



M-CL-301M MANUAL

Model: B2, B3
For: DMX512AP/SM512

2018-7

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01. INTRODUCTION

1. It can control and address some DMX512 lighting fixtures. This manual only introduces DMX512AP/SM512 chip ([Addressing Options U02](#)). If need to address the other DMX512 chips, please refer to manual of corresponding chip.
2. The controller and the first lighting fixture must connect with A/D+ cable, B/D- cable, GND cable and ADD cable, or it will be fail to address.
The lighting fixture save the new address immediately when it be addressed.
3. Lighting fixtures with DMX chip can be addressed easily. All lighting fixtures just need to be addressed once. Channels of lighting fixtures with DMX chip can be set according to actual need. Address of the first lighting fixtures can be set by user, but the value cannot exceed 4096.
4. The controller can switch between addressing and normol control without power on again.

02. TECHNICAL PARAMETERS

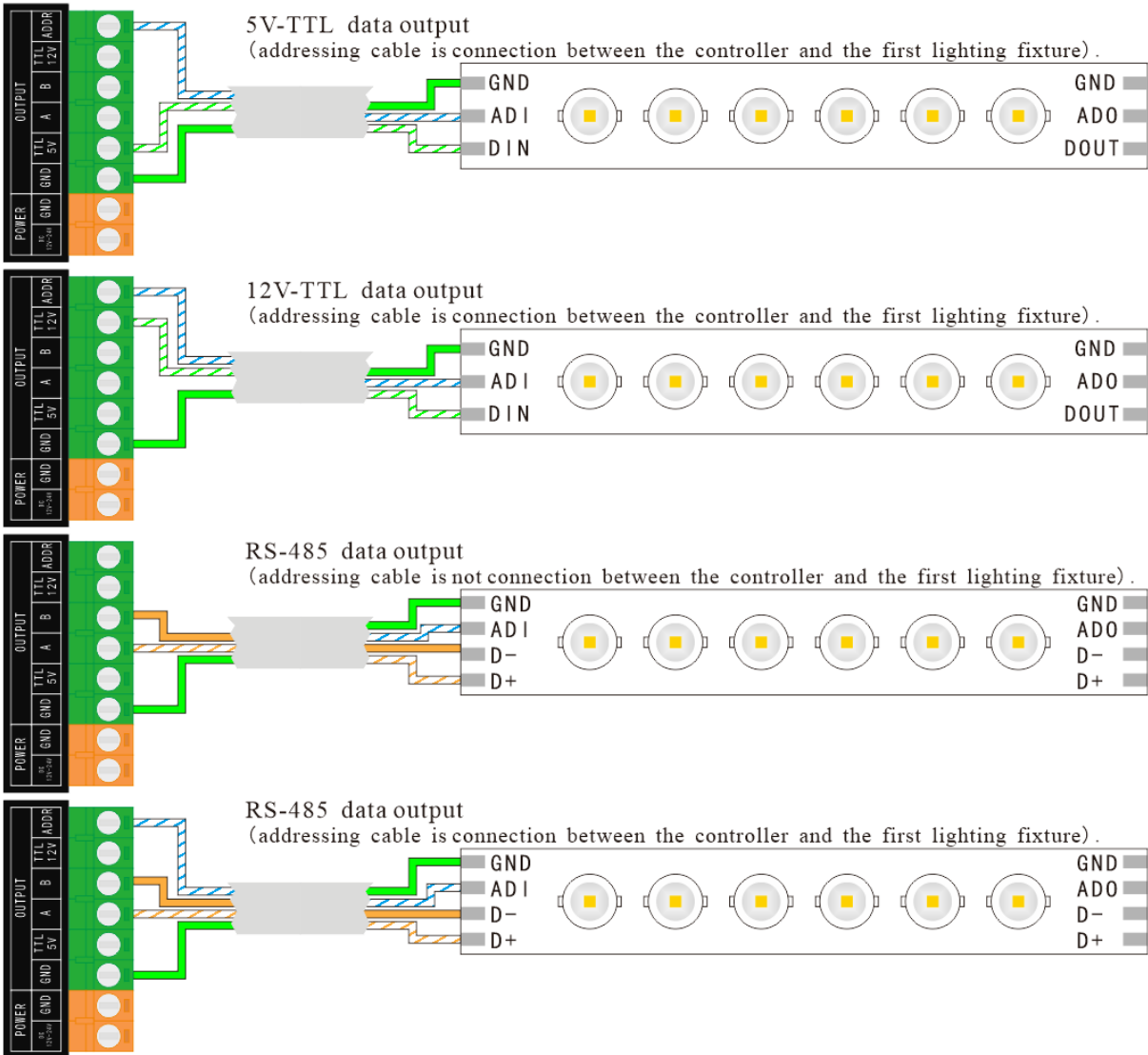
- Size: 127Lx64Wx24H (mm)
- Input voltage: Micro USB DC5V / DC 12V - 24V
- Output signal: RS-485 / 5V-TTL / 12V-TTL x1 channel
- Pixel quantity drove: standard DMX512: 168 points /each channels,
extensible DMX512: 336 points /each channels,
- Output power: <3W
- Working temperature: -15°C~60°C
- Relative 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: 300g (N.W. 250g)

