K-SY-408W-AVMS

K-SY-408W-AVXM

K-SY-408W MANUAL

Model: K-SY-408W-AVMS-B2, K-SY-408W-AVXM-B2

2016-11

Contents

1. FUNCTION OVERVIEW

1. 8-channel output signal (data-independent). Fit to big project or remote transmission, can many cascade combination use.
2. Include profession effect production software, user can arbitrarily make effect save in SD card for use.
3. Control the LED digital tube screen and LED pixel light screen those with variety of regular chips.

   Single chip lighting fixture: D**S series, D**J series.

   Single-wire lighting fixture: TM18** series, UCS19** series, UCS29** series, WS2811, TLS3001(1Mhz).

   Three-wire lighting fixture (should connect with our C13 sub-controller in series): UCS6803, P9813, LPD8806.

   DMX512 lighting fixture: SW512 lighting fixture, UCS512 lighting fixture, SM512AP lighting fixture, standard DMX512 lighting fixture on the market, UCS512C lighting fixture, SM16512 lighting fixture.
4. Effect, speed, sensitivity of volume and brightness are adjustable while the latter two are optional.
5. Audio control, voice control, custom list and DMX512 decoding are optional as additional functions.

2. TECHNICAL PARAMETERS

2.1 PRODUCT INFORMATION

Size:	220L×143W×45H (mm)
Input voltage:	AC 100V - 240V
Output signal:	TTL & RS-485 * 8 channels
Pixel quantity drove:	Single chip lighting fixture: 960 points ×8 channels,
	Single-wire lighting: 1024 points ×8 channels,
	standard DMX512light: 168 points ×8 channels,
	extensible DMX light: 336 points ×8 channels,
Output power:	<3W
Working temperature:	-15℃～60℃
Relative humidity:	≤50% RH
Ingress protection:	IP0 (non dustproof, non waterproof)
Working environment:	Please install under dry indoor condition, avoid any dust, moist and rain.
Weight:	1450g (N.W. 1230g)
Fittings:	×1, (1m)×5/, (1m)×1, (1.5m)×1,

2.2 ERROR CODE

Explanation of controller error:

| Error	Introduction	Reason
01	No SD card	Poor seat connection. / No SD card.
02	SD card no response	Card is broken. / Card doesn't support read sequentially.
03	Cannot reset SD card	Card is broken. / Card doesn't support read sequentially.
04	Cannot activate SD card	Card is broken. / Card doesn't support read sequentially.
05	Cannot read SD card	Cannot read part of the card. / Bad connection.
06	Cannot find feature code	Card is unformatted. / No files.
07	SD card file sequence doesn't match the controller	SD card file error. / Unfinished video synthesis.
09	Control sequence doesn't match file sequence	Player setting does not match the cover number.
10	Wrong password	Input wrong password
11	UID does not match	UID on main controller does not match the one on slave controller in cascad
12	UID error in Config file	UID on Config file does not match the one on controller
13	Controller is not fully unlocked	When controller is reading Config file, it is not fully unlocked
14	UID error on SD card	UID on SD card does not match the one on controller

3. CONNECTION MODE

3.1 INPUT INSTRUCTION

| Interface / Button	Function
ON/OFF	Switch of power supply.
SD	SD card slot.
AUDIO	Audio input, connect with audio equipment by wires (as CD player, Micophone).
IN	Insert network cable, signal output, connect with previous equipment as a series.
OUT	Insert network cable, signal output, connect with next equipment as a series or no need.

3.2 OUTPUT INSTRUCTION

The circuit should be adjusted in different applications. It is well set in accordance with actual project before delivery. User cannot change the application optionally. Please connect the cables in accordance with silk print on lighting fixture.

TTL signal output connection:
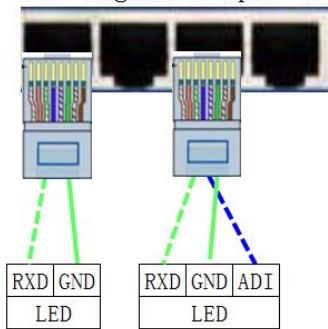
485 signal output connection:
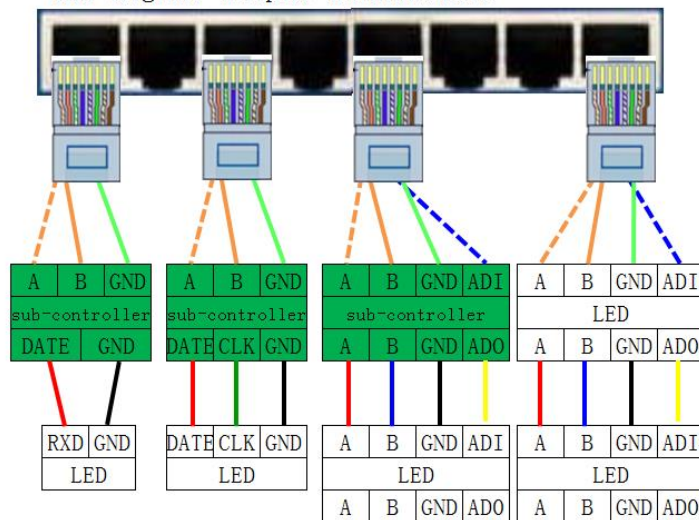
★ Signal cables connection notes:
1. Use UTP—Unshielded Twisted Pair(resistance per 100M<10Ω), low quality Ethernet cables and telephone cable are unavailable.
2. Use one group twisted pair, suggest green + green white or orange + orange white. The quality and color of the cable are very important. Blue 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 lighting fixture. *Cannot connect with lighting fixture 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.
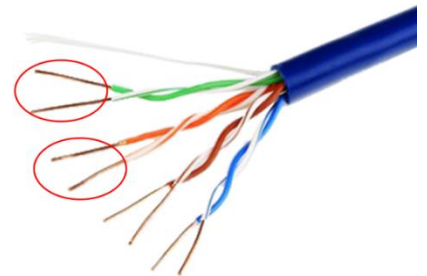
★ Transmission distance:

transmission type	Transmission Signals	transmission media	transmission distance	Notes
Master control-> slave control	RS-485	UTP-Unshielded Twisted pair	50～100	
Master control/slave control->SW Lighting Fixtures	TTL	UTP-Unshielded Twisted pair	30～50	
		two core copper wire	5～30	
Master control/slave control->Other Lighting Fixtures	TTL	UTP-Unshielded Twisted pair	5～20	
		two core wire	1～5	
Master control/slave control->DMX Lighting Fixtures	RS-485	UTP-Unshielded Twisted pair	30～50	The addr wire must be within 5 meter.
		three core wire	1～20	
		four core wire	1～20	
SW Lighting Fixtures->SW Lighting Fixtures DMX Lighting Fixtures->DMXLighting Fixtures	TTL	UTP-Unshielded Twisted pair	5～20	meters controlled less if over 5 meter
		two core wire	1～5	
		three core wire	1～5	
Other Lighting Fixtures->Other Lighting Fixtures	TTL	UTP-Unshielded Twisted pair	1～2	meters controlled less if over 1 meter
		two core wire	0.1～1	

4. BASIC OPERATION

4.1 BUTTONS FUNCTION

| Button	Function	Explanation
MENU	Menu key	Selection picture, audio control, Voice control+audio mode. Hold press 2 seconds to enter menu setting.
SPD/EN	speed key	Common mode: 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 15, 20, 30, 50, 80, 99. Communication mode: 04AC, 06AC, 08AC, 10AC, 12AC, 20AC, 50AC, 99AC.
	confirm key	Press it to save current setting on the menu setting.
MODE ◁	mode-key	Mode minus selection. Long press can be quickly change.
MODE ▷	mode+key	Mode add selection. Long press can be quickly change.

4.2 MODE SELECTION

4.2.1 CONTROL MODE SWITCHING

Press "MENU" button, select audio control, voice control or pictures 3 control modes.
When switch the mode, it will memorize previous effect of this mode and start to play.
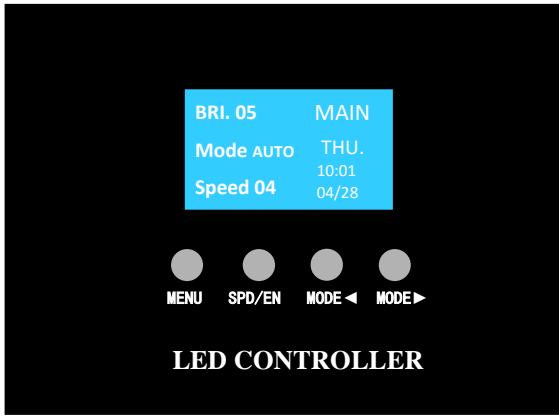
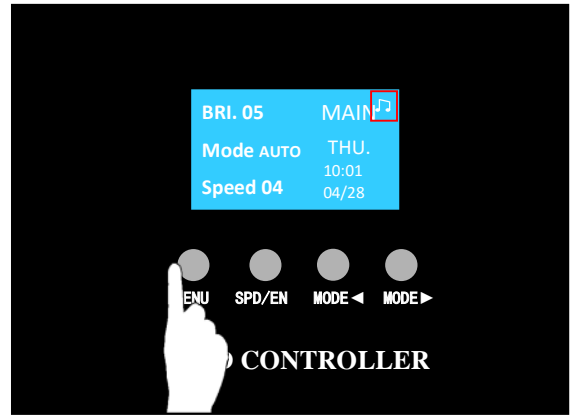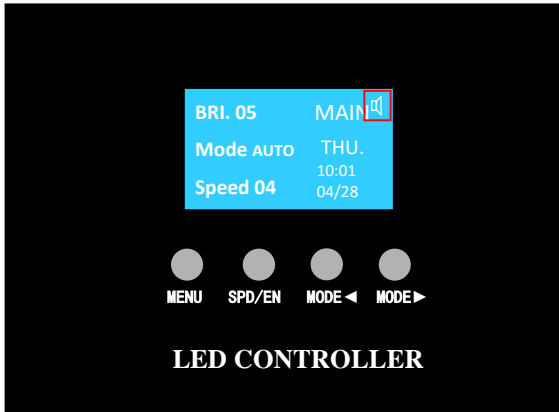| Control Mode	Icon	Automatic Mode	Manual Mode (Default)	Remark
Voice Control	🔊	Automatic	01-19	User can set the quantity of effects by software. No more than 96 effects.
Audio Control	♫	Automatic	01-19	
Picture		Automatic	01-55 (+1) / 20-70 (+1)	
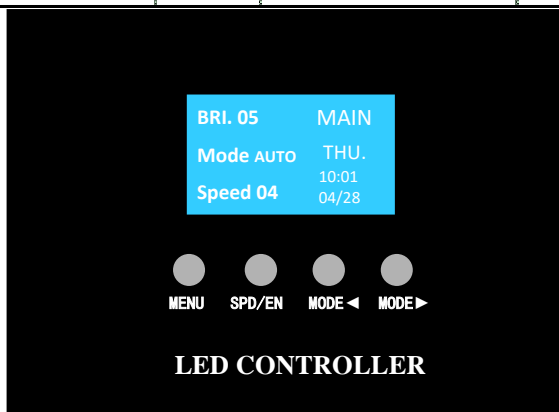
Picture mode
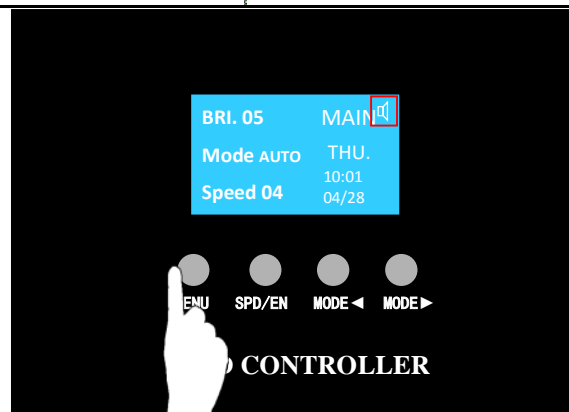
Press "MENU" once to become voice mode (optional)
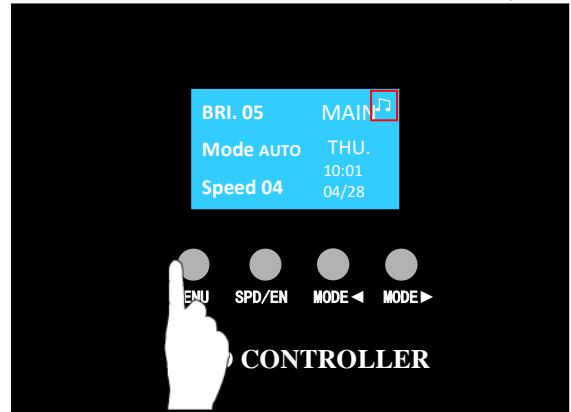
Picture mode

