



A faint, stylized American flag is visible in the background, featuring the stars and stripes in a dark, textured appearance.

# PATRIOT POWER GENERATOR 1500

User Manual

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## **Date and Revision**

July 2014 Revision A

## **Contact Information**

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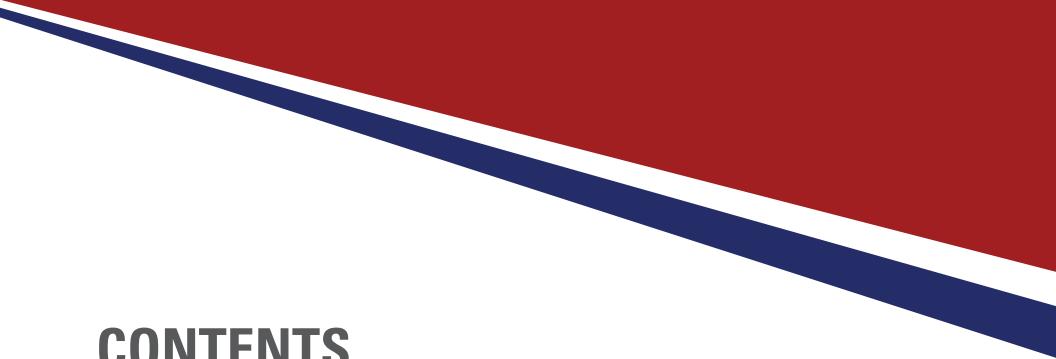
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# PATRIOT POWER GENERATOR 1500



Before using this unit, please read ALL instructions and information in this user manual.

# **ABOUT THE PATRIOT POWER GENERATOR**

The Patriot Power Generator is a seamless solution that protects you when outages leave you powerless for an extended period of time. The quiet, portable device is all about practicality and endurance, lasting up to 1,000+ life cycles. Other generators try, but none can match the power of the Patriot Power Generator and still offer all of the following:

## **Safety:**

No emissions – none. No dangerous risks, unlike fossil fuels and toxic lead-acid batteries. No carbon footprint, no greenhouse gases and no damage to the environment.

## **Quiet:**

The protected lithium core produces wattage without the loud, continuous, sanity-challenging noises of other generator engines.

## **Renewable:**

Powered and replenished by natural resources such as the sun, wind and water, as well as mechanical devices such as hand cranks. Unit retains charge for 1 year.

## **Portable:**

The Patriot Power Generator is a relatively small device measuring just over a cubic foot and weighing only 27 pounds (12.2 kg). That's small enough to carry or store just about anywhere. Most generators that offer less power surpass this weight by more than double.

## **Affordable:**

No other generator offers the same quiet power output and device versatility for the same value.

# SYMBOLS AND TERMS

## Important Symbols

The following symbols are used in this guide:

 **WARNING** Warnings are conditions and practices that could result in personal injury.

 **CAUTION** Cautions are conditions and practices that could result in damage to the unit or other equipment.

## Important Terms

The following terms are helpful for you to know and are used in this guide:

Term	Definition
A	Ampere or Amp
AC	Alternating Current
DC	Direct Current
kW	Kilowatt; one thousand Watts
LED	Light Emitting Diode
mA	Milliampere; one thousandth of an ampere
PV	Photovoltaic
VAC	Volts AC
VDC	Volts DC
W	Watts

## Additional Information

You can find additional information about this product at [www.patriotpowergenerator.com](http://www.patriotpowergenerator.com).

# SAFETY INSTRUCTIONS

 **WARNING** This section provides important safety and operating instructions.

 **CAUTION** Check with manufacturer of medical devices before powering any life-support systems or other medical devices or equipment to ensure they are compatible with the power supplied by the Patriot Power Generator.

 **CAUTION** Check with tool and/or equipment manufacturer before powering any of their products to ensure they are compatible with the power supplied by the Patriot Power Generator.

