

Smart-UPS Rack (VA):

450, 500, 700, 750, 1000, 1400,
1500, 2000, 2200, 3000, 5000

STEP 1:

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

NOTE: The Battery Disconnect/Connector may vary or be omitted on some models. Figure 1 illustrates some of the variations in connectors. Please follow the illustration which best resembles your UPS.

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

- 1.1 Remove the Front Bezel **1**
- 1.2 Locate the battery connector which will be adjacent to the battery compartment. Connect the Battery connector to the UPS connector. A snap will be felt as the connector partially engages the jack. A second snap will be felt as the connector securely seats in the Battery Jack **2**
- 1.3 Replace the front Bezel.

AND / OR

Procedure for Figure 1: (A)

- 1.1 Locate the 'Battery Disconnect' or 'Battery Connector' on the rear panel of the UPS. It is typically a Yellow connector.
- 1.2 If the Battery Disconnect/Connector has a metal cover, remove the fastening screws and move the cover **A**
- 1.3 Connect the battery by pressing the yellow connector into the Battery Jack. A snap will be felt as the connector partially engages the jack. A second snap will be felt as the connector securely seats in the Battery Jack.

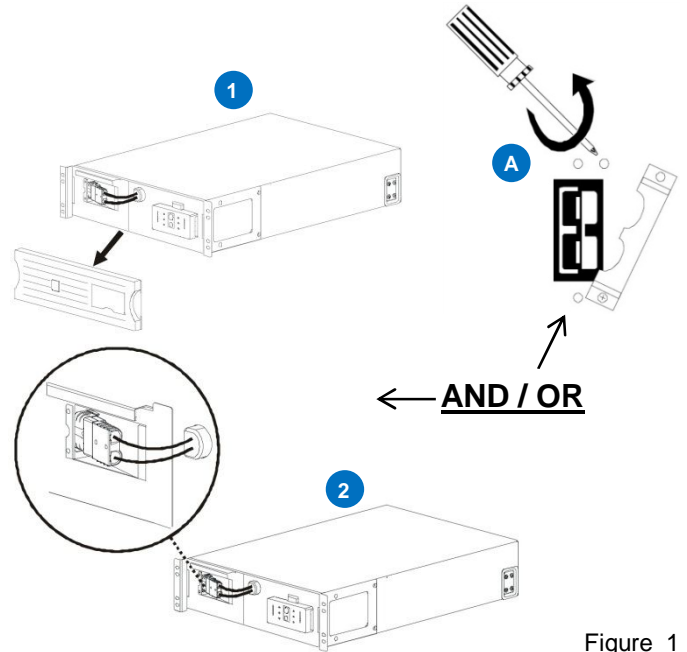


Figure 1

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 SmartSlot accessory (if applicable) **1**
- 2.2 Install Step-down transformer (if applicable).
- 2.3 Install all external Battery Packs (if applicable). The External Battery Pack connector is located on the rear panel of the UPS, and is either BLUE/RED (48V) or GREY (24V). If the External Battery Pack Connector has a metal cover, remove the fastening screws and move the cover as in Figure 1.A. **2**

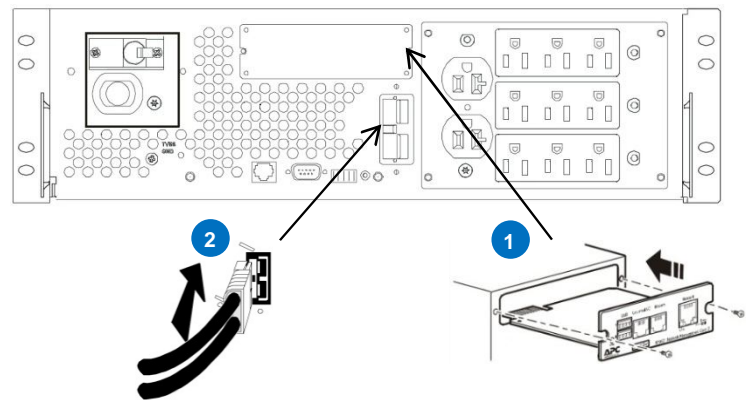


Figure 2

STEP 3:

Connect wiring & charge UPS (Figure 3):

NOTE: Ensure equipment is turned off.

