APC
www.apcc.com

Back-UPS Office® 400

User's Manual

990-2056A   Revision 2   5/99

1 Connect battery wire

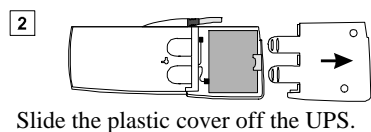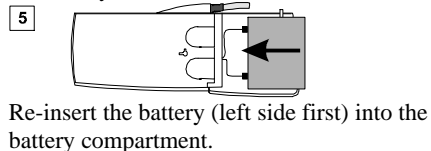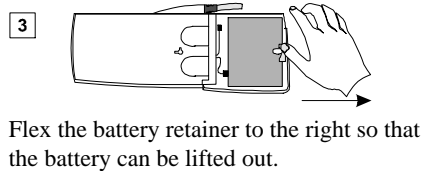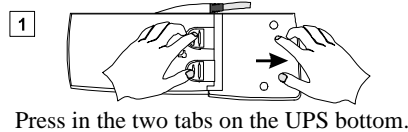The Uninterruptible Power Supply (UPS) is shipped with one battery wire **disconnected** - in compliance with Department of Transportation (DOT) regulations. *The UPS will not operate until you connect the wire to the battery.*

Note: Small sparks may occur during battery connection.

1 — Press in the two tabs on the UPS bottom.

2 — Slide the plastic cover off the UPS.

3 — Flex the battery retainer to the right so that the battery can be lifted out.

4 — Connect the battery wire solidly to the socket on the battery.

5 — Re-insert the battery (left side first) into the battery compartment.

6 — Slide the plastic cover to the left until the locking tabs lock into place.
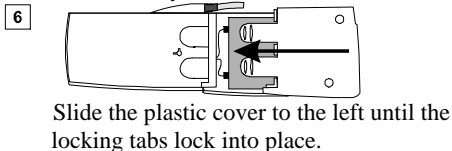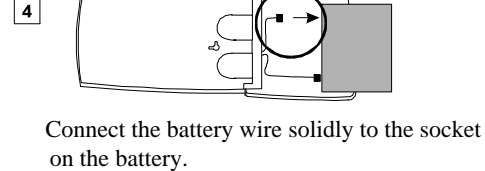
2 Place / Power

1. Place the UPS to avoid:
   - ?? Direct sunlight
   - ?? Excessive heat
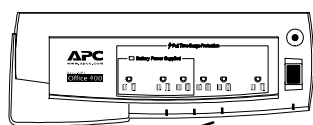   - ?? Excessive humidity or contact with liquids.
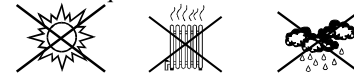
   The UPS can be wall mounted (optional) see mounting instructions on back.

2. Plug the UPS directly into the power outlet; **not into a surge protector or power strip. Additionally, the UPS may not work with all fuel powered generators.**

### 3 Check the Building Wiring Fault indicator

If this red indicator is lit, **the building wiring represents a shock hazard, that should be corrected by a qualified electrician.**

4 Connect equipment to UPS

Battery Power Supplied Outlets
These three outlets are powered whenever the UPS is switched On. These outlets are powered for a limited time during a utility outage. **Plug your PC, monitor, and one other data sensitive device (Zip™ drive or modem for example) into these outlets.**
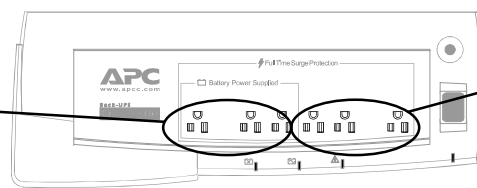
Full Time Surge Protection Outlets
All outlets provide protection from surges. These three outlets are powered whenever utility power is available - regardless of whether the UPS is switched On or Off. **Plug your printer, fax machine , scanner, or other peripherals that do not need battery power during an outage into these outlets.**
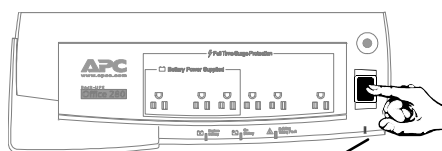
5 Connect Fax/Modem/Phone to surge protection