- Before using your unit, read ALL instructions and information in this user manual.
- Although intended for indoor use, the Patriot Power Generator can be used outdoors if sheltered. DO NOT expose the unit to rain, snow or extreme environments. To reduce the risk of fire hazard, DO NOT cover or obstruct fan vents located on the side of the unit. Provide a minimum of 6 inches of clearance on all sides of the unit when in use; otherwise overheating could occur.
- You may simultaneously connect as many as 2 DC loads and 2 AC loads as desired within the parameters enforced by the limits of the section.
- To reduce the risk of electrical shock, disconnect all sources of AC and DC from the unit before attempting any cleaning or maintenance or before working on any circuits connected to the unit. SWITCHING OFF ALL POWER DISCHARGE PORTS WILL NOT ELIMINATE RISK. TURN OFF MAIN POWER SWITCH.
- Inspect all power cords before attempting to charge your unit or connect devices to discharge ports. If cords are frayed, damaged or questionable, DO NOT connect the device to your unit. Using such devices increases the risk of fire and electrical shock.
- DO NOT use if your unit has been dropped or damaged in any way. If damaged, see Contact Information on page 2.
- DO NOT attempt to disassemble the unit. There is a high risk of unit shock as well as personal injury. There are NO serviceable parts.
- Repairs should ONLY be done by a qualified Patriot Power Generator repair technician.

## GETTING STARTED

- Thank you for your purchase of the Patriot Power Generator. The 1500-Watt pure sine wave AC inverter output in this unit makes it compatible for use with many of today's high-tech electronic devices. It also allows appliance motors to operate more efficiently and at cooler temperatures.
- In order to get the most from your unit, be sure to carefully read this user manual. Even though your Patriot Power Generator has many advanced built-in safety features, it is still important to take some time to become familiar with the Safety Instructions on Page 7 of this guide before operation.
- If you still have any questions, please contact our support team. See Contact Information on page 2.

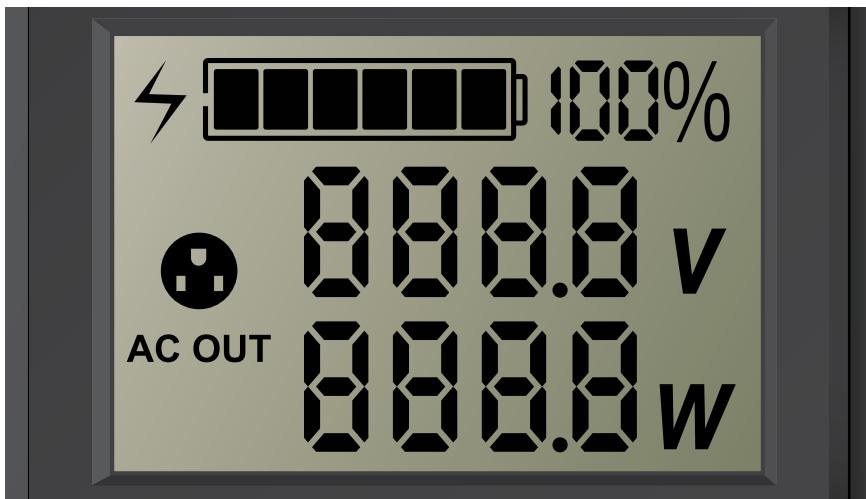
# UNIT OVERVIEW

You should have received the following items with your Patriot Power Generator:

- Unit
- AC wall outlet charging cord
- User manual

## Smart LCD Display

- Insert key into back of the unit and set to ON position to turn on and illuminate the LCD display.
- Turn the key to the OFF position to power down the unit.



### Things to remember:

- When not in use, turn the key to the OFF position and remove to ensure the unit is completely powered down.
- Store unit fully charged.

# Patriot Power Generator Interface

Front



Back



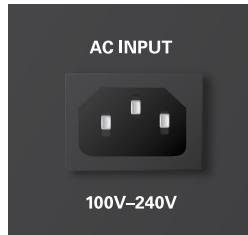
## **KEY**

- 1. AC power switch**
- 2. LCD display**
- 3. AC outlets**
- 4. 12 VDC cigarette lighter outlet (10A)**
- 5. 12 VDC Anderson poles outlet (20A)**
- 6. USB outlets**
- 7. USB power switch**
- 8. Front panel air vents (Do not obstruct)**
- 9. Ventilation fan**
- 10. Master power lock**
- 11. 24 VDC Anderson pole charging input**
- 12. 100V ~ 240V AC charging input**

## AC CHARGING

### WARNING

Electrical shock can occur if AC cord is damaged or frayed. Never use a damaged or frayed AC cord. Replace with a new cord before proceeding with AC charging. See Contact Information on page 2.



