User's Manual

Version 04/12

Smart Power Distribution Unit

Remote Power Manager ("RPM")

SmartPower™ SYSTEMS

A POWER QUALITY COMPANY

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Chapter 1: Introducing Remote Power Manager

The RPM is an Internet ready device designed to allow administrators to remotely and individually control the AC power for up to eight connected devices, such as: servers, routers, modems and telephone networks. With the expandable function of allowing daisy chaining (cascading) of up to 16 client units, administrators can control a total of 128 devices.

The RPM offers easy set up and user-friendly communication and control methods. Most common connection of all is via the LAN using normal Ethernet connection. The other option is to connect an external modem to the built in RS 232 port to allow dialing up of the Internet. Once connected and properly set up, the administrator will be notified of a web IP address and the administrator can manage the power of the devices from anywhere in the world via the web browser.

The superiority of the RPM over other power management products is RPM gives you control through a telephone (tone signals) with no need of a modem connection. So even if networks lock up or Internet crashes, there is always a back up telephone control option for administrators to control devices. With such powerful features, administrators can be sure that they will always gain access to their devices no matter where they are in the world.

1.1 Contents of Your RPM Package

The standard RPM package contains a Remote Power Manager Unit with supporting hardware and software. The components of your package are:

1. Remote Power Manager Unit
2. Rack mount Brackets
3. 1 piece of AC Power Cord.
4. 8 pieces of RJ-11 to RS232 NT Server Cables: For PC communication. (Optional)
5. 1 piece RJ-11 Cascade Cable: For RPM daisy chain and UPS connection.
6. CD-ROM
    a. SNMP Utility: Configure SNMP card's IP address and upgrade firmware.
    b. MIB: Management Information Base for Network. Support RPM and ENV. dgprpm.mib supports RPM and ENV.
7. User's Guide (PDF document) for RPM and SNMP card.
8. Adobe Acrobat Reader.

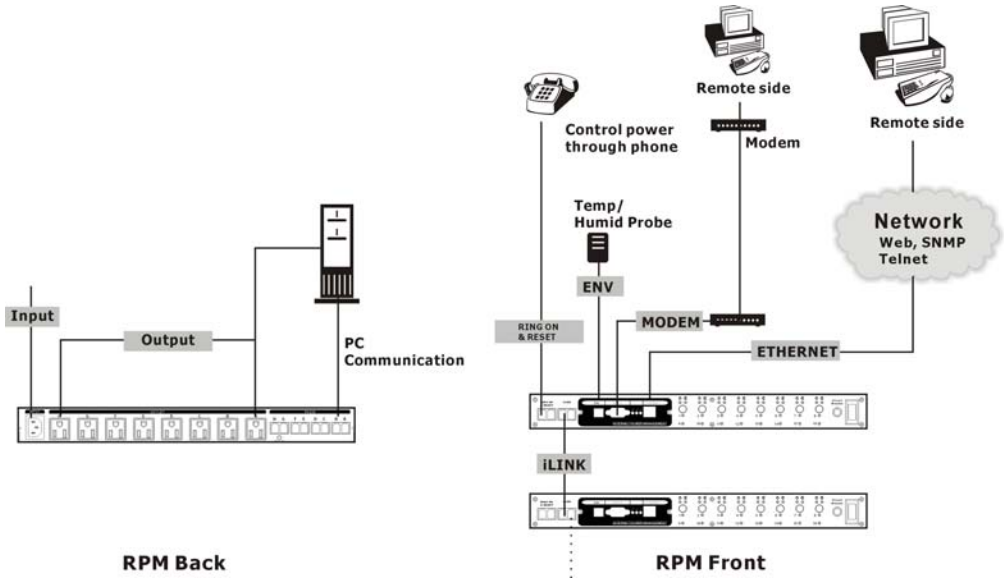
1.2 Remote Power Manager Features

- Turn ON/OFF any AC powered device via network and phone.
- Support turn on or off connected equipment by manual.
- Dual 15-AMP circuits.(Model 1500X2)
- Integral 10/100Base-T Ethernet port for connection to your TCP/IP network.
- Support dial in by modem to control power.
- Address-Specific IP security masks prevent unauthorized source from accessing the RPM menu through the network.
- Support NMS to control RPM through MIB. User also can use MIB to develop their application interface.
- Download data and events log list to server.
- Daisy Chain expandable up to 16 units.
- Available in 115VAC, 230VAC models.
- When events occur, RPM can notify user by email and trap according to the pre-set conditions.
- Allows users to configure the sequence in which power is turned on or off for each outlet. This helps avoid in-rushes at start-up, which can cause overloaded circuits and dropped loads. Sequencing also allows users to predetermine which piece of equipment is turned on first so other equipment dependant on that unit will function properly.
- Support Windows 2000 and XP to execute safe shutdown and reboot.
- Customize and schedule to turn on or off the connected equipment.
- Can be attached the temperature and humidity detect sensor to protect equipment.

Chapter 2: Hardware Setup

This section will guide you through the quick installation of the RPM.

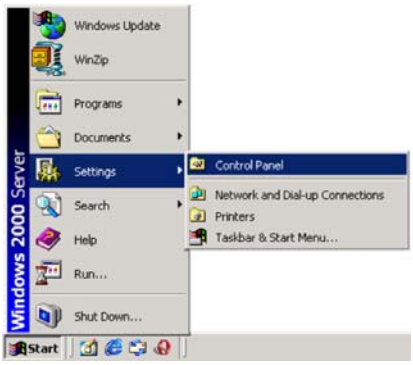
2.1 Basic Connection



2.2 Hardware Installation Procedure

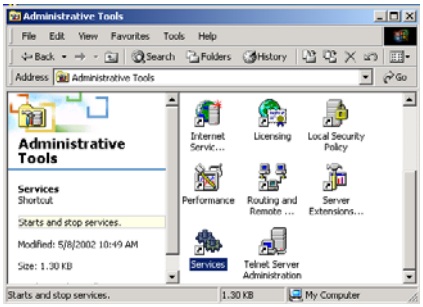
1. Install mounting brackets.
2. The RPM comes with brackets for mounting in a standard 19-inch rack. To mount the RPM into a rack perform the following procedure:
3. Attach the mounting brackets to the unit as shown, using the four retaining screws provided for each of the brackets.
4. Choose a location for the brackets. A notched hole on the vertical rail denotes the middle of a U slot.
5. Align the mounting holes of brackets with the notched hole on the vertical rail and attach with the retaining screws.
6. If installing more than one RPM, repeat process 3 -5.
7. Connect all input and output connectors. (Refer to section 5.0 for daisy chain configuration)
8. Connect Ethernet cable to RPM.
9. Program the IP address using Netility. (Refer to section 6.0 for IP configuration).
10. Set RPM's front control buttons for Internet/remote on manually control. (Please check LED Table for the operation)
11. Use browser to monitor and control.
12. For NT shutdown setup, please use RJ11 to RS322 NT Server cable to connect with server and use the following instruction to configure control panel /UPS in Windows OS.

1. Open your Windows 2000 Control Panel by clicking on “Start”, “Setting”, “Control Panel”.

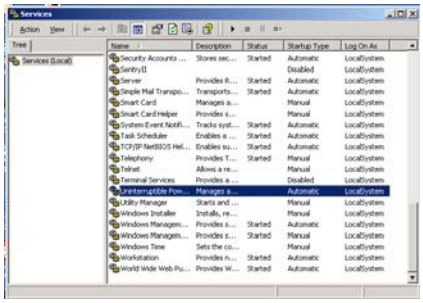


2. Double-click on the Control Panel’s “Administrative Tools” icon.

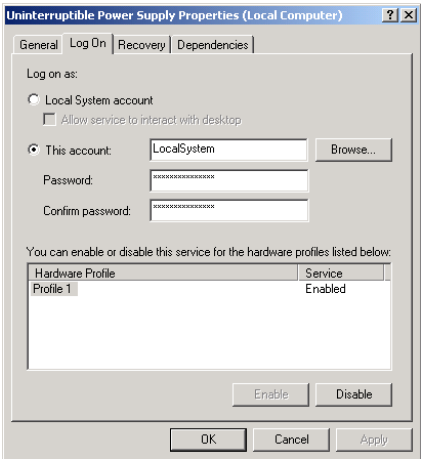
3. Double-click the “Services” icon.



