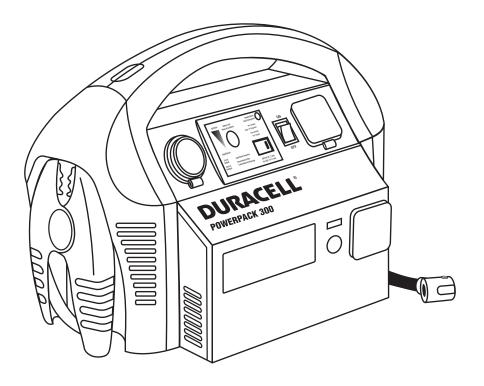
# DURACELL® POWERPACK 300



**Owner's Guide** 

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## Date and Revision

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## **Product Number**

DRPP300

**Contact Information** 

Phone: 1 800 842 2127

## **About This Guide**

## **Purpose**

The purpose of this Owner's Guide is to provide explanations and procedures for installing, operating, maintaining, and troubleshooting the Duracell® Powerpack 300.

## **Conventions Used**

The following conventions are used in this guide.



#### **WARNING**

Warnings identify conditions that could result in personal injury or loss of life.



## **CAUTION**

Cautions identify conditions or practices that could result in damage to the product or to other equipment.

**Important:** These notes describe an important action item or an item that you must pay attention to.

## **About This Guide**

### **Related Information**

You can find more information about Battery-Biz Inc. as well as its products and services at **www.battery-biz.com** 

## **Important Safety Instructions**

The Duracell® Powerpack 300 generates a type of AC power similar to a normal household wall outlet. Operating the Duracell® Powerpack incorrectly or misusing it may damage the equipment or create hazardous conditions for the user.

**Important:** Before using your Duracell® Powerpack 300, be sure to read and save these safety instructions.

## Warnings and Cautions



## WARNING: Shock hazard. Keep away from children.

The Duracell® Powerpack 300 generates the same potentially lethal AC power as a normal household wall outlet. Do not insert foreign objects into the AC Outlet, the DC Power Socket, the Jump-Start Cable Port, or the ventilation holes. Do not expose this product to water, rain, snow, or spray. Do not open the Duracell® Powerpack 300. There are no user serviceable parts inside the unit.



#### **CAUTION**

The unit will be damaged if connected to any AC load that has its neutral conductor connected to ground. Such loads include AC distribution wiring and house wiring.



#### CAUTION

Do not expose the Duracell® Powerpack 300 to temperatures over 40°C (104°F).



### **WARNING: Explosion hazard**

Do not use this product where there are flammable fumes or gases, such as in the bilge of a gasoline-powered boat, or near propane tanks. Do not use this product in an enclosure containing automotive-type lead-acid batteries. These batteries, unlike the sealed AGM battery in the Duracell® Powerpack 300, vent explosive hydrogen gas which can be ignited by sparks from electrical connections. When working on electrical equipment, always ensure someone is nearby to help you in an emergency.



#### **WARNING: Heated surface**

Ensure at least 2" (5 cm) air space is maintained on all sides of the Duracell® Powerpack 300. During operation, keep away from materials that may be affected by high temperatures such as blankets, pillows and sleeping bags.



### **WARNING: Fire hazard**

Jump-start cable clamps must be connected positive to positive (red clamp to battery "+") and negative to negative (black clamp to battery "-"). A reverse polarity connection (positive to negative) may cause damage to the unit and/or create a sparking/explosion hazard.



### WARNING: Fire hazard

Never allow jump-start cables' red and black clamps to touch each other or another common metal conductor. This could cause damage to the unit and/or create a sparking/explosion hazard. Always store the clamps in the appropriate holder on each side ofthe Duracell® Powerpack after use.



## **WARNING: Medical equipment**

This product is NOT tested, designed nor intended to be used with life support systems or any other medical devices.



#### **WARNING:** Fire hazard

The jump-start feature is designed for short term operation only—less than 4 seconds. Operating the jump-start feature for more than 4 seconds may cause damage to the unit. Allow the Duracell® Powerpack 300 to cool down for at least 3 minutes after each jumpstart.



## WARNING: Proper application

Do not use the appliance for any application except that for which it is intended.



## WARNING: Risk of unsafe operation

When using tools or equipment, basic safety precautions should always be followed to reduce the risk of personal injury. Improper operation, maintenance or modification of equipment could result in serious injury and property damage. We strongly recommend that this product NOT be modified and/or used for any application other than for which it was designed. Read and understand all warnings and operating instructions before using any equipment.

## Precautions When Working With Batteries



## **WARNING: Explosion Fire or Burns**

Follow all instructions published by the battery manufacturer and the manufacturer of the equipment in which the battery is installed.

- 1. Make sure the area around the battery is well ventilated.
- 2. Never smoke or allow a spark or flame near the engine or batteries.
- Be careful not to drop a metal object on the battery or allow a metal tool to simultaneously touch the positive and negative cable ends or battery terminals. It might spark or short-circuit the battery or other electrical parts and cause an explosion.
- 4. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-acid battery produces a short-circuit current high enough to weld a ring or other similar objects to metal, causing a severe burn.
- 5. If you need to remove a battery, always remove the positive terminal from the battery first. Make sure all accessories are off so you don't cause an arc.
- Someone should be within range of your voice, or close enough to come to your aid when you work near a leadacid battery.
- 7. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, and eyes.
- 8. Wear complete eye protection and clothing protection. Avoid touching your eyes while working near batteries.
- If battery acid contacts skin or clothing, wash immediately
  with soap and water. If acid enters your eyes, immediately
  flood them with running cold water for at least twenty
  minutes and get medical attention immediately.
- Keep a supply of baking soda on hand in the area of the batteries. Baking soda neutralizes lead-acid battery electrolyte.

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## Precautions for Using Rechargeable Appliances



## **CAUTION**

The output of the Duracell® Powerpack 300 inverter is a non-sinusoidal modified sine wave, which is different from pure sine wave utility-supplied electricity. Certain types of load equipment may be damaged.

