

CLUB PARTICULARS

AMA Charter 331 Website: peoriarcmodelers.com

PRESIDENT:	John "Gipetto" Hoelscher (309) 360-1017, johnhoelscher@comcast.net
VICE PRESIDENT:	"Hollywood" Jim Hogan (309) 370-6901, <u>bzsource@hotmail.com</u>
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MAINTENANCE & GROUNDS:	Roger "Pod Man" Stegall (309) 579-3023, <u>rogerstegall@hotmail.com</u>
EDITOR:	Bob "Grumplestiltskin" Wilson (309) 219-4262, <u>wilsorc@gmail.com</u>
AMA CONTEST DIRECTORS:	Bob Wilson

Flying Field Location

The flying field is located off Old Galena Road, ¹/₂ mile north of the Caterpillar Technical Center on the west side of the road. **GPS Location:** N40 51.844' W89 33.788'

Flying Hours

Flying hours are 8am until dusk, Monday thru Friday, Saturday and Sunday.

Membership

Club dues are \$100/year. All members and flyers <u>must</u> belong to the Academy of Model Aeronautics (AMA). A \$200 new field assessment will be initiated for all new club members in 2010. This assessment can be made in one payment or two, \$100 payments over two years.

General

We are committed to having fun and the safe operation of model aircraft.

The Peoria RC Modelers is an equal opportunity, not-for-profit organization and welcomes all new members.

Flight Instruction

The Peoria RC Modelers offers flight instruction as a free service to members. However, flight students are urged to supply their own aircraft, radio and support equipment. Students should also coordinate training schedules with the instructor. A club trainer aircraft is available for special situations. **Glow, gas & electric fixed wing.** Dave Olson (309) 688-6204, dmolson@ameritech.net

Glow, Gas, electric fixed wing & helicopter. Jim Fassino, (309) 361-6828, jfassino@me.com

Glow, gas fixed wing. Bob Wilson, (309) 219-4262, <u>wilsorc@gmail.com</u>

Soaring

Roger Stegall, (309) 579-3023, rogerstegall@hotmail.com

PHOTO OF THE MONTH

And to think...I almost sold the kit I have of this airplane. What was I thinking? Editor

One of the newer homebuilt designs on the market, the Charger is the product of Ed Marquart, a resident of Riverside, California.

The Charger is a moderate-sized "baby" biplane, and has a 24-foot span and 19-1/2-foot length. Wing area is 170 square feet, about par for a gross weight of 1,600 pounds, which nets a wing loading of 9.4 pounds per square foot. Designed with the sporting flyer in mind, the Charger is a delightful handling airplane with aerobatic capabilities.

The Charger will handle engines from 125 to 200 horsepower, with the bigger engines improving cruise over the nominal 115 mph and giving a better rate of climb.



The Marquart Charger... Plans built Grand Champion at Oshkosh 2009



PRCM BULLETIN

There **will be** indoor flying this Friday, January 29, 2010 as usual. A number of our members will be heading for E-Fest but don't let that stop you from flying with us. We plan to continue flying indoors on Friday nights at the Midwest Sports Complex through the month of March 2010. Tom Imhoff will be in-charge if you have questions or need help on the 29th. Also consider joining.

