LTECH LT-DMX-1809 DMX-SPI Signal Decoder User Manual

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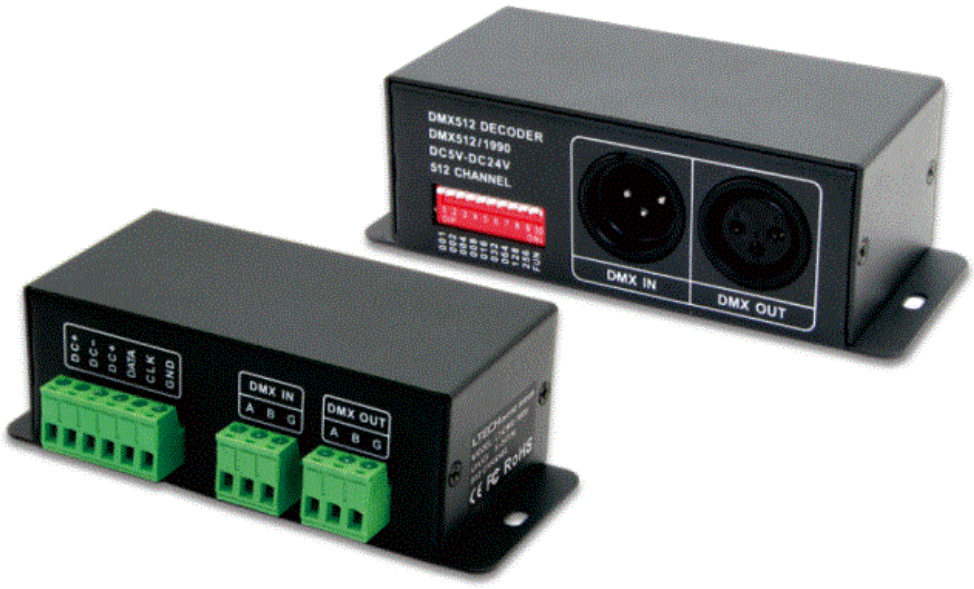


LT-DMX-1809 DMX-SPI Signal Decoder

LT-DMX-1809 converts the universal standard DMX512 signal into SPI(TTL) digital signal to drive LEDs with compatible driving IC, it could control every channel of the LED lights, and realize 0~100% dimming or editing all sorts of changing effects. DMX-SPI decoders are widely used in LED flashing word string lights, LED dot lights, SMD strips, LED digital tubes, LED wall lights, LED pixel screens, Hi-power spotlights, flood lights, etc.

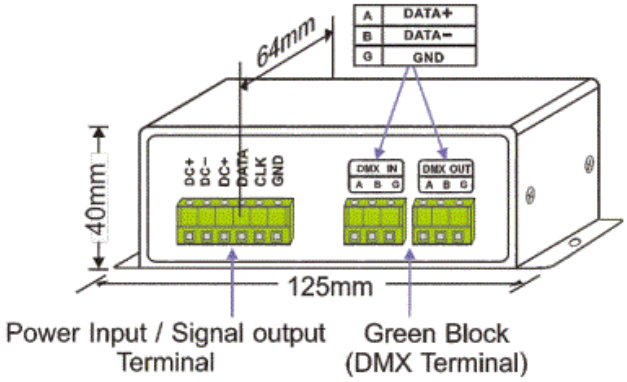
Product Parameter

LT-DMX-1809

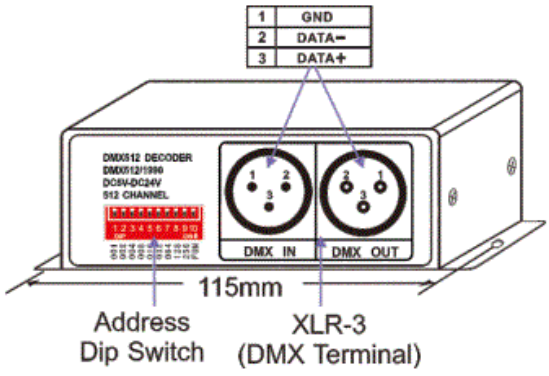
- Input Signal: DMX512
- Input Voltage: 5~24Vdc
- Output Signal: SPI
- Decoding Channels: 512 Channels/Unit
- DMX512 Socket: XLR-3, Green Terminal
- Dimming Range: 0~100%
- Working Temperature: -30℃~65℃
- Dimensions: L125×W64×H40(mm)
- Package Size: L135×W70×H50(mm)
- Weight (G.W.): 300g

