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

cameo®

GREEN SOLUTION

LED TECHNOLOGY

COLD WHITE

512 DMX

W-DMX™

RDM

ARTNET COMPATIBLE

sACN COMPATIBLE

FLICKER FREE

PAN & TILT

ZOOM

CMY

LINEAR CTO

COLOUR WHEEL

FOCUS

IRIS

4-SHUTTER FRAMING BLADES

FROST FILTER

ETL Intertek

OPUS W5
WASH MOVING HEAD
CLOW5

CONTENTS / INHALTSVERZEICHNIS / TABLE DES MATIÈRES / CONTENIDO / SPIS TREŚCI / CONTENUTO

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ESPAÑOL

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YOU HAVE MADE THE RIGHT CHOICE!

This device has been developed and manufactured to the highest quality standards to ensure many years of problem-free operation. Please read this manual carefully to be able to use your new Cameo product quickly and optimally. Further information about Cameo Light is available on our website **CAMEOLIGHT**.com.

INFORMATION ON THIS USER MANUAL

- • Carefully read the safety instructions and the entire manual before operating the device.

- • Observe the warnings on the device and in the user manual.

- • Always keep the user manual within reach.

- • If you sell or pass on the device, it is important that you also include this user manual, as it is an integral part of the product.

INTENDED USE

The product is a device for event technology!
This product has been developed for professional use in the field of event technology and is not suitable for use as domestic lighting!
Furthermore, this product is only intended for qualified users with specialist knowledge of event technology!
Use of the product outside the specified technical data and operating conditions is considered inappropriate!
Liability for damage and third-party damage to persons and property due to inappropriate use is excluded!
The product is not suitable for:

- • Use by persons (including children) with limited physical, sensory or mental abilities or lack of experience and knowledge.

- • children (children must be instructed not to play with the device).

DEFINITIONS AND SYMBOL EXPLANATIONS

1. **HAZARD:** The word HAZARD, possibly in combination with a symbol, indicates situations in which there is an immediate danger or risk of potentially fatal injury.
2. **WARNING:** The word HAZARD, possibly in combination with a symbol, indicates situations in which there is an immediate danger or risk of potentially fatal injury.
3. **CAUTION:** The word CAUTION, possibly in combination with a symbol, indicates situations or conditions that could result in injury.
4. ATTENTION: The word ATTENTION, possibly in combination with a symbol, indicates situations or conditions that could result in damage to property and/or the environment.

This symbol identifies hazards that can cause electric shock.

This symbol identifies hazardous areas or hazardous situations.

This symbol indicates hazards caused by hot surfaces.

This symbol indicates hazards caused by intense light sources.

This symbol indicates a device in which there are no user-replaceable parts.

This symbol indicates additional information on the operation of the product.

SAFETY INSTRUCTIONS

HAZARD:
1. Do not open the device and do not perform any modifications.
2. If your device no longer functions properly, if liquids or objects get inside it or if it has been damaged in any other way, switch it off immediately and unplug it from the power source. The device may be repaired only by authorised repair technicians.
3. For devices of protection class 1, the protective conductor must be connected correctly. Never disconnect the protective conductor. Devices of protection class 2 do not have a protective conductor.
4. Ensure that live cables are not kinked or otherwise mechanically damaged.
5. Never bypass the device fuse.

WARNING:
1. The device may not be operated if it shows obvious signs of damage.
2. The device may only be installed in a voltage-free state.
3. If the device's power cable is damaged, the device may not be used.
4. Permanently connected power cables may only be replaced by a qualified person.

CAUTION:
1. Do not switch on the device if it has been exposed to extreme temperature fluctuations (for example, following transport). Moisture and condensation can damage the device. Switch on the device only when it has reached room temperature.
2. Ensure that the voltage and frequency of the mains supply match the values specified on the device. If the device has a voltage selector switch, do not connect the device until it has been set correctly. Use only suitable power cables.
3. To disconnect the device from the mains on all poles, it is not sufficient to press the on/off switch on the device.
4. Make sure that the fuse used corresponds to the type printed on the device.
5. Ensure that suitable measures have been taken against overvoltage (e.g. lightning strikes).
6. Observe the specified maximum output current on devices with a Power Out connection. Ensure that the total current consumption of all connected devices does not exceed the specified value.
7. Replace pluggable power cables with original cables only.

HAZARD:
1. Choking hazard! Plastic bags and small parts must be kept out of reach of persons (including children) with reduced physical, sensory or mental capabilities.
2. Risk of falling! Make sure that the device is securely installed and will not fall down. Only use suitable stands or mountings (particularly for fixed installations). Ensure that accessories are properly installed and secured. Ensure that applicable safety regulations are observed.

WARNING:
1. Use the device in the prescribed manner only.
2. Operate the device using only accessories of the type recommended and supplied by the manufacturer.
3. Observe safety regulations applicable in your country during installation.
4. After connecting the device, ensure that all cables are routed so as to avoid damage or accidents, such as from tripping.
5. Always observe the specified minimum distance to normally flammable materials! Unless explicitly stated, the minimum distance is 0.3 m.
6. Always observe the minimum distance to the illuminated surface, which can be read on the device!

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CAUTION:
1. Moving components such as mounting brackets may become jammed.
2. In the case of devices with motor-driven components, there is a risk of injury due to the movement of the device. Sudden movement of the device can cause shock reactions.
3. The housing surface of the device can become very hot during regular operation. Ensure that accidental touching of the housing is not possible. Always allow the lamp to cool sufficiently before removal, maintenance work and charging etc.

