



Stetson Flyer

Stetson Flyers Model Airplane Club

April 2000

PRESIDENT'S MESSAGE

The 2000 flying season is almost here. It is a time to plan on testing your new bird or scramble to finish it for this season. The latter is usually my problem.

As for our club, we have many irons in the fire. Field prep and work party day, new frequency pins and board, flight training, newsletter, website, events, club t-shirts and sweatshirts, meetings, etc.

The first thing that I want to deal with, is the frequency pins. The board is in and we will be installing it shortly. Check our website, Roger received the info from Reg Grayston and put on the web the explanation needed and a means to order your pins. Free of charge, thanks to Discount Hobbies. Please, follow the instructions carefully, this a club rule. This gives us the opportunity of uniformity for frequency control.

Doug Tufts, the pink pig recipient, has come up with nice t-shirts. He will deliver some at the next meeting. Check it out, if you have not ordered one, maybe he will order another batch.

Bob Butterworth has organized a ground school for April 17 at the museum.

This year we need to be more aware on **safety** issues at the field. The last couple of years, we have not really made much of it. This year, we should be a little more safety conscious.

That is, we all pay a little more attention to what our fellow members are doing or not doing. And we tell them when this occurs. If this individual gives you a hassle, let me know. A phone call will follow. **It is the responsibility of all concerned.**

We will be making plans for our work party day, thanks to Darrel and Nigel.

As of this moment, entrance to the museum, for our meetings, will be made through the back door where we unload our planes at events and so on.

Our next meeting, we will have our annual **auction**. The handling of the reserve bid will be better controlled. 10% goes to your club, so bring lots, we will try to get as much as possible.

Bring n' Brag, as it is now called (not Show n' Tell), bring something to show off. We will draw a gift certificate from Discount Hobbies for participation.

Memberships are coming, thanks for hearing us. Those have not yet paid will not receive a newsletter and get the code for the gate.

That's it. Take care. See you at the next meeting.

Gerry Nadon

Next Meeting

Tuesday April 25, 7:30 pm

Auction Night!!

Don't forget your "Bring'n'Brag"!

⇒ Don't forget—Use the back door to the museum!

Coming Events...

May 27 th	Fun Fly
May 28 th	Rain Date
May 30 th Meeting	Engine Night
June 10 th	Scale Fun Fly (Light)
June 11 th	Rain Date
July 1 st	Static Display at NAM
Sept. 2 nd & 3 rd	Pattern contest
Sept. 16 th & 17 th	Giant-Scale Rally

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Club Officials and Contacts

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Mailing Address:

The Stetson Flyers Model Airplane Club
P.O. Box 456, Orleans, ON, K1C 1S8

Web Page:

<http://www.stetsonflyers.com>

Dues:

\$55.00 per calendar year; \$30.00 for students under 18

Meetings:

The Stetson Flyers meet at 7:30 on the last Tuesday of each month, except for December, June, July or August. The meetings are held at the National Aviation Museum in the Bush Theatre. As of April 2000, please enter by the back door. You may drive your car *carefully* around back using the open security gates just left of the farthest museum building. Signs will be posted!

Receive this newsletter via email!

Instead of sending a printed newsletter by Canada Post, we can send you an email notice with the web site address where you can download the newsletter each month. This is an Adobe Acrobat PDF file, which means that you need to use a FREE Acrobat Reader software to view or print the document. There is a link to the Adobe site to get the FREE software on our web site.

The benefits to you are faster delivery, colour pictures, less cost to the club, and environmentally friendly to boot! To update your membership listing and receive the newsletter by email, send **your** email address to john.jackson@netmanage.com.

Please visit our web site at

<http://www.stetsonflyers.com>

Our web site is hosted as a community service by
Magma Communications
(613) 228-3565

Would you like a member discount on your internet access? Contact club member Rick Ramalho at rick@magma.ca to receive information on discounts for Stetson Flyers members.

Narrow Band, Single Channel Receivers

By John Jackson

At the February meeting, there was a concern raised over single conversion receivers such as the FMA Tetra and other micro-receivers. Owing one, and not wanting to find out the hard way how well they will work at one channel separation, I asked Fred Marks of FMA. Fred has designed many of the electronics we all use in our modeling that were once sold by Ace R/C, such as the Silver Seven radios and many of the chargers and cyclers such as the Digipace.