Most rechargeable battery-operated equipment uses a separate charger or transformer that is plugged into an AC receptacle and produces a low voltage charging output.

Some chargers for rechargeable batteries can be damaged if connected to the Duracell® Powerpack 300.

## Do not use the following with the Duracell® Powerpack 300:

- Small battery-operated appliances like flashlights, razors, and night lights that can be plugged directly into an AC receptacle to recharge.
- Some chargers for battery packs used in hand power tools. These affected chargers display a warning label stating that dangerous voltages are present at the battery terminals.

**Note:** If you are unsure about using your rechargeable appliance with the Duracell® Powerpack, contact the equipment manufacturer to determine the rechargeable appliance's compatibility with the modified sine wave (non-sinusoidal) AC waveform.

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## 1 • Introduction

## About the Duracell® Powerpack 300

Easy-to-use and designed for years of reliable service, the Duracell® Powerpack 300 can run many AC appliances and 12 V DC appliances whenever you need power for work or play, at home or on the road.

The Duracell® Powerpack:

- Powers 115 V AC appliances
- Powers 12 V DC appliances
- Powers 5 V USB devices
- Jump starts vehicle engines
- Provides lighting for emergency use
- Inflates vehicle tires and small sports equipment

## **Comprehensive Protection**

#### **Automatic overload**

The Duracell® Powerpack has built-in protection against output overload. If you connect an appliance that draws more than 300 W to the AC power outlet on the Duracell® Powerpack, or one which draws excessive surge power, the power to the AC power outlet automatically shuts off.

## **Overheating**

The Duracell® Powerpack is protected from overheating. If the inverter exceeds a safe temperature, power to the AC outlet automatically shuts off.

## **Low Battery Protection**

Low battery protection protects the internal battery from excessive discharge and possible damage. The unit automatically turns off when the internal battery is discharged to 10.5 V DC.

## 2 • Features

Chapter 2 describes the main features of the Duracell® Powerpack 300. We recommend that you familiarize yourself with these features before operating the unit.

## **Materials List**

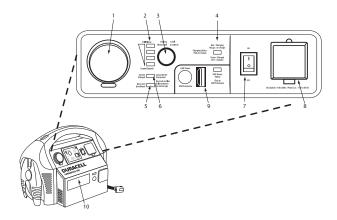
Your Duracell® Powerpack package includes these items:

- Duracell® Powerpack
- · Owner's Guide
- AC charger
- DC charging cable
- · Nozzle and needle adaptors for the compressor
- Built-in LED emergency light

If any of these materials are missing or are unsatisfactory in any way, please contact Customer Service at (800) 842-2127.

## **Duracell® Powerpack 300 Features**

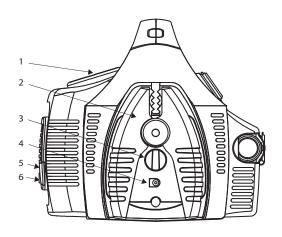
## **Front Panel Detail**



## **Panel Features:**

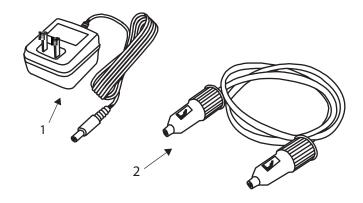
Feature	Description
1	DC power outlet:  • Powers 12 V DC auto, RV or marine appliances  • Recharges Duracell® Powerpack from a 12 V outlet in a vehicle using the DC charging cable.  ⚠ (CAUTION: Do not charge the Powerpack for more than 2.5 hours using the DC charging cable.)
2	Battery Level LEDs illuminate to indicate the Duracell® Powerpack battery charge level. All LEDs (two green, one yellow and one red) are illuminated when the battery is fully charged (Full), only the red LED is illuminated when the battery is completely discharged (Empty).
3	Battery Level button triggers the Battery Level Full/Empty LED indicators. Press to view the battery charge status.
4	Battery Status LED illuminates when the Duracell® Powerpack is charging (when an AC charger is connected to the Duracell® Powerpack's AC charger input socket and plugged into the household (120 V AC) outlet.
5	Red Incorrect Jumpstart Connection LED illuminates when the jumpstarting clamps are improperly connected to the vehicle battery.
6	Green Correct Jumpstart Connection LED illuminates when the jump-starting clamps are properly connected to the vehicle battery.
7	AC power ON/OFF switch
8	AC power outlet is standard 3-prong outlet that supplies 115 Vac power for running AC appliances when the AC power ON/OFF switch is on.
9	USB port provides up to 2.1 Amps.
10	LED emergency light

## **Left Side View**



Feature	Description
1	Pressure gauge shows the PSI (lb/in2).
2	Jump-starting clamp
3	Jump-start power switch
4	AC charger input socket
5	Compressor ON/OFF switch
6	Nozzle packet compartment
Not shown	Valve connector with connector hose

## Accessories



Feature	Description
1	AC charger lets you recharge the Duracell® Powerpack from a standard AC wall outlet and can only be used to recharge the internal battery of the Duracell® Powerpack.
2	DC charging cable lets you recharge the Duracell® Powerpack from a 12 V system in a car, SUV, RV or a boat.
Not shown	Nozzle packet containing nozzle adaptor and sports needle adaptor.

## 3 • Operation

## **Operating Conditions and Guidelines**



#### CAUTION

Read all operating instructions before operating the Duracell® Powerpack.



#### **CAUTION**

The Duracell® Powerpack is not intended for use as a UPS (Uninterruptible Power Supply).

**Important:** The Duracell® Powerpack is not suitable for use with certain products and loads.

The maximum output wattage of this product is limited to 300 watts total when supplying backup power from its batteries. This limit applies to the total of all items plugged into the product.

