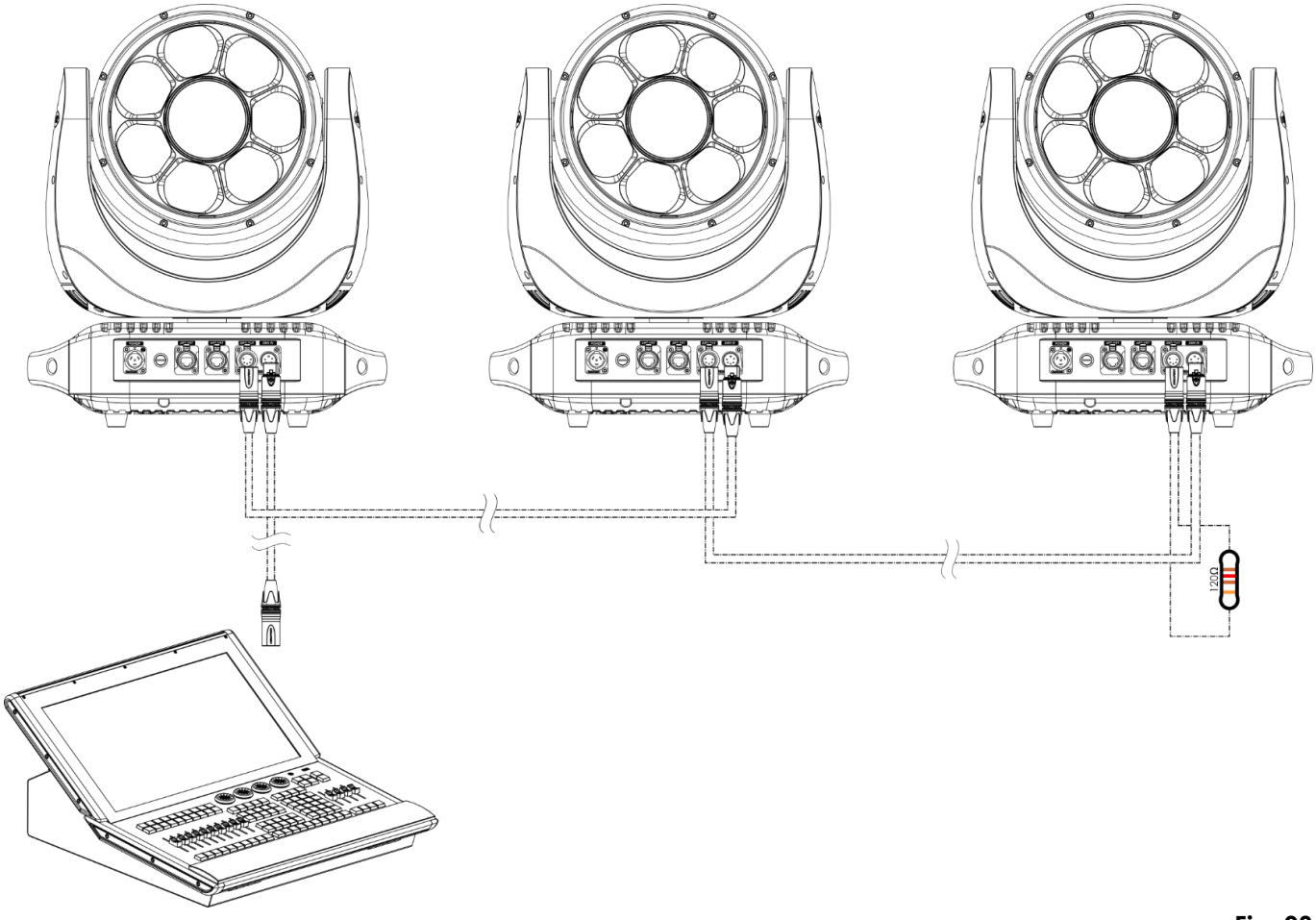


Fig. 08

Note: Link all cables before connecting electric power

Multiple Polars (Art-Net/sACN Control)

01) Fasten the effect light to a firm trussing or mount it on flat surface. Leave at least 1,3 m on all sides for air circulation.
02) Secure the device with a safety cable (order code 70454 / 70456).
03) Use a CAT-5/CAT-6 cable to connect the Polar and other devices.
04) Connect your computer with installed Art-Net software to the first device's RJ45 "in" socket.
05) Link the units as shown in Fig. 09. Connect the first unit's RJ45 "out" socket with the second unit's "in" socket, using a CAT-5/CAT-6 cable. Repeat this process to link the rest of the units.
06) Supply electric power: Plug electric mains power cords into each unit's power IN socket, then plug the other end of the mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly.

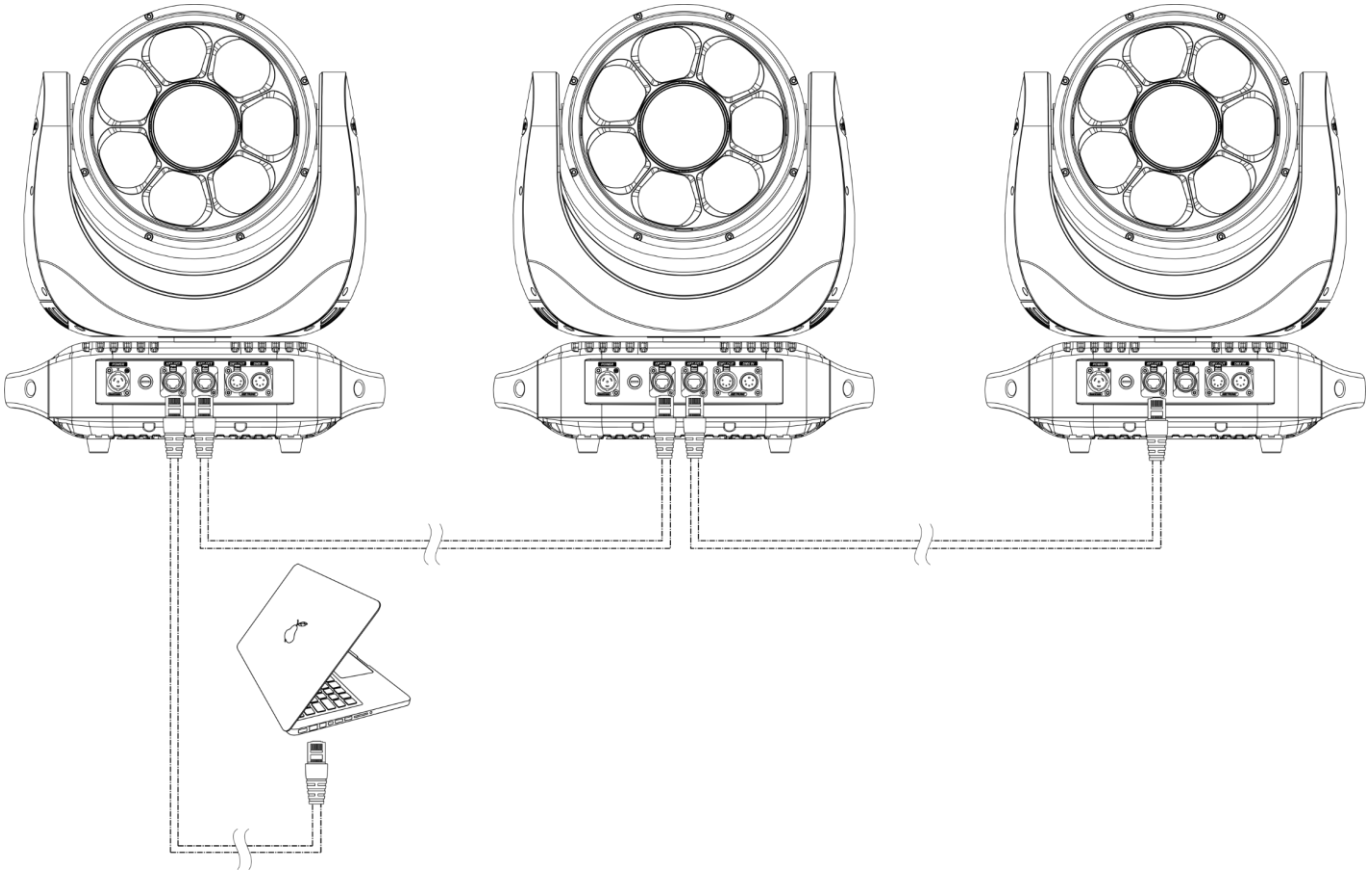


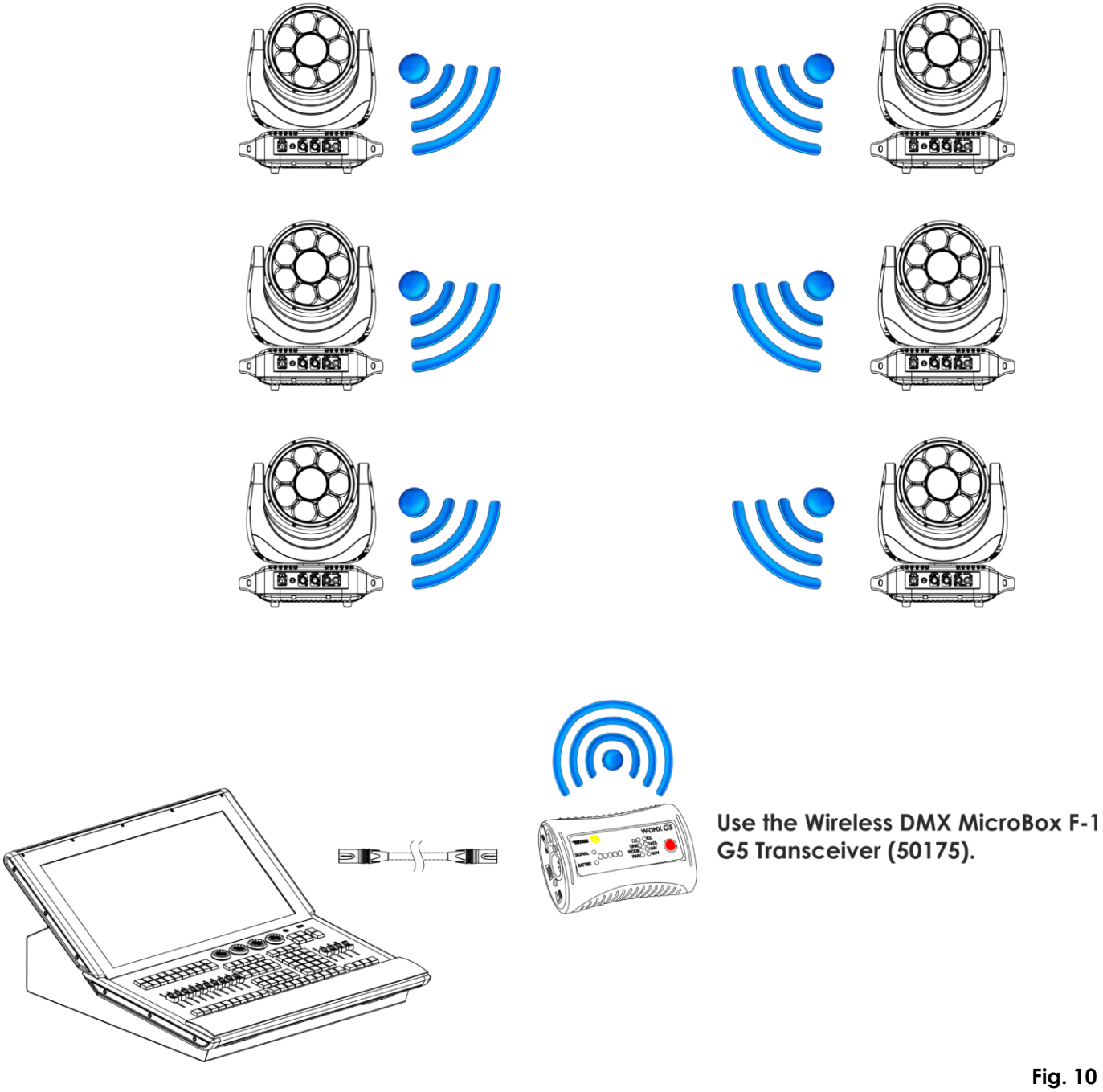
Fig. 09

Note: Link all cables before connecting electric power

Note: The Polar 340 WashFX supports Art-Net to DMX, which means that you can connect the first device to your computer using a CAT-5/CAT-6 cable and the rest of the devices can be linked using a DMX cable. For more information, see **3. Run Mode** on page 27.

Multiple Polars (Wireless DMX Control)

01) Install multiple Polars at the desired positions (maximum distance to transceiver: 250 m).
02) In order for the Polars to receive a wireless DMX signal properly, activate W-DMX on all Polars (see **4.5. Signal** on pages 30–31 for more information).
03) Pair the wireless signal transmitter with multiple Polars. In order to create a wireless connection, please read the manual of your wireless signal transmitter.
04) Use a DMX cable to connect the transmitter to a suitable light controller.



Use the Wireless DMX MicroBox F-1 G5 Transceiver (50175).

Fig. 10

Sweden 2.4 GHz Wireless communication module

Communication distance:	Depending on the transmitting power or transmitter module
Test conditions:	W-DMX TRx Transmitter module, 2 dBi Antenna, transmitting power 20 dBm (100 mW)
Range indoor:	60 m (approx. through three concrete walls)
Range outdoor:	250 m

Wireless DMX Connection

The wireless receiving module "Nano G5 Receiver, 2.4 GHz", provided by the Swedish WIRELESS SOLUTION, only has a 2.4 GHz wireless signal receiving function. In order to match the wireless signal, please use the 50175 W-DMX MicroBox F-1 G5 Transceiver by WIRELESS SOLUTION.

The Polar cannot receive a wireless DMX signal and a DMX cable signal at the same time.

Connect the Polar to the Wireless DMX Signal Transmitter

Enable W-DMX for the device and select the W-DMX option as control mode. See **4.5. Signal** on pages 30–31 for more information.

The Polar cannot actively match a random wireless signal transmitter.

In order to create a wireless match, please check the manual of your wireless signal transmitter.

We advise you to use the W-DMX MicroBox F-1 G5 Transceiver (50175) by WIRELESS SOLUTION (Fig. 11).

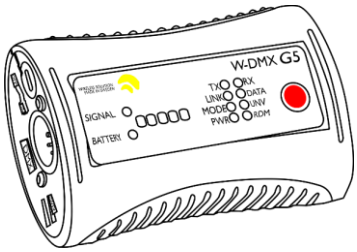


Fig. 11

Disconnect the Polar from the Wireless DMX Signal Transmitter

To turn W-DMX off, disable W-DMX by unlinking the fixture. See **4.5. Signal** on pages 30–31 for more information. The Polar will now be disconnected.

Connecting to a Network

Art-Net Settings

01) Install any Art-Net-based software on your PC (Windows or Mac) or use a light controller which supports Art-Net.
02) Connect the power supply to the Polar.
03) Connect the device's RJ45 connector to the RJ45 connector of the lighting controller/network switch, using a CAT-5/CAT-6 cable.
04) Set the IP address of your computer/light controller to **2.x.x.x** or **10.x.x.x**, depending on the Art-Net settings. See **4.4. Network** on pages 29–30 for more information.
05) Set the Subnet mask to **255.0.0.0**. on all devices.
06) Make sure that all fixtures in the network have a **unique IP address**.
07) If you want to connect more fixtures, follow the example below.