2010 CLUB CALENDAR

February		
2	Club meeting at TGI-Fridays, 5300 W. War Memorial Dr., 7PM. 6PM pre-meeting dinner.	
5, 12, 19,26	Electric flying at the Soccer Complex. 8-10.	
March		
2	Club meeting at TGI-Fridays, 5300 W. War Memorial Dr., 7PM. 6PM pre-meeting dinner.	
5, 12,19,26	Electric flying at the Soccer Complex. 8-10.	
April		
6	Club meeting at TGI-Fridays, 5300 W. War Memorial Dr., 7PM. 6PM pre-meeting dinner.	
9, 10, 11	Weak Signals 55 th Toledo Show	
2, 9, 16, 23, 30	Electric flying at the Soccer Complex. 8-10.	
May		
4	Club meeting at the field 7PM.	
June		
1	Club meeting at the field 7PM.	
July		
6	Club meeting at the field 7PM.	
26-30	Oshkosh Air Venture 2010	
30	Fat Lake Pattern Rendezvous - Tentative	
August		
1	Oshkosh Air Venture 2010 (Last Day)	
1	Fat Lake Pattern Rendezvous - Tentative	
3	Club meeting at the field 7PM.	
September		
7	Club meeting at the field 7PM.	
October		
5	Club meeting at TGI-Fridays, 5300 W. War Memorial Dr., 7PM. 6PM pre-meeting dinner.	

THE MEETING

Candid shots from the monthly meeting



Don Stedman showing off his new Focke Wulf.



The lighting is not good, but that's Chummer showing off his latest project.



Snappy has been busy. Here is a Beechcraft Bonanza.

FROM THE VEEP PRCM Vice President Jim Hogan

The Annual Banquet was held at Benardi's Restaurant on Saturday, January 9, 2010. This long-term event has been a tradition in the Peoria R/C Modelers for about as long as the club has been around. Our attendance this year was disappointing.



Banqueteers watch a tremendous photo slide show put together by Jim Fassino.

We had awards for people who made outstanding contributions to our club. JIM FASSINO earned "Modeler of the Year" for his efforts of always being willing to help others even if it prevents his flying.



PRCM Modeler of the Year

ROGER STEGALL won "Glow Plug Award" for his efforts to covert our first year flying field into a mature well-groomed flying park.



"Well done" JIM and ROGER!

Nick Chumbley was recognized for soloing.2/8 Dad, Bryan Chumbley, welcomed him by the traditional tie cut.



New member and soloist Nick Chumbley

Other awards for less then stellar performance where also presented.

Brian Chumbley - worst stall turn.



"I'll get Wilson for this!"

Jim Fassino - furthest crash from the field



The search turned into a Safari.

Bob Wilson - Flew more then membership allowed.



"I got my moneys worth".

Scott Ferguson - Flying with parts missing.



What about that wing tube?

John Hoslscher - Hole in the fence.



"I always turn off my transmitter first!"

George Knight - Most crashes.



"They were all radio problems."

As we enter the New Year and spring is around the corner, you will be hearing more on events for this spring and summer. We'll be looking for volunteers to help run the events.

"See you the in the lawn chairs."

Jim Hogan



A big thanks to banquet organizer and Toastmaster Jim Hogan.

FIRST TO FLY

By Bob Wilson

Here are a few flicks from PRCM's "First to Fly" event held on New Years Day. This event, organized and directed by Jim Fassino, was a huge success and lots of fun.



Outside flying...tailskid mark in the snow. Left by the Steve Blessin's "Super Bee".



Joe Board trying his hand at balloon popping.



Roger Wheeler & Steve Blessin taking care of the cash drawer



Don "Snappy" Stedman sacking some Z's.



The "Prez" looking cool in His Foster Grant's



Tommy Imhoff & Glen Howard snarfing down some lunch

IMAA News By Jim Hogan

There is no doubt, BIG BIRDS are becoming more popular every year. If fact, one of the biggest model airplane meets held in the US is a BIG BIRD meet. It's called the "Joe Nall Giant Scale Flyin" and will be held on May 8th through the 15th at the Triple Tree Aerodrome in Woodruff, South Carolina just east of Spartanburg. This is an active airport which features midday flight demonstrations in full scale as well as model aircraft. In 2009, over 800 pilots registered. There are five separate flight lines for Jets, 3-D, Float Planes, Helicopters, and the main flight line. Because of so much flying, 2010 will be an all 2.4GHz event. There are exhibits, workshops, food and camping. Many people camp because of all the activities going on. I've heard it call a mini Oshkosh.

