Redundant Switch:
Product Notes

CAUTION:
You must read the information provided in this document before you attempt to install and use the Redundant Switch.

PowerChute *plus* Compatibility

APC's Redundant Switch can only be used with PowerChute *plus* (5.X-up) for Windows NT.

Caution:
Do not attempt to use the Redundant Switch with any other version of PowerChute plus.

Important Requirements for Using the Redundant Switch with PowerChute *plus* for Windows NT

You **must** do the following to use the Redundant Switch with PowerChute *plus* for Windows NT:

Requirement	Instructions	Cautions
You **must** use two identical, sine-wave APC Smart-UPS models	The identical Smart-UPS models must have a VA rating of at least 700VA. When using Smart-UPS 2200's or 3000's with an SU042-1 or SU042-2, an alternate backplate (purchased separately) is needed for the following Smart-UPS models: • For an SU2200NET, SU2200XLNET, or SU3000NET, use an SU027 backplate. • For an SU2200RM, SU2200RMXLNET, or SU3000RMNET, use an SU027RM backplate. • For an SU2200RM3U, SU3000RM3U, NS2200RM3U, NS300RM3U, DL2200RM3U, or DL3000RM3U, use an SU027RM3U backplate.	*If the UPS models are not the same, <u>data will be incorrect and UPS protection could be compromised</u>. Your warranty does not cover problems caused by using the wrong UPSs.*
Never connect a PowerNet Adapter directly to the Redundant Switch	See the separate section on **Using Other APC Hardware with the Redundant Switch** for information about how to use APC's PowerNet SNMP Adapters with the Redundant Switch.	*A PowerNet Adapter connected directly to the Redundant Switch will not work properly.*

Requirement	Instructions	Cautions
After installation, you **must** configure both UPSs.	The PowerChute plus Configuration Procedure requires that the UPS's be given separate names: **UPS-A** and **UPS-B**. See the **PowerChute** *plus* **Configuration Procedure** in the *Redundant Switch User's Manual* (PN 990-0253) for information about how to configure your UPSs.	*If you switch to, and configure, UPS-B without first stopping and restarting PowerChute plus, <u>UPS data reported through PowerChute plus will be inaccurate</u>.*
You **must** perform runtime calibrations individually for each UPS, using the **Initiate Run Time Calibration** option of the **Diagnostics** menu.	1. Point the Redundant Switch front panel switch to UPS-A. 2. Perform a runtime calibration for UPS-A. 3. Stop the User Interface Module. (Click **Exit** on the PowerChute *plus* **System** menu.) 4. From the Windows NT **Services** control panel, stop the UPS Service. 5. Wait for the battery of UPS-A to recharge to full capacity. (Use **Monitoring Preferences** on the PowerChute *plus* **Configuration** menu to display the **Battery Capacity** bar graph in the main screen.) 6. Point the Redundant Switch front panel switch to UPS-B. 7. From the Windows NT **Services** control panel, start the UPS Service 8. Start the User Interface Module. (Select **PowerChute plus** in the **PowerChute plus** program group. Then use the "Monitor Server" dialog box.) 9. Perform a runtime calibration for UPS-B. 10. Repeat Steps 3, 4, 6, 7, and 8, but in Step 6 point the switch to UPS-A, **not** UPS-B.	*Do not schedule runtime calibrations using the Smart Scheduling feature of PowerChute plus. Perform them only interactively.* *To maintain maximum redundancy during runtime calibrations, always wait for the battery of the first UPS to recharge to full capacity before performing a runtime calibration on the second UPS. Runtime calibrations cause a temporary deep discharge of the UPS battery.*

Starting and Stopping the Redundant Switch and UPSs

Do not connect the communications cables between the Redundant Switch and the attached Smart-UPS models until you want the UPSs to start up and support the equipment load. When you connect the communications cables, the Redundant Switch immediately signals the UPSs to turn on.

To turn off the UPSs connected to the Redundant Switch, do either of the following:

- To turn off both UPSs, press and hold the OFF button on both UPSs simultaneously.

