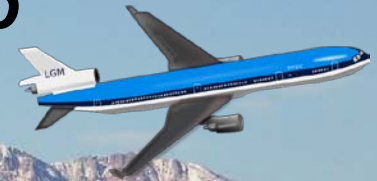


# Pikes Peak Radio Control Club Newsletter

Volume 42 / Issue 05 / May 2014



AMA Club Number 179 / 2616 Glen Arbor Dr. / Colorado Springs, Colorado 80920  
Phone: 719-329-1600 / Website: [www.pprcflyers.net](http://www.pprcflyers.net)



Club President – Rod Hart / Club Vice President – Eric Sauley  
Club Safety Officer – Rick Paquin / Club Treasurer – Adam Heffington  
Club Secretary – Keith Davis / Club Newsletter & Website Manager – Keith Davis

**Next PPRCC Meeting:**  
**7:00pm / May 6<sup>th</sup> (Tue) 2014**  
**@ Antelope Ridge Community Center**

**Local RC events happening this month:**  
• **Pueblo's Pre- Warbirds Warm-up**

## Last Month's Minutes . . . (April meeting)



Meeting Started: 7:00 pm  
Meeting Adjourned: 8:30 pm  
Members Attended: 26  
New Members: 2 – Nick Tait and Tom Jacob.  
Welcome!  
Visitors: 0

### New Business:

1) Club Treasurer Adam Heffington, spoke about the club's finances for the month of April. There were no major purchases in April but expects some field maintenance bills during May and June.

2) Club Website manager Keith Davis, encouraged everyone to send in their airplane pictures to get posted on the club website front page. The front page now has a slideshow presentation of PPRC flyers and airplanes. The only requirement is that the pictures must be taken at the PPRCC airfield.

### Old Business:

1) Club Vice President Eric Sauley, stated the club's official training program is still on track and expects to have it in place by June. Sunday's between the hours of 9-11 are scheduled to be the training period for trainers and trainees.

2) Club member Tom Andersen, went into detail about the proposed helicopter flying area. The flying area will be south of the parking lot, east of the airfield access road. A temporary helipad will be put in place to see how much usage it gets before a permanent pad is put in place.

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## You're Having a Bad RC Day. . .



"Because the good news is that you found the tail section of your plane. The bad news is that you are still looking for the nose section containing the DA-100L Twin gas engine!"

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# When LiPo Batteries Go Bad!



Email sent from the Mile Hi RC Club

This email was forwarded to me from Dave, who is a member of the Mile Hi RC club. This incident happened to Gary, one of its members:

**Dawn Patrol Members. Read this message from one of our members and be aware of what can happen while charging LIPO Batteries. He is very lucky that he caught it in time. Dave.**

Members,

Thought I pass this along to you all as an important message regarding Lipo batteries and our large planes. Yesterday I was charging up my Slick (suck) Edge for flying today. I did not pull the cowl and inspect the batteries like I should have.

The first battery charged and balanced just fine so I move to the next one, went into the house for about 30 minuets and came back outside to flames shooting out the top of my barn. The charger was on 1.5 V charging with a balance plug. Lesson learned the hard way, if you fly with a Lipo set up, make sure you always remove your batteries before charging.

In these big planes It's a real pain to remove them each time but this is what can happen. All my other planes have Life batteries and I always balance them. This could have been much worse, I was able to put the fire out myself before the fire department arrived, much to their surprise. It got so hot that it completely melted my transmitter that was setting next to the mid part of the fuselage, and two other chargers sitting on the plane.

It could have been much worse but we are fine and the insurance will cover most everything. Just wanted to share this with you all and make sure you all truly understand what can happen when charging these type of batteries. If you slip on safety, you will truly will get burned.

See you all at the field if the wind will quit blowing.  
Thanks, Gary

**Moral of the story – Keep a close eye (or two) on those batteries when charging!**



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## Show & Tell Item - I

Tom Andersen's Great Planes Evader



"Tom talked about his *Great Planes Evader*. It's lightweight and built very strong. Tom has over 30 flights on the jet, some of the flights exceeding 120mph!"

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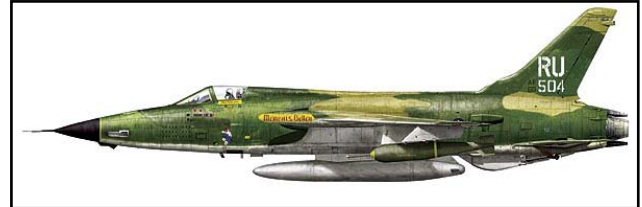
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## Name that Plane's Nickname!

