M0007009F

SANUPS

UPS Control System

SANUPS SOFTWARE STANDALONE

User Guide

for Windows

SANYO DENKI

E ENGLISH

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1. Introduction

1.1 Overview

The UPS Control System (SANUPS SOFTWARE STANDALONE) software supports a computer and UPS that are connected by a serial cable. This software also facilitates the safe shutdown of the computer during a power failure, along with the monitoring of the status of the UPS from the computer.

1.2 Notation in This Document

- “Computer” refers to a Windows® computer.
- “Default” refers to the initial status of the software immediately after installation.
- The screenshots in this document were taken using Windows® 2000. Other Windows® versions may have slightly different displays.
- “SANUPS SOFTWARE STANDALONE” refers to the UPS Control Software.
- “UPS Control System" refers to the combination of the UPS Control Software and the UPS.
- “Java™ VM” and “Java™ Execution Environment" refer to Java™ Virtual Machine.

1.3 Main Function of the SANUPS SOFTWARE STANDALONE

(1) Automatic Shutdown of the computer

This feature manages the automatic shutdown of the computer in the event of a power failure.
In addition to power outages, other events such as a UPS major breakdown, UPS overload, or serial communication failure can also be configured as shutdown triggers. Several different types of shutdown can also be selected: Shutdown, Shutdown & power OFF, or entering “Hibernate” mode.

During the shutdown process a user script to exit currently running applications, or to save data, can also be executed.
To prevent draining the battery, UPS power cutoff can be extended until after verifying that the computer was shut down.

(2) Scheduled Operation

Computer operation can be scheduled by setting a Start/Stop schedule for the UPS. When the UPS is stopped, the computer will be shut down automatically, reducing the burden of operating the system.

(3) UPS Status Display

Input/Output power status and battery status can all be checked in real time.
UPS status can also be logged, for checking at a later date.

(4) Notifications

Power failure/recovery events, the progress of the automatic shutdown, etc. are displayed as messages on the computer screen where the software is installed. The user can also specify sound files to be played when these messages are displayed.

(5) UPS Operation History Log

This feature saves the operating conditions of the UPS (status, measurement data, and event log) as a history / log file.
The operating history can be output to a file, making the data available for editing and analysis in other applications.

If the computer powers off automatically when the OS is shut down, the following points should be noted:
These computers may not start automatically, even if the power is supplied to them. If you want the computer to start up when the UPS is started, it is necessary to adjust computer settings accordingly.
There are computers that do not allow for such settings. Check with the computer manufacturer before building your system.

1.4 Operating Environment

The following is the minimum system configuration required for the setup and operation of the SANUPS SOFTWARE STANDALONE.

Computer: AT compatible
CPU: PentiumⅢ® 500MHz (or greater)
Memory: Minimum of 32 MB (64 MB or more recommended)
Available disk space: Minimum of 95MB
Display: Minimum 640 x 480 pixel resolution

Supported OS: Windows® NT 4.0 (*1), Windows® 2000, Windows® XP(x86, x64),
Windows® Server 2003(x86, x64) (*2), Windows® Server 2003 R2(x86, x64) (*2),
Windows® Vista(x86, x64) (*3), Windows® Server 2008(x86, x64) (*4) ,
Windows® Server 2008 R2(x64) (*4) , Windows® 7(x86, x64) (*5) ,
Windows® Server 2012(x64) (*6) , Windows® 8(x86, x64) (*7) ,
Windows® Server 2012 R2(x64) (*6) , Windows® 8.1(x86, x64) (*7) ,
Windows® 10(x86, x64) (*8) ,
Windows® Server 2016(x64) (*6)

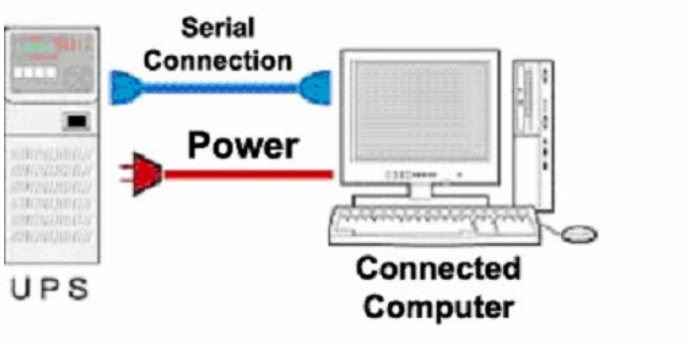
(*1) Service Pack 6 or above
(*2) Standard Edition or Enterprise Edition
(*3) Business , Enterprise or Ultimate
(*4) Standard , Enterprise or Web Server
(*5) Professional , Enterprise or Ultimate
(*6) Essentials , Standard or Datacenter
(*7) Windows 8 , Windows 8 Pro or Windows 8 Enterprise
(*8) Home , Pro , Enterprise or Education

UPS: SANYO DENKI UPS (with serial interface)

2. UPS Control System Configuration and Basic Operation

2.1 System Configuration

This software is used to control the power of a single computer connected to a single UPS via a serial cable.



Caution regarding the use of the SANUPS SOFTWARE STANDALONE

If the “Automatically Stop UPS during a Power Outage” option is selected, and the computer is manually restarted after an automatic shut down due to an unrecoverable power outage, it is possible that the UPS power may turn off during this restart period.
If the UPS is used with this setting enabled, do not restart the computer manually.

2.2 UPS Control System Basic Operation

2.2.1 Operation Sequence

Various incidents such as occurrence and recovery of Power failure are defined “**events**” in UPS Control System.

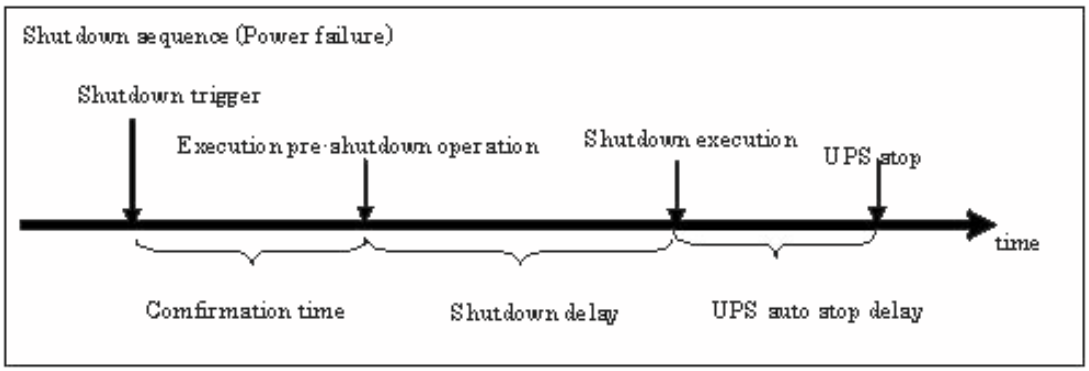
The following section provides a brief explanation about the operating sequence of the UPS Control System for the respective events:

(1) Power failure sequence
(2) UPS Major breakdown / overload / communication failure sequence
(3) Scheduled shutdown sequence

A script can be specified for the events to be processed prior to shutdown.
Refer to “Appendix C, Events” for more information about each event.

(1) Power Failure Sequence

The UPS Control System operating sequence for an unrecoverable power failure is as follows:



Further explanation of this sequence, using a power outage event as an example, is given below:

(A) When a power outage occurs, the UPS first waits for the power to recover during the Comfirmation time

If power is recovered during the Comfirmation time, no further steps are performed.

(B) If the Comfirmation time elapses and the UPS determines the recovery impossible, the pre-shutdown process is performed.

(Beyond this point, even if the power recovers, the power outage sequence will not be suspended.)

Before starting the shutdown, the process specified by the user will be executed. This period is called the Shutdown delay time.

(C) After the Shutdown delay time elapses, the shutdown of the computer begins.

If the UPS is set to automatic stop, it will stop once the UPS auto stop time has elapsed.

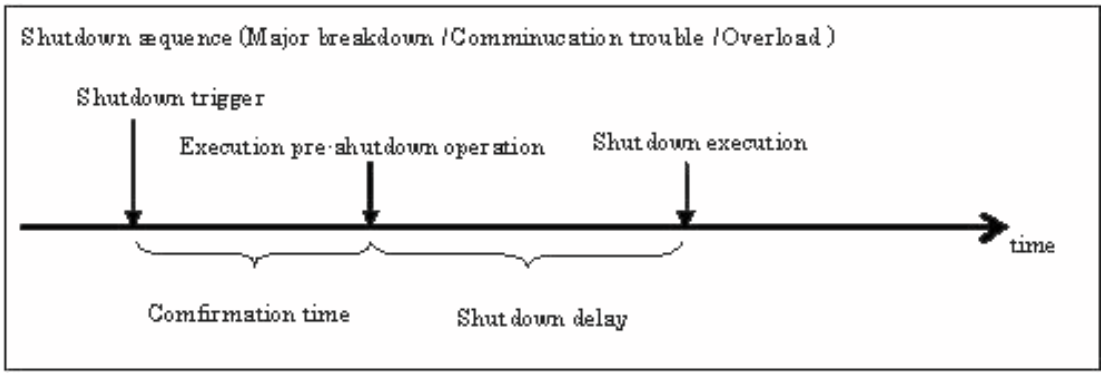
Refer to “Section 6.4, Setting the Shutdown Conditions” for information regarding time settings for operation of the UPS in the case of a Power failure.

Caution

Even if power is recovered during the Shutdown delay time or the UPS auto stop time the shutdown process will be completed. If the UPS is configured to stop operations during a power outage, that process will also be carried out. A power recovery at this point will not cause the computer to start.

(2) Major breakdown / Communication trouble / Overload Sequence

The UPS Control System operating sequence for an unrecoverable Major breakdown / Communication trouble / Overload is as follows:



Further explanation of this sequence, using a Major breakdown event as an example, is described below: (Overload and Communication trouble sequences are identical)

(A) When a major failure occurs, the UPS first waits for the failure to recover during the Comfirmation time.

If a recovery is made from the major failure during the Comfirmation time, no further steps are performed.

(B) If the Comfirmation time elapses and the UPS determines the recovery impossible, the pre-shutdown process is performed.

(Beyond this point, even if the failure recovers, the major failure sequence will not be suspended.)

Before starting the shutdown, the process specified by the user will be executed. This period is called the Shutdown delay time.

(C) After the Shutdown delay time, the shutdown of the computer will begin.

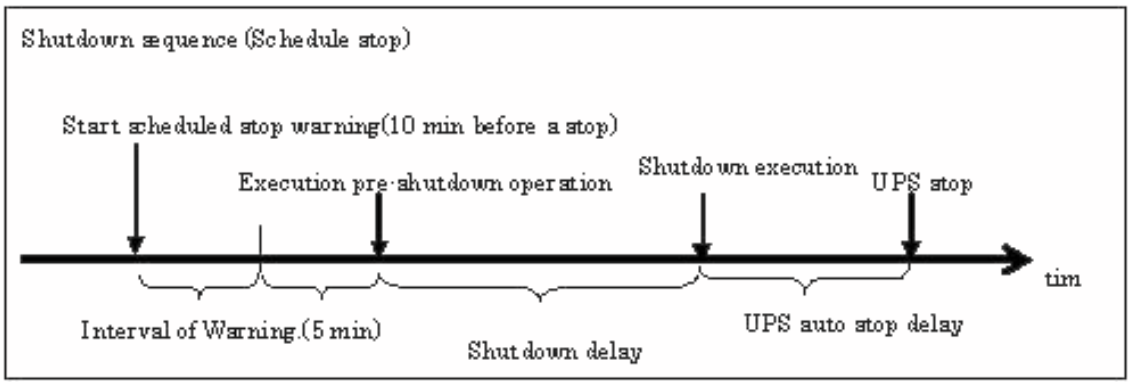
Refer to "Section 6.4, Setting the Shutdown Conditions" for information about the timing settings for the operation of the UPS in the case of a Major breakdown / Communication trouble / Overload .

Caution

Even if the failure is recovered during the shutdown delay time, the shutdown process will be completed. A recovery at a later point will also not cause the computer to start.

(3) Scheduled shutdown Sequence

Shutdown sequence when a UPS Start/Stop is scheduled



(A) 10 minutes before the scheduled shutdown time, an advanced shutdown notice is displayed.

(B) Once the time of the scheduled shutdown is reached, the pre-shutdown process begins.

(C) After the Shutdown delay time, the computer is shut down. After the UPS auto stop time has elapsed, the UPS will be shut down.

(D) At the Scheduled start time, the UPS will start up and supply power to the computer.

Refer to "Section 6.6, Scheduled Operation" for information about the UPS Start/Stop schedule settings.

2.3 System Configuration Requirements

2.3.1 Operating Conditions

- Even though an OS may have a “Standby” power option, the SANUPS SOFTWARE STANDALONE does not work during standby periods. Therefore, do not use this software on a computer that uses a standby mode.
- If another device is receiving power from the same UPS, its power supply will be synchronized (ON/OFF) with that of the computer which has the software installed. The user must ensure this configuration does not cause any problems with the attached device.
- Even though a UPS can support multiple systems, the systems cannot be controlled separately. All systems will have a single, common power control.

3. Installation

3.1 Connecting the UPS and the computer

Connect the UPS to the computer using the serial cable provided with the UPS.

3.2 Installing the UPS Control Software (SANUPS SOFTWARE STANDALONE)

This section explains the installing procedure of the SANUPS SOFTWARE STANDALONE on Windows 2000 or latter. When installing it on WindowsNT, execute Setup.exe in the WinNT folder on the CD-ROM, then proceed according to the installer to install.

The following operations should only be performed by a user with Administrator privileges.

3.2.1 Starting the Installation program

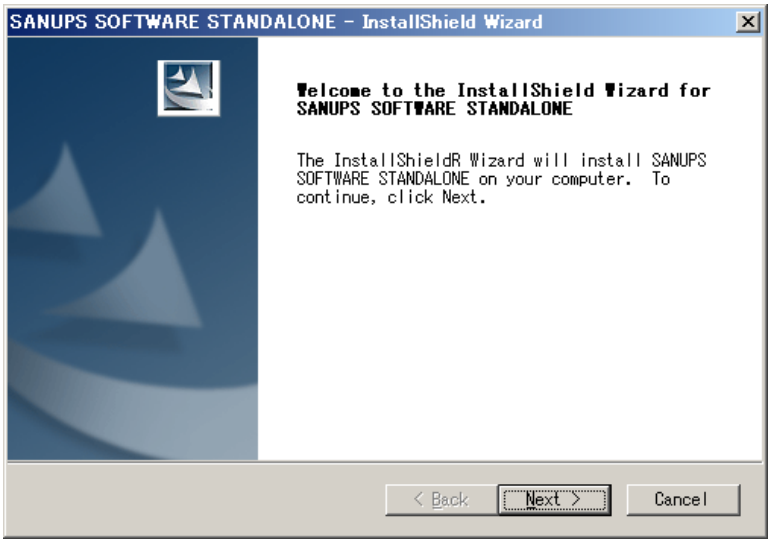
(1) Insert the SANUPS SOFTWARE STANDALONE CD-ROM into the CD-ROM drive.