- To charge your unit, plug in the AC cord that is provided. The LCD display will show  and charge level. Once the unit is fully charged, the display will read 100%. You should wait 10-15 minutes to make sure the cells have balanced before removing the power source.
- If the unit is plugged into an AC outlet at the same time it is being used to power an AC device, the unit will continue to function as normal and charge during use.
- Please Note: Your unit can be charged via AC and DC at the same time for a shorter charge time.

## DC CHARGING

### WARNING

Electrical shock can occur if DC cord is damaged or frayed. Never use a damaged or frayed DC cord. Replace with a new cord before proceeding with DC charging. See Contact Information on page 2.

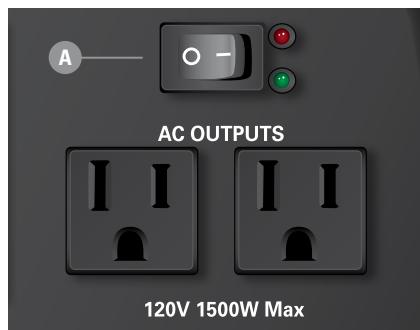


- To charge your unit, insert the DC charging cord that is connected to your charging source (solar panel, hand crank, windmill, etc.) into the DC 24 Volt Anderson connector on the back of the unit. The LCD display will show  and charge level. Once the unit is fully charged, the display will read 100%. You should wait 10-15 minutes to make sure the cells have balanced before removing the power source.
- Attention: This unit will ONLY accept 24V DC sources. Damage to the unit will occur if any voltage-rated sources other than 24V are used.

## AC USAGE OUTLETS

### WARNING

Electrical shock can occur if AC cord is damaged or frayed. Never use a damaged or frayed AC cord. Replace with a new cord before proceeding with AC usage. See Contact Information on page 2.

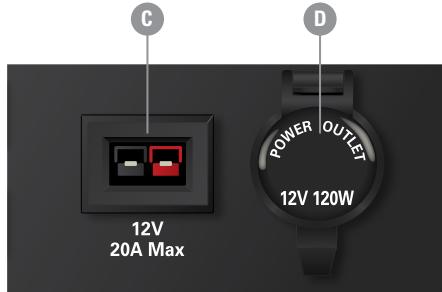


- To use your AC outlets, first turn on the inverter by switching the Main AC power outlet switch (A) to the ON position.
- Once on, the outlets will work like normal AC wall outlets in your home; just plug in the devices you want to run.

## DC USAGE OUTLETS

### WARNING

Electrical shock can occur if DC cord is damaged or frayed. Never use a damaged or frayed DC cord. Replace with a new cord before proceeding with DC usage. See Contact Information on page 2.

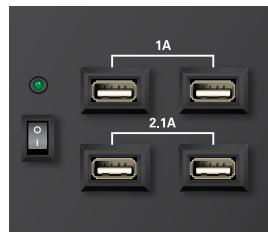


- To use the DC Anderson outlets (C) for large loads up to 15 Amps, simply plug in your devices using an Anderson cable and operate as normal. For larger loads of up to 20 Amps, plug Anderson poles directly into Anderson outlets.
- To use the DC cigarette outlet (D), simply plug in any 12-volt item that is rated for a maximum of 10 Amps and operate as normal.

Please check with your device manufacturer for proper power requirements and compatibility. See Contact Information on page 2.

## DC USB Outlets

- To use your USB outlets simply plug in the device you are trying to power into the appropriate outlets – 1A for cell phones and 2.1A for tablets.



# TROUBLESHOOTING/FAQ

## 1. My Patriot Power Generator won't turn on.

- The Patriot Power Generator is ready to give you power by pressing the main AC power switch on the right-hand side of the LCD display. When the green LED is lit, your Patriot Power Generator AC outlets are on and ready for use.
- For the Patriot Power Generator to function at its highest ability, it must be charged after being used and not be abused, misused, or damaged. Please ensure all of these conditions are met.
- Please make sure your key is inserted into the master power lock located on the back of the unit and turned to the ON position.
- Should you encounter further trouble please contact our customer service department.