Phone Jack

Fax/Modem/Phone

UPS (backside)

PHONE JACK   MODEM / PHONE / FAX

APC Back-UPS Office protects a single line (two wire) modem, fax, or phone from surges when it is connected through the UPS as shown in the adjacent drawing.
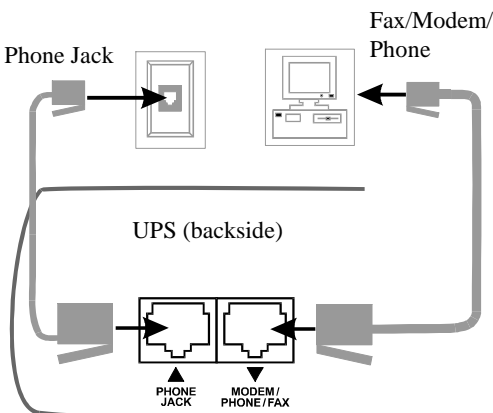
6 Switch On and test the UPS

Press the On/Off switch to power the unit.

A lit On Line (green) indicator confirms that the UPS is On and utility power is available. All outlets are now powered.

Self Test
The UPS has a Self Test capability to verify that the UPS is fully prepared for a utility outage. A UPS Self Test is performed whenever the unit is switched on and every two weeks of continuous operation. Details about Self Test can be found in the Self Test section.

Battery charging
The UPS charges the battery whenever it is connected to utility power. See the APC website for estimated battery runtime based on your computer system.

Visual Indicators

⌧   ⏢   ⚠

On Line
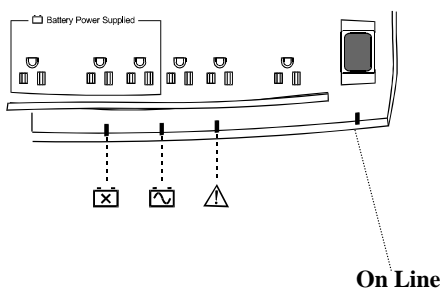
The table below lists visual and associated audible indicators which are used to determine the UPS status. See the Troubleshooting section for additional information.

Icon	Visual Indicator(s)	Audible Indicator	Description	User Action
-	On Line (green)	_	The UPS is switched On and utility power is acceptable.	-
⚠	Building Wiring Fault (red)	_	Building wiring is faulty.	Have wiring checked by an qualified electrician
⏢	On Battery (yellow)	**Single beep**	A brief power loss has occurred	-
		Four beeps, repeated every 30 seconds	Utility power is unacceptable. The battery is supplying power.	Promptly perform Computer Shutdown.
		Constant beeping	Battery capacity is low. Connected devices will lose power shortly.	**Immediately** perform the Computer Shutdown procedure.
⏢	Flashing On Battery (yellow)	**Continuous Tone**	Battery Power Supplied outlets are overloaded.	See the Troubleshooting section.
⌧	Replace Battery (red)	**Continuous short beeps for one minute, repeats every 5 hours**	The battery may need to be replaced.	See the Troubleshooting section.

The Self Test is designed to determine:
- ?? If the battery is healthy or needs replacement.
- ?? If the Battery Power Supplied outlets are overloaded.

The Self Test can be user initiated at any time and is performed automatically every two weeks of **continuous** operation. A Self Test should be performed whenever a device is **first** connected to a Battery Power Supplied Outlet, to confirm that the new device will not overload the UPS.

Procedure:
1. Perform steps 1 and 2 of the Computer Shutdown procedure. **Do not switch Off the computer or any other connected devices.**
2. Switch the UPS "Off" and then "On".
3. Watch the visual indicators and listen for any audible indicators during the test, to note possible fault indications.

When the On Battery indicator is lit, follow this procedure to shutdown the computer, UPS, and any equipment connected to the Battery Power Supplied Outlets.

1. Save your open files and close all applications.
2. Perform an orderly shut down of the operating system.
3. Switch Off all equipment connected to the UPS.
4. Switch Off the UPS to maintain battery capacity.

Note: This procedure needs to be completed **before** the battery is fully discharged. **Loss of data or corruption of the operating system is possible if this procedure is not completed before the battery is fully discharged.**

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Wall Mounting of UPS (optional)

APC Back-UPS Office can be mounted vertically or horizontally to a wall surface. Use the template below to position the securing fasteners (not supplied) .