This output wattage is not sufficient to run the following products:

- Items producing heat: examples include toasters, microwaves, heaters, pellet stove igniters
- Motor loads with high startup power surge requirements: Sump pumps, circular saws, larger power tools, refrigerators.

Visit www.DuracellPower.com for higher power solutions.

## **Choosing a Location**



#### WARNING: Fire or explosion

The Duracell® Powerpack contains components that tend to produce arcs or sparks. To prevent fire or explosion, do not operate the Duracell® Powerpack in compartments containing batteries or flammable materials, or in locations that require ignition-protected equipment.

The Duracell® Powerpack should be operated only in locations that meet these requirements:

Dry Do not allow water or other liquids to drop or

splash on the Duracell® Powerpack.

Cool Ambient air temperature should be between

32 and 104°F (0 and 40°C) — the cooler the

better within this range.

Ventilated Leave at least 2" (5 cm) clearance around

the Duracell® Powerpack for air flow.

Ensure that the ventilation openings are not

obstructed.

Safe Do not operate the unit in the same

compartment as batteries or in any

compartment capable of storing flammable

liquids like gasoline.

Protected from

Do not operate the Duracell® Powerpack where it will be exposed to battery gases. battery gasses

These gases are very corrosive, and

prolonged exposure.

## Using Duracell® Powerpack 300 for

## the First Time

**Important:** Prior to operating your AC appliance or 12 V DC appliance, ensure that the battery of the Duracell® Powerpack is fully charged. If the battery has been fully discharged, recharging with the AC charger may take up to 24 hours.

## Recharging with the AC Charger

**Note:** The Fuel Gauge is only accurate when the Duracell® Powerpack has been disconnected from all appliances and all charging sources for 15 minutes.

Recharging with the AC charger is a true "plug-in-and-forget" charging method. We recommend leaving the AC charger connected when the Duracell® Powerpack is not in use.



#### CAUTION

Do not operate AC or DC appliances with the Duracell® Powerpack while the Duracell® Powerpack is being recharged with the AC charger. The AC charger may be permanently damaged if AC appliances or 12 V DC appliances are operated while the AC charger is connected.

To recharge with the AC Charger:

- 1. Disconnect any 12 V DC appliances from the DC power outlets.
- 2. Disconnect any AC products from the Duracell® Powerpack and turn the AC Power ON/OFF switch to OFF.
- 3. Insert the AC charger cable end into the AC charger input socket located under the red jump-starting clamp.
- 4. Plug the AC charger into a standard AC wall outlet. The Battery Status LED changes from red to green when

charging is complete (about 24 hours if the battery is completely discharged).

Important: The 24-hour charging time for the Duracell® Powerpack assumes that there is 120 V AC at the AC wall outlet. If the voltage is less than 120 V AC, it may take more than 24 hours to fully recharge the Duracell® Powerpack. If, after 24 hours of charging, the Battery Status LED remains red, continue to charge the unit for another 12 hours. The unit will be ready for use even if the Battery Status LED remains red.

**Important:** If you keep the Duracell® Powerpack in storage, the battery will discharge over time. Remember to recharge the battery every three months to keep the Duracell® Powerpack operational.

**Note:** Once fully charged, the charging current automatically reduces to a maintenance charge mode, and the Duracell® Powerpack may be left permanently connected to the AC Charger.

## **Using the Built-in Light**

The Duracell® Powerpack has a built-in light to illuminate a room in an emergency.

## **Using the USB Port**

The USB Port provides up to 2.1 Amps to charge USB enabled devices such as cell phones, smartphones, iPhones and iPads.

## To charge USB devices:

Connect your USB device (smartphone, MP3 player, etc.) to the USB port using the USB cable supplied with your device. Charging will start and up to 2.1 Amps of current can be supplied by the port. The USB device controls the amount of current supplied. The Powerpack never "pushes" more than required by the devices.

## **Operating AC Appliances**

## **Understanding AC Appliances**

AC appliances are rated by how much electrical power (in watts) they consume. Duracell® Powerpack can power most appliances within its continuous power rating (240 W, 2 A).

Some appliances may be difficult or impossible to operate from the Duracell® Powerpack. They may have high surge requirements or should not be run from the Duracell® Powerpack. See "High Surge Appliances" and "Trouble Appliances" on page 11.

## **Run Time on Typical AC Appliances**

**Note:** The fewer watts an AC appliance uses, the longer the Duracell® Powerpack will operate before recharging is required.

Typical AC appliances that can be used on the Duracell® Powerpack are listed in Table 3-1.

Table 3-1: AC Appliances and Run Times

AC-powered Products	Watts <sup>a</sup>	Run time <sup>b</sup>
Cordless telephone	5	14 hrs.
Portable stereo	10	9 hrs.
Laptop computer	40	1hrs. 30 mins.
Fan	100	25 mins.
36" TV	133	25 mins.
3/8" drill	300	9 mins

a. Represents actual power consumption as measured on sample products.

## **High Surge Appliances**

b. Operating times assume a fully charged 12 Ah battery and may vary based on model/ brand used.

The wattage rating of AC appliances is the average power used by the appliance. Appliances such as televisions and appliances with motors consume much more power than their average rating when they are first switched on.

Although the Duracell® Powerpack can supply momentary surge power up to 480 W, some appliances may exceed the capabilities of the Duracell® Powerpack and trigger the safety overload shutdown circuit.

## **Trouble Appliances**



#### CAUTION

The output of the inverter is non-sinusoidal. Some equipment may be damaged by the inverter's modified sine wave output (non-sinusoidal).

- Some appliances, including the types listed below, may be damaged if they are connected to the inverter:
  - Electronics that modulate RF (radio frequency) signals on the AC line will not work and may be damaged.
  - Speed controllers found in some fans, power tools, kitchen appliances, and other loads may be damaged.
  - Some chargers for small rechargeable batteries can be damaged. See "Precautions for Using Rechargeable Appliances" on page viii for details.
  - Metal halide arc (MHI) lights can be damaged.

