



# **Power Inverter**

## **Model BI800T and BI800F**

### **Installation Guide and User's Manual**

# CONTENTS

|  | Page |
|--|------|
| Overview   | 1    |
| Checklist  | 1    |
| Section 1. Unpacking/Inspection (at reseller location) | 2    |
| Main Housing Chassis and Inverter                      | 2    |
| Battery Inspection                                     | 2    |
| Unpack Battery   | 2    |
| Inspect Battery  | 2    |
| Clean battery  | 2    |
| Remove Battery from Shipping Container                 | 2    |
| Check Battery Fluid Level                              | 2    |
| Check Battery Charge Level                             | 3    |
| Repackage Battery                                      | 3    |
| Section 2. Unpacking/Inspection (at customer location) | 3    |
| Main Housing Chassis and Inverter                      | 3    |
| Battery Inspection                                     | 4    |
| Unpack Battery   | 4    |
| Inspect Battery  | 4    |
| Clean Battery  | 4    |
| Remove Battery from Shipping Containe                  | 4    |
| Check Battery Fluid Level                              | 4    |
| Check Battery Charge Level                             | 4    |
| Section 3. Installation 1                              |      |
| Main Housing Placement                                 | 4    |
| Location Selection                                     | 4    |
| Lock Wheels  | 4    |
| Battery Installation                                   | 4    |
| Main Housing Chassis Rear Panel Removal                | 4    |
| Install a Battery                                      | 5    |
| Battery Connections                                    | 6    |
| Install Main Housing Chassis Rear Panel                | 6    |
| Install Inverter                                       | 6    |
| Install Wiring Management Kit                          | 7    |
| Section 4. Controls and Indicators                     | 9    |
| Inverter Controls                                      | 9    |
| AWAY/HOME  | 9    |
| TEST/MUTE  | 9    |
| Circuit Breaker Switch                                 | 9    |
| Inverter Indicators                                    | 9    |
| Section 5. Troubleshooting                             | 12   |
| Manual Bypass  | 12   |
| Preventative Maintenance                               | 13   |
| Specifications   | 14   |
| Warranty   | 15   |
| Contact Information                                    | 15   |

## CONTENTS - continued

### FIGURES

|   | <b>Page</b> |
|---|-------------|
| Figure 1. APC Power Inverter                                  | 1           |
| Figure 2. Battery Elements (tubular battery shown)            | 2           |
| Figure 3. Battery Fill Cap Elements                           | 3           |
| Figure 4. Main Housing Chassis Rear Panel Removal             | 5           |
| Figure 5. Battery Installations and Connections               | 6           |
| Figure 6. Inverter Assembly Placement                         | 7           |
| Figure 7. Typical Home Wiring Before Inverter Installation    | 7           |
| Figure 8. Typical Home Wiring After Inverter Installation     | 8           |
| Figure 9. Power Inverter Connections                          | 8           |
| Figure 10. Wiring Management Kit Installation                 | 9           |
| Figure 11. Power Inverter Front Panel Controls and Indicators | 10          |
| Figure 12. Power Inverter Bypass Connection                   | 13          |

### TABLES

|  |    |
|--|----|
| Table 1. Power Inverter Indicators                   | 10 |
| Table 2. Power Inverter Troubleshooting              | 12 |
| Table 3. APC Power Inverter Technical Specifications | 14 |

Thank you for purchasing APC's Power Inverter. Please fill out the enclosed Warranty Registration Card, or register your purchase on-line at: [www.apc.com/support](http://www.apc.com/support).

## Overview

APC's Power Inverter (Figure 1) is designed for years of trouble-free use. The Inverter is a sinewave back-up power supply intended to serve house loads. It is rated for 800 VA/500W at 230 Vac, 50-Hz, and operates on a wide range of input voltages (100 - 265V). If the input voltage goes out of range (less than 100V or more than 265V), the utility is isolated and the inverter supplies power to the load from the internal batteries. The Inverter can serve inductive loads (flourescent lamps, ceiling and table fans), resistive loads (incandescent lamps), and switched mode power supply (SMPS) loads (television). The typical backup time with the primary battery pack at full load is approximately two (2) hours. Backup time can be further extended by connecting the optional external battery pack in parallel to the existing battery pack.

**Note:** APC offers tubular, as well as flat-plate batteries for use with the Power Inverter. For the purposes of this manual, only the tubular batteries are shown.

## Checklist:

Depending on what the customer has ordered, ensure the following items have been delivered:

- Inverter
- Batteries (2), Tubular Batteries Shown
- Main Housing
- Wiring Kit
- Fill Kit (rubber gloves and a funnel)
- Wire Management Kit
- Parallel Wiring Kit (if external battery pack was ordered - not shown)

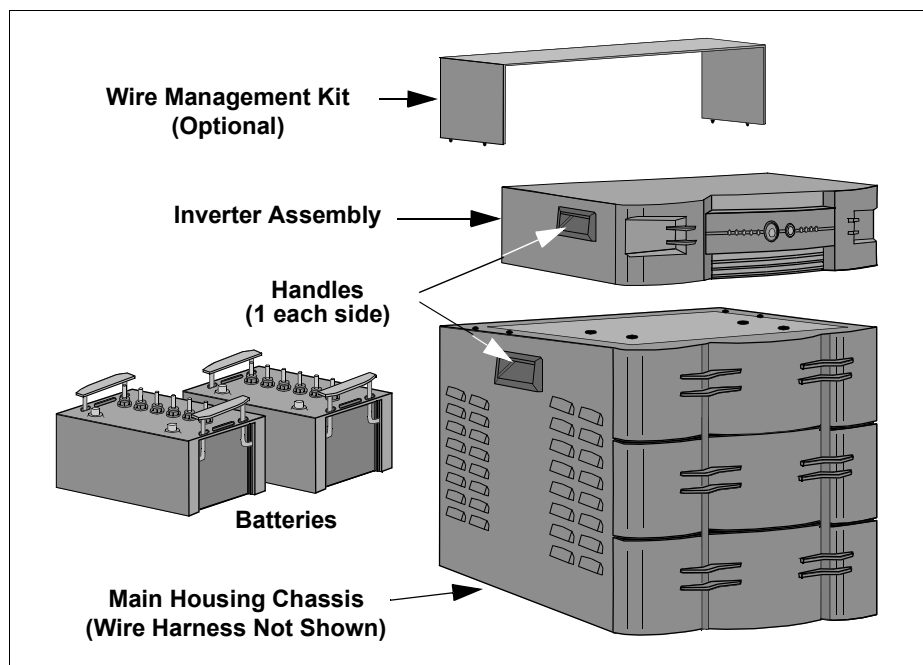


Figure 1. APC Power Inverter

## Section 1. Unpacking/Inspection (at reseller location)

### Main Housing Chassis and Inverter

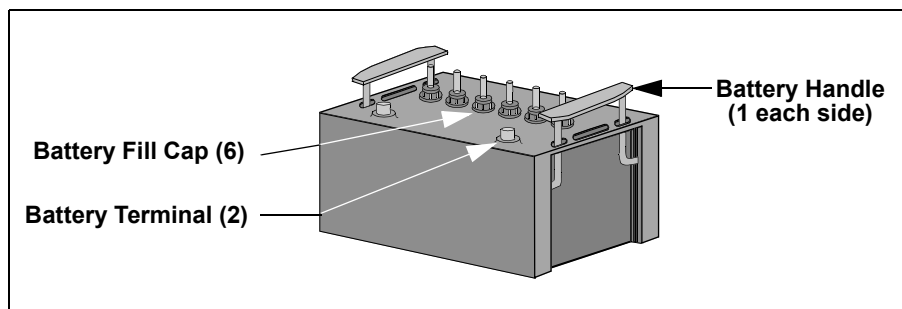
**!** **Warning:** The Main Housing Chassis weighs 18 kg. Two-person lift required. Failure to comply may result in personal injury.

