impression&
FR10 BAR

User Manual

Software version v.46

Rev. 20220727-1

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Document revisions

Revision number	Notes	Released
Rev. 20220727-1	Added Subfixture Mode selection option. *Firmware v.46*	07/2022
Rev. 20210901-2	Added layer 1/2/3 priority control via DMX or using control panel (Color Mix Priority setting). *Firmware v.30*	09/2021
Rev. A	First version available. *Firmware v.20*	04/2020

GLP® impression FR10 Bar User Manual – Revision 20220727-1

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Table of Contents

1. Safety

Key to symbols

The following symbols are used in this document:

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

Warning! Read the FR10 BAR Quick Start and Safety Manual supplied with the 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 FR10 BAR 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 GLP® impression FR10 BAR lighting fixture safely, contact your GLP supplier for assistance. Your GLP supplier will be happy to help.

The user documentation for impression FR10 BAR fixtures consists of three documents:

- The **FR10 BAR Quick Start and Safety Manual**, supplied with FR10 BAR 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 dimensions drawings and technical specifications for the fixture.
- The **FR10 BAR User Manual**, available for download from www.glp.de. The User Manual explains features and control of FR10 BAR fixtures.
- The **FR10 BAR DMX Channel Index**, available for download from www.glp.de. The Channel Index is a separate document containing the DMX control channel layout and DMX commands available in the fixture. This information is also included in the User Manual.

The FR10 BAR 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 fixture's user documentation and on the fixture. Read the fixture's Quick Start and Safety Manual and familiarize yourself with the safety precautions it contains before installing, using or servicing the fixture. 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 fixture's Quick Start and Safety Manual and this user manual.
- 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 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 user 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 fixture. Save both documents for future reference.
- If you have any questions about the safe operation of the fixture, please contact an authorized GLP distributor (see list of distributors at www.glp.de).

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
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2. FR 10 Bar overview

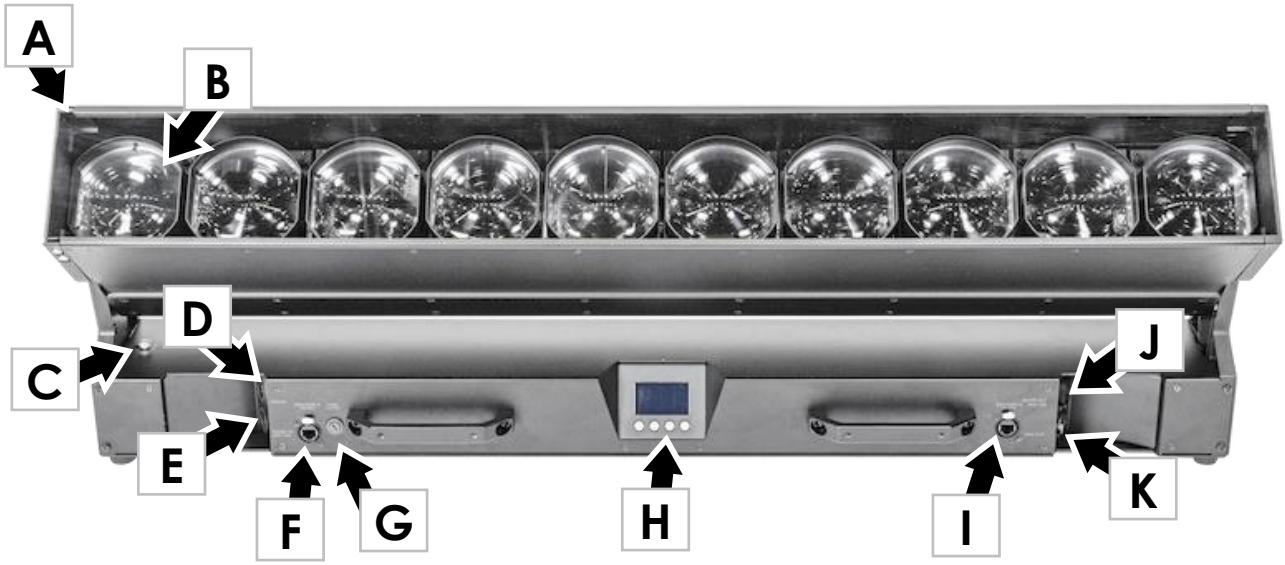

Figure 1. FR 10 Bar overview

A – Head

B – Pixel zoom lens

C – Alignment pins button

D – DMX IN (5-pin XLR)

E – AC mains power IN (Neutrik powerCON TRUE1)

F – EtherCon Port IN/THRU, fail-safe (Art-Net / sACN)

G – Fuseholder

H – Control panel with backlit display

I – EtherCon Port IN/THRU, fail-safe (Art-Net / sACN)

J – AC mains power THRU (Neutrik powerCON TRUE1)

K – DMX THRU (5-pin XLR)

3. Features

The impression FR10 BAR is a powerful LED-based linear format lighting fixture from GLP that features a head that tilts through 200° and ten independently controllable zoom lenses.

The FR10 Bar contains 10 x 60 Watt RGBW LED sources that are color matched with GLP's X4 and FR series. Each source features smooth, full range color mixing with a homogenized Fresnel lens. Along with individual color control, the impression FR10 Bar offers a powerful multi-layer zoom and color effects engine.

The fixture has a 10:1 ratio zoom range from 3.7° to 35° one-tenth peak angles. What makes it unique is the ability to control each of the zoom lenses independently.

A separate CTO DMX channel is available in all the fixture's DMX control modes, letting you quickly adjust the warmth of the white light output.

Fixtures feature an alignment system that lets you build unbroken lines of pixels, and power and data can be daisy-chained for ease of installation. The FR 10 Bar can be placed upright on a level surface or suspended from a suitable structure as described in the fixture's Quick Start and Safety Manual.

A front glass is installed in mounting channels with a quick-release system on the front of FR10 BAR fixtures. These channels can also be used for mounting optical accessories from GLP.

Tilt

The impression FR10 Bar offers motorized tilt from +100 to -100 degrees with 16-bit control and automatic position correction (position feedback).

The Tilt function can be inverted using the FIXTURE SETTINGS → TILT INVERT menu, tilt position feedback can be disabled using FIXTURE SETTINGS → POSITION FEEDBACK, or Tilt can be disabled completely using FIXTURE SETTINGS → TILT DISABLE.

Intensity/Dimmer

Output can be controlled by a dimmer channel in 16-bit resolution, following 2 separate dimmer curves (FIXTURE SETTINGS → DIMMER CURVE).

The global intensity channel controls the output of the entire fixture (it dims all layers).

In DMX control modes that offer a separate dimmer/shutter for a layer, that dimmer/shutter will only affect the layer that offers it.

Shutter

The separate Shutter channel gives control of Open and Blackout as well as different shutter effects:

- **Dimmer Flash** sets the fixture to perform one single flash each time there is a change in the value being sent on the Intensity/Master channel.
- **Pulse** smoothly fades intensity up and down with same fade-in and fade-out times.
- **Opening Pulse** fades intensity up and then snaps to blackout.

- **Closing Pulse** fades intensity down and then snaps to 100%.
- **Strobe Double Flash** gives a fast double flash.
- **Strobe Pixel Random** flashes individual pixels at random, giving a sparkling effect.
- **Strobe Random** flashes all the fixture's pixels together at random intervals. This lets you set up a random strobe across multiple fixtures. Note that the random effect between multiple fixtures really is completely random.
- **Strobe** flashes all the pixels of a fixture together. It will also flash all the pixels of multiple fixtures together in perfect synchronization.

The global shutter channel controls the output of the entire fixture (the shutter affects all layers).

In DMX control modes that offer a separate dimmer/shutter for a layer, that dimmer/shutter will only affect the layer that offers it.

Main and Sub modules

Some control modes divide the fixture into a Main module and one or more Sub modules. Professional controllers will handle this setup in a smart multi-fixture profile. For example, Control Mode 2 divides the Washlight into:

- **Main module** (Layer 1 = intensity, shutter, tilt, control/settings, range of patterns with RGBW control, range of zoom patterns
- **Sub module 1** (Layer 2 = intensity, shutter, range of patterns with RGBW control).
- Sub module 2 (Layer 3 = intensity, shutter, range of patterns with RGBW control).

The Main module has Intensity and shutter channels which operate as global fixture dimmer and shutter as default. The Subfixture Mode setting lets you decide whether the Sub module should operate subordinate to or independently of these Main module Intensity and shutter channels (see 'Subfixture Mode' below).

Subfixture Mode

The fixture offers two different options for control of the Main module and Sub modules:

- **Normal** mode makes the Sub module channels subordinate to the Main module. This means that the intensity and shutter of the Main module act as global intensity and global shutter.

  Example: Mode 2, Subfixture Mode = Normal

Modules	Channels	Note
Main module	CH01 ... CH25	
Sub module 1 (Layer 2 RGBW)	CH26 ... CH38	Main module dimmer affects the output of Sub module 1
Sub module 2 (Layer 3 RGBW)	CH39 ... CH51	Main module dimmer affects the output of Sub module 2

- **Independent** mode makes the Sub module channels completely independent of the Main module.

  Example: Mode 2, Subfixture Mode = Independent

Modules	Channels	Note
Main module	CH01 ... CH25	
Sub module 1 (Layer 2 RGBW)	CH26 ... CH38	Sub module 1 acts as independent fixture. Main module dimmer does NOT affect the output of Sub module 1
Sub module 2 (Layer 3 RGBW)	CH39 ... CH51	Sub module 2 acts as independent fixture. Main module dimmer does NOT affect the output of Sub module 2

Important! Note that the priority setting that determines how Layers 01 … 03 are mixed (See 'Color mixing priority' on page 20) is still valid.

Control/Settings channel

The special Control/Settings DMX channel lets you adjust certain fixture settings by DMX. This can be very helpful if you want to adjust fixture performance during a show or just for special scenes.

CTC

The separate Color Temperature Control channel provides a convenient way of shifting the fixture's color temperature in steps from 10 000 K to 2 500 K. This lets you set a fixed white point.

- If you set the CTC channel to zero, RGBW control goes into RAW mode with maximum output available.
- If you select a color temperature on the CTC channel, the RGBW system uses that color temperature as the white point when RGBW is set to 100%.

Virtual color wheel

The virtual color wheel channel gives quick access to saturated and pastel colors. Continuous color preset scrolling and random color presets are also available.

Colors set using the color wheel have higher priority than any colors set on the RGBW color mixing channels. To use RGBW color mixing, you must set the virtual color wheel channel to 000.

If you select Rainbow Colors the fixture will crossfade between the typical colors of a rainbow: purple, deep blue, light blue, green, yellow, orange, red. You can adjust the speed of color changes from slow to fast.

If you select Random Colors the fixture will crossfade between the multiple colors (Colors 01 to 12 and Rainbow Colors) randomly. You can adjust the speed of color changes from slow to fast.

Zoom

The main Zoom channel varies the beam angle of the fixture from narrow 3.7° to wide 35°. This main zoom channel controls all 10 zoom lenses together.

Zoom is narrow at low DMX Values and wide at high DMX values by default, but this can be inverted using FIXTURE SETTINGS → ZOOM INVERT.

Individual cell control

Color and zoom of each of the FR 10 Bar's cells can be controlled individually. Each cell has a new micro-Fresnel front lens that also gives great visual effects when the fixture is viewed from wider angles.

Individual pixel control

Each cell houses a 60 W RGBW OSRAM Ostar LED. Intensity and color of each LED can be controlled individually, giving a huge range of possibilities for creating dynamic effects and pixel mapping.

Individual zoom control

Each cell offers individual zoom angle control, making it possible to create zoom chasers and waves and allowing a huge range of combinations of individual pixel color and zoom.

FX engine

An advanced multi-layer FX Engine is included, with FX separated into Zoom and Color effects. The combination of different pixel and zoom FX patterns in multiple FX layers lets you create stunning effects without the need for an external media server.

The different FX are arranged in layers that have different levels of priority.

Multi-layer concept

The DMX Channel Index is designed to let you work with one Main module and, depending on the DMX mode selected, with additional Sub modules.

- The **Main module**, controlled by the first section of the DMX channels, gives you direct access to all the main functions of the fixture – the Main module forms the main layer.

- The two **Sub modules**, controlled by later sections of the DMX Channel Index, are layers that can be used in combination with the Main module.

By default, the fixture manages color mixing on the different layers using HTP (highest value takes priority). This means that the color mixing values of Layer 1, Layer 2 and Layer 3 are merged together and the highest value 'wins'.

This behavior can be changed by using the **Color Mix Priority** setting available on the Control/Settings DMX channel or using the fixture's control panel. Three options are available:

- **HTP** (the default setting).
- **True Color L3-L2-L1** – Layer 3 has priority over Layer 2 and Layer 2 has priority over Layer 1.
- **True Color L1-L2-L3** – Layer 1 has priority over Layer 2 and Layer 2 has priority over Layer 3.

See 'Color mixing priority' on page 20 for more details.

Each layer also has its own Dimmer and Shutter channel which lets you set that layer to Open and Blackout as well as selecting different pulse and strobe effects to run on that layer.

Pattern control

The FR10 Bar offers a range of different FX patterns that consist of pixel color/intensity and pixel zoom angle effects. Each pattern comprises a sequence of steps which can be selected step by step (static) or run continuously (dynamic) forwards or backwards.

Pattern control is similar to rotating gobo control using two DMX channels on an effect spotlight:

- Use the **Pattern Select** channel to select the FX pattern that you want to use, just as you would select a gobo.
- Then use the **Pattern Position/Movement** channel to either:
  - select a static pattern step (DMX 000 to 127 / Step 1 to 20), just as you would select a gobo indexing angle, or
  - select the speed and direction of a continuously running dynamic pattern (DMX 128 to 255), just as you would select gobo movement speed and direction.

The Pattern Position DMX range 000 to 127 is split into 20 pattern steps which you can select one by one. If a pattern only has 10 steps, you can only select steps 0 to 10 – all other steps are empty.

A pattern has active and inactive cells. An active cell displays the color and zoom of the pattern. An inactive cell is transparent and will display the color and zoom angle of the background.

You can select from 50 patterns on the Pattern Select channel. At the end of the channel there is also a Random Pattern function and a Random Pixel FX function. Random Pattern auto-selects patterns randomly and runs 10 pattern step cycles of each pattern. After 10 pattern step cycles, the fixture changes to the next pattern. Random Pixel FX randomly selects pixels which crossfade to each other.

Pattern length and offset

FX Length and FX Offset let you set up FX pattern chases and similar synchronized action in multiple fixtures (as opposed to running the same pattern at the same time on multiple fixtures). The length and offset options work like this:

- **FX Length** sets the number of steps the fixture will play back for the current pattern.
  - If you set both FX Length and FX Offset to DMX 000, the FX pattern will play back at the same time on all fixtures. Action is identical.
  - If you set FX Length to DMX 000, the fixture will play back all the steps in the FX pattern in a loop.
  - If you set FX Length to DMX 003, the fixture will only play back steps 1 to 3 in a loop.
  - If you set FX Length to DMX 100, the fixture will play back all the steps in the FX pattern and then add empty steps (black) at the end of the pattern until it reaches step 100. It will continue this action in a loop.
- **FX Offset** sets the starting point of the FX pattern.
  - If you set FX Offset to DMX 000 or DMX 001, the FX pattern will start at the first pixel with the first step in the pattern.
  - If you set FX Offset to DMX 011, the fixture will run 10 empty pattern steps (black) and then play back the pattern starting at step 1 on pixel 1 of the fixture.

