

EasyHP Series

PRODUCT MANUAL

Distributed by audio/effetti.

Revision Record

Serial No.	Version	Brief description of revision	Revision date
1	Version 1	First issue	July 28, 2020
2	Version 2	Addition of specifications of the pitch 1.2×1.3 and 1.5	August 19, 2020
3	Version 3	Add part of installation	January 1, 2021
4	Version 4	Add warning content and factory address	April 21,2021
5	Version 5	Modify configuration parameters such as power consumption	December 16,2022

Special Note

Thank you very much for choosing the product. To ensure your smooth use, please read the manual carefully before using. Although the Company has made best to be accurate and reliable when compiling the manual, there are still some careless mistakes. Therefore, the Company will modify and change the contents of the manual at any time without notice. Please understand. In case of any problems or suggestions during use, please contact us according to the contact information provided in the manual, and we will try our best to help you in time. We sincerely thank you for your suggestions and will evaluate and adopt them as soon as possible.

Copyright

The copyright of the manual belongs to Audio Effetti, LED operating software is developed based on Windows system. Without written permission, no other individual or organization may extract, reprint, copy, translate, edit or publish this publication in any form or store it in the retrieval system for other occasions.

To ensure the correct use of the display screen, please read the following carefully:

♦Warning!

It is of great possibility that the equipment will be damaged and unrecoverable due to ignoring of the warning.

- 1) Do not invert or throw the equipment during handling and storage;
- 2) Do not tilt to scrape or collide to scratch the equipment during installation;
- 3) Do not drench or soak the equipment;
- 4) Do not put the air outlet of air conditioner close to the display screen;
- 5) Do not place or use the display screen in the environment with volatile, corrosive and combustible chemicals;
- 6) Do not use it in an environment with a humidity above 80% or in an outdoor rainy day;
- 7) Do not clean the display screen with water and chemical solvents;
- 8) Do not use electrical accessories that have not been certified by the equipment manufacturer;
- 9) Ensure that the display screen and auxiliary equipment are grounded correctly and reliably before use;
- 10) In case of abnormalities of the display screen, such as peculiar smell, smoke, electricity leakage and abnormal temperature, please cut off the power immediately, and then contact professionals;
- 11) This is a class a product. In the living environment, this product may cause radio interference. In this case, users may need to take practical measures against interference.

Attention!

It is of great possibility that the best display effect can not be obtained due to ignoring of the attention.

- 1) Be sure to wear anti-static gloves and anti-static bracelets when installing and repairing the product;
- 2) Be sure to take the smooth air circulation behind the display screen into account when designing the heat dissipation solution;
- 3) The storage environment of the display screen shall be ventilated and dry, and the humidity shall not exceed 85%;
- Adopt single-phase power supply when the total power consumption of display screen is no greater than 3 KW, and three-phase power supply when the total power is greater than 3 KW;
- 5) Under normal conditions, ensure that the display screen is powered on and started at least twice a week, with the lighting time not less than 2 hours each time;
- 6) If the display screen is installed in seaside, saline-alkali area, areas containing sulfide gas and near kitchen smoke exhaust, and places with large temperature difference between indoor and outdoor, it may cause equipment failure and affect the service life. In case it is inevitable, please consult the professionals in our service outlets.

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Chapter I Product Introduction

EasyHP series is a new generation of LED display products of the Company, which is based on high-definition display application, has strong color reproducibility, stable picture and wide viewing angle, and supports wide-range adjustment of color temperature and brightness. The product is particularly outstanding in the design of safety application, with strong protection and high reliability, and can be freely and seamlessly spliced into display screens of any dimensions to meet the requirements of the application environment to the maximum extent.

1.1 Characteristics

1) Independent patent: Exclusive energy-saving patented technology of Audio Effetti;

2) High-efficiency energy saving: Ultra-low power consumption, 25%-35% energy saving compared with conventional 5 V screen;

3) High stability: Low heating, temperature rise and color drift, and long service life;

4) Uniform dimensions: With uniform dimensions of the whole series of 320 mm*160 mm, which can realize the interchange of indoor modules.

5) Low application cost: With universal high-reliability driver IC and mass production LED lights.

1.2 Cabinet Appearance





Fig. 1-1 Cabinet picture



Fig. 1-2 Drawing and specification of cabinet

1.3 Specifications parameters

Indoor EasyHP product parameter

	Parameter	EasyHP1.2 EasyHP1.5		EasyHP1.8			
LED Type		SMD1010	SMD1212	SMD1515			
	Pixel Pitch (mm)	1.25	1.538	1.839			
-	Module Resolution (W×H)	256x128	208x104	174x87			
Mod	Driver IC	PWM	PWM	PWM			
ule P	HUB	HUB320	HUB320	HUB320			
aram	Module Dimension (mm)	3	320 (W)×160 (H)×16.5 (D)				
eter	Module Weight (kg)	0.48	0.48	0.48			
	Max Power Consumption of Module(W)	≤18	≤10	≤17			
	Module Power Requirements	Su	pport DC4.2~5V power supply	-			
	Single-dot Brightness/Color Calibration	Yes	Yes	Yes			
Op	White Balance Brightness (nits)	600 CD/m ²	600 CD/m ²	600 CD/m ²			
tical p	Standard Color Temperature (K)	6500K (1000K ~ 9500K Adjustable)					
aram	Beam Angle(Hor/Ver°)	160° /140°	160° /140°	160° /140°			
eter	Brightness/Chromaticity Uniformity	≥95%	≥95%	≥95%			
	Contrast Ratio	3000: 1	3000: 1	3000: 1			
Elect	Input Power <max> (W/㎡)</max>	522W/m ²	386W/m ²	432W/m ²			
ronic para	Input Power <typical> (W/㎡)</typical>	157W/m²	116W/m ²	130W/m²			
Imete	Power Supply Input Voltage	AC186~264V, Frequency 47-63 (Hz)					
	Security Feature	GB4943/EN60950					
P	Frame Changing Frequency		50&60				
erformanc	Drive Mode	Constant Current Drive, 1/64 Scan	Constant Current Drive, 1/52 Scan	Constant Current Drive, 1/58 Scan			
ce Pa	Processing Depth	12-14bit	12-14bit	12-14bit			
ramet	Refresh Rate	4200Hz	4200Hz	4200Hz			
er	Video Support	2K HD, 4K UHD	2K HD, 4K UHD	2K HD, 4K UHD			
Envi	Life Typical Value (HRS)	100,000H	100,000H	100,000H			
ronmental F	Working Temperature/ Humidity Range(°C/RH)	-10°C~4	5°C / 10%~50%RH (No Conden:	sation)			
^o arameter	Storage Temperature / Humidity Range (°C/RH)	-20°C~5	5°C / 10%~60%RH (No Condens	sation)			

Remark:1. The above parameters are typical or recommended2. Product parameters or configuration adjustments without notice3. Customized products, please confirm the parameters with our company

Indoo	Indoor EasyHP product parameter							
	Parameter	EasyHP1.8	EasyHP2	EasyHP2.5				
	LED Type	SMD1515	SMD1515	SMD2121				
	Pixel Pitch (mm)	1.86	2	2.5				
	Module Resolution (W×H)	172*86	160*80	128x64				
Mod	Driver IC	PWM	PWM	PWM				
ule Pa	HUB	HUB75	HUB75	HUB75				
ıramet	Module Dimension (mm)	320 (W)×160 (H)×16.6 (D)	320 (W)×160) (H)×14 (D)				
lêr r	Module Weight (kg)	0.43	0.45	0.47				
	Max Power Consumption of Module (W)	≤14	≤16	≤14				
	Module Power Requirements		Support DC4.2~5V power suppl	У				
	Single-dot Brightness/Color Calibration	Yes	Yes	Yes				
0 D	White Balance Brightness (nits)	600 CD/m ²	600 CD/m ²	500 CD/m ²				
otical p	Standard Color Temperature(K)	(6500K (1000K ~ 9500K Adjustable)					
arame	Beam Angle(Hor/Ver°)	160°/140° 160°/140°		160°/140°				
əter	Brightness/Chromaticity Uniformity	≥95%	≥95%	≥95%				
	Contrast Ratio	3000: 1 3000: 1		3000: 1				
Elec	Input Power <max> (W/㎡)</max>	280W/m ²	408W/m ²	356W/m ²				
stronic par	Input Power <typical> (W/㎡)</typical>	75W/m²	122W/m ²	107W/m ²				
amete	Power Supply Input Voltage	AC186~264V, Frequency 47-63 (Hz)						
7	Security Feature	GB4943/EN60950						
Perf	Frame Changing Frequency		50&60					
ormance I	Drive Mode	Constant Current Drive, 1/43Scan	Constant Current Drive, 1/40 Scan	Constant Current Drive, 1/32 Scan				
Param	Processing Depth	12-14bit	12-14bit	12-14bit				
eter	Refresh Rate	4200 Hz	4200 Hz	4200 Hz				
	Video Support	2K HD, 4K UHD	2K HD, 4K UHD	2K HD, 4K UHD				
Envir	Life Typical Value (HRS)	100,000H	100,000H	100,000H				
onmental F	Working Temperature/ Humidity Range(°C/RH)	-10°C	-10°C~45°C / 10%~50%RH (No Condensation)					
'arameter	Storage Temperature / Humidity Range(℃/RH)	-20℃~55 ℃ / 10%~60%RH (No Condensation)						

Remark: 1. The above parameters are typical or recommended; 2. Product parameters or configuration adjustments without notice; 3. Customized products, please confirm the parameters with our company.

