K-1000C CONTROLLER MANUAL

LEDEdit PRO

Website : lededitpro.com
SM : @lededitpro
Mailbox : support@lededitpro.com

Join Now

K-1000C system features:

- **Professional K-1000C LED Controller, an upgrade of the T-1000S:** It supports all the smart ICs on the market. including WS2812B, WS2811, WS2813, SK9822, SK6812RGBW, APA102C, WS2801, etc. All the dual data led chips, data, and clock led chips, and single data led chips It is suitable for engineering projects or customers' DIY projects. SD card capacities range from 128MB to 32GB. Install LEDEDIT software on your Windows computer. cannot be used with a Mac.

- **Great for a DIY project:** It is compatible with LED strips, LED matrix panels, special-shaped LEDs, and various data direction projects. Various special lighting effects like fireworks, chasing, rainbows, scrolling text, single color, full color, running, etc. There is a lighting effect library in the LEDEdit software. You can also use some videos or pictures as your own lighting effect library.

- **Cascade Synchronisation:** There is one port on it; it can support 1536 pixels (DMX LED 512 pixels). Cascade synchronization is for large-pixel projects. We can cascade many controllers. Please contact us if you require K4000C controllers that can control up to 4000 pixels or K8000C controllers that can control up to 8000 pixels.

- **Refresh Rate:** 512 pixels at 30 frames per second, 1024 points at 25 frames per second, and 1536 pixels at 15 frames per second. The maximum WS2812B control resolution is 1536 pixels. Usually, we recommend 1000–1500 pixels. More pixels will decrease the speed of data transmission.

Notes:

1. The controller loads lamps with 512 pixels, whose speed can reach up to 30 frames per second; 1024 pixels, whose speed can reach up to 25 frames per second; and 2048 pixels, whose speed is about 15 frames per second (the above parameter is an example of a 1903 agreement IC; different ICs have differences).

2. International standard DMX512 (1990 agreement) maximum support is 512 pixels. When the load is international standard 170 pixels, the speed can reach up to 30 frames per second; 340 pixels speed is about 20 frames per second; and 512 pixels speed is about 12 frames per second.

Supported Pixel LED Types

- UCS1903, 1909, 1912, 2903, 2904, 2909, 2912
- WS2811, WS2812, WS2813, WS2815, WS2818
- SK6812 (Max Supports Pixel LEDs 2048 pixels)
- TM1803, 1804, 1809, 1812
- SM16703, 16709, 16712
- LX3203, 1603, 1103
- SM16716, 16726
- GS8205, 8206
- LX1003,1203
- P9883, P9823
- INK1003
- P9813
- LPD6803
- WS280
- LPD1886
- TM1913
- TM1914
- DMX
- DMX 500K
- DMX 250K-CZF
- DMX 250K-CZF

Notes:

1. If supporting RGBW, four channels' lights should select K-1000-RGBW.

2. If you support single-channel light, choose K-1000-W; at this time, one channel means one pixel, and the software effect is white lighting.

Difference Between K-1000C and T-1000S

There is not much difference when it comes to specifications. You can say K-1000C is a T-1000S Pixel LED controller with a seven-segment display. Unlike the T-1000S, the K-1000C needs manual chip selection. The T-1000S detects the chip name from the effect file. Other than that, the K-1000C Pixel LED controller is the T-1000S. Unlike the T-1000S pixel LED controller, the T-1000C is expensive (nearly twice the price). The benefit of the K-1000C controller is that you can see the status of the controller via a seven-segment display. These are the differences between these two controllers.

Selecting Pixel LED in the Controller

As I mentioned earlier, you need to select the pixel led type from the controller to control it. The pixel LED type group is given a two-digit code when the chip selection button is pressed (first two digits). It's called the pixel LED chip group. The other four digits in the display will show a pixel LED chip number that is in that group. That doesn't mean that it's the only chip supported by the group. It's just a chip number in the group. So, don't focus on the chip number. Focus on the chip group number. The same chip can work on multiple groups (due to the common data protocol being used).

Simple Trick: Go through all the chip groups until you get the group that gives the best playback of your effect. Below is a list of chip groups and the chip numbers supported by each group (which can vary from manufacturer to manufacturer).

