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# Skywords

The Newsletter of the Burlington Radio Control Modelers Club

www.brcm.org

September 1999

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## EDITORIAL:

It seems like yonks since I wrote my last editorial ('twas in May) but the summer months have provided many hours of flying time and I've taken advantage of as much of it as I could.

We have experienced some problems implementing the "spotter rule" at Bronte and the executive have adopted a compromise solution which requires one spotter for the field as distinct from one spotter per pilot. Exact details will be available in the secretary's report.

The club will make another attempt to seed the Bronte field. Last year, the seeding failed due to a combination of high winds and no rain. We can treat this a a win-win situation: if it rains, the grass will grow; if it doesn't, we get to fly some more!

The Fall season is approaching and we will begin our usual series of meetings. If you have ideas of what you would like the club to present, please let us have them. Otherwise, you'll be stuck with whatever "the few" can dream up.

Cheers, *Lawrence*.

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## THE PRESIDENT WRITES

### SUMMER VACATION

What did you do this summer, and how was your vacation spent? As president of your club, I indicated during the last newsletter in May that I would attempt to represent you at, as many other events as possible throughout the summer months. The following is a brief comment on each event that I attended this summer on behalf of the Burlington Radio Control Modelers.

June 12-13 - Float Fly at Christie Conservation Area. Saturday was bright, windy but pleasantly comfortable with about 20 fly-

ers showing up from Seeton Valley, Oakville, Dundas, Stoney Creek, Hamilton and of course Burlington. (My apologies for any club left out). Sunday, I did not attend, but apparently the wind was up considerably, making flying somewhat hazardous.

July 1 - Canada Day at Bronte Park - Not well attended by our club, the day was overcast and somewhat windy. There have been more pleasant days, but most managed to struggle into the air for at least one flight.

July 9,10, and 11 - Olean, New York, Scale Rally, - Friday night was tornado weather, Saturday was overcast and gusty cross winds, Sunday was bright, less windy, down the runway. Still I did not win any prizes from the draws, but kept my aircraft in one piece. Numerous crashes on Sunday in the calmer

weather, not one during the cross wind on Saturday. Well attended from New York, Pennsylvania, Maryland, Ontario, Ohio.

July 17, 18 - Otterville - Saturday was tremendously hot, sunny and great flying weather. Flew numerous times, earned my trout fillet lunch for flying, which was well appreciated. Sunday I did not attend, but this was the Barn storming day. The prize for flying through the window on either side of the small barn was \$300. Next year the prize will be \$400 as there was no successful flight this year. A good event to attend, well attended by surrounding clubs. No winning of any prizes on my part or 50/50 draws.

July 24, 25 - Dunnville - Saturday was bright, warm and extreme cross wind. I managed one flight only with my trusty Piper Cherokee. A few others braved the elements to take flight, but landing was always a challenge. No prizes at this event either, but Art Titmarsh and Wayne Bransfield won a jug of fuel each! The winnings are getting closer..... The event is continuing to grow in attendance, this was the fourth year.

July 31/Aug. 1 - Simcoe Fun Rally. Saturday was bright with fluffy white clouds, humid and unbelievably hot., 34 degrees C. Great flying weather of course. I attended on the Saturday, Wayne Bransfield on the Sunday. No prizes again for me!!!! Maybe I should give up buying tickets for these draws, but the

**Next Meeting:**  
**Thursday, September 23**  
**Video of Summer events**

money goes to support the local clubs. Flying from a sod farm is a welcome experience, strange how one tends to fly high, even over grass fields.

August 7 – Tri-Club Invitational Fun Rally at Bronte Park flying site. The weather broke nicely for the day, being quite comfortable. The event was well attended by a variety of neighbouring club members, with the registration numbers being into the 70's. The success of the event can be attributed to the volunteers who willingly put many hours into the day, and hopefully received satisfaction in seeing the job well done. My appreciation goes to all that were able to contribute to the success of the event, as well as our sponsors who so generously contributed the prizes and food.

August 14 – Hamilton Flying Tigers Fun Fly – this was my first visit to their new field, and it will be a wonderful location from which to fly in the years to come. The event was well attended again, with many flyers from the surrounding clubs joining in on the fun. The food was the usual fare, and for some reason hot dogs always seem to taste great when out at these events. A nice touch was the thirst quenching watermelon offered up after the noon time meal.

August 25 – Flight Centre at C.N.E.. I spent several hours at the booth set up by MAAC, which was represented by several of the local clubs. Wayne Bransfield had arranged a display of scale models, mostly from the Burlington Club, which were prominently displayed in other areas of the Flight Centre over full scale aircraft. The whole building was dedicated to Canadian aircraft history and was well presented.

Unfortunately I missed the Corn Roast on August 28th, due to business commitments in Kingston, and as usual, there was an excess of corn on the cob, but those that attended, I understand, were satisfied with the barbecue, and the evening.

September 11 – the Kitchener Flying Dutchmen Scale Rally in Waterloo was well attended by pilots from many parts of the province and U.S. It was a bit windy but the pilots put on an impressive show anyway. This included our own Wayne Bransfield who flew his Lancaster.

