An Owl cannot fly without …

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Flight Feathers

A quarterly publication of OneWingLowSquadron.org

MEETINGS

FIRST SATURDAY OF THE MONTH

@ 11:00 AM

NO MEETINGS IN JULY & AUGUST

Electric Fly-In
Saturday
May 28th
Fun, Food & Flyin'
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Field will be closed for Florida Soaring Society event April 23rd & 24th

WISE OWLS

MIKE FLICK
PRESIDENT
~
JERRY FLICK
VICE PRES.
~
RON SANDERS
SEC./TREAS.
~
ART SCHEURER
SAFETY OFFICER
~
JERRY FLICK
CONTEST DIRECTOR

LiPo Batteries: Series vs Parallel…by the editor

I recently ventured into the world of large aircraft (at least larger than I have been used to) with the purchase of Jerry's Carbon-Z Cub. With that, however, came the realization that I would have to upgrade to 22.2v batteries. But why, I thought, couldn't I use my 11.1v batteries, of which I have many, if I hook them up in series. So a quick check of the R/C forums determined that this was not going to be a safe or acceptable alternative.

First off, should you choose to do this, it was strongly suggested that the batteries all have the same parameters; such as age, capacity, and mAh. Then, while batteries in series grow in voltage, the amperage stays the same. So two 11.1v 2200mAh batteries in ***series*** would be 22.2v, but they still would only have 2200mAh capacity and therefore not have much useful flight time. (Note: Two 11.1v 2200mAh batteries in ***parallel*** would still be 11.1v, but they would have 4400mAh capacity.)

Charging batteries in parallel: Battery manufacturers **strongly caution against** charging batteries connected in parallel. Separate and charge your batteries individually.

For a very informative guide on LiPo batteries, visit: **http://www.rogershobbycenter.com/lipoguide/**

So what is the club's position on the FAA registration? It was decided that the club *recommends but will not require* compliance from the members or guests at the field or any sanctioned event hosted by the OWLS. Typical of gov't short-sightedness, the system does not allow pilots with residences in other countries to register at this time.

Old Time Photo…follow up

George Favor identified the mystery plane (right) featured in December's *Flight Feathers* as the Ryan PT-19, a WWll trainer pictured here with pilot/vaudevillian Edgar Bergen and Charlie McCarthy. Bergen was known to have several planes all of which displayed a silhouette of Charlie. George notes that the plane that Harrison Ford so spectacularly crash landed on a golf course was a PT-20, an updated version of the PT-19 with a bigger engine. An interesting fact is that they used to hang these airplanes under blimps and launch them while airborne. Stranger yet, the launched plane could fly back to the blimp and re-attach. WILD!!!

The plane in this photo (right) appears to be a Vultee Valiant. The Vultee Aircraft Corporation became an independent company in 1939 and had limited success before merging with the Consolidated Aircraft Corporation in 1943 to form the Consolidated Vultee Aircraft Corporation or Convair.

Source: https://en.wikipedia.org/wiki/Vultee_Aircraft

http://ventriloquistcentralblog.com/charlie-mccarthys-airplane/#more-3971
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What Connectors are on Your Battery?

For more info than you can possibly want on LiPo batteries go to:
http://www.mpoweruk.com/lithium_failures.htm

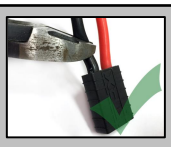
This plug is as close to an industry standard as we will ever have in a balance plug. It comes on almost all the major brands, from Traxxas and Venom to E-Flite and Duratrax. Most of the cheap battery places out of China use this plug as well. There are very few manufacturers that don't use the **JST-XH plug** for their balance lead. Just make sure to unplug it by grasping the plastic housing. Pulling on the wires will almost certainly pull the wires out of the housing, potentially shorting the battery out.

EC3 connectors came onto the scene because Horizon Hobby was looking for a connector to replace the Tamiya connector as its standard plug. So the story goes, Horizon approached Deans with the intent to license the connectors and obtain them at a bulk rate (so they could install them on their batteries at the factory). Deans refused to be "reasonable" in negotiations, so Horizon was left to come up with an alternative. They found the EC3 and licensed that connector. From there, it's no surprise that the EC3 spread like wildfire. While they aren't much fun to assemble, they have a sizeable foothold in the R/C airplane market. (Note: Some large-scale aircraft batteries use the EC5 which is a slightly larger version of the EC3.)