Selecting Pixel LED in the Software

You also have to select the controller in the LEDEdit software when creating a new project. However, different versions of LEDEdit use different methods when it comes to selecting the controller. In older versions of LEDEdit, you had to select the controller and the pixel LED type at the same time. But in the newer versions, controller selection and pixel LED type selection are separate tasks. [Click here to download].

K-1000C Display

Chip Mode Speed Display
With Digital Tube Display

The display consists of six segments. The main goal is to display the chip group and chip number in that group when the chip selection button is pressed. Also, it displays the setting values of the pixel LED controller. The first two digits show the chip selection group, the second two digits show the program number, and the final two digits show the playback speed. Also, the display will show error codes (on some controllers).

K-1000C Button Functions

Button		Meaning
CHIP	Switch chip	Press CHIP and then the MODE button, can enter write code mode, 61 means UCS512-A/B coding, 62 means WS2821 coding, 63 means SM512 coding, 64 means UCS512-C coding
MODE	Switch file	
SPEED+	Speed up	Press SPEED+ and SPEED- at the same time, would enter effect files looping mode.
SPEED-	Speed down	

The corresponding frame rate for speed level:

Speed Level	Frame Rate/Sec	Speed Level	Frame Rate/Sec
1	4 frame	9	14 frame
2	5 frame	10	16 frame
3	6 frame	11	18 frame
4	7 frame	12	20 frame
5	8 frame	13	23 frame
6	9 frame	14	25 frame
7	10 frame	15	27 frame
8	12 frame	16	30 frame

K-1000C Pixel LED Controller Pinout Definitions

DC 5-24V	5v-24V DC power positive input
GND	DC power supply negative input
POWER	Power indicator
STATUS ERROR	Status Indicator
SD CARD	SD card slot
GND	Ground line
CLK	Clock line (Coding line if DMX lights)
DAT	Data line
B	Signal -
A	Signal +
IN A	Cascade sync signal, connect the front OUT A
IN B	Cascade sync signal, connect the front OUT B
OUT A	Cascade sync signal, connect the next IN A
OUT B	Cascade sync signal, connect the next IN B

Wiring the K-1000C Controller

The wiring of the K-1000C controllers can be done in several ways; it depends on your needs. Here are some of the most common wiring methods: If you are planning to drive less than 2048 LEDs, you can use the single controller wiring method. If you have more than 2048 LEDs, you need to use the multi-controller wiring method.

Single K-1000C Controller With 3 Wire Pixel LED Strip or String

This method can be used when the number of pixel LEDs is less than or equal to 2048. A common power supply (5 V) is used for both the controller and the pixel LED string. The DAT (data) terminal of the pixel LED controller connects to the DIN wire of the pixel LED strip or string. The +5 wire of the pixel LED strip or string connects to the +5 output of the power supply. The GND wire of the pixel LED connects to the GND (data ground) of the controller.

Multiple K-1000C Controllers With 3 Wire Pixel LED Strip or String

This is how you connect multiple K-1000C controllers in a cascade (network) to control more than 2048-pixel LEDs. A common power supply (5 V) is used for both the controller and the pixel LED string. You can use multiple power supplies to meet the current requirement. The DAT (data) terminal of each pixel LED controller connects to the DIN wire of the pixel LED strip or string that is controlled by it. The +5 wire of the pixel LED strips or strings connects to the +5 output of the power supply. The GND wire of the pixel LED connects to the GND (data ground) of the particular controller.

Single K-1000C Controller With 4 Wire Pixel LED Strip or String

In this wiring diagram, a single-pixel LED controller is connected to a four-wire pixel LED strip or string that uses the I2C communication method. Since we are only using a single controller, this method can be used when the number of pixel LEDs is less than or equal to 2048. A common power supply (5 V) is used for both the controller and the Pixel LED string. The DAT (data) terminal of the pixel LED controller connects to the DIN wire of the pixel LED strip or string. The CLK (clock) terminal of the K-1000C controller connects to the CLK wire of the pixel LED strip or string. The +5 wire of the pixel LED strip or string connects to the +5 output of the power supply. The GND wire of the pixel LED connects to the GND (data ground) of the controller.

