

UPSentry Smart 2000

Shutdown Management Software for Windows

User's Manual

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Introduction

Congratulations on your purchase of UPSentry Smart 2000 to manage your Uninterruptible Power Supply (UPS). UPSentry Smart 2000 is designed to provide end users the ability to take proactive steps to protect their equipment from power related damages. UPSentry Smart 2000 allows for automatic shutdowns, scheduled shutdowns and a variety of other features that help you manage your system and its peripheral components.

UPSentry Smart 2000 provides detailed information about the UPS and its protected equipment. It is easy to install and program, yet has the necessary features to handle all of one's power requirements. Included is the capability for network management protocol (SNMP). UPSentry Smart 2000 will disseminate UPS information into SNMP protocol and project it to the appropriate Network Management Station (NMS), such as HP OpenView. To make use of resources on the Internet, UPSentry Smart 2000 also supports HTTP protocol. This enables end-users to monitor their UPS anywhere, anytime, by simply utilizing their web browser.

UPSentry Smart 2000 runs in the background as a Windows service, and communicates with the UPS in order to ensure that your computer and attached components are protected from any power problems.

UPSentry Smart 2000 features:

1. Graceful operating system shutdown
2. Scheduled tests, shutdown/restarts of the UPS, turn on/off receptacles
3. Flexible events
4. Notification: SMS, Pager, e-mail and audible alarm, network broadcasting and SNMP
5. Real-time values of voltage, current, frequency and loading...
6. Historical data & graph
7. Network monitoring
8. Multi-computer shutdown/restart
9. Support Simple Network Management Protocol (SNMP)
10. Support HTTP, remote monitor and control using Internet browser
11. Support Universal Serial Bus (USB)
12. Multi-lingual menus

UPSentry Smart 2000 Installation

UPSentry Smart 2000 Setup:

1. Turn off your computer.
2. Attach the electrical power cable from the computer to the UPS.
3. Attach the electrical power cable from the UPS to an AC power outlet.
4. Plug the communication cable into the UPS, then plug the other end of the cable into the communication port on your computer.
5. Start your computer.
6. Place the UPSentry CD in your CD-ROM device and execute the setup.exe to run the setup program.
7. Check the communication type of your UPS. If you select the USB option you must have connected the UPS to this computer and install the HID driver.
8. During the installation, the following dialog gives you 5 options:
 - Program File: Files contain UPSentry Service, UPSentry Monitor and this on-line help.
 - Audio Files: Some .wav files. These files will be played to notify you when power event occurs.
 - SNMP Files, UPSentry Smart 2000 SNMP DLL file.
9. After finishing the installation, setup program will create a UPSentry Smart 2000 association.

The UPSentry Smart 2000 software is comprised of two modules:

- An UPS Monitoring Module(UPSentry Service), which runs in the background as a Windows Service and communicates to the UPS.
- An User Interface Module(UPSentry Monitor), which enables you to control and configure UPSentry Smart 2000 through the drop down menus and dialog boxes. It also allows you to monitor the UPS through the Main Screen.

Help: UPSentry Smart 2000 on-line help.

Uninstall: To remove UPSentry Smart 2000 from your hard disk.

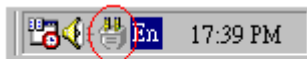
UPSentry Monitor: User interface, used to monitor and configure UPS.

UPSentry Status: Reflect the status of UPSentry Smart 2000 service program, the service program is used to communicate with your UPS.

UPSentry Service

UPSentry Smart 2000 Service runs in the background as a Windows Service when the system initiates. You can also run UPSentry Service manually by selecting the Start Menu- Program Files - UPSentry Smart 2000 - UPSentry Service. Once UPSentry Service starts there is an UPSentry Service icon located on the system tray to indicate UPS status.

1. Normal



Normal

2. UPS Disconnect, cannot get any information from the UPS.



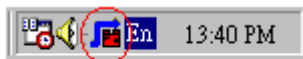
UPS Disconnect

3. Power Failed! The UPS is operating on battery power.



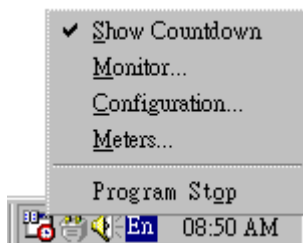
Power Failed!

4. UPS Bypass Active!



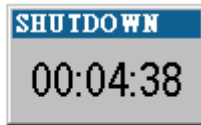
Bypass

Moving your mouse over the UPSentry Smart 2000 icon in the system tray and click the right button to pop up the following menu



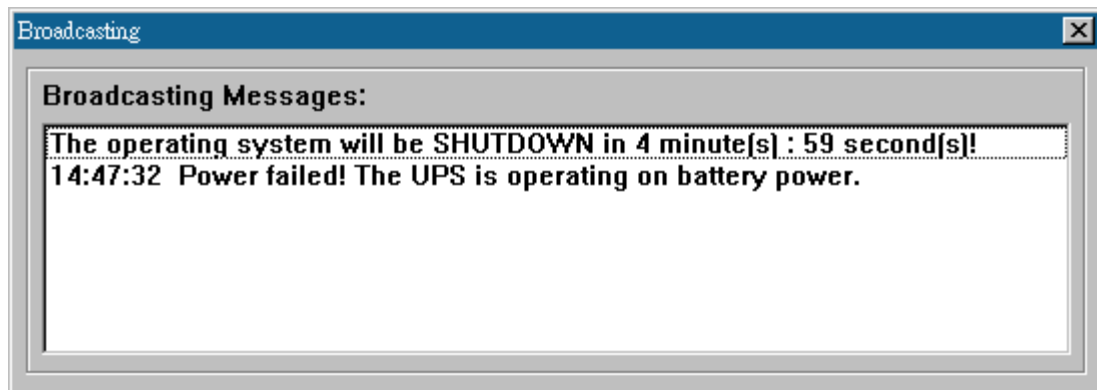
- Show Countdown: UPSentry Smart 2000 displays the countdown time (time to shutdown/suspend the operating system) window to remind the user that the operating system will be shutdown or suspend in the displayed time. This function lets user know clearly how much time is left

to shutdown/suspend the computer when power fails. The operating system shutdown time can be adjusted from the Action menu.



- Monitor: Run the UPSentry Smart 2000 user interface.
- Configuration: Displays the configuration window, allows you to change the UPS parameters.
- Meters: Shows UPS real-time meters.
- Program Stop: If this item marked UPSentry Smart 2000 stopped. Unmark it and the program will resume.

Once a power event has occurred, UPSentry Smart 2000 will pop up a broadcast dialog box to inform user what happened to UPS.



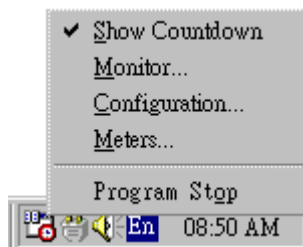
UPSentry Monitor

UPSentry Monitor enables you to control and configure UPSentry Smart 2000 through the drop down menus and dialog boxes. It also allows you to monitor the UPS through the Main Screen. It is not necessary for UPSentry Monitor to reside in your computer's memory, the execution depends on the user's requirement. This can save precious system resources.

After finishing the UPSentry Smart 2000 installation, UPSentry Service automatically loads into memory and runs once the Windows operating system startup. There is an UPSentry Smart 2000 icon that lies in the system tray to indicate current UPS status.



To run the UPSentry Monitor, moves the mouse cursor over the UPSentry Smart 2000 icon and double-click to launch UPSentry Monitor, or click the right button to pop up the menu:



Then select Monitor to run the program. You can also launch UPSentry Monitor without running UPSentry Service, select UPSentry Monitor from Program Files - UPSentry Smart 2000 menu.

UPSentry Monitor Main Screen:

The screenshot displays the main interface of the UPSentry Smart 2000 Monitor. The window title is "UPSentry Smart 2000 Monitor" and it includes a menu bar with "System", "Control", "View", and "Help". Below the menu bar are icons for "Configure", "Meters", "Event Log", and "History", along with the "UPS" logo.

The "Host Selection" dropdown menu is set to "Local=tnsofzcm 172.16.176.141 Model=GES-302N11 OS=Windows 98".

