Supercapacitor experiments

Greencap 16V 83F (6x 2.7V 500F)

Each cap can handle 2.7V long term, 2.85V short term. Balancer starts discharging overcharged caps through 1 ohm power resistor once they overshoot 2.8 - 2.85 V.

Self discharge current is expected to stabilize at relatively low value after 100 hours of being charged.

- Absorbtion current (initial)
- Leakage current (constant)

Replacing lead acid battery with supercapacitor

- UPS (replaced 12V 7Ah)
  - There is some inefficiency in conversion from 12VDC to 220VAC
  - UPS stops discharging at 10.2V (under load, which might translate to ~11V with no load)
  - 8W LED was running for over 5 minutes
  - 100W incadescent bulb was running for 30 seconds
- Piaggio scooter (replaced 12V 10Ah AGM)
  - Charges to 14.4V (in ~1 minute)
  - After sitting for
    - 9 hours voltage drops to 12.2V (cranks up)
    - 15 hours voltage drops to 11.2V (cranks up)
    - 22 hours voltage drops to 10V (cranks up)
    - 34 hours voltage drops to 8.2V (cannot crank up)