



CLUB PARTICULARS

AMA Charter 331
Website: peoriarcmodelers.com



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EDITOR:	Bob "Grumplestiltskin" Wilson (309) 219-4262, wilsorc@gmail.com
AMA CONTEST DIRECTORS:	Bob Wilson

Flying Field Location

The flying field is located off Old Galena Road, ½ 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 must 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, wilsorc@gmail.com

Soaring

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

PHOTO OF THE MONTH

It looks like a Hughes "Military Defender" flying an interdiction mission over the Afghanistan Hindu Kish Mountains. Is it real or is it an R/C model?



Actually, the photo above is a compilation of a Hindu Kish scenery photo and Steve Blessin's Hughes MD-530. It was taken on November 22 at the PRCM field with Jim Fassino performing a test flight. Here is the original photo.



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Sign up today



<http://www.facebook.com/pages/Peoria-RC-Modelers/151007523059>

FROM THE VEEP

PRCM Vice President Jim Hogan

Well, winter rules are upon us. But, that does not mean we are done flying. We have a very busy December and January ahead of us.

The indoor flying season at the soccer field (Midwest Sports Complex) has been going on for three weeks now and we have another flying night planned for Friday. We get together about 8:00pm. Even if you don't fly, it is a good time to sit in a folding chair and comment on how everybody else is flying. Bob Wilson and Terry Beachler are leading this department. About half the airplanes flying this season are Glen Howard originals. I hope he is in production for more airplanes because the carnage has begun.

New Years Day will be busy for the club. If you are not into football, join us as we fly all day at the Midwest Sports Complex. Contest Director Jim Fassino and his staff are busy putting together a full day of flying both indoors and out (weather permitting). We will also have food, an indoor fun fly event, and a swap meet. If you have some valuable "stuff" you want to unload, here is your opportunity. We plan to invite other area clubs to join us.

January 9, 2010 is the date for our annual banquet at Benardi's Restaurant in Lake of the Woods Plaza. Reception is at 6:00pm, and is followed by dinner and awards. If you have photos or videos you would like to share, please get them to Jim Fassino. So grab your favorite person and join us.

Jim Hogan

New Years Day First to Fly 2010 and Swap Shop

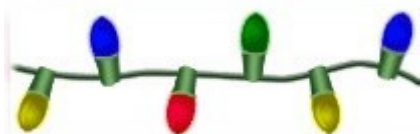
The Peoria RC Modelers will hold their 3rd **Annual First to Fly and Swap Shop** on January 1, 2010. You can be among the first to fly in 2010 at the Midwest Sports Complex. The doors open at 7AM for those selling at the swap shop, \$10 for a table, to set-up. The doors open at 8AM for both flying and buying. Indoor fly and outdoor flying will continue until 5 PM.

New items for this year's event include the Swap Shop, longer hours, and we are planning a number of scheduled events throughout the day including combat, limbo, night flight, a hovering contest and pylon races. We are still working out the details for these events. The rules will be posted on our web page for each of the events and the schedule for the day.

Pilots pay \$15 to fly all day both indoor and outdoor and spectators and shoppers get in for free. Swap Shop tables are \$10 each and will be available on a first come first serve basis. Food and drink will be available beginning with coffee and donuts early and lunch mid-day. Hot chocolate will be available for those that fly outdoors and need to warm up.

All pilots will get a Peoria RC Modelers **First to Fly 2010** sticker. AMA membership is required, helicopters 450 size and smaller, airplanes limited to no more than 18 ounces flying weight. See our web site for details. We will answer questions and post the rules on our club's Facebook page.

Peoria RC Modeler.



2010 CLUB CALENDAR

December (2009)

1	Club meeting at TGI-Fridays. 5300 W. War Memorial Dr. 7PM. 6PM pre-meeting dinner.
4, 11, 18	Electric flying at the Soccer Complex. 8-10.

