



OPERATOR'S MANUAL

LITTLE GENNY

TABLE OF CONTENTS

1. IMPORTANT SAFETY INFORMATION	2
Safety Instructions	2
Warnings, Cautions and Notes	2
Charging Cautions	2
Warning: Inverter Output	2
Caution: Inverter Operating Environment	2
Appliance Cautions	3
2. PRODUCT DESCRIPTION	4
Overview	4
The Little Genny Includes:	4
Knowing Your Power Requirement	5
Knowing Your Energy Requirement	5
Product Details: The Little Genny's Power Inverter	6
3. OPERATION	7
AC Outlets' Operation	7
USB Outlet Operation	7
Charging using the Little Genny's Plug-In AC Charger	7
Charging using the Little Genny Emergency Power Kit's Portable Solar Module	8
4. SPECIFICATIONS	9
5. TROUBLESHOOTING	10

1. IMPORTANT SAFETY INFORMATION



Safety Instructions

Before using the Little Genny or Little Genny Emergency Power Kit (“Little Genny EK”), read this manual thoroughly. This manual contains information needed to achieve Little Genny product performance for your application. Keep this manual for future reference.



Warnings, Cautions and Notes

Any operator of the inverter included in the Little Genny must read and follow all **WARNINGS**, **CAUTIONS** and **NOTES**, as well as all operation instructions. Comply with **WARNINGS** (possibility of serious injury or death), **CAUTIONS** (possibility of damage to the inverter and / or other equipment), and **NOTES** (included to assist you in achieving the maximum performance and longest working life from this advanced-design power supply).



Charging Cautions

The Little Genny may be on or off to fully charge. Recharging must be done with an approved 12 VDC charger or with the special solar panel only thru the small barrel connector. A 12 VDC car accessory outlet may also be used with an optional cable (the car must be running).

Always keep the battery charged as much as possible. Frequent charging does not harm the unit and will help the performance. The LED on the Little Genny may flash a few times when plugging the charger in or out. It flashes green continuously when charging is completed by the charger or solar panel. When disconnected from charger, the LED will return to solid green.



Warning: Inverter Output

- The Little Genny includes an inverter device that produces voltages similar to commercial AC power. Danger of shock or electrocution: Treat the inverter’s output the same as commercial AC power.
- Do not use the Little Genny near flammable materials or in any locations that may accumulate flammable fumes or gases.
- Do not allow water or other liquids into contact with the inverter.
- Do not use the Little Genny with appliances with damaged or wet cords.
- Do not connect devices or appliances to the Little Genny that exceed a draw of 300 Watts. All outlets can be used simultaneously, provided that the combined draw is no more than 300 W.



Caution: Inverter Operating Environment

1. Keep the inverter away from direct sunlight, if possible.
 - Do not expose the inverter to temperatures greater than 60°C (140°F) for extended periods of time.
 - Keep the area surrounding the inverter clear to ensure free air circulation around the unit. Do not place items on or over the inverter during operation. The unit will shut down if the internal temperature gets too hot. Restart the inverter after it cools.
 - Do not use the Little Genny in or near flammable fumes or gases, as ignition may result in explosion or fire.