Fittings:  * 4pcs (orange *1 and green *3)

Type of chip:	U01	UCS512A / UCS512B / SW-U series
	U02	DMX512AP / SM512
	U03	SW-D series (3 Channels / 4 Channels)
	U05	UCS512C0
	U06	3 Channels (SM16511 / SM16512 / SM16520)
	U07	4 Channels (SM16511 / SM16512 / SM16520)
	U08	3 Channels (UCS512C4)
	U09	4 Channels (UCS512C4)

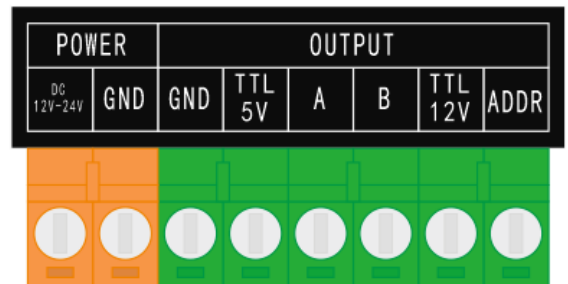
03. CONNECTION LIGHTING FIXTURE

The controller connect with the lighting fixture against actual conditions.



★ Signal cables connection notes:

1. User cannot change the application optionally.
Please connect the cables in accordance with silk print on lighting fixtures.
2. Use UTP—Unshielded Twisted Pair(resistance per 100M<10Ω), low quality Ethernet cables and telephone cable are unavailable.
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.
5. The signal cable must be in 5 meters with UTP and in 1 meters with core wire. Other wise the lighting fixture will address failly.



04. ADDRESSING SETTING

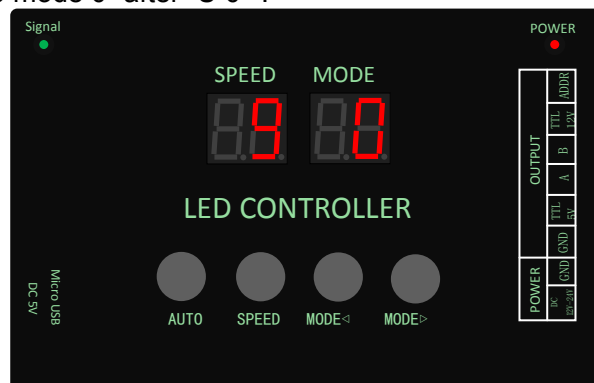
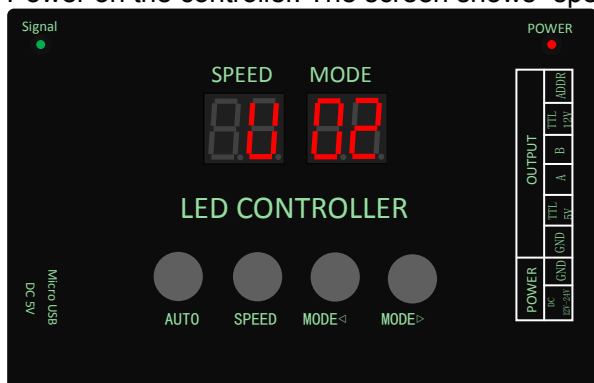
- ※ "A* **" means entering "auto addressing" mode, e.g. #1, #2, #3.....#999.
- "A0 00" means entering "fixed addressing" mode, e.g. #6, #6, #6.....#6.

