

RACEDAYQUADS BATTERY TEST RESULTS

These results are presented for informational purposes only. Test results reflect only the performance of the specific batteries tested. Other samples of the same pack may perform better or worse.

SPECIFICATIONS

Chemistry: LiPo
Cells: 4
Capacity: 1300 mAh
C-Rating: 100C
Price: \$20

DIMENSIONS

Weight: 171g
Size: 35x31x87mm
Main Lead: 10 cm
Bal. Lead: 4 cm

JB RATINGS

Capacity:
1300 mAh or less

Energy Density:
 $19.2 \text{ Wh} / 171\text{g} = 0.11$

Continuous Discharge:
60 Amps or less

Pulsed Discharge:
80 Amps or less

SUMMARY OF RESULTS

Two batteries were tested. Batteries were provided by RaceDayQuads; they were not purchased at retail by a secret shopper.

In the Capacity Test, the batteries discharged an average of 1,282 mAh, 99% of their rated capacity.

In the Constant Current Test, at 60 amps, the batteries discharged, on average, 729 mAh, 56% of their capacity, in 44 seconds.

In the Pulsed Discharge Test, at a discharge rate of 60 amps, the battery completed eight five-second pulses, with five seconds of rest between them. At a discharge rate of 70 amps, it completed four pulses. At a discharge rate of 80 amps, it completed two pulses. The 80 amp test was repeated twice to confirm the result.



PRODUCT LINK

<http://bit.ly/2LOqMaY>

WHAT IS “JB RATING”?

“JB Ratings” are intended to provide an objective means of comparing batteries with each other. By testing packs in a consistent and repeatable way, the relative performance of different packs can be judged.

“JB Ratings” are conservative. They are intended to represent conditions that result in reasonably long battery life. Batteries can perform at higher levels than their “JB Rating” especially if some shortening of pack life is tolerated.

“JB Ratings” should not be expected to correspond to manufacturer’s ratings since the test methodology used to derive JB Ratings is unique. Nothing in this test report should be interpreted as reflecting on the correctness or accuracy of manufacturer’s specifications.

TEST METHODOLOGY

In the Capacity Test, the battery is discharged at 1C discharge rate, down to a cutoff voltage of 3.5 volts per cell. This typically will produce a lower capacity than the manufacturer’s label, since the manufacturer typically discharges to a lower voltage. This test procedure represents a low-current discharge, such as if the pack was used to power an FPV goggle, a ground station receiver, a USB phone charger, or other such application. The Capacity Test result is given as “X mAh or less,” since it is assumed that most real-world discharge conditions will be more aggressive than the test protocol, and so will result in less mAh being discharged.

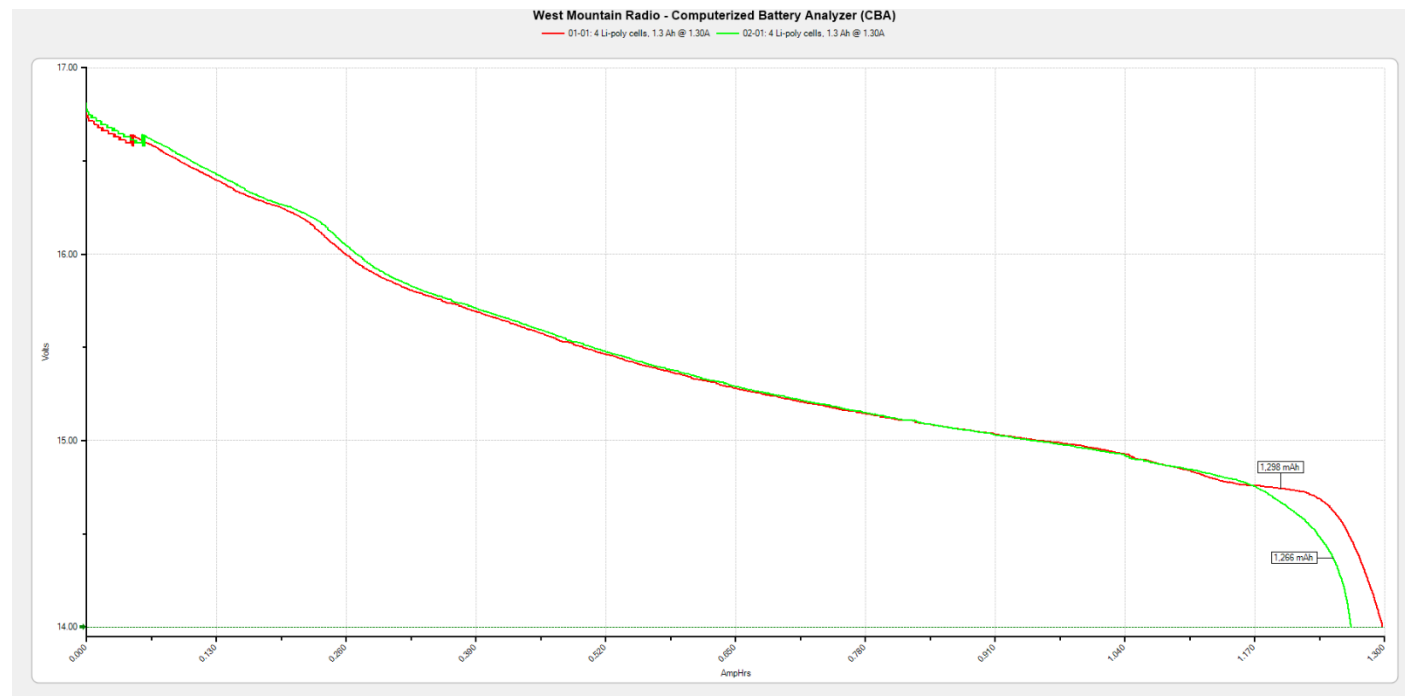
In the Constant Current test, the battery is discharged at increasing current: 10, 20, 30 amps, and so forth, down to a cutoff voltage of 3.5 volts per cell. The test is stopped when the battery fails to discharge at least 50% of its mAh capacity, as determined in the Capacity Test, or when its temperature becomes unsafe. Any temperature over 135° F is noted but does not necessarily cause termination of the testing. This test procedure represents an extended, high-current discharge, such as a long punchout at full throttle.

