SS-S980EW 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;

III. 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-S980EW 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-S980E controller



Rear view of SS-S980EW controller 2.

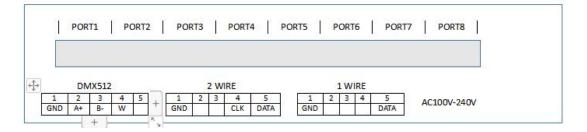


Basic parameters of controller

Input voltage	AC 220V
Max. power	15W
Length	23.60CM
Width	13.50CM
Height	4.50CM
Fixed hole spacing	7.50CM; 21.84CM

III. Output Interface Wire Map

The SS-980EW has 8 5P output interfaces, 1-8 respectively (as shown in the figure). 1.



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

Туре		-	DMX512					2	WIRE	
	1	2	3	4	5	1	2	3	4	5
	GND	A+	B-	W		GND			CLK	DATA
	GND	A+	B-	W		GND			CLK	DATA
Ado	ress: Building	65, No. 17, Jin	gsheng South 4	th Street, Zho	ongguancun Scie	ence and			Postcode: 1011	02

Address: Building 65, No. 17, Jingsheng South 4th Street, Zhongguancun Science and Technology Park, Tongzhou District, Beijing, China Tel.: 010-56370005 http://www.ssg-china.cn

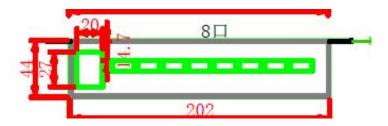
Fax: 010-56370005-810



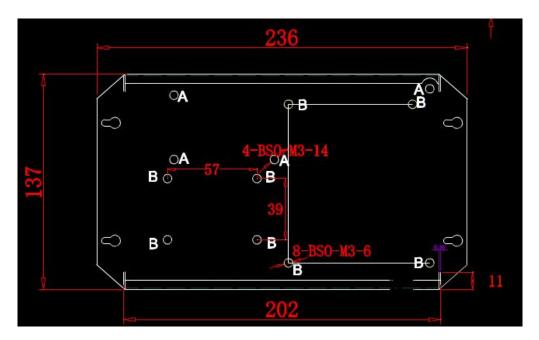
Туре			1 WIRE					
	1	2	3	4	5			
	GND				DATA			
	GND				DATA			

Chapter III Controller Dimensions (in mm)

I. Rear View of SS-S980EW Controller



II. Top View of SS-S980E Controller



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 980E 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;

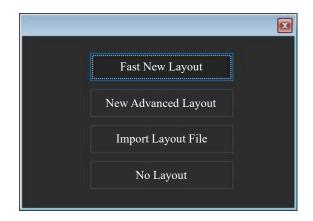
567



2. Enter the project name, screen size (pixels), and click New Project;

Version: 9.0025		Thou		55	5G°
Recent Projec		Path			
Example 1	8		am Files (x8	36)\Easy Sho	w 9\example\
Project Title Project Path	Instance Operatio C:\Program File			300 н	creen 300

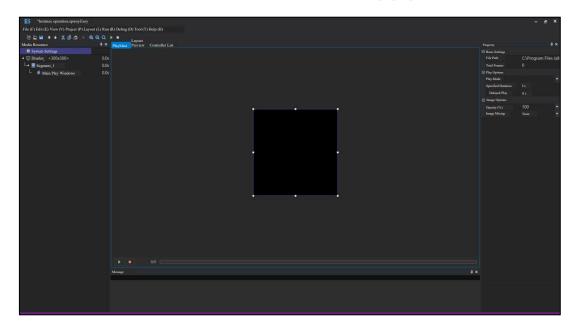
3. In the pop-up functional block, select Fast New Layout;



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";)

		x
Fast Layout Options		
Layout File Name	Display Screen_1_Partition_1	
Layout Width (Pixels)	300	
Layout Height (Pixels) 300	
Layout Direction	Input from Upper ($oldsymbol{\psi}$)	*
Host Network Card I	192.168.2.5	*
Controller Type	16-port S990	*
Number of Ports/Cha	inels 1024	*
Lighting Color	RGB	*
	Cancel OK	