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		

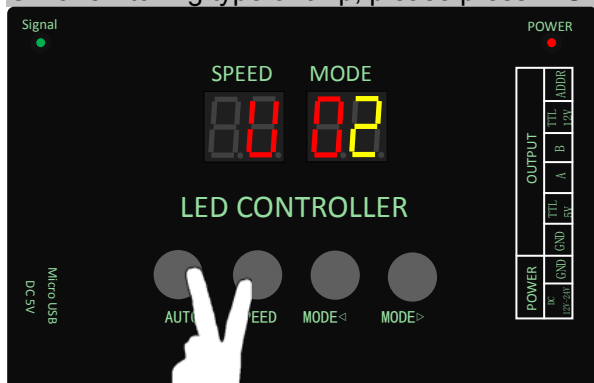
05. ADDRESSING OPERATION

- Power on the controller. The screen shows "speed 9 mode 0" after "U 0*".

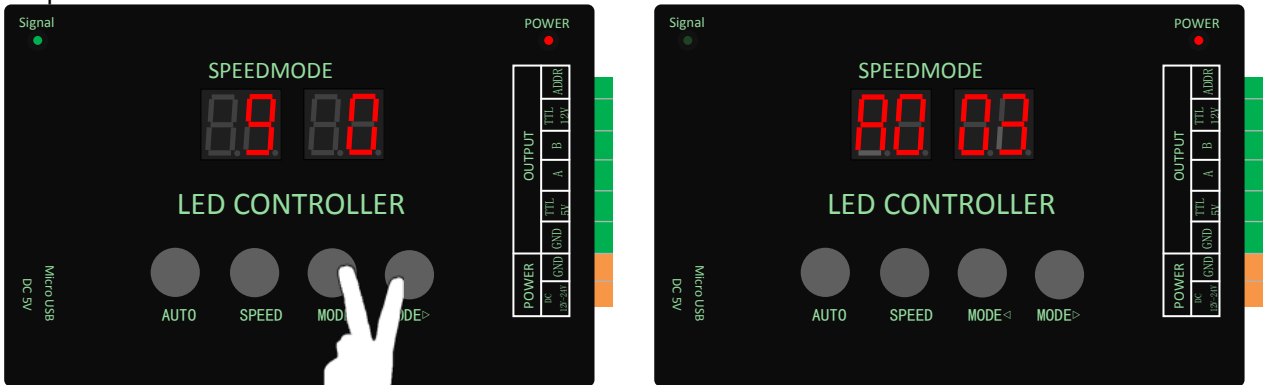


- Press "AUTO" and "SPEED" together and don't release the button until it shows "U 0*". "U 0*" means to select type of chip which need to be addressed. The DMX512AP/SM512 lighting fixture is "U02".

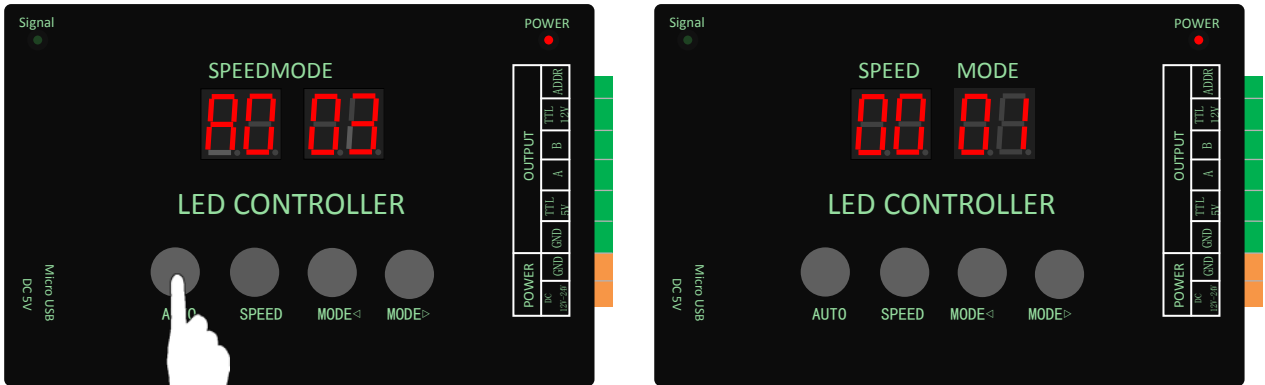
☺ For switching type of chip, please press "AUTO" and "SPEED" to operate.



