Established 1936
SKY-SCRAPERS BKLYN NY
AMA Club Charter 470

FLYOFF

Round 12 / Winter 1990

The SKYSCRAPERS Quarterly

Edited by Bob Hatschek

I apologize!

To whom? To AMA President Don Lowe and to AMA District VI Vice-President Jim Sears. They were there! Where? At the USOC/Nats in Lawrenceville.

Close readers of *FLYOFF* may recall that I said in Round 11 that, "If there were any elected members of the [AMA] Executive Council present [at the USOC/Nats]. . .they were keeping an extremely low profile and I missed them." I did say that, and I was wrong!

In the case of Don Lowe, I even knew better. Actually, Don was there throughout the five days of the meet. I saw him on the field. And I heard him address the NFFS banquet. I just forgot.

In the case of Jim Sears, he arrived some time on Saturday (the last day of the meet) and, according to an item in the *CIA Informer*, apparently spent most of his time punching a stopwatch at the junior HLG event. I spent most of that morning downwind chasing my Mulvihill, and my buddy and I departed shortly after lunch time because it's more than a full-day's drive to get home.

And because I did a shoddy job of reporting, I apologize to *FLYOFF* readers as well as to Messrs. Lowe and Sears.

I'm sure that these gentlemen learned a few points about how a major free-flight competition can be run without alienating the free-flighters!

What's up? XII

Are we going to Lawrenceville for the Free Flight National Model Airplane Championships in 1991? As this is being written in mid-January, that question is unanswered! It has come to our attention that at a meeting on Jan 19 the AMA Executive Council will decide the location (and dates) for the 1991 FF Nats. Our information is that they have two choices: Lawrenceville, Ill. (mid to late June) and Jean, Nev. (probably sometime in Oct. in conjunction with the SAM Champs).

We honestly don't know how this came about. Our best previous information—dating back to just after last October's USOC/Nats—was that there would be a repeat this year, with only the dates in question. Then we heard that the meet would be returned to June, "probably the week of June 17." It was called "80% certain."

Then I phoned AMA to nail down the dates so we could finalize our own contest schedule. And I learned that not only the dates were now questionable but so was the location!

I do not believe anyone is really trying intentionally to screw all free-flighters east of the Rockies. I think we just have a total lack of consideration! I'm not sure which bothers me more: the complete chaos that's being created in the season's FF plans, or the secrecy with which the potential chaos was created. When I communicated my concerns (and the following arguments) to District II VP John Byrne, he told me that my letter was the first he'd heard about it!

Although the decision-making can no longer be pushed back into the past, it is deplorable that it must come at such a late date. Potential sponsors of FF meets all over the nation schedule their meets around the Nats, and thus cannot establish local or regional schedules until the Nats date is set. The problem is national, but is especially acute in this area because we're supposed to submit

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Guest editorial

by Hal Lorimer

[The following has been excerpted from the Canadian newsletter, SAM 86 SPEAKS. *It certainly speaks to me!]*

Do you realize how lucky you are to be interested in this hobby? Possibly not! It's hard to find an activity like ours—that gives you an indoor activity *combined* with an outdoor activity. Think about it—we have the long winter months to plan and construct our favourites. During storms or bleak days and evenings, when everyone else is bored and stuck in—you have your favourite on the board. Many joyous and creative hours pass by. An added bonus in the winter (when even RC is uncomfortable to fly) we have the opportunity to participate in the weekly indoor flying sessions. Learning indoor building and flying tricks eventually improves all your larger building projects—no doubt about that!

Following this period comes the joy of being outdoors in the summer field with your creations, fresh air, healthy exercise and good comrades during testing and contests.

So the next time you meet that guy down the street, who complains about the long winter and how sick he is of the boob tube—tell him to take up model aircraft and then consider yourself one of the *lucky ones* in this creative endeavour.

What about carving ducks, trains, stamp collecting and the like? Great activities, but after completion most items just sit there and stare at you. They seldom *do* anything. Each model aircraft has a personality and flight pattern all its own, i.e. build two identical models and both will perform and have individual characteristics. Our finished projects *come alive* and do something.

Speaking of flying—to be reasonably successful in this aspect one certainly has to be prepared to put in almost *as much time* at the flying field as at the workbench. No point in spending hours constructing if you are not going to spend an equal time adjusting these creations—provided you are to get the ultimate satisfaction. *Equal time* for both activities is essential.

Although I am probably preaching to the already converted, I leave you with these thoughts: "To participate is to *live*—spectastors only *exist*." And finally, to quote Bill Noonan: "Perhaps many of us take the hobby too seriously and that, regardless of our particular interests, the *real winners* are those who have the most *fun* and the best *memories*." And remember: After all, there is more to life than model aircraft—probably!?

[Continued from page 1]
our schedule requests for the use of Galeville during the Fall of the previous year——several months ago. Please note that this affects sponsors in Districts I, II, III, and IV, and contestants from still other districts. I'm sure that HQ and the regional contest coordinators would like to get meet applications earlier than this.

Even more important and urgent at this time, however, is that the EC make the correct decision on location and dates! Naturally enough, we favor Lawrenceville (June) of the two choices noted above. In addition to the above and such other obvious reasons as the attendance at the last two USOC meets, we would like to emphasize the following points:

1. Free flight is apparently alive and well on the West Coast. In the rest of the country it is alive but severely endangered. The West already has one AAAA meet (the highly publicized *United States* Free Flight Championships). To put the only other authorized AAAA meet (the Nats) in the Far West would grievously wrong the AMA's FF membership east of the Rockies.

