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Owner's Manual SmartPro[®] INT SmartPro[®] XL INT

2200-3000 VA

Intelligent, Line-Interactive UPS Systems (230V)

> ESPAÑOL: p. 8 FRANÇAIS: p. 15 DEUTSCH: p. 22

Safety:

р. 2

Quick Installation: p. 3 - 4

Basic Operation: p. 5 - 7

Storage & Service:

Specifications:

p. 7

p. 7

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Safety



This manual contains important instructions and warnings that should be followed during the installation, operation and storage of all Tripp Lite UPS Systems.

UPS Location Warnings

- Install your UPS indoors, away from excess moisture or heat, dust or direct sunlight.
- For best performance, keep the indoor temperature between 0° C and 40° C (between 32° F and 104° F).
- Leave adequate space around all sides of the UPS for proper ventilation.

UPS Connection Warnings

- Connect your UPS to a properly grounded AC power outlet. Do not modify the UPS's plug. Do not use adapters that eliminate the UPS's connection to ground.
- Do not plug your UPS into itself; this will damage the UPS and void your warranty.
- If you are connecting your UPS to a motor-powered AC generator, the generator must provide clean, filtered computer-grade output.

Equipment Connection Warnings

- Do not use Tripp Lite UPS Systems for life support applications in which a malfunction or failure of a Tripp Lite UPS System could cause failure or significantly alter the performance of a life-support device.
- Do not connect surge suppressors to the output of your UPS. This may damage your UPS and will void both the surge suppressor and UPS warranties.

Battery Warnings

- Your UPS does not require routine maintenance. Do not open your UPS for any reason. There are no user-serviceable parts inside.
- Battery replacement must be performed by qualified service personnel. Because the batteries present a risk of electrical shock and burn from high short-circuit current, qualified service personnel should observe proper precautions: Unplug and turn off the UPS before performing battery replacement. Use tools with insulated handles and replace the existing batteries with the same number and type of new batteries (Sealed Lead-Acid). Do not open the batteries. Do not short or bridge the battery terminals with any object.
- The UPS batteries are recyclable. Refer to local codes for disposal requirements. Do not dispose of the batteries in a fire.
- When adding external batteries, connect only Tripp Lite battery packs of the correct voltage and type. Your UPS's External Battery Connector should match the color of the connector of any battery pack you want to connect.

Quick Installation

1

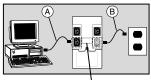
Connect the UPS to an electrical outlet and a computer to the UPS.

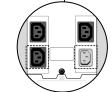
- Unplug the computer's power cord from both your AC outlet and the computer's AC input.
- Insert the female plug of the computer's cord (B) into your UPS's AC input. Insert the male plug of your computer's cord into your AC outlet.
- Insert the female plug of the power cord that came with your UPS (A) into the computer's AC input. Insert the UPS cord's male plug into any of your UPS's female output receptacles.

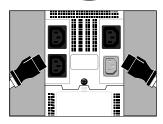
Plug additional computers and equipment into your UPS.

Your UPS is designed to support only computer equipment. You will overload your UPS if you connect household appliances, laser printers or surge suppressors.

Cords and receptacle adapters are available from Tripp Lite to accommodate most outlet configurations. If rewiring is necessary, refer to the Wire Color-Code Chart in the Specifications section.







3

Turn your UPS ON.

 Set the System Enable Switch (DIP Switch #4, UPS back panel) to the "ENABLE" (UP) position.

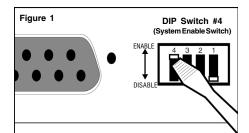
(See Figure 1)

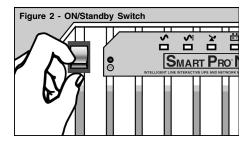
This switch activates the battery charger and microprocessor.

The " $\[\] n \]$ " light will flash until you engage the ON/Standby Switch to activate the "ON" mode.

 Engage the momentary ON/Standby Switch (UPS front panel) and release it to activate the "ON" mode and supply power to the UPS receptacles.