Inspect the shipping containers for signs of obvious damage. If damage to either shipping container is extensive, notify the carrier and return the unit to the factory. If there are no apparent signs of damage, carefully open the container, and remove the packing materials (do not discard). To remove the Main Housing Chassis or Inverter Assembly from the shipping container, grasp the handles located on each side of the housing or inverter (Figure 1), and remove the item from the container. Inspect each for: dents, scratches, broken or missing wheels (housing only), warpage of the top cover, or other signs of damage. If either unit is damaged, please notify the factory and obtain a Return Material Authorization number and return the unit as/if instructed. If there are no obvious signs of damage, repackage the unit for shipment to the customer using the materials already removed from the shipping container. Ship or otherwise deliver the unit to the customer location.

### Battery Inspection

**Unpack Battery** - Inspect the battery shipping container for signs of obvious damage. Carefully inspect the container for signs of a leaking battery. If the shipping container shows signs of leakage, the battery may be damaged. Contact the factory for instructions to further inspect the battery inside the container, or for return instructions. Carefully open the shipping container and remove the packing materials (do not discard).

**Inspect Battery** - If there are no obvious signs of damage or leakage, with the battery in the shipping container, inspect the battery for leaks, cracks, broken wiring terminals, broken handles, and broken fill caps (Figure 2).



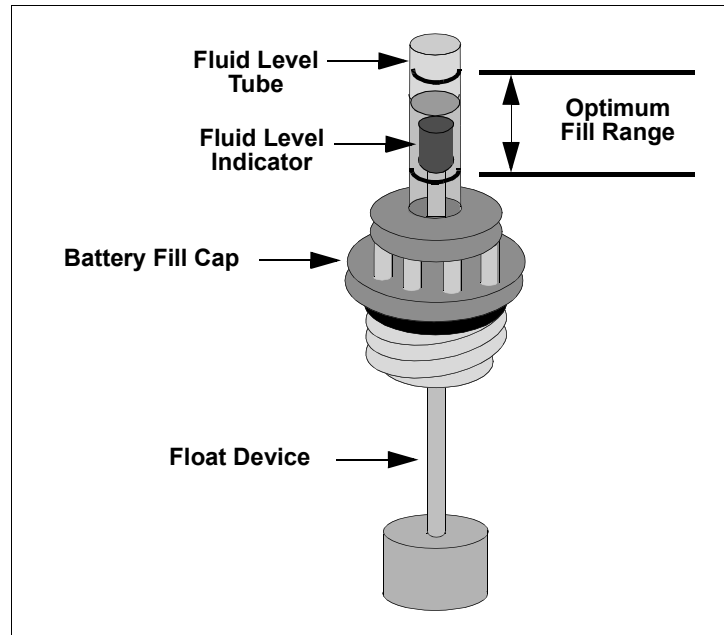
**Figure 2. Battery Elements (tubular battery shown)**

**Clean battery** - If the inspection shows signs of a leaking battery, put on rubber gloves and remove the battery fluid/residue from the battery housing using a mixture of baking soda and distilled water. If cracks or other damage is noted after cleaning the battery, contact the factory for return or disposal instructions.

**!** **Warning:** Each battery weighs 28 kg. Two-person lift required. Failure to comply may result in personal injury.

**Remove Battery from Shipping Container** - Remove the battery from the shipping container by grasping the handles (see Figure 1) located at each end of the battery. Lift the battery straight up and out of the shipping container.

**Check Battery Fluid Level** - After cleaning and inspection for damage, check the battery fluid level of each cell (Figure 3). If the fluid level of any cell is not within the specified range on the fill cap, put on rubber gloves (from Fill Kit), remove the battery cell cap, and fill the cell with distilled water using the funnel provided in the Fill Kit. Install the cell cap on each cell.



**Figure 3. Battery Fill Cap Elements**

**Check Battery Charge Level** - After filling battery cells (if necessary), check the battery specific gravity using a hydrometer. The battery specific gravity should be between 1230 and 1250. If battery specific gravity is below 1230, charge the battery using a battery charger until the battery specific gravity is within the acceptable range.

**!** **Warning:** Each battery weighs 28 kg. Two-person lift required. Failure to comply may result in personal injury.

**Repackage Battery** - Place the battery in the shipping container by grasping the handles located at each end of the battery. Lift the battery straight upwards and place it in the shipping container. Install packaging materials. Seal the shipping container, and ship the battery to the customer location.

## Section 2. Unpacking/Inspection (at customer location)

### Main Housing Chassis and Inverter

**Note:** The Inverter Assembly is shipped with two (one male and one female) IEC connectors for use in installing home wiring to/from the Inverter.

Inspect the shipping containers for signs of obvious damage. If damage to either shipping container is extensive, notify the carrier and return the unit to the factory. If there are no apparent signs of damage to the shipping container, carefully open the container, and remove the packing materials (do not discard).

**!** **Warning:** The Main Housing weighs 18 kg. Two-person lift required. Failure to comply may result in personal injury.

To remove the Main Housing Chassis or Inverter from the shipping container, grasp the handles located on each side of the Housing or Inverter (Figure 1), and remove the item from the shipping container. Inspect each for: dents, scratches, broken or missing wheels (housing only), warpage of the top cover, or other signs of damage. If either unit is damaged, please notify the factory and obtain a Return Material Authorization number and return the unit as/if instructed. If there are no obvious signs of damage, proceed with Battery Inspection.

## Battery Inspection

**Unpack Battery** - Inspect the battery shipping container for signs of obvious damage. Carefully inspect the container for signs of damage due to a leaking battery. If the shipping container shows signs of leakage, the battery may be damaged. Contact the factory for instructions to further inspect the battery inside the container, or for return instructions. Carefully open the shipping container and remove the packing materials (do not discard).

**Inspect Battery** - If there are no obvious signs of damage or leakage, with the battery in the shipping container, inspect the battery for leaks, cracks, broken wiring terminals, broken handles, and broken fill caps (Figure 2).

**Clean Battery** - If the inspection shows signs of a leaking battery, put on rubber gloves and remove the battery fluid from the battery housing using a mixture of baking soda and distilled water. If cracks or other damage is noted after cleaning the battery, contact the factory for return or disposal instructions.