2. This is especially true in view of the heavy western bias of the FF Team Selection Program, in which Finals have come no farther east than Albuquerque, Caddo Mills, Minneapolis, and Seguin in more than 20 years (if my memory is correct). Even if valid, the reasons for this are immaterial: what matters is the per-

[Continued on page 3]

Contest results

Skyscrapers June Monthly (6/17/90) – Bob Lipori, CD
Conditions good. Sunny. Upper 70s to low 80s. South winds 2-8 mph. Turnout significantly improved from May Monthly. (Note that Fathers' Day was not nearly as negative on attendance as Mothers' Day.)

Catapult		**1/2A**		**P-30U**	
R. Delinski	106	W. Buss	339	R. Hatschek	351
V. Nippert	104	M. Gagliano	266	W. Buss	345
R. Factor	74	A. Dashko	254	R. Factor	333
Mulvihill		**PW-30**		**P-30**	
V. Nippert	540	R. Delinski	1439	W. Buss	360
R. Hatschek	523	A. Abriss	1350	R. Langelius	299
J. Minassian	360	R. Langelius	930	V. Nippert	292
HLG		**Scale**		**A-D Gas**	
R. Delinski	93	R. Delinski	189	C. Darling	1029
F1A		**F1B**			
A. Schlosberg	847	W. Buss	414		
M. Gagliano	657	H. Cox	305		

Skyscrapers July Monthly (7/15/90) – Dave Acton, CD
Turnout low due to forecast of rain. Almost zero drift until 2 p.m., when overcast cleared and breeze increased, requiring move.

F1A		**F1B**		**P-30**	
Matt Gagliano	658	Bill Buss	528	Hank Cox	286
		Hank Cox	372	Bill Buss	275
PW-30		**P-30U**		Bob Lipori	193
Dick Delinski	889	Bob Lipori	352	Dick Delinski	68
Alan Abriss	766	Bill Buss	332		
Catapult		**Jr Catapult**		**Mulvihill**	
Dick Delinski	68	Allison Abriss	74	Hank Cox	290
Alan Abriss	56	Greg Abriss	19	Dick Delinski	227
Scale					
Dick Delinski	93				

Skyscrapers August Monthly (8/12/90) – Bob Langelius, CD
Meet started late due to conflict with Army Paratroops. Gate had to be manned. Weather near perfect with little or no drift.

F1A		**F1B**		**P-30U**	
Matt Gagliano	411	Bob Lipori	450	Jack Rice	468
		J Minassian	436	Ray Factor	360
PW-30		**HLG**		Bill Buss	341
Dick Delinski	1162	R Ludwigsen	266	**Jr HLG**	
Alan Abriss	193	**Catapult**		Rbt Ludwigsen	264
Jr Catapult		Vic Nippert	200	**P-30**	
Allison Abriss	24	Dick Delinski	133	Vic Nippert	337
Scale		Alan Abriss	103	Hank Cox	332
Vic Nippert	207	**A-D Gas**		**Mulvihill**	
Dick Delinski	47	Clark Darling	360	Dick Delinski	289

Skyscrapers September Monthly (9/16/90) – Dave Acton, CD
Cloudy, cool, winds variable (some models into compound). Weather improved throughout the day

F1A		**F1B**		**HLG**	
Aram Schlosberg	445	Bill Buss	158	Frank Wike	156
PW-30		**P-30**		**P-30U**	
Vic Nippert	2146	Henry Cox	334	Bill Buss	240
Bob Langelius	1098	Bill Buss	327	Art Phillips	222
Alan Abriss	1007	Vic Nippert	322	**Jr HLG**	
Catapult		Bob Langelius	302	Brian Heist	59
Vic Nippert	147	Bob Lipori	302	**Jr Catapult**	
Alan Abriss	63	**Jr P-30**		Allison Abriss	33
Mulvihill		Brian Heist	97	Greg Abriss	12
Hank Cox	329	**1/2A Gas**		**A-D Gas**	
Vic Nippert	319	Frank Wike	237	Frank Wike	257
Scale		Bill Buss	196		
Vic Nippert	157				

Skyscrapers October Monthly (10/28/90) – Dave Acton, CD
Cool temp and light drizzle until mid-morning, then clearing with temp up to 65F. and winds light and variable. Followed by heavy cloud by 3:30

F1A		**P-30U**		**HLG**	
Aram Schlosberg	1105	Bill Buss	331	Larry Pelatowski	128
Larry Pelatowski	311	Art Phillips	327	**PW-30**	
Jr Catapult		**Catapult**		Bob Langelius	2400
Greg Abriss	23	John Carbone	119	Dick Delinski	1755
Allison Abriss	19	Vic Nippert	90	Alan Abriss	952
P-30		Dick Delinski	86	**Mulvihill**	
Bill Buss	341	Alan Abriss	53	Vic Nippert	342

