

ElectroDynamics, Inc.

& More!
ELECTRONICS [^] FOR THE DISCERNING MODELER
31091 SCHOOLCRAFT, LIVONIA, MI 48150
(734) 422-5420 Fax: (734) 422-5338



8 February 2010

Rev. 1.4



Care and Feeding of ED-Nano Batteries

ED-Nano (A123) batteries are built with factory-fresh, original A123 Lithium NanoPhosphate cells, a breakthrough in battery technology. These cells feature high performance, low maintenance, ease-of-use and outstanding safety.

Cabling and Connectors

ED-Nano (A123) packs come with a combination of the following cable/connectors, depending on the pack configuration:

- “JR” **Red** Male Receiver (Rx) POWER Connector with 22AWG **2-wire 22AWG leads**.
– *For connection to the RC Rx’s up to 4A continuous.*
- Deans Ultra, AMT/Graupner or “Ganged pin” JetCat/Multiplex POWER Connector with **2-wire 16AWG or 14AWG leads**.
– *For high load current applications, e.g., Turbine ECU power, electric power etc.*
– *16AWG cables are rated for up to 25A continuous.*
– *14AWG cables are rated for up to 35A continuous.*
- “JR” **Black** Male NODE/BALANCE Connector with HD **3-wire 22AWG leads**.
– *On 2S, 6.6V packs, for up to 4A charging/balancing.*
- JST-XH White NODE/BALANCE Connector with 4 to 6-wire **20AWG leads**.
– *On 3S and higher packs, for up to 4A charging/balancing.*

Discharging

ED-Nano packs are capable of very high (up to 35A) discharge currents, limited only by the cable/connectors.

- The standard cutoff voltage is 2.0V per cell. You should only rarely allow a discharge to go below this voltage, or permanent cell damage can occur.
- The maximum allowable battery surface temperature is 71°C (160°F) – if this temperature is reached, discharge should be stopped to prevent damage to the battery.

If the pack is involved in a crash, remove immediately and inspect for leakage or abnormal heating. If any of these conditions are present, set pack in a safe place and monitor for 15 minutes, then dispose of in the proper manner.

Charging

ED-Nano (A123) batteries should be **always** be **balance- charged** with chargers **specifically designed for A123 chemistry**. If the doesn’t say “compatible with A123 or LiFe” it cannot be used to charge ED-Nano (A123)’s.

ElectroDynamics recommends the following chargers, which we have tested and approved:

- [ED-Nano B6AC Pro](#)
- [ED-Nano CellPro Multi-4](#)
- [ED-Nano CellPro 10S](#)
- ED-Nano CellPro 4S / 4S Gold
- Turnigy Accucel-6
- Turnigy Accucel-8

ED-Nano (A123) batteries pack a lot of energy, treat them with respect!
DO NOT ATTEMPT TO USE “Lithium” chargers not specifically designed for A123 batteries.

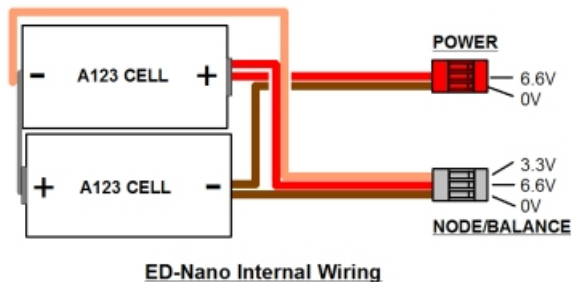
Although ED-Nano (A123)’s are very safe, we still recommend attending to your batteries and chargers while charging as a good safety practice, in case something unexpected were to occur.

RECEIVER (Rx) WIRING

ED-Nano Rx batteries feature a 3-wire “JR” NODE/BALANCE connector and a 2-wire POWER connector.

The “signal” (orange) lead on the NODE/BALANCE connector is “hot”!

It is internally connected to the “center tap” of the battery, and carries approx. 3.3V.



