CENTRAL INDIANA AEROMODELLERS

INFORMER

FREE FLIGHT NEWS OF THE MIDWEST

** The Weather **
Everybody talks about it!

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

Issue # 3/95 May/June Price $7.50/yr.

Power Trimming Tips ... (Thorkildsen/Stalick)

I'm starting out this issue of the Informer by bending one of my own rules about borrowing material from other model rags, but this article from Bob Stalick's *Free Flight* column in MB a few years ago bears repeating, especially with the resurgence of the Nostalgia gas classes (and the high incidence of crashes!). I believe the article was originally written by Terry Thorkildsen, targeting the modern pylon gas model, but one without auto surfaces. The initial assumption is that the model flies to the right under power and also glides to the right. He sez:

"1. Decreasing incidence will make the model go more to the left under power and also make the model go flatter in the climb. Taking out too much incidence will make the model go over the top, or "zero-out" under power.
2. Increasing incidence will make the model more loopy in the climb and go more to the right under power.
3. Thrust changes only the initial portion of the pattern and has no effect in the later portion of the power pattern. Because of this, the earlier and later portions of the power pattern should be examined to see if thrust changes are necessary.
4. Adding tail weight will have the same result under power as taking out incidence. The model will go flatter in the climb and go more to the left.
5. Adding trailing edge stock at the rear of the rudder for a tab has a strong influence under power with minimal effect on the glide. This is one of the most effective trimming tools that you can use.
6. Looking from the rear of the model and adding stab tilt, the model will turn to the higher side in the glide, with minimal effect in the climb.
7. Remember, when stab tilt is added to the front of the stab platform only, you're taking out incidence! To avoid this change, replace half of the amount that was removed at the trailing edge of the stab.

(cont'd p. 4)

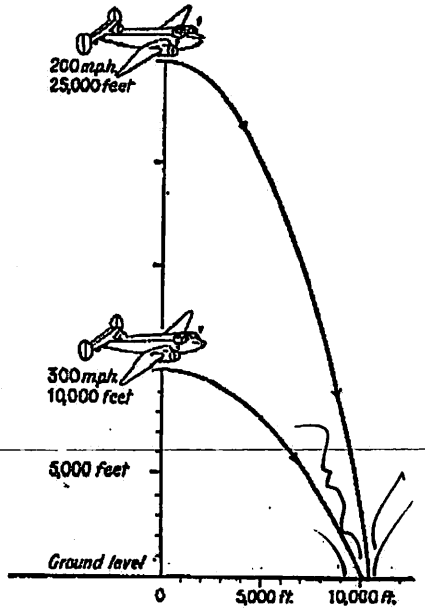


Hand-Launch Glider Flyers might be interested in the charts on pg. 5, which suggest that *there is an optimum glider weight and an optimum wing aspect ratio which yields maximum duration* for a given design. (The charts were generated by a HLG computer program I developed a few years ago which was originally based on Lou Young's method of HLG performance analysis ....) -MJW

Agent **John Adams** sez: "until he upgrades his giant *Valkyrie's* sick Mighty Midget engine with one of Murf's Brown Jrs., his Val will remain one of the biggest 10 ft. gliders in Indiana"!

Speaking of Murf .... "something" recently happened to temporarily mess up Harry's vision to the point that reading (and building) is a most difficult chore. The doctors can't agree as to what the hell it is, either.

Y'all might voice your support. Just don't let him time for you - ha!



Paths of falling bombs.
(RC only.)

An observation .... ever see a crow thermalling? Or gliding for any distance? Why not? They've got plenty of area. Always flapping, flapping, flapping ....

Those new electric cigarette lighters with glow elements (under $5) look like just the ticket for lighting DT fuses.

But if you'd like to DT in a much slicker manner, check out one of Bob Munson's tiny, flyweight rotary timers. The *Button Lite* is intended for Peanut Scale, small rubber, HLG and HHcatapult gliders - where lower tension on the line will get the job done. The *Button Classic* is for large rubber, A/1, 1/4A and 1/2A gas. In the works is a twice-size version that will accomodate flyoff flights of about 5 minutes.

A bit pricey at $18 a pop (NFFS mem's), they seem to work. (Ask **Phil Sullivan** how he likes the one he mounted in a HLG.) Maybe the 'economies of scale' will bring prices down as time goes on. (I've studied one - the cost has to be all labor ....)

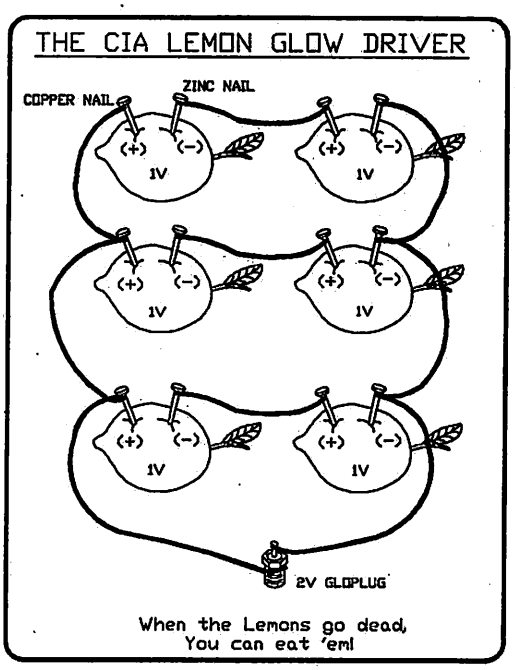
Order from Fred Terzian, 4858 Moorpark Ave., San Jose, CA 95129-2132.

A little help! The Informer sure could use some more of our reader's generous offerings of original (or obscure) 3-view plans, state-of-the-art-advancing tips, technical articles, computer-oriented stuff, field meteorology observations, cool modeling artwork, cartoons, etc,.... Especially needed is modern gas-oriented material, and an occasional hot indoor article just to maintain balance.

