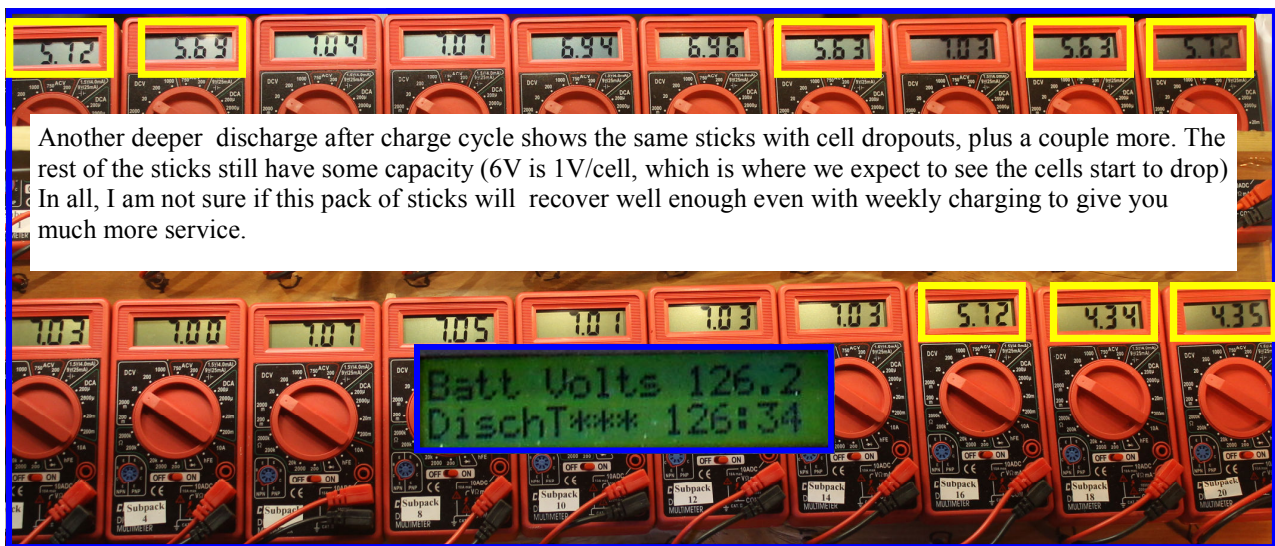
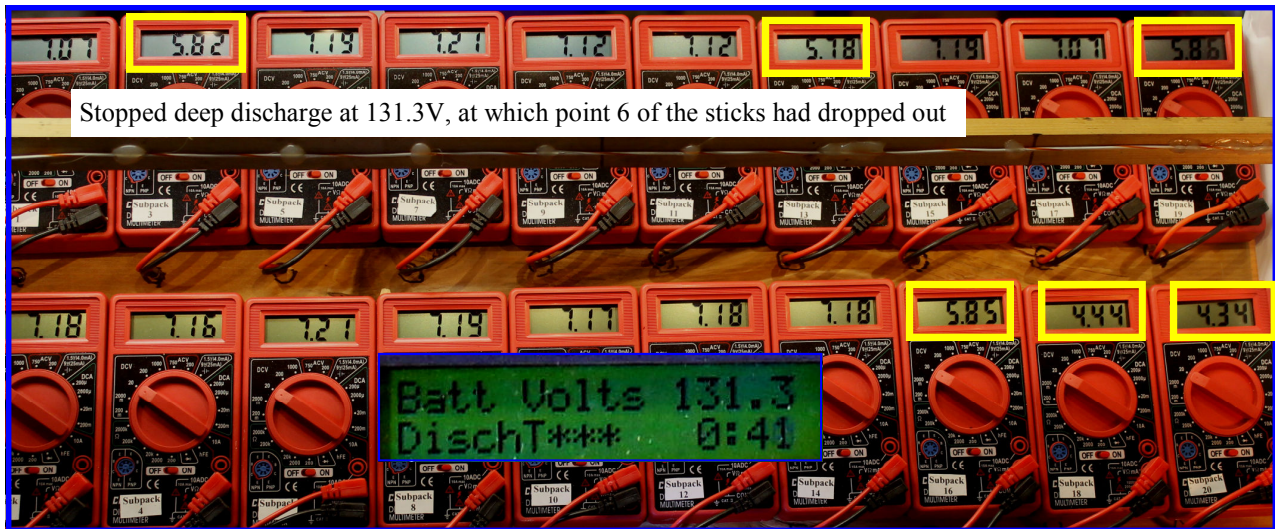
