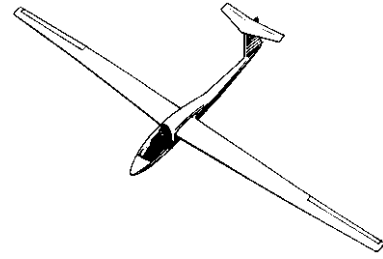


CLARENCE SILENT FLYAIR



BI-MONTHLY NEWSLETTER OF THE CLARENCE SAILPLANE
SOCIETY

Nov '98

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From the Editor

- Marty Timm

As the 1998 flying season draws to a close, I want to remind everyone of one of the things that they need to do to have a great 1999 season - RENEW your CSS membership! You can renew in person at the next CSS meeting, or by mail to Dan Oehman. To renew by mail, send a check for \$15, payable to "Dan Oehman" to:

Dan Oehman
5665 Salt Rd.
Clarence, NY 14031

Please enclose a self-addressed, stamped envelope so that Dan can send you your new membership card.

If you plan on flying with the club in 1999, please remember, also, to renew your AMA membership so you have adequate insurance coverage.

As November is the season for giving thanks, I would like to remember and thank the individuals who have helped, so much, with the writing of this newsletter. Lyn Perry, for his "President's Reports" and event reports, Bill Pike for numerous contributions of photos (many of which grace this edition) and articles, Roman Paryz and Jim Roller for event reports, Fran Miller for his contributions, and last, but definitely not least, Eric Rash for the time he spent getting me templates, mailing lists,

etc. Thank you all! My sincere apologies if I forgot anyone.

Before rambling on too much, let me apologize for the lateness of this newsletter. Just as I was starting to pull it together, the registry in my computer system suffered a corruption. (Not a virus as I had initially thought.) I managed to extract the needed files and transport them to my work computer to finish the job, but it was a time-consuming, laborious process.

Lastly, let me remind everyone that December 17 will be the final event of the 1998 season, with the club Christmas Party at Clarence Town Park. Bring an inexpensive (\$5) airplane-related gift for the gift exchange. Our president, Lyn Perry, has promised to bring his famous chili again this year. Come and enjoy!

From The Flightline

- Lyn Perry

I have the impression that in my last President's message I talked about what a great year we'd had, and how it was now time to turn to the building board; turns out I was WRONG! This remarkable soaring season continues: as of this writing (19 November), members continue to visit Rainbow Lake to slope, and five of us gathered yesterday for a four-hour series of twenty-minute plus flights at ECC-South. Hard to beat, and something to be thankful for as we approach Thanksgiving.

On another topic, I have agreed to coordinate League of Silent Flight (LSF) activities within the club. LSF is an international, no-fee or dues, individually-focused, achievement-oriented soaring program in which one demonstrates ability in various soaring tasks. One begins with a series of five-minute duration flights and moves level to level, ultimately recording a two-hour thermal flight, an eight-hour (!) slope flight, and a series of contest wins. Many of our members are currently working to move up in their LSF goals; if you're interested in starting this life-long program, do see me.

Finally, let me wish all of you a happy holiday season if I don't see you at the November or December meetings, and think Spring!

Harvest Happening - 1998

- Lyn Perry

Once again CSS was part of the program at the annual Clarence/Clarence Center Meals on Wheels Harvest Happening in Clarence Town Park. We had a marginal day, with the threat of rain and a bit too much wind for comfort; nonetheless, crowds of people came out, and I hope we provided a bit of entertainment for charity.

We had the Club banner, flyers, magazines, pictures, winches (one set near the safety fence for demonstrations), and, of course, every shape and size sailplane laid out for inspection and discussion - what is turning into our usual professional display. Bill Wilcox and Erik Rash even provided some partially completed bones and assorted pieces to be poked at. Tim and I flew during the day when the wind dropped, but we mostly talked to the folks passing by.

Thanks to the usual stalwarts for their support: Tim & Ben Krystaf, Bill Neumann, Erik (& Denise) Rash, Jim Sonnenmeier, Marty Timm, and Bill Wilcox.

