

CLOUD CLIMBERS
of S. E. LOUISIANA

Hot Air

Edited by:

Carl J. Bakay

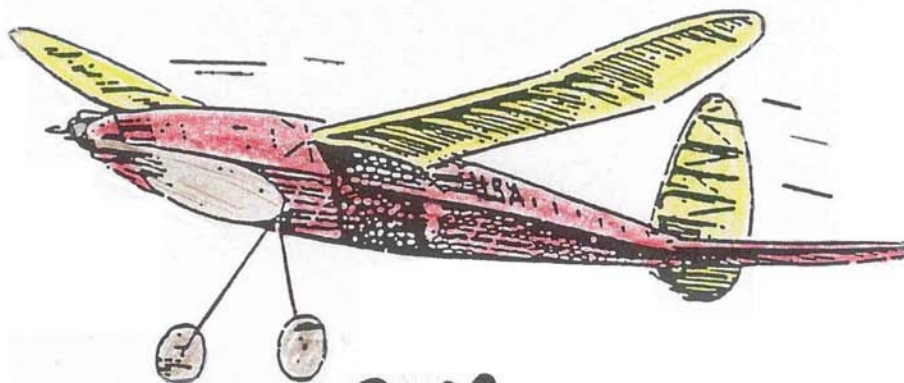
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**SAM
CHAPTER
59**

www.sam59.org

November-December 2007

SOME HOT AIR

The December 1, 2007 meeting of the Cloudclimbers was a Saturday Christmas Party held at the home of Scott and Dona Cannon. A total of 10 members attended, most with their wives.

The meeting was called to order with Carl Bakay as facilitator. Sharon Bakay gave a treasurer's Report that we started the year with \$737.70 in the club checking account, and ended with \$487.92, and nothing owed. As Old Business, Carl reported that the Gulf States Annual brought in \$280 from 14 entries, and had a net cost to the club of \$70 from A & K Septic Services for the portable toilet. Also as Old Business, Vince Burton brought up the question if we were going to do anything to thank Brent Beauveaux, the owner of Simpson's Sod Farm, for use of the field. A meat and cheese basket was decided on again this year, and Vince agreed to make the purchase, with Jim Bethea making delivery.

The first order of New Business was to collect \$20.00 from all ten members present for 2008 dues. Of this, \$65 was handed over to Vince to pay for the food basket. If you are reading this and did not pay your renewal dues, you need to give a cash, check, or money order to Carl, Sharon, Janet, or Scott as soon as you can. The full amount of \$20.00 entitles you to flying and voting privileges, with \$10.00 for the newsletter only.

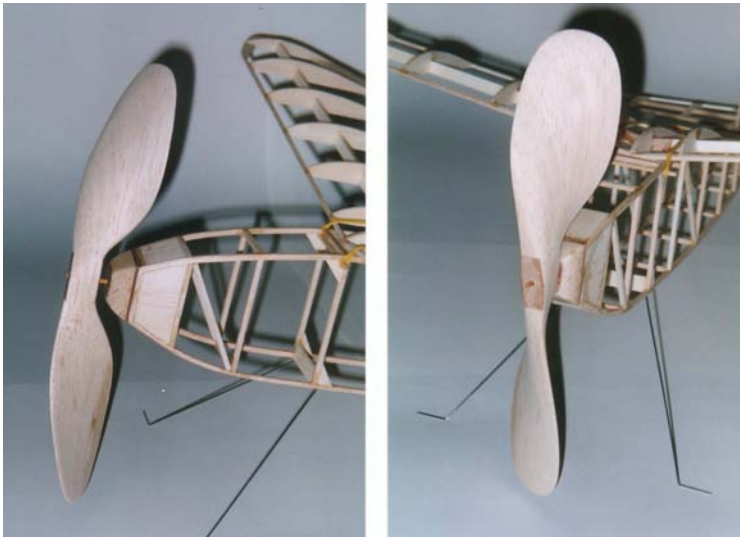
As New Business, Al Seither said he would donate all of his old trophies to the club for re-use. Vince suggested that the Vince Burton Challenge be flown this coming year without a radio (Walston retrieval system), as it was unfair to those who chose not to go to that expense, and it was not in line with the original intent by Bucky Walters to fly skillfully enough to keep the model on the field using just a D/T system. This was made into a motion, voted on and passed. Also as New Business for the coming year, Jim Bethea suggested we use widespread mailing and better advertising of the 2008 Gulf States Annual than the recent contest. After this, there was general discussion on club events for March, April, and May, generally at the Sod Farm on the 3rd Saturday of the month. Carl also agreed to e-mail Tom Hepler, BobThoren, and George White concerning their 2008 events. This was done, so see the attached calendar for the results of this effort.