The main display area is divided into several sections:

- UPS Health:** Indicated by a green circle icon.
- UPS Type:** On-Line
- UPS Model:** GES-302N11
- Firmware Version:** 6149
- Host Name:** tnsofzcm
- Rating VA:** 1000VA
- Rating Input Volt:** 110V
- Rating Output Volt:** 110V
- Rating Battery Volt:** 41V
- Rating Input Freq:** 60Hz
- Test Result:** No Test Performed
- AC Source:** Normal
- Battery Status:** Normal
- Battery Level:** 100% (represented by a full green bar)
- Loading Level:** 0% (represented by an empty bar)
- Input Voltage1:** 121.2V (gauge scale 0-165)
- Output Voltage1:** 109.8V (gauge scale 0-165)

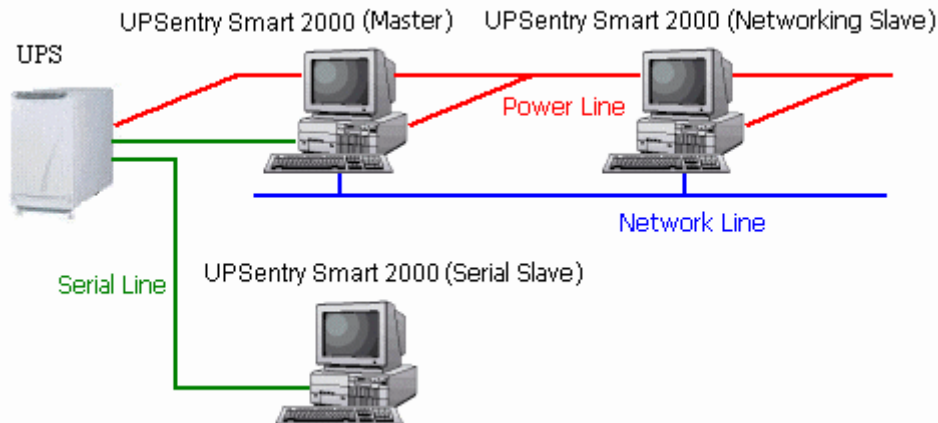
A status bar at the bottom of the main display area shows the date and time "07/30/1999 10:51:51" and a message: "<Load UPSentry HTTP DLL, startup the HTTP function!>".

The bottom navigation bar contains icons for "Main", "Tree", "Time", "Status", "Diagram", "Scroll", "Receptacle", and "Network".

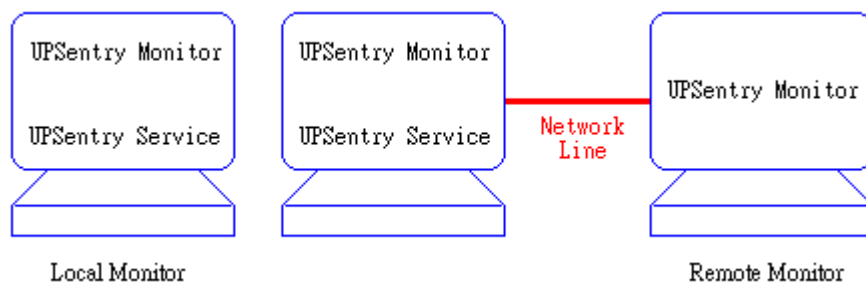
Networking

UPSentry Smart 2000 is comprised of two modules: UPSentry Service and UPSentry Monitor. You may run both the programs in a computer to monitor your localized UPS or run the programs in two different computers.

Operation Modes



UPSentry Service can operate in "Master" Mode (which allows UPSentry Smart 2000 to send commands to its connected UPS) in "Serial Slave" mode (which listens to its connected UPS) or in "Networking Slave" mode (which obtains the UPS information from Master via the network). If two or more computers are communicating with a single UPS, only one of these computers should be in Master mode; the others should be in Slave mode to prevent them from sending contradictory commands.

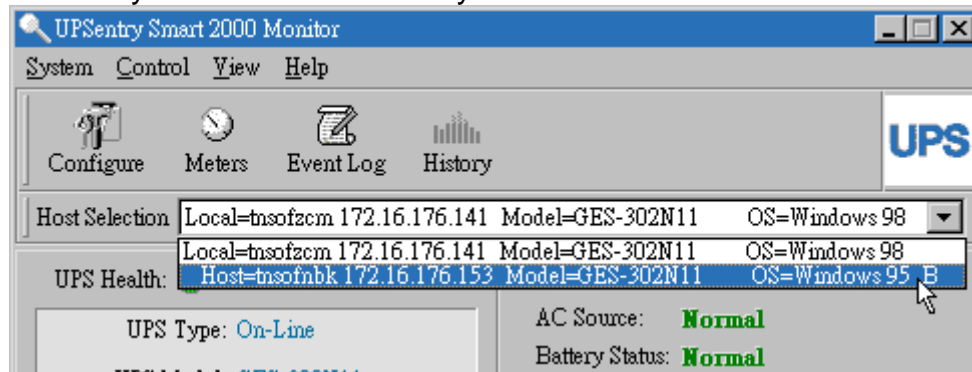


When a power event occurs, the Master gets the information then transmits it to Slave(s). Each UPSentry Service executes different "Actions"(FlexEvent) so that the system manager can configure different strategies into each different computer. For example: When a power failure occurs, the file server and mail server won't shutdown until the UPS battery is low, but other less important workstations execute

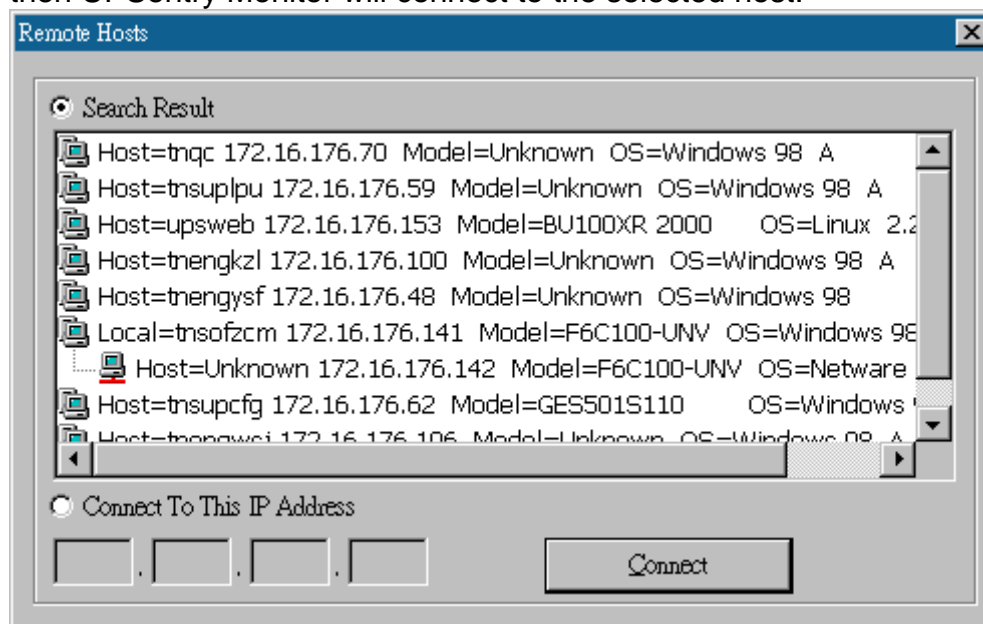
shutdown after 5 minutes, and the initial workstations shutdown after 10 minutes. Shutting down workstations preserves more battery power for your mission critical network servers.

Remote Monitoring and Control: UPSentry Monitor

UPSentry Monitor with the ability to monitor Local host and Remote host.



You can run only UPSentry Monitor without running UPSentry Service. UPSentry Monitor will search hosts in the LAN(Local Area Network) which runs UPSentry Service in the combo box. Click on the Host Selection combo box to list the searched hosts in the LAN. Select one, then UPSentry Monitor will connect to the selected host.



If the host is located on the Internet, you can also input the remote host IP address from the View Menu- Remote Hosts menu shows the hosts you can establish connections with.

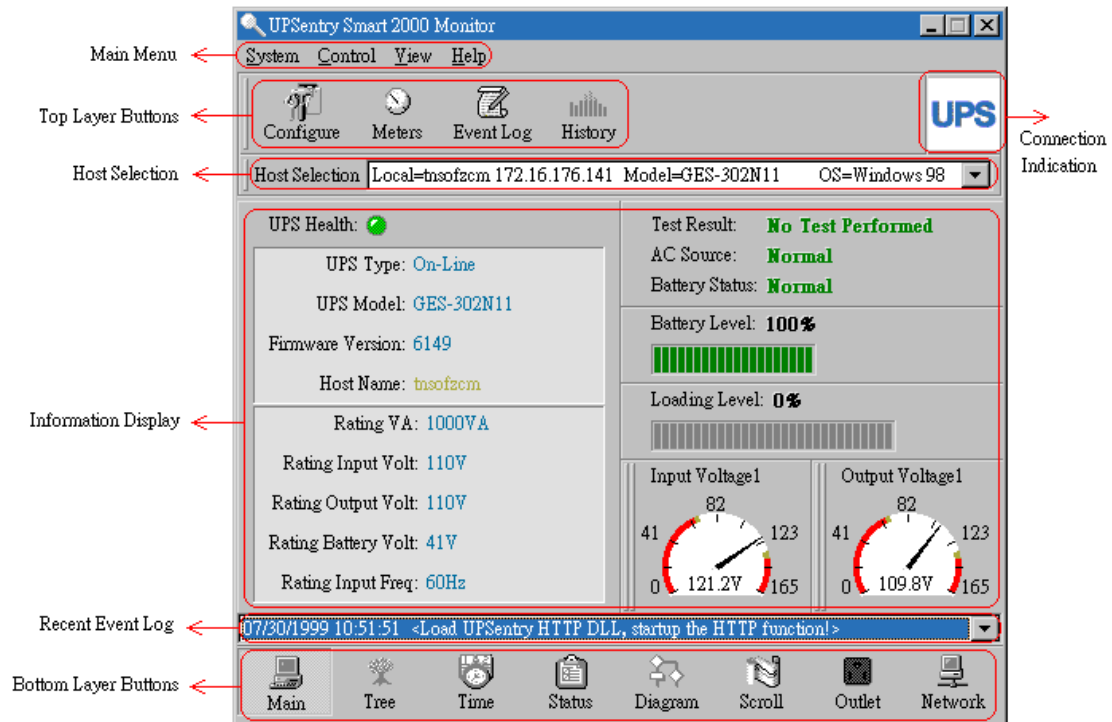
Remote Monitor and Control: Internet Browser

Another way to remote monitor UPSentry Service is by using the Internet Browser. Launch the Microsoft Internet Explorer or Netscape

Communicator, type the IP address in the URL and press enter you will then be able to see the UPS information. You can change the network port number to prevent conflict with other WEB server programs. If the port number isn't 80 you have to type URL like this:
<http://172.16.176.141:2000> where 2000 is the port number you assigned.

