

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



H2 FC

PENDANT LIGHT RGBAL WITH W-DMX™
CLH2FC(WH)

CONTENTS / INHALTSVERZEICHNIS / CONTENU / CONTENIDO / TREŚĆ / CONTENUTO

ENGLISH

SAFETY INFORMATION	3
INTRODUCTION	5
CONNECTIONS, OPERATING AND DISPLAY ELEMENTS	5
OPERATION	6
DIFFUSERS	13
SUSPENDED INSTALLATION	15
CABLING THE CONNECTION TERMINAL	16
OPTIONAL ACCESSORIES	17
DMX TECHNOLOGY	18
TECHNICAL DATA	19
MANUFACTURER'S DECLARATIONS	20

DEUTSCH

SICHERHEITSHINWEISE	21
EINFÜHRUNG	23
ANSCHLÜSSE, BEDIEN- UND ANZEIGEELEMENTE	23
BEDIENUNG	24
STREUSCHEIBEN	31
HÄNGENDE INSTALLATION	33
ANSCHLUSSTERMINAL VERKABELN	34
OPTIONALES ZUBEHÖR	35
DMX TECHNIK	36
TECHNISCHE DATEN	37
HERSTELLERERKLÄRUNGEN	38

FRANCAIS

MESURES PRÉVENTIVES	39
INTRODUCTION	41
RACCORDEMENTS, ÉLÉMENTS DE COMMANDE ET D'AFFICHAGE	41
MODE D'EMPLOI	42
DIFFUSEURS	50
INSTALLATION SUSPENDUE	52
CÂBLAGE DE LA BORNE DE RACCORDEMENT	53
ACCESSOIRES DISPONIBLES EN OPTION	54
TECHNIQUE DMX	55
CARACTÉRISTIQUES TECHNIQUES	56
DECLARATIONS	57

ESPAÑOL

MEDIDAS DE SEGURIDAD	58
INTRODUCCIÓN	60
CONEXIONES, ELEMENTOS DE MANEJO Y ELEMENTOS DE VISUALIZACIÓN	60
MANEJO	61
DIFUSORES	68
INSTALACIÓN EN SUSPENSIÓN	70
CABLEADO DEL TERMINAL DE CONEXIONES	71
ACCESORIOS OPCIONALES	72
TECNOLOGÍA DMX	73
DATOS TÉCNICOS	74
DECLARACIÓN DEL FABRICANTE	75

POLSKI

ŚRODKI OSTROŻNOŚCI	76
WPROWADZENIE	78
PRZYŁĄCZA, ELEMENTY OBSŁUGI I WSKAŹNIKI	78
OBŚŁUGA	79
DYFUZORY	86
MONTAŻ WISZĄCY	88
OKABLOWANIE LISTWY PRZYŁĄCZENIOWEJ	89
AKCESORIA DODATKOWE	90
TECHNIKA DMX	91
DANE TECHNICZNE	92
DEKLARACJE PRODUCENTA	93

ITALIANO

MISURE PRECAUZIONALI	94
INTRODUZIONE	96
CONNESSIONI, ELEMENTI DI COMANDO E DI VISUALIZZAZIONE	96
UTILIZZO	97
DIFFUSORI	104
INSTALLAZIONE A SOSPENSIONE	106
CABLAGGIO DEL TERMINALE DI COLLEGAMENTO	107
ACCESSORI OPZIONALI	108
TECNOLOGIA DMX	109
DATI TECNICI	110
DICHIARAZIONI DEL PRODUTTORE	111

DMX

DMX CONTROL / DMX STEUERUNG / PILOTAGE DMX / CONTROL DMX / STEROWANIE DMX / CONTROLLO DMX	112
---	-----

YOU HAVE MADE THE RIGHT CHOICE!

This device was developed and produced under the highest standards of quality in order to ensure smooth operation for many years. Please read these operating instructions carefully so that you can use your new Cameo Light product quickly and optimally. You can find more information on Cameo Light on our website WWW.CAMEOLIGHT.COM.

SAFETY INFORMATION

1. Please read through these instructions carefully.
2. Store all information and instructions in a secure location.
3. Follow the instructions.
4. Heed all warnings. Do not remove any safety warnings or other information from the device.
5. Use the device only in the intended manner.
6. Use only stable and suitable stands and/or mounts (for fixed installations). Make sure that wall mounts are properly installed and secured. Make sure that the device is securely installed and will not fall.
7. During installation, heed all safety provisions that apply in your country.
8. Do not install and operate the device in the vicinity of heaters, heat reservoirs, ovens, or other heat sources. Make sure that the device is installed in such a way that it is sufficiently cooled and will not overheat.
9. Do not place any ignition sources, e.g. candles, on the device.
10. Do not block the ventilation slits.
11. The device was designed to be used only in interior spaces, do not operate the device in the direct vicinity of water (this does not apply to specialty outdoor devices - in this case, please note the special instructions given in the following). Do not bring the device into contact with combustible materials, fluids, or gases.
12. Make sure that no water can drop or splash into the device. Do not place any containers filled with fluids, such as vases or drinking vessels, onto the device.
13. Ensure that no objects can fall into the device.
14. Operative the device using only those accessories recommended and specified by the manufacturer.
15. Do not open the device, and do not modify it.
16. After connecting the device, inspect all cable paths in order to avoid damage or accidents, such as those caused by tripping over said cables.
17. During transport, ensure that the device will not fall and potentially cause material damage and personal harm.
18. If your device no longer functions properly, fluids or objects have made their way into the device interior, or the device is otherwise damaged, switch it off immediately and remove it from the power outlet (provided the device is active).
This device is to be repaired only by authorized specialists.
19. Use a dry towel to clean the device.
20. Follow all laws on disposal applicable in your country. Please separate plastic and paper or cardboard when disposing of the packaging.
21. Plastic bags must be kept out of reach of children.

