

Network Power Manager (v1.10.1)

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1. Product Introduction

NPM network power manager is an intelligent power managing system. The user can control and manage outlets of each NPM through software. The administrators can control the NPM from anywhere via Internet, or just dial-in from a modem for off-internet power control, and also can perform the 0-800m short distance off-internet power control via RS-232, or RS-485 in the LAN.

Through the NPM management software, the user can expediently configure the name of each outlet, switch on/off, timing switch on/off, and look over current of individual outlet, environment temperature, humidity, smoke, water, door open status, etc. For CLVER NPM product, there is Four series, contain: NPM2000、NPM3000, NPM4000, NPM5000.

Security feature

NPM have two security levels, administrator level and user level. The administrator is allowed to access all configuration and command functions. The user is allowed to access functions which had been given property. User level security features are ideal for co-location applications. It allows multiple users access to a certain outlet of NPM unit. Each NPM have a system password and you can modify it. This password will reject the access of any PC which is not allowed.

Convince installation

The on/off of the plugs are controlled by the simply ASCII commands which are sent via network, modem, short distance PC (LAN). Its configuration is also simple and easy to install following the menu of the installation program.

2. Product Description

2.1 NPM 2000

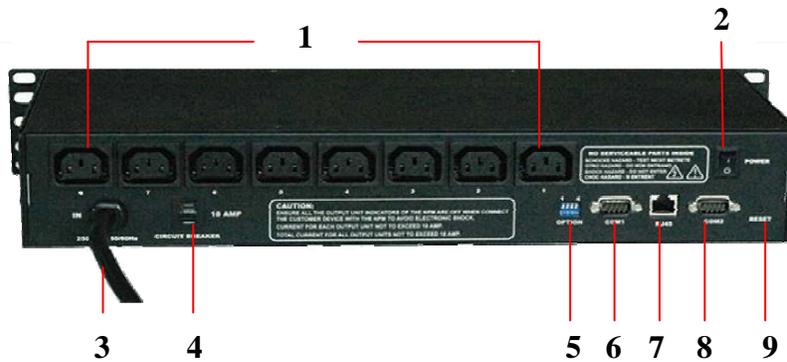
Main character:

- Horizontal installation, 8way outlets, 19" length, 2U;
- Switch on/off individual outlet and display on/off status of individual outlet;
- Timing switch on/off individual outlet and display on/off status of individual outlet;
- Original state and keep original state of individual outlet;
- Sequential power up/down individual outlet,



Picture 2.1-1. NPM 2000 frontal panel

- 1: Network connect indicator: light when connect;
- 2: RND next unit communicated indicator: flashes when next NPM unit is communicating.
- 3: RLD this unit communicated indicator: flashes when this NPM unit is communicating;
- 4: RUN run status indicator: flashes when this unit works normal;
- 5: POWER power indicator: Light when power supply of this unit is normal;
- 6: Bus A Indicators(1-8): Lights when the relative outlet is switched on.



Picture 2.1-2. NPM 2000 back panel

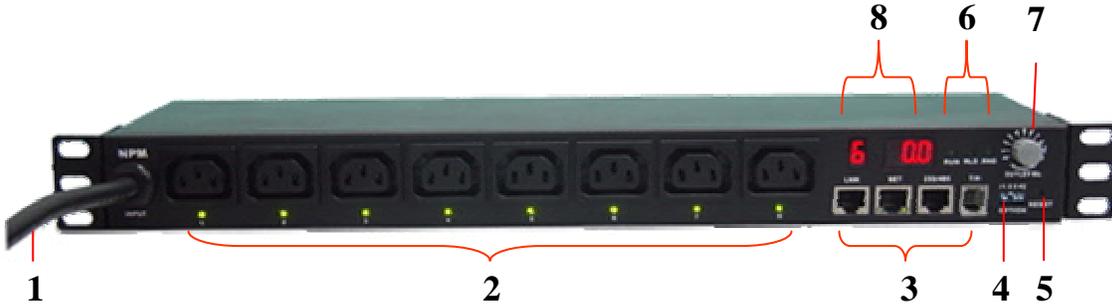
- 1: AC Power outlets: 8way, 10A/way;
- 2: Master power switch: ON/OFF power supply of this unit;
- 3: Power input: power input cable plug (IEC320 C20/IEC60309 plug);
- 4: Circuit breaker: overload protector;
- 5: Option switch: DIP switch, for configure master/slave unit and other status;
- 6: COM1: RS-232/482 port, DB9 connector, for connecting PC or next unit.
- 7: Network port: RJ45 ethernet network port, for connecting TCP/IP network;
- 8: COM2: MODEM port, RS-232/DB9 connector, for connecting external MODEM, when control NPM via MODEM;
- 9: RESET button: Restart or reset NPM CPU. Under not effect outlets on/off status, allows to reset NPM CPU.

2.2 NPM 3000

Main characaters:

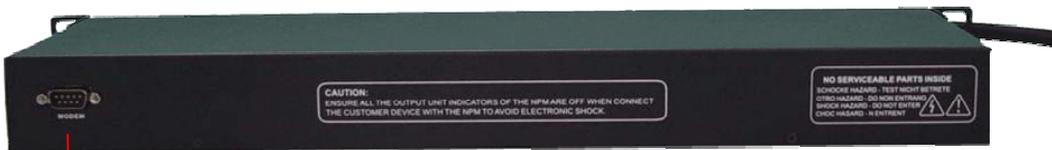
Horizontal installation, 8way outlets, 19" length, 1U;

- Switch on/off individual outlet and display on/off status of individual outlet;
- Timing switch on/off individual outlet and display on/off status of individual outlet;
- Original state and keep original state of individual outlet;
- Sequential power up/down individual outlet
- Display current of individual outlet;
- Display total current of unit;
- Display humidity and temperature;
- User-define alarm;



Picture 2.2-1. NPM 3000 frontal panel

- 1: Power input: power input cable;
- 2: AC power outlets: IEC320 C13 socket, 8way;
Power indicator of relative outlet: Lights when relative outlet is switched on;
- 3: Four ports;
LINK: When daisy chain multi NPM, this port for connecting RS232/485 port of next NPM;
NET: For connecting master NPM to WAN, LAN or PC.
232/485: For connecting serial interface of PC;
T/H: For connecting temperature/humidity sensor.
- 4: OPTION: option switch for set up master and slave property, baud rate, etc.
- 5: RESET: Reset button, for restart this unit;
- 6: Three system signal indicator
RUN: Flashes when NPM work normally;
RLD: Lights when NPM unit receive command;
RND: Lights when command received not from this unit;
- 7: OUTLET NO. Knob for choosing display information, you can choose display current of certain outlet, or total current of unit, or temperature, or humidity.
- 8: Digit display, left part and right part
Left part means chosen item, as picture, "6"——mean at present choose to display No.6 outlet;
Right part means current and temperature or humidity value, such as "0.0"—— mean temperature /humidity/current is zero.



