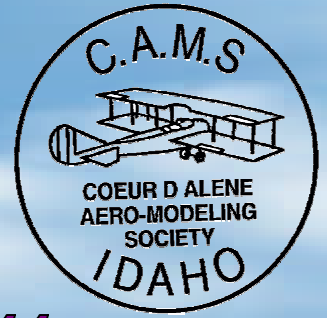


THE

The Official CAMS Newsletter

Prairie Flyer



P.O. Box 2073, Hayden Lake, Idaho 83835

www.camsda.com

November 2011

Board of Directors Meeting

November 2, 2011 at 6:00 pm

The meeting will be held at the Civil Air Patrol Hanger located at the Coeur d' Alene Airport.

All members are welcome.

Membership Meeting

November 2, 2011 at 7:00 pm

The meeting will be held at the Civil Air Patrol Hanger located at the Coeur d' Alene Airport.

All members are encouraged to attend.

EVENTS

December 10, 2011

Christmas Party and Swap Meet (see the flyer on the back page)

Come to the next membership meeting and join in the discussion regarding the Christmas party and Swap Meet.



NOVEMBER MEMBERSHIP MEETING AGENDA

Minutes from October Meeting
Treasurer's Report

Old Business:

1. Questions or Concerns

New Business:

1. December Swap Meet Progress
2. Christmas Party Progress
3. Open Forum
4. Presentations
5. Show and Tell

Adjourn meeting

From the Prez

Among other things this year I have tried to focus on safety at the field. I've received various reactions ranging from, trivializing, and ignore it, to understanding its importance. I have observed many examples of both but mostly the membership realizes its importance. It seems like there are a lot of kids and casual observers around these days that are just there when we least expect it. As a group, we need to be vigilant and what we do as individuals is an important part of everyone's safety. Not many know this, but one member of our club lost a finger this year at our field. (details & name, privacy protected) It is the responsibility of all members to abide by the AMA & club safety rules. If you see something say something. Let's work together to accomplish a goal of an accident free 2012.

Now let's plan on some fun at the swap meet & Christmas party

Bill Burgad

2012 Officers

President.....	Bill Burgad	509-710-1434
Vice President.....	Steve Astlund	208-773-6597
Secretary.....	Dennis Edelbrock	208-772-2295
Treasurer.....	Trevor Young	208-818-3972
Trustee.....	Loren Hall	208-666-1079
Trustee.....	Bruce Eckhardt	208-651-1604
Trustee.....	Joe Vaughn	208-664-4150

Appointed Positions

Safety Officer.....	Keith Bodeau	509-891-9553
Membership.....	Loren Hall	208-666-1079
Hwy Cleanup Ch.	Richard Wroth	208-446-6081
Field Marshal.....	Phil Clements	208-772-3267
Webmaster.....	Loren Hall	208-666-1079
Newsletter Editor...	Loren Hall	208-666-1079

Membership Meeting Minutes October 5, 2011

1. President Bill Burgad called our meeting to order at 7:00 p.m at the CAMS field. 18 members in attendance constitutes a quorum.
2. Minutes approved as published
3. Treasurers report read by Trevor.
4. Nominations opened for Board of Directors. All the incumbents were nominated for another term. Bruce Eckhart was nominated for the open trustee slot.
5. Christmas Party: Will be held on December 10th at the Newman lake Tri-Community Grange at 25025 E. Heather Lane, Newman Lake, WA 1 block north of the intersection of Trent and Star. A swap meet will be held before the Christmas party starting at 8:00 A.M. and ending at 3:00 P.M.. There are no reserved tables, everything is on a first come first served basis. Entry/Selling fee is \$5.00 per person. Sellers have a maximum of one 8 foot table. Seller setup starts at 7:00 A.M. NO Early Birds. At 3:00 P.M. select members and wives will start decorating the hall. Christmas Party will start at 6:00 P.M. More information to be supplied at the November Membership meeting
6. Members set a cap of \$500.00 for Christmas Decorations/gifts.
7. The continuing subject of dues was brought up by Bill and a motion was made to leave the dues structure as it is. Voted on and passed.
8. Safety Rules – use common sense.
9. Hiway cleanup Richard Wroth has scheduled the Hiway Cleanup for Saturday October 22nd starting at 9:00 A.M.
10. Stan Allison is no longer going to do the newsletter. Loren Hall said he would step in and do the newsletter from now on but would like some help gathering data for the newsletter. Anyone interested contact Loren. Thanks Stan for your many years of service.
11. Future plans for the club: We (the Club) need to get more involved with community projects and get better known as a benevolent club and one that is interested in community affairs. This needs to be done to endear ourselves to the powers that be to try and offset any negative repercussions resulting from the new FAA regulations on Remote Piloted Vehicles (RPV's). This was brought to our attention by the president of the AMA at a talk he gave at Whidbey Island 2 months ago. Chris Nicastro was present and brought this to our attention. Thanks Chris.



