

Thank you for purchasing APC's 90-Watt-Hour Universal Notebook Battery (UPB90). This slim, lightweight external battery pack is compatible with many notebook computers in the market today. It is equipped with two USB ports that are ideal for powering and charging iPods, MP3 players, mobile phones and portable gaming systems via APC USB Charging Cables (sold separately).

- OLED (Organic-light-emitting-diode) status indicator
- Up to eight hours of additional runtime for your notebook computer¹
- Automatic Output Voltage Selection (15V - 20V)
- Charge and power two additional mobile devices via two USB ports
- Included tips provide compatibility with most notebook computers
- Up to 90 Watts continuous power and 100 Watts peak power

Prior to use, please check the package contents for the following items. If any item listed below is not in the package, please contact APC Customer Service at 800.800.4APC (800.800.4272).

- Universal Notebook Battery (UPB90)
- Input / Output Power Cable
- Conversion Plug & Jack Kit
- Compatibility Guide

Safety Precautions

Warnings:

- **Caution:** Burn Hazard
- Do not attempt to disassemble or alter any part of this product.
- Do not store outside of the following temperature range: -4~140°F (-20~60°C).
- Do not operate outside of the following range: 32~113°F (0~40°C), as this will damage or reduce the life of the battery.

- ## Prior to Use

1. **Confirm Compatibility:** Find your notebook model and its voltage requirements on the *Universal Notebook Battery Compatibility Guide*. Individual voltage ratings can also be found on your notebook computer's system label or power adapter label.
2. **Select the Correct Tips:**
Plug: Each is marked with an uppercase letter that corresponds to the notebook computer models listed in the *Universal Notebook Battery Compatibility Guide*. It is used to connect output power from the UPB90 to the input DC voltage port on your notebook.

3. **Register Your Product:** Visit <http://warranty.apc.com> and use keycode p668y.

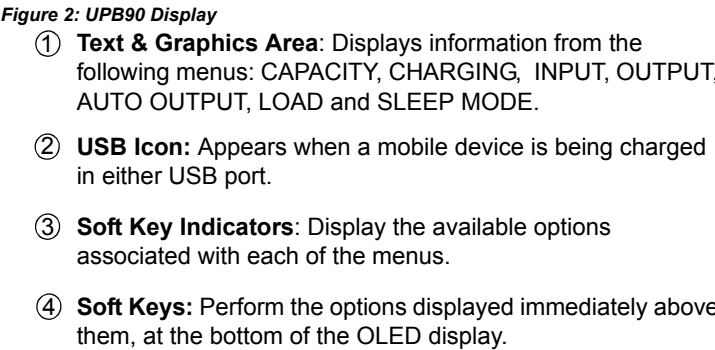
Once compatibility has been confirmed and appropriate plugs/jacks have been selected, APC recommends fully charging the UPB90 to 100% prior to use. To begin charging the UPB90:

1. Attach appropriate plug, jack and power connector, as shown in *Figure 1*.
2. Connect your notebook power adapter to the compatible jack.
3. The UPB90 OLED screen should now display **CHARGING**.

Diagram illustrating the back of the device with various ports and connectors labeled:

- Power port
- USB ports
- Power connector
- Input power connector
- Jack
- Output power connector
- Plug
- OLED Display
- Soft Keys

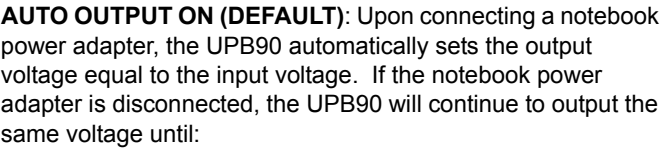
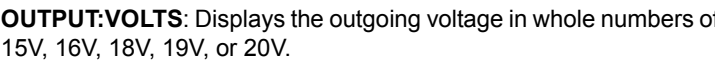
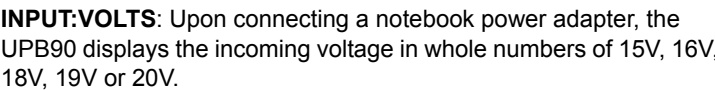
B. Understanding the Display



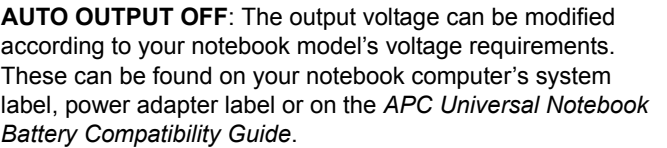
Press the **NEXT** soft key to scroll through menus and to display the current status of the UPB90.

1. Press and hold the **SELECT** soft key for 2-3 seconds until the value in the Text & Graphics Area blinks.
2. Press the **NEXT** soft key to scroll through the selections.
3. Once at the desired selection, press and hold the **SELECT** soft key for 2-3 seconds to confirm.
4. The screen will then stop blinking.