Apparently our rag has a reputation for good, original, technical FF material, but it's getting harder & harder for me 'n Murf to draw upon "the library" for the good stuff. And I refuse to steal from Vol Libre, as good as it is (even tho they sometimes borrow from the Informer!) ....

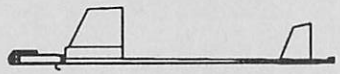
But do me a favor, if you send stuff and it's also destined for release in other publications, let me know! I hate conflicts!

HHCat Plan .... You've probably seen this model elsewhere, but on the facing page we're running the plan for Agent **Joe Mekina's** *Straight-Up*. (We followed the above-mentioned advice and waited 'til it first appeared in MA, rather than going for the scoop !)

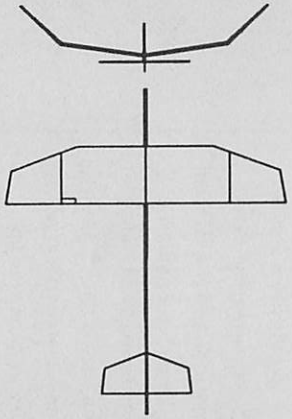


Straight - Up

A simple hand-held catapult glider
designed and drawn by Joe Mekina
September 1994
wing area = 35.8 sq in (projected)
stab area = 8.2 sq in
weight = approx 13 grams

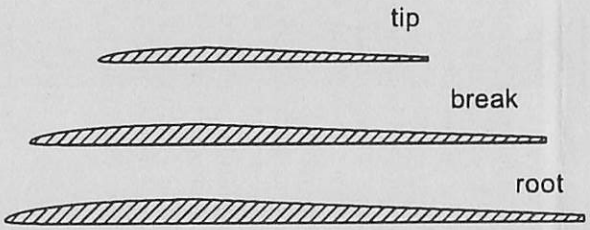


Good Luck !

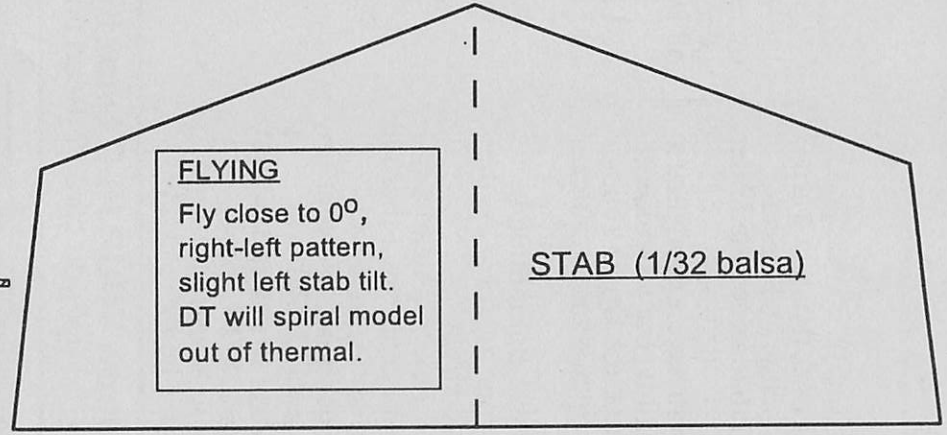


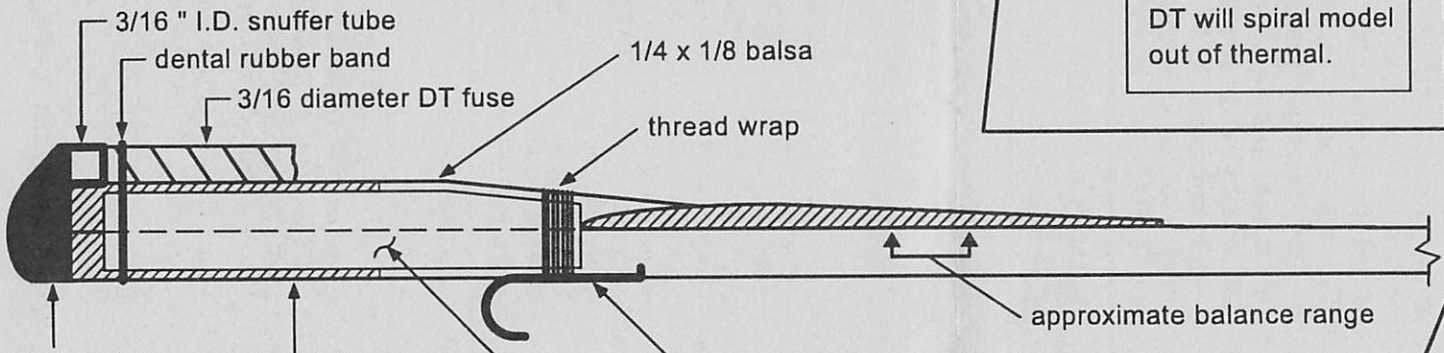
CATAPULT
9" loop of 1/4" rubber
on a 6" dowel

AIRFOIL SECTIONS

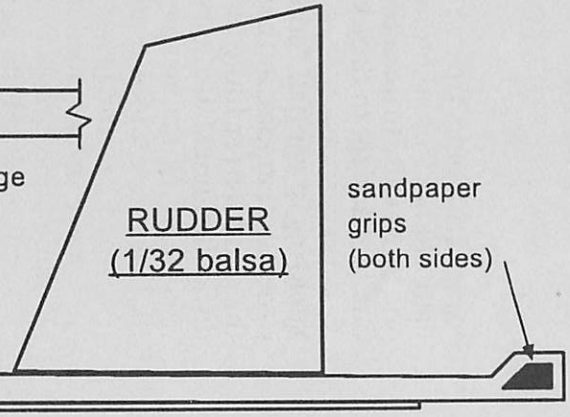


FLYING
Fly close to 0°,
right-left pattern,
slight left stab tilt.
DT will spiral model
out of thermal.