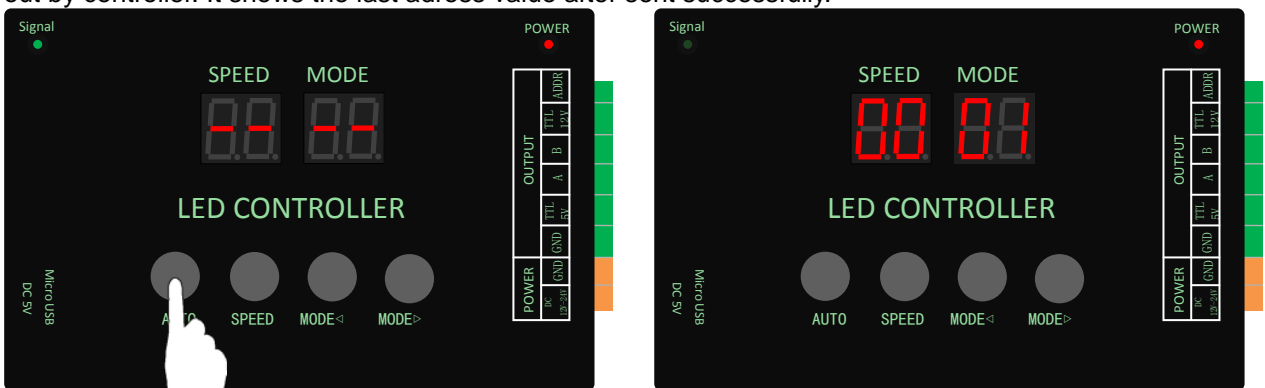
- Enter-into addressing.
Press “MODE◀” and “MODE▶” together and don't release the button until it shows “A0 03”. The lighting fixture is lighting-off. And it's the status of entering address increment.
“A* **” means need to enter the number of channels in single chip. It can set refer to Step 7 in this chapter.



- Long press “AUTO” and don't release the button until it shows “0 0 0 1”. It's the status of entering address.
The address value can set refer to Step 8 in this chapter. And it must be less than 4096.



- please long press “AUTO” and don't release the button until the screen shows “- - - -”. Then the data is sent out by controller. It shows the last address value after sent successfully.



**The DMX512AP lighting fixture is white light when addressed successfully.
The SM512 lighting fixture is green light when addressed successfully.**

※ The buttons are useless for sending the address.

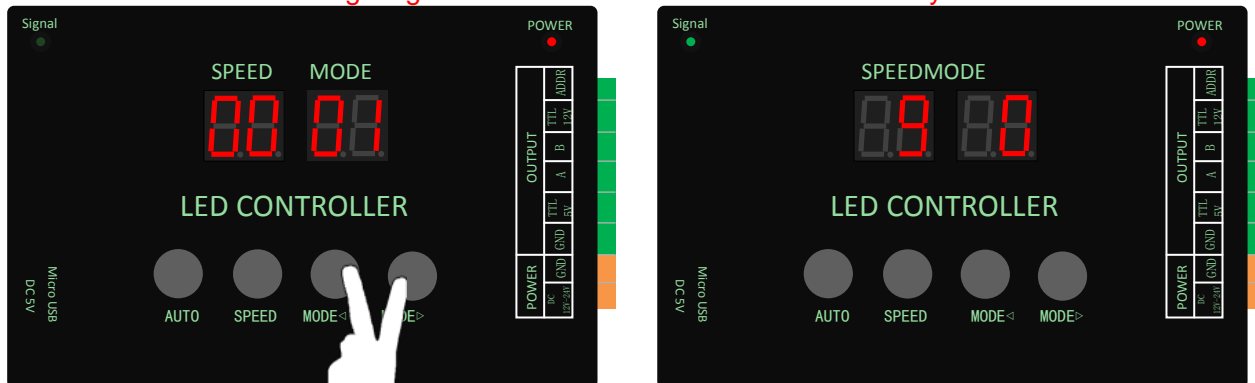
At this time (controller can be power on), directly connect to DMX lighting fixture with the same specification and chip which need to be addressed. Then repeat Step 5 for addressing.

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 long press “AUTO” to send the data one more time.

