

# STUDIO 5X8

## ABOUT LITEDIMMER STUDIO 5X8

LiteDimmer Studio 5x8 is the most advanced DMX-controlled LiteRibbon® dimmer available. Each of its five channels is capable of controlling 100W at 12VDC or 200W at 24VDC - that's 8 amps maximum per channel. We have included specialized software modes that allow for true cinema and TV-style action. From the simple setting where all channels respond to DMX address 1, to freely mixing RGB with Hybrid (bi-color) white for saturated and color-correct output. Adjustable PWM frequency, 8- or 16-bit operation, combined with user-selectable dimmer curves make our Studio 5x8 like no other.

### Features:

- Single, Hybrid, RGB+Hybrid, and RGB(A/W)+Single Modes
- DMX Control with Test Operation
- Variable PWM Frequency (5~30 kHz)
- Flicker-Free
- Variable Dimmer Response (Gamma) Curve
- 8-bit and 16-bit Operation
- RDM-Capable
- Ultra Capacity (32A Continuous; 40A Max.)

## POWER SUPPLY OPTIONS

Make sure that your power supply meets the following criteria before connecting it to the LiteDimmer Studio 5x8:

- Voltage: 12~24VDC
- Voltage must be compatible with the voltage requirements of LiteRibbon, LiteMat™, or LiteTile™.

*Note: For best results, we recommend that you do not use LiteDimmer Studio 5x8 with non-LiteGear LED products.*

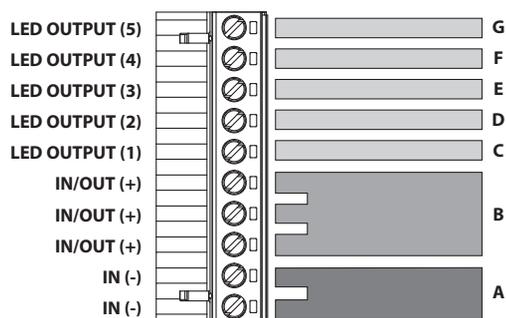
## CONTROLS

- (4) Pushbuttons (Back, Enter, Up, Down)
- (1) 4-digit 7-Segment Display (SSD)

## CONNECTIONS

- (2) 5-pin DMX Connections (Input/Output)
- (2) RJ45 DMX Connections (Input/Output)
- (1) Pluggable Phoenix-10 Male (PH10-M) (for Power Input and LED Output)

For bare wire connections, use the Phoenix-10 Female (PH10-F) connector included with the Studio 5x8. Ensure that you have connected the bare wires to the PH10-F connector observing correct polarity. Power input and LED output are routed through the same PH10-F connector for bare wire connections.



## WIRING DETAILS

LiteRibbon, LiteMat, or LiteTile	Recommended DMX Decoding Profile*	A	B	C	D	E	F	G
Single	dP1, 1 or dP2, 1	Power In (-)	Power In (+), LED1+, LED2+, LED3+, LED4+, LED5+	LED1-	LED2-	LED3-	LED4-	LED5-
Hybrid	dP3, 1 or dP3, 2	Power In (-)	Power In (+), HY1+, HY2+	TUN1-	DAY1-	TUN2-	DAY2-	NC**
RGB + Hybrid	dP4, 1	Power In (-)	Power In (+), RGB+, HY+	R-	G-	B-	TUN-	DAY-
RGB(A/W) + Single	dP6, 5 or dP7, 5	Power In (-)	Power In (+), RGB(A/W)+, LED+	R-	G-	B-	A-/W-	LED-

\*see "DMX Decoding Profiles" for more information

\*\*NC = No Connection

For pluggable connections, use the appropriate adapter for your LiteRibbon, LiteMat, or LiteTile setup: Single, Hybrid, RGB+Hybrid, or RGB(A/W)+Single.

## HOW TO INSTALL

The Studio 5x8 operates with DMX control. A test function is also included to allow for LED output during the LiteRibbon installation process without the need for DMX signal. DMX operation is referred to as **run 1** on the unit display while the test function is referred to as **run 2**. By default, DMX control is active and displays the DMX start address upon power-up. See below for changing between the two operations.

## DMX OPERATION (run 1)

- 1) Provide the Studio 5x8 with DMX signal using either the 5-pin DMX input or the RJ45 input.
- 2) Make your connections using the PH10-M connector.
- 3) Ensure that the DMX master intensity is at 100% and that all other DMX channels are set to 0.
- 4) Provide DC power.
- 5) After landing on the DMX Start Address screen (F###), press "Enter" to edit the DMX start address, and use the "Up" and "Down" pushbuttons to select the desired start address (F001 through F512). Press "Back" to confirm.

