SS-S880E Controller Instruction

V1.0

Beijing Soft Stone Optoelectronic Technology Co. , Ltd.

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Chapter I Introduction to Controller Functions

I. Product Performance

1. Double RJ45 gigabit network ports, facilitating the networking in practical application and improving the system stability.

2. The controller is provided with independent IP address, supports ARP protocol, and can automatically assign IP address, facilitating the network monitoring and management;

3. 8 output ports, each of which can drive 4096 channels at most;

4. The controller parameters are free of writing; the controller has strong universality, which allows the faulty one to be replaced directly, reducing the maintenance workload;

5. The single firmware supports a variety of chip communication protocols like DMX512 and return-to-zero code to reduce the complexity of maintenance;

6. It supports online addressing of DMX512 chip and online writing of chip parameters;

7. Up to 65536-level gray-scale control, which can truly restore the image color and details;

8. Three or four-color hardware brightness control and hardware anti-gamma correction function may make accurate adjustments to the image;

9. The online status of the controller can also be viewed in real time by software in case of playing.

II. Design Concept

1. Synchronous control mode, which can be added with offline player to realize offline playback, depending on the needs of end users;

2. *Easy Show*, a video editing, playing and layout design software with independent intellectual property rights, can adapt to various complex applications such as anomalous screen, multi-screen, text screen, pixel light screen;

3. The functions of the software system are highly integrated and open, and the design of content to play and layout can be completed independently by the customers; The software supports automatic, timed and preset festival effect playing; supports multi-screen display and split screen in the screen; supports the control of red, green, blue and white lamps; supports music spectrum display and external video call; supports playing instant messages without interrupting the display screen; the layout supports the import of CAD, reference pictures and other special functions to meet the diversified needs of customers;

4. It receives directly the data from the network card of the computer, abandoning the mode of "special graphics card + main control + sub control", making installation easier and greatly reducing the cost;

II. Expansibility

1．It can synchronously play the video and picture files in multiple formats;

2．It can display in the national languages supported by Windows operating systems;

3．It can support all LED driver chips and DMX512 protocol chips changed to 1 and 2-wire serial data interfaces;

4．It can support IP grouping function, and realize the stability of multiple controllers in large projects;

5．It can support wireless network transmission or wireless bridge connection;

Chapter II Controller Model & Appearance

I. Model

The SS-S880E controller is an industrial shell with 8 output ports, each of which can drive 4096 channels of pixels at most.

The controller can be widely used in building landscape, hotels, supermarkets, department stores, government lighting engineering, construction projects, commercial space, airports, subways, hospitals and other places. It provides all-round technical solutions for artistic visual dynamic color lighting on buildings for owners, architects, designers, floodlighting engineering operators, construction engineers and other professionals.

II. Product Pictures

1．Front view of SS-S880E controller

Basic parameters of controller

Input voltage	AC 220V
Max. power	15W
Length	16.9CM
Width	10.70CM
Height	2.5CM
Fixed hole spacing	10CM

III. Output Interface Wire Map

1. The SS-880E has 8 5P output interfaces, 1-8 respectively (as shown in the figure).


2. 5P terminals, from left to right, are:

类型	DMX512					2 WIRE				
	1	2	3	4	5	1	2	3	4	5
	地	数据+	数据-	编址		地			时钟	数据
	GND	A+	B-	W		GND			CLK	DATA
类型	1 WIRE									
	1	2	3	4	5					
	地				数据					
	GND				DATA					