**Note:** If you are unsure about powering any device with the inverter, contact the manufacturer of the device.

## **Operating Several Appliances at Once**

You can run several AC appliances if the total rating of all the appliances (in watts) does not exceed 240 W. Run time, however, will decrease accordingly with the number of appliances being operated and the AC power being consumed.

## **Operating an AC Appliance**

Before operating your AC appliance, ensure that the battery of the Duracell® Powerpack is fully charged. See "Recharging with the AC Charger" on page 23 for details.

## To operate an AC appliance:

- Turn off the AC outlet ON/OFF Switch to the ON position.
- 2. Open the protective cover on the AC power outlets.
- Plug the AC appliance into one of the AC outlets and turn the appliance on. Duracell® Powerpack will operate most devices rated up to 240 W.
- 4. Recharge the Duracell® Powerpack as soon as possible after each use. When using the Duracell® Powerpack to operate an AC appliance and the low battery warning sounds, the warning gives you time to shut your AC appliance off before loss of AC power.
- 5. Recharge the Duracell® Powerpack as soon as possible after each use.
- 6. In the event of an overload, low battery voltage or overheating, the Duracell® Powerpack automatically shuts down.

## Operating 12 V DC Appliances

The Duracell® Powerpack can operate 12 V DC auto, RV, marine, or other portable appliances that draw 12 A or less from a 12 V DC power outlet or from a vehicle's lighter socket.



## **CAUTION: Equipment damage**

The DC power outlet does not automatically switch off

when the internal battery is discharged. Check the battery status periodically to prevent total battery discharge.

**Note:** The fewer watts a 12 V DC appliance draws, the longer the Duracell® Powerpack will operate before recharging is required.

Table 3-2 Typical 12 V DC Appliances and Run Times

12 V DC Appliance	Watts <sup>a</sup>	Run Time <sup>b</sup>
Cellular telephone <sup>c</sup>	6	15 hrs
Stereo/CD player	10	7.5 hrs
Portable cooler	30	2.5 hrs

a. Represents actual power consumption as measured on sample appliances.

### To operate a 12 V DC appliance:

- 1. Open the protective cover on the DC power outlet of the Duracell® Powerpack.
- 2. Plug the 12 V DC appliance into the DC power outlet on the left side of the unit, and turn the 12 V DC appliance on (if required). If the 12 V DC appliance draws more than 12 A (or has a short-circuit defect), the internal circuit breaker of the Duracell® Powerpack shuts off the power to the 12 V DC appliance. If this occurs, unplug the 12 V DC appliance. The internal circuit breaker automatically resets after a few seconds.
- 3. Fully recharge the Duracell® Powerpack as soon as possible after each use.

As the DC power outlet is internally wired directly to the Duracell® Powerpack's battery, extended operation of a 12 V DC appliance may result in excessive battery discharge. See Caution for Equipment damage on page 13.

## Jump-Starting a Vehicle's Engine

You can use the Duracell® Powerpack with the supplied

b. Operating times assume a fully charged 12 Ah battery and may vary based on model or brand of appliance.

c. Represents talk time available from 10 recharge cycles.

jump-start cables to jump-start a vehicle or boat engine that has a 12 V starting battery.



#### **WARNING:** Fire hazard

Never allow jump-start cables' red and black clamps to touch each other or another common metal conductor. This could cause damage to the unit and/or create a sparking/explosion hazard. Always switch OFF the Jump-Start power switch and store the jump-start clamps in the appropriate holder on each side of the Duracell® Powerpack after use.



#### WARNING: Fire hazard

Jump-start cable clamps' connection to the vehicle's battery terminals must be positive to positive (red clamp to battery "+") and negative to engine block. A reverse polarity connection (positive to negative) may cause damage to the unit and/or create a sparking/explosion hazard.

**Important:** Closely follow these instructions for jumpstarting your vehicle because they may be different from the instructions supplied with other products or jump-start cables.

## To jump-start a vehicle or boat engine:

- Turn OFF the vehicle or boat ignition and all accessories.
- 2. Engage the park or emergency brake and place the transmission in park for an automatic or neutral for a manual.
- 3. If jump-starting a boat engine, purge the engine compartment and bilge of all fumes.
- 4. Position the Duracell® Powerpack on a flat, stable surface near the battery and away from all moving parts of the engine. Ensure that the jump-starting power switch is OFF.
- 5. Connect the red positive (+) clamp of the cables to the

- positive (+) terminal of the engine battery. The battery's positive terminal is usually larger in diameter than the negative terminal. In most vehicles, the battery's positive terminal has a red wire connected to it.
- 6. Connect the black negative (–) clamp of the cables to the engine block, cylinder head, or other stationary heavy metal part of the motor. If the Red Jumpstart Connection LED illuminates, then reverse polarity has been detected. Correct polarity must be established before proceeding. Disconnect the jump-start clamps from the vehicle's battery and redo steps 5 and 6 in this procedure.

If the Green Jumpstart Connection LED is illuminated, then proceed to the next steps:

- Switch ON the jump-starting power switch. Before starting the engine, make sure the Duracell<sup>®</sup> Powerpack and the cables are clear of belts and fans.
- 8. Crank the engine for 4 seconds or until it starts, whichever is first.



#### WARNING: Fire hazard

Do not crank the engine for more than 4 seconds. The jump-start feature is designed for short term operation only. Operating the jump-start feature for more than 4 seconds may cause damage to the unit. Allow the Duracell® Powerpack to cool down for at least 3 minutes after each jump-start.

- 9. Switch OFF the jump-starting power switch.
- 10. Remove the red positive (+) clamp and then the black negative (-) clamp from the vehicle.
- 11. Store the jump-start clamps in the appropriate holder on each side of the Duracell® Powerpack.

**Important:** Recharge the Duracell® Powerpack as soon as possible after each use. See "Recharging the Duracell® Powerpack 300 Battery" on page 23.

