1. Placement / Power
Avoid placing the Back-UPS as:
- Direct sunlight
- Excessive heat
- Excessive humidity or in contact with fluids of any type

Plug the Back-UPS into a wall outlet, as shown.

2. Connect Equipment to the Back-UPS
The rear panel of the Back-UPS consists of the following elements:

Battery Back Up Outlets (qty. of 3). These outlets provide battery back-up, surge protection, and Electro-Magnetic Interference (EMI) filtering. In case of power outage, battery power is automatically provided to these outlets. Power (utility or battery) is not supplied to these outlets when the Back-UPS is switched OFF. Connect a computer, monitor, and external disk or CD-ROM drive to these outlets.

Surge Only Outlet. This outlet is always On (when utility power is available) and is not controlled by the On/Off switch. This outlet does not provide power during a power outage. Connect a printer, fax machine or scanner to this outlet.

3. Connect the Phone Line to Surge Protection
The telephone ports provide lightning surge protection for any device connected to the telephone line (computer, modem, fax or telephone). The telephone ports are compatible with Home PhoneLine Networking Alliance (HPNA) and Digital Subscriber Line (DSL) standards, as well as all modem data rates. Connect as shown.

4. Switch on the Back-UPS
Note: Allow the Back-UPS to charge for a full eight hours prior to use.
Press the push-button on the front panel of the Back-UPS.

5. Power on the Back-UPS
Observe that the following events occur after pressing and releasing the push-button:
- The green On-Line indicator flashes.
- The yellow On Battery indicator lights while the Self-Test is being performed.
- When Self-Test has successfully completed, only the green On Line indicator will be lit.
- If the internal battery is not connected, (see Step 1) above) the green On Line indicator and red Replace Battery indicator will light. The Back-UPS will also emit a chattering sound.

Replace the Internal Battery
To replace the internal battery, proceed as follows:

- Place the unit on its side. Slide the battery compartment cover upward and off of the UPS.
- Pull the battery out, exposing the battery terminals and wires. Disconnect the wires from the terminals.
- Slide the new battery into the battery compartment. Connect the battery wires to the terminals as follows:
  - Black wire to Ground (-) terminal
  - Red wire to Positive (+) terminal
- Align the battery compartment cover with the grooves in the UPS. Slide the cover down until it locks.

There are four status indicators (lights) on the front panel of the Back-UPS (On Line, On Battery, Overload, and Replace Battery).

- On Line (green) - is lit whenever utility power is powering the Battery Backup outlets.
- On Battery (yellow) - is lit whenever the battery of the Back-UPS is powering equipment connected to the Battery Backup Outlets.
- Overload (red) - is lit whenever the Battery backup outlets are overloaded.
- Replace Battery (red) - is lit whenever the battery is near the end of its useful life or if the battery is not connected (see above). A battery that is near the end of its useful life has insufficient runtime and should be replaced.

Order Replacement Battery
The typical battery lifetime is 3-6 years (depending on the number of discharge cycles and operating temperature). A replacement battery can be ordered over the phone from APC, or the battery can be ordered on-line from the APC web site (http://www.apc.com, a valid credit card is required).

When ordering, please specify Battery Cartridge RBC2.

Order Replacement Battery
To replace the internal battery, proceed as follows:

- Place the unit on its side. Slide the battery compartment cover upward and off of the UPS.
- Pull the battery out, exposing the battery terminals and wires. Disconnect the wires from the terminals.
- Slide the new battery into the battery compartment. Connect the battery wires to the terminals as follows:
  - Black wire to Ground (-) terminal
  - Red wire to Positive (+) terminal
- Align the battery compartment cover with the grooves in the UPS. Slide the cover down until it locks.

Installation

Order Replacement Battery
To replace the internal battery, proceed as follows:

- Place the unit on its side. Slide the battery compartment cover upward and off of the UPS.
- Pull the battery out, exposing the battery terminals and wires. Disconnect the wires from the terminals.
- Slide the new battery into the battery compartment. Connect the battery wires to the terminals as follows:
  - Black wire to Ground (-) terminal
  - Red wire to Positive (+) terminal
- Align the battery compartment cover with the grooves in the UPS. Slide the cover down until it locks.