1990 Monthly Series High Point Winners

F1A		**F1B**		**Catapult**	
Matt Gagliano	27	Bill Buss	30	Dick Delinski	42
Aram Schlosberg	20	Henry Cox	14	Vic Nippert	34
Larry Pelatowski	7	Bob Lipori	10	Alan Abriss	23
PW-30		**P-30**		**P-30U**	
Dick Delinski	47	Bill Buss	34	Bill Buss	46
Alan Abriss	31	Henry Cox	28	Bob Hatschek	20
Bob Langelius	22	Vic Nippert	27	Art Phillips	18
1/2A Gas		**A-D Gas**		**Mulvihill**	
Bill Buss	27	Clark Darling	27	Vic Nippert	27
Frank Wike	10	Dick Delinski	10	Dick Delinski	27
Matt Ggliano	7	Frank Wike	10	Henry Cox	24
HLG		**Scale**		**Jr HLG**	
Rob Ludwigsen	10	Dick Delinski	34	Brian Heist	10
Frank Wike	10	Vic Nippert	30	**Jr Catapult**	
Larry Pelatowski	10			Allison Abriss	47
				Greg Abriss	

Tiebreaker note: In order to break ties, the above total scores show more than the "maximum" of three contests. In those cases where this still did not resolve the tie, competition times were compared although these times are not shown in the tables.

Thoughts on bunt Nordics—

by Bob Hatschek, the Skyscrapers

[This brief article relies heavily on information from the following sources: FFn *(England),* FFONZ Newz *(New Zealand),* ThermikSense *(Germany), and private correspondence with Martin Gregorie and Ian Kaynes]*

The obvious idea of bunt-launching a towline glider occurred to me a few years ago, but I was unable to devise gadgetry that I felt would prove reliable enough—especially in the repeatable positioning of the stabilizer glide setting, which falls between an UP position for tow and a DOWN position for bunt. Others now seem to have succeeded in this goal.

All drawings here show of a Russian glider attributed to Sergei Makarov and Mikhail Kochkarev. It may or may not be the best design around, but it certainly does work and the drawings are especially helpful in understanding what's happening—or what *should* happen.

The schematics show four conditions:

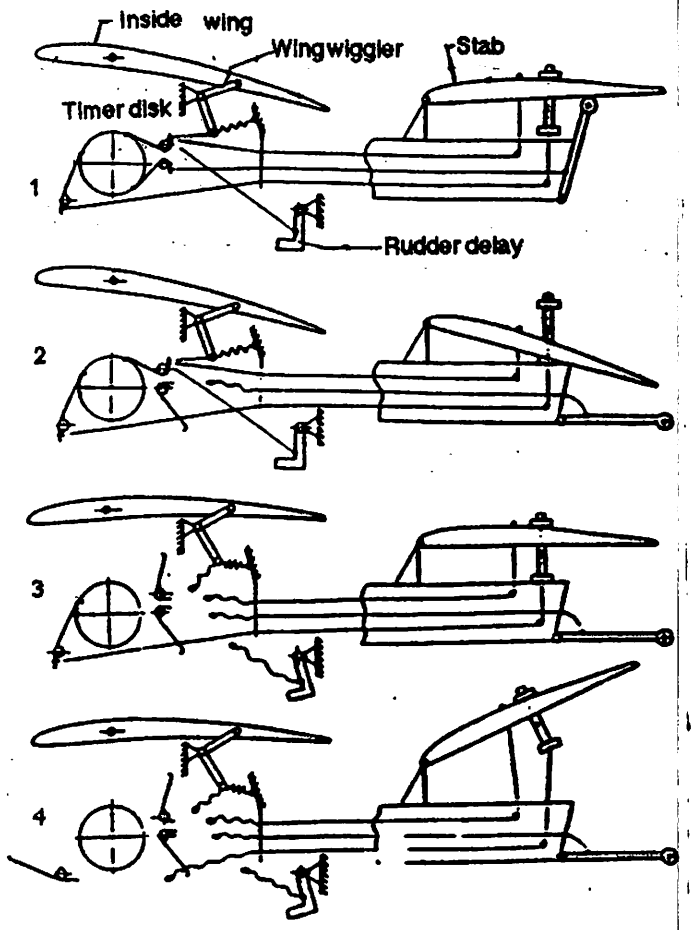
(1) The setup during straight tow, circle tow, high-speed tow prior to release, and the instant of release. During this time the hook and the rudder will be either in neutral or circle-tow position, depending on line tension. **The timer must be started at the instant of release from the line, not the unlatch action!** I'm told that Makarov aims for a release velocity of 50ft/sec, which demands very rugged wings. Unlatch tensions are set at 5-6 kg (11-13 lb). With delay of both glide rudder and wing-wiggler function, and with the stabilizer up about 0.5°-1.5° (which also helps tow) the model zooms straight ahead. Until. . .

(2) The timer releases the first trigger 0.5 to 1.0 sec after release of the glider. This is the trigger shown at 4 o'clock of the timer disk on the schematic. **The interval is critical and must be consistent.** This causes the stabilizer to drop to approximately +10° or more to effect the bunt maneuver, dropping the nose to glide angle just as momentum of the zoom dissipates. The second trigger (1 o'clock) then releases and. . .

(3) Rudder, stabilizer, and wing wiggler all move to their glide settings. Finally. . .

(4) The third trigger (10 o'clock) releases the d/t normally.

The one point that has not been clearly covered in print is the method used to start the timer on release. The Russians are said to a double motion. When the latch opens, a stop line is pulled **almost** clear of the timer's escapement (or windmill). Then, when the released hook moves back to contact the rudder-delay mechanism, the stop line moves another 0.5-1.0 mm to start the timer. Noted British glider flyer Chris Edge feels he can get the required reliability more simply by using a nylon pull pin attached to the towline. This old Nordic flinger isn't so sure.

