

EasyFLEX

PRODUCT MANUAL Creative Indoor LED Display



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EasyFLEX Product Manual

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|---------|-----------------|---------------------|
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The manual may be modified without any prior notice.

Instructions

Thank you for choosing our product. Please read the Product Manual carefully before using the product. The manual may contain errors despite all our efforts, and may be subject to change without prior notice. Contact us if you have any questions or suggestion when using the manual. We will try our best to help you resolve the problems in time, and highly appreciate your suggestions.

Copyright

The manual is the property of Audio Effetti, The LED's operating software is developed based on the Windows operating system. No part of the manual can be transcripted, transmitted, reproduced, translated, edited, published, stored to a retrieval system, or used in any form by any individual or organization without a prior written permission of Audio Effetti.

Read the following content carefully to ensure correct use of the LED display products:

♦ WARNING!

The LED display may be damaged and become irreparable if you ignore the following warnings.

- 1) Do not place the LED display upside down or throw it during transport and storage.
- 2) Do not incline, scratch, or crash the LED display during installation.
- 3) Do not wet or submerge the LED display into water.
- 4) Do not direct the air outlet of an air conditioner to the LED display.
- Do not place or use the LED display in an environment with volatile, corrosive or flammable chemical products.
- Do not use the LED display outdoors in rainy days or when the humidity is higher than 80%.
- 7) Do not clean the LED display with water or chemical solvents.
- 8) Do not use any electrical accessories not approved by the equipment manufacturer.
- Make sure the LED display and its auxiliary devices are grounded correctly and reliably before they are used.
- 10) Switch off the power immediately and contact the professional personnel when the LED display has any abnormal conditions such as peculiar smell, smoke, electric leakage, and abnormal temperature.

♦ CAUTION!

The optimum displaying effect may fail to be achieved if you ignore the following cautions.

- 1) Wear antistatic gloves when installing or repairing the product.
- Ensure good ventilation for the LED display when designing the heat dissipation solution.
- Keep the storage environment of the LED display well ventilated and dry, with a humidity not exceeding 85%.
- 4) Use single-phase power supply for an LED display with the total power consumption not exceeding 3 KW, and three-phase power supply for an LED display with the total power consumption exceeding 3 KW.
- 5) Ensure that the LED display is powered on at least twice per week, and at least 2 hours each time.
- 6) Installing the LED display in the following places may result in an equipment failure and reduce its lifespan: near the sea, in an area with salt and alkali or sulphurous gases, near a kitchen exhaust position, or at a place where the difference between indoor and outdoor temperatures is great. Consult our professional personnel at the service center if the LED display must be installed in any of these places.
- 7) Altitude during operation (m): 5000m or less.

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Chapter 1 Product Introduction

The EasyFLEX series is an innovative indoor LED display product launched by our company for the new commercial display application. Three standard sizes of cabinets realize mixed splicing and match different screen size applications. The EasyFLEX series can realize different creative shapes such as 90° right angle, round corner square column, cylinder, wave inner and outer arcs etc. according to the customer's on-site needs. The EasyFLEX series can be mounted on the wall, installed on the floor, or hanged on the ceiling, depending on the requirements for front or rear installation and maintenance.

1.1 Features

- 1) Ultrathin and lightweight aluminum die casting structure with thickness of 40 mm.
- Three standard sizes of cabinets can realize mixed splicing and match different screen size applications.
- Can realize different creative wave shapes such as 90° right angle, round corner, square column, cylinder, wave inner and outer arcs etc.
- 4) Support front and rear installation, front and rear maintenance.

1.2 Cabinet Appearance

The EasyFLEX series products have three standard sizes of cabinets, including 500 × 1000 mm, 500 × 500 mm and 500 × 250 mm. EasyFLEX supports 500mm * 250mm and 250mm * 500mm cabinet using the same modules.



Figure 1-1 500mm*1000mm cabinet appearance



Figure 1-2 250mm*750mm cabinet appearance



Figure 1-3 250mm*500mm cabinet appearance

1.3 Specification

| Parameter | EasyFLEX 1.9 | EasyFLEX 2.5 | EasyFLEX 3.9 |
|---|--------------------------|------------------------------|-------------------------|
| Pixel composition | 1R1G1B | 1R1G1B | 1R1G1B |
| Pixel pitch (mm) | 1.9 | 2.5 | 3.9 |
| Pixel density (dots) | 262,144 | 160,000 | 65,536 |
| | 256*512/ | 200*400/ | 128*256/ |
| Pixels per panel (dots) | 128*256/ | 100*200/ | 64*128/ |
| | 128*384 | 100*300 | 64*192 |
| | 500 |) (W) *1000 (H) *40 (D) | |
| Cabinet size (mm) | 250 (W | ") *500 (H) / 750 (H) *40 | (D) |
| Display area (m ²) | | 0.5/0.125/0.1875 | |
| Material | | Die-casting Aluminum | |
| Weight (kg) | | 10/3.5/4.5 | |
| Grey scale (bit) | | 14 | |
| Refresh rate (Hz) | | 3840 | |
| Frame frequency (Hz) | | 50/60 | |
| Data interconnection | Signal Cable (≤100m); Mu | ılti-Mode Fiber (≤300m); Sir | ngle Mode Fiber (≤15km) |
| Brightness (nits) | 800 | 800 | 800 |
| Color temperature (K) | | 2000K~9300K Adjustable | |
| Contrast ratio | | 5000:1 | |
| Viewing Angle (°) | | 160°/160° | |
| Input voltage (V) | | AC 100~240 | |
| Input frequency (Hz) | | 50~60 | |
| Input power <max typical=""> (W/m²)</max> | 460 | 450 | 450 |
| Input power <typical> (W/panel)</typical> | 154 | 150 | 150 |
| Storage temperature | | -20℃~+55℃/10-85%RH | |
| and humidity (°C/RH) Working temperature | | | |
| and humidity (°C/RH) | | -10℃~+45℃/10-80%RH | |
| Ingress protection | | IP30 | |

1.4 Scope of Application

The EasyFLEX series can realize different creative shapes such as 90° right angle, round corner square column, cylinder, wave inner and outer arcs etc. according to the customer's on-site needs, which is widely used in retail brand stores, large supermarkets, large commercial exhibition centers, high-end brand exhibition halls, hotel creative applications and other occasions.



Retail



Superstore



Exhibition hall



Liner

Chapter 2 Installation and Wiring

2.1 Out-of-Box Inspection

Check whether the packages are damaged. If the packages are intact, check the main components against the shipping list. If any inconsistency is found, contact us in time.

The main components include cabinets, signal cable, power cable, USB cable, DVI cable, and sending box. For details about the components, refer to the shipping list.

2.2 General Installation

2.2.1 Fixed Installation

EasyFLEX products are installed sequentially as shown in Figure 2-1:

Figure 2-1 Rear View of the Display

- Check whether the bottom beam is level. Make sure that its levelness is within ±1mm.
- Install the cabinets sequentially from bottom to top and from middle to both sides. In addition, fix the connecting plates and cabinets with installation screws to the square tubes.
- 3) Keep proper joints and flatness between the cabinets during cabinet installation.



Figure 2-2 Cabinet Fastening



Figure 2-3 Rear View of Cabinet Installation



Figure 2-7 Rear Installation Details

2.2.2 Hanged Installation

 Adjust the levelness of the hanging beam by using the synthetic fiber slings, to prevent tilting of the LED display, as shown in Figure 2-8.



Figure 2-8 Installation of Hanging Cabinets (1)

2) Fasten the cabinets sequentially from middle to both sides. These cabinets can be fastened through plug screws to the hanging beam and can be fastened with each other through plug screws, as shown in Figure 2-9.



Figure 2-9 Installation of Hanging Cabinets (2)

3) Fasten other cabinets sequentially from top to bottom and from middle to both sides (the number of cabinets in the horizontal direction is not restricted while the total height of all cabinets in the vertical direction shall not be more than 10 m).