CAUTION:
1. Do not install or use the device in the vicinity of radiators, accumulators, stoves, or other heat sources Ensure that the device is always installed in such a way that it is sufficiently cooled and cannot overheat.
2. Do not place any ignition sources, such as burning candles, near the device.
3. Ventilation openings may not be covered and fans may not be blocked.
4. For transport, use the original packaging or packaging provided by the manufacturer.
5. Avoid any impacts to or shaking of the device.
6. Observe the IP rating and the ambient conditions such as temperature and humidity according to the specification.
7. Devices can be continuously further developed. In the event of deviating information on operating conditions, performance or other device properties between the user manual and the device labelling, the information on the device always has priority.
8. The device is not suitable for tropical climate zones or for operation over 2,000 m above sea level.
9. Unless explicitly stated, the device is not suitable for operation under marine conditions.

CAUTION! IMPORTANT INFORMATION REGARDING LIGHTING PRODUCTS!
1. Never look directly into the beam of light, not even for a short period of time.
2. Never look into the beam of light using optical devices such as a magnifying glass.

3. Stroboscopic effects may cause epileptic seizures in those susceptible!

4. A permanently installed lamp is installed in this lighting unit which must not be replaced by the user. In the event of a fault, please contact your sales partner.

SIGNAL TRANSMISSION BY RADIO (E.G. W-DMX OR AUDIO RADIO SYSTEMS):

The quality and performance of wireless signal transmissions generally depends on the ambient conditions.

The following factors can impact range and signal stability, for example:

Shielding (e.g. masonry, metal structures, water)

High volume of radio traffic (e.g. powerful wireless LAN networks)

Interference

Electromagnetic radiation (e.g. LED video screens, dimmers)

All range specifications refer to free-field application with visual contact and without interference!

The operation of transmission systems is subject to official regulations. These may vary from region to region and must be checked by the operator before use (e.g. radio frequency and transmission power).

WARNING: Devices with wireless signal transmission are not suitable for use in sensitive areas in which radio operation can lead to potential detrimental effects. These include:

- Hospitals, health centres or other healthcare facilities that provide patient treatment with skilled personnel and equipment.
- Hazardous Area Class I, II and III
- Restricted areas
- Military facilities
- Aircraft or vehicles
- Areas where the use of mobile phones is prohibited

TRANSMISSION VIA W-DMX

WARNING: In general, wireless DMX transmission must not be used for applications involving safety-related factors that might result in personal injury or property damage in the event of a failure.

This applies in particular to moving scene or traverse structures, DMX-controlled motors/lifts or lifting devices for operating DMX-operated platform lifts, hydraulic systems or comparable moving components.

Furthermore, wireless DMX transmission must not be used to trigger flame or pyrotechnic devices, explosion-driven effects, or to control gas or liquid effects. These include CO2 cannons, confetti shooters, water effects or similar.

NOTES FOR MOBILE INDOOR DEVICES

1. Temporary operation! Event equipment is generally only designed for temporary operation.

2. Continuous operation or permanent installation can impair the functioning of the device and cause premature ageing.

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INTRODUCTION

MOVING HEAD OPUS SERIES
CLOW5

CONTROL FUNCTIONS
29-channel and 46-channel DMX control
Art-Net
sACN
W-DMX™
RDM-enabled
Master / slave operation
Standalone functions

FEATURES
• 380 W LED

• CMY + CTO colour blending

• Colour wheel 1 with 7 brilliant colours + open and split colours

• Colour wheel 2 with 6 correction filters and UV + open and split colours

• Focus and zoom function can be controlled via DMX

• Frosted filter and iris

• 4-way shutter

• Strobe

• Pan and tilt motors with 16-bit resolution

• Battery-powered display for mains-free configuration

• Automatic position correction

• Temperature controlled fans

• 3-pin and 5-pin DMX connections

• RJ45 network connections

• Wireless DMX™

• TRUE1 TOP compatible power connections IN and OUT

• 2 x Omega mounting brackets included

• Operating voltage 100–240 V AC

• Maximum power consumption 650 W

• The spotlight features the RDM standard (Remote Device Management). Remote device management allows the user to view the status and configuration of RDM terminals via an RDM-capable controller.

CONNECTIONS, OPERATING AND DISPLAY ELEMENTS

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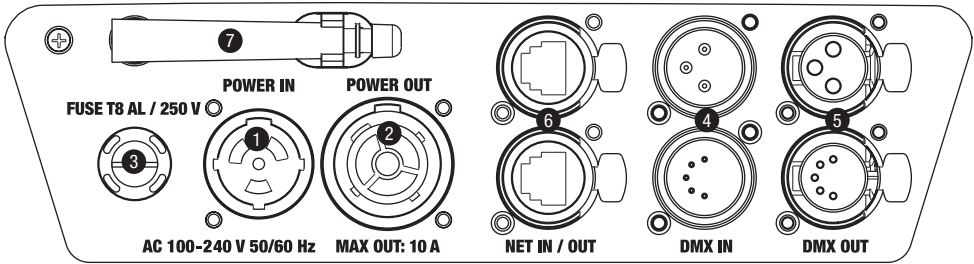
❶ POWER IN
TRUE1 TOP compatible power input socket. Operating voltage 100–240 V AC / 50–60 Hz. A suitable mains cable with TRUE1 TOP compatible plug is included.

❷ POWER OUT
TRUE1 TOP compatible power output socket. Facilitates power supply to other CAMEO lights. Ensure that the total power consumption of all devices connected to the device does not exceed the given ampere (A) value.

❸ FUSE
Fuse holder for 5 x 20 mm micro fuses. IMPORTANT: Replace the fuse only with a fuse of the same type and of the same value (see stamp on housing). In the event of repeated fuse failure, please contact an authorised service centre.

❹ DMX IN
Male 3-pin and 5-pin XLR sockets for connection of a DMX control device (e.g. DMX console). Only use the ports alternatively.

❺ DMX OUT
Female 3-pin or 5-pin XLR sockets for sending the DMX control signal. Only use the ports alternatively.

