Skywords

The Newsletter of :
Burlington Radio Control Modelers Club
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March 2010

President's Letter

Well here we are nearly into April and the weather is getting Spring like, we all know what that means. There have been the normal brave souls getting out and flying in the less than perfect conditions, I've been out a couple of times but I must admit I'm a fair weather fly er.

Next meeting
Thursday March 25th 8:00PM
BRING AND BUY
OUR SPEAKER CANCELLED SO WE ARE HOLDING A SPRING SWAP SHOP/Garage Sale/Bring and Buy/Show and Tell
BRING SOMETHING TO SELL AND SOME MONEY TO BUY BUT DONT BRING IT UNTIL 7:30

The colder times are when we can get down to building. As ARF's become more expensive I see a shift back towards Kits and hopefully some scratch projects. Myself I like to build from kits, it is very rewarding to see a box of wood taking shape, and of course you get to know how the thing goes together, just in case you need to repair it later, and you also get to modify it to your own likings with all kinds of scale detail. You only have to look at the Magazine reports on The Joe Nall , Top Gun and many other meets to see how great some of these models look. So if you haven't tried a Kit or Scratch build you might want to give it a try. There are a lot of guys in the club with a wealth of experience who would be only to willing to give

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SOGGI

The speaker (or speakers) at our February meeting was from SOGGI (Southern Ontario Glider Group Inc). Les Peer, Ray Munroe Warren Kelly Ted Toth and Dick Fahey made an interesting presentation on their gliders and field, which is in Binbrook.
Launching is by Hi-Start or winch and they enjoy flights of minutes to hours depending on the thermals.
They also fly Electric powered gliders but no fuel is allowed at the field which is in fact a 70 acre sod farm. (See the letter from SOGGI page 5)

Not All Replacement Wings are Created Equal

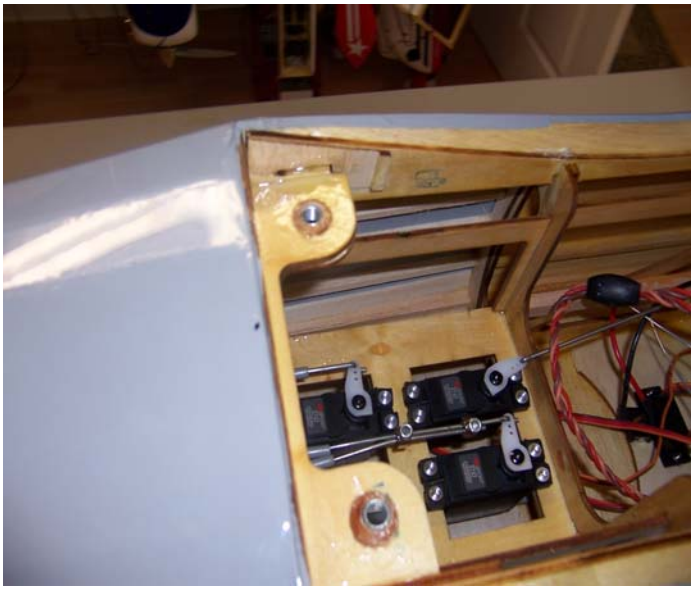
By Dave Cummings

If you've been in this sport long enough, you'll have the opportunity of making crash repairs. This can include having the conscience decision of buying a replacement wing for your ARF. Many manufacturers offer these for sale as replacement items.

Last fall Tim Marushack knew he was relocating to Saskatoon and offered me his damaged air frame of a PT 17 Great Plains Stearman. Unfortunately, Tim had a mishap during an aborted landing and experienced "Dead Stick" over the hydro wires. He made a heroic effort to immediately turn 180 degrees, headed back to the runway but like many of us didn't quite make the hill on the South-East end of the runway. This resulted in a broken bottom wing, twisted cabanes, ripped out landing gear and damage to the fuse behind the lower wing. All fixable but it made more sense to order a replacement wing and cabanes. Some balsa, plywood, epoxy and new covering took care of the rest it.

