



GTEC UPS MODEL:

MUST400

Power Monitor User's Manual

SERVICE DOCUMENT

UPS Power Monitor User's Manual_Ver 1.17_C

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Introduction

This software is designed for monitoring and setting UPS. There are two ways to connect with UPS: RS_232 & RS_485. If using RS_485 communication, a “485-232-adaptor” is necessary to connect 485 port of UPS and computer’s Serial port. If using RS_232 communication, a serial cable can be connected directly from UPS 232 port to the computer’s Serial port.

1. Hardware Connection of UPS and PC

1.1 Serial Communication Introduction

1.1.1 Serial Communication Interface Introduction

There are two types 9 cores serial interfaces, one is 9 pins (Male type) interface, another one is 9 holes (Female type) interface. Their pictures as below:



Pic 1-1. Male type interface



Pic 1-2. Female type interface

1.1.2 RS_232 Definition

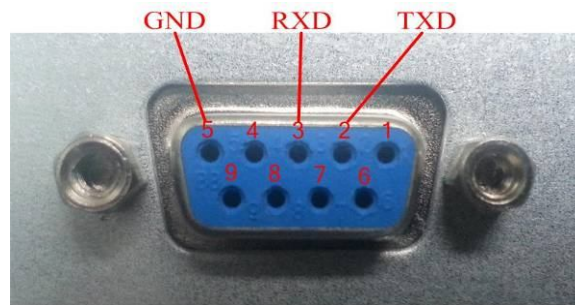
- 1) Male type pins definition of RS_232 Port is shown in Pic 1-3.



Pic 1-3. Male type pins definition of RS_232 Port

pin2--- RXD
pin3--- TXD
pin5--- GND

- 2) Female type holes definition of RS_232 Port is shown in Pic 1-4.

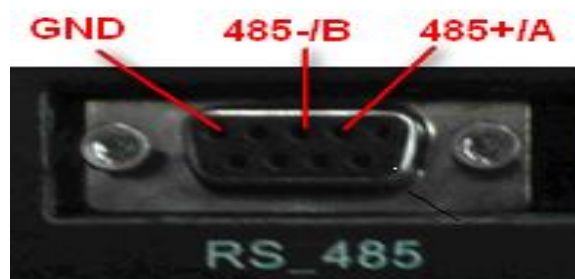


Pic 1-4. Female type holes definition of RS_232 Port

pin2--- TXD
pin3--- RXD
pin5 --- GND

1.1.3 RS_485 Definition

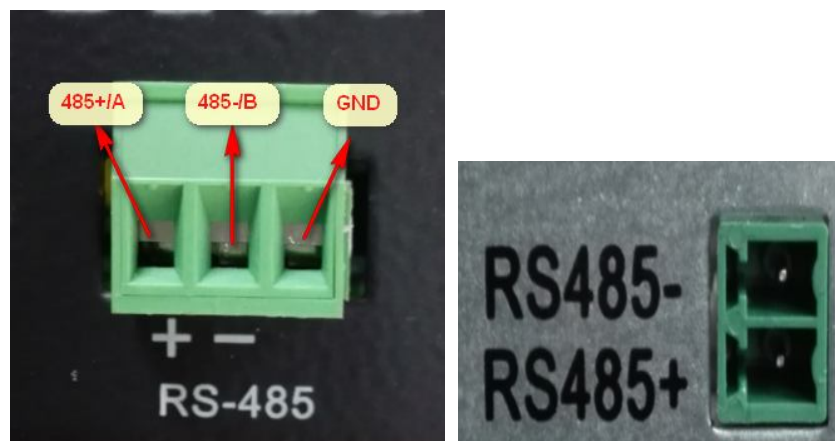
The 9 cores RS_485 interfaces definition is shown in Pic 1-5.



Pic 1-5. RS_485 definition

pin2--- 485+/A
pin3--- 485-/B
pin5 --- GND

The 3 pins and 2 pins pluggable terminal block definition are shown in Pic 1-6.

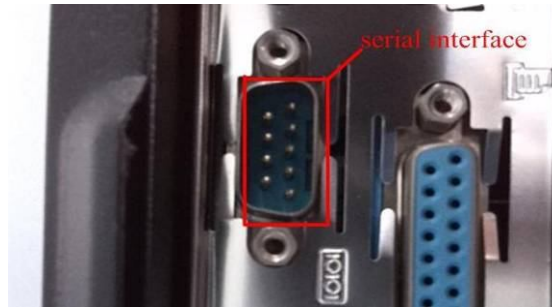


Pic 1-6. RS_485 definition

1.2 Connection between UPS and PC

1.2.1 RS_232 Connection of UPS- PC Monitoring System

As usual, the desktop computer's serial communication port as shown on Pic 1-7. There is no serial communication port on the notebook computer. The users need a USB-RS_232 cable and install relative drive program at PC, as shown on Pic 1-8.



Pic 1-7. Desktop computer serial communication port



Pic 1-8. USB-RS_232 cable and drive program

(1) To communicate with standard RS_232 cable

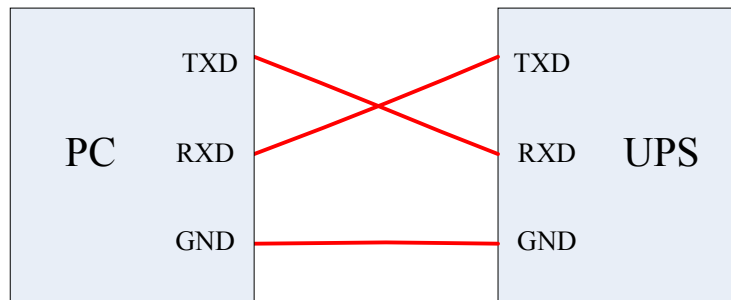
The standard RS_232 cable as shown on the Pic 1-9. As usual, computer's serial communication port is male type. If your UPS's serial communication port is also male type, you can connect the computer and UPS with a **crossed** double female terminal RS_232 cable. If your UPS's serial communication port is female type, you need a **directly connected** RS_232 cable with one male terminal and one female terminal.



Pic 1-9. RS_232 cable

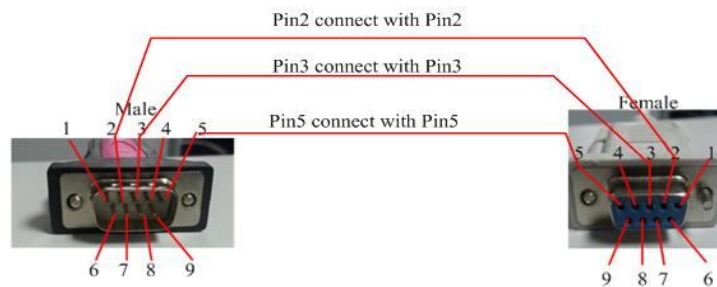
(2) To communicate with lead wire

The detailed way is shown on Pic 1-10:



Pic 1-10. PC RS_232 port to UPS RS_232 port

For example, if the PC RS_232 port is male type, UPS RS_232 is female type, the connection way is shown as below:



Pic 1-11. PC RS_232 port to UPS RS_232 port

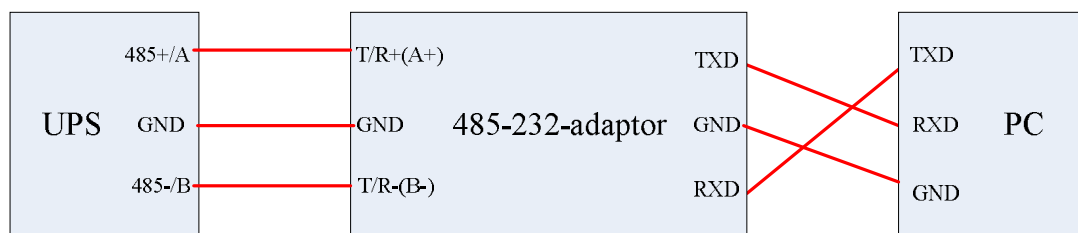
1.2.2 RS_485 Connection of UPS- PC Monitoring System

The connection of **UPS- PC monitoring system** is shown in Pic. 1-12.

1) Connect the **485-232 adaptor** to **485-port of UPS** using a customized serial cable, which is an accessory of UPS.

NOTE: Pins definition of this Serial cable is different from a normal one.

2) Connect the **serial port of PC** to **232 port of 485-232-adaptor** using a normal serial cable.



Pic 1-12. UPS and PC monitoring system connection

1.2.3 USB Connection of UPS- PC Monitoring System

RMX serie provide a USB interface, you can connect the computer and UPS with a standard USB cable.

2. Using UPS-Power-Monitor Software

2.1 Software Introduction

After Decompressing, the software can be used directly, need not install it. Please make sure that all 4 files should be put in the same directory, which are described as follows:

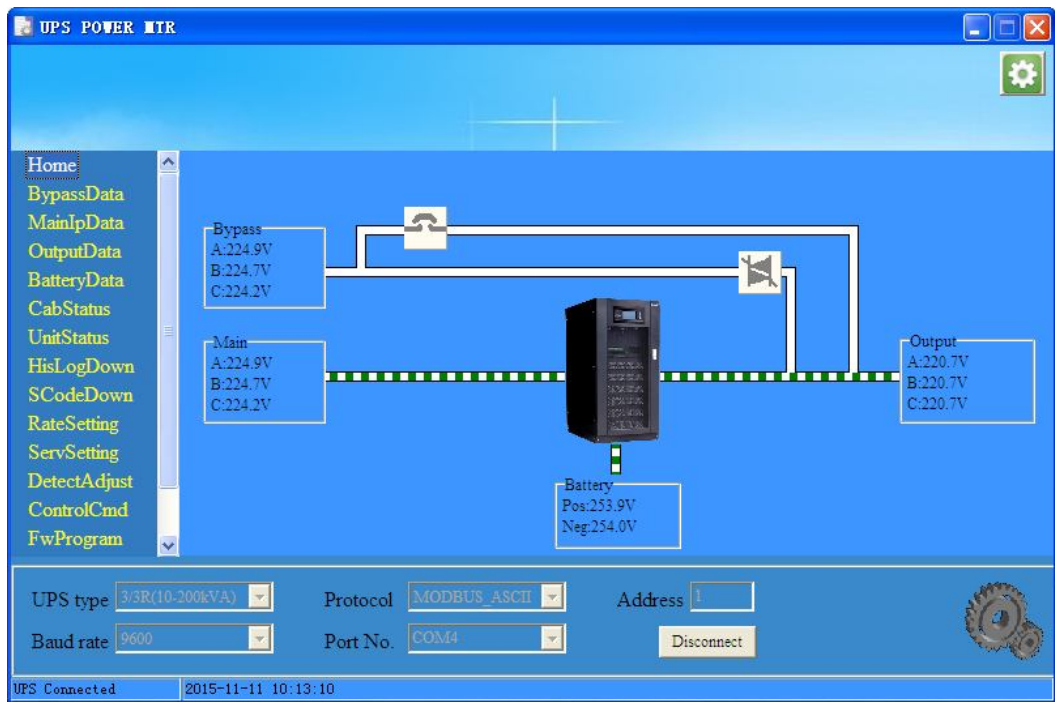
UPSPowerMTR.exe: Executable file

UPSPowerMTR.CHS: Language file

UPSPowerMTR.ENU: Language file

CLOSEAPP.EXE: Close application

As hardware connection finished, double click “UPS Power MTR.exe” to start it. Then Home is visible as shown in Pic 2-1. Left side of software window is **function selection menu**, right side is the **energy-flow-diagram**.



Pic 2-1. Home

2.2 UPS Setting on the LCD

It is necessary to set the UPS communication protocol as Modbus before using UPSPowerMTR. Different UPS have different LCD, the setting is also different, detailed way as below:



2.2.1 Color Touch Screen

Color touch screen display as shown on Pic 2-2, communication setting way as below:



Pic 2-2. Color touch screen display



a. Setting for RS_232:

Click the button , you will get setting manu, then click the button  to enter communication setting page, as shown on Pic 2-2, and set each item step by step:

- 1) RS_232 Protocol Selection: Modbus;
- 2) Baudrate: 9600 or any other value, but it must is the same as monitoring software;
- 3) Modbus Mode: ASCII or RTU, but it must is the same as monitoring software;
- 4) Modbus Parity: None;
- 5) Device Address: 1;

Then click , setting finished.

b. Setting for RS_485:

Click the button , you will get setting manu, then click the button  to enter communication setting page, as shown on Pic 2-2, and set each item step by step:

- 1) RS_232 Protocol Selection: SNT;
- 2) Baudrate: 9600 or any other value, but it must is the same as monitoring software;
- 3) Modbus Mode: ASCII or RTU, but it must is the same as monitoring software;
- 4) Modbus Parity: None;
- 5) Device Address: 1;

Then click , setting finished.

