FUSION
by **GLP**

X-PAR 18Z

User Manual

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Fixture software version 1.2.0

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Document revisions

Revision number	Notes	Date released
20240416-1	First X-PAR 18Z User Manual available Firmware v. 1.2.0	April 2024

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1. Safety

Key to symbols

The following symbols are used in the product's user documentation:

	Warning! Safety hazard. Risk of severe injury or death.		**Warning!** Hazardous voltage. Risk of lethal or severe electric shock.
	Warning! See user documentation for important safety information.		**Warning!** Fire hazard.
	Warning! Risk of eye injury.		**Warning!** Hot surface. Risk of burn injury.

 Warning! Read the Quick Start and Safety Manual supplied with the Fusion X-PAR 18Z lighting fixture and available for download from www.glp.de before installing, operating or servicing the fixture. The Quick Start and Safety Manual contains important information for the safe use of Fusion X-PAR 18Z fixtures. If you fail to read that information, you may create a safety hazard with a risk of injury, death or damage.

If you have any doubts or questions about how to use the product safely, please contact your GLP® supplier, who will be happy to help.

The user documentation for GLP Fusion X-PAR 18Z lighting fixture consists of:

- The **Fusion X-PAR 18Z Quick Start and Safety Manual**, supplied with Fusion X-PAR 18Z fixtures and available for download from www.glp.de. The Quick Start and Safety Manual contains important safety information and installation instructions that the installer and user must read. It also contains a detailed product overview, dimensions drawings and technical specifications for the product.

- The **Fusion X-PAR 18Z User Manual**, available for download from www.glp.de. The User Manual explains features and control of Fusion X-PAR 18Z fixtures.

- The **Fusion X-PAR 18Z DMX Channel Index**, containing the DMX control channel layout and DMX commands available in the fixture. This information is also included in the User Manual.

The Fusion X-PAR 18Z is intended for use by experienced professionals with the knowledge and skills to set up, operate, and maintain high-powered, remotely controlled lighting equipment safely and efficiently. These operations require expertise that may not be provided in this manual.

- Respect all warnings and directions given in the product's user documentation and on the product. Read the user documentation and familiarize yourself with the safety precautions it contains before installing, using or servicing the product. GLP and affiliated companies will take no responsibility for damage or injury resulting from disregard for the information in the user documentation.

- Check the GLP website at www.glp.de and make sure that you have the latest versions of the product's user documentation.

- Check the fixture software version indicated on page 2 of this User Manual and then use the fixture's control panel to check the version installed in the fixture. If the versions are not the same, the user manual may still cover the fixture, because software updates do not always affect the use of the fixture. However, it is possible that this User Manual does not match the fixture perfectly. Software release notes can help clarify this question. You can consult software release notes and download the correct version of this manual on the GLP website if necessary.

- Make both the Quick Start and Safety Manual and this User Manual available to all persons who will install, operate or service the product. Save both documents for future reference.

- If you have any questions about the safe operation of the product, please contact an authorized GLP distributor (see list of distributors at www.glp.de).

- Use the product only as directed in this manual. Observe all markings in this manual and on the product.

GLP Service and Support

Contact information for the nearest GLP Service and Support is available online at www.glp.de/en/service, by email at info@glp.de, or by telephone at the following numbers:

- GLP Germany: +49 (7248) 927 19-55

- GLP N. America: +1 818 767-8899

- GLP UK: +44 1392 690140

- GLP Asia: +852 (3151) 7730

- GLP Nordic: +46 737 57 11 40

Avoiding damage to the fixture

The Quick Start and Safety Manual contains important information that is intended to help you avoid possible damage to the fixture from other light sources, during transportation, etc. Read that information before storing, transporting or using the fixture.

2. Features

Light source

The Fusion X-PAR 18Z uses a 180W RGBL LED light source (Red, Green, Blue, Lime). It has a smart cooling system with a single fan.

Control options

The Fusion X-PAR 18Z is compatible with DMX 512 and RDM control protocols. It also includes a GLP iQ.Mesh module for easy configuration, control, service and maintenance via the GLP iQ.Service App and a LumenRadio CRMX module for wireless DMX control.

Zoom

The Fusion X-PAR 18Z has a zoom range that lets you vary the output from 8.5° beam angle to 55° field angle. Control on the Zoom DMX channel moves from spot to flood as the DMX value increases (can be inverted in Settings).

Color Mix Mode

The color output can be set using either RGB values (Lime output set automatically for best color rendering) or direct control of the RGBL emitters. You can change the color mixing mode using the **Fixture Settings → Color Mix Mode** setting or via DMX on the Special/Control channel.

Color Wheel

Depending on the DMX control mode selected, you can select a color from a virtual color wheel channel that gives quick access to a wide range of LEE-referenced colors. Color Wheel is not available in "RGB(L)", "Basic" and "White" DMX control modes.

Color wheel color presets are always mixed with the best available spectrum. Color filter color coordinates are based on a Source C (daylight) light source.

If a color coordinate is outside the possible color gamut of the light source, the fixture tries to match the target color as closely as possible.

Note: Color wheel color presets have higher priority than the Color Mix, CTO and M/G Shift channels.

The virtual color wheel channel must be set to DMX 000 in order to use normal RGB or RGBL color mixing.

Color Temperature / Green-Magenta Shift

Some DMX modes allow control of CTC (color temperature) and Magenta/Green shift. These settings modify the color settings selected on the other controls. Available in "White", "Standard" and "Advanced" DMX control modes.

The Magenta/Green Shift channel lets you move the color coordinate of a white point, a mixed color or a selected CTC color along a vertical line on the color temperature curve. The corresponding white point is either shifted towards Green or Magenta. If M/G Shift is enabled, it immediately affects all mixed colors as well as the color temperature that is selected on the CTC channel. It has no effect on the colors of the virtual color wheel.

Dimming

The fixture has 16-bit dimming (only available in "Advanced" DMX control mode) with selectable dimming curve. A soft-fade option can be selected to simulate tungsten dimming.

Shutter

The fixture's electronic shutter offers continuous blackout, continuous open and a range of intensity effects.

The following shutter effects are available:

- **Single flash** performs exactly one single flash with each value change within this DMX value slot.

- **Pulse** dims up and down smoothly with the same fade-in and fade-out times. Speed can be adjusted from slow to fast.

- **Pulse open** fades in and then snaps to blackout. Speed can be adjusted from slow to fast.

- **Pulse close** fades out and then snaps to full. Speed can be adjusted from slow to fast.

- **Strobe double flash** provides a quick double flash. Speed can be adjusted from slow to fast.

- **Strobe random** strobes the fixture at random intervals, allowing a random strobe between multiple fixtures. Speed can be adjusted from slow to fast. *Note that the random effect across multiple fixtures really is random!*

- **Strobe** strobes the fixture at a fixed rate and also perfectly synchronizes the strobe in multiple fixtures so that all the fixtures flash at exactly the same time. Speed can be adjusted from slow to fast.

Special/Control DMX channel

The *Special/Control* DMX channel lets you change fixture settings and perform a fixture reset from the control desk (a possibility that can be very useful during a show or for a specific scene). To apply a command on the *Special/Control* channel, you must hold the command for the time indicated in the DMX channel index section at the end of this user manual.

To trigger a reset using the *Special/Control* channel, you must send the DMX value for this function for 3 seconds. If you want to trigger an additional reset using the *Special/Control* channel, you must first move away from the Reset DMX value and then return to this value. This requirement to change DMX values eliminates the risk of the fixture entering an unwanted Reset loop if it is patched wrongly.

3. Settings

The settings described in this chapter let you customize the Fusion X-PAR 18Z. Settings can be available in the control panel on the rear of the fixture, via DMX and/or via RDM.

Color Mix Mode

The fixture uses an LED with RGBL emitters (Red, Green, Blue, Lime). This color combination is used to give improved color rendering with better white light and pastel tints. Some DMX Control Modes allow you to change between mixing the colors in "RGB HO" (RGB with focus on High Output) and "RGB HQ" (RGB with Focus on High Color Quality). In both color modes, the Lime emitters are automatically controlled and the Lime control channel(s) have no effect; color is set using levels of Red, Green and Blue.

Using the menu option **Fixture Settings → Color Mix Mode** you can change the color control mode:

RGB HO (Calibrated) sets the fixture to automatically control emitters from the RGB settings for maximum light output.

- RGB HQ (Calibrated) sets the fixture to automatically control emitters from the RGB settings to give maximum color rendering quality.

- RGBL mode allows independent control of the Red, Green, Blue and Lime emitters.

The default setting is **RGB HO (Calibrated)**. RGB(L) control is not available in "White" and "Easy" DMX control modes.

Control Protocol

The Fusion X-PAR 18Z can be controlled via USITT512 DMX over a standard DMX cable link using the fixture's 5-pin XLR connectors, or using CRMX wireless DMX, or using the GLP iQ.Mesh system.

Note: The **Protocol Setup** settings are not affected if you select **Default Settings** from the Service menu, but they are returned to factory defaults if you select **Load Factory Backup**.

Use the **Protocol Setup → Data In** option to select one of the following options:

DMX

The fixture is set up for control via a standard DMX cable.

CRMX

The fixture is set up for control via CRMX wireless system..

GLP iQ.Mesh

The fixture's internal GLP iQ.Mesh technology lets you create a wireless connection to the GLP iQ.Service App on your mobile device. For information on connecting one or more fixtures with the GLP iQ.Service App, please contact your GLP Support or read the GLP iQ.Service User Manual.

Dimmer curves

See Figure 1. You can select from four dimming curves using the **Fixture Settings →Dimmer Curve** option on the control panel:
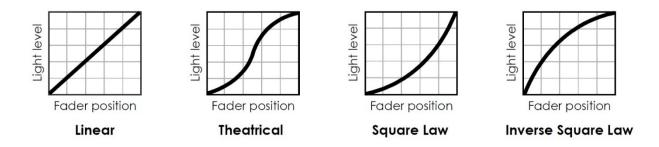

Figure 1. Dimming curves

- **Linear** sets dimming so that it appears to increase and decrease evenly throughout the dimming range.

- **Theatrical** is an S-shaped curve that gives finer control at low and at high light levels.

- **Square Law** gives finer control at low light levels and coarser control at high light levels.

- **Inverse Square Law** gives coarser control at low light levels and finer control at high light levels.

The default setting is **Linear**.

