SKY User Guide

creamsource
Film and TV LED lighting

The Creamsource Sky is a 1200W, full colour (RGBWA) LED softlight fixture with continuous colour adjustment from 2200K up to 15000K, including full control of Green/Magenta axis. Wireless DMX is built in, and IP65 protection allows for use outdoors.

Please take the time to read this manual before using your Creamsource Sky. This will give you a good understanding of the full functionality and capabilities.

PART NUMBERS

The table below lists individual part numbers for the Creamsource Sky system

Part Number	Description
CSS-1200-C	Creamsource Sky Luminaire, 1200W with full colour mixing
CSS-PSU-1200	Power Supply for Creamsource Sky, 1200W
CSS-PWR-15M	15M Power Cable to go between PSU and Fixture

WARNINGS

High power LED light is emitted from this product. Do not stare directly into the beam, permanent eye damage could result

Case can get hot during normal operation. Please take care when handling unit. Maximum Surface Temperature Tc = 70 deg C

Power Supply has dangerous voltages inside. Do not open.

Falling hazard - make sure unit is properly secured and all three rigging chains are attached

If the external flexible cable of this luminaire is damaged, it must be replaced by an original cable from the manufacturer or service agent.

The XLR DMX connectors ARE NOT WATERPROOF! If used in wet environments, make sure the blue connector cover is closed.

COMPLIANCE NOTES

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 N24018

Please make sure discarded electrical waste is properly recycled to reduce environmental impact. Please use a separate collection facility or contact the supplier from which this fixture was purchased

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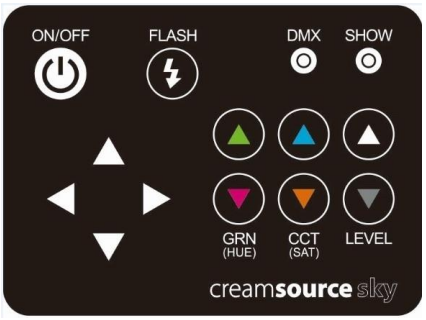
CONTROLLING THE SKY

There are four different ways of controlling the fixture, which are detailed below.

1. On-board keypad and display
2. Wired DMX
3. Wireless DMX using inbuilt SHoW DMX system
4. Wired remote dimmer control (sold separately, not yet available)

ON-BOARD KEYPAD AND DISPLAY

All settings and configuration can be done using the on-board keypad and OLED display.



Dedicated buttons:

ON/OFF - Press to turn light on and off
FLASH - Flashes light on or off when held down
LEVEL - Adjusts intensity from 0 to 100%
CCT (SAT) - Adjusts CCT from 2200K to 15000K. Also controls Saturation when in HSV mode
GRN (HUE) - Adjust Green/Magenta bias from Full Minus Green to Full Green (-100 to 100 on display). Also controls Hue when in HSV mode

To access the menu system, press any of the Arrow buttons, then:

⬅ Back - Press to go back a menu level.
➡ Select - Press to accept current menu item or setting
⬆ Up - Press to scroll up, or increase setting value. Hold to scroll quickly
⬇ Down - Press to scroll down, or decrease setting value. Hold to scroll quickly

Indicator LEDs:

DMX - Flashes yellow rapidly when DMX signal is present
SHOW - Flashes blue rapidly when SHoW DMX wireless signal is present

MENU FUNCTIONS

The table below outlines all the menu items and a brief description of their function, for firmware V1.0.0 and above

