CENTRAL INDIANA AEROMODELLERS

CIA INFORMER

FREE FLIGHT NEWS OF THE MIDWEST

** The Weather **
A green Christmas -
a white Easter!

- Editor -
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2348S, 700W
New Palestine
IN 46163

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"All I Know About Turbulators (I borrowed from Fred Pearce and Jim Fullarton)!" - by Mo

" .... some carpet thread, about 5% chord .... " is the usual passing reference made as to how big, and how far back on the wing to put turbulators. If you're interested in improving your model's performance by adding the right amount of drag to its wing, read on!

To Use, or Not to Use .....

Fixed turbulators are most successfully used on model classes where the speed range (power-to-glide phase) is limited to less than a 2:1 ratio. The turbulator is generally designed to be just tall enough to trip the boundary layer at the model's gliding speed. But at speeds greater than this, the drag penalty gets quite severe. (The boundary layer gets thin enough to run flat into the appendage!)

Forget using 'em on hand launched gliders! Personal experience shows that (fixed) turbulators don't work worth a damn here! If you study published plans of winning HLG's, you'll be hard pressed to find evidence of their use. There's a reason. That skinny strip that makes the model glide so well at 12 ft/sec, is a killer at 80 ft/sec! I imagine the same holds true for the gas classes. If you're gonna use 'em on wide speed range models, you'll probably wind up using an "auto-turb", or timed surfaces.

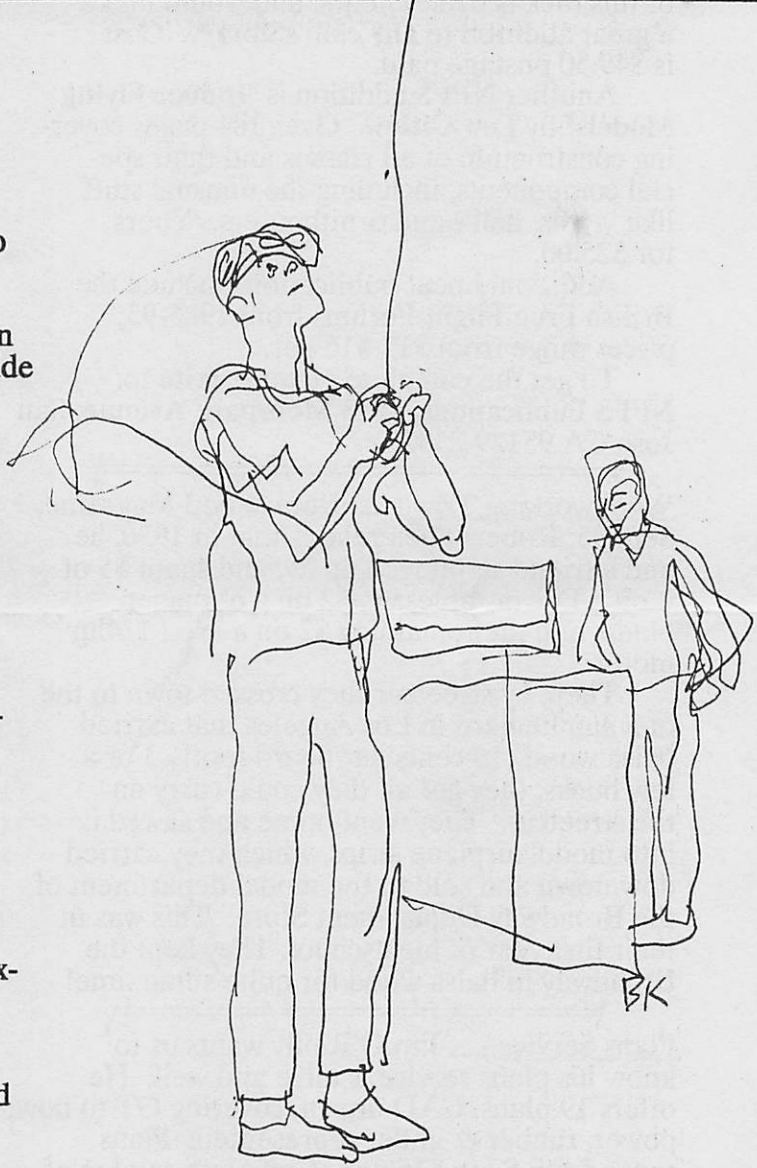
Multispar wings with their line segment approximation of an airfoil curve (complete with covering sags and discontinuities), yield a "natural" turbulator effect, and on slower gliding models generally perform better than their smooth-sheeted counterparts. (And remember that a wing with a very sharp leading edge is self-turbulating.)

Testing, testing .....

Using a well-trimmed, non-turbulated model as a baseline, the first thing you'll notice during "before-and-after" glide tests is the model will exhibit a nose-down, or diving tendency after the turbulators are added - an indication that the center of pressure has now shifted rearward (more of the wing is contributing lift).

One explanation, offered by Australia's **Jim Fullarton** (in a 60's Zaic yearbook) is: most of

(cont'd p.4)

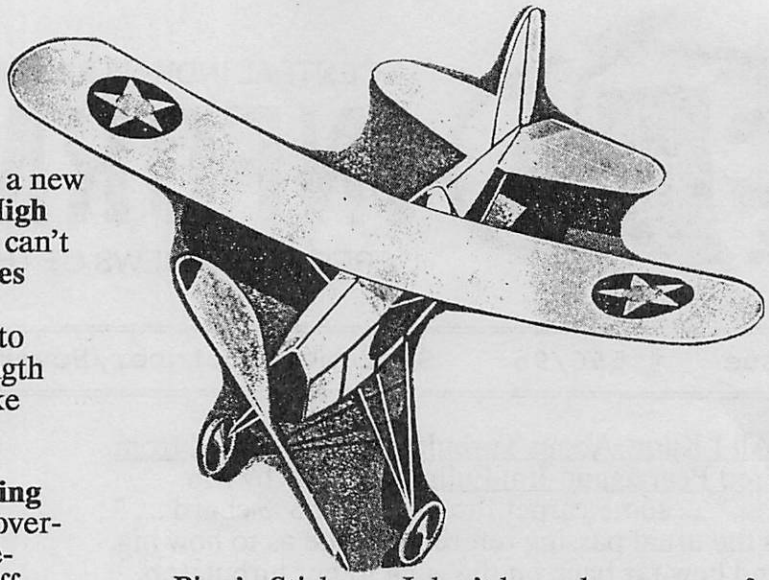


The Gospel According To Killer Bee - (Bob Larsh)

The Nostalgia Committee has approved the use of the **Cox Killer Bee** engines for NOS competition. This approval requires that the Cox glow head P/N 325 (Medallion plug) be used in lieu of the Tee Dee P/N 1702 hi-compression head as furnished with new engines.

The Killer Bees are manufactured with boost ports in the intake bypasses. Therefore, this decision is consistent with the stipulation that

(cont'd p.3)



From the NFFS .... NFFS Publications has a new offering -**"Construction Techniques Of a High Powered Free Flight Model Aircraft".** You can't miss on this one! It's done by **Bob Johannes** of the St. Louis Thermaleers.

It covers construction from beginning to end, and includes flight trimming. The length of this flick is over 4 hours, and would make a great addition to any club's library. Cost is $49.50 postage paid.

Another NFFS addition is **"Indoor Flying Models"** by **Lew Gitlow.** Over 184 pages covering construction of all classes and their special components, including the unusual stuff like 'gyros, heli's and ornithopters. Yours for $25.00.

Additional neat publications include the British Free Flight Forums from 1985-93; prices range from $12-$16 per.

To get the complete picture, write to: NFFS Publications, 4858 Moorpark Avenue, San Jose CA 95129-2132.

Woodworking Trivia ..... from Wood Magazine, Sept'95: Robert Shea relates that in 1930, he and a friend scrounged up $9, and spent $5 of it on a Driver tablesaw, $2 on a 6" planer blade, and the remaining $2 on a used 1/4hp motor.

Then, by streetcar they crossed town to the only lumberyard in Los Angeles that carried balsa wood (15 cents per board foot!). For a few bucks, they got all they could carry on the streetcar. They went home and sawed it into model airplane strips, which they carried downtown and sold to the model department of the Broadway Department Store. This was in their first year of high school. They kept the Broadway in balsa wood for quite some time!

Plans Service ..... Jim O'Reilly wants us to know his plans service is alive and well. He offers 19 plans, CAD drawn, covering OT to now; power, rubber & glider represented. Plans range from $7 to $15 per. Complete catalog of goodies only $2. A sample plan from the collection is shown on the facing page.



The ZIPP

Pigs 'n Sticks ..... I don't know how many of our readers heed the weather lore tidbit on the front page of every Informer, but at least one has worked out on a couple different occasions! Remember *"when pigs carry sticks, the clouds will play tricks"* some issues back?

One of the guys I work with raises pigs, and was amused by the saying when he spotted it on that issue posted in the hobby shop (my part time thing). Then, one day last year some of his pigs started running around kinda nuts - carrying sticks. Shortly thereafter a tornado went thru a half mile south of the farm!

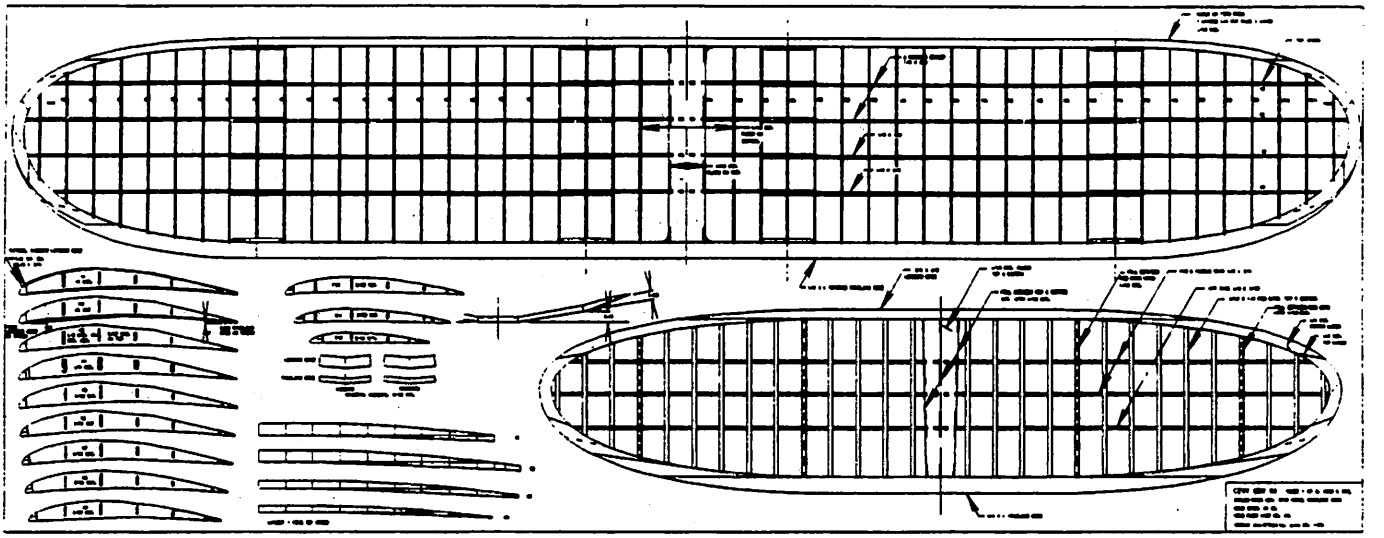
Yesterday the pigs were doing the same thing, except this time with no sticks around, they had to tear some wood out of their stalls to have something to carry. The day proceeded to deteriorate from a rather mild, windy one to thunderstorms, constant rains, and a tornado watch for the southern part of the state. We woke up the next morning to high winds and snow!