The 3-wire NODE/BALANCE connector should never be plugged directly into the Rx
Nor routed to the Rx via a 3-wire switch

This will present 3.3V to the “DSC” or “Binding Port” of the Rx, and can cause unpredictable operation.

This will also drain one cell on the ED-Nano battery, causing a severe cell imbalance.

Use the 2-wire POWER connector from the battery instead!



Using an ED-Nano (A123) battery in an existing model already equipped with a 3-wire Switch

Carefully SNIP OFF and INSULATE the exposed end of the “signal” wire (Orange or White) on the connector that plugs into the Rx.

Better yet, simply replace it with our [EDN-77N Ultra Switch II Nano](#), which lets you conveniently balance-charge the ED-Nano (A123) Rx pack *Hassle-Free* thru its integrated charge jack.

Storage and Disposal

Store in a cool, dry location. ED-Nano batteries are *Hassle-Free* and may be stored in any state of charge.

ED-Nano (A123) batteries hold a charge for a very long time. The batteries will **maintain 80%** of their charge over several months.

Dispose or recycle batteries by wrapping in a plastic bag. Check with the Re-chargeable Battery Recycling Corporation at www.rbr.org for a battery recycling drop-off location near you.

Support and Warranty

For customer support or technical questions, please send email to support@electrodynam.com.

We cannot control how a battery is treated after it leaves our factory. ED-Nano packs are warranted free of manufacturing defects for 30 days after purchase. We will repair or replace defective packs at our option. Please return them to the address below with a note explaining the problem.

Warranty will be void due to inappropriate use of this product, including but not limited to failure to follow usage guidelines, disassembly or tampering, or unauthorized repair; determination of inappropriate usage.

ElectroDynamics, Inc.



ED-Nano EDN-2S1P Standard Rx Pack

Comes standard with:

- “JR” **Red** Male Receiver Connector with HD 2-wire 22AWG leads. Plugs into your RC switch.
- “JR” **Black** Male Node/Balance Connector with HD 3-wire 22AWG leads. Plug into your charger’s balance/node port.

When used with our EDN-77N Ultra Switch II Nano and one of our ED-Nano chargers, simply match the connector colors from the switch to the ED-Nano Rx pack, and charge-balance thru the integrated charge jack, *no-muss, no-fuss, no-hassle!*

EDN-77N Ultra Switch II Nano



Heavy-Duty, 8A max. Ultra Switch II designed specifically to match the ED-Nano 2S1P Rx battery for *No-Hassle, Plug-and-Play* use

Simply plug in your ED-Nano Rx pack to the Ultra Switch II Nano, matching connector colors.

Plug the Ultra Switch II ED-Nano into two ports your Rx for the maximum 8A load capability, or just one port for 4A max.

That’s it!!

Balance-Charge the battery using the Ultra Switch II's convenient charge port and our ED-Nano chargers!

All the great features of our acclaimed Ultra Switch II plus *No-Hassle* ED-Nano installation!!

ED-Nano B6AC Pro



**Professional Balancing
Charger/Discharger with
AC (110 - 220V)
or DC (12V) Power**

**A Super-convenient, Super-capable
E-Z to use, No-Hassle Charger!**

Charge **EVERY** kind of battery used in RC
at home (AC power) or at the field (DC power)
with up to 5 Amps or 50 Watts!

- Cells are individually balanced-while-charging... **Get back in the air faster!**
- Discharge and cycle up to 1A, real-time readout of individual cell voltages - **Diagnose battery problems BEFORE they become serious!**
- Displays "mAh added" after charging - **Useful for estimating in-flight power consumption!**
- Backlit, **BRIGHT** Liquid Crystal Display - **EZ-to-read, even in low light conditions!**
- Brushed Aluminum grounded enclosure - **acts as a heatsink and safety shield**
- Super E-Z, No-Muss, No-Fuss Operation - **No head-scratching, Manual-page flipping...**
- **Best of All, it works on AC at home, and DC at the field! - How cool is that?**

Visit: <http://electrodynam.com/store/EDN.html> for full list of ED-Nano products!