# Chapter IV How to Use EASY SHOW Software

I. Overview

EASY-SHOW is a powerful lighting control software developed by the Company, used for online control of 880E controller. In order to show you how to use the software more concisely and clearly, the following examples are used to explain. For detailed function & operation of the software, please refer to *EASY SHOW Software Instruction*
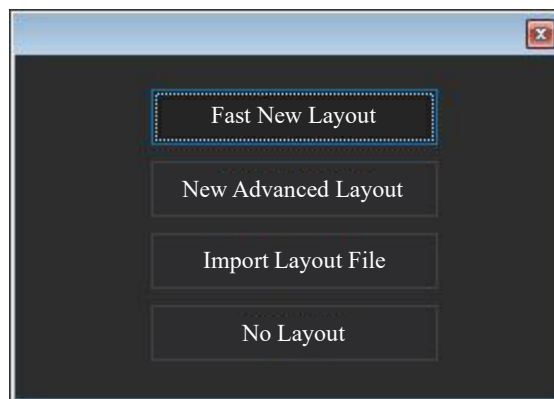
1. Install EASY SHOW software and click to open it;
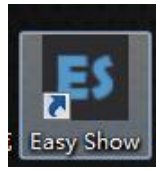
2. Enter the project name, screen size (pixels), and click New Project;
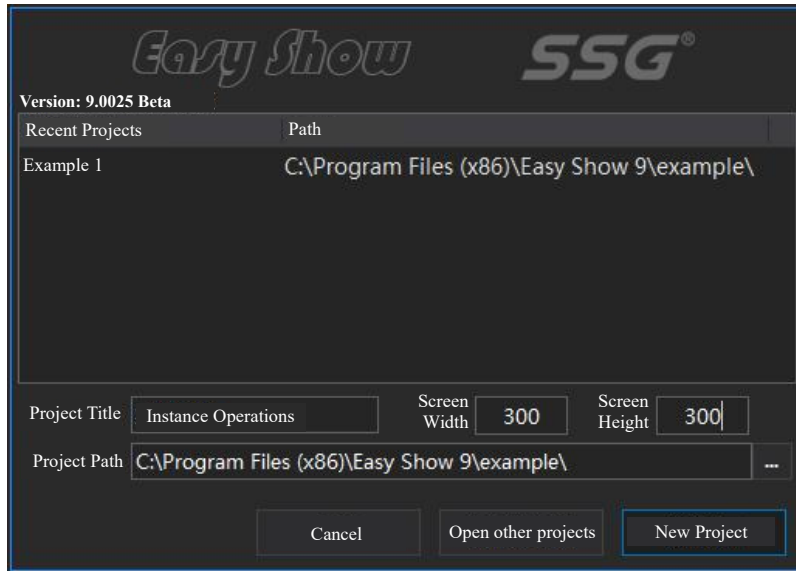

