



Pikes Peak Radio Control Club Newsletter



Volume 44 / Issue 02 / February 2016

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



Club President – Romi Lucas / Club Vice President – Rob Latkovich
Club Safety Officer – Ben Woofter / Club Treasurer – Adam Heffington
Club Field Maintenance Office – Chuck Brath
Club Secretary – Keith Davis / Club Newsletter & Website Manager – Keith Davis

<p>Next PPRCC Meeting: 7:00pm / February 2nd (Tue) 2016 @ Antelope Ridge Community Center</p>	<p>Local RC events happening this month:</p> <ul style="list-style-type: none"> • JEFCO Auction – 5th & 6th Feb • Wings over the Rockies – 20th Feb
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Last Month's Minutes . . . (January meeting)



Meeting Started: 7:00 pm
Meeting Adjourned: 9:00 pm

Members Attended: 37
New Members: 2 – David Pope, Mike Weisner.
Welcome!
Visitors: 2 – George Coleman, Tom Austin.
Welcome!

New Business:

- 1) Rob Latkovich has been elected as the club VP for 2016. Congratulations Rob!
- 2) Club Treasurer Adam Heffington, Spoke about the December club finances. Adam then discussed the proposed budget for 2016. It was voted on and passed by the club members present at the meeting.
- 3) The airfield gate combination has been changed for the new year. Be sure to pick up your 2016 club badge at Pikes Peak RC Hobbies or at the next club meeting. The new combination is on the back of your badge. Please do not share the combination with others. Also, club badges must be displayed while flying at the airfield.

Old Business:

1) Club Secretary Keith Davis, reminded everyone about the FAA's new registration requirements for sUAS. Last day for the \$5.00 registration fee and refund is February 19th. Keith also reminded everyone that we still need to follow the AMA safety rule of having your name and address or your AMA number placed somewhere on all of your aircraft.

Airplane Anomalies . . .



"When looking for a new airplane club to join, there may be some obvious clues that indicate that this may not be the club for you."

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2016 Frozen Needle-Valve



On January 1st 2016, PPRCC held its annual tradition of the Frozen Needle-Valve event, and as usual it had a large turnout. The local thermometer read 18 degrees, people said their car thermometers read around 15 degrees, but when you stepped outside, it seemed like zero degrees!



“There were 25 club members in the photo and another 10 or so people in the area. Overall, it was a nice turnout to start out the new year.”

The new club president, Romi Lucas, brought out dozens of breakfast burritos and Ben Woofter fired up the grill to boil hot water for coffee and hot chocolate. So there were plenty of hot items to keep everyone warm.



“Ben kept the grill going, keeping the water hot and the pilots warm and happy.”

The runways were covered with a light covering of snow but as the planes taxied over it, the snow just blew away and it wasn't a problem. The real problem was keeping your hands warm when a slight breeze developed, bringing the temperature down and trying to keep your airplane up in the air.



“Plenty of pilots came out to get their first flight of the year and collect that 2016 Frozen Needle-Valve badge.”



“It was cold enough for the electric planes to be the plane of choice, they started right up. However, the glow engines took some time to get going.”

The event was pretty much over by 11:00 am, even though several people did remain and continued flying. Overall, everyone that did come out, had a good time. Everyone got to fly, everyone got to eat and there were no cold weather injuries. So that was a good day!

Thanks to all that came out and endured the cold. You can view the whole event in photos on the club website.

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Can You Name that Plane?



Clue #1: In 1970, this plane was designed from the civilian version into a military and law enforcement version. It now has four under-wing hard points and an enlarged nose section to accommodate radar, a FLIR system or other electronic equipment.



Clue #2: The FBI has a few of these aircraft in their inventory and one was used for aerial surveillance during the Branch Davidian's compound siege in Waco, 1993.



Clue #3: Both the military and law enforcement enjoys the plane because of its endurance flight time of over 5 1/2 hours.

Last month's airplane: Spartan Executive. Paul McCoy was the only one with the correct answer.

