



# The Rogue Eagle

Rogue Eagles R/C Club - AMA Chapter 534 - Medford, Oregon

## Happy Thanksgiving!

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### 2010 Event Schedule

- Mar 27 Pylon Race Agate
- Apr 3 Swap Meet GP \*\*
- Apr 16-18 Agate Float Fly
- Apr 24 Pylon Race Agate
- May 1-2 IMAC Agate \*\*
- May 15-16 Warbirds Agate
- May 22 Pylon Race Agate
- May 30 Fun Fly Lunch Agate
- Jun 5-6 Klamath Glen
- Jun 11-13 Ash Creek
- Jun 18-20 Plat I (?)
- Jun 26 Pylon Race Agate
- Jun 27 Keno BBQ \*\*
- Jul 10-11 Selmac Float Fly
- July 16-18 IMAA Agate
- July 24 Pylon Race Agate
- Jul 30/Aug 1 IMAA Elkton \*\*
- Aug 13-15 Dawn Ptrl Elkton
- Aug 13-15 Klamath Glen
- Aug 21-22 Air Show Agate
- Aug 28 Pylon Race Agate
- Sep 11 Fun Fly Lunch Agate
- Sep 18 Swap Meet Agate
- Sep 25 Pylon Race Agate

\*\* Tentative

### President's Corner

Here we are going into the building season and another year almost gone. It seems that the years go by at a faster pace then when I was younger. This year has been an experience for me but I have enjoyed all of it.

As some of you have already seen the access road was redone and new gravel put down.

We can thank the county for the gravel and the work to apply the gravel to the road AT NO COST TO THE CLUB.

Please when you drive on the road obey the speed limit signs and do 10 MPH. This cuts down on the repairs to the road and leaves the gravel where its supposed to be.

Please keep the ideas coming to the board. We have received some really great ones and are working on instituting some of them.

As some of you know I have been approached by the NSRCA District 8 which covers Alaska, Idaho, Montana, Oregon, Washington and Wyoming. Flyers from Canada also participate as well, to HOST a Regional Pattern Contest at our field.

I was asked to find out what the income from this event would be to our club and I can not answer that question at this time. It would be basically the same as the IMAC event or the pylon races we have held at the field, but specific

dollar amounts are determined by the number of participants at each contest.

The main thing that I feel we need to look at is do we as a club want to give up another weekend plus for a major event like the pylon races. Our members would be invited to participate as competitors but the work for the event other than field prep would be covered by the NSRCA.

We need your input on this and want to hear from all sides. It would take about a year to put this together so we do not have to worry about this next year.

**Happy Flying  
Floyd**

### News Briefs:

#### Christmas Dinner Confirmations

Please contact one of our Club Officers to confirm your dinner reservations. We need to know how many will be in your party and what your food preference is.

#### WANTED: Safety Coordinator

Must attend meetings, have good communication skills and be at the field as often as possible. Contact Bill Grove for more information.

#### Gate Combination changing

Just a reminder that the gate combination will change December 31st.

#### Welcome New Members!

Chuck Beck  
Larry Cogdell  
Chris Johns



## Board Meeting Minutes - October 27th 2009

### Opening:

The club President, Bill Grove, formally opened the meeting for business at 7:00 p.m. at the Central Point Senior Center. There were nine members present.

### OLD BUSINESS

#### Constitution By-laws.

Bill ensured that all members present had a copy of the current club by-laws document. There was some discussion on Article 5 and the need to add a section that would place a limit on the amount of money that the members at the General Meeting would be able to spend without the need for a ballot vote of the full membership. (Note that presently there is no monetary limit).

The proposed addition is worded as follows:

“Club expenditures up to \$2500.00 may be made at any General Meeting by MAJORITY vote of those members present at that meeting. Any amount exceeding Twenty Five Hundred dollars requires notification of all club members and a vote per SECTION 1 ARTICLE X.”

A motion was moved, seconded and approved to present this article to the full membership for a ballot vote to approve, or not, the inclusion of this article in the By-laws.