Compatible with WS2811/2812 UCS1903/1909/1912/2903/2909/2912 TM1803/1804/TM1809/1812 driving IC)

Configuration Diagram



(Side A)

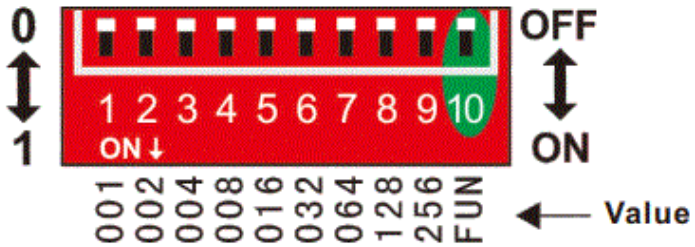


(Side B)

Output Port Definition

No.	Port		Function
1	Power Supply Input Port	DC+	5-24Vdc LED power supply input
		DC-	
2	Output Port Connect LED	DC+	LED power supply output anode
		DATA	Data cable
		CLK	Clock cable (N/A)
		GND	Ground cable (DC-)

Dip Switch Operation

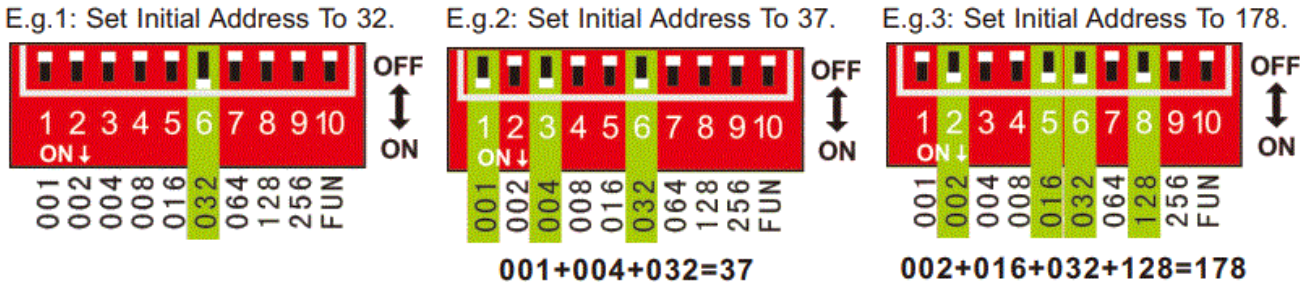


How to set DMX address via dip switch:

- FUN=OFF (the 10th dip switch=OFF) DMX Mode

The Decoder enters into DMX control mode automatically when receiving a DMX signal.
Like figure upward: FUN=OFF is high speed(upward), FUN=ON is low speed (downward)

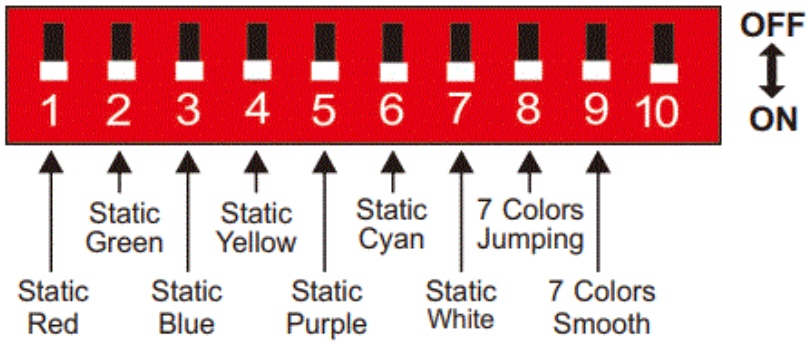
1. The driving chip of this decoder has options for high and low speeds (800K/400K), please choose the suitable speed according to the design of your LED lights, in most cases, it is high speed.
2. DMX address value = the total value of (1-9), to get the place value when in the “on” position, otherwise will be 0.