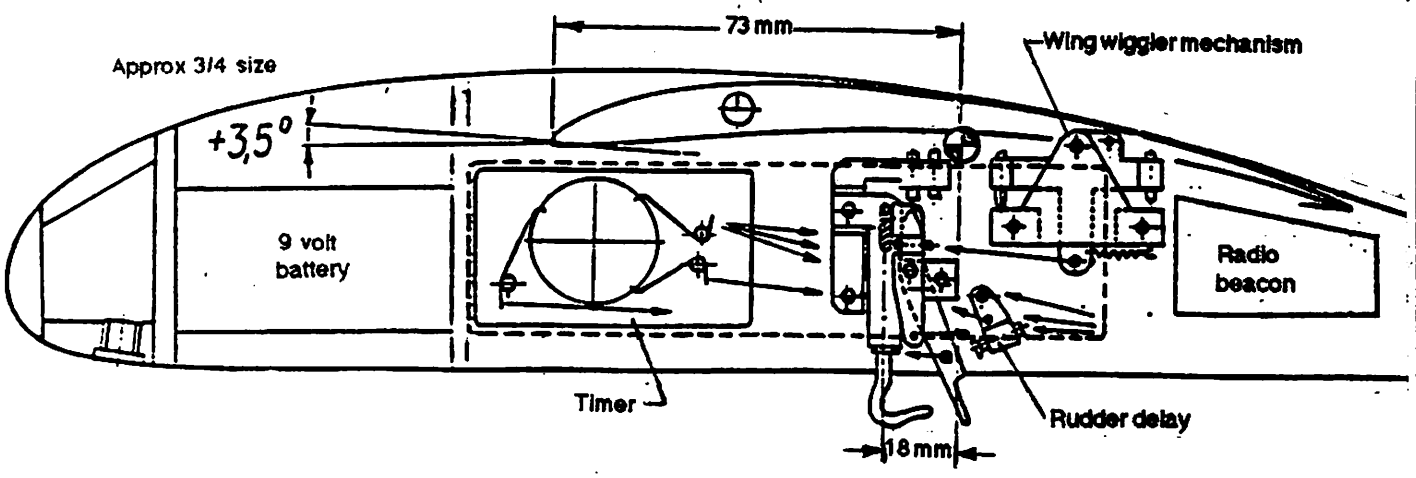


Operating schematic

Also, present day one-function electronic timers won't work either. Dutchman Allard Van Wallene is reportedly working on a three-function electronic timer that should do it, however. But it isn't known if, much less when, this will become available.

Stefan Rumpp notes as follows: "Bunting requires a completely new approach to launching. Under no circumstances can the launch be aborted after unlatch and the model left to float from the line. . .It is important to m,ake many test flights. The model must be trimmed so that it makes a quarter loop after leaving the line, consistently staying in the vertical plane. It is necessary to tow the model with a little extra negative on the tail. . First set the glide position and, when that is reliable, then start the bunt."

We emphasize: **heroic wing structures are mandatory.** A Dragmaster wing just won't handle it!



Strato-Streak kit by Klarich

by Jim Bocckinfuso, the Skyscrapers

I collect almost anything old—especially if it has to do with model airplanes. About two years ago, I acquired a nice collection of old *Air Trails* magazines. I really enjoy reading about old models and engines, and what it must have been like to fly in those days gone by—with larger fields, more contestants, and better public support.

Anyway, when I picked up the December 1941 issue the date stood out more than any other. I thought about how many young men and boys must have read that issue, then went to war and never returned. In this issue, Carl Goldberg wrote an article about just witnessing Dick Korda's model using a rudder-equipped dethermalizer and how he felt this could be improved upon to prevent the loss of models There was also a listing of then-current national records. Who do I see in the Senior category of Class A? None other than my good friend Joe Beshar. Sometimes modeling can be a small world.

What interested me most in that issue, however, was the newest, hottest gas model to hit the scene—the Strato-Streak by Louis Garami. The plane was designed for an Atom engine, and Garami had written a short article to accompany the plans. His design objective for the 39-inch Strato-Streak was a fast-climbing, easily built model that would give the same performance as much larger models. Most models back then were large, and rather tedious to build. This plane was about as simple as you could get!

Several years ago, Harry Klarich started producing short or partial kits of many of the old-time models. Today his latest catalog lists 244 kits! Harry does all the time-consuming work of cutting out all the ribs, bulkheads, firewalls, wing tips, etc., and bends the wire landing gears. You supply the leading and trailing edges, strip wood, sheet wood, and covering. Harry also supplies a very nice set of plans. Some of the kits are scaled up or down, which is only legal under SAM rules for the radio-control boys.

I had just finished breaking in a new Elfin 2.49 replica diesel from Gordon Burford, of Australia, and wanted to build an old-time free-flight for it. What many people don't realize is that there were also other size versions of the Strato-Streak built before 1943 which make them legal in SAM free-flight. I chose the 52" version with 359 sq. in. of wing area. I felt this would be a good combination for my Elfin 2.49 (.15 cu. in.) The plans that came with the kit were researched and engineered by Bob Larsh.

According to SAM rules, this plane must weigh 19.9 oz., so I knew I could build in some additional strength here and there.

The wing has only two spars, both on the bottom, which does not make the strongest structure, so I picked the hardest wood I could find for these.