We then exchanged presents, while in the Family Room, the ladies had their own tree ornament exchange. Jules Damare brought 8 or 10 extra rubber kits, and so we had a second raffle after the exchange. With no more New Business, the meeting was adjourned.

AN EIGHT INCH PROPELLER FOR THE LITTLE 'UNS

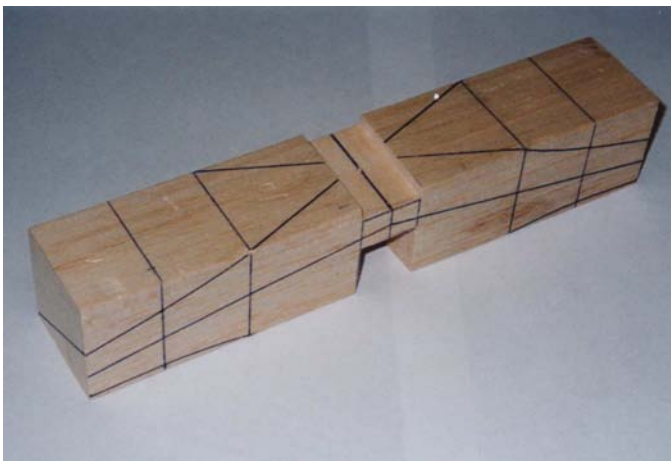
Martyn Presnell – SAM 35

The SAM 35 Rule Book (No.2 Jan 2001) defines the Very Small Rubber class of model as having a wingspan of 25 in. or below. The propeller must be of the freewheeling, non-folding type, with a maximum diameter of 8 in. (200 mm), regardless of what may be shown on the original plan. Models must be equipped with a two leg, two wheel under-carriage as shown on the original plan and the model will be hand launched.

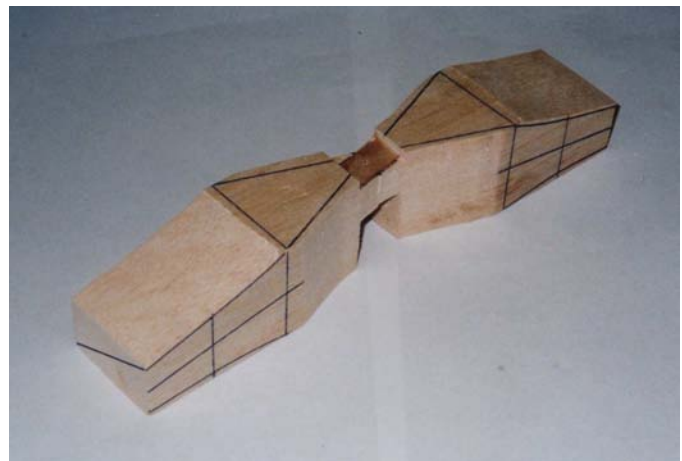


Two qualifying flights are required to a maximum decided on the day, followed by one flight of unlimited duration. It is possible to drop a maximum on one of the first two flights, whilst achieving a winning performance on the last flight. Thus a fly-off is most unlikely to be required. This is becoming a very popular competition for these very small models, allowing events to be staged at Old Warden or other venues of restricted size, even in conditions of strong wind.

It is possible to use an eight inch plastic propeller of which two or three brands are available, weighing about 6 grams. Whilst these are durable, they are not regarded as ideal in terms of pitch distribution or blade area. Indeed the weight can be reduced whilst improving the aerodynamics of the blades significantly by carving a free-wheeling propeller from Balsa wood in the time honoured manner. Whilst the maximum diameter is fixed, the block width and thickness are at the discretion of the designer. The propeller shown here was carved from wood of 5.6 lb/cu.ft. density. About 90% of the wood was removed by carving, leaving a propeller in the sanded state of less than 3 grams.



