

FilmGrade™ DMX512 LED Dimmer / Decoder is a professional DMX512 dimmer and decoder that boasts the best dimming performance in the industry. The device takes a low-voltage DC power source input (12-24V DC) and produces 5 separate channels of high-frequency flicker-free PWM output to control LED brightness levels. The output signal is controlled via DMX512 with a wide range of interface compatibility, or using the built-in control interface.

The unit has an unprecedented level of PWM control and capability:

- **PWM Frequency** is adjustable and can be set anywhere between 500 Hz (industry standard) through 30 kHz. High PWM frequency ensures that light output for use in all video and photography applications results in completely flicker-free images.
- **PWM Resolution** can be set at either 8-bit (industry standard) or 16-bit. 16-bit PWM provides more than 250x the dimming level precision vs 8-bit PWM. Increased PWM resolution results in smaller dimming steps, which provides smoother dimming and eliminates “jumps” between brightness levels, particularly when near 0% brightness.
- **PWM Gamma Value** can be adjusted between 0.1 to 9.9, giving you full control over the dimming curve. Don't like how brightness ramps up too quickly in the beginning but “plateaus” past 60%? Simply increase the gamma value to achieve a flatter dimming curve.

This product is capable of providing up to 40 Amps of power (8 Amps per channel), and is the perfect complement to FilmGrade™ FiveSpect™ 5-in-1 LED strips.

### FEATURES

- 5 channels of fully adjustable PWM output
- 12-24V DC input / output, 40 Amps (input) / 8 Amps (output, per channel)
- Black anodized aluminum enclosure with dimensions of 6.46 x 2.87 x 1.50 in
- DMX-512 & RDM compatible
- DMX signal input via XLR 5-pin, RJ45, or wire leads; daisy chain capable
- Standalone controller mode capable
- PWM frequency adjustable between 500 Hz and 30 kHz
- PWM resolution settable to 8-bit or 16-bit
- PWM gamma value adjustable between 0.1 and 9.9
- Conforms to UL safety standards
- For indoor use only