1.4 System solution

The display system is mainly composed of LED display screen, sending box, control computer, matrix, splicing controller, distribution box and other equipment (please refer to the shipping list for details). The system topological graph is as follows:



Fig. 1-2 System topological graph

1.5 Applicable scope

EasyHP series products can be seamlessly spliced into display screens of any dimensions, which are widely used in public places such as conference room, school multi-function hall, studio, airport, station and urban rail, as well as fields such as hotel lobby, company lobby, exhibition hall, shopping mall, brand store, promotion site and home theater.



Chapter II Installation and Configuration

2.1 Unpacking check

Please carefully check the package for damage. If it is normal, continue to check the shipping list to verify the main parts. In case of any discrepancy, please contact us in time.

Main parts: Module, signal connection line and DC power line. Specific parts and the quantities are shown in the shipping list.

2.2 Installation method

The Cabinet is first fixed with the steel structure, and then the module is fixed to the cabinet by adding a magnetic column magnetic suction (indoor).

Advantages: High flatness, easy splicing of special-shaped screen (inner arc and outer arc), less use of steel structure, and high protection.



Figure 2-1 module with iron plate





Figure 2-2 equipped with magnetic column

2.3 Installation of Cabinet- Front Installation

When used as fixed LED displays, the EasyHP products are installed sequentially according to the cabinet number, as shown in Figure 2-3:



Figure 2-3 Rear View of the Display

- 1) Check whether the bottom beam is level. Make sure that its levelness and straightness is within ± 1 mm.
- 2) Install the cabinets sequentially from bottom to top and from middle to both sides. Fasten the adjacent cabinets with bolts. In addition, secure the connecting plates and cabinets with installation screws to the square tubes.
- 3) Keep proper joints and flatness between the cabinets during cabinet installation.
- 4) After the installation of the cabinet is complete, manually screw the power signal connection cable on the cabinet, Connection to the previous cabinet.
- 5) Then install the module on the corresponding box, the module installation process, need to pay attention to the gap between the module and flatness.



Figure 2-4 Cabinet Fastening



Figure 2-5 Rear View of Cabinet Installation



Figure 2-6 Location Map

2.4 Accessories for LED display

2.4.1 Common Accessories

Module magnetic suction accessories						
Magnetic column (Just for reference)	DC power cable (Just for reference)	Flat cable (Just for reference)				
Cabinet assembly accessories						
Magnetic sheet with stud (Just for reference)	Con	necting Plate				
Bolt:M8*60	Bol	t:M5*20				
(Connecting plate bolt)	(Cabinet connection bolts)					

2.4.2 Power & Signal Cable Connection

Figure 2-7, 2-8 show the power & signal cable connection for cabinets with an arrangement of 4 cabinets (Width) \times 4 cabinets (Height). Signal cables shall be connected based on the wiring diagram of the delivered products for the project.



Figure 2-7 Power Cable Connection Diagram



Figure 2-8 Signal Cable Connection Diagram

2.5 Intelligent control distribution box

The intelligent control distribution box can be used for power distribution of display screen, and it is also equipped with auxiliary functions of monitoring the temperature, humidity, smoke, power supply voltage and other status of the external environment in real time. The control software is added with timed on-off function. Through time setting, the functional requirements of remote opening and closing of the display screen at any time can be realized.



Fig. 2-3 Internal schematic diagram of distribution box

Serial No.	Name	Remarks
1	Master switch	Three-phase five-wire input power supply
2	Temperature sensor	Detect temperature
3	PLC	Intelligent control
4	Relay	Control the on and off of AC contactor
5	Air switch	Connect to the incoming live wire of the display screen
6	Neutral line row	Connect to the incoming neutral line of the display screen
7	Power socket	/
8	AC contactor	Control the connection and disconnection of current
9	Ground wire row	Connect to the incoming ground wire of the display screen

Connection description of PLC of intelligent control distribution box:

Convert the PLC communication from the serial port RS232 of the control computer to RS485 with a converter, and then connect it to the converter of the PLC through a network cable. For specific settings and operations, please refer to the *Manual of Intelligent Power Distribution Management System*.



Connection schematic diagram of PLC of intelligent control distribution box

2.6 General receiving card and power configuration of the product

1) Take EasyHP 2 as an example:



Product Model	Receive card with load	Supply voltage	Power supply	Power supply with load
EasyHP 1.25	1pc(1 Cabinet)	4.2V/4.5V	200W-4.2V-B	1pc(1 Cabinet)
EasyHP 1.538	lpc(1 Cabinet)	4.2V/4.5V	200W-4.2V-B	1pc(1 Cabinet)
EasyHP 1.839	1pc(1 Cabinet)	4.2V/4.5V	200W-4.2V-B	1pc(1 Cabinet)
EasyHP 2	1pc(1 Cabinet)	4.2V/4.5V	200W-4.2V-B	1pc(1 Cabinet)
EasyHP 2.5	lpc(1 Cabinet)	4.2V/4.5V	200W-4.2V-B	1pc(1 Cabinet)
EasyHP 3.076	1pc(1 Cabinet)	4.2V/4.5V	200W-4.2V-B	lpc(1 Cabinet)
EasyHP 4	1pc(1 Cabinet)	4.2V/4.5V	200W-4.2V-B	lpc(1 Cabinet)

2) General receiving card and power configuration of the product

Chapter 3 LED Display Control Setting

3.1 Power-on Testing

Before performing control setting on the LED display, confirm that each device is connected correctly.

- 1) Before turning on the power of the LED display, you must use a multimeter to test the live wire, neutral wire, and ground wire of the AC power supply, in order to ensure they are not conductive with each other.
- 2) The ground wire must be in reliable contact with the ground, and kept away properly from the live wire. The connected power supply shall be distant from high-power equipment.
- 3) When the 3-phase and 5-wire system is adopted, the load shall be distributed evenly among the phases to ensure three-phase balance as far as possible.
- 4) The input voltage must meet the voltage requirements indicated the cabinet rating label.
- 5) Connect the USB cable provided for the sending box to the USB port on the control PC.
- 6) Check whether cables for the LED display are connected in accordance with the power cable and signal cable connection diagrams provided for the delivered products.

3.2 Preparation

3.2.1 Starting the Hardware

Start the control PC Windows system. After the graphics card driver is activated, set graphics card of the control PC to replication mode and confirm that the green indicator of the sending box is blinking normally (blinking once per second).



Figure 3-1 Replication Mode

3.2.2 Installing the Software

Open the optical disk provided for the delivered products. Install the LED control software UniLCT-Mars stored in the optical disk to the control PC. Then install UniStudio.



Fig 3-2 Software Installation

NOTE: You can follow the software installation wizard to install the software.

3.3 Display Configuration

Run UniLCT-Mars. Make sure that **Control System** on the main window is 1. Click the **User** option and select **Advanced Login**, as shown in Figure 3-3.

Brightness	Display	Control M	onitor Fur	Advanced Enter Dem	Login(A)		Ð		
Control System	stem:	1	Other	Device:	0	View	<u>/ Detail</u>		
	1	111			8	×		-	
						0			

Figure 3-3 Main Window of UniLCT-Mars

Enter the initial password "admin", as shown in Figure 3-4, to go to the advanced user window.

🖳 User Login	22	
Password:	Cancel	

Figure 3-4 User Login

After login, click Screen Config on the main window, as shown in Figure 3-5:

System(S)	Tools(C)	Plug-in Te	ool(P) Us	er(U) Lanı	guage(Lang)	(L) Help(ł	-1)			
Screen Con	fig Bright	tness Cali	bration Di	splay Contro	Monitor	Function C	ard			
Control Sy	stern:	1	Other	Device:	0	Viev	v Detail			
Monitor Info										
E	. -	- 111		\sim	8	4		**	÷	
										·

Figure 3-5 Main Window for Advanced User

Click Next, as shown in Figure 3-6:

💀 Screen Config			×
-Select communication	port		
Current operation	COM4		
Config Screen			
🔘 Load Config File			Browse
		Next	Close



The following window is displayed. Set Sending Board Resolution (1920×1080 recommended). Set Graphics Output Resolution to the same value as Sending Board Resolution. Then click Save to save the settings.

