

## User Manual

### SōlStar™ T-12g (12-Watt) Folding Solar Charger for the Globalstar GSP-1600 Satellite Phone



#### Important Notice:

Please read this instruction manual in its entirety before using your SōlStar™ T-12g solar charger

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## Introduction

Congratulations on your purchase of the SölStar™ T-12g folding solar power charger for use with the Globalstar GSP-1600 satellite phone. The SölStar™ T-12g features the most advanced thin-film, solar cell technology available. The patented, copper-based materials used to make the T-12g solar cells provide some of the highest solar-electric efficiencies ever attained.

SölStar™ Energy is proud to be the market leader in providing mobile energy devices to discriminating customers who require the most advanced, lightweight, portable power wherever their work or adventures take them, anywhere on the planet! SölStar™ Energy hopes you enjoy using your SölStar™ T-12g solar charger as much as we enjoy making this Earth-friendly product available to you.



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## Parts List



GSP-1600 Satellite Phone  
(phone is purchased separately and  
is not included with charger)



Globalstar Cigarette Lighter Adapter (CLA)  
(CLA is purchased separately and is not  
included with charger)



Female Adapter  
(supplied with the SölStar™ T-12 charger)



SölStar™ T-12 Charger

## How to Connect SölStar™ T-12g Solar Charger to GSP-1600

Step 1: Connect GSP-1600 satellite phone to Globalstar cigarette lighter adapter (CLA).



Step 2: Connect Globalstar CLA to female adapter.



Close-up view

Step 3: Connect female adapter to SölStar™ T-12g charger.





GSP-1600 connected to SölStar™ T-12 charger

Step 4: Orient SölStar™ T-12g solar charger directly towards sun for optimal charging.

## Special Instructions for Globalstar GSP-1600

As with all solar charging systems using a 12-volt (cigarette lighter) adapter:

- **Charger works best in cloudless conditions and full sun.** Make sure that charger fully faces the sun.
  - It takes approximately 3 hours to fully charge the GSP-1600 in full sun (4 bars on the battery icon).



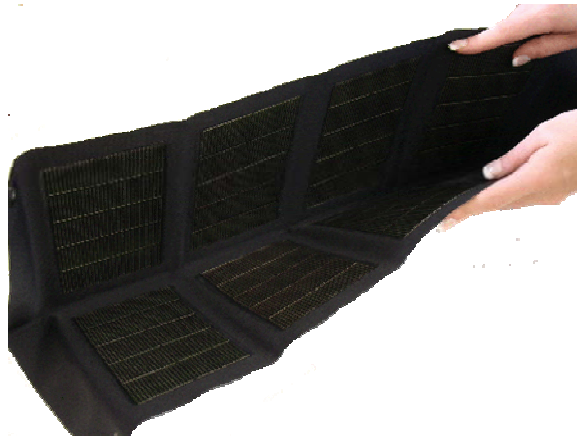
GSP-1600 display showing 4 bars on the battery icon and “Charging is Complete” message.

- It is best to monitor charging status from time to time (in case of clouds, low light conditions, or shade). Otherwise, phone may display the “Charging is Complete” message prematurely. If the “Charging is Complete” message is displayed prematurely, the phone should be **reset**.\*
- It is best to let the phone charge for 5 minutes before attempting to place a call.
- In case the operator disconnects the phone from the charger in full sun and message display remains blank after reconnecting, follow reset instructions\*.

\* **RESET INSTRUCTIONS:** Disconnect, then reconnect cigarette lighter adapter from **base** of phone. Wait for full sun.

## Folding Instructions for the SolStar™ T-12g Solar Charger

Step 1. Fold the charger down the centerline, active solar cells to the inside.



Step 2. Orient so the solar panel cord out of the junction box is on the “up” side.



3. Starting at the end away from the cable, fold the charger along its hinge-folds.





4. When both the hook and loop sides of the Velcro are lined up, press them together to secure the folded unit.



Note: When correctly folded and secured, the solar panel cord out of the junction box will have been folded inside the charger.



## Helpful Tips

- Unfold and place so solar cells are facing up with orientation to sun.



- With the grommets on each of the corners, use tie cords or stakes to hold the SōlStar™ panel in place. This is important to reduce loss or damage from high winds.



- Ensure the solar panel cord out of the junction box is well-connected to the female adapter.