❻ NET IN / OUT
RJ45 network connectors for connecting to an Art-Net or sACN network in order to send the control signal. Use CAT 5e, or better, cables to set up the network.

❼ ANTENNA FOR W-DMX™
The antenna for control via W-DMX™ remains in the holder (= operating position) during operation.

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DMX
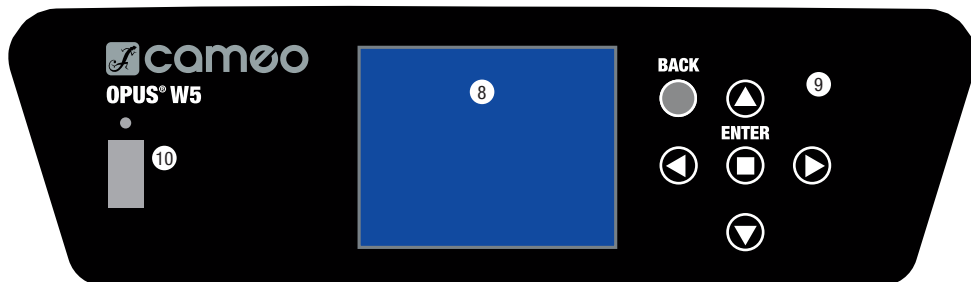
⑧ PRESSURE SENSITIVE LC DISPLAY WITH ILLUMINATION

Thanks to the pressure-sensitive LC display, the device can be operated directly from the display (glove-compatible). The LCD display shows the currently activated mode (main display), the menu items in the selection menu and the numerical value or operating status in certain menu items. If there is no control signal to the device, the display starts flashing; the flashing stops as soon as a control signal is present (DMX and slave operation, ArtNet and sACN).

⑨ TOUCH-SENSITIVE CONTROLS

BACK – Press BACK (repeatedly) to move up one level in the menu structure to the main display. ▲ and ▼ – Select the individual menu items in the main menu (DMX address, operating mode, etc.) and in the submenus. ENTER – Starting from the main display, press ENTER to enter the main menu. In the main menu, press ENTER to access the menu level in which values can be changed. You can also confirm value changes by pressing ENTER. ◄ and ► – Use the control panel to change the value in a menu item, such as the DMX address, as desired.

⑩ USB INTERFACE

USB interface for updating the device firmware. In the **Service menu**, set the status for **USB update** to **ON**. When available, download the latest firmware from the product page at www.cameolight.com, unzip it and copy the files to a folder without special characters on a USB stick. Disconnect the Moving Head from the mains and all input connections (DMX / Ethernet), connect the USB stick to the USB interface and reconnect the Moving Head to the mains. The USB stick is automatically recognised and shown in the display. Now navigate to the corresponding folder on the USB stick and confirm with ON. The update procedure begins. Do not remove the USB stick or disconnect the Moving Head from the mains during the update procedure. If updates are required for several components, the procedure must be carried out individually for all updates.

The battery-powered display can be activated, even if the device is not connected to the mains. To do this, press and hold BACK for approximately 4 seconds. You can now access device information to change and save system settings without mains connection. External control of the spotlight is not activated in this case. For this reason, the display shows that there is no DMX signal even if a DMX signal is present at the device.

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⓫ PAN LOCK

Mechanical locking device used to prevent the rotation of the head in the horizontal direction during transport. Disconnect the unit from the mains, move the head parallel to the base (4 possible positions) and push the locking lever in the direction of the pan rotation axis to lock it in position. Unlock the device before startup.

⓬ TILT LOCK

Mechanical locking device used to prevent rotation of the head in the vertical direction during transport (7 possible positions). Disconnect the unit from the mains and slide the locking lever in the direction of the tilt rotation axis, moving the head of the unit vertically until one of the 7 locking positions is found and the locking lever engages. Unlock the device before startup.

OPERATION

NOTE

As soon as the spotlight is connected correctly to the power, "Software Update Please Wait..." and the Cameo logo with information on the device model will display while the device starts up and the motor resets. The spotlight is ready after this process, and the operating mode that was selected will activate.

The spotlight can be operated using the touch-sensitive control fields next to the display, or the pressure-sensitive display (can be used with gloves) itself can be used to access all menu options and intuitively modify settings as desired. Information on which control element on the display and which control field next to the display have the same functionality can be found in the adjacent table.

Display	Bedienfeld
↩	BACK
⬆	▲
■	ENTER
⬇	▼
▬	◄
✚	►

The following describes how to operate the device using the control fields next to the display.

MAIN DISPLAY

The upper line of the display shows whether and which control signal is present on the device, the line below shows the currently active control mode (DMX Standard / Extended, Static, Auto, Slave), and well visible in the middle is the DMX start address or the corresponding operating mode (e.g. DMX start address 001). As soon as the control signal is interrupted, the characters on the display will begin to flash and "None" will display behind "Signal" on the upper line (no signal). When the control signal is again present, the screen will switch back to the main display. The display can be rotated by 180° by pressing the touch-sensitive ▼ control key. If the display is already rotated 180°, press the ▲ control key to return the display to its standard position. The display can also be rotated 180° by pressing the "roof" symbol on the pressure-sensitive display.

