

# SkyPanel® S360-C

USER MANUAL

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# Introduction

Thank you for selecting the SkyPanel LED soft light from ARRI. The SkyPanel is a compact, ultra-bright and high-quality LED soft light. It is much more efficient than a soft light with a conventional light source.

The SkyPanel combines the advantages of the LED technology with the characteristic of a conventional soft light. The SkyPanel integrates seamlessly into established working practice. Lighting designers as well as Studios don't need to change its workflow. The optical system produces a soft, homogeneous light field.

The different models of the SkyPanel emit white light with a fixed color temperature or colored light with adjustable color temperature and adjustable green-magenta point. The light spectrum is optimized for excellent color rendition and fulfills perfectly the demands of modern, digital cameras. All models of the SkyPanel can be controlled using the common DMX512-A protocol, Art-Net, sACN or the fixture menu.

Please observe the SkyPanel Installation and Safety Manual. The manual is available for free download on the ARRI web site [www.arri.com](http://www.arri.com).

## Features

### Light Field

The SkyPanel offers the same functionality as a conventional softlight.

### Even Light Field

The SkyPanel softlight produces a homogeneous, single-shadow light field, delivering natural results.

### Vibrant Colors, Full Spectrum Lighting

True-to-life color rendition is an outstanding feature of the SkyPanel S360-C. The fully tunable white light of the SkyPanel can be adjusted for different skin tones, camera sensors and mixed light environments. Full gamut color mixing enables the rendition of all color shades. The extensive gel library (from firmware version 2.0) offers a wide range of familiar colors at the user's fingertips.

### Cool Light Beam

The SkyPanel S360-C does not emit any infrared or UV radiation and thus does not forward heat, making actors feel comfortable in the light beam.

## Properties

### Guiding Rails

Diffuser plates or an intensifier is placed on the front of the fixture and held by four locking pins. Both the diffuser and intensifier are equipped with guiding rails at the front to carry other accessories for shaping the light like a honey comb.

### Yoke

The carbon fiber yoke provides high strength with minimum weight. The short metal yoke is the perfect solution when the SkyPanel is mounted in a grid facing downwards.

### Tilt-Lock

The high strength tilt-locks on each side of the stirrup provide secure locking. It eliminates movement and slippage and ensures that the SkyPanel will stay where you put it.

## Control

All functions of the SkyPanel S360-C are controllable through DMX, CRMX, Art-Net or sACN. The SkyPanel is also fully RDM compatible (via DMX, CRMX and Art-Net with suitable controllers) and is equipped with an RDM feedback channel for reporting all set parameters including system status.

## Fixture Menu

For location applications the SkyPanel is equipped with a fixture menu for manual adjustment of intensity, color temperature and plus/minus green as well as hue and saturation.

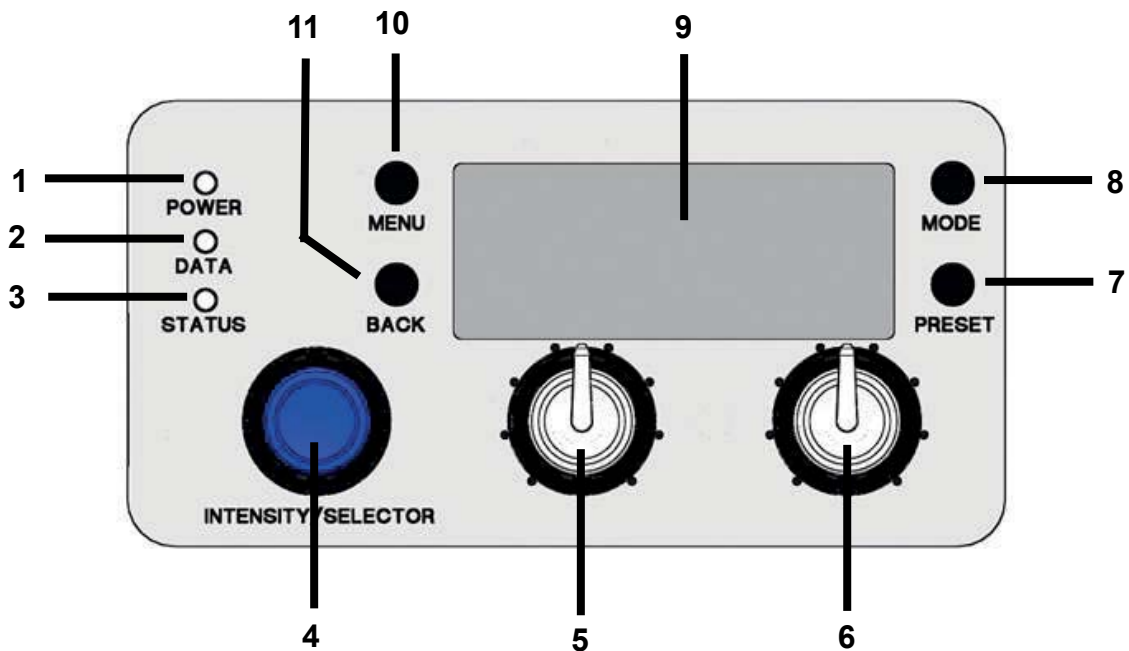
## Control Options

You can set up or control the SkyPanel with the options listed in the table below

Option	Control	Configuration	Information
Fixture menu	Yes	Yes	page 7
DMX	Yes	No	page 30
CRMX (WDMX)	Yes	No	page 13
RDM	No	Yes	page 28
Art-Net and sACN	Yes	No	page 21
ALSM	No	Yes	page 21
Web server	No	Yes	page 22

# Fixture Menu

## Overview



## Features of the Fixture Menu

### POWER-LED (1):

Color	Indication
Green	Fixture switched on. No error.
No color	Fixture switched off.

### DATA-LED (2):

Color	Indication
Blue	The fixture receives a valid DMX signal.
Blue / green	The fixture receives a valid CRMX (WDMX) signal.
Purple	Master mode active
White	Receiving valid Art-Net signal, Gateway active
Green	Receiving valid Art-Net signal, Gateway not active
Orange	Receiving valid sACN signal, Gateway active
Cyan	Receiving valid sACN signal, Gateway not active
Red	No communication between fixture menu and controller board.
No light	The fixture receives no valid control signal.

## STATUS-LED (3):

Color	Indication
Green	No error. Normal temperature.
Red flashing (0,5s rhythm)*	Warning fixture over temperature (only with fan modes LOW and High Speed).
Red*	Fixture over temperature.
Change from red to green *	Fixture normal temperature.
Red flashing (0,25s Rhythm) *	Calibration data not loaded.
<i>*Display lights up red when STATUS-LED is lit red</i>	

## INTENSITY/SELECTOR (I/S, 4)

The INTENSITY/SELECTOR encoder I/S has two functions:

- Fixture menu closed: Setting the intensity.
- Fixture menu open: Use I/S to scroll through the menu, open sub menus and set parameters. Pressing the knob opens sub menus and confirms settings.

## Central Rotary Knob (5)

Use the rotary knob to set the color temperature (CCT) or the color hue (HUE). The current function of the rotary knob is shown in the display (9) above the knob.

## Right Rotary Knob (6)

Use the rotary knob to set the green / magenta saturation or the color saturation (SAT). The current function of the rotary knob is shown in the display (9) above the knob.

## PRESET (7)

### ***To call up a preset***

A short press of the PRESET button brings up the list of all available presets. Turn I/S (4) to select one of 10 factory presets and 10 user definable presets. Press I/S (4) to activate the preset.

### ***To store a preset***

Use the fixture menu to adjust the settings. Hold PRESET, until the preset save dialog opens. Turn I/S (4) to select a preset memory slot. Press I/S (4) to store the preset. Close the dialog with BACK.

## MODE (8)

MODE swaps between CCT, HSI, GEL, Source Matching and RGBW mode of the SkyPanel.

## DISPLAY (9)

The display shows the current settings and other information during normal operation. Press the MENU button (4) to open or close the fixture menu. Use I/S (4) and the BACK button (11) to navigate through the fixture menu.

## MENU (10)

The MENU button opens the fixture menu. Press MENU when the fixture menu is open to close the menu and abort an action (Escape). Use I/S (4) to scroll through the menu, open sub menus and set parameters. Press MENU long to display the menus which are used most.



## BACK (11)

The BACK button closes a sub menu and aborts an action (Escape). Compared to the MENU button (10) the BACK button only closes the sub menu, but not the fixture menu.

Press BACK long to display the last used menus.

### To lock the fixture menu

- Press I/S in the home screen for 5 seconds to lock all buttons and knobs. Use the feature to prevent an accidental change of settings.
- The word „LOCKED“ appears on the display when locked.
- Press I/S in the home screen for 5 seconds again to unlock all buttons and knobs.
- Please find a overview in chapter “Overview of the Fixture Menu” on page 23.

## To Set the Operation Mode

Press the MODE button (8) to switch from CCT to HSI to GEL to Source to RGBW and back to CCT mode.

In CCT mode the SkyPanel generates white light with optimized color rendition. In HSI mode the SkyPanel generates colored light. If saturation is set very low, the SkyPanel generates white light, but not with optimized color rendition. The GEL mode offers an extensive color gel library. In Source mode the SkyPanel generates the light of traditional light sources. Use the RGBW mode to generate a RGBW color using the control panel.

### To set the Lighting Parameters in CCT Mode

Set the color temperature continuously with the central rotary knob (5). Set the Green-Magenta point continuously with the right rotary knob (6). The current setting is displayed above the rotary knobs.

### To set the Color in HSI Mode

Set the hue continuously with the central rotary knob (5). Set the saturation continuously with the right rotary knob (6). The current setting is displayed above the rotary knobs.

### To Set the Lighting Parameters in GEL Mode

Use the central rotary knob (5) to set the color temperature 3.200 K or 5.600 K. The right rotary knob (6) offers two options: „Best color“ displays the gel with optimized color quality, „Brightest“ displays the gel with optimized brightness.

- Press I/S (4) to open the gel library. Choose the gel manufacturer (Rosco or LEE) with the central rotary knob (5). Use the right rotary knob (6) to activate a gel category as shown in the table below.

Rosco	LEE
Color Correction	Color Correction
CalColor	Color Filters
Storaro Selection	600 Series
Cinelux	Cosmetic
	700 Series

- Turn I/S (4) to call up a gel from the gel set. Press I/S to select a gel or press BACK (11) to close the gel set and set the intensity with I/S (4). Press I/S (4) again, to re-open the gel set.

### To set the Light Source in Source Mode

Use the fixture menu to activate the source mode. Press I/S to call up a list of the light sources available. Use the right rotary knob (6) to select the category (please see page 56 for a detailed list). Turn I/S to select a light source. The SkyPanel calls up the selected light source in real time. Press I/S to choose the selected light source.

## To set the Color in RGBW Mode)

Use the MODE button to activate the RGBW color mode. The central rotary knob (5) has no function in RGBW mode. Use the right rotary knob (6) to select the functionality of the encoder I/S (4). Dependent on the selection of the right rotary knob, I/S is used to set the overall intensity of the red, green, blue and white color. Please note the setting „Direct Control“ or „RGBW Color Space (see page 11). You can store the RGBW color as a preset.

## To Set the Brightness in all Operating Modes

Set the brightness in both operating modes continuously with the encoder I/S (4). The setting is dynamic: Turning the encoder fast changes the intensity in coarse steps, turning it slow changes the intensity in fine steps.

## To Set the Dimming Curve

The SkyPanel supports four dimming curves. The dimming curves are global: They affect both the intensity control via the fixture menu or DMX, WDMX, Art-Net and sACN.

- **Linear:** The intensity changes proportional to the encoder I/S (4) or the channel value.
- **Exponential:** The resolution is high at lower intensity levels and low at higher intensity levels. Use this dimming curve when you need a high resolution at low intensity levels. This is the default setting.
- **Logarithmic:** The resolution is low at lower intensity levels and high at higher intensity levels. Use this dimming curve when you need a high resolution at high intensity levels.
- **„S“ curve:** The resolution is both high at lower and higher intensity levels and low at intensity levels in between. Use this dimming curve, when you need a high resolution at low and high intensity levels.

## To set the dimming curve

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Light Control“ is selected. Press I/S to open the menu.
3. Turn I/S, until „Dimming Curve“ is selected. Press I/S to open the menu.
4. Select the dimming curve by turning I/S. Press I/S to confirm the setting.

### NOTICE

The dynamic of an effect using the intensity is very low, when you choose a basic intensity value in a flat area of the dimming curve. Choose a different effect or select another dimming curve to create a more dynamic effect.

## To Set a Special Control Mode

The SkyPanel supports three special control modes. The special control modes are global: They affect both the intensity control via the fixture menu or DMX, WDMX, and Art-Net or sACN.

### **Low End Mode**

The Low End Mode optimizes the dimmer quality at low intensity levels and enables SkyPanel to generate accurate CCTs with high color rendition and smooth dimming at very low light levels. The Low End Mode can cause flickering when used with cameras shooting at high frame rates.