## RDM COMMANDS

The following RDM commands 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

## TEST FUNCTION (run 2)

- 1) Connect the LED load to the PH10-M connector.
- 2) Provide DC power.
- 3) Upon power-up, 1--## will appear. This represents dimmer channel 1 followed by the intensity in percent.
- 4) To change the intensity of each channel, scroll to the desired channel (1--## through 5--##) using the "Up" and "Down" pushbuttons, press "Enter" for the desired channel, and use the "Up" and "Down" pushbuttons to change the intensity (0% = 00 through 100% = FL). Press "Back" to confirm.
- 5) A simple chase function is provided to help during LiteRibbon installation and troubleshooting.
  - 5.1) Use the "Up" and "Down" pushbuttons to navigate until you see CHAS (appears after 5--##).
  - 5.2) Press "Enter" (CHAS will begin flashing).
  - 5.3) The chase will run the following sequence:
    - 5.3a) Dimmer Channel 1 (fade in ---> fade out)
    - 5.3b) Dimmer Channel 2 (fade in ---> fade out)
    - 5.3c) Dimmer Channel 3 (fade in ---> fade out)
    - 5.3d) Dimmer Channel 4 (fade in ---> fade out)
    - 5.3e) Dimmer Channel 5 (fade in ---> fade out)
    - 5.3f) All Dimmer Channels (fade in ---> fade out)
    - 5.3g) Repeat a through f.
  - 5.4) Press "Back" to exit the preset chase.
- 6) The speed of the chase can be adjusted by navigating to SP## using the "Up" and "Down" pushbuttons (appears after CHAS). To adjust the speed, observe the following instructions.
  - 6.1) From the SP## screen, press "Enter." SP## will begin flashing.
  - 6.2) Press "Up" or "Down" to scroll through the available speeds (SP01 [slowest] through SP09 [fastest]).
  - 6.3) Press "Back" to confirm the chase speed.

## SWITCHING BETWEEN run 1 AND run 2

Regardless of the current operation your Studio 5x8 is running, the method for changing that operation is the same.

- 1) With the dimmer powered, scroll to the dimmer operation screen - the display will read either "run 1" or "run 2" - using the "Up" and/or "Down" buttons.
- 2) Press "Enter" (run 1 or run 2 will begin flashing).
- 3) Press either "Up" or "Down" to scroll to either run 1 or run 2.
  - 4.1) If you want DMX operation, you should press "Back" when run 1 is flashing.
  - 4.2) If you want the test operation, you should press "Back" when run 2 is flashing.
- 5) Cycle power. Your dimmer will now run the operation you selected.

## DMX CHANNEL ASSIGNMENT SETTING

LiteDimmer Studio 5x8 is capable of two channel assignment settings. The channel assignment setting along with the DMX decoding profiles (see "DMX Decoding Profiles" below) helps to patch dimmer channels to DMX addresses. See below for a list of the available channel assignment settings.

Channel Assignment Setting	Bit Rate	# of DMX Addresses	Description
CH01	8-bit	1 (8-bit)	The outputs of all five (5) dimmer channels are paralleled and controlled by one (1) DMX address.
CH05*	8-bit and 16-bit	5 (8-bit) 10 (16-bit)	The outputs of all five (5) dimmer channels are discrete and controlled by as few as five (5) and as many as ten (10) DMX addresses.

\*default

See below for more information on Channel Assignment Setting operation.

## DMX DECODING PROFILES (run 1 ONLY)

LiteDimmer Studio 5x8 is programmed with several advanced DMX decoding profiles. See below for a list of the available DMX decoding modes:

**FOR CHANNEL ASSIGNMENT SETTING CH01:**

Decoding Profile	Recommended LiteRibbon, LiteMat, or LiteTile	Bit Rate	# of DMX Addresses	Description (assumes DMX start address of 0001)
dP1, 1*	Single	8-bit	1	Maps all dimmer channels to one (1) DMX address. DMX Address 1 = Dimmer Channels 1 through 5

