



# PIXEL DRIVER 4000

## User Manual

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## DOCUMENT VERSION



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Date	Document Version	Software Version	DMX Channel Mode	Notes
05/24/18	1.0	1.0	Not Applicable	Initial Release.
11/28/18	1.2	N/C	Not Applicable	Updated release.
11/08/19	1.4	N/C	Not Applicable	Updated specs on included power cable.
08/02/21	1.6	1.2	Not Applicable	Updated System Menu.

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# GENERAL INFORMATION

## INTRODUCTION

This fixture has been designed to perform reliably for years when the information in this manual is followed. Please read and understand all the instructions and guidelines carefully and thoroughly before operating this unit. This manual contains important information regarding safety, installation, use, and maintenance.

## UNPACKING

Each fixture has been thoroughly tested and shipped in perfect operating condition. Carefully check the outer shipping carton for signs of any damage that may have occurred during shipping. If the outer carton appears to be damaged, carefully inspect the fixture for damage and be sure all included accessories have arrived intact. In the event that damage has been found and/or parts are missing, please contact our customer support team for further instructions. Please do NOT return this fixture to your dealer without first contacting customer support at the number listed below. Please do NOT discard the outer shipping carton in the trash. Please recycle whenever possible.

## CUSTOMER SUPPORT

Contact ELATION Service for any product related service and support needs. Also visit [forums.elationlighting.com](https://forums.elationlighting.com) with questions, comments or suggestions.

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## IMPORTANT NOTICE!

**THERE ARE NO USER SERVICEABLE PARTS INSIDE THIS UNIT. DO NOT ATTEMPT ANY REPAIRS YOURSELF, AS DOING SO WILL VOID YOUR MANUFACTURER'S WARRANTY. DAMAGES RESULTING FROM MODIFICATIONS TO THIS FIXTURE AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS MANUAL VOID THE MANUFACTURER'S WARRANTY AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS.**

## LIMITED WARRANTY (USA ONLY)

- A. Elation Professional hereby warrants, to the original purchaser, Elation Professional products to be free of manufacturing defects in material and workmanship for a period of two years (730 days), and Elation Professional product rechargeable batteries to be free of manufacturing defects in material and workmanship for a period of six months (180 days), from the original date of purchase. This warranty excludes discharge lamps and all product accessories. This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.
- B. For warranty service, send the product only to the Elation Professional factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, Elation Professional will pay return shipping charges only to a designated point within the United States. If any product is sent, it must be shipped in its original package and packaging material. No accessories should be shipped with the product. If any accessories are shipped with the product, Elation Professional shall have no liability what so ever for loss and/or or damage to any such accessories, nor for the safe return thereof.
- C. This warranty is void if the product serial number and/or labels are altered or removed; if the product is modified in any manner which Elation Professional concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the Elation Professional factory unless prior written authorization was issued to purchaser by Elation Professional; if the product is damaged because not properly maintained as set forth in the product instructions, guidelines and/or user manual.
- D. This is not a service contract, and this warranty does not include any maintenance, cleaning or periodic check-up. During the periods as specified above, Elation Professional will replace defective parts at its expense, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of Elation Professional under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of Elation Professional. All products covered by this warranty were manufactured after January 1, 1990, and bare identifying marks to that effect.
- E. Elation Professional reserves the right to make changes in design and/or performance improvements upon its products without any obligation to include these changes in any products theretofore manufactured.
- F. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with the products described above. Except to the extent prohibited by applicable law, all implied warranties made by Elation Professional in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty periods set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said periods have expired. The consumer's and/or dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall Elation Professional be liable for any loss and/or damage, direct and/or consequential, arising out of the use of, and/or the inability to use, this product.
- G. This warranty is the only written warranty applicable to Elation Professional products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

### WARRANTY RETURNS

All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support.

# SAFETY GUIDELINES

This fixture is a sophisticated piece of electronic equipment. To guarantee smooth operation, it is important to follow all instructions and guidelines in this manual. Elation Professional is not responsible for injury and/or damages resulting from the misuse of this fixture due to the disregard of the information printed in this manual. Only qualified and/or certified personnel should perform installation of this fixture and only the original rigging parts included with this fixture should be used for installation. Any modifications to the fixture and/or the included mounting hardware will void the original manufacturer's warranty and increase the risk of damage and/or personal injury.



**PROTECTION CLASS 1 - FIXTURE MUST BE PROPERLY GROUNDED.**



**THERE ARE NO USER SERVICEABLE PARTS INSIDE THIS UNIT. DO NOT ATTEMPT ANY REPAIRS YOURSELF. DOING SO WILL VOID YOUR MANUFACTURER'S WARRANTY. DAMAGES RESULTING FROM MODIFICATIONS TO THIS DEVICE AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS MANUAL VOID THE MANUFACTURER'S WARRANTY AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS.**



**DO NOT PLUG THIS UNIT INTO A DIMMER PACK!  
DO NOT REMOVE THE COVER FOR ANY REASON!  
NEVER OPERATE THIS UNIT WITH THE CASING REMOVED!  
UNPLUG FROM POWER DURING LONG PERIODS OF NON-USE.  
KEEP FLAMMABLE MATERIALS AWAY FROM DEVICE!  
DISCONNECT POWER BEFORE PERFORMING MAINTENANCE.**