- 3.1 Connect equipment to UPS **1**
- 3.2 Connect UPS Power Cord to a suitable power receptacle **2**
- 3.3 Set UPS circuit breakers to the 'ON' position (if applicable) **3**
- 3.4 Power-up the UPS by pressing the **Test** 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.

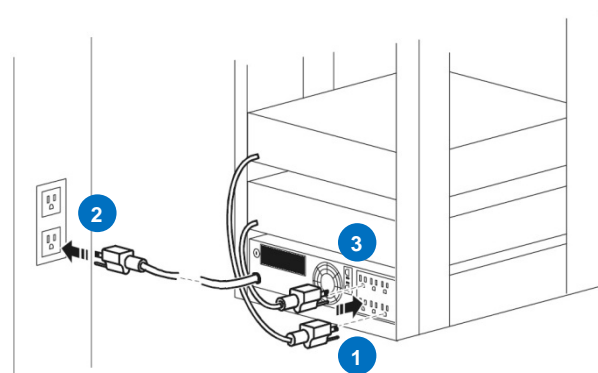


Figure 3

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.

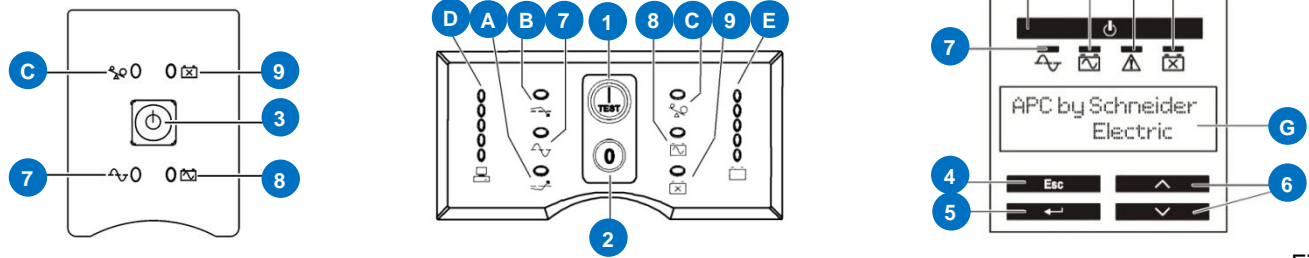


Figure 4

	1 POWER 'ON' BUTTON - Button to turn UPS on & perform manual self-test.		A AVR BOOST - UPS is compensating for a low utility input voltage.
	2 POWER 'OFF' BUTTON - Button to turn UPS off.		B AVR TRIM - UPS is compensating for a high utility input voltage.
	3 POWER 'ON/OFF' BUTTON - Button to turn UPS on or off.		C OVERLOAD - The power demand from the load has exceeded the capacity of the UPS. A sustained alarm tone is also emitted.
	4 ESCAPE BUTTON - Button to exit a sub-menu.		D LOAD CAPACITY - The load is indicated by the number of sections illuminated, one to five. Each bar represents 20% of the load.
	5 ENTER BUTTON - Button to confirm a selection on the menu.		E 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.
	6 UP/DOWN BUTTONS – Buttons to scroll through menu options.		F SYSTEM FAULTS - The system has a fault. The fault number will illuminate on the display interface. See "UPS Troubleshooting" on page 3
	7 ONLINE - UPS is supplying utility power to the connected equipment. If not lit, the UPS is not turned ON, or is supplying battery power.		G DISPLAY SCREEN – Display important information about the UPS and connected equipment.
	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.		

UPS Back Panel (Figure 5):

NOTE: Panel layout may differ on some models.

