

# **SS-SD76SG Offline Main Control Manual**

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## Chapter 1 : Introduction

SS-SD76 is a new generation master designed and developed by our company. It is simple in operation and powerful in function. (There are three models: ① SS-SD76SG contains WiFi/4G/GPS module, which can realize network timing synchronization or satellite synchronization function, and support remote control. ②SS-SD76S includes WiFi/GPS module, which can realize satellite synchronization function. ③SS-SD76 only contains wifi module, can not be synchronized)

Features and functions are as follows:

- 1、 Adopt new hardware platform, based on customized Linux system, can run stably for a long time;
- 2、 7 inch LCD screen 1024x600 resolution, can be directly operated on the screen of SS-SD76SG;
- 3、 Built-in high-precision timing function to achieve simultaneous playback of multiple devices;
- 4、 Built-in wifi module, after connecting wifi, with mobile phone APP and PC software can realize its remote control, firmware upgrade, and file operation and other functions;
- 5、 Integrated SD card,USB interface, you can import SD card or USB disk playback materials and wiring files, or external USB interface device;
- 6、 Integrated uart port for system debugging;

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- 7、Integrated 485 interface for cascading other systems;
- 8、Integrate 2 gigabit electrical ports, 1 1.25G optical port for cascade control;
- 9、Support video material AVI/MP4 and other mainstream video format controller internal direct conversion to SSV offline file playback, support playback preview;
- 10、Built-in DMX universal chip addressing, writing parameters, screen testing and DMX512 console functions, easy to debug on site;
- 11、Built-in cascaded sub-control query, read and write parameters, address functions;
- 12、Built-in timing playback function;

## Chapter 2 : Specification Parameter

Basic parameters of SD76SG off-line master controller:

Housing	Aluminum
Display	7 "LCD screen 1024x600 resolution
Communication interface	2 RJ45's; 1 SFP; 2 USB; 1 SDHC; 1 SIM; 1 DEBUG; 1 GPS; 1 4G and 1 WIFI/BLE
Network interface	1000M electrical port; 1.25G optical port
Network media	100BASE-TX: Class 5 and above twisted pair ( $\leq 100$ m)
Storage space	32G (factory standard)
WIFI/BLE	Wireless network (factory standard)

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module	
4G module	Wireless network (factory standard)
Work environment	Working temperature: -20°C~70°C
	Storage temperature: -40°C~85°C
	Working humidity: 5%~90% no condensation
	Storage humidity: 5%~90% non-condensing
Operating voltage	AC100~220V
Dimensions (L*W*H)	Length:292mm, Width:205mm, Height:45mm
Fixed hole spacing	279x164mm
Rated power	6.5 W.

### Chapter 3 : Product Appearance

SD76SG design concept:

1. The controller adopts metal shell, which can effectively avoid the impact of extrusion and bump on the controller;
2. 7 inch LCD touch screen is integrated on the front of the controller;
3. The back of the controller integrates multiple interfaces for system function expansion;
4. One NET interface on the back of the controller, which is used for cascading our sub-controller;

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The appearance is as follows:

## Product diagram



Back board



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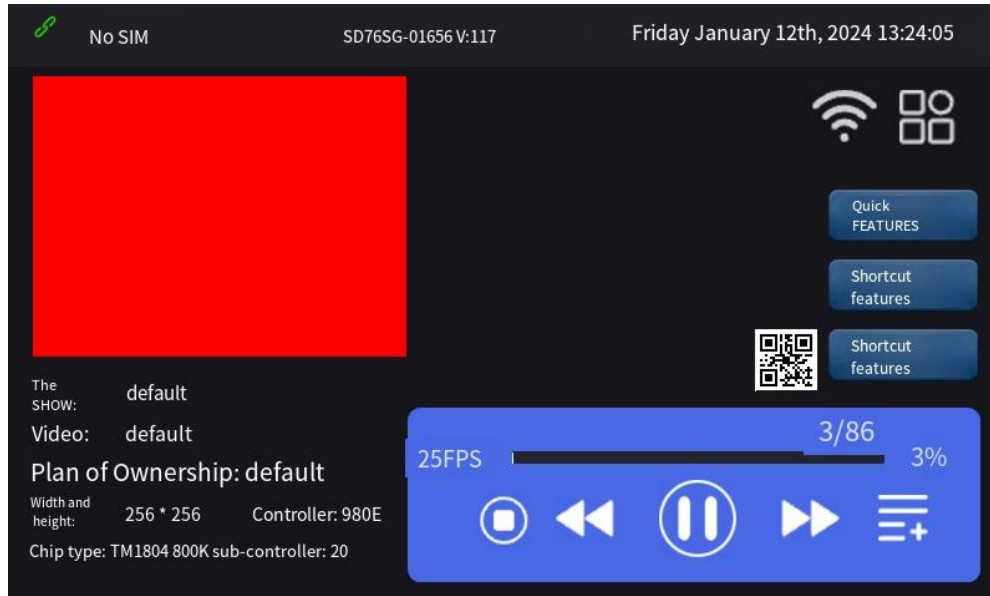
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## Chapter 4 : Basic Operation