The fixture can be set to snap to dimmer changes or to have a soft-fade change similar to a tungsten fixture. This is set using the **Fixture Settings → Dimmer Speed** option. The default setting is **Fast**.

Zoom

The Zoom operation can be inverted using the **Fixture Settings → Zoom Invert** menu option.

Behavior when the fixture is not receiving a DMX signal

You can set the fixture to react in three different ways if no DMX signal is present (if the fixture is being controlled by DMX but the DMX signal stops, or if you apply power to the fixture when no DMX signal is present).

The behavior is set using the **Fixture Settings → No Signal** menu option.

- **Hold** sets the fixture to continue obeying the last DMX values it received. If the fixture is powered up with no DMX signal, the fixture will remain in black out. This is the default setting.

- **Blackout** sets the fixture to black out.

- **Scene** sets the fixture to output the DMX state stored using the Fixture Settings → Capture Scene option on the user menu, or using the Manual DMX settings.

Variable PWM frequency

The fixture's LED is controlled using Pulse-Width Modulation (PWM) which can cause visible banding or strobing on video camera pictures. To minimize this effect you can change the frequency of the pulses used for the PWM using the **Fixture Settings → PWM** option on the user menu. As the frequency is increased, the dimming resolution of the fixture may decrease.

OLED Display

The illuminated OLED display lets you change fixture settings when power is applied. See Chapter 4 for more details.

Using the **Fixture Settings → Display Mode** option on the user menu you can set the display to automatically switch off when no buttons are pressed for a time.

- **Auto** (default): the display automatically switches off after a few seconds if the fixture is receiving a valid control signal and has not detected an error. If the fixture is not receiving a valid control signal, the display will flash. If the fixture has detected an error, the display remains constantly on and shows an error message.

- **On**: The display stays on constantly. This setting can be useful if you are configuring or servicing the fixture.

- **Off**: The display will automatically switch off after a few seconds even if the fixture is not receiving a valid control signal or if it has detected an error. Pressing any button turns on the display again.

Using the **Fixture Settings → Display Orientation** option you can rotate the display to make it easier to read if the fixture is rigged upside-down.

Using the **Fixture Settings → Lock** option you can lock the control panel to prevent the options being changed. To unlock, enter the passcode – the default passcode is 0000 or you can set your own code using the **Fixture Settings → Lock → Set Passcode** menu setting.

When the display is locked, pressing any button will show a warning message and the button press will have no other effect.

If the passcode is lost, you can reset it to the default by loading Factory Default Settings using the DMX Control channel or by RDM.

Fan modes

Four cooling fan modes let you give priority to lowest fan noise or most powerful cooling:

- **Regulated** mode gives priority to light output and only operates fans as necessary. If the fixture is blacked out, fans run at minimum speed. When light output intensity is increased, temperature regulation increases fan speed to the level necessary to keep the fixture at optimum temperature.

  If light output is set to maximum intensity but the fans can keep the fixture at optimum temperature, there is no regulation of light intensity. If the fixture begins to exceed optimum temperature and the fans are running at maximum speed, light intensity is limited until optimum temperature can be maintained.

- **High** mode sets the fixture to give maximum light output and suits operation in high ambient temperatures. Fans are set to constant operation at high speed. Light output intensity is limited smoothly if it becomes necessary in order to keep fixture temperature at optimum level.

  You can also use **High** mode to cool down a fixture quickly after a period of operation or to help remove dust from cooling fans.

- **Medium** mode sets fans to constant operation at medium speed. Light output intensity is reduced to a level where it will normally remain constant at ambient temperatures of up to 45° C (113° F). Intensity is smoothly limited further if it becomes necessary in order to keep fixture temperature at optimum level.

- **Low** mode sets fans to constant operation at low speed and is optimized for minimum noise. Light output intensity is reduced to a level where it will normally remain constant at ambient temperatures of up to 30° C (86° F). Intensity is smoothly limited further if it becomes necessary in order to keep fixture temperature at optimum level.

Note: In all fan modes, if fixture temperature reaches a dangerous level, the LEDs are shut down for a period until the fans have brought the temperature down to a safe level.

Load User Settings

Lets you load different custom fixture configurations or return the fixture to the default fixture settings.

*To save a custom setting preset from 1 to 3, see **Service → Advanced → Save_Settings**.*

- **Load User Settings 1** to **3** loads one of three specific custom fixture settings. You must confirm the function for 3 seconds before the new settings are loaded (see **Fixture Settings → Load User Settings**).

- **Save User Settings 1** to **3** saves the current fixture settings as a set of user settings. You must confirm the function for 2 seconds in order to save the settings as one of the three custom settings presets (see **Service → Advanced → Save User Settings**).

*Note: The **Load User Setting Presets** and **Load User Setting Defaults** commands will only affect settings in the **Fixture Settings** group and will not affect DMX Address, Control Mode, Protocol Type, IP Settings, etc. This helps avoid loss of communication with the controller.*

Manual DMX

Gives individual control of the fixture using the fixture user interface. The menu timeout function is disabled while this menu is open.

*Note that external DMX Values will always have higher priority than manually entered values. We recommend that you disconnect the fixture from the data source when using **Manual DMX**.*

Manual DMX values are saved to the internal **Scene (Stand Alone)** memory as soon you exit the **Manual DMX** menu. This scene can be replayed automatically using the **No-Signal → Scene (Stand Alone)** function.

- **Manual Control**: Manually sets a DMX value for each function.

- **Capture DMX values**: Captures the external DMX signal values currently being received and uses them as the manual control values.

Information

The **Information** submenu provides readouts of all relevant information such as the error list if any errors have been detected, the fixture's serial number, firmware version, device info, device hours counter, power cycles counter, DMX input monitor, signal quality etc.

Service

The Service menu contains the following items:

- **Test All**: Runs a test sequence of all LEDs for a quick test of the fixture. Press BACK to stop the test sequence.

- **Test LED only**: Runs a test sequence of the LED pixel only. Press BACK to stop the test sequence.

- **Test Zoom only**: Runs a test sequence of Zoom functionality only. Press BACK to stop the test sequence.

- **Default Settings**: Sets options to default except: Captured Scene, DMX Address, ControlMode, Preset Values, Offset Values.

- **Units**: Allows Temperature units to be set to Centigrade or Farenheit.

- **Job Offsets**: Lets you set +/- offsets to the zoom function, and the RGBL emitter brightness for matching between fixtures.

- **Reset Counter**: Allows you to reset various maintenance counters within the fixture: Device Hours, Power Cycles, Lamp Hours, Max. Temperature, Temperature Unit

- **Load Factory Backup**: (Hold Enter for 3 seconds to confirm) Resets all fixture settings to default except User Hour Counter, Temperature Unit.

Factory Menu

Important! Do not enter the Factory Menu unless you are a trained service professional with service documentation or clear instructions from GLP Service. Read the user and service documentation carefully before entering this menu. In the Factory Menu you can apply critical settings which can damage the fixture.

The Factory Menu is a hidden menu for the manufacturer or professional service technicians only. This special menu allows fixture calibration and the adjustment of all mechanical features following the manufacturer's instructions.

To enable the Factory Menu, press the **ENTER** and **MENU** buttons together while at the top level menu. You can release the buttons as soon as FACTORY MODE appears in the display. After doing this, Factory Menu is visible as the last item in the main menu.

The Factory Menu will remain available until the next power cycle. While the Factory Menu is enabled, all display timeouts are disabled to make working on the fixture easier and a Factory symbol is visible in the main screen.

4. Control panel

⚠️ **Warning!** DMX control is disabled when the control menus are active. Be prepared for the fixture to emit bright light as soon as you exit the control menus.

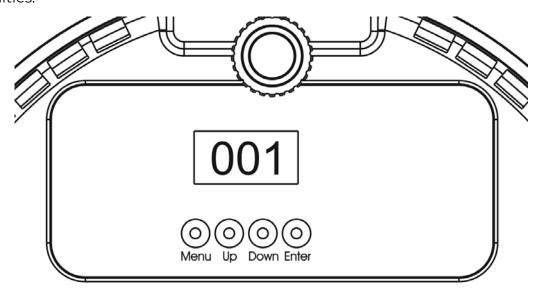The control panel and onboard OLED display provide access to user settings, readouts and utilities.

Figure 2. Onboard control panel

The four control buttons have the following functions:

MENU/ESC: Activate the control panel if it is in sleep mode or go back one level towards the top of the menu.

UP: Scroll up or increase a number.

DOWN: Scroll down or reduce a number.

ENTER: Enter a menu, select a setting or implement a command.

When you apply power to the fixture, it boots up. After it has booted, the panel displays the default screen showing the fixture's DMX mode and the DMX address that the fixture is using.

In the default screen:

● Hold down the **MENU** button to show the Quick Set Menu.

● Hold down the **UP** or **DOWN** button to show the Settings Overview screen which lets you see all main fixture information and settings. This can be useful if you are troubleshooting or if you are in contact with GLP Service.

You can set the display to go into a blank sleep mode after a time by using the **Display Mode → Auto** control panel option.

DMX control is disabled when the control menus are active.

See also the Display On / Off functions on the *DMX Control / Settings* channel.

Control button shortcuts

Live Diagnostics

Pressing UP or DOWN three times calls up an overview of all main fixture information, signal quality and settings. This can be useful if you are troubleshooting or if you are in contact with GLP Service.

Toggle Display Orientation

Pressing and releasing UP and DOWN together rotates the display through 180°.

Note

If **Display Orientation** is set to **Auto**, changing the display orientation by pressing UP and DOWN at the same time will only change the display orientation until the next power cycle. To change the display orientation permanently, go to **Fixture Settings → Display Orientation** in the control panel menus.

Trigger iQ.Service Connect

Pressing and holding ENTER for 6 seconds enables connectivity to the GLP iQ.Connect Service App for 5 minutes.

Error Warning

If the fixture detects an error, it shows **ERROR** in the display. This Error message is 'sticky' and will continue to be shown in the display until the next power cycle or reset. An Error can have a variety of causes. To see details of the cause of the error, press **Details** for the error information. To ignore the error message, press **ESC**.

If you need to contact GLP Service in connection with an Error message, please press **Details** and make a note of any information given. This will help the GLP service team provide rapid assistance.

Loss of DMX signal

The display flashes if the DMX signal is lost (the fixture will then behave according to its No Signal setting – see 'Behavior when the fixture is not receiving a DMX signal' on page 13).

