Standalone 4 Channel DMX Decoder - 5A per Channel
Part number: **DMX-4-5A**

The Standalone 4 Channel DMX Decoder - 5A per Channel acts as both a DMX controller and a basic RGBW controller. An integrated high-resolution OLED display allows DMX settings and stand-alone modes to be configured directly on the decoder. DMX settings include starting address, dimming curve and DMX resolution. Stand-alone modes include static color mixing, color changing and strobing modes. It accepts 5-24V DC input voltage range at up to five amps per channel maximum current.

Features

- High resolution OLED screen can display 4-lines of text.
- Easily change DMX address without DIP switch math.
- 2,000 Hz PWM frequency for flicker-free performance in most applications
- Switchable 8-bit or 16-bit DMX input.
- Configurable stand-alone modes, including static color, color fade and color strobe
- 5-24V DC input range.
- Substantial 4 x 5A current capacity means it can drive up to 240W/480W per decoder at 12V/24V respectively.
- Adjustable dimming curve for a best fit for your application.
- Terminal block connectors for DMX communication.
- Mounting tabs are integrated into the chassis.

Applications

- Color coordinated lighting – static colors are mixed by setting DMX values for RGBW, so colors can easily be matched across many decoders and locations.
- Stand-alone modes can replace an external DMX controller for simple functions, reducing cost and complexity.
- Multi-purpose event lighting – use DMX when needed or stand-alone for simplicity

Specifications

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Dimensions:	6.9" x 1.7" x 1.2"
	175 mm x 44 mm x 30mm
Output Channels:	4
Input voltage:	5-24 Volts DC
Max. current load:	4x5A
Max. output power:	100W/240W/480W (5V/12V/24V)
PWM frequency:	2,000 Hz

Wiring

1. Confirm that the power supply voltage matches the LED voltage and that the power supply is powered OFF.
2. Connect the LEDs and power supply to the DMX-4-5A using the screw terminals as shown in the diagram. Power supply positive and ground should be connected to "DC+" and "DC-" terminals respectively. LED positive should be connected to the "V+" terminal. Connect LED grounds to output channels 1-4 as appropriate for the installation.
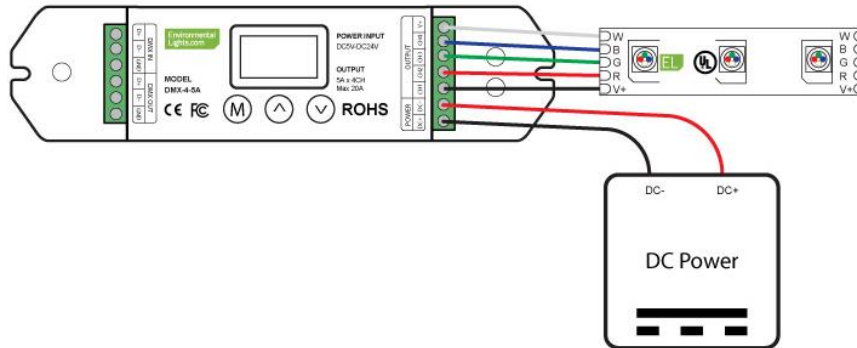
3. The DMX terminals do not need to be connected for operation in stand-alone mode
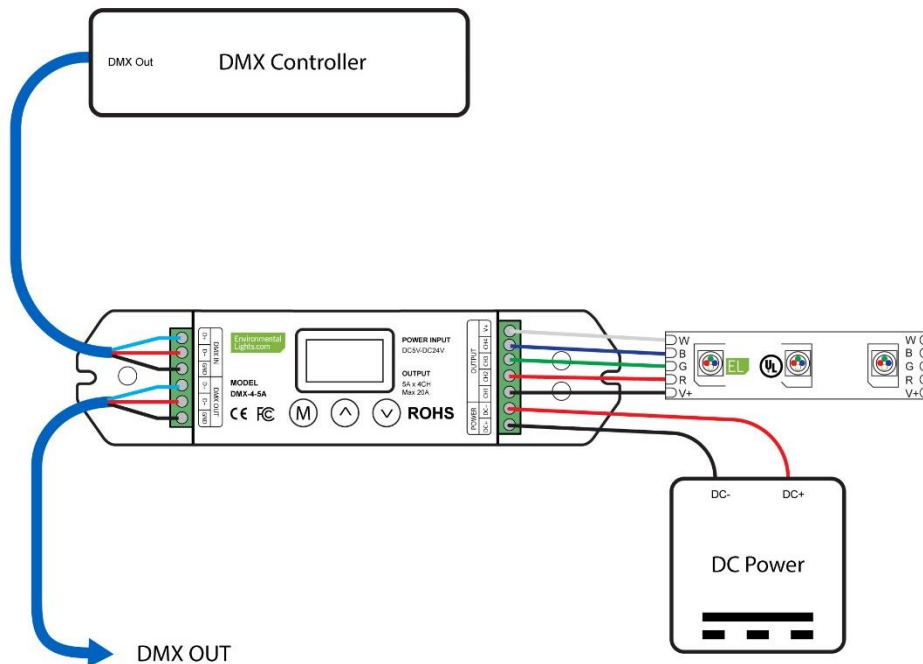
4. For DMX control: Connect the outputs of the DMX controller to the "D+", "D-" and "GND" terminals for "DMX IN". Additional DMX devices may be connected using the "DMX OUT" terminals. Only apply a DMX signal while the decoder is powered on.

