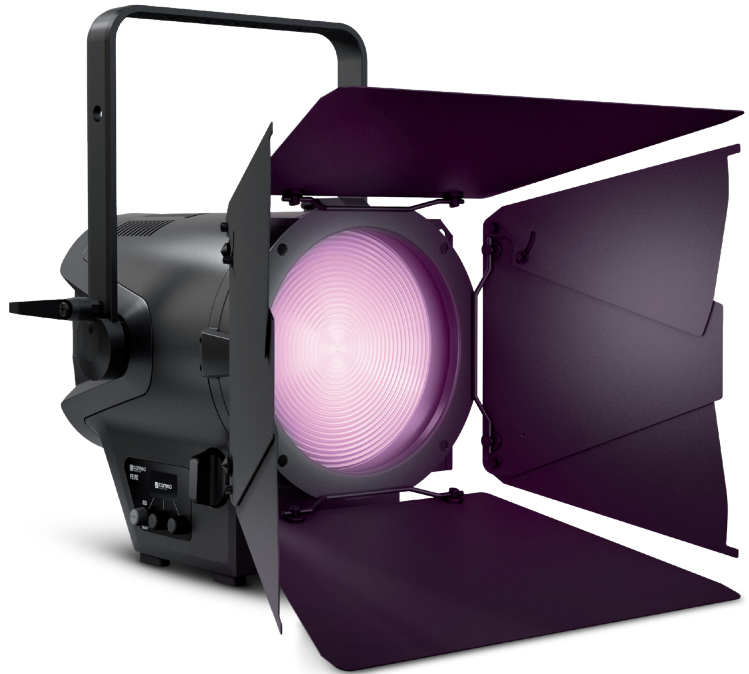


USER'S MANUAL  
BEDIENUNGSANLEITUNG  
MANUEL D'UTILISATION  
MANUAL DE USUARIO  
INSTRUKCJA OBSŁUGI  
MANUALE D'USO



VERSION: before 1.20

# F2 FC

PROFESSIONAL HIGH-POWER FRESNEL WITH RGBW LED  
CLF2FC

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**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](http://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 it 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 mm<sup>2</sup>. 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:**

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

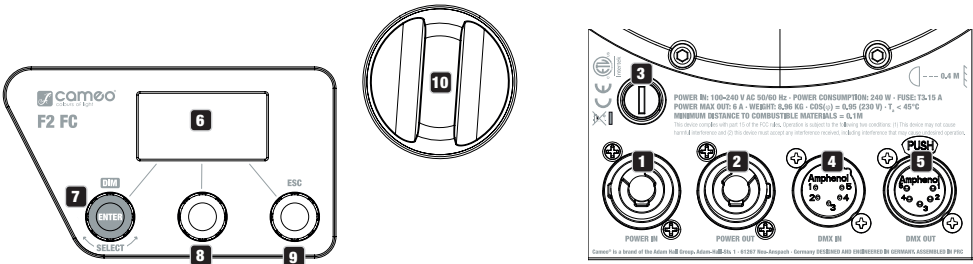
Stand-alone functions

**PROPERTIES**

1 x High Power 240W RGBW LED. 17° - 53° Beam angle, manual zoom. 200mm 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: 240W. 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

Neutrik powerCON TRUE1 mains input socket. Operating voltage: 100 - 240V AC / 50 - 60Hz.

### 2 POWER OUT

Neutrik powerCON TRUE1 mains output socket to supply power to additional CAMEO spotlights. Ensure that the total power consumption of all devices connected to the device does not exceed the given Ampere (A) value.

### 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 (T3,15A/250V). 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 between 53° and 17°, 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.

