

June 2008

The  
**Inside Loop**



## Safety is our most important Product!

A modeler flying out of Dusters had two fingers cut off by a propeller.  
In a contest between fingers and props, the props always wins.

### President's Soapbox

This could be a banner month for our new members. There's been one solo certificate issued earlier, and June should see a few more framed certificates hanging on living room or den walls. Saturday morning training has been well attended, and there's also been lot's of training activity during the week for those lucky retirees. On our FAW Club Day in August I think it would be a blast to see 4 or more of our newer members in a coordinated trainer squadron fly-by! Diamond pattern, please. Half throttle. 15 foot altitude. Straight and level flight. Climb out in a chandelle. Don't forget to use your rudder! Show us how it's done!

The Evergreen Aviation & Space Museum continues to grow. The Space Museum opens Friday June 6 with special ceremonies in the morning. The Titan II is featured. One week earlier on Sunday June 1 there's a Nieuport and Fokker dedication. I

n't have any details on that, but being a WWI buff I'll probably go to see what's up. If you haven't been to this museum you're missing out on one of the premier aviation museums *anywhere!* The aircraft collection is exceptional and just keeps growing. Some of the space collection was previously displayed in the aviation building, but is now relocated to the Space Museum building. And there's an IMAX theatre. You can pay admission for each visit (aviation admission and space admission are separate!) or purchase an annual membership and get unlimited access to all exhibits. Membership also gets you into a Passport program that provides access to 250 museums worldwide. Unfortunately, neither the Tillamook Aviation Museum or the Boeing Museum are included. Event schedule, membership details, and a listing of the Passport museums are on the museum website at [www.sprucegoose.org](http://www.sprucegoose.org). Oh, and don't forget the museum also hosts an annual Flying Models static show, typically the last weekend of February or first weekend of March.

### Next Meeting

June 16<sup>th</sup> 7:00 PM

Kinton Grange



I have some news for all you politicians', talk to my butt the rest of me is in the nut box getting breakfast. As one candidate said "America is the greatest country in the world, help me change it." Now who is that stupid? Oh ya it's BHO. See ya ... Sq Earl III

Let's keep June fun and safe. Cliff P. had an excellent reminder for us to dull the edges of those plastic and composite props...they are *sharp!!!* They can cut a finger simply by turning the prop to prime your engine. A little sandpaper works wonders to "take the edge off".

Check the FAW website...you know.... [www.flyaways.org](http://www.flyaways.org) for upcoming events and to enjoy the picture galleries.

Let's fly! *Scott E.*

## Portland Ink

OK, so maybe I've gone over the edge...to be determined. I do know one place I've gone, and that would be Infinity Tattoo in North Portland. This was not my first visit. I've been there a few times before when my wife and a friend got inked. This was, however, my first personal experience. I'm pleased to report that getting a tattoo wasn't too difficult...it felt very similar to when I carry a backpack sprayer though a giant stand of blackberry bushes, and the blackberries attack from all directions and don't let go for 2 hours. Oh well.

Having an affinity for vintage aircraft, and enjoying the history surrounding them, I just had to have a couple of WWI aircraft in a dogfight on my arm. I started with a SPAD and Albatross. Those who have seen my model SPAD might recognize it in the ink. The Albatross is on my future model hit list. There's room for more planes to join the fight at a later date. Then the other arm might have to have a famous WWI War Bonds poster of Lady Liberty rallying the troops. I've heard that once you get one they become addictive. Time will tell.

*Scott E.*



Editors Comment: This just proves a theory that everything has a common denominator like "Don't bother to live life on the safe side when you are all done just slide sideways into the grave, cut and bruised screaming YIP YIP YIP YAHOO, WHAT A RIDE! and don't mess with my TATTOO."

### **Park Flying year Two** **'a rant by Hugh Christian'**

Last year I invited everyone to join me for flying at Beaverton parks. Thanks you Bob Beardsley for joining me.

My favorite park flying site is Western and 5<sup>th</sup>, kiddy corner to Michaels Crafts and Floral. This site offers plenty of parking and a larger field. I pull in on the south side of the field to keep the sun to my back. The car is parked in the dirt just off the driveway. This side of the field is hand launch only. The street along the north side is for more traditional takeoffs. Beware of the west side power lines and the north side trees and you'll be fine. Other park flying areas are St. Cecilia on 5<sup>th</sup> and Schiffler Park on Main. These two areas are multi use areas and have other activities to plan flying around. Don't fly over a soccer game!