Multiple K-1000C Controllers With 4 Wire Pixel LED Strip or String

In this arrangement, multiple K-1000C controllers are being used with separate 4-wire pixel LED strings. so that it can control more than 2048-pixel LEDs at the same time. A common power supply (5 V) is used for both the controller and the pixel LED string. The DAT (data) terminal of each pixel LED controller connects to the DIN wire of the pixel LED strip or string that is controlled by it. The CLK (clock) terminal of each controller connects to the CLK wires of the pixel LED strips or strings that are controlled by them. The +5 wire of the pixel LED strips or strings connects to the +5 output of the power supply. The GND wire of the pixel LED connects to the GND (data ground) of the particular controller.

Single K-1000C Controller With DMX Pixel LED Strip or String

In this wiring diagram, a single-pixel LED controller is connected to a four-wire pixel LED strip or string that uses the DMX512 communication method. Since we are only using a single controller, this method can only be used when the number of pixel LEDs is less than or equal to 2048. A common power supply (5 V) is used for both the controller and the Pixel LED string. The "A" terminal of the K-1000C pixel LED controller connects to the "DMX+", "D+", or "A" wire of the pixel LED strip or string. The B terminal of the K-1000C controller connects to the "DMX-", "D-", or "B" wire of the pixel LED strip or string. The +5 wire of the pixel LED strip or string connects to the +5 output of the power supply, and the GND wire of the pixel LED connects to the GND (data ground) of the controller.

Multiple K-1000C Controllers With DMX Pixel LED Strip or String

In this arrangement, multiple K-1000C controllers are being used with separate 4-wire pixel LED strings that use the DMX512 protocol. A common power supply (5 V) is used for both the controller and the Pixel LED string. The "A" (DMX+) terminal of each pixel LED controller connects to the "DMX+", "D+", or "A" wire of the pixel LED strip or string that is controlled by them. The "B" (DMX-) terminal of each controller connects to the "DMX-", "D-", or "B" wires of the pixel LED strips or strings that are controlled by them. The +5 wire of the pixel LED strips or strings connects to the +5 output of the power supply. The GND wire of the pixel LED connects to the GND (data ground) of the particular controller.

Programming K-1000C Controller

Programming this controller is the same as programming the T-1000C pixel LED controller. Except for this controller, it can only be programmed by LEDEdit-K versions. The controller version matters when selecting the LEDEdit-K software version. Most of the time, the proper software version can be found on the SD card. If not, try different versions of the LEDEdit-K software until you find the proper version that will work with your pixel LED controller. Here is the list of LEDEdit software versions [download links].

Controller Selection (Old Versions): In the "New Project Creation" window, you need to select the correct pixel LED controller. The different versions of LEDEdit software have different ways and different labels when it comes to selecting the pixel LED controller.

- In the New Project Creation window, if you can't see the K-1000C controller listed, click on the "Select Controller" button.
- In the "Controller Type" window, expand any item that has a K-1000C label on it.
- Then select the item with the label K-1000C. Finally, click on the "Add to >>" button to add that item to the main list. Click on "OK".
- Back in the "New project window", you will see the new controller in the list. Select it and change the settings on the right side as you wish. Once you're done changing these settings, click "OK" to create the new project.

Controller Selection (New Versions): Newer versions of LEDEdit-K software have a limited number of supported controllers. The K-1000C pixel LED controller is one of them. It's listed in the new project window. However, there are three or four types of K-1000C controllers listed. To select the correct controller, you may have to try them all until you find the correct one.

Even though your controller model is the K-1000C, there is no guarantee that your controller will be supported by the new LEDEdit-K software versions. It depends on your controller version. The controller version and year are printed on the PCB inside the controller. The higher the number, the better the chances that your controller will be supported by the newer version of LEDEdit-K software.