FUSELAGE (1/4 x 1/8 x 17-1/4 spruce)



(taper fuselage from behind wing on top only)

(Power Trimming Tips .... cont'd)

8. Looking from the rear of the stab, a warp that raises its trailing edge will cause the model to turn to that same side under power.
9. Models with tall rudders have a tendency to weathervane in the glide, but a too-small rudder (or fin) will cause a Dutch roll. The height of the rudder is more critical than the actual size.
10. Unwanted warps tend to be amplified by speed, so the faster your model goes, the more pronounced the effect.
11. Wide glide circles work better in dead air, but don't let the model center in a thermal as easily as a smaller glide circle will."

Remember the rudder paradox: size your fin such that it's big enough to avoid Dutch roll under power, but small enough to center the ship in lift!

And remember that these tips are for right-right pylon models! Hope this helps .... MJW



Can YOU throw YOUR HLG twice the length of a Football Field ?

(Do you care ?? Read on ...)

Flying Marvel

Call it a supertoy. The X-zylo has amazed and inspired NASA scientists; yet it's a deceptively simple plastic toy. The X-zylo, a slim flying cylinder that's becoming a craze, flies faster than a Frisbee and farther than a football. The size of your fist, it weighs less than one ounce and has been thrown the length of two football fields. Its incredible flying properties may provide the basis for a new generation of aerospace technology.

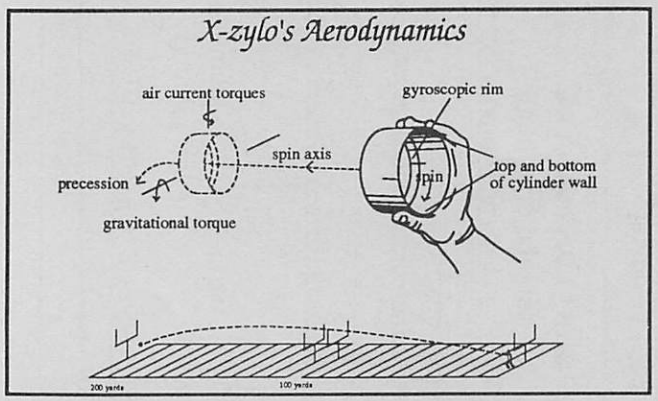
The X-zylo was conceived when Baylor University student Mark Forti had a brainstorm while flying paper airplanes in his apartment. His dad was in the aerospace industry, and the two had a lifelong interest in airfoils. Forti knew the key to making an airfoil fly was to keep it flat on one side and curved on the other, like an airplane wing. "So I took a wing made of cardboard and bent it into a cylinder, using paper clips and tape to make one continuous wing. When I threw it with spin, it glided across the room."

After hundreds of prototypes, he learned how to throw it 150 feet. "I didn't know I had anything revolutionary; it was just a cool thing," remembers Forti. "So I took it to the engineering departments heads and asked, 'How can I improve this based on what you know about how cylinders fly?'

And they said, 'What? You mean cylinders fly?" Forti and his father went to General Dynamics, then to a wind tunnel at the NASA research center in Langley, Va. The experts shook their heads in disbelief.

"They said, 'Wow, so simple and so light, and you can throw it so far. Astonishing,' " recalls Forti. He quickly filed for a patent and started selling X-zylos at less than $10 a pop in June 1993. Mark's dad left his job as a General Dynamics executive to create the William Mark Corporation with his son. The company will sell X-zylos at 600 stores this year.

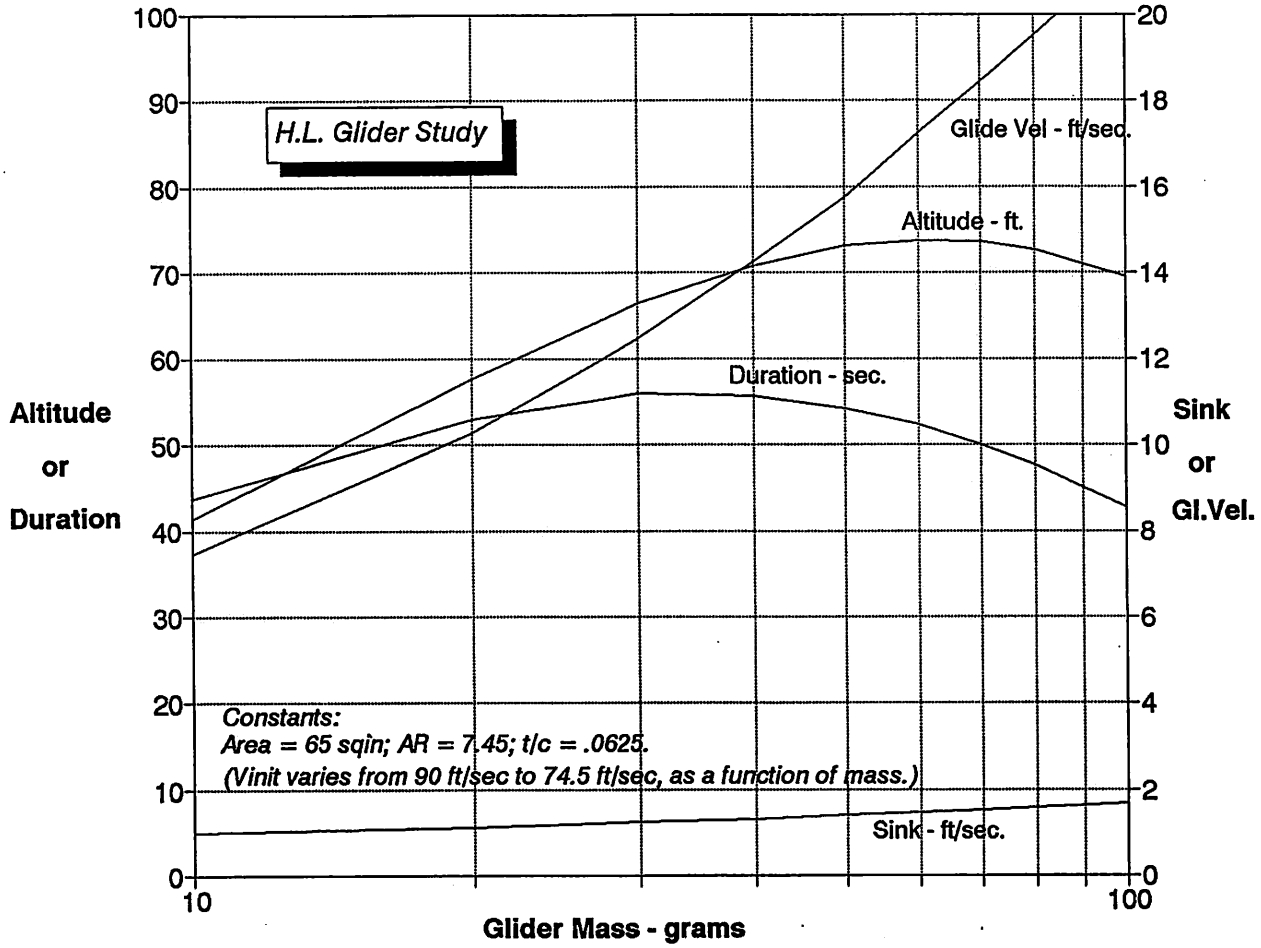
There are other applications for X-zylo. NASA is looking into its capabilities in exotic space weaponry - including projectiles that will fly faster than bullets.

