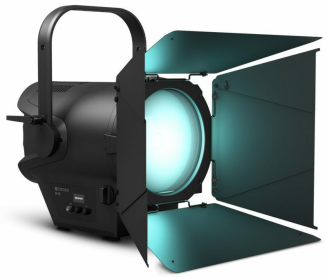
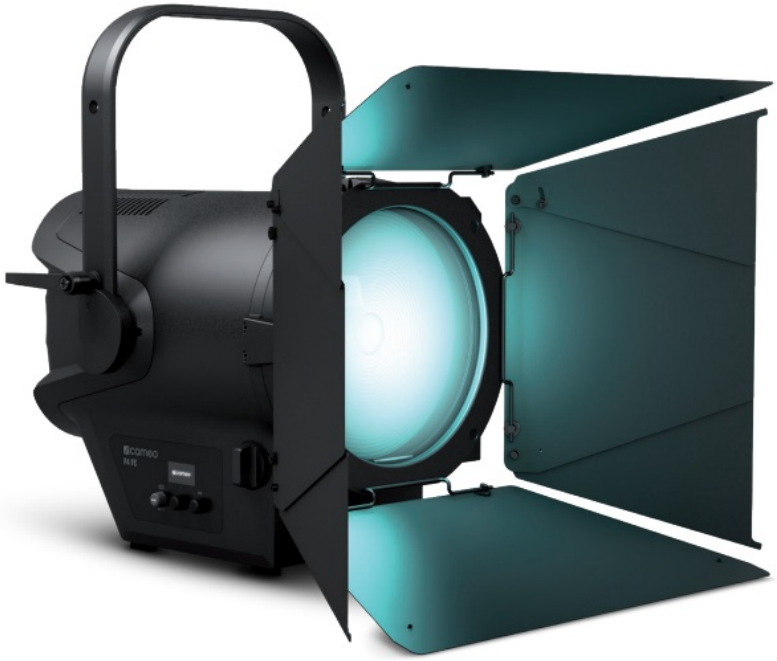


Cameo CL4FC Professional High Power Fresnel with RGBW LED User Manual

Contents



VERSION: before 1.20

F4 FC

PROFESSIONAL HIGH-POWER FRESNEL WITH RGBW LED
CL4FC

YOU'VE MADE THE RIGHT CHOICE!

We have designed this product to operate reliably over many years. Please read this User's Manual carefully, so that you can begin making optimum use of your Cameo Light product quickly. Learn more about Cameo Light on our website **WWW.CAMEOLIGHT.COM**.

PREVENTIVE MEASURES

1. Please read these instructions carefully.
2. Keep all information and instructions in a safe place.
3. Follow the instructions.
4. Observe all safety warnings. Never remove safety warnings or other information from the equipment.
5. Use the equipment only in the intended manner and for the intended purpose.
6. Use only sufficiently stable and compatible stands and/or mounts (for fixed installations). Make certain that wall mounts are properly installed and secured. Make certain that the equipment is installed securely and cannot fall down.
7. During installation, observe the applicable safety regulations for your country.
8. Never install and operate the equipment near radiators, heat registers, ovens or other sources of heat. Make certain that the equipment is always installed so that is cooled sufficiently and cannot overheat.
9. Never place sources of ignition, e.g., burning candles, on the equipment.
10. Ventilation slits must not be blocked.
11. This appliance is designed exclusively for indoor use, do not use this equipment in the immediate vicinity of

water (does not apply to special outdoor equipment – in this case, observe the special instructions noted below). Do not expose this equipment to flammable materials, fluids or gases.

12. Make certain that dripping or splashed water cannot enter the equipment. Do not place containers filled with liquids, such as vases or drinking vessels, on the equipment.
13. Make certain that objects cannot fall into the device.
14. Use this equipment only with the accessories recommended and intended by the manufacturer.
15. Do not open or modify this equipment.
16. After connecting the equipment, check all cables in order to prevent damage or accidents, e.g., due to tripping hazards.
17. During transport, make certain that the equipment cannot fall down and possibly cause property damage and personal injuries.
18. If your equipment is no longer functioning properly, if fluids or objects have gotten inside the equipment or if it has been damaged in another way, switch it off immediately and unplug it from the mains outlet (if it is a powered device). This equipment may only be repaired by authorized, qualified personnel.
19. Clean the equipment using a dry cloth.
20. Comply with all applicable disposal laws in your country. During disposal of packaging, please separate plastic and paper/cardboard.
21. Plastic bags must be kept out of reach of children.

FOR EQUIPMENT THAT CONNECTS TO THE POWER MAINS:

22. CAUTION: If the power cord of the device is equipped with an earthing contact, then it must be connected to an outlet with a protective ground. Never deactivate the protective ground of a power cord.
23. If the equipment has been exposed to strong fluctuations in temperature (for example, after transport), do not switch it on immediately. Moisture and condensation could damage the equipment. Do not switch on the equipment until it has reached room temperature.
24. Before connecting the equipment to the power outlet, first verify that the mains voltage and frequency match the values specified on the equipment. If the equipment has a voltage selection switch, connect the equipment to the power outlet only if the equipment values and the mains power values match. If the included power cord or power adapter does not fit in your wall outlet, contact your electrician.
25. Do not step on the power cord. Make certain that the power cable does not become kinked, especially at the mains outlet and/or power adapter and the equipment connector.
26. When connecting the equipment, make certain that the power cord or power adapter is always freely accessible. Always disconnect the equipment from the power supply if the equipment is not in use or if you want to clean the equipment. Always unplug the power cord and power adapter from the power outlet at the plug or adapter and not by pulling on the cord. Never touch the power cord and power adapter with wet hands.
27. Whenever possible, avoid switching the equipment on and off in quick succession because otherwise this can shorten the useful life of the equipment.
28. IMPORTANT INFORMATION: Replace fuses only with fuses of the same type and rating. If a fuse blows repeatedly, please contact an authorised service centre.
29. To disconnect the equipment from the power mains completely, unplug the power cord or power adapter from the power outlet.
30. If your device is equipped with a Volex power connector, the mating Volex equipment connector must be unlocked before it can be removed. However, this also means that the equipment can slide and fall down if the power cable is pulled, which can lead to personal injuries and/or other damage. For this reason, always be careful when laying cables.

31. Unplug the power cord and power adapter from the power outlet if there is a risk of a lightning strike or before extended periods of disuse.
32. The device must only be installed in a voltage-free condition (disconnect the mains plug from the mains).
33. Dust and other debris inside the unit may cause damage. The unit should be regularly serviced or cleaned (no guarantee) depending on ambient conditions (dust etc., nicotine, fog) by qualified personnel to prevent overheating and malfunction.
34. Please keep a distance of at least 0.5 m to any combustible materials.
35. Power cables to power multiple devices must have a cross-section of at least 1.5 mm². Within the EU, the cables must correspond to H05VV-F, or similar. Suitable cables are offered by Adam Hall. With these cables, you can connect multiple devices via the power OUT connection to the power IN connection of an additional device. Make sure that the total current consumption of all connected devices does not exceed the specified value on all connected devices (label on the device). Make sure to keep power cable connections as short as possible.

	**CAUTION**	
	RISK OF ELECTRIC SHOCK DO NOT OPEN	

CAUTION:
To reduce the risk of electric shock, do not remove cover (or back). There are no user serviceable parts inside. Maintenance and repairs should be exclusively carried out by qualified service personnel.

 The warning triangle with lightning symbol indicates dangerous uninsulated voltage inside the unit, which may cause an electrical shock.

 The warning triangle with exclamation mark indicates important operating and maintenance instructions.

 Warning! This symbol indicates a hot surface. Certain parts of the housing can become hot during operation. After use, wait for a cool-down period of at least 10 minutes before handling or transporting the device.

Warning! This device is designed for use below 2000 metres in altitude.


Warning! This product is not intended for use in tropical climates.


Caution! Intense LED light source! Risk of eye damage. Do not look into the light source.

CAUTION! IMPORTANT INFORMATION ABOUT LIGHTING PRODUCTS!

1. The product has been developed for professional use in the field of event technology and is not suitable as household lighting.
2. Do not stare, even temporarily, directly into the light beam.
3. Do not look at the beam directly with optical instruments such as magnifiers.
4. Stroboscope effects may cause epileptic seizures in sensitive people! People with epilepsy should definitely avoid places where strobes are used.