(2) The installation program starts automatically, and the following window is displayed:



<u>If the installation program doesn't start automatically,</u> double-click **Setup.exe** on the CD-ROM to start installation manually.

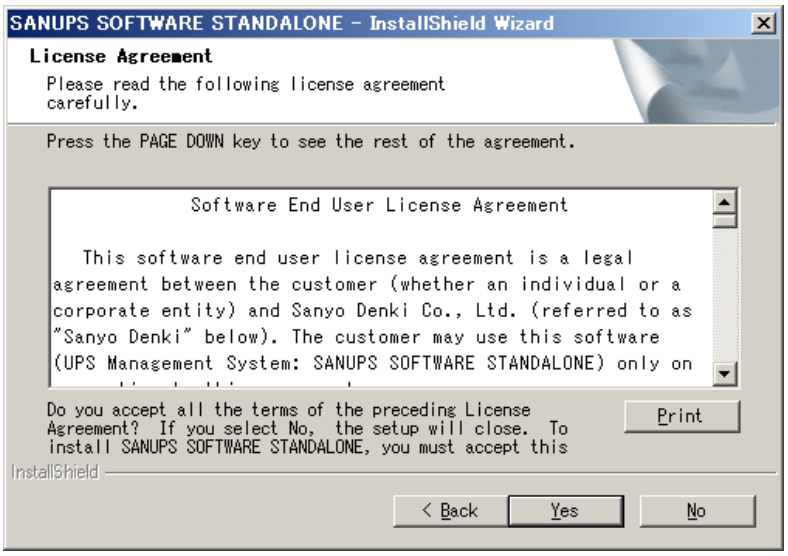
(3) Select the language, and click (select) the "**OK**" button.



(4) Click the "**Next**" button to proceed.

3.2.2 Product License

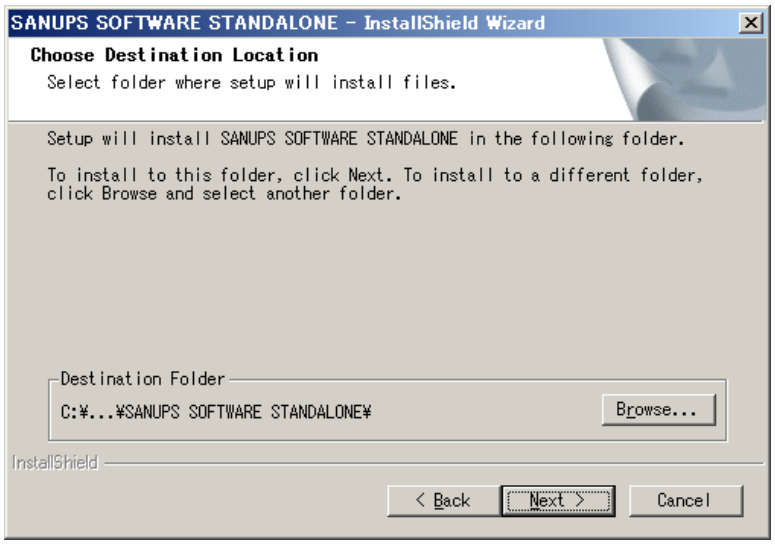
(1) The License Agreement window is displayed.



(2) Click the "**Yes**" button to continue the installation.

3.2.3 Selecting the Destination Location

(1) The Destination Folder selection window is displayed.

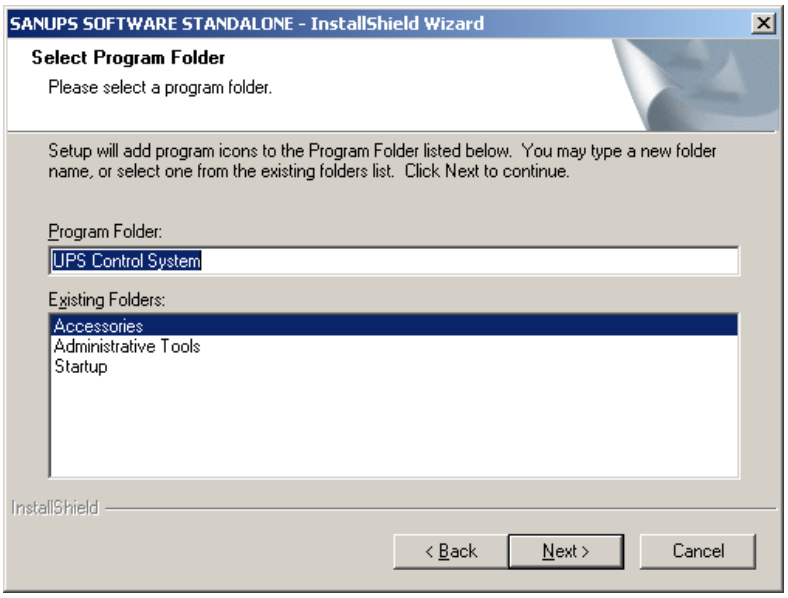


The "Destination Folder" can be modified in this window, if necessary, by clicking the "Browse" button.

(2) Click the "**Next**" button to proceed.

3.2.4 Selecting the Program Folder

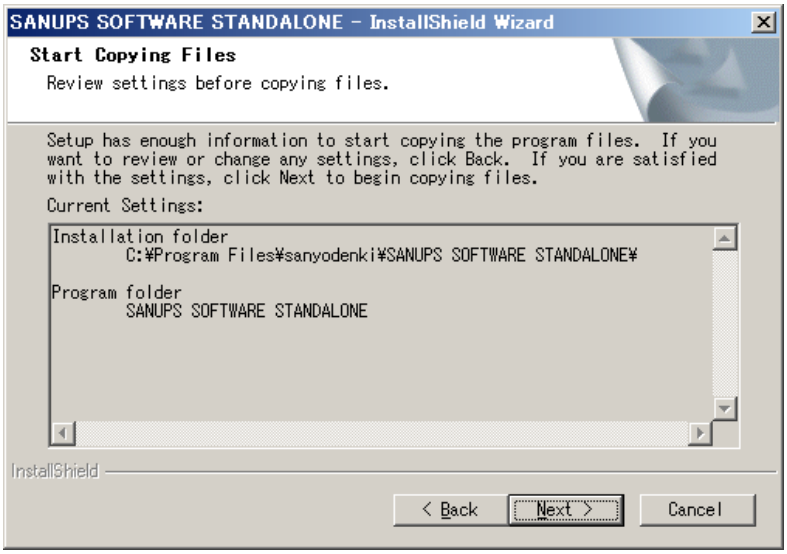
(1) The program folder selection window is displayed.



(2) Click the "**Next** " button once a selection has been made.

3.2.5 Verifying the Start of File Copy

(1) The verification window for file copying is displayed.



(2) Verify the settings, and then click the "**Next** " button to proceed.

3.2.6 Copying the Files (Actual Installation)

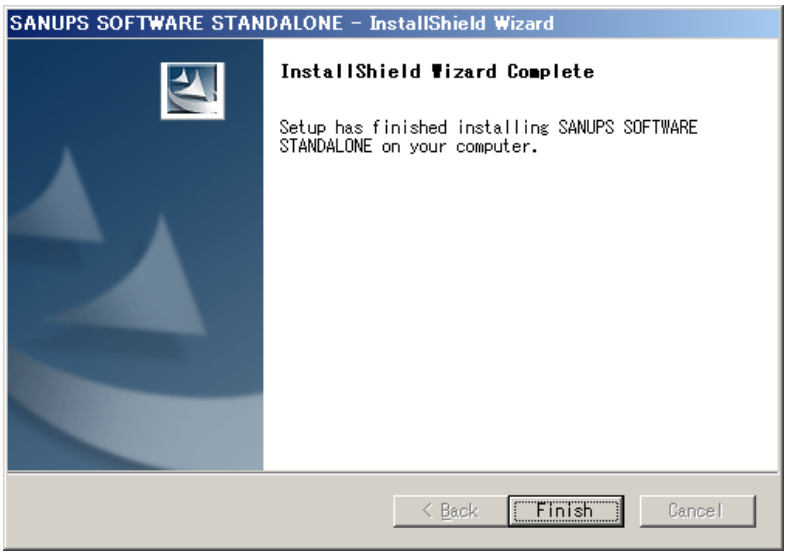
The SANUPS SOFTWARE STANDALONE files are copied to the hard disk.

The installation may take several minutes. Please wait until a message indicates that all files have been successfully copied.

> If there is insufficient disk space available in the installation directory, the installation may fail. Make sure that there is sufficient available disk space for the operating environment.

3.2.7 Completing the Installation

(1) The Setup Complete window is displayed.



(2) Click the "**Finish**" button to end the installation program.

*** After completing the software installation, the UPS connection needs to be established and configured in order to perform automatic shutdowns.**

3.3 Using the Java™ VM (Virtual Machine)

The SANUPS SOFTWARE STANDALONE runs as a Java™ application.

During the installation of the SANUPS SOFTWARE STANDALONE on the computer, the Java™ VM (*1) will be automatically configured. This Java™ VM is configured for exclusive use with the SANUPS SOFTWARE STANDALONE. If another instance of the Java™ VM is already installed, or the user intends to install another copy of any Java™ VM in the future, this installation of the Java™ VM will not affect them.

*1) Java™ Runtime Environment Version1.5 (JRE1.5) will be installed.

Additionally, installation or uninstall of another Java™ VM will not have any effect on the Java™ VM environment of the SANUPS SOFTWARE STANDALONE.

3.4 Uninstalling the UPS Control Software (SANUPS SOFTWARE STANDALONE)

Follow the instructions below to completely uninstall the UPS Control Software.

(1) Stop the SANUPS SOFTWARE STANDALONE UPS service program.

If the UPS Control System is in operation, refer to “Appendix A, Service Operating Procedure” for information on stopping the SANUPS SOFTWARE UPS service.

Caution

Uninstall is not possible while the service is running.

(2) Uninstalling the SANUPS SOFTWARE STANDALONE

(A) From the [Start] menu on the taskbar, select [Settings] – [Control Panel].

(B) On the Control panel, select “Add or Remove Programs”.

(C) Select “UPS Management System SANUPS SOFTWARE STANDALONE” from the list of currently installed programs, and remove it.

Uninstalling on Server Core environment of Windows Server 2008 / 2012.

Set the installer CD-ROM, and execute “Setup.exe” to uninstall.

If there is not CD-ROM, start the command prompt, and execute “uninstSSS.bat” after changing folder to the installation folder. When executing “uninstSSS.bat”, “The batch file cannot be found.” message will be displayed at the last. However, there is no need to do something because this message is displayed due to uninstallation of “uninsSSS.bat”.

4. Setup

After installing the SANUPS SOFTWARE STANDALONE, follow the instructions in Section 4.1, UPS Connection Setup Function (below), to configure the UPS connections. After configuring the connection settings, the SANUPS SOFTWARE STANDALONE will begin normal operations.

4.1. UPS Connection Setup Function

This function configures the serial port that is used to connect the computer and the UPS via a serial cable. If this serial port number is not configured properly (e.g. immediately after installation), the SANUPS SOFTWARE STANDALONE will automatically display the UPS Connection Information Setting window on startup, and the serial port can then be configured.

Proper configuration of this setting allows the computer to automatically shut down in the event of a power failure.

The serial port configured with UPS Connection Information Setting can be modified later.

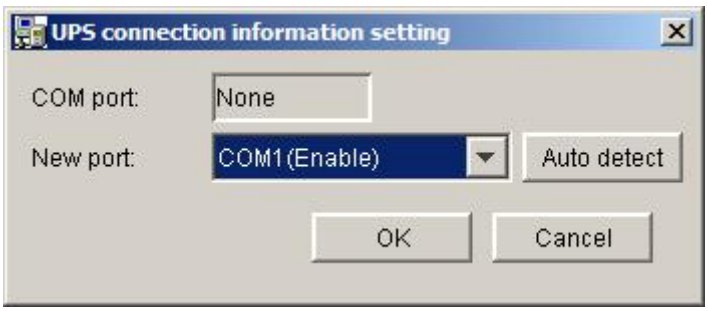
4.1.1. UPS Connection Setup Procedure

(1) Connect the computer and the UPS with the serial cable.

(2) Launch the SANUPS SOFTWARE STANDALONE from the Windows® Start menu.

> Starting on Server Core environment of Windows Server 2008 / 2012.
>
> Start the command prompt, and execute “SG4EXEC.BAT” after changing folder to the installation folder..

(3) The serial port connected to the UPS is automatically detected, and the UPS Connection Information Setting window is displayed. If automatic detection is successful, the detected serial port number is displayed in the “New port” field. (Note: If the computer uses A, B, etc., for indicating serial ports, read A as 1, and B as 2., etc.)



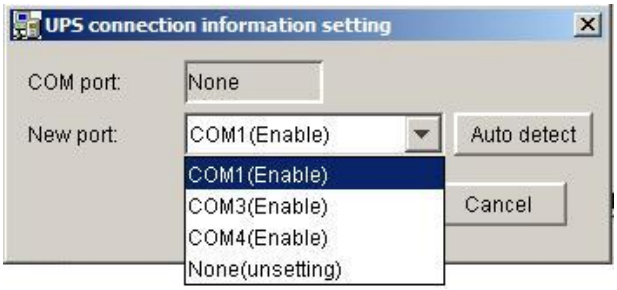
If automatic detection fails

If automatic detection fails, the following dialog box is displayed:



In this situation, confirm that the serial cable is properly connected, UPS power is turned on, and that other applications are not using the same serial port. Retry automatic detection after confirming all of these conditions.

To check if other applications are using the serial port, display the selection list for the “New port” field, and see if “Disable” is displayed. If “Disable” is displayed for a port address, then the port is in use by another application.



(4) Click the “OK” button.

