



# SUNTACTICS

## *Solar Chargers*



sCharger-5 1000mA



sCharger-8 1700mA



sCharger-14 2800mA

***The most powerful USB solar chargers in their class***

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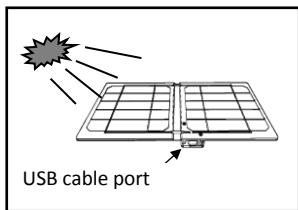
## Introduction

As you will soon find out, sChargers are very unique high powered solar chargers. They are capable of charging USB rechargeable devices directly from the sun. They do not need internal batteries that can become discharged. They will actually run a cell phone directly from the sun while you are using it. They utilize fairly complex circuitry that makes them very simple to use. With proper use and care, your sCharger will provide many years of service.

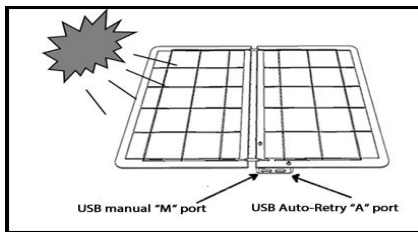
Most smart phones come with their own USB connector cable so that they can communicate with personal computers. This is the same cable that can be used to charge device with your sCharger. All USB devices (phones, tablets etc.) include a cable that has a mini or micro USB connector on one end and a larger USB connector on the other end. If you don't have a cable, you should be able to find your USB cable on the internet or at any local electronics store.

## Getting Started

Simply unfold the sCharger and place it in the sun with solar cells facing up. The solar cells are the black squares with tiny lines on them. The little box on the back has a female USB connector and an LED indicator. The indicator should light up when the solar panel sees light. It will light up even in the slightest sunlight. **In order to get maximum power, the panel should be in full sunlight.** Simply plug your USB device into the USB socket on the back of the sCharger using your device's existing charge cable. Also note, as the sun moves, the solar panel could eventually get blocked by an obstruction like a tree or a building etc. Try and strategically place it where there will be no obstructions. If you are having problems, please see the troubleshooting section.



sCharger 5



sCharger 8 and 14

## iPhone Charging

All iPhone models are fully supported. You will most likely be surprised how quickly your iPhone will charge with the sChargers. Most of the time it is not even necessary to aim the panel at the sun. You can lay it on any flat surface and it should work fine.

Instructions:

- Place the sCharger in full sunlight when being plugged into the iPhone
- Do not try to charge in shade or behind glass(sCharger-5)

- On hot days, keep your iPhone as cool as possible by wrapping in a towel. A USB extension cable may also be used to get phone into the shade
- Look for the lightning icon battery indicator
- Try to be patient and let the sCharger do its job

See a video at [www.suntactics.com/videos](http://www.suntactics.com/videos)

## iPad, Samsung, Other Tablet Devices and High Power Readers

The sCharger-5 is at its best with smaller USB devices, but it is capable of charging tablets as well just a little slower. The latest iPads can take longer because their larger battery sizes. For absolute best results, charge on a clear cool day when the sun is high in the sky. Like any solar panel, output power lowers as temperature rises. So charge times may vary. The sCharger 8/14 provides faster charging rates for tablets.

Instructions:

- Aim the sCharger in the sun's general direction.
- Lower your screen brightness to 1/3 and turn auto brightness off (sCharger-5)
- Press top button to put iPad into sleep mode (sCharger-5)
- Set background image to a dark image (**most important tip**)
- Keep the tablet in shade on hot days
- Use after market, heavy gauge, charger cable for best results

See the many videos at [www.suntactics.com/videos](http://www.suntactics.com/videos)

## Samsung Smartphone and Android OS Phone Charging

Samsung galaxy phones and most all Android OS phones charge extremely well with the sCharger. Simply place the sCharger in the sun, plug your charging cable into it, then plug the other end of the cable into your phone. The sChargers also support the latest quick charge feature on the latest smartphones.

## Charging other devices

If you can get your USB device to charge from a PC USB port then it should solar charge from the sCharger. The sChargers can also charge USB backup batteries. USB batteries can be found online or any electronics store. These battery packs are inexpensive and many are less sensitive to heat than your phone. Plug the battery pack into the sCharger using a USB cable and leave it in the sun to charge. When charging is complete, you can either use it to charge your device right away or store it for later use. Some of these batteries are specialized for certain brands of phones or PDAs, some are general purpose. The sChargers can also charge GoPro Cameras, Nikon and Canon batteries (use a USB battery cradle), 18650, AAA/AA, USB batteries that can be found from many retailers.