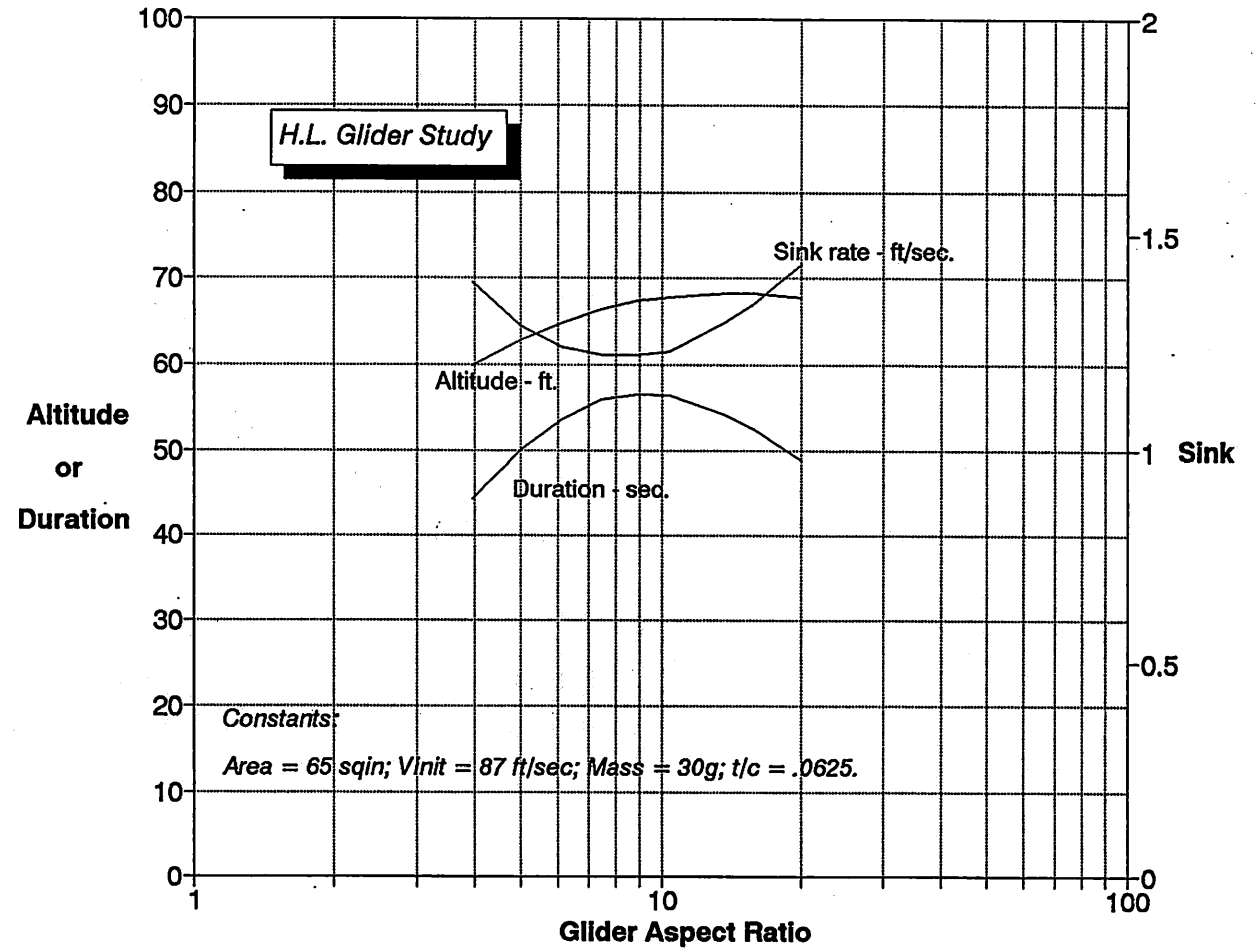


It's *a deceptively simple-looking toy that can fly 600 feet. Thrown spirally like a football, the X-zylo becomes a flying gyroscope, resisting gravitational torque (force) and random air current torques. The cylinder's leading edge is thicker, so the upper and lower surfaces act as airfoils to provide lift.*



For more information on X-zylo call the William Mark Corporation at (909)-621-6823