5. Control menus

Main menu

The following menus and commands are available in the Fusion X-PAR 18Z control panel.

Menus		*Notes*
DMX Address		
1-508		*Set fixture's DMX start address. Highest possible address depends on control mode.*
Control Mode		
M1 Basic		*Set fixture's DMX control mode.*
M2 Standard		
M3 Advanced		
M4 RGB(L)		
M5 White		
M6 Easy		
Protocol Setup		
Data In	**DMX**	*Control via DMX protocol*
	CRMX	
	iQ.Mesh	
Linking Options	CRMX Unlink	*Unlink from any existing CRMX network*
	iQ.Mesh Unlink	*Unlink from any existing iQ.Mesh network*
Fixture Settings		
Color Mix Mode	**RGB HO**	*Sets maximum output intensity. M1-M4 only. Lime channels have no effect.*
	RGB HQ	*Sets maximum color quality. M1-M4 only. Lime channels have no effect.*
	RGBL	*Independent emitter control*
Dimmer Curve	**Linear**	*Linear dimming curve*
	Theatrical (S-Curve)	*Finer dimming control at low and high intensity*
	Square Law	*Soft (square law) dimming*

			curve
	Inv. Square Law		*Inverse square law*
Dimmer Speed	Soft		
	Fast		
	Snap		
Zoom Invert	**Off**		*DMX 0 = Narrow beam*
	On		*DMX 0 = Wide beam*
No-Signal	Blackout		*Fixture goes to blackout if control signal lost*
	Hold		*Fixture holds current state*
	Scene		*Fixture goes to captured scene (next option)*
Capture Scene	Confirm		*Press Enter to capture scene for control signal loss*
PWM	600 Hz		*Best dimming*
	1200 Hz		
	2200 Hz		
	3000 Hz		
	4800 Hz		
	9600 Hz		
	25 kHz		*Maximum PWM frequency, helps avoid flicker on TV cameras at very high shutter speeds*
Display Mode	**Auto**		*Display off if no error and valid control signal*
	On		*Display always on*
	Off		*Display off*
Display Orientation	**Normal**		
	Upside Down		
Max Temperature	60 – **90** °C (140 – **194** °F)		*Units set to C or F in Service Menu*
Fan Mode	**Regulated**		*Only X-PAR 18Z*
	High		
	Medium		
	Low		
RDM	**On**		
	Off		
Load Settings	Preset 1	Hold 3sec to confirm	*Load custom / default fixture settings*
	Preset 2	Hold 3sec to confirm	
	Preset 3	Hold 3sec to confirm	
	Default	Hold 3sec to confirm	
Lock	**Off**		
	On		
	Set Passcode		

Manual Control			
Manual DMX	Dimmer	< 000..**255** >	*Manually control all effects*
	Shutter	< **000**..255 >	
	Zoom	< **000**..255 >	
	R	< 000..**255** >	
	G	< 000..**255** >	
	B	< 000..**255** >	
	Capture DMX Values	Confirm for 3 seconds *(press Enter)*	*Sets all manual DMX values to the values currently being received via DMX*
Stand Alone Setting	Stand Alone		
	Host		
	Client		
Reboot	Confirm		*Reboots the fixture*
Information			
Firmware Version			*Shows fixture firmware information*
Calibration			*Shows calibration state*
Fixture Details			*Shows fixture name, serial, MAC, RDM ID*
Device Life			*Fixture power on counter*
DMX Link Status			*Online state, frame rate, drops, quality*
Temperatures			*LED temperature*
Wireless DMX			*Link state, signal strength*
iQ.Mesh			*Link state, signal strength*
Fan Speed			
Error Log			

Service				
Test All				*Run test sequence of all effects*
Test LED only				*Run test sequence of LED*
Test Zoom only				*Run test sequence of zoom effect.*
Default Settings				*Set options to default except Captured Scene, DMX Address, Control Mode, Preset Values, Offset Values*
Units	**C**			
	F			
Job Offsets	Enable / Disable	**Enable**		*Normal operation*
		Disable		*Disable pan, tilt and display timeouts (exit by cycling power off and on.)*
	Color Job offsets	Red	-128 .. +128	*Create custom offsets in home positions of all effects. Default offset = 0*
		Green	-128 .. +128	
		Blue	-128 .. +128	
		Lime	-128 .. +128	
	Zoom Job Offset	-128 .. +128		
	Reset counters	Device Hours	Confirm 2 seconds	
		Power Cycles		
		Lamp Hours		
		Max. Temperature		
		Temperature Unit		
	Save User Settings	Preset 1	Confirm 2 seconds	*Saves current fixture settings as user settings preset*
		Preset 2		
		Preset 3		
Load Factory Backup				
>>>Confirm<<<				*Reloads all factory default settings and default fixture configuration settings.*

*Default settings are written in **BOLD type***

6. DMX control modes overview

The Fusion X-PAR 18Z offers the following DMX control modes.

DMX Mode 1: Basic gives raw color control using 8-bit RGB levels, with overall dimmer and shutter controls. The Lime channel has no effect unless the fixture Color Mode is set to RGBL.

A Control / Settings channel lets you configure the fixture remotely via DMX.

Mode 1 Basic	
1	Dimmer
2	Shutter
3	Zoom
4	Control
5	Red
6	Green
7	Blue
8	Lime

DMX Mode 2: Standard provides a selection of fixed colors with overall dimmer and shutter controls. If Channel 9 is set below DMX 10 (3.9%) then the color can be controlled by the RGB(L) channels - the Lime channel has no effect unless the fixture Color Mode is set to RGBL. If Channel 9 is DMX 10 or above, Channels 5-8 have no effect.

The CTC and M/G shift channels modify the color selected by the other channels.

A Control / Settings channel lets you configure the fixture remotely via DMX.

Mode 2 Standard	
1	Dimmer
2	Shutter
3	Zoom
4	Control
5	Red
6	Green
7	Blue
8	Lime
9	Color Wheel
10	CTC
11	M/G shift

DMX Mode 3: Advanced provides a selection of fixed colors with overall 16-bit dimmer and a shutter control. If Channel 14 is set below DMX 10 (3.9%) then the color can be controlled by the 16-bit RGB(L) channels - the Lime channels have no effect unless the fixture Color Mode is set to RGBL. If Channel 14 is DMX 10 or above, Channels 6-13 have no effect.

The CTC and M/G shift channels modify the color selected by the other channels.

A Control / Settings channel lets you configure the fixture remotely via DMX.

Mode 3 Advanced	
1	Dimmer
2	Dimmer Fine
3	Shutter
4	Zoom
5	Control
6	Red
7	Red fine
8	Green
9	Green fine
10	Blue
11	Blue fine
12	Lime
13	Lime fine
14	Color wheel
15	CTC
16	M/G shift

DMX Mode 4: RGB(L) gives raw color control using 8-bit RGB levels. The Lime channel has no effect unless the fixture Color Mode is set to RGBL. There is no master dimmer control.

A Control / Settings channel lets you configure the fixture remotely via DMX.

Mode 4 RGB(L)	
1	Zoom
2	Control
3	Red
4	Green
5	Blue
6	Lime

DMX Mode 5: White operates the fixture as a white light with controllable Color Temperature and Green/magenta shift

A Control / Settings channel lets you configure the fixture remotely via DMX.

Mode 5 White	
1	Dimmer
2	Shutter
3	Zoom
4	Control
5	CTC
6	Green/Magenta shift

DMX Mode 6: Easy provides a simple operating mode with a fixed selection of colors and zoom.

A Control / Settings channel lets you configure the fixture remotely via DMX.

Mode 6 Easy	
1	Dimmer
2	Zoom
3	Control
4	Color Wheel

7. DMX control channel layout

In the following DMX channel layout tables:

- Where commands are marked with an asterisk * you must send that value continuously for 3 seconds (or other duration if indicated in the table) to apply the command.

DMX Mode 1: Basic

8 DMX Channels

Channel		Command	DMX range	Percent	Default DMX	Fade
1	**Master Dimmer**	Intensity 0-100%	0-255	0-100%	0	Fade
2	**Shutter**	Closed	0-4	0-1.6%	255	Snap
		Single Flash (when value changes)	5-9	1.9-3.5%		Snap
		Sync Ramp-Up (slow→fast)	10-39	3.9-15.3%		Fade
		Sync Ramp-down (slow→fast)	40-69	15.7-27%		Fade
		Sync Ramp up-down (slow→fast)	70-99	27.4-38.9%		Fade
		Sync Double Flash (slow→fast)	100-129	39.2-50.6%		Fade
		Random Strobe (slow→fast)	130-359	51-62%		Fade
		Sync Strobe (1Hz-10Hz)	160-239	62.8-93.7%		Fade
		Open	251-255	98.4-100%		Snap
3	**Zoom**	Beam angle 6-43 degrees	0-255	0-100%	0	Fade
4	**Control / Settings**	No function	0-15	0-5.8%	0	Snap
		Compatibility: Off*	16-20	6.2-7.8%		
		Compatibility: X-PAR 12Z	21-25	8.2-9.8%		
		Compatibility: X-PAR 8Z	26-30	10.1-11.7%		
		No function	31-35	12.2-13.7%		
		Color Mode: RGB HO (Calibrated)*	36-40	14.0-15.6%		
		Color Mode: RGB HQ (Calibrated)*	41-45	16.0-17.6%		
		Color Mode: RGBL *	46-50	18.0-19.6%		
		No function	51-55	20.0-21.6%		
		Dimmer speed smooth*	56-60	22.0-23.5%		
		Dimmer speed fast*	61-65	23.9-25.5%		
		No function	66-70	25.9-27.5%		
		Dimming curve Linear*	71-75	27.8-29.4%		
		Dimming curve Theatrical*	76-80	29.8-31.4%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		Dimming curve Square Law*	81-85	31.8-33.3%		
		Dimming curve Inverse Square Law*	86-90	33.7-35.3%		
		No Function	91-95	35.7-37.3%		
		No DMX = Hold scene*	96-100	37.6-39.2%		
		No DMX = Blackout*	101-105	39.6-41.2%		
		No DMX = Play captured scene*	106-110	41.6-43.1%		
		No Function	111-115	43.5-45.1%		
		Display Backlight Auto*	116-120	45.5-47.1%		
		Display backlight Off*	121-125	47.5-49.0%		
		No Function	126-130	49.4-51.2%		
		DMX Mode: M1-Basic*	131-135	51.4-52.9%		
		DMX Mode: M2-Standard*	136-140	53.3-54.9%		
		DMX Mode: M3-Advanced*	141-145	55.3-56.9%		
		DMX Mode: M4-RGB(L)*	146-150	57.3-58.8%		
		DMX Mode: M5-White*	151-155	59.2-60.8%		
		DMX Mode: M6-Easy*	156-160	61.2-62.7%		
		No Function	161-165	63.1-64.7%		
		Zoom Invert On*	166-170	65.1-66.7%		
		Zoom Invert Off*	171-175	67.1-68.5%		
		Zoom Reset*	176-180	69.0-70.5%		
		Fixture reset*	181-185	71.0-72.5%		
		Factory default settings (except DMX address & mode)*	186-190	72.9-74.5%		
		No function	191-195	74.9-76.2%		
		PWM Rate: 600Hz	196-200	76.9-78.4%		
		PWM Rate: 1200Hz	201-205	78.8-80.4%		
		PWM Rate: 2200Hz	206-210	80.8-82.4%		
		PWM Rate: 3000Hz	211-215	82.7-84.3%		
		PWM Rate: 4800Hz	216-220	84.7-86.3%		
		PWM Rate: 9600Hz	221-225	86.7-88.2%		
		PWM Rate: 25KHz	226-230	88.6-90.2%		
		Fan Mode: Regulated*	231-235	90.6-92.1%		
		Fan Mode: High	236-240	92.5-94.1%		
		Fan Mode: Medium	241-245	94.5-96.1%		
		Fan Mode: Low	246-250	96.5-98%		
		Fixture Reset	251-255	98%-100%		
5	**Red**	Intensity 0-100%	0-255	0-100%	0	Fade
6	**Green**	Intensity 0-100%	0-255	0-100%	0	Fade
7	**Blue**	Intensity 0-100%	0-255	0-100%	0	Fade

