

**Focus on Sailplanes!**

# Peoria R/C Modelers Newsletter April 2006



**A -3A USAAC**  
military glider  
trainer on a low  
fly-by.

1:5 scale = 3.4  
meter wing span  
= 133" span

An **Olympic II**  
sailplane in flight.

99" span. Note  
the spoilers on  
the wings.

More inside!



**CONDOR 4** Sailplane

## **Club Meeting Show-n-tell: Gliders!**

Roger Stegall provided some sailplane education last month. So this issue focuses on Sailplanes. Here are a few notes I took:

Roger has spent serious time as a glider flyer: glider club President of the Rockford Skyhawks Club, and active competitor. At one time he had 14 gliders! Due to the negative influence of 'wet power', he only has 2 gliders now. He is hoping for more glider interest in the club in the near future. Roger shows his Flamingo below:



There are several ways to launch gliders:

1. Discuss (hand) launch to ~100 feet for small and light gliders
2. Hi-Start (surgical rubber) launch to ~300-500 feet for gliders to 15 feet/11lbs
3. Winch launch to ~500-700 feet for any strong gliders, 2-3meter typical.

4. Aero-tows to any altitude using an R/C power plane towing up a glider mainly for large, heavy scale gliders 2.5meters +. There is a proper way to rig a plane for towing – just ask Roger the humorous story of two people doing it the first time, wrong. Anyhow, Roger has outfitted his Bird-dog with a tow ring (correctly) and awaits his first aero-tow of his glider (I'd like to see how he flies both of them at once J ).

Roger demonstrates a winch launcher with pulley turnaround in his hand. A rubber Hi-start is on the yellow spool just left of the winch:



There are three sizes of planes:

- 2 meter: 80 inches. Usually 2 servos.
- Standard class: up to 100" span. 3 servos+
- Unlimited class: 100+", up to 8 servos. In crow configuration, flaps go down fully and both ailerons go up: Viola! dive brakes! In this way, gliders can descend at a 45 degree angle, with no speed increase, and make spot landings.

Roger recommended the Olympic II as the finest 'standard class' & beginner's glider. (Having built one back as an eager 17 year old, I had to grab a picture for nostalgia's sake). It still is competitive! The picture on the cover was published in Flying Models magazine, December 2004 issue. High quality, fast-building kits can be had from skybench.aerotech@GTE.net. Electric conversion adapters for speed 600 motors are had for under \$5. But Roger has a tow plane, so give him \$5 for tows and save the power plant & battery cost. :)

G.P.'s Spirit 100" is another great sail-er.

Ask Roger about "Sailplane Golf"!

## **Electric Powered Sailplanes:**

An electric AVA sailplane, by Kennedy Composites, is shown by Mike Reagan who won the AMA electric nationals last year. What a beauty! I'd go for it if my skills matched the plane's performance! You can pick various options/configurations: 100 to 147 inch wingspan options (147" shown), spoilers, flaps, (sorry, no ailerons), pure sailplane or electric. And, if you fly like me, spare parts are available! Oh, around \$600.



## **R/C Resources on the Web**

[www.modellbau-usa.com](http://www.modellbau-usa.com)

Has a \$35 make your own BEC with 5-6V output up to 5A, 10A surge. Check it out.

[www.glowwire.com](http://www.glowwire.com)

Electroluminescent wire for that special touch and adds night-flying capability! Laser LED's too. Mr. Mike Lusher, check out the picture gallery: a glow-wire lit-up Soarstar!

[www.socalflyers.com](http://www.socalflyers.com)

"Toys for Kids" fly-in. An idea for charity fly?

