

LITEDIMMER PRO UNIVERSAL

USER GUIDE



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ABOUT

The LiteDimmer Pro Universal was designed to work with LiteRibbon, LiteStix, LiteMat, and LiteTile. The LiteDimmer Pro Universal comes in 2 models, 228-2 and 228-1. The LiteDimmer Pro Universal can be controlled locally or through DMX. Model 228-1 comes equipped with LumenRadio technology allowing for wireless DMX. There are 5 profiles on the LiteDimmer Pro Universal and 4 advanced settings that allow the user to take the dimmer beyond everyday use.

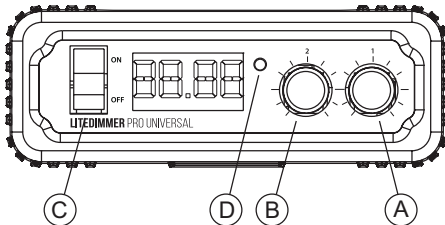
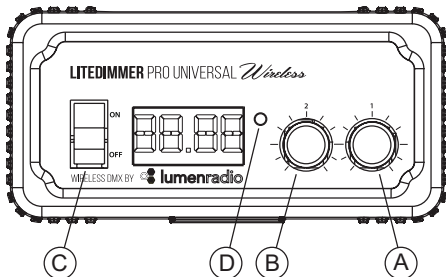
NOTE: If purchasing model 228-1, a transmitter equipped with LumenRadio Technology is required to use the LiteDimmer Pro Universal as a receiver. This item is sold separately.

FEATURES

- Single, Hybrid, RGB, RGBX, and Independent Profiles
- Manual and DMX Operation
- Variable DMX Loss Behavior Settings
- Variable PWM
- Flicker-Free
- 8-bit and 16-bit Operation
- Magnetized Rubber Bumpers for Mounting
- Cold Shoe Slot for Mounting
- Standard Capacity (8A Max.)

CONTROLS & CONNECTIONS – FRONT PANEL

- A) [1] – the primary selector
- B) [2] – the secondary selector
- C) [ON] & [OFF] – two-position rocker switch
- D) Indicator Light
Green = Local Control
Blue = DMX Control



CONTROLS & CONNECTIONS – REAR PANEL

E) [ON] & [OFF] – slide switch for DMX functionality

F) “DMX IN” RJ45 port

G) “DMX OUT” RJ45 port

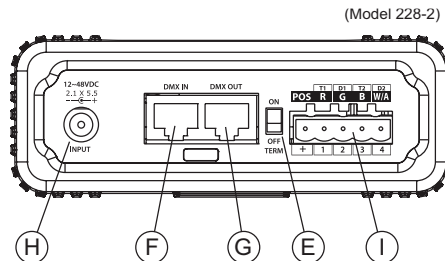
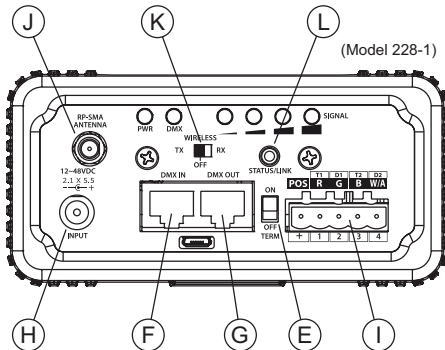
H) [INPUT] – BARREL MALE power port

I) “DC LED” output: PH5 Connector

J) “RP-SMA Wireless DMX” antenna port (Model 228-1)

K) [TX/RX] three-position slide switch for wireless functionality (Model 228-1)

L) [STATUS/LINK] pushbutton for wireless DMX linking and delinking (Model 228-1)



POWER

12VDC – 48VDC

NOTE: *Input voltage must match the voltage rating of the LiteGear LEDS being used. MOST LITEGEAR LED PRODUCTS REQUIRE 12VDC (NOMINAL) OR 24VDC (NOMINAL).*

SET UP

- 1) Set front switch to [OFF];
- 2) Connect load to "PH5 output" connector;
- 3) Connect power supply to barrel DC voltage input;
- 4) LiteDimmer Pro Universal is now operational.