The main page interface is as follows:



At the top of the interface is a network signal, controller ID number as well as the date, time and device software version display

The page contains the device QR code, click to enlarge, you can use the mobile APP scan code to add.

There are two ICONS in the upper right corner. The WIFI sign is used to connect to the Internet or the mobile APP.  The icon for the Settings and app controller, tap it to enter the app interface.

Click it , will pop up Settings -- Screen Test -- console three options.

Console: The function of DMX512 console is integrated in the controller, which is convenient for practical application.

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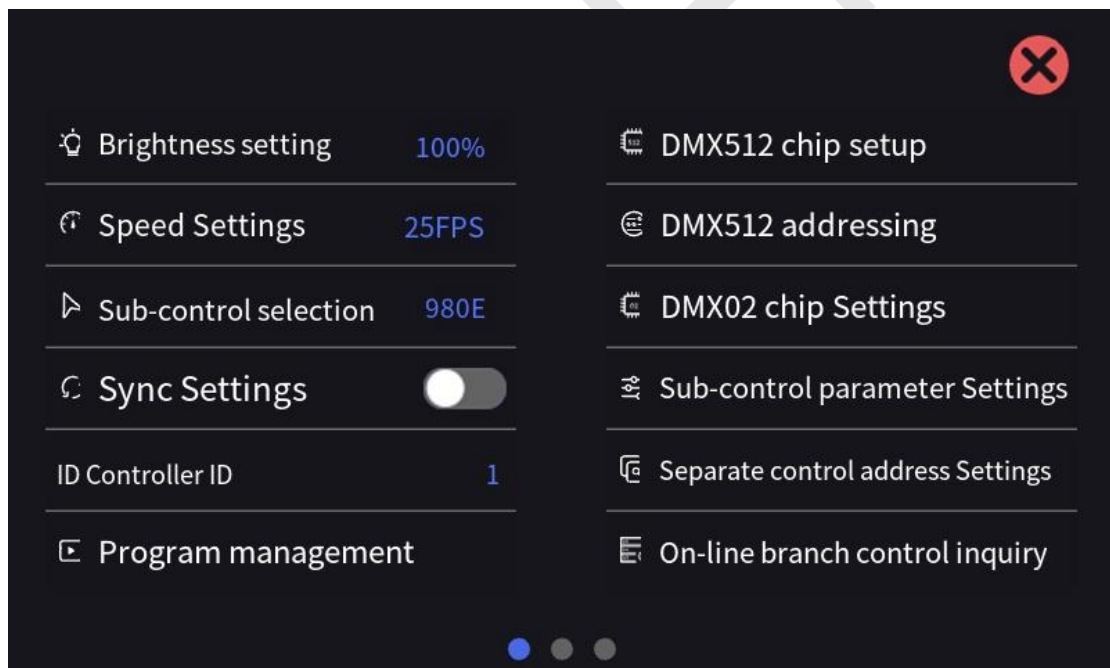
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Screen test: mainly test color, address, etc., which can provide debugging convenience to the maximum extent in practical applications.

The bottom of the interface is about the current playback scene setting interface.

