

# ***N*Power**

# **22Ah**

## **6-in-1 HEAVY DUTY 1,000 AMP POWER PACK**

**FOR JUMPSTARTING CAR & TRUCK BATTERIES AND PROVIDING 110V AC & 12V DC POWER**



**⚠WARNING:**

Read carefully and understand all **INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

## **USER MANUAL**

**ITEM # 149214**

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## **NOTICE:**

**If you experience any problems with the Power Pack, please DO NOT return the unit to the place of purchase. Please call Northern Tool's customer service department at 800-317-1260.**

# WARNING INFORMATION

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This manual contains information regarding safety, operation, maintenance and storage of this product.

Please carefully read and understand this manual before using this product to avoid possible injury or property damage.

Keep this manual for future reference.



**Risk of personal injury.** ALWAYS wear approved eye protection when using this equipment.



**Shock Hazard.** Keep Away from Children. Do not insert foreign objects into the DC power socket, AC power socket or the ventilation slots. Do not expose the unit to water, snow, spray or excessive moisture.



**Risk of fire, explosion or burns.** This unit has no user-serviceable parts within the housing. Have a qualified technician complete any service work.



**Fire Hazard.** Never allow the jumpstart's red and black cable clamps to touch each other or a common metal conductor. Such contact could cause damage to the unit and/or create a sparking/explosion hazard.



**Fire Hazard.** Connect red clamp to the positive (+) battery terminal. The black clamp should be attached to the engine block of stalled vehicle. Do not connect black clamp to the negative (-) battery terminal. Doing so could cause damage to the unit and/or create a sparking/explosion hazard.



**Fire Hazard.** Do not try to jumpstart a battery for more than six seconds. Before repeating the jump starting cycle, allow the unit to cool for three minutes.



**Risk of fire, explosion, or burns.** The jumpstarting cable connection has enough energy to cause a spark, create an explosion hazard or cause burns if a metal object contacts both terminals. Do not turn on the jumpstarting function without having cables properly attached to the vehicle's battery.

# WARNING INFORMATION CONTINUED

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 **WARNING**

**Fire Hazard.** Do not leave the compressor unattended while operating. The compressor must be allowed to cool for ten minutes following each ten minutes of continuous use.

 **CAUTION**

Do not expose the Power Pack to temperatures greater than 104°F (40°C).

 **WARNING**

**Explosion Hazard:** Do not use this unit where there are combustible fumes or gases. Do not use in an enclosure containing automotive-style lead acid batteries.

 **WARNING**

**Risk of personal injury or death:** Make sure the jumpstart is safely secured when transporting. If the unit is not properly secured during an accident the unit could hit the driver or passengers.

 **WARNING**

**Risk of personal injury or damage to equipment:** Do not exceed recommended air pressure of object being inflated. Do not exceed a pressure of 260 PSI.

 **CAUTION**

**Caution:** Contains a sealed lead acid battery. Keep dry. Do not drop. Do not charge battery if frozen. See owners guide for proper charging procedures. Dispose of battery according to local regulations.

 **WARNING**

**Warning:** The output of the inverter is non-sinusoidal. Do not use the inverter with the following equipment:

- Small battery-operated products such as rechargeable flashlights, some rechargeable shavers, and night-lights that are plugged directly into an AC receptacle to recharge.
- Certain battery chargers for battery packs used in powered-hand tools. These chargers will have warning labels stating that dangerous voltages are present at the charger's battery terminals.

If you are uncertain that non-sinusoidal power will cause damage to an item, check with the item's manufacturer before using with the AC inverter.

## **WARNING INFORMATION** CONTINUED

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 **CAUTION**

To avoid possible damage and/or a shortening of the unit's working life, protect the unit from direct sunlight, direct heat, and/or moisture.

 **CAUTION**

The jumpstart function is designed to be used only on vehicles or boats with 12V electrical systems.

 **CAUTION**

This unit is not designed to be used in the place of a vehicle battery.

 **CAUTION**

This unit is not designed to be used as a battery charger.