## 2. I left my Patriot Power Generator plugged in to trickle charge and now it won't accept a charge.

- Your Patriot Power Generator should not be trickle-charged. Lithium batteries are not treated the same as any other battery. You can leave your Patriot Power Generator connected to a wall socket continuously and connected to solar panels for a day or two to charge it, but it is not recommended to leave the solar panels connected constantly unless you are using the unit to continuously power an appliance.
- If you intentionally try to charge your Patriot Power Generator beyond the 600Wh capacity, you will damage it and void your warranty.
- Please make sure your key is inserted into the master power lock located on the back of the unit and turned to the ON position.
- Disconnect the solar charging cable from the Patriot Power Generator.
- Check the battery status for charge. Turn the unit on and connect something that you have used with it before to make sure the battery is supplying power.
- If the Patriot Power Generator powers the device, let it continue to run for a while to partially drain the battery.
- Reconnect the solar charging cable to the Patriot Power Generator and check the LCD display for a lightning bolt on the left of the battery charge status bar.

- If the Patriot Power Generator has the lightning bolt on the left of the battery charge status bar, you have a functioning unit. Let it charge to full, disconnect it and store it.
- If you are not able to see the LCD status change after following the above steps, please contact our customer service department to further assist you.

### **3. I used the Patriot Power Generator once, and now it won't charge when I plug it into the wall.**

- The Patriot Power Generator is designed to work for over 1000 full discharge and charge cycles. If it will not charge when using the AC 120V charging cord, follow these steps:
  - Please make sure your key is inserted into the master power lock located on the back of the unit and turned to the ON positon..
  - Disconnect the power cable from the unit and wall outlet.
  - Inspect the cable for damage to both ends and the cable itself.
  - Inspect the Patriot Power Generator and the wall outlet for damaged sockets or disfigurement.
  - After ensuring all connections are clean and free of any debris that may prevent a solid connection, reconnect the Patriot Power Generator and check the LCD display for a charging status.
  - If the Patriot Power Generator will not function after following these steps, contact customer support for further assistance.

### **4. My Patriot Power Generator won't hold a charge.**

- Please make sure that when you store your unit, your key is inserted into the master power lock located on the back of the unit and turned to the OFF position.
- The Patriot Power Generator will retain 60% of its 600Wh capacity after one year of storage. It will not accept a charge if either of the ports are not connected to a power source with a compatible cable. It will accept a charge from either an AC 120V or DC 24V source in their respective ports.
- The Patriot Power Generator has a 24V/25Ah (600Wh) battery and will be able to provide the full 600Wh to any DC device connected to it. If using the AC 120V outlet, a portion of the Patriot Power Generator battery capacity will be used to convert the native DC 24V battery power to AC 120V power. Using one of the

most efficient processes available, the Patriot Power Generator is 85% efficient when using the AC120V outlet. This means that the unit has 510Wh available while using the AC120V outlets.

- When comparing the time that different devices will function on the Patriot Power Generator, remember that all devices consume different amounts of energy. For example, a newer 60" LED television may consume less energy than a 42" LCD television manufactured 5 years ago, and consume much less than a 10" CRT (tube) television manufactured 15 years ago. Always use the actual wattage consumption displayed on the LCD when using the specific device to measure the life of that device on the battery of the Patriot Power Generator.
- To know the life of a device with the Patriot Power Generator as a power source, divide the capacity of the Patriot Power Generator (600Wh or 510Wh) by the power consumption of the device (in watts, W) that is displayed on the LCD and you will have the time the device will last in hours (h). Capacity / Consumption = Life of the device.
  - Example: 100W light bulb used in the AC 120V port;  $510\text{Wh} / 100\text{W} = 5.1 \text{ Hours}$ . If you were to use a 9W LED bulb with a 100W equivalency rating, the result would be 56.6 hours.
- To know how long it will take to fully charge the Patriot Power Generator, use the same formula arranged: Capacity / Wattage = Hours.
- If the Patriot Power Generator will not function after following these steps, contact customer support for further assistance.

## **5. My Patriot Power Generator battery doesn't last as long as I thought it would.**

- The Patriot Power Generator has a power capacity of 600Wh, or .6kWh. While the Patriot Power Generator has a very large energy capacity, it is not limitless and after being used will need to be recharged.
- Think of the Patriot Power Generator as a glass and energy as water. When you drink water from the glass, it does not refill itself, but will hold more water if you refill it. Refer to question 4 above for information regarding how long a specific device should stay powered.
- To extend the life of your Patriot Power Generator battery, consider using more energy-efficient devices and connecting it to solar panels during use.