Example A

Settings:

- *Fixture A: FX Length = 000, FX Offset = 000, Pattern 01 running CW*
- *Fixture B: FX Length = 000, FX Offset = 000, Pattern 01 running CW*

Result:

- *Pattern 1 (single pixel chaser with 10 pattern steps) will run at the same time on both fixtures from pixel 01 to pixel 10. Action will be identical.*

Example B

Settings:

- *Fixture A: FX Length = 020, FX offset = 000, Pattern 01 running CW*
- *Fixture B: FX Length = 020, FX offset = 011, Pattern 01 running CW*

Result:

- *Fixture A will run Pattern 1 (single pixel chaser with 10 pattern steps) on Pixel 01 to 10 followed by 10 invisible pattern steps.*
- *Fixture B will run 10 invisible pattern steps and then run Pattern 1 (single pixel chaser with 10 pattern steps).*
- *The result is a clean pixel chaser running across two fixtures.*

Note that FX Length and Offset only work when you set an FX to *Dynamic* (forwards or backwards movement with adjustable speed). If you set an FX pattern to *Static*, the fixture will simply display the pattern step that you select. Length and Offset will not affect action.

Crossfading

Crossfading determines how each step in an FX pattern fades into the next step. Crossfading can be a snap, a normal crossfade or a fade with tail (quick fade in and long fade out with variable length).

Transition

Transition determines how each pattern fades into the next pattern. Transition can be a snap, a soft crossfade, a fade passing through blackout/narrow or a fade passing through full intensity/wide.

4. Control panel and display

The FR10 has a backlit graphic display and four-button control panel.

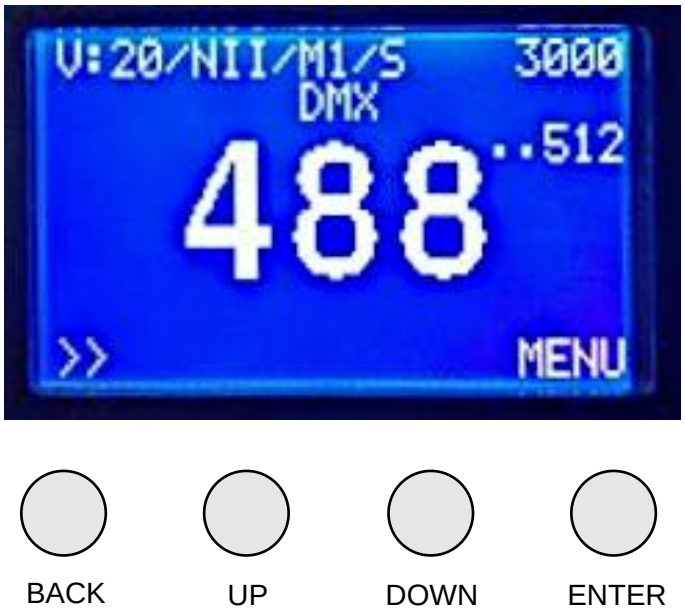

Figure 2. Control panel and display

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

Control panel

The four buttons under the display have the following functions:

- **BACK** – Activates the Quick Menu or goes back one level towards the top of the menu.
- **UP** – Scrolls up or increments a number.
- **DOWN** – Scrolls down or decrements a number.
- **ENTER** – MENU/ENTER activates the control panel if it is in sleep mode. Then enters a menu, selects a setting or implements a command depending on where you are in the menus.

Pressing the UP or DOWN button and holding it pressed in scrolls through menu items or values continuously until you reach the end of the range.

Main screen

Press any button to activate the main screen.

The main screen contains the following information:

- Top left: Firmware version – Tilt, Zoom and Pixel Mirror settings **N** (Normal) or **I** (Inverted) – DMX Mode – Dimming curve
- Top right: PWM Frequency
- Center: Signal source (DMX, Art-Net…), DMX address and last DMX channel occupied
- Bottom left: the >> symbol indicates that the left-hand button opens the Quick menu
- Bottom right: **MENU** indicates that the right-hand button opens the main menu

The example screen shown in Figure 2 gives the following information:

- The fixture is running firmware v. 20
- Tilt = **N** (Normal), Zoom = **I** (Inverted), Pixel Mirror = **I** (Inverted)
- The fixture is in DMX Mode 1
- The dimming curve is set to Soft
- The PWM frequency is set to 3000
- The fixture is set to receive data via DMX
- The fixture's DMX address is set to 488 and the fixture uses DMX channels from 488 up to and including channel 512.

Information displayed when using Art-Net / sACN

Figure 3. Display, Art-Net / sACN networks

See Figure 3. If the fixture is set up for control over an Art-Net or sACN network, the signal source and currently set universe (**Uni:** starting from **0**) appear above the DMX address. The fixture's IP address is displayed below the DMX address. See 'Ethernet config' on page 18 for details of how to configure the fixture's network address.

The fixture uses a network icon to indicate a connection to a valid, active network. If displayed to the left of the DMX address, the icon indicates that a network is connected to the left-hand etherCON port. If displayed to the right of the DMX address, the icon indicates a network connection at the right-hand etherCON port (left and right are as seen when facing the control panel).

Network speed is displayed below the network icon.

If the fixture does not detect a network at one of the ports, it displays **NO LINK** instead of the network icon for that port.

Error code display

If the fixture detects an error, it displays an error code in place of the DMX address in the center of the display.

Button Shortcuts

Battery Eco Mode

Holding BACK and MENU/ENTER together for 10 seconds activates Battery Eco Mode, which switches off the display completely to avoid unwanted discharge of the control menu battery. This is mode is useful if a fixture is going be stored long-term.

The Battery Eco Mode command is only available when the fixture is disconnected from AC mains power.

Quick Fixture Overview

Pressing UP or DOWN three times displays an overview of all the main fixture information and settings. This can be useful while troubleshooting or communicating with GLP Service.

Flip Display Orientation

Pressing and releasing UP and DOWN together flips the display orientation.

Main Menu

Pressing MENU/ENTER opens the Main Menu.

Quick Menu

Pressing the **>>** / BACK button on the left opens the Quick Menu containing the most frequently used menu items.

Contents of the Quick Menu

Display Orientation

Lets you set the control panel display to Normal or Upside-down for most convenient viewing.

Reset All

Performs a full fixture reset to initialize all features and effects.

Load Settings

Lets you load one of the customized Setting Presets from PRESET 1 to PRESET 3.

Loading the DEFAULT PRESET sets all fixture settings back to their default values. This does not affect data network configuration settings such as DMX start address, IP address etc.

Load Factory Backup

Important! The LOAD FACTORY BACKUP command will restore all factory default settings *including* data network configuration settings such as DMX start address, IP address settings, etc. This may mean that you lose communication with your controller.

The LOAD FACTORY BACKUP command does not change device counters and calibration settings.

Main menus

The FR10 Bar has the following main control menus.

DMX Address

Sets the DMX start address of the fixture. The DMX address is 001 by default.

Control Mode

Selects one of the fixture's DMX control modes. See 'DMX control modes overview' on page 31.

Protocol Setup

Protocol Type

The fixture is compatible with DMX 512 and RDM control protocols. You can control the fixture using DMX over a standard DMX cable link or over an Art-Net or sACN network:

- **DMX** (default setting) – The fixture uses the DMX control data received at its 5-pin XLR connectors. No IP settings are required.
- **Art-Net** – The fixture uses the DMX control data received via Art-Net at its Ethernet port. It is necessary to set up an Ethernet network. To configure the fixture to receive control data via Art-Net, you need to set an IP Address, IP Subnet and Art-Net port/universe (see Ethernet Config below).

  Note that it is possible to transmit DMX data as broadcast or unicast packages via Art-Net. If a large number of universes (more than 30) is broadcast, data loss can occur. If you suspect that this is happening, configure your console to unicast Art-Net DMX packages to fixtures or switch to sACN.

- **sACN** – The fixture uses the DMX control data received via sACN at its Ethernet port. It is necessary to set up an Ethernet network. To configure the fixture to receive control data via sACN, you may need to set an IP Address, IP Subnet and sACN universe (see Ethernet Config below).

Ethernet config

Lets you set up an IP Network if controlling the fixture by Art-Net or sACN.

Addressing mode

Lets you choose how the fixture acquires its IP Address:

- **Auto 2.x.x.x.** – the fixture will generate its own IP address within the range 2.x.x.x (Art-Net specification)
- **Auto 10.x.x.x.** – the fixture will generate its own IP address within the range 10.x.x.x (Art-Net specification)
- **DHCP** – the fixture will acquire its IP address automatically by DHCP
- **Custom IP** – you can assign IP addresses manually by entering individual IP addresses and Subnet mask (see Custom IP Address and Custom IP Subnet below)
  - Custom IP Address – lets you set a custom IP Address.
  - Custom IP Subnet – lets you set a custom IP Subnet mask.

ArtNet Port

Selects an Art-Net port/universe from 00000 (Network 0 / Subnet 0 / Universe 0) to 32767 (Network 7 / Subnet 15 / Universe 255).

Note that the first Art-Net universe is considered to be universe number 00000, not 00001.

sACN Universe

Selects a sACN universe from 00001 to 63999.

Fixture Settings

Tilt Invert

Inverts direction of Tilt:

- **OFF** (the default setting) – Normal Tilt control: positive Tilt values turn the head towards the *front* of the fixture
- **ON** – Inverted Tilt control: positive Tilt values turn the head towards the *back* of the fixture

Position feedback

Enables/disables head position feedback (auto Tilt correction):

- **Position Feedback** is enabled by default.
- If you disable **Position Feedback**, the fixture will not automatically correct any errors in Tilt position. In this case, if the head loses its correct Tilt position you must carry out a reset to restore correct operation.

Tilt disable

Disables/enables Tilt movement. Disabling Tilt movement can be useful if the fixture is installed in a location where there is not enough space for tilt movement, for example. Three settings are available:

- **OFF** (the default setting) – Gives normal Tilt control.
- **Reset disabled** – Prevents the Tilt function from resetting if you send a Reset command, but Tilt can still be controlled via DMX. The Tilt motor is energized so that the head stays in position.
- **Current disabled** – Disconnects the Tilt function completely from power and from DMX control. The Tilt motor will not hold the head in position.

Note: If you change from one setting to the other, the fixture will carry out a Tilt reset to initialize Tilt position.

Zoom Invert

Lets you invert the Zoom effect:

- At the default setting (Zoom Invert = **OFF**), increasing values on the Zoom channel moves the zoom from narrow to wide.
- If invert is enabled (Zoom Invert = **ON**), increasing values on the Zoom channel moves the zoom from wide to narrow.

No Signal

Determines what the fixture does 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):

- **Blackout** – Sets the fixture to black out whenever it is not receiving a DMX signal.
- **Hold** (the default setting) – Sets the fixture to continue obeying the last DMX values it received.
- **Stand-Alone** – Sets the fixture to play its stored stand-alone scene (see CAPTURE DMX SCENE) when the fixture is not receiving a DMX signal. If no stand-alone scene is stored in memory, the fixture will black out.

  Note: This setting is useful if you want fixtures to automatically start stand-alone operation when you apply power to them.
- **Capture DMX Scene** – Takes a snapshot of the DMX values that the fixture is currently receiving and stores them in the fixture's memory as its stand-alone scene.

  Once captured, the fixture will display this stand-alone scene if it is set to STAND-ALONE and is not receiving a DMX signal.

Dimmer Curve

Selects one of the two dimming curves available:

- **Linear** – Light intensity appears to increase and decrease evenly throughout the dimming range.

- **Soft (Square)** – The Soft dimming curve is the default setting. Using the Soft curve gives finer control at low light levels (where the eye is more sensitive to changes in light level) and coarser control at high levels.

Color mixing priority

Gives you three options for managing color mixing on the Main Layer (L1), Layer 2 (L2) and Layer 3 (L3):

- **Mix (HTP)** – this is the default setting. The fixture mixes the different layers using HTP (highest value takes priority): the color mixing values of Layer 1, Layer 2 and Layer 3 are merged together and the highest value 'wins'
- **True Color L3-L2-L1** – Layer 3 has priority over Layer 2 and Layer 2 has priority over Layer 1.

  Example: Colors are mixed in true color. As soon the DMX value of Layer 2 is higher than 000 the color of Layer 2 will be visible exactly as mixed and Layer 1 will black out to avoid influencing the color mix of Layer 2.
- **True Color L1-L2-L3** – Layer 1 has priority over Layer 2 and Layer 2 has priority over Layer 3.

  Example: Colors are mixed in true color. As soon the DMX value of Layer 1 is higher than 000, the color of Layer 1 is visible exactly as mixed and Layer 2 blacks out to avoid influencing the color mix of Layer 1.

Subfixture Mode

The fixture offers two different options for control of the Main module and Sub modules using **Fixture Settings → Subfixture Mode** (see 'Main and Sub modules' and 'Subfixture Mode' on page 8).

- **Normal** mode makes the Sub module channels subordinate to the Main module. This means that the intensity and shutter of the Main module act as global intensity and global shutter.
- **Independent** mode makes the Sub module channels completely independent of the Main module.

Pixel Mirror

Inverts the order of pixels:

- **OFF** – In the normal, default setting, the first pixel is at the Power IN connector end of the fixture and the last pixel is at the Power THRU connector end.
- **ON** – If you enable Pixel Mirror, the first pixel is at the Power THRU connector end of the fixture and the last pixel is at the Power IN connector end.

Performance

Using this setting allows the operator to select between three different settings for the movement speed of all the fixture's mechanical effects:

- **Normal** (default setting) – All mechanical effect movement is set to achieve an optimum balance between speed, quietness and smoothness.

- **Fast** – Sets movement to maximum speed. This setting gives super-fast effects but can result in higher noise levels.
- **Smooth** – Sets movement to optimize smoothness and give lowest-noise performance. This setting gives extremely low noise and smooth performance, but effect movement will be slower than in Normal mode.

PWM Frequency

Lets you select between different PWM frequencies for the fixture's LEDs to best match camera shutter frequencies and avoid flicker and beat interference in video images.

You can change the fixture's PWM frequency using either the *Control / Settings* DMX channel or the control panel.

The default PWM setting is **3000 Hz**. You can set the PWM frequency to **2200 Hz**, **3000 Hz**, **4800 Hz**, **9600 Hz** or **25 kHz**.

Note that a higher PWM frequency may affect dimming performance. The PWM frequency setting is stored in the fixture and is not affected by cycling power off and on. However, it will be affected if you apply a Factory default command in the control menus. As a rule, you should set all the fixtures in an installation to the same PWM frequency in order to ensure the same performance.

Display Mode

Lets you select an option for the fixture's control panel display:

- **Auto** (default setting) – The display automatically blacks out 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 flashes.
  - If the fixture has detected an error, the display remains constantly on and shows the error.
- **ON** – The display stays on constantly. This setting can be useful when you are configuring or servicing the fixture.
- **OFF** – The display automatically blacks out after a few seconds, even if the fixture is not receiving a valid control signal and even if it has detected an error. Pressing any of the buttons on the control panel will reactivate the display.

Display Orientation

Sets the orientation for the control panel display:

- **Normal** (default setting) – Display easy to read with the fixture's head above the base
- **Upside-down** – Display easy to read if the fixture is suspended with the head below the base.

Fan Mode

Selects between different cooling fan and temperature management options. These can be useful if the fixture is operating in a very hot or very noise-sensitive environment:

- **Regulated** (default setting) – Balances light output and fan noise, and only operates fans when 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 will be no regulation of light intensity. If the fixture begins to exceed optimum temperature and fans are running at max. speed, light intensity will be limited until optimum temperature can be maintained.

- **High** – Sets fans to constant operation at high speed. The fixture will run at maximum possible light output. This setting is suitable for operation in high ambient temperatures.

  The fixture limits light output intensity smoothly if it becomes necessary in order to keep fixture temperature at optimum level.

