

The Doc's Battery Test Report

Battery Details	
Brand	Powerex 2500
Size	AAA AA C D 9V 6V
Type	Ni-MH Ni-Cd RAM Alkaline Titanium
Current in mAHs	2500
Stated Voltage	1.5 volts 1.2 volts
Number of batteries	Single Set of 2 Set of 4
Battery Set used	Set 1
Times charged before test started	12
Charger used to charge	Rezap RBC883 Vanson Speedy Box UBA4
Time Batteries charged in charger	See UBA graph.

Test Procedures	
Spreadsheet name	Powerex2500NiMH-AA-Set1.123 (Discharge data file)
UBA file name	Energisier2100NiMH-AA-Set1-12Powerex2500NiMH-AA-Set1.uba
Select Resistance 5 or 10 ohms	5 ohms 10 ohms
Voltage cut off	3.5 volts 3.6 volts
Date of test	21/04/06

Summary of test	
Voltage	Starting voltage 4.9 volts, cut off voltage 3.6 volts
Test duration	18,364 seconds or 306.06 minutes
Max Battery Temp	22.9 degrees Celsius
Min Battery Temp	20.4 degrees Celsius

Methodology

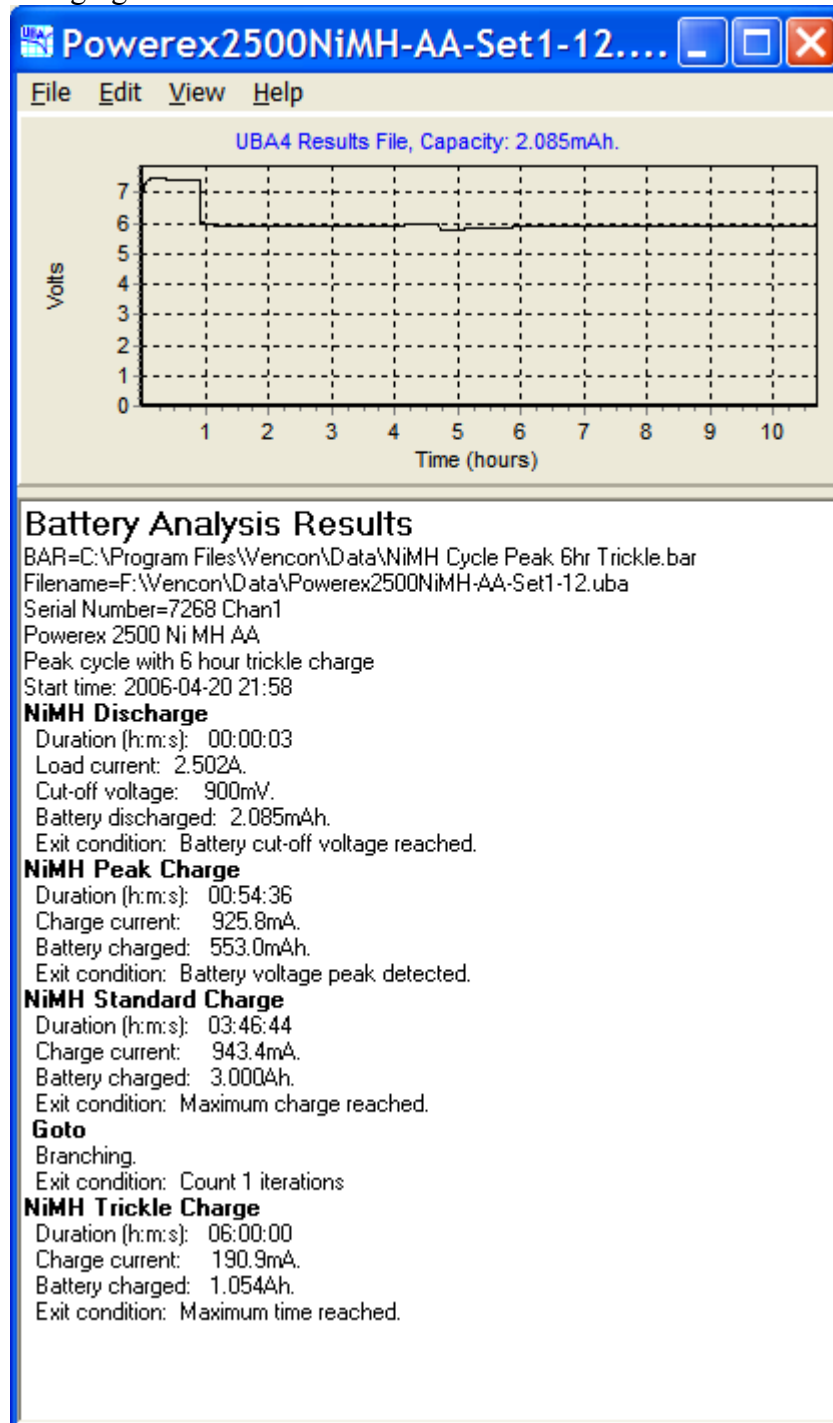
The usual methodology was used here. Lets see what actually happens. The following pages give various data, including:

1. charging information from the UBA4;
2. a graph of the voltage during the test (cut off voltage being 3.6 volts);
3. a graph of the battery temperature during the test; and
4. a graph of the battery temperature verse ambient air temperature during the test.

The Doc's Battery Test Report

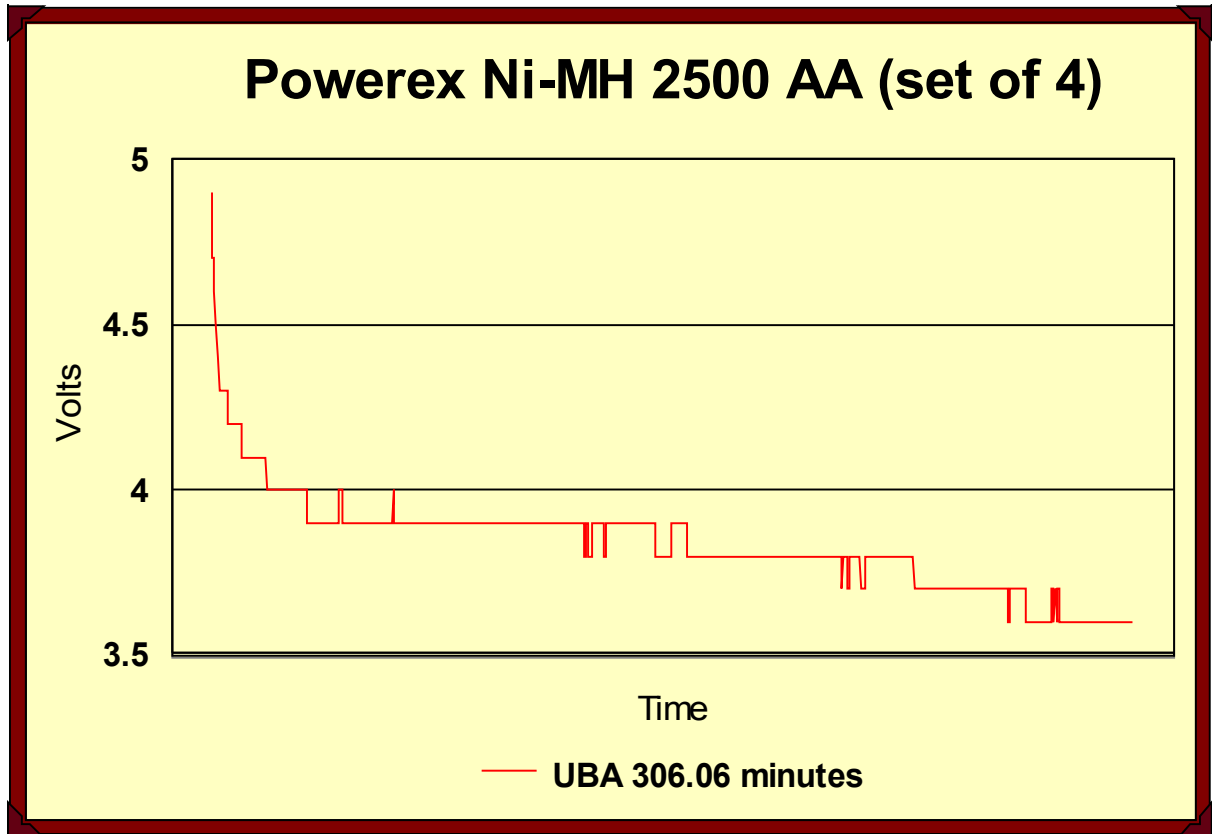
UBA report

The graph and charging information from the UBA4.