INTRODUCTION

CONTROL FUNCTIONS

1-channel, 3-channel, 4-channel Direct, 6-channel HSI-CCT (Hue Saturation Intensity – Correlated Colour Temperature), 7-channel RGB-CCT, 8-channel Direct, 10-channel HSI-CCT, 16-channel Direct-CCT

Master / slave mode

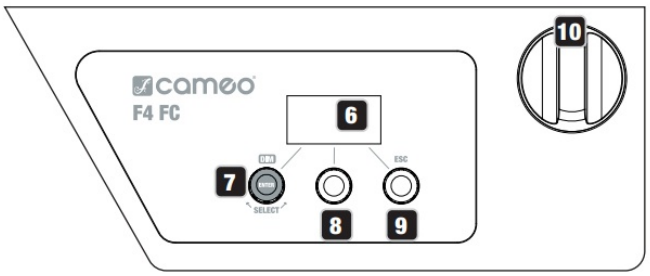
Stand-alone functions

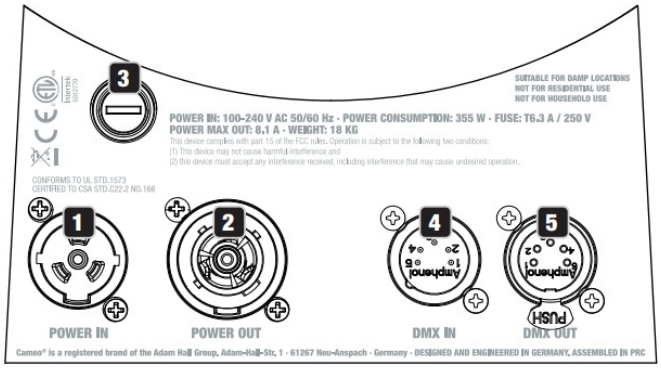
PROPERTIES

1 x High Power 570 W RGBW LED. 14° – 52° Beam angle, manual zoom. 250 mm Fresnel lens. Configurable PWM frequency (flicker free). DMX-512 control. RDM enabled. Manual control. 4 dimmer curves. 16 bit dimming. Master / Slave mode. Extremely quiet operation thanks to heat pipe cooling and fan. Operating voltage: 100 – 240V AC / 50 – 60Hz. Power consumption: 355 W. Mounting bracket, filter frame and 8-way barn door included.

The spotlight complies with the RDM standard (Remote Device Management). This device manager allows the user to request the status of and configure RDM end devices via an RDM-capable controller.

CONNECTIONS, CONTROL AND DISPLAY ELEMENTS





[1] POWER IN
TRUE1-compatible mains input socket Operating voltage 100–240 V AC/50–60 Hz.

[2] POWER OUT
TRUE1-compatible mains output socket for power supply to additional CAMEO spotlights Ensure that the total current consumption of all connected devices does not exceed the value specified on the device in amperes (A).

[3] FUSE
Fuse holder for 5 x 20 mm micro fuses. IMPORTANT NOTE: Exclusively replace the fuse with a fuse of the same type and values (T6.3 A / 250 V). If a fuse trips repeatedly, please contact an authorized service center.

[4] DMX IN
Male 5-pin XLR connector to connect a DMX control device (e.g. DMX console).

[5] DMX OUT
Female 5-pin XLR connector to transmit the DMX control signal.

[6] OLED DISPLAY
Display for the currently active operating mode and the menu items in the processing menu.

[7] DIM / ENTER / SELECT
Push button rotary encoder to set and control the spotlight.
DIM – When used in CCT, HSI, Direct LED, Gel, User Color or Play Loop stand-alone mode, the encoder serves as a master dimmer (rotary encoder).
ENTER – 1. Pressing ENTER brings you to the menu level to select the mode. 2. This navigates you one level deeper into the menu structure. 3. Confirm the new value, such as a change to the DMX address, by pressing ENTER
SELECT – Rotate the encoder to select the menu item from the menu level and change the value within the menu item (such as DMX address).

[8] The function of the center push button rotary encoder (rotate and press) is shown on the corresponding menu item at the center of the display (middle row = rotate, lower row = press).

[9] ESC – If the press function on the right push button rotary encoder is not shown explicitly in the display, then pressing the encoder navigates to the next higher menu level.

[10] ZOOM
Adjustment knobs for manual configuration of the beam angle are located on either side of the housing. The two knobs are positioned directly across from one another and are mechanically linked. The knobs can be turned for continuous adjustment of the spotlight beam angle, with the zoom tube on the Fresnel lens moving in and out of the housing through a gear-and-pinion system. The further the zoom tube emerges from the housing, the smaller the beam angle. A stopping mechanism is in place to prevent the tube from falling out of the housing.

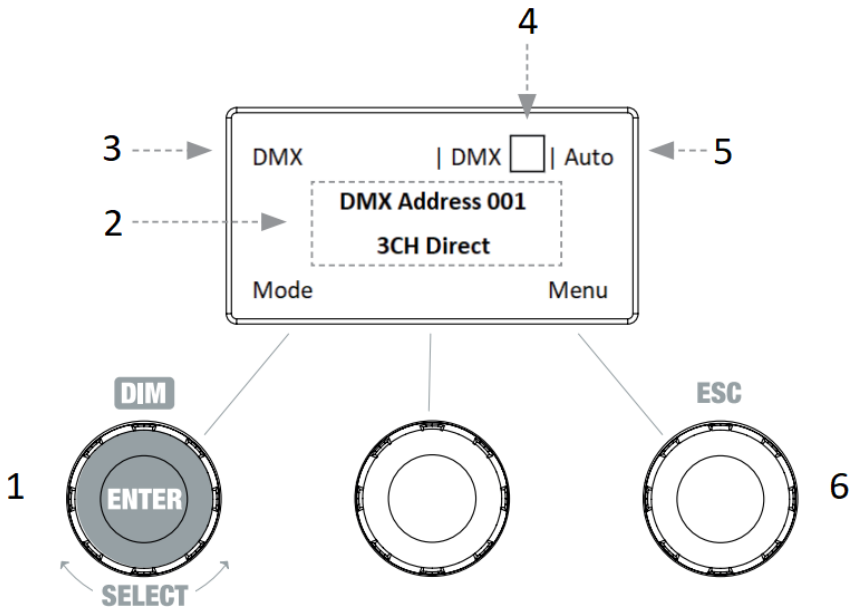
OPERATION

NOTE

- As soon as the spotlight is correctly connected to the power mains, “Welcome to Cameo”, the model designation, and then the software version are displayed in sequence on the display as part of the startup process. Once the process is complete, the spotlight is ready for use and resumes whichever mode was most recently activated.
- If one of the DMX modes or the Slave mode is active and no control signal is present at the DMX input, then the symbols on the display will begin to blink.
- If no input is received within approx. 1 minute, then the currently activated operating mode will be shown automatically on the display (main display).

DISPLAY MAIN DISPLAY DMX OPERATING MODE

The main display in DMX mode shows the currently configured DMX start address, the DMX mode and other information (see illustration).

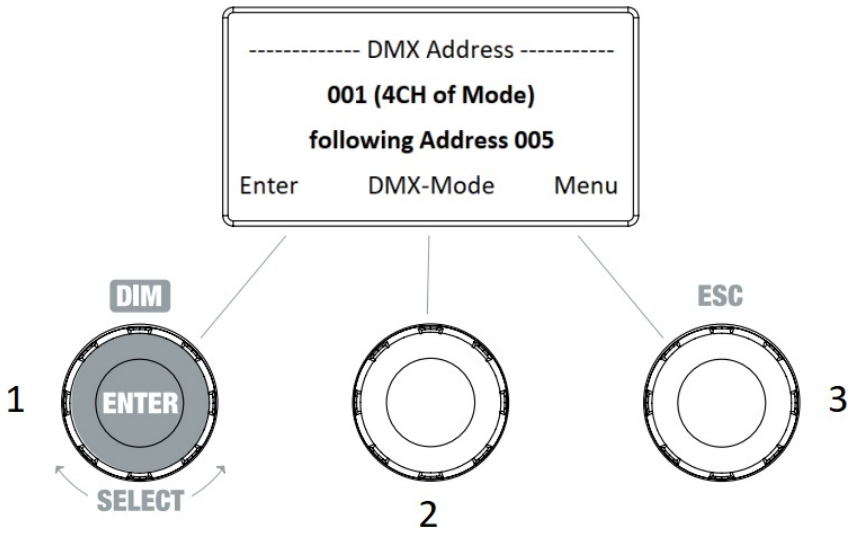


1. Press encoder = select mode
2. DMX start address and DMX mode
3. currently activated mode
4. ☑ = DMX signal present ☒ = no DMX signal
5. Fan mode
6. Press encoder = Open main menu

SETTING THE DMX START ADDRESS (DMX Address)

Starting from the main display, press on the right push button rotary encoder to move to the main menu. Rotate the left encoder (SELECT) to select the “DMX Address” menu item (as indicated by selector arrow on left) and confirm by pressing the encoder (ENTER). You can now configure the DMX start address as desired by rotating the left encoder (highest value reflects the active DMX operating mode). At the same time, the following address, i.e. the DMX start address derived from the selected start address plus the channel number for the selected DMX mode, is also shown. Confirm the entry by pressing on the left encoder (ENTER), which then returns you

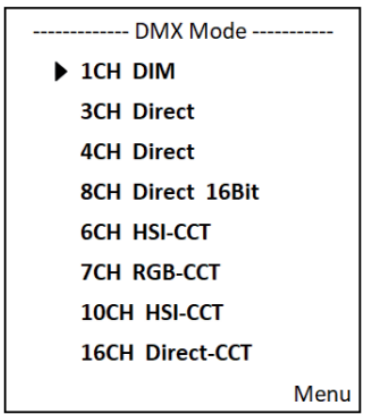
automatically to the main display and activates the DMX mode. The menu item for selecting the desired DMX mode is reached directly from the “DMX Address” menu item by pressing on the middle push button rotary encoder (DMX mode), while the previously configured DMX start address is then saved automatically.