Pigs know!! - MJW

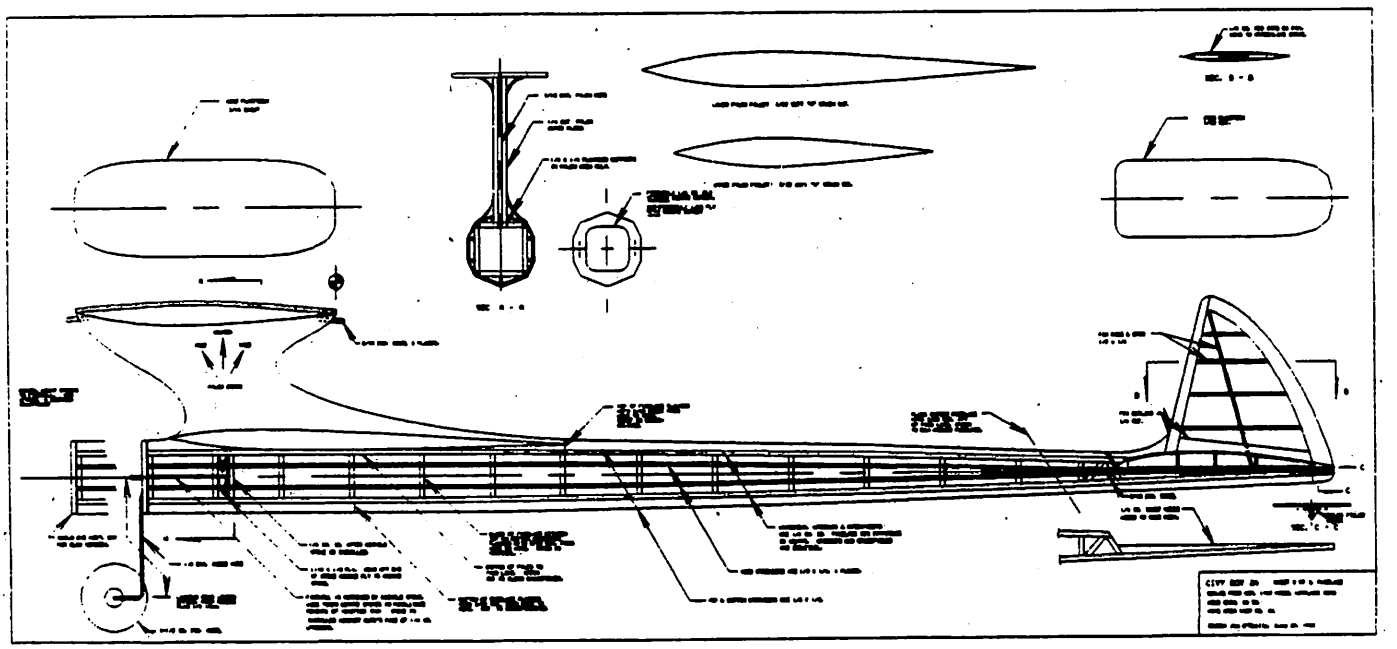
Covering Stuff ..... Agent **Dick Covalt** has recently been searching for a replacement for the venerable (but light) Solarfilm that's been his favorite covering for many years. Although it's early in the game, he kinda likes the new **Goldberg Ultracote.** It weighs in at 1.46 oz/yd^2 - about halfway between flexy Solarfilm and leaden Monokote.

Iron-On Carbon Fibre ..... California Carbon (P.O. Box 39, Jamul, CA 91935) offers iron-on CF composite. It's impregnated with hot-melt, allowing quick attachment to your wimpy surfaces. A blast of CyA bonds the whole mess together, making for a stiff assembly. (Careful - too much CyA on this sponge can make it a heavy assembly!) It's unidirectional and .007" thick, boasting a tensile strength of 375# per 1/4" strip.

Prices: 1" X 48", $5.50; 2" X 48", $9.00; 12" X 48", $18.00. They've got more hi-tech stuff, too. Send for their catalog.



Paul Gilliam's Civy Boy 84



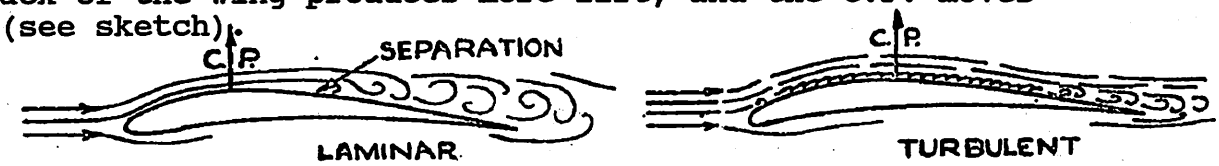
(Killer Bees ... cont'd)
the Medallion, which also has boost ports, be required to use the #325 head. The #325 is also required in the manufacture of replacement heads for the Holland Hornets. The Cox #1702 head will continue to be eligible for the approved rear intake Coxes which do not employ boost ports.

Additionally, other than the required substitution of glow plugs, the Killer Bees are to be flown stock out of the box with no mods, rework or substitution of parts. The plastic backplate may be trimmed down to fit firewalls if necessary, and the factory optional KB tank is approved for use.

The performances of the KBs will be monitored and evaluated over the next year as contest experience is gained. We will then determine if any changes should be made.

We did find during our tests that the KBs do thrive on high nitro fuels and that Cox's recommended 50% mixture is absolutely correct. - R. Larsh

Turbulators (cont'd ...)
the lift comes from the upper surface. With laminar flow at low (sub-critical) RN's, separation occurs well forward -<u>near the point of max camber</u>. This means that the back part of the wing is doing very little work, so that most lift comes from the forward part, hence the forward C.P. With a turbulator the flow sticks to the upper surface much longer, the back of the wing produces more lift, and the C.P. moves back (see sketch).



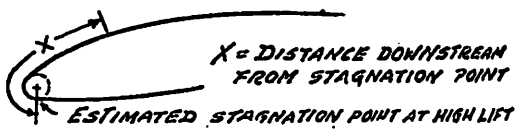
Although there's a much greater boundary layer thickness in the case of the turbulent condition, the velocity close to the surface is <u>greater.</u> As a result, the onset of stall may be delayed by as much as 4 or 5 degrees!

A couple of neat byproducts are obvious - less nose ballast may now be used, lightening up a given model; or a shorter nose moment may be used on the model, reducing its moment of inertia and making it more responsive. Your choice.

* Note: if you're skeptical and like to run "good wing-bad wing" tests (one with; one without), don't be puzzled like I once was, when a test model did a nose-down turn <u>into</u> the wing with the turb's. What's happening doesn't have as much to do with lift and drag, than the fact that the c.p. of the turbulated wing panel has moved back! The wing's total c.p. line *is now skewed* (spanwise) causing the model to turn toward the turb'd wing. Just like putting your wing on crooked. Furthermore, since the wing's net c.p. (hence, the model's aerodynamic center) is more rearward than before, the C.G. is now a bit wrong causing a nose heavy tendency in the model's trim. As mentioned before, a turb'd model (vs. the same model non-turb'd) experiences a C.G. shift that must be trimmed out!

The Nuts 'n Bolts .....

Now, to figure out "how big" and "where at" for a given model, we'll borrow from **Fred Pearce's** writings. I'll also include a practical example of square strip turbs for a Wakefield model flying at 20 ft/sec. Proceed as follows: First, estimate the stagnation point (the point where the airstream splits into its upper & lower surface paths) for the airfoil you're working with. This can be approximated by the point of tangency of the leading edge radius and the lower camber (see sketch below). (This point is needed to figure the magical distance downstream, or **"X"**.)



Next, determine **Rk** for your favorite turb style. (The critical Reynolds Number value for a round strip=440 or a square one=360).

Estimate or calculate your model's velocity U_∞ (the "free stream velocity") where you want the turb's to work; units are ft/sec.

How Tall?? The next step is to calculate the required turbulator thickness. Use the following formula, or grab the value from Chart A. (Remember that the units are in ft. - don't forget to convert!)

$Rk = (U_\infty)(k)/(\gamma)$ $\quad (\gamma) = 1.63 \times 10^{-4}$ $\quad U_\infty = 20$ $\quad Rk = 360$

$k = (\gamma)(Rk)/U_\infty = (1.63 \times 10^{-4})(360)/20 = .00293\text{ft} = \underline{.035\text{in}}.$

Where?? Finally, experimental data indicate that the most sensitive or effective location for the tripping device is where the boundary layer is 1.25 times as thick as the device, so figure the distance downstream from the stagnation point where the boundary layer is 1.25 times as thick as the turbulator you just found (distance "X"), using the following formula or picking the value from Chart B.

$= 5\sqrt{(\gamma)(X)/(U_\infty)}$; $\delta = 1.25k$; $k = .00293\text{ft}$.

$X = (k^2)(U_\infty)/162$ $\qquad \gamma = 1.63 \times 10^{-4}$

$X = (.293)^2 \times 10^{-4}(20)/16(1.63) \times 10^{-4} = .0659\text{ft} - \underline{.781\text{in}}.$

And there we have it!