\*default

**FOR CHANNEL ASSIGNMENT SETTING CH05:**

Decoding Profile	Recommended LiteRibbon, LiteMat, or LiteTile	Bit Rate	# of DMX Addresses	Description (assumes DMX start address of 0001)
dP1, 1*	Single	8-bit	5	Provides 1-to-1 DMX address mapping. DMX Address 1 = Dimmer Channel 1 DMX Address 2 = Dimmer Channel 2 DMX Address 3 = Dimmer Channel 3 DMX Address 4 = Dimmer Channel 4 DMX Address 5 = Dimmer Channel 5
dP2, 1	Single	16-bit	10	Provides 1-to-1 DMX address mapping using two DMX addresses per dimmer channel. DMX Address 1 = Dimmer Channel 1 (Coarse) DMX Address 2 = Dimmer Channel 1 (Fine) DMX Address 3 = Dimmer Channel 2 (Coarse) DMX Address 4 = Dimmer Channel 2 (Fine) DMX Address 5 = Dimmer Channel 3 (Coarse) DMX Address 6 = Dimmer Channel 3 (Fine) DMX Address 7 = Dimmer Channel 4 (Coarse) DMX Address 8 = Dimmer Channel 4 (Fine) DMX Address 9 = Dimmer Channel 5 (Coarse) DMX Address 10 = Dimmer Channel 5 (Fine)
dP3, 1	Hybrid	8-bit	3	Allows for control of one (1) circuit of Hybrid LiteRibbon, paralleling the outputs of dimmer channels 1+3 and 2+4 with master intensity control. DMX Address 1 = Master Intensity for Hybrid (DMX Addresses 2 and 3) DMX Address 2 = TUNGSTEN Channels 1 and 3 DMX Address 3 = DAYLITE Channels 2 and 4 No output over Dimmer Channel 5
dP3, 2	Hybrid	8-bit	6	Allows for control of two (2) circuits of Hybrid LiteRibbon. DMX Address 1 = Master Intensity for Hybrid Circuit 1 (DMX Addresses 2 and 3) DMX Address 2 = TUNGSTEN Channel 1 (Hybrid Circuit 1) DMX Address 3 = DAYLITE Channel 2 (Hybrid Circuit 1) DMX Address 4 = Master Intensity for Hybrid Circuit 2 (DMX Addresses 5 and 6) DMX Address 5 = TUNGSTEN Channel 3 (Hybrid Circuit 2) DMX Address 6 = DAYLITE Channel 4 (Hybrid Circuit 2) No output over Dimmer Channel 5
dP4, 1	RGB+ Hybrid	8-bit	7	Allows for control of one (1) circuit of RGB LiteRibbon and one (1) circuit of Hybrid LiteRibbon. DMX Address 1 = Master Intensity for RGB (DMX Addresses 2, 3, and 4) DMX Address 2 = RED Channel 1 DMX Address 3 = GREEN Channel 2 DMX Address 4 = BLUE Channel 3 DMX Address 5 = Master Intensity for Hybrid (DMX Addresses 6 and 7) DMX Address 6 = TUNGSTEN Channel 4 DMX Address 7 = DAYLITE Channel 5
dP6, 5	RGB(A/W)+Single	8-bit	6	Allows for control of one (1) circuit of RGB(A/W) LiteRibbon and one (1) circuit of Single LiteRibbon. DMX Address 1 = Master Intensity (DMX Addresses 2 through 6) DMX Address 2 = RED Channel 1 DMX Address 3 = GREEN Channel 2 DMX Address 4 = BLUE Channel 3 DMX Address 5 = AMBER/WHITE Channel 4 DMX Address 6 = Dimmer Channel 5
dP7, 5	RGB(A/W)+Single	8-bit	7	Allows for control of one (1) circuit of RGB(A/W) LiteRibbon and one (1) circuit of Single LiteRibbon with an effects channel. DMX Address 1 = Master Intensity (DMX Addresses 2 through 6) DMX Address 2 = RED Channel 1 DMX Address 3 = GREEN Channel 2 DMX Address 4 = BLUE Channel 3 DMX Address 5 = AMBER/WHITE Channel 4 DMX Address 6 = Dimmer Channel 5 DMX Address 7 = Preset Chase FX

\*default

**HOW TO CHANGE DMX DECODING PROFILES (run1 ONLY)**

To change the decoding profile (designated by dP#, #) during DMX operation, observe the following instructions:

- 1) Navigate to the dP#, # screen.
- 2) Press "Enter" (dP#, # will begin flashing).
- 3) Press "Up" or "Down" to scroll through the available decoding profiles.
- 4) Press "Back" to confirm the desired decoding profile.