1. Rotate encoder = change value
   Press encoder = confirm change to value (enter)
2. Press encoder = select the DMX mode
3. Press encoder = Open main menu

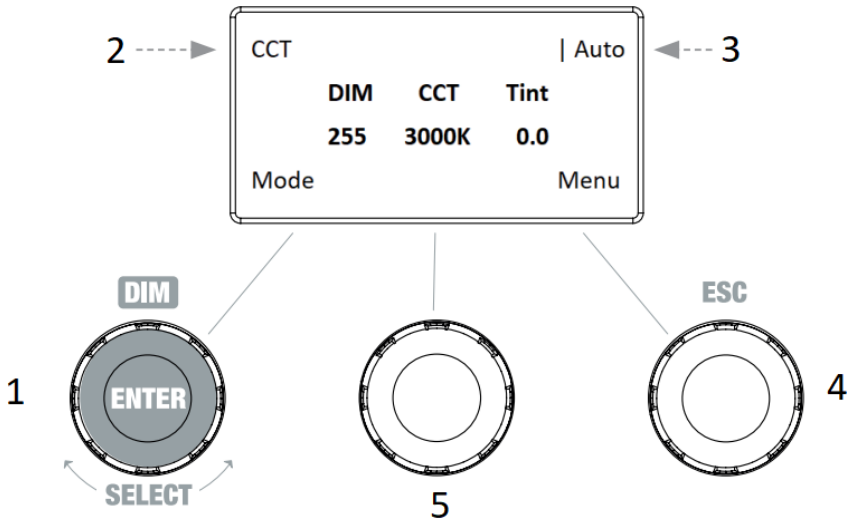
SETTING THE DMX MODE (DMX Mode)

Starting from the main display, press on the right push button rotary encoder to move to the main menu. Rotate the left encoder (SELECT) to select the “DMX Mode” menu item (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). You can now select the desired DMX mode by rotating the left encoder. Confirm the choice by pressing on the left encoder (ENTER), which then returns you automatically to the main display and activates the DMX mode. You can find tables on channel assignment in the different DMX modes in these instructions under DMX CONTROL.



STAND-ALONE MODE CCT (Correlated Color Temperature)

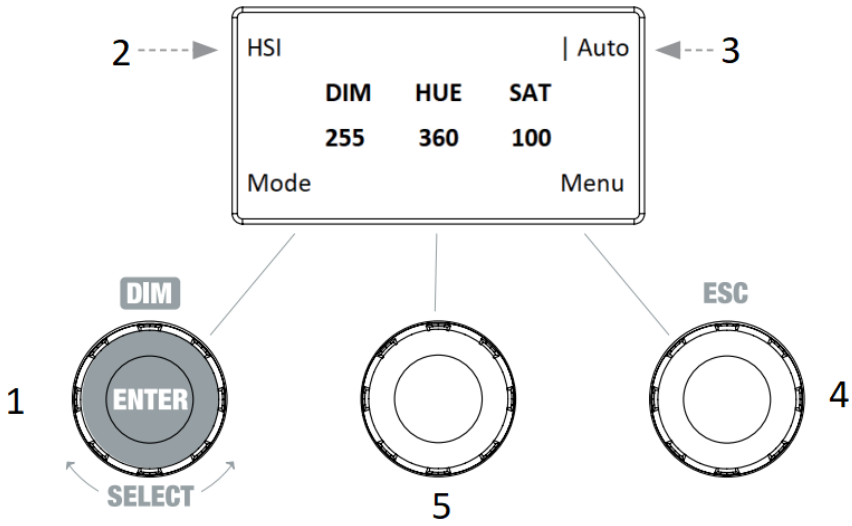
Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder (SELECT) to select “CCT” mode (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). Dim level, correlated color temperature (CCT) and tint can now be configured using the three push button rotary encoders (see illustration).



1. Rotate encoder = set DIM
   Press encoder = select mode
2. currently activated mode
3. Fan mode
4. Rotate encoder = set Tint
   Press encoder = Open main menu
5. Rotate encoder = set correlated color temperature (CCT)

STAND-ALONE MODE HSI (Hue – Saturation – Intensity)

Starting from the main display, press on the left push button rotary encoder to move to the mode select menu. Rotate the left encoder (SELECT) to select “HSI” mode (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). Dim level, hue and color saturation (SAT) can now be configured using the three push button rotary encoders (see illustration).

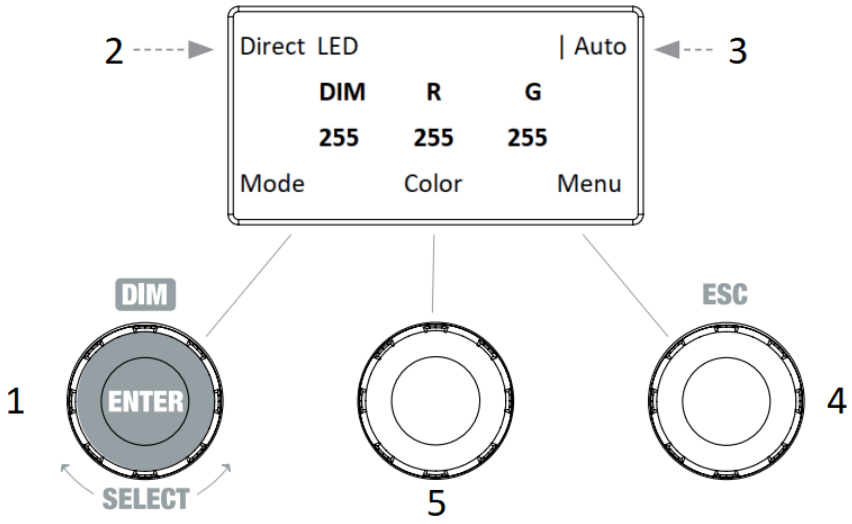


1. Rotate encoder = set DIM
   Press encoder = select mode
2. currently activated mode
3. Fan mode
4. Rotate encoder = set color saturation (SAT)
   Press encoder = Open main menu

5. Rotate encoder = set Hue

STAND-ALONE MODE DIRECT LED (RGBW color mix)

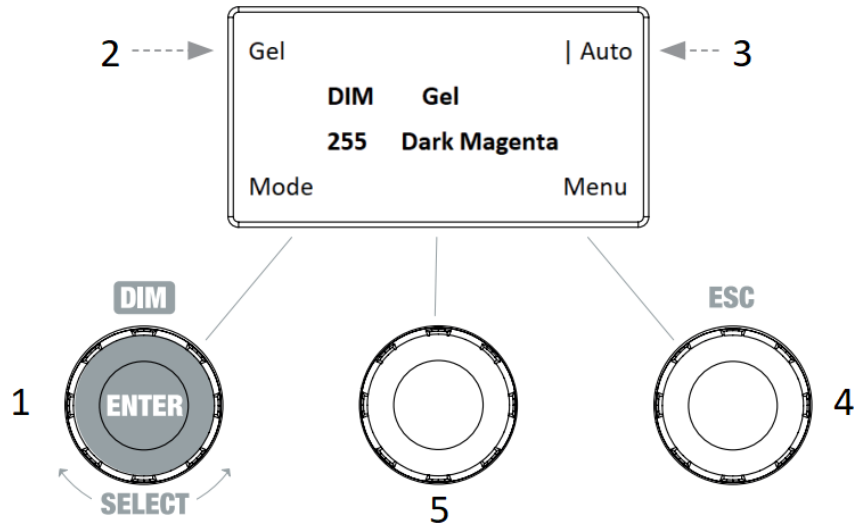
Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder (SELECT) to select “Direct LED” mode (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). The total brightness and intensity levels for R, G, B and W can now be configured using the three push button rotary encoders (see illustration).



1. Rotate encoder = set overall brightness level (DIM)
   Press encoder = select mode
2. currently activated mode
3. Fan mode
4. Rotate encoder
   Set G and W dim levels
   Press encoder = Open main menu
5. Rotate encoder
   Set R and B dim levels
   Press encoder = switch between R+G and B+W (Color

STAND-ALONE MODE GEL (Color Filter Presets)

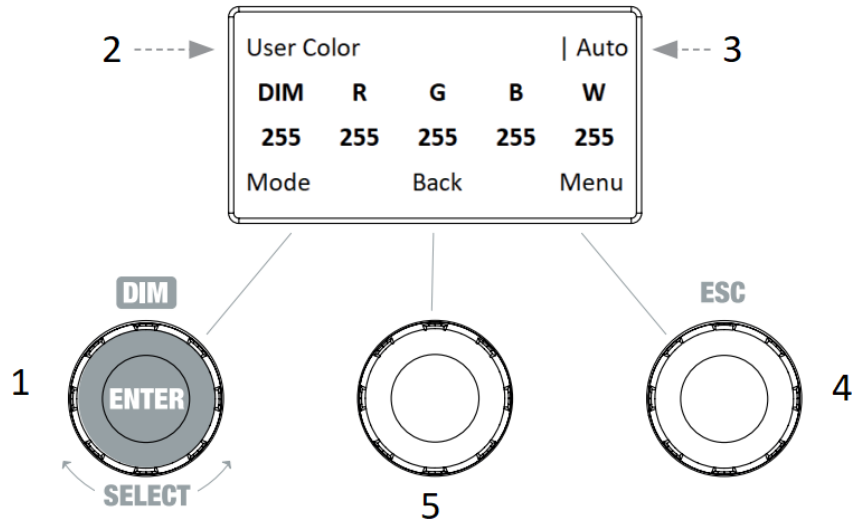
Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder (SELECT) to select “GEL” mode (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). The brightness level (DIM) and color filter preset (Gel) can now be set using the left and center push button rotary encoder (see illustration). The color filter presets with Lee filter designations and corresponding Rosco filter numbers can be found in the DMX tables under DMX CONTROL (channel “GEL”, such as in 14-channel mode, without “User Color 1-8”).