Channel		Command	DMX range	Percent	Default DMX	Fade
8	**Lime**	Intensity 0-100%	0-255	0-100%	0	Fade

Note: Channel 8 has no effect unless Fixture Settings → Color Mode is set to RGBL

DMX Mode 2: Standard

11 DMX Channels

Channel		Command	DMX range	Percent	Default DMX	Fade
1	**Master Dimmer**	Intensity 0-100%	0-255	0-100%	0	Fade
2	**Shutter**	Closed	0-4	0-1.6%	255	Snap
		Single Flash (when value changes)	5-9	1.9-3.5%		Snap
		Sync Ramp-Up (slow→fast)	10-39	3.9-15.3%		Fade
		Sync Ramp-down (slow→fast)	40-69	15.7-27%		Fade
		Sync Ramp up-down (slow→fast)	70-99	27.4-38.9%		Fade
		Sync Double Flash (slow→fast)	100-129	39.2-50.6%		Fade
		Random Strobe (slow→fast)	130-359	51-62%		Fade
		Sync Strobe (1Hz-10Hz)	160-239	62.8-93.7%		Fade
		Open	251-255	98.4-100%		Snap
3	**Zoom**	Beam angle 6-43 degrees	0-255	0-100%	0	Fade
4	**Control / Settings**	No function	0-15	0-5.8%	0	Snap
		Compatibility: Off*	16-20	6.2-7.8%		
		Compatibility: X-PAR 12Z	21-25	8.2-9.8%		
		Compatibility: X-PAR 8Z	26-30	10.1-11.7%		
		No function	31-35	12.2-13.7%		
		Color Mode: RGB HO (Calibrated)*	36-40	14.0-15.6%		
		Color Mode: RGB HQ (Calibrated)*	41-45	16.0-17.6%		
		Color Mode: RGBL *	46-50	18.0-19.6%		
		No function	51-55	20.0-21.6%		
		Dimmer speed smooth*	56-60	22.0-23.5%		
		Dimmer speed fast*	61-65	23.9-25.5%		
		No function	66-70	25.9-27.5%		
		Dimming curve Linear*	71-75	27.8-29.4%		
		Dimming curve Theatrical*	76-80	29.8-31.4%		
		Dimming curve Square Law*	81-85	31.8-33.3%		
		Dimming curve Inverse Square Law*	86-90	33.7-35.3%		
		No Function	91-95	35.7-37.3%		
		No DMX = Hold scene*	96-100	37.6-39.2%		
		No DMX = Blackout*	101-105	39.6-41.2%		
		No DMX = Play captured scene*	106-110	41.6-43.1%		
		No Function	111-115	43.5-45.1%		
		Display Backlight Auto*	116-120	45.5-47.1%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		Display backlight Off*	121-125	47.5-49.0%		
		No Function	126-130	49.4-51.2%		
		DMX Mode: M1-Basic*	131-135	51.4-52.9%		
		DMX Mode: M2-Standard*	136-140	53.3-54.9%		
		DMX Mode: M3-Advanced*	141-145	55.3-56.9%		
		DMX Mode: M4-RGB(L)*	146-150	57.3-58.8%		
		DMX Mode: M5-White*	151-155	59.2-60.8%		
		DMX Mode: M6-Easy*	156-160	61.2-62.7%		
		No Function	161-165	63.1-64.7%		
		Zoom Invert On*	166-170	65.1-66.7%		
		Zoom Invert Off*	171-175	67.1-68.5%		
		Zoom Reset*	176-180	69.0-70.5%		
		Fixture reset*	181-185	71.0-72.5%		
		Factory default settings (except DMX address & mode)*	186-190	72.9-74.5%		
		No function	191-195	74.9-76.2%		
		PWM Rate: 600Hz	196-200	76.9-78.4%		
		PWM Rate: 1200Hz	201-205	78.8-80.4%		
		PWM Rate: 2200Hz	206-210	80.8-82.4%		
		PWM Rate: 3000Hz	211-215	82.7-84.3%		
		PWM Rate: 4800Hz	216-220	84.7-86.3%		
		PWM Rate: 9600Hz	221-225	86.7-88.2%		
		PWM Rate: 25KHz	226-230	88.6-90.2%		
		Fan Mode: Regulated*	231-235	90.6-92.1%		
		Fan Mode: High	236-240	92.5-94.1%		
		Fan Mode: Medium	241-245	94.5-96.1%		
		Fan Mode: Low	246-250	96.5-98%		
		Fixture Reset	251-255	98%-100%		
5	**Red**	Intensity 0-100%	0-255	0-100%	0	Fade
6	**Green**	Intensity 0-100%	0-255	0-100%	0	Fade
7	**Blue**	Intensity 0-100%	0-255	0-100%	0	Fade
8	**Lime**	Intensity 0-100%	0-255	0-100%	0	Fade
		Open (Color set by ch 5-8)	0-3	0-1.2%	0	Snap
		Preset 3200K	4-6	1.6-2.4%		
		Preset 4200K	7-9	2.7-3.5%		
9	**Color Wheel**	Preset 5600K	10-12	3.9-4.7%		
		Preset 6500K	13-15	5.1-5.9%		
		Filter 004 (Medium Bastard Amber)	16-18	6.3-7.1%		
		Filter 019 (Fire)	19-21	7.5-8.2%		

Channel	Command	DMX range	Percent	Default DMX	Fade
	Filter 025 (Sunset Red)	22-24	8.6-9.4%		
	Filter 026 (Bright Red)	25-27	9.8-10.6%		
	Filter 036 (Medium Pink)	28-30	11-11.8%		
	Filter 049 (Medium Purple)	31-33	12.2-12.9%		
	Filter 058 (Lavender)	34-36	13.3-14.1%		
	Filter 068 (Sky Blue)	37-39	14.5-15.3%		
	Filter 088 (Lime Green)	40-42	15.7-16.5%		
	Filter 089 (Moss Green)	43-45	16.9-17.6%		
	Filter 090 (Dark Yellow Green)	46-48	18-18.8%		
	Filter 102 (Light Amber)	49-51	19.2-20%		
	Filter 103 (Straw)	52-54	20.4-21.2%		
	Filter 106 (Primary Red)	55-57	21.6-22.4%		
	Filter 111 (Dark Pink)	58-60	22.7-23.5%		
	Filter 115 (Peacock Blue)	61-63	23.9-24.7%		
	Filter 117 (Steel Blue)	64-66	25.1-25.9%		
	Filter 118 (Light Blue)	67-69	26.3-27.1%		
	Filter 121 (Filter Green)	70-72	27.5-28.2%		
	Filter 122 (Fern Green)	73-75	28.6-29.4%		
	Filter 124 (Dark Green)	76-78	29.8-30.6%		
	Filter 126 (Mauve)	79-81	31-31.8%		
	Filter 128 (Bright Pink)	82-84	32.2-32.9%		
	Filter 131 (Marine Blue)	85-87	33.3-34.1%		
	Filter 132 (Medium Blue)	88-90	34.5-35.3%		
	Filter 134 (Golden Amber)	91-93	35.7-36.5%		
	Filter 135 (Deep Golden Amber)	94-96	36.9-37.6%		
	Filter 136 (Pale Lavender)	97-99	38-38.8%		
	Filter 137 (Special Lavender)	100-102	39.2-40%		
	Filter 138 (Pale Green)	103-105	40.4-41.2%		
	Filter 140 (Summer Blue)	106-108	41.6-42.4%		
	Filter 141 (Bright Blue)	109-111	42.7-43.5%		
	Filter 143 (Pale Navy Blue)	112-114	43.9-44.7%		
	Filter 147 (Apricot)	115-117	45.1-45.9%		
	Filter 148 (Bright Rose)	118-120	46.3-47.1%		
	Filter 152 (Pale Gold)	121-123	47.5-48.2%		
	Filter 154 (Pale Rose)	124-126	48.6-49.4%		
	Filter 157 (Pink)	127-129	49.8-50.6%		
	Filter 162 (Bastard Amber)	130-132	51-51.8%		
	Filter 164 (Flame Red)	133-135	52.2-52.9%		
	Filter 165 (Daylight Blue)	136-138	53.3-54.1%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		Filter 169 (Lilac Tint)	139-141	54.5-55.3%		
		Filter 170 (Deep Lavender)	142-144	55.7-56.5%		
		Filter 172 (Lagoon Blue)	145-147	56.9-57.6%		
		Filter 180 (Dark Lavender)	148-150	58-58.8%		
		Filter 182 (Light Red)	151-153	59.2-60%		
		Filter 194 (Surprise Pink)	154-156	60.4-61.2%		
		Filter 197 (Alice Blue)	157-159	61.6-62.4%		
		Filter 201 (Full C.T. Blue)	160-162	62.7-63.5%		
		Filter 202 (Half C.T. Blue)	163-165	63.9-64.7%		
		Filter 203 (Quarter C.T. Blue)	166-168	65.1-65.9%		
		Filter 204 (Full C.T. Orange)	169-171	66.3-67.1%		
		Filter 206 (Quarter C.T. Orange)	172-174	67.5-68.2%		
		Filter 219 (Fluorescent Green)	175-177	68.6-69.4%		
		Filter 247 (Filter Minus Green)	178-180	69.8-70.6%		
		Filter 248 (Half Minus Green)	1811-183	71-71.8%		
		Filter 281 (Three Quarter C.T. Blue)	184-186	72.2-72.9%		
		Filter 285 (Three Quarter C.T. Orange)	187-189	73.3-74.1%		
		Filter 352 (Glacier Blue)	190-192	74.5-75.3%		
		Filter 353 (Lighter Blue)	193-195	75.7-76.5%		
		Filter 507 (Madge)	196-198	76.9-77.6%		
		Filter 778 (Millennium Gold)	199-201	78-78.8%		
		Filter 793 (Vanity Fair)	202-204	79.2-80%		
		Filter 798 (Chrysalis Pink)	205-207	80.4-81.2%		
		Rainbwo Stop - at first Color	208-210	81.6-82.4%		
		Rainbow slow→fast	211-252	82.7-98.8%		
		Rainbow Stop - at current Color	253-255	99.2-100%		
10	CTC	RAW (RGBL control)	0-15	0-5.9%	0	Snap
		10000K	16-18	6.3-7.1%		
		9900K	19-21	7.5-8.2%		
		9800K	22-24	8.6-9.4%		
		9700K	25-27	9.8-10.6%		
		9600K	28-30	11-11.8%		
		9500K	31-33	12.2-12.9%		
		9400K	34-36	13.3-14.1%		
		9300K	37-39	14.5-15.3%		
		9200K	40-42	15.7-16.5%		
		9100K	43-45	16.9-17.6%		
		9000K	46-48	18-18.8%		

