JN-MPPT Buck Solar Chagre Controller

Host computer communication instructions

Contents

The first part: hardware connection ..... - 2 -

1. RS485 communication connection ..... - 2 -

2.Connection between the device and the PC ..... - 2 -

The second part: parameter configuration ..... - 3 -

1. the installation of the software ..... - 3 -

2. the introduction of the software interface ..... - 3 -

3.Parameters configuration ..... - 4 -

3.1 Communication parameter setting: ..... - 4 -

3.2 System Settings: ..... - 5 -

3.3 System parameter setting: ..... - 6 -

3.4 Query function: ..... - 7 -

The third part, parameter monitoring ..... - 8 -

1. real-time running data ..... - 8 -

2. Real-time running parameter curve ..... - 8 -

3. Historical data ..... - 9 -

Appendix 1: ..... - 10 -

Note: This operation manual guides the user to use the host computer to view the working status of the device and set the parameters of the device.

The first part: hardware connection

1. RS485 communication connection

The controller device uses the RJ45 interface (RS485 communication protocol) to communicate with the host computer:

Figure 1-1 RJ45 interface (RS485 communication protocol)

2.Connection between the device and the PC

Use the special network cable (1.5 meters) in our accessories to communicate with the RJ45 to USB interface converter (RS485 communication protocol) to realize communication between the controller and the host computer. See the wiring diagram below for details:

Figure 1-2 RJ45 to USB interface converter (RS485 communication protocol)

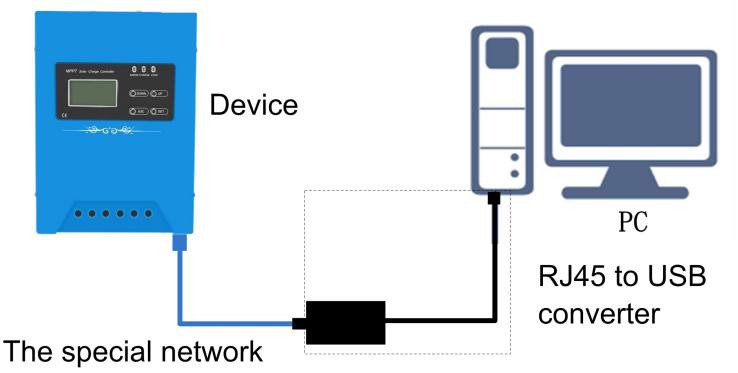


Figure 1-3 Device and PC connection diagram

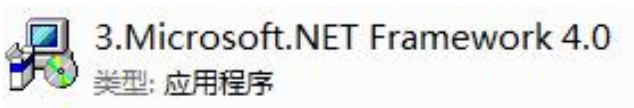
Note: the special network cable crystal head blue sheath termination controller device, black sheath termination RJ45 to USB converter, RJ45 to USB converter USB port and computer USB port plug-in connection,
Note: Network wire making Reference Appendix 1.

Warning:
It is forbidden to use any network cable as the communication cable to connect the device directly to the PC monitoring port. Otherwise, the device and PC will be damaged!

The second part: parameter configuration

1. the installation of the software

First put the CD that came with the controller into the CD-ROM drive of the computer, then read the information on the CD-ROM and assemble the four installation programs in sequence.

Step	Program	Remarks
1		USB serial port driver
2		Microsoft Access database plugin
3		Installation Tip: This computer has a newer version of the software installed, no need to install it;
4		Solar MPPT Controller Monitoring Software

2. the introduction of the software interface

After the software installation is complete, double-click the “Equipment monitoring platform” shortcut icon on the desktop of the computer to open the monitoring software operation interface.