1. Rotate encoder = set overall brightness level (DIM)
   Press encoder = select mode
2. currently activated mode
3. Fan mode
4. Press encoder = Open main menu
5. Rotate encoder = select filter preset

STAND-ALONE MODE USER COLOR (Individual color presets 1 – 8)

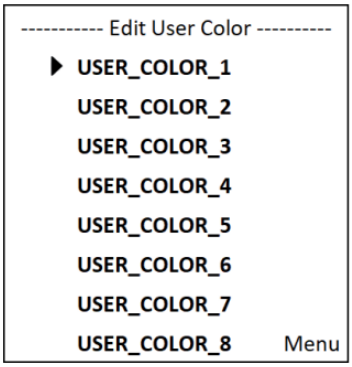
Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder (SELECT) to select “User Color” mode (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). Now select one of the 8 preset but customizable user colors by rotating the left encoder. Confirm the selection by pressing the left encoder (ENTER). The brightness level (DIM) of the user color can now be set using the left encoder (see illustration). The individual preset settings and the name of the user color can be modified using the “Edit User Color” menu item.

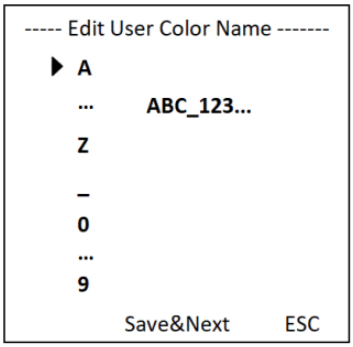


1. Rotate encoder = set DIM
   Press encoder = select mode
2. currently activated mode
3. Fan mode
4. Press encoder = Open main menu
5. Rotate encoder = select filter preset

STAND-ALONE MODE EDIT USER color (Edit User Color)

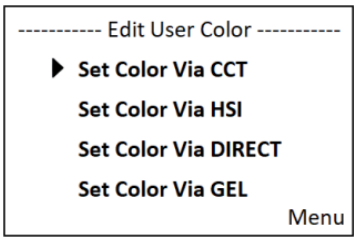
Starting from the main display, press on the right push button rotary encoder to move to the main menu. Rotate the left encoder (SELECT) to select “Edit User Color” menu item (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). You can now select one of the 8 color presets by rotating the left encoder and then confirm the selection by pressing on the left encoder (ENTER).



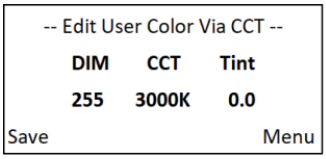


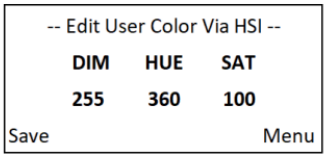
Now enter a custom name of up to 12 digits to be assigned to the preset (Edit User Color Name) by rotating the left encoder to a letter, underscore or number for the first position of the preset name, confirming the selection by pressing on the left encoder. The second position etc is chosen in the same way. Once the preset name is complete, press the center encoder (Save&Next) to move to the next step of editing. If you press on “Save&Next” without selecting a letter, underscore or number for the first position, then the previous preset name is retained and you move immediately to the next step of editing.

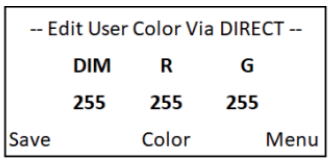
Now you can decide in which way you wish to create the color for the preset, i.e. one of the 4 methods “CCT”, “HSI”, “DIRECT” and “GEL”, as selected by rotating the left encoder (SELECT) and confirmed by pressing the left encoder (ENTER).

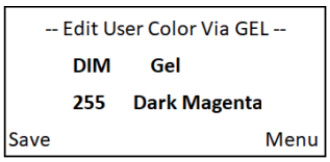


You should now set the desired color as described in the instructions for the respective stand-alone mode and then confirm by pressing on the left encoder (ENTER/Save).





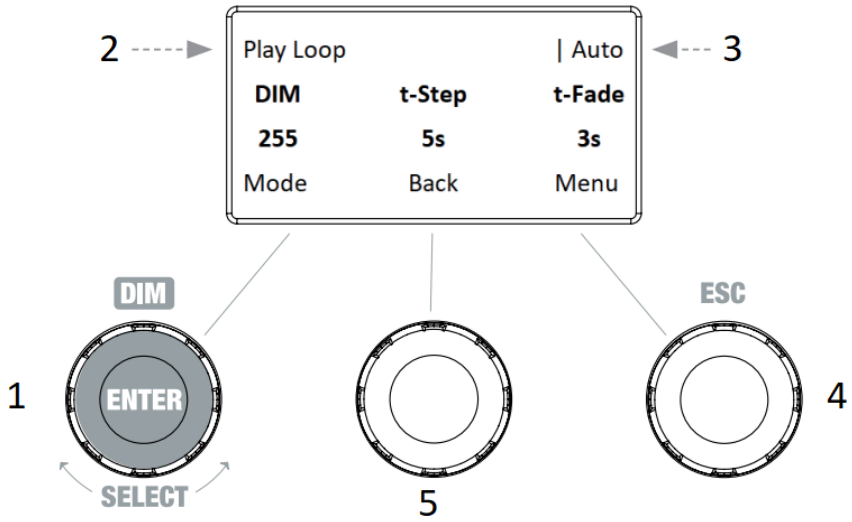




STAND-ALONE MODE PLAY LOOP (8-step color sequences 1 – 8)

Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder (SELECT) to select “Play Loop” mode (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). Now select one of the 8 preset but customizable color sequences (loops) by rotating the left encoder. Confirm the selection by pressing the left encoder (ENTER). The brightness (DIM) of the color loop can now be set using the left encoder, while the step duration (0.1 second to 21 minutes, with 2 random modes) and fade times (0 seconds to 18 minutes, with 2 random modes) are configured using the center

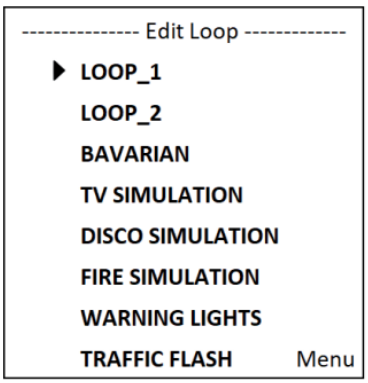
and right encoders respectively (see illustration). The individual settings and the name of the color loops can be modified using the “Edit Loop” item in the main menu.

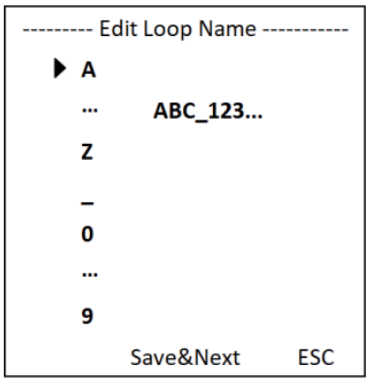


1. Rotate encoder = set brightness (DIM)
   Press encoder = select mode
2. currently activated mode
3. Fan mode
4. Rotate encoder = set fade time (t-Fade)
   Press encoder = Open main menu
5. Rotate encoder = set step duration (t-Fade)
   Press encoder = return to color loop selection (Back)

STAND-ALONE MODE EDIT PLAY LOOP (Edit Loop)

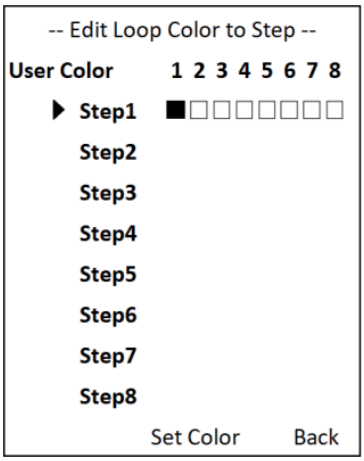
Starting from the main display, press on the right push button rotary encoder to move to the main menu. Rotate the left encoder (SELECT) to select “Edit Loop” menu item (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). You can now select one of the 8 color sequences (loops) by rotating the left encoder and then confirm the selection by pressing on the left encoder (ENTER).