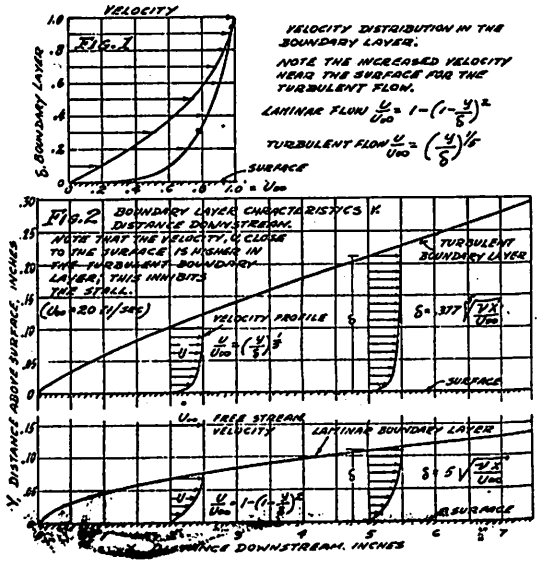
The numbers work! As an extreme example of a wing turbulator application, the numbers were run to fit these devices to an *indoor* model (a limited pennyplane), just for the hell of it! Since the speeds were slow (3.5 ft/sec), a somewhat rearward (45 % location) and rather tall (approx 3/16 in) turbulator was indicated by the math due to the very thick boundary layer at these Reynolds numbers. A bit skeptical of the numbers at first, I installed shorter turbs (they couldn't be *that* tall!) - and nothing happened! When I finally built them "to spec", the model exhibited the characteristic nose-down flight attitude, marking the successful excitation of the boundary layer. Believe the formulae! -MJW

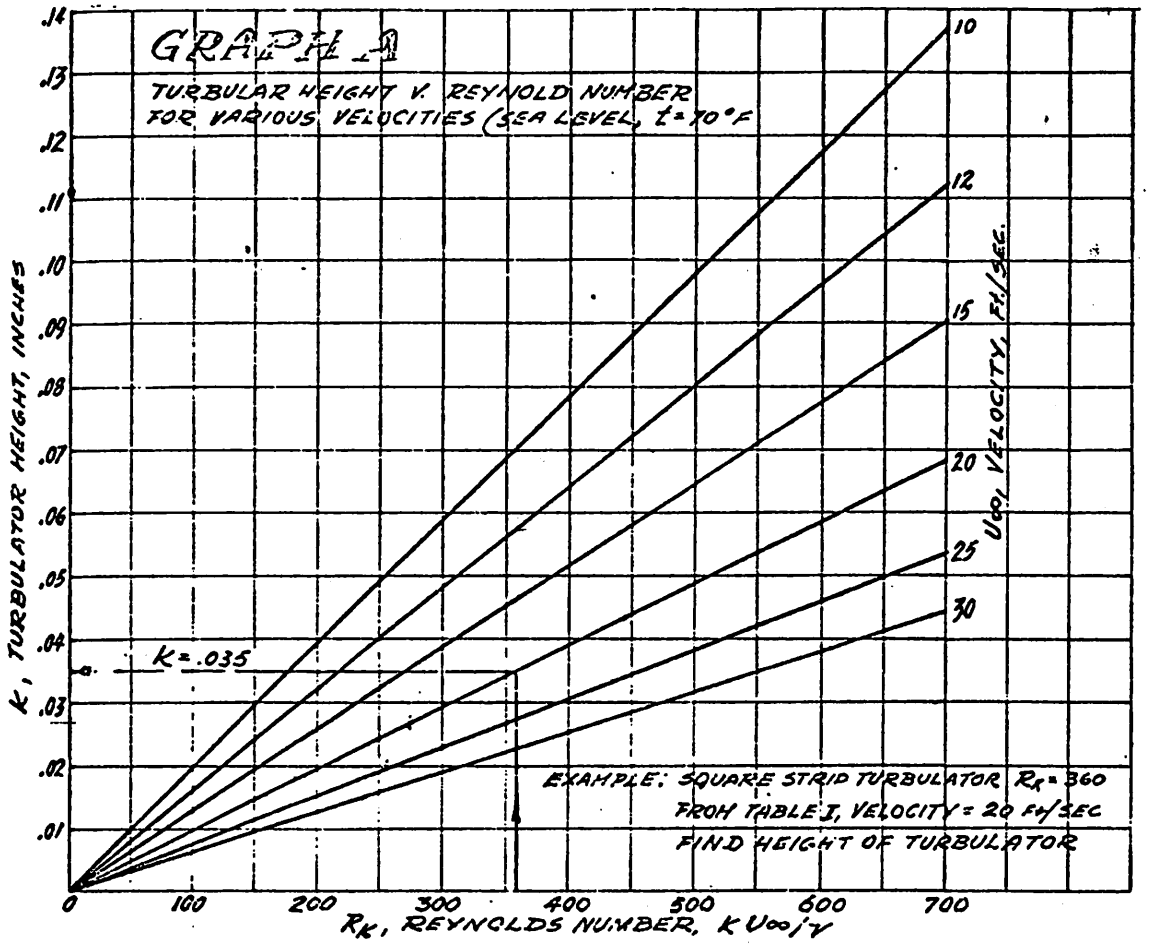
ADDITIONAL USEFUL INFO

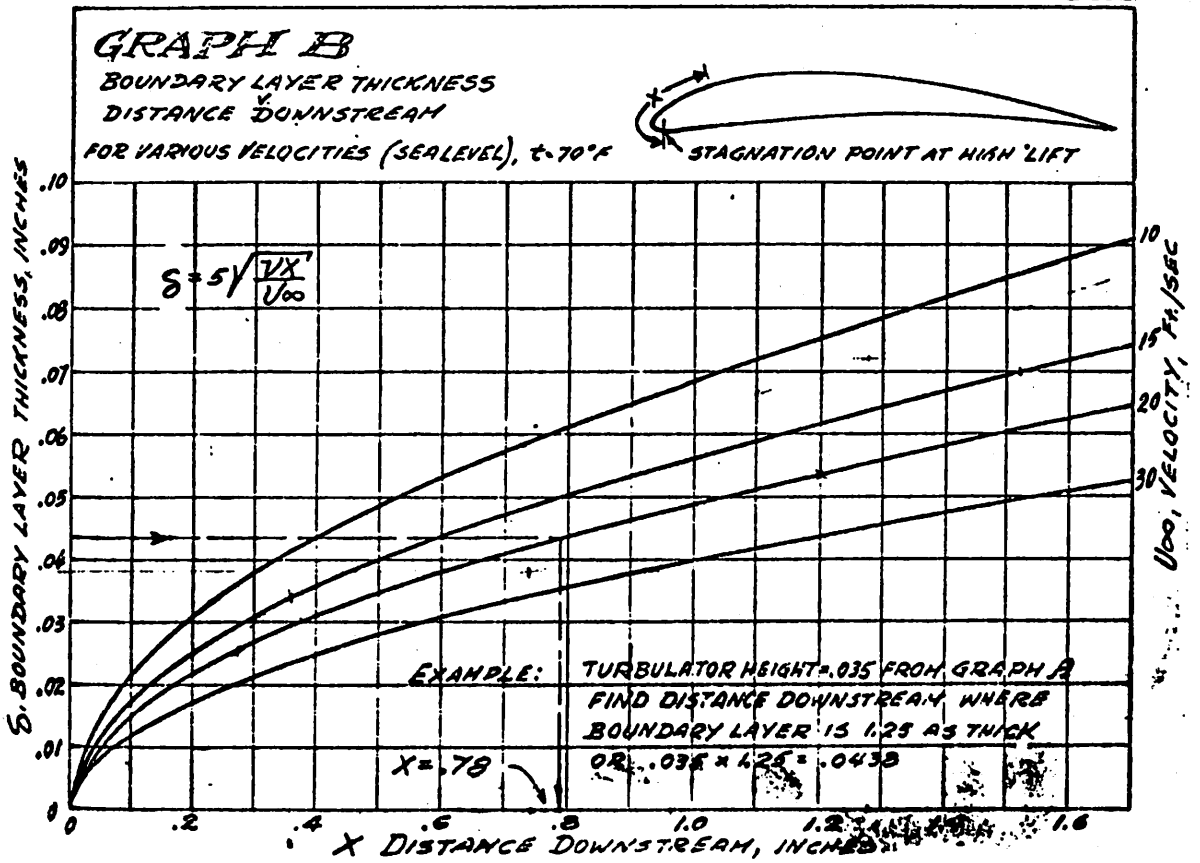
Critical Reynolds Numbers for Transition from Laminar to Turbulent Flow at the Device

DEVICE	R_k FOR FLAT PLATE AT $\alpha=0$	R_k FOR AIRFOIL AT HIGH LIFT
ROW OF SPHERES	570 MIN.	1140
SANDPAPER TYPE	320 "	640
ROUND STRIP OR WIRE	220 "	440
SQUARE STRIP	180 "	360
TRIANGULAR PATCHES	50 "	100

These data for the Rk for a flat plate at zero angle of attack are derived from several sources. The values of Rk for an airfoil at a high angle of attack are estimated to be twice the value for the flat plate at zero angle of attack. At Rk even slightly below the critical size, turbulators become ineffective.




GRAPH A
TURBULAR HEIGHT V. REYNOLD NUMBER
FOR VARIOUS VELOCITIES (SEA LEVEL, t = 70°F
k, TURBULATOR HEIGHT, INCHES
U∞, VELOCITY, FT./SEC.
10
12
15
20
25
30
k = .035
EXAMPLE: SQUARE STRIP TURBULATOR R_k = 360
FROM TABLE I, VELOCITY = 20 FT/SEC
FIND HEIGHT OF TURBULATOR
R_k, REYNOLDS NUMBER, k U∞/ν


GRAPH B
BOUNDARY LAYER THICKNESS
DISTANCE DOWNSTREAM
FOR VARIOUS VELOCITIES (SEALEVEL), t = 70°F
STAGNATION POINT AT HIGH LIFT
δ = 5√(νX/U∞)
δ, BOUNDARY LAYER THICKNESS, INCHES
U∞, VELOCITY, FT./SEC
10
15
20
30
EXAMPLE:
TURBULATOR HEIGHT = .035 FROM GRAPH A
FIND DISTANCE DOWNSTREAM WHERE
BOUNDARY LAYER IS 1.25 AS THICK
OR .035 × 1.25 = .0438
X = .78
X DISTANCE DOWNSTREAM, INCHES

Spark Plug Stuff .....

Seemed like we kicked up a bit of interest with **Dick Covalt's** Informer article on the CT90 spark plugs. Here's some additional tips from various respondents:

Jim O'Reilly has a 1972 K4 CT-90 that has had a tendency to foul plugs. In his case the plug fouling seemed more related to carburetion than ignition. In addition, if the headlight was turned on it often refused to kick-start, especially if the battery was low. But even balky, a "run & bump" would usually start it - until a recent move, when it became near-impossible to start. He finally replaced the battery, and had the plug(s) sandblasted. It now took less of a push, but still wouldn't kick start.

He next looked into the points & timing. The points on a Trail 90 live in a chamber of the LH side of the head and they are driven by the camshaft. When he pulled the cover, water ran out! And the points were badly oxidized (not pitted) - an obvious high resistance contact!

After cleaning/polishing the points, guessing at a clearance for timing and reassembling, it fired on the first kick and started on the second!