(5) The Account Authentication window is displayed. Use the following default values:

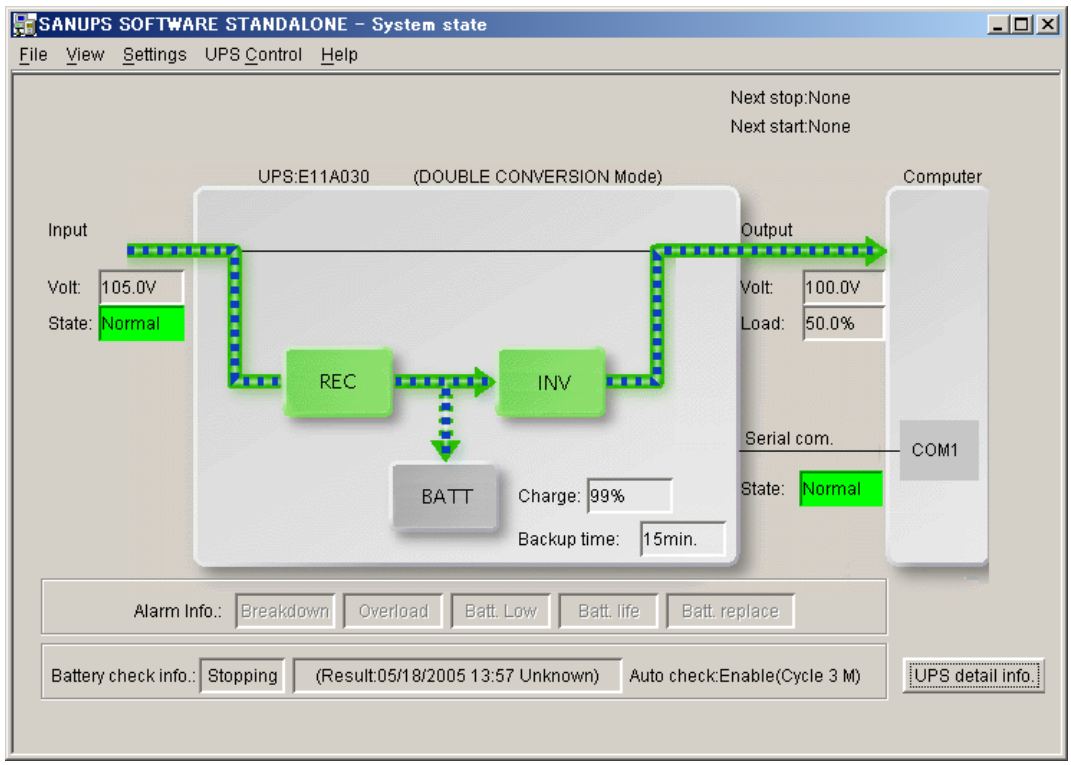
Administrator: upsadmin

Password: UpsAdmin (the password is case-sensitive)



(6) Click the "**OK**" button after entering the default authentication.

(7) The current system status is displayed on the main screen (System State display window).



(8) The following procedure describes how to verify that the automatic shutdown is working properly in the case of a power failure:

(A) Intentionally cause an artificial power failure (for example, turn OFF the UPS power input).

(B) Confirm that the power failure message is displayed on the screen.

(C) After the message is displayed, restore the power to normal.

5. Starting and Exiting the SANUPS SOFTWARE STANDALONE

5.1 Start

Use the [Start] button on the Taskbar, and select [Programs] – [UPS Control System] – [SANUPS SOFTWARE STANDALONE]

> Starting on Server Core environment of Windows Server 2008 / 2012.
>
> Start the command prompt, and execute “SG4EXEC.BAT” after changing folder to the installation folder..

5.2 Exit

There are two methods to exit this program:

(1) Select “File” – “Exit” form the menu (OR)

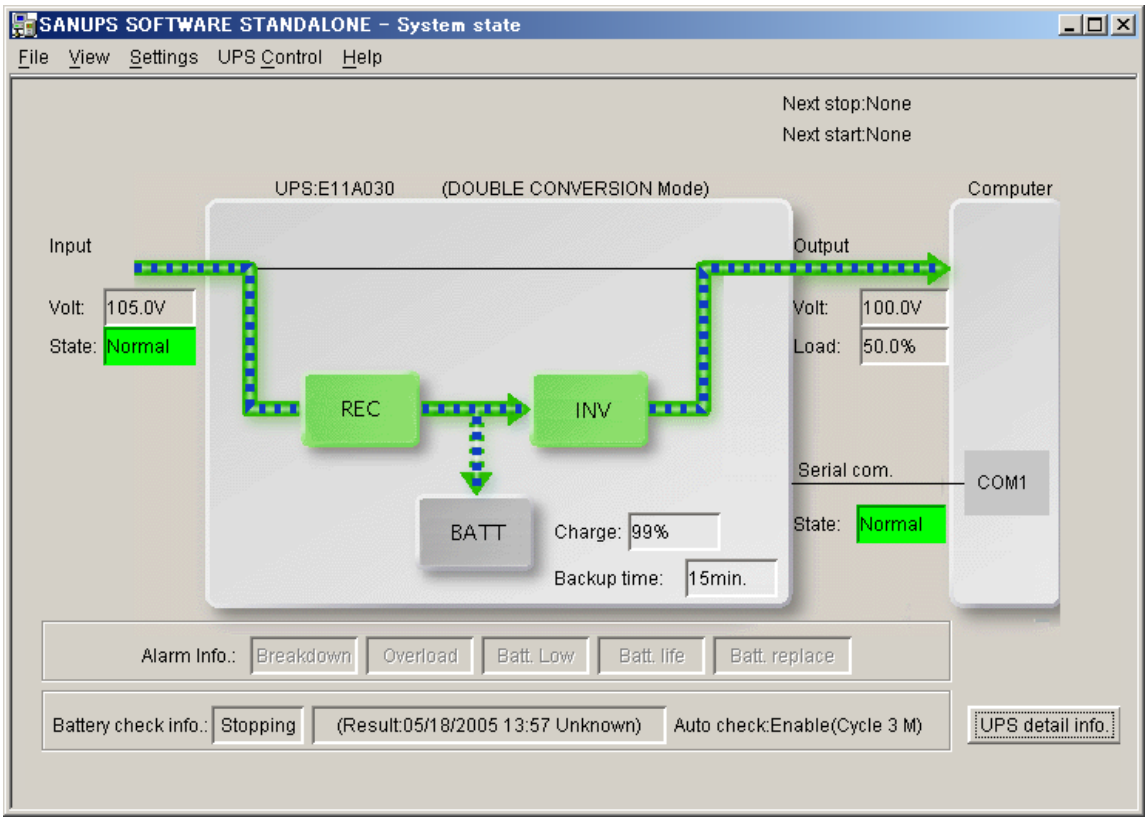
(2) Click on the X on the title bar of the window.

6. Description of the Functions

INDEX	Section
Main Screen	6.1
Setting the UPS connection information	6.2
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6.1 Main Screen

The main screen of the SANUPS SOFTWARE STANDALONE displays the operating status of the system in an overview format, including the image of the power supply system, the important measurement values, and the UPS warnings, if any. The display automatically refreshes every 5 seconds.



Menu Items

Select the desired function from the menu bar.

Menu name	Menu items	Description
File	Exit	Exits the GUI tool.
View	UPS history (condition & measured value)	Displays the history of the UPS.
	Event-Log	Displays the event log.
Settings	Account Info.	Sets the account information.
	UPS connection info.	Sets the UPS connection.
	Shutdown condition	Sets the shutdown conditions.
	Monitoring condition	Sets the monitoring conditions.
	Schedule info.	Sets the Start/Stop schedule.
UPS Control	UPS stop/reset	Stops/resets the UPS.
	Battery Check	Checks the battery.
Help	Help	Displays help information.
	About SANUPS SOFTWARE STANDALONE	Displays the version of the program.

Backup time

Displays the presumed backup time under battery power (in minutes), under the current load conditions.

If the presumed backup time exceeds 1092 minutes, the display will show "1092 min.".

Caution: The presumed backup time is an approximation; it can change dramatically depending on the load status.
If the UPS does not have the capability to calculate the presumed backup time, the display will show “Unknown”.

Next stop, start

Displays the next scheduled stop time, and the next startup time based on the scheduled settings.

If no schedule is set up, or the schedule is disabled, “None” will be displayed.

Charge

Displays the charge rate (as a %) of the battery.

Caution: If the UPS does not have the capability to calculate the charge rate, the display will show “Unknown”.

Alarm info.

Warning conditions, such as breakdown, (minor breakdown and major breakdown), overload, low battery voltage, battery lifetime, and battery replacement time are indicated as red or yellow alarm lights at the corresponding parts.

“Breakdown” and “Batt. Low” are shown in red; other warnings are yellow lights.

Battery check info.

Displays the current status of the battery check (executing/stopping), and the results of the previous battery check. If the battery check finishes abnormally, the result field will be highlighted in red.

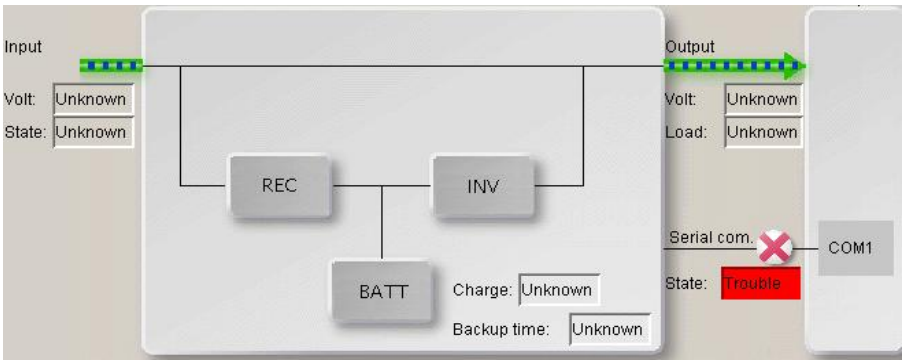
Other information

Refer to “Appendix B, Description of Main Screen Display Items” for information about other additional display items.

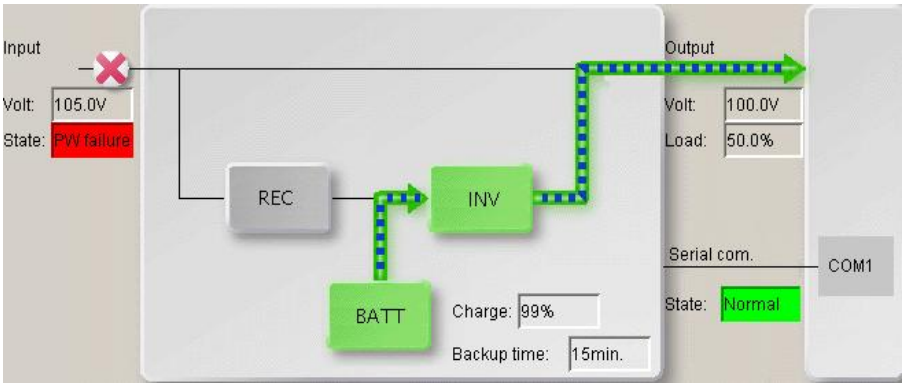
Power supply system image

The UPS status is displayed by switching the screens according to the priority order described below.

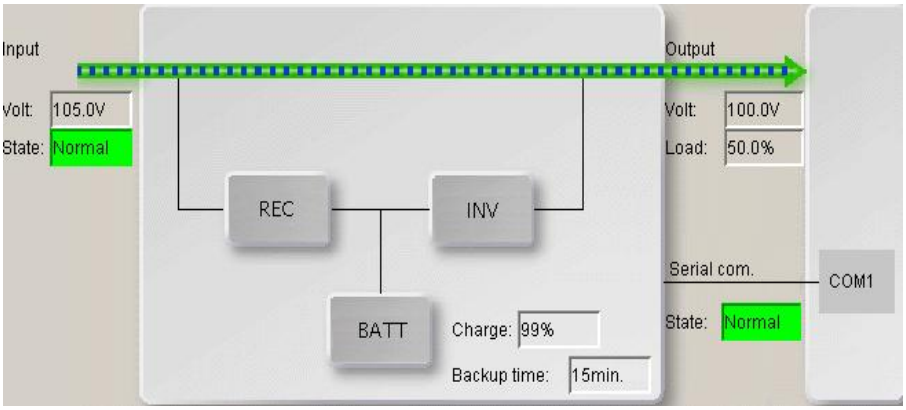
<Display Priority 1: If the UPS connection is not set, or a serial communication error occurs>



<Display Priority 2: During a power failure>



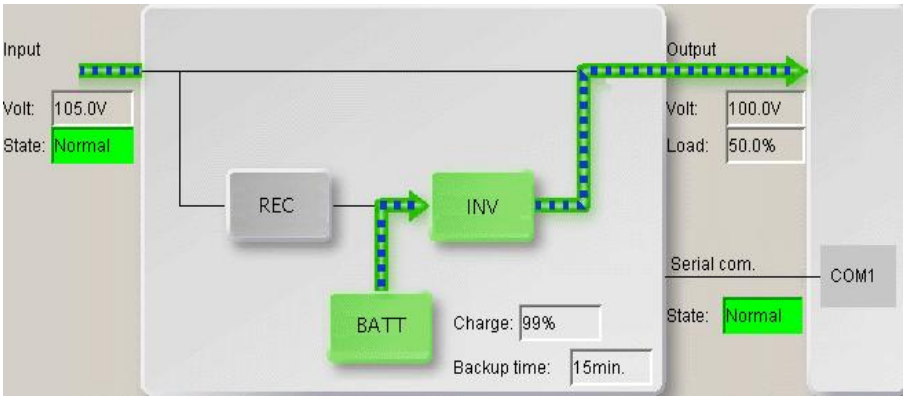
<Display Priority 3: During bypass operations>



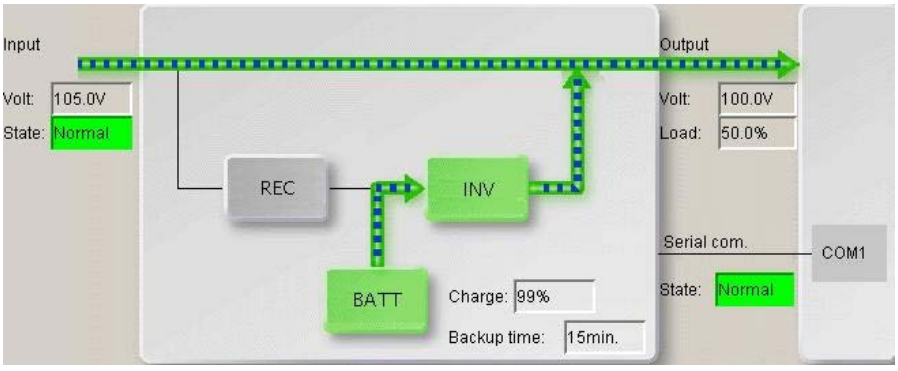
<Display Priority 4: During battery test >