4. Double-click on the Uninterruptible Power Supply service

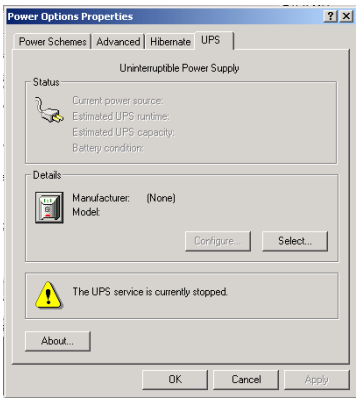


5. Select the “Log On As: This Account” button, input the appropriate account information, and then click “OK”.

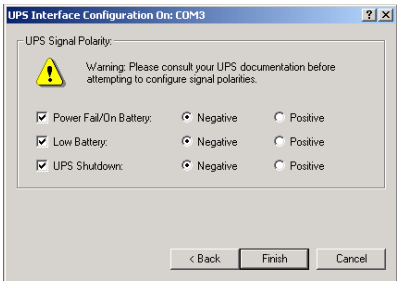


6. Double-click on the Control Panel’s “Power Options” icon

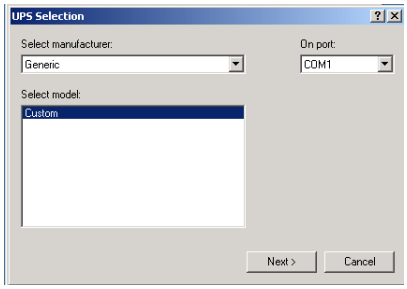
7. Select the UPS page, and then click on “Select…”



8. Choose the correct manufacturer from the “Select manufacturer” pull-down list, choose the correct COM port, and then click on “Next”



9. Click on the boxes, as shown, and then choose “Negative” for the three voltage settings. Click on “Finish” to keep these settings.



10. Click “OK” at bottom of the “Power Options Properties” window to finish.

2.3 Daisy Chain Setup Procedure

The Remote Power Manager (RPM) can be Daisy Chained up to a maximum of sixteen units. Each RPM in the Daisy Chain must have its own unique identification number. The default ID# is “0 “. The first RPM must have the Internet Power Management Card install and must be configured before you can begin Daisy Chaining any additional RPMs. Only the first RPM requires the Internet Power Management Card. All of the other RPMs in the Daisy Chain do not require that the Internet Power Management Card be installed. Follow the procedure below to Daisy Chain the RPMs:

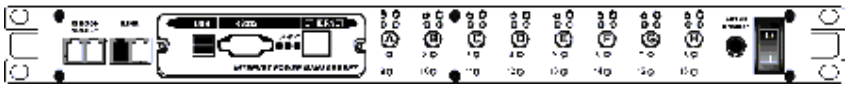


Figure 1 - First RPM

1. Make sure that the Terminator is plugged into the first RPM's iLink port (see Figure 1).
2. Plug the first RPM's power cord into utility power.
3. Turn the master power switch on.
4. Setup the RPM (see Setup Procedure page 9).
5. Configure the first RPM's ID number (each RPM must have it's own unique ID#, the default ID# is "0").

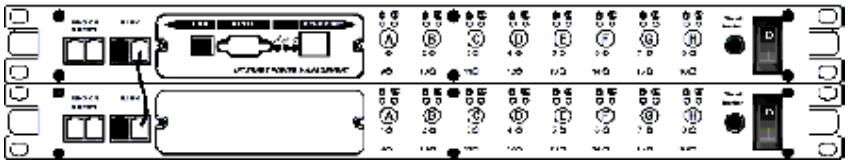


Figure 2 - First and second RPM

6. Make sure that the second RPM has the Terminator plugged into the iLink port (see Figure 2).
7. Connect the first and second RPM together with the iLink cable.
8. Plug the second RPM's power cord into utility power.
9. Turn the master power switch on.
10. Configure the second RPM's ID number (each RPM must have it's own unique ID#, the default ID# is "0").
11. If there are only two RPMs required for this application, then this completes the Daisy Chaining procedure and the RPMs are ready for use.

12. If your application requires additional RPMs, then continue on with the Daisy Chaining procedure.

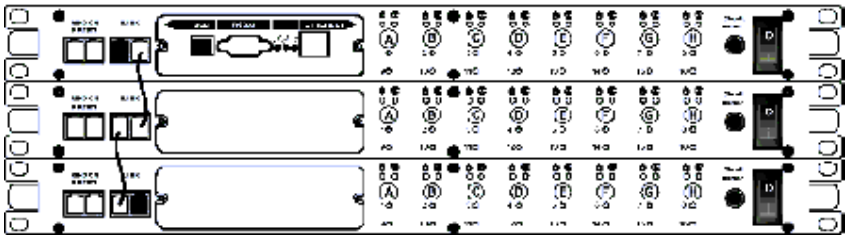


Figure 3 - First, second and third RPM

13. Make sure that the third RPM has the Terminator plugged into the iLink port (see Figure 3).
14. Remove the Terminator from the second RPM.
15. Connect the second and third RPM together with the iLink cable.
16. Plug the third RPM's power cord into utility power.
17. Turn the master power switch on.
18. Configure the third RPM's ID number (each RPM must have it's own unique ID#, the default ID# is "0").
19. If there are only three RPMs required for this application, then this completes the Daisy Chaining procedure and the RPMs are ready for use.
20. If your application requires additional RPMs (maximum of sixteen), then repeat steps 13-19 of the Daisy Chaining procedure.

Chapter 3: RPM Setup Utility (Netility)

3.1 Installing Netility

1. Insert the SNMP Utility CD into the CD-ROM driver and execute Netility.exe

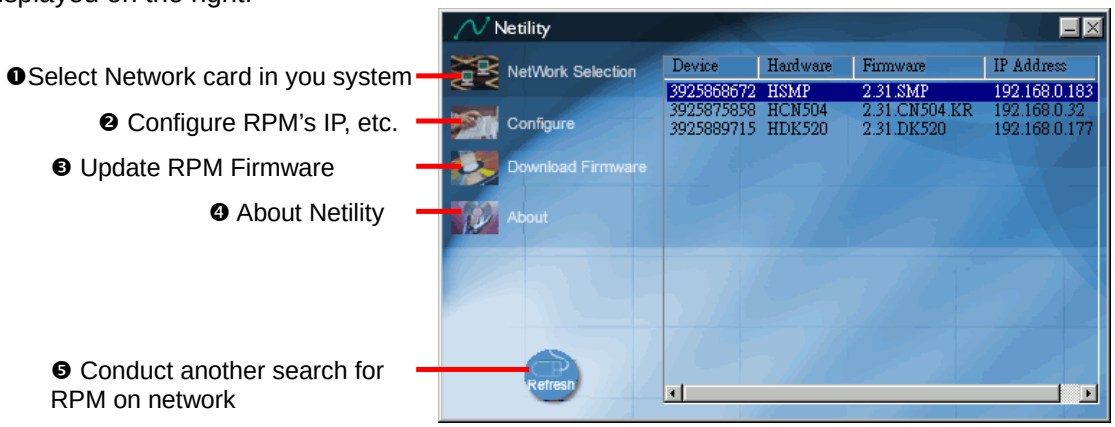
2. After installation is completed, 'Netility' group will appear in Windows 'Start' → 'Program Group'.

Netility Group

3. Click "Netility" to start the program.

3.2 Using Netility for IP Configurations

The Netility main menu is shown below. The selection menu is located on the left. The device, hardware, firmware and IP addresses of all RPM connected to the LAN are displayed on the right.

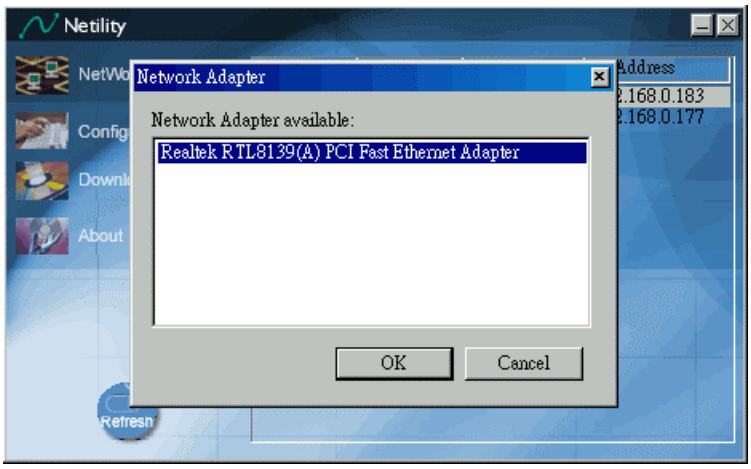


Netility Main Menu

3.2.1 NetWork Selection

Once Netility starts-up, it will automatically search for the computer's Network card (If not, click on "Network Selection" on the main menu to start the search). A pop-up window will show the available Network Adapter.

Next, select the Network Adapter which is connected to the internet and click 'OK' to return to the main menu. RPM current IP will now appear in the main menu display area.



Netility: NetWork Selection

3.2.2 Configure

Select the IP on the right display screen, and then click “Configure”. This will bring up the IP Address Configuration window. The user can now set;

- ❖ IP Address
- ❖ Advanced (for port setting configuration)

1. IP Address

   This section determines RPM’s IP Address. When using RPM for the first time, the IP address, subnet mask and gateway will have to be set. Enter the IP Address of your choice.

Netility : Set an IP Address for RPM

Address Configuration : Once the IP address is set, you will be able to connect to the RPM webpage from a standard browser.