**THIS DEVICE IS INTENDED FOR INDOOR USE ONLY!  
USE OF THE DEVICE OUTDOORS VOIDS ALL MANUFACTURER'S WARRANTIES!  
DO NOT EXPOSE THE DEVICE TO RAIN OR MOISTURE!**

# SAFETY GUIDELINES

- **DO NOT** shake device, and avoid brute force when installing and operating.
- **DO NOT** operate device the power cord has been frayed, crimped, damaged, and/or if any of the power cord connectors are damaged and do not insert easily into the device.
- **NEVER** force a power cord connector into the device. If the power cord or any of its connectors are damaged, it must immediately be replaced with a new cord or connector of the same power rating.
- **DO NOT** block any air ventilation slots.
- All fan and air inlets must remain clean and never blocked.
- For proper cooling, allow approx. 6" (15cm) between the device and other devices or a wall.
- When installing the device in a suspended environment, always use mounting hardware that is at least M10x25mm, and always install the device with an appropriately rated safety cable.
- Always disconnect the device from its main power source before performing any type of service or cleaning procedure.
- Handle the cord only by the plug end. **NEVER** pull out the plug by tugging on the wire portion of the cord.
- Consistent operational breaks will ensure that the device functions properly for many years.
- Use **ONLY** the original packaging and materials to transport the device in the event that service or repair is required.

# MAINTENANCE GUIDELINES



**DISCONNECT POWER BEFORE PERFORMING ANY MAINTENANCE!**

## **CLEANING**

Frequent cleaning is recommended to ensure proper function and extended life. The frequency of cleaning depends on the environment in which the device operates: damp, smoky, or particularly dirty environments can cause greater accumulation of dirt on the device and air vents. Clean the external surface regularly with a soft cloth to avoid dirt/debris accumulation.

***NEVER use alcohol, solvents, or ammonia-based cleaners.***

## **MAINTENANCE**

Regular inspections are recommended to ensure proper function and extended life. There are no user serviceable parts inside this device. Please refer all other service issues to an authorized Elation service technician. Should you need any spare parts, please order genuine parts from your local Elation dealer.

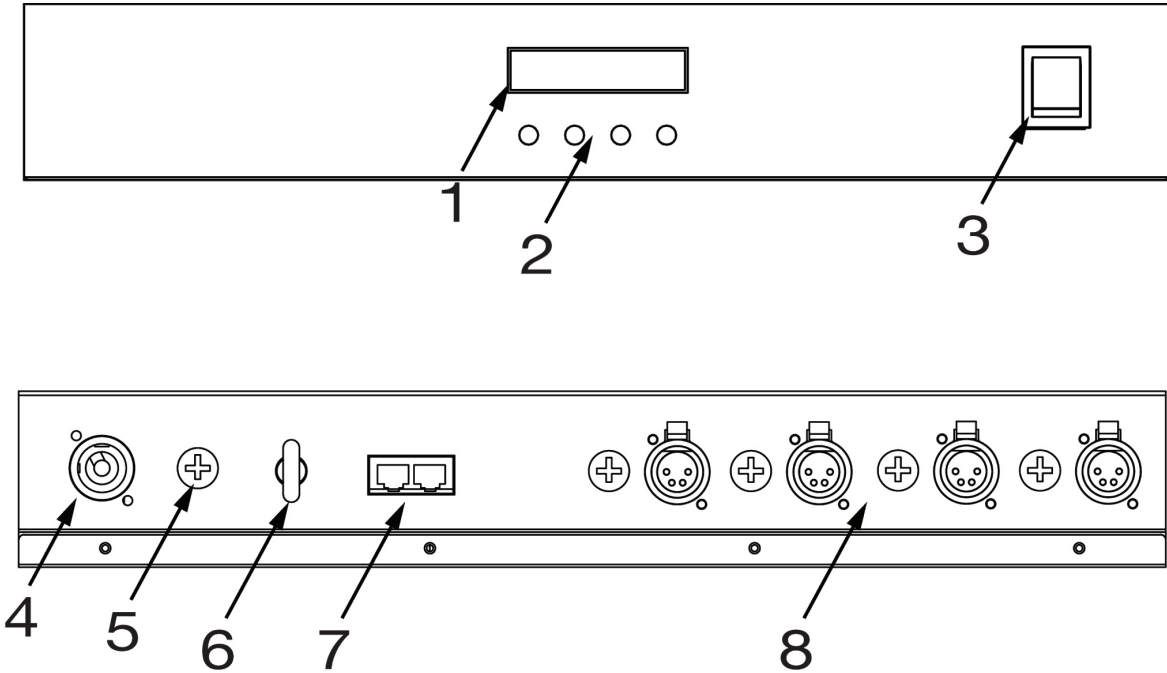
Please refer to the following points during routine inspections:

- A detailed electrical check by an approved electrical engineer every three months, in order to make sure the circuit contacts are in good condition and prevent overheating.
- Be sure all screws and fasteners are securely tightened at all times. Loose screws may fall out during normal operation, resulting in damage or injury as larger parts could fall.
- Check for any deformations on the housing, rigging hardware, and rigging points (ceiling, suspension, trussing). Deformations in the housing could allow for dust to enter into the device. Damaged rigging points or unsecured rigging could cause the device to fall and seriously injure a person(s).
- Electrical power supply cables must not show any damage, material fatigue, or sediments.