## **Club Photo Contest**

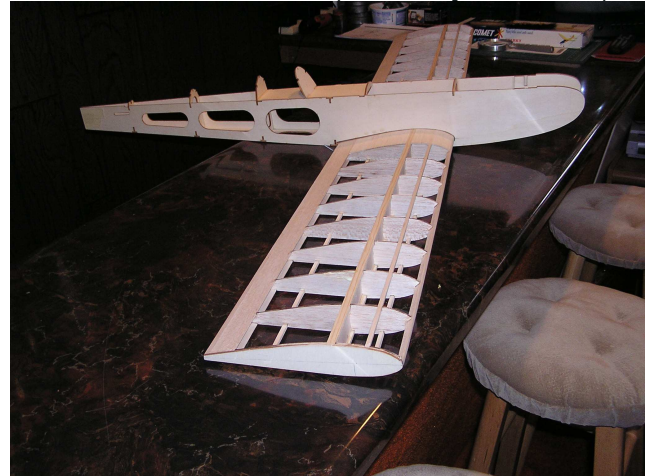
Bob, you received any pictures yet? We can feature it here.

## **For Sale**

Ercoupe Kit. \$90. Michael Seyfert. 385-1896

Four Star-40. \$55 (with box and remainder of original kit –not shown).

Contact: Rod Fletcher (via Terry Beachler)



## **News from Around**

Vern Mall, President of the Washington R/C Flyers: "The events chairman has a slate of activities scheduled. A static display of an aircraft and radio equipment has been erected inside the Washington Library and will be on display for the month of April. Plans are underway to have a presence and display at the Prairie Air Show. Also under consideration is a static display, similar to the one at the Library, at the Washington Cherry Festival. All of the above would not be possible except for YOU!"

## **Meeting Minutes** for April 4, 2006

President Beachler asked for member introductions and recognized guest Max Koehl.

Treasurer Fassino presented the financial report, and had bills totaling \$237.28 for runway installation. He also read a list of previous members who had paid their AMA dues, but had not paid their Peoria Radio Control Modelers dues. The bylaws require that to be a member of the Club, one must

be current with their dues with both organizations.

President Beachler commented that the radio control article had recently appeared in the Journal Star. Several members commented that they had seen the article. President Beachler commented that (Sat.) breakfasts continues to be held at Le Peeps, but encouraged members to check for any updated information on the Club website. Bob Wilson, the activity coordinator had no report. Next month's program will likely include a presentation by Wes Miller on simulated (scale) rivets.

President Beachler discussed the upcoming fieldwork day, which is scheduled for April 22nd with a rain date of April 29th. A list of activities, including preparing the mower, installing the bulletin board, mowing under fences, fertilizing grass and killing weeds, repairs to the restrooms, replacing the entry sign, cutting logs and lubricating locks, all needed attention. Roger Stegall discussed the possibility of preparing breakfast for the 9:00 a.m. start time to include sausage and eggs. (Open fly session to follow).

Next, President Beachler discussed the recently installed runway, which measures about 135 ft. long by 12 ft. wide. It was mentioned that the runway could be increased by 50%, giving an 18 ft. wide runway for about \$120. The motion was approved with Bob Wilson voting against the motion. President Beachler reviewed a checklist useful with new members.

There was discussion about a possible need for a replacement safety officer. The names of Roger Stegall, Terry Delvecchio and George Knight were all raised as possible replacements.

There being no further business the meeting adjourned at 7:35 p.m. with Roger Stegall presenting a program on Sailplanes.

## Coming Events

- **Club Breakfast**. All Saturday's! 7AM.  
See website for location.

- **April 22 Field Clean-up/Breakfast** & flying fun to follow! 9-noon. Raindate: 29<sup>th</sup>.

- June 18th Washington R/C club's Fun Fly

- July 21 – 23rd Prairie Air Show, Peoria Airport, & Washington's R/C Display

- **Club meeting**: Tuesday, May 2, back at the Field! Note time change: 6PM! Chris will change our lock combination; we may have a night flying demonstration by George, Don, and any **other interested lighted night flyer**; a Possible fun fly event and a 'making scale rivets' demo.