## 1. Introduction to Setting Interface Functions

**Settings:** related to brightness, speed, addressing, play plan and so on, to highlight it, click the Settings as follows: 



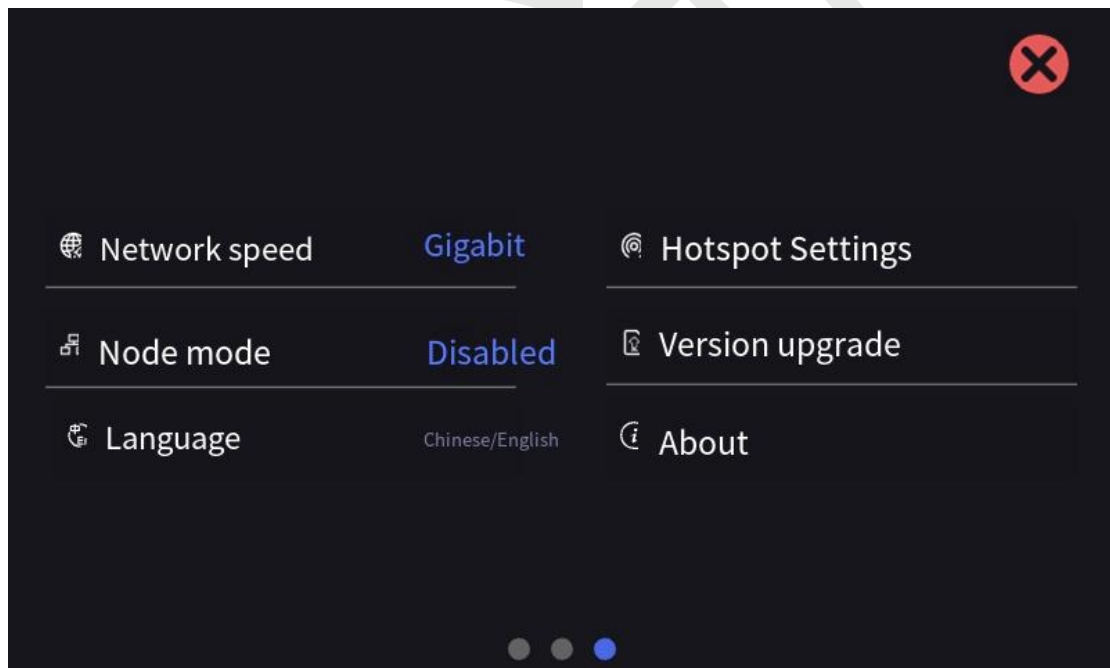
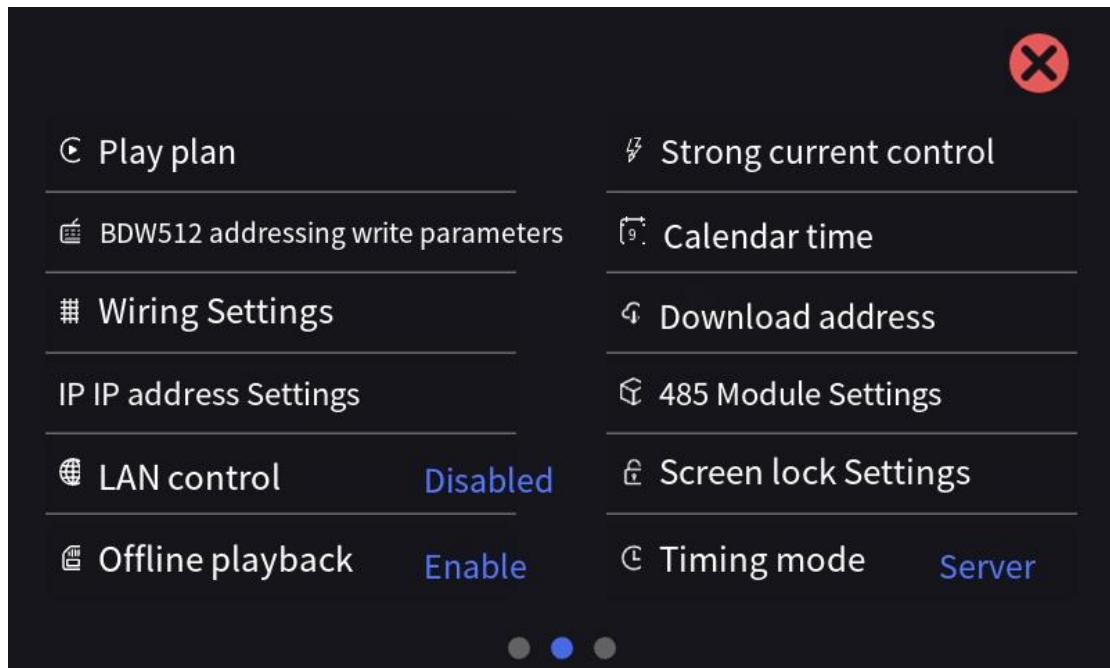
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There are three screens in the Settings that can be switched by swiping left and right.