## **Using the Air Compressor**



#### WARNING: Fire hazard

The compressor is designed for short term operation only. Operating the compressor over an extended period of time will cause the compressor unit to overheat which could lead to fire.

Allow the compressor to cool down for 10 minutes after each 10 minutes of continuous operation.



## WARNING: Risk of personal injury or damage to equipment

Never leave the compressor unattended while in operation. Keep out of reach of children. The compressor is capable of inflating to 250 PSI. Do not exceed the recommended pressure of either the compressor or the object being inflated. If either recommended pressure is exceeded, an explosion may result.

## **Over-temperature Safety Protection**

It is recommended that you follow the warnings and turn the compressor off for 10 minutes after every 10 minutes of operation. However, the Duracell® Powerpack 300 is equipped with an over-temperature safety protection feature that automatically turns the compressor off if it begins to overheat. Once the compressor cools down to its normal operating temperature it will automatically turn on again and continue inflating. You should turn the compressor off at the power switch if this safety feature engages, and allow the compressor to cool for 15 minutes before restarting.

## **Inflating Tires**

Table 3-3 Pressure Specifications for Common Items

Tires	PSI	
520-13	26	
A-78-14	26	
E78-14	30	
H-78-14	24	
HR-78-15	28	
Bicycle Tires		
27 x 1 ¼	85	
20 x 1 ½	40	
Other Inflatables		
Football	13	
Basketball	9	
Volleyball	5	
Lawn Tractor Tire	22	

**Note:** The information in the table is for reference only. For precise pressure specifications, refer to the information supplied with the item to be inflated.



#### **CAUTION**

If the pressure gauge on the compressor indicates more than twice the recommended pressure for the object you are inflating, and you have only started to inflate the object, the valve connector is incorrectly connected to the valve stem. This may damage the Duracell® Powerpack 300. Remove and reattach the valve connector to the valve stem.

## To inflate your vehicle, motorcycle, or bicycle tires:

1. Place the valve connector securely on the tire valve stem, push it as far as possible to allow normal airflow,

- and close the thumb latch. If necessary, use a supplied nozzle adaptor.
- 2. Turn the compressor on, and inflate your tire to the recommended pressure. Use Table 3-3 as a guide only.
- 3. Turn the compressor off after appropriate pressure is reached.
- 4. Open the thumb latch and remove the valve connector from the valve stem.
- 5. Check air pressure with a pressure gauge.

## **Inflating Small Sports Equipment**

You can use the compressor to inflate small sports equipment such as soccer balls and footballs.



#### CAUTION

The Duracell® Powerpack 300 cannot be used to inflate large capacity inflatables such as float tubes, large air mattresses, and inflatable boats. These types of products require extended inflating times that may damage the compressor.

## To inflate small sports equipment:

1. Place the valve connector fully on or into the valve receptacle on the item. Go to Step 4.

#### OR

If necessary, use a supplied nozzle adaptor.

- 2. Choose the appropriate nozzle adaptor, insert the nozzle adaptor into the valve stem and close the thumb latch.
- 3. Insert nozzle adaptor into the valve receptacle of the item.
- 4. Turn the compressor on and inflate to appropriate pressure.

- 5. Turn the compressor off before removing nozzle adaptor from valve stem.
- 6. Remove nozzle adaptor from valve connector and store in storage compartments.

**Note:** Leave the thumb latch in the open position for storing to relieve pressure on the internal mechanisms.



#### **WARNING: Fire hazard**

Allow the compressor to cool down for 10 minutes after each 10 minutes of continuous operation.

## **Connecting to an External Battery**

You can extend battery operating times by connecting the Duracell® Powerpack to a larger external battery.

For example, an external 60 Ah battery gives approximately five times the operating time of the Duracell® Powerpack internal 12 Ah battery.



### **WARNING: Fire hazard**

Never allow jump-start cables' red and black clamps to touch each other or another common metal conductor. This could cause damage to the unit and/or create a sparking/explosion hazard.



### WARNING: Fire hazard

Jump-start cable clamps must be connected positive to positive (red clamp to battery "+") and negative to negative

(black clamp to battery "-"). A reverse polarity connection (positive to negative) may cause damage to the unit and/or create a sparking/explosion hazard.



## **WARNING: Acid spills**

Use a sealed, non-spillable battery for indoor use. Common auto and marine batteries are not suitable for indoor use unless their fumes are vented outdoors. Common auto and marine batteries contain acid, which is hazardous if spilled. Wear eye protection and protective clothing when connecting the Duracell® Powerpack to an external battery.

## To connect the Duracell® Powerpack to an external battery using the jump-start cables:

- 1. Ensure that the jump-start power switch is OFF.
- 2. Connect the red positive (+) clamp of the cables to the red positive (+) terminal of the external battery.
- Connect the black negative (–) clamp of the cables to the black negative (–) terminal of the external battery If the Red Jumpstart Connection LED illuminates and the alarm sounds, then reverse polarity has been detected. Correct polarity must be established before proceeding.

Disconnect the jump-start clamps from the battery and redo steps 2 and 3 in this procedure.

If no alarm sounds, and the Green Jumpstart Connection LED is illuminated, then proceed to the next step.

Switch ON the jump-start power switch.

## To disconnect the cables from an external battery and from the Duracell® Powerpack:

- 1. Ensure that the jump-start power switch is OFF.
- 2. Remove the red positive (+) clamp, and then remove

- the black negative (–) clamp from the external battery terminals.
- 3. Store the jump-start clamps in the appropriate holder on each side of the Duracell® Powerpack.
- 4. Recharge the Duracell® Powerpack as soon as possible after use.



## **CAUTION**

Do not recharge the Duracell® Powerpack when an

external battery is connected. The AC charger may be damaged.

## 4 • Maintenance

Chapter 4 provides information on maintaining your internal battery, recharging options for the internal battery, and replacing user-replaceable parts.