Self-testing Mode:

When no DMX signal and FUN=ON (the 10th dip switch=ON) Self-testing Mode

Dip Switch	1–9=off	1=on	2=on	3=on	4=on	5=on	6=on	7=on	8=on	9=on
Self-test Function	Static Black	Static Red	Static Green	Static Blue	Static Yellow	Static Purple	Static Cyan	Static White	7 Colors Jumping	7 Colors Smooth

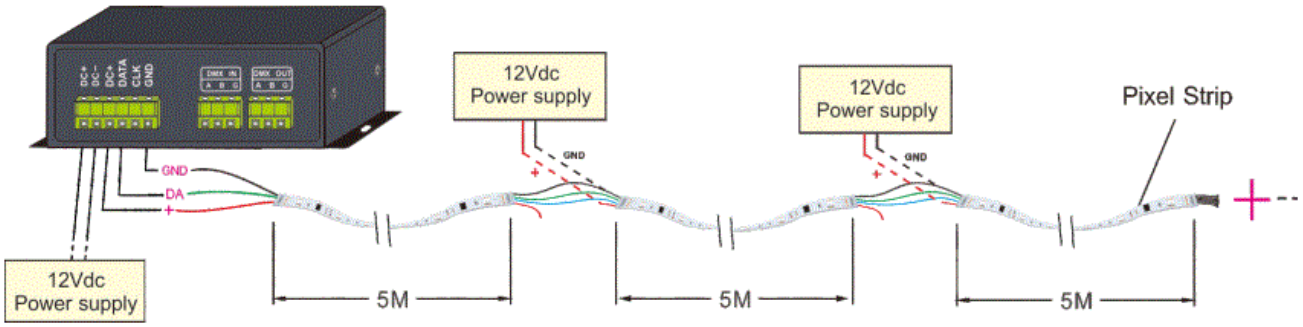


For changing effects (Dip Switch 8/9=ON): DIP switch 1-7 is used to realize 7 speed levels. (7=ON, the fastest level)
[Attn] When several dip switches are ON, subjected to the highest switch value. As the figure above shows, the effect will be 7 colors smooth at 7 speed level.