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**Brightness Settings:** You can set the brightness of the lamp.

**Speed setting:** You can change the playback speed.

**Sub-control selection:** need to select according to the load sub-control model

**Sync setting:** After enabled, multiple devices can play simultaneously

**Controller ID:** You can set the controller ID manually.

**Program management:** you can add and delete programs, add, delete, modify and check the videos in the program, and set the video timing.

**DMX512 chip Settings:** Here set some DMX512 chip self-test effect, current gain, self-channel number and other parameters.

**DMX512 addressing:** To DMX512 luminaire addressing

**DMX02 chip Settings:** Set the parameters of the DMX02 chip

**Sub-controller parameter Settings:** The sub-controller parameters can be set or read

**Distributor address setting:** Set the controller ID.

**Online sub-controller query:** Query the number of sub-controllers.

**Play plan:** you can add, delete the plan, modify the program in the plan and set the plan timing.

**BDW512 address write parameter:** set for BDW512 chip.

**Wiring Settings:** Import the wiring, or update the wiring

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**IP Address setting:** Set the IP for the controller to access the Internet (you can access the Internet through a network port).

**LAN control:** Interface with other devices and systems.

**Offline playback:** Insert U disk or SD card to play offline files generated by the company's software.

**Strong current control:** Control the strong current switch.

**Calendar time:** Set the date and time of the controller.

**Download address:** APP Download Index.

**485 module:** Connect to other devices or systems through the 485 protocol.

**Screen lock Settings:** The screen lock function can be set duration + numeric password, or can be cancelled to prevent miscontact.

**Timing mode:** Corrects system time by server, GPS, and GPS-V in different ways.

**Hotspot setting:** need to insert the hotspot module, connect the SD76SG hotspot WiFi with the mobile phone, and use the led app of the company to control the LAN.

**Node mode:** Our main control as a node to access the centralized control platform, receive the issued instructions (such as: under the program, wiring, play scene, etc.) automatically operate, the centralized control

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platform real-time feedback send heartbeat packets, check the status.

(See the platform control protocol for detailed instructions)

**About:** Controller related information.

**Language:** English and Chinese can be switched at will.

**Version upgrade:**

- ① It can be remotely upgraded by mobile app Stoneware iot.
- ② Any previously uploaded version can be upgraded in the Settings.
- ③ Insert the USB flash drive, pop up all the upgrade packages in the USB flash drive, you can choose to upgrade.

**Network speed:** through the network card rate and test Intranet transmission speed to decide to choose 100 Mbit/s.

**Synchronization principle:** The slave computer updates the real-time time according to the received host synchronization frame, so as to ensure that the system time of all the main control devices of the same project is completely consistent. When the total number of SSV files played in the master is the same, at any point in time the master will play the corresponding frame at the same time to achieve synchronous playback screen synchronization.