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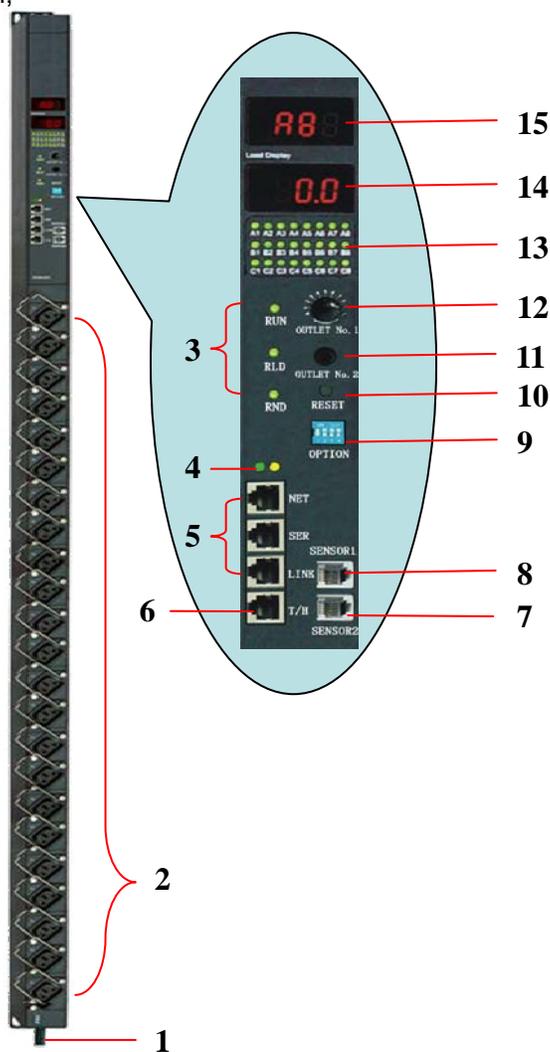
Picture 2.2-2. NPM 3000 back panel

9: MODEM PORT: For connecting MODEM when control via external MODEM.

2.3 NPM 4000/5000

Main character:

- Vertical installation, super high power, 380V AC input (NPM 5000);
- Switch on/off individual outlet and display on/off status of individual outlet;
- Timing switch on/off individual outlet and display on/off status of individual outlet;
- Original state and keep original state of individual outlet;
- Sequential power up/down individual outlet
- Display current of individual outlet;
- Display total current of this unit;
- Display current of group outlets;
- Display humidity and temperature, smoke, water, door open status, etc;
- User-define alarm;



Picture 2.3-1. NPM 4000/5000 control panel

1: Power input cable;

- 2: Max. 24way outlets;
- 3: Three system signal indicator
 - RUN: Flashes when NPM work normally;
 - RLD: Lights when NPM unit receive command;
 - RND: Lights when command received not from this unit;
- 4: Indicator of network connection
- 5: Three connect ports
 - NET: For connecting master NPM to WAN, LAN or PC, when control via network;
 - SER: for connecting COM port of PC when control NPM via local RS-232;
 - LINK: When daisy chain multi NPM, this port for connecting serial port of next NPM;
- 6、 T/H: For connecting 1 or 2pcs of temperature/humidity sensor;
- 7、 SENSOR2: for connecting water, door open status sensor;
- 8、 SENSOR1: for connecting smoke sensor;
- 9、 OPTION: option switch for set up master and slave property, baud rate, etc.
- 10、 RESET: reset button for restart NPM.
- 11: Choose group A or group B or group C outlets;
- 12: Choose certain outlet in a group(A/B/C);
- 13: On/off status of individual outlet, green color means switch on.
- 14: Display current and environment parameter, such as temperature, humidity,etc.
- 15: Display outlet No. chosen at present.

3. Hardware installation

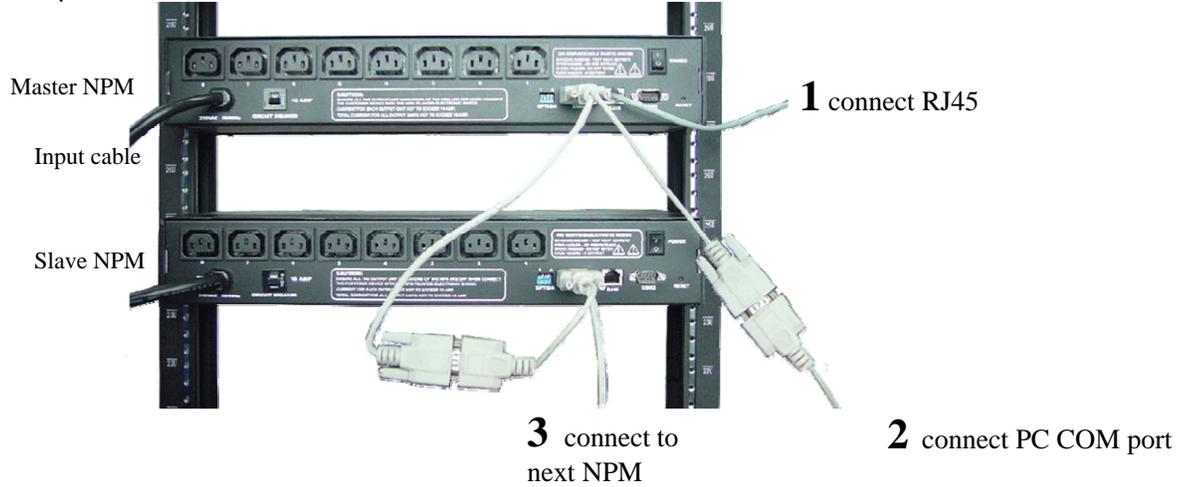
3.1. Option Switch

- 1: Choose master/slave property:
 - Option NO.1and option NO.2, for selecting master or slave features of NPM unit.
 - 1OFF/2ON: NPM is master NPM, 1ON/2OFF NPM is slave NPM.
 - One master NPM max. can daisy chain 31pcs slave NPM.
- 2: Choose baud rate:
 - Option NO.3 for setting baud rate: 3OFF=19200BIT, 3ON=9600BIT.
 - Default baud rate of NPM is 9600BIT。
- 3: Reset default value.
 - A:** Option No.1, No.2, No.3 for reset default address, password of NPM;
 - Reset NPM default address and password initial value: password=12345678, address=65535;
 - Operate procedure:
 - 1): Switch off power supply of total unit;
 - 2): Set up option No.1, option No.2, option No.3 be on;
 - 3): Switch on power supply of total unit, wait for 3 second, then switch off power supply again, for 3 second;
 - 4: Resume on/off status of option switch.
 - B:** Option No.4 for reset network default parameters of NPM.
 - Reset NPM default network parameters: IP=192.168.0.178, Subnet mask=255.255.255.0, port=4001, baud rate=19200, data bit=8, stop bit=1, network setting password=88888;
 - Operate procedure:

- 1): Switch off power supply of total unit;
- 2): Disconnect all devices connecting to the NPM;
- 3): Make option No.4 to be ON.;
- 4): Switch on power supply of total unit, wait for 3 second, then switch off power supply again, for 3 second;
- 5): Make option No.5 to be OFF.