Operation

Navigation Buttons:

- The "M" key is used to cycle through the different menu options. The currently selected option will blink.
- The up and down arrow keys enter the selected submenu or adjust the selected parameter.
- Use the "M" button to select the desired setting, use the arrows to change the value then press the "M" key again to save the setting and move on.
- To deactivate the internal buzzer, select SYSTM → BUZZER → OFF

Main Screen:

The main screen is displayed by exiting the top level menu. This screen displays current DMX values, the DMX resolution and the gamma curve setting.


DMX Address:

Change the DMX starting address right in the top-level menu (press any key from the main screen or screen saver). With the DMX value selected, use the arrow keys to adjust the address. Holding down one of the arrows will speed through addresses.

DMX Setup:

Pressing an arrow key with "DMX Setup" highlighted will bring up this submenu. The first line controls DMX resolution and can be set to either 8-bit for standard DMX or 16-bit for extreme resolution. Operation in 16-bit mode requires 2 DMX input channels for each output. The first DMX channel works as normal and the second provides fine control.

The Curve parameter is only available in 8-bit mode and can be set to Gamma (default), linear or 1/Gamma. This setting controls the amount of change in LED brightness for each DMX step. Gamma values greater than 1 cause dimming to be more precise at the low end and less precise at the high end. Gamma values less than 1 cause dimming to be more precise at the high end and less precise at the low end. A gamma value of 1 is linear, meaning that each DMX step results in the same change in brightness. Using gamma values greater than 1 typically works best with the way that humans perceive light, this corresponds to the default "Gamma" setting.
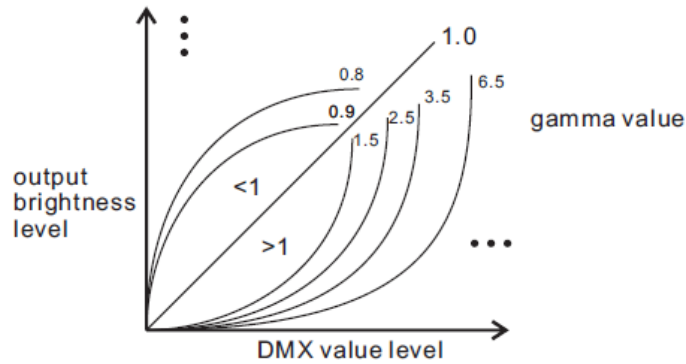
Factory Reset returns all settings to default. A factory reset can also be accomplished in any menu by holding down all 3 buttons until the screen displays "Device Restore Default".

Test:

Selecting the "Test" menu enters stand-alone mode. The decoder will ignore any DMX inputs when in this mode. The dimmer function will set a static color by setting the DMX values for each channel independently. Values range from 0-255. All other modes have adjustments for speed, RGB brightness and white brightness. Exit will return to the main menu and end stand-alone mode.

System:

The System menu allows the user to change the screen saver, buzzer and display contrast. There are three options for the screen saver: ON+ADDR, ON+BLACK and OFF. The screen saver will activate after several minutes of inactivity. The default setting, "ON+ADDR", sets the screen saver to display the DMX starting address in large letters. ON+BLACK turns the screen off. The OFF setting disables the screen saver.

Buzzer ON (default) causes the device to beep every time a button is pressed, OFF disables the beeping. The contrast setting will effectively reduce screen brightness, which can be useful in dark environments.

Safety Precautions

Please take the following precautions:

1. This equipment, like all electrical equipment, should be installed by a qualified person.
2. Do not expose these LEDs, dimmers or power supplies to intense electro-magnetic fields, including lightning.
3. The controllers and power supplies are not waterproof. Keep them dry.
4. Always observe proper polarity.

When installing LED lighting, it is a good idea to follow this "dry-run" procedure:

1. Be sure you have everything you need before you start.
2. Lay out your lights and power supply on the floor or table.
3. There is some resistance in the LED lighting. If you see any color fading or dimming at the end of a long run, you may have too many LEDs for your power supply and you might need a bigger supply or shorter runs. Use a bus structure as described in rgb_manual.pdf. Call if you need assistance with larger projects.
4. Connect everything and test it to be sure it works and you have it connected properly. It is unlikely, but possible, that some part of your system is defective or was damaged during shipment. If that is the case, it will be very helpful to you to know that before you do all the work involved in installing custom LED lighting systems. You will also know if you damage anything during installation, which is really helpful in trouble-shooting because manufacturing defects and installation damage typically have very different solutions.

Once you have tested the system successfully, you are ready to install it. We recommend you install LEDs, electronic controls and dimmers in such a way that you have access to them in case they fail. All electrical components can fail.