January

1	"First to fly". All day event at the Soccer Complex.
4	Club meeting at TGI-Fridays, 5300 W. War Memorial Dr., 7PM. 6PM pre-meeting dinner.
9	Club Banquet at Bernardi's, 6:00 dinner.
5, 15, 22, 29	Electric flying at the Soccer Complex. 8-10.

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.
2, 9, 16, 23, 30	Electric flying at the Soccer Complex. 8-10.

May

4	Club meeting at the field 7PM.
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June

1	Club meeting at the field 7PM.
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July

6	Club meeting at the field 7PM.
30	Fat Lake Pattern Rendezvous - Tentative

August

1	Fat Lake Pattern Rendezvous - Tentative
3	Club meeting at the field 7PM.



SAFETY REPORT

PRCM Safety Officer George Knight



On a rare November 21 fly day, our safety officer is on the Tele, his airplane idling at the far end of the runway. Theory is, George was "calling in" a safety infraction committed at the field.

PATTERN FLYING



Bob Wilson, Newsletter Editor & Pattern Reporter

See, pattern flying does have its advantages!



OK, OK this babe photo was included just to get your attention. Actually it was taken at the 2005 NATS during the IMAC scale pattern competition. But, pattern is pattern....right? Nice airplane too!

Pattern Weight Limitations

The current NSRCA weight limitation of 5 kg (11 lbs) seems to be set in stone. I've watched the forum discussions on the subject and talked with veteran fliers but never really felt comfortable with the explanations.

Even a one-pound weight addition to the rules would make it easier for electric and gasoline powered airplanes to compete.

Since the size of the pattern aircraft is regulated to 2 meters, a weight increase wouldn't preface a rush to bigger (and more expensive) aircraft such as seen in IMAC.

In pattern, lighter is always better so I can't really see any unfair advantages realized by raising the weight limit. In fact, I never have heard a good explanation as to why the 11 lb limit was established.

So, I started doing some investigating on my own.

The AMA handbook for Radio Controlled Aerobatics evidently takes its cue from the FAI, so let's start out with a little history.

FAI (*Federation Aeronautique Internationale*), founded in 1905, is the world governing body for air sports and aeronautical world records. This includes everything that flies; full scale, parachutes, balloons, spacecraft, rockets, models...everything!

Within the FAI, CIAM (*Commission Internationale d'Aeromodelisme*) is the commission that follows aeromodeling and spacemodelling activities. The CIAM history began in 1936 when the FAI established rules for model aircraft. Before this, aeromodeling was taken care of in the FAI general conference by delegates that had little or no knowledge of aeromodeling.

In the 1920's and 1930's there were several contests for model airplanes that were well attended. Beginning in 1927 there was the Wakefield Trophy Contest, which continued every year until 1939.

In 1937 a model glider contest was organized in Austria.

And...in 1938 a contest called the King Peter Cup...no kidding... was organized in Ljubljana, Yugoslavia for rubber powered models. In 1938 this contest was held in England, but, of course, WWII got in the way of any further contests. The Peoria RC Modelers should probably consider unearthing this name for a local contest!

I digress.

Within the CIAM there are a number of disciplines, F1 thru F7 and S. For example, F1 is free flight, F2 is control line, and so on. We are F3A...Radio control aerobatics. By the way, "S" is for space models.

Now, prior to 1947 I can't find any rules set by the CIAM for aircraft weight, but in 1947 the original rules for weight were revised by CIAM at 5 kg (11 lbs) for rubber band and powered FF airplanes. This is the only entry I can find mentioning the 5 kg rule in the CIAM history.

If I'm reading this correctly, the current weight as specified for RC pattern were originally set for rubber band and engine powered FREE FLIGHT airplanes and this hasn't changed since 1947! This original weight limitation had nothing to do with RC Pattern and nowhere can I find justification as to why this arbitrary weight was chosen.

Interestingly, as RC scale and RC helicopters were added to the international venue they were subjected to the same weight limitations. In 1977 RC scale asked for, and was given a new weight limit of 6 kg (12.2 lbs). RC helicopters followed suit in 1981.