UPSentry Monitor operation

The Main Screen has 7 areas that present information on the operating status of your UPS. These areas are discussed in the following sections.



Host Selection: Press the combo box to select hosts that runs UPSentry Smart 2000 in the LAN. Users can monitor or control the UPS remotely (password is needed).

Connection Indication: The logo will rotate while the communication between UPSentry Monitor and UPSentry Service is established.

Information Display: Press Bottom Layer Buttons to change the information that is displayed in this area.

Recent Event Log: Preserve last 10 event logs in the combo box, click on the combo box to pull down and view the logs.

Top Layer Buttons

These buttons are used to increase the speed of your operation, refer to the dialog boxes in the menu.



Configuration: Same as the System-> Configuration in the menu.

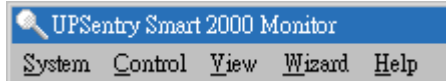
Meters: Same as the View-> Meters in the menu.

Event Log: Same as the View-> Event Log in the menu.

History Graph: Same as the View-> History Graph in the menu.

UPSentry Monitor Main Menu

The Main Screen has a menu bar at the top with 5 main options:



System: This menu allows you to set the UPSentry Smart 2000 and computer parameters.

Control: This menu allows you to set UPS buzzer, outlet, and test ...

View: The View menu allows you to see the real-time values and history event or history data.

Wizard: Directs users to configure the most frequent use of settings, the wizard guides users step-by-step to finish their configuration.

Help: The Help menu allows you to access the online help system.

System

The system menu allows you to configure the UPS and monitoring screen parameters. When you select the System menu from Main Menu bar, a drop down menu appears offering you the following menu options:



Login: Used for Remote Monitor. User must pass the password verification before he can control or configure the UPS.

Configuration: The Configuration menu allows you to tailor various UPSentry Smart 2000 parameters.

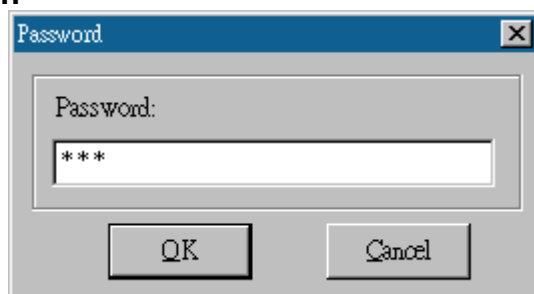
Monitor Screen: Allows you to change display item in the Scroll screen of Information Display Area

Font: Sets the font size. UPSentry Smart 2000 will resize window automatically.

Window: This menu allows you to change the displayed items in the Information Display Area. The items in the menu refer to each button in the Bottom Layer Buttons.

Close Monitor: Stops UPSentry Monitor.

Login



When attempting to use UPSentry Monitor as a Remote Monitor (connect to different host) you have to enter the password for verification if you want to do such tasks as configuration, or to control the UPS.

Otherwise, you can only view the UPS information.

If user runs UPSentry Service and UPSentry Monitor on the same

computer, you can perform such configurations or control the UPS without the password.

To change your password, please choose the Set Password from Configure - Network menu

Monitor Screen

This dialog box allows you to change display item in the Scroll screen of Information Display Area



Language: Choose a language that suits your operating system needs. Program will automatic replace the on-line help file and audio files to your selected preferences.

Meters: Press the Main button from the Bottom Layer Buttons, and you will see that there are two meters in the information area. You can change the displayed items of the two meters.

Scroll Window: Press the Scroll button from the Bottom Layer Buttons, and the scroll window will display the information in this area. This item allows you to change the display menu and its items.

Font

This menu allows you to change the font size of UPSentry Monitor window.

Window

This menu allows you to change the display items in the Information Display Area. The items in the menu refer to each button in the Bottom

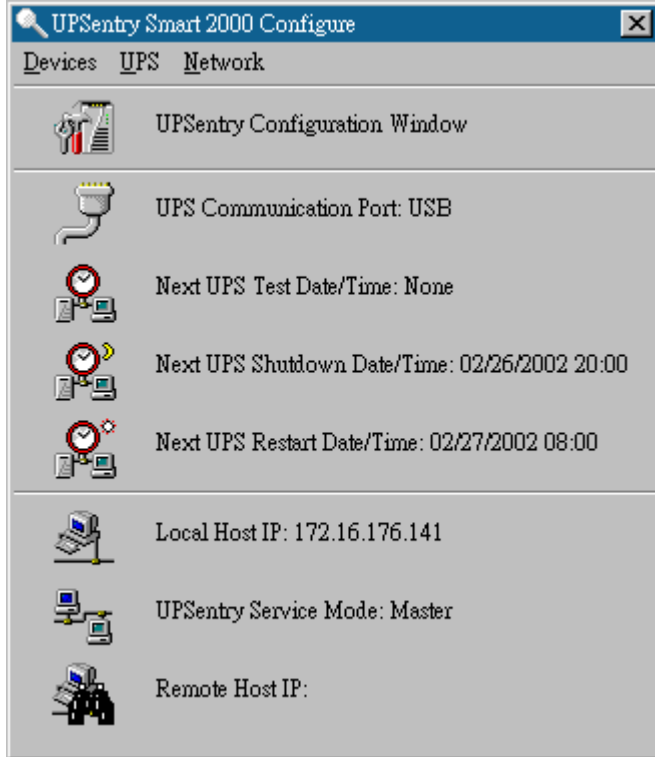
Layer Buttons.

Close Monitor

Close UPSentry Monitor and leave UPSentry Service running.

Configuration

The Configuration Screen has a menu bar at the top with three main options:



Devices: This menu allows you to configure modem, pager and e-mail applications.

UPS: The UPS menu allows you to plan and set the UPS schedule or perform the Action...

Network: This menu allows you to choose the Master/Slave settings or configure SNMP, HTTP functions.

Configuration Window

UPS Communication Port: COM1, ... COM4, USB.

Next UPS Test Date/Time: The date of the next user-initiated UPS self test. Setting from System->Configuration->UPS->Schedule.

Next UPS Shutdown Date/Time: This field displays the date of the next shutdown the computer and UPS. Setting from System->Configuration->UPS->Schedule.

Next UPS Restart Date/Time: The date of the next restart UPS. Setting from System->Configuration->UPS->Schedule.

Local Host IP: IP address of a computer, which runs UPSentry Monitor.

UPSentry Service Mode: UPSentry Service acts as a Master or Slave.

Remote Host IP: The host, which runs UPSentry Service. If UPSentry Monitor and UPSentry Service runs on the same computer and this field will be empty.

Devices

Notification Users -- Pager List

To let UPSentry Smart 2000 notify you via pager you must setup the modem device. If you select the TAPI (Windows Telephony Application Programming Interface) then Windows will handle the modem device, otherwise, UPSentry Smart 2000 will control the modem device directly (AT Command).

Program will set the modem to notify all via the pager numbers, which are listed in the pager list. You can input your pager number for your own notification purposes. For example: 060123456 is your pager number, each ',' tells modem to delay 2 seconds, delay time is for setting waiting period for the response signal, before proceeding to transmit to the displayed number 119. 119 will appear in your pager LCD.

To trigger the pager notification you must enable the Pager Action in the Action dialog box.

- a.COM Port: The communication port COM1, ...COM4.
- b.Baud Rate: Set the data transmitting speed.
- c.Initialize String: The string, which is sent to the modem before paging is attempted.
- d.Dial Prefix: The string, which is added to the beginning of each of the Pager Number before they are sent to the modem.
- e.Using TAPI: Lets Windows handle the modem device.
- f.Add: Add a new pager number.
- g.Modify: Modify the selected pager number.
- h.Delete: Delete the selected pager number.

Notification Users -- e-mail

You can also e-mail users through SMTP when power events occur.

To trigger the e-mail notification you must enable the e-mail Action in the Action dialog box.

