The Tailwind

AMA Charter No. 704

FEBRUARY ***DON LEWIS, EDITOR*** **2015**

President: Lynn Perkes *Vice-President*: Bill Pruner
Treasurer: Lynn Perkes *Secretary*: Don Lewis
Safety Officer: Carl Tackett *Instructor Pilots*: Bill Pruner, Lynn Perkes

Next Meeting – February 19 – Be There!

Be sure to check out the website at www.fly-hrcc.org

MEETING MINUTES

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President Lynn Perkes opened the meeting at 7:00

Attendees: L. Perkes, S. Chrzanowski, B. Pruner, C. Tackett, D. Lewis

The minutes from the November meeting were published in the January Tailwind. D. Lewis moved that the minutes be accepted as published; seconded by C. Tackett; passed unanimously.

L. Perkes presented the Treasurer's Report (details below). D. Lewis moved to accept; seconded by C. Tackett, passed unanimously.

Old Business

- Decided to wait until warm weather to install the pilot fence sockets and the new field sign.
- Reviewed the event dates for 2015 – D. Lewis reserved the shelter for both dates.
- Discussed set-up needs for the Numb Thumbs Fly-in:
  - B. Pruner – donuts & coffee
  - D. Lewis – drinks

New Business

- D. Lewis suggested that area around bleachers and picnic tables be edged, plastic, and decorative gravel be placed inside to keep weeds from under those areas. D. Lewis to check with Parks Department for permission to proceed.
- As soon as weather get warmer, will schedule a day to complete fencing.
- S. Chrzanowski suggested that we look into displaying models at the weekly car show on Fridays during the summer behind the Indian Lake Theater.

B. Pruner moved for adjournment at 8:05; seconded by C. Tackett; passed unanimously.

TREA$URER'$ REPORT

Opening balance	$1,036.94
Income	249.96
Expenses	(105.37)
Closing Balance	$1,181.53

ENGINE THRUST LINE

by Clay Ramskill

For all practical purposes, (excluding those prop effects) we can consider that the engines thrust acts along the centerline of the engines crankshaft. The plans for your plane show whether or not that coincides with the centerline of the plane itself - it may or may not, depending on the plane and how well the designer did his job.

From the prop effects story, you know that all of our planes, to some degree, want to turn to the left when slow, at high power, and at a high angle of attack. This is not always a good thing; not all pilots have the experience to correct with just the right amount of right rudder at the right time. Let's face it

- we'd rather the darn thing wanted to go straight ALL the time. And we can do that, by using some right thrust on the engine.

By shifting the engine so it points a bit to the right, the engine will tend to pull the nose of the plane to the right, turning the plane. And that turning tendency will be proportional to the amount of power applied, as is the prop effect tendency for the plane to turn left. So by putting in a degree or two of right thrust, the prop effects may be pretty much cancelled out. The only down side to this procedure is that the right thrust will be left thrust when the plane is inverted, ADDING to the prop effect.

The thrust line may also be shifted to help out with pitch (up and down) problems. Flat bottom wing trainers are notorious for wanting to go up with full power - we trim them for loping about at 1/2 power, and when we goose the engine, up goes the plane. To a large degree, this tendency can be cured with DOWN thrust; with the thrust line pointed down a bit, the more power we apply, the more the nose wants to go down, counteracting the tendency for the plane to go up at the higher speed. The plans for my Seniorita include 6 degrees of downthrust, which is a LOT - but that contributes to the fine flying qualities of that design.

Shifting the thrust line is relatively simple - you can just stick a washer or two behind the engine mount, or you can buy plates with the angle manufactured in. Better yet, build it into the plane; the Goldberg Extra 300 kit has allowed for 3-4 degrees right thrust, shifting the rear of the engine mount to the left so that the spinner will line up properly.

So how do we know if changing the thrust line will give us a better flying plane? If your plane has a vicious tendency to go left when its slow and you add full power, you would definitely be better off with some right thrust. The same applies if the nose always drops in left turns and comes up in right turns. Experimentation will tell you how much for the plane involved and the way you fly. And if your plane always wants to climb at full power, or if when you trim hands off at full power, then chop the throttle, the plane dives, some down thrust will help.

The above techniques are a part of the trimming process. Don't be afraid to make changes if your plane doesn't fly the way it should; and thrust line changes are relatively easy to do, and can always be changed back if the results are not what you want.

Editorial

Planning Time

There are a number of things that we want to take care of this year. Improvements to the field, increasing membership, publicizing the club and the hobby, and, of course, increasing attendance at our flying events are all things we have discussed for this year. If we are going to have any kind of success at these, we need to do some planning.

We would like to have some great input into planning and implementing these initiatives. Even if you can't attend a meeting, you can always email me with ideas and suggestions. We could also use some volunteers to help with some of the work at the field. More muscle makes the work go faster and easier, as well as contributing your skills to the efforts. If you can, please attend one of the next two meetings to help make our field safer and more enjoyable for everyone.

I will welcome any member to submit an opinion in writing so long as it is civil in its expression (I reserve the right to make that determination). You can email your letters to the editor to me at Don_Lewis@comcast.net, or just give them to me at a club meeting.

That's my opinion – it oughta' be yours! ☺

Novice Nuances:

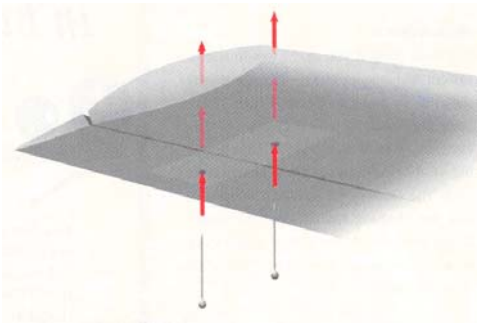
Carb Filter

If you fly off dirt or grass, you can keep your engine clean by using a filter over the carburetor intake. A simple filter can be

made by cutting a small, round piece of pantyhose a little larger than the carburetor opening. Hold it in place with a rubber O-ring of the correct size pressed down on the outside of the carburetor barrel. The best part is that there is no noticeable power loss.