You will see flying models of B-29's, B-17's B-52's with wing spans of 20 feet or more. This event is open to quarter scale aircraft and up, but I understand 33%, 40% and larger are very popular. There was a 60% Piper Cub shown in "Model Aviation Magazine" which flew last year. I hope it returns.

I am considering going this year, but I have not made up my mind for sure. If others are interested in going, maybe we can put together a group to represent PRCM and Central Illinois at the Joe Nall.

More later. Jim Hogan



It appears we will have a new pattern flier for the 2010 season. After much deliberation, JD "Captain Crunch" Keenan purchased Jim Fassino's Venus II. We welcome him to the pattern community and hope his flying is as smooth as his reported landings for Southwest Airlines.



Newest pattern flier, JD Keenan.



Propellers and Airscrews

This month we will discuss propeller efficiency and how to select a propeller of similar sizes to optimize performance. Let's begin with a situation that happened recently. A fellow PRCM pilot of considerable skill was concerned that all of his batteries were suddenly not up to the task of powering his indoor airplane. He wondered could they all wear down at once, was the charger malfunctioning? After borrowing a fellow pilot's battery, he noted the same lack of power. Now, his suspicion turned to the motor getting tired or an electronic speed control that might be failing.

Well, to jump to the end of this mystery, it actually took much longer to determine the cause, he sheepishly reported some time later that the propeller had been mounted backwards. It turns out that he had knocked the prop off on his last flight of the day and while he put it back on the airplane, he did not fly it again until the following week. Could this simple (OK we are being generous here) mistake be the cause of the poor performance?

Here are some real world numbers that answer the question with a big...Yes! A Scorpion Outrunner 3020 motor with an 11X7 prop running on 10.5 volts draws 47.8 amps, making 502 watts turning at 9,700 rpm and generating 2,212 grams of thrust. Turn the prop around and it draws 54.7 amps and the thrust drops to 1,100 grams. By putting the prop on backwards, the system consumes about 15% more power (amps) and generates 50% less thrust. That explains why the pilot thought he had a problem, he did but only a prop that used 15% more energy to deliver about ½ the thrust...not good!

Last week I built a scale prop for my Antoinette and with the backwards prop incident fresh in my mind I thought it might not work very well. As was common in 1909 the "air screw" was a flat plate set at a 45° angle to the plane of rotation. While it is not as inefficient as putting a prop on backwards, it is not much better. My scale prop produced enough thrust to fly the airplane but it was very inefficient and caused the Rimfire 250 to get warmer than normal. But at least if you put this propeller on backwards it would not matter.

Here is a quote from the January 9, 1909 Flight Journal addressing propellers.

"It is a very singular fact that a propeller is regarded by the uninitiated as the simplest possible apparatus; while, by those who know or try to know the facts, it is looked upon as one of the most puzzling devices in the sole science of engineering...yet very little is known about the aerial propeller at the present day and it is very evident that a great deal will have to be found out before the utmost capabilities of the aerial engines are tuned to the best advantage."

Here is a system to try if you would like to test several propellers onn your power system. You may have heard the rule to cut the diameter an inch if you want to increase the pitch an inch. That might work but here is a better formula. Cube the diameter of the prop and multiply it by the pitch, this result will help you find another prop that will take the same amount of energy to operate but let you trade prop speed for thrust or thrust for speed.

Here is an example, for a 12X6 prop you cube the diameter, 12 cubed is 1,728, times the pitch, in this case 6...which gives a result of 10,368. the units do not matter, only the result. Any prop that gives you a product close to the 10,368 should work. Look at a 15X3 prop (15 cubed, 3,375 times 3 equals 10,125) is very close, within about 2%. Or and 11X8 prop works out to 10,648 or within 2.7%. Any of these props will require the same energy of the power system. Each of these props will pull the same energy out of an electric motor. But, the prop speed for the 3-inch pitch will be slow but lots of torque...good for hovering. The 12X6 prop will give a higher speed but have less thrust, fine it you are not interested in hovering. And...the 11X8 prop will give the best top speed but the least thrust. This would be good for a pylon racer, you would likely have a long take off run but once it got up to speed...watch out!