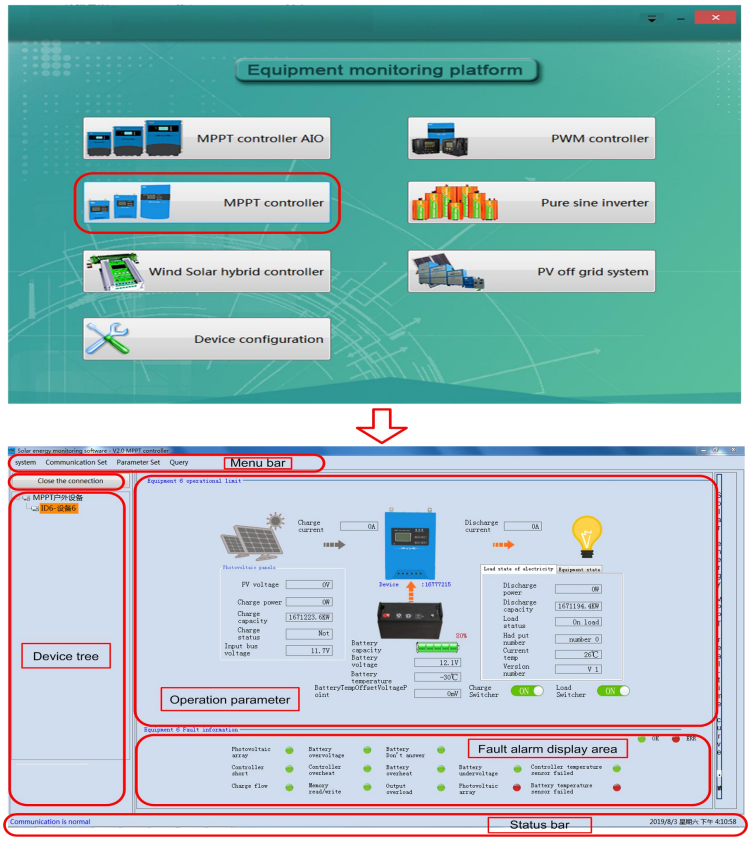


Figure 2-1 Software interface diagram

The software interface is shown in the figure above. The main interface area is divided into menu bar, status bar, device tree, operation parameter, and fault alarm display area.
Menu bar: Edit and run parameters, the functions are as follows:

Menu Item	Function	Rem arks
System	Add, delete, edit devices;	
Communic ation settings	Edit communication parameters, including serial port number, serial port parameters, etc.	
Parameter settings	Read and edit set operating parameters, including battery parameter settings and device parameter settings;	
Search	Query and edit historical data, as well as export report functions.	

3.Parameters configuration

3.1 Communication parameter setting:

Click the “Communication Settings” menu in the menu bar to pop up the “Serial Port Settings” submenu.
Click the “Serial Port Settings” submenu to pop up a serial port setting dialog box, as shown below:

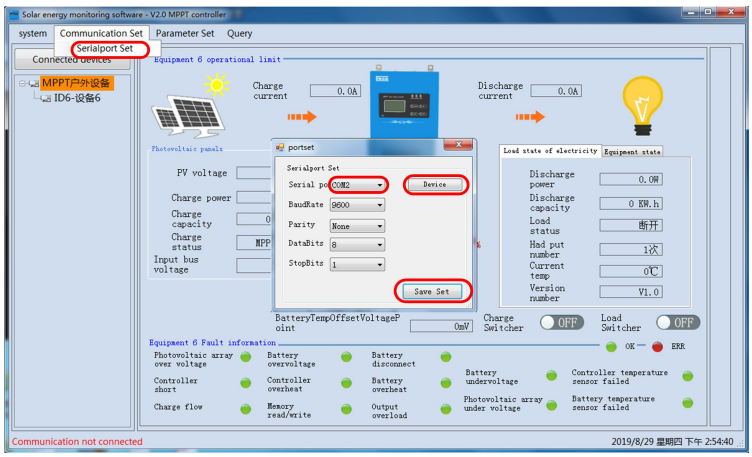


Figure 2-2 Serial Port Settings

Click the drop-down box next to “Serial Port” and select the corresponding serial port number (you can also find the serial port number of the device connected to the computer through “Device Manager”), and then click “Save Settings” to complete the serial port setting.
In this setup page, you only need to change the serial port number. Other parameters do not need to be changed.

The default value is: baud rate: 9600
Check digit: None
Data bits: 8
Stop position: 1

3.2 System Settings:

Click the “System” menu in the menu bar to pop up the submenu. The submenu includes two menus “Add Device” and “Language”. Click the “Add Device” submenu system to pop up the “Add Settings” dialog box, as shown below figure2-3. As shown; click on the "Language" submenu to switch between Chinese and English.as shown below figure2-4.