Routine maintenance is required to keep your Duracell® Powerpack 300 operating properly. Occasionally clean the exterior of the unit with a damp cloth to remove the accumulated dust and dirt.



#### **WARNING: Shock hazard**

Disconnect all sources of AC power and DC power before performing any type of maintenance.

## **Battery Maintenance**

All rechargeable batteries gradually discharge when left standing, and you need to recharge them periodically to maintain maximum battery capacity. The AC charger supplied with the Duracell® Powerpack is designed to regulate the charging process, ensuring that the battery is always fully charged but never overcharged. To ensure safe recharging and maximum battery life, recharge the Duracell® Powerpack only with the supplied charger or approved battery chargers.



### **CAUTION**

Due to inherent self-discharge, lead acid batteries must be charged at least every 3 months, especially in a warm environment. Leaving a battery in a discharged state, or not recharging every 3 months, may result in permanent battery damage and poor jump-starting performance.



#### CAUTION

Do not attempt to recharge the Duracell® Powerpack

battery if it is frozen. Gradually warm the frozen battery to 32 °F (0 °C) before recharging.

## Recharging the Duracell® Powerpack 300 Battery

To check the battery's charge level, press the Fuel Gauge button.

Note: Battery Fuel Gauge status is only accurate when

the Duracell® Powerpack has been disconnected from all appliances and all charging sources for 15 minutes. You can recharge the battery using:

- The fully automatic "plug-in-and-forget" AC charger;
- The DC charging cable to recharge from your vehicle as you drive;
- A generator equipped with a regulated 12 V battery charging outlet;
- A solar panel.

## Recharging with the AC Charger

Recharging with the AC charger is a true "plug-in-and-forget" charging method.



#### CAUTION

Do not operate AC or DC appliances while the Duracell® Powerpack is being recharged with the AC charger. The AC charger may be permanently damaged if AC appliances or 12 V DC appliances are operated while the AC charger is connected.

## To recharge with the AC charger:

- Disconnect any 12 V DC appliance and turn the light switch to OFF.
- 2. Turn the AC outlet ON/OFF switch to OFF.
- 3. Insert the AC charger cable end into the AC charger input socket located under the red jump-starting clamp.
- 4. Plug the AC charger into a standard AC wall outlet.

5. While the Duracell® Powerpack is recharging, the Battery Status LED is red. If the Duracell® Powerpack is completely discharged, a typical recharge may take up to 24 hours. When fully charged, the Battery Status LED changes to green and the Duracell® Powerpack is ready to use.

Important: The 24-hour charging time for the Duracell® Powerpack assumes that there is 120 V at the AC wall outlet. If the voltage is less than 120 V AC, it may take more than 24 hours to fully recharge the Duracell® Powerpack. If, after 24 hours of charging, the Battery Status LED is still red, continue to charge the unit for another 12 hours. The Duracell® Powerpack will be ready for use even if the Battery Status LED remains red.

Once the Duracell® Powerpack is fully charged, the charging voltage and current automatically reduces to a maintenance level and the Duracell® Powerpack may be left permanently connected to the AC charger. If your utility power is interrupted, the charging process automatically restarts when power returns.

## **Recharging with the DC Charging Cable**

Using the DC charging cable, the Duracell® Powerpack can be recharged while you drive your vehicle.

Important: Although the charge regulation circuitry in the Duracell® Powerpack does not operate with this charging method, most vehicle voltage regulators will ensure that the Duracell® Powerpack is not overcharged.Note: The Battery Status LED will not illuminate when the Duracell® Powerpack is recharged using the DC charging cable.



## WARNING: Fire and explosion hazard

Do not use this recharging method if your vehicle has abnormally high voltage electrical systems that operate above 15 V DC. This may lead to accumulations of hydrogen, causing exposure to fire and explosion hazard.



## **CAUTION**

Do not operate AC or DC appliances while the Duracell® Powerpack is being recharged with the DC charging cable from your vehicle.

## To recharge the Duracell<sup>®</sup> Powerpack while you drive using the DC charging cable:

- While the vehicle engine is running, plug one end of the DC charging cable into a DC power outlet on the Duracell® Powerpack.
- 2. Plug the opposite end of the DC charging cable into the vehicle's lighter socket or 12 V accessory outlet.
- 3. Once the Duracell® Powerpack is fully charged or if your vehicle's engine is not running, disconnect the DC charging cable from both sockets.Most of the Duracell® Powerpack's capacity will be restored in 2 ½ hours while the vehicle engine is running.

**Note:** The Battery Level LEDs are only accurate when the Duracell® Powerpack has been disconnected from all appliances and all charging sources for 15 minutes.

Important: Do not leave the Duracell® Powerpack permanently connected to the vehicle's lighter socket or 12 V accessory outlet. Do not solder or hard wire the DC charging cable from the Powerpack to an external electrical system. The charging cable is designed for temporary use

# Recharging with a Generator's Regulated 12 V DC Outlet



WARNING: Fire and explosion hazard

The generator output must be intended for battery charging and have an output of 15 V or less. An unregulated output or one that exceeds 15 V DC can damage the battery. This may lead to accumulations of hydrogen, causing exposure to fire and explosion hazard.

Refer to the Owner's Guide accompanying your generator for detailed instructions on connecting the generator to a unit like the Duracell® Powerpack.

You can recharge the battery of the Duracell® Powerpack using a generator in several ways:

- Using a generator that has an auxiliary regulated 12 V DC output designed for charging 12 V DC batteries. Most generators are equipped with them. Use this power source for faster charging.
- Using a generator with a regulated 12 V DC lighter socket. Follow the connection instructions in "Recharging with the DC Charging Cable" on page 24.Using the AC charger to recharge the Duracell® Powerpack from a generator is possible, but would require extended generator running time. Most of the Duracell® Powerpack's battery capacity will be recharged in a few hours.

**Note:** The Battery Level LEDs are only accurate when the Duracell® Powerpack has been disconnected from all appliances and all charging sources for 15 minutes.