Note: Position the On/Off switch to the right for horizontal mounting, to the top for vertical.

Vertical Mounting
Only

Horizontal **and** Vertical
Mounting

Horizontal Mounting
Only
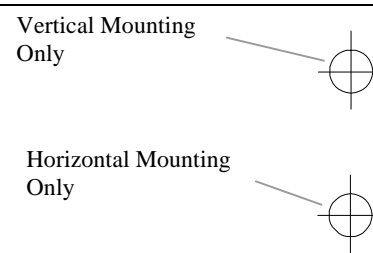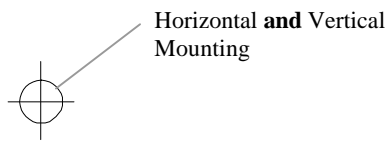
1. Hold this page against the wall with the appropriate edge parallel to the floor.
2. Use thumbtacks to hold this page in place. Make sure the template circles line up where you want the mounting fasteners to be installed. Use a sharp nail or pin to puncture the center of each appropriate template circle to mark the wall.

3. Install fasteners at the marked locations. Leave the head of both fasteners 5/16" (8 mm) out from the surface of the wall. Fasteners must be able to support 15 lb (6.8 kg).
4. Mount APC Back-UPS Office by positioning the key-hole slots over the fastener heads. For vertical mounting, slide the unit down into place. For horizontal mounting, turn it slightly counterclockwise until it is securely in place.

Order Replacement Battery

Replacement batteries can be ordered from local retailers, APC, or the APC website.

UPS Model	Replacement Battery Part #
Office 400	RBC 21

Battery Replacement

Battery replacement is a safe procedure, isolated from electrical hazards.

Do not replace the battery when the UPS is On-Battery.

Please consult the diagrams in the "Connect Battery Wire" procedure during this procedure.

Procedure:

1. **Switch "Off", and unplug all equipment from APC Back-UPS Office.**
2. **Switch "Off" APC Back-UPS Office, and unplug it from the wall outlet.**
3. Refer to the "Connect battery wire" (Step 1) section of the manual for instructions on how to open the battery compartment.
4. Disconnect the battery wires one at a time.
5. Grasp each wire connector and pull straight back. Take care not to pull the wires.
6. Remove the old battery.

Note: Small sparks at the battery connections are normal during connection.

7. Connect the red wire to the positive (+) battery socket of the replacement battery. Connect the black wire to the negative (-) battery socket.
8. Tip the new battery, terminal end first, into the battery compartment. Press the battery gently until the retaining clip snaps into place.
9. Slide the battery compartment cover back into place. **The UPS needs to be connected to utility power for at least 4 hours before full runtime can be expected.**

Note: The spent battery must be recycled. Deliver the battery to an appropriate recycling facility or return it (in the new battery's packing material) to APC. See the new battery instructions for additional recycling information.

UPS Storage

Before storing, charge the UPS for at least 12 hours. Store the UPS covered and upright in a cool, dry location.

Extended Storage

Storage Temperature	Recharge Frequency	Charging Duration
5 to 86°F (-15 to 30°C)	Every 6 Months	12 Hours
86 to 113°F (30 to 45°C)	Every Month	12 Hours

Specifications

Acceptable Input Voltage	0 - 150 Vac, Single Phase
"On Battery" Output Voltage	109-121 Vac
Frequency Limits ("On Line")	57 - 63 Hz
Maximum Load - Battery Power Supplied Outlets	400 VA, 250 W
Maximum Load - Surge Protected Only Outlets	10 A
Maximum Branch Circuit Overcurrent Protection Requirement	20A
	Caution: To reduce the risk of fire, connect only to a circuit provided with 20 Amp maximum branch circuit overcurrent protection in accordance with the National Electrical Code ANSI/NFPA.
Typical Recharge Time	12 hours from total discharge
Operating /Storage Temperature	32 to 104?F (0 to 40?C) / 5 to 113?F (-15 to 45?C)
Operating and Storage Relative Humidity	0 to 95%, non-condensing
Operating Elevation/ Storage Elevation	0 to +10,000 ft (0 to +3,000 m) / 0 to +50,000 ft (0 to +15,000 m)
UPS Size (H x W x D) excluding cord	2.7 x 17.0 x 7.0 in (6.9 x 43.2 x 17.8 cm)
UPS Weight /	8.6 lb (3.9 kg)
Shipping Weight	9.1 lb (4.2 kg)
EMI Classification	FCC/DOC Class B