- **JR's Aero-tow 2006**:

May 31-June 4 Monticello Airport/Gliderport  
A vigorous towing program provides 30 tows per hour. Last year's Aero-Tow recorded over 300 tows and there was never a long line. Full-size Sailplane rides available 10am - 4PM Saturday. See [jrradios.com](http://jrradios.com).  
Pictures below:



Another scale beauty on (short?) final!



Classics with classic lines are still appealing!

## **Which is Better: PPM vs PCM**

From the AMA Insider 11/05 issue  
Tuesday, April 04, 2006 from the River District  
RC Eagles, Saint Clair, MI

Aside from all the other choices when selecting an RC radio, the terms PPM and PCM comes up. PPM (Pulse Position Modulation) is standard FM. The next step up is PCM or Pulse Code Modulation which seems to be shrouded in mysticism. In a nutshell, it is not what frequency each is on, but how they use their frequencies. To demystify PCM you should understand that there is no range increase with PCM. It is not on some special side band or frequency. It shares the exact same FM frequency everyone else on your channel is using, and is susceptible to the same interference. There is, however, improvement in noise reduction and safe performance while the noise is received.

Noise is the undesirable signals on your frequency. They can be caused by anything from sunspots to another transmitter hornning in on your frequency. Today's modern radios operate on a narrow band that eliminates most of the random noise. Basically, the PCM radio takes your FM signal and "codes" it digitally (the "C" in PCM). Then the PCM receiver "decodes" the signal to utilize it.

Since noise is not a normally recognized code, it is ignored by the PCM receiver, and is not sent as servo instructions. In addition PCM does not transmit position signals for each servo in each transmitter pulse. Rather it transmits movement commands as required, and occasional positions confirmation commands. Short periods of interference will simply leave the servo at its last known position, and not show such radio interference as glitches or fluttering.

If your PCM receiver continuously receives interference past the preset time, it then switches into "failsafe mode," and obeys some preset commands you programmed in the receiver. For example, you may set failsafe to throttle down and move all other surfaces to the neutral position. This is great if you are in level flight,

but disastrous if you are exiting a loop. If set to continue the last command, it will often keep your model in the loop. Unfortunately, failsafe settings will put your model in a precarious situation you didn't want it locked into.

A third level of protection may be obtained by using a pilot assist module in combination with preset positions on the failsafe settings. You can help ensure your model will go to level flight at a slow—but safe—airspeed and hopefully safely ride out the interference.

Even though the radio does not glitch, it is not to say the PCM radio was in good contact at all times. If another radio is transmitting on your frequency, it can—and likely will—interfere with your receiver's ability to receive the proper signal from your transmitter. The CB radio enthusiast in the seventies used to call this being "walked on." PCM will help keep your receiver from acting on a bad signal, but there is nothing it can do if a good signal can not be received over the interference.

The logic of PCM is that it is better to momentarily do nothing than act on a bad signal. PCM benefits are purely in precise Tx/Rx communication. PCM does, unfortunately, have a serious weakness. Even minimal atmospheric or external noise can foul up those wonderful intricate binary numbers beyond any correction. In that case, the receiver is up a creek without a paddle. With PCM, the main purpose is to hide glitches by not transmitting them to a control surface command. As far as the pilot is concerned, there is only an unnoticeable momentary loss of control. If the radio interference is persistent, the pilot will probably be unaware and may lead to total loss of control sending the airplane either into the wild blue yonder or to the ground.

On the other hand, the simple PPM pulses may be corrupted with some information getting through. When things go bad, the choice is between no control (PCM)—and some control (PPM). Most RC pilots would prefer having some control even if erratic. When a model aircraft is suddenly doing the funky chicken, it is

normally a signal to land. Most radio interferences are normally small glitches and are recoverable, giving the PPM pilot a chance to land and find the cause of the problem.

The bottom line is if you are looking for a bullet-proof radio system to keep your airplane from falling from the sky, it does not exist. A system sporting PCM is an excellent choice for larger acrobatic and 3-D fliers with quick throws, where a small glitch may send it suddenly into the ground. PCM will of course work on smaller, more docile airplanes. These airplanes will benefit less from the added features, and PPM is probably a good bet.