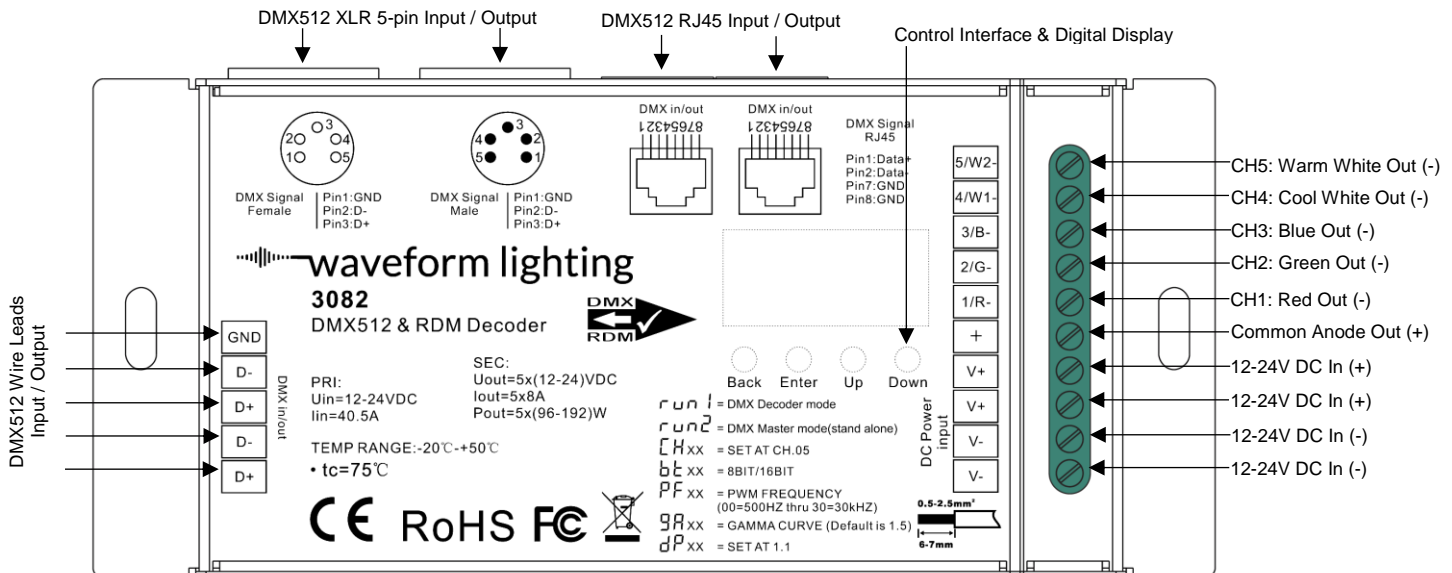
### ELECTRICAL SPECIFICATIONS

<b>Input voltage:</b>	12 - 24V DC
<b>Input connection:</b>	Wire leads
<b>Max current:</b>	40 Amps (input) 8 Amps (output, per channel)
<b>PWM Frequency:</b>	500 Hz – 30 kHz adjustable
<b>PWM Resolution:</b>	8-bit / 16-bit adjustable
<b>PWM Gamma Value:</b>	0.1 – 9.9 adjustable

### MECHANICAL SPECIFICATIONS

<b>Length:</b>	6.46 in (164 mm)
<b>Width:</b>	2.87 in (73 mm)
<b>Height:</b>	1.50 in (38 mm)
<b>Weight:</b>	7.76 oz (220 g)