## Auto-Retry

The Auto-Retry port is one of the reasons the sChargers work so well. The Auto-Retry will activate within 5 minutes after first being placed in the sun. Once activated there are a few good things that start happening to further optimize charging. If a shadow appears like a slow cloud or even a person walking in front of the panel, some USB devices will give up charging and show a warning message. They will often not restart when the sun is again available. Charging from the Auto-Retry port takes care of interruptions by doing a charger reset automatically. As long as the sCharger sees sun, the USB device will continue to charge. Any messages that may have been displayed on the device will eventually disappear when the Auto-Retry kicks in. Also, if the sun becomes brighter because cloud haze disappears, the Auto-Retry will cause some more sophisticated USB devices to kick into a bulk charging state. Some devices may make a signal sound when in auto mode, this is normal and is a nice indicator that your phone is still charging and not to forget about it.

[www.suntactics.com/Auto-Retry](http://www.suntactics.com/Auto-Retry)

## The Manual Port (S8 and S14 solar chargers)

The manual port is a solid source of power. It will not do a retry if the sun is interrupted. So, when using the manual port and you suspect intermittent shadows, your phone may stop charging and not restart. The manual port, however, can be useful for non-display devices such as USB batteries and other devices that do not have screens. We found that offering the two options, both manual and auto-retry provides much flexibility with different portable USB devices. Once you start experimenting, you will most likely be very happy with this flexibility.

## Mounting to a Backpack

We have had many customers ask us if they can mount their sCharger to a back-pack or even a bike. While possible, we really can't guarantee success. Why not? Well, what do you get when you are walking on a typical trail? Lots of trees! Solar panel outputs can drop as much as 90% power in the shade. What does this do to your solar charging session? Not much good. Most smartphones need a required level of energy for their internals to start charging. When the solar panel is not providing enough power, the phone can get confused, cause the screen to come on and actually drain the battery in some cases.

We highly recommend "opportunity charging" verses backpack mounting. Solar charge when you take a rest, for lunch, at breakfast or even dinner. The sChargers are very powerful when sun shines on them and you will be quite surprised how quickly your smart device will top off in such a short amount of time.

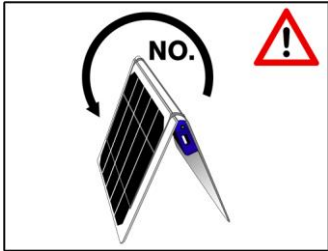
**"I Don't Care, I still want to mount it to my backpack!"**

So you want the challenge and to show off your sCharger? If you will be in the direct sun at least 80% of the

time, then great, your smart device will probably stay at 100%. If you want more challenge and think you can still be successful walking under trees, then we recommend purchasing a USB storage battery. USB batteries are less finicky and can charge at a lower power level. However, do not expect the USB battery to be fully charged if you are mostly in shade conditions, it will still take time.

## Cleaning and Caring for your sCharger

Suntactics sChargers are very rugged and can handle a lot of abuse. We just ask to take care and not fold the panel backwards. Fold with the panel in the direction where the solar cells meet.



Try and keep your sCharger clean. If you find dust on the panels, you can simply wipe them off using a soft cloth with a non abrasive spray cleaner or just clean water.

## Water Resistance

All three sChargers are water resistant. If it falls in water, take it out of the water and gently shake the water out of the USB box with USB port hole facing down. If condensation collects in the USB box, you can also blow out the water then let it dry completely by leaning the sCharger so that the USB port is facing up. You could also use a hair dryer too but do not heat the box up too much. It could melt at 170 degrees or so.

## Troubleshooting

Note that some of the troubleshooting items are not sCharger specific problems. Some of these problems can happen regardless of what charger you are using.

**Solar chargers in general will not charge at full capacity through glass especially UV filtered glass. Glass blocks a large portion of the sun's rays, so charging through glass (such as on the dash of a car or energy efficiency windows) may not work as well. However the S8 and S14 may work behind glass in good conditions.**

Keep the device cool (in the shade) if possible. Heat may cause some devices to shut down or stop charging. Your device will not be harmed by overheating, just cool it down and start over again.