Appliance Cautions

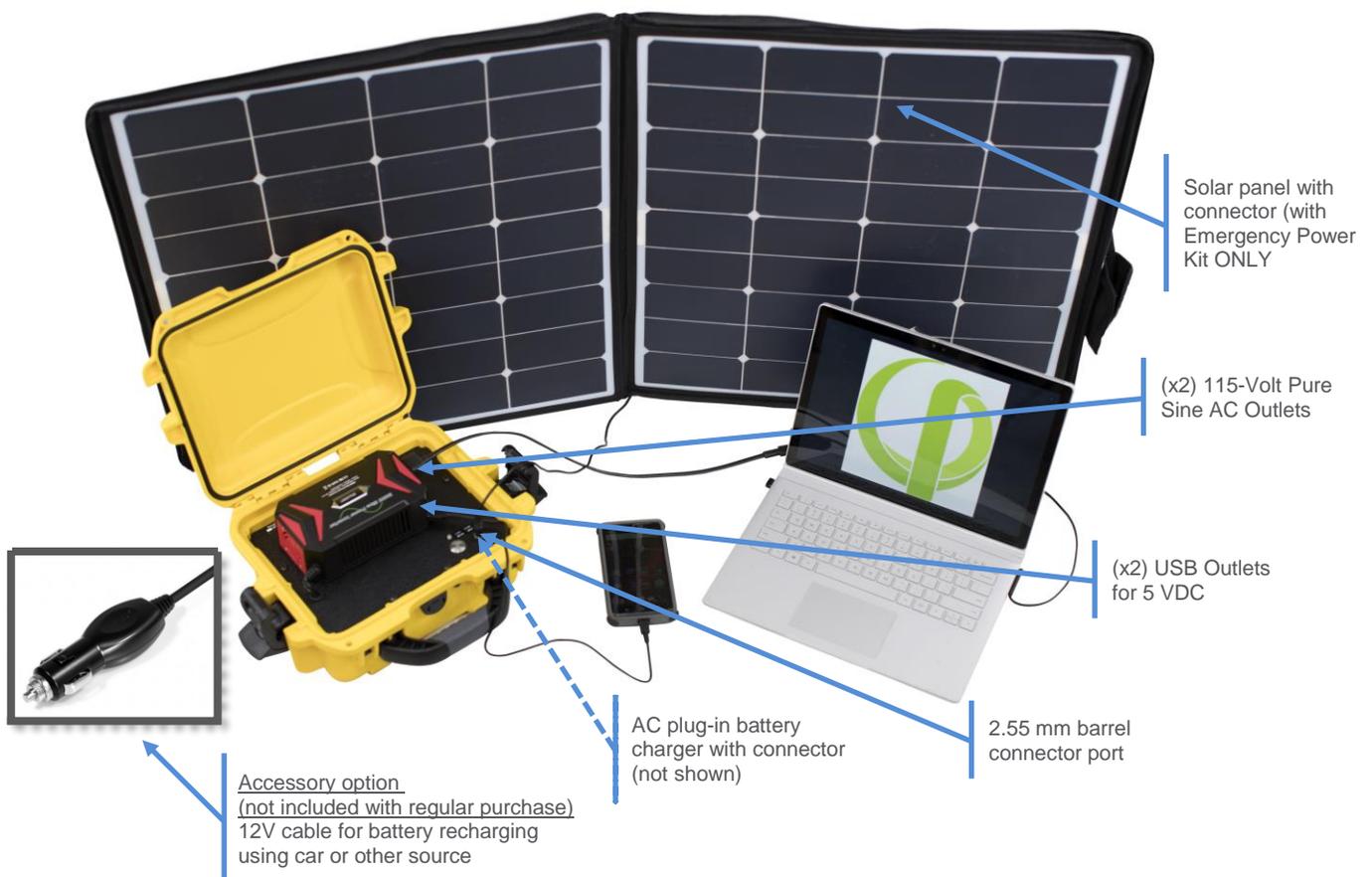
1. Do NOT plug in battery chargers for cordless power tools if the charger carries a warning that dangerous voltages are present at the battery terminals.
 - Route connected appliance cords and extension cords to prevent accidental pinching, crushing, abrading and tripping people.
 - The inverter included in the Little Genny is not tested for use with medical equipment.
 - The inverter included in the Little Genny is not tested for use in marine applications.
 - In the event of a continuous audible alarm or automatic shutdown, turn the inverter OFF immediately. Do not restart the inverter until the source of the problem has been identified and corrected (refer to Section 5. Troubleshooting).

2. PRODUCT DESCRIPTION

Overview

The Little Genny or Little Genny Emergency Power Kit (“Little Genny EK”) is a portable rechargeable generator that converts low voltage direct current (DC power) to 115-volt Pure Sine Wave alternating current (AC power). The Little Genny stores electricity from any power source (e.g. grid, solar, wind, or car) in its 12-Volt DC Lithium Ferro Phosphate (LFP) batteries, and uses that stored energy to power lighting, electronics, and other devices when normal AC grid power is not available, such as in the cases of power outages, emergencies, or field work. The Little Genny Emergency Power Kit includes additional PV charging from a portable solar module.

The Little Genny Includes (portable PV solar module with Emergency Power Kit only):



**Phone and laptop included in the photo above are for demonstrative purposes only; neither appliance is included with the Little Genny*

Knowing Your Power Requirement

The loads connected to the Little Genny should have a combined power draw that does not exceed the inverter's **300-Watt** continuous power rating / **700-Watt** surge power rating. Prior to connecting an appliance to the Little Genny, determine how much power your appliance requires to run ("continuous load") and to start up ("starting load" or "peak load").

Power consumption is rated in Watts, or it can be calculated from Amperes (Amps). This information is usually stamped or printed on most appliances and equipment. If this information is not indicated on the appliance or equipment that you wish to connect to the Little Genny, check the appliance's manual for its power ratings.