<if the unit is not a Hybrid UPS or

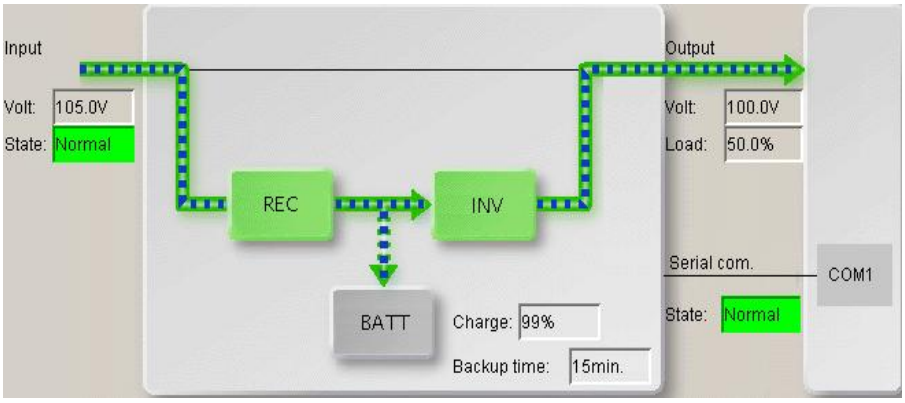
Hybrid UPS during DOUBLE CONVERSION Mode>



< Hybrid UPS during Not DOUBLE CONVERSION Mode >



<Display Priority 5: During normal operation (if the unit is not a Hybrid UPS)>



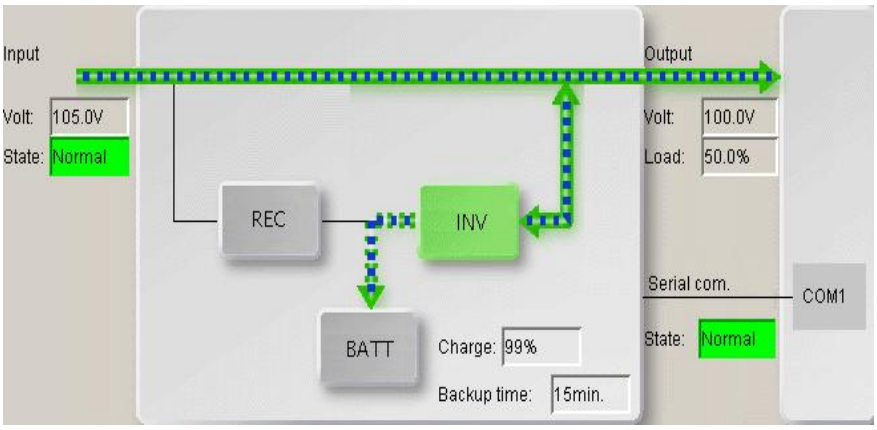
<Display Priority 5: During DOUBLE CONVERSION mode (for a Hybrid UPS)>

In the case of a Hybrid UPS, one of the following 3 modes is displayed.

DOUBLE CONVERSION mode

The image displayed is the same as for <Display priority 4> . In this mode, both the CVCF function and the power factor improvement function are working.

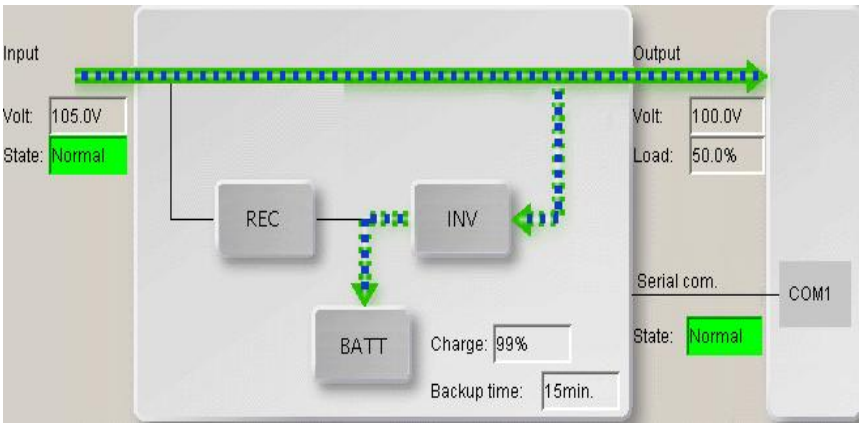
ACTIVE FILETER mode



In this mode, the CVCF function is suppressed, so that only the power factor improvement function operates.

This mode is used automatically when the power quality is relatively good.

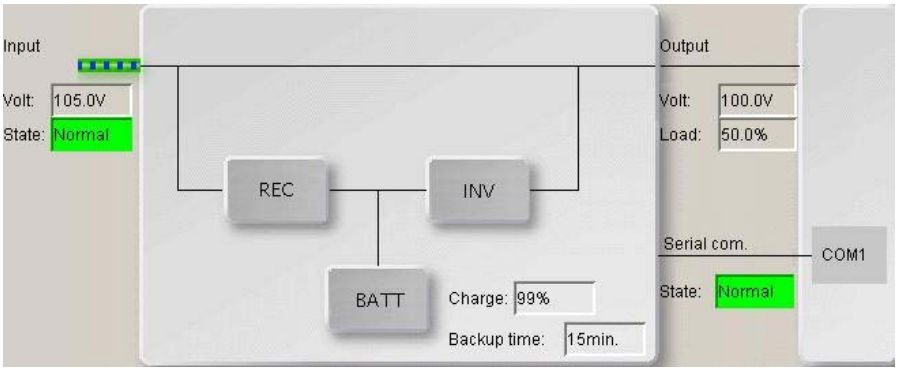
ECONOMY mode



In this mode, both the CVCF and the power factor improvement functions are suppressed.

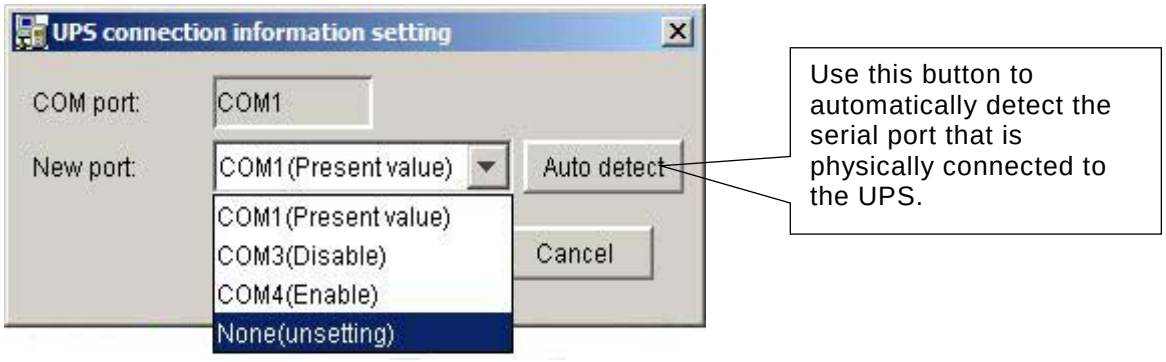
This mode is used automatically when the power quality is exceptional.

<Display Priority 6: During Standing by operation >



6.2 Setting the UPS Connection

From the menu bar on the main screen select "Settings" – "UPS connection info.". The UPS connection information setup screen will be displayed. This screen is used to select the serial port designated for serial communication with the UPS.



New Port

This field sets the serial port for serial communication with the UPS.

The selection list displays the name of the port and the status of the port as well. If the status shows "(Disable)", this means the serial port cannot be used for some reason, such as being used by another application.

Automatic Detection

The Automatic Detection button is used to automatically detect a serial port that is physically connected to the UPS, and where serial communication is possible.

If there is a serial port where the communication was successful, its number will be set in the "New Port" field.

6.3 Setting up Account Information

From the menu bar on the main screen select "Settings" – "Account info.". The account information setup screen will be displayed, allowing the user to set up the account information to prevent unauthorized access.



Account information (Administrator, Password)

The following values are the default settings for the Administrator and the Password:

Administrator: upsadmin (not case sensitive)

Password: UpsAdmin (case sensitive)

If you want to change the account information (administrator, password), check the "Change the account" checkbox, and then enter the new information.

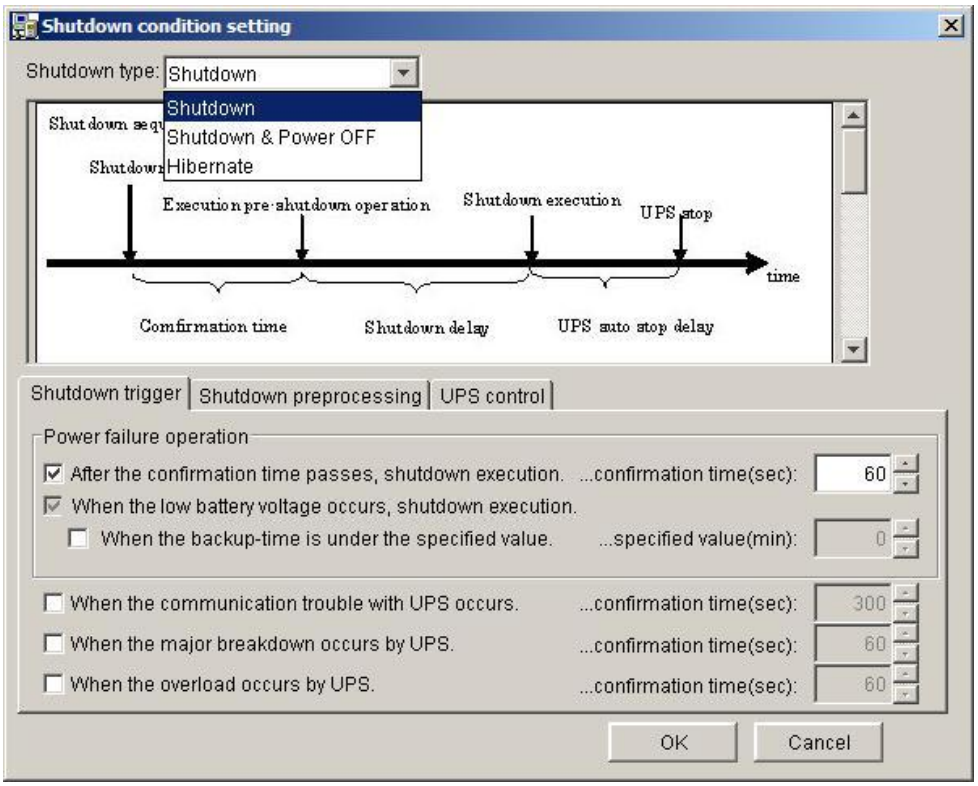
Save Password

When settings are updated in the UPS Control System, the account information is verified by default; to suppress account information, check this box.

6.4 Setting the Shutdown Conditions

From the menu bar on the main screen select "Settings" – "Shutdown condition". The shutdown condition setup screen will be displayed. This screen sets the operating conditions for shutdown in the case of a power failure, etc. The four shutdown conditions include "Shutdown type", "Shutdown trigger", "Shutdown preprocessing" and "UPS control".

(1) Setting the Shutdown Condition

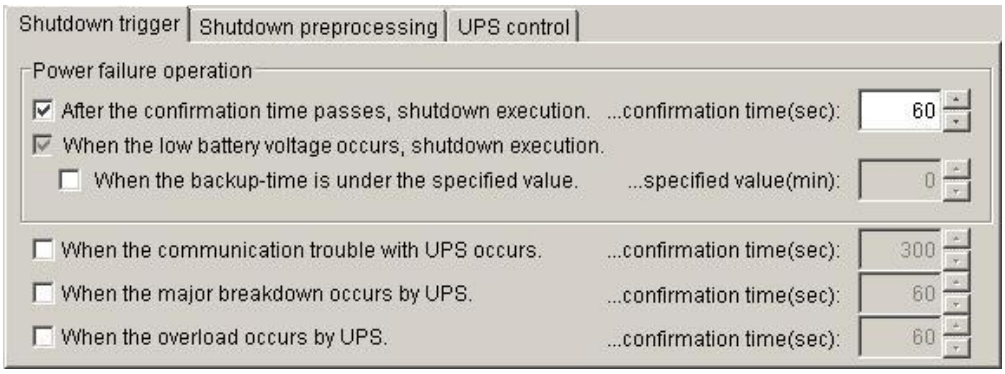


Shutdown Type

Select the shutdown type of the computer for power failure and scheduled shutdowns.

Shutdown Con.	Details
Shutdown	After shutdown, the power of the computer does not turn OFF automatically. For the computer to power down, the UPS automatic stop must be enabled under the "UPS control" tab.
Shutdown & Power OFF	After shutdown, the power of the computer turns OFF automatically. In this case, the power supply for the computer is turned OFF, but UPS output is not shut OFF. This option is displayed in the selection list only if the OS supports automatic power down of the computer.
Hibernate	After entering Hibernate mode, the power of the computer turns OFF automatically. The restart method depends on the OS settings. This option is displayed in the selection list only if the Hibernate mode is enabled in the OS settings. **Caution: If the Scheduled Operation feature is in use, do not use the "Hibernate" setting.**

(2) Setting the shutdown trigger conditions



After the comfirmation time passes, shutdown execution

Check this option to use the comfirmation time passed since the start of the power failure as the shutdown trigger.

This option is used to preserve the battery for the next power failure, and ensure reliable operation.

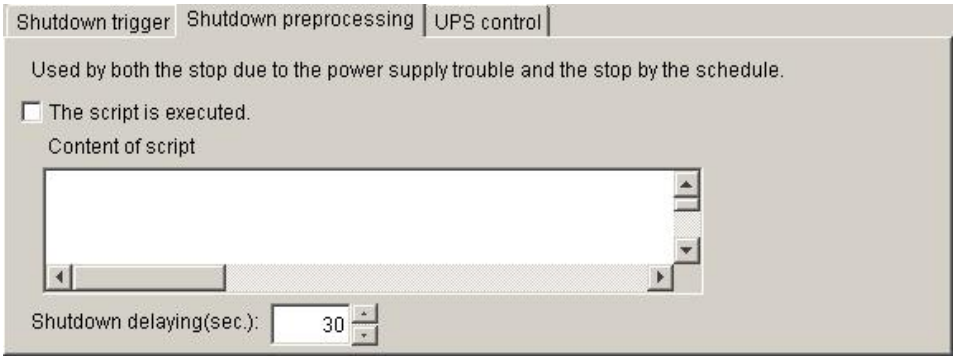
Remove this check to avoid stopping the computer (if continuous operation of the computer is a requirement).