Press "MENU" once to become audio mode (optional)
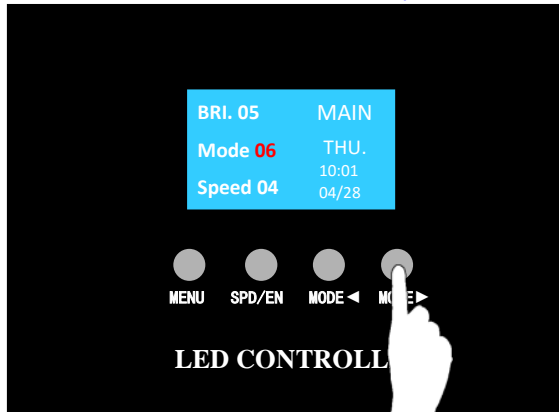

Voice mode

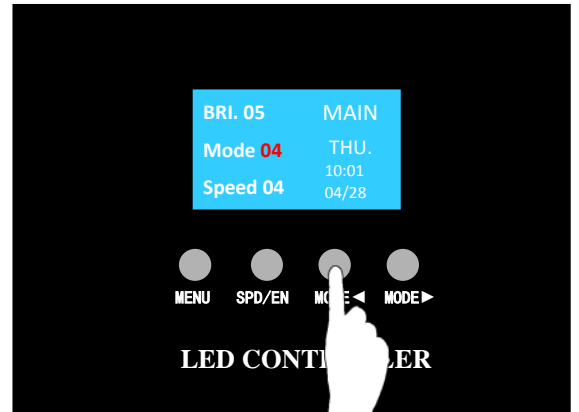

Press "MENU" once to become audio mode (optional)

4.2.2 EFFECT SWITCHING

Press "MODE◄" and "MODE►" on control panel to select effects.
(Apply to voice control, audio control and picture three control modes.)
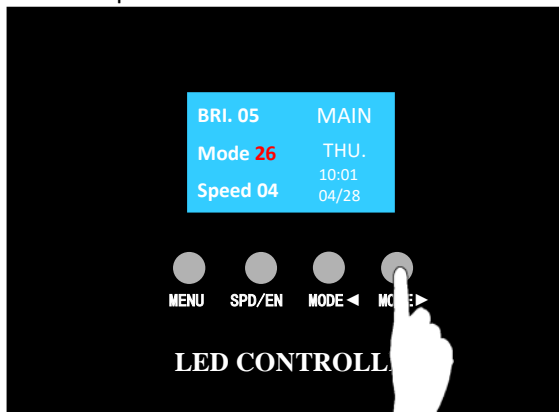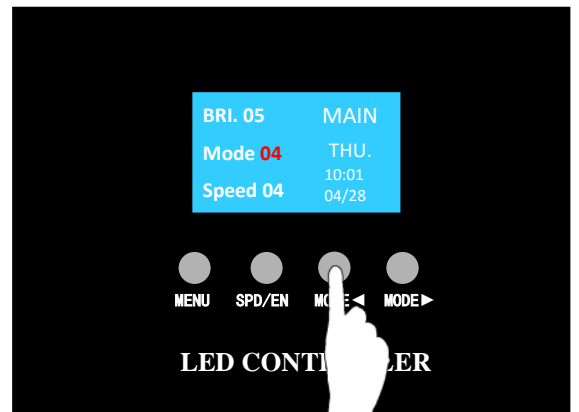

Press "MODE►" 6 times, the mode is 6.

Press "MODE◄" twice, the mode is 4.

Long press "MODE◄" or "MODE►" to fast increase or decrease the effect mode. Release the button until the screen shows required mode.
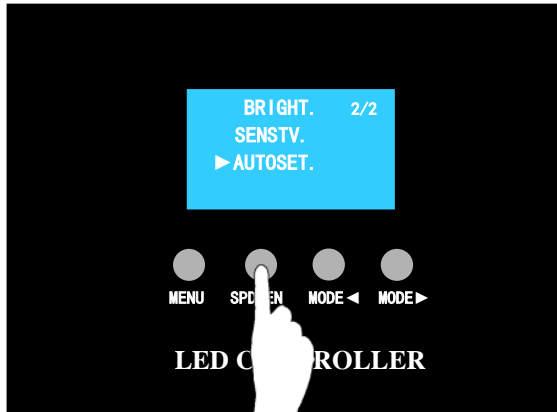

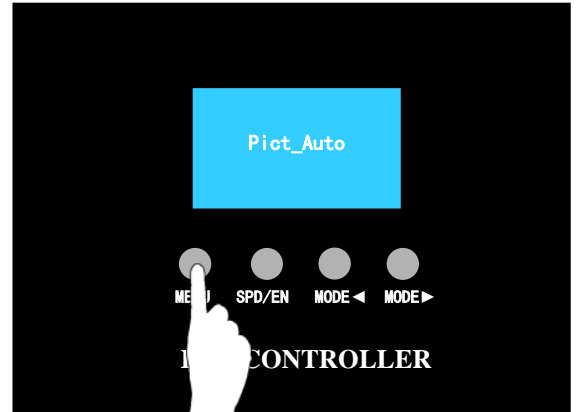Long press "MODE►", release the button when mode is 26.

Long press "MODE◄", release the button when mode is 04.

4

AUTOSET: Long press "MENU" button 2 seconds to open the menu. Press "MODE◀" and "MODE▶"to select "AUTOSET" and press "SPD/EN" to enter. Use "MODE◀" and "MODE▶" to select auto effect.

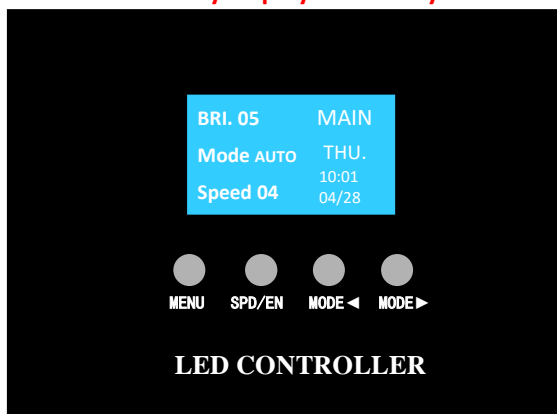|	
BRIGHT. 2/2 SENSTV. ▶AUTOSET. MENU SPD/EN MODE◀ MODE▶ LED CONTROLLER	Pict_Auto MENU SPD/EN MODE◀ MODE▶ LED CONTROLLER
Select "AUTOSET" and press "SPD/EN"to enter.	Press "MENU"once, Mode=Auto.

4.3 SPEED SELECTION

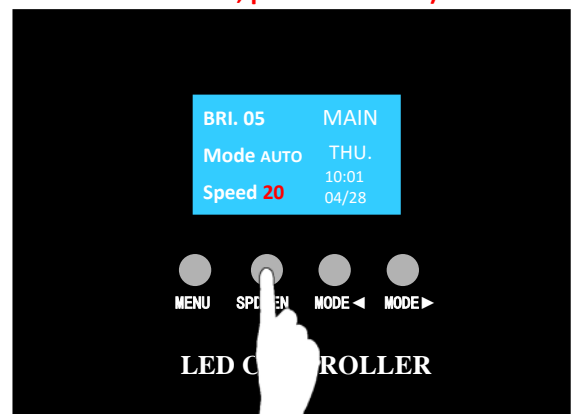Press button "SPD/EN" on control panel to select play speed, the less the rate, the quicker the speed.

Parameters	Speed Display															Notes
Main Control speed	03	04	05	06	07	08	09	10	11	12	15	20	30	50	80	99	Independent Speed
	04 AC		06 AC		08 AC		10 AC		12 AC		20 AC		50 AC		99 AC		Synchronization Speed
Frame Rate(ms)	30	40	50	60	70	80	90	100	110	120	150	200	300	500	1000	2000	
Frame Per Second	33	25	20	17	14	13	11	10	9	8	7	5	3	2	1	0.5	

※ Independent speed: Independent speed: this speed is decided by the meters of hurdle lights of clients, if it is less than actual meters, the data won't display.

※ Synchronization speed: All the controllers set same speed and same mode, connect to power in the same time. They can reach synchronization.
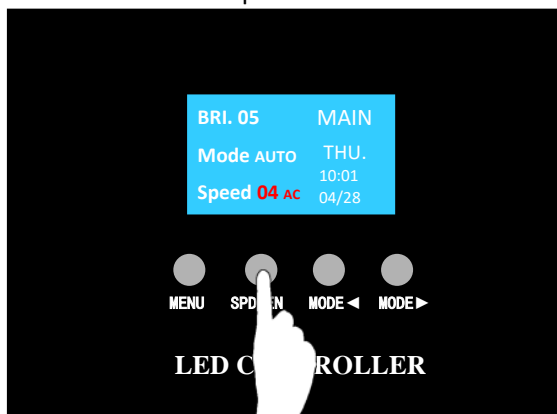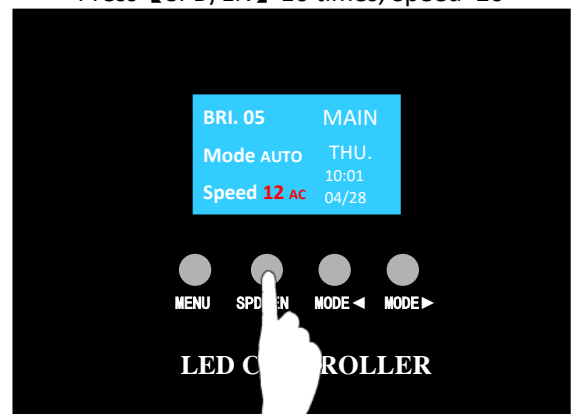**(Same frame rate may display differently if controller model is not the same, please confirm.)**

BRI. 05 MAIN Mode AUTO THU. 10:01 Speed 04 04/28 MENU SPD/EN MODE◀ MODE▶ LED CONTROLLER	BRI. 05 MAIN Mode AUTO THU. 10:01 Speed 20 04/28 MENU SPD/EN MODE◀ MODE▶ LED CONTROLLER
Speed=04	Press【SPD/EN】10 times, Speed=20
BRI. 05 MAIN Mode AUTO THU. 10:01 Speed 04 AC 04/28 MENU SPD/EN MODE◀ MODE▶ LED CONTROLLER	BRI. 05 MAIN Mode AUTO THU. 10:01 Speed 12 AC 04/28 MENU SPD/EN MODE◀ MODE▶ LED CONTROLLER
Press "SPD/EN" once again, Speed =04AC	Press "SPD/EN" 4 times, Speed =12AC

4.4 MENU SETTING

CONTROLLER

LED CONTROLL

Long press "MENU" button on control panel for 2 seconds to enters menu setting up mode.
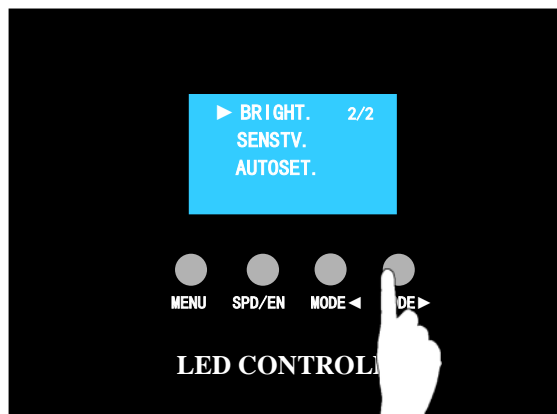
Long press "MENU" button for 2 seconds to exit menu setting up mode and return to control mode.

Select function through "MODE◄" and "MODE►". Details functions are shown as below:

	MENU	LED Display	Operation
MENU SETTING	MAIN/SUB	MAIN/SUB	1) Press "MODE◄" and "MODE►" to select MAIN/SUB. Press "SPD/EN" enter. 2) Press "MODE◄" and "MODE►" to select main control properties. Resting Stste only "MENU" can use. Other functions are controlled by main controller. 3) Press "SPD/EN" to save. And press "MENU" return to parent menu. ※ **Cannot activate the function of this controller by pressing a key.**
	DMX ADDR	DMX ADDRESS ***	1) Press "MODE◄" and "MODE►" to select DMX ADDR. Press "SPD/EN" enter. 2) Press "MODE◄" and "MODE►" to select address data (long press change quickly). 3) Press "SPD/EN" to save. And press "MENU" return to parent menu. SY DMX additional function occupy 8 channels, next DMX equipment address is X+8.
	TIME DATE	TUESDAY 00:01 2016/11/01	1) Press "MODE◄" and "MODE►" to select TIME DATE. Press "SPD/EN" enter. 2) Press "MODE◄" and "MODE►" to select the currnet data. 3) Press "SPD/EN" jump to the next data setting. And press "MENU" return to parent menu.
	LANGUAGE	CHN./ENG.	1) Press "MODE◄" and "MODE►" to select LANGUAGE. Press "SPD/EN" enter. 2) Press "MODE◄" and "MODE►" to select LANGUAGE diplay. 3) Press "SPD/EN" to save. And press "MENU" return to parent menu.
	BRIGHT.	BRIGHTNESS 5	1) Press "MODE◄" and "MODE►" to select BRIGHT. Press "SPD/EN" enter. 2) Press "MODE◄" and "MODE►" to select brightness. (1-5 for selection. 1 is the darkest, and 5 is the brightest.) 3) Press "SPD/EN" to save. And press "MENU" return to parent menu. ※ **This function is applicable for Single-wire lighting fixtures only. E.g. TM1804, BS0825.**
	SENSTV.	SENSITIVITY 2	1) Press "MODE◄" and "MODE►" to select SENSTV. Press "SPD/EN" enter. 2) Press "MODE◄" and "MODE►" to select sensitivit. (0-5 for selection. 0 is the dullest, and 5 is the most sensitivite.) 3) Press "SPD/EN" to save. And press "MENU" return to parent menu. ※ **Apply to the controller with voice control or audio control only.** **Merged SD.BIN file must contain musical effects.**
	AUTOSET.	AUTO_SET Pict._Auto	1) Press "MODE◄" and "MODE►" to select AUTO_SET. Press "SPD/EN" enter. 2) Press "MODE◄" and "MODE►" to select auto setting. 3) Press "SPD/EN" to save. And press "MENU" return to parent menu.

