

FORTY2

solar energy generator

USER MANUAL

MADE BY

PeppermintSM

PeppermintEnergy.com

Electric Shock Hazards

- The Forty2 produces enough electric power to cause death or serious injury if misused.
- While the internal electronics are weather sealed, using the Forty2 or electrical appliances in wet conditions, such as rain or snow, or near a pool or sprinkler system, or when your hands are wet, could result in electrocution.
- There is equivalent power to a regular household outlet, do not immerse in water. Death or serious injury can result if placed in water.
- If the Forty2 is stored outdoors, unprotected from the weather, check all of the electrical components on the control panel before each use. Moisture or ice can cause a malfunction or short circuit in electrical components, which could result in electrocution.
- Do not connect to a building electrical system unless a qualified electrician has installed an isolation switch.

Burn Hazards

- Caution, the base of the Forty2 may become hot during use. Take caution not to contact metal on base.
- Solar Panels may become hot after prolonged exposure to the sun. Handle with care.

Lithium-ion Advantages

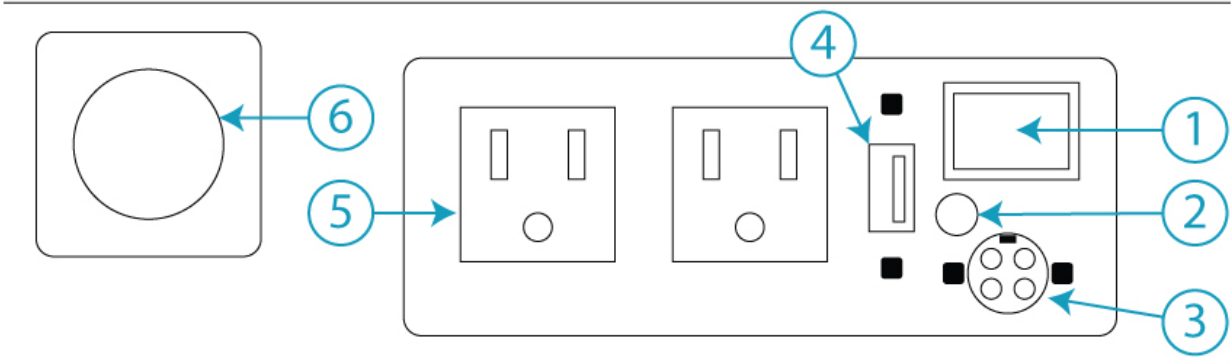
- The biggest advantage Li-ion batteries have is the improvements in cell voltage and capacity over nickel cadmium (NiCd) or nickel metal hydride (NiMH) batteries. Li-ion batteries are therefore said to have a much higher energy density compared with NiCd or NiMH batteries.
- Unlike NiCd or NiMH batteries, Li-ion batteries have no 'memory' effect. This translates into more productive products or systems that can be used un-corded for longer periods in the field or handle higher-end applications, which are usually more energy demanding.
- Much lighter batteries, compared to the same capacity NiCd.
- No cadmium. As most people know, cadmium is highly toxic and is known to accumulate in biological systems, which is why NiCd batteries must be disposed of carefully and in the right places, following local regulations.

Although there are many other technical advantages that make Li-ion the current chemistry of choice for high-end portable equipment, much greater care is required for Li-ion batteries. Fortunately, more precise equipment and monitoring systems are built-into these battery packs for performance and safety reasons. A more rigorous approach, plus a profound awareness of Li-ion batteries, is vital to the wellbeing and SAFETY of users, bystanders, equipment, and premises. It's important to remember that, like other batteries, these batteries too may explode if abused!

Battery Safety

- While the internal electronics are weather sealed. Working in the vicinity of a Lithium-Ion battery is dangerous. Batteries can be dangerous or damaged if misused. Follow all manufacturers instructions.
- If an exposed lithium-ion battery does start a fire, it may burn even more violently if it comes into contact with water or even the moisture in the air. DO NOT THROW WATER ON A BURNING LI-ION BATTERY! A class C fire extinguisher must be used.


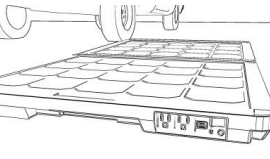
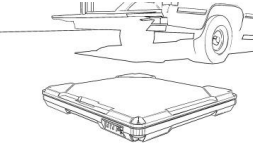
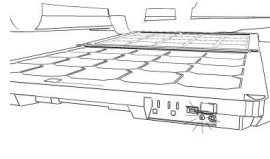
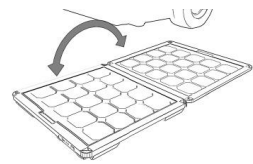
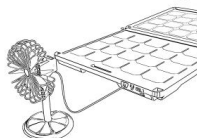
Controls/Features