Just to see if anyone is watching I flew at the large grassed lots by the waterfront OHSU buildings. The tall buildings offer shade and interesting wind currents. No one chase me off. Watch out for cars and parking police.

Another park I've flown at is next to the Beaverton Library. Beware of too many light poles. It seems that Beaverton is a little preoccupied with keeping terrorist, skateboarders and airplanes out of the parks.

Send me your favorite parks. I'll publish them in my next rant! Send to [phooff@gmail.com](mailto:phooff@gmail.com).

Foamies can be wonderful planes but are terribly unforgiving. After flying several foamy planes I was frustrated by never ending repairs. The Foamies crash and break like no other planes but with my secret repair trick the plane always goes back together! The secret is my wife's hot glue gun. The servos, receiver, control horns and the foam plane parts are all hot glued to the plane. Hot glue will repaired foam accidents easily and quickly. Add an extra piece of foam as a doubler to a bad break and the plane is improved. Try the hot glue, you'll like it.

Hats off to Mr. Lekner for the "4 servos for \$20" tip last December. I order a 4 pack and they work in my foamy just fine!

Two planes that work well at the park- The Park Zone Stryker and the Great Planes U-Can-Do 3D EP. The Stryker is a \$200 ARF (radio, plane, charger and batteries included) you can fly any where. The Stryker will survive an occasional tree grab. The U-Can-Do 3D EP is an interesting plane – it bends. Check it out at the Great Planes web site. Get the U-Can-Do 3D EP with the E-Flite brushless motor for complete satisfaction.

One plane that didn't work for me is the E-flite Mini Edge 540 3D. It looks great but had a very strange tip stall. It would tip

stall without warning at any speed and never let me relax. But it looks great.

Till my next rant - "*The wind is your friend*"!

Visit [www.ABCHT.com](http://www.ABCHT.com) for the best RC links.

*Hugh C.*

## Museum Notes

The Flying Heritage Collection, Paul Allen's collection of 15 war birds will be open to the public six days a week, closed Mondays. Located next to the Future of Flight and Boeing tour at Paine Field, Everett Wash. Some of the best examples of their type, including Mustang, Hellcat, Zero and ME109. Planes will be flying every other Sat starting June 14. More info at [www.flyingheritage.com](http://www.flyingheritage.com) \$12 general and \$10 seniors, military and ages 6-10.

*Cliff P.*

## The Carbonator's ZDZ80B2 Gets an Electric Starter

In February, 2008 I decided to test the on board starter advertised on the RC Showcase Website. I called Mike Dooley at RC Showcase and we discussed the starter. I decided to try the starter on my ZDZ80B2 engine before making the final decision to install a ZDZ160



Champion with the starter on my 33% Aircraft Modelers Research YMF-5 WACO. The engine arrived April 30, 2008 and looked great. The next step was to mount the engine on a test stand and see if it

really worked. The starter requires a 24 VDC power supply. I had two seven cell A123 packs ready for the test. The first pack was a seven cell 1100 mAh pack the second a seven cell 2300 mAh pack. The object of the onboard starter idea was to have everything contained inside the plane. A power cable was made running through a 250 V 22 Amp servo activated micro switch. The rationale being 'if the micro switch can handle 22 amps at 250 volts it should be able to handle 54 amps at 24 volts.' A JR X9303 was setup using an AR6000 receiver to activate the servo. An Astro watt meter was connected in series with the power source to check current flow and voltage drop. The 1100 mAh A123 pack was up first.

Staying within the recommended two second starter on time frame the starter button was depressed and bingo, the starter engaged, turned the engine over faster than expected and the observers all agreed we might have a winner here. After five more two second runs the observed current draw was in the 55 amp range with a voltage drop to 15 volts. The battery was noticeably warm and the starter motor was warmer than one would expect it to be. It looks like the 1100 mAh A123 pack might be the absolute minimum for about three two second runs without a cool-off period. I would only use the 1100 mAh A123 pack if I really had to save weight or had a severe size restriction because the difference between it and the 2300 mAh A123 pack is only seven ounces.

The next pack up was the 2300 mAh A123 and after a substantial cooling off period for the starter motor we started the second test. The results were impressive, the engine turned over faster, current draw was less and the voltage drop was less. We calculated that 1800 mAh were available from the 2300 mAh pack and that would give us 120 seconds of run time or the equivalent of sixty starts before a battery charge was required. We ran ten consecutive two second tests allowing ten seconds between runs to record voltage, current draw, milliamps used, checking the battery temperature and the starter motor temperature. Everything was normal, the battery pack had a slight increase in temperature and the starter motor was slightly warm, about what one would expect for this kind of test. A total of 306 milliamps were used, proving our calculated estimate of sixty starts between pack charging. The following chart provides the test details.