After the time and effort of making the repairs, I found myself struggling with the new replacement wing, attempting to get the "pre-drilled holes" to line up with the already existing blind nuts in the fuse. They were close but that only works in the game of "Horse Shoes". Not only were the holes misaligned in the new wing to the existing blind nuts but the holes in plywood back up ple ate (which came with the new wing) didn't line up with thholes of the wing! Hmmmm.

Frustrated, my initial thought was to use a big mother $%#@IN* drill and ream all of the holes to fit. Not a good solution and it would look ugly and fit loose. After having a Scotch and recomposing, I thought about starting from scratch and rework the original blind nuts holes. This actual became a simple task by finding some half inch dowel, putting away the big mother $%#@IN* drill in exchange for a one half inch drill to accommodate the diameter of the dowel. I cut off the dowel length to match that of the plywood frame



and with a little 30 minuet epoxy., I was ready to re-drill the holes from the spacing alignment of those holes in the wing.

This next photo really shows the original misalignment with the dowel being the darker shade of wood.

Letter From Lawrence Cragg

Regarding Paul Chitty's article on the tendency of tail draggers to swing left on take off.

It isn't torque that causes the swing to the left, it's *precession*. Torque tries to rotate the fuselage in the opposite direction to the prop - i.e. it would try to lift the right wing. *Precession* results from lifting the tail on take off. This action rotates the prop about its axis and this creates precession forces which act at 90º to the rotating force (lifting the tail) and causes the aircraft to swing to the left.

If you happen to have a spare bicycle wheel handy, set it spinning then try to tilt it. The wheel will immediately turn at 90º to the direction of the force you apply. That's precession at work.

For more information on this, look at How Stuff Works for lots of good stuff about precession including a short video of the bicycle wheel demonstration. http://science.howstuffworks.com/gyroscope1.htm

Lawrence

P.S. Helicopter flight controls provide an interesting example of precession at work. E.g. to tilt the craft to a nose down attitude, the tilt force is applied to the rotor at 90º to the desired tilt.

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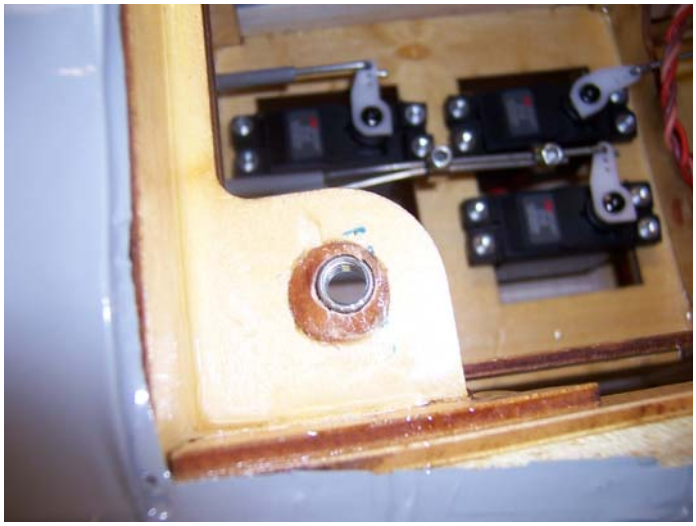

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Lastly, replace the wing drill the new holes, reinstall blind

nuts and screw in bolts!

Importantly, this quick methodical fix allowed me enough time for a refill at the bar before retiring for the evening.

Good luck with this fix and hope you don't ever need to order a replacement wing. Incidentally, the replacement cabanes have been on back order for 4 months. I now understand they are on the next "Slow Boat" from China.

Dave Cummings

By: LCol (Ret'd) Dan Dempsey, Team Historian

Canadians will bear witness to an historic event in 2009 as one of the most famous aircraft to have served in the Royal Canadian Air Force tours Canada as the mainstay of the Centennial Heritage Flight celebrating 100 years of powered flight in Canada. Chosen by the RCAF as its frontline day fighter in August 1949, the Canadair F-86 Sabre served in Western Europe as a deterrent to the Warsaw Pact from the early days of the Cold War until it was replaced by the CF-104 Starfighter beginning in 1962.

