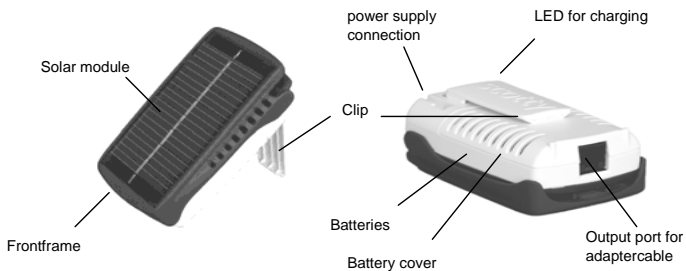


# Manual

## **scottyPro** the solar battery charger



### what is "scottyPro" ?

scottyPro beams the sun into the world of the electronic appliances: scottyPro can charge your batteries, mobile phones, PDAs, MP3 player etc. and to this he needs only the sunlight as an energy source. Mobile energy everywhere, independence pure and environmental friendly: with one scottyPro up to 100 AA Alkaline primary batteries can be saved every year!

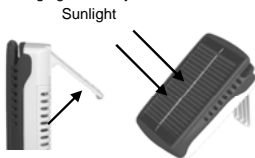
There are lots of accessories available, e. g. adapter cables, mains adapter, booster solar module etc. to enlarge the functionality of scottyPro.

### how does scottyPro work ?

Just fold up the solar module and place it directly to the sunlight without shadowing. The solar cells will now charge the internal batteries via the integrated charge electronics. The more direct and stronger the irradiation, the better for the charging efficiency.



flap the clip



...and place scottyPro in the sun

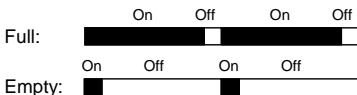


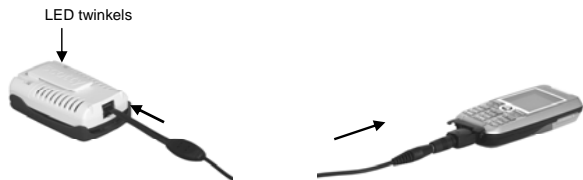
...or clip on a belt

After charging you can either take the batteries and insert them into your external equipment or you attach *scottyPro* directly to the device. For that purpose different adapter cables with different pluggable adapters can be used. The energy stored in the batteries can be transferred much faster into your device with the adapter cable as if the solar module was attached directly to the device. During the energy transfer to external devices *scottyPro* can of course be placed in the sunlight which even enlarges its efficiency.

However, you can alternatively operate or charge your external devices in direct solar operation mode with *scottyPro*. For that you only have to remove the internal batteries, connect the external device via adapter cable and place *scottyPro* into the sunlight as described before. Note: This operation mode only makes sense at full sunshine and does not work with some devices since the current is too low.

Status of frequency of the LED charging display:





The light-emitting diode integrated in the back shows the charge condition of the integrated batteries if an adapter cable is plugged in. The bigger the on/off ratio the more charge is stored in the batteries. If the batteries are flat the LED display goes off and scottyPro is switched off internally.

If - e. g. in winter – there is low sunlight irradiation you can charge the internal batteries via the optional mains adapter. For that purpose just connect the adapter to the input jack at the back of scottyPro and attach it to the mains socket overnight. By the way: it works worldwide at all power supply systems (100 to 240 volt voltage). If you attach your device to scottyPro with the mains adapter (in several countries you need an adapter which is not part of scottyPro) at the same time you have a universal power supply unit for all devices which can be operated with scottyPro. Therefore you only need 1 scottyPro + mains adapter instead of many different mains adapters!

The rear input jack is also used for connecting the optional booster solar module to *scottyPro*. It boosts the charging power by a factor 3 and thus reduces the charging time of the internal batteries by the same factor (compare table below).

And in emergency cases you even can insert normal Alkaline primary batteries in *scottyPro* and operate or charge external devices with their energy!



### Charging times

<b>Example Standard mobile phone</b>	<b>Solar charge scottyPro</b>	<b>Charging cell phone</b>	<b>Average operation time cell phone</b>
scottyPro with NiCd Batteries 800 mAh, 50% Charging, full sun	4 hours (1,2 hours with booster module)	45 minutes	60 h Standby 50 min talk time
scottyPro with NiMH Batteries 2.000 mAh, 50% Charging, full sun	10 hours (3 hours with booster module)	2 hours	150 h Standby 125 min talk time
scottyPro with Alkaline primary batteries	100% full <b>no solar charge possible</b>	3 hours	180 h Standby 160 min talk time

Comparison operation time of appliances after 1 hour solar charge

<b>Cell phone</b>	<b>PDA</b>	<b>Discman</b>	<b>GPS</b>
15 hours Standby 12 minutes talk time	1 - 3 hours	0,5 – 1,5 hours	0,5 – 1 hours

Charging scottyPro (100%) with universal mains adapter:

8 - 10 hours with NiCd batteries 600 – 1.000 mAh,

12 - 16 hours with NiMH batteries 1.200 – 2.200 mAh.