Starter Test - ASTROWatt Meter										
	mAh	min	sec	hr/sec	amp draw					
	1800	60	60	3600	54					
	mAh @ 54a	54a/sec		# starts						
	33.333333	120		60						
Test 10 - 2 second starter runs				2300 mAh A123 Batteries						
	1	2	3	4	5	6	7	8	9	10
Volts	19	20	19	19	20	19	20	19	19	19
Amps	45	46	45	46	45	46	45	47	46	45
mA	24	54	88	121	157	185	225	255	278	306
Voltage Starter on										
mA used cumulative										
Computed start accumulated current										
10.2 second start runs				54	20	300				
				amps	seconds	mAh				

The test proved the starter works as advertised, actually worked better than we expected. The next step is to re-install the engine on the Carbonator and see how the system performs when mounted in an airplane. The engine was weighed and the starter unit added three and one half pounds to the front of the plane. The battery pack weighs fifteen ounces. A pack holder was installed in the back of the fuselage and the pack strapped to the holder. The cowl was cut to accommodate the starter and new mufflers and then installed on the plane. The plane was completely assembled and balanced, it came out right on the money. The weight of the plane with all the modifications is 42 pounds. Takeoff weight with gas and smoke oil will be 46 pounds.



The flight test was conducted May 9, 2008. The Carbonator is a World Models 1/3 scale J3 Cub, wings clipped to 106 inches with STOL tips, covered with Worldtex fabric and painted with Latex paint. Two flights were flown, both extremely easy with no bad tendencies due to the increase in weight. A few clicks of up were required likely due to the drag of the opened cowl and the starter ring gear. Landings were smooth with a very controllable flair point. This onboard starter is a winner and the ZDZ160 Champion engine with a

starter is on order for the YMF-5.

In the course of the on-board testing that included developing a cold start and hot start procedure plus taxi tests and two flights the starter was activated twenty seven times using 575 mAh of the available 1800 mAh.

Cold start (we have a servo activated choke):

1. Ignition off, choke full on, throttle full advance.
2. Starter on for 1 to 1½ seconds, wait 4 or 5 seconds starter on for 1 to 1½ seconds.
3. Ignition on, choke set at ½ on, throttle 3 clicks advanced, starter on, engine should start immediately.
4. Choke off, let the engine warm up and adjust idle trim if needed.

Hot Start:

1. If the plane has been sitting for several hours, Ignition off, choke full on, throttle full advance, starter on for 1 second.
2. If the plane is still warm skip step 1.
3. Ignition on, choke off, throttle 3 clicks advanced, starter on, engine should start immediately, let the engine warm up and adjust the idle trim if needed.

If you are interested in exploring the wonderful world of onboard electric starters contact RC Showcase, [www.rcshowcase.com/](http://www.rcshowcase.com/) or call (301) 374-2197.

*Don S.*

**Editors Note:** The Carbonator was semi-crashed May 3, 2008 because of a rudder gyro operating in reverse. Stick to the right, gyro more to the right, same to the left, three of those moves and the Cub got Bonked.

The flight test was done with a 10 to 12 mile per hour wind all went well. Flying with short wings and this weight with no wind the plane was unstable. Thanks to Kelly Martin the Carbonator has a new pair of 141" wings and once again "Fly's like a Cub."

## Flight Training Update Charles B. Hagen Solos

Charles B. Hagen is the second Winter Term PCC student to solo this spring. Charles really persevered through the invasion of the ever present gremlins that hide in the seed grass North of the runway. Once a gremlin named O-S..t sneaked in and pulled the trainer cord out of the instructors transmitter. On another occasion a gremlin in charge weight and balance ejected the right landing gear right after takeoff, dropping of course somewhere in the seed grass field.

In the end with help from Cliff Pemberton, Scott Carrigan, Scott Enochs and Aerodominic the Greek God of Flight, Charles made his solo flight May 24, 2008 flying a NexSTAR trainer.



**Charles on the left with  
Instructor Scott Enochs.**

Fly-A-Ways welcomes James D. Walker and his son James A. Walker (James A. goes by Austen) the latest father son duo to enter flight training at the club. All the members wish you the greatest success, just keep one eye on the gremlins hiding in the seed grass, one eye on your instructor and one eye on your plane.

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Hugh Christian