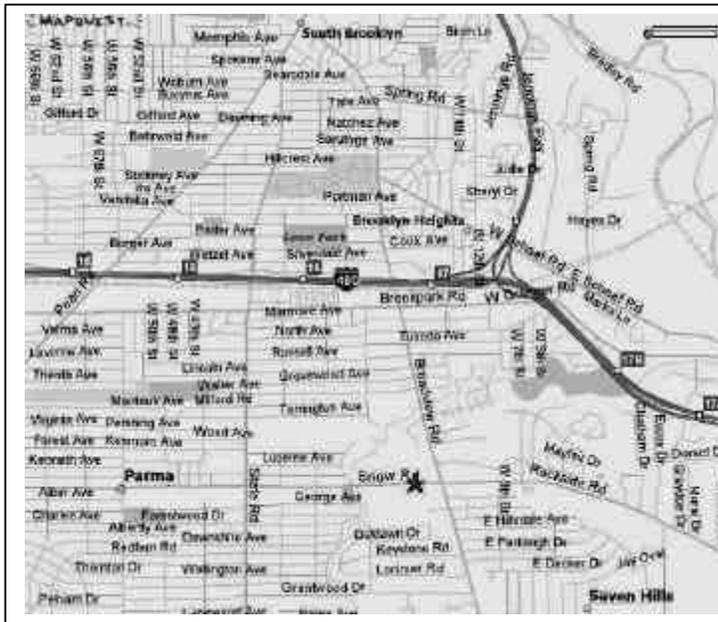
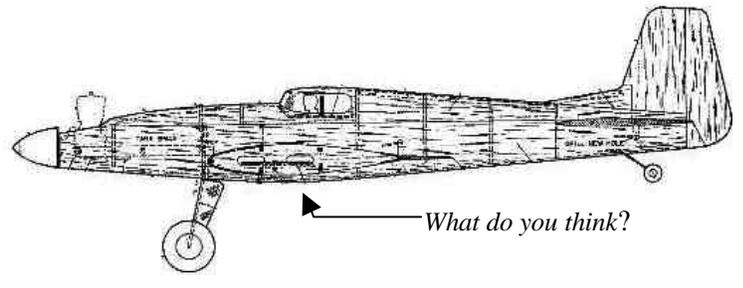




Gerry and Merry Phelps (left, at VSC 14, with Concours winning ‘Patriot’) have a new temporary address, while they await their new home. All tools and planes are safely tucked away. You may contact them at 315 Wilson Mills Rd. #109, Chardon, Ohio 44024. Phone (cell only): (330) 807-3706. e-mail: teamphelps@adelphia.net.

Bob’s Original “Smoothie”, A.T. 8/52 – The original “windy weather stunter”. Now we have kits and an ARF!



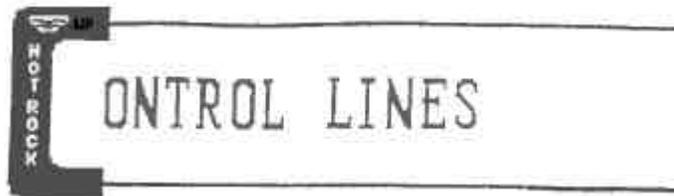
The **January Business Meeting** is next Tuesday, January 17, 7:00 PM at the Parma Hts. Library. Bring your ideas for the coming season, and show us what you’re working on. ‘see you there!

The annual **NCCL banquet** is coming up – February 7, 7:00 PM at Dimitri’s, 1830 Snow Rd. (map at left). Dimitri’s is in the Midtown Plaza shopping center on the north side of Snow Rd. near Broadview. This is always a good time. Norm asks those who have not yet responded to call him, if you plan to attend: (440) 884-4229. The banquet replaces the February fun meeting. **Fun Meetings** resume March 7.

Remember, Dues are now \$20.00/year, due by March to be listed on Roster and receive newsletter. Contact Walt.

See the Calendar and columns for several other interesting area events!

3114 Edgehill Rd.
Cleveland Hts., OH 44118



NORTH COAST CONTROL LINERS



President: Ron Lutz (330) 334-4673 xtavia@peoplepc.com
Vice President: Dick Yatson (216) 941-4543
Secretary: Nelson Erbs (216) 267-1572
Treasurer: Walt Elbrecht (440) 843-8132
Safety Officer: Dave Evar (216) 635-2597 rustyknuckle@myway.com
Newsletter Editor: Serge Krauss (216) 321-5743 skrauss@ameritech.net

January 10, 2006

Editor's Notes:

Just back from Indiana, I'm getting the newsletter together at the very last minute. So, things may have to be simpler this issue. Still, despite many days away, due to ongoing family health issues, we've lucked out on the schedule!

