



B-SY-302S-AVMANUAL

For Model: B-SY-302S-A2, B-SY-302S-B3

2017-10

Contents

1. FUNCTION OVERVIEW	1
2. TECHNICAL PARAMETERS	1
2.1 PRODUCT INFORMATION.....	1
2.2 ERROR CODE.....	1
3. CONNECTION MODE	2
3.1 CONNECTION MODE.....	2
4. BASIC OPERATION.....	3
4.1 BUTTONS FUNCTION.....	3
4.2 BUTTONS OPERATION.....	3
4.21 CONTROL MODE SWITCHING	3
4.22 SENSITIVITY.....	3
4.23 SPEED SELECTION	4
4.24 EFFECT SWITCHING	4
5. INTERNAL CONTROL.....	4
5.1 SWITCH THE TYPE OF CHIPS.....	5
5.2 CHANGE SPEED AND BUILT-IN EFFECT	5
6. AUDIO & VOICE CONTROL	6
7. SD CARD COPY.....	7

1. FUNCTION OVERVIEW

1. The effect will change according to the music and sound; can be widely used for small screens in KTV, bar and etc.
2. Professional effects making software as free and clients can make any effects they want and put into SD card.
3. Effect, speed, sensitivity of volume are adjustable.
4. 2-channel output signal (data-independent), applicable for small, medium and large engineering projects and remote transmission.

SW single chip lighting fixture: D**Sseries, D**J series.

Single-wire lighting fixture: TM180*-400K/800K, UCS19**, UCS29**, WS2811/12, TLS3001(1Mhz), TM1913, BS0901, SM167**.

DMX512 lighting fixture: SW-D, SW-U, UCS512A/B/C0/C4, DMX512AP/SM512, SM16512, standard DMX512 lighting fixture on the market.

Netants: UCS5603, WS2818, GS8206, P9883, TM1914, XT1506S.

2. TECHNICAL PARAMETERS

2.1 PRODUCT INFORMATION

Size:	193L×122W×43H (mm)
Input voltage:	AC 100V - 240V
Output port:	RS-485 & TTL×2 channels
Pixel quantity drove:	SW single chip: 960 points×8 channels, single-wire: 1024points×8 channels, standard DMX512: 168points×8 channels, extensible DMX light: 336points×8 channels, netants: 960 points×8 channels.
Output power:	<3W
Working temperature:	-15℃～60℃
Relative humidity:	≤50%
IP grade:	IP0 (not dustproof and not waterproof)
Working environment:	Please install under dry indoor condition, avoid any dust, moist and rain.
Weight:	700g (N.W. 5500g)



Accessories attached:  ×1、 ×(2～4)、 (1m) ×1

2.2 ERROR CODE

Control box error explanation:

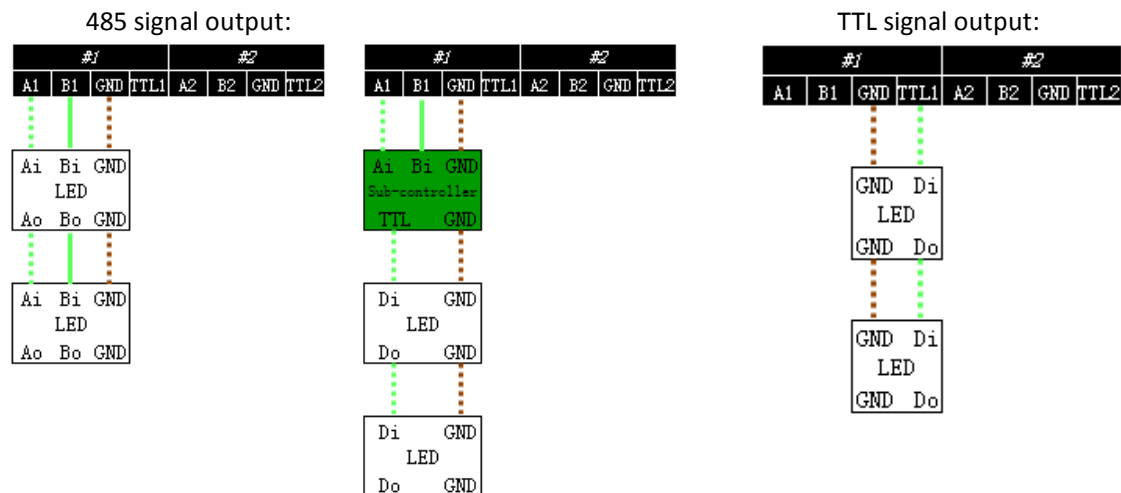
Er	Introduction	Reason
01	No SD card	Poor seat connection. / No SD card.
02	SD card no response	Card is broken. / Card cannot be read sequentially.
03	Cannot reset SD card	Card is broken. / Card cannot be read sequentially.
04	Cannot activate SD card	Card is broken. / Card cannot be read sequentially.
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.