Now, you can't do this in a vacuum, you can't make a slow stick go 100 mph by changing the prop, but you can optimize the prop for the airframe and the power system. Give it a try and consider the great advantage we have over the aeroplane experimenters of the early 1900's building their flying machines. Until next month..."Say No to Glow", and put your props on the curved side facing forward.

JCF

THE GROUND TEST WHAT IT IS AND WHAT IT IS NOT By Wally Pitts

Editors Note: Member Roger Stegall dug out this very interesting article.

The Ground Test – What It Is And Is Not (by Wally Pitts)

I have often been asked why we have a ground test for pattern flying. The short answer is: The AMA has (to my knowledge) always measured aircraft sound on the ground.

In the past, it has worked out perfectly well for the AMA (F3A and Pattern). Unfortunately for IMAC (and the STF), the ground test has become increasingly troublesome. Most problems are related to aircraft size, prop size, and of course the fact that the test is taken on the ground, which is in itself a great reflector of sound.

Looking back, it seems to me that the purpose of the ground test was to predict (in a fashion) how an airplane would sound in the air. The theory being that the quieter the plane was on the ground, the quieter the plane would be in the air. To date, we have found this relationship to be non-predictive. As the STF started to study Decibel theory, we decided to base our rules on the theory that we should be able to predict (by measuring a model on the ground) what it will measure in dB in the air. To date, we have found that no relationship exists between the two values (at reasonable ground measured distances). The ground test therefore has no relationship to the sound itself. When a plane flies through the air, it is surrounded by an "atmosphere" of air. Put another way, there is a blanket of air surrounding the plane for 360 degrees in every direction from the plane that not only carries sound but allows it to dissipate. On the ground, the model looses half of that atmosphere to a highly reflective hard surface.

Complicating the issue further are the measuring devices themselves. It would be unreasonable to expect IMAC to invest in expensive sound spectrum analyzers and distribute them across the country. So what we are left with are commercially available consumer retail units from Radio Shack (RS). Initially we tested various RS units in the lab (at General Dynamics) and found them to be within one dB of each other. So we IMAC quite happily employed them in the field as Pattern clubs had done in years past. Unfortunately, as in the case with many systems, once employed in the field, the inaccuracies started cropping up. It was common to find the RS meters consistently 2 dB apart on readings, and in many cases we have found units to be as much ad 3 dB apart! When one considers the fact that that the intensity of sound doubles for every 3.01 dB, the use of the RS meters can give widely varying readings during the ground test. Another persistent problem is that we have 40% 150cc powered planes on canisters (turning 32 and 33 inch two blade propellers) barely making ground test levels, yet recording sound readings in the air less than that of planes with engines half their size. These 40% planes are recording VERY QUIET SCORES in the air, yet they are at the top of the allowable range during a ground test. Having said all this, the ground test will not soon be going away and the RS meters are the only reasonable game in town and I still recommend every IMAC club have access to one.

Naturally, somebody should ask - "if the ground test has no predictive value, why do we have it?" The answer to this question is multi-faceted. First, we have it because the competition rules say we have to have a sound test. The rules are dictated by a much larger organization of which we are but a small part. To be frank, there were those in this larger organization who were (at the onset) very skeptical of our sincerity, drive and desire to reduce the sound of our models. Fortunately, we put solid work and established theory into our sound plan, and as a result we have a great working relationship with the AMA. A negative was truly turned into a positive, and we have a renewed credibility with those who make decisions that affect our SIG. In the end, we have a ground test because it is of value. While not a predictor of airborne sound, the ground test does give one a general view of what levels of sound might be expected in the air. We know for example that if one model's dB is at 98 over a hard surface, we would expect the dB to be lower in the air at the same distance. Conversely, if another model's dB's over the same hard surface is at 103, in all likelihood that model will emit a louder dB in the air than the other model that measured 98 dB on the ground.