Figure 2-10 Installation of Hanging Cabinets (3)

2.2.3 Module Flatness Adjustment

When there is a deviation in flatness between adjacent modules, use the adjustment tool to adjust the magnet on the cabinet. At the low end, the module regulates the adjustable magnets until the module is flush with the adjacent modules. (one module has 8 adjustable magnets)



Fig 2-11 Adjustable magnet







Fig 2-13 Schematic diagram of adjustable magnet



Fig 2-14 Schematic diagram of module flatness adjustment

2.3 General Installation

2.3.1 Common Cables

| Incoming Power Cable | Power Cable Passing Through Cabinet | DVI Cable |
|-----------------------|---|-----------|
| | | |
| Incoming Signal Cable | Signal Cable Passing Through Cabinet | USB Cable |

2.3.2 Signal and Power Cable Connection

Figure 2-15 shows the signal cable connection for cabinets with an arrangement of 6 cabinets (Width) \times 2 cabinets (Height). Signal cables shall be connected based on the wiring diagram of the delivered products for the project.



Figure 2-15 Signal Cable Connection Diagram

Figure 2-16 shows the power cable connection for cabinets with an arrangement of 6 cabinets (Width) × 2 cabinets (Height). Power cables shall be connected based on the wiring diagram of the delivered products for the project.



Figure 2-16 Power Cable Connection Diagram

2.3.3 Smart Control Distribution Box

The Smart Control Distribution Box can be used for distributing electric power to the LED display, and has the function for real-time monitoring of the temperature, humidity, smoke, and mains voltage of the external environment. The control software has the scheduled start/stop function, allowing you to set any time for the LED display to be remotely started or stopped.



Figure 2-17 Internal Structure of Distribution Box

| SN | Component | Remark (s) |
|----|---------------------|---|
| 1 | Main switch | Three-phase five-wire Input |
| 2 | Temperature sensor | Used for temperature detection |
| 3 | PLC | Used for smart control |
| 4 | Polovo | Used to control the ON/OFF of the AC |
| 4 | Relays | contactor |
| 5 | Circuit breaker | MCB , Connect to display live wire |
| 6 | Neutral wire socket | Connect neutral wire |
| 7 | Power Port | / |
| 8 | AC Contactor | Used to control the ON/OFF of the current |
| 9 | Earth wire socket | Connect earth wire |

PLC connection of the smart control distribution box:

The PLC communication system is RS485 which uses converter from control computer RS232 to RS485. For more detail information, please refer to our *Intelligent Power Distribution Management System Manual*.



Figure 2-18 Distribution Box PLC Connection Diagram

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.

- 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.
- 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 highpower 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.
- Connect the USB cable provided for the sending box to the USB port on the control PC.
- 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 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

3.3 Software Control Setting

3.3.1 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.

3.3.2 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.

| -0- | | - | ~~ | Advanced I Enter Dem | | | | | | |
|-------------|---------|---------|---------|-------------------------|---|------|-----------------|----------|----|--|
| Brightness | Display | Control | Monitor | Function Card | | | | | | |
| ocal Syster | | | < | | | | | | | |
| Control S | | 1 | > • | ther Device: | 0 | View | <u>r Detail</u> | | | |
| Control S | | | • | | 0 | Viev | v Detail | a | •• | |

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 | 23 |
|--------------|--------|
| Password: | |
| Login | Cancel |

Figure 3-4 User Login

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

| | | < | | 1.040 | . 4 | Elec | | |
|-----------|-------------|---|-------------|-----------------|---------|---------------|--------|--|
| creen Co | nfig Bright | 5 | Calibration | Display Control | Monitor | Function C | | |
| cal Syste | (T) | | Campraton | Display Collard | Mornior | i direttori o | | |
| | | | | | | | | |
| - | | | | | | | | |
| Control | | 1 | Ot | her Device: | 0 | View | Detail | |
| - | | 1 | Ot | her Device: | 0 | View | Detail | |
| Control | | 1 | | her Device: | 0 | View | Detail | |

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 |

Figure 3-6 Screen Configuration

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 Screen Co | nnection | |
| Display Mode Current Display Mode Sending Board Resolution: 1920 x 1080 | Graphics output resolution: 0920 x 1080 | Refresh |
| Set the sending board display mod Resolution: 1920 × 1080 px Refresh Rate: 60 | e Custom: 1920 | 0 * x 1080 * Set |
| Hot Backup Setting Set the current device: Set Ma Master Devi | ster Device Stave Device | e Device |
| | | |
| Master Conding | aster Port Index Slave Sending Board Index | Slave Port Index |
| Master Sending | | |
| Master Sending Board Index M | aster Port Index Board Index | Slave Port Index |

Figure 3-7 Sending Board Configuration

Chapter 3 LED Display Control Setting

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

| Screen Config-C | | onnection | | | | |
|-----------------|---------------|-------------------------|---------------------|----------------------|--------------|------------------------------------|
| Module Info | | | | | | |
| Chip: | MBI5036 | Size: | 32W×16H | Scan Type: | 1/2 scan | |
| Direction: | Horizontal | Decode Type: | 74HC138 Decoding | Data Group: | 2 | >> |
| Cabinet Info | | | | | | |
| Regular | | | 💿 Irregula | ar | | |
| Pixel Width: | 32 🚔 | | Please 🔺 Width: | ?? Heigh | it ?? | Please |
| Pixel Height: | 16 🌻 | <=128 the | width | ng error. Please adj | ustnerform | make sure = |
| Module Casc | Right to Left | of | the | | 'iew Cabinet | and height of the cabinet is |
| Performance Set | ing | | | | | |
| Group Swap | More Sett | ing | | | | |
| Refresh Rate: | 60 | ✓ Hz | Accelerate Rate: 1 | • | | |
| Gray Scale: | Normal 8192 | • | Gray Mode: Br | ightness First 👻 | | |
| Data Clock: | 12.5 | MHz | Data Duty: 50 | • | (25~75) % | |
| Clock Phase: | 6 | • | Low Gray Comp 0 | × | | |
| Blanking Time: | 15 | (=1.20us) | Ghost Control En 13 | | (1~14) | |
| Line Change Ti | 3 | (0~12) | | | | |
| Smart Setting | | | Load File | Save File | Read From HV | W Send To HW |
| | | | 5 | 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:

 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 O Complex Screen |
| Basic Information Location: χ: 0 γ: 0 | Virtual Mo 🖪 Enable |
| The current network port operations Sending Board Index | Scan Board Columns: 1 Rows: 1 ResetAll Hide Line |
| Portindex | 1 Sending# Port 1 Scan Bo: Widh:0 Height:0 |
| Connect to d | |
| Scan Board Size Widh: 128 A Height 128 A | |
| Set Blank Apply to port | Note:Click or drag left 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

2) Click Send to HW.