Example settings:

If you want to connect multiple Polars using Art-Net protocol, proceed as follows:

01) Set the universe of the first Polar to **000**. See **4.4. Network** on pages 29–30.
02) Set the DMX starting address of the first Polar to **001**.
03) If you want to operate the Polar in 52-channel DMX mode, you can connect only 9 devices (9 x 52 channels = 468 channels needed). Due to the channel limit of 512, you cannot connect the tenth fixture to the same data line, as it would result in limited functionality of this device.
04) In order to solve this problem, set the universe of the tenth Polar to **001** and its DMX address to **001**.
05) When connecting multiple devices, you can repeat steps 1 to 4 up to 255 times, each time inserting ascending universe numbers (as there are 256 universes available).
06) Map all connected devices. The connected Polars are now ready for use.

Note: Counting of the universes begins at 0. There are 512 channels in 1 universe and 256 universes in 1 net.

Art-Net is a protocol that uses TCP/IP to transfer large amount of DMX-512 data over an Ethernet network. Art-Net 4 can support up to 32768 universes. Art-Net™ Designed by and Copyright Artistic Licence Holdings Ltd.

sACN Settings

01) Connect the device's RJ45 connector to a network switch, using a CAT-5/CAT-6 cable.
02) Set the IP address of your computer/lighting controller. sACN networks have no restrictions on the IP address.
03) Set the Subnet mask on all devices.
04) Make sure that all fixtures in the network have a **unique IP address**.

sACN (streaming Architecture for Control Networks), also known as ANSI E1.31, is a protocol for sending DMX-512 data over IP networks developed by ESTA (Entertainment Services and Technology Association). It supports up to 63999 universes and uses multicasting.

How to Make a Data Cable

A standard ETHERNET cable can be used to replace the data cable required to transmit the data.

Please follow the instructions below in order to create an extra network cable.

Take a standard network cable (CAT-5/ 5E /6) and connect it to the RJ45 connector, as shown on Fig. 12. The wires should now be colored as follows:

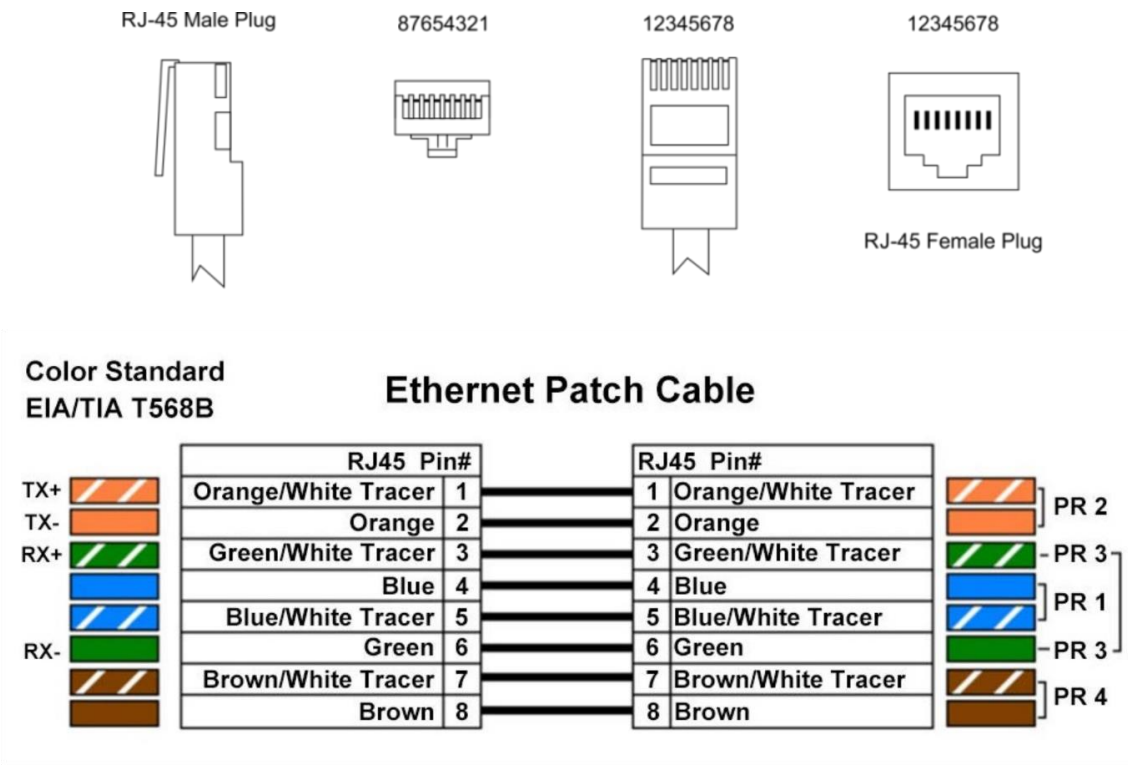


Fig. 12

Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX-512 controller or to run synchronized shows of two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.

Important: Fixtures on a serial data link must be daisy-chained in a single line. To comply with the EIA-485 standard, no more than 30 devices should be connected on one data link. Connecting more than 30 fixtures on one serial data link without the use of a DMX optically isolated splitter may result in deterioration of the digital DMX signal.

Maximum recommended DMX data link distance: 100 meters
Maximum recommended number of fixtures on a DMX data link: 30 fixtures

Data Cabling

To link fixtures together, you must obtain data cables. You can purchase DAP Audio certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable, please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

DAP Audio DMX Data Cables

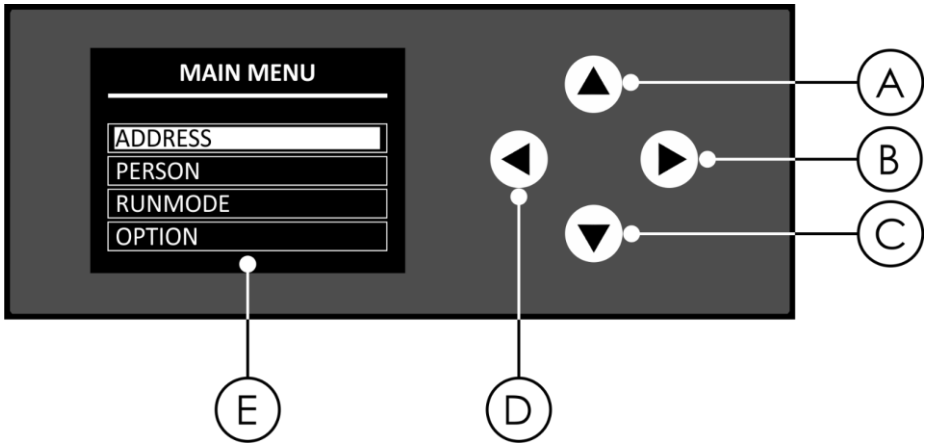
- DAP Audio DMX cable by Neutrik®. **Order code** FL71150 (1,5 m), FL713 (3 m), FL716 (6 m), FL7110 (10 m)
- DAP Audio DMX by Neutrik®. **Order code** FL7275 (0,75 m), FL72150 (1,5 m), FL723 (3 m), FL726 (6 m), FL7210 (10 m)
- DAP Audio 110 Ohm cable with digital signal transmission. **Order code** FL0975 (0,75 m), FL09150 (1,5 m), FL093 (3 m), FL096 (6 m), FL0910 (10 m), FL0915 (15 m), FL0920 (20 m)

Note: Connect the Polars with the dedicated special DMX cables for outdoor use.

FL83150 DMX cable 5p XLR IP65, Neutrik®, 1,5 m
FL833 DMX cable 5p XLR IP65, Neutrik®, 3 m
FL836 DMX cable 5p XLR IP65, Neutrik®, 6 m
FL8310 DMX cable 5p XLR IP65, Neutrik®, 10 m
FL8320 DMX cable 5p XLR IP65, Neutrik®, 20 m

The Polar 340 WashFX IP65 Moving Head can be operated with controller or without controller in stand-alone mode.

Control Panel



A) UP touch button
B) ENTER touch button
C) DOWN touch button
D) BACK touch button
E) LCD display

Fig. 13

DMX Addressing

The control panel on the front side of the base allows you to assign the fixture a DMX address, which is the first channel with which the Polar will respond to the controller.
Please note, when you use the controller, the device has **52** channels.
When using multiple Polars, make sure you set the DMX addresses right.
Therefore, the DMX address of the first Polar should be **1 (001)**; the DMX address of the second Polar should be **1+52=53 (053)**; the DMX address of the third Polar should be **53+52=105**, etc.
Make sure that you do not have any overlapping channels in order to control each Polar correctly. If two or more Polars are addressed similarly, they will work similarly.

Controlling:

After having addressed all Polars, you may now start operating these via your lighting controller.
Note: After switching on, the Polar will automatically detect whether DMX-512 data is received or not. If there is no data received at the DMX input, the DMX address on the start screen will be blinking.
The problem may be:

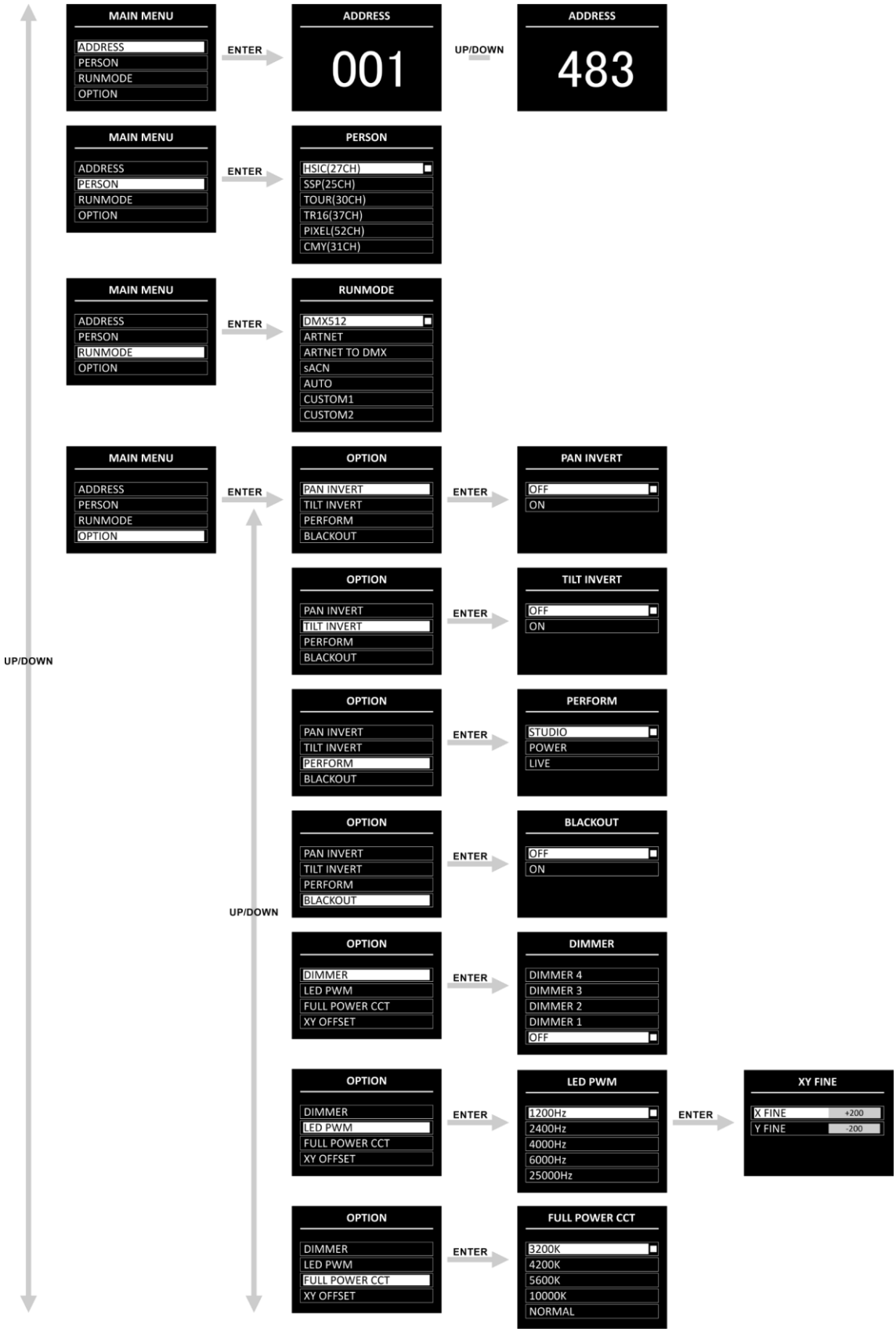
- The DMX cable from the controller is not connected with the input of the Polar.
- The controller is switched off or defective, the cable or connector is detective, or the signal wires are swapped in the input connector.

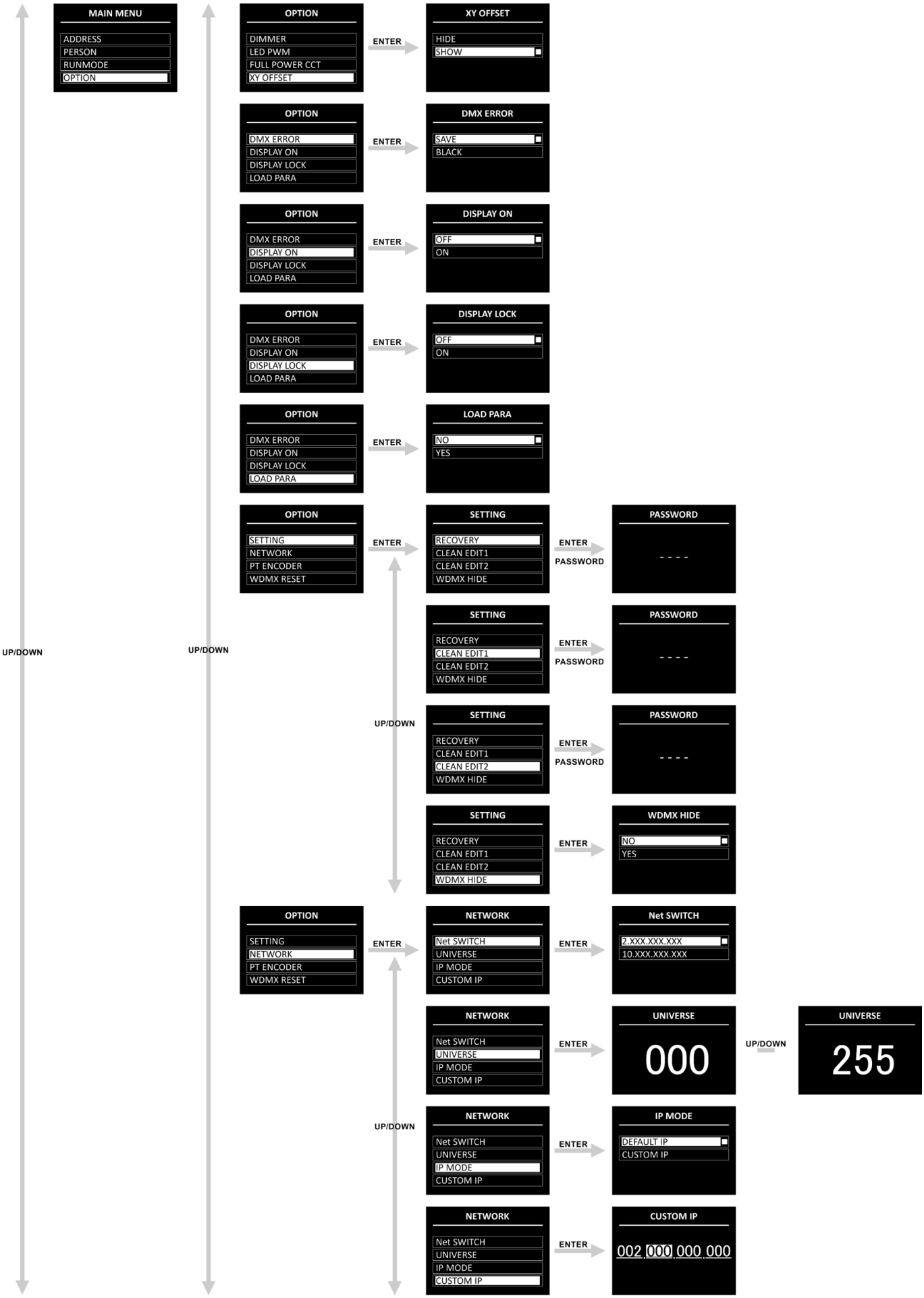
Note: It is necessary to insert a termination plug (with 120 Ohm) in the last fixture in order to ensure proper transmission on the DMX data link.

