M0010499B

SANUPS

UPS Control System

SANUPS SOFTWARE

User Guide

Web/Telnet

SANYO DENKI

ENGLISH

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1. Introduction

1.1 Overview

This document describes the functions of the **SANUPS SOFTWARE** Web control tool and Telnet terminal tool.

1.2 Conventions Used in This Manual

· Unless otherwise stated, "**Windows**" is used to denote the **Windows** operating system.
· "Default" is used to denote the initial state prior to any changes after the introduction of **SANUPS SOFTWARE**.
· "Browser" or "Web browser" is used to denote Internet Explorer, etc.
· "UPS control software" is used to denote **SANUPS SOFTWARE**.
· "**SANUPS SOFTWARE** server" or "UPS" is used to denote **SANUPS SOFTWARE** connected to the UPS with a serial/contact connection.
· "PC" is used to denote a **Windows** computer and "WS" is used to denote a **UNIX/Linux** computer.
· "Computer" is used to denote both a PC and WS.

1.3 Required Software Environment

Use the following software to set up the UPS.

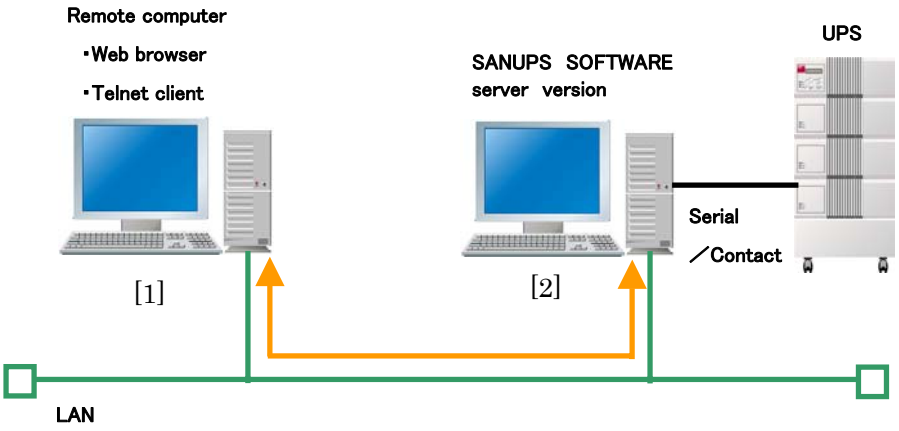
- **Web browser supporting Java**
  A **Java** Applet function is used to manage the **SANUPS SOFTWARE** from a Web browser.
  Use of Internet Explorer 6.0 or higher is recommended.

  * For details on configuring **JavaVM**, refer to “Appendix A Read before using a Web browser”.

- **Terminal software**
  Make a Telnet connection to the **SANUPS SOFTWARE** server version to use the terminal setting function.

1.4 System Configuration

The illustration below shows a system configuration example.



<Explanation of above illustration>

- The computer of [2] is running as the server version of **SANUPS SOFTWARE** and is connected to the UPS with a serial/contact connection.
- Configure [2] to use the network and enable the HTTP and Telnet service settings. You can also change the port numbers as necessary.
- Control or monitor the UPS by accessing the **SANUPS SOFTWARE** server from remote computer [1] using the Web browser or Telnet client.

2. Explanation of the functions of the Web control tool

2.1 Accessing UPS using a Web browser

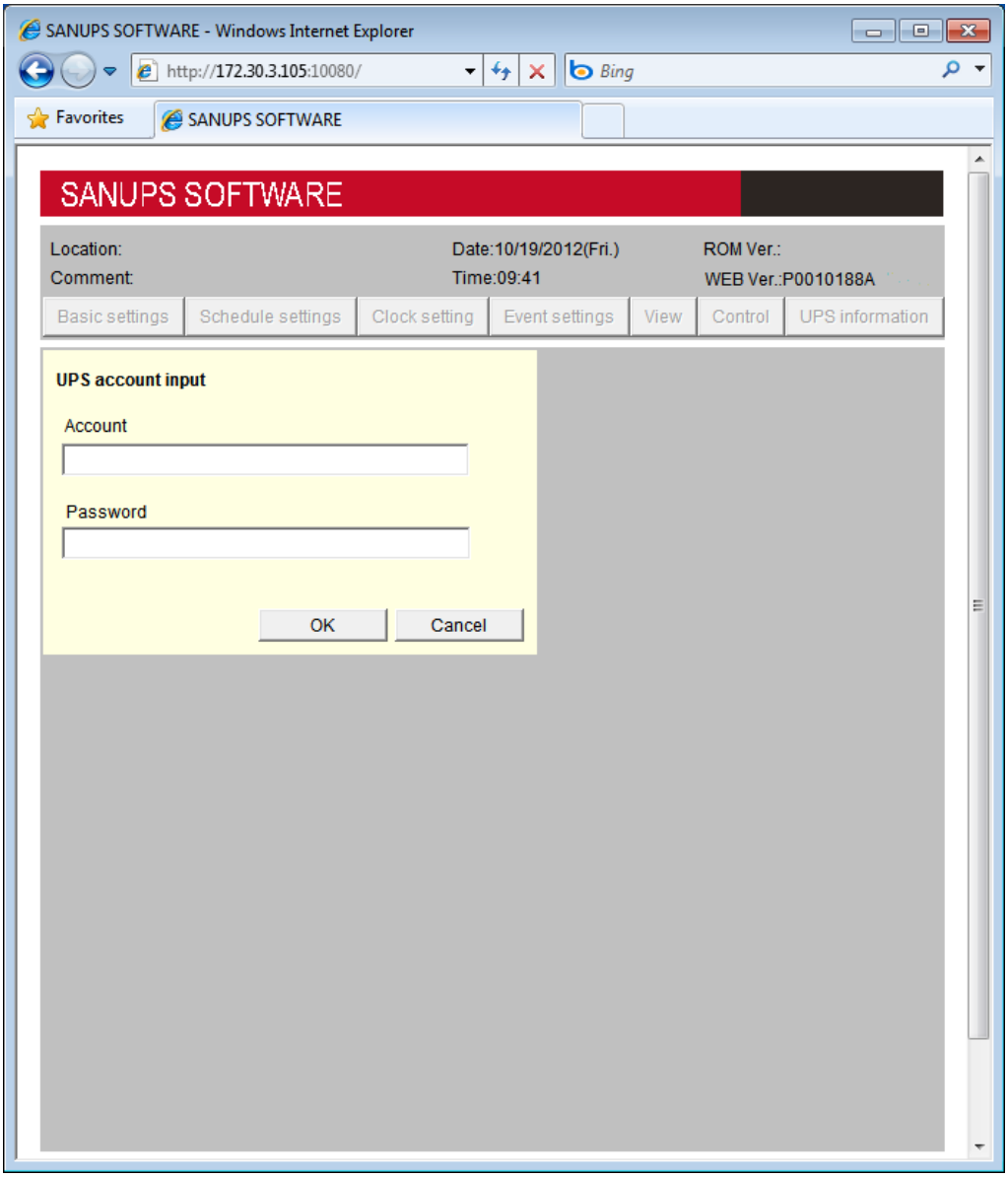
[1] Start up the Web browser.

[2] Enter the UPS IP address and HTTP server port in the Web browser address bar.

Example: IP address = 172.30.3.105, HTTP server port = 10080(Default value)

http://172.30.3.105:10080/

The Web browser opens the screen shown below.



[3] Enter the UPS account.

The default account data is as follows. (Use single byte characters.)

Account : **upsadmin**

Password : **UpsAdmin** (Entries are case-sensitive.)

Enter the account data and click [OK] and the UPS authenticates the account.

If the account authentication ends normally, the Main screen shown below appears to enable setup.

<Information>
The account data can be changed. To change account data, refer to Section 2.10 , **"**Changing UPS login account**".**

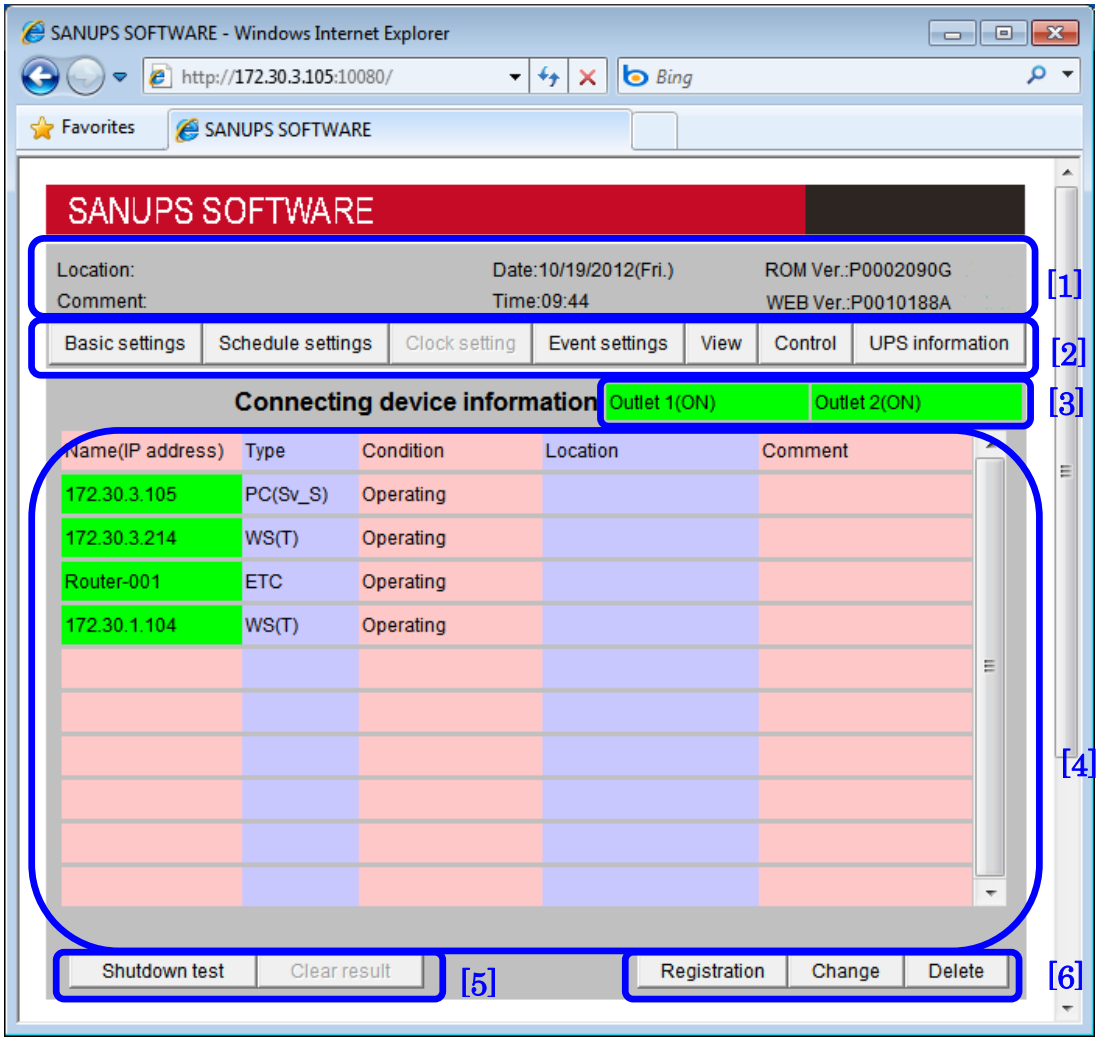
2.2 list of Web management tool functions

Start up Web management tools from the Web browser to perform UPS setup and check status.
The list below describes Web management tool functions.
The table below and the links provide an overview of tool functions.

Name	Overview
2.3 Main Screen for Web Management Tools	Describes the items in the Main screen. Describes Main screen items and indications.
2.4 Registering and editing UPS devices	Describes functions for registering devices in UPS and methods for editing data for registered devices.
2.5 Deleting devices registered in UPS	Describes methods for deleting devices registered in UPS.
2.6 Wake On LAN function	Describes the Wake On LAN function for registered devices.
2.7 Basic UPS settings	Describes UPS network information and control configuration.
2.8 Adding delay in a UPS with multiple power distribution system	Describes how to set On/Off delay in a UPS output control system. This function is available to a UPS with multiple power distribution system.
2.9 Service Settings	Describes HTTP and Telnet setup.
2.10 Changing UPS login account	Describes methods for changing account data for remote UPS access.
2.11 Mail function	Provides an overview of the UPS mail function.
2.12 Mail function setup	Describes Mail function setup.
2.13 Schedule functions	Provides an overview of the UPS schedule function.
2.14 Schedule setup	Describes the menu screen for schedule settings.
2.15 chedule setup (weekly schedule)	Describes methods for setting weekly schedules.
2.16 Schedule setup (specified date schedule)	Describes methods for setting specified date schedules.
2.17 Confirming schedule settings	Describes methods for verifying set schedules.
2.18 Events	Provides an overview of events.
2.19 Setting event log	Describes methods for setting condition of event log operation.
2.20 Setting up WS Script execution	Describes how to set conditions for WS script execution when an event occurs.
2.21 Editing WS Script execution	Describes methods for editing WS scripts.
2.22 Testing execution of WS Scripts	Describes functions for testing WS scripts.
2.23 Notifying breakdowns via E-mail	Describes use of mail to notify events.
2.24 Check UPS state and event log	Describes UPS condition, measuring values and event log information.
2.25 UPS Control	Describes remote UPS On/Off control and battery check control.
2.26 Verifying UPS information	Describes functions for displaying UPS information.
2.27 Executing Shutdown test	Describes functions for shutdown test.

2.3 Main Screen for Web Management Tools

The illustration below shows the Main Screen for Web Management Tools.
(Connect a UPS with multiple power distribution system.)



Screen layout

No.	Description
[1]	Indicates UPS location, time (see Note) and program version information.
[2]	This is the Main Menu. Use this menu for viewing information on UPS condition and for using UPS setup functions.
[3]	Indicates UPS output condition.
[4]	Provides information on registered devices. The [Registration], [Change] and [Delete] buttons allow the user to register new devices, change the information in registered devices and delete devices.
[5]	To execute shutdown test from here.
[6]	To execute register new devices, change the information in registered devices and delete

devices by the [Registration], [Change], [Delete].

Note: The time shown here is not UPS time but the time of the computer where the Web browser is installed.

Explanation of the functions of the Web control tool

Main Menu

The Main Menu allows the user to setup a UPS, view conditions and access other functions.

[Menu] button	Function	Overview
Basic settings	Basic settings	Sets UPS network information.
	UPS control setting	Sets the operation to be performed in the event of a power failure.
	Service setting	Sets UPS to enable Web or Telnet use.
	Account setting	Changes account data when logging into a UPS.
	Mail setting	Sets mail transfer functions.
Schedule setting (See Note)	Operation condition setting	Determines whether scheduled operation will be used or not.
	Specified date schedule setting	Sets mail specified date schedule.
	Weekly schedule setting	Sets weekly schedule setting.
	Schedule verification	Shows a time chart of set schedules.
Clock setting	Clock setting	Adjusts UPS clock.
Event setting	Event log setting	Sets up event log recording.
	Condition of WS script execution	Defines whether a WS script is to be run or not.
	Edit WS script	Edits WS scripts.
	Verify WS script	Verifies WS scripts.
	Setting condition of Mail notification	Sets conditions for mail transfer.
	Mail address setting	Sets the destination mail address.
	Mail transfer verification	Verifies mail transfer.
View	Condition & measured value	Shows UPS condition & measured value.
	Event-Log view	Shows the event log recorded by the UPS.
Control	UPS startup	Turns UPS output on.
	UPS stop	Turns UPS output off.
	Start battery check	Starts battery check.
	Stop battery check	Ends battery check.
UPS information	UPS information	Shows information on the UPS.

Note : This function can only be used when there is a serial connection to the UPS.

Explanation of the functions of the Web control tool

Viewing UPS output condition

A UPS will show the following information. Note that the information that is displayed depends on UPS type.

・UPS without multiple power distribution system

Displays UPS condition.

Condition	Description
Start	UPS output is on.
Stop	UPS output is off.
Power failure	A power failure has occurred.
Breakdown	The UPS has broken down.

*If a serial communication problem occurs between the UPS unit and **SANUPS SOFTWARE** when the computer starts up, the state is not displayed. Furthermore, if a serial communication problem occurs during startup of the computer, note that the state in the Web Control Tool will be that before the serial communication problem occurred.

・UPS with multiple power distribution system

Displays condition of Output 1 and Output 2.

Condition	Description
ON	Output 1 or Output 2 is on.
OFF	Output 1 or Output 2 is off.

Viewing information on connected devices

The list below shows how devices registered in the UPS are classified.

Type	Device type	Remarks
PC(Sv_S)	PC(serial connection)	PC with UPS management software Server version
PC(Sv_C)	PC(contact connection)	PC with UPS management software Server version
WS(Sv_S)	WS(serial connection)	WS with UPS management software Server version
WS(Sv_C)	WS(contact connection)	WS with UPS management software Server version
PC	PC (network connection)	PC with UPS management software
WS	WS (network connection)	WS with UPS management software
WS(T)	WS (LAN I/F card Telnet connection)	
ETC	The others device	

Device operating condition is indicated as shown below.

Operating condition	Description
Operating	The device is running.
Error	The UPS management software program has frozen.
Stop	The device has stopped.
Shutting down	For PCs and WSs

Note: For a WS(T) device, start and stop indicate, respectively, whether network access is available or not. Thus “stop” is indicated when a workstation is not connected to the network.

*If the **SANUPS SOFTWARE** server is shut down, the correct state cannot be displayed in the Web Control Tool because the state cannot be acquired.

2.4 Registering and editing UPS devices

Use this function to register computers powered by the UPS to enable shutdown from the UPS.

The UPS can connect up to 50 devices.

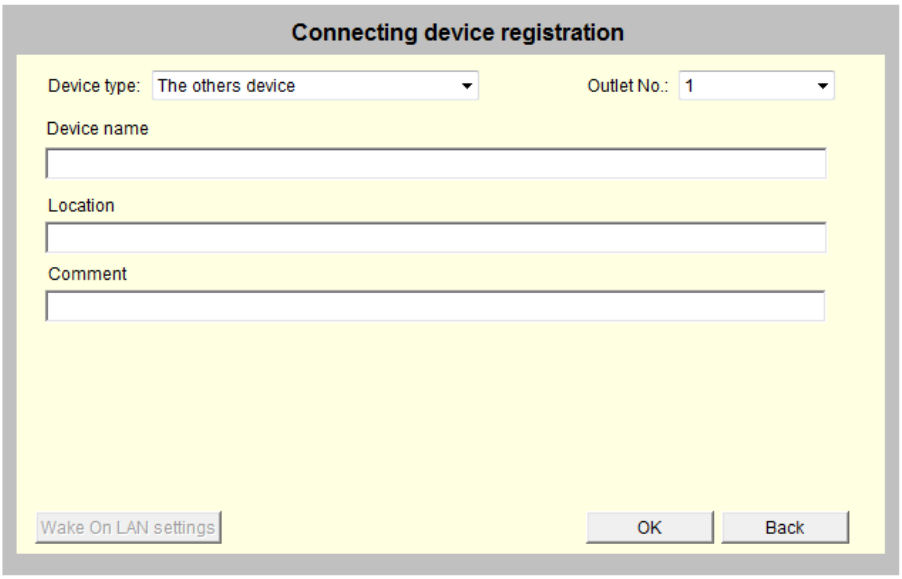
2.4.1 Registration

[Operation procedure]

Click the [Registration] button in the Main screen.

The screen shown below appears.

[Screen description]



(The above figure shows the screen that appears for a UPS with multiple power distribution system. The default setting shows "**The others device**.")

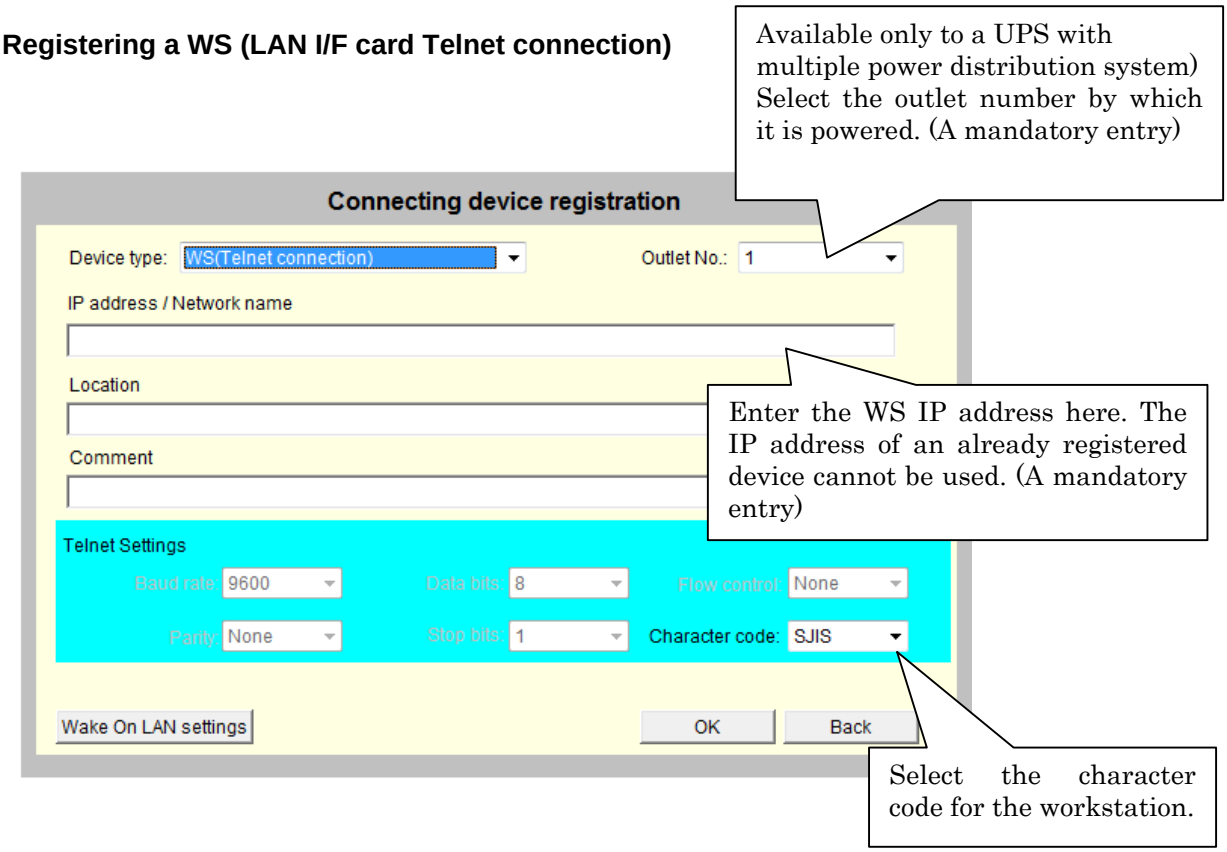
Screen name	Description	Remarks
Device name	A device entered in this field appears in the list of registered devices in the Main screen.	Singe-byte characters only (Single-byte digits only is not possible)
Location	Enter a comment on the location of the device. (This field can be left blank.)	
Comment	Enter a comment on the device. (This field can be left blank.)	
Device type	Select the device type.	
Outlet No.	Enter the number of a charging (connected) UPS outlet number.	Available only to a UPS with multiple power distribution system

Select a Device type for the device you connect.

Device type	Description
WS (LAN I/F card Telnet connection)	A workstation connected to the network and that is shut down using Telnet login.
Other devices	Devices that do not need to be shut down.

Note: The Registration, Change and Delete UPS Web tools cannot be used on a PC or workstation running UPS management software. Instead use the UPS management software setting tools.

Registering a WS (LAN I/F card Telnet connection)



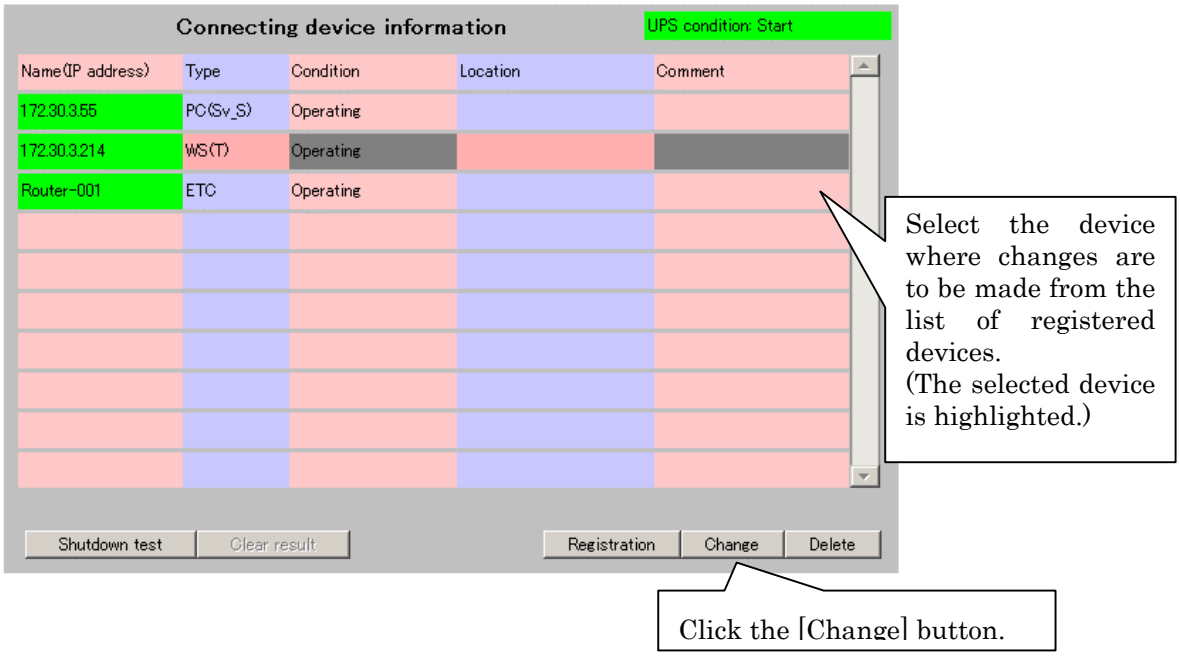
Use Event settings in the Main screen to set a Telnet log-in procedure to the workstation and to set a procedure for executing shutdown and other commands. (Section 2.20 , ”Setting up WS Script execution”)

For information on the Wake On LAN function, refer to Section 2.6 , **“**Wake On LAN function”.

2.4.2 Making changes

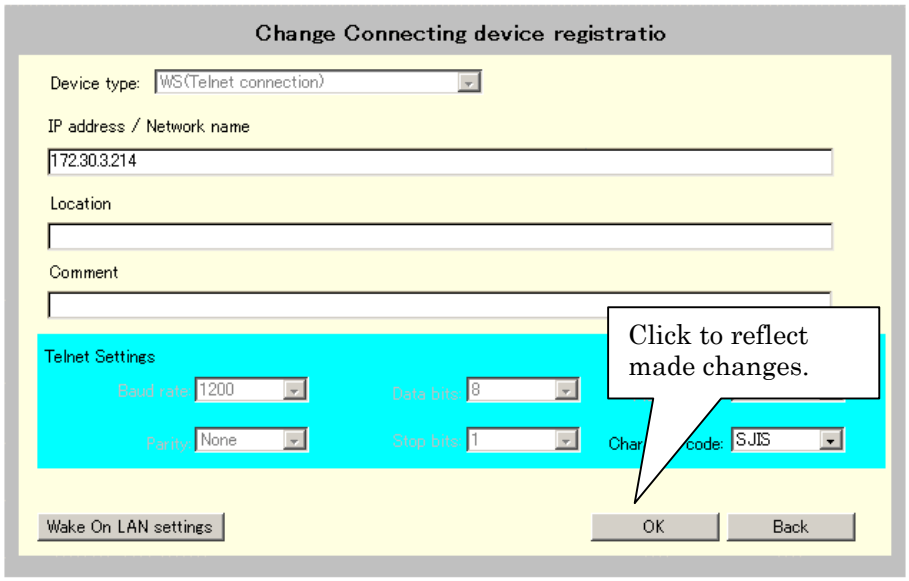
[Operation procedure]

Select the device for which changes are to be made in the Main screen list of registered devices.



Entries that can be entered can also be changed.

Click the [OK] button after making a change to reflect it to the UPS.



Note:

Change can not be used to change the device type.

Changing the device type of a registered device type requires that the device be deleted from the list and reregistered.

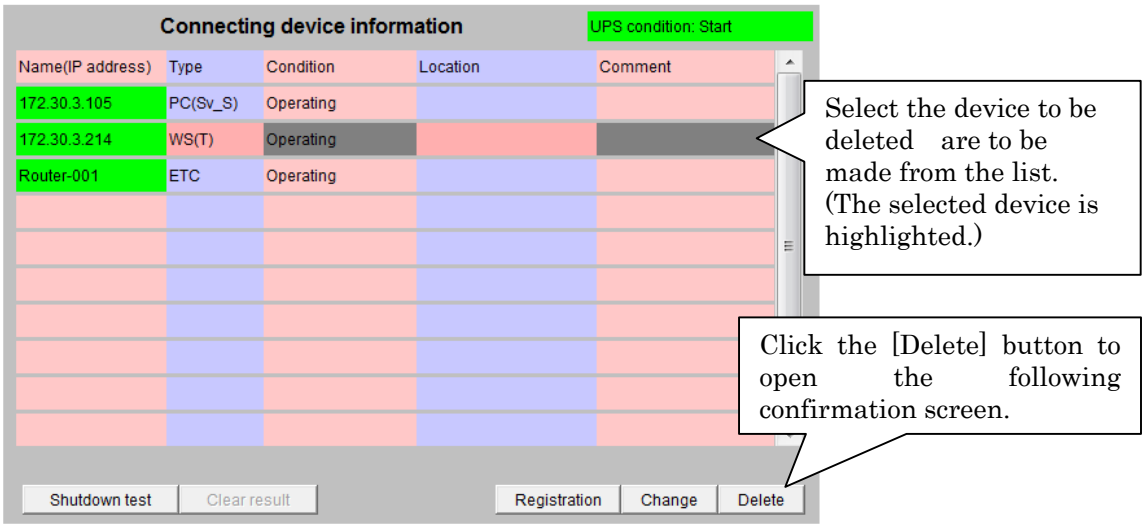
Nor can it be used to make changes for devices that run UPS management software.

2.5 Deleting devices registered in UPS

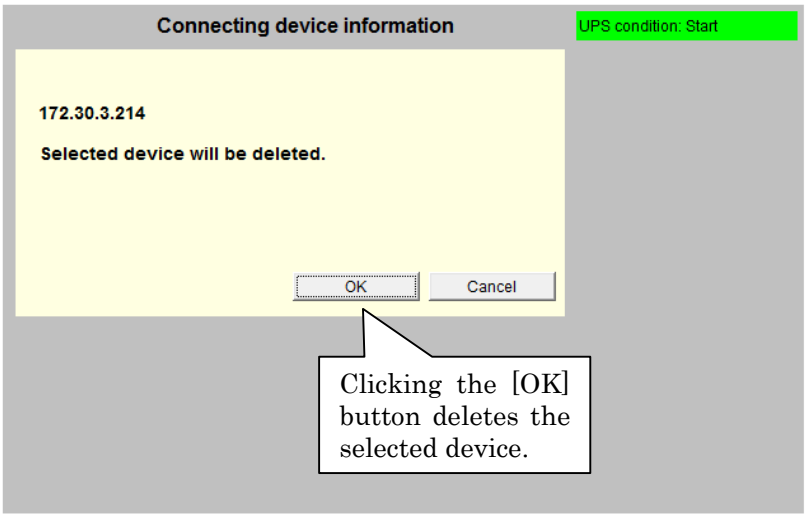
Delete the registration information in the UPS for any device that is disconnected from the UPS. To change the [Device type] of a registered device, use this function to delete it and assign it a different device type after reregistering it.

[Operation procedure]

Select the device to be deleted are to be made in the Main screen list of registered devices.



This screen prompts you to confirm the device to be deleted.
If you wish to delete the device, click the [OK] button.



Note:
This delete function cannot be used for deleting devices that run UPS management software. Instead use the UPS management software setting tools.