3. In the pop-up functional block, select Fast New Layout;

4. Select the host network card IP and other information, and click OK to enter the Home Page. (If no IP is selected, after entering the software interface, the message window will prompt "network initialization failed! Please check the network IP address setting";)
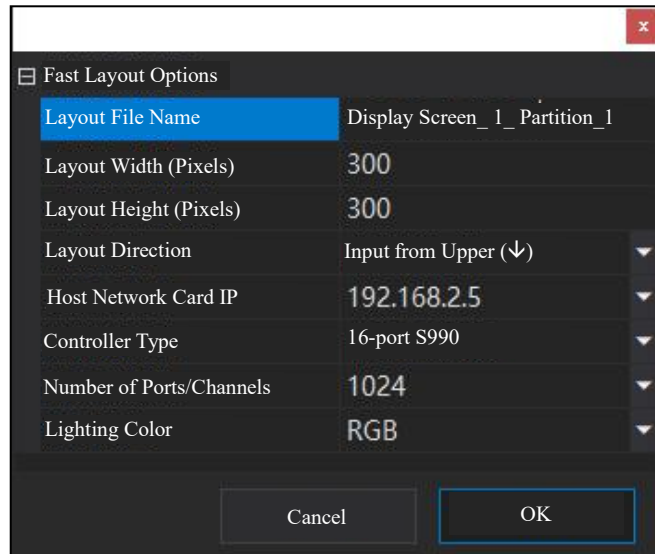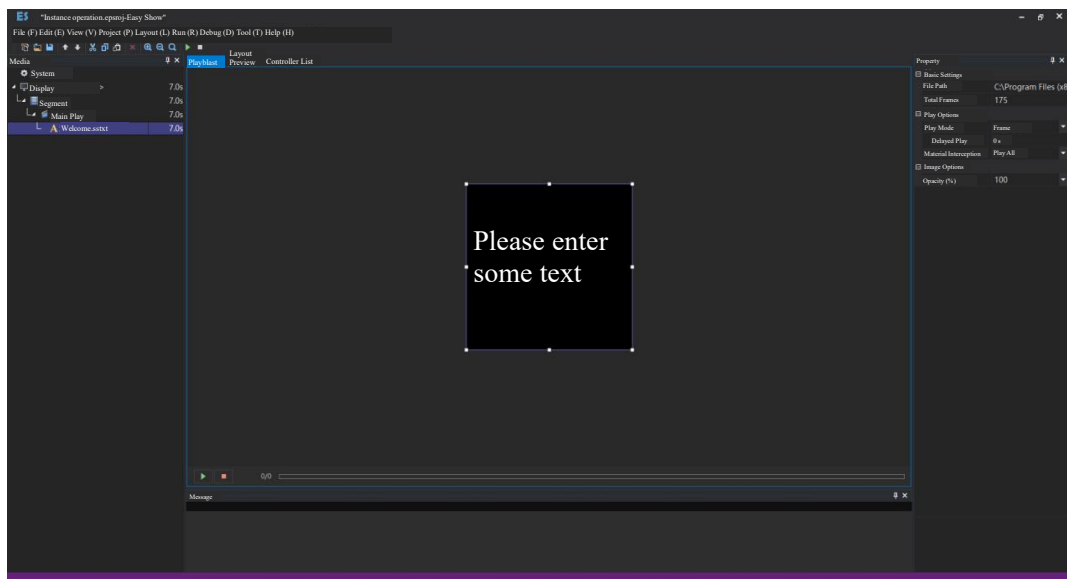