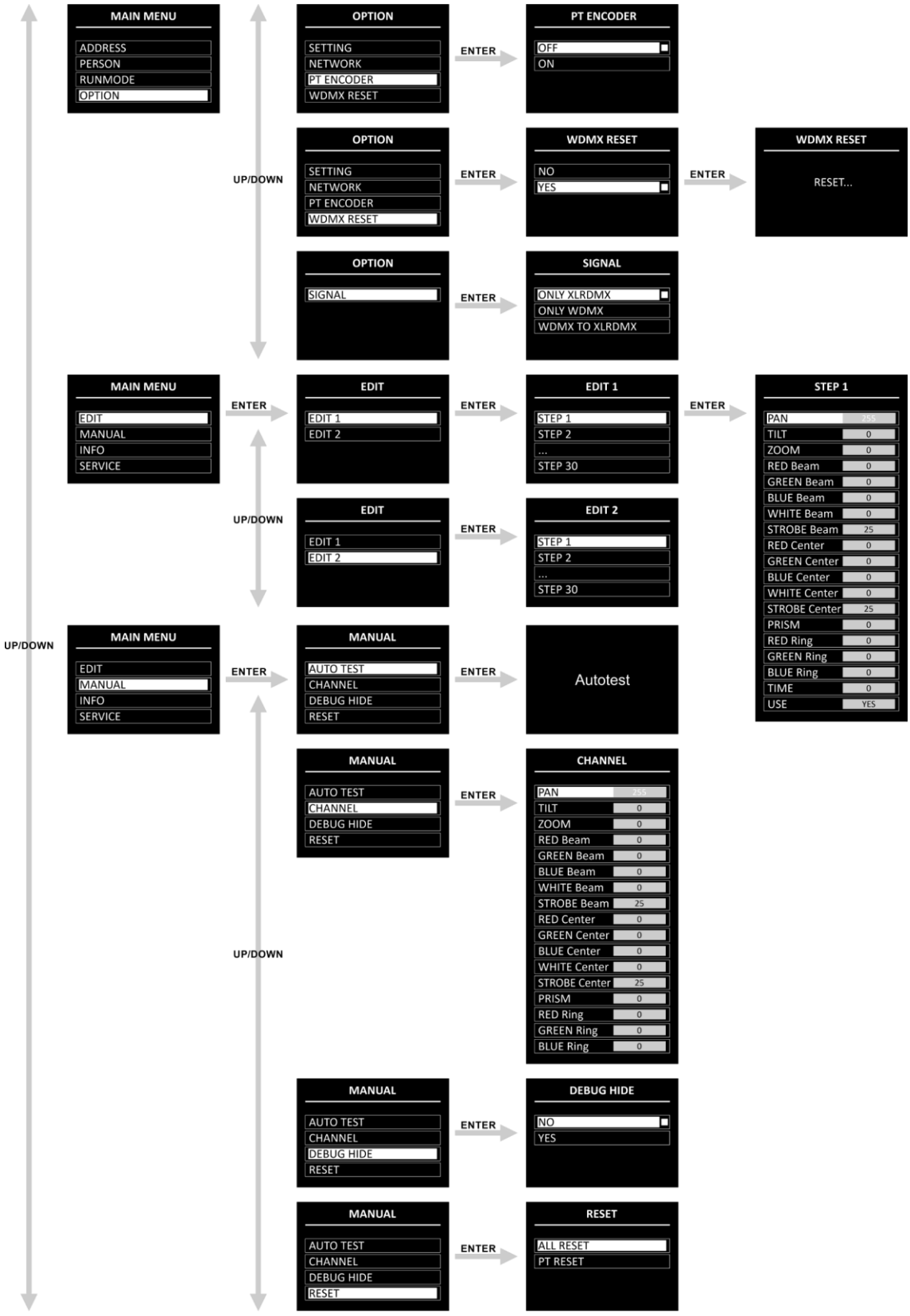
⚠ Display Off after 40 seconds ⚠

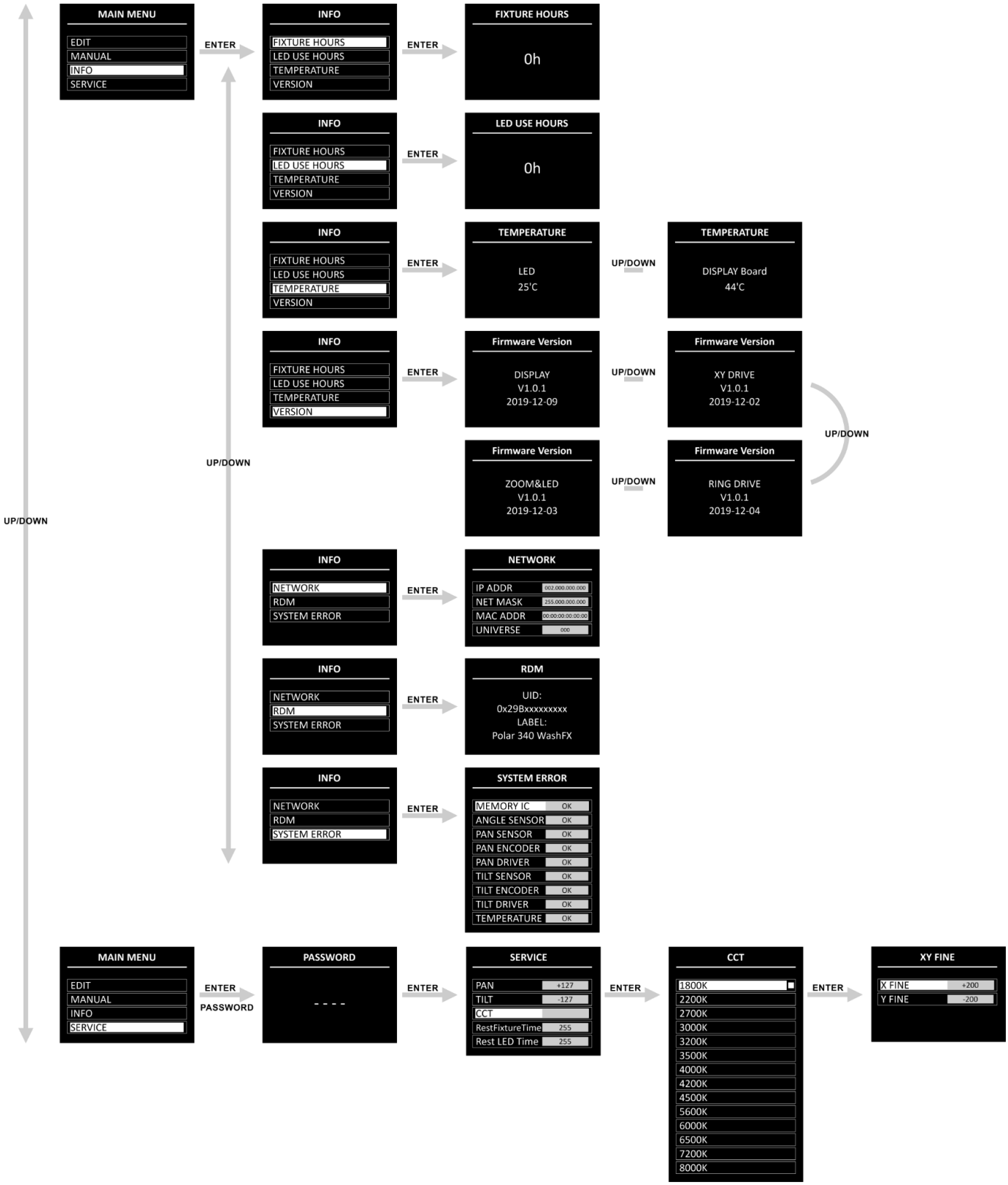
When no button is pressed for 40 seconds, the display will turn off.
To light up the display, press and hold down the BACK button for 5 seconds.

Menu Overview




MAIN MENU
ADDRESS
PERSON
RUNMODE
OPTION
UP/DOWN
OPTION
DIMMER
LED PWM
FULL POWER CCT
XY OFFSET
ENTER
XY OFFSET
HIDE
SHOW
OPTION
DMX ERROR
DISPLAY ON
DISPLAY LOCK
LOAD PARA
ENTER
DMX ERROR
SAVE
BLACK
OPTION
DMX ERROR
DISPLAY ON
DISPLAY LOCK
LOAD PARA
ENTER
DISPLAY ON
OFF
ON
OPTION
DMX ERROR
DISPLAY ON
DISPLAY LOCK
LOAD PARA
ENTER
DISPLAY LOCK
OFF
ON
OPTION
DMX ERROR
DISPLAY ON
DISPLAY LOCK
LOAD PARA
ENTER
LOAD PARA
NO
YES
OPTION
SETTING
NETWORK
PT ENCODER
WDMX RESET
ENTER
SETTING
RECOVERY
CLEAN EDIT1
CLEAN EDIT2
WDMX HIDE
ENTER
PASSWORD
PASSWORD
- - - -
UP/DOWN
SETTING
RECOVERY
CLEAN EDIT1
CLEAN EDIT2
WDMX HIDE
ENTER
PASSWORD
PASSWORD
- - - -
UP/DOWN
SETTING
RECOVERY
CLEAN EDIT1
CLEAN EDIT2
WDMX HIDE
ENTER
PASSWORD
PASSWORD
- - - -
SETTING
RECOVERY
CLEAN EDIT1
CLEAN EDIT2
WDMX HIDE
ENTER
WDMX HIDE
NO
YES
OPTION
SETTING
NETWORK
PT ENCODER
WDMX RESET
ENTER
NETWORK
Net SWITCH
UNIVERSE
IP MODE
CUSTOM IP
ENTER
Net SWITCH
2.XXX.XXX.XXX
10.XXX.XXX.XXX
NETWORK
Net SWITCH
UNIVERSE
IP MODE
CUSTOM IP
ENTER
UNIVERSE
000
UP/DOWN
UNIVERSE
255
UP/DOWN
NETWORK
Net SWITCH
UNIVERSE
IP MODE
CUSTOM IP
ENTER
IP MODE
DEFAULT IP
CUSTOM IP
NETWORK
Net SWITCH
UNIVERSE
IP MODE
CUSTOM IP
ENTER
CUSTOM IP
002.000.000.000


MAIN MENU
ADDRESS
PERSON
RUNMODE
OPTION
UP/DOWN
OPTION
SETTING
NETWORK
PT ENCODER
WDMX RESET
ENTER
PT ENCODER
OFF
ON
OPTION
SETTING
NETWORK
PT ENCODER
WDMX RESET
ENTER
WDMX RESET
NO
YES
ENTER
WDMX RESET
RESET...
OPTION
SIGNAL
ENTER
SIGNAL
ONLY XLRDMX
ONLY WDMX
WDMX TO XLRDMX
MAIN MENU
EDIT
MANUAL
INFO
SERVICE
ENTER
EDIT
EDIT 1
EDIT 2
ENTER
EDIT 1
STEP 1
STEP 2
...
STEP 30
ENTER
STEP 1
PAN 255
TILT 0
ZOOM 0
RED Beam 0
GREEN Beam 0
BLUE Beam 0
WHITE Beam 0
STROBE Beam 25
RED Center 0
GREEN Center 0
BLUE Center 0
WHITE Center 0
STROBE Center 25
PRISM 0
RED Ring 0
GREEN Ring 0
BLUE Ring 0
TIME 0
USE YES
UP/DOWN
EDIT
EDIT 1
EDIT 2
ENTER
EDIT 2
STEP 1
STEP 2
...
STEP 30
UP/DOWN
MAIN MENU
EDIT
MANUAL
INFO
SERVICE
ENTER
MANUAL
AUTO TEST
CHANNEL
DEBUG HIDE
RESET
ENTER
Autotest
MANUAL
AUTO TEST
CHANNEL
DEBUG HIDE
RESET
ENTER
CHANNEL
PAN 255
TILT 0
ZOOM 0
RED Beam 0
GREEN Beam 0
BLUE Beam 0
WHITE Beam 0
STROBE Beam 25
RED Center 0
GREEN Center 0
BLUE Center 0
WHITE Center 0
STROBE Center 25
PRISM 0
RED Ring 0
GREEN Ring 0
BLUE Ring 0
UP/DOWN
MANUAL
AUTO TEST
CHANNEL
DEBUG HIDE
RESET
ENTER
DEBUG HIDE
NO
YES
MANUAL
AUTO TEST
CHANNEL
DEBUG HIDE
RESET
ENTER
RESET
ALL RESET
PT RESET


MAIN MENU
EDIT
MANUAL
INFO
SERVICE
ENTER
INFO
FIXTURE HOURS
LED USE HOURS
TEMPERATURE
VERSION
FIXTURE HOURS
0h
LED USE HOURS
0h
TEMPERATURE
LED
25'C
DISPLAY Board
44'C
Firmware Version
DISPLAY
V1.0.1
2019-12-09
XY DRIVE
V1.0.1
2019-12-02
ZOOM&LED
V1.0.1
2019-12-03
RING DRIVE
V1.0.1
2019-12-04
UP/DOWN
NETWORK
RDM
SYSTEM ERROR
IP ADDR
NET MASK
MAC ADDR
UNIVERSE
UID:
0x29Bxxxxxxxx
LABEL:
Polar 340 WashFX
MEMORY IC
ANGLE SENSOR
PAN SENSOR
PAN ENCODER
PAN DRIVER
TILT SENSOR
TILT ENCODER
TILT DRIVER
TEMPERATURE
OK
PASSWORD
SERVICE
PAN
TILT
CCT
RestFixtureTime
Rest LED Time
CCT
1800K
2200K
2700K
3000K
3200K
3500K
4000K
4200K
4500K
5600K
6000K
6500K
7200K
8000K
XY FINE
X FINE
Y FINE

Start-up

After powering up, the fixture will perform a reset and the display will show the following splash screen:

When the resetting is completed, the device is ready to be operated. The display will show the start screen:

The start screen provides information about the active run mode of the device and the temperature of the LEDs.