FOR DEVICES CONNECTED TO A POWER SUPPLY:

22. ATTENTION: If the device power cable is equipped with a ground pin, it must be inserted into an outlet with a grounding conductor. Never disable the grounding conductor of a power cable.
23. Do not immediately switch on the device when it has been exposed to stark temperature deviations (for example after transport). Humidity and condensation could damage the device. Switch on the device only when it has reached room temperature.
24. Before you connect the device to the outlet, first ensure that voltage and frequency of the power supply complies with the values given on the device. If the device has a voltage selector switch, connect the device to the outlet only if the device values comply with the values of the power supply. If the provided power cable or power adapter does not fit your power outlet, contact an electrician.
25. Do not step on the power cable. Make sure that live cables, in particular those at the power socket or at the power adapter and the device socket, are not bent.
26. With regard to the device cables, always make sure that the power cable or power adapter is always freely accessible. Always separate the device from the power supply when the device is not in use or when you would like to clean the device. Always unplug the power cable and power adapter from the power outlet using the plug or adapter, not the cord. Never touch the power cable and power adapter with wet hands.
27. If possible, do not switch the device on and off quickly because this may impair the service life of the device.
28. IMPORTANT INFO: Replace fuses only with fuses of the same type and value. If a fuse trips repeatedly, please contact an authorized service center.
29. In order to completely separate the device from the power supply, remove the power cable or power adapter from the outlet.
30. If your device is equipped with a Volex power cord, release the correct Volex device connector before removing the cord. However, this also means that the device may slide and fall when removing the power cord, which may cause personal harm and/or material damage. Therefore, always lay cables carefully.
31. Remove the power cable and power adapter from the outlet when there is a risk of lighting or when you no longer want to use the device.
32. The device may only be installed when it carries no voltage (separate the power plug from the power supply).
33. Dust and other debris within the device may damage it. The device should be serviced or cleaned regularly by qualified specialists depending on the environmental conditions (dust, nicotine, smoke, etc.) in order to avoid overheating.
34. The distance to combustible materials must be at least 0.5 m.
35. Power cables for powering multiple devices must have a core cross-section of at least 1.5 mm². In the EU, lines must be H05VV-F or similar. Adam Hall provides suitable cables. Using these cables, you can connect multiple devices via the Power Out connection with the Power In connection of another device. Ensure that the total power consumption of all connected devices does not exceed the specified value (printed on the device). Be sure to keep power lines as short as possible.

36. The appliance is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
37. Children must be instructed not to play with the device.
38. If the power cord of the device is damaged, do not use the device. The power cord must be replaced by an adequate cable or assembly from an authorized service center.

**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

RGBAL PENDANT SPOTLIGHT WITH W-DMX™

CLH2FC (black housing)
CLH2FCWH (white housing)

CONTROL FUNCTIONS

- 1-channel, 2-channel 16-bit, 2-channel CCT, 3-channel CP, 6-channel HSI, 5-channel RGBAL, 13-channel 8-bit, 20-channel 16-bit, 23-channel 16-bit DMX-control
- W-DMX™
- Standalone functions
- Master/slave modes

FEATURES

- 180 W Multicolour Array (Red - Green - Blue - Amber - Lime) LEDs
- 5-pin DMX connections. W-DMX™. OLED display
- Convection cooling. Mounting bracket can be removed for suspended installation. Connecting terminal for fixed installation
- Operating voltage 100–240 V AC
- Power consumption 165 W

CONNECTIONS, OPERATING AND DISPLAY ELEMENTS



1 POWER IN

Blue Power Twist mains input socket. Operating voltage 100–240 V AC/50–60 Hz. A suitable mains cable with Power Twist plug is included.

2 POWER OUT

White Power Twist mains output socket for supplying power to additional Cameo spotlights (max. 6 A).

3 DMX IN

Male 5-pin XLR socket for connection to a DMX control device (e.g. DMX console).

4 DMX OUT

Female 5-pin XLR socket for sending the DMX control signal.

5 OLED DISPLAY

The OLED display shows the currently activated mode (main display 1), the spotlight status (main display 2 = W-DMX status), the menu items in the editing menu and the numerical value or operational status in certain menu items. Switch between both main displays by briefly pressing ENTER and DOWN at the same time. Note on the main display in DMX operating mode: As soon as the control signal is interrupted, the characters in the display begin to flash. When there is a control signal again, the flashing stops. Briefly pressing UP on the control panel when in the main display rotates the display by 180°.

6 TOUCH-SENSITIVE CONTROLS

MENU – Press MENU to access the editing menu. Press repeatedly to return to the main display. Pressing MENU without confirming a value or status change with ENTER restores the previously confirmed value or status.

ENTER – Press ENTER to access the menu levels to make value changes and use the ENTER control field to access the submenus. Confirm value or status changes by pressing ENTER.

UP and DOWN – Select individual menu items in the selection menu (DMX address, operating mode etc.) and in the submenus. Allow changes to the value in a menu item, such as the DMX address, as required.

Before changing device settings, ensure that the control panel is dry and clean, in order not to impair its functionality.

7 FUSE

Fuse holder for 5 x 20 mm micro fuses.

IMPORTANT: Replace the fuse only with a fuse of the same type and value. In the event of repeated fuse failure, please contact an authorised service centre.

8 SECURING LUG

Securing lug for attaching the spotlight on truss installations and for fixed suspended ceiling installation.

9 ANTENNA

Antenna for wireless control via W-DMX.

10 CONNECTION TERMINAL

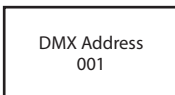
The connection terminal is used for voltage and signal supply for fixed installations. Observe the safety instructions for wiring the terminal under CABLING THE TERMINAL.

OPERATION**PLEASE NOTE**

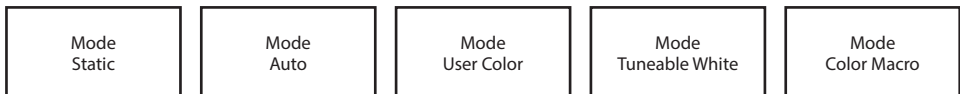
- Immediately after connecting to the mains, the spotlight is ready for operation and the previously selected operating mode is activated.
- To navigate one level up in the menu structure, briefly press MENU, or press MENU again to return to the main display. The main display is activated automatically if no input is made within approximately 30 seconds.
- Briefly pressing the UP button when in the main display rotates the display by 180°.
- To quickly change a value (e.g. DMX start address), press and hold the UP or DOWN button.

