



# S301 MANUAL

Version: 3.2

2025-12

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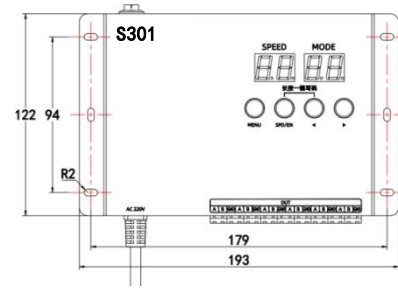
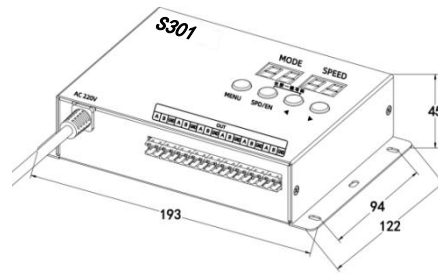
1. It can control some DMX-512 luminaires.
2. Support one-key coding/regular coding/rapid coding, the maximum addressing limit is 4096 channels.
3. Support a variety of DMX chip luminaire calibration.
4. Built-in 50 test effects.
5. Supports AC synchronization.
6. The switching between the addressing function and the control function can be realized without the need to power on again.
7. SD card with 32Gb capacity (128M maximum for effect files, No-Flash Version Does Not Support Backup) can be used. LED Player software is suitable for 3.4.1 or later.
8. S301 controller supports Bluetooth function.

## 2. TECHNICAL PARAMETERS

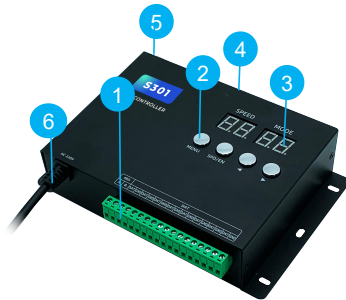
### 2.1. Product Information

- Cover material: Iron
- Input voltage: AC 220V
- Output signal: RS-485×6 ports (The data are all the same.)
- Pixel quantity drove: Standard DMX512: 512 channels; Extensible DMX: 1024 channels
- Output power: <3W
- Effect files: <128M
- Working temperature: -20°C ~ 60°C
- Relative humidity: ≤50 % RH
- Bluetooth Control: Eseeker(App / Mini Program): ≤20m (no walls in between)  
Remote Controller: ≤20m (no walls in between)
- Ingress protection: IP20 (Prevent people from touching the components inside electrical appliance, prevent object which diameter is more than 12.5mm from getting in, no special protection to water or moisture.)
- Working environment:
  1. Please do not install the controller in magnetic, high pressure, high temperature or seriously wet environment.
  2. Please do connect the earth safely in order to reduce risks of fire and damage which cause by short circuit.
  3. Please ensure AC 220V power supply is used, and same polarity is connected between transformer and controller in order to guarantee the proper supply voltage.
  4. No waterproof function in the control system, please pay attention on rainproof and waterproof during installing.
- Net weight: 0.83 Kg
- Size: L193\*W122\*H45

(Millimeters (unit))

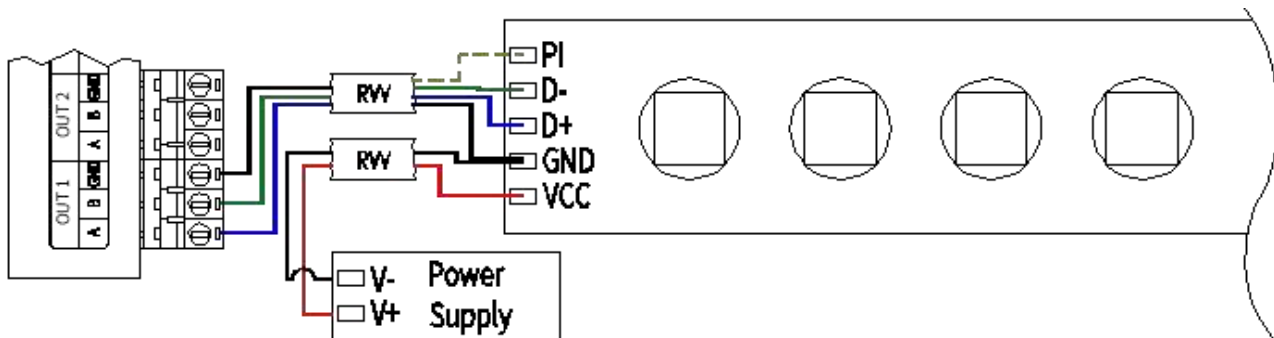


## 2.2. Component Name



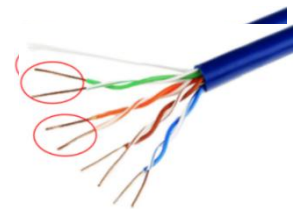
- ① RS485 signal luminaire ports
- ② Control button
- ③ Nixie tube display
- ④ SD card port
- ⑤ Power switch
- ⑥ power cord

## 3. Control the lamps



### ★ Signal cables connection notes:

1. Use UTP—Unshielded Twisted Pair(resistance per 100M<10Ω), low quality Ethernet cables and telephone cable are unavailable.
2. Use one group twisted pair, suggest green + green white or orange + orange white. The quality and color of the cable are very important. Blue and brown wires greatly influence the signal transmission. Please don't use several groups of twisted pairs together.
3. Controller signal output GND must connect directly with input GND of lamp. Cannot connect with lamp through power switch.
4. Switch on the controller after all hardware signal cables and wires are connected. Please don't CONNECT / DISCONNECT the signal cables while the controller is power on; avoid bad output by reverse current and protect the circuit and components.



### ★ transmission distance:

Transmission Type	Signals	Media	Distance (M)	Notes
Controller → Repeater	RS-485	UTP - Unshielded Twisted Pair	50-100	

Transmission Type	Signals	Media	Distance (M)	Notes
Controller → DMX lighting fixture DMX lighting fixture → DMX lighting fixture	RS-485	UTP - Unshielded Twisted Pair	30-50	The address cable must be no more than 5m.
		Three core wire	1-20	
		Four core wire	1-20	
Controller/Repeater → DMX lighting fixture	TTL	UTP - Unshielded Twisted Pair	5-20	Controllable pixels reduce if wire is over 5m. (The address cable must be no more than 5m)
		Two core wire	1-5	
		Three core wire	1-5	

## 4. Basic Operations

### 4.1. Button Instructions

Button	Operation	Description
MENU	Short-press	"Parameter Setting" interface: Switch parameter items
	Long-press	Enter/Exit secondary menu "Parameter Setting" interface
SPD/EN	Short-press	"Normal Operation" interface: Switch effect speed "Parameter Setting" interface: Confirm
	Long-press	Rapidly increase speed
◀	Short-press	Decrease value
	Long-press	Rapidly decrease value
▶	Short-press	Increase value
	Long-press	Rapidly increase value
◀ + ▶	Long-press	Enter/Exit "General Addressing"
MENU + ▶	Long-press	Enter/Exit "Address Verification"
SPD/EN + ▶	Long-press	Enter/Exit "One-click Programming"
MENU+SPD/EN	Long-press	"Quick Addressing": Send last addressing parameters

### 4.2. Speed Adjustment

Press "SPD/EN" button on controller panel to adjust playing speed.

Parameters	Speed																				
	2	2.	3	3.	4	4.	5	5.	6	7	8	9	10	11	12	15	20	30	50	80	99
Interface display	2	2.	3	3.	4	4.	5	5.	6	7	8	9	10	11	12	15	20	30	50	80	99
Frame rate (ms)	20	25	30	35	40	45	50	55	60	70	80	90	100	110	120	150	200	300	500	1000	2000
Frames per second (fps)	50	40	33	28	25	22	20	18	17	14	13	11	10	9	8	7	5	3	2	1	0.5

AC Synchronization: All controllers must be set to the same speed and mode, and powered on simultaneously, in order to achieve AC synchronized.

### 4.3. Parameter Settings

When the controller is powered on, it will display the following version information:

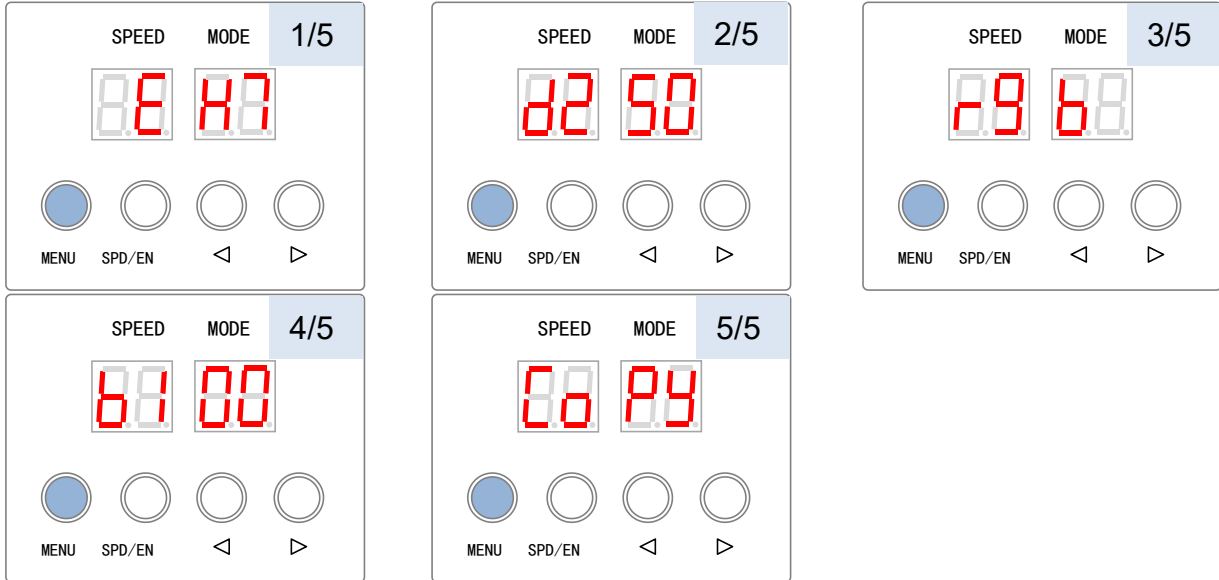
- Boot Version: bXXX (for example: b001)
- Application (App) Version: x.xx (for example: 0.04)

Long-press the controller panel's **【MENU】** button to enter the "Parameter Setting" interface.