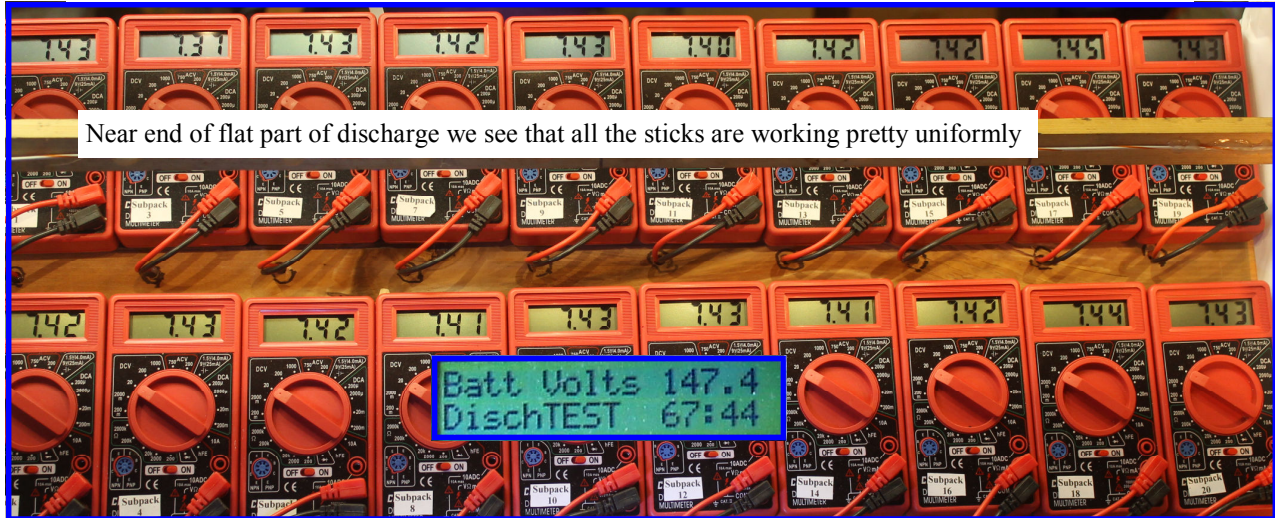