In synchronous mode, the pause and play of the previous and next one

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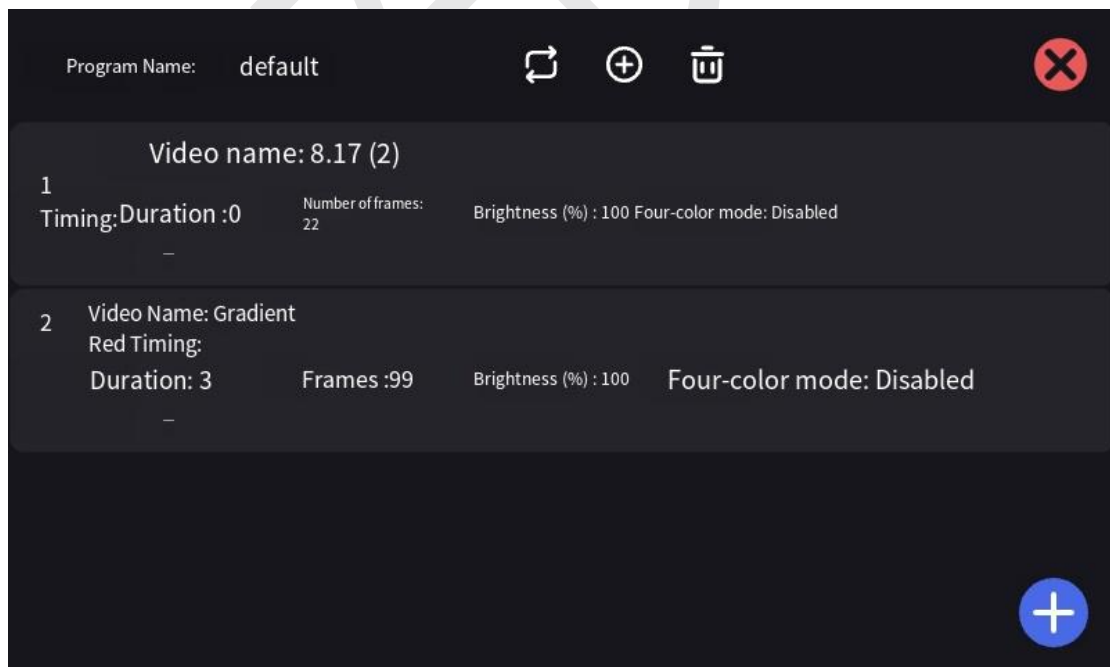
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at the bottom of the main interface cannot be operated to ensure synchronous playback.

## 2. The Relationship Between Video, Programs, and Playlists, and How to Convert Videos into Playback Files

Introduce in detail the relationship between video, program and playback plan, and how to convert video into playback file.

① Click the "Program Management" of the setting interface to enter the following interface:



Controller factory prefabricated a program, the name of the program is

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the default. It can be operated by the icon on the back

Trash can icon: represents the deletion of this program segment

Plus sign: indicates the addition of new program segments

Double arrow: shows all programs, you can select the corresponding program to modify the Settings

There is a video file below the program clip, click on the video file, and a yellow box will appear in the lower right corner. Inside the yellow box