3. CONNECTION MODE

3.1 CONNECTION MODE

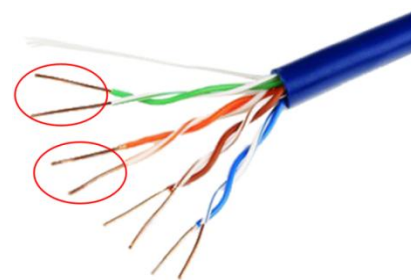
The circuit should be adjusted in different applications. It is well set in accordance with actual project before delivery. User cannot change the application optionally.

Please connect the cables in accordance with silk print on lamp.



★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	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->DMX Lighting 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	

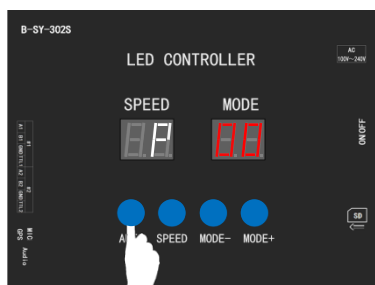
4. BASIC OPERATION

4.1 BUTTONS FUNCTION

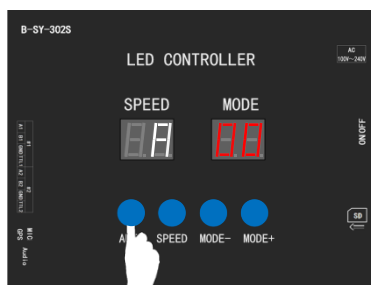
Button	Pre-condition	Function
AUTO	Insert SD card and read it properly	Short press: adjust the sensitivity (only effective when SD card contains audio effects). Hold press 2 seconds to select audio control, voice control or pictures 3 control modes, and the effect is 0(audio mode).
	Built-in effects	Long press 2 seconds: switch the type of "sound control / audio control / picture".
SPEED	Insert SD card and read it properly / Built-in effects	Common mode:5, 6, 7, 8, 9, 10, 11, 12, 15 Communication mode: 6., 8., 10., 12., 18.
MODE-	Insert SD card and read it properly / Built-in effects	Mode minus selection
MODE+	Insert SD card and read it properly / Built-in effects	Mode add selection

4.2BUTTONS OPERATION

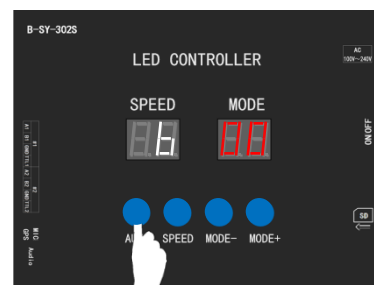
4.21CONTROL MODE SWITCHING



Long press "AUTO" once, shows "P 00".(P is picture type, mode=00)



Long press "AUTO" once, shows "A 00".(A is audio control type, mode=00)



Long press "AUTO" once, shows "b 00".
(b is sound control type, mode=00)

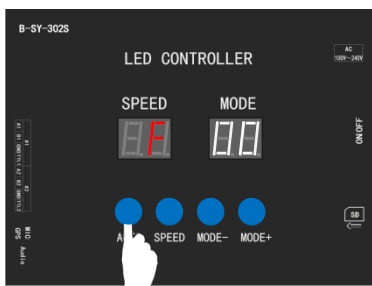
4.22SENSITIVITY

When the controller is under sound control or audio control, the sensitivity can be adjusted automatically or manually.