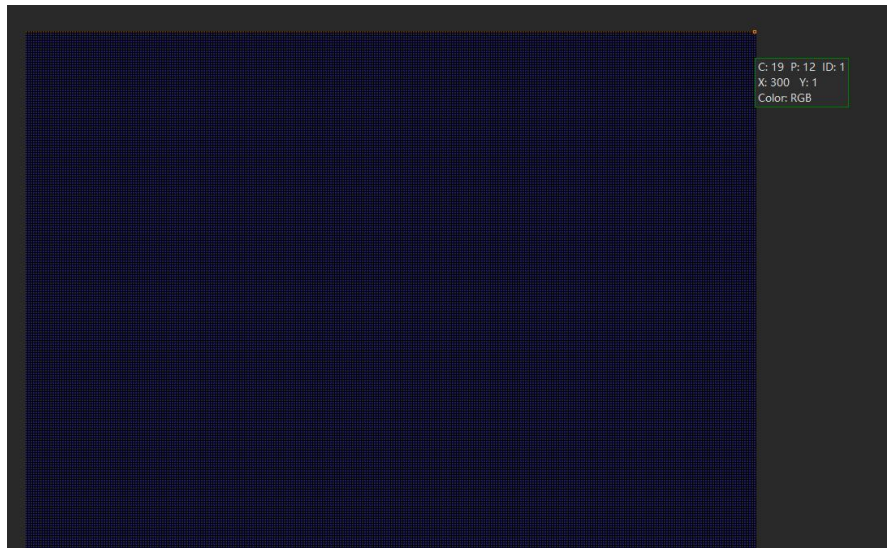5. If the file is created successfully, the software interface will pop up;
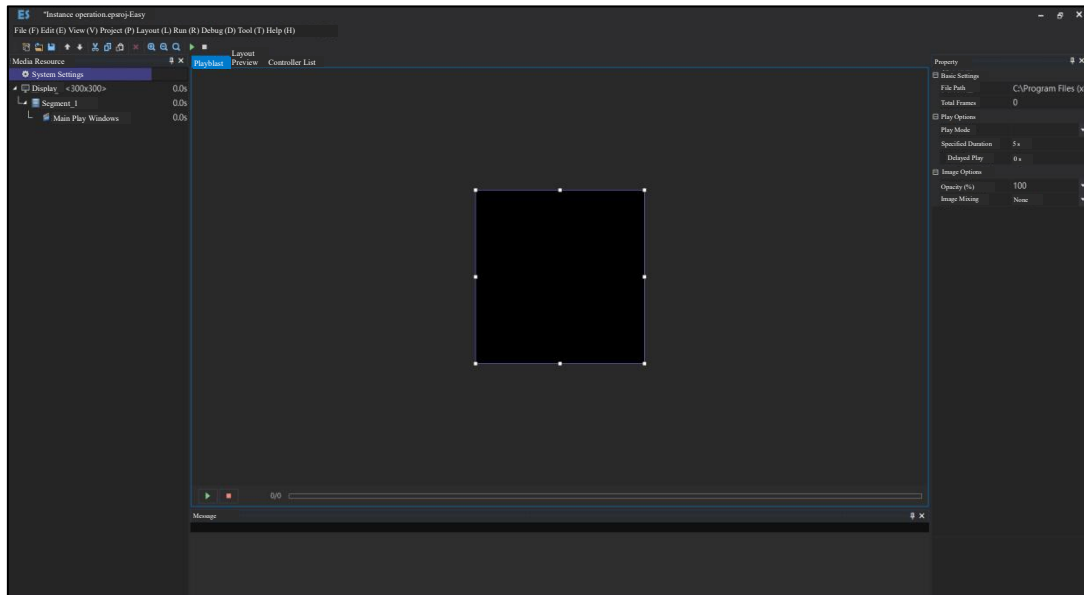
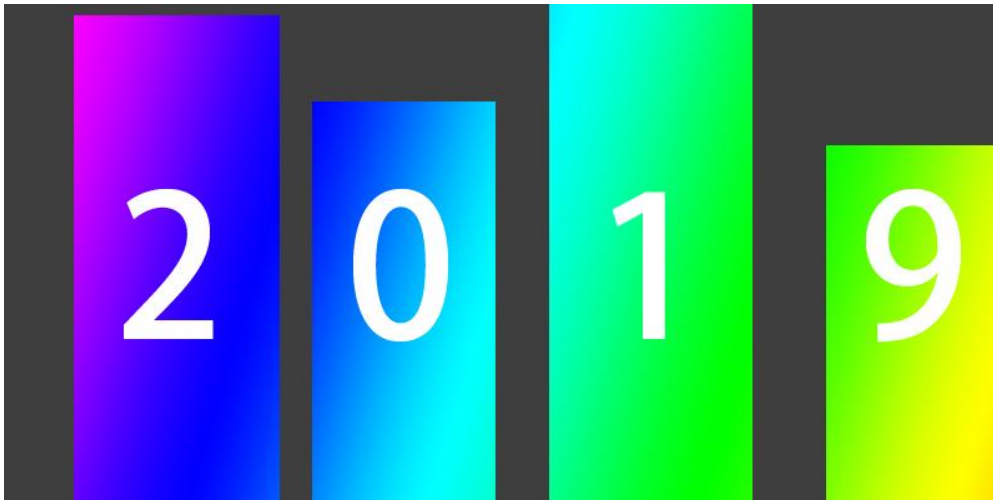6. Create a new colorful text "Welcome", running from left to right;
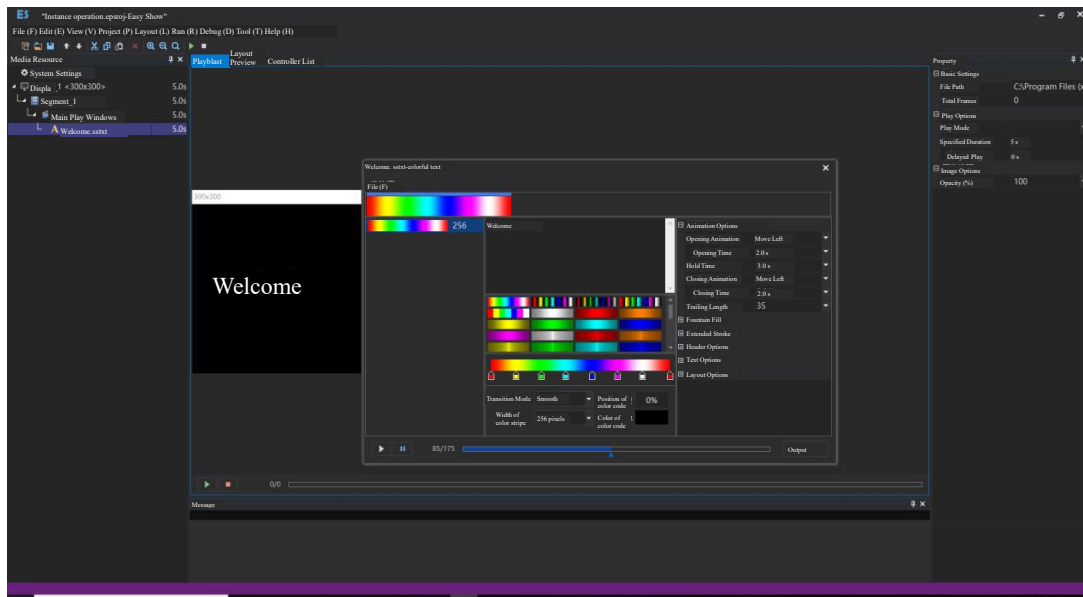
7. Click on the Output, and the colorful text file is successfully created;