Jim's "point" is, he's willing to bet that any Trail 90 will run well on resistor plugs as long as the points, plugs and timing are 100%!!

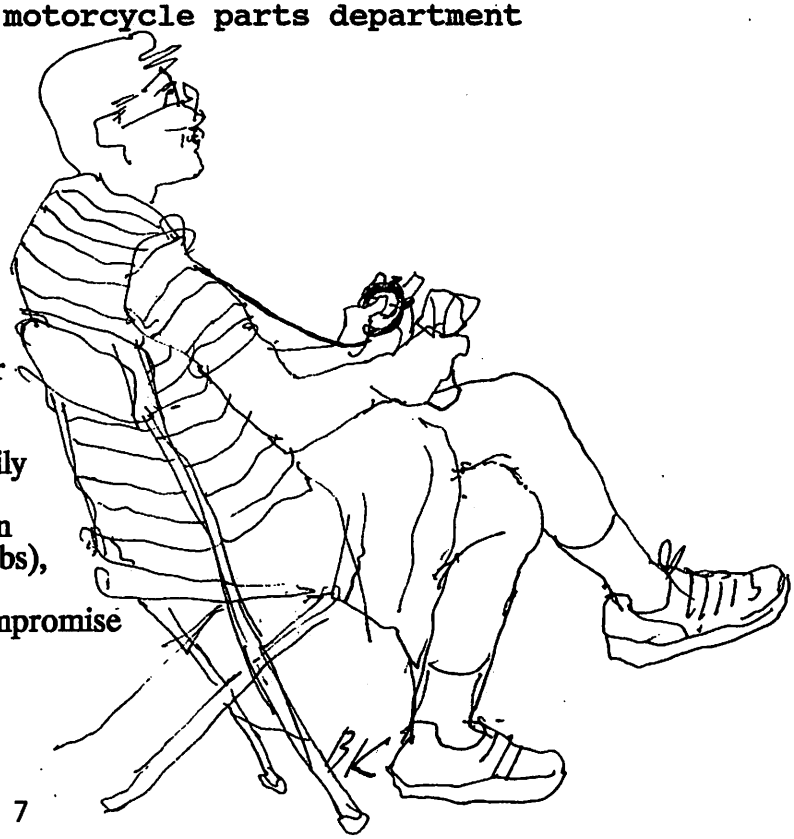
And **John Irwin** sez "go to a Suzuki dealer and ask for a D8HA plug". He was told some years ago, that this plug replaced the D8HS. He uses the D8HA plug in his Trail 90 with no problems.

Joe Clawson relays that after a little research (and a call to a local Falls Church, VA, Honda cycle dealer), the NGK D8HS plug is available and in stock at $1.75 each. Sometimes you have to go to the motorcycle parts department to get motorcycle parts .....

A neat book ..... Check out Cecil Lewis' book "All My Yesterdays" - an autobiography of an unusual person! There's plenty of historical aviation adventure spanning WWI, China in the 20's & 30's, thru WWII. After WWII, his career direction switches a couple more times - all fascinating!

And a Balsa Reminder ... All you need to remember about "A", "B" and "C" grain balsa sheets is this:

* "A" grain - long, parallel grain lines. Stiff in length, but weak in width. Prone to warps, but easily forms tubes & cowls.
* "C" grain - "mother-of-pearl" or "curly" look. Stiff in length and width. Warp resistant (the choice for ribs), but shatters or splits easily.
* "B" grain - halfway between "A" & "C". A good compromise when you can't find the other two!



11-1-95

1996 C.I.A. AREA CONTEST CALENDAR

JAN 27	HAGERSTOWN, IN	C.I.A. WINTER BANQUET
APR 12-14	TOLEDO, OH	R/C EXPO
MAY 4-5	MUNCIE, IN	THERMALEER FF MEET
4-5	COLUMBUS, OH	MECA COLLECTO
11-12	--	MOTHER'S DAY WEEKEND
18-19	MUNCIE, IN	ADVENTURE V FF MEET
25-29	--	MEMORIAL DAY WEEKEND
MAY 29 to JUN 2	JOHNSON CITY, TN	USIC/AMA INDOOR NATS
9	BONG, WI	AERONUTS O.T. FF MEET
15-16	WPAFB, DAYTON, OH	FF MAS FF MEET
22-23	STURGIS, MI	M.A.M. O.T. FF MEET
29-30	GALEVILLE, NY	EASTERN FF CHAMPS
JUL 6-7	WPAFB, DAYTON, OH	C.I.A. O.T. & NOS GAS FF MEET
13-14	BONG, WI	FAI INVIT/IMAC (SUNDAY)
22-26	MUNCIE, IN	AMA FF NATS
28	STURGIS, MI	JIMMIE ALLEN & O.T. RUBBER (C & D ONLY)
AUG 3-4	WPAFB, DAYTON, OH	NOFFA FF MEET
11	BONG, WI	BONG EAGLES/PELICANS FF MEET
18	BONG, WI	AERONUTS O.T. FF MEET
17-18		
25	BONG, WI	MIDWESTERN STATES FF MEET
31-2	--	LABOR DAY WEEKEND
SEP 7-8		
14-15		
21-22	MUNCIE, IN	C.I.A. FALL REGIONAL FF MEET
28-29		
OCT. 5-6	LAWRENCEVILLE, IL	TRI-CO AERO CLUB FF MEET
12-13		
19-20	WPAFB, DAYTON, OH	(PRACTICE SESSION)
26-27	PENSACOLA,FL	SAM CHAMPS (APPROX. TIME)
NOV 3	COLUMBUS, OH	MECA COLLECTO

SEND ANY COMMENTS TO H. S. MURPHY, 3824 OAKWOOD BLVD., ANDERSON, IN 46011 (317) 642-7377 ASAP.

CONSTRUCTING A FIBERGLASS TUBE FOR A FREE FLIGHT MODEL THE "LOW TECH" 1968 WAY

by

Dick Covalt

Note: This article was written in October 1970 but was not published. The technique described was developed in 1968 and used to build all classes of gas free flight fuselages until the early 1980's. Bob Mattes enhanced this technique in the mid 1970's with the use of preinpregnated glass cloth and aluminum forms. It is still valid today and probably just as applicable with newer materials. I have been told that a technique similar to this was used to build ventilation ducts for WW II bombers.

CONSTRUCTING THE TUBE

The form for a fiberglass tube may be considered the same as that necessary to construct a balsa tube with the exception that it should be a straight constant taper. Compound curves cause great difficulty when forming the tube, and long straight sections cause difficulty when removing the tube from the form.

If you don't have access to the tools to turn a form and are not inclined to carve one there is an alternative method. Find a piece of brown wrapping paper the length of the tube desired and about 2/3 as wide. Simply roll a tapered tube of the size you desire with the inside diameter plus one thickness of paper being the finished size of the tube. As an alternative make the tube a few inches longer than needed with the big end bigger and the small end smaller than required then cut to length at the correct outside diameters. Don't expect to get it the first time. If you are especially particular it could take a couple of dozen attempts to get the first one. Push a wooden dowel the same size as the small end through the small end with the rest of the dowel inside the paper tube. Tape securely at the small end. Prop the tube vertically with the small end down such that the paper tube is not deformed. Fill with epoxy resin and let harden. I do not recommend polyester for this step because the cure rate is too fast and the tube will get hot and surely warp.

When the epoxy is cured remove as much of the paper as possible, sand and apply a final finish. Polyester resin make a good final finish on the form. Sand the ends of the form square and drill center holes in each end.

It will be necessary to rig up something to support and let the form turn on the center holes in order to construct the tube. After you have the form on centers tape on about 1-1/4 turn of shelf paper. Scotch magic mending tape works very well. Tape very sparingly to the form as the tape must be pulled loose to remove the form from the completed tube. Now cover the form and shelf paper with monocote. Any color is OK. The monocote is the entire secret to making a strong tube as it gives a very smooth surface to start on and does not penetrate the glass cloth as release agents do.

Using glass cloth of the appropriate weight lay out what is needed for four layers. Glue a dowel to each side making sure the cloth is laying out with the fibers pulled tight. Lay one dowel over the form and let the other dowel hang pulling the cloth tight. Run a bead of polyester along the form and cloth and let harden. Now cut off the one dowel at the form and start applying the cloth and polyester resin. The best method is to rotate the form about 1/3 turn and apply the resin on top of the cloth. Continue rotating and applying the resin pulling out wrinkles as necessary.

The secret to making a light tube is to apply only enough resin to wet the cloth and no more. When the final dowel is reached cut it off and finish up with the cloth left. After the resin has hardened lightly and apply any local strengthening such as an extra 1 or 2 layers of cloth at the nose. Give the whole thing another cost of resin. Sand smooth when hard and apply a very thin finish coat and then finish sand.

To remove the tube I usually push the small end of the form against the head of a spike nail driven into something solid. If you didn't use to much tape the form should be easily pushed out. With the form out you will find that the paper and monocote is still inside the tube. To remove pull loose at small end with a knife and twist with needle nose pliers then push out from the small end with a dowel. The paper and monocote should turn inside out as it is pushed out and leave the tube clean.

If you have done the job well you now have a superior free flight fuselage. Happy Flying.

CIA Consumer's Report - by Murph

What they don't tell you about newly advertised hobby products!

* **"Revolutionary Electronic Flight Timer"**
  ... only works with a 58lb, 12v auto battery.
* **"Satisfaction Guaranteed"**
  ... until your checks clears.
* **"Meets Quality Standards"**
  ... theirs, not yours.
* **"No Maintenance"**
  ... impossible to fix.
* **"Hand Crafted"**
  ... the machine that made it was operated without gloves.
* **"Exclusive"**
  ... made in Taiwan.
* **"Field Tested"**
  ... manufacturer lacks proper test equipment.
* **"Direct Sales Only"**
  ... manufacturer couldn't find any distributor that would handle it.
* **"Breakthrough"**
  ... they finally figured out a way to peddle it.

... and a CIA Record Review! - by Mo

This one is intended for you modelers blessed with a **roaring** stereo system at your disposal, a love of the sounds of the big Vees and Rounds, (Hardy sould dig the rhyme!) and neighbors you'd like to get even with! (Or something completely different to get eyes, cruisin' in your lo-rider!)

I recently came into possession of a really great CD sampler of aircraft sounds - a P-38 being stunted; inside the P-51 during startup, taxi & flight; the unlimiteds and AT6's at Reno - qualifying and heat races, including 'maydays'; inside the Lockheed Electra - taxiing, takeoff and climb to altitude (everything Amelia heard!); and much more! All extremely well recorded.

These sounds are available on the *Sounds of Aircraft Sampler* (**AirCraft Records #AC-D1**). Each segment of the sampler is also available as a complete, expanded program on it's own CD (or cassete).