**Warning:** Each battery weighs 28 kg. Two-person lift required. Failure to comply may result in personal injury.

**Remove Battery from Shipping Container** - Remove the battery from the shipping container by grasping the handles (see Figure 2) located at each end of the battery. Lift the battery straight upwards and out of the shipping container.

**Check Battery Fluid Level** - After cleaning and inspection for damage, check the battery fluid level of each cell (Figure 3). If the fluid level of any cell is not within the specified range on the fill cap, put on rubber gloves, remove the fill cap, and fill the cell with distilled water. Install the fill cap on each cell. If battery fluid is discharged from the battery during the filling process, put on rubber gloves and remove the battery fluid from the battery housing using a mixture of baking soda and distilled water.

**Check Battery Charge Level** - After filling battery cells (if necessary), check the battery specific gravity using a hydrometer. The battery specific gravity should be between 1230 and 1250. If battery specific gravity is below 1230, charge the battery using a battery charger until the battery specific gravity is within the acceptable range.

## Section 3. Installation

### Main Housing Placement

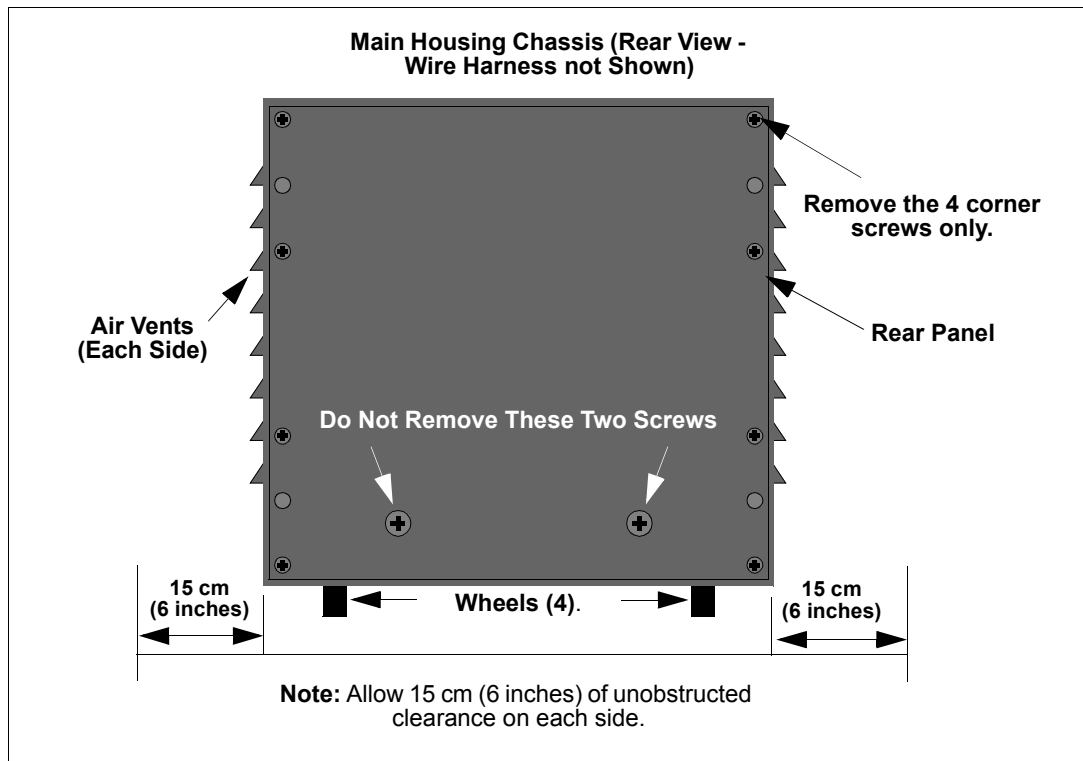
**Note:** Once the unit has been completely installed, it is not desirable to move it.

**Location selection** - unlock the wheels located at the bottom of the Main Housing Chassis, and roll it to the desired location. Ensure the area where the unit is to be placed is not in direct sunlight (surfaces may become hot). Further ensure the unit is placed in a dry area away from sources of liquids, and that the vents on each side have at least 15 cm (6 inches) of unobstructed clearance (Figure 4).

**Lock Wheels** - Lock the wheels to restrict movement during battery installation.

### Battery Installation

**Main Housing Chassis Rear Panel Removal** - Remove the four machine screws (Figure 4) that secure the Rear Panel to the Main Housing Chassis. Remove the Rear Panel and set it aside.



**Figure 4. Main Housing Chassis Rear Panel Removal**

**Note:** Access through the top of the Main Housing Chassis is provided for connecting and topping (filling) of the batteries only.

**Warning:** Each battery weighs 28 kg, and must be installed through the opening at the rear of the Main Housing Chassis and not through the opening in the top of the unit. Failure to comply may result in personal injury and/or equipment damage

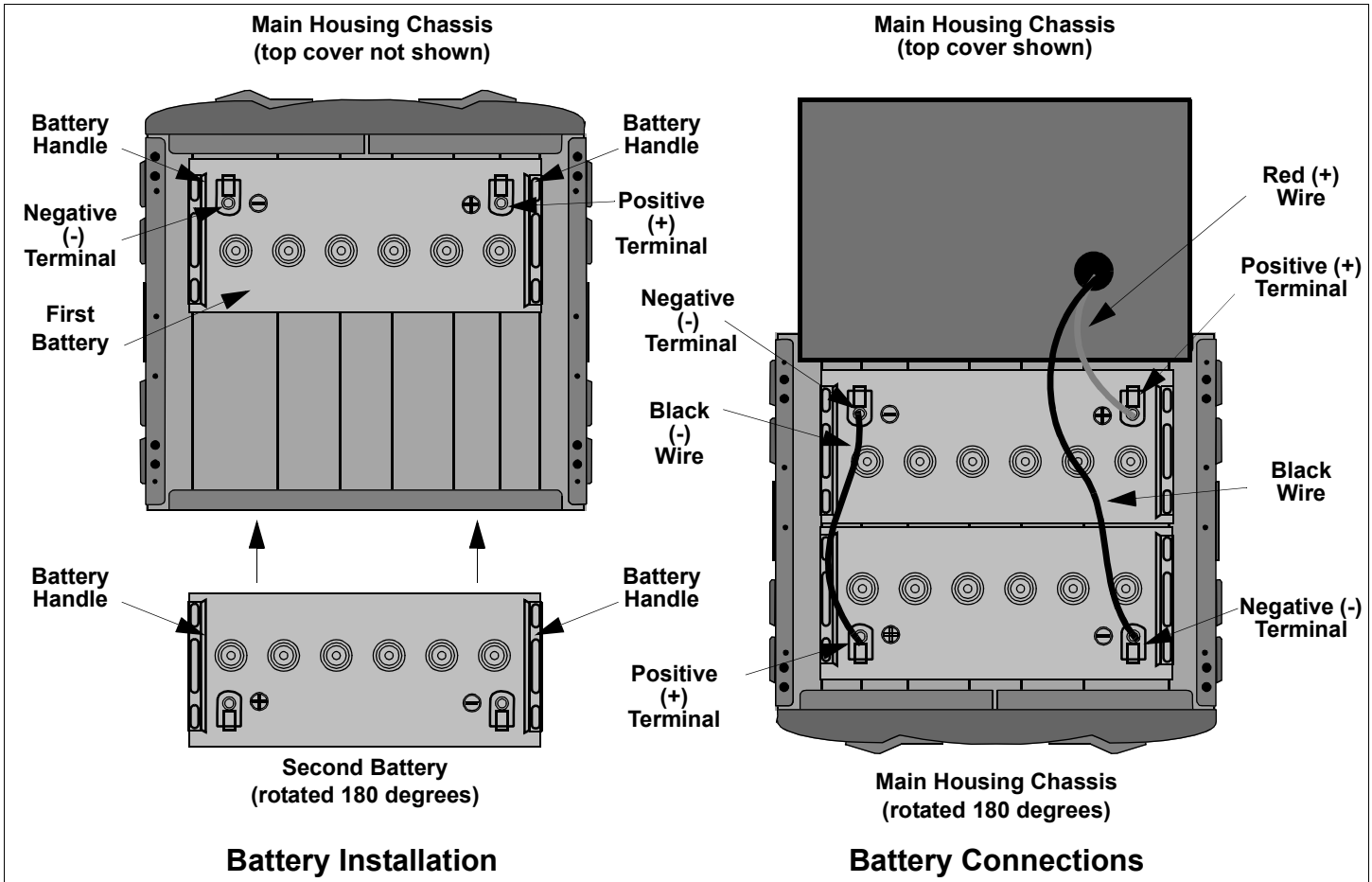
**Install a Battery** - Raise the top lid of the Main Housing Chassis to provide visual access to the interior of the chassis (Figure 5).