Meeting Adjourned.

It is time once again to start thinking about renewing your CAMS Membership dues for the 2012 season. At the last membership meeting we voted to keep the dues structure the same for next year, so there will be no increase. As you can see in the Membership Application below, dues will remain at \$75.00 for all adult members under 70 years of age, and \$50.00 for all members over 70 years of age, with junior members (under 18 years of age) remaining at \$35.00.

As in the past, I would greatly appreciate it if all renewing members fill out the membership application so that I can keep the membership records up to date. Even if you think there are no changes, by filling out the Membership Application, you help me to make sure that I have not made any errors in my past record keeping.

As always, send your checks and Applications to:

CAMS
P.O. Box 2073
Hayden Lake, ID 83835

Thank You
Loren Hall

CAMS Membership Application

Coeur d'Alene Aero Modeling Society (2012)

NAME: _____ AMA # _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

PHONE: _____ CELL PHONE _____

E-mail: _____ The Prarie Flyer newsletter will be E-mailed to you, and is also available on-line at CAMSCDA.com

Frequencies Used _____

Have you ever been a member of CAMS in the past? YES _____, NO _____. If no, new members must pay a one time only fee of **\$145 (Includes first years dues)**. No Assessment for Junior Memberships

Membership dues: **\$75** for adults. **\$50** over 70 years of age, **\$35** for Junior membership (under 18 years of age).

Total due: _____ Payment by Check made out to CAMS, along with this form should be sent to: CAMS PO Box 2073, Hayden Lake, Idaho, 83835.

Non-flying members are not required to have a AMA card

I intend to be a non-flying member: Yes _____ No _____

Thank you for your interest and support. If you have any questions, please call: Loren Hall, Membership Chairman @ (208) 666-1079

Classified Ads

There are no new classified ads for this month. If you have any R/C related items either for sale or wanted, please contact me by the 20th of the month so that I can get those items included in the newsletter.

**Thanks,
Loren Hall
camsmail@roadrunner.com**

Lithium Polymer (LiPo) Basics

Submitted by Joe Vaughan

It can sometimes be difficult to know which battery is best for your application.

For R/C aircraft there is a huge variety of batteries available and while many may suit your application your ultimate goal is to purchase a battery pack that will;

-be within your budget

-have a long cycle life

-have the correct size and weight

-give you the longest flight times

-be able to deliver the correct voltage/amp (Power)

We hope this simple guide helps you understand the different types of LiPoly (Lithium Polymer) batteries and which is right for your model.

You may have noticed by now that batteries have different ratings, sizes, plugs, wire, charge rates and chemical makeup. Lets decipher;

Capacity (mAh).

This is usually the biggest number shown on the pack and is measured in mAh (Milliamp/hour) or Ah (Amp/hour). The capacity is the first indicator of the batteries size. To keep things simple, think of capacity (mAh) as the amount of fuel in your cars gas tank. A higher capacity tank will run your car for longer. A 4,000mAh battery will run for twice as long as a 2,000mAh battery.

A 2,000mah battery will (in theory) run for 1hr if drained at a constant 2,000 Milliamps.

Discharge (C)

Discharge is the amount of power the battery can 'push' out and the number shown '20C' is an multiplication of the capacity. For example; A 20C battery can discharge at 20 x 2,000mAh which is 40,000mAh or 40Amps.

This is an important number if you know your motor requires a certain power level.

In addition to this, batteries have a 'Burst' rate, which is the amount of power the battery can discharge for a short period, usually 10-20 seconds. A typical battery label may show 20-30C, this would mean a 1,000mAh battery can discharge 20,000mAh constantly or give a sudden and short 10-20 second 30,000mAh (30A) burst of power.

Tip: A higher 'C' rated battery will last longer if run at a lower 'C' rate. Example: a 30C battery run at 20C maximum will have a longer cycle life than a 20C run at 20C each flight.

Voltage (S)

All lithium Polymer cells in any industry have a nominal voltage of 3.7v per cell. When fully charged a LiPoly cell should be 4.2v and when discharged it should never be below 3v.

You will notice that LiPoly RC packs are made up of layers of multiple cells. If the battery's rating is 3S this means it is 3 x 3.7v which is 11.1v. It has 3 layers of 3.7v each. In other words, its a '3 cell pack'.

Weight/Size

For a battery to be right for your model it must fit within the models battery compartment and also balance the plane correctly.