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;



ES "Instance operation.epsroj-Easy Show" File (F) Edit (E) View (V) Project (P) Layout (L) Run				- s ×
Media Resource 🕴 🕴 🗙	Playblast Preview Controller List			4 ×
System Settings			Basic Settings	887. I
▲ □ Displa 1 <300x300 > 5.0s			File Path	C:\Program Files (x8
La Segment_1 5.0s			Total Frames	0
			Play Options	
A Welcome.sster 5.0s				
101			Specified Duration	5 x
				0 x
		Welcome. wtst-colorful text	Hanage Options	
		File(F)		100 🔹
	300x300			
		256 Wdcome 🔤 🛛 🗠 Animation Optices		
		C Animation Options Optiming Animation Move Left		
		Opening Time 2.0 s		
	the second se	Hold Time 3.0 •		
	Welcome	Closing Asimution Move Left •		
	welconne	Choing Time 2.0.		
		🗄 Fountain Fill		
		Extended Stroke		
		* III Header Options		
		II Text Options		
		🖌 🔒 🔒 🏠 🏠 🏠 🖓 🕼 Layout Options		
		Transition Mode Smooth - Position of 1 0%		
		Width of color stripe 256 pixels Color of 1 advantage		
		color stripe color code		
		> 11 85/173 Output		
		u copa		
	Message			

7. Click on the Output, and the colorful text file is successfully created;

File (F) Edit (E) View (V) Project (P) Layout (L) Run (R)				
	Debug (D) Tool (T) Help (H)			
8 🖬 🕈 + X ₫ Δ × € € C ト 🖬	•			
Media 9 × Play	Layout yblast Preview Controller List			4 ×
• System			Basic Settings	
✓ □ Display > 7.05				C:\Program Files (x)
La Segment 7.05				
La S Main Play 7.0s				
L A Welcome.sstxt 7.0s				
				Play All
T M	* * 99	Please enter some text		

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-S980E 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;





9. New advanced layout instance;



 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;

	GAY	ЯЬOU	IJ	S	5 6	, ©	
Version: 9.0.25	Beta						
Recent Project	s	Path					
Example 1		C:\Progra	am Files (x	86)\Easy	Show 9\e	xample	N
	高级布线实例 C:\Program File	es (x86)\Ea	Screen Width sy Show 9\	600 example\	Screen Height	300]
		Cancel	Ope	n other proje	ects N	Jew Project	t

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";

Easy Show	×
Please enter the layout file name:	ОК
	Cancel
Advanced Layout Display_1_Partition_1	

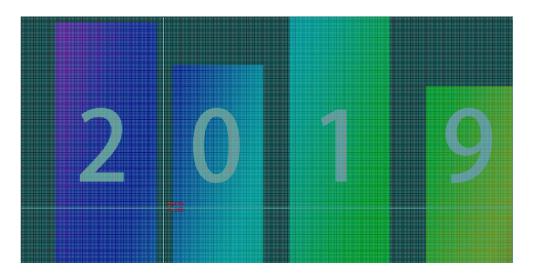
12. Set relevant properties on the pop-up "Project Settings" page. The instance uses a controller 980E, with the channels per set up to 4096, 8-port, and the color of the engineering light control chip is set to RGB (three channels per light), that is, each port can drive the lights up to 1365. The layout 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) \times width (pixels) \div actual number of lights per port \div number of ports per controller \approx number of controllers

Page Settings	s (144.0)
Horizontal 600	Show Grid
Vertical 300	Snap to Grid
Spacing of Lights (cm) 1	Port Random Color Display
Light Size (cm) 1	- Overlapped Lights for Layout
	Allowable Maximum Lights a
	🔽 Show X, Y
ontroller Parameter Settings	
Controller Model 16-	port 🗾
Color Order RG	B
Number of Controllers Used	10 🕂

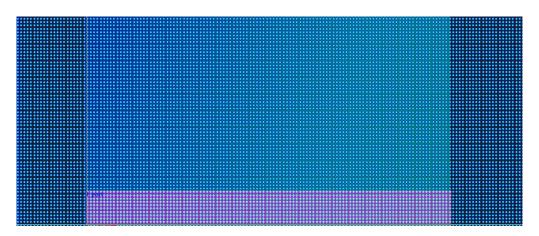
13. Click on OK to enter the Easy Layout page, select the picture mask, and import the instance picture as the background file, as shown in the figure.