## **6. How do I know when my Patriot Power Generator is fully charged?**

- To ensure the Patriot Power Generator is fully charged while using the AC 120V charger:
  - Turn all switches to the OFF position.
  - Insert the end of the cable with 3 prongs into the AC 120V plug in the wall, and insert the end of the cable with 3 slots into the AC 120V charging port on the back of the Patriot Power Generator.
  - The LCD display should show a lightning symbol on the left side of the battery charging status bar, as well as a percentage of battery charge.
  - Continue charging the Patriot Power Generator for at least 3.5–4.5 hours.
  - After 3.5–4.5 hours, the Patriot Power Generator will be finished charging and the LCD display will show a full battery status gauge.
- If you remove the cable from the Patriot Power Generator while it is charging, you may need to wait 1 minute while the Patriot Power Generator recalibrates and is ready to accept a charge again. Charging should resume normally. This behavior is a safety feature to protect the battery from surges of power, harsh disconnections, and over/undercharging.
- To ensure the Patriot Power Generator is fully charged when using a DC 12V power source:
  - Ensure all switches are in the OFF position.
  - Connect the power source to one of the Patriot Power Generator's DC 24V Anderson input ports (black to black and red to red).
  - Know how much current (in Amps or Watts) is being put into your Patriot Power Generator through the 24V Anderson port. If you know the Watts, divide 600Wh by that number, and you will know how many hours it should take (with accuracy anywhere from 3-30%, depending on weather conditions and physical placement of the panel). If you know the Amps, divide 50 Ah by that number and you will know how many hours it should take the Patriot Power Generator to charge (again, with accuracy anywhere from 3-30%).
  - Let the Patriot Power Generator charge for the estimated time. Watch to see the battery charge status bar update and it will give you the battery charge level. The Patriot Power Generator

has a cutoff built into it that will stop current from flowing to it after the Patriot Power Generator is fully charged.

- Do not attempt to overcharge the Patriot Power Generator. You cannot overcharge the Patriot Power Generator without damaging the battery and creating an unsafe environment that may lead to serious injury or death.
- Some energy sources are more reliable than others. Know the type of electricity and the current you are putting into your Patriot Power Generator. For instance, if you have a Patriot Power Generator and two DC 24V 100W solar panels, you know that when connected to the Patriot Power Generator and in direct sunlight the panels will give 200 Watts of DC 12V energy to the battery. The battery has a capacity of 600Wh (Watt-hours), so it will take roughly 3-4 hours of direct sunlight to charge the Patriot Power Generator.
- It is important to note that the Patriot Power Generator can be charged by both AC sources and DC sources at the same time for a faster charge.

## **7. How do I know when my Patriot Power Generator is fully discharged?**

- The Patriot Power Generator has an LCD display that will show the voltage, the wattage being used and a battery gauge. These will let you know the status of your battery while charging or discharging. Do not attempt to over-discharge the Patriot Power Generator. It will cause damage to the unit and will void your warranty.
- If you have a device (such as a laptop computer with AC 120V power cable) connected to the Patriot Power Generator while using the device, the battery drain will be more demanding. To prolong the usable life of your devices on the battery, turn the laptop computer off while charging it, and then drain the battery of the laptop computer before connecting to the Patriot Power Generator to recharge (again, while the device is turned off). Leaving the device on while charging may give the illusion of less energy used because the battery of your device will show full charge, but you are in fact using almost three times the energy that you would if you were to disconnect it from the Patriot Power Generator.

## **8. I can't connect my solar panel to my Patriot Power Generator.**

- If a Patriot Power Generator solar panel was included in your order, the connectors are Anderson Power Pole Connectors specifically designed to fit in your Patriot Power Generator. There are two sets of these connectors to use with any 24V input. These connectors are small and rectangular with one side that is red and another side that is black. Always connect black to black and red to red.
- While the ends of the connectors may appear flat and not able to connect to a similar connector, they are specially made to slide together. Simply match up the colors on the input side and push them together gently to form a solid connection.
- The solar panel connectors that fit your Patriot Power Generator are uniquely engineered only for Patriot Power Generator products. They look very similar and fit together easily. If you believe you have a solar panel with a different connector that will not fit your Patriot Power Generator, we will be happy to send you an adapter at no additional cost to you (once confirmation of a different connector is received).
- If you did not buy your solar panel from us and would like an adapter made, please contact customer service for pricing.