Channel	Command	DMX range	Percent	Default DMX	Fade
	8900K	49-51	19.2-20%		
	8800K	52-54	20.4-21.2%		
	8700K	55-57	21.6-22.4%		
	8600K	58-60	22.7-23.5%		
	8500K	61-63	23.9-24.7%		
	8400K	64-66	25.1-25.9%		
	8300K	67-69	26.3-27.1%		
	8200K	70-72	27.5-28.2%		
	8100K	73-75	28.6-29.4%		
	8000K	76-78	29.8-30.6%		
	7900K	79-81	31-31.8%		
	7800K	82-84	32.2-32.9%		
	7700K	85-87	33.3-34.1%		
	7600K	88-90	34.5-35.3%		
	7500K	91-93	35.7-36.5%		
	7400K	94-96	36.9-37.6%		
	7300K	97-99	38-38.8%		
	7200K	100-102	39.2-40%		
	7100K	103-105	40.4-41.2%		
	7000K	106-108	41.6-42.4%		
	6900K	109-111	42.7-43.5%		
	6800K	112-114	43.9-44.7%		
	6700K	115-117	45.1-45.9%		
	6600K	118-120	46.3-47.1%		
	6500K	121-123	47.5-48.2%		
	6400K	124-126	48.6-49.4%		
	6300K	127-129	49.8-50.6%		
	6200K	130-132	51-51.8%		
	6100K	133-135	52.2-52.9%		
	6000K	136-138	53.3-54.1%		
	5900K	139-141	54.5-55.3%		
	5800K	142-144	55.7-56.5%		
	5700K	145-147	56.9-57.6%		
	5600K	148-150	58-58.8%		
	5500K	151-153	59.2-60%		
	5400K	154-156	60.4-61.2%		
	5300K	157-159	61.6-62.4%		
	5200K	160-162	62.7-63.5%		
	5100K	163-165	63.9-64.7%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		5000K	166-168	65.1-65.9%		
		4900K	169-171	66.3-67.1%		
		4800K	172-174	67.5-68.2%		
		4700K	175-177	68.6-69.4%		
		4600K	178-180	69.8-70.6%		
		4500K	181-183	71-71.8%		
		4400K	184-186	72.2-72.9%		
		4300K	187-189	73.3-74.1%		
		4200K	190-192	74.5-75.3%		
		4100K	193-195	75.7-76.5%		
		4000K	196-198	76.9-77.6%		
		3900K	199-201	78-78.8%		
		3800K	202-204	79.2-80%		
		3700K	205-207	80.4-81.2%		
		3600K	208-210	81.6-82.4%		
		3500K	211-213	82.7-83.5%		
		3400K	214-216	83.9-84.7%		
		3300K	217-219	85.1-85.9%		
		3200K	220-222	86.3-87.1%		
		3100K	223-225	87.5-88.2%		
		3000K	226-228	88.6-89.4%		
		2900K	229-231	89.8-90.6%		
		2800K	232-234	91-91.8%		
		2700K	235-237	92.2-92.9%		
		2600K	238-240	93.3-94.1%		
		2500K	241-255	94.5-100%		
11	M/G Shift	Off - (no correction)	0-9	0-3.5%	0	snap
		full plus Magenta +100% (-0,1 Duv)	10-10	3.9-3.9%		
		plus Magenta +99% → + 1%	11-124	4.3-48.6%		fade
		neutral / no effect	125-140	49-54.9%		snap
		plus green +1% → +99%	141-254	55.3-99.6%		fade
		full plus green +100% (+ 0,1 Duv)	255-255	100-100%		

Notes: Channels 5-8 have no effect unless Channel 9 is set between 0-3.

Channel 8 has no effect unless Fixture Settings → Color Mode is set to RGBL

DMX Mode 3: Advanced

16 DMX Channels

Channel		Command	DMX range	Percent	Default DMX	Fade
1	**Master Dimmer**	Intensity 0-100% (16-bit)	0-655355	0-100%	0	Fade
2	**Dimmer Fine**					
3	**Shutter**	Closed	0-4	0-1.6%	255	Snap
		Single Flash (when value changes)	5-9	1.9-3.5%		Snap
		Sync Ramp-Up (slow→fast)	10-39	3.9-15.3%		Fade
		Sync Ramp-down (slow→fast)	40-69	15.7-27%		Fade
		Sync Ramp up-down (slow→fast)	70-99	27.4-38.9%		Fade
		Sync Double Flash (slow→fast)	100-129	39.2-50.6%		Fade
		Random Strobe (slow→fast)	130-359	51-62%		Fade
		Sync Strobe (1Hz-10Hz)	160-239	62.8-93.7%		Fade
		Open	251-255	98.4-100%		Snap
4	**Zoom**	Beam angle 6-43 degrees	0-255	0-100%	0	Fade
5	**Control / Settings**	No function	0-15	0-5.8%	0	Snap
		Compatibility: Off*	16-20	6.2-7.8%		
		Compatibility: X-PAR 12Z	21-25	8.2-9.8%		
		Compatibility: X-PAR 8Z	26-30	10.1-11.7%		
		No function	31-35	12.2-13.7%		
		Color Mode: RGB HO (Calibrated)*	36-40	14.0-15.6%		
		Color Mode: RGB HQ (Calibrated)*	41-45	16.0-17.6%		
		Color Mode: RGBL *	46-50	18.0-19.6%		
		No function	51-55	20.0-21.6%		
		Dimmer speed smooth*	56-60	22.0-23.5%		
		Dimmer speed fast*	61-65	23.9-25.5%		
		No function	66-70	25.9-27.5%		
		Dimming curve Linear*	71-75	27.8-29.4%		
		Dimming curve Theatrical*	76-80	29.8-31.4%		
		Dimming curve Square Law*	81-85	31.8-33.3%		
		Dimming curve Inverse Square Law*	86-90	33.7-35.3%		
		No Function	91-95	35.7-37.3%		
		No DMX = Hold scene*	96-100	37.6-39.2%		
		No DMX = Blackout*	101-105	39.6-41.2%		
		No DMX = Play captured scene*	106-110	41.6-43.1%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		No Function	111-115	43.5-45.1%		
		Display Backlight Auto*	116-120	45.5-47.1%		
		Display backlight Off*	121-125	47.5-49.0%		
		No Function	126-130	49.4-51.2%		
		DMX Mode: M1-Basic*	131-135	51.4-52.9%		
		DMX Mode: M2-Standard*	136-140	53.3-54.9%		
		DMX Mode: M3-Advanced*	141-145	55.3-56.9%		
		DMX Mode: M4-RGB(L)*	146-150	57.3-58.8%		
		DMX Mode: M5-White*	151-155	59.2-60.8%		
		DMX Mode: M6-Easy*	156-160	61.2-62.7%		
		No Function	161-165	63.1-64.7%		
		Zoom Invert On*	166-170	65.1-66.7%		
		Zoom Invert Off*	171-175	67.1-68.5%		
		Zoom Reset*	176-180	69.0-70.5%		
		Fixture reset*	181-185	71.0-72.5%		
		Factory default settings (except DMX address & mode)*	186-190	72.9-74.5%		
		No function	191-195	74.9-76.2%		
		PWM Rate: 600Hz	196-200	76.9-78.4%		
		PWM Rate: 1200Hz	201-205	78.8-80.4%		
		PWM Rate: 2200Hz	206-210	80.8-82.4%		
		PWM Rate: 3000Hz	211-215	82.7-84.3%		
		PWM Rate: 4800Hz	216-220	84.7-86.3%		
		PWM Rate: 9600Hz	221-225	86.7-88.2%		
		PWM Rate: 25KHz	226-230	88.6-90.2%		
		Fan Mode: Regulated*	231-235	90.6-92.1%		
		Fan Mode: High	236-240	92.5-94.1%		
		Fan Mode: Medium	241-245	94.5-96.1%		
		Fan Mode: Low	246-250	96.5-98%		
		Fixture Reset	251-255	98%-100%		
6	Red	Intensity 0-100% (16-bit)	0-65535	0-100%	0	Fade
7	Red Fine					
8	Green	Intensity 0-100% (16-bit)	0-65535	0-100%	0	Fade
9	Green fine					
10	Blue	Intensity 0-100% (16-bit)	0-65535	0-100%	0	Fade
11	Blue fine					