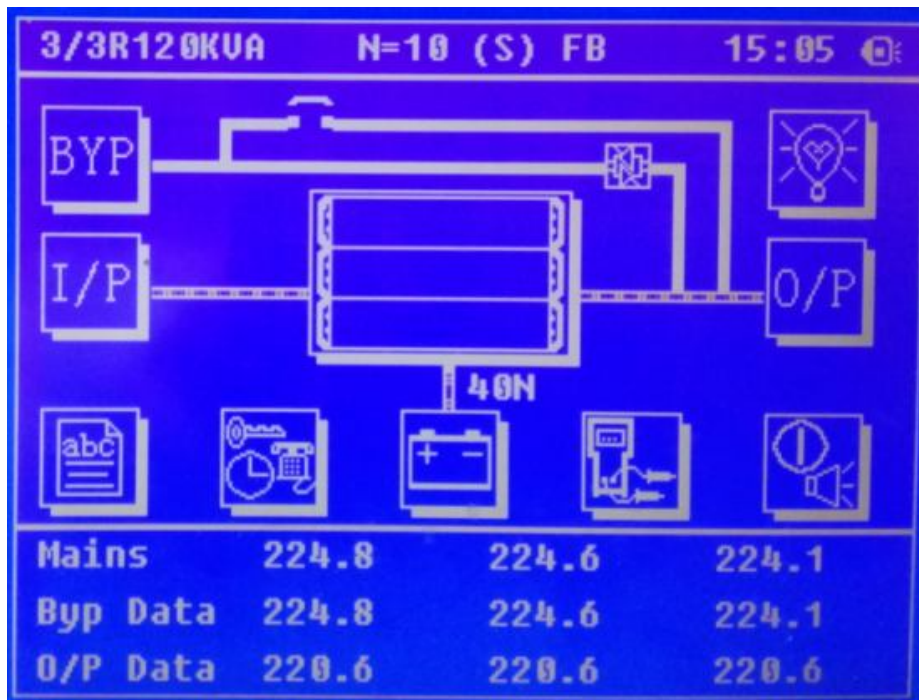
c. Setting for USB:

The setting method of USB communication in the same way with RS_485, so the setting method of RS_485 can be referred.

Note: USB and RS_485 cannot be used at the same time.

2.2.2 Monochrome Touch Screen

Monochrome touch screen display as shown on Pic 2-3, communication setting way as below:




Pic 2-3. Monochrome touch screen display


a. Setting for RS_232:

Note 1: UPS monitoring firmware version should be higher than 003.018.












Note 2: It is not allowed to use RS_232 and RS_485 at same time.

The UPS monitoring firmware version can be gotten by: click  first at LCD display home page, then click **SysInfo**, you will see it.

The detailed setting as below:

- 1) click  at the home page of UPS LCD display, then click **Comm Set**, then click **Modbus** to set communication protocol as "Modbus".
- 2) click **ProtoSet** to enter protocol setting manu;
- 3) click **Mode** to enter Modbus setting manu, then click **ASCII** to set Modbus communication mode as "ASCII" mode, you can also choose "RTU" mode, but it must be the same as monitoring software;
- 4) back to protocol setting manu, click **Address** to set Modbus device address as "1";
- 5) back to protocol setting manu, click **BaudRate** to set Modbus Baud rate as "9600", you can also choose other value, but it must be the same as monitoring software;
- 6) back to protocol setting manu, click **Parity** to set Modbus parity bit as "None".

b. Setting for RS_485:

- 1) click  at the home page of UPS LCD display, then click , then click  to set communication protocol as “Modbus”.
- 2) click  to enter protocol setting manu;
- 3) click  to enter Modbus setting manu, then click  to set Modbus communication mode as “ASCII” mode , you can also choose “RTU” mode, but it must is the same as monitoring software;
- 4) back to protocol setting manu, click  to set Modbus device address as “1”;
- 5) back to protocol setting manu, click  to set Modbus Baud rate as “9600”, you can also choose other value, but it must is the same as monitoring software;
- 6) back to protocol setting manu, click  to set Modbus parity bit as “None”.
- 7) click , back to protocol choose page, click  to set current RS_232 communication protocol as “SNT”.

c. Setting for USB:

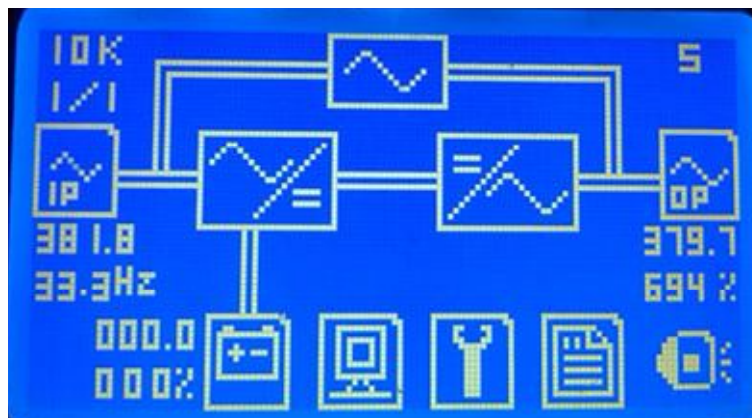
The setting method of USB communication in the same way with RS_485, so the setting method of RS_485 can be referred.

Note:

- 1. USB and RS_485 cannot be used at the same time.**
- 2. Only RMX series have USB interface.**

2.2.3 Small LCD


The LCD display as shown Pic 2-4:




Pic 2-4 Small LCD

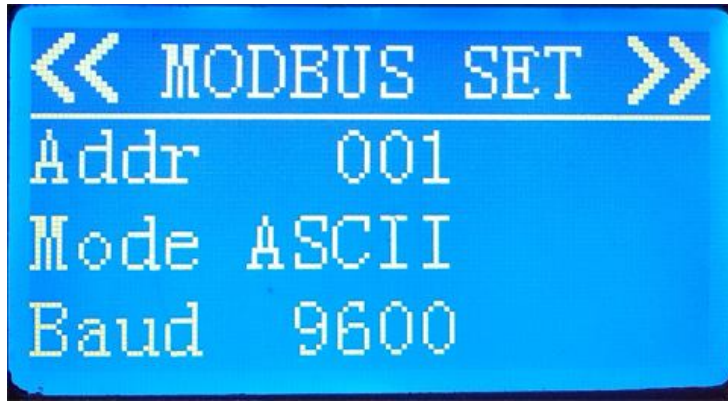
Note 1: Your UPS rectifier version must be advanced than Version 001.001 when using RS_232.

Note 2: Port RS_485 is forbidden to use when using RS_232.

Select  icon in the main display interface of UPS LCD, then enter “Version” interface, then you will see UPS REC version.

a. The way to set Port RS_232 of UPS as below:


- 1) Select  icon in the LCD of UPS to enter “COMM. SET” interface;
- 2) In the “COMM. SET” interface, set current communication protocol to “ModBus”;
- 3) In the “MODBUS SET” interface, set Modbus communication mode to “ASCII” or “RTU”, set device address to “1”, set baud rate to “9600” or other, as shown on Pic 2-5:



Pic 2-5 Modbus Setting

b. The way to set Port RS_485 of UPS

The way to set Port RS_485 of UPS as below:

- 1) Select  icon in the LCD of UPS to enter “COMM. SET” interface;
- 2) In the “COMM. SET” interface, set current communication protocol to “SNT”;
- 3) In the “MODBUS SET” interface, set Modbus communication mode to “ASCII” or “RTU”, set device address to “1”, set baud rate to “9600” or other, as shown on Pic 2-5:

Note: No RS_485 interface on the HT31 10~20kVA and HT11 6~20kVA UPS.

2.2.4 1/1T (1-3KVA) series Setting


1/1T (1-3KVA) UPS LCD display as shown on Pic 2-6:



Pic 2-6. 1/1T (1-3KVA) LCD Display

Setting for RS_232 interface of 1/1T (1-3KVA) UPS

1) Press “ON/OFF” and “FUNC” at same time for 5 seconds, then will enter UPS function setting manu;

2) Press “ON/OFF” to select , press “FUNC” to modify the number to be “0CC”, it means that the current communication protocol is “Modbus”.

Note: No RS_485 interface on 1/1T (1-3KVA) UPS.

2.3 UPS Power MTR communication setting

To start monitor UPS, UPS type, Protocol, Address, Baud rate, Serial port number need be set correctly, Click the button “**Connect**” to make the software communicate with UPS.

After a few seconds, if hardware connection and the software setting are correct, status bar at the bottom of the window should display “**UPS connected**”, as shown in Pic 2-7. If not, please check hardware and your setting.

When connected, clicking the button ‘disconnect’ will make the software disconnect with UPS.

Some settings are as follows:

UPS type: Auto or choose a type according to your UPS. (Note, same old UPS do not support auto choose)

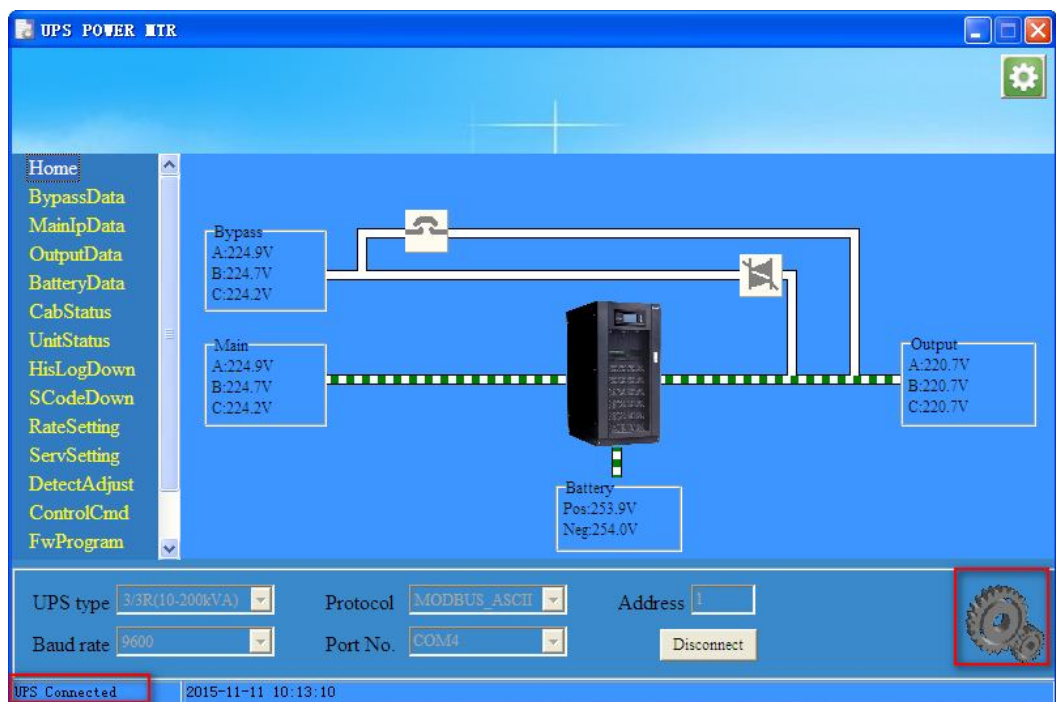
Baud rate: Auto , you can also choose other value, but it must is the same as UPS

Protocol: MODBUS_ASCII or MODBUS_RTU, it must is the same as UPS

Address: 1

Note 1: “UPS type” must be set correctly.


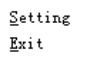
Note 2: The software can scan serial port numbers of computer. If there is only one serial port for computer, no need to choose.