Here is Fred's response:

"The TETRA has the same adjacent channel rejection and third order intermod rejection as our dual conversion receivers. The single conversion receiver will always be open to interference at the image frequency which is outside the R/C band. The AMA rule book specifies proper operation at your club field that protects all receivers and no one has a problem with TETRA as long as they follow the guidelines. However, if 15 or so people congregate close to each other in violation of AMA guidelines, they create so much intermodulation that it reaches out beyond the image freq for a single conversion. However, the image for the dual conversion is 21.4 MHz out and image is never a problem. If you are concerned, the Fortress micro weighs only 0.1 ounce more and is very slightly larger than TETRA. The price is the same."

For Sale: If you have something you would like to sell, feel free to send me the details and I will add it to our next newsletter!

Minutes of March 28 meeting

Location: Aviation Museum

Attendance: 60

1.0 Gerry welcomed all to the meeting. Many visitors, and newcomers to the hobby introduced themselves. This meeting was hosted by Richard Robichaud of Discount Hobbies.

1.1 A motion to accept the minutes as published in the last newsletter was seconded by Paul Bettez and Pat Lebrun and passed.

1.2 Christine gave the treasurer's report. The current bank balance is \$3493.

1.3 John Jackson asked if anyone who received the last newsletter by email had any problems and questions. He said that feedback had been positive.

1.4 Bob Butterworth gave the CFI report. He is planning a ground school at the Museum in April and the information on this will be posted on the website. Anyone wishing to have a new trainer inspected, can bring it to a meeting.

1.5 Events as set earlier are unchanged. Gerry also reminded everyone of the upcoming IMAA symposium on April 1 in which a Cornwall high school class will be displaying a 1/3 scale Beaver they are currently working on.

2.0 The field has been recently had the brush cutting done. The cost was \$420.00 but George Pepper is paying half of this. A follow up cutting may be done in the fall to make the spring cut easier. Next month, preparations will take place for the Work Party Day.

2.1 Doug Tufts showed the sweatshirts and T-shirts he is taking orders for. They feature the club's crest in full colour. Pricing is \$35.00 and \$20.00 respectively.

2.2 Gerry spoke on the changes that the club should follow with regards to frequency pins used at the field. Other clubs have been follow-

ing the single pin size for all modern radios and we should as well. A new frequency board has been ordered for the field.

2.3 Reg Grayston offered to produce new pins for all that are interested. He will have info in the next newsletter and perhaps the website.

2.4 A method was put forth by Gerry for the club to pay for one pin per member in order to get the club started on using the single pin size. This was passed. Richard Robichaud of Discount Hobbies offered to help cover the costs as well.

2.5 John Jackson put forth the motion that all flyers at the field using narrow band radio systems, use a frequency pin that covers one channel on the frequency board. Members with wide band radios built after 1984 use a pin that covers three channels on the board. Ones with pre-1985 radios use a frequency pin that covers five channels on the board. Gerry mentioned other clubs that have been using this policy have not had encountered any difficulties. This motion was passed.

2.6 Doug Tufts was chosen as the winner of the Pranged Pig over Marc Shaw.

2.7 Next month's meeting is the Auction. The back door will be available to bring in items. The meeting will be in the Bush theatre. Following meetings Gerry would like all to come in by the back door.

2.8 Terry Satchell asked if there was anyone with parts available for a YS 1.20.

2.9 A motion was made by Marc Shaw, to change the name Show and Tell to Bring and Brag for future meetings, seconded by Mike Gratton, and was passed. Next meeting's Auction will also have a "Bring and Brag".

2.10 The meeting was followed by coffee, show and tell with prizes from Discount Hobbies, a 50/50 draw, and a crash video.

Bitza - A Pack Rat Special By Roger Hiscocks

So I stepped into the basement, and thought to myself "What a load of junk, this should be cleared out and tidied up." With a rare enthusiasm, I waded into the darker recesses, garbage bag in hand. In no time at all no end of useful bits turned up, which I just couldn't bring myself to ditch. Consequently, I still have a tip for a basement, but there is (yet) another aeroplane in it!

For people of a kindred spirit, here's a list of the junk that went onto the building board:

- one slightly battered swept Gremlin wing, result of an abortive attempt at a better flying Gremlin
- a piece of down spout, obviously an off-cut from my Gremlin kitting days, and too short to be of use on the house
- a broken carbon fibre cross country ski pole
- a bent aluminum one
- a ladder from an above ground pool
- the tail plane of a re-kitted Stik
- one bent aluminum landing gear with wheels
- a piece of high density foam used at NRC for simulating human bone (don't ask)
- sundry off-cuts of Sullivan flexible control rods
- various bits of 1/4 ply, screws and so on.