### **Recharging From a Solar Panel**

Small, unregulated 12 V solar panels rated to produce a maximum

of 2.5 A (or 30 W) can be used to charge the Duracell® Powerpack through the AC charger Input socket. You will need to purchase a standard 5.5 mm OD  $\times$  2.5 mm ID (0.217  $\times$  0.10") coaxial DC (barrel type center positive) connector to mate with the AC charger input socket.

#### To wire the coaxial DC connector:

- 1. Connect the solar panel's red positive (+) wire to the coaxial plug's inner or center contact.
- 2. Connect the solar panel's black negative (–) wire to the plug's outer contact. See Figure 4-1.

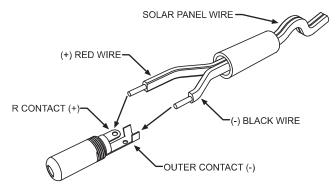


Figure 4-1 Typical DC Coaxial Connector Connection

Once the connector is inserted into the AC charger input socket and the solar panel is placed in the sun, the Duracell®Powerpack charges automatically just as with the AC charger. See "Recharging with the AC Charger" on page 23.

It takes about six hours in direct sunlight to recharge the Duracell® Powerpack from a 2.5 A solar panel.

### Recycling

If it's rechargeable, it's recyclable!

Battery-Biz is committed to environmental responsibility and has established a program for recycling Duracell rechargeable batteryrelated products.

For instructions on how to recycle this product visit www.rbrc.org

## 5 • Troubleshooting

Troubleshooting will help you identify the common problems that can occur with the Duracell® Powerpack 300.

If you cannot solve the problem with the Duracell® Powerpack, contact your dealer or Duracell Customer Service at (800) 842-2127.

### **Common Problems**

### **Buzz in Audio Equipment**

Some low-quality stereo systems have inadequate internal powersupply filtering and may buzz slightly when powered by the Duracell® Powerpack. The best solution to eliminate the buzzing is to use an audio system with a better quality filter.

#### **Television Interference**

The Duracell® Powerpack is shielded to minimize interference with TV signals. If TV signals are weak, you may see interference in the form of lines scrolling across the TV screen. Try one of the following suggestions to minimize or eliminate the interference:

- Increase the distance between the Duracell® Powerpack and the TV, antenna, and cables.
- Adjust the orientation of the Duracell® Powerpack, television, antenna, and cables.
- Maximize TV signal strength by using a better antenna. Use a

- shielded antenna cable where possible.
- Try a different TV. Different models vary considerably in their susceptibility to interference.

### **Troubleshooting Reference**



#### WARNING: Electric shock hazard

Do not remove the cover of the Duracell® Powerpack or disassemble the Duracell® Powerpack except to replace the internal battery. The Duracell® Powerpack does not contain any internal user-serviceable parts and attempting to service the unit yourself could result in electrical shock or burn.

**Table 5-1** Troubleshooting reference

Problem	Possible Cause	Solution
AC appliance will not operate	AC appliance rated more than 300 W: the safety overload has tripped.  AC appliance is rated less than 300 W: high starting surge has tripped the safety overload.	Use an AC appliance with a power rating less than 300 W.  AC appliance may exceed the Duracell® Powerpack's surge capability.  Use an AC appliance with a starting surge within the Duracell® Powerpack surge rating.
	Battery has discharged to 10.5 V.	Turn OFF the AC Power ON/ OFF switch and recharge the Duracell® Powerpack. Turn the AC Power ON/OFF
	Duracell® Powerpack has overheated due to poor ventilation or excessively warm environmental conditions.	switch OFF and allow the Duracell® Powerpack to cool for 15 minutes or more. Clear blocked opening or remove objects covering the unit, then restart the Duracell® Powerpack and move it to a cooler environment.

Problem	Possible Cause	Solution
Overload shutdown	Appliance power requirements exceed the capability of the Duracell® Powerpack.	Unplug the appliance and confirm that the appliance's power requirement is 300 W or less before attempting to restart the appliance.
Run time is less than expected.	Duracell® Powerpack battery is not fully charged.	Recharge using the AC charger, until Battery Status LED is green.
	AC appliance power consumption is higher than expected.	Check AC appliance power or wattage rating (or current draw for 12 V DC appliances) and compare with Table 3-1 on page 10 and Table 3-2 on page 13.
	Environmental temperature is less than 0°C (32°F) or more than 40°C (104°F)	Operate within correct temperature range.
Measured AC output voltage is too low.	Using an average-reading AC voltmeter to read output voltage.	The modified sine wave output of the Duracell® Powerpack requires a true RMS reading meter, such as the Fluke 87 series, for accurate measurement.
	Duracell® Powerpack battery is almost fully discharged.	Press Battery Level button to verify battery status and recharge the Duracell® Powerpack as necessary. Battery Level LEDs are only accurate when the unit has been disconnected from all appliances and all charging sources for 15 minutes.
Battery Status LED is OFF when AC charger is connected	No AC power at the AC wall outlet.	Ensure power is available at the AC wall outlet.
	AC charger is faulty.	Replace the AC charger.
Battery Status LED is red and Battery Level LEDs show the battery is full when the Battery Level button is triggered.	Battery Level lights are only accurate when the Duracell® Powerpack has been disconnected from all appliances and all charging sources for 15 minutes	Unplug the charging sources and any appliances and let the Duracell® Powerpack rest for 15 minutes to obtain an accurate reading.