Remember there is no substitute for a good battery charge and a range check. If another radio on your frequency is turned on, there is little any radio can do to keep you from being “shot down.”

## **The Flyboy Advisor** by Dave Olson

March 29, 2006 - I'm a morning person, and sometimes go in to work early just because I'm awake & ready. I like the empty office, with no interruptions, I like the morning sky and the crisp cool air, and I like the leisurely drive up Highway 29, when there is very little traffic.

Ordinarily, a morning drive to work before 6 AM is uneventful, even boring (unless you're a morning person) but this morning was different. The location was just north of the 150/War Memorial drive interchange with 29, far south of Gardner Lane / Forest Park Drive. I was alone on the road, the closest other car perhaps a quarter mile in front. It was just before sunup, and in the dim light ahead I saw a deer emerge from in front of the leading car. Then another, and I think one more before I saw the brake lights come on. In all, I counted 5 deer, all about the same size, ambling across the highway.

I remember Mom telling me that if I see one deer start to cross the road, look for another. That advice has served me well, on at least two other occasions. I slowed down and kept looking for that sixth deer, which never came. Then I noticed that even at my slow speed, I was closing fast on the other car, and moved into the left lane. As I went around, I saw that the driver was pretty shaken by the experience, and had probably not seen deer until there were 3 on the road and two approaching.

Now, that could have been me, but for luck. I watch the road, but I'm usually surprised when something is stationary or moving slow across the road in front of me.

Now, there's a parallel in flying that I'd like to mention. You're landing your plane, it sets down nicely, and begins the rollout. Something catches your eye, just ahead of your plane, and you glance that way – to see somebody picking up their plane, right in your plane's path!

Sort of like that guy that was confronted by all the deer. Know why that doesn't happen at our field? Because everybody announces their intentions. I've noticed people are letting other pilots on the flight line know when they're taking off, landing, making touch 'n go's or low passes. When they need to go out on the field, I'm hearing “On the Field!” I like it. Only good things can happen, and everybody knows they won't have that deer on the road experience at the field, because everyone's letting others know their intentions.

The Flyboy Advisor endorses this.

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## **From the President's Hangar:**

Flying is at full speed with some really super spring weather. Last Sunday we had around 10 airplanes at the field. Please welcome new member John Hoelscher. Dave Olson is

training him. Michael will provide more info on John in a future newsletter.

If you missed the April meeting you missed a dandy! Roger's sailplane presentation was excellent. I think we will see a good level of sailplane activity at the field this year.

Our annual field cleanup and maintenance day is scheduled for Saturday April 22, 9 a.m. Roger Stegall is providing breakfast. Anyone is welcome to add something for a breakfast donation. (Please no fried braunschweiger as I can't stand the stuff). Tasks include hand mow around fence/entrance area (Don S. has mower), clean rest rooms, repair sagging rest room doors, cut parking logs into manageable lengths, (I have chain saw), Replace and label clothespins on frequency board (with wood), change lock combination, add more runway mat, spray weed killer and maybe some other things not listed here. If you noticed something needing attention please feel free to go after the project. After project completion, it's flyin' time again!

I recently purchased The Pilot's Guide to Mastering Radio Controlled Flight, by Scott Stoops. He writes in Fly R/C magazine. It starts with "This is an airplane", and ends with very detailed instructions for aerobatics unheard of by some of us. I'll bring the copy to the meeting for your perusal. An excellent book by a very knowledgeable author.

We have the possibility of obtaining a new flying site from the Peoria Park District. The Peoria Park District has an 80 acre site just north of Cat/Mossville. We need to put a proposal together for presentation to the Peoria Park Board. This is not a slam dunk. The field has neighbors (3) to the northeast more than a quarter mile away. Our present field is a prime flying site, but we need only look at the recent development at the south end of the field: Houses are getting closer. If you have skills which would be helpful with the presentation to the Park Board, legal, site mapping, familiarity with zoning, etc.,

please contact me. At our next meeting we should have a discussion regarding our requirements for a new site. If you know present field dimensions and facts, that would be helpful. The AMA web site has a pdf file with a recommended field layout. It is likely that we would have an east/west runway layout. Stay tuned and be sure to make the meeting.