## **9. My Patriot Power Generator won't charge when I connect my solar panels to it.**

- Solar panels work best when pointed directly at the sun without obstruction. The solar panel will not produce an adequate charge if it is:
  - Not pointed toward the sun
  - Placed behind a window (30% to 70% less efficient depending on window type)
  - Used indoors
  - Positioned in shade
  - Not connected to the Patriot Power Generator directly or with an approved extension cable
  - Used with an unapproved or excessively long extension cable
- Please make sure your key is inserted into the master power lock located on the back of the unit and turned to the ON position.
- The optimum position of the solar panel is slightly angled to the south (if living in the Northern Hemisphere) at noon in an open area. The panel will produce less power at times further from noon, or angles that are not axially tangent to the relative path of the Sun.

- Solar panels will produce little to no power if they are placed in a shaded area, behind a window, or next to a sun-obstructing object. Remember, shadows move, so an object that is next to the solar panel may not create a shadow during one time of the day, but may produce a shadow for some or all of the rest of the day.
- Solar panels will produce little to no power if placed vertically or facing down.

## **10. I can't connect all three of my solar panels to my Patriot Power Generator at the same time.**

- The Patriot Power Generator is designed to accommodate three solar panels with identical Anderson connectors. If using Anderson Power Pole Connectors (rectangular red and black connectors), there may be dust covers that need to be pulled back to connect the first panel directly to the unit. Using the daisy chain feature, you can add the panels inline by connecting them to the daisy chain adapter. If you have different connectors on the panels we have sent you, please contact customer service to have an adapter mailed to you.

## **11. I left my solar panel connected to a battery (not a Patriot Power Generator) overnight and now it has less charge than the evening before.**

- Batteries will not gain any power from a solar panel at night. It may even deplete the battery if connected poorly (e.g. without a solar charge controller or to the wrong connections). Electricity is a two-way street and will flow to and from the source and to and from the destination depending on the current, charge, power draw, as well as a few other factors. Unless electricity is governed and controlled with technology such as a solar charge controller, you cannot be assured of the results when charging with solar panels, batteries or other electronic components.
- Solar panels only produce electricity with the presence of sunlight. When in the absence of sunlight and connected to a battery without a solar charge controller, the electricity in the battery will flow back to the panel in the form of heat. The panels will become warm, just like an electric blanket (do not use solar panels as heat sources), and may drain the battery connected to it.
- The other peril of ungoverned solar charging batteries is that you may supercharge and damage the battery. This is unsafe and will not give you more energy. In fact, it will most likely reduce the charge because of the damage caused to the battery. The battery may swell and become warm. Do not use a swollen battery and carefully dispose of it in a legal and safe manner.

- Disconnect your Patriot Power Generator from any charging source when it is not charging. Unlike lead-based batteries, the lithium-based Patriot Power Generator does not need to be kept on a trickle-charger, or have the charger plugged in constantly to retain a charge.

## **12. My Patriot Power Generator's fans are on after I turned it off. Should I be worried?**

- No. The Patriot Power Generator may continue to run to cool the internal components to optimal temperatures after being turned off. When the unit is charging, the fans may turn on, even if the Patriot Power Generator is turned off.

## **13. The Patriot Power Generator emits a burning odor while operating.**

- The Patriot Power Generator should not have any odor while functioning or stored. Dust, dirt, or debris should not be allowed to enter the Patriot Power Generator, but if it does, it may emit a very light odor similar to a clothes dryer when functioning. Use electronics-safe compressed canned air to clear the vents of your unit (only while the unit is turned off). If you notice a strong, smoky, or persistent odor, stop use immediately and do not attempt to remove anything from the interior of the Patriot Power Generator. Do not use the Patriot Power Generator again, and contact customer service for repair or replacement. See Contact Information on page 2.

## **14. The Patriot Power Generator will not run my microwave after I used it to watch TV.**

- The Patriot Power Generator has a battery capacity of 600Wh. After a device has used 500Wh of the battery, another device will not have 600Wh to use, but 100Wh. Remember to calculate the power consumption of the devices you use and ration the time you plan to use your unit accordingly. The LCD display will help you with these calculations because it shows the wattage used by any appliance plugged in.
- To ensure you are able to enjoy the Patriot Power Generator's full battery charge after being used, charge it fully and turn the power off.
- To extend the battery life, connect the Patriot Power Generator to solar panels while in use.