- a.Add: Add a new user.
- b.Modify: Modify the selected user name.
- c.Delete: Delete the selected user.

Notification Users -- Network Broadcast

You can also broadcasting information to users when power event has occurred. The broadcast function is associated with Microsoft Messenger service.

To trigger the broadcasting notification you must enable the Broadcast Action in the Action dialog box.

- a.Domain: Enable this item to broadcast to all the users in the domain, otherwise UPSentry Smart 2000 will send messages to the hosts that users assigned.
- b.Add: Add a new machine name.
- c.Modify: Modify the selected machine name.
- d.Delete: Delete the selected name.

Notification Users – SMS (Short Message Service)

To let UPSentry Smart 2000 notify you via SMS(Short Message Service) you must setup the GSM modem or connect the mobile phone to your PC(Nokia is recommended).

To trigger the SMS notification you must enable the SMS action in the Action dialog box.

- a.COM Port: The communication port COM1, ...COM8.
- b.Baud Rate: Define the data transmitting speed.
- c.Add: Add a new mobile phone number.
- d.Modify: Modify the selected number.
- e.Delete: Delete the selected number.

Color

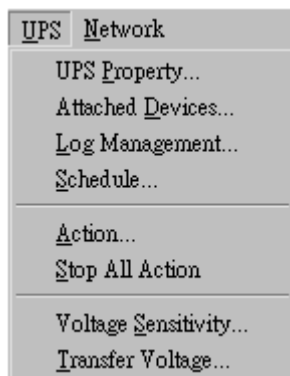
Used to change the screen color.

- a.Color Items: This area lets you select an item, which you want to change the color for. The right-top corner color will display current selected color.
- b.Change: Change the color you have selected.
- c.Default: Default setting.
- d.Exit: Close the dialog box.

Close

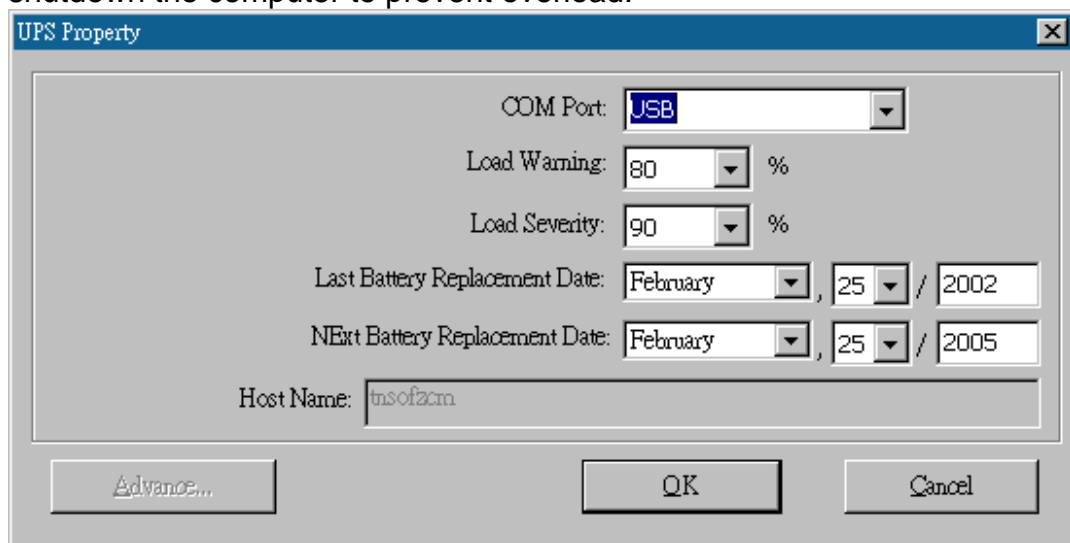
Close the Configuration window.

UPS



UPS Property

This dialog box allows you to configure the UPS COM port, battery replacement date,... etc. Load Warning and Load Severity used to prevent UPS overload(see the UPS hardware user manual). In general, Load Warning will notify users to reduce the UPS load, Load Severity will shutdown the computer to prevent overload.



- a.COM Port: COM1, ...COM4, USB.
- b.Load Warning: Load warning.
- c.Load Severity: User must reduce UPS load.
- d.Last Battery Replacement Date: Records last battery replacement date.
- e.Next Battery Replacement Date: Displays the date of the next battery replacement, UPSentry Smart will notify users to replace the battery.
- f.Host Name: Local host name.

Attached Devices

Allows the user to assign the attached device a name. When you're controlling the outlet, UPSentry Smart 2000 will let you know which devices you are controlling.

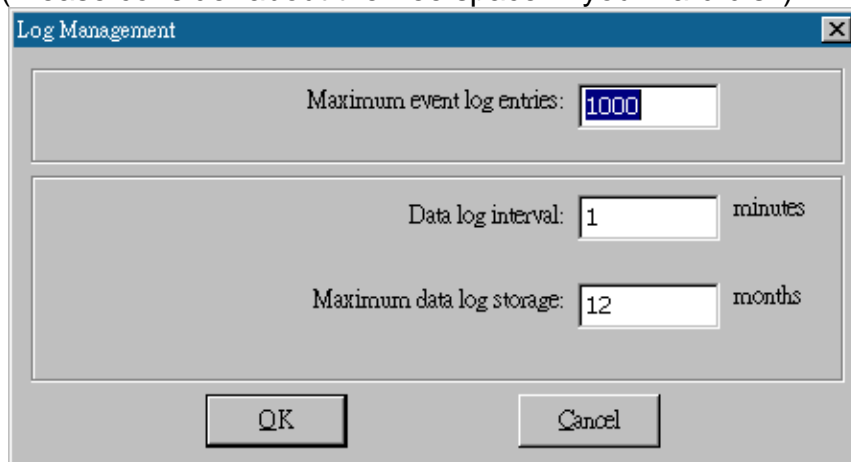
a. Select an Outlet Group: Assigns an outlet group. Please look at the back panel carefully, Some outlets may share one control relay, these outlets are called outlet group. If you turn off outlet group (for example: outlet1 and outlet2) then the UPS will stop power to the outlet group outlet1 and outlet2.

b. Device Name: Assigns the attached devices a name, for example: Outlet Group1 is called Monitor for association with the monitor and Outlet Group2 is called Computer for association with the CPU. These records can improve the efficiency of your management. Don't forget to press the Update button.

c. Update: Updates your change.

Log Management:

(Please consider about the free space in your hard disk)



The screenshot shows a 'Log Management' dialog box with the following settings:

- Maximum event log entries: 1000
- Data log interval: 1 minutes
- Maximum data log storage: 12 months

a. Maximum Event Log Entries: Always UPSentry Smart to preserve less than the assigned entries of event log.

b. Data Log Interval: Time designated for automatic saving of a record of UPS data.

c. Maximum Data Log Storage: It allows you to save how many months UPS data files you wish to keep.

Schedule

This function allows you to shutdown, restart, test and turn on/off outlet. You can schedule up to 6 events. Settings are based on day, week or

month and up to a period of 2 years.

Choose the applicable schedule to set whether it be for:

a. One Time: This set schedule is applicable for a single day.

b. Daily: This set schedule is applicable for every day

c. Weekly: This set schedule is applicable for once a week period.

d. Monthly: This set schedule is applicable for once a month period.

The screenshot shows a 'Schedule' dialog box with a calendar for the year 2002 and the month of March. The calendar grid has columns for days of the week (SUN to SAT) and rows for dates (1 to 31). The date 21 is highlighted. To the right of the calendar are dropdown menus for 'Year' (set to 2002) and 'Month' (set to March), and an 'Exit' button. Below the calendar are five rows of configuration options. Each row has a dropdown menu for the action type (Restart, Shutdown, None) and three time input fields (hour, minute, second) separated by colons. To the right of these fields are four buttons labeled 'Applicable: One Time', 'Daily', 'Weekly', and 'Monthly'.

SUN	MON	TUE	WED	THR	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Action

The action menu provides you with a list of events to choose from. The event and/or any combination of these actions can be selected from the Choose Event list box. Actions that are already enabled will show a check mark. To delay the actions, set the desired time for delay in the Delay combo box.

a. Enable Auto-Save: UPSentry Smart will save opened files and close applications automatically when you enable this function.

b. Choose Event: When you select one item in the list the action buttons will display current settings. Press button to do further configurations.

c. Set Default: Set all the actions to default values.

d. Delay: The power event must stay within the delay time to trigger actions.

Action – Shutdown

Shutdown/Hibernate/Suspend the operating system or shutdown UPS. If you select shutdown item UPSentry Smart 2000 will execute or ignore the Auto-Save function depending on your selection in the Action dialog box. But if you select the “suspend” or “hibernate” item, the program will ignore the Auto-Save function.

The action of “shutdown”, “hibernate” or “suspend” are the same as if you select the Shutdown option from the Windows Start menu.

Action – Logging

Allows you to log events as well as modify the default logging message. You can see this message in the Event Log dialog box.

Action – Broadcasting

Permits you to broadcast an event based on a set period of time. If you want to be notified once, set the time period to "0". However, if you want to be notified more than once, set the time period to a larger number.

