

SatSim EPS Demo Report: Battery Voltage, Switches, SA

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Notes:

- Target: GENERIC_EPS.
- Command: GENERIC_EPS_SWITCH_CC.
- The Time Item in each Data Object is set to PACKET_TIMESECONDS, but while running the simulator data intervals were every ~10 seconds.
- **Main success:** ability to turn Solar Wings ON and OFF.

Demo Process and Findings:

- Successfully shut OFF all SW switches, and the result was an increase in raw battery voltage (decreased 7/10/24 when tested).
- At 11:23am EST voltage steadily increased (linear increase at some intervals).
- Waited 10 minutes (11:33am EST) to see if voltage would eventually plateau naturally. Waited an extra few minutes, so ~ 13-14 minutes of run-time the data began to plateau slightly, but was still increasing.
- Turned ON all switches at 11:41am EST, data plateaued immediately and remained constant for 6 intervals of data.
- After the 6 interval plateau data steadily decreased.
- Waited 10 minutes (11:51am EST) to see if voltage made any other changes. Data steadily decreased, almost full linear decrease.

Screenshot taken after turning ON all switches and waiting 10 minutes.

Able to see overall data captured in the bottom of the Telemetry Grapher window: increase in voltage with switches OFF, immediate slight plateau once switches turned ON, and then decreasing voltage.