So, knowing all of this – what do I as a CD do with the Ground Test at a Pattern/IMAC contest? First, keep in mind that we do not intend to be the "end all test." Folks come to fly at our events, and we want to give them every reasonable opportunity to do so. Since there can be as much as a 3 dB difference in readings from meter to meter, you as a CD don't know if your unit is on the high side or the low side of a true dB reading. In my view, no one should be turned down from contest flying if they test within 3 dB of the limit. Individual clubs will often adopt a "NO FLY" dB level (A-scale reading), appropriate to all flying activities. Clubs using this type of threshold (measurement on their dB meter) do not allow flying of aircraft that emit sounds above the set limit. This discipline is often necessary to maintain a "good neighbor" policy and respect for other pilots.

BUILDING NEWS

Frank DelGiudice

Our Pattern buddy from Chicago's Tri Village RC Club, Frank DelGiudice, also has a thing for B25's. Frank is just finishing a 118" Zeroli kit which is powered by two 38cc gassers. Weight will be around 55 lbs. Frank is going to hold off on the graphics until after flight tests, but as evidenced by the below photos, it will be a showstopper. Good job Frank!



Wes Miller

Former member Wes Miller (who, hopefully will be a member in 2010) is at it again. His B24 is nearing completion and, boy, does it look good!





Jim Fassino

Jim has completed his electric "Antionette" and will be putting it into competition at this years E-fest. Really looks nice!





Bryan Chumbley

Bryan Chumbley has constructed a unique indoor foamie and his inspiration was the Oscar Myer Weiner mobile. When I asked Bryan to elaborate on his creation, this is the story I got. Editor

"I built the plane as a novelty. I had a dream about a month ago that I was flying this plane. So, the dream becomes a reality. The plane is built of 3mm Midwest Products foam. Power is DualSky 27Turn motor with built in ESC. 2S lipo's provide the juice. First flight will hopefully be this Monday at Charter Oak. I have a digital recording package from a Hallmark card that I used to record the Oscar Mayer "Wiener" song. I have not mounted the speaker and circuit board yet. I wanted to complete a test flight first. I have not been able to weigh the plane yet, but my guess is it will finish out at about 12 oz. with battery, and onboard sound. With the speaker mounted cone side down, the plane actually resonates the sound quite nicely and the overall sound quality improves and seems louder."

A few days later, Bryan went on to say.

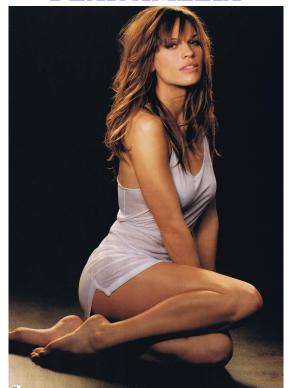
"After the successful flight of the Wiener Mobile on Monday, I have moved forward with adding sound to the plane. Rather than use the Hallmark Card sound card, I chose to use my old IPod Shuffle. The shuffle weighs about the same as the servo and sound card and offers more flexibility in terms of the amount of music that can be loaded. I took an old set of earbud headphones and cut the right earpiece off, shortened the left cord and soldered the wires to the speaker from the Hallmark card. I cut a slot in the fuselage to hold the Shuffle and taped the speaker to the fuse. I can set the Shuffle to repeat the songs I have loaded and can adjust the volume. Now the sound will play throughout the flight, which I think adds to the effect. As a side benefit, placing the speaker with the cone facing the fuselage turns the whole plane into a resonator and the sound is louder and clearer than with the speaker facing out. I think the plane will be a hit!"





Top view of the "Weiner Mobile".