**NEVER** remove the ground prong from the power cable.



# DEVICE OVERVIEW



1. LCD System Menu Control Display
2. Menu Control Buttons (Mode, Setup, Up, Down)
3. Power Switch
4. Power Cable Input
5. 10A Fuse
6. Safety Cable Attachment Loop
7. RJ45 Ethernet In/Out Ports (Kling-Net, Art-Net/sACN)
8. Output Ports 1-4 (10A Fuse each)

## INCLUDED ITEMS

- PIXEL DRIVER 4000
- 19" Rack Mount Kit
- 1.7m (5.6 ft) Power Cable
- 2.8m (9.25ft) 4pin 16AWG Power/Data Cable

# INSTALLATION GUIDELINES



## **FLAMMABLE MATERIAL WARNING!**

Keep drive a minimum of 5.0 feet (1.5m) away from flammable material and/or pyrotechnics.



## **ELECTRICAL CONNECTIONS**

A qualified electrician should be used for all electrical connections and/or devices.



## **FOR USE IN INDOOR OR DRY LOCATIONS ONLY! DO NOT EXPOSE TO RAIN OR MOISTURE!**



## **DO NOT INSTALL THE DEVICE IF YOU ARE NOT QUALIFIED TO DO SO!**

Device **MUST** be installed following all local, national, and country commercial electrical and construction codes and regulations.

Before rigging/mounting the device to any metal truss/structure or placing the device on any surface, a professional equipment installer **MUST** be consulted to determine if the metal truss/structure or surface is properly certified to safely hold the combined weight of the device, clamps, cables, and accessories. Overhead device installation must always be secured with a secondary safety attachment, such as an appropriately rated safety cable that meets all local, national, and country codes and regulations.

Device ambient operating temperature range is **14° to 113°F (-10° to 45°C)**. Do not use the device when the ambient temperature falls outside of this range.

Device should be installed in areas outside walking paths, seating areas, or away from areas where unauthorized personnel might reach the fixture by hand.

**NEVER** stand directly below the device when rigging, removing, or servicing.

# INSTALLATION GUIDELINES

## RACK MOUNTING

The device can be rack mounted in a standard 19-inch rack space. Attach the included rack ears to both sides of the device using the included screws. Tighten rack ear screws securely but do NOT over tighten. Use careful planning when rack mounting the device to allow ample space for the power/data cables.

## TRUSS MOUNTING

The device can be attached to truss or a like structure using an appropriated truss clamp (not included) and an M10 screw (not included).



### SAFETY CABLE

**ALWAYS ATTACH A SAFETY CABLE TO THE SAFETY CABLE LOOP ON THE BACK OF THE DEVICE WHENEVER INSTALLING THIS DEVICE IN A SUSPENDED ENVIRONMENT TO ENSURE THE FIXTURE WILL NOT DROP IF THE CLAMP FAILS.**

## RIGGING

Overhead rigging requires extensive experience, including calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the device, among other requirements. If you lack these qualifications, do not attempt the installation yourself. Improper installation can result in bodily injury.



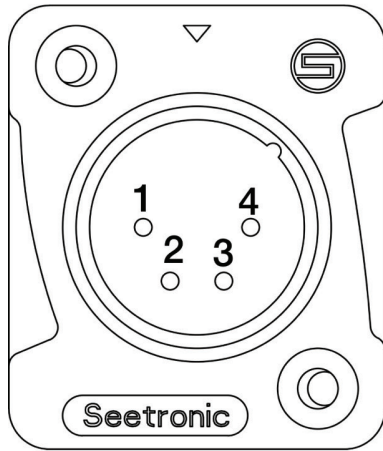
### INSTALLATION LOCATION PLANNING

Use careful planning to select the installation location of the PIXEL DRIVER 4000 unit(s). **The maximum distance from the driver to the first pixel bar should not exceed 50 feet (18m).**

# CONNECTIONS AND CABLES

## CONNECTIONS

The device features RJ45 Ethernet in/out and 4pin power/data combination output connections. The wiring diagram below provides the pin details for the power/data outputs.



**PIN #1** - (+) Power

**PIN #2** - Data

**PIN #3** - CLK (clock pin)

**PIN #4** - (-) Power

## CABLES

ELATION P BAR IP 4pin 16AWG power/data cables are available in various lengths. See the **Optional Accessories** section of this manual for details.



### MAXIMUM CABLE DISTANCES - 16AWG

The following maximum cable distances apply when using 16AWG cables.

PIXEL DRIVER 4000 to 1st PIXEL BAR IP = **Maximum 50 feet (18 meters)**

PIXEL BAR IP to PIXEL BAR IP = **Maximum 32 feet (10 meters)**

Total combined length of cables can NOT exceed = **Maximum 98 feet (30 meters)**



### MAXIMUM CABLE DISTANCES - 12AWG

The following maximum cable distances apply when using 12AWG cables.

PIXEL DRIVER 4000 to 1st PIXEL BAR IP = **Maximum 50 feet (18 meters)**

PIXEL BAR IP to PIXEL BAR IP = **Maximum 32 feet (10 meters)**

Total combined length of cables can NOT exceed = **Maximum 213 feet (65 meters)**

# SYSTEM CONFIGURATION

## LINKING

Maximum number pixels/bars each PIXEL DRIVER 4000 supports is listed in charts below. Multiple combinations of PIXEL BAR IP models can be linked (daisy-chained) together to a single driver port, as long as the maximum number of pixels/bars is NOT exceeded.