5. ADDITIONAL FUNCTION

5.1 AUDIO & VOICE CONTROL

It includes audio and voice control function.

Press "MENU" to transfer voice control or audio control. The effect of the two controls is same. Voice control and audio control quantity can be changed according client's needs.

※ **Please ensure there are .YEL/.YIN format effects in the software before merging files in SD card. Otherwise the controller will be unavailable.**

◆ Audio control

Connect controller with audio output equipment by audio line. Manual adjust to audio control mode. The controller will output Different audio color column based on voice volume. Higher volume, Higher color column. Lower volume, lower color column.
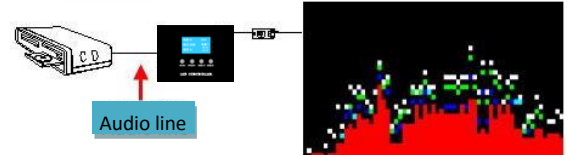
Audio line

Additional fittings: *1

※ Audio control mode default is 1-19. Client can make different audio control effects according to your needs.

When the controller is power off, plug one end of audio line into AUDIO port, and plug the other end into music player. Then switch on the power of controller and music player.

Ensure the status is "Audio control". It can be seen the effect of lamp will change along with the rhythm of music.

AUDIO   IN   OUT   ON/OFF   AC 220V   SD

◆ Voice control

Controller with built-in microphone, put the controller near voice equipment and make the voice clear. Manually adjust to voice mode. Different audio color columns base on voice volume. Higher volume, higher color column. Lower volume, lower color column.
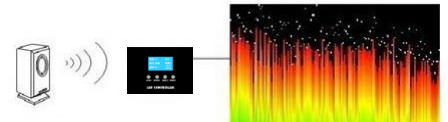
Additional fittings: None

※ Voice control mode default is 1-19. Client can make different audio control effects according to your needs.

Voice control / audio control effects show:

Low volume	Medium volume	High volume

Low volume	Medium volume	High volume
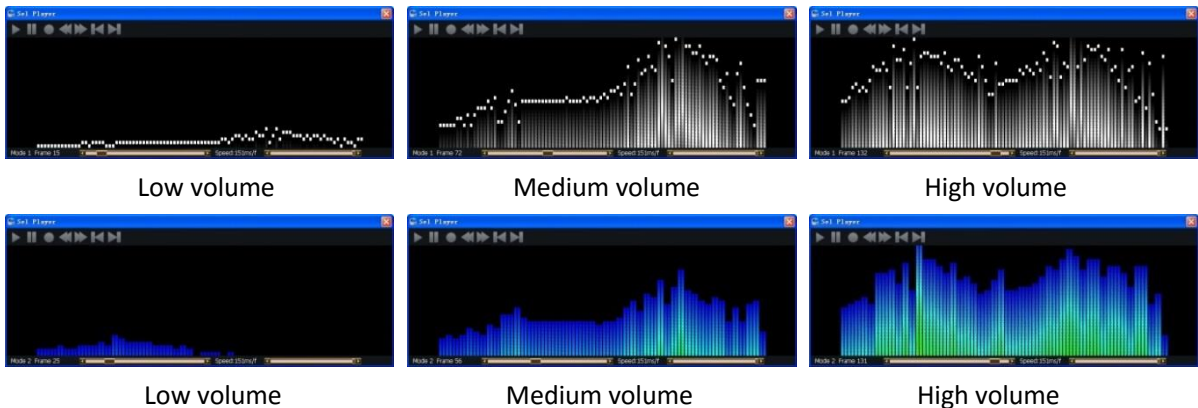
5.2 CASCADE FUNCTION

If single controller cannot drive the whole project lights, can try cascade controllers. It connects Main controller with slave controllers by cables to make the whole project synchronization.

K-SY-408W-AVMS can be main/sub controller optionally. K-SY-408W-AVXM can be main controller only, it will be out of controller when it is set as sub controller.

The normal controller (the model is AVMS.) should be set as sub controller.

1. Long press "MENU" for 2 seconds to enter MENU SETTING UP mode.

2. Press "MODE◄" and "MODE►" select "MAIN / SUB". Press "SPD/EN" enter.

3. Press "MODE◄" and "MODE►" to select "SUB" control. Press "SPD/EN" to save.

Change "SUB" into "MAIN" at the end to set as main controller.

Switch off the controller. Plug a head of network cable into main controller "OUT", plug the other head into sub-controller "IN".

Then restart the controller.

Slave control S can only start to work by connecting to Master control. CASADE controller uses high quality cables as connection, the distance can reach 100M (Please add A86 relay amplifier if more than 100M).

GND and DATA signals only use Orange white + orange twisted pair wires. Clients can extend the cables or by clipping straight-through wires (cables two ends based on T568B).

straight-through wires: the distance must be less than 100M.

Cascade Pictures:
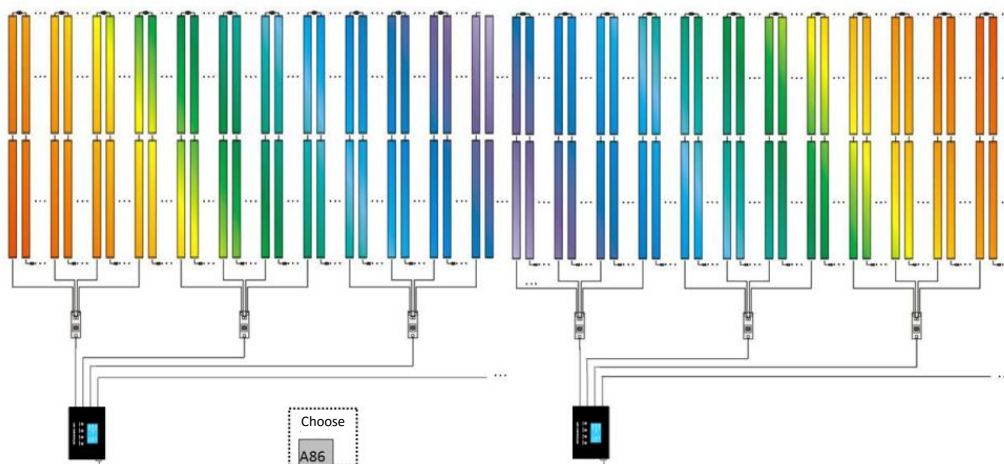
If the distance between casade controllers is more than 100M, Please add A86 repeater.

5.3 DMX512 DECODING

User can adjust the effect, speed and brightness by DMX512 control console. The same or different addresses can be set in the controller, so that DMX512 control console is able to control several controllers with same or different effects. *The actual effect is determined by SD card and mode selection of the controller.*

K-SY-408W-AVXM can connect with DMX console by using DMX cable.

Port Introduction:

P1 = GND；P2 = D-/B；P3 = D+/A

Male port is the receiving terminal. It receives the signal of DMX512 control console or the output terminal of previous device. Female port is the transfer terminal to connect with next DMX512 controller or DMX device.

Address Setting:

01)Long press "MENU" for 2 seconds to enter MENU SETTING UP mode.

02)Press "MODE◄" and "MODE►" to select DMX ADDR, Press "SPD/EN" enter.
    The controller screen shows "DMX ADDRESS: ***"

03)Press "MODE◄" and "MODE►" to select address data (long press change quickly).
    ※ Formula of address setting: **(N-1)* 8 + 1**. N represents the Nth controller.
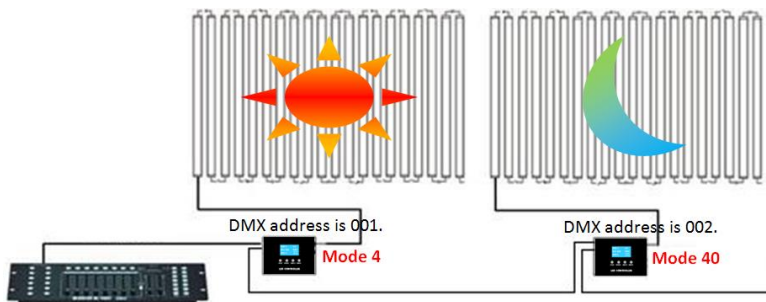
04)When address setting is finished, press "SPD/EN" to confirm, then press "MENU" to return to status of general mode.

※ If the distance between DMX 512 decode controllers exceeds 100m, the repeater A88D will be required.
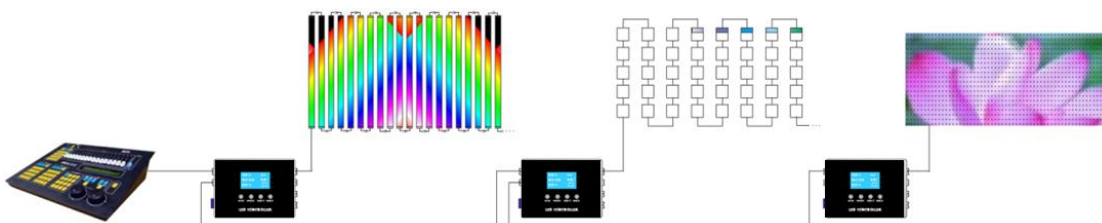
Controllers with the same parameter and address:

DMX address is 001.   Mode 3
DMX address is 001.   Mode 3
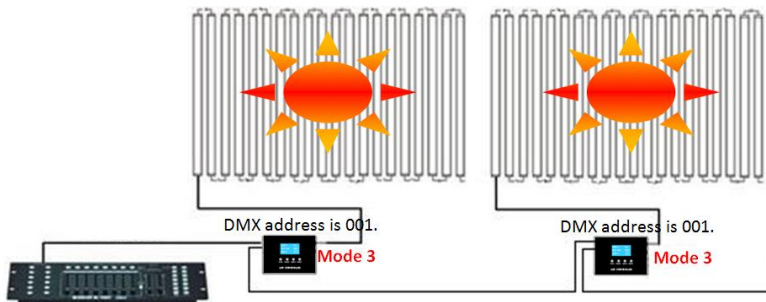
Controllers with the same parameters but different addresses:

DMX address is 001.   Mode 4
DMX address is 002.   Mode 40

Controllers with the same addresses but different parameters:

Introduction of Push Rod of DMX Control Console:

Label Diagram: **DC Status**

CH 01 — Sensitivity (Position of Push Rod)

Show	Range	
05	215	~ 255
04	172	~ 214
03	129	~ 171
02	86	~ 128
01	43	~ 85
00	00	~ 42

CH 02 — Speed

Show	Range	
99	240	~ 255
80	224	~ 239
50	208	~ 223
30	192	~ 207
20	176	~ 191
15	160	~ 175
12	144	~ 159
11	128	~ 143
10	112	~ 127
09	96	~ 111
08	80	~ 95
07	64	~ 79
06	48	~ 63
05	32	~ 47
04	16	~ 31
03	00	~ 15

CH 03 — Effect

Show	Range	
Audio Control	170	~ 254
Voice Control	85	~ 169
Picture Control	00	~ 84

CH 04 — Mode (Tensdigit)

Show	Range	
09	225	~ 255
08	200	~ 224
07	175	~ 199
06	150	~ 174
05	125	~ 149
04	100	~ 124
03	75	~ 99
02	50	~ 74
01	25	~ 49
00	0	~ 24

CH 05 — Mode (Singledigit)

Show	Range	
09	225	~ 255
08	200	~ 224
07	175	~ 199
06	150	~ 174
05	125	~ 149
04	100	~ 124
03	75	~ 99
02	50	~ 74
01	25	~ 49
00	0	~ 24

CH 06 — /

CH 07 — Sync Status

Show	Range	
AC	128	~ 255
DC	00	~ 127

CH 08 — Brightness

Show	Range	
05	204	~ 255
04	153	~ 203
03	102	~ 152
02	51	~ 101
01	0	~ 50

Label Diagram: **AC Status**

CH 01 — Sensitivity (Position of Push Rod)

Show	Range	
05	215	~ 255
04	172	~ 214
03	129	~ 171
02	86	~ 128
01	43	~ 85
00	0	~ 42

CH 02 — Speed

Show	Range	
99AC	224	~ 255
50AC	192	~ 223
20AC	160	~ 191
12AC	128	~ 159
10AC	96	~ 127
08AC	64	~ 95
06AC	32	~ 63
04AC	0	~ 31

CH 03 — Effect

Show	Range	
Audio Control	170	~ 254
Voice Control	85	~ 169
Picture Control	0	~ 84