Drawing of Forty2 Front Panel

1. I/O switch (On/Off)
2. Inverter Power indicator light - green for full charge, yellow for medium charge, and red for low charge.
3. DC input receptacle
4. USB receptacle
5. Receptacles - Your unit may have a different receptacle type than pictured above
6. Optional Hub connection (if equipped)

How To Use

	<p>1. Take the Forty2 to an open area.</p>		<p>4. Locate the switch on the front of the panel.</p>
	<p>2. Place the Forty2 on a flat area with full exposure to the sun.</p>		<p>5. Flip the switch to the ON position, and the battery indicator light should indicate the battery status.</p>
	<p>3. Open the Forty2, exposing the solar panels to the sun, and allow to charge 30 minutes before first use.</p>		<p>6. Plug in appliances and enjoy.</p>

Operation

- Review all SAFETY instructions prior to operation
- Open the Forty2 and face the sun
- Clean glass surfaces regularly for optimal operation
- Inspect cords and plugs, and replace if damaged.
- Make sure devices/appliances are in good working order. Appliances in poor working order should not be used.
- Make sure the electrical rating of all devices/appliances combined does not exceed the stated rating of the Forty2
- Turn off when not in use

⚠ WARNING

Improper maintenance, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations and schedules in this owner's manual.

Internal Inverter Operation

When an appliance or tool is turned on, the motor on that appliance or tool goes through two stages:

1. Peak load or starting load, which is an initial surge of power
2. Continuous operation, the standard or continuous power consumed

Before using the Forty2 inverter, all loads should be calculated

- Amps x Volts = Watts
- Most appliances and equipment will have the amps or the watts stamped on them or in their user manual. In the event they do not, contact the manufacturer to find out if the device is compatible with a modified sine wave inverter.
- Most peak loads are 2 x Wattage
- The start up load of the appliance or power tool determines whether the Forty2 inverter has the capability to power the device.
- Always run a test to verify whether the Forty2 inverter will power a particular appliance or tool. If the load becomes too great the Forty2 inverter is designed to shut down to prevent damage.

The Forty2 Inverter Safety Features

- Overload protection
- Short Protection
- High Voltage Protection
- Low Voltage Protection
- Low Voltage Audible Alarm
- Thermal Protection

Transporting/Storage

- Air transportation of Li-ion batteries is regulated in several countries, and by United Nations through the International Air Transportation Association (IATA) Dangerous Goods Regulations, among others. Please check local regulations and with the common carrier before shipping Li-ion battery packs or products containing relatively large Li-ion battery packs.

Charging and Storing Battery Packs

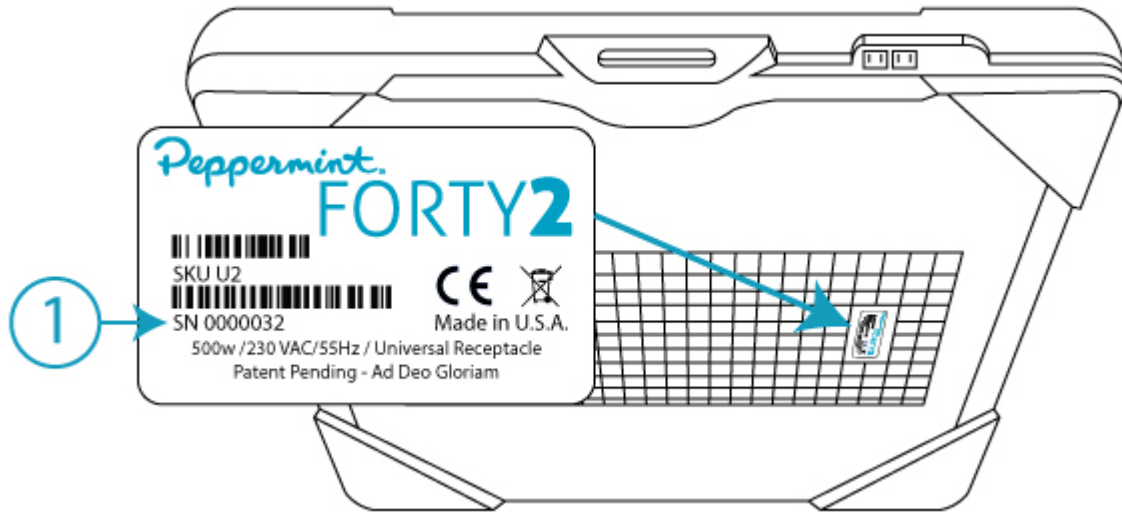
- The required charging time will depend upon the remaining charge level of the battery, and will vary from product to product. Required charging time may also increase at lower temperatures.
- The temperature range over which the battery can be charged is typically 0°C to 45°C (32°F to 113°F). Therefore, charging efforts outside the prescribed temperature range may automatically be blocked by the protection circuitry of the battery pack.

Technical Information

There may be Federal and/or State Occupational Safety and Health Administration regulations, local codes, or ordinances that apply to the intended use of the Forty2. Please consult local agencies having jurisdiction.

