



The Gull

BULLETIN OF THE CENTRAL ONTARIO GLIDER GROUP



December 2009

2009 Executive

| | | | |
|----------------|---------------|---------------------|---------------|
| President | Bob Sherliker | Treasurer | Tony Boothman |
| Vice President | Roy Bourke | Field Coordinator | Doug Pike |
| Secretary | Helmut Berger | Contest Coordinator | Doug Pike |
| Safety | Jozef Banial | Newsletter | Roy Bourke |

Web Site <http://www.cogg.ca>

The 2009 Annual General Meeting

**Minutes of the Central Ontario Glider Group
AGM for 2009**
*Held at "Pauls Eatery" on HW 400 and HW 89
11/01/2009*

Yes another flying season has passed us by, and what a miserable one it has been weather-wise. A late start to the flying season and again wind and wet did the rest. Let's hope the weather gods will keep us in mind for next year.

We had to change our venue for this meeting since the "New Penny" restaurant in Cookstown is under new management and currently not open to the public. Hopefully we will be able to return next year as it makes a more suitable place to hold our annual breakfast meeting. Thanks to Bob Sherliker who located this location. Turnout this year was approx 17 including a few spouses. A good breakfast was served which I hope everyone enjoyed. Thanks to everyone who helped with the "Self Service".

At about 10:15 AM our Pres. Bob Sherliker called the meeting to order.

1. Treasurer's Report by Tony Boothman:

We had 34 paid members for 2009, which breaks down to 29 free memberships and 5 paid members. We saw an increase of 5 new members for 2009

The total payout for 2009 to date is \$305.32, a drop from previous years. Expenses seem to be dropping each year. Expenses consisted of the following items:
- Nov 05 2008 AGM breakfasts, Christmas gifts to field owners, Gull and mail costs, field registration.

Our current bank balance as of end of Oct. 09 is around \$2000, which is rather surprising since we enjoyed a free membership year.

2. Field Report by Doug Pike:

We were lucky this year by not having to relocate and it is assumed that we will retain the same location for 2010. They may however harvest the south field, which still leaves us the north side, we will see. The only problem with our current location is it's slow trying ability in the spring that we all witnessed at the start of 2009. But who is to complain for having such great fields.

3. Safety Report by Joe Banial:

Joe had not much to report for this year, other than to be very cautious when flying to the east of the power lines, particular when breezy conditions exist. He found out the hard way, fortunately not much damage was the result.

4. Competition Report by Doug Pike:

Despite the poor weather, we managed to squeeze in all our contests except the 2M and one electric contest. The turnout for the sailplane events averaged about 8-10 fliers with one sailplane event where we had about 12 fliers show up.

The Grand Champ for 2009 again was Doug Pike. Joe Banial won the Stuart Pearce trophy. Congrats to these guys.

Contest schedule for 2010:

| Contest | Dates | Contest Director(s) |
|-----------------------------------------------------------------------------------|----------------------|----------------------------|
| 2 Meter | June 5 th | Jozef Banial |
| Open Sailplane (Man on Man) | June 6th | Doug Pike |
| <i>Note: A RES comp will also be held if at least 3 entries on the above date</i> | | |
| * Electric F5J | July 10 | Doug Pike |
| Open Sailplane (Man on Man) | July 11 | Doug Pike |
| Hand Launch | Aug 14 | Ivan Mackenzie |
| Open Sailplane | Aug 15 | Doug Pike |
| <i>Note: A RES comp will also be held if at least 3 entries on the above date</i> | | |
| * Electric F5J | Sept 11 | Doug Pike |
| Open Sailplane | Sept 12 | Doug Pike |

* Some changes to the above schedule may occur, you will be notified.

Thanks to Doug for running all these events, please don't forget to send these dates to MAAC for inclusion in the MAAC Magazine.

5. Election of Club Officers for 2010:

| Position | Name | Term |
|---------------------|---------------|-----------------|
| President | Bob Sherliker | Still in charge |
| Vice President | Roy Bourke | Ongoing |
| Secretary | Helmut Berger | Ongoing |
| ** Treasurer | Roy Bourke | New Fellow |
| ** Editor | Greg Galler | New Fellow |
| Safety | Joe Banial | Ongoing |
| Field Coordinator | Doug Pike | Ongoing |
| Contest Coordinator | Doug Pike | Ongoing |

** These are changes in the Executive for 2010.

Many thanks go to Tony Boothman who looked after our finances capably for so many years and we all wish him a well-deserved break. Many thanks also go to Roy Bourke for doing an outstanding job as our editor for several years.