 **CAUTION**

Never attempt to jumpstart a frozen battery. Gradually warm the frozen battery to a minimum of 40°F (4°C) before jumpstarting.

 **CAUTION**

Always turn inverter OFF after each use; battery can drain quickly when inverter is left in ON position.

# INTRODUCTION

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Thank you for purchasing the NPower 6-in-1 Power Pack. The Power Pack is a user-friendly & versatile product designed to instantly jumpstart vehicles, address inflation needs and provide portable 110V AC and 12V DC power. The Power Pack also brings light to any situation with an integrated work lamp.

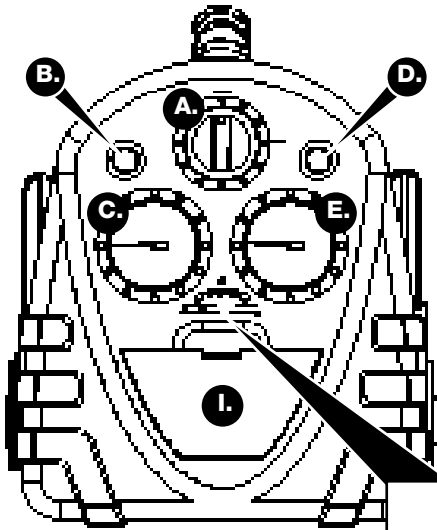
The Power Pack is an ideal companion to accompany all your jumpstarting, inflation and portable power needs.

## FEATURES

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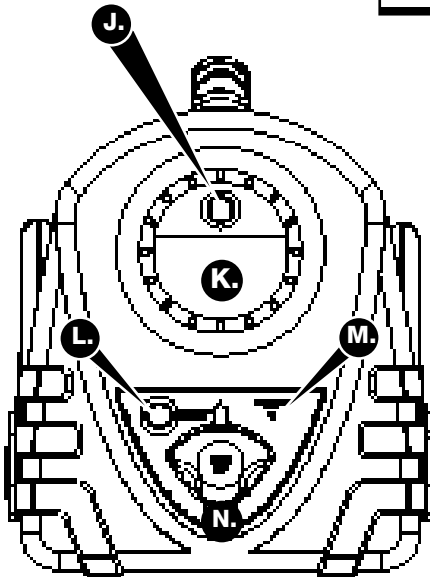
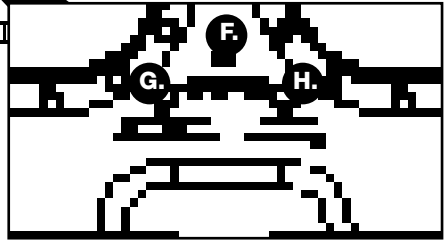
- High current EHP battery provides 1,000 Amps peak power, 400 Amps starting power.
- Starts cars, trucks, recreational vehicles, and boats without the need of a host vehicle or an AC power source.
- 110V AC outlet powers various appliances anywhere.
- 2-12V DC power outlets provide power for appliances designed to plug into a vehicle or boat 12V cigarette lighter socket.
- Solid-state, integrated charger allows for re-charging of the Power Pack battery from any 120V AC source. The Power Pack integrated charger automatically stops charging when the battery has acquired a full charge and keeps your Power Pack battery in peak condition.
- Sealed, maintenance-free heavy duty battery is safe to use, transport and store.
- 46in. heavy duty, 6-gauge industrial-grade welding cables carry more amperage for maximum starting power.
- Battery gauge for quick assessment of Power Pack battery state of charge.
- High-impact molded case provides durability and convenient transport.
- Integrated light for roadside repairs or emergency situations.
- 260 PSI air compressor and air inlet adapters can address a wide range of inflation needs.
- Pressure gauge displays actual air pressure in PSI.

