TAILSPINNERS

Volume 52 Issue 2 ***November 2006*** ***Editor: Anthony Puca***

November MEETING

PLEASE NOTE!! The December meeting will be held at Ridge View Academy on December 5th, 2006 at 7:00pm.

If the gate is closed, drive to the right of the small building and press the button on the speaker box and when prompted state your name and state that you are with Mile Hi RC and are coming in for the club meeting. When you get to the main building, you will have to sign in, turn in your car keys, and get a visitors badge. They will then direct you to the meeting room. Come a little early to get through the security routine.

RIDGE VIEW ACADEMY IS A NO SMOKING FACILITY. SMOKING IS NOT ALLOWED ANYWHERE ON THE PROPERTY.

FLIGHT LOG FOR THE NOVEMBER MILE HI RC BOARD MEETING

GENERAL MEETING MINUTES

Board Meeting – *Anthony Puca's home*

Agenda for November 27, 2006

Present: Neuimeir, Ballman, Fyler, Puca, Rocco, George, Larry, Mark

1) Approve Minutes – *October, 2006 board meeting*

2) Treasurers Report – John Ballman, Treasurer

3) Investment Report – Jerry Warrington, Investment Officer

4) Membership Report – Mark Johnston, Vice President

- Discussion of late payment incidents
- Discussion about Hobby Store Memberships – Open Membership
- One $20 per month = one Open Membership

5) Contest/Events Committee Report

- *Polar Fly, January 1, 2007-Larry Ellis*
  6 people are signed up
  Must be paid by Dec club meeting

- Aeroworks CP event is listed in AMA magazine with Sunday as a "Rain Day"

6) Field Maintenance Issues

- Mark is working on getting locks installed on containers
- Snowblower is being procured

7) Safety Report – Chuck Brant, Vice President & Safety Officer

- Frequency hits on 46 and a few others. Use

8) Field Acquisition Report – George Kerr, Chairman of the Board

- Meeting scheduled on Friday @ 9:30AM with ACF
- Lease requested for 80 acres of 160 that is 12 miles east of our field

9) Unfinished Business

- What is the AMA Gold Leader Club, how did we qualify, why, etc…
- Map to nearest EMT station is laminated and in the radio impound

10) New Business

- *Meeting with Arapahoe County*
- Right down what position responsibilities entail

11) Announcements

- *Next Club Meeting – December 5, 2006*
- *Next Board Meeting – January 4th, Rocco's Home*
- January 9th Club Meeting
- *Need drawing certificates and fuel for meeting.*

=== END OF MINUTES FOR THE NOVEMBER BOARD MEETING ===

FLIGHT LOG FOR THE NOVEMBER MILE HI RC CLUB MEETING

Ridge View Academy Library

November 7, 2006 minutes

Present: Mark, John, John, Puca present

1) Meeting Called to Order

2) Welcome

3) Introduction of Board Members and Guests

4) Quorum (Must have 14-15 members present, which represents 10% of voting members)

- Quorum met

5) Read & Approve previous meetings minutes – Anthony Puca, Secretary

- Approved from web sites

6) Treasurers Report – John Ballman, Treasurer

7) Membership Report – Mark Johnston, Vice President

- Long term members slow to renew

8) Contest/Events Committee Report

- Polar Fly January 1, 2007 – Larry Ellis
  - Please register by Dec meeting
  - Fastest, slowest, longest flights
- Wings over the Rockies
  - New concession stand
  - Chuck Yeager will be present
  - February 10th
  - Access is 6AM
  - Show starts @ 10AM
  - Park cars on N side of hangar
  - No charge for anyone who brings plane before 10AM
  - Admission for booths is $120 before Dec. 1st (non-refundable)

9) Field Maintenance Report – Gary Brady

- New construction lock procured for container and temporarily in place
- New lock assembly procured and will be installed on large container

10) Safety Report – Chuck Brant, Safety Officer

- People are not using mid-runway takeoff locations
- Discussions on how to approach members who are unaware

11) Field Acquisition Report – George Kerr /John Neumeier

- John and George are talking to Arapahoe County about location preferences
- Still in touch with state on leasing land out east
- Proposed 77 acres on N side of field would be bordered by power lines to the N, burms on the S, and horse stables to the East
- State land is on Quincy Rd. and 129. Land totals 160 acres.
- Pros and Cons discussed between state land and ACF.

12) New Business

- Vandalism & Theft
- Suggestion for meeting minutes to be emailed as well as posted. This was specific to procedure and safety.
- Chuck is now Red Cross certified – carry your own mask!
- Denny printed out map and drew line on quickest route to emergency care from field
- Chuck, Adam & Larry are helping out at Ridge view with their robotics program. They are looking for volunteers. They are also looking for corporate sponsors.