Long-press **【MENU】** again to exit the "Parameter Setting" interface.

Short-press **【◀】** and **【▶】** to change the current option parameters.

Short-press **【SPD/EN】** to confirm the changes.



Interface Diagram	Function	Function Description																																																																																																						
	built-in/external Effect Switching	EXT: Output external effect INT: Output built-in effect																																																																																																						
	Output Chip Settings (built-in effect)	<table border="1"> <thead> <tr> <th>Number</th> <th>Display</th> <th>Chip</th> <th>Number</th> <th>Display</th> <th>Chip</th> </tr> </thead> <tbody> <tr><td>1</td><td>1804</td><td>TM1804</td><td>17</td><td>5603</td><td>UCS5603</td></tr> <tr><td>2</td><td>1809</td><td>TM1809</td><td>18</td><td>8903</td><td>UCS8903</td></tr> <tr><td>3</td><td>1812</td><td>TM1812</td><td>19</td><td>8904</td><td>UCS8904</td></tr> <tr><td>4</td><td>1913</td><td>TM1913</td><td>20</td><td>9812</td><td>UCS9812</td></tr> <tr><td>5</td><td>1914</td><td>TM1914</td><td>21</td><td>6703</td><td>SM16703</td></tr> <tr><td>6</td><td>1934</td><td>TM1934</td><td>22</td><td>6704</td><td>SM16704</td></tr> <tr><td>7</td><td>1814</td><td>TM1814</td><td>23</td><td>6813</td><td>SM16813</td></tr> <tr><td>8</td><td>1903</td><td>TM1903</td><td>24</td><td>6714</td><td>SM16714</td></tr> <tr><td>9</td><td>1903</td><td>UCS1903</td><td>25</td><td>2811</td><td>WS2811</td></tr> <tr><td>10</td><td>1904</td><td>UCS1904</td><td>26</td><td>2812</td><td>WS2812</td></tr> <tr><td>11</td><td>1909</td><td>UCS1909</td><td>27</td><td>2818</td><td>WS2818</td></tr> <tr><td>12</td><td>1912</td><td>UCS1912</td><td>28</td><td>2813</td><td>WS2813</td></tr> <tr><td>13</td><td>2903</td><td>UCS2903</td><td>29</td><td>1003</td><td>LX1003</td></tr> <tr><td>14</td><td>2904</td><td>UCS2904</td><td>30</td><td>9883</td><td>P9883</td></tr> <tr><td>15</td><td>2909</td><td>UCS2909</td><td>31</td><td>d250</td><td>DMX250K</td></tr> <tr><td>16</td><td>2912</td><td>UCS2912</td><td>32</td><td>d500</td><td>DMX500K</td></tr> </tbody> </table>	Number	Display	Chip	Number	Display	Chip	1	1804	TM1804	17	5603	UCS5603	2	1809	TM1809	18	8903	UCS8903	3	1812	TM1812	19	8904	UCS8904	4	1913	TM1913	20	9812	UCS9812	5	1914	TM1914	21	6703	SM16703	6	1934	TM1934	22	6704	SM16704	7	1814	TM1814	23	6813	SM16813	8	1903	TM1903	24	6714	SM16714	9	1903	UCS1903	25	2811	WS2811	10	1904	UCS1904	26	2812	WS2812	11	1909	UCS1909	27	2818	WS2818	12	1912	UCS1912	28	2813	WS2813	13	2903	UCS2903	29	1003	LX1003	14	2904	UCS2904	30	9883	P9883	15	2909	UCS2909	31	d250	DMX250K	16	2912	UCS2912	32	d500	DMX500K
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4	rbg	RBG	13	urgb	WRGB																																																									
5	gbr	GBR	14	ugrb	WGRB																																																									
6	brg	BRG	15	ubgr	WBGR																																																									
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<p>Brightness setting</p>		<p>b000~b100:100-level brightness adjustment (b000 for full black)</p>																																																												
<p>Data backup</p>		<ul style="list-style-type: none"> <li>●Flash:Supports manual backup of effect files from the SD card to the internal Nand Flash</li> <li>●No Flash:Does not support backup to Nand Flash.Attempting to back up effects will result in a "FAIL" error.</li> </ul>																																																												

## 5. Built-in Effects

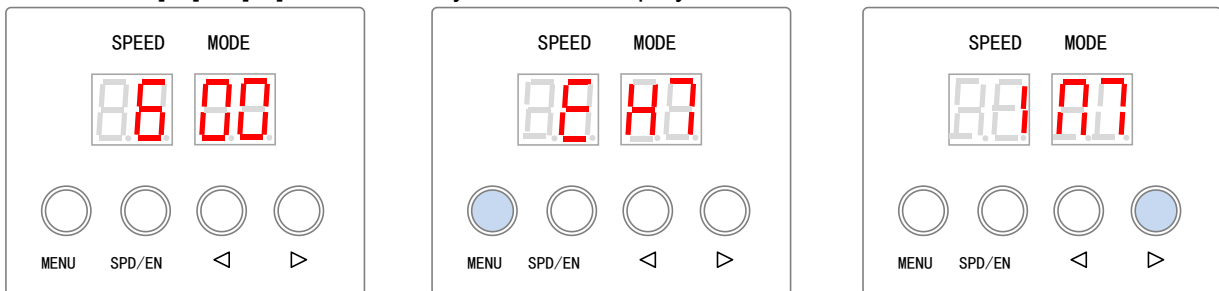
### 5.1. Enter Built-in Effect Mode

#### 5.1.1.Controller Interface Operation

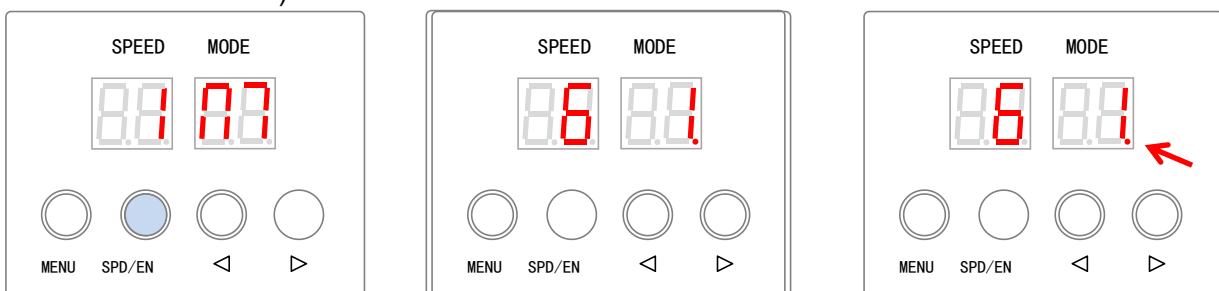
1. Press and hold the [MENU] button on the normal operation interface to enter the parameter setting menu page. The digital tube displays "INT" or "EXT".

("INT": Built-in effect "EXT": External effect)

2. Press the [◀] or [▶] buttons briefly to switch the playback effect status.

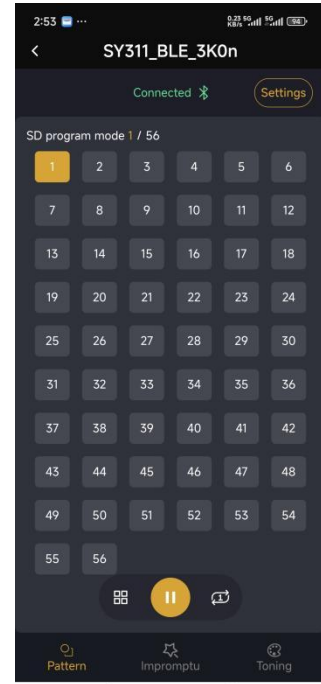
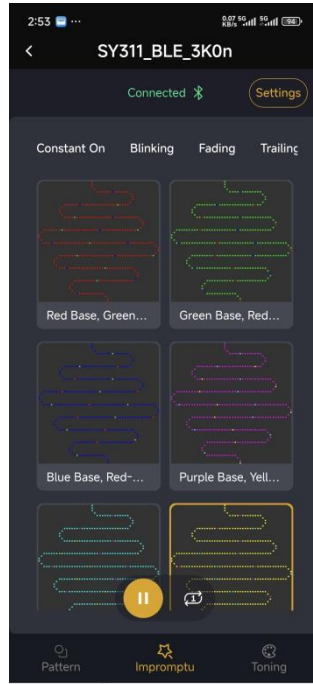
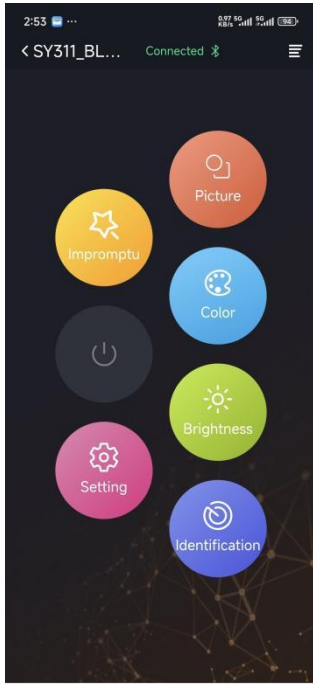


3. After selecting "INT", briefly press the [SPD/EN] button. The controller will return to its normal working state, entering the built-in effect mode (the decimal point on the right indicates that it is currently in the built-in effect state).



## 5.1.2. Operation of Bluetooth APP or WeChat Mini Program Eseeker

1. In the Bluetooth APP or mini program, select "Impromptu" to switch to the built-in effect, If select "Pattern" to switch to the external effect. This function is only supported for the S301 model controller.