- To turn off one of the UPSs, first disconnect the communications cable to the UPS, and then use the Off button on the UPS. If you do not disconnect the communications cable, the Redundant Switch will attempt to restore redundancy by turning the UPS back on in several seconds.

Using Other APC Hardware with the Redundant Switch

This section contains important information on using other APC hardware devices (SNMP Adapter, Call-UPS, Share-UPS Measure-UPS, or SmartSlot Measure-UPS II) with the Redundant Switch.

PowerNet SNMP Adapter

When using PowerNet SNMP Adapters, note the following restrictions:

- Always use the PowerChute *plus* User Interface Module to perform or schedule a shutdown rather than using the PowerNet SNMP interface. The PowerNet SNMP software cannot perform a system shutdown correctly when the Redundant Switch is in use.

- To use SNMP adapters with the Redundant Switch, you connect the Redundant Switch to your computer's serial port, connect your UPSs to the Redundant Switch, and place an SNMP adapter in the SmartSlot of each UPS. With this hardware configuration, however, an SNMP adapter's console interface is inaccessible. To configure or reconfigure an SNMP adapter, you must do one of the following:

    - If you are using BOOTP and a 3.*x* version of the SNMP adapter, the BOOTP server assigns the adapter's IP address, subnet mask, and default gateway when the server starts. Use the telnet capability of the adapter to configure the adapter's other parameters.

    - If you are not using BOOTP, temporarily connect to your computer the UPS that has the adapter you want to configure. This direct connection lets you access the configuration screen of the adapter's console interface to define the adapter's IP address, subnet mask, and default gateway. Use the cable (940-0024C) provided with the Redundant Switch or the cable (940-1524C) provided with either UPS. If your adapter is a 2.*x* version, also configure any other parameters while the configuration screen is accessible. (With a 3.x adapter, after you define the IP address, subnet mask, and default gateway, you can configure other parameters at any time using telnet.)

    For more information on defining the SNMP Adapter's parameters, and on using telnet, see the *SNMP Adapter User's Guide*, provided in pdf format, on the diskette shipped with the Adapter.

Measure-UPS or SmartSlot Measure-UPS II

When using a Measure-UPS or SmartSlot Measure-UPS II with an SNMP Adapter, always use the PowerChute *plus* **Configuration** menu to set or change Measure-UPS Parameters. When you use an SNMP Adapter and either a Measure-UPS or SmartSlot Measure-UPS II, Measure-UPS Parameters are not displayed through the PowerNet SNMP interface.

Remote (Out-Of-Band) Management Issues for SmartSlot Call-UPS II or Share-UPS

When a UPS self-test is performed through either a SmartSlot Call-UPS II (Remote UPS Management Device) or a Share-UPS connected to the Redundant Switch, the result of the self-test often is not displayed on the device's UPS Status Display, even if the UPS passes the self test. To obtain the results of a UPS self-test performed through a SmartSlot Call-UPS II or a Share-UPS, perform the following steps.

1. Check the device's UPS Status Display. A displayed value of `Self Test: OK` indicates that the UPS passed its self-test. A displayed value of `Self Test: None` (for a SmartSlot Call-UPS II) or `SelfTest: No` (for a Share-UPS) indicates that the test results are unavailable through the device's UPS Status Display.

2. If Step 1 fails to provide you with the self-test results, do the following

    a. **SmartSlot Call-UPS II:** See the Call-UPS log file or PowerChute *plus* to determine UPS self-test results.

    b. **Share-UPS:** Because the Share-UPS has no log file, use PowerChute *plus* to view the self-test results. or perform a self-test through the Redundant Switch itself, as described in the *Smart-UPS Redundant Switch User's Guide*.

    PowerChute *plus* records UPS self-test results in its event log and displays them on its main screen in the **Last Two Events** window and the **Status** field.

<u>APC Technical Support</u>

If you want to contact APC Technical Support for any reason, see the **APC Contact Information** section in the *Redundant Switch User's Guide* (PN 990-0253), or the **Technical Support** section in the *PowerChute plus for Windows NT - Release Notes* (relnotes.pdf) available on your PowerChute *plus* for Windows NT installation CD-ROM.

Read these instructions first. Begin at the front page.