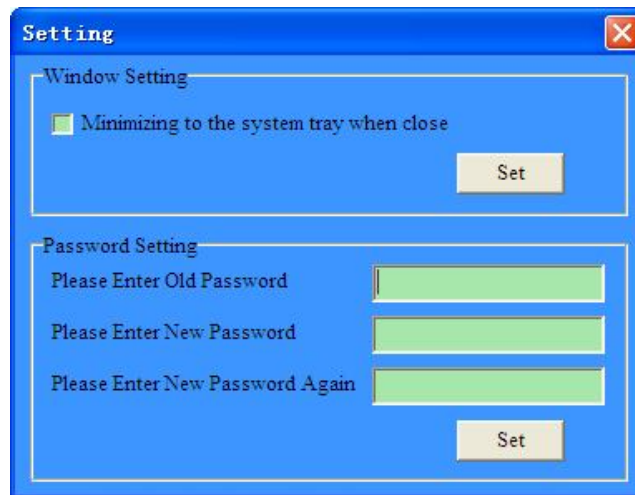


Pic 2-7. UPS connected

Once UPS is connected, UPS status and data are shown on PC. Clicking the menu items on the left side of the window, corresponding data will be shown.

2.4 UPS Power MTR system setting

Click the button  at the top-right corner of UPS Power MTR or right click system tray icon and choose 'Setting' , then a system setting dialog will popup, as shown in Pic 2-8. In this dialog, you can set the action when click close button, and you also can set the password if you like, the initial password is 12345678.

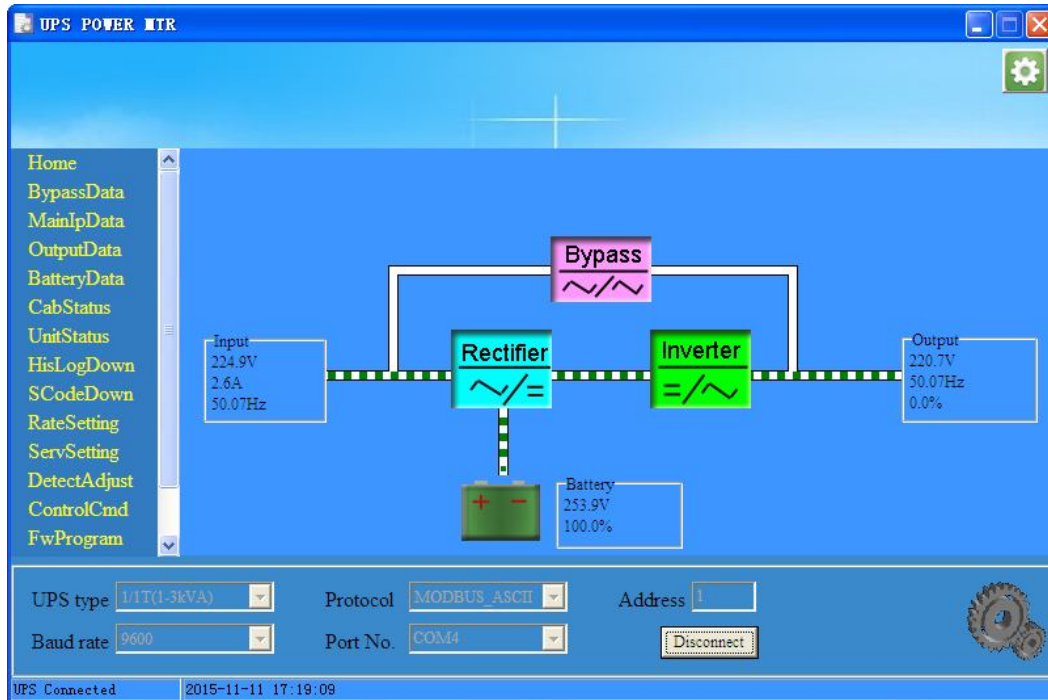


Pic 2-8. Setting

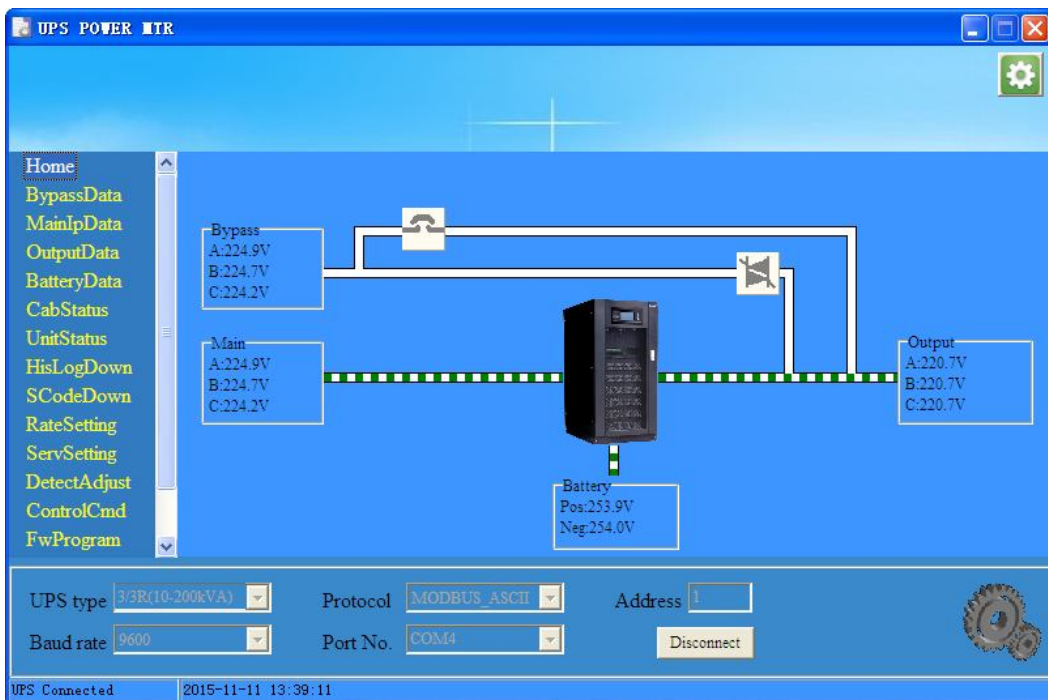
3 Function selection menu

3.1 Home

Home Page display the **energy-flow-diagram** and informations of main input voltage, bypass voltage, output voltage and battery voltage. The interface appears to be two different types according to the UPS model selected. Type A with 1/1T(1-3KVA)、1/1T (6-20KVA)、3/1T (10-20KVA) selected as is shown in Pic.3-1; Type B with other type selected as is shown in Pic.3-2.



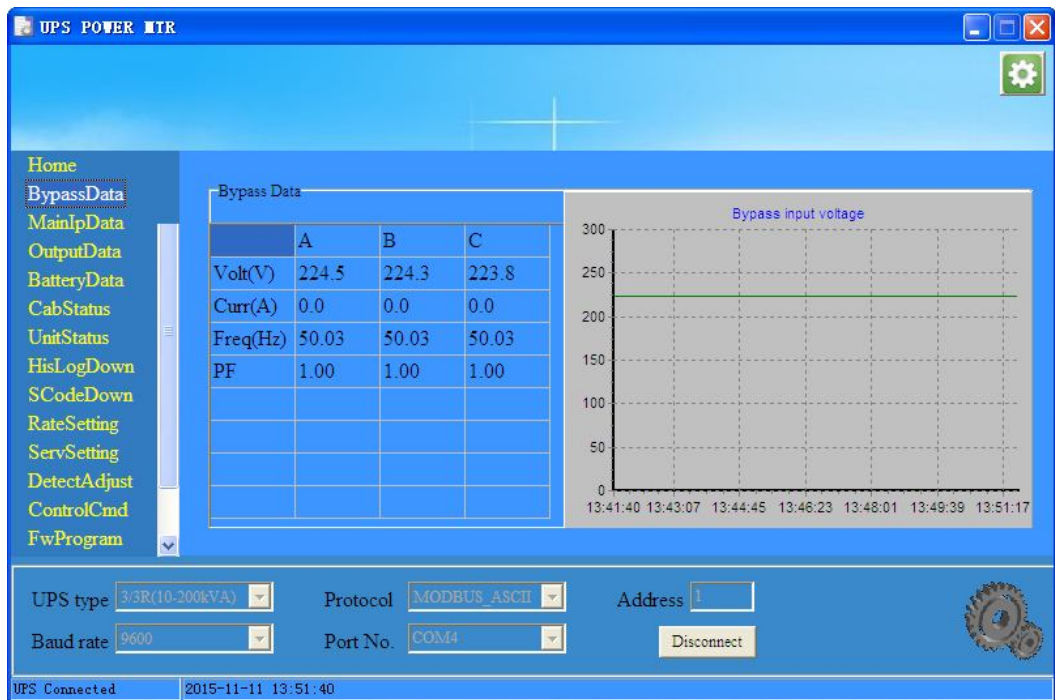
Pic.3-1 Homepage-Type A



Pic.3-2 Homepage-Type B

3.2 BypassData

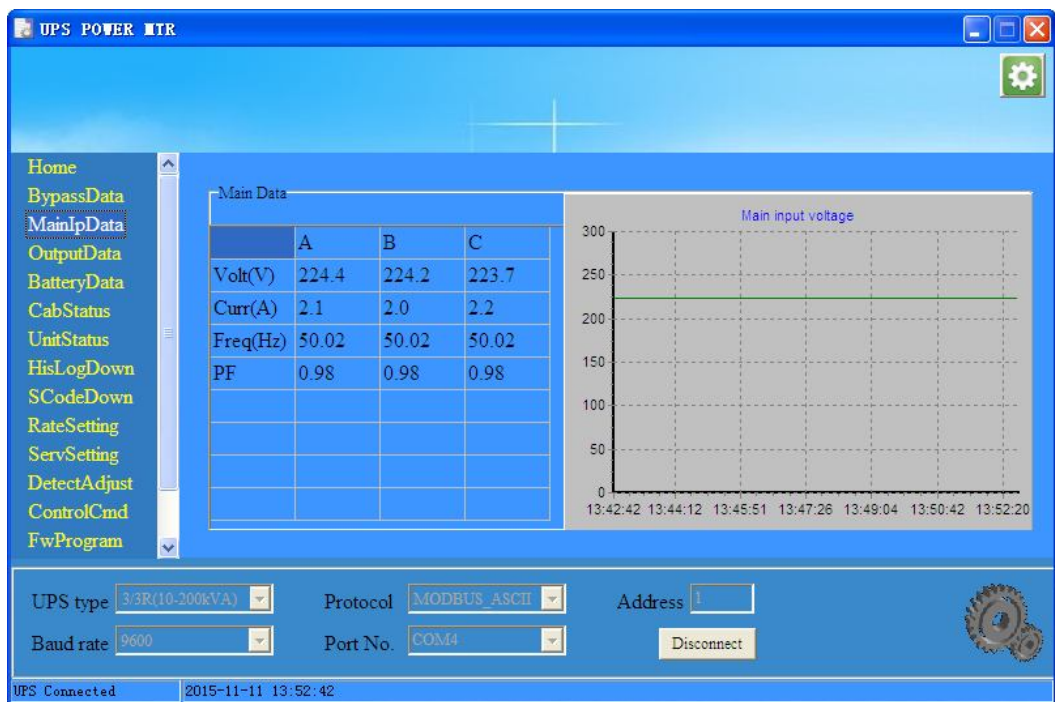
This page is to show the data of **UPS bypass input**, including voltage, current, frequency and power factor, as shown in Pic.3-3.