- In some areas, generators are required to be registered with local utility companies.
- If the Forty2 is used at a construction site, there may be additional regulations that must be observed.

Technical Information



Drawing of Forty2 Bottom

1. Unit serial number

Record the serial number and date purchased in the spaces below.

Serial Number _____

Date Purchased _____

Size (Folded)	34 in x 32 in x 5 in (86.36 cm x 81.28 cm x 12.7 cm)
Weight (Battery Dependant)	60 / 63 / 67 / 70 lbs (27.2155 / 28.5763 / 30.3907 / 31.7515 kg)
Storage Capacity	250 / 500 / 750 / 1000 Wh
Power Output	900 W (1,800 W Peak - 3 seconds max)
Inverter Type	Modified Sine Wave
Operating time at nominal load (250 W)	Variable by model: 5-15 hours (day) 0.75 - 4 hours (night)
Operating time at max load (900 W)	Variable by model: 0.25-1 hours
Solar Power	180 Watts
Solar Cells	Monocrystalline 20S2P
Electrical Output	110/220 V, 50/60 Hz
Battery Recharge Time	Variable by model: 1.5-8 hours

Battery Type	Lithium ion
--------------	-------------

Consumer Information

Dealer Locator Information

- To find an authorized Forty2 dealer visit www.peppermintenergy.com

Warranty

1. Limited Warranty

- Peppermint Energy, LLC warrants that the following products will be free from defects in material and workmanship for the period of time specified, subject to the limitations set out below.

2. Products Covered and Warranty Length

Parts Covered	Warranty Length: From Date of Original Retail Purchase
Forty2 TM Solar Panels	(60) Months
Forty2 TM	(12) Months

3. Qualifying for the Warranty

- To qualify for this warranty, the product must be purchased directly from Peppermint Energy or from a seller authorized by Peppermint Energy to sell the product. This warranty applies to the original purchaser only. A subsequent owner of a product has no rights under this warranty.

4. Exclusive Remedy: Repair and Replace

- Peppermint Energy’s sole obligation under this warranty is to repair or replace, free of charge and at its option, any defective part or product determined by Peppermint Energy to be the result of defective material or workmanship. This obligation applies only to defects occurring under normal use of the product during the applicable warranty period. A replacement part or product assumes the remaining warranty period of the original product.

5. How to Make a Warranty Claim

- To make a warranty claim, you must: (1) ADD REGISTRATION INFO FROM USER MANUAL, (2) provide written notice of the defect to Peppermint Energy and (3) deliver the product to Peppermint Energy for its inspection. All of these steps must be completed prior to the expiration of the product’s warranty period. You are responsible for the cost and risk of shipping the product to Peppermint Energy. The written notice must be made on the Peppermint Energy Warranty Claim Form, a copy of which can be obtained from Peppermint Energy’s website: www.peppermintenergy.com. The Warranty Claim Form and the defective product must be sent to:

Peppermint Energy, LLC
5000 S Minnesota Ave
Suite 400

6. Warranty Exclusions

This warranty does not apply to damage, deterioration, or breakage due to any of the following:

- a. Neglect of periodic maintenance recommended in the product's user manual
- b. Improper repair or maintenance
- c. Normal wear and tear, accident, misuse, abuse, or improper use.
- d. External causes or acts of God, such as collision, theft, vandalism, riot or wars, fire, extreme freezing and heat, lightning, earthquake, windstorm, hail, volcanic eruption, water or flood, tornado or hurricane.
- e. Unauthorized alteration or modification, or incorporation or use of unauthorized attachments or parts.

7. No Consequential Damages

In no event shall PEPPERMINT ENERGY be liable for any consequential, indirect, incidental or special damages of any nature whatsoever, including without limitation, lost profits arising from the failure of the Product, loss of time or use of the product, transportation, commercial loss, or any other consequential, indirect, INCIDENTAL, or special damages. peppermint energy's sole obligation under this warranty is limited to repair or replacement, at its option. SOME STATES DO NOT ALLOW THE EXCLUSION OF SUCH DAMAGES, SO THIS provision MAY NOT APPLY TO YOU.

8. Limitation Of All Other Warranties

EXCEPT FOR THE WARRANTY HEREIN PROVIDED, PEPPERMINT ENERGY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND TITLE AND INFRINGEMENT ARE LIMITED TO THE DURATION OF THIS LIMITED WRITTEN WARRANTY. SOME STATES DO NOT ALLOW THE LIMITATION OF SUCH IMPLIED WARRANTIES, SO THIS PROVISION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE.

9. South Dakota Law and Venue Apply Exclusively

This warranty will be governed by and construed in accordance with the domestic laws of the State of South Dakota without giving effect to any choice of law or conflicts of laws provision or rule. ALL DISPUTES SHALL BE ADJUDICATED IN STATE OR FEDERAL COURT LOCATED IN SIOUX FALLS, SOUTH DAKOTA. YOU HEREBY WAIVE ANY OBJECTIONS TO SUCH VENUE.