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Show & Tell Item - I



Romi Lucas' Howard Hughes H1 Racer



"Once again, Romi shared his building skills with the club members. This time he completed a scratch-built Howard Hughes H1 racer. The plane is fully sheeted and he elected to use fixed landing gear and an open cockpit. The plane weighs about 10 pounds and powered by a 60 size equivalent electric motor. The plane has not been flown yet. Very nice!"

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Latest AMA vs FAA



Dear Members,

As you know, we have been working with our legal counsel and the FAA to find a solution for our members on the registration rule. To date, FAA has agreed in principle to several proposed initiatives that will help ease this process for our members. Specifically, they are:

- AMA and the FAA are working to streamline the registration process for AMA members whereby those who register with the FAA will be able to use their AMA number as the primary identification on their model aircraft, as opposed to adding a new federal registration number.
- In addition, AMA members' federal registration will automatically renew provided membership remains active and current. We are working with FAA in negotiating the renewal fee, but in any case it is envisioned the renewal process will be provided as a member benefit.
- In the future, federal registration will automatically be accomplished upon joining the AMA, eliminating the need to register with both AMA and the FAA.

These initiatives are a step in the right direction. However, we want to emphasize that this is not the end of our efforts to protect AMA members from this overreaching regulation. We are continuing to explore all legal and political options available, but these conversations may take time and a definitive solution is unlikely before the February 19 registration deadline.

Currently, registration is free of charge until January 19. If you would like to take advantage of this free period, you may want to register before that day. But please note that you have until February 19 to register in order to avoid violating the federal rule.

Thank you for your patience as we work to find the best path forward on registration. We are committed to doing everything possible to protect our hobby and ensure that future generations have the opportunity to fly.

Sincerely,

AMA

[\(AMA email dated Monday, January 11th 2016\)](#)

Show & Tell Item - II



Keith Davis' PT-19 Cornell



"This is Keith's first gas-powered airplane, bought from Texas RC Airplanes, it is the 110" ws PT-19. The plane is an ARF with a two-piece wing, powered by a DLE-85cc gas engine and weighs 27 pounds. Keith also installed a Sullivan smoke pump and added the two pilots. The plane has been flown twice and flies very easy for a giant scale airplane."

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When Barn Doors Fly

By Mike Weidner



A friend of mine emailed me an eye catching photo of what appeared to be a barn door in flight – nothing more, just the picture. I had to look at the photo from one than one direction. Was the barn door airborne in the midst of a tornado? No. Did the door fall off a cliff and take flight? Nope.

I finally spotted the giveaway small propellers barely visible along one long edge.



My interest was thoroughly piqued; I had to get some more information on this intriguing project. My friend, Bob Parks, helped to fill in the knowledge void.

It turns out this interesting project is the brainchild of Ran D. St. Clair who lives in Sunnyvale, CA. My sense is there was some form of *Double Dog Dare* among some of the local modelers which resulted in a challenge for the most creative use of foam board. What else would account for this kind of design response?

Ran responded with an approach that would use an entire four by eight foot piece of foam board! Yeah, right. Fly a slab of foam board you say? Some folks will tell you that a flat plate with square edges and corners will not fly – period, dot. Well, nobody told a flat plate that Bernoulli’s Principle applies to it as well even though it is not an “airfoil.”

What Bernoulli’s equation translates to is simply this: with enough air speed and angle of attack, **any** so called flat plate will fly. Beyond that, according to Bob, “the detailed explanation of the ‘why’ is a good topic for a semester of aerodynamics in college and a bunch of calculus. Plus, it does not simplify very well.” That

being said, the challenge beyond merely achieving aerodynamic lift is to actually control the flight path.

OK, so Ran came up with a fairly simple configuration as shown in the photo below. In the photo you’ll see a couple of electric motors with their propellers. There are two flight control surfaces (ailerons) with the servos to control them along with an RC receiver and plugs for a battery pack. Notice there are no vertical fins or functional rudders. Also included is a little gizmo called a flight controller – more on this later.



Obviously this baseline configuration looks nothing like a barn door. Some creative finish work and artistic painting achieved the following result. Gee, it actually looks like a barn door. I wanna see it fly though.