**KLING-NET = 1,020 Max Pixels per PIXEL DRIVER 4000 Port**

**Art-NET/sACN = 170 Max Pixels per PIXEL DRIVER 4000 Port**

MODEL	TOTAL PIXELS	TOTAL CONTROL CHANNELS	KLING-NET 1,020 Max Pixels per Driver Port 4,080 Max Pixels per Driver Unit			
			MAX BARS per DRIVER PORT	MAX PIXELS per DRIVER PORT	MAX BARS per DRIVER UNIT	MAX PIXELS per DRIVER UNIT
Pixel Bar 30 IP	30	90	34	1020	136	4080
Pixel Bar 60 IP	60	180	17	1020	68	4080
Pixel Bar 120 IP	120	360	8	960	32	3840

MODEL	TOTAL PIXELS	TOTAL CONTROL CHANNELS	ARTNET/sACN 170 Max Pixels per Driver Port 680 Max Pixels per Driver Unit			
			MAX BARS per DRIVER PORT	MAX PIXELS per DRIVER PORT	MAX BARS per DRIVER UNIT	MAX PIXELS per DRIVER UNIT
Pixel Bar 30 IP	30	90	5	150	20	600
Pixel Bar 60 IP	60	180	2	120	8	480
Pixel Bar 120 IP	120	360	1	120	4	480

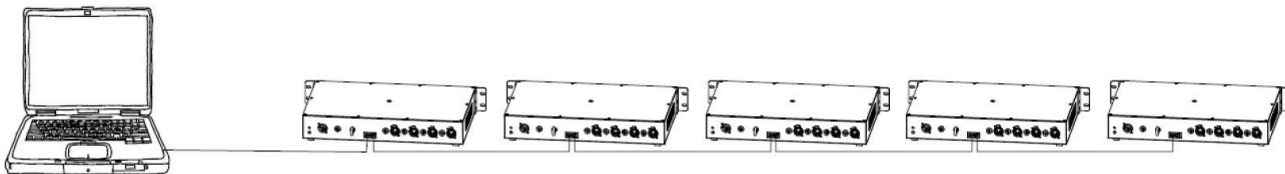
# SYSTEM CONFIGURATION

## CONTROL

PIXEL DRIVER 4000 supports Kling-NET, Art-NET, and sACN control protocols. It can be controlled by an Art-NET compatible controller/console and for advanced pixel programming, or it can be controlled via a computer with media software such as ArKaos Media Master. The driver also includes 16 internal programs for easy stand-alone demo proposes, which can be accessed manually from the 4-button LCD control menu display.

## PC - DRIVER DIRECT CONNECTION

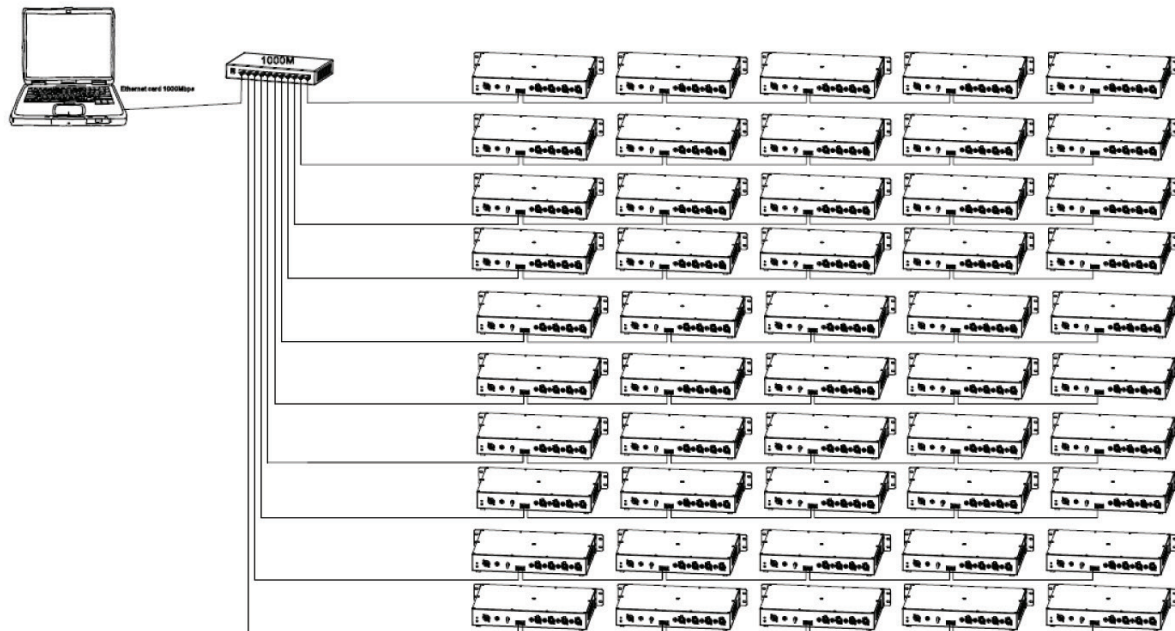
Up to 5 PIXEL DRIVER 4000 units can be linked (daisy-chained) from a computer. For systems requiring more than 5 drivers, see the next section for more information.