  Besides maximizing light output in high ambient temperatures, you can use this mode to cool down a fixture quickly or to remove dust from cooling fans.

- **Medium** – 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** – Sets fans to constant operation at low speed. This setting 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, LEDs will be shut down for a period until the fans have brought the temperature down to a safe level.

Load Settings

Using this setting allows the operator to load different customized fixture configurations and to set the fixture back to the Default Fixture Settings. (To save customized Setting Presets 1 to 3 see SERVICE → ADVANCED → SAVE SETTINGS)

Note: The Load Fixture Presets and Load Fixture Defaults will only affect settings in the Fixture Settings and will not affect DMX Address, Control Mode, Protocol Type, IP Settings, etc. That will help to not losing communication with the controller.

- **Preset 1 ... 3** – Loads one of three specific customized fixture settings. You have to confirm the function for 3s before the new settings are loaded. For information on saving fixture settings to a custom preset, see SERVICE → ADVANCED → SAVE SETTINGS.

- **Default** – Loads all the default fixture settings and brings the fixture into standard show condition. You must confirm the function for 3 seconds before the new settings will load.

Information

This menu gives fixture information readouts such as a list of any errors that the fixture has detected, the fixture's serial number, the currently installed software version, device info (RDM protocol version, model ID, personality, sub-device, sensor count) total hours of operation from new, number of power cycles from new, DMX signal monitoring and signal quality, etc.

Manual Control

This menu gives options to control the fixture manually with no need for a DMX controller. This can be useful during service or when setting up a stand-alone scene.

- **Reset All** – Performs a full fixture reset to initialize all features and effects.
- **Reset Tilt** – Performs a reset of the Tilt only in order to re-initialize Tilt position.
- **Reset Head** – Performs a reset on all the effects in the head.
- **Manual DMX** – Allows control of the fixture using the fixture's own control panel.

  An external DMX signal will always have higher priority than manual control values. Disconnect the fixture from the control data source when using manual DMX.

  Important! *Be prepared for the fixture to start moving without warning when you enter manual control.*

  - **Manual DMX** – Sends internal values to control each of the fixture's functions
  - **Load No-Signal Scene** – Loads the DMX values of the stored captured scene from the No-Signal feature
  - **Save as No-signal scene** – Saves the current manual control values as the captured scene from the No-Signal feature.
  - **Capture DMX values** – Captures the current external DMX signal values and uses them as manual control values.
  - **Reset Manual values** – Resets all manual control values to default.

Service

The Service menu contains test sequences that are useful during service and maintenance. It also contains an ADVANCED submenu which is for use by trained technicians only. Read the information below carefully before entering this level.

Test Sequences

Runs different test sequences to check fixture functionality. Press the BACK button to stop a test sequence.

- **Test All** – Runs a test sequence of all features one by one.
- **Test Tilt** – Runs a test sequence of Tilt movement only.

- **Test LED** – Runs a test sequence of LED pixels only.
- **Test Zoom** – Runs a test sequence of Zoom only.

Advanced Service

Entering this Submenu will allow you to do advanced fixture settings. You need to confirm to enter the advanced Service level by holding enter for 3s.

Note: The Advanced Service Level is for trained technicians only. Read the information below before entering this level.

Service Mode

Disables Tilt movement for convenience when servicing the head. Tilt is enabled again at the next power cycle.

Note: You can also disable Tilt by pressing and holding the MENU / ENTER button *for 3 seconds while powering on the fixture.*

Offset

Lets you set customized offset values for each of the fixture's effects. This is a useful way of temporarily adjusting multiple fixtures without changing fixture calibration.

Note: Offset Values are not calibration values. They are not deleted by a ***Load Setting Defaults*** *command but they are deleted by a* ***Load Factory Backup*** *command. If you want to permanently adjust effects, use* ***Feature Calibration*** *in the* ***Factory*** *menu.*

Reset Counters

Lets you reset the different fixture counters.

Note: Device Counters are not reset by a ***Load Factory Backup*** *command.*

Save Settings

Lets you save the current fixture settings to one of three custom fixture presets. After saving a custom Fixture Setting Preset, you can reload it at any time using the **Load Fixture Setting Preset** command (see FIXTURE SETTINGS → LOAD SETTINGS on page 22).

Note that the Default Preset is set at the factory and cannot be changed.

Load Factory Backup

Important! Using this setting will return all the fixture's settings to factory defaults. This includes all data network configuration such as DMX start address, IP configuration etc. Note that you may lose communication with your controller!

LOAD FACTORY BACKUP does not affect device counters and calibration values.

Factory Menu

Important! Do not enter the Factory menu unless you are a trained service professional. Read the fixture's service and calibration documentation, if available, before entering this menu. In the Factory mode you can change critical settings and cause damage to the fixture that is not covered by the product warranty.

The Factory menu structure is normally hidden and is for use by the manufacturer or professional service technicians only.

To enable the Factory menu the fixture must be powered on while holding the MENU / ENTER button pressed for minimum 5 seconds. A warning message will appear in the display. The Factory Menu will then be visible as the last item in the Main Menu.

The Factory menu stays enabled until the next power cycle. The control panel display is set to constantly on and a Factory symbol is visible in the main screen while the Factory menu is enabled.

RDM Address

Lets you edit the RDM Address of the fixture. This should always be the serial number of the fixture.

Important! *Make sure that the RDM address is correct, especially after changing the mainboard. This is especially important for rental fixtures. If you have any questions, please contact your GLP Support.*

Feature Calibration

Lets you calibrate the fixture's effect and LEDs.

Important! *Make sure that calibration is carried out correctly so that all fixtures in the market perform identically. This is important for rental fixtures. If you have any questions, please contact your GLP Support.*

5. Control menu layout

Menus			***Notes***
DMX Start Address			
001-512			*Set fixture's DMX address*
Protocol Setup			
Protocol Type	**DMX**		*Control via DMX protocol*
	Art-Net		*Control via Art-Net protocol*
	sACN		*Control via sACN protocol*
Ethernet Config	Addressing Mode	Auto 2.X.X.X	*Auto addressing in the range 2.X.X.X*
		Auto 10.X.X.X	*Auto addressing in the range 10.X.X.X*
		DHCP	*Get IP address by DHCP*
		Custom IP	*Use custom IP address*
	Custom IP Address	xxx.xxx.xxx.xxx	*Set custom IP address*
	Custom IP Subnet	xxx.xxx.xxx.xxx	*Set custom subnet*
	Art-Net Port	0 - 32767	*Set Art-Net port*
	sACN Universe	1 - 63999	*Set sACN universe*
Fixture Settings			
Tilt Invert	**OFF**		*Reverse direction of tilt movement*
	ON		
Position Feedback	**ON**		*Enable/disable pan/tilt position correction*
	OFF		
Tilt Disable	**OFF**		*Tilt normal*
	Reset disable		*No tilt reset but DMX Tilt control enabled*
	Current disable		*Tilt fully disabled*
Zoom Invert	**OFF**		*Zoom narrow to wide*
	ON		*Zoom wide to narrow*
No Signal	Blackout		*Fixture blacks out if no DMX signal received*
	Hold		*Fixture continues to display current effect if no DMX signal received*
	Replay DMX scene		*Plays the scene stored with **Capture DMX Values** (see below) if no DMX signal received*
	Capture DMX Values		*Captures current scene and stores it for use in **Replay DMX Scene** (see above)*
Dimmer Curve	**Soft (Square)**		*Soft (square law) dimming curve*
	Linear		*Linear dimming curve*

Color Mix Priority	**Mix (HTP)**	*Layers 1 (main), 2 and 3 color mixing: Highest DMX value takes priority*
	True Color L3-L2-L1	*Layers 1 (main), 2 and 3 color mixing: Layer 3 takes priority, then Layer 2, then Layer 1*
	True Color L1-L2-L3	*Layers 1 (main), 2 and 3 color mixing: Layer 1 takes priority, then Layer 2, then Layer 3*
Subfixture Mode	**Normal**	*Main module shutter and dimmer appy to Sub modules*
	Independent	*Main module shutter and dimmer do not apply to Sub modules. Sub modules act as independent fixtures*
Pixel Mirror	**OFF**	*Pixel numbering normal 1-10*
	ON	*Pixel numbering reversed 10 - 1*
Performance	**Normal**	*Normal pan, tilt and effects movement*
	Fast	*Optimize pan, tilt and effects movement for speed*
	Smooth	*Optimize pan, tilt and effects movement for smoothness*
PWM Frequency	2200 Hz	*Select LED PWM frequency*
	3000 Hz	
	4800 Hz	
	9600 Hz	
	25 kHz	
Display Mode	**Auto**	*Display dims to zero after a short period of inactivity if no errors and if there is a valid DMX signal*
	On	*Display constantly on*
	Off	*Display dims even if there are errors / no DMX signal*
Display Orientation	**Normal**	*Display normal (for use when fixture is standing)*
	Upside-down	*Display inverted (for use when fixture is flown head-down)*
Fan Mode	**Regulated**	*Fan speed temperature-regulated (optimized for light output and noise)*
	High	*Fan speed constant high (maximum cooling)*
	Medium	*Fan speed constant medium*
	Low	*Fan speed constant low (lowest possible noise)*

Load Settings	Preset 1 (Confirm 3 seconds)		*Load one of custom settings presets stored in Advanced → Save settings menu*
	Preset 2 (Confirm 3 seconds)		
	Preset 3 (Confirm 3 seconds)		
	Default (Confirm 3 seconds)		*Restore all custom personality settings and offsets to factory defaults*
Information			
Show errorlist			*Show fixture status information in display*
Show Serial Number			
Show SW version			
Show device info			
Show device hours			
Show power cycles			
Show DMX input			
Show signal quality			
Show temperature			
Show fan monitor			
Manual Control			
Reset All	**No**		*Reset complete fixture*
	Yes		
Reset Tilt	**No**		*Reset tilt only*
	Yes		
Reset Head	**No**		*Reset all LED and Zoom functions*
	Yes		
Manual DMX	Intensity … Zoom FX Offset	**000** … 255	*Manually set a DMX value on each channel*
	Load No-Signal Scene	Confirm	*Loads currently stored No-Signal Scene*
	Save as No-Signal Scene	Confirm	*Saves current manual values as No-Signal Scene*
	Capture DMX values	Confirm	*Take external DMX values and use them as manual values*
	Reset Manual values	Confirm	*Reset all manual values to default*

Service				
Test Sequences	Test All			*Run test sequence on all effects*
	Test Tilt			*Run test sequence on Tilt functionality*
	Test LED			*Run test sequence on LEDs*
	Test Zoom			*Run test sequence on Zoom functionality*
Advanced (Press and hold Enter for 3 seconds)	Service Mode	**OFF**		*Put fixture into service mode (disable tilt until next power cycle)*
		ON		
	Offset	Tilt Offset +/-128	-99 … 0 … 99	*Set custom effect offsets (unaffected by power cycles but deleted if factory defaults are loaded)*
		Zoom offset +/-128	-99 … 0 … 99	
		…	-99 … 0 … 99	
		Reset offsets	Confirm	*Delete all custom offsets*
	Reset counters	Device hours	Confirm	*Reset resettable counters / temperature log*
		Device power cycles	Confirm	
		Max. temperatures	Confirm	
	Save settings	Preset 1	Confirm	*Save current personality settings including offsets as a custom preset*
		Preset 2	Confirm	
		Preset 3	Confirm	
	Load factory backup		Confirm (hold for 5 seconds)	*Restore personality settings, fixture configuration incl. DMX address, control protocol, offset values, etc. (will not affect calibration settings and device counters)*

Shortcut menu

To open the Shortcut menu, press the BACK button under the **>>** symbol at the bottom left of the main screen in the control panel.

Display orientation	**Normal**		*Display orientation*
	Upside down		
Reset all	Confirm		*Reset entire fixture*
Load settings	Preset 1	Confirm (hold for 3 seconds)	*Load one of custom settings presets stored in Advanced → Save settings menu*
	Preset 2	Confirm (hold for 3 seconds)	
	Preset 3	Confirm (hold for 3 seconds)	
	Default	Confirm (hold for 3 seconds)	*Restore personality settings to factory defaults. Will not affect fixture configuration (DMX address, control protocol, offset values etc.).*
Load Factory Backup (!)	Confirm (hold for 5 seconds)		*Restore personality settings, fixture configuration incl. DMX address, control protocol, offset values, etc. Will not affect calibration settings and device counters.*

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

6. DMX control modes overview

The following four DMX control modes are available in the FR10 Bar.

DMX Mode 1: Normal is the default DMX mode. It provides 16-bit control of tilt and dimming, shutter effects, a Control/Settings channel that lets you configure the fixture remotely via DMX, color temperature control, a virtual color wheel (color presets) and RGBW color mixing.

It also features a powerful effects engine with static and dynamic pixel and zoom effect patterns.

Mode 1 Normal (default mode)	
1	Tilt
2	
3	Intensity global
4	
5	Shutter global
6	Control/Settings
7	CTC
8	Virtual color wheel
9	Red
10	Green
11	Blue
12	White
13	Pixel FX Pattern select
14	Pixel FX Position/Speed
15	Pixel FX Crossfading
16	Pixel FX Transition
17	Pixel FX Length
18	Pixel FX Offset
19	Zoom global
20	Zoom FX Pattern select
21	Zoom FX Position/Speed
22	Zoom FX Crossfading
23	Zoom FX Transition
24	Zoom FX Length
25	Zoom FX Offset

DMX Mode 2: Multi-Layer provides 16-bit control of tilt and dimming, shutter effects, a Control/Settings channel that lets you configure the fixture remotely via DMX, color temperature control, a virtual color wheel (color presets) and RGBW color mixing.

It also features a powerful effects engine with static and dynamic pixel and zoom effect patterns.

Besides the main layer (Layer 1) described above, DMX Mode 2 features two additional layers that can be used in combination with Layer 1.

The fixture decides which of the three layers takes priority based on the Color Mix Priority setting on the Control/Settings DMX channel or in the fixture's control panel. The default setting is HTP (highest DMX value takes priority), but you can set Layer 1 (the main layer) or Layer 3 to take priority.

Each of the two additional layers offers a 16-bit layer master (the visibility of the layer over the lower layers from 0% – 100%), shutter effects, RGBW control and the same range of pixel FX as in DMX Mode 1.

Mode 2 Multi-Layer		
1	Tilt	Layer 1 – Main Layer
2		
3	Intensity global	
4		
5	Shutter global	
6	Control/Settings	
7	CTC	
8	Virtual color wheel	
9	Red	
10	Green	
11	Blue	
12	White	
13	Pixel FX Pattern select	
14	Pixel FX Position/Speed	
15	Pixel FX Crossfading	
16	Pixel FX Transition	
17	Pixel FX Length	
18	Pixel FX Offset	
19	Zoom global	
20	Zoom FX Pattern select	
21	Zoom FX Position/Speed	
22	Zoom FX Crossfading	
23	Zoom FX Transition	
24	Zoom FX Length	
25	Zoom FX Offset	
26	Layer 2 Master	Sub module 1 (Layer 2)
27		
28	Shutter	
29	Red intensity	
30	Green intensity	
31	Blue intensity	
32	White intensity	
33	Pixel FX Pattern select	
34	Pixel FX Position/Speed	
35	Pixel FX Crossfading	
36	Pixel FX Transition	
37	Pixel FX Length	
38	Pixel FX Offset	
39	Layer 3 Master	Sub module 2 (Layer 3)
40		
41	Shutter	
42	Red intensity	
43	Green intensity	
44	Blue intensity	
45	White intensity	
46	Pixel FX Pattern select	
47	Pixel FX Position/Speed	
48	Pixel FX Crossfading	
49	Pixel FX Transition	
50	Pixel FX Length	
51	Pixel FX Offset	

DMX Mode 3: MultiPix (Multi-pixel) provides 16-bit control of tilt and dimming, shutter effects, a Control/Settings channel that lets you configure the fixture remotely via DMX and color temperature control.