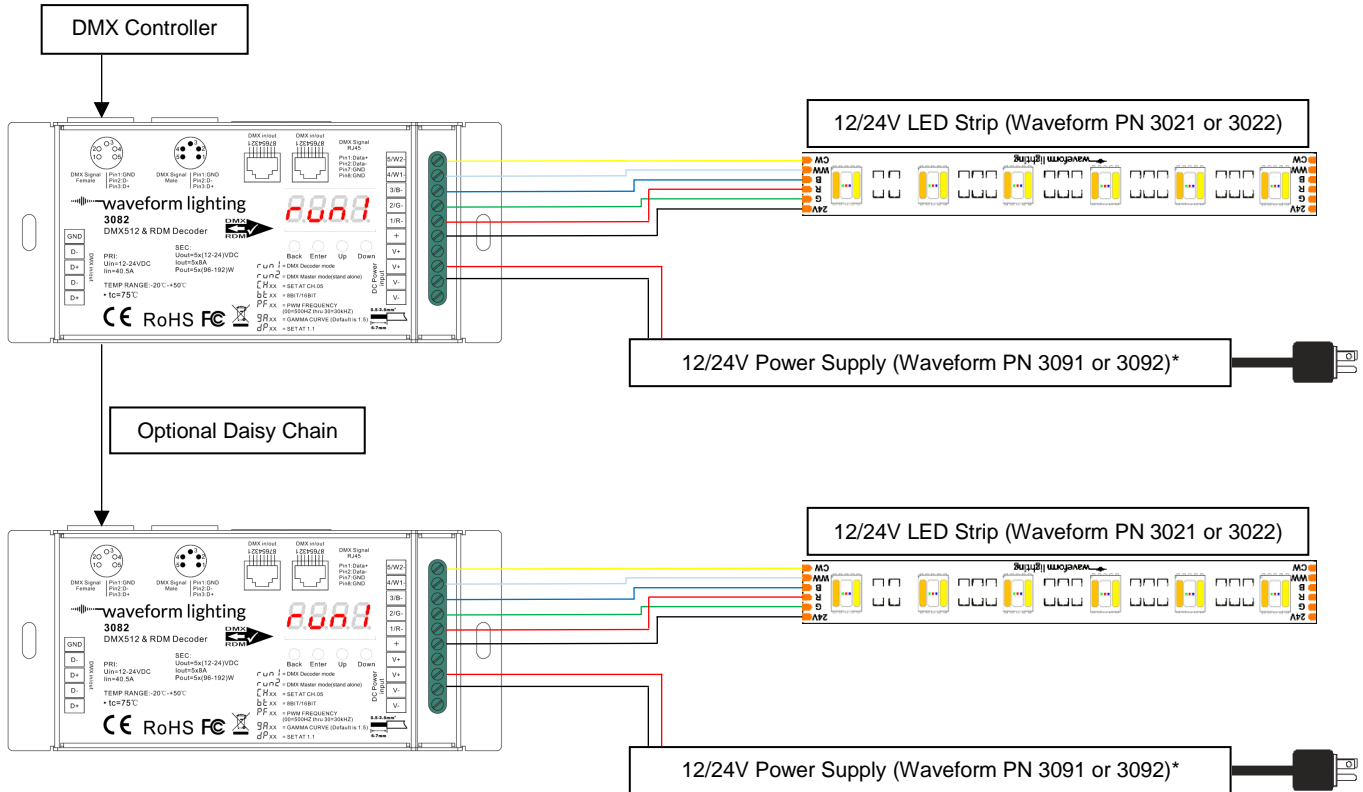
### PRODUCT INTERFACE



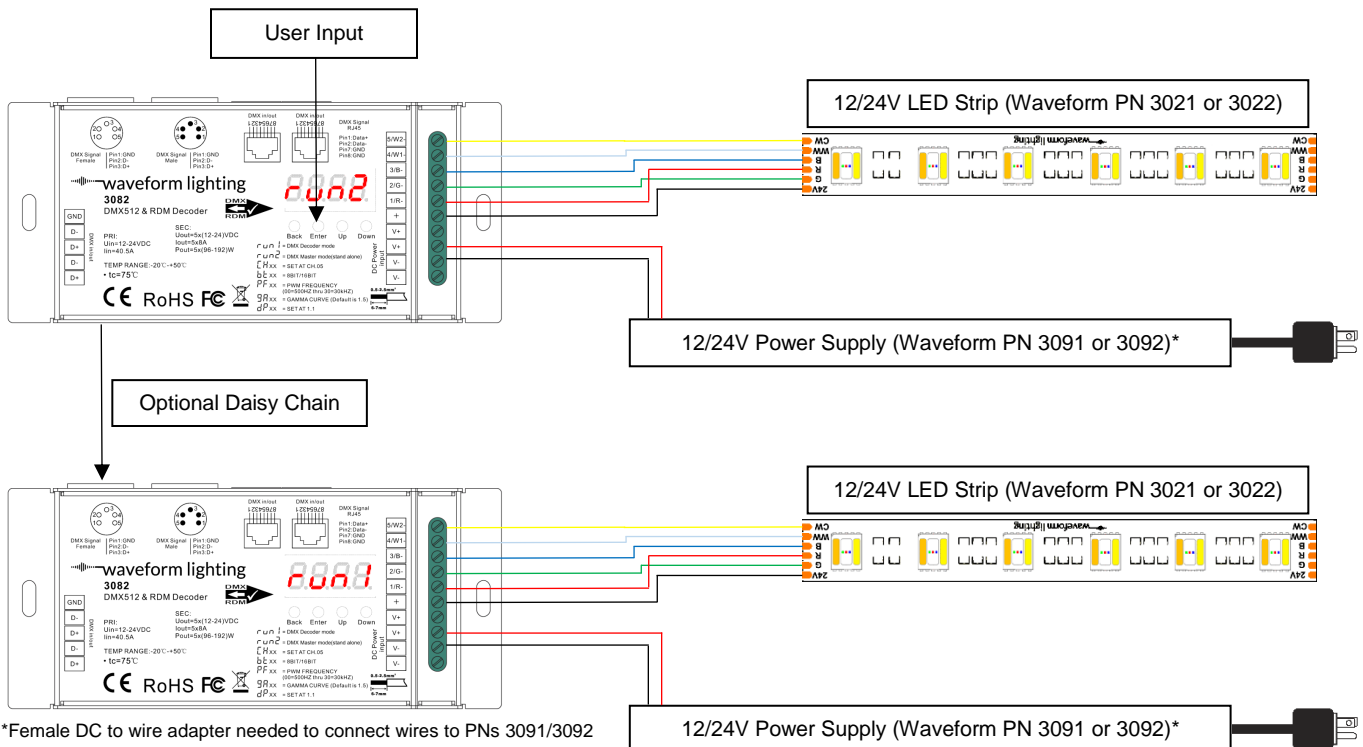
### OPERATING INSTRUCTIONS

This device is capable of working as both a DMX decoder (slave mode) or standalone controller (standalone master mode). As a DMX decoder, a separate DMX controller is needed to generate the DMX signals. As a standalone controller, the dimming signals are generated directly and no separate DMX controller is needed. Determine whether you intend to use the device as a pure DMX decoder only or as a standalone controller, and connect as shown in the wiring diagrams below. For both configurations, daisy-chaining is possible via the DMX output port. The downstream DMX devices will emulate the upstream devices.

#### Decoder Mode (Slave)



#### Standalone Controller Mode (Master)



\*Female DC to wire adapter needed to connect wires to PNs 3091/3092

### User Settings Guide

Settings such as DMX addresses and PWM parameters can be adjusted using the four buttons and digital display mounted on the front panel of the unit.

There are a total of 6 settings that can be adjusted. Use the [Up] and [Down] buttons to scroll through the settings. To change the setting, press [Enter], after which the digital display will begin to blink, indicating that the setting is now adjustable. Use the [Up] and [Down] buttons until your desired setting is found, then press [Back] to save the settings.

**IMPORTANT:** When switching between Decoder Mode (P08B) and Standalone Controller Mode (P082), reboot the unit prior to continuing.

Settings for Decoder Mode P08B					
	Default Value	Default Value Display	Setting	Possible Values	Value Description
[Up] →	A001	8000	DMX Address	8000	DMX 001
				8000	DMX 001 (Dot indicates signal detected)
				...	...
