



SOLAR SCOTTEVEST [SeV]

IMPORTANT INSTRUCTIONS & PRODUCT SPECIFICATIONS



CEO & FOUNDER SCOTT JORDAN

IMPORTANT INSTRUCTIONS - READ FIRST

The SCOTTEVEST Solar Charger was designed to charge an auxiliary battery located in any convenient pocket within the SeV jacket. The auxiliary battery has an universal serial bus (USB) port designed to interface with almost any handheld portable electronic device that can be supported by USB charging (see back side FAQ #2). The solar charger was designed with a revolutionary new solar material that is durable, flexible and lightweight. Please read the following detailed instructions for:

- System Component Part List
- Important System Care Instructions
- Solar Charger Washing Instructions
- Typical System Performance
- Complete System Connection Instructions
- System Operation Instructions

SYSTEM COMPONENT PART LIST

Each SeV Solar Charger comes complete with the following items:

- Installation Instructions
- Solar Charger Cape with a 4-ft Extension Wire
- Auxiliary Battery with Charge Status Indication LED's

SYSTEM CARE INSTRUCTIONS

To care for the solar panels:

- Although the solar panels are flexible, DO NOT fold or crease the solar charger on sharp edges or objects.
- DO NOT crumple or fold the solar panels.
- Maximum rolling diameter of the solar panels is 3-inches (7.5 cm). The solar panels are not meant to be rolled into a tight cylinder (for example rolled into a cylinder, folded and stuffed into a pocket). The solar panels are designed to be lightweight and comfortable and as a consequence is very flexible.
- REMOVE the solar panels and auxiliary battery from your SeV before machine washing or dry cleaning the jacket.
- DO NOT machine wash, machine dry or dry clean the solar panels.
- AVOID inserting electrically conductive objects (coins, metallic gum wrappers) into the auxiliary battery USB port. The auxiliary battery has an internal automatic reset fuse, however, a direct short will discharge the battery reducing system performance.
- DO NOT open the auxiliary battery box.
- DO NOT attempt to charge the auxiliary battery with any other charging device.
- The auxiliary battery box is not waterproof. DO NOT immerse in water.

To clean the solar panels:

- Remove the solar charger from your SeV.
- Wipe clean with a damp wash cloth.
- Lay the clean charger flat and allow to air dry
- DO NOT machine wash or machine dry.
- DO NOT dry clean. Dry cleaning chemicals may damage the solar charger's protective plastics.

CONTACT INFORMATION

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SOLAR/BATTERY SPECIFICATIONS

The solar panels charge the battery, which in turn powers your device. Charging time for the battery is dependent on several variables, including orientation to direct sunlight, season, cloud cover, temperature and shadowing. Typical charge times in direct sunlight will be approximately 2-3 hours. The solar panels will charge the battery in cloudy conditions and some ambient light conditions, including artificial light, but the charge times will increase. Note that you can begin using your device almost immediately after it is attached to the battery while the solar panels are exposed to light, even if the battery is not fully charged.

Charging depends completely on the device. Typical times are shown below:

Device*	Approximate Charge Time
Cell Phone	2-3 Hours
MP3 Player	3-5 Hours
PDA	3-5 Hours
CD Player	2-4 Hours

*Note: The device must be USB compatible and be designed to charge using USB connections. Please see back side FAQ #2, or consult device manufacturer's information to determine whether it can be charged via USB cables.

System performance of the solar panels is dependent on several variables, including: orientation to direct sunlight, season, cloud cover, temperature and shadowing. As a result, "typical" performance parameters are user and condition dependent. Specifications for ideal conditions are shown below.

Performance Parameter	Value
Rated Peak Power	3.0 Watts
System Voltage Rating	7.5 Volts
Open Circuit Voltage	12 Volts
Nominal Operating Current	0.35 Amps

System performance of the battery is shown below:

Performance Parameter	Value
USB Output Voltage	5.0 Volts +/- 10%
USB Output Current	0.5 Amps Max*

*Output current typically regulated by the hand held device charge control circuitry.

PRODUCT WARRANTY

The solar panels and battery are guaranteed for a period of two years. Please refer to the warranty shown below for more details. The solar cells are encapsulated in protective plastics engineered to protect the solar cells and prevent the solar panel performance from degrading over time. These plastics keep out moisture and other elements that could reduce the solar panel performance. If properly cared for, the solar panels should not reduce in performance and should operate for several years.

Global Solar Energy (GSE) warrants that for a period of two (2) years from the date of purchase, each production unit of the Goods delivered hereunder will demonstrate a power output greater than eighty percent (80%) of the rated peak power denoted in the applicable technical specifications, provided that the units are operated and maintained in accordance with generally accepted practices. The foregoing warranty does not apply to any unit which has been subject to misuse, unauthorized modifications, neglect, attempts to repair by or for the Purchaser without the express written authorization from GSE, or which has been damaged by accident, fire or other hazard.

In addition, any units that show signs of creasing or folding on the active photovoltaic areas are not covered under this warranty. Goods claimed to be defective under this warranty shall be returned during the warranty period, with GSE's prior authorization, to the GSE facility, together with a written description of the claimed defect, original proof of purchase (e.g. purchase order number and specific module serial number), with the shipment prepaid by Purchaser. Warranty applies to the solar charger and auxiliary battery.