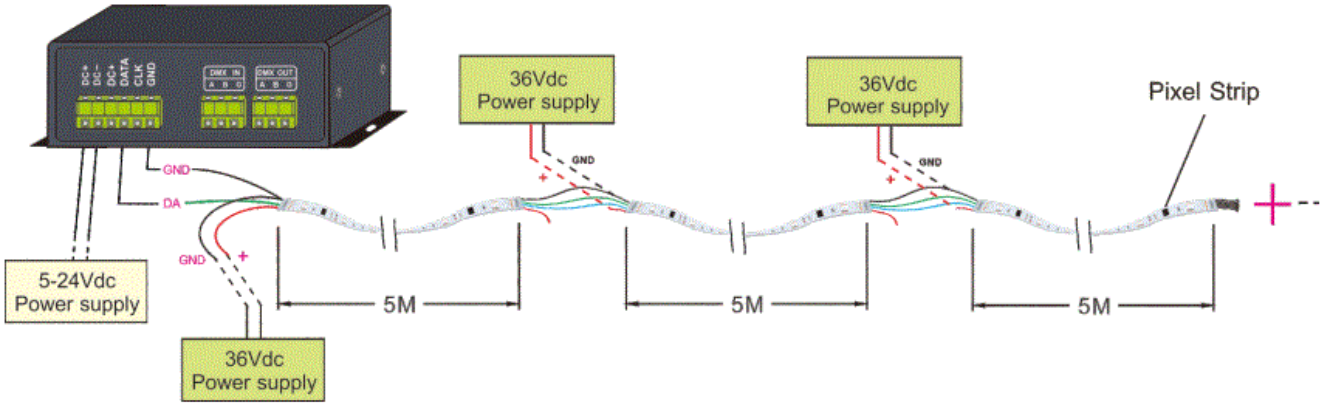
Wiring Diagram

LED pixel strip wiring diagram

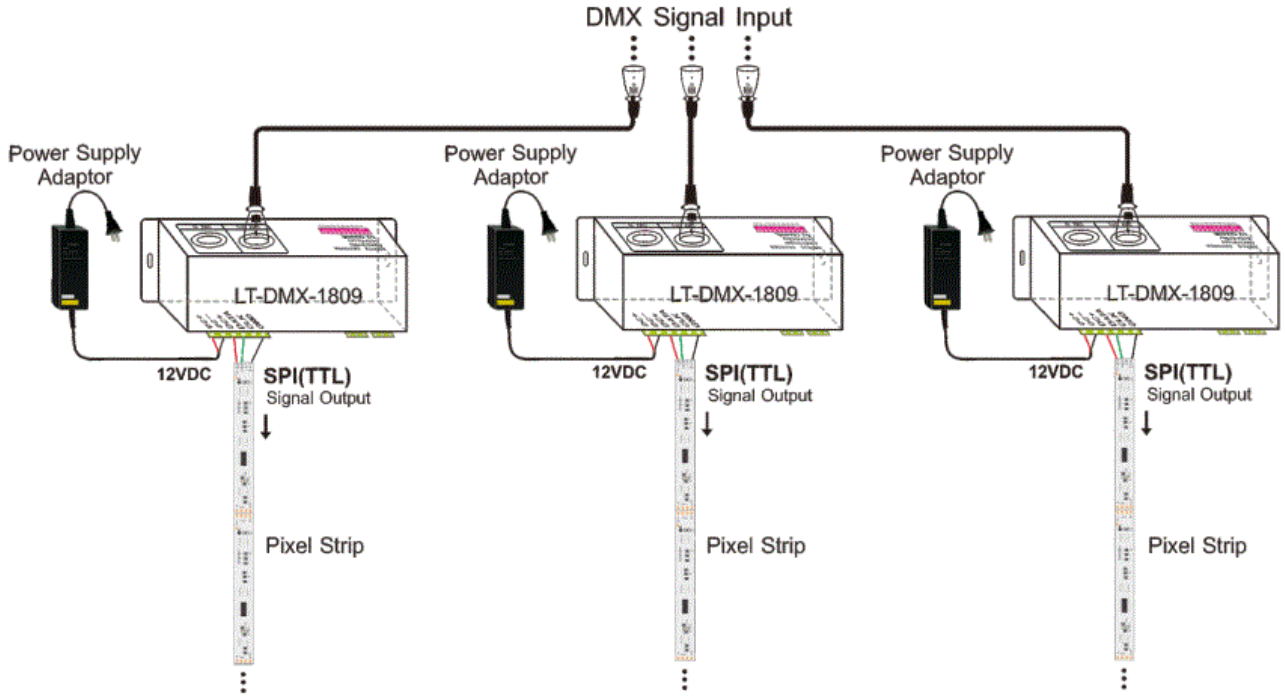
- A. Conventional connection method.



- B. Special connection method – light fixtures and controller using different operating voltages.



DMX wiring diagram



* An amplifier is needed when more than 32 decoders are connected, signal amplification should not be more than 5 times continuously.

Attention:

- The product shall be installed and serviced by a qualified person.
- This product is non-waterproof. Please avoid the sun and rain. When installed outdoors please ensure it is mounted in a waterproof enclosure.
- Good heat dissipation will prolong the working life of the controller. Please ensure good ventilation.
- Please check if the output voltage of the LED power supply used complies with the working voltage of the product.
- Please ensure that an adequate-sized cable is used from the controller to the LED lights to carry the current. Please also ensure that the cable is secured tightly in the connector.
- Ensure all wire connections and polarities are correct before applying power to avoid any damage to the LED lights.
- If a fault occurs, please return the product to your supplier. Do not attempt to fix this product by yourself.

Warranty Agreement

We provide lifelong technical assistance with this product:

- A 5-year warranty is given from the date of purchase. The warranty is for free repair or replacement if covers manufacturing faults only.
- For faults beyond the 5-year warranty, we reserve the right to charge for time and parts.

Warranty exclusions below:

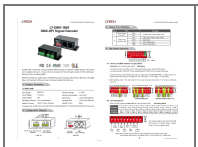
- Any man-made damages caused by improper operation, or connecting to excess voltage and overloading.
- The product appears to have excessive physical damage.

- Damage due to natural disasters and force majeure.
- Warranty labels, fragile labels,s, and unique barcode labels have been damaged.
- The product has been replaced by a brand-new product.

Repair or replacement as provided under this warranty is the exclusive remedy to the customer. We shall not be liable for any incidental or consequential damages for breach of any stipulation in this warranty.
Any amendment or adjustment to this warranty must be approved in writing by our company only.

This manual only applies to this model. We reserve the right to make changes without prior notice.
www.ltech-led.com

Documents / Resources

	**LTECH LT-DMX-1809 DMX-SPI Signal Decoder** [pdf] User Manual LT-DMX-1809 DMX-SPI Signal Decoder, LT-DMX-1809, DMX-SPI Signal Decoder, Signal Decoder, Decoder

References

- **LED Controller | LED Dimmable Driver | LED Intelligent Lighting | Intelligent Home -LTECH**
- **User Manual**