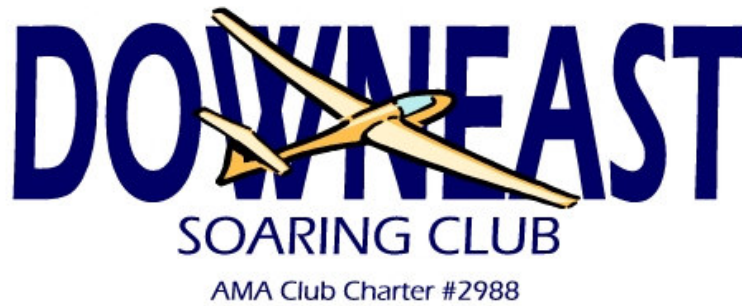


**President**  
**Jim Armstrong**  
(207) 725-5758

**Secretary**  
**Larry Smith**  
(207) 748-1069



**Vice-President**  
**Mike Farnsworth**  
(207) 729-7290

**Treasurer**  
**Ken McDonald**  
(207) 443-3585

**Downeast Soaring Club**  
**3/8/2003 Meeting Minutes**  
(Recorded by Mike Farnsworth and Larry Smith)

Prior to the meeting: Printed copies of the newsletter were given to Marc Higgins, Charlie Kerr, and Ken MacDonald.

**Members Present:** Larry Smith, Dave Martin, Charlie Kerr, Rex Olmstead, Mac McLaughlin, Dick Rosenburg, Michael Moore, Rick Hallett, Glen Collins, Ken MacDonald, Marc Higgins, Ted McKibben, Bruce Molzen, Mike LaTorre, Anthony Palanza, and Mike Farnsworth

**Guests:** The club welcomed Brian Johnson as a guest.

**Video Tape Status:**

Charlie Kerr returned tapes DSC-29 and DSC-34, and has tapes DSC-33, DSC-20, and DSC-28

Mike LaTorre returned DSC-44

Dave Martin returned Endless Lift, DSC-33, DSC-20, DSC-28 and has DSC-29 and DSC-34

Glen Collins has Endless Lift

Somebody returned DSC-48

Mike Farnsworth has DSC-48

Dick Rosenburg has DSC-44

**Treasurers Report:**

The treasurers report was given by Ken MacDonald. Outstanding debts are owed to Jim Armstrong and also to Jeff Carr for the purchasing the club radio.

**Secretaries Report:**

Larry Smith delivered the Secretaries report. For the first time in ages his report was not "no correspondence".

Darren Garnick of AWARD Productions is searching for modelers in the New England area who are military history buffs, fly planes, and craft models for the fun of it. He is producing a documentary about the hobby of military models. His selection criteria is:

1. Be experienced and have a great overview of the modeling hobby.
2. Be articulate and have a friendly and engaging personality.
3. Have a room/workshop in the home where there are at least a dozen models on display.
4. Either have kids who are learning modeling – or have a social relationship with other modelers in the community.

If you can recommend anyone, please call Darren at (978) 667-3335.

**Old Business:**

The Sabbattus slope site is now listed on our web site. The listing contains directions but not a map. Mike could not get the map out of the word document that Jim sent him. Go figure that the computer geek (me) could not do it. Anybody else want to try?

Mr. Whorff still has not submitted the insurance and check to AMA for the Topsham sandpit. Jim Armstrong was going to call him. We wondered if he took the bottle and went to some place warm for the winter.

Mac brought the solenoid for the club retriever. Mike will give it to Jim. Thanks, Mac, for getting it for us.

The new club trainer radio was passed around the room. It was purchased at the WRAM show from Northeast Sailplanes. We got it tax free and without having to pay shipping. We bought the Hitec Flash 5 instead of the Laser 6. It was only \$10 dollars more. It has dual rates, exponential, flaperons and camber adjustment. It has 5 model memory too. Rumor has it that its memory is better than the current slate of officers. It also came with a 555 receiver, 3 HS-81 servos, and a 270mah battery pack. We ordered it on channel 50 (Jim's) and it came on 24 (mine) – go figure. Actually it was supposed to be on channel 36. The box and stickers are 36, but, if you look real close at the crystals, they are on 24. The club will call and arrange for a set of crystals on channel 36.

