

Re: reverse biased Ni-Cad cells

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A voltage reversed NiCd is typically due to a weaker cell being in a stack of other stronger cells when the entire battery pack is too discharged. Sometimes a negative cell could be corrected by hitting the cell with higher current in the reverse direction. On older cells, this would (theoretically) burn out the reverse section. Then that cell would be recharged. This technique has not been very successful for me with newer technology NiCds. But then you would only be restoring that reversed cell so that operation can continue until a new battery pack is obtained.

Again, the most probably reason for such a destructive failure – battery pack was permitted to discharge well beyond what should have been its lowest limit causing its weakest cell to become reverse charged.

argathor wrote:

- > A quick check on a 6 pack containing D size Ni-Cad
- > revealed one with $-0.4V$, another with $-0.1V$. I know
- > that's not a very good thing, so here are my questions:
- >
- > a) is there some simple circuit that could be used
- > to prevent this? I'm thinking of a parallel Schottky
- > diodes, but preferably with a V_f under $0.1V$.
- > How low can Schottkies go, BTW?
- > b) how much damage can reverse voltage cause,
- > and how quickly?
- > c) what should be terminal voltage when discharging
- > Ni-Cads? I plan to build a discharger from a battery
- > holder where they would discharge through some
- > series diodes and a resistor.
- >
- > TIA