Deans connectors are really the king of connectors. They've been around seemingly forever, and have been the top choice for the discerning R/C enthusiast for quite some time now. They are somewhat difficult to solder, especially for novice users. Deans connectors slide together smoothly, and are very well designed. Like almost every modern connector, they are polarity protected. Currently, they are neck-and-neck with Traxxas connectors for the title of most popular connector - Traxxas has the edge in the R/C surface category, but Deans dominates in the air.

http://www.rogershobbycenter.com/lipoguide/ http://www.tjinguytech.com/reviews/rc-connectors

Hints & Tipsé



If you need to change the connector on your battery, be sure to never cut both wires at the same time.

The safest charge rate for most LiPo batteries is 1C ï 1 x capacity of battery in Amps.

Mikeôs P-30

Mike explains: ñItôs a 20 year-old rubber free-flight model covered in Japanese tissue with a wing span of 30 inches. A 10 gram rubber band powers a 9.5 inch prop giving it a flight of one & a half to two minutes.ò

As the rubber band is wound, the arm in front of the prop draws in to engage the prop. Then, once the rubber band unwinds, the spring disengages the arm and the prop free-wheels while in flight.

Using an old-fashion hand drill, Sean winds up the rubber band that powers Mikeôs P-30.

And speaking of Charlie McCarthy…

Charlie's feud with W. C. Fields was a regular feature of the show.

W. C. Fields: "Well, if it isn't Charlie McCarthy, the woodpecker's pinup boy!"
Charlie: "Well, if it isn't W.C. Fields, the man who keeps Seagram's in business!"
W. C. Fields: "I love children. I can remember when, with my own little unsteady legs, I toddled from room to room."
Charlie: "When was that? Last night?"
W. C. Fields: "Quiet, Wormwood, or I'll whittle you into a venetian blind."
Charlie: "Ooh, that makes me shutter!"
W. C. Fields: "Tell me, Charles, is it true that your father was a gate-leg table?"
Charlie: "If it is, your father was under it."
W. C. Fields: "Why, you stunted spruce, I'll throw a Japanese beetle on you."
Charlie: "Why, you bar-fly you, I'll stick a wick in your mouth, and use you for an alcohol lamp!"
Charlie: "Pink elephants take aspirin to get rid of W. C. Fields."
W.C. Fields: "Step out of the sun Charles. You may come unglued."
Charlie: "Mind if I stand in the shade of your nose?"

Source: https://en.wikipedia.org/wiki/Edgar_Bergen

And everyone laughed
when I had to put 10 pounds of washers in the nose of my Giant Ugly Stick (below) to off-set its huge tail (okayé maybe it was only a pound and a half). But its new owner, Ted, removed the washers and built a 6òbox extension, which holds the battery and fuel tank and replaced my O.S. 120 with a humongous gas engine to maintain balance. And it flies great once again.

Stalls…

OWLS member George Favor was trying to explain accelerated stall crashes to me. Something we have all seen and probably experienced: during a turn, a wing dips dramatically toward earth and the plane follows it to an untimely death. So I thought it might prove useful to write up a primer on the subject.

Types of stalls:

Normal induced stall: the pilot raises the planeôs nose to decrease air speed

Take off & departure stalls

Approach to landing stalls

First, letôs consider some basic rules of flight:

Rule #1: Air must go over the wing at a determined minimum rate to get lift.

Rule #2: If air does not go over both wings at the same rate, the wing with lesser air will dip (stall).

Rule #3: Wind factors into the rate in either a positive or negative way.

Rule #4: Stall speed is proportional to the angle of bank.

Therefore, letôs say that our cub *needs* a 40mph indicated air speed (IAS) to lift off. Directing the cub into a 10mph headwind (HW) means at a ground speed (GS) of 30mph, the cub will lift off.

30mph GS + 10mph HW = 40 mph IAS over the wings. Simple.

Now take into account a quick turn after take off without adding additional power, whether due to approaching power lines or anxious pilot, the air over one of the wings drops. Why? Consider a line of marchers shoulder to shoulder pivoting around a fixed point. The marchers closer to the fixed point moved slower than the poor SOBs at the other end who are racing like hell to keep the line straight. So, in our cubôs left hand turn, the left wing is moving slower than the right wing causing the left wing to lose IAS and the cub will bank adding another complication (rule #4). Example: A 10 degree bank means our stall speed increases by 10% to 44mph.