COLOUR MODE	➡	Normal - CCT	➡	Switch to CCT mode to produce white light with CCT and GRN/MAG control
		Colour - HSV	➡	Switch to HSV mode to produce colours with Hue and Saturation control
PRESET	➡	2700K	➡	Set colour temperature to 2700K, GRN/MAG to 0
		3200K	➡	Set colour temperature to 3200K, GRN/MAG to 0
		4500K	➡	Set colour temperature to 4500K, GRN/MAG to 0
		5600K	➡	Set colour temperature to 5600K, GRN/MAG to 0
		6500K	➡	Set colour temperature to 6500K, GRN/MAG to 0
DMX Address	➡		⬆ ⬇	Use UP/DOWN arrow keys to set DMX address from 1 to 494 (<512 to allow for all channels to be patched)
DMX Scenario	➡		⬆ ⬇	Use UP/DOWN arrow keys to set DMX Scenario from 1 to 10 (see DMX implementation tables for complete description of different scenarios)
Boost Brightness	➡			Boost Brightness allows for increased light output when unit is running at low temperatures. When Boost Brightness is NOT enabled, the output level of the light is restricted to that of the normal 'HOT' running temperature of the light, even if the light is running cooler than normal. This prevents 'output droop' as the unit heats up
Advanced	➡	ShowDMX ID	⬆ ⬇	Use UP/DWN arrow keys to select Show ID for unit. This must match Show ID of transmitting device (default setting: 201)
		ShowDMX Enabled	➡	SHoW DMX Receiver can be enabled or disabled
		High Speed	➡	Enable High Speed Mode – this increases the PWM frequency of the unit to allow fast frame rate shooting (up to 2,000fps). The drawback of using High Speed mode is that the dimming and colour changing of the unit becomes less fluid and smooth. When disabled, frame rates of up to 500fps are achievable.
		DMX Terminated	➡	Enable to terminate DMX line with 120R resistor internally. The last fixture in the DMX chain should have this option selected
		Display Always On	➡	If this is not enabled, then the OLED display will switch off after a period of no key-presses, to lengthen it's lifespan and prevent screen burn-in
		Information	➡	Displays information screen with serial number, temperatures, unit run-hours and other vital statistics
		Restore Defaults	➡	Restores user defaults including DMX address, Show ID and other settings

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WIRED DMX CONTROL

Standard 5 pin XLR connectors are located under the blue rubber sealing cap on the back of the unit. There are also two weatherproof 3 pin Weipu SF connectors located directly below these which can be used when weatherproof DMX connections are required.

The XLR DMX connectors ARE NOT WATERPROOF! If used in wet environments, make sure the blue connector cover is closed.

When a valid DMX signal is detected, the yellow DMX indicator LED will flash on the rear of the unit and the keypad controls for the light are disabled. These are restored one second after loss of DMX signal. After around 15 seconds of valid DMX input the OLED Display will power off automatically – press any key on the keypad to turn it back on again.

The desired DMX address can be selected from the main menu. Please see the DMX Implementation Tables for more information about the channel mapping options.

As with all DMX installations, the last unit in the chain should be terminated. This can be done through the menu system, by selecting MENU->Advanced->DMX Terminated.

WIRELESS DMX CONTROL

Every Sky unit has built in Wireless DMX control using the SHoW DMX system from City Theatrical. By default the Show ID is set to 201. The antenna for the unit is located underneath the power supply. An N-Type connector is utilised for the antenna, so if extended range is required, a larger one could be installed.

When a valid SHoW DMX signal is present on the correct channel, the blue SHOW indicator LED will flash rapidly. The text "SHOW – x" will also be displayed on the OLED screen. The number x denotes the signal strength from 0 to 3, where 0 is minimum and 3 is maximum.

After around 15 seconds of valid DMX input the OLED Display will power off automatically – press any key on the keypad to turn it back on again.

If wired DMX is connected at the same time as the Wireless DMX is receiving data, then the wired connection will take control.

The DMX address and scenario should be set in the same mannor as for wired DMX. Please see City Theatrical documentation for more information about the SHoW DMX system.

WIRED REMOTE DIMMER

The wired remote dimmer plugs into either of the 7 pin Weipu SF connectors located directly below the blue rubber sealing cap on the back of the unit. This will allow access to the menu system of the unit for setup and also control of levels, cct and some other settings.

REMOVING POWER SUPPLY UNIT

To remove the power supply from the head, the safety button must be depressed, then the blue catch lifted. The power supply can now be rotated counter-clockwise and lifted clear of the unit.