**Note:** The batteries are installed with the long side of the battery going across the length of the front panel.

**Caution:** Installation of the Power Inverter Batteries must be performed by a licensed and qualified electrician. Failure to comply may result in equipment damage, and may also void the Warranty.

At the rear of the Main Housing Chassis, position the first battery to be installed through the rear opening so that the positive (+) terminal is to the right. Position the second battery so that the positive (+) terminal is to the left. Grasp the battery using the handles (Figure 2) located at each end of the battery. Carefully lift the battery and slide it into the Main Housing through the rear opening. Slide the first battery as far forward as it will go into the Main Housing Chassis. Repeat this step for the second battery until it is up against the second battery.





**Figure 5. Battery Installations and Connections**

**Battery Connections - Note:** The batteries are charged and produce electric current. Small sparks may be noted during the connection process. This is a normal condition and does not pose a threat of injury.

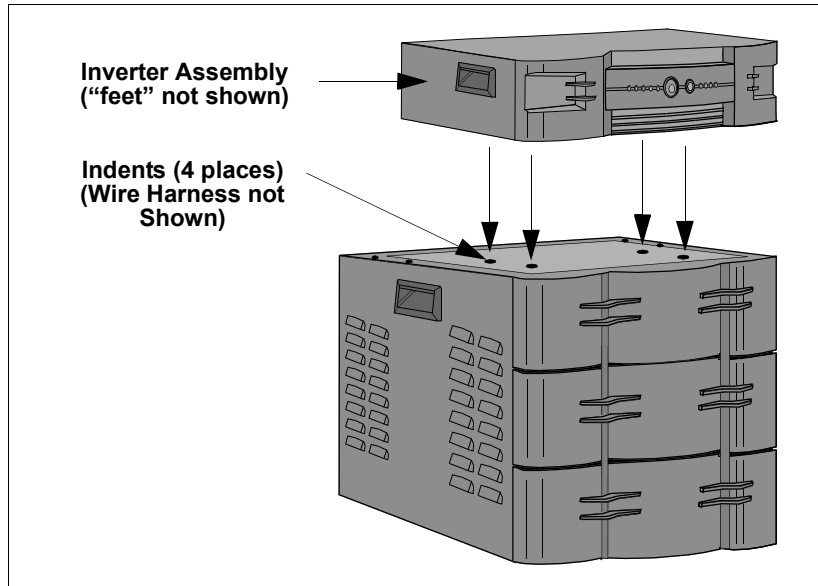
Connect the red battery terminal lead (protrudes from the lid) to the positive (+) terminal of the battery (Figure 5) closest to the rear of the Main Housing Chassis (second battery installed). Connect the black battery terminal lead (protrudes from the lid) to the negative (-) terminal of the first battery installed. Connect the black battery cable attached to the left side of the Main Housing Chassis to the positive (+) terminal of the first battery, and to the negative (-) terminal of the second battery. Ensure battery connections are tight by grasping each connector at the terminal and try to move it. If the terminal lead has movement on the terminal, tighten the connection until no movement is evident. Install battery terminal covers.

**Install Rear Panel** - Align the Rear Panel with the mounting holes at the rear of the Main Housing Chassis. Install the four machine screws which secure the Rear Panel to the chassis.

### Install Inverter

**Caution:** Installation of the Power Inverter must be performed by a licensed and qualified electrician. Failure to comply may result in equipment damage, and may also void the Warranty.

Place the Inverter Assembly on top of the Main Housing Chassis with the Inverter facing forward, and the Inverter “feet” in the indents provided on the Main Housing Chassis top cover.



**Figure 6. Inverter Assembly Placement**

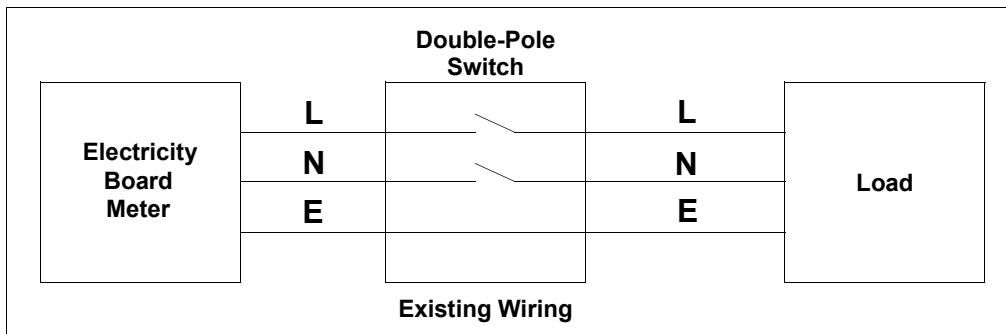
Remove power at the electricity board meter (circuit breaker panel) of the home.

Figure 7 shows a diagram of a typical home wiring scenario. Figure 8 shows a typical home wiring scenario after installation of the Inverter Assembly wiring.