The slope combat competition is still on hold. No rounds have been flown to date. We have had a severe lack of wind for 3 meetings in a row. Is the curse of Rick still active, did he sacrifice the Baggi Zaggi to the wind gods? It appears the answers to the questions are yes to the first and no to the second. You still have time to join the competition and not be at a disadvantage. Sign up today on the website Forum.

BAM/DSC are hosting a flea market at the Pejepscot Terrace. See the Events section of the web site and visit the special section of the forum. You can post, buy, and sell right from the forum in advance of the flea market. There should be deals galore. Don't miss out.

Along with this, the Prosnappers are hosting their own swap meet on March 11<sup>th</sup>. Some members expressed interest in going. It will have already happened by the time you read this, so you will have to go to the BAM/DSC event instead.

Club building project update by Glen Collins:

Glen said that the CNC foam cutter now uses software to control the heat of the wire. This should help prevent burnout on the trailing edge. Members looked for booms at the WRAM show but could not find a good deal on them. Thanks for all of the work, Glen.

Larry, Mike, Jeff, Glen, and Brat all went to WRAM show. It was fun as usual. For those who have never been, there are quite a few deals to be had as well as lots of great exhibits.

Contests:

Jeff Carr is the CD for a hand launch contest on Saturday, July 12<sup>th</sup>. This is the weekend after the fourth of July.

Rick Hallett is the CD for the annual Open Thermal Contest on May 3, 2003

### **New Business:**

Jim Armstrong is now retired. He should be able to spend large amounts of time building (taping) airplanes. The lucky dog will now not have stitch of time to spend on his hobby according to the retirees at the meeting. Ken MacDonald discussed Jim's retirement party. He said that Sup-Ship did a really great job hosting the event. Jim received a GWS electric and a gift certificate for a retirement gift. Ken told the attendees of the friendship and kindness that Jim has shown him over the years. Kens story about Jim helping out while he was in the hospital left nary a dry eye in the house. All of the Officers and club members wish Jim a happy retirement and congratulations. *(note from the ed - Jim was the kind person that let me fly for the first time. Even though I did not want to land, he made me do it. Thanks for initiating me into the hobby – Mike)*

Marc Higgins is building a Majestic RES sailplane kitted by Laser Arts. Marc says that the laser cut parts go together very nicely. The kit is a joy to build. This it kind of plane that you may want to build to stay low tech. It has a 7037 airfoil and a 110 inch wingspan. Marc said that it did very well "with a squid from Pennsylvania flying it" during the Charles River TD

contest. It beat many molded ships. We hope to see it soon. *(Many of the new sailplanes, like the Organic, are using a combination of vacuum bagged parts and balsa aft ribs to build a light and strong structure. The Organic 2M weighs 30 ounces fully complete! Look for more planes of this style to show up in the future.)*

Dave Martin is pursuing an event a Loon mountain. He is looking for volunteers to travel to Loon to scope the place out. If there are slopes in many directions, it may be possible to hold a slope event there. If you wish to go, contact him for details. Larry said that from what he remembers, the top is covered by a lot of scrub brush. Larry is going skiing there and will give a report on what it looks like as well.

Larry made a suggestion to visit [Ezonemag.com](http://Ezonemag.com) for soaring info.

Charlie Kerr showed club members his building aids. He buys sanding sticks from the local drug store. They are usually used for finger and toe nails. He passed around some very nice modeling pins from Clancy Aviation. They work much better than T-pins. Charlie uses wooden close pins with the wood reversed. They make nice clamps for modeling. John Ponds plan service is taken over by the AMA. They are in the process of cataloging the thousands of plans that he had. They will be available through the AMA in the future. He passed around a sample of laser cut parts for his Super Sinbad glider. Bob Holman Plans now has a 100 Watt laser to cut parts. You supply the sheet wood and sticks, and he cuts the parts. The 12 sheets of parts for the Super Sinbad cost \$40 dollars to cut. The quality of the parts was outstanding.

Camera Flash: Jim A wanted the club to purchase a flash for the club camera. Members were not sure which camera he wanted it for. This item was tabled for future discussion.