The power failure verification period sets the time from the start of the power failure until the failure is determined unrecoverable. If power is recovered during this period, the shutdown will be cancelled. If the power failure continues beyond this time, it will be determined unrecoverable, and the shutdown will continue regardless of power recovery at a later point.

Shutdown triggered by serial communication trouble, major breakdown or overload

Check the respective options to select the comfirmation time passed since the start of the serial communication trouble, major breakdown, or overload as the shutdown condition. Each option sets the time from the start of the event until it is determined unrecoverable. If the condition is recovered during this period, the shutdown will be cancelled. If the event continues beyond this time, it will be determined unrecoverable, and the shutdown will continue regardless of event recovery at a later point. **If a shutdown is triggered by a communication trouble, a major breakdown, or overload, the UPS does not stop automatically.**

(3) Setting the shutdown preprocessing conditions



Run a user-defined script before starting the shutdown

If it is necessary to execute a specific process before an event triggered shutdown, check the “The script is executed” checkbox, and enter the script contents in the text-box.

Caution: The following limitations apply to scripts:

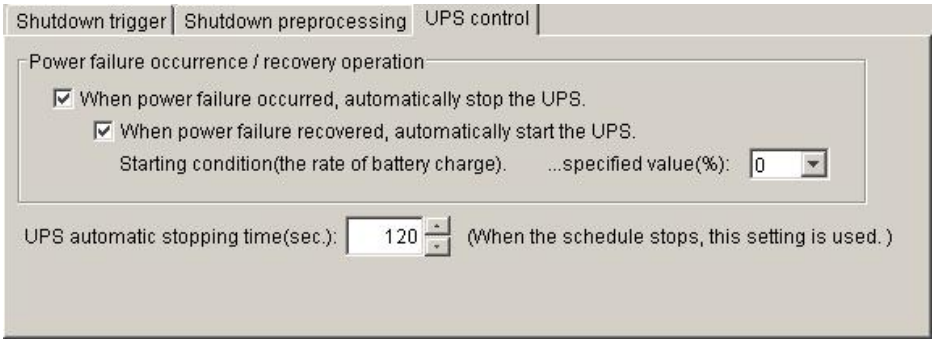
Maximum of 128 bytes per line (CR, LF excluded)

Total size is limited to a maximum of 510 bytes (including CR, LF of all lines)

Shutdown delaying time

This function sets the time delay from the point when the status was determined unrecoverable until the actual shutdown begins. If a pre-shutdown script is to be executed, allow sufficient time (a value at least as long as the processing time of the script) for its execution.

(4) Configuring the UPS control conditions



When power failure occurred, automatically stop the UPS

Check this box to turn OFF UPS output after the UPS automatic stopping time has elapsed.

If UPS output cannot be turned OFF for some reason (such as having another device other than the computer connected to it) uncheck this checkbox to enable continuous UPS output.

When power failure recovered, automatically start the UPS

Check this box to automatically turn ON the UPS when the power is recovered. If the UPS automatic start is enabled, the charge rate of the battery can be configured as an additional condition, so that when the battery charge rate is equal to or exceeds this value, UPS output will be activated.

What to do when the computer does not automatically start due to insufficient "Output OFF Keep Time."

When the UPS automatically restarts when power recovers, the UPS output is turned on 10 seconds in the shortest after the UPS output is turned off. If this duration is insufficient and the computer does not power off and not automatically turn on, change the setting of the minimum time for the output off keep time.

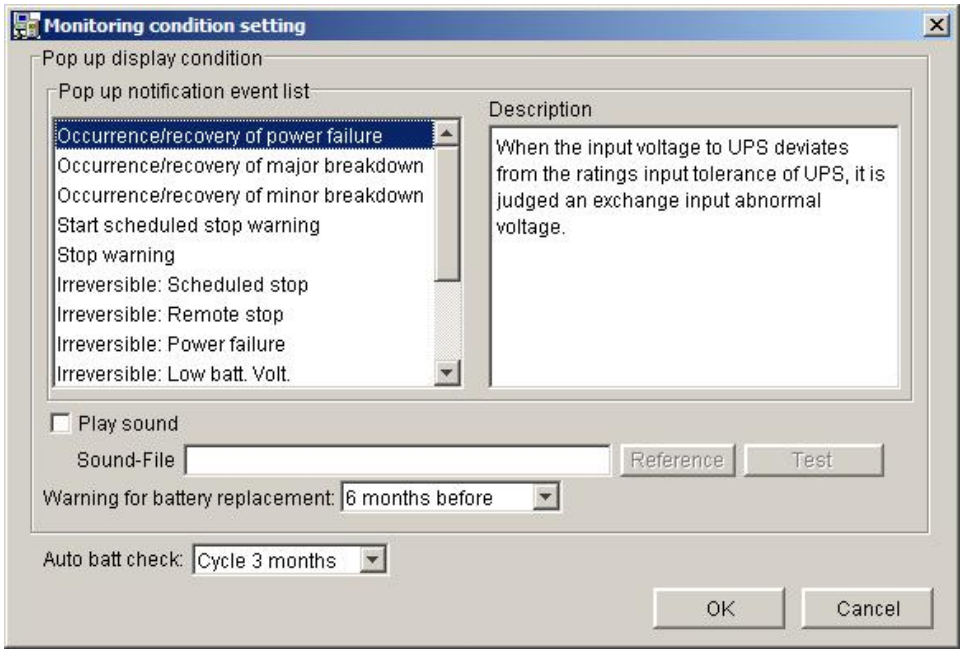
For how to change the setting, refer to Appendix E Changing the Output OFF Keep Time.

UPS automatic stopping time

This function sets the time from the start of the computer shutdown until the time the UPS output is turned OFF. If the checkbox labeled "When power failure occurred, automatically stop the UPS" is checked, the UPS output is turned OFF after this time has elapsed.

6.5 Setting the monitoring conditions

From the menu bar on the main screen select "Settings" – "Monitoring condition". The monitoring conditions setup screen will be displayed.
The SANUPS SOFTWARE STANDALONE will display a pop-up message in the case of predefined events.
This screen displays the list of predefined message events, and is used to enable or disable sound effects for these messages. In addition, the scheduled battery replacement time and the automatic battery check conditions can be configured on this screen.



Play a sound with the pop-up message

To enable a sound effect at the time of displaying a pop-up message, check the "Play sound" checkbox, and specify the sound file name. Click the "Reference" button and select the desired sound file.

Caution: The "Play sound" function does not function with Windows Vista or later.

Warning for battery replacement

This option sets the number of months to elapse before notification of required battery replacement. If battery replacement is required, the "Batt. replacement" will be displayed in yellow on the alarm information of the main screen.

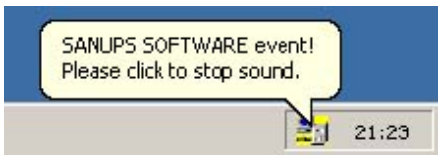
Automatic battery check

This potion sets the frequency of the automatic battery check from four choices: "None", "Cycle 1 months", "Cycle 3 months", and "Cycle 6 months". If automatic battery checks are not desired, select "None".

Note that if the UPS does not have automatic battery check capability, this item will not be displayed.

Stopping Sound Playback

When a sound file has been specified in order to play a sound when a message is displayed, the sound plays when an event occurs and the following icon appears in the task tray in **Windows**.



* **[SANUPS SOFTWARE event! Please click to stop sound]** appears after the event occurs and the icon flashes.

Align the mouse pointer over the icon and then right-click or left-click the icon to display the following **[Sound stop]** menu item.



If you align the mouse pointer over the **[Sound stop]** menu item and then right-click or left-click the menu item, the icon disappears and the sound stops playing.

6.6 Scheduled operations

Schedules such as the following can be set up to start/stop the computer:
(1) Daily, at a specific time
(2) On a specific day, at a specific time

Two types of schedules can be set up:
- Weekly schedule
- Specified day schedule
Both schedules allow flexible scheduled operations.

(A) Weekly schedule setting

For the weekly schedules, the Sunday-Saturday sequence is handled in a common schedule. The start/stop times can be specified for each day of the week. This is the base setting, and the system will operate according to the schedule set for each day.

(B) Specified day schedule setting

For daily schedules, the start/stop schedule for a specific day can be specified to modify the weekly schedule for that particular day.

If a day in is included in both the weekly schedule and the daily schedule, the specified day schedule takes priority.

Scheduled stop operations

Once a scheduled stop is performed, after the shutdown of the computer is verified, the UPS output will be shut OFF to preserve battery life.

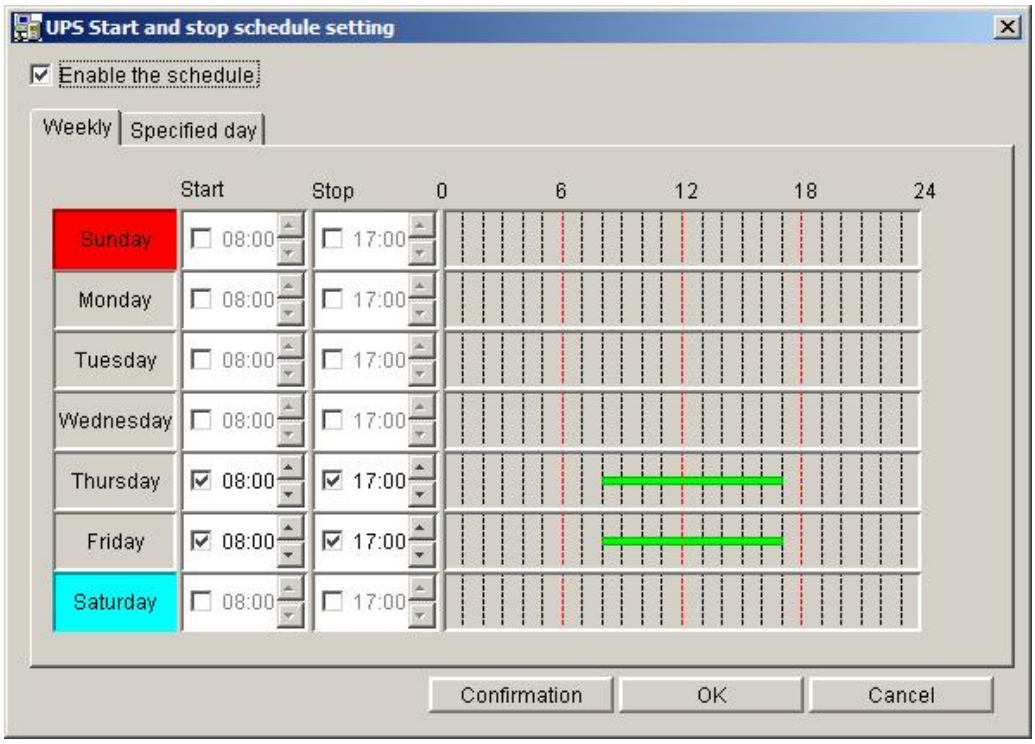
Scheduled start operations

After the scheduled start time, the output of the UPS is turned ON (power is supplied to the computer), and the computer starts up.

6.7 Setting the weekly schedule

From the menu bar on the main screen select "Settings" – "Schedule info.". The UPS start/stop schedule setup screen will be displayed. Select the weekly setting tab, and set the weekly schedule.

This schedule is set on a weekly basis; scheduled operations are executed based on these settings.



(In the figure above, Thursday and Friday have a weekly schedule set up.)

Check the checkbox to set the start or stop time.
The checkmark enables the execution of the schedule.

The figure above shows settings for Thursday and Friday, with 8:00 and 17:00 set for respective start and stop times, to control the scheduled operation every week.

Note
Specified day schedule settings take precedence over weekly schedule settings.

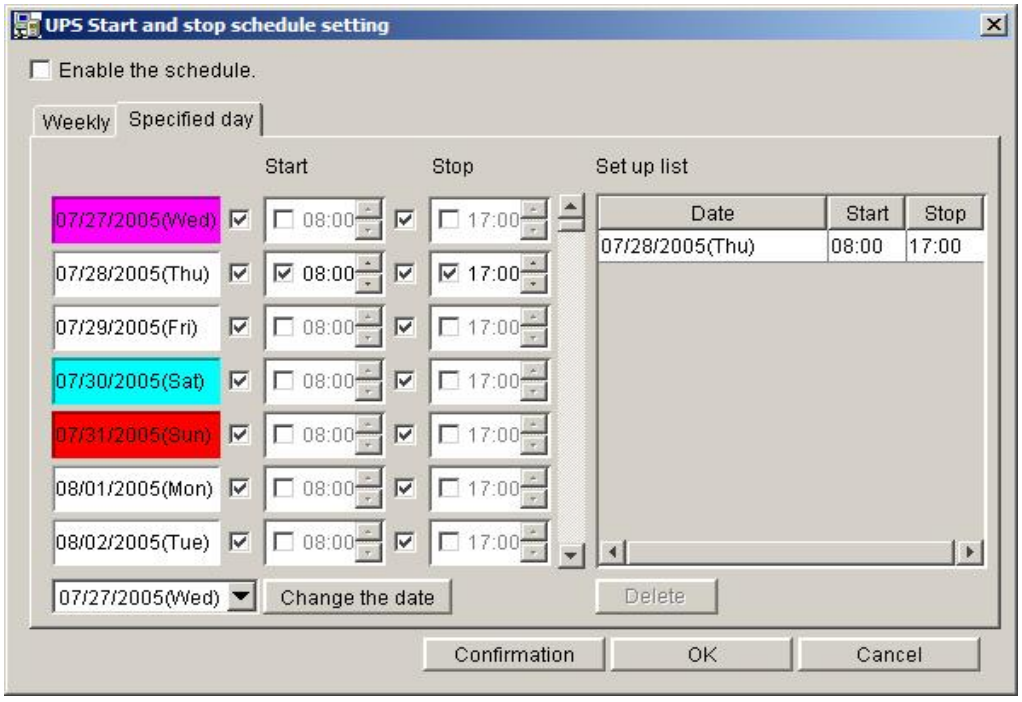
6.8 Setting the specified day schedule

From the menu bar on the main screen select "Settings" – "Schedule Info.". The UPS start/stop schedule setup screen will be displayed. Select the specified day setting tab, and set the specific day's schedule.