MAIN DISPLAY 1 DMX OPERATING MODE

The display shows the **DMX address** and current DMX start address (in the example **001**).

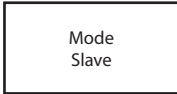
**MAIN DISPLAY 1 STANDALONE MODE**

The display shows the currently activated stand-alone mode.

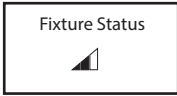


MAIN DISPLAY 1 SLAVE MODE

The display shows **Mode Slave**.

**MAIN DISPLAY 2 W-DMX STATUS**

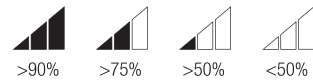
The display shows the W-DMX status. Switch between both main displays by briefly pressing ENTER and DOWN at the same time.

**W-DMX™**

To pair the W-DMX receiver with a W-DMX compatible transmitter, W-DMX must be activated (W-DMX On) in the receiver's menu under **Wireless Settings**. The **Reset** command must be also executed under the same menu item (select Reset and confirm with ENTER). The receiver is now in pairing standby and waiting for a pairing request from a transmitter. Start the pairing by selecting **Link** in the menu of the transmitter and then confirm; the pairing now takes place automatically. In the same way, several receivers can be paired to a transmitter either simultaneously or one after the other. A W-DMX connection is always maintained until the connection is disconnected by means of the **Reset** command in the receiver or the **Unlink** command in the transmitter, regardless of whether a device has been disconnected from the power supply in the meantime.

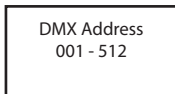
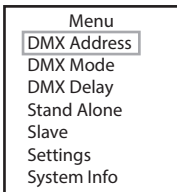
W-DMX™ STATUS

W-DMX deactivated	W-DMX activated, not paired	W-DMX activated and paired, Transmitter switched off or out of range	W-DMX activated and paired, no DMX signal	W-DMX activated and paired, DMX-Signal is present

RF SIGNAL STRENGTH**CONFIGURE DMX START ADDRESS**

Press MENU to access the main menu. Now use the controls UP and DOWN to select the menu item

DMX address and confirm with ENTER. You can now configure the DMX start address with UP and DOWN (highest value dependent on the activated DMX mode). Confirm by pressing ENTER.



CONFIGURE DMX MODE

Press MENU to access the main menu. Now use the controls UP and DOWN to select the menu item

DMX mode and confirm with ENTER. Again use UP and DOWN to select the desired DMX mode

and confirm with ENTER. Tables with the channel assignment of the different DMX modes can be found in these instructions under DMX CONTROL.

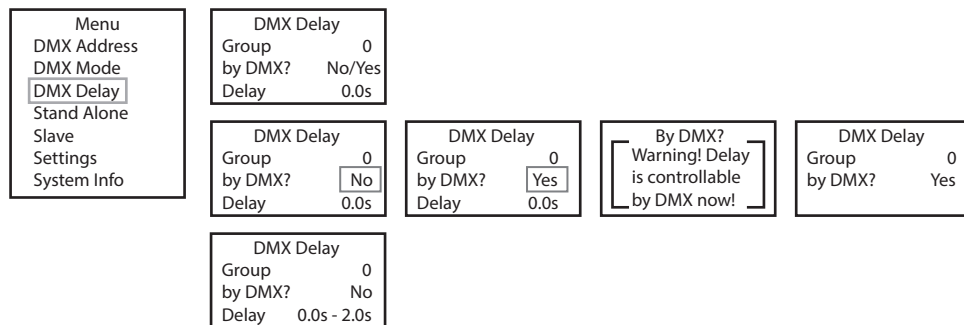
Menu	DMX Mode
DMX Address	1 CH
DMX Mode	2 CH 16Bit
DMX Delay	2 CH CCT
Stand Alone	3 CH CP
Slave	6 CH HSI
Settings	5 CH RGBAL
System Info	13 CH 8Bit
	20 CH 16Bit
	23 CH 16Bit

DMX DELAY

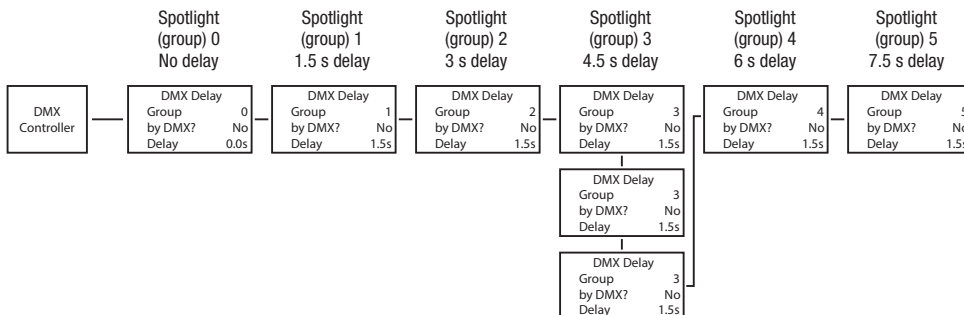
The DMX Delay function is a simple way to create a running light effect with a large number of spotlights that are all the same model and that are all running the same software version. This is otherwise only achievable with a suitable DMX controller and time-consuming programming. All the spotlights used in this are set to the same DMX operating mode and controlled via the same DMX start address.