Pic.3-3 Bypass Data

3.3 MainIpData

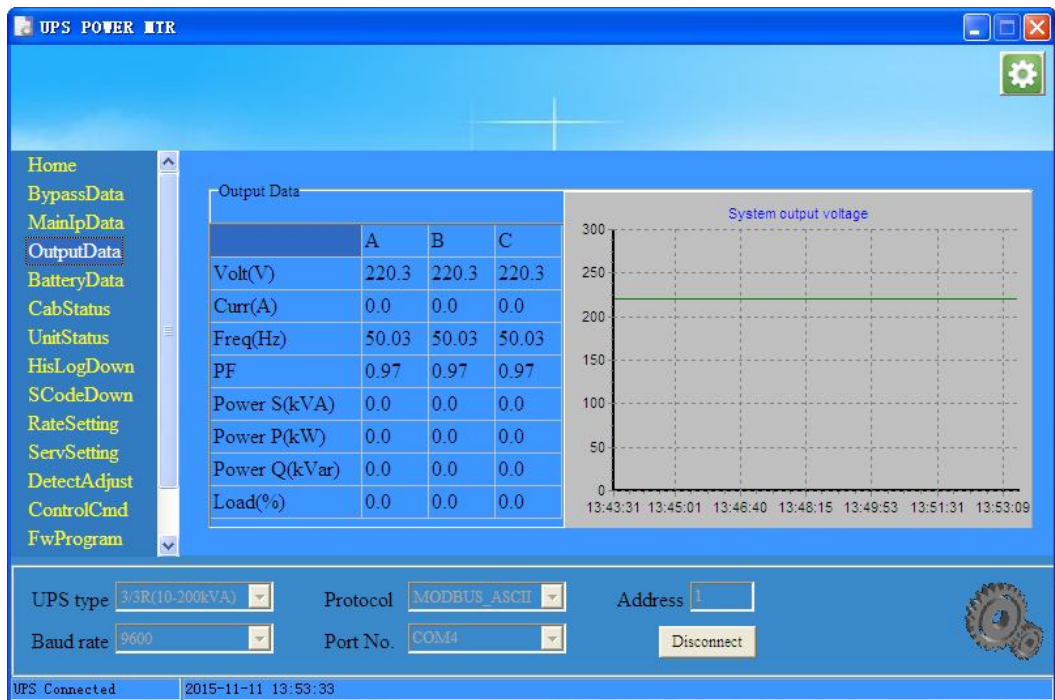
This page is to show the data of **UPS main input**, also including voltage, current, frequency and power factor, as shown in Pic.3-4.



Pic.3-4 Main Input Data

3.4 OutputData

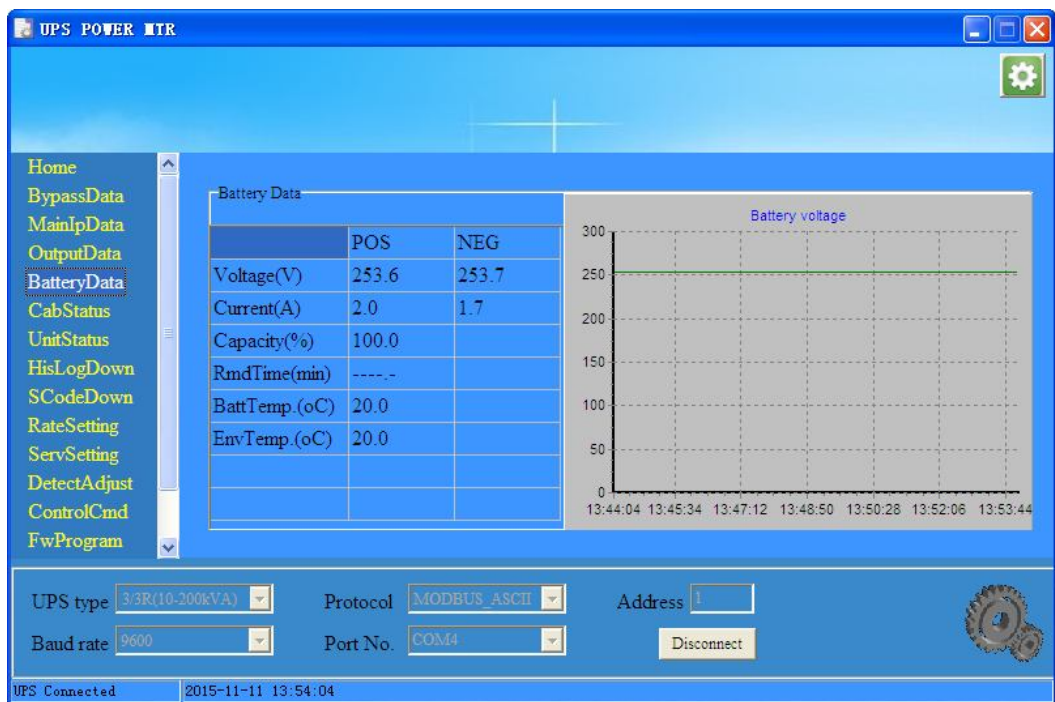
This page is to show the data of **UPS output**, including voltage, current, frequency, power factor, power, and load percents, as shown in Pic.3-5.



Pic.3-5 Output Data

3.5 BatteryData

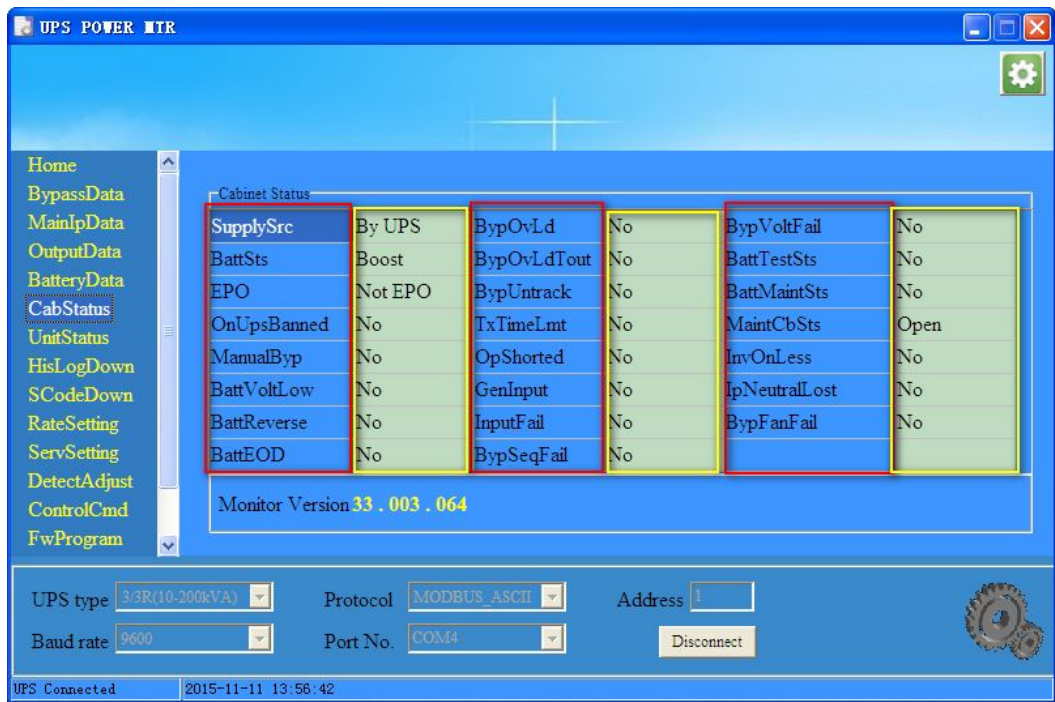
This page is to show the data of **UPS Battery**, including voltage, charge/discharge current, capacity and remind time. The capacity and remind time data are effective when UPS is discharge, as shown in Pic.3-6.



Pic.3-6 Battery Data

3.6 CabStatus

This page is to show the status for the cabinet. As is shown in Pic 3-7, the description in the yellow frame indicate the status listed in the red frame. Take the first row as an example, the 'By UPS' in the yellow frame indicate the power supply source is UPS.



Pic.3-7 Cabinet Status

Cabinet status items explanation:

Display Items	Means
SupplySrc	System power supply source. Available states: None, By UPS, Bypass.
BattSts	The work status of battery. Available states: Not Work, Float, Boost, Discharge.
EPO	Emergency power off. Available states: Not EPO, EPO.
OnUpsBanned	Whether UPS power on is banned. Available states: No, Yes.
ManualByp	Whether Manual switch to bypass occurred. Available states: No, Yes.
BattVoltLow	Whether battery voltage is low. Available states: No, Yes.
BattReverse	Whether battery reverse. Available states: No, Yes.
BattEOD	Whether battery End Of Discharge occurred. Available states: No, Yes.
BypOvLd	Whether bypass over load. Available states: No, Yes.
BypOvLdTout	Whether bypass over load timeout. Available states: No, Yes.
BypUntrack	Whether bypass frequency untrack occurred. Available states: No, Yes.
TxTimeLmt	Whether the times of tranlate to bypass reach its limit. Available states: No, Yes.
OpShorted	Whether Output shorted occurred. Available states: No, Yes.
GenInput	Whether generator input. Available states: No, Yes.
InputFail	Whether input fail occurred. Available states: No, Yes.
BypSeqFail	Whether bypass sequence fail. Available states: No, Yes.
BypVoltFail	Whether bypass voltage fail. Available states: No, Yes.
BattTestSts	Battery test status. Available states: No, Ok., Fail, Testing
BattMaintSts	Battery maintain status. Available states: No, Ok., Fail, Maintaining



MaintCbSts	Maintain CB statu. Available states:Open, Close.
InvOnLess	Whether Inverter Ready Capacity Less. Available states: No, Yes.
IpNeutralLost	Whether input neutral lost. Available states: No, Yes.
BypFanFail	Whether bypass fan fail. Available states: No, Yes.

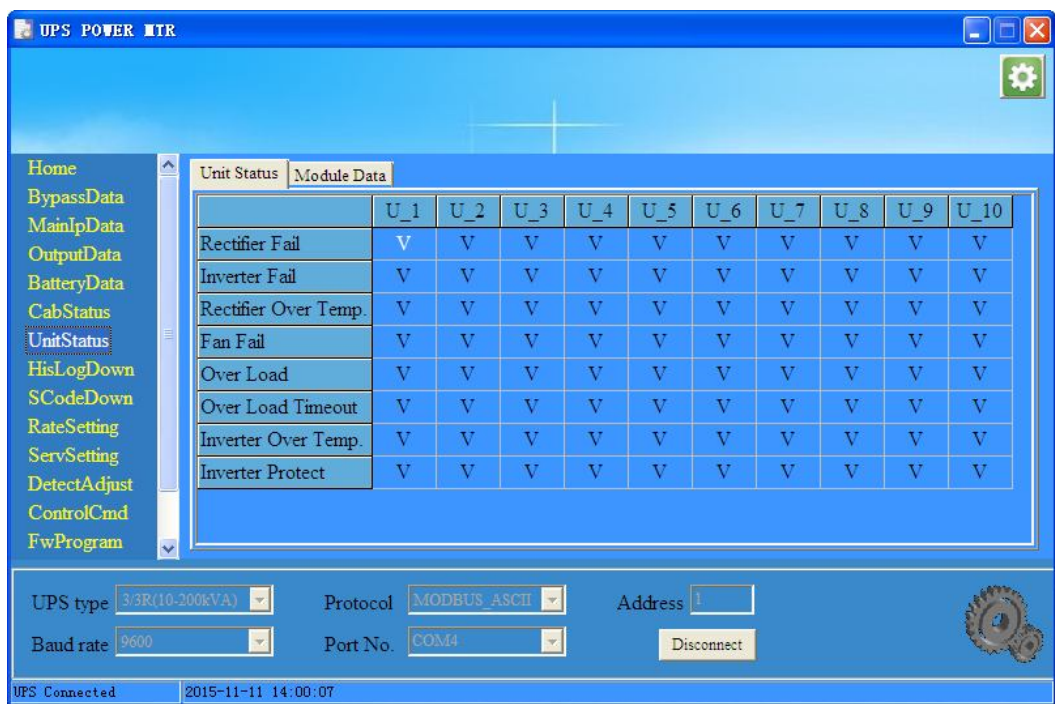
3.7 UnitStatus

This page has two display modes: Dynamic Mode and Static Mode. The monitor software detects the mode automatically when it is connected to the UPS. The software will into Dynamic Mode if it be supported by your UPS, otherwise it will into the Static Mode. The Static Mode is used as compatibility for the old version.