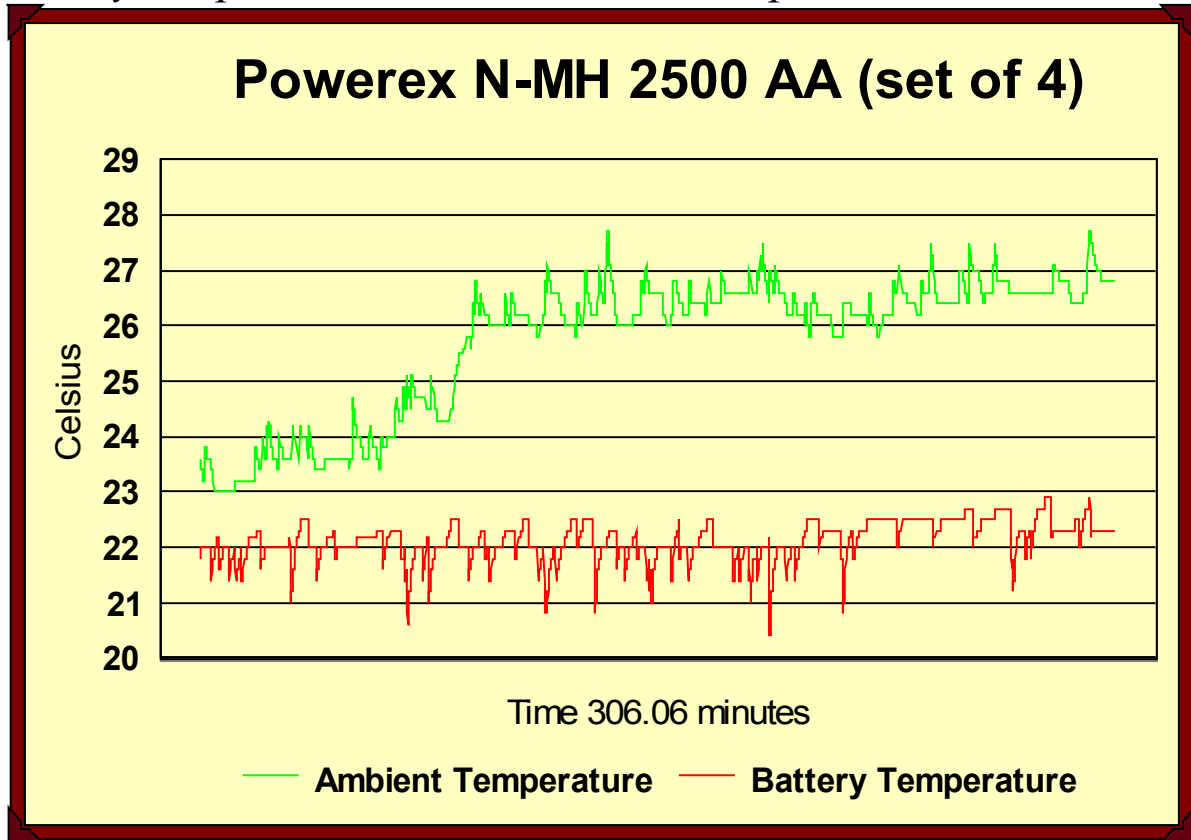
The Doc's Battery Test Report

Voltage graph



The Doc's Battery Test Report

Battery temperature -v- Ambient air temperature

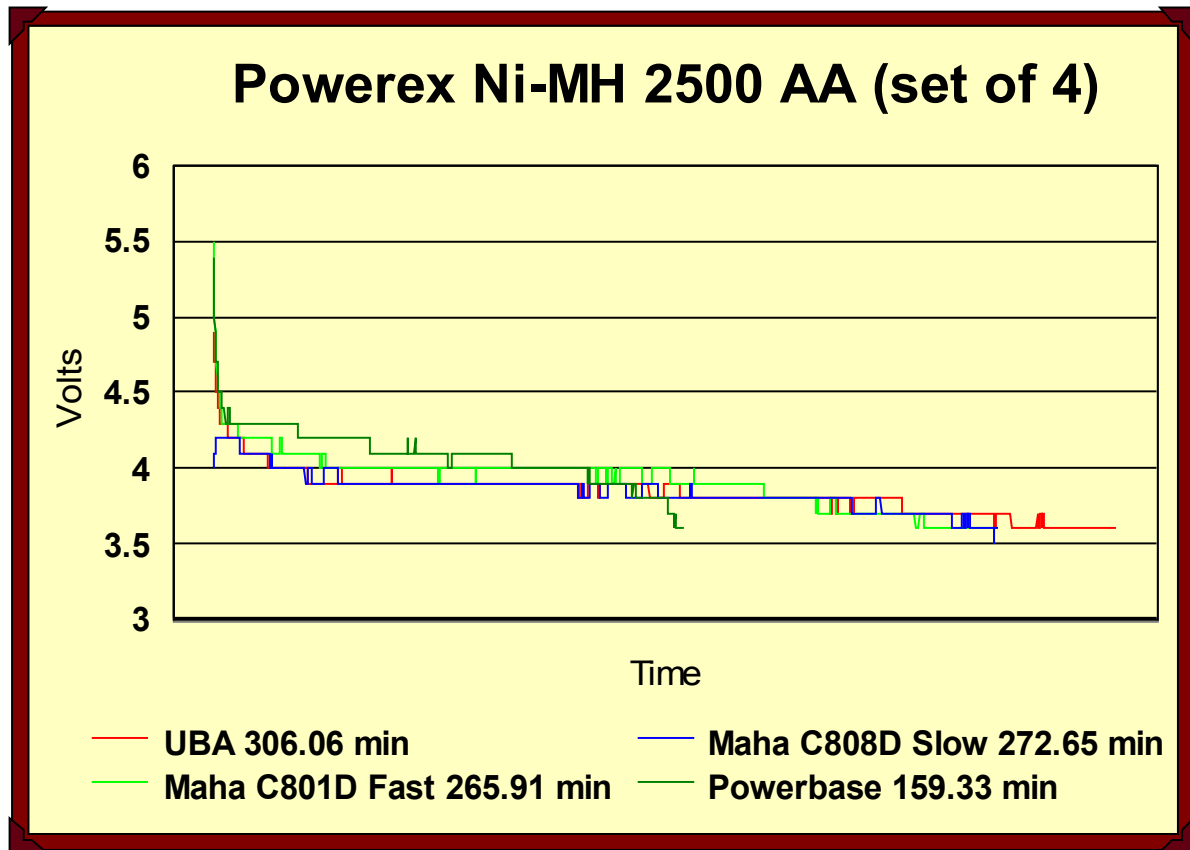


Ignore the ambient air temperature, as the temperature sensor was not attached to the battery set (I either forgot to attach it or it fell off).

The Doc's Battery Test Report

Charger comparison

The Powerex battery set was then tested in various battery chargers to compare charging performance. Here are the results:



As usual the UBA is way out ahead. The Maha C801D does a very good job at charging (as you would expect). But look how close the fast and slow charge performance are together, a mere 6 minutes difference. The fast charge gives excellent performance (but remember fast charging means less battery life over time, when compared to slower charging).

Conclusion

The first battery to really challenge the Sanyo 2500 in terms of performance and quality. 306.06 minutes for the Powerex verse 321.95 minutes for the Sanyo. Now there are 2 names for quality and performance Powerex and Sanyo! A set of 4 Powerex AA batteries cost \$17.95 and they come with an excellent Maha battery holder. Excellent value overall. You can purchase the batteries (and other Maha products) from the Australian Distributor here: <http://www.servas.com.au/>

Run Time (5 ohm)	306.06 minutes
Battery build quality:	Excellent
Place of Origin	Japan
Cost (set of 4)	AUD\$17.95 (with battery holder)

Report date: 15 July 2006. Revised September 2006.

<http://www.users.on.net/mhains/>, thedoc@internode.on.net