

## Back-UPS (VA):

350, 450, 500, 550, 600, 650, 725, 750,  
800, 900, 1000, 1050, 1200, 1250, 1300, 1500

### STEP 1:

Connect the UPS's Internal batteries (Figure 1):

**NOTE: Battery Cartridge installation will differ depending on UPS model. Figure 1 illustrates some of the variations in Battery Cartridges. Please follow the illustration which best resembles your UPS.**

#### Procedure for Figure 1: (1, 2, 3,4)

- 1.1 Using a table or raised surface, seat the UPS in the stand 1
- 1.2 Remove the Battery Compartment Door 2
- 1.3 Connect the Battery Connectors 3
- 1.4 Replace the Battery Compartment Door 4

**OR**

#### Procedure for Figure 1: (A,B,C,D)

- 1.1 Remove the Battery Compartment Door A
- 1.2 Slide the battery out enough to get access to the Battery Connector B
- 1.3 Insert the Battery Connector into the matching connector on the inside of the UPS Battery Compartment C
- 1.4 Replace the Battery Compartment Door D

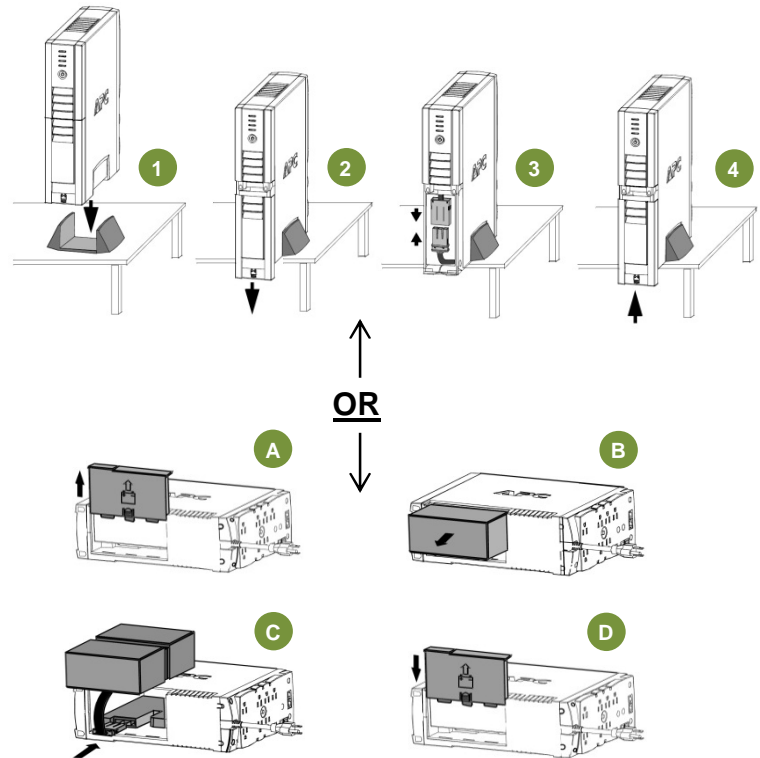


Figure 1

### STEP 2:

Install UPS accessories (Figure 2):

**NOTE: Ensure the UPS is turned off prior to installing any accessories. Some accessories are not provided with the UPS, please contact APC or CBM for the compatible accessories.**

- 2.1 Install all external Battery Packs (if applicable). The External Battery Pack connector is located on the rear panel of the UPS and is typically a Grey connector 1



Figure 2

### STEP 3:

Connect wiring & charge UPS (Figure 3):

**NOTE: Ensure equipment is turned off.**

- 3.1 Connect equipment to UPS.
- 3.2 Connect UPS Power Cord to a suitable power receptacle.
- 3.3 Reset the UPS Circuit Breaker by pushing-in the button or flipping the toggle switch (Circuit breakers may differ on some models)
- 3.4 Power-up the UPS by pressing the button.
- 3.5 Wait for the Self-Test to complete, then Power-up equipment.
- 3.6 Allow UPS to charge batteries for 24 hours prior to operating on battery or performing additional Self-Test or Calibration tests.