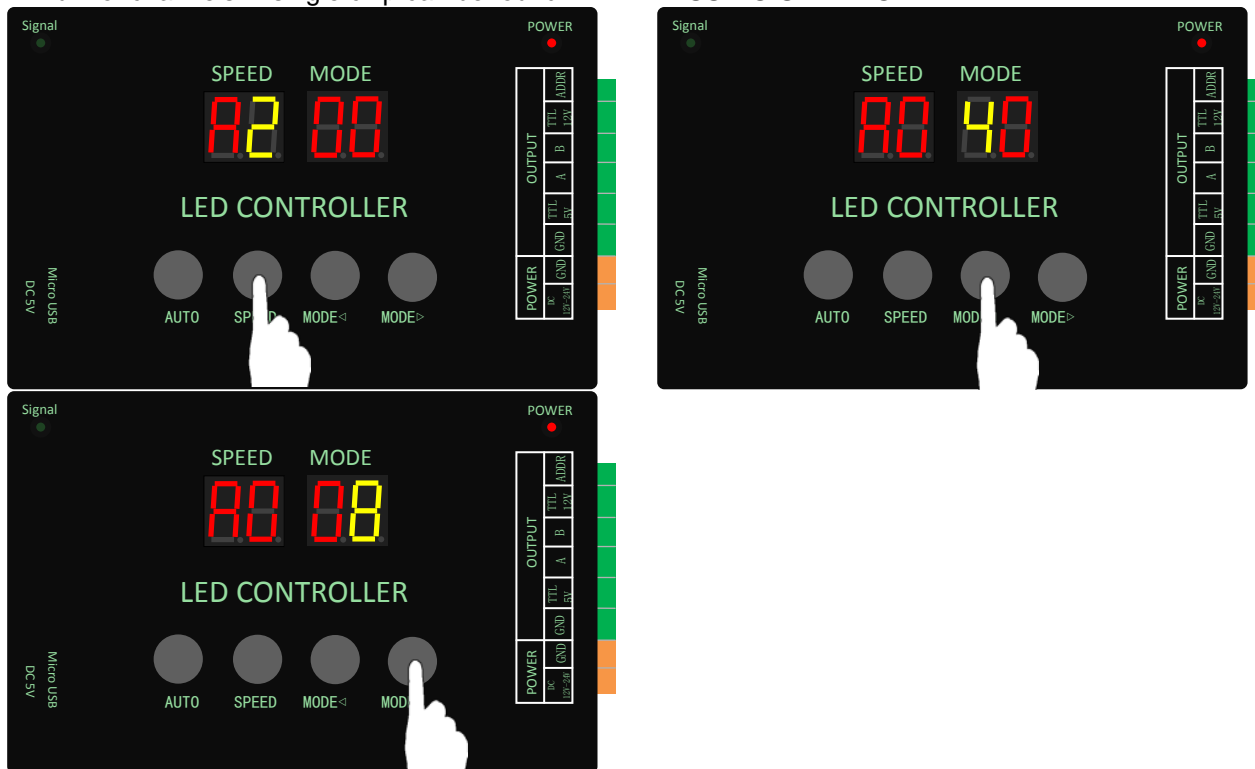
- If the addressing is finished, long press “MODE ◀” and “MODE ▶” to enter normal control. The screen shows “SPEED 9 MODE 0”.

Note: DMX512AP/SM512 lighting fixture save the new address immediately when it be addressed.

