

The Doc's Battery Test Report

Battery Details

Brand	Rezap 2200
Size	AAA AA C D 9V 6V
Type	Ni-MH Ni-Cd RAM Alkaline Titanium
Current in mAhs	2200
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	11
Charger used to charge	Rezap RBC883 Vanson Speedy Box UBA4
Time Batteries charged in charger	See UBA graph.

Test Procedures

Spreadsheet name	Rezap2200NiMH-AA-Set1.123 (Discharge data file)
UBA file name	Rezap2200NiMH-AA-Set1-10.uba (Charge file)
Select Resistance 5 or 10 ohms	5 ohms 10 ohms
Voltage cut off	3.5 volts 3.6 volts
Date of test	22/08/04

Summary of test

Voltage	Starting voltage 5.7 volts, cut off voltage 3.6 volts
Test duration	8,412 seconds or 140.2 minutes
Max Battery Temp	29.2 degrees Celsius
Min Battery Temp	18.9 degrees Celsius

Methodology

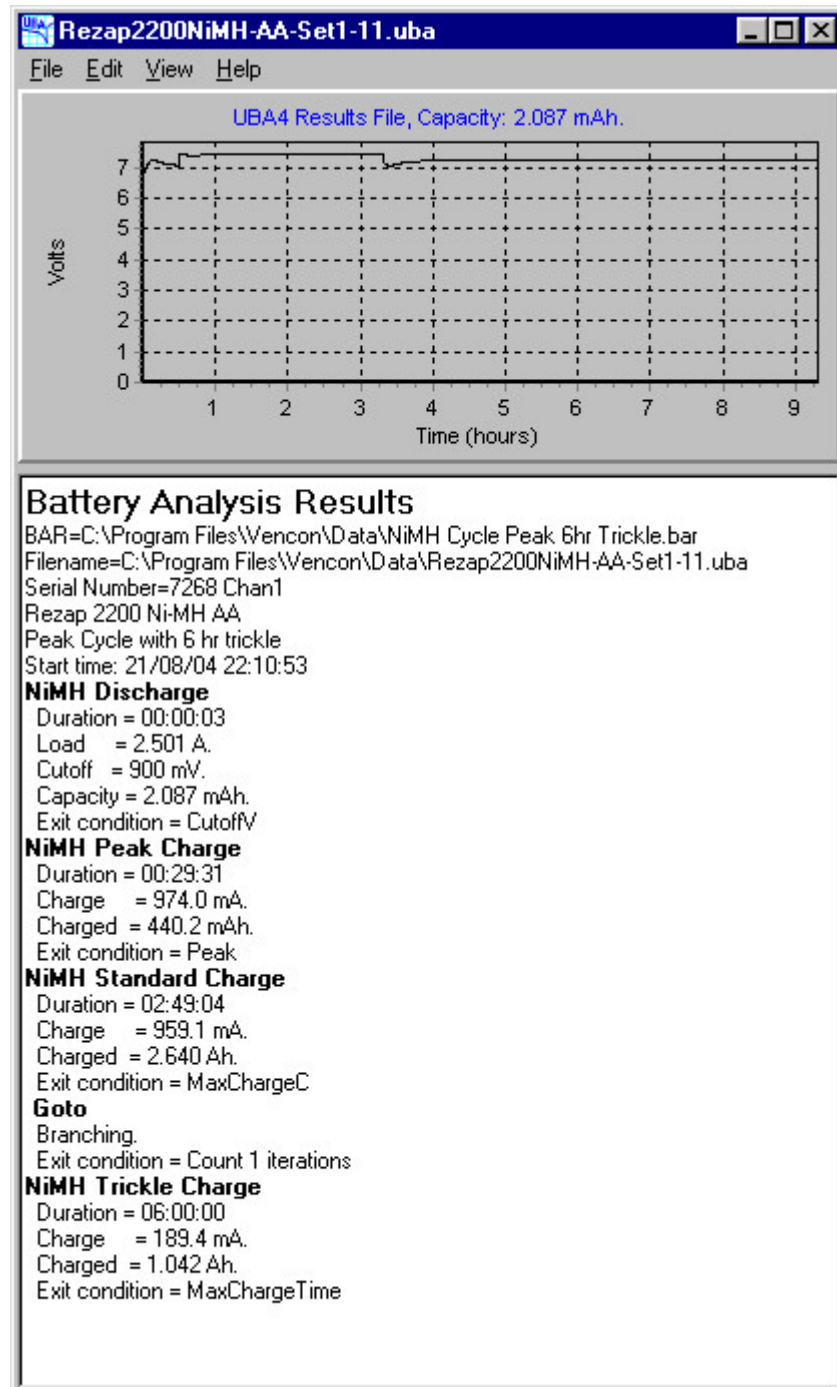
The battery set being tested has been charged at least 5 times. The charge actually used in the test is noted above. The battery set is charged in a Universal Battery Charger (UBA4). It is then tested under a load of 5 ohms, in the scientific dooverlackie. The following pages give various data, including:

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.

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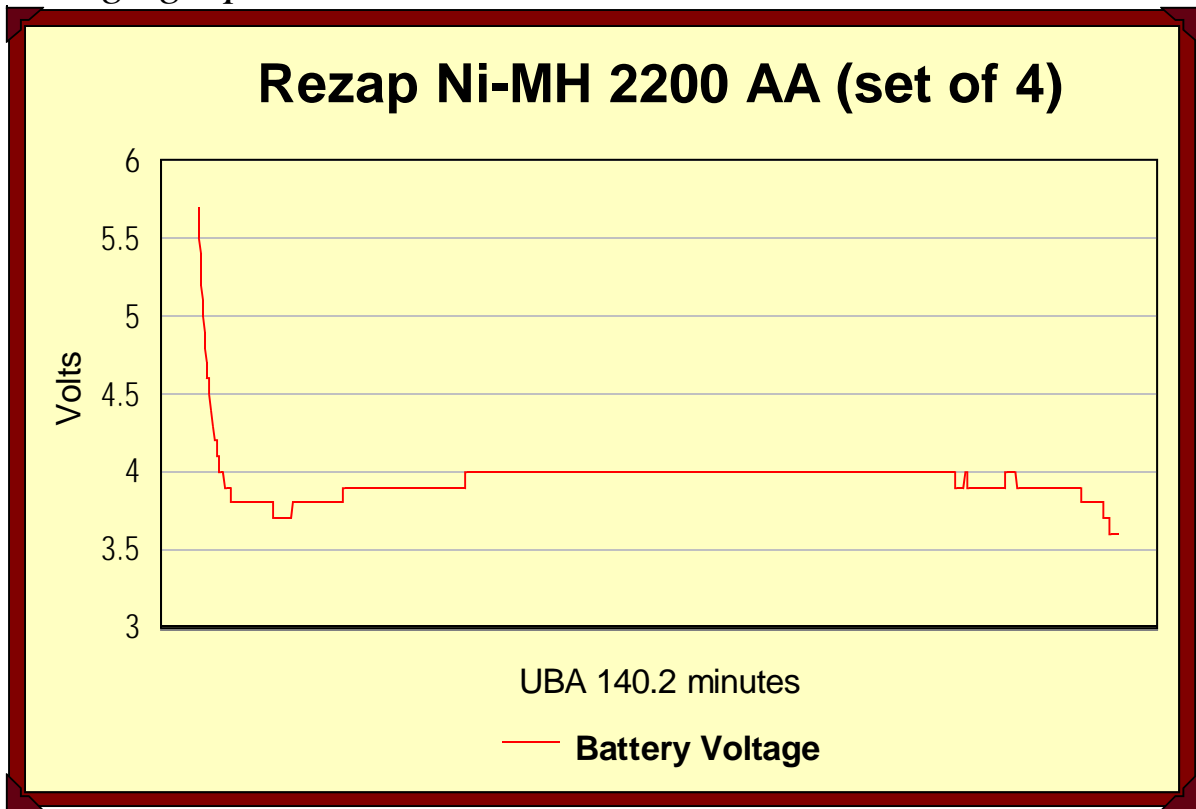
UBA report

The graph and charging information from the UBA4.