Each number corresponds to the number of times of notification.

Action - SMS(Short Message Service)

Permits you to send SMS through GSM modem or mobile phone. You can edit the user list by clicking the Edit list button, and add, modify or delete any user name in the list. To enable or disable this action, mark the Enable SMS check box.

Action – Paging

Allows you to set the time period for paging intervals. If you want to be notified once, set the time period to "0". However, if you want to be notified more than once, set the time period to a larger number. Each number corresponds to the number of times of notification.

Action- Command

Permits you to execute command files and set a period of time to delay its activation. To test this function, you can click the Test button. To enable or disable this action, mark the Enable Command check box.

Action – Alarm

Permits you to send out audible alarm instead of a broadcast message.

There are two alarms to select from - Buzzer and Audio. If you choose Audio, the UPSentry Smart 2000 requires a ".wav" file to emit the alarm. You can browse your system for other ".wav" files by clicking on the Browse button. If you want to be notified once, set the time period to "0". However, if you want to be notified more than once, set the time period to a larger number. Each number corresponds to the number of times of notification.

Action - e-mail

Permits you to send e-mails through SMTP. If you want to be notified once, set the time period to "0". However if you want to be notified more than once, set the time period to a larger number. Each number corresponds to the number of times of notification. You can edit the user list by clicking the Edit list button, and add, modify or delete any user name in the list. To enable or disable this action, mark the Enable e-mail check box.

Action - SNMP Trap

Lets you send a SNMP trap when the relative power event occurs. To enable or disable this action, mark the Enable SNMP Trap check box. You also need to specify the SNMP Trap target hosts and community string, please see the SNMP dialog box in the Network menu.

Action - Receptacle Control

Allows you to control the Receptacle Relay on or off. Each Receptacle Relay may control not only one outlet, please see the rear panel of your UPS or the UPS hardware user's manual.

Stop All Action

Clicking on this, terminates all the actions immediately.

Voltage Sensitivity

Adjust the UPS voltage sensitivity.

Transfer Voltage

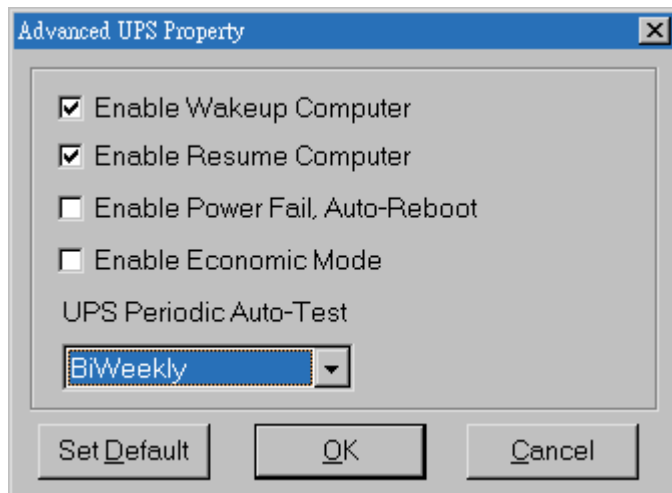
Changes the low transfer voltage and high transfer voltage. This function lets your UPS adjust to the local power environment.

a. Low Transfer Voltage: When utility power voltage drops lower than the

assigned value the UPS will switch to backup mode. The output power is supplied from the battery.

b. High Transfer Voltage: When utility power voltage rises higher than the assigned value, the UPS will switch to backup mode. The output power is supplied from the battery.

Advanced UPS Property

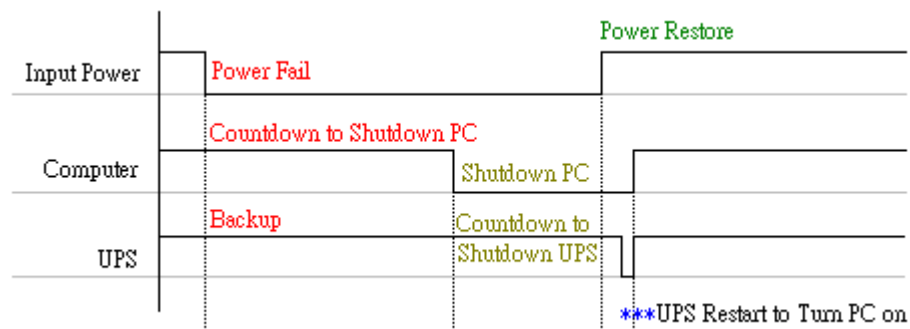


If your UPS doesn't support this function, the item will be displayed as gray and the user cannot select this item.

Enable Wakeup Computer: If your computer architecture is compatible to ATX and the BIOS supports RS-232(RI) Wakeup function. You should enable this item to make the Schedule work correctly.

Enable Resume Computer: Be sure the BIOS supports RS-232(RI) Wakeup function. When UPSentry Smart 2000 suspends the computer and the UPS detects the change of power status, the UPS will resume the computer to its prior operating status and let UPSentry Smart 2000 notify users.

Enable Power Fail, Auto-Reboot: The time-line describes below,



If you enable this function, the UPS will reboot to restart the computer otherwise, it goes back to its normal state.

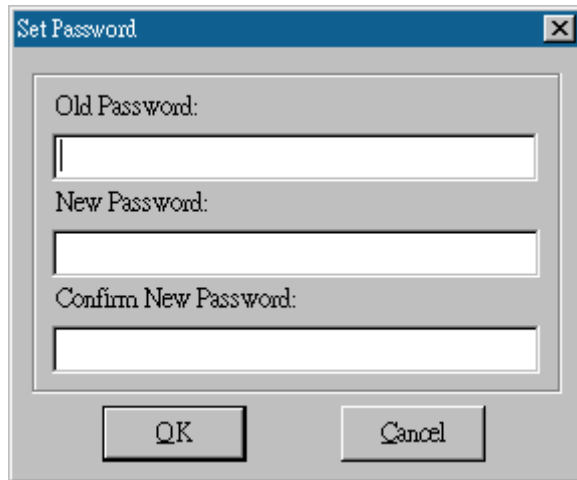
Enable Economic Mode: Switches to UPS economic mode.

UPS Periodic Auto-Test: Daily, weekly, biweekly and monthly. UPS starts the test procedure automatically when it reaches the test time.

Network

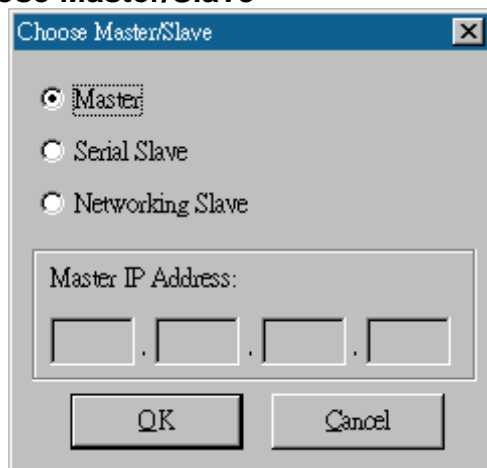


Set Password



Sets the UPSentry Service password.

Choose Master/Slave



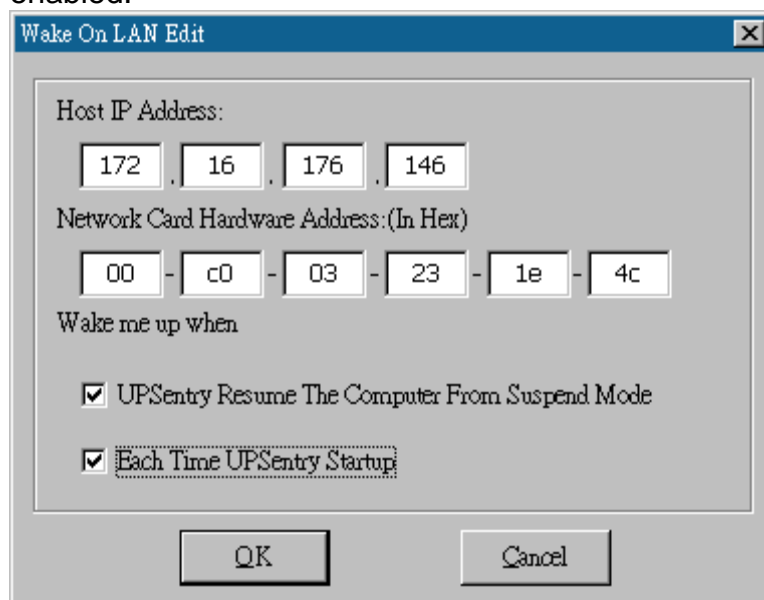
Please refer to the UPSentry Service operation mode. If the computer connects to UPS directly (with RS-232 or USB) and can send commands to its connected UPS then the UPSentry Service acts as a "Master". If it connects to UPS directly (with RS-232 or USB) but only listens to UPS then it is a "Serial Slave". If the computer is powered by the UPS, but obtains the UPS information from Master via TCP/IP network then it is a

"Networking Slave". When UPSentry Service is a Networking Slave you must assign the Master IP address so that the Networking Slave can connect to the Master and obtain the UPS information.