Charging at a cloudy sky: considerably longer charge times than at direct sun irradiation (ca. factor 5 – 50, dependant of weather), therefore only suitable for trickle charge of full batteries or for very slow charging.

Adapter cables, mains adapters and other scottyPro accessories are available in the Internet under [www.solarc.de](http://www.solarc.de) or ask your dealer.

#### **Important notes**

- Ambient temperatures of 0 – 25 °C are optimum for charging of the internal batteries. At higher temperatures over 40 °C, e. g. behind a car window in the summer sun, the batteries can be charged only at a small fraction and both solar module and batteries even might get damaged, so such situations should be avoided urgently!
- Do not insert any batteries with different capacity or charge condition in scottyPro. Charge the batteries frequently in a mains charger or use scottyPro with the mains adapter.
- Alkaline primary batteries may not be charged with scottyPro and shall be used only for emergency (1-time) energy supply of external devices. Charging in scottyPro with solar power or the mains adapter may damage the batteries and scottyPro.
- Use AAA (Micro) batteries with the optional AAA adapter.
- Only use the adapter cables and plugs for the devices indicated in the respective table. Note polarity and voltage of your external device input at usage of the universal adapter cable, otherwise your device or scottyPro might be damaged.
- scottyPro can produce up to 13 volts at the adapter cable. Caution with small children and tongue tests therefore!

- scottyPro must remain dry if water has penetrated into the inside of the device. In this case remove batteries immediately and let scottyPro dry.
- scottyPro doesn't like aggressive cleaning agents, don't spare on his solar module at all - just wipe off only with a soft, dry rag or with warm water.
- Do not short-circuit any contacts at scottyPro and note the correct polarity while inserting the batteries in scottyPro.

#### Technical data

Output voltage	2.5 – 13.0 V
Output current	max. 2 amps at 2.4 – 3.0 V and 250 mA at 4 – 6 V
Solar module power	0,55 watts at full sun, 25 °C module temperature
Life time standard batteries	100 – 1.000 cycles or 1 – 6 years depending on temperature
Utilizable batteries/battery systems	NiCd, NiMH, RAM, sizes AA, AAA
Recommend ambient temperature	Charging internal accu's: 0 ... +40 °C, Charging external devices: -20 ... +50 °C (temperature measured in the shade)
Max. relative humidity	90 %
Dimensions (L x B x H)	100 x 68 x 38 mm
Weight without batteries	approx. 110g

Used materials

Case of PC/ABS, Santoprene

Disposal

Case and batteries recyclable, electronics and solar module into appropriate electronic scrap

Examining signs

CE, RoHS compliant

#### Possible problems and remedy

Problem	Test	Result
scottyPro doesn't get charged	Remove batteries, attach adapter cable, hold scottyPro under electric light bulb or in sunlight	LED must illuminate
scottyPro gets charged too slowly	Insert empty, well working batteries, charge for 1 hour at full sun or putting under electric light bulb in approx. 15 cm distance for 3 hours	LED must flash after plugging in an adapter cable, external device must be charged for ca. 5 – 10 min.
scottyPro doesn't charge an external equipment	Charging with spare cable and charged batteries at your dealer	The external device must indicate charging process

<sup>1)</sup> Indication for the brightness topic: The light intensity which is converted in to electric power in solar cells behaves considerably different from the "brightness" felt by the human eye, e. g.:

- Sunlight at noon, outside ⇒ scottyPro: 100% charging current / eye: very bright
- Light clouds, behind window ⇒ scottyPro: approx. 20% charging current / eye: bright
- Luminescent light indoor ⇒ scottyPro: approx. 0,5% charging current (no effective charge!) / eye: bright

Please send your scottyPro together with the adapter cable, adapters and batteries to your dealer or directly to SOLARC if it doesn't work after the described tests as indicated.

### Battery- / battery disposal

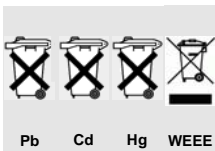
Batteries don't belong into the domestic garbage. As consumers you are legally obliged to return used batteries. You can return used batteries at the public gathering points of your municipality or everywhere there where the respective batteries are sold.

You find these signs on batteries containing pollutant:

**Pb** = battery contains lead

**Cd** = battery contains cadmium

**Hg** = battery contains mercury



## Warrenty

Warranty: 2 years as of purchase date

The Warranty applies to material and production faults. It isn't valid and we are only liable in the context of the legal regulations of German law when unscrewing the device or other interventions by persons not authorized by us, at an improper treatment, at use of other batteries than these of us recommended, as well as these arise from improper operation of scottyPro or the accessories enclosed by us for damages. This also includes improper operation of scottyPro with external devices or an operation with external devices who are not listed in the device table.

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