## **15. My fully discharged Patriot Power Generator's LCD battery gauge looks like it is fully charged almost immediately after I start charging it. Is it fully charged?**

- No. Lithium batteries are known for their durability and long life. When active for charging or discharging, you may notice fluctuations or spikes in voltage because the chemical components of the battery easily and immediately accept charge or discharge. The LCD battery gauge uses the battery voltage to gauge the charge left. This method is effective at rest, but should only be used as an estimate, not as an accurate gauge while in use.
- The best way to know when your Patriot Power Generator is charged is to know how much energy is going in from the source you are using and rely on the battery charge status display on the LCD to know how much time you have left until the Patriot Power Generator is fully charged. Refer to question 4 above for a simple equation to help gauge use.
- Be sure to give your Patriot Power Generator at least 3.5–4.5 hours of charge time while connected to a steady AC 120V source. When using a DC 24V 100W solar panel, a full day of unobstructed sunlight will charge your Patriot Power Generator. Use 2 of these panels to charge your unit even faster.

## **16. The AC 120V outlet turns off when I use two electronic devices at the same time.**

- The Patriot Power Generator has a number of safety features built in to prevent injury to you or the unit. One of these safety features is an automatic cutoff for devices that use more than 1500W (~15 Amps) continuously. When the current passes 1500W or 15A, power will be cut off from both AC 120V output ports and you will need to turn off the switch next to the AC ports, wait for 5 seconds and then switch it back on to begin using again.
- For example, most hair dryers use 1500 Watts when used on the high setting. Use a lower setting on your hair dryer if using multiple hair dryers. The same lower setting suggestion applies to toasters, microwaves, or electric power tools.

## **17. My Patriot Power Generator stops working when I turn up the power on my space heater while using it to power my TV.**

- The Patriot Power Generator will accommodate all power draws going out of the AC 120V output up to 1500 Watts. Most space heaters draw more than 1500 Watts at the higher settings. Experiment to find the optimal balance between energy conservation and heat output while enjoying your entertainment.
- See Question 16 for additional information.

## **18. My Patriot Power Generator got wet and now will not turn on.**

- It is possible to damage the Patriot Power Generator when used improperly or in harsh conditions. If your Patriot Power Generator is submerged in water, do not turn it on or touch it. The Patriot Power Generator contains a powerful battery and when it comes into contact with water, or any other conducting equivalent, it will create an unsafe environment, void the warranty, and may cause serious injury or death.
- Additionally, the Patriot Power Generator is not rated for dropping from any height.

## **19. Can I daisy chain my Patriot Power Generator in series or parallel with other Patriot Power Generator units or batteries for a specific application?**

- The Patriot Power Generator is designed for use as a stand-alone power unit. It should not be connected to other batteries in series or parallel in a battery bank. It may be recharged by a suitable external power source and may charge a suitable external device, but it is not to be used as a normal battery in a battery bank, charging/discharging array, or any other combination of multiple connected batteries. Doing so will void your warranty, damage the unit, and may expose the battery to unsafe charging and discharging conditions, which may lead to serious injury or death.

## **20. The Patriot Power Generator will not function after I charged it with two solar panels, a windmill, and the AC 120V charger simultaneously.**

- The Patriot Power Generator is a versatile and adaptable product and is able to take a charge from most modern sources. We have designed your Patriot Power Generator to accept all charges possible up to 10A @ 24V through the DC input and 8A through the AC input. If more current is available than the specified limit, the Patriot Power Generator will reject the source as a whole. If you

knowingly attempt to overcharge the battery, it may damage it, voiding the warranty, and creating an unsafe environment with possible serious injury or death.

- The number of charging sources does not matter as much as the amount of charge being put in. Theoretically you could connect the Patriot Power Generator to 100 Solar panels that each have an output of 4 Amps @ 24V and the system would only accept 10 Amps @ 24V of the 400 Amps @ 24V that are available. Attempting to concentrate 400 Amps @ 24V into an insufficient cable diameter, such as those found in the Patriot Power Generator, will result in a severe risk of electrical shock and possibly death. The Patriot Power Generator can, however, accept all of the charge from three 4 Amp @ 24V solar panels.
- Always be aware of what you are putting in and taking out of the Patriot Power Generator. This is a sure way to know you are treating your Patriot Power Generator in a way that will prolong the battery life, stay in warranty, and give you many years of extensive use.
- Should you encounter further trouble please contact our customer service department.