3.2 Network connection and daisy chain of NPM

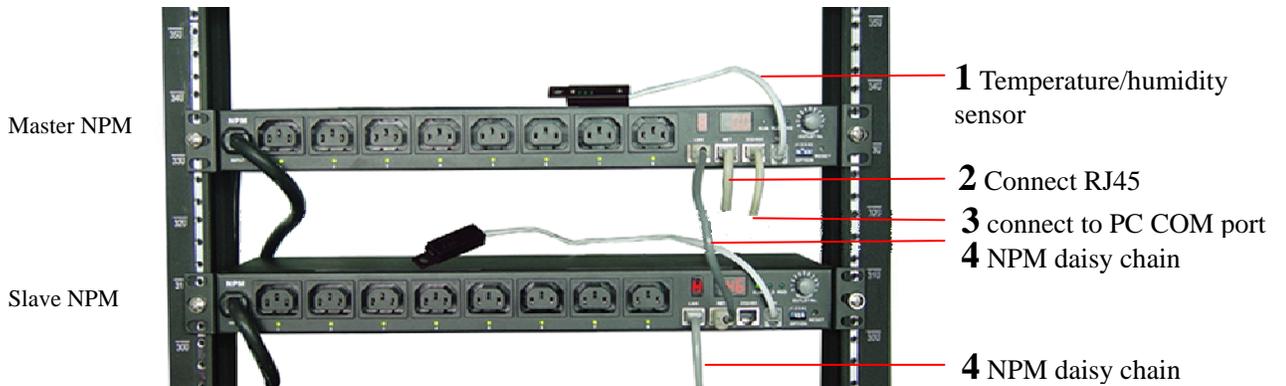
Connection picture of NPM2000:



Picture 3.2-1. NPM2000 series connection

Explanation of NPM 2000 series connection:

- 1: If control NPM via network, please connect to RJ45 port of PC or HUB, Router, Switch, etc.
- 2: If control NPM via local RS-232, connect to COM port of PC.
- 3: Connect to COM1 port of next NPM.



Picture 3.2-2. NPM 3000 series connection

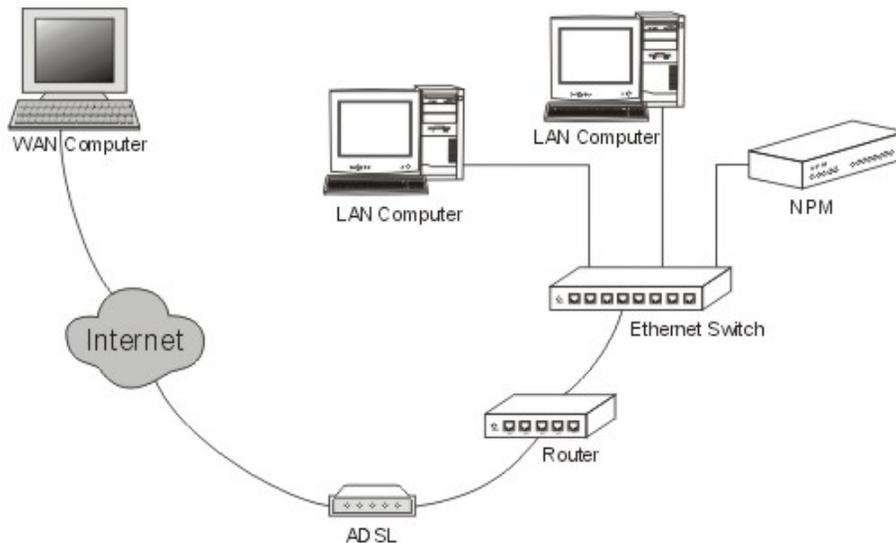
Explanation of NPM 3000 series connection (NPM 4000/5000 series similar)

- 1: Temperature/humidity sensor;
- 2: If control NPM via network, please connect to RJ45 port of PC or HUB, Router, Switch, etc.
- 3: If control NPM via local RS-232, connect to COM port of PC.
- 4: NPM daisy chain cable, begin at master NPM unit, from LINK port to RS-232 port of next NPM unit, the rest may be deduced by analogy.

4. Use of control software

4.1 NPM which connect to network

Dummy connect method when NPM connect to Ethernet:



Picture 4.1-1 NPM connect to network

4.2. Explanation for using control software

After finished install hardware, install control software: Network Power Manage System on PC. The following is explanation of control software: Network Power Manage System.

4.2.1 Login system



Picture 4.2.1-1 Login system

Explanation:

1: After finished installation of software, there are two default login name: "lxb" and "aa", "lxb" is administrator, "aa" is normal user, both passwords are 123.

2: Press "Database", can configure database information. As following:



Picture 4.2.1-2、 Database configure

The database had kept necessary information for running the software. After installed the system, there is a file "ID0" (Access format) in the install path, Login Name: admin; Password:(123456). You must defined this path when access the first time. Choose path (is install path of software, such as "D:\Program Files\Clever\Network Power Manage System"). Then press "login", login the system.

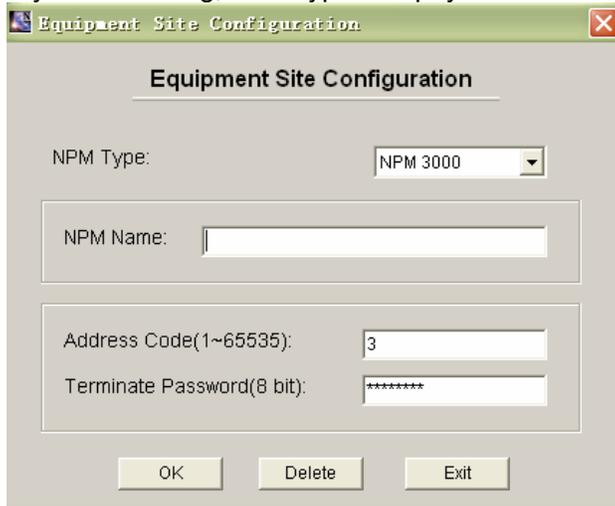
4.2.2 Main screen

After login, access main screen, as following picture. User can get information of many pieces of daisy chain NPM unit, contain on/off status, current and other parameters. Also can run the automatic timing get information monitor program



Picture 4.2.2-1 Main screen

- 1、System menu;
- 2、NPM group choose. Can group NPM units according area or other requirement: For example, China, USA, Germany or Guangzhou, Shanghai, Shenzhen, etc.
Explanation:
A: NPM of different groups, NPM name can different. (contain outlet name.);
B: NPM unit of different groups have relative configuration.(such as network IP);
C: You can switch to other NPM group, press "Save setting" to save configuration of current group.
- 3: NPM naming: display NPM naming, NPM type and physics address, etc. Press to modify;



Picture 4.2.2-2、NPM name and address

4: Choose NPM, when choose you can read this NPM;

5: Status parameters of NPM:

1~8: on/off status of NPM outlet, and current of outlets.

