

Skywords

The Newsletter of the Burlington Radio Control Modelers Club

www.brcm.org

October 1999

EDITORIAL:

As noted in the previous edition, if I don't get some material from the membership at large, you'll be stuck with whatever I can write. Well, so far, a few contributions. So, here they are plus stuff about me plus a story or two and a bit of history.

I finally succumbed and bought a scanner. Yeah, I know, what took me so long? You really don't want to know. Next question: what are you going to do with it? The intent is to publish interesting pictures in Skywords. All I have to do now is reconcile three different operating systems, (Win98, Macintosh & Linux), some desk top publishing software, and photo processing software. I'll either succeed or go mad in the attempt.

To start with, here is a picture of my Ultra Sport 60 a.k.a. "Pussy Cat" because it is so easy to fly. If you have pictures that you would like to see published in Skywords, let me have a print or, if you're ahead of me already, send me a jpeg attachment via email.

The printed edition of Skywords will be monochromatic due to cost considerations - it is prohibitively expensive to produce colour. But those of you who get your copy from our web site in pdf format will see Skywords in full colour.



I am rapidly running out of material from my favourite oracle Harry Curzon. These items have all been technical in nature and I would welcome contributions of a similar nature. Cheers, Lawrence.

Next Meeting:

Thursday, October 28

Joe Trinidad will present his magnificent Raven - the model he flew at our Tri-Club event at Bronte



THE PRESIDENT WRITES:

Wowee!!!! What a great summer! Burlington members represented our club in over 15 locations around the province and several locations in the United States, as far away as New York, Indiana, and Illinois with aircraft from several categories including those of Sport, Scale, Standoff Scale, Control Line, and who could forget the funny looking, Autogyros. Congratulations to those that ventured out of the immediate area to fly at other clubs, make new friends and acquaintances, renew old friendships, and just have a great time doing what we like to do.

I welcome everyone back after what I hope was a safe and fun summer. I expect that all members did what they promised to do at the last meeting in May, and that was 'HAVE FUN'. I know that my wife was very tolerant of my many outings this year, and I love her for it. Guess she figures that it keeps me off the streets!!

We have two major events planned for the remainder of the year, THE GREAT CANADIAN RUBBER RACE, in which we will be competing against those bullies from the Hamilton Flying Tigers. Any rubber-powered aircraft is eligible to race, and the race consists of flying the farthest in a straight line under its own rubber power. The key is 'straight line'. Hamilton will be visiting us during our November meeting, attempting to 'show' us how this is done. We fully expect to demonstrate our expertise in this matter, and "send them tigers home with their tails between their legs." They, of course, later in the building season, will be inviting us to their meeting to again demonstrate our prowess in such matters.

The second major event at the end of the year will be the CHRISTMAS PARADE. We are expected to enter, (we already have entered our registration form) and the general public seems to appreciate our participation in this event. Hearsay indicates that we put on a good show, similar to our Mall Shows, only this one is outside and mobile.

I am sure many of you have started to build again, and we would be interested in hearing about your projects. Scratch built, or kit built, we would be interested in your review of the building process. How about a small article in the newsletter, to inform the rest of us about the problems or ease of building your particular model? I know Lawrence is constantly looking for new and varied material to put before the members' eyes.

Your executive has already been hard at work discussing issues that affect the club, one of these being the problem of getting Flying Instructors. This is a major problem! What do we do? If we stop instructing, the club stops growing, PERIOD! Without instruction, we do not bring new blood into the organization or the hobby. We become stagnant and pass the way of the dinosaurs. We need to continually make the hobby flourish with new members, new ideas, and be able to pass the baton on to the next generation. Bring your ideas to the next meeting as requested at the last gathering. I know we can work our way out of this difficulty as we have other issues on the past and bring the fun back into the hobby. See you at the meeting, and remember, Fly straight, fly level, fly safely, and have fun!