# GETTING TO KNOW YOUR POWER PACK



**Figure 1**

- A. Jumper cable ON/OFF switch
- B. Battery test switch
- C. Voltmeter
- D. Air compressor ON/OFF switch
- E. Air compressor gauge
- F. Cables reversed indicator
- G. Battery charging indicator
- H. Full charge indicator
- I. Air compressor accessory and hose storage

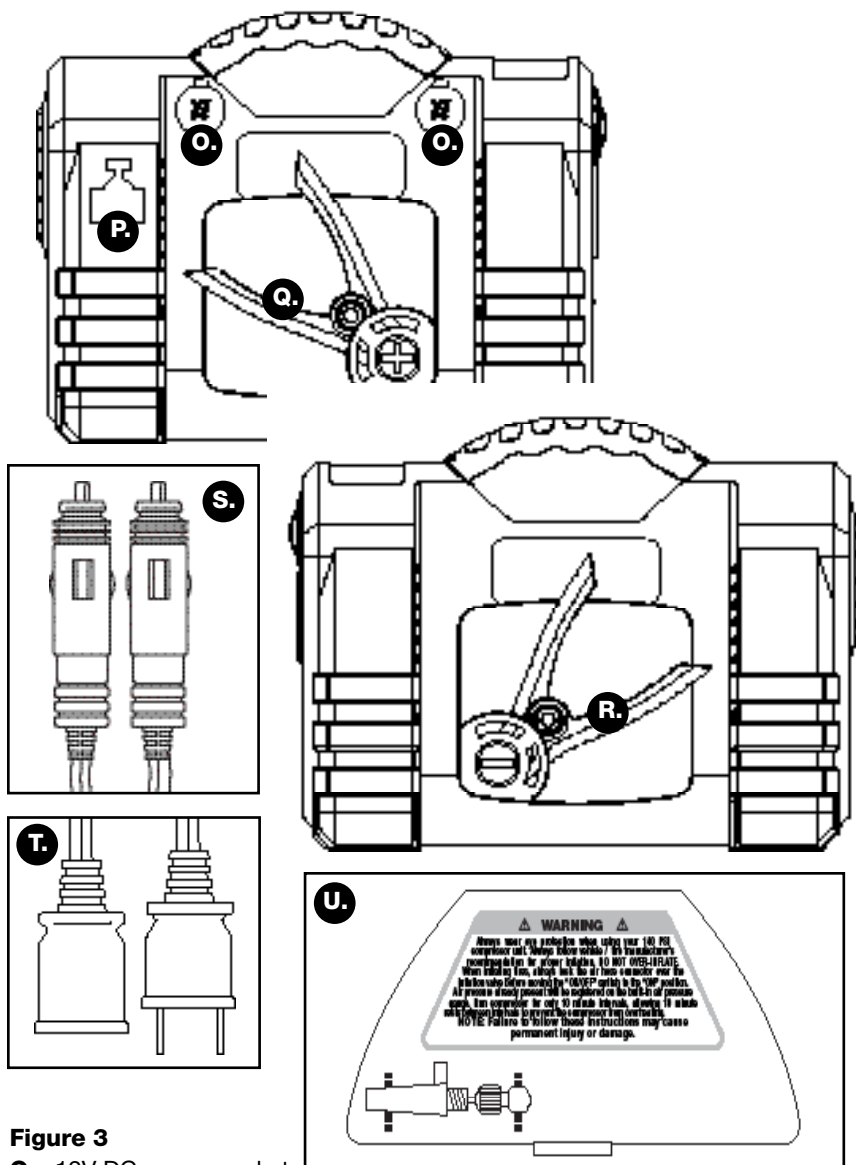


**Figure 2**

- J. Integrated work lamp ON/OFF switch
- K. Integrated work lamp
- L. Inverter ON/OFF switch
- M. Inverter ON LED
- N. 110V AC outlet

# GETTING TO KNOW YOUR POWER PACK

CONTINUED



**Figure 3**

- O.** 12V DC power socket
- P.** Solid-state, integrated AC charger port
- Q.** Positive clamp
- R.** Negative clamp
- S.** 12V DC power cable
- T.** 120V AC charger cable
- U.** Air inlet adaptors



# OPERATION

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Read all operating instructions before using your Power Pack.