H.L. Glider Study
Glide Vel - ft/sec.
Altitude - ft.
Duration - sec.
Sink - ft/sec.
Constants:
Area = 65 sqin; AR = 7.45; t/c = .0625.
(Vinit varies from 90 ft/sec to 74.5 ft/sec, as a function of mass.)
Altitude or Duration
Sink or Gl.Vel.
Glider Mass - grams
100
90
80
70
60
50
40
30
20
10
0
20
18
16
14
12
10
8
6
4
2
0
10
100


H.L. Glider Study
Sink rate - ft/sec.
Altitude - ft.
Duration - sec.
Constants:
Area = 65 sqin; Vinit = 87 ft/sec; Mass = 30g; t/c = .0625.
Altitude or Duration
Sink
Glider Aspect Ratio
100
90
80
70
60
50
40
30
20
10
0
2
1.5
1
0.5
0
1
10
100

RESULTS: THERMALEERS CAT III MEMORIAL FF CHAMPS - of May 6&7, 1995

The initial free flight contest of the '95 flying season for this area lit amidst the best 3 days of model flying weather for the month of May. Winds were light and variable for both days with plenty of sun and pleasant Spring atmosphere. CD Roy White and crew did a masterful job at the tables and score charts in keeping the paperwork up-to-date. A "GreatShow!"

Mulvihill (8)

1. Joe Williams	2337
2. Ed Konefes	2151
3. O.C. Stewart	1250

HH Catapult Glider (15)

1. Ralph Schlarb	526
2. Joe Mekina	420
3. Phil Sullivan	360

C/D Gas (11)

1. Bob Johannes	886
2. Guy Scott	588
3. Don Diggs	492

C O.T. Gas (10)

1. Bob Edelstein	415
2. Harry Murphy	356
3. Elmer Jordan	337

1/2A Nos Gas (18) 478

1. Tom Hepler	478
2. Harry Murphy	431
3. Gene Bowers	347

A Gas (12)

1. Bob Perkins	735
2. Bob Johannes	597
3. Jim Hainen	580

HLG (11)

1. Bill Schlarb	347
2. Al Beletz	324
3. Lee Campbell	276

CdH (11)

1. Bob Thoren	583
2. Eric Hepler	580
3. Tom Hepler	578

O.T. Rubber Stk-Sm (16)

1. Ed Konefes	1218
2. Dan Smith	1080
3. Herb Kothe	732

O.T. Rubber Cab-Lg (13)

1. Don Reid	540
2. Randy Ryan	489
3. Roy Stewart,Jr.	460

B Gas (10)

1. Bob Johannes	1050
2. Bill Schlarb	578
3. Dick Covalt	558

1/2A Gas (14)

1. Bob Johannes	734
2. Steve Frazier	709
3. Lee Campbell	658

P-30 (17)

1. Tom Hepler	510
2. Steve Eggers	484
3. Bob Rollison	351

Spl. 1/2A "Starduster" (12)

1. Harry Murphy	670

"Our THANKS to the THERMALEERS for bringing their contest to Muncie once again for allto enjoy!"

A/B Nos Gas (10)

1. Shel Myers	535
2. Bill Burgess	439
3. Bob Edelstein	420

A/B O.T. Gas (11)

1. Don Reid	834
2. Bob Edelstein	705
3. Harry Murphy	426

Moffett (9)

1. O.C. Stewart	1017
2. Bud Brown	984
3. Doc Zabelka	484

O.T. Rubber Stk-Lg (12)

1. George Batiuk	1080
2. Dave Seath	860
3. Herb Kothe	752

O.T. Rubber Cab-Sm (18)

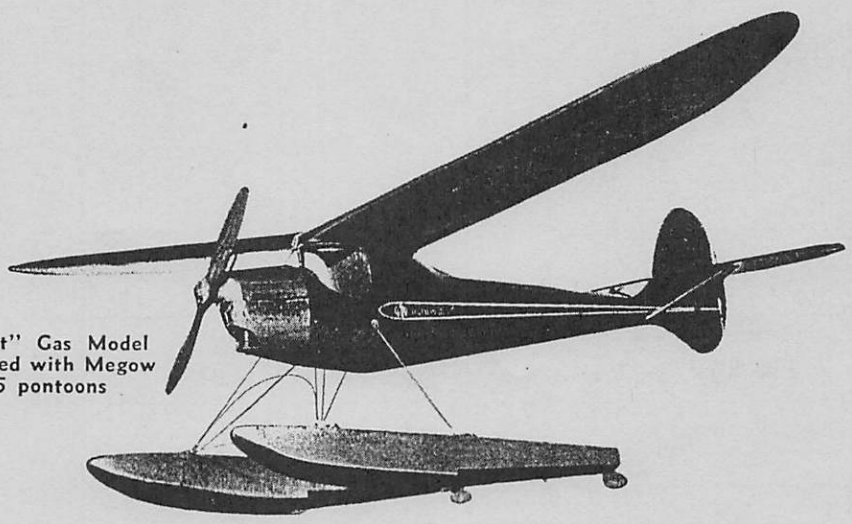
1. Ed Konefes	1860
2. Herb Kothe	1762
3. Don Reid	760

.020 Gas Combined (17)