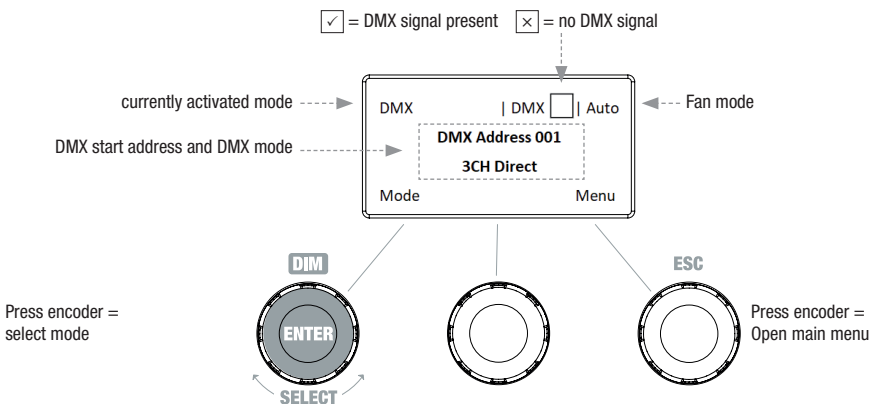
## OPERATION

### 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).

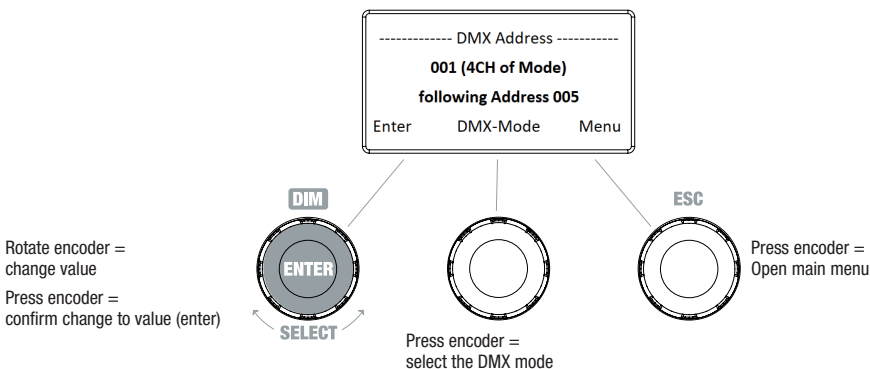
### DISPLAY MAIN DISPLAY DMX OPERATING MODE

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



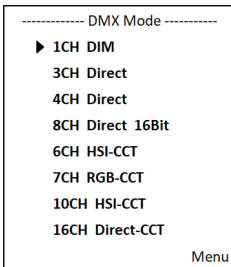
### SETTING THE DMX START ADDRESS (DMX Address)

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. 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.



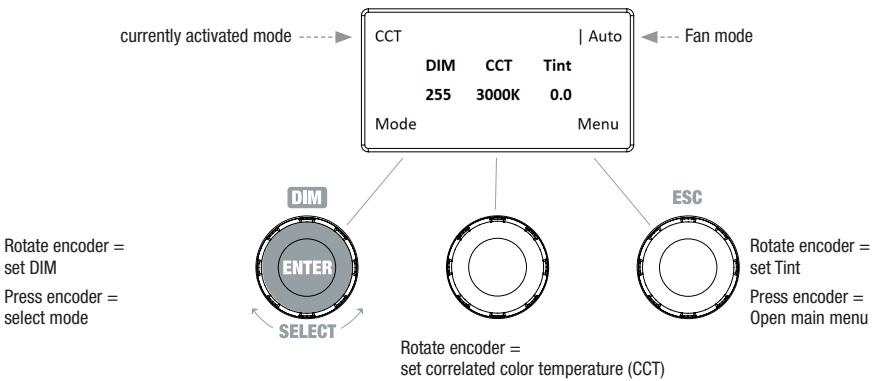
### SETTING THE DMX MODE (DMX Mode)

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.