## This section will guide you through:

- **Charging the Power Pack before initial use**
- **Standard recharging of the Power Pack**
- **Jumpstarting a vehicle**
- **Using the integrated work lamp**
- **Using the compressor**
- **Operating 12V DC outlet**

## Charging the Power Pack before initial use

Your Power Pack will need to be charged until the Green Full Charge LED illuminates before initial use. The initial charge could take up to 72 hours.



Do not use the Power Pack as a power source while recharging.

Use the following step-by-step guide to recharging your unit.

## Standard Recharging of the Power Pack

We recommend leaving the AC charger connected to a 120V AC outlet when the Power Pack is not in use to obtain maximum battery life. This charger can be left plugged in all of the time when not in use.

### To recharge the Power Pack internal battery using AC power:

1. Ensure that all elements of the unit are off and that nothing is connected to the 12V DC outlet.
2. Plug the AC charger cable into a standard wall AC outlet.
3. Plug the AC charger cable into the AC charger access point on the unit. At this time the red “Battery Charging” indicator will illuminate.
4. Allow unit to charge until the red “Battery Charging” indicator turns off and the green “Full Charge” indicator is illuminated.

**Note: The Power Pack can stay connected to a 120V power source and will charge automatically.**

5. The charge level can be checked by first disconnecting the AC charger cable from the wall outlet and pressing the battery test button.

**Charge your Power Pack after each use.**

**Note: If the battery is fully discharged, up to 72 hours may be needed to completely recharge. If you store your Power Pack for extended periods of time without use, completely recharge at least once every three months. The Power Pack is equipped with a sensor that prevents overcharging.**

## OPERATION CONTINUED

### To Recharge using a 12V DC power source: (Do not exceed 2 hours)

Note: Only use the DC charging option when an AC power source is not available.

1. Insert the DC charging cord into the cigarette lighter receptacle on the boat or vehicle.
2. Insert the other end of the DC charging cord into either one of the 12V DC power outlets on the side of the unit.

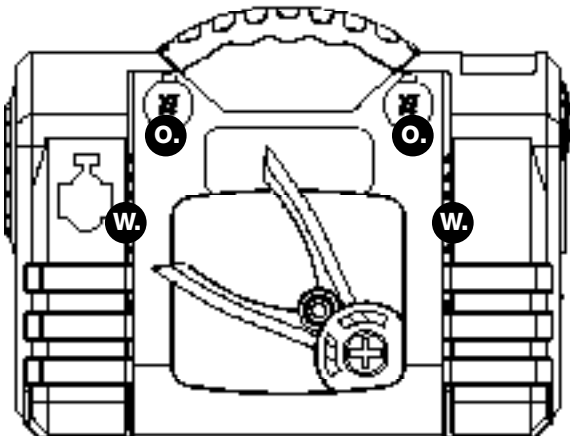
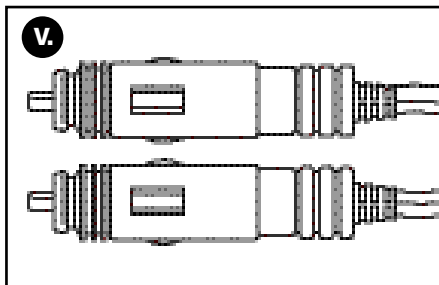
**Note: The jumpstart on/off switch can be left in the off position.**

#### CAUTION

It is possible to over charge the battery when re-charging using the DC outlet. Over charging the battery can cause permanent damage and decrease battery performance. Only charge using DC supply if a 120V AC outlet is not available.

**Figure 4**

- V.** 12V DC to DC cable
- O.** 12V DC outlet
- W.** Location of cooling vents



# USE OF THE POWER PACK

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## The following section will guide you through the use of your Power Pack.

Please note that while using various features of the Power Pack simultaneously is permissible, this will increase the load on the battery, thereby reducing run-time before recharging is necessary.