#### Lease Agreement.

R.E. Club Officers met with County officials to discuss the Lease Agreement for the Agate facilities. Bill reported that the current lease agreement we have is in force and correct in every respect. The Agreement is a fully enforceable legal document. It is valid until 2013. If a member would like a copy they should contact Bill Grove.

#### Selmac Float-Fly 2010.

Bill received receipts from Art Kelly, President of the RVF club, for deposits paid for renting the sites in the Heron loop at Lake Selmac. Bill is concerned about some of the working in the paperwork related to “Daily Use Fees”. He is having Art Kelly check with the Parks Department to clarify.

#### Potential F3A Contest.

It has been suggested that R.E. host an annual “NSRCA Class A” pattern contest event at our field. This could be a very prestigious and lucrative event for the club. The board is generally in favor of this and Bill will bring up to the membership at the next General meeting.

#### Officers Job Descriptions.

Bill now has the complete set of description and will clean them up into a presentable format and include them in the “Membership Manual”. Bill noted that the Membership Manual is out of date and requires some work. A new manual will be provide to members at the beginning of next year.

#### Fire Extinguishers.

On the subject of fire extinguishers, Bill could not find the units he was originally approved to purchase for the field. After talking with some experts, he determined that the best product to purchase is a TD PRO 460 4A60BC fire extinguisher. They sell for \$70.00 and can be purchased at Home Depot.

There was considerable discussion and statements from the members about types, recharging, servicing, storage, theft problems, etc. Due to the possibility of theft, there is no guarantee that an extinguisher will be available when needed., so again, it is strongly recommended that every pilot carry an extinguisher in their own vehicle.

In conclusion, Bill will purchase two new units as quoted above. One will be kept in the impound area, the other two will be kept in the storage container for backup.

#### Constitution and By-Laws.

The discussion came back to the proposed changes and additions to the By-Laws. A proposed addition to insert a new Article IX related to the disciplinary actions is as follows:

**Section 1.** All pilots at Agate field must abide by all AMA and Rogue Eagles safety rules at all times.

**Section 2.** Any pilot violating any rules should be warned by the club safety officer or by any club member. Continued infraction of the rules shall be cause for expulsion from the field and/or termination of club membership, depending on the severity of, and frequency of said rule violation.

**Section 3.** At any event, the contest director (CD) is in total control, including enforcement of rules including those specific to the event. If rules are broken and/or behavior of any participant or pilot is unacceptable and reflect negatively on the Rogue Eagles Club, the CD shall take appropriate action including but not limited to expulsion of the offender(s) from the flying site and possible membership termination by a vote of the board.

A motion was moved and seconded and was approved by the Board to present this text to the club membership for the vote to include in the by-laws.

### NEW BUSINESS

There was a discussion about the R.E. incumbency in the AMA District XI and the total lack of attention paid to Southern Oregon when it comes to reporting activities in this region. Bill mentioned that a new Associate Vice President, Bruce Harwood, has been appointed for Southern Oregon.

#### Constitution and By-Laws.

The discussion came back to the proposed changes and additions to the By-laws. Werner Bruckner expressed the desire to clarify the wording concerning “fees” in Article VII, Dues and Fees, Section 1.

Werner’s proposed wording is as follows:

“Junior members must annually, no later than January, declare their intent to remain in the club and AMA members by submitting to one of the club officers a completed AMA membership application. The club will continue to submit this to the AMA with the appropriate fee and waive the club dues”.

There was some discussion in the meeting over the intent of the Club’s policy to support the cost of Junior members. Bill Grove stated that his understanding was as follows, verbatim:

“Junior members must bring their junior membership into the Treasurer by January 1st and the club will take care of those fees and their club membership. Then we know that they have updated and we will know that they still want to participate. The initial idea of this project was to give the first year of a junior member free membership in the club and free membership in the AMA, but after the first year it should be their responsibility to bring to you and to present his AMA membership and/or the AMA application and he/she should pay the junior membership after the first year”.