### **Tungsten Mode**

The tungsten Mode can mimic the dimming curve and strike on-and-off effect of a traditional tungsten lamp. The CCT warms as the light is dimmed and when the intensity drops to zero quickly there is a short after-glow of warm light. This mode is perfect for mixing the SkyPanel with tungsten sources or for producing a familiar effect.

### **High Speed Mode**

The High Speed mode generates flicker-free light for High Speed shootings. High Speed Mode has been tested up to 25.000 fps and down to 2° shutter angle with no flicker or roll bars. The intensity is fixed in High Speed mode. The only settings are 0% (black out) or 100% (full intensity). In High Speed mode the settings for low end mode, tungsten mode, effects and PWM frequencies are ignored.

## NOTICE

Effects are de-activated in High Speed mode. When you try to call up an effect in High Speed mode, the warning „*Not Possible: High Speed Active*“ is displayed. When you try to activate the High Speed mode with an effect active, the warning „*Not Possible: Effect Active*“ is displayed. De-activate the effect or the High Speed mode to change the control mode.

**To set a special control mode:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Light Control“ is selected. Press I/S to open the menu.
3. Turn I/S, until „Special Modes“ is selected. Press I/S to open the menu.
4. Select the special mode by turning I/S. Press I/S to confirm the setting.
5. Press MENU to close the menu.

**Master/Slave Mode**

In Master/Slave mode the slave fixtures mimic the master fixture without delay. The master fixture generates a DMX signal on the 5-pin DMX Thru connector.

Connect a maximum of 32 SkyPanels and L-series fixtures to a DMX data link. Choose one SkyPanel to be the master fixture.

## NOTICE

There must not be more than one SkyPanel in the data link set to master.

Setting more than one fixture to master or connecting a DMX controller to the data link causes one or all master fixtures to de-activate the master mode

**To set the Master Fixture:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Light Control“ is displayed. Press I/S to open the menu.
3. Turn I/S, until „Master/Slave Mode“ is displayed. Press I/S to open the menu.
4. Set all fixtures in the data link to „Off“ to de-activate master mode. Select „On“ on one fixture in the data link to set the fixture as master fixture.
5. Press MENU to close the menu.

All fixtures in the data link will mimic the master fixture automatically and independent from their settings.

Please note when using the master/slave mode:

- Art-Net and sACN are de-activated on all fixtures in the data link.
- Changing the mode on the master fixture (CCT, HSI, GEL, Source Matching, RGBW) changes the mode on all slave fixtures accordingly.
- The settings DMX protocol version, DMX address, tungsten mode, low end mode, fans and signal loss behavior are changed accordingly to the settings of the master fixture.
- Connect only C version fixtures of one type in a data link.
- L-series fixtures do not support the GEL mode.
- Presets are not available.

**Calibrated RGBW Color Space**

When using RGBW mode, the SkyPanel by default does not generate colors in a calibrated color space. The color is generated with optimized brightness within the specified tolerances. You can activate the calibrated color space Kodak Pro Photo Color Gamut / ESTA standard E1.54 to force the SkyPanel to generate a calibrated color. The white point is 3.200 K. The calibrated color space is a global setting and is active in both on-board controls and DMX.

**To Activate and De-activate the Calibrated RGBW Color Space:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Light Control“ is displayed. Press I/S to open the menu.
3. Turn I/S, until „RGBW Color Space“ is displayed. Press I/S to open the menu.
4. Select „Direct Control“ to generate colors with optimized intensity. Select „Calibrated Color“ to generate a calibrated color.
5. Press MENU to close the menu.

**Frequency Selection**

You can change the frequency in the fixture menu. Change the frequency, when you recognize flicker when in the camera picture or by your eyes. The default frequency is the highest frequency. You can change the frequency in 10 steps. Frequency 1 is the highest frequency, while frequency 10 is the lowest frequency setting.

**To set the frequency:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Light Control“ is displayed. Press I/S to open the menu.
3. Turn I/S, until „Frequency Selection“ is displayed. Press I/S to open the menu.
4. Select a frequency. Press I/S to confirm the setting. The frequency is set immediately.
5. Press MENU to close the menu.

**DMX Address**

When you control the SkyPanel using DMX in a DMX data network, you must assign a DMX address to the fixture.

**To assign a DMX address:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „DMX Settings“ is displayed. Press I/S to open the menu.
3. Turn I/S, until „DMX Address“ is displayed. Press I/S to open the menu.
4. Select a DMX address. Press I/S to confirm the setting.
5. Press MENU to close the menu.

**DMX Protocol**

The SkyPanel offer different DMX protocols. Please find a detailed overview of all DMX protocols on page 30.

**To Set a DMX Protocol:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „DMX Settings“ is displayed. Press I/S to open the menu.
3. Turn I/S, until „DMX Protocol“ is displayed. Press I/S to open the menu.
4. Select a DMX protocol. Press I/S to confirm the setting.
5. Press MENU to close the menu.

**DMX-Signal-Loss Behavior**

You can set the behavior of the fixture when the control signal is lost. The table below shows the available options:

Option	Description
<b>Hold Last Command</b>	The last received DMX values are used until the fixture is switched off or valid DMX data is received again.
<b>Black Out</b>	The fixtures douses to 0% intensity immediately.
<b>Hold 2 Min. Fade Out</b>	The last received DMX values are used for 2 minutes. After 2 minutes the fixture douses to 0% intensity. When valid DMX data is received after less than 2 minutes, these data will be used.

**To set the DMX-Signal-Loss Behavior:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „DMX Settings“ is displayed. Press I/S to open the menu.
3. Turn I/S, until „DMX Loss Behavior“ is displayed. Press I/S to open the menu.
4. Select the setting by turning I/S. Press I/S to confirm the setting.
5. Press MENU to close the menu.

**Wireless DMX**

The SkyPanel S360-C is equipped with a wireless DMX receiver supporting the LumenRadio CRMX protocol.

If there is no DMX traffic received via a wired interface (DMX-512A, ArtNet or sACN) and wireless DMX is activated via the fixture menu, the SkyPanel S360-C can be linked to a wireless DMX transmitter via an RDM discovery command. Once linked successfully, the SkyPanel S360-C processes wireless DMX data and responds to RDM requests only via the wireless link.

The DATA LED on the fixture menu panel fades from blue to green followed by a 2 second fade from green to blue as soon as CRMX (WDMX) is active AND CRMX data is received and processed by the SkyPanel S360-C.

If the WDMX Data State is set to OFF, no wireless DMX and no wireless RDM traffic will be processed. However, „Unlinking“ and Linking is still possible in State OFF.

To Unlink a SkyPanel S360-C from a Wireless DMX transmitter:

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S until „DMX Settings“ is displayed. Press I/S to open the menu.
3. Turn I/S until „WDMX Settings“ is displayed. Press I/S to open the menu.
4. Turn I/S until „WDMX Connection Unlink“ is displayed. Press I/S to open the menu.
5. Select the setting „Yes“ by pressing the I/S.
6. The fixture is now unlinked from the transmitter. Press MENU to close the menu.

As soon as DMX or RDM traffic is detected via the other interfaces, any wireless DMX or RDM data will be ignored and the SkyPanel S360-C processes the wired DMX/RDM traffic.

**To set the Fan Mode**

You can set the fan mode to adapt the cooling and noise level to the environment. The table below shows the available options:

Fan Mode	Max. power	Description
<b>Normal</b>	<b>1500 W</b>	The fans operate temperature regulated.
<b>Quiet Mode</b>	<b>1200 W</b>	The fans operate constantly at low speed (silent).
<b>Variable</b>	<b>1200 W</b>	The fans operate temperature regulated.
<b>High Temp</b>	<b>1200 W</b>	The fans run at maximum speed.

**To set the fan Mode**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Fan Mode“ is displayed. Press I/S to open the menu.
3. Select the Fan mode by turning I/S. Press I/S to confirm the setting.
4. Press MENU to close the menu.

## Lighting Effects

The SkyPanel offers an effect library with a wide variety of lighting effects used on set or in a TV studio. The SkyPanel replaces many special effect devices with its unique effect library.

You can call up all effects using the fixture menu or via DMX, Art-Net or sACN. Every effect offers specific parameters. A lighting effect can be stored in a preset slot for quick access at a later point.

### **To select and activate an effect:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Lighting Effects“ is displayed. Press I/S to open the menu.
3. Select the desired effect by turning I/S.
4. Press I/S to start the effect.
5. Set the parameters, as described below.

### **To stop an effect:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Lighting Effects“ is displayed. Press I/S to open the menu.
3. Select the option „Off“. Press I/S to confirm.

### **Start / Stop function of the effect**

If an effect is running, press I/S to stop the effect execution. Press I/S again to restart the effect from the beginning. While stopped, the SkyPanel performs a black out and a P:<Effect> shows the status in the display. The start / stop function is only available in the effects control screen.

The SkyPanel provides the following effects in DMX modes 22 (8 bit) and 23 (16 bit). Intensity is a parameter for all effects:

### **Party**

The Party effect calls up the color spectrum or changes the color temperature from warm to cold and vice versa in an endless loop.

Parameters:

- Saturation
- Speed

If you do not need the effect for shooting, you will need it for the party when the movie is done!

### **Candle**

Low flickering of a warm light, slower than fire and less energetic. The light gently fades in CCT and brightness with periods of static behavior in between. It consists of „flutters“ and static periods.

Parameters:

- CCT range
- Speed

### **Clouds Passing**

Slow variations in intensity and CCT that can be offset. The effect is most useful when using many Sky-Panels that are offset to prevent a simultaneous effect on different fixtures.

Parameters:

- Offset
- Passing speed
- Sync

### **Club Lights**

Random colors that pulse, flash and fade.

Parameters:

- Color variety
- Speed
- Sync

### **Color Chase**

Creates a color chasing effect over the surface of the SkyPanel using multiple LED light engines.

Parameters:

- Saturation
- Speed

- Offset
- Sync

### **Cop Car**

Creates an on-board blue and red flashing effect to mimic a police car, an ambulance or a fire brigade. Do not use the effect in public areas without permission.

Parameters

- Color combination
- Flash pattern

### **Fire**

Creates a flickering fire effect.

Parameters:

- CCT range
- Flicker speed

### **Fireworks**

Bright flashes of color and have a quick start and fade to zero intensity.

Parameters:

- Color combination
- Speed

### **Light Strobe**

Generates a white or colored strobe effect with adjustable speed from 25 flashes / sec to 1 flash / sec.

## **DANGER**

### **DANGER! Risk of injury or death through epileptic seizure.**

Do not use the effect near stairways, in corridors or near public exits.

Provide advance notice that strobe lighting is in use. Display advisory notices on the set, at the point of ticket sales, on tickets if possible, in the program, and at the entrance(s) to the venue or studio.

Avoid extended periods of continuous flashing, particularly at frequencies of 10 to 20 flashes per second. At flash rates below 5 flashes per second, it is estimated that only 5% of flicker-sensitive persons will be at risk of seizure

Make sure that personnel at the venue are trained in the care of a person who is having an epileptic seizure and able to provide care if necessary.

If strobes are in use and a person has a seizure, switch the strobes off immediately.

Mount strobes as high above head height as practicable.

Parameters:

- CCT
- Green-Magenta point
- Cross fade
- Saturation
- Flash speed

### **Lightning**

Creates an on-board flashing lightning effect. Intensity, speed and frequency of flashing can be controlled.

Parameters:

- CCT
- Green-Magenta point
- Speed
- Frequency
- Sync

**Paparazzi**

Effect that mimics a flash bulb or modern camera flash.

Parameters:

- CCT
- Flash type
- Frequency

**Pulsing**

A pulsing or throbbing effect where the color and speed can be set.

Parameters:

- CCT
- Green-Magenta point
- Cross fade
- Color
- Saturation
- Frequency
- Span

**Television**

Creates an on-board TV effect. Cool CCT that changes intensity every few seconds.

Parameters:

- CCT range
- Speed

**To Activate and set Effect Parameters with the Fixture Menu**

The rotary knobs adjust the effect parameters when an effect is active. For all effects applies:

- The selected effect is displayed in the left top corner of the display.
- Intensity / Selector adjusts the intensity.
- Press I/S to stop the effect (black out).
- Press I/S again to restart the effect.
- Press MODE long (> 1 sec) to activate the parameters described below (column „Mode“, not available for all effects).
- Press MODE again to close the effect control and regain normal control.