CH 04 — Mode (Tensdigit)

Show	Range	
09	225	~ 255
08	200	~ 224
07	175	~ 199
06	150	~ 174
05	125	~ 149
04	100	~ 124
03	75	~ 99
02	50	~ 74
01	25	~ 49
00	0	~ 24

CH 05 — Mode (Singledigit)

Show	Range	
09	225	~ 255
08	200	~ 224
07	175	~ 199
06	150	~ 174
05	125	~ 149
04	100	~ 124
03	75	~ 99
02	50	~ 74
01	25	~ 49
00	0	~ 24

CH 06 — /

CH 07 — Sync Status

Show	Range	
AC	128	~ 255
DC	0	~ 127

CH 08 — Brightness

Show	Range	
05	204	~ 255
04	153	~ 203
03	102	~ 152
02	51	~ 101
01	0	~ 50

★ When the fastest speed of software is 5, it will display 5 in the controller even it is in 3-5.
  It will display accordingly from 6.
★ **The channel will be blank if the controller doesn't have corresponding function.**

5.4 BRIGHTNESS

1. Long press "MENU" for 2 seconds to enter MENU SETTING UP mode.

2. Press "MODE◄" and " MODE►" select "BRIGHT.", Press "SPD/EN" enter.

3. Press " MODE◄" and " MODE►" select Brightness. (5 is 100% bright, 4 is 50%, 3 is 25%, 2 is 12.5%, 1 is 6.25%.)

4. Press "SPD/EN" to save. And press "MENU" return to parent menu.

　※ **This function is applicable for Single-wire lighting fixtures only. E.g. TM1804, BS0825.**
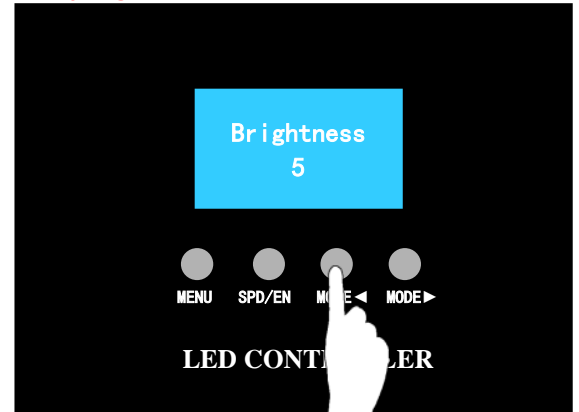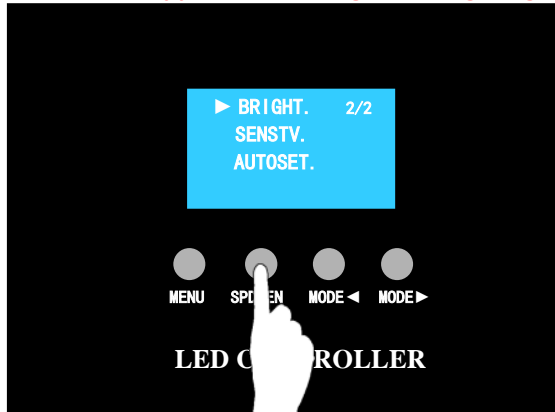
5.5 SENSITIVITY

1. Long press "MENU" for 2 seconds to enter MENU SETTING UP mode.

2. Press "MODE◄" and " MODE►" select "SENSTV.", Press "SPD/EN" enter.

3. Press " MODE◄" and " MODE►" select senvitity. (5 is 200%, 4 is 160%, 3 is 130%, 2 is 100%, 1 is 67%, 0 is 50%.)

4. Press "SPD/EN" to save. And press "MENU" return to parent menu.

※ **Apply to the controller with voice or audio control only. Merged SD.BIN file must contain musical effects.**
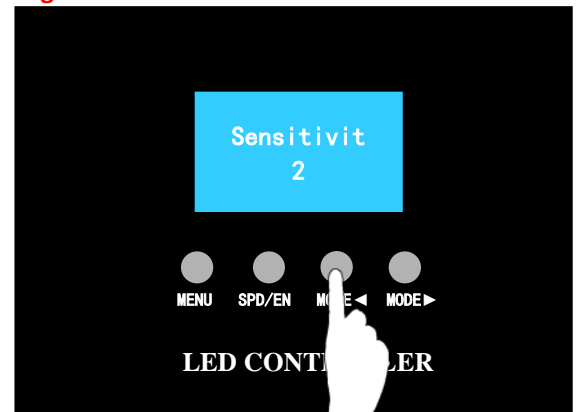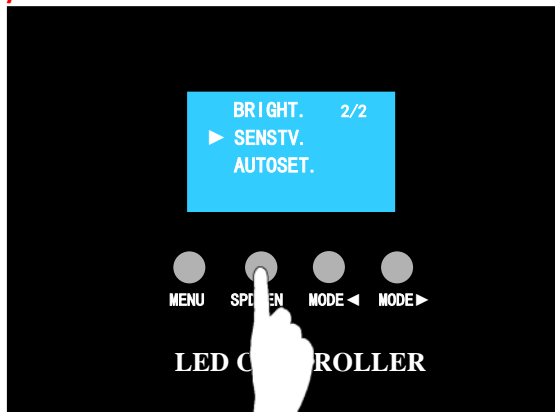
5.6 LIST SETTING

According to the request, user can set specific effect in the controller directly instead of changing the file in SD card. Only two lists can be set, maximum 12 effects in each list.

Please refer to the example of setting list below. (List 1: Mode 02, 06 and 03. List 2: Mode 01, 03, 08 and 05.)

1) Press and hold "MENU" and "SPD/EN" buttons together, turn on the power. Do not release the buttons until the LCD screen shows the setting.
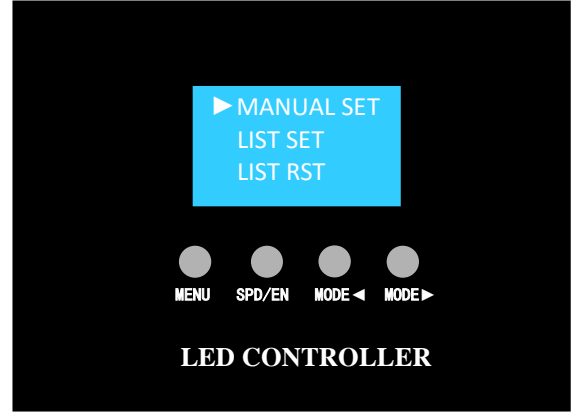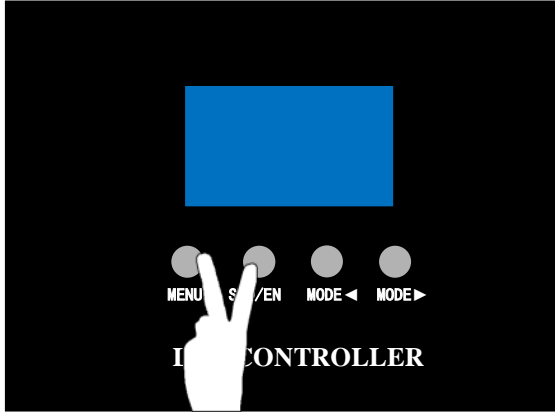

2) Press "MODE►"to move the cursor to "LIST SET".
Press "SPD/EN" to confirm and enter editing interface, the LCD screen shows "LIST 1".
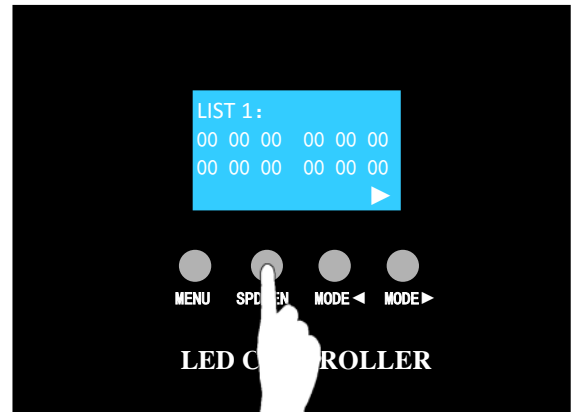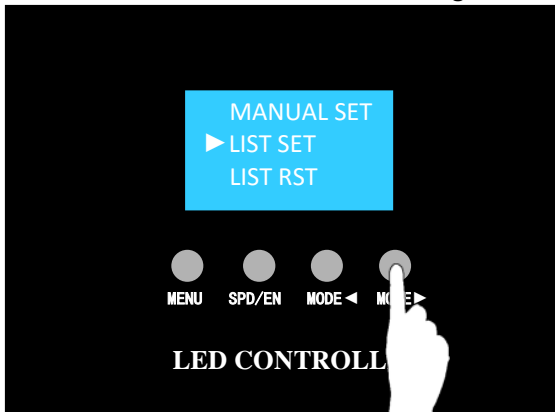
3) Press "MODE►" and "MODE◄"to select the digit to be edited.
Press "SPD/EN" to increase the digit, press once to increase 1, it will return to 0 after 9.
When "►"in the lower right corner flashes, press "SPD/EN" to enter List 2. If press "SPD/EN" when "◄"flashes, then it returns to List 1.
There are 12 groups of "00" (preset), user can set each group of "00" into required effect mode. E.g. List 1 is playing Mode 02, 06 and 03 in a loop, then set "00" to be 02, 06 and 03.
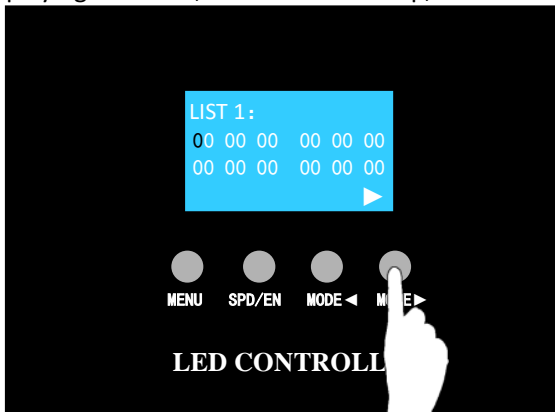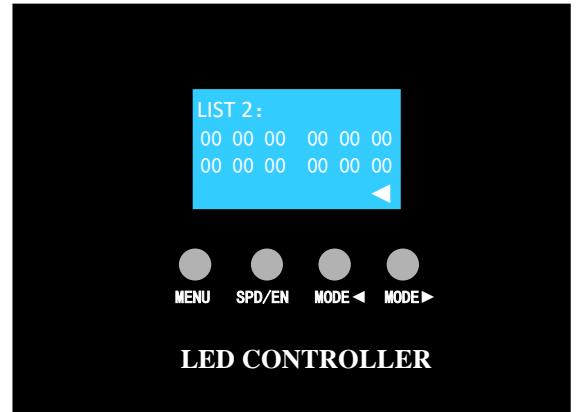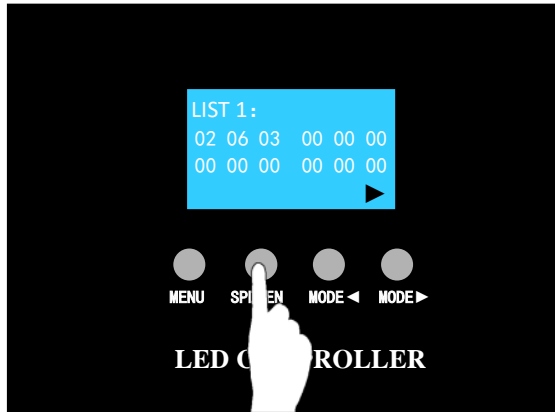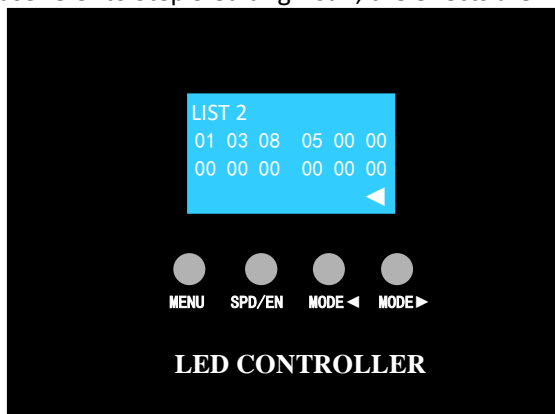

Press "MODE►" to move cursor.   Press "SPD/EN" to change digit.
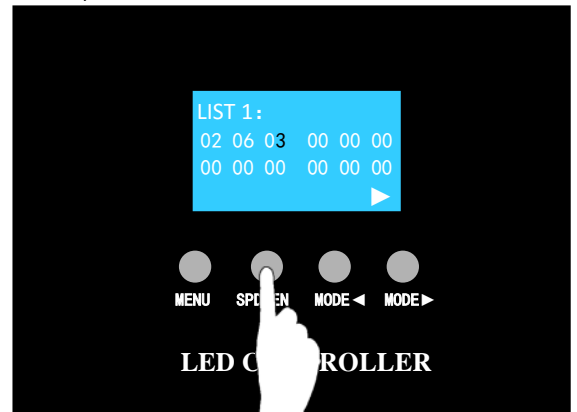
12

