



Stetson Flyer

Stetson Flyers Model Airplane Club

January 2004



Next Meeting

Tuesday, January 27th
7:30 pm

Video from 2003 NEAT Event

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

***Use the back door
to the museum!***



The Winners Circle—The first flight of the new year was by Michael Pronovost (centre), followed by Pierre Tessier (right) and Marc Shaw (left).

Coming Stetson Events...

January 27th

Monthly Meeting

Our website address: <http://www.stetsonflyers.com>

Club Officials and Contacts

President	Gerry Nadon	613-824-9100 president@stetsonflyers.com
Vice-President	Peter Barnes	613-824-5352
Secretary	Erich Zappe	613-830-7549 secretary@stetsonflyers.com
Treasurer	Dan Murphy	819-663-5188 treasurer@stetsonflyers.com
Membership	Monique Simoneau	613-741-7374 treasurer@stetsonflyers.com
Member at Large	Greg Marshall	613-742-5130 greg@zone12.com
Member at Large	Pierre Tessier	613-443-1472 pierretessier@yahoo.com
Member at Large	Scott Clarke	613-824-5114 sclarke@rogers.com
Chief Flying Instructor	Rick Ramalho	613-741-3337 rick@magma.ca
Webmaster	John Jackson	613-445-5726 webmaster@stetsonflyers.com
Newsletter	John Jackson	613-445-5726 editor@stetsonflyers.com

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 Canadian Aviation Museum in the Bush Theatre.

To receive the newsletter by email, send **your** email address to editor@stetsonflyers.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.

Newsletter Questions and Answers

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. The file 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!

How do I open the electronic newsletter?

You *the latest version* of the free Adobe Acrobat Reader software installed on your computer. You can download this from:

<http://www.adobe.com/products/acrobat/readstep2.html>

If you are using a dial-up modem, this may take about 30 to 40 minutes to download.

Why do I get errors opening the newsletter?

Most likely you have an older version of Acrobat – perhaps version 3 or 4. Please the latest version as described above. It usually fixes all the error messages with the newsletter.

I used to get emails about club events, but now only get a printed newsletter – what happened?

Mostly likely your email address changed or failed and we were not given a new one. When this happens we revert to printed newsletters. To get back on to electronic distribution, just send an email to editor@stetsonflyers.com. By default, those with email addresses will be notified when the electronic version is ready for download. You can ask to have a printed copy sent as well.

If there are any other questions, please contact me at editor@stetsonflyers.com.

Meeting Minutes-December 2, 2003

1.0 Gerry opened the meeting by welcoming all including visitors. In attendance was our zone director Richard Barlow.

1.1 Meeting minutes as published in the last newsletter were accepted after a motion by Claude Brunet and Pierre Tessier.

1.2 Dan reported on the club finances. Bank balance is currently \$162.12 with the GIC at \$6964.03. A motion put forth by J.F. Labrosse was passed.

1.3 Membership total for the year 2003 is 113.

1.4 The Chief Flying Instructor position has been assumed by Rick Ramalho.

1.5 John Jackson reported that the October newsletters that were to be mailed out were not. He asked for anyone who has not given him an email to please do so. John added that on the website he has links to Darcy Whyte's Calmdays site for chat and classifieds. One must register for access but this is not difficult.

1.6 Richard Barlow reported on MAAC and some zone matters. Brian Wattie will chair a committee on field and safety concerns to bring to MAAC. Richard asked for all club members to get their memberships in early so that their vote can count at the spring MAAC AGM. Insurance coverage has been settled for the 2004 season. Richard will also be setting up a meeting for zone presidents or club reps to discuss matters in our zone.

1.7 The airship will be flying again at the Ottawa 67's games with thanks to Peter Barnes for his call to team management.

1.8 Dan reported that there are some club jackets still available as well as some hats.

1.9 Gerry inquired if there were any nominations for positions on the executive. There were none proposed. The current executive has agreed to continue for 2004 but will have some help. Members who are willing to help out with club administration are Monique Simoneau, Greg Marshall, Pierre Tessier and Scott Clarke.

2.0 Dan presented a financial review of the past year and how it compared with the budget for 2003. A large variance from the budget was due to the decision to buy the shelter last spring. As well Dan proposed a new budget for 2004 with a request for in-

creasing the general membership dues by \$15.00. A motion by John Jackson was put forth to accept the budget and was carried.