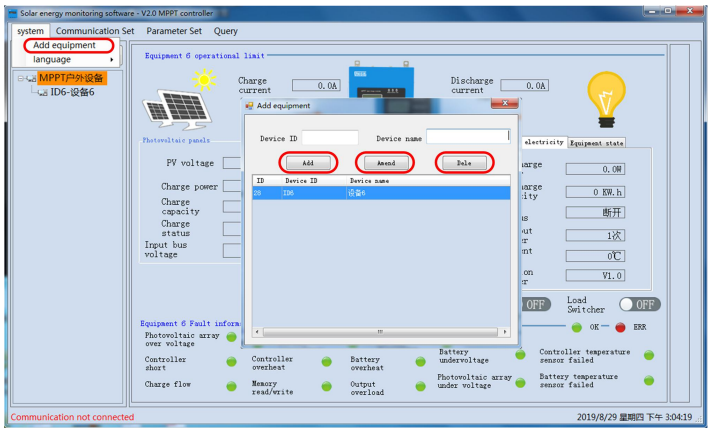


Figure 2-3 Add Device

Enter the device ID in the device ID field. (The device ID must be viewed on the JN-MPPT device first. It cannot be set arbitrarily. The default value of the JN-MPPT is 6, edit the device name, and click the “Add” button to complete. Device addition

Select a device in the device list, and display the parameters of the device in the device ID and device name. If you want to modify it, modify it directly in the corresponding column, and then click the “Modify” button to complete the modification of the device parameters.

Select a device in the device list and click the "Delete" button, then the device will be deleted.

Note: The device ID is the device identification address of JN-MPPT. Once the setting is completed, please do not change it arbitrarily. Otherwise, the data connection will be abnormal.

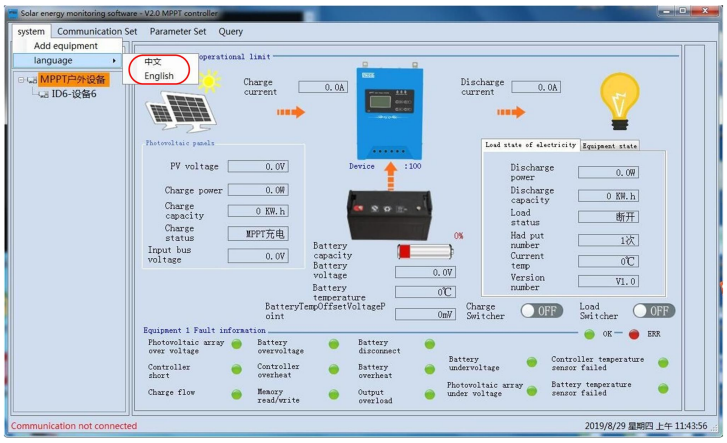


Figure 2-4 Operation language settings

3.3 System parameter setting:

Through the system monitoring software, click the “Parameter Setting” menu in the menu bar, the system will pop up the “Basic Parameter Setting” and “Factory Setting” submenu, click the “Basic Parameter Setting” submenu, and the system will pop up “Basic Parameter Setting”. The dialog box, including “battery parameter setting” and “equipment parameter setting”, reads and sets the battery and controller parameters, as shown in the following figure 2-5 and figure2-6; click “factory setting” system will pop up the password input dialog box, The parameter setting is the controller factory setting parameter and the user does not need to change it.