- In the <u>LEDEdit</u>, click on File and select New to create a new project.
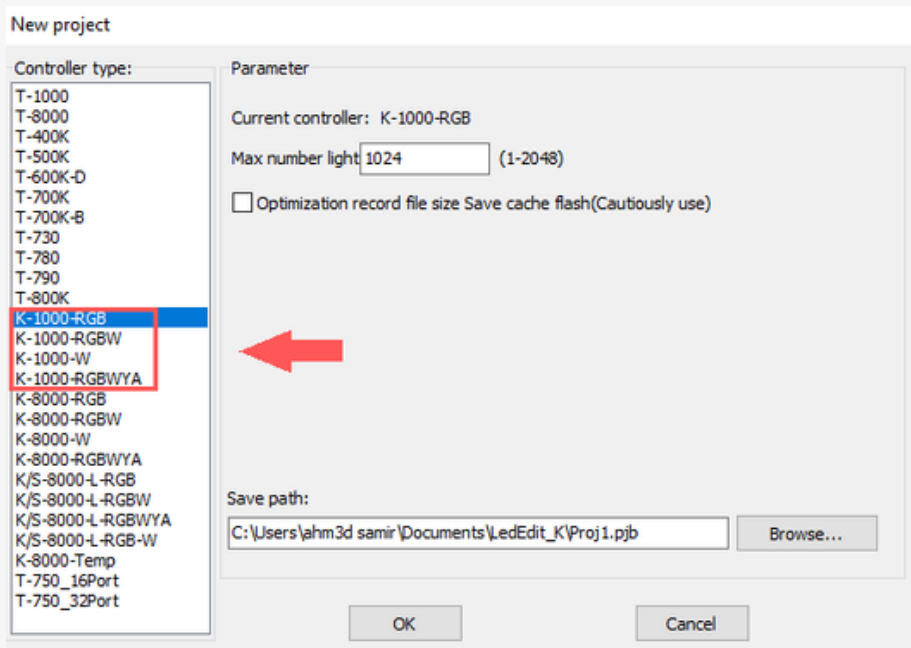
- In the New Project window. Select K-1000RGB (for pixel LED types that support only R, G, and B channels), K-1000RGBW (for pixel LED types that support R, G, B, and W channels), K-1000RGBWYA (for pixel LED types that support R, G, B, W, Y, and A channels), or K-1000W (for pixel LED types that support only a single channel).

The programming of the controller can be done as usual. Follow this tutorial on <u>How to Use LEDEdit-K Software</u>.

The SD Card

Your controller will come with a 256M or 128MB SD card. However, the K-1000C can support SD cards up to 32GB. Some SD cards may have problems with the controller. If a certain SD card doesn't work, replace it with a different brand of SD card. You may also use adapters (such as a microSD to SD adapter) if you can't find an SD card.

Formatting the SD card: The SD card should be formatted in the Fat32 format. You can use Windows Explorer to format your SD card or use third-party software such as HP Format Tool. Here is how to do it in Windows.
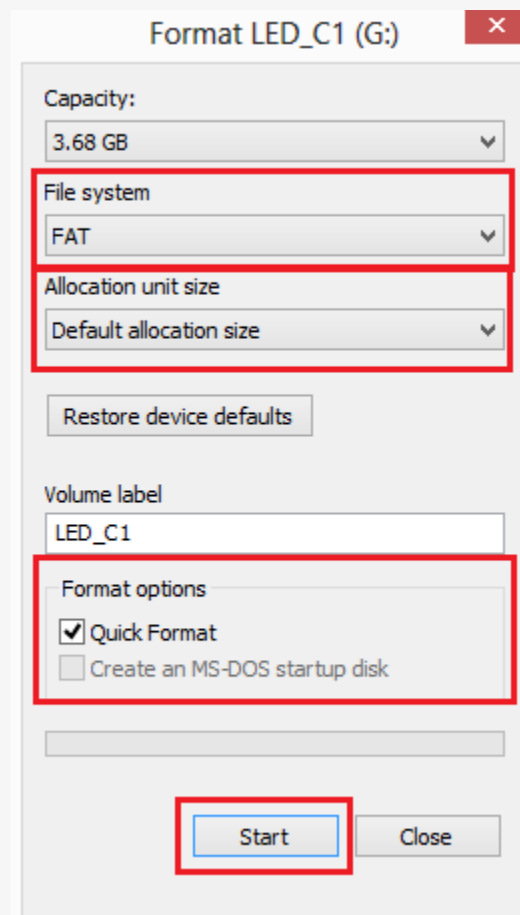
Unlock State   **Lock State**