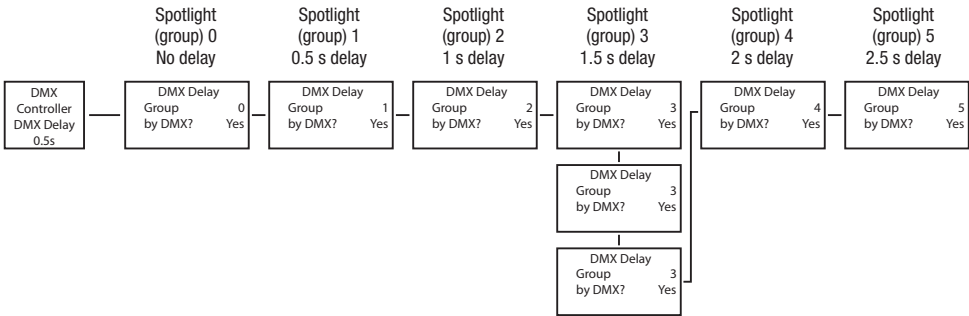
The delay time (DMX signal delay) can be manually set on each spotlight with different delay times (DMX Delay by DMX? No) or with the same delay time for all spotlights via a connected DMX controller on a specially reserved DMX channel (DMX Delay by DMX? Yes).

Starting from the main display, press MENU to enter the main menu. Now use UP and DOWN to select the menu item **DMX Delay** and confirm with ENTER. Again use UP and DOWN to select the desired submenu item, confirm with ENTER and set the value or status accordingly. Confirm all entries with ENTER.



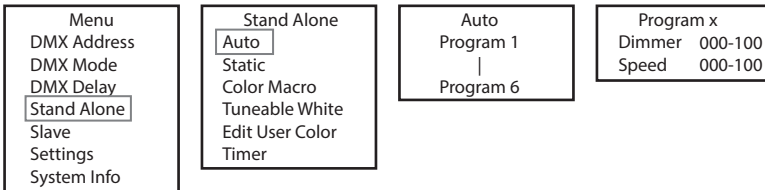
Assign the spotlights to the desired groups (maximum number of groups 6), whereby several spotlights can be assigned to one group. The group number is also the factor by which the set delay time is multiplied (see setup example).





STANDALONE MODE AUTO

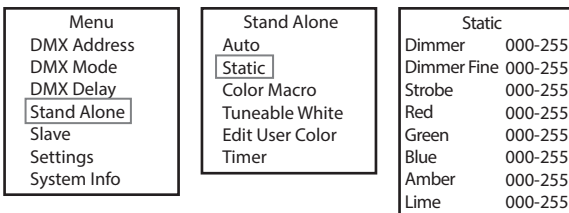
The 6 available auto-programs each comprise non-editable colour-change sequences. Brightness (Dimmer) and running speed (Speed) are separately adjustable in each programme. Starting from main display 1, press MENU to enter the main menu. Now use the controls UP and DOWN to select the menu item **Stand Alone** and confirm with ENTER. Again use UP and DOWN to select the standalone mode **Auto** and confirm with ENTER. Now use UP and DOWN to select the desired programme (programme 1 to 6) and again confirm with ENTER. Now use UP and DOWN to select **Dimmer** or **Speed**, confirm with ENTER and set the brightness or speed value from 000 to 100 as desired. Confirm all entries with ENTER.



STANDALONE MODE STATIC

The standalone mode Static allows the Dimmer, Strobe, R, G, B, A and L values to be set directly on the device with values between 000 and 255, in a similar way to with a DMX controller. In this way, an individual scene can be created without an additional DMX controller. Starting from main display 1, press MENU to enter the main menu.

Now use the controls UP and DOWN to select the menu item **Stand Alone** and confirm with ENTER. Again use UP and DOWN to select the standalone mode **Static** and confirm with ENTER. Use UP and DOWN to select the menu item you wish to edit and confirm with ENTER. You can now use UP and DOWN to configure the desired setting from 000 to 255. Confirm all entries with ENTER. The strobe effect values correspond to those in channel 2 of the DMX table 3CH CP.



STANDALONE MODE COLOR MACRO

15 different colour macros and 4 individual colours (User Color 1-4) are available as presets. The brightness can be adjusted for each preset. Starting from main display 1, press MENU to enter the main menu. Now use the controls UP and DOWN to select the menu item **Stand Alone** and confirm with ENTER. Again use UP and DOWN to select the standalone mode **Color Macro** and confirm with ENTER. Using the UP and DOWN controls, select the desired colour preset and confirm with ENTER (Color Off = blackout). You can now set the desired brightness from 000 to 100 using UP and DOWN; confirm with ENTER.

The individual colours User Color 1-4 are created in menu item **Edit User Color** in the **Stand Alone** menu.

Menu
DMX Address
DMX Mode
DMX Delay
Stand Alone
Slave
Settings
System Info

Stand Alone
Auto
Static
Color Macro
Tuneable White
Edit User Color
Timer

Color Macro
Color Off
Red
Amber
Yellow W
Yellow
Green
Turquoise
Cyan
Blue
Lavender

Mauve
Magenta
Pink
Warm White
White
Cold White
User Color 1
User Color 2
User Color 3
User Color 4

STANDALONE MODE TUNEABLE WHITE

In the standalone mode Tuneable White, the colour temperature (CCT) can be adjusted from 1800 K to 6500 K in 100 K increments, in addition to the brightness (Dimmer) and colour (Tint). Starting from the main display, press MENU to enter the main menu. Now use the controls UP and DOWN to select the menu item **Stand Alone** and confirm with ENTER. Use UP and DOWN to select **Tuneable White**, confirm with ENTER and then use UP and DOWN to select the menu item you wish to edit. Confirm with ENTER. Use UP and DOWN to configure the desired value, then confirm all entries with ENTER.