INCLUDED MOUNTING OPTIONS:

- Magnetic rubber bumpers
- Slots for cold shoe adapters

PROFILES & MODES

MODES:

- LOCAL MODE
- DMX MODE

PROFILES:

- SINGLE
- HYBRID
- RGB
- RGBX
- INDEPENDENT

PROFILE SELECTION:

- 1) Press [1] repeatedly until "Personality Settings" appears on screen;
- 2) Turn [2] to scroll through available profiles;
- 3) Push [1] to confirm selection;
- 4) Dimmer is now set. It will restart in the selected profile.

LOCAL MODE – Indicator Light is Solid Green

Profile	Description	Instructions
SINGLE	<ul style="list-style-type: none">•Single Profile is the default profile•LED Output 1 only•Ideal for Single Color LEDs•LED Outputs 2-4 are unused	Intensity: <ul style="list-style-type: none">• Turn [1] "Primary Selector" or [2] "Secondary Selector"

LOCAL MODE – Indicator Light is Solid Green

Profile	Description	Instructions
HYBRID	<ul style="list-style-type: none">• Hybrid output over LED Outputs 1-2• Ideal for Bi-Color (Hybrid) LEDs• Allows for control of intensity and CCT/ Kelvin	<p>Intensity:</p> <ul style="list-style-type: none">• Turn [1] "Primary Selector" <p>CCT/Kelvin:</p> <ul style="list-style-type: none">• Turn [2] "Secondary Selector"

LOCAL MODE – Indicator Light is Solid Green

Profile	Description	Instructions
RGB	<ul style="list-style-type: none">• Hue Saturation Intensity (HSI)• Desaturation is achieved by adding unused portions of the red, green, and blue LEDs to create “white” Uses Outputs 1-3	<p>Intensity:</p> <ul style="list-style-type: none">• Turn [1] “Primary Selector” <p>Hue:</p> <ul style="list-style-type: none">• Turn [2] “Secondary Selector” <p>Saturation:</p> <ul style="list-style-type: none">• Turn [2] “Secondary Selector” <p><i>Note: To move between Hue and Saturation, press and release [2] “Secondary Selector”</i></p>

LOCAL MODE – Indicator Light is Solid Green

Profile	Description	Instructions
RGBX	<ul style="list-style-type: none">• HSI Output• Uses Outputs 1-4• Desaturation is achieved by adding unused portions of the red, green, and blue LEDs to create "white"• Fourth Color "X" affected by the overall intensity	<p>Intensity:</p> <ul style="list-style-type: none">• Turn [1] "Primary Selector" <p>Hue:</p> <ul style="list-style-type: none">• Turn [2] "Secondary Selector" <p>Saturation:</p> <ul style="list-style-type: none">• Turn [2] "Secondary Selector" <p>Fourth Color "X":</p> <ul style="list-style-type: none">• Turn [2] "Secondary Selector" <p><i>Note: To move between Hue, Saturation, and X, press and release [2] "Secondary Selector"</i></p>

LOCAL MODE – Indicator Light is Solid Green

Profile	Description	Instructions
INDEPENDENT	<ul style="list-style-type: none">•Uses Outputs 1-4•Ideal when granular control of each LED Output is important or required	<p>Intensity:</p> <ul style="list-style-type: none">•Turn [1] "Primary Selector" or [2] "Secondary Selector" <p><i>Note: To move between each LED Output – CH1-4, press and release [2] "Secondary Selector"</i></p>

DMX Mode – Indicator Light is Solid Blue

Model 228-2 – Send DMX signal to the Universal dimmer through the RJ45 DMX input. Model 228-1 – Send DMX signal wirelessly via the integrated LumenRadio CRMX.

NOTE: In the presence of an active DMX signal, both models will automatically convert to DMX operation. If the Indicator Light flashes blue, DMX signal has been lost. If the Indicator Light turns green, the dimmer has returned to Local Mode.

NOTE: “DMX Start Address” equals value on the DMX ID line.

Setting DMX Start Address:

- 1) Press [1] repeatedly until the “DMX SETTINGS” screen appears;
- 2) Rotate the [2] to scroll through available valid DMX start addresses (1-512) on the DMX ID line;
- 3) Press and release [1] to confirm selection;
- 4) Press and release [1] to return to the home screen.