This mode also gives individual RGBW color mixing and individual Zoom control of each of the fixture's ten pixels.

Mode 3 MultiPix	
1	Tilt
2	
3	Intensity global
4	
5	Shutter global
6	Control/Settings
7	CTC
8	Pixel 01 Red
9	Pixel 01 Green
10	Pixel 01 Blue
11	Pixel 01 White
12	Pixel 01 Zoom
13	Pixel 02 Red
14	Pixel 02 Green
15	Pixel 02 Blue
16	Pixel 02 White
17	Pixel 02 Zoom
18	Pixel 03 Red
19	Pixel 03 Green
20	Pixel 03 Blue
21	Pixel 03 White
22	Pixel 03 Zoom
23	Pixel 04 Red
24	Pixel 04 Green
25	Pixel 04 Blue
26	Pixel 04 White
27	Pixel 04 Zoom
28	Pixel 05 Red
29	Pixel 05 Green
30	Pixel 05 Blue
31	Pixel 05 White
32	Pixel 05 Zoom
33	Pixel 06 Red
34	Pixel 06 Green
35	Pixel 06 Blue
36	Pixel 06 White
37	Pixel 06 Zoom
38	Pixel 07 Red
39	Pixel 07 Green
40	Pixel 07 Blue
41	Pixel 07 White
42	Pixel 07 Zoom
43	Pixel 08 Red
44	Pixel 08 Green
45	Pixel 08 Blue
46	Pixel 08 White
47	Pixel 08 Zoom
48	Pixel 09 Red
49	Pixel 09 Green
50	Pixel 09 Blue
51	Pixel 09 White
52	Pixel 09 Zoom
53	Pixel 10 Red
54	Pixel 10 Green
55	Pixel 10 Blue
56	Pixel 10 White
57	Pixel 10 Zoom

DMX Mode 4: MultiPix (Multi-pixel) Advanced provides 16-bit control of tilt and dimming, shutter effects, a Control/Settings channel that lets you configure the fixture remotely via DMX, color temperature control, a virtual color wheel (color presets) and RGBW color mixing.

It also features a powerful effects engine with static and dynamic pixel and zoom effect patterns.

Besides the main layer (Layer 1) described above, DMX Mode 4 features two additional layers that can be used in combination with Layer 1:

- Layer 2 offers shutter effects and individual pixel RGBW color mixing with 16-bit Master control (visibility of Layer 2 from 0% – 100%).
- Layer 3 offers individual pixel zoom control with Master control (visibility of Layer 3 from 0% – 100%).

The fixture decides which of the three layers takes priority based on the Color Mix Priority setting on the Control/Settings DMX channel or in the fixture's control panel. The default setting is HTP (highest DMX value takes priority), but you can set Layer 1 (the main layer) or Layer 3 to take priority.

Mode 4 MultiPix Advanced		
1	Tilt	Layer 1 – Main layer
2		
3	Intensity global	
4		
5	Shutter global	
6	Control/Settings	
7	CTC	
8	Virtual color wheel	
9	Red	
10	Green	
11	Blue	
12	White	
13	Pixel FX Pattern select	
14	Pixel FX Position/Speed	
15	Pixel FX Crossfading	
16	Pixel FX Transition	
17	Pixel FX Length	
18	Pixel FX Offset	
19	Zoom global	
20	Zoom FX Pattern select	
21	Zoom FX Position/Speed	
22	Zoom FX Crossfading	
23	Zoom FX Transition	
24	Zoom FX Length	
25	Zoom FX Offset	
26	Layer 2 (individual pixel intensity) Master	Layer 2 – Pixel intensity
27		
28	Shutter	
29	Pixel 01 Red	
30	Pixel 01 Green	
31	Pixel 01 Blue	
32	Pixel 01 White	
33	Pixel 02 Red	
34	Pixel 02 Green	
35	Pixel 02 Blue	
36	Pixel 02 White	
37	Pixel 03 Red	
38	Pixel 03 Green	
39	Pixel 03 Blue	
40	Pixel 03 White	
41	Pixel 04 Red	
42	Pixel 04 Green	
43	Pixel 04 Blue	
44	Pixel 04 White	
45	Pixel 05 Red	
46	Pixel 05 Green	
47	Pixel 05 Blue	
48	Pixel 05 White	
49	Pixel 06 Red	
50	Pixel 06 Green	
51	Pixel 06 Blue	
52	Pixel 06 White	

53	Pixel 07 Red	Layer 2 – Pixel intensity (continued)
54	Pixel 07 Green	
55	Pixel 07 Blue	
56	Pixel 07 White	
57	Pixel 08 Red	
58	Pixel 08 Green	
59	Pixel 08 Blue	
60	Pixel 08 White	
61	Pixel 09 Red	
62	Pixel 09 Green	
63	Pixel 09 Blue	
64	Pixel 09 White	
65	Pixel 10 Red	
66	Pixel 10 Green	
67	Pixel 10 Blue	
68	Pixel 10 White	
69	Layer 3 (individual pixel zoom) Master	Layer 3 – Pixel zoom
70	Pixel 01 Zoom	
71	Pixel 02 Zoom	
72	Pixel 03 Zoom	
73	Pixel 04 Zoom	
74	Pixel 05 Zoom	
75	Pixel 06 Zoom	
76	Pixel 07 Zoom	
77	Pixel 09 Zoom	
78	Pixel 09 Zoom	
79	Pixel 10 Zoom	

7. DMX control channel layout

In the following DMX channel layout tables:

- Default settings are indicated with **bold type**.
- Where commands are marked ***(3s hold)*** *or* ***(5s hold)***, you must send the DMX value continuously for 3 or 5 seconds to apply the command.
- Percentage equivalents are rounded up or down to the nearest 0.1%

DMX Mode 1: Normal (default DMX mode)

25 DMX Channels

Channel		Command	DMX range		Percent		Default DMX	Fade
1	**Tilt coarse**	Tilt backwards > forwards (16-bit)	0	65535	0	100	32768	Fade
2	**Tilt fine**							
3	**Intensity coarse**	Global intensity 0-100% (16-bit)	0	65535	0	100	32768	Fade
4	**Intensity fine**							
5	**Shutter**	Shutter closed	0	4	0	1.6	255	Snap
		Dimmer flash (at intensity change)	5	9	2.0	3.5		Snap
		Pulse slow > fast	10	39	3.9	15.3		Fade
		Opening pulse slow > fast	40	69	15.7	27.1		Fade
		Closing pulse slow > fast	70	99	27.5	38.8		Fade
		Double flash slow > fast	100	129	39.2	50.6		Fade
		Random pixel strobe slow > fast	130	159	51.0	62.4		Fade
		Random all strobe slow > fast	160	199	62.7	78.0		Fade
		Strobe sync all pixels 1Hz > 10Hz	200	250	78.4	98.0		Fade
		Open	251	255	98.4	100		Snap
6	**Control / Settings**	No function	0	38	0	14.9	0	Snap
		Dimmer curve: Soft (square) (3s hold)	39	41	15.3	16.1		
		Dimmer curve: Linear (3s hold)	42	44	16.5	17.3		
		No function	45	53	17.6	20.8		
		Display mode: Off (3s hold)	54	56	21.2	22		
		Display mode: Auto (3s hold)	57	59	22.4	23.1		
		Display mode: On (3s hold)	60	62	23.5	24.3		
		Display orientation: Normal (3s hold)	63	65	24.7	25.5		
		Display orientation: Inverted (3s hold)	66	68	25.9	26.7		
		No function	69	71	27.1	27.8		
		No DMX: Blackout (3s hold)	72	74	28.2	29.0		
		No DMX: Hold (3s hold)	75	77	29.4	30.2		
		No DMX: Captured scene (3s hold)	78	80	30.6	31.4		
		Capture Scene (3s hold)	81	83	31.8	32.5		
		No function	84	86	32.9	33.7		
		Fan mode: Regulated (3s hold)	87	89	34.1	34.9		
		Fan mode: High (3s hold)	90	92	35.3	36.1		
		Fan mode: Medium (3s hold)	93	95	36.5	37.3		
		Fan mode: Low (3s hold)	96	98	37.6	38.4		
		No function	99	104	38.8	40.8		
		Position feedback: Off (3s hold)	105	107	41.2	42.0		
		Position feedback: On (3s hold)	108	110	42.4	43.1		
		Tilt disable: Off (3s hold)	111	113	43.5	44.3		
		Tilt disable: Reset Disabled	114	116	44.7	45.5		
		Tilt disable: Current Disabled	117	119	45.9	46.7		
		Tilt inversion: Off (3s hold)	120	122	47.1	47.8		
		Tilt inversion: On (3s hold)	123	125	48.2	49.0		
		No function	126	128	49.4	50.2		
		Zoom inversion: Off (3s hold)	129	131	50.6	51.4		
		Zoom inversion: On (3s hold)	132	134	51.8	52.5		
		No function	135	140	52.9	54.9		
		Pixel mirror: Off (3s hold)	141	143	55.3	56.1		
		Pixel mirror: On (3s hold)	144	146	56.5	57.3		

		No function	147	155	57.6	60.8		
		Performance: Fast (3s hold)	156	158	61,2	62,0		
		Performance: Normal (3s hold)	159	161	62,4	63,1		
		Performance: Smooth (3s hold)	162	164	63.5	64.3		
		No function	165	170	64.7	66.7		
		Color mix priority: Mix (HTP)	171	173	67.1	67.8		
		Color mix priority: L3-L2-L1	174	176	68.2	69.0		
		Color mix priority: L1-L2-L3	177	179	69.4	70.2		
		Subfixture mode: Normal	180	182	70.6	71.4		
		Subfixture mode: Independent	183	185	71.8	72.5		
		No function	186	191	72.9	74.9		
		PWM: 2200 Hz (5s hold)	192	194	75.3	76.1		
		PWM: 3000 Hz (5s hold)	195	197	76.5	77.3		
		PWM: 4800 Hz (5s hold)	198	200	77.6	78.4		
		PWM: 9600 Hz (5s hold)	201	203	78.8	79.6		
		No function	204	206	80.0	80.8		
		PWM: 25 kHz (5s hold)	207	209	81.2	82.0		
		No function	210	245	82.4	96.1		
		Reset Tilt (3s hold)	246	248	96.5	97.3		
		Reset Head (3s hold)	249	251	97.6	98.4		
		Reset All (3s hold)	252	255	98.8	100		
7	**Color Temperature Control**	RAW	0	15	0	5.9		Snap
		10000 K	16	18	6.3	7.1		
		9900 K	19	21	7.5	8.2		
		9800 K	22	24	8.6	9.4		
		9700 K	25	27	9.8	10.6		
		9600 K	28	30	11.0	11.8		
		9500 K	31	33	12.2	12.9		
		9400 K	34	36	13.3	14.1		
		9300 K	37	39	14.5	15.3		
		9200 K	40	42	15.7	16.5		
		9100 K	43	45	16.9	17.6		
		9000 K	46	48	18.0	18.8		
		8900 K	49	51	19.2	20.0		
		8800 K	52	54	20.4	21.2		
		8700 K	55	57	21.6	22.4		
		8600 K	58	60	22.7	23.5		
		8500 K	61	63	23.9	24.7		
		8400 K	64	66	25.1	25.9		
		8300 K	67	69	26.3	27.1		
		8200 K	70	72	27.5	28.2		
		8100 K	73	75	28.6	29.4		
		8000 K	76	78	29.8	30.6		
		7900 K	79	81	31.0	31.8		
		7800 K	82	84	32.2	32.9		
		7700 K	85	87	33.3	34.1		
		7600 K	88	90	34.5	35.3		
		7500 K	91	93	35.7	36.5		
		7400 K	94	96	36.9	37.6		
		7300 K	97	99	38.0	38.8		
		7200 K	100	102	39.2	40.0		
		7100 K	103	105	40.4	41.2		
		7000 K	106	108	41.6	42.4		
		6900 K	109	111	42.7	43.5		
		6800 K	112	114	43.9	44.7		
		6700 K	115	117	45.1	45.9		
		6600 K	118	120	46.3	47.1		
		6500 K	121	123	47.5	48.2		

		6400 K	124	126	48.6	49.4		
		6300 K	127	129	49.8	50.6		
		6200 K	130	132	51.0	51.8		
		6100 K	133	135	52.2	52.9		
		6000 K	136	138	53.3	54.1		
		5900 K	139	141	54.5	55.3		
		5800 K	142	144	55.7	56.5		
		5700 K	145	147	56.9	57.6		
		5600 K	148	150	58.0	58.8		
		5500 K	151	153	59.2	60.0		
		5400 K	154	156	60.4	61.2		
		5300 K	157	159	61.6	62.4		
		5200 K	160	162	62.7	63.5		
		5100 K	163	165	63.9	64.7		
		5000 K	166	168	65.1	65.9		
		4900 K	169	171	66.3	67.1		
		4800 K	172	174	67.5	68.2		
		4700 K	175	177	68.6	69.4		
		4600 K	178	180	69.8	70.6		
		4500 K	181	183	71.0	71.8		
		4400 K	184	186	72.2	72.9		
		4300 K	187	189	73.3	74.1		
		4200 K	190	192	74.5	75.3		
		4100 K	193	195	75.7	76.5		
		4000 K	196	198	76.9	77.6		
		3900 K	199	201	78.0	78.8		
		3800 K	202	204	79.2	80.0		
		3700 K	205	207	80.4	81.2		
		3600 K	208	210	81.6	82.4		
		3500 K	211	213	82.7	83.5		
		3400 K	214	216	83.9	84.7		
		3300 K	217	219	85.1	85.9		
		3200 K	220	222	86.3	87.1		
		3100 K	223	225	87.5	88.2		
		3000 K	226	228	88.6	89.4		
		2900 K	229	231	89.8	90.6		
		2800 K	232	234	91.0	91.8		
		2700 K	235	237	92.2	92.9		
		2600 K	238	240	93.3	94.1		
		2500 K	241	255	94.5	100		
8	**Virtual color wheel**	Off (RGBW)	0	7	0	2.7	0	Snap
		Color 01 - Red	8	15	3.1	5.9		Snap
		Color 02 - Amber	16	23	6.3	9.0		Snap
		Color 03 - Warm Yellow	24	31	9.4	12.2		Snap
		Color 04 - Yellow	32	39	12.5	15.3		Snap
		Color 05 - Green	40	47	15.7	18.4		Snap
		Color 06 - Turquoise	48	55	18.8	21.6		Snap
		Color 07 - Cyan	56	63	22.0	24.7		Snap
		Color 08 - Blue	64	71	25.1	27.8		Snap
		Color 09 - Lavender	72	79	28.2	31.0		Snap
		Color 10 - Male	80	87	31.4	34.1		Snap
		Color 11 - Magenta	88	95	34.5	37.3		Snap
		Color 12 - Pink	96	103	37.6	40.4		Snap
		Color 13 - White 3200K	104	111	40.8	43.5		Snap
		Color 14 - White 5600K	112	119	43.9	46.7		Snap
		Color 15 - White 7200K	120	127	47.1	49.8		Snap
		Stop	128	128	50.2	50.2		Snap
		Rainbow colors crossfade slow > fast	129	223	50.6	87.5		Fade
		Random colors crossfade slow > fast	224	255	87.8	100		Fade