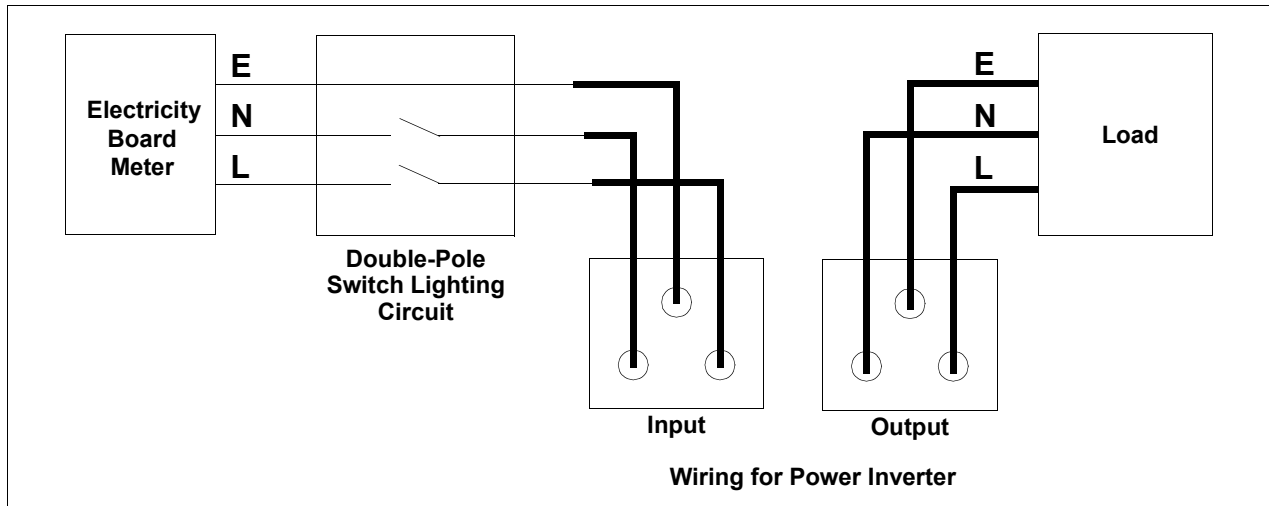
**Note:** The Power Inverter can serve inductive loads (flourescent lamps, ceiling and table fans), resistive loads (incandescent lamps), and SMPS loads (television). The typical backup time with the primary battery pack at full load is approximately two (2) hours.

**Caution:** Connecting the Power Inverter to a branch circuit that exceeds 16 amps may result in equipment damage.

**Note:** Home wiring to power the desired loads should be routed and connected to a single branch circuit providing a maximum of 16 amps to the circuit, Wiring must be in accordance with local electric codes and standards. Connected loads must not exceed 500 watts when the Inverter is On Battery.



**Figure 7. Typical Home Wiring Before Inverter Installation**

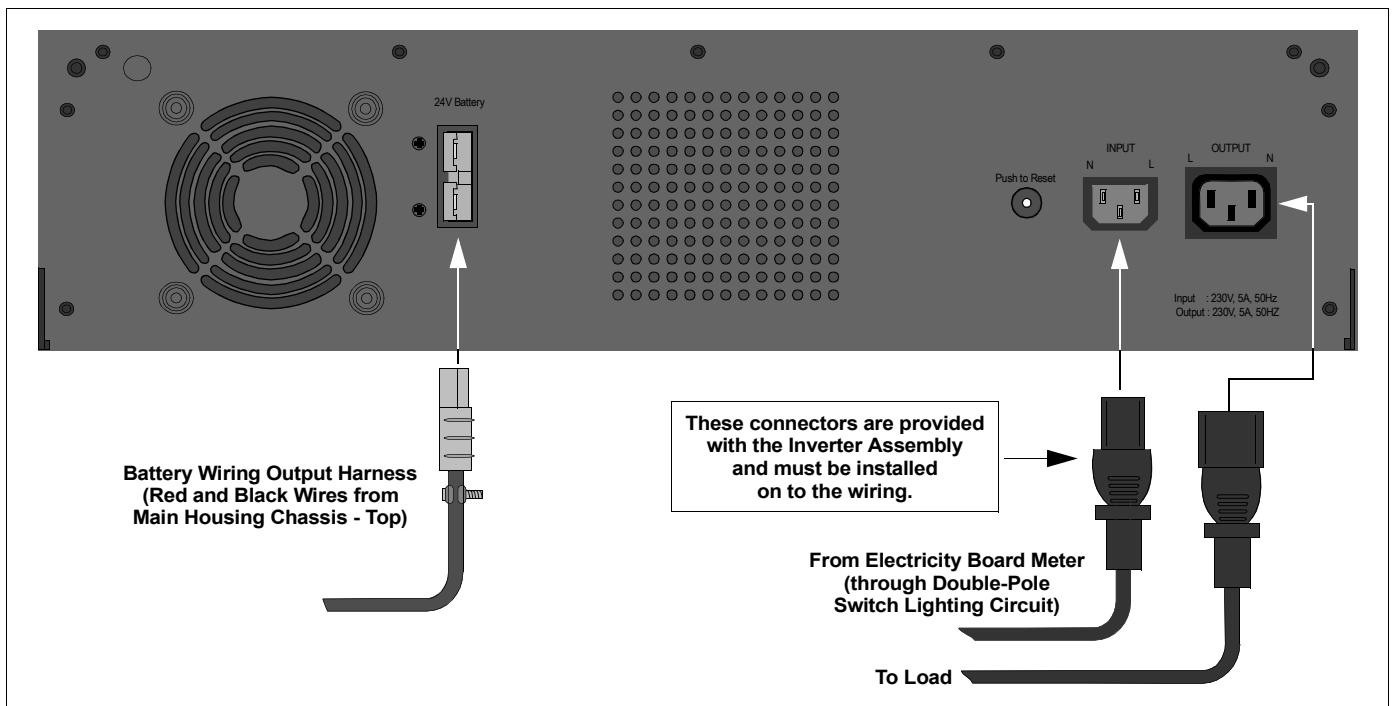


**Figure 8. Typical Home Wiring After Inverter Installation**

Connect one end of the electrical cable from the double-pole switch lighting circuit in accordance with local electric codes and standards. Connect the other end of the electrical cable to the provided IEC connector, and then to the rear panel **Input** connector on the Inverter Assembly (Figures 8 and 9).

Connect one end of the electrical cable from the load in accordance with local electric codes and standards. Connect the other end of the electrical cable to the provided IEC connector, and then to the rear panel **Output** connector on the Inverter Assembly (Figures 8 and 9).

Connect the wiring harness (protrudes out of the top of the Main Housing Chassis top cover) from the batteries to the rear panel input connector of the Inverter (Figure 9) marked **24V Battery**. Once the home wiring is complete and the batteries are connected to the Inverter Assembly, turn on power at the Electricity Board Meter then at the Double-Pole Switch Lighting Circuit. The Inverter will automatically turn on.