DMX Mode – Indicator Light is Solid Blue

Profile	Description	Instructions
SINGLE	<ul style="list-style-type: none">• Single Profile is the default profile• LED Output 1 only• Ideal for Single Color LEDS• LED Outputs 2-4 are unused	Intensity: <ul style="list-style-type: none">• [DMX Start Address]

DMX Mode – Indicator Light is Solid Blue

Profile	Description	Instructions
HYBRID	<ul style="list-style-type: none">• Hybrid output over LED Outputs 1-2• Ideal for Bi-Color (Hybrid) LEDs• Allows for control of intensity and CCT/ Kelvin	Intensity: <ul style="list-style-type: none">• [DMX Start Address] CCT/Kelvin: <ul style="list-style-type: none">• [DMX Start Address+1]

DMX Mode – Indicator Light is Solid Blue

Profile	Description	Instructions
RGB	<ul style="list-style-type: none">•Allows for RGB output - Master Intensity, Red, Green, and Blue Uses Outputs 1-3	Master Intensity: <ul style="list-style-type: none">• [DMX Start Address] Red: <ul style="list-style-type: none">• [DMX Start Address+ 1] Green: <ul style="list-style-type: none">• [DMX Start Address+ 2] Blue: <ul style="list-style-type: none">• [DMX Start Address+ 3]

DMX Mode – Indicator Light is Solid Blue

Profile	Description	Instructions
RGBX	<ul style="list-style-type: none">• Allows for RGBX output - Master Intensity, Red, Green, Blue, and "X"• Final color mix can operationally be supplemented by independently adding the fourth color "X"• Uses Outputs 1-4• Fourth color "X" is affected by the overall intensity	<p>Master Intensity:</p> <ul style="list-style-type: none">• [DMX Start Address] <p>Red:</p> <ul style="list-style-type: none">• [DMX Start Address+ 1] <p>Green:</p> <ul style="list-style-type: none">• [DMX Start Address + 2] <p>Blue:</p> <ul style="list-style-type: none">• [DMX Start Address+ 3] <p>Fourth Color "X":</p> <ul style="list-style-type: none">• [DMX Start Address+ 4]

DMX Mode – Indicator Light is Solid Blue

Profile	Description	Instructions
INDEPENDENT	<ul style="list-style-type: none">• Uses Outputs 1-4• Ideal when granular control of each LED Output is important or required	<p>Intensity (LED Output 1):</p> <ul style="list-style-type: none">• [DMX Start Address] <p>Intensity (LED Output 2):</p> <ul style="list-style-type: none">• [DMX Start Address+ 1] <p>Intensity (LED Output 3):</p> <ul style="list-style-type: none">• [DMX Start Address + 2] <p>Intensity (LED Output 4):</p> <ul style="list-style-type: none">• [DMX Start Address+ 3]

DMX Loss Behavior

When in “DMX Mode” you may dictate the dimmer’s behavior when DMX signal is lost during operation.

There are three (3) choices: Hold, Blackout, and Manual

- 1) “Hold” will continue to output the last valid DMX signal until active DMX signal returns.
- 2) “Blackout” shuts off all LEDS until active DMX signal returns.
- 3) “Manual” will revert the dimmer to “Local Mode” until active DMX signal returns. The last saved “Local Mode” values will be output to the LEDS.

Setting DMX Loss Behavior:

- 1) Push [1] until “DMX SETTINGS” appears on screen;
- 2) Push [2] to select “DMX LOST”
- 3) Turn [2] to select chosen DMX Loss Behavior;
- 4) Push [1] to confirm and set selection.

Wireless DMX – (Model 228-1 Only)

WIRELESS DMX:

LiteDimmer Pro Universal 228-1 can both transmit and receive DMX wirelessly via integrated Lumen Radio CRMX. Ensure that the appropriate RP-SMA antenna is connected to the antenna jack for optimal reception and transmission of wireless DMX signal. It is likely that you will use your Universal dimmer with wireless as a receiver most of the time.