🖳 Screen Config-COM4		
Sending Board Scan Board Screer	Connection	
Display Mode Current Display Mode Sending Board Resolution: 1920 x 108 Set the sending board display	Graphics output resolution: 1920 x 1080	Refresh
Resolution: 1920 x 108	0 px v Custom. 1920	₹ x 1080 ₹
Refresh Rate: 60	✓ Hz	Set
Hot Backup Setting Set the current device: Se Master De	t Master Device Stave Device	Device
Master Sending Board Index	Master Port Index Slave Sending Board Index	Slave Port Index
Refresh Send	Add	Edit Delete
Factory Restore	Save Config File	Save

Figure 3-7 Sending Board Configuration

After configuring the parameters on the Sending Board page, click Scan Board to display the following window:

🖳 Screen Config-C	COM4					
Sending Board Scar	n Board Screen (Connection				
Module Info						
Chip:	MBI5036	Size:	32W×16H	Scan Type:	1/2 scan	
Direction:	Horizontal	Decode Type:	74HC138 Decoding	Data Group:	2	
Cabinet Info						
Regular			🔘 Irregu	ar		
Pixel Width:	32 🌲	<=363	Please 🔺 Width	?? Heigl	ht ??	Please 🔺
Pixel Height:	16 🛓	<=128 the an	width d height	ng error. Please ad	ljust perform	make sure the width and height
Module Case	Right to Left	v of cal	the binet is 👻 Co	nstruct	View Cabinet	of the cabinet is 🔻
Performance Set	ting					
Group Swap	More Se	tting				
Refresh Rate:	60	✓ Hz	Accelerate Rate:	-]	
Gray Scale:	Normal 8192	•	Gray Mode: B	rightness First 🛛 👻]	
Data Clock:	12.5	✓ MHz	Data Duty: 5) -	(25~75) %	
Clock Phase:	6	•	Low Gray Comp 0	A. V]	
Blanking Time:	15	(=1.20us)	Ghost Control En 1	×	(1~14)	
Line Change Ti	3	\$ (0~12)				
Smart Setting			Load File	Save File	Read From HV	Send To HW
				Save Config File	Save	Close

Figure 3-8 Scan Board Configuration

- 1) Click Load File to load the file xxxx.rcfg stored in the optical disk.
- 2) Click Send to HW.
- 3) After sending, confirm that the loaded picture received by scan board is normal on the screen. Then click Save.

After configuring the parameters on the Scan Board page, click Screen Connection to display the following window:

1) Click **Read File** to load the file xxxx.scr stored in the optical disk, as shown in Figure 3-9.

Screen Config-COM4		
Sending Board Scan Board Screen Connection		
Screen1		Screen N 1 Config
Screen Type: 💿 Simple Screen	Standard Screen	Complex Screen
Basic Information Location: χ: 0 γ: 0	Virtual Mo 📄 Enable	••
The current network port operations Sending Board Index	Scan Board Columns: 1	Scan Board 1 ResetAll Hide Line
1	1 Sending#: Port: Scan Bo.:	
PortIndex	Width:0 Height:0	
Connect to d Back Clear Port		
Scan Board Size		
Width: 128		
Set Blank Apply to port	Nata:Clish an da	a left muse butter to confin concern sight
	NOTE:CIICK OF ar	ag fert mouse button to config screen, right
Detect Status		Read File Save File Read from HW Send To HW
Factory Restore		Save Config File Save Close

Figure 3-9 Screen Connection 1

2) Click Send to HW.

3) After sending, confirm that the screen is complete. Then click Save.

					Screen N 1	- Contig
creen1						
Screen Type: 💿 Simple Screen	Standar	rd Screen	Complex Screet	een		
Basic Information						
Location: X: 0 Y: 0	Virtual Mo	Enable	•			
The current network port operations	Scan Board Columns:	5	Scan Board Rows: 10	ResetA	📕 📰 Hide Line	•
		1	2	3	4	5
-		Sending#:1 Port:1	Sending#:1 Port:1	Sending#:1 Port:1	Sending#:1 Port:1	Sending#.1 Port:1
Port Index		Width:128 Height:128	Width: 128 Height: 128	Width: 128 Height: 128	Width:128 Height:128	Width:128 E Height:28
		Sending#:1 Port:1	Sending#:1 Port:1	Sending#:1 Port:1	Sending#:1 Port:1	Sending#.1 Port.1
	-	Width:128 Height:128	Width: 128 Height: 128	Width: 128 Height: 128	Width:128 Height:128	Width:128 Height:128
Back Clear Port	2	Sending#:1 Port:2	Sending#:1 Port2	Sending#:1 Port2	Sending#:1 Port:2	Sending#:1 Port2
Scan Board Size		Width:128 Height:128	Width: 128 Height: 128	Width: 128 Height: 128	Width:128 Height:128	Width:128 Height:28
Width: 128		Sending#:1 Port:2	Sending#:1 Port:2	Sending#:1 Port2	Sending#:1 Port:2	Sendinc#.1 Port2
Height 128		Width:128 Height:128	Width: 128 Height: 128	Width: 128 Height: 128	Width:128 Height:128	Width:128 Height:128
	Note:Cli	ck or dra	g left mouse	button to	config sc	reen, right
Detect Status			Read	d File Sav	e File Read	a from HW Send To '

Figure 3-10 Screen Connection with Loaded File

3.4 Brightness Adjustment

On the main window, click Brightness, as shown in Figure 3-11, to display the brightness adjustment interface:

System(S)	Tools(C)	Plug-in To	ol(P) Use	r(U) Lan	guage(Lang)	(L) Help(H	-1)			
Screen Cor	nfig Bright	tness Cali	oration Dis	splay Contro	Monitor	Function C	ard			
- Local Syster	n Info									
Control S	ystem:	1	Other D	Device:	0	View	v Detail			
- Monitor Info										
H	. -	- 111			8	*				
				0						
									,	

Figure 3-11 Main Window for Advanced User

There are four brightness adjustment modes, namely **Manual**, **Schedule**, **Auto**, and **Auto Adjustment by Hardware**. After adjustment is finished, click **Save to HW** to save the adjustment results to the hardware.

3.4.1 Manual Adjustment

Select **Manual** and adjust the brightness by dragging the scroll bar below **Brightness Adjustment** or directly modifying the brightness value (the maximum value is 255) next to the scroll bar.

OM4-Screen1				
Adjustment Mode				
🔘 Manua) 💿	Sched	onfig 💿 Auto	Config 💿 Auto a	djus Config
Display Quality			Gamma Adjustment	
Soft Mode) E	inhanced Mode	Fixed Value	
Brightness Adjustme	ent		Mode A	🖻 Mode B
			٠	> 28
٠		255	Custom	Gamma Ta
		(100.0%	Custom	Garrina ra.
Color Temperature A	djustment			
Custom	Chip:	B15036		
Gain			RGB brightness	
	_	10151	D (1 255
R. K		F 101.54 %	R.	(100.05
-	_		_	(100.0
G: K		▶ 101.54 %	G:	> 255
_			_	(100.0*
B: <		▶ 101.54 %	B: K	> 255
📝 Synchronous			Synchronous	(100.0)
	1	Default Value		Normal mod
		Deladit value		Normal mod
	(Default Value		Normal
			Refresh	Save To Hardw

Figure 3-12 Manual Adjustment

Display Quality: Includes Soft mode and Enhanced mode. The Soft mode is generally used for indoor LED displays while the Enhanced mode is used for outdoor LED displays.

Gamma Adjustment: Includes Mode A and Mode B. The LED display in Mode A can light up earlier than that in Mode B.

Gain: For chips with current gain function, adjusting the current gain can improve the chip's current output.

RGB brightness: Adjusts the brightness of Red (R), Green (G) or Blue (B) separately.

3.4.2 Automatic Adjustment

Schedule, **Auto**, and **Auto Adjustment by Hardware** are automatic adjustment modes. Automatic adjustment function is not recommended for indoor LED display products because the indoor environment has stable ambient light and is rarely affected by the ambient brightness. If you really need to use this function, you can configure this function by using the wizard.

3.5 Correction Coefficient Management

The products have been subject to correction before shipment. To ensure the optimum displaying effect of the screen, you need to activate the correction function when using the LED display, and to reload the correction coefficients after replacing the modules or receiving card. This Section introduces how to upload the correction coefficients after replacing the modules or receiving card.