With respect to the flying part, this is where the flight controller gizmo comes in. The flight control function is fulfilled by a commercial offering known as a KK2 Multi Rotor board. It is available from a variety of sources found on the Internet. Its true functionality stems from the OpenAeroV2 firmware that interprets the output of the KK2’s gyros and accelerometers which are translated to commands sent to the ailerons and electric motors to achieve controlled flight.

As you might expect, there are several radio control forums and related discussion threads on the Web that address each of the items discussed so far.

URLs for some of these discussions are included as end notes. Finally, let's get to the part we're interested in: does it fly? Oh you bet!



<https://www.youtube.com/watch?v=r2IQO9AM08g&feature=youtu.be>

Seeing this flat plate slab in (controlled) flight is an

Bernoulli's equation

*relates pressure, speed, and height
at any two points within an ideal fluid*

$$P_1 + \frac{1}{2} \rho v_1^2 + \rho g h_1 = P_2 + \frac{1}{2} \rho v_2^2 + \rho g h_2$$

P = pressure **ρ = density**
g = acceleration (9.80 m/s²)
h = height **v = velocity**

example of the power and flexibility of the KK2 coupled with OpenAero-VTOL firmware. I was truly amazed at this remarkable accomplishment. Yes, so when barn doors fly . . . be careful of what you wager on or against that!

1. Bernoulli's Principle:
http://www.encyclopedia.com/topic/Bernoullis_Principle.aspx
2. Discussion on airfoils:
<https://www.av8n.com/how/htm/airfoils.html>
3. The 4x8 Challenge:
<http://forum.flitetest.com/showthread.php?23847-4-x-8-Challenge>



“And who said barn doors can't fly!”

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No Electricity At this Time



During the January club meeting, Romi Lucas and attending club members, had a brief discussion about installing solar powered-electricity at the airfield. The electric stations would be used to charge airplane batteries and provide a limited source of electricity for other devices.

Romi brought up several advantage points of having electricity; The ability to charge batteries and not having to use your vehicle to charge batteries, the ability to charge more than one battery at a time and having lights during early or late days at the airfield.

However, a few club members in the discussion brought up a few disadvantage points that concerned them; Battery & solar panel cost and maintenance, battery life expectancy in Colorado's extreme weather changes and the possibility of vandalism.

After several long minutes into the discussion, it was obvious that no one was gaining ground on which way to go on the subject, so the matter was put to a vote; Is the club interested in the possibility of installing electricity at the airfield at this time? The majority of the club members voted “No”, not to install electricity at the airfield at this time.

Therefore the proposal has been shelved for now. However, Romi does have much of the research already completed (costs, system location, etc) and may address the matter again at a later date.

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Old News
Is Good News



After several months of working on the club website, trying to repair the broken link pertaining to the newsletter archive section, the link is finally working again!

You can now view the club newsletters going back as far as 2006. Unfortunately, year 2012 is completely missing and a few other issues are missing but the majority of them are now accessible.

So when you have nothing else to do during these cold winter days, take a look at some of the old newsletters and see how the newsletter has evolved into what it is today. You may even find some of your old airplane projects that you brought in for Show & Tell years ago.

2016
JEFCO Auction



JEFCO AEROMOD' LERS RC CLUB PRESENTS

RC AUCTION
DENVER, COLORADO

Saturday, Feb 6, 2016

JEFFERSON COUNTY FAIRGROUNDS 15200 W. 6th Avenue—Golden
(6th Avenue/Indiana Street)

<p>BUYERS & SELLERS PRE-REGISTER BY JAN 1 ~ \$10 AFTER JAN 1 ~ \$15</p> <p>Pre-Registration Closes Jan 31</p> <p>No Admission Fee to View Merchandise.</p>	<p>SCHEDULE OF EVENTS ONE DAY AUCTION</p> <p>FRIDAY—FEB 5 11am—7pm Merchandise Check In</p> <p>SATURDAY—FEB 6 8am—6pm AUCTION Merchandise Check In— Until Noon</p>
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HUGE SELECTION & VARIETY OF ITEMS UP FOR BID

Airplanes • Jets • Cars • Helicopters • Gliders
Radios • Engines • Tools • MORE!