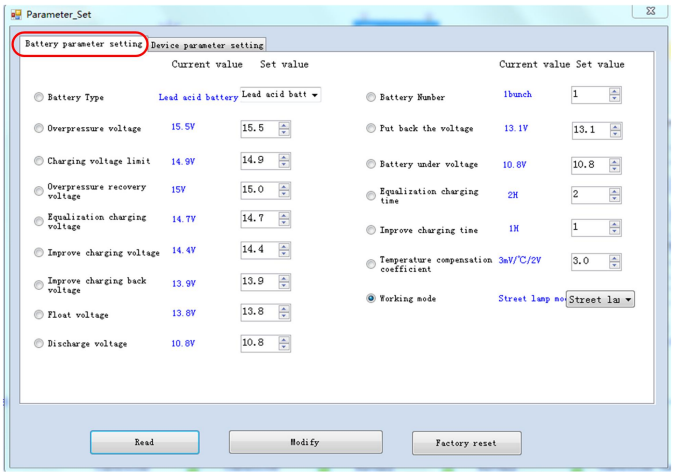


Figure 2-5 Battery parameter settings

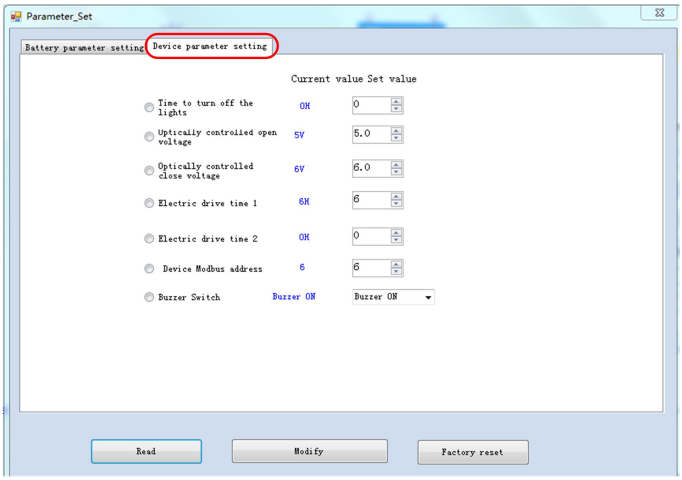


Figure 2-6 Device parameter settings

As shown in the figure, click the “Read” button to read the setting parameters of the current device; to modify the operating parameters of the device, first select the item to be modified, enter the data to be modified in the “Setting Value” box, and then click "Confirm Modification" completes the modification of the parameters;

In this interface, you can also change the parameters such as “Battery Type”, “Number of Battery Strings” and “Work Mode” through the pull-down menu; the battery is powered by the lead-acid battery by default; the working mode defaults to the household mode;

Click the “Restore Factory” button, the system's operating parameters will be restored to the factory settings.

Note: Please don't modify the device ID address arbitrarily. Otherwise, the communication will be abnormal. Generally, after the first configuration, you do not need to modify it again. Also, the “Restore Factory” button should not be clicked because the factory settings are restored. At the same time, the accumulated parameters such as charging and discharging power will be cleared, please be cautious;

3.4 Query function:

The system monitoring software can query the historical data of the controller. Click the “Query” button in the menu bar to pop up the “History” submenu, click on the submenu to open the historical data dialog box, as shown below figure 2-7.

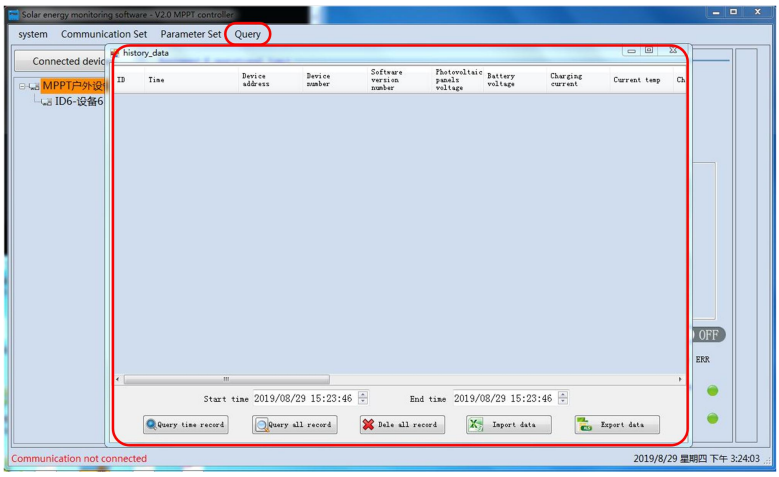


Figure 2-7 History Dialog record

As shown in the figure, in the dialog box, historical data can be queried, exported, deleted, and the like.

Query phase data: first set the start time and end time (the start time needs to be less than the end time), and then click “Query time period record” to query the running data of the time period;

Query all records: Click "Query all data" to query all running data;

Import, export, and delete historical data: Click the corresponding button to import, export, and delete historical records. The exported data format is excel format, so the format of the data table when importing is also the format of excel.

