

# SPI-16 Mini LED Fantastic Controller

RF WIRELESS



Wall-mounted

SPI-16 is a Mini LED pixel controller, equipped with RF remote M16, almost able to control all IC-driven LED lights. Compact and powerful, various built-in changing effects and customized scene modes can bring you fantastic color!

By RF remote control M16, you can select from a variety of dynamic lighting effects, set controlled pixels quantity, adjust the changing speed and brightness, change the lighting moving direction, adjust RGB sequence, select the IC type, store and play customized scene etc.

## 1. Product Parameter:

### SPI-16 Controller:

- Power Input: 5~24Vdc
- Output : SPI
- Working Temperature: -30°C~55°C
- Dimensions: L135×W30×H20(mm)
- Weight(N.W.): 47g
- Compatible driving IC: Many kinds, can be customized also

**Package Size: L132×W198×H22(mm)**

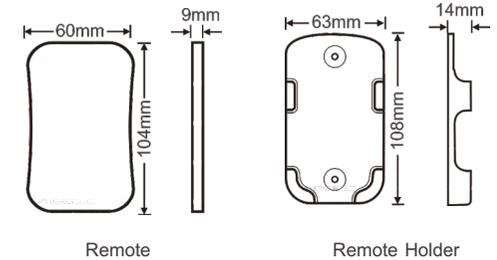
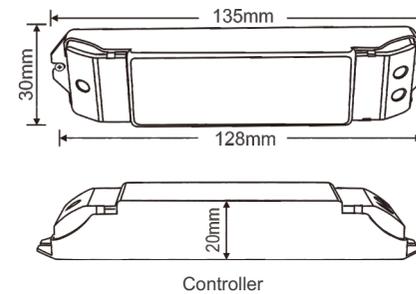
### M16 Remote:

- Working Voltage: 3V (battery CR2032)
- Working Frequency: 433.92MHz
- Remote Distance: 30m
- Working Temperature: -30°C~55°C
- Dimensions: L104×W58×H9(mm)
- Weight(N.W.): 42g

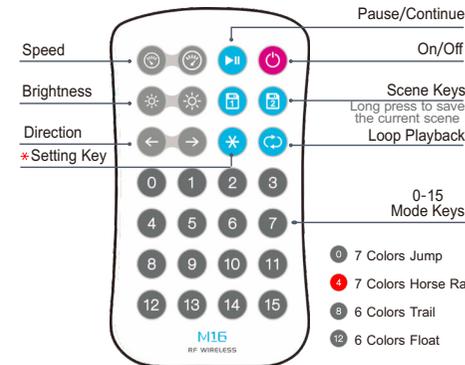
**Total Weight(G.W.): 135g**

★ Connect power supply to pixel LEDs separately, in case of overvoltage, overcurrent to the receiver. Receiver only supply a signal to the LEDs.

## 2. Product Dimension:



## 3. The Remote Instruction:



- 0 7 Colors Jump
- 1 7 Colors Flash
- 2 7 Colors Fade
- 3 7 Colors Smooth
- 4 7 Colors Horse Race
- 5 7 Colors Circle Horse Race
- 6 7 Colors Flow
- 7 7 Colors Gradients Flow
- 8 6 Colors Trail
- 9 6 Colors Circle Trail
- 10 Gradients Trail
- 11 White Meteor
- 12 6 Colors Float
- 13 6 Colors Double Trail
- 14 Color White Float
- 15 Bi-color Float

## The Learning ID Method:

The receiver and remote are Pre-synced at factory. If deleted accidentally, the sync method is as follows (multiple remotes could be synced to one receiver):

### Learning ID:

Short press "ID learning button" on the SPI-16 receiver, the running light is on. Then press any keys on the remote M16, the running light flicker several times, activated.

### Canceling ID:

Press "ID learning button" on the SPI-16 receiver in 5s, the running light flicker several times, canceled.

## Other Setting Instructions of Remote

1. Loop playback: Short press \* key, then continuous press any 0-15 numeric keys, last press key to finish. Controller will play cycle the corresponding mode of the numeric key.
2. Method for selecting IC / RGB Sequence:  
Can control the following pixel LEDs: TM1804/TM1809/TM1812/UCS1903/UCS1909/UCS1912/UCS2903/UCS2909/UCS2912/WS2811/WS2812 in factory default.