I'm probably missing something, but if tradition is the only reason for keeping the 5kg weight limit, the argument is weak. A weight increase, in my opinion, would revitalize pattern and give us all more options. New technology is always a good thing.



Indoor Electric News

Jim Fassino, PRCM Secretary/Treasurer

C Ratings and Why They Matter

Batteries Since we are flying indoors now many are using either 2 cell or 3 cell Lipo batteries in the 250 mAh to 700 mAh size with “C” ratings from 10C to as high as 30C. So what do these numbers mean and what do they tell us about our power source.

If you check the voltage on a one cell pack with a volt meter it will read between 3.00 volts to 4.20 volts, but by convention it is described as a 3.7 volt cell. The number of Lipo cells connected in a series determines the voltage of the pack. A two cell pack has a nominal voltage of 7.4 and a three cell pack has a nominal voltage of 11.7. If you check the voltage of the packs right after they have been charge the 2 cell pack will be 8.40 volts and the 3 cell pack 12.60 volts.

Charging: For Lipo packs the standard charge rate is 1C where “C” is the battery packs capacity in mAh. Thus a 300 mAh pack charged at 1C would be charged at 300 mAh. You can charge at a lower rate but not higher unless the manufacturer says it’s ok. Assuming the pack was fully used it would take about an hour to fully charge the pack. If your charger displays the charging rate you will see the amps move up quickly to the 300 mAh in this example and the voltage start at say 7.0 volts. The voltage will increase slowly until it hits 8.40 volts, then the mAh rate will begin to decline from the 300 mAh we selected and work its way down to zero. This is referred to as a charge cycle that begins with constant current and then changes to constant voltage. Never charge at over 1C.

Discharging: Now let’s talk about using that freshly charged 2 cell 300 mAh Lipo pack. The voltage the motor and speed controller will see when first connected should be 8.40 volts. As the pack is used the voltage will drop until it reaches 6.00 volts. If the motor has a KV rating of 1,200 (KV is thousands of revolutions per volt) the propeller can spin at 10,800 rpm (8.40 volts times 1,200 KV) but only 7,200 rpm (6.0 volts times 1,200 KV) when the battery is delivering 6.00 volts. If our airplane needs 9,000 rpm to hover, then once the battery voltage falls below 7.50 volts (9,000 rpm divided by 1,200 KV) our hovering is over until we charge the pack.

Where “C” “rating becomes important: If our 2 cell 300 mAh pack has a 10C rating it can deliver 3 amps (300 mAh times 10) but if it is a 20C pack it can deliver 6 amps (300 mAh times 20). Let’s say our airplane needs 5 amps to hover. You can see that we need more power, 5 amps, than the 10C battery pack can deliver, it can only supply 3 amps. If we try to draw 5 amps from this battery the voltage will drop quickly and the pack will heat up as it is over worked. If we use the 20C pack it can deliver the 5 amp

power we need and it can do it continuously. The battery voltage will not fall as quickly since the pack can keep up with the power demanded by the motor and propeller to hover the airplane. The pack will not heat up as much and it should have a longer life.

A good example of the “C” rating is the new little Blade MSR helicopter. It comes with 120 mAh batteries with a 14 “C” rating. It will easily fly for 6 minutes on that battery. But if you use a similar battery from a Cessna 210, you will be lucky to get 30 seconds of flight. It is not the quantity of electron in the battery, rather the battery’s ability to deliver them to do the work of hovering the helicopter.

Batteries with higher C ratings are more expensive but using lower C rated batteries beyond their limit will be even more costly. jcf

NEAT PHOTOS

By the Editor

Following are a bunch of photos I took at various Oshkosh meets that turned out pretty nice. During a slow winter month like November, it’s handy to have things like this to fill in for lack of news.



The Aeroshell team at 2005 Oshkosh



A C17 on a bad-ass down and dirty flyby at Oshkosh 2005.





A JU-52 at Oshkosh 2005.



My favorite, if you look close you can see Patty winking at me.