Why Didn't I Think of That?

Make It Stick



CA-type hinges can be used on foam control surfaces, but they need a little help to wick the CA deep into the hinge slot. First, install the hinge and make a small pinhole through the control surfaces and the hinge. Wick in drops of CA to ensure complete bonding of the entire hinge. This creates a stronger bond – much better than only wicking in a few drops of CA at the hinge line.

Motor-Back Plate Slippage

Almost all motor prop adapters are smooth; they don't have a knurled finish. This means that when you install a prop and try to tighten the nut, the adapter often slips. Small pieces of 220-grit sandpaper CA'd to the back plate surface will prevent this and secure the prop tightly. This easy fix is well worth the bit of time it takes to do.

Sometimes to Just Have to Laugh…

An atheist was walking through the woods. He said to himself, "What majestic trees! What powerful rivers! What beautiful animals!"

As he was walking alongside the river, he heard a rustling in the bushes behind him. He turned to look. He saw a 7-foot grizzly charge towards him.

He ran as fast as he could up the path. He looked over his shoulder and saw that the bear was closing in on him. He looked over his shoulder again, and the bear was even closer. He tripped and fell on the ground. He rolled over to pick himself up but saw that the bear was right on top of him, reaching for him with his left paw and raising his right paw to strike him.

At that instant the Atheist cried out, "Oh my God!!!"

Time Stopped. The bear froze. The forest was silent.

A bright light shone upon the man, and a voice came out of the sky, "You deny my existence for all these years, teach others I don't exist and even credit creation to cosmic accident. Do you expect me to help you out of this predicament? Am I to count you as a believer?"

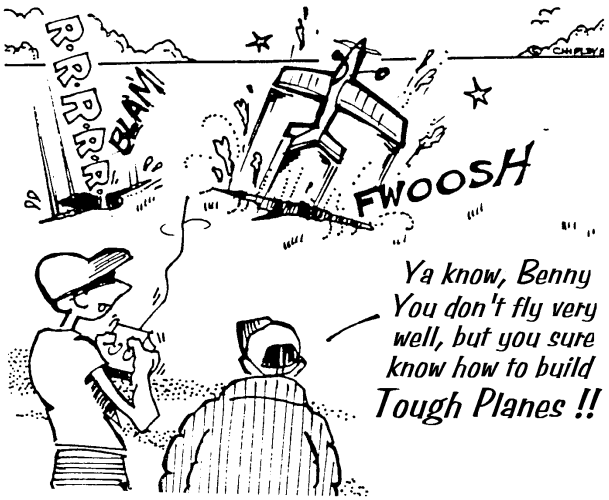
The atheist looked directly into the light, "It would be hypocritical of me to suddenly ask You to treat me as a Christian now, but perhaps You could make the *BEAR* a Christian?"

"Very well," said the voice.

The light went out. The sounds of the forest resumed. And the bear dropped his right paw; brought both paws together, bowed his head and spoke,

"Lord bless this food, which I am about to receive from thy bounty through Christ our Lord. Amen."

The Lighter Side of R/C



Product Review:

TME Xtrema Charger

The Xtrema charger is a very well built piece of hardware. The exterior case is made from high quality aluminum and not plastic like many chargers. This makes it very impact resistant and you can feel the quality when handling it.

The LCD screen supports 4 lines and 20 characters at a glance while many other chargers only have 2 line LCD's. The 4 lines allow more information to be placed on one menu screen and that means less screens that one has to scroll through. To navigate through the parameters, TME designed in a joystick. This method of walking through the menus seems very familiar and comfortable.

From 1s to 10s the Xtrema is ready to handle any lithium cell on the market today. Now while this charger is marketed at up to 8 amps, keep in mind that if voltage increases (in cell count) then the current must decrease to maintain power equally throughout the charge. So the Xtrema will not charge a 10s at 8 amps. It will most likely charge the 10s at up to 4 amps max. The less cells/less voltage required means the amperage can increase.

Since version 1.1 firmware update, the Xtrema can charge the M1 A123 Lithium Ion Cells. These cells must be charged at a Constant Voltage of 3.6 volts. These cells popularity is ever growing in the RC community, so it is nice to see TME staying ahead of the game.

The charger has the ability to store four of the most commonly charged packs within the charger makes life simple. I have mine setup for my 5S 5200 pack, 3S 4400 pack, 3s 1320 packs and 3S 2100 packs. That covers just about the entire range of batteries that I use. After a battery packs is stored in memory, it is simply a matter of plugging in the correct pack and choosing that memory location to charge from. All of the settings are pre configured, so it is more or less hands off.

CC/CV is a term most people know with relation to lithium chargers. CC/CV stands for Constant Current and Constant Voltage. I believe that this is the better way to charge a lithium pack over pulse charging as some chargers utilize. At the beginning of the charge cycle is the test phase. This is where the charger is more or less checking the settings against the cell voltage to verify cell count. After the cell count is verified, the charger switches to the CC phase. The current is held at a constant level while the cell voltage naturally climbs. As the cell approaches a charged state, the charge cycle changes to CV or constant voltage to top it off. Typically the charger will stop charging when the cells reach 1/10th of their starting value.

Michael Parsons
www.rcuniverse..com

You Might Be An R/C Modeler If…

...You have fuel stains on your new sneakers.

...You are shopping for land to build your dream home on, and would rather have flat, open pasture land than rolling wooded hills.