The radio and engine were both bought secondhand a long time ago for Gremlin development.

What came off the board can be seen in the photos. It's a Dura-Plane look alike which I have called Bitza (do I have to explain?). Much to my astonishment, it flies, and pretty good too.



Step one - design.

Design ? Yeah right! The design process went something like this. How long is the down spout? How far back looks right for the tail? Quick glance at the remains of my old Eagle, still in the rafters; ok that should do. Cut off the carbon fibre ski pole long enough to join the tail to the fuselage. The wheels need to be just in front of the wing and of course, the engine goes at the front. The electrical bits can all go inside, along with a six-ounce fuel tank, which just fits into the down spout. A quick trial fit suggests the CG should be achievable, but just to make sure, leave extra fuselage out the front, we can move the engine back later. (I don't wish to worry anybody, but in my professional capacity as an aeronautical engineer, I have designed things that you may have flown in.)

Step two - the tail group.

The tail plane and fin are epoxied to the end of the carbon fibre boom, with triangle stock giving a little extra glue area. The forward end of the boom is epoxied into two frames that are screwed into the rear of the fuselage. A small length of 1/16 bore brass tube is epoxied into the back end of the boom to provide support for the tail wheel spindle.

Step three - the wing.

The wing is a standard Combat Gremlin wing, except that the trailing, not leading edge is straight. The wooden blocks are drilled 1/4 inch to accept nylon wing bolts, as close to the edge of the fuselage cut-out as possible. A space is hot carved out of the centre section to enable an aileron servo to be mounted on a couple of bits of ply. The wing is not skinned, and the only spars are glass fibre reinforced packing tape, under the Mono-Kote.

Step four - the fuselage.

A 1/4 ply firewall is screwed into the front of the down spout. The engine is mounted horizontally to enable the exhaust to run out along the underside of the fuselage. A hole is cut in the top of the fuselage, giving just enough room to fit the aileron servo and linkages. The wing bolt holes are drilled through from the wing, and hardwood blocks glued (with Plumbers Goop) to the inside of the fuselage. These blocks are tapped 1/4 - 20 for the wing bolts. A six-ounce tank wrapped in foam is squeezed into the fuselage before the firewall is attached. This tight fit also traps the throttle cable outer tube. Three servos are laid on their sides. The servos are screwed to blocks of the simulated bone, which are then screwed to the floor of the fuselage. All the control rods have to be fitted first, since they cannot be accessed easily after. This takes a bit of trial and error. The un-

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derrigage is simply screwed to a 1/4 ply plate, glued at the right spot to the floor inside the fuselage.

Step five - the silencer.

The engine I had available was a Skyward, by Pico. Unfortunately, it had a missing muffler. A while ago there was a series of articles in Model Airplane News describing the design and manufacture of silencers from (brass) tube. Now, I didn't have brass tube of the correct size, but I did have the aluminum ski pole and the pool ladder, which, surprise, were just the right diameter for the exhaust and muffler respectively. I had a small amount of heat proof, metal filled epoxy that I used to glue the various bits together. A header was made from an old copper elbow, silver soldered into a brass plate bolted to the engine. Being a Pico, the exhaust port was circular, same diameter as the elbow. The muffler was attached to the header with a bit of silicone tube and some wire ties, and off for engine trials...

Step six - engine tests.

With the tank full, the aeroplane suitably restrained, the starter was applied. A little bit of adjustment and she ran fine. And QUIET! The exhaust was much quieter than the intake and prop noise, the neighbours were impressed.

Step seven - flying.

It was a bit cool when I went to the field for a try at flying the beast, so we had a little trouble getting the engine to run well. Anyway, eventually it was sorted and off into the air we went. Real twitchy on the elevator, bit more rudder throw needed. Land, adjust the clevises to get more and less throw, and away we go again. Much better. A couple of circuits to get the feel, and lets see how it goes. Loops big (it's under five pound with no drag and lot's of power) and rolls like a Gremlin - blink and you've missed it! Just as we're beginning to have fun, there is a large increase in the noise levels, and I see a bit of exhaust hanging down just behind the en-



Top view of a Blitz

gine. Bring it down, and check it out. The heat proof epoxy wasn't! The muffler had all come apart. Oh well, back home and let's think what to do. I could buy some thin wall brass tube and solder up a muffler, but BUY? Heck, somewhere in the basement there is an old .40 size tuned pipe, which if I remember, should just fit right on to the copper elbow header...