The table below shows the parameters you can adjust with the rotary knobs for each effect:

Effect	Mode	Rotary Knob	Parameter
<b>Candle</b>		Central	CCT range
		Right	Speed
<b>Clouds Passing</b>		Central	Offset
		Right	Speed
<b>Club Lights</b>		Central	Color range
		Right	Speed
<b>Color Chase</b>		Central	Offset
	X	Central	Saturation
		Right	Speed
<b>Cop Car</b>		Central	Color combination
		Right	Flash pattern
<b>Fire</b>		Central	CCT range
		Right	Speed
<b>Fireworks</b>		Central	Color combination
		Right	Speed



Effect	Mode	Rotary Knob	Parameter
<b>Light Strobe</b>	X	Central	Speed
		Central	Normal functionality
		Right	Normal functionality
<b>Lightning</b>		Central	Frequency
	X	Central	CCT range
		Right	Speed
	X	Right	Green-Magenta point
<b>Paparazzi</b>		Central	Frequency
	X	Central	CCT range
		Right	Flash bulb
	X	Right	Green-Magenta point
<b>Pulsing</b>		Central	Normal functionality
	X	Central	Span
		Right	Normal functionality
	X	Right	Frequency
<b>Television</b>		Central	CCT range
		Right	Speed

When changing a parameter of an active effect through the fixture menu or via DMX, the internal effect generator recalculates the effect in real time. The effect can stutter, step or be unsmooth for a short period. Do not change parameters of an active effect if the effect needs to run smooth.

## To Set the Display Behavior

You can set the intensity of the background illumination, the contrast, the behavior of the background illumination and the orientation of the display content.

### **To set the display behavior:**

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Display Setup“ is displayed. Press I/S to open the menu.
3. Turn I/S, until „Display Illumination“ is displayed. Press I/S to open the menu. Select the desired setting by turning I/S. Press I/S to confirm the setting.
4. Turn I/S, until „Display Brightness“ is displayed. Press I/S to open the menu. Select the desired brightness by turning I/S. Press I/S to confirm the setting.
5. Turn I/S, until „Display Contrast“ is displayed. Press I/S to open the menu. Select the desired contrast by turning I/S. Press I/S to confirm the setting.
6. Turn I/S, until „Display Rotation“ is displayed. Press I/S to open the menu. Select the desired setting by turning I/S. Press I/S to confirm the setting.
7. Turn I/S, until „Error Mode Display“ is displayed. Press I/S to open the menu. Select the desired setting by turning I/S. Press I/S to confirm the setting.

Please refer to section “Overview of the Fixture Menu” on page 23 for a detailed explanation of the options.

## Preset Lists

The fixtures preset list can be saved to an USB memory stick and be uploaded to another SkyPanel.

### NOTICE

Disconnect all DMX cables from the product before using an USB memory stick. The data transfer between the product and the USB memory stick might be disturbed due to interferences.

The USB-A port can power small USB devices. The maximum current is 500 mA @ 5V. Do not overload the USB-A port.

#### **To Save a preset List:**

1. Connect an USB memory stick to the USB-A connector of the SkyPanel.
2. Press the MENU button (10) to open the fixture menu.
3. Turn I/S, until „USB Functions“ is selected. Press I/S to open the menu.
4. Turn I/S, until „Save Presets“ is selected. Press I/S to open the menu.
5. Select „Yes“ and press I/S to confirm the setting. Select „No“ to abort saving the preset list.
6. The preset list will be saved on the USB memory stick.

Up to 30 preset lists can be stored in the root directory of the USB memory stick. The file name is **<product serial number>-Presetxx.json**. The SkyPanel is looking for „Presetxx.json“ to identify a preset list on an USB memory stick. Be sure to keep the string when renaming a preset list. Otherwise the file will not be found by the SkyPanel.

#### **To Load a Preset List:**

1. Connect an USB memory stick with one or more preset lists to the USB-A connector of the SkyPanel.
2. Press the MENU button (10) to open the fixture menu.
3. Turn I/S, until „USB Functions“ is selected. Press I/S to open the menu.
4. Turn I/S, until „Load Presets“ is selected. Press I/S to open the list of the preset lists available in the root directory of the USB memory stick.
5. Turn I/S, to select a preset list.
6. Press I/S to load the selected preset list. The internal preset list of the SkyPanel will be overwritten by the selected preset list.

## To Save and Load Fixture Settings

The fixtures settings can be saved to an USB memory stick and be uploaded to another SkyPanel. The file contains all fixture settings except the DMX address and IP settings.

#### **To Save the Fixture Settings:**

1. Connect an USB memory stick to the USB-A connector of the SkyPanel.
2. Press the MENU button (10) to open the fixture menu.
3. Turn I/S, until „USB Functions“ is selected. Press I/S to open the menu.
4. Turn I/S, until „Save Fix. Settings“ is selected. Press I/S to open the menu.
5. Select „Yes“ and press I/S to confirm the setting. Select „No“ to abort saving the fixture settings.
6. The fixture settings will be saved on the USB memory stick.

Up to 30 fixture settings files can be stored in the root directory of the USB memory stick. The file name is **<product serial number>-Clonexx.json**. The SkyPanel is looking for „Clonexx.json“ to identify a fixture settings file on an USB memory stick. Be sure to keep the string when renaming a fixture settings file. Otherwise the file will not be found by the SkyPanel.

#### **To Load Fixture Settings:**

1. Connect an USB memory stick with one or more fixture settings files to the USB-A connector of the SkyPanel.
2. Press the MENU button (10) to open the fixture menu.
3. Turn I/S, until „USB Functions“ is selected. Press I/S to open the menu.
4. Turn I/S, until „Load Fix. Settings“ is selected. Press I/S to open the list of the fixture settings files available in the root directory of the USB memory stick.
5. Turn I/S, to select a fixture settings file.
6. Press I/S to load the selected fixture settings. The SkyPanel restarts with the new fixture settings after successful upload.

## To Save the Error and Service Log

For diagnosis purpose you might be asked to send the error and service log to the ARRI service. The log files can be downloaded to an USB memory stick.

The file name contains the date, time and serial number of the fixture.

### **To save the log files:**

1. Connect an USB memory stick to the USB-A connector of the SkyPanel.
2. Press the MENU button (10) to open the fixture menu.
3. Turn I/S, until „USB Functions“ is selected. Press I/S to open the menu.
4. Turn I/S, until „Save Error Log“ is selected. Press I/S to open the menu.
5. Select „Yes“ and press I/S to confirm saving the log files. Select „No“ to abort saving the log files.
6. The log files will be saved on the USB memory stick.

## To Read out Fixture Information

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Enabled Functions“ is displayed. Press I/S to open the menu.
3. Turn I/S to display readouts.
4. Press I/S to change settings, if applicable.

## To Perform a Factory Reset

1. Press the MENU button (10) to open the fixture menu.
2. Turn I/S, until „Factory Reset“ is displayed. Press I/S to open the menu.
3. Turn I/S to choose the option „Yes“ and perform a factory reset. Press BACK (11) to abort.
4. The SkyPanel reboots with its factory settings.

# Fixture Control

The SkyPanel offers, depending on the model, up to 23 control modes. Use the 8 bit modes with basic controllers like dimmer consoles.

ARRI recommends the use of the 16 bit modes in combination with controllers supporting 16 bit resolution to obtain best results. The high resolution provides smooth dimming and precise color adjustments.

The coarse / fine modes utilize two channels for most parameters and provide higher resolution compared to the 8 bit modes in combination with controllers that do not support true 16 bit resolution. One channel sets the coarse value between 0 and 255 of the function. Each step is divided in 256 increments using the fine channel. This way it is possible to control the light very precise without using a true 16 bit resolution.

## CCT and RGBW

This mode provides control of intensity, color temperature, green-magenta point and individual channels for controlling the red, green, blue and white color (only SkyPanel-C).

## CCT

Simple white-only mode. It is used when the number of available channels of the controller is very limited. It provides control of intensity, color temperature and green-magenta point.

## CCT & HSI

Provides control of intensity, color temperature, green-magenta point, hue and saturation (HSI = hue, saturation, intensity). In HSI mode (only SkyPanel-C) the color and intensity is very even over the fixtures as it is controlled using color algorithms which take the tolerances of the light engines into account during calculation.

## RGBW

Simple mode for controlling the overall intensity and the red, green, blue and white intensity when only a limited number of channels is available. Please find more information about the RGB color space on page 11.

## HSI

Simple mode for controlling hue, saturation and intensity when only a limited number of DMX channels is available.

## GEL

The GEL mode offers an extensive color filter list. The color temperature has two settings, 3.200 K and 5.600 K. The intensity can be controlled as usual.

## xy Coordinates

The xy mode determines the color displayed by its xy coordinates in the CIE 1931 diagram. Set the x and y coordinate with 8 bit or 16 bit resolution. One channel determines the transition type when fading from one color to another color.

## Source Matching

Select from a list of light sources to match that color and spectrum. Source Matching saves a lot of time when you need a specific illumination. Select from 50 different light sources the one which fits best to your demands.

## Light Effects

The SkyPanel contains a light effect engine with 13 different light effects. Activating a light effect is very easy. Just activate a light effect via the fixture menu, DMX, Art-Net or sACN and set the parameters to get exactly the effect you need.

Please find a detailed description of all modes in chapter "Protocol" on page 30.

### NOTICE

Depending on the selected mode the channels required for each SkyPanel should be allocated in the controller to provide independent control of all SkyPanels connected to the controller.

# Art-Net and sACN

From firmware version 2.0 the SkyPanel supports Art-Net. Art-Net is a network protocol to control devices. Here is a brief explanation of some basic terms being used by Art-Net. For more detailed information, please visit the web site of the Art-Net developers: [www.artisticlicence.com](http://www.artisticlicence.com).

Please find more information about sACN in the standard ANSI E1.31.

## Art-Net IP Address

When setting the IP address manually, please take care the address is in the range 2.0.0.1 to 2.255.255.255 (Network switch off) or 10.0.0.1 to 10.255.255.255 (Network switch on). Any other range is not according to the Art-Net standard and problems might occur.

## Art-Net Net

A group of 16 consecutive Sub-Nets or 256 consecutive Universes is referred to as a net. There are 128 Nets in total.

## Sub-Net

A group of 16 consecutive universes is referred to as a sub-net. (Not to be confused with the subnet mask).

## Universe

A single DMX512 frame of 512 channels is referred to as a Universe.

## Art-Net Merge Mode

The Art-Net protocol allows multiple nodes or controllers to transmit ArtDmx data to the same universe. Merging is limited to two sources, any additional sources will be ignored by the Node.

## Art-Net Gateway

With enabled Art-Net gateway the SkyPanel makes all 512 channels of the used universe available at its DMX connectors.

The menu „Art-Net Settings“ contains all parameters to set up a SkyPanel in an Art-Net network. Please find a detailed description in the chapter "Features of the Fixture Menu" on page 7.

## ARRI Lighting Service Manager

Please find information about the features and the functionality of the ARRI Lighting Service Manager in the user manual for the ARRI Lighting Service Manager. You can download it with the ARRI Lighting Service Manager software-bundle from the ARRI web site [www.arri.com/lightingsoftware](http://www.arri.com/lightingsoftware) free of charge.

## Web Server

The SkyPanel provides a web page accessible via http, when connected to a network. Type in the IP address of the SkyPanel in your web browser to open the web page and change the settings listed below. The Web Server can also be found by using a Bonjour service to discover the fixture and open the Web Server page without needing to know the IP address.

### NOTICE

Always use the latest version of your web browser. Earlier versions might not be compatible to the web page of the SkyPanel.

The table show the settings you can change:

Option
DMX Settings
RGBW Color Space
Fan Mode
Dimming Curve
Special Modes
Light Effects
Display Settings
Network Settings
Low Battery Warning
USB Mode
Factory Reset

#### **To Save Settings**

You can save the settings visible on the web page to a file. Click „Download Settings“ to start the download to your computer.

#### **To Load Settings**

You can upload a settings file to the SkyPanel. Click „Upload Settings“ to start the upload of a settings file. A file selector menu will open to select the settings file.

#### **To Save or Load Presets via the Web Server**

You can save and load a preset list via the web server. Click „Download Presets“ to save a preset list on your computer. Click „Upload Presets“ to upload a preset list saved on your computer to the SkyPanel.

#### **To Activate a Password Protection**

You can activate a password protection for changing settings via the web server page. The password can be set, modified and deactivated using the web server page.

If password protection has been activated via ALSM or the web server page, the SkyPanel only allows changing settings via the web server if a valid password has been entered at the beginning of each http session.

Per default there is no password check. A factory reset deactivates a previously activated password.

The default user name is „webuser“.

# Overview of the Fixture Menu

From Firmware-Version 3.0

Open and close the fixture menu the MENU button. BACK closes a sub menu and aborts an action.