The block marked out with hub cut back



- and ready for carving

As a well established guide for a free-wheeling propeller for outdoor models, propeller diameter is made about 40% of the wingspan. Thus an eight inch propeller would seem good for a 20 in. span model, such as Tubby II. A ten inch propeller is specified on most plans for 25 in. models such as King Harry. However it seems feasible to use a smaller propeller gearing up the drive from a thicker motor such as the 20 in. Elmer Mk 6, using a six inch propeller. Of course the larger model could well be preferred because of its visibility, rubber capacity and airworthiness, notwithstanding the need to use an eight inch propeller.

The free-wheeling propeller choice is an aerodynamic compromise unlike that of a folding type. This is because of its influence upon the gliding performance of the model. A relatively coarse pitch is desirable to cut down the free-wheeling speed and reduce gliding drag. However a small diameter, coarse pitch propeller will be prone to stalling under power, which leads to the risk of the model tail sliding during its climb. A workable compromise was demonstrated by Wakefield models circa 1950 using a pitch/diameter ratio in the range 1.5 to 1.7 with success.

The design shown has a P/D ratio of 1.5, that is a pitch of 12 in. and a diameter of 8 in. I prefer this ratio at the lower end of the range because propeller stalling must be avoided at all cost, and because I wish to maximise the propeller area outboard operating with a geometric blade angle less than 45 degrees. At this angle it is reasoned that maximum aerodynamic efficiency is achieved, and inboard efficiency is rapidly lost, leading to the production of drag rather than thrust near the hub. For a 25 in. model the smallish eight inch diameter must be compensated for by using a bigger than normal chord. This may also be beneficial through the effects of blade Reynolds' number. An historical recommendation is to make the total blade area 15% of wing area. Of course the best rubber motor must be evaluated in relation to the model for which it provides the motive power.

I am making no attempt here to explain how to carve a propeller, this has been covered extensively by other writers. However the method of marking out needs some explanation because errors are frequently encountered in the texts. The propeller offered is based upon a helical distribution of twist set out on a block measuring 8.0×1.5×1.5 in. This takes the form of straight lines passing through the propeller axis on the front and rear surfaces, running out to the edge of the block at a radius of 1.91 in. See the diagram and photographs for clarity. The true helix then requires hyperbolic curves drawn on the sides of the block running out to the tip. Two thickness dimensions are quoted to enable these curves to be drawn with sufficient accuracy (0.95 in. and 0.72 in. respectively).

In this form of marking out the propeller blank, the rate of twist of the blade is progressively maintained across the widest diagonal position. However please see also the spanwise datum lines shown. In side view these are straight lines from root to tip sweeping out a shallow cone as the propeller rotates about its axis. By marking out the thickness equally about the datum lines a continuous blade surface results without a kink. Indeed the datum line can be identified on the under surface of the blade sections as a straight radial line. This also ensures that much of the wood grain that passes through the hub stays within the blade close to the leading edge. It can also be seen how the blades flair back over the nose of the model itself, using the nose to fill the central gap in the propeller airflow.

Ideally the wood grain within the chosen block should be symmetrical about the propeller axis. Occasionally one finds wood that does this, with the medullar rays parallel to the propeller axis, and the growth rings normal to it. For Wakefield size models, a medium to hard Balsa wood is often chosen to enable thin blades of sufficient strength to be carved, indeed Beech can be utilised. However for these very small models I believe light Balsa wood is

preferable to minimise weight. I like to use a spring and stop mechanism to retain turns on the motor and thus keep it in place within the model. An ordinary clutch releases the propeller to free-wheel.

-Thanks to James Crockett of North Fork, CA for the plan and info.