To install the power supply back onto the head, the reverse procedure is followed. The safety button must be depressed when rotating the power supply clockwise until it latches securely to the head.

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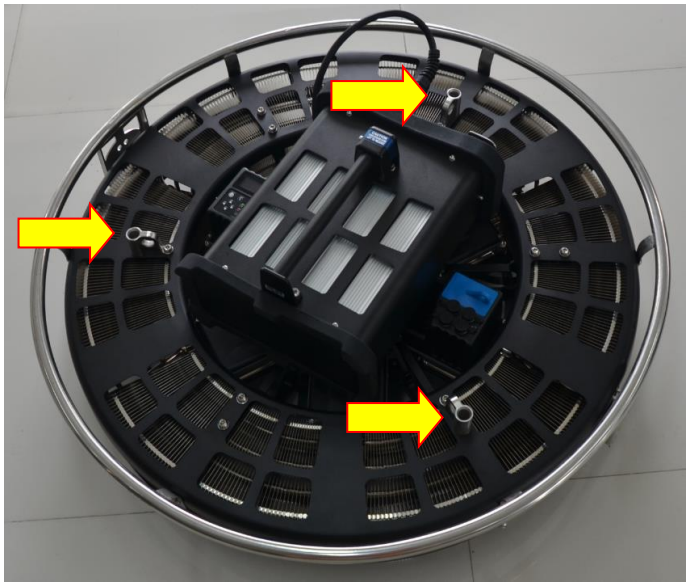
RIGGING

Three rigging points are provided for attachement of the correctly rated safety cables to hang the unit. Make sure to use cables rated to withstand the full weight of the unit: 23kg without power supply, or 36kg with power supply mounted.

Unit must be hung with the lowest point at least 3.5m (11ft) above ground level

Ensure that mounting point is safe and secure and is rated to take the full unit weight

These three point also align with the silk skirt attachment spigots on the underside of the unit, and can be used to stack several units together for storage.

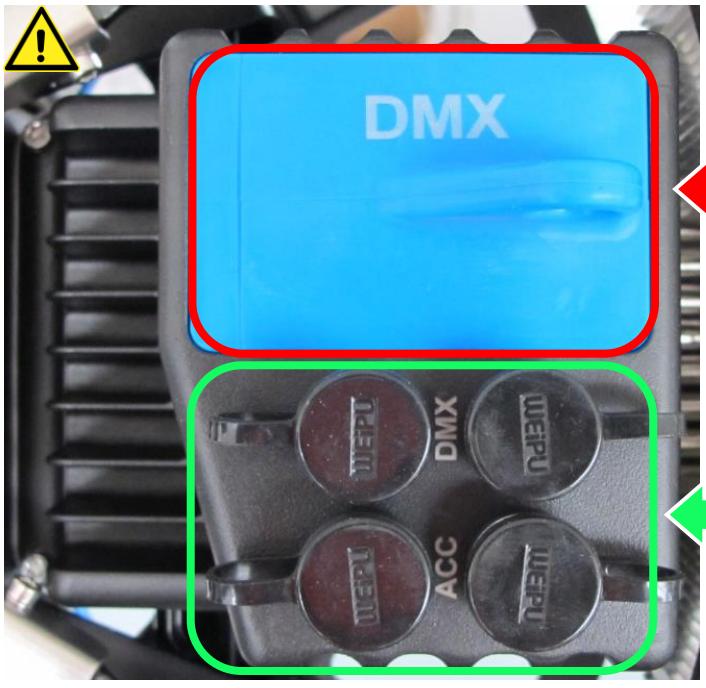


SILK SKIRT ATTACHEMENT

Three spigots are provided for attachement a silk and/or black skirt to the underside of the unit. Slide the skirt over the spigot and use an R-Pin to secure the skirt in place.

USING IN WET LOCATIONS

Both the Sky and the Power supply are rated to IP65, which means they can be used in wet locations. Please take special note of connectors:



The 5pin XLR connector connectors located under the blue rubber cap ARE NOT WATERPROOF!