Obtain an IP address by DHCP or BOOTP – the IP address, Subnet Mask and Gateway is acquired directly from the system

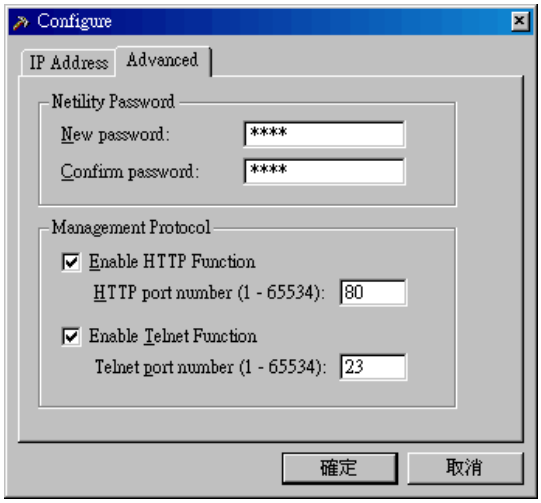
2. Advanced

   In order to increase security to RPM, Netility offers two additional security features:

Netility Password
Use this to set an access password for Netility.

WARNING:
Do not lose this password. If the password is lost, Netility will not be able to perform future firmware upgrades.

Management Protocol
The administrator can determine the parameter settings when providing access via HTTP (web) or Telnet to RPM. For security reasons, the administrator can choose to use either an open or advanced port setting to control these access.



The default values are set to port number 80 for HTTP and 23 for Telnet Function.

If set to other port values, the full IP Address must be entered in order to Telnet or access the Website. For example:

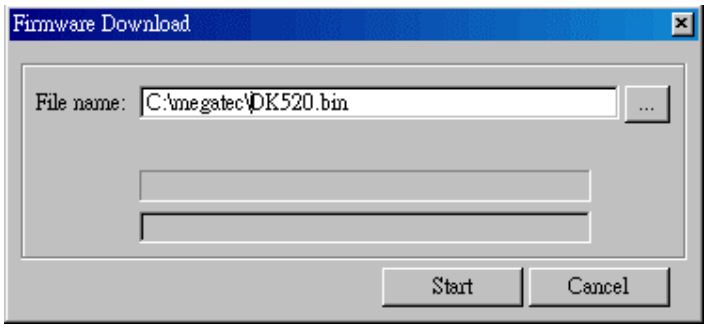
a. Set a value of 81 as the HTTP port number, then http://192.168.0.177:81 must be typed as the web address in order to access the RPM website.
b. Set a value of 24 as Telnet port number, then "192.168.0.177 24" must be typed at Telnet in order to access the RPM Telnet screen.

Uncheck to disable the function.

3.2.3 Download Firmware

Netility offers a convenient firmware upgrade. When a new firmware is available;

1. Click “Download Firmware” from the Netility main menu,
2. Click “Browser”,
3. Select new firmware file (*.bin) and,
4. Click “Start”.

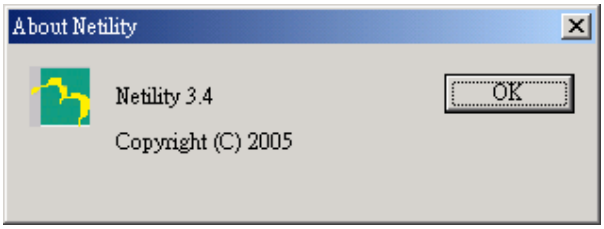


Netility: Update RPM firmware

NOTE:
If the downloading / upgrade process is interrupted or the data is corrupted, RPM will keep its default firmware to avoid complete data loss. Repeat the above firmware upgrade procedure if your upgrade process was interrupted.

3.2.4 About

This section displays the current Netility version.



Netility version examined

3.2.5 Refresh

Netility automatically search for any RPM connected to the LAN. However, the user can do a manual search by click the “Refresh” icon.

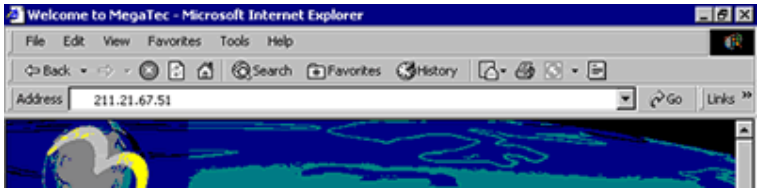
Chapter 4: RPM Environment Control Management

4.1 Introduction

After you have setup the hardware and set an IP address for RPM, you will then be able to go to RPM web site to monitor and control the devices. All you have to do is enter the new IP address into any standard web browser.

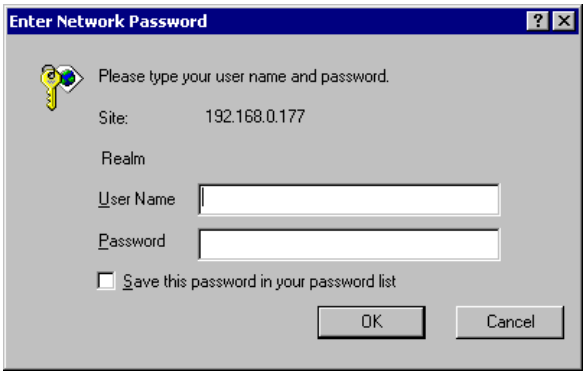
1. Start the Web Brower (Netscape or Internet Explore)

2. Enter the RPM IP Address that was set earlier using Netility (e.g. 211.21.67.51) and press [ENTER]



Enter RPM IP address

3. A login screen will appear, press [ENTER]. By default the username and password is left blank.



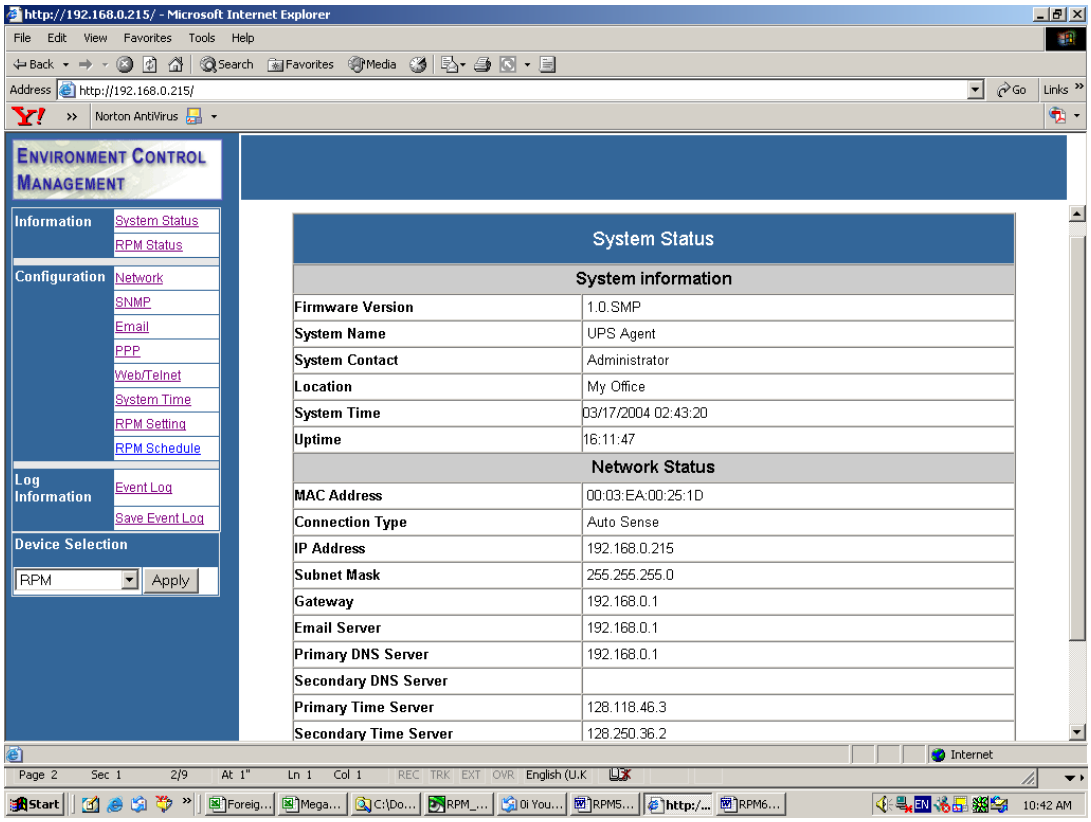
RPM Login screen

4.2 Environmental Control Management

The RPM webpage main menu is divided into two sections. The selections menu on the left and display menu on the right. The selection menu consists of the following options:

- Information
- Configuration
- Log Information
- Device Selection

When using RPM for the first time, you must first set the necessary parameters in the “Configuration” menu. This will ensure that the RPM will work properly.