**Figure 9. Power Inverter Connections**

## Install Wiring Management Kit

Installation of the Wiring Management Kit consists of unpacking and inspecting the kit for signs of obvious damage, and return or replace as necessary, and placement of the unit on the Main Housing Chassis. Secure the kit to the chassis by placing the alignment pins (Figure 10) with the holes provided in the top of the Main Housing Chassis, and pushing straight downward until all four retaining pins are fully seated.

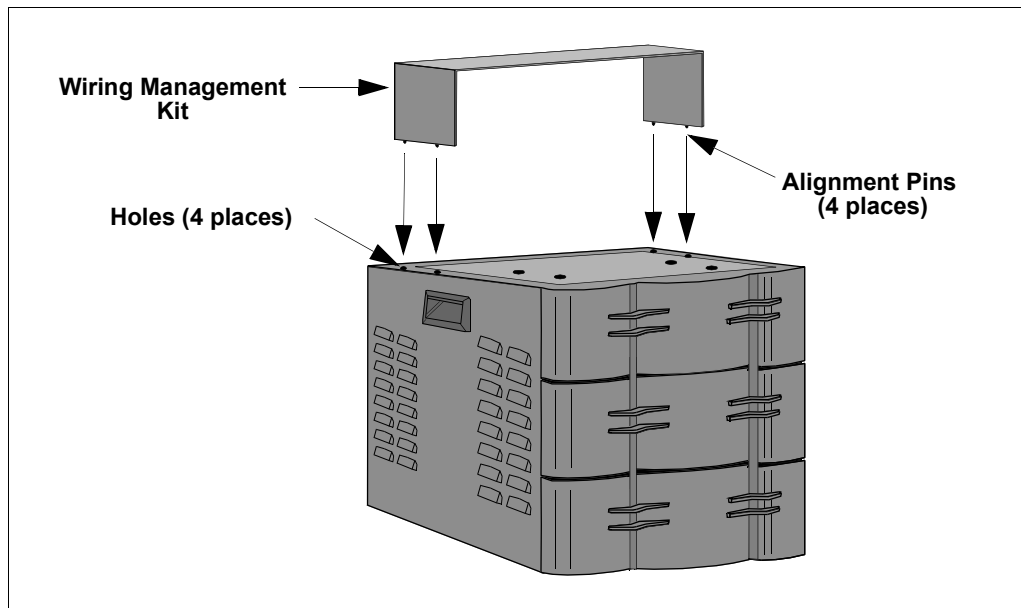


Figure 10. Wiring Management Kit Installation

## Section 4. Controls and Indicators

Please review this section thoroughly before applying power to the Power Inverter.

**Inverter Controls** - Controls provided on the Power Inverter consist of the holiday mode switch marked **AWAY/HOME**, and the **Test/Mute** switch, as well as a rear panel **Push to Reset** circuit breaker, and are defined in the following:

**AWAY/HOME** - (also known as the holiday mode switch) - In the **HOME** position, this two-position rocker switch (Figure 11) sets the Inverter so that it will switch to battery output when there is a utility power outage.

In the **AWAY** position, the Inverter goes into standby mode and will not switch to battery power in the event of a power outage. This is to conserve the batteries. However, in this position, the Inverter will charge the batteries until a utility power failure occurs.

**TEST/MUTE** - In **TEST** mode, when ON MAINS LED is lit, on pressing this push button, the unit will do self test to determine the state of the system. During On Battery self test it will also show the load status which can be used to find out the load capacity. In the **MUTE** position (push in for 5 seconds), this push button switch silences the low battery buzzer.

**Circuit Breaker Switch** (Rear Panel) - When in ON MAINS mode, if the system draws more than 10A, circuit breaker will trip. To reset the circuit breaker switch, push the switch fully inward.

**Inverter Indicators** - The Inverter provides light emitting diode (LED) indicators (Figure 11) to show the operational condition of the Inverter and batteries. Indicators consist of Inverter Load Status (**25%**, **50%**, **75%**, **100%**, and **OVER LOAD**). Other indicators consist of: **INVERTER DISABLE**, **ON MAINS**, **ON BATTERY**, and **FAULT**). Using Table 1, determine the condition of the Inverter and batteries.