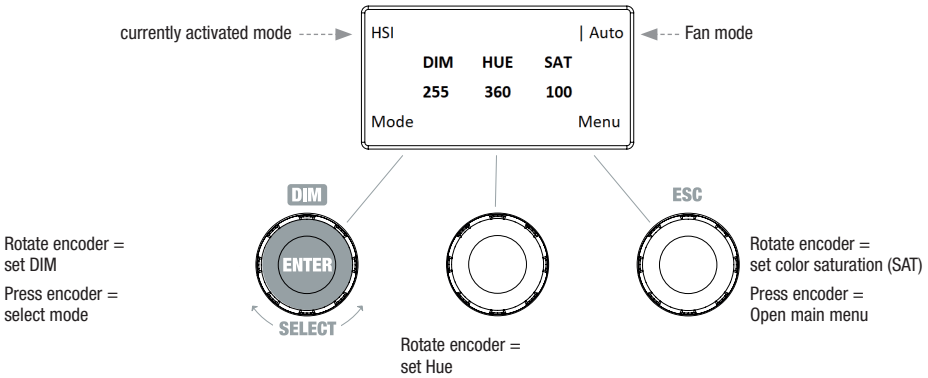
### STAND-ALONE MODE CCT (Correlated Color Temperature)

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).



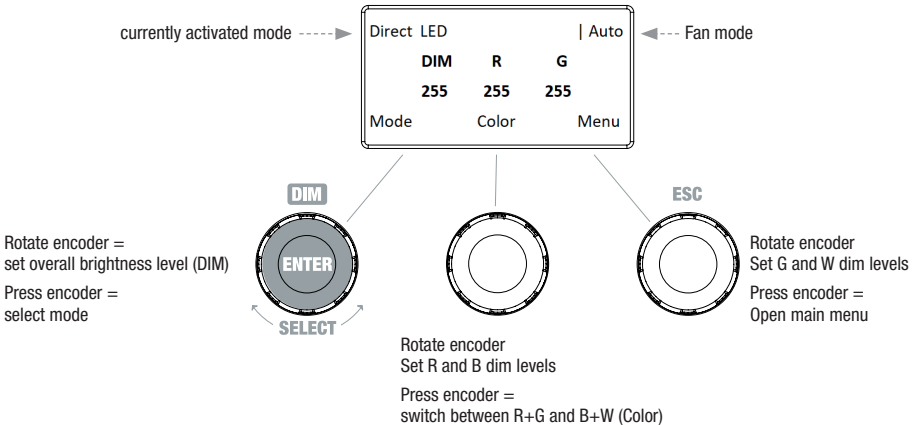
### STAND-ALONE MODE HSI (Hue - Saturation - Intensity)

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).



### STAND-ALONE MODE DIRECT LED (RGBW color mix)

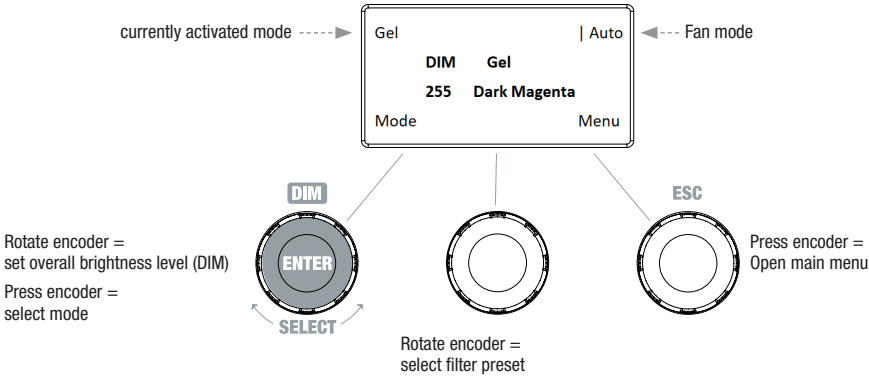
Starting from the main display, press on the left push button rotary encoder to move to the mode selection menu. Rotate the left encoder (SELECT) to select "Direct LED" mode (as indicated by selector arrow on left) and confirm by pressing the left encoder (ENTER). The total brightness and intensity levels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