It's tempting to choose the biggest and most powerful battery your model can handle, but this will sacrifice flight performance and if your packs voltage is too high; destroy the ESC or Motor.

Check with your ESC and Motor specification to ensure you have the right voltage pack then check the models CG (Center of Gravity) to decide on the right battery weight.

LiPoly Charging

Always use a lithium Polymer battery charger and never charge the battery above 4.2v per cell. (example: 2S, never above 8.4v)

Never leave a charging battery unattended. NEVER!!!!!!

Never allow the battery's voltage to fall below 3v per cell. (example: 3S, never below 9v)

Tips and Techniques

The following tips were found on R/C Universe

By applying a strip of tape over each cowl-mounting block, it is easy to find the locations for the cowl screws.



Here's another trick to prevent small screws from stripping out a wooden hole. Enlarge the hole to $7/64$ ". Add a little CA or epoxy and then tap a piece of inner pushrod tubing into the hole. Now a #2 screw will fit nicely into the pushrod tubing and won't vibrate loose or strip out the hole.



From the Editor

If you have read the minutes for the October Membership meeting, you will have read the Stan Allison has resigned as the CAMS newsletter editor.

Starting with the November 2006 Newsletter Stan Allison agreed to take over the CAMS newsletter as a favor to me because I would be going South (with all the other snowbirds) for the winter. Stan has continued to do a fantastic job getting the newsletter out every month since that time. I want to publicly thank Stan for the great job he has done for the past 5 years, especially since it all

started with my request for help. THANK YOU STAN!

So.....

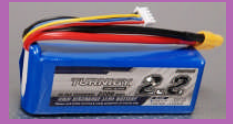
When Stan called me and said that he would like to step down as the newsletter editor, and in the face of there being no other volunteers for that position, I decided to once again try my hand at keeping you all informed and entertained.

I will do my best to find interesting material and photos to include in the newsletter every month, but I can use all the help I can get. So please send your submissions to:

Loren Hall at: camsmail@roadrunner.com

With more and more of us becoming interested in Electric Flight, the following article may provide some interesting and useful information.

Thanks to Joe Vaughan for sending it.



An under-powered model is a disaster waiting to happen, here is a rough guide to choosing the electric power train needed for various model types, bear in mind that over-powering is fine but the penalty is additional weight, and a good model is one that is balanced in terms of power, flying weight and build quality. This guide is as the title says, a ROUGH guide and offers a basis from which to choose a power train for your model, it is not intended to be a definitive guide but will help to get you into the air with performance that will make your introduction to electric flight enjoyable and reliable.

MOTOR POWER CHOICE (base on recommended All Up Weight, or Flying Weight of model choice):

Vintage types and many non-aerobatic indoor flyers - **50w~70w per 1lb**

Trainers, gliders and high wing scale - **70w~100w per 1lb**

Sport flyer with general aerobatic performance - **100w per 1lb**

Warbirds - **120w~150w per 1lb**

Multi engined models - **100w per 1lb (thrust from Multiple props gives in effect, more than 100w per 1lb performance)**

EDF Jets - **150w~200w per 1lb**

3D, F3A and high performance Models - **150w~200w per 1lb**

LIPOLY VOLTAGE CHOICE

Based on the above, we now need to work out what voltage we are going to need to use, generally, to keep Lipo's in good order, try and keep max amps to around 50~60% of the capacity/C rating of the Lipoly Pack, for example, if you purchase a 2200mAh 20c pack, then it is rated for 44A constant discharge, so keep the max amps at around 20A~25A IF possible, it isn't always! Choose the capacity of pack based on recommendation for the model by model manufacturer and in conjunction with the size/weight data published with all our advertised Lipoly packs, for low powered models, choose 20c packs, for general flying choose 20c~25c packs, for high performance models 30c + packs;

Up to 50w: **1s~2s**

up to 100w: **2s~3s**

100w Up to 500w: **3s (This is the practical upper limit for 3s Lipo's, so basically, models of 5lb AUW)**

500w up to 800w: **4s (This is the 0.40~0.46 glow equivalent range favored by many club flyers)**

800w up to 1000w: **5s**

900w up to 1500w: **6s (this is the 0.60~0.90 equivalent range)**

8s~10s packs are for very large and generally specialized models.

MOTOR CHOICE - KV or RPM per volt

Which actually means, what prop size! If you are used to IC, the simple analogy is to treat low kv motors as 4 stroke engine equivalents and mid-high kv motors as 2 stroke engine equivalents, if you are not used to IC then we can give you some examples of the approach to take, this is an important choice as you can literally choose how your model flies, however, there are practical considerations, the most obvious is ground clearance. Please refer to motors such as the NTM range, which give you prop data as well as power, dimension and weight data.