Trouble	Possible Cause	Solution
Device starts charging then stops	USB Device is overheating	Move device to be charged to a cooler place (in the shade)
Device won't charge at all	Charging through glass. Solar panel upside down	Move the solar panels into direct sunlight with solar cells facing up. Observe indication LED.
Incompatibility message or other charge error message	Panel has been shaded or was connected while in the shade then moved into the sun	While in full sunlight, plug the phone into the sCharger or just leave alone and sCharger will commence within 5 minutes and message will go away.
iPhone battery completely dead and will not reboot while solar charging.	Dead phone battery	It may take a while for the iPhone to come back on when solar charging. Eventually it should reboot and come alive.
iPhone, iPad charge indicator showing "plug" icon instead of lightning bolt icon	iPhone, iPad is over heating	Cool down then retry.
Phone seems to discharge	Low light conditions and solar charger continues cycling which causes phone screen to turn on thus drains power	The sCharger MUST be in sunshine to work properly. If you suspect constant low light conditions, turn your brightness down or turn phone (some models)completely off to help minimize discharge when solar charger cycles. Or unplug solar charger and try when sun is out.
Samsung or Android phone won't not charge or charges slowly.	Not enough solar energy, overheating with sun exposure or higher power required	Make sure the sCharger is in direct sun and phone is cool. Try turning screen brightness down or turn phone off completely.

## Troubleshooting incompatible or error messages

If the phone or tablet displays an incompatibility or error message, it basically translates to it needing more power. These messages will not, in any way, harm your iPhone. It is an indication the sCharger is not outputting the full energy needed to activate the iDevices's internal charger. Make sure the sCharger is in the sun. After you plug your device into the sCharger and you see the charge icon activate then you are charging. If not, then unplug the phone and plug it back in while the sCharger is in the sun then let the sCharger do its job. For battery status verification, take a note of the percentage charged (\*see note below) then come back in ten minutes and verify how much it increased.

*\*Go to Settings->General->Usage then turn Battery Percentage "ON". If this option is unavailable, then your iPhone needs an IOS update.*

## Charge Times Rates

Device	S5	S8	S14
iPad 1,2, Air and Mini	5-8 hours	3-5 hours	3-4 hours
iPad 3 and higher	11-15 hours	8-9 hours	6-8 hours
iPad Mini	4-6 hours	3-6 hours	3-4 hours
iPhone	1.5-3 hours	*1.5-2 hours	*1.5-2 hours
Samsung, Android OS phones	3-4 hours	*2-3 hours	*2-3 hours
Gopro camera	1.5-3 hours	*1.5-3 hours	*1.5-3 hours
Other USB camera	1.5-3 hours	*1.5-3 hours	*1.5-3 hours
USB battery 1500-2500mA	1.5-3 hours	*1.5-3 hours	
SLR Camera batteries with adaptor Available on Amazon or Ebay	*1-2 hours		
USB battery 5000mA	2.5-5 hours	*2.5-5 hours	*2-5 hours
AA/AAA Cells 2500=3000mA	2-5 hours	*2.5-5 hours	*2.5-5 hours
18650 and similar batteries	Refer to charge time formula		
* Can charge two devices simultaneously at the time rate specified			
Charge time formula = battery capacity/sCharger current (ex: 5000mAh/1000mA = 5 hours)			

## True Specifications

Item	S5	S8	S14
Connector Type	USB Type "A"	USB Type "A" (two ports)	USB Type "A" (two ports)
Output Voltage (USB)	5.0 Volts		
Output Current (USB)	1.1A (1100mA)	1.7A (1700mA)	2.8A 2800mA
Output Power	5-6 watts	>8 Watts	14 Watts
Temperature	Optimum <110F Max 160F/ 71C		
Indicator	Bright LEDs		
Dimensions (open)	6-1/8" x 11.5" / 15.5 x 29.2 cm	7.75" x 14.5" (19.6cm 36cm)	11.5" x 14.5" (29cmx 36.5cm)
Dimensions (closed)	6-1/8" x 5-3/4" / 15.5 x 14.6 cm	7.75" x 7.25"(19.6cmx18.4cm)	11.75" x 7.25" (30cm x 18cm)
Weight	8-8.5 oz / 200-240 g	13oz (395 Grams)	20oz (635 Grams)
Weather and corrosion resistant	Water resistant tested to 40 feet. Salt and corrosion tested. IP7 rated.		