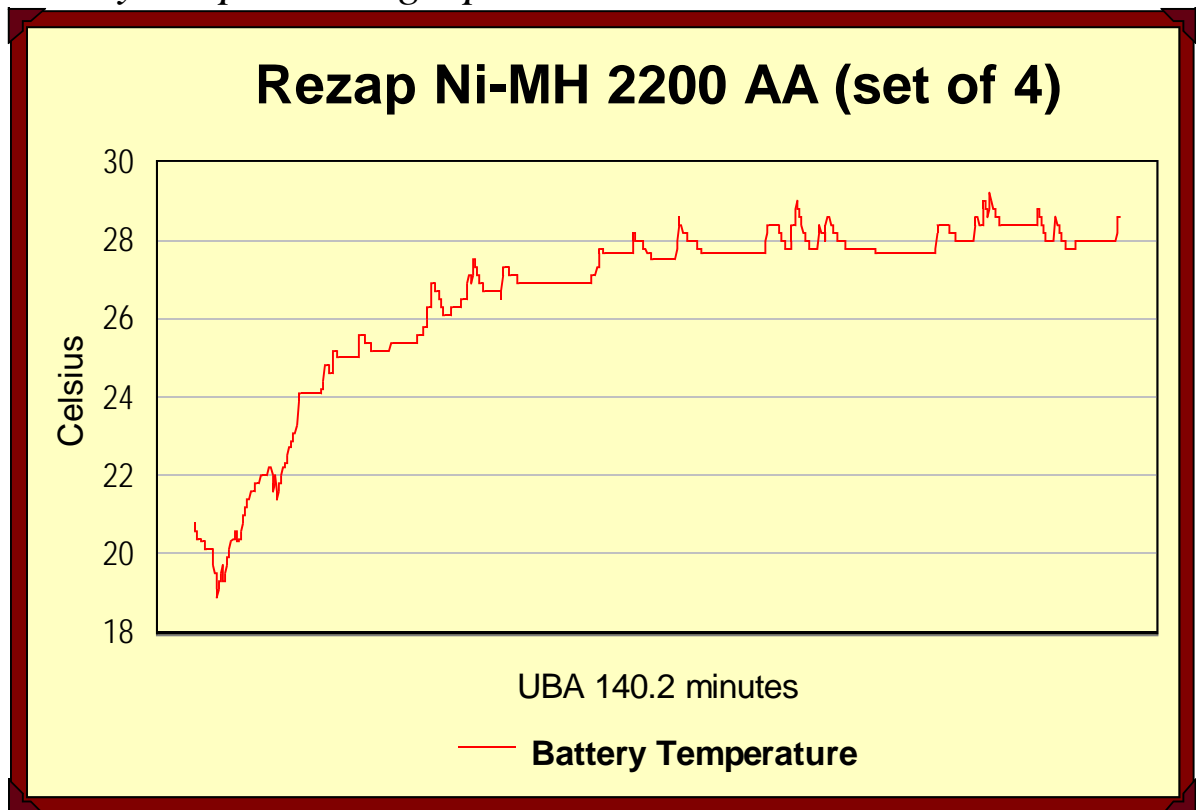


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Voltage graph



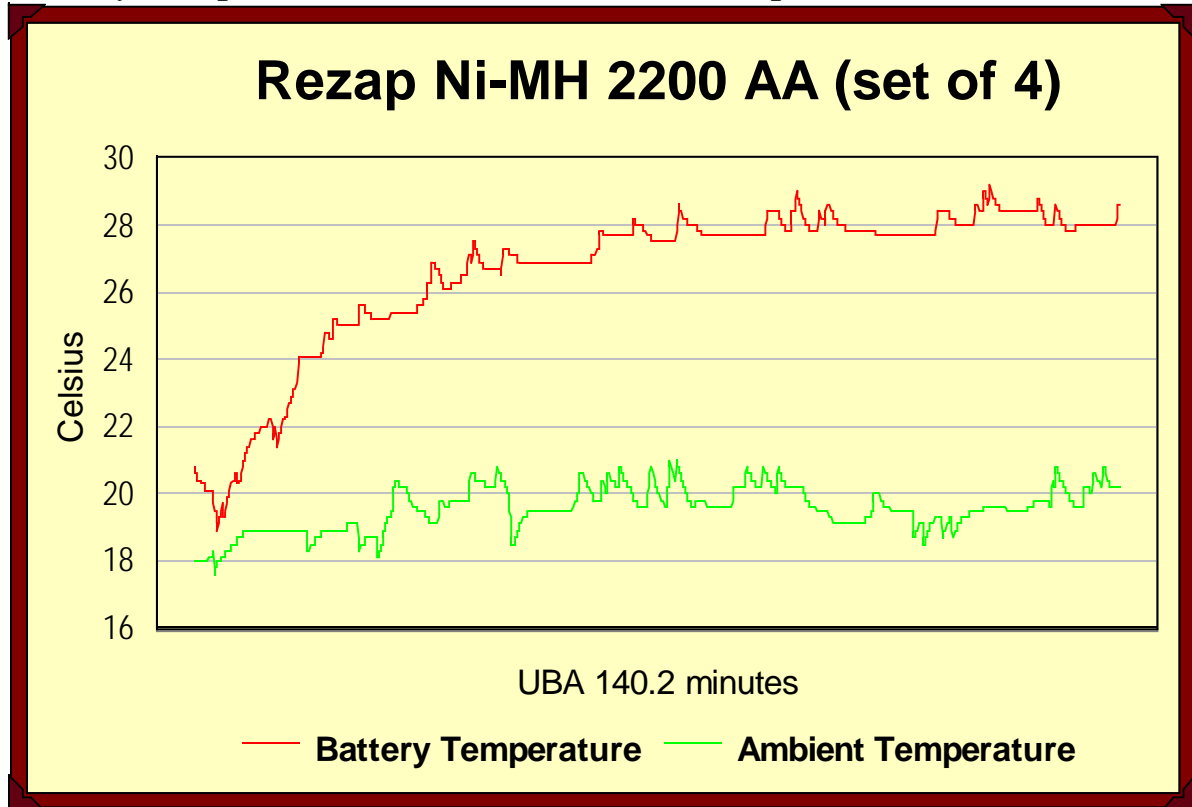
Battery temperature graph



The Doc is surprised about the increase in battery temperature by over 10 degrees. Having touched the batteries a few times during the test they never seemed that warm.

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Battery temperature -v- Ambient air temperature



Conclusion

The Rezap performed very close to their stated rating, certainly within the variation that The Doc has come to expect. Performance can vary up to about 10% between tests. The Doc is a little concerned about the increase in battery temperature during the test. There are some usual results coming (at least with one charger), it maybe a simple case of the charger and battery set not being that compatible (this has happened before with other brands). So I will just do some more testing before I state an opinion.

Run Time (5 ohm)	140.2 minutes
Battery build quality	Fair to Good
Place of Origin	China

Report date: 23 August 2004

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Postscript

It has been drawn to my attention that the Rezap 2200 batteries I tested were engineering samples made by hand. The level of finish, I am told, will be superior in the final product.

The rated capacity of batteries is worked out in accordance to an international standard. The problem with the standard is that the rate of discharge bears no relationship to everyday use, especially for high capacity batteries. While my procedures are far from perfect, they more accurately test performance in everyday use. Hence my comments about the Rezap's performance.