Bill Swindells.

OUR MEMBERS WRITE

This from Earle Smith:

On June 25 - 27/99 the GyroNuts Autogyro group in the United States hosted an Autogyro Fly-In at Martinsville, Indiana. Art Titmarsh and Earle Smith, along with their wives, attended with others from all over the United States, and one participant even came all the way from Panama.

This Hi-Tech group is dedicated to the advancement of Autogyro Model flying and is very deep into the technology. For instance, they use Direct Control from a servo to tilt the rotor in the same way we use aileron control. Their gyros are generally smaller than those we are flying and they are generally hand launched instead of taking off from the ground.

Art demonstrated his Whistler's Mother Autogyro which is an oversized version of the standard Whistler and it really

impressed this group that a Gyro so big could fly so well and practically hover in a slight headwind.

The GyroNuts have a very informative web site: <http://www.autogyro.com> It is full of photos, plans, and everything there is to know about autogyros. It is worth a visit!

Next year the Fly-In will be in June at Tillsonburg, Ontario.

This from Neil Nugent:

This is my second year of flying with my instructor. I have had a few crashes with my Eagle 2 and have repaired it several times. This airplane takes a licking and keeps on ticking. I am in the process or building another "Eagle 2" this one will be modified so it can be in a float fly and also have a trike landing gear for wheels and skis. Balsa USA has a Stick 40 & 40 Plus. This is a durable aircraft, and is easier to repair than the Eagle 2. The Stick 40 has (3) servos and the 40 Plus has (4) servos. As a third year member I would strongly recommend these two kits if you like building in the winter months like I do.

This from Murray Covello:

As much as this year was plagued with other time commitments, I was able to get my new Great Planes Ultimate in the air after a year and half of construction. I dressed it in a vivid red/orange/yellow/white/black colour scheme with the name of "Miss Lucy" after my daughter. It is my first experience with a biplane and it flew very well on the OS 70 4-S with a Radiant radio system and hi-torque aileron servo. Neil Allatt spotted me through a total of 3 flights without incident but the real wringing out will have to wait until next season. This winter will be devoted to a rebuild of my Goldberg Cub up-engined with floats.

This from Me (Lawrence)

Those of you who read the last edition may remember that I had one model, an Extra 300S, 40 size, finished and ready to go but that I had not yet conjured up the nerve to fly it. Well, I did! I took it to Bronte and photographed it in all its glory; this is what it looked like before its maiden flight:



I invited Mike Block to fly it. All went well and, when he gave it to me, I got one helluva kick out of the lively performance - but I gave it back to Mike to land it.

Eventually, I worked up enough courage to fly it. Take off is fine. Take it up and switch to high rate ailerons and whoopee, watch that baby roll. Wow! OK I'm good enough to land this thing so let's make a nice approach. Turning in on final, I got a

bit behind it (I was still on high rate ailerons). It's coming at me damn near full bore and totally out of control. I lost it in fairly spectacular fashion but, fortunately, no one was hurt. So this is what it looked like a few minutes later:



The moral to this story is don't try high rates until you know you can handle it.

Surprising as it may seem given the severity of the crash, I think I can rebuild it.

Meanwhile, I'll be damned if I'm going to be intimidated by this so I've finished an ARF version of the same model. Haven't yet had the nerve to fly it yet but.....

HERE'S HARRY – TURNING WHILE INVERTED

I only "know" Harry Curzon, my favourite oracle, from correspondence through email and one of the news groups. but, now, at least I know what he looks like: here he is with his beloved Chipmunk.



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. I'm rapidly running out of material from Harry. Here is one from a long time ago.: Turning while inverted:

Here is a bit of ground school for you all to try in the comfort of your home! Get a piece of paper and crease it to simulate a wing with dihedral. Hold it in front of you and imagine that you are behind the wing, facing forward with the plane. Yaw it to the left and you will see the large changes in angle of attack on each side, the left side reducing its AoA and the right side

increasing, thus roll to the left. Now lie down on your side and do it. Guess what, yaw left, roll left. Try it upside down, any orientation you like and you will see that yaw left = roll left. You will never see a left yaw that produces an AoA change that rolls right, because its physically impossible. The dihedral must always produce a rolling force in the same direction as the yaw.