(See Figure 2)





DB9 Port Connection (Optional) On Next Page

DB9 Port Connection –Optional–*

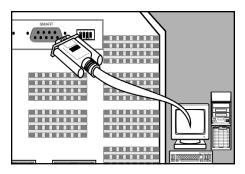
Using the grey or tan Tripp Lite cable that came with your UPS, connect your primary server's DB9 port to the single DB9 port labeled "LAN 4.1" (which provides complete intelligent RS-232 communications).**

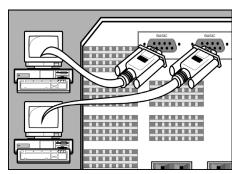
- Serial port connections are optional. Your UPS will function properly without these connections.
- ** The "LAN 4.1" DB9 port is always enabled and is not controlled by the LAN Interface DIP Switches.

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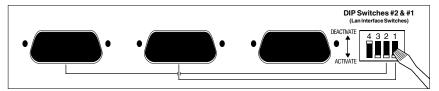
) If you have additional computers:

- a. Connect them to the DB9 ports labeled "LAN 2.2" (which provide basic, contact-closure shutdown capabilities) using the black cables that came with your UPS.
- b. Set their corresponding LAN Interface DIP Switches to the ACTIVATE (DOWN) position. See diagram for which switch controls which port.***
 - *** If you do not connect a computer to either of the "LAN 2.2" DB9 ports, set their corresponding LAN Interface DIP Switches to the DEACTIVATE (UP) position. Note: DIP Switch #3 has no function.





2a. Back Panel



2b. Back Panel



Load software and run the installation program appropriate for your operating system.

Basic Operation

Switches

System Enable Switch (DIP Switch #4)



This switch is on the back panel in the set of 4 switches next to the UPS's DB9 ports. It activates the battery charger and intelligent microprocessor. <u>Always</u> leave it in the "ENABLE" (UP) position when your UPS is plugged in. Set the switch to "DISABLE" (DOWN) only if you store or ship your UPS (to reduce battery drain). Note: the " \bigcirc " light will flash until you engage the ON/Standby Switch to activate the

"ON" mode (power ON at the UPS receptacles).

ON/Standby Switch



This momentary switch on the front panel controls power to the UPS receptacles. Engage it momentarily and release it to toggle between the "ON" mode (power ON at the UPS receptacles) and "Standby" mode (power OFF at the UPS receptacles).

Mute/Test Switch



Use this momentary switch on the front panel to do two things: **Silence the UPS On Battery alarm**

Engage this switch and release it to silence the UPS On Battery alarm, a series of short beeps that sounds intermittantly when the UPS is providing AC power from battery. Note: when the battery is nearly depleted, the Low Battery alarm, a continuous beep that cannot be silenced, will alert you to immediately shut down connected equipment.

Test your UPS's battery charge

Leave your connected equipment ON. With your UPS plugged in and completely turned ON, engage this switch; hold it there for 5 seconds and release it. You will hear a series of short beeps as the UPS momentarily switches to battery to test its charge. The " $\not\boxtimes$ " light will turn ON and the alarm (a long, continuous beep) will sound if your UPS fails a self-test and/or the UPS battery is less than fully charged. If this occurs, let the UPS charge for 12 hours and perform a second self-test. If the light continues to stay on, contact Tripp Lite for service. CAUTION: Do not unplug your UPS to test its batteries. This will remove safe electrical grounding and may introduce a damaging surge into your network connections.

Indicator Lights

Light descriptions apply when the UPS is plugged into a wall outlet and turned ON.



This green light will shine *constantly* to indicate AC power is available at the receptacles. It will *flash* to indicate AC power <u>is</u> <u>not</u> available. (See "System Enable Switch" and "On/Standby Switch" descriptions above.)



This multi-colored light displays 7 separate UPS battery charge conditions. It will turn from red (low) to yellow (medium) to green (full) to show you the level of battery charge. If the light is constant, your UPS is operating from line power, and the battery is charging. If the light is flashing, your UPS is operating from battery power, and the battery is discharging. When the light flashes red, close any files you are working on and shut down your computer.



Whenever your UPS is automatically correcting high or low AC line voltage, this green light will turn ON and the UPS will gently click. The more the UPS has to correct voltage, the more the green light will turn ON and the more the UPS will click. These are both normal, automatic operations of your UPS, and no action is required on your part.



This red light will turn ON if your UPS fails a self-test and/or the UPS battery is less than fully charged. Let the UPS charge for 12 hours and perform a second self-test. If the light continues to stay on, contact Tripp Lite for service.