Turn INTENSITY / SELECTOR to scroll. Press INTENSITY / SELECTOR to select an item

Level 1	Level 2	Level 3	Level 4	Explanation (default setting = bold)
DMX Settings	DMX Address	<b>001</b> - 512		Start address
	DMX Protocol	<b>P1</b> - P23		Protocol (see page 30)
	DMX Loss Behavior	<b>Hold Last Command</b>		Fixture holds the last received control values
		Black Out		Fixture douses the dimmer
		Hold 2 Min Fade Out		Hold the last received values for 2 min. then douse
	DMX Protocol Version	Version 3.4		Version of the DMX protocol
		Version 4.0		
		Version 4.1		
		Version 4.2		
		<b>Version 4.3</b>		
	RDM State	<b>On</b>		RDM communication active
Off		RDM communication not active		
WDMX Settings	WDMX State	On	WDMX activated	
		<b>Off</b>	WDMX deactivated	
	Connection	Unlink	Link (NO) or Unlink (YES) fixture	
Fan Mode	<b>Normal</b>		Fans temperature regulated, P(max.) 1.500 W	
	Quiet Mode		Fan speed low, P(max.) 1.200 W	
	Variable		Fans temperature regulated, P(max.) 1.200 W	
	High Temp		Fan speed high, P(max.) 1.200 W	
Light Mode	<b>CCT</b>		White light, color temperature and green / magenta correction adjustable	
	HSI		Colored light, hue and saturation adjustable	
	Gel		GEL mode, gel library available, color temperature 3.200 K or 5.600 K	
	Source Matching		The SkyPanel emulates a specific light source.	
	RGBW		Color mixing in RGBW mode.	
Light Control	Dimming Curve	<b>Exponential</b>		Exponential dimming curve
		Linear		Linear dimming curve
		Logarithmic		Logarithmic dimming curve
		„S“ Curve		Combination of exponential and logarithmic dimming curve
	Special Modes	Low End Mode	<b>Off</b>	Flicker free light
			On	Optimized dimming behavior at low intensity levels
		Tungsten Mode	<b>Off</b>	Color temperature optimized when dimming
			On	Emulates the behavior of a tungsten light
		High Speed Mode	<b>Off</b>	Highspeed mode OFF
			On	Highspeed mode ON
	Master/ Slave Mode	<b>Off</b>		Master/Slave Mode OFF
		On		Master/Slave Mode active
	RGBW Color Space	<b>Direct Control</b>		The color is mixed in RGBW mode direct (optimized brightness).
Calibrated Color		The RGBW color is calibrated (optimized hue)		

Level 1	Level 2	Level 3	Level 4	Explanation (default setting = bold)
Light Control (cont.)	Frequency Selection	<b>Default</b>		Default frequency (highest frequency)
		Frequency 1		Adjusted frequency
		Frequency 2		
		Frequency 3		
		Frequency 4		
		Frequency 5		
		Frequency 6		
		Frequency 7		
		Frequency 8		
		Frequency 9		
		Frequency 10		
Lighting Effects	<b>Off</b>		No stand alone effect	
	Party Effect		Party mode	
	Candle		Candle	
	Clouds Passing		Clouds passing	
	Club Lights		Club light	
	Color Chase		Color chase	
	Cop Car		Cop car	
	Fire		Fire	
	Fireworks		Fireworks	
	Light Strobe		Light strobe	
	Lightning		Lightning	
	Paparazzi		Paparazzi	
	Pulsing		Pulsing	
	Television		Television	
Display Setup	Display Illumination	<b>Always On</b>		Display illumination always on
		Off After 10 Sec.		Display illumination douses 10 sec. after last menu action
	Display Brightness	0 - <b>10</b>		Brightness of the display illumination
	Display Contrast	01 - <b>03</b> - 10		Contrast of the display content
	Display Rotation	<b>Normal</b>		No rotation of the display content
		Upside-Down		Display content 180° rotated
	Display Error Mode	<b>Normal</b>		Show error codes, switch status LED and display illumination to red.
Hidden		Show error codes. Status LEDs and display illumination off.		
USB Functions	Light Presets	Save Light Pre-sets	No	Store preset list to an USB memory stick (see page 18)
			Yes	
	Load Light Pre-sets	[List]		Load preset list from an USB memory stick. Select preset list with Intensity / Selector (see page 18)
		Save Fix. Settings	No	Store fixture settings to an USB memory stick (see page 18)
	Yes			
	Load Fix. Settings	[List]		Load fixture settings from an USB memory stick. Select fixture settings with Intensity / Selector (see page 18)
Save Error Log			Store error and service log to an USB memory stick (see page 19)	



Level 1	Level 2	Level 3	Level 4	Explanation (default setting = bold)
Art-Net & sACN	Art-Net/sACN State	<b>Automatic</b>		Accepts both protocols.
		Art-Net Only		Accepts Art-Net only
		sACN Only		Accepts sACN only
		Off		Accepts no network protocol
	Art-Net Net	<b>0</b> - 127		Select Art-Net net
	Art-Net Subnet	<b>0</b> - 15		Select Art-Net subnet in Art-Net net
	Art-Net Universe	<b>0</b> - 15		Select Art-Net universe in Art-Net subnet
	Merge Mode	<b>LTP</b>		Select Merge-Mode „LTP“ (Last Take Precedence)
		HTP		Select Merge-Mode „HTP“ (High Take Precedence)
	Gateway	<b>On</b>		Gateway disabled
Off			Gateway enabled	
sACN Universe	<b>1</b> ... 65000		sACN universe	
IP Mode -->				Shortcut to menu „Fixture Settings“.
Network Settings	Connection Status	Connection OK		Connection established
		No Connection		No connection
	IP Address	AAA.BBB.CCC.DDD		The fixtures IP address (assigned via DHCP, if active) If manual mode is active: AAA = 10, 172 or 192 BBB = 0 - 255, 16 - 31 or 168 CCC = 0 - 255 DDD = 0 - 255 If changed, the IP mode is automatically set to „Manual“
	IP Mode	DHCP		Use DHCP mode
		Art-Net 2.B.C.D		Use Art-Net net 2.B.C.D
		Art-Net 10.B.C.D		Use Art-Net net 10.B.C.D
		Manual		Jumps to „IP Address“
	Subnet Mask	255.255.255.0		Cannot be changed via the fixture menu.
	Gateway	x.x.x.x		Cannot be changed via the fixture menu.
	DNS1	x.x.x.x		Cannot be changed via the fixture menu.
DNS2	x.x.x.x		Cannot be changed via the fixture menu.	
MAC Address	XX:XX:XX:XX:XX:XX		MAC address	
Network Name	Sxx-xxxxxxx-xxxx		Serial number	
Enabled Menu	Fan Mode			Shows the settings of each option. Press I/S to change the setting of the selected option.
	Dim. Curve			
	Low End			
	Tungsten			
	High Speed			
	Frequency			
	Master/Slave			
	Effect			
	Art-Net/sACN			
	RDM			
	Gateway			
	RGBW C-Space			
	USB Mode			

Level 1	Level 2	Level 3	Level 4	Explanation (default setting = bold)
Fixture Info	Fixture Status	System Ready		No error
		<error message>		Error message (see „Safety and Installation manual“)
	Light Engine Temp.	xx.x °C xx.x °F		Recent light engine temperature
	Hour Counter	xxh - Light Engine yyh - System		Working hours of the light engines and of the system since production of the fixture
	Battery Status	x.y V		Recent voltage of an external battery
	Fixture Serial No.	L1.xxxxxxx-xxx		The fixtures serial number
	Firmware Versions	FW: x.xx.xx.xxxx CP: x.xx.xx.xxxx		Main firmware version and display firmware version
Fixture Settings	USB Mode	Normal		USB port powered
		Service		USB port not powered. <b>Do not change this setting unless being asked by ARRI service. Risk of damage!</b>
Factory Reset	<b>No</b>			Abort action
	Yes			Load factory settings

# RDM Commands

From Firmware-Version 3.0

Command	Description	GET	SET
Discover Unique Branch	Searches RDM device	X	X
Discover Mute	Mutes the RDM device, no response messages	X	X
Discover Unmute	Activates device for response messages	X	X
Supported Parameters	Shows a list of all supported RDM commands	X	
Parameter Description	Shows a list of commands that are not standard RDM commands, mostly commands from manufacturer.	X	
Device Info	Get: RDM protocol version Model ID Product category Main software version ID DMX foot print, DMX personality Sub device count Sender count	X	
Software Version Label	Shows the software version string from main, e.g. Main 1.66.1 Yes 16 2012 19:10:26	X	
DMX Start Address	DMX address	X	X
Identify Sevice	Identify Flag -> physically fl ash the light, Sky-Panel-C flashes Blue and all other White	X	X

## RDM Command Extension

Command	Description	GET	SET
Status Message	Display of actual warning / error message of the fixture.	X	
Status ID Description	Detailed description of each warning / status report.	X	
Device Label	Generate an informative label for each fixture. It can be utilized to identify the rack number of a dimmer or to determine the position of a fixture	X	X
Product Detail ID List	This parameter is utilized to retrieve technical details of a fixture.	X	
Device Model Description	A text description for the model type of the fixture.	X	
Manufacturer Label	Shows „ARRI Lighting“ an	X	
Boot Software Version ID	PrBO Version 2.03.00	X	
Boot Software Version Label	Shows text from PrBo Bootloader	X	
DMX Personality	DMX mode	X	X
DMX Personality Description	Displays a text description of a DMX mode	X	
Slot Info	Shows a description for each DMX channel in use	X	
Slot Description	Shows a text description for each DMX channel	X	
Default Slot Value	Shows the default DMX channel value	X	
Sensor Definition	Shows the definition of a specific sensor	X	
Sensor Value	Shows the actual sensor value	X	
Device Hours	Shows the actual device hours of the fixture	X	
Lamp Hours	Shows the actual lamp hours of the fixture	X	
Factory Defaults	This command deletes all user parameters and sets the fixture to factory default	X	X
Reset Device	Performs a reboot.	X	X

## RDM Command Extension (continued)

Command	Description	GET	SET
Display Invert	Rotates the display content 180° (only MKII)	X	X
Display Level	Set the display contrast (only MKII)	X	X
Real Time Clock	Get / set time and date (only L10 and SkyPanel)	X	X
Queued Message	Get / set message	X	X
Curve	Get / set dimming curve (only SkyPanel)	X	
Curve Description	Get / set curve description	X	
List Interfaces Interface Label Interface Hardware Address Type1 IPV4 Current Address IPV4 DHCP Mode IPV4 Static Address Interface Release DHCP IPV4 Default Route DNS IPV4 Name Server DNS Hostname Interface Apply Configuration	only SkyPanel	X	X

## Manufacturer Commands

Command	Description	GET	SET
RDM Fan Mode 0x8001	Get / set fan mode Fan Low = 1 Fan HI45 = 2 Fan Vari = 3	X	X
RDM Status LED 0x8002	Get / set status LED and display illumination on = 0 off = 1	X	X
RDM DMX Signal Lost Mode 0x8005	Get / set DMX signal lost behavior Hold = 1 Hold 2 min / fade out = 2 Blackout = 3	X	X
RDM DMX Protocol version 0x8004	Get / set DMX protocol version V3.4 = 1 V4.0 = 2 V4.1 = 3 V4.2 = 4 V4.3 = 5	X	X
RDM Display contrast 0x8005	Get / set display contrast (only MKII) less = 0 high = 10	X	X
RDM Dim Curve 0x8006	Get / set dimming curve Dim Curve Exponential = 1 Dim Curve Linear = 2 Dim Curve Logarithmic = 3 Dim Curve S-Curve = 4	X	X
RDM Tungsten Mode 0x8007	Get / set Tungsten mode off = 0 on = 1	X	X
RDM Low End Mode 0x8008	Get / set low end dimming mode off = 0 on = 1	X	X
RDM IP DHCP 0x8009	Get / set DHCP off = 0 on = 1	X	X

## Manufacturer Commands (continued)

Command	Description	GET	SET
RDM IP Address 0x800A	Get / set IP address	X	X
RDM IP Subnet 0x800B	Get / set subnet mask	X	X
RDM IP Gateway 0x800C	Get / set Gateway address	X	X
RDM IP DNS1 0x800D	Get / set DNS1 address	X	X
RDM IP DNS2 0x800E	not used		
RDM Error Mode Display 0x800F	Get / set error mode display (only MKII) normal = 0 hidden = 1	X	X
RDM RGBW PLASA Mode 0x810	Get / set calibrated color space (PLASA mode) off = 0 on = 1	X	X
RDM Frequency 0x8011	Get / set PWM frequency Frequency setting off = 0 Frequency 1 = 1 Frequency 2 = 2 Frequency 3 = 3 Frequency 4 = 4 Frequency 5 = 5 Frequency 6 = 6 Frequency 7 = 7 Frequency 8 = 8 Frequency 9 = 9 Frequency 10 = 10	X	X
RDM High Speed Mode 0x8012	Get / set high speed mode off = 0 on = 1	X	X
RDM Service RDM 0x8013	Get / set RDM service off = 0 on = 1	X	X

# Protocol

Protocol V4.3 is set as default. Use the ALSM to change to the protocol version. ARRI recommends to reserve additional channels which are required in V4.3 for each fixture when using a protocol version below V4.3. This way you do not need to change the patch when you want to use additional features which became available with protocol V4.3.