Transfer Voltage and Sensitivity Adjustment (optional)
In situations where the Back-UPS or connected equipment appears too sensitive to input voltage, it may be necessary to adjust the transfer voltage. This is a simple task requiring use of the front panel pushbutton. To adjust the transfer voltage, proceed as follows:

1. Plug the Back-UPS into the utility power source. The Back-UPS will be in a Standby Mode (no indicators lit).

2. Press the front-panel pushbutton fully inward for 10 seconds. All indicators on the Back-UPS will flash to acknowledge going into Programming Mode.

3. The Back-UPS will then indicate its current Sensitivity Setting, as shown in the following table.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Flashing</th>
<th>Sensitivity Setting</th>
<th>Input Voltage Range (for utility operation)</th>
<th>Use When</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>yellow</td>
<td>Low</td>
<td>180 - 220 Vac</td>
<td>input voltage is extremely low or high. Not recommended for computer loads.</td>
</tr>
<tr>
<td>2</td>
<td>yellow, and red</td>
<td>Medium (factory default)</td>
<td>180 - 220 Vac</td>
<td>Back-UPS frequently goes On Battery</td>
</tr>
<tr>
<td></td>
<td>yellow, and red</td>
<td>High</td>
<td>190 - 220 Vac</td>
<td>Connected equipment is sensitive to voltage fluctuations (recommended).</td>
</tr>
</tbody>
</table>

4. To select the Low Sensitivity setting, press the pushbutton until the yellow indicator is flashing.
5. To select the Medium Sensitivity setting, press the pushbutton until the yellow and red indicators (second and third from the top) are flashing.
6. To select the High Sensitivity setting, press the pushbutton until yellow and both red indicators (bottom three) are flashing.
7. To exit without changing the Sensitivity Setting, press the pushbutton until the green indicator is flashing.
8. Once in Programming Mode, if the pushbutton is not pressed within 5 seconds, the Back-UPS will exit Programming Mode; all indicators will extinguish.

Avoid placing the Back-UPS in:
- Excessive heat
- Excessive humidity or in contact with fluids of any type
- Direct sunlight
- Any time it is connected to a wall outlet.
Troubleshooting

Use the tables below to solve minor Back-UPS installation and operation problems. Consult APC On-line Technical Support for assistance with problems that cannot be resolved using this document:

### Back-UPS will not switch on

- **Possible Cause:** Back-UPS not connected to an AC power source.
- **Procedure:** Check that the Back-UPS power plug is securely connected to the wall outlet.

- **Possible Cause:** Back-UPS circuit breaker “tripped”.
- **Procedure:** Disconnect non-essential equipment from the Back-UPS. Reset the circuit breaker (located on the rear panel of the Back-UPS) by pushing the circuit breaker button fully inward until it catches. If the circuit breaker trips again, it is likely that one of the connected devices is causing the overload.

- **Possible Cause:** Very low or no utility voltage.
- **Procedure:** Check the wall outlet that supplies power to the Back-UPS using a table lamp. If the lamp is very dim, have the utility voltage checked by a qualified electrician.

### Back-UPS does not do power computer/monitor/external drive during an outage

- **Possible Cause:** Internal battery is not connected.
- **Procedure:** Check the battery connections.

- **Possible Cause:** Computer, monitor or external disk/CD-ROM drive is plugged into a Surge Only outlet.
- **Procedure:** Move computer, monitor, or external drive power cord plug to the Battery Backup outlets.

- **Possible Cause:** Back-UPS operates on battery although normal utility voltage exists.
- **Procedure:** Disconnect non-essential equipment from the Back-UPS. Read the circuit breaker (located on the rear panel of the Back-UPS) by pushing the circuit breaker button fully inward until it catches.