Batteries: Contact Jeff Carr if you wish to get in on a purchase of 2000 mah AA NIMh cells. They can get them for just over a dollar a piece. Michael Moore and Jeff are going in on an order. Get yours today!

### **Show and Tell**

Larry Smith brought his latest toy. He bought a Omega 2M Electric from Northeast Sailplanes at the WRAM show. He installed a Kontronic 480 geared motor with a 14 inch prop. He is using a 1700 mah battery pack.



Rick Hallet displayed samples of malformed foam cores. They had nice ripples (undulations) all through them. The ripples were caused by problems: too low a heat combined with a loose wire. He stated that you should cut foam cores on a piece of glass to make nice trailing edges. The glass provides a flat surface, which prevents warps from causing trailing edge burn through.

Rick Hallett brought a cutaway version of a refrigerator compressor. If you rotate the electrical connector so that the single pin is on the top, the single pin is the common and the pin below and to the right is the main pin. The pin located down and to the left is the start terminal. Rick gave some tips on operation of these compressors for vacuum bagging. He says that the oil absorbs moisture and will froth up just like anti-freeze in an engine. If you keep it at a perfect vacuum, moisture will not get into the oil. If you do not run them right, they will not last very long. If you run them correctly, they should get too hot to touch. This is normal. At normal temperatures, any water in the oil will boil off. Rick noted that the cutout temperature is 325 F. That is hot enough to cook eggs. You can bag yours wings and cook breakfast at the same time!



### Recently Completed Projects

Jeff Carr has (almost) completed his E-3D. This airplane is an electric aerobat designed for radical 3D maneuvers. It is powered by an Aveox electric motor swinging a 14X7 E prop. This airplane should be fun to fly. Jeff is just hoping for some warm weather to melt the snow so he can fly it soon.





Mike Farnsworth has completed two projects this winter. One is an Extreme open class thermal duration glider. It has molded wings and stabs. Jeff Carr and Michael Moore are currently flying similar V-tailed versions of this airplane.

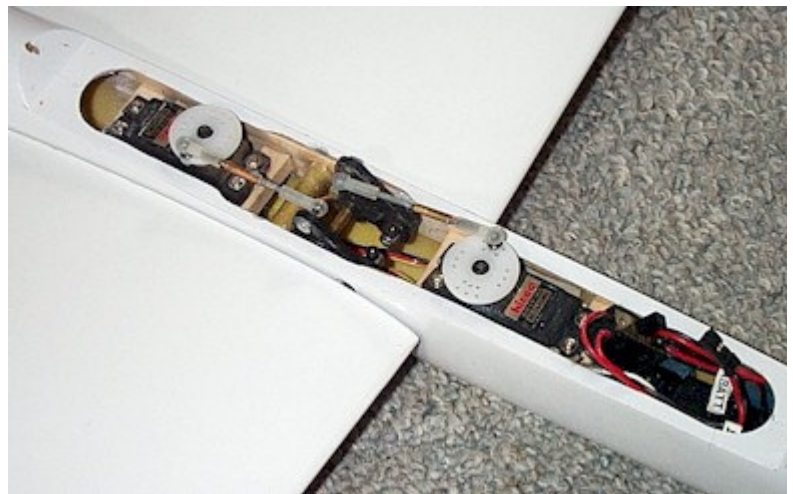


Extreme radio / servo setup

The other project is a Sig Samurai slope soarer. Mike has had the “Sammy” for quite a while and never got around to building it. This airplane is not longer kitted by Sig. It is one of Dave Garwood’s all time favorites for sloping. The airfoil is an RG-14. The kit can be built in two configurations, wingeron and pitcheron. The wingeron version uses elevators in the stab while the pitcheron version controls roll and pitch using the wings. Mike chose to build the airplane using the pitcheron configuration. It should be fast!