8. Click on "Layout Preview". This instance adopts the fast layout method, and the layout file has been automatically generated according to the settings. This file adopts 300×300 pixels, 8-port controller SS-S880E is selected, and the software automatically generates the layout file composed of 19 controllers, among of which 18 ones use all ports, and the last one uses 12 ports, i.e., 18×18+12=300, forming a 300×300 layout file, as shown in the following figure. Click on "Controller Parameters" to set relevant parameters such as light chip information, save and output the file;

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9. New advanced layout instance;

10. New advanced layout instance, a project file with screen size 600×300 pixels, file name "advanced layout instance", and one light point is one pixel;
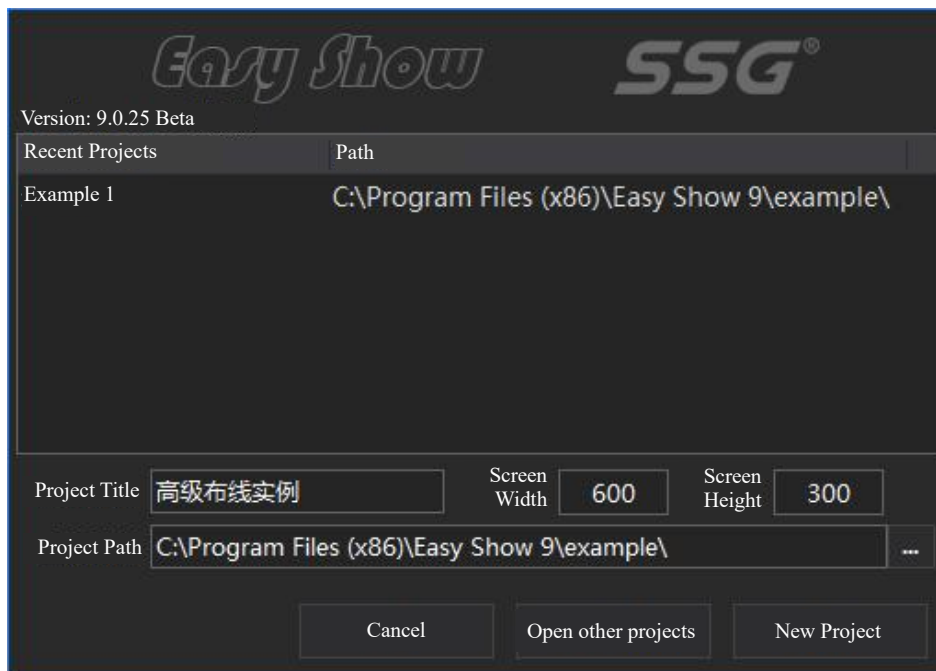
11. Click the New Project to pop up the new advanced layout message text box, and enter the name of the new layout file "advanced layout display screen_1_partition_1";
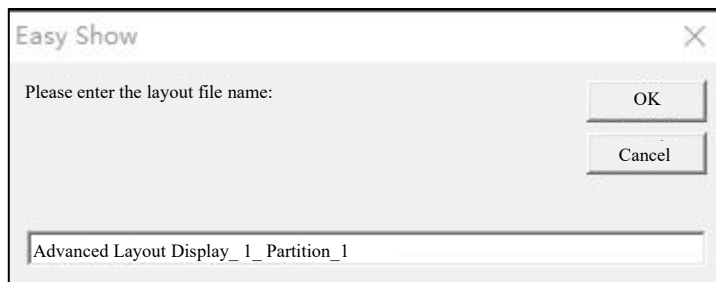

12. Set relevant properties on the pop-up "Project Settings" page. The instance uses a controller 880E, with the channels per set up to 4096, 8-port, and the color of the engineering light control chip is set to RGB (three channels per light), that is, each port can drive the lights up to 1365. The layout file sets the control light of each port to 300 (width pixels) × 4 (height pixels) = 1,200 (all pixels), the lights are arranged in a rectangular way, and the number of controllers is 600×300÷1200÷8≈19 (sets).
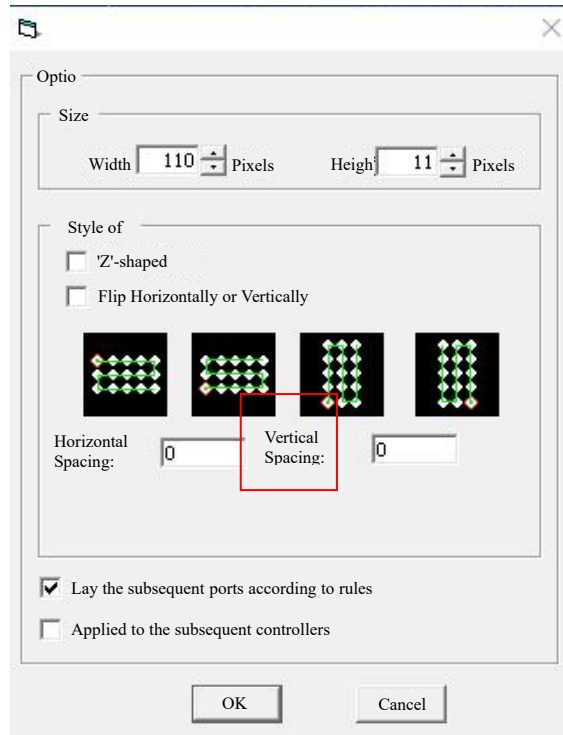
Namely:

Length (pixels) × width (pixels) ÷ actual number of lights per port ÷ number of ports per controller ≈ number of controllers
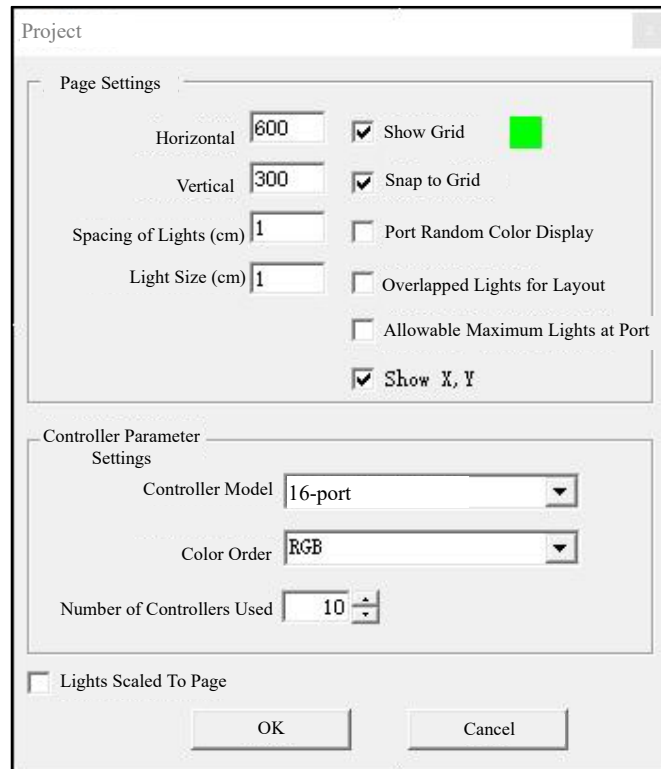
13. Click on OK to enter the Easy Layout page, select the picture mask, and import the instance picture as the background file, as shown in the figure.
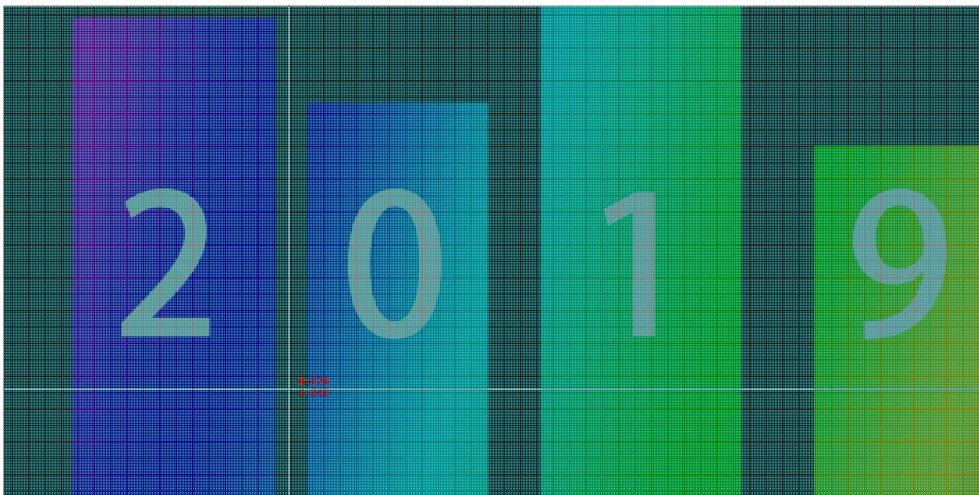
14. According to the light picture template, select automatic layout, calculate the length-width ratio of the layout file of each port, and check "lay the subsequent ports according to rules", as shown in the figure below;