If used in a wet location, this cap must be securely in place.

The four Weipu connectors are waterproof only when mated, or when caps are fitted.

If used in wet location, make sure caps are fitted or plugs are connected.

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SPECIFICATIONS FOR FIXTURE

Model Number	CSS-1200-C
Input	2 circuits: 50.0V DC, Max 12.0A each, combined total draw 24A MAX
Maximum Ambient Temperature	40°C
Cooling	Passive (Silent)
Weight	23kg / 50lbs (head)
Protection Class	IP65 when all connector caps are fitted, or when Weipu connectors are mated (but not XLR DMX connectors)

SPECIFICATIONS FOR POWER SUPPLY

Model Number	CSS-PSU-1200
Input	90-277V AC, 50-60Hz, 14A @ 115V, 6.6A @ 230V
Output	2 circuits: 50.0V DC, 12.8A MAX each circuit, combined capacity 25.6A MAX
Maximum Ambient Temperature	40°C
Cooling	Passive (Silent)
Weight	13kg / 28lbs (power supply)
Protection Class	IP65 when all connectors are mated

DMX IMPLEMENTATION TABLES

The Creamsource Sky offers a number of different DMX implementation scenarios, in both 8 and 16 bit resolutions.

The active scenario can be changed by selecting 'DMX Scenario' from the main menu on the fixture.

Note it is possible that some combinations of CCT and Green/Magenta will not be able to be accurately reproduced. This is most likely to occur at warm colour temperatures (<2500K) combined with Minus Green. In this situation the light will output the closest colour it can reach.

These DMX implementation tables are valid for Firmware Versions **2.3.0** and above.

Changes to DXM profiles in Firmware Versions 2.3.0:

- Added Scenario's 11-18 to solve compatibility issues between V0 and V1 hardware.
- Adjusted HSV implementation to get more saturated primary colours

DMX Refresh Rate

The smoothest dimming will be achieved when the DMX refresh rate on the console is set to 40-44Hz. The dimming may not be as smooth for refresh rates above or below this.

Note on 'Version 0' Sky Hardware Differences

The first Sky units manufactured (V0 units with serial numbers beginning in "2") have the Amber colour LEDs physically linked to the Red colour LEDs in hardware, so they operate in tandem when the Red DMX Channel is adjusted. Adjusting the Amber DMX Channel will have no affect on these units.

Version 1 and above Sky's (serial number starting in "3" or above) have the Amber channel is separated out so it can be controlled independantly.

If using a mix of V0 and V1 Sky hardware in the same DMX setup and RGBW or Hue/Saturation control is required, it is recommended to use scenarios 11-18 on all fixtures, so they all respond the in the same way. If using White (CCT) control only, there are no compatibility issues.

Scenario	Bits	Description	
1	8 Bit	White and RGBWA	
2	8 Bit	White	
3	8 Bit	White and Hue/Saturation	
4	8 Bit	RGBWA	
5	8 Bit	Hue/Saturation	
6	16 Bit	White and RGBWA	
7	16 Bit	White	
8	16 Bit	White and Hue/Saturation	
9	16 Bit	RGBWA	
10	16 Bit	Hue/Saturation	
11	8 Bit	White and RGBW –V0 Compat	(compatibility mode for V0 hardware)
12	8 Bit	White and Hue/Saturation – V0 Compat	(compatibility mode for V0 hardware)
13	8 Bit	RGBW – V0 Compat	(compatibility mode for V0 hardware)
14	8 Bit	Hue/Saturation – V0 Compat	(compatibility mode for V0 hardware)
15	16 Bit	White and RGBW – V0 Compat	(compatibility mode for V0 hardware)
16	16 Bit	White and Hue/Saturation – V0 Compat	(compatibility mode for V0 hardware)
17	16 Bit	RGBW – V0 Compat	(compatibility mode for V0 hardware)
18	16 Bit	Hue/Saturation –V0 Compat	(compatibility mode for V0 hardware)