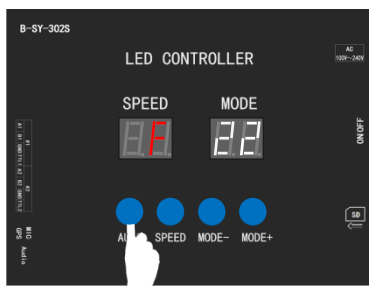
Controller Display	00	12	14	16	18	20	22	24	26	28
SENSITIVIT	self-regulation	100.0%	85.7%	75.0%	66.7%	60.0%	54.5%	50.0%	46.2%	42.9%

Controller Display	30	32	34	36	38	40	42	44	46	48
SENSITIVIT	40.0%	37.5%	35.3%	33.3%	31.6%	30.0%	28.6%	27.3%	26.1%	25.0%

✖Please ensure the SD.Bin file contains music effects when using this function.



Press "AUTO" once, shows "F 00"
(F is sensitivity, mode=00)



Press "AUTO" 6 times, shows "F 22"
(Press once to return to "F 00" after "F 48")

★Press "SPEED", "MODE-" or "MODE+" to return to "Normal Mode" interface from "Sensitivity" interface. The control will save the previous speed and effect mode. (E.g. Speed=6, Effect=5, press "MODE+" in "Sensitivity" interface to return normal mode, speed and effect will remain unchanged.)

4.23 SPEED SELECTION

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

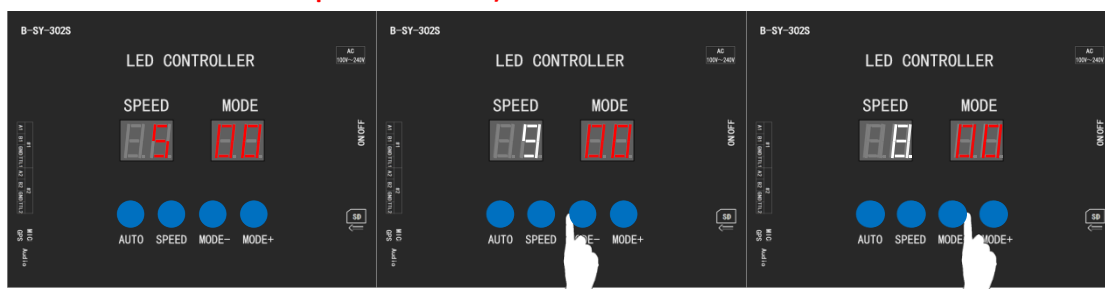
Parameters	Speed Display									Notes
Main Control speed	5	6	7	8	9	10	11	12	15	Independent Speed
	-	6.	-	8.	-	10.	-	12.	-	Synchronization Speed
Frame Rate(ms)	50	60	70	80	90	100	110	120	180	
Frame Per Second	20	17	14	13	11	10	9	8	7	

Synchronization Speed.

※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.)

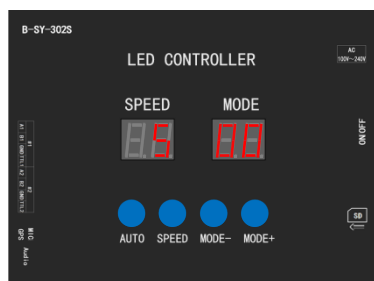


Speed=05 Press "SPEED" 4 times, Speed=9 Press "SPEED" 6 times, Speed=8.

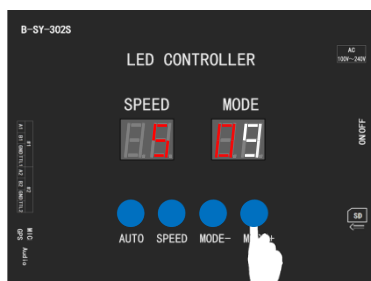
4.24 EFFECT SWITCHING

Press "MODE-" and "MODE+" on control panel to select effects.