Elsewhere Ron mentions next week's event at **Dart Airport**, just a couple hours east, at the NW tip of Chautauqua Lake. If you haven't visited this picturesque little airport, you should. While I didn't know they flew CL there, I have found it a fascinating place. Besides a unique museum and glider towing, they have a great little library of historic aviation and model periodicals that Greg let me use in completing my bibliography. It's a haven for grass-roots aviation enthusiasts and flyers. Just drive I-90 east past Erie and then turn down to Mayville – easy!

Last week's **fun meeting at Wayne's** was another fine success, with a large turnout. Besides Wayne and Donna's usual great refreshments, there were Werwage I-Beam and VSC videos (with Gerry Phelps interview), Wayne's new shop and ARF "Smoothie" (flown the previous weekend), Dave Evar's mini-"Dil-Bod", and lots of discussion. Great time!

From Wayne: **Air Force Museum** get-together with the Columbus, Dayton, and Indy cubs is scheduled for Feb 18. Touch base with Ron Lutz about the day trip. Also, Don Sopka still has F-2D planes, at cost, for interested members.

Please remember that if you know of events in which club members would be interested, you need to *let me know*. I have not had time to ask around as much as I'd like – so we need you "reporters" out there. We can also use more member submissions – personal news, how-to items, etc. We want to know what you're up to! I still want to include something extra, perhaps of an instructive nature, but that does add \$.07/page/person. I've accumulated material and can write some of this myself, but I'd like to hear how members feel about such features. Among items already lying around are an interesting CL-speed drag/power tabulation by Gene Hempel, Walt Williamson's "Case of the Wondering Bellcrank", more plans, etc. There are tuning, trimming, and design topics to be written about. Last month's were on me. What say?

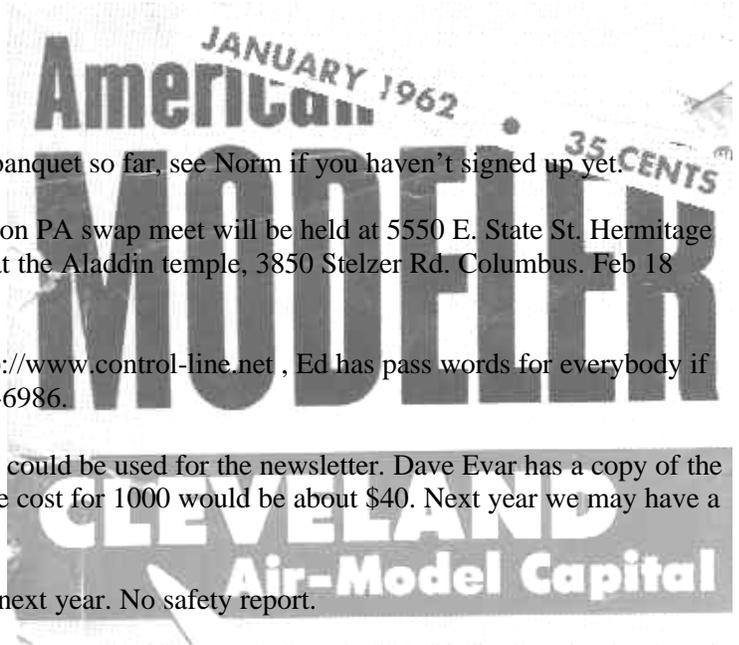
Finally, don't forget to contact Norm about reservations for **the banquet**, if you have not done so. It's always a good time.

North Coast Control Liners Business Meeting Minutes –12/20/05:

12/20/05 Meeting called to order 7:10 PM

1. Attendance: Wayne Buran, Walter Elbrecht, Dave Domin, Dave Evar, Nelson Erbs, Ron Lutz, Ken Smith, Norm Skuderin, Ed & Zak Pomnitz, Frank Zabudske, Carl Allendorff, Dave Heintzman, Dick Yatson.
2. No minutes were read.