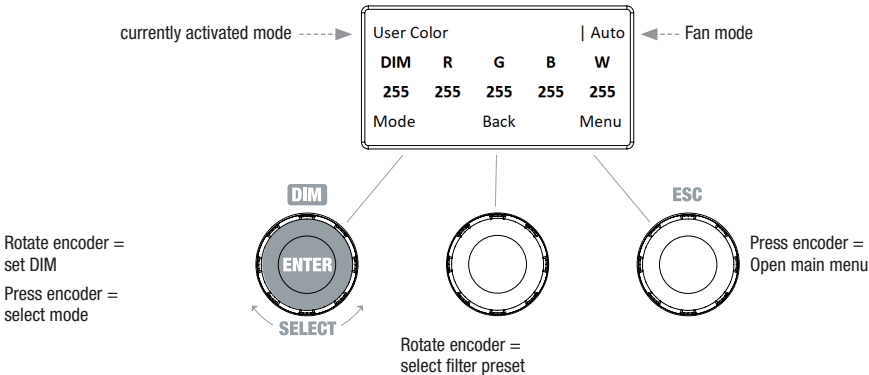
**STAND-ALONE MODE GEL (Color Filter Presets)**

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").



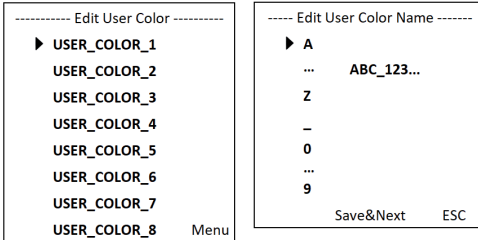
**STAND-ALONE MODE USER COLOR (Individual color presets 1 - 8)**

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.



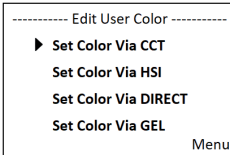
### STAND-ALONE MODE EDIT USER color (Edit User Color)

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).

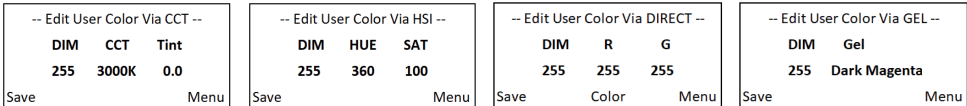


Now enter a custom name of up to 12 digits to be assigned to the preset (Edit User Color Name) by rotating the left encoder to a letter, underscore or number for the first position of the preset name, confirming the selection by pressing on the left encoder. The second position etc is chosen in the same 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).

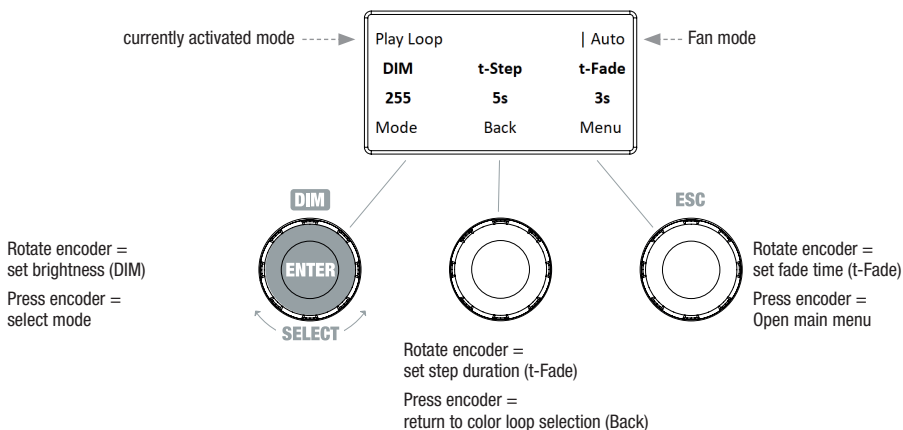


You should now set the desired color as described in the instructions for the respective stand-alone mode and then confirm by pressing on the left encoder (ENTER/Save).