Menu
DMX Address
DMX Mode
DMX Delay
Stand Alone
Slave
Settings
System Info

Stand Alone
Auto
Static
Color Macro
Tuneable White
Edit User Color
Timer

Tuneable White
Dimmer 000-255
CCT 1800K - 6500K
Tint -10 - 10

STANDALONE MODE EDIT USER COLOR

The standalone mode Edit User Color allows you to store four individual colour presets for brightness, stroboscope (strobe) and a colour mix of R, G, B, A and L directly in the device. Starting from main display 1, press MENU to enter the main menu. Now use the controls UP and DOWN to select the menu item **Stand Alone** and confirm with ENTER. Again use UP and DOWN to select **Edit User Color** and confirm with ENTER. Using UP and DOWN, now select the desired preset (Color 1 -Color 4) and confirm with ENTER. Use UP and DOWN to select the menu item you wish to edit and confirm with ENTER. You can now use UP and DOWN to configure the desired setting from 000 to 255. The strobe effect values correspond to those in channel 2 of the DMX table 3CH CP. Confirm all entries with ENTER.

Menu
DMX Address
DMX Mode
DMX Delay
Stand Alone
Slave
Settings
System Info

Stand Alone
Auto
Static
Color Macro
Tuneable White
Edit User Color
Timer

Edit User Color
Color 1
Color 4

Color x
Dimmer 000-255
Dimmer Fine 000-255
Strobe 000-255
Red 000-255
Green 000-255
Blue 000-255
Amber 000-255
Lime 000-255

TIMER FUNCTION (Timer)

The timer function allows the standalone modes Static, Color Macro and Tuneable White to be timer controlled in such a way that the Fade In time can be configured from 0.5 seconds to 24 minutes, the Dwell Time from 0.5 seconds to 24 hours and infinite (Limitless) and the Fade Out time from 0.5 seconds to 24 hours.

After activation of the timer function, the timer control will be implemented upon the next system start.

Starting from the main display, press MENU to enter the main menu. Now use the controls UP and DOWN to select the menu item **Stand Alone** and confirm with ENTER. Again use UP and DOWN to select **Timer** and confirm with ENTER. Under point **Switch**, select **On** and confirm again with ENTER. For the individual timer control settings, select **Fade In**, **Dwell Time** or **Fade Out** and confirm with ENTER. You can now use UP and DOWN to configure the desired setting. Confirm all entries with ENTER. To deactivate the timer function, under point **Switch**, select the setting **Off** and confirm with ENTER. Please note: The timer function is suitable for use in master/slave mode via cable.

Menu DMX Address DMX Mode DMX Delay Stand Alone Slave Settings System Info	Stand Alone Auto Static Color Macro Tuneable White Edit User Color Timer	Timer Switch On / Off Fade in 0.5s-24h Dwell Time 0.5s-∞h Fade out 0.5s-24h
--	---	---

SLAVE MODE

Starting from the main display, press MENU to enter the main menu. Using UP and DOWN, select the menu item **Slave** and confirm with ENTER. Connect the slave and the master units (same model, same software version) using a DMX cable, and enable one of the standalone modes on the master unit (Auto, Static, Color Macro, Tuneable White) and if required, the timer function. The slave unit will now follow the master unit.

Menu DMX Address DMX Mode DMX Delay Stand Alone Slave Settings System Info	Mode Slave
--	---------------

SYSTEM SETTINGS (Settings)

Starting from the main display, press MENU to enter the main menu. Using UP and DOWN, select the menu item **Settings** and confirm with ENTER.

Menu DMX Address DMX Mode DMX Delay Stand Alone Slave Settings System Info
--

This will take you to the submenu for setting the submenu items (see table, select with UP and DOWN, confirm with ENTER, change value or status with UP and DOWN, confirm with ENTER).

Settings				
Display Reverse	=	Rotate display	On	Display is rotated by 180° (e.g. for overhead installation)
			Off	No rotation of the display
Display Back-light	=	Display lighting	On	Permanently on
			Off	Deactivation after approximately 1 minute of inactivity
DMX Fail	=	Operating status with DMX signal fault	Hold	Last command is retained
			Blackout	Activates blackout
			White	All LEDs 100% output

Dimmer Curve	=	Dimmer curve	Linear	Light intensity increases linearly with DMX value
			Exponential	Light intensity can be finely adjusted at lower DMX values and broadly adjusted at higher DMX values
			Logarithmic	Light intensity can be broadly adjusted at lower DMX values and finely adjusted at higher DMX values
			S-Curve	Light intensity can be finely adjusted at lower and higher DMX values and broadly adjusted at medium DMX values
Dimmer Response	=	Dimmer response	LED	Lamp responds abruptly to changes in DMX value
			Halogen	Spotlight behaves like a halogen spotlight with soft brightness changes
PWM Frequency	=	Configuration of LED PWM frequency	800 Hz/1200 Hz/2000 Hz/3600 Hz/12 kHz/25 kHz	
Autolock	=	Automatic locking of the controls	On	Automatic locking of the controls after approximately 30 seconds of inactivity. Display shows: "LOCKED" To unlock: Press and hold UP and DOWN simultaneously for approx. 5 seconds
			Off	Automatic locking of the controls is deactivated
Calibration	=	Colour calibration	Type	Factory Calibration
			User Calibration	Factory calibration of R, G, B, A and L (across all modes)
			RAW	Individual colour calibration. Cross-mode brightness setting of R, G, B, A and L with values from 000 - 255. R, G, B, A and L with maximum value 255
Wireless	=	W-DMX settings	W-DMX On/Off	On = W-DMX activated Off = W-DMX deactivated
			Reset	Press ENTER = Reset pairing with a transmitter and ready for new pairing
Power	=	Operating mode	Constant	Constant brightness over long periods
			Maximum	Maximum brightness
Software Update	=	For service purposes only		
Factory Reset	=	Reset to factory settings	Reset?	Reset to factory settings: Perform reset with ENTER, cancel with MENU
Factory Reset WC	=	Reset to factory settings except User Colors	WC Reset?	Reset to factory settings except User Colors Perform reset with ENTER, cancel with MENU

SYSTEM INFORMATION (System Info)

Starting from main display 1, press MENU to enter the main menu. Using UP and DOWN, select the menu item **System Info** and confirm with ENTER.

Menu
DMX Address
DMX Mode
DMX Delay
Stand Alone
Slave
Settings
System Info

This will take you to the submenu for accessing the system information (see table, selection with UP and DOWN, confirm with ENTER, change status with UP and DOWN, confirm with ENTER).