Channel		Command	DMX range	Percent	Default DMX	Fade
12	**Lime**	Intensity 0-100% (16-bit)	0-65535	0-100%	0	Fade
13	**Lime fine**					
14	**Color Wheel**	Open (Color set by ch 5-8)	0-3	0-1.2%	0	Snap
		Preset 3200K	4-6	1.6-2.4%		
		Preset 4200K	7-9	2.7-3.5%		
		Preset 5600K	10-12	3.9-4.7%		
		Preset 6500K	13-15	5.1-5.9%		
		Filter 004 (Medium Bastard Amber)	16-18	6.3-7.1%		
		Filter 019 (Fire)	19-21	7.5-8.2%		
		Filter 025 (Sunset Red)	22-24	8.6-9.4%		
		Filter 026 (Bright Red)	25-27	9.8-10.6%		
		Filter 036 (Medium Pink)	28-30	11-11.8%		
		Filter 049 (Medium Purple)	31-33	12.2-12.9%		
		Filter 058 (Lavender)	34-36	13.3-14.1%		
		Filter 068 (Sky Blue)	37-39	14.5-15.3%		
		Filter 088 (Lime Green)	40-42	15.7-16.5%		
		Filter 089 (Moss Green)	43-45	16.9-17.6%		
		Filter 090 (Dark Yellow Green)	46-48	18-18.8%		
		Filter 102 (Light Amber)	49-51	19.2-20%		
		Filter 103 (Straw)	52-54	20.4-21.2%		
		Filter 106 (Primary Red)	55-57	21.6-22.4%		
		Filter 111 (Dark Pink)	58-60	22.7-23.5%		
		Filter 115 (Peacock Blue)	61-63	23.9-24.7%		
		Filter 117 (Steel Blue)	64-66	25.1-25.9%		
		Filter 118 (Light Blue)	67-69	26.3-27.1%		
		Filter 121 (Filter Green)	70-72	27.5-28.2%		
		Filter 122 (Fern Green)	73-75	28.6-29.4%		
		Filter 124 (Dark Green)	76-78	29.8-30.6%		
		Filter 126 (Mauve)	79-81	31-31.8%		
		Filter 128 (Bright Pink)	82-84	32.2-32.9%		
		Filter 131 (Marine Blue)	85-87	33.3-34.1%		
		Filter 132 (Medium Blue)	88-90	34.5-35.3%		
		Filter 134 (Golden Amber)	91-93	35.7-36.5%		
		Filter 135 (Deep Golden Amber)	94-96	36.9-37.6%		
		Filter 136 (Pale Lavender)	97-99	38-38.8%		
		Filter 137 (Special Lavender)	100-102	39.2-40%		
		Filter 138 (Pale Green)	103-105	40.4-41.2%		
		Filter 140 (Summer Blue)	106-108	41.6-42.4%		
		Filter 141 (Bright Blue)	109-111	42.7-43.5%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		Filter 143 (Pale Navy Blue)	112-114	43.9-44.7%		
		Filter 147 (Apricot)	115-117	45.1-45.9%		
		Filter 148 (Bright Rose)	118-120	46.3-47.1%		
		Filter 152 (Pale Gold)	121-123	47.5-48.2%		
		Filter 154 (Pale Rose)	124-126	48.6-49.4%		
		Filter 157 (Pink)	127-129	49.8-50.6%		
		Filter 162 (Bastard Amber)	130-132	51-51.8%		
		Filter 164 (Flame Red)	133-135	52.2-52.9%		
		Filter 165 (Daylight Blue)	136-138	53.3-54.1%		
		Filter 169 (Lilac Tint)	139-141	54.5-55.3%		
		Filter 170 (Deep Lavender)	142-144	55.7-56.5%		
		Filter 172 (Lagoon Blue)	145-147	56.9-57.6%		
		Filter 180 (Dark Lavender)	148-150	58-58.8%		
		Filter 182 (Light Red)	151-153	59.2-60%		
		Filter 194 (Surprise Pink)	154-156	60.4-61.2%		
		Filter 197 (Alice Blue)	157-159	61.6-62.4%		
		Filter 201 (Full C.T. Blue)	160-162	62.7-63.5%		
		Filter 202 (Half C.T. Blue)	163-165	63.9-64.7%		
		Filter 203 (Quarter C.T. Blue)	166-168	65.1-65.9%		
		Filter 204 (Full C.T. Orange)	169-171	66.3-67.1%		
		Filter 206 (Quarter C.T. Orange)	172-174	67.5-68.2%		
		Filter 219 (Fluorescent Green)	175-177	68.6-69.4%		
		Filter 247 (Filter Minus Green)	178-180	69.8-70.6%		
		Filter 248 (Half Minus Green)	1811-183	71-71.8%		
		Filter 281 (Three Quarter C.T. Blue)	184-186	72.2-72.9%		
		Filter 285 (Three Quarter C.T. Orange)	187-189	73.3-74.1%		
		Filter 352 (Glacier Blue)	190-192	74.5-75.3%		
		Filter 353 (Lighter Blue)	193-195	75.7-76.5%		
		Filter 507 (Madge)	196-198	76.9-77.6%		
		Filter 778 (Millennium Gold)	199-201	78-78.8%		
		Filter 793 (Vanity Fair)	202-204	79.2-80%		
		Filter 798 (Chrysalis Pink)	205-207	80.4-81.2%		
		Rainbwo Stop - at first Color	208-210	81.6-82.4%		
		Rainbow slow→fast	211-252	82.7-98.8%		
		Rainbow Stop - at current Color	253-255	99.2-100%		
15	CTC	RAW (RGBL control)	0-15	0-5.9%	0	Snap
		10000K	16-18	6.3-7.1%		

Channel	Command	DMX range	Percent	Default DMX	Fade
	9900K	19-21	7.5-8.2%		
	9800K	22-24	8.6-9.4%		
	9700K	25-27	9.8-10.6%		
	9600K	28-30	11-11.8%		
	9500K	31-33	12.2-12.9%		
	9400K	34-36	13.3-14.1%		
	9300K	37-39	14.5-15.3%		
	9200K	40-42	15.7-16.5%		
	9100K	43-45	16.9-17.6%		
	9000K	46-48	18-18.8%		
	8900K	49-51	19.2-20%		
	8800K	52-54	20.4-21.2%		
	8700K	55-57	21.6-22.4%		
	8600K	58-60	22.7-23.5%		
	8500K	61-63	23.9-24.7%		
	8400K	64-66	25.1-25.9%		
	8300K	67-69	26.3-27.1%		
	8200K	70-72	27.5-28.2%		
	8100K	73-75	28.6-29.4%		
	8000K	76-78	29.8-30.6%		
	7900K	79-81	31-31.8%		
	7800K	82-84	32.2-32.9%		
	7700K	85-87	33.3-34.1%		
	7600K	88-90	34.5-35.3%		
	7500K	91-93	35.7-36.5%		
	7400K	94-96	36.9-37.6%		
	7300K	97-99	38-38.8%		
	7200K	100-102	39.2-40%		
	7100K	103-105	40.4-41.2%		
	7000K	106-108	41.6-42.4%		
	6900K	109-111	42.7-43.5%		
	6800K	112-114	43.9-44.7%		
	6700K	115-117	45.1-45.9%		
	6600K	118-120	46.3-47.1%		
	6500K	121-123	47.5-48.2%		
	6400K	124-126	48.6-49.4%		
	6300K	127-129	49.8-50.6%		
	6200K	130-132	51-51.8%		
	6100K	133-135	52.2-52.9%		

Channel	Command	DMX range	Percent	Default DMX	Fade
	6000K	136-138	53.3-54.1%		
	5900K	139-141	54.5-55.3%		
	5800K	142-144	55.7-56.5%		
	5700K	145-147	56.9-57.6%		
	5600K	148-150	58-58.8%		
	5500K	151-153	59.2-60%		
	5400K	154-156	60.4-61.2%		
	5300K	157-159	61.6-62.4%		
	5200K	160-162	62.7-63.5%		
	5100K	163-165	63.9-64.7%		
	5000K	166-168	65.1-65.9%		
	4900K	169-171	66.3-67.1%		
	4800K	172-174	67.5-68.2%		
	4700K	175-177	68.6-69.4%		
	4600K	178-180	69.8-70.6%		
	4500K	181-183	71-71.8%		
	4400K	184-186	72.2-72.9%		
	4300K	187-189	73.3-74.1%		
	4200K	190-192	74.5-75.3%		
	4100K	193-195	75.7-76.5%		
	4000K	196-198	76.9-77.6%		
	3900K	199-201	78-78.8%		
	3800K	202-204	79.2-80%		
	3700K	205-207	80.4-81.2%		
	3600K	208-210	81.6-82.4%		
	3500K	211-213	82.7-83.5%		
	3400K	214-216	83.9-84.7%		
	3300K	217-219	85.1-85.9%		
	3200K	220-222	86.3-87.1%		
	3100K	223-225	87.5-88.2%		
	3000K	226-228	88.6-89.4%		
	2900K	229-231	89.8-90.6%		
	2800K	232-234	91-91.8%		
	2700K	235-237	92.2-92.9%		
	2600K	238-240	93.3-94.1%		

Channel	Command	DMX range	Percent	Default DMX	Fade
	2500K	241-255	94.5-100%		
	Off - (no correction)	0-9	0-3.5%	0	snap
	full plus Magenta +100% (-0,1 Duv)	10-10	3.9-3.9%		
16 **M/G Shift**	plus Magenta +99% → + 1%	11-124	4.3-48.6%		fade
	neutral / no effect	125-140	49-54.9%		snap
	plus green +1% → +99%	141-254	55.3-99.6%		fade
	full plus green +100% (+ 0,1 Duv)	255-255	100-100%		

Notes: Channels 6-13 have no effect unless Channel 14 is set between 0-3.