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Input signal display → Signal:DMX

DMX mode or operating mode → User Mode:Extended

Display battery status ←

Rotate display by 180° ←

DMX start address or operating mode → 001

Information on device model
Back to main display = press any-where on display or ENTER →
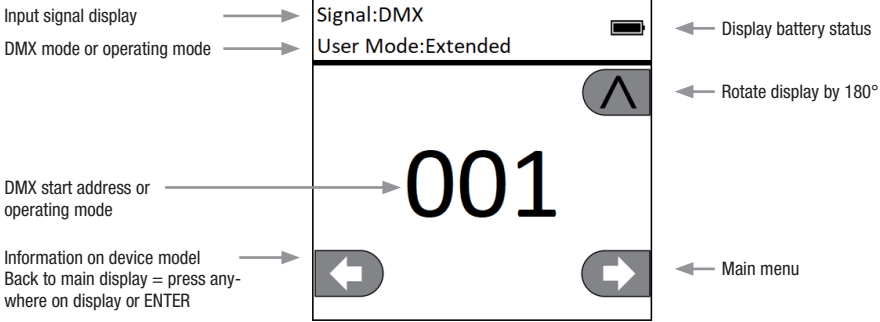
Main menu ←

CONTROL MENU (Control)
SETTING THE DMX START ADDRESS (DMX Address)

Starting from the main display, press ENTER to go to the main menu. Use the ▲ and ▼ control keys to select the **Control** menu and press ENTER. Using the ▲ and ▼ buttons, now select the "DMX Address" menu option and confirm via ENTER. Set the desired DMX start address using the ◄ and ► buttons, and confirm via ENTER (highest value depends on active DMX mode). Press BACK 2x to return to the main display, the selected DMX start address will now be displayed enlarged when the DMX mode is active.

Control		DMX Address
DMX Address		001
DMX Mode		
Network		
Wireless		
Stand Alone		
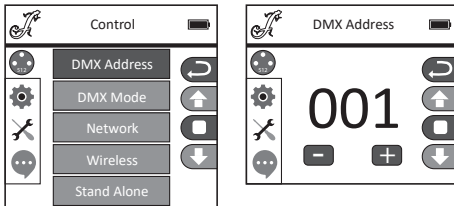
SETTING THE DMX MODE (DMX Mode)

Starting from the main display, press ENTER to go to the main menu. Use the ▲ and ▼ control keys to select the **Control** menu and press ENTER. Using the ▲ and ▼ buttons, now select the "DMX Mode" menu option and confirm via ENTER. Select the desired DMX mode via ▲ and ▼ and confirm by selecting ENTER. Press BACK 2x to return to the main display, the selected DMX mode is now active. You can find tables on channel assignment in the different DMX modes in these instructions under DMX CONTROL.

Control		DMX Mode
DMX Address		Standard
DMX Mode		
Network		Extended
Wireless		
Stand Alone		
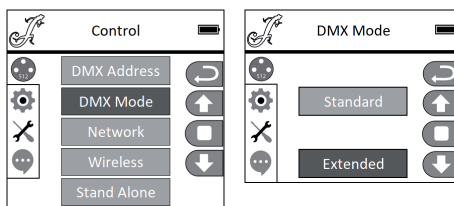
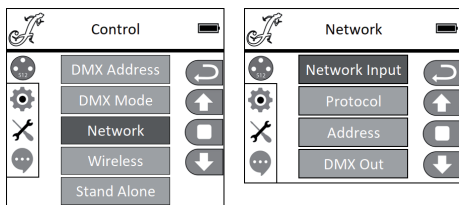## NETWORK SETTINGS (Network)

Starting from the main display, press ENTER to go to the main menu. Use the ▲ and ▼ control keys to select the **Control** menu and press ENTER. Using the ▲ and ▼ buttons, now select the "Network" menu option and confirm via ENTER. Network settings information can be found in the following table. Confirm all network settings changes via ENTER.

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Control	Network
DMX Address	Network Input
DMX Mode	Protocol
Network	Address
Wireless	DMX Out
Stand Alone	

Network			
Network Input	Activate / deactivate network input	OFF	Network input deactivated
		ON	Network input activated
Protocol	Network protocol	ArtNET	ArtNet protocol
		sACN	sACN protocol
Address	Universe 1 - 256, configure IP address and subnet mask	Universe 000 - 255	000 to 255. Change value via ◄ and ►, confirm via ENTER.
		IP address	Select Block via ◄ and ►, change value via ▲ and ▼, confirm with ENTER.
		IP Subnet Mask	Select Block via ◄ and ►, change value via ▲ and ▼, confirm with ENTER.
DMX OUT	Output network signal via DMX OUT	OFF	Do not output signal
		ON	Output signal

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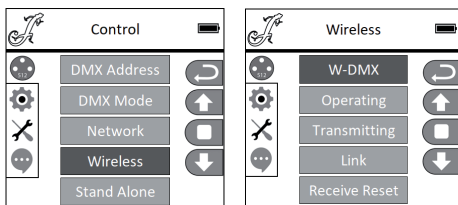
DMX

W-DMX SETTINGS (Wireless)

Starting from the main display, press ENTER to go to the main menu. Use the ▲ and ▼ control keys to select the **Control** menu and press ENTER. Using the ▲ and ▼ buttons, now select the "Mode" menu option and confirm via ENTER. W-DMX settings information can be found in the following table. Confirm all changes made to the settings via ENTER.

| Wireless		
W-DMX	OFF	Deactivate W-DMX
	ON	Activate W-DMX
Operating	Receiver	W-DMX module configured as receiver
	Transmitter	W-DMX module configured as transmitter
Transmitting	G3	G3 transmission standard
	G4S	G4S transmission standard
Link	Link	Pair with W-DMX devices. W-DMX must be enabled on all devices, and the pairing with a transmitter must be reset (Receive Reset)
	Unlink	Unpair all devices
Receive Reset	NO	Do not reset transmitter pairing
	YES	Reset transmitter pairing

STAND ALONE MODES (Stand Alone)

Starting from the main display, press ENTER to enter the main menu. Use the ▲ and ▼ controls to select the control menu **Control** and press ENTER. Using ▲ and ▼, now select the menu item "Stand Alone" and confirm by pressing ENTER. Now select one of the three stand-alone modes using the ▲ and ▼ controls and confirm with ENTER.
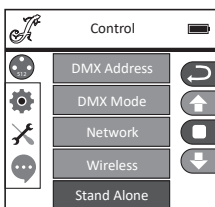
STANDALONE STATIC MODE (Master and Alone)

The Static mode allows PAN, Tilt, Dimmer, Strobe, Colour Wheel and Gobo Wheel etc. to be adjusted directly on the device with values between 000 to 255, similar to a DMX control unit. In this way, an individual scene can be created without an additional DMX controller. Here you can choose between the "Master" mode (with output of the control signal to slave devices) and "Alone" (no influence on the DMX signal). After selecting the "Master" or "Alone" mode as described above under "STANDALONE MODES", the settings can be made as desired. The information on the submenu items in the static menu and the relevant setting options are shown in the table below (selection with ▲ and ▼, confirm with ENTER, change value with ◄ and ►, confirm with ENTER).