From Firmware-Version 3.0

8 bit, 1 channel per function	16 bit, 2 channels per function	Coarse/fine, 1-2 channels per function
Mode 1 CCT & RGBW	Mode 6 CCT & RGBW	Mode 11 CCT & RGBW
Mode 2 CCT	Mode 7 CCT	Mode 12 CCT
Mode 3 CCT & HSI	Mode 8 CCT & HSI	Mode 13 CCT & HSI
Mode 4 RGBW	Mode 9 RGBW	Mode 14 RGBW
Mode 5 HSI	Mode 10 HSI	Mode 15 HSI
Mode 16 GEL V2	Mode 17 GEL V2	
Mode 18 x,y Koordinaten	Mode 19 x,y Koordinaten	
DMX Mode 20 Source Matching	DMX Mode 21 Source Matching	
DMX Mode 22 Effects	DMX Mode 23 Effects	

## Green-Magenta Point - Average Equivalents

Setting	Rosco#	Setting	Rosco#
Full -Green	3308	Full +Green	3304
1/2 -Green	3313	1/2 +Green	3315
1/4 -Green	3314	1/4 +Green	3316
1/8 -Green	3318	1/8 +Green	3317

## Preset Channel - DMX Value Allocation

Channel	Value	Percent	Function
Depending on DMX mode	0 – 11	0 – 4	<b>Preset</b> No effect
			<b>User Defined Presets</b>
	12 – 23	5 – 9	Preset 01
	24 – 35	10 – 14	Preset 02
	36 – 47	15 – 18	Preset 03
	48 – 59	19 – 23	Preset 04
	60 – 71	24 – 28	Preset 05
	72 – 83	29 – 33	Preset 06
	84 – 95	34 – 37	Preset 07
	96 – 107	38 – 42	Preset 08
	108 – 119	43 – 47	Preset 09
	120 – 131	48 – 51	Preset 10
			<b>Factory Presets</b>
	132 – 143	52 – 56	Preset 01 (2.900 K, 0 +/- GN)
	144 – 155	57 – 61	Preset 02 (3.200 K, 0 +/- GN)
	156 – 167	62 – 65	Preset 03 (5.600 K, 0 +/- GN)
	168 – 179	66 – 70	Preset 04 (6.500 K, 0 +/- GN)
	180 – 191	71 – 75	Preset 05 (120° Hue, 100% Sat)
	192 – 203	76 – 80	Preset 06 (240° Hue, 100% Sat)
	204 – 215	81 – 84	Preset 07 (Rosco 3408, 5.600 K)
216 – 227	85 – 89	Preset 08 (Lee 187, 3.200 K Base)	
228 – 239	90 – 94	Preset 09 (Rosco 3152, 3.200 K)	
240 - 255	95 - 100	Preset 10 (Lee 162, 3.200 K Base)	

## Mode 1: CCT & RGBW, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-255	0-100	<b>Color temperature CCT</b> 2.800 K → 10.000 K
3	0-10	0-4	<b>Green-Magenta Point</b> neutral / no effect
	11-20	5-8	full minus green
	21-119	8-46	-99% → -1%
	120-145	47-57	neutral / no effect
	146-244	57-96	1% → 99%
	245-255	96-100	full plus green
4	0-255	0-100	<b>Cross Fade to Color</b> White → RGBW color
5	0-255	0-100	<b>Intensity red</b> 0% → 100%
6	0-255	0-100	<b>Intensity green</b> 0% → 100%
7	0-255	0-100	<b>Intensity blue</b> 0% → 100%
8	0-255	0-100	<b>Intensity white</b> 0% → 100%
9 <i>Reverts to fixture setting when signal lost.</i>	0-9	0-3	<b>Fan Control</b> Use fixture setting
	10-57	4-22	Quiet Mode
	58-105	23-41	Variable Mode
	106-153	42-60	High Temp Mode
	154-201	61-78	Normal Mode (only S360-C)
	202-249	79-97	Fan max. speed
	250-255	98-100	Fan off
10	0-255	0-100	<b>Preset</b> See page 31
11-12			<b>Reserved (only V4.x)</b>

## Mode 2: CCT, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-255	0-100	<b>Color temperature CCT</b> 2.800 K → 10.000 K
3	0-10 11-20 21-119 120-145 146-244 245-255	0-4 5-8 8-46 47-57 57-96 96-100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
4 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
5	0-255	0-100	<b>Preset</b> See page 31
6-7			<b>Reserved (only V4.x)</b>

## Mode 3: CCT & HSI, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-255	0-100	<b>Color temperature CCT</b> 2.800 K → 10.000 K
3	0-10 11-20 21-119 120-145 146-244 245-255	0-4 5-8 8-46 47-57 57-96 96-100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
4	0-255	0-100	<b>Cross Fade to Color</b> White → Color
5	0-255	0-100	<b>Hue</b> 0° → 360°
6	0-255	0-100	<b>Saturation</b> 0 → full saturated
7 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
8	0-255	0-100	<b>Preset</b> See page 31
9-10			<b>Reserved (only V4.x)</b>



### Mode 4: RGBW, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-255	0-100	<b>Intensity red</b> 0% → 100%
3	0-255	0-100	<b>Intensity green</b> 0% → 100%
4	0-255	0-100	<b>Intensity blue</b> 0% → 100%
5	0-255	0-100	<b>Intensity white</b> 0% → 100%
6 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
7	0-255	0-100	<b>Preset</b> See page 31
8-9			<b>Reserved (only V4.x)</b>

### Mode 5: HSI, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-255	0-100	<b>Hue</b> 0° → 360°
3	0-255	0-100	<b>Saturation</b> 0 → full saturated
4 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
5	0-255	0-100	<b>Preset</b> See page 31
6-7			<b>Reserved (only V4.x)</b>

### Mode 6: CCT & RGBW, 16 bit Resolution per Function

Channel		Value	Percent	Function
<b>HI</b>	<b>LO</b>			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0 % → 100% (open)
3	4	0-65.535	0-100	<b>Color temperature CCT</b> 2.800 K → 10.000 K
5	6	0-10 11-20 21-119 120-145 146-244 245-255	0-4 5-8 8-46 47-57 57-96 96-100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
7	8	0-65.535	0-100	<b>Xfade to color</b> White → RGBW color
9	10	0-65.535	0-100	<b>Intensity red</b> 0% → 100%
11	12	0-65.535	0-100	<b>Intensity green</b> 0% → 100%
13	14	0-65.535	0-100	<b>Intensity blue</b> 0% → 100%
15	16	0-65.535	0-100	<b>Intensity white</b> 0% → 100%
17		0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
18		0-255	0-100	<b>Preset</b> See page 31
19-20				<b>Reserved (only V4.x)</b>

## Mode 7: CCT, 16 bit Resolution per Function

Channel		Value	Percent	Function
HI	LO			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0 % → 100% (open)
3	4	0-65.535	0-100	<b>Color temperature CCT</b> 2.800 K → 10.000 K
5	6	0-10 11-20 21-119 120-145 146-244 245-255	0-4 5-8 8-46 47-57 57-96 96-100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
7		0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
8		0-255	0-100	<b>Preset</b> See page 31
9-10				<b>Reserved (only V4.x)</b>

## Mode 8: CCT & HSI, 16 bit Resolution per Function

Channel		Value	Percent	Function
HI	LO			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0 % → 100% (open)
3	4	0-65.535	0-100	<b>Color temperature CCT</b> 2.800 K → 10.000 K
5	6	0-5.000 5.001-10.000 10.001-29.999 30.000-40.000 40.001-59.999 60.000-65.535	0-7 8-15 16-46 46-61 61-92 92-100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
7	8	0-65.535	0-100	<b>Xfade to color</b> White → Color
9	10	0-65.535	0-100	<b>Hue</b> 0° → 360°
11	12	0-65.535	0-100	<b>Saturation</b> 0 → full saturated
13		0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
14		0-255	0-100	<b>Preset</b> See page 31
15-16				<b>Reserved (only V4.x)</b>

### Mode 9: RGBW, 16 bit Resolution per Function

Channel		Value	Percent	Function
HI	LO			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0% → 100% (open)
3	4	0-65.535	0-100	<b>Intensity red</b> 0% → 100%
5	6	0-65.535	0-100	<b>Intensity green</b> 0% → 100%
7	8	0-65.535	0-100	<b>Intensity blue</b> 0% → 100%
9	10	0-65.535	0-100	<b>Intensity white</b> 0% → 100%
11 <i>Reverts to fixture setting when signal lost</i>		0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
12		0-255	0-100	<b>Preset</b> See page 31
13-14				<b>Reserved (only V4.x)</b>

### Mode 10: HSI, 16 bit Resolution per Function

Channel		Value	Percent	Function
HI	LO			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0% → 100% (open)
3	4	0-65.535	0-100	<b>Hue</b> 0° → 360°
5	6	0-65.535	0-100	<b>Saturation</b> 0 → full saturated
7 <i>Reverts to fixture setting when signal lost</i>		0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
8		0-255	0-100	<b>Preset</b> See page 31
9-10				<b>Reserved (only V4.x)</b>

## Mode 11: CCT & RGBW, Coarse / Fine per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity coarse</b> 0 % → 100% (open)
2	0-255	0-100	<b>Master Intensity fine</b>
3	0-255	0-100	<b>Color temperature CCT coarse</b> 2.800 K → 10.000 K
4	0-255	0-100	<b>Color temperature CCT fine</b>
5	0-10 11-20 21-119 120-145 146-244 245-255	0-4 5-8 8-46 47-57 57-96 96-100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
6	0-255	0-100	<b>Xfade to color</b> White → RGBW color
7	0-255	0-100	<b>Intensity red coarse</b> 0% → 100%
8	0-255	0-100	<b>Red fine</b>
9	0-255	0-100	<b>Intensity green coarse</b> 0% → 100%
10	0-255	0-100	<b>Green fine</b>
11	0-255	0-100	<b>Intensity blue coarse</b> 0% → 100%
12	0-255	0-100	<b>Blue fine</b>
13	0-255	0-100	<b>Intensity white coarse</b> 0% → 100%
14	0-255	0-100	<b>White fine</b>
15 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
16	0-255	0-100	<b>Preset</b> See page 31
17-18			<b>Reserved (only V4.x)</b>

## Mode 12: CCT, Coarse / Fine per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity coarse</b> 0 % → 100% (open)
2	0-255	0-100	<b>Master Intensity fine</b>
3	0-255	0-100	<b>Color temperature CCT coarse</b> 2.800 K → 10.000 K
4	0-255	0-100	<b>Color temperature CCT fine</b>
5	0-10 11-20 21-119 120-145 146-244 245-255	0-4 5-8 8-46 47-57 57-96 96-100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
6 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
7	0-255	0-100	<b>Preset</b> See page 31
8-9			<b>Reserved (only V4.x)</b>

## Mode 13: CCT & HSI, Coarse / Fine per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity coarse</b> 0 % → 100% (open)
2	0-255	0-100	<b>Master Intensity fine</b>
3	0-255	0-100	<b>Color temperature CCT coarse</b> 2.800 K → 10.000 K
4	0-255	0-100	<b>Color temperature CCT fine</b>
5	0-10	0-4	<b>Green-Magenta Point</b> neutral / no effect
	11-20	5-8	full minus green
	21-119	8-46	-99% → -1%
	120-145	47-57	neutral / no effect
	146-244	57-96	1% → 99%
245-255	96-100	full plus green	
6	0-255	0-100	<b>Xfade to color</b> White → Color
7	0-255	0-100	<b>Hue coarse</b> 0° → 360°
8	0-255	0-100	<b>Hue fine</b>
9	0-255	0-100	<b>Saturation coarse</b> 0 → full saturated
10	0-255	0-100	<b>Saturation fine</b>
11 <i>Reverts to fixture setting when signal lost</i>	0-9	0-3	<b>Fan Control</b> Use fixture setting
	10-57	4-22	Quiet Mode
	58-105	23-41	Variable Mode
	106-153	42-60	High Temp Mode
	154-201	61-78	Normal Mode (only S360-C)
	202-249	79-97	Fan max. speed
250-255	98-100	Fan off	
12	0-255	0-100	<b>Preset</b> See page 31
13-14			<b>Reserved (only V4.x)</b>

## Mode 14: RGBW, Coarse / Fine per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity coarse</b> 0 % → 100% (open)
2	0-255	0-100	<b>Master Intensity fine</b>
3	0-255	0-100	<b>Intensity red coarse</b> 0% → 100%
4	0-255	0-100	<b>Red fine</b>
5	0-255	0-100	<b>Intensity green coarse</b> 0% → 100%
6	0-255	0-100	<b>Green fine</b>
7	0-255	0-100	<b>Intensity blue coarse</b> 0% → 100%
8	0-255	0-100	<b>Blue fine</b>
9	0-255	0-100	<b>Intensity white coarse</b> 0% → 100%
10	0-255	0-100	<b>White fine</b>
11 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
12	0-255	0-100	<b>Preset</b> See page 31
13-14			<b>Reserved (only V4.x)</b>

## Mode 15: HSI, Coarse / Fine per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity coarse</b> 0 % → 100% (open)
2	0-255	0-100	<b>Master Intensity fine</b>
3	0-255	0-100	<b>Hue coarse</b> 0° → 360°
4	0-255	0-100	<b>Hue fine</b>
5	0-255	0-100	<b>Saturation coarse</b> 0 → full saturated
6	0-255	0-100	<b>Saturation fine</b>
7 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
8	0-255	0-100	<b>Preset</b> See page 31
9-10			<b>Reserved (only V4.x)</b>