NOTE: If purchasing model 228-1, a transmitter equipped with LumenRadio Technology is required to use the LiteDimmer Pro Universal as a receiver. This item is sold separately.

Wireless DMX – (Model 228-1 Only)

Receiving Wireless DMX (Linking to a Transmitter):

- 1) Connect LiteDimmer Universal Pro to power supply of choice (12VDC-48VDC);
- 2) No indicator lights should be on at this time;
- 3) Set switch to [RX];
- 4) "PWR" indicator light should turn GREEN;
- 5) Push the [STATUS/LINK] , with the [STATUS/LINK] indicator light beginning to flash BLUE as it connects to transceiver;
- 6) [STATUS/LINK] indicator light stops flashing but remains BLUE once link is established;
- 7) "DMX" indicator light turns GREEN once link has been established;
- 8) "Signal" indicator lights will turn ORANGE, GREEN, GREEN; number of lit "Signal" lights indicate strength of connection.

Transmitting Wireless DMX (Linking to a Receiver):

- 1) Connect LiteDimmer Universal Pro to power supply of choice (12VDC-48VDC);
- 2) No indicator lights should be on at this time;
- 3) Set switch to [TX];
- 4) "PWR" and "DMX" indicator lights should now turn GREEN; [STATUS/LINK] indicator light turns BLUE;
- 5) Push [STATUS/LINK] to begin search for receiver;
- 6) [STATUS/LINK] indicator light will flash BLUE as it searches for, and begins to connect to the receiving device;
- 7) Once devices are linked, the [STATUS/LINK] indicator light will stop flashing but remain BLUE.

Wireless DMX – (Model 228-1 Only)

DE-LINKING:

Transmitter:

- 1) Press [STATUS/LINK] button and hold for three (3) seconds;
- 2) [STATUS/LINK] indicator light stops flashing but remains BLUE;
- 3) Connection has been disrupted.
- 4) Push [STATUS/LINK] button to re-link devices.

Receiver:

- 1) Press and hold [STATUS/LINK] indicator light for three (3) seconds;
- 2) [STATUS/LINK], "DMX", and "Signal" indicator lights shut off;
- 3) Receiver has been de-linked from transmitter.
- 4) Transmitter is responsible for re-linking.

Wireless DMX – (Model 228-1 Only) - Advanced Setting

Advanced Settings:

There are four (4) Advanced Settings available – Max Amps, PWM, LCD off, and 16bit DMX.

Profile	Description	Instructions
MAX AMPS	<p>This setting allows the user to choose to bypass the default current limit. The dimmer is set to a limit of 8amps, the most common range for the DC power input connector on the dimmer. However, available current limits range from 3amps to 10amps (in 0.5Amp increments). Limits exceeding 8amps are only provided for those times when maximum output is deemed absolutely necessary by the user, even at the expense of dimmer failure.</p> <p>CAUTION: THE RECOMMENDED CURRENT LIMIT IS 8AMPS. ANY DAMAGE THAT OCCURS AS A RESULT OF SETTING A LIMIT BEYOND 8AMPS IS SOLELY THE RESPONSIBILITY OF THE USER; LITEGEAR, INC ASSUMES NO RESPONSIBILITY FOR DIMMER FAILURE.</p>	<ol style="list-style-type: none">1) Push [1] repeatedly until “Advanced Settings” screen appears;2) Press and hold [1] until the LED indicator light next to screen turns ORANGE;3) Screen should say “Secret Settings #1”;4) Push [2];5) Turn [2] until “Max Amps” is selected;6) Push [1] to confirm selection.

Wireless DMX – (Model 228-1 Only) - Advanced Setting

Profile	Description	Instructions
PWM	<p>The PWM frequency directly correlates to how “flicker-free” the dimmer is during operation. The higher the frequency, the less susceptible to flicker on camera; the lower the frequency, the more likely to flicker on camera. The default PWM is 24 kHz, which is flicker free up to 120fps.</p> <p>Heat management becomes a bigger problem with higher PWM frequencies. Be sure to monitor the dimmer for over-heating conditions</p>	<ol style="list-style-type: none">1) Push [1] repeatedly until “Advanced Settings” screen appears;2) Press and hold [1] until the LED indicator light next to screen turns ORANGE;3) Screen should say “Secret Settings #1”;4) Push [2];5) Turn [2] until “PWM” is selected;6) Push [1] to confirm selection.