Problem	Possible Cause	Solution
Battery Status LED is red and has not changed to green after 24 hours of charging.	The voltage at the AC wall outlet is less than 120 VAC.  Use AC wall outlet that supplies 120 VAC.	Continue to charge the unit for another 12 hours; the unit will be ready to use even if the Battery Status light remains red.
The engine being jumpstarted will not start.	Duracell® Powerpack battery is not fully charged.	Recharge the Duracell® Powerpack battery.
	The engine condition is poor.	Have the engine serviced.
	The engine start capacity exceeds the Duracell® Powerpack jump-start capability.	Use a higher power Duracell® Powerpack.
The jump-start clamps measure zero volts.	Jump-start power switch is OFF.	Turn the jump-start power switch ON.
	Duracell® Powerpack battery needs to be recharged.	Recharge the battery.
The compressor runs, but won't inflate.	The valve connector may not be securely placed on the valve stem.	Make sure the valve connector is securely placed on the valve stem before closing the thumb latch.
	The item being inflated may have a leak.	Make sure the item being inflated doesn't have a leak. Check the compressor hose for any breaks or leaks.

Problem	Possible Cause	Solution
The compressor runs slowly	The compressor may have overheated from excessive use.	Turn off the compressor and let it cool down.
	Battery voltage is too low.	Check the condition of the internal battery. The battery may need to be recharged or replaced.

## A • Specifications

## **Electrical Specifications**

12 V DC Section	
Internal battery type	Sealed/non-spillable, AGM (Absorbed Glass Mat) leadacid
Internal battery voltage (nominal)	12 V DC
Internal battery capacity (minimum)	12 Ah
Internal battery CCA rating	120 CCA
Internal battery CA rating	180 CA
DC power socket (maximum continuous load)	12 A with automatic reset

AC Power Section	
Output power  • Continuous output power  • Peak output power  • Peak AC output surge capacity	240 W 300 W 480 W
Output voltage	115 ± 10 V AC RMS
Output frequency	60 Hz
Output wave form	Modified sine wave
No load current draw	<0.40 A DC
Input voltage range	10.5 to 15.5 V DC
Low battery alarm	10.8 V DC
Low battery shutdown	10.5 V DC
High battery voltage shutdown	Yes, automatic reset
Over temperature shutdown	Yes, automatic reset
Overload shutdown	Yes, automatic reset

AC output short circuit protection	Yes, automatic reset
Fuse (Internal)	40 A
Operating temperature range	0-40 °C (32-104 °F)
Storage temperature range	0-30 °C (32-86 °F)

Internal Battery Charging Controller System	
AC charger bulk charging current	500 mA
Peak charging voltage (nominal)	14.2 V
Charge restart voltage (nominal)	12.9 V
Float charge after full charge is completed (nominal)	1 mA
AC charger input socket maximum current	2.5 A
Charge time from AC outlet	24 hours
Charge time from DC outlet	2.5 hours max

Air Compressor	
Pressure	250 PSI (lb/in2)

Accessories	
DC charge cable	39" (1 m) 18 AWG with male to male
Lighter plugs	
AC charger	Input: 120 V AC, 60 Hz, 11 W Output: 13.5 V DC, 500 mA
Compressor nozzles	

## **Physical Specifications**

Length	12.5" (31.7 cm)
Width	10.0" (25.4 cm)
Height	8.0" (20.3 cm)
Weight	14.3 lb (6.48 kg)

**Important:** All specifications are subject to change without notice.

### **B** • Warranty and Return Information

### **Quality Guarantee**

Battery-Biz guarantees the Duracell® Powerpack 300 to be free of defects due to faulty materials or workmanship. This Duracell® Powerpack 300 carries a 1-year limited warranty from the date of purchase.

If found to be defective, this Duracell® Powerpack 300 will be replaced without charge when returned to Battery-Biz. This guarantee does not apply to damage from misuse or abuse beyond normal usage. This guarantee gives you specific legal rights, and you may also have other rights which vary from state to state. Should any device be damaged by the Duracell® Powerpack 300 due to defects in the product arising from faulty materials or workmanship, Battery-Biz will repair or replace (at our option) the

Duracell® Powerpack 300, provided both device and product usage instructions have been followed.

Send device with the Duracell® Powerpack 300 to: Battery-Biz Inc. 1380 Flynn Road, Camarillo, CA 93012 Attention: Duracell Product Returns

If you would like additional information on Duracell products call 1-800-842-2127.

### **Contacting Customer Support**

If you experience any problems or have any questions regarding your Duracell® Powerpack 300, free technical support is available. Prior to calling, please review the technical support tips below.

- Call from a phone where you have access to your mobile device
- Be prepared to provide the following information:
  - Name, address and telephone number
  - Name of the DURACELL® product
  - Make and model of your device
  - Symptoms of the problem(s) and what led to them

Technical Support is available by telephone:

- U.S. and Canada (800) 842-27
- Outside of the US/Canada: (805) 437-7765

Written inquires should be directed to:

Battery-Biz Inc.
 DURACELL Product Inquiry
 1380 Flynn Road, Camarillo, CA 93012, USA

### Warranty and Return

### **One Year Limited Warranty**

The Duracell® Powerpack 300 carries a limited warranty against defects in material and workmanship under normal use and service for one year from the original date of purchase. The manufacturer or distributor, at its option, shall repair or replace the defective unit covered by this warranty. Please retain the dated sales receipt as evidence of the date of purchase as it will be required for any warranty service. In order to keep the warranty in effect, the product must have been handled and used as described in the instructions accompanying this warranty. This warranty does not cover any damage due to accident, misuse, abuse or negligence.

### **Disclaimer Of Warranty**

The limited warranty described herein is your sole remedy. To the extent permitted by law, the manufacturer and distributor disclaim all other implied or express warranties including all warranties of merchantability and/or fitness for any particular purpose.

### **Limitation Of Liability**

Except to the extent of repairing or replacing this product as expressly stated in the limited warranty described herein, the manufacturer and distributor shall not be liable for any damages, whether direct, indirect, incidental, special, consequential, exemplary, or otherwise, including lost revenues, lost profits, loss of use of software, loss or recovery of data, rental of replacement equipment, downtime, damage to property, and third-party claims, arising out of any theory of recovery, including statutory, contract or tort. Not withstanding the term of any limited or implied warranty,

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