In response to a question from the floor as to how long the club carries a junior member, Bill suggested:

“Junior membership under 16 years of age for the first year will be waived by the club and AMA dues will be paid by the club for the first year”. We could further add: We allow them to stay a member of the club when under 16 years of age for a dollar a year, but the club will not pay their AMA dues”.

There was further discussion from the floor about whether the club should also pay the dollar per year club membership and whether this covered the cost of the membership card or not.

Currently in the R.E. by-laws there is no stated cost for junior membership. Werner suggested \$5.00 or \$10.00 per year. Bill suggested that we match the AMA cost, being \$1.00 per year.

After further comments and discussion, Bill proposed the following wording:

“Junior membership under 16 years of age for the first year will be waived by the club and AMA dues will be paid for by the club. After the first year of membership, it will be the junior members responsibility to pay the AMA their yearly fees for Junior membership and the club membership of \$1.00”.

The discussion turned to the subject of Life membership. Wording needs to be added into Article III, section 7. Some suggestions from the floor were as follows:

“Life members are those members who have provided exemplary service and or substantial donations to the organization and are voted in by the entire club membership”. “Life membership is not transferrable and is only valid as long as the Life member holds a current AMA membership”. There was more discussion on what constitutes “substantial contributions”, \$1500.00 was mentioned.

Ultimately, the wording arrived at was as follows:

“Life membership will only be given to existing paid up members of the club and the AMA, who have performed exemplary tasks and/or service to the club and shall be voted on by the membership. People who are prepared to pay \$1500.00 up front may purchase a Life membership with the understanding that AMA membership must be maintained throughout, or Life membership will be terminated without refund”.

Article III MEMBERSHIP requires a definition for Family Membership. Meeting members agreed that for our purposes “family” means husband, spouse and children.

Bill stated that he will gather up the proposed changes that have been discussed and present them at the next Board meeting for review and voting for moving forward to the General membership for approval.

#### Signs at the field.

Bill stated that he has posted three new signs at the field.

#### Safety Officer.

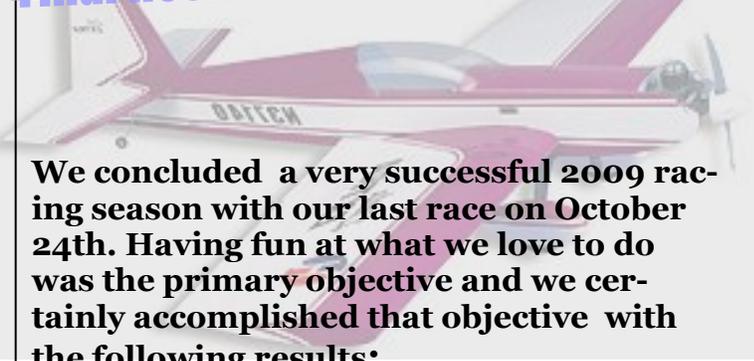
Doug McKee is unable to continue in his role as Safety Officer, therefore, we now need to find someone who is willing and able to take over this required position.

#### Field Matters

Gary Neal commented on the work that had been performed on the roadway and that we need to drive gently on the surface to enable it to bed down properly, so PLEASE observe the 10 MPH speed limit sign. This will help prevent unnecessary wear and tear. Bill commented that the cost of this work was fully borne by the County. They are extremely pleased by the way the club is maintaining the flying site.

The meeting was adjourned at 9:02 p.m.

## Final Results: 2009 Pylon Winners!



**We concluded a very successful 2009 racing season with our last race on October 24th. Having fun at what we love to do was the primary objective and we certainly accomplished that objective with the following results:**

- 1st Place - Ray Wasson Sr.**
- 2nd Place - Ben Musolf**
- 3rd Place - Joe DeAscentis**

**Congratulations everyone! See you next year....AT THE RACES!**

From the Anoka County Radio Control Club, Inc., Coon Rapids, Minnesota

## BETTER PERFORMANCE WITH LESS NOISE

By Brian Dorff

With the ongoing debate about the noise our little engines produce, much is being done to preserve our way of life while respecting the rights of others. At first, noise reduction sounds bad for pilots. We think that reduced noise means reduced power, and conventional wisdom supports this. It is not until you fully understand how engines and propellers operate that you will realize the gains that benefit not only our neighbors but our airplanes as well!