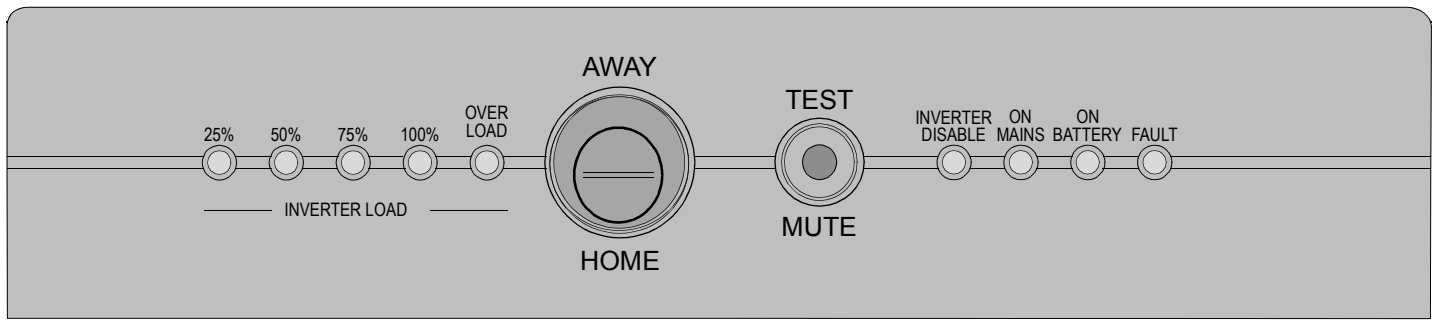


Figure 11. Power Inverter Front Panel Controls and Indicators

Table 1. Power Inverter Indicators

| Mode                 | On Mains (green) | On Battery (yellow) | Fault (red) | INV Disable (red) | 25% (green) | 50% (green) | 75% (green) | 100% (green) | Overload (red) | Buzzer   | Description   |
|----------------------|------------------|---------------------|-------------|-------------------|-------------|-------------|-------------|--------------|----------------|--|---|
| ON LINE              | On               | Off                 | Off         | Off               | Off         | Off         | Off         | Off          | Off            | Off  | The unit is ON-LINE.  |
| ON LINE SELF TEST    | Flashing         | Off                 | Off         | Off               | Off         | Off         | Off         | Off          | Off            | Off  | The unit is in ON-LINE Self-Test mode.  |
| ON BATTERY SELF TEST | Flashing         | On                  | Off         | Off               | On          | Off         | Off         | Off          | Off            | Off  | The unit is in ON-BATTERY Self-Test mode, and the load is less than 25%.                              |
|                      | Flashing         | On                  | Off         | Off               | On          | On          | Off         | Off          | Off            | Off  | The unit is in ON-BATTERY Self-Test mode, and the load is between 25% - 50%.                          |
|                      | Flashing         | On                  | Off         | Off               | On          | On          | On          | Off          | Off            | Off  | The unit is in ON BATTERY Self-Test mode, and the load is between 50% - 75%.                          |
|                      | Flashing         | On                  | Off         | Off               | On          | On          | On          | On           | Off            | Off  | The unit is in ON-BATTERY Self-Test mode, and the load is more than 75% but less than overload limit. |
|                      | Flashing         | On                  | Off         | Off               | On          | On          | On          | On           | On             | Continuous beep for first 30 seconds for a fresh overload. | The unit is in ON-BATTERY Self-Test mode, and is in an overload condition.                            |
| ON BATTERY           | Off              | On                  | Off         | Off               | On          | Off         | Off         | Off          | Off            | 4 beeps every 22 minutes                                   | The unit is in ON-BATTERY mode, and the load is less than 25%.  |
|                      | Off              | On                  | Off         | Off               | On          | On          | Off         | Off          | Off            | 4 beeps every 22 minutes                                   | The unit is in ON-BATTERY mode, and the load is between 25% and 50%.                                  |
|                      | Off              | On                  | Off         | Off               | On          | On          | On          | Off          | Off            | 4 beeps every 22 minutes                                   | The unit is in ON-BATTERY mode, and the load is between 50% and 75%.                                  |
|                      | Off              | On                  | Off         | Off               | On          | On          | On          | On           | Off            | 4 beeps every 22 minutes                                   | The unit is in ON BATTERY mode; the load is between 75% and the overload limit.                       |
|                      | Off              | On                  | Off         | Off               | On          | On          | On          | On           | On             | Continuous beep for first 30 seconds of a new overload.    | The unit is in ON-BATTERY mode, and is in overload condition (see NOTE below).                        |
| STANDBY ENABLE       | Off              | Off                 | Off         | Off               | Off         | Off         | Off         | Off          | Off            | Short beep every 5 seconds                                 | The unit is shut down due to a LOW BATTERY.   |
| STANDBY              | Off              | Off                 | Off         | Off               | Off         | Off         | Off         | Off          | Off            | Off  | The unit is in STANDBY mode, and is not powering the load.  |
| FAULT -              | Off              | Off                 | Off         | Off               | On          | On          | On          | On           | On             | Off  | Inverter load capacity has been exceeded (see NOTE below).  |
| FAULT-               | Flashing         | Flashing            | Flashing    | Off               | Off         | Off         | Off         | Off          | Off            | Off  | The unit is in FAULT mode, contact APC Technical Support.   |
| FAULT-               | Off              | Off                 | On          | Off               | Off         | Off         | Off         | Off          | Off            | Continuously On  | The unit is in FAULT mode, contact APC Technical Support.   |

| Mode                           | On Mains (green) | On Battery (yellow) | Fault (red)              | INV Disable (red) | 25% (green) | 50% (green) | 75% (green) | 100% (green) | Overload (red) | Buzzer   | Description   |
|--------------------------------|------------------|---------------------|--------------------------|-------------------|-------------|-------------|-------------|--------------|----------------|--|---|
| FAULT-                         | On               | Flashing            | Flashing                 | Off               | Off         | Off         | Off         | Off          | Off            | Chirps every 2.5 seconds; sound is mutable through the front panel TEST/ MUTE push button. | The unit is in FAULT mode, contact APC Technical Support.   |
| BATTERY DISCONNECTED           | On               | Off                 | Flashing                 | Off               | Off         | Off         | Off         | Off          | Off            | Chirp every 2 seconds  | The unit is ON-LINE mode; battery is disconnected.  |
| OVER TEMP ON-BATTERY           | Off              | Off                 | 4 flashes every 2 second | Off               | Off         | Off         | Off         | Off          | Off            | Continuously On  | The unit is in FAULT mode due to over- temperature condition.   |
| OVER TEMP ON-LINE              | On               | Off                 | 4 flashes every 2 second | Off               | Off         | Off         | Off         | Off          | Off            | Off  | The unit is in ON-LINE mode, but the charger is switched off due to over- temperature.  |
| ON LINE                        | On               | Off                 | Off                      | On                | Off         | Off         | Off         | Off          | Off            | Off  | The unit is in ON-LINE, but the inverter is disabled and the unit will not go ON BATTERY during a power failure.                |
| ON LINE SELF TEST              | Flashing         | Off                 | Off                      | On                | Off         | Off         | Off         | Off          | Off            | Off  | The unit is in ON-LINE Self-Test mode, but the inverter is disabled and the unit will not go ON-BATTERY during a power failure. |
| ON BATTERY SELF TEST           | Flashing         | On                  | Off                      | On                | On          | Off         | Off         | Off          | Off            | Off  | The unit is ON-BATTERY-Self-Test but the inverter is disabled and the unit will not go ON-BATTERY during a power failure.       |
| ON BATTERY Low Battery Warning | Off              | On                  | Off                      | Off               | On          | Off         | Off         | Off          | Off            | Constant Beeping, Can be muted through front panel TEST/ MUTE push button.                 | Load is less than 25%.  |
| ON BATTERY Low Battery Warning | Off              | On                  | Off                      | Off               | On          | On          | Off         | Off          | Off            | Constant Beeping, Can be muted through front panel TEST/ MUTE push button.                 | Load is between 25% and 50%.  |
| ON BATTERY Low Battery Warning | Off              | On                  | Off                      | Off               | On          | On          | On          | Off          | Off            | Constant Beeping, Can be muted through front panel TEST/ MUTE push button.                 | Load is between 50% and 75%.  |
| ON BATTERY Low Battery Warning | Off              | On                  | Off                      | Off               | On          | On          | On          | On           | Off            | Constant Beeping, Can be muted through front panel TEST/ MUTE push button.                 | Load is between 75% and Overload limit.   |
| ON BATTERY Low Battery Warning | Off              | On                  | Off                      | Off               | On          | On          | On          | On           | On             | Constant Beeping, Can be muted through front panel push TEST/MUTE button.                  | Load is more than overload limit.   |

**NOTE:** In the case of a sustained overload, the Inverter will be turned off automatically after one minute, and will wait in the fault state for a minute. After that, it will restart again. If the overload still persists, the Inverter will be turned off again after one minute, and will wait in fault state for one minute and restart again. In the same way, it will try for three restarts. If the overload still persists, it will stay in fault state permanently until the unit is restarted with push button. If the time interval between two consecutive overloads is more than 5 mins, then the latest overload is considered as a fresh overload and three restart cycle will begin again.

## Section 5. Troubleshooting

**Note:** If the Power Inverter causes interference with a television while **ON-BATTERY**, move the television at least 3 feet away from the Inverter.