## 5.2. Impromptu Effects (Built-in Effects)

\*Built-in Effect Drive Points:

250k:3 channels, 170 points

500k:3 channels, 341 points

Mode	Animation	Preview	Impromptu
00	Mode 1-49 plays in a loop		
xx	Mode 1-49 plays randomly		
01.	Always light		Constantly On
02.	Always light		Constantly On
03.	Always light		Constantly On
04.	Always light		Constantly On
05.	Always light		Constantly On
06.	Always light		Constantly On
07.	Always light		Constantly On
08.	Flicker		Gradient

Mode	Animation	Preview	Impromptu
25.	Roller / wave		Wave
26.	Roller / wave		Wave
27.	Roller / wave		Wave
28.	Roller / wave		Wave
29.	Roller / wave		Wave
30.	Roller / wave		Wave
31.	Trailing		Tail
32.	Roller / wave		Wave
33.	Wave		Flow
34.	Roller / wave		Flow

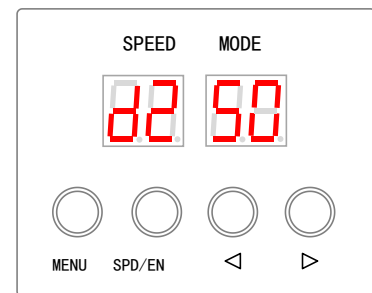
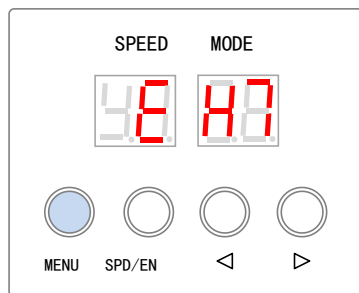
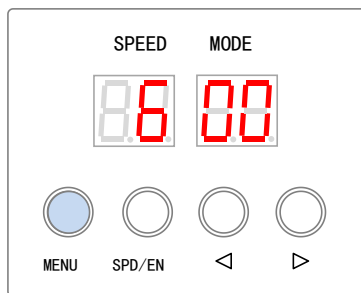
Mode	Animation	Preview	Impromptu
09.	Flicker		Gradient
10.	Flicker		Gradient
11.	Gradually turn		Gradient
12.	Gradually turn		Gradient
13.	Gradually turn		Gradient
14.	Trailing		Tail
15.	Trailing		Tail
16.	Trailing		Tail
17.	Trailing		Racing Horse
18.	Trailing		Racing Horse
19.	Trailing		Racing Horse
20.	Trailing		Racing Horse
21.	Trailing		Racing Horse
22.	Trailing		Racing Horse
23.	Roller / wave		Wave
24.	Roller / wave		Wave

Mode	Animation	Preview	Impromptu
35.	Trailing		Tail
36.	Roller / wave		Wave
37.	Wave		Flow
38.	Roller / wave		Flow
39.	Breath (black)		With Black
40.	Breath (black)		With Black
41.	Breath (black)		With Black
42.	Breath (black)		With Black
43.	Breath (duskiness)		Without Black
44.	Breath (duskiness)		Without Black
45.	Breath (duskiness)		Without Black
46.	Breath (duskiness)		Without Black
47.	Breath (duskiness)		Without Black
48.	Breath (duskiness)		Without Black
49.	Breath (duskiness)		Without Black
50.	Black		Constantly On

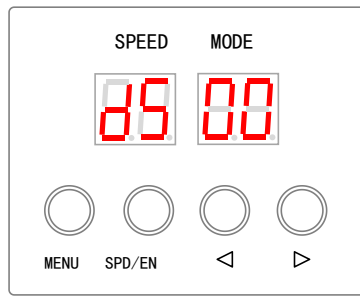
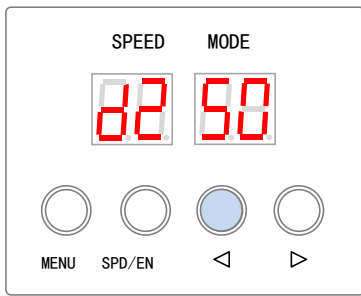
## 6. Built-in effect output chip settings

1. Under normal operation interface Long-press the **【MENU】** key to enter the parameter setting menu page. Short-press the **【MENU】** key to switch to the selection of the built-in effect output chip.

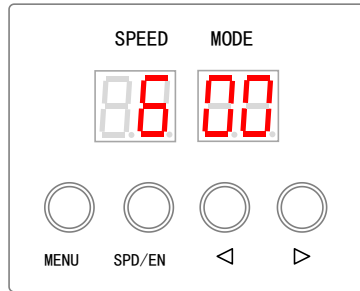
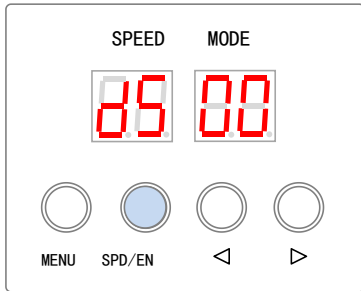
Note: “d250” : DMX250K; “d500” : DMX500K ;



2. Short-press [**◀**] or [**▶**] to switch the baud rate, and long-press [**◀**] or [**▶**] to quickly change the built-in effect output chip.



3. After selecting the correct baud rate, briefly press the [SPD/EN] button. The controller will return to its normal operating state, and the internal effect output chip settings will be successful.



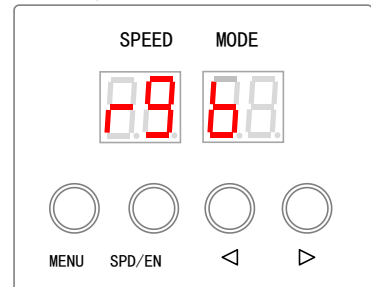
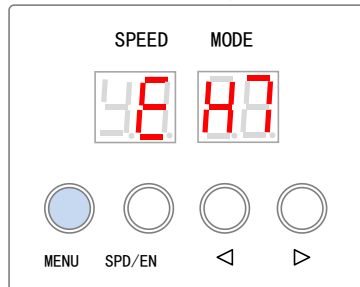
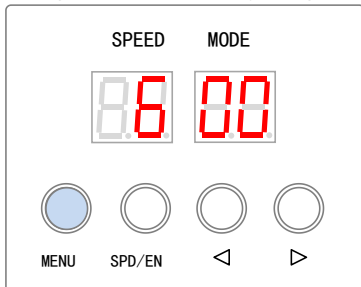
## 7. Channel Order Settings

1. Under the normal operation interface

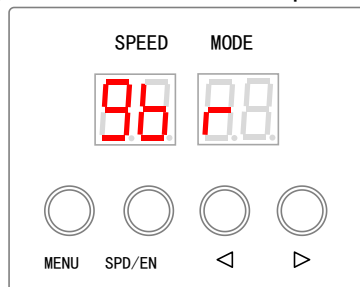
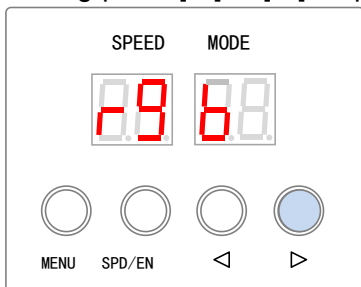
Long-press the **【MENU】** key to enter the parameter setting menu page.

Short-press the **【MENU】** key to switch to the channel sequence setting.

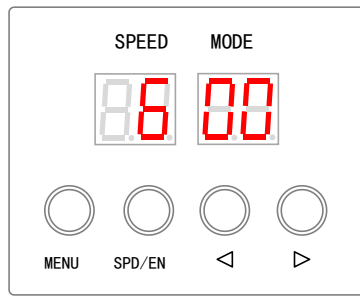
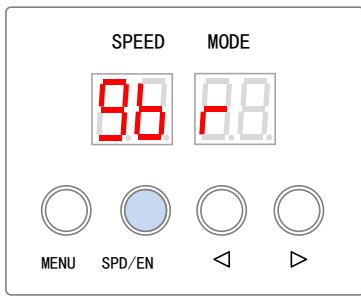
The digital tube displays "rgb\*" (or shows the previously set channel sequence).



2. Short-press [**◀**] or [**▶**] to switch the channel sequence combination,  
Long-press [**◀**] or [**▶**] to quickly switch the channel sequence combination.



3. After selecting the correct baud rate, short-press the [SPD/EN] button. The controller will return to its normal operating state and the channel sequence setting will be successful.



## 8. Brightness setting

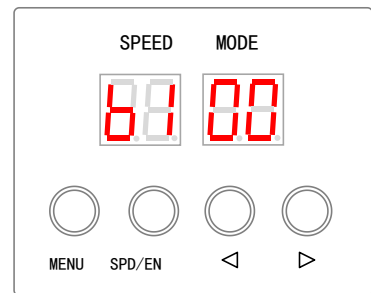
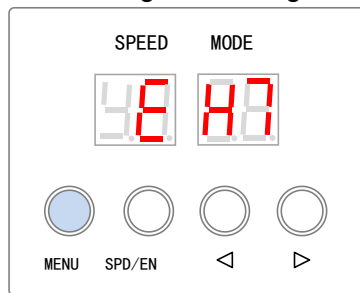
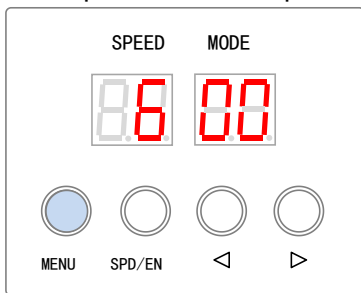
1. Under the normal operation interface

Long-press the **【MENU】** key to enter the parameter setting menu page.

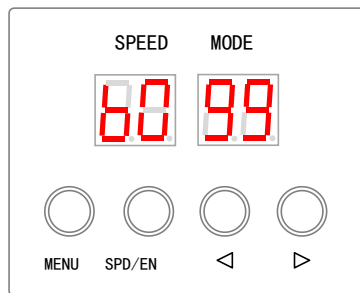
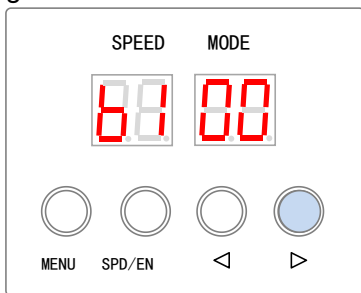
Short-press the **【MENU】** key to switch to the brightness setting.

The digital tube displays "b\*\*\*".