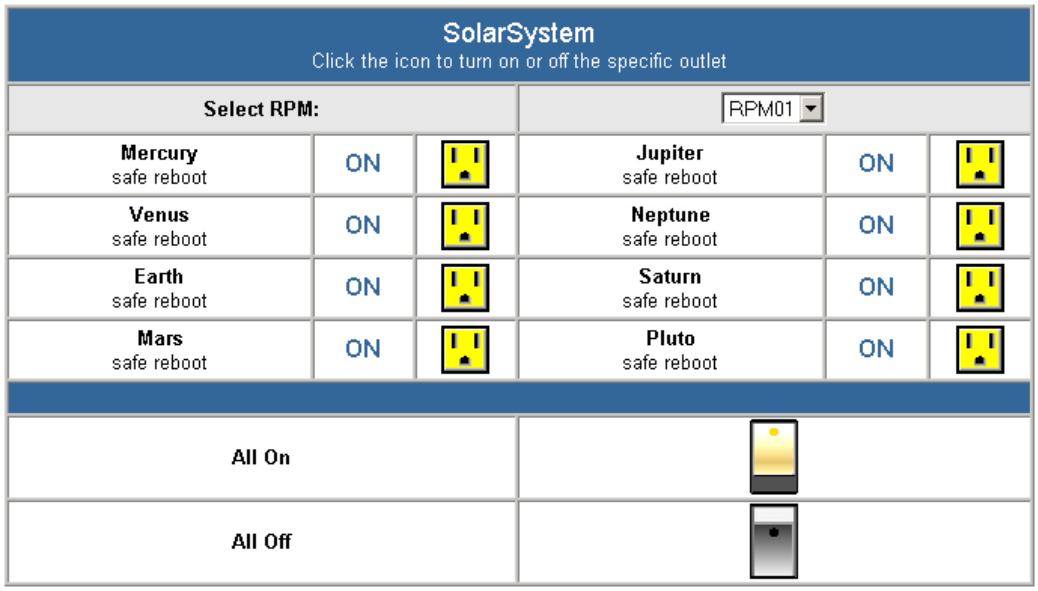
RPM Main Menu

4.2.1 Information

This tab displays the System Information and RPM Status. The information and values are either provided by RPM or values set by the users in the “Configuration” section. Click on “System Status” to view the information.

1. System Status
   This section shows you the System Information and Network Status such as the Firmware Version, the system name, uptime, IP Address, Gateway, PPP Server, Login IP and the like. These values are either provided by RPM (i.e. MAC address) or set by user.

2. RPM Status
   This section gives you remote control over the RPM unit and its individual devices. Click on the individual power input icon to either switch on / off the device.



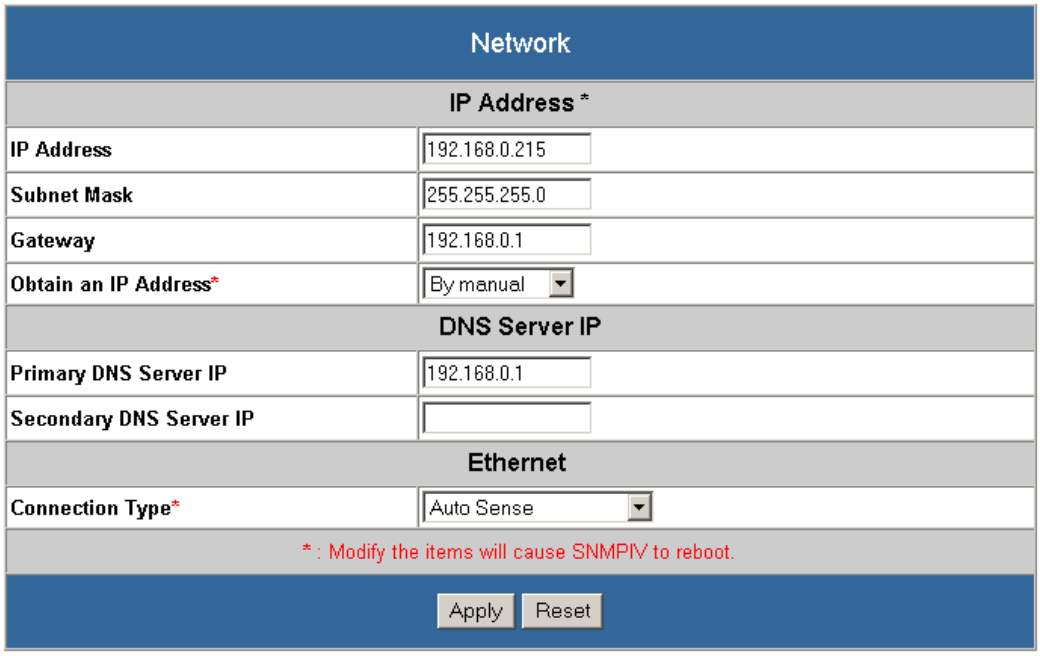
RPM Status Menu

4.2.2 Configuration

Please ensure that each of the following option is set correctly. Otherwise, RPM may not work properly.

- Network
- SNMP
- Email
- PPP
- Web/Telnet
- System Time
- RPM Setting
- RPM Schedule

1. Network



This option determines the RPM Network settings. Once you changed the IP Address, you will have to redirect your browser to the new IP address manually. In addition, changing the option between “manually” and “using DHCP” to “Obtain an IP Address” will cause the SNMP card to reset once you click the <Apply> button.

DNS Server IP

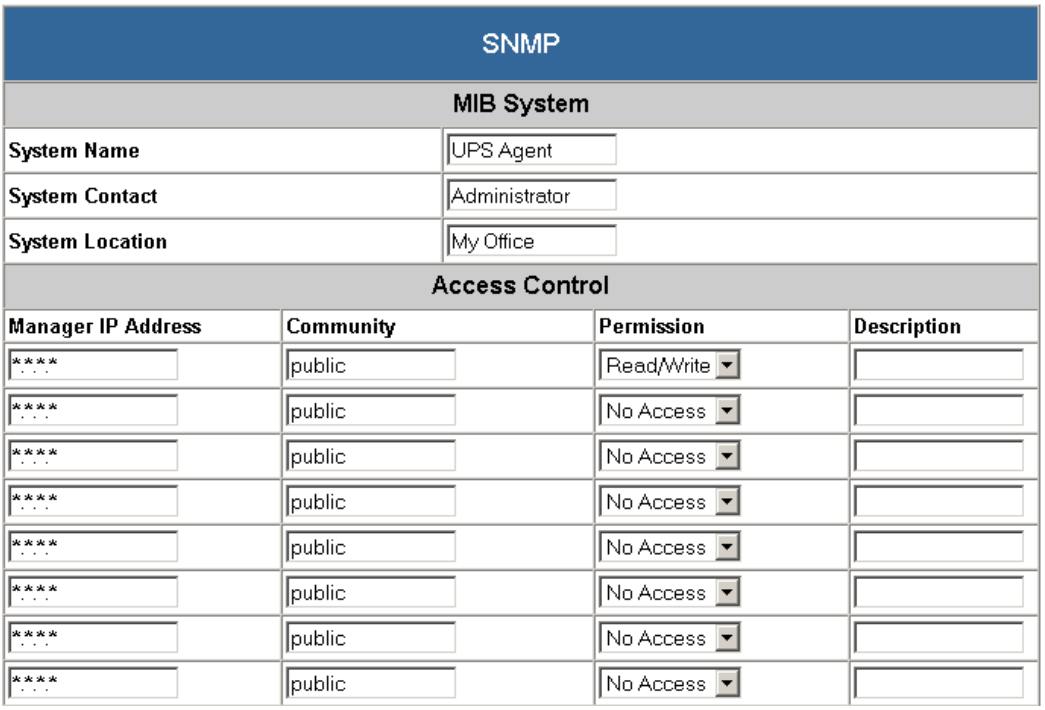
Primary DNS Server IP	:	This is to set SNMPIV primary DNS Server IP address.
Secondary DNS Server IP	:	This section is to set SNMPIV secondary DNS Server IP address. SNMPIV will use the secondary DNS Server IP address when the Primary DNS Server IP address is not working

Ethernet: Connection Type

This item sets the communication speed between SNMPIV and the Network. If you change the Connection Type settings, SNMPIV will reboot.

2. SNMP

This page is to configure the SNMP settings so that the RPM can be used by a NMS (Network Management System). (Eg: HP OpenView, SUN SunNet Manager, IBM Trivoli, etc…)



MIB System

System Name	:	Give a name to the SNMP.
System Contact	:	Name the administrator.
System Location	:	Name SNMPIV location.

Access Control

Manager IP Address : This section is to fix the IP address from which the administrator can access the Environment Control Management webpage. You can set up to 8 IP addresses.

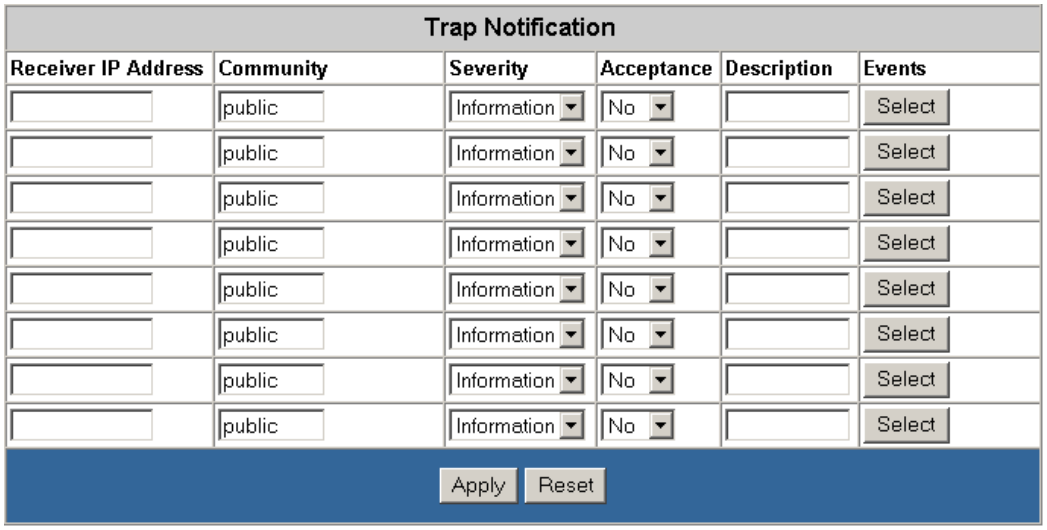
To access this webpage from any IP address leave this space as *.*.*.* (default)

Community : This section is to set a Community name for NMS.