## PC - NETWORK SWITCH CONNECTION

Up to 50 PIXEL DRIVER 4000 units can be linked (daisy-chained) from a computer and a Gigabit Ethernet Switch (not included) that supports IGMP (Internet Group Management Protocol). Using a Gigabit Ethernet Switch that does not support IGMP can cause erratic behavior of all connected devices to the switch. Up to 5 PIXEL DRIVER 4000 units can be connected per ethernet switch port and up to 10 total ethernet switch ports can be used in a system. Click link below for more information about IGMP.

[https://en.wikipedia.org/wiki/Internet\\_Group\\_Management\\_Protocol](https://en.wikipedia.org/wiki/Internet_Group_Management_Protocol)



# SYSTEM MENU

<b>MODE</b>	<b>SET UP</b>	<b>UP/DOWN</b>	<b>DESCRIPTION</b>
<b>DIMMER MODE</b>	Red Dimmer	Manual Control Red: xxx	Adjust the intensity of the red color.
	Green Dimmer	Manual Control Green: xxx	Adjust the intensity of the green color.
	Blue Dimmer	Manual Control Blue: xxx	Adjust the intensity of the blue color.
	Output enable or disable	Manual Control Out1: Enable/Disable	Enable or disable output 1.
		Manual Control Out2: Enable/Disable	Enable or disable output 2.
		Manual Control Out3: Enable/Disable	Enable or disable output 3.
		Manual Control Out4: Enable/Disable	Enable or disable output 4.
	<b>KLINGNET MODE</b>	Pixel Bar Setup	Klingnet Out x Pixel Bar xxx IP
Klingnet Out x xxx IP Number xx			Select the number of pixel bar units that will be connected to each output. • x = output port # • xx = number of units • xxx = pixel bar model
Klingnet Out x xx X xx RGB Pixels			Set RGB Channel mode, see <b>Pixel Modes</b> section of this manual for details.
<b>ARTNET MODE</b>	IP Address Set	IP Address Out x xxx:xxx:xxx:xxx	Set IP address of each output.
	DMX Universe Set	Universe Out x U:xxxxx	Set DMX universe of each output.
	Pixel Bar Setup	Artnet Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. • x = output port # • xxx = pixel bar model
		Artnet Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. • x = output port # • xx = number of units • xxx = pixel bar model
		Artnet Out x xx X xx RGB Pixels	Set RGB Channel mode, see <b>Pixel Modes</b> section of this manual for details.

CONTINUED ON NEXT PAGE

# SYSTEM MENU

<b>MODE</b>	<b>SET UP</b>	<b>UP/DOWN</b>	<b>DESCRIPTION</b>
<b>sACN MODE</b>	DMX Universe Set	sACN Out x u:xxxxx	Set DMX universe of each output.
	Pixel Bar Setup	sACN Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. • x = output port # • xxx = pixel bar model
		sACN Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. • x = output port # • xx = number of units • xxx = pixel bar model
		sACN Out x xx X xx RGB Pixels	Set RGB Channel mode, see <b>Pixel Modes</b> section of this manual for details.
<b>KLINGNET &amp; ARTNET CONTROL MODE</b>	Klingnet enable or disable set	Klingnet & Artnet Klingnet: Enable/Disable	Enable or disable the klingnet control.
	Klingnet Pixel Bar Setup	Klingnet Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. • x = output port # • xxx = pixel bar model
		Klingnet Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. • x = output port # • xx = number of units • xxx = pixel bar model
	Artnet IP Address Set	IP Address Out x xxx:xxx:xxx:xxx	Set the IP address of each output.
Artnet Universe Set	Universe Out x U:xxxxx	Set the DMX universe of each output.	
<b>BUILT IN PROGRAM MODE</b>	Program Play Set	Programs Program xx	Select the built in program.
		Programs Speed xx	Set the program speed.
		Programs Fade xx	Set the fade time speed.
		Programs Phase Time xx	Set the phase time.

CONTINUED ON NEXT PAGE



# SYSTEM MENU

<b>MODE</b>	<b>SET UP</b>	<b>UP/DOWN</b>	<b>DESCRIPTION</b>
<b>BUILT IN PROGRAM MODE</b>	Pixel Bar Setup	Program Out x Pixel Bar xxx IP	Select the pixel bar model that will be connected to each output. <ul style="list-style-type: none"> <li>• x = output port #</li> <li>• xxx = pixel bar model</li> </ul>
		Program Out x xxx IP Number xx	Select the number of pixel bar units that will be connected to each output. <ul style="list-style-type: none"> <li>• x = output port #</li> <li>• xx = number of units</li> <li>• xxx = pixel bar model</li> </ul>
<b>SETUP OPTIONS</b>	LCD Backlight On/Off	Setup Options BLGT: On	LED backlight always on.
		Setup Options BLGT: Off	LED backlight off after 20 seconds.
	LCD Backlight Brightness	Setup Options BRCO: xxx	Adjust the brightness of the LCD backlight
	System Reset*	Setup Options SysReset	Reset the unit to factory settings.
<b>SOFTWARE VERSION</b>	Software Version Display	Software Version Port1 Vx.x	Display software version of port 1.
		Software Version Port2 Vx.x	Display software version of port 2.
		Software Version Port3 Vx.x	Display software version of port 3.
		Software Version Port4 Vx.x	Display software version of port 4.



## **\*SYSTEM RESET**

ONLY QUALIFIED TECHNICIANS SHOULD PERFORM THIS FUNCTION. PLEASE NOTE THAT ALL SAVED SETTINGS ARE ERASED AFTER A SYSTEM RESET IS PERFORMED.

