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LED Display Prodl

LED display professional manufacturer

SN 1406001

The product after-sales service number

WARNING

Warning: To prevent any bodily harm, please read the installation and setup operation rules before connecting the switch.



1. Before turning on the switch, check that all AC power sources are properly connected.
2. Before performing any maintenance work, turn off all switches, including LED boards, computer terminals, system boxes, and monitors.
3. Do not touch the power supply when the switch is not turned off.

Warning: To prevent damage to installed device drivers and loss of data, please read the installation and setup operation rules before operating the display board.



1. Before connecting cables, please turn off all devices, including LED boards, computer terminals, system boxes, and monitors.
2. Wear an anti-static wristband on your hand before replacing electronic components.
3. Before replacing modules, hook a safety rope on both the module and the connection module panel.

The instructions of LED display screen

To ensure that our product can be used properly under reasonable conditions and to gain your approval of the product, we will briefly outline the product's usage process and precautions. Please read carefully before proceeding with the installation and debugging of the LED display screen.

1. Hardware equipment list

LED Display Screen

Signal Connection Cables (Data cables, Signal cables)

Power Cables (5V cable, Red and Black wires, 2.5 square three-core cable)

Sending Card (Installed in the LED display screen and video processor)

Receiving Card (Installed in the LED display screen)

Computer (with DVI, video input, and spare USB ports)

Video Processor and accompanying products

2. Use process

1) Hardware Installation

The installation steps are as follows:

- Insert the video input card into an empty PCI slot (if applicable).
- Use a DVI cable to connect the sending card to the receiving card.
- Install the driver software for this card.
- Connect the data cables to the serial port (75E) (required for Novastar

and Colorlight system).

- Connect the receiving cards with network cables (the specific number of cables depends on the drawings).
- Check the connections for accuracy before proceeding with setup or powering on for testing.

2) Software installation

The installation steps are as follows:

- **Graphics Card Driver Installation**

Install the software and control card from the USB flash drive or download from the official website to enter the installation state. Follow the prompts to complete the installation. First, install the latest version; then install the driver software; finally, install the control panel.

- **Media Player Software**

Install specialized software for large screens like LED Studio or other control software. Copy or install all the applications included with the screen onto the computer.

3.Operating Steps for Electronic Screen (Important)

Powering On:

Start by turning on the computer, then turn on the electronic screen.

Connect power to all devices (ensure input voltage meets product requirements).

Turn on the LED screen (there will be localized flashing when the screen is powered on, indicating that the screen is powered), turn on the computer, and ensure that the graphics card settings are correct (incorrect settings will result in no display, i.e. a black screen).

Open the control software and perform basic pixel size and display area settings (this setting does not affect the display of the LED screen).

Powering Off:

First, turn off the power to the LED screen, then close the control software, and finally shut down the computer correctly.

4. Find the problem

Check whether all wiring connections are correct, including the connection of high-voltage components (low-voltage parts have been tested by the manufacturing company). Ensure that signal connections are correct, particularly checking if the input and output directions of the system receiving card are correct; the receiving card should have directional indicators. Verify that the system connections are correct by referring to the system connection instructions.

Verify whether the computer software installation is complete, including the settings for the graphics card (refer to the graphics card setup instructions) and the installation of control software.

5. Precautions

- ◆ Follow the operating steps outlined in the manual
- ◆ Ensure moisture protection; the humidity requirement is: at the highest working temperature, the relative humidity for the LED display screen should be less than 92%.
- ◆ Maintain appropriate temperatures; temperature requirements are: Working environment temperature: $-20^{\circ}\text{C} \leq t \leq 50^{\circ}\text{C}$

Storage environment temperature: $-40^{\circ}\text{C} \leq t \leq 60^{\circ}\text{C}$

If the temperature is too low or too high, power must be cut off.

- ◆ Ensure power supply meets requirements:

Power supply voltage for the LED display screen: $220\text{V} \pm 10\%$

Frequency: $50\text{HZ} \pm 5\%$

Ensure reliable contact with safety ground, reliable isolation between ground wire and neutral wire, and keep the power supply away from high-power electrical equipment. Non-operating personnel are prohibited from switching the power supply for the large screen.