1. Jim Haught	1120
2. Gerald Caldwell	335
3. Ted Dock	321

Hi-Point Award

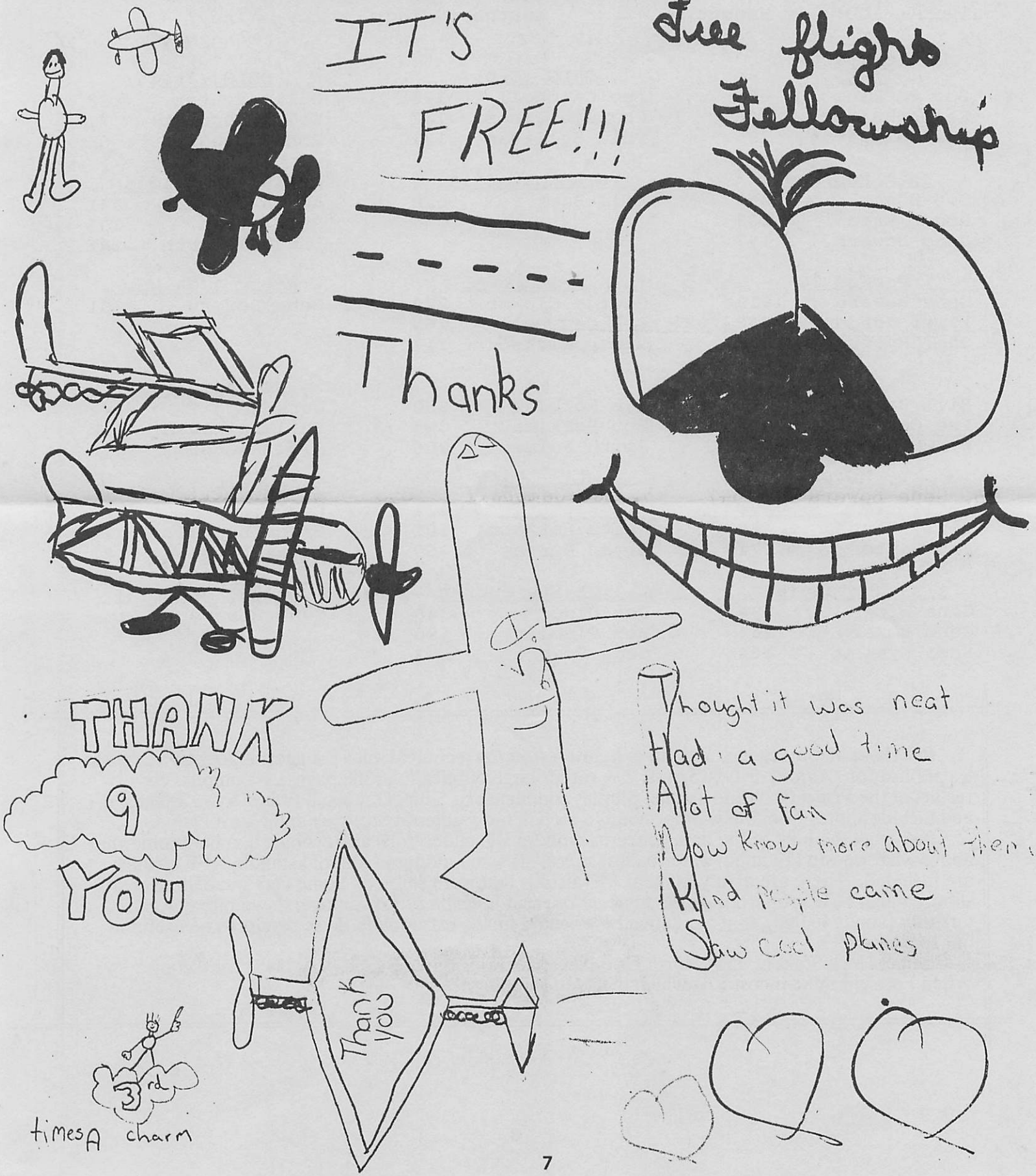
Herb Kothe



"Cadet" Gas Model equipped with Megow Y5 pontoons

Thank you for helping me fix and fly my airplane.

I couldn't resist showing these .... On May 30, a few of our Double Agents (CIA/IFFF) from Indy showed up at Southport Elementary's Aviation Day festivities to show the kids their FF stuff. Here's some of the students' "thank-you" notes to the club:



- Contest Results -

Excellent Adventure IV, May 20 & 21, Muncie, IN

CD: Jim Haught Weather: *Windy, Windy, Windy!*

1/2A	
Bob Perkins	360
Keith Fulmer	346
Les Hallgarth	195

1/4A Rep/Nos	
Don Boyer	263
Roger Lane	203
Gene Bowers	197

PeeWee '30	
Gene Bowers	1919
Elmer Jordan	1866
Shel Myers	1858

Nordic	
Bill Barr	315
Lee Campbell	286
W. Weisenbach	262

HHCataG (Jr.)	
Daniel Vest	95
Billy Reuter	89
Jon Reuter	71

1/2A Nostalgia	
Gene Wicks	284
Gene Bowers	262
Shel Myers	164

OHLG (S/O)	
Lee Campbell	178
Charlie Jones	137
Phil Sullivan	131

.010 Nostalgia	
Bill Barr	518

P-30/Coupe	
George Clower	229
Lee Campbell	165
Vicky Wicks	117

F1J	
Gib Robbins	350
Bob Perkins	325
Keith Fulmer	306

Jr. Rubber	
Jon Reuter	121
Keith Barnett	101
Bryan Murphy	60

1/2A Starduster	
Don Diggs	348
Bob Placier	290
Gene Bowers	233

OHLG (Jr.)	
Billy Reuter	123
Keith Barnett	71
Robby Haught	65

ABC Nostalgia	
Keith Fulmer	321
Shel Myers	305
Les Hallgarth	181

Early 1/2A Nos.	
Gene Bowers	301

HHCataG (S/O)	
Mark Wood	272
Phil Sullivan	218
Bill Reuter	140

Rubber (Open)	
Don Diggs	284
Bruce Barnett	120
Roger Lane	88

Haught Memorial	
Gene Bowers	12pts

For those of our readers with an avid interest in the technical, may I suggest a peek at Soartech 8's publication *"Airfoils at Low Speeds"*. A rather large publication (308 pages), it compiles the results of the Princeton Wind Tunnel Studies conducted by Selig/Donovan/Fraser a few years ago, and includes notes from a few other notable model 'foil studies at Stuttgart and Notre Dame.