In the Pulsed Discharge Test, the battery is discharged at 10, 20, 30 amps, and so forth, down to a cutoff voltage of 3.5 volts per cell. The battery is discharged for 5 seconds and then allowed to rest for 5 seconds. If the battery completes three or more 5-second pulses, it is allowed to proceed to the next higher discharge rate. The test is stopped when the battery fails to complete three discharge cycles, or when the battery’s temperature exceeds safety thresholds. The purpose of the Pulsed Discharge test is that some batteries may perform worse under continuous load but may have good “recovery” and perform better under pulsed load. Pulsed load also probably more closely reflects how mini quad pilots actually use their batteries.

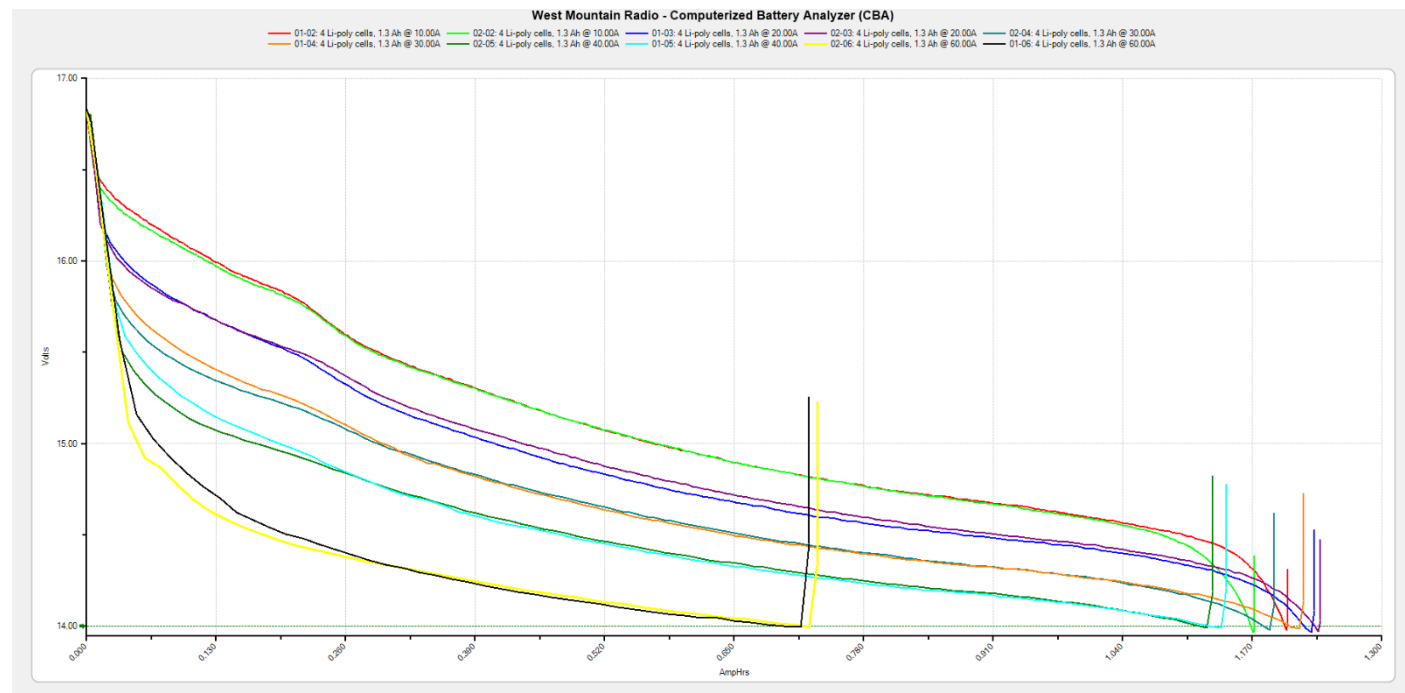
INTERPRETING RESULTS

In the Continuous Discharge test, when two packs are rated at the same Amps, the pack that discharged more mAh is better. In the Pulsed Discharge test, when two packs are rated at the same Amps, the pack that completed more pulses is better.

CAPACITY TEST DISCHARGE GRAPH



CONSTANT CURRENT DISCHARGE GRAPH



PULSED DISCHARGE GRAPH

