

User Manual

LM8 Series 12V and 24V LED Controllers



AscenticTM
RETAIL ENGINEERING
by Audio Authority®

Introduction

The Ascentic LM8 LED controllers are available in 24V or 12V versions. Up to eight LEDs or arrays can be controlled via serial commands. There are two LED connection options for the LM8 series: one with removable screw terminal blocks (shown here) and one with barrel ports.



Compatible with Ascentic MediaHubs



Models	
LM8-12	12V with removable screw terminal blocks
LM8-12P	12V with 5.5 x 2.1mm barrel
LM8-24	24V with removable screw terminal blocks
LM8-24P	24V with 5.5 x 2.1mm barrel

Package Contents

Before installing this product, please check the packaging and make certain the following items are contained in the shipping carton:

- LM8 light bar control module
- Power supply: 12V or 24V DC, 1.5 Amps
- 8x Terminal blocks (screw terminal modules only)

Features

- Turn on one or more outputs.
- Control brightness on each output (PWM).
- Expand the system by linking multiple units via RS-485.
- Receives human readable serial commands via RS-232.
- Share power between multiple devices using the 12V power bus.

RS-232 Commands

Serial command examples are shown in the table below. Baud rate: 115200. Adjust Straight / Null switch as needed. Standard RJ-45 cable, or RJ-45 to 3.5mm adapter, PN: 801-373.

STRUCTURE	EXAMPLE	RESULT
[DEV=*;LED=*;OFF]	[DEV=*;LED=*;OFF]	Turn off ALL LEDs for all LM8 units
[DEV=#;LED=\$;ON]	[DEV=2;LED=5,6,7;ON]	Turn on LEDs 5, 6 and 7 for LM8 #2
[DEV=#;LED=\$;OFF]	[DEV=1;LED=2,8;OFF]	Turn off LEDs 2 and 8 for LM8 #1
[DEV=#;LED=\$;PWM=#]	[DEV=1;LED=*;PWM=180]	Set the PWM level to 180 on all LEDs for LM8 #1

- Brightness range (PWM) is 0-255
- Multiple units or outputs must be separated by commas
- Device address is set by the ID switch (base address of 24 + binary) e.g. ID 30 = turn on DIPs 2 and 3

OFF	DIP 1 ON	DIP 2 ON	DIP 3 ON	DIP 4 ON
24	+1	+2	+4	+8

RS-485 Communication Bus

The RS-485 communication bus is for expansion or use with custom applications. Standard commands include LED_OFF, LED_ON, LED_PWM, and LIGHTS_OFF. Baud rate: 57600. When linking multiple LM8 modules, use the ID switches as shown above to designate a different address for each one.

Power

Caution: LED voltage must match power supply voltage (12 or 24 volts). Connect the 12V or 24V power adapter to the port marked Power Input. Multiple LM-8s can run off of a single power supply (depending on peak system demands). Contact your Audio Authority account manager for more details.

LEDs

Connect LED arrays to the output ports on the Model LM8. Observe correct polarity (center positive or left positive) when connecting to LED strips or bars.

LED Specifications

- Max current output per position is 5A @ 12V (60W)
- Max current rating for the unit is 12A @ 12V (144W)

LEDs	Bar or Strip Length	Typical mA Draw
30	11.8 in	210 - 565*
60	23.6 in	355 - 955*
300	16.4 ft	1300 - 3500*

*Variance depends on wavelength and intensity of LED strip.

Multi-Color LED Arrays

The LM8 works with common anode, analog multi-color strips but not digital LED strips. Connect a common positive contact on terminal 1 and the three colors to the negative terminals of 1, 2, and 3. With the wiring shown, use the commands below for LED color mixing. For more detailed mixing, use PWM commands.

Color Mixing Commands	
Red	[DEV=24;LED=1;ON]
Green	[DEV=24;LED=2;ON]
Blue	[DEV=24;LED=3;ON]
Yellow	[DEV=24;LED=1,2;ON]
Magenta	[DEV=24;LED=2,3;ON]
Cyan	[DEV=24;LED=1,3;ON]
White	[DEV=24;LED=1,2,3;ON]



Installation

- Attach the LM8 to a flat surface with the screws provided.
- Connect LED terminals securely, observing correct voltage and polarity.
- Connect RS-485 cable from the LM8 to the serial host.
- Connect the power adapter to AC power, then to the power port.
- Call Audio Authority with questions that are not addressed in this manual.