3. Treasurer report: \$1270.00
4. Field report: Someone drove over the field.
5. Committee report: 21 people are signed up for the banquet so far, see Norm if you haven't signed up yet.
6. Notices and communications: The Skylarks of Sharon PA swap meet will be held at 5550 E. State St. Hermitage PA 16148 on 4/19/06. Swap meet on Sat., Mar 25 at the Aladdin temple, 3850 Stelzer Rd. Columbus. Feb 18 Columbus club will be going to Air force Museum.
7. Old business: Our web sight is up and running, <http://www.control-line.net> , Ed has pass words for everybody if you want to post pictures. His number is (440) 842-6986.
8. New business: Carl has a Sharp Copier for sale that could be used for the newsletter. Dave Evar has a copy of the business cards, artwork by Gary Hull. Dave says the cost for 1000 would be about \$40. Next year we may have a prize for the WW2 combat contest.
9. General discussion: All officers will carry over for next year. No safety report.



Meeting adjourned at 7:58

Nelson Erbs, Secretary

CALENDAR

Tuesday	Jan. 17	NCCL Monthly Business Meeting – 7:00 PM	Parma Heights Library, 6206 Pearl Rd.
Saturday	Jan. 21	Swap Meet and Pig Roast: 11:00 - 4:00	Dart Airport, Mayville NY (see columns)
Sunday	Jan. 29	N. Canton RC Club Swap Shop – 11:00 AM	Uniontown Comm. Hall, 3696 Apollo St.
Tuesday	Feb. 7	NCCL Banquet – 7:00 PM	Dimitri's, 1830 Snow Rd. near Broadview
Saturday	Feb. 18	WP Air Force Museum Trip – Contact Ron	WP AFB, Dayton
Tuesday	Feb. 21	NCCL Monthly Business Meeting – 7:00 PM	Parma Heights Library, 6206 Pearl Rd.
Tuesday	March 7	NCCL Fun Meeting – 7:00 PM	Dick Yatson's
Tuesday	March 21	NCCL Monthly Business Meeting – 7:00 PM	Parma Heights Library, 6206 Pearl Rd.
Saturday	March 25	Swap Meet	Alladin Temple, 3850 Stlzer Rd., Columbus
Tuesday	April 4	NCCL Fun Meeting – 7:00 PM	Norm Skuderin's

Ron's Ramblings-



Well, it's the start of another year so hope this finds you in good health and starting to put the finishing touches on that new ship. Brodak's will be here before you know it. And before that is the Toledo show in April, VSC in March, the Air Force Museum in February, and this just in, Dart Airport on January 21. Dart is in Mayville, NY near Jamestown and they are having a model airplane swap meet and pig roast from 11 am to 4 pm. If you've never been there it is a neat place with a museum and restaurant and control line flying every Sunday. Might be just the thing to shake off the winter blahs.

Got a newsletter from the Cincinnati club and they are contemplating having club racing with models of 30's era racers. Sounds kind of familiar. Maybe we should try to have some races this year as well as the WWII combat. Don't forget that dues are due. See you at the meeting.

-Ron

Safety subjects for January – Dave Evar:

January 2006 Propeller Safety:

Use a chicken stick, electric starter, or well-padded glove to flip the prop. The trailing edges of the newer composite props are really sharp, and should be smoothed out a bit by sanding. Premature failure of chicken sticks and padded gloves is a small price to pay. A chicken stick keeps your hand out of the way of the prop. A



padding glove can absorb some of the shock if it is struck from behind. Electric starters are fine but require additional support equipment and wreak havoc on that pretty spinner.

Make needle adjustments from behind the propeller, and avoid the propeller arc. If your body is behind the propeller, the reaction to an unusual occurrence would be to draw a hand/arm toward yourself and away from the propeller. Inspect your propeller before each flying session and after mishaps. It is better to discard a damaged prop than to have it come apart while starting or during a flight. Save the damaged propeller to mount the hub on your display engines.

Balance your propeller. An unbalanced prop will not allow your engine to perform its best, and vibrations can damage the airplane over time. An unbalanced prop can shake motor mount bolts loose. Plain bearing engines are more susceptible to excessive bearing wear due to an unbalanced prop. Make sure your prop is mounted securely on the engine.

Last month I promised a floppy disc for qualifying requestors. I can no longer produce the floppies. My new computer does not have an appropriate drive type. This means more reed valve stock is available.

Safety concerns can be e-mailed to me at: rustyknuckle@myway.com Use NCC Safety as subject to identify mail as club related. This note will change next month.

Classifieds:

Wanted: Quality stunt plane, pref. piped, for advanced stunt events, 2006 season. Call Don Sopka, (440) 526-2878.