9	**Red**	Red intensity 0-100%	0	255	0	100	255	Fade
10	**Green**	Green intensity 0-100%	0	255	0	100	255	Fade
11	**Blue**	Blue intensity 0-100%	0	255	0	100	255	Fade
12	**White**	White intensity 0-100%	0	255	0	100	0	Fade
13	**Pixel FX pattern select**	No effect	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		
		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random pixel FX pattern	246	250	96.5	98.0		
		Random pixel FX	251	255	98.4	100		

14	**Pixel FX pattern static position / dynamic movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		Snap
		Pattern static Step 03	12	17	4.7	6.7		Snap
		Pattern static Step 04	18	23	7.1	9.0		Snap
		Pattern static Step 05	24	29	9.4	11.4		Snap
		Pattern static Step 06	30	35	11.8	13.7		Snap
		Pattern static Step 07	36	41	14.1	16.1		Snap
		Pattern static Step 08	42	47	16.5	18.4		Snap
		Pattern static Step 09	48	53	18.8	20.8		Snap
		Pattern static Step 10	54	59	21.2	23.1		Snap
		Pattern static Step 11	60	65	23.5	25.5		Snap
		Pattern static Step 12	66	71	25.9	27.8		Snap
		Pattern static Step 13	72	77	28.2	30.2		Snap
		Pattern static Step 14	78	83	30.6	32.5		Snap
		Pattern static Step 15	84	89	32.9	34.9		Snap
		Pattern static Step 16	90	95	35.3	37.3		Snap
		Pattern static Step 17	96	101	37.6	39.6		Snap
		Pattern static Step 18	102	107	40.0	42.0		Snap
		Pattern static Step 19	108	113	42.4	44.3		Snap
		Pattern static Step 20	114	119	44.7	46.7		Snap
		Stop / no function	120	127	47.1	49.8		Snap
		Pattern dynamic, forwards fast > slow (run pattern from Step 1 to end in loop)	128	190	50.2	74.5		Fade
		Stop	191	192	74.9	75.3		Snap
		Pattern dynamic, backwards slow > fast (run pattern from end to Step 1 in loop)	193	255	75.7	100.0		Fade
15	**Pixel pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
16	**Pixel FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FOB (fade over blackout) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOF (fade over full intensity) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		
17	**Pixel FX pattern length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
18	**Pixel FX pattern offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade
19	**Zoom**	Narrow > wide	0	255	0	100	0	Snap

20	**Zoom FX pattern select**	No effect, all lenses have normal zoom functionality	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		
		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random zoom FX pattern	246	250	96.5	98.0		
		Random pixel zoom	251	255	98.4	100		

21	**Zoom FX static pattern position / dynamic pattern movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		
		Pattern static Step 03	12	17	4.7	6.7		
		Pattern static Step 04	18	23	7.1	9.0		
		Pattern static Step 05	24	29	9.4	11.4		
		Pattern static Step 06	30	35	11.8	13.7		
		Pattern static Step 07	36	41	14.1	16.1		
		Pattern static Step 08	42	47	16.5	18.4		
		Pattern static Step 09	48	53	18.8	20.8		
		Pattern static Step 10	54	59	21.2	23.1		
		Pattern static Step 11	60	65	23.5	25.5		
		Pattern static Step 12	66	71	25.9	27.8		
		Pattern static Step 13	72	77	28.2	30.2		
		Pattern static Step 14	78	83	30.6	32.5		
		Pattern static Step 15	84	89	32.9	34.9		
		Pattern static Step 16	90	95	35.3	37.3		
		Pattern static Step 17	96	101	37.6	39.6		
		Pattern static Step 18	102	107	40.0	42.0		
		Pattern static Step 19	108	113	42.4	44.3		
		Pattern static Step 20	114	119	44.7	46.7		
		Stop / no function	120	127	47.1	49.8		
		Pattern dynamic, forwards fast > slow (run pattern from Step 1 to end in loop)	128	190	50.2	74.5		
		Stop	191	192	74.9	75.3		
		Pattern dynamic, backwards slow > fast (run pattern from end to Step 1 in loop)	193	255	75.7	100.0		
22	**Zoom pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
23	**Zoom pattern FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FON (fade over narrow) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOW (fade over wide) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		
24	**Zoom pattern FX length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
25	**Zoom pattern FX offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade

DMX Mode 2: Multi-Layer

51 DMX Channels

Channel		Command	DMX range		Percent		Default DMX	Fade
Layer 1 (Main layer)								
1	**Tilt coarse**	Tilt backwards > forwards (16-bit)	0	65535	0	100	32768	Fade
2	**Tilt fine**							
3	**Intensity coarse**	Global intensity 0-100% (16-bit)	0	65535	0	100	32768	Fade
4	**Intensity fine**							
5	**Shutter**	Shutter closed	0	4	0	1.6	255	Snap
		Dimmer flash (at intensity change)	5	9	2.0	3.5		Snap
		Pulse slow > fast	10	39	3.9	15.3		Fade
		Opening pulse slow > fast	40	69	15.7	27.1		Fade
		Closing pulse slow > fast	70	99	27.5	38.8		Fade
		Double flash slow > fast	100	129	39.2	50.6		Fade
		Random pixel strobe slow > fast	130	159	51.0	62.4		Fade
		Random all strobe slow > fast	160	199	62.7	78.0		Fade
		Strobe sync all pixels 1Hz > 10Hz	200	250	78.4	98.0		Fade
		Open	251	255	98.4	100		Snap
6	**Control / Settings**	No function	0	38	0	14.9	0	Snap
		Dimmer curve: Soft (square) (3s hold)	39	41	15.3	16.1		
		Dimmer curve: Linear (3s hold)	42	44	16.5	17.3		
		No function	45	53	17.6	20.8		
		Display mode: Off (3s hold)	54	56	21.2	22		
		Display mode: Auto (3s hold)	57	59	22.4	23.1		
		Display mode: On (3s hold)	60	62	23.5	24.3		
		Display orientation: Normal (3s hold)	63	65	24.7	25.5		
		Display orientation: Inverted (3s hold)	66	68	25.9	26.7		
		No function	69	71	27.1	27.8		
		No DMX: Blackout (3s hold)	72	74	28.2	29.0		
		No DMX: Hold (3s hold)	75	77	29.4	30.2		
		No DMX: Captured scene (3s hold)	78	80	30.6	31.4		
		Capture Scene (3s hold)	81	83	31.8	32.5		
		No function	84	86	32.9	33.7		
		Fan mode: Regulated (3s hold)	87	89	34.1	34.9		
		Fan mode: High (3s hold)	90	92	35.3	36.1		
		Fan mode: Medium (3s hold)	93	95	36.5	37.3		
		Fan mode: Low (3s hold)	96	98	37.6	38.4		
		No function	99	104	38.8	40.8		
		Position feedback: Off (3s hold)	105	107	41.2	42.0		
		Position feedback: On (3s hold)	108	110	42.4	43.1		
		Tilt disable: Off (3s hold)	111	113	43.5	44.3		
		Tilt disable: Reset Disabled	114	116	44.7	45.5		
		Tilt disable: Current Disabled	117	119	45.9	46.7		
		Tilt inversion: Off (3s hold)	120	122	47.1	47.8		
		Tilt inversion: On (3s hold)	123	125	48.2	49.0		
		No function	126	128	49.4	50.2		
		Zoom inversion: Off (3s hold)	129	131	50.6	51.4		
		Zoom inversion: On (3s hold)	132	134	51.8	52.5		
		No function	135	140	52.9	54.9		
		Pixel mirror: Off (3s hold)	141	143	55.3	56.1		

		Pixel mirror: On (3s hold)	144	146	56.5	57.3		
		No function	147	155	57.6	60.8		
		Performance: Fast (3s hold)	156	158	61,2	62,0		
		Performance: Normal (3s hold)	159	161	62,4	63,1		
		Performance: Smooth (3s hold)	162	164	63.5	64.3		
		No function	165	170	64.7	66.7		
		Color mix priority: Mix (HTP)	171	173	67.1	67.8		
		Color mix priority: L3-L2-L1	174	176	68.2	69.0		
		Color mix priority: L1-L2-L3	177	179	69.4	70.2		
		Subfixture mode: Normal	180	182	70.6	71.4		
		Subfixture mode: Independent	183	185	71.8	72.5		
		No function	186	191	72.9	74.9		
		PWM: 2200 Hz (5s hold)	192	194	75.3	76.1		
		PWM: 3000 Hz (5s hold)	195	197	76.5	77.3		
		PWM: 4800 Hz (5s hold)	198	200	77.6	78.4		
		PWM: 9600 Hz (5s hold)	201	203	78.8	79.6		
		No function	204	206	80.0	80.8		
		PWM: 25 kHz (5s hold)	207	209	81.2	82.0		
		No function	210	245	82.4	96.1		
		Reset Tilt (3s hold)	246	248	96.5	97.3		
		Reset Head (3s hold)	249	251	97.6	98.4		
		Reset All (3s hold)	252	255	98.8	100		
7	**Color Temperature Control**	RAW	0	15	0	5.9		Snap
		10000 K	16	18	6.3	7.1		
		9900 K	19	21	7.5	8.2		
		9800 K	22	24	8.6	9.4		
		9700 K	25	27	9.8	10.6		
		9600 K	28	30	11.0	11.8		
		9500 K	31	33	12.2	12.9		
		9400 K	34	36	13.3	14.1		
		9300 K	37	39	14.5	15.3		
		9200 K	40	42	15.7	16.5		
		9100 K	43	45	16.9	17.6		
		9000 K	46	48	18.0	18.8		
		8900 K	49	51	19.2	20.0		
		8800 K	52	54	20.4	21.2		
		8700 K	55	57	21.6	22.4		
		8600 K	58	60	22.7	23.5		
		8500 K	61	63	23.9	24.7		
		8400 K	64	66	25.1	25.9		
		8300 K	67	69	26.3	27.1		
		8200 K	70	72	27.5	28.2		
		8100 K	73	75	28.6	29.4		
		8000 K	76	78	29.8	30.6		
		7900 K	79	81	31.0	31.8		
		7800 K	82	84	32.2	32.9		
		7700 K	85	87	33.3	34.1		
		7600 K	88	90	34.5	35.3		
		7500 K	91	93	35.7	36.5		
		7400 K	94	96	36.9	37.6		
		7300 K	97	99	38.0	38.8		
		7200 K	100	102	39.2	40.0		
		7100 K	103	105	40.4	41.2		
		7000 K	106	108	41.6	42.4		
		6900 K	109	111	42.7	43.5		
		6800 K	112	114	43.9	44.7		
		6700 K	115	117	45.1	45.9		
		6600 K	118	120	46.3	47.1		

		6500 K	121	123	47.5	48.2		
		6400 K	124	126	48.6	49.4		
		6300 K	127	129	49.8	50.6		
		6200 K	130	132	51.0	51.8		
		6100 K	133	135	52.2	52.9		
		6000 K	136	138	53.3	54.1		
		5900 K	139	141	54.5	55.3		
		5800 K	142	144	55.7	56.5		
		5700 K	145	147	56.9	57.6		
		5600 K	148	150	58.0	58.8		
		5500 K	151	153	59.2	60.0		
		5400 K	154	156	60.4	61.2		
		5300 K	157	159	61.6	62.4		
		5200 K	160	162	62.7	63.5		
		5100 K	163	165	63.9	64.7		
		5000 K	166	168	65.1	65.9		
		4900 K	169	171	66.3	67.1		
		4800 K	172	174	67.5	68.2		
		4700 K	175	177	68.6	69.4		
		4600 K	178	180	69.8	70.6		
		4500 K	181	183	71.0	71.8		
		4400 K	184	186	72.2	72.9		
		4300 K	187	189	73.3	74.1		
		4200 K	190	192	74.5	75.3		
		4100 K	193	195	75.7	76.5		
		4000 K	196	198	76.9	77.6		
		3900 K	199	201	78.0	78.8		
		3800 K	202	204	79.2	80.0		
		3700 K	205	207	80.4	81.2		
		3600 K	208	210	81.6	82.4		
		3500 K	211	213	82.7	83.5		
		3400 K	214	216	83.9	84.7		
		3300 K	217	219	85.1	85.9		
		3200 K	220	222	86.3	87.1		
		3100 K	223	225	87.5	88.2		
		3000 K	226	228	88.6	89.4		
		2900 K	229	231	89.8	90.6		
		2800 K	232	234	91.0	91.8		
		2700 K	235	237	92.2	92.9		
		2600 K	238	240	93.3	94.1		
		2500 K	241	255	94.5	100		
8	**Virtual color wheel**	Off (RGBW)	0	7	0	2.7	0	Snap
		Color 01 - Red	8	15	3.1	5.9		Snap
		Color 02 - Amber	16	23	6.3	9.0		Snap
		Color 03 - Warm Yellow	24	31	9.4	12.2		Snap
		Color 04 - Yellow	32	39	12.5	15.3		Snap
		Color 05 - Green	40	47	15.7	18.4		Snap
		Color 06 - Turquoise	48	55	18.8	21.6		Snap
		Color 07 - Cyan	56	63	22.0	24.7		Snap
		Color 08 - Blue	64	71	25.1	27.8		Snap
		Color 09 - Lavender	72	79	28.2	31.0		Snap
		Color 10 - Male	80	87	31.4	34.1		Snap
		Color 11 - Magenta	88	95	34.5	37.3		Snap
		Color 12 - Pink	96	103	37.6	40.4		Snap
		Color 13 - White 3200K	104	111	40.8	43.5		Snap
		Color 14 - White 5600K	112	119	43.9	46.7		Snap
		Color 15 - White 7200K	120	127	47.1	49.8		Snap
		Stop	128	128	50.2	50.2		Snap
		Rainbow colors crossfade slow > fast	129	223	50.6	87.5		Fade

		Random colors crossfade slow > fast	224	255	87.8	100		Fade
9	**Red**	Red intensity 0-100%	0	255	0	100	255	Fade
10	**Green**	Green intensity 0-100%	0	255	0	100	255	Fade
11	**Blue**	Blue intensity 0-100%	0	255	0	100	255	Fade
12	**White**	White intensity 0-100%	0	255	0	100	0	Fade
13	**Pixel FX pattern select**	No effect	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		
		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random pixel FX pattern	246	250	96.5	98.0		
		Random pixel FX	251	255	98.4	100		

14	**Pixel FX pattern static position / dynamic movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		Snap
		Pattern static Step 03	12	17	4.7	6.7		Snap
		Pattern static Step 04	18	23	7.1	9.0		Snap
		Pattern static Step 05	24	29	9.4	11.4		Snap
		Pattern static Step 06	30	35	11.8	13.7		Snap
		Pattern static Step 07	36	41	14.1	16.1		Snap
		Pattern static Step 08	42	47	16.5	18.4		Snap
		Pattern static Step 09	48	53	18.8	20.8		Snap
		Pattern static Step 10	54	59	21.2	23.1		Snap
		Pattern static Step 11	60	65	23.5	25.5		Snap
		Pattern static Step 12	66	71	25.9	27.8		Snap
		Pattern static Step 13	72	77	28.2	30.2		Snap
		Pattern static Step 14	78	83	30.6	32.5		Snap
		Pattern static Step 15	84	89	32.9	34.9		Snap
		Pattern static Step 16	90	95	35.3	37.3		Snap
		Pattern static Step 17	96	101	37.6	39.6		Snap
		Pattern static Step 18	102	107	40.0	42.0		Snap
		Pattern static Step 19	108	113	42.4	44.3		Snap
		Pattern static Step 20	114	119	44.7	46.7		Snap
		Stop / no function	120	127	47.1	49.8		Snap
		Pattern dynamic, forwards fast > slow (run pattern from Step 1 to end in loop)	128	190	50.2	74.5		Fade
		Stop	191	192	74.9	75.3		Snap
		Pattern dynamic, backwards slow > fast (run pattern from end to Step 1 in loop)	193	255	75.7	100.0		Fade
15	**Pixel pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
16	**Pixel FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FOB (fade over blackout) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOF (fade over full intensity) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		
17	**Pixel FX pattern length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
18	**Pixel FX pattern offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade
19	**Zoom**	Narrow > wide	0	255	0	100	0	Snap