Manipulate table for choosing ICs, RGB order or pixel No..

IC Type	Setting e.g.
TM1809	*1809*
LPD6803	*6803*
WS2801	*2801*
TLS3001	*3001*
P9813	*9813*
.....	*□□□□*

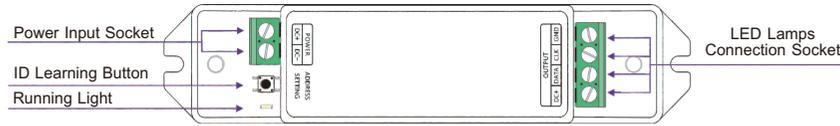
Pixel	Setting e.g.
8	**008
16	**016
100	**100
160	**160
360	**360
Range: 8-360 pixels	

RGB Order	Setting
RGB	*123*
RBG	*132*
GRB	*213*
GBR	*231*
BRG	*312*
BGR	*321*

[Attn]: The running light of SPI-16 controller flashes 2s means set completed.

When setting IC type, pixel number and RGB order, select multiple keys at uniformed speed. Not too fast.

4. Terminal Description:

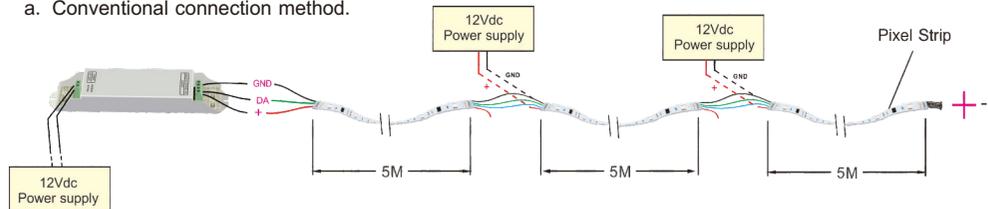


5. Wiring Diagram:

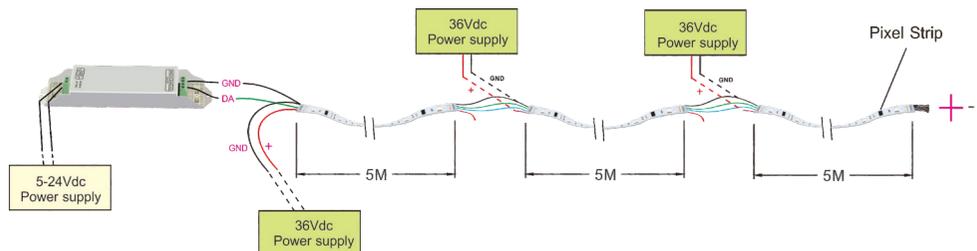


5.4 LED pixel strip wiring diagram:

a. Conventional connection method.



b. Light fixtures and controller using different operating voltages.



6. Attention:

- 6.1 The product shall be installed and serviced by the qualified person.
- 6.2 This product is non-waterproof. Please avoid the sun and rain. When installed outdoors please ensure it is mounted in a water proof enclosure.
- 6.3 Good heat dissipation will prolong the working life of the controller. Please ensure good ventilation.
- 6.4 Please check if the output voltage of the LED power supply used comply with the working voltage of the product.
- 6.5 Please ensure that 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.
- 6.6 Ensure all wire connections and polarities are correct before applying power to avoid any damages to the LED lights.
- 6.7 If a fault occurs, please return the product to your supplier. Do not attempt to fix this product by yourself.

7. Warranty Agreement:

- 7.1 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 cover manufacturing faults only.
    - For faults beyond the 5-year warranty, we reserve the right to charge for time and parts.
  - 7.2 Warranty exclusions below:
    - Any man-made damages caused from 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 label, fragile label and unique barcode label have been damaged.
    - The product has been replaced by a brand new product.
  - 7.3 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.
  - 7.4 Any amendment or adjustment to this warranty must be approved in writing by LTECH only.
- ★ This manual only applies to this model. LTECH reserve the right to make changes without prior notice.