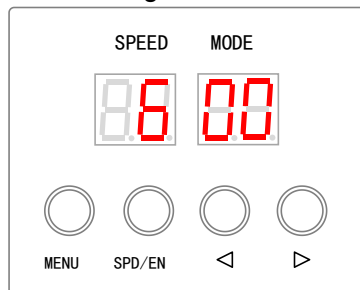
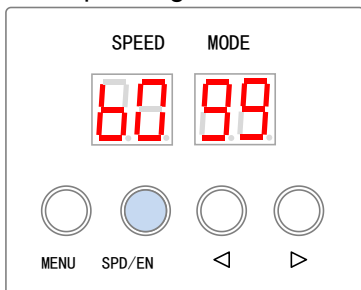
"b\*\*\*": represents the output brightness. The brightness range is from 0 to 100.



2. Short-press [**◀**] or [**▶**] to adjust the brightness, and long press [**◀**] or [**▶**] to quickly change the brightness.



3. After selecting the correct baud rate, short-press the [SPD/EN] button. The controller will return to its normal operating state and the brightness setting will be successful.



## 9. Data Backup

The controller can switch to play the backup effect in case of SD card damage, file damage, or no SD card. It is necessary to back up the files in SD card (with a content size limit of 128M) to the controller in advance.

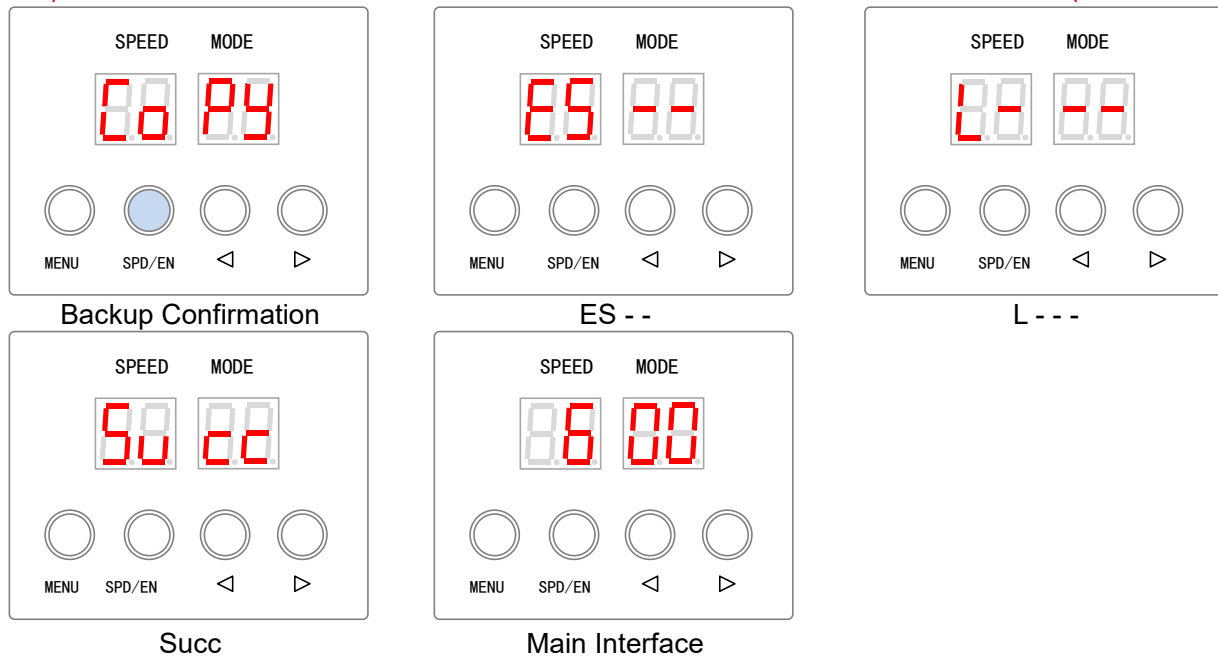
**Note:** No Flash version: Does not support the data backup function and only plays the content of the SD card directly.

### 9.1. Pop-up Prompt for Backup

1. Each time the controller is powered on, it will automatically read the effect files from the SD card and prompt whether a backup is needed.
2. If a backup is required, when the controller displays "Copy", manually press [SPD/EN] to start the backup. The controller will then sequentially display:  
"ES - -" → "L - -" → "Succ". When "Succ" is displayed, it means the backup was successful.
3. If a backup is not needed, simply wait for 3 seconds. The controller will automatically cancel the backup and enter the basic operation interface.

**Note:** The backup prompt will not appear under the following conditions:

- 1) The file size on the controller's SD card is greater than 128MB.
- 2) The file on the controller is the same as the file on the SD card in terms of size (and content).



### 9.2. Automatic Backup

During the 30 consecutive power-on operations, if the following 3 conditions are met, a backup will be performed automatically. Wait until the controller displays "ES - -" indicating file deletion and "L - -" indicating file download, and "Succ" indicating successful backup. The startup time upon power-on will be longer, which is a normal phenomenon. (If the conditions are not met, the process will be repeated for 30 times until the conditions are met before performing the backup.)

Condition 1: The size (content) of the files in the controller does not match that of the files on the SD card;

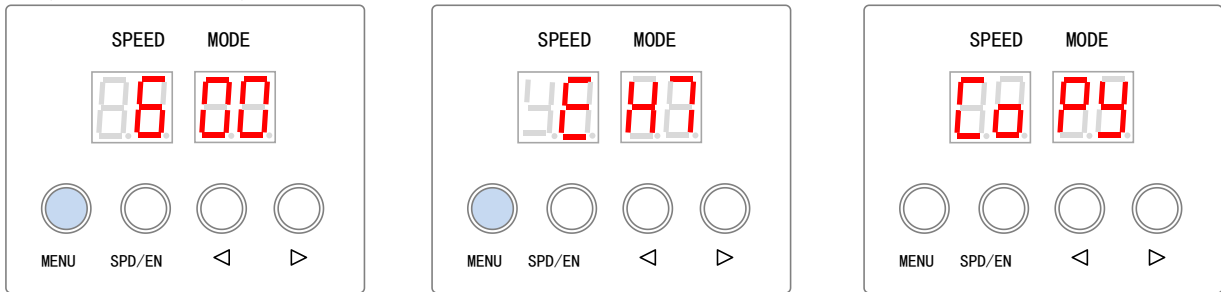
Condition 2: After power-on, the controller is in the external effect mode (EXT);

Condition 3: Throughout the entire process, no error messages have appeared.

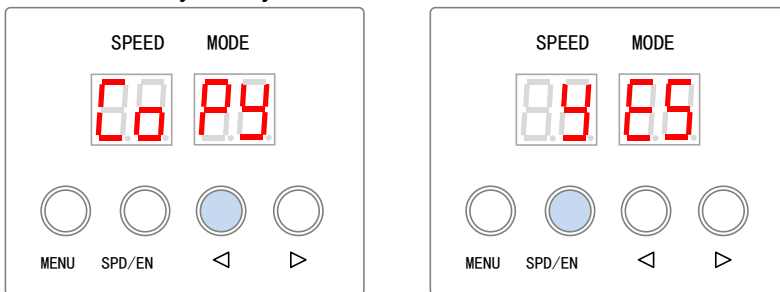
**Note:** The backup prompt will not appear if the controller does not meet the backup conditions.

### 9.3. Manual Backup

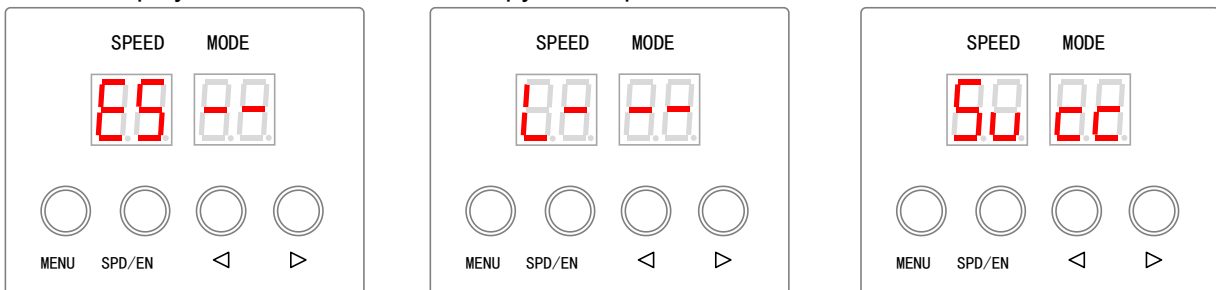
1. In the normal working interface, long-press the **【MENU】** key to enter the parameter setting menu page. Short-press the **【MENU】** key to switch to the option for backing up effect files. The digital tube displays the text "copy".



2. Press the **【◀】** or **【▶】** keys briefly to make the digital display show "YES", then press the **【SPD/EN】** key briefly to confirm.



3. Display the images in sequence: Figure 1 "ES - -" → Figure 2 "L- -" → Figure 3 "Su cc". When "Su cc" is displayed, it indicates that the copy is complete.



## 10. Address Writing Function

### 10.1. Supporting Chips

Option	Supporting Chip
U-01	SW-D
U-04	UCS512C4
U-05	SM16512
U-06	UCS512D
U-07	GS8512
U-08	SM17512P
U-09	SM17522P
U-10	SM17500P
U-12	SM16500P

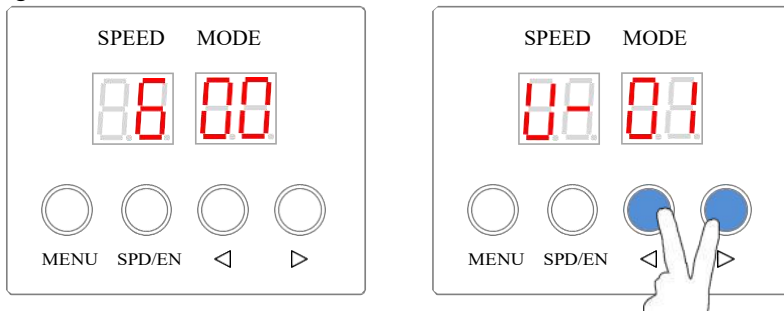
Option	Supporting Chip
U-18	Hi512A0
U-19	Hi512A4
U-20	Hi512A6
U-21	Hi512D/Hi512E
U-22	UCS512CN
U-23	GS8513
U-24	GS8515
U-25	SM18522P
U-26	SM18522PH

U-13	UCS512C0
U-15	TM512ACx
U-16	TM512AD
U-17	QED512P

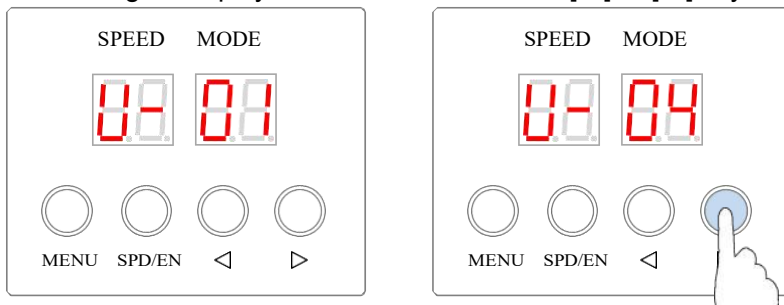
U-27	GS8511
U-28	UCS512G
U-29	UCS512E

## 10.2. Normal Addressing

1. In the normal operation interface, long-press the **【◀】** and **【▶】** keys to enter the normal addressing interface. The digital tube display shows "U-\*\*\*", where "U-\*\*\*" indicates the type of chip to be programmed.