For more info, contact Perfect Pitch Music Marketing, 704 Gilman St., Berkeley, CA 94710. Or phone (510) 528-0860. - MJW

Free Flight Aeromodelers Society

August 19-20, 1995 Contest - Wright-Patterson AFB, Ohio

Contest Directors: Marty Richardson - Joe Mekina

1/2 A Gas (O) (9 Entries)

1st	Norm Poti	1050 secs
2nd	Keith Fulmer	1035
3rd	Steven Frazier	577
4th	Bob Placier	277
5th	Donald Boyer	254
6th	Frank Heeb	240
7th	James Keppler	237
8th	Jacob Noble	232
9th	Tom Jones	157

1/2 A Gas (Jr/Sr) (2 Entries)

1st	Billy Reuter	218 secs
2nd	Jon Reuter	95

A Nostalgia Gas (8 Entries)

1st	Keith Fulmer	360 secs
2nd	Jacob Noble	349
3rd	Harry Murphy	319
4th	Gene Bowers	312
5th	Bill Hale	243
6th	Elmer Jordan	180
7th	Shel Myers	167
8th	Bill Hall	130

Hand Launch Glider (Sr/Open) (5 Entries)

1st	Joe Mekina	284 secs
2nd	Norm Poti	275
3rd	Phil Sullivan	266
4th	Tom Jones	148
5th	Bill Reuter	76

Hand Launch Glider (Jr) (4 Entries)

1st	Daniel Vest	296 secs
2nd	Billy Reuter	94
3rd	Jon Reuter	56
4th	Jason Poti	31

B Gas (4 Entries)

1st	Dick Covalt	595 secs
2nd	Gib Robbins	342
3rd	Steve Frazier	237
4th	Harry Murphy	211

C/D Gas (4 Entries)

1st	Mark Wood	600 secs
2nd	Norm Poti	556
3rd	Dick Covalt	433
4th	Andy George	DNF

B/C Nostalgia Gas (6 Entries)

1st	Harry Murphy	360 secs
2nd	Shel Myers	342
3rd	Bill Hale	291
4th	Gene Bowers	240
5th	Warren Weisenbach	138
6th	Elmer Jordan	69

Catapult Glider (Sr/Open) (6 Entries)

1st	Joe Mekina	356 secs
2nd	Mark Wood	297
3rd	Norm Poti	264
4th	Phil Sullivan	199
5th	Tom Jones	191
6th	Bill Reuter	72

Catapult Glider (Jr) (4 Entries)

1st	Billy Reuter	151 secs
2nd	Dan Vest	92
3rd	Jason Poti	90
4th	Jon Reuter	63

Open Glider (1 Entry)

1st	Warren Weisenbach	360 secs

Open Power (7 Entries)

1st	Norm Poti	600 secs
2nd	Gib Robbins	557
3rd	Mark Wood	532
4th	Bob Perkins	360
5th	Don Boyer	214
6th	Bob Placier	154
7th	Dick Covalt	115

1/4 A Nostalgia Gas (8 Entries)

1st	Harry Murphy	340 secs
2nd	Bill Reuter	312
3rd	Bill Hale	306
4th	Tom Jones	292
5th	Shel Myers	283
6th	Roger Lane	223
7th	Gene Bowers	221
8th	Elmer Jordan	197

1/2 A Nostalgia Gas (10 Entries)

1st	Harry Murphy	720 secs
2nd	Bill Hale	637
3rd	Keith Fulmer	530
4th	Shel Myers	438
5th	Gene Bowers	294
6th	Warren Weisenbach	228
7th	Bob Placier	226
8th	Bill Reuter	192
9th	Floyd Miller	181
10th	Elmer Jordan	76

Open Rubber (2 Entries)

1st	Martin Richardson	335 secs
2nd	James Keppler	300

A Gas (5 Entries)

1st	Dick Covalt	1050 secs
2nd	Steve Frazier	354
3rd	Charles Mortimer	320
4th	Don Boyer	262
5th	Andy George	120

P-30 Rubber (Open) (5 Entries)

1st	Martin Richardson	360 secs
2nd	Steve Sova	317
3rd	Warren Weisenbach	313
4th	Frank Heeb	290
5th	Roger Lane	53

P-30 Rubber (Jr/Sr) (2 Entries)

1st	Jon Reuter	92 secs
2nd	Billy Reuter	74

The weather, although hot, was some of the best we have seen at WPAFB for a contest this year. We started out at the North end of the field in the morning and finally ended up moving South along Loop Road later in the afternoon when the wind shifted more from the East. Sunday flying was from the same location with light and variable winds eventually settling down at less than 5 mph from the East.

On Saturday, August 19, Norm Poti continued his string of maxes in 1/2 A Gas. He accumulated a total of 27 min 19 secs for a new Category III National Record. He actually broke his own record set earlier this year at Muncie. The flight times of Dick Covalt in A Gas and Harry Murphy in 1/2 A Nostalgia Gas are an indication of the great weather we had as well as the level of competition. Dan Vest's score of 296 secs on Saturday in Junior HL Glider put several of the older "experts" to shame.

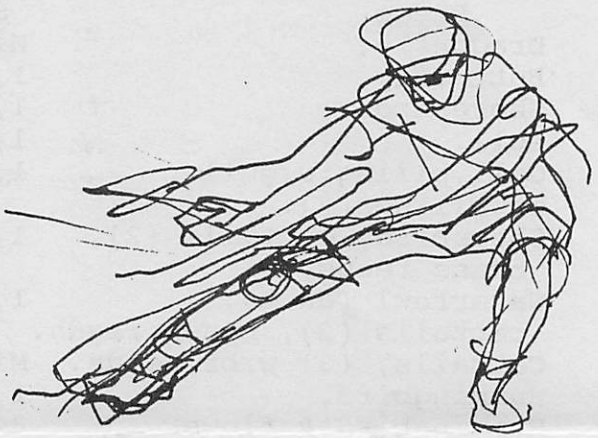
The Open Power fly off was flown at 8:45 on Sunday morning. Although the winds were light from the East, the idea of an unlimited flight time was changed in favor of a 5 sec engine run with a 4 minute max. Norm Poti was the only flier to make the max. Gib Robbins attracted the attention of some female soccer players (the model, not Gib), when he drifted over their playing field and made a perfect 3 point landing on Loop Road.

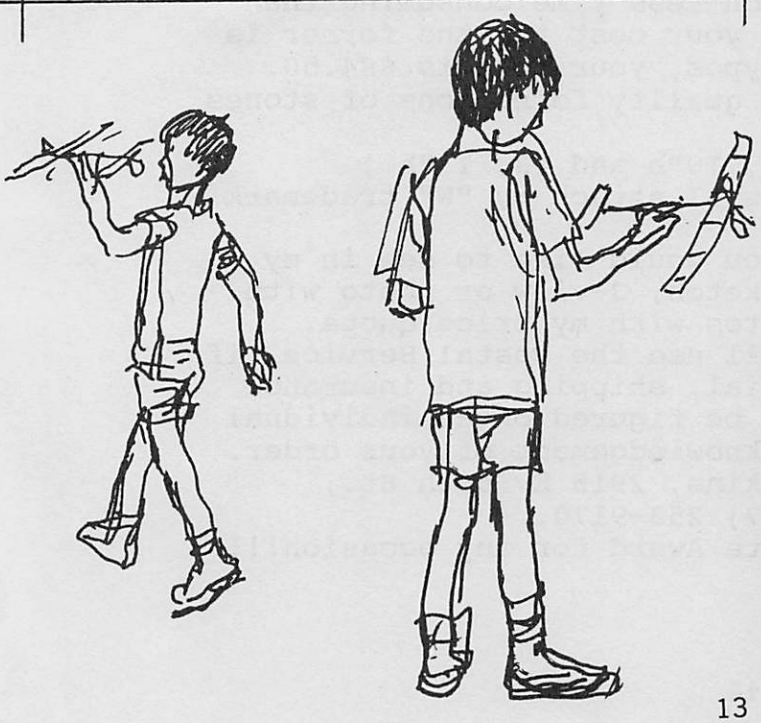
Merchandise awards were donated by: Aerospace Composites, the Hobby Hanger (Bob Laybourne), Campbell's Custom Kits, Carl Goldberg Models, Coverite, Dremel, FAI Model Supply, Fiberlay, Hobby Lobby International, House of Balsa, Lone Star Models, Oldtimer Model Supply, Omni Models, Poti's Hanger Products, Satellite City, Sig Manufacturing, Starline International, Superior Aircraft Materials and Tower Hobbies.

Special thanks are due Beth and Cris Mekina, Joe's daughters, for taking care of the registration work on Saturday, also Ellen Poti and Frank Heeb for helping with score keeping when Joe and I were flying.

Again the Records Go Up. 1933 Model Plane Champions Shatter All Former N.A.A. Marks. Gasoline Engine Models Successful

Maxwell Bassett, Philadelphia, "stole the show" outdoors by capturing all three events with his gasoline powered models. Bassett flew one of his fuselage models 28 minutes, 18 seconds to establish a new gasoline engined model record and won the Rear Admiral William A. Moffett Memorial Trophy for international competition, another new N.A.A. annual trophy. He won the Mulvihill Trophy with a flight of 14 minutes, 55 seconds, took the Stout Outdoor Contest with a flight of 22 minutes, 22½ seconds and won the Texaco Trophy, also a new N.A.A. annual trophy, by making the best gasoline engine flight in the meet. Due to Bassett's demonstration of internal combustion powered model planes, N.A.A. officials have decided that henceforth rubber power will not compete against gasoline.

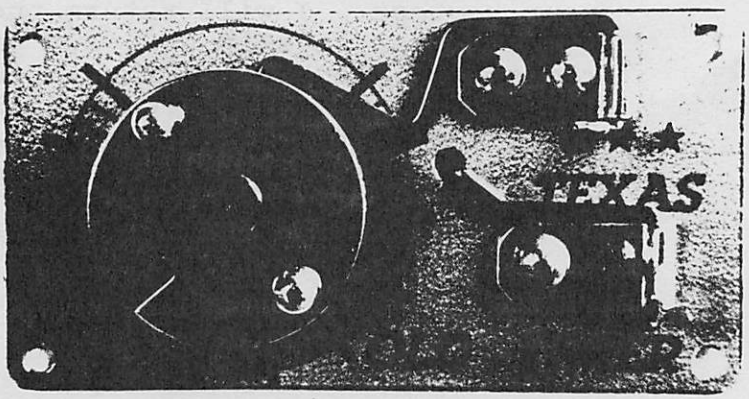




From Texas Timers ..... Among **Hank Nystrom's** latest offerings are the Texas Old Timer "A" (with up to 10 second quick DT @ $40.00 - shown below) and "B" ($38.50, no DT), specifically designed for ignition engine timing. Engine runs may be varied up to a full 30 seconds in length.