8 BIT MODES

Scenario 1: 8 Bits - White and RGBWA

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	CCT	000 … 255	2200 … 15000K
3	Green/Magenta	000 … 010	Neutral
		011 … 133	-100 to -1 Green
		134	Neutral
		135 … 255	+1 to +100 Green
4	White-Colour Crossfade	000 … 255	0 … 100%
5	Red	000 … 255	0 … 100%
6	Green	000 … 255	0 … 100%
7	Blue	000 … 255	0 … 100%
8	White	000 … 255	0 … 100%
9	Amber	000 … 255	0 … 100%

Scenario 2: 8 Bits - White

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	CCT	000 … 255	2200 … 15000K
3	Green/Magenta	000 … 010	Neutral
		011 … 133	-100 to -1 Green
		134	Neutral
		135 … 255	+1 to +100 Green

Scenario 3: 8 Bits - White and Hue/Saturation

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	CCT	000 … 255	2200 … 15000K
3	Green/Magenta	000 … 010	Neutral
		011 … 133	-100 to -1 Green
		134	Neutral
		135 … 255	+1 to +100 Green
4	White-Colour Crossfade	000 … 255	0 … 100%
5	Hue	000 … 255	0 … 360 Degrees
6	Saturation	000 … 255	0 … 100%

Scenario 4: 8 Bits - RGBWA

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	Red	000 … 255	0 … 100%
3	Green	000 … 255	0 … 100%
4	Blue	000 … 255	0 … 100%
5	White	000 … 255	0 … 100%
6	Amber	000 … 255	0 … 100%

Scenario 5: 8 Bits - Hue/Saturation

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	Hue	000 … 255	0 … 360 Degrees
3	Saturation	000 … 255	0 … 100%

Scenario 11: 8 Bits - White and RGBW (V0 Compatibility Mode)

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	CCT	000 … 255	2200 … 15000K
3	Green/Magenta	000 … 010	Neutral
		011 … 133	-100 to -1 Green
		134	Neutral
		135 … 255	+1 to +100 Green
4	White-Colour Crossfade	000 … 255	0 … 100%
5	Red & Amber Combined	000 … 255	0 … 100%
6	Green	000 … 255	0 … 100%
7	Blue	000 … 255	0 … 100%
8	White	000 … 255	0 … 100%

Scenario 12: 8 Bits - White and Hue/Saturation (V0 Compatibility Mode)

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	CCT	000 … 255	2200 … 15000K
3	Green/Magenta	000 … 010	Neutral
		011 … 133	-100 to -1 Green
		134	Neutral
		135 … 255	+1 to +100 Green
4	White-Colour Crossfade	000 … 255	0 … 100%
5	Hue	000 … 255	0 … 360 Degrees
6	Saturation	000 … 255	0 … 100%

Scenario 13: 8 Bits – RGBW (V0 Compatibility Mode)

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	Red & Amber Combined	000 … 255	0 … 100%
3	Green	000 … 255	0 … 100%
4	Blue	000 … 255	0 … 100%
5	White	000 … 255	0 … 100%

Scenario 14: 8 Bits - Hue/Saturation (V0 Compatibility Mode)

Slot No	Slot Name	DMX Value	Output Value
1	Master Level	000 … 255	0 … 100%
2	Hue	000 … 255	0 … 360 Degrees
3	Saturation	000 … 255	0 … 100%

16 BIT MODES

Scenario 6: 16 Bits - White and RGBWA

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	CCT	HI	00000 … 65535	2200 … 15000K
4		LO		
5	Green/Magenta	HI	00000 … 05000	Neutral
			05001 … 35267	-100 to -1 Green
6		LO	35268	Neutral
			35269 … 65535	+1 to +100 Green
7	White-Colour Crossfade	HI	00000 … 65535	0 … 100%
8		LO		
9	Red	HI	00000 … 65535	0 … 100%
10		LO		
11	Green	HI	00000 … 65535	0 … 100%
12		LO		
13	Blue	HI	00000 … 65535	0 … 100%
14		LO		
15	White	HI	00000 … 65535	0 … 100%
16		LO		
17	Amber	HI	00000 … 65535	0 … 100%
18		LO		