Bob Wilson and I visited the Toledo show April 7. The show was great with many absolutely gorgeous models displayed. We attended two very good seminars: entering aerobatics and how-to on scale competition.

A few have not paid 2006 dues. We would like to keep you flying. If you have not paid, take a moment to mail the checks both to the AMA and the Peoria R/C Modelers.

The Safety Coordinator position is open as Chris Haley is loaded with home projects this summer. Nominations from the floor will be taken and voted upon at the May meeting

See ya'll at the field!

Terry Beachler  
President

### **From the Editor's pen:**

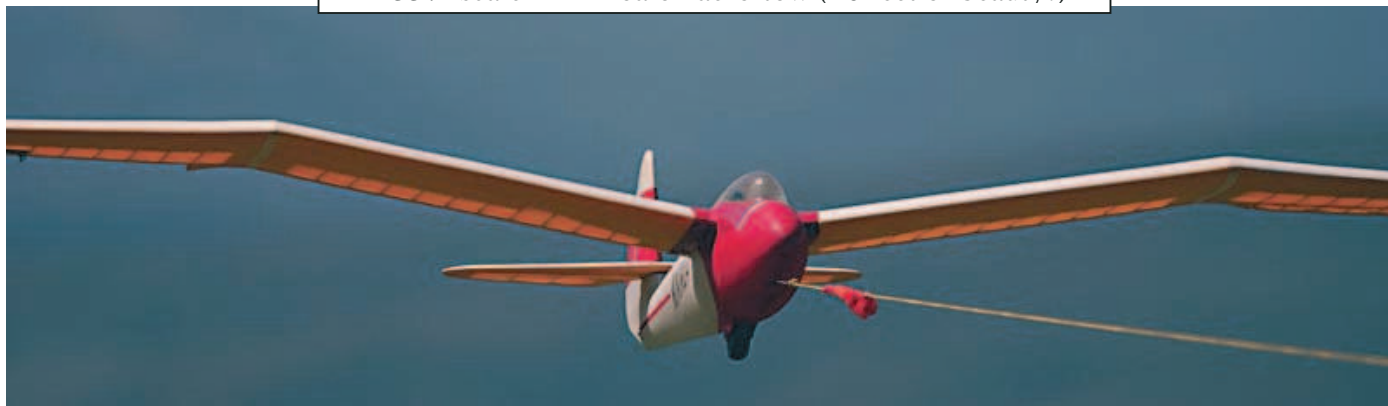
I had some fun building on Roger's Sailplane presentation. It makes for a 'theme' for the newsletter. I thought I'd try next month to focus on either scale modeling techniques, or WWI/WWII/vintage planes. Your input for either of these will be most graciously accepted. If I get too much, I'll have two months of newsletters! If you have anything to add at any time, the mailbox or eMail in-basket is always open.

I hope you had a great Easter! And enjoyed the 'reason for the season'! My 'Easter Bunny' gave me a classy sailplane. What about yours?