Chapter 3 LED Display Control Setting

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

| nding Board Scan Board Screen Connection | | | | | Screen N. | • | onfig |
|--|------------------------|-----------------------------------|-------------------------|-------------------------|----------------------------------|------------------------------------|-------|
| Screen Type: 💿 Simple Screen | e Standa | rd Screen | Complex So | 294N | | | |
| Location X 0 Y 0 | Virtual Mo | Enable | ••• | | | | |
| The current network port operations Sending Board Index | Scan Board Columns: | 5 | Scan Board Rows | 0 ResetA | 📄 🖂 Hide Line | | |
| Sending Board Index | | 1 | 2 | 3 | 4 | 5 | |
| 1.00 | 4 | Sending#1 Port1 Scan ES 4 | Sending# 1 Port.1 | Sending# 1 Port 1 | Sending# 1 Port.1 | Sending#1 Port1 Sean-Bg 5 | |
| Portindex | | Width: 128 Height 128 | Width 128 Height 128 | Width 128 Height 128 | Width 128 Height 128 | Width: 128 Height: 28 | |
| | 2 | Sending#1 Port 1 Scan ED40- | Sending# 1 Port 1 | Sending#1 Port 1 | Sending#1 Port1 | Sendine#.1 Port.1 | |
| Connect to d. | | Width: 128 Height: 128 | Width 128 Height 128 | Width 128 Height 128 | Width 128 Height 128 | Width: 128 Height: 128 | |
| Back Clear Port | 3 | Sending#1 Port2 Scan ES 1 | Sending#1 Fort2 | Sending#1 Port2 | Sending# 1 Port2 Door Doo4 | Sending# 1 Port2 Octan Ca. 5 | |
| Scan Board Size | | Width: 128 Height: 128 | Wight 128 Height 128 | Width 128 Height 128 | Width 128 Height 128 | Width: 1 19 Height: 28 | |
| Width: 128 🕀 | | Sending#1 Port2 Scan BD 10 | Sending#.1 Port2 | Sending#1 Port2 | Sending#1 Port2 | Sending #.1 Polt.2 | |
| El Set Blank Apply to port | | Width: 128 Height 128 | Widty 128 Height 128 | Width 128 Height 128 | Width: 128 Height: 128 | Width: 128 Height: 129 | |
| | Note:Cli | ck or dr | ng left mous | e button to | config sci | reen, right | |
| Detect Status | | | Re | od File Sav | File Read | strom HW (Send | TOHW |

Figure 3-10 Screen Connection with Loaded File

3.3.3 Brightness Adjustment

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

| 1 | 1 | | De la compañía de la | - | A. | E | | |
|------------|------------|------------|--|----------------|---------|------------|--------|--|
| Creen Co | nfia Briah | tness Cali | ibration Di | isplay Control | Monitor | Function C | ard | |
| ical Syste | m Info | | | | | | | |
| | | | | | | | | |
| Control | Bystem: | 1 | Other | Device: | 0 | View | Detail | |
| Control | | 1 | Other | Device: | 0 | View | Detail | |
| | | 1 | Other | | | View | Detail | |
| Control | | 1 | | Device: | 0 | View | Detail | |

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.

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 | | 1 | | _ | - |
| (Manua) 💿 | SchedC | ntig 🗇 Auto | Confi | 🔿 🔿 Auto adjus | Config |
| Display Quality | 0.6 | nhanced Mode | Gamma Adji Gamma Adji | | |
| Brightness Adjustm | ent | | @ Mo | de A 👘 🗇 Mode | Ð |
| | _ | | | | |
| • | | (100.0 | (%) © Custom | | Gamma Ta. |
| Color Temperature | | 10002 | 1990 | | |
| 🛛 Custom Gain | Chip: | #8150 | RGB bright | iess | |
| R + | | + 101.54 | | | + 255 |
| | | | | | (100.01 |
| B : 4 | | + 101.54 | 96 O. C | | + 255 |
| | | | | | (100.09 |
| 8 4 | | + 101.54 | % 8 4 | 1 | + 255 |
| V Synchronous | | | Synchro | nous | (100.05 |
| | | Default Value | | | lormal mod |
| | | | | | |
| | | | | | |
| | | | 6 | | |
| | | | | Rebesh | e To Hardwi |
| | | | | | 6 |

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.

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.

3.3.4 Correction Coefficient Management

The EasyFLEX series 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:



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:



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 uniform 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.

3.3.4.1 Setting Coefficients for a New Receiving Card

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

| | ion:X=0, Y=0 Si @ Topolo | | elect Ares On | |
|-------|-----------------------------|-------|---------------|------|
| (1,1) | (1,2) | (1.3) | (1,4) | Zeom |
| (2.1) | (2.2) | (2.3) | (2.4) | 1.0 |
| | | | | |

Figure 3-15 Selecting Area for New Receiving Card

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

| Select Database: | | | | | Browse | |
|-------------------|---------------------------------|-----------------------------------|---------|---|--------|--|
| Select Adjust Lin | | | | | Browse | |
| Type: | Unknown | Cabinet ID: | | ~ | | |
| Columns: | Unknown | Rows: | Unknown | | | |
| Discription: | Unknown | | | | | |
| Upload Mode | Fast Upload | Stable Upload | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



3) Select the corresponding correction coefficients:

| ent operation communication | Or an I am a m I Harres Castleinte | |
|-----------------------------|--|--|
| | 12 打开 | |
| 4 w | • database | • 49 BER database P |
| ent Screen | · 追訳 * 新建文件夹 | B• 🖬 🛛 |
| Boren1 | * の職業 * の職業 * 50000168 A1151 * 50000188 A1151 * 50000188 A1153 * 50000188 A1153 * 50000188 A1155 * 50000188 A1155 * 50000188 A1155 * 50000188 A1157 * 50000188 A1151 * 50000188 A1151 * 50000188 A1151 * 50000188 A1151 * 50000188 A1151 | |
| | 文件名创 | Access Database(*.mdb;*.db * I77开(0) RiA |
| viay Screen | | |
| Display + | | |
| | | |
| ble/Disable Calibraion | L | |
| able - | | Back Next Return |
| Save | | |

Figure 3-17 Selecting Correction Coefficients for Receiving Card

4) Select Stable Upload and click Next:

| Screen Calibration | | | | | | | × |
|---|--|--|--|--------------|--------|--------|---|
| Current operation communication port | Online Calibration Office Select the source of Co Database Select Database Select Adjust Line Type: | efficients © R C:Userstillmendet | Coefficients effer to Su Desktopidatabaset50000 Cabinet ID; | 160_A1152.db | Browse | | |
| | Columns: Discription: Upload Mode | 192 | Rows: | 192 | | | |
| Display Screen Main Display Enable/Disable Calibration Disable | | | | | Back | Return | |
| Sare | | | | | | | |

Figure 3-18 Uploading Correction Coefficients

Chapter 3 LED Display Control Setting

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

| | | tion Manage Coeffi | | | | | |
|----------------------------|----|--------------------|------|------|-----|--------|-----|
| djust Coefficien Simple | ts | | | | | | |
| 0 10 10 0 | D | | | | | | |
| Red | ۲. | | | | | | 89. |
| Green: | 4 | | | | | | |
| Green. | | | | | | | 89 |
| Blue: | * | | | | | | 92 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Advanced | - | Show Color WL | | | | | |
| | | | | Back | Net | Return | |

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
3.3.4.2 Setting Coefficients for a New Module

1) 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:

| Screen Calibration | Online Calibration Offline | Calibration Manage Coeff | Icierta | and the second | |
|----------------------------------|----------------------------|--------------------------|----------------|----------------------|------------|
| pot | Constant Constant | Law stor | | | |
| C084 + | Select the New Module | | | | |
| Current Screen | Screen:1 Locat | ion:X=0, Y=0 Si | se:5120×2568 | | |
| @ Screent | O Screen O Plue | Topolo | gy or List 🖂 😽 | Gort Area On reen | |
| | (1.1) | (1.2) | (1.3) | (1.4) | Zaons |
| | (2.1) | 9.2) | (2.3) | (2.4) | 10 |
| Display Screen Itain Deplay + | | | | | |
| Enable Calibration | | | | Buck | Ned Raturn |

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**.

| current operation communication ort | Dotre Calibration Diffine Calibration Hanage Coefficients |
|--|--|
| 2014 - | Select the New Module |
| Current Screen | Scan Bo.: (0,0,0) , Lecation:: (504,0) , Size: 128×128 |
| Boreen1 | O Screen O Pieri @ Topology or List |
| | Nodré Size: 14 (E) x 14 (E) Chapter Mode: 16 Modules C Prints |
| | i 🔘 i |
| | |
| | |
| | |
| Display Screen | |
| lain Display - | |
| Deable/Disable Calibraton | Back Return Return |
| Care | |