From here, the user can:

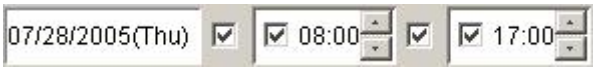
(1) Set the operating schedule for a specific day

(2) Modify the weekly schedule for a specific day.



(The figure above shows a schedule setting for Jul 28, 2005.)

Scheduled operation time setting



(2) (3) (4) (5) (6) (7)

(1) Display the scheduled day.

(2) Click the scheduled start checkbox

This checkbox enables the start of a schedule on the specified day (in the example above, Jul 28, 2005). (This start schedule includes the daily and weekly schedules.)

(3) Daily start scheduled checkbox

If this checkbox is checked, the start schedule for the specified day can be set (control enabled).

(4) Start schedule setting area
This area sets the start schedule timing for the specific day.
The time displayed by default is the time set in the weekly schedule.

(5) Stop schedule checkbox
This checkbox enables the stop schedule on the specified day (in the example above, Jul 28, 2005). (This stop schedule includes the specific day schedule and the weekly schedule.)

(6) Daily stop schedule checkbox
If this checkbox is checked, the stop schedule for a specified day can be set (control enabled).

(7) Stop schedule setting area
This area sets the stop schedule timing for the specific day.
The time displayed by default is the time set in the weekly schedule.

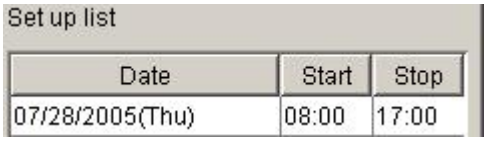
Start/stop schedule checkbox (Nos. 2 and 5 above)

These checkboxes determine whether or not the day's start and stop schedule will be executed. If a checkbox is **checked**, the schedule will be performed under the following conditions:

	Weekly schedule setting	Daily schedule setting	Operating schedule
1	Set	Set	Daily schedule is executed
2	Not set	Set	daily schedule is executed
3	Set	Not set	Weekly schedule is executed
4	Not set	Not set	No scheduled operation performed.

If the checkbox is **not checked**, regardless of the conditions above, no scheduled operation will be performed. For example, if only the weekly schedule is used for operation, in order to avoid executing the schedule set for a specific day, simply remove the checkmark from the checkbox. After the specific day has passed, operation will return to normal.

Daily schedule setting verification



The figure on the left shows the daily schedule settings.
An item can be deleted by selecting it, then clicking the "Delete" button.

Change the date



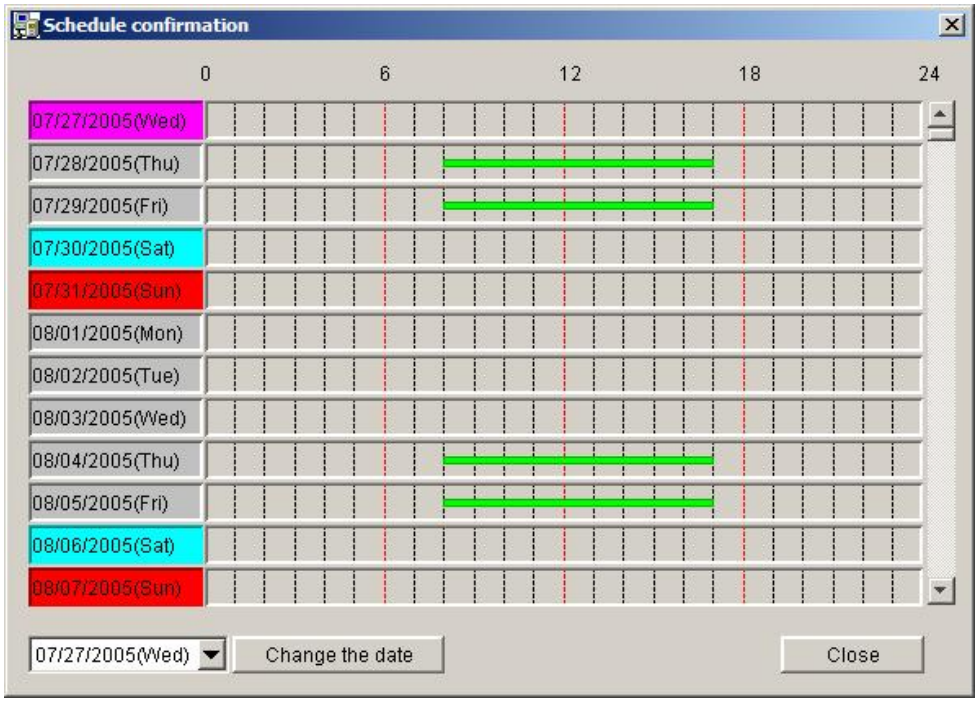
After modifying the date, click the “Change the date” button to scroll the display to the specified date.

Clicking the ▼ button will display the calendar.



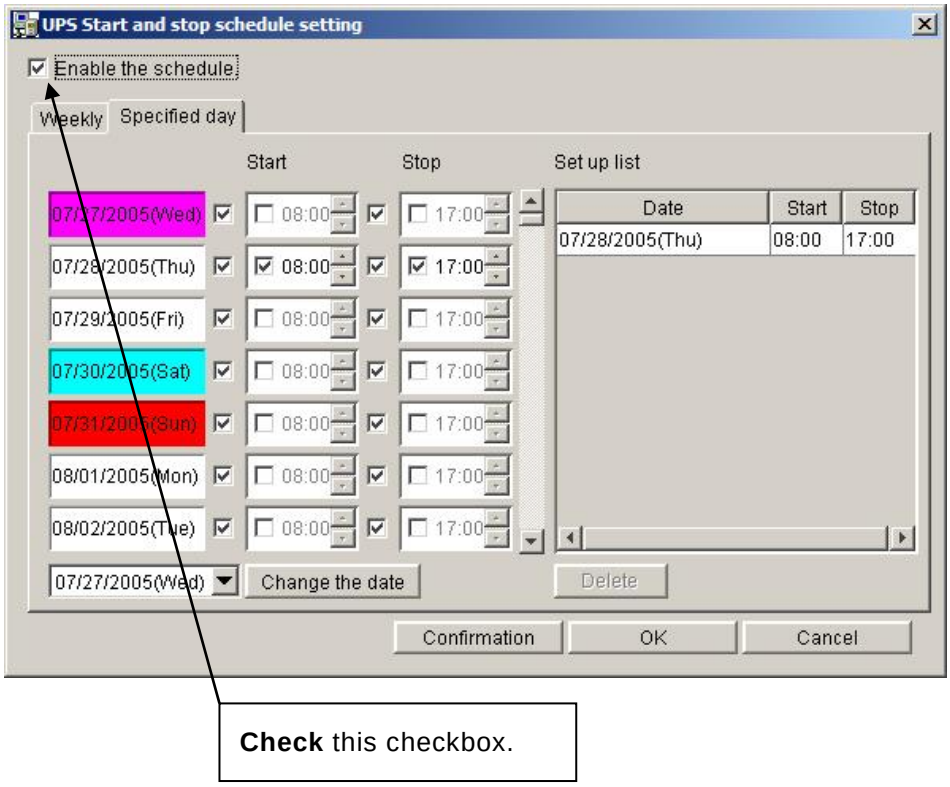
6.9 Comfirmation of schedule

Click the Comfirmation button on the weekly schedule or specified day schedule setting screen to list the current operation schedule. The green bar represents the operating status. Comfirmation the accuracy of these settings.



6.10 Enabling Scheduled Operations

If the schedule is set correctly, enable the scheduling function by clicking the "Enable the schedule" checkbox.



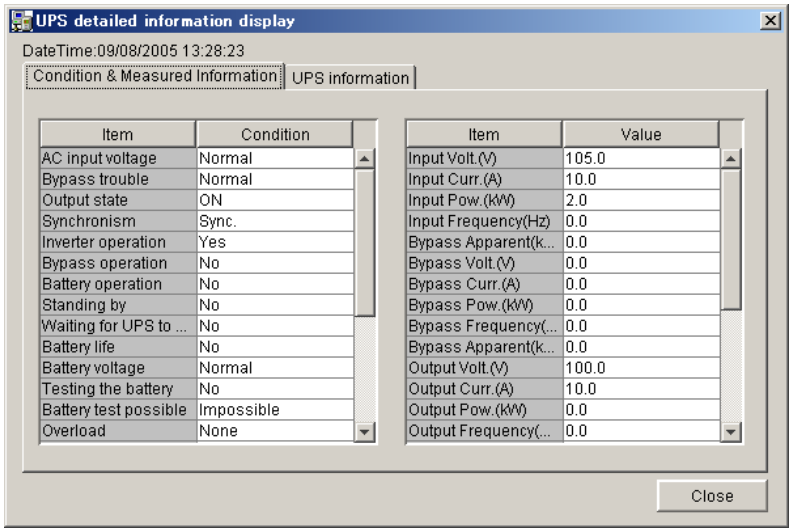
Check this checkbox.

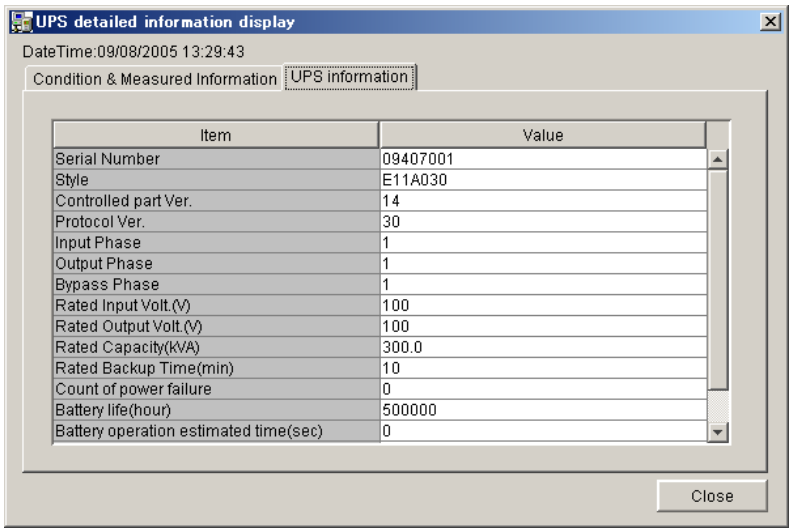
If this box is not checked, the scheduled operation will not be performed.

6.11 Displaying Detailed UPS Conditions and Measurement Value

Select the “UPS detail info.” button on the main screen to view the detailed UPS detail information screen. This screen is used to verify UPS conditions and measurement value, as well as UPS characteristics (UPS information). This screen automatically refreshes every 10 seconds.

* If the UPS does not have measurement data transmission capability, the measurement data will not be displayed.





Conditions information

Displays status information acquired from the UPS. Failure and warning status are displayed with a red background. Refer to “Appendix D, UPS Conditions and Measurement Description” for more information about this status information.

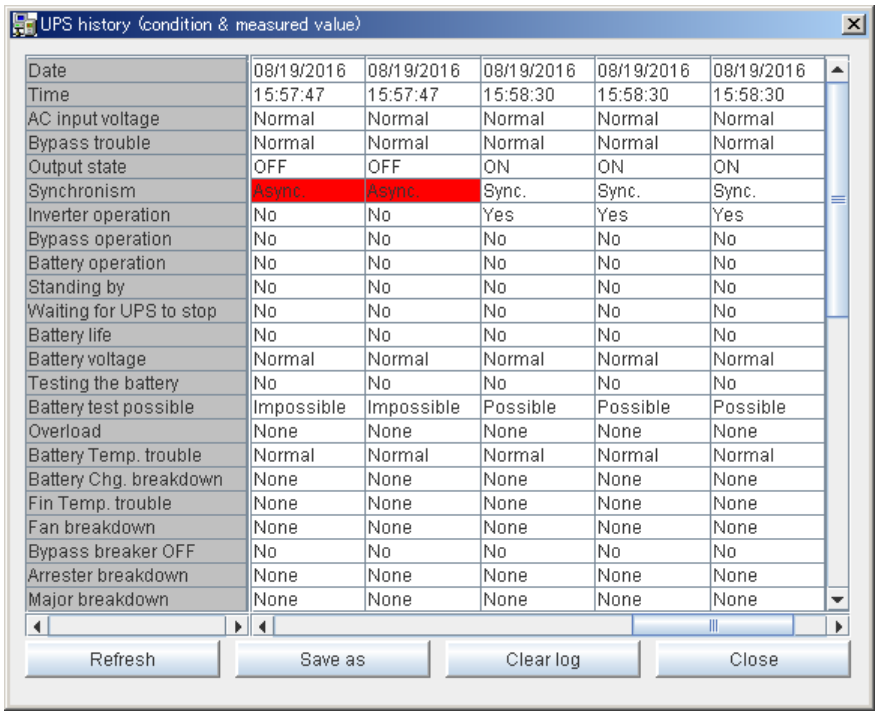
Measurement value information

Displays measurement information acquired from the UPS. If this information relates to multiple phases, a hyphen and the phase number will be inserted between the displayed measurement name and the unit. (Example: Input voltage – 1 (V))

Refer to “Appendix D, UPS Conditions and Measurement Description” for more information about this measurement information.

6.12 Displaying UPS History(condition & measured value)

From the menu bar on the main screen select "View" – “UPS history(condition & measured value” to display the UPS conditions and measurement history screen. The stored results of the past 14 days of UPS conditions and measurement value history can be reviewed here. **(Note that this record contains 14 days worth of history data taken at 10 minute intervals. UPS conditions changes are recorded automatically, regardless of the saving intervals.)**



Date	08/19/2016	08/19/2016	08/19/2016	08/19/2016	08/19/2016
Time	15:57:47	15:57:47	15:58:30	15:58:30	15:58:30
AC input voltage	Normal	Normal	Normal	Normal	Normal
Bypass trouble	Normal	Normal	Normal	Normal	Normal
Output state	OFF	OFF	ON	ON	ON
Synchronism	Async.	Async.	Sync.	Sync.	Sync.
Inverter operation	No	No	Yes	Yes	Yes
Bypass operation	No	No	No	No	No
Battery operation	No	No	No	No	No
Standing by	No	No	No	No	No
Waiting for UPS to stop	No	No	No	No	No
Battery life	No	No	No	No	No
Battery voltage	Normal	Normal	Normal	Normal	Normal
Testing the battery	No	No	No	No	No
Battery test possible	Impossible	Impossible	Possible	Possible	Possible
Overload	None	None	None	None	None
Battery Temp. trouble	Normal	Normal	Normal	Normal	Normal
Battery Chg. breakdown	None	None	None	None	None
Fin Temp. trouble	None	None	None	None	None
Fan breakdown	None	None	None	None	None
Bypass breaker OFF	No	No	No	No	No
Arrester breakdown	None	None	None	None	None
Major breakdown	None	None	None	None	None

* If the UPS does not have measurement data transmission capability, the measurement information will not be displayed.