**PWM FREQUENCY**

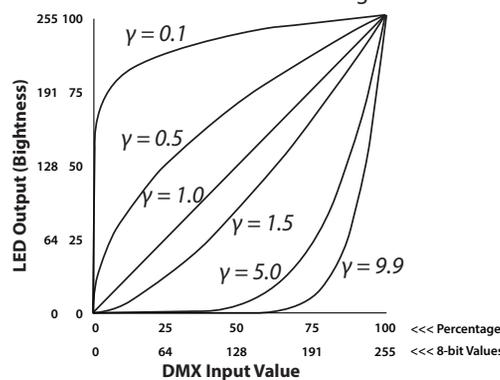
The pulse width modulation (PWM) frequency of the Studio 5x8 is what determines the degree to which the device will appear to be "flicker-free" on camera. The default PWM frequency is 30 kHz. To adjust the PWM frequency, ensure that your dimmer is operating in the run1 setting, and follow the steps below:

- 1) Navigate to the PF## screen.
  - 2) Press "Enter" (PF## will begin flashing).
  - 3) Press either "Up" or "Down" to scroll through the available PWM frequencies.
  - 4) Press "Back" to confirm the desired PWM frequency.
- The PWM frequency set in the run1 operation will carry over to the run2 operation.  
Available PWM frequencies are: 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 25, and 30 (units in kHz).

**DIMMER RESPONSE (GAMMA) CURVE**

The dimmer response (gamma) curve determines what the output of the LEDs will be based on the DMX signal coming in. The higher the gamma value, the higher the resolution on the low end of the dimming range; the lower the gamma value, the higher the resolution on the high end of the dimming range. A gamma value of 1 represents a linear curve in which the resolution is the same at the high end and the low end of the dimming range. The default gamma value is 1.5. To adjust the gamma value, ensure that your dimmer is operating in the run1 setting, and follow the steps below:

- 1) Navigate to the GA#, # screen.
- 2) Press "Enter" (GA#, # will begin flashing).
- 3) Press "Up" or "Down" to scroll through the available gamma values.
- 4) Press "Back" to confirm the desired gamma value.



γ = Gamma Value

The gamma value set in the run1 operation will carry over to the run2 operation.

**TROUBLESHOOTING**

If LiteDimmer Studio 5x8 seems to be experiencing irregular operation, a factory reset may be needed. Resetting the operating system can restore normal operation in many cases. To perform a factory reset, perform the following steps:

- 1) Power the dimmer.
- 2) Press and hold the "Back" and "Enter" buttons simultaneously for 5 seconds. At this point, the SSD will flash, and the dimmer will revert to run1 operation and land on the start address screen, which will display 0001. You do not need to cycle power.

Your preferences and settings may now have to be reset.

If LiteDimmer Studio 5x8 is still experiencing irregular operation after a factory reset, contact LiteGear Technical Support for assistance.

**DEFAULTS**

The default operation for the LiteDimmer Studio 5x8 is run1 (DMX).

**The defaults for run1 are as follows:**

Start Address: 0001  
Channel Assignment Setting: CH05  
PWM Frequency: PF30  
Dimmer Response (Gamma) Curve: GA1, 5  
DMX Decoding Profile: dP1, 1

**The defaults for run2 are as follows:**

Dimmer Channel 1 Intensity: 1-00  
Dimmer Channel 2 Intensity: 2-00  
Dimmer Channel 3 Intensity: 3-00  
Dimmer Channel 4 Intensity: 4-00  
Dimmer Channel 5 Intensity: 5-00  
Chase Effect: CHAS (preset)  
Chase Effect Speed: SP04

**WARNINGS**

Stage and Studio Use Only; Risk of Electrical Shock; Dry Location Only; Disconnect Power Before Servicing; Hazardous Voltage; Not for Residential Use

Any Questions? Comments? Concerns? Contact us at +1 (818) 358-8542

**LITEDIMMER STUDIO 5X8 SPECIFICATIONS**

RATING: 40 amps max. total (32 amps continuous), 8 amps max. per channel  
INPUT: 12~24VDC  
OUTPUT: Constant Voltage, PWM  
SIZE: 6.5 in. x 2.875 in. x 1.5 in. (LxWxH)  
WEIGHT: 13.41 oz, 380 g  
Input voltage must match load voltage requirements!



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