Both models are supplied with a snubber capacitor on the switch for long contact life, plus pre-attached & strain-relieved wires for easy timer installation. The 2" X 1" unit weighs in at 22g.

The switch is mounted at the inside rear of the timer, isolating the electrical stuff from oil & gas. For more info, drop Hank a SASE at Texas Timers, 3317 Pine Timbers Drive, Johnson City, TN 37604, or call (615) 282-6423.



The Wirecrafter .....

Many of you know this guy, having competed against him. Some of you may not realize his artistry. Agent **Don Jenkins** is the one that creates those great moving (fluttering) wire sculptures that often wind up as treasured awards for various free flight achievements. This is a blatant plug for his wares!

Sez Don: "these are the same prices I charge the consignment shops that have handled my work in the past. They are approximately 35% of the normal retail prices which you would pay in a shop that sells my work. I have sold many of these sculptures to modelers at swap meets, contests, etc. Each piece is guaranteed FOREVER against my workmanship, and the stone bases have been around for many millions of years!"

Piece	Size	Cost
Dragonfly.	Mini,1,2,3	$6.50, $8, $10, $13
Butterfly.	1,2,3	$10, $13, $16
Shorebird.	1,2,3	$10, $13, $16
Gull.	1,2,3	$10, $13, $16
Gull,piling;w/gull on piling (2).	1,2,3	$21.50, $25, $30
Shorebird, cattails (2), brass reeds.	1,2,3	$21.50, $25, $30
Waterfowl (duck), cattails (2), brass reeds.	1,2,3	$21.50, $25, $30
Cattails, (3) w/br reeds.	Mini,1,2,3	$19, $21.50, $25, $30
Hummingbird.	1,2,3	$10.50, $13, $16
Hummingbird & flower, w/brass leaves.	3	$30
Warbird (biplane).	2,3	$24.50, $27.50
Warbird (triplane).	2,3	$27.50, $31.50
Helicopter.	3	$31.50

Kite flyer. This has to be the Ultimate in Motion Sculpture! You gotta see it to believe it. Child figure with kite on a 30" 'string', running, standing, sitting, reclining, whatever position the super quality mineral formation will allow. The Standing and Running kids are much less time consuming than the reclining, sitting, etc, and your cost for the former is $71.50. For the more difficult types, your cost is $84.50. The latter figures are on museum quality formations of stones and minerals.

(Sizes -- Mini, 6"h: #1, 8"h: #2, 10"h and #3, 13"h.)

On each stone, all sculptures, I attach my "W" trademark. ACCEPT NO SUBSTITUTES!

If you have a subject that you would like to see in my Motion work, send along a good sketch, 3-view or photo with your request. I will return photos with my price quote.

I prefer to ship UPS, but will use the Postal Service, if requested. Packaging, very special, shipping and insurance will run a bit extra. Cost will be figured on an individual basis and be included with my acknowledgement of your order.

Interested? Contact Don Jenkins, 2915 E. 65th St., Indianapolis, IN 46220. Ph (317) 253-9170.

These pieces make the Ultimate Award for any occasion!!!

BOX SCORE: 23RD ANNUAL C.I.A. REGIONAL FALL FF MEET OF 9-23/24-95

.020 PAYLOAD (8)

1.	Gene Bowers	465*
2.	Elmer Jordan	327
3.	Bill Barr	294
4.	Bill Reuter	268
5.	Les Hallgarth	212
6.	Harry Murphy T. Jones, J. Haught	

1/2A NOS GAS (12)

1.	Keith Fulmer	360
2.	Harry Murphy	331
3.	Tom Hepler	328
4.	Gene Bowers	299
5.	Shel Myers	290
6.	Bob Edelstein	261
7.	Bob Placier	248
8.	Bill Barr L. Hallgarth, B. Barnett, D. Boyer, T. Jones	204

MOFFETT/KORDA (4)

1.	Guy Scott	240
2.	Roger Lane J. Williams, O.C. Stewart	78

MULVIHILL (10)

1.	Joe Williams	1021
2.	O.C. Stewart	994
3.	James Ferwerda	780
4.	Jim Richmond	357
5.	Chris Matsuno	354
6.	Don Diggs	343
7.	Roy Stewart	240
8.	Don Barnett B. Barnett, M. Richmond	171

CD AMA GAS (7)

1.	Norm Poti	900
2.	Bob Johannes	884
3.	Guy Scott	477
4.	Mark Wood	360
5.	Dick Covalt	268
6.	Bob Coverdill G. Robbins	220

OHLG - OPEN (4)

1.	Bill Schlarb	340
2.	Bob Larsh	205
3.	Bill Reuter T. Jones	126

PEE WEE 30 (8)

1.	Jim Haught	2061
2.	Shel Myers	2029
3.	Elmer Jordan	1829
4.	Bill Barr	1788
5.	John Schifko H. Murphy, D. Boyer, G. Bowers	1648

1/4A NOS GAS/.020 REPLICA (15)

1.	Bill Burgess	470
2.	Shel Myers	413
3.	Bill Barr	295
4.	Les Hallgarth	294
5.	Harry Murphy	262
6.	Bob Edelstein	237
7.	Tom Jones	217
8.	Bill Reuter	213
9.	John Schifko	213
10.	Dan Harshman	180
11.	Elmer Jordan	152
12.	Don Boyer	120
13.	Roger Lane T. Hepler, G. Bowers	66

AB AMA GAS (13)

1.	Bob Johannes	1200
2.	Gib Robbins	900
3.	Dick Covalt	673
4.	Bob Perkins	457
5.	Norm Poti	447
6.	Don Diggs	360
7.	Bill Burgess	330
8.	Don Boyer	288
9.	Steve Frazier	240
10.	Brad Bane	162
11.	Guy Scott G. Bowers, R. Stewart	91

OHLG - JR (8)

1.	Billy Reuter	289
2.	Keith Barnett	233
3.	Dan Vest	209
4.	Jon Reuter	122
5.	Robby Haught	103
6.	Ryan Bane	98
7.	Jason Poti	76
8.	Andrew Coverdill	51

ABC O.T. GAS (12)

1.	Dan Harshman	340
2.	Gil Morris	331
3.	Harry Murphy	321
4.	Don Boyer	268
5.	Bob Edelstein	253
6.	John Schifko	239
7.	Elmer Jordan	142
8.	Bob Larsh L. Hallgarth, G. Bowers, S. Myers, R. Stewart	120

ABC NOS GAS (8)

1.	Keith Fulmer	600
2.	Gene Bowers	480
3.	Bob Edelstein	322
4.	Elmer Jordan	308
5.	Shel Myers	152
6.	Bill Burgess L. Hallgarth, H. Murphy	120

1/2A AMA GAS (15)

1.	Norm Poti	600
2.	Brad Bane	569
3.	Steve Frazier	486
4.	Keith Fulmer	455
5.	Bill Barr	352
6.	Tom Jones	307
7.	Bill Burgess G. Robbins, B. Johannes T. Hepler, B. Schlarb, G. Bowers, R. Stewart H. Murphy, J. Haught	120

JR. RUBBER (10)

1.	Dan Vest	360
2.	Emily Heinken	350
3.	Andrew Coverdill	301
4.	Justin Fordeck	272
5.	Lauren Johnston	230
6.	Keith Barnett	203
7.	Ryan Bane	148
8.	Jason Poti	89
9.	Billy Reuter	80
10.	Jon Reuter	49

H.H. CATAPULT - JR. (7)

1.	Dan Vest	278
2.	Billy Reuter	239
3.	Robby Haught	159
4.	Jason Poti	95
5.	Ryan Bane	92
6.	Keith Barnett	84
7.	Jon Reuter	46

P-30/ELECTRIC "A" - (11)

1. Jim Richmond	510
2. Vicki Wicks	484
3. Roger Lane	411
4. Frank Heeb	331
5. Chris Matsuno	317
6. Tom Hepler	277
7. Bob Rollison	274
8. Don Jenkins	265
9. Bruce Barnett	219
J. Williams. O.C. Stewart	

A1/A2 TOWLINE (5)

1. Bill Schlarb	552
2. Bob Klipp	385
3. Bill Barr	228
T. Hepler, J. Haught	

COUPE de HIVER (6)

1. Joe Williams	589
2. Tom Hepler	528
3. Bill Barr	488
4. O. C. Stewart	476
5. Chris Matsuno	417
J. Ferwerda	

H.H. CATAPULT - OPEN (12)

1. Bill Schlarb	324
2. Ralph Schlarb	314
3. Chris Matsuno	183
4. Mark Richmond	165
5. Jim Richmond	149
6. Tom Jones	141
7. Bill Reuter	90
8. John Schifko	85
9. Bruce Barnett	73
O. C. Stewart, T. Hepler, J. Haught	

CD's: Moe Whittemore
Phil Sullivan

(*) NEW AMA RECORD APPLIED FOR.

WEATHER WAS GREAT, MODELS D-T'D ON TOOL BOXES SUNDAY. HEAVY ENTRIES IN NOS GAS. IT'S HERE TO STAY. WE THINK GENE BOWERS SET A NEW PAYLOAD RECORD. AMA GAS PERFORMANCES ACCENTED BY AWESOME POWER PATTERNS. 'TIS TUFF TO BEAT THOSE OVER-POWERED JAVELLINS. THE SCHLARBS STILL DOMINATE GLIDER EVENTS. GOOD JUNIOR SHOWING WITH RESPECTABLE TIMES.

CHARITY BEGINS AT HOME! - or so goes the old cliche.....

Some time ago I read where the AMA Executive Council voted to award some $600 to a Field Maintenance Fund to aid the financial position of the Brooklyn Skyscrapers model flying club in their use of the Galesville flying site. Now, I see where they have contributed an additional $7,500 for Galesville maintenance, plus another $2,000 going for upgrades at the Saunders farm site in Cuckoo, VA.

This is all well and good and surely a deserved "well done" should go to John Grigg (area AMA VP) for pursuing remedies for east coast flying club financial difficulties through the AMA Ex. Council.

Meanwhile, with all this monetary "good will" being flashed around the east coast by the AMA, midwestern flying clubs are still struggling in dealing with the AMA's current home base policy of charging $50/day for use of the Muncie site. Apparently the AMA does not realize our area clubs also have financial worries in just staying alive. The primary source for club income comes from contest net profits. When these profits (if any) are skimmed off by the AMA at $100 for a two-day affair, then club funds soon become drained or non-existent.

It is not like the AMA needs the money to maintain Muncie either. The site has been bought and paid for some years ago and site expenses are budgeted on a yearly basis. I should think the $50/day fees are like a drop in the AMA's total picture where in contrast are a large lump to swallow for area club's who may wish to utilize the facility for weekend formal competition purposes.