Example 1: **Trainer/Sport Model, 1lb AUW, we want 100w motor (3s 20c Lipoly) mid kv for general flying, probably around 1200kv~1400kv, so around 8" prop**

Example 2: **3D/F3A Model, 1lb AUW, we want 150w motor (3s 20c~30c Lipoly) low kv, 1000kv or under, spinning 10~11" prop, highly efficient at low throttle openings giving lot's of prop wash over control surfaces at all times, high thrust for low rpm and low amps draw at higher throttle openings.**

Example 3: **Warbird/scale Model, 1lb AUW 120w motor, kv choice, either of the above, it is personal choice**

Example 4: **High Speed Delta type model, 1lb AUW, 200w motor (3s 25c~30c Lipoly) 2200kv~3200kv motor, 5"~6" Prop, high speed/low torque, low thrust at low throttle openings, high speed from high rpm at full throttle.**

FINALLY, ESC CHOICE

You have decided on your motor, so look at the MAX AMPS figure given by the motor manufacturer in the data section and generally add 25% headroom, so, if a motor is rated to 15A, then choose at least an 18A ESC, better still a 20A and so on. Next make sure that the ESC voltage is compatible, in other words, if you are using a 4s Lipo, that the ESC is rated for 4s voltage. Next, check if it has functions you desire, if you are flying a glider for instance, you will want a brake facility so that the prop stops when soaring un-powered, allowing the prop to fold by not wind milling, we strongly advise purchasing a program card to make programming the ESC easier. Also look at BEC rating, the BEC supplies radio receiver power for servo's without the need for a separate receiver battery, however, the can be limited in the number of servo's they are capable of powering, if the servo count is over 4, as it is on many models these days, then consider purchasing an ESC with a high AMP rated SBEC, or a separate UBEC, OPTO type ESC's (they have no BEC, keeping the ESC separate from RX supply) are recommended for large models that require a separate receiver power supply, they are also safer in high powered, large models as they will not arm until the RX is switched on.

In Memory Of Jim Rockstrum

Jim Rockstrum passed away earlier this year on March 21, 2011. I only learned of Jim's passing a couple of weeks ago when I noticed that he had not renewed his CAMS membership this year and called to see how he was. Imagine my shock and embarrassment to discover the news from his wife Carol. Jim and Carol would have been married 60 years this year. Jim had been a member of CAMS for more than 10 years, and he and Carol had faithfully attended the CAMS Christmas party every year.



When Jim called to let me know about Fred, he asked me if I would like to come up to his house and see his model airplane shop. Shortly after that, Arden Beck and I went up to Jim's house and spent an afternoon looking at Jim's collection of model planes, kits, engines and miscellaneous parts that he had accumulated over the years.



I don't know how many of you knew Jim, but I felt it prudent to let everyone know of his passing. Of course it is way too late to send condolences to Carol, but I know she would appreciate any thoughts and prayers that are sent her way.

Last year Jim called me to tell me about the passing of his good friend Fred Rogers who was also a long time CAMS member. Fred you may remember built the heavy roller that we still use to roll the field every year. Fred passed away in November 2010.

Personally, I know I will miss seeing him at the Christmas party this year.

A couple of weeks ago I thought it would be interesting to go over all of the membership lists I have going back to 2002 when I first started keeping track of such things and see just how many members have come and gone from then until now. Of course, there were a lot of names that caused me to say "I wonder whatever happened to so and so". I was somewhat surprised to find that in all there were 188 names. I thought it might be interesting to post a few photos here to see how many of you remember these past members.



As many of you know, Rod and Arden Beck are members of the Post Falls Flyers as well as being long time CAMS members. Rod Beck has recently developed a web site for the Post Falls Flyers that some of you might be interested in viewing. The web address is.

<http://www.wix.com/allons7/post-falls-flyers>

C.A.M.S CHRISTMAS SWAP MEET

DECEMBER 10TH 2011

**NEWMAN LAKE TRI-COMMUNITY
GRANGE, 25025 E. HEATHER LN.**

**NEWMAN LAKE, WA. 1 BLOCK NORTH OF
THE INTERSECTION OF TRENT AND STAR**

\$5.00 PER PERSON ENTRANCE FEE - BUYER OR SELLER

**SELLER SETUP STARTS AT 7:00 A. M. FIRST COME -FIRST
SERVED. NO RESERVED TABLES. 1- 8' TABLE PER SELLER.**

SWAP MEET STARTS AT 8:00 A.M. ENDS AT 3:00 P.M.

FOOD AND DRINK WILL BE SOLD

ARF'S

KIT'S

ENGINES

RADIOS

SERVOS

TOOLS

PARTS AND SUPPLIES