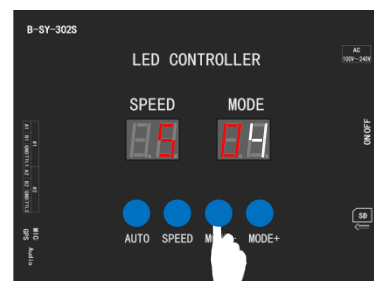
(Apply to voice control, audio control and picture three control modes.)



Press "AUTO" once, Mode = 0, (Switch the control type in the meantime)



Press "MODE+" 9 times, Mode = 09

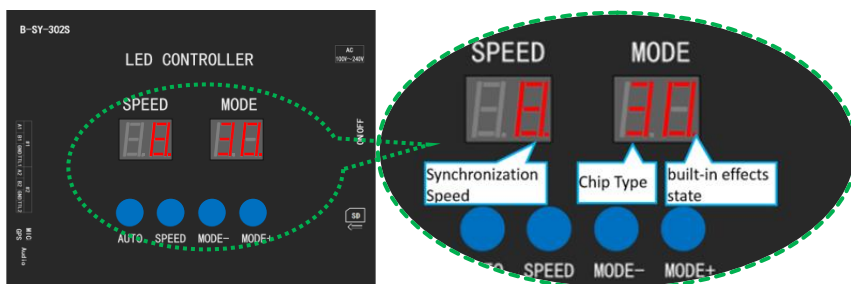


Press "MODE-" 5 times, Mode = 04

5. Internal Control

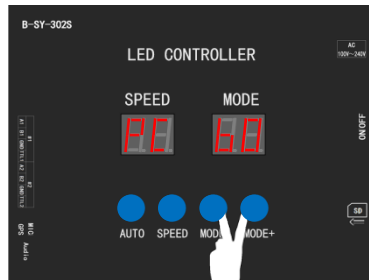
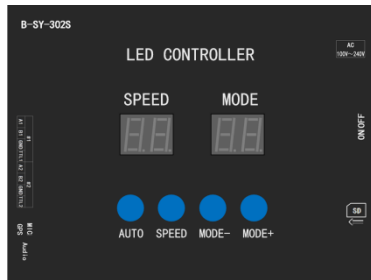
When there is something wrong with SD card, the controller will run built-in effects automatically.

Support five types of chips: standard DMX512, TM1804(800K), TM1804(400K), WS2811 and TLS3001.

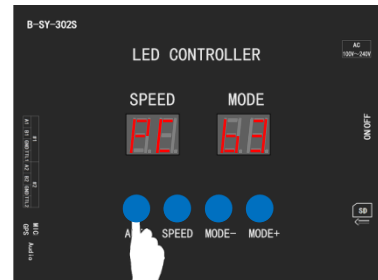


5.1 Switch the type of chips

Controller Display	PC b0	PC b1	PC b2	PC b3	PC b4
Chip Description	standardDMX512	TM1804 (800K)	TM1804 (400k)	WS2811	TLS3001



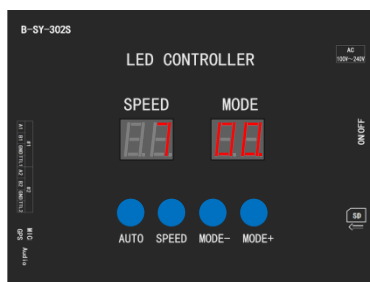
Press "MODE-" and "MODE+" together, press power switch and don't release the button until it shows "PC b0".
(Support Standard DMX512 Chip)



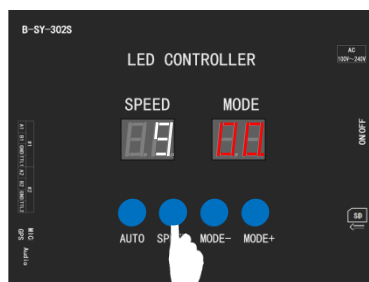
Long press "AUTO" three times, shows "PCb3".
(Support WS2811 Chip at the moment)

★Restart the controller after changing the type of chip. In the meantime, the controller can memorize the previous selected chip.