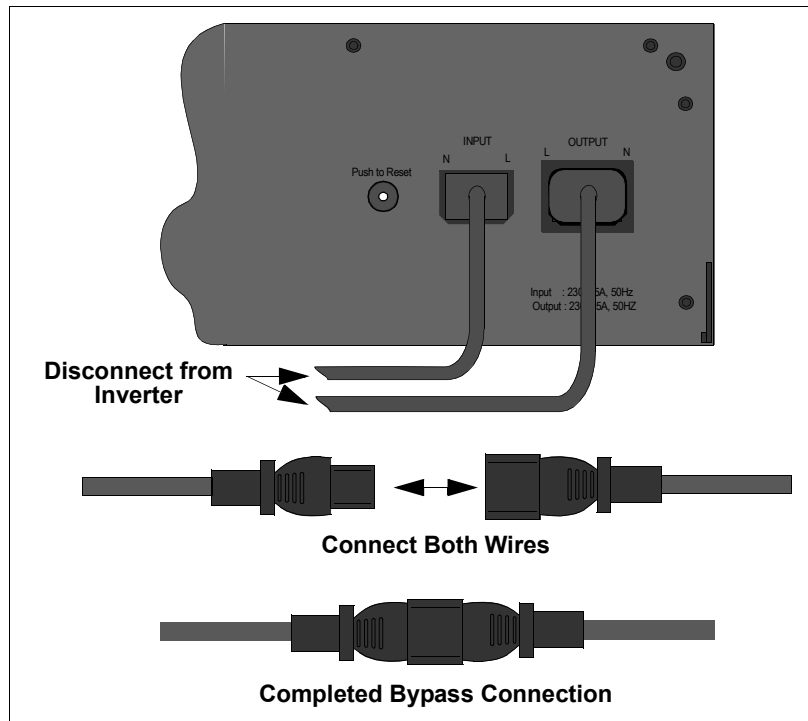
Use the information provided in Tables 1 and 2 to diagnose Power Inverter problems. If the problem cannot be resolved using the information provided in this manual, contact APC Technical Support.

**Table 2. Power Inverter Troubleshooting**

| Problem   | Cause  | Corrective Action   |
|---|--|---|
| Inverter fails to operate when mains power is turned on, or during a utility power failure. | <p>Disconnected battery.</p> <p>Power is off at the Mains.</p> <p>Inverter <b>HOME/AWAY</b> switch in the <b>AWAY</b> position.</p> <p>Dead batteries.</p> <p>Inverter rear panel <b>Push to Reset</b> circuit breaker has tripped.</p> <p>Improper wiring installation or loose connection.</p> | <p>Ensure batteries are connected as defined in this manual.</p> <p>Turn on power at the Mains.</p> <p>Set switch to the <b>HOME</b> position.</p> <p>Inverter failed to charge batteries, or batteries were allowed to completely discharge. Replace batteries. If replacing the batteries does not fix the problem, contact APC Technical Support.</p> <p>Reset the circuit breaker by pushing it fully inward until it stops; release the circuit breaker.</p> <p>Ensure wiring is as described earlier in this manual, and that all connections are secure.</p> |
| Computer load reboots when inverter switches to <b>ON BATTERY</b> .                         | Inverter transfer time too slow for computer load.   | For computer-type loads, a separate battery back-up (UPS) should be used, as the 60 millisecond transfer time is inadequate, and will cause the computer to reboot.   |
| Inverter faults.  | <p>Inverter drops the load.</p> <p>Inverter is overloaded.</p>   | <p>Inverter may have an internal failure. If this happens, the unit can be disconnected from the mains by completion of a Manual Bypass (see Manual Bypass).</p> <p>Turn off some loads connected to the Inverter until the OVER LOAD LED is no longer lit</p>  |

**Manual Bypass** - In the event of an Inverter failure or dead battery condition, the Inverter can be disconnected from the mains and power restored to the circuit by completing a Manual Bypass (Figure 12) of the Inverter, as follows:

Remove the Wiring Management Kit from the Inverter. Disconnect all wires connected at the Inverter rear panel. Connect the wire from the **Input** socket to the wire from the **Output** socket.



**Figure 12. Power Inverter Bypass Connection**

**Preventative Maintenance** - Preventative maintenance consists of inspecting the batteries for cracks and/or leakage, and checking battery fluid levels and filling the batteries (every 120 days), using the criteria and methods as defined earlier in this manual. Dust the unit with a dry cloth. Do not use liquids when cleaning.



## Specifications

**Table 3. APC Power Inverter Technical Specifications**

|                               | <b>Item</b>  | <b>Specification</b>   |
|-------------------------------|--|--|
| <b>Input Characteristics</b>  | Nominal Voltage  | 230 V  |
|                               | Rated Voltage  | 230 V  |
|                               | Frequency  | 47-53 Hz   |
|                               | Nominal Rated Current  | 3.47 A   |
|                               | Input Circuit Breaker Rating                                       | 10 A   |
|                               | Input Voltage Window for Utility Operation                         | 100 - 265 VAC  |
| <b>Output Characteristics</b> | Voltage (on Mains)   | 100 - 265 VAC  |
|                               | Voltage (on battery)   | 210 - 240 VAC  |
|                               | Rated VA   | 800 VA   |
|                               | Rated Watts  | 500 W  |
|                               | Nominal Rated Current  | 3.47 A   |
|                               | Overload Indicated ON BATTERY                                      | >100%  |
|                               | Shutdown due to OVERLOAD<br>Frequency (ON BATTERY)                 | > 100% after 60 seconds (see Table 1 and following note)<br>50 Hz +/- 1%   |
| <b>Surge Protection</b>       | Built-in Surge Protection  | Protects the load from surges and spikes..   |
| <b>Environmental</b>          | Ambient Operating Temperature                                      | 0-45 degrees C   |
|                               | Humidity   | 95 % Relative humidity, non-condensing   |
|                               | Altitude   | 3000 m   |
| <b>Physical</b>               | Input Line   | IEC socket   |
|                               | Outlet Receptacles   | IEC socket   |
|                               | Dimensions - Unit (h) x (w) x (d)                                  | Main Housing Chassis: 51.2 x 47.5 x 43.0 cm<br>Inverter Assembly: 13.0 x 50.6 x 29.3 cm<br>Battery: 27.94 x 17.78 x 41.27 cm |
|                               | Weight   | Main Housing Chassis: 18 kg<br>Inverter Assembly: 13.5 kg<br>Battery: 28 kg  |
|                               | Shipping Weight  | Main Housing Chassis: 20.5 kg<br>Inverter Assembly: 14.5 kg<br>Battery: XX kg (each)   |
| <b>Batteries</b>              | Type   | Two 12 V, 70 Amp-Hour  |
|                               | Typical Runtime  | Approximately 120 minutes  |
|                               | Typical Load Set Up  | Set-up A = 5 fans, 4 tube lights<br>Set-up B = 4 fans, 4 tube lights, and 1 TV   |
|                               | Runtime at 500 W   | Approximately 120 minutes  |
|                               | Typical Recharge Time (for a 90% Charge Following a 50% Discharge) | 8-10 Hours   |
|                               | AC Input Voltage Range for Charging                                | 100 - 265 V  |

## **Warranty**

APC warrants its products to be free from defects in materials and workmanship under normal use and service for 2 years for the Inverter, and 2 years for the Batteries to 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 Return Material Authorization (RMA) number from APC Technical Support or an APC Service Center. The defective unit must be returned with an RMA number, with transportation charges prepaid and 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.

## **Contact Information**

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