Uwe Zieglemueller

- Fran Miller

Back around the second week of October, when the foliage in Allegheny State Park was at its' peak, I took my wife, Ann, and an old Navy buddy and his wife, for a ride down there to enjoy the Fall scenery. As we approached Ellicottville, I realized that the wind was coming out of the Northwest at a pretty good clip. I made the right turn at Plato and went back through the gorgeous woods to Rainbow Lake. Now, I have bored the pants off my wife and my friends many, many times, with tales of the great radio controlled soaring on this hill, so I really felt that this was an excellent opportunity to let them see what I get excited about. Even though it was a Wednesday, I felt that there was a good chance that Fred, Frank, Richard, Don, Vince, Paul or Lyn would be there. Going up that steep, rocky, dirt road, almost completely tree covered, I think I heard sounds of dissent, but as we got to the top there were exclamations of the vast beauty in front of them. The only "glider guider" up there was Uwe Zieglemueller, who was pretty well bundled up against the fierce wind. When I told Uwe that these people had never seen an R/C sailplane, much less a slope soaring glider, he bounded out of his vehicle and with his usual tremendous enthusiasm, grabbed his Mini-Ellipse and transmitter, and proceeded down to the "rock" to launch. The wind was rough as a cob, but Uwe didn't even hesitate. He hurled that little Vee-tailed ship off into 20-30 gusting winds coming up-slope. The Ellipse staggered and clawed its way out through the turbulence, to a point where it finally became clear that, yes indeed, Uwe really did appear to be flying that machine. He let the machine climb out to 400 feet or so and then split-essed into the valley, pulling up smoothly at the last second to avoid disaster, he maintained all of his speed and paid it off in a series of aileron rolls, his white wings flashing the sun against the clear, hard, blue October sky. Back up to 400 feet, he started to loop continuously, and with the strong wind did not seem to lose any altitude. Finally, he finished us off with a parade of whistling, hi speed, low passes, using stall turns at the end of each pass, to reverse course. Since we were on a trip and had to leave shortly, Uwe whipped that little ship right back in front of us and gently dropped it into the brush. I was so pleased. He had turned my wife and my friends into believers in a short but spectacular 15 minute flight that was made all the more impressive by the fall weather in that lovely valley. I told him then, and I tell him now, "Thanks Uwe."

Good soaring,
Fran Miller



CSS Fall Finale

- Jim Roller

The CSS Fall Finale was finally held on Saturday October, 17th. An earlier attempt on the 3rd was aborted due to a lack of contestants. The 17th was also a scheduled fun-fly and besides having eleven contestants for the contest, other members showed up and flew their handlaunches or electrics. Fortunately there were no frequency conflicts, mid-air or other nasties that interfered with anyone's flying.

The format of this contest was to attain 20 minutes of flying time. Contestants were given four flights to attain this time with a 7 minute maximum on each flight. Severe point penalties would be deducted to any times over 7 minutes. Points were also given for landing within a 16 ft. radius circle. Although the sky looked good, strong lift was not present. High launches however found air that was relatively

buoyant. By the time the 4th round came around only three pilots were in reach of the 20 minute target time given the 7 minute max per flight. Here is what everyone flew and how they finished. Maximum attainable points was 1320.

Place	Contestant	Score	Plane
1	Jim Roller	1315	Varracuda
2	Roman Paryz	1186	Comet XC
3	Bill Hauth	1120	Saturn 3m
4	Marty Timm	1000	Bird of Time
5	Don Chudyk	965	Dove
6	Tim Krystaf	958	Opus
7	Jim Sonnenmeir	945	Aquila
8	Jason Kester	933	Flamingo
9	Bill Wilcox	796	Sagitta XC
10	Ben Krystaf	794	Spirit 2m
11	Bill Pike	722	Gentle Lady

Electric Fun Fly Twelve - 1998

- Lyn Perry

Day One - Saturday 12 September

Too windy! The forecast called for 10-15; the actuality was 15-20 with higher gusts coming through, and the airport reporting a constant 14 mph with a 60% chance of rain. Sixteen of us hung out until 11:30 without putting a plane in the air, consuming three dozen doughnuts and muffins and hangar flying, before I canceled for our "rain" date - Sunday.