4) Press "MODE►" or "MODE◄"few times, when "►" in the lower right corner flashes, press "SPD/EN" to enter List 2.
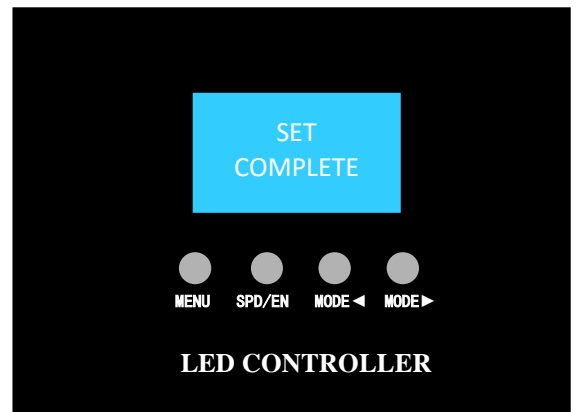

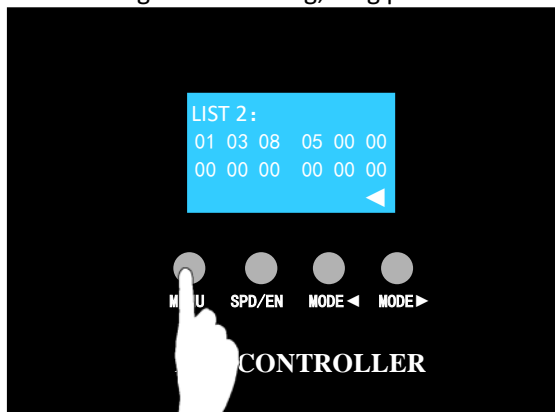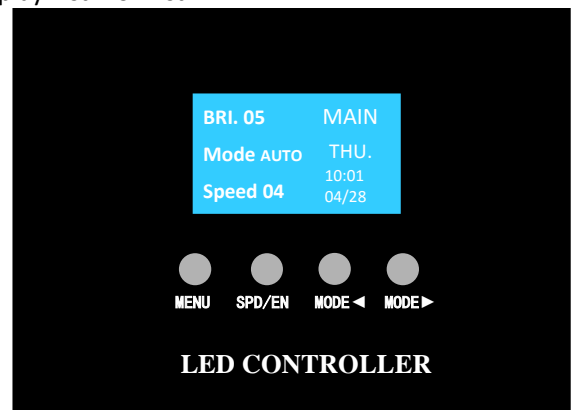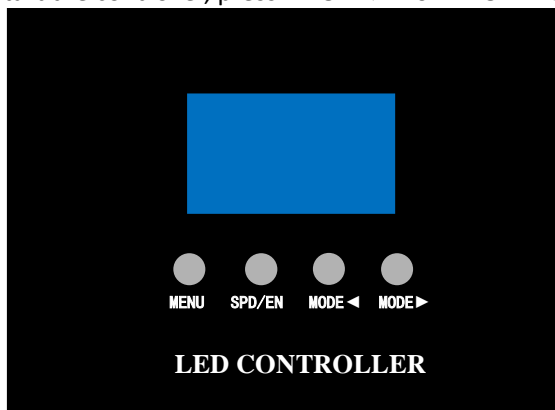When "►" flashes, press "SPD/EN" to enter.

5) Please refer to Step 3 editing List 2, the effects are Mode 01, 03, 08 and 05.

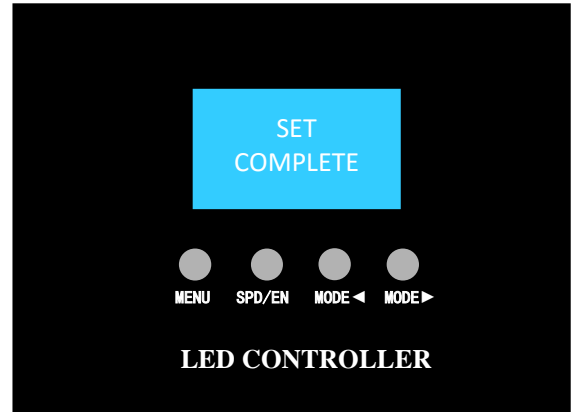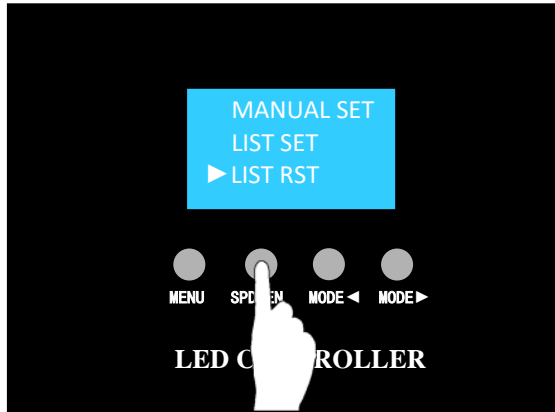6) After confirming the list setting, long press "MENU" until the LCD screen shows "SET COMPLETE".

7) Restart the controller, press "MODE►" or "MODE◄" to play List 1 or List 2.

8) Delete the list: Select "LIST RST", press "SPD/EN" to empty the setting of List 1 and List 2.
   Attention: The list cannot be recovered after reset. Please be discreet when conduct this operation.


5.7 Unlock Controller

When controller shows "It is Locked. Enter Password", then the controller stops working.
Input 8 digits password will open the controller and for lifetime use*.*
It can be perpetual use after ultimate unlocking.
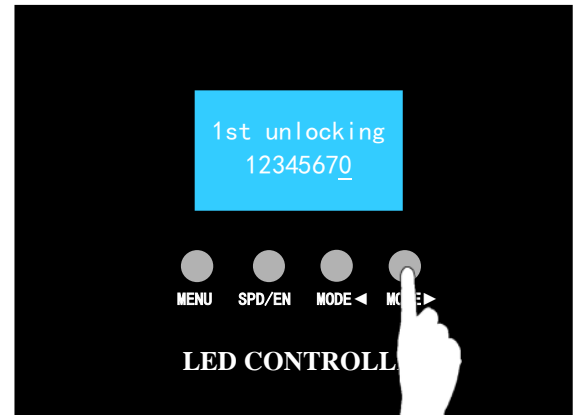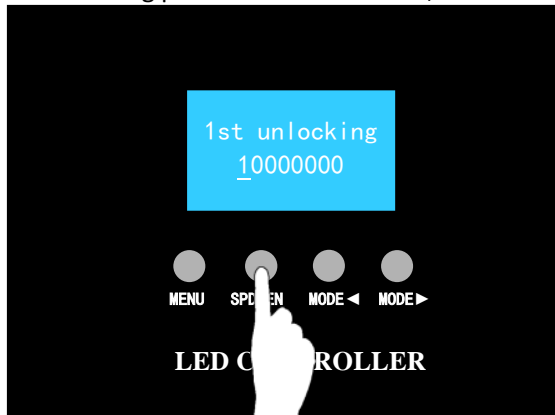Please refer to the unlocking operations below.

1) Please turn off the power of controller and contact with us when the controller shows "***It is Locked. Enter Password***".
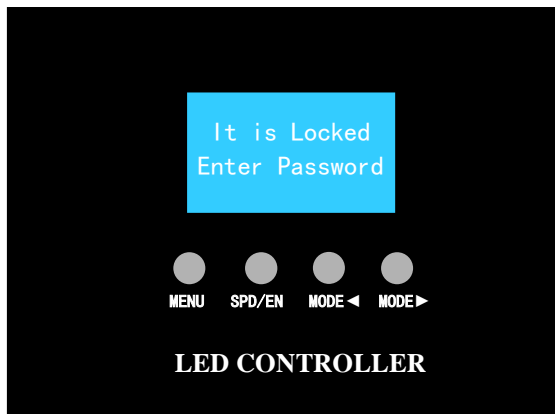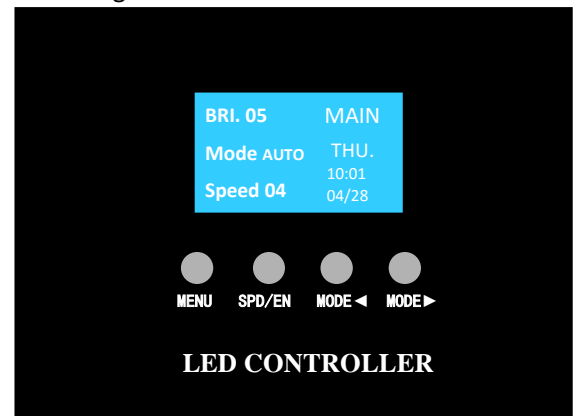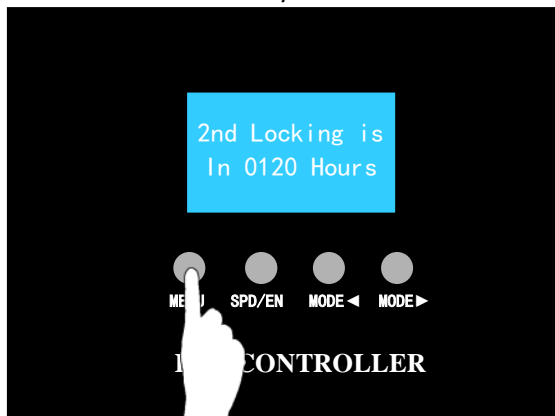

2) Long press "MENU" and turn on the power, the LCD screen will show "1st unlocking 00000000".
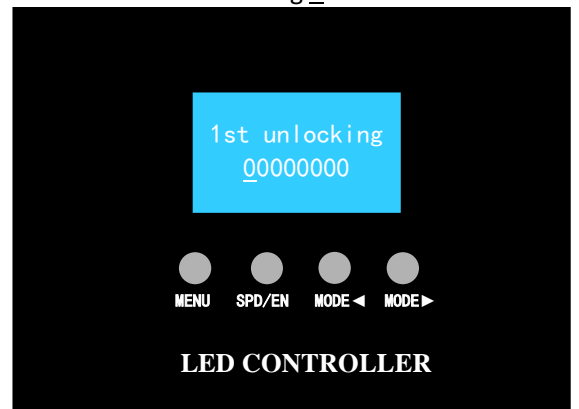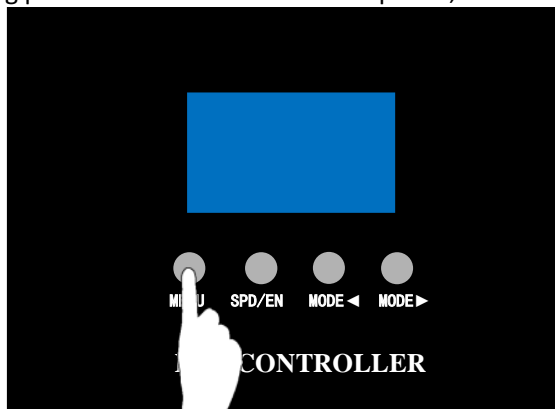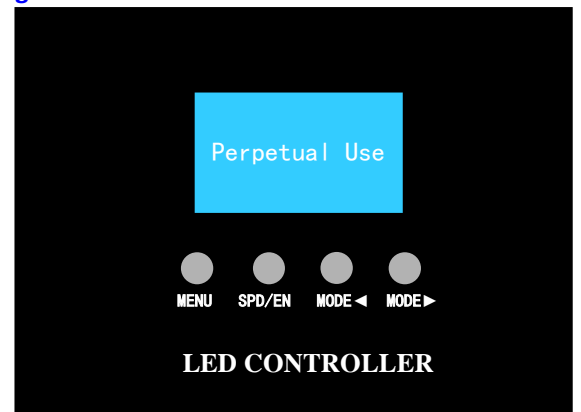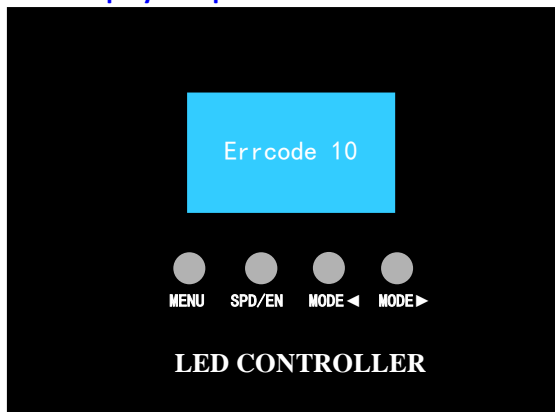
3) Press "MODE►" and "MODE◄" to move cursor which shows the digit can be edited.
   Press "SPD/EN" to modify selected digit. Press once to increase 1, it will return to 0 after 9.
   E.g. 1st unlocking password is 123456789, then enter 123456789.


```
1st unlocking
  10000000
```

MENU   SPD/EN   MODE◄   MODE►

LED CONTROLLER


```
1st unlocking
  12345670
```

MENU   SPD/EN   MODE◄   MODE►

LED CONTROLLER

4) Long press "MENU" button, release the button when the LCD screen shows "xxx Locking is in xxxx
   Hours". It will be successfully unlocked when LCD screen returns regular interface.


```
2nd Locking is
In 0120 Hours
```

MENU   SPD/EN   MODE◄   MODE►

LED CONTROLLER


```
BRI. 05      MAIN
Mode AUTO    THU.
             10:01
Speed 04     04/28
```

MENU   SPD/EN   MODE◄   MODE►

LED CONTROLLER

If Errcode 10 occurs, that means the password is wrong.
It will display "Perpetual Use" after ultimate unlocking.


```
Errcode 10
```

MENU   SPD/EN   MODE◄   MODE►

LED CONTROLLER


```
Perpetual Use
```

MENU   SPD/EN   MODE◄   MODE►

LED CONTROLLER

Note: It should be unlocked in sequence, and cannot unlock in advance during a trial.
Final unlocking can be done any time.