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DMX
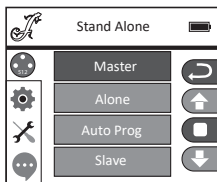
Stand Alone Mode Master / Alone				
Function				**Values**
Pan	000	-	255	0% to 100%
Pan fine	000	-	255	0% to 100%
Tilt	000	-	255	0% to 100%
Tilt fine	000	-	255	0% to 100%
Dimmer	000	-	255	0% to 100%
Strobe functions	000	-	005	Strobe open
	006	-	010	Strobe closed
	011	-	022	Ramp up/down, slow -> fast
	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
Cyan	000	-	255	0% to 100%

Magenta	000	-	255	0% to 100%
Yellow	000	-	255	0% to 100%
CTO	000	-	255	0% to 100%
Color Wheel	000	-	000	Color open
	001	-	023	Open -> Deep red
	024	-	024	**Deep Red (1)**
	025	-	047	Deep Red -> Medium Blue
	048	-	048	**Medium Blue (2)**
	049	-	071	Medium Blue -> Deep Green
	072	-	072	**Deep Green (3)**
	073	-	095	Deep Green -> Lavender
	096	-	096	**Lavender (4)**
	097	-	119	Lavender -> Amber
	120	-	120	**Amber (5)**
	121	-	143	Amber -> CTO
	144	-	144	**CTO (6)**
	145	-	167	CTO -> Congo Blue
	168	-	168	**Congo Blue (7)**
	169	-	191	Congo Blue -> Open
	192	-	192	Color open
	193	-	223	Color Wheel rotation fast -> slow, fwd
	224	-	224	Color Wheel rotation stop
	225	-	255	Color Wheel rotation slow -> fast, bwd

Color Wheel 2	000	-	000	Color open
	001	-	023	Open -> CTO 2600K
	024	-	024	**CTO 2600K (1)**
	025	-	047	CTO 2600K -> CTO 3200K
	048	-	048	**CTO 3200K (2)**
	049	-	071	CTO 3200K -> CTB 7500K
	072	-	072	**CTB 7500K (3)**
	073	-	095	CTB 7500K -> CTB 9000K
	096	-	096	**CTB 9000K (4)**
	097	-	119	CTB 9000K -> Lavender
	120	-	120	**Lavender (5)**
	121	-	143	Lavender -> Pink
	144	-	144	**Pink (6)**
	145	-	167	Pink -> UV
	168	-	168	**UV (7)**
	169	-	191	UV -> Open
	192	-	192	Color open
	193	-	223	Color Wheel rot. fast -> slow, fwd
Color Wheel 2	224	-	224	Color Wheel rot. stop
	225	-	255	Color Wheel rot. slow -> fast, bwd
Zoom	000	-	255	Narrow to wide
Focus	000	-	255	0% to 100%
Iris	000	-	191	Open -> Close
	192	-	200	Pulse, slow -> fast (with Dim)
	201	-	209	Pulse, slow -> fast (without Dim)
	210	-	218	Pulse Random, slow -> fast (without Dim)
	219	-	227	Ramp up, slow -> fast (with Dim)
	228	-	236	Ramp up, slow -> fast (without Dim)
	237	-	245	Ramp down, slow -> fast (with Dim)
	246	-	255	Ramp down, slow -> fast (without Dim)
Frost heavy	000	-	255	0% to 100%
Blade 1A	000	-	255	0% to 100%
Blade 1B	000	-	255	0% to 100%
Blade 2A	000	-	255	0% to 100%
Blade 2B	000	-	255	0% to 100%
Blade 3A	000	-	255	0% to 100%
Blade 3B	000	-	255	0% to 100%
Blade 4A	000	-	255	0% to 100%
Blade 4B	000	-	255	0% to 100%
Shape Rotation	000	-	255	0% to 100%

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|				
Pan/Tilt Macro	000	-	005	off
	006	-	040	PAN "small > big"
	041	-	075	TILT "small > big"
	076	-	110	PAN / TILT "small > big"
	111	-	145	PAN / TILT (invers) "small > big"
	146	-	180	Circle "small > big"
	181	-	215	Circle (invers) "small > big"
	216	-	255	Random "small > big"
Pan/Tilt Speed	000	-	255	Pan/Tilt speed fast -> slow

STAND-ALONE AUTO PROGRAM (Auto Prog)

The 4 different Auto programs (Program 1 - 4) consist of pre-programmed head movements and color changes, etc.; the speed is configured separately. Select Auto mode, as described previously under "STAND-ALONE MODES", confirm via ENTER, select the desired Auto program via ▲ and ▼, confirm via ENTER, and now change the value for the speed from 000 to 100 via ◄ and ► as desired. Confirm via ENTER. Press BACK repeatedly to return to the main screen.
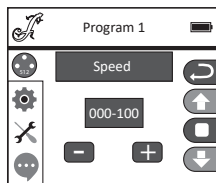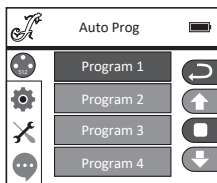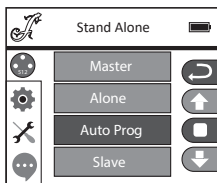

SLAVE MODE (Slave)

Select Slave mode as described previously under "STAND-ALONE MODES". Connect the slave and master unit (same model, same software version) using a DMX cable (Master DMX OUT - Slave DMX IN), and activate one of the stand-alone modes, Auto or Master, on the master unit. The slave unit will now follow the master unit. Press BACK repeatedly to return to the main screen.