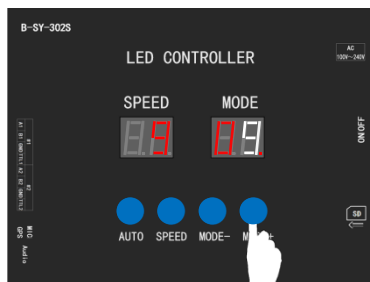
5.2 Change speed and built-in effect



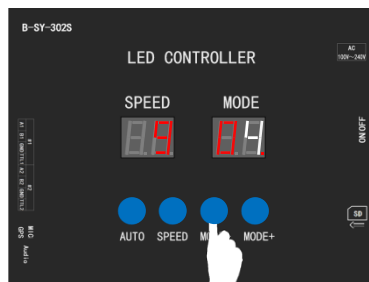
Speed=7, Mode=00.



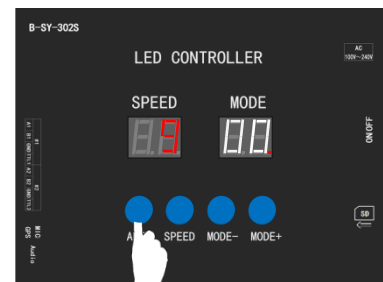
Press "SPEED" twice, Speed=9



Press "MODE+" nine times, Mode=09.



Press "MODE-" five times, Mode=04.



Long press "AUTO", Mode=00.

This controller provides 6 modes of effects (as the table below)

Mode	Effect
0	Repeat Mode 1 to Mode 6 automatically
1	Jumping colors (Red, green and blue)
2	Color gradient (Red, yellow, green, cyan, blue and purple)
3	Color flow (Red, yellow, green, cyan, blue and purple)
4	Color tail (Red, yellow, green, cyan, blue and purple)
5	Race horse (Red, yellow, green, cyan, blue, purple and white)
6	Single color (Red, yellow, green, cyan, blue, purple and white)
7	Black

6.Audio & Voice control

It includes audio and voice control function.


Press "AUTO" to transfer voice control or audio control. The effect of the two controls is same. The picture effect will follow the after all effects. 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.

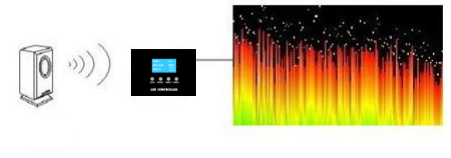


Additional fittings:  *1

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

◆ Voice control

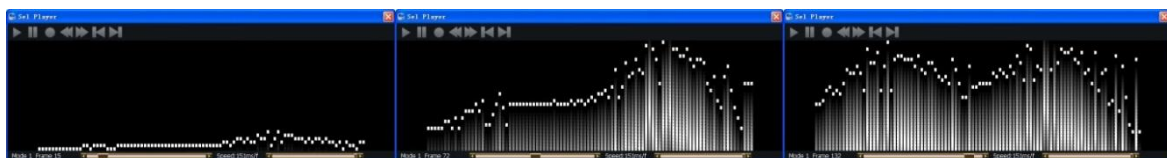
Controller with built-in microphone, put the controller near voice equipment and make the voice clear. Manually adjust to voice mode. Different audio color columns base on voice volume. Higher volume, higher color column. Lower volume, lower color column.



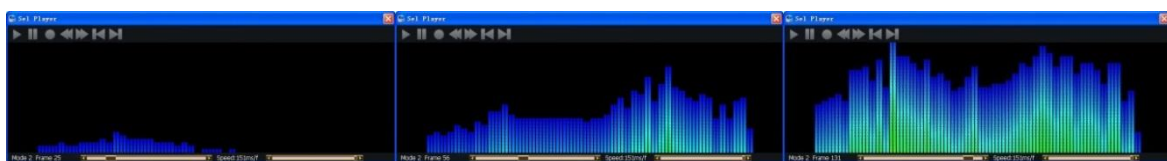
Additional fittings: None

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

Voice control / audio control effects show:



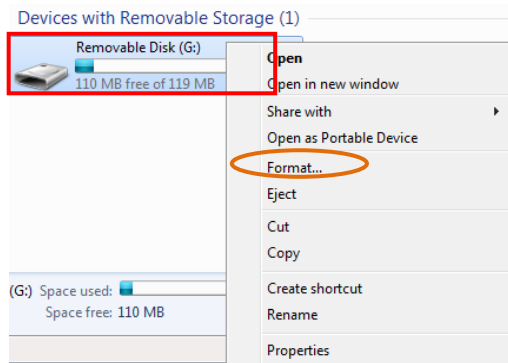
Low volumeMedium volumeHigh volume



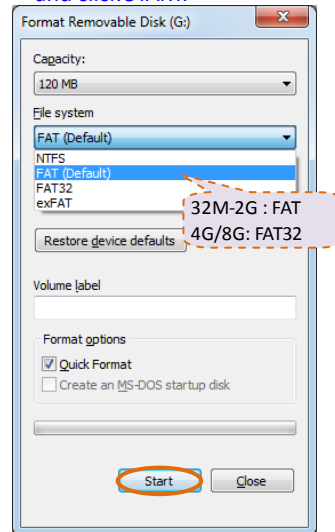
Low volumeMedium volumeHigh volume

7. SD CARD COPY

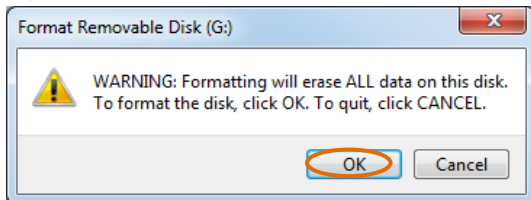
1) Right click the disk where the SD card locates.



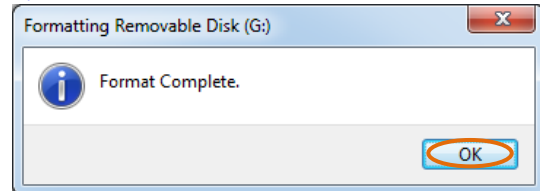
2) Select –FAT (Can tick off “Quick Format”) and click START.



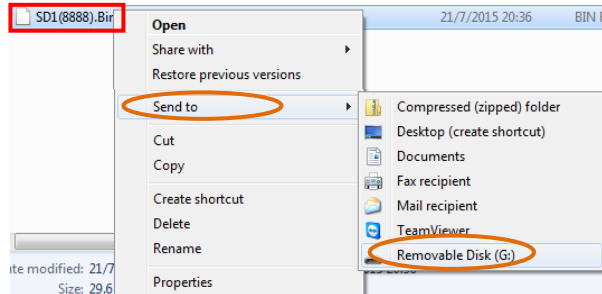
3) Confirm to format the Disk.



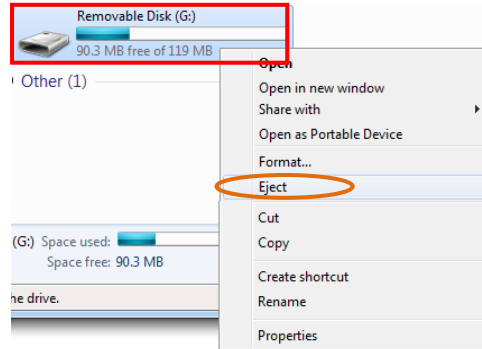
4) Finished the formatted, click confirm to exit.



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.