- a. Master: Configures the UPSentry Service to be a Master.
- b. Serial Slave: Configures the UPSentry Service to be a Serial Slave.
- c. Networking Slave: Configures the UPSentry Service to be a Networking Slave.
- d. Master IP Address: When UPSentry Service is a Networking Slave you must assign the Master IP address so that the Slave can connect to the Master host and obtain the UPS information.

Wake On LAN

To wake up the remote host, UPSentry Smart 2000 sends notification through the network. You must provide the IP address and the network hardware address of the remote host. In Windows98, you can execute the "ipconfig /All" command under the MS-DOS prompt to obtain the network cards physical address of the local host. Or, input the "arp -a" command to see the remote host's physical address. Your network card must support the remote wakeup feature and this function should be enabled.

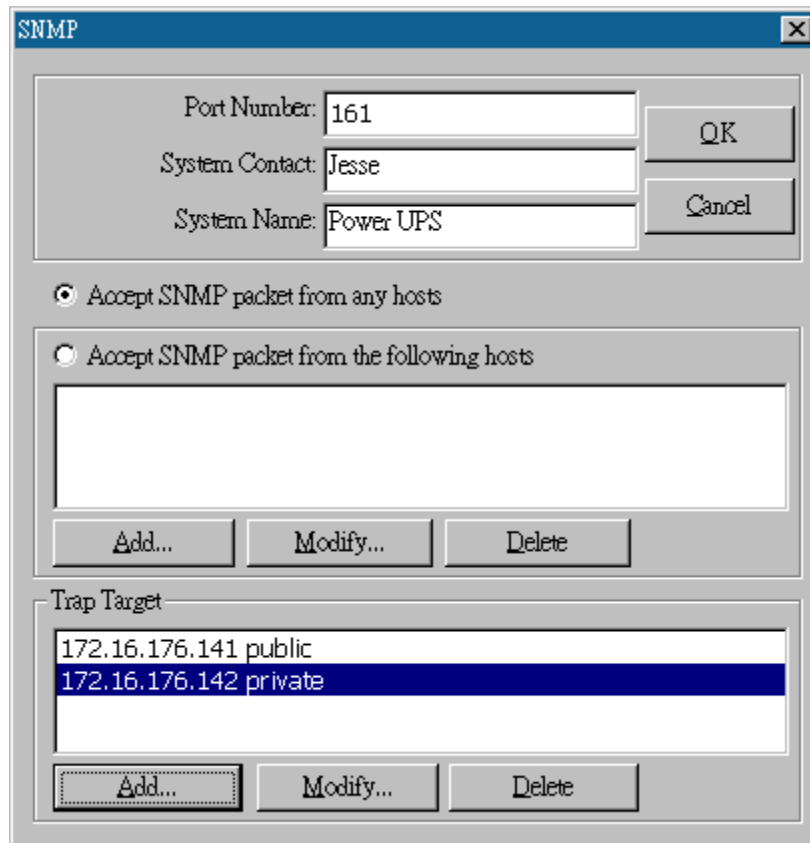


- a. UPSentry Resume The Computer From Suspend Mode: UPSentry Smart 2000 will reinstate the computer into normal mode, and the program will awaken the remote hosts once the actions have been enabled.
- b. Each Time UPSentry Startup: Program will wake up the remote hosts

which are enabled when UPSentry Smart 2000 starts and is connected to the UPS.

SNMP

If you are using a Windows 95/98/Me operating system, you can configure the SNMP parameters directly from the UPSentry Smart 2000:



Select the Accept SNMP packet from any hosts, UPSentry Smart 2000 will accept all the requested commands and set commands. When you select the Accept SNMP packet from the following hosts, UPSentry Smart 2000 receives information only from the hosts that you assigned. Once a power event has occurred and the user enables the SNMP Trap in the Action dialog box, UPSentry Smart 2000 will send the SNMP trap to the hosts that are listed in the Trap Target list box. To add, modify or delete the host, click on its respective command button.

If you are using a Windows 2000/XP/2003 operating system, you must install the SNMP Service and configure the SNMP parameters from your operating system:

UPSentry Smart 2000 will ignore the values that were set in the SNMP dialog box. To change the parameters of SNMP function,

you should install the SNMP Service in the Network option. Select the SNMP Service from the Network option in the Control Panel and click the Property button to do your changes.

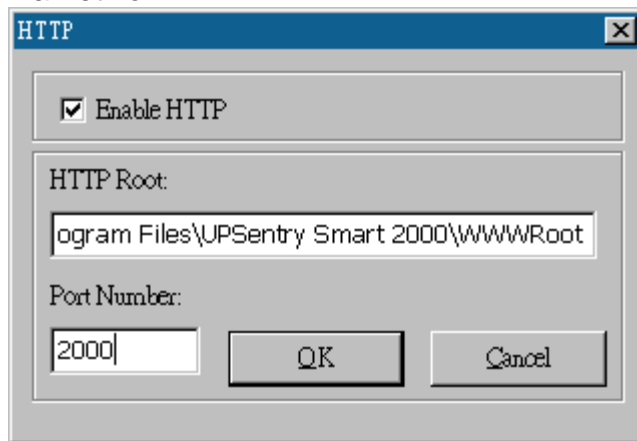
SNMP Trap Number

Variable	Trap No.	Description
dupsCommunicationLost	1	SEVER: Communication with the UPS failed
dupsCommunicationEstablished	2	INFORMATION: Communication with the UPS reestablished
dupsPowerFail	3	WARNING: Power failed! The UPS is operating on battery power
dupsPowerRestored	4	INFORMATION: Power restored! The utility power restored
dupsLowBattery	5	SEVER: The UPS batteries are low and will soon be exhausted
dupsReturnFromLowBattery	6	INFORMATION: The UPS has returned from a low battery condition
dupsLoadWarning	7	INFORMATION: Loading percent of the UPS over the Load Warning value
dupsNoLongerLoadWarning	8	INFORMATION: Returnd from Load Warning condition
dupsLoadSeverity	9	Warning: Loading percent of the UPS over the Load Severity value
dupsNoLongerLoadSeverity	10	INFORMATION: Returned from Load Severity condition
dupsLoadOnBypass	11	WARNING: The UPS loads on bypass
dupsNoLongerLoadOnBypass	12	INFORMATION: The UPS is not on bypass mod
dupsUPSFault	13	SEVER: A general fault caused in the UPS
dupsBatteryGroundFault	14	SEVER: The UPS battery ground faul
dupsNoLongerBatteryFault	15	INFORMATION: The UPS recovered from battery ground fault
dupsTestInProgress	16	INFORMATION: The UPS test in progress
dupsBatteryTestFail	17	SEVER: The UPS test in progress
dupsFuseFailure	18	SEVER: The UPS fuse failed
dupsFuseRecovered	19	INFORMATION: The UPS fuse recovere
dupsOutputOverload	20	SEVER: The UPS overload
dupsNoLongerOverload	21	INFORMATION: Recovered from UPS overload
dupsOutputOverCurrent	22	SEVER: The UPS output overcurrent
dupsNoLongerOutputOverCurrent	23	INFORMATION: Recovered from UPS overcurrent
dupsInverterAbnormal	24	SEVER: The UPS inverter abnormal
dupsInverterRecovered	25	SEVER: Recovered from UPS inverter abnormal
dupsRectifierAbnormal	26	SEVER: The UPS rectifier abnormal
dupsRectifierRecovered	27	INFORMATION: The UPS recovered from rectifier abnormal
dupsReserveAbnormal	28	SEVER: The UPS rectifier abnormal
dupsReserveRecovered	29	INFORMATION: The UPS rectifier abnormal
dupsLoadOnReserve	30	INFORMATION: The UPS load on reserve

dupsNoLongerLoadOnReserve	31	INFORMATION: The UPS no longer load on reserve
dupsEnvOverTemperature	32	WARNING: The environment overtemperature
DupsNoLongerEnvOverTemperature	33	INFORMATION: The environment recovered from overtemperature
DupsEnvOverHumidity	34	WARNING: The environment overhumidity
DupsNoLongerEnvOverHumidity	35	INFORMATION: The environment recovered from overhumidity

HTTP

UPSentry Smart 2000 supports WEB Server for remote manager to obtain the UPS information. Users can use IE or Communicator to connect with UPSentry Service. Even your computer doesn't have UPSentry Smart 2000 installed you can monitor and control your UPS via network.