1	UPS input
2	Input Circuit breaker/Overload protection
3	SmartSlot for optional NMC accessory card
4	Outlets
5	Outlet circuit breaker/Overload protection
6	Site/Building wiring fault indicator
7	USB port
8	Serial UPS monitoring port
9	EPO connector
A	Voltage sensitivity button
B	Voltage sensitivity indicator
C	External Battery Pack connector

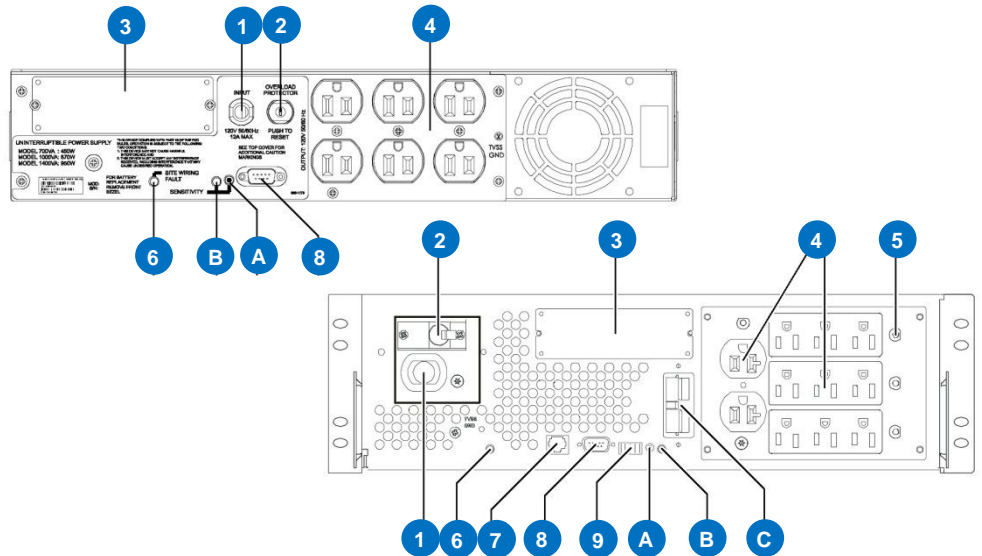


Figure 5

UPS Troubleshooting:**NOTE: Troubleshooting procedures may differ depending on UPS model.****Problem:****Solution:**

UPS will not turn on	
• ON button not pushed.	Press the ON button once to power the UPS and the load.
• UPS not connected to AC power supply.	Check that the power cable from the UPS to the power supply is securely connected at both ends.
• UPS input circuit breaker tripped.	Reduce the load on the UPS by unplugging equipment and reset the circuit breaker (on back of UPS) by pressing the plunger back in.
• Very low or no utility voltage.	Check the AC power supply to the UPS with a table lamp. If very dim, have the utility voltage checked.
• Battery not connected properly.	Confirm the battery connections.
UPS will not turn off	
• Internal UPS fault.	Do not attempt to use the UPS. Unplug the UPS and have it serviced immediately.
UPS operates on-battery although normal line voltage exists	
• UPS's input circuit breaker tripped.	Reduce the load on the UPS by unplugging equipment and reset the circuit breaker (on back of UPS) by pressing the plunger back in.
• Very high, low, or distorted line voltage. Inexpensive fuel powered generators can distort the voltage.	Move the UPS to a different outlet on a different circuit. Test the input voltage with the utility voltage display. If acceptable to the load, reduce the UPS's sensitivity. See <i>User's Manual</i> for procedures.
UPS beeps occasionally	
• Normal UPS operation.	None. The UPS is protecting the load.
UPS does not provide expected backup time	
• The UPS's battery is weak due to recent outage or is near the end of its service life.	Charge the battery. Batteries require recharging after extended outages. Also, they wear faster when put into service often or when operated at elevated temperatures. If the battery is near the end of its service life, consider replacing the battery even if the replace battery indicator is not yet lit.
• The UPS is overloaded.	Check the UPS's load display. Unplug less needed equipment, such as printers.
Front panel indicators flash sequentially	
• The UPS has been shut down by remote control.	None. The UPS will restart automatically when utility power returns.
All indicators are lit and UPS emits a constant beeping	
• Internal UPS fault.	Do not attempt to use the UPS. Turn the UPS off and have it serviced immediately.
All indicators are off and UPS is plugged into wall outlet	
• The UPS is shut down and the battery is discharged from an extended outage.	None. The UPS will return to normal operation when the power is restored and the battery has a sufficient charge.
The replace battery light is lit	
• Weak batteries.	Do another self-test to see if it clears.
• Replacement batteries not connected properly.	Confirm the battery connections.

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

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