* The history information is not saved during a serial communication failure.

Condition information

Displays status information acquired from the UPS. Failure and warning states are displayed with a red background. Refer to “Appendix D, UPS Conditions and Measurement Description” for more information about status information.

Measurement value information

Displays measurement information acquired from the UPS. If this information related to multiple phases, a hyphen and the phase number will be inserted between the displayed measurement name and the unit. (Example: Input voltage – 1 (V)). Refer to “Appendix D, UPS Conditions and Measurement Description” for more information about this measurement information.

“Refresh” button

Refreshes the display with the most recent information.

“Save as” button

Use this button to save the entire contents of the current display to a CSV format file.

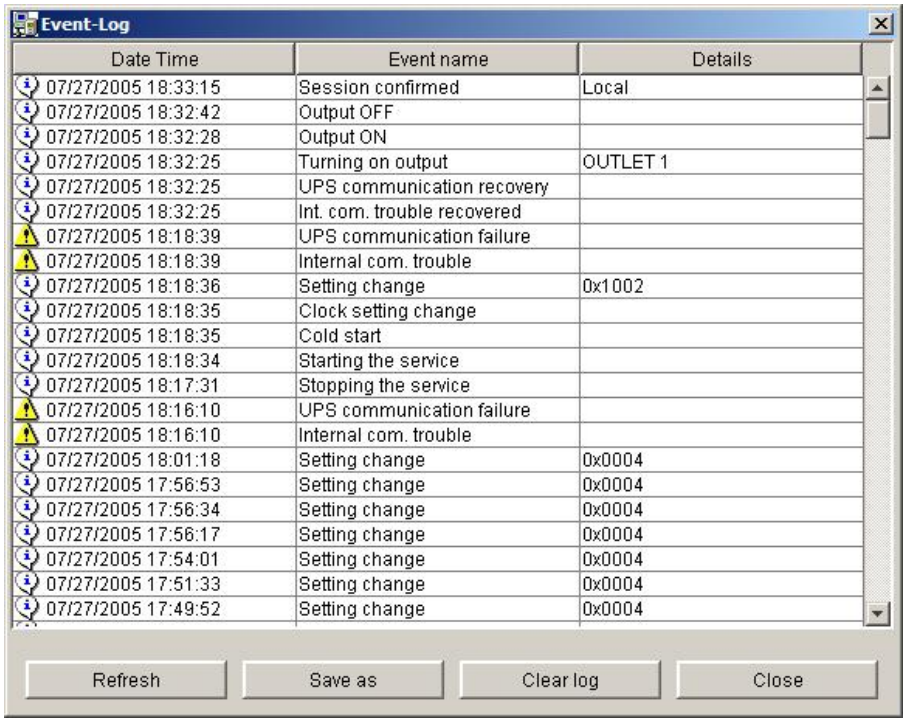
“Clear log” button

Use this button to clear the history data record saved by the UPS control system.

6.13 Displaying the Event Log

From the menu bar on the main screen select "View" – "Event- log". The event log screen will be displayed. The UPS control system saves power failure / recovery, breakdown / recovery and shutdown information as "**events**". Use this display to review the event information saved by the UPS control system. Refer to "Appendix C, Events" for more information about each event.

***The event-log contains the most recent 1000 events.**



"Refresh" button

Refreshes the display with the most recent information.

"Save as" button

Use this button to save the entire contents of the current display to a CSV format file.

"Clear log" button

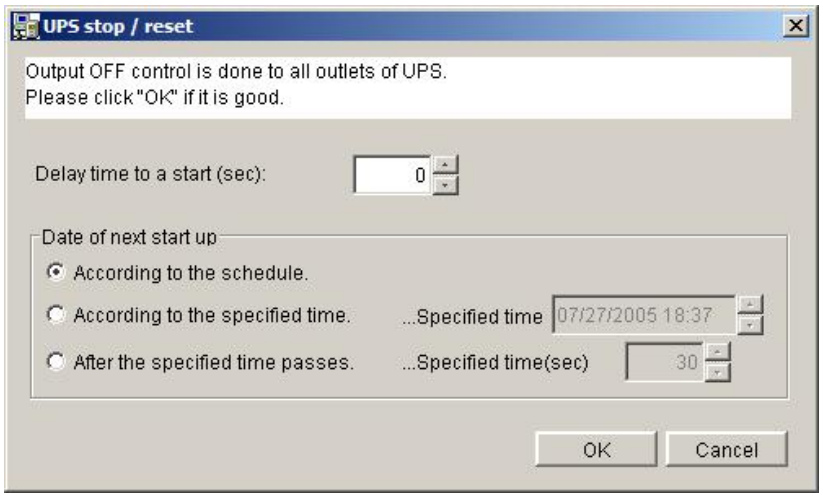
Use this button to clear the event log saved by the UPS control system.

6.14 Stopping / resetting UPS output

From the menu bar on the main screen select "Control" – "UPS stop/reset" to display the UPS stop / reset screen.

This screen allows for control of the UPS output from the connected computer.

(The connected computer performs an automatic shutdown.)



Delay time to a start

Sets the time to elapse before shutdown starts.

Date of next start up

Sets the time to turn ON the UPS output after it has been turned OFF.

Next start time	Explanation
According to the schedule	If the weekly or daily schedule is set, the UPS output will be turned ON based on those schedules. **Caution: If no schedule is set (including the disabled schedule), and "According to the schedule" is selected, the UPS output will remain turned off.**
According to the specified time	UPS output will be turned ON at the specified time.
After the specified time passes	UPS output will be turned ON after a specified time passes.

6.15 Checking the UPS Battery

From the menu bar on the main screen select "Control" – "Battery check" to display the battery check screen.

This screen is used to start or suspend the battery check on the connected UPS. (*Note 1)

*Note 1: Some UPS devices do not support the battery check function.



The results of the battery check are displayed on the main screen. The following table explains the various possible results:

Battery test result	Description
Unknown	Default result at the time the battery check is requested.
Normal end	Battery is normal.
Abnormal end	A low battery voltage can sometime cause abnormal test results, for example after battery operation in a power outage. In such cases, it is necessary to recharge the battery. If the battery status remains abnormal even after recharging the battery, then a battery problem could likely be suspected.
Error	The battery test cannot be completed for some reason.
Test stop	Displayed if the battery test was interrupted.
Testing	Displayed during the battery test.

(*1) If the UPS does not have battery check capability, the "battery check" will not be displayed, and the "Start" and "Stop" buttons are disabled.

(*2) The "Start" button is changed to "Stop" button during the battery test.

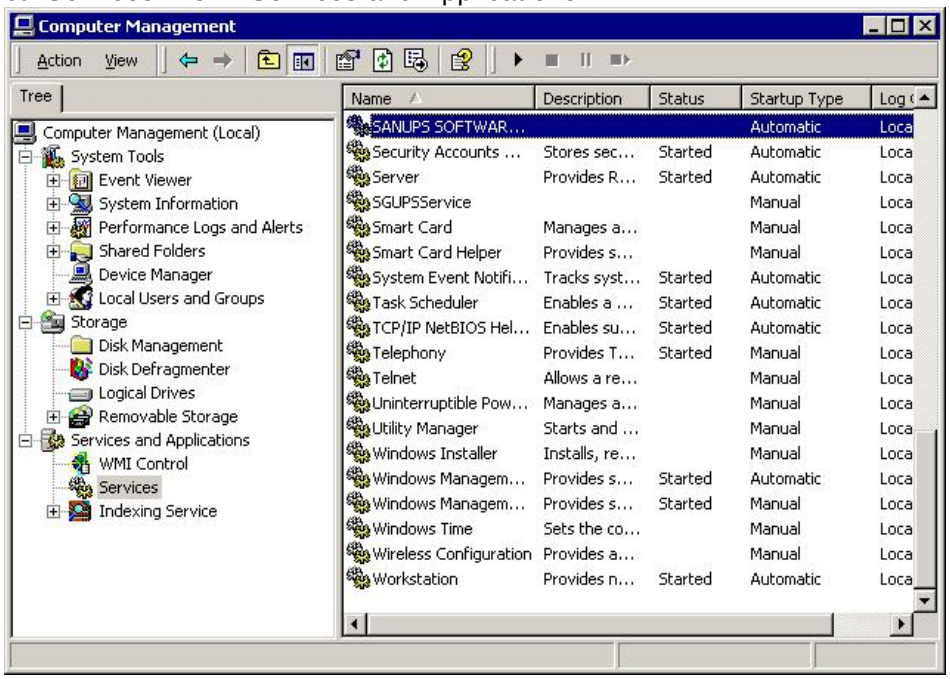
Appendix A UPS Service Operating Procedure

This section explains the operating procedure of the SANUPS SOFTWARE STANDALONE UPS service. The following example shows the operation using Windows®2000, but the operation is similar on other versions of Windows®.

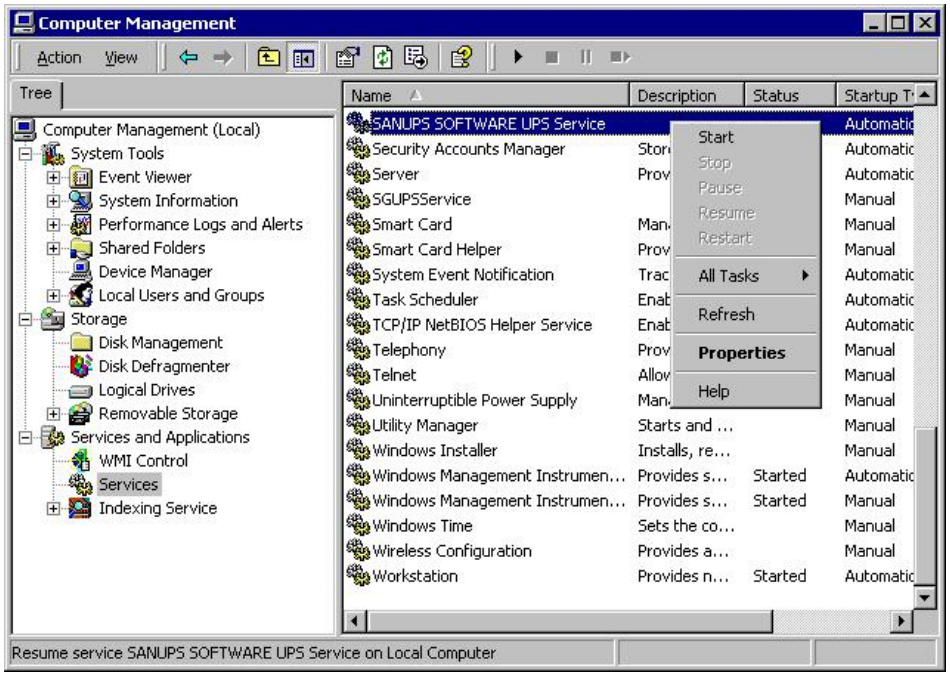
[Using Windows®2000]

Go to [Start] button – [Control Panel] – [Management tools], and select [Computer management].

Select “Services" from “Services and Applications”.

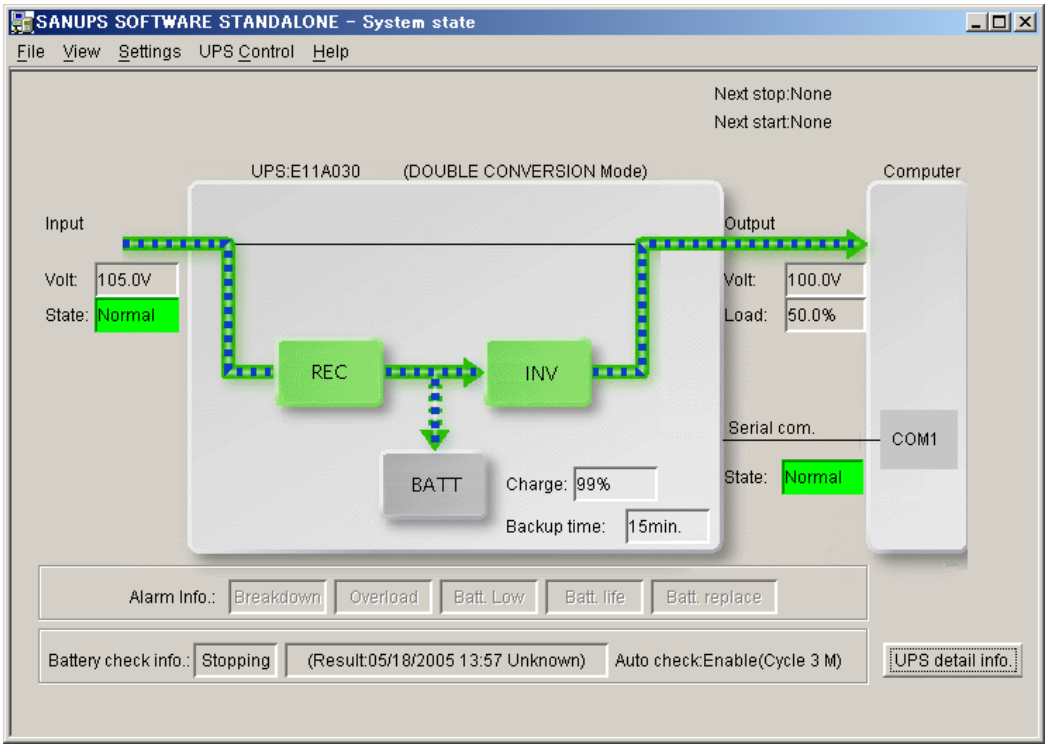


Select “SANUPS SOFTWARE STANDALONE UPS Service”. Right-clicking on it will open a pop-up menu to start, stop and perform other service program operations.



Appendix B Description of Main Screen Display Items

This section describes the items displayed on the main screen of the SANUPS SOFTWARE STANDALONE.



Item	Description	Notes
Input		
Volt	Displays the input voltage.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. Multi-phase UPS systems display the first phase. If the UPS is does not support this feature, “Unknown” is displayed.
State	Shows “Normal”, unless the AC input voltage is abnormal (during a power outage, for example).	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. In the case of a power outage, the display shows “Power outage” with a red background.
UPS type (Shown on the top of the UPS image)	Shows the UPS type. Inside the parentheses, one of the following inverter modes is displayed: - DOUBLE CONVERSION mode * - ACTIVE FILTER mode * - ECONOMY mode * - Bypass operation - Battery operation - Standing by - Stop* - Testing the battery * (* : Hybrid UPS only)	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. However, if the UPS is configured and serial communication was successful at least once, the UPS type will be displayed. (In this case, the UPS operation mode is not added.)