6. ADDRESSING

6.1 ADDRESS SETTING

6.1.1 UCS512A/UCS512B

※ "ADDRESS PLUS ****" means entering "auto addressing" mode, e.g. #1, #2, #3……#999.
   "ADDRESS PLUS 0000" means entering "fixed addressing" mode, e.g. #6, #6, #6……#6.

Number of channels in single chip: number of lighting fixture ÷ number of DMX chips × Number of Channels.
The first address of Nth lighting fixture is X * (N-1) where X is the number of channels in each lighting fixture.

Color of LED	Number of Channels	Number of Lighting fixtures	Number of DMX chips in each lighting fixture Pixels	Number of channels in single chip	First Add. Of Each Chip					Type of control signal	Color display when addressing successfully
					Chip 1	Chip 2	Chip 3	Chip 4	Chip 5		
UCS512	3	1	1	3	0	3	6	9	12	485 differential signal	
		8	1	24	0	24	48	72	96		
			8	3	0	24	48	72	96		
		12	1	36	0	36	72	108	144		
			12	3	0	36	72	108	144		
		16	1	48	0	48	96	144	192		
			16	3	0	48	96	144	192		
UCS512 UCS512A UCS512A2	4	1	1	4	0	4	8	12	16		
		8	1	32	0	32	64	96	128		
			8	4	0	32	64	96	128		
		12	1	48	0	48	96	144	192		
			12	4	0	48	96	144	192		
		16	1	64	0	64	128	192	256		
			16	4	0	64	128	192	256		
UCS512B UCS512B3	3	1	1	3	0	3	6	9	12	TTL single-wire signal	Blue
		8	1	24	0	24	48	72	96		
			8	3	0	24	48	72	96		
		12	1	36	0	36	72	108	144		
			12	3	0	36	72	108	144		
		16	1	48	0	48	96	144	192		
			16	3	0	48	96	144	192		
UCS512B4	1	1	1	1	0	1	2	3	4		
	3	1	1	3	0	3	6	9	12		
		8	1	24	0	24	48	72	96		
			8	3	0	24	48	72	96		
		12	1	36	0	36	72	108	144		
			12	3	0	36	72	108	144		
		16	1	48	0	48	96	144	192		
			16	3	0	48	96	144	192		
	4	1	1	4	0	4	8	12	16		
		8	1	32	0	32	64	96	128		
			8	4	0	32	64	96	128		
		12	1	48	0	48	96	144	192		
			12	4	0	48	96	144	192		
		16	1	64	0	64	128	192	256		
			16	4	0	64	128	192	256		

6.1.2 DMX512AP/SM512

Number of channels in single chip: number of lighting fixture pixel ÷ number of DMX chips × Number of Channels.

The first address of Nth lighting fixture is $X*(N-1)+1$ where X is the number of channels in each lighting fixture.

Color of LED	Number of Channels	Number of Lighting fixture Pixels	Number of DMX chips in each lighting fixture	Number of channels in single chip	First Add. Of Each Chip					Type of control signal	Color display when addressing successfully
					Chip 1	Chip 2	Chip 3	Chip 4	Chip 5		
DMX512AP-N	3	1	1	3	1	4	7	10	13	TTL single-wire signal	White
DMX512AP-NE	3	1	1	3	1	4	7	10	13		Green
SM512-4	4	1	1	4	1	5	9	13	17		
SM512-9	9	1	1	9	1	10	19	28	37		
SM512-12	12	1	1	12	1	13	25	37	49		

6.1.3 SW-U

Number of channels in single chip: number of lamp pixel ÷ number of DMX chips × Number of Channels.

The first address of Nth lighting fixture is $X*(N-1)$ where X is the number of channels in each lighting fixture.

Color of LED	Number of Channels	Number of Lighting fixture Pixels	Number of DMX chips in each lighting fixture	Number of channels in single chip	First Add. Of Each Chip					Type of control signal	Color display when addressing successfully
					Chip 1	Chip 2	Chip 3	Chip 4	Chip 5		
D01U	3	1	1	3	0	3	6	9	12	485 differential signal / TTL single-wire signal	Blue
D12U		12	1	36	0	36	72	108	144		
D16U		16	1	48	0	48	96	144	192		
D01U	4	1	1	4	0	4	8	12	16		
D12U		12	1	48	0	48	96	144	192		
D16U		16	1	64	0	64	128	192	256		

6.1.4 UCS512C

Number of channels in single chip: number of lighting fixture pixel : number of DMX chips x Number of Channels.

The first address of Nth lighting fixture is X*(N-1)+1 where X is the number of channels in each lighting fixture.

Color of LED	Number of Channels	Number of Lighting fixture Pixels	Number of DMX chips in each lighting fixture	Number of channels in single chip	First Add. Of Each Chip					Type of control signal	Color display when addressing successfully
					Chip 1	Chip 2	Chip 3	Chip 4	Chip 5		
UCS512C	1	1	1	1	0	1	2	3	4	485 differential signal	White
		8	1	8	0	8	16	24	32		
			8	1	0	8	16	24	32		
		12	1	12	0	12	24	36	48		
			12	1	0	12	24	36	48		
		16	1	16	0	16	32	48	64		
			16	1	0	16	32	48	64		
	2	1	1	2	0	2	4	6	8		
		8	1	16	0	16	32	48	64		
			8	2	0	16	32	48	64		
		12	1	24	0	24	48	72	96		
			12	2	0	24	48	72	96		
		16	1	32	0	32	64	96	128		
			16	2	0	32	64	96	128		
	3	1	1	3	0	3	6	9	12		
		8	1	24	0	24	48	72	96		
			8	3	0	24	48	72	96		
		12	1	36	0	36	72	108	144		
			12	3	0	36	72	108	144		
		16	1	48	0	48	96	144	192		
			16	3	0	48	96	144	192		
	4	1	1	4	0	4	8	12	16		
		8	1	32	0	32	64	96	128		
			8	4	0	32	64	96	128		
		12	1	48	0	48	96	144	192		
			12	4	0	48	96	144	192		
		16	1	64	0	64	128	192	256		
			16	4	0	64	128	192	256		

6.1.5 SM16512

Number of channels in single chip: number of lighting fixture pixel ÷ number of DMX chips × Number of Channels.

The first address of Nth lighting fixture is $X*(N-1)+1$ where X is the number of channels in each lighting fixture.

Color of LED	Number of Channels	Number of Lighting fixture Pixels	Number of DMX chips in each ighting fixture	Number of channels in single chip	First Add. Of Each Chip					Type of control signal	Color display when addressing successfully
					Chip 1	Chip 2	Chip 3	Chip 4	Chip 5		
SM16512	3	1	1	3	1	4	7	10	13	485 differential signal	White
	4	1	1	4	1	5	9	13	17		
SM16511	3	1	1	3	1	4	7	10	13		
	4	1	1	4	1	5	9	13	17		

6.1.6 SW-D

The first address of Nth lighting fixture is $X*(N-1)+1$ where X is the number of channels in each lighting fixture.

Color of LED	Number of Channels	Number of Lighting fixture Pixels	Number of DMX chips in each lighting fixture	Number of channels in single chip	First Add. Of Each Chip					Type of control signal	Color display when addressing successfully
					Chip 1	Chip 2	Chip 3	Chip 4	Chip 5		
D01D	3	1	1	3	1	4	7	10	13	485 differential signal / TTL single-wire signal	The first lamp connects with controller will have yellow light, the others are green light.
D06D		6	1	18	1	19	37	55	73		
D08D		8	1	24	1	25	49	73	97		
D12D		12	1	36	1	37	73	109	145		
D16D		16	1	48	1	49	97	145	193		
D01D	4	1	1	4	1	5	9	13	17		
D06D		6	1	24	1	25	49	73	97		
D08D		8	1	32	1	33	65	97	129		
D12D		12	1	48	1	49	97	145	193		
D16D		16	1	64	1	65	129	193	257		

6.2 UNSUCCESSFUL ADDRESSING

6.2.1 UCS512A/UCS512B

Check signal cable + 1pc or more addressing cable:
bad connection or disconnected
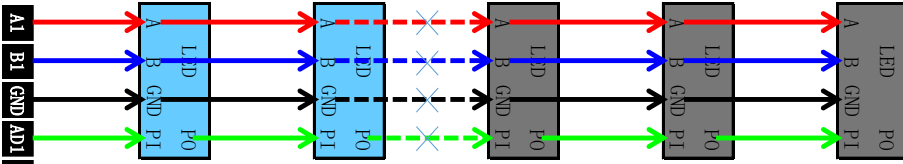
Check signal cable + 1pc or more addressing
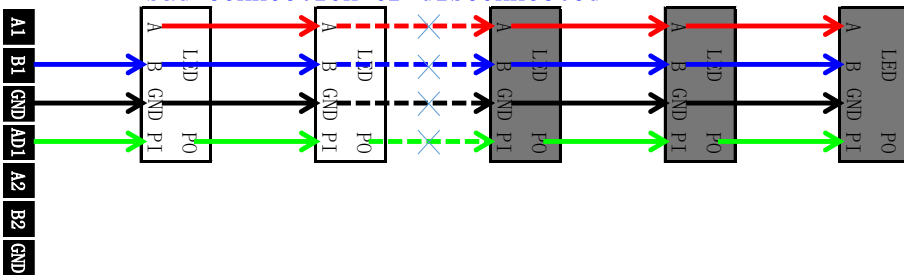cable: bad connection or disconnected
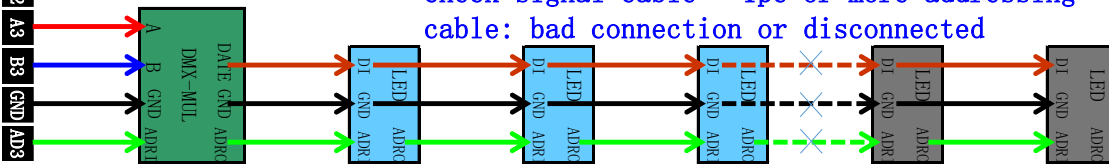
## 6.2.2 DMX512AP/SM512

Check signal cable + 1pc or more addressing cable: bad connection or disconnected
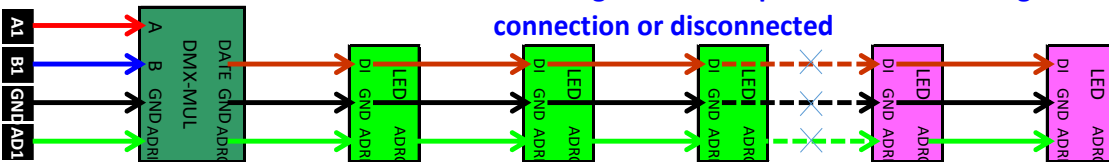
Check signal cable + 1pc or more addressing cable: bad connection or disconnected
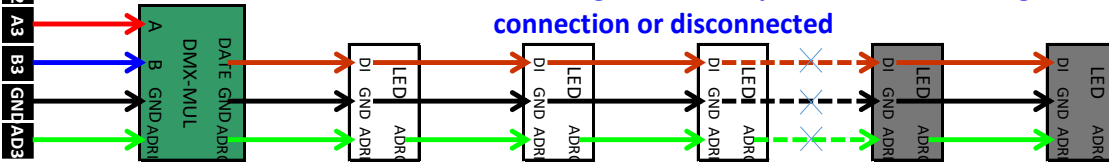
6.2.3 SW-U

Check signal cable + 1pc or more addressing cable:
bad connection or disconnected
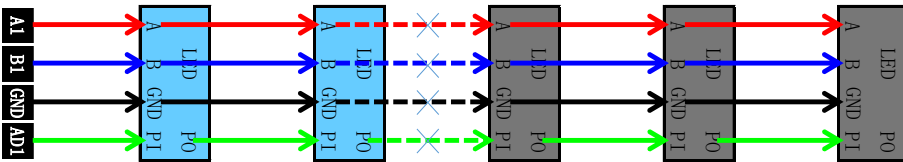
6.2.4 UCS512C

Check signal cable + 1pc or more addressing cable: bad connection or disconnected

6.2.5 SM16512

Check signal cable + 1pc or more addressing cable: bad connection or disconnected
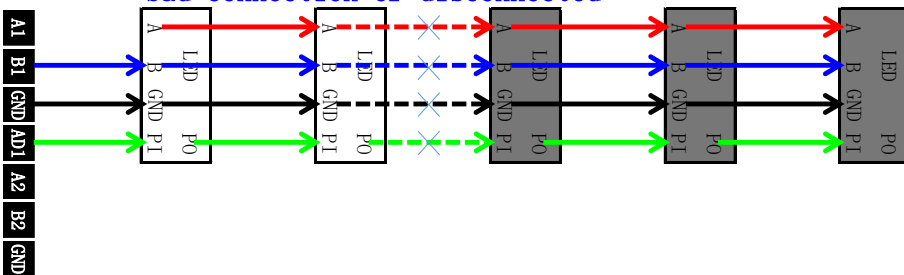
6.2.6 SW-D

When DMX lighting fixture is addressed successfully, the first chip will be yellow light, and it will be green light from the second chip. When the other color occurs, that means the connection between this llighting fixture and previous chip with green light is poor or disconnected.