2.6 Wake On LAN function

Wake On LAN – a definition

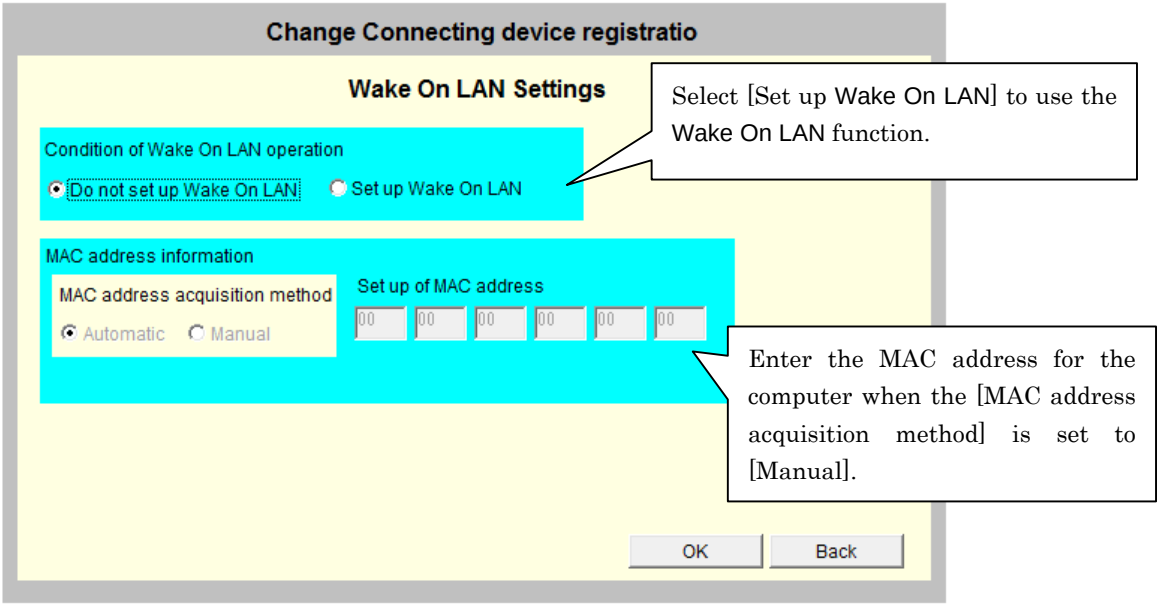
Wake On LAN is a function that enables a computer to start up another computer connected to a network.
A computer that receives a [Magic Packet] (a packet for restarting computers) is powered up.
This function requires that the network card, the motherboard, BIOS and other computer hardware be set up appropriately.

UPS Wake On LAN function

When UPS output is on, the UPS sends a [Magic Packet] to a registered device whose Wake On LAN setting is [Enable].

Wake On LAN settings

When registering a WS (LAN I/F card Telnet connection) device to the UPS, click the [Wake On LAN settings] button to open a setup screen.



Note:
Selecting [Set up Wake On LAN] for a WS (LAN I/F card Telnet connection) device does not necessarily mean that Wake On LAN will function. Operating conditions are given below.

Condition 1	Condition 2	Wake On LAN function
WS (LAN I/F card Telnet connection) device is in same segment as UPS		○
WS (LAN I/F card Telnet connection) device is not in the same segment as UPS	The WS (LAN I/F card Telnet connection) device and UPS management software in the same segment are registered in UPS	○
	The WS (LAN I/F card Telnet connection) device and UPS management software in the same segment are not registered in UPS	×

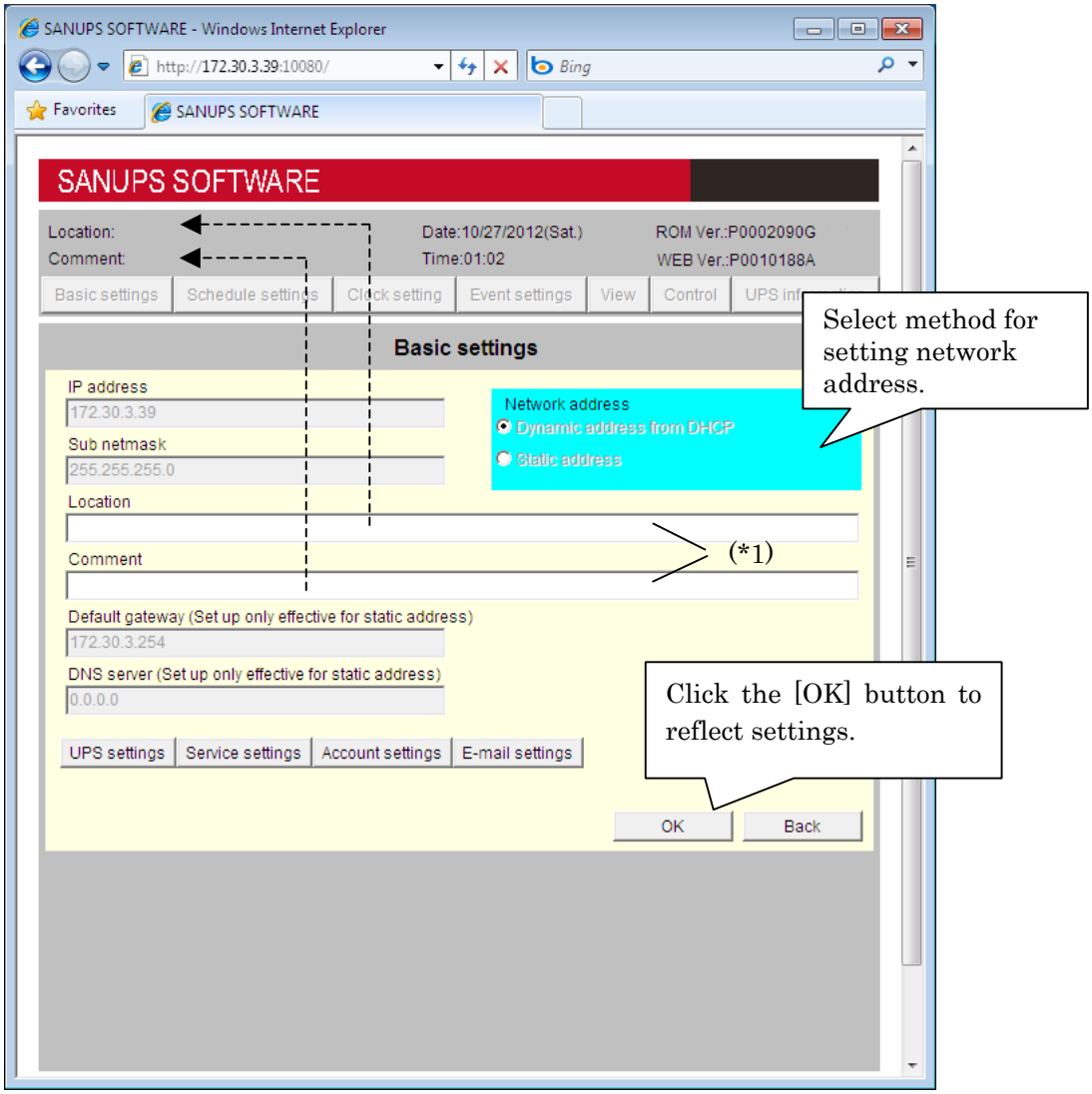
When WS (LAN I/F card Telnet connection) device is in a separate segment of the network than the UPS, be sure to set the [MAC address acquisition method] to [Manual].

2.7 Basic UPS settings

2.7.1 Network settings

Click the [Basic settings] button in the Main screen.

The screen shown below appears.



Use this screen to set the [Location] and [Comment].

(*1) Changes to the [Location] and [Comment] fields are reflected to the [Location] and [Comment] indications at the top of the Web Management Tool screen.

2.7.2 UPS control settings

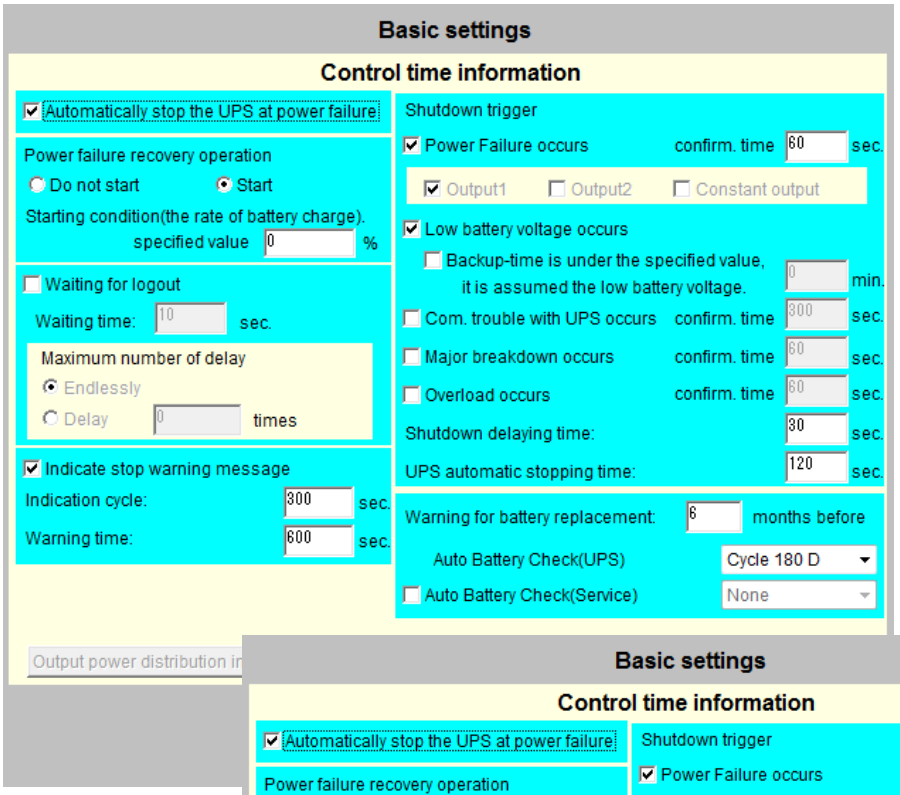
Configure settings related to control operations such as how many seconds after a power failure to start shutdown.

[Operation procedure]

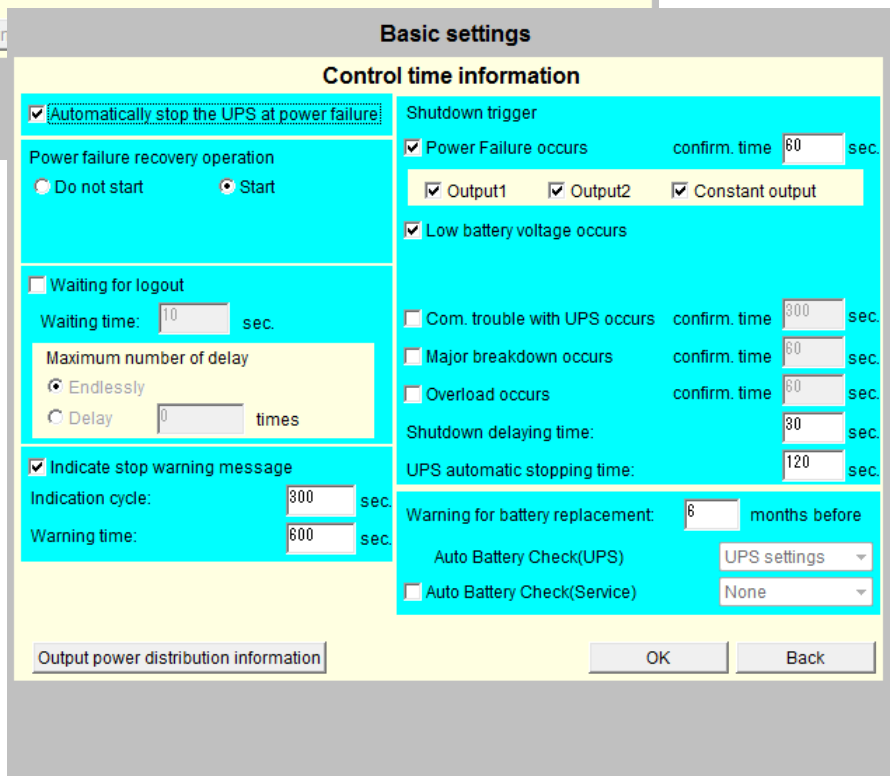
Click the [Basic settings] button in the Main screen.

Click the [UPS settings] button in the Basic Settings screen.

The screen shown below appears.

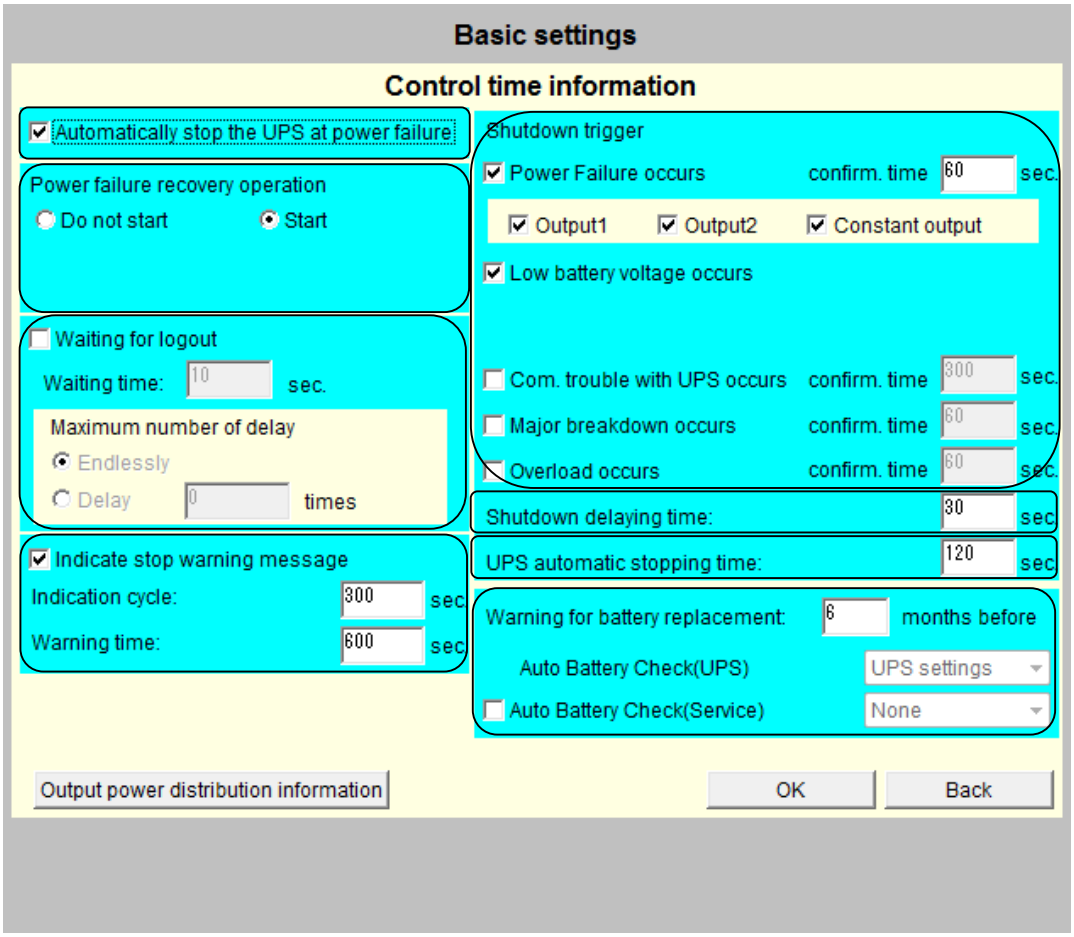


Left figure indicates a UPS which is not provided multiple power distribution system.



Right figure indicates the UPS which provides multiple power distribution system.

Screen description (screen shown for UPS with multiple power distribution system



Screen layout

No.	Description
[1]	Set the conditions that will shut down the UPS in the event of a power failure.
[2]	Set the conditions that will start up the UPS after power is restored.
[3]	Set delays (log off wait).
[4]	Select to output a stop warning message.
[5]	Set a shutdown trigger.
[6]	Set a shutdown delay time.
[7]	Configure UPS auto stop time.
[8]	Set up the battery.

[Screen description]

Screen name	Description
Automatically stop the UPS at power failure	This setting determines whether or not the UPS will be shut down in the event of a power failure. (*1)
Power failure recovery operation	This setting determines whether a turned off UPS output will be turned on (started up) or not after power is restored (*1).
Starting condition[the rate of battery charge].	Turns on the UPS if the battery charge exceeds a set value and startup after power recovery is set. (This setting is available only if the UPS supports it.) UPS output is turned on as soon as power is restored if a value 0% is set.
Waiting for logout	This setting inserts a delay (to allow the user to log off) in a shutdown process programmed by a scheduled stop or remote control. This setting is available for a PC or workstation running UPS management software. (For information on this setting, refer to the User's Guide of the UPS management software.)
Indicate stop warning message	Determines whether or not a stop warning messages is output.
Indication cycle	Determines the frequency of stop warning message display.
Warning time	Determines the display interval of the stop warning message.

Screen name	Description
Shutdown trigger	Sets shutdown conditions and confirmation time when the following events occur. (*1) (1) Power failure occurs (2) Low Battery voltage occurs A UPS that detects remaining battery time can be set to shut down when remaining battery time goes below a preset value. (3) Communication trouble with UPS occurs (not supported) (4) Major breakdown occurs (5) Overload occurs
Shutdown delaying time	Sets the time until a shutdown is initiated after a shutdown trigger generates an unrecoverable event. This gives the user time to prepare for shutdown. (*1)
UPS automatic stopping time	Sets the delay time prior to a UPS shutdown following the elapse of the shutdown delay time. This should provide enough time to complete the shutdown of all registered devices.
Warning for battery replacement	Sets the number of months prior to battery replacement that a warning will appear. (*1)
Auto Battery Check	Turns battery check on/off and sets battery check interval. Turn on "Auto Battery Check[UPS]" if it supports this function. Turn on "Auto. battery check by UPS control software" for a UPS that has battery check function but not an auto battery check function.

(*1) Messages appear on computers running UPS management software.
Use the battery replacement warning only as a rough guide to when the battery should be replaced. Replacement may be required at an earlier date in some environments.

[Outlet No. that will be shut down in the event of a power failure]

A UPS with multiple power distribution system allows you to set the outlet No. that are to be shut down in the event of a power failure for "**1**", "**2**" or "**Constant output**".
Use "1" only for other UPS devices. ("2" and "Constant output" cannot be used.)

When [Power failure] is selected as the shutdown trigger, the UPS waits for a recovery during the "Power failure confirmation time" for the system the selection was made when a power failure occurs. When power is not restored, the UPS assumes that recovery is impossible and starts to shut down devices.
For systems where this selection was not made, the UPS will not determine that recovery is impossible until it outputs a low battery voltage signal. (The [Power failure confirmation time] is not used for determining that a power failure cannot be recovered.)
This setting makes it possible to delay the start of the shutdown when you want a computer to operate as long as possible after the occurrence of a power failure.

2.8 Adding delay in a UPS with multiple power distribution system

This function is available on a UPS with multiple power distribution system.

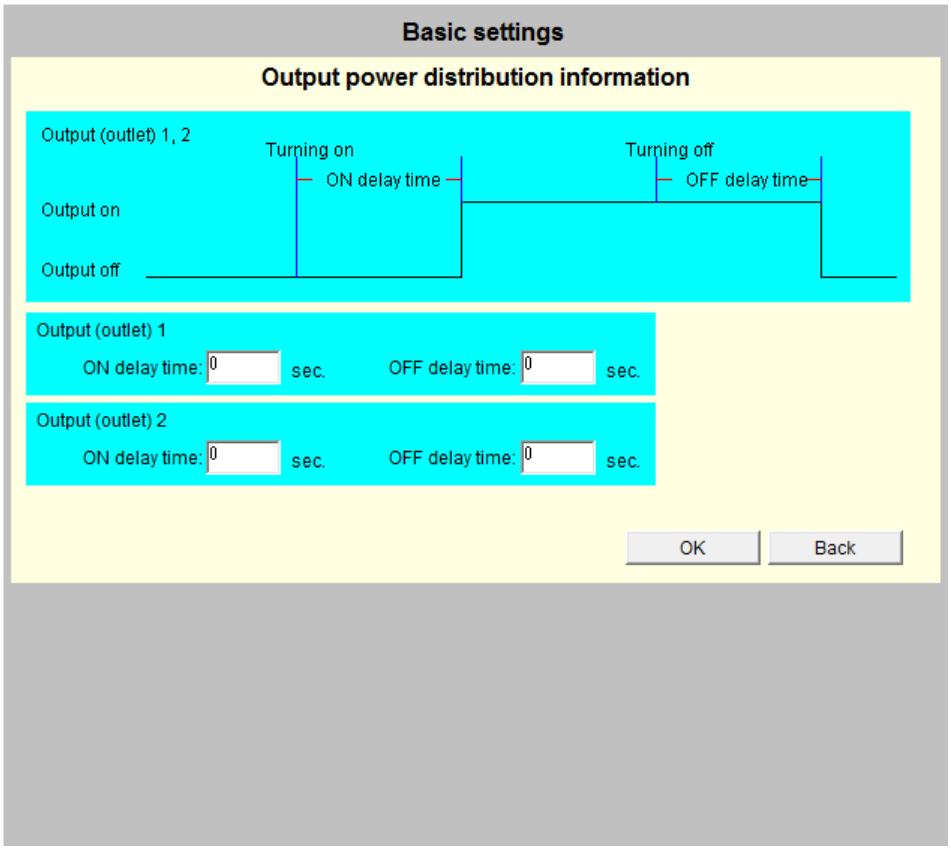
[Operation procedure]

Click the [Basic settings] button in the Main screen.

Click the [UPS settings] button in the Basic Settings screen.

Click the [Output power distribution information] button in the Control Time Information screen.

The screen shown below appears.



[Description]

The delay time for output on and off can be separately set for Output outlet 1 and 2 in a UPS with multiple power distribution system.

This function makes it possible to turn Output 1 on or off earlier or later than Output 2.

(Output 2 operates in the same way.)

For example, if you want a server connected to Output 1 to start up after a storage device connected to Output 2, you can do this by making the output on delay time for output outlet 1 longer than the output on delay time for output outlet 2.

The devices will start up in the following order: UPS output goes on → Output 2 on (storage device starts up) → Output 1 goes on (server startup).

2.9 Service Settings

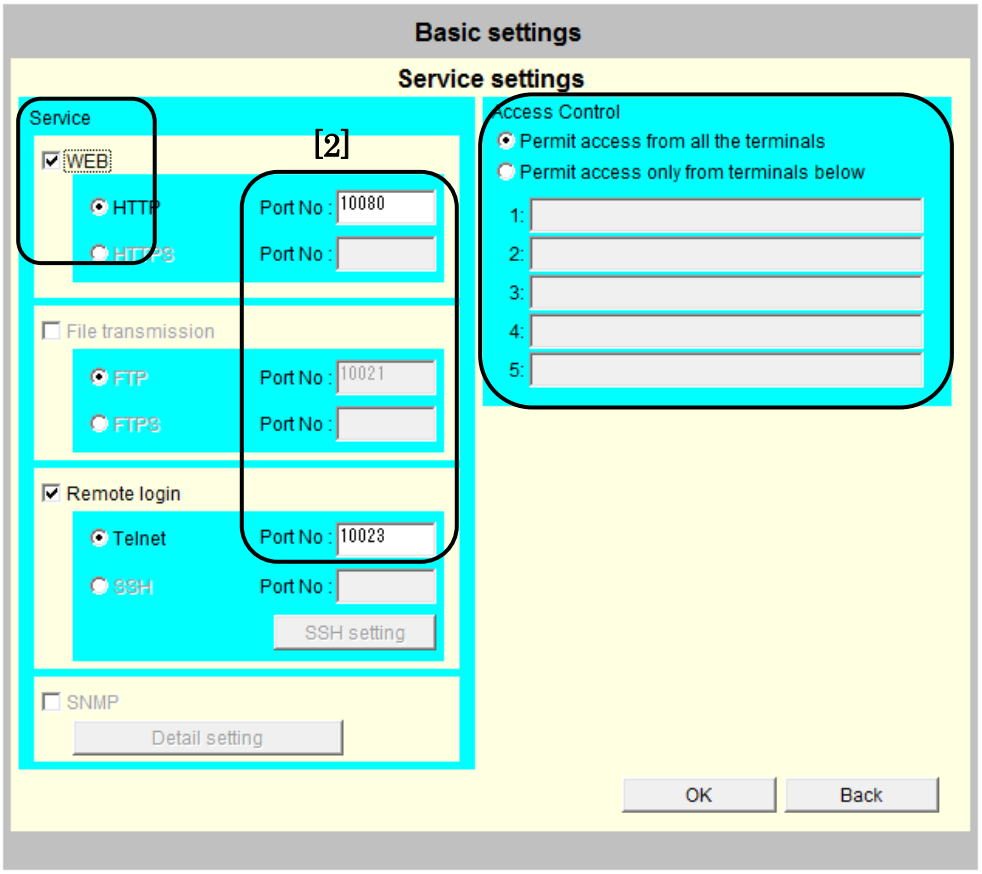
This function allows you to turn HTTP and Telnet on and off, change port numbers and access limitations.

[Operation procedure]

Click the [Basic settings] button in the Main screen.

Click the [Service settings] button in the Basic Settings screen.

The screen shown below appears.



Screen layout

No.	Description
[1]	Turns services on and off.
[2]	Allows you to modify service port numbers. (But not SNMP port numbers)
[3]	Allows you to set common access limitations for each service. (IP address or Network name specified)

[Screen description]

Screen name	Description
HTTP	Turns Web access on and off.
Remote login	Turns Telnet / SSH access on and off. (Note) This software doesn't support SSH.
Telnet	Turns Telnet access on and off.
Port No.	Modifies service port numbers.
Access control	Restricts SNMP access by external services. Enter the network address of terminals that will allow access to the network. (Enter up to five addresses.)

2.10 Changing UPS login account

Default login account data

Account name: **upsadmin**

Passowrd: **UpsAdmin** (case-sensitive)

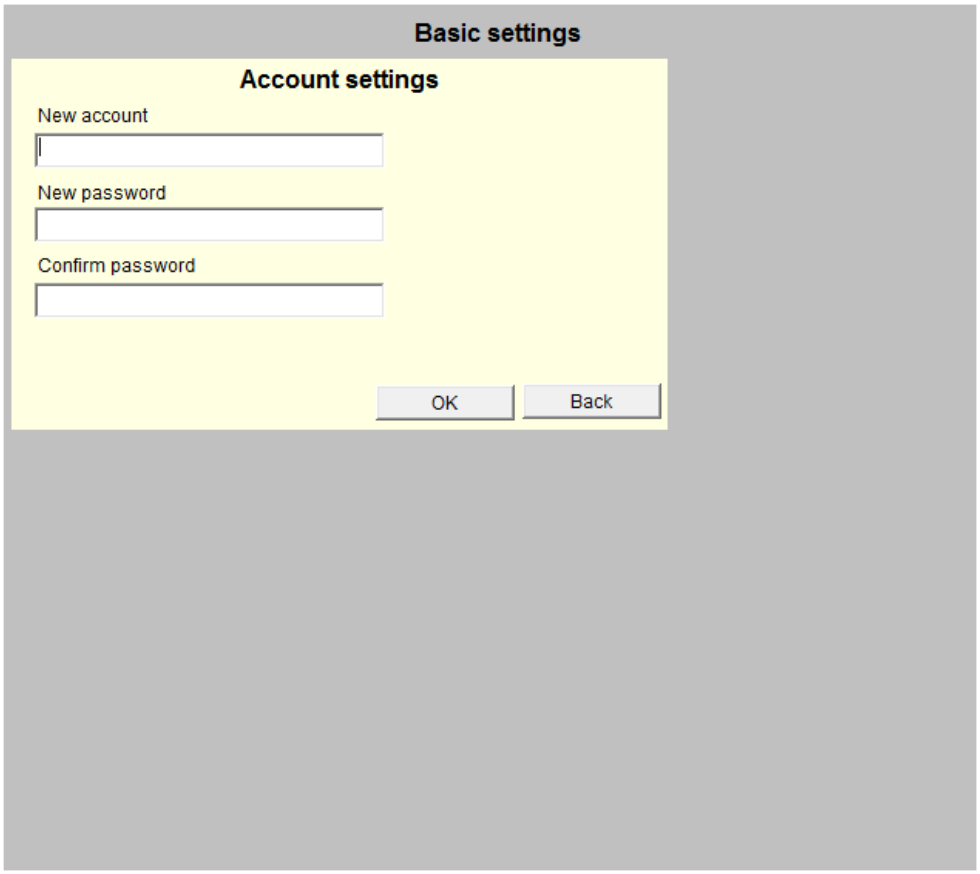
Use this function to change accounts. (Use single byte characters.)

[Operation procedure]

Click the [Basic settings] button in the Main screen.

Click the [Account settings] button in the Basic Settings screen.

The screen shown below appears.



[Screen description]

Screen name	Description	Remarks
New account	Enter a new account name.	1 to 20 single-byte characters
New password	Enter a new password.	Up to 20 single-byte characters
Confirm password	Enter the new password again.	Up to 20 single-byte characters

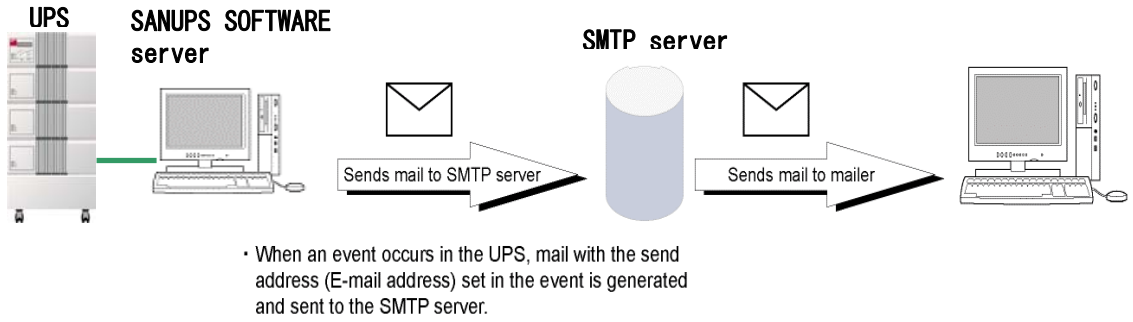
Note: The password must be alphabetic characters and is case-sensitive.

2.11 Mail function

The UPS mail function has the following functions.

[1] When a power failure or other breakdown occurs, mail notifying the event is sent to a specified address.

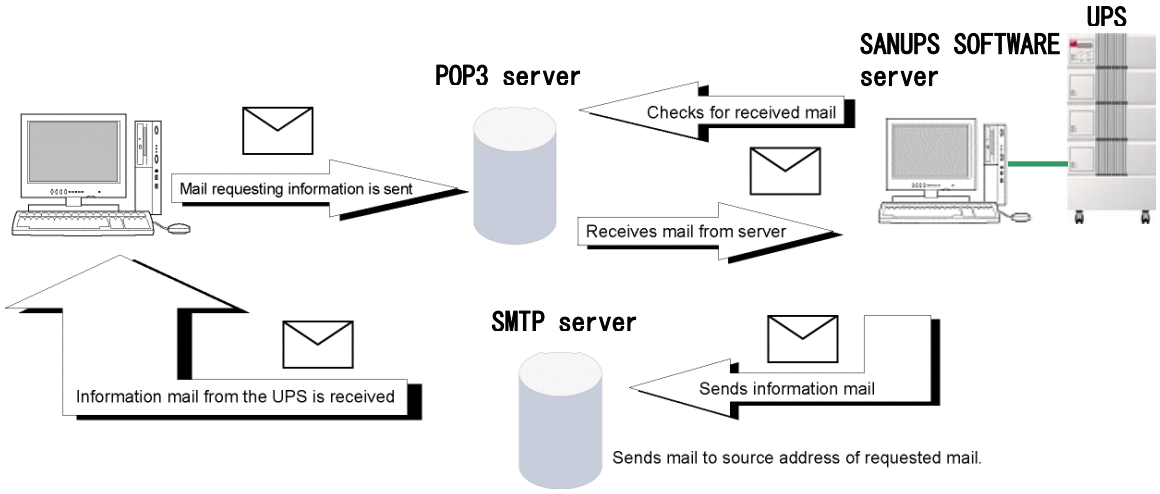
The function sends mail to notify a cellular phone or computer of the UPS anomaly (event).



[2] The function uses mail to query UPS condition & measurement data.

Mail uses a cellular phone mail function or a mailer in PC/WS to send mail requesting information from the UPS.

The UPS receives the mail request and returns mail to report UPS condition & measurement data.



<Sending mail requesting UPS for information using a cellular phone or computer mailer>
Send mail containing the following entries in the mail address and subject fields.
Enter the UPS E-mail address in the [UPS E-Mail Address] as described in the next Section 2.12 , “Mail function setup”.
Enter the following in the Subject line.
(Use single byte characters. These entries are case-sensitive.)

- **UPS Status Request** : UPS condition and measurement data
- **UPS Info Request** : UPS information
- **Setting Request** : Device setup information
- **Log Request** : Event log information (The latest ten)
- **Log Request All** : Event log information (All)

This creates a mail message without a message.

For information on reply mail, see “User Guide, Appendix F List of Received Mail” .