Sean D. Tucker doing his thing at Oshkosh.



Bob Hoover at Oshkosh

OUR MEMBERS



The French Connection at Oshkosh.



The remorseless bean field sucks in another victim. Two members make the sad trek out to a still quivering pile of balsa remnants.



Jim Fassino hovers his Seminol at the soccer center.



Photo by Smith

Another neat hover photo, but don't know whose airplane.

What Happened to the Vampire Flier??

Who's the vampire flier? Well, here at PRCM we give pilots flight names by deeds they do or quirks in their personalities.

For example, Joe Lang badly cut his arm when his Venus II attacked him. The result was a gazillion stitches...his flight name..."Stitch".

Occasionally Roger Stegall flies really, really, good which is way out of his normal abilities. It's almost as if aliens have entered his body. Remember the Sci-Fi movie, "Invasion of the Body Snatchers" where they entered human bodies and formed pods. Roger's flight name is "Pod Man".

Now, Steve Lewis has been with the club for a number of years but hardly anyone sees him. In preceding years he would arrive at the field just as the sun was going down and hurriedly get a few flights in. Only real die hard fliers like the editor ever saw him. Because he only flew after the sun went down...you guessed it..."Vampire Flier".

This year no one has seen Steve and it wasn't until a few weeks ago that we found out why. Here's the story in his own words.

I did not fly this year out at the very nicely made new field. I have all the excuses, like extremely busy at work, kids play travel soccer and so, but I do have a unique new one. I spent a great deal of free time this year working on a land speed record attempt motorcycle. We had a good showing at Bonneville, we missed the record by 8mph, which considering it was everyone's on the team first attempt, we thought was pretty good. We got bit by that old devil, turbulent air over the turbocharger air intake. The faster we went, the more fuel we had to take out of the maps, consequently the less power we could make. All added up to just shy of what we needed.

What a neat story, and here's a photo to prove it.



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.

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.

Since there weren't many Amelia Airhead write-ins, I found an interesting story on the real Amelia.

The Editor

Earhart's Final Resting Place Believed Found Amelia Earhart mostly likely crash-landed near a tropical island in the southwestern Pacific.

Legendary aviatrix Amelia Earhart most likely died on an uninhabited tropical island in the southwestern Pacific republic of Kiribati, according to researchers at The International Group for Historic Aircraft Recovery (TIGHAR).

Tall, slender, blonde and brave, Earhart disappeared while flying over the Pacific Ocean on July 2, 1937 in a record attempt to fly around the world at the equator. Her final resting place has long been a mystery.

For years, Richard Gillespie, TIGHAR's executive director and author of the book "*Finding Amelia*," and his crew have been searching the Nikumaroro island for evidence of Earhart. A tiny coral atoll, Nikumaroro was some 300 miles southeast of Earhart's target destination, Howland Island.

A number of artifacts recovered by TIGHAR would suggest that Earhart and her navigator, Fred Noonan, made a forced landing on the island's smooth, flat coral reef.

According to Gillespie, who is set to embark on a new \$500,000 Nikumaroro expedition next summer, the two became castaways and eventually died there.

"We know that in 1940 British Colonial Service officer Gerald Gallagher recovered a partial skeleton of a castaway on Nikumaroro. Unfortunately, those bones have now been lost," Gillespie said.

The archival record by Gallagher suggests that the bones were found in a remote area of the island, in a place that was unlikely to have been seen during an aerial search.

A woman's shoe, an empty bottle and a sextant box whose serial numbers are consistent with a type known to have been carried by Noonan were all found near the site where the bones were discovered. "The reason why they found a partial skeleton is that many of the bones had been carried off by giant coconut crabs. There is a remote chance that some of the bones might still survive deep in crab burrows," Gillespie said.

Although she did not succeed in her around-the-world expedition, Earhart flew off into the legend just after her final radio transmission. Books, movies and television specials about her disappearance abound as well as speculation about her fate. Theories proliferated that she was a spy, that she was captured by the Japanese, that she died in a prisoner-of-war camp, and that she survived and returned to live her life as a New Jersey housewife.