# TECHNICAL SPECIFICATIONS

## Dimensions:

LxWxH: 18" x 10" x 12"

## Weight:

27 lbs (12.2kg)

## Operating Temperatures:

23–111° F (-5–45° C)

## Battery:

- Lithium Polymer Based Chemistry (LiPO)
- 23 Ah (595Wh)
- 24V
- Rated for 1000 charge and discharge cycles (80% loss after 500 cycles)
- Minimum Charge Time: 3.5 Hours
- Charge Retention: 1 Year (80%)
- Integrated Inverter: 120V AC Pure Sine Wave, 3000W for 1 second then 1500W continuous
- Integrated Charge Controller: Maximum of 10A @ 24V charging current from AC and DC circuitry
- Combined Charge to the internal battery from the AC Charging Circuitry: 10A @ 24V DC
- Max DC Output Current: 20A @ 12V DC
- Max DC Input Current: 10A @ 24V DC
- Prismatic Cell Geometry

## Unit Body:

- Steel Case
- Cooled by side mounted fans

## **LCD Display:**

- 6-Bar Battery-Shaped Gauge with Percentage
  - Always on so you always know when your battery is charged
  - Displays wattage used at all times for easily-run time calculations

## **Controls:**

- On/Off
  - The Patriot Power Generator has a master power key located on the back of the unit, which works in conjunction with the AC ON/OFF switch on the front of the unit and the DC USB ON/OFF switch also located on the front of the unit.

## **Input Ports:**

- AC: 110V–120V 50–60Hz
- Anderson Power Pole Connectors: 1 set of ports, total of 10A limit using 24V DC input

## **Output Ports:**

- AC: 110V–120V 50–60Hz: two outlets share a combined total current limit of 1500W, with 3000W peak for less than 1 second
- 4 USB outlets, 3.1A Max (2 @ 1A and 2 @ 2.1A)
- Anderson Power Pole Connectors: 1 set of poles with a total of 20A @ 12VDC shared current limit (240W max output)
- DC: 12V Cigarette Lighter Adapter, capable of 10A output (120W max output)

# MANUFACTURER WARRANTY INFORMATION

**0–365 days from the date of delivery:**

## What is covered?

- Defects in materials or workmanship
- Non-cosmetic normal wear and tear related damages
- Returns: Please contact our customer service team (information on page 2) for all returns and we will arrange a scheduled pickup. Returns are not subject to a restocking fee.
- If for any reason your unit is not working and you believe it is in need of repair or replacement, please contact our Customer Service department to guide you through the process. Under no circumstances should the unit be returned to us without a Returned Merchandise Authorization (RMA) from our Customer Service team.

## What is not covered?

- Damage or defect caused willfully or through negligence
- Damage caused through excessive wear and tear
- Cosmetic blemishes, scratches, or dents caused through the course of regular use
- Damage caused by use of the unit with unsafe, unregulated, or inappropriate products, devices, power sources, or power consumption
- Damage resulting from use of the product for anything other than what it is intended for. This warranty does not cover damage caused when the unit is used as a footstool, wheel chock, door jam, or flotation device (It does not float, is not waterproof, and may cause bodily injury or death if abused as such).
- A return to our corporate or manufacturing facilities without an RMA number. These packages will be rejected or restocked without notification to the sending party.
- Replacement with a new unit

## **Additional Terms:**

- 1.** Damage caused willfully or by negligence will void the warranty at any point in the 365-day period. Willful or negligent damage is determined upon receipt and inspection of the unit. All refunds/returns will be processed after inspection for willful or negligent damage.
- 2.** Any unit that has been altered or repaired by an unauthorized service is voided of any warranty.
- 3.** All products must be returned with all included attachments and accessories unless otherwise directed when obtaining an RMA number. The customer will be billed/charged for any missing attachments or accessories.
- 4.** If proof of purchase, purchase order, receipt, or record of purchase is not available upon request, we will not be responsible for any warranty service.
- 5.** When returning a unit, it must be packaged safely and labeled clearly. Any damage caused by poor packaging when returning the unit is the responsibility of the customer and may void the warranty.
- 6.** The serial number of the unit must be written clearly on the shipping box of the unit when returned. Units without serial numbers as described above cannot be accepted and will be rejected.
- 7.** Products that are not authorized by the RMA will not be accepted.
- 8.** At our discretion, units will be repaired or replaced.
- 9.** If the customer requests a unit to be sent in for repair and it is found to be free of defect or damage after inspection, at our discretion, the customer will be responsible for a \$50 service charge, handling, and all actual shipping costs for the unit to and from our facility.

## Notes



# **PATRIOT POWER**

# **GENERATOR 1500**