System Info			
Firmware	=	Displays device firmware	Firmware V1.xx

Temperature	=	Displays temperature of LED unit	LED	xxx°C / xxx°F
			C/F	Unit Celsius (= display in degrees Celsius)
				Unit Fahrenheit (= display in degrees Fahrenheit)
Operation Hours	=	Displays operating time	Operation Hours xxxx:xxh	Displays total operating time in hours and minutes

MANUAL LOCKING FUNCTION

In addition to the ability to automatically protect the spotlight from accidental and unauthorised operation (see „Settings“ – „Auto Lock“), the controls can also be locked manually. Press and hold the UP and DOWN controls simultaneously for approximately 5 seconds. „LOCKED“ is now displayed and it is no longer possible to change the spotlight’s settings via the controls. After approx. eight minutes, the current operating mode is displayed again. To unlock, press and hold the UP and DOWN controls simultaneously for approximately 5 seconds. The display will show the previously displayed information.

DIFFUSERS

Three diffusers (diffuser with medium beam angle already installed) are provided with the spotlight. The other two diffusers have a beam angle of 21° and 64°. Loosen the four cross-head screws **A** on the retaining ring on the front of the spotlight with a suitable tool and remove the retaining ring from the spotlight. Use a small flat-bladed screwdriver to remove the diffuser from the retaining ring. Insert the required diffuser in the retaining ring and then secure the ring to the spotlight with the previously loosened screws.



TRUSS INSTALLATION



Important safety notice: Overhead mounting requires extensive experience, including the calculation of the load limit values of the installation material and regular safety inspection of all installation materials and spotlights. If you do not have these qualifications, do not attempt to perform an installation yourself. Refer instead to a qualified professional.

Installation on a truss is possible with an optionally available truss clamp, which is attached to the mounting bracket **A**. An Omega bracket is optionally available. Ensure firm connections and secure the spotlight to the designated securing lug **B** with a suitable safety cable.



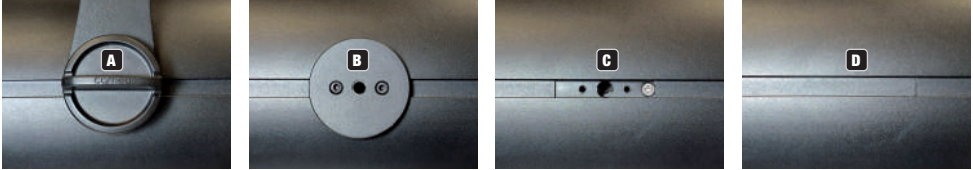
SUSPENDED INSTALLATION



Important safety notice: Overhead mounting requires extensive experience, including the calculation of the load limit values of the installation material and regular safety inspection of all installation materials and spotlights. If you do not have these qualifications, do not attempt to perform an installation yourself. Refer instead to a qualified professional.

For suspended installation, the mounting bracket can be removed completely to create a consistent and discreet appearance.

To do this, loosen and remove both knob screws **A** from the mounting bracket. Remove the sockets **B** on each side of the spotlight with a 3 mm Allen key. Cover the mounting holes **C** with the sliding metal strips in the grooves **D**. Keep all removed components safe for later use.



To suspend the spotlight, only the securing lug **E** and an appropriate suitable security cable should be used.



CABLING THE CONNECTION TERMINAL



Important Safety Instructions:

Opening the spotlight and connecting cables to the terminal connector requires specialist knowledge and may only be carried out by specially trained personnel! If you are not suitably qualified, do not attempt to open the spotlight and attach cable yourself. Refer instead to a qualified professional.

The manufacturer shall not be liable for any damage to property or personal injury caused by improper handling.

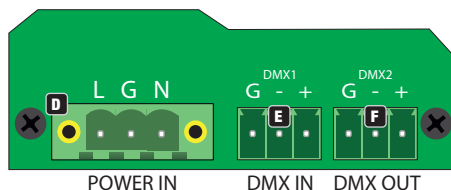
- The terminal connector may be used only as an alternative to the input and output sockets on the spotlight. This applies to the DMX connections as well as the mains connections.
- Fully disconnect the spotlight from the mains before opening it (remove the mains cable from the spotlight)!
- The cables must not be used to suspend the spotlight from a ceiling or similar. The cables must only be used for mains and signal supply. To suspend the spotlight, only the securing lug and an appropriate suitable security cable should be used.

Loosen the three cross head screws **A** on the terminal cover with a suitable tool and remove the cover from the spotlight housing.

The terminal cover has 3 cable bushings. Feed a suitable 3-core mains cable (zero potential!) through the larger cable bushing **B** and 1 (only DMX IN) or 2 DMX cables (DMX IN and OUT) through the smaller cable bushing(s) **C**.



Loosen the 2 securing screws of the terminal block with the power supply cables and remove it from the corresponding terminal (terminal block connector **D**). Use suitable ferrules for the stripped cable ends and attach the 3-core mains cable to the corresponding contacts of the accompanying terminal block for the power supply. Observe the correct allocation (see diagram below, L=Live, G=Ground/Earth, N=Neutral). Attach the terminal block to the corresponding terminal block connector **D** and secure it with screws.



Remove the terminal blocks for DMX IN (**E** / DMX1) and DMX OUT (**F** / DMX2) from the terminal block connector and connect the 3 leads from the DMX cable to the corresponding contacts on the terminal blocks (G = Ground/Earth, - = Negative, + = Positive). Attach the terminal blocks to the corresponding terminal block connectors, then seal the connection terminal with the terminal cover and secure it with the previously loosened screws. Protect the terminal connector from mechanical stress by ensuring that the clamping nuts for the cable bushings are securely tightened.

OPTIONAL ACCESSORIES

Ceiling installation kit

- CLH2CKB (black)
- CLH2CKW (white)



Important Safety Instructions:

Installation of the spotlight on ceilings requires specialist knowledge and may only be carried out by specially trained personnel! If you are not suitably qualified, do not attempt to install the spotlight on ceilings yourself. Refer instead to a qualified professional.