### Back-UPS does not provide expected backup time

- **Possible Cause:** Back-UPS is excessively loaded.
- **Procedure:** Unplug non-essential Battery Backup connected equipment, such as printers, and plug them into Surge Only outlets. Note: Devices that have motors or dimmer switches (laser printers, heating lamps, and vacuum cleaners, for example) should not be connected to the Battery Backup outlets.

- **Possible Cause:** Back-UPS battery is weak due to recent outage and has not had time to recharge.
- **Procedure:** Charge the battery. The battery charges whenever the Back-UPS is connected to a wall outlet. Typically, eight hours of charging time are needed to fully charge the battery from total discharge. Back-UPS run-time is reduced until the battery is fully charged.

- **Possible Cause:** Battery requires replacement.
- **Procedure:** Replace battery (see Order Replacement Battery). Batteries typically should not be subjected to frequent power outages or elevated temperatures.

### Red indicator is lit

- **Possible Cause:** Battery is not connected properly.
- **Procedure:** Check the battery connections.

- **Possible Cause:** The Overload indicator is lit if equipment connected to the Battery Backup outlets is drawing more power than the Back-UPS can provide.
- **Procedure:** Move one or more equipment power plugs to the Surge Only outlets.

- **Possible Cause:** Battery requires replacement.
- **Procedure:** The battery should be replaced within two weeks (see “Order Replacement Battery”). Failure to replace the battery will result in reduced run-time during a power outage.

### Red indicators are flashing

- **Possible Cause:** Replace Battery indicator lit and an alarm sounds when the Back-UPS is turned on.
- **Procedure:** Check the battery connections.

### Specifications

<table>
<thead>
<tr>
<th>Input Voltage (on line)</th>
<th>180 - 266 Vac (default setting)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency Limits (on line)</td>
<td>47 - 63 Hz (nominal)</td>
</tr>
<tr>
<td>On Battery Waveform</td>
<td>Stepped Sin Wave</td>
</tr>
<tr>
<td>Maximum Load</td>
<td>350 VA - 210 W 500 VA - 300 W</td>
</tr>
<tr>
<td>Typical Recharge Time</td>
<td>8 Hours</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0° to 40°C (32° to 104°F)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-15° to 45°C (5° to 113°F)</td>
</tr>
<tr>
<td>Operating and Storage Relative Humidity</td>
<td>5 to 90% non-condensing</td>
</tr>
<tr>
<td>Size (H x W x D)</td>
<td>16.5 x 9.2 x 28.5 cm (6.5 x 3.6 x 11.2 inches)</td>
</tr>
<tr>
<td>Weight</td>
<td>350 VA - 5.7 kg (12.5 lbs) 500 VA - 7.1 kg (15.3 lbs)</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>350 VA - 6.8 kg (14.9 lbs) 500 VA - 7.6 kg (16.8 lbs)</td>
</tr>
<tr>
<td>EMI Classification</td>
<td>EN 55022, IEC 801-2 and 801-4 (level IV), and IEC 801-3 (level III)</td>
</tr>
<tr>
<td>On Battery Run-Time</td>
<td>350 VA - 13.2 minutes (typical) - computer and 17” (43.2 cm) monitor. 500 VA - 10.8 minutes (typical) - computer and 21” (53.3 cm) monitor.</td>
</tr>
<tr>
<td>Back-UPS Storage</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Before returning the Back-UPS to APC for service, please contact APC Technical Support to troubleshoot the unit before returning it to APC.

### Service

1. Consult the Troubleshooting section to eliminate common problems.
2. Determine if the circuit breaker is tripped. If the circuit breaker is tripped, rest the breaker and determine if the problem still exists.
3. If the problem persists, consult the APC Worldwide Web site (www.apc.com) or call customer service.
   - Record the model number of the UPS, the serial number, and the date purchased. 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.
   - If the UPS is under warranty, repairs are free. If not, there is a repair charge.
4. Pack the UPS in its original packaging. If the original packaging is not available, ask customer service about obtaining a new set. Pack the UPS properly to avoid damage in transit.
5. Write the RMA# on the outside of the package.
6. Return the UPS by insured, prepaid carrier to the address provided by customer service.

### Warranty

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

### 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.apc.com/support

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