LED Technologies UCS512-A Multi Purpose Controller Instruction Manual

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LED Technologies
Creative LED & Effect Technology for the Trade Professional

LED Technologies UCS512-A Multi Purpose Controller

Product Overview

This DMX Code Editor / Player from LED Technologies is a multi-purpose controller that will enable you to program and edit the DMX Chips on the Pixel strip and Pixel neon products supplied by LED Technologies up to one DMX Universe (512 DMX addresses).
Other functions are built into the controller that will be detailed later in this data sheet but primarily this controller should be used to program and play the Pixel Strip & Pixel Neon as detailed above. The Player has 22 x built-in programs that have been written to the SD card (supplied with the unit). Once the DMX address codes have been written to the LED Pixel Strip or Pixel Neon, the various programs can be selected, and the effects played onto the connected product. The speed that these programs run at can be adjusted as required along with the option to cycle or not cycle the programs. The controller features a 9.4cm x 5.3cm colour touch screen, a master power on/off switch, 12V or 24V power inputs and a 5V USB power input USB C port. The power inputs will both power the controller and charge the internal rechargeable battery. The main port on the front of the controller has five terminals: Ground, A, B, ADDR & +5V. A Red & Green LED indicator shows the power status and the correct operation of the controller. The time and date can be set on the touch display and there are two operating modes on the DMX Code Editor: Play Mode and Test Mode. Please note that the DMX Chip Type on our LED Pixel Strip products is: UCS512-C4, and the Chip Type on our Pixel Neon products is: UCS512-C2L, the DMX Code Editor can also write to a number of different control chips as detailed in the chart below.
Note: We recommend that when writing the addresses to our Pixel products you select the UCS512-C4 option from the UCS series chip type which is a DMX512 Chip.

Chip Series		Chip Type
UCS Chip Series	UCS512-A UCS512-C4 UCS512-D UCS512-F UCS512-H	UCS512-B UCS512-CN UCS512-E UCS512-G / UCS512-G-S UCS512-H-S
SM Series	SM1651X-3CH SM175121 SM17500 SM1852X	SM1651X-4CHA SM17512X SM17500-SELF (self-channel setting)
TM Series	TM512AB TM51TAC TM512AE	TM512L TM512AD
Hi Series	Hi512A0 Hi512A6 Hi512A0-SELF	Hi512A4 Hi512D
GS Series	GS8511 GS813 GS8516	GS8512 GS8515
Other	QED512P	

Initial Setup

- Insert the SD Card into the SD card slot and then charge the internal battery using either the USB C port or connect a 12V or 24V Driver to the power input terminals. Note: Disconnect the power once the unit is charged to 100% as shown on the upper RHS of the touch screen. This will prevent overcharging. Once charged, the controller should give approximately 10 hours of use from a full charge. The controller can also be connected to the power supply for continuous operation.
- Set the required language by touching the bottom right of the touch screen to toggle between the two available options, (English or Chinese).
- Set the Date and time by touching and holding the upper centre section of the screen, this will display a pop-up window in which you can then input the date and time, and press OK when done.

Note: The time and date are stored in the controller's memory so the information only needs to be entered once when first powered on. Once these parameters are set your DMX Code Editor & Player is ready for use.

Operating Modes

Test Mode

This is the mode that you use to write or edit the DMX addresses on the LED Technologies Pixel Strip or Pixel Neon products.

Note:

- Each 5m length of the RGB Pixel Strip will take up 150 x DMX Addresses, so the maximum length of Pixel strip per DMX Universe is realistically 17m.
- Each 5m Roll of our RGBW Pixel Neon will take up 160 x DMX addresses, so the maximum length of LED Pixel Neon per DMX Universe is realistically 15m.

Address Writing

Pixel Strip & Pixel Neon has a “run direction” that is clearly marked “Input” & “Output”. Take care to connect the product so that the run direction is connected to the DMX Writer the correct way round and each length of the product is connected together so the run direction is the same on each.

- Connect the number of meters of LED strip or LED Neon together using the in/out plugs and sockets on the product, please take care to connect these correctly as in the above note.
- Ensure that there is a suitable 24V LED Constant voltage driver connected to the product at each 5m length. This should be connected to the 24V “power in” terminals on the product.
- Connect the input on the first length of the product to the A, B &C terminals on the DMX Code Editor. Blue: “A”, White: “B” and Green: ADDR. The 24V power is connected to the Red + power input and Black to the – Power input from the 24V driver. This is the same color coding for the Pixel Strip and Pixel Neon.
- Switch on the DMX Code Editor / Player and select “Test”.
- Select “Write Add”
- Select UCS Series
- Select UCS512-C4
- Select “By Ch”
- Set the Start Ch/Num to “1”
- Set “Ch Space” to “3” for the pixel Strip as this is 3 3-channel (RGB) product or “4” for the Pixel Neon as this is 4 4-channel RGBW product.
- Select “Write Add”, on the pop-up window “Write OK, first white, other red”, Click “Close or the window will close automatically after a few seconds and the “Write Add” button at the bottom will change to “Writing”. At this point the Write Editor is writing the DMX addresses to the product. Once “Writing” has finished you then have the option to test the product by running the “Test Light” option detailed later in this datasheet