There are four contributors to the noise made by model (in no specific order): Muffler type, engine speed (RPM), tip speed of the propeller, and vibration.

### Muffler

The mufflers provided with today's engines are quite good for the rpm range in which they are designed to run. Mufflers that come with internal baffles should not be removed. Removing them does nothing to boost power, it increases noise, and makes the engine idle poorly because of lack of back pressure. Pitts-style mufflers shouldn't have more exit area than a stock muffler does, and if it does, one of the ports may have to be partially or completely blocked. Again, this will help the idle.

### Engine Speed

A large contributor of noise made by our engines is an over-revving engine. Most modders try to make their engines run as fast as possible, trying to obtain the rpm at which the manufacturer claims the largest brake-horsepower (BHP) number. What they don't realize is the peak efficiency for the engine occurs at peak torque, which is usually about 65% to 75% of the peak BHP rpm.

Example 1: A manufacturer of a .46 engine claims 1.5 BHP at 16,000 rpm. After break-in you find that you can turn a 10X5 prop at 15,500 rpm—very close to the peak BHP, but the airplane's performance is mediocre, it is loud, and consumes way too much fuel. Now you find the engine's peak torque is about 70% of the peak BHP rpm ( $.70 \times 16,000 \text{ rpm} = 11,200 \text{ rpm}$ ). You switch to an 11x7 prop and find that the rpm is 11,500 rpm. You are much closer to peak torque now, and the airplane flies better and is quieter because the frequency of the engine firing has reduced dramatically. The fuel also lasts longer, and the engine will last longer as well since it is not working as hard. A slower engine also helps in achieving the next goal...

### Propeller Tip Speed

The tip speed of the prop is critical in quieting the airplane. The point where things get noisy is 560-feet per second or about 380 mph. Going more than 400 mph is a big no-no. Even in an airplane that is built for speed, you should be able to choose a quiet prop.

Example 2: Same setup as the last example, the 10x5 prop is at 15,500 rpm and the 11x7 prop is at 11,500 rpm. The formula for tip speed in MPH is:  $(\text{Diameter in inches}) \times (3.1416) \times (\text{rpm}) / 1056$ .

The number 1056 is a constant that converts inches per minute to miles per hour. A 10x5 prop has a tip speed of 461 mph!

We want our tip speeds no faster than 400 mph and it should be less than 380 mph if you want to keep your flying site. The 11x7 prop at 11,500 rpm has a tip speed of 376 mph. The tip speed is now down to a moderate level. But how do these props compare in performance? You can calculate airspeed by using the prop pitch and the rpm of the propeller. The pitch of the prop is the second number in the propeller designation. This is the distance that the prop will travel through the air in one revolution.

*ED note: Propellers are not 100% efficient and suffer from what is called prop slippage and reduces efficiency by as much as 20% depending on propeller design.*

Multiplying the pitch by the rpm and dividing by 1056 will give the calculated speed of the model ( $5 \times 15,500 / 1056 = 73 \text{ mph}$ — $7 \times 11,500 / 1056 = 76 \text{ mph}$ ).

So your airplane will actually be travelling slightly faster with the 11x7 prop than with the 10x5, while turning 4,000 rpm slower. This reduces engine noise, prop noise, fuel consumption, wear and tear on the engine, etc., without compromising performance.

### Propeller Loading Factor (PLF)

How do you know what to expect by changing propellers? Being able to compare props before you run them is the key to optimizing your airplane's performance. And getting rid of the noise. Say you are happy with the rpm that your engine is turning with the 11x7 prop, but you want to try other props to see what you liked best for flight performance.