2.12 Mail function setup

Set up the mail server (SMTP server) that will be used to send mail to a specified address reporting breakdowns and other events.

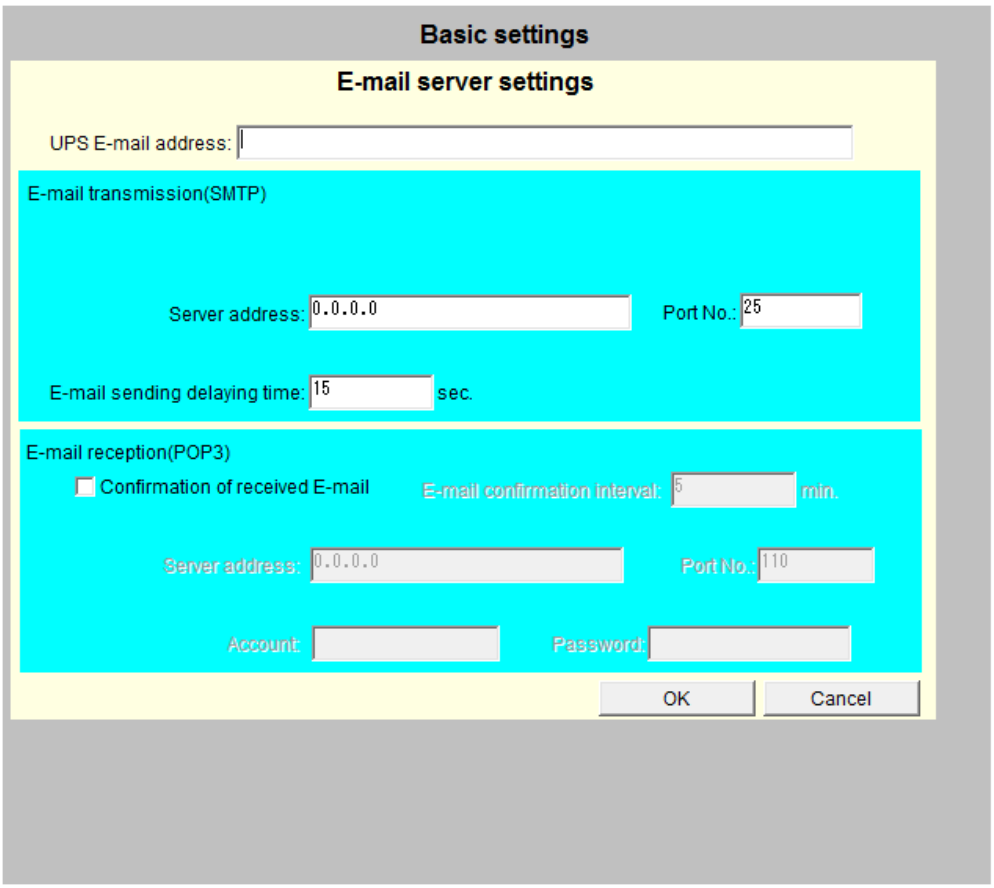
Also set up the mail server (POP3 server) that will query UPS condition and receive mail containing status information.

[Operation procedure]

Click the [Basic settings] button in the Main screen.

Click the [E-mail settings] button in the Basic Settings screen.

The screen shown below appears.



Item description

・UPS E-mail address

This is added as a [source address] when E-mail is sent from the UPS.

(Enter a mail address that includes the @ symbol.)

・E-mail transmission (SMTP)

Determine the server (SMTP server) that will transmit mail sent from the UPS.

Name	Description
Server address	Specifies the IP address/Network name of the SMTP server.
Port No.	Specifies the port number of the SMTP server. (The default value is no. 25.)
E-mail sending delaying time	Sets the delay time (in seconds) in sending mail to the SMTP server.

Refer to Section 2.23 , "Notifying breakdowns via E-mail" for information on the destination of mail generated by the occurrence of an event before entering a destination mail address.

・E-mail reception (POP3)

To acquire condition and measurement values from the UPS the mailer sends mail requests to the UPS.

Thus a mail server (POP3 server) has to be set up to handle the mail the UPS receives.

Name	Description
Confirmation of received E-mail	Specify whether mail reception in the POP3 server is to be confirmed. Clearing this checkbox will skip confirmation of mail received in the POP3 server.
Server address	Specifies the IP address/Network name of the POP3 server.
Port No.	Specifies the port number of the POP3 server. (The default value is no. 110.)
POP3 account	The name of the account used for POP3 server authentication.
Password	The password used for POP3 server authentication.
E-mail confirmation interval	Set the time interval for the mailer to verify mail received in the POP3 server.

Any mail that the UPS removes from the POP3 server is deleted from the POP3 server.

2.13 Schedule functions

The UPS can be scheduled to stop and start once a day.

For example, the following operations become possible:

・Stopping and starting computers at a specified time every day

・Shutting down computers before a holiday and starting them up at the start of the next working day

The UPS comes two with schedule functions.

・Weekly schedule

A one-week schedule (Sunday to Saturday) that runs 365 days.

Stop and start times are set in day units.

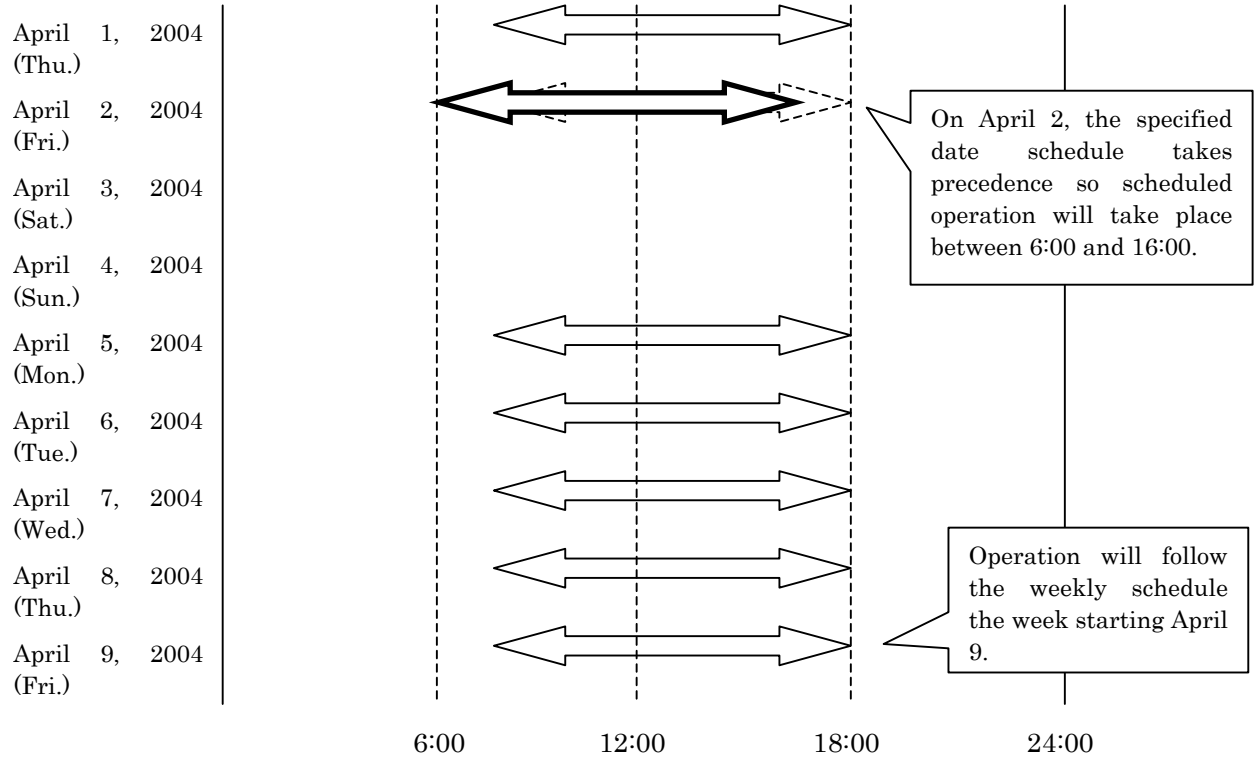
・Specified date schedule

Startup and stopping schedules are set as specified dates.

(For example, the date takes the following format: April 1, 2004, 8:00 Start, 17:00 Stop.)

When a specified date schedule and a weekly schedule are both specified, the specified date schedule takes precedence.

The figure below shows scheduled operation when a weekly schedule (Mon. to Fri. 8:00 Start, 18:00 Stop) and a specified date schedule (April 2 6:00 Start, 16:00 Stop) are both set.

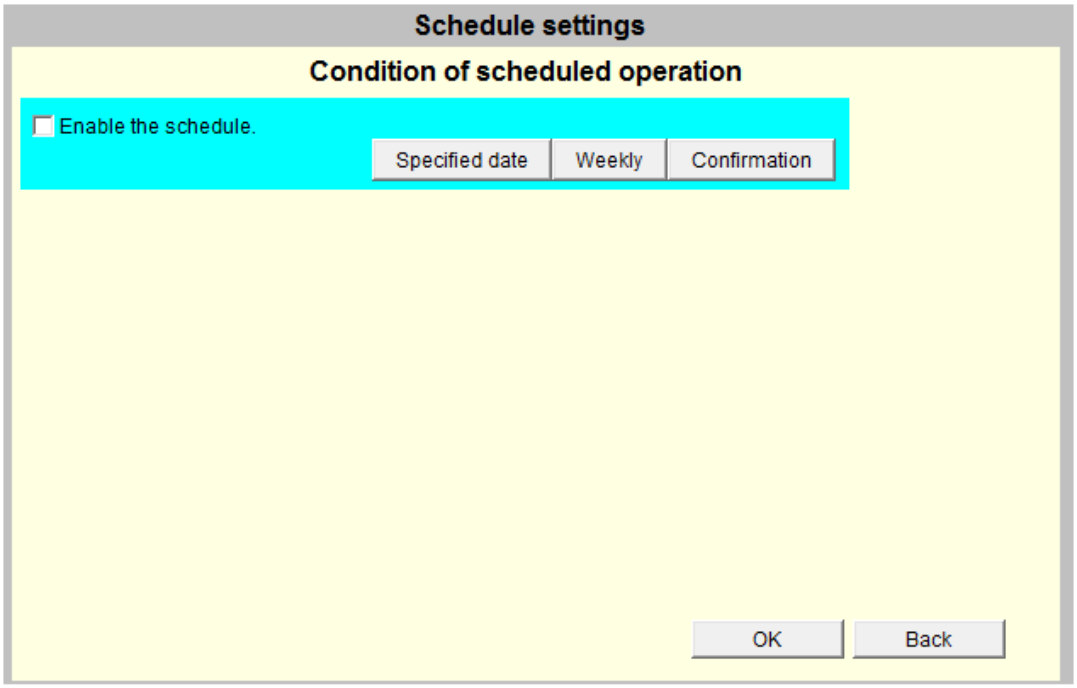


2.14 Schedule setup

[Operation procedure]

Click the [Schedule settings] button in the Main screen.

The screen shown below appears.

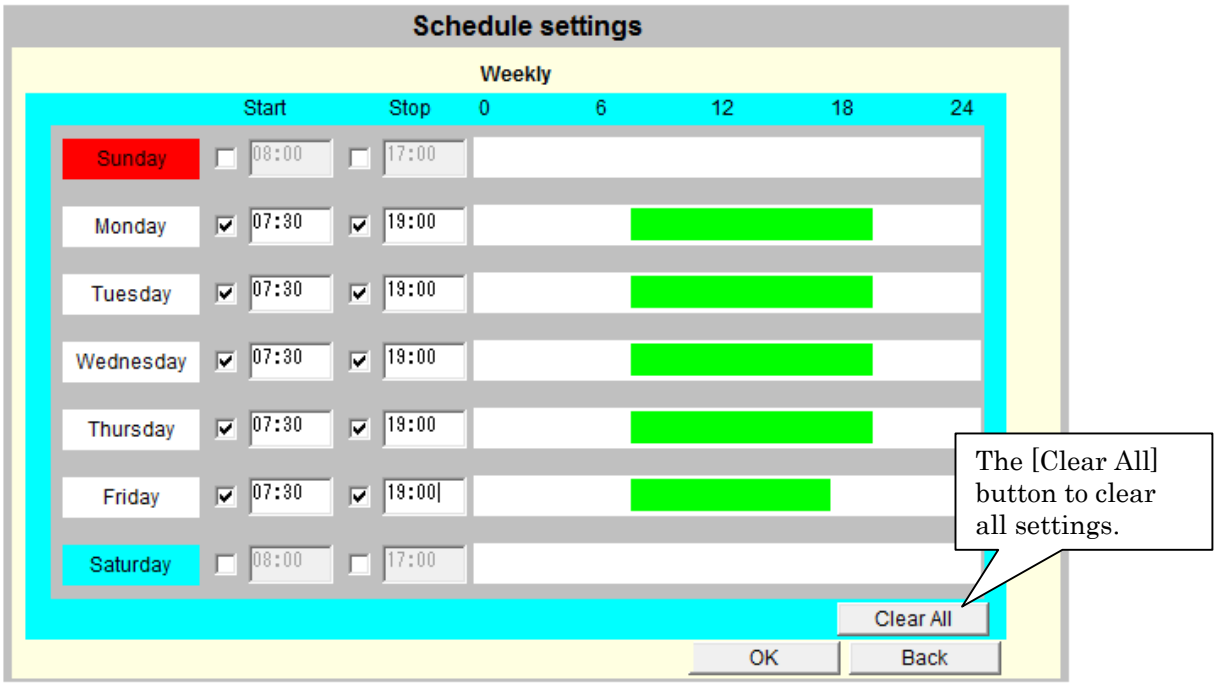


[Screen description]

Screen name	Description
Enable the schedule	Check to enable scheduled operation. Clear the check mark to disable all set schedules.
Specified date	Opens the screen for specified date schedule settings. For information on the screen for setting specified date schedules, refer to Section 2.16 , “Schedule setup (specified date schedule)”.
Weekly	Opens the screen for Weekly schedule settings. For information on the screen for setting weekly schedules, refer to Section 2.15 , “chedule setup (weekly schedule)”.
Confirmation	Shows a list of set schedules.

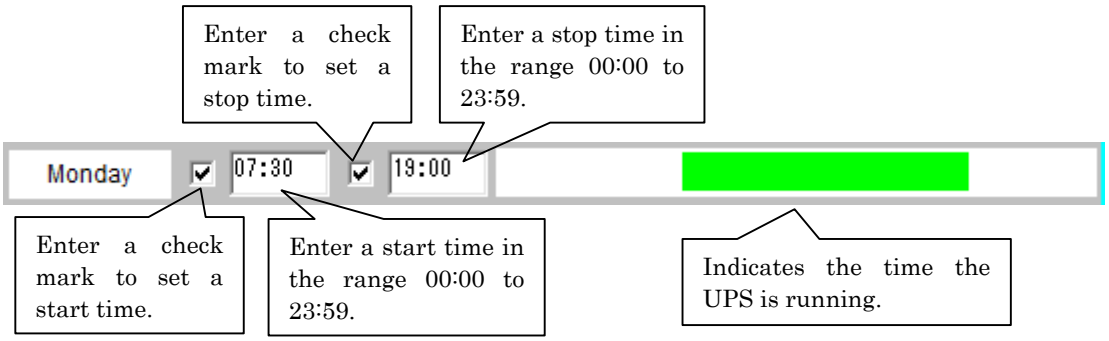
2.15 chedule setup (weekly schedule)

Click the [Weekly] button in the screen in Section 2.14 , “Schedule setup” to open the screen for setting weekly schedules shown below.



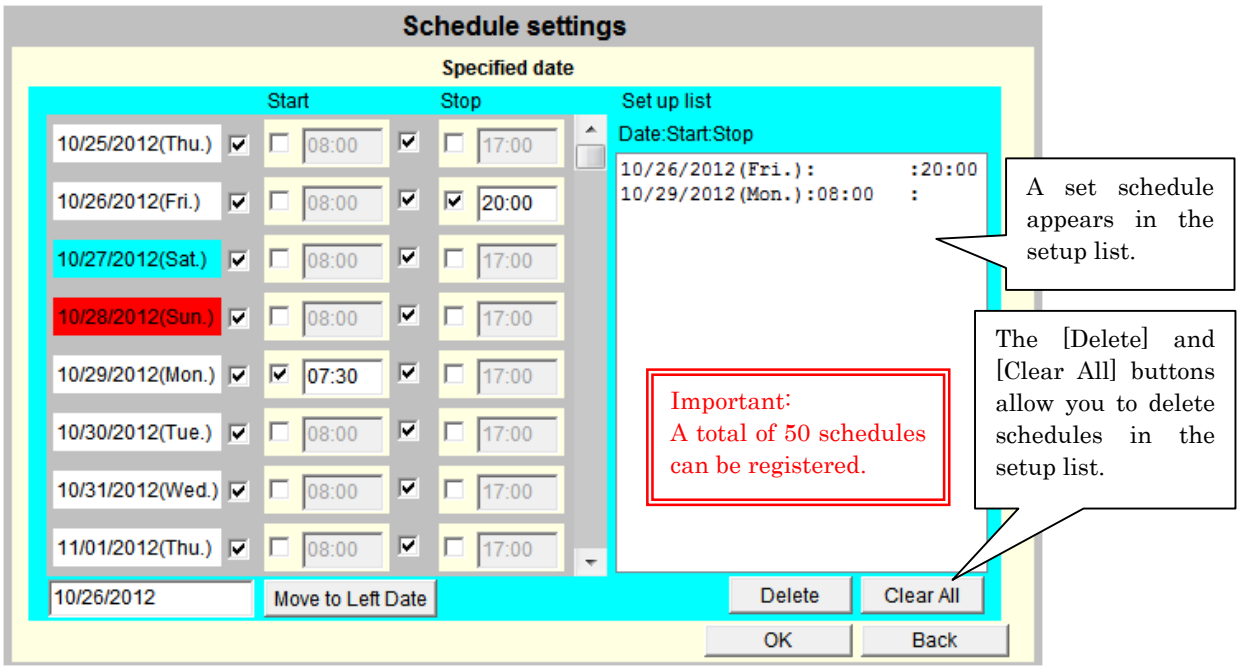
The figure above shows a schedule set for Monday to Friday (7:30 Start, 19:00 Stop).

[Setup procedure]



2.16 Schedule setup (specified date schedule)

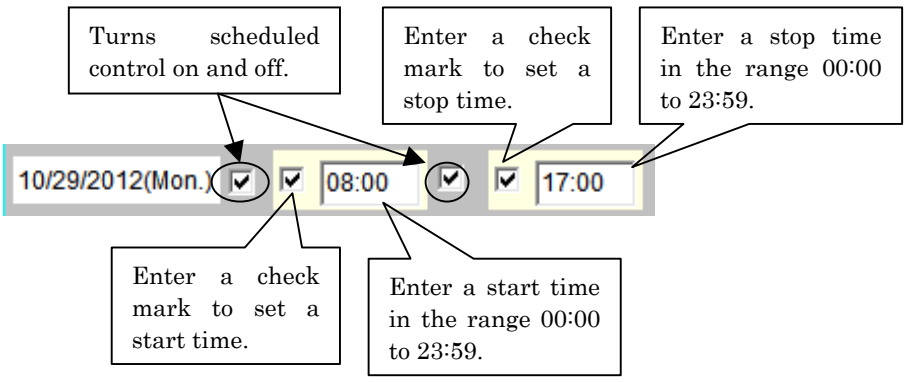
Click the [Specified date] button in the screen in Section 2.14 , “Schedule setup” to open the screen for setting specified date schedules shown below.



In the figure above, the stop time for October 26 is 20:00.

Also a schedule is set for October 29 (8:00 Start to 17:00 Stop).

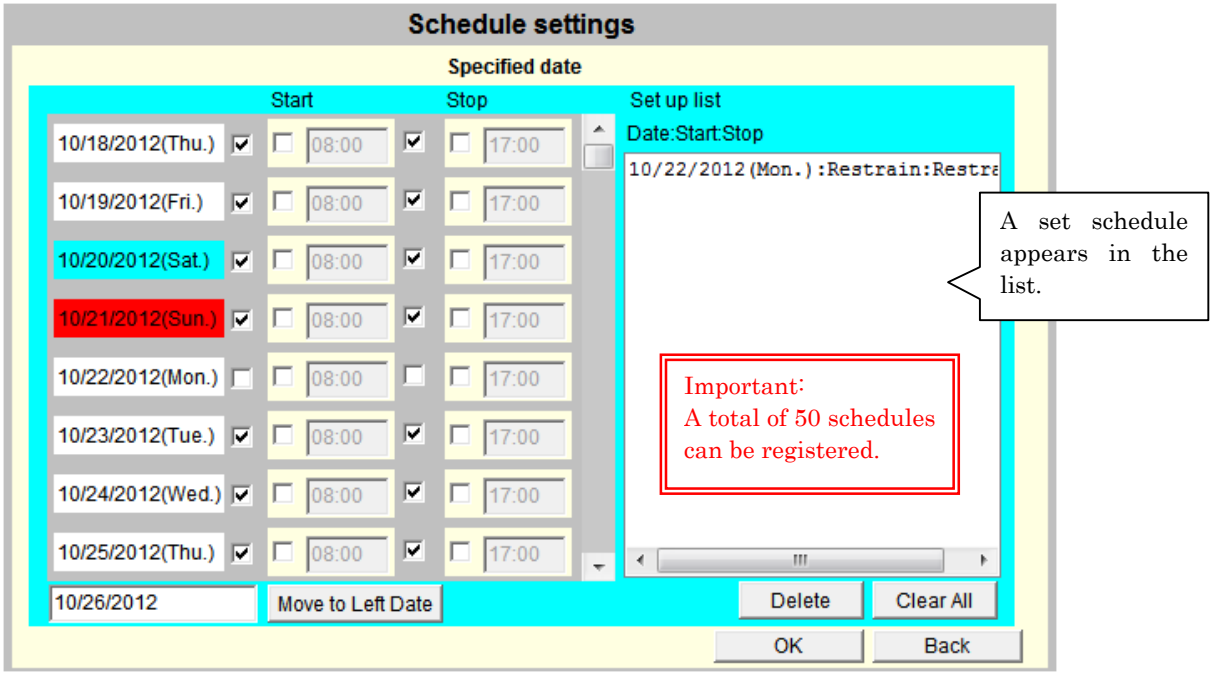
[Setup procedure]



Schedule restrain

A weekly schedule starting Monday and ending Friday may include holidays when you would like to turn off the schedule function. The schedule restrain function can then be used without having to rearrange the entire schedule.

(In the same manner, a set specified date schedule can be restrained by clearing the check mark.)



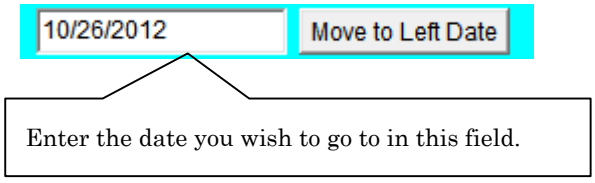
In the figure above, scheduled operation for October 21 (Mon.), which is a holiday, has been restrained.

October 21 is a weekday and is thus part of the weekly schedule, but the removal of the check mark means that the schedule for that day will not run.

Thus after the shutdown on the 19rd, the system will not start up until the 23th.

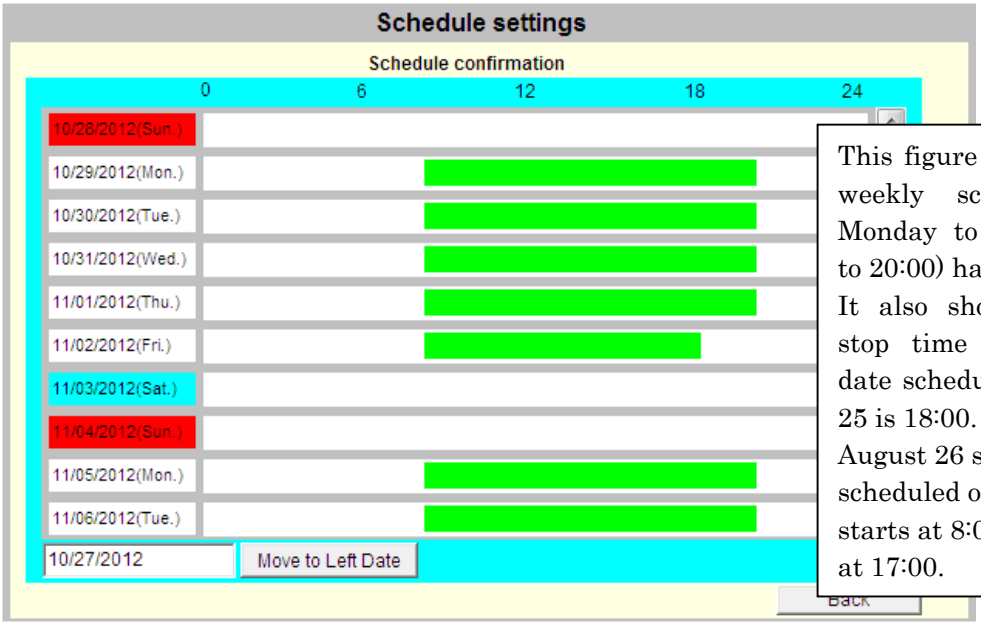
Moving dates

The Specified Date and the Schedule Confirmation screens show today's date. Enter any date in this field and click the [Move to Left Date] button to move to this date.

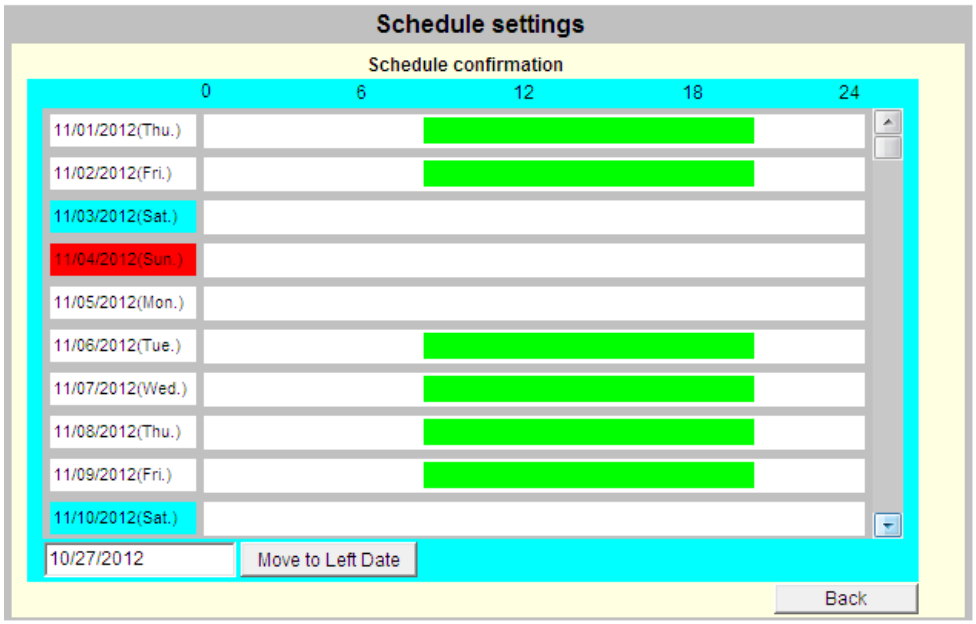


2.17 Confirming schedule settings

To confirm a specified date schedule or a weekly schedule, click the [Confirmation] button in the screen shown in Section 2.14 , “Schedule setup” The screen shown below appears to confirm set schedules.



This figure shows that a weekly schedule from Monday to Friday (8:00 to 20:00) has been set.
It also shows that the stop time for specified date schedule for August 25 is 18:00.
August 26 shows that scheduled operation starts at 8:00 and stops at 17:00.



This figure shows that weekly schedule from Monday to Friday(8:00 to 20:00) has been set.
It also shows that a specified date schedule for September 18 has been restrained.

2.18 Events

In UPS, a power failure, recovery from a power failure, UPS output off and other changes in states or operations such as the start of a shutdown induced by a recovery impossible condition are referred to as events.

The following settings can be made for these events:

- ・Whether or not to record an event log
- ・Running a workstation script
- ・Whether or not E-mail should be sent

Event log

The event log can record the following:

- ・When a power failure or other condition occurred
- ・When a shutdown was started and for what device it was started
- ・The devices that changed UPS settings and the order it occurred

The recording of each separate event in the log can be turned on or off.

WS script execution

A workstation that is set up to be shut down by a UPS via a direct Telnet login makes it possible to run scripts that issue commands to the workstation when a specific event occurs.

In addition to shutting down devices, these commands could stop applications or perform other duties.

Sending E-mail

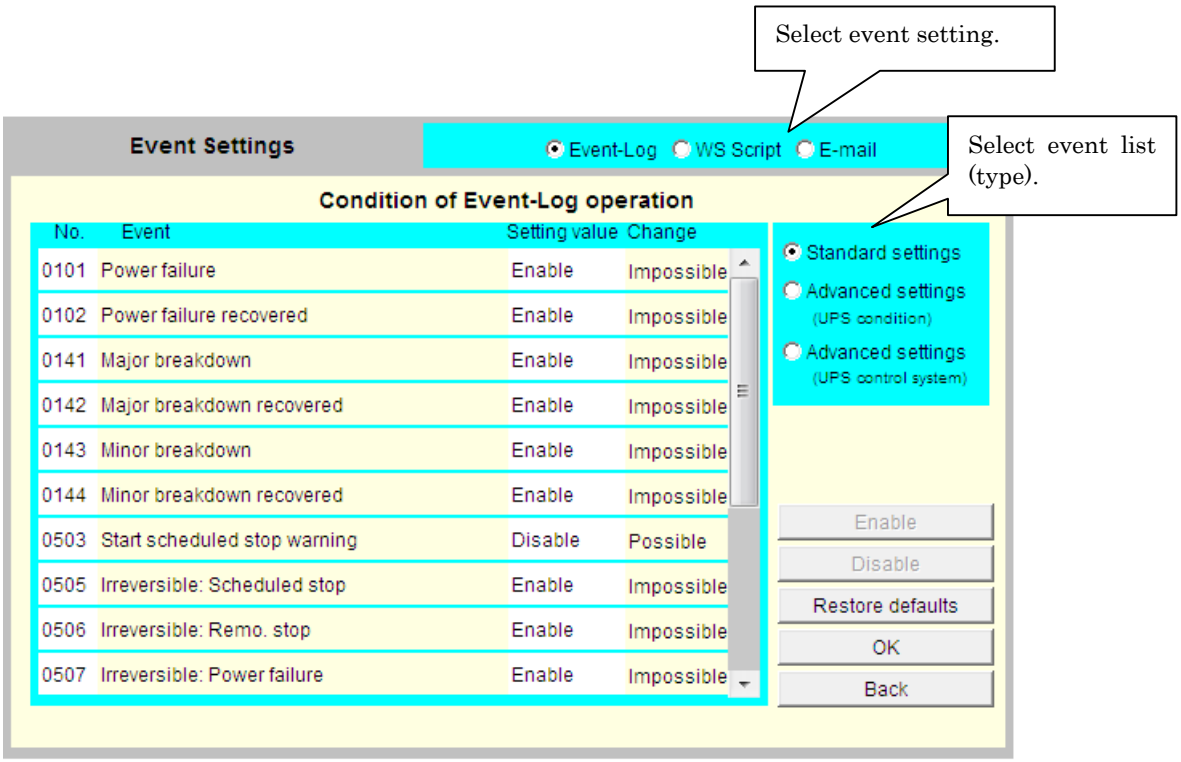
It is possible to send E-mail messages notifying the occurrence of an event to a specific E-mail address.

2.19 Setting event log

[Operation procedure]

Click the [Event settings] button in the Main screen.

The screen shown below appears.



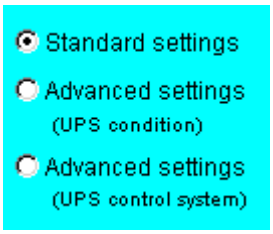
Changing event settings (see below)



Part Name	Description
Event log	Selects the event log.
WS script	Selects WS script.
E-mail	Selects E-mail.

Note: A function change made before settings are reflected to the UPS will delete them. Click the [OK] button to reflect the changes before changing functions.

Selecting event type (see below)



Name	Description
Standard settings	Sets standard items.
Advanced settings (UPS condition)	Sets detailed UPS breakdown conditions and other UPS operation details.
Advanced settings (UPS control system)	Sets UPS control details.

Settings buttons

Button name	Description
Enable	**Enables** a selected event. Changes a [Setting value] from "**Disable**" to "**Enable**". This setting causes data to be recorded in the event log.
Disable	**Disables** a selected event. Changes a [Setting value] from "**Enable**" to "**Disable**". This setting means that no data is recorded in the event log.
Restore to defaults	Returns the selected event items to their default values.
OK	The settings are reflected to the UPS.
Back	Returns to the Main screen. Cancels made changes without reflecting them to the UPS.