By Tom McCallum and Keith Davis



Throughout aviation history, airplanes have been given nicknames from their own pilots, their friends and their foes. Some nicknames were flattering, others not so flattering. Can you name that plane's nickname?



Republic F-105 Thunderchief:

- A) The Chief
- B) Thunder
- C) Thud



Airbus A340

- A) Lowrider
- B) Aluminum Cigar
- C) Four engines, not enough!

Last month's answers:

- British pilot's nicknamed the Airco D.H.4 the "**Flaming Coffin**". The fuselage had a large space between the pilot and the rear gunner, so an extra fuel tank was installed in that spot. But when the fuel tank caught fire, it also took out the pilot and the gunner. In later models, the fuel tank was relocated.
  - Australian pilots enjoyed flying the General Dynamics F-111 and gave it the nickname "**Warthog**" as a complement. The plane was able to fly extremely low level, keeping its nose down to the ground, just like the Australian warthog.
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# Colorado College Science Fair

By Keith Davis



Back in April, Colorado College held its annual spring Cool Science Fair. Club member Tom Andersen took the helm on this event and got a few other PPRCC members to join in as well. Eric Sauley, Steve McKee and myself participated.

It was a one-day college event opened to the public to display projects, events and activities that was science-related. Our club as well as our sister club, the Pikes Peak Soaring Society, set up hands-on flight simulators and static displays for everyone to enjoy.



**"Eric explains the functions of the transmitter to a few excited flyers to prepare them for their first flight."**



**"Steve (white shirt) and Tom (yellow shirt) explains the helicopter controls to a pair of visitors. Eric's airplane flight sim and the two helicopter sims stayed busy all day!"**

The event started at 10:00 am and ended at 3:00 pm. During that time, Eric, Tom, Steve and myself stayed quite busy explaining the airplane RC hobby, allowing people to fly the simulators and how to get started into the hobby.



**"In addition to Eric bringing his laptop and flight simulator, he brought the Apprentice trainer and I brought my Su-26."**

Throughout the day, Eric also handed out dozens of PPRCC Flight Training brochures promoting the club's new flight training program while I handed Warbirds over Pikes Peak flyers. On the other end of the table, Tom and Steve were also encouraging people to come out and learn how to fly helicopters.



**"Tom and Steve's elaborate corner included two helo flight simulators, several helicopters and quads of various sizes."**

Other science displays included dinosaurs, planets, better health, solar energy and environmental projects. It was a good one-day event for children as well as adults. And if everything turns out as hoped, May 4th should be a busy opening day for the club's flight training program!

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## Show & Tell Item - II

Tom Andersen's Raptor 50 Helicopter



"Tom's second item of the night was his 14 year old Raptor 50 helo. He mentioned how nice it is to fly but throughout the years, the helo went through numerous paint schemes for best visibility."

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## Out of Town Flyers

By Keith Davis



As usual, April was a pretty windy month for flying, but that didn't stop flyers John from Denver and Dale from Pueblo, to meet at the PPRC field to check the place out and do some flying of their own.

I happened to be out there that day, so I showed them around and explained the club flying rules, then off to do some flying they went! John brought his Great Planes giant Big Stick and Dale came out to assist and also brought a plane of his own.



"John (left) preps his plane while Dale (right) holds that big plane down."



"Powered by a DLE-55 gas engine, the winds didn't bother this 82" ws plane too much."

John is a retired USMC pilot, he flew the A-4 Skyhawk and the C-130 Hercules, so of course I had to pick his brain about both aircraft.

John and Dale got in several flights but as the winds increased even more, that was enough for them too! John and Dale, Thanks for visiting us, come again!

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# Heli Talk

By Tom Andersen



There have been several very helpful innovations in the past 2 years that have significantly helped RC helicopter flight training. Some of them focus on stabilizing a heli or airplane, and some of them focus on training you to fly better. The combination of the two is unprecedented in the RC hobby.

The newest and most helpful is the 3-axis self-leveling autopilot gyro with hover holding feature. The KDS Flymentor at only \$75 is one of these. It has a tiny camera facing down to the ground and it digitally processes that crude image and maintains position laterally, keeping the heli from sliding around in a hover. It takes no pictures, it transmits no video, it only uses the image to hold a hover over one spot on the ground. The Flymentor allows almost no bank angle in roll, only a slight angle in pitch, and it replaces a heading hold gyro to hold the yaw heading. Altitude control is still completely in your hands, and it is flown by pitching forwards and backwards, and yawed for direction. Because it replaces the tail gyro, the cost is only slightly more than a low-end tail rotor gyro. This is really more of a hovering aid than an autopilot but you can take your hands off the sticks and it will hold a hover, so it's still called an autopilot.