Green color means switch on, white color means switch off, grey color means invalid or have no right to access relative outlet.

A: total current of this 8way outlets;

ALL: Total current of group A, B, C;

C1: Temperature of place No.1.

T1: Humidity of place No.1;

C2: Temperature of place No.2;

T2: Humidity of place No.2;

F: Smoke sensor: red mark flashes when it detect smoke;

D: Door open sensor: red door mark means door open, gray mark means door closed.

W: Water sensor: water mark flashes when there is water.

6: Manage NPM:

Press to access relative NPM unit control screen, reference “4.2.4 Manage Screen” section.

7: Connection configure

The screenshot shows a 'Connect Configuration' dialog box with three radio button options: 'Network(TCP/IP)', 'RS-232', and 'Modem'. The 'Network(TCP/IP)' option is selected. Under this option, there are three input fields: 'Host IP' with the value '192.168.62.179', 'Connect Port' with the value '4001', and 'Reset Port' with the value '3003'. The 'RS-232' option is unselected and shows 'COM Port' set to 'COM1' and 'Baud Rate' set to '19200'. The 'Modem' option is also unselected and shows 'Tel:', 'COM Port:', and 'Baud Rate:' fields. At the bottom of the dialog are two buttons: 'Dial-up' and 'Hang up'.

Picture 4.2.2-3 connection configuration

Press “**Connect Type**” button at main screen, it will display configure window, as picture above:

When “Connect Type” is **Network (TCP/ IP)**, Configuration parameters as following:

When PC is at the same LAN of PC:

Host IP: Default IP of NPM is 192.168.0.178

Connect Port: Default Port of NPM is 4001

Reset Port: Default reset port of NPM is 3003

When PC control NPM via Internet:

Host IP is WAN port IP of NPM’S LAN. NPM’s IP, Connect Port, Reset Port must be mapped at NPM’s LAN. More information please refer “Network configuration”Section.

When “Connect Type” is **RS-232**, configuration parameter .

Configure port and baud rate.

When “Connect Type” is **Modem**, configure parameters:

The “Tel” is phone number of the phone wire which connecting to the external MODEM;

“Port” number is PC’s MODEM port number ;

“Baud Rate”: Choose one of them.

4.2.3 Initialization network configure

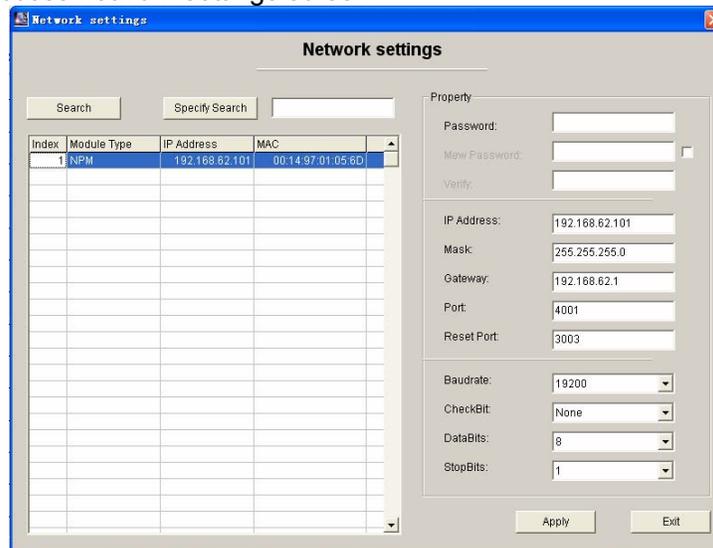
Initializing NPM network configure before control NPM via network

- 1: If change IP of NPM, need make the connected PC at the same network section. For example, configure local IP as follow (DNS can be ignored), Setting PC and not initialized NPM in the same Net. (NPM’s default IP is 192.168.0.178).



Picture 4.2.3-1、 Make PC and NPM’s IP at the same network section

- 2: After login the manage software, you will access main screen, then through the menu access network settings screen:



Picture 4.2.3-2、 Initialization network configuration

Press  search all NPM units of the same network. And list these units. The list contains module type, IP address, physics address, etc. Double click a certain NPM, it will show the main parameters of this NPM at "Property" section at right. Contain IP address, subnet mask, gateway, work port, reset port, etc.

 Is search via specified IP, the right blank fill the specified IP.

Explanation of items as following:

Item	Name	Default Value	Explanation
Password Operation	Password	88888	You must enter correct password before modifying other items. The password can reach 9 bits. And you can use a~z, A~Z, 0~9 etc.
	New Password	No	You must choose "Yes" <input checked="" type="checkbox"/> first on the right side. Then you can fill "New password" and "Confirm new password".
	Verify	No	Confirm new password
IP Configure	IP Address	192.168.0.178	You cannot fill X.X.X.0 or X.X.X.255. IP address is address in the network for network devices such as PC and NPM, etc. It is exclusive in the same network.
	Mask	255.255.255.0	Subnet mask is very important for the network. The value of subnet mask is the same with IP address in the same network. So you must set the IP address and subnet mask correctly.
	Gateway	192.168.0.1	Fill the gateway's IP address or router address of home network.
	Port	4001	You can fill 1~65535, some are occupied by other network agreements. These occupied ports can't be used. More relative details please refer appendix.
	Reset Port	3003	Reset port. Can fill 1~65535. Some ports are occupied by other network agreements. These occupied ports can't be used. More details please refer appendix.
Config of Serial Port for communicating network and NPM	Baud rate	19200	Can choose 9600 19200
	Check Bit	NONE	There are 5 items. You can choose "No", "even", "odd", "force configure to 1", "force configure to 2"
	Data Bits	8	Mean the availability data bits which through the serial port. You can choose 5,6,7,8.
	Stop Bits	1	There are 2 choices; 1 bit and 2 bits. (Mean the length of stop bit)

If you modified parameters in the "Properties" menu, you must click  in the

“Properties” menu. Then the modifying can be sent to NPM. If you fill a wrong value and haven't applied it, you can click “search” and modify again. If the NPM can't work because of the modifying (For example modify to a wrong IP address, wrong subnet mask, or forget password), you can resume defaulting configuration when factory installed. About the detailed procedures, please refer to 3.1.