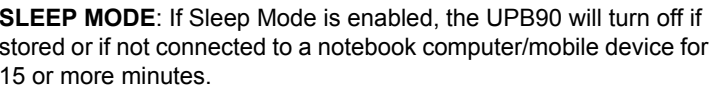
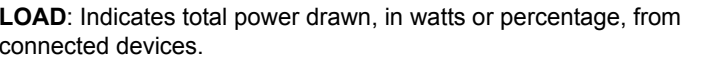
CHARGING: Indicates AC power is connected to the UPB90 and that the battery is being charged. Display is in a percentage, bar graph, or hours:minutes format.



Note: The **SELECT** soft key indicator will not be available when AUTO OUTPUT is ON. You may only move to the next UPB90 menu option.



Note: The **SELECT** soft key indicator is now available to set the output voltage. For details on customizing menu settings, see Section C: Customizing Display & Viewing Status.



When powered and charged by a notebook power adapter, the UPB90 status menus will differ slightly from those menus displayed when the UPB90 is not connected to a notebook power adapter.

| Menus available when the UPB90 is connected to a notebook power adapter | Menus available when the UPB90 is NOT connected to a notebook power adapter |
|---|---|
| 1. CHARGING | 1. CAPACITY |
| 2. INPUT | 2. OUTPUT |
| 3. OUTPUT | 3. AUTO OUTPUT |
| 4. AUTO OUTPUT | 4. LOAD |
| 5. SLEEP MODE | 5. SLEEP MODE |

Figure 3: UPB90 Menu Sequences

E. General Operation of the UPB90

With Notebook Computer: When the UPB90 is properly connected to your notebook computer, it will appear to be on utility power. For optimal battery runtime, adjust your notebook computer's power settings (Refer to your notebook user manual or control panel for more user information on changing power settings). If your notebook power adapter, or other compatible power adapter is removed from the UPB90, the UPB90 will charge and power your notebook computer. If any of these notebook adapters are present, power will pass through the UPB90 and charge/power the notebook computer. *(Note: The UPB90 will also be recharged during this pass through period, but overall recharge time for the UPB90 will increase)*

With a Mobile Device: Use an appropriate USB charging cable to power devices such as iPods, MP3 players, mobile phones, PDAs and portable gaming systems. Connect the USB cable to an available USB port on the UPB90 and the other end of the cable to the device that needs to be powered. See *Figures 1 & 4*.

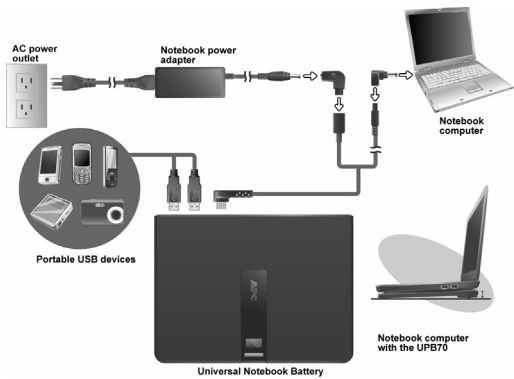


Figure 4: Typical Connection Diagram

F. Specifications

| Item | Specification |
|-----------------------|--|
| Capacity | 90 Watt-hours |
| Output Power | 90 Watts Maximum Continuous Power, 100 Watts Peak Power (short duration) |
| Output Voltage | Main: 15V, 16V, 18V, 19V, 20V USB: 5.3Vdc each |
| Input Power Source | OEM notebook power adapter |
| Charge Time | Recharges to 100% in 3.5 hours |
| Size (H x W x D) | 12.20" x 9.84" x 0.73" (310mm x 250mm x 18.6mm) |
| Weight | 2.38 lbs (1.08kg): battery only 2.59 lbs (1.17kg): battery, power cable, one plug and one tip |
| Environmental Storage | -4 ~ 140°F (-20 ~ 60°C) |
| Operation | 32 ~ 113°F (0 ~ 40°C) |
| Agency Approvals | TUV / GS, UL and CSA Note: This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference which may cause undesired operation. |