Figure 3-22 Selecting Position of New Module

Chapter 3 LED Display Control Setting

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

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

4) 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 | | | | The second | | × |
|--|--|------------|--|------------|------------------|---|
| Current Screen Current Screen Corean Corean | Dites Calibration Office Select the source of Cor @ Database Select Database: Select Adjust Line Type: Columns: Discription: Upload Mode | efficients | Cathonis Ter to Da Cabinet ID: Rows: Stabre Upload | Unknown | - Frome | |
| Display Screen Main Display + | | | | | | |
| Enable/Disable Calibraion | | | | | Back Next Return | |

Figure 3-23 Obtaining Correction Coefficients for a New Module

3.3.5 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 3-25.

| System(S) 🧖 | ools(C) Plug-in Tool(P) User(U) Languag | (Lang)(L) Help(H) | |
|----------------------------|--|-------------------|------------|
| | Screen Config(S) Brightness(B) | <u>s</u> | |
| Screen Conf | Calibration(C) Display Control(P) | nor Function Card | |
| Local System Control Sy | Monitor(M) Function Card(F) | View Detail | |
| Monitor Info | Hardware Information(H) Multiple Screen Management(A) Error <u>Dot Detect</u> (T) | * 31 | a . |
| • | Prestore Picture(R) Color Restore(0) | 0 0 | • • |
| Server Status | Memory On Module Manage(U) Receive Card relay(I) MutilBatch of Adgustment(M) Load Configuration File(E) Dark or Bright Line Adjustment for Cabinet | | - |

Prestore Picture

| Prestore Picture Settings | | | | | | |
|---------------------------------|------------------------------|---------------------|--|--|--|--|
| -Communication po | Communication port selection | | | | | |
| Communication | COM4 | • | | | | |
| Screen1 | | | | | | |
| Prestore Picture S | ettings | | | | | |
| Select Pi | | Browse | | | | |
| Effect Settings | | | | | | |
| Screen Effe | ct Stretch | • | | | | |
| Cabinet Effe | Stretch | Test Effect | | | | |
| | Save To Hardw | Check Store Picture | | | | |
| Function Settings | | | | | | |
| Boot Screen | | | | | | |
| 📄 Enable | Time: | 2 A | | | | |
| Cable Disconnect | | | | | | |
| Black | 💿 Last Frame | Prestore Picture | | | | |
| No DVI Signal — | | | | | | |
| | | | | | | |
| Black | Last Frame | Prestore Picture | | | | |
| | Send | Save To Hardware | | | | |

Figure 3-25 Prestore Picture Settings

Chapter 3 LED Display Control Setting

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 so as to check its effect.

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 LED Display Playing Setting

4.1.1 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.



Figure 4-1 Switching Schedule Mode



Figure 4-2 Edit Mode Setting

4.1.2 Playing Setting

4.1.2.1 Display Window Setting

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

| Display Wine | dow Setting | | | | | |
|--|-------------------------------|--|--|--|--|--|
| Number of D Windows: | Display 1 Update | | | | | |
| Display win | dow 1 | | | | | |
| Name: | Display window 1 | | | | | |
| Start X: | 3 🐳 Width: 400 🛬 | | | | | |
| Start Y: | -9 🚔 Height: 400 🚖 | | | | | |
| On Top: | 🔘 Never 🔘 Always 💿 Playing | | | | | |
| Set frame rate: | 20 V HZ | | | | | |
| 🔽 Show [| Show Display Window (Shift+H) | | | | | |
| 📃 Lock di | Lock display window (Shift+L) | | | | | |
| Display Window Border Line | | | | | | |
| Note: After the display window is locked, it is unable to use the mouse to change size and position of display window. | | | | | | |
| | 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.

4.1.2.2 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 | 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.

4.1.3 Editing Professional Playing Solution

4.1.3.1 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:



Figure 4-5 Creating a Playing Solution

Chapter 4 LED Display Playing Setting

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:

| Schedule (P) Control (C) Settings (S) View | r (V) Tool (T) Plug-in (U) Language (A) Help (E) |
|--|--|
| New Open Save Save At | Pay Putte Stop Hide all windows Edt/Collapse |
| Add schedde | Name: Ceneral Segnect1 Time Property Effective Date Specified date From 2016-11-30 Te 2016-11-30 Effective/DSF of the Week Vieldnesday V Vieldnesday V Trursday Friday V Saturday V Sunday Effective TRe-S48a_Day Effective TRe-S48a_Day V All Day From 10:00:00 11:00:00 |
| Show window number and name | |

Figure 4-6 Properties of General Time Segment

4.1.3.2 Editing the Program Page

1) Creating a program page

As shown in Figure 4-7, right click General Segment or click the Add Global

Program Page in the toolbar to create a program page:

| Schedule (P) | ontrol (C) Settings (S) View (V) Tool (T) Plug-in (U) Language (A) Help (E) |
|----------------------------|---|
| New | Image: Save Save Save Page Image: Save Save Page Save Save <td< th=""></td<> |
| Company winds | |
| (8) | Name: General Segment |
| Adds | hedule Time Property |
| | Add Program Page Ive Day of the Week |
| | Copy V Mondey V Tuesday V Wednesday V Thursday Paste V Friday V Saturday V Sunday |
| | Move Up the Time Of the Day Move Down I Day From 10.00:00 (1) To 11:00:00 (1) |
| | Delete Cear Programs |
| | Preview Current Segment Set screen |
| | Hide Play window (Shift+H) |
| < ✓ Show window name | m > |

Figure 4-7 Creating a Program Page

Chapter 4 LED Display Playing Setting

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 | r) Tool (T) Plug-in (U) Language (A) Help (E) | |
|---|--|-----------|
| New Open Save Save As | Ney Pause Stop Hide all windows Edl/Collapse | |
| ∃ • □ • 🗊 🗈 ♠ 🖊 🗰 * | | |
| | Background Color: | |
| Add schedule | | |
| Program | Background Picture: No background picture | |
| Connon Window1 | Display Type: Stretch | |
| | Back Music: | |
| | | 🕂 🗰 🎓 🖊 👿 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | ` | |
| | Specify number of times: | |
| | Specify duration: 00.06.00 + | |
| | © Cycle: | |
| | | |
| × [| | |
| 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.

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.

| Add schedule General Segmenti Programi | Background Color: Background Picture: Display Type: | No background picture | • |
|--|---|-----------------------|---|
| Add Scrolling We Add Clock Windo Add Timing Windo Add Temperature Nove Dp Move Down Copy Paste Delete Cere Window Save the Current | w ow exasting Window e and Humidity Window | | |

Figure 4-10 Program Page Operation Menu

4.1.3.3 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 | Rey Paule Stop Hole al windows EditColase | |
| Display window 1 | | |
| Cock Whatow | neda) M Color: • • • • • • • • • • • • • • • • • • • | |
| Tening Véndow Vésather Forecasting Véndow Temperature and Humidity Véndow | E | ÷ ≭ ÷ ∓ <u>⊤</u> |
| Copying Window | Specify number of times: Specify duration: Cocide 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

2) 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:



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

Chapter 4 LED Display Playing Setting

3) Deleting a display window

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

| Schedule (P) | Control (C) | Settings (S) | View (V) | Tool (T) | Plug-in (U) | Longuage (A) | Help (E) | | |
|--------------|--|--------------|----------|----------|--------------|--------------|---------------|---------------|----------|
| New | Open | | ave As | Flav | II Pause | Store H | ke al windows | Edit/Collapse | |
| Display win | Charles Labor | Save S | ave As | P10Y | Pause | stop H | de al windows | EditAcollapse | |
| 8.0 | - A B | * 1 | 0 | | | | | | |
| | d schedule | | | Name: | Common Winds | ow2 | Frane | | |
| | General S | egnent1 | | ĸ | 119 | ÷ | Y. | 119 | 0 |
| | Progr | an l | | Math | 166 | 1 | Height. | 131 | 0 |
| | and a second sec | ommon Vindo | - 69 | DO | | | | | B. |
| | and a | onnon Windo | | 4 | | | | | B |
| 10 | Progr | | | | | | | | |
| | L.(3 | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Figure 4-15 Deleting the Display Window