Day Two - Sunday 13 September

BEAUTIFUL!!

Sun, a high of 78, and winds of (as Ed Waters used to say) three gusting to five; this was going to work! I tried to beat John Wisniewski to the field, but he got me by two minutes, arriving at about 9:15. We checked wind direction (light and variable), then set up with more doughnuts. By flight time we had twenty-three electrics registered, with lots of kids, non-flying club members, and several interested outsiders who picked up newsletters and other information. Pilots started putting up flights, and it became clear that we had 30-minute air: we logged at least six 30+ minute flights during the event. Everyone kept an eye on flight times, as the "Longest Flight" trophy was one of two to be awarded.

However, the next order of business was the balloting for "Pilots' Choice": pick the plane you like best, for whatever reason; the most votes wins a handsome plaque. Bill Hauth had flown his Falcon 550E (with Maxcim brushless motor

and planetary gearbox) to great effect, launching straight out for about three feet, then pulling the plane vertical until it was practically out of sight - outstanding! The crowd loved this, and he won Pilots Choice. Runners-up were Jim Sonnenmeier's Skat pylon racer in second, with my Lanzo Bomber third.

The Longest Flight tally continued, with my Bomber recording 37:26, Harold Becker's Spectra 35:34, Roman & Roman's Spectra 33:40; Marty Timm's Electron (one of three identical planes at the meet) showing us a 30:15, and John W. almost making the first cut with his Spectra at 29:50. Falcon 550 Es (Bill, Don and Dave) were doing mid-

twenties - good times for a fast plane. At 11:30, I tossed my 100" SD 100 up, and managed to find enough air to win the event with a flight time of 82+ minutes.

The day's highlights included the appearance of Mrs. Rita Kirk, Ron's widow, who came out both days to greet us and watch the planes fly once again; it's always delightful to see her. Some new(er) folks came to fly with us, including Frank Calvarese, John Kinkel, Neil Watson and Gus Burgin - nice to see them out in addition to the regulars.

A few minor accidents occurred: Dave Decker broke the tail boom on his 550 with a hot landing, Jim's Skat and R & R's Spectra went in from launch, and Jim Roller lawn-darted while landing his open ship after a nice flight.

All in all, a lovely day; see you next year?



Fun Fly at ECC South September 19, 1998

Real-time Weather at Rainbow Lake

- Marty Timm

Have you ever made the trek to the Rainbow Lake slope-soaring site because the weather forecast predicted 25 MPH winds from the Northwest, only to find that the weeds were barely bobbing in the breeze? Well help is here! WIVB participates in a network of weather-recording stations located at schools around the country, several of which are located right here in WNY. The station closest to Rainbow Lake is located about 5 miles down the road in Ellicottville.

We can access the information transmitted from these weather stations in real-time over the Internet. That's right, you can electronically surf down to Ellicottville and check out the wind from the comfort of your own computer. While the weather in Ellicottville is no guarantee of the conditions at Rainbow Lake, it should be close enough to give you an idea of what it'll be like.

To check this out, surf on over to:

<http://aws.com/cgi-win/wx.exe?ELCTV>

To see current conditions at other locations, try:

<http://sqlwx.aws.com/wivb/index.idc>

These links will be added to the CSS Web Site soon.

CSS E-Mail List

The following is a list of CSS members with access to e-mail. Let's keep in contact. We have a lot of expertise in the club. If you have a technical question about R/C flight or models, try posting it to the members of this list.

Name	E-Mail Address
Jack Archibald	jackarch2@aol.com
Dick Bates	cybrmax@aol.com
Paul Bolis	PaulyStar1@aol.com
Harold Becker	beckerhd@buffalostate.edu
Bill Hauth	toolmkr@fcs-net.com
Bill Hays	whays@ibm.net
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John Wisnewski	jjwis52@aol.com

* Indicates changes or new entries

Reducing Drag

*From the AMA National Newsletter
by Clay Ramskill*

This subject is tough, assuming we want to stay clear of complexity. To get into the nitty-gritty of drag reduction, we need a wind tunnel, some heavy computations, and a whole bunch of witchcraft!