Alarm: Set the video's timing feature

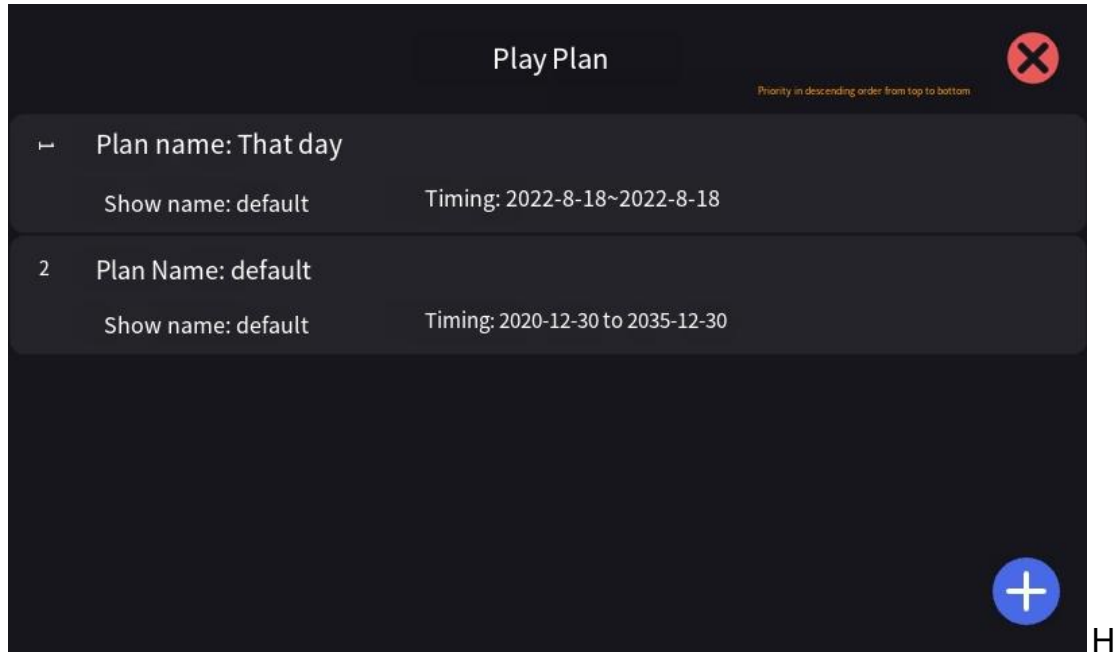
Light bulb: Brightness adjustment

Up and down arrows: Change the order of this video file in this program segment

Cross: Delete this video file.

A plus sign inside the blue box at the bottom represents adding the video file.

② Click the "Play plan" in the setting interface to enter the following interface:



uman logo: Set the name of the plan

Double arrow: Shows all programs, you can modify the program corresponding to the plan

Alarm clock: Set the timing function of the plan

Up and down arrow: Change the priority of the schedule, the higher the priority is

Minus: Delete the plan.

A plus sign at the bottom, to add a new plan.

### 3. Remote Control

Install our "Stoneware iot APP" or "Stoneware iot PC", register an account through your mobile number, open the cloud platform

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permission, and remotely operate the SD76SG device.

#### 4. Detailed description of strong power control

- ① Manual switch, add equipment, set address, circuit number, equipment manufacturer (can be connected to all manufacturers)