The fuselage is a box construction with all 3/16" square wood. For added strength, I also made 3/16" sheet balsa formers for the first four stations, which not only added strength but also made it much easier to build the fuselage square. I also added some triangular stock behind the firewall after it was installed. My only mistake was not using stiff enough main longerons in the fuselage. I covered the model with silk and dope, and this pulled in the longerons slightly, causing a "scalloped" effect.

The only fault I could find with the kit was in the pylon. Klarich supplies a solid 1/4" balsa pylon with vertical grain. I felt this would crack the first time the plane cartwheeled or hit a wingtip (single-wheel gear). I got lazy and used it just the way it came—and, sure enough, it did crack the first day I flew it! My suggestion would be either to laminate several pieces of balsa with the grain in different directions or to use a center core of 1/16" plywood with 3/32" balsa sides.

I installed a Perfect #6 tank behind bulkhead #2 and a KSB timer between the tank and the engine. All-up finished weight was 20 oz. ready to fly.

Flying the Strato-Streak is a lot of fun, even with the smelly, oily diesel up front. The Elfin turns a 9x4 Rev-Up at 10,000 rpm. which is not as good as the original Elfin but good enough for this model. My flying adjustments worked out to be 1/16" left thrust, no rudder offset, and a 3/16" shim under the trailing edge of the stab for increased decalage. I fly right-right with stab tilt for the glide. Remember, if you do offset the whole tail for rudder adjustment, you're turning all three rudders—so go easy!

I should also mention that, as with most old-timers, there is no reference to CG location anywhere—either in the original article or in this kit. I had to get out my computer and use some math to figure it out. *[Don't let Jim's reference to a computer scare you. Paper and pencil will do it almost as easily!—Editor]* First you figure out the "tail volume coefficient" (T_{vo}):

$$T_{vo} = A_s/A_w \times M_s/C_w$$

Where: A_s = Stabilizer area
A_w = Wing area
M_s = Stabilizer moment arm measured between the quarter-chord points of wing and stab
C_w = Average wing chord (Area/Span)

After finding T_{vo}, proceed with the following equation:

$$CG = 0.4 \times T_{vo} + 0.25$$

which then gives you and answer of about 0.80 or 80%.

I met Harry Klarich at the 1990 SAM Champs at Westover AFB last July, and we had a pleasant conversation while he looked over my model. Harry said he would look into the pylon problem and come up with a better solution—and I'm sure he will. He takes great pride in his products.

He also told me that he will make any kit as long as you send him plans, which he will return. He is a fine person with a fine product, and I wish him luck with his company.

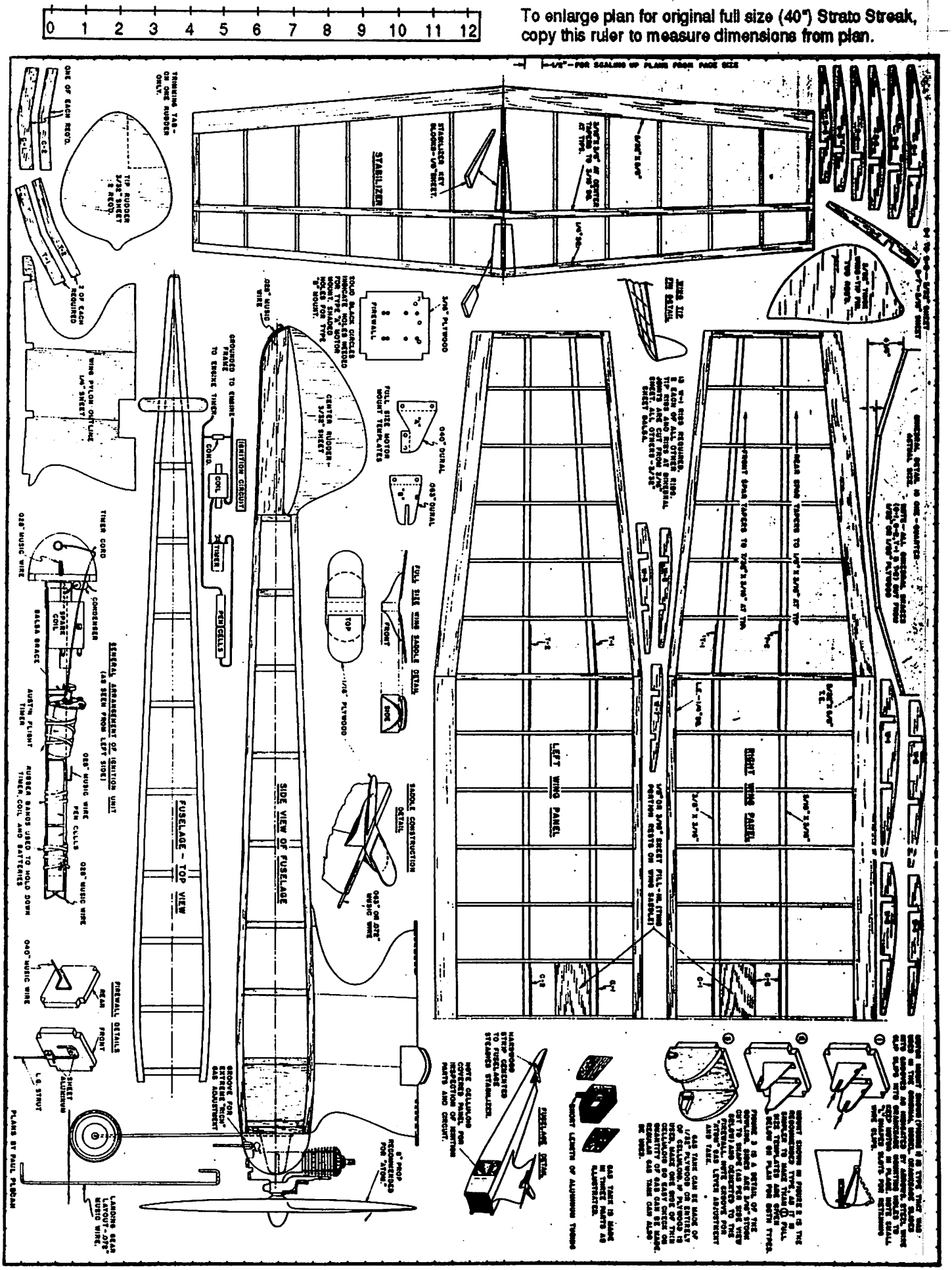
Klarich Custom Kits, 2301 Sonata Dr, Rancho Cordova, CA 95670
Elfin Replica Diesel, 86 Tierney Dr, Currumbin, Qld, Australia

