

PRESS RELEASE



EnvironmentalLights.com Expands Studio Series of DMX Controllers and Decoders

New 24-Channel DMX Decoder from EnvironmentalLights.com allows for greater design flexibility, higher load capacities, and includes the newest scrambled pulse width modulation (S-PWM) technology.

San Diego, CA (February 15, 2013) EnvironmentalLights.com, a leading source for high-quality, energy-efficient LED lighting, recently added a top-of-the-line [24 Channel \(3 Amps per Channel\) DMX Decoder](#) to their Studio Series of DMX controllers and decoders. This new addition allows for greater design flexibility, higher load capacities, and includes the newest scrambled pulse width modulation (S-PWM) technology.

“What it does, in plain English, is it takes the DMX output from any standard DMX console or controller, and decodes the signal so you can drive 4-wire LED RGB lights,” said Alicia Cheng, Director of Product Development. “Products such as LED wall washers, LED strip lights or LED Modules.”

Each of the 24 channels can sustain up to 3 amps of current at 5, 12, or 24 VDC. Channels 1-12 and 13-24 are powered by separate voltage inputs, allowing strands of two different voltages to be addressed simultaneously. Contrary to traditional decoders which apply the same voltage to all loads, with the 24-Channel DMX Decoder (DMX-24-2000S) all of your [LED strip lights](#) do not have to have the same input voltages.



With a high PWM frequency of 2,000 hertz, the appearance of flicker that can be seen by studio equipment is reduced and there is a smooth output of light. The 24 Channel DMX Decoder also contains S-PWM patented technology, which increases the visual refresh rate and supports a 16-bit gray scale control on the output channels. Simply put, this decoder allows for higher color resolution and enables high speed iris cameras to seamlessly capture video in real time, without flicker.

“The 24 Channel DMX Decoder has several pre-programmed built in functions for testing. We recommend testing your LED lights before connecting the decoder to DMX in, as this will help insure that the proper connections are made,” said Cheng. “The 24 channels can support eight separate Red-Green-Blue devices, or 24 monochrome channels. Each of the eight sets of outputs contains three signal channels and one power output.”

Pulse Width Modulation

[Pulse width modulation](#) (PWM) is a method of controlling power to devices. LED lights do not dim smoothly on analog signals, so PWM is a common method used for dimming LED lighting. On and off pulses of different frequencies are sent to the light, which then visually appears as steady dimmed light. “Cameras tend to pick up on PWM flicker at much higher frequencies than the human eye,” explained Lauren Rueda, Product Engineer. “Still shots occasionally show distortions of lighting with PWM frequency of up to several hundred hertz. Digital viewfinders may also output flicker, making it hard for the photographer to focus a shot.”

Video cameras, especially those used in professional studios, can pick up on flicker at much higher frequencies than normal cameras. For this reason, EnvironmentalLights.com has developed their [Studio Line of DMX Controllers and Decoders](#). All controllers in this line have either a PWM frequency of 5,000 hertz, or a scrambled PWM of 2,000 hertz.

Scrambled Pulse Width Modulation

[Scrambled pulse width modulation](#) (S-PWM) is an enhanced version of normal PWM signaling. This new technology has been patented in several countries due to its innovation and ability to reduce appearance of flickering in high level recording.

The duty cycle of each period is split or “scrambled” into several sub-pulses. The pulses of each channel will coordinate to reduce periods in which all channels are off. S-PWM supports 16-bit gray scale control that allows for greater color resolution and clarity.

“Although new to the commercial market, S-PWM technology has been in use for several years and is well researched,” said Cheng. “A striking example of its capabilities was shown in the opening ceremony of the 2008 Beijing Olympics, where S-PWM control was used in the control of the over 12,000 square foot LED display.”

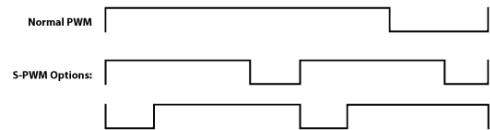
This technology is typically used in professional studios to reduce flicker recorded by high speed iris cameras, and could also be used for stage lighting at concerts, sporting events or nightclubs.

About Environmental Lights

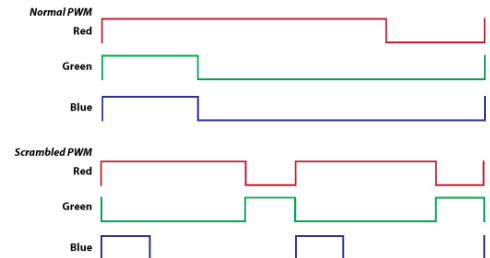
EnvironmentalLights.com is an industry leader in providing specialized LED lighting solutions for their business partners through expert engineering, superior products, and dependable service. Their in-house sales engineers provide complimentary advice in the selection and design of lighting systems, as well as technical support throughout the installation process.

They offer a broad spectrum of LED light bulbs, rope and strip light, under cabinet lighting systems, dimmers, controllers and necessary hardware for any lighting project. For more information visit www.EnvironmentalLights.com.

Example: 75% Duty Cycle



Example: Normal RGB PWM versus RGB S-PWM



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