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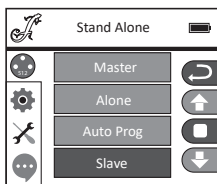
⚙ SYSTEM SETTINGS (Settings)

Starting from the main display, press ENTER to go to the main menu. Use the ▲ and ▼ control keys to select the **System Settings** menu and press ENTER.
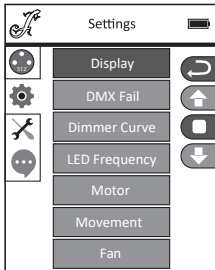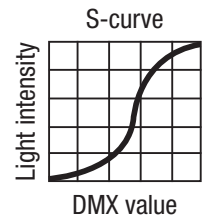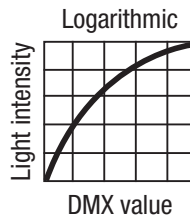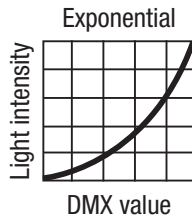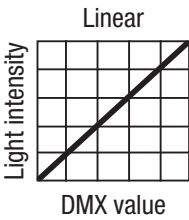

This will take you to the submenu for setting the submenu options, see table (select via ▲ and ▼, confirm via ENTER, change status via ▲ and ▼, confirm via ENTER):

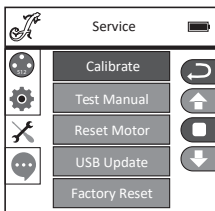| Settings (bold = factory setting)					
Display	Display settings	Reverse	**OFF**		No rotation of the display
			ON		Display is rotated through 180° (e.g. for overhead installation)
		Backlight	**OFF**		Deactivation of the display lighting after approx. 30 seconds of inactivity
			ON		Display lighting permanently on
DMX Fail	Operational status with DMX signal fault	Black			Activates blackout
		Hold			Last command is retained
		Auto			activates Auto mode
Dimmer Curve	Selection of the 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
LED Frequency	Configuration of LED PWM frequency	**650 Hz**, 1530 Hz, 3600 Hz, 12 kHz, 18.9 kHz, 25 kHz			

Motor	Motor settings in the device	Pan Reverse	**OFF**	does not reverse pan direction
			ON	Reverses pan direction
		Tilt Reverse	**OFF**	does not reverse tilt direction
			ON	Reverses tilt direction
		Pan Angle	630	Pan angle 630°
			540	Pan angle 540°
		Feedback	OFF	automatic position correction is disabled
			ON	automatic position correction is enabled
		Color1 Pos	**Standard**	Standard rotation of colour wheel on colour change
			Short	Colour wheel turns the shortest distance on colour change
		Color2 Pos	**Standard**	Standard rotation of colour wheel on colour change
			Short	Colour wheel turns the shortest distance on colour change
		Colorwheel1	Scroll	Colour wheel offers continuously variable rotation
			Snap	Colour wheel jumps directly back to the desired colour filter when the relevant value is reached
		Colorwheel2	Scroll	Colour wheel offers continuously variable rotation
			Snap	Colour wheel jumps directly back to the desired colour filter when the relevant value is reached
Movement	Blackout	**OFF**		No blackout during head movement
		ON		Blackout during head movement
	Silent	**OFF**		Standard pan/tilt speed
		ON		Pan/tilt movements are slower and therefore quieter
Fan	Fan control	**Auto**		The fan speed is automatically adjusted according to temperature
		Silent		Reduced maximum fan speed, resulting in quieter operation. Reduced brightness if required
		Off		Deactivates fan, resulting in greatly reduced brightness

DIMMER CURVES

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Linear	Exponential	Logarithmic	S-curve

(Each graph: y-axis "Light intensity", x-axis "DMX value")

⚒ SERVICE MENU

Starting from the main display, press ENTER to go to the main menu. Use the ▲ and ▼ control keys to select the Service menu and press ENTER.

```
Service          🔋
  Calibrate        ↩
  Test Manual      ⬆
  Reset Motor      ⬛
  USB Update       ⬇
  Factory Reset
```

This will take you to the submenu for adjusting the submenu options (select via ▲ and ▼, confirm via ENTER, change value via ◄ and ►, confirm via ENTER).

Calibrate - Calibrate the components with values of 000 to 255 (Password 050).

**Test Manual** - Manually test the components with values of 000 to 255.

Reset Motor - Reset the motors. **All** = All motors, **Pan&Tilt** = pan and tilt motors, **Head Only** = motors in device head.

USB Update - Firmware update via USB interface. **OFF** = Stop firmware update via USB interface. **ON** = Allow firmware update via USB interface.

Factory Reset - Reset to factory settings.