3.7.1 Dynamic Mode

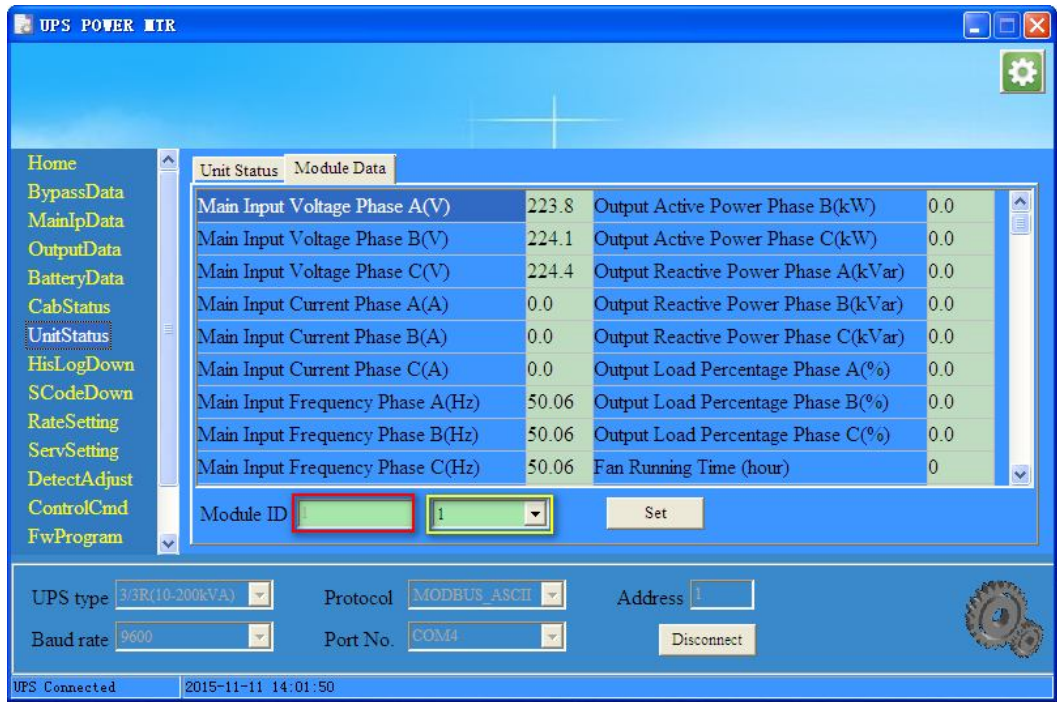
The Dynamic Mode interface is shown in Pic 3-8. By clicking the tab button of ‘Unit Status’ and ‘Module Data’, users can see the status information and analog value of the online module respectively.

The ‘Unit Status’ page can up to show 30 modules. By dragging the horizontal scroll bar, user can view all the information of the modules. For the mark, the “” indicates the normal operation; the mark”” indicates fault occur.






Pic3-8 Status Unit of Dynamic Mode

The “Module Data” displays the analog value of the current selected module As is shown in Pic 3-9,the number in the red frame is the selected module. By pulling-down menu in the yellow frame and confirm click, users can change the information displayed for different module.

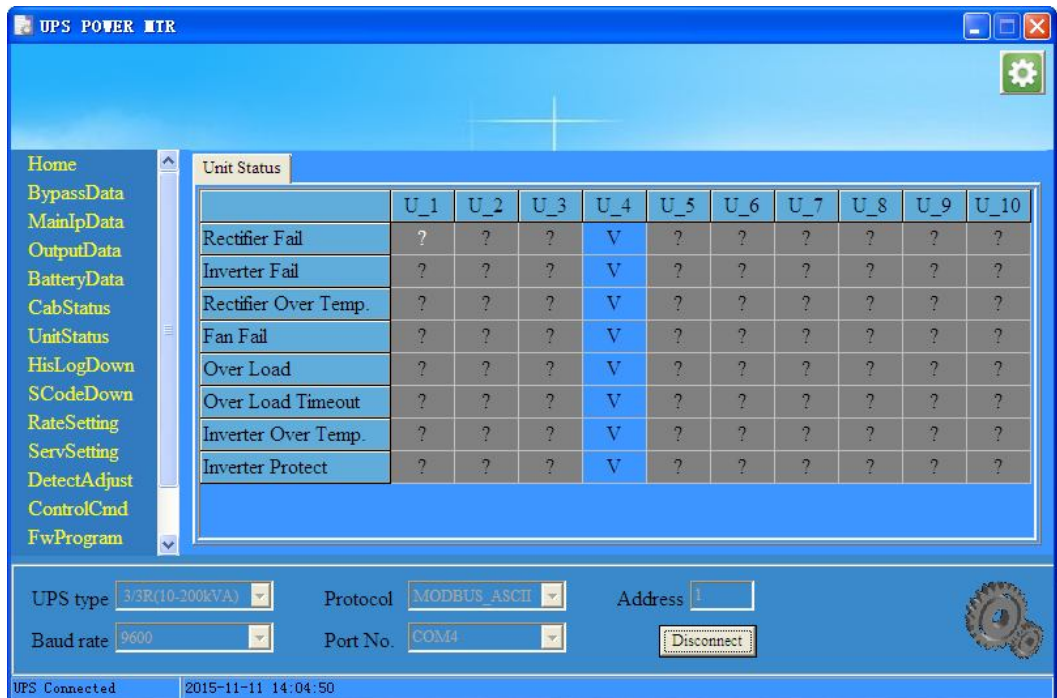


Pic 3-9 Module Data

3.7.2 Static Mode

In Static Mode, only “Unit Status” is available with maximum of 10 modules supported. As shown in Pic 3-10, the mark “” means the unit is normal; the mark “” means a fault occur; the mark “”, indicates unit is not online.

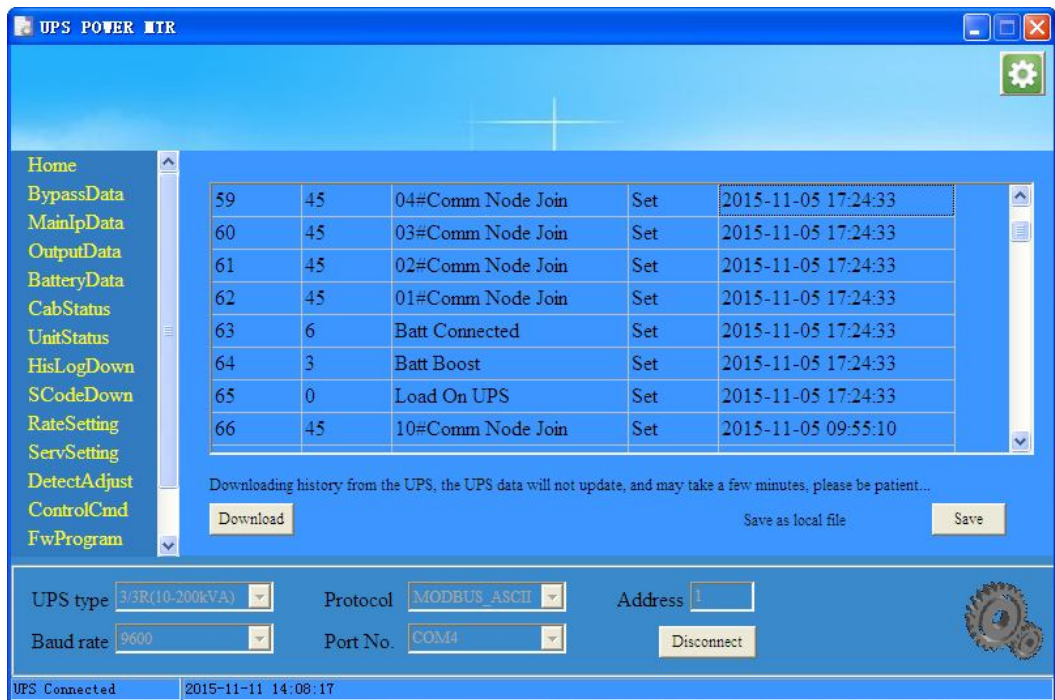
Note: HT series be regarded as unit 1.



Pic 3-10 Unit Status

3.8 Hislog Down

UPS history log can be downloaded to PC in this page. Click 'Download' to download history log from UPS which then would be displayed on PC. Click 'Save' to save history log to PC as a file. It's shown in Pic.3-11.



Pic.3-11 Hislog Down

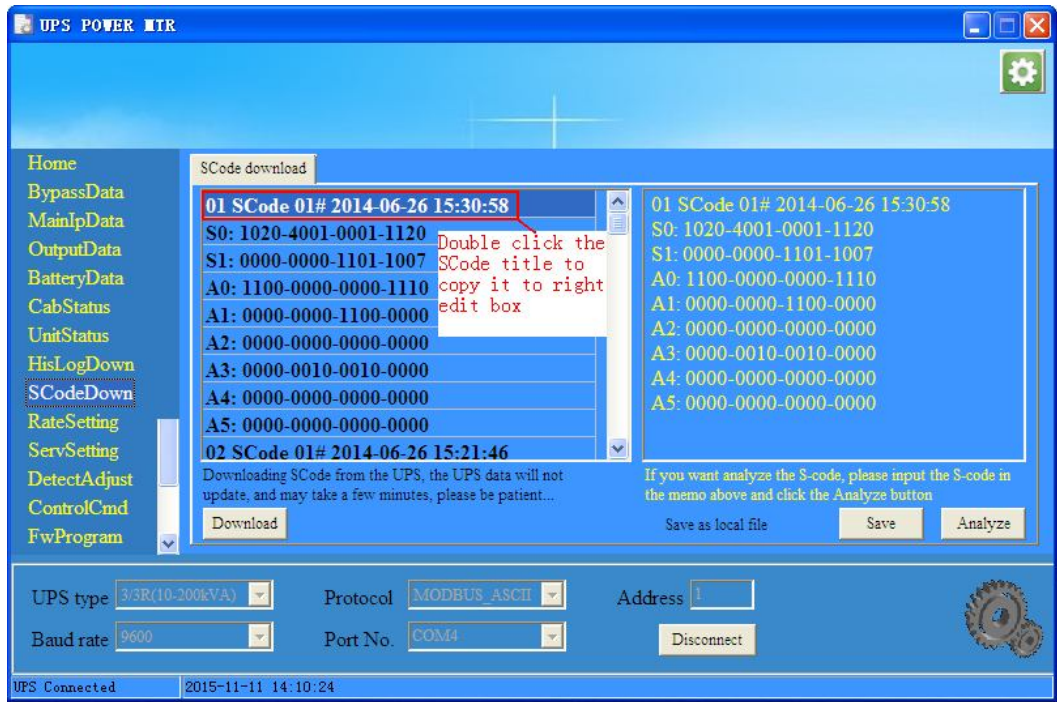
3.9 SCodeDown

"SCode download" interface is shown in Pic 3-12. The SCode can be downloaded to the grid on the left by simply clicking the "Download" button, and click "Save" to save the SCode to the local computer.

If you want to analyze the SCode that was download from UPS, you can input it to the box on the right and click the button "Analyze" then the "Analyze dialog window" will show as Pic3-13.

There are three methods to input the SCode into the SCode box :

- Double-click the SCode title on the left, the SCode will be copy to the SCode box, as shown in Pic 3-12.
- Save the SCode to the local file and copy it to the SCode box.
- Directly type the SCode to the SCode box, make sure the format is as same as the one on the left box.



Pic 3-12 Scode Download

“Analyze dialog window” as shown in Pic 3-13, the failure will be shown in red in order to attract attention. For the mark ?, it means the parameter is not detected, the mark X it indicates the data is out of range.