- Unlock The SD card by sliding the physical lock upward. This will allow the card to be formatted and write data.
- Insert the SD card into the card reader slot of your PC (use a USB card reader if you don't have one on the PC).
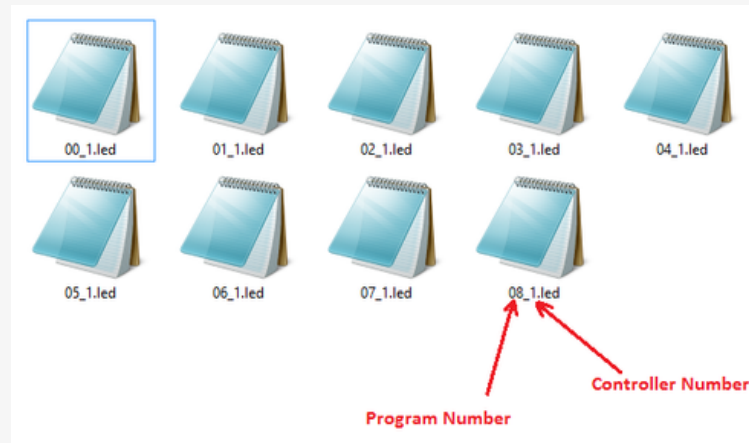- In Windows Explorer, right-click on the SD card drive and select "Format".

- In the format window, select the settings as shown in the above image and click on the "Start" button. Wait until the formatting process is complete.

## Program File placement

The program file placement inside the SD card depends on the controller's usage.

Single Controller

If you are using a single K-1000C controller or multiple K-1000C controllers (without networking them), in this case, every controller has an individual SD card. The file placement for each controller SD card should be like this: The first two digits stand for the program number (00 to 32). Since we use a single SD card for each controller, the last digit should always be "1". This numbering is used so that you can keep track of which effect is represented by the program number displayed on the controller. If you don't care about the order, you can use any name. But make sure to name them ".led" files.

Multiple Controllers (Networked)
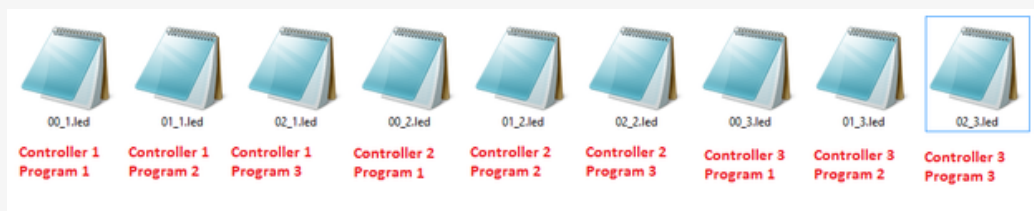
If you are using multiple K-1000C controllers in a network, you need to name your effects files as described in the above image. The first two digits represent the effects file number (00–32), and the last number represents the controller number in the network. Then, place these files on an SD card and insert them into the first controller on the network.

Troubleshooting the K-1000C Controller

Problem 1: After powering on, the controller screen displays FFF and no effect output.

Answer: The screen display of FFF means the controller did not read the SD card correctly. The existing problems are as below:

1. The SD card is empty and does not affect files.
2. The effect files *.led on the SD card and the controller model are mismatched; please select the correct controller model and chip model in the latest edition of LEDEdit 2023 and remake the effect files *.led.
3. Change the SD card, and then retesting will rule out the possibility that the SD card is broken.

Problem 2: After being powered on, the indicator is normal, but the lamps have no effect.

Answer: It has the following reasons for this problem:

1. Please check if the signal lines of the lamps and the controller are connected correctly.
2. Conventional lamp signals are divided into input and output; please confirm whether the controller connected the first lamp's signal input.

Problem 3: After connecting the lamps and the controller, the lamps strobe and have an effective change; at the same time, the controlled indicator shows normal.