13) Announcements

- Board Meeting – November 27th, Anthony Puca's home
- Next Club Meeting – December 5th, Ridge View Library
- Futaba has told a member that old receivers need to be upgraded as they are prone to interference

14) Drawings (Gift Certificates/Fuel)

- Air Scharnell – Larry Ellis
- Colpar – Dan Reed
- Rocky Mountain R/C - Puca
- Fuel Drawing – Chuck Brandt

Program – Adam Bryant, "Building Safely"

=== END OF MINUTES FOR THE NOVEMBER MILE HI RC CLUB MEETING ===

NEWS

Attached is a photo of the Seafury that won the US Scale Masters Championship with Brian and Bonnie , October 20, 2006.. Bonnie is his caller.

Brian OMeara wins the US Scale Masters Championship for the second time in three years. Brian is a life member of Mile Hi RC and joined the club almost 40 years ago in 1967.

The US Scale Masters contest was held at the AMA flying site in Muncie Indiana.

The plane is a 101 inch Seafury painted in Cuban markings. The original plane was built by the British and then sold to the Dutch, who flew it during the Korean War. The Dutch then sold the plane to the Cuban Batista regime in 1958. It has a 250 CC radial engine from Airworld-USA and has almost 20 HP. It swings a 34X12 prop with ease. The landing gear were custom made by Sierra Precision retracts. The radio is a 10 channel Airtronics with 14 servos. It weighs right at 50 pounds.

It was entered in the team event with Brian as the pilot and Bruno Bary as the builder. Brian earned the top flight score along with the award for "Most Realistic Presentation" of a scale aircraft. Brian also earned 4th place with the big Seafury at the International Top Gun Scale Contest in Florida last April.


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Model Aviation News:

Check out page 19 this month to see Randy Hodges!

Basics of Electric Flight – Notes from the August Program - Roman Fyler and Electrics Basics…

OK, here's how it all shakes out. The basic power required to fly an electric model is as follows:

Direct Drive Systems 60 watts/pound
Gear Drive Systems 50 watts/pound
Mild aerobatic performance 70-80 watts/pound
For all-out aerobatics 100-110 watts/pound
3-D performance 150 watts/pound or more

The above numbers are based on models with wing loadings from 8-16 oz/square foot. As with gas models, higher wing loadings require more power since they must fly faster to support the added weight. By the same token, a lightly-loaded model with a wing loading in the 3-5 oz/square foot range will fly very well at 25 -30 watts/pound.

What's a 'watt'; and where can I get some?
Wattage is the term used in electric flight to relate the level of power that an electric drive system will produce. To relate it to terms we're familiar with, 746 watts = 1 horsepower. To calculate the wattage delivered by a given system looks like this: amps x volts = watts. So where do these numbers come from and how do I know how many volts and amps are needed to fly a given model?

Okay, let's say you want a mildly aerobatic sport model with a 14 oz/square foot wing loading that will weigh in at 2 pounds. We already know that the power requirement for a model like this is about 70 watts/pound, so we're going to need to generate about 140 watts. Let's assume that you are going to use an eight-cell Ni-Cd battery. At 1.2 volts per cell, eight cells will deliver 9.6 volts. To arrive at the necessary current draw to achieve 140 watts, simply divide 140 (watts) by 9.6 (volts) and you arrive at 14.58 amps.

Now, let's assume that you have a three-cell Li-Poly battery for the model, which is rated at 11.1 volts. The formula is the same; 140 (watts) divided by 11.1 (volts) = 12.6 amps. As you can see, as the available voltage increases, the lower the current draw needs to be to deliver the necessary wattage.

Now here's something to consider when selecting your system: the higher the current draw, the shorter the flight duration on any given battery. Therefore, the ideal setup would be to use a higher-voltage battery with lower current draw for maximum duration. On the downside, when using Ni-Cd and NiMH batteries, as the cell count goes up, the weight will increase significantly as well. It works that way with Lithium too, but Lithium batteries are dramatically lighter then the old "round" cells.

Okay, let's say we're going to use an 11.1 volt Li-Poly battery. All we need to do now is select a motor that will swing enough propeller at 12.6 amps to fly the model at a top speed of around 40-45 mph and we're in business. Now that you know the parameters, visit your local hobby shop and select a motor that fits that description.

