

## NiCd Battery-Care

Thank you for purchasing an LRP HiVolt-Plus battery pack. Please read this instructions carefully to make sure the product works to your full satisfaction.

Charging: NiCd batteries (Nickel Cadmium) are relatively uncritical in handling. But make sure that you are not overcharging them, which may cause them to vent! We recommend a charging current of 3.5 - 5.5 Amps and chargers that are suited for the new generation of NiCd's such as our Charger family of Quadra, Jet, Micro and Quick & Easy-Charger. In case you should use a different charger it is recommended to adjust the delta-peak on 100-200mV (=0.1 - 0.2V) on a 6-cell pack. Charge up to a cell temperature of 45°C when you're using a temperature cut-off charger.

Application: You can use your NiCd-batteries maximum two times a day, but they require around 4 hours minimum between cycles to fully cool down internally.

Discharging: NiCd-Batteries do have a memory effect and should be properly discharged after every application. We recommend using the LRP NiMH-discharger (Order.No. 41350), this unit discharges the pack to the optimised cut-off voltage with variable current. An additional deep-discharging with a 33 Ohms resistor can be done over night to achieve maximum performance. Do not use the common light-bulbs without a cut-off or a monitoring device on modern NiCd-batteries.

Storage: Always store your NiCd-packs completely discharged. The will only perform best by doing this because of their memory effect.

Warning: This battery is not a toy and shouldn't be used or charged without adult supervision by children under 14 years.

Return the battery after use to the point of sale or another suitable institution for recvcling.

Have fun with your HiVolt-Plus Batteries, your LRP-team.

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## **NiMH Battery-Care**

Thank you for purchasing an LRP HiVolt-Plus battery pack. Please read this instructions carefully to make sure the product works to your full satisfaction.

**Charging:** NiMH batteries (Nickel Metal Hydride) are a little more sensitive than NiCd cells (Nickel Cadmium), so make sure not to overcharge them, which may cause them to vent. We recommend a charging current of 4.0 Amps and chargers that are suited for NiMH such as our Charger family of Quadra, Jet, Micro and NiMH-Charger. In case you should use a different charger it is important to adjust the deltapeak rather low on 50-100mV (=0.05 - 0.1V) on a 6-cell pack. Charge up to a cell temperature of 45°C when you're using a temperature cut-off charger.

Application: You can use your NiMH-batteries max. 3-times per day, but they require at least 2 to 3 hours minimum between cycles to fully cool down internally. Although NiCd-batteries give higher average voltage values on matching machines, this is due to NiCd's having a high initial peak voltage, which quickly burns off after a lap or two. The NiMH-cells actually carry more usable voltage over their entire discharge cycle, you'll notice that NiMH-cells have much more punch later in your run.

**Discharging:** We recommend using the LRP NiMH-discharger (Order.No. 41350) after every run, this unit discharges the pack to the optimised cut-off voltage with variable current. Do not dead-short or deep-discharge the cells afterwards, this will hurt the cells. Also do not use the common light-bulbs without a cut-off or a monitoring device.

Storage: Latest tests have shown that you can store your NiMH-packs completely discharged for a longer period without hurting the cells. For best performance we recommend, if you have not used the battery for several weeks, to do a charge-/discharge-cycle the day before the next use. Your charger in combination with our NiMH-discharger is all you need.

Warning: This battery is not a toy and shouldn't be used or charged without adult supervision by children under 14 years. Never use NiMH-batteries in airsealed models (like some racing boats) and don't bring them in touch with larger amounts of water. Never charge your cells in ice. Water can release a violent chemical reaction inside the cell which could ruin the cells completely!

Have fun with your HiVolt-Plus Batteries, your LRP-team. (Version December 15<sup>th</sup> 2000)