Scenario 7: 16 Bits - White

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	CCT	HI	00000 … 65535	2200 … 15000K
4		LO		
5	Green/Magenta	HI	00000 … 05000	Neutral
			05001 … 35267	-100 to -1 Green
6		LO	35268	Neutral
			35269 … 65535	+1 to +100 Green

Scenario 8: 16 Bits - White and Hue/Saturation

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	CCT	HI	00000 … 65535	2200 … 15000K
4		LO		
5	Green/Magenta	HI	00000 … 05000	Neutral
			05001 … 35267	-100 to -1 Green
6		LO	35268	Neutral
			35269 … 65535	+1 to +100 Green
7	White-Colour Crossfade	HI	00000 … 65535	0 … 100%
8		LO		
9	Hue	HI	00000 … 65535	0 … 360 Degrees
10		LO		
11	Saturation	HI	00000 … 65535	0 … 100%
12		LO		

Scenario 9: 16 Bits - RGBWA

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	Red	HI	00000 … 65535	0 … 100%
4		LO		
5	Green	HI	00000 … 65535	0 … 100%
6		LO		
7	Blue	HI	00000 … 65535	0 … 100%
8		LO		
9	White	HI	00000 … 65535	0 … 100%
10		LO		
11	Amber	HI	00000 … 65535	0 … 100%
12		LO		

Scenario 10: 16 Bits - Hue/Saturation

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	Hue	HI	00000 … 65535	0 … 360 Degrees
4		LO		
5	Saturation	HI	00000 … 65535	0 … 100%
6		LO		

Scenario 15: 16 Bits - White and RGBW (V0 Compatibility Mode)

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	CCT	HI	00000 … 65535	2200 … 15000K
4		LO		
5	Green/Magenta	HI	00000 … 05000	Neutral
			05001 … 35267	-100 to -1 Green
6		LO	35268	Neutral
			35269 … 65535	+1 to +100 Green
7	White-Colour Crossfade	HI	00000 … 65535	0 … 100%
8		LO		
9	Red & Amber Combined	HI	00000 … 65535	0 … 100%
10		LO		
11	Green	HI	00000 … 65535	0 … 100%
12		LO		
13	Blue	HI	00000 … 65535	0 … 100%
14		LO		
15	White	HI	00000 … 65535	0 … 100%
16		LO		

Scenario 16: 16 Bits - White and Hue/Saturation (V0 Compatibility Mode)

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	CCT	HI	00000 … 65535	2200 … 15000K
4		LO		
5	Green/Magenta	HI	00000 … 05000	Neutral
			05001 … 35267	-100 to -1 Green
6		LO	35268	Neutral
			35269 … 65535	+1 to +100 Green
7	White-Colour Crossfade	HI	00000 … 65535	0 … 100%
8		LO		
9	Hue	HI	00000 … 65535	0 … 360 Degrees
10		LO		
11	Saturation	HI	00000 … 65535	0 … 100%
12		LO		

Scenario 17: 16 Bits – RGBW (V0 Compatibility Mode)

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	Red & Amber Combined	HI	00000 … 65535	0 … 100%
4		LO		
5	Green	HI	00000 … 65535	0 … 100%
6		LO		
7	Blue	HI	00000 … 65535	0 … 100%
8		LO		
9	White	HI	00000 … 65535	0 … 100%
10		LO		

Scenario 18: 16 Bits - Hue/Saturation (V0 Compatibility Mode)

Slot No	Slot Name		DMX Value	Output Value
1	Master Level	HI	00000 … 65535	0 … 100%
2		LO		
3	Hue	HI	00000 … 65535	0 … 360 Degrees
4		LO		
5	Saturation	HI	00000 … 65535	0 … 100%
6		LO		