**Balancing**

Battery balancing refer to techniques that maximize the capacity of a battery pack with multiple cells in series to make all of its energy available for use and increase the battery's durability.

Individual cells in a battery have different capacities and may be at different levels of state of charge (SOC). Without redistribution, discharging must stop when the cell with the lowest capacity is empty (even though other cells are still not empty); this limits the energy that can be taken from and returned to the battery.

Methods for Balancing include **active** or **passive**.

Use a MOSFET in parallel with each cell and controlled by a comparator output for simple voltage-based algorithms that turn on the bypass FETs during the onset of voltage differences, or controlled by a microcontroller for more complex and effective algorithms that can work continuously regardless of variations in the voltage.

REFERENCE LINKS

<https://en.wikipedia.org/wiki/Battery_balancing>

<http://www.mpoweruk.com/balancing.htm>

Reference PDF for cell balancing techniques

<http://www.artechhouse.com/static/sample/Barsukov-491_CH04.pdf>