There's all kinds of 3-axis gyro aids like this for more advanced flying but the Flymentor hovering aid is most helpful for folks just starting out. This type of system is best on a 450 size and up heli, electric or nitro. I have experience with one of these on my friend Steve's Blade 500 3D heli, it holds position nicely. What a nice heli at a great value, it's ready to fly with a heli ESC with governor feature, motor, servos, BNF receiver, look it up.

Steve and I installed the KDS Flymentor on it. Some of the very newest heli's are shipping with this type of system already installed. That's the wave of the future. Whistle three times and it takes off, whistle twice to land. Just kidding on the whistling. I wouldn't be surprised though, to see a form of programmable RC assisted free-flight autopilot systems rise in popularity over the next few years.

The newest Blade multirotor quads already can do GPS return-to-home, GPS hold, and GPS altitudehold, what would it take to allow them to be programmed with a flight path, then press a button and watch it go out and come back? By the way, this is all still RC!!! Don't worry, it will certainly lead to hand-flying because we know that's the most fun!

The second most helpful innovation is the advent of the quad, the four-propellor multirotor, which makes a great hovering trainer since they are extremely stable and very crash-tolerant compared to helicopters. I highly recommend to anyone interested in heli's to start with a micro quad like the Blade Nano QX, which is about \$80 depending on whether you get the bind-n-fly or the one with the little but decent transmitter included. The quad only weighs half an ounce and is best flown indoors, and even if you hit walls and end up on the floor it bounces back without damage 99.9% of the time.

Dan Brunson's hobby shop Pikes Peak R/C Hobbies at 2126 E Boulder St in Colorado Springs carries three different kinds of these quads and all the batteries, accessories, and replacement parts. Dan says he's got the Blade Nano QX BNF at only \$71.50 as of April. Does acquiring one get any easier than that?? By the way that's a great price, take it from me, I'm frugal!

The third most helpful innovation is the micro heli. The micro heli's are so lightweight they bounce more than they break. Almost everyone tries their first inverted hover or other difficult maneuver on a micro heli first because the fear factor is non-existent. These are heli's with blade diameters less than twelve inches. You want a fixed-pitch heli to start with, but be careful there's a lot of junk out there in this category! Mr. Herbert at NightFlyer on Youtube reviews a lot of ready to fly micro and small electric heli's, quads, and planes, and gives good tips on modding each one for best results. He buys everything himself and he can be brutal on the junk but he heaps praises on the winners. Co-Axial heli's are great for kids, they are so stable it's hard to get them to do anything besides hover!

The fourth innovation isn't even new but is the most overlooked and underutilized tool in the box, the RC flight simulator. It is possible to completely learn to fly a heli in the simulator and be manually hovering the first day in the field. I think the sim should be considered the number 1 training helper but today's column is about the new innovations in heli training and sims are already old hat.

My sim is from 2005, it's Aerofly Pro Deluxe, basically it's version 1 but it does the job. Phoenix 5 sim started out as a heli sim and added planes so it's a great heli sim, and version upgrades are always free. Reallight is good. Heli-X.net offers a free heli-only sim that looks and flies great but every 10min it nags you to buy it! The Aerofly RC7 sim is \$50 for the basic version with four planes, one heli, and one quad model, and the graphics look like a Hollywood HD quality movie.

The ideal thing to do is use your regular R/C transmitter with a USB adapter simply connected to the trainer port. This gets you used to the feel and position of your gimbals and all your switches on your own transmitter, and lets you use the transmitter's functions like dual rates, expo, and computer mixers. This also gets you familiar with programming your transmitter. When using a sim I prefer to listen to my own music and I turn off all the motor and crashing sounds and also turn off the crashing as much as possible. I turn off the trees, objects, anything possible you can hit, because it's a waste of time avoiding them since you can't even see them coming. Half the time you can't see the ground coming up either so crashing is entirely "forgiven" in the sim. It's not very realistic to even fly in front of a flight line since you can't tell where that is either! It's like flying your model through binoculars.