20	**Zoom FX pattern select**	No effect, all lenses have normal zoom functionality	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		
		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random zoom FX pattern	246	250	96.5	98.0		
		Random pixel zoom	251	255	98.4	100		

21	**Zoom FX static pattern position / dynamic pattern movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		
		Pattern static Step 03	12	17	4.7	6.7		
		Pattern static Step 04	18	23	7.1	9.0		
		Pattern static Step 05	24	29	9.4	11.4		
		Pattern static Step 06	30	35	11.8	13.7		
		Pattern static Step 07	36	41	14.1	16.1		
		Pattern static Step 08	42	47	16.5	18.4		
		Pattern static Step 09	48	53	18.8	20.8		
		Pattern static Step 10	54	59	21.2	23.1		
		Pattern static Step 11	60	65	23.5	25.5		
		Pattern static Step 12	66	71	25.9	27.8		
		Pattern static Step 13	72	77	28.2	30.2		
		Pattern static Step 14	78	83	30.6	32.5		
		Pattern static Step 15	84	89	32.9	34.9		
		Pattern static Step 16	90	95	35.3	37.3		
		Pattern static Step 17	96	101	37.6	39.6		
		Pattern static Step 18	102	107	40.0	42.0		
		Pattern static Step 19	108	113	42.4	44.3		
		Pattern static Step 20	114	119	44.7	46.7		
		Stop / no function	120	127	47.1	49.8		
		Pattern dynamic, forwards fast > slow (run from Step 1 to end in loop)	128	190	50.2	74.5		
		Stop	191	192	74.9	75.3		
		Pattern dynamic, backwards slow > fast (run from end to Step 1 in loop)	193	255	75.7	100.0		
22	**Zoom pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
23	**Zoom pattern FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FON (fade over narrow) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOW (fade over wide) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		
24	**Zoom pattern FX length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
25	**Zoom pattern FX offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade
Layer 2								
26	**Layer 2 master coarse**	Layer 2 master 0-100% (16-bit)	0	65535	0	100	32768	Fade
27	**Layer 2 master fine**							
28	**Layer 2 shutter**	Shutter closed	0	4	0	1.6	255	Snap
		Dimmer flash (at intensity change)	5	9	2.0	3.5		Snap
		Pulse slow > fast	10	39	3.9	15.3		Fade
		Opening pulse slow > fast	40	69	15.7	27.1		Fade
		Closing pulse slow > fast	70	99	27.5	38.8		Fade
		Double flash slow > fast	100	129	39.2	50.6		Fade
		Random pixel strobe slow > fast	130	159	51.0	62.4		Fade
		Random all strobe slow > fast	160	199	62.7	78.0		Fade
		Strobe sync all pixels 1Hz > 10Hz	200	250	78.4	98.0		Fade
		Open	251	255	98.4	100		Snap

29	**Layer 2 Red**	Red intensity 0-100%	0	255	0	100	255	Fade
30	**Layer 2 Green**	Green intensity 0-100%	0	255	0	100	255	Fade
31	**Layer 2 Blue**	Blue intensity 0-100%	0	255	0	100	255	Fade
32	**Layer 2 White**	White intensity 0-100%	0	255	0	100	0	Fade
33	**Layer 2 pixel FX pattern select**	No effect	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		
		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random pixel FX pattern	246	250	96.5	98.0		
		Random pixel FX	251	255	98.4	100		

34	**Layer 2 pixel FX pattern static position / dynamic movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		Snap
		Pattern static Step 03	12	17	4.7	6.7		Snap
		Pattern static Step 04	18	23	7.1	9.0		Snap
		Pattern static Step 05	24	29	9.4	11.4		Snap
		Pattern static Step 06	30	35	11.8	13.7		Snap
		Pattern static Step 07	36	41	14.1	16.1		Snap
		Pattern static Step 08	42	47	16.5	18.4		Snap
		Pattern static Step 09	48	53	18.8	20.8		Snap
		Pattern static Step 10	54	59	21.2	23.1		Snap
		Pattern static Step 11	60	65	23.5	25.5		Snap
		Pattern static Step 12	66	71	25.9	27.8		Snap
		Pattern static Step 13	72	77	28.2	30.2		Snap
		Pattern static Step 14	78	83	30.6	32.5		Snap
		Pattern static Step 15	84	89	32.9	34.9		Snap
		Pattern static Step 16	90	95	35.3	37.3		Snap
		Pattern static Step 17	96	101	37.6	39.6		Snap
		Pattern static Step 18	102	107	40.0	42.0		Snap
		Pattern static Step 19	108	113	42.4	44.3		Snap
		Pattern static Step 20	114	119	44.7	46.7		Snap
		Stop / no function	120	127	47.1	49.8		Snap
		Pattern dynamic, forwards fast > slow (run pattern from Step 1 to end in loop)	128	190	50.2	74.5		Fade
		Stop	191	192	74.9	75.3		Snap
		Pattern dynamic, backwards slow > fast (run pattern from end to Step 1 in loop)	193	255	75.7	100.0		Fade
35	**Layer 2 pixel pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
36	**Layer 2 pixel FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FOB (fade over blackout) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOF (fade over full intensity) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		
37	**Layer 2 pixel FX pattern length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
38	**Layer 2 pixel FX pattern offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade

Layer 3								
39	**Layer 3 master coarse**	Layer 3 master 0-100% (16-bit)	0	65535	0	100	32768	Fade
40	**Layer 3 master fine**							
41	**Layer 3 shutter**	Shutter closed	0	4	0	1.6	255	Snap
		Dimmer flash (at intensity change)	5	9	2.0	3.5		Snap
		Pulse slow > fast	10	39	3.9	15.3		Fade
		Opening pulse slow > fast	40	69	15.7	27.1		Fade
		Closing pulse slow > fast	70	99	27.5	38.8		Fade
		Double flash slow > fast	100	129	39.2	50.6		Fade
		Random pixel strobe slow > fast	130	159	51.0	62.4		Fade
		Random all strobe slow > fast	160	199	62.7	78.0		Fade
		Strobe sync all pixels 1Hz > 10Hz	200	250	78.4	98.0		Fade
		Open	251	255	98.4	100		Snap
42	**Layer 3 Red**	Red intensity 0-100%	0	255	0	100	255	Fade
43	**Layer 3 Green**	Green intensity 0-100%	0	255	0	100	255	Fade
44	**Layer 3 Blue**	Blue intensity 0-100%	0	255	0	100	255	Fade
45	**Layer 3 White**	White intensity 0-100%	0	255	0	100	0	Fade
46	**Layer 3 pixel FX pattern select**	No effect	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		

		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random pixel FX pattern	246	250	96.5	98.0		
		Random pixel FX	251	255	98.4	100		
47	**Layer 3 pixel FX pattern static position / dynamic movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		Snap
		Pattern static Step 03	12	17	4.7	6.7		Snap
		Pattern static Step 04	18	23	7.1	9.0		Snap
		Pattern static Step 05	24	29	9.4	11.4		Snap
		Pattern static Step 06	30	35	11.8	13.7		Snap
		Pattern static Step 07	36	41	14.1	16.1		Snap
		Pattern static Step 08	42	47	16.5	18.4		Snap
		Pattern static Step 09	48	53	18.8	20.8		Snap
		Pattern static Step 10	54	59	21.2	23.1		Snap
		Pattern static Step 11	60	65	23.5	25.5		Snap
		Pattern static Step 12	66	71	25.9	27.8		Snap
		Pattern static Step 13	72	77	28.2	30.2		Snap
		Pattern static Step 14	78	83	30.6	32.5		Snap
		Pattern static Step 15	84	89	32.9	34.9		Snap
		Pattern static Step 16	90	95	35.3	37.3		Snap
		Pattern static Step 17	96	101	37.6	39.6		Snap
		Pattern static Step 18	102	107	40.0	42.0		Snap
		Pattern static Step 19	108	113	42.4	44.3		Snap
		Pattern static Step 20	114	119	44.7	46.7		Snap
		Stop / no function	120	127	47.1	49.8		Snap
		Pattern dynamic, forwards fast > slow (run pattern from Step 1 to end in loop)	128	190	50.2	74.5		Fade
		Stop	191	192	74.9	75.3		Snap
		Pattern dynamic, backwards slow > fast (run pattern from end to Step 1 in loop)	193	255	75.7	100.0		Fade
48	**Layer 3 pixel pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
49	**Layer 3 pixel FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FOB (fade over blackout) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOF (fade over full intensity) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		

50	**Layer 3 pixel FX pattern length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
51	**Layer 3 pixel FX pattern offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade

DMX Mode 3: MultiPix Normal

57 DMX Channels

Channel		Command	DMX range		Percent		Default DMX	Fade
1	**Tilt coarse**	Tilt backwards > forwards (16-bit)	0	65535	0	100	32768	Fade
2	**Tilt fine**							
3	**Intensity coarse**	Global intensity 0-100% (16-bit)	0	65535	0	100	32768	Fade
4	**Intensity fine**							
5	**Shutter**	Shutter closed	0	4	0	1.6	255	Snap
		Dimmer flash (at intensity change)	5	9	2.0	3.5		Snap
		Pulse slow > fast	10	39	3.9	15.3		Fade
		Opening pulse slow > fast	40	69	15.7	27.1		Fade
		Closing pulse slow > fast	70	99	27.5	38.8		Fade
		Double flash slow > fast	100	129	39.2	50.6		Fade
		Random pixel strobe slow > fast	130	159	51.0	62.4		Fade
		Random all strobe slow > fast	160	199	62.7	78.0		Fade
		Strobe sync all pixels 1Hz > 10Hz	200	250	78.4	98.0		Fade
		Open	251	255	98.4	100		Snap
6	**Control / Settings**	No function	0	38	0	14.9	0	Snap
		Dimmer curve: Soft (square) (3s hold)	39	41	15.3	16.1		
		Dimmer curve: Linear (3s hold)	42	44	16.5	17.3		
		No function	45	53	17.6	20.8		
		Display mode: Off (3s hold)	54	56	21.2	22		
		Display mode: Auto (3s hold)	57	59	22.4	23.1		
		Display mode : On (3s hold)	60	62	23.5	24.3		
		Display orientation: Normal (3s hold)	63	65	24.7	25.5		
		Display orientation: Inverted (3s hold)	66	68	25.9	26.7		
		No function	69	71	27.1	27.8		
		No DMX: Blackout (3s hold)	72	74	28.2	29.0		
		No DMX: Hold (3s hold)	75	77	29.4	30.2		
		No DMX: Captured scene (3s hold)	78	80	30.6	31.4		
		Capture Scene (3s hold)	81	83	31.8	32.5		
		No function	84	86	32.9	33.7		
		Fan mode: Regulated (3s hold)	87	89	34.1	34.9		
		Fan mode: High (3s hold)	90	92	35.3	36.1		
		Fan mode: Medium (3s hold)	93	95	36.5	37.3		
		Fan mode: Low (3s hold)	96	98	37.6	38.4		
		No function	99	104	38.8	40.8		
		Position feedback: Off (3s hold)	105	107	41.2	42.0		
		Position feedback: On (3s hold)	108	110	42.4	43.1		
		Tilt disable: Off (3s hold)	111	113	43.5	44.3		
		Tilt disable: Reset Disabled	114	116	44.7	45.5		
		Tilt disable: Current Disabled	117	119	45.9	46.7		
		Tilt inversion: Off (3s hold)	120	122	47.1	47.8		
		Tilt inversion: On (3s hold)	123	125	48.2	49.0		
		No function	126	128	49.4	50.2		
		Zoom inversion: Off (3s hold)	129	131	50.6	51.4		
		Zoom inversion: On (3s hold)	132	134	51.8	52.5		
		No function	135	140	52.9	54.9		
		Pixel mirror: Off (3s hold)	141	143	55.3	56.1		
		Pixel mirror: On (3s hold)	144	146	56.5	57.3		

		No function	147	155	57.6	60.8		
		Performance: Fast (3s hold)	156	158	61,2	62,0		
		Performance: Normal (3s hold)	159	161	62,4	63,1		
		Performance: Smooth (3s hold)	162	164	63.5	64.3		
		No function	165	170	64.7	66.7		
		Color mix priority: Mix (HTP)	171	173	67.1	67.8		
		Color mix priority: L3-L2-L1	174	176	68.2	69.0		
		Color mix priority: L1-L2-L3	177	179	69.4	70.2		
		Subfixture mode: Normal	180	182	70.6	71.4		
		Subfixture mode: Independent	183	185	71.8	72.5		
		No function	186	191	72.9	74.9		
		PWM: 2200 Hz (5s hold)	192	194	75.3	76.1		
		PWM: 3000 Hz (5s hold)	195	197	76.5	77.3		
		PWM: 4800 Hz (5s hold)	198	200	77.6	78.4		
		PWM: 9600 Hz (5s hold)	201	203	78.8	79.6		
		No function	204	206	80.0	80.8		
		PWM: 25 kHz (5s hold)	207	209	81.2	82.0		
		No function	210	245	82.4	96.1		
		Reset Tilt (3s hold)	246	248	96.5	97.3		
		Reset Head (3s hold)	249	251	97.6	98.4		
		Reset All (3s hold)	252	255	98.8	100		
7	**Color Temperature Control**	RAW	0	15	0	5.9		Snap
		10000 K	16	18	6.3	7.1		
		9900 K	19	21	7.5	8.2		
		9800 K	22	24	8.6	9.4		
		9700 K	25	27	9.8	10.6		
		9600 K	28	30	11.0	11.8		
		9500 K	31	33	12.2	12.9		
		9400 K	34	36	13.3	14.1		
		9300 K	37	39	14.5	15.3		
		9200 K	40	42	15.7	16.5		
		9100 K	43	45	16.9	17.6		
		9000 K	46	48	18.0	18.8		
		8900 K	49	51	19.2	20.0		
		8800 K	52	54	20.4	21.2		
		8700 K	55	57	21.6	22.4		
		8600 K	58	60	22.7	23.5		
		8500 K	61	63	23.9	24.7		
		8400 K	64	66	25.1	25.9		
		8300 K	67	69	26.3	27.1		
		8200 K	70	72	27.5	28.2		
		8100 K	73	75	28.6	29.4		
		8000 K	76	78	29.8	30.6		
		7900 K	79	81	31.0	31.8		
		7800 K	82	84	32.2	32.9		
		7700 K	85	87	33.3	34.1		
		7600 K	88	90	34.5	35.3		
		7500 K	91	93	35.7	36.5		
		7400 K	94	96	36.9	37.6		
		7300 K	97	99	38.0	38.8		
		7200 K	100	102	39.2	40.0		
		7100 K	103	105	40.4	41.2		
		7000 K	106	108	41.6	42.4		
		6900 K	109	111	42.7	43.5		
		6800 K	112	114	43.9	44.7		
		6700 K	115	117	45.1	45.9		