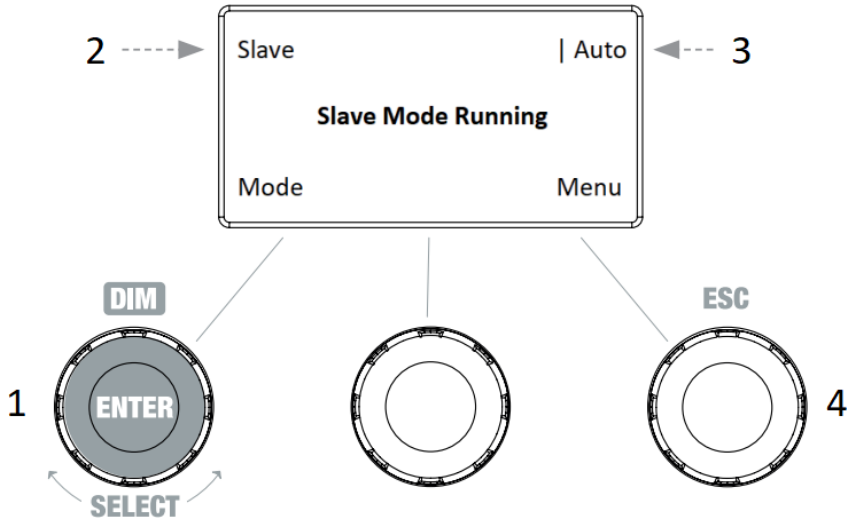
Now enter a custom name of up to 12 digits to be assigned to the color loop (Edit Loop Name) by rotating the left encoder to a letter, underscore or number for the first position of the preset name, confirming the selection by pressing on the left encoder. The second position etc. is chosen in the same way. Once the preset name is complete, press the center encoder (Save&Next) to move to the next step of editing. If you press on “Save&Next” without selecting a letter, underscore or number for the first position, then the previous preset name is retained and you move immediately to the next step of editing.

Select Step 1 from the 8-step loop (Step1-Step 8) by rotating the left encoder to determine the color for the step (Step 1, note the selection arrow). Now select one of the colors in the stand-alone mode “User Color” by rotating the center encoder and confirm the selection for Step 1 by pressing on the middle encoder. The selected color for the respective step is displayed visually in a box on a light background below the color number 1 to 8. The same method is used to set the colors for steps 2 through 8. Close the process and save the loop by pressing on the left encoder (ENTER).



SLAVE MODE

Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder to select the “Slave” menu item (as indicated by selector arrow on left) and confirm by pressing the encoder (ENTER). Slave mode is now activated and the main display is automatically shown again. Connect the slave and master unit (same model, same software version) using a DMX cable, and activate one of the stand-alone modes on the master unit. The slave unit will now follow the master unit.



1. Press encoder = select mode
2. currently activated mode
3. Fan mode
4. Press encoder = Open main menu

DMX MODE

Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder to select the “DMX” menu item (as indicated by selector arrow on left) and confirm by pressing the encoder (ENTER). DMX mode is now activated and the main display is automatically shown again.

Select one of the ten available DMX modes in the menu item “DMX Mode” in the main menu (see SET DMX MODE).

DEVICE SETTINGS (Settings)

Starting from the main display, press on the right push button rotary encoder to move to the main menu. Rotate the left encoder (SELECT) to select “Settings” menu item (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). This will take you to the submenu for setting the submenu options (see table, select via SELECT, confirm via ENTER, change value or status via SELECT, confirm via ENTER).

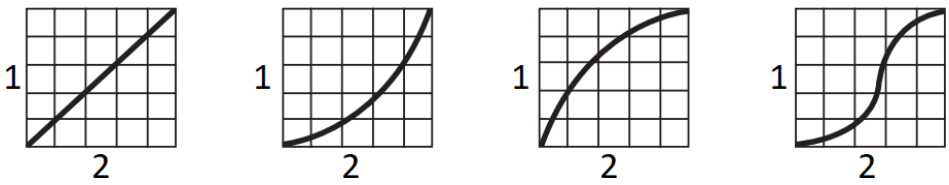
Settings (bold = factory setting)				
Display Flip	=	Flips the display	**Standing Position**	No rotation of display
			Hanging Position	Display rotates by 180° (such as when installed overhead)
Display Time off	=	Display backlight	Display always on	permanently on
			Display off after 20s	deactivates after approx. 20 seconds of in activity
DMX Fail	=	operating mode if DMX signal is lost	**Hold**	last command is held
			Blackout	activates Blackout
			User Color 8	activates User Color 8
Dimmer Curve	=	Dimmer Curve	Linear	The light intensity climbs linearly with the DMX value
			Exponential	The light intensity can be set finely in the l ower DMX value range and roughly in the upper DMX value range
			Logarithmic	The light intensity can be set roughly in th e lower DMX value range and finely in the upper DMX value range
			S-curve	The light intensity can be set finely in the l ower and upper DMX value ranges and ro ughly in the medium DMX value range
Dimmer			**LED**	The spotlight reacts abruptly to changes i n the DMX value.

Response	=	Dimmer behavior	Halogen	The spotlight behaves similar to a halogen spotlight with soft changes in brightness.
RedShift	=	Imitates color drift by dimming one of the halogen spotlights. The dimming of the spotlight automatically changes the color temperature along a rising curve of warm white and amber (and vice-versa).	**No**	Color drift deactivated
			Dim To Warm	Color drift activated
PWMFrequency	=	LED PWM frequency	600 Hz / **1200 Hz** / 2000 Hz / 4000 Hz / 6000 Hz / 25k Hz	Sets the LED PWM frequency
ColorCalibration	=	Calibration of the color	RAW	R, G, B and W with maximum value of 255
			User Calibration (Custom adjustment of R, G, B, and W by values ranging from 000 to 255, independent of mode)	Press center encoder = Switch between R+G and B+W (Color) Rotate center encoder = Configure value of R or B
				Press right encoder = Move up one level in the menu navigation (ESC) Rotate right encoder = Configure value of G or W
				Press left encoder = Confirm and save settings
			Factory Calibration	Factory preset calibration of R, G, B and W (independent of mode). Select this setting for correct depiction of color tones and presets in the stand-alone modes CCT and Gel, as well as to activate CCT and the Gel presets via DMX.
Autolock	=	Automatically locks the control element	On	Automatically locks the control element after approx. 30 seconds of inactivity. If a subsequent attempt is made to use controls, display shows: “Locked!” Unlock method: simultaneous pressing of center and right encoder for approx. 3 seconds
			Off	Deactivates automatic locking of the control element

Fan	=	Fan settings	**Auto**	Automatic fan control
			Silent	Fan deactivated, brightness reduced
Factory Reset	=	Restores factory defaults (but does not reset user colors or loops)	Reset Now?	Reset to factory defaults: confirm with ENTER, abort with ESC
UC/Loops Reset	=	Resets user colors and loops to factory defaults	Reset User Colors/ Loops	Reset to factory defaults: confirm with ENTER, abort with ESC

Dimmer Curves

linear exponential logarithmic S-curve



1. Light intensity
2. DMX value

SYSTEM INFORMATION (System Info)

Starting from the main display, press on the right push button rotary encoder to move to the main menu. Rotate the left encoder (SELECT) to select “System Info” menu item (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). Rotate the left encoder to display the desired information (see chart).

System Info	
Main CPU	Device firmware
LED Temp.	Displays the LED temperature in Celsius or Fahrenheit
Op. Hours	Cumulative operating time in hours and minutes
Display	Activates/deactivates display
DMX Fail	Operating mode if DMX signal is lost
Dim Curve	Dimmer Curve
Dim Response	Dimmer behavior
Red Shift	Activates/deactivates color drift
PWM	LED PWM frequency
Calibr.	Factory default calibration / no adjustment / user defined adjustment
Color-Cal. R	Adjusts red (independent of mode)
Color-Cal. G	Adjusts green (independent of mode)
Color-Cal. B	Adjusts blue (independent of mode)
Color-Cal. W	Adjusts white (independent of mode)
Autolock	Activates/deactivates automatic locking of the control element
Fan	Fan settings

MANUAL LOCK FUNCTION

While the option is available to have the spotlight lock itself automatically against unintentional or unauthorized use (see “Settings” – “Autolock”), it is also possible to lock the controls manually. Press the center and right push button rotary encoders simultaneously for approx. 3 seconds. Any subsequent attempt to change the controls will display “Locked!” on the display and no further changes to the spotlight settings can be made via the encoders. After approx. 1 minute the name of the currently set mode then returns. To unlock the controls, press the center and right push button rotary encoders simultaneously for approx. 3 seconds. The display then returns to whichever information it had been showing before the lock was applied.

SETUP AND INSTALLATION

Thanks to its four plastic feet, the spotlight can be placed in a suitable location on a flat surface. Install on a crossbeam using the preinstalled mounting bracket (A) and a suitable crossbeam clamp (available as an accessory). Make sure that the spotlight is firmly attached and secure it using a suitable safety cable on the designated location on the top of the spotlight (B). Use the lever screw (C) located on one side to adjust the vertical radiation direction.