So just use it for what's it best at, which is orientation, and learning to move the stick based on model position. I will many times "skew" or move my own fixed flying position 200' above the ground, then bring the model up there, just so I can practice something without hitting the ground and wasting a precious percentage of time resetting the model. Phoenix 5 lets you set "Hover Training" mode where the model does not even hit the ground, it stays a foot high no matter what. Yes it's unrealistic, who cares? The mind/hand connection improvement is the only thing that matters.

If you can learn to orient and control the model, then at the club field you will be able to keep it in a safe area at a safe altitude. I dare you, no, I double dare you, no, I Double-Dog Dare you to try flying in the sim a little bit every day for one week straight, either airplane or heli.

Doing it every day allows you to build on the previous day's advances. Do you want to get good this year and enjoy those skills for the next 10 years? Or do you want to work at it slowly and finally get good 10 years from now and miss out on 9 years of good skills?

Hit it hard in the sim, make it difficult if it seems too easy, mash the trims all the way off center and fly it like that for a half hour, this will help your test-flight flying skills where the plane or heli is out of trim, possibly out of balance, and possibly dead stick to boot. Mash the aileron trim all the way over and fly it rolling for a half hour. Mash the yaw trim to the left on a heli and fly it constantly pirouetting for a half hour.

If you get a headache then you're challenging yourself just right. If you're bored with a sim then amp it up, make it harder, get creative with the trim tabs and the built-in games. This is a great opportunity to enjoy your favorite music which relaxes you and lets new thought pathways and muscle memories develop faster.

Dan's got RealFlight 7 and Phoenix 4 at his shop too, and the Phoenix 4 gets a free upgrade to Phoenix 5 online. The flight sim has the greatest bang for the buck factor, they don't ever crash or wear out and I'm certain the money is a dollar for dollar return on investment in crashes avoided, in fact it's probably a ten-fold return in crashes avoided, fuel not burned, motors not worn out, skills gained for time spent, and something to do on windy and snowy days.

I'd be glad to help anyone interested in helis, so bring out what you've got and let's look at it. Yes they are 3x harder than airplanes but the big rewards are there too! Future articles will cover the difference between quads and tricopters, FPV flying and why it's not different from RC, capturing aerial video, and creating homemade hovering machines on a budget, and of course all heli's including electric's, nitro's, gassers(huge for 2014), micro's, mini's, gyros, servos, Lipo's, BEC's, UBEC's, SBEC's, FBL's, EFC's, DSMX, FHSS, AFHSS, ACCST, it's gonna be acronym city.

Success in flying an RC heli or plane is like a 10 digit combination lock, you can guess at it for hours or someone else can help you with the code in a few minutes, so don't be afraid to ask for help, just promise to pay it forward!

**Tom Andersen**  
**Member PPRCC**  
**Email: [tommy@hoverbatics.com](mailto:tommy@hoverbatics.com)**

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# All About Commercial Airplanes

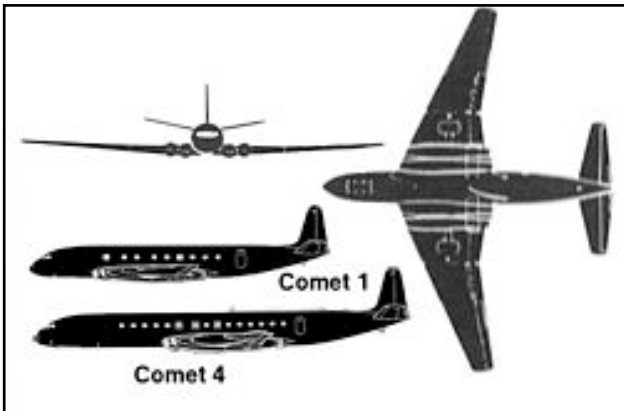
By Keith Davis



First flown in May 1952, the British De Havilland Comet was the world's first commercial passenger jet put into production. Similar in size to the Boeing 737, it carried less passengers, allowing more space for the passengers. However the Comet started off with a dismal safety record with several crashes on takeoff and several more Comets experiencing catastrophic metal fatigue failure in flight.



"The Comet was considered a very elegant jet during its time, however its deadly flight record over shadowed its beauty and long career."



"3 Plan view of De Havilland Comet."

The Comet was an all-metal low-wing cantilever monoplane powered by four jet engines; it had a four-place cockpit occupied by two pilots, a flight engineer, and a navigator. The clean, low-drag design of the aircraft featured many design elements that were fairly uncommon at the time, including a swept-wing leading edge, integral wing fuel tanks, pressurized cabin and four-wheel bogie main undercarriage units designed by de Havilland.