Some editorial notes about the Strato-Streak

The plan reproduced here is not from the Klarich kit. Rather it is the "original" plan from the Dec. 1941 *Air Trails*, which was available FULL SIZE for a dime (10¢). Here it is reproduced slightly smaller than the original, which was not to any convenient scale anyway. The scale reproduced in the border will produce a drawing of the original 40" (flat) Atom-powered original.

The Klarich version (drawn by Bob Larsh) incorporates a few improvements, such as a better handling of the fuselage structure at the leading edge of the stablizer—which is virtually guaranteed to break at that point. We do not know if Garami's original was built as shown on the AT plan, or if that was a draftsman's error.

FLYOFF's editor never saw an enlarged Strato-Streak back before WWII, but there was a very similar design—Super Cyke powered and about 7-foot span—by Basil Giessen and/or his father. I have no idea which design came first. The Giessens were neighbors of Garami's, adjacent to old Holmes Airport in Jackson Heights, NY. With the wind in the right direction, they could launch from their backyards!


0 1 2 3 4 5 6 7 8 9 10 11 12
To enlarge plan for original full size (40") Strato Streak, copy this ruler to measure dimensions from plan.
STABILIZER
RIGHT WING PANEL
LEFT WING PANEL
SIDE VIEW OF FUSELAGE
FUSELAGE - TOP VIEW
GENERAL ARRANGEMENT OF IGNITION UNIT
(AS SEEN FROM LEFT SIDE)
SADDLE CONSTRUCTION DETAIL
FIREWALL DETAILS
FUSELAGE DETAIL
PLANS BY PAUL PLOGAN

Silky smooth! — by Larry Davidson, The Skyscrapers

[Larry's beautiful Bomber won the Spirit of SAM Concours at the 1990 SAM Champs. the Editor]

Here's the silking technique I used on my Lanzo Bomber:

First, sand all areas to be covered. I use garnet sandpaper and go down to 220 grit for final sanding. Then I brush two coats of butyrate dope on all the perimeters of the plane including sheeted areas. I use Randolph or Sig and thin it about 30%, sanding between coats. I have also used Aerogloss—but the results were not satisfactory and I definitely recommend against it. It is not necessary to dope ribs or fuselage cross-braces unless they are where the silk will end. Cut the silk oversize for each panel to be covered—about 1" border is usually sufficient at leading and trailing edges and for fuselage sides. I usually cover the bottom of wings in one piece so there are no seams to bother with, and I know of some others who cover the tops of wings in one piece but I have not been able to get the courage to try this yet.

My method on the polyhedral and dihedral breaks on top of the wing sounds complicated and time-consuming. But it's worth it!

First of all, it is very important that the grain of the silk runs lengthwise (spanwise) and reasonably straight. Otherwise unwanted warps may develop that may be difficult to remove. Cut the silk chordwise straight with the grain and lay it on the poly break rib. If the poly rib angle equally splits the poly angle (as I prefer) it will be necessary to align the grain spanwise and cut the silk on a curve that overlaps the poly rib about 3/16" toward the tip. Then cut the other end of the silk for the main section about 1" past the opposite poly rib. Then tack the silk in place with a dab of dope on the leading or trailing edge at the poly break.

Next, stretch the silk spanwise opposite the end that was tacked and make sure the grain is straight and let the rest of the silk lie over the center section. Now, while holding the silk, spray the silk with water along the leading or trailing edge that you're holding. Then, starting from the area just beyond where it was tacked, dope a couple of inches at a time working to the opposite end, rubbing the dope in as you go along. Next, pull the silk chordwise to the other edge (LE or TE) at the poly rib and dope this in place, making sure the grain is straight. Then dope the 3/16" overlap, discussed above, to the outside side of the poly rib to keep it from pulling off. After a couple of minutes drying time for the dope, pull all the wrinkles out of the silk chordwise until you get to the opposite poly rib—making sure that the silk is still damp from the water spray—and dope the silk from the finished rib to the opposite side a couple of inches at a time while pulling out the slack. Now dope the silk to the poly rib, cut the excess to 3/16" and dope this excess to the outside side of the rib as before, pulling the silk spanwise to prevent wrinkles.