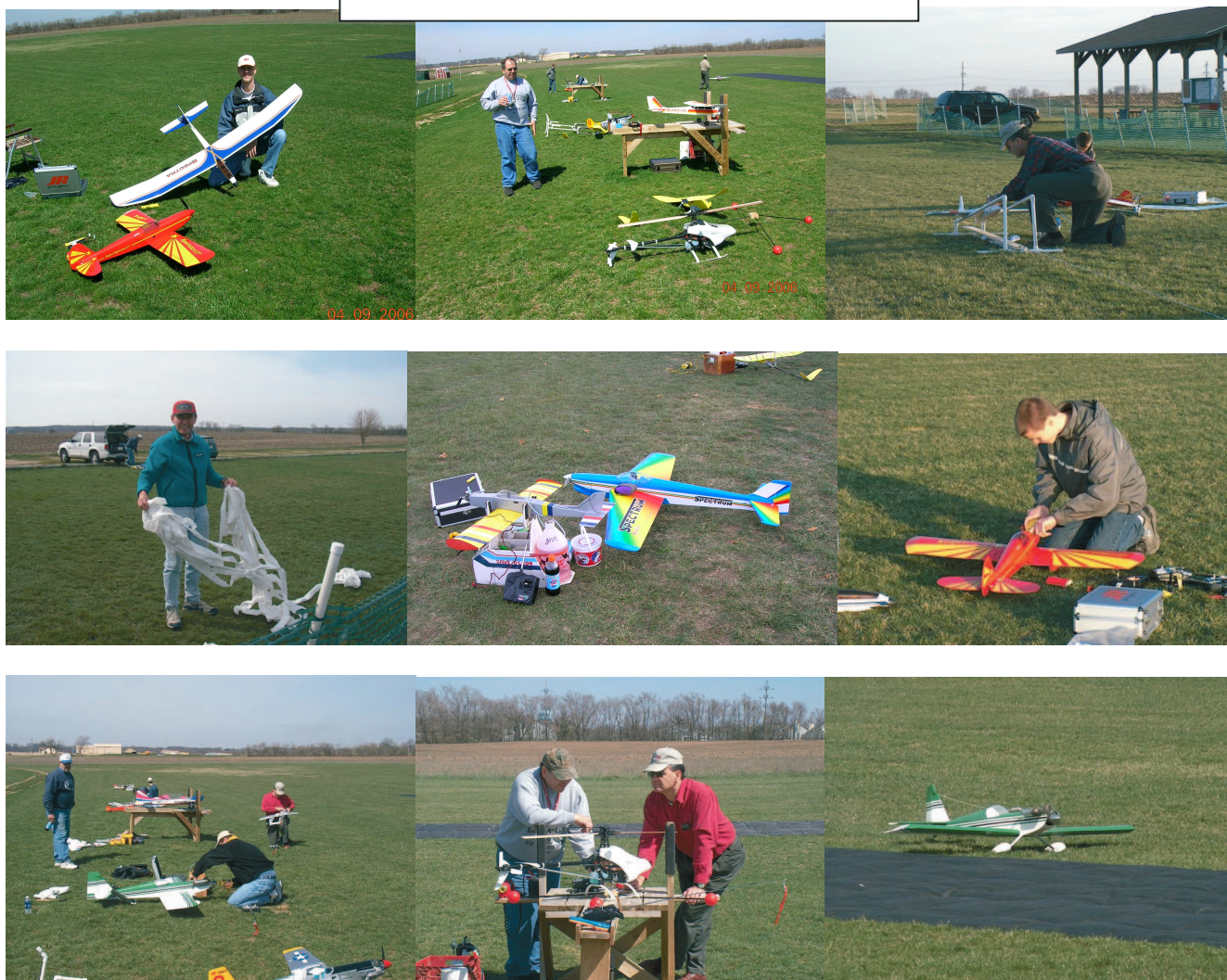
Oh, any sales on new/used 9 channel radio's out there?

Michael Seyfert

A 35% scale Minimoa on aero-tow (20 feet of beauty!)



Just another beautiful day at the field!



Top row from left: Editor Michael Seyfert with his ePowered Spectra. George Knight on active flightline. Jim Fassino readying for bungee assisted twin eJet launch. Second row: President Terry laughing about someone TP'ing the field (you missed – my daughters collected it and made you think you had a bulls-eye). Dave Olson's Spectrum with matching color scheme. Jonathan Seyfert and his new ePowered Super Sportster prepping for maiden launch. Bottom row: Active flightline. George works while Jim ponders. :) Kerry's pride –n- joy.