DEAR AMELIA



Tired of looking at Roger's ugly "photoshopped" mug on Amelia Earheart's body? Check out Hilary Swank who plays "Amelia" in this season's movie blockbuster by the same name. OK, OK, this photo isn't from the movie, but...who cares!

These are real questions from real members about RC pilot concerns. Amelia Airhead will answer all questions and give unique insights from an area of the brain little explored. Address questions for Amelia directly to the editor. Amelia Airhead is the pen name of Roger "Pod Man" Stegall.

Dear Amelia,

I have this friend who has dreams of flying the Oscar Myer Weiner. Now, this friend is an RC enthusiast, which allows him to be somewhat weird, but I think this is slightly over the line. Instead of dreaming about Angeline Jolie, Carrie Prejean, Hilary Swank or even the gals on Fox News, my friend has deep lascivious thoughts about a hot dog with wings on it. I ask you Amelia, is this a precursor to a more latent condition resulting in...Ohhhh...I can't say it...the thought is too ugly. Please give me your analysis.

Sincerely, Weiner Man

Dear Weiner Man,

The magazine, "Psychology Today" had a similar article about a guy who fixated on the idea of using a gallon of "Silly Putty" to make a free copy of the most recent "Playboy" issue from a newstand. Needless to say, that idea ended in a messy and gooey situation. I believe your "Weiner man" has an infatuation with tubular shapes and warm buns. The Weiner Mobile should be just that -- a few chunks of meat dangling from an array of sticks and strings - not a phallic symbol to parade around city streets atop a vehicle that looks like it was designed during the Woodstock music festival. The placing of that weiner shape onto a set of foam wing is yet another perversion of how mankind has taken a really bad idea and made it worse. Rumor has it, that your club member has procured the Weiner song from a Hallmark card and plans to flaunt his weiner to music in a public demonstration of gyrations and floppy maneuvers. I guess I wouldn't worry too much about having the school board put this guy put on some kind of neighborhood "watch list," unless he insists upon landing his new plane in a vat of mustard.

Sincerely,

Amelia Airhead - Original author of the Weiner Song



Bob Wilson Stuff

Magnum XL-15, glow	\$20
Super Tigre 51, used	\$50
2-O.S. Max 40 FP, 2-stroke, used, each	\$20
2-O.S. Max 61 FSR, 2-stroke, used, each	\$40
YS 60, 2 stroke, rear exhaust, used	\$10
Contact Bob Wilson wilsorc@gmail.com (309) 219-4262	

Wes Miller Stuff

Midwest Extra 300 XS

Assembled & ready to cover Fiberglass cowl Aluminum landing gear All control surfaces hinged Engine size: 1.8-2.4 glow or gas 80" wingspan

This kit usually sells for \$250 and the fiberglass cowl for \$60.

Wes is asking \$200 Call Wes at: (309) 264-4640

Joe Rice Stuff

I have a CMPro Giles 202-140 that is NIB that I would like to sell. I am asking \$150. I would post on the national RC sites, but do not want to deal with shipping this big box, if possible.

The CMPro Giles 202-140 takes a 120-140 4cycle glow, 120-160 2 cycle glow, or light 26 - 30cc gas. 72 inch wingspan.



Joe Rice Cell (309) 258-8692

OTHER R/C ACTIVITIES



We need to have your pre-registration info in hand by Friday to qualify. Go to our Registration page for more info.

We're looking forward to seeing everybody here for EFEST!!!



"The Toledo Show" At the SeaGate Centre 401 Jefferson Avenue Toledo, Ohio 43604 April 9th, 10th, & 11th, 2010 Show hours: Fri/Sat 9am to 5pm - Sun 9am to 2pm Handicap parking available - Tickets readily available at the door!

Admission is only \$8.00 per person per day Kids 12 and under are FREE! Active duty U.S. Military are free. ID card required, no ticket necessary!

There is a new Sports Arena in Toledo but the Weak Signals Exposition will stay at SeaGate Centre!