I should have said at the beginning to cover the bottom of the wing first and cut the silk flush with the perimeter with a new sharp double-edge razor blade. When silking the top of the the wing, you will leave about 1/8" at the LE and TE and then roll it under, doping it as you go. Note: a little drop of water on your fingertip as you roll the silk over will help it to lie flat.

The next step was developed to prevent the silk from pulling off the poly rib when covering the wing tip. First, cut the silk carefully to match the curve of the poly rib while keeping the grain parallel to the ribs on this panel. Then tack the silk on the LE by the poly rib and then hold the silk at the TE and spray this section with water. This allows the silk to expand so that no wrinkles develop later. Now dope the silk to the poly rib and let this dry thoroughly. Do the opposite rib next. When both sections are dry from the water, take thin cyano with a thin applicator and run a small narrow bead about an inch at a time and rub it into the silk as you go along. You will not stick to the silk as long as you keep moving your finger. *[Or rub with a small piece of plastic wrap. Editor]* Now let this dry thoroughly, as water will turn the cyano white before it has cured and may not come out by doping. Next pull the silk from the tip and water-spray as before. Then dope-tack the tip, and then dope the perimeter, keeping the grain straight. Roll edges over as in the center section. Don't worry about any blushing or whitening at this step as this will come out on the first coat of dope applied.

Fuselage and tail use the same methods. Be sure to dope through the silk on all sheeted surfaces, starting at the center at one end and working your way to the sides and ends. The fuse is covered in four sections and two more pieces for the pylon.

I make fillets with Sig Epoxolite, which I find not only makes the joints stronger without adding much weight, but also makes the job look more professional. Be sure you smooth the fillet before it cures as it does not sand easily. Another tip is to rub in thin cyano on the fillets after silking them to prevent subsequent coats of dope from pulling up the silk and causing bubbles.

I use thin cyano (Zap) for fastening the silk to the wing undercamber as follows: With the wing upside down, I start at the leading edge of the rib, holding about 2" of the silk against the rib by holding my palm facing toward me and using my index and middle finger and then carefully put a small bead of glue on this section. I then spray Zip Kicker from about 2 feet away with a very light mist. I continue this until all ribs are done.

The first two coats of dope are the most difficult. I use a closed cell foam brush 3" wide (the kind that says "do not use for lacquer or shellac"). I dip the brush into the dope about 3/4" and then, at a 45° angle to the grain of the silk, lightly and quickly dope the surface with only enough pressure to dope the surface. If a puddle develops, turn the surface upside down to allow the dope to run back through by gravity and, lightly brush the dope back and forth for a few seconds so it will spread out and dry. The Randolph has to be thinned at least 50% or more for doping. If you dope on a damp day or the dope turns milky white (blushing), Randolph has a retarder which will prevent this and is used in place of thinner. However, it is better to dope in low humidity.

After about 6 coats of dope, I start wet sanding lightly only on the solid surfaces with 3M wet-or-dry #400 Tri-M-Ite sandpaper. As you progress on subsequent coats you can sand a little heavier—being very careful not to go through the silk.

Around the eighth coat, I mask off an area for my black Randolph butyrate dope trim. I use Karoden Hobby Products "Flex Mask" tape, which comes in 1/8" and 1/4" widths and follows a tight radius very well. I use regular 3/4" paper masking tape beyond the Flex-Mask to prevent the black from going where it is not supposed to. I brush the black on with a foam brush. On the wing and tail, I brush a section about 6" to 8" long and glob it on. Then I go back over this after about only 30 seconds to a minute and put another heavy coat on. Don't worry if it looks uneven, it usually dries with no runs.

To prevent a lip from developing, as I do each small section I pull the tape off almost to the end of where I just doped, and I cut it off with scissors and continue the process until finished. Then, after the dope dries, I wet send very lightly the small lip that may have developed with the black dope, and then I spray a thin coat of clear dope over the black and overlap the clear area to seal the black paint. If you try to brush the clear over the black trim, you will probably pull the black into the clear and mess up the finish. Badger's #350H airbrush works well. Thin the dope about 70%.

After about 24 hours, I lay a last coat of clear over the entire plane with the foam brush and the job is done.

[Continued from page 2]
ception of the US FF community today!

3. One of the reasons we have been given for the Nevada site is that "AMA does not want to overload the Mid-America facility," in view of the fact that the RC/CL Nats is already scheduled for Lawrenceville (July 13-21). That is a heavy slap in the FF face! RC and CL do not require a site as large as Lawrenceville; the realities of FF demand it! The EC really should consider necessities first and niceties later! It would be far easier to find suitable alternatives for RC and CL than for FF.

4. Finally, although July or August would far better accommodate youngsters (students), the mid to late June dates at least come at a time of "summer" vacation for more people than October. Furthermore, the June dates are less in conflict with the FF Team Selection Program.

These sentiments have all been expressed to John Byrne, our district VP, and he is in complete agreement. He is, however, only one member of the council. AMA President Don Lowe and Executive Director Vince Mankowski have also been made aware of these points, as has NFFS President Tony Italiano.

It could separate Nats and USOC

If the EC does opt to couple the AMA Nats with the SAM Champs at Jean in October, where does that leave the USOC? Will it also move to the Far West? The answer, according to Tony Italiano is "NO."

If the EC votes for FF at Lawrenceville in June, the meets will be combined, much as last year.

If the EC votes for Jean in Oct, Tony indicates he'll try to secure Lawrenceville in June (or some other date, if necessary). If Lawrenceville is not available for free flight at any date this year, Tony says that NFFS will then try to obtain the use of the site in Palm Bay, Fla, at whatever dates are possible.

