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;
- 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

	LE	D LIGHTING	CONTROL	LER		
5 	5 8 8 2 2 2 3 3 4 4 5 5 5 5 5 5 5 5	в 8 в в п	PORTS			For For
DMX512		2W	IRE		1WIRI	
GND A+ B+ W	2	GND 3	CLK DATA		1 2 3 GND	4 5 DATA

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).



类型		C	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					

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

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;

	GAY	Shov.	פ ת	SG	
Version: 9.0025	Beta				
Recent Projec	ts	Path			
Example 1		C:\Prograr	n Files (x86)\Easy	[•] Show 9∖exa	mple\
Project Title	Instance Operat	ions	Screen Width 300	Screen Height	300
Project Path	C:\Program Fi	les (x86)\Easy	Show 9\example	1	
		Cancel	Open other pro	jects New	Project

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

_	
Fast New Layout	
New Advanced Layout	
Import Layout File	
No 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 ($m \psi$)	-
Host Network Card IP	192.168.2.5	-
Controller Type	16-port S990	-
Number of Ports/Chan	nels 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"				- e ×
File (F) Edit (E) View (V) Project (P) Layout (L) Run				
10 🚔 🖬 🔹 🛊 🕺 🗗 🕼 🛎 🖉 🖨 🖓				
	Playblast Preview Controller List			ų ×
System Settings			Basic Settings	
✓ □ Displa 1 <300×300> 5.0				C:\Program Files (x8
La Segment_1 5.0				0
La 🖆 Main Play Windows 5.09			Play Options	
L A Welcome.sstxt 5.0				
				5 x
			Delayed Play	0 x
			Image Options	
				100 -
	300x300	FIR(F)		
		256 Wdcome 🔤 🗄 Animation Options		
		Opening Animation More Left *		
		Opening Time 2.0,		
		BioldTime 3.0 *		
	*** 1	Closing Asimation More Left		
	Welcome	Cloing Time 2.0,		
		TailingLauph 35 •		
		() Fourtain Fill		
		e E Header Options		
		E reader Options		
		Transition Mode Smooth + Position of 0%		
		color code		
		Width of 256 pixels Color of 1 color stripe 256 pixels color color		
		▶ 11 85/175 Output		
	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-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;





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] i	То	IJ	S	50	7	
Version: 9.0.25	Beta						
Recent Project	s	Path					
Example 1		C:\Progra	ım Files (xi	86)\Easy	Show 9\a	example	N
Project Title	高级布线实例	-	Screen Width	600	Screen Height	300	
Project Path	C:\Program File	es (x86)\Ea	sy Show 9\	example\			
		Cancel	Oper	n other proje	cts	New Project	

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 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) \times width (pixels) \div actual number of lights per port \div number of ports per controller \approx number of controllers

Page Settings	S 1803
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 at
	🔽 Show X, Y
ontroller Parameter	
Controller Model 16	-port
Color Order RG	B
Number of Controllers Used	10 🕂
Lights Scaled To Page	

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;

otio ———			
Size			
Width	110 Pixels	Heigh	11 ÷ Pixels
Style of —			
C 'Z'-shaped			
:::::		•	
Horizontal Spacing:		tical cing: 0	
-			
Lay the subse	equent ports accord	ling to rules	
Applied to th	e subsequent contr	ollers	

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-S880E controller;
- 2. Power cord;
- 3. Instruction;
- 4. Service manual;

Address: Building 65, No. 17, Jingsheng South 4th Street, Zhongguaneun 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.