OK.　　　　OK.　　　　OK.　　　　OK.　　　　Ready for addressing.
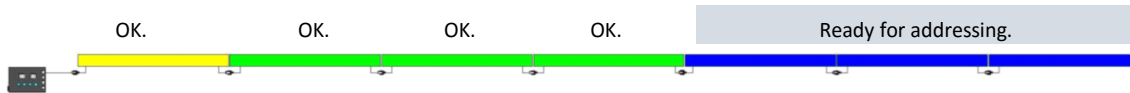
※ Note: If the addressing cable is poor contact or short circuit, it may keep displaying blue color. Please check corresponding addressing cable when this occurs.

OK.　　OK.　　Abnormal.　　OK.　　OK.　　OK.　　Ready for addressing.
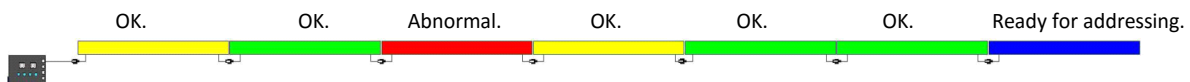
※ When abnormal signal occurs, the next tube will automatically be the first one (yellow light) and renumber accordingly.

OK.　　OK.　　OK.　　OK.　　OK.　　OK.　　OK.

※ When the addressing cable is disconnected, the next lighting fixture will automatically be the first one (yellow light) and renumber accordingly.

6.3 ADDRESSING OPERATION

For addressing operations please refer to following example. (The whole process should be conducted with plugging card. Please switch off the controller first if need to remove the card.)

1) Long press "MODE◄" and "MODE►" together, press power switch and don't release the button until the screen shows IC CHOICE LIANXINKE.
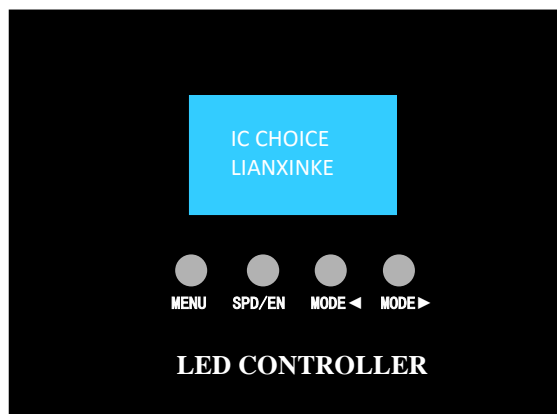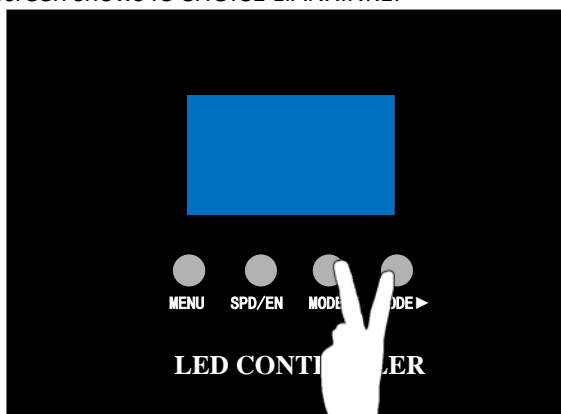
Addressing mode must be consistent with lighting fixtuer, otherwise the addressing will be invalid.
☺ Press "MODE◄" and "MODE►" can change the type of chip.

2) If the chip is SM16512, please press "SPD/EN" to select Channel 3 or Channel 4.
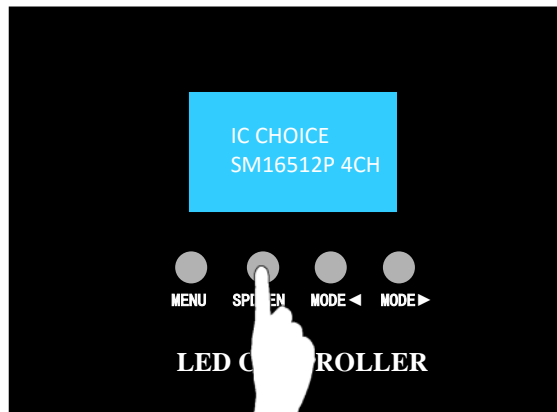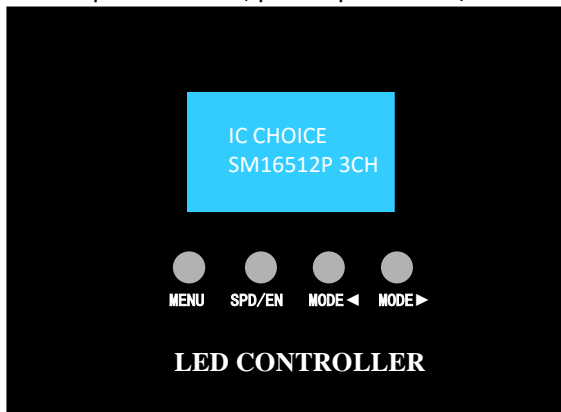
3) Long press "MENU" and don't release the button until the screen shows LIANXINKE ADDRESS PLUS 0 0 0 3. It's the status of entering address. "0003" means need to enter the number of channels in single chip. If the address plus of lighting fixture is different, please refer to Step 7 in this chapter for setting it.
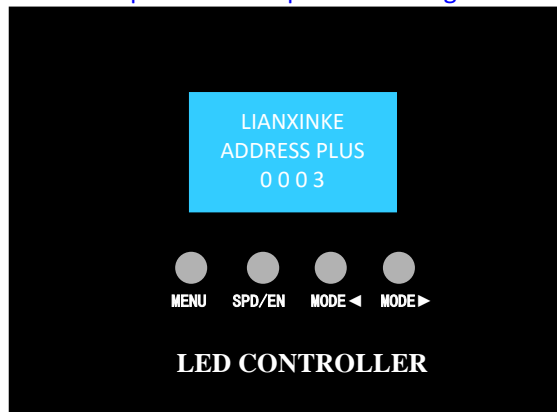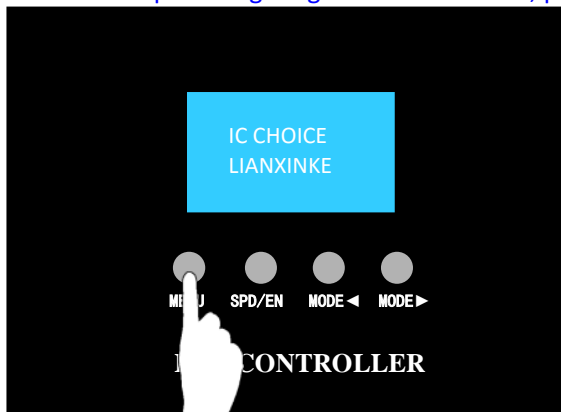
4) Long press "MENU" and don't release the button until the screen shows "LIANXINKE ADDRESS SET 0 0 0 0".
It's the status of entering address. **"0000" means entering "Automatic" addressing mode.**
If the address of the lighting fixture is different, please refer to Step 8 in this chapter for setting address value.
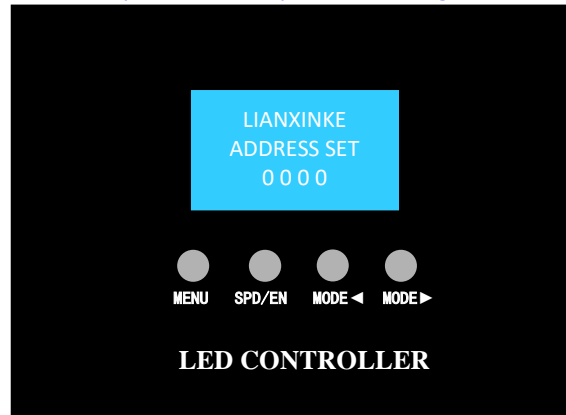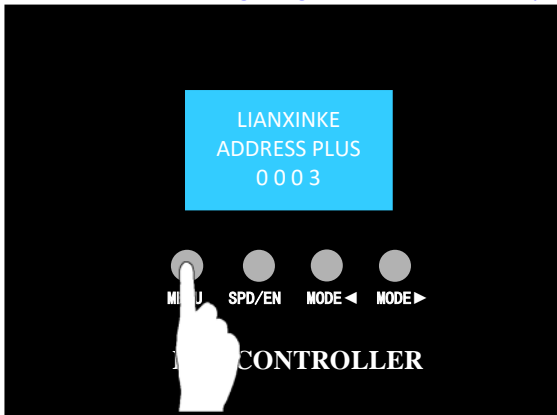
5) If the address is confirmed, please long press "MENU" and don't release the button until the screen shows ADDRESSING ADDR_VALUE 0000. Then the data is sent out by controller.
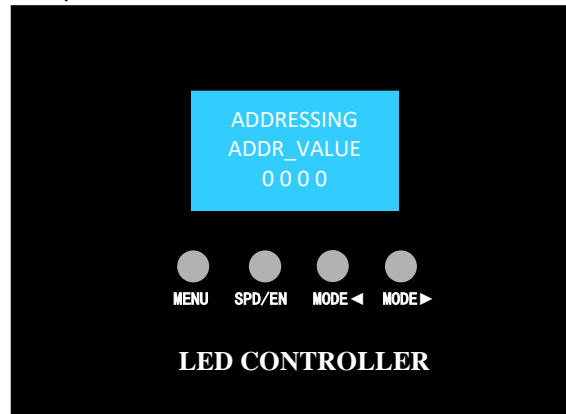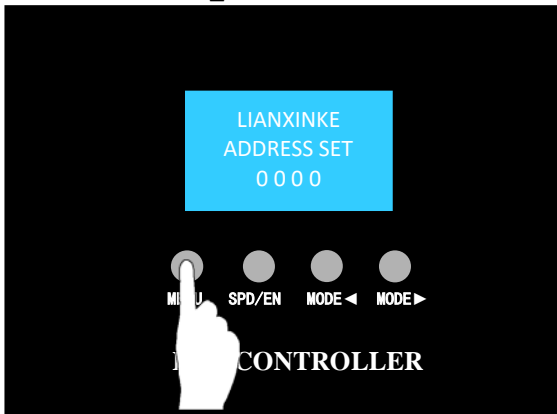
※ The buttons are useless for sending the address.

6) The screen displays the address set before after it is sent out successfully.
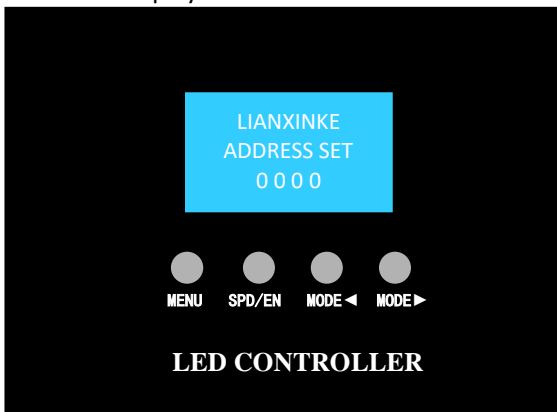
When DMX lighting fixture is addressed successfully, the first chip will be the particular light. When the other color occurs, that means this lighting fixture is addressed unsuccessfully.

※ At this time (controller can be power on), directly connect to DMX lighting fixture with same specification and chip which need to be addressed. Then repeat Step 5 for addressing.
If the address is found to be wrong after sending out the data, please repeat Step 8 and Step 5 to re-address the lighting fixture.
If fail to set the address, please check connection of the lighting fixture again. Please repeat Step 5 to send the data one more time.

7) Address Plus modification.

Press "MENU" to increase the 1st value.   Press "SPD/EN" to increase the 2nd value.
Press "MODE◄" to increase the 3rd value.   Press "MODE►" to increase the 4th value.