Note: The community name has to be the same as the setting in NMS.

Permission : This section is to set the authorities of accessing administrator. There is an option of Read, Read/Write, and No Access (for banning / restricting access from certain IP Address).

Description : This section is for an administrator to make notes.



Trap Notification

Receiver IP Address : This section is to set receivers IP address for receiving traps sent by RPM. It is valid for up to 8 IP Addresses.

Community : This section is to set a Community name for NMS. The community name has to be as the same as the setting in NMS.

Severity : This section is to set Trap receiver levels. There are three levels of Trap receiver:

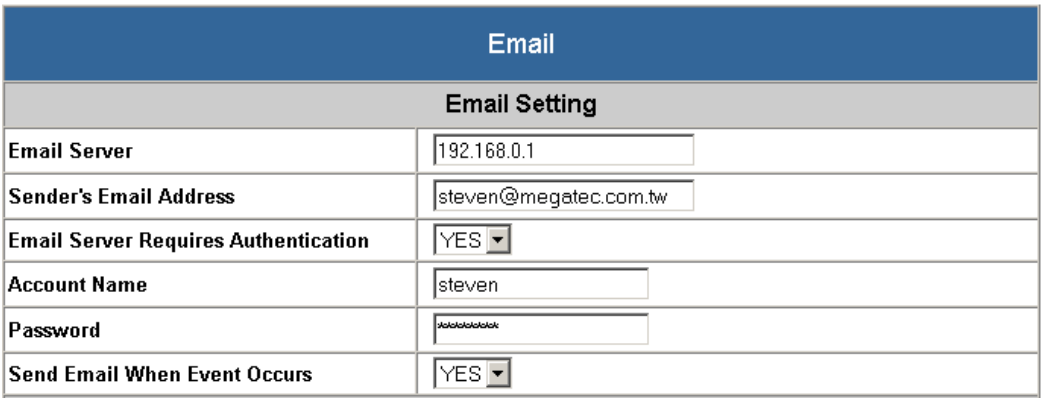
1. Information: To receive all traps.
2. Warning: To receive “warning” and “severe” traps.
3. Severe: To receive only “severe” traps. (Please refer to NMS manual for Trap levels).

Acceptance : Determines if the IP will receive a trap or not.

Description	:	This section is for an administrator to make notes.
Event	:	This section is to select events for RPM to send traps. Clicking on Select will open a “Select Events List”. Event Traps may be selected from this list.

3. E-mail

This option sets the following Email details for RPM



E-mail Settings

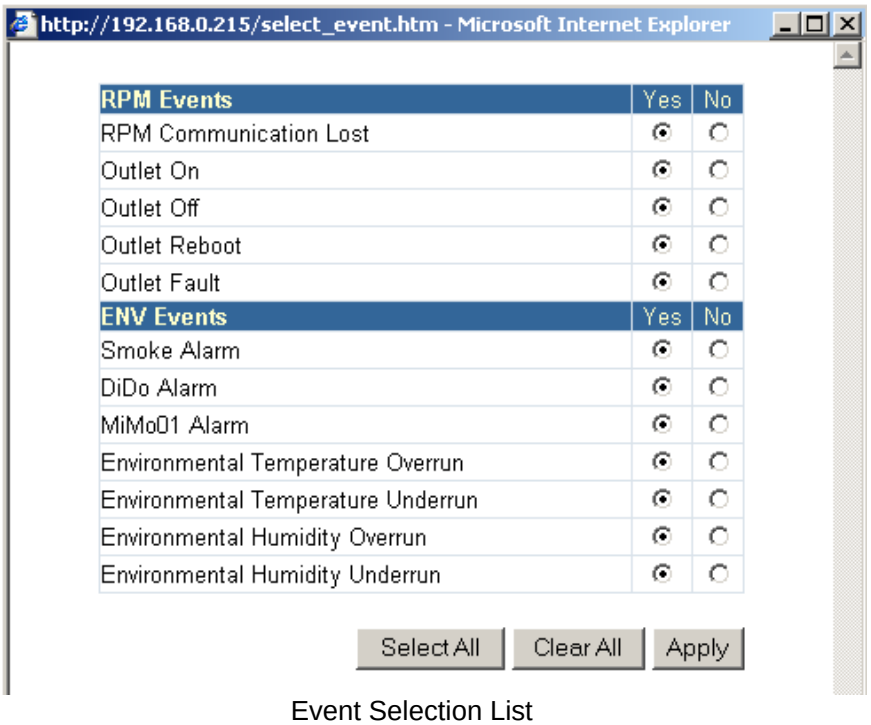
E-mail Server	:	This is to set the email server
Sender’s Email Address	:	This item determines RPM Email address
Email Server Requires Authentication	:	If set to “YES”, the user will have to provide the account name and password in order to access the Email server. Otherwise, enter “NO”.
Account Name	:	Enter the account (login) name for the email server.
Password	:	Enter the password for the above account name
Send Email When Event Occurs	:	If set to “YES”, RPM will send an email to the Recipient’s Email Address (set below) when an event occurs.

Recipient's Email Address (for Event Log)		
No.	**Email Address**	**Events Selection**
Account 1	steven@megatec.com.tw	Select
Account 2		Select
Account 3		Select
Account 4		Select
Account 5		Select
Account 6		Select
Account 7		Select
Account 8		Select

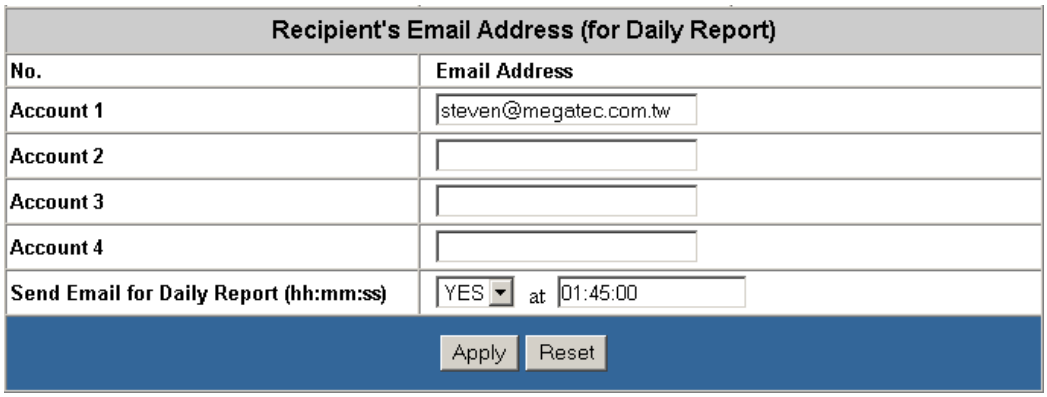
Event Log recipient's email address

Recipient's Email Address (for Event Log)
The user can determine which 8 email addresses will receive warning email when an event occurs.

Event Selection : This section determines the type of event. Click on "Select" to open the "Select Events List" and choose the appropriate event for the respective email accounts.



Event Selection List

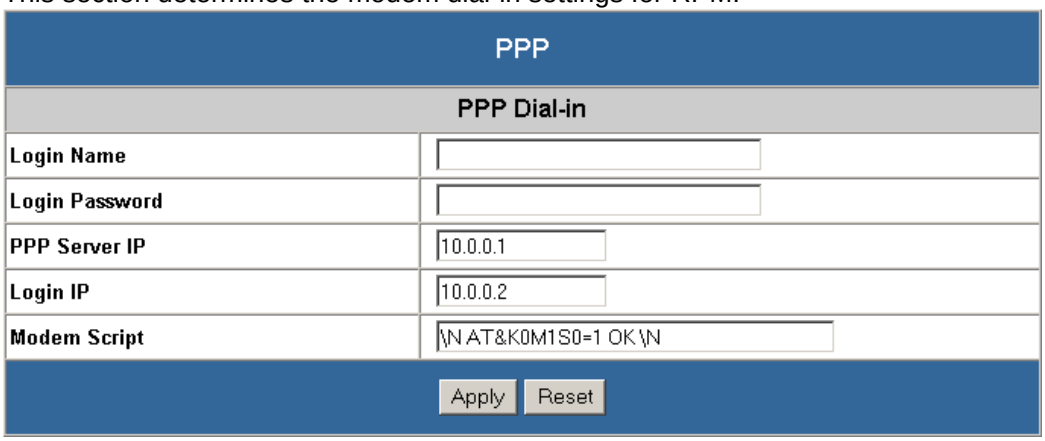


RPM Daily Report recipient's email address

Recipient's Email Address (for Daily Report)
The user can determine which 4 email addresses will receive a Daily Report sent by SNMPIV.

Send Email for Daily Report (hh:mm:ss)
This section determines the time of the day, the report is sent.