The December edition for 2009 will be Roy's last. I am sure that Greg Galler will be a capable successor and wish him luck. Please don't forget to supply Greg with material for inclusion in the Gull. I suggest everyone send him some info about building or assembly projects for next winter and flying season or anything else you discover on the Internet that might be of interest to the membership.

6. New and Old Business:

It has been discussed by the membership that the COGG website lacks information such as some ongoing events, competition results, etc. Please, members, if you think that something should be up on the web then by all means forward it to the Webmaster. He is not always on the field and depends on your submission. Thank you.

As has been tradition for many years, our Field Coordinator will again distribute Christmas presents for 2009 to important people at Zanders at his discretion.

7. Roy Bourke's report:

1. When the Beeton Club moved closer to the COGG field during the summer, an investigation revealed that the exact location of the COGG field was not known by MAAC. The description on file was too vague and we may not have been covered by MAAC insurance. A more detailed map with dimensions was re-submitted to the Zone Director to rectify the situation. A copy of this same detailed map needs to be submitted when the field is registered this December for the coming year. And it is vitally important that the required club registration fee (\$25.00) be submitted before 31 December 2009.

2. The MAAC Safety Code has been modified considerably this past year. The General Code has been reduced to 10 basic rules for all model aviation activities. What used to be the detailed MAAC Safety Code is now considered to be a set of guidelines for the individual disciplines. Clubs are now required to develop an appropriate set of field rules for their own discipline and field situation, using these guidelines.

Roy will work on the existing COGG field rules, make additions as appropriate, and submit them to the club for ratification and for inclusion in the club's registration application this December.

3. The subject of incorporation of the club has been considered before, and is now under re-consideration. Incorporation would limit the liability of the club's executive and members in cases of possible lawsuits following an accident. The club becomes a legal entity in itself, instead of a group of individuals who could be named in a lawsuit. It may be possible to incorporate the club in Ontario for a relatively low fee (approx. \$200-\$250) provided it could be done without a lawyer. A committee was formed consisting of Roy Bourke, Ray Munro, Neil Tinker and Greg Galler, to look into the matter, and implement it if feasible.

8. The meeting was officially called closed by our President at 11:05.

Thanks everyone for attending.

I wish everyone a happy upcoming holiday season and a busy building season!

Your friendly Secretary Helmut Berger



Competition Results

The results of most of this past season's sailplane competitions at the COGG field were reported in the August/September issue of The Gull. Here are the results of the remaining three competitions.

Sport Electric Sailplane 12 Sept. 2009

Held at: COGG flying field, 15th Sideroad
Weather: Sunny, warm, scattered Cu, CAVU, winds light to moderate, variable direction.
 Good thermal activity. 10 minute maxes.

| Contestant | Flights | Score | Prize |
|----------------|-------------------|-------|--------|
| Doug Pike | (598) (616) (589) | 1803 | First |
| Jozef Banial | (442) (610) (619) | 1671 | Second |
| Paul Harvey | (510) (504) (360) | 374 | |
| Ivan Marchenko | (593) (Off field) | (DNF) | |

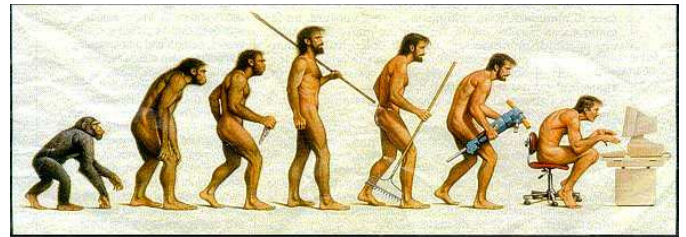
F5J Electric.....12 Sept 2009

| | |
|------------------|------|
| 1 Jozef Banial | 3650 |
| 2 Ivan Marchenko | 3317 |
| 3 Doug Pike | 3279 |
| 4 Paul Harvey | 2876 |