The manufacturer shall not be liable for any damage to property or personal injury caused by improper handling.

Omega mounting bracket

- CLOMEGABRACKET1



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.

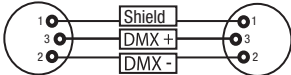
The Adam Hall 3 STAR, 4 STAR, and 5 STAR product ranges include an extensive selection of suitable cables.

DMX CABLES

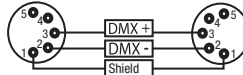
When fabricating your own cables, always observe the illustrations on this page. Never connect the shielding of the cable to the ground contact of the plug, and always make certain that the shielding does not come into contact with the housing of the XLR plug. If the shielding is connected to the ground,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

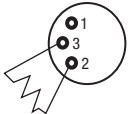
To prevent system errors, the last device in a DMX chain needs to be equipped with a terminating resistor (120 ohm, 1/4 Watt).

3-pin XLR connector with a terminating resistor: K3DMXT3

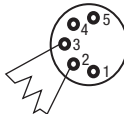
5-pin XLR connector with a terminating resistor: K3DMXT5

PIN ASSIGNMENT

3-pin XLR connector:



5-pin XLR connector:



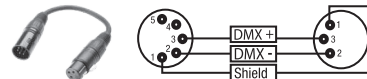
DMX ADAPTER

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

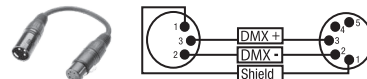
Pins 4 and 5 are not used.



PIN ASSIGNMENT

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

Pins 4 and 5 are not used.



TECHNICAL DATA

Product number:	CLH2FC(WH)
Product type:	LED spotlight
Type:	Installation spotlight
Colour spectrum:	RGBAL
Number of LEDs:	1
LED type:	180 W Multicolour Array
LED PWM frequency:	800 Hz, 1200 Hz, 2000 Hz, 3600 Hz, 12 kHz, 25 kHz (adjustable)
Beam angle:	21° / 30° / 64° (interchangeable diffusers)
DMX input:	5-pole male, terminal block connection
DMX output:	5-pole female, terminal block connection
DMX modes:	1-channel, 2-channel 16-bit, 2-channel CCT, 3-channel, 6-channel HSI, 5-channel RGBAL, 13-channel 8-bit, 20-channel 16-bit, 23-channel 16-bit
DMX functions:	Dimmer, Dimmer fine, Strobe, RGBAL, RGBAL fine, HSI, CCT, Tint, Colour Presets, Colour Preset Crossfade, DMX-Delay
Control:	DMX512, W-DMX™
Standalone functions:	Auto, Static, Colour Macro, Tuneable White, User Colour, Timer-Function, Master/Slave
Operating controls:	Menu, Enter, Up, Down
Display elements:	OLED display
Operating voltage:	100–240 V AC/50–60 Hz
Power consumption:	165 W
Luminous flux:	7400 lm
Power supply connection:	INPUT: Blue Power Twist socket, terminal block OUTPUT: White Power Twist socket, terminal block (max. 6 A)
Fuse:	T3AL/250 V (5 x 20 mm)
Ambient temperature (in operation):	0–40°C
Relative air humidity:	< 80%, non-condensing
Housing colour:	Black (CLH2FC) White (CLH2FCWH)
Housing material:	Metal
Housing cooling:	Convection cooling
Dimensions (Ø x L, without mounting bracket):	200 x 380 mm
Weight (incl. mounting bracket):	8.3 kg
Additional features:	Mains cable included, Omega mounting bracket and ceiling installation kit optionally available

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. 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.

DEUTSCH

FRANCAIS

ESPAÑOL

POLSKI

ITALIANO

DMX

DMX CONTROL / DMX STEUERUNG / PILOTAGE DMX / CONTROL DMX / STEROWANIE DMX / CONTROLLO DMX

1CH	2CH 16 Bit	2CH CCT	CH Mode					
User Color 1	User Color 1		Function	Values			Sub-Group	
1	1	1	Dimmer	000	-	255	0% to 100%	Dimmer
	2		Dimmer fine	000	-	255	0% to 100%	
		2	Color Temperature	000	-	005	Full on	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	6500K - 1800K	

3CH	6CH HSI	CH Mode						
		Function	Values				Sub-Group	
1	1	Dimmer	000	-	255	0% to 100%		Dimmer
2		Strobe functions	000	-	005	Strobe open		Multifunctional Strobe
			006	-	010	Strobe closed		
			011	-	022	Ramp up/down, slow -> fast		
			023	-	033	Ramp up/down random, slow->fast		
			034	-	045	Ramp up, slow -> fast		
			046	-	056	Ramp up random, slow -> fast		
			057	-	068	Ramp down, slow -> fast		
			069	-	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		
2	2	Hue	000	-	000	Full on		HSI
			001	-	255	0° (RED) -> 360°		
3	3	Saturation	000	-	255	0% - 100%		CCT
4		Color Temperature (affects HSI)	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)		
021	-	255	6500K - 1800K					

3	Color Presets (override Color Temperature)	000	-	005	Full on	Color Presets
		006	-	013	Red	
		014	-	021	Amber	
		022	-	029	Yellow warm	
		030	-	037	Yellow	
		038	-	045	Green	
		046	-	053	Turquoise	
		054	-	061	Cyan	
		062	-	069	Blue	
		070	-	077	Lavender	
		078	-	085	Mauve	
		086	-	093	Magenta	
		094	-	101	Pink	
		102	-	109	Warm White	
		110	-	117	White	
		118	-	125	Cold White	
		126	-	127	Color Jumping Stop	
		128	-	164	Color Jumping Speed slow->fast / Color 1 -> 12	
		165	-	201	Color Fading Speed slow -> fast / Color 1 -> 12	
		202	-	207	User Color_1	
208	-	213	User Color_2			
214	-	219	User Color_3			
220	-	225	User Color_4			
226	-	255	Full on			
5	Color Temperature Crossfade	000	-	005	no function	
		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)	
6	DMX-Delay	000	-	005	No Delay	
		006	-	255	0,1s - 2,0s	