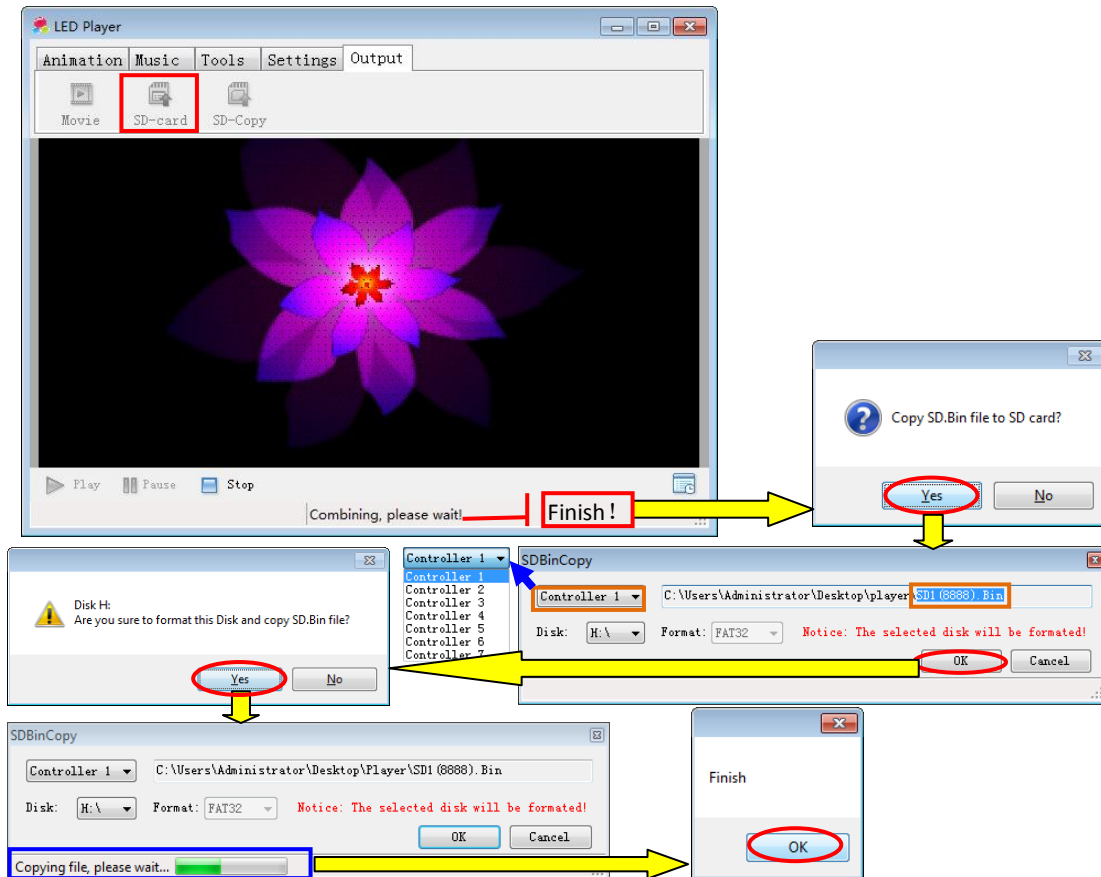
7) Put the SD-card into controller. When start the equipment the SD- card can use. (There is only one bin file in the card.)



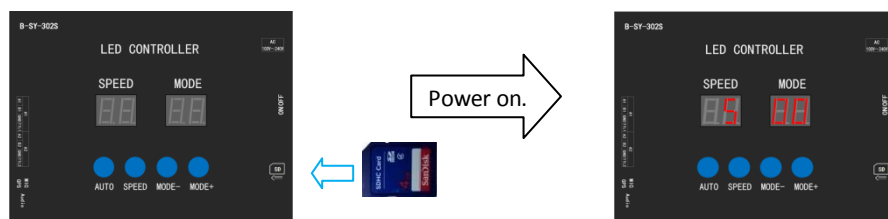
E07 error will occur in controller if above format + SD Card Copy is used in WIN 8 above system.
Please use the second method to copy SD Card again.

SD-Card Copy Method 2:

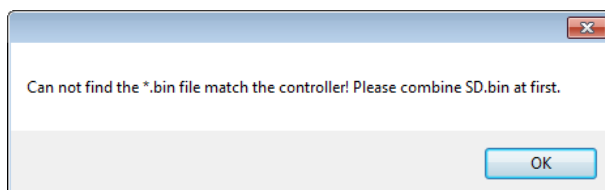
1. Insert SD card.
2. Click . It will pop the Information Frame "Copy SD. Bin file to SD card?". Click . Select required controller. (SD.Bin file will automatically change according to selected controller.) Controller 1 corresponds to SD1, Controller 2 corresponds to SD2, and so on.....
3. Copy the file 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 to exit the information reminder. Then click  to re-merge the effect once again and copy into SD card.