All told, some 300 RCAF Sabres were based in Europe at the height of the fighter's operational service as part of Canada's collective defence contribution to the North Atlantic Treaty Organization (NATO). Spread throughout 12 Squadrons on 4 Wings, the aircraft saw service in three countriesy September 1953 Canada had 12 F-86 Sabre squadrons operational in Europe with the RCAF's No.1 Air Division. In 1956, four of the Sabre squadrons were disbanded to give way to the Avro CF-100 All Weather Interceptor. Ultimately, all were replaced by the CF-104 Starfighter as the RCAF switched its NATO role to low level

Photo from Al Race taken at Hamilton 2009

nu- cl
ear strike and reconnaissance.

Built under license from North American of the United States, all Canadian Sabres were built by Canadair Ltd at its Cartierville, Quebec plant near Montreal. Modelled after North American's F-86A, the prototype Canadair Sabre 1 (19101) made its first test flight at RCAF Station Dorval on August 9, 1950 piloted by Canadair's chief test pilot, Al Lilly.

Original production models of the Sabre were thereafter designated the Canadair CL-13 Sabre 2 and closely matched the North American F-86E-1 in

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design and performance. The first Sabre 2 (19102) made its maiden flight on January 31, 1951. By August 1952, Canadair had built 350 Sabre 2s for the RCAF. Ultimately, Canadair built six variants of the Sabre, the most famous and capable being the CL-13B Sabre 6. Powered by the Canadian-built Orenda 14 engine which produced 7,275 pounds of thrust, the
ircraft had a top speed of 710 mph and a service ceiling of 55,000 feet.

The first Sabre 6 bore the serial number 23371 and took flight on October 19, 1954. When the last F-86 Sabre (23752) rolled off the assembly line at Canadair on October 9, 1958, the company had manufactured a total of 1,815 Sabres, including 655 Sabre 6s.

Hawk One Lineage – Going for Gold

The F-86 Sabre that forms the backbone of the Centennial Heritage Flight is a Canadair Sabre 5 that originally bore the RCAF serial number 23314. Manufactured in 1954, it was the 1,104th Sabre to come off the Canadair assembly line. It has been retrofitted with wings equipped with leading edge slats and an Orenda 14 engine, thus bearing all the resemblance of a Sabre 6. Purchased by Vintage Wings of Canada in October 2007, it is being refurbished in the colours of the RCAF's most famous aerobatic team, the Golden Hawks. Hence the moniker, "Hawk One."

This article is from the Blog of L. Col (Ret'd) Dan Dempsey. Team historian

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advice and assistance, we will also be holding building worshops in the future to help you get into it.

Once agin I have to get on my high horse I'm afraid, last summer someone broke the door closer at the club house and never told any one it was broken, this week someone has busted the door lock at the club house and once again didn't tell anyone. It was only by chance that we found that the shed was unlocked, it could have cost us a club a great deal

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Fantasies

One of the benefits of editing Skywords is that I get to write a bit about my fantasies (the aircraft ones anyway). One day, when I'm rich, I will get my flight in an English Electric Lightning as flown by Thunder City out of Cape Town SA. This picture shows one of their Lightnings over, if I'm not mistaken Robben Island.

The Lightning is known for its vertical climb performance and it still holds a number of world climb-to-altitude records. It is capable of Mach 2.2 (1500 m.p.h.) and an initial climb rate of 50,000 feet per minute

thundercity.co.za

Just for the heck of it here is one of their other ridables, a Bae Bucaneer

Battery alternatives

I have been approached several times recently regarding the use of LIPO's as receiver batteries, As many of you know I have been doing this myself for some time now with just one mishap (self induced). You can also use LI-ION or A123. LIPO's and LI_ION are 3.7VDC per cell and are about a quarter the weight of NICAD Packs and A123 are 3.6 VDC. LIPO's are considered the most volatile of the three and A123 are the heaviest (approaching the weight of NICADs)

Basically all that is required is a Lipo Battery, a regulator or UBEC Large Aircraft sometimes use a special Power

(See Batteries page 5)

Hello Paul

Well I thought I'd get this off to you while still fresh in my mind Just can't thank you and the others enough for letting us in to your inner-sanctum and to be able to observe a pro club in action.