### Jumpstarting precautions



#### WARNING

**Risk of personal injury.** ALWAYS wear approved eye protection when using this equipment.



#### WARNING

**Risk of Fire, explosion, or burns.** Electrolyte inside lead acid batteries contains sulfuric acid which can burn skin and harm or destroy clothing. Wear eye protection any time you are jumpstarting a battery and keep baking soda mixed with water available to neutralize acid. Make sure that long hair is put up securely, do not wear loose fitting clothing or jewelry, these could become caught in moving engine parts or create a short circuit resulting in personal injury or loss of life.



#### WARNING

**Fire Hazard.** Never allow the jumpstart's red and black cable clamps to touch each other or a common metal conductor. Such contact could cause damage to the unit and/or create a sparking/explosion hazard.



#### WARNING

**Fire Hazard.** Connect red clamp to the positive (+) battery terminal. The black clamp should be attached to the engine block or other non-moving metal part of stalled vehicle. Do not connect black clamp to the negative (-) battery terminal. Doing so could cause damage to the unit and/or create a sparking/explosion hazard.



#### WARNING

**Fire Hazard.** Do not try to jumpstart a battery for more than six seconds. Allow the unit to cool for three minutes after each six second jumpstart.



#### WARNING

**Risk of Fire, explosion, or burns.** The jumpstarting cable connection has enough energy to cause a spark, create an explosion hazard, or cause burns if a metal object contacts both terminals. Keep the jumpstart switch in the OFF position, except when executing the jump start procedure. Do not turn on the jumpstarting function without having cables securely attached.

**Before connecting the jumpstart cables check the jumper cables power switch to confirm that it is in the OFF position. The reverse polarity warning function does not protect the Power Pack or your vehicle from damage if the cables are not correctly connected and the jumper cables power switch is in the ON position. If the red “cables reversed” LED illuminates and the warning buzzer sounds when the cables are attached to the vehicle battery, STOP! Make certain the Red positive clamp on the jump start is connected to the Positive battery terminal in the vehicle and the Black negative clamp is grounded to the vehicle.**

**⚠ CAUTION**

## Using the Jumpstart

The Power Pack can be used to jumpstart any standard size vehicle or boat with a single 12V starting battery. If you have any questions regarding how to jump start your vehicle, consult the vehicle owners manual or the vehicle manufacturer before using the Power Pack jump start function.

**The following steps should be read completely before starting this procedure and then carefully followed throughout the procedure:**

1. Be sure that the Power Pack jumpstart power switch is in the OFF position.
2. Ensure safety of immediate area. See warnings at the beginning of this manual for further details.
3. Turn off the vehicle or boat, as well as all attached accessories such as lights, radios, et cetera.
4. Be sure that the emergency brake is engaged. Manual transmission vehicles should be in neutral. Automatic transmission vehicles should be in park.
5. If jumpstarting a boat engine, purge the engine compartment and vent fumes per boat manufacturer instructions before proceeding.
6. Position the Power Pack on a secure, level surface in reach of the battery but away from all electrical and moving parts of the engine. Please note, some engine components may be hot enough to cause severe burns or damage the Power Pack.
7. Connect the red positive (+) clamp of the Power Pack to the positive (+) terminal of the battery (never lean over the battery when making connections to jumpstart).
8. Connect the black negative (-) clamp of the Power Pack to the engine block, cylinder head, or other heavy yet stationary metal engine part.

# USE OF THE POWER PACK CONTINUED

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If cables are attached to the incorrect battery terminal the Cables Reversed LED will switch on and a warning tone will sound. If this occurs, correct the connection before proceeding to the next step. Failure to do so may cause sparking, personal injury and/or harm to the vehicle or jumpstart unit. **Check to be sure that the cables are clear of all moving engine parts.**

## **WARNING**

9. Turn the jumper cables power switch to the “ON” position (see Figure 1 on page 5 for location A). Crank the engine. Do not crank for more than six seconds. Allow the Power Pack to cool for at least 3 minutes between six second jumpstart cycles.
10. After successfully starting the engine, turn the jumper cables power switch back to the “OFF” position.
11. Remove the black negative (-) clamp and return to its stored position.
12. Remove the red positive (+) clamp from the battery and return to its stored position.