So far, that was my summer, how about yours?? If you have any interesting experiences to relate, tell us all by allowing your story to be told in the newsletter. We are all interested in the flying events around the world.

Bill Swindells, President, BRCM

## THE CNE CELEBRATIONS

*Wayne Bransfield writes:*

### Fiftieth Anniversary Celebration at the CNE

I would like to take this time to thank all volunteers who helped to man the MAAC/Club booth during the EX. (They are too numerous to mention)

I would also like to give a special thanks to the modelers who let me use their superb models for display:

Karl Gross: Skycraft Hobbies - Burlington R/C Modelers - Lysander

Syl Tudin: Burlington R/C Modelers - Hawker Hurricane - Spitfire

George Bartkus: Burlington R/C Modelers - Folke Wolfe 190

Wayne Gilbank Burlington R/C Modelers - P47 Thunderbolt

Russell McKay: South Haldiman Sky Hawks - Bolingbroke Bomber

Knox Hawkshaw: Bramalea Model Club - Canso Water Bomber

Bill Sikma: Oakville Model Club - Fiesler Storch

Tony Pittari: Burlington R/C Modelers - Helicopter

Fred Messacar: Bramalea Model Club - BF 109

Wayne Bransfield: Burlington R/C Modelers - Lancaster Bomber

The Great Planes Realflight simulator was won by: Mr. Doug Carlson, Scarborough, Ont.

My sincere thanks

**Wayne Bransfield**, Middle Zone Director

PS: I am pleased there was no contest involved in this display for I would have been forced to take a bribe to choose a winner

## WINGS PROGRAM

*This from Bud Childerhose:*

Compliments to all BRCM Instructors for 1999.

Way back in our memories, all of us can recall one sunny day when we first saw brightly coloured model airplanes flying in a park. Some recollections are clear and vivid enough to include the sound of the little engines and the unmistakable smell of their burnt fuel.

With dedication we pursued this sport through untold personal trials and tribulations of learning to build, cover, mount all manner of accessories, engine adjustments and some variations on each one. RC flying is an exclusive club requiring a host of exacting skills. In hind sight, a very daunting task. How little we knew of what we were asking for.

Some still hold those memories and are prepared to sacrifice personal time to extend the pleasure in mastering model flight.

Our graduates are applauded front and centre for their achievement. But it was all the instructors who have provided the regular, dedicated, effort to help realize the dream. Without them the realization of RC flight remains a figment of some ones imagination.

To instruct is to revisit the learning and to share in the exhilaration of achievement with a new member.

My heartiest thanks goes to the BRCM instructors of 1999: Ron Birchall, Carl Gross, Kurt Fritz, Adrian McInerney, Laddie Mikulasko, Dave Parry, John Spackman, and Art Titmarsh.

Many thanks gentlemen.

**Bud Childerhose** BRCM Wings Director.

## OUR MEMBERS WRITE:

*Neil Nugent writes:*

I had two high wire acts at the Bayview this summer. The first wasn't too bad, but the last crash took out four front ribs of my Eagle II. I am ready to go again this week with my instructor: Col. Dave Parry. ("Col"? Ed.)

*Lawrence Cragg writes:*

This is only my second year of flying but I've had a great time; especially with a couple of fun fly aircraft which provide a huge performance envelope to play about in. I have a lot to learn of course; to me, that is a good part of the enjoyment of our hobby. Another big part is the friendship of club members as well as internet acquaintances such as my favourite oracle Harry Curzon in England.

I built a Great Planes Ultra Sport 60 with a Saito 0.91 engine. It's a real pussy cat to fly which is quite different from flying like a pussy cat.

My children bought me a SIG Fazer kit for my birthday. I built it and have had one helluva lot of fun with it. Great little devil!

I went to the Toledo show for the first time and was suitably wowed by this huge show of magnificent models plus all the odds and ends that go into making the visit a memorable experience. At the show, I fell in love with a SIG Somethin' Extra. I have had a great time with this lively aircraft. The model has a fairly low landing gear and, after a session at Bronte, it comes back covered in mud!

I have a Extra 300S ready to fly but, as of the time of writing, it is still a "hanger queen". Translation: I still haven't had the nerve to fly it.

Several times this year, I have taken off in one direction and landed in the opposite direction. Sometimes, I even did this on purpose!

The "score" todate: two demolished and four still flying!