Channels 12-13 have no effect unless Fixture Settings → Color Mode is set to RGBL

DMX Mode 4: RGB(L)

6 DMX Channels

Channel		Command	DMX range	Percent	Default DMX	Fade
1	**Zoom**	Beam angle 6-43 degrees	0-255	0-100%	0	Fade
2	**Control / Settings**	No function	0-15	0-5.8%	0	Snap
		Compatibility: Off*	16-20	6.2-7.8%		
		Compatibility: X-PAR 12Z	21-25	8.2-9.8%		
		Compatibility: X-PAR 8Z	26-30	10.1-11.7%		
		No function	31-35	12.2-13.7%		
		Color Mode: RGB HO (Calibrated)*	36-40	14.0-15.6%		
		Color Mode: RGB HQ (Calibrated)*	41-45	16.0-17.6%		
		Color Mode: RGBL *	46-50	18.0-19.6%		
		No function	51-55	20.0-21.6%		
		Dimmer speed smooth*	56-60	22.0-23.5%		
		Dimmer speed fast*	61-65	23.9-25.5%		
		No function	66-70	25.9-27.5%		
		Dimming curve Linear*	71-75	27.8-29.4%		
		Dimming curve Theatrical*	76-80	29.8-31.4%		
		Dimming curve Square Law*	81-85	31.8-33.3%		
		Dimming curve Inverse Square Law*	86-90	33.7-35.3%		
		No Function	91-95	35.7-37.3%		
		No DMX = Hold scene*	96-100	37.6-39.2%		
		No DMX = Blackout*	101-105	39.6-41.2%		
		No DMX = Play captured scene*	106-110	41.6-43.1%		
		No Function	111-115	43.5-45.1%		
		Display Backlight Auto*	116-120	45.5-47.1%		
		Display backlight Off*	121-125	47.5-49.0%		
		No Function	126-130	49.4-51.2%		
		DMX Mode: M1-Basic*	131-135	51.4-52.9%		
		DMX Mode: M2-Standard*	136-140	53.3-54.9%		
		DMX Mode: M3-Advanced*	141-145	55.3-56.9%		
		DMX Mode: M4-RGB(L)*	146-150	57.3-58.8%		
		DMX Mode: M5-White*	151-155	59.2-60.8%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		DMX Mode: M6-Easy*	156-160	61.2-62.7%		
		No Function	161-165	63.1-64.7%		
		Zoom Invert On*	166-170	65.1-66.7%		
		Zoom Invert Off*	171-175	67.1-68.5%		
		Zoom Reset*	176-180	69.0-70.5%		
		Fixture reset*	181-185	71.0-72.5%		
		Factory default settings (except DMX address & mode)*	186-190	72.9-74.5%		
		No function	191-195	74.9-76.2%		
		PWM Rate: 600Hz	196-200	76.9-78.4%		
		PWM Rate: 1200Hz	201-205	78.8-80.4%		
		PWM Rate: 2200Hz	206-210	80.8-82.4%		
		PWM Rate: 3000Hz	211-215	82.7-84.3%		
		PWM Rate: 4800Hz	216-220	84.7-86.3%		
		PWM Rate: 9600Hz	221-225	86.7-88.2%		
		PWM Rate: 25KHz	226-230	88.6-90.2%		
		Fan Mode: Regulated*	231-235	90.6-92.1%		
		Fan Mode: High	236-240	92.5-94.1%		
		Fan Mode: Medium	241-245	94.5-96.1%		
		Fan Mode: Low	246-250	96.5-98%		
		Fixture Reset	251-255	98%-100%		
3	**Red**	Intensity 0-100%	0-255	0-100%	0	Fade
4	**Green**	Intensity 0-100%	0-255	0-100%	0	Fade
5	**Blue**	Intensity 0-100%	0-255	0-100%	0	Fade
6	**Lime**	Intensity 0-100%	0-255	0-100%	0	Fade

Note: Channel 6 has no effect unless Fixture Settings → Color Mode is set to RGBL

DMX Mode 5: White

6 DMX Channels

Channel		Command	DMX range	Percent	Default DMX	Fade
1	**Master Dimmer**	Intensity 0-100%	0-255	0-100%	0	Fade
2	**Shutter**	Closed	0-4	0-1.6%	255	Snap
		Single Flash (when value changes)	5-9	1.9-3.5%		Snap
		Sync Ramp-Up (slow→fast)	10-39	3.9-15.3%		Fade
		Sync Ramp-down (slow→fast)	40-69	15.7-27%		Fade
		Sync Ramp up-down (slow→fast)	70-99	27.4-38.9%		Fade
		Sync Double Flash (slow→fast)	100-129	39.2-50.6%		Fade
		Random Strobe (slow→fast)	130-359	51-62%		Fade
		Sync Strobe (1Hz-10Hz)	160-239	62.8-93.7%		Fade
		Open	251-255	98.4-100%		Snap
3	**Zoom**	Beam angle 6-43 degrees	0-255	0-100%	0	Fade
4	**Control / Settings**	No function	0-15	0-5.8%	0	Snap
		Compatibility: Off*	16-20	6.2-7.8%		
		Compatibility: X-PAR 12Z	21-25	8.2-9.8%		
		Compatibility: X-PAR 8Z	26-30	10.1-11.7%		
		No function	31-35	12.2-13.7%		
		Color Mode: RGB HO (Calibrated)*	36-40	14.0-15.6%		
		Color Mode: RGB HQ (Calibrated)*	41-45	16.0-17.6%		
		Color Mode: RGBL *	46-50	18.0-19.6%		
		No function	51-55	20.0-21.6%		
		Dimmer speed smooth*	56-60	22.0-23.5%		
		Dimmer speed fast*	61-65	23.9-25.5%		
		No function	66-70	25.9-27.5%		
		Dimming curve Linear*	71-75	27.8-29.4%		
		Dimming curve Theatrical*	76-80	29.8-31.4%		
		Dimming curve Square Law*	81-85	31.8-33.3%		
		Dimming curve Inverse Square Law*	86-90	33.7-35.3%		
		No Function	91-95	35.7-37.3%		
		No DMX = Hold scene*	96-100	37.6-39.2%		
		No DMX = Blackout*	101-105	39.6-41.2%		
		No DMX = Play captured scene*	106-110	41.6-43.1%		
		No Function	111-115	43.5-45.1%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		Display Backlight Auto*	116-120	45.5-47.1%		
		Display backlight Off*	121-125	47.5-49.0%		
		No Function	126-130	49.4-51.2%		
		DMX Mode: M1-Basic*	131-135	51.4-52.9%		
		DMX Mode: M2-Standard*	136-140	53.3-54.9%		
		DMX Mode: M3-Advanced*	141-145	55.3-56.9%		
		DMX Mode: M4-RGB(L)*	146-150	57.3-58.8%		
		DMX Mode: M5-White*	151-155	59.2-60.8%		
		DMX Mode: M6-Easy*	156-160	61.2-62.7%		
		No Function	161-165	63.1-64.7%		
		Zoom Invert On*	166-170	65.1-66.7%		
		Zoom Invert Off*	171-175	67.1-68.5%		
		Zoom Reset*	176-180	69.0-70.5%		
		Fixture reset*	181-185	71.0-72.5%		
		Factory default settings (except DMX address & mode)*	186-190	72.9-74.5%		
		No function	191-195	74.9-76.2%		
		PWM Rate: 600Hz	196-200	76.9-78.4%		
		PWM Rate: 1200Hz	201-205	78.8-80.4%		
		PWM Rate: 2200Hz	206-210	80.8-82.4%		
		PWM Rate: 3000Hz	211-215	82.7-84.3%		
		PWM Rate: 4800Hz	216-220	84.7-86.3%		
		PWM Rate: 9600Hz	221-225	86.7-88.2%		
		PWM Rate: 25KHz	226-230	88.6-90.2%		
		Fan Mode: Regulated*	231-235	90.6-92.1%		
		Fan Mode: High	236-240	92.5-94.1%		
		Fan Mode: Medium	241-245	94.5-96.1%		
		Fan Mode: Low	246-250	96.5-98%		
		Fixture Reset	251-255	98%-100%		
5	**CTC**	Default 6500K	0-15	0-5.9%	0	Snap
		10000K	16-18	6.3-7.1%		
		9900K	19-21	7.5-8.2%		
		9800K	22-24	8.6-9.4%		
		9700K	25-27	9.8-10.6%		
		9600K	28-30	11-11.8%		
		9500K	31-33	12.2-12.9%		
		9400K	34-36	13.3-14.1%		

FUSION
by GLP

Channel	Command	DMX range	Percent	Default DMX	Fade
	9300K	37-39	14.5-15.3%		
	9200K	40-42	15.7-16.5%		
	9100K	43-45	16.9-17.6%		
	9000K	46-48	18-18.8%		
	8900K	49-51	19.2-20%		
	8800K	52-54	20.4-21.2%		
	8700K	55-57	21.6-22.4%		
	8600K	58-60	22.7-23.5%		
	8500K	61-63	23.9-24.7%		
	8400K	64-66	25.1-25.9%		
	8300K	67-69	26.3-27.1%		
	8200K	70-72	27.5-28.2%		
	8100K	73-75	28.6-29.4%		
	8000K	76-78	29.8-30.6%		
	7900K	79-81	31-31.8%		
	7800K	82-84	32.2-32.9%		
	7700K	85-87	33.3-34.1%		
	7600K	88-90	34.5-35.3%		
	7500K	91-93	35.7-36.5%		
	7400K	94-96	36.9-37.6%		
	7300K	97-99	38-38.8%		
	7200K	100-102	39.2-40%		
	7100K	103-105	40.4-41.2%		
	7000K	106-108	41.6-42.4%		
	6900K	109-111	42.7-43.5%		
	6800K	112-114	43.9-44.7%		
	6700K	115-117	45.1-45.9%		
	6600K	118-120	46.3-47.1%		
	6500K	121-123	47.5-48.2%		
	6400K	124-126	48.6-49.4%		
	6300K	127-129	49.8-50.6%		
	6200K	130-132	51-51.8%		
	6100K	133-135	52.2-52.9%		
	6000K	136-138	53.3-54.1%		
	5900K	139-141	54.5-55.3%		
	5800K	142-144	55.7-56.5%		
	5700K	145-147	56.9-57.6%		
	5600K	148-150	58-58.8%		
	5500K	151-153	59.2-60%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		5400K	154-156	60.4-61.2%		
		5300K	157-159	61.6-62.4%		
		5200K	160-162	62.7-63.5%		
		5100K	163-165	63.9-64.7%		
		5000K	166-168	65.1-65.9%		
		4900K	169-171	66.3-67.1%		
		4800K	172-174	67.5-68.2%		
		4700K	175-177	68.6-69.4%		
		4600K	178-180	69.8-70.6%		
		4500K	181-183	71-71.8%		
		4400K	184-186	72.2-72.9%		
		4300K	187-189	73.3-74.1%		
		4200K	190-192	74.5-75.3%		
		4100K	193-195	75.7-76.5%		
		4000K	196-198	76.9-77.6%		
		3900K	199-201	78-78.8%		
		3800K	202-204	79.2-80%		
		3700K	205-207	80.4-81.2%		
		3600K	208-210	81.6-82.4%		
		3500K	211-213	82.7-83.5%		
		3400K	214-216	83.9-84.7%		
		3300K	217-219	85.1-85.9%		
		3200K	220-222	86.3-87.1%		
		3100K	223-225	87.5-88.2%		
		3000K	226-228	88.6-89.4%		
		2900K	229-231	89.8-90.6%		
		2800K	232-234	91-91.8%		
		2700K	235-237	92.2-92.9%		
		2600K	238-240	93.3-94.1%		
		2500K	241-255	94.5-100%		
6	M/G Shift	Off - (no correction)	0-9	0-3.5%	0	snap
		full plus Magenta +100% (-0,1 Duv)	10-10	3.9-3.9%		
		plus Magenta +99% → + 1%	11-124	4.3-48.6%		fade
		neutral / no effect	125-140	49-54.9%		snap
		plus green +1% → +99%	141-254	55.3-99.6%		fade
		full plus green +100% (+ 0,1 Duv)	255-255	100-100%		