On the main window, click Calibration, as shown in Figure 3-13, to display the screen calibration interface:

System(S)	Tools(C)	Plug-in To	ool(P) Us	er(U) Lan	guage(Lang)	(L) Help(H	-I)		
Screen Co	nfig Bright	tness Cali	bration Di	splay Contro	Monitor	Function C	ard		
Control S	System:	1	Other	Device:	0	View	<u>/ Detail</u>		
- Monitor Info									
E	-	111			8	*		-	

Figure 3-13 Main Window for Advanced User

Configure Enable/Disable Calibration to Brightness, click Save, and then click Manage Coefficients to display the following window:

Screen Calibration Current operation communication port COMM Current Screen © Screen1	Online Calification Offline Calification Select Operation 1.Upload Coefficients 2.Save coefficients to database 3.Set coefficients for a new scan board 3.Set coefficients for a new scan board 4.Set coefficients for a new module 5.Adjust coefficients (color is ununiform on screen) 6.Erase or reload coefficients 7. Reset correction coefficients 7.
Display Screen Main Display	

Figure 3-14 Manage Coefficients

Upload coefficients: Upload the correction coefficient database generated by the software or read back by the display screen to the screen. **Save coefficients to database:** Read back and save the coefficients from the screen to the coefficient database.

Set coefficients for a new scan board: After replacing the scan board (receiving card), set the correction coefficients for the new receiving card.

Set coefficients for a new module: After replacing a module, set the correction coefficients for the new module.

Adjust Coefficients (Color is ununiform on screen): Adjust the correction coefficients for a selected area on the screen to achieve a satisfactory effect.

Erase or reload Coefficients: Erase or reload the correction coefficients for a selected area on the LED display.

Reset Correction Coefficients: Reset the calibration coefficients on whole or selected section of LED display.

3.5.1 Setting Coefficients for a New Receiving Card

1) As shown in Figure 3-15, select **Topology or List.** Select the position of the replaced receiving card. Click Next:

Online Calibration Offline	Calbration Manage Coef	ficients			
Select Area of New Scar	n Board in Screen				
Screen:1 Locati	ion:X=0, Y=0 Si	ze:512W×256H			
🔵 Screen 🔵 Pixel	Topolo	gyorList 🔲 Se	lect Area On reen		
(1.1)	(1.2)	(1.3)	(1.4)		Zoom:
(2.1)	(2.2)	(2.3)	(2.4)		- 1.0
			B	ack Next	Return

Figure 3-15 Selecting Area for New Receiving Card

2) Select the coefficient source. Click **Browse** at **Select Database**.

Online Calibration Offline	Calibration Manage (Coefficients				
Select the source of Co	efficients					
 Database 	🔘 Ret	'er to Su			_	
Select Database: Select Adjust Lin Type: Columns: Discription: Upload Mode	Unknown Unknown Unknown Fast Upload	CabinetID: Rows: Stable Upload	Unknown	Browse		
				Back	Next	Return

Figure 3-16 Obtaining Correction Coefficients for Receiving Card

3) Select the corresponding correction coefficients:

Screen Calibration		8
Current operation communication port	en 17开	—
COM4 v	• database	 ↓ 投票 database
Current Screen	组织 ▼ 新建文件夹	₿ ▾ 🔲 😧
Screen1	 ★ 依面映 ● 5000168 A1151 ● 5000168 A1153 ● 5000168 A1153 ● 5000168 A1153 ● 5000168 A1155 ● 5000168 A1155 ● 5000168 A1157 ● 5000168 A1159 ● 5000168 A1151 ● 5000168 A1151 	
	文件名(12):	✓ Access Database(*.mdb;*.db ▼
		打开(O) 取尚
Display Screen		
Main Display 👻		
Enable/Disable Calibraion		
Disable •		Back Next Return
Save		

Figure 3-17 Selecting Correction Coefficients for Receiving Card

4) Select Stable Upload and click Next:

Current operation communication	Online Calibration Offline	Calibration Manage (Coefficients			
COM4 -	Select the source of Co	efficients				
Ourrent Screen Screen1	Select Database:	C:\Users\linrende\De	ter to Su esktopidatabase\50000	168_A1152.db	Browse	
	Select Adjust Line Type:	Cabinet D	Cabinet ID:	A1151	Browse	
	Columns:	192	Rows:	192		
	Upload Mode	Fast Upload	Stable Upload	>		
isplay Screen						
sin Display 👻						
nable/Disable Calibraion	L			(Back Next	Return
Save						

Figure 3-18 Uploading Correction Coefficients

5) Adjust Coefficient: Perform a simple adjustment if the displaying effect is not good enough after you upload the coefficient. Then click **Next.**

Online Calibration	n Offline Ca	libration Manage Coef	ficients					
Adjust Coeffici Simple	ients							
0 16 41	0							
Red:	٠			 				89.7
Green:	٠			 				89.6
Blue:	<							92.8
Advance	ed	Show Color Wi						
					Back	Next	Re	turn

Figure 3-19 Simple Adjustment

Red: Adjust the red brightness value of calibration coefficients.

Green: Adjust the green brightness value of calibration coefficients.

Blue: Adjust the blue brightness value of calibration coefficients.

6) Save Coefficients: Click **Save** to save the correction coefficients to the hardware. The saved coefficients are retentive even after a power failure. Then click **Finish**.



Figure 3-20 Saving Correction Coefficients

3.5.2 Setting Coefficients for a New Module

 Select Position of the New Module: Select Topology or List. Then select the position of the receiving card where the new module is located. Double click the selected position:



Figure 3-21 Selecting Cabinet for the New Module

2) Choose Display Mode to Modules. Select the position of the new module and click Next.

🛃 Screen Calibration		23
Screen Calibration Count operation communication port Count Count Screen Screen1	Online Calibration Manage Coefficients Select the New Module Scan Bo.: (0,0,0), Location:: (384,0), Size:128×128 Screen Pixel Screen Pixel Modules Topology or List Screen Pixel Display Mode: Modules	
Display Screen Man Daptay - Enable/Disable Calibraton Disable - Save	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	

Figure 3-22 Selecting Position of New Module

Module Size: Set the size of the module in a cabinet. The software determines each module arrangement based on module size and cabinet size.

 Adjust the coefficients (similar to the steps of coefficient adjustment in setting coefficients for a new receiving card). For details, refer to Step 2 and Step 3 in Section 3.5.1).

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Save the correction coefficients to the hardware (Use similar steps in setting coefficients for a new receiving card. For details, refer to Step 4, Step 5, and Step 6 in Section 3.5.1) so that they are retentive after a power failure.

Screen Calibration						X
Current operation communication port	Online Calibration Offline	Calibration Manage C	oefficients			
COM4 ~	Select the source of Co	efficients	er to Su			
Current Screen	Select Database:				Browse	
(a) Screen 1	Select Adjust Line				Browse	
	Type: Columns:	Unknown	Cabinet ID: Rows:	Unknown	-	
	Discription:	Unknown				
	Upload Mode	Fast Upload	Stable Upload	>		
Display Screen						
Enable/Disable Calibraion						
Disable •					Back Next Return	
Save						

Figure 3-23 Obtaining Correction Coefficients for a New Module

3.6 Pre-storing Picture

On the Prestore Picture interface, you can save a picture as the prestored picture for the screen. This prestored picture can be set as a screen displayed upon booting, signal cable disconnection, or DVI signal absence.

On the main window, click Tool and select Prestore Picture, as shown in Figure 3-24.

System(S) 🤇	Tools(C) Plug-in Tool(P) User(U)	Language(Lang)(L) He	p(H)		
	Screen Config(S)	L	100			
	Brightness(B)		1	2		
Screen Conf	Calibration(C)	itor	Functio	n Card		
Local System	Display Control(P)					
	Monitor(M)					
Control Sy	Function Card(F)		Σ	iew Detail		
Monitor Info	Hardware Information(H)					
CONTRACT INTO	Multiple Screen Management(A)		. (
	Error Dot Detect(T)		~			
	Prestore Picture(R)					
	Color Restore(0)					
	Memory On Module Manage(U)					
Server Status:	Receive Card relay(I)					
_	MultiBatch of Adgustment(M)		-	1.0.00	-	
	Load Configuration File(E)			100	and and and	
	Dark or Bright Line Adjustment for Ca	abinet 🕨				

Figure 3-24 Prestore Picture

		_					
Prestore Picture Settings		×					
Communication port sele	Communication port selection						
Communication COI	Communication COM4						
Screen1							
Prestore Picture Settings	6						
Select Pi		Browse					
Effect Settings							
Screen Effect	Stretch •						
Cabinet Effect	Stretch 👻	Test Effect					
S	ave To Hardware	Check Store Picture					
Function Settings							
Boot Screen							
Enable	Time: 2	S S					
Cable Disconnect							
🖲 Black 💿 L	ast Frame	Prestore Picture					
No DVI Signal							
I Black 🔘 L	ast Frame	Prestore Picture					
	Send	Save To Hardware					

Figure 3-25 Prestore Picture Settings

3.6.1 Prestore Picture Settings

Select Picture: Click Browse to select the directory of the picture.