Okay, we all make left & right hand turns all the time, but remember, our GS at lift off in a 10 mph HW was 30mph giving us an IAS of 40mph. As we make the crosswind turn the headwind is no longer adding to our IAS. Without the benefit of the headwind, the IAS begins to drop. Then as our cub tries to turn downwind the 10mph headwind is no longer passing over the wings and our IAS of 30mph will immediately drop to 20mph plummeting our cub to terra firma. This is known as an accelerated stall crash usually accompanied by the pilotôs and/or spectatorsô utterances of ñWhat the *^@# just happened?ò

How do we avoid a stall? Whether flying into a wind or calm air, make sure your IAS is well over the speed needed for a lift off before making a turn. So, as the cub rotates, the IAS, while not equal over each wing, is still greater than the minimum speed needed for lift. Then, the wing dip that occurs with any turn is easily corrected with aileron, rudder and/or elevator inputs.

This phenomenon is also prevalent during the landing approach. Remember, a landing is technically a stallé just closer to the ground. Here the headwind will help. Since your cub is already approaching the minimum speed needed to maintain lift on the base leg, the added headwind will increase the IAS while providing a slower ground speed for a more controllable landing.

4-SALE

Our President Mike Flick is looking to sell his three electric planes (right). Mike is going back to fuel planes and needs to free up some extra space in his shop. He would like to sell all three as a package for a very reasonable price.

Contact Mike for details:

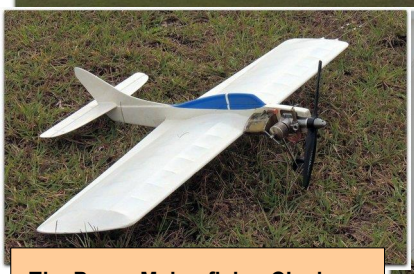
Aeroglide33@aol.com
407-832-3353

Art Scheurer was drafted…er, I mean, elected to fill the Safety Officer spot recently vacated by Rob Grant.

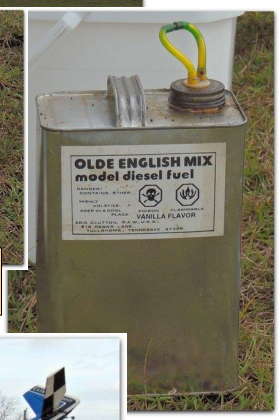
Our CD Gale Moore is moving to Lexington KY as maintenance manager for a 560 acre thoroughbred horse farm, so Jerry Flick will be filling the CD position. Good luck Gale!

The OWLS Nest Gallery… See all the videos at https://vimeo.com/groups/onewinglow

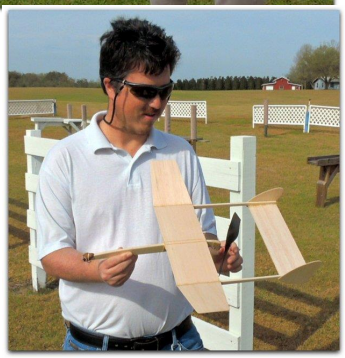
Mike & Shaun started off the New Year by treating us to a control-line demo flying Mike's diesel engine Peace Maker followed by some free-flights amid gusty conditions.



The Peace Maker flying CL above

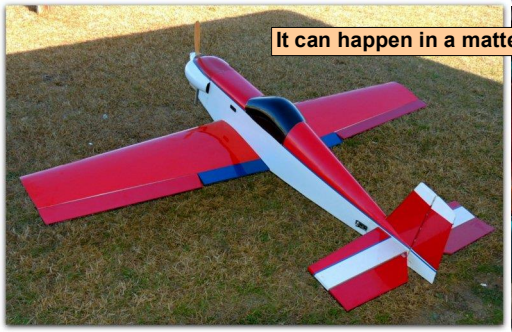


Mike's lil' "free flight" model & a work in progress



Art & Jim with a flock of Radians

A threatening storm on the horizon



It can happen in a matter of seconds!

Shaun's delicate landing gear

Got Photos? Catch me at a meeting or send a copy to: keukadiver@gmail.com

KennyWorld R/C Field **CR 464 west of SR 41, 17150 SE 60th Street, Morriston, FL 32668, 352-528-3744**

We're on the Web! Onewinglowsquadron.org