Answer:

1. The ground lines of the controller and the lamps are not connected.
2. The effects in SD are not correct. The IC of the lamps when making an effect does not correspond with the IC of the actual lamps.
3. If you did not lock the chip, when making effects in the software, you need to press the controller chip on the light's corresponding chip. To find out which number to press, please refer to the sticker IC order on the controller.
4. The power supply voltage for the lamps is insufficient.

Problem 4: SD cards cannot be formatted.

Answer:

1. Firstly, make sure the protection switch on the side of the SD card is unlocked. The unlocking direction is on the gold needle side of the SD card.
2. The protection has been designed as required but cannot be formatted. If this condition appears, it is always because the SD card reader is broken. Please change the SD card reader (you'd better use a good-quality card reader; an SSK card reader is suggested).
3. If the above operations do not solve the formatting problems, please change the SD card and retest.

Warnings

Never pull out or remove the SD card from the controller while the power is on. This will damage your SD card permanently. If you are lucky, you can get away with only files being lost or damaged. Always power off the controller, wait for a second and then remove the card.

Never reverse the polarity. Reverse polarity protection may or may not be in your controller or LED string. If there is no protection, it will damage the controller and Pixel LED Driver IC. Use a multimeter to check the polarity of the power supply's output before wiring.

Since there are thousands of different manufacturers, wire colors may change with the manufacturer. Please contact the seller or the manufacturer before wiring. If not, it may cause damage to the driver's chip.

Limit the amount of time you insert and remove the SD card from the controller because every time you do this, it will cause the gold-plated pins to scratch, which will lead to oxidizing the pins. thus preventing contact between the port and the SD card.

Environmental conditions may cause damage to your LED string and the LED controller. These controllers are not designed for outdoor use; they're for indoor use only. If you are putting the LED string outside, please make sure to use the water-sealed LED strings or strips. But even the water-sealed LED strings may be damaged due to harsh environmental conditions.

Pixel LED Effects Download for LEDEdit, NeonPlay, Jinx, and More
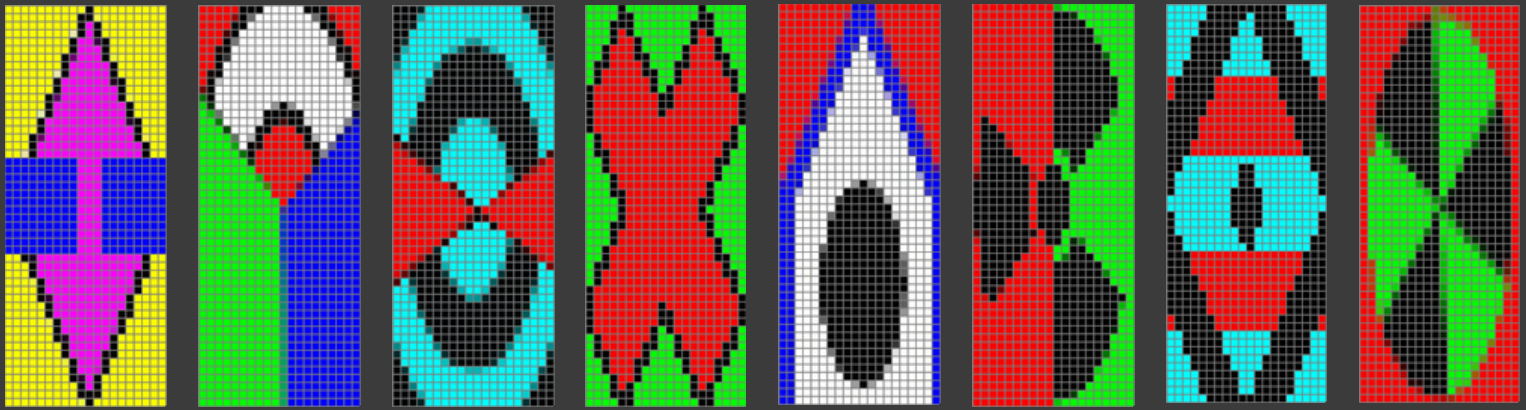
Pixel LED Thoranam Effects 10X60 Pack1 For LEDEdit

Pixel LED Thoranam Effects 64X16 Pack1 For LEDEdit

Support and Downloads Software and Effects:

http://lededitpro.com

https://lededitpro.com/product-category/led-effects