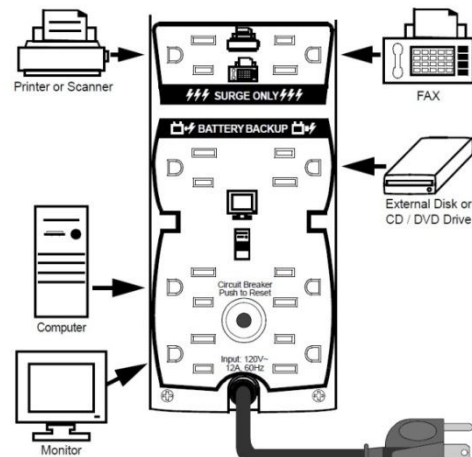


Figure 3

**UPS Front Panel (Figure 4):**

**NOTE: Symbols & functions may differ on some UPS models. Figure 4 illustrates some of the variations in displays. Please use the illustration which best resembles your UPS.**

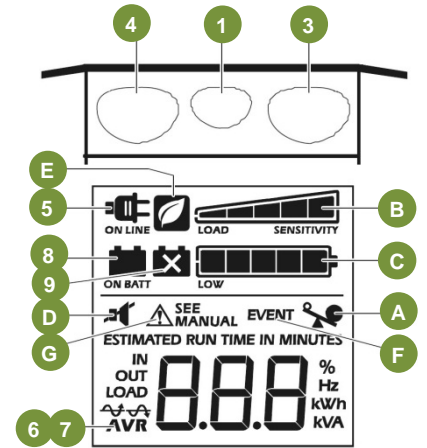
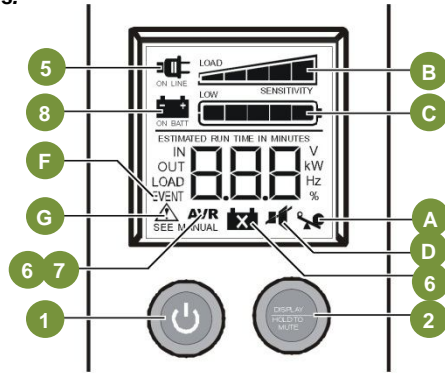
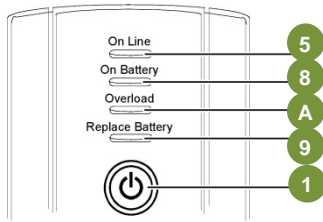


Figure 4



**1 POWER 'ON/OFF' BUTTON** - Button to turn UPS on or off.



**2 DISPLAY/HOLD TO MUTE BUTTON** - Button to display messages & mute UPS alarm.



**3 DISPLAY BUTTON** - Button to illuminate the display.



**4 MUTE BUTTON** - Button to mute UPS alarms.



**5 ONLINE** - UPS is supplying utility power to the connected equipment. If not lit, the UPS is not turned ON, or is supplying battery power.



**6 AVR BOOST** - UPS is compensating for a low utility input voltage.



**7 AVR TRIM** - UPS is compensating for a high utility input voltage.



**8 ON BATTERY** - UPS is supplying battery backup power to the connected equipment. UPS will beep four times every 30 seconds.



**9 REPLACE BATTERY** - UPS fails a self-test, or battery is bad. UPS makes short beeps for a minute.  
**BATTERY DISCONNECTED** - Flashes to indicate the battery is disconnected. UPS will beep every two seconds.



**A OVERLOAD** - The power demand from the load has exceeded the capacity of the UPS. A sustained alarm tone is also emitted.



**B LOAD CAPACITY** - The load is indicated by the number of sections illuminated, one to five. Each bar represents 20% of the load.



**C BATTERY CHARGE** - The battery charge level is indicated by the number of sections illuminated. When all five blocks are illuminated, the UPS is at full charge.



**D MUTE** - If the line through the speaker icon is illuminated, the audible alarm has been turned off.



**E POWER SAVING** - Master and Controlled outlets are enabled, saving power when the master device goes into sleep or standby mode.



**F EVENT** - The event counter shows the number of events that occurred that caused the UPS to switch to battery operation.



**G SYSTEM FAULTS** - The system has a fault. The fault number will illuminate on the display interface. See "UPS Troubleshooting" on page 3

**UPS Outlets (Figure 5):**

**NOTE: Panel Layout may differ depending on model.**

|   |  |
|---|--|
| 1 | Data port                                  |
| 2 | Modem/Phone/FAX/Network Wall Outlet        |
| 3 | Chassis ground connection screw (TVSS GND) |
| 4 | Modem/Phone/FAX/Network                    |
| 5 | Circuit breaker/Overload protection        |
| 6 | UPS input                                  |
| 7 | Outlets                                    |
| 8 | Power button                               |
| 9 | Power On/ replace Battery indicator        |
| A | Site/Building Warning Indicator            |