Palm Bay (or Melbourne) was the site of the King Orange International this year. It is a very large site—a housing development that went broke after the roads were put in but before the houses went up!

Skyscrapers elect 1991 officers

The Skyscraper railroad ran again at the December meeting, and the list of 1991 club officers appears very similar to 1990's. But there has been a major philosophical shift. After a long and serious discussion, the members in attendance decided to split the responsibilities of our chief executive into two essentially equal parts. We now have a President (North) and a President (East). These co-Presidents are Dave Acton (North, of course) and Jim Boccikinfuso (East). Dave will preside at meetings on the mainland side of Long Island Sound; Jim will do it when the meetings are held off the coast. In other presidential matters, the two will act as each other's alter ego.

This arrangement eliminates the post of vice-president.

All other officers and assignments remain as in 1990: Tom Waddington continues to handle our funds as Treasurer (although Finance Minister might be more accurate). Bill Colish continues as Secretary. Jean Pailet remains in charge of scorekeeping, and **he reminds everyone that 1990 competition results must be in his hands before the end of January.** Bob Langelius is once again in charge of the annual Skyscraper banquet (see separate item for details of the 1991 affair). Ferdie Hendriks stays on as Galeville liaison officer with West Point. And Bob Hatschek retains his blue pencil as editor of *FLYOFF*.

The 1991 Skyscraper banquet

Bob Langelius reports that the high point of the Skyscrapers' social calendar — the annual dinner — will once again be held at Manero's Steak House in Greenwich, Conn. Those who attended last year will recall that the location was as convenient as it could be for a club whose membership is spread over four states, that the facility provided a private room that fit our requirements well, and that the fare was excellent as well as reasonably priced.

The menu will include your choice of filet mignon, chicken Florentine, or the fish of the day. Price will be $18.25 per person, including gratuities. Drinks will be available at a cash bar. You DO NOT have to make an advance menu selection nor even pay in advance. Just show up! But it would be greatly appreciated if you would call Bob Langelius (914/949-6083) in advance to tell him how many are coming and what they prefer to eat.

To get there, take I-95 (north or south) and get off at Exit 3 (Arch Street) in Greenwich. Take Arch St. east for a short distance to Steamboat Rd. Turn right (south). Manero's is at 559 Steamboat Rd. (left side) one long block from Arch St. If you get lost, call Bob Langelius at Manero's (203/869-0049) for directions.

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Subscriptions: *FLYOFF* is published quarterly for active (dues paid) Skyscrapers. Others may subscribe to a minimum of five issues at a rate of $2.00 per issue in North America ($10.00 minimum) or $3.00 per issue overseas ($15 minimum). Payment must be in US funds drawn on a US bank, and payable to "Brooklyn Skyscrapers."

Guarantee : All payment go into escrow and only when an issue is mailed is $2.00 ($3.00 overseas) withdrawn. Thus, if an issue is not published for any reason, funds are available for refunds.

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Some back issues of *FLYOFF* are still available and can be purchased for the original price of $2 per copy, including postage ($3 per copy overseas). Just tell us which issues you want and send a check or money order (in US funds, drawn on a US bank, made out to the "Skyscrapers") to *FLYOFF*. Available issues, and their principal content, are as follows:

Round 3 — **Solid-state booster battery**, by Bill Prensky (Low-cost electronic replacement for ignition-engine booster battery). **Mr. Mulligan**, full-size reproduction of 16" Megow dime scale. Stan Wennerstrom's **P-30 / Cd'H torquemeter** simple and practical meter for rubber torques up to 10 or 40 in-oz.

Round 4 — Ken Nawyn explains how to make tapered **Tail-boom mandrels the easy way**. And **Ebenezer**, the simplest all-sheet .02-powered beginner's model ever seen.

Round 5 — **Spitball**, an .049-powered Nostalgia model for ROG or ROW by Bob Hatschek. **Heat and the free-flighter**, by Jim Boeckinfuso. How to avoid physical problems in hot weather, and what to do if they occur.

Round 6 — Oldtimer small stick **Ritz 1936 C Tractor**, full size wing and tail plans, notes and tips from three recent builders. **Coverings Revisited**, Moe Whittemore's roundup of FF covering materials (reprinted from CIA Informer).

Round 7 — **High-aspect props and Liberty II**, NFFS Small Rubber Model of the Year (1990), Bob Hatschek's winning Coupe design with details on its radical propeller and suggestions for Wakefield and Mulvihill props.

Round 8 — Ed Keck's C-gas record-breaker **Prime Time**. And **Thinking Nostalgically** with Walt Rozelle about the selection of particular model designs and engines for the NFFS NosGas events. Authored specifically for *FLYOFF*.

Round 9 — Jean Pailet's winning 1/2A **SHOC-King**, an update of the highly successful SHOCer design. Also first details of BV **Shuriken** engine with specs and full size drawings.

Round 10 — A **Simple F1C** by Tony Mathews (from Canada Free Flight). A **P30/P30U** design by Bob Hatschek for the proposed new class. And a full size Peanut **ZLIN Z 50 M** from the Czech magazine *Modelár*.

Round 11 — **What's Dat**, a pusher canard P-30U by Art Phillips. **Density table for balsa sheets** compiled by Hank Cox. And a discussion of **Power/weight ratios for nostalgia** class engines by Walt Rozelle.