

# LED CONTROLLER

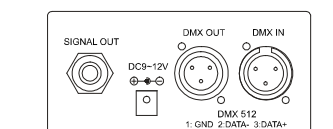
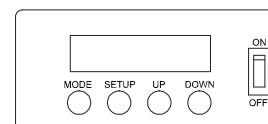
ITEM NO.: **CTR-DIGITAL-12V** (V7.2)

## INSTRUCTION OF DIGITAL CONTROLLER

This controller is used specially for LED Neon Tube digital model. It has a broad application, from building exteriors to shopping malls, from bridges, plazas and display halls to hotels, casinos and advertisements such as signages and displays, etc. It's the leading product for city decorations.

### A. Technical Parameters

|                    |                  |
|--------------------|------------------|
| Size:              | L192*W147*H56mm  |
| Material of shell: | aluminum alloy   |
| Weight:            | 0.95kgs          |
| Working Voltage:   | 12V DC           |
| Power:             | 1W               |
| Signal output:     | 5 Pins Connector |
| Protection:        | IP20             |



### B. Working mode

1. Independent mode
2. DMX512 Console mode

### C. Function and setup:

#### C-1 Independent mode

Controller will enter into independent mode, if there is no connection of DMX signal or DMX console. Various functions and different parameters can be setup via the button on the controller. Please refer to display of the programs showed in LCD;

1. **【MODE】** button is used to select main function of the system, the sequence is: Built-In programs --> DMX --> System setting --> Addressing;
2. **【SETUP】** is used to choose the valid parameter, which will be adjusted; Once the parameter being valid, it will be flashing 5 seconds continuously for activity and adjustment.
3. **【UP】** : Increase function or parameter.
4. **【DOWN】** : Decrease function or parameter
5. Memorization of the adjusted parameters in two methods:
  - 5-1 System will automatically save the parameter, after 5 seconds flashing of the parameter;
  - 5-2 Press **【MODE】** button when the parameter still flashing;

\*\*\* In case of power off during flashing, the parameter will NOT be saved!
6. Tube Addressing: there are two methods on addressing.
  - 7-1 Automatic: the starting address is always from 001.
  - 7-2 Professional: the first starting address can be selected. Specially for separation application or replacement.

#### Warning:

- \* **All tubes must be addressed before application.**
- \* **All sequence number should be sequential, so as to make function can be displayed properly.**
- \* **After being addressed, all tubes will become red, and data saved.**
- \* **Each application should be attached with end cap in the last tube.**

2. DMX Channel: 4 Channels available as sheet:

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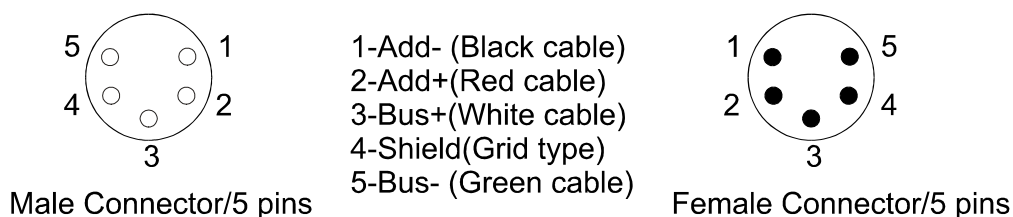
\* Enter or quit DMX mode automatically once detecting valid signal!!!

| DMX Data | CHANNEL-1    | CHANNEL-2       | CHANNEL-3  | CHANNEL-4 |
|----------|--------------|-----------------|------------|-----------|
| 0~14     | BLACKOUT     | NULL            | NULL       | NULL      |
| 15~29    | STATIC COLOR | COLOR           | BRIGHTNESS | NULL      |
| 30~44    | COLOR FLASH  | COLOR           | SPEED      | NULL      |
| 45~59    | COLOR FADE   | COLOR           | SPEED      | NULL      |
| 60~74    | COLOR CHANGE | COLOR           | SPEED      | NULL      |
| 75~89    | COLOR STREAM | COLOR           | SPEED      | DIRECTION |
| 90~104   | COLOR FLEX   | COLOR           | SPEED      | DIRECTION |
| 105~119  | COLR CHASE   | COLOR           | SPEED      | DIRECTION |
| 120~134  | WATER FLOW   | COLOR           | SPEED      | DIRECTION |
| 135~149  | COLOR STACK  | COLOR           | SPEED      | DIRECTION |
| 150~164  | PING-PONG    | COLOR           | SPEED      | FREQUENCY |
| 165~179  | RAINBOW FLOW | COLOR SECTION   | SPEED      | DIRECTION |
| 180~194  | DRIP FLOW    | COLOR           | SPEED      | DIRECTION |
| 195~209  | AUTORUN      | CIRCLE QUANTITY | NULL       | NULL      |
| 210~255  | DIMMER       | RED             | GREEN      | BLUE      |

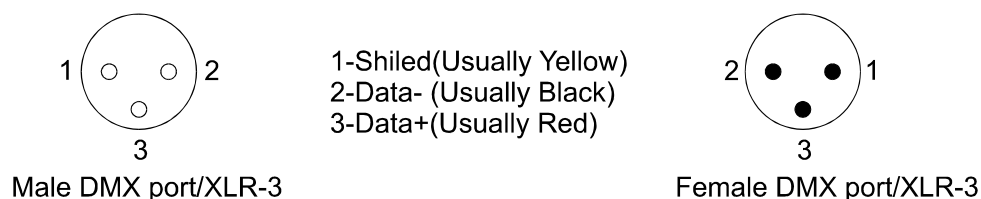
3. Under DMX mode, LCD in the controller will display the present function and parameter selected.  
Exception: the data of CH-2, CH-3, CH-4 show 0~255, and LCD show 0~100.