2.1 A motion was made to increase dues for 2004 by \$20.00 for new members to assist with the shelter's cost by Raphael Ready and J.F. Labrosse and was passed.

2.2 Gerry thanked the museum staff for their help in setting up the workshop for the night's meeting. A motion by Pierre Tessier to conclude the meeting was accepted.

DuraGrit Special Offer

I received an email from a Canadian company DuraGrit that they are offering 15% off on selected items from their online store until January 31, 2004. DuraGrit have a line of permanent sanding and shaping tools.



Look at <http://www.duragrit.com> for more information.

“QUOTES”

The airplane is just a bunch of sticks and wires and cloth, a tool for learning about the sky and about what kind of person I am, when I fly. An airplane stands for freedom, for joy, for the power to understand, and to demonstrate that understanding. Those things aren't destructable.

Richard Bach, 'Nothing by Chance,' 1963

If helicopters are so safe, how come there are no vintage/classic helicopter fly-ins?

— *Anon*

What is that mountain goat doing way up here in the clouds?

— *Gary Larson, in a well-known 'Farside' cartoon.*

Death is just nature's way of telling you to watch your airspeed.

— *Anon*

Flying an aeroplane with only a single propeller to keep you in the air. Can you imagine that?

— *Captain Picard, from 'Star Trek: The Next Generation' episode 'Booby Trap'*

2.4 GHz Digital Spread Spectrum Radio Control System

The following is an explanation of the advantages of Digital Spread Spectrum technology for the remote controlling of an unmanned aircraft. I'll explain why we chose digital spread spectrum.

After giving this task a great deal of thought, we have come to the conclusion that the currently available hobby type radio control systems do not have sufficient protection against intentional or unintentional interference. Our concern was that while an aircraft was at altitude it could be subject to higher levels of natural or man made radio frequency interference, and without some form of protection it would be very easy to lose control of the aircraft with devastating results. The biggest concern was that a 72 MHz hobby R/C transmitter could come up on the same channel that we would be using. If that were to happen and the operator flipped the switch that we use to activate the autopilot, we may not be able to override the inputs and could lose control of the aircraft.

We reviewed the technology that was available to us and have developed a unique system that has 4 levels of protection from interference. During the testing phase of the development, we designed and built a solid-state A/B switching system that could be used to transfer control of the test aircraft from the experimental digital radio control system over to a 72 MHz system. We did this in case of component failure in the digital spread spectrum radio. This was a safety issue as well as a financial one as we did not want to endanger anyone on the ground and we couldn't afford to lose the test aircraft with all of the equipment onboard.

After reviewing the following information it will be clear that the Digital Spread Spectrum Radio Control System is a very unique system in that offers four or more levels of protection from intentional or unintentional interference.

LEVEL 1

Spread Spectrum Frequency Hopping

The transmitter and receiver are constantly changing channels by a predetermined sequence. They are preprogrammed to hop through 25 channels to avoid interference from natural or man made radio frequency interference. For example, if channel 12 has interference on it, the system would only be on that channel for such a short time that the pilot will not even notice a glitch of the controls.

LEVEL 2

2.4 GHz Frequency Band

This is 33 times higher than the 72 MHz radios that are currently used to fly model aircraft, this allows us to use smaller antennas on the receiver with higher gains than the wire antennas that are currently used on 72 MHz systems. The higher frequency insures that we will not have interference from a model radio control transmitter that may be near the flying site.

LEVEL 3

Unique Spread Code

If a second spread spectrum frequency hopping transmitter were transmitting on the same 2.4 GHz band, and even using the exact same set of frequencies, the spread code (hopping sequence) would have to be identical as well as time sequence matched to this system to cause interference.

LEVEL 4

Digital Data Format

The control data that is sent over this type of system is true digital data and is for all practical purposes immune to outside interference (in the manner that we intend to use this system). Even if a second spread spectrum frequency hopping transmitter were transmitting on the same 2.4 GHz band with the same hopping sequence the servo decoder board would still have to receive the exact same digital data in the correct format before any of the servos would move, this is the 4th level of protection that is offered with this new and unique form of control system. The following is an explanation of the advantages of Digital Spread Spectrum technology for the remote controlling of an unmanned aircraft. I'll explain why we chose digital spread spectrum.

From:

http://www.auav.net/spread_spectrum_radio.htm