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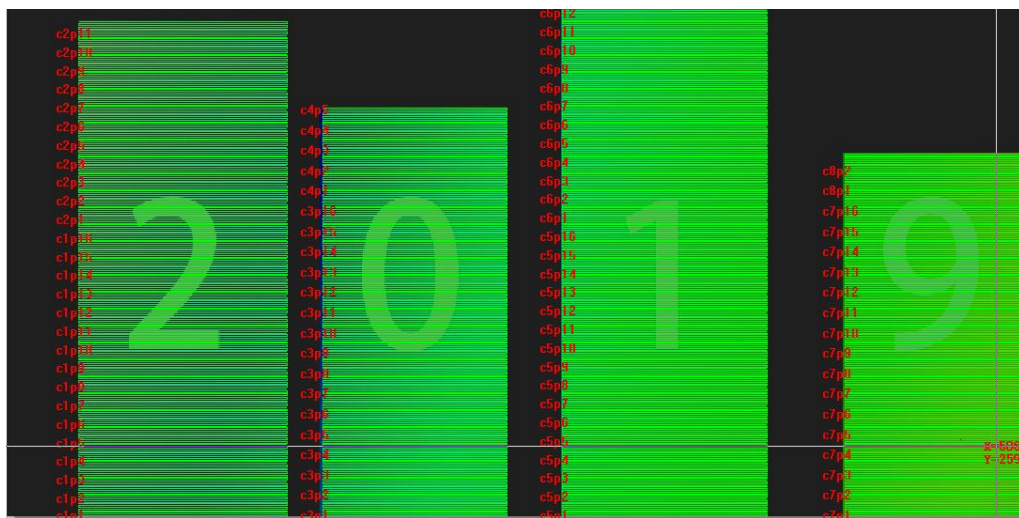
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15. Move the layout file to the appropriate position in the drawing area, and the position of the first light is located in the lower left corner of the building, as shown in the following figure;
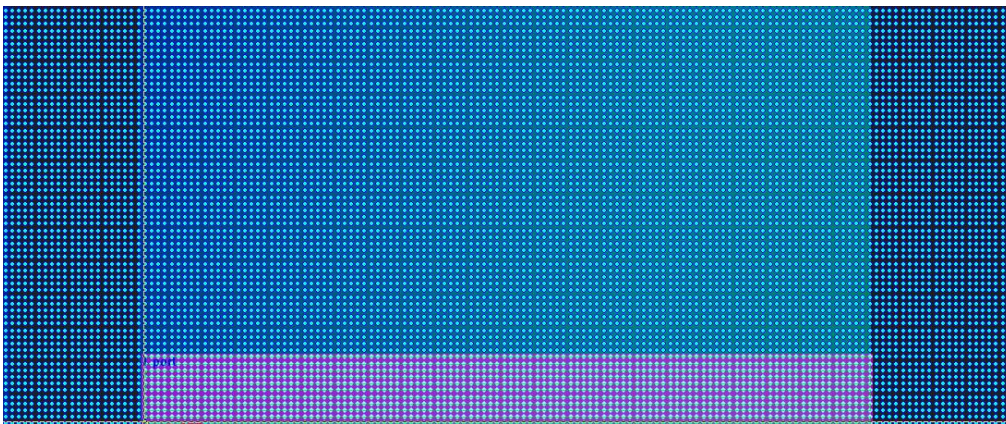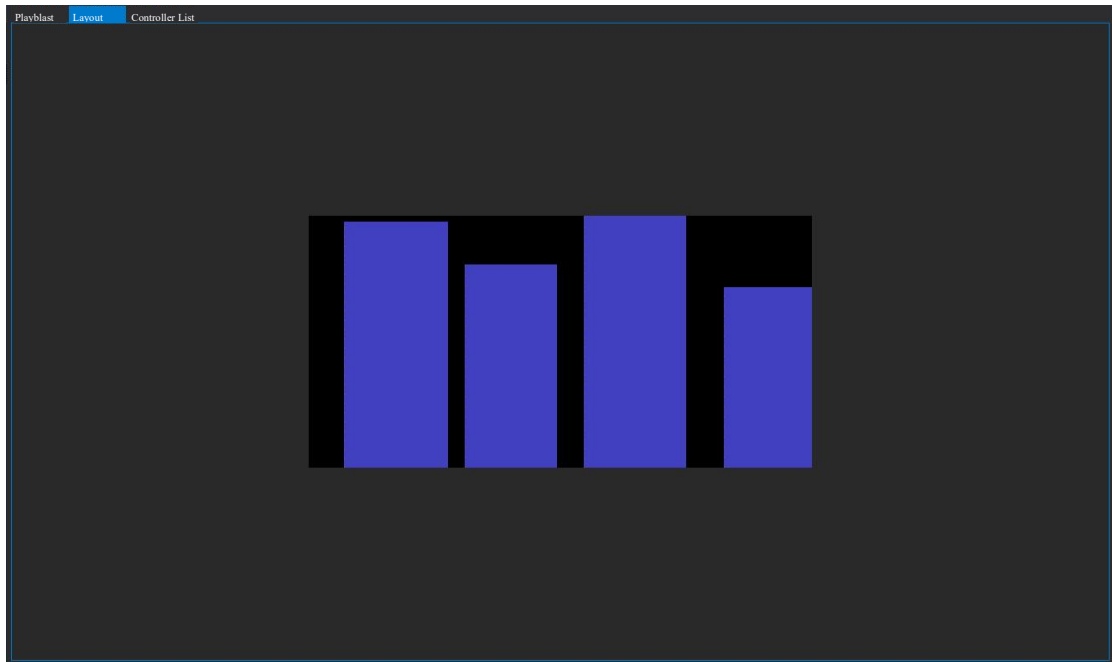

16. After selecting "lay the subsequent ports according to rules", all ports of the controller will be laid automatically, and all 8 or 16 ports of the set controller will be laid automatically, as shown in the figure below;