After finished the network configurations of PC, you can set the module. Now we had known the properties and the modification method of the network parameters for the NPM. So we begin to configure the NPM to be part of LAN:

- 1) . Double-click the searched NPM and enter password;
- 2) . Modify the IP in “IP config”, the new IP is an unused IP in the IP pool of the LAN.
- 3) . Modify the subnet mask in “IP config” to be the same as subnet mask of LAN.
- 4) . Modify the gateway in “IP config” to be gateway's IP address or router
- 5) . Click  in the “Properties” blank to submit the modifying.
- 6) . Resume the network parameters of PC. Then the whole configuration is finished.

Now we can manage NPM through LAN.

Remote manage NPM via PC

If remote manage and control NPM via PC, do as following:

- A) Configure the NPM to be part of the LAN, same as above.
- B) Let the PC access the Router in the LAN, Map NPM's IP and Port (4001 and 3003) in the Router's Virtual Server. As following picture.

虚拟服务器

虚拟服务器定义了广域网服务端口和局域网网络服务器之间的映射关系，所有对该广域网服务端口的访问将会被重定位给通过IP地址指定的局域网网络服务器。

ID	服务端口	IP地址	协议	启用
1	4001	192.168.62.178	ALL	<input checked="" type="checkbox"/>
2	3003	192.168.62.178	ALL	<input checked="" type="checkbox"/>
3		192.168.62.	ALL	<input type="checkbox"/>
4		192.168.62.	ALL	<input type="checkbox"/>
5		192.168.62.	ALL	<input type="checkbox"/>
6		192.168.62.	ALL	<input type="checkbox"/>
7		192.168.62.	ALL	<input type="checkbox"/>
8		192.168.62.	ALL	<input type="checkbox"/>

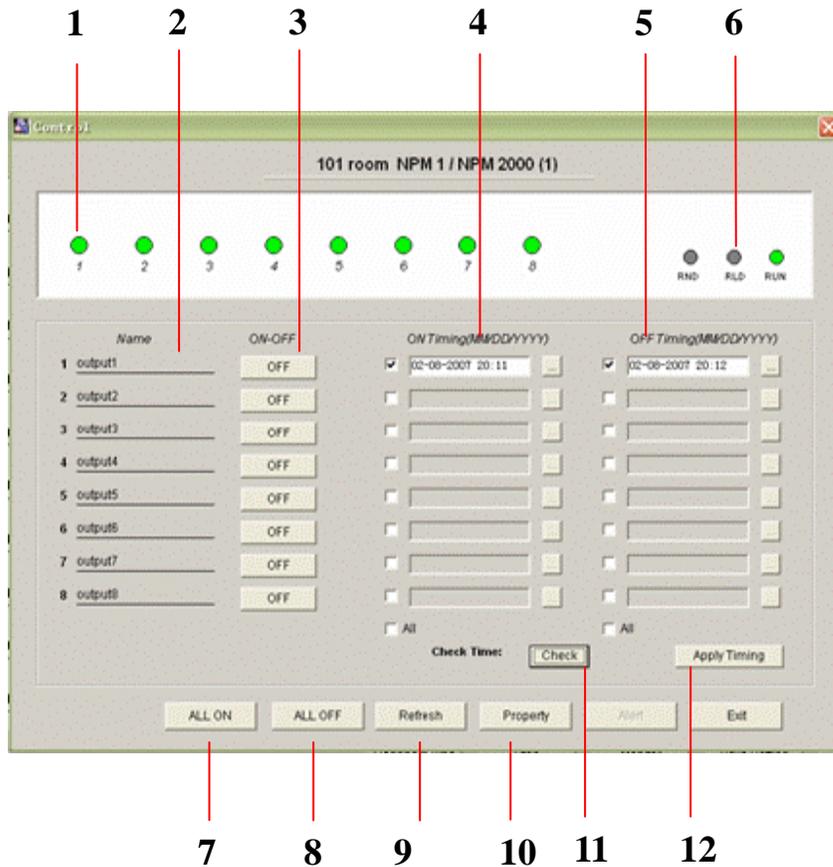
常用服务端口： DNS (53) ID

C) Run the NPM management software in the remote PC, login as administrator, in the main window, enter the “HOST IP” and the two ports. The “HOST IP” is the same with the “WAN” port’s IP address of LAN’s Router. This LAN means the LAN which the NPM belong.

Network(TCP/IP)
 Host IP:
 Connect Port:
 Reset Port:

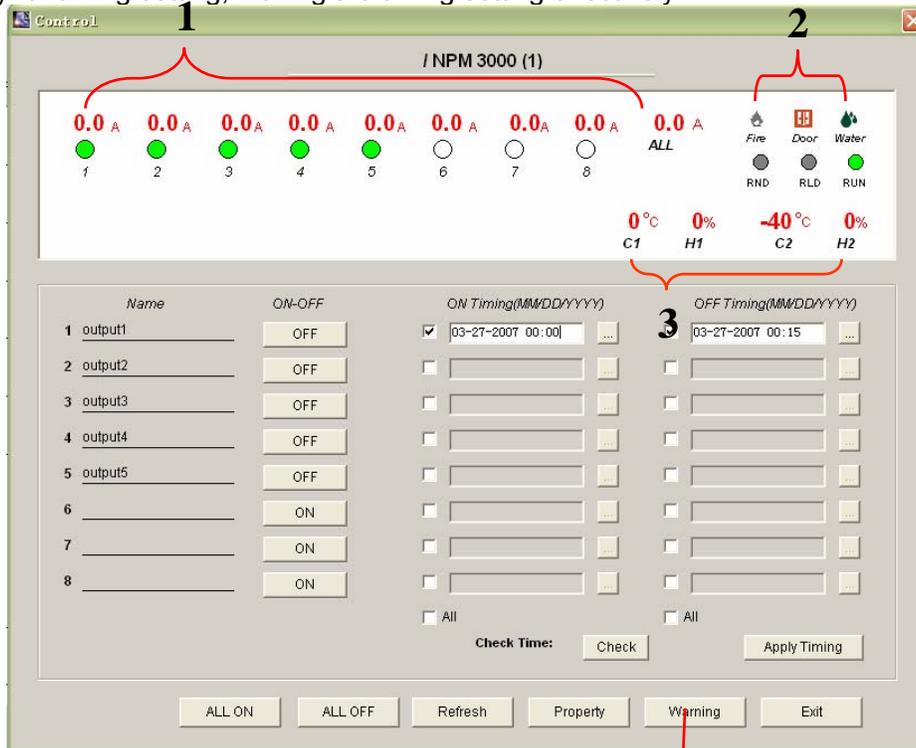
4.2.4 Control Screen Details

In main window, presses “Detail (01)”or: “Detail (02)”...access the relative control screen of NPM. In this screen user can power on/off, timing on/off each outlets, modify the terminate address and terminate password of NPM, and check the time of NPM.