PRE-REGISTRATION OPENS DECEMBER 1
WWW.JEFFCOAEROMODLERS.COM

QUESTIONS?
Bruce Riley
Auction Coordinator
JefcoRCAuction@gmail.com
303-898-6014

Show & Tell
Item - III



Ben Woofter's F4U Corsair project



"Ben updated club members on the progress of his Bryon Taylor's F4U Corsair project. The fuselage now has panel lines and the cockpit now has a manual sliding canopy. The rudder and elevators also have simulated trim tabs. The plane will have an 80" ws and powered by an EME 55cc gas engine. Ben is hoping to keep the weight at 20 pounds or less."

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2015 PPRCC Proposals



During the December 2015 club meeting, two new club proposals were introduced and discussed;

Issue 1: Frank Tuxworth's proposal for free lifetime PPRCC membership for all past and current Bob Burows award recipients.

Discussion: The topic was discussed again during the January 2016 club meeting. The proposal was amended to state; All past, present and future Bob Burows award recipients will be granted a one-year free club membership to PPRCC. This will also include free admission and meals to all PPRCC events during that same year. The amended proposal was approved during the January 2016 club meeting.

Conclusion: Past, present and future Bob Burows award recipients have the option of using their free membership this year if they have not paid membership dues yet, or use it in the future. There is no time limit when to use the free membership option and club Treasurer Adam Heffington, will record the transactions.

After the proposal was approved, a question was asked; How does one get considered for the Bob Burows award?

The person should go above and beyond what the average club member does for the club. The person will usually volunteer his/her time at many club events and participates in many of the club events. The person is always looking for ways to improve the club.

And it does not have to be RC related abilities in order to support the club. Expertise in field maintenance, building maintenance, computer skills (website, Facebook), public relations, marketing, etc. The club has dozens of members that has the unique skill(s) that can really help to improve the club.

Talents like that does not go unnoticed and that person's skills will be discussed and considered at each of the Bob Burows award meetings.

Bob Burows Award consideration process: All club members are considered for the award. Each year, all Burows award recipients will meet sometime in November, a time and place determined by the current award recipient.

The current award recipient will have the latest club roster, announce each name and ask, should they be considered for the award, "Yes or No? If the name gets a "Yes", it goes to the semi-final list, if the name gets a "No", that person is no longer considered for the award. This process will continue through entire club roster.

The group will then review the names on the semi-final list and the process begins again until it is narrowed down to one or two names on the finals list.

The group must agree 100% on one person. If one individual does not agree on the person and 10 individuals do agree on the person, that person will still not be considered. If the group cannot agree 100% on any one person, then there will not be a Bob Burows award recipient for that year.

If the group does agree 100% on one person, then the new recipient will be announced during the December club meeting. Once given the Bob Burows award, that person cannot be considered for it again.

Issue 2: Kevin Kinzel's proposal for members having the ability to vote on club issues by proxy.

Discussion: During the December 2015 club meeting, the topic did not get approval by attending club members to continue.

Conclusion: The issue was dropped.

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

Lkdavis03@hotmail.com

Keith Davis - PPRCC Newsletter Editor



Don't forget, lock the gate!

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**Giant Rc's from
Around the World**



**"Chance Vought F4U Corsair"
Country - England**



**"Howard Hughes Spruce Goose"
Country - USA**



**"Lockheed C-5 Galaxy"
Country - Germany**

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**Show & Tell
Item - IV**



Larry Laughlin's Aeroworks Yak-54



"Larry was looking for a quick project to build this winter, so he came across his 20 year old Yak-54 still new in the box and slapped it together. He recently flew it for the first time during the club's Frozen Needle-Valve event. The plane weighs about 10 pounds and has a DLE-35cc gas engine. Larry commented that it very easy to fly and has unlimited vertical!"



Pikes Peak RC Hobbies



Upcoming RC Events:

- **February 2nd (Tue) 2016 - PPRCC meeting**
- **February 5th - 6th (Fri - Sat) 2016 - JEFCC Auction**
- **February 20th (Sat) 2016 - Wings over the Rockies (RC event)**
- **March 1st (Tue) 2016 - PPRCC meeting**
- **April 5th (Tue) 2016 - PPRCC meeting**