## Mode 16: GEL V2, 8 bit Resolution per Function, Basis

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-128 129-255	0-50 51-100	<b>Gel 1,CCT Selection</b> 3.200 K 5.600 K
3	0-128 129-170 171-255	0-50 51-67 68-100	<b>Gel 1, Color Matching</b> Best Color <i>Color quality optimized</i> Brightest <i>Color brightness opt.</i> No Color Gel
4	0-128 129-255	0-50 51-100	<b>Gel 1, Brand</b> <i>Category on ch. 5</i> <i>Gel on ch. 6</i> Rosco LEE Filters
5	0-50 51-101 102-152 153-203 204-255	0-20 21-39 40-60 61-80 81-255	<b>Gel 1, category</b> <i>Manufacturer on ch. 4</i> <b>Category 1:</b> Rosco: Color Correction LEE: Color Correction <b>Category 2:</b> Rosco: CalColor LEE: Color Filters <b>Category 3:</b> Rosco: Storaro Selection LEE: 600 Series <b>Category 4:</b> Rosco: Cinelux LEE: Cosmetic Filters <b>Category 5:</b> LEE: 700 Series
6	0-255	0-100	<b>Gel 1</b> See tables below
7	0-255	0-100	<b>Xfade to Gel</b> Gel 1 → Gel 2
8	0-128 129-255	0-50 51-100	<b>Gel 2,CCT Selection</b> 3.200 K 5.600 K
9	0-128 129-170 171-255	0-50 51-67 68-100	<b>Gel 2, Color Matching</b> Best Color <i>Color quality optimized</i> Brightest <i>Color brightness opt.</i> No Color Gel
10	0-128 129-255	0-50 51-100	<b>Gel 2, Brand</b> <i>Category on ch. 11</i> <i>Gel on ch. 12</i> Rosco LEE Filters

Channel	Value	Percent	Function
11	0-50 51-101 102-152 153-203 204-255	0-20 21-39 40-60 61-80 81-255	<b>Gel 1, category</b> <i>Manufacturer on ch. 10</i> <b>Category 1:</b> Rosco: Color Correction LEE: Color Correction <b>Category 2:</b> Rosco: CalColor LEE: Color Filters <b>Category 3:</b> Rosco: Storaro Selection LEE: 600 Series <b>Category 4:</b> Rosco: Cinelux LEE: Cosmetic Filters <b>Category 5:</b> LEE: 700 Series
12	0-255	0-100	<b>Gel 2</b> See tables below
13	0 – 51 52 – 102 103 – 153 154 – 204 205 - 255	0 – 20 21 – 40 41 – 60 61 – 79 80 - 100	<b>Gel Transition Type</b> Direct Through White Point Through Black Point Over White Point Under White point
14 <i>Reverts to fixture setting when signal lost</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
15	0-255	0-100	<b>Preset</b> See page 31
16-17			<b>Reserved (only V4.x)</b>

## Mode 17: GEL V2, 16 bit Resolution per function, Basic

Channel		Value	Percent	Function
HI	LO			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0 % → 100% (open)
3		0-128 129-255	0-50 51-100	<b>Gel 1,CCT Selection</b> 3.200 K 5.600 K
4		0-128 129-170 171-255	0-50 51-67 68-100	<b>Gel 1, Color Matching</b> Best Color <i>Color quality optimized</i> Brightest <i>Color brightness opt.</i> No Color Gel
5		0-128 129-255	0-50 51-100	<b>Gel 1, Brand</b> <i>Category on ch. 5</i> <i>Gel on ch. 6</i> Rosco LEE Filters
6		0-50 51-101 102-152 153-203 204-255	0-20 21-39 40-60 61-80 81-255	<b>Gel 1, category</b> <i>Manufacturer on ch. 4</i> <b>Category 1:</b> Rosco: Color Correction LEE: Color Correction <b>Category 2:</b> Rosco: CalColor LEE: Color Filters <b>Category 3:</b> Rosco: Storaro Selection LEE: 600 Series <b>Category 4:</b> Rosco: Cinelux LEE: Cosmetic Filters <b>Category 5:</b> LEE: 700 Series
7		0-255	0-100	<b>Gel 1</b> See tables below
8	9	0 - 65.535	0 - 100	<b>Xfade to Gel</b> Gel 1 → Gel 2
10		0-128 129-255	0-50 51-100	<b>Gel 2,CCT Selection</b> 3.200 K 5.600 K
11		0-128 129-170 171-255	0-50 51-67 68-100	<b>Gel 2, Color Matching</b> Best Color <i>Color quality optimized</i> Brightest <i>Color brightness opt.</i> No Color Gel
12		0-128 129-255	0-50 51-100	<b>Gel 2, Brand</b> <i>Category on ch. 13</i> <i>Gel on ch. 14</i> Rosco LEE Filters

Channel	Value	Percent	Function
13	0-50	0-20	<b>Gel 1, category</b> <i>Manufacturer on ch. 12</i> <b>Category 1:</b> Rosco: Color Correction LEE: Color Correction <b>Category 2:</b> Rosco: CalColor LEE: Color Filters <b>Category 3:</b> Rosco: Storaro Selection LEE: 600 Series <b>Category 4:</b> Rosco: Cinelux LEE: Cosmetic Filters <b>Category 5:</b> LEE: 700 Series
	51-101	21-39	
	102-152	40-60	
	153-203	61-80	
	204-255	81-255	
14	0-255	0-100	<b>Gel 2</b> See tables below
15	0 – 51	0 – 20	<b>Gel Transition Type</b> Direct Through White Point Through Black Point Over White Point Under White point
	52 – 102	21 – 40	
	103 – 153	41 – 60	
	154 – 204	61 – 79	
	205 - 255	80 - 100	
16 <i>Reverts to fixture setting when signal lost.</i>	0-9	0-3	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
	10-57	4-22	
	58-105	23-41	
	106-153	42-60	
	154-201	61-78	
	202-249	79-97	
250-255	98-100		
17	0-255	0-100	<b>Preset</b> See page 31
18-19			<b>Reserved (only V4.x)</b>

**Mode 16 / 17: GEL, Gel Selection**  
**Category 1, Rosco, Color correction**

Channel	Value	Gel Name	Number
<b>8 bit:</b> Gel 1: 6 Gel 2: 12  <b>16 bit:</b> Gel 1: 6 Gel 2: 14	0 - 1	Full CTB	3202
	2 - 3	3/4 CTB	3203
	4 - 5	1/2 CTB	3204
	6 - 7	1/3 CTB	3206
	8 - 9	1/4 CTB	3208
	10 - 11	1/8 CTB	3216
	12 - 13	Double CTB	3220
	14 - 15	Full CTO	3407
	16 - 17	3/4 CTO	3411
	18 - 19	1/2 CTO	3408
	20 - 21	1/4 CTO	3409
	22 - 23	1/8 CTO	3410
	24 - 25	Double CTO	3420
	26 - 27	Full CTS	3441
	28 - 29	1/2 CTS	3442
	30 - 31	1/4 CTS	3443
	32 - 33	1/8 CTS	3444
	34 - 35	Full Plusgreen	3304
	36 - 37	1/2 Plusgreen	3315
	38 - 39	1/4 Plusgreen	3316
	40 - 41	1/8 Plusgreen	3317
	42 - 43	Full Minusgreen	3308
	44 - 45	3/4 Minusgreen	3309
	46 - 47	1/2 Minusgreen	3313
	48 - 49	1/4 Minusgreen	3314
	50 - 51	1/8 Minusgreen	3318
	52 - 53	Fluorofilter	3310
	54 - 55	Industrial Vapor	3150
	56 - 57	Urban Vapor	3152
	58 - 59	Tough Y-1	3107
	60 - 61	Tough MT 54	3134
	62 - 63	Tough MTY	3106
	64 - 65	Tough MT2	3102
	66 - 255	Reserved	

**Category 2, Rosco, CalColor**

Channel	Value	Gel Name	Number
<b>8 bit:</b> Gel 1: 6 Gel 2: 12  <b>16 bit:</b> Gel 1: 6 Gel 2: 14	0 - 1	15 Blue	4215
	2 - 3	30 Blue	4230
	4 - 5	60 Blue	4260
	6 - 7	90 Blue	4290
	8 - 9	7 Cyan	4307
	10 - 11	15 Cyan	4315
	12 - 13	30 Cyan	4330
	14 - 15	60 Cyan	4360
	16 - 17	90 Cyan	4390
	18 - 19	15 Green	4415
	20 - 21	30 Green	4430
	22 - 23	60 Green	4460
	24 - 25	90 Green	4490
	26 - 27	15 Yellow	4515
	28 - 29	30 Yellow	4530
	30 - 31	60 Yellow	4560
	32 - 33	90 Yellow	4590
	34 - 35	15 Red	4615
	36 - 37	30 Red	4630
	38 - 39	60 Red	4660
	40 - 41	90 Red	4690
	42 - 43	15 Magenta	4715
	44 - 45	30 Magenta	4730
	46 - 47	60 Magenta	4760
	48 - 49	90 Magenta	4790
	50 - 51	15 Pink	4815
	52 - 53	30 Pink	4830
	54 - 55	60 Pink	4860
	56 - 57	90 Pink	4890
	58 - 59	15 Lavender	4915
	60 - 61	30 Lavender	4930
	62 - 63	60 Lavender	4960
	64 - 65	90 Lavender	4990
66 - 255	Reserved		

**Category 3, Rosco, Storaro Selection**

Channel	Value	Gel Name	Number
<b>8 bit:</b> Gel 1: 6 Gel 2: 12  <b>16 bit:</b> Gel 1: 6 Gel 2: 14	0 - 1	VS Red	2001
	2 - 3	VS Orange	2202
	4 - 5	VS Yellow	2003
	6 - 7	VS Green	2004
	8 - 9	VS Cyan	2005
	10 - 11	VS Azure	2006
	12 - 13	VS Blue	2007
	14 - 15	VS Indigo	2008
	16 - 17	VS Violet	2009
	18 - 19	VS Magenta	2010
	20 - 255	Reserved	

Category 4, Rosco Cinelux

Channel	Value	Gel Name	Number
	0 - 1	Bastard Amber	2
	2 - 3	Pale Bastard Amber	302
	4 - 5	No Color Straw	6
	6 - 7	Pale Gold	8
	8 - 9	Daffodil	310
	10 - 11	Straw	12
	12 - 13	Light Amber	16
	14 - 15	Gallo Gold	316
	16 - 17	Light Flame	17
	18 - 19	Flame	18
	20 - 21	Mayan Sun	318
	22 - 23	Golden Amber	21
	24 - 25	Soft Golden Amber	321
	26 - 27	Orange	23
	28 - 29	Henna Sky	325
	30 - 31	Light Red	26
	32 - 33	No Color Pink	33
	34 - 35	Blush Pink	333
	36 - 37	Flesh Pink	34
	38 - 39	Pale Rose Pink	37
	40 - 41	Salmon	41
	42 - 43	Deep Salmon	42
	44 - 45	Middle Rose	44
	46 - 47	Light Rose Purple	47
	48 - 49	Surprise Pink	51
	50 - 51	No Color Blue	60
	52 - 53	Clearwater	360
	54 - 55	Booster Blue	62
	56 - 57	Tipton Blue	362
	58 - 59	Blue Bell	364
	60 - 61	Daylight Blue	65
	62 - 63	Tharon Delft Blue	365
	64 - 65	Cerulean Blue	375
	66 - 67	Bermuda Blue	376
	68 - 69	Green Blue	77
	70 - 71	Alice Blue	378
	72 - 73	Primary Blue	80
	74 - 75	Baldassari Blue	381
	76 - 77	Medium Blue	83
	78 - 79	Pale Yellow Green	87
	80 - 81	Light Green	88
	82 - 83	Moss Green	89
	84 - 85	Primary Green	91
	86 - 87	Turquoise	92
	88 - 89	Blue Green	93
	90 - 91	Chocolate	99
	92 - 255	Reserved	

**8 bit:**  
Gel 1: 6  
Gel 2: 12

**16 bit:**  
Gel 1: 6  
Gel 2: 14

Category 1, LEE Color Correction

Channel	Value	Gel Name	Number
	0 - 1	Double CTB	200
	2 - 3	Full CTB	201
	4 - 5	3/4 CTB	281
	6 - 7	1/2 CTB	202
	8 - 9	1/4 CTB	203
	10 - 11	1/8 CTB	218
	12 - 13	Double CTO	287
	14 - 15	Full CTO	204
	16 - 17	3/4 CTO	285
	18 - 19	1/2 CTO	205
	20 - 21	1/4 CTO	206
	22 - 23	1/8 CTO	223
	24 - 25	1 1/2 CTB	283
	26 - 27	1 1/2 CTO	286
	28 - 29	Full CTS	441
	30 - 31	1/2 CTS	442
	32 - 33	1/4 CTS	443
	34 - 35	1/8 CTS	444
<b>8 bit:</b>	36 - 37	Full CTO + .3 ND	207
Gel 1: 6	38 - 39	Full CTO + .6 ND	208
Gel 2: 12	40 - 41	L.C.T. Yellow (Y1)	212
<b>16 bit:</b>	42 - 43	White Flame Green	213
Gel 1: 6	44 - 45	LEE Fluorescent Green	219
Gel 2: 14	46 - 47	Super Correction L.C.T. Yellow	230
	48 - 49	Super Correction W.F. Green	232
	50 - 51	H.M.I. (to Tungsten)	236
	52 - 53	C.I.D. (to Tungsten)	237
	54 - 55	C.S.I. (to Tungsten)	238
	56 - 57	LEE Fluorescent 5700 Kelvin	241
	58 - 59	LEE Fluorescent 4300 Kelvin	242
	60 - 61	LEE Fluorescent 3600 Kelvin	243
	62 - 63	LEE Plus Green	244
	64 - 65	1/2 Plus Green	245
	66 - 67	1/4 Plus Green	246
	68 - 69	1/8 Plus Green	278
	70 - 71	LEE Minus Green	247
	72 - 73	1/2 Minus Green	248
	74 - 75	1/4 Minus Green	249
	76 - 77	1/8 Minus Green	279
	78 - 255	Reserved	