2. The digital display shows "U-\*\*\*". Press the **【◀】** or **【▶】** keys to switch to other chips.



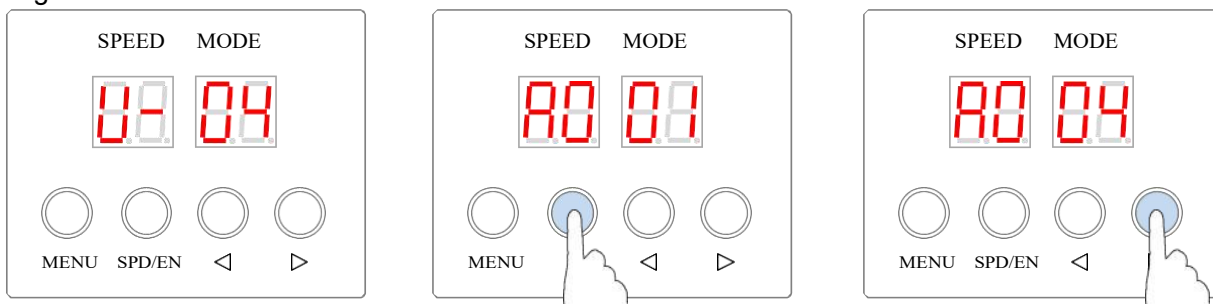
**Note:** For support chips, please refer to "10.1 Support Chips". For example, the UCS512C4 chip is "U-04".  
Selecting a chip code that does not match the write address is invalid.

3. Enter Addressing Mode:

After selecting the correct chip type, press [SPD/EN], and the digital display will show "A\*\*\*\*".

"A\*\*\*\*" indicates that you can input the channel values (increment) occupied by each DMX chip (in increments). The maximum value cannot exceed 192.

Press **【◀】** or **【▶】** to change the increment value, and press **【◀】** or **【▶】** for a long-press to quickly change the increment value.

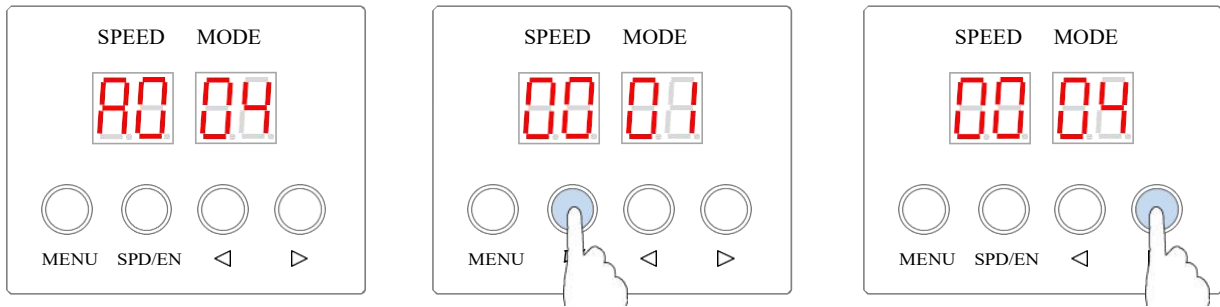


4. Press the [SPD/EN] key to enter the address setting interface and enter the address. The digital tube display shows "\*\*\*\*\*", "\*\*\*\*\*" represents the first chip address that can be input for the lamp, and the maximum value cannot exceed 4096.

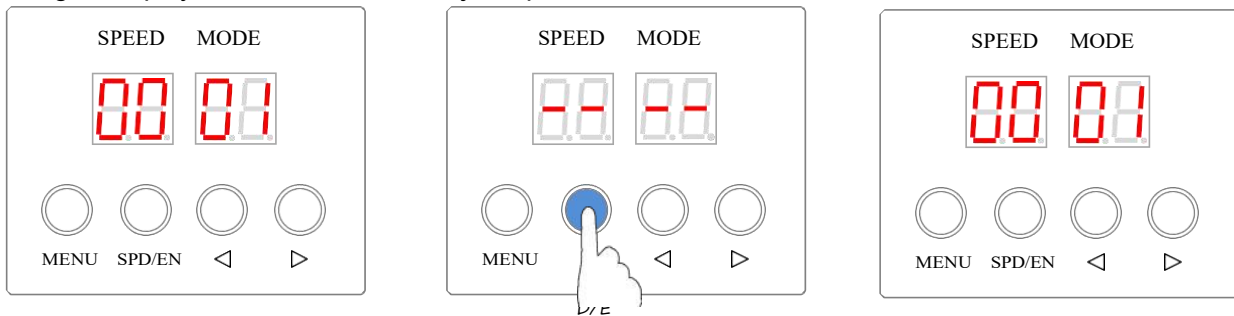
The first chip address starts from 1.

Press **【◀】** or **【▶】** to change the address value, and long-press **【◀】** or **【▶】** to quickly change the address value.

Press [SPD/EN] to shift and change the address value.



5. Press and hold the [SPD/EN] key without releasing it until the digital display shows " ", then release your hand. The controller will then send the data and address the lamps. After the operation is successful, the digital display will show the address just operated.



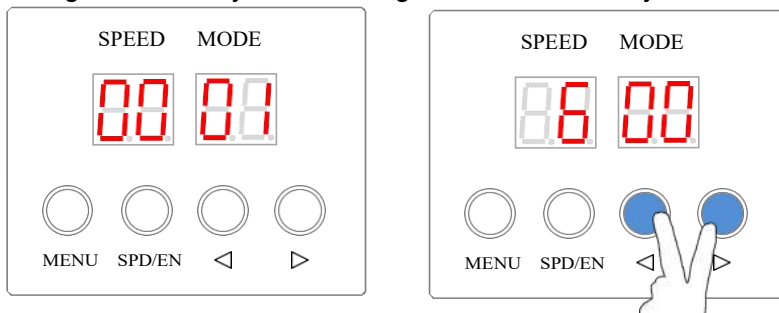
※ During the process of the controller sending data, all the buttons cannot be operated.

At this time (the controller can remain on), directly connect the DMX lamps of the same specification and model that need to be addressed, and repeat step 5 to perform addressing;

If the input address is found to be wrong (or other addresses are changed) after the data is sent successfully, repeat step 4 to rewrite the lamp address after changing the address;

If the lamp address is not successfully written, recheck the wiring of the lamps, and then press the 【SPD/EN】 key for a long time again to send data.

6. Press and hold the [◀] and [▶] keys simultaneously, and the controller will return to its normal working state. Then you can change the effect normally.



### 10.3. Rapidly send address parameters

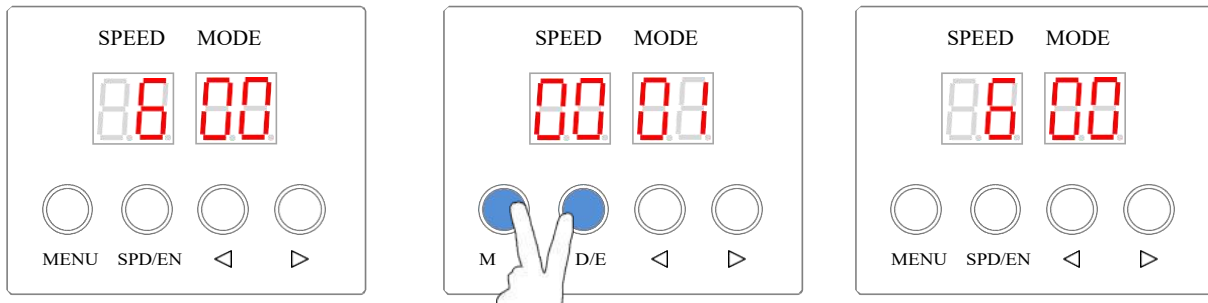
The controller can read back the previous address parameter and directly send this address parameter to the lamp with just one click;

This operation is particularly suitable for multiple repeated write address operations in the same project or lamps.

(If the selected chip is different from the actual lamp, please refer to "10.2 Normal Write Address" for operation.)