Picture 4.2.4-1、 NPM 2000 control managing window
 1: Power on, power off state of each outlet;

- 2: Name of each outlet unit;
- 3: Configure on/off of each outlet;
- 4: Timing on;
- 5: Timing off;
- 6: System indicator applies to the 3indactors on the front panel, more information please to the products description part;
- 7: Power on all the outlets;
- 8: Power off all the outlets;
- 9: Refresh outlets state, Read all information of outlet state again
- 10: Property setting of NPM, Including the amending address code and terminal password of NPM
- 11: Verify NPM inner clock, Making the same with the clock in the PC system.
- 12: Apply for timing setting, Making the timing setting effectively.



4
Picture 4.2.4-2 NPM 3000 control managing window

NPM3000 control interface setting, except saving all setting of NPM2000, the main difference is:

Add current display, sensor data display, setting of alarm as follow:

1. Current display of each outlet, Total current display (ALL)
2. Smoke state display,
Door state display,
Water state display;
3. Temperature/ humidity display;
4. Overload, Exceed limit setting (Detail please see latter introduction).



Picture 4.2.4-3. NPM 4000/5000 control managing window

NPM 4000

NPM4000 due to the character of super great current, This control interface setting, except saving all setting of NPM3000, the main difference is: Add the group setting of outlets, and grouping current display as follow:

NPM4000

- 1: A group total current, A group 1-8 way current display of outlet units;
- 2: B group total current, B group 1-8 way current display of outlet units
- 3: C group total current, C group 1-8 way current display of outlet units;
- 4: ALL: Total current display of A+B+C three groups;

NPM 5000

NPM5000 due to 380VAC input, owning the display character of L1, L2, L3 every phase current, This control interface setting, except saving all setting of NPM4000, the main difference is: NPM5000 group L1, L2, L3 according to 380VAC power supply as follow:

1. A group means L1: A group total current, A group 1-8 way current display of outlet units;
2. B group means L2: B group 1-8 way current display of outlet units;
3. C group means L3: C group 1-8 way current display of outlet units;
4. ALL: The total current display without L1, L2, L3 three group;

4.2.5 The alarm setting about the overload and exceed limit.

The administrator can set the current, temperature and humidity limit value on the controlling software and the NPM system also have the alarm function. When the outlet data overtop the setting data and the controlling software will flash give an alarm, and you can choose the sound alarm or send email alarm.



Picture 4.2.5-1、 setting the safety limit bound

- 1, Press “Warning” can enter the overload and exceed limit setting.
- 2, The administrator can set the outlet current, temperature and humidity limit bound
- 3, If the system operating automonitor, the system will send the alarm when the outlet data overtop the setting data.
- 4, Min: the min limit; Max: the max limit.
- 5, The warn setting interface contains five options, the user has been confirm if is connecting with the corresponding sensor, when the user mark it and it will display the corresponding data, or it will not.
- 6, The original default is NPM system default.

4.2.6 the automatic manage setting.

When the administrator have not the time to manage the NPM, the manage software will operate and monitor the NPM automatically, then it will display the NPM operating state and others environment state.

1: Operating entrance: (main menu: Tools >> Monitor Settings)



Picture 4.2.6-1、The automatic manage setting.

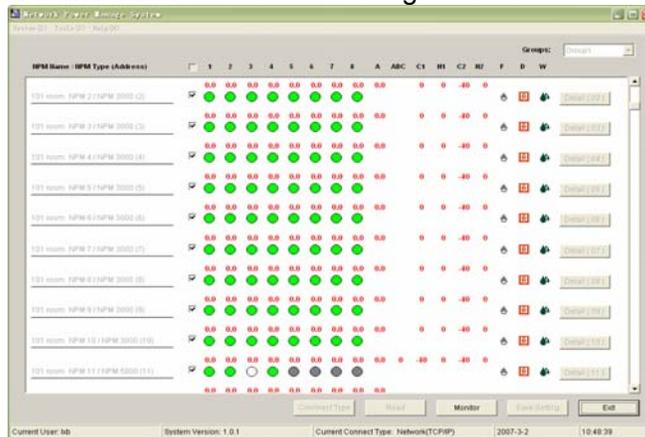
explain:

Setting the automatic manage parameter	
Interval	Interval about the automatic reply data
Monitor Type	Monitor Type
Warning Records	Inquire about alarm records
All Records	Keep all the monitor data.
Enable sound prompt	If choose the sound alarm and can user-defined the sound
Enable sound prompt	If open the email alarm, when the user open it , the user need to collocate SMTP ,including the mail list that receive the alarm.

2: The operating automatism manage function

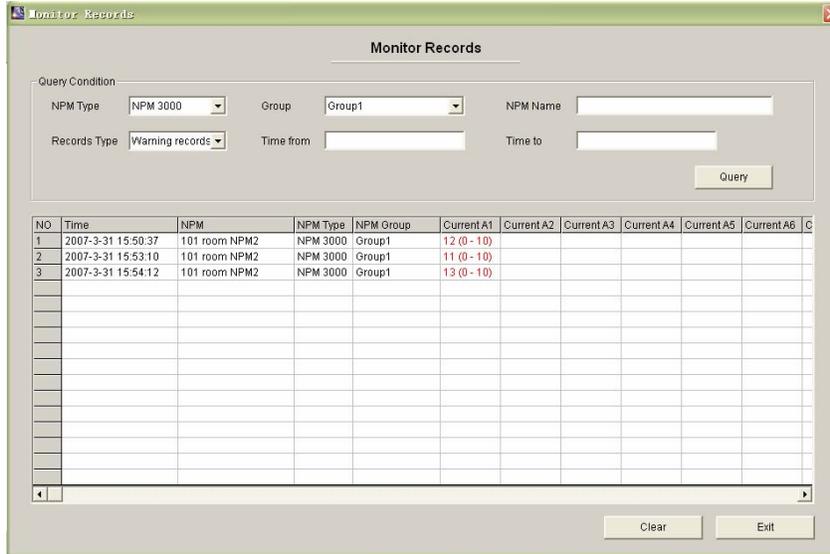
The operating entrance : (main interface button —— “ Monitor ”) , when operating and the main interface will automatic hide.

According to the appointed the interval (If you do not set the automatic interval and the system will default 10 seconds) can obtain the NPM state data automatically. When the outlet data overtop the setting data and the NPM will automatic give an alarm.



Picture 4.2.6-2、The operating automatism manage state

When you set the interval, this window will display the NPM outlet state in time, when the outlet data overtop the setting data and the NPM will automatic give an alarm.