2.20 Setting up WS Script execution

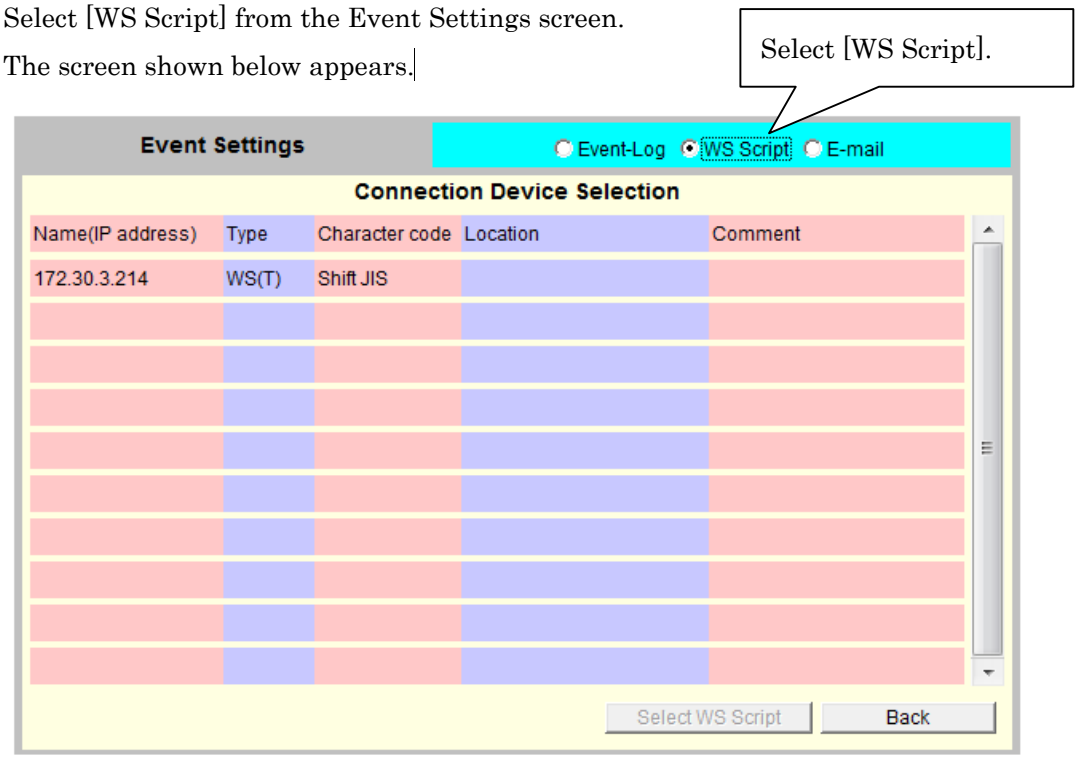
Use this function to set up a workstation login procedure and enter commands for workstation execution to shutdown a workstation or run application commands.

[Operation procedure]

Click the [Event settings] button in the Main screen.

Select [WS Script] from the Event Settings screen.

The screen shown below appears.



The list shows registered workstations.

Note: Workstations running UPS management software do not appear in this list.

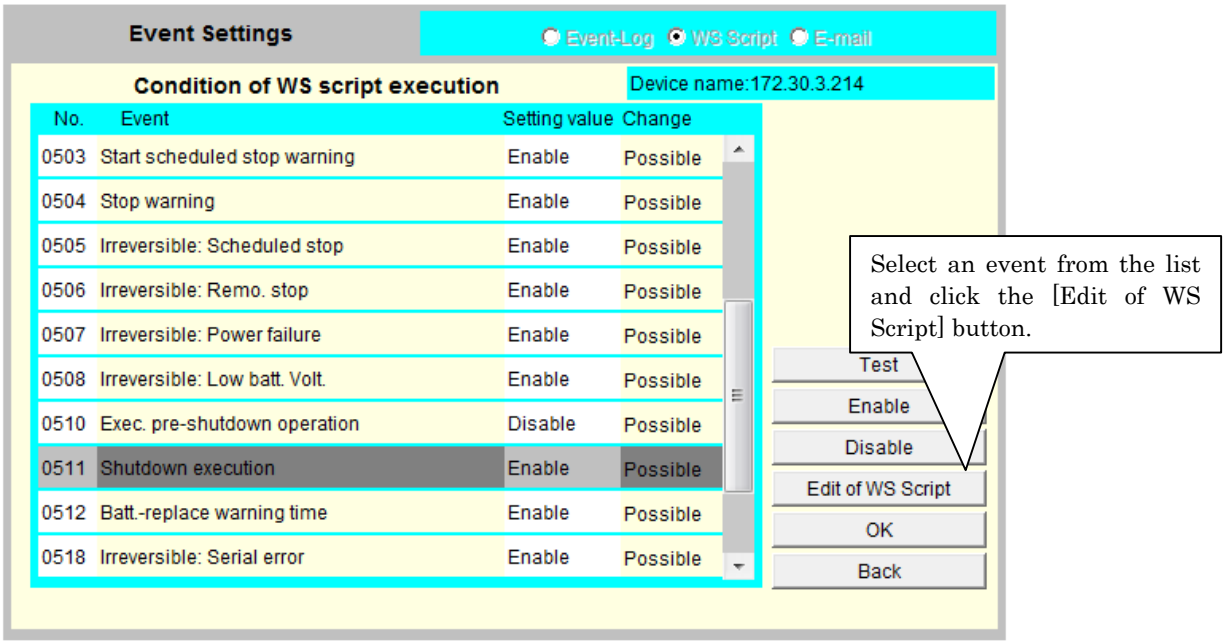
The [Select WS Script] button becomes available when a workstation is selected for editing a WS script.

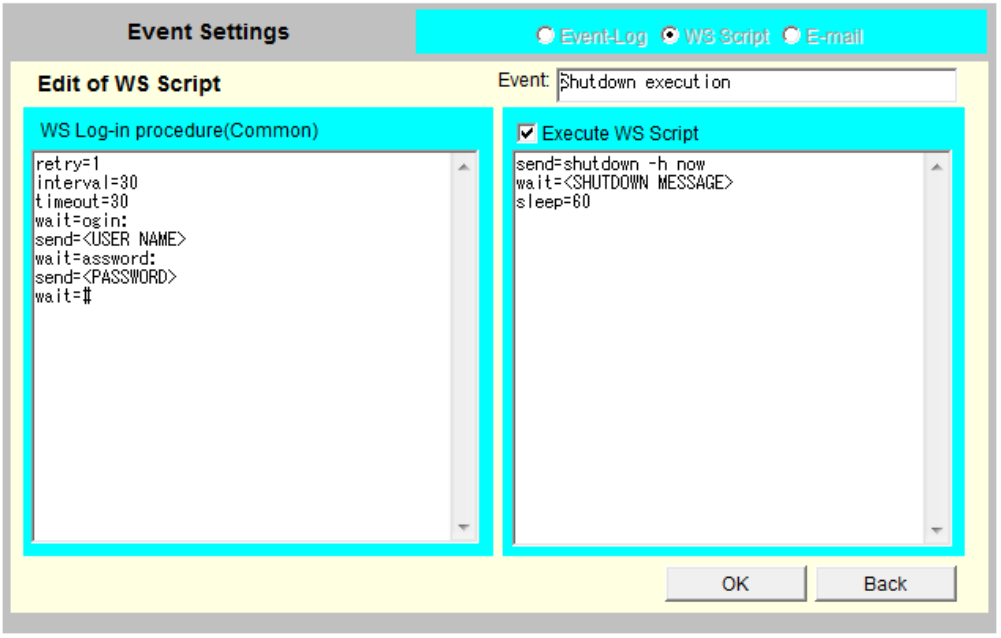
Click the [Select WS Script] button to open the screen for selecting events. Select the event for which the script is to be recorded.

Editing WS scripts

Select an event for which a WS script will be edited in the event list screen.

Click the [Edit of WS Script] button to open the Edit of WS Script screen.





This screen appears when clicking the [Edit of WS Script] button after selecting the [Power failure] event.

2.21 Editing WS Script execution

Enter a WS login procedure in the Edit of WS Script screen shown in Section 2.20 , "Setting up WS Script execution".

[WS Log-in procedure] edit (left side of screen)

This section describes using **[Edit of WS Script]** (right side of screen) to edit scripts to be run when an event occurs.

An example of a script recording is provided below.

・WS Log-in procedure

Enter a WS Log-in procedure to be run as an event script.

This data becomes a common WS script. Thus it will be used also for other events.

Login script default settings

Line	Login script		Description
1	retry=1	←	Specifies the number of retries when the execution of a script fails.
2	interval=30	←	Specifies the time interval until the start of a retry.
3	timeout=30	←	The maximum number of seconds the system waits for reception of the specified character data string at "wait=".
4	wait=ogin:	←	Waits for the login input prompt.
5	send=<USER NAME>	←	Sends the login name.
6	wait=assword:	←	Waits for the password input prompt.
7	send=<PASSWORD>	←	Sends the password.
8	wait=#	←	Waits for completion of login to workstation. (waits for prompt to appear)

Lines 1 and 3 set the operation of the login script.
Line 4 and 5 enter the login name.
Line 6 and 7 enter the password.
Line 8 wait for completion of login. (The # prompt appears when login is successful.)

List of commands for [WS Log-in procedure]

Commands	Description	Example
send	Sets the character string that is sent to a workstation.	Example: send=shutdown
wait	Sets the character string (prompt) received by the UPS.	Example: wait=login
sleep	Sets the time period when the machine is idle. Unit: seconds (s).	Example: sleep=90
timeout	Sets the time that the system will wait for the completion of a process. Unit: seconds (s). The default value is 30 seconds.	Example: timeout=60
retry	Specifies the number of retries when the execution of a script fails. Unit: times (valid range: 0 to 10 times). Default value: 1 time.	Example: retry=2
interval	Specifies the interval between retries when the execution of a script fails. Unit: seconds (valid range: 1 to 60 seconds). Default value: 30 seconds.	Example: interval=10
port	Specifies the Telnet port number of a workstation. Valid range: 0 to 65,535. If omitted, port 23 is used.	Example: port=10023
cr_only	Sets newline code to <CR>. Set value: yes or no Setting yes changes subsequent newline code of send data to <CR>. An omission of this entry is treated as a no entry. (newline code is <CR><LF>.)	Example: cr_only=yes cr_only=no
binsend	Sets the 8-bit code that is sent to a workstation. Valid range: Hexadecimal notation: x00 to xff Octal notation: 000 to 377	Example: hexadecimal notation binsend=x07 Octal notation binsend=004

* The presence or absence of a space before or after "=" does not affect processing.

Use a total of 510 single-byte characters.

・WS Script

Enter the script the workstation will run when an event occurs.

The "script" referred to here differs from a UNIX shell script.
Instead, a script consists of commands sent to computers to perform a sequence of operations.

Exapmle
```
send=shutdown -h now     ← Sends a shutdown command.
sleep=60                 ← Waits for 60 seconds.
                           (The system waits for logout.)
```

[WS Script] commands

Commands	Description	Example
send	Sets the character string that is sent to a workstation.	Example: send=shutdown
wait	Sets the character string (prompt) received by the UPS.	Example: wait=login
sleep	Sets the time period when the machine is idle. Unit: seconds (s).	Example: sleep=90
timeout	Sets the time that the system will wait for the completion of a process. Unit: seconds (s). Default value: 30 seconds.	Example: timeout=60
retry	Specifies the number of retries when the execution of a script fails. Unit: times (valid range: 0 to 10 times). Default value: 1 time.	Example: retry=2
interval	Specifies the interval between retries when the execution of a script fails. Unit: seconds (valid range: 1 to 60 seconds). Default value: 30 seconds.	Example: interval=10
cr_only	Sets newline code to <CR>. Set value: yes or no Setting yes changes subsequent newline code of send data to <CR>. An omission of this entry is treated as a no entry. (newline code is <CR><LF>.)	Example: cr_only=yes cr_only=no
binsend	Sets the 8-bit code that is sent to a workstation. Valid range: Hexadecimal notation: x00 to xff Octal notation: 000 to 377	Example: hexadecimal notation binsend=x07 Octal notation binsend=004
delay	The time period that script execution is delayed. An event script with a "delay" executes the login script and the event script when the specified time interval has elapsed.	Example: delay=60

* The presence or absence of a space before or after "=" does not affect processing.

Use a total of 598 single-byte characters.

Macro strings that can be used in scripts

The text strings that are sent may contain macros. The table below shows the character strings that replace the macro strings.

Macro string	Meaning
%STOP_TIME_M%	Time remaining until recovery impossible (approx. min)
%STOP_TIME_S%	Time remaining until recovery impossible (approx. s)
%SD_DELAY_TIME%	Shutdown delaying time (s) set in UPS
%BAT_CHG_MON%	Months remaining until battery replacement

Recording login scripts

Some environments may not allow the direct login of a user with superuser (root) privileges. Should this happen, use the "su" command as a substitute to being a root user to execute commands.

The following is an example of a login script using the "su" command.

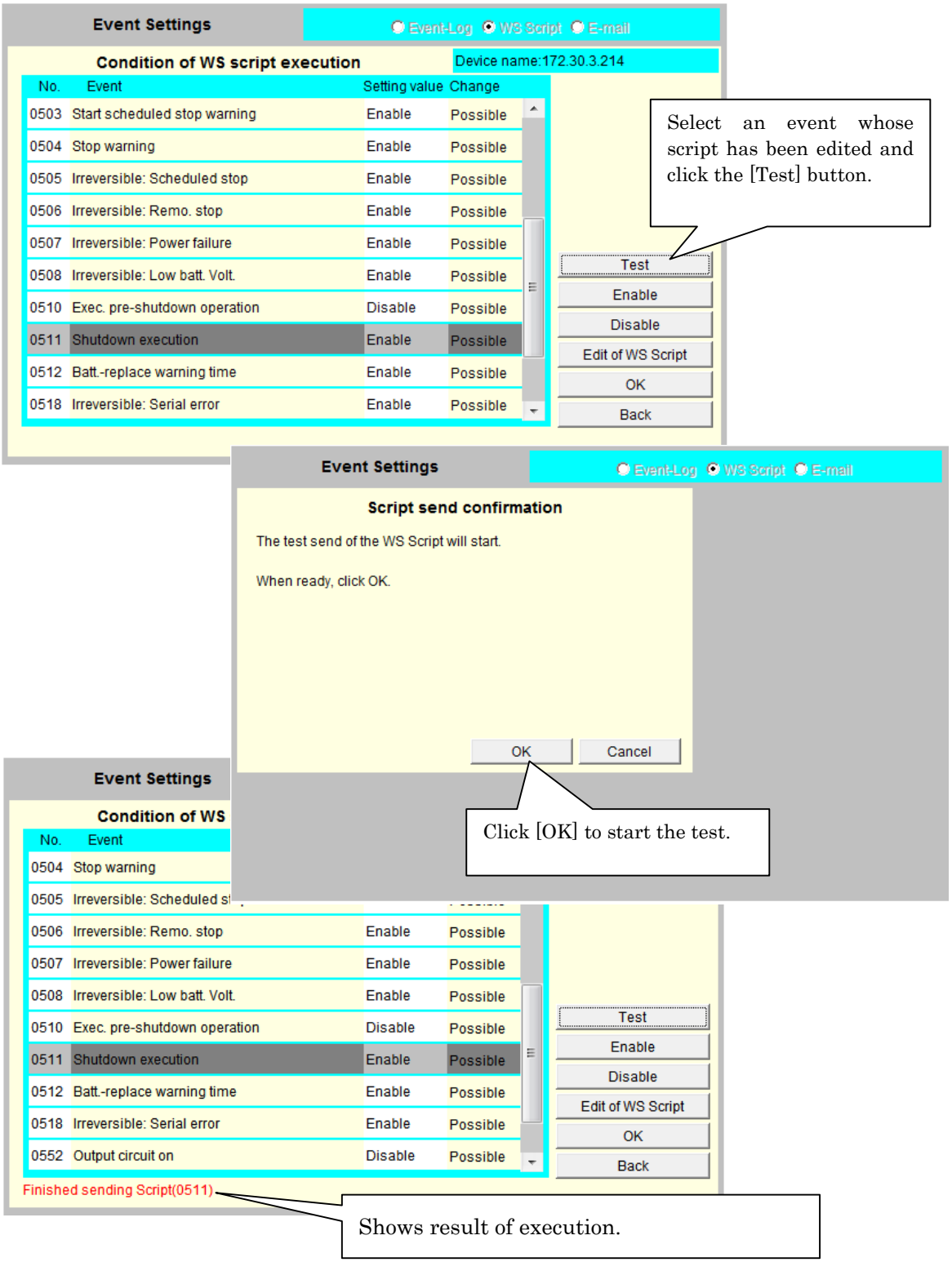
The example shows logging in of regular users (user name: guest, password: guest) and root (password: root) users.

Line	Login script	Description
1	retry=1	Sets login script operation.
2	interval=30	
3	timeout=30	
4	wait=ogin:	Regular user: log in as "guest".
5	send=guest	Enter login name: "guest".
6	wait=assword:	Regular user: enter the guest password.
7	send=guest	Password: enter "guest"
8	wait=$	Wait for the $ prompt that appears after login.
9	send=su	Enter and run the "su" command.
10	wait=assword:	Enter the root password.
11	send=root	Password: enter "root"
12	wait=#	Wait for the # prompt that appears after login.

2.22 Testing execution of WS Scripts

This section shows how to check whether a script created in Section 2.21 , “Editing WS Script execution” will run normally.

Select the event in the script list screen and click the [Test] button.



Result of script execution

The result of the script test is shown when the test completes.

An example is shown below.

・Message when successful

Example	Finished sending Script(0511)
Description	Event No. 0511 (shutdown execution) script ran successfully.

Note:
The success of a script does not mean that the commands entered by a user ran successfully. (Even if command execution fails on the workstation because of an incorrect path or the command is not spelled correctly, the UPS will not notice the failure.)
A script will run successfully once it has been set.
Thus it is the sole responsibility of the customer to make sure that entered commands run properly.

・Message when script fails

Example	Failed to send Script(0511), Details:E=0511, L=8T
Description	Event No. 0511 (shutdown execution) script failed. Details: E=0511 indicates event No. L=8T L: script type (This indicates the script failed in the log-in procedure) 8: Line where error occurred T: cause of failure (This indicates that a timeout occurred.) Script type L: Log-in procedure S: WS script Cause of failure T: Timeout F: Format error (incorrect script format)

・Message during execution

Example	Now testing(0511)
Description	Event No. 0511 (shutdown execution) script is running.

2.23 Notifying breakdowns via E-mail

This function makes it possible to select an event from the event list and add an E-mail address.

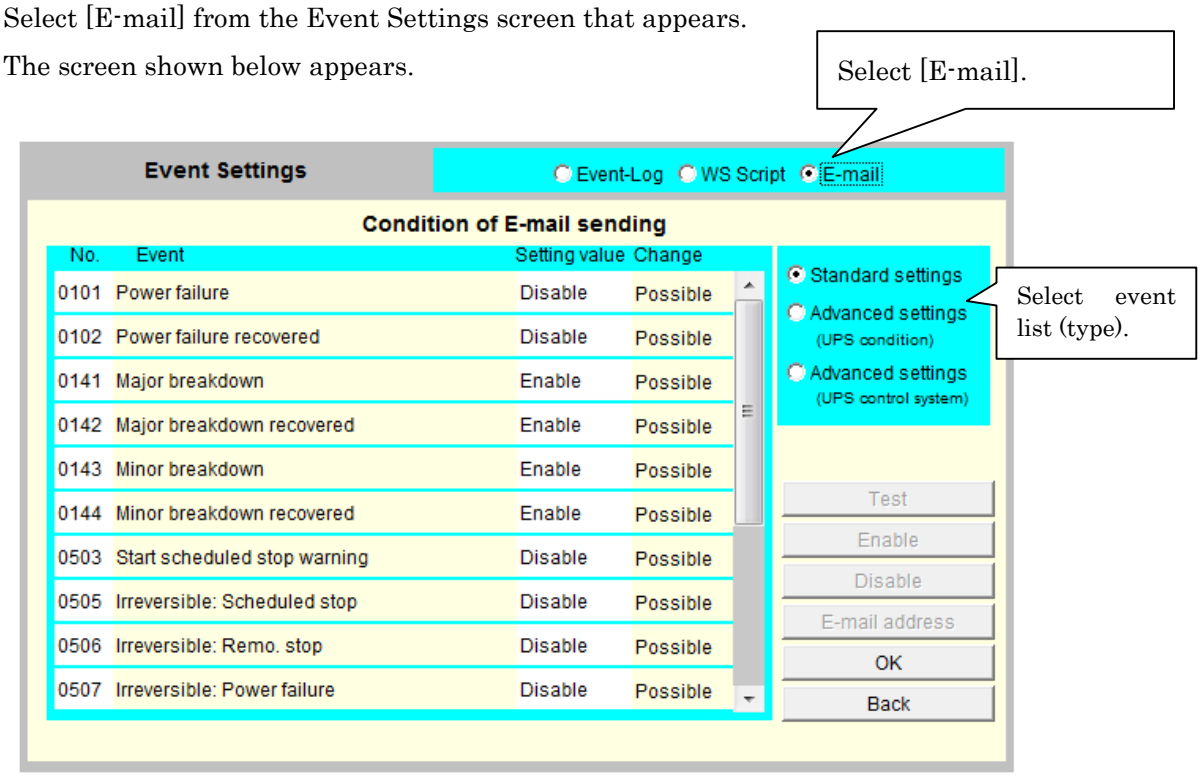
UPS will notify the set address the occurrence of the event by mail.

[Operation procedure]

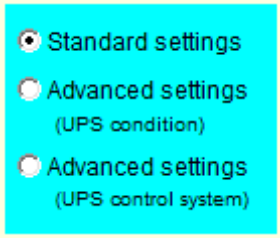
Click the [Event settings] button in the Main screen.

Select [E-mail] from the Event Settings screen that appears.

The screen shown below appears.



Selecting event type (see below)



Name	Description
Standard settings	Sets standard items.
Advanced settings (UPS condition)	Sets detailed UPS breakdown conditions and other UPS operation details.
Advanced settings (UPS control system)	Sets UPS control details.

Settings buttons

Button name	Description
Test	A mail send test is performed for the selected event to the registered mail address for the event.
Enable	**Enables** a mail transfer for a selected event. Changes a [Setting value] from "**Disable**" to "**Enable**". This enables mail transfer.
Disable	**Disables** a mail transfer for a selected event. Changes a [Setting value] from "**Enable**" to "**Disable**". This disables mail transfer.
E-mail address	Enter the E-mail address for the selected event.

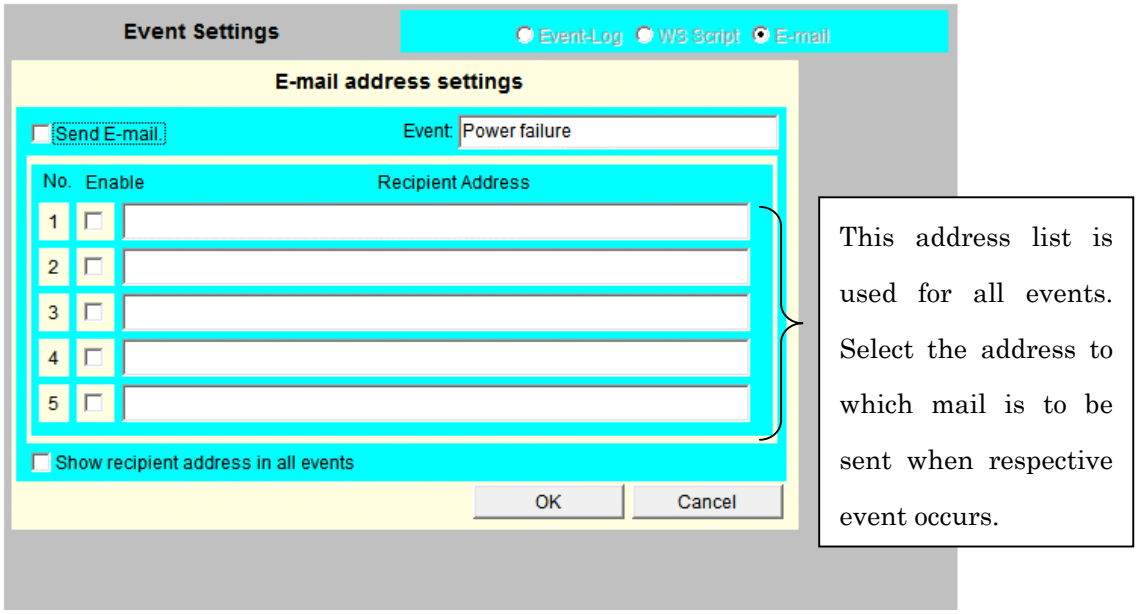
Setting a mail address

[Operation procedure]

Select an event from the event list for which mail transfer will be set.

Click the [E-mail Address] button.

The screen shown below appears.



This screen appears when the event "Major breakdown" is selected.

Name	Description
Send E-mail	Select to have an E-mail message sent to announce the selected event.
Enable	Select the address for E-mail destination from the mail address list when the selected event occurs.
Recipient Address	Registers destinations in the mail address list. Up to five mail addresses can be registered.
Show recipient address in all events	Check to use the mail address for a selected event for all events.

2.24 Check UPS state and event log

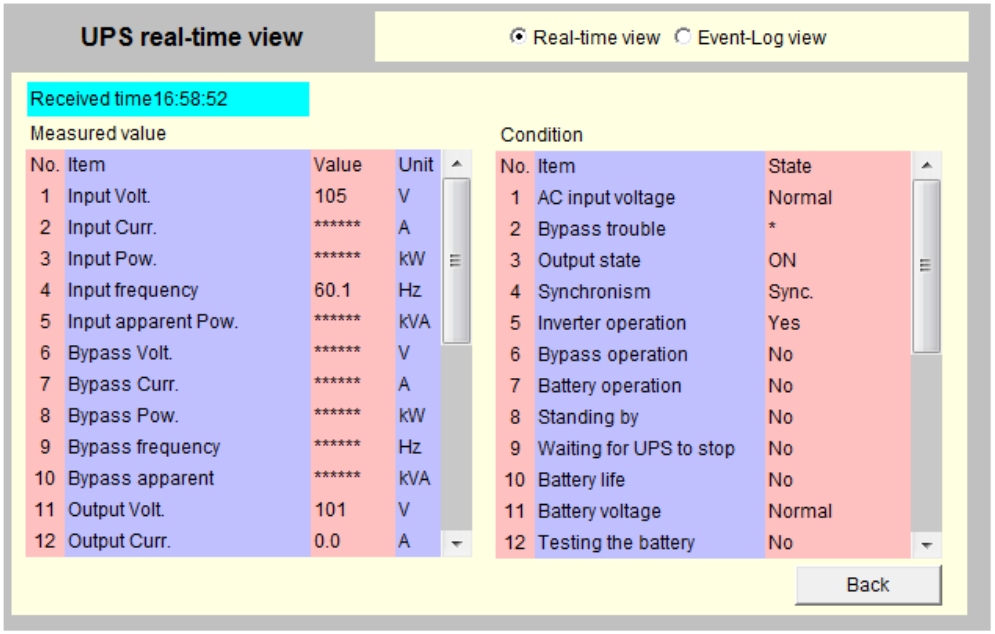
The view function shows current UPS condition and measured values and makes it possible to check event log data.

(Information)
Refer to "Appendix D About the status of UPS and a measurement value" of "User Guide" for details on UPS conditions and measurement values and refer to "Appendix C Explanation of events" of "User Guide" for an explanation on events.

[Operation procedure]

Click the [View] button in the Main screen.

The screen shown below appears.



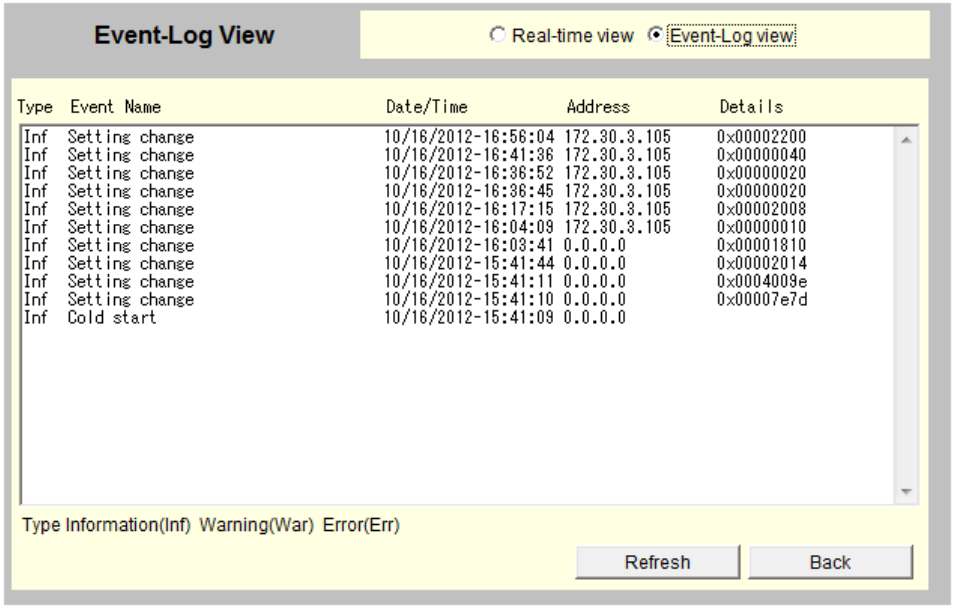
[Screen description]

Screen name	Description
Real-time view	Shows Real-time view (this screen).
Event-Log view	Opens the Event-Log view.
Received time	Indicates the time when the condition data was received from the UPS. The log is acquired every 10 seconds and the condition data changes accordingly.
Measured value	Displays UPS measured values. Items for which no measured values have been acquired are indicated as "******".
Condition	Indicates UPS state. Items for which a state has not been acquired are indicated as "*".

<Information>
Some UPS models are not equipped with a Real-time view.
Then all measured values are indicated as "******".

Event Log

The [Event-Log view] enables the user to check the event log recorded in the **SANUPS SOFTWARE** Server version.



Item	Description
Type	Indicates the type of event that has occurred.
Event Name	Indicates the name of the event.
Date/Time	Indicates the date and time when the event occurred.
Address	Use this IP address for external access.
Details	Provides additional details.

2.25 UPS Control

UPS output can be remotely turned on and off to perform emergency stop of connected computers or rebooting devices. However, connected computers must be shut down before UPS output can be turned off.

This function can also be used to test the UPS battery.

[Operation procedure]

Click the [Control] button in the Main screen.

The screen shown below appears.

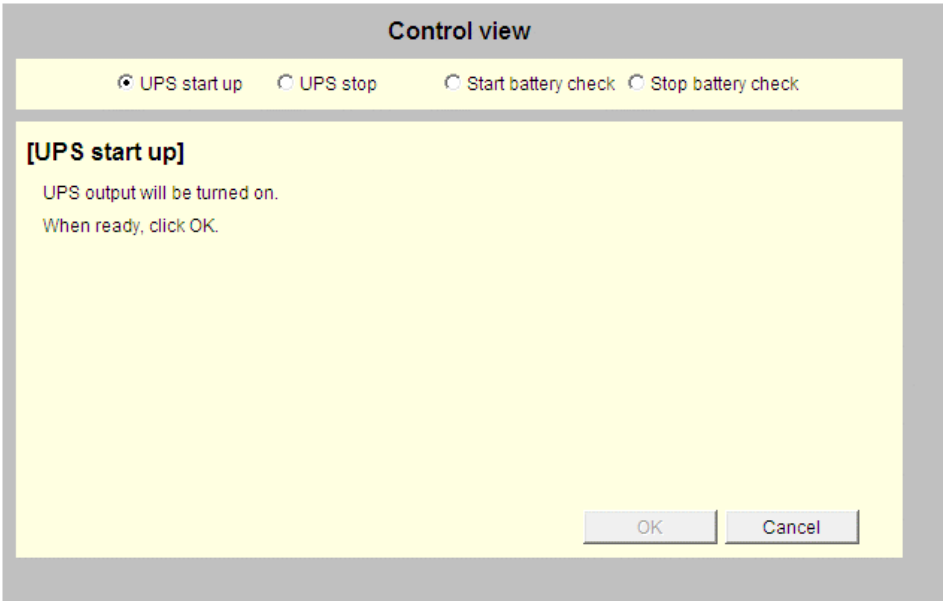


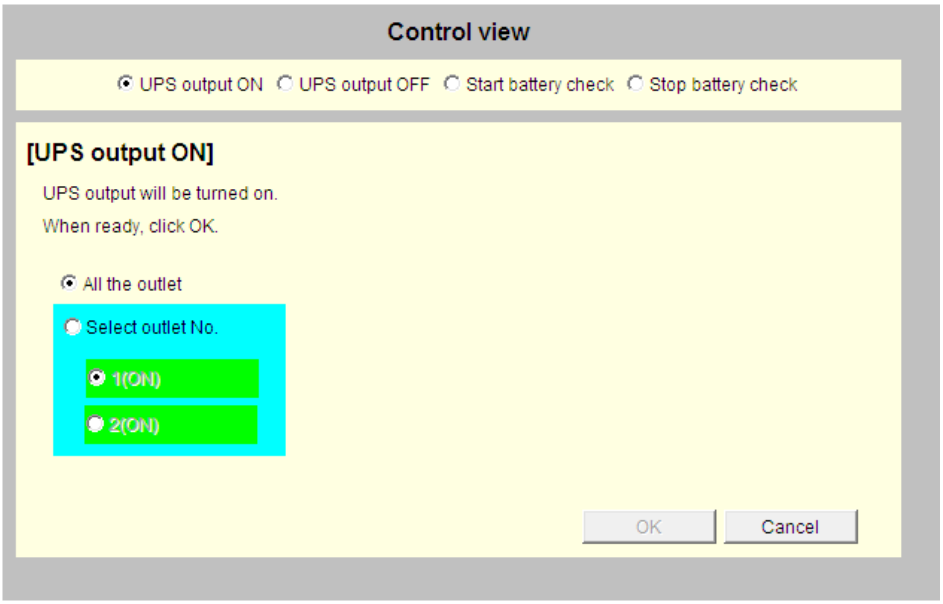
[Screen description]

Screen name	Description
UPS startup	Opens the screen for UPS output on control. (The screen shown above.)
UPS stop	Opens the screen for UPS output off control.
Start battery check	Opens the Start Battery Check screen.
Stop battery check	Opens the Stop Battery Check screen.
OK	Finalizes control.
Cancel	Cancels control and returns to the Main screen.