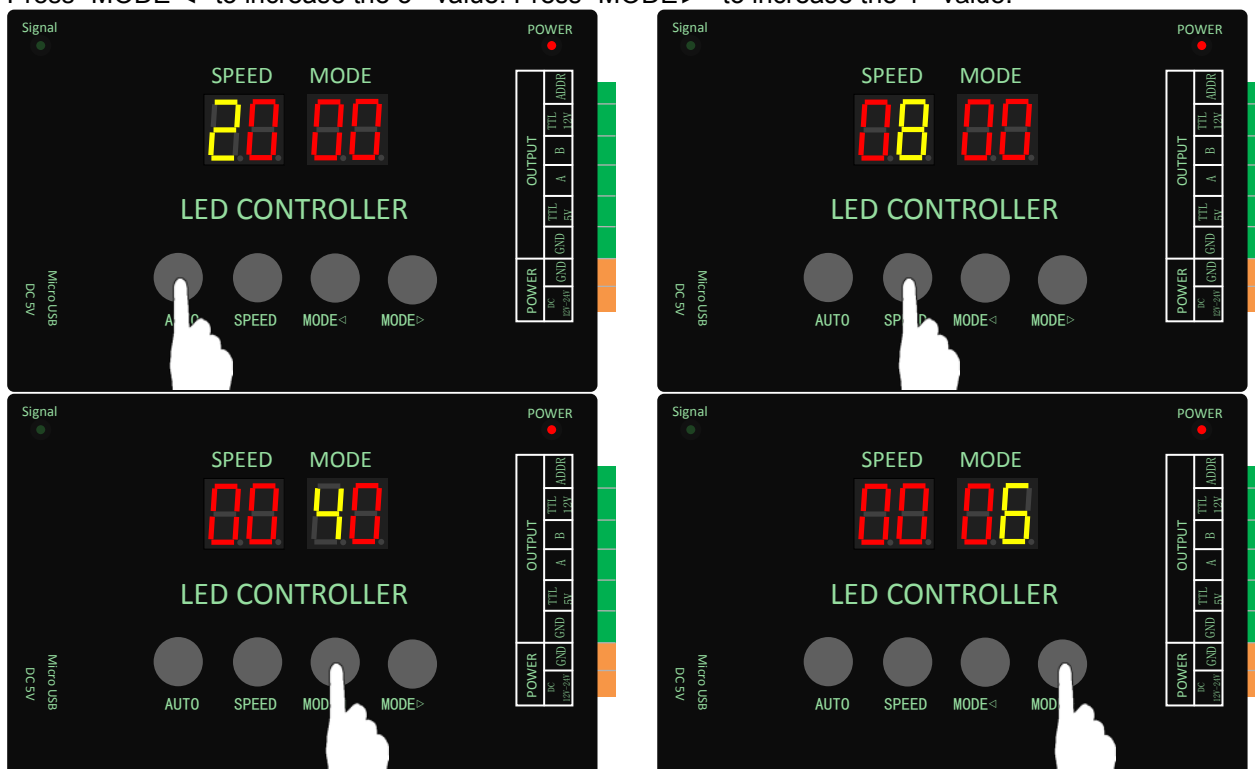


- Address Increment modification. The value must be less than 999. Press “SPEED” to increase the 2nd value. Press “MODE ◀” to increase the 3rd value. Press “MODE ▶” to increase the 4th value.

★ Num of channels in single chip can be found in ADDRESSING SETTING.

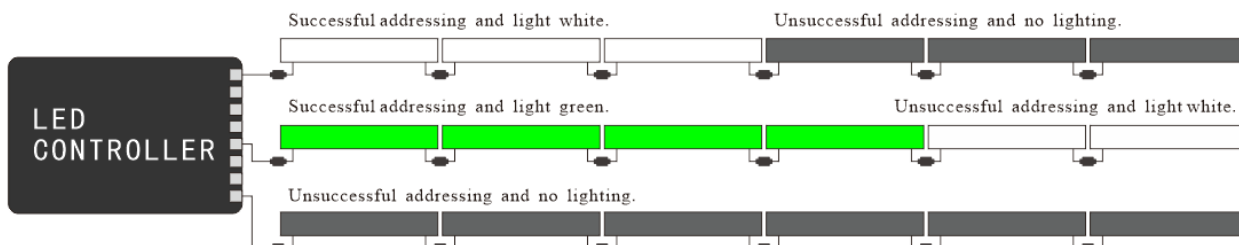


8. Address modification. Repeat Step 5 to address the new value into the DMX512 lighting fixture after modification.
 Press "AUTO" to increase the 1st value. Press "SPEED" to increase the 2nd value.
 Press "MODE◀" to increase the 3rd value. Press "MODE▶" to increase the 4th value.



- ★ The address of Nth DMX512AP/SM512 lighting fixtures is $X(N-1)+1$.
 The address value must be less than 4096.

06. ADDRESSED RESULT



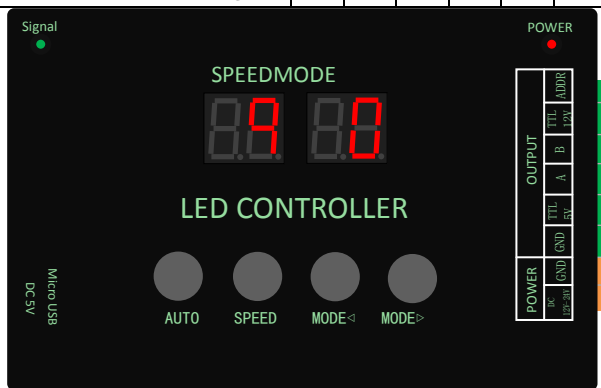
The addressing cable between the controller and the first lighting fixture must connect. Otherwise controller can not send the addressing data to the DMX512 lighting fixture. When the DMX512AP/SM512 lighting fixture is addressed successfully, the lighting fixture will be white(or green) light. Or it means the connection is abnormal. Please check the cable again.