By default the display of the device is locked. To unlock the display and access the Main Menu, you will need to enter the **password**:

01) Press and hold down the **BACK** button for 5 seconds to light up the display.
02) Press the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN**.
03) Press the **ENTER** button to confirm.

To change the settings and remove the display lock, see **4.2. Display Lock** on page 28.

If no button is pressed, after 35 seconds the display will be locked. After 5 more seconds the display will turn off. Enter the password to unlock the display. If the display lock is turned off, press any button to turn the display on.

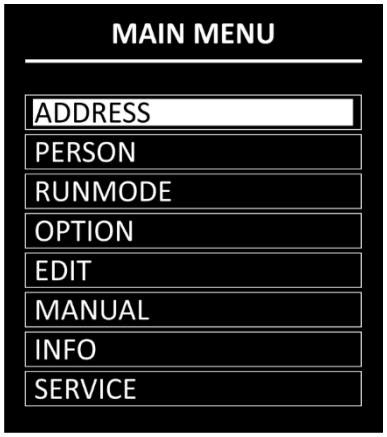
- Use the **UP/DOWN** buttons to navigate through the menus or to increase/decrease numeric values.
- Use the **ENTER** button to open the desired menu or to set the currently selected value.
- Use the **BACK** button to exit the current menu and/or to return to the Main Menu.

No Reset Start-up

It is not required to power up the Polar, in order to adjust the device's settings. It is possible to activate only the display. Press and hold down the **BACK** button for 5 seconds. As the display is equipped with a battery, the display will turn on and the Polar will remain off.

Main Menu Options

The Main Menu has the following options:



01) Press the **UP/DOWN** buttons to navigate through the Main Menu.
02) Press the **ENTER** button to open the submenus.

Note: Some of the submenus require a password. The default password is pressing the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN**. Deactivating the display lock does not affect the submenu items which by default require a password.

1. DMX Address

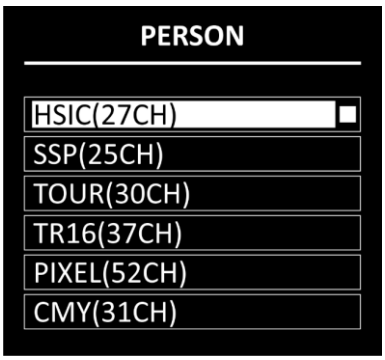
In this menu you can set the device's DMX starting address.

01) Press the **UP/DOWN** buttons to set the desired DMX address. The adjustment range depends on the selected DMX channel mode:
    - HSCI (27 channels): 001–486
    - SSP (25 channels): 001–488
    - TOUR (30 channels): 001–483
    - TR16 (37 channels): 001–476
    - PIXEL (52 channels): 001–461
    - CMY (31 channels): 001–482
02) Press the **ENTER** button to save the changes.

2. Person (DMX Channel Modes)

In this menu you can set the DMX channel mode (personality).

01) Press the **UP/DOWN** buttons to select the desired DMX channel mode. There are 6 options available:



HSCI: 27 channels
SSP: 25 channels
TOUR: 30 channels
TR16: 37 channels
PIXEL: 52 channels
CMY: 31 channels

02) Press the **ENTER** button to confirm your choice. See pages 37–49 for the DMX channel modes.

3. Run Mode

In this menu you can set the control mode of the device.

01) Press the **UP/DOWN** buttons to select one of the following 7 options:

- DMX512: The device will operate in DMX mode
- ARTNET: The device will operate in Art-Net mode
- ARTNET TO DMX: The device will receive the data via Ethernet and transmit it via DMX. When linking multiple devices, the first device can be connected to a computer with a CAT-5/CAT-6 cable and the rest of the devices can be linked using a DMX cable
- sACN: The device will operate in sACN mode
- AUTO: The device will run the built-in program
- CUSTOM1: The device will run Custom Program 1. See **5. Edit** on pages 31–32 for more information on how to edit the custom programs
- CUSTOM2: The device will run Custom Program 2. See **5. Edit** on pages 31–32 for more information on how to edit the custom programs

02) Press the **ENTER** button to confirm your choice.

4. Option

In this menu you can adjust the device's settings.

01) Press the **UP/DOWN** buttons to scroll through the following 17 options:

02) Press the **ENTER** button to confirm your choice.
The available submenus are:

- PAN INVERT: Pan direction will be inverted, depending on the position of the Polar (OFF/ON)
- TILT INVERT: Tilt direction will be inverted, depending on the position of the Polar (OFF/ON)
- PERFORM: Adjustment of the speed of the cooling fans: STUDIO (Slow), POWER (Fast), LIVE (Auto)
- BLACKOUT: Output blackout during pan/tilt movement (OFF/ON)
- DIMMER: Dimmer speed adjustment: DIMMER 1, DIMMER 2, DIMMER 3, DIMMER 4 (non-linear dimmers), OFF (linear dimmer)
- LED PWM: See **4.1. LED PWM** for more information
- FULL POWER CCT: Color temperature adjustment: 3200 K, 4200 K, 5600 K, 10000 K, NORMAL
- XY OFFSET: Enabling/disabling the color temperature calibration with fine adjustment of X and Y: SHOW (enable), HIDE (disable)

- DMX ERROR: Polar's behavior in case of a DMX error. There are 2 options: SAVE (the Polar will use the last properly received DMX signal which ensures undisrupted performance) and BLACK (output blackout)
- DISPLAY ON: If you choose ON the display will not turn off. If you choose OFF, the display will turn off after 40 seconds of inactivity
- DISPLAY LOCK: See **4.2. Display Lock** for more information
- LOAD PARA: Upload the parameters of Custom Program 1 and/or 2 from the master device to the slave device(s) in master/slave mode (NO/YES)
- SETTING: See **4.3. Settings** for more information
- NETWORK: See **4.4. Network** for more information
- PT ENCODER: If the encoder is turned on (ON), the device will automatically correct the pan/tilt position, if it deviates from the last saved value (OFF/ON)
- WDMX RESET: Resets wireless connection and clears all receiver's messages (NO/YES)
- SIGNAL: See **4.5. Signal** for more information

4.1. LED PWM

In this submenu you can adjust the LED's PWM (Pulse Width Modulation) frequency and the CCT for the respective frequency level.

01) Press the **UP/DOWN** buttons to choose one of the available options: 1200 Hz, 2400 Hz, 4000 Hz, 6000 Hz, or 25000 Hz.
02) Press the **ENTER** button to confirm your choice. The menu will show the CCT XY Fine adjustment screen:

Note: The factory default settings of the CCT (Correlated Color Temperature) are done for the lowest PWM frequency, in this case – 1200 Hz. When you adjust the PWM frequency, the CCT might change. You can fine-tune the CCT settings for the chosen PWM frequency at this stage. See **8.1. CCT (Correlated Color Temperature)** on page 36 for more information on how to calibrate the CCT.

Note: If XY OFFSET is disabled in the OPTION menu, the XY fine adjustment of the CCT will not be visible in the LED PWM submenu. Make sure XY OFFSET is enabled, if you want to adjust this parameter. For more information see **4. Option** on pages 27–28.

03) Press the **UP/DOWN** buttons to choose between X FINE and Y FINE.
04) Press the **ENTER** button to confirm the selection.
06) Press the **UP/DOWN** buttons to increase/decrease the value. The adjustment range is between -200 and +200.
07) Press the **ENTER** button to set the value.

4.2. Display Lock

In this submenu you can activate the display lock.

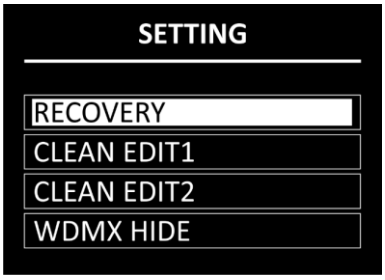
01) Press the **UP/DOWN** buttons to toggle between ON and OFF.
    - ON: Display lock is on. The display will be locked after 35 seconds of inactivity. After 5 more seconds the display will turn off. To access the Main Menu, you will need to enter the password. The default password is pressing the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN**
    - OFF: The Main Menu remains unlocked after the display turns off
02) Press the **ENTER** button to confirm your choice.

Note: Deactivating the display lock does not affect the submenu items which by default require a password.

4.3. Settings

In this submenu you can reset some of the device's parameters.

01) Press the **UP/DOWN** buttons to scroll through the following 4 options:



02) Press the **ENTER** button to confirm your choice.

4.3.1. Recovery

In this submenu you can restore the default factory settings. This submenu requires a **password**.

01) Press the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN**.
02) Press the **ENTER** button to confirm the password and start the resetting.

4.3.2. Clean Edit 1

In this submenu you can clear all settings of Custom Program 1. This submenu requires a **password**.

01) Press the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN**.
02) Press the **ENTER** button to confirm the password. All changes made in EDIT 1 (see pages 31–32) will be reset.

4.3.3. Clean Edit 2

In this submenu you can clear all settings of Custom Program 2. This submenu requires a **password**.

01) Press the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN**.
02) Press the **ENTER** button to confirm the password. All changes made in EDIT 2 (see pages 31–32) will be reset.

4.3.4. WDMX Hide

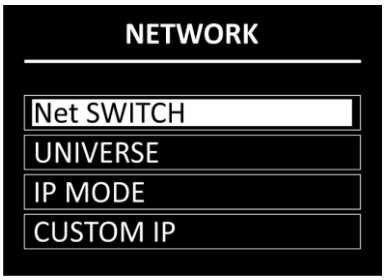
In this submenu you can hide the wireless mode settings in the menu.

01) Press the **UP/DOWN** buttons to toggle between:
    - NO: The wireless mode settings (WMDX RESET and SIGNAL) will be visible in the menu
    - YES: The wireless mode settings (WMDX RESET and SIGNAL) will not be visible in the menu
02) Press the **ENTER** button to confirm your choice.

4.4. Network

In this submenu you can adjust the network settings.

01) Press the **UP/DOWN** buttons to scroll through the following 4 options:



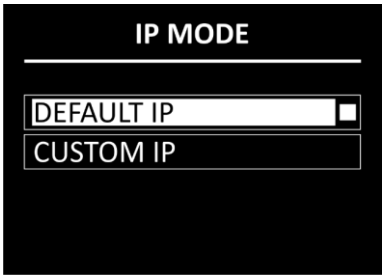
02) Press the **ENTER** button to confirm your choice.
    The available options are:
    - Net SWITCH: Set the starting number of the IP address of the device. You can choose between 2.x.x.x and 10.x.x.x
    - UNIVERSE: Set the universe of the device (0–255)
    - IP MODE: See **4.4.1. IP Mode** for more information
    - CUSTOM IP: See **4.4.2. Custom IP** for more information

Note: If DEFAULT IP is selected in IP MODE, the CUSTOM IP submenu will not be visible in the NETWORK submenu. Make sure CUSTOM IP is selected in IP MODE, if you want to configure the IP address manually. For more information see **4.4.1. IP Mode** on page 30.

4.4.1. IP Mode

In this submenu you can choose the IP mode.

01) Press the **UP/DOWN** buttons to toggle between the following 2 options:



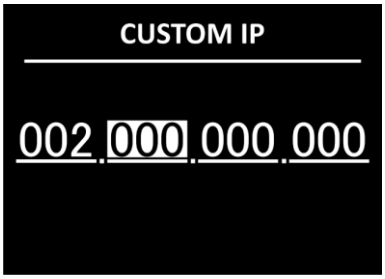
- DEFAULT IP: The IP address of the device will be generated automatically by the network server (DHCP)
- CUSTOM IP: The IP address of the device can be configured manually (see **4.4.2. Custom IP**). Make sure that this option is selected, in order to have the CUSTOM IP submenu enabled in the NETWORK submenu

02) Press the **ENTER** button to confirm your choice.

4.4.2. Custom IP

In this submenu you can configure manually the IP address of the device.

01) Press the **ENTER/BACK** buttons to move the cursor respectively to the right/left on the display. The selected number will be highlighted.



02) Press the **UP/DOWN** buttons to change the number. The selection range is between 0 and 255.
03) Press the **ENTER** button to confirm and to move to the next number.
04) Repeat steps 1–3 for each of the 3 editable sections of the IP address. To change the starting number of the IP address, see **4.4. Network** on pages 29–30.

Note: This submenu is visible only if CUSTOM IP is selected in the IP MODE submenu. For more information see **4.4.1. IP Mode** on page 30.

4.5. Signal

In this submenu you can set the signal preferences when wireless DMX is enabled.

01) Press the **UP/DOWN** buttons to scroll through the following 3 options:

02) Press the **ENTER** button to confirm your choice.

The available options are:

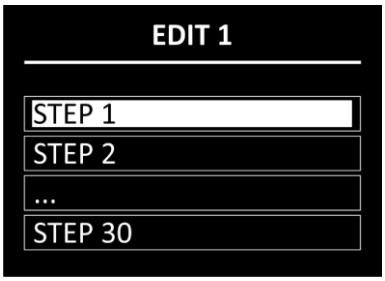
- ONLY XLR DMX
- ONLY WDMX
- WDMX TO XLR DMX: When linking multiple Polars, you can set a wireless connection of the first device to your computer and link the rest of the devices using a DMX cable

5. Edit

In this menu you can edit the custom programs thus creating your own custom show.

01) Press the **UP/DOWN** buttons to choose one of the two custom programs you want to edit (EDIT 1 or EDIT 2).

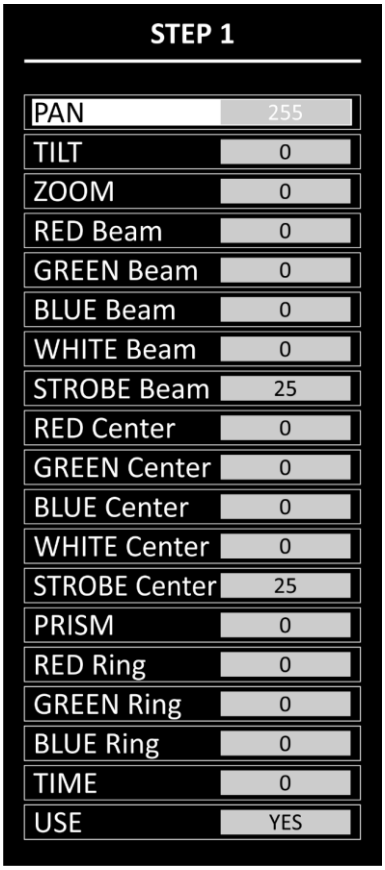
02) Press the **ENTER** button to confirm the selection. Each custom program has 30 steps, which can be edited:



03) Press the **UP/DOWN** buttons to select the desired step.