Although the bulk of the data concerns modern RC glider 'foils at Reynolds numbers somewhat above what we run (120mph, water ballast specials!) some modern - and old standby - FF airfoils are included. There are plenty of "near FF" airfoils that were studied. Some very interesting charts show enough L/D properties *on the same airfoils as a function of RN,* dipping down into our gliding territory (about 40,000), that a creative FF'er could finally extrapolate these results to be useful in our specialty.

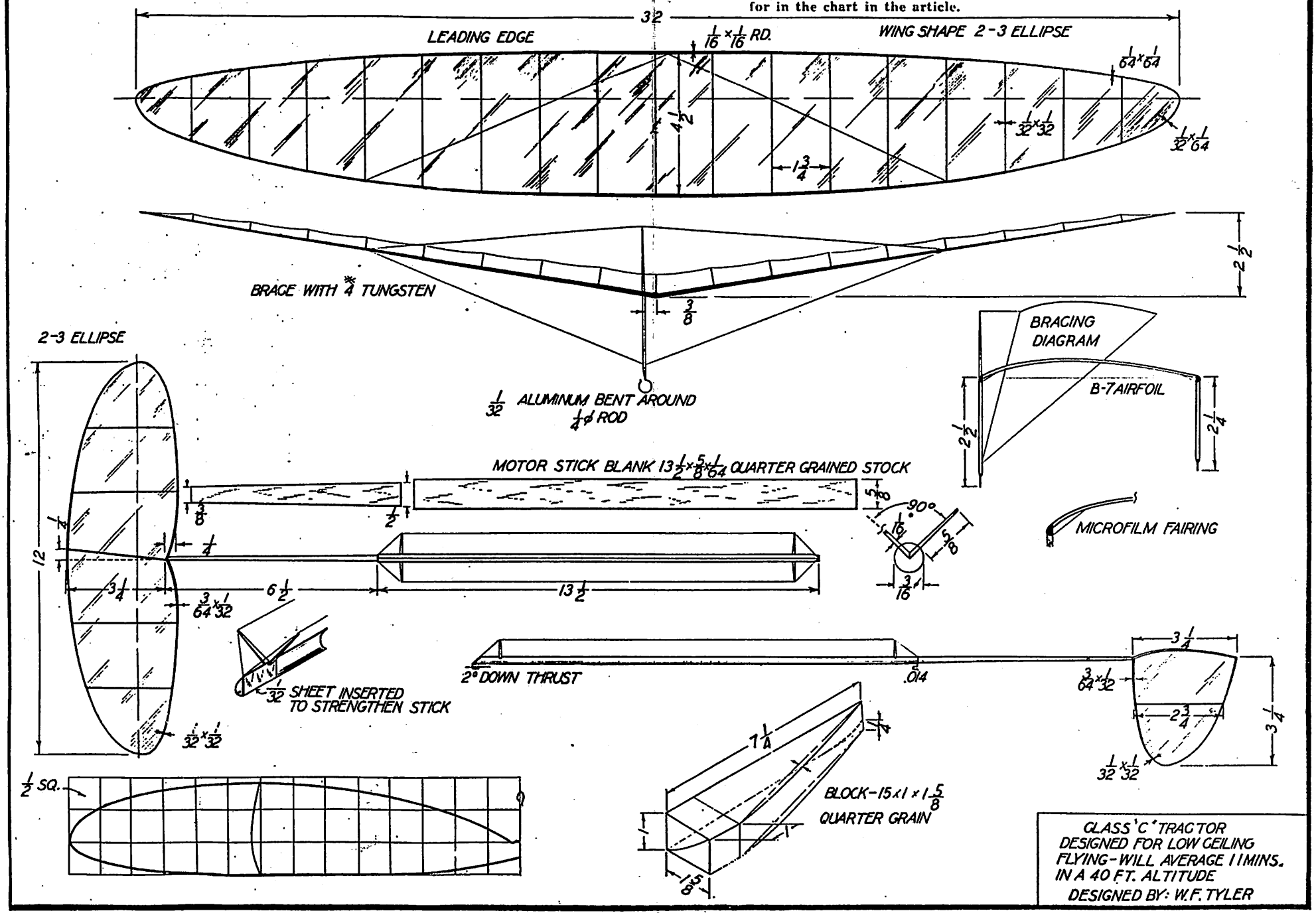
Contact Herk Stokely, 1504 North Horseshoe Circle, Virginia Beach, VA 23451 for a copy. When I bought mine it cost $20, which included shipping. - MJW

The Indoor "Stick" Canadian Record Holder

Wilbur Tyler flew the indoor tractor described and illustrated in the accompanying article at the 1938 Canadian Championship Model Airplane Meet sponsored by the Canadian National Exposition in Toronto on August 31st, to a first place and a new all-time high Canadian duration record of

15 minutes 26 seconds

in the Fort York Armories with an effective flying height of 50 feet. On this record flight the model was powered by the same size and length of rubber motor as called for in the chart in the article.



CLASS 'C' TRACTOR
DESIGNED FOR LOW CEILING
FLYING - WILL AVERAGE 11 MINS.
IN A 40 FT. ALTITUDE
DESIGNED BY: W.F. TYLER

Free Flight Aeromodelers Society

Annual Wright Field Free Flight Contest

Wright-Patterson AFB, Ohio - Area B
AMA Sanctioned - Category III

August 19-20, 1995

Saturday

(9:00 a.m. to 5:00 pm EDST)

1/2 A Gas (JS) (O)
B Gas (JSO)
A Nostalgia Gas (JSO)
B/C Nostalgia Gas (JSO)
HLG (J) (SO)
OPEN Power (JSO)
OPEN Glider (JSO) } see below for special rules
OPEN Rubber (JSO) }

Sunday

(8:00 a.m. to 4:00 pm EDST)

A Gas (JSO)
C/D Gas (JSO)
1/4 A Nostalgia Gas (JSO)
1/2 A Nostalgia Gas (JSO)
Catapult Glider (J) (SO)
P-30 (JS) (O)

Awards: Plaques for FIRST plus merchandise through THIRD.