Testing

After addressing the Pixel product, it is possible to verify the results by running various tests built into the controller. The “Test Mode” option enables you to test each individual color, on each individual Pixel. For the LED Pixel Strip, each pixel is 100mm Long and Red, Green, and Blue, on the LED Pixel Neon each pixel is 125mm long and Red, Green, Blue, and White or you can test the product by running effects. On the “Test Mode” menu, you can test each DMX address along the length of the product. There are two types of tests that can be run, “Test Address” or “Test Effect

Test Address

- Click on the “Test Add” option.
- Tick the “Reissue” or “Test Travel” Option as required. Reissue: Tests each color on each pixel, Test Travel: This shows each colour for each pixel, and leaves the previous pixel lit on white, moving down the product to the last address.

- By pressing the + & – buttons on the “Manual Test” will let you select each color and each pixel along the product one step at a time.
- To run the selected test automatically, select “Auto Test” on the “Start Test” option, this will run the test automatically.

Test Effects

- Click on “Test Light” This is the Test Effect mode and will test the product by running various selectable effects (see table below).
- Press and hold the “IC” option and select the IC type which in the case of our Pixel Strip and Pixel Neon products will be “DMX512”.
- Select the number of pixel channels for your product (3 for Pixel Strip, 4 for Pixel Neon).
- Select the “Brightness” option to adjust the intensity of the test that you want to run.
- Select the “Dimmable” option to control each colour individually.
- Select the “Manual Count” option to manually select each pixel so that you can tell if each pixel section is working in the correct sequence.
- Select the “Auto Count” option to run the test automatically.

No.	Name	Content	Notes
1	Channel 1	First Channel Lights On	Effect numbers 1-6 are related t o the setting of the number of ch annels. If 4 channels are set the single channel effects will only h ave the 1-4 effects.
2	Channel 2	Second Channel Lights On	
3	Channel 3	Third Channel Lights On	
4	Channel 4	Fourth Channel Lights On	
5	Channel 5	Fifth Channel Lights On	
6	Channel 6	Sixth Channel Lights On	
7	All On	All Channel’s Lights On	
8	All Off	All Channel’s Lights Off	
9	All On/Off	All Channel Turn On & Off simultaneously	
10	Alternate On/Off	All Channel’s Turn On & Off Alternatively	
11	Single Point Scan	Pixel Scan	

Play Mode

In this mode, the controller can be used to play one of 22 x Pre-programmed sequences that reside on the SD card. Program Speed can be adjusted as required.

Running Programs

To run one of the programs on the controller, follow the instructions under “Address Writing” on how to connect your DMX pixel product to the output port on the DMX Code Editor and DMX Player.
Note: When running programs, there is no need to connect the green cable to the “ADDR” connection unless you intend to edit or re-write to the DMX chips on your Pixel Strip or Pixel Neon. This connection is only required for

pro-gramming/editing.

Playing a Program

- Select “Play” on the controller then make sure the Left-Hand round button is set to DMX 250K.
- Select “Cycle” or “No Cycle” as required.
- Select the “SD” option which will play the 22 programs recorded to the SD Card.
- Select either the “3-channel” or “4-channel” mode by toggling the “channel” button as required.
- Press the “Up and Down” arrows on the “Mode” button to select the program you want to run.
- Press the “Up and Down” buttons on the “Speed” button to adjust the speed of the program.

Dimming

- Select “Dimming” if you simply want to dim each of the colours on the Pixel product so that the whole length of product lights up a colour.
- Select the number of channels by toggling the “Ch Num” button, you can then increase or decrease the colour by sliding the appropriate colour bar to increase or decrease the brightness of the associated colour. Note: This is the most accurate way of mixing colours as each colour has a number to indicate the exact intensity of the colour in RGB or RGBW as a DMX value.
- For more faster but more basic colour mixing, select the “Flash” option until “Image” is shown.
- Toggle the “Accurate” button to switch between “Accurate” and “Fuzzy” colour mixing.
- Select “Save” to save the dimming parameters.

Product Specifications

- Memory Card: SD Card, Capacity: 128MB – 32GB, Format: Fat or FAT 32, Storage File Name: *.led Operating Power: 5V – 24V DC input (4000mAh bult-in rechargeable battery)
- Data Port: 4 Pin Terminal Block
- Power Consumption: 4W
- Operating Temperature: -10ºC – 65ºC
- Dimensions: L 140mm x W 100mm x H 40mm
- Weight: 1.7Kg
- Box Contents: DMX Code Editor & Player, 1 x 256MB SD card, 1 x USB A to USB C charging cable.

For further information on this and our other professional LED lighting and control products, please contact us by telephone, email, WhatsApp, or via Live Chat on our website.

- **www.ledtechnologies.co.uk**
- 01260 540014

Documents / Resources

	LED Technologies UCS512-A Multi Purpose Controller [pdf] Instruction Manual UCS512-A, UCS512-A Multi Purpose Controller, Multi Purpose Controller, Purpose Controller, Controller

References

- LED Technologies | Supplier of High Quality LED Lighting
- User Manual