Welding near the large screen or on the cabinet is prohibited.

***Non-professionals should not switch on the power supply during**

maintenance.

For other issues in the operation process, please refer to our relevant instructions. If you have any further questions, please contact us.

Common faults of LED display screens and their troubleshooting methods.

1) Full Screen Not Lighting Up (Black Screen)

A: Check the power supply of the screen unit by using a test pen or multimeter to detect if there is power at the switch connection to the appliance end. There may be issues with the switch itself or a short circuit.

B: For screens synchronized with a computer, first check if the computer is in sleep mode or screen saver mode. If it's in sleep mode, go to "Control Panel," click on "Power Options," and set both "System Standby" and "Turn off Monitor" to "Never" so that the computer won't go to sleep and the screen can work normally. If it's not in sleep mode, open the computer case to check if the control card and communication cable are securely connected, and inspect the communication cable for any breaks. This should address the above-mentioned issues.

C: Check if the communication line is connected properly and if there are any incorrect connections (for synchronized screens).

Follow the connection diagram for proper connections and perform checks.

2) Entire Unit Board Not Lighting Up (Black Screen)

If multiple boards in a row horizontally are not lighting up, check if the data cable connection between the normal unit board and the abnormal unit board is properly connected.

If multiple boards in a column vertically are not lighting up, check if the power supply to this column is functioning normally.

Incomplete or Mispositioned Display

A: First, check if the parameters for "Display Position" and "Screen Size" in the software match those provided by the installation engineer. If unsure, count the number of pixels in length and width on the screen, set the "Screen Size" accordingly, observe how much the displayed area differs from the actual screen, and then adjust on the computer until the position matches.

B: If the display is incomplete, check if the file size matches the "Screen Size" of the screen.

C: Open the computer case and check if there are any conductive particles on the control card.

Communication Failure with Communication Display Screen

A: Check if the parameters in the software match those provided by the installation engineer.

B: Check if the serial port connection is secure and if there are any breaks in the communication cable.

Screen Shaking with Horizontal Stripes

Check if the ground wire connecting to the computer is loose or if the communication cable is loose. If the operator cannot determine the cause of the problem or is not very familiar with computers, do not open the computer case easily. If the screen problem is severe, please contact our company promptly. Only diagnose further with the consent and guidance of our company's relevant personnel.

3) Simple Handling of Module Issues

When there is a white strip on the screen with missing colors or flickering:

Start by identifying the problematic module. Then, using a long power cable, bypass the first faulty module and connect it to the next module. If the issue resolves, it indicates that the skipped module is faulty. If the issue persists, it suggests that the module before the skipped one is faulty.

If there are small square grid color gaps within a module:

Check if the corresponding ICs inside the module and nearby current-limiting resistors have any soldering issues. For example, if a 4x4 small square grid lacks red color on a static real pixel module (16x8), check the ICs and resistors labeled with UR closest to the fault range. Green is denoted as UG, and blue is denoted as UB.

When one module on the screen is black or lacks a color while the subsequent modules display normally:

A black module issue typically involves checking the module's power supply, as the positive terminal may have disconnected. If a module lacks a color, check if the white balance resistors on the module have any soldering issues. The white balance resistors are usually marked with colors like red (VR, RR, etc.), green (VG, RG, etc.), and blue (VB, RB, etc.), with each color corresponding to a specific resistor located in the middle of the module.

When there is a large area on the screen that is not lit:

Start by checking if the green light on the receiving card is flashing. Since receiving cards are usually daisy-chained, loose Ethernet connections or damaged receiving cards can prevent the signal from

reaching subsequent modules, leading to a large black area. Additionally, check for power supply damage by inspecting the indicator lights (green light for power supply and red light for the receiving card).

When half of a box on the screen is not lit:

In this case, check if there is any damage to the internal power supply of the box. Since signals are transmitted from the front stage to the back stage, a damaged power supply can prevent the signal from reaching the next stage. However, if the receiving card is intact, the subsequent screen segments can display normally.