Screen Effect: Set the selected picture to be displayed on the whole screen by means of stretching, tiling, or centering.

Cabinet Effect: Set the selected picture to be displayed on each cabinet of the screen by means of stretching, tiling, or centering (the number of pictures displayed by each cabinet shall be equal to the number of receiving cards in the cabinet).

Click **Test Effect** to display the selected picture on the screen. Click **Save to Hardware** to save the picture as a prestored picture to the hardware. Click **Check Store Picture** to display the stored picture on the screen to check its effect.

3.6.2 Function Settings

Boot Screen: Set whether to use the prestored picture and set the displaying time of the prestored picture when the screen is powered on. **Cable Disconnect:** Set the picture to be displayed by the cabinet whose signal cable is disconnected.

No DVI Signal: Set the picture to be displayed in the period in which the screen does not receive any DVI signals.

Click Send to the settings to the hardware (the settings will be lost if you do not click Save to Hardware).

Click Save to Hardware to save the current settings so that these settings are retained even if there is a power failure

Chapter 4 LED Display Playing Setting

4.1 Selecting a Playing Solution

The playing software UniStudio has three playing modes, namely Simple playing program, Professional playing program, and Priority programs of the page. Professional playing program is used most commonly. This Section introduces the Professional playing program only. Run the software to enter the main window. Click Setting > Switch schedule mode. On the editing mode setting window, select Professional playing program and click OK. As showed in Figure 4-1 and Figure 4-2.

Schedule (P) Control (C) Settings (S)	View (V) Tool (T)	Plug-in (U) Language (A) Help (E)
New Open	etting (S) ing (A) NIOFF settings (R)	Stop Hide all windows EstitCollapse
Display window 1	ng (P)	
Backgrou	nd Play(B)	
Preview 1	setting of single media (M)	
Add schedule	ings	2016-11-30 Ex
- C General S Lock Set	ing (L)	
Progr Network	Settings (I)	
C _c Setting of	Temperature and Humidit	y Sensor
Weather	Information setting (VV)	
Hide all v	vindows(H)	
Adjust Ti	пе	
Settings	of LED Display Parameters	
LED Disp	lav Zoom Settings	
	chade da una da	
Switches	cheque mode	
		The latter segment has higher priority in the same type
Show window number and	About	
Image: Image		The timing inserted segment has higher priority than the cycle inserted one.

Figure 4-1 Switching Schedule Mode

Edit mode setting	<u> </u>
Current editing mode	
🔘 Simple playing p	program
Professional pla	aying program
🔘 Priority program	ns of the page
ОК	Cancel

Figure 4-2 Edit Mode Setting

4.2 Playing Setting

4.2.1 Display Window Setting

Run the UniStudio, click Settings and select Display Setting, as in following fig:

Visplay Window Setting	Display Win
Number of Display Update Update	Number of Windows:
Display window 1	Display wir
Name: Display window 1	Name:
Start X: 3 🛬 Width: 400 🛬	Start X:
Start Y: -9 🚔 Height: 400 🖨	Start Y:
On Top: 🔘 Never 🔘 Always 💿 Playing	On Top:
Set frame 20 HZ	Set frame rate:
Show Display Window (Shift+H)	🔽 Show
Lock display window (Shift+L)	📃 Lock d
Display Window Border Line	🔽 Displa
Note: After the display window is locked, it is unable to use the mouse to change size and position of display window.	Note: After mouse to a
OK Cancel	

Figure 4-3 Display Window Setting

Number of Display Windows: Indicates the number of display windows. To increase or decrease the number of display windows, re-enter the number of display windows in the box next to Number of Display Windows and then click Update.

Start X: Indicates the horizontal start point of the display window.

Start Y: Indicates the vertical start point of the display window.

Width: Indicates the horizontal pixel value of the display.

Height: Indicates the vertical pixel value of the display.

Other configuration items are set to the default values.

4.2.2 Startup Setting

On the main window of the software, click **Setting** > **Start Setting** to enable the software to run automatically upon startup of the PC and to automatically activate a playing solution. See Figure 4-4:

Start setting	- 23				
Auto Run after Power-on					
📝 Restart Software on Time					
Every 1 🚖 day, restart software once.					
Restart time: 2:00:00 🔄 -					
Exit of software on time					
Exit Time: 00:00:00					
Enable Auto Play					
Display window 1					
Please select the schedule file to be played.					
Play the schedule played last time					
Instant plug and play of USB disk					
OK					

Figure 4-4 Startup Setting

Auto Run after Power-on: If you enable this function, UniStudio will run automatically the next time when the PC is started.

Restart Software on Time: If you enable this function, set the restart interval and time, and click **OK**, UniStudio will be automatically restarted after the PC time reaches the preset restart time. After the software is restarted, the window information and playing status before restart will be automatically recovered.

Exit of software on time: If you enable this function and set the exit time, the software will exit automatically upon the preset time. This function can prevent damages to the uploaded data caused by forcible exit of the software.

Enable Auto Play: If you enable this function and specify a playing solution for the screen, the software will automatically activate the specified playing solution once the software is started.

Instant plug and play of USB disk: If you enable this function, the PC will automatically read and activate the playing solution once the USB flash drive is inserted to the PC. If you do disable this function, the PC cannot implement the plug-and-play function even though you have inserted the USB flash drive to the PC.

4.3 Editing Professional Playing Solution

4.3.1 Editing the Time Segment

1) Creating a playing solution

On the main window of the software, click **Schedule** > **New**, as shown in Figure 4-5:

Schedule (P) Control (C) Settings (S) View ((V) Tool (T) Plug-in (U)	Language (A) Help (E)	
New (N) Open (0)			
Save (S)			
Save As (A) Save As	Play Pause	Stop Hide all windows Edit/Collapse	
Backup (B)			
Export to USB Disk (E)	Date Ranne of Scherkle		
Recent schedule (R)	Exam 2016 44 20	The 1996 At 20 -	Retresh
- C General Segment 1	2016-11-30	10 2018-11-30	Heinestr
Program1			
Common Window1			
	The latter	seament has higher priority in the same type.	
Show window number and name	About Priority: The timing	inserted segment has higher priority than the cycle inserted one.	

Figure 4-5 Creating a Playing Solution

2) Editing the properties of the playing solution

After adding a general time segment or interstitial segment, click **General Segment 1** to edit the properties displayed in the segment editing area on the right side, as shown in Figure 4-6:

animate (i) animate (a) mant (i) mant (i) mant (a) manage (a) manage (a)	
New Open Save Save As Pause Stop Hide all windows Edit/Collapse © Display window 1 Company Company Company Company Company Company	
Add schedule Foreral Connon Window Connon Window Y Program Connon Window Y Prose value Y Prose Value	

Figure 4-6 Properties of General Time Segment

4.3.2 Editing the Program Page

1) Creating a program page

As shown in Figure 4-7, right click General Segment or click the Add Program Page button in the toolbar to create a program page:

Schedule (P) Control	I (C) Settings (S) View (V) Tool (T) Plug-in (U) Language (A) Help (E)
	Save As Play Plays Stop Held Hindows EditCollapse
Display window 1	
Add schedu	Add Olobel Program Page Ve Day of the Week Copy Ve Table Ve Statuday Ve Satuday Ve
	Paste
	Move Up trive Time of the Day
	More Down
	Delete Clear Programs
	Preview Current Segnent Set screen
	Hide Play window (Shift+H)
Show window numb Show window numb	m +

Figure 4-7 Creating a Program Page

2) Setting the properties

After creating the program page, click **Program 1** and set the background, displaying mode, and other properties displayed on the property page on the right side. See Figure 4-8:

Schedule (P) Control (C) Settings (S) View (V) Tool (T) Plug-in (U) Language (A) Help (E)	
New Open Save Save As	Play Pause Stop Hide all windows EddCollapse	
Display window 1		
Add schedule Conacon Window1	Background Color: Background Picture: No background picture Display Type: Back Music:	+ ≭ ☆ ↓ 1
	Specify number of times: Specify duration: Ocococo	
Show window number and name		

Figure 4-8 Properties of Program Page

If you select **Specify Number of Times**, the next general program page is played after the preset **Times to Play** for the display window with the longest playing time on the current program page has been reached.

If you select **Specify Duration**, the next program page is played after the preset **Play Duration** for the current program page has been reached.

If you select Cycle, the current program page will be played cyclically all the time.

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When the current program page is played, the background picture or colour of the program page is displayed in the area not covered by the display window, as shown in Figure 4-9:



Figure 4-9 Background of Program Page

After adding the program page, you can move, copy, paste, or delete the program page by using the toolbar in the program page editing area, or by using the short-cut menu, as shown in Figure 4-10.