The general consensus has been that the plane had run out of fuel and crashed in the Pacific Ocean, somewhere near Howland Island. But according to Gillespie, the "volume of evidence" TIGHAR has gathered suggests an alternative scenario.

"Propagation analysis of nearly 200 radio signals heard for several days after the disappearance make it virtually indisputable that the airplane was on land," Gillespie said.

Eventually, Earhart's twin-engine plane, the Electra, was ripped apart by Nikumaroro's strong waves and swept out into deep water, leaving no visible trace.

"The evidence is plentiful -- but not conclusive yet -- to support the hypothesis that Amelia landed and died on the island of Nikumaroro," forensic anthropologist Karen Ramey Burns told Discovery News.

The author of a book on Earhart, Burns believes that the strongest of the amassed evidence comes from the report related to the partial skeleton found by Gallagher.

"The skeleton was found to be consistent in appearance with females of European descent in the United States today, and the stature was consistent with that of Amelia Earhart," said Burns.

According to Burns, another piece of documentary evidence comes from the accounts of Lt. John O. Lambrecht, a U.S. Naval aviator participating in the search for Earhart's plane. Lambrecht reported "signs of recent habitation" on what was an officially uninhabited atoll. Lambrecht's report begs the question: Why did no one follow up?

"I have stood in plain sight on Nikumaroro in a white shirt waving wildly as a helicopter flew over me and was not noticed until the video tape of the flight was examined," Burns said.

"I find it very easy to believe that Amelia and Fred would not have been seen by the pilot. If the Electra was not visible at the time, their last chance of rescue was lost in Lambrecht's notes," she added.

Abandoned on a desert island where temperatures often exceed 100 degrees, even in the shade, Earhart and Noonan likely eventually succumbed to any number of causes, including injury and infection, food poisoning from toxic fish, or simply dehydration.

The coconut crabs' great pincers would have done the rest, likely removing some of the last physical traces of this pioneering aviatrix.

Dear Amelia,

I thought I had seen just about everything but my last trip to the flying field proved me wrong. We have one club member who uses a very unusual method for starting his motors. This guy whom I'll call Gorgeous will activate his starter motor to full speed before shoving it against the spinner of his airplane. When the two components collide, a sound is produced that resembles an aardvark being hit by a sledgehammer. I seek to know if there is some underlying physics principle that Gorgeous may have discovered to explain this deviant behavior. There may even be some concern for safety to other flyers and onlookers.

Sincerely,
Slow to Start

Dear Slow Starter,

There is a property of movement called inertia that can be best described, as "a guy sitting on his butt will generally remain sitting on his butt until somebody offers him a free beer. Gradual acceleration is why we have airplanes rather than stepping on a conveyor belt going 500 MPH. That first step on such a conveyor would produce enough G-force to suck the chrome off a bumper. When this Gorgeous guy slams the spinning nose cone of his starter against a stationary spinner, be prepared for loose spinner nuts and delaminated propellers. Some scientists theorize that when an immovable propeller encounters an unstoppable starter motor, a rift in time will be created sufficient to

build a Pawnee. You should advise your club safety officer that a club member might be using a deviant method to make noise and antagonize onlookers.

Sincerely
Amelia

FOR SALE

GETTING OUT OF THE HOBBY

Top Flite GS P51 Mustang, ws 84", Zenoah G45, Robart Super

Spring Air retracts, needs canopy, \$600 – never flown

BalsaUSA Eindecker 40, ws 60", no engine, \$100

Contact Kerry Delvecchio, (309) 360-1222

Bob Wilson Stuff

¼ Scale Marquart Charger Biplane Kit \$125
Span 73", Engine size: Gas 2.2 ci

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

Terry Beachler Stuff

Goldberg Extra 300 Kit

Engine Size: 1.20 Four Stroke

Terry is asking \$125

Call Terry at (309) 696-0035

HAPPY HOLIDAYS!