Sig Samurai



Pitcheron Controls

*This article was submitted by Jeff Carr. His dad wrote this for the club that he belongs to. It has also been printed in the Clarence Sailplane society newsletter. Thanks to both Jeff and his dad.*

## **Thermal Flying, Some Thoughts**

**By Peter Carr WW30**

**[Contact Pete via e-mail](mailto:pscarr@juno.com)**

**pscarr@juno.com**

Last years' contest performance was disappointing so I set about looking for a fix. I'm very fortunate in that my oldest son is also a contest R/C sailplane pilot. While explaining things to him it helped me organize my thoughts and work through the problem. Jeff lives in Maine where thermals are hard to find. This made have been the reason he listened to me so attentively! The first step was to localize the problem. I decided that it could be split into four groups. These are:

- The aircraft
- The radio
- The pilot
- The air

**The aircraft:** There are some very good articles on the Northeast Sailplanes website dealing with sailplane trimming. I read these and others dealing with the Dive Test and decided that much of it did not agree with my experience. I use an angle of incidence meter to set the wing of the assembled sailplane to zero degrees. I then adjust the flying stab to +1 degrees relative to the wing. The transmitter elevator trim is set to middle-throw. I then balance the model to 30% of average chord being careful to check the math for multi-taper planforms. Once that's done I head out to the field for some hand-chucks. The idea is to adjust nose weight for a good glide without adjusting the elevator trim. When that's done it's time for the winch launch. Since hand-chucks are slow speed flights I expect a change in trim at thermal search speeds and there usually is. This is very true of cambered airfoils where there is increased downward pitch of the airfoil as speed increases. After a bunch of test flights, adding and removing nose weight, I find the "best" balance for overall performance for my conditions and flying style. Since the stab was trimmed for +1 degree of "up", it provides very little "up" or "down" force on the wing in level flight. This should translate into minimum wing drag as well as equal stab authority in either direction. However, in higher speed flight, like coming back upwind, up-trim adjustment is needed to keep the nose up while slow flight wants a bit of down-trim to keep the nose level. Since a typical flight is a series of compromises of speeds and trim settings the object is to find a stab and nose weight combination that handles them all. In theory this combination should make the aircraft fall to the ground the slowest in conditions where there is no lift.

**The radio:** As you may know, I enjoy rebuilding radios. The goal is to make a transmitter that is comfortable in my hands, has all the controls in positions where I can operate them with minimum effort and are light-weight. I like to fly big sailplanes out to the limits of vision and take particular care about TX-RX tuning and battery care for solid range. The connections from the servos to the flying surfaces take extra attention. Ailerons and flaps are easy as long as the hinges have no play. The stab and rudder usually take some work both for the mechanics and throws. Pushrods must be stiff and straight and well supported through the fuselage. Many models call for a tape hinge at the rudder. I try to use pin-type hinges because tape works loose in hot weather and gives poor centering and reduced throw. This is also true of flaps and ailerons but I do compromise and use tape while being careful to inspect these hinge points frequently. The last item is receiver and battery installation. I've used foam rubber, white foam, and EPP foam. EPP is my favorite because it returns to original shape on impact (landing) while absorbing large amounts of energy. These helps preserve the cell and wire connections during my normally imperfect landings (*ED - Pete is a true gentleman and modest to boot, I try to emulate his landing abilities!*).

**The pilot:** I do just what you're doing now. I try to find every scrap of information about every aspect of soaring flight and read it. The video tapes from RadioCarbonArt are very good. Resource pages of club websites such as the Dayton Darts,

DownEast Soaring Society and the Charles River club are excellent. Unfortunately, magazines available now are generally aimed at electric sailplanes but occasionally have article paragraphs about the thermal search. There is also information available using a Yahoo or Goggle search for "r/c sailplane trimming" or "r/c sailplane flying" and the like. Lastly, while it's fun to fly alone, never waiting for the winch or the pin, you can learn more in a shorter time by flying with other guys. You can pick the best of their methods and techniques and add them to your own.