Member Submissions:

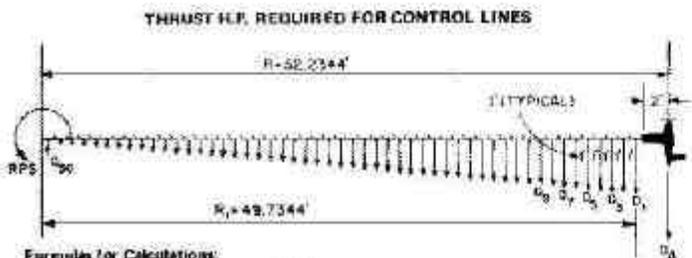


Upper Left (half-tone): Mario Rondinelli and "Venus"
Left: Mouse Racer w/TD .049, ca. 1969 (DNF)

CL Drag:

Gene Hempel's CL Speed column in the 7/83 M.A. included Jerry Rautio's interesting drag/power breakdown for an asymmetric FAI CL speed model at 165 mph. Jerry broke the line drag into 50 small increments along the lines, rather than using calculus, but he seemed to get a close approximation.

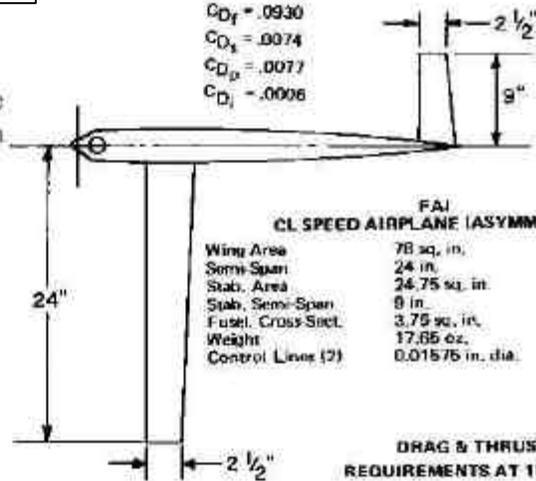
Interestingly, drag of last two feet of lines equals wing drag.



Formulas for Calculations:
 $RPS \text{ at } 365 \text{ rpm} = \frac{242 \text{ fms}}{2 \pi R} = \frac{242}{2 \pi (52,234.4)} = .732359$
 $V_{lps} = .732359 (2 \pi R_{ps}) \text{ Ft./Sec.}$
 $V_{mph} = \frac{V_{lps}}{1.466667} \text{ Miles Per Hour}$
 $D = 2.56 (d)^2 \left(\frac{V_{mph}}{100} \right)^2 \text{ Drag of a Single Control Line, Lbs./Ft.}$
 $d = .01575"$ Control Line Diameter, Inches
 $i = \text{Resistance of Two Lines}$ Drag Variation Due to Line Skewing
 $D_T = i \times D$ Drag, Lbs. for Two Skewed Control Lines
 $THP_r = \frac{D_T \times V_{mph}}{375}$ Thrust H.P. Required

AIRPLANE SPECIFICATIONS & THRUST H.P. REQUIRED

$C_{Df} = .0930$
 $C_{D_s} = .0074$
 $C_{D_p} = .0077$
 $C_{D_i} = .0006$



FAI CL SPEED AIRPLANE (ASYMMETRIC)

Wing Area	78 sq. in.	0.5416 sq. ft.
Semi-Span	24 in.	2.000 ft.
Stab. Area	24.75 sq. in.	0.1719 sq. ft.
Stab. Semi-Span	9 in.	0.75 ft.
Fusel. Cross Sect.	3.75 sq. in.	0.026 sq. ft.
Weight	17.85 oz.	1.103 lb.
Control Lines (2)	0.01575 in. dia.	

DRAG & THRUST H.P. REQUIREMENTS AT 165 M.P.H.

		Lbs.	THP _r
Fuselage	$D_f = C_{Df} \cdot 2 \cdot A_f \cdot V^2$.1886	.074
Stabilizer	$D_s = C_{D_s} \cdot 2 \cdot A_s \cdot V^2$.0880	.039
Wing (Profile)	$D_p = C_{D_p} \cdot 2 \cdot A_w \cdot V^2$.2928	.129
Wing (Induced)	$D_L = C_{D_i} \cdot 2 \cdot A_w \cdot V^2$.0227	.010
Control Lines	(See Table 1)	2.2227	.978
Total Thrust H.P. Required		2.7949	1.230 (Average)

Note: Hempel estimate of Total THP_r 1.134* (Clean)
 *See Model Aviation, July and September 1982.