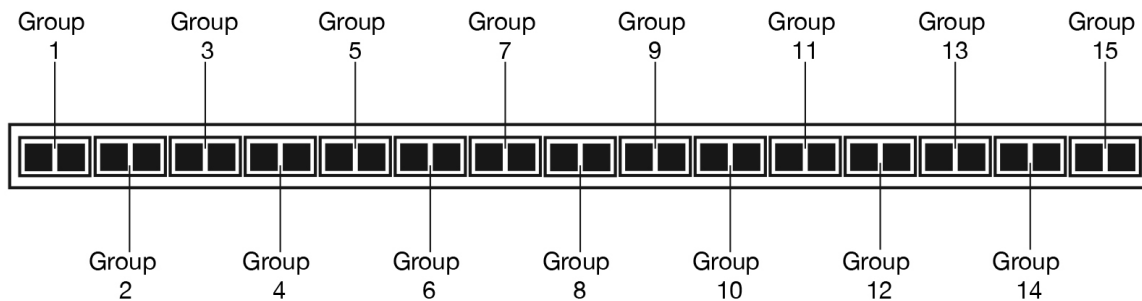
# PIXEL GROUPING

Each pixel requires three channels (red, green, and blue) to operate, and therefore the number of pixels (and consequently, the number of devices) that the driver can control is limited by the total number of control channels available on the driver.

However, this driver also gives the user the ability to adjust the pixel grouping configuration. In the standard configuration, individual pixels are controlled independently for finer control over the resolution of the lighting display. Alternately, multiple individual pixels may be grouped together under a common set of control channels in order to reduce the number of required control channels. This also reduces the effective pixel count for each fixture. The downside to this is the reduced resolution of the lighting display.

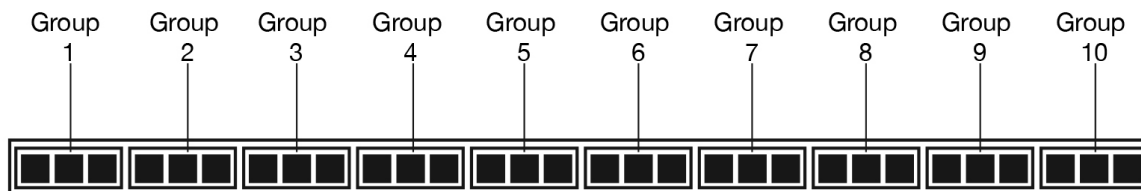
In each pixel control mode, the first number denotes the number of individual pixels that make up each control group, while the second number denotes the number of control groups. Each control group will always occupy 3 DMX channels (for red, green, and blue control). This means that within each control group, all pixels will be controlled by the same set of 3 DMX channels.

For example, let us examine a 30-pixel strip, as shown below. Selecting **2x15** mode means that the pixels will be divided into 15 control groups, with each group containing 2 LEDs.



In this mode, a total of 45 DMX channels are used: 3 DMX channels (for Red, Green, Blue) per group multiplied by 15 groups.

If we want to reduce the number of control groups required, one possible solution is to select a different pixel grouping mode. For instance, selecting **3x10** mode will result in the LED display being divided into 10 control groups each containing 3 pixels. Therefore, the number of DMX channels required drops to 30: 10 control groups multiplied by 3 DMX channels (for Red, Green, and Blue) per group.



Available pixel grouping modes are shown in the tables on the following pages.

# PIXEL MODES

Pixel Count	Pixel Group Options
1	1x1
2	1x2, 2x1
3	1x3, 3x1
4	1x4, 2x2, 4x1
5	1x5, 5x1
6	1x6, 2x3, 3x2, 6x1
7	1x7
8	1x8, 2x4, 4x2, 8x1
9	1x9, 3x3, 9x1
10	1x10, 2x5, 5x2, 10x1
11	1x11
12	1x12, 2x6, 3x4, 4x3, 6x2, 21x1
13	1x13
14	1x14, 2x7, 7x2, 14x1
15	1x15, 3x5, 5x3, 15x1
16	1x16, 2x8, 4x4, 8x2, 16x1
17	1x17
18	1x18, 2x9, 3x6, 6x3, 9x2, 18x1
19	1x19
20	1x20, 2x10, 4x5, 5x4, 10x2, 20x1
21	1x21, 3x7, 7x3, 21x1
22	1x22, 2x11, 11x2, 22x1
23	1x23
24	1x24, 2x12, 3x8, 4x6, 6x4, 8x3, 12x2, 24x1
25	1x25, 5x5, 25x1
26	1x26, 2x13, 13x2, 26x1
27	1x27, 3x9, 9x3, 27x1
28	1x28, 2x14, 4x7, 7x4, 14x2, 28x1
29	1x29
30	1x30, 2x15, 3x10, 5x6, 6x5, 10x3, 15x2, 30x1
31	1x31
32	1x32, 2x16, 4x8, 8x4, 16x2, 32x1

