

Maximising rechargeable battery life, Nov 92

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Maybe this was still a new idea in 92, and it certainly later became standard practice to discharge cells before recharging. But I think it was probably already invented elsewhere by 92.

Concept

Rechargeable battery life enhancement

Problem

Rechargeable batteries develop a memory, and if not fully discharged before topping up, store progressively smaller charges. This reduces the effective use of the battery and reduces usefulness of portable phones, computers etc. which depend on them if these are topped up too frequently.

Opportunity

To maintain the lifetime of rechargeable batteries

Summary

The problem arises from users recharging the batteries before they have been fully discharged, where the useful charge is then only the amount used to 'top it up'.

This could be solved by incorporating a circuit which detects the charge level and postpones recharge until the battery is empty. Firstly, the user would be told that a recharge is not necessary. If the user insists on a recharge, the recharging unit could first drain the battery completely (via a resistor) and then recharge. This would waste a small amount of energy but would enhance battery life and capacity.

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