

## Short Manual Wing6 / Wing12

1. Remove the charging cable from the Bag (eBag) and plug in the adapter for Apple or USB-C devices if necessary.
2. Open the solar module, overstretch it slightly backwards and align it optimally to the sun. If needed, fold out eBag from bottom side and support the solar module.
3. Plug the USB charging cable into the terminal device. Slide the device into the eBag if you like.

To transport the solar module, simply fold it up and secure it with the push button.

## Operating Manual Solar Chargers Wing6 / Wing12

Wing6 and Wing12 are foldable solar direct chargers for charging USB devices. This means that the generated solar power flows directly into the USB device without storage, unless you connect a Powerbank or a PowerBooster to the solar charger. At full sun they generate a charging current of 1000mA (Wing12: 2000mA) @ 5V at the USB port. This corresponds to the charging current of typical mains adapters for smart phones or tablets, so the charging times are comparable.

The chargers feature the patented "eBag", a detachable textile bag with integrated electronics and charging cable for storing Powerbank or Smartphone.

### Safety Notes/Liability:

- Hard or sharp objects can damage the solar cells, as well as strong bending of the individual modules. Do not compress the module bending areas when folded.
- Avoid operating the device with liquid that has penetrated into the bag. In this case, drain the liquid immediately and allow the unit to dry.
- The warranty expires in case of improper handling of the device or non-compliance with these instructions. No liability is assumed for damages resulting from this.

### Equipment and Scope of Delivery:

The solar chargers Wing6 and Wing12 are supplied in the basic configuration with the following scope:

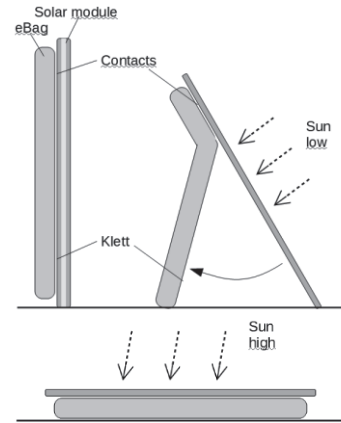
- Solar module with attached eBag
- 2 adapters (USB-C and Apple)
- Operating manual

### Starting up and Application

The Wing6 and Wing12 solar chargers do not contain a battery and are immediately ready for operation after unpacking. Basically, all devices that can be charged via the USB-A interface are usable. Smartphones and other USB devices can be charged directly with the solar generated charging currents. Overcharging is usually prevented by the end devices themselves, otherwise the respective operating instructions must be observed.

For charging, the solar module is opened and optimally aligned with the light source. To

prevent the wings from closing, the device should be slightly overstretched to the rear when it is opened. The rubber strap on the Wing6 prevents it from closing. If required, the eBag can now be detached from the bottom of the solar module and used as a support for tilting and optimally aligning the module with the sun. Otherwise you can simply lay the solar charger flat, e.g. when the sun is vertical.



Then the terminal device is connected to the solar charger via the USB charging cable provided.

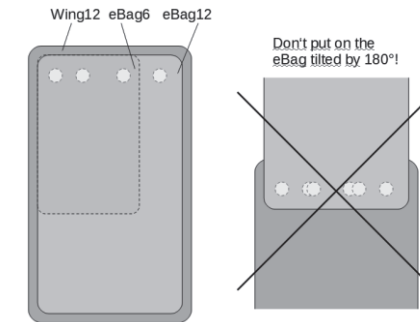
If possible, charging should take place outside in full sunlight in order to achieve efficient charging. Some devices like the iPhone only accept currents above a minimum value of e.g. 400mA, which is slightly less than half the maximum value of the Wing6.

**Attention:** If this value is not reached in case of insufficient sunlight, the respective terminal devices, e.g. iPhone, switch off the charge permanently. When irradiation is sufficient again, the charging cable must be disconnected and reconnected so that charging can start again. This is remedied by the patented **PowerBooster** cable from the **Sonnenrepublik**, which always converts any charging currents into a stable, high output current.

The four eyelets attached to the outside can be used to attach it to the backpack, tent, etc. Splash water, e.g. during boat trips or light rain, is no problem unless it penetrates the USB plug on the terminal device. However, if a terminal device or a power bank is connected in a tightly closed eBag, this will be hardly possible.

## The Modular eBag Principle

The Wing6 and Wing12 solar chargers are equipped with the innovative removable "eBag", which is electrically contacted and mechanically secured to the solar module. The eBag included in the basic equipment contains not only the USB charging electronics but also the charging cable with MicroUSB plug and 2 additional adapters for the most common end devices. Further eBag modules will be available in the future, which will differ from the basic module either in design or in functionality. For example with wireless charging, integrated energy storage or charging box for NiMH batteries. By the way, the eBag of the Wing6 fits on the Wing12 solar module and vice versa (see scheme below).



Typical charging times at full sun are shown in the table below.

Device	Charging current max.	Charging time typ. Wing6 / Wing12
Cell phone Dig. Camera	500mA	1.5-2h @ 600-900mAh battery
Smart-phone	1000 - 2000mA	3-4h / 1.5-2h @ 1500-2500mAh battery
Tablet	1000 - 2000mA	4-5h / 2-3h @ 3000 - 4000mAh battery
Powerbank 5000mAh	1000mA	5h / 3h

## Storage and Maintenance

The Wing6 / Wing12 solar chargers should not be stored for long periods in humid or hot (above 45°C) locations. Since no battery is included, the devices have an almost unlimited shelf life with good care. The housing and module surface can be cleaned with a soft cloth and mild cleaning agents.

## Technical Data Wing6 / Wing12:

Rated power solar panel: 6.2Wp / 12.4Wp  
 USB output current / voltage at USB port:  
 1000mA / 2000mA @ 5V / open circuit 5.1V  
 Amb. temperature: -20 ... +45°C  
 Maximum relative humidity: 90%  
 Measures (folded):  
 100 x 155 x 20mm / 115 x 155 x 20mm  
 Weight: 140g / 280g  
 Compliance / Prot. Class: CE, RoHS, IP54



## Disposal of Waste:

Electronic devices, primary and secondary batteries must not be treated as household waste. You can return used products optionally at municipal collection, trading spots or directly at our address (see below) - everywhere free of charge. Please pay attention to EU regulation 2002/96/EC.



Disposal of all packaging material should be done according to environmental standards.



## Guarantee:

We provide a warranty of 24 months from the delivery date. It is limited to all faults of production and material except the ones mentioned below. There is no right of complaint if there is only a neglectable deviation from the agreed quality, a minor restriction of usefulness or natural deterioration. Damage due to wrong or incompetent treatment, extreme usage or damage based on unusual external effects that have not been considered in the agreement also lead to no right of complaint. In case you or a third person might do improper repair work or modifications, there is also no right of complaint concerning the consequences of these modifications. The modification or removal of the device's components is also considered as inadequate usage. Please contact us in case of a complaint before returning an item.

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