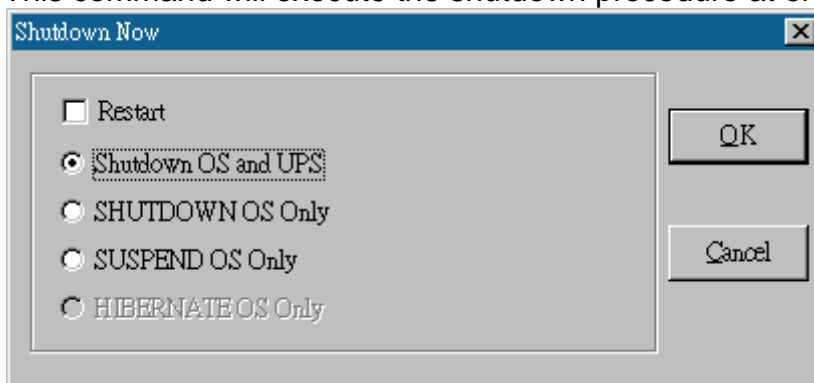
- a.Enable HTTP: Enable or disable the feature of Web service.
- b.HTTP Root: The HTTP root path. All the html and gif files will be located here.
- c.Port Number: The default port number is 80 but if there is already one WEB server running you can change UPSentry Service HTTP port number to a different number. At the Internet Browser you can input `http://172.16.176.141:2000` in the URL where 2000 is the assigned port number.

Control



Shutdown Now

This command will execute the shutdown procedure at once.



This command will execute the shutdown procedure at once.

- Restart: This function lets you restart the UPS automatically after being shutdown. To start the UPS for the next schedule, mark the Restart check box.
- Shutdown OS and UPS: Use this function to shutdown both the OS and UPS.
- SHUTDOWN OS Only: Use this function to shutdown OS only.
- SUSPEND OS Only: Use this function to suspend your operating system.
- HIBERNATE OS Only: Use this function to hibernate your operating system.

Cancel Shutdown

This menu enables you to terminate the current shutdown procedure.

Turn Receptacle Relay On

Turns the selected receptacle relay on. Each Receptacle Relay may control more than one outlet, please see the rear panel of your UPS or the UPS hardware user's manual.

- a. Select a Receptacle Relay: Selects a receptacle relay.
- b. Delay: Set the delay time to turn on the receptacle relay.
- c. On: Executes the turn on command.

Turn Receptacle Relay Off

Turns the receptacle relay off. Each Receptacle Relay may control more than one outlet, please see the rear panel of your UPS or the UPS hardware user's manual.

- a. Select a Receptacle Relay: Selects a receptacle relay.
- b. Delay: Set the delay time to turn off the outlet group.
- c. Off: Executes the turn off command.

UPS Audible Alarm On

Enables the UPS buzzer. On the Bottom Layer Buttons press the Status button to get the UPS buzzer status.

UPS Audible Alarm Off

Mutes UPS buzzer alarm.

10 Seconds Test


UPS switches to backup mode and the output power is supplied by the battery for 10 seconds.

Deep Battery Test

UPS switches to backup mode and output power is supplied by the battery until the battery is low.

Cancel Test

This menu allows you to stop test immediately.

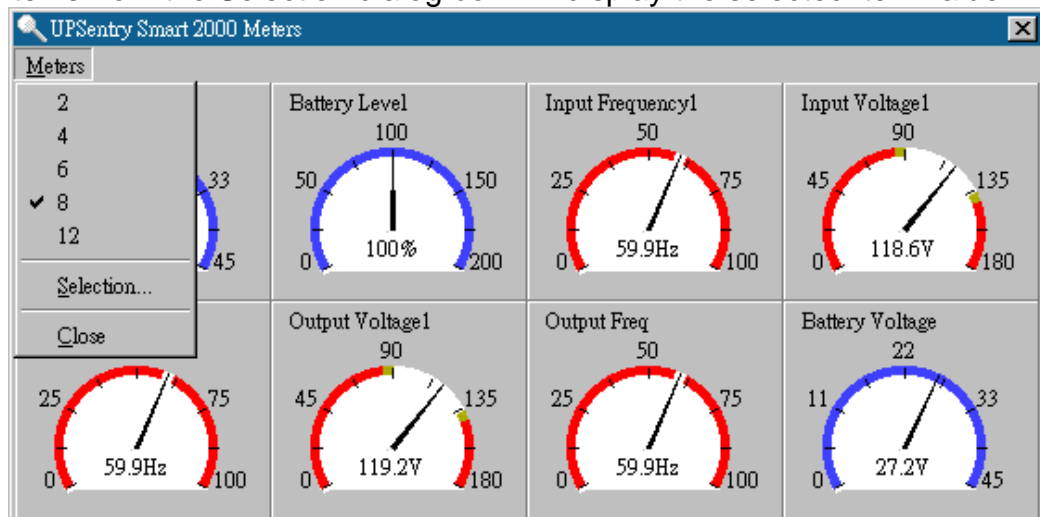


View



Meters

The UPSentry Smart supports up to 12 meters of real-time values. Each meter has the ability to display all of the UPS values. Selecting different items from the Selection dialog box will display the selected item value.

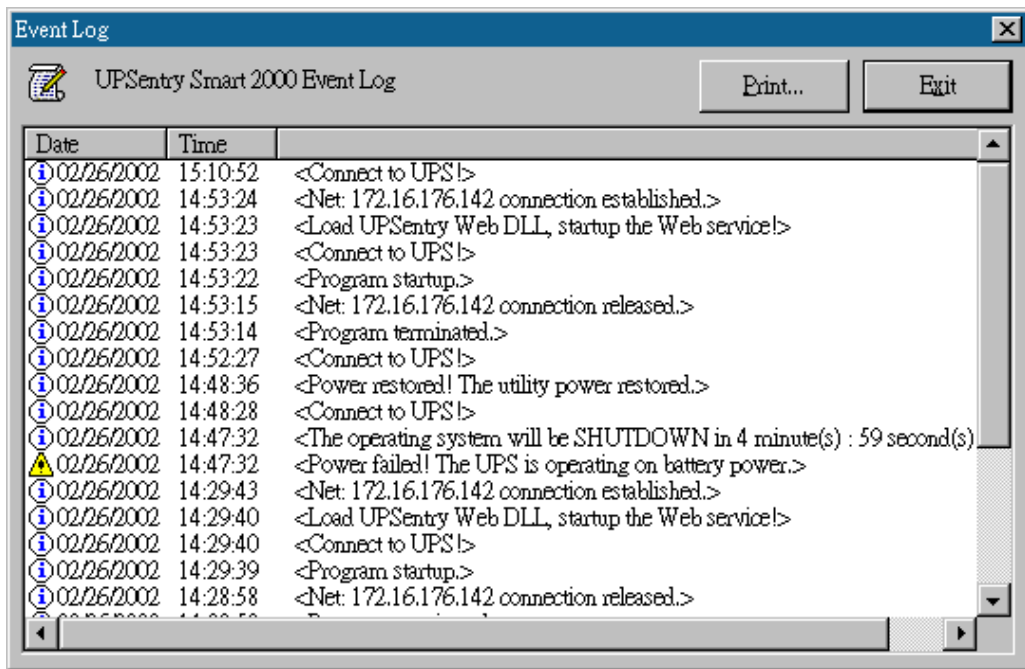


- 2,4,6,8,12: Displays meter number.
- Selection: Assigns each meter to a different UPS item value.
- Close: Closes the meter window.

Event Log

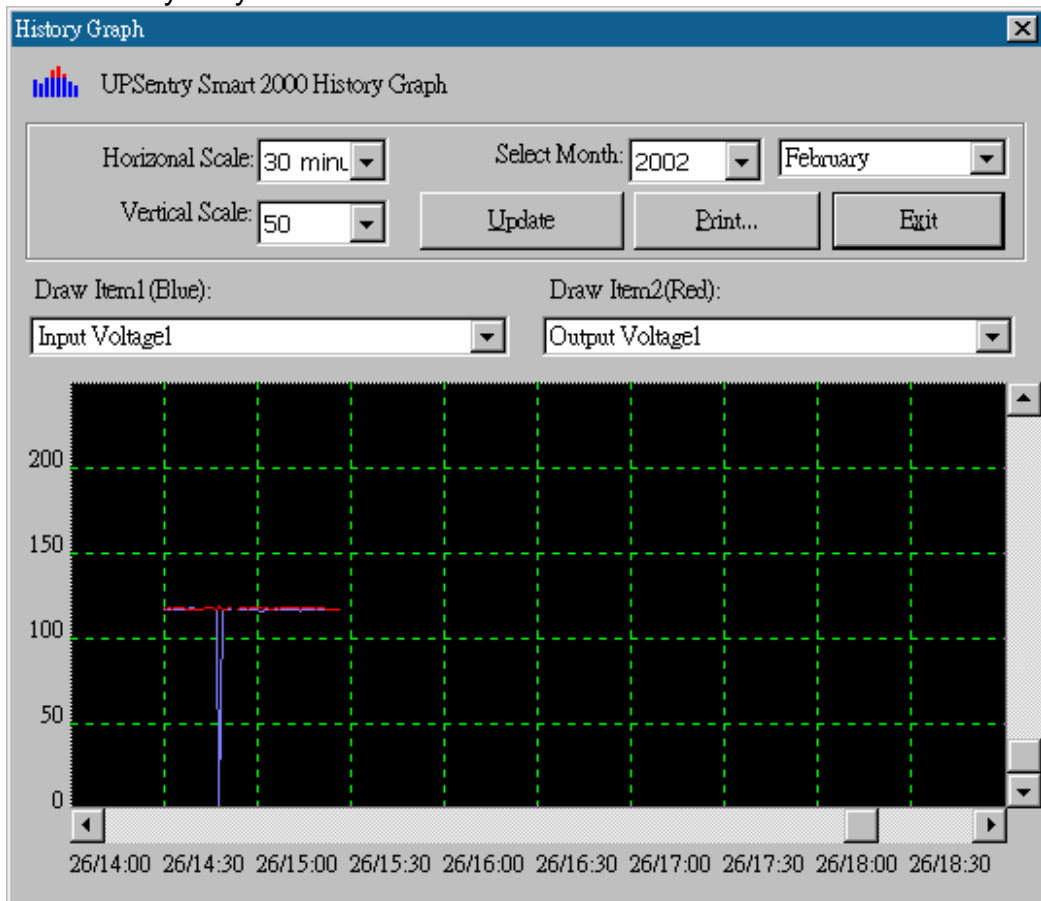
This menu offers you the possibility of viewing past events.