Calculate power consumption (Watts) by multiplying the appliance's AC Amperage rating by its AC Voltage rating:

AC Amps x 120 Volts = AC Watts

This formula yields a close approximation of the continuous load of your appliance.

When a motorized appliance or a tool turns on, there is an initial surge of power to start. This surge of power is referred to as the "starting load" or "peak load." Once started, the tool or appliance requires less power to operate (referred to as the "continuous load").

Calculate the appliance's starting load by multiplying the appliance's continuous load draw by two:

AC Watts_{Continuous} x 2 = AC Watts_{Starting}

This formula yields a close approximation of the starting load of most appliances. To ensure that the Little Genny is capable of powering the appliance at hand, check the appliance's manual for its Starting Watts rating.

Knowing Your Energy Requirement

The amount of energy consumed by loads connected to the Little Genny is equal to the loads' power draw multiplied by the loads' runtime:

Power Draw (Watts) x Runtime (hours) = Energy Draw (Watt-hours)

The batteries included in the Little Genny have a rated capacity of **322** total Watt-hours DC / **~257.6** Watt-hours AC (assuming an inverter efficiency of 80%). Connected loads consuming more energy than **~257.6** Watt-hours will result in low battery voltage and inverter shutdown. See Table 1 below for expected runtimes for various loads.

Table 1 – Little Genny's Approximate Potential Load Runtimes

Load Draw (Watts)	Approximate Runtime (hours, minutes)
300 W	51 minutes
250 W	1 hour, 1 minute
200 W	1 hour, 17 minutes
150 W	1 hour, 43 minutes
100 W	2 hours, 34 minutes
50 W	5 hours, 9 minutes

**Runtime may vary depending on the Little Genny battery's starting State of Charge, the type of connected appliance (AC or DC), and the operating efficiency of the Little Genny's inverter while the loads are connected.*

Product Details: The Little Genny's Power Inverter



- **AC Power Switch:** This switch controls AC output of the inverter.
- **US Sockets:** These two outlets can supply up to 2.6 Amps combined at 115V AC / 60 Hz.
- **USB Charging Ports:** These power ports can supply 5 Volts DC at 2.4 Amps for charging or powering tablets, e-readers, smart phones and other small electronic devices. The USB outlets on the inverter are always on. The LED light on the Little Genny's inverter indicates how full the battery is. A green LED light represents a State of Charge of 50% or greater. A yellow LED light means that the battery's voltage is low, red is very low, and flashing red will appear just before the unit turns off.
- **LED Power Indicator:**
 - **Green light** indicates the inverter is working normally.
 - **Red light** indicates the inverter shut down due to overheating, overload, over voltage, low voltage, or another fault condition.
 -  Immediately turn off all connected AC appliances if the red FAULT LED is lit. Allow the inverter to cool before resuming normal operation. Make sure that the ventilation vents are not blocked.
- **Cooling Fan:** The cooling fan runs in the case of normal inverter operation.

3. OPERATION

Charge the Little Genny fully before first-time use. Refer to either the **Charging using the Little Genny's Plug-In AC Charger** section below or the **Charging using the Little Genny Emergency Power Kit's Portable Solar Module** section on the following page for further instruction.

AC Outlets' Operation

Connecting Loads:

1. After confirming that the appliance you plan on connecting to the Little Genny is turned off, plug the appliance cord into one of the two AC outlets on the front panel of the Little Genny's inverter.
2. Turn ON the inverter. Verify that the green LED is lit.
3. Turn the appliance on.
4. Plug in additional appliances and turn them on.

Note: If an extension cord is used from the inverter to the appliance, limit the extension cord length to 25 feet or less. Make sure that the cord is safety approved and rated at 14 AWG or greater to carry the appliance load. Remember that extension cords are intended for temporary use.

Disconnecting Loads:

1. Turn off the connected appliance.
2. Turn OFF the inverter.
3. Unplug the appliance from the Little Genny.

USB Outlet Operation

1. Plug the USB cable into the USB outlet located on the front panel of the Little Genny's inverter, then into the device to be charged. Ensure that the device is charging.
2. The inverter does not have to be ON to charge devices using the USB outlet.
3. After the device is finished charging, unplug the USB cable from inverter.

Charging using the Little Genny's Plug-In AC Charger

1. Connect the charger to the Little Genny via the 2.5 mm barrel connector.
2. Plug the AC charger into an AC wall outlet or AC power source.