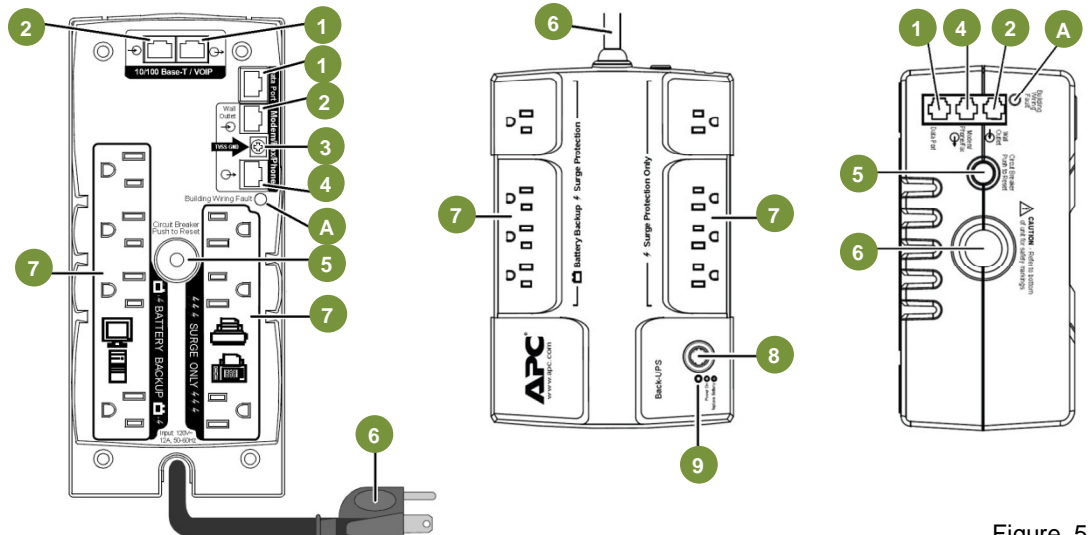


Figure 5

**UPS troubleshooting:****NOTE: Troubleshooting procedures may differ depending on UPS model.****Problem:****Solution:****UPS will not turn on**

|  |  |
|--|--|
| • UPS not connected to AC power source.          | Ensure the UPS is securely connected to an AC outlet.  |
| • UPS circuit breaker "tripped".                 | Disconnect non-essential equipment from the UPS. Reset (push in) the rear panel circuit breaker. Switch on the UPS and plug in devices one at a time. If the circuit breaker trips again, disconnect the device that caused the breaker to trip. |
| • Utility input voltage quality is out of range. | Consider adjusting the transfer voltage and sensitivity (See <i>Transfer Voltage and Sensitivity Adjustment</i> in the full User Manual)   |
| • Internal battery cartridge is not connected.   | Connect battery cartridge (see <i>Connect Battery Cartridge</i> in the full User Manual)   |

**UPS does not power essential equipment during an outage**

|   |   |
|---|---|
| • Equipment plugged into a Surge Only outlet. | Unplug device from 'Surge Only' outlet and move to a 'Battery Backup' outlet. |
|---|---|

**UPS operates on battery although utility power exists**

|  |  |
|--|--|
| • UPS circuit breaker "tripped".                 | Disconnect non-essential equipment from the UPS. Reset (push in) the rear panel circuit breaker. Switch the UPS on and plug equipment in one-at-a-time. If the circuit breaker trips again, disconnect the device that caused the breaker to trip. |
| • Utility input voltage quality is out of range. | Consider adjusting the transfer voltage and sensitivity (See <i>Transfer Voltage and Sensitivity Adjustment</i> in the full User Manual)   |

**UPS does not provide expected backup time**

|  |  |
|--|--|
| • UPS is heavily loaded.   | Unplug non-essential equipment (printers, scanners, etc) from the Battery Backup outlets and plug into 'Surge Only' outlets. |
| • UPS battery cartridge is discharged due to recent power outage and has not had time to recharge. | Charge the battery cartridge for 8 hours. UPS runtime is reduced until the battery cartridge is fully charged.               |
| • Battery has reached the end of its life.   | Replace battery cartridge (see <i>Order Replacement Battery Cartridge</i> in the full User Manual)                           |

**Red Replace Battery indicator is flashing. Green On Line indicator is on**

|  |  |
|--|--|
| • Internal battery cartridge is not connected. | Connect battery cartridge (see <i>Connect Battery Cartridge</i> in the full User Manual) |
|--|--|

**Red Replace Battery indicator is on**

|  |  |
|--|--|
| • Battery has reached the end of its life. | Replace the battery cartridge (see <i>Order Replacement Battery Cartridge</i> in the full User Manual) |
|--|--|

**Red Overload indicator is on or flashing**

|   |   |
|---|---|
| • Connected equipment is drawing more power than the UPS can provide. | Move one or more equipment power plugs from Battery Backup outlets to Surge Only outlets. |
|---|---|

**Green On Line indicator is on and all other front panel indicators are flashing**

|                       |                                |
|-----------------------|--------------------------------|
| • Internal UPS fault. | Contact CBM Technical Support. |
|-----------------------|--------------------------------|

For the complete User Manual or comprehensive troubleshooting, please visit the following websites:

APC: <http://www.apc.com> or CBM: <http://www.buyupsonline.com>