	run1	8000	Run Mode	8542	DMX 512
				8088	Decoder Mode – uses DMX input signal
	dP1.1	88.88	Decoder Setting	8082	Standalone Controller Mode – uses user defined settings
				88.88	Single channel per output
				88.28	Coarse/fine (two channels) per output (Gamma must be < 1.4)
	GA1.5	98.89	Gamma	88.65	Single channel per output, channel 6 = master dimmer
				88.75	Single channel per output, channel 6 = master dimmer, channel 7 = strobe*
98.88				Gamma = 0.1, most sensitive at low brightness	
PF01	88.08	PWM Frequency	...	...	
			98.89	Gamma = 9.9, most sensitive at high brightness	
			88.00	500 Hz	
			88.01	1 kHz	
			88.02	2 kHz	
			88.03	3 kHz	
bt16	88.88	PWM Resolution	88.04	4 kHz	
			...	...	
			88.30	30 kHz	
CH05	88.88	Output channels	88.16	16-bit PWM resolution	
			88.08	8-bit PWM resolution	
			88.01	1 DMX Address, all 001	
			88.02	2 DMX Addresses, Output 1/3 = 001, Output 2/4/5 = 002	
			88.03	3 DMX Addresses, Output 1/2 = 001/002, Output 3/4/5 = 003	
			88.04	4 DMX Addresses, Output 1/2/3 = 001/002/003, Output 4/5 = 004	
			88.05	5 DMX Addresses, Output 1/2/3/4/5 = 001/002/003/004/005	
← [Back] Press [Enter] to select a setting, and [Back] to confirm change and return [Enter] →					

**The follow RDM PIDs are supported:**

- DISC\_UNIQUE\_BRANCH
- DISC\_MUTE
- DISC\_UN\_MUTE
- DEVICE\_INFO
- DMX\_START\_ADDRESS
- IDENTIFY\_DEVICE
- SOFTWARE\_VERSION\_LABEL
- DMX\_PERSONALITY
- DMX\_PERSONALITY\_DESCRIPTION
- SLOT\_INFO
- SLOT\_DESCRIPTION
- MANUFACTURER\_LABEL
- SUPPORTED\_PARAMETERS

**\*Strobe Channel Inputs**

Strobe Input Value	Effect
{0, 7}	Undefined
{8, 65}	Slow to Fast Strobe
{66, 71}	Undefined
{72, 127}	Slow push, Fast close
{128, 133}	Undefined
{134, 189}	Slow close, Fast push
{190, 195}	Undefined
{196, 250}	Random Strobe
{251, 255}	Undefined