So we'll stick to some more basic principles, and leave the name dropping and number crunching to someone more learned than we are! We do, however, have to make one distinction: drag due to lift. That is pretty much separate from the rest, because it's strictly a function of lift. The more lift we need, the higher the angle of attack our wing must operate at, the more lift drag we have. And once our wing area, shape, and airfoil are established, there's really only one control we have, and that is the weight of the plane.

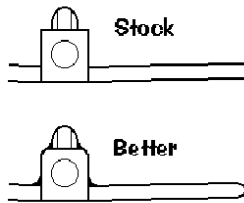
Put simply, the heavier the plane, the more this form of drag will degrade performance. Having gotten past that, there are several other drag components to look at: Cross-sectional area, form drag, skin friction, interference drag, and projections. Cross-sectional area is easy. The more air you have to push aside as you go through it, the more drag. So we need to keep fuselages reasonably slender, and airfoils reasonably thin. But the size is not nearly as important as shape.

Form Drag: Good streamlining is an area where we can really see some results. What we'd like to see is every component of the plane shaped like a good symmetrical airfoil, or drop tank as seen on jet aircraft. At the speeds we're interested in, a really sharp point in the front is not necessary (that's what you see on supersonic planes!). What is desirable is a

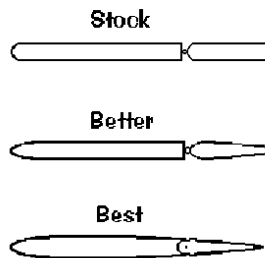
nice smooth curvature. Where we do want the pointiness is at the rear. A good, smooth, continually tapering curve ending at a relatively sharp trailing edge or point. The main thing to avoid is abrupt or angular changes in the airflow.

Reducing Drag

Smoothing



Stab / Fin



Landing Gear

Stock Wire

Better

Stock Aluminum

Better

Best

plane. You'll see all of these features.

Drag reduction involves many details, all of which add up in achieving your goal. If you want to go fast, get out the sandpaper. But remember, we need both a

rounded off, carrying the rounding well aft of the wing. You'll see these on pattern and racing planes.

Projections: The best solution to projections is to get rid of them! Retract the landing gear, hide the control horns, enclose the radio antenna, countersink the bolt heads, etc. Cowl in the engine, and use an enclosed muffler. Look at a competitive pattern

smooth skin and a smooth form!

Retracts: The worst contributor to drag is the landing gear. Fixed gear drag can be reduced by wheel pants and cuffs on struts, but retracting gear is the obvious solution. There are, however, weight, complexity, and expense penalties.

Skin Friction: First, the less skin, the less friction! Rounding corners not only cuts form drag, it cuts the skin area. Round forms enclose the most interior volume with the least skin area. A smooth skin cuts drag. Dirt, rough covering overlaps, and covering wrinkles all increase drag. You won't do much better than good sanding and covering! We should point out that sharp corners, even when aligned with the airflow, will tend to increase turbulence and produce more drag. A rounded fuselage is less draggy than a square fuselage. The same goes for wingtips.

Interference Drag: We did a nice little wind tunnel experiment in school. We measured the drag of a fuselage, and then the wing. Then we put in the wing and fuselage attached together. The combination had extra drag beyond the sum of the components!

The interference caused by projecting objects (like wings, landing gear, gear struts, stabs, etc.) can usually be reduced by the use of fillets. These were quite pronounced on WWII fighter wings, as on the Spitfire and P40 with the interior square corners

from Clay Ramskill

7 Towers RC Club

cramskill@arlington.net

<http://www.startext.net/homes/cramskill/inkclay.htm>

Using an Audio Jack as a Receiver Switch

- Marty Timm

Every once in a while, we build a model airplane in which it's difficult to install or operate a receiver switch. Perhaps you've got a canopy that just doesn't lend itself to being opened and closed easily. Perhaps you've got a foamie slope-combat plane where you don't want a moveable switch to be exposed to another plane's attack. Whatever the reason, one solution is to mount an audio jack just under the surface of the fuselage and use a corresponding audio jack to turn it on and off.

