## \&ㄴUZ NEGRA

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## DIGITAL CONTROLLER WITH IP20 SENSOR

Digital controller with 133 effects.
It is controlled by means of the buttons on the controller or with a small remote control.

Working tension 12 V , maximum pixel load of 1024 points (in low mode) or 2048 points (in high mode).


## Controller:



## Remote control:



12V
voltage

| Product | Led digital controller |
| :---: | :---: |
| Working voltage | 12 V |
| Working current | $<60 \mathrm{~mA}$ |
| Electric feed | By means of Jack connector or terminal with screws for cables |
| Maximum pixel load | 1024 points (in low mode) or 2048 points (in high mode). |
| IC compatible models | WS2811, WS2812B, TM1809, UCS1903 y TM1812 |
| Working temperature | $-20^{\circ} \mathrm{C} /+60^{\circ} \mathrm{C}$ |
| Effect modes | 133 |
| Product dimensions | L137xW70xH25mm |
| Control types | by means of the buttons on the controller or with a small remote control. |
| Synchronous controller | yes, they can be synchronised by means of a mains cable connection and a RJ45 connector |

Aprobado por:

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## Operation Manual:

1. Configuration and functions:

## Configuration:

Connect the charging cable at the beginning, followed by the power cord. Make sure that a short circuit cannot occur between the connecting cable before turning on the power.
Then configure the steps as follows:
Press the "On/off" button to turn off the controller before setting the menu.
Press the "up" and "down" button once at a time, and the LED will light up at this time. Then press the "Mode/ Speed" button to access the menu settings screen.

The first setup screen is for "High Speed and Low Speed Settings", and the LED will show "S-HI" or "S-LO". Then press the "up" and "down" button to select the mode. (If the IC in the light bar is the high speed mode, you must choose "S-HI" and choose "S-HI" when the speed is low). The factory default is for high-speed mode.
Continue to press the "Mode/Speed" button to enter the second screen:
"Setting checkpoints". The 4-digit LED display is for the number of control points. To increase or decrease the number press the "up" and "down" button (long press can be adjusted quickly). The factory default is 50 .
After setting it up properly, press the "On/off" button to save and exit.

## Functions:

There are 4 buttons in total on the control panel, the function of each button is as follows:
On/Off: you can turn the output on or off.
Mode / Speed: Mode setting function switch / speed setting (the first LED shows H for model adjustment, displays S for speed adjustment). UP: Mode + / Speed + button. When in the mode slider function, it is for " + " mode. When in the speed slider function, it is for "Speed + ".

DOWN: Mode/speed button. When in the mode slider function, it is for "Mode-". When in the speed slider function, it is for "Speed-".
A. Mode setting/speed setting function switch (first LED shows H for model setting, displays S for speed adjustment).
B. Mode $+/$ Speed + button. When in the mode slider function, it is for " + " mode. When in the speed slider function, it is for "Speed + ".
C. Mode/speed button. When in the mode slider function, it is for "Mode-". When in the speed slider function, it is for "Speed-".
D. On/Off button: you can open or close the output.

## Synchronous Controller System Description:

The synchronous control system can be made of any number of controller connections. Each of the subcontrollers would follow the first master controller for permanent synchronous change. And there's no delay.
After connecting the wiring diagram, you do not need to configure the subcontroller. It will be according to the master to control the speed and the mode change. (That wouldn't be synchronous when it's turned on. You can close and open to be synchronous) When the master is working and the subcontrol works well, the green signal light of the subcontrol will flash. The digital LED shows the working mode.

