

Battery Pack 1	
Readings while Charger Attached	
	Charger Input Voltage
1.87	Charging current to CMB in Amps
0.00	Charge to CMB when Charging
18.52	Time to charge from 0% to 100% in minutes
16.50	Voltage to Main PCW while charging is used
	Temperature of battery pack while charging (Highest reading)
21.30	Max voltage allowed through to initial charger connection
Readings below are without Charger Attached	
228.00	Current to Main PCW in standby mode
1.00 mA	Current to Main PCW while running on gold
Run Time	
0:00	Reading at P+ and P- with 4 Blue LEDs on solid
0:30	Reading at P+ and P- with 3 Blue LEDs on solid
4:30	Reading at P+ and P- with 2 Blue LEDs on solid
6:00	Reading at P+ and P- with 1 Blue LED on solid
11:00	Reading at P+ and P- with only Red LED on
14:00	Reading at P+ and P- when Red LED Blink
20:30	Reading at P+ and P- when LEDs go low voltage

Charge time with 2 LEDs at 100% when fully charged once charger is unbalanced Charging until Charge LED is on	
Run Time	20.00
Current at Main PCB	1.500
Current at P+ and P- when LEDs are on	15.63
Voltage to CMB when charging	1.000
Time to charge from 0% to 100% in minutes	20.00
Voltage to Main PCB while charging is used	1.000
Temperature of battery pack while charging (highest connection)	1.000
My voltage allowed through on initial charger reading	1.000
Readings below are without Charge Attached	
Run Time	17.00
Current at Main PCB in standby mode	1.000
Current to Main PCB while running	1.000
Current at P+ and P- with 2 LEDs on solid	2.000
Current at P+ and P- with 3 LEDs on solid	2.000
Reading at P+ and P- with 2 LEDs on solid	4.000
Reading at P+ and P- with 3 LEDs on solid	4.000
Reading at P+ and P- with only red LED on	7.400
Reading at P+ and P- when red LED Blinks	14.000
CMB pins show down due to low voltage	1.000

Readings while Charger attached	
20.00	Charger input voltage
1.86	Charging current to CMB in Amps
16.62	Voltage to CMB when charging
1.86	Time to charge from 0% to 100% in minutes
150.00	Voltage to Main PCB while charging
1.86	Temperature of battery pack while charging (thinnest reading)
150.00	Main voltage allowed through on initial charger connection
Readings before and after Charger Attached	
1.86	Current to Main PCB in standby mode
150.00	Current to Main PCB while running on high
Run time	
0.00	Reading at P+ and P- with 4 blue LEDs on solid
0.30	Reading at P+ and P- with 4 blue LEDs on solid
4.30	Reading at P+ and P- with 2 white LEDs on solid
11.00	Reading at P+ and P- with 1 blue LED on solid
11.00	Reading at P+ and P- with only red LED on solid
14.00	Reading at P+ and P- with only Red LED Blink
14.00	Reading at P+ and P- with only Red LED Blink
14.00	Reading at P+ and P- with only Red LED Blink

Readings while Charger attached		
20.00	Charger input voltage	
1.87	Charging current to CMB in Amps	
10.92	Voltage to CMB when charging	
15.00	Time to charge from 0% to 100% in minutes	
15.81	Voltage to Main PCB while charger is used	
15.81	Temperature of battery pack while charging (Highest reading)	
20.00	Main voltage allowed through on initial charger connection	
Readings before and after Charger attached		
2.00	Current to Main PCB in standby mode	
2.00	Current to Main PCB while running on solid	
Run Time		
0:00	Reading at P+ and P- with 4 blue LEDs on high	
0:15	Reading at P+ and P- with 3 blue LEDs on solid	
1:00	Reading at P+ and P- with 2 blue LEDs on solid	
6:45	Reading at P+ and P- with 1 blue LED on solid	
10:00	Reading at P+ and P- with only Red LED on solid	
14:30	Reading at P+ and P- when Red LED blinks	
15:00	Time taken from the 4 blue LEDs to the Red LED	

Only 3 blue LEDs are lit even when fully charged once charger is unpluged	
Reading before unplug charger	20.00
Charger input voltage	4.92
Charging current to CMB in Amperes	0.00
Voltage to CMB when Charging	4.92
Time to charge from 0 to 100% in minutes	10.00
Voltage to Main PCB when Charge is Used	10.00
Temperature of battery pack when charging (thinnest connection)	20.00
Main voltage allowed through on initial charger connection	20.00
Charger Attached	20.00
Current to Main PCB in standby mode	0.00
Current to Main PCB while running on high	0.00
Room Temp	20.00
Reading at 0.00	0.00
Reading at 0.00	0.00
1.30	20.00
4.30	20.00
6.30	20.00
8.30	20.00
10.30	20.00
CMB 24	20.00
CMB 24	20.00
Reading at P+ and P- with 4 blue LEDs on solid	20.00
Reading at P+ and P- with 3 blue LEDs on solid	20.00
Reading at P+ and P- with 2 blue LEDs on solid	20.00
Reading at P+ and P- with only red LED on solid	20.00
Reading at P+ and P- with only red LED flicks	20.00
CMB 24	20.00

Only 3 blue LEDs are lit even when fully charged once charger is unplugged	
Readings before charger attached	
Charger Input Voltage	1.85
Charging current to CMB in Amperes	1.85
Voltage to CMB when charging	1.85
Time to charge from 0% to 100% in minutes	18.61
Voltage to Main PCB when charger is used	18.61
Temperature of battery pack while charging (highest reading)	22.22
Max voltage allowed (during charge connection)	22.22
Readings before you attach the charger	
Current to Main PCB in standby mode	0.00
Current to Main PCB while running on high	0.00
Charger Attached	
Run Time	Voltage
0:00	1.85
0:00	1.85
2:15	15.93
3:45	14.91
8:00	13.90
13:00	13.90
16:00	14.40
CMB auto shut down due to low voltage	

Number of BLUE LEDs **Number of RED LEDs**

The color of the cube indicates how many LEDs were on the battery pack. (White cube = 0 Blue LEDs = 1 Blue LED = 2 Blue LEDs = 3 Blue LEDs = 4 Blue LEDs = 5 Blue LEDs = 6 Blue LEDs)

All six LEDs turned off overnight and then restarted at 8:30 AM the next morning.

Cube can't operate continuously by simply connecting it charger (and let enough) to reset the CSM (the remaining charge) and checking voltage at A and B under load.

Elapsed time shown in hours:minutes

Voltage in DC volts

All six units maintained a temperature between 75 and 80 degrees F throughout the test when not charging.

Voltage drops rapidly below 12 volts. Cube will operate properly until shut off with no issues.