04) Press the **ENTER** button to open the settings submenu of the respective step.

05) Press the **UP/DOWN** buttons to scroll through the 19 available options:



06) Press the **ENTER** button to confirm the selection.

07) Press the **UP/DOWN** buttons to increase/decrease the values.

- PAN: Pan position adjustment (0–255)
- TILT: Tilt position adjustment (0–255)
- ZOOM: Zoom adjustment (0–255)
- RED Beam: Red color intensity of the 7 peripheral LEDs (0–255)
- GREEN Beam: Green color intensity of the 7 peripheral LEDs (0–255)
- BLUE Beam: Blue color intensity of the 7 peripheral LEDs (0–255)

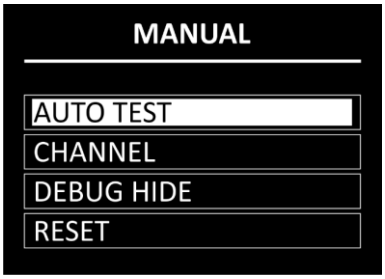
- WHITE Beam: White color intensity of the 7 peripheral LEDs (0–255)
- STROBE Beam: Strobe effect of the 7 peripheral LEDs, from OFF to high frequency (0–25)
- RED Center: Red color intensity of the center LEDs (0–255)
- GREEN Center: Green color intensity of the center LEDs (0–255)
- BLUE Center: Blue color intensity of the center LEDs (0–255)
- WHITE Center: White color intensity of the center LEDs (0–255)
- STROBE Center: Strobe effect of the center LEDs, from OFF to high frequency (0–25)
- PRISM: Prism adjustment (0–255)
- RED Ring: Red color intensity of the ring LEDs (0–255)
- GREEN Ring: Green color intensity of the ring LEDs (0–255)
- BLUE Ring: Blue color intensity of the ring LEDs (0–255)
- TIME: Set the duration of the step (0–255, from 0,1 to approximately 25 seconds)
- USE: Include the step in the custom program (YES/NO). If you choose NO, the step will be excluded during the custom program play

08) Press the **ENTER** button to set the value.
09) Repeat steps 3–8 above for the remaining steps of the custom program.

Note: For each custom program you can create 30 steps, which makes it possible to create 60 customized scenes in total.

6. Manual

In this menu you can manually adjust and reset the device's parameters.
01) Press the **UP/DOWN** buttons to scroll through the following 4 options.



02) Press the **ENTER** button to confirm your choice.
The available options are:
- AUTO TEST: See **6.1. Auto Test** for more information
- CHANNEL: See **6.2. Channel** for more information
- DEBUG HIDE: This option is not relevant to the use and operation of the device
- RESET: See **6.3. Reset** for more information

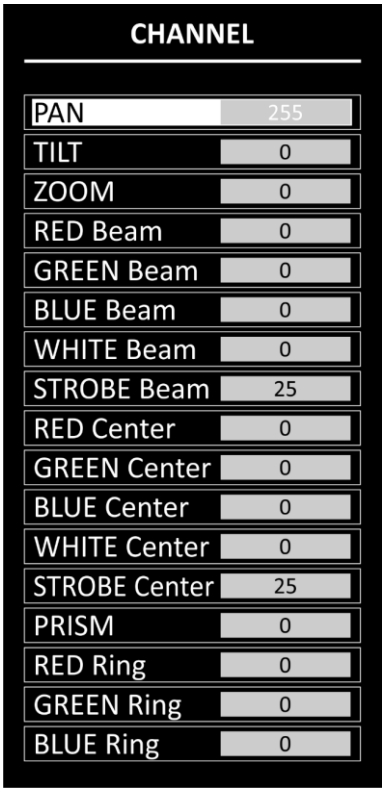
6.1. Auto Test

In this submenu you can perform auto test of the device's parameters.
01) Press the **ENTER** button to start the test.
02) Press the **BACK** button to stop the test.

6.2. Channel

In this submenu you can manually adjust the device's parameters.

01) Press the **UP/DOWN** buttons to scroll through the following 17 options.



02) Press the **ENTER** button to select the parameter.

03) Press the **UP/DOWN** buttons to increase/decrease the values.

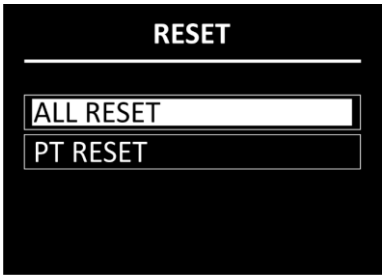
- PAN: Pan position adjustment (0–255)
- TILT: Tilt position adjustment (0–255)
- ZOOM: Zoom adjustment (0–255)
- RED Beam: Red color intensity of the 7 peripheral LEDs (0–255)
- GREEN Beam: Green color intensity of the 7 peripheral LEDs (0–255)
- BLUE Beam: Blue color intensity of the 7 peripheral LEDs (0–255)
- WHITE Beam: White color intensity of the 7 peripheral LEDs (0–255)
- STROBE Beam: Strobe effect of the 7 peripheral LEDs, from OFF to high frequency (0–25)
- RED Center: Red color intensity of the center LEDs (0–255)
- GREEN Center: Green color intensity of the center LEDs (0–255)
- BLUE Center: Blue color intensity of the center LEDs (0–255)
- WHITE Center: White color intensity of the center LEDs (0–255)
- STROBE Center: Strobe effect of the center LEDs, from OFF to high frequency (0–25)
- PRISM: Prism adjustment (0–255)
- RED Ring: Red color intensity of the ring LEDs (0–255)
- GREEN Ring: Green color intensity of the ring LEDs (0–255)
- BLUE Ring: Blue color intensity of the ring LEDs (0–255)

04) Press the **ENTER** button to set the value.

6.3. Reset

In this submenu you can manually reset some of the device's parameters.

01) Press the **UP/DOWN** buttons to scroll through the following 2 options:



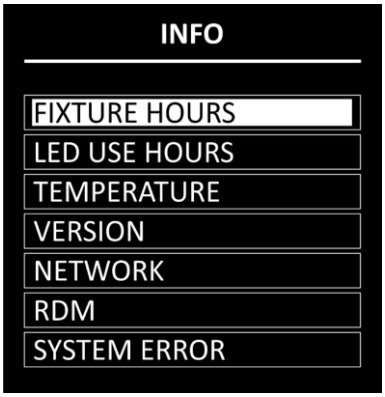
02) Press the **ENTER** button to confirm your choice. The reset of the parameters will be carried out. The available options are:

- ALL RESET: Resetting of all parameters
- PT RESET: Resetting of the Pan/Tilt to home position

7. Info

In this menu you can view the device's parameters.

01) Press the **UP/DOWN** buttons to scroll through the following 7 options:

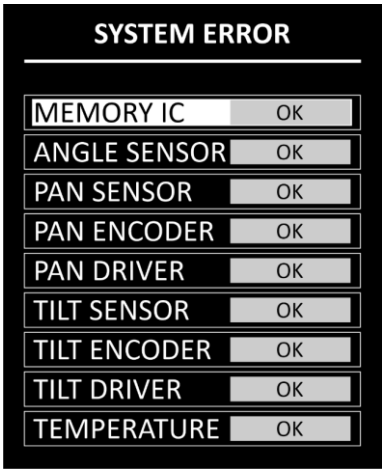


02) Press the **ENTER** button to confirm your choice and view the parameter. The available options are:

- FIXTURE HOURS: Shows the total hours of operation of the fixture
- LED USE HOURS: Shows the total hours of use of the LEDs
- TEMPERATURE: Provides information about the temperature of the LEDs and the display. Press the **UP/DOWN** buttons to switch between the 2 screens: LED and DISPLAY Board
- VERSION: Provides information about the firmware version of the following parameters: DISPLAY, XY DRIVE, ZOOM&LED and RING DRIVE. Press the **UP/DOWN** buttons to scroll through the 4 screens
- NETWORK: Shows the network settings of the device (IP ADDRESS, SUBNET MASK, MAC ADDRESS and UNIVERSE)
- RDM: Shows the UID number and name (LABEL) of the device
- SYSTEM ERROR: See **7.1. System Error** for more information

7.1. System Error

In this submenu you can view whether there are any system errors.
Press the **UP/DOWN** buttons to scroll through the following 9 options:



The displayed parameters are:

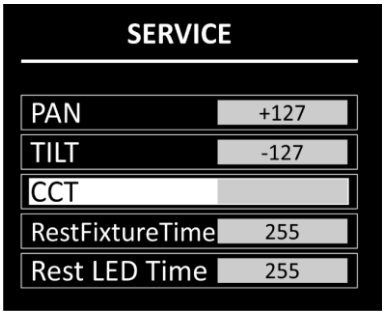
- MEMORY IC
- ANGLE SENSOR
- PAN SENSOR
- PAN ENCODER
- PAN DRIVER
- TILT SENSOR
- TILT ENCODER
- TILT DRIVER
- TEMPERATURE

If there are no errors, the display will show OK next to the parameter. If there are errors, the display will show ERROR.

8. Service

In this menu you can calibrate some of the device's parameters. This submenu requires a **password**.

01) Press the **UP/DOWN** buttons in the following order: **UP, DOWN, UP, DOWN** to enter the password.
02) Press the **ENTER** button to confirm the password and enter the submenu.
03) Press the **UP/DOWN** buttons to scroll through the following 5 options:



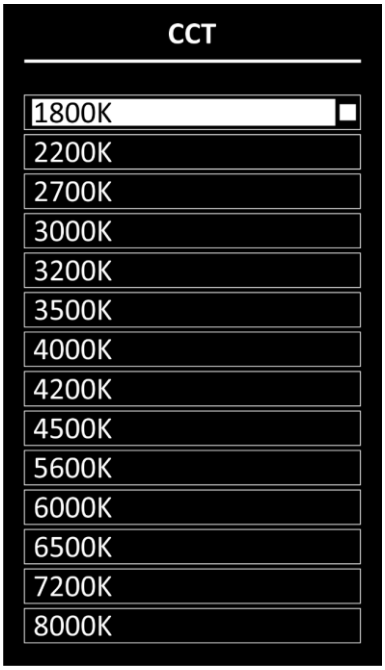
04) Press the **ENTER** button to confirm your choice.
05) Press the **UP/DOWN** buttons to increase/decrease the value or make a selection.
06) Press the **ENTER** button to set the value or confirm your choice.
The available options are:

- PAN: Adjustment of the home position of the pan drive. The adjustment range is between -127 and +127.
- TILT: Adjustment of the home position of the tilt drive. The adjustment range is between -127 and +127.
- CCT: See **8.1. CCT (Correlated Color Temperature Control)**
- Rest Fixture Time: Resets the total hours of operation of the fixture. Select 0 to reset the fixture time.
- Rest LED Time: Resets the total hours of use of the LEDs. Select 0 to reset the LED time.

8.1. CCT (Correlated Color Temperature Control)

In this submenu you can calibrate the color temperature.

01) Press the **UP/DOWN** buttons to scroll through the following options:



02) Press the **ENTER** button to open the submenu.
03) Press the **UP/DOWN** buttons to choose between X FINE and Y FINE.
04) Press the **ENTER** button to confirm the selection.
05) Press the **UP/DOWN** buttons to increase/decrease the value. The adjustment range is between -200 and +200.
06) Press the **ENTER** button to set the value.

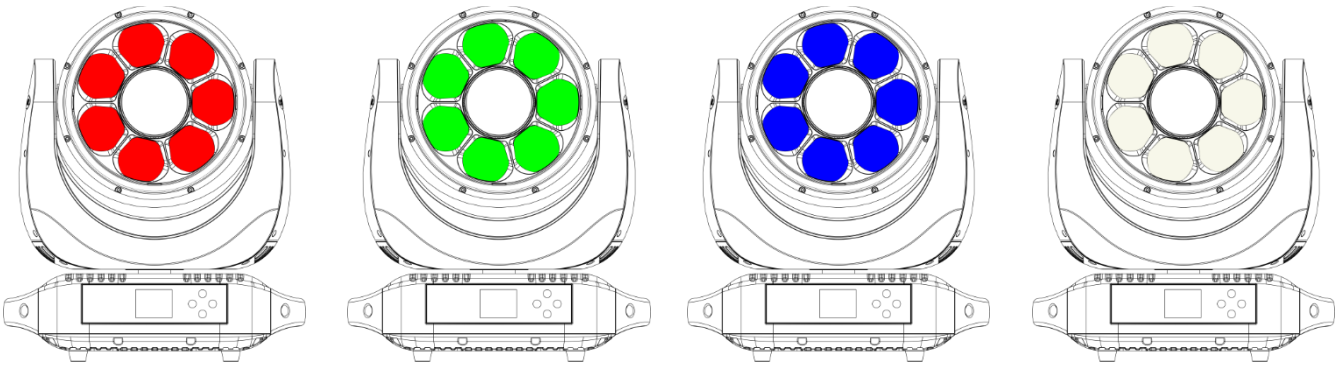
Note: If XY OFFSET is disabled in the OPTION menu, the XY fine adjustment of the CCT will not be visible in the submenu. Make sure XY OFFSET is enabled, if you want to adjust this parameter. For more information see **4. Option** on pages 27–28.