The next time the Council is confronted with a plea for a handout, it would most surely be appreciated by midwest area freeflight clubs if they might be reminded that "charity begins at home" - and that we seek relief from the Muncie site fee situation if we are to be permitted to function with a few nickels in our respective club socks. HELP!

HSM

46th ANNUAL INTER-CITY FAI MEET

October 14 & 15, 1995, AMA Flying Field, Muncie, IN

Contest results:

FIA Sun 15 Oct	**Round 1**	**Round 2**	**Round 3**	**Round 4**	**Round 5**	**TOTAL**
Chuck Markos	116	177	180	180	180	833
Aram Schlosberg	180	126	164	180	0	650
Bob Klipp	134	145	144	75	110	608
Andrew Barron	44	109	180	69	159	561
Jim Thornbery	44	37	94	0	0	175
F1B Sun 15 Oct						
Jerry McGlashan	180	175	180	180	122	837
Ed Konefes	180	180	180	168	113	821
Joe Williams	180	146	180	110	180	796
Jim Brooks	127	131	180	135	89	662
O.C. Stewart	180	125	180	115	52	652
Chris Matsuno	180	100	159	160	0	599
Larry Pelatowski	180	180	114	0	0	474
Paul Crowley						DNF
Bill Kozak						DNF
Paul Shailor						DNF
F1C Sun 15 Oct						
Hardy Brodersen	30	162	169	172	0	533
Norm Poti						DNF
Zygfryd Sulisz						DNF
F1G Sat 14 Oct						
Joe Williams	81	120	120	60	120	501
Bob Hatschek	57	103	109	116	83	468
Ed Konefes	53	69	93	94	51	360
Chuck Markos	113	47	36	0	0	196
Chris Matsuno	0	0	5	0	0	5
O.C. Stewart						DNF
F1H Sat 14 Oct						DNF
Jean Pailet						DNF
O.C. Stewart						DNF
Chris Matsuno						
F1J Sat/Sun 14/15 Oct						
Norm Poti	120	120	120	120	120	600
Bob Burgess	107	105	120	120	104	556
Joe Mekina	74	99	120	120	0	413
Jean Pailet	120	0	0	0	0	120
R. Perkins	5	0	0	0	0	5

TEAM FIA	
Barron/Schlosberg	1211
Markos/Thornbery	1008

TEAM F1B	
Brooks/McGlashan	1499
Stewart/Williams	1448
Konefes/Pelatowski	1295

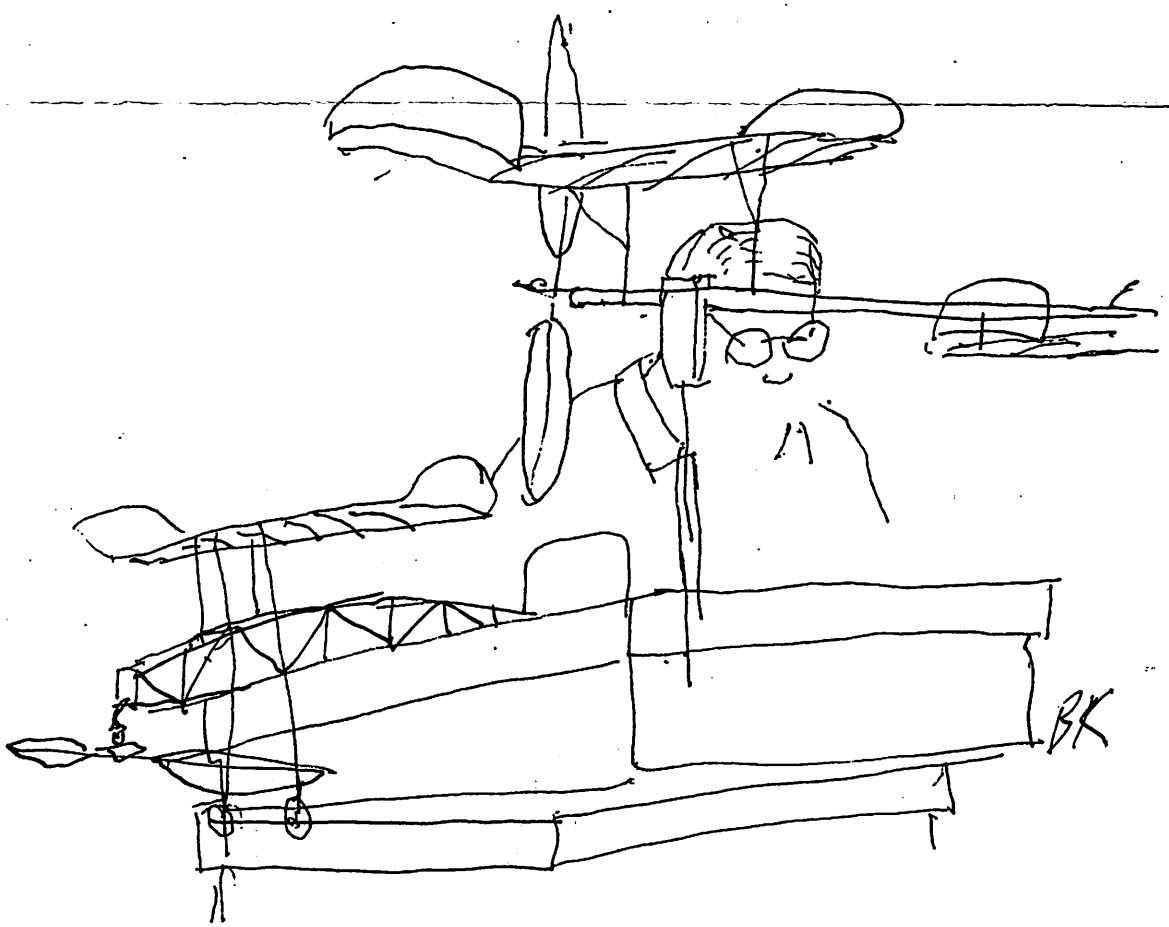
Comments:

A big THANK YOU to everyone who attended and supported the 46th Annual Inter-City FAI meet. Unfortunately, after a week of really nice autumn weather and 3 previous weekends which would have been average to good contest days, our luck ran out and the weather turned sour. A front moved through late Friday and the temperature dropped from the 70s to the 40s and 50s, and someone turned on the wind. Saturday, the wind was out of the west, not a good direction at Muncie, because it blows across the short length of the field. 3 minute maxes would be well off the field, which is not desirable since we want to stay on good terms with people living around the field. F1A/B/C rounds were delayed to see if the weather would improve, but it got windier, so it was decided to postpone these events until Sunday.

Although conditions were certainly not good, the mini events were started on schedule, since it was felt that 2 minute maxes would stay (barely) on the field. Even this was shaky, and after one round, the F1J flyers decided to finish their rounds on Sunday. F1G flew on and all 5 rounds were completed in very challenging conditions. No one was brave enough to try to tow up an F1H. Paul Crowley's wind meter indicated gusts well over 25 knots! The overcast and continual wind made it a long day and we all appreciated the meaning of "Wind Chill."

It was hoped that the front would stabilize and Sunday would be better, but the forecast that night was again for winds from the west at 15-25, with slightly warmer temperatures. Unfortunately this proved to be accurate. Sunday morning, a contestant's meeting was held, and the consensus was to go with 5 rounds. Flying started at 8:00 and for a while, the wind was manageable, and 3 minute flights were generally going just to the edge of the field or slightly beyond. The sun came out, so temperatures were a bit more comfortable than Saturday. By the 4th round, the wind had picked up, and Schlosberg and Markos had models in big thermals that landed 2 miles off the field. Fortunately, no one lost any models.

This was quite an endurance contest, and hats off to everyone who persevered and got their flights in. To those who entered but chose not to fly, we understand and thank you for your support. After completion of flying, engraved glassware was awarded, along with champagne for the winners. The lucky F1B team winners were Jim Brooks and Jerry McGlashan, and they will have the honor of organizing next year's contest. Maybe we'll be meeting at Camp Borden?



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Zygfryd Sulisz							DNF
F1G	Sat 14 Oct						
Joe Williams		81	120	120	60	120	501
Bob Hatschek		57	103	109	116	83	468
Ed Konefes		53	69	93	94	51	360
Chuck Markos		113	47	36	0	0	196
Chris Matsuno		0	0	5	0	0	5
O.C. Stewart							DNF
F1H	Sat 14 Oct						DNF
Jean Pailet							DNF
O.C. Stewart							DNF
Chris Matsuno							
F1J	Sat/Sun 14/15 Oct						
Norm Poti		120	120	120	120	120	600
Bob Burgess		107	105	120	120	104	556
Joe Mekina		74	99	120	120	0	413
Jean Pailet		120	0	0	0	0	120
R. Perkins		5	0	0	0	0	5

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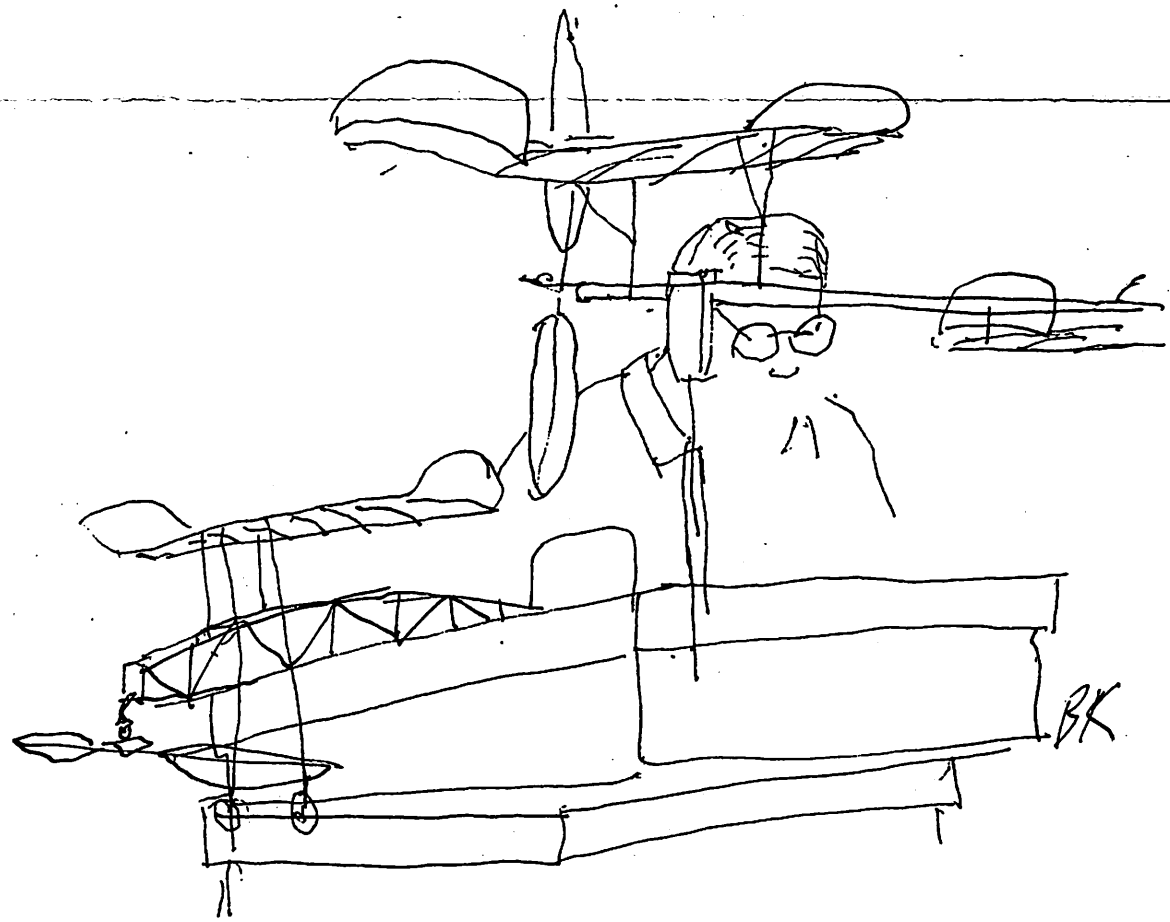
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Pluggers



A plugger's toolbox.