DMX Mode 6: Easy

4 DMX Channels

Channel		Command	DMX range	Percent	Default DMX	Fade
1	**Master Dimmer**	Intensity 0-100%	0-255	0-100%	0	Fade
2	**Zoom**	Beam angle 6-43 degrees	0-255	0-100%	0	Fade
3	**Control / Settings**	No function	0-15	0-5.8%	0	Snap
		Compatibility: Off*	16-20	6.2-7.8%		
		Compatibility: X-PAR 12Z	21-25	8.2-9.8%		
		Compatibility: X-PAR 8Z	26-30	10.1-11.7%		
		No function	31-35	12.2-13.7%		
		Color Mode: RGB HO (Calibrated)*	36-40	14.0-15.6%		
		Color Mode: RGB HQ (Calibrated)*	41-45	16.0-17.6%		
		Color Mode: RGBL *	46-50	18.0-19.6%		
		No function	51-55	20.0-21.6%		
		Dimmer speed smooth*	56-60	22.0-23.5%		
		Dimmer speed fast*	61-65	23.9-25.5%		
		No function	66-70	25.9-27.5%		
		Dimming curve Linear*	71-75	27.8-29.4%		
		Dimming curve Theatrical*	76-80	29.8-31.4%		
		Dimming curve Square Law*	81-85	31.8-33.3%		
		Dimming curve Inverse Square Law*	86-90	33.7-35.3%		
		No Function	91-95	35.7-37.3%		
		No DMX = Hold scene*	96-100	37.6-39.2%		
		No DMX = Blackout*	101-105	39.6-41.2%		
		No DMX = Play captured scene*	106-110	41.6-43.1%		
		No Function	111-115	43.5-45.1%		
		Display Backlight Auto*	116-120	45.5-47.1%		
		Display backlight Off*	121-125	47.5-49.0%		
		No Function	126-130	49.4-51.2%		
		DMX Mode: M1-Basic*	131-135	51.4-52.9%		
		DMX Mode: M2-Standard*	136-140	53.3-54.9%		
		DMX Mode: M3-Advanced*	141-145	55.3-56.9%		
		DMX Mode: M4-RGB(L)*	146-150	57.3-58.8%		
		DMX Mode: M5-White*	151-155	59.2-60.8%		
		DMX Mode: M6-Easy*	156-160	61.2-62.7%		
		No Function	161-165	63.1-64.7%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		Zoom Invert On*	166-170	65.1-66.7%		
		Zoom Invert Off*	171-175	67.1-68.5%		
		Zoom Reset*	176-180	69.0-70.5%		
		Fixture reset*	181-185	71.0-72.5%		
		Factory default settings (except DMX address & mode)*	186-190	72.9-74.5%		
		No function	191-195	74.9-76.2%		
		PWM Rate: 600Hz	196-200	76.9-78.4%		
		PWM Rate: 1200Hz	201-205	78.8-80.4%		
		PWM Rate: 2200Hz	206-210	80.8-82.4%		
		PWM Rate: 3000Hz	211-215	82.7-84.3%		
		PWM Rate: 4800Hz	216-220	84.7-86.3%		
		PWM Rate: 9600Hz	221-225	86.7-88.2%		
		PWM Rate: 25KHz	226-230	88.6-90.2%		
		Fan Mode: Regulated*	231-235	90.6-92.1%		
		Fan Mode: High	236-240	92.5-94.1%		
		Fan Mode: Medium	241-245	94.5-96.1%		
		Fan Mode: Low	246-250	96.5-98%		
		Fixture Reset	251-255	98%-100%		
4	**Color Wheel**	Open (Color set by ch 5-8)	0-3	0-1.2%	0	Snap
		Preset 3200K	4-6	1.6-2.4%		
		Preset 4200K	7-9	2.7-3.5%		
		Preset 5600K	10-12	3.9-4.7%		
		Preset 6500K	13-15	5.1-5.9%		
		Filter 004 (Medium Bastard Amber)	16-18	6.3-7.1%		
		Filter 019 (Fire)	19-21	7.5-8.2%		
		Filter 025 (Sunset Red)	22-24	8.6-9.4%		
		Filter 026 (Bright Red)	25-27	9.8-10.6%		
		Filter 036 (Medium Pink)	28-30	11-11.8%		
		Filter 049 (Medium Purple)	31-33	12.2-12.9%		
		Filter 058 (Lavender)	34-36	13.3-14.1%		
		Filter 068 (Sky Blue)	37-39	14.5-15.3%		
		Filter 088 (Lime Green)	40-42	15.7-16.5%		
		Filter 089 (Moss Green)	43-45	16.9-17.6%		
		Filter 090 (Dark Yellow Green)	46-48	18-18.8%		
		Filter 102 (Light Amber)	49-51	19.2-20%		
		Filter 103 (Straw)	52-54	20.4-21.2%		
		Filter 106 (Primary Red)	55-57	21.6-22.4%		
		Filter 111 (Dark Pink)	58-60	22.7-23.5%		

Channel	Command	DMX range	Percent	Default DMX	Fade
	Filter 115 (Peacock Blue)	61-63	23.9-24.7%		
	Filter 117 (Steel Blue)	64-66	25.1-25.9%		
	Filter 118 (Light Blue)	67-69	26.3-27.1%		
	Filter 121 (Filter Green)	70-72	27.5-28.2%		
	Filter 122 (Fern Green)	73-75	28.6-29.4%		
	Filter 124 (Dark Green)	76-78	29.8-30.6%		
	Filter 126 (Mauve)	79-81	31-31.8%		
	Filter 128 (Bright Pink)	82-84	32.2-32.9%		
	Filter 131 (Marine Blue)	85-87	33.3-34.1%		
	Filter 132 (Medium Blue)	88-90	34.5-35.3%		
	Filter 134 (Golden Amber)	91-93	35.7-36.5%		
	Filter 135 (Deep Golden Amber)	94-96	36.9-37.6%		
	Filter 136 (Pale Lavender)	97-99	38-38.8%		
	Filter 137 (Special Lavender)	100-102	39.2-40%		
	Filter 138 (Pale Green)	103-105	40.4-41.2%		
	Filter 140 (Summer Blue)	106-108	41.6-42.4%		
	Filter 141 (Bright Blue)	109-111	42.7-43.5%		
	Filter 143 (Pale Navy Blue)	112-114	43.9-44.7%		
	Filter 147 (Apricot)	115-117	45.1-45.9%		
	Filter 148 (Bright Rose)	118-120	46.3-47.1%		
	Filter 152 (Pale Gold)	121-123	47.5-48.2%		
	Filter 154 (Pale Rose)	124-126	48.6-49.4%		
	Filter 157 (Pink)	127-129	49.8-50.6%		
	Filter 162 (Bastard Amber)	130-132	51-51.8%		
	Filter 164 (Flame Red)	133-135	52.2-52.9%		
	Filter 165 (Daylight Blue)	136-138	53.3-54.1%		
	Filter 169 (Lilac Tint)	139-141	54.5-55.3%		
	Filter 170 (Deep Lavender)	142-144	55.7-56.5%		
	Filter 172 (Lagoon Blue)	145-147	56.9-57.6%		
	Filter 180 (Dark Lavender)	148-150	58-58.8%		
	Filter 182 (Light Red)	151-153	59.2-60%		
	Filter 194 (Surprise Pink)	154-156	60.4-61.2%		
	Filter 197 (Alice Blue)	157-159	61.6-62.4%		
	Filter 201 (Full C.T. Blue)	160-162	62.7-63.5%		
	Filter 202 (Half C.T. Blue)	163-165	63.9-64.7%		
	Filter 203 (Quarter C.T. Blue)	166-168	65.1-65.9%		
	Filter 204 (Full C.T. Orange)	169-171	66.3-67.1%		
	Filter 206 (Quarter C.T. Orange)	172-174	67.5-68.2%		
	Filter 219 (Fluorescent Green)	175-177	68.6-69.4%		

Channel		Command	DMX range	Percent	Default DMX	Fade
		Filter 247 (Filter Minus Green)	178-180	69.8-70.6%		
		Filter 248 (Half Minus Green)	1811-183	71-71.8%		
		Filter 281 (Three Quarter C.T. Blue)	184-186	72.2-72.9%		
		Filter 285 (Three Quarter C.T. Orange)	187-189	73.3-74.1%		
		Filter 352 (Glacier Blue)	190-192	74.5-75.3%		
		Filter 353 (Lighter Blue)	193-195	75.7-76.5%		
		Filter 507 (Madge)	196-198	76.9-77.6%		
		Filter 778 (Millennium Gold)	199-201	78-78.8%		
		Filter 793 (Vanity Fair)	202-204	79.2-80%		
		Filter 798 (Chrysalis Pink)	205-207	80.4-81.2%		
		Rainbwo Stop - at first Color	208-210	81.6-82.4%		
		Rainbow slow→fast	211-252	82.7-98.8%		
		Rainbow Stop - at current Color	253-255	99.2-100%		

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