This multi-colored light displays 4 separate UPS load conditions. It will turn from green (low) to yellow (medium) to red (high) as you connect equipment to show you the load level your UPS is supporting. When the light is red, your UPS is supporting a load above 85% of its capacity. If the red light begins flashing, then your UPS is severely overloaded. Remove overload immediately until light stops flashing.

Other UPS Features

AC Receptacles



The receptacles provide your connected equipment with AC line power during normal operation and battery power during blackouts and brownouts. They also protect your equipment against damaging surges and line noise. You can remotely reboot connected equipment by turning all of the receptacles OFF and ON at once using Tripp Lite UPS software. Select models, however, feature a unique "Remote Reboot Outlet" (identified on the back panel of your UPS) which allows you to use Tripp Lite UPS software to remotely reboot equipment connected to this outlet without interrupting power to equipment connected to the other outlets. See software instructions for details.

Note: constant power is available at the Remote Reboot Outlet (and all other outlets) unless controlled through Tripp Lite UPS software.

RS-232 Port



This port, labeled "LAN 4.1" on the UPS, connects your UPS to a workstation or server. Use with Tripp Lite software and cabling to monitor and manage network power and automatically save open files and shut down equipment during a blackout. This port uses RS-232 communications to transmit UPS and power conditions (Pin 7 = Transmit; Pin 8 = Common; Pin 9 = Receive). Contact Tripp Lite Customer Support for more information and a list of available SNMP, network management and connectivity products.

Contact Closure Ports



These ports, labeled "LAN 2.2" on the UPS, are also used to connect your UPS to a workstation or server. Use with Tripp Lite software and cabling to automatically save open files and shut down equipment during a blackout. This port uses contactclosure signals to indicate line-fail and low-battery status. Contact Tripp Lite Customer Support for more information.

External Battery Connector

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Use to connect additional Tripp Lite battery packs for additional runtime. Refer to the label next to the connector for the appropriate Tripp Lite battery pack to connect. Refer to instructions available with the battery pack for complete connection information and safety warnings.

Storage & Service

Storage

Turn your UPS OFF: first engage the ON/Standby Switch and release it to place your UPS in the "Standby" mode, then move the System Enable Switch to the "DISABLE" (DOWN) position to prevent battery drain, then disconnect the UPS power cord from the wall outlet. If you plan on storing your UPS for an extended period of time, recharge the UPS batteries once every three months. Follow steps #1 and #3 in the Quick Installation section and allow the UPS to charge from 4 to 6 hours. If you leave your UPS batteries discharged for an extended period of time, they will suffer permanent loss of capacity.

Service

If returning your UPS for service, contact your local Tripp Lite dealer or distributor. They will refer you to a service center. Please carefully pack the UPS using the ORIGINAL PACKING MATERIAL that came with the unit. Enclose a letter describing the symptoms of the problem. If the UPS is within the 2 year warranty period, enclose a copy of your sales receipt.

Specifications

	Smart INT 2200	Smart INT 3000
Output Capacity (VA/Watts):	2200/1700	3000/2400
Battery Runtime (Half Load/ Full Load) Minutes:	27+/11+*	23+/7+*
Battery Recharge Time:	2-4 hrs.	2-4 hrs.
Approvals:	UL, CE	UL, CE

* Battery Runtime for this model can be increased with the addition of optional external battery packs.

Input Voltage (230V); Input Frequency (50/60 Hz, Auto-Selecting); On-Line Input Voltage Range (166-276 volts); Voltage-Regulated Output Voltage Range (230V + 3%); Output Waveform Line Mode (filtered sinewave); Output Waveform Battery Mode (PWM sine wave); AC Surge Suppression (exceeds IEEE 587 Cat. A & B standards); AC Noise Attenuation (>40 GB); AC TVSS Protection Modes (H to N, H to G, N to G).

Wire Color-Code Chart

Wire Color	Wire 1	Wire 2	Wire 3]
American	Black	White	Green	Black Brown
European	Brown	Blue	Green/Yellow	White
Wire Reference	Wire 1	Wire 2	Wire 3	
American	Line 1	Neutral	Ground	
European	Line 1	Line 2 or Neutral	Ground	Green Green/

The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change.