If you have experienced the opposite of this, and I don't doubt that some of you have on many occasions, then what you have observed is real life contradicting theory. In that case, the theory must be wrong, or something else as yet unexplained is acting on the plane. We know from the above experiment that the theory just can not be wrong, so is there something else coming into play? Yes, the instability of a plane with dihedral when inverted. The mean point where the lift force acts will be somewhere out along the wingspan, so when a plane with dihedral is inverted that point is far below the weight of the plane. It's like trying to balance a broom handle on its end. It may well be that the momentum generated by such instabilities is overcoming the force generated by the wings to roll the plane in the way that the yaw should roll it. I'll bet that if your model is rolling right at the same time that you feed in left rudder, if you switched to right rudder it would not correct it by rolling left, it would quicken the roll to the right.

Many of modelers problems of visualization come from thinking that the model somehow behaves with respect to the model pilot, that's a standard human attitude. It doesn't, aerodynamically the plane only behaves as the air around it dictates, in other words a plane behaves with respect to itself, not to you! And I've flown some rather disrespectful models in my time! Yaw left = roll left from the plane's point of view, every time.

Harry

A STORY, NOTHING TO DO WITH FLYING:

This is an exchange of notes between husband and wife!

Dear Wife: You must realize that you are 54 years old, and I have certain needs which you are no longer able to satisfy. I am otherwise happy with you as a wife, and I sincerely hope you will not be hurt or offended to learn that by the time you receive this letter, I will be at the Grand Hotel with my 18-year old secretary. I'll be home before midnight.

When he arrived at the hotel, there was a faxed letter waiting for him that read as follows:

Dear Husband: You, too, are 54 years old and by the time you receive this letter, I will be at the Breakwater Hotel with the 18-year old pool boy. Since you are an accountant, you will appreciate that 18 goes into 54 many more times than 54 goes into 18. Therefore don't wait up. *Your Wife*

CANADA'S FIRST AERODROME

Contributed by a well known member: anonymous!

In May, 1915, Curtiss Aeroplanes and Motors, Ltd. established Canada's first aerodrome and flying school on Lakeshore Blvd. West, just west of Dixie Road. (The site is now occupied by the grounds of Ontario Hydro's Lakeview Generating Station.) The school, and the Curtiss aircraft factory on Strachan Avenue in Toronto, were managed by John A.D. McCurdy, Canada's first

aviator. Most of the graduates were sent to England, at their own expense, to join the Royal Flying Corps or the Royal Naval Air Service. When the Royal Flying Corps, Canada, was created in January, 1917, its first flying units were based at Long Branch. Later that year, when Armour Heights and Leaside were prepared for flying, Long Branch became the ground training school for the cadet wing of the R.F.C.

At the beginning of 1915, Curtiss Aeroplanes and Motors, Ltd. of Hammondsport, New York, began producing two-seater biplanes –the famous “Jennies” – at a plant on Strachan Avenue in Toronto. Soon afterwards, the firm established a base near Hanlan’s Point on Toronto Island where primary flying instruction was given in Curtiss F-type flying boats. Like the factory, the school was under the management of John A.D. McCurdy, who in 1909 had been the first Canadian to fly.

In May, 1915, the flying school acquired facilities at Long Branch for training students on wheeled aircraft, and Canada’s first aerodrome came into being. It thus became possible for aspiring combat pilots to receive flying training in Canada for the first time. Here, the student who had successfully undergone training at Hanlan’s Point, graduated to a “Jenny”, and after a total of some seven hours of flying was generally considered ready to test for a pilot’s certificate. The test was administered by the Aero Club of America, and by modern standards was quite rudimentary.