If anybody should be interested in having one of these, I'm sure there are some bits downstairs, I'll check!

Redundant Power Systems

By John Jackson

There has been some discussions over the past few months about the merits of redundant power systems for receiver batteries. One camp suggests adding a second battery set in parallel with the first; the other camp believes that some electronic switch is required between the two battery packs in case one cell shorts.

Since this borders on religion with some folk, I am not about to suggest a correct answer. I contacted Larry Sribnick of SR Batteries in New York. Here is what he had to say on the subject:

"NEVER just parallel two packs. You can run into all kinds of problems that can cost you an aircraft. I know there are some people who say you can do it, but don't. As far as battery backup systems, the Jomar unit sold by EMS is the best of them. However, I believe in keeping things simple and see battery backup systems as just one more thing to have trouble with."

Larry publishes a regular newsletter on R/C Battery issues. For more information, visit his web site at: <http://www.srbatteries.com>

Important Definitions

PROPELLER: Rotating knife that cuts holes in the air, which the aircraft falls into, thus propelling the aircraft.

SNAP ROLL: After a nice hard G roll, something SNAPS (usually and most likely the wing). Aerodynamic ability will slightly diminish.

STALL: Score—Gravity 1, Mr. Bernoulli 0

WING AREA: What you get more of in the car by leaving your spouse at home.

(Lifted without permission from <http://www.xs4all.nl/~hdebruin/rcdef.htm>)

Stetson Flyer's New Frequency Pin

At the February meeting a motion was adopted that members with narrow band radios (those built after 1990) WILL use a single channel frequency pin. For those members having radios which pre-date

Year Radio Manufactured	Frequency Pin Width
pre - 1984	5 channels
1984-1990	3 channels
1990 and later	1 channel

1990 the following standards are applicable:

The motion was accepted by the membership at the February meeting and is now a club rule.

To ease the process of switching to the new frequency pin format, a proposal was made at the March meeting for a standard frequency pin. A motion was adopted which created a standard frequency pin for use by all members of the club.



Sample Single Channel Frequency Pin

All club members will receive a frequency pin for EACH one of their transmitters ABSOLUTELY FREE, thanks to funding and support from the Stetson Flyers and Richard Robichaud @ DISCOUNT HOBBIES.

To obtain your frequency pins, submit an email to Reg Grayston [grayston.siew@home.com] (or phone 765-3274) prior to April 22nd 2000 with the following information:

First Name, Last Name, MAAC #, All Channel #s, Pin Widths

Example:

Gerry Nadon 5271L, (12,1), (58,1), (17,3)

Translation → Gerry needs pins for channels 12

and 58 (both 1 frequency wide) and channel 17 (3 frequencies wide).

For anyone requiring a 5 channel pin, include the date of manufacture for your radio in your email.

Frequency pins will be available at the monthly club meetings or @ DISCOUNT HOBBIES.

Any questions or comments on the frequency pins or the new club rule can be forwarded to either Reg Grayston or Gerry Nadon, and will be addressed at the next monthly meeting.

Winner of the Pranged Pig Award March 2000



Doug Tufts is the proud recipient of the Pranged Pig award for the Month of March, 2000



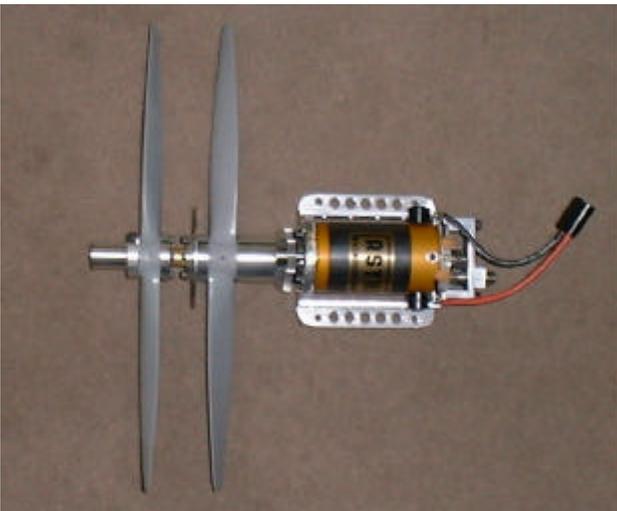
Jim Brown's "Air Magic" was one of several models on display last meeting as part of Scale Night.