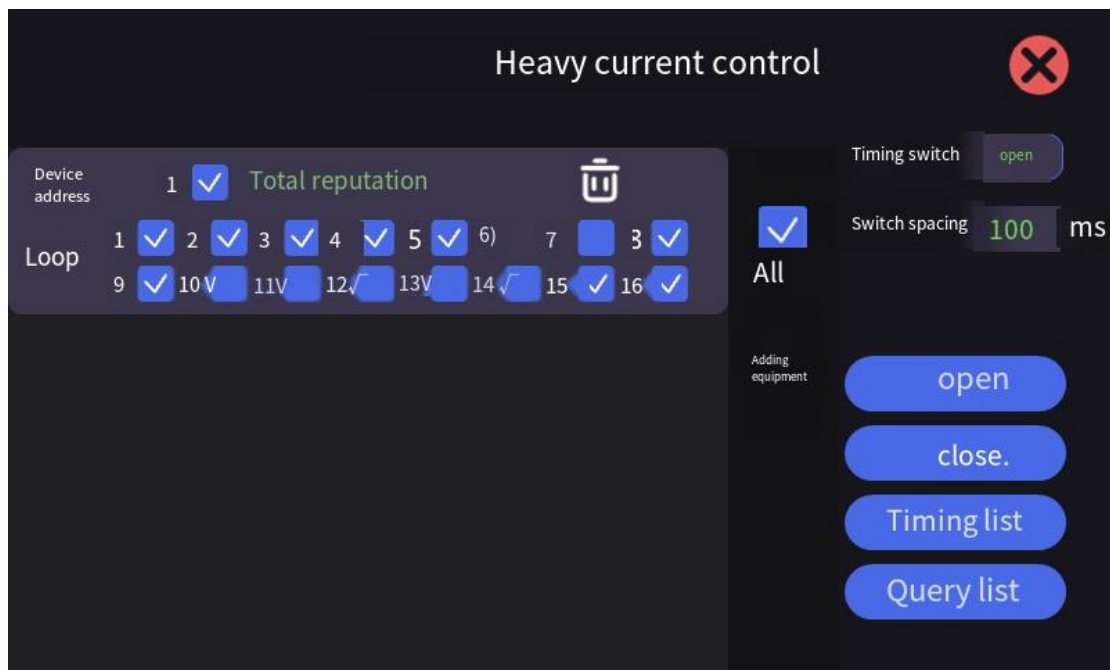
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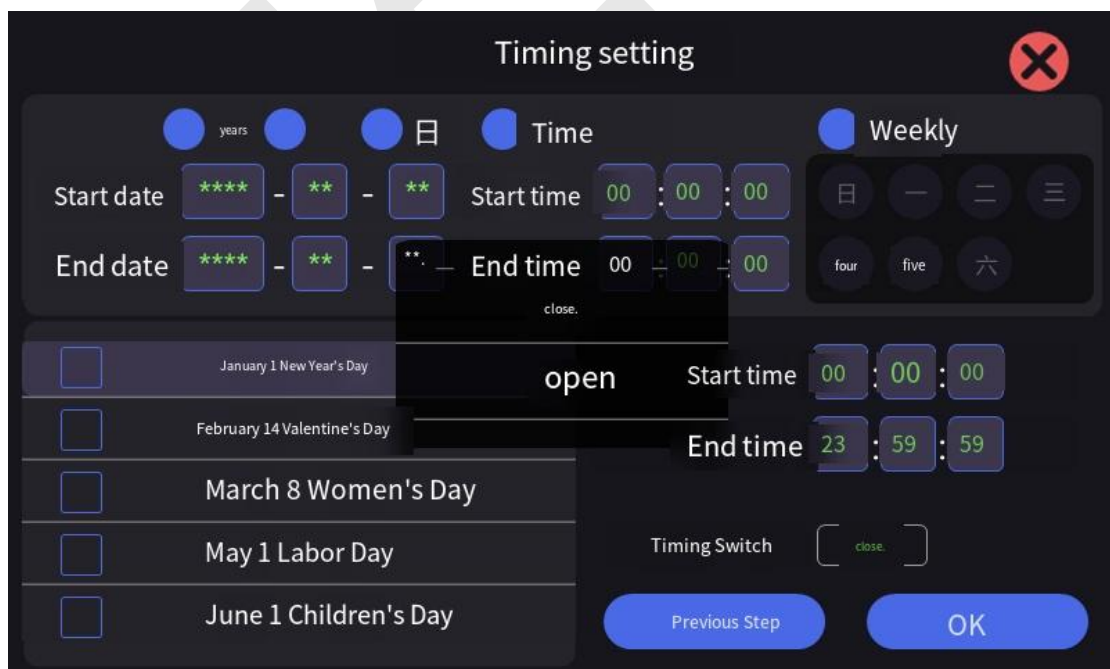
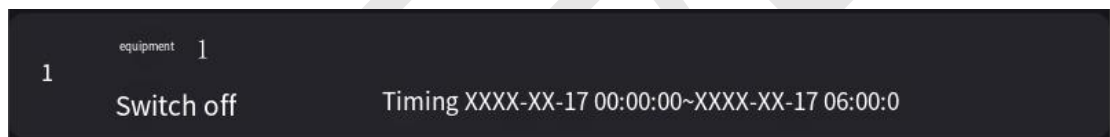
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② Timing list setting, can be opened or closed at any time.



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③ Query the strong power control status list, you can query the working status of each loop.



## 5. Detailed description of 485 module functions

① Ceiling infrared: When the infrared detector detects someone or an object moving, it plays the desired program effect (can be customized)