		6600 K	118	120	46.3	47.1		
		6500 K	121	123	47.5	48.2		
		6400 K	124	126	48.6	49.4		
		6300 K	127	129	49.8	50.6		
		6200 K	130	132	51.0	51.8		
		6100 K	133	135	52.2	52.9		
		6000 K	136	138	53.3	54.1		
		5900 K	139	141	54.5	55.3		
		5800 K	142	144	55.7	56.5		
		5700 K	145	147	56.9	57.6		
		5600 K	148	150	58.0	58.8		
		5500 K	151	153	59.2	60.0		
		5400 K	154	156	60.4	61.2		
		5300 K	157	159	61.6	62.4		
		5200 K	160	162	62.7	63.5		
		5100 K	163	165	63.9	64.7		
		5000 K	166	168	65.1	65.9		
		4900 K	169	171	66.3	67.1		
		4800 K	172	174	67.5	68.2		
		4700 K	175	177	68.6	69.4		
		4600 K	178	180	69.8	70.6		
		4500 K	181	183	71.0	71.8		
		4400 K	184	186	72.2	72.9		
		4300 K	187	189	73.3	74.1		
		4200 K	190	192	74.5	75.3		
		4100 K	193	195	75.7	76.5		
		4000 K	196	198	76.9	77.6		
		3900 K	199	201	78.0	78.8		
		3800 K	202	204	79.2	80.0		
		3700 K	205	207	80.4	81.2		
		3600 K	208	210	81.6	82.4		
		3500 K	211	213	82.7	83.5		
		3400 K	214	216	83.9	84.7		
		3300 K	217	219	85.1	85.9		
		3200 K	220	222	86.3	87.1		
		3100 K	223	225	87.5	88.2		
		3000 K	226	228	88.6	89.4		
		2900 K	229	231	89.8	90.6		
		2800 K	232	234	91.0	91.8		
		2700 K	235	237	92.2	92.9		
		2600 K	238	240	93.3	94.1		
		2500 K	241	255	94.5	100		
8	**Pixel 01 Red**	Pixel 01 red intensity 0-100%	0	255	0	100	255	Fade
9	**Pixel 01 Green**	Pixel 01 green intensity 0-100%	0	255	0	100	255	Fade
10	**Pixel 01 Blue**	Pixel 01 blue intensity 0-100%	0	255	0	100	255	Fade
11	**Pixel 01 White**	Pixel 01 white intensity 0-100%	0	255	0	100	0	Fade
12	**Pixel 01 Zoom**	Pixel 01 zoom wide > narrow	0	255	0	100	128	Fade
13	**Pixel 02 Red**	Pixel 02 red intensity 0-100%	0	255	0	100	255	Fade
14	**Pixel 02 Green**	Pixel 02 green intensity 0-100%	0	255	0	100	255	Fade
15	**Pixel 02 Blue**	Pixel 02 blue intensity 0-100%	0	255	0	100	255	Fade
16	**Pixel 02 White**	Pixel 02 white intensity 0-100%	0	255	0	100	0	Fade
17	**Pixel 02 Zoom**	Pixel 02 zoom wide > narrow	0	255	0	100	128	Fade
18	**Pixel 03 Red**	Pixel 03 red intensity 0-100%	0	255	0	100	255	Fade
19	**Pixel 03 Green**	Pixel 03 green intensity 0-100%	0	255	0	100	255	Fade
20	**Pixel 03 Blue**	Pixel 03 blue intensity 0-100%	0	255	0	100	255	Fade
21	**Pixel 03 White**	Pixel 03 white intensity 0-100%	0	255	0	100	0	Fade

22	**Pixel 03 Zoom**	Pixel 03 zoom wide > narrow	0	255	0	100	128	Fade
23	**Pixel 04 Red**	Pixel 04 red intensity 0-100%	0	255	0	100	255	Fade
24	**Pixel 04 Green**	Pixel 04 green intensity 0-100%	0	255	0	100	255	Fade
25	**Pixel 04 Blue**	Pixel 04 blue intensity 0-100%	0	255	0	100	255	Fade
26	**Pixel 04 White**	Pixel 04 white intensity 0-100%	0	255	0	100	0	Fade
27	**Pixel 04 Zoom**	Pixel 04 zoom wide > narrow	0	255	0	100	128	Fade
28	**Pixel 05 Red**	Pixel 05 red intensity 0-100%	0	255	0	100	255	Fade
29	**Pixel 05 Green**	Pixel 05 green intensity 0-100%	0	255	0	100	255	Fade
30	**Pixel 05 Blue**	Pixel 05 blue intensity 0-100%	0	255	0	100	255	Fade
31	**Pixel 05 White**	Pixel 05 white intensity 0-100%	0	255	0	100	0	Fade
32	**Pixel 05 Zoom**	Pixel 05 zoom wide > narrow	0	255	0	100	128	Fade
33	**Pixel 06 Red**	Pixel 06 red intensity 0-100%	0	255	0	100	255	Fade
34	**Pixel 06 Green**	Pixel 06 green intensity 0-100%	0	255	0	100	255	Fade
35	**Pixel 06 Blue**	Pixel 06 blue intensity 0-100%	0	255	0	100	255	Fade
36	**Pixel 06 White**	Pixel 06 white intensity 0-100%	0	255	0	100	0	Fade
37	**Pixel 06 Zoom**	Pixel 06 zoom wide > narrow	0	255	0	100	128	Fade
38	**Pixel 07 Red**	Pixel 07 red intensity 0-100%	0	255	0	100	255	Fade
39	**Pixel 07 Green**	Pixel 07 green intensity 0-100%	0	255	0	100	255	Fade
40	**Pixel 07 Blue**	Pixel 07 blue intensity 0-100%	0	255	0	100	255	Fade
41	**Pixel 07 White**	Pixel 07 white intensity 0-100%	0	255	0	100	0	Fade
42	**Pixel 07 Zoom**	Pixel 07 zoom wide > narrow	0	255	0	100	128	Fade
43	**Pixel 08 Red**	Pixel 08 red intensity 0-100%	0	255	0	100	255	Fade
44	**Pixel 08 Green**	Pixel 08 green intensity 0-100%	0	255	0	100	255	Fade
45	**Pixel 08 Blue**	Pixel 08 blue intensity 0-100%	0	255	0	100	255	Fade
46	**Pixel 08 White**	Pixel 08 white intensity 0-100%	0	255	0	100	0	Fade
47	**Pixel 08 Zoom**	Pixel 08 zoom wide > narrow	0	255	0	100	128	Fade
48	**Pixel 09 Red**	Pixel 09 red intensity 0-100%	0	255	0	100	255	Fade
49	**Pixel 09 Green**	Pixel 09 green intensity 0-100%	0	255	0	100	255	Fade
50	**Pixel 09 Blue**	Pixel 09 blue intensity 0-100%	0	255	0	100	255	Fade
51	**Pixel 09 White**	Pixel 09 white intensity 0-100%	0	255	0	100	0	Fade
52	**Pixel 09 Zoom**	Pixel 09 zoom wide > narrow	0	255	0	100	128	Fade
53	**Pixel 10 Red**	Pixel 10 red intensity 0-100%	0	255	0	100	255	Fade
54	**Pixel 10 Green**	Pixel 10 green intensity 0-100%	0	255	0	100	255	Fade
55	**Pixel 10 Blue**	Pixel 10 blue intensity 0-100%	0	255	0	100	255	Fade
56	**Pixel 10 White**	Pixel 10 white intensity 0-100%	0	255	0	100	0	Fade
57	**Pixel 10 Zoom**	Pixel 10 zoom wide > narrow	0	255	0	100	128	Fade

DMX Mode 4: MultiPix Advanced

79 DMX Channels

Channel		Command	DMX range		Percent		Default DMX	Fade
Layer 1 (Main layer)								
1	**Tilt coarse**	Tilt backwards > forwards (16-bit)	0	65535	0	100	32768	Fade
2	**Tilt fine**							
3	**Intensity coarse**	Global intensity 0-100% (16-bit)	0	65535	0	100	32768	Fade
4	**Intensity fine**							
5	**Shutter**	Shutter closed	0	4	0	1.6	255	Snap
		Dimmer flash (at intensity change)	5	9	2.0	3.5		Snap
		Pulse slow > fast	10	39	3.9	15.3		Fade
		Opening pulse slow > fast	40	69	15.7	27.1		Fade
		Closing pulse slow > fast	70	99	27.5	38.8		Fade
		Double flash slow > fast	100	129	39.2	50.6		Fade
		Random pixel strobe slow > fast	130	159	51.0	62.4		Fade
		Random all strobe slow > fast	160	199	62.7	78.0		Fade
		Strobe sync all pixels 1Hz > 10Hz	200	250	78.4	98.0		Fade
		Open	251	255	98.4	100		Snap
6	**Control / Settings**	No function	0	38	0	14.9	0	Snap
		Dimmer curve: Soft (square) (3s hold)	39	41	15.3	16.1		
		Dimmer curve: Linear (3s hold)	42	44	16.5	17.3		
		No function	45	53	17.6	20.8		
		Display mode: Off (3s hold)	54	56	21.2	22		
		Display mode: Auto (3s hold)	57	59	22.4	23.1		
		Display mode : On (3s hold)	60	62	23.5	24.3		
		Display orientation: Normal (3s hold)	63	65	24.7	25.5		
		Display orientation: Inverted (3s hold)	66	68	25.9	26.7		
		No function	69	71	27.1	27.8		
		No DMX: Blackout (3s hold)	72	74	28.2	29.0		
		No DMX: Hold (3s hold)	75	77	29.4	30.2		
		No DMX: Captured scene (3s hold)	78	80	30.6	31.4		
		Capture Scene (3s hold)	81	83	31.8	32.5		
		No function	84	86	32.9	33.7		
		Fan mode: Regulated (3s hold)	87	89	34.1	34.9		
		Fan mode: High (3s hold)	90	92	35.3	36.1		
		Fan mode: Medium (3s hold)	93	95	36.5	37.3		
		Fan mode: Low (3s hold)	96	98	37.6	38.4		
		No function	99	104	38.8	40.8		
		Position feedback: Off (3s hold)	105	107	41.2	42.0		
		Position feedback: On (3s hold)	108	110	42.4	43.1		
		Tilt disable: Off (3s hold)	111	113	43.5	44.3		
		Tilt disable: Reset Disabled	114	116	44.7	45.5		
		Tilt disable: Current Disabled	117	119	45.9	46.7		
		Tilt inversion: Off (3s hold)	120	122	47.1	47.8		
		Tilt inversion: On (3s hold)	123	125	48.2	49.0		
		No function	126	128	49.4	50.2		
		Zoom inversion: Off (3s hold)	129	131	50.6	51.4		
		Zoom inversion: On (3s hold)	132	134	51.8	52.5		
		No function	135	140	52.9	54.9		
		Pixel mirror: Off (3s hold)	141	143	55.3	56.1		

		Pixel mirror: On (3s hold)	144	146	56.5	57.3		
		No function	147	155	57.6	60.8		
		Performance: Fast (3s hold)	156	158	61,2	62,0		
		Performance: Normal (3s hold)	159	161	62,4	63,1		
		Performance: Smooth (3s hold)	162	164	63.5	64.3		
		No function	165	170	64.7	66.7		
		Color mix priority: Mix (HTP)	171	173	67.1	67.8		
		Color mix priority: L3-L2-L1	174	176	68.2	69.0		
		Color mix priority: L1-L2-L3	177	179	69.4	70.2		
		Subfixture mode: Normal	180	182	70.6	71.4		
		Subfixture mode: Independent	183	185	71.8	72.5		
		No function	186	191	72.9	74.9		
		PWM: 2200 Hz (5s hold)	192	194	75.3	76.1		
		PWM: 3000 Hz (5s hold)	195	197	76.5	77.3		
		PWM: 4800 Hz (5s hold)	198	200	77.6	78.4		
		PWM: 9600 Hz (5s hold)	201	203	78.8	79.6		
		No function	204	206	80.0	80.8		
		PWM: 25 kHz (5s hold)	207	209	81.2	82.0		
		No function	210	245	82.4	96.1		
		Reset Tilt (3s hold)	246	248	96.5	97.3		
		Reset Head (3s hold)	249	251	97.6	98.4		
		Reset All (3s hold)	252	255	98.8	100		
7	**Color Temperature Control**	RAW	0	15	0	5.9		Snap
		10000 K	16	18	6.3	7.1		
		9900 K	19	21	7.5	8.2		
		9800 K	22	24	8.6	9.4		
		9700 K	25	27	9.8	10.6		
		9600 K	28	30	11.0	11.8		
		9500 K	31	33	12.2	12.9		
		9400 K	34	36	13.3	14.1		
		9300 K	37	39	14.5	15.3		
		9200 K	40	42	15.7	16.5		
		9100 K	43	45	16.9	17.6		
		9000 K	46	48	18.0	18.8		
		8900 K	49	51	19.2	20.0		
		8800 K	52	54	20.4	21.2		
		8700 K	55	57	21.6	22.4		
		8600 K	58	60	22.7	23.5		
		8500 K	61	63	23.9	24.7		
		8400 K	64	66	25.1	25.9		
		8300 K	67	69	26.3	27.1		
		8200 K	70	72	27.5	28.2		
		8100 K	73	75	28.6	29.4		
		8000 K	76	78	29.8	30.6		
		7900 K	79	81	31.0	31.8		
		7800 K	82	84	32.2	32.9		
		7700 K	85	87	33.3	34.1		
		7600 K	88	90	34.5	35.3		
		7500 K	91	93	35.7	36.5		
		7400 K	94	96	36.9	37.6		
		7300 K	97	99	38.0	38.8		
		7200 K	100	102	39.2	40.0		
		7100 K	103	105	40.4	41.2		
		7000 K	106	108	41.6	42.4		
		6900 K	109	111	42.7	43.5		
		6800 K	112	114	43.9	44.7		
		6700 K	115	117	45.1	45.9		
		6600 K	118	120	46.3	47.1		

		6500 K	121	123	47.5	48.2		
		6400 K	124	126	48.6	49.4		
		6300 K	127	129	49.8	50.6		
		6200 K	130	132	51.0	51.8		
		6100 K	133	135	52.2	52.9		
		6000 K	136	138	53.3	54.1		
		5900 K	139	141	54.5	55.3		
		5800 K	142	144	55.7	56.5		
		5700 K	145	147	56.9	57.6		
		5600 K	148	150	58.0	58.8		
		5500 K	151	153	59.2	60.0		
		5400 K	154	156	60.4	61.2		
		5300 K	157	159	61.6	62.4		
		5200 K	160	162	62.7	63.5		
		5100 K	163	165	63.9	64.7		
		5000 K	166	168	65.1	65.9		
		4900 K	169	171	66.3	67.1		
		4800 K	172	174	67.5	68.2		
		4700 K	175	177	68.6	69.4		
		4600 K	178	180	69.8	70.6		
		4500 K	181	183	71.0	71.8		
		4400 K	184	186	72.2	72.9		
		4300 K	187	189	73.3	74.1		
		4200 K	190	192	74.5	75.3		
		4100 K	193	195	75.7	76.5		
		4000 K	196	198	76.9	77.6		
		3900 K	199	201	78.0	78.8		
		3800 K	202	204	79.2	80.0		
		3700 K	205	207	80.4	81.2		
		3600 K	208	210	81.6	82.4		
		3500 K	211	213	82.7	83.5		
		3400 K	214	216	83.9	84.7		
		3300 K	217	219	85.1	85.9		
		3200 K	220	222	86.3	87.1		
		3100 K	223	225	87.5	88.2		
		3000 K	226	228	88.6	89.4		
		2900 K	229	231	89.8	90.6		
		2800 K	232	234	91.0	91.8		
		2700 K	235	237	92.2	92.9		
		2600 K	238	240	93.3	94.1		
		2500 K	241	255	94.5	100		
8	**Virtual color wheel**	Off (RGBW)	0	7	0	2.7	0	Snap
		Color 01 - Red	8	15	3.1	5.9		Snap
		Color 02 - Amber	16	23	6.3	9.0		Snap
		Color 03 - Warm Yellow	24	31	9.4	12.2		Snap
		Color 04 - Yellow	32	39	12.5	15.3		Snap
		Color 05 - Green	40	47	15.7	18.4		Snap
		Color 06 - Turquoise	48	55	18.8	21.6		Snap
		Color 07 - Cyan	56	63	22.0	24.7		Snap
		Color 08 - Blue	64	71	25.1	27.8		Snap
		Color 09 - Lavender	72	79	28.2	31.0		Snap
		Color 10 - Male	80	87	31.4	34.1		Snap
		Color 11 - Magenta	88	95	34.5	37.3		Snap
		Color 12 - Pink	96	103	37.6	40.4		Snap
		Color 13 - White 3200K	104	111	40.8	43.5		Snap
		Color 14 - White 5600K	112	119	43.9	46.7		Snap
		Color 15 - White 7200K	120	127	47.1	49.8		Snap
		Stop	128	128	50.2	50.2		Snap
		Rainbow colors crossfade slow > fast	129	223	50.6	87.5		Fade
		Random colors crossfade slow > fast	224	255	87.8	100		Fade