Display window 1	
Add schedule	Background Color:
- O General Segment 1	Background Picture: No background picture
Programl HolidayPagel	Display Type: Stretch
Add Common Win Add Scrolling Win Add Scrolling Windo Add Clock Windov Add Timing Windo Add Weather Fore Add Temperature Nove Up Move Down Copy Paste Delete Add serviced Windov Save the Current	Andow Layout
Preview the Curre Show window number e Show screen(Shit	nt Segment from the Current Program Page (t+H)

Figure 4-10 Program Page Operation Menu

4.3.3 Editing the Display Window

1) Adding a display window

After adding a program page, you need to add a display window to this program page. Click **Add Window** on the toolbar of the program page to add a window to the current program page. See Figure 4-11:

Schedule (P) Control (C) Settings (S) View (V)	Tool (T) Plug-in (U) Language (A) Help (E)
New Open Save Save As	Pay Pause Stop Hatel Windows EditCollapse
Scroling Window	a) d Color: d Pichare No bedground jeture
Clock Window	pe: Stretch ·
Timing Window	F 🕹 👙 🐥 🐺 🗍
Temperature and Humidity Window	
Copying Window	
- Stow window runter and	8 Specify runtitier of times: 9 (2) 5 Specify runtition: 00 00:00 (2) C cycle:

Figure 4-11 Adding a Window to Program Page

After the window is added, the added window is selected and displayed on the screen, as shown in Figure 4-12:



Figure 4-12 Added Window

Setting the location and size of the display window

The location and size of the new window is generated randomly and can be adjusted based on actual conditions by using either of the following two methods:

a) Directly specify the new location and size in the setting pane, as shown in Figure 4-13:

Schedule (P) Control (C) Settings (S) View	(V) Tool (T) Plug-in (U) Language (A)	Help (E)
New Open Save As		al windows EditCollacte
Display window 1		
Add schedule	Name: Common Window2	Frane
Program1	V1681: 294 🔄 He	ight 197 文
Common Window2		🕒 , 🖻 🖪 🕊 🖬 🛦 🎩
Common Windowl	<u> </u>	
	Please select the Lens in toolbar Add Media to Window	κ.
Show window number and name		

Figure 4-13 Setting the Window Size

b) Click the display window on the screen and adjust its size by using the mouse, as shown in Figure 4-14:



Figure 4-14 Adjusting the Window Size Using the Mouse

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2) Deleting a display window

Select the window to be deleted. Click the delete key to delete the window, as shown in Figure 4-15:



Figure 4-15 Deleting the Display Window

3) Moving a display window

Select the program or window. Click the direction key to adjust the playing sequence, as shown in Figure 4-16:



Figure 4-16 Moving a Display Window

4.3.4 Editing the Media

1) Adding the media

The type of window for adding the media is **Common Window**. Click the **Add Media** button of a common window to select media of different types to be added into the media list. See Figure 4-17:

Schedule (P) Control (C) Settings (S)	View (V) Tool (T) Plug-in (U)	Language (A) Help (E)	
Display window 1			
Add schedde	Name: Common We X: 119 Wd2x: 166 Wddwc 166 Wholow Poston Wholow Size Move Up by One Layer Move Down by One Layer	File Diversified Text Single-row text Scrolling Text Analog Clock Digital Clock Plash clock Vista Clock Lunar Calendar Media	
	Copy Paste	Table	
	Delete Hidden screen(Shift+H)	Tining Digital Count-down Timer	
Show window number and rame	Fort Arial Fort Colorful Color	Vielather Temperature and Humidity URL Streaming RSS Villndow Video Device	

Figure 4-17 Adding the Media

After adding the media, you can set the media texts and properties, as shown in Figure 4-18.

Schedule (P) Control (C) Settings (S) View	(V) Tool (T) Plug-in (U)	Language (A) Help (E)	
Ner Corr Store Store A			EW Choice
Display window 1			
Add schedule	Name: Common Wind	ow2 🔄 Frame	
General Segmenti	X: 119	🐑 Y.	119
- Program	Width: 166	🕀 Height:	131
Conson Window2	a a		📕 🛖 🕷 👘 😭 -
Program2	1 Scroling Text		Any Tines
	Text Property		
	hello!		
	Font: Arial	 Size (px): 	
	Text Effect Suspen	sion v V D	epthx 2
Fig. Show window number and	Colorful None		•

Figure 4-18 Media Setting Window

2) Setting the media properties

Different media have different properties. After a medium in the media list is selected, the property page of this medium is displayed below the selected medium. On this property page, you can change the properties of the medium. See Figure 4-19:

Schedule (P) Control (C) Settings (S) View	(V) Tool (T)	Plug-in (U)	Language (A)) Help (E)			
New Open Save Save As	Play	Pause	Stop	ide all windows	Edit/Collapse		
Display window 1							
🗄 • 🗔 • 🗊 🗈 🛊 🖊 🗰							
= Add schedule	None:	Common Windo	rw1	Frame			
General Segment1	X:	0	\$	Y.	0	*	
Program1	Width	400	iei	Height	400	 \$	
Common Window2			Mad .	-			
Common Window1	8					🗟 • 🗊 🖪 :	🗰 👘 🖊 -
Program2	1 Diversifi	ed Text					Any Times
	2 Simple T	ext					Any Times
	3 Scrolling	g Text					Any Times
	Edit Text						
	Background	Dure colo				-	Transpare
	Cooling Com	ration			•	115 30 200 1 1	
	Special	Random				 Speed: 	5 😌 Q.1 s
	Special	Random				- Speed	5 🕀 0.1 s
	Stav Time		A S.,	E ve	rtical line		
	stay ring.						
see Show window number and	Complete	e Play	Play Dur	ation: 00 :	00 : 05 . 000 🛬		
✓ name							

Figure 4-19 properties of Medium

3) Editing the media in the common window

In an actual application, if different playing times are required for different media, you can select the media in the media list and then double click **Times to Play** to modify the playing times by either entering a new value or selecting a value from the drop-down list. See Figure 4-20:





Figure 4-20 Changing the Media Playing Times

Right click the media to perform operations on the selected media, as shown in Figure 4-21:

Schedule (P) Control (C) Settings (S) View	(V) Tool (T)	Plug-in (U)	Language (A)) Help (E)			
🗔 🔷 💾 💾		П		ø			
New Open Save Save As	Play	Pause	Stop H	fide all window	ws Edit/Collepse		
Display window 1							
🖸 • 🗇 • 🖻 🗈 🔺 🕊							
	Name: C	ommon Windo	w1	Frame	[
= Add schedule							
General Segment 1	× 2			Y.	0		
Program1	Width: 4	00	1	Height	400	÷	
Common Window2							
Common Window1	6				l.	🤹 - 🗐 👘 🖌	🛯 🖀 🔶 🛛
	1 Diversified	Text					Any Times
	2 Simple Text	t			inve I In		Any Times
-	3 Scroling Te	ext			ione Op		Any Times
					ove bown	_	
				0	opy		
				P	aste		
				In	sert Media	•	
				D	elete		
	Text Propert			B	ename		
	riopon	7				_	
	Hello!				pply Properties to		^ 🔽
	East	Arial		- Site (16	- B 7 II S	
	Text Etter		ľ	- Size (Durth D		
	Colortal	a Suspensa	011 ¥		Deburk		
	characters:	None			-		
Show window number and name	Horizontal alignment:	Align 👻	Vertical alionment	ign 🔹 Spacin	ng 1 🕀 Kerning:	0 💠	Vertical line

Figure 4-21 Media Operation Menu

Right click a blank area in the media playlist. A media playing menu is displayed, as shown in Figure 4-22:

Schedule (P) Control (C) Settings (S) View	(V) Tool (T) Plug-in (U) Language	s (A) Help (E)	
New Open Save Save As	Play Pause Stop	Hide all windows Edit/Collapse	
Display window 1			
Conservations	Name: Connon Vitrisori X 0 0 Vetex 40 0 0 0 0 0 0 0 0 0 0 0 0 0	File Diversities Text Single Ford Single-row text Single-row text Sording Text Analog Clock Dight Clock Vata Clock Vata Clock Vata Clock Vata Clock Vata Clock Unar Celender Media Table Detabase Timing Dight Clock-count-Timer Vesitier forecasting Temperature and Haniatty Uitit Uitit Uitit Sineening Media Vediav RSS	Ary Times Ary Times Ary Times Ary Times
Show window number and name		External Program	
		Add Copied Media	

Figure 4-22 Media Playing Menu

4.3.5 Playing the Media

After the playing mode is edited or loaded, click the play key on the main toolbar to start the current playing mode, as shown in Figure 4-23:



Figure 4-23 Play Key on the Toolbar

After play is activated, the editing page is switched to the playing page, as shown in Figure 4-24:

🦉 Screenl	
Current Common Segment: Segment1 [2012/6/27 0:	00:00 To 2012/6/28 0:00:00] Playing
Next Common Segment(In Segment1 [2012/6/28 0: a week):	00:00 To 2012/6/29 0:00:00]
Play Info-	
Global Page	
-Common Page(Pagel) Status:Playing	-
≟₩ (0, 0, 359, 328)	=
Current Media: oppo. AVI	
Next Media foreign 1 ing	· · · · · · · · · · · · · · · · · · ·
Current Inserted Inserted Segment2 [201]	2/6/27 18:48:00] Playing
Next Inserted Segment(In a week): Inserted Segment2 [201	2/6/27 18:50:00]
Play Info-	
Common Page(Page1) Status:Playing	
[⊥] ₩ (0, 0, 215, 184)	
Current Media:Analog clock	E
Next Media: Analog clock	
Play Error	

Figure 4-24 Play Information Page

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Clicking **Pause** or **Stop** on the toolbar can pause or stop the currently played program. You can also perform this operation by using the operation menu that appears when you right click the display window. See Figure 4-25:



Figure 4-25 Short-cut Menu

All display windows on the same program page plays simultaneously. If the display windows overlap with each other, the upper-layer windows will cover the lower-layer windows. For example, if you add a common window and then a clock window of the same size and coordinate, the common window will cover the clock window when they are playing. If you want to display the clock window, you need to click **Pause**, perform the **Move Up** operation to move the clock window to the front side of the common window, and then click **Play**. If the clock is displayed transparently, the clock will overlay the media of the common window when the playing solution is played upon the moving operation. Figure 4-26 shows the displaying effect:



Figure 4-26 Transparent Displaying Effect of the Clock

4.4 Saving and Opening a Playing Solution

Save: After a playing solution is created, you can click **Schedule** on the toolbar and select **Save** or **Save As** to save the playing solution in the format of **xxxx.plym**. See Figure 4-27:



Figure 4-27 Saving a Playing Solution File

Open: After a playing solution is saved, you can directly click **Schedule** in the toolbar and select **Open** to open the playing solution. See Figure 4-28:

General Segment1	(W	findow Editing Area		_	
Common Wind		档→	▼ 49 ///////////////////////////////////	文档	\$
	组织 ▼ 新建文件夹	文档库		800 ▼ 推列方式:	2件来▼
	桌面 到一桌近访问的位置	包括: 2 个位置 名称	修改日期	英型	*
L.	▲ (同) 席 → 同 和明	鷆 Labeling 🎉 My ISO Files	2016/8/15 13:42 2015/5/14 11:24	文件夹 文件夹	
		My RTX Files NovaDog	2016/7/1 9:18 2016/8/21 19:13	文件夹 文件夹	
		NovaLCT 2012	2016/8/9 18:39 2016/8/21 19:13	文件夹 文件夹	
	▷ 1票 计算机	RTXC File List Tencent Tencent Files	2014/7/11 8:45 2014/4/25 9:51 2014/7/11 15:05	文件夹 文件夹	
Show window name and index	 ・ ・	< CON-	 - File(to	2.172	، • • • سیسیر س
lew Schedule	2.11		177	Ŧ(O)	Roja

Figure 4-28 Opening a Playing Solution File

Chapter 5 Startup, Shutdown, and Maintenance

5.1 Startup Sequence

- 1) Start the distribution box for the LED display.
- 2) Start the control computer.
- 3) Start the video processor.
- 4) Start the sending box.

5.2 Shutdown Sequence

- 1) Shut down the video processor.
- 2) Shut down the sending box.
- 3) Shut down the control PC.
- 4) Shut down the distribution box for the LED display.

5.3 Daily Maintenance

- 1) Check whether ambient temperature and humidity meet the operating conditions for the LED display on a daily basis.
- Use the LED display and its auxiliary devices at least twice a week and two hours each time. Before using the LED display, perform warm-up operations if it has been idle for 14 days (for details about warm-up operations, see Section 5.4).
- 3) It is recommended that you should use a soft antistatic brush to clear dust on the screen surface monthly in order to achieve an optimum displaying effect.
- 4) Check the parts in the distribution box quarterly. Check whether the power cables and signal cables for the LED display are connected securely and safely, and whether the display is grounded reliably.
- 5) Check whether the steel structure is secure on a yearly basis.

5.4 Warm-up Operation

If the LED display has been idle for a long period of time, perform warm-up operations before using the LED display. Set the prestored picture as follows when you initially start the LED display. This setting is for warm-up operation only. You do not need to set the prestored picture if the LED display is used frequently.

5.4.1 Setting the Prestored Picture

For details about how to set the prestored picture, refer to Section 3.6. Select a black background picture. Set **Boot Screen** to 60 seconds. Set both **Cable Disconnect** and **No DVI Signal** to **Prestored Picture**. Then click **Save to Hardware**. See Figure 5-1.

Prestore Picture Sett	ings	83
- Communication port	selection	
Communication	COM4	-
Screen1		
Prestore Picture Set	tings	
Select Pi		Browse
Effect Settings		
Screen Effect	Stretch	•
Cabinet Effect	Stretch	- Test Effect
	Save To Hardy	ware Check Store Picture
Function Settings		
Boot Screen		
👽 Enable	Time:	60 🚔 s
Cable Disconnect -		
🗇 Black 🤅	🖱 Last Frame	Prestore Picture
No DVI Signal		
🗇 Black 🤇	🖯 Last Frame	Prestore Picture
	Send	Save To Hardware

Figure 5-1: Prestore Picture Setting

5.4.2 Ageing

On the main window, click Brightness to enter the brightness adjustment interface, as shown in Figure 5-2:

System(S) Too	ls(C) Plug-in T	ool(P) User	(U) Lan	guage(Lang)	(L) Help(i	H)			
Screen Config Local System Info									
Control System: 1 Other Device: 0 <u>View Detail</u>									
Monitor Info	Monitor Info								
	- 111		$\langle \rangle$	8	*			ŀ	

Figure 5-2 Main Window for Advanced User

Select **Manual** and set the brightness to 26 (the brightness is about 10%) by dragging the scroll bar below **Brightness Adjustment**. See Figure 5-3:

Ito Config (Gamma Adjustme Ie Fixed Value Mode A	Auto adjus Config
Gamma Adjustme	ent
Mode A	
	Mode B
4	1 20
Custom	Gamma Ta
036	
RGB brightness	
% R: <	> 255
	(100.0
% G: <	▶ 255
_	(100.0
% B: <	> 255
Synchronous	(100.01
	Normal mod
	Custom Custom Costom ROB brightness CO Custom Cu

Figure 5-3 Manual Adjustment

NOTE: It is recommended that manual brightness adjustment be finished within 60 seconds.

Return to the main window. Click **Display Control** to enter the **Screen Control** interface. Set **Self Test** to **White**. Click **Send** to finish the operation. As showed in Figure 5-4 and Figure 5-5.

System(S)	Tools(C)	Plug-in To	ol(P) Use	r(U) Lang	guage(Lang)	(L) Help(H	-I)			
Screen Co	nfig Bright	ness Calib	oration vis	play Contro	Monitor	Function C	ard			
-Local Syste	m Info			\bigcirc						
Control S	System:	1	Other D	evice:	0	View	<u>/ Detail</u>			
Monitor Info	Monitor Info									
E		111	5	$\langle \rangle$	8	*				

Figure 5-4 Display Control

COM4-Screen1			
Black Ou	Freeze	Run	
Self Test White	•	Send	
			Close

Figure 5-5 Display Control

5.4.3 Display Brightness and Ageing Time table

Adjust the screen brightness and perform ageing based on the steps described in Section 5.5.2.

SN	Display Brightness	Ageing time
1	10%	1 h
2	30%	2 h
3	60%	2 h
4	80%	2.5 h
5	100%	0.5 h

Chapter VI Common Troubleshooting

6.1 Common faults and troubleshooting methods

6.1.1 The whole screen does not light up (black screen)

Cause analysis:

- 1) The display screen or control equipment has no power input;
- 2) The display screen has no signal input; and
- 3) The control computer is in the sleep status or the graphics card setting is incorrect.

Troubleshooting method:

- 1) Check whether the AC input of display screen and control equipment is normal;
- 2) Check whether the wiring between the sending box and receiving card is normal; and check whether the DVI line between the control computer and sending box is connected securely; and
- 3) Check whether the control computer enters the sleep status or monitor protection status, if not, check whether the graphics card is well set.

6.1.2 The image on the display screen is incomplete or in the wrong position

Cause analysis:

- 1) The file connected to the display screen is incorrect;
- 2) The network cable of receiving card between modules is poorly contacted; and
- 3) The parameter setting of display position and display screen dimension is incorrect.