## Voltage comparisons at different points in the discharge

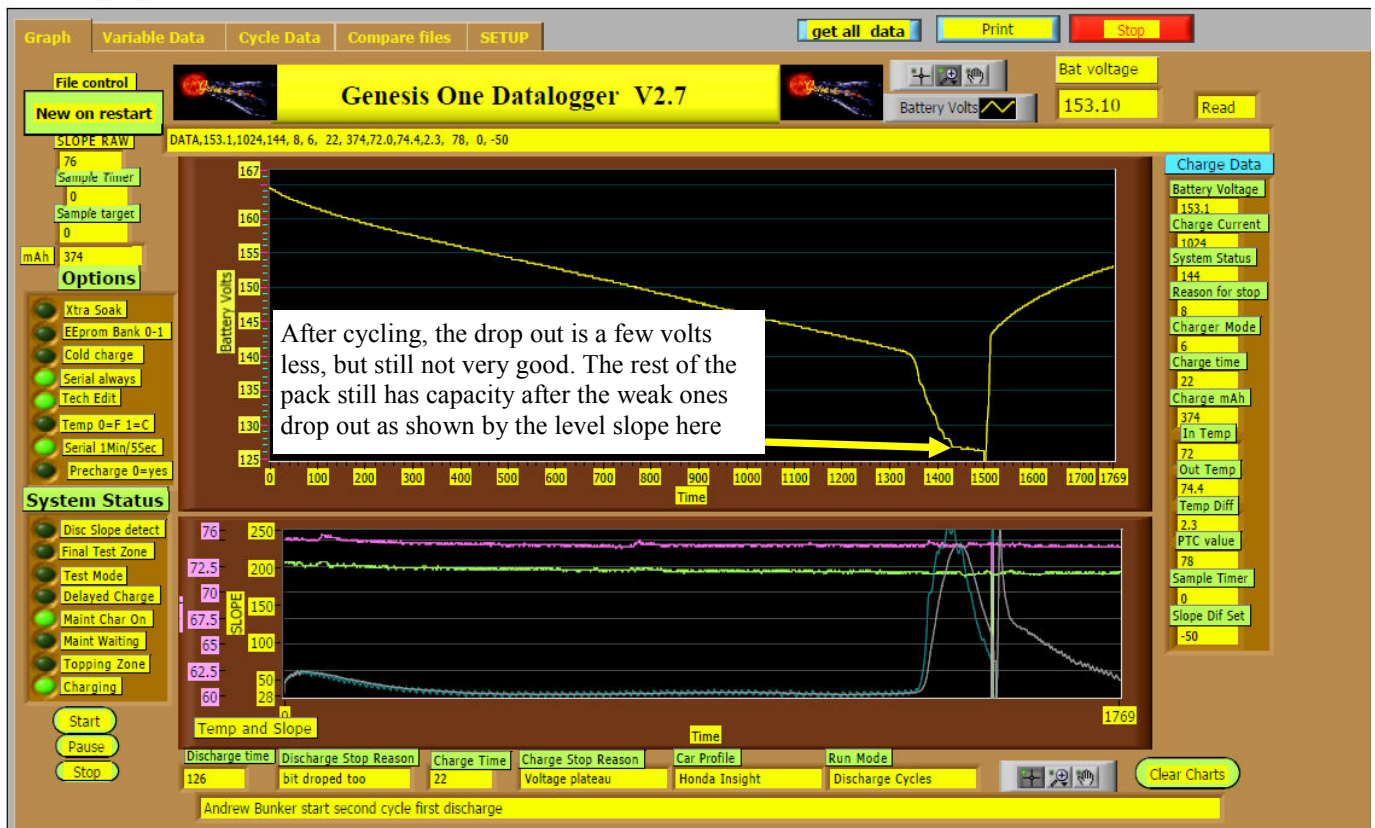




ted on 3/11/2013 at 2:01 PM



nted on 3/11/2013 at 10:12 PM



# Pack cycling report card

A good pack will show 5000 to 6500MAH for the charge MAH yours only shows 3300 to 3600, so the pack is only capable of ~ 1/2 of the nominal capacity

This end volts is normal, so the sticks are charging normally to plateau.

Charge stopped due to the normal plateau in voltage

A good pack will see 200 or more minutes of run time, this pack is over an hour short of that, indicating low capacity.

We allowed a deeper discharge to try and regain capacity, but it does not seem to be helping as we continue to see cell drop outs at 144-142V (see graph page)

Bank 0 Cycle 1	Bank 0 Cycle 2	Bank 0 Cycle 3
Charge mAh 3373	Charge mAh 3244	Charge mAh 3620
Watt Hour 545	Watt Hour 524.9	Watt Hour 587.8
Charge Time 346	Charge Time 333	Charge Time 396
Topping Time 217	Topping Time 209	Topping Time 269
Chg End Volts 167.5	Chg End Volts 167.5	Chg End Volts 168
Chg Stop Reason 8	Chg Stop Reason 8	Chg Stop Reason 8
Start Chg` Volts 126.2	Start Chg Volts 138.6	Start Chg Volts 138.6
Discharge Time 126	Discharge Time 121	Discharge Time 122
Dis End Volts 126.2	Dis End Volts 138.6	Dis End Volts 138.6
Dis Stop Reason 2	Dis Stop Reason 2	Dis Stop Reason 2
Start Dis Volts 167.5	Start Dis Volts 167.5	Start Dis Volts 167.5

From the graphs it looks like 6 or more of the sticks have lower capacity than the rest, which is making the whole pack behave badly, since the pack is only as good as the weakest stick. If I had 6 sticks of known better capacity we could try and change those sticks, but I expect that the whole pack would still not be very good, based on the voltages we see in the stick voltage page. I will try one additional series with some different parameters, and try to squeeze some more MAH out of it.