G. Troubleshooting

| OLED Error Message/ Problem | Indication | Remedy |
|---|--|---|
| <div>ATTENTION! SET OUTPUT VOLTAGE I NEXT</div> <div>INPUT VOLTAGE MUST EQUAL OUTPUT INPUT:19V OUTPUT:18 I NEXT</div> | <ul style="list-style-type: none">Output voltage has been incorrectly set, no output power to notebook.Output has been changed while the battery is in use; output power to notebook will be interrupted. | <ul style="list-style-type: none">To resume power output, ensure that the output voltage equals input voltage. <p>Check the voltage rating from the system label on the notebook or power adapter. Switch the output voltage to the corresponding voltage. Disconnect and reconnect the UPB90 power cable from/to the UPB90. Press “SELECT” and the battery will resume power output.</p> <p>Note: To prevent inequal input and output voltages, set AUTO OUTPUT to “ON”. See <i>Section C: AUTO OUTPUT</i>.</p> |

| Possible OLED Error Message | Indication | Remedy |
|---|---|---|
| <div>SYSTEM FAULT ! OVERLOAD</div> | Total output power has exceeded the maximum power rating of the UPB90. Output power to notebook and/or mobile devices has stopped. | Check "LOAD" menu to determine amount the amount of watts being supported. If > 90 watts or > 100%, begin removing connected devices to reduce load. Also consider the following options in order to resume power output: <ol style="list-style-type: none">Fully charge the internal notebook battery using the adapter provided with the notebook. Once fully charged, connect the UPB90 to the notebook.Change the power settings on the notebook (lower LCD brightness, turn off DVD drive, or reduce CPU speed) to reduce power requirements. |
| <div>SYSTEM FAULT ! TEMPERATURE</div> | The surface temperature of the UPB90 is at or above the desired specifications and has shut down as a precaution. | Remove UPB90 from enclosed area (in notebook case, under notebook computer etc..) and let it cool for few minutes. The unit will recover from thermal protection mode. Review the operating temperatures set for the UPB90.(See <i>Section F: Specifications</i>) |
| <div>SYSTEM FAULT ! INPUT VOLTAGE ERROR</div> | Input voltage of the notebook adapter is lower than 14.3V or higher than 26.5V. The notebook computer and/or UPB90 are fully discharged. A significant amount of power is being drawn from the notebook power adapter, affecting the input voltage. | <ol style="list-style-type: none">Confirm output voltage of notebook power adapter is 15- 24V. Voltage requirements can be found on on your notebook computer's system label or power adapter label.Disconnect UPB90 from notebook. Individually recharge the notebook and UPB90 with notebook power adapter before reconnecting the units according to <i>Figure 4</i>. |
| <div>SYSTEM FAULT ! USB OVERLOAD</div> | UPB90 cannot support power draw of the mobile devices connected in either or both of USB port(s). | Remove one or both mobile devices. Review power consumption ratings of mobile devices. |
| <div>CHARGING 85% SELECT I NEXT</div> <p>The UPB90 will not charge to 100% or the UPB90 will remain at a certain value (<i>percentage, bar graph or hours: minutes</i>) for a period of time.</p> | The UPB90 is not being charged because a significant amount of power is being drawn by the notebook computer in order to charge its internal battery and power the notebook computer. | <ul style="list-style-type: none">UPB90 charging will resume once notebook computer's internal battery is fully charged.Disconnect UPB90 from the notebook computer and notebook power adapter. Independently charge the UPB90 with notebook power adapter until the UPB90 is fully charged. |

H. Recycling, Storage, and Battery Life

The UPB90 should be disposed of properly. Please do not incinerate or dispose of in trash receptacles. For more information about APC's battery recycling program, visit: mobilecomputing.apc.com.

For best results, do not store the UPB90 where there is excessive heat or cold, as such environments can damage the battery pack and reduce battery life. If storing the UPB90 for an extended period, completely discharge and recharge the unit before the next use.

To completely discharge: Attach the UPB90 to a notebook and wait until all LED indicators are off during use.

To completely charge: Attach any compatible notebook power adapter to the UPB90 and continue charging it until all Status indicators are extinguished. For best results, the UPB90 should be completely discharged and recharged once every 3 months. This will condition the cells inside the battery and ensure the UPB90 delivers the most capacity available.

I. Limited Warranty

APC warrants its products to be free from defects in materials and workmanship under normal use and service for one (1) year from the date of purchase for the original purchaser. Its obligation under this warranty is limited to repairing or replacing, at its sole option, any such defective products. To obtain service under warranty, you must obtain a Returned Material Authorization (RMA) number from APC or an APC Service Center with transportation charges prepaid. It must be accompanied by a brief description of the problem and proof of date and place of purchase. This warranty applies only to the original purchaser.

J. Contact Information

American Power Conversion
132 Fairgrounds Rd
West Kingston, RI 02892, USA
Toll Free: 800.800.4APC (800.800.4272)
Toll: (1) 401.789.5735
Fax: (1) 401.789.3710
Internet: <http://www.apc.com>

APC Asia Pacific
APC Australia
Level13 The Denison
65 Berry Street
North Sydney, NSW 2060
Tel: 1800 652 725

¹Actual runtimes vary according to notebook model and power setting; please refer to Runtime Chart.
²APC recommends the use of APC USB Charging Cables (sold separately). Devices may not work properly with other USB charging cables.