Settings for Standalone Controller Mode <i>P002</i>				
Default Value	Default Value Display	Setting	Possible Values	Value Description
run2	<i>P002</i>	Run Mode	<i>P000</i>	Decoder Mode – uses DMX input signal
			<i>P002</i>	Standalone Controller Mode – uses user defined settings
5-00	<i>5000</i>	Channel 5 Brightness	<i>5000</i>	Brightness: 0%
			...	...
			<i>5099</i>	Brightness: 99%
			<i>5255</i>	Brightness: 100%
4-00	<i>4000</i>	Channel 4 Brightness	<i>4000</i>	Brightness: 0%
			...	...
			<i>4099</i>	Brightness: 99%
			<i>4255</i>	Brightness: 100%
3-00	<i>3000</i>	Channel 3 Brightness	<i>3000</i>	Brightness: 0%
			...	...
			<i>3099</i>	Brightness: 99%
			<i>3255</i>	Brightness: 100%
2-00	<i>2000</i>	Channel 2 Brightness	<i>2000</i>	Brightness: 0%
			...	...
			<i>2099</i>	Brightness: 99%
			<i>2255</i>	Brightness: 100%
1-00	<i>0000</i>	Channel 1 Brightness	<i>0000</i>	Brightness: 0%
			...	...
			<i>0099</i>	Brightness: 99%
			<i>0255</i>	Brightness: 100%
bt08	<i>0000</i>	PWM Resolution	<i>0008</i>	8-bit PWM resolution
			<i>0016</i>	16-bit PWM resolution
SP-4	<i>5004</i>	Sequence Speed	<i>5000</i>	Slowest
			...	...
			<i>5009</i>	Fastest
P-01	<i>P000</i>	Preset Sequences	<i>P000</i>	Off
			<i>P001</i>	Static red
			<i>P002</i>	Static green
			<i>P003</i>	Static blue
			<i>P004</i>	Static yellow (50% red + 50% green)
			<i>P005</i>	Static amber (75% red + 25% green)
			<i>P006</i>	Static cyan (50% green + 50% blue)
			<i>P007</i>	Static magenta (50% blue + 50% red)
			<i>P008</i>	Static RGB white (100% red + 100% green + 100% blue)
			<i>P009</i>	RGB fade-out, fade-in 1
			<i>P010</i>	RGB colors mix fade
			<i>P011</i>	RGB fade-out, fade-in 2
			<i>P012</i>	RGB jump
			<i>P013</i>	RGB fade-in
<i>P014</i>	RGB fade-out			

[Up] →

Scroll Settings Using Up/Down Buttons

← [Down]

			<b>8815</b>	RGB 3 color strobe
			<b>8816</b>	RGB white strobe (100% red + 100% green + 100% blue)
			<b>8817</b>	7 color fade-out, fade-in
			<b>8818</b>	7 color jump
			<b>8819</b>	7 color strobe
			<b>8820</b>	Red – RGB white gradual fade cycle
			<b>8821</b>	Green - RGB white gradual fade cycle
			<b>8822</b>	Blue - RGB white gradual fade cycle
			<b>8823</b>	Red - amber gradual fade cycle
			<b>8824</b>	Red - magenta gradual fade cycle
			<b>8825</b>	Green - yellow gradual fade cycle
			<b>8826</b>	Green - cyan gradual fade cycle
			<b>8827</b>	Blue - purple gradual fade cycle
			<b>8828</b>	Blue - cyan gradual fade cycle
			<b>8829</b>	Red – yellow - green gradual fade cycle
			<b>8830</b>	Red – magenta – blue gradual fade cycle
			<b>8831</b>	Green – cyan – blue gradual fade cycle
← [Back]			Press [Enter] to select a setting, and [Back] to confirm change and return	
			[Enter] →	

**Factory Reset**

The settings are saved in memory even after the device is unplugged from power. To reset all settings to original factory settings, press and hold the [Back] and [Enter] buttons simultaneously until you see the digital display blink. Then, release the buttons, after which the system will reboot with all user settings cleared.