The total cost to the student was \$400, of which about \$300 was reimbursed if he enlisted in the Royal Flying Corps or Royal Naval Air Service. The first two graduates passed their tests on July 11, 1915: H. Strachan Ince and F. Homer Smith, both of Toronto. By the end of the year, fifty more successful graduates had earned their wings at Long Branch.

ANOTHER STORY, SLIGHTLY RELATED TO FLYING:

Bud and Jim were a couple of drinking buddies who worked as airplane mechanics in Atlanta. One day the airport was fogged in and they were stuck in the hangar with nothing to do. Bud said, “Man, I wish we had something to drink!” Jim says, “Me too. Y’know, I’ve heard you can drink jet fuel and get a buzz. You wanna try it?” So they pour themselves a couple of glasses of high octane hooch and get completely smashed. The next morning Bud wakes up and is surprised at how good he feels, in fact he feels GREAT! NO hangover! NO bad side effects. Nothing! Then the phone rings...It’s Jim. Jim says, “Hey, how do you feel this morning?” Bud says, “I feel great. How about you?” Jim says, “I feel great, too. You don’t have a hangover?” Bud says, “No, that jet fuel is great stuff - no hangover, nothing. We ought to do this more often.” “Yeah, well there’s just one thing...” “What’s that?” “Have you farted yet?” “No...” “Well, DON’T, ‘cause I’m in PHOENIX!

ABOUT BUDDY BOXES:

With newer transmitters such as the Futaba 8UAF which have digital trims, a connected buddy box picks up the transmitter’s trims, dual rates and exponential settings. This is a great boon to students and instructors alike; especially those who want to get into advanced training when things can get hairy in a hurry and it is very nice indeed to be able to set up the

transmitter the way you want it and have the buddy box use those settings.

THE FUNKY CHICKEN!

This was on the news group in response to questions about stability contributed by swept wings, dihedral, etc.

Interesting discussion - it reminds me of my F-4 days. In the F-4D, we had to be very conscious of this [yaw] effect. On the F-4, the ailerons only went down, and it had spoilers that went up; i.e. when you commanded a left roll, the right aileron would go down and the left spoiler would go up. This worked fine in normal flight but at higher angles of attack (high G) the spoilers were aerodynamically ineffective. Therefore, that big aileron hanging down on the side opposite that of the intended roll would create excess drag. This drag would cause the aircraft to yaw into the down aileron. With the aircraft now yawed to the side of the down aileron, the opposite wing was straighter into the airflow and producing much more lift than the other wing. The end result was if you used the stick to roll the aircraft under high-G maneuvering, the aircraft would violently snap roll in the opposite direction of the intended turn (adverse yaw). We sometimes used to call it “doing the funky chicken”. The solution was to use rudder to roll at high angle of attack (AOA). If you wanted to roll to the right, step on the right rudder. This would bring the left wing straighter into the airflow, resulting in more lift on the left wing and thus a right roll. The F-4E had slats and was not near as bad about adverse yaw.

Jim Nunnallee, Ft. Meade, FL USA

AND LASTLY:

This just came in. I had put this edition to bed but I thought this information, sent to me by George Bartkus’ wife, was well worth “stopping the press” to include it.

On October 16th, 1999 -George Bartkus qualified for the Canadian Team - to go to the Worlds in Switzerland in August 2000 - along with Karl Gross who qualified earlier this year at the Nationals held in Tillsonburg, Ontario in July of this year. Peter Hill of Blackstone - just north of Bowmanville - is also on the team with Karl and George.

This message is from George's wife - who is very proud of him and Karl - they've worked very hard to achieve this.

I’m sure I can speak for all Burlington RC Modelers in offering congratulations to George and Karl and wishing them the very best for their forthcoming trip to Switzerland. Ed.

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