## D. Signal interface

### D-1 Data connector of the controller and tube



### D-2 DMX port of the controller



## E. Compatibility of different versions

| Controller<br>Tube | V5.0               | V6.0                              | V6.2                            | V7.0       | V7.2                                                  | Remark                                                        |
|--------------------|--------------------|-----------------------------------|---------------------------------|------------|-------------------------------------------------------|---------------------------------------------------------------|
| V5.0               |                    | Invalid                           | Invalid                         | Invalid    | Invalid                                               | 3pin signal system                                            |
| V6.0               | Invalid            |                                   | Valid                           | Valid      | Valid                                                 | 5pin signal system<br>Bus Control                             |
| V6.2               | Invalid            | Invalid                           |                                 | Valid      | Valid                                                 | Update the program into V6.2;                                 |
| V7.0               | Invalid            | Invalid                           | Valid                           |            | Valid                                                 | Update on the structure(End cap)<br>No changes on the program |
| V7.2               | Invalid            | Invalid                           | Valid                           | Valid      |                                                       | Update the program into V7.2;                                 |
| Remark             | 3pin signal system | 5pin signal system<br>Bus Control | Update the<br>program into V6.2 | No changes | Update the<br>program into V7.2;<br>And V6.2 optional |                                                               |

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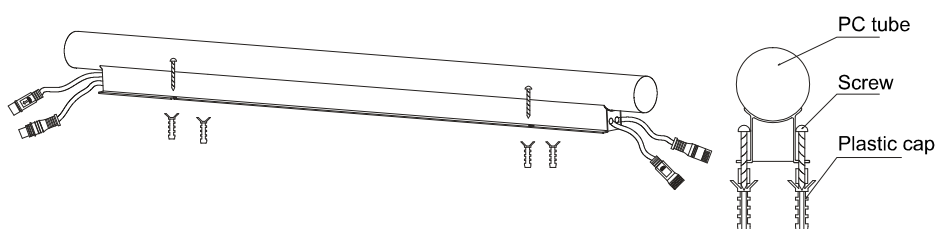
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## Appendix

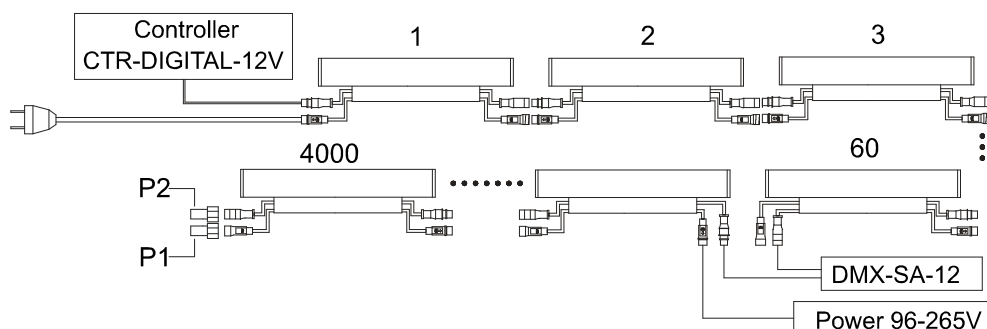
### LED Neon Tube-Digital Type/LNT-D

#### 1. Specification:

|                  |                             |
|------------------|-----------------------------|
| Material:        | PC tube & aluminum base     |
| Size:            | 1000 (500) *50*78mm         |
| Weight:          | 1.3 kgs/L1000, 0.7kg/L500   |
| Input Voltage:   | 90V~265V AC;50/60Hz         |
| Working Voltage: | 12V DC                      |
| Power:           | Max.15W/L1000, Max. 8W/L500 |
| Protection:      | IP65                        |
| Life Time:       | about 50,000 hours          |



#### 2. Connection between controller and tubes:



P1: 2-pin power female connector end cap

P2: 5-pin signal connector end cap(with two 120 ohm resistors inside)

#### Warning:

1. Installed controller into lightningproof, magnetic-protection field.
2. The controller is for indoor use only.
3. The tubes need to be supplied by new power and signal be amplified by each 60pcs.
4. Each connector should use silicon ring for waterproof purpose.
5. Replacement of any tube require coding newly.
6. Make sure the ground connection well avoid electric shock, due to metal housing.
7. Make sure all connectors have been connected tightly, avoiding any failure of function or waterproof.
8. Once the tubes was damaged, please submit for repairing and replace new ones.