Note: The amount of data in the history record will be relatively large, so there will be a delay when the query is created. Please wait patiently. The waiting time depends on the running speed of the computer. Please be cautious when deleting data. Delete the data. It cannot be recovered. Please export the data before deleting to avoid data loss, which will bring you unnecessary trouble.

The third part, parameter monitoring

1. real-time running data

After the hardware is connected, JN-MPPT works normally. After the relevant parameters are configured, click on the upper left corner of the main interface.“Connected devices” button, if the communication is normal, the status bar will be displayed in the lower left corner of the main interface.“COM2 Connection is opened successfully ”, otherwise an error will be reported, showing a red font“ID6 Communication time out !”。With the device ID6 Communication time out !

After the communication is normal, the main interface displays the operating parameters of the controller and the corresponding icons:

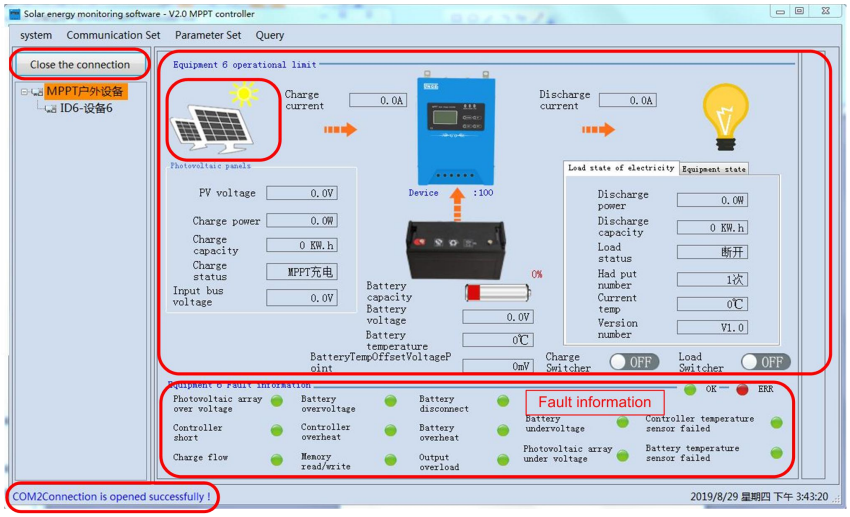


Figure 3-1 Charging status display

1.1 The photovoltaic icon lights up under the state of photovoltaic charging. Without charging, the PV panel icon will be dimmed; if the load is turned off, the corresponding load pointing icon will be dimmed.

1.2. The icon lights up, various operating parameter settings are displayed, and the charge and discharge levels are accumulated at the same time. If an alarm event occurs, the item corresponding to the fault alarm interface will turn red, as shown above figure3-1.

2. Real-time running parameter curve

The monitoring software can not only monitor the running data in real time, but also provide the main running parameters in a curved way for the customer to browse; on the right side of the data display interface, hold down the left mouse button and drag the mouse to open the curve display page.

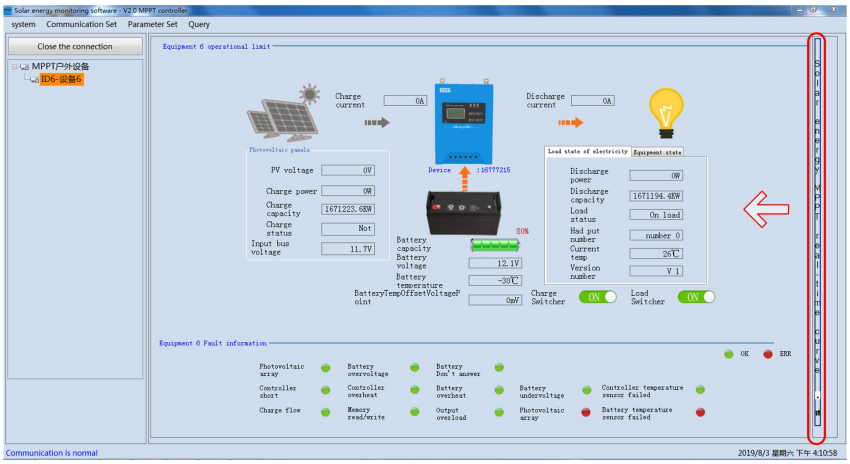


Figure 3-2 How to open the parameter curve interface

In the position of the arrow in the above figure, if you pull it like the left, you can display the curve interface, and the size of the display area can be pulled at will. As shown below:

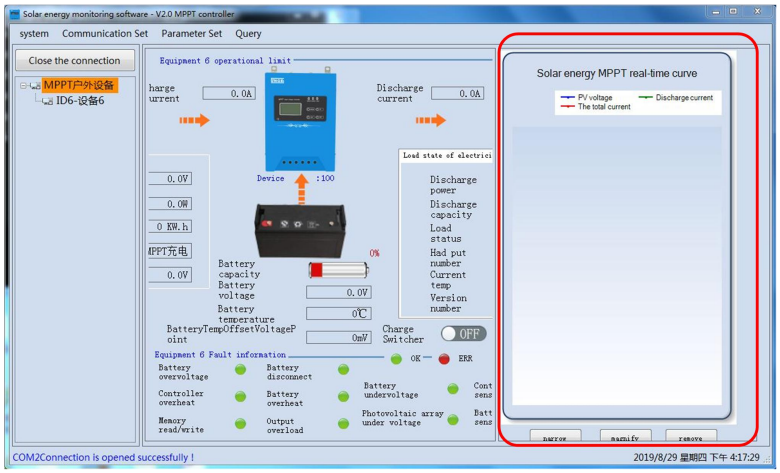


Figure 3-3 Parameter curve display mode

In the area of the “Solar MPPT Real-Time Graph”, the graph of the controller is displayed in real time.

3. Historical data

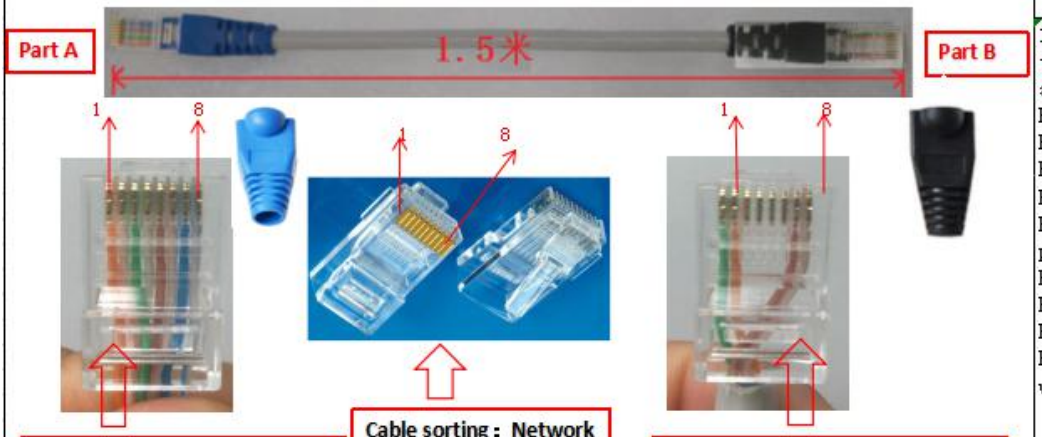
Click the “Query” button on the menu bar to pop up the “History” submenu, click the “History” menu to query the historical data, and export, import and delete the history,Reference”3.4 Query function”.

Appendix 1:

Standard for making RJ45-TO-USB communication connection cable

RJ45 to USB module network cable standard

Network cable connection



Part A（from 1-8 feet）color：orange、orange and white、green、green and white、brown、brown and white、blue、blue and white

Part A is connected to the communication board network port, with a blue jacket;

Cable sorting：Network port terminal buckle down，the cable is inserted from the opening under the terminal，Cable sorting from 1-8 feet;

Part A color （From 1-8 feet）：green、orange、no、no、no、no、brown、brown and white

Part A is connected to the RJ45 to USB module network port, with a black jacket;

Instructions

1. The production of the network cable is as right picture

Part A:

Pin1/2---B-,

Pin3/4---A+,

Pin5/6---GND,

Pin7/8---+12V,

part B:

Pin1---A+(green),

Pin2---B- (orange),

Pin7---GND (brown),

Pin8---GND (brown and white),