Gear Drive vs. Direct Drive: Why is one better then the other?
Well, it all depends on the kind of performance you're looking for. If you're looking to go fast, go with direct drive. Going fast requires a high-pitch propeller turning high rpm. The formula to calculate propeller pitch speed is an easy one; it looks like this: rpm x pitch (in inches)/1056 = mph.
Let's say that you are turning a 7-6 propeller at 14,000 rpm. 14,000 x 6 = 84,000/1056 = 79.55 mph

Now, let's assume you are setting up a slow, relaxing park flyer with about a 5 oz/square foot wing loading. If we swing a 9-7 propeller at about 3,500 rpm, we'd be looking at a top speed of roughly 23 mph. To swing that much propeller with a small, light drive system, we would use a gear drive unit at a very low current draw and a small, light battery.

Again, to make a known comparison, we can relate all this to riding a 10-speed bicycle. A gear drive swinging a big propeller is like riding your bike in low gear. You pedal like mad with little effort, you don't go very fast, but you can climb steep hills with ease. The direct drive system could be compared to riding the bike in high gear. It'll really go fast, and even though you're pedaling slower, it requires considerably more effort.

What all this boils down to is "propeller disc loading." We all know what wing loading is: it's the amount of the model's

weight that each square foot of wing must carry. Prop disc-loading works the same way. A large propeller will be more lightly loaded, thus delivering more torque then a smaller propeller turning high rpm. The tradeoff, of course, will be speed.

One more thing to cover and we'll give you a rest. Batteries are rated in "voltage" and "amperage." Voltage dictates the amount of power the battery will deliver. The amperage rating dictates for how long the battery will deliver that power. To relate that to glow fuel, consider the voltage as nitro content. High voltage (nitro) means more power. The amperage is related to the quantity of fuel, or simply the "size of the tank."

To figure the size of battery needed, let's go back to our 140-watt sport airplane. If we're pulling 14 amps from a 1400 mAh (1.4 amp hour) battery, we will have full power duration of five to six minutes. In the real world, with proper throttle management, you'll see flight times of approximately eight minutes. These are common flight times, even with liquid-fueled models.

To arrive at that number, divide the battery amp rating by the current draw: 1.4 (amp hours)/14 (amps) = 0.1. Then take 60 (minutes per amp hour) x 0.1 = 6 minutes. Now, to double the duration, you must either cut the current draw in half (to 7 amps), or double the battery size (to 2800 mAh or 2.8 amp hours)—again we see tradeoffs. To reduce the current draw, we can use a larger, higher-pitch propeller turning slower with very little weight penalty. If we double the size of the battery capacity, the weight penalty is quite high unless we go over to the new Lithium batteries in which we will discover we have benefited from a tremendous weight reduction, but at a higher price then conventional batteries.

To get started, work with a known good design, and use the recommended equipment that has been proven to work. Talk to the people who are successful and copy what they're doing. The one thing I do know about modelers is that they are always willing to share their knowledge with those interested in what they are doing.

CLASSIFIED

Mile Hi R/C Official Wear – Winter Jackets

Prices are as follows: S-XL $60.00; 2XL $61.50; 3XL $63.00; 4X$64.50; 5XL $66.00 Prices do not include tax**.**

Winter jackets have your first name and AMA number on the front and the club logo on the back. The jackets appear to run on the small size so we recommend ordering one size larger than you normally wear.

Do you have other embroidery needs, Contact Phil, He can take care of all of your customized embroidery needs.
Contact Phillip Kenney
(303)369-7044
fargophil@comcast.net

Mile Hi R/C Official Wear

- Hats: Summer Edition (Mesh on top for venting) Blue, Club Logo up front $12.00 Winter Edition (full twill) Blue with Club Logo up front $12.00
- 3" Patches $5.00
- All Items sold at Club Meeting!!

Editor's note

My email address for any submissions is Puca_Anthony@emc.com. If you have a new plane picture, a building tip, an item to sell, or anything else that might be of interest to your fellow club members, please let me know! Also, if you have sold any of the items or want to update any of the items currently shown in the classifieds, please let me know so I can make the appropriate changes.

These local businesses support our club through donations and discounts on material for the club. Please show your appreciation of by giving them your business.

Air Scharnell	***Air Scharnell*** **6276 East Pine Lane** **Parker, CO 80134** **(303) 617-9777**
	***Colpar Hobbies*** **804 S. Havana** **Aurora, CO 80012** **(303) 341-0414**
Rocky Mountain R/C HOBBIES rmrchobbies.com	***Rocky Mountain R/C Hobbies*** **5435 Boatworks Drive** **Littleton, CO 80123** **(303) 804-0470**