💬 DEVICE INFORMATION (Info)

Starting from the main display, press ENTER to enter the main menu. Use the ▲ and ▼ controls to select the information menu **Info** and press ENTER.

```
Info             🔋
  Error Info       ↩
  Temperature      ⬆
  Runtime          ⬛
  Firmware         ⬇
```
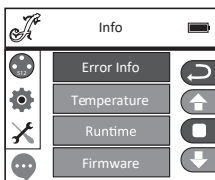
This will take you to the submenu for reading the device information
(select with ▲ and ▼, confirm with ENTER).
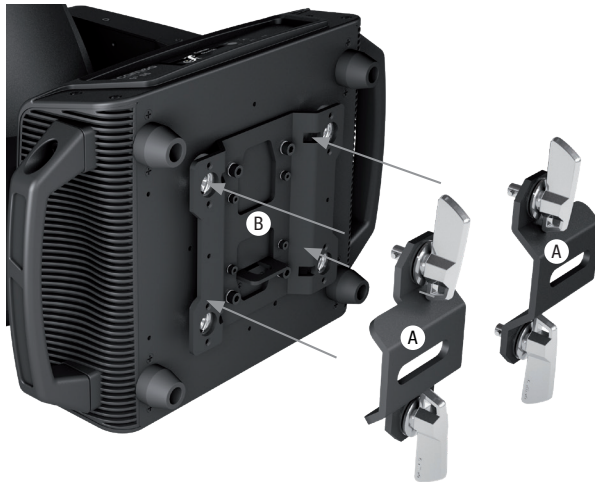
Info			
Error info	Function error display **If a fault is not corrected by a reset or restart, the defective unit must be repaired by an authorised service centre.**		
Tem-perature	Temperature display	Head	xx°C/F°
		Base	xx°C/F°
		Unit	Temperature display in degrees Celsius or Fahrenheit
Runtime	Displays operating time	Total Time	Displays total operating time in hours
		Current Time	Displays the current operating time
		Time PW	Enter the password for resetting the current operating time (Time PW = 050)
		Clean Current	Resets the current operating time
Firm-ware	Displays the firmware of the device components	Vx.x.x	
Model Info	Model name	Opus W5	

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SETUP AND INSTALLATION

The integrated plastic feet allow the spotlight to be placed in a suitable position on a level surface. Install on a crossbeam using an Omega bracket that is attached to the middle of the device base (A). An Omega bracket is included in the scope of delivery; suitable crossbeam clamps are optionally available. Make sure that the spotlight is firmly attached and secure it using a suitable safety cable on the designated location (B). The laterally attached wing screws are used to adjust the LED unit's beam direction independently of the device base.

DANGER: 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 carry out the installation yourself; contact a professional company. There is a risk that incorrectly mounted or secured devices may come loose and fall down. This can seriously injure or kill people.

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CARE, MAINTENANCE AND REPAIR

In order to ensure the long-term, proper functioning of the device, it must be regularly cleaned and, if necessary, maintained. The maintenance requirement depends on the intensity of use and the environment in which it is used. We generally recommend a visual inspection before each operation. Furthermore, we recommend carrying out all the applicable maintenance measures specified below once every 500 operating hours or, in the case of a lower intensity of use, at the latest after one year. Warranty claims may be limited in the event of defects resulting from inadequate maintenance.

CARE (carried out by user)

WARNING! Before carrying out any care or maintenance, the power supply – and, if possible, all device connections – must be disconnected.

PLEASE NOTE! Improper care can lead to impairment of the device or even its destruction.

1. Housing surfaces must be cleaned with a clean, damp cloth. In doing so, ensure that no moisture can penetrate into the device.
2. Air inlets and outlets must be regularly cleaned of dust and dirt. If compressed air is used, care must be taken to ensure that damage to the device is prevented (e.g. fans must be blocked in this case, as they could otherwise over-rev).
3. Lines and plug contacts must be cleaned regularly and dust and dirt must be removed.
4. In general, no cleaning agents or abrasive agents may be used, otherwise the surface finish may be damaged.
5. Devices must generally be stored dry and protected from dust and dirt.
6. To ensure correct and safe operation, all accessible or removable lenses and light-emitting apertures must be cleaned regularly.

MAINTENANCE AND REPAIR (by qualified personnel only)

HAZARD! There are live components in the device. Even after disconnecting the mains connection, there may still be residual voltage in the device, for example, due to charged capacitors.

PLEASE NOTE! There are no user-serviceable assemblies in the device.

PLEASE NOTE! Maintenance and repair work may only be carried out by sufficiently qualified specialist personnel. If in doubt, consult a specialist workshop.

PLEASE NOTE! Improperly performed maintenance work may affect the warranty claim.

i PLEASE NOTE! For conversion or retrofit sets provided by the manufacturer, it is essential to observe the enclosed installation instructions.

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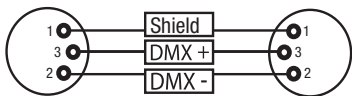
The Adam Hall 3 STAR, 4 STAR, and 5 STAR product ranges include an extensive selection of suitable cables.

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.

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PIN ASSIGNMENT

DMX cable with 3-pin XLR connectors:

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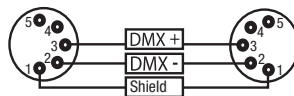
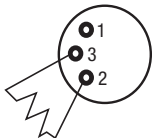## DMX TERMINATORS (TERMINATING RESISTORS)

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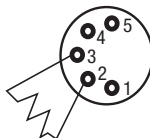3-pin XLR connector with a terminating resistor: K3DMXT3
5-pin XLR connector with a terminating resistor: K3DMXT5

PIN ASSIGNMENT

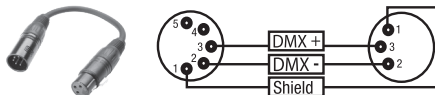3-pin XLR connector:

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:
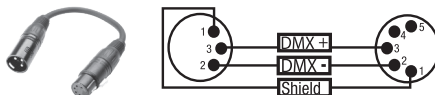K3DGF0020
Pins 4 and 5 are not used.

