

Please read these instructions before using your new **SWISSBATTERIES** - The accu-batteries will thank you for that by highest performance and longest lifetime.



1. Charging

For charging **SWISSBATTERIES** use only intelligent chargers. You see this when the charger controls each charging tray / each battery separately. According to extensive tests by the Institute for Electronics at the Swiss Federal Institute of Technology (ETH)

Zurich (Dr. Zinniker) only a few chargers are suitable to charge high performance accu-batteries properly. Therefore we recommend our SwissCharger (Test winner / only charger with rating "VERY GOOD").



2. Utilization

- Always use **SWISSBATTERIES** of the same capacity, fully charged together and of the same age.
- The best is when you mark the sets that are used together with a waterproof felt tip marker (Numbers / Letters / etc.).
- Do not mix unequal sets. Unequal capacities, sets, charging levels cause uncontrolled equalizing current and this will lead to great loss of capacity / total loss.
- Never use together with disposable batteries or third-party products.
- Absolutely avoid complete discharge. Take the batteries out of the appliance if the battery alarm is on and recharge as soon as possible. Take away from pocket lights as soon as the lighting power decreases. **A complete discharge can lead to irreversible damage (Loss of capacity / Total loss).**
- **New:** From the **accubattery** generation the batteries are self-regenerating even after a complete discharge.
- **SWISSBATTERIES** reach their maximum performance after the fourth full charge. This performance will be preserved if after every fifth charge the Refresh / Discharge key is pressed (if the charger is equipped with this feature).
- Only press the Refresh key with already empty batteries.



3. Storage

When not in use NiMH batteries have to be fully charged and then stored in a cool place (for example refrigerator – not freezer!)

New: From the **accubattery** generation even at room temperature practically no self-discharge takes place.



4. Accu Capacity / Lifetime / Charging cycles

(Too) many rechargeable batteries could live much longer, if not one ore more of the grave using failures would be made (See Par.2). Therefore it is worthwhile to use the easy rules for the treatment of accu-batteries. Many failures are also happening when children use rechargeable batteries, because they treat them like disposable batteries.

The most important: DON'T FULLY DISCHARGE – DON'T MIX!

With disposable batteries one is used to „drain them empty“ until nothing goes anymore. When you act the same with (most) rechargeable batteries, these are irreversibly damaged or even totally defective. Only newer appliances digital cameras or mobile phone have an integrated protective switch-off system – other products like pocket lights, CD-Players etc. have not. Therefore it takes the human decision to re-charge the rechargeable batteries early enough.

SWISSBATTERIES are not damaged because they are recharged too often, but only when they are discharged too strongly.

Therefore -. For example with the pocket light already change the rechargeable batteries as soon as the lighting power dims. Recharge the empty batteries regularly as soon as possible – don't leave empty rechargeable batteries lying around for a longer period.

The lifetime and number of charging cycles with rechargeable batteries is not unlimited, unfortunately. In the batteries a chemical reaction takes place, which will wear with the time:

Link wikipedia: <http://de.wikipedia.org/wiki/Nickel-Metallhydrid-Akku>

The nominal number of charging cycles (up to 1000) according to KIS Standard is achieved under ideal circumstances like for example 20° Centigrade, applied load / 1/5 of the rated current etc. Stress factors like high discharge current, high temperatures, too fast charging, wrong storage as well as chemical aging will shorten the lifetime.

At a realistic rechargeable battery capacity limit of 75% this will give 150-200 charging cycles during 1-3 years in practice, depending of the appliance (it is useless if you can recharge the battery 5000 times when it has only 5% capacity in the end). Each rechargeable battery **SWISSBATTERIES** is quality checked according to the highest standards before delivery.



5. Accu-battery marking

From the "**accubattery**" generation check boxes have been placed. You should mark the "accu-battery families" which belong together accordingly) for example field A for the digital camera, field C for CD-Players etc.). This way the accu-battery groups have the same age and the same wear and later you will know exactly which group has to be replaced eventually.



6. Disposal

SWISSBATTERIES can be recycled without any problem. Therefore don't throw them in the garbage, but return them to a battery collecting point. In the buying price an advanced recycling charge is included. You have the right to give off **SWISSBATTERIES** to any battery sales point free of charge.

Link Battery disposal in Switzerland (German): <http://www.inobat.ch/>