The whole setup only takes a few dollars worth of electronic equipment that is readily available at your local Radio Shack store. The parts you'll need are:

- 274-247 3/32" Phone Jacks
- 274-290B 3/32" Phone Plugs

The diagram shows how to wire it up. (Wires are shown as dashed lines for clarity.) The battery's positive lead should be soldered to one of the terminals on the back end of the jack. The receiver plug's positive lead should be soldered to the other terminal on the back end of the jack. (Make sure you follow the diagram in figure 1 carefully if you want to be able to charge the battery through this jack.) Both the battery's and the receiver plug's negative leads should be soldered to the terminal on the side of the jack. (See Figure 1)

The switch is off when a phone plug is inserted into the jack. Turn the switch on simply by removing the phone plug. Make sure you don't lose that plug while you're flying or you won't be able to turn your receiver off!!! Some people tie a long brightly colored ribbon to the plug so it's harder to lose.

You can take the next step and make the phone plug into a charging jack by wiring it up as shown in figure 2. The positive lead should be soldered to the short connector, and the negative lead to the long connector. Plug your charger into this and you're charging your battery. Pretty neat!!

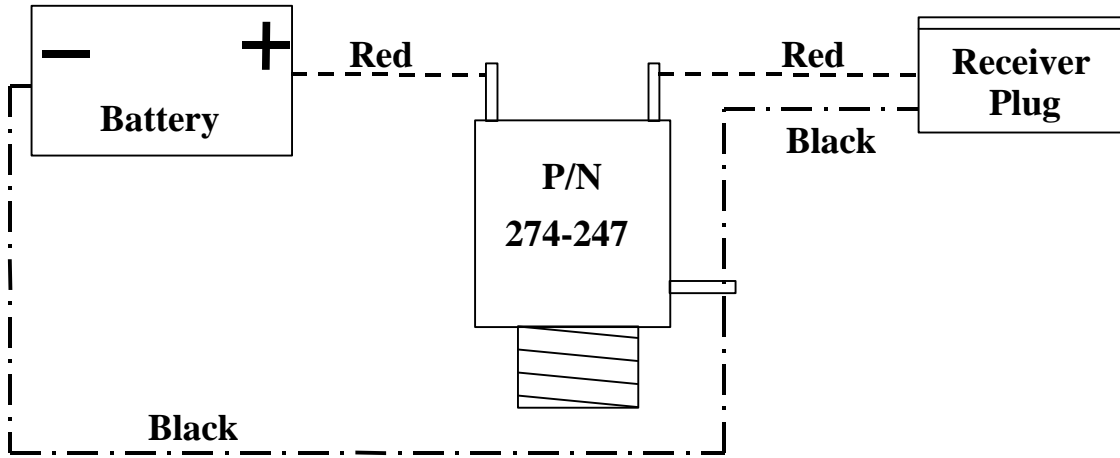


Figure 1

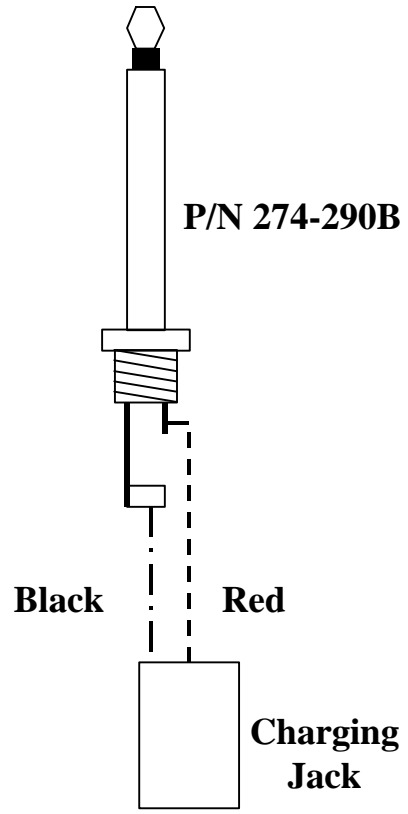


Figure 2