Right now you are at the middle of the road, slightly fast and passable vertical performance, but what if you want more vertical? First we solve the PLF of our existing prop, and then we compare it to others.  $PLF = D \times D \times P$  (D=diameter, P=pitch). The 11x7 PLF would be  $11 \times 11 \times 7 = 847$  PLF (compared with the 10x5 whose PLF is 500). Now let's see what else is out there. To increase vertical you should either increase diameter, decrease pitch or both.

To keep a PLF close to the same you will have to do both. If you are trying to raise the rpm, decrease the pitch—and if you are trying to slow the motor, increase diameter. I would try the 12x6 first and then the 13x5. They both have close PLF's. This is for comparison only. Switching propeller brands or not balancing a prop, among other things, can vary your results.

### Vibration

How does the vibration of your model relate to the sound it makes in the air? Well, sound is vibration. Imagine your beautiful model—a nice wooden structure covered in drum tight plastic covering. Think of a percussion instrument. The piston is traveling up and down like a drumstick pounding away at your model and you model echoes every stroke it makes. The same thing happens with an out of balance propeller. Noise.

**Start at the Propeller**

If it moves 300+ mph at the tip—balance it! It will remove some of the noise and vibration going to your receiver, servos, switch, fuel tank and battery! Also consider a high-quality spinner, they are better balanced and look nicer.

**Back to the other cause of vibration—the engine**

It is not possible to balance an engine dynamically at all speeds, so some vibration will forever be present, especially with four-strokes. The only thing you can do about it is to isolate the vibration from the airframe, making less noise in the process. Iso-mounts vary in type and price, from rubber grommets between the firewall and the mount, to specialized mounts for specific engines and airplanes that cost \$100 or more. A popular one is make by Dubro and is for any 40-90-size 2 stroke or 4 stroke engine. It sells for \$20 to #30, well worth the investment.

**OCTOBER Name that Plane:**

**Sopwith Camel**

**Specifications of the F.1 Camel:**

- Engine: 130hp Clerget 9-cylinder rotary engine
- Max. Speed: 117 MPH at sea level
- Ceiling: 19,000 feet
- Climb Rate: 10 minutes to reach 10,000 feet
  
- Weight: 929 lb. empty, 1,453 lb. fully loaded
- Wingspan: 28 feet
- Length: 18 ft 9 in
- Height: 8 ft 6 in
- Wing area: 231 sq ft

**Guns:** Two synchronized .303 inch Vickers machine guns. The Camel was the first British fighter to mount twin forward-firing machine guns side-by-side, a natural arrangement that became standard for the RAF.

**Bombs:** Four 20-lb. Cooper bombs



**NOVEMBER Name that Plane:**



Rogue Eagles R/C Club

**2009 OFFICERS AND BOARD MEMBERS**



**Elective**

**President\***—Bill Grove.....660-6581  
 Email: floyd955@charter.net

**Vice Pres\***—Gary Croucher.....664-1133

**Secretary\***—Alan Littlewood.....362-3731  
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**Treasurer\***—Werner Bruckner.....664-2549  
 Email: wkbruck@charter.net

**Board Members-At-Large:**

Gary Neal\*.....476-6159  
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Larry Myers\*.....770-3390  
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Danny Stanton\*.....301-4396  
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**Appointive:**

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**Newsletter Editor\***—Ben Musolf.....608-7240  
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**Webmaster** — John James.....826-4119  
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**Instructors** — Richard Schwegerl.....773-5479  
 Bill Grove.....955-0634  
 Gary Lindsey.....776-5832

( \* = Voting Board Members )

*Our Thanks and Appreciation to the following businesses:*



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541-471-8780  
[rmildtowild@peoplepc.com](mailto:rmildtowild@peoplepc.com)

# Thanksgiving



*For each new morning with its light,  
For rest and shelter of the night,  
For health and food,  
For love and friends,  
For everything Thy goodness sends.*

*--Ralph Waldo Emerson (1803-1882)*

**Rogue Eagles R/C Club**  
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«First» «Last»  
«Street/Apt»  
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