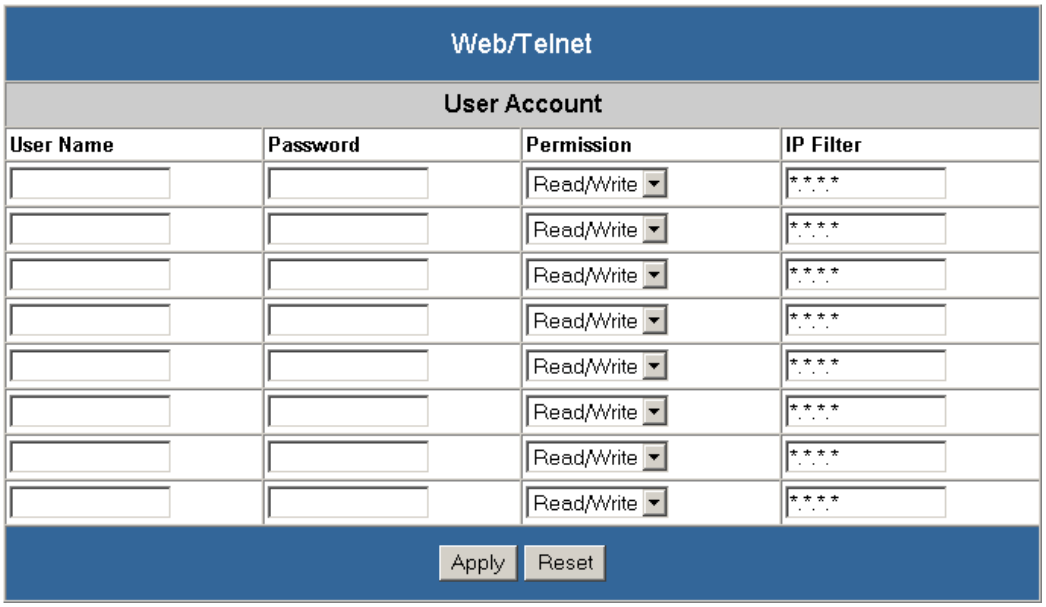
4. PPP
This section determines the modem dial-in settings for RPM.



PPP Dial-in

Login Name	:	Determine the username of visitors who can log in.
Login Password	:	Set a password for the visitor's account
PPP Server IP	:	Default set at 10.0.0.1
Login IP	:	Default set at 10.0.0.2
Modem Script	:	Default / Standard modem script.

5. Web/Telnet
This section is to set the Web/Telnet options for RPM. Once set, a user will have to enter the given username and password in order to access RPM Environment Control Management webpage.



User Account

User Name : This section is to set a User Name for SNMPIV web pages. It is valid for up to 8 users. Users have to input their user name to get access to SNMPIV web pages from a web browser.

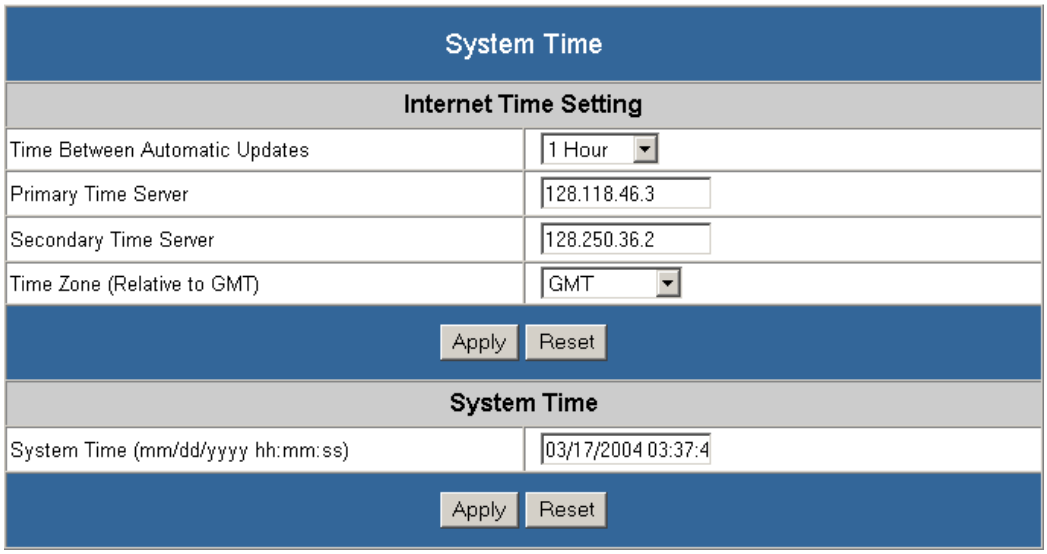
Password : This section is to set a password for SNMPIV web pages. Users have to input the password to get access to SNMPIV web pages from a browser.

Permission : Determine the user's authorization. The user can either "Read only" or "Read and Write" after gaining entry to the webpage.

IP Filter : An additional security feature. Once specified, the user can only login from the specified IP address. Leave blank to allow user to login from any place.

6. System Time

This section is to set RPM System Time. You can provide RPM with up to two time servers or alternatively you can set the time zone yourself.



Internet Time Setting

Time Between Automatic Updates	:	This section is to set an interval for time synchronization. Select either nil, 1, 3, 12 hours or 1, 10 & 30 days.
Primary / Secondary Time Server	:	Set the primary and secondary time server for RPM.
Time Zone (Relative to GMT)	:	Select the appropriate time zone for your area.

System Time (Manually)

System Time (mm/dd/yyyy hh:mm:ss)	:	This section is to set RPM System Time manually. The format is pre-determined to: mm/dd/yyyy hh:mm:ss

7. RPM Settings

This section determines the setting to the individual device connected to RPM.

Select RPM	:	Select the RPM that is currently connected and switched on
Address Change	:	Use this to assign a new number or change the currently assigned number for the RPM unit. You have a choice of 00 to 16. **Note**: You cannot choose a number that is already assigned to another RPM.
Identification	:	To give a unique name for the RPM.
Outlet	:	Indicate outlets A-H
Name	:	To set a unique name for the Outlets

Phone Controllable : Option of “Yes” or ”No”

Control Type : Select a control type for the outlet. Option of;
1. Safe shutdown
2. Safe reboot, and
3. Instant shutdown

(refer to Control Type Table for examples)

Power off Delay : Sets the power off delay time in seconds (value from 0 to 9999)

Power Resume Delay : Sets the power resume/on delay time in seconds (value from 0 to 9999)

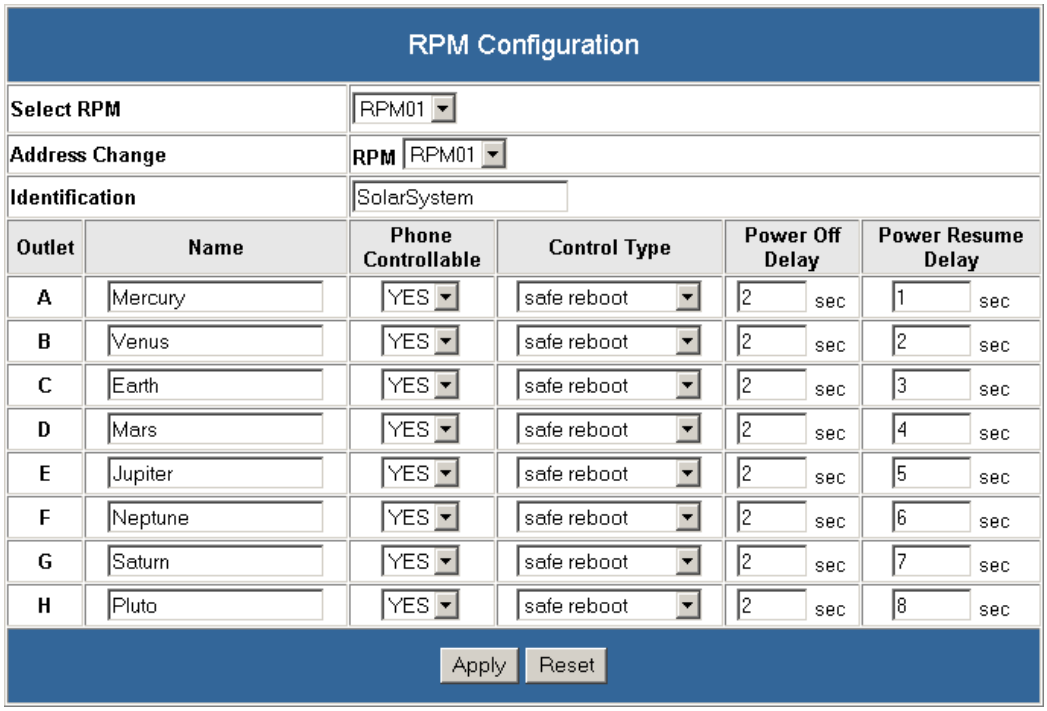


Table of Control Type and Resulting RPM Action:

Power Mode	Control Type	Power Off Delay (sec)	Power Resume Delay (sec)	Action By RPM
ON-OFF	Instant Shutdown	0	0	Instant Shutdown
ON-OFF	Instant Shutdown	10	0	Instant Shutdown
ON-OFF	Instant Shutdown	0	10	Instant Shutdown
ON-OFF	Instant Shutdown	10	10	Instant Shutdown
OFF-ON	Instant Shutdown	0	0	Instant ON
OFF-ON	Instant Shutdown	0	10	On within 10 sec.
OFF-ON	Instant Shutdown	10	0	Instant ON
OFF-ON	Instant Shutdown	10	10	On within 10 sec.
ON-OFF	Safe Shutdown	0	0	Instant Shutdown
ON-OFF	Safe Shutdown	10	0	Shutdown in 10 sec.
ON-OFF	Safe Shutdown	0	10	Instant Shutdown

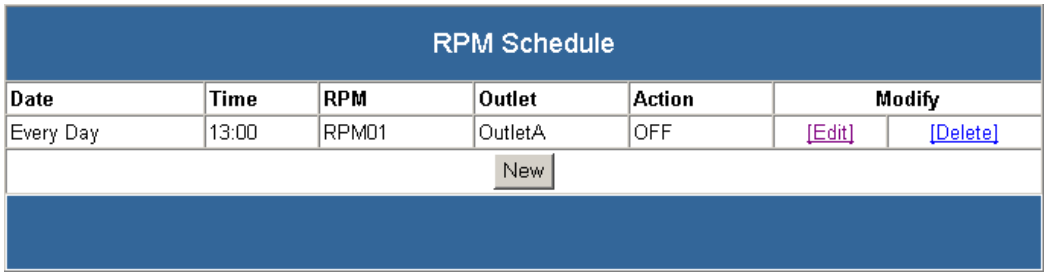
ON-OFF	Safe Shutdown	10	10	Shutdown in 10 sec.
OFF-ON	Safe Shutdown	0	0	Instant ON
OFF-ON	Safe Shutdown	0	10	On within 10 sec.
OFF-ON	Safe Shutdown	10	0	Instant ON
OFF-ON	Safe Shutdown	10	10	On within 10 sec.
ON-OFF	Safe Reboot	0	0	Inst S/D, reboot in 10
ON-OFF	Safe Reboot	10	0	S/D in 10, reboot in 10
ON-OFF	Safe Reboot	0	10	Inst S/D, reboot in 20
ON-OFF	Safe Reboot	10	10	S/D in 10, reboot in 20

Note: If the Control Type were changed from Instant or Safe Shutdown to Safe Reboot and for the first time only, the following will occur;

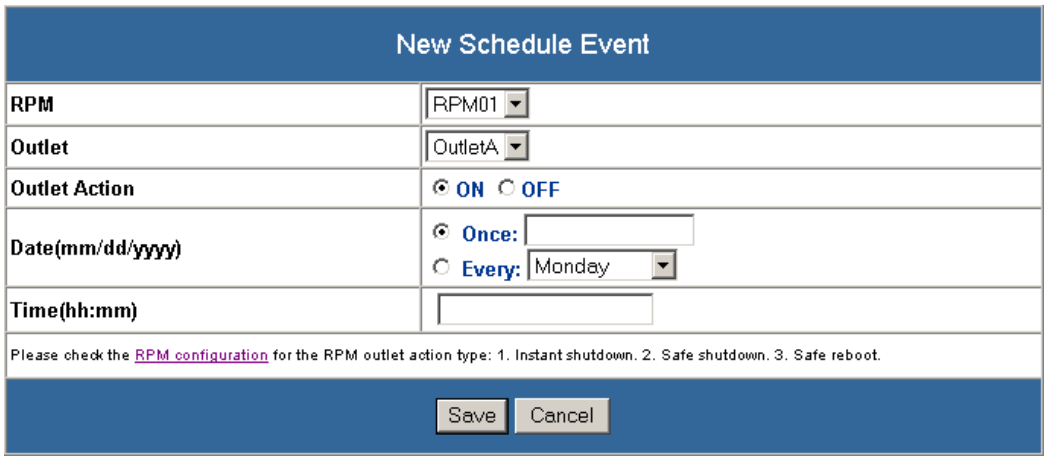
Power Mode	Control Type	Power Off Delay (sec)	Power Resume Delay (sec)	Action By RPM
OFF-ON	Safe Reboot	0	10	Starts in 20 sec.
OFF-ON	Safe Reboot	10	0	Starts in 10 sec.

8. RPM Schedule

Use this section to manage your RPM schedules. You can choose to add a new schedule, Edit the existing schedule or delete a schedule.



Click on [New] to enter a new schedule event.



4.2.3 Log Information

This section keeps track of device events. It will record the time and date, device, RPM unit, and details of the event which occurred. You can also opt to save the event log. Up to 99 events can be logged. When the limit is reached SNMPIV will delete the earliest record and continue logging new events.

RPM Events List:

- RPM Communication Lost
- Outlet On
- Outlet Off
- Outlet Reboot
- Outlet Fault

ENV Events List:

- Environmental Temperature Overrun
- Environmental Temperature Underrun
- Environmental Humidity Overrun
- Environmental Humidity Underrun

Data Log

This page is a UPS data log. It shows a record of all data log in certain interval time, it includes Date/Time, Input Volt, Output Volt, Freq. Loading, Capacity, and Temp. When this limit is reached SNMPIV will delete the earliest data record and continue logging new data.

Chapter 5: Connected Device

5.1 Environment Monitor, ENV

Once an ENV device is connected, the additional information on this page will be shown on the Environment Control Management webpage.

1. ENV Status
   This page show details of the environment detected by the ENV device. The user can choose the interval (2, 5, 10, 30 seconds or 1 minute) at which the status is refreshed. “DiDo01 Status” will show the Security sensor status and “Smoke01 Status” will show Smoke sensor status (if these are connected). You can connect to another 7 sensors and their status will be indicated on “MiMo01 to MiMo07”

ENV Status	
Refresh Status every	10 seconds
Item	**Status**
Environment Temperature	28.4C (83.1F)
Environment Humidity	47 %
DiDo01 Status	Normal
Smoke01 Status	Normal
MiMo1 Status	Normal
MiMo2 Status	Normal
MiMo3 Status	Normal
MiMo4 Status	Normal
MiMo5 Status	Normal
MiMo6 Status	Normal
MiMo7 Status	Normal

2. ENV Settings
   This section sets the lower and upper limits for Humidity and Temperature. If the temperature or humidity, drops below the lower limits or goes above the upper limit, SNMP will send out a warning email.

ENV Configuration		
Item	**Critical Under Run**	**Critical Over Run**
Humidity (%)	5	85
Temperature (c)	5.0	70.0
Apply Reset		

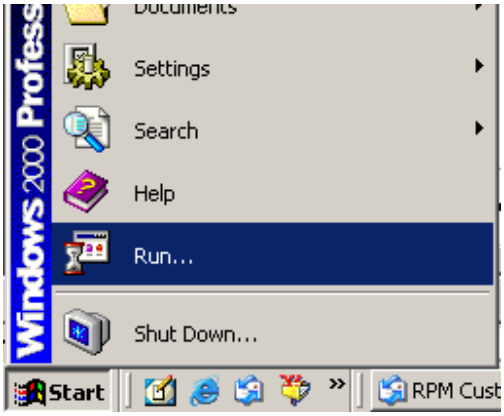
Chapter 6: Remote Monitoring Using Telnet

6.1 Accessing RPM using Telnet

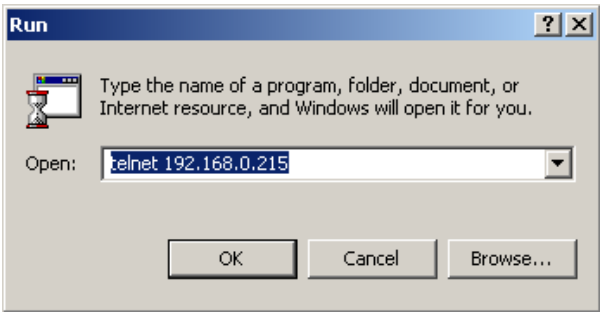
RPM supports multiple Network Management Systems as well as LAN protocols. Once you have finished the hardware installation and have assigned an IP to the RPM, you will be able to use Telnet to monitor and control the RPM.

To access RPM using the telnet option, follow these steps;

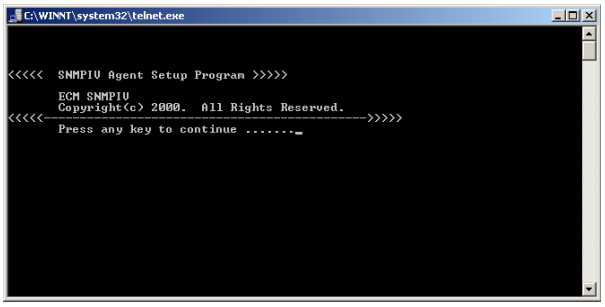
1. Select “Start” from Windows, click “Run” to key-in RPM’s IP Address



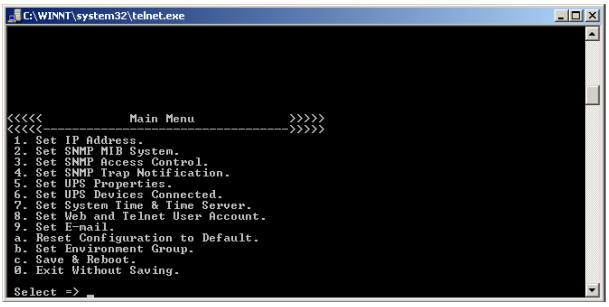
2. Double-click on the Control Panel’s “Administrative Tools” icon.



