



SUNTACTICS

sCharger-14



14 Watt USB Solar Charger

The sCharger-14. The most powerful USB solar charger in its class.

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Introduction

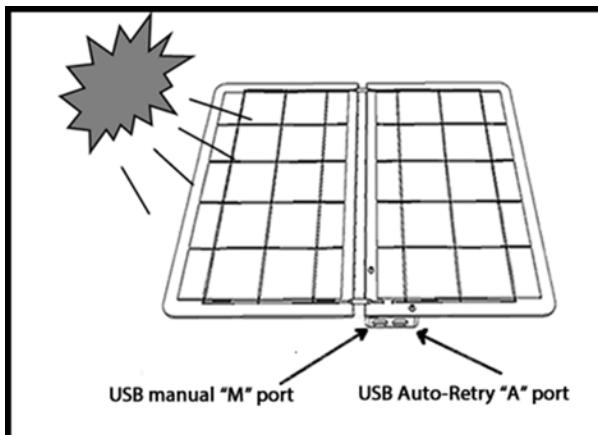
As you will soon find out, the *sCharger-14* is a very unique high powered solar charger. It is capable of charging USB tablets and other rechargeable devices directly from the sun. It does not use any internal batteries. It will run a USB tablet or smartphone directly from the sun. It utilizes fairly complex circuitry that makes it very simple to use. With proper use and care, the *sCharger-14* will provide many years of service.

Most USB devices now come with their own charge/sync cable. This is the same cable that can be used to charge your device with the *sCharger-14*. We have found that most of the new modern devices include a cable that have a mini or micro USB connector on one end and a standard USB sized connector on the other end. If you don't have a cable, you should most likely be able to find your USB cable on the internet or at a local store.

Getting Started

Simply unfold the *sCharger-14* and place it in the sun with solar cells facing up. The little box on the back has two female USB connectors with corresponding LED indicators. The indicators should light up when the solar panel sees light. The LEDs 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 one of the USB sockets on the back of the *sCharger-14* using your device's charge cable. Either port will charge your device but each port has a special function. If you are charging an iPad, start with using Port "A". Please read the **USB Ports** section for more info on port functionality

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.



iPad Charging

The sCharger-14 can charge all versions of iPad and iPad mini.

Instructions:

- Place the sCharger-14 in the sun
- *While avoiding shading to the panel, plug the iPad into the *sCharger-14* into port A
- Note the charge icon. If it is a lightning bolt, then it is charging
- Press top button to put iPad into sleep mode
- Not necessary but setting background image to a dark image will help speed charging
- Keep iPad in shade on hot days by wrapping in towel or equivalent
- Tip: A heavy gauge after-market charge cable will boost iPad charging speeds even when wall charging

*More explained about the ports in the USB ports section

iPhone and iPod Touch Charging

These devices are fully supported. You will most likely be surprised how quickly your iPhone will charge with the *sCharger-14*. The sCharger-14 is powerful enough to charge two smart phones at once at full wall charger rated speeds and sometimes even faster.

Instructions:

- Place the sCharger-14 where it can see the sun
- *While avoiding shading to the panel, plug the iPhone into the sCharger-14 into port A
- On hot days, keep iPhone as cool as possible by wrapping in a towel
- Look for the lightning icon battery indicator
- Try to be patient and let the *sCharger-14* do its job

*More explained about the ports in the USB ports section

Charging other Tablet Devices and High Power Readers

USB type tablets and color eReaders can also be charged from the *sCharger-14*. Most of the time you can follow the procedures in the iPad charging section. If your tablet device does not show the charge indicator or you have had issues charging with other aftermarket USB chargers and USB solar chargers, you will need a P1000 charge cable adaptor. Another option is to put the device in sleep or off mode and it should charge as well.

Android Phone Charging

An Android phone is considered a phone that is running the Android operating system. Samsung Galaxy phones are Android phones. Different Android

phones have different charging behaviors. In general, try and keep the phone as cool as possible. If the phone gets too hot, you may get a battery full indication or other warning. If you suspect full overcast conditions or you are charging the Android near dusk hours, then use the “M” port. Some Android phones can become confused if the sCharger-14 becomes fully shaded and will display a USB sync message. This is okay; just let the sCharger-14 keep charging. If plugged into the “A” USB port, this message will eventually go away. If you have other issues with charging, like slow charging times, this could be an indication of a faulty battery in the phone.

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-14*. What you will find is that some tablet devices will not charge from a PC USB but yet will charge from the sCharger-14. This is because the sCharger-14 supplies the required power to charge tablets.

The *sCharger-14* can also charge USB backup batteries. USB batteries can be found in many stores or online, on our website; suntactics.com. Many of these portable USB battery packs are inexpensive. Just simply plug the USB battery pack into the *sCharger-14* while in the sun. When charging is complete, you can either use the USB battery to charge your device right away or store it for later use at night or for emergency power outages. You can even run USB led lights from these batteries in emergency situations. The *sCharger-14* can also charge AAA/AA USB battery chargers available online and in some retail stores.

Mounting to a Backpack

We have many customers ask us if they can mount their sCharger to a backpack or a bike. While possible, we really can't guarantee success. Why? Well, what do you get when you're 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 giving out 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”. 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

(see our store). USB batteries are much 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

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

The *sCharger-14* is 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-14* 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.