**The air:** Finding thermals should be about gathering information. There are certain fixed pieces of information such as sun angle, amount of dew or water on the ground and degree of sky overcast. Then there are the variables. These include texture of the terrain (rocks, grass, forests, etc), asphalt streets and parking lots shaded for part of the day by trees or buildings, wind speed and direction. Rocks retain more heat than plowed fields, which hold more heat than grass. However, if the sun angle doesn't shine on the rocks they won't pop very many thermals. It's the ever-changing relationship of all these factors that make each flight such a challenge. Many times I've heard the Timer ask the pilot if he has a plan. Sometimes the response is a muttered cuss word and sometimes it's something like "I think I'll go left." I had the chance to fly with Larry Jolly at the Westover AFB Nationals a while back. He said that he watches the conditions a full 20 minutes prior to launch in order to set a plan. He also mentioned that in some conditions thermals pop every 15 to 25 minutes from the same source. From his legendary success in R/C sailplanes it's hard to argue with his comments. I try to build on that by checking the Accuweather.com web site for hourly forecasts of cloud cover, wind speed and direction and temperature on flying day. I also have a thermometer on my transmitter to help spot thermals blowing through the flying field. And obviously, other sailplanes and/or birds in lift are a pretty sure sign of good air. There is a vast amount of information that needs to be weighed and analyzed to give the best guidance on where to find lift. Since all this information changes as the day ages it means that the pilot must be focused on the mission all the time. At contests where pilots are called to fly in flight groups it can be difficult to concentrate on the decision process with so much happening around you. This isn't quite so bad at contests where the CD calls a "round-per-hour" or such. You then have the option of picking your launch time for most favorable conditions. This is also a variable that must be processed!

**To wrap up:** You've made sure the radio is right, the airplane is right and that you made it only a "two beer" night last night. Before leaving home or the hotel you checked the weather forecast and made notes of the highlights. Arriving at the field you swap lies with the other pilots, line up some timers and assemble your ship. From then on, it's work, work, work. Take a walk to the landing circles, check the likely flight paths into each one and the trees, poles or wires that you will have to dodge. Then check the winches for different foot pedals, retriever lines and line size. If possible, you should get a test launch in order to discover any surprises with the winches. Once that's done you need to go sit down and watch the sky. Look for insects, blowing leaves, birds and watch the tree tops. Large fields of tall grass are excellent indicators of wind action. Survey the terrain for likely thermal generators like asphalt, buildings and tree lines. Watch the sun angle, or try to gauge it from the weather forecast you looked at earlier. Then try to be the last of a group to launch. Every ship that launches ahead of you is a source of information about the upper air conditions. Even sailplanes that are sinking miserably are telling you not to go near them. Get the highest launch possible since this translates into more search time. Once clear of the line set the ship to best cruise and go get your thermal. After you've made the time and landed it's best to check over the ship for any problems before turning the transmitter back to Impound. If all is well, set the plane aside and go back to watching the changing conditions for the next round.

Time spent tossing a HLG is excellent for learning to read air. Nostalgia ships fly differently than modern glass birds or HLGs. A thermal sensing telemetry system is also a great way to learn thermalling. Whatever you fly, every minute of flight time on any ship will add to your knowledge and make you a better pilot.

### DownEast Soaring Club Upcoming Events

Event	Date	Time	Location
BAM/DSC Free Swap meet / Flea market	Saturday, 4/5/2003	11 AM till 3 PM	Pejepscot Terrace Brunswick Maine Directions: <a href="http://bamrc.com/">http://bamrc.com/</a>
DSC Club Business Meeting	Saturday, 4/12/2003	9am coffee/pastry, 9:30 Business meeting, 10:30 Show & Tell.	Bookland Coffee Shop, Cooks Corner, Brunswick, ME * See Note # 1
Dead Meet 2003 (Slope Combat Competition)	Saturday, 4/12/2003	After each club business meeting	To be determined at each club meeting. * see note 7 below
Open Thermal Duration Contest (AMA req)	Saturday, 5/3/2003	CD Rick Hallett (800) 430-3058 FMI, 9:00 AM reg, 10:00 AM pilots meeting	Hemond Airport in Minot, ME
May MTG / No Host Slope Soaring Pizza Festival	Sunday, 5/4/2003	Business meeting 11 AM till Noon, Flying before/after meeting,	Clark's Cove, Harpswell, ME ; Low tide 10:59
Hand Launch Glider contest (AMA req)	Saturday, 7/12/2003	FMI contact CD, Jeff Carr; jscarr4@aol.com; Phone: 207-353-9096	TBD

See you at the next meeting and watch your six!

Mike