3. Successful link-up display. For first time login only, press <Enter> for User Name and Password.



4. Main screen is as follows



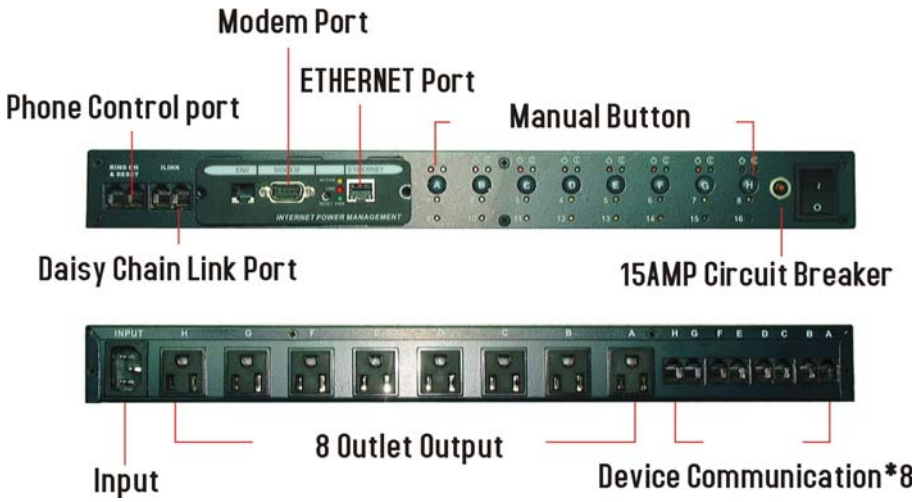
6.2 Control and Setup RPM using Telnet

Once you can access RPM using telnet you will be able to control and manage your RPM. The following details the individual menu option available using telnet.

1. Set IP Address	:	This function allows you to setup IP Address, Gateway Address and Subnet Mask parameters. Similar to that on the webpage.
2. Set SNMP MIB System	:	This function allows you to set the MIB system group parameters.
3. Set SNMP Access Control	:	This function allows you to set the Manager IP, Community, Access Permission. **Note:** The configuration of 'Set SNMP Access Control' is only used for SNMP Network Manager.
4. Set SNMP Trap Notification	:	If you want to use a PC and perform the 'Trap' function of SNMP manager to manage RPM, the IP address of the PC must be added in this list. **Note:** The configuration of 'Set SNMP Trap Receiver' is only used for SNMP Network Manager.
5. Set UPS Properties	:	Choose only RPM. Note: Other functions are not available for RPM.
6. Set UPS Devices Connected	:	This allows you to setup the System Name, Rating in % and shows if the device is connected or not.
7. Set System Time & Time Server	:	This allows you to setup the System date, time and two time servers.
8. Set Web and Telnet User Account	:	This is allows to set users account's authority.
9. Set E-mail	:	This is allows to set e-mail accounts to receive power event notification for emergency management.
a. Reset Configuration to Default	:	Set all values to their default settings.
b. Set Environment Group	:	Set the Environment group settings
c. Save & Reboot	:	Save the current configuration data, including any changes you have made, and reset the SNMP card.
0. Exit Without Saving	:	All changes will be lost.

Chapter 7: The Outlook of RPM Panels

7.1 RPM Front and Back Panels



The rear-panel contains eight NT SERVER PORTS from A-H. These ports provides controlled shutdown for NT server. (Port A controls receptacle A; Port B controls receptacle B, etc…)

7.2 RPM LED Table

RPM LED Table			
LED	ON	OFF	FLASHING
GREEN	The momentary switch is disabled and the output receptacle is programmed for remote control.	The momentary switch is active and the receptacle may be turned on or off by pressing and releasing the switch	Pressing and holding the momentary switch for three seconds will change the state from remote to local control.
RED	The receptacle is on and providing power to devices	The receptacle is off and doesn't provide power.	The receptacle has internal fault.
YELLOW	Indicate the RPM ID number. The master one-plugged with SNMP card, will display all the connected RPM ID numbers	It means the RPM ID is RPM00.	

7.3 SNMP LED Table

SNMP LED Table			
YELLOW	RED	GREEN	STATUS
Solid Off	Solid Off	Solid On	Power ON
Flashing	Solid On	Solid On	System initial
Solid On	Solid Off	Solid On	Normal Operation
Solid On	Flashing	Solid On	No Connection to UPS
Flashing	Flashing	Solid On	Writing data to flash memory
Green Light : Power state Red Light : Connection state with UPS			

Chapter 8: Accessing RPM using a Telephone

This section guides you through control of RPM using a telephone.

1. Dial up the RPM.
2. After three rings the RPM will respond by sending out three short beeps to the caller. Then the RPM waits for the user to enter the password.
3. The user enters an access password (default password is 123456789#).
4. The RPM will send out three short beeps to confirm a successful login, or one long beep to deny access. The RPM will disconnect after three unsuccessful access password attempts.
5. Once logged in, the remote user can punch in 4-8 digits. The first two digits specify which RPM, the next digit specifies which output receptacle and the next digit specifies which command. The last four digits specify the amount of time:
    i. Command format: XXNA#:
    ii. XX - 00—16 is the RPM's device number for a daisy chain, if there is no daisy chain, then any number is accepted.
    iii. N - Outlet number: 1(A)—8(H), 9 controls all the outlets.
    iv. A - Action type: 0=off, 1=on, 2=reset.
    v. I.E. 0111# RPM01 turn on Outlet A.
    vi. I.E. 0120# RPM01 turn off Outlet B.
    vii. I.E. 0212# RPM02 reset outlet A.
    viii. I.E. 01113600# means turn A on after 3600 minutes.
    ix. I.E. 01103600# means turn A off after 3600 minutes.
    x. I.E. 01123600# means reset A after 3600 minutes.
    xi. Use a combination of 0111XXXX# or 0112XXXX# to get a different delay time. XXXX max value is 9999, which is about 166 hours or 6.94 days.
6. Use the "*" key to cancel a command at any time.
7. The RPM will acknowledge the receipt of the commands by issuing 2 short beeps. A long beep indicates a failure or a non-recognizable command.
8. To change the password. The default password is 123456789#. The user has to enter the previous password in order to change their password.
    i. NOTE: The Password has to have a minimum of 7 digits and can have a maximum of 10 digits.
9. The user enters 888# or whatever previous password. Then the RPM responds with three short beeps acknowledging access granted. The user then enters the new password as follows: 888XXXXXXXXX#, and the RPM acknowledges with 2 short beeps. Then user inputs 888XXXXXXXXX# the second time to re-confirm the new password. The RPM acknowledges with 4 short beeps, indicating that the password has been changed.
10. Hang up to close any access.
11. Forgot telephone interface password? Please do the following steps to restore the default password.
12. Dial up the RPM.
13. After three sequence rings, the RPM will respond by sending out 3 short beeps to the caller and waiting for user to enter password. Then pressing the button A and H simultaneously on the RPM within twenty seconds.
14. When the LED A and H blinking, release the two buttons, the RPM will respond by sending out 4 short beeps to the caller. The password will be restored to default.
15. The RPM is in a waiting loop to receive the command string. Each command string should be entered within 20 seconds. After 180 seconds without any user input, the RPM will logout the user.

16. The 9 command set is for the administrator:
17. 0190# to turn every port off.
18. 0191# to turn every port on.
19. 0192# to reset every port with a delay of 8 minutes, which will allow safe shutdowns. The delay can be changed by command 888911XXXX#, where XXXX can range from 1 to 9999 minutes.
20. The user enters 000# that can force to break connection with RPM.

Appendix A: Frequently Asked Questions

Questions	Answers
TES (Terminal Emulation Software) does not display	Make sure the TES's communication parameters are correct. They should be 115200-baud rate, no parity, 8 data bits, and 1 stop bit.
NMS cannot ping the Remote Power Manager	Make sure the network connection to the RPM is good. Make sure the cable is in good condition Make sure to set the community String. Make sure to set the Manager table. Make sure the Gateway is correct
My NT server shutdown	Verify that the NT server is not setup to have a scheduled shutdown. Verify that the RJ-11 NT server cable on the RPM and the NT server is properly secured.
All the LEDs are off and all of the output receptacles are dead	1. Turn the master power switch ON 2. Reset the AC circuit breaker
The RPM will not communicate and all of the LEDs on the web card are ON	There has been a collision of the packets. The RPM needs to be reset. Turn the RPM off and wait for approximately one minute, then turn it back on.
All the LEDs are off and all of the output receptacles are on	The RPM needs to be reset. Turn the RPM off and wait for approximately one minute, then turn the RPM back on.
The user cannot change from one web page to the next	The RPM needs to be reset. Turn the RPM off and wait for approximately one minute, then turn the RPM back on.
I forgot my Supervisor's name/password	The RPM needs to be upgraded.