Troubleshooting method:

- 1) Check whether the wiring mode of display screen signal is consistent with that of the loaded "xxxx.scr" file;
- 2) Check whether the associated network cable of module receiving card is loose, and replace the receiving card in case of failure; and
- 3) Check whether the parameter settings of "display position" and "display screen dimension" in the software are consistent with the actual one of display screen.

6.1.3 The whole screen is flashing or jittering

Cause analysis:

- 1) The interface of sending box is loose or the transmission distance of signal line is too long; and
- 2) The output resolution setting of player or sending box is incorrect.

Troubleshooting solution:

- 1) Check whether the equipment connection, DIV line and network cable of display screen are loose, or whether the length of signal line exceeds the allowable transmission distance (the effective transmission distance is as follows, respectively: DVI line: no greater than 10 m, network cable: no greater than 100 m, multimode optical fiber: no greater than 1,000 m, and single-mode optical fiber: no greater than 15 km); and
- 2) Check whether the resolution of player and sending box is equal to or greater than that of the display screen.

6.1.4 Certain unit module of display screen becomes blurred or is flashing

Cause analysis:

- 1) The receiving card or riser card is output poorly; and
- 2) The program of receiving card is incorrect.

Troubleshooting method:

- 1) Check whether the network cable of the associated receiving card of the module and the riser card are well-connected; and
- 2) Check whether the program of the associated receiving card of the module is normal, or whether the function of the

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receiving card is normal.

6.1.5 Certain unit module of display screen does not light up

Cause analysis:

- 1) The power, receiving card or riser card connected to the module is faulty; and
- 2) The signal output of the previous unit module is poor.

Troubleshooting method:

- 1) Measure whether the voltage of power DC terminal and the input terminal of receiving card power is normal, whether the signal indicator light of the associated receiving card of the module is normal, and the riser card and receiving card are well-contacted; and
- 2) Check whether the signal output of the associated receiving card of the previous module is normal, or replace with a normal network cable.
 - 6.1.6 Certain module does not light up

Cause analysis:

- 1) The power output of the switch for controlling relevant module is poor; and
- 2) The signal output for controlling relevant module is poor.
- 3) Troubleshooting method:
- 4) Check whether the DC voltage of relevant module is normal; and
- 5) Check whether the riser card interface or data cabling for controlling relevant module is normal.

Chapter VII Packaging, Transportation and Storage

7.1 Packaging

As shown in the figure below:



The packaging picture is for reference only, the specific object shall prevail.

7.2 Transportations

The module must be packed before transportation. Products shall keep upright and flat, and shall be free from wind and rain, sun exposure, and corrosive liquid during transportation. The wooden cases shall be stacked up to three layers.

7.3 Storage

For storing the unit module, the ambient temperature shall be -20°C~+55°C, and the relative humidity shall be 10%~85% RH. Do not put the unit module in environment with volatile, corrosive and combustible chemicals.

Chapter VIII After-sales Repair

8.1 Application of warranty clause

This clause is applicable to LED display screen that is directly purchased from Audio Effetti and within the warranty period, and is not applicable to any product not directly purchased from Audio Effetti.

8.2 Warranty period

The warranty period shall be subject to contractual agreement. Please properly keep the warranty card or other valid voucher.

8.3 Warranty service

For products that meet the requirements of the warranty clause, Audio Effetti provides warranty service for problems related to quality, material, manufacturing, etc. occurred in normal use. Audio Effetti is entitled to decide whether the product is faulty.

8.3.1 Type of warranty service

1) Free on-line remote service:

Provide remote technical guidance via instant messaging tools such as telephone, email and remote software to assist in solving problems occurred in equipment use. Including but not limited to connection of signal line and power cable, system software problems related to software use and parameter setting, and replacement of module, power and system card.

2) Return to factory for repair:

For products with problems cannot be solved via on-line remote service, Audio Effetti is entitled to decide whether to return to factory for repair, and whether to provide such service. The customer shall bear the transport expense, insurance premium, tariffs and customs clearance fees incurred in delivering the product or component that require returning to factory for repair to Audio Effetti or the nearest service point. Audio Effetti will send the repaired product or component back to you and only pay for the return shipping fees. Audio Effetti will not accept logistics parcel with freight at destination, will not bear any tarrifs or customs clearance fees incurred by sending the repaired items to the customers, and will not bear any responsibility for damage and loss due to transportation and packaging.

Provide the on-site engineer service for products with quality problems:

In case of quality problems specified in article 4 of warranty clause and when Audio Effetti deems it as necessary, Audio Effetti will provide free on-site engineer service. Under this circumstance, the customer shall provide Audio Effetti with fault report for application of on-site service. The content of fault report includes but not limited to pictures, videos and number of faults, so that Audio Effetti can carry out initial fault determination. If it is determined that the quality problem is beyond the warranty range upon the on-site analysis of Audio Effetti engineer, the customer shall pay for the travel expenses of engineer and the technical service fees according to the after-sales service standard.

8.4 Disclaimer

The warranty service provided by Audio Effetti does not cover the following situations:

- 1) Unless otherwise agreed, the warranty clause does not apply to the consumables, including but not limited to the connector, network cable, power cable, optical cable, signal cable, aviation connector and other wire connection items.
- 2) Complete or partial defect, fault or damage caused by improper use, treatment, operation and installation, monitor disassembly or any other misconduct of customer, and defect, fault or damage caused by transportation.
- 3) Disassembly and repair without authorization and permission of Audio Effetti.

- 4) Operation, use and maintenance not according to the product manual.
- 5) Man-made damage, physical damage, accidental damage, and damage due to product misuse, e.g. component defect and damage, PCB board defect.
- 6) Product damage or fault caused by force majeure, including but not limited to war, terrorist activity, flood, fire, earthquake, and lightning.
- 7) Any product defect, fault or damage caused by storing in external environment that does not meet the requirements of product manual (dry and ventilated environment), including but not limited to storing in extreme weather, environment with moisture, salt spray, pressure or lightning, closed environment, and compressed space.
- 8) Products used beyond the range of specified parameter, including but not limited to lower or higher voltage, extreme or excessive power surge, and improper power condition.
- 9) Defect, fault or damage incurred in installation caused by failure to follow the technical guidance, instruction or precautions.
- 10) Natural loss of brightness and color in normal circumstance.
- 11) Lack of necessary product maintenance.
- 12) Other repair not resulted from product quality, design and manufacturing.
- 13) Failure to provide valid warranty card, tearing off or damage of the sealing tape of product serial number, damage of the product case or other outer parts, or failure to provide other valid vouchers.
- 14) Problems incurred after the expiry of warranty period.
- 15) Products with major damage and cannot be repaired caused by improper operation or maintenance, accident, and failure to follow the specification.
- 16) Failure to operate normally or damage due to using player, control equipment, etc. not provided by Audio Effetti. In case of repair by Audio Effetti, the charging standard shall be executed according to the contract.

8.5 Warranty service process

1) Remote service process:

Submit the demand (include the detailed content of service required, contact information and contact person for remote docking) via Audio Effetti website, mail, telephone or special service window with warranty card or order number.

2) Product repair process:

Submit the demand (include the packing list of product to be repaired, the mailing address for sending back the repaired product, etc.) via Audio Effetti website, mail, telephone or special service window with warranty card or contract number.

- a) Mailing information of Audio Effetti: (Audio Effetti Srl Via A. Manuzio, 57A 16143 Genova (GE) Italia)
- b) Instructions for customer mailing:
- c) Simple fault description of products to be repaired (which can be pasted on the equipment surface)
- d) Packing list (containing the contract order number, and type and number of equipment to be repaired)
- e) Receipt information for sending products back (company name, receipt address, consignee, contact info, etc.)
- f) Please pay attention to product packaging and protection to avoid damage during transportation of products to be repaired. Audio Effetti bears no responsibility to any damage resulted when sending the products or components to be repaired back to Audio Effetti.
- 3) On-site engineer service process:

Submit the demand (include the detailed content of service required, information of site address and contact person, etc.) via Audio Effetti website, mail, telephone or special service window with warranty card or order number.

8.6 Others

This warranty policy is the standard warranty clause of Audio Effetti. Anyone (include any agent, distributor or sales representative) shall have no right to make any statement or guarantee differs from this warranty clause. Unless confirmed in written forms such as contract and appendix by Audio Effetti, any warranty and guarantee content conflict with the

clause of this warranty policy will automatically become invalid.

8.7 Product warranty card

Product Warranty Card									
Order No.		Shipment date				Warranty period			
Product model						Product quantity			
Customer name			Cu	stomer contac	ct				
Customer address:									
Remarks:	Remarks:								
	Warranty record								
Warranty date]	method		Date	of completion	Customer signature			

Contact

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