- Print: Prints the event log.
- Exit: Closes event log dialog box.



History Graph

Clicking on the History Graph opens a dialog box that contains information about the UPS data in graph format. This information is available only if there is an accumulation of data. You can select the month and year you want to view.



- a.Horizontal Scale: Selects the time scale.
- b.Vertical Scale: Selects the value scale.
- c.Select Month: Displays the UPS data for the month, which you want to see.
- d.Draw Item1(Blue): Displays the UPS item value by a blue line.
- e.Draw Item2(Red): Displays the UPS item value by a red line.
- f.Update: Updates the graph.
- g.Print: Exports the graph to a printer.
- h.Exit: Closes the history graph dialog box.

History Data

Clicking on the History Data opens a dialog box that contains information about UPS data in list form. This information is available only if there is an accumulation of data. You can select the month and year you want to view.

The screenshot shows a dialog box titled "History Data" with a table of data. The table has columns for Date, Time, Battery Voltage, Battery Current, Battery Level, and Input Frequency. The data is for the month of February 2002, with 12 rows of data.

	Date	Time	Battery Voltage	Battery Current	Battery Level	Input Frequency
1	02-25-2002	16:50	27.2		100.0	60.0
2	02-26-2002	14:30	27.2		100.0	60.0
3	02-26-2002	14:31	27.2		100.0	60.0
4	02-26-2002	14:32	27.2		100.0	60.1
5	02-26-2002	14:33	27.2		100.0	60.0
6	02-26-2002	14:34	27.2		100.0	60.0
7	02-26-2002	14:35	27.2		100.0	59.9
8	02-26-2002	14:36	27.2		100.0	60.0
9	02-26-2002	14:37	27.2		100.0	60.0
10	02-26-2002	14:38	27.2		100.0	60.0
11	02-26-2002	14:39	27.2		100.0	60.0
12	02-26-2002	14:40	27.2		100.0	60.0

- a.Select Month: Displays the UPS data in the month, which you want to see.
- c.Save As: Saves the data in the list to the file that you assigned.
- d.Print: Exports the list data to a printer.
- e.Exit: Closes the history data dialog box.

Auto Save

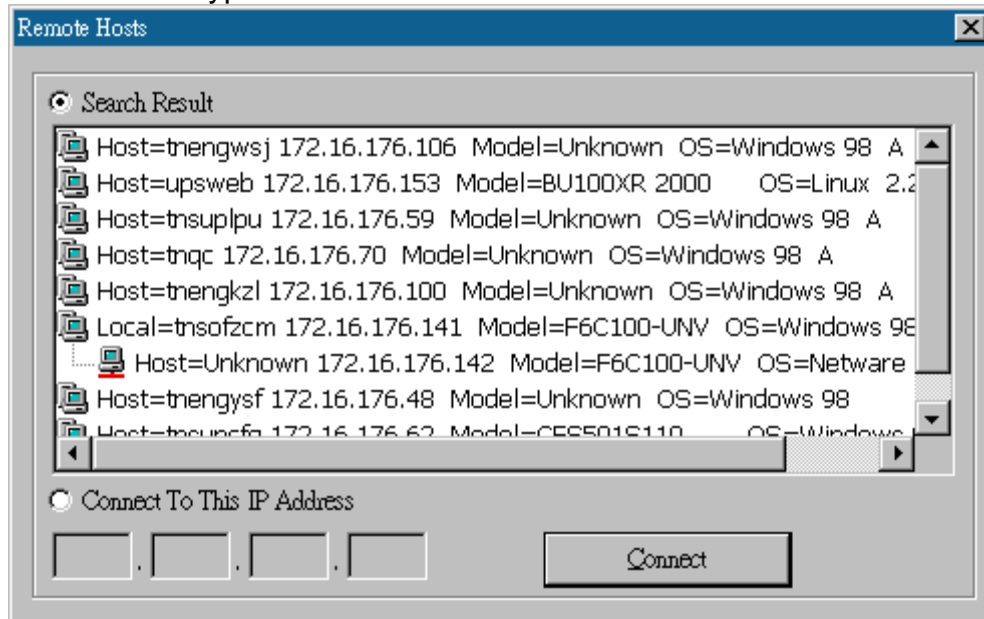
When certain power events occur, UPSentry Smart will save open files and close applications before shutting down the operating system. If these saved files are untitled, UPSentry Smart will assign file names for them and put the files in temporary directory. This dialog box will tell you

which files were saved by UPSentry Smart 2000.

- a. Program Title: The application's title name.
- b. Auto-Save File Name: UPSentry Smart names the file for you.
- c. Clear: Clear this record.

Remote Hosts

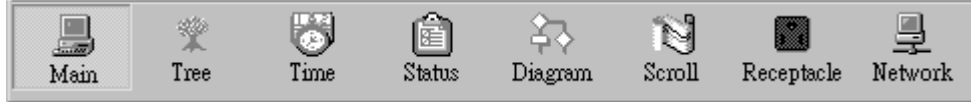
Detects the hosts, which are running the UPSentry Service in the LAN. You can also type in the IP address and connect to the WAN.



- a. Search Result: The hosts will be listed in the Search Result list box. Select the host you want to connect to and press the Connect button to establish the connection.
- b. Connect to this IP address: UPSentry Smart will connect to the IP address, which you type in.
- c. Connect: Establish the network connection.

Bottom Layer Buttons

Each button shows the respective information in the Information Area



Main: General Information about the UPS.

Tree: There are 2 sub-trees in the UPSentry Smart tree: System and UPS. The system tree is for host information and the status of Master/Slave connection, the UPS tree is for all other UPS information.

Time: Displays the time for all schedules, battery replacement date and countdown time.

Status: UPS status.

Diagram: Indicates the UPS current flow.

Scroll: UPS data graph.

Outlet: Displays outlet status. (If your UPS cannot control the outlet then this button disappears)

Network: Indicates the connection of Master/Slave, UPSentry Monitor and UPSentry Service.

Main

UPS Health: 3 levels: Green, yellow and red.

UPS Type: On line, off line, line interactive or 3 phase on line.

UPS Model: The UPS model, which is being monitored by UPSentry Smart 2000.

Firmware Version: Indicating the version status of the UPS internal code.

Host Name: The host, which runs UPSentry Smart 2000.

Rating VA: The UPS rating VA.

Rating Input Voltage: The UPS rating input voltage.

Rating Current: The UPS rating current.

Rating Battery Voltage: The UPS rating battery voltage.

Rating Input Frequency: The UPS rating input frequency.

Test Result: Results of the last self-test.

AC Source: Normal, battery or bypass.

Battery Status: The status of battery.

Battery Level: Percentage of battery level.

Loading: Output loading percentage.

UPSentry Smart 2000 with the ability to change the display item of the meters, the referred menu item: System-> Main Screen.

UPS Tree

System: System tree for host information and the connection of Master/Slave.

UPS: UPS tree for all of the UPS information.

Time

Last Battery Replacement Date: To change the date of last battery replacement in the System-> Configuration UPS->UPS Property.

Next Battery Replacement Date: To change the date of next battery replacement in the System-> Configuration UPS->UPS Property.

Next 10 seconds Test Time: System-> Configuration UPS-> Schedule.

Next Deep Test Time: System-> Configuration UPS-> Schedule.

Next Shutdown UPS Time: system->Configuration UPS-> Schedule.

Next Restart UPS Time: System-> Configuration UPS-> Schedule.

Status

Shows all of the UPS status, red light indicates this event happened.

Diagram

Input and output power flow of UPS.

Scroll

Records the most recent UPS data information. You can change the displayed item from System->Main Screen.

Outlet

Displays the UPS outlet status(If your UPS cannot control outlet this button disappears).

Status: Identifies the current outlet status: Normal or shut.

Next Turn Off Time: System->Configuration->UPS->Schedule

Next Turn On time: System->Configuration->UPS->Schedule

Network

Displays all the UPSentry Services searched in the LAN.