4) Moving a display window

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

| Control (C) | Settings (S) | View (V) | Tool (T) | Plug-in (U) | Longuage (A |) Help (E) | | |
|--|---|---|---|---|---|--|--|--|
| 2 | | | | | | đ | | |
| Open | Save S | ave As | Play | Pause | Step 1 | tide all windows | Edit.Collepor | |
| dow 1 | - | | | | | | | |
| schedule | | | Name | Common Wilnes | w2 | E Frame | | |
| | | | x | 119 | * | Y. | 119 | - |
| Progr | anl | | VMdth | 166 | 0 | Height | 131 | (b) |
| | | - | 0 | | | | | 1.1.1.1.1. |
| | | w1 | 4 | | | | | B · 🗊 |
| State of the local division of the local div | | | | | | | | |
| Lg | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | Open kow 1 Schedulo General S Progr | Opm Save 5 Nov1 Schedule Move General Segant I Programi | open Seve Seve As Seve T Seve T Seve As Several Segment I Program Vandov Consen Vandov Program 2 | Open Save Save As Open Save Save As Save Save As Pay Save Save As Pay Pay Pay Name Schedule Move Down K Move Down Consum Vindovi Consum Vindovi Program2 | Open Save Save Ac Pay Pause Sove1 Save Ac Pay Pause Schedule Move Down X 19 General Segnent I Y Y Program X 19 Constant Vindovi Wdetv 166 Constant Vindovi Wdetv 166 Program2 Vindovi Wdetv | Open Save Save As Page Due Due | Open Save Save As Pay Pause Stop Hide all windows Sove Save As Pay Pause Stop Hide all windows Sove Save As Pay Pause Stop Hide all windows Sove Save As Pay Pause Stop Hide all windows Sove Save As Name Connon Windows There Freme Schedular Move Down X 119 Y Wdtx Height Consone Vindowi Consone Windowi Wdtx 166 Height Wdtx Consone Windowi Consone Windowi Consone Windowi The stop Freme Programa Consone Windowi Consone Windowi Consone Windowi Freme | Open Save Save Az Pay Pause Stop Hide all windows EddColepose Sove1 Image: Stop Hide all windows EddColepose EddColepose Schedular Move Down Name Common Window2 Preme Preme General Segment I Name Common Window2 Preme Image: Stop Program Wdex Hight 113 Consent Vindov2 Consent Vindov2 Image: Stop Hight 131 Consent Vindov2 Consent Vindov2 Image: Stop Hight 131 Consent Vindov2 Consent Vindov2 Image: Stop Hight 131 Consent Vindov2 Program2 Image: Stop Image: Stop Image: Stop Program2 Program3 Image: Stop Image: Stop Image: Stop Image: Stop |

Figure 4-16 Moving a Display Window

4.1.3.4 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) | Verw (V) Tool (T) Plug-in (U | (Language (A) Hels (E) | |
|--|---|---|-----------|
| New Open See | Seve As Page Page | To: Hon al withdown | Edication |
| E - C2 - (2) (2) 2 4 1 | Hate: Comon He | File | |
| General Segment Proposit Constit | VARY 108 | Diversified Text Single fast Single-raw text Scroling Text | |
| a a Prograd - 🕢 11 | Vikadow Postian • Vikadow Size • Mone Up by One Layer | Analog Dock Digital Olich Flach obcit Vieta Olick | Any Trees |
| | Move Down by One Layer Copy Pactor | Lunar Calendar Mode Teble Teble | |
| | Delete Halden screen(Shift+H) | Teang Digital Count-Jown Taker | |
| - | nello; | Vielabler Temperature and Humality | |
| Show window rundow and | Fort Annu Southment Suiter | URL Stranning IRSS Weskow | |
| 2 name | characters hove | Video Device Application | |

Figure 4-17 Adding the Media

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

| Scheilule (P) Control (C) Settings (S) Views | v) Tost (1) Phapin (U) Language (A) Hele (E) | |
|--|--|----|
| New Open Save Save As | Image: New State Image: New State< | |
| 🖯 - 🕞 🗊 🕆 🕹 🗰 | | |
| Add schedule | Name Common Vitridiova2 Trans | |
| G General Segment 1 | x 112 10 x 112 10 | |
| + E Program | Video 10 Houge 131 (0) | |
| Control Varderel | | |
| COmment WithDow1 | 😵 Q. 🚯 👘 🗰 🗰 🛣 🏦 🎓 | • |
| 6-Program2 | 1 Scrating level Any fame | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | Ted Property | - |
| | | |
| | hello! | 21 |
| | | 5 |
| | 1.1 | |
| | Fort Aria • Size (pr.) | |
| | Ted Effect Supervison + + Depth/2 | |
| Provide the states and | Colorbal (News | |
| Show window number and name | characters * | |

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:

| Image: endaline of the second secon | u | | Vite al window Prane Y Teget | 5 EdBCollapse | 8 8 8 | |
|---|-----------------|------|---------------------------------------|---------------|-------------|--------------|
| Add scheeler Add scheeler | eter 400 | 2 | Y | | 10 | Any Tales |
| And schedule Reserved Segment | eter 400 | 2 | Y | | 10 | Any Tales |
| And schedule | eter 400 | 2 | Y | | 10 | Any Tales |
| General Sepenti Programi Programi Programi Programi Programi | en 400 Q | | | | 10 | Any Tales |
| Grane Rodovi Communication Program | Q. | | THIPE | 400 | 10 | Any Tales |
| G-C Propriet | Congrete Territ | | | | B• 🖗 🖪 | Any Tales |
| D Programit | Congrete Territ | | | | | Any Tales |
| 2 1 | Service Text | | | | | |
| | | | | | | |
| | Distand Jury | | | | | |
| | | | | | | Ary Teles |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | - |
| 1 State | at last | | | | | |
| Buch | good has | - | | - | | 27 Transport |
| | Recis - Parce | | | | - Speet | - |
| 1 | (FORTH | | | | | |
| 1.8 | Beecker Hands | 049 | | | - Speed | 61 1 |
| litery | | | | | | |
| | Time | 11.8 | 10 | Verbouriere | | / |

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 dropdown list. See Figure 4-20:



Double click





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 (F) Control (C) Settings (S) Ver New Open Save Save A | | Phon (U) Langunge Phon Step | ø | bws EdECollepse | | |
|---|--|---------------------------------------|------------|--|----------|-------------------------------------|
| Display window 1 | | | | | | |
| Add schedule | Name Co X: 0 | nenon Window 1 | Frane Y | 6 | | |
| Programi | Vidty 40 | 0 (4) | Height | 400 | 1 | |
| Conten Vindov? | Q Diversified Diversified Scroling Tex | | | Move Up Move Down Copy | . | Any Times Any Times Any Times |
| | Test Property | 1 | | Poste Innert Media Deleta Retrane | | |
| | Hello! | | | Apply Properties to | | |
| | Fort | Arisi Suspension = | • Sz | (px) 15 Depth 2 | • B I] | į s 📻 |
| Show wholow number and name | Colorful characters: Horizontal alianment | None Align • Vertical alignment | Algn + Spa | eng 1 (Kerni | u 0 💠 | Vertical line |