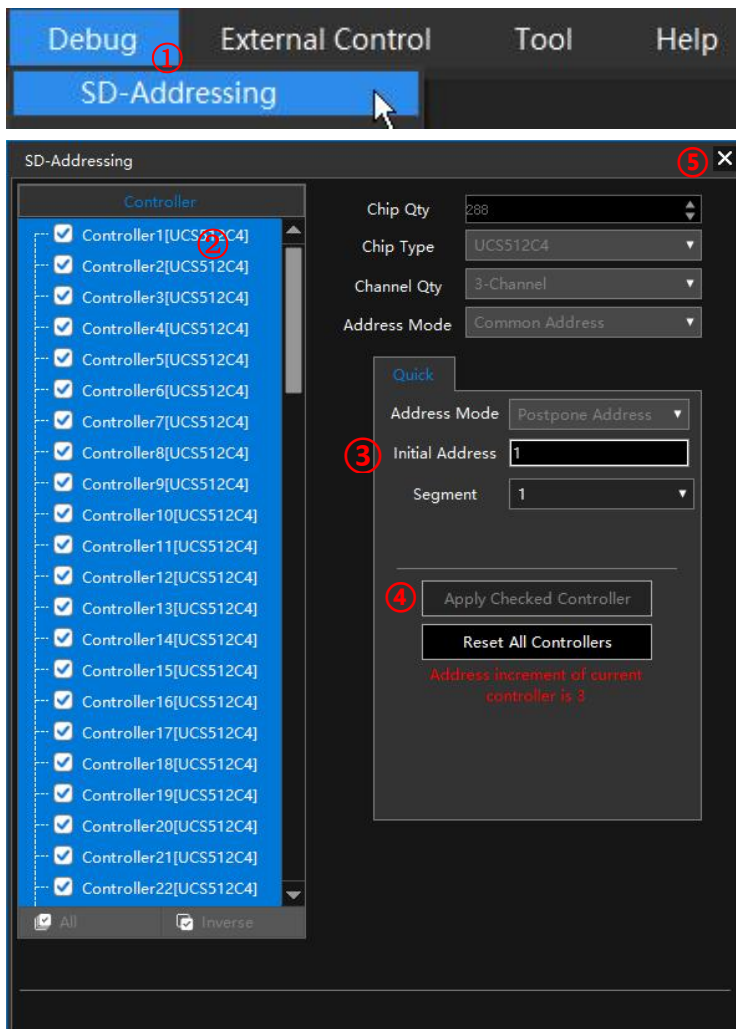
Under normal working conditions, long press [MENU] and [SPD/EN], the digital tube displays the address of the last address (if the previous address writing operation is one-click address writing, the digital tube displays H-\*\*\*).

After the address programming is completed, the controller returns to normal output.



## 10.4. One-click Code Writing or Parameter Writing Operation

### 10.4.1. Software Setting of Chip Address



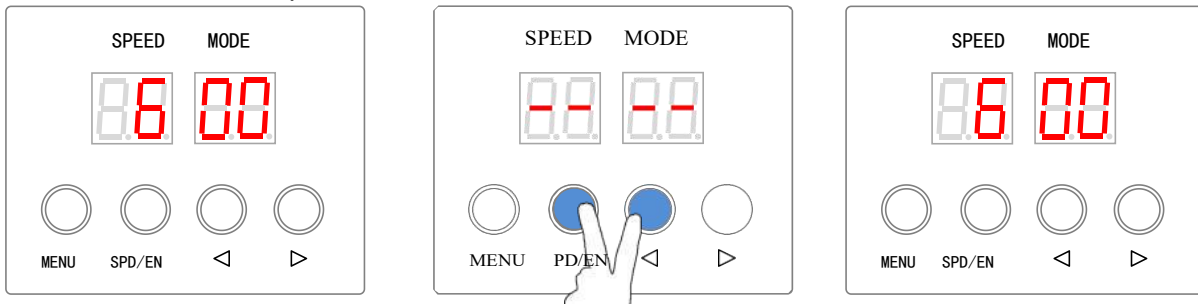
- ① Click on LED Player [Debug] → [SD-Addressing], open the settings window;
- ② Select the controllers to be set;
- ③ Set the "Initial Address" and "Segment";
- ④ Click [Apply to Selected Controller] to save;
- ⑤ Close and exit the window;
- ⑥ Output the SD card and copy the card (you can set the chip parameters and effect materials and output them at once. Copying the card is described in the "Output SD card files and card copying" section).

Note: Each controller can be configured with a different chip and starting address.

The selection of the chip is set in the **【Settings】** - **【Hardware Settings】** section.

### 10.4.2. Hardware operation

Under the normal operation interface, long press the 【SPD/EN】 and 【◀】 keys. The digital tube screen displays "----". The controller will address the lamps based on the KeyAddress.bin file in the SD card. After the transmission is successful, the controller returns to the normal working state, and the effects can be normal output .

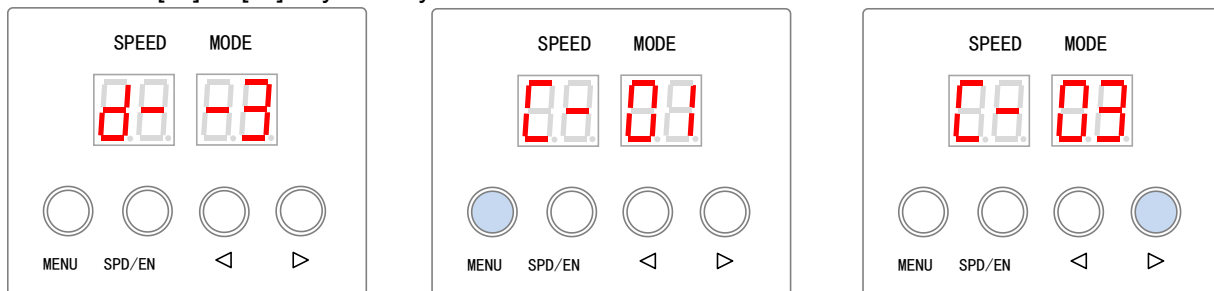


**Note:** During the data transmission process by the controller, all buttons cannot be operated. If you need to re-assign the address, please press and hold the [SPD/EN] and [◀] buttons for a longer period of time.

### 10.5. Address Verification

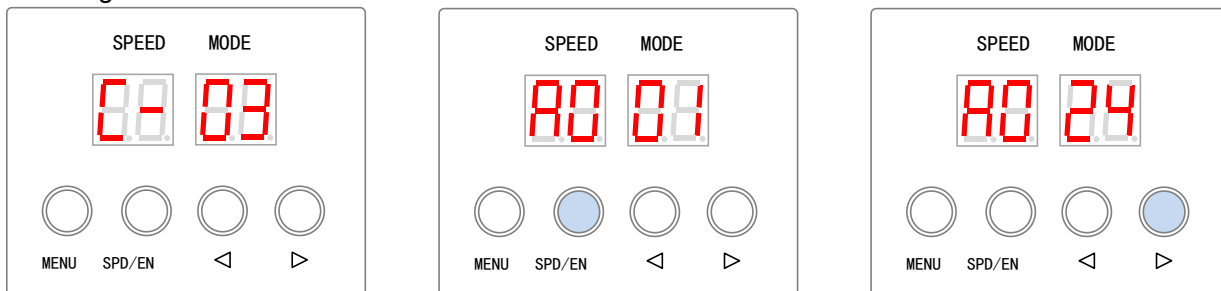
- In the normal operation interface, long press the 【MENU】 and 【▶】 keys to enter the verification settings interface. The digital tube display shows "C-\*\*\*".  
C-01: Manual point-by-point, C-02: Automatic point-by-point, C-03: Manual accumulation, C-04: Automatic accumulation.

- Press the [◀] or [▶] keys briefly to switch the verification effect.

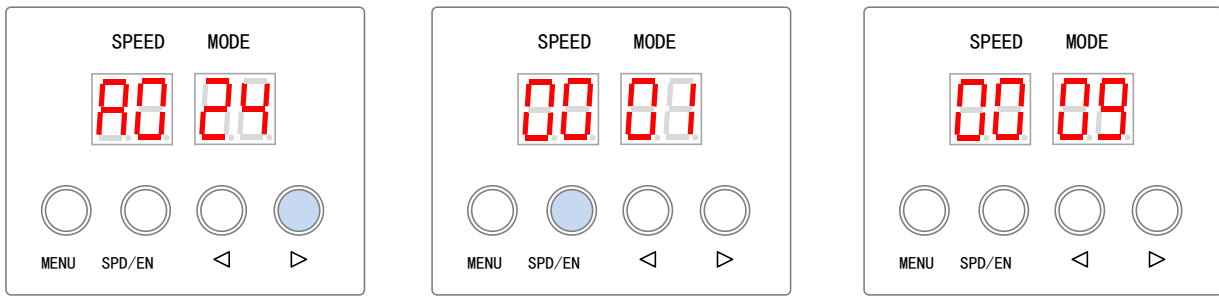


- Press the [SPD/EN] key briefly to enter the interface for setting the increment value. The digital display shows "A\*\*\*\*".  
"A\*\*\*\*" indicates the channel value (increment) that can be input for each DMX chip. The maximum value cannot exceed 192.

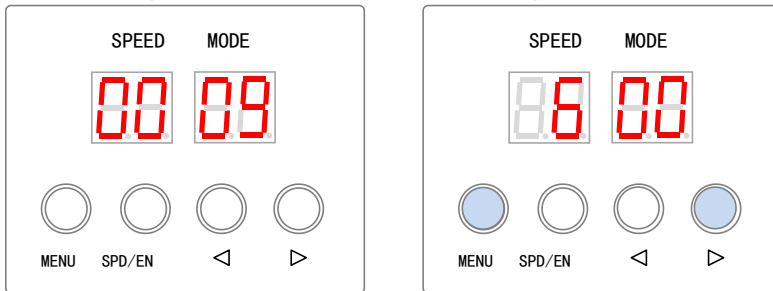
Press [◀] or [▶] briefly to change the increment value. Press [◀] or [▶] for a long time to quickly change the increment value.



- Press the [SPD/EN] key briefly to start the verification process. Press [◀] or [▶] to change the number of verification lights. Press [SPD/EN] again to reset the number of verification lights to 1.
- When in "Automatic Point-by-Point or Accumulation" mode, short pressing [◀] or [▶] will pause the process. At this point, pressing [▶] again will resume the automatic point-by-point or accumulation.



6. Press and hold the "MENU" and "▶" buttons simultaneously. The controller will return to its normal operating state, and then you can change the effect normally.



## 11. Bluetooth Control

When the controller enables the Bluetooth signal, you can access the controller's functions, speed, etc. through the mobile phone's APP program or the WeChat mini-program Eseeker. The operation methods can be found in the manual "Eseeker\_APP Operation Manual" or "Eseeker Operation Manual".

**Note:**

1. Before using the APP program or the WeChat mini-program, please turn on the Bluetooth and location switch of your mobile phone.

2. Eseeker recommends operating the controller within 20 meters without walls, and within 10 meters with walls.

1. The controller is powered on and started.

2. Turn on Bluetooth on your mobile phone:

Scan the following lotus flower code with WeChat.



APP:

Method 1: You can search for "Eseeker" in the app store and install it.

Method 2: You can scan the QR code below via WeChat to install it.