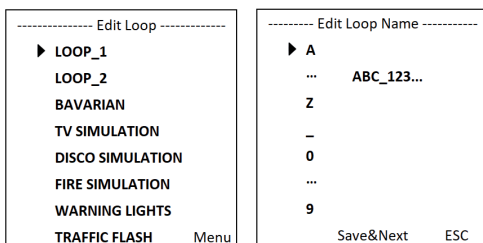
## STAND-ALONE MODE PLAY LOOP (8-step color sequences 1 - 8)

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.



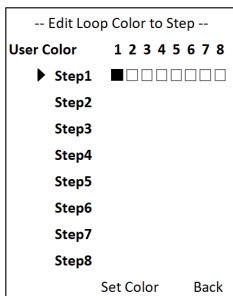
## STAND-ALONE MODE EDIT PLAY LOOP (Edit Loop)

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).



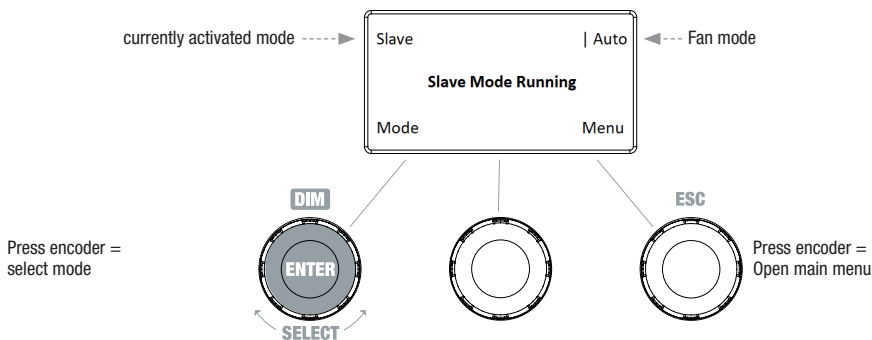
Now enter a custom name of up to 12 digits to be assigned to the color loop (Edit Loop Name) by rotating the left encoder to a letter, underscore or number for the first position of the preset name, confirming the selection by pressing on the left encoder. The second position etc. is chosen in the same 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.



## 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).

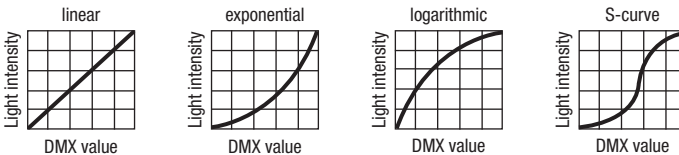
## DEVICE SETTINGS (Settings)

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	<b>Standing Position</b>	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
			<b>Display off after 20s</b>	deactivates after approx. 20 seconds of inactivity
DMX Fail	=	operating mode if DMX signal is lost	<b>Hold</b>	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 lower DMX value range and roughly in the upper DMX value range
			Logarithmic	The light intensity can be set roughly in the lower DMX value range and finely in the upper DMX value range
			S-curve	The light intensity can be set finely in the lower and upper DMX value ranges and roughly in the medium DMX value range
Dimmer Response	=	Dimmer behavior	<b>LED</b>	The spotlight reacts abruptly to changes in the DMX value.
			Halogen	The spotlight behaves similar to a halogen spotlight with soft changes in brightness.
Red Shift	=	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).	<b>No</b>	Color drift deactivated
			Dim To Warm	Color drift activated
PWM Frequency	=	LED PWM frequency	600 Hz / <b>1200 Hz</b> / 2000 Hz / 4000 Hz / 6000 Hz / 25k Hz	Sets the LED PWM frequency
Color Calibration	=	Calibration of the color	<b>RAW</b>	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
<b>Factory Calibration</b>	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



### 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 pre-installed 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). The laterally mounted level screw (C) is used to configure the vertical beam angle.



**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

Disconnect the device completely from the power mains. To mount or unmount the barn doors and filter frame, please pivot the spring-loaded lock pins (D) on the retaining bracket toward the top. 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 Fresnel lens (E) and its rubber frame as well as the glass lens behind it (F) can be cleaned by flipping the retaining bracket upwards as previously described and then drawing the Fresnel lens and its rubber frame upwards out of the retaining bracket. Clean the Fresnel lens with a moist, lint-free cloth. The glass lens should be cleaned with a special optical cloth. Return the Fresnel lens and glass lens to their respective positions (Fresnel lens in front) and return the bracket mechanism 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.