SCode Analyze			
1		Output Power Source	UPS
2	1	Rectifier Status	OFF
3		Inverter Status	Normal Work
4		Bypass Status	Abnormal
5		Battery Status	Discharging
6	2	Input CB Status	Open
7		Bypass CB Status	Open
8		Output CB Status	Close
9	3	Maintenance CB Status	Open
10		Postive Battery String CB Status	Open
11		Negative Battery String CB Status	Open
12	4	Postive Battery String Connect Status	Connect
13		Negative Battery String Connect Status	Connect
14		Inverter On Allow Status	Disable
15		Inverter Working Status	Supplying
16		Generator Connect Status	Disconnect
17		Service Mode	No
18		Inverter Ready Capacity	Enough

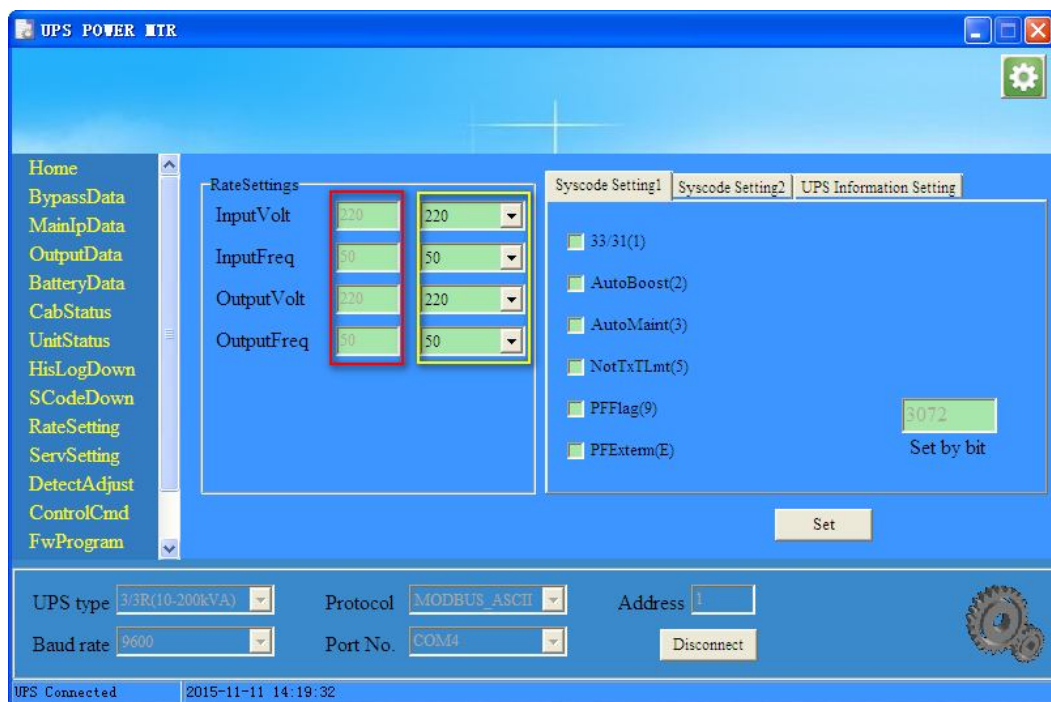
Pic 3-13 Scode analyze

3.10 RateSetting

“RateSetting” page is for factory use. A password is needed for the access to the page.

3.10.1 RateSettings

“RateSettings” menu can set the rated system voltage and frequency. The values in red rectangle are currently used by UPS, while in yellow rectangle are the new values to be set. Click button “set” can save the data to the UPS, as is shown in Pic.3-14.



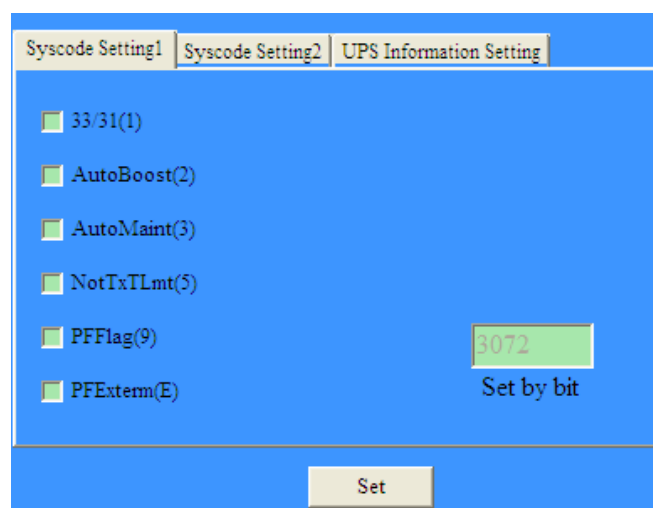
Pic 3-14 RateSetting

The items are described as follows:

Contents	Description
InputVolt	The system rated input voltage(V)
InputFreq	The system rated input frequency(Hz)
OutputVolt	The system rated output voltage(V)
OutputFreq	The system rated output frequency(Hz)

3.10.2 Syscode setting 1

The syscode setting 1 is set by bit. Different bit may has different meaning to different model of UPS. Users can check or uncheck the checkbox and click “Set” to save the setting to the UPS. As is shown in Pic3-15.



Pic3-15 Syscode setting1

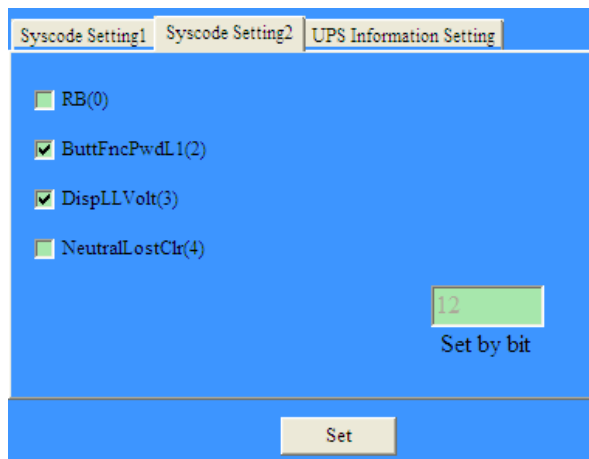
System code is set by bit, described as follows:

Setting items	Choose (1)	Not choose (0)															
AutoBoost:	Enable battery auto boost	Disable battery auto boost															
AutoMaint:	Enable battery auto maint	Disable battery auto maint															
NotTxTLmt:	Not limit switch to bypass times	Limit switch to bypass times(5s per hour)															
FreqSelfAdpt:	Enable frequency self adaptive function	Disable frequency self adaptive function															
PFflag:	Combine with PFExterm to set PF. <table border="1"> <thead> <tr> <th>PFflag</th><th>PFExterm</th><th>PF</th></tr> </thead> <tbody> <tr> <td>0</td><td>0</td><td>0.8</td></tr> <tr> <td>0</td><td>1</td><td>0.7</td></tr> <tr> <td>1</td><td>0</td><td>0.9</td></tr> <tr> <td>1</td><td>1</td><td>1</td></tr> </tbody> </table>	PFflag	PFExterm	PF	0	0	0.8	0	1	0.7	1	0	0.9	1	1	1	
PFflag	PFExterm	PF															
0	0	0.8															
0	1	0.7															
1	0	0.9															
1	1	1															
PFExterm:	See PFflag	See PFflag															
InvAutoStart:	Enable Inverter auto start	Disable Inverter auto start															
NoBattExistChk:	Do not check battery if exist	Check battery if exist															
FanFullSpeed:	Fan full speed run	Fan run normally															
Transformer:	With transformer mode	No transformer mode															
FanLow:	Fan low speed run	Fan run normally															
Generator:	Enable generator mode	Disable generator mode															
DisBattSocEn:	Display battery remaining capacity	Not display battery remaining capacity															

Note: Different UPS mode has different system code.

3.10.3 Syscode setting 2

The syscode setting 2 is set by bit. Different bit may has different meaning to different model of UPS. Users can check or uncheck the checkbox and click “Set” to save the setting to the UPS. As is shown in Pic3-15.



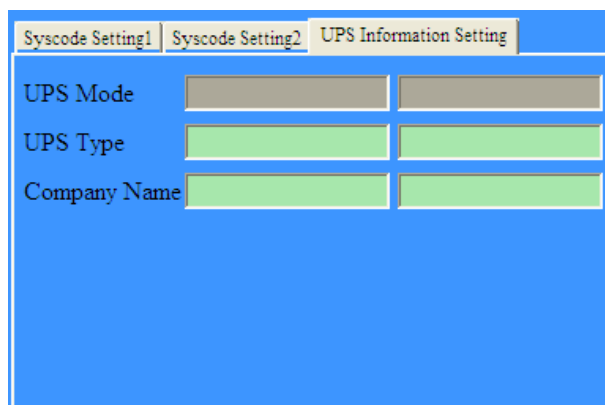
Pic 3-16 Syscode setting 2

System code is set by bit, described as follows:

Setting items	Choose (1)	Not choose (0)
RB:	Set UPS mode as RB	Not RB mode
ButtFncPwdL1:	Set monochrome touch LCD function page password for 1 level	Set monochrome touch LCD function page password for 2 level
DispLLVolt:	Display line voltage	Not display line voltage
NeutralLostClr:	Neutral line lost auto clear faults	Normal logic
EpoNormClose:	Epo terminal normal close	Epo terminal normal open
PFFExterm:	See System code 1 PFFlag	See System code 1 PFFlag

3.10.4 UPS information setting

The UPS information setting include : UPS Mode , UPS Type, Company Name, as is shown in Pic3-17. You can set the UPS Type and Company Name by input it in right edit, then click set button.



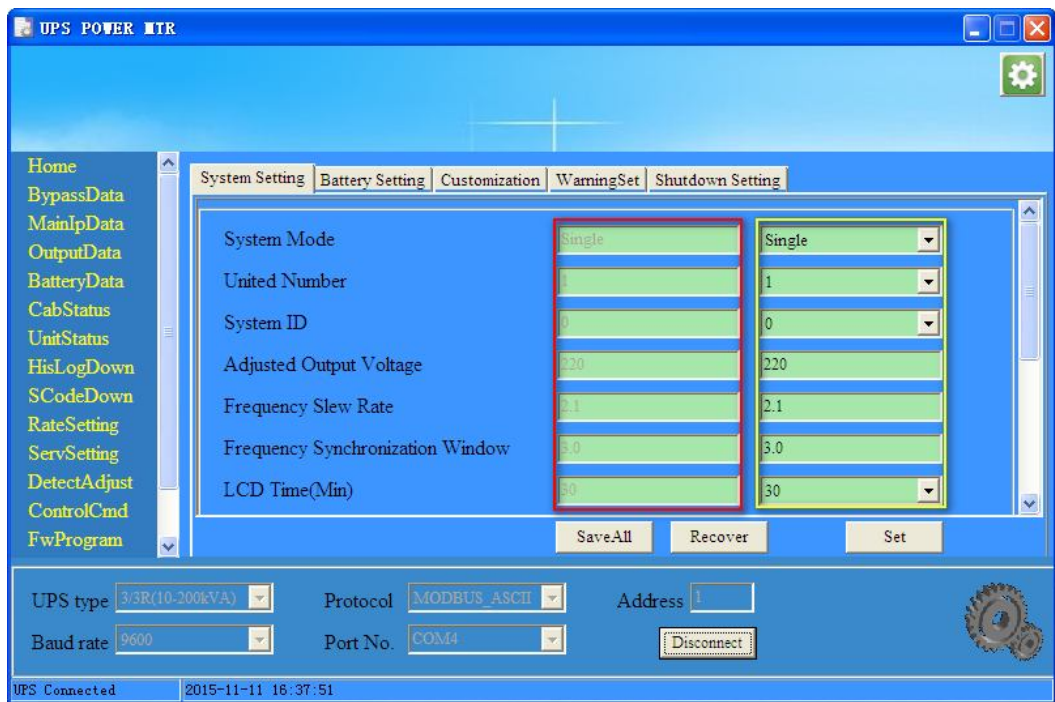
Pic 3-17 UPS information setting

3.11 ServSetting

In the “ServSetting” menu, a password is needed before entering. The submenu “System Setting”, “Battery Setting”, “Customization”, “DryContactSet” are for factory use, the “Warning Set” and “Shutdown setting” are for customer use.

3.11.1 System Setting

“System Setting” interface is shown as Pic3-18. The values in red rectangle are currently used by UPS, while in yellow rectangle are the new values to be set. Click “Set” to send new values to UPS. In the system Settings page, click the “SaveAll” button can save all the data and setting to the local disk, also the data can be restored to the monitoring software from the local disk by clicking the “Recover”.