## **Using the integrated work lamp**

To use the integrated work lamp, simply press the work lamp power button located directly above the work lamp (see Figure 2 on page 5 for location J).

## **Using the compressor**

The air compressor in the Power Pack is designed as a convenient portable inflation device. After ten minutes of continuous use, turn off the compressor and allow it to cool for ten minutes. Continue use, if necessary, following this ten minutes on / ten minutes off cycle (see Figure 1 on page 5 for location I).

Allowing the compressor to run in excess of 10 minutes can result in permanent damage to the compressor, jump start unit, property or personal injury. Make sure the compressor ventilation slots are free of debris and air can circulate around the compressor motor while in use.

## **WARNING**

## **Inflating a tire or object using the compressor**

1. Secure the inflator nozzle to the valve stem using the thumb latch.
2. Switch on the compressor via the switch on the front of the Power Pack (see Figure 1 on page 5 for location D).
3. Check the pressure gauge on the front of the Power Pack, once desired PSI is reached remove the valve connector by releasing the thumb latch.
4. Turn off compressor via the switch on the front of the Power Pack.

# USE OF THE POWER PACK CONTINUED

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## Inflating other objects

1. Place the appropriate inflation accessory nozzle on the valve connector and secure with the thumb latch.
2. Insert the accessory into the deflated object.
3. Turn on compressor via the switch on the front of the Power Pack, once desired PSI is reached remove the valve connector by releasing the thumb latch.
4. Turn off compressor via the switch on the front of the Power Pack.

**Note:** *If the maximum pressure of the item being inflated is not known, then allow the compressor to run only until the desired fullness is reached. Overinflating an item could result in damage to the Power Pack or the item being inflated. Never leave the compressor running unattended.*

## Operating AC appliances



The output of the inverter is non-sinusoidal. If you are uncertain that non-sinusoidal power will cause damage to a device, check with the device's manufacturer before proceeding.



TURN INVERTER SWITCH OFF AFTER EACH USE or battery could be drained very quickly.

To power a 110V AC appliance with your Power Pack please follow these steps:

1. Turn on the power inverter (see Figure 2 on page 5 location L).
2. Plug in appliance.
3. Turn on appliance.
4. After use is completed, turn off appliance, unplug appliance from the unit and turn off the power inverter.
5. Re-charge the Power Pack after each use.

**Note:** *To avoid unnecessary draining of your Power Pack's battery, turn off the power inverter when not in use.*

## Low Battery Shutoff

This time period will vary according to the wattage of the of the appliance in use, state of Power Pack battery charge and temperature. This auto shut-off prevents the Power Pack battery from becoming completely discharged and overheating of the inverter which can cause permanent damage.

Do not operate AC appliances while charging your Power Pack. Doing so may damage the unit and/or your AC appliance.

# USE OF THE POWER PACK CONTINUED

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The AC inverter inside your Power Pack will shut off automatically when the battery reaches 10.7-10.5 volts. An audible alarm will switch on at 11 volts to indicate the internal battery is low on power.

AC appliances vary greatly according to the amount of power they consume. The Power Pack is rated to produce 400 watts of power for 5 minutes and 320 watts continuously which allows for safe operation of most appliances falling within this range of power consumption. (Not all AC appliances are compatible with non-sinusoidal AC inverters. If you have a question regarding compatibility, consult with the manufacturer of that device.)

In order to handle momentary power fluctuations the Power Pack power inverter has a surge capacity of 800 Watts.

The wattage consumed by an AC appliance will impact the length of time the Power Pack will operate the appliance before the need to recharge. The greater the wattage consumed, the faster the Power Pack battery will discharge.

Please see list of appliances in table below for typical 110V AC appliances used with portable power units and the approximate number of hours the appliance can be used before recharging of the unit is necessary.