EMFSO AGM

By John Jackson

On March 11 the Electric Model Flyers of Southern Ontario held their Annual meeting in Toronto. While this club meets regularly in the Toronto area and has events, workshops, and exhibitions, they are becoming a provincial organization for those of us who fly electric.

Dr. Keith Shaw from Michigan is 'the guy' when it comes to electric flight. Keith gave an excellent history of electric model flight over the past 25 or so years. These pictures illustrate some of the models brought for display.



Keith Shaw's Gearbox for Astro 40 Engine which drives two 11 inch props (one 11X7, one 11X10) which will power his Bugatti racer

Keith Shaw's Scale Fokker D8 uses a direct drive electric motor to swing a 26 X 16 prop at 3600 RPM. Powered by thirty cells.

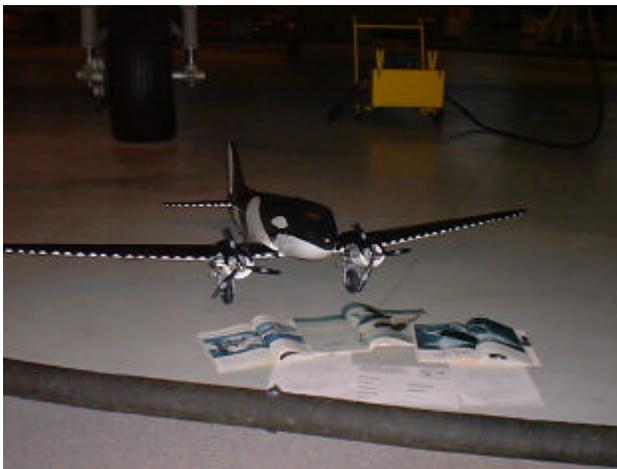


Scale model of a Tupolev TB-3 Russian bomber with Antonov parasite fighters, built by Laddie Mikalaso. This model plane had nearly an eight foot wingspan and was powered by two geared Astro 15 motors. On each wing was a speed 400 powered fighter model. With three pilots on three frequencies, the plane takes off and on command from the bomber one or both of the fighters can be released from their cradle. The pilots of the two fighters can switch on their motors and 'fight off the enemy', landing on their own power. This model looked so strange I had trouble believing such a beast existed in real life. On the internet I found that these bomber flew with up to FIVE such fighters attached. In order to get off the ground the real planes would have had to have all their seven engines running.

IMAA Show at the National Aviation Museum



Kate Jackson stands next to a Beaver built as a class project by students of La Citadelle in Cornwall. The plane stands 63 inches tall on floats and has a wingspan of 16 feet. It is powered by a Quadra 200 engine. Fibre optics are used to control servos to avoid glitching as a result of long wire runs. They have been nominated for awards for their achievements.

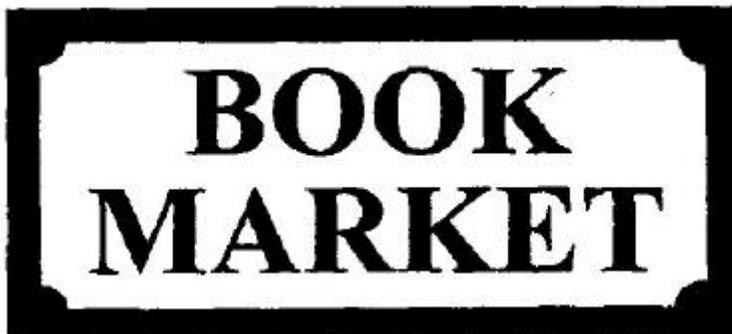


A DC-3 built by JJ Cartier is 1/13 scale, with a wingspan of 82 inches. Powered by two FSR 25 engines.



A 1/6 scale Spitfire Mk16E built by Chris Burrige has a wingspan of 85" and is powered by a Laser 150.

The Stetson Flyers would like to thank George Pepper from the **Book Market** for the excellent job arranging the brush cutting at the field. George has also paid \$210.00, which is half of the cost of the cutting, for the club. Thanks, George!!



GEORGE PEPPER

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