## Limited Warranty

### Warranty Period

The warranty period for SUNTACTICS portable solar chargers (whether purchased from the website or any authorized dealers such as; Amazon, Ebay or certified distribution channels listed on the dealers page) is five (5) years limited from the date of January 1st, 2014 (01/01/2014), all purchases before January 1st, 2014 are guaranteed only two (2) years of warranty from the date of purchase. A full 2 year warranty is guaranteed for any solar charger from the date of purchase (proof of purchase required), however to receive a 5 year warranty the consumer must fill out the warranty registration form within 30-days from the date of purchase, after 30-days registration for a 5-year warranty becomes invalid and will only be guaranteed two (2) years of warranty from the date of purchase.

### Limited 5-Year Warranty

The 5 year warranty is limited. Coverage of replacement is 75% of the original cost at 3 years, 50% of the original cost at 4 years and 25% of the original cost at 5 years. For example if you spent \$100 for a solar charger and you are within the 2-3 year timeframe, Suntactics will cover 75% of the original purchase price(or \$75), 3-4 year 50% and 4-5 year 25%.

### Exclusions

SUNTACTICS' warranties do not apply to a product that is abused, misused, modified, physically damaged, or used for anything other than normal use as noted in a SUNTACTICS product manual.

### Warranty Limited to Original Purchaser

The warranty on SUNTACTICS' products is limited to the original buyer/consumer/purchaser and is non-transferable. Original proof of purchase must be under the name of the consumer who requests a warranty replacement.

### How to Receive 5-Year Warranty

To obtain the 5-year warranty, the consumer must either (i) sign registration form card or register online: [www.suntactics.com/warranty-registration/](http://www.suntactics.com/warranty-registration/) (ii) call customer service: 888-308-4786, (iii) or email [info@suntactics.com](mailto:info@suntactics.com) within 30-days from the date of purchase to receive the 5-year warranty. Consumer must have original proof of purchase / order number from Amazon, Ebay, or Suntactics.com. The consumer will receive a PDF document via e-mail a 5-year warranty receipt that is proof of registry of a SUNTACTICS portable solar product.

### How to Claim a Warranty

To claim a standard warranty, the consumer must contact customer service via telephone: 888-308-4786, or via email at [info@suntactics.com](mailto:info@suntactics.com), for 5 year warranty applicants they will be asked for an order number, once approved they will be then asked to send to the following address:

Suntactics ATTN: EXCHANGE DEPT.  
1430 Koll Circle Ste. 107  
San Jose, CA, 95112

Note: Do not send unless you have called and requested, and approved by SUNTACTICS.

Note: We may ask for an additional fee for shipping and handling.

## Warranty Registration

### REGISTER FOR A 5-YEAR WARRANTY

All Suntactics products come with a default 2-year limited warranty (from date of purchase), but in order to secure an extended 5-year limited warranty, you must fill out this online form:

***go to: [suntactics.com/warranty-registration/](https://www.suntactics.com/warranty-registration/)***

Fill out all requested details, and if anything happens to your Suntactics solar product within 5-years from the date of purchase, send it back to us, and we will send you a brand new one. Make sure to read the Terms and Conditions carefully before requesting an exchange.

## Liability Statement

SUNTACTICS solar chargers have been designed to perform flawlessly. They are very safe, inert, and have been designed to perform much like a wall charger. SUNTACTICS is not liable for damages to the receiving charge device or Suntactics product incurred from mal use, reverse connections, damage incurred from using testing equipment, unauthorized modifications or damages incurred to the receiving charge device in the unlikely event the receiving charge device overheated from the sun. SUNTACTICS is not obligated to repay the consumer for the price of the Suntactics product, however, Suntactics will exchange the charger upon inspection and evaluation of the incident.

## Website and Videos

Informational videos: [www.suntactics.com/videos](https://www.suntactics.com/videos)  
Support, manual updates and FAQs: [www.suntactics.com/support](https://www.suntactics.com/support)



[www.suntactics.com](http://www.suntactics.com)

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