USB Ports

The *sCharger-14* contains two USB charge ports. These ports can be used simultaneously. But the *sCharger-14* delivers more than enough energy to charge one tablet device at full speed. You can also plug a smart phone into it at the same time and get full speed charging. Either port will work to charge your USB device; however the Auto-Retry port has a unique feature that is especially useful when charging some devices, notably iDevices. As you learn more about how the *sCharger-14* works, you will build on strategies to get the most out of its abilities.

The Auto-Retry port

The Auto-Retry port is one of the reasons the *sCharger-14* works so well. The Auto-Retry will activate within 5 minutes after being placed in the sun. Once activated there are a few good things that start happening to further optimize charging. If a momentary shadow appears like a 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-14* 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.

The Manual Port

The manual port is a solid source of power. It will not do a retry if the sun is interrupted. If you suspect complete overcast or even raining conditions, using the Auto-Retry port could cause your phone screen to come on momentarily. On some devices, the screen's consumption will cause a power drain. Solar

panels are at their best in sunlight. If you expect full overcast to almost raining conditions, you may want to charge from the Manual port to at least get a trickle charge.

Specifications

Connector Type	USB Type "A"
Output Voltage (USB)	5.0V on two ports
Output Current (USB)	2.8A 2800mA
Output Power	14 Watts
Temperature	Optimum <110F Max 160F
Indicator	Bright LEDs
Dimensions (open)	11.5" x 14.5" (29cmx 36.5cm)
Dimensions (closed)	11.75" x 7.25" (30cm x 18cm)
Weight	1.4 lbs (635 Grams)
Weather and corrosion resistant	Salt and corrosion tested. Water resistant tested to 40 feet.

Approximate Charge Times

Device	Time
iPad1,2, mini	3-5 hours
iPad 3, 4	6-9 hours
10" tablets	3-7 hours
7-8" tablets and iPad mini	3-5 hours
eReaders B&W	*2-3 hours
eReaders Color	3-6 hours
iPhone All Models	*1.5-3 hours
Android, HTC, Samsung	*3-4 hours
USB battery 1500-2500mA	*1.5-3 hours
USB battery 5000mA	*2.5-5 hours
AA/AAA Cells	*1.5-2.5 hours
GoPro and other USB cameras	*1.5-3 hours
* Can charge two devices at once at this rate	

Troubleshooting

Note that some of the troubleshooting items are not *sCharger-14* specific problems. Some of these problems can happen regardless of what charger you are using.

The *sCharger-14* does 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 be as fast.

Keep the device to be charged cool (in the shade) if possible. Heat will shorten the life of your batteries and may cause some devices to shut down or stop charging because of overheating.

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). Use USB extension cable to bring into 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.
iPhone, iPad, incompatibility message or triangle warning	Panel has been shaded or was connected while in the shade then moved into the sun.	While in full sunlight, plug the iPhone into the <i>sCharger-14</i> or just leave alone and charging will commence within 5 minutes or so and message will go away. Use Auto-Retry port
iPhone, iPad, will not charge at all from AC charger or <i>sCharger-14</i> charger	unknown	Sync with iTunes or upgrade firmware.
iPhone, iPad, battery completely dead and will not reboot while solar charging.	This happens when you do not charge the phone.	Just give solar charging some time and your iDevice should eventually reboot. Could take up to ½ hour
iPhone, iPad, charge indicator showing "plug" icon instead of lightning bolt icon	Over heating	Cool down then retry.
My tablet or phone does not show charge indicator.	Cable converter may be required	Put the device in sleep or turn off and you should get a charge. You may also use a P1000 adaptor cable if you want to use while charging.
Some model phones seem to discharge.	Low light conditions and solar charger continued cycling causes phone screen to come on.	Use Manual "M" USB port

Troubleshooting iDevices and incompatible messages

If the iDevice (iPhone, iPad, etc) shows an incompatibility message, it basically translates to it needing more power. These messages will not, in any way, harm your iPhone. It means the sCharger-14 is not outputting the full energy needed to activate the iDevices' internal charger. Make sure the sCharger-14 is in the sun. After you plug your iDevice into the *sCharger-14* 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-14* is in the sun then let the sCharger-14 do its job. Use port "A" for Auto-Retry. 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.*

Website and Videos

Informational videos www.suntactics.com/videos

Support, user manual updates and FAQs www.suntactics.com/support

Limited Warranty

Warranty Period

The warranty period for SUNTACTICS portable solar chargers (whether purchased from the website or any authorized dealers such as; Amazon, E-Bay or certified distribution channels) is a period of five (5) years from the date of January 1st, 2014. All purchases after January 1st, 2014 are guaranteed only two (2) years of warranty from the date of purchase. Warranty period for batteries is a period of 6-months from the date of purchase. 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 (below) 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.

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 authorized by 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/ (ii) call customer service: 888-308-4786, (iii) or email 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 obtain warranty, the consumer must contact customer service via telephone: 888-308-4786, or via email at info@suntactics.com, for 5 year warranty applicants they will be asked for a warranty receipt number, consumers with the standard warranty will be asked for their name, phone number, serial number and if applicable will be given an RMA number, this number must be visible on the front of the package:

RMA:

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

There is a \$15 fee that the consumer will be asked to pay for, and this covers the shipping cost for sending out a new replacement, please allow 2-weeks for the unit to process and ship to its destination. (Note: filling out the registration form is not necessary for a 2 year warranty).

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www.suntactics.com