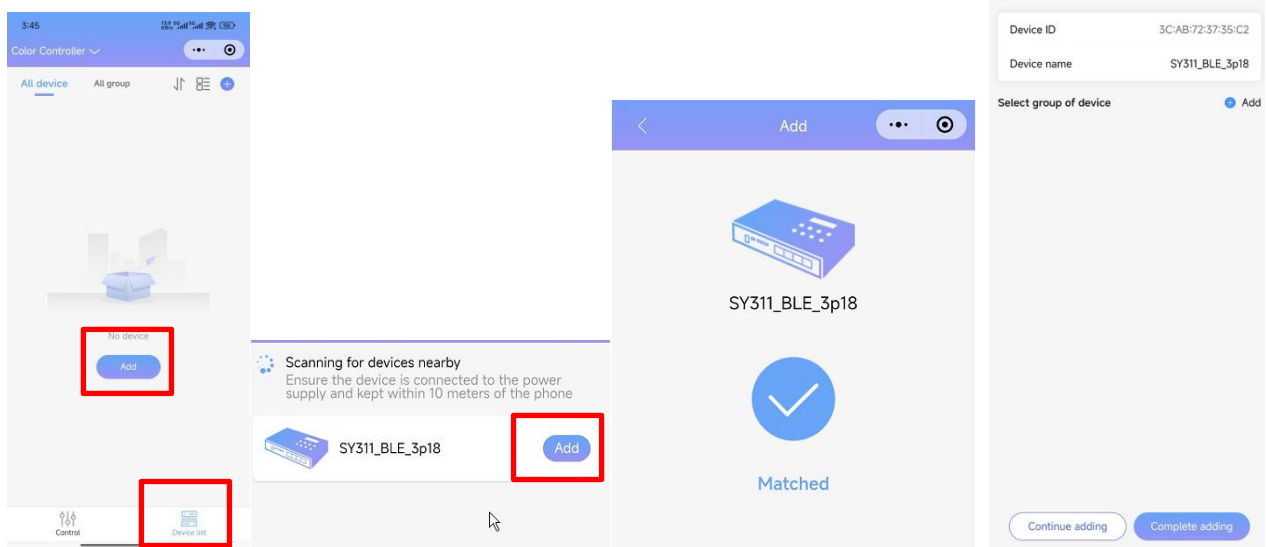


For Android systems and HarmonyOS, you can directly download the file by clicking the following link.

<http://www.swdoc.cn/f/20d2ce9de42a47fbad89/>

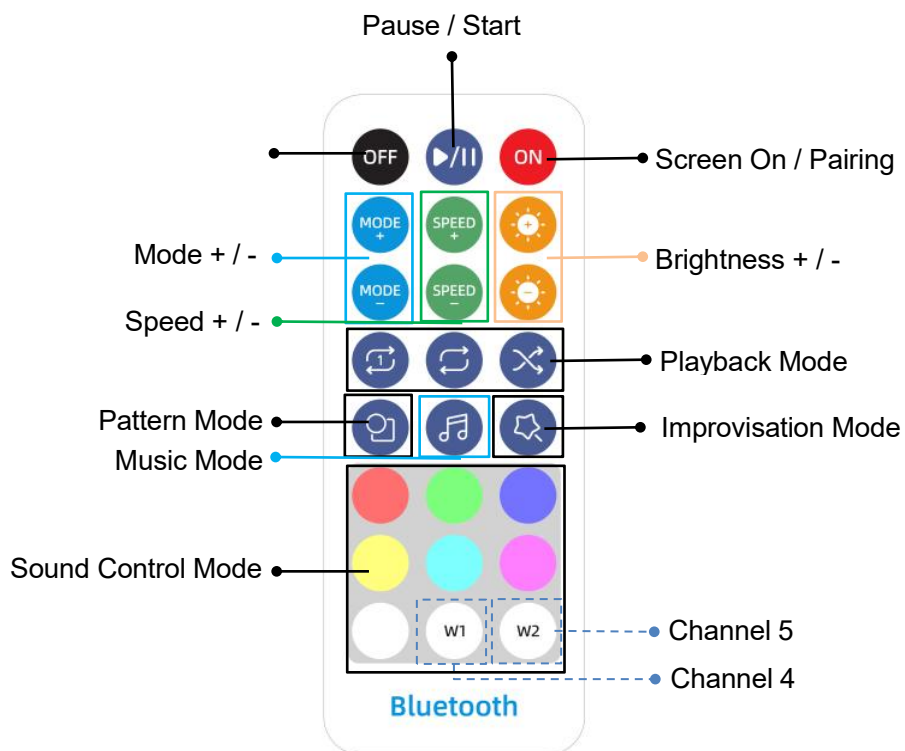
Please note that the file name after downloading must be "apk" in order for the installation to proceed normally.

### 3. Select the matching devices for connection.








- 1) Click on "Device List", then click on "Add";
- 2) Select the corresponding device and click on "Add";
- 3) The connection is successful. The interface shows "Matched", and the corresponding controller's light effect displays a white flashing effect;
- 4) You can customize and modify the device name;
- 5) Click on "Continue Adding" to connect the next device.

## 12. Bluetooth Remote Control



**Remote Control Function Description Table**

Icon	Function	Operation	Function Description	Notes
	Screen Off	Short Press	The controller outputs a pure black screen	
		Long Press	Cancel pairing function ( Press and hold the <b>【OFF】</b> button,Power on the controller, wait until it enters the working interface to complete the cancellation of pairing)	
	Screen On	Short Press	Restore the controller's normal screen output	
		Long Press	Enable pairing function (Press and hold the <b>【ON】</b> button,Power on the controller, wait until it enters the working interface to complete the activation of pairing)	
	Pause / Start	Short Press	Pause the current effect playback / Start the paused effect playback	
	Mode +	Short Press	Increase mode value by 1 (single adjustment)	
		Long Press	Continuously increase mode value (hold and adjust continuously)	
	Mode -	Short Press	Decrease mode value by 1 (single adjustment)	
		Long Press	Continuously decrease mode value (hold and adjust continuously)	
	Speed +	Short Press	Increase playback speed by one level (-1 step)	
	Speed -	Short Press	Decrease playback speed by one level (+1 step)	
	Brightness +	Short Press	Increase brightness by 20%	
	Brightness -	Short Press	Decrease brightness by 20%	
	Fixed Playback	Short Press	Switch to Fixed Playback Mode, loop a single effect	
	Sequential Playback	Short Press	Switch to Sequential Playback Mode, play effects in order from the first one, cycling through multiple effects	
	Random Playback	Short Press	Switch to Random Playback Mode, automatically and randomly select effects to play	

	Pattern Mode	Short Press	Switch to Pattern Mode, play preset effect files stored in SD card or nandflash	Ensure the storage device is properly connected and contains valid effect files
	Sound Control Mode	Short Press	Currently not supported	This function is not available in the current version
		Long Press		
	Improvisation Mode	Short Press	Switch to Improvisation Mode: play the controller's built-in default effects	Built-in effects are fixed, no external file required
	Effect Color	Short Press	Output color effects: W1 corresponds to Channel 4, W2 corresponds to Channel 5	W1: Valid when the controller is set to 4-channel mode W2: Output not currently supported

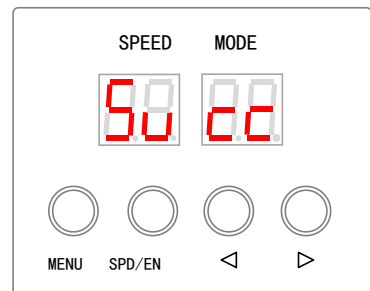
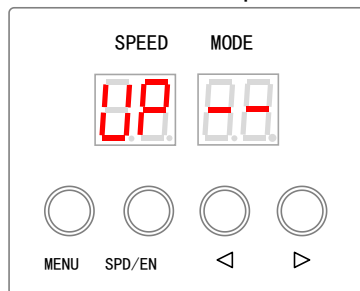
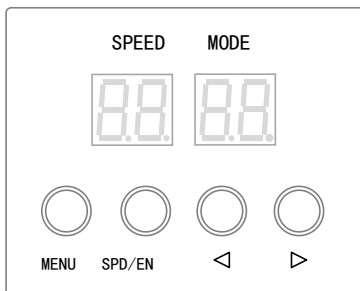
**Note:**

1. If the remote control indicator does not light up during operation, please check and replace the battery.
2. It is recommended to operate the controller within a 20-meter range in an unobstructed (no walls) environment to ensure stable signal transmission.

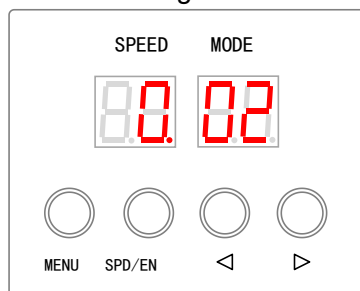
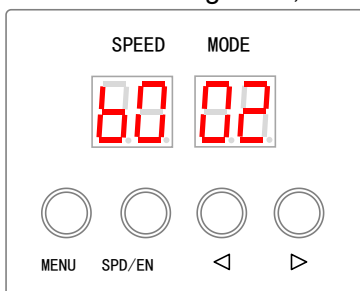
### 13. Standalone firmware upgrade program

The controller supports reading the SD card parameters file (T311U\_Nxx.bin) to update its procedure. Please refer to the follow steps.

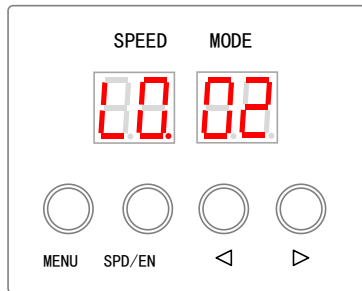
- 13.1. Please refer to MANUAL FORMAT AND COPY CARD and copy the T311U\_Nxx.bin file into the SD card.
- 13.2. Power on the controller after inserting the SD card. The nixie display shows "UP --" and it will start to update.
- 13.3. The nixie display shows "Succ" when finishing update. Power off the controller and insert the SD card with the xx.bin file into. After the controller is powered on, it can continue to work.



- 13.4. For details on how to check the firmware version, after the controller is powered on or the firmware is upgraded, the nixie display will show the version information. "b002" indicates the boot version and can be ignored; "0.02" represents the regular firmware version.