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:	CLOW5
Product type:	LED moving light
Type:	Profile Washer
Number of lamps:	1
Type of lamp:	380 W LED
Colour temperature of lamp:	Cool white 6700 K
LED PWM frequency:	650 Hz, 1530 Hz, 3600 Hz, 12 kHz, 18.9 kHz, 25 kHz (adjustable)
Colour blend function:	CMY + CTO
Number of colours – colour wheel 1:	7 + open and split colours
Number of filters– colour wheel 2:	6 correction filters plus UV + open and split colours
Beam angle:	8° to 45°
Interfaces:	3-pin XLR IN/OUT, 5-pin XLR IN/OUT, Ethernet IN/OUT, wireless transceiver
DMX mode:	29-channel, 46-channel
DMX functions:	Pan/tilt, pan/tilt fine, dimmer, dimmer fine, multifunctional strobe, cyan, cyan fine, magenta, magenta fine, yellow, yellow fine, CTO, CTO fine, colour wheel 1, colour wheel 2, zoom, zoom fine, focus, focus fine, iris, frost, 4x shutter, shutter rotation, shutter rotation fine, pan/tilt macros, pan/tilt speed, dimmer curve, system settings
Standalone functions:	Automatic programmes 1–4, static mode, master/slave operation
System settings:	Wireless Setting, Display Reverse, Display Illumination On/Off, DMX Fail, Dimmer Curve, LED PWM Frequency, Pan Angle, Pan Reverse, Tilt Reverse, Feedback, Movement Blackout, Fan Setting, Calibration, Test, Motor Reset, Factory Reset, Network Settings
Control:	DMX512, RDM enabled, W-DMX™ (Transceiver), Art-Net, sACN, Master/Slave
PAN angle:	540°/630°
TILT angle:	270°
Operating elements:	Touch-sensitive controls BACK, ENTER, UP, DOWN, LEFT, RIGHT, pressure-sensitive graphic colour LCD display (glove-compatible)
Display elements:	Illuminated graphic colour LC display, battery-powered for mains-independent system settings
Operating voltage:	100–240 V AC / 50–60 Hz

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| PRODUCT NUMBER:	CLOW5
Maximum power consumption:	650 W
Luminous flux:	15,400 lm
Power supply connection:	TRUE1 TOP compatible input and output (output max. 10 A)
Electrical protection class:	1
Fuse:	T6.3AL / 250 V (5 x 20 mm)
Ambient operating temperature:	-10°C to 40°C
Relative air humidity:	< 85%, non-condensing
Protection class:	IP20
Housing material:	metal, plastic
Housing colour:	Black
Housing cooling:	Heatpipe cooling system plus temperature controlled fans
Minimum distance to illuminated surface:	1.6 m
Minimum distance to normal flammable materials:	0.5 m
Dimensions (W x H x D, without bracket):	400 x 250 x 630 mm
Weight:	25 kg
Additional features:	1 m mains cable with TRUE1 TOP compatible plug and 2 Omega mounting brackets included with the appliance, user manual

MINIMUM DISTANCE TO ILLUMINATED SURFACE
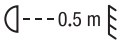
◖- - - 0.5 m ⴺ   This symbol with distance specification in metres (m) indicates the minimum distance between the light head and the illuminated surface. In this example the distance is 0.5 m.

MINIMUM DISTANCE TO NORMALLY FLAMMABLE MATERIALS
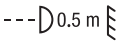
- - - ◗ 0.5 m ⴺ   This symbol with distance specification in metres (m) indicates the minimum distance between the light head and normally flammable materials. In this example the distance is 0.5 m.

DISPOSAL

PACKAGING:
1. Packaging can be fed into the reusable material cycle using the usual disposal methods.
2. Please separate the packaging in accordance with the disposal laws and recycling regulations in your country.

DEVICE:
1. This device is subject to the European Directive on Waste Electrical and Electronic Equipment, as amended. WEEE Directive Waste Electrical and Electronic Equipment. Old appliances do not belong in household waste. The old device must be disposed of via an approved disposal company or a municipal disposal facility. Please observe the applicable regulations in your country!
2. Observe all disposal laws applicable in your country.
3. As a private customer, you can obtain information on environmentally-friendly disposal options from the seller of the product or the appropriate regional authorities.

MANUFACTURER'S DECLARATIONS

MANUFACTURER'S WARRANTY & LIMITATION OF LIABILITY
Adam Hall GmbH, Adam-Hall-Str. 1, D-61267 Neu Anspach / E-mail Info@adamhall.com /
+49 (0)6081 / 9419-0.
Our current warranty conditions and limitation of liability can be found at:
https://cdn-shop.adamhall.com/media/pdf/Manufacturers-Declarations-CAMEO_DE_EN_ES_FR.pdf.
Contact your sales partner for service.

CE CONFORMITY
Adam Hall GmbH hereby confirm that this product meets the following guidelines
(where applicable):
Low-Voltage Directive (2014/35/EU)
EMC Directive (2014/30/EU)
RoHS (2011/65/EU)
RED (2014/53/EU)

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EC DECLARATION OF CONFORMITY

Declarations of conformity for products subject to the LVD, EMC, RoHS Directive can be requested from info@adamhall.com.
Declarations of conformity for products subject to RED can be downloaded from www.adamhall.com/compliance/.

UKCA- CONFORMITY

Hereby, Adam Hall Ltd. declares that this product meets the following guidelines (where applicable)
Electrical Equipment (Safety) Regulations 2016
Electromagnetic Compatibility Regulations 2016 (SI 2016/1091)
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulation 2012 (SI 2012/3032)
Radio Equipment Regulations 201 7(SI 2016/2015)

UKCA- DECLARATION OF CONFORMITY

Products that are subject to Electrical Equipment(Safety)Regulation 2016, EMC Regulation 2016 or RoHS Regulation can be requested at info@adamhall.com.
Products that are subject to the Radio Equipments Regulations 2017 (SI2017/1206) can be downloaded from www.adamhall.com/compliance/

SUBJECT TO PRINTING ERRORS AND MISTAKES, AS WELL AS TECHNICAL OR OTHER CHANGES!