Item	Description	Notes
Next stop	Displays the next scheduled stop time based on the schedule settings.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. If “Enable scheduling” is not checked in the start/stop schedule settings, the display will show "Schedule not set".
Next Start	Displays the next scheduled start time based on the schedule settings.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. If “Enable scheduling” is not checked in the start/stop schedule settings, the display will show "Schedule not set".
Output		
Volt	Displays the output voltage.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. Multi-phase UPS devices display the first phase. If the UPS is does not support this feature, “Unknown” is displayed.
Load	Displays the load rate.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. If the UPS is does not support this feature, “Unknown” is displayed.
Charge	Displays the approximate charge rate (%) of the battery.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. If the UPS is does not support this feature, “Unknown” is displayed.
Backup time	Displays the estimated retention time if running on battery (in minutes), under the current load conditions. If the estimated retention time is more than 1092 minutes, the display will show "1092 minutes". Caution: The estimated retention time is an approximation; it can change dramatically depending on the load status.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. If the UPS is does not support this feature, “Unknown” is displayed.
Serial communications		
State	Displays “Normal", unless the UPS connection is not configured, or there is a serial communication trouble.	If the UPS connection is not configured, or there is a serial communication trouble, “Trouble” is displayed with a red background.
COM	Displays the connected COM port. COM port numbers are displayed in the “COM1”, “COM2” format.	If the UPS connection is not configured, it shows “COM?”

Appendix B Description of Main Screen Display Items

Item		Description	Notes
Alarm info.			
	Breakdown	Display shows a red background in the case of a major breakdown or minor breakdown; it is dimmed otherwise.	The details of the failure can be viewed by clicking on the “UPS detail infor.” button. If the UPS connection is not set, or during serial communication trouble, it is dimmed.
	Overload	Display shows a yellow background in the case of overload; it is dimmed otherwise.	If the UPS connection is not configured, or there is a serial communication trouble, the display is dimmed.
	Batt. LOW	Display shows a red background in the case of low battery voltage signal; it is dimmed otherwise.	If the UPS connection is not configured, or there is a serial communication trouble, the display is dimmed.
	Batt. life	Display shows a yellow background to warn about battery life; it is dimmed otherwise.	If the battery life is 0 hours, it is determined to have reached the end of battery life. Battery life can be checked by clicking the “UPS detailed information” button and looking under the UPS information tab. If the UPS connection is not configured, or there is a serial communication trouble, the display is dimmed.
	Batt. replacement	Display shows a yellow background to warn about entering the battery replacement period; it is dimmed otherwise.	The replacement time is determined by the following method: ・Battery life (H) [=α] ・battery replacement notification time (months) ［=β］ Use the following calculation: If {α/(24H×30days)}<β then it is time to replace the battery. If the UPS connection is not configured, or there is a serial communication trouble, the display is dimmed.
Battery check info.			
	Run status	Indicates if the battery test is currently running. If the battery test is running, “Executing” will be displayed. If the battery test is not running, “Stopped” will be displayed.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed.
	Check results	Display the results of the last battery check, including the battery check start time. Example: “Result: 05/10/2004 17:00 Normal end”	If the UPS connection is not configured, or there is a serial communication trouble, “Result: Unknown” is displayed.
Auto check		Displays the cycle of the automatic battery check.	If the UPS connection is not configured, or there is a serial communication trouble, “Unknown” is displayed. If the automatic battery check is enabled, “Enabled (Cycle N M)" is displayed. M is months. If the automatic battery check is disabled, “Disabled” is displayed. If the UPS is does not support this feature, nothing will be displayed.

Appendix C Events

This section contains an overview of the main predefined events in the UPS Control System.

Power failure (Event No: 0101)

This event indicates the occurrence of a power failure.

Power failure recovered(Event No: 0102)

This event indicates the recovery of a power failure.

Major bnreakdown (Event No: 0141)

This event indicates the occurrence of a major breakdown.

Major breakdown recovered(Event No: 0142)

This event indicates the recovery of a major breakdown.

Minor breakdown (Event No: 0143)

This event indicates the occurrence of a minor breakdown.

Minor breakdown recovered(Event No: 0144)

This event indicates the recovery of a minor breakdown.

Start scheduled stop warning (Event No: 0503)

This event indicates that the time for the scheduled stop notification has arrived.

Stop warning (Event No: 0504)

This event is generated at every cycle of the stop notification message display.

Irreversible: Scheduled stop (Event No: 0505)

This event is generated upon going to unrecoverable state (due to a scheduled stop).

Irreversible: Remo. Stop (Event No: 0506)

This event is generated when a UPS stop is controlled remotely.

Irreversible: Power failure (Event No: 0507)

This event is generated after the power failure is determined to be unrecoverable.

Irreversible: Low batt. Volt. (Event No: 0508)

This event is generated following a power failure, if the battery voltage level becomes low.

Exec. pre-shutdown operation (Event No: 0510)

This event is generated at the start of the shutdown delay period.

Shutdown execution (Event No: 0511)

This event is generated at the start of the UPS automatic stop period.
This event starts the shutdown of the computer.

Batt.-replace warning time (Event No: 0512)

This event is generated at the time of the battery replacement notification.

Irreversible: Serial error (Event No: 0518)

This event is generated when a serial communication trouble is determined unrecoverable, and the settings specify a shutdown at the time of a serial communication trouble.

Irreversible: Out. Ctrl. Sw. (Event No: 0551)

This event is generated when a stop is controlled by the output control switch.

UPS Event List

Event No.	Event Name
0101	Power failure
0102	Power failure recovered
0103	Bypass trouble
0104	Bypass trouble recovered
0105	Output OFF
0106	Output ON
0107	Synchronous
0108	Asynchronous
0109	Inverter operation
0110	Non-inverter operation
0111	Bypass operation
0112	Non-bypass operation
0113	Battery operation
0114	Non-battery operation
0115	Standing by
0116	Non-standing by
0117	Waiting for UPS stop
0118	Waiting for Non-UPS stop
0119	Battery life
0120	Normal Battery
0121	Low battery voltage
0122	Normal battery voltage
0123	Battery test
0124	Non-battery test
0125	Battery test is possible
0126	Battery test is impossible
0127	Overload
0128	Load normal
0129	Battery temperature trouble
0130	Battery temperature normal
0131	Battery charger breakdown
0132	Battery charger normal
0133	Fin temperature trouble
0134	Fin temperature normal
0135	Fan breakdown
0136	Fan normal
0137	Bypass breaker OFF
0138	Bypass breaker ON
0139	Arrester breakdown
0140	Normal arrester
0141	Major breakdown
0142	Major breakdown recovered
0143	Minor breakdown

Event No.	Event Name
0144	Minor breakdown recovered
0145	UPS system OFF
0146	UPS system ON
0147	Changes UPS oeration mode
0201	Internal com. trouble
0202	Int. com. trouble recovered
0301	Reception of UPS stop request
0302	Reception of UPS start req.
0303	Rec. battery test start req.
0304	Rec. battery test stop req.
0308	Session confirmed
0311	Requested protocol error
0351	Reception of output ON req.
0352	Reception of output OFF req.
0353	Reception of reboot request
0407	UPS stop (serial)
0409	Battery test start (serial)
0410	Battery test stop (serial)
0501	Cold start
0503	Start scheduled stop warning
0504	Stop warning
0505	Irreversible: Scheduled stop
0506	Irreversible: Remo. Stop / Irreversible: Remo. OutputOff
0507	Irreversible: Power failure
0508	Irreversible: Low batt. Volt.
0509	Pressing for log off
0510	Exec. pre-shutdown operation
0511	Shutdown execution
0512	Batt.-replace warning time
0513	Clock setting change
0514	Setting change
0518	Irreversible: Serial error
0552	Turning on output
0553	Turning off output
0562	Irreversible: Major breakdown
0563	Irreversible: Overload

PC Event List

Event No.	Event Name
1101	Starting the service
1102	Stopping the service
1201	UPS communication failure
1202	UPS communication recovery
1207	UPS major breakdown
1208	UPS major breakdown recovered
1209	UPS overload
1210	UPS overload recovered

Appendix D UPS Conditions and Measurement Descriptions

The following conditions and measurement data is displayed for the UPS; two sets of information exist, depending on the type of the UPS.However, there are also items which are not supported depending on the type of UPS. Those items are not displayed on a screen.

Status Information - 1

Status Name	Status Description	Remarks
AC input voltage	Normal/Trouble(power failure)	
Bypass trouble	Normal/ Trouble	
Output state	OFF/ON	
Synchronism	Sync./Async.	
Inverter operation	No/Yes	
Bypass operation	No/Yes	
Battery operation	No/Yes	
Standing by	No/Yes	
Waiting for UPS stop	No/Yes	*1
Battery life	No/Yes	
Battery voltage	Normal/ Decline	
Testing the battery	No/Yes	
Battery test possible	Impossible/Possible	
Overload	No/Yes	
Battery Temp. trouble	No/Yes	
Battery Chg. breakdown	No/Yes	
Fin Temp. trouble	No/Yes	
Fan breakdown	No/Yes	
Bypass breaker OFF	No/Yes	
Arrester breakdown	No/Yes	
Major breakdown	No/Yes	
Minor breakdown	No/Yes	
UPS system OFF	No/Yes	*2
UPS operating mode	DOUBLE CONVERSION Mode/ACTIVE FILETER Mode/ECONOMY Mode/Bypass operation/Battery operation/Standing by/Stop/Testing the battery	

* 1. UPS automatic stop period countdown is in progress.

* 2. Corresponds to the UPS power switch.

Status Information - 2

Status Name	Status Description	Remarks
AC input voltage	Normal/Trouble (power failure)	
Battery voltage	Normal/Decline	

Output status	OFF/ON	
Under operation	Bypass operation/Inverter operation	
Breakdown	No/Yes	
Waiting for UPS to stop	No/Yes	*1

* 1. UPS automatic stop period countdown is in progress.

Measurement Values - 1

Measurement Name	Unit	Remarks
Input	—	This item can change depending on the number of phases.
Input Frequency	Hz	
Input Apparent	kVA	
Bypass	—	This item can change depending on the number of phases.
Bypass Frequency	Hz	
Bypass Apparent	kVA	
Output	—	This item can change depending on the number of phases.
Output Frequency	Hz	
Output Apparent	kVA	
Load Factor	%	
Battery Chg. Volt.	V	
Battery Chg. Curr.	A	
Battery Dis-Chg. Volt.	V	
Battery Dis-Chg. Curr.	A	
Ambient Temp.	C	
Battery Temp.	C	
Fin Temp.	C	

* 1. For “Input”, “Bypass” and “Output”, the following three items are one unit.

Measurement Name	Unit
Volt.	V
Curr.	A
Pow.	kW

Measurement Values - 2

Measurement Name	Unit	Remarks
Input Volt.	V	
Input Curr.	A	
Input Capacitance	kVA	
Output Volt.	V	
Output Curr.	A	
Load Factor	%	
Battery Chg. Volt.	V	
Battery Chg. Curr.	A	
Battery Dis-Chg. Volt.	V	
Battery Dis-Chg. Curr.	A	
Ambient Temp.	C	

Measurement Values - 3

Measurement Name	Unit	Remarks
Input	—	This item can change depending on the number of phases.
Input Pow.	kW	
Input Frequency	HZ	
Input Apparent	kVA	
Bypass	—	This item can change depending on the number of phases.
Bypass Pow.	kW	
Bypass Frequency	Hz	
Bypass Apparent	kVA	
Output	—	This item can change depending on the number of phases.
Output Pow.	kW	
Output Frequency	Hz	
Output Apparent	kVA	
Load Factor	%	
Battery Chg. Volt.	V	
Battery Chg. Curr.	A	
Battery Dis-Chg. Volt.	V	
Battery Dis-Chg. Curr.	A	
Ambient Temp.	C	
Battery Temp.	C	
Fin Temp.	C	
Battery Chg. Rate	%	
Battery Remainder Hold Time	min	

*1. For “Input”, “Bypass” and “Output”, the following items are one unit

Measurement Name	Unit
Volt.	V
Curr.	A

For 3-phases UPS, the following items are one unit

Measurement Name	Unit
Volt.（1）	V
Volt.（2）	V
Volt.（3）	V
Curr.（1）	A
Curr.（2）	A
Curr.（3）	A

Appendix E Changing the Output OFF Keep Time

This appendix explains how to set the minimum time from when the UPS output is turned off until the UPS output is turned on (output off keep time) when the UPS automatically restarts when power recovers.

The following operations should only be performed by a user with Administrator privileges.

(1) Stopping the Service.

Stop the **SANUPS SOFTWARE STANDALONE UPS Service.**

For operating procedure, refer to “Appendix A　　UPS Service Operating Procedure”

(2) Changing the Setting

Edit the ”OffKeepTime.txt” file in the destination folder of SANUPS SOFTWARE STANDALONE.

(Default installation folder)

32-bit version: C:¥Program Files¥sanyodenki¥SANUPS SOFTWARE STANDALONE

64-bit version: C:¥Program Files (x86)¥sanyodenki¥SANUPS SOFTWARE STANDALONE

Edit the file using Notepad.

Note when saving a file from Notepad

Depending on the OS, the message “You do not have permission to open this file.” may appear and the file
cannot be saved. In that case, run Notepad as administrator and save the file.
(In Windows10, from the Start menu, go to “Windows Accessories” and right-click your mouse on Notepad, and click “More” and “Run as administrator” in this order. After opening Notepad, go to “File” Menu and click “Open” and select the file.

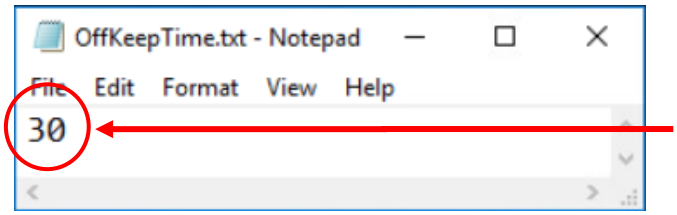


Image of OffKeepTime.txt

The setting range is 10 to 65535 seconds. The default value is 10 seconds.

After changing the setting, overwrite the file.

(3) Starting the Service

Start the **SANUPS SOFTWARE STANDALONE UPS Service**.

For operating procedure, refer to “Appendix A UPS Service Operating Procedure”