DMX Channels

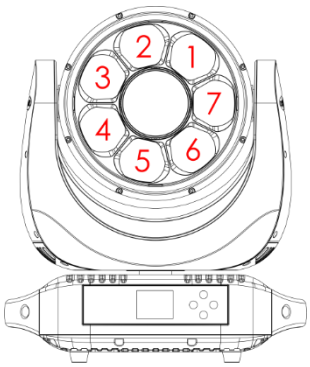
SSP (25 channels), TOUR (30 channels), TR16 (37 channels)

SSP 25CH	TOUR 30CH	TR16 37CH	Function	Value	Setting
1	1	1	**Pan**	000–255	Pan adjustment 0°–540°
		2	**Pan, Fine**	000–255	Pan adjustment, 16-bit
2	2	3	**Tilt**	000–255	Tilt adjustment 0°–270°
		4	**Tilt, Fine**	000–255	Tilt adjustment, 16-bit
3	3	5	**Pan/Tilt Speed**	000–255	From fast to slow

Peripheral LEDs (Beam)



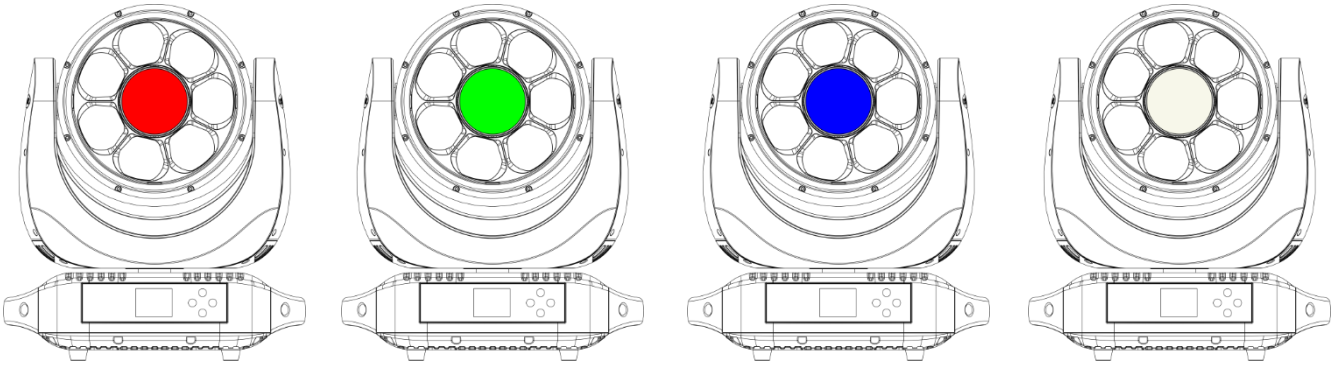
4	4	6	**Beam Red**	000–255	From low to high intensity (0–100 %)
		7	**Beam Red, Fine**	000–255	Fine adjustment
5	5	8	**Beam Green**	000–255	From low to high intensity (0–100 %)
		9	**Beam Green, Fine**	000–255	Fine adjustment
6	6	10	**Beam Blue**	000–255	From low to high intensity (0–100 %)
		11	**Beam Blue, Fine**	000–255	Fine adjustment
7	7	12	**Beam White**	000–255	From low to high intensity (0–100 %)
		13	**Beam White, Fine**	000–255	Fine adjustment
8	8	14	**Beam Master Dimmer**	000–255	From low to high intensity (0–100 %)
		15	**Beam Master Dimmer, Fine**	000–255	Fine adjustment
9	9	16	**Beam Strobe**	000–009	No function
				010–099	From low to high frequency (0–25 Hz)
				100–109	No function
				110–179	Pulse strobe, from low to high rate
				180–189	No function
				190–255	Random strobe, from low to high rate
	10	17	**Beam Color Macros**	000–010	No function
				011–030	Red 100 % / Green up/ Blue 0 %
				031–050	Red down / Green 100 % / Blue 0 %
				051–070	Red 0 % / Green 100 % / Blue up
				071–090	Red 0 % / Green down / Blue 100 %
				091–110	Red up/ Green 0 % / Blue 100 %
				111–130	Red 100 % / Green 0 % / Blue down
				131–150	Red 100 % / Green up / Blue up
				151–170	Red down / Green down / Blue 100 %
				171–195	Full output
				196–199	1800 K
				200–203	2200 K
				204–207	2700 K
				208–211	3000 K
				212–215	3200 K
				216–219	3500 K
				220–223	4000 K
				224–227	4200 K

SSP 25CH	TOUR 30CH	TR16 37CH	Function	Value	Setting
				228–231	4500 K
				232–235	5600 K
				236–239	6000 K
				240–243	6500 K
				244–247	7200 K
				248–255	8000 K
				000–009	No function
				010–015	1
				016–021	2
				022–027	3
				028–033	4
				034–039	5
				040–045	6
				046–051	7
				052–057	1, 2
				058–063	1, 3
				064–069	1, 4
				070–075	1, 5
				076–085	1, 6
				086–090	1, 7
				091–095	2, 3
				096–100	2, 4
				101–105	2, 5
				106–110	2, 6
				111–115	2, 7
				116–120	3, 4
				121–125	3, 5
				126–130	3, 6
				131–135	3, 7
	11	**18**	**Beam Static Pixel**	136–140	4, 5
				141–145	4, 6
				146–150	4, 7
				151–155	5, 6
				156–160	5, 7
				161–165	6, 7
				166–170	1, 2, 3
				171–175	1, 4, 5
				176–180	1, 6, 7
				181–185	2, 3, 4
				186–190	5, 6, 7
				191–195	4, 5, 6
				196–200	7, 2, 3
				201–205	1, 2, 3, 4
				206–210	1, 5, 6, 7
				211–215	1, 3, 5, 7
				216–220	3, 4, 5, 6
				221–225	1, 2, 3, 4, 5
				226–230	1, 4, 5, 6, 7
				231–235	3, 4, 5, 6, 7
				236–240	1, 2, 3, 4, 5, 6
				241–245	2, 3, 4, 5, 6, 7
				246–250	1, 2, 3, 5, 6, 7
				251–255	All on

SSP 25CH	TOUR 30CH	TR16 37CH	Function	Value	Setting
				000–009	No function
				010–013	Program 1 (user selectable colors)
				014–017	Program 2 (user selectable colors)
				018–021	Program 3 (user selectable colors)
				022–025	Program 4 (user selectable colors)
				026–029	Program 5 (user selectable colors)
				030–033	Program 6 (user selectable colors)
				034–037	Program 7 (user selectable colors)
				038–041	Program 8 (user selectable colors)
				042–045	Program 9 (user selectable colors)
				046–049	Program 10 (user selectable colors)
				050–053	Program 11 (user selectable colors)
				054–057	Program 12 (user selectable colors)
				058–061	Program 13 (user selectable colors)
				062–065	Program 14 (user selectable colors)
				066–069	Program 15 (fixed colors)
				070–073	Program 16 (fixed colors)
				074–077	Program 17 (fixed colors)
				078–081	Program 18 (fixed colors)
				082–085	Program 19 (fixed colors)
				086–089	Program 20 (fixed colors)
				090–093	Program 21 (fixed colors)
				094–097	Program 22 (fixed colors)
				098–101	Program 23 (fixed colors)
				102–105	Program 24 (fixed colors)
				106–109	Program 25 (fixed colors)
				110–113	Program 26 (fixed colors)
	12	**19**	**Beam Pixel Effects**	114–117	Program 27 (fixed colors)
				118–121	Program 28 (fixed colors)
				122–125	Program 29 (fixed colors)
				126–129	Program 30 (fixed colors)
				130–133	Program 31 (fixed colors)
				134–137	Program 32 (fixed colors)
				138–141	Program 33 (fixed colors)
				142–145	Program 34 (fixed colors)
				146–149	Program 35 (fixed colors)
				150–153	Program 36 (fixed colors)
				154–157	Program 37 (fixed colors)
				158–161	Program 38 (fixed colors)
				162–165	Program 39 (fixed colors)
				166–169	Program 40 (fixed colors)
				170–173	Program 41 (fixed colors)
				174–177	Program 42 (fixed colors)
				178–181	Program 43 (fixed colors)
				182–185	Program 44 (fixed colors)
				186–189	Program 45 (fixed colors)
				190–193	Program 46 (fixed colors)
				194–197	Program 47 (fixed colors)
				198–201	Program 48 (fixed colors)
				202–205	Program 49 (fixed colors)
				206–209	Program 50 (fixed colors)
				210–215	Random chase (user selectable colors)
				216–221	Chase in the following order: (1, 4, 5) - (2, 5, 6) - (3, 6, 7) - (4, 7, 1) - (5, 1, 2) - (6, 2, 3) - (7, 3, 4) (user selectable colors)

SSP 25CH	TOUR 30CH	TR16 37CH	Function	Value	Setting
				222–227	Chase in the following order: (1, 2, 5, 6) - (2, 3, 6, 7) - (3, 4, 7, 1) - (4, 5, 1, 2) - (5, 6, 2, 3) - (6, 7, 3, 4) - (7, 1, 4, 5) (user selectable colors)
				228–230	1, 2 circular movement, CCW (user selectable colors)
				231–233	1, 2, 3 circular movement, CCW (user selectable colors)
				234–236	1, 2, 3, 4 circular movement, CCW (user selectable colors)
				237–239	1–3 Blue, 4–7 Red
				240–242	1–3 Cyan, 4–7 Orange
				243–245	1–3 Purple, 4–7 Yellow
				246–248	1–3 Orange, 4–7 Green
				249–251	1–3 Red, 4–7 Purple
				252–254	1–3 Yellow, 4–7 Blue
				255	1–3 Green, 4–7 Purple
	13	**20**	**Beam Pixel Effects Speed**	000–255	Speed adjustment, from slow to fast
10	**14**	**21**	**Beam Zoom**	000–255	Zoom adjustment, 4,5°–35°

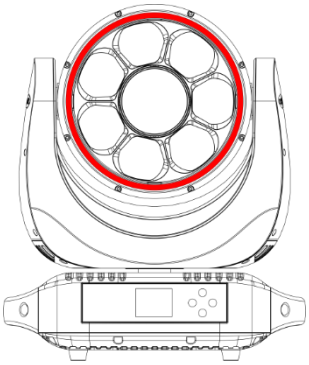
Center LEDs

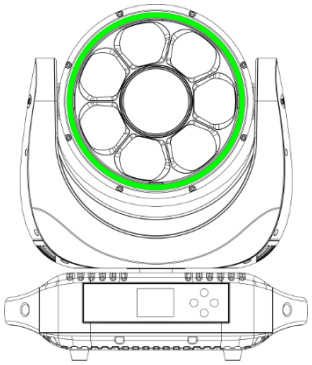


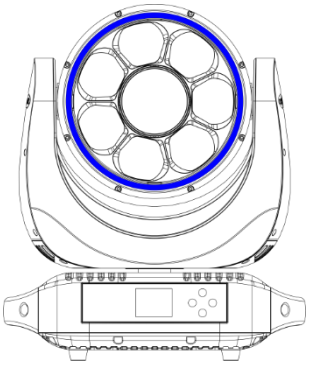
11	**15**	**22**	**Center Red**	000–255	From low to high intensity (0–100 %)
12	**16**	**23**	**Center Green**	000–255	From low to high intensity (0–100 %)
13	**17**	**24**	**Center Blue**	000–255	From low to high intensity (0–100 %)
14	**18**	**25**	**Center White**	000–255	From low to high intensity (0–100 %)
15	**19**	**26**	**Center Master Dimmer**	000–255	From low to high intensity (0–100 %)
				000–009	No function
				010–099	From low to high frequency (0–25 Hz)
16	**20**	**27**	**Center Strobe**	100–109	No function
				110–179	Pulse strobe, from low to high rate
				180–189	No function
				190–255	Random strobe, from low to high rate
				000–009	No function
				010–025	Red + Green
				026–041	Red + Blue
				042–057	Red + White
				058–073	Green + Blue
				074–089	Green + White
	21	**28**	**Center Macros and Effects**	090–105	Blue + White
				106–121	Red + Green + Blue
				122–137	Red + Green + Blue + White
				138–153	Red - Green - Red
				154–169	Red - Blue - Red
				170–185	Red - White - Red
				186–201	Green - Blue - Green

SSP 25CH	TOUR 30CH	TR16 37CH	Function	Value	Setting
				202–217	Blue - White - Blue
				218–233	Red - Green - Blue - Red
				234–255	Red - Green - Blue - White - Red
17	**22**	**29**	**Center Prism**	000–120	Prism indexing
				121–125	Stop
				126–165	Prism bouncing, from slow to fast
				166–170	Stop
				171–210	Clockwise rotation, from fast to slow
				211–215	Stop
				216–255	Counterclockwise rotation, from slow to fast

Ring LEDs







18	**23**	**30**	**Ring Red**	000–255	From low to high intensity (0–100 %)
19	**24**	**31**	**Ring Green**	000–255	From low to high intensity (0–100 %)
20	**25**	**32**	**Ring Blue**	000–255	From low to high intensity (0–100 %)
21	**26**	**33**	**Ring Color Macros**	000–009	No function
				010–014	Red
				015–019	Green
				020–024	Blue
				025–029	Yellow
				030–034	Magenta
				035–039	Cyan
				040–044	White
				045–049	Violet blue
				050–054	Light blue
				055–059	Wine red
				060–064	May green
				065–069	Reseda green
				070–074	Blue lilac
				075–079	Moss green
				080–084	Signal violet
				085–089	Red lilac
				090–094	Purple red
				095–099	Green brown
				100–104	Pale green
				105–109	Ruby red
				110–114	Flame red
				115–119	Red orange
				120–124	Rose
				125–129	Honey yellow
				130–134	Light pink
				135–139	Deep orange
				140–144	Lemon yellow
				145–149	Golden yellow

SSP 25CH	TOUR 30CH	TR16 37CH	Function	Value	Setting
				150–154	Pastel orange
				155–159	Cream
				160–164	Melon yellow
				165–169	Luminous orange
				170–174	Luminous yellow
				175–255	No function
				000–009	No function
				010–023	FX 1
				024–037	FX 2
				038–051	FX 3
				052–065	FX 4
				066–079	FX 5
				080–093	FX 6
				094–107	FX 7
				108–121	FX 8
22	**27**	**34**	**Ring Color Effects**	122–135	FX 9
				136–149	FX 10
				150–163	FX 11
				164–177	FX 12
				178–191	FX 13
				192–205	FX 14
				206–219	FX 15
				220–233	FX 16
				234–247	FX 17
				248–255	No function
23	**28**	**35**	**Ring Color Effects Speed**	000–255	Speed adjustment, from slow to fast
24	**29**	**36**	**Ring Dimmer**	000–255	From low to high intensity (0–100 %)
				000–009	No function
				010–019	Blackout Pan/Tilt movement ON
				020–029	Blackout Pan/Tilt movement OFF
				030–059	DIM 0
				060–069	DIM 1
				070–079	DIM 2
				080–089	DIM 3
				090–099	DIM 4
				100–139	PWM 1200 Hz
25	**30**	**37**	**Control**	140–149	PWM 2400 Hz (2 KHz)
				150–159	PWM 4000 Hz (2,4 KHz)
				160–169	PWM 6000 Hz
				170–179	PWM 25000 Hz
				180–189	Studio (Slow)
				190–199	Power (Fast)
				200–209	Live (Auto)
				210–219	Pan/Tilt reset
				220–229	Zoom reset
				230–239	All reset
				240–255	No function

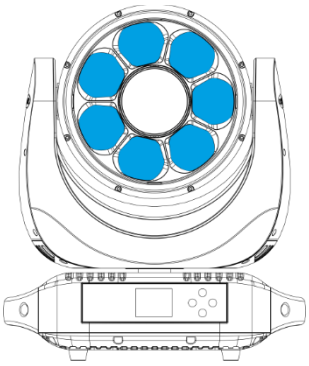
Notes:

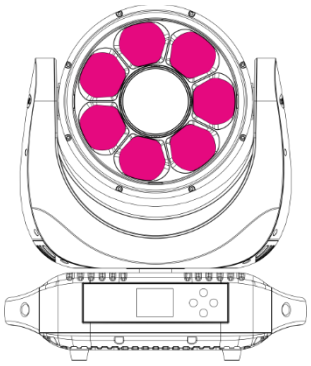
- Make sure the Master Dimmer channel for the respective LEDs (Peripheral/Beam, Center, Ring) is open in order to use the rest of the LEDs' functionalities.
- You need first to select a color before running the beam pixel effects with user selectable colors. Select values for red, green, blue and white in the respective channels for the Peripheral/Beam LEDs, before choosing a built-in program.