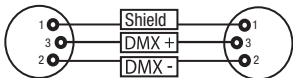
The Adam Hall 3 STAR, 4 STAR, and 5 STAR product ranges include an extensive selection of suitable cables.

### DMX CABLES

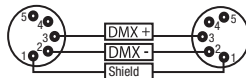
When fabricating your own cables, always observe the illustrations on this page. Never connect the shielding of the cable to the ground contact of the plug, and always make certain that the shielding does not come into contact with the housing of the XLR plug. If the shielding is connected to the ground,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

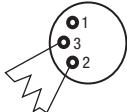
To prevent system errors, the last device in a DMX chain needs to be equipped with a terminating resistor (120 ohm, 1/4 Watt).

3-pin XLR connector with a terminating resistor: K3DMXT3

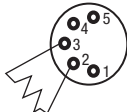
5-pin XLR connector with a terminating resistor: K3DMXT5

#### Pin Assignment

3-pin XLR connector:



5-pin XLR connector:



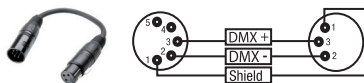
### DMX ADAPTER

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

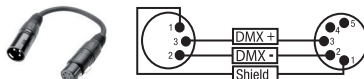
Pins 4 and 5 are not used.



#### Pin Assignment

DMX Adapter 3-pin XLR male to 5-pin XLR female: K3DHM0020

Pins 4 and 5 are not used.





## TECHNICAL SPECIFICATIONS

Item number:	CLF2FC
Product type:	LED Spotlight
Type:	Fresnel Spotlight with Zoom Function
Color spectrum:	RGBW
CRI:	> 90
Number of LEDs:	1 LED Array (Rx18, Gx18, Bx16, Wx37)
LED Type:	240W
LED PWM frequency:	600Hz, 1200Hz, 2000Hz, 4000Hz, 6000Hz, 25kHz (adjustable)
Beam angle:	17° - 53° (field 30° - 87°)
DMX input:	5-pin XLR, male
DMX output:	5-pin XLR, female
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, color macros, dimmer curve, dimmer response, PWM frequency, red shift, fan settings
Standalone functions:	Dimmer, strobe, RGBW, Auto programs, color macros, User Color 1 - 8, Master/Slave
System settings:	Display flip, display backlight On/Off, DMX fail, dimmer curves, dimmer response, red shift, PWM frequency, color calibration, auto lock, fan settings, Factory Reset, UC/Loops Reset
Controller:	DMX512, RDM enabled
Control elements:	3x push button rotary encoder, manual zoom
Display elements:	OLED Display
Operating voltage:	100 - 240V AC / 50 - 60Hz
Power consumption:	220W
Luminous flux:	6500lm
Efficiency:	27lm/W
Power supply connection:	INPUT: Neutrik powerCON TRUE1 OUTPUT: Neutrik powerCON TRUE1 (Max. 6A)
Fuse:	T3,15A / 250V (5 x 20mm)
Ambient temperature (running):	-10°C - 45°C
Relative humidity:	< 80%, non-condensing
Enclosure material:	cast metal
Enclosure color:	black
Housing cooling:	Temperature controlled fan + heat pipe
Dimensions (B x H x W, without mounting bracket and barn doors):	302 x 282 x 320mm
Weight:	8.96kg
Additional features:	200mm Fresnel lens. Manual zoom. Power cable, filter frame, 8-way barn door and mounting bracket included in delivery.

ENGLISH

DEUTSCH

FRANCAIS

ESPAÑOL

POLSKI

ITALIANO

DMX

## MANUFACTURER'S DECLARATIONS

ENGLISH

### 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](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](mailto: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](http://www.adamhall.com).

Furthermore, you may also direct your enquiry to [info@adamhall.com](mailto:info@adamhall.com).

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