## The standard color changes as follows:

| 1 | Static red | 2 | Static green |
| :---: | :---: | :---: | :---: |
| 3 | Static blue | 4 | Static yellow |
| 5 | Static cyan | 6 | Static purple |
| 7 | Static white | 8 | Three color jumpy change |
| 9 | Seven color jumpy change | 10 | Seven color stroboflash |
| 11 | Red horse race lamp to right direction | 12 | Purple horse race lamp to left direction |
| 13 | Blue horse race lamp to right direction | 14 | Cyan horse race lamp to left direction |
| 15 | Seven color cycling horse race lamp to right direction | 16 | Seven color cycling horse race lamp to left direction |
| 17 | Seven color horse race lamp back-for-ward direction | 18 | Seven color horse race lamp to left direction |
| 19 | Seven color jumping horse race lamp to right direction | 20 | Three color gradually change |
| 21 | Seven color gradually change | 22 | Red background scan lamp back-for-ward direction |
| 23 | Green background scan lamp back-for-ward direction | 24 | Blue background scan lamp back-for-ward direction |
| 25 | Yellow background scan lamp back-for-ward direction | 26 | Cyan background scan lamp back-for-ward direction |
| 27 | Purple background scan lamp back-for-ward direction | 28 | White background scan lamp back-for-ward direction |
| 29 | Seven color scan lamp back-for-ward direction | 30 | Red water move to right direction |
| 31 | Red water move to left direction | 32 | Green water move to right direction |
| 33 | Green water move to left direction | 34 | Blue water move to right direction |
| 35 | Blue water move to left direction | 36 | Yellow water move to right direction |
| 37 | Yellow water move to left direction | 38 | Cyan water move to right direction |
| 39 | Cyan water move to left direction | 40 | Purple water move to right direction |
| 41 | Purple water move to left direction | 42 | White water move to right direction |
| 43 | White water move to left direction | 44 | Seven color cycling water move to right direction |
| 45 | Seven color breathing lamp back-for-ward direction | 46 | Red trail to left single direction |
| 47 | Purple trail to left single direction | 48 | Blue trail to left single direction |
| 49 | Cyan trail to left single direction | 50 | White trail to left single direction |
| 51 | Green trail to left single direction | 52 | Yellow trail to left single direction |
| 53 | Seven color jumping trail to left single direction | 54 | Seven color queue trail to left single direction |
| 55 | Seven color alternation trail to left single direction | 56 | Red trail to right single direction |
| 57 | Purple trail to right single direction | 58 | Blue trail to right single direction |
| 59 | Cyan trail to right single direction | 60 | White trail to right single direction |
| 61 | Green trail to right single direction | 62 | Yellow trail to right single direction |
| 63 | Seven color jumping trail to right single direction | 64 | Seven color queue trail to right single direction |
| 65 | Seven color alternation trail to right single direction | 66 | Red water trail to right direction |
| 67 | Purple water trail to right direction | 68 | Blue water trail to right direction |
| 69 | Cyan water trail to right direction | 70 | White water trail to right direction |
| 71 | Green water trail to right direction | 72 | Yellow water trail to right direction |
| 73 | Seven color jumping water trail to right direction | 74 | Seven color queue water trail to right direction |
| 75 | Seven color alternation water trail to right direction | 76 | Red trail to left double direction |
| 77 | Purple trail to left double direction | 78 | Blue trail to left double direction |
| 79 | Cyan trail to left double direction | 80 | White trail to left double direction |
| 81 | Green trail to left double direction | 82 | Yellow trail to left double direction |
| 83 | Seven color jumping trail to left double direction | 84 | Seven color queue trail to left double direction |
| 85 | Seven color alternation trail to left double direction | 86 | Red trail to right double direction |
| 87 | Purple trail to right double direction | 88 | Blue trail to right double direction |
| 89 | Cyan trail to right double direction | 90 | White trail to right double direction |
| 91 | Green trail to right double direction | 92 | Yellow trail to right double direction |

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| 93 | Seven color jumping trail to right double direction | $\mathbf{9 4}$ | Seven color queue trail to right double direction |
| :---: | :--- | :---: | :--- |
| 95 | Seven color alternation trail to right double direction | 96 | Full color wave to right direction |
| 97 | Seven color water move to left direction | 98 | Purple background trail to right double direction |
| 99 | Blue background trail to right double direction | 100 | White background trail to right double direction |
| $\mathbf{1 0 1}$ | Cyan background trail to right double direction | 102 | Green background trail to right double direction |
| $\mathbf{1 0 3}$ | Yellow background trail to right double direction | 104 | Seven color background trail to right double direction |
| $\mathbf{1 0 4}$ | Seven color spread from the middle to both sides | 106 | Seven color breathing from the middle to both sides |
| $\mathbf{1 0 7}$ | Seven color draw curtain | 108 | Seven color lower curtain |
| $\mathbf{1 0 9}$ | Seven color spread from both sides to the middle | 110 | Colorful switch |
| $\mathbf{1 1 1}$ | Seven color overlay to right direction | $\mathbf{1 1 2}$ | Seven color overlay to left direction |
| $\mathbf{1 1 3}$ | Seven color overlay to left and right direction | $\mathbf{1 1 4}$ | Seven color background overlay to double direction |
| $\mathbf{1 1 5}$ | Seven color overlay from middle to both sides | $\mathbf{1 1 6}$ | Seven color background overlay middle to both sides |
| $\mathbf{1 1 7}$ | Seven color overlay from both sides to middle | $\mathbf{1 1 8}$ | Seven color background overlay both sides to middle |
| $\mathbf{1 1 9}$ | Sub seven color move back-for-ward direction | $\mathbf{1 2 0}$ | Sub seven color jump and move back-for-ward |
| $\mathbf{1 2 1}$ | Sub seven color background move back-for-ward | $\mathbf{1 2 2}$ | Sub seven color background move single direction |
| $\mathbf{1 2 3}$ | Sub seven color overlay to left and right direction | $\mathbf{1 2 4}$ | Sub seven color background overlay to left and right |
| $\mathbf{1 2 5}$ | Sub seven color spread to single direction | $\mathbf{1 2 6}$ | Sub seven color spread back-for-ward |
| $\mathbf{1 2 7}$ | Sub seven color water move to left and right | $\mathbf{1 2 8}$ | Sub seven color spread from middle to both sides |
| $\mathbf{1 2 9}$ | Sub seven color stretch from middle to both sides | $\mathbf{1 3 0}$ | Sub seven color stretch to single direction |
| $\mathbf{1 3 1}$ | Sub seven color overlay to single direction | $\mathbf{1 3 2}$ | Auto play circularly |
| $\mathbf{1 3 5}$ | Custom combination mode |  |  |

## Connected:

This scheme is for a single controller only.


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## DIGITAL CONTROLLER WITH IP20 SENSOR

DOGITAL LED
The following two diagrams are for connecting them in synchronous mode (operate simultaneously).

1. Standard and easy way. Connect them with an RJ45 cable using the Input and Output terminals.

2. In cascade, the first controller will have the connection in Output (MASTER) and the rest of the controllers will have the input, which means that many leads must be made from an RJ45 socket, in this way we save cables but we have to make more splices.


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