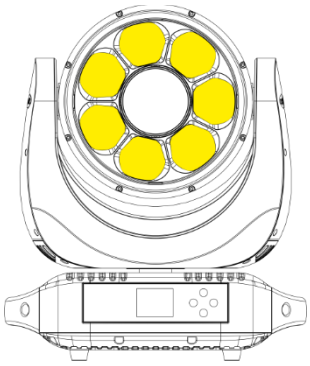
HSIC (27 channels), CMY (31 channels), PIXEL (52 channels)

HSIC 27CH	CMY 31CH	PIXEL 52CH	Function	Value	Setting
1	**1**	**1**	**Pan**	000–255	Pan adjustment 0°–540°
2	**2**	**2**	**Pan, Fine**	000–255	Pan adjustment, 16-bit
3	**3**	**3**	**Tilt**	000–255	Tilt adjustment 0°–270°
4	**4**	**4**	**Tilt, Fine**	000–255	Tilt adjustment, 16-bit
5	**5**	**5**	**Pan/Tilt Speed**	000–255	From fast to slow

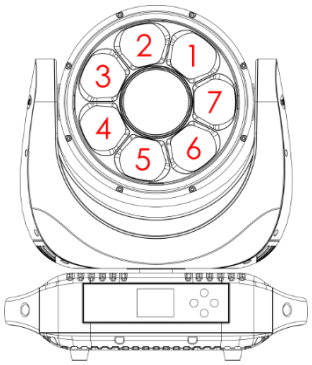
Peripheral LEDs (Beam)







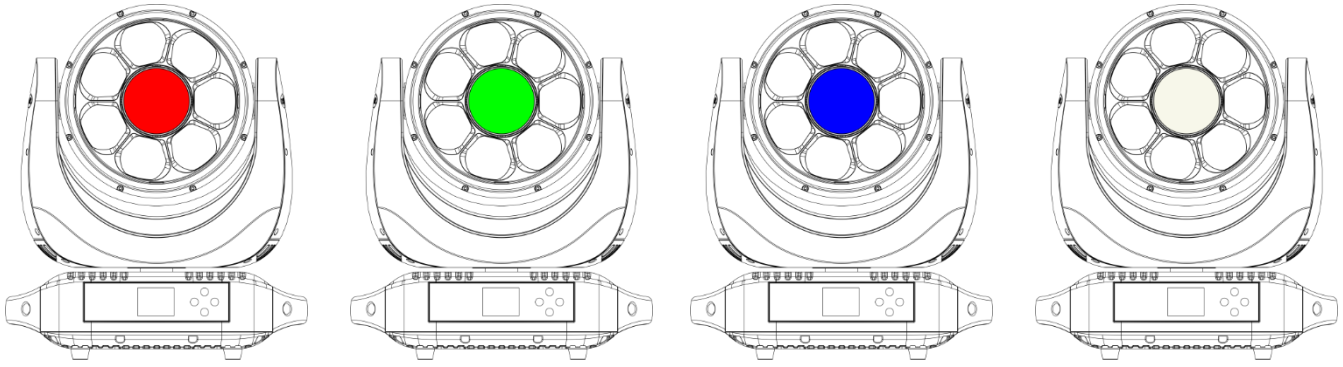
	6		**Beam Cyan**	000–255	From low to high intensity (0–100 %)
	7		**Beam Magenta**	000–255	From low to high intensity (0–100 %)
	8		**Beam Yellow**	000–255	From low to high intensity (0–100 %)
	9		**Beam Master Dimmer**	000–255	From low to high intensity (0–100 %)
6			**Beam Color Intensity**	000–255	From low to high intensity (0–100 %)
7			**Beam Color Hue**	000–255	Hue adjustment (0–100 %)
8			**Beam Color Hue Fine**	000–255	Fine adjustment
9			**Beam Color Saturation**	000–255	Saturation adjustment (0–100 %)
10			**Beam CCT**	000–010	No function
				011–028	1800 K
				029–046	2200 K
				047–064	2700 K
				065–082	3000 K
				083–100	3200 K
				101–118	3500 K
				119–136	4000 K
				137–154	4200 K
				155–172	4500 K
				173–190	5600 K
				191–208	6000 K
				209–226	6500 K
				227–244	7200 K
				245–255	8000 K
11	**10**		**Beam Strobe**	000–009	No function
				010–099	From low to high frequency (0–25 Hz)
				100–109	No function
				110–179	Pulse strobe, from low to high rate
				180–189	No function
				190–255	Random strobe, from low to high rate
	11		**Beam Color Macros**	000–010	No function
				011–030	Cyan 100 % / Magenta up / Yellow 0 %
				031–050	Cyan down / Magenta 100 % / Yellow 0 %
				051–070	Cyan 0 % / Magenta 100 % / Yellow up
				071–090	Cyan 0 % / Magenta down / Yellow 100 %

HSIC 27CH	CMY 31CH	PIXEL 52CH	Function	Value	Setting
				091–110	Cyan up / Magenta 0 % / Yellow 100 %
				111–130	Cyan 100 % / Magenta 0 %/ Yellow down
				131–150	Cyan 100 % / Magenta up/ Yellow 0 %
				151–170	Cyan down / Magenta down/ Yellow 100 %
				171–195	All LEDs at full output
				196–199	1800 K
				200–203	2200 K
				204–207	2700 K
				208–211	3000 K
				212–215	3200 K
				216–219	3500 K
				220–223	4000 K
				224–227	4200 K
				228–231	4500 K
				232–235	5600 K
				236–239	6000 K
				240–243	6500 K
				244–247	7200 K
				248–255	8000 K
	12		 **Beam Static Pixel**	000–009	No function
				010–015	1
				016–021	2
				022–027	3
				028–033	4
				034–039	5
				040–045	6
				046–051	7
				052–057	1, 2
				058–063	1, 3
				064–069	1, 4
				070–075	1, 5
				076–085	1, 6
				086–090	1, 7
				091–095	2, 3
				096–100	2, 4
				101–105	2, 5
				106–110	2, 6
				111–115	2, 7
				116–120	3, 4
				121–125	3, 5
				126–130	3, 6
				131–135	3, 7
				136–140	4, 5
				141–145	4, 6
				146–150	4, 7
				151–155	5, 6
				156–160	5, 7
				161–165	6, 7
				166–170	1, 2, 3
				171–175	1, 4, 5
				176–180	1, 6, 7
				181–185	2, 3, 4
				186–190	5, 6, 7

HSIC 27CH	CMY 31CH	PIXEL 52CH	Function	Value	Setting
				191–195	4, 5, 6
				196–200	7, 2, 3
				201–205	1, 2, 3, 4
				206–210	1, 5, 6, 7
				211–215	1, 3, 5, 7
				216–220	3, 4, 5, 6
				221–225	1, 2, 3, 4, 5
				226–230	1, 4, 5, 6, 7
				231–235	3, 4, 5, 6, 7
				236–240	1, 2, 3, 4, 5, 6
				241–245	2, 3, 4, 5, 6, 7
				246–250	1, 2, 3, 5, 6, 7
				251–255	All on
				000–009	No function
				010–013	Program 1 (user selectable colors)
				014–017	Program 2 (user selectable colors)
				018–021	Program 3 (user selectable colors)
				022–025	Program 4 (user selectable colors)
				026–029	Program 5 (user selectable colors)
				030–033	Program 6 (user selectable colors)
				034–037	Program 7 (user selectable colors)
				038–041	Program 8 (user selectable colors)
				042–045	Program 9 (user selectable colors)
				046–049	Program 10 (user selectable colors)
				050–053	Program 11 (user selectable colors)
				054–057	Program 12 (user selectable colors)
				058–061	Program 13 (user selectable colors)
				062–065	Program 14 (user selectable colors)
				066–069	Program 15 (fixed colors)
				070–073	Program 16 (fixed colors)
				074–077	Program 17 (fixed colors)
				078–081	Program 18 (fixed colors)
				082–085	Program 19 (fixed colors)
	13		**Beam Pixel Effects**	086–089	Program 20 (fixed colors)
				090–093	Program 21 (fixed colors)
				094–097	Program 22 (fixed colors)
				098–101	Program 23 (fixed colors)
				102–105	Program 24 (fixed colors)
				106–109	Program 25 (fixed colors)
				110–113	Program 26 (fixed colors)
				114–117	Program 27 (fixed colors)
				118–121	Program 28 (fixed colors)
				122–125	Program 29 (fixed colors)
				126–129	Program 30 (fixed colors)
				130–133	Program 31 (fixed colors)
				134–137	Program 32 (fixed colors)
				138–141	Program 33 (fixed colors)
				142–145	Program 34 (fixed colors)
				146–149	Program 35 (fixed colors)
				150–153	Program 36 (fixed colors)
				154–157	Program 37 (fixed colors)
				158–161	Program 38 (fixed colors)
				162–165	Program 39 (fixed colors)
				166–169	Program 40 (fixed colors)
				170–173	Program 41 (fixed colors)

HSIC 27CH	CMY 31CH	PIXEL 52CH	Function	Value	Setting
				174–177	Program 42 (fixed colors)
				178–181	Program 43 (fixed colors)
				182–185	Program 44 (fixed colors)
				186–189	Program 45 (fixed colors)
				190–193	Program 46 (fixed colors)
				194–197	Program 47 (fixed colors)
				198–201	Program 48 (fixed colors)
				202–205	Program 49 (fixed colors)
				206–209	Program 50 (fixed colors)
				210–215	Random chase (user selectable colors)
				216–221	Chase in the following order: (1, 4, 5) - (2, 5, 6) - (3, 6, 7) - (4, 7, 1) - (5, 1, 2) - (6, 2, 3) - (7, 3, 4) (user selectable colors)
				222–227	Chase in the following order: (1, 2, 5, 6) - (2, 3, 6, 7) - (3, 4, 7, 1) - (4, 5, 1, 2) - (5, 6, 2, 3) - (6, 7, 3, 4) - (7, 1, 4, 5) (user selectable colors)
				228–230	1, 2 circular movement, CCW (user selectable colors)
				231–233	1, 2, 3 circular movement, CCW (user selectable colors)
				234–236	1, 2, 3, 4 circular movement, CCW (user selectable colors)
				237–239	1–3 Blue, 4–7 Red
				240–242	1–3 Cyan, 4–7 Orange
				243–245	1–3 Purple, 4–7 Yellow
				246–248	1–3 Orange, 4–7 Green
				249–251	1–3 Red, 4–7 Purple
				252–254	1–3 Yellow, 4–7 Blue
				255	1–3 Green, 4–7 Purple
	14		**Beam Pixel Effects Speed**	000–255	Speed adjustment, from slow to fast
12	**15**	**6**	**Beam Zoom**	000–255	Zoom adjustment, 4,5°–35°

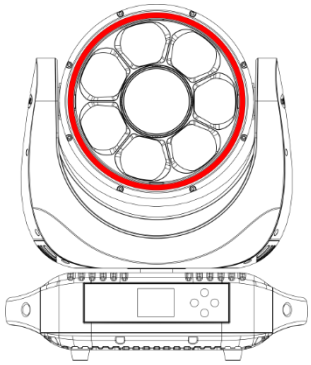
Center LEDs

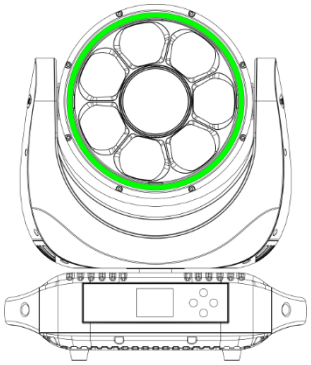


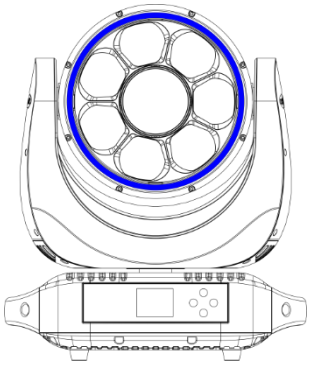
		7	**Center Master Dimmer**	000–255	From low to high intensity (0–100 %)
		8	**Center Strobe**	000–009	No function
				010–099	From low to high frequency (0–25 Hz)
				100–109	No function
				110–179	Pulse strobe, from low to high rate
				180–189	No function
				190–255	Random strobe, from low to high rate
13	**16**	**9**	**Center Red**	000–255	From low to high intensity (0–100 %)
14	**17**	**10**	**Center Green**	000–255	From low to high intensity (0–100 %)
15	**18**	**11**	**Center Blue**	000–255	From low to high intensity (0–100 %)
16	**19**	**12**	**Center White**	000–255	From low to high intensity (0–100 %)

HSIC 27CH	CMY 31CH	PIXEL 52CH	Function	Value	Setting
17	**20**		**Center Master Dimmer**	000–255	From low to high intensity (0–100 %)
18	**21**		**Center Strobe**	000–009	No function
				010–099	From low to high frequency (0–25 Hz)
				100–109	No function
				110–179	Pulse strobe, from low to high rate
				180–189	No function
				190–255	Random strobe, from low to high rate
22	**13**		**Center Macros and Effects**	000–009	No function
				010–025	Red + Green
				026–041	Red + Blue
				042–057	Red + White
				058–073	Green + Blue
				074–089	Green + White
				090–105	Blue + White
				106–121	Red + Green + Blue
				122–137	Red + Green + Blue + White
				138–153	Red - Green - Red
				154–169	Red - Blue - Red
				170–185	Red - White - Red
				186–201	Green - Blue - Green
				202–217	Blue - White - Blue
				218–233	Red - Green - Blue - Red
				234–255	Red - Green - Blue - White - Red
19	**23**	**14**	**Center Prism**	000–120	Prism indexing
				121–125	Stop
				126–165	Prism bouncing, from slow to fast
				166–170	Stop
				171–210	Clockwise rotation, from fast to slow
				211–215	Stop
				216–255	Counterclockwise rotation, from slow to fast

Ring LEDs







20	**24**	**15**	**Ring Red**	000–255	From low to high intensity (0–100 %)
21	**25**	**16**	**Ring Green**	000–255	From low to high intensity (0–100 %)
22	**26**	**17**	**Ring Blue**	000–255	From low to high intensity (0–100 %)
23	**27**	**18**	**Ring Color Macros**	000–009	No function
				010–014	Red
				015–019	Green
				020–024	Blue
				025–029	Yellow
				030–034	Magenta
				035–039	Cyan
				040–044	White
				045–049	Violet blue

HSIC 27CH	CMY 31CH	PIXEL 52CH	Function	Value	Setting
				050–054	Light blue
				055–059	Wine red
				060–064	May green
				065–069	Reseda green
				070–074	Blue lilac
				075–079	Moss green
				080–084	Signal violet
				085–089	Red lilac
				090–094	Purple red
				095–099	Green brown
				100–104	Pale green
				105–109	Ruby red
				110–114	Flame red
				115–119	Red orange
				120–124	Rose
				125–129	Honey yellow
				130–134	Light pink
				135–139	Deep orange
				140–144	Lemon yellow
				145–149	Golden yellow
				150–154	Pastel orange
				155–159	Cream
				160–164	Melon yellow
				165–169	Luminous orange
				170–174	Luminous yellow
				175–255	No function
24	**28**	**19**	**Ring Color Effects**	000–009	No function
				010–023	FX 1
				024–037	FX 2
				038–051	FX 3
				052–065	FX 4
				066–079	FX 5
				080–093	FX 6
				094–107	FX 7
				108–121	FX 8
				122–135	FX 9
				136–149	FX 10
				150–163	FX 11
				164–177	FX 12
				178–191	FX 13
				192–205	FX 14
				206–219	FX 15
				220–233	FX 16
				234–247	FX 17
				248–255	No function
25	**29**	**20**	**Ring Color Effects Speed**	000–255	Speed adjustment, from slow to fast
26	**30**	**21**	**Ring Dimmer**	000–255	From low to high intensity (0–100 %)
27	**31**	**22**	**Control**	000–009	No function
				010–019	Blackout Pan/Tilt movement ON
				020–029	Blackout Pan/Tilt movement OFF
				030–059	DIM 0
				060–069	DIM 1
				070–079	DIM 2
				080–089	DIM 3
				090–099	DIM 4