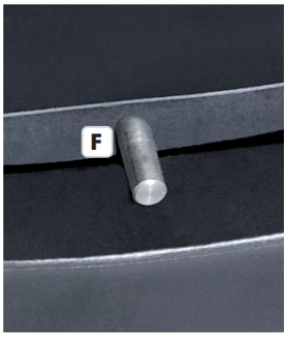
A distance of at least 0.1 m must be kept between objects or walls located beside, above and behind the spotlight; a distance of at least 0.5 m must be kept in front of the spotlight in the cone of light.

 **Important safety information** Overhead installation requires extensive experience, which includes calculating the limit values of the working load of the installation material to be used and regular safety inspections

of all installation material and spotlights. If you do not have these qualifications, do not attempt to carry out the installation yourself; contact a professional company.

INSTALLATION / DISASSEMBLY OF BARN DOOR AND FILTER FRAME / CLEANING OF LENSES

Separate the device completely from the power supply. To mount or dismount the barn door and filter frame, press the spring-loaded locking bolt (D) of the holding device so that it folds upwards. Do not forget afterwards to return the retaining bracket back to the original position so that the lock pins click back into their locked position. The barn door's retention arm and filter frame on the bottom of the spotlight are equipped with a second securing device (E) so that an additional safety cable for the barn door is not required. Once the barn door is mounted on the spotlight, move the lever (E) on the bottom retention arm so that it is positioned parallel to the spotlight. The latch (F) will then stop the barn door from sliding out of the retention arm. Rotate the lever 90° to open the securing device. Use the safety cable provided to secure the filter frame.



The front lens (G) and its rubber frame as well as the glass lens behind it (H) can be cleaned by flipping the retaining bracket upwards as previously described and then drawing the front lens and its rubber frame upwards out of the retention arms. Clean the front lens and the glass lens behind it with a moist, lint-free cloth, making sure not to scratch the surface of the lenses. Put the front lens in front of the glass lens and return the retaining bracket back to its downward position until the lock pins click into place.

Important safety notice!
For safety reasons, the filter frame must always be in the respective bracket on the spotlight, even if no filter is inserted!

DMX TECHNOLOGY

DMX-512

DMX (Digital Multiplex) is the designation for a universal transmission protocol for communications between corresponding devices and controllers. A DMX controller sends DMX data to the connected DMX device(s). The DMX data is always transmitted as a serial data stream that is forwarded from one connected device to the next via the “DMX IN” and “DMX OUT” connectors (XLR plug-type connectors) that are found on every DMX-capable device, provided the maximum number of devices does not exceed 32 units. The last device in the chain needs to be equipped with a terminator (terminating resistor).

DMX CONNECTION

DMX is the common “language” via which a very wide range of types and models of equipment from various manufacturers can be connected with one another and controlled via a central controller, provided that all of the devices and the controller are DMX compatible. For optimum data transmission, it is necessary to keep the connecting cables between the individual devices as short as possible. The order in which the devices are integrated in the DMX network has no influence on the addresses. Thus the device with the DMX address 1 can be located at any position in the (serial) DMX chain: at the beginning, at the end or somewhere in the middle. If the DMX address 1 is assigned to a device, the controller “knows” that it should send all data allocated to address 1 to this device regardless of its position in the DMX network.

SERIAL CONNECTION OF MULTIPLE LIGHTS

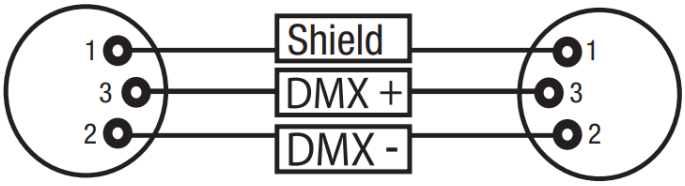
1. Connect the male XLR connector (3-pin or 5-pin) of the DMX cable to the DMX output (female XLR socket) of the first DMX device (e.g. DMX-Controller).
2. Connect the female 3-pin XLR connector of the DMX cable connected to the first projector to the DMX input (male 3-pin socket) of the next DMX device. In the same way, connect the DMX output of this device to the DMX input of the next device and repeat until all devices have been connected. Please note that as a rule, DMX devices are connected in series and connections cannot be shared without active splitters. The maximum number of DMX devices in a DMX chain should not exceed 32 units.

The Adam Hall 3 STAR, 4 STAR, and 5 STAR product ranges include an extensive selection of suitable cables.

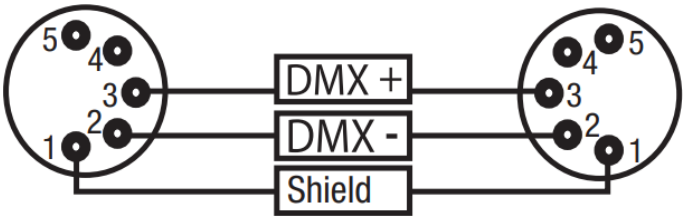
DMX CABLES

When fabricating your own cables, always observe the illustrations on this page. Never connect the shielding of the cable to the ground contact of the plug, and always make certain that the shielding does not come into contact with the housing of the XLR plug. If the shielding is connected to the ground, this can lead to short-circuiting and system malfunctions.

Pin Assignment
DMX cable with 3-pin XLR connectors:



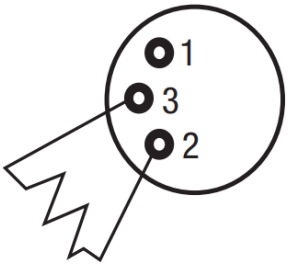
DMX cable with 5-pin XLR connectors (pin 4 and 5 are not used):



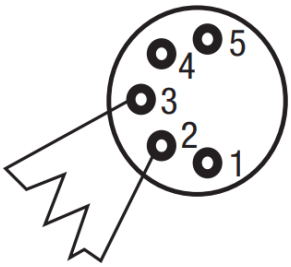
DMX TERMINATORS (TERMINATING RESISTORS)

To prevent system errors, the last device in a DMX chain needs to be equipped with a terminating resistor (120 ohm, 1/4 Watt).
3-pin XLR connector with a terminating resistor: K3DMXT3
5-pin XLR connector with a terminating resistor: K3DMXT5

Pin Assignment
3-pin XLR connector:



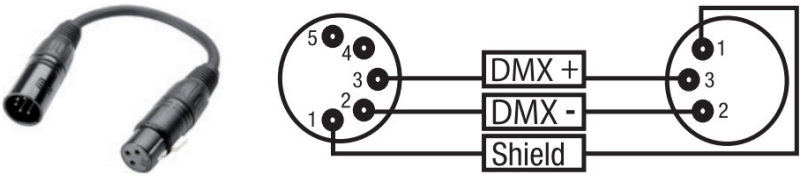
5-pin XLR connector:



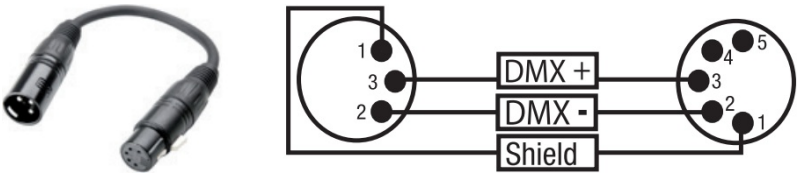
DMX ADAPTER

The combination of DMX devices with 3-pin connectors and DMX devices with 5-pin connectors in a DMX chain is possible with suitable adapters.

Pin Assignment
DMX Adapter 5-pin XLR male to 3-pin XLR female: K3DGF0020
Pins 4 and 5 are not used.



Pin Assignment
DMX Adapter 3-pin XLR male to 5-pin XLR female: K3DHM0020
Pins 4 and 5 are not used.



TECHNICAL SPECIFICATIONS

Product number:	**CLF4FC**
Product type:	LED spotlight
Type:	Fresnel spotlight with zoom function
Colour spectrum:	RGBW
CRI:	Up to 95.5

Number of LEDs:	1 LED array (Rx30, Gx30, Bx24, Wx68)
LED type:	570 W
LED PWM frequency:	600 Hz, 1200 Hz, 2000 Hz, 4000 Hz, 6000 Hz, 25 kHz (adjustable)
Beam angle:	14° to 52° (field 24° to 69°)
DMX input:	5-pin male XLR
DMX output:	5-pin female XLR
DMX mode:	1-channel, 3-channel, 4-channel direct, 6-channel HSI-CCT (hue saturation intensity – correlated colour temperature), 7-channel RGB-CCT, 8-channel direct, 10-channel HSI-CCT, 16-channel direct-CCT
DMX functions:	Dimmer, dimmer fine, strobe, RGBW, RGBW fine, CCT, HSI, colour macros, dimmer c urve, dimmer response, PWM frequency, red shift, fan setting
Standalone functions:	Dimmer, strobe, RGBW, auto programme, colour macros, user colour 1–8, master/sla ve
System settings:	Display flip, display lighting on/off, DMX fail, dimmer curves, dimmer response, red shi ft, PWM frequency, colour calibration, auto lock, fan setting, factory reset, UC/loops re set
Control:	DMX512, RDM enabled
Operating controls:	3x rotary-push encoder, manual zoom
Display elements:	OLED display
Operating voltage:	100–240 V AC/50–60 Hz
Power consumption:	355 W
Luminous flux:	10,500 lm
Efficiency:	29.6 lm/W
Power supply connecti on:	INPUT: TRUE1 compatible OUTPUT: TRUE1 compatible (max. 8.1 A)
Fuse:	T6, 3A/250 V (5 x 20 mm)
Ambient temperature (i n operation):	-10°C to 40°C
Housing material:	Die-cast metal
Housing colour:	Black
Housing cooling:	Temperature-controlled fan + heat pipe
Dimensions (W x H x D , without bracket and b arn doors):	433 x 420 x 531 mm
Weight:	18 kg
Additional features:	250 mm glass Fresnel lens Manual zoom Power cable, filter frames, 8-way barn doors and mounting bracket included.