9	**Red**	Red intensity 0-100%	0	255	0	100	255	Fade
10	**Green**	Green intensity 0-100%	0	255	0	100	255	Fade
11	**Blue**	Blue intensity 0-100%	0	255	0	100	255	Fade
12	**White**	White intensity 0-100%	0	255	0	100	0	Fade
13	**Pixel FX pattern select**	No effect	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		
		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random pixel FX pattern	246	250	96.5	98.0		
		Random pixel FX	251	255	98.4	100		

14	**Pixel FX pattern static position / dynamic movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		Snap
		Pattern static Step 03	12	17	4.7	6.7		Snap
		Pattern static Step 04	18	23	7.1	9.0		Snap
		Pattern static Step 05	24	29	9.4	11.4		Snap
		Pattern static Step 06	30	35	11.8	13.7		Snap
		Pattern static Step 07	36	41	14.1	16.1		Snap
		Pattern static Step 08	42	47	16.5	18.4		Snap
		Pattern static Step 09	48	53	18.8	20.8		Snap
		Pattern static Step 10	54	59	21.2	23.1		Snap
		Pattern static Step 11	60	65	23.5	25.5		Snap
		Pattern static Step 12	66	71	25.9	27.8		Snap
		Pattern static Step 13	72	77	28.2	30.2		Snap
		Pattern static Step 14	78	83	30.6	32.5		Snap
		Pattern static Step 15	84	89	32.9	34.9		Snap
		Pattern static Step 16	90	95	35.3	37.3		Snap
		Pattern static Step 17	96	101	37.6	39.6		Snap
		Pattern static Step 18	102	107	40.0	42.0		Snap
		Pattern static Step 19	108	113	42.4	44.3		Snap
		Pattern static Step 20	114	119	44.7	46.7		Snap
		Stop / no function	120	127	47.1	49.8		Snap
		Pattern dynamic, forwards fast > slow (run pattern from Step 1 to end in loop)	128	190	50.2	74.5		Fade
		Stop	191	192	74.9	75.3		Snap
		Pattern dynamic, backwards slow > fast (run pattern from end to Step 1 in loop)	193	255	75.7	100.0		Fade
15	**Pixel pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
16	**Pixel FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FOB (fade over blackout) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOF (fade over full intensity) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		
17	**Pixel FX pattern length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
18	**Pixel FX pattern offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade
19	**Zoom**	Narrow > wide	0	255	0	100	0	Snap

20	**Zoom FX pattern select**	No effect, all lenses have normal zoom functionality	0	10	0	3.9	0	Snap
		Pattern 01	11	14	4.3	5.5		
		Pattern 02	15	18	5.9	7.1		
		Pattern 03	19	22	7.5	8.6		
		Pattern 04	23	26	9.0	10.2		
		Pattern 05	27	30	10.6	11.8		
		Pattern 06	31	34	12.2	13.3		
		Pattern 07	35	38	13.7	14.9		
		Pattern 08	39	42	15.3	16.5		
		Pattern 09	43	46	16.9	18.0		
		Pattern 10	47	50	18.4	19.6		
		Pattern 11	51	54	20.0	21.2		
		Pattern 12	55	58	21.6	22.7		
		Pattern 13	59	62	23.1	24.3		
		Pattern 14	63	66	24.7	25.9		
		Pattern 15	67	70	26.3	27.5		
		Pattern 16	71	74	27.8	29.0		
		Pattern 17	75	78	29.4	30.6		
		Pattern 18	79	82	31.0	32.2		
		Pattern 19	83	86	32.5	33.7		
		Pattern 20	87	90	34.1	35.3		
		Pattern 21	91	94	35.7	36.9		
		Pattern 22	95	98	37.3	38.4		
		Pattern 23	99	102	38.8	40.0		
		Pattern 24	103	106	40.4	41.6		
		Pattern 25	107	110	42.0	43.1		
		Pattern 26	111	114	43.5	44.7		
		Pattern 27	115	118	45.1	46.3		
		Pattern 28	119	122	46.7	47.8		
		Pattern 29	123	126	48.2	49.4		
		Pattern 30	127	130	49.8	51.0		
		Pattern 31	131	134	51.4	52.5		
		Pattern 32	135	138	52.9	54.1		
		Pattern 33	139	142	54.5	55.7		
		Pattern 34	143	146	56.1	57.3		
		Pattern 35	147	150	57.6	58.8		
		Pattern 36	151	154	59.2	60.4		
		Pattern 37	155	158	60.8	62.0		
		Pattern 38	159	162	62.4	63.5		
		Pattern 39	163	166	63.9	65.1		
		Pattern 40	167	170	65.5	66.7		
		Pattern 41	171	174	67.1	68.2		
		Pattern 42	175	178	68.6	69.8		
		Pattern 43	179	182	70.2	71.4		
		Pattern 44	183	186	71.8	72.9		
		Pattern 45	187	190	73.3	74.5		
		Pattern 46	191	194	74.9	76.1		
		Pattern 47	195	198	76.5	77.6		
		Pattern 48	199	202	78.0	79.2		
		Pattern 49	203	206	79.6	80.8		
		Pattern 50	207	210	81.2	82.4		
		No pattern – no function	211	246	82.7	96.5		
		Random zoom FX pattern	246	250	96.5	98.0		
		Random pixel zoom	251	255	98.4	100		

21	**Zoom FX static pattern position / dynamic pattern movement**	Pattern static Step 01	0	5	0.0	2.0	0	Snap
		Pattern static Step 02	6	11	2.4	4.3		
		Pattern static Step 03	12	17	4.7	6.7		
		Pattern static Step 04	18	23	7.1	9.0		
		Pattern static Step 05	24	29	9.4	11.4		
		Pattern static Step 06	30	35	11.8	13.7		
		Pattern static Step 07	36	41	14.1	16.1		
		Pattern static Step 08	42	47	16.5	18.4		
		Pattern static Step 09	48	53	18.8	20.8		
		Pattern static Step 10	54	59	21.2	23.1		
		Pattern static Step 11	60	65	23.5	25.5		
		Pattern static Step 12	66	71	25.9	27.8		
		Pattern static Step 13	72	77	28.2	30.2		
		Pattern static Step 14	78	83	30.6	32.5		
		Pattern static Step 15	84	89	32.9	34.9		
		Pattern static Step 16	90	95	35.3	37.3		
		Pattern static Step 17	96	101	37.6	39.6		
		Pattern static Step 18	102	107	40.0	42.0		
		Pattern static Step 19	108	113	42.4	44.3		
		Pattern static Step 20	114	119	44.7	46.7		
		Stop / no function	120	127	47.1	49.8		
		Pattern dynamic, forwards fast > slow (run pattern from Step 1 to end in loop)	128	190	50.2	74.5		
		Stop	191	192	74.9	75.3		
		Pattern dynamic, backwards slow > fast (run pattern from end to Step 1 in loop)	193	255	75.7	100.0		
22	**Zoom pattern FX crossfade (Xfade between steps)**	Off (no crossfade between steps in pattern)	0	10	0.0	3.9	0	Snap
		1 – 3 sec. crossfade	11	125	4.3	49.0		Fade
		Stop	126	130	49.4	51.0		Snap
		1 – 3 sec. crossfade with tail	131	255	51.4	100.0		Fade
23	**Zoom pattern FX transition (Xfade between patterns)**	No transition time, snap	0	10	0.0	3.9	0	Snap
		Normal transition, 0s to 5s crossfade	11	68	4.3	26.7		Fade
		No transition time, snap	69	73	27.1	28.6		Snap
		FON (fade over narrow) transition, 0s to 5s crossfade	74	130	29.0	51.0		Fade
		No transition time, snap	131	135	51.4	52.9		Snap
		FOW (fade over wide) 0s to 5s crossfade	136	193	53.3	75.7		Fade
		No function	194	255	76.1	100.0		
24	**Zoom pattern FX length**	Off (pattern length normal)	0	0	0	0	0	Snap
		Pattern length 1 > 255 steps	1	255	0.4	100		Fade
25	**Zoom pattern FX offset**	Off (pattern starts at first pixel)	0	0	0	0	0	Snap
		Pattern start offset 1 > 255 pixels	1	255	0.4	100		Fade

Layer 2 (individual pixel intensity layer)								
26	**Layer 2 master coarse**	Layer 2 (pixel intensity) master 0-100% (16-bit)	0	65535	0	100	32768	Fade
27	**Layer 2 master fine**							
28	**Layer 2 shutter**	Shutter closed	0	4	0	1.6	255	Snap
		Dimmer flash (at intensity change)	5	9	2.0	3.5		Snap
		Pulse slow > fast	10	39	3.9	15.3		Fade
		Opening pulse slow > fast	40	69	15.7	27.1		Fade
		Closing pulse slow > fast	70	99	27.5	38.8		Fade
		Double flash slow > fast	100	129	39.2	50.6		Fade
		Random pixel strobe slow > fast	130	159	51.0	62.4		Fade
		Random all strobe slow > fast	160	199	62.7	78.0		Fade
		Strobe sync all pixels 1Hz > 10Hz	200	250	78.4	98.0		Fade
		Open	251	255	98.4	100		Snap
29	**Pixel 01 Red**	Pixel 01 red intensity 0-100%	0	255	0	100	255	Fade
30	**Pixel 01 Green**	Pixel 01 green intensity 0-100%	0	255	0	100	255	Fade
31	**Pixel 01 Blue**	Pixel 01 blue intensity 0-100%	0	255	0	100	255	Fade
32	**Pixel 01 White**	Pixel 01 white intensity 0-100%	0	255	0	100	0	Fade
33	**Pixel 02 Red**	Pixel 02 red intensity 0-100%	0	255	0	100	255	Fade
34	**Pixel 02 Green**	Pixel 02 green intensity 0-100%	0	255	0	100	255	Fade
35	**Pixel 02 Blue**	Pixel 02 blue intensity 0-100%	0	255	0	100	255	Fade
36	**Pixel 02 White**	Pixel 02 white intensity 0-100%	0	255	0	100	0	Fade
37	**Pixel 03 Red**	Pixel 03 red intensity 0-100%	0	255	0	100	255	Fade
38	**Pixel 03 Green**	Pixel 03 green intensity 0-100%	0	255	0	100	255	Fade
39	**Pixel 03 Blue**	Pixel 03 blue intensity 0-100%	0	255	0	100	255	Fade
40	**Pixel 03 White**	Pixel 03 white intensity 0-100%	0	255	0	100	0	Fade
41	**Pixel 04 Red**	Pixel 04 red intensity 0-100%	0	255	0	100	255	Fade
42	**Pixel 04 Green**	Pixel 04 green intensity 0-100%	0	255	0	100	255	Fade
43	**Pixel 04 Blue**	Pixel 04 blue intensity 0-100%	0	255	0	100	255	Fade
44	**Pixel 04 White**	Pixel 04 white intensity 0-100%	0	255	0	100	0	Fade
45	**Pixel 05 Red**	Pixel 05 red intensity 0-100%	0	255	0	100	255	Fade
46	**Pixel 05 Green**	Pixel 05 green intensity 0-100%	0	255	0	100	255	Fade
47	**Pixel 05 Blue**	Pixel 05 blue intensity 0-100%	0	255	0	100	255	Fade
48	**Pixel 05 White**	Pixel 05 white intensity 0-100%	0	255	0	100	0	Fade
49	**Pixel 06 Red**	Pixel 06 red intensity 0-100%	0	255	0	100	255	Fade
50	**Pixel 06 Green**	Pixel 06 green intensity 0-100%	0	255	0	100	255	Fade
51	**Pixel 06 Blue**	Pixel 06 blue intensity 0-100%	0	255	0	100	255	Fade
52	**Pixel 06 White**	Pixel 06 white intensity 0-100%	0	255	0	100	0	Fade
53	**Pixel 07 Red**	Pixel 07 red intensity 0-100%	0	255	0	100	255	Fade
54	**Pixel 07 Green**	Pixel 07 green intensity 0-100%	0	255	0	100	255	Fade
55	**Pixel 07 Blue**	Pixel 07 blue intensity 0-100%	0	255	0	100	255	Fade
56	**Pixel 07 White**	Pixel 07 white intensity 0-100%	0	255	0	100	0	Fade
57	**Pixel 08 Red**	Pixel 08 red intensity 0-100%	0	255	0	100	255	Fade
58	**Pixel 08 Green**	Pixel 08 green intensity 0-100%	0	255	0	100	255	Fade
59	**Pixel 08 Blue**	Pixel 08 blue intensity 0-100%	0	255	0	100	255	Fade
60	**Pixel 08 White**	Pixel 08 white intensity 0-100%	0	255	0	100	0	Fade
61	**Pixel 09 Red**	Pixel 09 red intensity 0-100%	0	255	0	100	255	Fade
62	**Pixel 09 Green**	Pixel 09 green intensity 0-100%	0	255	0	100	255	Fade
63	**Pixel 09 Blue**	Pixel 09 blue intensity 0-100%	0	255	0	100	255	Fade
64	**Pixel 09 White**	Pixel 09 white intensity 0-100%	0	255	0	100	0	Fade
65	**Pixel 10 Red**	Pixel 10 red intensity 0-100%	0	255	0	100	255	Fade
66	**Pixel 10 Green**	Pixel 10 green intensity 0-100%	0	255	0	100	255	Fade
67	**Pixel 10 Blue**	Pixel 10 blue intensity 0-100%	0	255	0	100	255	Fade
68	**Pixel 10 White**	Pixel 10 white intensity 0-100%	0	255	0	100	0	Fade

Layer 3 (individual pixel zoom layer)								
69	**Pixel zoom master**	Layer 3 (pixel zoom) master 0-100%	0	255	0	100	128	Fade
70	**Pixel 01 Zoom**	Pixel 01 zoom wide > narrow	0	255	0	100	128	Fade
71	**Pixel 02 Zoom**	Pixel 02 zoom wide > narrow	0	255	0	100	128	Fade
72	**Pixel 03 Zoom**	Pixel 03 zoom wide > narrow	0	255	0	100	128	Fade
73	**Pixel 04 Zoom**	Pixel 04 zoom wide > narrow	0	255	0	100	128	Fade
74	**Pixel 05 Zoom**	Pixel 05 zoom wide > narrow	0	255	0	100	128	Fade
75	**Pixel 06 Zoom**	Pixel 06 zoom wide > narrow	0	255	0	100	128	Fade
76	**Pixel 07 Zoom**	Pixel 07 zoom wide > narrow	0	255	0	100	128	Fade
77	**Pixel 08 Zoom**	Pixel 08 zoom wide > narrow	0	255	0	100	128	Fade
78	**Pixel 09 Zoom**	Pixel 09 zoom wide > narrow	0	255	0	100	128	Fade
79	**Pixel 10 Zoom**	Pixel 10 zoom wide > narrow	0	255	0	100	128	Fade


GLP