SOLAR SCOTTEVEST [SeV]

FAQ & STEP BY STEP SETUP INSTRUCTIONS



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SOLAR SeV FAQs

Described below are some frequently asked questions about how to use and care for your Solar SeV. If you have a question that is not addressed here, please email us at solar@scottevest.com.

1. Where can I purchase USB charging cables?

- USB charging cables are not included, but are readily available from numerous sources, including www.SCOTTEVEST.com, Radio Shack, and www.ziplinq.com.

2. What devices can I charge?

- The auxiliary battery pack should charge most USB compatible devices. However, there are some devices that require authentication with a computer in order to charge. Our technology partner, Global Solar, tested numerous devices (including most phones, MP3 players, digital cameras and PDAs) and have to date only found that the Apple iPod requires such authentication. We are working diligently with Apple to resolve this issue, and plan on offering a replacement battery or adapter if and when the issue is resolved, but we cannot make any promises that this will ultimately be resolved. Please note that USB charging is only an option for the newest iPods. We understand that this is a popular product and would like you to be aware of this issue. If you are unsure about your device, please consult device manufacturer's information to determine whether it can be charged via USB cables.

3. Can the solar panels be used independently of my SeV?

- Yes! You can use the solar panels to charge your devices without attaching it to the jacket as long as the panels are exposed to light, preferably direct sunlight.

4. How can I tell if the battery is charging and when it is fully charged?

- When exposed to light sufficient to provide a charge, the red "Charging" light on the battery will illuminate. Once the battery is fully charged, the "Charging" light will extinguish and the green "Charged" light will illuminate. You can now remove the solar panels from the jacket and battery. Note that you can begin using your device almost immediately after it is attached to the battery while the solar panels are exposed to light, even if the battery is not fully charged.

5. What are the solar panels made from and why are they so special?

- The solar panels consist of unique flexible thin-film photovoltaic material made from copper indium gallium diselenide (CIGS) sun-absorbing material placed onto a thin substrate. The solar panels are made by Global Solar and are called PowerFLEX™. Global Solar's CIGS technology is a high-efficiency, ultra-lightweight personal solar power solution that has proven itself in numerous applications, ranging from marine to desert environments for the military and others. It is highly durable and the highest performance flexible solar cell available in the market, ideally suited for mobile applications. Combined with integrated charge control and optional battery/charger systems, it provides the convenience of backup and always on, on-demand small scale solar electrical power. Benefits and attributes of Global Solar PowerFLEX™ include:

- The solar cells are lightweight, flexible and durable, making them ideal for portable power.
- PowerFLEX™ uses CIGS, which is 1.5 to 2X greater in performance than comparable thin film flexible solar materials. CIGS has achieved the highest performance of any thin film solar cell technology in domestic and international laboratories.
- Global Solar employs roll-to-roll manufacturing, which is a proven industrial manufacturing process to reduce labor, materials, energy, handling and capital costs.
- Unlike other thin film solar cells, Global Solar's PowerFLEX™ does not exhibit instabilities that cause reduction of power output over time.

6. What is the material the solar panels are attached to?

- The material used to attach the solar panels is the same material Version Three.0 Finetex is made from, Finetex®. Finetex is an innovative material. It is both waterproof and breathable (like Gore-Tex, but not as costly).

7. Can the solar panels get wet?

- Yes, but they are not intended to be submerged in water.

8. Can I charge more than one device at a time?

- Only one device can be charged at a time.

9. What pocket do you use to hold the battery while charging?

- You can use any pocket that is connected to the Personal Area Network (P.A.N.) to hold the battery. The cord to the solar panels is 4 feet long and is capable of reaching any of the pockets. We recommend leaving the battery in one of the front hand warmer pockets. You can then connect the USB charging cables to the battery using the P.A.N.

STEP BY STEP SETUP INSTRUCTIONS



Step 1 – Solar Panel Installation

Loop the top flaps on the solar panel through the canvas straps on the shoulders of your SeV jacket.



Step 2 – Solar Panel Installation

Secure the flap with the strips on the solar panel to the same flaps located on the shoulders of your SeV jacket.



Step 3 – Solar Panel Installation

Affix the bottom of the solar panel to the strips in the middle of the jacket.



Step 4 – Wire Routing

Route the 4-foot solar charger wire into the zipper pocket located on the back of the jacket. Once on the inside of the jacket, the wire can be routed to any of the internal or external jacket pockets through openings that already exist in the jacket (Personal Area Network - P.A.N.).

*Note - If you purchased your solar panels separately, please refer to the instructions provided with your purchase to properly attach the strips mentioned above.



Step 5 – Attaching the Auxiliary Battery to the Solar Charger

Simply insert the solar charger male connector into the auxiliary battery female connector as shown in the picture to the right.



Step 6 – Attaching Your Hand Held Device to the Solar Module

Insert the separately purchased cable into the auxiliary box female USB port and connect to your hand held device. Examine your hand held device for charging indication.

SOLAR SeV INSTRUCTIONS COMPLETE! - SYSTEM OPERATION

Once connected, the solar charger will continuously charge the auxiliary batteries. While charging, the red 'charging' LED on the auxiliary battery will be illuminated. Once the auxiliary battery is fully charged, the charging light will extinguish and the green 'charged' light will illuminate. If there is insufficient light for the solar charger to operate, the red 'charging' light will remain off. The auxiliary battery will charge even if it is not connected to the solar charger (dependent on the auxiliary battery state of charge).