MANUFACTURER'S DECLARATIONS

MANUFACTURER'S WARRANTY & LIMITATIONS OF LIABILITY

You can find our current warranty conditions and limitations of liability at: **https://cdn-shop.adamhall.com/media/pdf/MANUFACTURERS-DECLARATIONS_CAMEO.pdf**. To request warranty service for a product, please contact Adam Hall GmbH, Adam-Hall-Str. 1, 61267 Neu Anspach / Email: Info@adamhall.com / +49 (0)6081 / 9419-0.

CORRECT DISPOSAL OF THIS PRODUCT

(valid in the European Union and other European countries with a differentiated waste collection system)
This symbol on the product, or on its documents indicates that the device may not be treated as household waste. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. Please dispose of this product separately from other waste and have it recycled to promote sustainable economic activity. Household users should contact either the retailer where they purchased this product, or their local government office, for details on where and how they can recycle this item in an environmentally friendly manner. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

FCC STATEMENT

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

CE Compliance

Adam Hall GmbH states that this product meets the following guidelines (where applicable):
R&TTE (1999/5/EC) or RED (2014/53/EU) from June 2017
Low voltage directive (2014/35/EU)
EMV directive (2014/30/EU)
RoHS (2011/65/EU)
The complete declaration of conformity can be found at **www.adamhall.com**.
Furthermore, you may also direct your enquiry to **info@adamhall.com**.

DMX CONTROL

1 CH DIM Mode (User Color 1)						
Ch.	**Function**	**Values**				**Sub-Group**
1	Dimmer	000	–	255	0% to 100%	Dimmer

6 CH HSI-CCT Mode (16Bit)

Ch.	Function	Values				Sub-Group
1	Dimmer	000	–	255	0% to 100%	I
2	Dimmer fine	000	–	255	0% to 100%	
3	Hue	000	–	255	0° – 360°	H
4	Saturation	000	–	255	0% to 100% (CCT -> Hue)	S
5	CCT	000	–	005	off	CCT
		006	–	008	Bulb White (2700K)	
		009	–	011	Halogen White (3200K)	
		012	–	014	Neutral White (4000K)	
		015	–	017	Studio-White (5600K)	
		018	–	020	Daylight White (6500K)	
		021	–	255	1600K – 6500K	
6	Tint	000			no function	
		001	–	127	Magenta -> neutral	

		128	–	128	neutral	
		129	–	255	neutral -> Green	

7 CH RGB-CCT (Calibrated)						
Ch.	**Function**	**Values**				**Sub-Group**
1	Dimmer	000	–	255	0% to 100%	Dimmer
2	Dimmer fine	000	–	255	0% to 100%	
3	Red	000	–	255	0% to 100%	RGB fade to 100% = CCT
4	Green	000	–	255	0% to 100%	
5	Blue	000	–	255	0% to 100%	
6	CCT	000	–	005	off	
		006	–	008	Bulb White (2700K)	
		009	–	011	Halogen White (3200K)	
		012	–	014	Neutral White (4000K)	
		015	–	017	Studio-White (5600K)	

		018	–	020	Daylight White (6500K)	CCT
		021	–	255	1600K – 6500K	
7	Tint	000			no function	
		001	–	127	Magenta -> neutral	
		128	–	128	neutral	
		129	–	255	neutral -> Green	

3 CH Direct Mode (Calibrated)						
Ch.	**Function**	**Values**				**Sub-Group**
1	Red	000	–	255	0% to 100%	Red
2	Green	000	–	255	0% to 100%	Green
3	Blue	000	–	255	0% to 100%	Blue

4 CH Direct Mode (RAW)						
Ch.	**Function**	**Values**				**Sub-Group**
1	Red	000	–	255	0% to 100%	Red
2	Green	000	–	255	0% to 100%	Green
3	Blue	000	–	255	0% to 100%	Blue
4	White	000	–	255	0% to 100%	White

8 CH Direct 16Bit Mode (RAW)						
Ch.	**Function**	**Values**				**Sub-Group**
1	Red	000	–	255	0% to 100%	Red
2	Red fine	000	–	255	0% to 100%	
3	Green	000	–	255	0% to 100%	Green
4	Green fine	000	–	255	0% to 100%	
5	Blue	000	–	255	0% to 100%	Blue
6	Blue fine	000	–	255	0% to 100%	
7	White	000	–	255	0% to 100%	White
8	White fine	000	–	255	0% to 100%	

10 CH HSI-CCT 16Bit Mode						
Ch.	**Function**	**Values**				**Sub-Group**
1	Dimmer	000	–	255	0% to 100%	I

2	Dimmer fine	000	–	255	0% to 100%	
3	Multifunctional Strobe	000	–	005	Strobe open	Multifunctional Strobe
		006	–	010	Strobe closed	
		011	–	033	Pulse Random, slow -> fast	
		034	–	056	Ramp up Random, slow -> fast	
		057	–	079	Ramp down Random, slow -> fast	
		080	–	102	Random Strobe Effect, slow -> fast	
		103	–	127	Strobe Break Effect, 5s…..1s (Short burst with break)	
		128	–	250	Strobe slow -> fast <1Hz – 20Hz	
		251	–	255	Strobe open	
4	Hue	000	–	255	0° – 360°	H

5	Saturation	000	–	255	0% to 100% (CCT -> Hue)	S
6	CCT	000	–	005	off	CCT
		006	–	008	Bulb White (2700K)	
		009	–	011	Halogen White (3200K)	
		012	–	014	Neutral White (4000K)	
		015	–	017	Studio-White (5600K)	
		018	–	020	Daylight White (6500K)	
		021	–	255	1600K – 6500K	
7	Tint	000			no function	
		001	–	127	Magenta -> neutral	
		128	–	128	neutral	

		129	–	255	neutral -> Green	
					Lee Filter No.	**Roscolux Filter No.**
		000	–	005	no function	
		006	–	009	46 Dark Magenta	46
		010	–	013	29 Plasa Red	
		014	–	017	26 Bright Red	26
		018	–	021	127 Smokey Pink	50
		022	–	025	36 Medium Pink	36
		026	–	029	19 Fire	19
		030	–	033	135 Deep Golden Amber	
		034	–	037	778 Millennium Gold	22

038	–	041	21 Gold Amber	21
042	–	045	157 Pink	
046	–	049	110 Middle Rose	38
050	–	053	109 Light Salmon	331
054	–	057	35 Light Pink	35
058	–	061	134 Golden Amber	321
062	–	065	17 Surprise Peach	17
066	–	069	746 Brown	
070	–	073	105 Orange	15
074	–	077	20 Medium Amber	20
078	–	081	768 Egg Yolk Yellow	

8	GEL (override HSI + CCT)	082	–	085	15 Deep Straw	15	Colour Macro
		086	–	089	767 Oklahoma Yellow	313	
		090	–	093	101 Yellow	312	
		094	–	097	100 Spring Yellow	10	
		098	–	101	88 Lime Green	388	
		102	–	105	121 LEE Green	86	
		106	–	109	738 Jas Green	4460	
		110	–	113	89 Moss Green	89	
		114	–	117	139 Primary Green	90	
		118	–	121	124 Dark Green		

122	–	125	323 Jade	393
126	–	129	354 Special Steel Blue	370
130	–	133	116 Medium Blue-Green	95
134	–	137	183 Moonlight Blue	
138	–	141	132 Medium Blue	77
142	–	145	119 Dark Blue	74
146	–	149	716 Mikkel Blue	384
150	–	153	71 Tokyo Blue	382
154	–	157	181 Congo Blue	382
158	–	161	799 Special KH Lavender	
162	–	165	707 Ultimate Violet	382

166	–	169	343 Special Medium Lavender	357
170	–	173	798 Chrysalis Pink	358
174	–	177	701 Provence	358
178	–	181	797 Deep Purple	347
182	–	185	48 Rose Purple	48
186	–	189	345 Fuchsia Pink	
190	–	193	795 Magical Magenta	346
194	–	197	128 Bright Pink	339
198	–	201	2 Rose Pink	44
202	–	207	User Color_1	
208	–	213	User Color_2	