We were all quite envious of your meeting room and the ammenities you have, but we do have much higher ceilings and can get some good indoor 'soaring' in.

In place of the old 'power vs. glide' and who is better, your membership made us feel like we belonged to the bigger fraternity of those who just love what we do.

All of us were quite concerned about being able to talk and hold an audience for more than a couple minutes, but you made us feel very comfortable and the words had no trouble in pouring out. Many thanks for that.

I sincerely hope I get a chance to come to your field and check out what makes a good club tick, and by all means, any of your interested members are most welcome at ours.

Whether we achieved our purpose is a mute point, just being able to share some time with you and the members is reward enough...and I should have realized at the beginning, ...the best thing that modelers do, is talk to other modelers...no one else would believe us anyway.

Best wishes for a safe and sane flying season...

On behalf of our contingent

With Respects

Ray Munro

SOGGI pres.

If You're not the lead dog...
....the scenery never changes..!!!

(Continued from page 4)

of money. Guys if you brake something let us know so we can get it repaired, accidents happen and you won't be asked to pay for accidents.
This month we will have a garage sale at the meeting on the 25th, we were scheduled to have an Air Brush manufacturer talk to us but he has had to beg off at short notice so get all your unwanted stuff together and bring it along for sale.
See you all on the 25th

(Batteries from page 4)

(distrbution system that is both expensive and unnecessary for most of our purposes) and a halfway decent charger with a built in balancer. Battery size is determined by :

1) physical size restriction and weight.
2) Regulator/UBEC input requirement
3) Power requirement.

In the case of 1) above, if you have a larger plane then this is pretty much open ended, 2) Most regulators and UBEC require an input of 7-30 VDC which they then regulate down to 5 or 6 VDC. In the case of a UBEC they come as a complete package with a built in Switch and a 5 or 6VDC output selector, they are a DC to DC switching power supply so placement needs to be as far from the Receiver as possible. A regulator usually does not have a built in switch and must be placed on the receiver side of the switch or it will drain down the battery. Regulators are also usually 5 o 6 VDC, not internally selectable so you need to specify when buying them.
The charger needs to have a balancing circuit to avoid damage and/or fire during charging and also to get the most out of your pack. My preference is to use 11.1 V LIPo packs with 2000 mAH + ratings, this gives me a minimum of 22 Watts of available power. With a standard Nicad/Nimh pack of 5V and a 1000mAH rating you only have 5Watts available. You can see that this would translate into a couple of days flying without worrying about charging. As an aside I also use a 2400mAH LIPO pack in my Transmitter. With the amount of flying I do this translates into charging it once a week on average.
When deciding to go this route you must check the ratings of your Servo's, some servo's will not work on 6V so be careful. Bluebird Servo's will cook at 6V and JR undercarriage Servo's simply do not operate at 6V. Receivers will operate happily at almost anything from 3,8 to 15VDC but there is no need to go above 6V as you gain nothing.
The cost of this type of set up depends on where you purchase your gear, typically I pay about $35.oo for a LIPO and a regulator/UBEC, and my chargers range in price from $50- $150 again depending where I purchased them.
To check prices go to Skycraft or check out these sites:
www.hobbypartz,com

World Miniature Warbirds Association.

Just recently a number of BRCM members have joined the World Miniature Warbirds Association (WMWA). This is pretty much a fledgling association dedicated to Warbird enthusiasts. The membership at the moment I believe is only in the Hundreds but as it starts new wings around the world it obviously grows.
WMWA is run by some of the world's best Scale Warbird builders, some of whom make their plans available for free or a small charge through the website www.wmwa.com