Gilbert "Plugger" Morris has one of these tool boxes. He has also been known to use grocery sacks.....

1996 CONTEST CALENDAR

The initial universal distribution of the Contest Calendar for the next outdoor flying season is included somewhere in this issue. Some preliminary "passouts" were sent to meet sponsors to confirm the schedule and their respective feedbacks are included here. What remains are the confirmations from the governing bodies of Muncie, Bong, WPAFB, etc. We hope we do not have further adjustments from these sources.

At least two affairs appear still in limbo - 1) The SAM CHamps started out to be slated for Muncie or Lawrenceville, skipped to Pensacola, hopped on down to Palm Bay, and at last info is flipped back to Pensacola. Dates of same are yet to be nailed down as well, but supposedly to be the last of October. 2) The Inter-city FAI bash is perennially tardy from the schedule and will probably pop up about six weeks before the event date if it goes true-to-form. The Cannucks have the baton this coming year, so both dates and site are unknown at this writing.

Any further revisions to the schedule shall be noted in our next issue. HSM

C.I.A. WINTER BANQUET

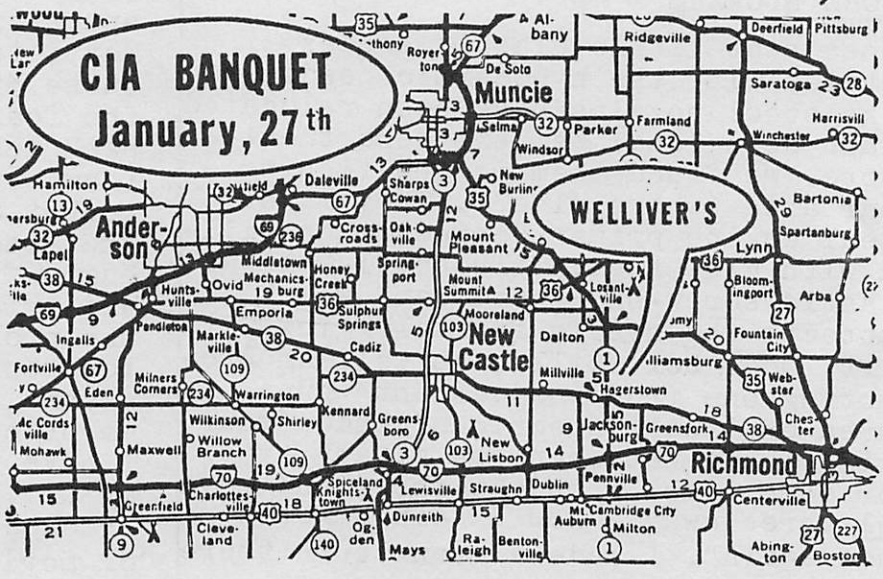
After "Turkey Day" and Santa's visit comes our annual CIA Awards Banquet to be staged at our usual haunt - Guy Welliver's Smorgy in Hagerstown, IN. The date for this event is January 27, 1996. Come one! Come all! There shall be door prizes, awards, attaboys as well as insults. You don't want to miss it.

Dinner tabs are: Adults = $16, young folks 10-11 = $8, 7-9 = $6, and 2-6 = $3. The line forms at 7pm sharp and the food never runs out. PLEASE! notify Harry Murphy, 3824 Oakwood Blvd., Anderson, IN 46011 (317) 642-7377 by Monday, January 22, 1996 so we may confirm the number of attendees to ole Guy so we will have plenty of space to squat. Also, please supply the names and ages of young folks in your party.

Last year CIA Club Prexy, Guy Scott, shall be wielding the baton with some aid from his friends (and a few enemies). Phil Sullivan shall be relinguishing the coveted "Crash and burn trophy to some well-deserved recpient, and there shall be other happenings that "ain't been all thunk-up yet".

Don't fret if the weather man predicts snow, ice, or whatever because he was wrong last year, plus you have all-day Sunday to get back home. Let's make it a banner turn-out. Y'all come - and we'll se you thar!

The "MAP" - Don't leave home without it!



GIL MORRIS COMMENTS ON THE MKII AME .049

Remember the AME Mk II .049 that I got to run at 23.5K in our last issue? Well, Gil Morris has been trying his luck with one. Here follows his comments: Sez Gil - "After breaking-in my AME w/2 washers, Glo Bee 5RX, 60% nitro fuel and Poti 1/2A prop trimmed to 5-1/4" dia., it turned 27,500 rpm; with 40% - 26,500; with 5-1/2 x 2 APC cut to 4-1/2" and 60% it did 32,000. (How about trying it w/a wing nut on it, Gil - Ha!)."
"I used the 4-1/2" APC and 20% for break-in of about (20) 2 min. runs - but first I hand-lapped with piston in upside down to accentuate taper. Also, I had to champer the bore in the casing for the c'shft since the shaft fillet was riding on this sharp edge. GREAT ENGINE! Better than VA or 2nd batch of STELS. I think Norm (Poti) said he is getting 27.5K w/50% and his 1/2A prop cut to 5-1/4" on his Galbreath CS. I am getting another AME unless you will unload your "lemon" for $15 - Ha! - Gil."

Boy, kick a guy while he is down. Some pal. Anyway, sounds like $29 well spent. (... and if you find Gil's 1/2A downwind next season - Stomp It!) HSM

MUNCIE FAI SEMI'S - July 1, 1995

Chris Matsuno sent the results of the '95 Muncie Semi-finals for reprint here. Wind was 10-15 and temps 75-80°.

F1A (4)

1.	Chuck Markos	1141
2.	Jim Thornberry	1067
3.	Bill Shailor	1046

F1B (10)

1.	Bill Shailor	1241
2.	Jim O'Reilly	1241
3.	Carl Perkins	1225

F1C (6)

1.	Hardy Brodersen	900
1.	Ed Keck	900
1.	Joe Mekina	900
1.	Norm Poti	900

HSM

WORM BLOWERS

Those neat little plastic squeeze bottles with the hypodermic needle-like steel nozzles have been relocated again at a local Meijers department store. We found them in the fishing gear area (where else?). They make ideal engine primer devices when filled with glow fuel. This bottle has a plastic screw-on "guard-cap" which protects the needle from clogging with dirt, model box spills, as well as protecting one from inadvertant punctures or "fuel injections" under your skin. I had not seen any of any type for some time. I bought three and gave all three away - now I "ain't got none once again". I made a wrong turn there someplace.....

HSM

BATTERY SHOCK ABSORBERS

Those of us who have had experience with battery and coil laden old timer models know what damage can result on a hard D-T or even the slightest nose-over mishaps should flight batteries go flying out of their nest and begin knocking out formers, windscreens, and whatever.
Well, a trip to your local Wal-Mart or similar store can remedy many of those situations with the purchase of a bag of that thick foam strip insulation used to seal around window air conditioners. The stuff I bought is 2-¼ x 2-¼ x 42" long.
Simply whack-off a length that is a wee bit longer than the longitudinal space between the fuselage formers of where you would ordinarilly install your battery box. You can use a pair of scissors to roughly shape the foam piece to better fit the designated space if you like.
Next, take an X-Acto knife with one of those 3" long blades and cut a slit in the foam piece the width of the battery pack lengthwise down the middle of the foam. Push your batt-pack into the pocket and jam the whole thing into the fuselage compartment. Snug-as-a-bug! If it is too snug, pull it out and trim off a bit more of the foam in the problem area(s).
You could do the same with a coil, I assume, but "flying batteries" are the major culprits for internal disasters. I have made this conversion in most of my O.T. cabin models and have not even cracked a former since. Makes an easy job of moving batteries fore and aft to re-balance the model CG as well.

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Let's Get Real! Who in their right mind would ever send money to Dave Linstrum? (Tee Hee)

C.I.A. MEMBERSHIP/INFORMER DUES

No changes in dues/fees this year. If your subscription runs out now or pretty soon, it's still $7.50 for a while longer. Tear off the bottom of this page and remit along with your check. We'll love ya for it! Thank y'all!

SHOW & TELL

Here is the formal schedule for the upcoming winter for "Show & Tell" sessions at C.I.A. Club meetings. This does not mean that there will not be others thrown-in on the same dates by spur-of-the-moment volunteers, but will insure that we have at least one each meeting. Roger, you're first, so don't buzz-off to Florida, yet....

1995

Nov	6	Roger Lane
	20	Moe Whittemore
Dec	4	Jim Haught
	18	No Meeting!

1996

Jan	1	No Meeting!
	15	Bill Burgess
	27	C.I.A. Banquet
Feb	5	Steve Frazier
	19	Harry Murphy
Mar	4	Dick Covalt
	18	Gib Robbins
Apr	1	Les Hallgarth
	12-14	Toledo R/C Show & Swap Shop
	15	Guy Scott
May	6	Phil Sullivan
	20	Meredith Chamberlain
Jun	3	Guido Speedy
	17	Dan Vest

Cut this out and nail to your shop wall

CENTRAL INDIANA AEROMODELLERS - Club Membership Form

Expiration Code

Name _____ **AMA#** _____ _____

(Office use only)

Address _____

City _____ **State** ____ **Zip** _____ **Ph:** _____

Age last July, if under 19 _____

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Add $1.00 to the above for Canadian, $2.00 if Foreign (surface mail only)

Please send this form and proper remittance to Moe Whittemore, 2348S, 700W New Palestine, IN 46163. Thank you for your support of free flight !!
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