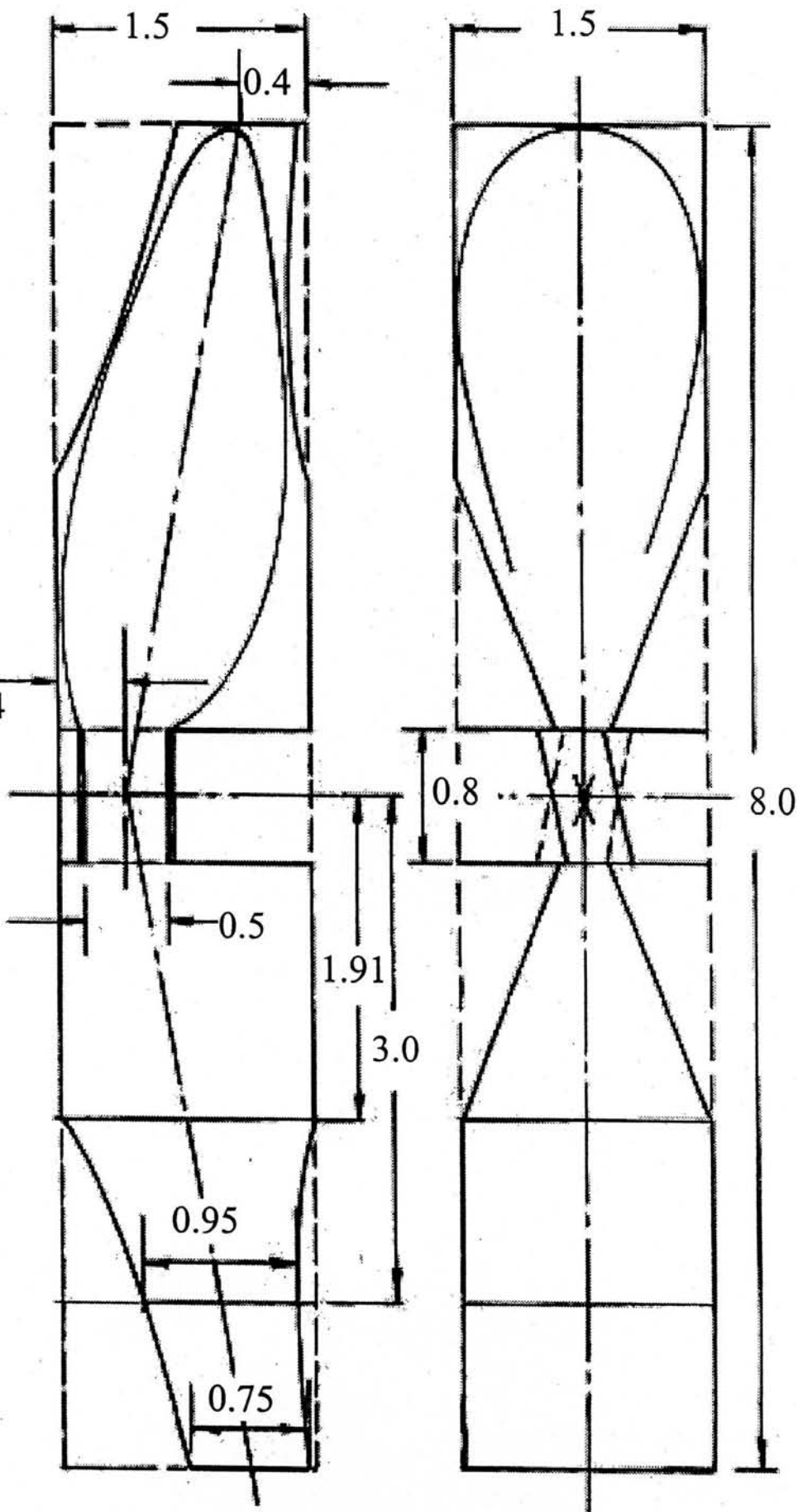
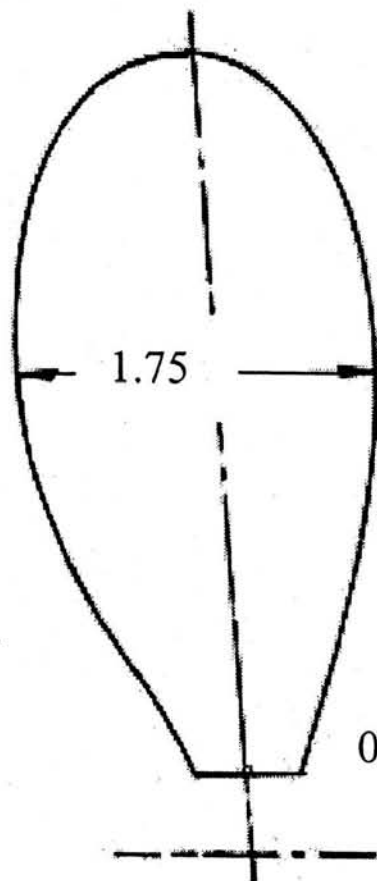
-See Martyn's site at <http://www.martyn.pressnell.btinternet.co.uk/>

SAM 59 MEETING SCHEDULE FOR 2008

Friday, Jan 4	J. Damare, M. Hobbies	Friday, July 4	Open
Friday, Feb 1	Open	Friday, Aug. 1	Open
Saturday, Mar 8	Bakay's in Lafayette	Friday, Sept. 5	Open
Friday, Apr 4	Jim & Bev Bethea	Friday, Oct. 3	Open
Saturday, May 3	Doug & Stella Petty	Friday, Nov. 7	Open
Saturday, June 7	Vince & Gerry Burton	Saturday, Dec. 6	Scott & Dona Xmas Party

We still have 6 open dates, so please think about hosting a meeting if you haven't already signed up. Call Janet at 985-892-7204 if you can help.