- To store the product, simply disconnect the cords and fold with the solar cells facing in. Use the attached strip to hold the folded panel in place.



- The overall performance of the SōlStar™ T-12g solar charger is dependent on a variety of conditions, including season, orientation with direct sunlight, cloudy conditions, temperature, and shadowing. As a result, providing “typical” performance parameters is dependent of the placement of the SōlStar™ T-12g charger.

**NOTE:** When in use, the SölStar™ T-12g solar charger will adjust its voltage and charge the electronic device at its intended rate. Measuring current and voltage while charging may not give an accurate reading of the solar charger's performance. The SölStar™ T-12g solar charger will not work with indoor lighting.



## Incorrect Deployment of the SölStar™ T-12g Charger

Examples of **incorrect** deployment of the SölStar™ T-12g charger include:



SölStar™ T-12g charger facing down  
(away from direct sunlight)



SölStar™ T-12g charger folded or closed



SölStar™ T-12g charger in full shade



SölStar™ T-12g charger in partial shade

## Important Care Instructions for the SolStar™ T-12 Solar Charger

- Although the SolStar™ T-12 charger is flexible, ONLY FOLD the natural creases in the all-cloth portions of the charger.
- DO NOT FOLD with the solar cells facing outward.
- DO NOT FOLD or crease the solar charger on sharp edges or objects.
- DO NOT CRUMPLE OR IMPROPERLY BEND SOLAR CELLS.
- DO NOT excessively flex or bend the charger, as this could cause the plastic layers to crease or bubble.
- DO NOT machine wash, machine dry, or dry clean the charger.
- DO NOT reverse the polarity of the connections.
- The SolStar™ T-12 charger is not designed for continuous outdoor use.



## Frequently Asked Questions

### How do I know that my SölStar™ T-12 charger is charging the GSP-1600 satellite phone?

Confirm that the charge bars are “rolling” inside the battery icon on the GSP-1600 display panel.



View of GSP-1600 display showing “rolling” charge bars inside the battery icon during charging.

### What happens if the SölStar™ T-12 charger gets wet?

The SölStar™ T-12 charger is made from water-resistant material. Wipe the product with a clean, dry cloth and allow the product to dry before folding for storage. DO NOT keep the product in or under water.

### Can I leave the SölStar™ T-12 charger outside for continual use?

SölStar™ T-12 chargers were not designed for continuous outdoor usage. Once your GSP-1600 satellite phone is finished charging, wipe the product with a clean, dry cloth and allow the product to dry before folding for storage.

## SölStar™ T-12g Solar Charger Product Specifications

<b>Dimensions and Weight</b>	
<b>Folded</b>	
Length, in (mm)	9 (229)
Width, in (mm)	5 (127)
Thickness, in (mm)	.7 (17.78)
<b>Deployed</b>	
Length, in (mm)	29.5 (749.3)
Width, in (mm)	18 (457)
Thickness, in (mm)	0.03 (.762)
<b>Weight</b>	
Weight, lb (kg)	.9 (.4)
Max power to weight ratio watt/lb (watt/kg)	13.3 (30)
<b>Electrical Characteristics*</b>	
Product Number	T-12
Typical Current (milliamps) at STC* (at 11V)	800
Nominal Operating Voltage	12V CLA**
Typical Power (Watts) at STC*	11
Maximum Limit for Open Circuit Voltage	15.6V
Maximum Power (Watts)	12
<b>Thermal Characteristics</b>	
Power (% / C)	-0.6
Voltage (% / C)	-0.6
Cell Temperature Operating Range	-40°F to 176°F / -40°C to 80°C

STC: Irradiance level 1,000W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature 25°C

\* Data at Standard Test Conditions (STC)

\*\* Cigarette Lighter Adapters (CLAs) typically operate best between 11V and 14.5V



## Limited Warranty

This SōlStar™ T-12g folding solar power panel carries a one- (1-) year limited warranty against defects in workmanship and materials affecting performance. SōlStar™ Energy agrees to replace the defective product free of charge, within the stated warranty period, when returned by the original purchaser with proof of purchase. This product is not guaranteed against wear or breakage due to misuse and/or abuse. In addition, any units that show signs of creasing or folding on the active photovoltaic areas are not covered under this warranty.

# SōlStar™

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