Open Sailplane.....13 Sept 2009

| | |
|---------------------|------|
| 1 Alex Nadashkevych | 4721 |
| 2 Doug Pike | 4234 |
| 3 Bob Sherliker | 4140 |
| 4 Jozef Banial | 3912 |
| 5 Ray Monroe | 3895 |
| 6 Ivan Marchenko | 3712 |
| 7 Paul Harvey | 989 |

Jozef Banial wins the Stuart Pearce Trophy



Somewhere, something went terribly wrong

Incorporation

As mentioned in the minutes of the AGM, the prospect of incorporation of the club is under investigation by a small committee. Currently the Electric Model Flyers of Southern Ontario (EMFSO) is applying for incorporation of their club, and we are following their processes and progress closely, with a view to duplicating the process for the COGG. An application process includes a name search, an application, and eventually submission of a set of By-Laws for the club. The executive body becomes the Board of Directors with each executive position also acting as a Board member. So far everything the EMFSO has done has not needed a lawyer. The name search was easy and fast, done entirely on line and cost only \$40. The application is trivial, listing only the Board members and the mission of the club, and involves a fee of about \$150. And there doesn't seem to be anything on the horizon of the EMFSO's incorporation that ever will justify hiring a lawyer.

We will continue to monitor the progress of EMFSO's incorporation and if all continues to look well, we can begin a process of our own. Incorporation of a non-profit club such as ours makes the club itself a legal entity, and helps to protect the club executive and its individual members from liability in case of a major lawsuit resulting from a flying accident.



THIRIET

ENCULÉS D'ÉCOLOGISTES

Linear and Switch-Mode BEC's

**Roy Bourke
MAAC 204L**

Most electric model flyers these days use ESC's (Electronic Speed Controllers) with built-in BEC's (Battery Eliminator Circuits) to provide power to both the motor and the airborne radio system from a single flight battery. A BEC is a voltage regulator circuit that maintains a constant voltage supply (usually 5 volts) to the radio receiver and servos, as the power requirements of the radio system vary due to varying loads on the servos. (Some BEC's allow you to choose a 6-volt setting). The BEC continues to supply this voltage even after the ESC shuts off the power supplied to the motor when the battery voltage falls to a pre-set minimum level, so you can maintain control of the aircraft. But there are two types of BEC circuits commonly supplied that use different modes of operation, "Linear" and "Switching".

"Linear" regulators are simpler, cheaper, and do not generate electrical noise, but suffer in efficiency. Let's say we have a 12-volt flight battery, and we have a receiver and servo system that is calling for an average current of 1 amp at 5 volts (or 1 V times 5 A = 5 Watts of power). The BEC draws 1 amp of current from the 12-volt flight battery (1 A times 12 V = 12 Watts of power) to meet this demand. So we have 12 Watts of power being used but only 5 Watts being supplied to the radio system. Where do the other 7 Watts go? The answer is Heat! The BEC must dissipate this excess power in the form of heat. So the BEC gets warm, maybe even hot, and it is mounted right in the ESC circuitry which itself may be generating heat and trying to dissipate it. And from the standpoint of efficiency, the linear BEC is using 12W input with only 5W of useful output, which means it is operating at 5/12 or 42% efficiency.

The "Switching" (or switch-mode) regulators operate quite differently. They switch the power drawn from the flight battery at a very high rate, and control the power fed to the radio system by varying the duty cycle of the switching. (This is similar to the operation of the ESC itself, where power is switched between Full-On or Full-Off and there is little resistance in the circuit to create

heat.) As a result, there is little heat generated in the BEC and no need to dissipate heat. Only the power needed by the radio circuitry is drawn from the battery, so a switch-mode BEC can run at about 90% efficiency.

If the difference between your flight battery voltage and the operating voltage of your radio system is relatively small, say with a 2S LiPo pack (7-8 V) and a 5-volt receiver/servo system, then the heat dissipated by a linear BEC is rather insignificant. But when you get into LiPo packs with 4 or more cells in series, the heat produced by a linear BEC can be considerable. Your ESC had better be equipped with a switch-mode BEC! (Some even consider a 3S LiPo pack to justify the use of a switch-mode BEC.)