07. BASIC OPERATION

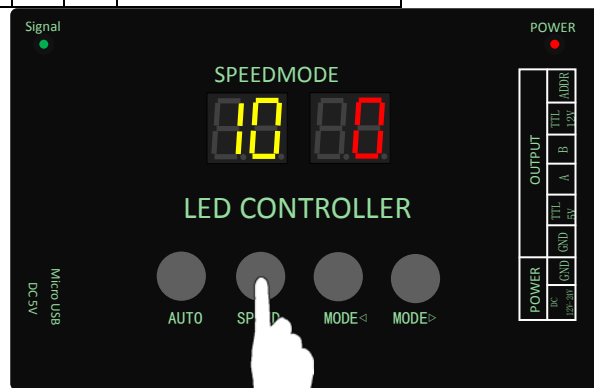
07.1 SPEED SELECTION

Press "Speed" button on controller panel to adjust playing speed. The larger the value is, the slower the speed will be.

	Speed Value										
Main controller Speed	4	5	6	7	8	9	10	11	12		Independent Speed
Frame Per Secong	25	20	17	14	13	11	10	9	8		



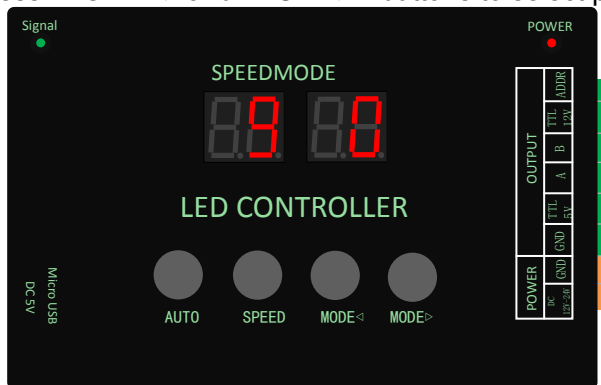
Speed = 9



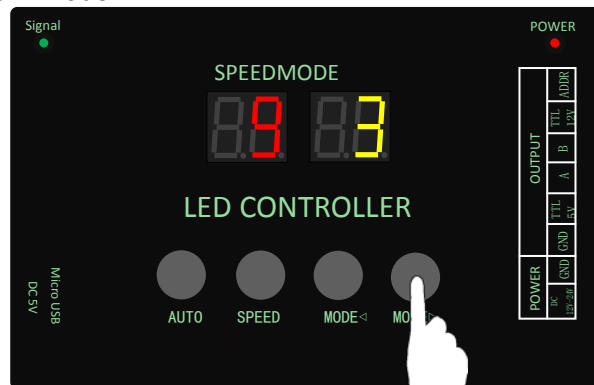
Press "Speed" once, Speed = 10.

07.2 MODE SELECTION

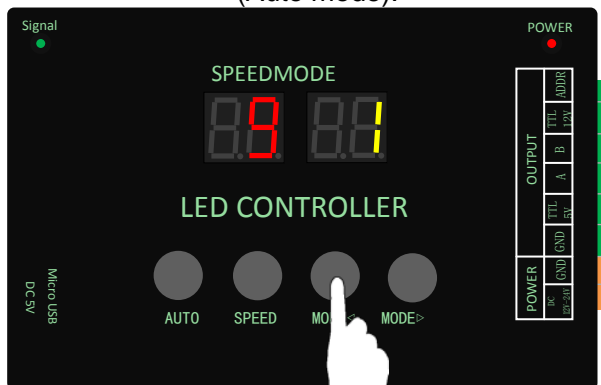
Press "MODE◀" and "MODE▶" buttons to select pattern mode.



Press "AUTO" once, Mode = 0 (Auto mode).





















Press "Mode▶" 3 times, Mode = 3.



Press "Mode◀" once, Mode = 1.

07.3 EFFECT LIST

The effects be normal show on the 3 channels lightint fixture. They would be error on the 4 channels lighting fixture.

Mode	Effect	Mode	Effect
0	Multi loop (mode 1 to 19).	10	 Light and shade
1		11	
2		12	
3		13	
4		14	
5		15	
6		16	
7		17	
8	 pops change	18	
9	 gradual change	19	