Never plug the AC charger into the Little Genny inverter's socket.

3. The charger will automatically turn on after qualifying the battery. At this point, the charger's LED should be lit red.
 4. When the charger's LED changes to solid green, charging is complete and the charger should be disconnected.
 5. To disconnect the AC charger, unplug the charger from the AC power source, then disconnect the charger from the Little Genny via the 2.5 mm barrel connector.
- Keep the Little Genny fully charged whenever possible for best performance.

Note: Charging can stop at any time, even if the Little Genny's battery has only been partially charged. No battery memory will develop.

Charging using the Little Genny Emergency Power Kit's Portable Solar Module

*The portable solar module is included with Little Genny EK models only; the solar module is **not** included with regular Little Genny models.*

1. Ensure that the portable solar module is closed, so that the panels are not exposed to sunlight.
2. Connect the portable solar module to the Little Genny EK using the 2.5 mm barrel connector.
3. Open the portable solar module and orient it to fully face the sun.
4. The red light inside the pocket of the solar panel case shows that the solar panel is working.
5. When the LED is lit solid green, a full battery charge has been reached.
6. After the battery is charged, the portable solar panel can be disconnected by closing the solar panel and disconnecting from the Little Genny EK via the 2.5 mm barrel connector.
 - The Little Genny EK can be used to power devices / appliances while the solar module is connected. However, the Little Genny EK's inverter would ideally be turned off while solar charging for quicker and more efficient battery charging.

Charging a fully discharged unit (indicated by a red LED) via solar should take about three and a half to four hours with full sun.

Charging a partially discharged unit (indicated by a yellow LED) via solar should take about two to two and a half hours with full sun.

4. SPECIFICATIONS

Little Genny and Little Genny Emergency Kit (EK)	
Dimensions	13" L x 11" W x 7" H / 33 cm L x 28 cm W x 18 cm H
Weight	12 lbs. / 5 kg
Charger Connection	2.5 mm Barrel Connector (for AC plug-in charger or solar panel)
Little Genny and Little Genny EK's Battery	
DC Voltage - Nominal	12.8 Volts DC
Amp-Hours	25 Ah
Rated Watt-Hour Capacity	322 Watt-hours DC
Operating Temperature	-4°F to 140°F (-20°C to 60°C)
Charging Temperature	32°F to 120°F (0°C to 49°C)
Battery Chemistry	Lithium Ferro Phosphate (LFP)
Memory Effect	None
Charge Retention	< 1% loss per month
Charge Cycles	2,500 cycles
Charging Requirements	14.65 VDC / up to 8 Amps DC
Cell Certifications	ROHS, UL, CE, UN-DOT
Little Genny and Little Genny EK's Inverter	
Continuous Output Rating	300 Watts (2.6 Amps @ 115 VAC)
Surge Capacity (Peak Power Rating)	700 Watts (6 Amps @ 115 VAC)
AC Output Rating	115 Pure Sine Volts AC
Frequency Rating	60Hz
Output Wave Form	Pure Sine Wave
DC Input Rating	12 Volts DC
Input Voltage Range	11 to 15 Volts DC
Low Battery Shutdown	10 to 11 Volts DC
Over Voltage Shutdown	15 to 16 Volts DC
USB Output Rating	5 Volts DC MAX / 2.4 Amps DC
AC Output Sockets	2 x North American Standard Outlets
Operating / Storage Humidity RH	5 to 95%
Little Genny EK's Solar Module (<i>not</i> included with regular Little Genny models)	
Peak Output	80 Watts / 4.44 Amps at 18 VDC
Solar Input	12 to 18 VDC, up to 15A
Folded Dimensions	22" L x 20" W x 0.4" D
Opened Dimensions	22" L x 40" W x 0.2" D
Net Weight	4.8 lbs. / 2.2 kg

5. TROUBLESHOOTING

Problem	Possible Cause	Solution
The inverter's power switch is on, the LED is lit red and the cooling fan does not run. No loads are connected.	There may be a short circuit inside the inverter. The red LED might indicate that the inverter is in a state of overcurrent protection.	Consult SimpliPhi regarding potential Little Genny repair.
	The battery input voltage may be insufficient or too high.	Charge the battery.
The inverter's power switch is on, the LED's green color becomes dim or turns red, and the cooling fan does not run.	Connected devices' / appliances' power draw exceeds the inverter's power rating.	Disconnect the connected loads from the inverter. Do not use the devices / appliances that caused the inverter fault with this inverter; use a higher Wattage-rated inverter instead.