※ **Number of channels in single chip can be found in green column of reference table.**
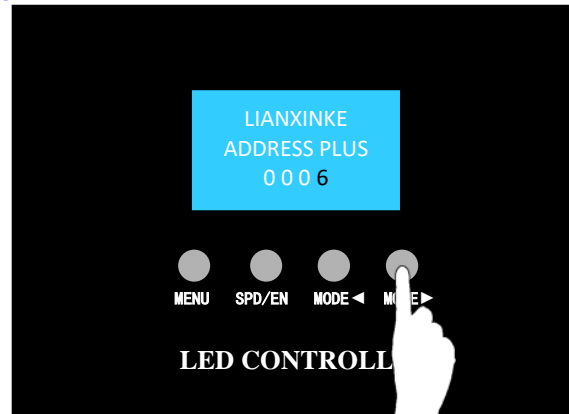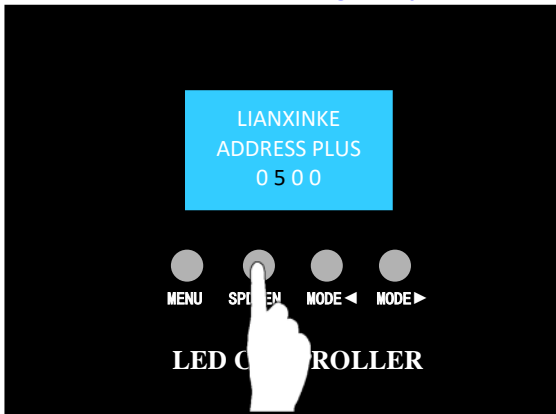
★ Address the lighting fixture directly after modifying address plus. Please restart the controller to enter addressing interface if user find address plus is wrong after sending out.

8) Address modification.

Press "MENU" to increase the 1st value.   Press "SPD/EN" to increase the 2nd value.
Press "MODE◄" to increase the 3rd value.   Press "MODE►" to increase the 4th value.
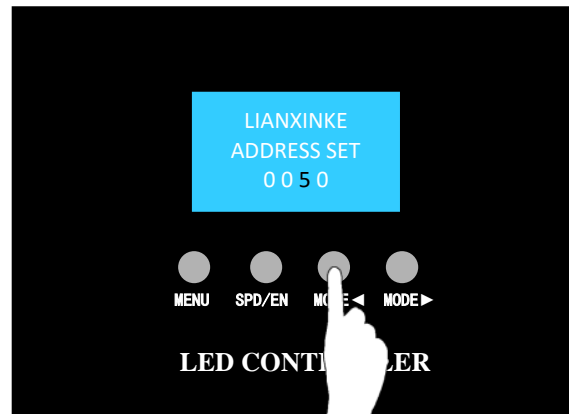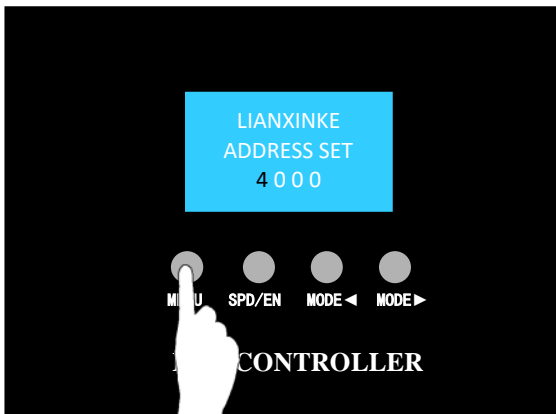
★ After modifying the address, please repeat Step 5 to send the data one more time.

9) **It has memory function that only needs to set the address once.** When the controller and lamp are power on again, controller enters normal control mode and the lamp plays effect properly.
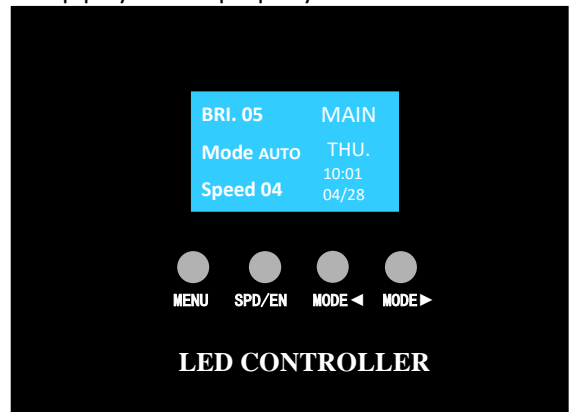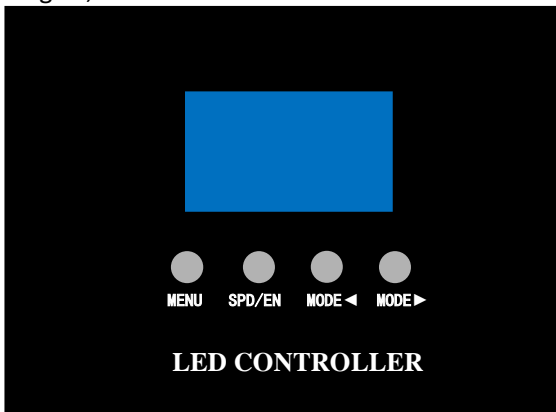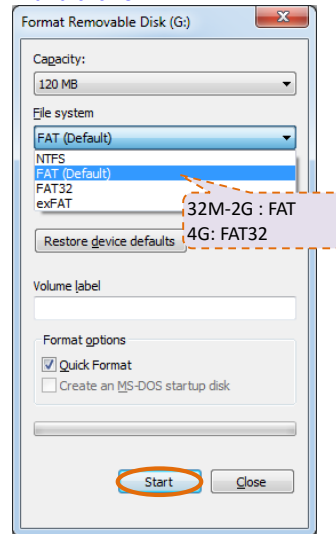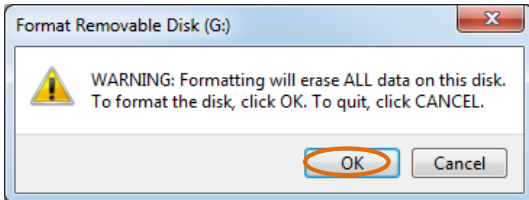
7. SD CARD COPY

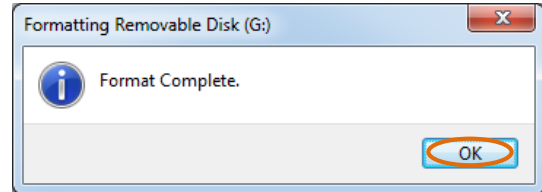1) Right click the disk where the SD card locates.
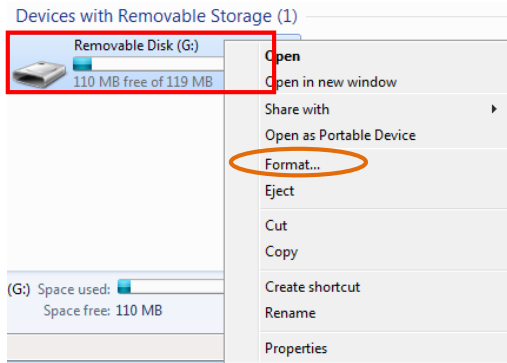
2) Select –FAT (Can tick off "Quick Format") and click START.

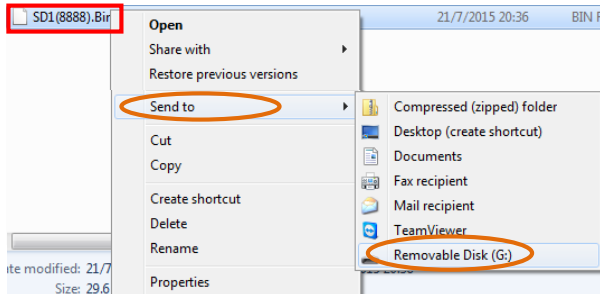32M-2G : FAT
4G: FAT32

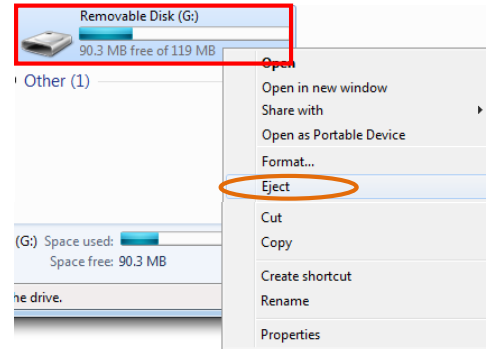3) Confirm to format the Disk.

4) Finished the formatted, click confirm to exit.

5) Right click SD1(8888).Bin file, send the file to removable disk.

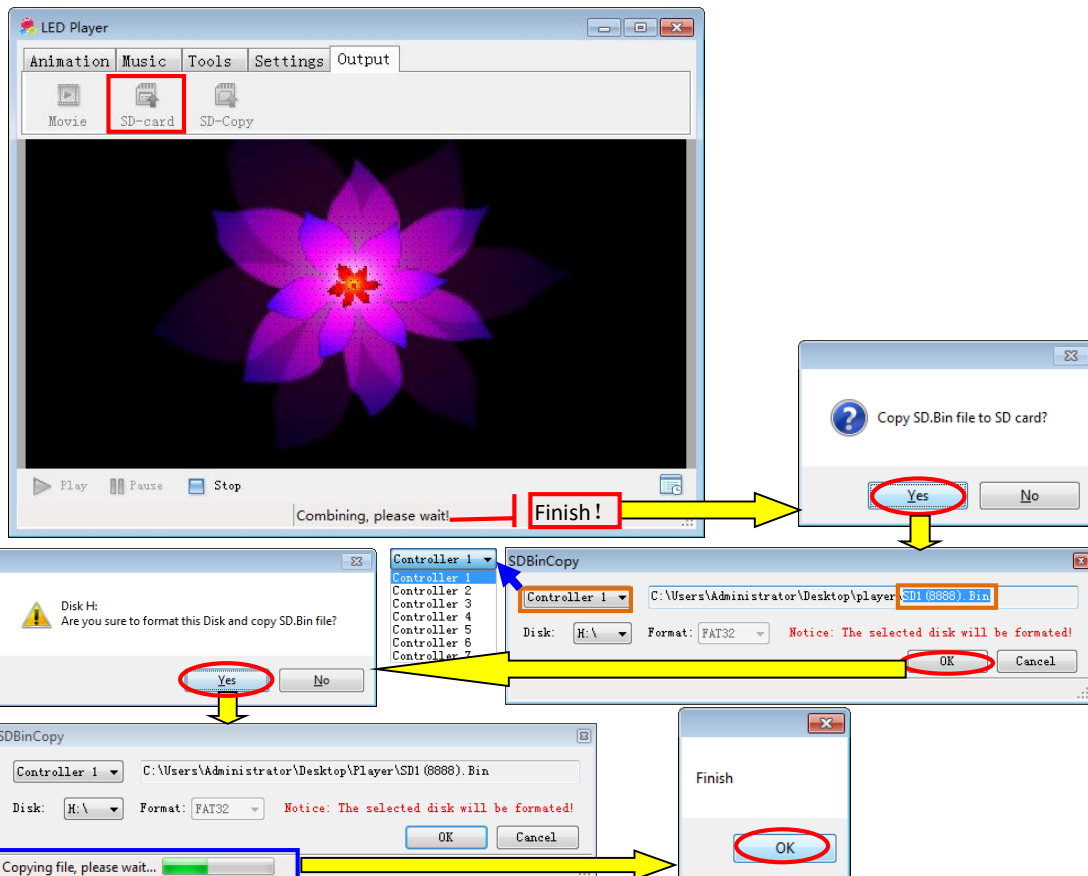6) Right click removable disk and select pop to pop the SD card.

7) Put the SD-card into controller. When start the equipment the SD- card can use. (There is only one bin file in the card.)

TIPS **E07 error will occur in controller if above format + SD Card Copy is used in WIN 8 above system. Please use the second method to copy SD Card again.**

SD-Card Copy Method 2:

1. Insert SD card.

2. Click . It will pops the Information Frame "Copy SD. Bin file to SD card?". Click [Yes].
   Select required controller. (SD.Bin file will automatically change according to selected controller.)
   Controller 1 corresponds to SD1, Controller 2 corresponds to SD2, and so on…..

3. Copy the file into SD card according to hints (all copying steps into SD card are the same).

At last, put the SD-card into controller. When start the equipment the SD-card can use. (There is only one bin file in the card.)
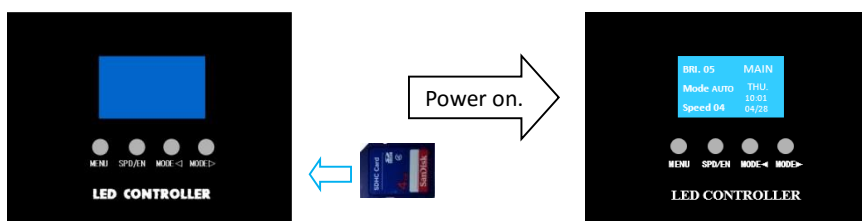
 Click , it will pops the Error Information Frame like the follow picture?
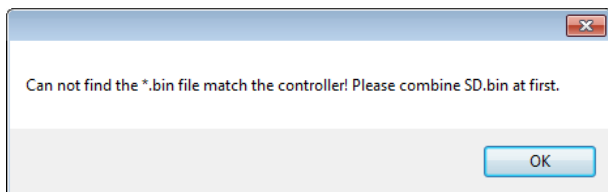
SOLUTION:

Click [OK] to exit the information reminder. Then click to re-merge the effect once again and copy into SD card.