・UPS output on control

The figure on the right shows the screen that appears for a UPS without a control system.
Click the [OK] button to turn on UPS output.





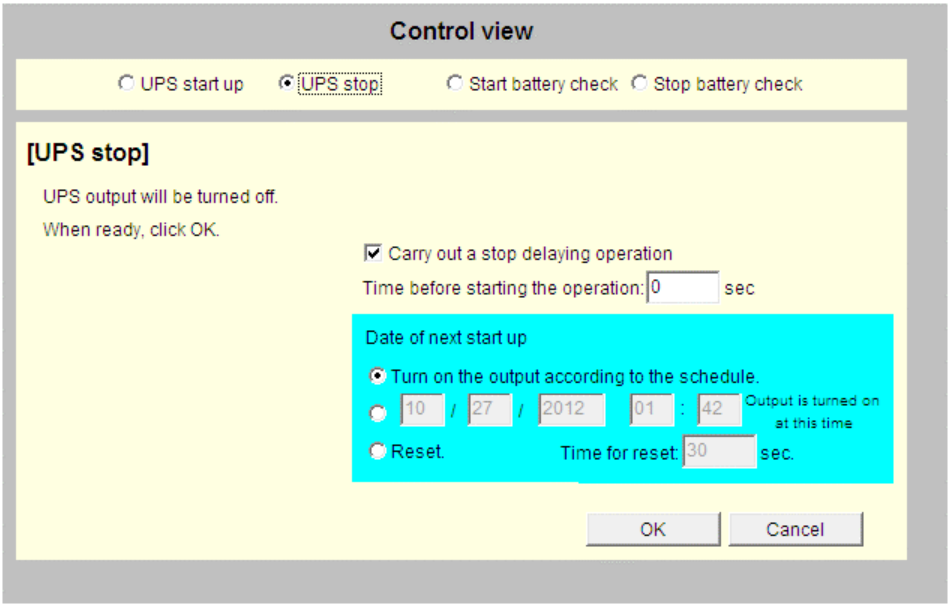
The above figure shows the screen that appears for a UPS with multiple power distribution system.

[All the outlet]: provides simultaneous control of Output 1 and Output 2 outlets.

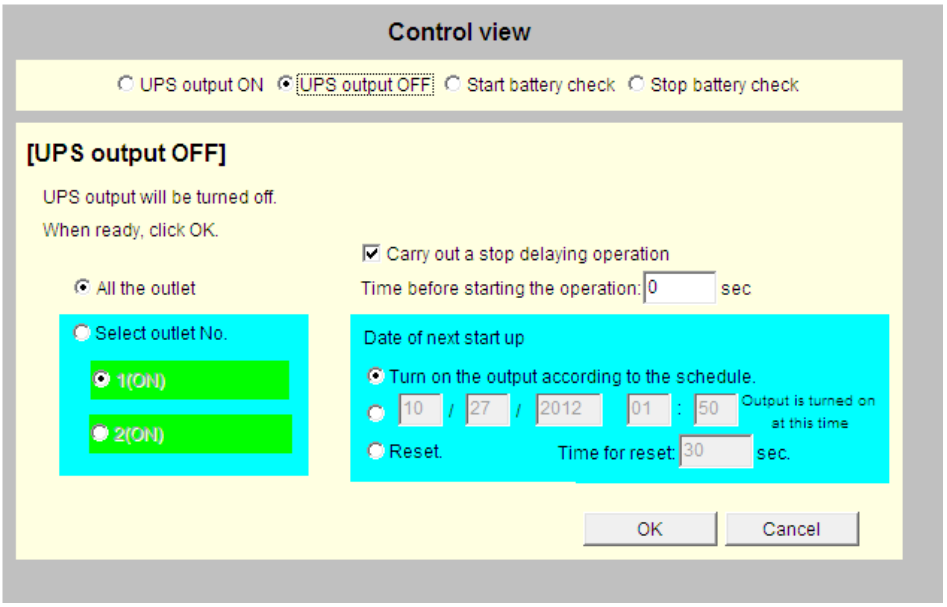
[Select outlet No.]: provides independent control of Output 1 and Output 2 outlets.

・UPS output off control

The figure on the right shows the screen that appears for a UPS without a control system.
Click the [OK] button to turn off UPS output.



The figure on the left shows the screen that appears for a UPS with multiple power distribution system.
Click the [OK] button to turn off UPS output.

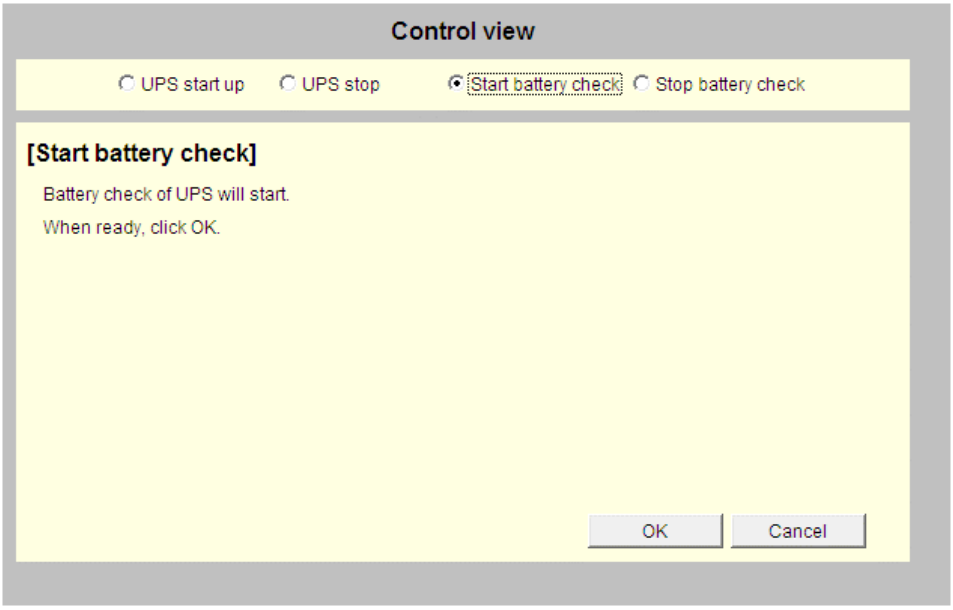


[Screen description]

Screen name	Description
[All the outlet]	This function is available on a UPS with multiple power distribution system. It simultaneously turns off both Output 1 and Output 2.
[Select outlet No.]	This function is available on a UPS with multiple power distribution system. It turns off Output 1 and Output 2 separately.
1 (ON)	Turns Output 1 off. Shut down a computer that is connected to Output 1 before turning the output off.
2 (ON)	Turns Output 2 off. Shut down a computer that is connected to Output 2 before turning the output off.
[Carry out a stop delaying operation]	Performs a stop delaying operation before a shutdown delay. This function is useful in conjunction with [adding a delay] described in Section 2.7.2 , "UPS control settings".
[Time before starting the operation]	Sets the time remaining until stop operation starts.
[Date of next startup]	Select one of the following three startup methods when next startup is set.
[Turn on the output according to the schedule]	Starts up according to schedule when there is a schedule.
[Output turned on at this time]	Turns on output at the indicated date and time.
[Reset]	Starts up the UPS after shutdown when the time (seconds) set for a reset has elapsed.
OK	Finalizes control.
Cancel	Cancels the operation and returns to the Main screen.

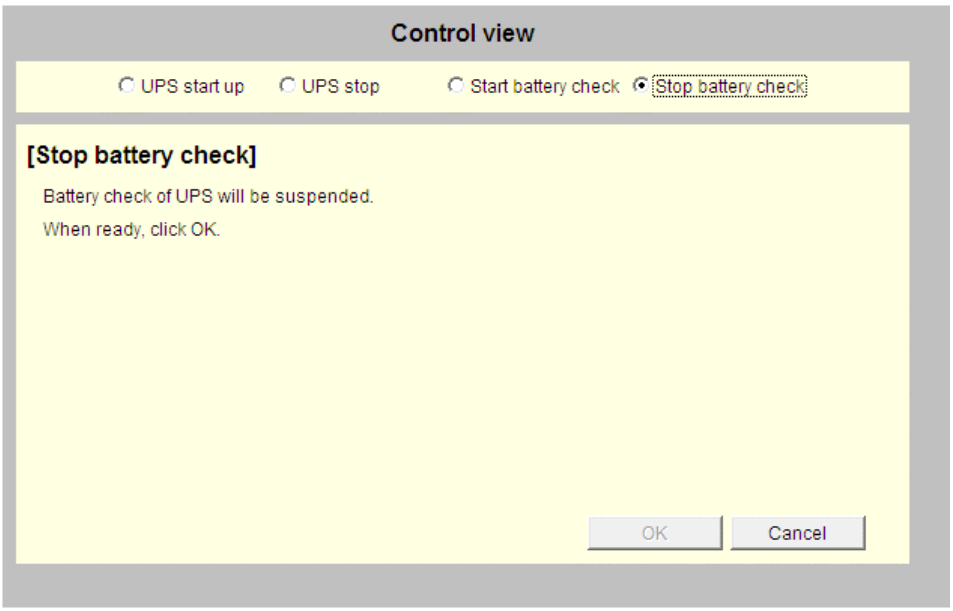
・Start battery check control

Select [Start battery check] and click the [OK] button to start a battery check.



To stop a battery check, select [Stop battery check].

Select [Stop battery check] and click the [OK] button to stop a battery check.



2.26 Verifying UPS information

This function allows you to verify UPS information.

For example, the following UPS profile data:

・UPS style

・Input phase

・Rated voltage

As well as the following UPS internal information:

・Result of battery test/date of battery test

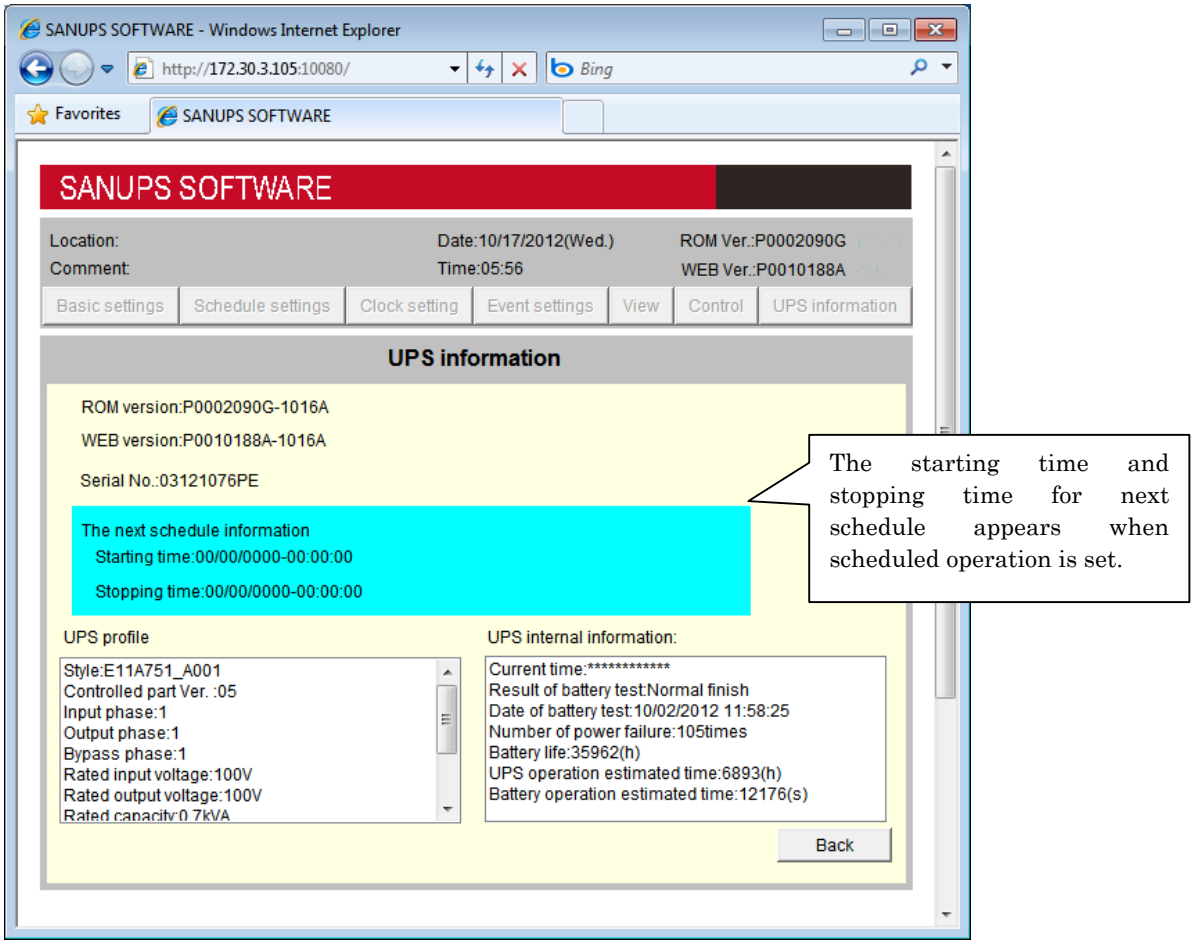
・Number of power failures

・UPS operation estimated time

[Operation procedure]

Click the [UPS information] button in the Main screen.

The screen shown below appears.



(The figure above shows the screen for a UPS test model and may therefore differ slightly from that displayed by an actual model.)

2.27 Executing Shutdown test

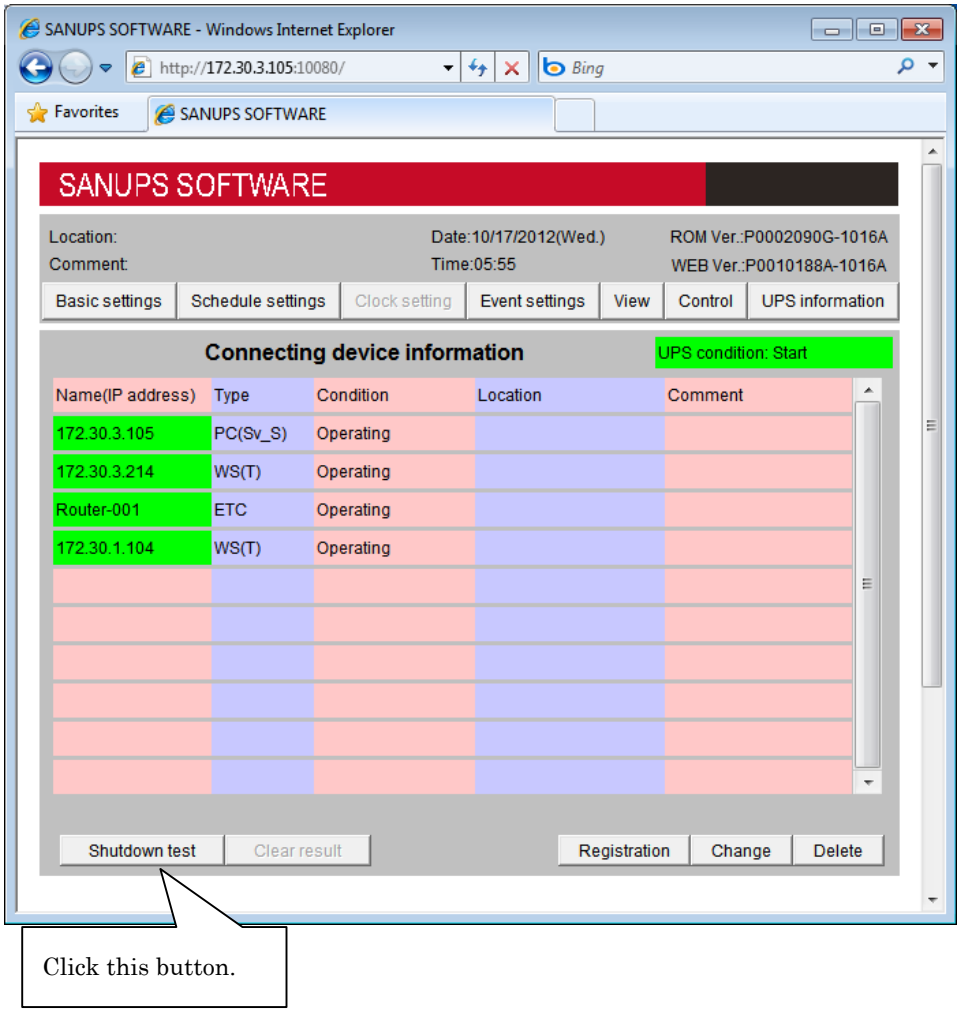
Shutdown test can execute below three sequences artificially without real power failure. Shutdown test will not notify E-mail, SNMP trap or UPS output control.

Sequence	Starting location of sequence.	Finishing location of sequence.
Power failure	Power failure occured	UPS automatic stopping time passed (Real UPS output status control will not be executed.)
Low battery voltage	Low Battery voltage occured	
Shutdown	To execute shutdown	

Shutdown test can be executed for the registered「PC(network connection))」、「WS(network connection)」,「WS(Telnet connection)」devices.

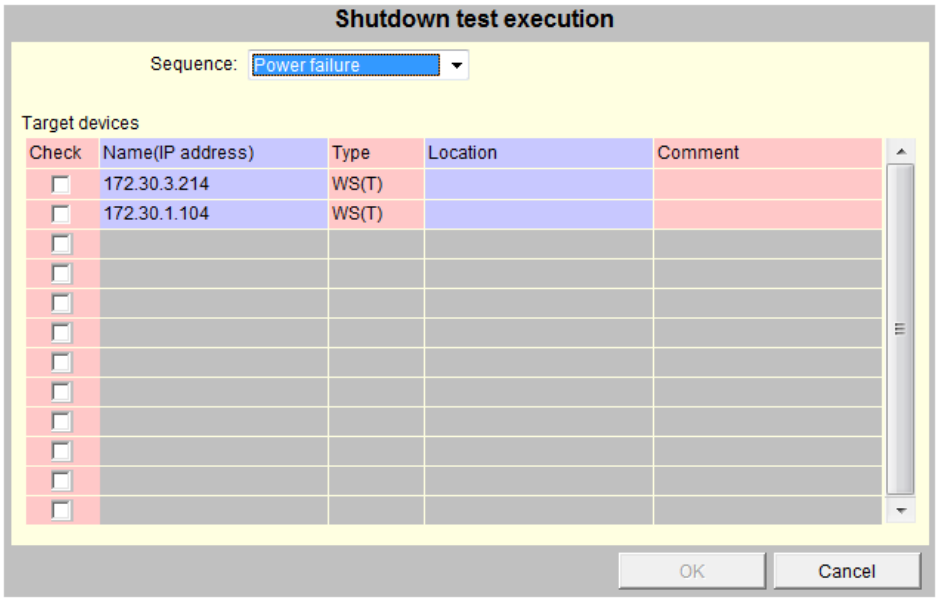
[Starting order of shutdown test]

Display shutdown test screen by click「Shutdown test」button from main screen.

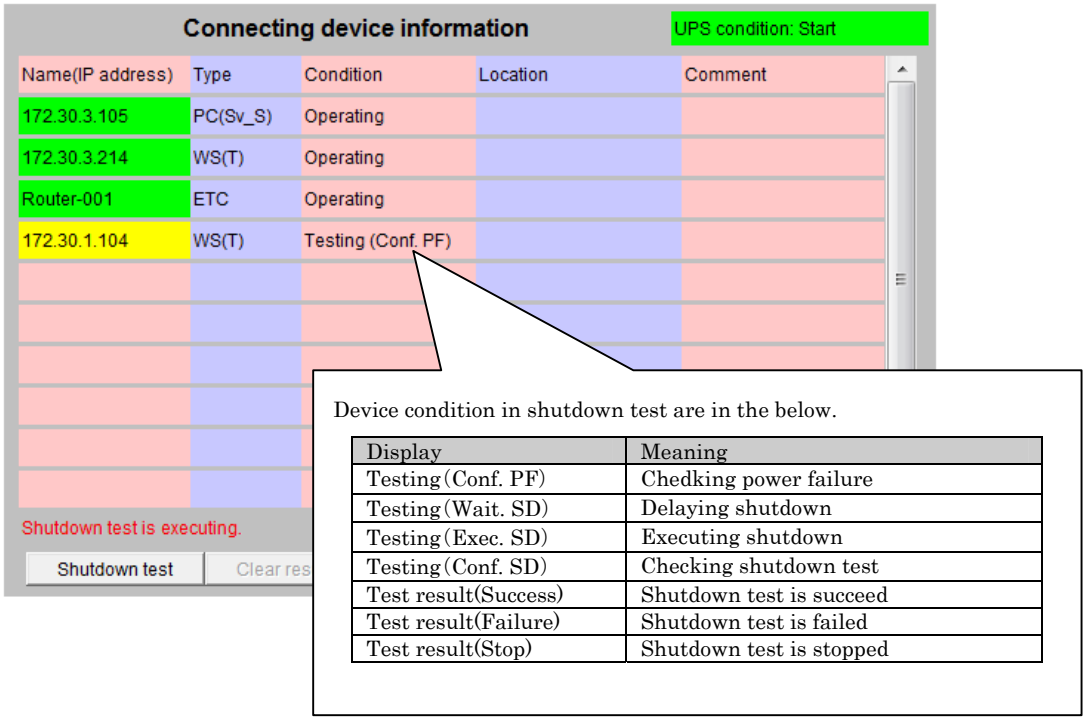


Executing Shutdown test

Sequence to execute and target device of shutdown test can be selected from shutdown test screen.



Check to the device to execute shutdown and then click “OK” button, shutdown test will be executed. Condition of shutdown test will be display in “Condition”.

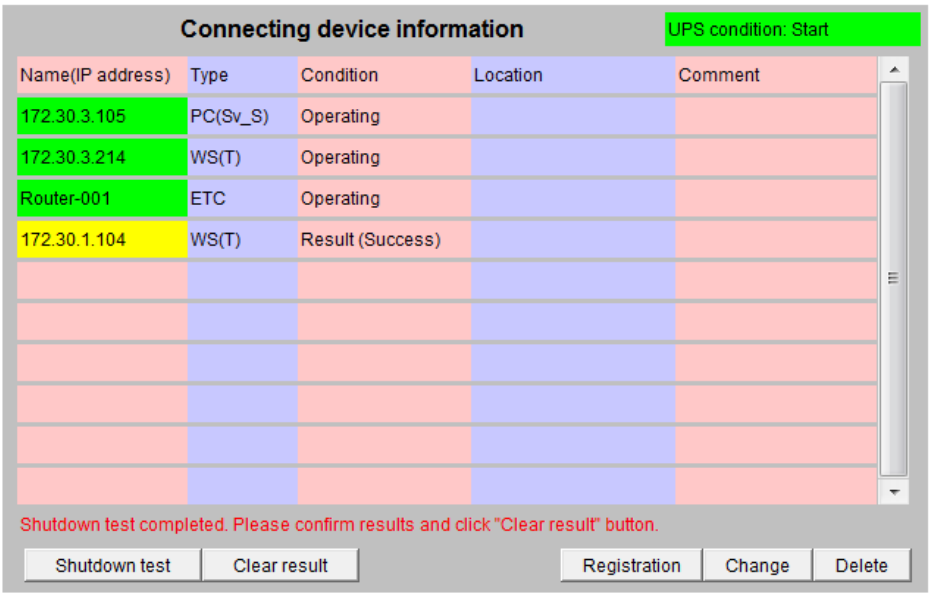


Device condition in shutdown test are in the below.

Display	Meaning
Testing(Conf. PF)	Chedking power failure
Testing(Wait. SD)	Delaying shutdown
Testing(Exec. SD)	Executing shutdown
Testing(Conf. SD)	Checking shutdown test
Test result(Success)	Shutdown test is succeed
Test result(Failure)	Shutdown test is failed
Test result(Stop)	Shutdown test is stopped

Executing Shutdown test

After shutdown test finished, test complete message will be displayed and then result display can be cleared by “Clear result” button.



〈Restriction of shutdown test〉

(1) Shutdown test may not be executed by condition of UPS. Under the situation, error dialogue "Shutdown test can not be started (Errir code: NM)" will be displayed. NN can be real error code.

#	Error code	Reason
①	20	Shutdown test, mail send test or WS script test are in executed.
②	21	Unrecoverble event like schuedule stopped is occurred and shutdown sequence is in executed.
③	22	Internal communication error is occurred.
④	23	Power failure is occurred
⑤	25	Major breakdown is occurred
⑥	26	Overload occured
⑦	27	All selected devices selected for shutdown test fall under any of the followings and there is no device can be shutdown. • Concent connected to device is in output off. • Device is stopped. • Under selected executing sequence by shutdown test is "Power failure", the device is connected to the concent whih is not specified as a shutdown trigger during power failure.

(2) If any of ② to ⑥ error is occurred during shutdown test is in executed, shutdown test will be stopped forcibly.

(3) Shutdown test will not notify E-mail, SNMP trap or UPS output control.

3. Description of Telnet terminal tool functions

3.1 Access the UPS from a Telnet client

[1] In the case of **Windows**, start Command Prompt.

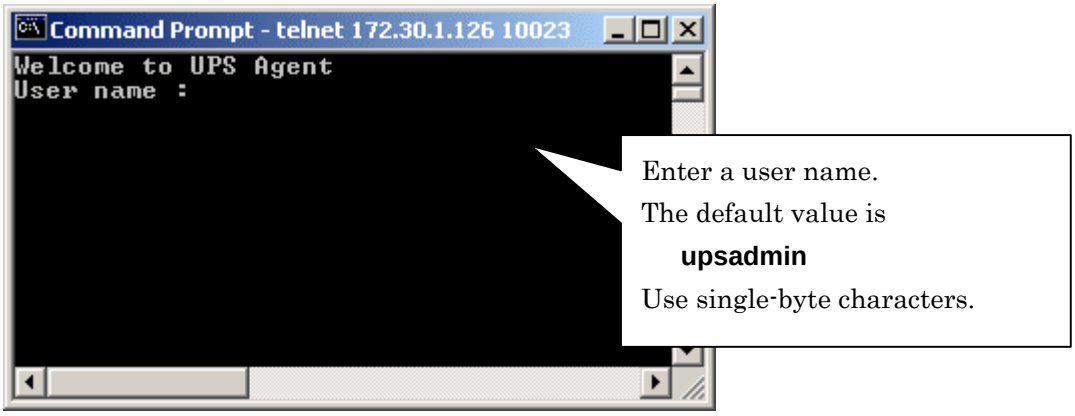
[2] In Command Prompt, use a Telnet command to specify the IP address of the **SANUPS SOFTWARE** server and the port number of the Telnet server provided by the **SANUPS SOFTWARE** server, and connect to the **SANUPS SOFTWARE** server.

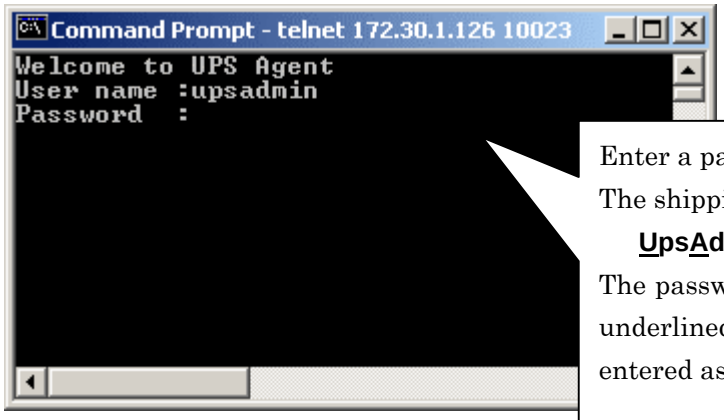
Example: When the IP address is 172.30.1.126 and the port number is 10023 (default)

telnet 172.30.1.126 10023

* When using an operating system other than **Windows** or when using another Telnet client software, specify the IP address of the **SANUPS SOFTWARE** server and the port number of the Telnet server in accordance with the specifications of the operating system or Telnet client software.

[3] The following screen appears when you connect to the **SANUPS SOFTWARE** server. Perform user name and password authentication to log into the **SANUPS SOFTWARE** server.





[4] The Main Menu appears when the user name and password are authenticated.

3.2 List of Telnet terminal tool functions

The following sections describe Web management tool functions.
The table below and the links provide an overview of tool functions.

Name	Overview
3.3 Main Menu	Describes Main Menu items.
3.4 UPS Configuration Menu	Describes methods for UPS setup (network, changing accounts, control operations, SNMP, E-mail setup, NTP setup, etc.)
3.5 Schedule Menu	Describes methods for setting UPS schedules.
3.6 UPS Control Menu	Describes Remote UPS on/off control.
3.7 UPS Display Menu	Describes UPS conditions, measuring values and event log indication.
3.8 Connection Device Menu	Describes methods for registering devices, changing registered data and deleting registered devices in UPS. Information on how to configure event scripts is also provided.
3.9 Event Menu	Describes methods for setting E-mail transfer and event log recording conditions.
3.10 UPS Outlet Menu	Describes methods for setting output on/off delay. This function is available to a UPS with multiple power distribution system.
3.11 Ping Menu	Checks the state of a network connection to a specified device using Ping.

3.3 Main Menu

The Main Menu shown below appears when Telnet terminal is used with a serial connection to the UPS.

```
  Main Menu
1.Configuration
2.Schedule
3.Control
4.Display
5.DateTime
6.Connection Device
7.Event
8.Outlet
9.Ping
10.Download/Upload
11.Exit
UPS Agent>
```

The table below gives an overview of Main Menu items.

Menu name	Description
1.Configuration	Configure UPS operation. Use this menu for setting up the network and define operation in the event of a power failure.
2.Schedule	Create schedules.
3.Control	Perform UPS control.
4.Display	View UPS information. View condition and measuring data, event log and LAN Interface Card information.
5.DateTime	Adjust the UPS clock. **(Non-Support)**
6.Connection Device	Register/delete connected devices.
7.Event	Make event settings.
8.Outlet	Set the on/off delay time for Output 1 and Output 2 on a UPS with multiple power distribution system.
9.Ping	Use the Ping command to check network status.
10.Download/Upload	Download/upload UPS settings. **(Non-Support)**
11.Exit	Exit this tool.