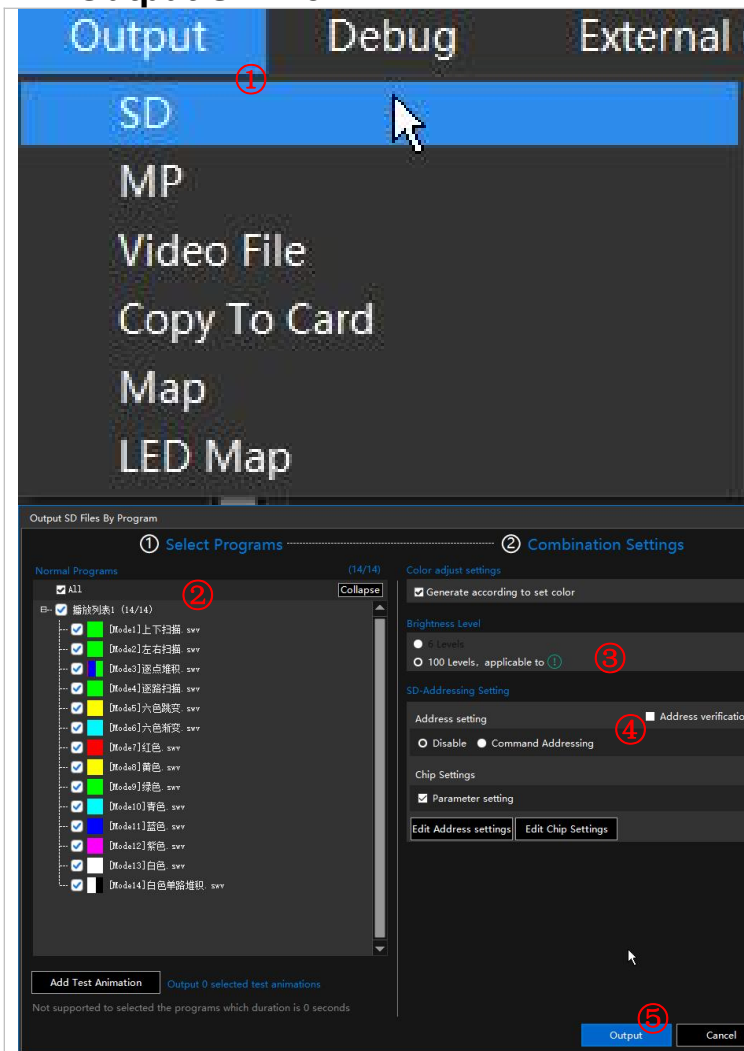


13.5. SW301 Compatible Version: The power-on display version is "L0.02". The "L" indicates the firmware version of the SW-301 compatible version. (Note: The current regular firmware version and the SW301 compatible version cannot be used together.)



## 14. Output SD card files and card copying

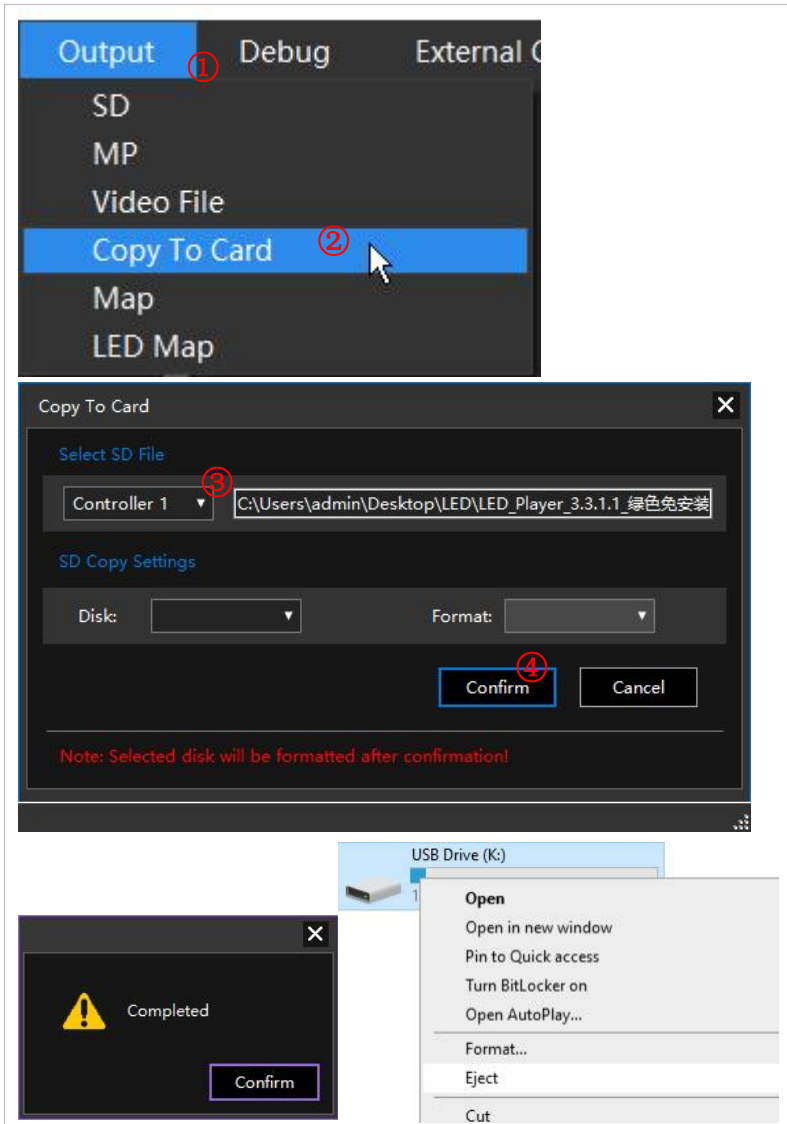
### 14.1. Output SD file



- ① Click on LED Player **【Output】** - **【SD】** , then open the settings window;
- ② Select the program files to be output;  
The total number of selected programs must be less than 96, and the single program frame count should not exceed 65,000 frames;
- ③ Select "Color adjust Settings";
- ④ Select "Brightness Level";
- ⑤ Click on **【Output】** .

Note: By default, all programs and one-click coding files will be output; when no effect programs are set for the project, output is not supported.

## 14.2. Software Card Insertion

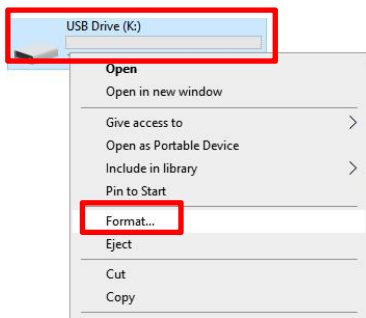


- ① Insert the SD card into the computer;
- ② Click on LED Player [Output] - [Copy To Card], and the card-copying window will open;
- ③ Select the controller number to be output (the corresponding file will be automatically read);
- ④ Click [Confirm].

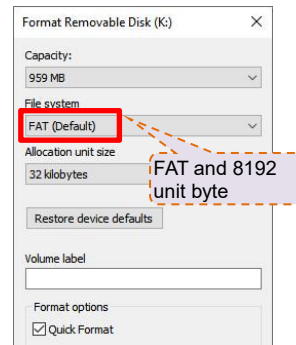
\*After the card is copied, please right-click on the SD card on my computer and select "Safe Eject".

### 14.3. MANUAL FORMAT AND COPY CARD

1) Right click the disk where the SD card locates.

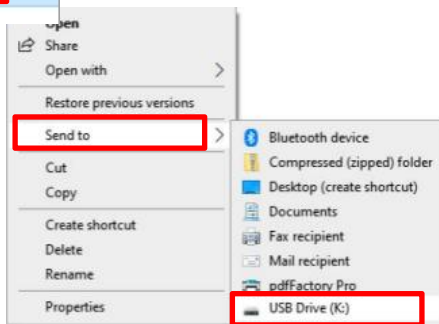
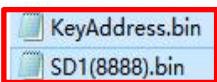


2) Select File system FAT and 8912 (can check “Quick Format” ) click START.

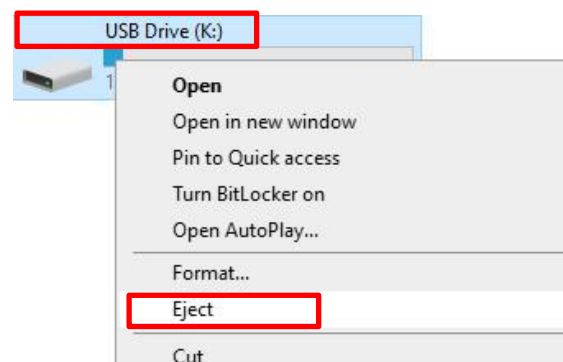


3) Right click SD\*(8888).Bin file and KeyAddress.bin file, send the file to removable disk.

(KeyAddress.bin is a one-key write code file, only copy this file when one-key write code is required).



4) Right click removable disk and click “Eject” .







### 15. ERROR CODE AND TROUBLE SHOOTING

Error	Introduction	Reason
E 01	No SD card or SD card port is broken.	1. Insert the SD card. 2. If an error occurs when inserting the SD card, the SD card holder is damaged. Contact us.
E 02	SD card no response or breakdown.	1. Please replace the new SD card. 2. If an error occurs when inserting the SD card, the SD card holder is damaged. Contact us.
E 03	There is no file in the SD card or SD card is breakdown.	Copy SD card file again.
E19	The effect file does not match.	SD card file error. or unfinished video merging.Please open the corresponding code to output the SD card file and copy again.
E21	The updated operation is wrong.	Please update again.
E23	The update file is lost.	Please contact us.
E66	The number of channels set in the controller does not match the number of channels in the effect	1. Please set the controller's channel number according to the number of channels in the playback effect file.

Error	Introduction	Reason
	file.	2. Please replace the effect file with the same number of channels as the controller.
r03	Backup files exceed nandlash size	1. Use effect files no larger than 128MB

## 16. FITTINGS

Picture	Name	Quantity	Remarks
	SD 卡	1	
	6P terminal blocks	3	
	Flat-head screwdriver	1	
	Bluetooth remote control N5	Optional	
	SW301 compatible firmware	Optional	For details, please refer to 13.5

Note:  
 Right of revising this specification reserved.  
 (Please understand there will be no extra notice when change is occurred.)  
 The information in the manual is for reference only,  
 please don't regard it as guarantee of the product.