Pic 3-18 System Setting

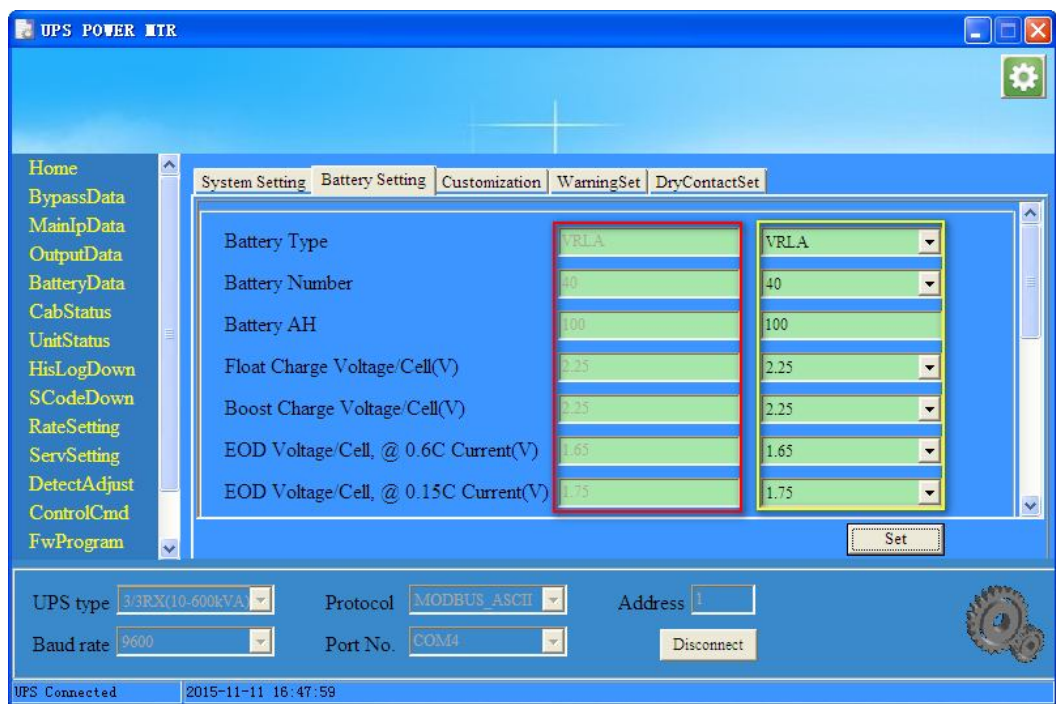
The items of System Setting are described as follows(Different UPS type may have different items):

Setting item	Description
System Mode	Set the running mode of UPS
United Number	Set the number of UPS in parallel system
System ID	Set the ID of UPS in parallel system
Adjusted Output Voltage	Adjusted output voltage, Unit: V
Frequency Slew Rate	Slew rate of track, Unit: Hz/s
Frequency Synchronization Window	Frequency Synchronization window, Unit: Hz
LCD Time(Min)	Set LCD backlight time, Unit: Min
Logo Show Time(s)	Set logo page show time
Redundant Module Number	Set the number of N+X redundant module
Bypass Voltage UP Limited (%)	Set bypass voltage up limited
Bypass Voltage Down Limited (%)	Set bypass voltage down limited
Bypass Frequency Limited (Hz)	Set the range of frequency fluctuation, Unit: Hz
Battery Transfer to Main Delay(s)	Set the delay time from battery transfer to main

System Auto Start Mode After EOD	Set system auto start mode after EOD
Aging Current(%)	Used in Aging mode to set aging current
Fan Speed 3 Level Enable	Enable or disable fan speed 3 level
Allow Lost Phase Work	Enable or disable UPS lost phase work
Temperature Rist Limit Level	Set temperature rist limit level
Inlet Temperature Level	Set inlet temperature level
Motor Mode	Enable or disable motor mode
Ftrequency Convertor Mode	Enable or disable ftrequency convertor mode
Bypass Backfeed Protected Enable	Enable or disable bypass backfeed protected
Input Overvolt Fast Check Enable	Enable or disable input overvolt fast check
Charger Fail Alarm Enable	Enable or disable charger fail alarm
Module Fan Maintenance Period	Set the maintenance period of module fan
Bypass Fan Maintenance Period	Set the maintenance period of bypass fan
Module Capacitor Maintenance Period	Set the maintenance period of module capacitor
Generator In Charger Off Enable	Set if disable charger when generator switch in
System Time	Set system time

3.11.2 Battery Setting

“Battery Setting” interface is shown in Pic3-19, The values in red rectangle are currently used by UPS, while in yellow rectangle are the new values to be set. Click “Set” to send new values to UPS.



Pic3-19 Battery Setting

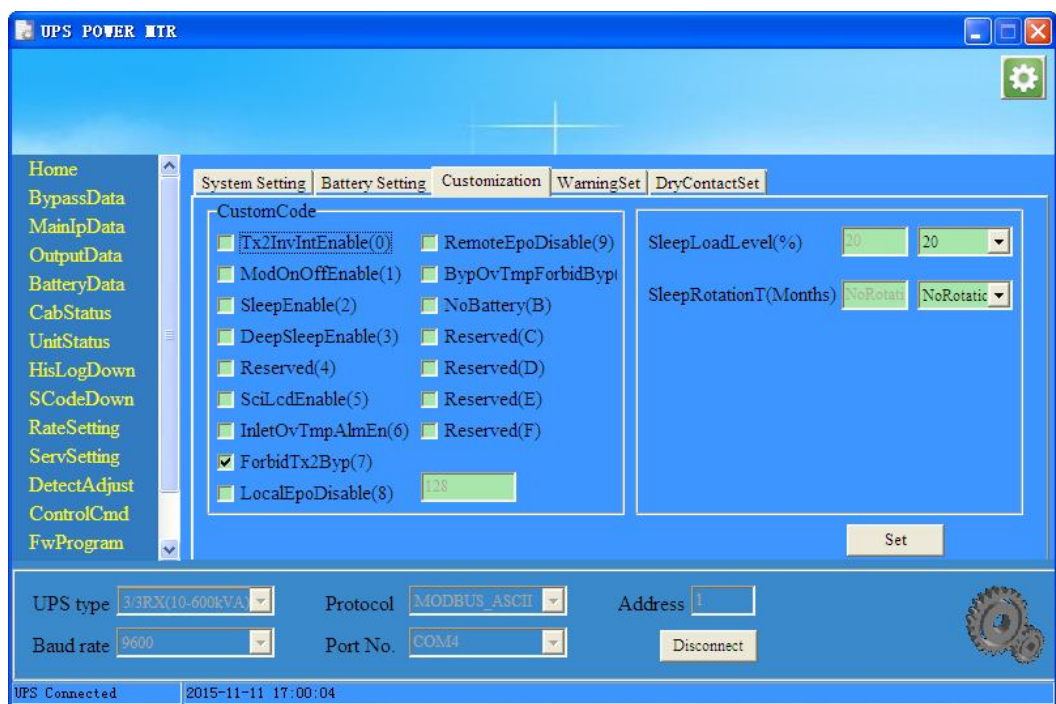
The items of Battery Setting are described as follows(Different UPS type may have different items):

Setting item	Description
Battery Type	Set the type of battery used by your UPS
Battery Number	Set battery number
Battery AH	Set battery AH
Float Charge Voltage /Cell(V)	Set the float charge voltage of battery cell

Boost Charge Voltage/Cell(V)	Set the boost charge voltage of battery cell
EOD Voltage/Cell, @ 0.6C Current(V)	EOD voltage of Battery cell at 0.6c
EOD Voltage/Cell, @ 0.15C Current(V)	EOD voltage of Battery cell at 0.15c
Charge Current Percent Limit %	Set charge current limit
Battery Temperature Compensate	Battery temperature compensate, unit: mV/°C
Boost Charge Time Limit	Boost charge time limit, unit: hour
Auto Boost Period	Auto boost period, unit: hour
Auto Maintenance Discharge Period	Auto maintenance discharge period, unit: hour
Deep Discharge Time	Deep discharge time, unit: hour
No Battery Detect Period	No battery detect period, unit: minute
No Battery Detect Time	No battery detect time, unit: minute
Battery Maintenance Period	Battery maintenance period, unit: day
Critical Battery Temperature	Critical battery temperature, unit: °C
Critical Battery Ambient Temperature	Critical battery ambient temperature, unit: °C
Battery Backup Time	Battery backup time, unit: minute

3.11.3 Customization

“Customization” interface is shown in Pic3-20. The CustomCode on the left is set by bit, check or uncheck the box and click the “Set” button can send the data to the UPS; CustomCode on the right set the load level and rotation time of sleeping and waking.



Pic3-20 Customization

Items	Checked	Unchecked
Tx2InvIntEnable	Enable interrupt transfer to inverter	Disable interrupt transfer to inverter
ModOnOffEnable	Enable module power on/off	Disable module power on/off
SleepEnable	Enable sleep	Disable sleep
DeepSleepEnable	Enable deep sleep	Disable deep sleep
KoreaEco	Enable KoreaEco(Korea nonstandard)	Disable KoreaEco

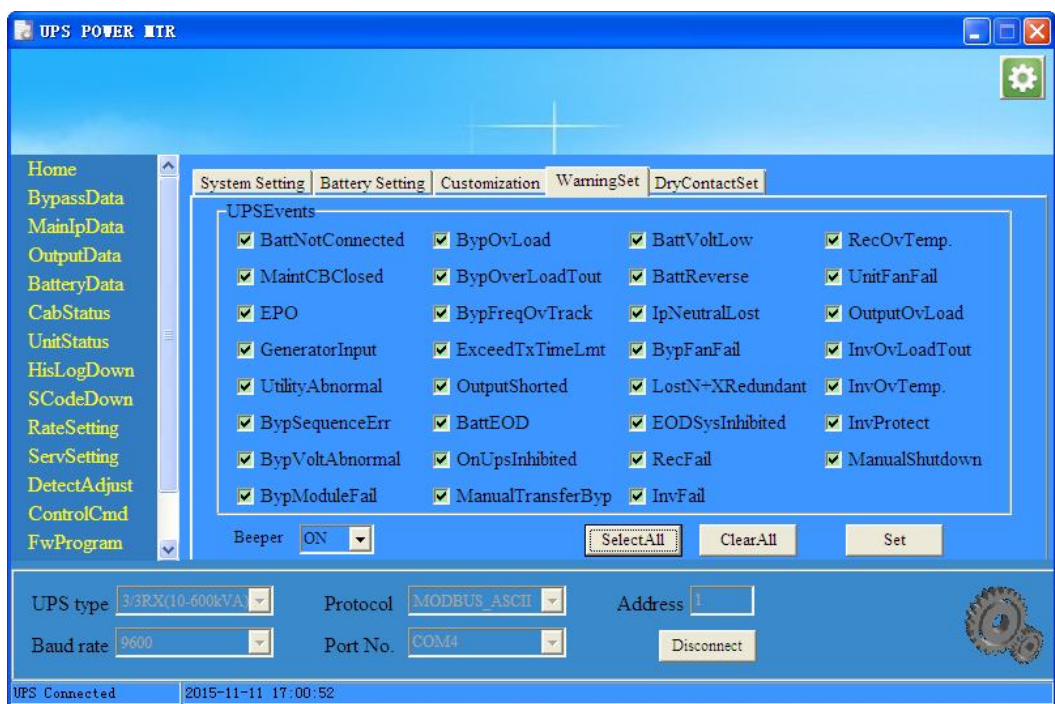
SciLcdEnable	Configure Lcd as serial port screen	Configure Lcd as blue and white screen
2PhasOut	Enable two phase output	Disable two phase output
usedAsOne	Enable used as one phase output	Disable used as one phase output
ForbidTx2Byp	Forbid transfer to bypass	Not forbid transfer to bypass
EpoDisable	Disable EPO	Enable EPO
LocalEpoDisable	Disable local(LCD) EPO	Enable local EPO
RemoteEPODisable	Disable remote EPO	Enable remote EPO
BypOvTmpForbidByp	Bypass over tempreature forbid bypass	Bypass over tempreature not forbid bypass
NoBattery	No battery mode	Have battery mode

CustomCode on the right is described as the following table

Contents	Meaning	Note
Sleeping Load Rate	Setting the sleeping load rate	
Interval Time for sleeping	Setting the interval for the sleeping	

3.11.4 WarningSet

The “WarningSet” is shown in Pic 3-21. If the checked event occurs, there appears a warning window. The switch of beeper can controlling the buzzing. Click the “SelectAll” button to select all the events and click the “ClearAll” to uncheck all the events.