**Very Small
Rubber Class
Propeller**

Diameter: 8in.

Pitch: 12in.

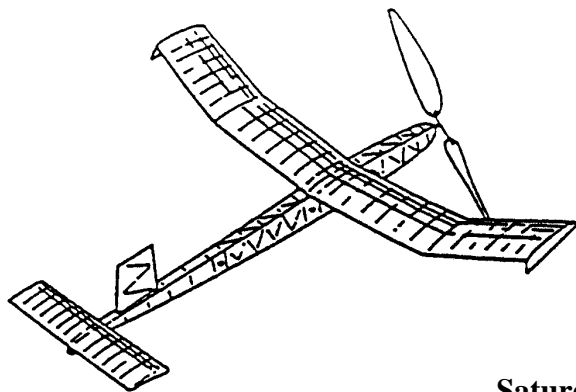
Block: 8.0×1.5×1.5in.

Density: 5.6 lb/cu.ft.

2008 CONTEST & EVENT CALENDAR

- Jan 19-21 The 58th Annual SW Regionals Model Airplane Championships will be held at Eloy, Arizona . Three contests at the same field, same weekend: AMA/NFFS/SAM Free Flight; The Randy Archer Invitational FAI FF; SAM RC Old Timers Swap Meet at the east end of the AMA flight line, Saturday afternoon at 4pm. CD A. A. Lidberg, aalmps@aol.com
- January 26 The Pensacola Free Flight Team has its first meeting of the year at 12:00 noon on Saturday, Jan. 26, at the Fire Mountain Buffet on Florida Highway 29 North of I-10. Lunch is 12:00 to 1:00 pm, with the meeting afterwards. You do not need to have lunch to attend. There is a show-and-tell, so bring your latest project. Take Florida Interstate 10 to Exit 10, go 1.5 miles north towards Cantonment. A few yards past the Wal-Mart sign is an Office Depot sign. Turn here, and Fire Mountain is right next to Office Depot.
- February 9,10 The Model Airplane Club of Huntsville hosts the **MACH Winter Coupe** Event at the Pensacola Navy Field, Site 8A. See flyer in this issue for entry details. CD: Bob Thoren, 10002 Bluff Drive, Huntsville, AL 35803-1704, phone 256-880-8099. dthoren3@comcast.net
- March 15 **SAM 59 Club Harbor Freight Electric, SAM Two-Bit Rubber** Contest. Simpson Sod Farm, Saturday 8 am til 4 pm. Date subject to change. CD Carl Bakay 800-676-7302, carl.bakay@scientificdrilling.com
- April 19 **SAM 59 Club Old Time Gas, 8 oz New & Old Wakefield.** Simpson Sod Farm. 8 am til 4 pm. CD To Be Announced.
- May 10 **SAM 59 Classic Wakefield Event**, 4 oz and 8 oz combined. Simpson Sod Farm. Saturday 8 am til 4 pm CD Jim Bethea, 985-373-2088, jbethea@charter.net. (Moved to 2nd Saturday due to HOD Meet)
- May 17,18 Model Airplane Club of Huntsville hosts the **Heart of Dixie National Cup Contest**, Navy Site 8A, Pensacola, FL. AMA Gas, Classic Power, OT Rubber, Commercial Rubber, Moffett, F1H Glider, F1D Coupe, Gollywocks Galore, and more. Tom Hepler CD, 256-350-9263. [BuzzardBombshell @aol.com](mailto:BuzzardBombshell@aol.com)
- June 14,15 Pensacola FF Team hosts the McLaughlin SE Model Airplane Championship, The **Fiesta of Five Flags** Contest. Pensacola Navy Site 8A. Featuring AMA, SAM and FAI events. George White CD. 850-473-0866, white76@cox.net
- June 28 ? **SAM 59 AMA/FAC Scale, Vince Burton Challenge.** Simpson Sod Farm. 8 am til 4 pm. Date approx., CD To Be Announced.
- July 5,6 **Dixie Nationals**, sponsored by the Florida Modelers Association, Plam Bay Florida, AMA, FAI, SAM and NFFS Nostalgia events. Saturday 7 am til 4 pm, Sunday 7 am til Noon. CD TBA.
- August 4-8 **AMA FF Nationals**, AMA Flying Site, Muncie, IN. For info www.modelaircraft.org/events Be sure and stop by the NFFS table for some freebies from Carl Bakay, your Membership Guy.
- September ?? The Cloudclimbers of SAM 59 host the **Gulf States Annual**. At Pensacola Navy Site 8A. 3 SAM events – To be announced, 3 FAC events – TBA, 3 AMA events. \$20 entry flies any or all events. CD Carl Bakay, 800-676-7302, carl.bakay@scientificdrilling.com
- September 7-12 **SAM Champs 2008**, AMA Flying Site, Muncie, IN. 4 oz & 8 oz Wakefield, Large & Small Rubber Cabin, Large & Small Rubber Stick, Commercial Rubber, Twin Pusher, Jimmie Allen, A, B & C Pylon, A, B & C Gas Fuselage, ½ A, A, B & C Nostalgia, Tomboy, Toyline Glider, much more. Entry Forms send SASE to Registrar Carl Bakay, 118 Gentry Circle, Lafayette, LA 70508-6326
- October 11-13 **PFFT Gathering of the Turkeys**, Navy Site 8A, Pensacola, FL. George White CD. 850-473-0866, white76@cox.net.
- Dec 29,30,31 FMA hosts the **King Orange International**, Palm Bay Florida. CD TBA.