Although Comet sales never fully recovered after several crashes in 1952 and 1953, the improved Comet 2 and the prototype Comet 3 culminated in the redesigned Comet 4 series which debuted in 1958 and had a productive career of over 30 years. The Comet was also adapted for a variety of military roles such as VIP, medical and passenger transport, as well as surveillance. The Comet's last flight was March 14th 1997, with 114 total jets being built.

The most extensive Comet modification was a specialized maritime patrol aircraft variant, the Hawker Siddeley Nimrod. The Nimrod remained in service with the Royal Air Force (RAF) until June 2011, over 60 years after the Comet's first flight.



"The Comet featured an aerodynamically clean design with four De Havilland Ghost turbojet engines buried in the wings."



"The Comet 4 was flown by several air services to include BOAC and several countries throughout Africa and the Middle East."

**Did You Know?** Queen Elizabeth, the Queen Mother and Princess Margaret, were guests on a special Comet flight on 30 June 1953 hosted by Sir Geoffrey and Lady De Havilland. They became the first members of the British Royal Family to fly by jet.

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## 3rd Annual Kids Flight Festival

Sponsored by the Mountain Men RC Club



# 3rd Annual Kids Free Flight Festival!

## Airplane Meet

### May 18, 2014 9 am to 12 p.m.



3 Events (\$1 per event entry)

**Rubber power:** *Twisted rubber, propeller-driven.*

**Gliders:** *Towline, rubber catapult launch or hand launch.*

**Electric:** *"Flash Fighter" available at Radio Shack*

- We have loaner models available, or kids may bring their own. Kids are not required to build their own models.
- Awards (through third place in each event) promptly afterward, followed by an open (adults & kids) flying meet from 12:30-5:00 p.m. Kids are welcome to fly in this too--no charge! In the afternoon they'll be able to see some cool high performance models flown by experts!

- Pre-registration is appreciated. Send your child's name and age to the event director.
- AMA membership required for flyers (Kids join free at [www.modelaircraft.org](http://www.modelaircraft.org), or sign up at field)
- Event Director: Don DeLoach, 719-964-7117, <[ddeloach@comcast.net](mailto:ddeloach@comcast.net)>
- The flying site is remote and primitive. There's no running water, only a porta-potty. Bring your own shade, food/beverage and sunscreen. A limited number of chairs are available.
- Site is located about 20 miles ESE of downtown Denver. Drive six miles east of E-470 on Quincy Road. Continue one mile east of "T" intersection at Watkins Road, look for ranch entry gate on right hand (south) side. Gate is locked at all times. Call or e-mail for lock combo.

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## Warbirds over Pikes Peak

By Keith Davis



With the Warbirds over Pikes Peak event now just weeks away (June 21-22 / Sat-Sun), you may be asking yourself "What do I need to participate?" Here's what you will need:

- 1) Any military type airplane, jet or helo. It can be gas, glow or electric powered. No aircraft will be permitted to conduct test flights during the event.
- 2) AMA membership.
- 3) \$25.00 pilot's registration fee.
- 4) The desire to have a good time!

This is a Non-contest, Non-competition event. Fly whenever you like, or don't fly at all! Guest flyers and spectators are welcome. Visit the PPRCC website for more details and directions.



"Karl inspects his line of warbirds. Left to right - Great Planes Big Stick (Sorry, does not count as a warbird during the event!), Top Flite P-40 and Hanger 9 Spitfire."

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Do You have a story, article or a picture that you would like to share with the club? Get it to me at:

[Lkdavis03@hotmail.com](mailto:Lkdavis03@hotmail.com)

Keith Davis - PPRCC Newsletter Editor

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# Pikes Peak RC Hobbies



## Upcoming RC Events:

- **May 6th (Tue) 2014 - PPRCC Meeting (New location, see website!)**
- **Jun 3rd (Tue) 2014 - PPRCC Meeting (New location, see website!)**
- Jun 6th-7th-8th (Fri-Sat-Sun) 2014 - Warbirds over Denver
- Jun 21st-22nd (Sat-Sun) 2014 - Warbirds over Pikes Peak
- **Jul 1st (Tue) 2014 - PPRCC Meeting (New location, see website!)**
- Jul 19th (Sat) 2014 - PPRCC Electric Fly-In
- Jul 26th (Sat) 2014 - PPRCC Scale Fly-In