Pixel Count	Pixel Group Options
33	1x33, 3x11, 11x3, 33x1
34	1x34, 2x17, 17x2, 34x1
35	1x35, 5x7, 7x5, 35x1
36	1x36, 2x18, 3x12, 4x9, 6x6, 9x4, 12x3, 18x2, 36x1
37	1x37
38	1x38, 2x19, 19x2, 38x1
39	1x39, 3x13, 13x3, 39x1
40	1x40, 2x20, 4x10, 5x8, 8x5, 10x4, 20x2, 40x1
41	1x41
42	1x42, 2x21, 3x14, 6x7, 7x6, 14x3, 21x2, 42x1
43	1x43
44	1x44, 2x22, 4x11, 11x4, 22x2, 44x1
45	1x45, 3x15, 5x9, 9x5, 15x3, 45x1
46	1x46, 2x23, 23x2, 46x1
47	1x47
48	1x48, 2x24, 3x16, 4x12, 6x8, 8x6, 12x4, 16x3, 24x2, 48x1
49	1x49, 7x7, 49x1
50	1x50, 2x25, 5x10, 10x5, 25x2, 50x1
51	1x51, 3x17, 17x3, 51x1
52	1x52, 2x26, 4x13, 13x4, 26x2, 52x1
53	1x53
54	1x54, 2x27, 3x18, 6x9, 9x6, 18x3, 27x2, 54x1
55	1x55, 5x11, 11x5, 55x1
56	1x56, 2x28, 4x14, 7x8, 8x7, 14x4, 28x2, 56x1
57	1x57, 3x19, 19x3, 57x1
58	1x58, 2x29, 29x2, 58x1
59	1x59
60	1x60, 2x30, 3x20, 4x15, 5x12, 6x10, 10x6, 12x5, 15x4, 20x3, 30x2, 60x1
61	1x61

# PIXEL MODES

Pixel Count	Pixel Group Options
62	1x62, 2x31, 31x2, 62x1
63	1x63, 3x21, 7x9, 9x7, 21x3, 63x1
64	1x64, 2x32, 4x16, 8x8, 16x4, 32x2, 64x1
65	1x65, 5x13, 13x5, 65x1
66	1x66, 2x33, 3x22, 6x11, 11x6, 22x3, 33x2, 66x1
67	1x67
68	1x68, 2x34, 4x17, 17x4, 34x2, 68x1
69	1x69, 3x23, 23x3, 69x1
70	1x70, 2x35, 5x14, 7x10, 10x7, 14x5, 35x2, 70x1
71	1x71
72	1x72, 2x36, 3x24, 4x18, 6x12, 8x9, 9x8, 12x6, 18x4, 24x3, 36x2, 72x1
73	1x73
74	1x74, 2x37, 37x2, 74x1
75	1x75, 3x25, 5x15, 15x5, 25x3, 75x1
76	1x76, 2x38, 4x19, 19x4, 38x2, 76x1
77	1x77, 7x11, 11x7, 77x1
78	1x78, 2x39, 3x26, 6x13, 13x6, 26x3, 39x2, 78x1
79	1x79
80	1x80, 2x40, 4x20, 5x16, 8x10, 10x8, 16x5, 20x4, 40x2, 80x1
81	1x81, 3x27, 9x9, 27x3, 81x1
82	1x82, 2x41, 41x2, 82x1
83	1x83
84	1x84, 2x42, 3x28, 4x21, 6x14, 7x12, 12x7, 14x6, 21x4, 28x3, 42x2, 84x1
85	1x85, 5x17, 17x5, 85x1
86	1x86, 2x43, 43x2, 86x1
87	1x87, 3x29, 29x3, 87x1
88	1x88, 2x44, 4x22, 8x11, 11x8, 22x4, 44x2, 88x1
89	1x89
90	1x90, 2x45, 3x30, 5x18, 6x15, 9x10, 10x9, 15x6, 18x5, 30x3, 45x2, 90x1

Pixel Count	Pixel Group Options
91	1x91, 7x13, 13x7, 91x1
92	1x92, 2x46, 4x23, 23x4, 46x2, 92x1
93	1x93, 3x31, 31x3, 93x1
94	1x94, 2x47, 47x2, 94x1
95	1x95, 5x19, 19x5, 95x1
96	1x96, 2x48, 3x32, 4x24, 6x16, 8x12, 12x8, 16x6, 24x4, 32x4, 48x2, 96x1
97	1x97
98	1x98, 2x49, 7x14, 14x7, 49x2, 98x1
99	1x99, 3x33, 9x11, 11x9, 33x3, 99x1
100	1x100, 2x50, 4x25, 5x20, 10x10, 20x5, 25x4, 50x2, 100x1
101	1x101
102	1x102, 2x51, 3x34, 6x17, 17x6, 34x3, 51x2, 102x1
103	1x103
104	1x104, 2x52, 4x26, 8x13, 13x8, 26x4, 52x2, 104x1
105	1x105, 3x35, 5x21, 7x15, 15x7, 21x5, 35x3, 105x1
106	1x106, 2x53, 53x2, 106x1
107	1x107
108	1x108, 2x54, 3x36, 4x27, 6x18, 9x12, 12x9, 18x6, 27x4, 36x3, 54x2, 108x1
109	1x109
110	1x110, 2x55, 5x22, 10x11, 11x10, 22x5, 55x2, 110x1
111	1x111, 3x37, 37x3, 111x1
112	1x112, 2x56, 4x28, 7x16, 8x14, 14x8, 16x7, 28x4, 56x2, 112x1
113	1x113
114	1x114, 2x57, 3x38, 6x19, 19x6, 38x3, 57x2, 114x1
115	1x115, 5x23, 23x5, 115x1
116	1x116, 2x58, 4x29, 29x4, 58x2, 116x1
117	1x117, 3x39, 9x13, 13x9, 39x3, 117x1
118	1x118, 2x59, 59x2, 118x1