Category 2, LEE Color Filters

Channel	Value	Gel Name	Number
	0 - 1	Rose Pink	002
	2 - 3	Lavender Tint	003
	4 - 5	Medium Bastard Amber	004
	6 - 7	Pale Yellow	007
	8 - 9	Dark Salmon	008
	10 - 11	Pale Amber Gold	009
	12 - 13	Medium Yellow	010
	14 - 15	Straw Tint	013
	16 - 17	Surprise Peach	017
	18 - 19	Fire	019
	20 - 21	Medium Amber	020
	22 - 23	Gold Amber	021
	24 - 25	Dark Amber	022
	26 - 27	Scarlet	024
	28 - 29	Sunset Red	025
	30 - 31	Bright Red	026
	32 - 33	Light Pink	035
	34 - 35	Medium Pink	036
	36 - 37	Dark Magenta	046
	38 - 39	Rose Purple	048
	40 - 41	Light Lavender	052
	42 - 43	Paler Lavender	053
	44 - 45	Lavender	058
	46 - 47	Mist Blue	061
	48 - 49	Pale Blue	063
	50 - 51	Sky Blue	068
	52 - 53	Evening Blue	075
	54 - 55	Just Blue	079
	56 - 57	Deeper Blue	085
	58 - 59	Lime Green	088
	60 - 61	Moss Green	089
	62 - 63	Dark Yellow Green	090
	64 - 65	Spring Yellow	100
	66 - 67	Yellow	101
	68 - 69	Light Amber	102
	70 - 71	Straw	103
	72 - 73	Deep Amber	104
	74 - 75	Primary Red	106
	76 - 77	Light Rose	107
	78 - 79	English Rose	108
	80 - 81	Light Salmon	109
	82 - 83	Middle Rose	110
	84 - 85	Dark Pink	111
	86 - 87	Magenta	113
	88 - 89	Peacock Blue	115
	90 - 91	Steel Blue	117
	92 - 93	Light Blue	118
	94 - 95	Deep Blue	120
	96 - 97	LEE Green	121
	98 - 99	Fern Green	122
	100 - 101	Dark Green	124
	102 - 103	Smokey Pink	127
	104 - 105	Bright Pink	128
	106 - 107	Marine Blue	131
	108 - 109	Golden Amber	134
	110 - 111	Deep Golden Amber	135
	112 - 113	Pale Lavender	136
	114 - 115	Special Lavender	137

**8 bit:**  
Gel 1: 6  
Gel 2: 12

**16 bit:**  
Gel 1: 6  
Gel 2: 14

**Category 2, LEE Color Filters, continued**

Channel	Value	Gel Name	Number
<b>8 bit:</b> Gel 1: 6 Gel 2: 12  <b>16 bit:</b> Gel 1: 6 Gel 2: 14	116 - 117	Pale Green	138
	118 - 119	Summer Blue	140
	120 - 121	Pale Violet	142
	122 - 123	Pale Navy Blue	143
	124 - 125	No Color Blue	144
	126 - 127	Apricot	147
	128 - 129	Bright Rose	148
	130 - 131	Gold Tint	151
	132 - 133	Pale Gold	152
	134 - 135	Pale Salmon	153
	136 - 137	Pale Rose	154
	138 - 139	Chocolate	156
	140 - 141	Pink	157
	142 - 143	No Color Straw	159
	144 - 145	Slate Blue	161
	146 - 147	Bastard Amber	162
	148 - 149	Flame Red	164
	150 - 151	Daylight Blue	165
	152 - 153	Lilac Tint	169
	154 - 155	Deep Lavender	170
	156 - 157	Dark Steel Blue	174
	158 - 159	Loving Amber	176
	160 - 161	Dark Lavender	180
	162 - 163	Light Red	182
	164 - 165	Flesh Pink	192
	166 - 167	Surprise Pink	194
	168 - 169	Zenith Blue	195
	170 - 171	True Blue	196
	172 - 173	Alice Blue	197
	174 - 175	Palace Blue	198
	176 - 177	Regal Blue	199
	178 - 255	Reserved	

**Category 3, LEE 600 Series**

Channel	Value	Gel Name	Number
<b>8 bit:</b> Gel 1: 6 Gel 2: 12  <b>16 bit:</b> Gel 1: 6 Gel 2: 14	0 - 1	Arctic White	600
	2 - 3	Silver	601
	4 - 5	Platinum	602
	6 - 7	Moonlight White	603
	8 - 9	Full CT 85	604
	10 - 11	Industry Sodium	650
	12 - 13	HI Sodium	651
	14 - 15	Urban Sodium	652
	16 - 17	LO Sodium	653
	18 - 255	Reserved	

## Category 4,LEE Cosmetic Filters

Channel	Value	Gel Name	Number
<b>8 bit:</b> Gel 1: 6 Gel 2: 12  <b>16 bit:</b> Gel 1: 6 Gel 2: 14	0 - 1	Cosmetic Peach	184
	2 - 3	Cosmetic Silver Rose	186
	4 - 5	Cosmetic Rouge	187
	6 - 7	Cosmetic Highlight	188
	8 - 9	Cosmetic Silver Moss	189
	10 - 11	Cosmetic Aqua Blue	191
	12 - 13	Lily Frost	705
	14 - 15	Shanklin Frost	717
	16 - 17	Half Shanklin Frost	718
	18 - 19	Durham Daylight Frost	720
	20 - 21	Hampshire Rose	749
	22 - 23	Durham Frost	750
	24 - 25	Soft Amber Key 1	774
	26 - 27	Soft Amber Key 2	775
	28 - 29	Moroccan Frost	791
	30 - 31	Blue Diffusion	217
	32 - 33	Blue Frost	221
	34 - 35	Daylight Blue frost	224
	36 - 255	Reserved	

## Category 5,LEE 700 Series

Channel	Value	Gel Name	Number
<b>8 bit:</b> Gel 1: 6 Gel 2: 12  <b>16 bit:</b> Gel 1: 6 Gel 2: 14	0 - 1	Perfect Lavender	700
	2 - 3	Provence	701
	4 - 5	Special Pale Lavender	702
	6 - 7	Cold Lavender	703
	8 - 9	Lily	704
	10 - 11	King Fals Lavender	706
	12 - 13	Cool Lavender	708
	14 - 15	Electric Lilac	709
	16 - 17	Spir Special Blue	710
	18 - 19	Cold Blue	711
	20 - 21	Bedford Blue	712
	22 - 23	Elysian Blue	714
	24 - 25	Cabana Blue	715
	26 - 27	Mikkel Blue	716
	28 - 29	Colour Wash Blue	719
	30 - 31	Berry Blue	721
	32 - 33	Virgin Blue	723
	34 - 35	Ocean Blue	724
	36 - 37	Old Steel Blue	725
	38 - 39	Steel Green	728
	40 - 41	Liberty Green	730
	42 - 43	Dirty Ice	731
	44 - 45	Damp Squib	733
	46 - 47	JAS Green	738
	48 - 49	am Brown	742
	50 - 51	Dirty White	744
	52 - 53	Brown	746
	54 - 55	Easy White	747
	56 - 57	Seedy Pink	748
	58 - 59	Wheat	763
	60 - 61	Sun Colour Straw	764
	62 - 63	LEE Yellow	765
	64 - 65	Cardbox Amber	773
	66 - 67	Nectarine	776
	68 - 69	Millenium Gold	778
	70 - 71	Bastard Pink	779
	72 - 73	Terry Red	781
	74 - 75	Blood Red	789
	76 - 77	Moroccan Pink	790
	78 - 79	Pretty n'Pink	794
	80 - 81	Magical Magenta	795
	82 - 255	Reserved	

### Mode 18: X,Y Coordinates, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-255	0-100	<b>X1 Coordinate</b> 0.0 → 0.8
3	0-255	0-100	<b>Y1 Coordinate</b> 0.0 → 0.8
4	0-255	0-100	<b>Xfade</b> X1, Y1 → X2, Y2
5	0-255	0-100	<b>X2 Coordinate</b> 0.0 → 0.8
6	0-255	0-100	<b>Y2 Coordinate</b> 0.0 → 0.8
7	0 – 51 52 – 102 103 – 153 154 – 204 205 - 255	0 – 20 21 – 40 41 – 60 61 – 79 80 - 100	<b>Gel Transition Type</b> Direct Through White Point Through Black Point Over White Point Under White point
8 <i>Reverts to fixture setting when signal lost.</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
9	0-255	0-100	<b>Preset</b> See page 31
10-11			<b>Reserved (only V4.x)</b>

## Mode 19: X,Y Coordinates, 16 bit Resolution per Function

Channel		Value	Percent	Function
<b>HI</b>	<b>LO</b>			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0 % → 100% (open)
3	4	0-65.535	0-100	<b>X1 Coordinate</b> 0.0 → 0.8
5	6	0-65.535	0-100	<b>Y1 Coordinate</b> 0.0 → 0.8
7	8	0-65.535	0-100	<b>Xfade</b> X1, Y1 → X2, Y2
9	10	0-65.535	0-100	<b>X2 Coordinate</b> 0.0 → 0.8
11	12	0-65.535	0-100	<b>Y2 Coordinate</b> 0.0 → 0.8
13		0 – 51 52 – 102 103 – 153 154 – 204 205 - 255	0 – 20 21 – 40 41 – 60 61 – 79 80 - 100	<b>Gel Transition Type</b> Direct Through White Point Through Black Point Over White Point Under White point
14 <i>Reverts to fixture setting when signal lost.</i>		0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
15		0-255	0-100	<b>Preset</b> See page 31
16 - 17				<b>Reserved (only V4.x)</b>

## Mode 20: Source Matching, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-50 51-101 102-152 153-203 204-255	0-20 21-39 40-59 60-79 80-100	<b>Category 1</b> Incandescent Fluorescent Discharge Other Reserved for future use
3	0-255	0-100	<b>Source 1</b> Please see table below
4	0-255	0-100	<b>Cross Fade</b> Cat 1, Source 1 → Cat 2, Source 2
5	0-50 51-101 102-152 153-203 204-255	0-20 21-39 40-59 60-79 80-100	<b>Category 2</b> Incandescent Fluorescent Discharge Other Reserved for future use
6	0-255	0-100	<b>Source 2</b> Please see table below
7 <i>Reverts to fixture setting when signal lost.</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
8	0-255	0-100	<b>Preset</b> See page 31
9-11			<b>Reserved (only V4.x)</b>

## Mode 21: Source Matching, 16 bit Resolution per Function

Channel		Value	Percent	Function
HI	LO			
1	2	0-65.535	0-100	<b>Master Intensity</b> 0 % → 100% (open)
3		0-50 51-101 102-152 153-203 204-255	0-20 21-39 40-59 60-79 80-100	<b>Category 1</b> Incandescent Fluorescent Discharge Other Reserved for future use
4		0-255	0-100	<b>Source 1</b> Please see table below
5	6	0-65.535	0-100	<b>Cross Fade</b> Cat 1, Source 1 → Cat 2, Source 2
7		0-50 51-101 102-152 153-203 204-255	0-20 21-39 40-59 60-79 80-100	<b>Category 2</b> Incandescent Fluorescent Discharge Other Reserved for future use
8		0-255	0-100	<b>Source 2</b> Please see table below
9 <i>Reverts to fixture setting when signal lost.</i>		0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
10		0-255	0-100	<b>Preset</b> See page 31
11 - 12				<b>Reserved (only V4.x)</b>