Warranty

Please contact APC Technical Support to troubleshoot the unit before returning the unit to APC. The standard warranty is 2 years from date of purchase. APC's standard procedure is to replace the original unit with a factory reconditioned unit. Customers who must have the original unit back due to assigned asset tags and set depreciation schedules must declare such a need at first contact with APC Technical Support. APC will ship out the replacement unit once the defective unit has been received by the repair department or cross ship upon the provision of a valid credit card number. The customer pays for the shipping to APC, and APC pays ground freight transportation costs back to the customer.

Troubleshooting

Symptom	Possible Cause	Solution
Replace Battery indicator is lit.	The battery wire is not connected.	Connect the battery wire as shown in installation Step 1 (front page).
	Battery has reduced capacity due to frequent or long outages or needs replacing.	Let the UPS charge overnight. Next day, switch the UPS Off and then On. If the Replace Battery indicator is still lit, the battery needs to be replaced. If the UPS **is** under warranty, contact APC Technical Support. If the UPS is **not** under warranty see Order Replacement Battery section.
Circuit breaker popped up.	The outlets are severely overloaded.	Unplug one (or more) device from the UPS and reset the breaker by pressing the button in.
UPS does not provide expected runtime.	The battery is not fully charged or is depleted by frequent power outages.	The UPS battery becomes discharged during power outages. Keep the battery charging (by keeping the UPS plugged into utility power) for up to 12 hours after a power outage. Recharge may occur in less time-depending on the battery capacity.
	The battery is near the end of its useful life.	Consider the purchase of a replacement battery.
Flashing On Battery indicator and constant tone.	The Battery Power Supplied outlets are overloaded.	1. Perform the Computer Shutdown. 2. Switch the UPS Off. 3. Unplug one device from the Battery Power Supplied outlets. 4. Switch the UPS On. If the overload indication disappears, the problem is solved. Repeat the procedure if the overload indication persists.
Continuous Tone **and** Flashing ??On Battery (yellow) ??On Line (green)	A UPS fault has occurred.	Switch the UPS Off and then On. If the same symptoms appear, disconnect the UPS from utility power and contact APC Technical Support.

Service

Please, Do Not Return the Unit to the Place of Purchase Under any Circumstances!

1. Consult the Troubleshooting section to eliminate common problems.
2. Verify that you have connected the battery as shown in step 1 of the Installation instructions and that the circuit breaker is not tripped (see Troubleshooting section).

If you still have problems or questions, please contact APC via the Internet or at one of the phone numbers listed at the bottom of the page.

3. Before contacting APC, please be sure to record the date purchased, UPS model, and serial number (on bottom of UPS).
4. Be prepared to troubleshoot the problem over the telephone with a technician If this is not successful, the technician will issue a Return Merchandise Authorization Number (RMA#) and a shipping address.
5. To prepare UPS for shipment, first:

   Disconnect the black wire from the UPS battery.

   Department of Transportation (DOT) regulations require that the black battery wire be **disconnected before shipping the UPS back to APC**. The "Connect Battery Wire" instructions and graphics on the front page show how to access the wire.
6. Pack the UPS in its original packaging. If the original packing is not available, ask APC Technical Support about obtaining a new set. Pack the UPS properly to avoid damage in transit.

Never use Styrofoam™ beads for packaging. Damage sustained in transit is not covered under warranty (insuring the package for full value is recommended).

7. Write the RMA# on the outside of the package.
8. Return the UPS by insured, prepaid carrier to the address **given to you by APC Technical Support**.

APC Contact Information

USA/Canada …………….	1.800.800.4272
Mexico……………………	292.0253 / 292.0255
Brazil …………………….	0800.12.72.1
Worldwide ………………	1.401.789.5735

Internet http://www.apcc.com

Tech. Support http://support.apcc.com