## AC Appliance Operating Times

<b>AC Appliance</b>	<b>Wattage (approx.)</b>	<b>Hours (approx.)</b>
Mobile Telephone (stand-by)	4	40
Clock Radio	8	22
Portable stereo/ CD player	10	17
Laptop Computer	25	6
Table lamp	40	3
13in. Color TV	60	2.5
3/8in. Drill	190	.3

Typical 110V AC appliances used with portable power units.

### **Note:**

*Operating times assume a completely charged Power Pack battery. Actual operating times may vary according to appliance specifications, level of use, outside temperature, and other environmental variables.*

Some appliances are considered high surge appliances. All wattage ratings are averages. Products such as televisions and devices with motors consume power on a varying basis, often consuming a larger wattage when first turned

## **USE OF THE POWER PACK** CONTINUED

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on or when operated in certain modes. Please be aware that the Power Pack is rated at 320 watts of continuous power with a surge capacity of 800 watts. Some appliances rated under this threshold may actually consume more than 320 Watts, thereby triggering the safety overload shutdown circuit.

If this occurs, the inverter will shut down and then reset itself. Do not repeatedly attempt to use a device with the inverter if it continues to trigger the shutdown circuit as this could damage the inverter.

The Power Pack has one 110V AC outlet. Be sure that the continuous load does not exceed 320 watts. Operating multiple appliances will, naturally, decrease battery run-time as more power will be consumed.

Take care not to block the cooling vents on the front and back of the Power Pack when using the inverter (These vents are illustrated in figure 4 on page 8 as location W). Blocking these vents could cause the unit to overheat, which may cause personal injury and/or damage to appliances and the Power Pack.

The output of the Power Pack is non-sinusoidal. Some sensitive equipment may be damaged by the inverter's modified sine wave output or may not operate correctly. If you are uncertain that non-sinusoidal power will cause damage to a device, check with the device's manufacturer before proceeding.

These devices may include but are not limited to:

- Electronics that modulate RF signals on the AC line;
- Speed controllers in some fans, power tools, kitchen appliances, and other motors;
- Some chargers for re-chargeable batteries
- Metal Halide lights

### **Operating 12V DC appliances**

To power a 12V DC appliance with your Power Pack please follow these steps:

- Plug in appliance to the 12V outlet
- Turn on appliance
- After use is completed, turn off appliance, unplug appliance from the unit
- Re-charge the Power Pack as soon after use as possible

#### **Notes:**

*The 12V DC outlet is always on. No other switches need to be on to use this outlet.*

*The combined load should not exceed 15 Amps. Outlet will switch off automatically if overloaded.*



## **USE OF THE POWER PACK** CONTINUED

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**Notes:**

*The Power Pack will NOT automatically turn off power to the DC outlet. Continuing to use 12V DC appliances after the battery has been depleted can permanently damage the unit.*

*Do not operate 12V DC appliances while charging your Power Pack. Doing so may damage the unit and/or your DC appliance.*

12V DC appliances vary greatly according to the amount of power they consume. The wattage consumed by a 12V DC appliance will impact the length of time the Power Pack will operate the appliance before the need to recharge the Power Pack. The greater the wattage consumed, the lesser the duration of the Power Pack battery charge. The 12V DC outlets are equipped with an internal circuit breaker which will automatically cut power to the outlet if: the DC appliance causes a direct short or if the appliance draws excessive amperage. This circuit breaker is designed to automatically reset once the fault has been corrected and the breaker has cooled to a normal operating temperature.

# REPLACEMENT PARTS

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The following replacement parts are available for the Power Pack:

<b>PART NUMBER</b>	<b>DESCRIPTION</b>
RSPS151	110V AC power cord
RSPS152	12V DC power cord
RSPS205	Inflation accessories

Only parts identified by part number are available for purchase.

**If you experience any problems with the Power Pack, please DO NOT return the unit to the place of purchase. Please call the customer service department at 800-317-1260.**

# NOTES

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