# PIXEL MODES

Pixel Count	Pixel Group Options
119	1x119, 7x17, 17x7, 119x1
120	1x120, 2x60, 3x40, 4x30, 5x24, 6x20, 8x15, 10x12, 12x10, 15x8, 20x6, 24x5, 30x4, 40x3, 60x2, 120x1
121	1x121, 11x11, 121x1
122	1x122, 2x61, 61x2, 122x1
123	1x123, 3x41, 41x3, 123x1
124	1x124, 2x62, 4x31, 31x4, 62x2, 124x1
125	1x125, 5x25, 25x5, 125x1
126	1x126, 2x63, 3x42, 6x21, 7x18, 9x14, 14x9, 18x7, 21x6, 42x3, 63x2, 126x1
127	1x127
128	1x128, 2x64, 4x32, 8x16, 16x8, 32x4, 64x2, 128x1
129	1x129, 3x43, 43x3, 129x1
130	1x130, 2x65, 5x26, 10x13, 13x10, 26x5, 65x2, 130x1
131	1x131
132	1x132, 2x66, 3x44, 4x33, 6x22, 11x12, 12x11, 22x6, 33x4, 44x3, 66x2, 132x1
133	1x133, 7x19, 19x7, 133x1
134	1x134, 2x67, 67x2, 134x1
135	1x135, 3x45, 5x27, 9x15, 15x9, 27x5, 45x3, 135x1
136	1x136, 2x68, 4x34, 8x17, 17x8, 34x4, 68x2, 136x1
137	1x137
138	1x138, 2x69, 3x46, 6x23, 23x6, 46x3, 69x2, 138x1
139	1x139
140	1x140, 2x70, 4x35, 5x28, 7x20, 10x14, 14x10, 20x7, 28x5, 35x4, 70x2, 140x1
141	1x141, 3x47, 47x3, 141x1
142	1x142, 2x71, 71x2, 142x1
143	1x143, 11x13, 13x11, 143x1
144	1x144, 2x72, 3x48, 6x36, 8x24, 9x18, 12x16, 16x12, 18x9, 24x8, 36x6, 48x3, 72x2, 144x1
145	1x145, 5x29, 29x5, 145x1

Pixel Count	Pixel Group Options
146	1x146, 2x73, 73x2, 146x1
147	1x147, 3x49, 7x21, 21x7, 49x3, 147x1
148	1x148, 2x74, 4x37, 37x4, 74x2, 148x1
149	1x149
150	1x150, 2x75, 3x50, 5x30, 6x25, 10x15, 15x10, 25x6, 30x5, 50x3, 75x2, 150x1
151	1x151
152	1x152, 2x76, 4x38, 8x19, 19x8, 38x4, 76x2, 152x1
153	1x153, 3x51, 9x17, 17x9, 51x3, 153x1
154	1x154, 2x77, 7x22, 11x14, 14x11, 22x7, 77x2, 154x1
155	1x155, 5x31, 31x5, 155x1
156	1x156, 2x78, 3x52, 4x39, 6x26, 12x13, 13x12, 26x6, 39x4, 52x3, 78x2, 156x1
157	1x157
158	1x158, 2x79, 79x2, 158x1
159	1x159, 3x53, 53x3, 159x1
160	1x160, 2x80, 4x40, 5x32, 8x20, 10x16, 16x10, 20x8, 32x5, 40x4, 80x2, 160x1
161	1x161, 7x23, 23x7, 161x1
162	1x162, 2x81, 3x54, 6x27, 9x18, 18x9, 27x6, 54x3, 81x2, 162x1
163	1x163
164	1x164, 2x82, 4x41, 41x4, 82x2, 164x1
165	1x165, 3x55, 5x33, 11x15, 15x11, 33x5, 55x3, 165x1
166	1x166, 2x83, 83x2, 166x1
167	1x167
168	1x168, 2x84, 3x56, 4x42, 6x28, 7x24, 8x21, 12x14, 14x12, 21x8, 24x7, 28x6, 42x4, 56x3, 84x2, 168x1
169	1x169, 13x13, 169x1
170	1x170, 2x85, 5x34, 10x17, 17x10, 34x5, 85x2, 170x1

# TECHNICAL SPECIFICATIONS

## CONTROL / CONNECTIONS

Manual RGB Mode  
Internal Programs  
Art-NET | sACN | Kling-NET  
(2) RJ45 Ethernet Ports  
(4) 4pin Power/Data Outputs

## SIZE / WEIGHT

Length: 16.7" (425mm)  
Width: 11.9" (301mm)  
Vertical Height: 2.9" (74mm)  
Weight: 9.5 lbs. (4.3 kg)

## ELECTRICAL / THERMAL

AC 100-240V - 50/60Hz  
800W Max Power Consumption  
-4° to 113°F. (-20° to 45°C)

## APPROVALS / RATINGS

CE | cETLus



Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

## **FCC STATEMENT**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **FCC RADIO FREQUENCY INTERFERENCE WARNINGS & INSTRUCTIONS**

This product has been tested and found to comply with the limits as per Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device uses and can radiate radio frequency energy and, if not installed and used in accordance with the included instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following methods:

- Reorient or relocate the device.
- Increase the separation between the device and the receiver.
- Connect the device to an electrical outlet on a circuit different from which the radio receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