The type of BEC on an ESC can usually be determined from the specifications of the ESC. If you are using an ESC with a linear BEC, and want to use a higher voltage pack and still supply power for both motor and radio from the single pack, you can install a switch-mode "UBEC" (Universal Battery Eliminator Circuit) which is a separate BEC that is connected to your main flight pack in parallel with the ESC. These UBEC's are relatively inexpensive, and often can handle a higher number of servos than the BEC's supplied on ESC's. The UBEC can also be used where the ESC does not have a built-in BEC.



A word of caution. If you install a UBEC in a system that already has an ESC with a built-in BEC, you must disable the BEC on the ESC. This can be done simply by cutting the red wire in the 3-wire cable from the ESC to the receiver (or by removing the red-wire pin from the plug on the cable). The black (negative) and signal connections from the ESC must, of course, remain connected to the receiver for the ESC to work. Also, a switching UBEC (like an ESC) can generate a high-frequency noise signal so it should not be installed close to the receiver.

For Sale **By Al Walker** ...**416-487-1714**

SERENITY 2.5M full-house electric sailplane.

Light, very high performance, in excellent condition,
Beautifully finished and an excellent flyer.
Foam cored black-poplar-covered wings, V-tail
Wood finish; stained, lacquered and hand rubbed.



Complete with top-line PJS-2500ART Outrunner motor (made in the Czech Republic)
13.5 x 6 Folding prop
Castle Creations 45A speed controller
Separate Castle Creations BEC
3S1P, 2100mAh LiPo pack
Spare 3S1P, 2100mAh LiPo pack
All servos (servos in wing are digital)
Wing and tail bags
“Plug and Fly “ (add your own receiver)



Climb is very spirited, with 49oz of thrust and battery power for several climbs per charge. An excellent thermal sailplane, fun to fly

Asking \$600.

Field Rules

As reported in the minutes of the AGM, clubs are now required to develop an appropriate set of field rules for their own discipline and field situation. COGG already has a set of basic field rules, but in view of the current situation with the MAAC Safety Code now becoming a set of guidelines rather than a set of mandatory rules, it was felt that a review of the club's field rules would be in order.

As a result, our Field Rules have been modified slightly, basically with a few additions and references, and have now been accepted by the club executive.

A copy of the new version of COGG Field Rules is attached to this newsletter.

*Have A Very
Happy Holiday
Season
and
A Prosperous and
Productive
New Year*

C.O.G.G. Field Rules for 2010

Since different sod fields may be assigned our club at various times, these general rules shall apply to any of COGG's registered fields.

The MAAC General Safety Code and, for RC aircraft, Section 8 ("RC Climb and Glide Category") of the MAAC Safety Code Guidelines shall apply.

Aircraft flying at COGG fields shall be restricted to unpowered sailplanes, and aircraft powered by electric motor, rubber, or compressed gas. Generally aircraft shall be flown in climb-and-glide mode, but limited flight of other types may be allowed at the discretion of the club.

The club reserves the right to restrict the operation of aircraft that it considers to be dangerous, or beyond the scope and nature of the club's primary mission and objectives.

No liquid-fuelled engines or rocket-powered aircraft or missiles are allowed.

Drive only on the designated access paths and at low speed.

NO VEHICLES are permitted on the sod.

All fliers (members and guests) must be current members of the M.A.A.C. or the A.M.A.

All fliers must check the frequency board (or other frequency control system in place) and register their frequency before turning on a transmitter.

Before the first flight of the day, and after any significant changes or repairs have been made, a radio range check must be made before flying. Also check charge level of all batteries.

Check settings and operation of all controls on any aircraft you are about to fly, as well as the charge level indication on transmitter. Ensure the transmitter is set to the correct model.

All takeoffs and landings must be made at least 100 feet (30 meters) from all parked vehicles.

Launches must not be made with people or equipment in dangerous proximity ahead of, or on either side of, the launch path.

No Fly Zones: No low flying shall be allowed;

- Over vehicles, pit areas, launching areas (while launches are taking place.)
- Over houses or other buildings.
- Over areas being mowed.
- Over, at or near power lines
- Over any other areas deemed dangerous by the club.

During contests, the Contest Director is responsible for enforcing the safety rules, and for authorizing and coordinating all flying activities at the field.

Do not leave ground stakes, equipment or any refuse behind when leaving.

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