Figure 4-21 Media Operation Menu

Chapter 4 LED Display Playing Setting

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) Phap-In (U) Language (A | N) Helsi(E) | |
|--|---|--|-----------|
| New Open Sever Al | Page Passe Days | Hile al windows EditCollegee | |
| Coaser version 1 | Name Cosmon VMedure1 x 0 0 Well 00 0 Well 00 0 Operation 0 0 1 Devention Find 2 Single Find 3 Sociality Red 0 0 | Pie Diversing Tecl Diversing Tecl Single-Tecl Socialing Tecl Socialing Tecl Arcsing Oock Dayter Oocs Patch Oocs Vatis Oocs Unter Calender Media Table Database Taning Digital Caust-Bown Timer | Ary fines |
| $\overline{\mathscr{C}}$ There window number and $$ more | Peace solid the https://www.solid to | Webber forecasting Tengensture and Hanothy UR, Streaming Media Videore RSS Video Device Edmant/Program Astr Organs | |

Figure 4-22 Media Playing Menu

4.1.3.5 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:



Figure 4-24 Play Information Page

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

Chapter 4 LED Display Playing Setting

Attention: 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

4.1.4 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:

| Sch | nedule (P) Control (C |) Settings (S) | View (V) |
|-----|-----------------------|-----------------------|----------|
| | New (N) | | |
| | Open (O) | | |
| < | Save (S) | | |
| | Save As (A) | s | ave As |
| | Backup (B) | | |
| | Export to USB Disk (B | e 🖡 🕷 | |
| | Recent schedule (R) | | N |
| _ | General | Segment 1 | X |
| | <u> </u> | gram1 Common Windo | w1 |
| | | gram2 | |
| | | W1 | 1 |
| | | | 2 |

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:

| dule preral Segment 1 | Nindow Editing Ares | | _ | × |
|--|--|--|--------------------------|---|
| | | • 47 MR | 文相 | |
| ④枳▼ 新建文件與 | | | H • D | |
| TR AT | 文档库 10年 2个0篇 | | 1070530 234R | - |
| 35 単近の月の位置 | 80 103 | 律改日期 | 82 | 2 |
| - (3) 府 - 田 155 - 田 155 - 田 157 | Labeling My ISO Files My RTX Files | 2016/8/15 13:42 2015/5/14 11:24 2016/7/1 9:18 2016/8/21 19:13 | 2月夜 文印页 2月末 2日末 | |
| ● ② 文雅 ● ♪ 重乐 | NovaLCT 2012 NovaStudio2012 RTXC File List | 2016/8/9 18:39 2016/8/21 19:13 2014/7/11 8:45 | 交体完 交体用 交体明 | |
| 2月9日第6 | Tencent Tencent Files | 2014/4/25 9:51 2014/7/11 15:05 | 文件兵 文件兵 | |

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.
- Screen color will reach to best status after 5 minutes lighting up.(Color gradually c hanges as the temperaure warms up)

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.
- 2) 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.
- 6) In dry seasons, perform warm-up operations on the LED display and its auxiliary devices at least once every two months if it is idle for a long period of time.
- 7) In wet seasons, perform warm-up operations on the LED display and its auxiliary

devices at least once a month if it is idle for a long period of time.

5.4 Warm-up Operation

If the LED display has been idle for 14 days, 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.

| restore Pictur Communicatio | | tion | | | 13 |
|--|------------------------------|-------------|----|------------------|------|
| Communicati | - provinces | | - | | |
| Screen1 | | | | | |
| Prestore Pictu | re Settings | | | | |
| Select Pi | | | | Brov | VSe |
| Effect Setting | | | | · · · · | _ |
| Screen | | stretch | - | | |
| | | Stretch | | Test Effect | 1 |
| Cabinel | Effect | streton | - | | |
| Function Setti Boot Screen - | ngs | ve To Hardw | | Check Store Pict | ture |
| | ngs le T | ve To Hardw | 60 | s | ture |
| Boot Screen - | ngs le T nect | | 60 | | |
| Boot Screen - IV Enab Cable Discon | ngs le T mect D Lat | ime: | 60 | \$ 5 | |
| Boot Screen - I Enab Cable Discon | ngs le T nect Lat | ime: | 60 | \$ 5 | • |

Figure 5-1: Prestore Picture Setting

5.4.2 Ageing Operation

On the main window, click Brightness to enter the brightness adjustment interface,

as shown in Figure 5-2:

| System(S) | Tools(C) | Plug-in Ti | ool(P) Us | er(U) Lang | juage(Lang) | (L) Help(H |) | | |
|-------------|------------|------------|-----------|---------------|-------------|-------------|--------|---|---|
| | | -) 🛙 | | 0 | ~n | 100 | | | |
| Screen Co | nfig Brigh | tness Cali | bration D | isplay Contro | Monitor | Function Ca | ard | | |
| ocal Syste | m Info | | | | | | | | |
| Control S | lystem: | 1 | Other | Device: | 0 | View | Detail | | |
| onitor Info | | | | | | | | | |
| H) | | 111 | | 9 | 8 | * | | | |
| - | - | - | - | - | - | - | - | - | - |

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:

| COM4-Screen1 | | | | | |
|------------------------------|----------|---------------|-------|--------------------------------|---|
| Adjustment Mode | | | | | |
| (Manual) 5 | Sched Co | nig O Aut | 0 | Config © Auto | adjus Config |
| Display Quality Soft Mode | © E | nhanced Mode | | amma Adjustment Fixed Value | |
| Brightness Adjustmen | | | | Mode A. | Mode B |
| | | | | | * 2.8 |
| | | + 26 | | - | Gamma Ta |
| 9 | | (10.2 | 30) S | Custom | Camma ta |
| Color Temperature Ad | | | | | |
| Custom | Chip | 88150 | | | |
| Gain | | | | ROB brightness | |
| | - | + 101 54 | | | + 255 |
| | 100 | 101.54 | ~ | | (100.09 |
| | | | | | |
| 0: • | 100 | + 101.54 | % | 6. K | + 255 |
| _ | | | | | (100.04 |
| B | had | * 101.54 | % | 8 4 | • 255 |
| 💽 Synchronous | | | | Synchronous | (100.09 |
| | | Default Value | | | Normal mode |
| | | | | | and the second se |
| | | | | | |
| | | | | | |
| | | | | Refresh | Save To Hardwi |
| | | | | Heneta | |
| | | | | | 6 |

Figure 5-3 Manual Adjustment

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

Chapter 5 Startup, Shutdown, and Maintenance

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.

| | 1 | - | 1 | | A | 10 | | | |
|--------------|------------|-----------|---------|----------------|---------|-------------|--------|----------|--|
| Screen Co | 0.752 | tness Cal | bration | isplay Control | Monitor | Function Ca | rd | | |
| | vetern | 1 | Other | Device: | 0 | View | Detail | | |
| Control S | yalom. | | | | | | | | |
| | yaioin. | 1.4 | | | | | | | |
| Monitor Info | M - | | D | | 8 | * | 01 | 2 | |

Figure 5-4 Display Control

| COM4-Screen1 | | | |
|--------------|--------|------|-------|
| | | | |
| Black Out | Freeze | Run | |
| Self Test | | | |
| white | _ | Send | |
| (VVIRO | | | |
| | | | |
| | | 6 | Close |

Fig 5-5 Display Control

Adjust the screen brightness and perform ageing based on the steps described in Section 5.4.2.

| SN | Display | Ageing |
|----|------------|--------|
| 31 | Brightness | time |
| 1 | 10% | 1 h |
| 2 | 30% | 2 h |
| 3 | 60% | 2 h |
| 4 | 80% | 2.5 h |
| 5 | 100% | 0.5 h |

Chapter 6 Troubleshooting and Component

Replacing

6.1 Common Faults and Troubleshooting Methods

6.1.1 Failure in Lighting up the Display

Causes:

- 1) No power is supplied to the display or the control devices.
- 2) The LED display does not have input signals.
- 3) The control PC is in sleep mode or the graphics card is set incorrectly.