## Source Matching, Light Sources

Category	Value	Function
<b>Incandescent</b>	0-2 3-5 6-8 9-11 12-14 15-17 18-20 21-23 24-26 27-255	Tungsten Bulb Incandescent Halogen Antique Bulb Warm Antique Bulb Christmas Lights Night Light Infrared Heat Lamp Grow light Reserved for future use
<b>Flourescent</b>	0-2 3-5 6-8 9-11 12-14 15-17 18-20 21-23 24-26 27-255	CFL Soft White CFL Bright White CFL Cool White CFL Daylight Cool White 1 Cool White 2 Cool White 3 Warm White CFL Blacklight Reserved for future use
<b>Discharge</b>	0-2 3-5 6-8 9-11 12-14 15-17 18-20 21-23 24-255	HMI High Pressure Sodium Low Pressure Sodium Mercury Vapor Metal Halide Ceramic Carbon Arc Xenon Reserved for future use
<b>Other</b>	0-2 3-5 6-8 9-11 12-14 15-17 18-20 21-23 24-26 27-29 30-32 33-35 36-38 39-41 42-44 45-47 48-50 51-53 54-56 57-59 60-255	Candle Gas Fire Sun Direct Sun Overcast Sun Blue Hour Mobile Phone Computer Monitor Electroluminescence Blow Torch Road Flare Amber Caution Green Traffic Light Yellow Traffic Light Red Traffic Light Blue Glow Stick Green Glow Stick Red Glow Stick Yellow Glow Stick Pink Glow Stick Violet Glow Stick Reserved for future use



## Mode 22: Effects, 8 bit Resolution per Function

Channel	Value	Percent	Function
1	0-255	0-100	<b>Master Intensity</b> 0 % → 100% (open)
2	0-10 11-20 21-30 31-40 41-50 51-60 61-70 71-80 81-90 91-100 101-110 111-120 121-130 131-140 141-255	0-4 5-8 9-12 13-15 16-20 21-23 24-27 28-31 32-35 36-39 40-43 44-47 48-51 52-55 53-100	<b>Effect Selection</b> No Effect Party Effect Candle Clouds Passing Club Lights Color Chase Cop Car Fire Fireworks Light Strobe Lightning Paparazzi Pulsing Television Reserved for future use
3	0-255	0-100	<b>Effect Parameter 1</b> See table below
4	0-255	0-100	<b>Effect Parameter 2</b> See table below
5	0-255	0-100	<b>Effect Parameter 3</b> See table below
6	0-255	0-100	<b>Effect Parameter 4</b> See table below
7	0-255	0-100	<b>Effect Parameter 5</b> See table below
8	0-255	0-100	<b>Effect Parameter 6</b> See table below
9	0-255	0-100	<b>Effect Parameter 7</b> See table below
10 <i>Reverts to fixture setting when signal lost.</i>	0-9 10-57 58-105 106-153 154-201 202-249 250-255	0-3 4-22 23-41 42-60 61-78 79-97 98-100	<b>Fan Control</b> Use fixture setting Quiet Mode Variable Mode High Temp Mode Normal Mode (only S360-C) Fan max. speed Fan off
11	0-255	0-100	<b>Preset</b> See page 31
12-13			<b>Reserved (only V4.x)</b>

### Mode 23: Effects, 16 bit Resolution per Function

Channel		Value	Percent	Function
HI	LO			
1	2	0-65535	0-100	<b>Master Intensity</b> 0 % → 100% (open)
3		0-10	0-4	<b>Effect Selection</b> No Effect
		11-20	5-8	Party Effect
		21-30	9-12	Candle
		31-40	13-15	Clouds Passing
		41-50	16-20	Club Lights
		51-60	21-23	Color Chase
		61-70	24-27	Cop Car
		71-80	28-31	Fire
		81-90	32-35	Fireworks
		91-100	36-39	Light Strobe
		101-110	40-43	Lightning
		111-120	44-47	Paparazzi
		121-130	48-51	Pulsing
		131-140	52-55	Television
141-255	53-100	Reserved for future use		
4	5	0-255	0-100	<b>Effect Parameter 1</b> See table below
6	7	0-255	0-100	<b>Effect Parameter 2</b> See table below
8	9	0-255	0-100	<b>Effect Parameter 3</b> See table below
10	11	0-255	0-100	<b>Effect Parameter 4</b> See table below
12	13	0-255	0-100	<b>Effect Parameter 5</b> See table below
14	15	0-255	0-100	<b>Effect Parameter 6</b> See table below
16	17	0-255	0-100	<b>Effect Parameter 7</b> See table below
18 <i>Reverts to fixture setting when signal lost</i>		0-9	0-3	<b>Fan Control</b> Use fixture setting
		10-57	4-22	Quiet Mode
		58-105	23-41	Variable Mode
		106-153	42-60	High Temp Mode
		154-201	61-78	Normal Mode (only S360-C)
		202-249	79-97	Fan max. speed
250-255	98-100	Fan off		
19		0-255	0-100	<b>Preset</b> See page 31
20-21				<b>Reserved (only V4.x)</b>

## Party Effect

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0 1-255	0 1 – 65535	0 1-100	<b>Saturation</b> CCT 2.800 → 10.000 K 0 → 1.0 Saturation
2	0-255	0 – 65535	0-100	<b>Speed</b> Loop 60 s → 1 s

## Candle

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-84 85-170 171-255	0 – 21844 21845 - 43690 43691 - 65535	0-33 34-66 67-100	<b>CCT Range</b> <i>Not continuous, set range for random generation</i> 1.400 → 1.700 K 1.700 → 2.000 K 2.000 → 2.300 K
2	0-255	0 – 65535	0-100	<b>Speed</b> 0 → 120 changes / min

## Clouds Passing

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-255	0 – 65535	0-100	<b>Offset</b> Offset Number 0 – 50 <i>Every 5 DMX values is a new offset</i>
2	0-127 128-255	0 - 32767 32768 - 65535	0-50 51-100	<b>Speed</b> 2 x Slower → Default Speed Default Speed → 2 x Faster
3				<b>Sync</b> <i>If bumped to 255 (100%), the loop will start at zero (or depending on the offset value)</i>

## Club Lights

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0 – 31 32 – 63 64 – 95 96 – 127 128 – 159 160 – 191 192 – 223 224 – 255	0 – 8191 8192 – 16383 16384 – 24575 24576 – 32767 32768 – 40959 40960 – 49151 49152 – 57343 57344 – 65535	0 – 12 13 – 25 26 – 37 38 – 49 50 – 62 63 – 75 76 – 87 88 – 100	<b>Color Variety</b> 3 Colors 6 Colors 9 Colors 12 Colors 15 Colors 18 Colors 21 Colors 24 Colors
2	0-255	0 – 65535	0-100	<b>Speed</b> 0 → 120 changes / min

## Color Chase

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-255	0 – 65535	0-100	<b>Offset</b> Offset Number 0 – 50 <i>Every 5 DMX values is a new offset</i>
2	0-255	0 – 65535	0-100	<b>Speed</b> Loop 60 s → 1 s
3	0 1-255	0 1 – 65535	0 1-100	<b>Saturation</b> CCT 2.800 → 10.000 K 0 → 1.0 Saturation
4				<b>Sync</b> <i>If bumped to 255 (100%), the loop will start at zero (or depending on the offset value)</i>

## Cop Car

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-63 64-127 128-191 192-255	0 – 16383 16384 – 32767 32768 – 49151 49152 - 65535	0-25 26-50 51-75 76-100	<b>Color Combinations</b> Just Blue Blue and Red Blue and White Blue, Red and White
2	0 – 31 32 – 63 64 – 95 96 – 127 128 – 159 160 – 192 192 – 223 224 – 255	0 – 8191 8192 – 16383 16384 – 24575 24576 – 32767 32768 – 40959 40960 – 49151 49152 – 57343 57344 - 65535	0 – 12 13 – 25 26 – 37 38 – 50 51 – 62 63 – 75 76 – 87 88 – 100	<b>Flash Pattern</b> Single Flash Double Flash Quint All Flash Quint Flash Quad Flash Cycle All Reserved for future use Reserved for future use

## Fire

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-84 85-170 171-255	0 – 21844 21845 – 43690 43691 - 65535	0-33 34-66 67-100	<b>CCT Range</b> <i>Not continuous, set range for random generation</i> 1.800 → 2.200 K 2.200 → 2.600 K 2.600 → 3.000 K
2	0-255	0 – 65535	0-100	<b>Speed</b> 0 → 180 changes / min

## Fireworks

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-63 64-127 128-191 192-255	0 – 16383 16384 – 32767 32768 – 49151 49152 - 65535	0-25 26-50 51-75 76-100	<b>Color Combinations</b> Colors White Colors and White Reserved for future use
2	0-255	0 – 65535	0-100	<b>Speed</b> 10 → 0,5 s between fire-works

## Strobe Light

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-255	0 – 65535	0-100	<b>Speed</b> 1 → 25 flashes / second
2	0-255	0 – 65535	0-100	<b>Color Temperature</b> CCT 2.800 → 10.000 K
3	0 - 10 11 - 20 21 - 119 120 - 145 146 - 244 245 - 255	0 – 2621 2622 – 5243 5244 – 30146 30147 – 37355 37356 – 62914 62915 - 65535	0 - 4 5 - 8 8 - 46 47 - 57 57 - 96 97 - 100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
4	0-255	0 – 65535	0-100	<b>Cross Fade</b>
5	0-255	0 – 65535	0-100	<b>Hue</b> 0 → 360°
6	0-255	0 – 65535	0-100	<b>Saturation</b> 0 → 1.0 Saturation

## Lightning

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-254 255	0 – 65534 65535	0-99 100	<b>Frequency</b> 2 → 14 lightning strikes set Random
2	0-254 255	0 – 65534 65535	0-99 100	<b>Speed</b> 0 → 10 flashes / second Random
3	0-255	0 – 65535	0-100	<b>Color Temperature</b> CCT 2.800 → 10.000 K
4	0 - 10 11 - 20 21 - 119 120 - 145 146 - 244 245 - 255	0 – 2621 2622 – 5243 5244 – 30146 30147 – 37355 37356 – 62914 62915 - 65535	0 - 4 5 - 8 8 - 46 47 - 57 57 - 96 97 - 100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
5				<b>Sync</b> <i>If bumped to 255 (100%), the loop will start at zero (or depending on the offset value)</i>

## Paparazzi

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-255	0 – 65535	0-100	<b>Frequency</b> 6 → 120 Flashes / min
2	0-128 129-255	0 - 32767 32768 - 65535	0-50 51-100	<b>Flash Type</b> Flash Bulb Modern Flash
3	0-255	0 – 65535	0-100	<b>Color Temperature</b> CCT 2.800 → 10.000 K
4	0 - 10 11 - 20 21 - 119 120 - 145 146 - 244 245 - 255	0 – 2621 2622 – 5243 5244 – 30146 30147 – 37355 37356 – 62914 62915 - 65535	0 - 4 5 - 8 8 - 46 47 - 57 57 - 96 97 - 100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green

## Pulsing

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-255	0 – 65535	0-100	<b>Frequency</b> 5 → 90 Pulses / minute
2	0-255	0 – 65535	0-100	<b>Pulse Duration</b> 4 → 0.25 seconds
3	0-255	0 – 65535	0-100	<b>Color Temperature</b> CCT 2.800 → 10.000 K
4	0 - 10 11 - 20 21 - 119 120 - 145 146 - 244 245 - 255	0 – 2621 2622 – 5243 5244 – 30146 30147 – 37355 37356 – 62914 62915 - 65535	0 - 4 5 - 8 8 - 46 47 - 57 57 - 96 97 - 100	<b>Green-Magenta Point</b> neutral / no effect full minus green -99% → -1% neutral / no effect 1% → 99% full plus green
5	0-255	0 – 65535	0-100	<b>Cross Fade</b>
6	0-255	0 – 65535	0-100	<b>Hue</b> 0 → 360°
7	0-255	0 – 65535	0-100	<b>Saturation</b> 0 → 1.0 Saturation

## Television

Parameter	Value 8 bit	Value 16 bit	Percent	Function
1	0-84 85-170 171-255	0 – 21844 21845 – 43690 43690 - 65535	0-32 33-66 67-100	<b>CCT Range</b> <i>Not continuous, set range for random generation</i> 2.800 → 4.700 K 4.700 → 6.500 K 6.500 → 10.000 K
2	0-255	0 - 65535	0-100	<b>Speed</b> 4 → 24 changes / min

## Overview of Typical CCT Values as DMX Values

CCT value	DMX value (8 bit)			DMX value (16 bit)		
Sky-Panel			C			C
3.200 K			14			3.670
5.600 K			99			25.493
6.000 K			113			29.098
6.500 K			131			33.685

### ***Equations for calculation***

**To calculate the CCT value**

8 bit

$$DMX_{Value} = \frac{CCT_{Value} - 2800}{28.235}$$

$$CCT_{Value} = (DMX_{Value} \times 28.235) + 2800$$

16 bit

$$DMX_{Value} = \frac{CCT_{Value} - 2800}{0.109865}$$

$$CCT_{Value} = (DMX_{Value} \times 0.109865) + 2800$$

**To calculate the x,y coordinate**

8 bit

$$DMX_{x-Value} = \frac{x_{Coordinate} \times 255}{0.8}$$

$$DMX_{y-Value} = \frac{y_{Coordinate} \times 255}{0.8}$$

16 bit

$$DMX_{x-Value} = \frac{x_{Coordinate} \times 65535}{0.8}$$

$$DMX_{y-Value} = \frac{y_{Coordinate} \times 65535}{0.8}$$

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