		214	–	219	User Color_3		
		220	–	225	User Color_4		
		226	–	231	User Color_5		
		232	–	237	User Color_6		
		238	–	243	User Color_7		
		244	–	249	User Color_8		
		250	–	255	no function		
9	Colour Macro Crossfade	000	–	005	0s		Transition Time between Colour Macros
		006	–	105	0,1s – 10s (0,1s Steps)		
		106	–	214	11s – 119s (1s Steps)		
		215	–	244	2m – 4m50s (10s Steps)		

		245	–	255	5m – 15m (1m Steps)	
		000	–	077	no function	
		078	–	079	Dimmer Response LED (Hold 1,5s)	
		080	–	081	Dimmer Response Halogen (Hold 1,5s)	
		082	–	083	DTW (Redshift) on (Hold 1,5s)	
		084	–	085	DTW (Redshift) off (Hold 1,5s)	
		086	–	101	no function	
		102	–	103	Silent Fan (Hold 3s)	
		104	–	105	Auto Fan (Hold 3s)	
		106	–	123	no function	
		124	–	125	LED Frequency 600Hz (hold 3s)	

10	Device Settings (please read remark 1*)	126	–	127	LED Frequency 1200Hz (hold 3s)	Device Settings
		128	–	129	LED Frequency 2000Hz (hold 3s)	
		130	–	131	LED Frequency 4000Hz (hold 3s)	
		132	–	133	LED Frequency 6000Hz (hold 3s)	
		134	–	135	LED Frequency 25kHz (hold 3s)	
		136	–	167	no function	
		168	–	169	Dimmer Curve Linear (hold 3s)	
		170	–	171	Dimmer Curve Exponential (hold 3s)	
		172	–	173	Dimmer Curve Logarithmic (hold 3s)	
		174	–	175	Dimmer Curve S-Curve (hold 3s)	

		176	–	205	no function	
		206	–	207	RAW-Mode (Hold 3s)	
		208	–	209	User Calibrated-Mode (Hold 3s)	
		210	–	211	Factory Calibrated-Mode (Hold 3s)	
		212	–	243	no function	
		244	–	245	Default set (except User Colour, DMX-Address and Mode) (Hold 3s)	
		246	–	255	no function	

16 CH Direct-CCT 16Bit Mode						
Ch.	**Function**	**Values**				**Sub-Group**
1	Dimmer	000	–	255	0% to 100%	Dimmer
2	Dimmer fine	000	–	255	0% to 100%	

3	Multifunctional Strobe	000	–	005	Strobe open	Multifunctional Strobe
		006	–	010	Strobe closed	
		011	–	033	Pulse Random, slow -> fast	
		034	–	056	Ramp up Random, slow -> fast	
		057	–	079	Ramp down Random, slow -> fast	
		080	–	102	Random Strobe Effect, slow -> fast	
		103	–	127	Strobe Break Effect, 5s…..1s (Short burst with break)	
		128	–	250	Strobe slow -> fast <1Hz – 20Hz	
		251	–	255	Strobe open	
4	Red	000	–	255	0% to 100%	
5	Red fine	000	–	255	0% to 100%	

6	Green	000	–	255	0% to 100%	RGBW fade to 100% = CCT
7	Green fine	000	–	255	0% to 100%	
8	Blue	000	–	255	0% to 100%	
9	Blue fine	000	–	255	0% to 100%	
10	White	000	–	255	0% to 100%	
11	White fine	000	–	255	0% to 100%	
12	CCT	000	–	005	off	
		006	–	008	Bulb White (2700K)	
		009	–	011	Halogen White (3200K)	
		012	–	014	Neutral White (4000K)	
		015	–	017	Studio-White (5600K)	

		018	–	020	Daylight White (6500K)		CCT
		021	–	255	1600K – 6500K		
13	Tint	000			no function		
		001	–	127	Magenta -> neutral		
		128	–	128	neutral		
		129	–	255	neutral -> Green		
					Lee Filter No.	**Roscolux Filter No.**	
		000	–	005	no function		
		006	–	009	46 Dark Magenta	46	
		010	–	013	29 Plasa Red		
		014	–	017	26 Bright Red	26	

018	–	021	127 Smokey Pink	50
022	–	025	36 Medium Pink	36
026	–	029	19 Fire	19
030	–	033	135 Deep Golden Amber	
034	–	037	778 Millennium Gold	22
038	–	041	21 Gold Amber	21
042	–	045	157 Pink	
046	–	049	110 Middle Rose	38
050	–	053	109 Light Salmon	331
054	–	057	35 Light Pink	35
058	–	061	134 Golden Amber	321

062	–	065	17 Surprise Peach	17
066	–	069	746 Brown	
070	–	073	105 Orange	15
074	–	077	20 Medium Amber	20
078	–	081	768 Egg Yolk Yellow	
082	–	085	15 Deep Straw	15
086	–	089	767 Oklahoma Yellow	313
090	–	093	101 Yellow	312
094	–	097	100 Spring Yellow	10
098	–	101	88 Lime Green	388
102	–	105	121 LEE Green	86

14	GEL (override RGBW + CCT)	106	–	109	738 Jas Green	4460	Colour Macro
		110	–	113	89 Moss Green	89	
		114	–	117	139 Primary Green	90	
		118	–	121	124 Dark Green		
		122	–	125	323 Jade	393	
		126	–	129	354 Special Steel Blue	370	
		130	–	133	116 Medium Blue-Green	95	
		134	–	137	183 Moonlight Blue		
		138	–	141	132 Medium Blue	77	
		142	–	145	119 Dark Blue	74	
		146	–	149	716 Mikkel Blue	384	

150	–	153	71 Tokyo Blue	382
154	–	157	181 Congo Blue	382
158	–	161	799 Special KH Lavender	
162	–	165	707 Ultimate Violet	382
166	–	169	343 Special Medium Lavender	357
170	–	173	798 Chrysalis Pink	358
174	–	177	701 Provence	358
178	–	181	797 Deep Purple	347
182	–	185	48 Rose Purple	48
186	–	189	345 Fuchsia Pink	
190	–	193	795 Magical Magenta	346

194	–	197	128 Bright Pink	339
198	–	201	2 Rose Pink	44
202	–	207	User Color_1	
208	–	213	User Color_2	
214	–	219	User Color_3	
220	–	225	User Color_4	
226	–	231	User Color_5	
232	–	237	User Color_6	
238	–	243	User Color_7	
244	–	249	User Color_8	
250	–	255	no function	

15	Colour Macro Crossfade	000	–	005	0s	Transition Time between Colour Macros
		006	–	105	0,1s – 10s (0,1s Steps)	
		106	–	214	11s – 119s (1s Steps)	
		215	–	244	2m – 4m50s (10s Steps)	
		245	–	255	5m – 15m (1m Steps)	
		000	–	077	no function	
		078	–	079	Dimmer Response LED (Hold 1,5s)	
		080	–	081	Dimmer Response Halogen (Hold 1,5s)	
		082	–	083	DTW (Redshift) on (Hold 1,5s)	
		084	–	085	DTW (Redshift) off (Hold 1,5s)	
		086	–	101	no function	

16	Device Settings (please read remark 1*)	102	–	103	Silent Fan (Hold 3s)	Device Settings
		104	–	105	Auto Fan (Hold 3s)	
		106	–	123	no function	
		124	–	125	LED Frequency 600Hz (hold 3s)	
		126	–	127	LED Frequency 1200Hz (hold 3s)	
		128	–	129	LED Frequency 2000Hz (hold 3s)	
		130	–	131	LED Frequency 4000Hz (hold 3s)	
		132	–	133	LED Frequency 6000Hz (hold 3s)	
		134	–	135	LED Frequency 25kHz (hold 3s)	
		136	–	167	no function	
		168	–	169	Dimmer Curve Linear (hold 3s)	

		170	–	171	Dimmer Curve Exponential (hold 3s)	
		172	–	173	Dimmer Curve Logarithmic (hold 3s)	
		174	–	175	Dimmer Curve S-Curve (hold 3s)	
		176	–	205	no function	
		206	–	207	RAW-Mode (Hold 3s)	
		208	–	209	User Calibrated-Mode (Hold 3s)	
		210	–	211	Factory Calibrated-Mode (Hold 3s)	
		212	–	243	no function	
		244	–	245	Default set (except User Colour, DMX-Address and Mode) (Hold 3s)	
		246	–	255	no function	

(1*) After the adjustments have been made, set the value to 000 to avoid disturbance by endless function call.

CAMEOLIGHT.COM

Adam Hall GmbH | Adam-Hall-Str. 1 | 61267 Neu-Anspach | Germany
Phone: +49 6081 9419-0 | adamhall.com

REV: 05

Documents / Resources

	Cameo CL4FC Professional High Power Fresnel with RGBW LED [pdf] User Manual CL4FC Professional High Power Fresnel with RGBW LED, CL4FC, Professional High Power Fresnel with RGBW LED, Fresnel with RGBW LED, RGBW LED

References

- Eventtechnik Lösungen | Adam Hall Group
- Cameo® | For Lumen Beings
- Eventtechnik Lösungen | Adam Hall Group
- Cameo® | For Lumen Beings
- cdn-shop.adamhall.com/