Whirlwind

Newsletter of the Beltzville Flying Machine Society May, 2017

COCKPIT CORNER – by Brian Sherman, did4ways@aol.com

I recently purchased some of the new generation of LiPO batteries designated LiHV. The batteries were from Hyperion and below is an outtake from their website.

Silicon combined with Graphene makes for a superior electrode compared to standard LiPo batteries. Hyperion proprietary Si-Graphene chemistry ensures that your G7 pack will have higher-capacity, lower internal resistance, and higher cycle life than the other-brand LiPo currently on the market.

The G7 combines quality Graphene substrate with a Silicon metalloid to produce a Lithium battery that is uncompromised in performance and reliability. Hyperion's proprietary Si-Graphene additive has been shown to be less prone to puffing than standard Silicon-only LiPo packs.

Of course there are other LiHV brands on the market with different chemistries such as Hobby King's BOLT series. All have their own marketing spin and lots of advocates and detractors on the blogs. I was interested to try the Hyperion's first due to the claim of a flatter I/V curve and reduced susceptibility to puffing.

As always, new technology requires new equipment. In this case I had to purchase chargers capable of charging LiHV's to the 4.35/V.

Until next time, keep the cockpit up and be safe.

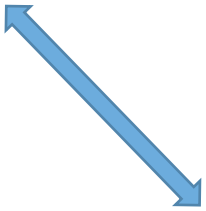
West End Wings

Jack Mertz reports that the West End Wings Club will conduct their annual Father's Day Fun Fly, June 18, 2017. Your attendance is welcome as an observer or participant. Don't be bashful, they participated in the one we conducted the year before last. A few became members of our club.

LiPO Internal Resistance Voltage Drop Calculator

Rev1 B.Sherman 5/8/2017

Variable	Description	Value
FCV	Fully Charged Voltage (Volts)	16.8
BC	Battery Capacity (mAh)	3,200
NC	Number of Cells	4
CR	C-Rating (continuous)	30
MCC	Max Continuous Current (A)	96
R1	Cell 1 Resistance (mOhm)	25
R2	Cell 2 Resistance (mOhm)	15
R3	Cell 3 Resistance (mOhm)	35
R4	Cell 4 Resistance (mOhm)	20
R5	Cell 5 Resistance (mOhm)	-
R6	Cell 6 Resistance (mOhm)	-
R7	Cell 7 Resistance (mOhm)	-
R8	Cell 8 Resistance (mOhm)	-
ECV*	ESC Cut-Off Volatage/Cell	3.2
ECB	ESC Cut-Off for Battery (Volts)	12.8
MIVD	Max Internal Batt Drop Before ESC Alarm	4.0
MACV**	Min Allowed Cell Voltage	3.0
MAVD***	Max Allowed Voltage Drop	1.2



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*** Typically preset by manufacturer at 3.2V**

**** Voltages below this cell may result in cell damage/fire/explosion**

***** Formula is (FCV/NC)-MACV = (16.8/4)-3**

(Calculated when battery is fully charged.)

NOTE: The values shaded gray can be changed by the user.

ıis cell starts to become damaged when the
ırrent draw exceeds (34) Amps

ESC Current Draw (A)	Calculated Voltage Drop Across Each Cell (Volts)							
	VR1	VR2	VR3	VR4	VR5	VR6	VR7	VR8
10	0.25	0.15	0.35	0.20	-	-	-	-
20	0.50	0.30	0.70	0.40	-	-	-	-
30	0.75	0.45	1.05	0.60	-	-	-	-
40	1.00	0.60	1.40	0.80	-	-	-	-
50	1.25	0.75	1.75	1.00	-	-	-	-
60	1.50	0.90	2.10	1.20	-	-	-	-
70	1.75	1.05	2.45	1.40	-	-	-	-
80	2.00	1.20	2.80	1.60	-	-	-	-
90	2.25	1.35	3.15	1.80	-	-	-	-
100	2.50	1.50	3.50	2.00	-	-	-	-
110	2.75	1.65	3.85	2.20	-	-	-	-
120	3.00	1.80	4.20	2.40	-	-	-	-
130	3.25	1.95	4.55	2.60	-	-	-	-
140	3.50	2.10	4.90	2.80	-	-	-	-
150	3.75	2.25	5.25	3.00	-	-	-	-

ESC will go into cut-off mode when the internal voltage drop reaches this le

NOTE: This example is the ideal case. In practice the voltage at the battery terminal decreases during flight.

For Sale

Brian was visiting Trains and Lanes and spoke to Ken (aka "Pops") who said, a person he knows is looking to sell a CESSNA 310 because he is not capable of flying it any more. He said, also, that he had a minor crash on one of his first flights (Pops says, he fixed it, and you can't see the repair). The person is willing to sell it for $610.00. It has two Evolution 10cc gas motors and all the equipment except the receiver.

I think if you are interested, it would be wise to call Trains and Lanes and talk to Ken (Pops) before visiting.

Trains and Lanes is located at 3825 Northwood Ave., Easton, PA 18045 (Just off Route 33 at exit for route 248). Telephone # 610-253-8850. Hours – Monday –Wednesday from 11- 6, Thursday – Saturday 11 8:30, Sunday 12-6

Meeting at the Field

That's correct, the meeting this Saturday, 13 May 2017, will be held at the field. Bring a chair so that you are comfortable while we discuss the club's business. You might also bring a plane or two to fly before and after the meeting. The meeting commences about noon as usual.

Remember, if the weather does not cooperate, and it rains on our meeting, we will adjourn the meeting to Platz's. A note will be placed on the gate, if that should happen, at least we will try.

Any questions or comments should be directed to
John Carrigan
at
carrjjc1238@yahoo.com

The next meeting of the BFMS is at the Field 12:00 PM (noon) on Saturday, May 13, 2017