3.4 UPS Configuration Menu

```
  Main Menu
1.Configuration
2.Schedule
3.Control
4.Display
5.DateTime
6.Connection Device
7.Event
8.Outlet
9.Ping
10.Download/Upload
11.Exit
UPS Agent>1

  Configuration Menu
1.Network
2.Account
3.Control Configuration
4.Service
5.UPS Information
6.E-Mail
7.NTP
8.Exit
UPS Agent>
```

Enter "1"

1.Network

```
1.IP Address
2.Router Address
3.DNS Server Address
4.Exit
UPS Agent>
(Display only)
```

2.Account

```
Input User Name.
UPS Agent>
Input Password.
UPS Agent>
Input Password Again.
UPS Agent>
```

3.Control Configuration

```
1.Shutdown Condition
2.UPS Control
3.Common
4.Battery
5.Exit
UPS Agent>
```

4.Service

```
1.Condition
2.Port
3.Access Limitation
4.Access Address
5.Community
6.Trap Address
7.Shutdown Mode
8.Trap Test
9.Exit
UPS Agent>
```

5.UPS Information

```
1.Location
2.Comment
3.Exit
UPS Agent>
```

6.E-Mail

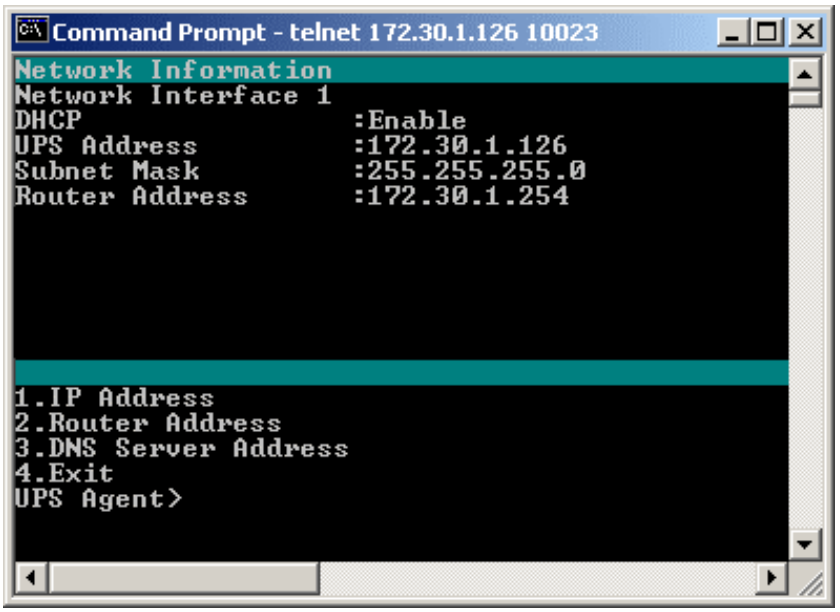
```
1.UPS E-Mail Address
2.SMTP Address
3.SMTP Port
4.E-Mail Sending Delaying Time
5.Receiving Mail Confirmation
6.POP3 Address
7.POP3 Port
8.Account
9.E-Mail Confirmation Interval
10.Exit
UPS Agent>
```

7.NTP

(Non-Support)

3.4.1 Network Menu

Selecting Network from the Configuration Menu opens the screen shown below.

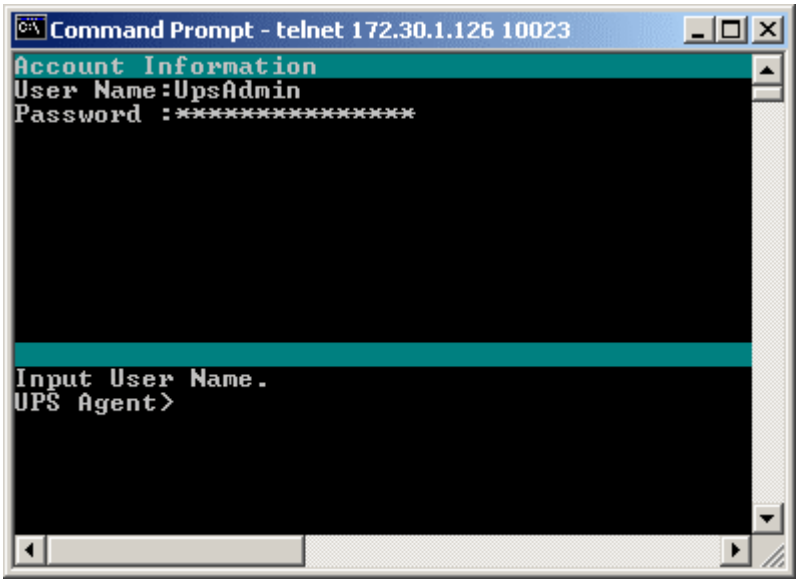


Menu name	Description
1. IP Address	Set the UPS network address. **(Non-Support)**
2.Router Address	Enter the router address. **(Non-Support)**
3.DNS Server Address	Enter the DNS server address. **(Non-Support)**
4.Exit	Return to Configuration Menu.

*The menu is displayed here but each address cannot be set.

3.4.2 UPS Account Menu

Selecting Account from the Configuration Menu opens the screen shown below.



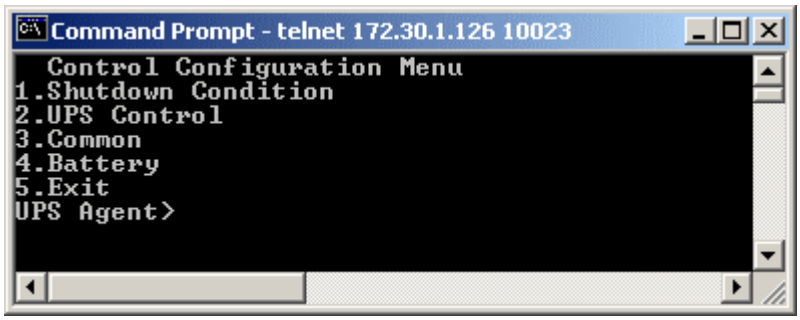
Enter the following in this menu.
A new [User Name]
A new [Password]

Enter the password once again for confirmation.

Note:
The password is case-sensitive.
When you change the password, please be sure to make a note of the new password so that you do not forget it.

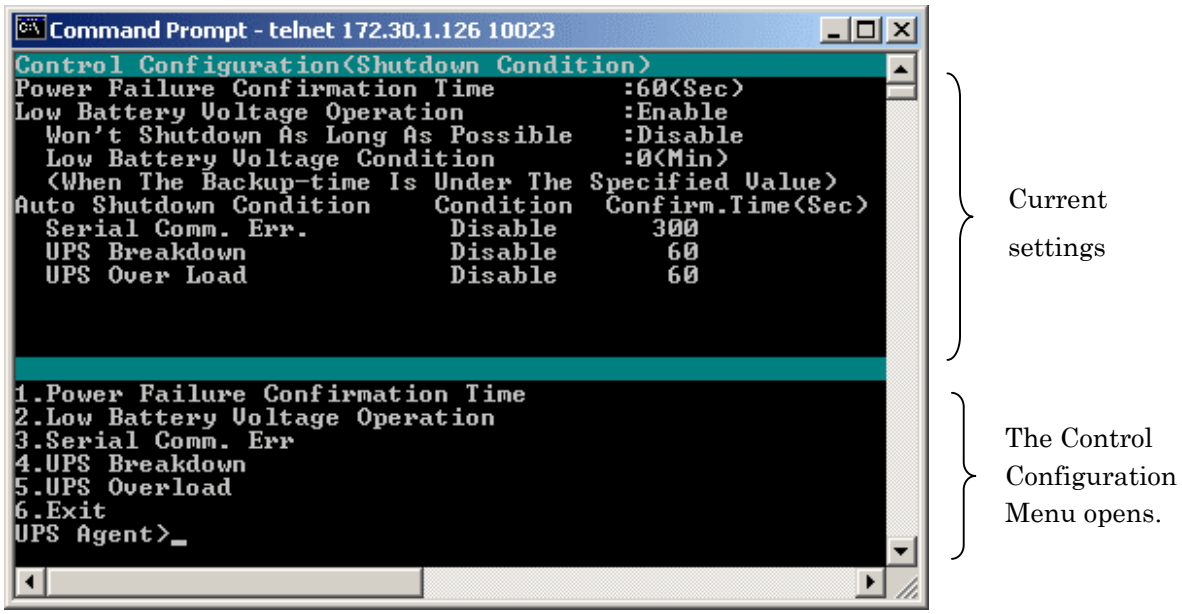
3.4.3 UPS Control Configuration Menu

Select Control Configuration from the Configuration Menu to open the screen shown below.



Menu name	Description
1.Shutdown Condition	Select the following shutdown triggers. Power failure confirmation time Low battery voltage condition Shutdown due to serial communication error (not supported) Shutdown due to major breakdown Shutdown due to overload
2.UPS Control	Select the following UPS control information Shut down UPS in the event of a power failure UPS auto startup after power recovery The Rate of Battery Charge
3.Common	Select the following common information Delay process (user log off wait) enable/disable Stop delay time (delay repeat interval when delay process is enabled) Shutdown delaying time UPS automatic stopping time
4.Battery	Select the following battery information. Battery replace warning time Auto battery check (UPS function) Auto battery check (UPS control software)
5.Exit	Return to the Configuration Menu.

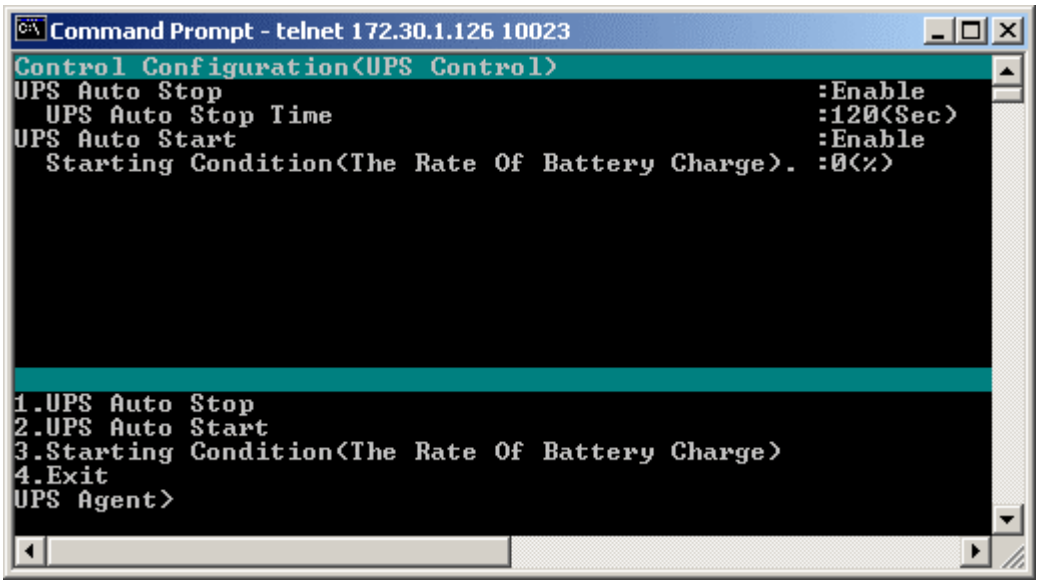
（1） Shutdown trigger (Shutdown Condition)



Menu name	Description
1.Power Failure Confirmation Time	Set the [Power failure confirmation time] in (seconds).
2.Low Battery Voltage Operation	Select the occurrence condition of low battery voltage. Select one of the following: Low battery voltage occurrence by the remaining battery time. : Enable Low battery voltage occurrence by battery voltage decline : Disable When "Enable" is selected, set "Low battery voltage condition (remaining battery time)" in (minutes). When "Disable" is selected, set "Low battery voltage condition (remaining battery time)" to 0 (minutes). If the UPS does not support "Low battery voltage condition (remaining battery time)", "Non-Support" appears indicating that this setting is not available.

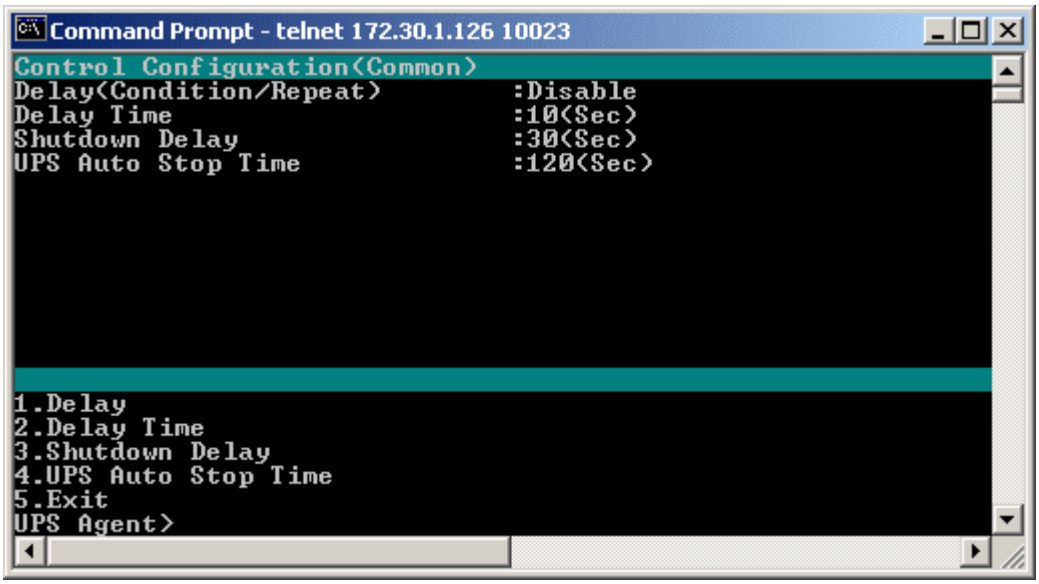
Menu name	Description
3.Serial Comm. Err.	Select “Serial communication error shutdown”. Select one of the following: Shut down: Enable Do not shut down: Disable When “Shut down” is selected, set the [Confirmation time] in (seconds). Since this unit does not support this function, “Non-Support” appears to indicate that this setting is not available.
4.UPS Breakdown	Select “Major Breakdown shutdown”. Select one of the following: Shut down: Enable Do not shut down: Disable When “Shut down” is selected, set the [Confirmation time] in (seconds).
5.UPS Overload	Select “Overload shutdown”. Select one of the following: Shut down: Enable Do not shut down: Disable When “Shut down” is selected, set the [Confirmation time] in (seconds).
6.Exit	Return to the Control Configuration Menu.

(2) UPS Control information (UPS Control)



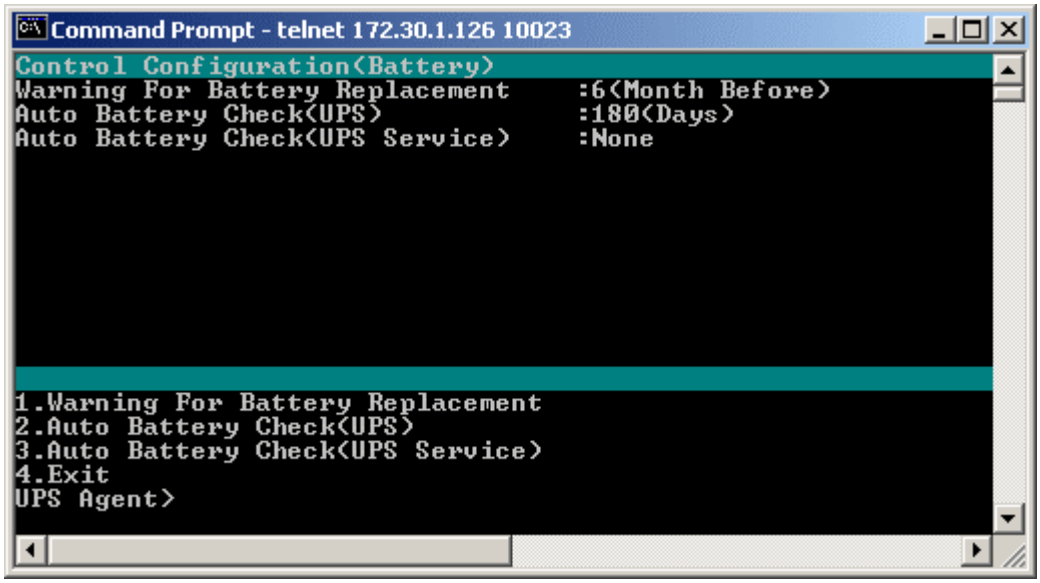
Menu name	Description
1.UPS Auto Stop	Select “UPS Auto Stop after power failure”. Select one of the following: On: Enable Off: Disable When ON is selected, set the [UPS automatic stopping time] in (seconds). When “OFF” is selected, the “UPS Auto Stop Time” (seconds) is set to 0 (seconds).
2.UPS Auto Start	Set “UPS startup condition after power recovery.” Select one of the following: Start up: Enable Do not start up: Disable
3.Starting Condition(The Rate Of Battery Charge)	Set “Startup condition after power recovery (The Rate of Battery Charge)” in (%). If the UPS does not support “Startup condition after power recovery (The Rate of Battery Charge)”, “Non-Support” appears indicating that this setting is not available.
4.Exit	Return to the Control Configuration Menu.

（3）共通情報（Common）



Menu name	Description
1.Delay	Enable or disable delay processing. Select one of the following: Add delay: Enable No delay: Disable
Select Repeat.	When [Add delay] is selected, the user is prompted for Number of Times.
1.Number Of Times	Set Number of Times.
2.Infinity	Sets an infinite number of delays.
2.Delay Time	Set the [Stop delay time] in (seconds). This is the delay time repeat interval used when “3. Delay” is set to “Enable.”
3.Shutdown Delay	Set the [Shutdown delaying time] in (seconds).
4.UPS Auto Stop Time	Set the [UPS automatic stopping time] in (seconds).
5.Exit	Return to the Control Configuration Menu.

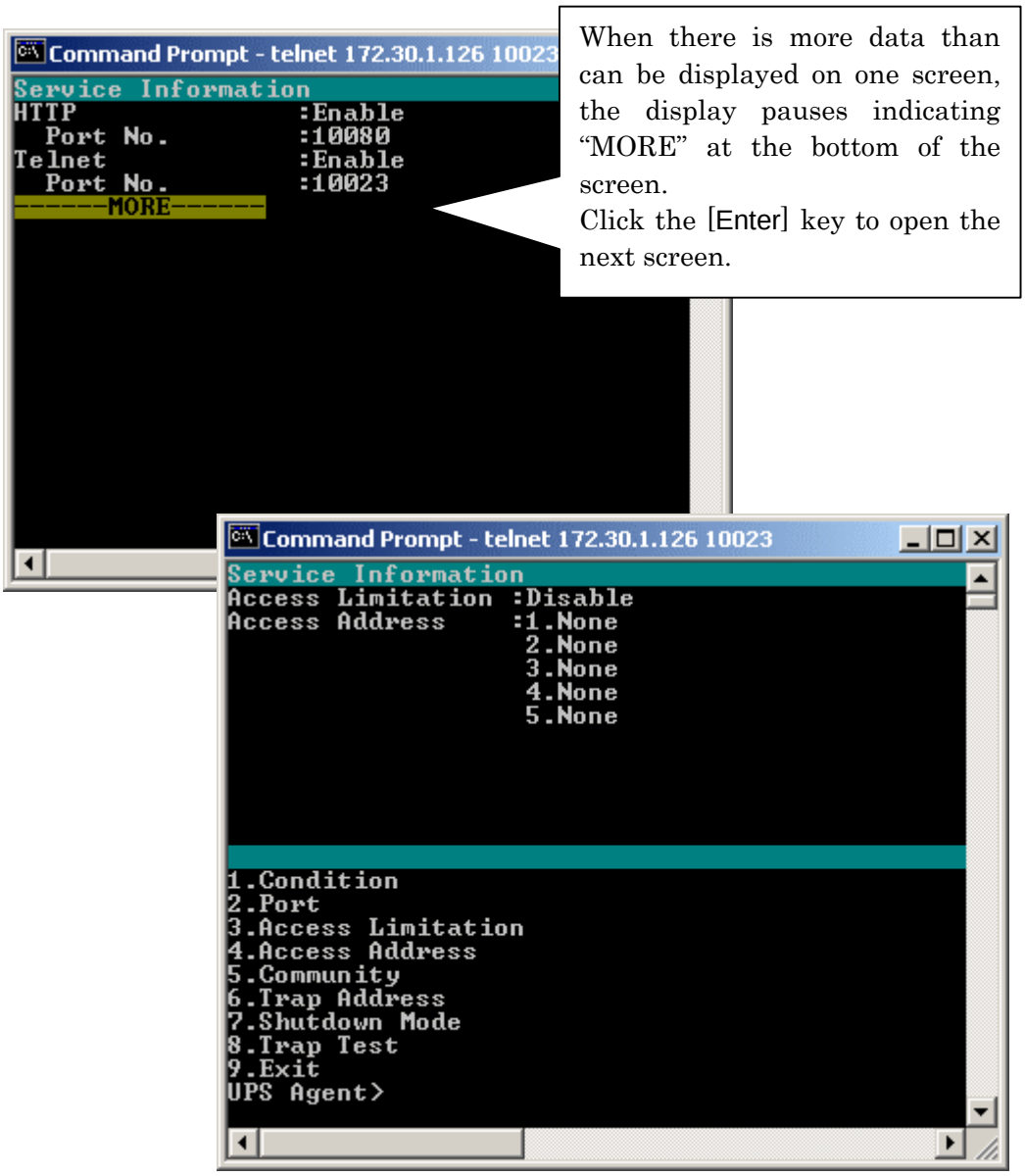
(4) Battery



Menu name	Description
1.Warning For Battery Replacement	Set “Warning For Battery Replacement” (Month Before).
2.Auto Battery Check(UPS)	Set “Auto Battery Check” (UPS). If the UPS does not support “Auto Battery Check”, “Non-Support” appears indicating that this setting is not available.
3.Auto Battery Check(UPS Service)	Set “Auto Battery Check” (UPS control software). If the UPS does not support battery check, “Non-Support” appears indicating that this setting is not available.
4.Exit	Return to the Control Configuration Menu.

3.4.4 Service Menu

Select Service from the Configuration Menu to open the screen shown below.



Description of Telnet terminal tool functions

Menu name	Description
1.Condition	Turn HTTP and Telnet on and off. Select one of the following: On: Enable Off: Disable
2.Port	Change HTTP and Telnet port number. (1 - 65535)
3.Access Limitation	Restrict HTTP and Telnet access. Select one of the following: To allow access to a specified terminal: Enable To allow access to all terminals: Disable When "Enable" is selected, go to "4. Access Address" to enter the IP address of the computer that will be allowed access.
4.Access Address	Add the IP address of the computer you wish to grant HTTP and Telnet access (add/delete).
1.Add	Add IP address to allow access. (Register up to five addresses.)
2.Delete	Delete a registered IP address.
3.Exit	Exit the mode for setting an IP address to allow access.
5.Community	Set SNMP community name.**(Non-Support)**
6.Trap Address	Set an address for an SNMP trap destination (add/delete). **(Non-Support)**
1.Add	Add destination IP address. (Register up to five addresses.)
2.Delete	Delete a registered IP address.
3.Exit	Exit the trap address mode.
7.Shutdown Mode	Set a method for shutting down computers when UPS is turned off using SNMP.**(Non-Support)**
8.Trap Test	Perform a trap send test.**(Non-Support)** This sends a (coldStart) trap to the address entered as the trap destination.
9.Exit	Return to Configuration Menu.

・Access Address

Access Address registration procedure

```
1.Condition
2.Port
3.Access Limitation
4.Access Address
5.Community
6.Trap Address
7.Shutdown Mode
8.Trap Test
9.Exit
UPS Agent>4

Select No.
1.Add
2.Delete
3.Exit
UPS Agent>1

Input Access Address.
UPS Agent>172.30.3.50
OK
```

Enter "4".

Enter "1".

Enter address.

Access Address delete procedure

```
1.Condition
2.Port
3.Access Limitation
4.Access Address
5.Community
6.Trap Address
7.Shutdown Mode
8.Trap Test
9.Exit
UPS Agent>4

Select No.
1.Add
2.Delete
3.Exit
UPS Agent>2

Select No.
UPS Agent>1
OK
```

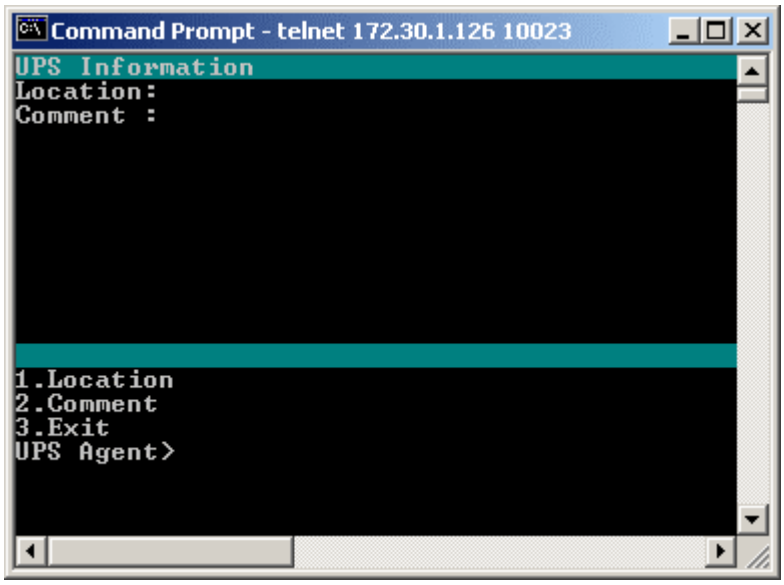
Enter "4".

Enter "2".

Enter the item No. for the registered address. Delete 172.30.3.50 registered in No. 1.

3.4.5 UPS Information Menu

Selecting UPS Information from the Configuration Menu opens the screen shown below.



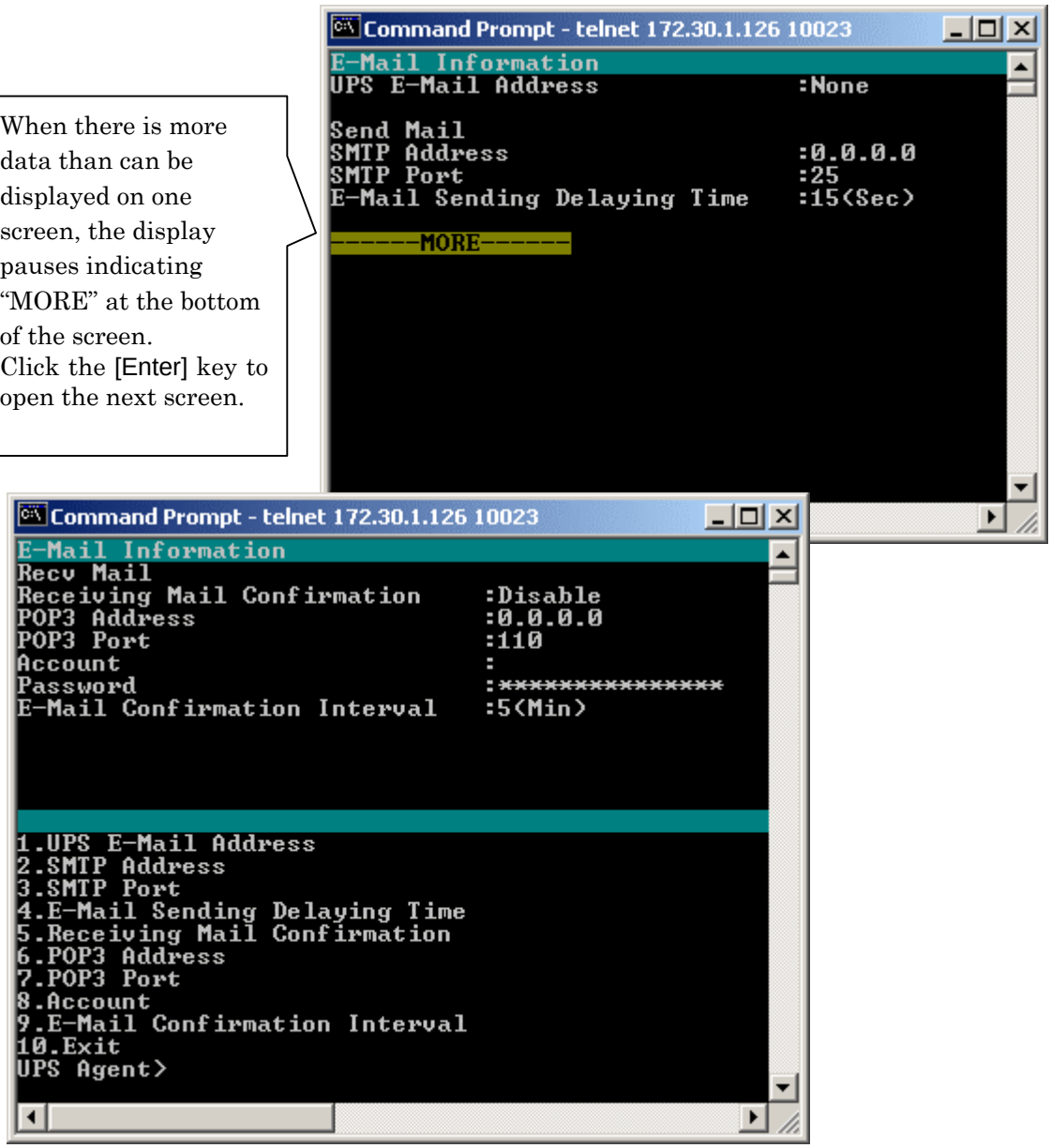
Enter the location of the UPS at “1. Location.” (This field can be left blank.)

Enter a comment at “2. Comment”. (This field can be left blank.)

3.4.6 E-Mail Menu

Selecting E-Mail from the Configuration Menu opens the screen shown below.

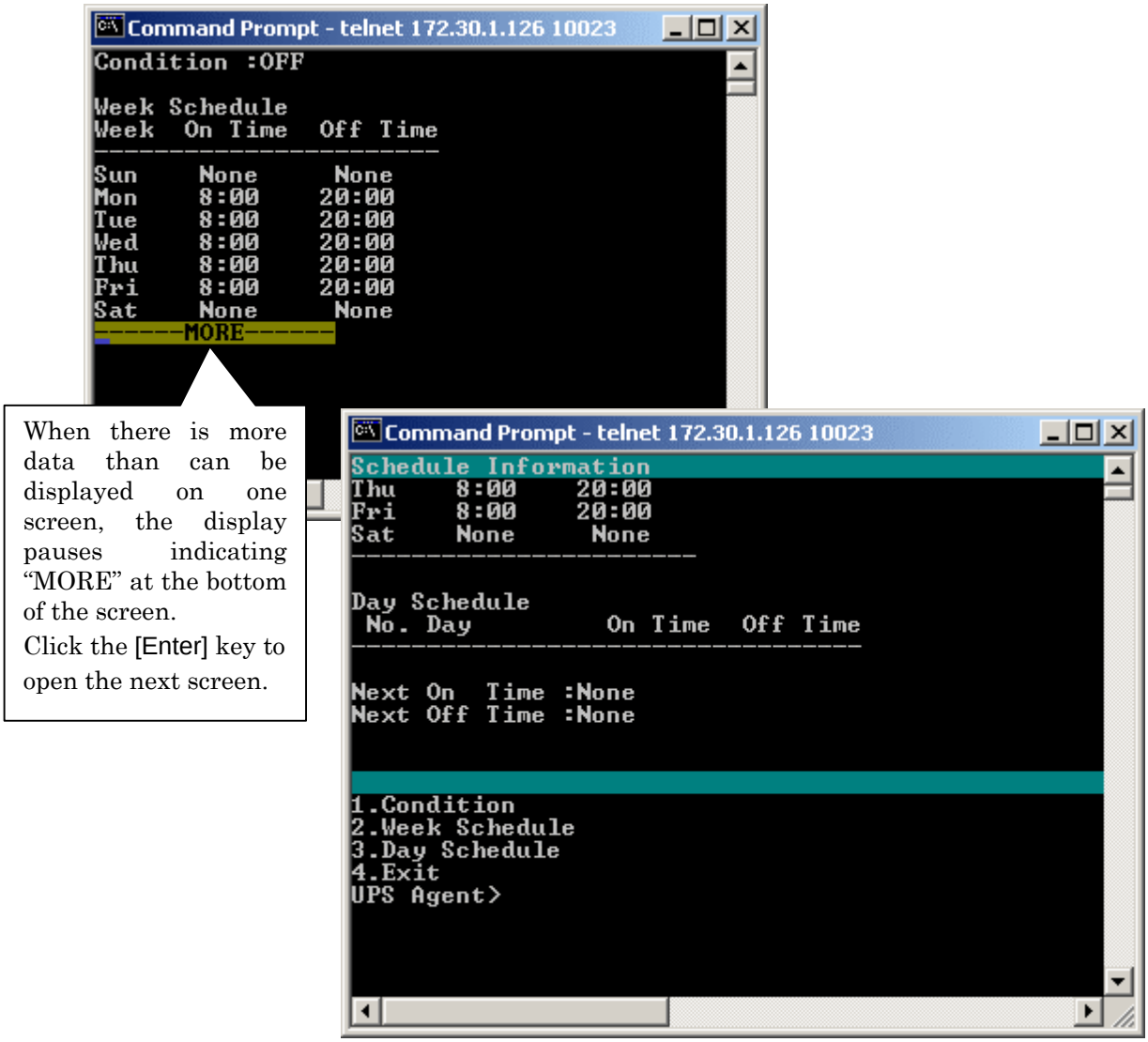
When there is more data than can be displayed on one screen, the display pauses indicating "MORE" at the bottom of the screen.
Click the [Enter] key to open the next screen.