Picture 4.2.6 -3、 the automatic manage record

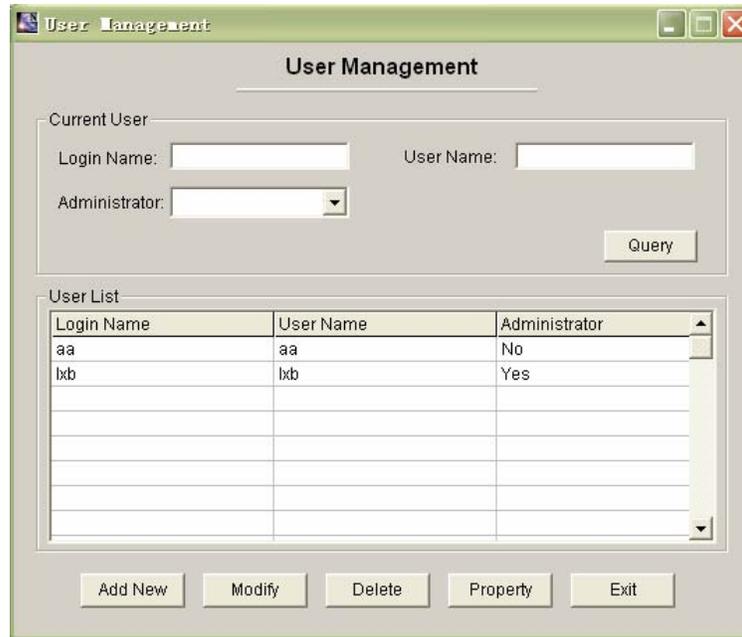
The system will automatic record these overtop current data and the sensor data, when you choose the “All records” in the manage setting and the system will record all the data about the current and the sensor. You can monitor the records in the alarm system. Press “Monitor Records” enters the alarm system menu. As shows the picture.

4.2.7 User management

Entrance:(main menu: system>>user management)

The administrator can manage the users: to add, cancel, modify, the user information. The selects user’s information will display as shown in picture NO.16. And can modify only one user’s information each time.

- (1) “login name” for login the system is unique. ”User name “is true name of user. It is not required.
- (2) “Administrator:” yes ” indicates it is administrator currently, “no” indicates it is not administrator currently.



Picture 4.2.7-1、 the user manage

- (3) Press “Add new” can add new user. As show in following picture.



Picture 4.2.7-2、 the user manage

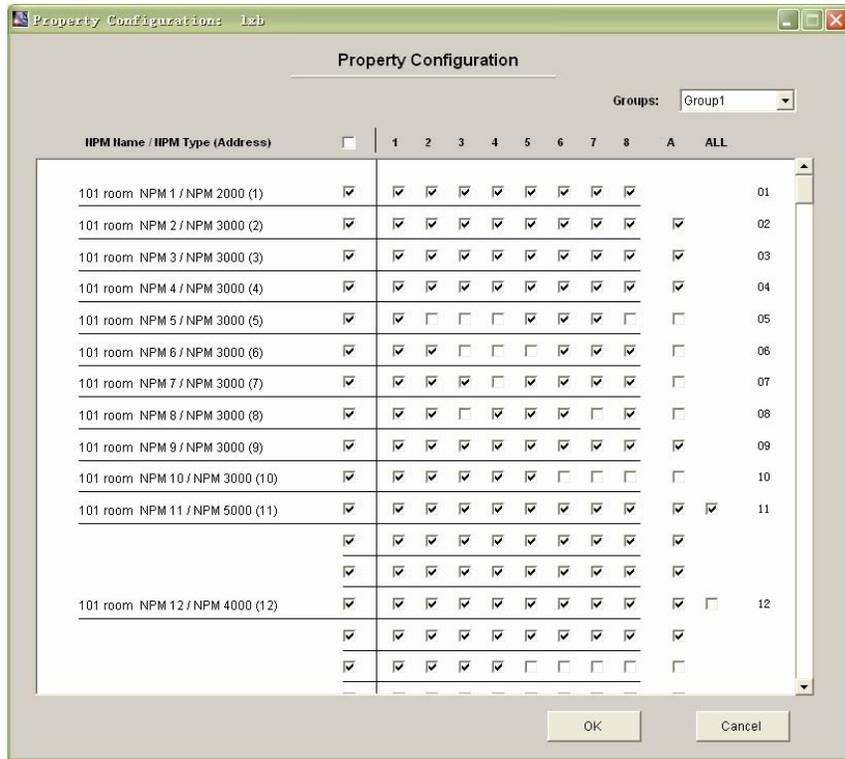
- (4) In the list choose one user and press “Modify”, then you can edit the user information.

- (5) Press “property can assign the properties for the current user. As shown in picture NO.17..

4.2.8 Assign properties of NPM for user

Entrance: user management >>button “property”.

Administrator can perform all functions of all NPM. User can only perform the property assigned by administrator. The user can control the selected out assign properties of NPM for user.



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Picture 4.2.8-1、 NPM property configuration

- 1、 It is the first step choosing NPM group ;
 - 2、 Administrator have the right control all the NPM ;
 - 3、 The administrator assign the user's right, the frame display each PNM's outlet state in the window, if you choose ones and you have the right to control, then you can see the outlet state and current.
 - 4、 A has the corresponding NPM, A/B/C group can display each group total current, ALL can display A/B/C three groups total current.
 - 5、 Press“OK”and save the setting.
- 4.2.9 Modify use's password

Entrance (main menu: system>>change password)

You can modify your login password after enter the system, as shown in the following:



Picture 4.2.9-1、 Modify the password

4.2.10 Change the user

Entrance:(main menu: system>>change user)

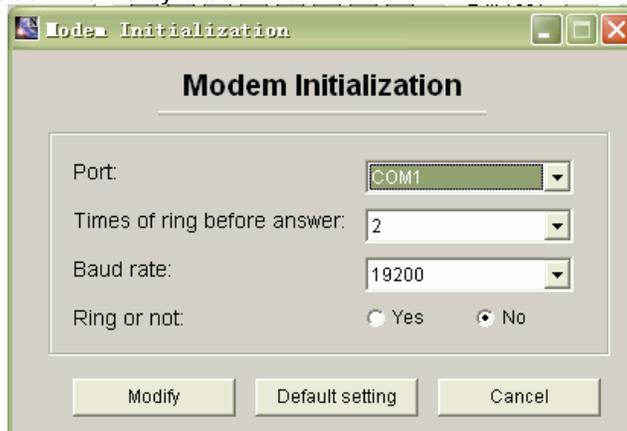
Change the current login user and login again.

4.2.11. Modem initialization

Entrance:(main menu: Tools>>modem initialization)

This function is convenient to connect with the NPM external modem. When the user uses it, the external modem connects with the PC port directly, then select the parameter (the main setting: how many times the system will automatically answer, baud rate, diabolio or no,) press "modify is OK". "Default setting" is rebooting the modem to the manufacturer's setting.