Troubleshooting method:

- 1) Check AC power input of the display and the control devices.
- Check cables between the sending box and the receiving card. Check whether the DVI cable between the control PC and the sending box is connected reliably.
- Check whether the control PC is in sleep mode or monitor protection mode. If the control PC is not in sleep mode, check whether the graphics card is configured properly on the software.

6.1.2 Incomplete Picture or Incorrect Position of Picture Displayed

Causes:

- 1) The connecting file for the screen is incorrect.
- 2) Receiving card signal cables between cabinets do not contact properly.
- 3) The displaying position and screen size are set incorrectly.

Troubleshooting method:

- Check whether the display's signal cable connection method is same to that of the loaded file xxxx.scr.
- Check whether the signal cable is connected to the cabinet receiving card. If the receiving card is faulty, replace the receiving card.
- Check whether Displaying Position and Screen Size on the software are set to actual screen size.

6.1.3 Screen Blinking

Causes:

- 1) The ports on the sending box are loose, or the signal cables are too long.
- 2) The output resolution of the playing device or sending box is set incorrectly.

Troubleshooting method:

- Check whether the DVI cable and signal cable are connected to the display and devices, or whether the length of signal cables exceeds the maximum transmission distance (the effective transmission distance shall not exceed 10 m for DVI cable, 100 m for signal cable, 300 m for multi-mode optical fiber, and 15 km for singlemode optical fiber).
- 2) Check whether the resolution of the playing device and the sending box is greater than or equal to the resolution of the screen.

6.1.4 Blinking of a Cabinet in the Display

Causes:

- 1) The output of receiving card or hub card is faulty.
- 2) The receiving card program is incorrect.

Troubleshooting method:

- 1) Check whether the receiving card signal cable and hub card in the cabinet are connected correctly.
- 2) Check the receiving card program for the cabinet or check the receiving card.

6.1.5 Failure in Lighting up of a Cabinet in the Display

Causes:

- 1) The power supply, receiving card, or hub card for the cabinet is faulty.
- 2) Signal output of the previous cabinet is faulty.

Troubleshooting method:

- Check voltage at the DC side of the power supply and the receiving card power supply. Check the receiving card signal indicator light in the cabinet. Check whether the hub card contacts properly with the receiving card.
- 2) Check output signals of the receiving card of the previous cabinet, or replace the signal cable.

6.1.6 Failure in Lighting up Part of the Modules in the Cabinet

Causes:

- 1) Output of the power supply for the modules is faulty.
- 2) Output of signal which controls the related modules is faulty.

Troubleshooting method:

- 1) Check DC voltage for the modules.
- 2) Check the hub card ports that control the modules.

6.2 Replacement of Main Components

Before performing maintenance on the LED display, cut off the power supply to ensure your personal safety and equipment safety.

6.2.1 Front Maintenance of Main Components

Replace a module of the LED display based on the following steps:

| Front maintenance step | Picture | Description |
|------------------------------|---------|---|
| Step 1 | | Locate the malfunction cabinet and malfunction module. Disconnect the screen power. Press the front maintenance tool by aiming at the center of the malfunction module (If the front maintenance tool is a suction tool, turn on the switch) |
| Step 2 | | Suck out the module Remove it from the tool. (If the front maintenance tool is a suction tool, grab and hold the module before turn off the tool) |

Chapter 6 Troubleshooting and Component Replacing

Replace hub card (receiving card is integrated on the hub card) of the LED display based on the following steps:

| Front maintenance step | Picture | Description |
|------------------------------|---------|---|
| Step 1 | | Locate the malfunction cabinet. Locate the malfunction |
| Step 2 | | Suck out the module Remove it from the tool. (If the front maintenance tool is a suction tool, grab and hold the module before turn off the tool) |



Chapter 6 Troubleshooting and Component Replacing

Chapter 6 Troubleshooting and Component Replacing



| Front maintenance step | Picture | Description |
|------------------------------|---------|---|
| Step 1 | | Locate the malfunction cabinet. Locate the malfunction PSU. Disconnect the screen power. Press the front maintenance tool by aiming at the center of the module, which is at the corresponding position of the lower hub card (If the front maintenance tool is a suction tool, turn on the switch) Suck out the module |
| Step 2 | | Remove it from the tool. (If the front maintenance tool is a suction tool, grab and hold the module before turn off the tool) |
| Step 3 | | A connector card is located at the middle between upper hub and lower hub. Use a screwdriver to remove the screws fixing the lower hub card. Screw number for 500x1000: Lower hub: 8 used to fix with cabinet 4 used to fix with connector |

Replace a power supply of the LED display based on the following steps:

Chapter 6 Troubleshooting and Component Replacing




6.2.2 Rear Maintenance of Main Components

When replacing the module, pull out the network cable and power cable, push out the module by gripping the handle of the module with your fingers, then pull out the cable (to prevent the module from falling), and take out the module; when installing the module, pay attention to the direction of the module, DC cable and the DC plug-in cable

| Rear | | | | |
|-------------|---------|---|--|--|
| maintenance | Picture | Description | | |
| step | | | | |
| Step 1 | | Locate the malfunction cabinet. Locate the malfunction module. Disconnect the screen power. | | |
| Step 2 | | Remove the back cover plate from the cabinet that has the malfunction module. | | |
| Step 3 | | Grab the malfunction module rear handle. | | |
| Step 4 | | Push forward until the module detached from the cabinet | | |

Replace module of the LED display based on the following steps:

| Chapter 6 Troubleshooting and Component Replacing | | | |
|---|--|---|--|
| Step 5 | | Slowly rotate to one of the red line position | |
| Step 6 | | Slowly move backward through the hole | |

| Rear maintenance step | Picture | Description | | |
|-----------------------------|---------|---|--|--|
| Step 1 | | Locate the malfunction cabinet. Locate the malfunction hub card. Disconnect the screen power. | | |
| Step 2 | | Remove the back cover plate from the cabinet that has the malfunction hub card. | | |
| Step 3 | | Grab the module rear handle. Push forward until the module detached from the cabinet | | |
| Step 4 | | | | |

Replace HUB card of the LED display based on the following steps:

| Chapter 6 Troubleshooting and Component Replacing | | | | |
|---|--|---|--|--|
| Step 5 | | Slowly rotate to one of the red line positions | | |
| Step 6 | | Slowly move backward through the hole | | |
| | | Remove the screws used to fix the | | |
| | | upper hub card, connector card and | | |
| | | lower hub card. (500x1000) | | |
| | | Screw number for 500x1000: | | |
| | | Upper hub: | | |
| Step 7 | | 6 used to fix with cabinet | | |
| | | Connector card: | | |
| | | 2 used to fix with cabinet | | |
| | | Lower hub: | | |
| | | 8 used to fix with cabinet | | |
| Step 8 | | Push the hub card forward. (Upper+connector+lower) | | |



 Slowly rotate the hub card to suitable position.
 Move the hub card backward through the hole.

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Rear maintenance **Picture** Description step 1. Locate the malfunction cabinet. Step 1 2. Locate the malfunction hub card. 3. Disconnect the screen power. Remove the back cover plate from Step 2 the cabinet that has the malfunction hub card. Step 3 Grab the module rear handle. Push forward until the module Step 4 detached from the cabinet Slowly rotate to one of the red line Step 5 positions

Replace a power supply of the LED display based on the following steps:

| | icshooting and component rep | ··· 3 | |
|--------|------------------------------|--|--|
| Step 6 | | Slowly move backward through the hole | |
| Step 7 | | Remove the screws used to fix the upper hub card, connector card and lower hub card. (500x1000) Screw number for 500x1000: Upper hub: 6 used to fix with cabinet Connector card: 2 used to fix with cabinet Lower hub: 8 used to fix with cabinet | |
| Step 8 | | Push the hub card forward. (Upper+connector+lower) | |
| Step 9 | | Slowly rotate the hub card to suitable position. Move the hub card backward through the hole. | |

| | Chapter 6 Troubleshooting and Component Replacin | | |
|---------|--|---|--|
| Step 10 | | Use a screwdriver to remove the screws fixing the PSU and IEC connector. Screw number for 500x1000: 3 used to fix IEC connector 2 used to fix PSU | |
| Step 11 | | Remove PSU and IEC connector | |
| Step 12 | | Use a screwdriver to remove the screws fixing between the PSU and IEC connector. Screw number for 500x1000: 3 used to fix between the PSU and IEC connector. | |

Chapter 7 Packaging Transportation and

Storage

7.1 Packaging

The EasyFLEX series products would be packaged with standard carton package.