HSIC 27CH	CMY 31CH	PIXEL 52CH	Function	Value	Setting
				100–139	PWM 1200 Hz
				140–149	PWM 2400 Hz
				150–159	PWM 4000 Hz
				160–169	PWM 6000 Hz
				170–179	PWM 25000 Hz
				180–189	Studio (Slow)
				190–199	Power (Fast)
				200–209	Live (Auto)
				210–219	Pan/Tilt reset
				220–229	Zoom reset
				230–239	All reset
				240–255	No function
		23	**Beam Master Dimmer**	000–255	From low to high intensity (0–100 %)
		24	**Beam Strobe**	000–009	No function
				010–099	From low to high frequency (0–25 Hz)
				100–109	No function
				110–179	Pulse strobe, from low to high rate
				180–189	No function
				190–255	Random strobe, from low to high rate
		25	**Beam Red 1**	000–255	From low to high intensity (0–100 %)
		26	**Beam Green 1**	000–255	From low to high intensity (0–100 %)
		27	**Beam Blue 1**	000–255	From low to high intensity (0–100 %)
		28	**Beam White 1**	000–255	From low to high intensity (0–100 %)
		29	**Beam Red 2**	000–255	From low to high intensity (0–100 %)
		30	**Beam Green 2**	000–255	From low to high intensity (0–100 %)
		31	**Beam Blue 2**	000–255	From low to high intensity (0–100 %)
		32	**Beam White 2**	000–255	From low to high intensity (0–100 %)
		33	**Beam Red 3**	000–255	From low to high intensity (0–100 %)
		34	**Beam Green 3**	000–255	From low to high intensity (0–100 %)
		35	**Beam Blue 3**	000–255	From low to high intensity (0–100 %)
		36	**Beam White 3**	000–255	From low to high intensity (0–100 %)
		37	**Beam Red 4**	000–255	From low to high intensity (0–100 %)
		38	**Beam Green 4**	000–255	From low to high intensity (0–100 %)
		39	**Beam Blue 4**	000–255	From low to high intensity (0–100 %)
		40	**Beam White 4**	000–255	From low to high intensity (0–100 %)
		41	**Beam Red 5**	000–255	From low to high intensity (0–100 %)
		42	**Beam Green 5**	000–255	From low to high intensity (0–100 %)
		43	**Beam Blue 5**	000–255	From low to high intensity (0–100 %)
		44	**Beam White 5**	000–255	From low to high intensity (0–100 %)
		45	**Beam Red 6**	000–255	From low to high intensity (0–100 %)
		46	**Beam Green 6**	000–255	From low to high intensity (0–100 %)
		47	**Beam Blue 6**	000–255	From low to high intensity (0–100 %)
		48	**Beam White 6**	000–255	From low to high intensity (0–100 %)
		49	**Beam Red 7**	000–255	From low to high intensity (0–100 %)
		50	**Beam Green 7**	000–255	From low to high intensity (0–100 %)
		51	**Beam Blue 7**	000–255	From low to high intensity (0–100 %)
		52	**Beam White 7**	000–255	From low to high intensity (0–100 %)

Notes:

- Make sure the Master Dimmer channel for the respective LEDs (Peripheral/Beam, Center, Ring) is open in order to use the rest of the LEDs' functionalities.
- You need first to select a color before running the beam pixel effects with user selectable colors. Select values for red, green, blue and white in the respective channels for the Peripheral/Beam LEDs, before choosing a built-in program.

Maintenance

The operator has to make sure that safety-related and machine-technical installations are to be inspected by an expert after every year in the course of an acceptance test.
The operator has to make sure that safety-related and machine-technical installations are to be inspected by a skilled person once a year.

The following points have to be considered during the inspection:
01) All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
02) There may not be any deformations on housings, fixations and installation spots.
03) Mechanically moving parts like axles, eyes and others may not show any traces of wearing.
04) The electric power supply cables must not show any damages or material fatigue.

The Polar 340 WashFX IP 65 Moving Head requires almost no maintenance. However, you should keep the unit clean. Otherwise the fixture's light output will be significantly reduced.
Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Wipe lens clean with glass cleaner and a soft cloth. Do not use alcohol or solvents.
The front lens will require weekly cleaning, as smoke-fluid tends to build up residues, reducing the light output very quickly.
Keep connections clean. Disconnect electric power, and then wipe all connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Replacing the Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below.
01) Unplug the unit from electric power source.
02) Insert a flat-headed screwdriver into the slot in the fuse cover. Turn the screwdriver to the left, at the same time gently push a bit. The fuse will come out.
03) Remove the used fuse. If brown or unclear, it is burned out.
04) Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse holder. Be sure to use a fuse of the same type and specification. See the product specification label for details.

Draining Condensation Water

The Polar WashFX IP65 Moving Head is designed to resist water and moisture. If the device is exposed to extreme humid conditions during servicing, condensation may form inside the device. This can happen also during transportation, if the device is exposed to extreme temperature variations.
In case condensation occurs on the inside of the lens, proceed as follows:
01) Carefully remove the M12 GORE® valve and the water drainage plug with a wrench.

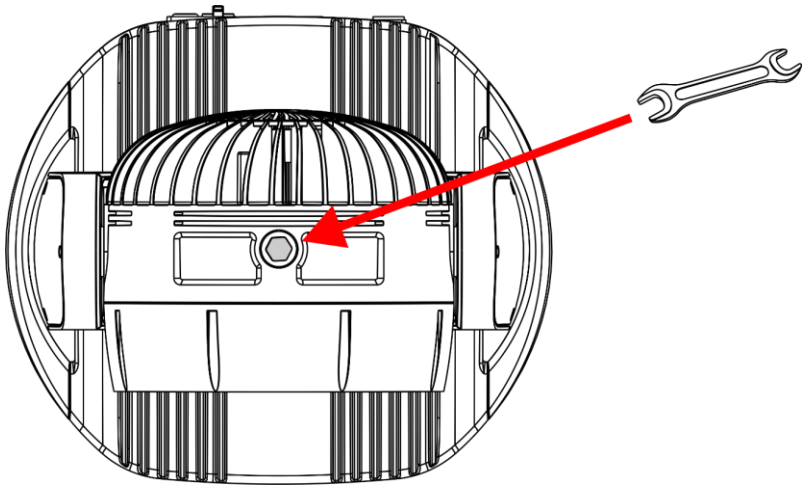


Fig. 14

02) Let the device operate with all LEDs at full output for 60 minutes.
03) Let the device cool down for 30 minutes.
04) Replace the M12 GORE® valve and the water drainage plug. Make sure you do not overtighten them.

Troubleshooting

This troubleshooting guide is meant to help solve simple problems.
If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

No Light

If the light effect does not operate properly, refer servicing to a technician.
Suspect three potential problem areas as: the power supply, the LEDs, the fuse.

01) Power supply. Check if the unit is plugged into an appropriate power supply.
02) The LEDs. Return the Polar to your Showtec dealer.
03) The fuse. Replace the fuse. See page 50 for replacing the fuse.
04) If all of the above appears to be OK, plug the unit in again.
05) If you are unable to determine the cause of the problem, do not open the Polar, as this may damage the unit and the warranty will become void.
06) Return the device to your Showtec dealer.

No Response to DMX

Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.

01) Check the DMX settings. Make sure that DMX addresses are correct.
02) Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
03) Determine whether the controller or light effect is at fault. Does the controller operate properly with other DMX products? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

Problem	Probable cause(s)	Solution
One or more fixtures do not function at all	No power to the fixture	• Check if power is switched on and cables are plugged in
	Primary fuse blown	• Replace fuse
Fixtures reset correctly, but all respond erratically or not at all to the controller	The controller is not connected	• Connect controller
	5-pin DMX OUT of the controller does not match DMX IN of the first fixture on the link (i.e. signal is reversed)	• Install a phase reversing cable between the controller and the first fixture on the link
Fixtures reset correctly, but some respond erratically or not at all to the controller	Poor data quality	• Check data quality. If much lower than 100 percent, the problem may be a bad data link connection, poor quality or broken cables, missing termination plug, or a defective fixture disturbing the link
	Bad data link connection	• Inspect connections and cables. Correct poor connections. Repair or replace damaged cables
	Data link not terminated with 120 Ohm termination plug	• Insert termination plug in output jack of the last fixture on the link
	Incorrect addressing of the fixtures	• Check address settings
	One of the fixtures is defective and disturbs data transmission on the link	• Bypass one fixture at a time until normal operation is regained: unplug both connectors and connect them directly together • Have the defective fixture serviced by a qualified technician
	5-pin DMX OUT on the fixtures does not match (pins 2 and 3 reversed)	• Install a phase-reversing cable between the fixtures or swap pin 2 and 3 in the fixture, that behaves erratically
No light or LEDs cut out intermittently	Fixture is too hot	• Allow fixture to cool • Clean the fan • Make sure air vents are not blocked • Turn up the air conditioning
	LEDs damaged	• Disconnect fixture and return to your dealer
	The power supply settings do not match local AC voltage and frequency	• Disconnect fixture. Check settings and correct if necessary

Product Specifications

Model:	Polar 340 WashFX IP65 Moving Head
Input voltage:	100–240 V AC, 50/60 Hz (auto-ranging)
Power consumption:	350 W (max)
Fuse:	T6,3 A/250 V
Dimensions:	489 x 416 x 356 mm (L x W x H)
Weight:	23,24 kg

Operating and Programming:	
Signal pin OUT:	Pin 1 (earth), pin 2 (-), pin 3 (+), pin 4 (N/C), pin 5 (N/C)
DMX Mode:	HSIC (27 channels), SSP (25 channels), Tour (30 channels), TR16 (37 channels), Pixel (52 channels), CMY (31 channels)
Signal input:	5-pin DMX IN
Signal output:	5-pin DMX OUT

Electro-mechanical properties:	
Light source:	7 LED modules x 40 W (RGBW) and 1 LED module x 60 W (RGBW)
Light output:	300000 Lux @ 1 m (4,5°); 15000 Lux @ 1 m (35°)
Zoom range:	4,5°–35°
Dimmer:	0–100 % (16 bit)
Strobe:	0–25 Hz
DMX control:	Via standard DMX controller
Display:	LCD, battery-powered
Control:	Stand alone, Manual, Master/Slave, DMX-512/RDM, Art-Net/sACN, W-DMX
Pan:	0°–540°
Tilt:	0°–270°
Special:	Pan/Tilt movement blackout, user selectable Pan/Tilt ranges, reverse Pan/Tilt movement
Pan/Tilt resolution:	8–16 bit
Prism:	8-facet prism
Prism functions:	Bidirectional rotation, adjustable speed
Housing:	Die-cast aluminum
Color:	Black
IP rating:	IP-65
Connections:	IP-65 rated power connector True1 IN, IP-65 rated 5-pin DMX IN/OUT connectors, 2 x IP-65 rated RJ45 connectors
Cooling:	Forced convection

Max. ambient temperature t_A:	40 °C
Max. housing temperature t_B:	70 °C

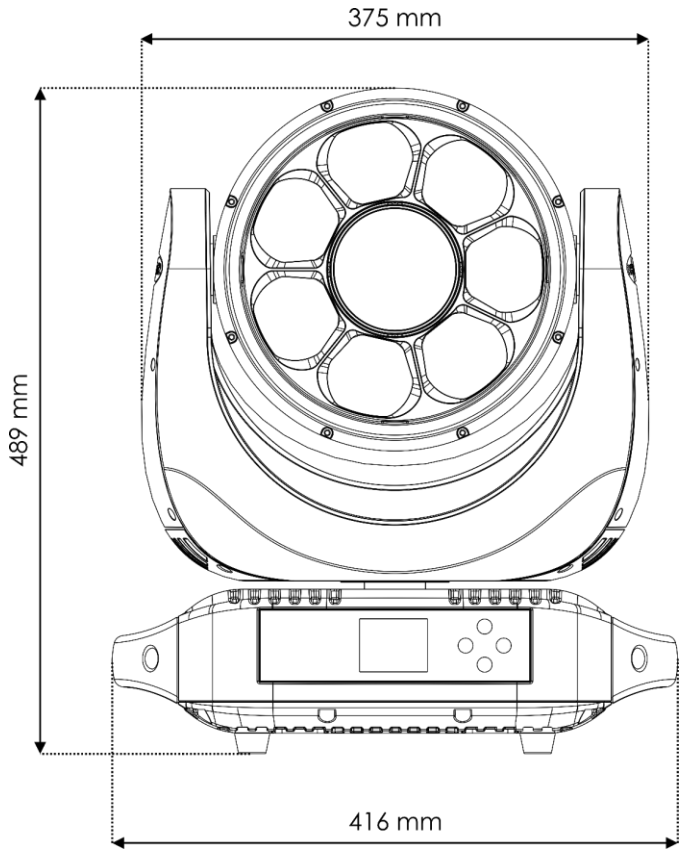
Minimum distance:	
Minimum distance from flammable surfaces:	1,3 m
Minimum distance to lighted object:	1,3 m

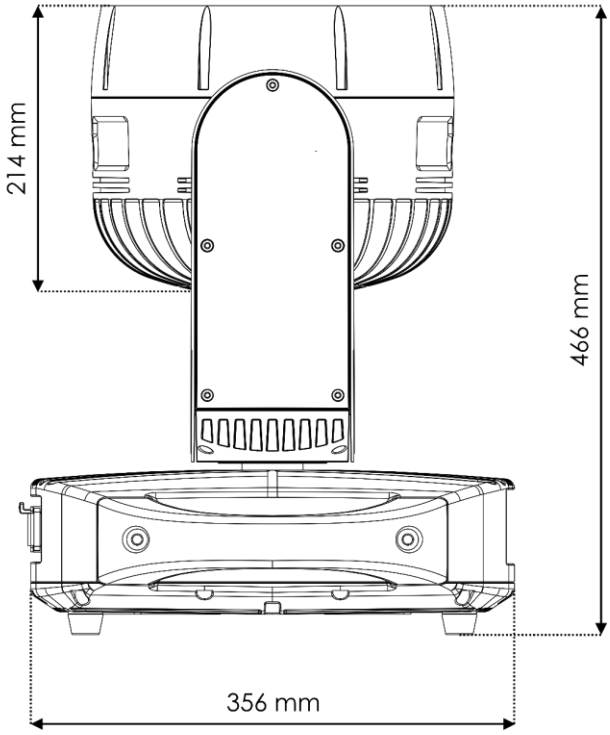
Design and product specifications are subject to change without prior notice.

CE

Website: www.Showtec.info
Email: service@highlite.com

Dimensions





©2020 Showtec