

The Flying Times

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August Meeting Discussion

At the august meeting of the VRCFC a lively discussion ensued on the mowing situation.

The auction was enjoyed by all?

Technical Notes

Electric vs Glow

Here are my opinions on the advantages of electric over glow or gas. I've often read that electric flight isn't better than glow power, just different, but now that I have a few years of experience with electric power systems I'm willing to say electric is much better. I don't fly glow or gas at all any more.

Here's 18 reasons why electric-powered planes are better than glow-powered planes:

1. Safer - With glow engines, usually an electric starter is used. If not, then a chicken-stick, or worse, flipping the prop by hand. All these methods have hands and fingers close to the rotating propeller. With an electric, there's no need to have your hand near the prop, it's always remote starting. Also, there's no needle valve adjustments required with electric planes, so there's no reason to have fingers near the prop.
2. Cleaner - Since electric planes don't use glow fuel, the plane isn't slimed with oil after each flight. Therefore, a larger variety of finishes can be used with electrics, including non-fuel-resistant paints.
3. Last Longer - Since electric planes don't use glow fuel, the wood doesn't get soaked with oil over time. Therefore, electric planes can last a lot longer than their glow-powered counterparts.
4. Improved Scale Appearance - Since electrics don't have a cylinder head or muffler sticking out, scale subjects can be modeled more scale. Also, since the spinner of an electric plane never needs to be touched by a starter, scale appearance can be enhanced by painting the spinner (olive drab, for example), if the scale subject requires it. A starter would eventually wear the paint away.

5. More aerodynamic - For the same reasons as improved scale appearance, electrics can be built more aerodynamically efficient, since no cylinder or muffler sticks out into the airflow. Electrics with a spinner allow a smooth transition of airflow from the spinner onto the fuselage at all points.

6. Inexpensive to build - The electric planes I'm involved with are small Speed 400 and 05 can motor powered. They don't take much in materials to construct. And since they're smaller, they take less room to store in the garage, and take less room to transport. I don't have to put the plane in the truck bed, it will fit on the seat in the cab next to me.

7. Inexpensive to fly - Electrics can be viewed as less expensive to operate since fuel at \$15 or more per gallon doesn't have to be bought, and glow plugs will never burn out.

8. More reliable - There's no needle valves to tweak on electrics. You never have a poor engine run with electrics. You never have an electric motor go lean or rich. For multi-engine electric planes, you never have one motor quit, and the motors always run at the same RPM. Even counter-rotating props are possible with a simple polarity change.

9. More power - Theoretically, you can pump volts (by increasing the number of cells) into an electric motor until it blows apart. With glow engines, they peak at a certain horsepower, and there isn't much you can do to get more.

10. Limited support equipment - When I fly electric, this is the stuff I can leave at home: Field box, almost all tools, bottle of glow fuel, fuel pump, starter battery, power panel, glow starter, engine starter, cleaning spray, paper towels. When I fly electric, all I need is the plane, the transmitter, and the battery charger (which I attach to my car's battery).

Tip of the Month:

Did you ever wonder how fast your airplane is flying? Do you think your plane is flying "200mph +"? Most people are curious about that. I find sometimes that how fast an airplane flies rates right up there with fishin' stories. Actually, judging airplane speed is pretty difficult by the eyeball method. A radar gun is probably most accurate. We have set up closed distance courses at the field before and timed the airplane through the trap, and calculated the speed from that, and we have also used radar guns. Lacking either of those, below is a method to use to calculate how fast your plane will

fly, disregarding a few details like propeller slip, drag on the plane, etc, but it is accurate enough for our purposes.
(reprinted from AMA Insider)

All you need to know is the rpm of the engine and the pitch of the propeller. The "pitch" is the actual distance the prop will advance forward in one revolution.

To find the speed, follow this simple equation:
 $\text{rpm} \times \text{pitch} \times .000947 = \text{speed}$

The .000947 converts the pitch inches and the rpm into miles per hour. For example, if your motor has a propeller with a 6 pitch that turns at 12,000 rpm, the airplane will probably have a top speed of roughly 68mph.

$$12,000 \times 6 \times .000947 = 68\text{mph}$$

If your model is aerodynamically clean, this figure will be close; however, if you have a "draggy" airplane you could lose 10 to 20% of your speed.

Buy, Sell or Trade: =====
It looks like everyone is happy with what they have now.

Food for Thought=====

Are You a Gambler?

Question: How many of us are gamblers?
Short answer: ALL of us!

What? You say you don't gamble-don't wager? Of course you do. Every time we fly our models, we're betting our wit and knowledge against gravity, Mother Nature, the wind, physics or just plain bad luck that we have done our homework AND we will win this round of flying.

The point is, how long will you be willing to let something go that should have been done, in the expectation that "I have enough battery voltage for one more flight" or "Darn, I left my voltmeter at home, but the battery should be charged since I had it on the charger for 24 hours." Another one: "Why should I range check it-it was fine the last time I flew." There is an old saying, "Nothing lasts

forever." The opposite side to that is: "Don't fix it if it ain't broke."

How many of us are flying with radios that are more than 3 years old and have never sent them back for a routine check up? I'm guilty, on TWO counts! I have two Futaba radios that are approaching 6 years old, that I'm sorry to say I have never sent back for a check up-but this year, they are going back. Have they given me any trouble-no. Have they been dropped, kicked or abused-no. But for my peace of mind, I'm going to spend the money to give them a physical-by someone who knows what to look for.

When I first got started in this hobby, (now approaching 30 years ago), if we got through a Sunday afternoon when someone didn't have a crash due to radio/component failure, glitch or something radio related, we felt like we had a successful day. (and I'm sure some of the so-called "radio failures" back then were pilot error also)

Thanks to technology, radio failure is hardly ever heard of today. But, we still need to maintain our equipment. Sending it back for a check up is a smart thing to do. Having done some checking into radio repair facilities, it looks like, including shipping both ways, it will probably set you back about \$50-75.00 to get your transmitter checked out.

Compared to the dollar amount you have invested in that plane flying around, wouldn't you think this is probably a good use of that money? Winter is approaching us now, and the good flying weather will start becoming more sporadic. This might just be a good time to consider sending that equipment back for a check up.

Happy Flying

Aviation Humor =====

"Airspeed, altitude and brains. Two are always needed to successfully complete the flight."

"A smooth landing is mostly luck; two in a row is all luck; three in a row is prevarication."

"I remember when sex was safe and flying was dangerous."

"Mankind has a perfect record in aviation; we never left one up there!"

"Flashlights are tubular metal containers kept in a flight bag for the purpose of storing dead batteries."