Wireless DMX – (Model 228-1 Only) - Advanced Setting

Profile	Description	Instructions
LCD OFF	The LCD display on the universal dimmer may be set to never turn off or to turn off after either 10 minutes or 30 minutes of inactivity. The default setting is “never”. However, having the LCD display shut off occasionally will help to preserve the lifespan of the LCD display over time.	<ol style="list-style-type: none">1) Push [1] repeatedly until “Advanced Settings” screen appears;2) Press and hold [1] until the LED indicator light next to screen turns ORANGE;3) Screen should say “Secret Settings #1”;4) Push [2];5) Turn [2] until “LCD off” is selected;6) Push [1] to confirm selection.

Wireless DMX – (Model 228-1 Only) – Advanced Setting

Profile	Description	Instructions
16bit DMX	<p>The default resolution for the Universal dimmer is 8-bit. However, for increased resolution when in DMX Mode, you may choose to turn 16-bit DMX on. Typically, higher bitrates yield smoother dimming, but given the Universal dimmer's existing dimming curves and smoothing, the difference between 8-bit and 16-bit smoothing is negligible – if noticeable. 16-bit operation adds a second channel of DMX to each parameter. For example, if intensity was originally on DMX channels 7 and 8 in 16-bit operation, in which DMX channel 7 is a "course" intensity adjustment while DMX channel 8 is a "fine" intensity adjustment.</p>	<ol style="list-style-type: none">1) Push [1] repeatedly until "Advanced Settings" screen appears;2) Press and hold [1] until the LED indicator light next to screen turns ORANGE;3) Screen should say "Secret Settings #1";4) Push [1] to get to "Secret Settings Push #2";5) Turn [2] until "Yes" or "No" is selected;6) Push [1] to confirm selection.

Trouble Shooting - Factory Reset

If the LiteDimmer Pro Universal is experiencing irregular operation, a factory reset may be necessary to return the dimmer to normal functionality. Take the following steps to return the LiteDimmer Pro Universal to factory settings.

- 1) Push [1] until "Advanced Settings";
- 2) Turn [2] clockwise to select "Y" (Yes) for "Reset to Defaults";
- 3) Push [1] to confirm factory reset;
- 4) Dimmer automatically restarts and returns all settings to factory defaults.
- 5) If the dimmer continues to experience irregular operation after factory reset, contact LiteGear Technical Support for assistance.

Factory Defaults:

- Profile: Single
- DMX Start Address: 1
- DMX Loss Behavior: Manual
- Max Amps: 8.0
- PWM Frequency: 24 kHz
- LCD off: never
- 16bit DMX: No

Specifications

RATING: 8A max. per channel; 8A max. total

INPUT: 12VDC – 48VDC (Connector: BAR.M)

OUTPUT: Constant Voltage, PWM (Connector: PH5.M) PROTOCOL: DMX512

RADIO (Model 228-1): LumenRadio CRMX

ANTENNA (Model 228-1): RP-SMA (50 Ω , 2.4 GHz)

DMX INPUT/OUTPUT JACK: RJ45

SIZE (Model 228-2): 90.2 mm (3.55in.) length, 121.4mm (4.78 in.) width, 44.5mm (1.75 in.) height WEIGHT (Model 228-2): 0.67 lb, 10.7 oz, 0.302 kg

SIZE (Model 228-1): 90.2 mm (3.55in.) length, 121.4mm (4.78 in.) width, 59.2mm (2.33 in.) height WEIGHT (Model 228-1): 0.84 lb, 13.4 oz, 0.380 kg

Input voltage must match load voltage requirements!

Does not provide “Current Limiting”.

For use with LiteGear products only.

WARNINGS:

Stage and Studio Use Only Dry Location Only Hazardous Voltage

Risk of Electrical Shock

Disconnect Power Before Servicing

Must Be Serviced by a Trained Technician

Not For Residential Use

Designed and Made in California

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