Menu name	Description
1.UPS E-Mail Address	Enter the source address for sending E-mail from the UPS.
2.SMTP Address	Specify the IP address of the SMTP server. (The initial value is 0.0.0.0.)
3.SMTP Port	Specify the port number of the SMTP server. (The initial setting is 25.)
4.E-Mail Sending Delaying Time	The delay added when sending E-mail. (The initial setting is 15 s.)
5.Receiving Mail Confirmation	Determine whether or not mail requesting information should be received. If this setting is disabled, information request mail is not received and the mail send process is not performed for the state, measurement values, event logs, etc.
6.POP3 Address	Enter the address of the mail server (POP3 server) receiving mail requesting information.
7.POP3 Port	Specify the port number of the mail server (POP3 server). (The initial setting is 110.)
8.Account	Enter information for an authentication account in the POP3 server.
9.E-Mail Confirmation Interval	The set interval when the system checks the mail server (POP3 server) for mail for information.
10.Exit	Return to Configuration Menu.

3.5 Schedule Menu

Selecting [Schedule] from the Main Menu opens the screen shown below.



Menu name	Description
1.Condition	Determine whether scheduled operation will be used or not.
2.Week Schedule	Make a weekly schedule setting.
3.Day Schedule	Set a specified date schedule.
4.Exit	Return to Main Menu.

3.5.1 Disable/Enable scheduled operation

Selecting [Condition] from the Schedule Menu opens the menu shown below.

```
Select No.
1.ON
2.OFF
3.Exit
UPS Agent>
```

Select one of the following:
Select ON to enable a schedule.
Select OFF to disable a schedule.

After a change is made, the new settings will appear as shown below.
"Condition" returns the settings.

```
Condition : ON

Week Schedule
Week       On Time      Off Time
-------------------------------------------
Sun          None         None
Mon          7:00         19:00
Tue          7:00         19:00
Wed          7:00         19:00
Thu          7:00         19:00
Fri          7:00         19:00
Sat          None         None
```

3.5.2 Setting weekly schedule operation

Selecting [Week Schedule] from the Schedule Menu opens the menu shown below.

The screen below shows a schedule for Monday that start at 7:00 and stop at 19:00.

```
1.Condition
2.Week Schedule
3.Day Schedule
4.Exit
UPS Agent>2          <- Select Week Schedule.

Select Week.
1.Sun
2.Mon
3.Tue
4.Wed
5.Thu
6.Fri
7.Sat
UPS Agent>2          <- Select Monday.

Select Schedule Type.
1.OFF Time
2.ON Time
UPS Agent>1          <- Select OFF Time.

Input Time.([hh:mm], [0]:Delete)
UPS Agent>19:00
OK                   <- Enter stop time.

Select Schedule Type.
1.OFF Time
2.ON Time
UPS Agent>2          <- Select ON Time

Input Time.([hh:mm], [0]:Delete)
UPS Agent>7:00
OK                   <- Enter start time.
```

Indication of made settings (example)

Condition : ON

Week Schedule

Week	On Time	Off Time
Sun	None	None
Mon	7:00	19:00
Tue	None	None
Wed	None	None
Thu	None	None
Fri	None	None
Sat	None	None

Explanation:
A schedule from 7:00 to 19:00 is set for Monday.

The half-tone areas indicate where key entries are made.

3.5.3 Setting specified date schedule operation

Selecting [Day Schedule] from the Schedule Menu opens the menu shown below.

The screen below shows a schedule for March 6 that starts at 8:00 and stops at 18:00.

```
1.Condition
2.Week Schedule
3.Day Schedule
4.Exit
UPS Agent>3
```
Select a specified date schedule (Day Schedule).

```
Select No.
1.Add
2.Delete
UPS Agent>1
```
Select add schedule (Add).

```
Input Day.([mm/dd/yy])
UPS Agent>3/6/04
```
Enter schedule date.

```
Select On Schedule.
1.Set Time
2.Repression
3.None
UPS Agent>1
```
Select schedule start time (Set Time).

```
Input Time.([hh:mm])
UPS Agent>8:00
```
Enter start time.

```
Select Off Schedule.
1.Set Time
2.Repression
3.None
UPS Agent>1
```
Select the schedule stop time (Set Time).

```
Input Time.([hh:mm])
UPS Agent>18:00
OK
```
Enter the stop time.

Indication of made settings (example)

```
----------------------------

Day Schedule
 No. Day          On Time      Off Time
-------------------------------------------------
   1.   3/ 6/04       8:00          18:00

Next On Time :   3/ 6/04     8:00
Next Off Time :   3/ 6/04    18:00
```

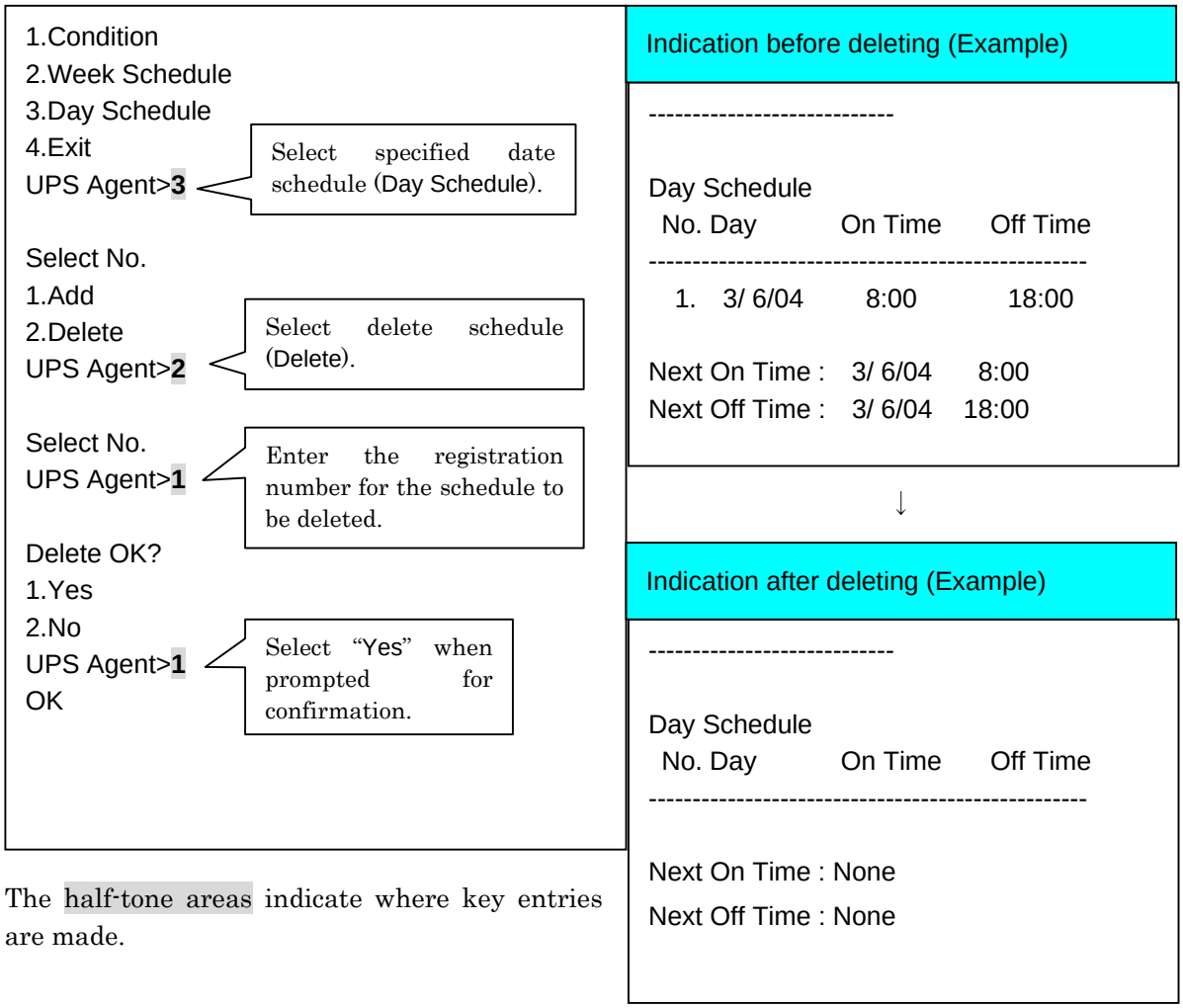
Explanation:
In the above, an 8:00 to 18:00 schedule for March 6, 2004 was set in item no. 1.

“Next On Time” indicates next start time.
“Next Off Time” indicates next stop time.

The half-tone areas indicate where key entries are made.

<Information>
This function can record up to 50 schedules.
This does not include completed schedules.

The following shows how to delete the schedule (March 6) recorded above.



The half-tone areas indicate where key entries are made.

The following is a description of how to repress a schedule.
The schedule repression function of a specified date schedule makes it possible to suppress the execution of a set schedule without deleting it.
It can be used to suppress the execution of a weekly schedule or specified date schedule when a holiday falls on a weekday without requiring any changes to the schedules.
The example below shows the suppression of a weekly schedule (Monday through Friday starting 7:00 and stopping 21:00) to prevent execution of that schedule on April 29, 2004, which is a holiday.

```
1.Condition
2.Week Schedule
3.Day Schedule
4.Exit
UPS Agent>3

Select No.
1.Add
2.Delete
UPS Agent>1

Input Day.([mm/dd/yy])
UPS Agent>4/29/04

Select On Schedule.
1.Set Time
2.Repression
3.None
UPS Agent>2

Select Off Schedule.
1.Set Time
2.Repression
3.None
UPS Agent>2
OK
```

Select specified date schedule (Day Schedule).

Select add schedule (Add).

Enter 4/29/2004.

Select repress (Repression) start schedule.

Select repress (Repression) stop schedule.

The half-tone areas indicate where key entries are made.

Settings indicated after schedule repression (Example)

Condition : ON

Week Schedule

Week	On Time	Off Time
Sun	None	None
Mon	7:00	21:00
Tue	7:00	21:00
Wed	7:00	21:00
Thu	7:00	21:00
Fri	7:00	21:00
Sat	None	None

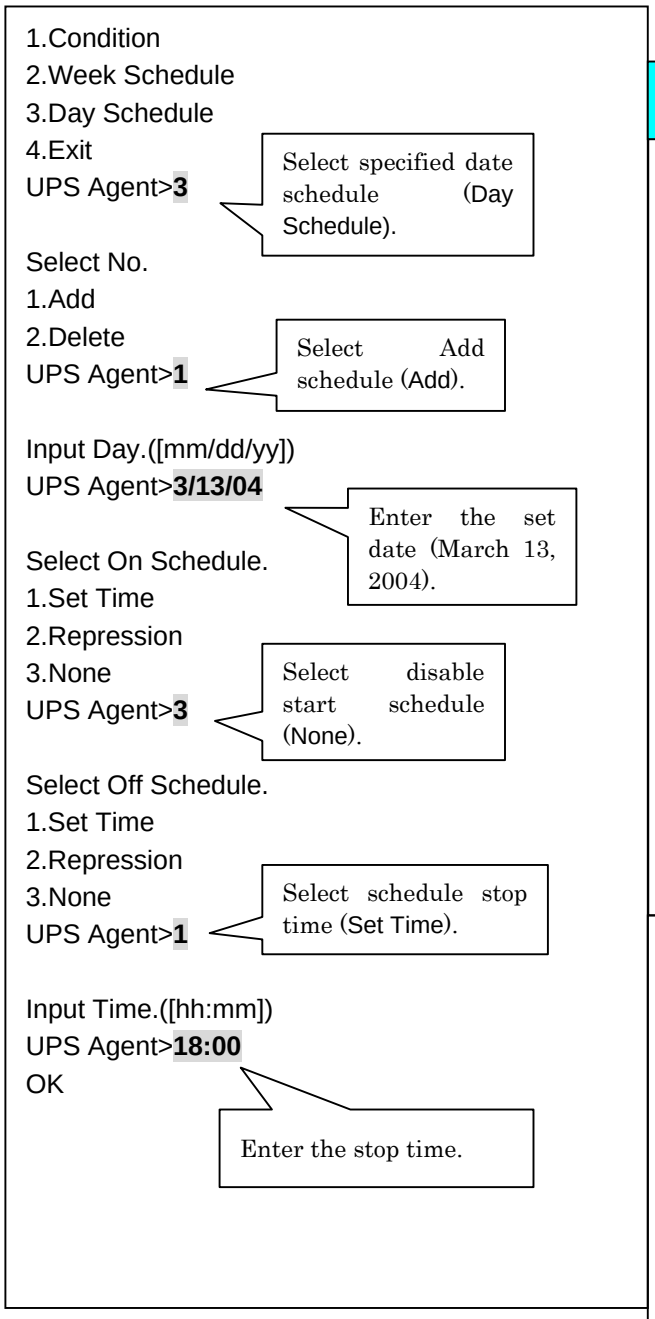
Day Schedule

No.	Day	On Time	Off Time
1.	4/29/04	XX:XX	XX:XX

Explanation:
A weekly schedule from Monday through Friday starting at 7:00 and stopping at 21:00 is set above.

Start (ON) and stop (OFF) for the specified date schedule (Day Schedule) set for April 29, 2004 has been repressed (XX:XX).

The following shows how to disable a specified date schedule.



The half-tone areas indicate where key entries are made.

Indication after setting (Example)

Condition : ON

Week Schedule

Week	On Time	Off Time
Sun	None	None
Mon	7:00	21:00
Tue	7:00	21:00
Wed	7:00	21:00
Thu	7:00	21:00
Fri	7:00	21:00
Sat	None	None

Day Schedule

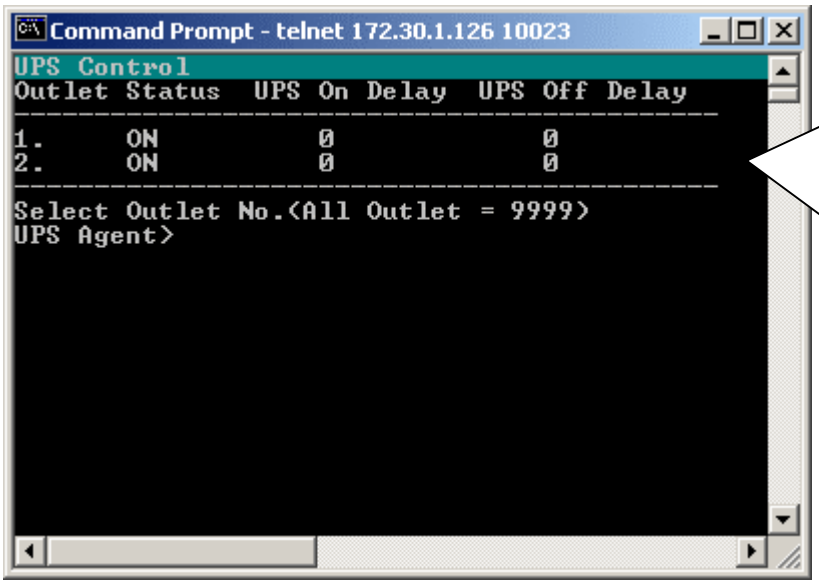
No.	Day	On Time	Off Time
1.	3/12/04	7:00	--:--
2.	3/13/04	--:--	18:00

Explanation:
A weekly schedule (Monday – Friday, start 7:00, stop 21:00) has been set above.

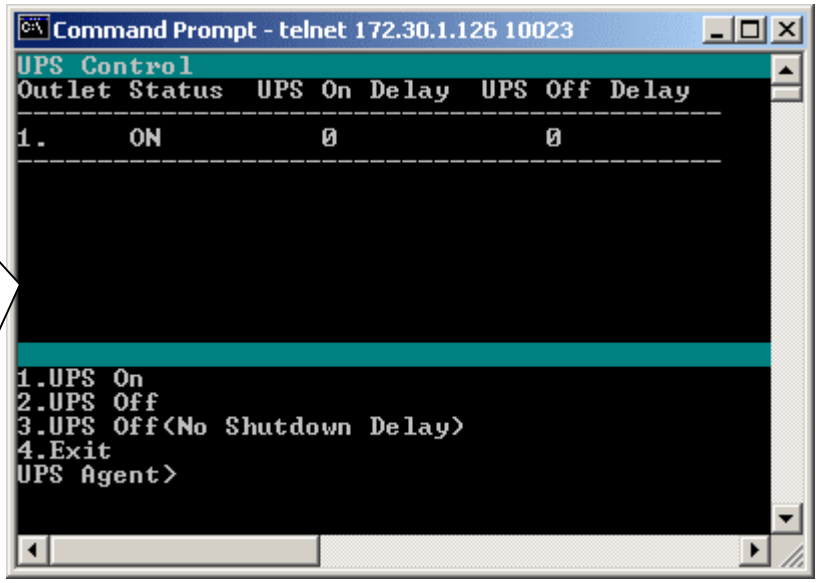
The stop time of a specified date schedule (Day Schedule) (March 12, 2004, start 7:00) has been turned off.
Also the start time for March 13, 2004 has been turned off and stop time is 18:00.
This means operation on the 12th will not stop until 18:00 the following day (13th).

3.6 UPS Control Menu

Selecting [Control] from the Main Menu opens the screen shown below.



The figure on the left shows the screen that appears for a UPS with multiple power distribution system.
It makes it possible to check the condition of Output 1 and Output 2 and the output on/off delay time.



The figure on the right shows the screen that appears for a UPS without multiple power distribution system. (There is one output system.)
On a UPS without a control system, "UPS On Delay" and "UPS Off Delay" remain at 0.

Menu name	Description
1.UPS On	Turn on UPS output
2.UPS Off	Turn off UPS output
3.UPS Off (No Shutdown Delay)	UPS output is turned off without a delay process.
4.Exit	Return to Main Menu.

3.6.1 Turning on UPS output

< UPS with multiple power distribution system >

Select the outlet number from the menu.

```
Outlet Status     UPS On Delay   UPS Off Delay
-------------------------------------------------------------------
1.       ON             0              0
2.       ON             0              0
-------------------------------------------------------------------
Select Outlet No.(All Outlet = 9999)
UPS Agent>
```

Input value	Description
1	Select control for Output 1.
2	Select control for Output 2.
9999	Select control for Output 1 and Output 2.

The following shows how to turn UPS output on.

(The following operation is the same for all UPS devices.)

```
1.UPS On
2.UPS Off
3.UPS Off (No Shutdown Delay)
4.Exit
UPS Agent>1
```

Select output on (UPS On).

```
UPS On OK ?
1.Yes
2.No
3.Exit
UPS Agent>1
OK
```

Enter "Yes" for control check.
Control will be performed.

The half-tone areas indicate where key entries are made.

3.6.2 Turning off UPS output

< UPS with multiple power distribution system >

Select the outlet number from the menu.

```
Outlet Status     UPS On Delay   UPS Off Delay
-----------------------------------------------------------------
1.      ON              0               0
2.      ON              0               0
-----------------------------------------------------------------
Select Outlet No.(All Outlet = 9999)
UPS Agent>
```

Input value	Description
1	Select control for Output 1.
2	Select control for Output 2.
9999	Select control for Output 1 and Output 2.

The following shows how to turn UPS output off.

(The following operation is the same for all UPS devices.)

```
1.UPS On
2.UPS Off
3.UPS Off (No Shutdown Delay)
4.Exit
UPS Agent>2        <- Select output on (UPS Off).

UPS On OK ?
1.Yes
2.No
3.Exit
UPS Agent>1        <- Select "Yes" for control confirmation.
OK                    Control will be performed.
```

The half-tone areas indicate where key entries are made.

"2. UPS Off" setting

This control waits for computers to log off when shutting them down. However, it waits for log off only when UPS management software is used.

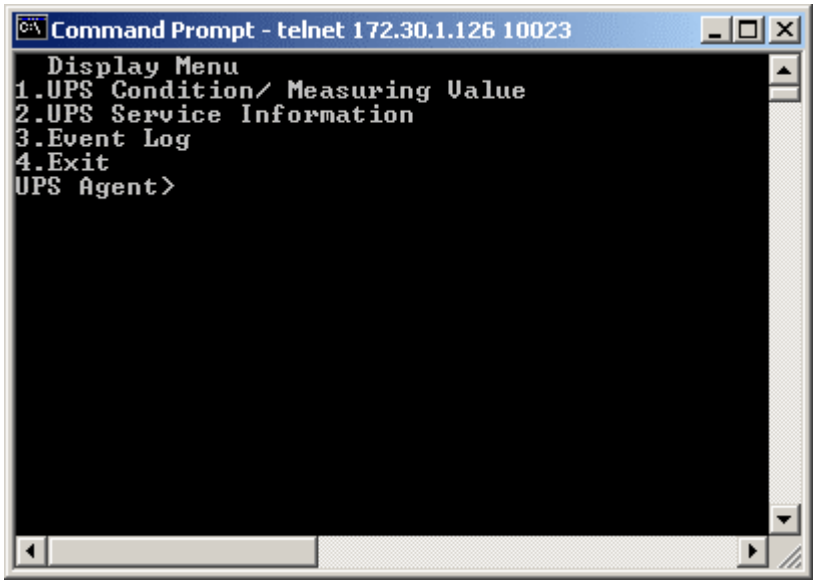
(Without UPS management software, it operates in the same way as "3. UPS Off (No Shutdown Delay)."

"3. UPS Off (No Shutdown Delay)" setting

This control does not wait for computers to log off when shutting them down. (The shutdown delay period count starts and the pre-shutdown process is performed.)

3.7 UPS Display Menu

Selecting [Display] from the Main Menu opens the screen shown below.

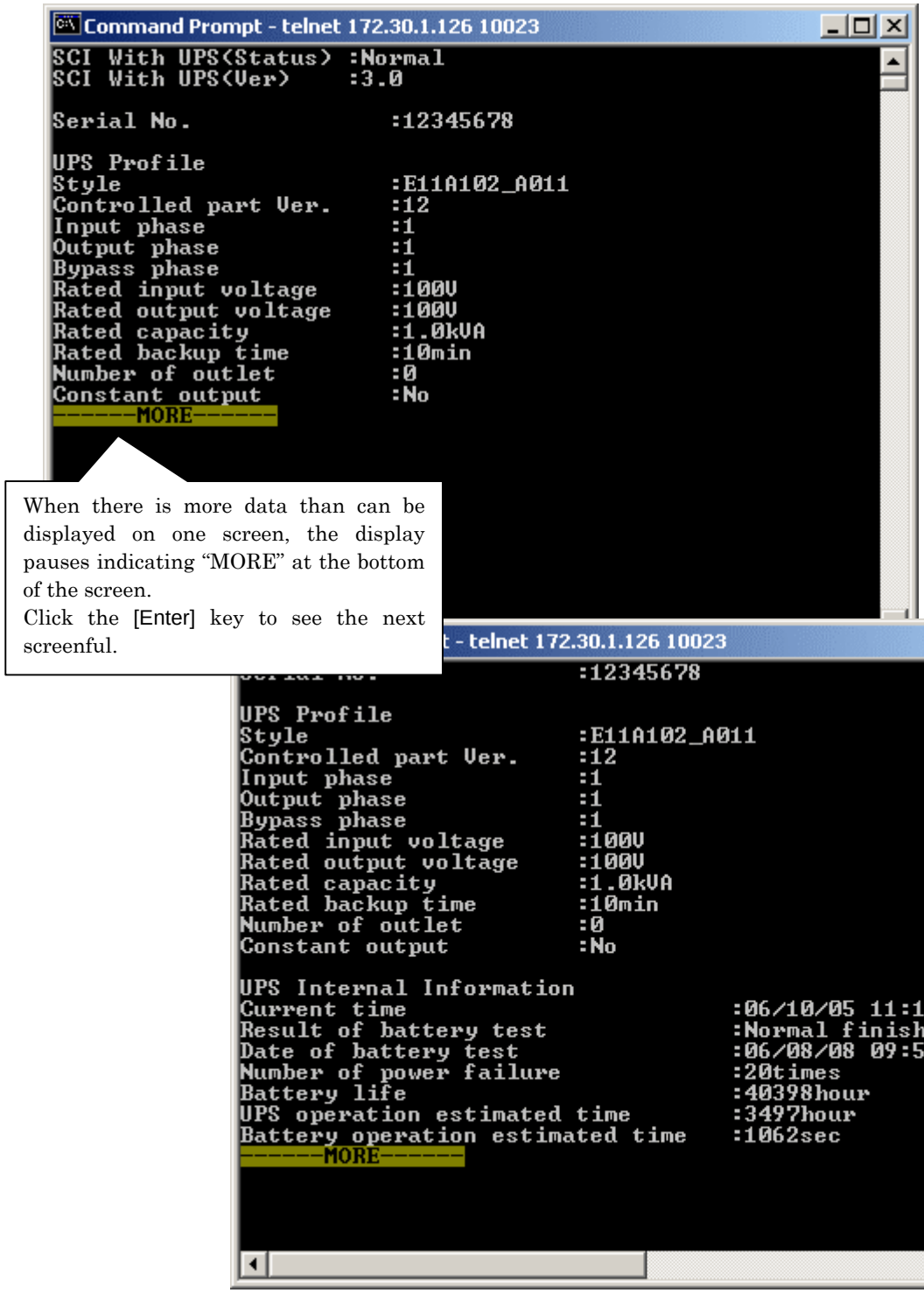


Menu name	Description
1.UPS Condition/ Measuring Value	Shows UPS condition & measured values
2.UPS Service Information	Shows **SANUPS SOFTWARE** information. Shows program version.
3.Event Log	Indicates UPS event log.
4.Exit	Return to Main Menu.

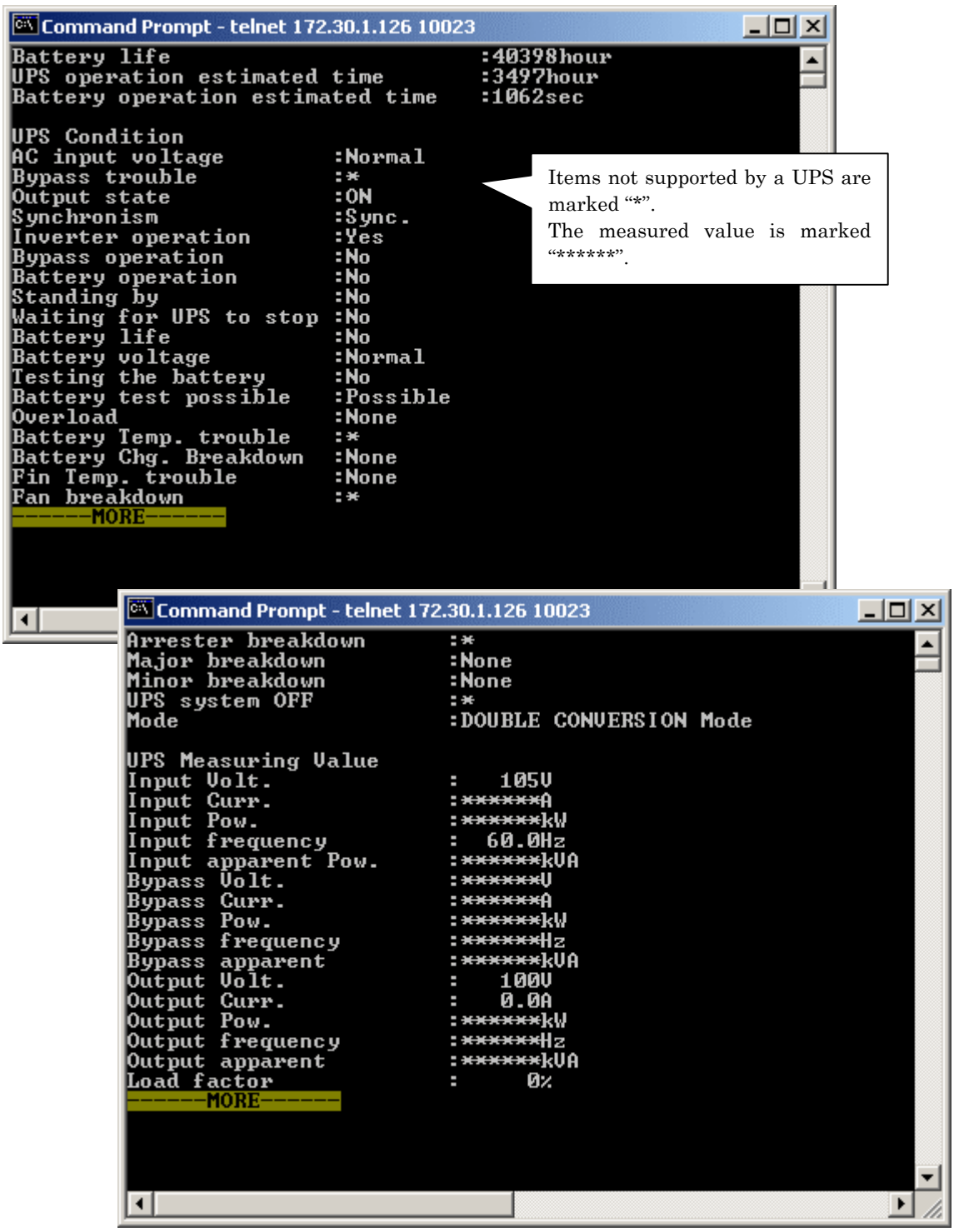
<Information>
Some UPS models are not equipped with a Real-time view.

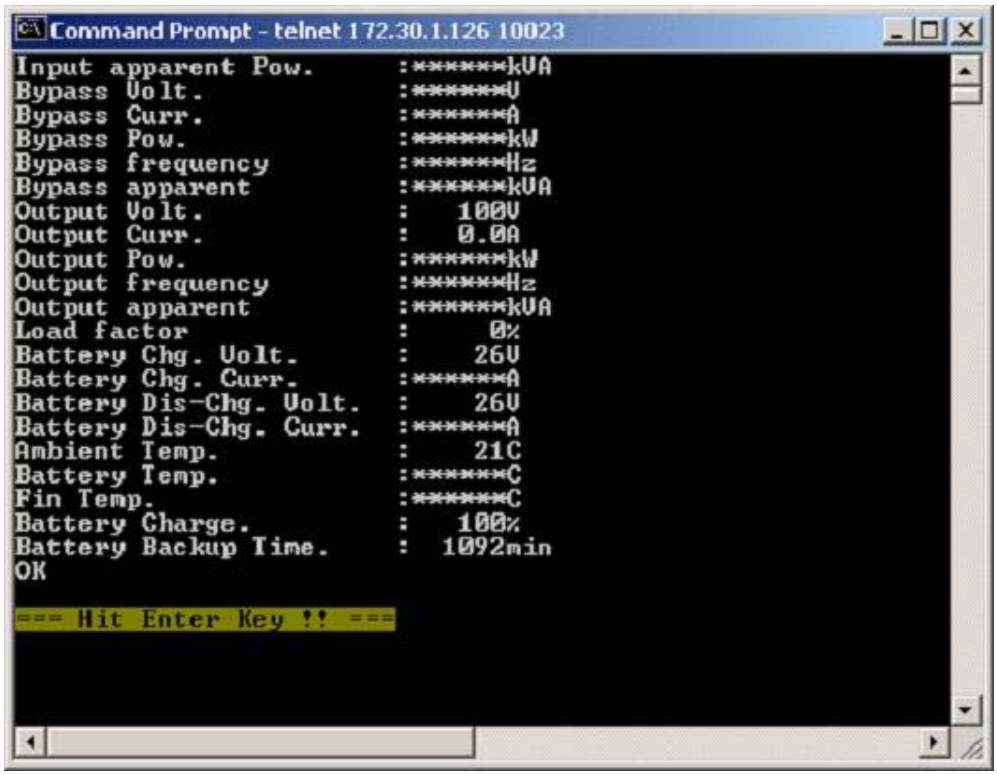
3.7.1 Confirming UPS condition & measured value

Selecting [UPS Condition/Measuring Value] from the Display Menu allows you to check UPS condition and measurement values.



When there is more data than can be displayed on one screen, the display pauses indicating “MORE” at the bottom of the screen.
Click the [Enter] key to see the next screenful.