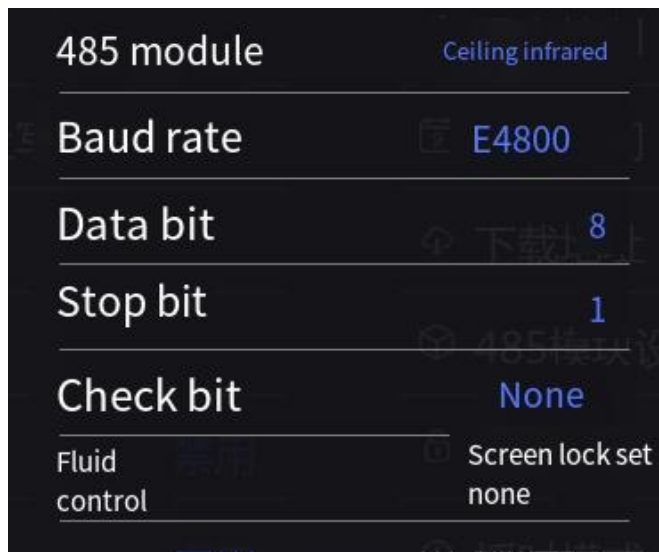
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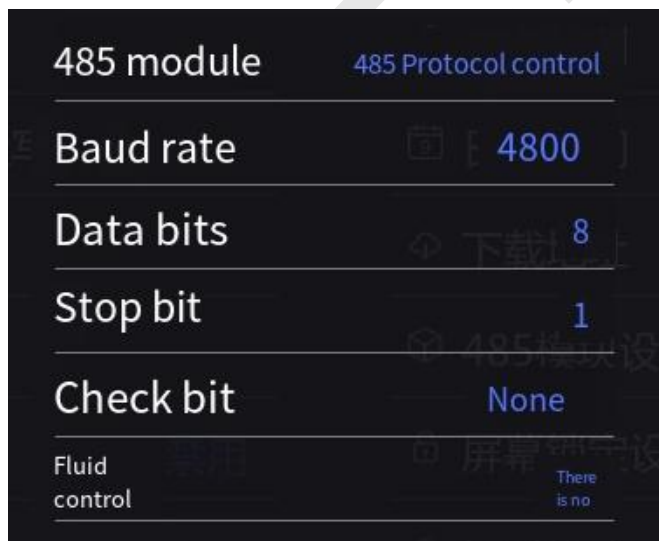
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② 485 protocol control: through the third party instructions, can play, stop, switch segments and other operations (see the control protocol for details).



③ 485 console control: can receive the standard 512 protocol.

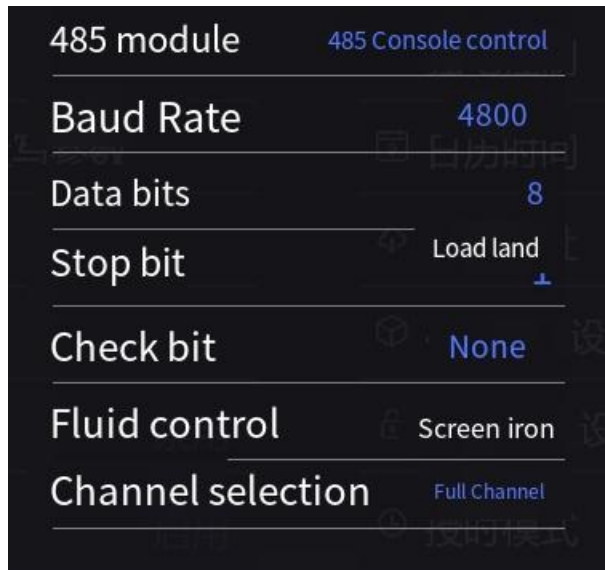
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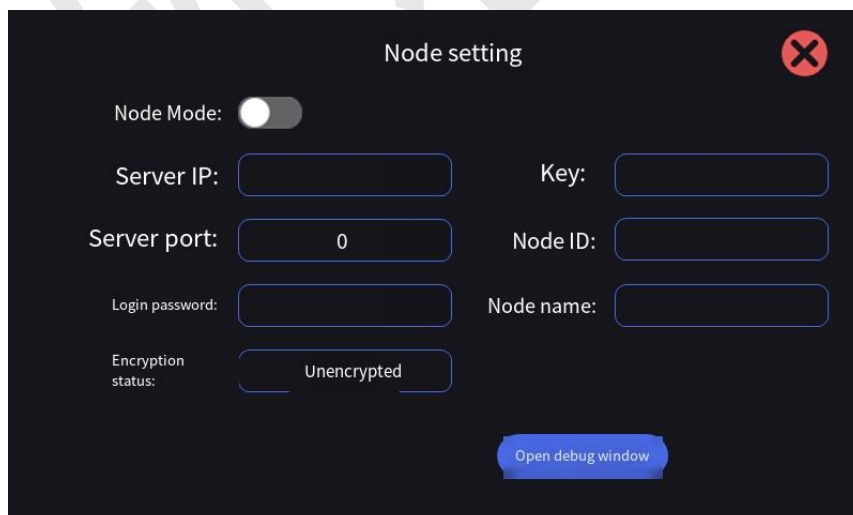
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## 6. Detail node mode function.

Used as the node end of a large centralized control platform, it accesses the platform through TCP protocol and accepts the platform control; Set the relevant parameters required by the server, enable the node mode, and master the automatic connection platform.



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