5CH RGBAL Mode						
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	Amber	000	-	255	0% to 100%	Amber
5	Lime	000	-	255	0% to 100%	Lime

13CH 8Bit	20CH 16Bit	23CH 16Bit	CH Mode				Sub-Group	
			Function	Values				
1	1	1	Dimmer	000	-	255	0% to 100%	Dimmer
-	2	2	Dimmer fine	000	-	255	0% to 100%	
2	3	3	Strobe functions	000	-	005	Strobe open	Multifunctional Strobe
				006	-	010	Strobe closed	
				011	-	022	Ramp up/down, slow -> fast	
				023	-	033	Ramp up/down random, slow->fast	
				034	-	045	Ramp up, slow -> fast	
				046	-	056	Ramp up random, slow -> fast	
				057	-	068	Ramp down, slow -> fast	
				069	-	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		
3	4	4	Red	000	-	255	0% to 100%	Red
-	5	5	Red fine	000	-	255	0% to 100%	
4	6	6	Green	000	-	255	0% to 100%	Green
-	7	7	Green fine	000	-	255	0% to 100%	
5	8	8	Blue	000	-	255	0% to 100%	Blue
-	9	9	Blue fine	000	-	255	0% to 100%	
6	10	10	Amber	000	-	255	0% to 100%	Amber
-	11	11	Amber fine	000	-	255	0% to 100%	
7	12	12	Lime	000	-	255	0% to 100%	Lime
	13	13	Lime fine	000	-	255	0% to 100%	
		14	Hue	000	-	005	Full on	HSI
				006	-	255	0° (RED) thru 360°	
				000	-	255	fine steps	
				000	-	255	0% - 100%	
8	14	17	Color Temperature (affect RGBAL or HSI)	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	6500K - 1800K	
9	15	18	Tint (affects Color Temperature)	000	-	000	Off	Tint
				001	-	127	Magenta -> Neutral	
				128	-	128	neutral	
				129	-	255	Neutral -> Green	

10	16	19	Color Presets (override RGB, HSI, Color Temperature)	000	-	005	Color off	Color Presets
				006	-	013	Red	
				014	-	021	Amber	
				022	-	029	Yellow warm	
				030	-	037	Yellow	
				038	-	045	Green	
				046	-	053	Turquoise	
				054	-	061	Cyan	
				062	-	069	Blue	
				070	-	077	Lavender	
				078	-	085	Mauve	
				086	-	093	Magenta	
				094	-	101	Pink	
				102	-	109	Warm White	
				110	-	117	White	
				118	-	125	Cold White	
				126	-	127	Color Jumping Stop	
				128	-	164	Color Jumping Speed slow->fast / Color 1 -> 12	
				165	-	201	Color Fading Speed slow -> fast / Color 1 -> 12	
				202	-	207	User Color_1	
208	-	213	User Color_2					
214	-	219	User Color_3					
220	-	225	User Color_4					
226	-	255	no function					
11	17	20	Color Preset Crossfade (Affects Color Temperature, HSI)	000	-	005	no function	
				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)	
12	18	21	Rec. User Color	000	-	005	no function	
				006	-	011	User Color 1 (hold 3s)	
				012	-	017	User Color 2 (hold 3s)	
				018	-	023	User Color 3 (hold 3s)	
				024	-	029	User Color 4 (hold 3s)	
030	-	255	Spare					

19	22	Device settings (please read remark 1*)	000 - 073	No function	Device settings	
			074 - 075	Dimmer Response LED (hold 1,5 s)		
			076 - 081	Dimmer Response Halogen (hold 1,5 s)		
			082 - 083	No function		
			084 - 085	No function		
			086 - 119	No function		
			120 - 121	PWM 1 (800 Hz) (hold 3s)		
			122 - 123	PWM 2 (1200 Hz)(hold 3s)		
			124 - 125	PWM 3 (2000 Hz)(hold 3s)		
			126 - 127	PWM 4 (3600 Hz)(hold 3s)		
			128 - 129	PWM 5 (12 KHz)(hold 3s)		
			130 - 131	PWM 6 (25 KHz)(hold 3s)		
			132 - 133	RAW (hold 3s)		
			134 - 135	Calibrated (hold 3s)		
			136 - 137	User Calibrated (hold 3s)		
			138 - 139	No function		
			140 - 141	Display on (hold 3s)		
			142 - 143	Display off (hold 3s)		
			144 - 163	No function		
			164 - 165	Dimmer Curve Linear (hold 3s)		
			166 - 167	Dimmer Curve Exponential (hold 3s)		
			168 - 169	Dimmer Curve Logarithmic (hold 3s)		
			170 - 171	Dimmer Curve S-Curve (hold 3s)		
			172 - 235	No function		
			236 - 237	Reset All Functions (hold 3s)		
238 - 239	Reset (except User Colour) (hold 3s)					
240 - 255	No function					
13	20	23	DMX-Delay	000 - 005	No Delay	
				006 - 255	0,1s - 2,0s	

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

DE: (1*) Nachdem die Einstellungen vorgenommen wurden, stellen Sie den Wert auf 000 ein, um Störungen durch endlosen Funktionsaufruf zu vermeiden.

FR: (1*) Une fois les ajustements effectués, réglez la valeur sur 000 pour éviter les perturbations par appel de fonction sans fin.

ES: (1*) Después de realizar los ajustes, establezca el valor en 000 para evitar perturbaciones mediante una llamada de función sin fin.

PL: (1*) Po dokonaniu ustawień ustaw wartość na 000, aby uniknąć zakłóceń przez niekończące się wywołanie funkcji.

IT: (1*) Dopo aver effettuato le regolazioni, impostare il valore su 000 per evitare disturbi causati da una chiamata a funzione infinita.