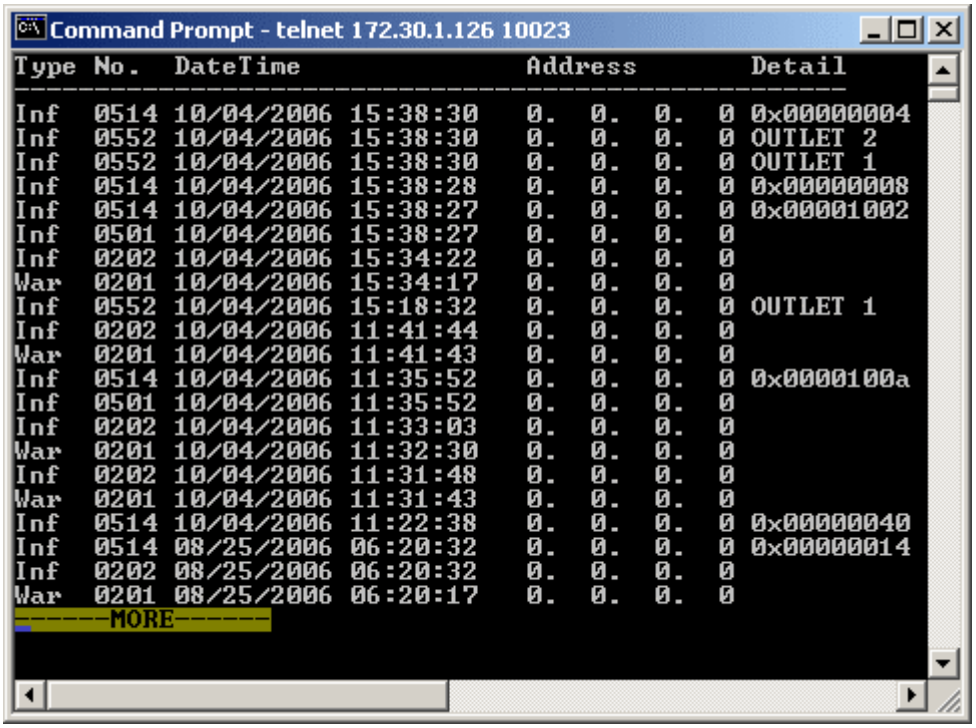

Command Prompt - telnet 172.30.1.126 10023
Battery life :40398hour
UPS operation estimated time :3497hour
Battery operation estimated time :1062sec
UPS Condition
AC input voltage :Normal
Bypass trouble :*
Output state :ON
Synchronism :Sync.
Inverter operation :Yes
Bypass operation :No
Battery operation :No
Standing by :No
Waiting for UPS to stop :No
Battery life :No
Battery voltage :Normal
Testing the battery :No
Battery test possible :Possible
Overload :None
Battery Temp. trouble :*
Battery Chg. Breakdown :None
Fin Temp. trouble :None
Fan breakdown :*
------MORE------
Items not supported by a UPS are marked "*".
The measured value is marked "******".
Command Prompt - telnet 172.30.1.126 10023
Arrester breakdown :*
Major breakdown :None
Minor breakdown :None
UPS system OFF :*
Mode :DOUBLE CONVERSION Mode
UPS Measuring Value
Input Volt. : 105V
Input Curr. :******A
Input Pow. :******kW
Input frequency : 60.0Hz
Input apparent Pow. :******kVA
Bypass Volt. :******V
Bypass Curr. :******A
Bypass Pow. :******kW
Bypass frequency :******Hz
Bypass apparent :******kVA
Output Volt. : 100V
Output Curr. : 0.0A
Output Pow. :******kW
Output frequency :******Hz
Output apparent :******kVA
Load factor : 0%
------MORE------



Name	Description
SCI With UPS(Status)	Displays UPS communication status. Communication normal: Normal Communication error: Error
SCI With UPS(Ver)	Displays the version of protocol used in communications with the UPS.
Serial No.	Indicates UPS serial number.
UPS Profile	Indicates UPS profile.
UPS Internal Information	Indicates UPS internal information.
UPS Condition	Indicates UPS status.
UPS Measuring Value	Indicates UPS measuring value.

3.7.2 Confirming UPS event log

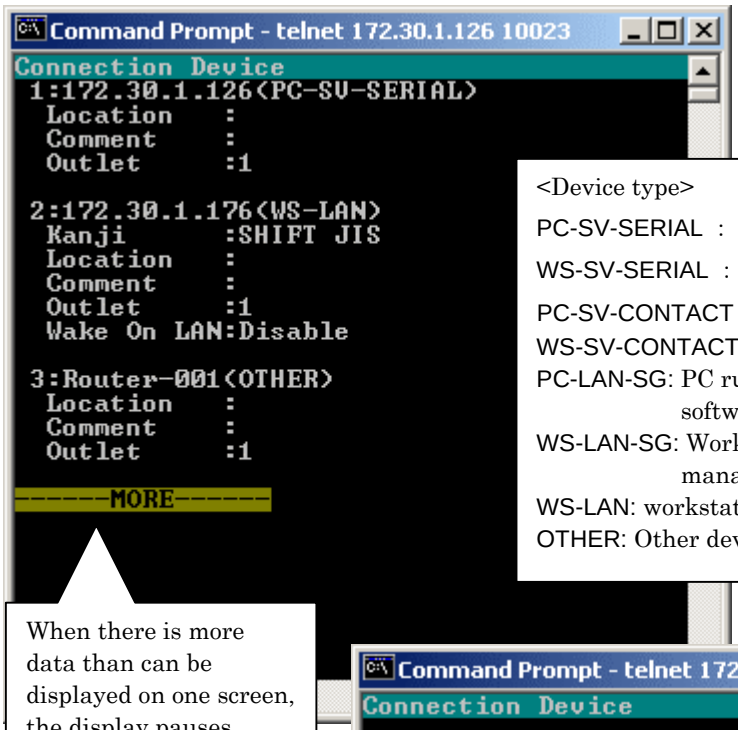
Select [Event Log] from the Display Menu to confirm the UPS event log.



Display item	Description
Type	Event log type The following abbreviations are used: Inf:Information, War:Warning, Err:Error
No.	Event Number Event log numbers are introduced in the appendices.
DateTime	Date and time when event occurred
Address	The IP address of a device that accessed the system from outside.
Detail	Detailed information

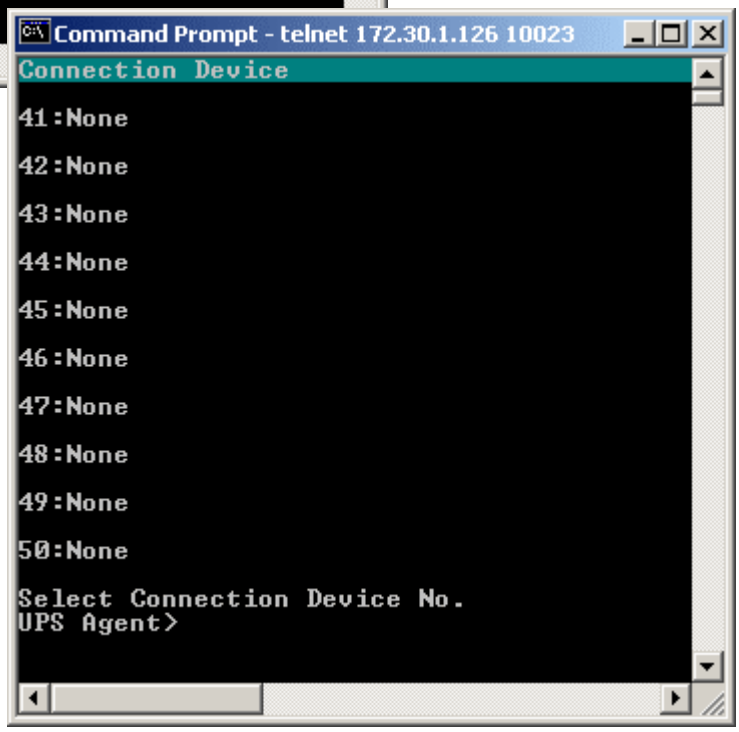
3.8 Connection Device Menu

Selecting [Connection Device] from the Main Menu opens the screen shown below.



<Device type>
PC-SV-SERIAL : PC(serial connection)
WS-SV-SERIAL : WS(serial connection)
PC-SV-CONTACT : PC(contact connection)
WS-SV-CONTACT : PC(contact connection)
PC-LAN-SG: PC running UPS management software
WS-LAN-SG: Workstation running UPS management software
WS-LAN: workstation connected via Telnet
OTHER: Other device

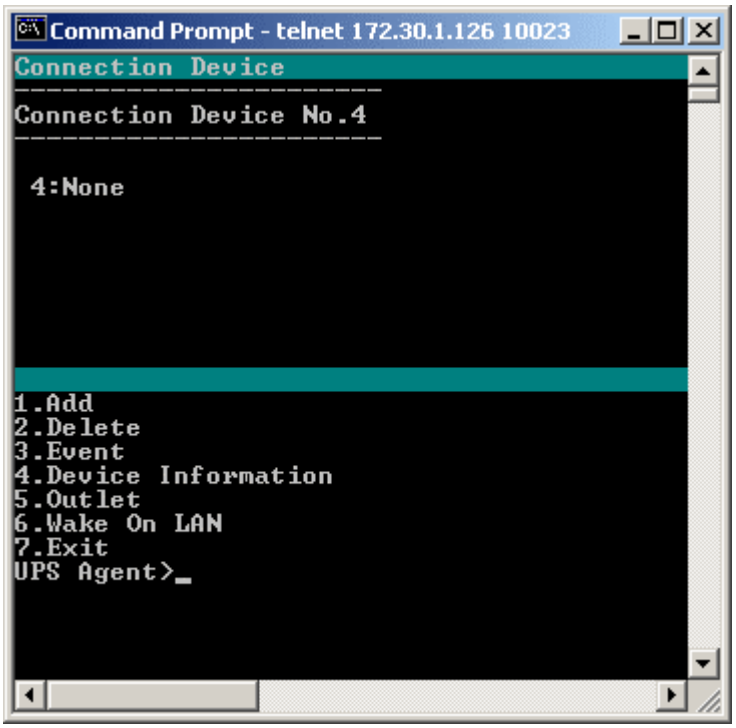
When there is more data than can be displayed on one screen, the display pauses indicating "MORE" at the bottom of the screen.
Click the [Enter] key to see the next screenful.



Select [Device No.] to add, change or delete devices.

A total of 50 devices can be registered.

The screen shown below appears when a [Device No.] is entered.
(The screen shows that an unregistered device is connected to [Device No. 4].)



Menu name	Description
1.Add	Register an unregistered device.
2.Delete	Delete connected devices.
3.Event	Set up a WS script to use when an event occurs.
4.Device Information	Define device data (location/comment).
5.Outlet	Enter the outlet number to which a connection is made. (On a UPS with multiple power distribution system)
6.Wake On LAN	Set up the Wake On LAN function.
7.Exit	Exit to return the screen for setting up device numbers.

3.8.1 Registering devices

Select the number of an unregistered device.

Select [Add] in the menu that appears. Registration of a **[Telnet connected WS]** is shown below.

(Information)
Only a WS (Telnet connection) device can be registered with the Telnet terminal tool.

Register a **SANUPS SOFTWARE** client from the GUI tool or CUI tool. For details, refer to "User Guide."

```
1.Add
2.Delete
3.Event
4.Device Information
5.Outlet
6.Wake On LAN
7.Exit
UPS Agent>1
```

Select [Add].

```
Select Type.
1.PC(DIGITAL)
2.WS(SERIAL)
3.WS(LAN)
4.Exit
UPS Agent>3
```

Select [3. WS(LAN)] since a Telnet connected workstation is to be connected.

```
Input Network Name Or IP Address
UPS Agent>172.30.3.33
OK

Select Kanji Code.
1.SHIFT JIS
2.JIS
3.EUC
4.UNICODE
UPS Agent>3
OK
```

Enter the WS IP address.

Select the Kanji code for the WS. This completes the UPS registration of the workstation.

Screen shown after registration



The half-tone areas indicate where key entries are made.

Note : Do not select UNICODE because it is not supported in the current version.

Settings of registered devices

Name	Initial value (setting)
Location	(blank)
Comment	(blank)
Outlet	1
Wake On Lan	Disable (appears only when "WS(LAN)" is selected)

The above information is displayed when a device is registered.

When changes are required, make the required selections from the menu ([4. Device Information], [5. Outlet] or [6. Wake On LAN] to make the required changes.

3.8.2 Deleting devices

Select the number of an unregistered device.

Select [Delete] in the menu that appears.

The example below shows the deletion of a device connected to [Device No. 4].

```
1. Add
2. Delete
3. Event
4. Device Information
5. Outlet
6. Wake On LAN
7. Exit
UPS Agent>2

Delete Device
1. Yes
2. No
3. Exit
UPS Agent>1
OK
```

Select [Delete].

Select "Yes" in the confirmation dialog. The device is now deleted.

The half-tone areas indicate where key entries are made.

Screen shown after deletion



3.8.3 Setting operations to run at the occurrence of an event

Set up a script that will run on a workstation when an event occurs.
This function is used to set shutdown operations when a power failure occurs.

The following sections will describe:
Editing of a **[Login Script]** used to record a procedure for logging into a workstation.
Editing **[Event Script]** to record procedures that will be executed when an event occurs.
An example of a script recording is provided below.

・Login Script

Enter a WS Log-in procedure to be run as an event script.

Login script default settings

Line	Login script		Description
1	retry=1	←	Specifies the number of retries when the execution of a script fails.
2	interval=30	←	Specifies the time interval until the start of a retry.
3	timeout=30	←	The maximum number of seconds the system waits for reception of the specified character data string at "wait=".
4	wait=ogin:	←	Waits for the login input prompt
5	send=<USER NAME>	←	Sends the login name.
6	wait=assword:	←	Waits for the password input prompt
7	send=<PASSWORD>	←	Sends the password.
8	wait=#	←	Waits for completion of login to workstation. (Waits for prompt to appear)

Items 1 to 3 sets the operation of the login script.
Line 4 and 5 enter the login name.
Line 6 and 7 enter the password.
Line 8 wait for completion of login. (The # prompt appears when login is successful.)

Use commands in the "List of Commands" below to record a Login Script.

List of Login Script Commands

Commands	Description	Example
send	Sets the character string that is sent to a workstation.	Example: send=shutdown
wait	Sets the character string (prompt) received by the UPS.	Example: wait=login
sleep	Sets the time period when the machine is idle. Unit: seconds (s).	Example: sleep=90
timeout	Sets the time that the system will wait for the completion of a process. Unit: seconds (s). Default value: 30 seconds.	Example: timeout=60
retry	Specifies the number of retries when the execution of a script fails. Unit: times (valid range: 0 to 10 times). Default value: 1 time.	Example: retry=2
interval	Specifies the interval between retries when the execution of a script fails. Unit: seconds (valid range: 1 to 60 seconds). Default value: 30 seconds.	Example: interval=10
port	Specifies the Telnet port number of the workstation. Valid range: 0 to 65,535. If omitted, port 23 is used.	Example: port=10023
cr_only	Sets newline code to <CR>. Set value: yes or no Setting yes changes subsequent newline code of send data to <CR>. An omission of this entry is treated as a no entry. (newline code is <CR><LF>.)	Example: cr_only=yes cr_only=no
binsend	Sets the 8-bit code that is sent to a workstation. Valid range: Hexadecimal notation: x00 to xff Octal notation: 000 to 377	Example: hexadecimal notation binsend=x07 octal notation binsend=004

* The presence or absence of a space before or after "=" does not affect processing.

Use a total of 510 single-byte characters.

・Event Script

Enter the script the workstation will run when an event occurs.

The "script" referred to here differs from a UNIX shell script.
Instead, a script consists of commands sent to computers to perform a sequence of operations.

Example
```
send=shutdown -h now      ← Sends a shutdown command.
sleep=60                  ← Waits for 60 seconds.
                            (The system waits for logout.)
```

Commands

Commands	Description	Example
Send	Sets the character string that is sent to a workstation.	Example: send=shutdown
Wait	Sets the character string (prompt) received by the UPS.	Example: wait=login
Sleep	Sets the time period when the machine is idle. Unit: seconds (s).	Example: sleep=90
timeout	Sets the time that the system will wait for the completion of a process. Unit: seconds (s). Default value: 30 seconds.	Example: timeout=60
Retry	Specifies the number of retries when the execution of a script fails. Unit: times (valid range: 0 to 10 times). Default value: 1 time.	Example: retry=2
interval	Specifies the interval between retries when the execution of a script fails. Unit: seconds (valid range: 1 to 60 seconds). Default value: 30 seconds.	Example: interval=10
cr_only	Sets newline code to <CR>. Set value: yes or no Setting yes changes subsequent newline code of send data to <CR>. An omission of this entry is treated as a no entry. (newline code is <CR><LF>.)	Example: cr_only=yes cr_only=no
binsend	Sets the 8-bit code that is sent to a workstation. Valid range: Hexadecimal notation: x00 to xff Octal notation: 000 to 377	Example: hexadecimal notation binsend=x07 octal notation binsend=004
Delay	The time period that script execution is delayed. An event script with a "delay" executes the login script and the event script when the specified time interval has elapsed.	Example: delay=60

* The presence or absence of a space before or after "=" does not affect processing.

Use a total of 598 single-byte characters.

Macro strings that can be used in scripts

The text strings that are sent may contain macros. The table below shows the character strings that replace the macro strings.

Macro string	Meaning
%STOP_TIME_M%	Time remaining until recovery impossible (approx. min)
%STOP_TIME_S%	Time remaining until recovery impossible (approx. s)
%SD_DELAY_TIME%	Shutdown delaying time (s) set in UPS
%BAT_CHG_MON%	Months remaining until battery replacement

Recording login scripts

Some environments may not allow the direct login of a user with superuser (root) privileges. Should this happen, use the "su" command as a substitute to being a root user to execute commands.

The following is an example of a login script using the "su" command.

The example shows logging in of regular users (user name: guest, password: guest) and root (password: root) users.

Line	Login script	Description
1	retry=1	Sets login script operation.
2	interval=30	
3	timeout=30	
4	wait=ogin:	Regular user: log in as "guest".
5	send=guest	Enter login name: "guest".
6	wait=assword:	Regular user: enter the guest password.
7	send=guest	Password: enter "guest"
8	wait=$	Wait for the $ prompt that appears after login.
9	send=su	Enter and run the "su" command.
10	wait=assword:	Enter the root password.
11	send=root	Password: enter "root"
12	wait=#	Wait for the # prompt that appears after login.

A procedure for editing a Login Script is described below.

Select the number of an unregistered device.
Make the following changes to line 5.

send=<USER NAME>
↓
send=root

```
1.Add
2.Delete
3.Event
4.Device Information
5.Outlet
6.Wake On LAN
7.Exit
UPS Agent>3      ← (1):Select [Event].

Select Script.
1.Login Script
2.Event Script
3.Exit
UPS Agent>1      ← (2):Select [Login Script].

Select Script Line Number.
UPS Agent>5      ← (3):Enter the No. of the line to be revised.

Operation        <a-key:Add d-key:Delete e-key:Exit>
UPS Agent>d      ← (4):First delete the line to be revised.
OK delete script 5line.

Select Script Line Number.
UPS Agent>4      ← (5):Enter the number of the line to be added.

Operation        <a-key:Add d-key:Delete e-key:Exit>
UPS Agent>a      ← (6):Enter line to be added.

Input script.
UPS Agent>send=root    ← (7):Enter additional process.

Select Script Line Number.
UPS Agent              ← (8):Click the [Enter] key.

Operation        <a-key:Add d-key:Delete e-key:Exit>
UPS Agent>e            ← (9):End editing.

Save Event Script.
1.Yes
2.No
UPS Agent>1            ← (10):Save editted data.
OK
```

Initial setting

```
Login Script
 1 : retry=1
 2 : interval=30
 3 : timeout=30
 4 : wait=ogin:
 5 : send=<USER NAME>
 6 : wait=assword:
 7 : send=<PASSWORD>
 8 : wait=#
```

(4)Settings after execution "send = <USER NAME>" line deleted

```
Login Script
 1 : retry=1
 2 : interval=30
 3 : timeout=30
 4 : wait=ogin:
 5 : wait=assword:
 6 : send=<PASSWORD>
 7 : wait=#
```

(7)Settings after execution "send= root" line added

```
Login Script
 1 : retry=1
 2 : interval=30
 3 : timeout=30
 4 : wait=ogin:
 5 : send=root
 6 : wait=assword:
 7 : send=<PASSWORD>
 8 : wait=#
```

A procedure for editing an Event Script is described below.
The example shows how to revise a [shutdown] event (event No: 511) script.
Select the number of an unregistered device.

```
1.Add
2.Delete
3.Event
     :(omitted)
7.Exit
UPS Agent>3      ← (1):Select [Event].

Select Script.
1.Login Script
2.Event Script
3.Exit
UPS Agent>2      ← (2):Select [Event Script].

Input event No.
UPS Agent>511    ← (3):Enter event No.

1.Condition
2.Edit Script
3.Test
4.Exit
UPS Agent>2      ← (4):Select [Edit Script].

Select Script Line Number.
UPS Agent>1      ← (5):Enter the number of the line to be revised.

Operation        <a-key:Add d-key:Delete e-key:Exit>
UPS Agent>d      ← (6):First delete the revised line.

Select Script Line Number.
UPS Agent>1      ← (7): Enter the number of the line to be revised.

Operation        <a-key:Add d-key:Delete e-key:Exit>
UPS Agent>a      ← (8):Enter the line to be added.

Input script.
UPS Agent>send=shutdown -i0 –g0 -y
                 ← (9):Describe the additional operation

Select Script Line Number.
UPS Agent>1      ← (10): Enter the number of the line to be revised.

Operation        <a-key:Add d-key:Delete e-key:Exit>
UPS Agent>d      ← (11):Delete the line where the change was made.


Select Script Line Number.
UPS Agent>       ← (12):Click the [Enter] key.

Operation        <a-key:Add d-key:Delete e-key:Exit>
UPS Agent>e      ← (13):End editing.

Save Event Script.
1.Yes
2.No
UPS Agent>1      ← (14):Save edited data.
```

Initial setting

```
--------------------
Event No.0511
--------------------
Condition            :ON

Event Script
 1 : send=shutdown -h now
 2      :      wait=<SHUTDOWN
      MESSAGE>
 3 : sleep=60
```

(6)Settings after execution
1 line was deleted

```
--------------------
Event No.0511
--------------------
Event Script
 1      :      wait=<SHUTDOWN
      MESSAGE>
 2 : sleep=60
```

(9)Settings after execution
Record process to be added.

```
--------------------
Event No.0511
--------------------
Event Script
 1      :      wait=<SHUTDOWN
      MESSAGE>
 2 : send=shutdown -i0 -g0 -y
 3 : sleep=60
```

(11)Settings after execution
1 line was deleted

```
--------------------
Event No.0511
--------------------
Event Script
 1 : send=shutdown -i0 -g0 -y
 2 : sleep=60
```

・Enabling and disabling script execution

For some events, the initial condition for script execution is [disable].

[Condition] in the displayed settings indicates the current conditions for script execution.

```
--------------------
Event No.0511
--------------------
Condition            :ON
```

ON means “enable” and OFF means “disable”.

A set script whose condition is [disable] will not run.

Select [1. Condition] in the menu that appears in setting (4) in the above procedure.

To prevent a set script from running, set its condition to [Disable].

・Test function of script execution

```
1.Add
2.Delete
3.Event
     :(omitted)
7.Exit
UPS Agent>3        ← (1):Select [Event].

Select Script.
1.Login Script
2.Event Script
3.Exit
UPS Agent>2        ← (2):Select [Event Script].

Input event No.
UPS Agent>511      ← (3):Enter the Event No.

1.Condition
2.Edit Script
3.Test
4.Exit
UPS Agent>3        ← (4):Select [Test].

Test OK ?
1.Yes
2.No
3.Exit
UPS Agent>1        ← (5):Run test.
OK
```

Select [Event No.] from the menu and execute the script registered for that event.

The execution result is recorded in the event log.

3.8.4 Changing settings on a connected device

The following describes a procedure for changing the settings (initial value) of a registered device.

If the device is **"WS (LAN): Telnet connected WS"**, use the following menu to make changes.

Menu name	Description
4.Device Information	Enter the location of the device and a comment.
5.Outlet	Enter the UPS outlet used by a connected device for a UPS with multiple power distribution system. 1:OUTPUT1 2:OUTPUT2 0:OUTPUT0 (always on)
6.Wake On LAN	Determine whether or not Wake On LAN is to be used.

Wake On LAN settings

```
Select Wake On LAN Condition
1.Disable
2.Enable
3.Exit
UPS Agent>2
```
Turn Wake On LAN on or off.
[Disable]: off
[Enable]: on

```
Select Mac Address Acquisition Condition.
1.Automatic
2.Fixation
3.Exit
UPS Agent>
```
Enter method of MAC address acquisition.
[Automatic]: automatic acquisition
[Fixation]: manual setting

```
Input MAC Address.([XX XX XX XX XX XX])
UPS Agent>
```
Enter the MAC address when the address is set manually.

When the [Automatic] MAC address acquisition method is used, confirm that the correct address is set in [MAC Address]. An indication of "00-00-00-00-00-00" means that a correct MAC address has not been acquired. Enter the address manually.

Use the following menu for changing settings for a **"WS (SERIAL): serial log in WS"** or a **"PC (CONTACT): contact connection PC"**.

Menu name	Description
4.Device Information	Enter the location of the device and a comment.
5.Outlet	Enter the UPS outlet used by a connected device for a UPS with multiple power distribution system. 1:OUTPUT1 2:OUTPUT2 0:OUTPUT0 (always on)
6.Wake On LAN	Not used.

3.9 Event Menu

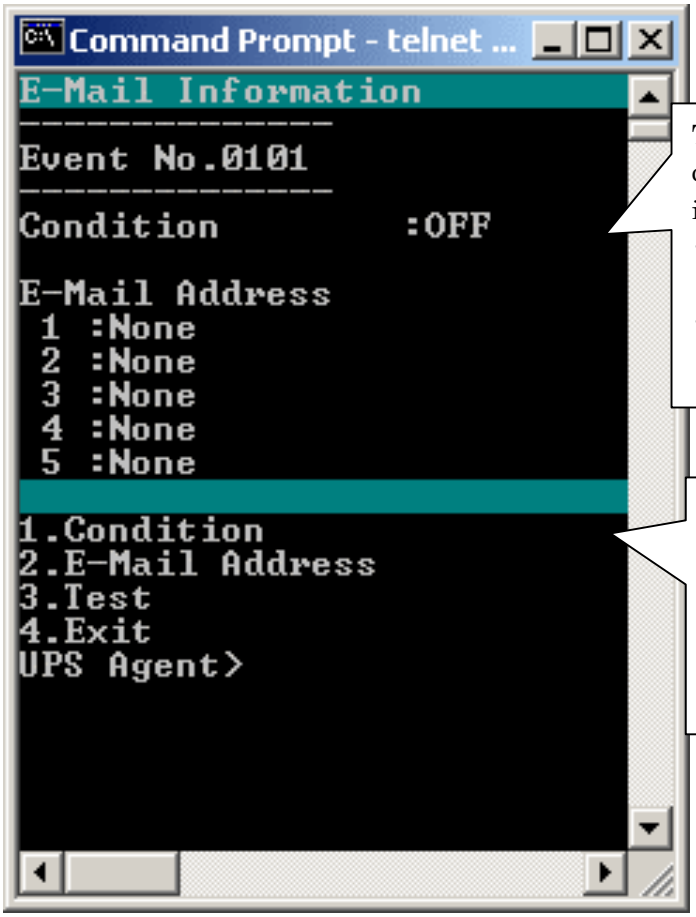
Use this function to set event log recording and E-mail send conditions.
Use [Event] under [Connection Device] in the Main Menu to make event scripts.

Use one of the following two methods for entering the recording conditions for an event log.

- ・Default : Return to initial value.
- ・All : Record all events.

To enter recording conditions for specific events, use Web browser management tools.

Enter the event number of an event whose occurrence is to be notified by E-mail to set up E-mail send conditions.
The screen shown below appears.



The figure on the left shows current settings. ([Event No. 0101] indicates a power failure event.)
・[Condition] indicates whether the mail send condition is ON or OFF.
・[E-Mail Address] indicates a mail address.

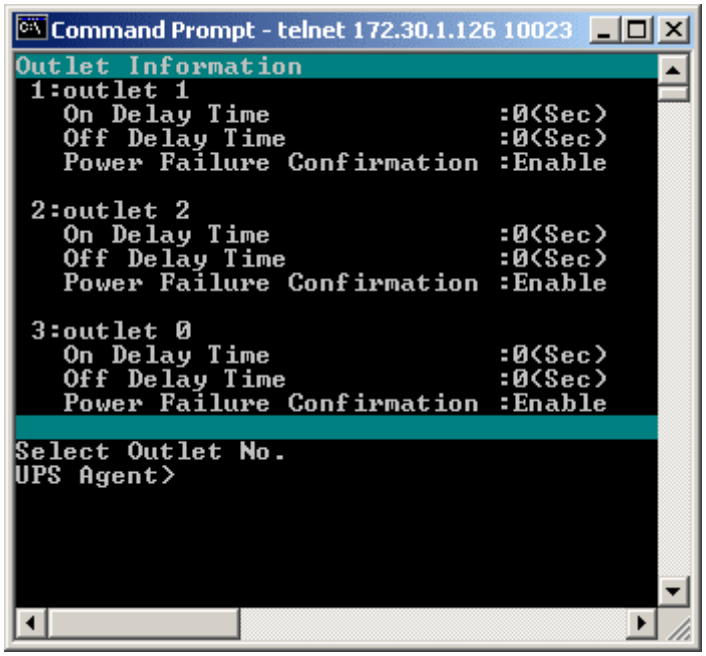
・[1. Condition] determines whether or not mail will be sent.
・[2. E-Mail Address] sets the mail destination address.
・[3. Test] tests sending mail to the address entered above.

3.10 UPS Outlet Menu

This section describes how to configure the outputs, Output 1, Output 2 and Output 0, on a UPS with multiple power distribution system. This function is not available on a UPS without multiple power distribution system.

・Setting the delay time for Output 1 and Output 2 when UPS output is turned on or off
・Output 1, Output 2 and Output 0 can all be set up to "Outlets that are to be shut down in the event of a power failure".

Select the Outlet Menu to open the screen shown below.



The current settings for Output 1, Output 2 and Output 0 are shown.
[**On Delay Time**] is the time that the UPS waits after startup to turn output on.
[**Off Delay Time**] is the time that the UPS waits after the "UPS auto stop time" to turn output off.
[**Power Failure Confirmation**] is "Outlets that are to be shut down in the event of a power failure".
This area shows current settings.

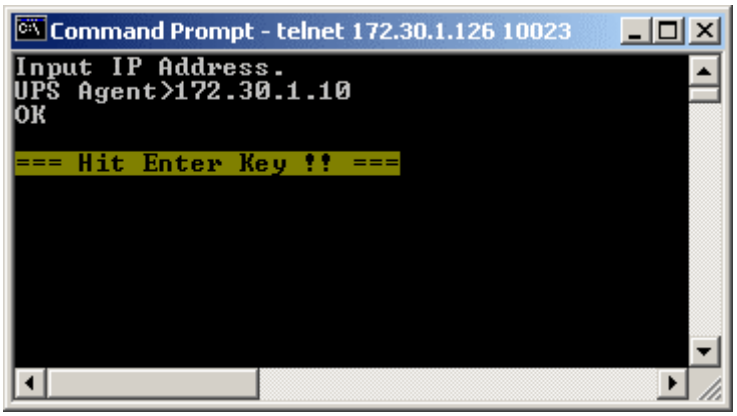
Select Outlet to set up.

Note:
Only [Power Failure Confirmation] can be set for Outlet 0.
[On Delay Time] and [Off Delay Time] cannot be set.

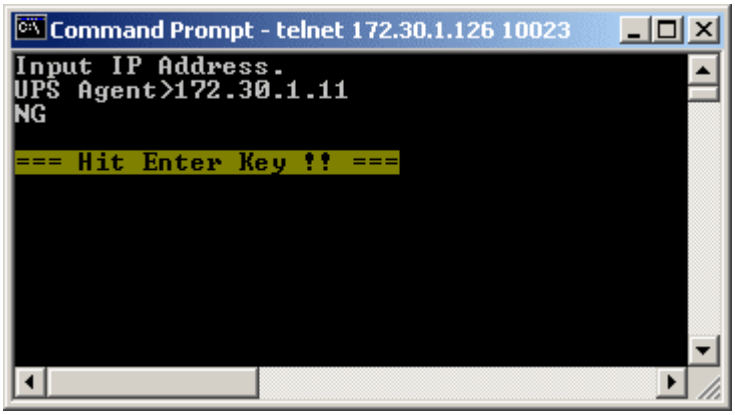
3.11 Ping Menu

The **ping** command allows you to check the status of the communication line between the UPS and a specific device by entering the address of that device.

Enter the IP address for the other device to check whether it can be accessed.



[OK] in the figure on the left indicates that communications with the [172.30.3.34] address were successful.



[NG] in the figure on the left indicates that communications with the [172.30.3.55] address failed.

Important:
Host name is not a supported entry and will only generate an error.

Appendix A　Read before using a Web browser

Use a Web browser and Web management tools that support **Java** applets.
If your Web browser cannot handle **Java** applet, please download **JRE(Java Ruitime Environment)** and set up then it works.

Reference: **JRE** download site(Windows)

http://java.com/