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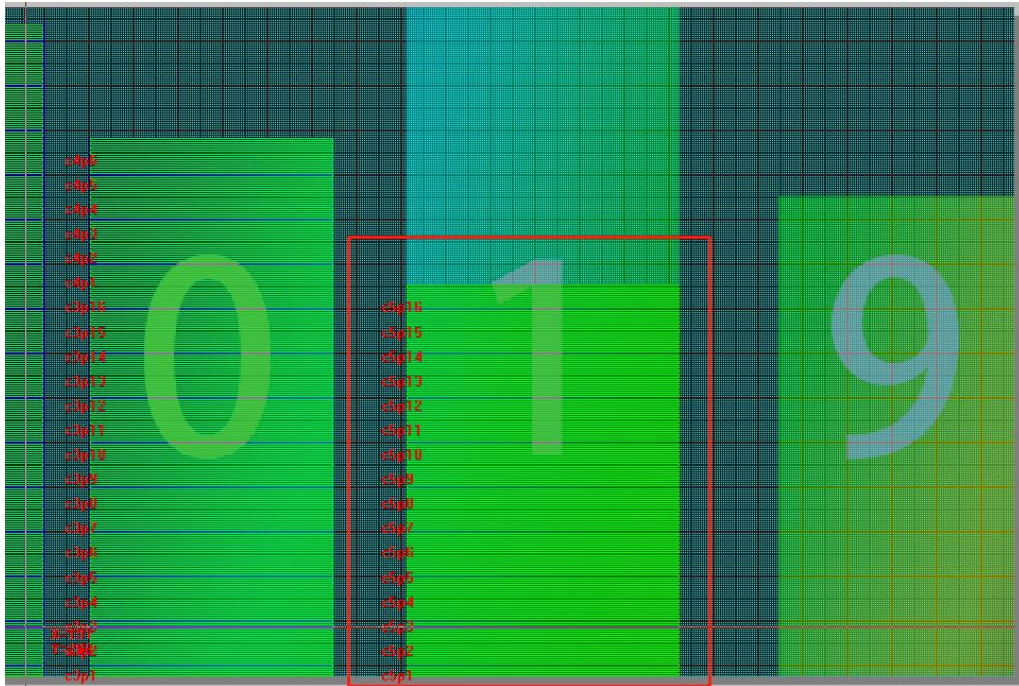
17. Use Auto Layout to complete the layout of all buildings;

18. After layout is completed, save the layout file. Click on Save to save in the default file address or a user-defined file address. Close the Easy Layout page. The layout preview window is shown in the following figure;

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19. Click to Play Preview to create a new animation file. For the setting method, refer to the instance of animation effects production in Section 5 of Chapter III;
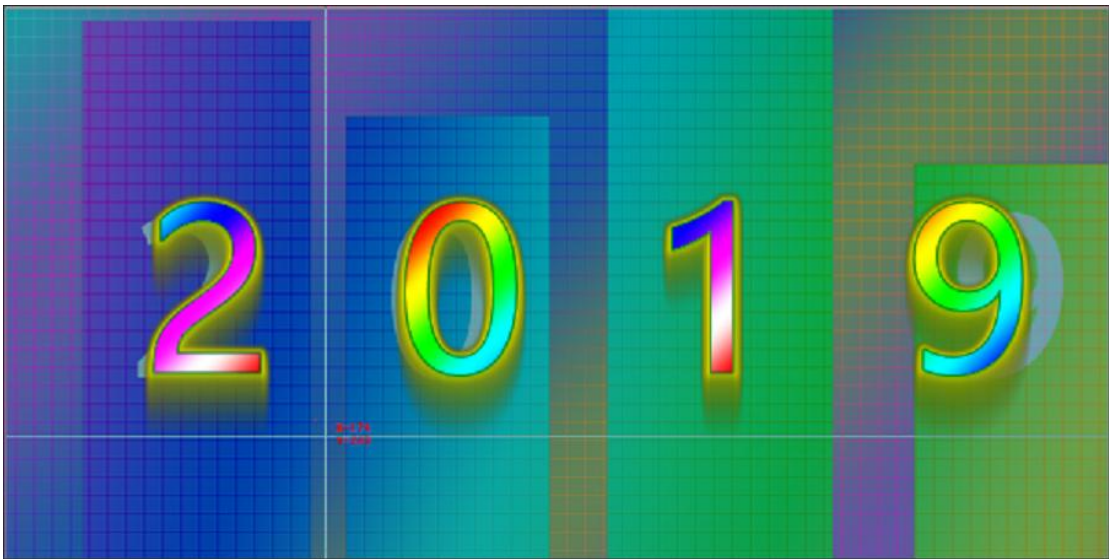
Note: During animation setting, you may import a picture file as a reference background to determine the display position.

Chapter V Factory Configuration

1. SS-S880E controller;

2. Power cord;

3. Instruction;

4. Service manual;

5.   Warranty card.

Chapter VI Precautions

1.   Cut off the power supply of the product before installation to avoid electric shock;

2.   Before debugging, check whether there is a short circuit in the external line, so as not to cause the recession of product components, resulting in failure;

3.   When debugging and using the controller, attention shall be paid to water, steam and knock, otherwise fault and electric shock may be caused;

4.   Do not disassemble the product without the consent of the Company;

5.   The customer is requested to conduct layout, operation and use according to the Instruction of the Company. The Company is not responsible for any fault of the product in violation of the content of the Instruction.