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;

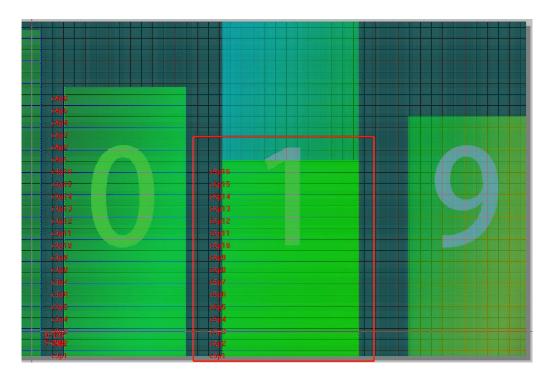
Size Width	110 ÷ Pi	xels	Heigh	11 ÷ Pixel
Style of				
T'Z'-sha	aped			
Horizontal Spacing:	0	Vertical Spacing	0	##
	ibsequent ports			

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;

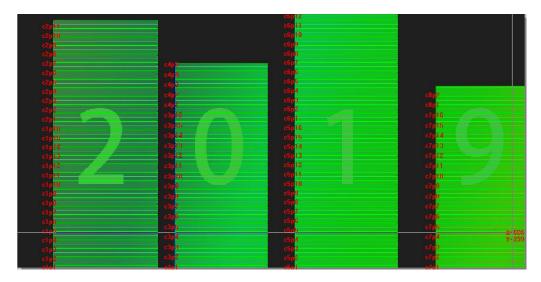


16. After selecting "lay the subsequent ports according to rules", all ports of the controller will be laid automatically, and all 8 or 16 ports of the set controller will be laid automatically, as shown in the figure below;

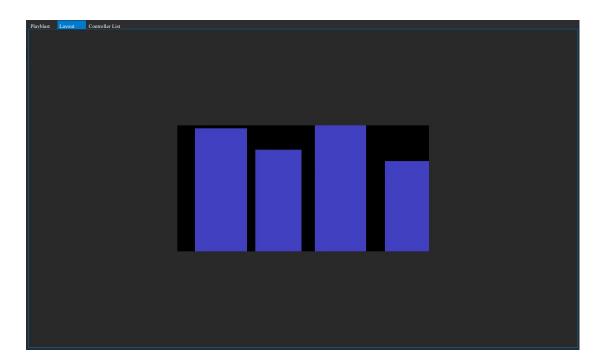




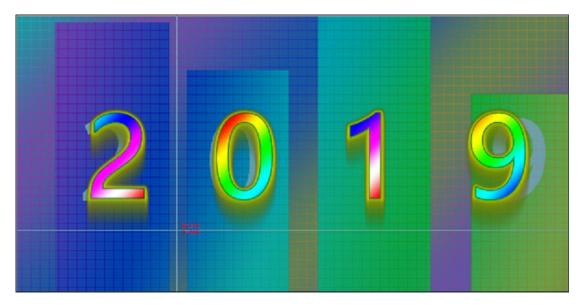
17. Use Auto Layout to complete the layout of all buildings;



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;



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-S980EW controller;
- 2. Power cord;
- 3. Instruction;
- 4. Service manual; Address: Building 65, No. 17, Jingsheng South 4th Street, Zhongguancun Science and Technology Park, Tongzhou District, Beijing, China Tel.: 010-56370005 http://www.ssg-china.cn

Postcode: 101102 Fax: 010-56370005-810 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.