Because the different manufacturers produced the modem's AT are different. The user can achieve the initialization works by the window systemic super-terminate if it could not achieve the initialization works by the window.



Picture 4.2.11-1、 Modem initialization

4.2.12 NPM groups' configuration

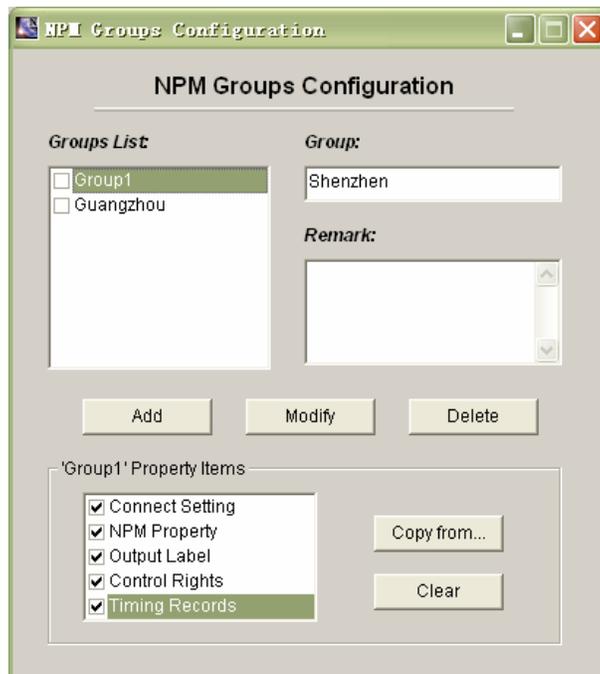
Entrance: (main menu: Tools >> Groups Configuration)

In order to control the different area NPM, the manufacturers add the function. The user can add, delete, modify and setting in the window.

The groups contain connect scheme, NPM (contain the NPM name, address code terminal password), NPM outlet mark, control purview, timing note and so on five items, when add a new group, the content is blank and the user can copy it. The following is operation information.

- 1、 Press  add the new grouping, in the form fill the name and remark, then keep it.
- 2、 Choose one group in the groups list, in the right form will display group name and remark information, and then the user can fill the information in the window.

- 3、 Press will delete all marking groups。
- 4、 Below the window attribute is the current attribute, the user can divide attribute into two items: copy it from another group, clear these attribute.
- 5、 Press will show the Groups List, choose one group and copy the content to the currently group. (only parenthesis like this mark)。
- 6、 Press will clear all marking content.
- 7、 About the detail information, such as connect annex, NPM' s name, outlet mark and so on will display in others window, the user could not control it in this window.



Picture 4.2.12-1、 group configuration

5: Technology parameters

The characteristic of the NPM input and outlet, the NPM dimension and the others technology parameters, please reverence the manual.

6: The incasement listing

NPM 2000:

- 1、 one piece of NPM;
- 2、 one piece of serial port line;(3 pin)
- 3、 one piece of "Y" type serial port line.
- 4、 one piece of network cable(beeline);
- 5、 one piece of CD (contain a manage software and the user manual)

NPM 3000、NPM 4000、NPM 5000:

- 1、one piece of NPM;
- 2、one piece of (3 pin);
- 3、one piece of network cable(beeline);
- 4、one piece of CD (contain a manage software and the user manual)

7: Installation

1: The hardware Configuring

- (1): Configuring every NPM as the master NPM model in OPTION. Configuring method as 3.1 explanation
- (2): Connect single NPM with PC as the foregoing drawing to initialize every NPM.

2. The software operation

(1) NPM Initializing NPM

- 1、Refer to 4.2.1 explanation to log on the controlling software
- 2、Choose the first NPM name, property label in the main interface, then pop-up the following configuring window, fill in the address code 65535 and terminal password 12345678, and choose corresponding NPM type. Press “OK” to save.

Picture 7 -1、NPM name、address orientation

- 3、The faster way to initialize the NPM is through connecting the RS-232 port. After log on the system, press “connect Type” to pop-up the connecting configuration frame.

Picture7 -2、connecting configure

Choose RS-232 and port number, baud rate, then press “Connect Type” again to exit the choosing frame.

4、 Choose the first NPM(put√in the choosing frame),press inferior button “Read”to read NPM state data.

5、 Press “Detail(01)” to enter the controlling window, press inferior button “Property” to pop-up the following window:

The screenshot shows a configuration window with two main sections. The first section is titled "Address Code(1~65535):" and contains a text input field with the value "65535" and a "Modify" button to its right. The second section is titled "Terminate Password(8 bit):" and contains three text input fields labeled "Old Password:", "New Password:", and "Verify:". Below these fields is a "Modify" button. At the bottom right of the window is an "Exit" button.

Picture7 -3、 Modify NPM address code, terminal password

The user can modify NPM address code and terminal password in the above window. The address code among daisy-chain NPM are different, and need to be configured again. In order to remember, it can be configured the integer number such as 1,2,3,4,5 etc between 1~65535. Exit the controlling window after modify successfully.。

- 6、 Carrying out the above operation can achieve to initialize one NPM. If one NPM is as the master NPM among the daisy-chian NPM and used through network, it should be network initialization. Follow “4.2.3 Initializing network configuration” explanation to operate, configure a LAN IP for NPM, can control NPM in the LAN after configuring successfully.
 - 7、 If want to control NPM remotely through internet, should image from the router port in the LAN where NPM is located to transfer the data from external network to the master NPM. Configuring method see the rearward part of “4.2.3 Initializing network configuration”.
- (2) Daisy-chain NPM
- 1、 If want to daisy-chain NPM, configure one NPM as master NPM, the rest NPM are slave NPM, operation please see 3.1
 - 2、 Can control NPM through network when network is configured successfully. Choose “Network(TCP/IP) in the above connecting configuration frame, fill in the NPM IP address(fill in the IP address of NPM’s router when remotely control), working port and reset port. Conceal the configuring frame, press “Read” to read NPM state data.
 - 3、 If want to read many daisy-chian NPM, fill in the NPM’s type, address code and terminal password in the main interface, picth on and choose the corresponding connecting type.

Appendix1 List for default occupied ports in TCP and UDP

Agreement	Port
Reservation	0
TCP port multi channel server	1
2reservation 2	
ECHO	7
Reservation	9
Reservation	11
Reservation	13
Network status	15
FTP	20
FTP	21
TELNET	23
SMTP	25
Printer	35
Time server	37
Name server	42
Reservation	43
Login host computer agreement	49
DNS	53
DHCP	67
DHCP	68
TETP	69
Gopler	70
Finger	79
HTTP	80
Remote TELNET	107
SUN	111
NNTP	119
NTP	123
SNMP	161
SNMP	162
IPX	213
Reservation	160-223