Any corrections, additions, please notify Carl Bakay. My contact info is on the masthead on Page 1. Thanks!



MODEL AIRPLANE CLUB
OF HUNTSVILLE, ALABAMA
MACH WINTERCOUPE EVENT

Sanction Class A # 08-0029

Pensacola, Florida Navy Helicopter Field Site 8A

Saturday, February 9 and Sunday February 10, 2008

Directions to Site: Take I10 West from Pensacola. Take Exit 5 to Alt 90 and continue west approximately 2 miles to the field

Enter the 19th annual MACH Wintercoupe Event to be held in Pensacola, Florida at Navy Site 8A. **We have the facility for two days.** The glider events (HLG, CLG and Classic Towline Glider) will be flown on Saturday. Coupe d'Hiver will be flown in rounds on Sunday. Sunday's events will also include P-30 and Commercial Rubber. Contest start-stop times are 0800-1600 both days.

This is a National Cup event for HLG,CLG,TLG and P-30
\$10 Entry Fee. Fly any or all events. Plaques to third place

Saturday Events:

ENTRY FORM

- Hand Launch Glider
- Catapult Launch Glider
- Classic Towline Glider — Any glider 750 sq inches max total area projected; No weight requirements; BOM applies; No circle tow; fixed surfaces except for glide rudder; zoom launch OK; No tow time limit

Sunday Events:

- Coupe d'Hiver — 70 gm airframe; 10gm rubber; 5 rounds, 2 minute max
Rounds: 0900-1000, 1000-1100, 1100-1200, (Lunch), 1300-1400, 1400-1500+ Flyoffs until 1600
- P-30 Rubber — 40 gm airframe; 10 gm rubber; 3 flights, 2 minute max
- Commercial Rubber — 36" max wing, freewheel prop; 3 flights, 2 minute max

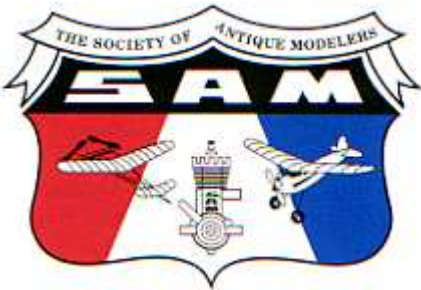
Signature _____

Name _____ AMA #. _____

Address _____

CD — Bob Thoren, 10002 Bluff Drive, Huntsville, AL 35803, Tel 256-880-8099 email dthoren3@comcast.net
or bob.thoren@tdytsi.com

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S.A.M. CHAPTER 59

**FLYING
ACES** Club

**GULFHAWKS
SQUADRON #68**

To:



First Class Mail