Figure 7-1 Carton Package

7.2 Transportation

The cabinets must be packaged before transportation. The product shall not be placed upside down or horizontally, and must be protected against the wind, rain, direct sunlight, and corrosive liquid during transportation. The stacking layers shall not exceed three layers for wood cases.

7.3 Storage

The cabinets shall be stored in an environment with an ambient temperature ranging from -20°C to +55°C and a relative humidity ranging from 10% to 85% RH. Do not store the cabinets in an environment with volatile, corrosive, or flammable chemical products.

Chapter 8 After-Sales and Warranty

8.1 Warranty Scope

This Warranty Policy applies to LED display products (hereinafter referred to as "Products") purchased directly from Audio Effetti and within Warranty Period. Any products not purchased directly from Audio Effetti does not apply to this Warranty Policy.

8.2 Warranty Period

The warranty period shall be in accordance with the specific sales contract. Please make sure warranty card or other valid warranty documents are in safekeeping.

8.3 Warranty Service

Products shall be installed and used strictly aligned with the Installment Instructions and Cautions for Use stated in the product manual. If Products have defects of quality, materials, and manufacturing during normal use, Audio Effetti provides warranty service for Products under this Warranty Policy.

8.3.1 Warranty Service Types

1) Online Remote Free Technical Service:

The remote technical guidance provided through instant messaging tools such as telephone, mail, and other means to help solve simple and common technical problems. This service is applicable for technical problems including but not limited to the connection issue of signal cable and power cable, system software issue of software use and parameter settings, and replacement issue of the module, power supply, system card, etc.

2) Return to Factory Repair Service:

For problems of Products that cannot be solved by online remote service, Audio Effetti will confirm with the customers whether to provide returning to the factory repair service. If factory repair service is needed, customer shall bear the freight, insurance, tariff and customs clearance for return delivery of the returned products or parts to

Audio Effetti's service station. And Audio Effetti will send back the repaired products or parts to customer and only bear one-way freight. Audio Effetti will reject unauthorized return delivery via pay upon arrival and will not be liable for any tariffs and custom clearance fees. Audio Effetti shall not be held liable for any defects, damages or losses of the repaired products or parts due to transportation or improper package.

3) Provide On-site Engineer Service for Quality Issues:

If there is a quality issue as stipulated in Article 5 of this Warranty Policy, and Audio Effetti believes the condition is necessary, on-site engineer service free of charge will be provided. In this case, customer shall provide a fault report to Audio Effetti for on-site service application. The content of the fault report shall include but not limited to photos, videos, number of faults, etc., to enable Audio Effetti to conduct preliminary fault judgment. If the quality problem is not covered by this Warranty Policy after the on-site investigation of Audio Effetti's engineer, customer shall pay travel expenses and technical service fees as per Article 7.4. Defective parts replaced by Audio Effetti's on-site engineers shall be the property of Audio Effetti.

8.4 Disclaimer

No warranty liability shall be assumed by Audio Effetti for defects or damages due to the following conditions:

- Unless written agreed otherwise, this Warranty Policy does not apply to consumables, including but not limited to connectors, networks, fiber optic cables, cables, power cables, signal cables, aviation connectors, and other wire and connections.
- Defects, malfunctions or damages caused by improper use, improper handling, improper operation, improper installation/disassembly of the display or any other customer misconduct. Defects, malfunctions or damages caused during transportation.
- 3) Unauthorized disassembly and repair without permission of Audio Effetti.
- 4) Improper use or improper maintenance not in accordance with the product manual.
- 5) Man-made damages, physical damages, accident damages and product misuse, such as component defect damage, PCB board defect, etc.

- 6) Product damage or malfunction caused by Force Majeure Events, including but not limited to war, terrorist activities, floods, fires, earthquakes, lightning, etc.
- 7) The product shall be stored in a dry, ventilated environment. Any product defects, malfunctions or damages caused by storage in an external environment that does not comply with the product manual, including but not limited to extreme weather, humidity, salt haze, pressure, lightning, sealed environment, compressed space storage etc.
- Products used in conditions not meeting product parameters including, but not limited to lower or higher voltage, extreme or excessive power surges, improper power conditions.
- 9) Defects, malfunctions, or damages caused by non-compliance with technical guidelines, instructions, or precautions during the installation.
- 10) Natural loss of brightness and color under normal conditions. Normal degradation in the performance of the Product, normal wear and tear.
- 11) Lack of necessary maintenance.
- 12) Other repairs not caused by product quality, design, and manufacturing.
- Valid warranty documents cannot be provided. Product serial number is torn or damaged. Product shell or other external parts are damaged.
- 14) Repairs after Warranty Period.
- 15) Products which have too significant damages caused by mishandling, accidents, improper maintenance, and failure to comply with product manual to be prepared.
- 16) Products malfunctions caused by unmatched play or control devices that are not provided by Audio Effetti. If Products are damaged arising out of the aforementioned unmatched devices and require Audio Effetti's repair, charging rate shall be as per Article 7.4.

8.5 Warranty Service Process

1) Remote Service Process:

Submit service requirements through website, email, telephone and other service channels of Audio Effetti with warranty card or contract number. Specific content of the service and contact information shall be provided.

2) Product Return to Repair Process:

Chapter 8 After-Sales and Warranty

Submit service requirements through the website, email, telephone and other service channels of Audio Effetti with warranty card or contract number. Packing list of the returned product and postal information to receive the repaired product shall be provided.

Audio Effetti's postal information is stipulated in Article 11.

Customer instructions:

- a) Shall provide a brief fault report (can be attached to the surface of the repaired item)
- b) Shall provide packing list (including contract number, model and quantity of the repaired item)
- c) Shall provide receipt postal information (company name, address, consignee, contact information, etc.)
- d) To avoid damages of the returned products during transportation, please be cautious about the package and protection of the products. Audio Effetti is not responsible for any damages to the returned products or parts during delivery.

3) On-site Engineer Service Process:

Submit service requirements through the website, email, telephone and other service channels of Audio Effetti with warranty card or contract number. Service content, site address, contact information, and visa application information shall be provided.

8.6 Other

This Warranty Policy is a standard application of Audio Effetti. No other third party (including any agent, distributor or sales representative) is authorized to make any representations or warranties that are different from this Warranty Policy. Unless otherwise confirmed by Audio Effetti in written forms of contract or other documents, any warranty clauses that conflict with this Warranty Policy shall be deemed to be automatically invalid. Final power of interpretation of this Warranty Policy shall be be vested in Audio Effetti.

8.7 Product Warranty Card

| Product Warranty Card | | | | | |
|-----------------------|---------------------------|---|------------------|--------------------------|---|
| Order No. | Shipment Date | 1 | | Warranty Period | / |
| Product Model | | | | Product Quantity | |
| Customer Name | Contact Information | | | | |
| Customer Addres | ss: | | | | |
| Remark(s): | Remark(s): | | | | |
| | Warranty Record | | | | |
| Warranty Date | Fault and Troubleshooting | | npletion Date | Signature of Customer | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |

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