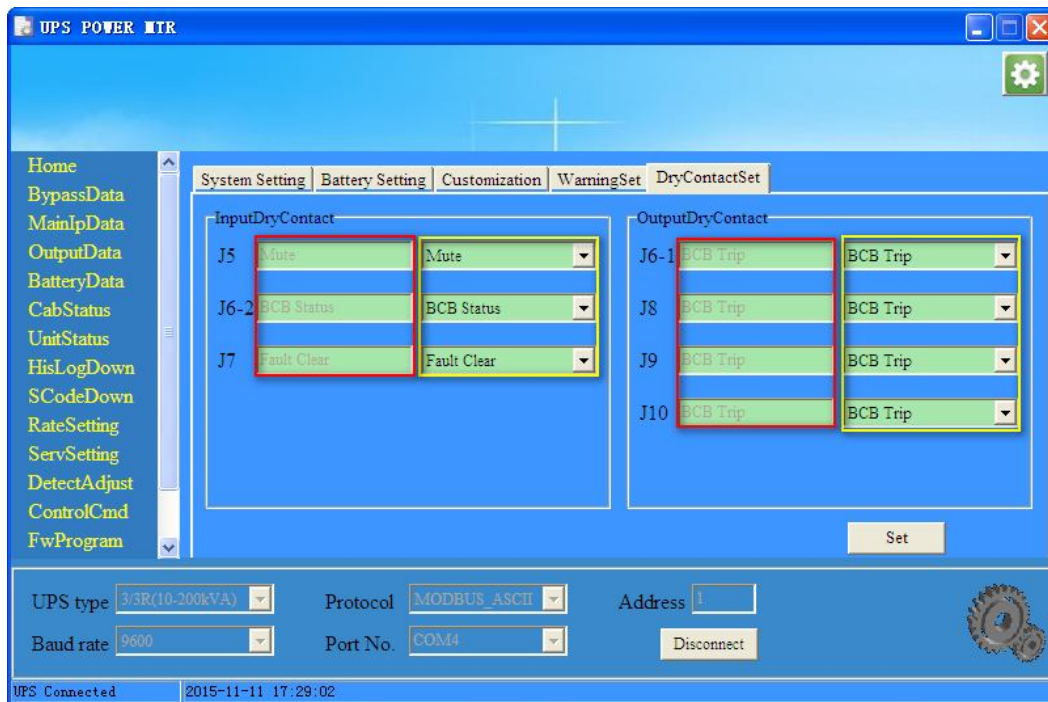


Pic 3-21 WarningSet

3.11.5 DryContactSet

Note: This function is supported by part series UPS.

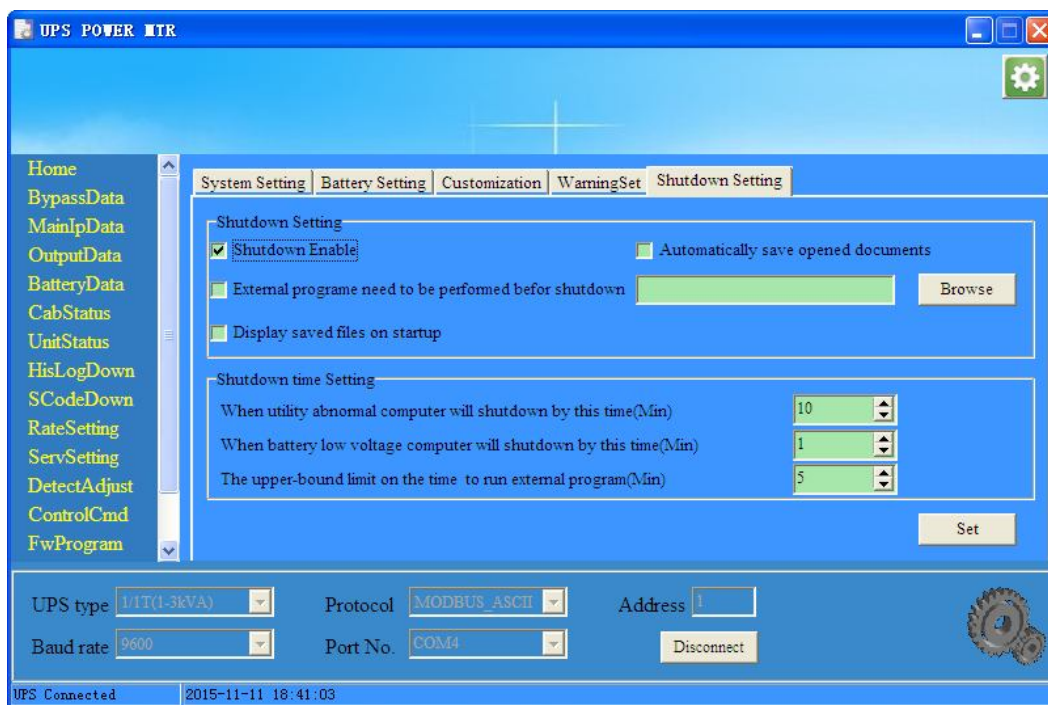
“DryContactSet” interface is shown in Pic 3-22, The values in red rectangle are currently used by UPS, while in yellow rectangle are the new values to be set. Click “Set” to send new values to UPS.



Pic 3-22 DryContactSet

3.11.6 Shutdown Setting

Shutdown setting page include “Shutdown Setting” and “Shutdown time setting”, this function only be allowed by the 1-20K UPS.



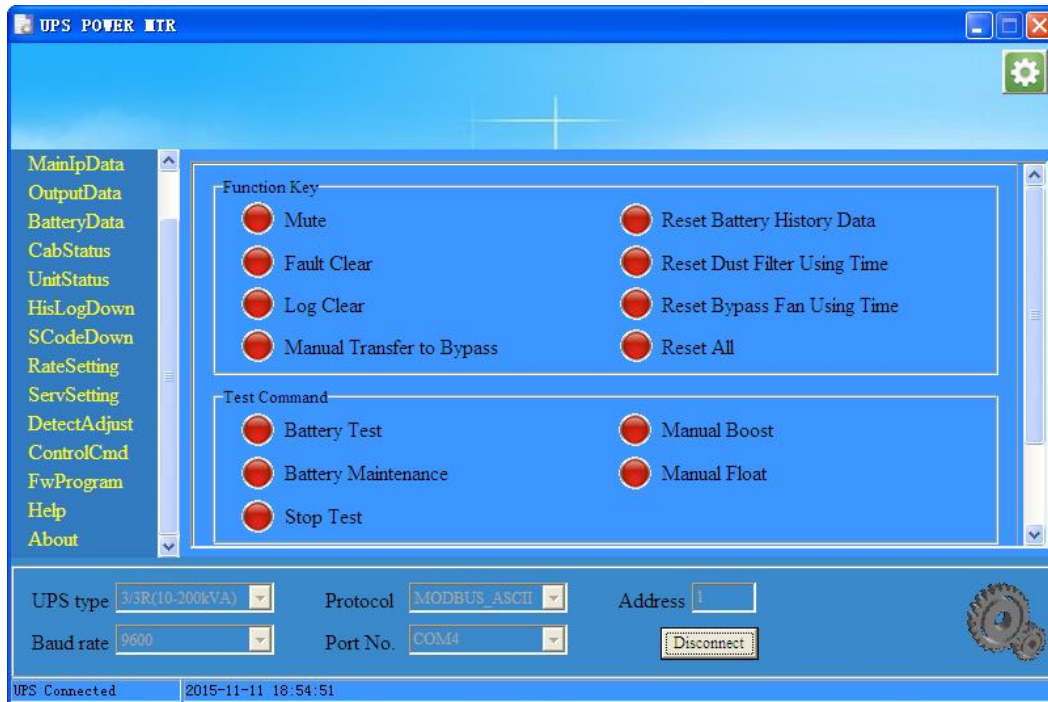
Pic 3-23 Shutdown Setting

3.12 DetectAdjust

This function is only for factory setting

3.13 ControlCmd

In the “ControlCmd” menu, a password is needed before entering. This page include “Function Key”, “Test Command” and “Module Operation Command” three parts. In “Function Key” and “Test Command” parts, you can click the red button to execute corresponding command, then the command will be send to UPS. In “Module Operation Command” part, you can choose a module and choose a action then click “Done” button, so the command can be send to UPS module.



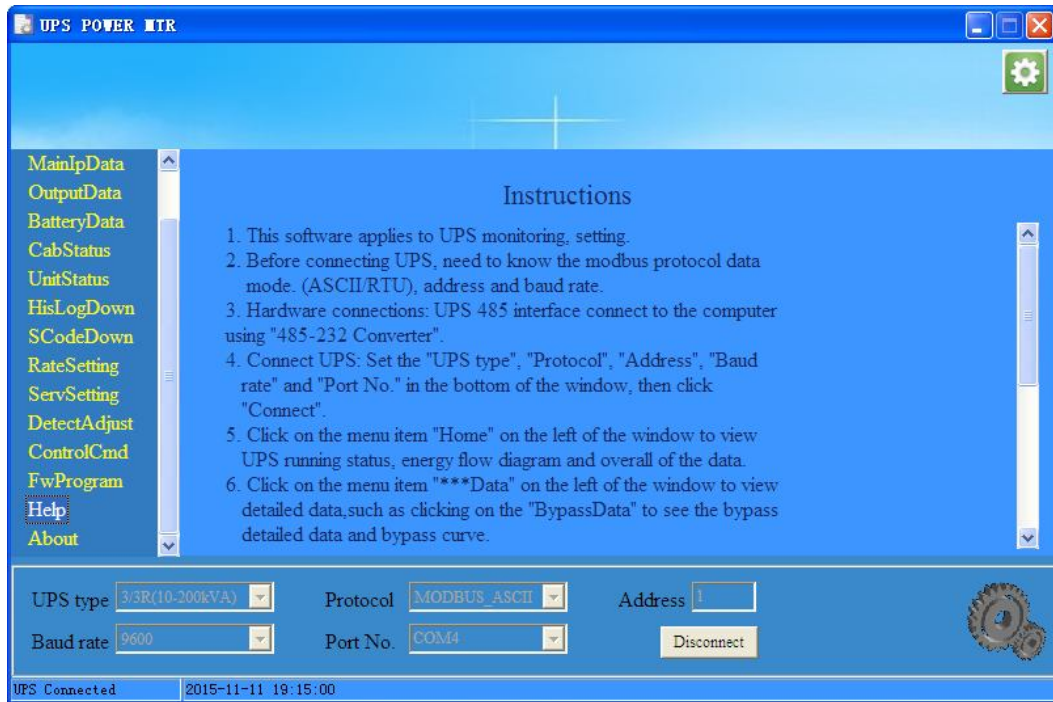
Pic.3-24 ControlCmd

3.14 FWProgram

This function is only for factory setting, disabled for users.

3.15 Help

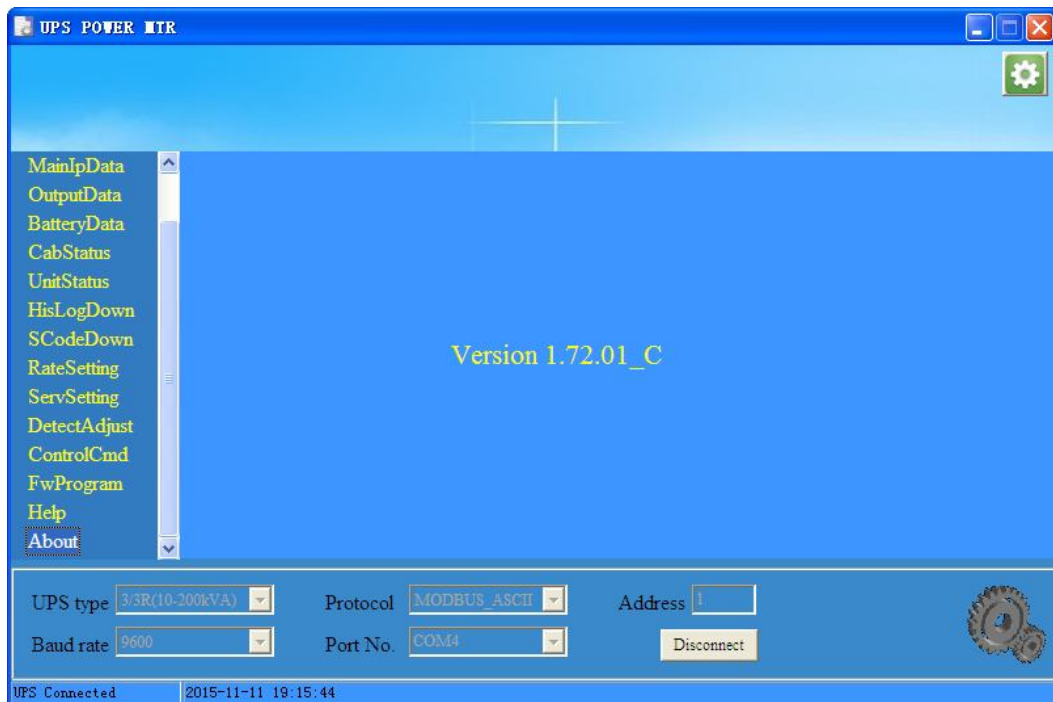
Brief description of the software, as shown in Pic.3-25.



Pic.3-25 Help

3.16 About

Version information of the software, as shown in Pic.3-26.



Pic.3-26 About