## DID YOU KNOW THAT...

*From Lawrence Cragg*

This is another treatise from my favourite oracle: Harry Curzon. Harry writes reviews for the (English) Radio Control Model World (available at your favourite hobby shop); flies full size aircraft and is an experienced modeler to say the least. I recently wrote that while fun fly aircraft have huge control surfaces and equally huge deflections; other aircraft such as the

Extra 300 limit deflections to very small amounts. I wondered why that was so. Here is Harry's response:

You are right to notice that fun-fly models have control movements that would be fatal on an aerobatic aeroplane. The reasons why fun-fly models need, and can get away with it, tell us a bit more about the nature of airflow. Fun-fly models operate at low airspeeds. For example, the Thunder Tiger ARTF fun-flyers are for a TT 46 pro but come with a strict warning never to use full power in level flight or damage and probable destruction will occur. This gives a stark warning of what we already observe, fun fly models never get up to high speeds that most models will normally operate at. Therefore they need bigger control surfaces and movements in order for them to have any bite at the lower airspeeds. They also land at very low speeds due to the low wing loadings and need huge surfaces just to have any control authority. So even when they are on low rate movement for normal flying, they need big surfaces and big movements compared to our normal models. But why does this not become a liability when we are flying them at the high end of their speed range? Well, although everyone is aware that things like drag and lift are proportional to the square of the airspeed, and therefore control effectiveness too, few people are aware that the airspeed squared term in lift and drag equations is an approximation, not an absolute. Below 30 m.p.h. the effects of airspeed become increasing linear. So for example doubling airspeed from 5 m.p.h. to 10 m.p.h. will approximately double the lift and drag rather than quadruple it as expected from the equations with a squared airspeed term. Since most of the flight of a fun-fly is at these low speeds, the control authority rises and falls more linearly with airspeed, rather than the exponential change in authority that we know at higher speeds. Therefore at the top of its speed range compared to its slow end, a fun-fly model's controls have a fraction of the increase in authority that we see in higher speed models. That is why they do not become uncontrollably twitchy across their speed range.

The reason that fun-fly models stall in their gentle manner is due to a thick wing with a very round leading edge. The thickness of the wing allows a large radius curve from the leading edge to the point of maximum thickness. The air can easily follow this gentle curve, so that as the AoA increases the stall separation starts well back on the wing and moves forward only very slowly with increasing AoA. That allows us to take the wing up to the start of the stall and still wiggle the elevator and hence AoA with impunity as the separation point only moves gently. If we sharpened the leading edge we reduce its radius and the air has a tighter curve to follow. With thinner wings we have no choice, the radius must necessarily be smaller. The separation will start at a lower AoA and move further forward with each increase in AoA than it would with a larger radius. This makes the thinner wing of an aerobatic model more susceptible to stalling hence the need for more gentle elevator response.

Aerobatic models will probably also have a more rearward CG than a fun-fly. This will also manifest itself in the suddenness of the stall.

Aspect ratio also plays a part. The greater the aspect ratio, the lower will be the stalling angle, subject to the minimum stalling angle for that section. So gliders tend to be more sensitive on elevator and sudden on the stall. As the aspect ratio reduces so

the stalling angle increases and the harshness of the stall reduces. This is related to the amount of tip vortices affecting the airflow of the wing. Large tips and small spans mean that the tip vortex has an impact on a lot of the wing's area. Fun-fly models usually have very low aspect ratio wings. Bear in mind this is different to a delta which is influenced by leading edge vortices spilling back over the wing, these do not apply to a standard wing on a fun-fly.

All of these factors come together to produce an aeroplane that responds controllably across a low speed range, if any one was changed then a fun-fly model's behaviour would start moving back to that of a normal model.

There is one other thing to note about the reasons why fun-fly models have such large control surfaces with big movements. The G force of a manoeuvre is inversely proportional to its radius and proportional to the square of the speed. So for example, do a loop half the radius and the G force doubles, but keep the same radius and do it at double the speed and the G force quadruples. Or in the opposite direction, do it at half the speed and the G force is a quarter. This is why fun-fly models have to fly so slowly, you can fly a ridiculously and disproportionately small loop if you are travelling at slow speed, without increasing the G force. But such pitch rates, i.e. the degrees per second that the nose changes direction, are far higher than if flying the same G at a higher speed, so a more powerful control is required to produce the necessary rotation.

*Well, what did you think of that? Personally, I love this kind of information and I know of no better source than Harry Curzon. (Ed.)*

**EVENING MEETING PLANS**

Too early to say! Norm' Harris has run away to the UK for a few days but will doubtless provide us with a calender of events

upon his return. Notwithstanding that (where have I heard that before?) we would like to have your ideas and/or requests.

**COMING EVENTS**

Don't know yet!

**A STORY**

*I don't remember who sent me this one; probably Ernie.*

A guy named David received a parrot for his birthday. The parrot was fully grown, with a bad attitude and worse vocabulary. Every other word was an expletive. Those that weren't expletives were, to say the least, rude. David tried hard to change the bird's attitude and was constantly saying polite words, playing soft music, anything he could think of to try and set a good example.

Nothing worked. He yelled at the bird and the bird yelled back. He shook the bird and the bird just got more angry and more rude. Finally, in a moment of desperation, David put the parrot in the freezer.

For a few moments he heard the bird squawk and kick and scream. Then suddenly there was quiet. Not a sound for half a minute.

David was frightened that he might have hurt the bird and quickly opened the freezer door. The parrot calmly stepped out onto David's extended arm and said, "I believe I may have offended you with my rude language and actions. I will endeavor at once to correct my behavior. I really am truly sorry and beg your forgiveness."

David was astonished at the bird's change in attitude and was about to ask what had made such a dramatic change when the parrot continued, "May I ask what the chicken did?"

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