Entry Fees: Open: $5 for 1st event, $2 each additional, $10 max. Juniors & Seniors FREE

Event Rules:

Current AMA and NFFS Nostalgia rules will apply for applicable events.
AMA or MAAC membership required, One day AMA licenses available for Juniors who fly non-powered events (and small gas events through 0.051 engines) for $0.25.

OPEN events will be flown as follows:
No model weight, power, or size restrictions. (anything goes, within current AMA safety guidelines)
- Power - 5 sec engine run for all flights, including the flyoff.
Engine run defined per current AMA rules to be last audible combustion stroke.
- Glider - Standard length towline per current FAI rules - 164 feet.
3 qualifying flights of 2 minute max prior to 5:00 p.m.

Winners determined by unlimited flyoffs during a 15 minute window for each event. Timers may follow models. Start of flyoffs to be determined by popular vote, of eligible contestants, at 5:00 pm Saturday. Flyoffs will be either that evening between 7 & 8 p.m. or the next morning between 8 & 9 a.m

Field rules:

You must enter WPAFB at the SPRINGFIELD STREET GATE, one gate east of USAF Museum gate.

WPAFB enforces the use of seat belts while driving on the base. Also, obey all traffic laws as traffic tickets can be issued and will cost you $

Retrieval of models with motorcycles is permitted at your own risk. You must wear a bright colored shirt or vest and YOU MUST WEAR A HELMET. .

The South end of the field is fenced off and is a restricted area. If wind direction dictates we may need to utilise this area. In this case the gate will be unlocked. Be careful when retrieving models near the various trailers and vehicles in this area.

Contest Directors: **Marty Richardson, 7130 Claybeck Dr., Dayton, OH 45424**
Phones: Home - (513) 236-4058 Work - (513) 255-2318

Joe Mekina, 2404 Banyon Dr., Dayton, OH 45431
Phones: Home - (513) 429-5864 Work - (513) 255-6605

It's the only FF Contest in this area during the month of September.Y'all Come!

Central Indiana Aeromodellers

23rd Annual Regional

CIA

This Meet Carries a AAA AMA Sanction

FREE FLIGHT MEET

... to be held at the AMA site at Muncie, IN - September 23 & 24, 1995

Events:

Saturday, 9/23 9-4:00 EST

- A/B AMA Gas
- Mulvihill Rubber
- A1/A2 (F1H/F1A) Towline
- Hand Held Catapult (J,SO)
- Pee Wee 30
- 1/2A Nos Gas
- ABC Nos Gas

Saturday Eve (Approx. 4-6:00 PM)

- .020 Payload
- Moffett/Korda Combo

Sunday, 9/24 9-4:00 EST

- 1/2A AMA Gas
- C/D AMA Gas
- Hand Launch Glider (J,SO)
- ABC Old Timer Gas
- ¼A Nos Gas/.020 Replica
- P-30/Electric 'A'
- Coupe d'Hiver (F1G)
- Jr. Rubber (Anything Goes)

Entry Fees:

$10 for first event, plus $2 for AMA field use fees. $2 for each additional event. $24 max. Juniors are free.

Awards:

Beautiful trophies to third place in all(SO) events. Trophies and merchandise in Junior HLG, HHCat, and the Jr. Rubber events. Junior is 14 years of age or under.

Rules:

AMA events per AMA Rule Book.

Old Timer per SAM Rule Book except only original or repro ign. engines are permitted. No diesels or glow conversions.

Pee Wee 30 per Orbiteer Rules.

Chase bikes OK, but "go slow!"

CD's:

Moe Whittemore
2348S, 700W
New Palestine, IN 46163
(317) 861-4266

Phil Sullivan
4536 Southern Ave.
Anderson, IN 46013
(317) 640-4536

The **INFORMER**

2348S, 700W
New Palestine, IN
46163

1995 President
Guy Scott

Vice President
Roger Lane

Sec'y/Treasurer
Harry Murphy

Issue No. **3-95**

1995 Area FF Contest Calendar - (AMA Districts 3, 6, & 7) 12

Apr	7-9	Toledo, OH	41st Toledo R/C Expo
May	6-7	Muncie, IN	Thermaleers FF Meet
	7	Columbus, OH	MECA Collecto
	14	---	MOTHER'S DAY
	20-21	Muncie, IN	Excellent Adventure FF Meet
	27-29	---	MEMORIAL DAY WEEKEND
Jun	5/31-6/4	Johnson City, TN	USIC
	3-4	Muncie, IN	COFFC FF Meet
	11	Bong, WI	Aeronuts O.T. FF Meet
	17-18	Sturgis, MI	M.A.M. O.T. FF Meet
	18	WPAFB, OH	(Practice Weekend)
	26-30	Muncie, IN	NFFS USOC/AMA FF NATS
Jul	1-2	*Muncie, IN	FAI Semis for F1A, F1B, and F1C.
	8-9	Bong, WI	FAI & IMAC AMA FF Meet
	15-16	**	
	22-23	WPAFB, OH	CIA O.T. & Nos Gas FF Meet
	29-30		
Aug	5-6	WPAFB, OH	NOFFA FF Meet
	6	Bong, WI	Eagles/Pelicans FF Meet
	13	Bong, WI	Midwestern States FF Meet
	19-20	WPAFB, OH	FFMAS FF Meet
	20	Bong, WI	Aeronuts O.T. FF Meet
	27		
Sep	2-4	---	LABOR DAY WEEKEND
	10-15	Colorado Sprgs.	SAM CHAMPS
	16-17		
	23-24	Muncie, IN	CIA FF Meet (AAA)
	30-1		
Oct	7-8	Lawrenceville,IL	TCAC FF Meet
	14-15		
	21-22	WPAFB, OH	(Practice Weekend)
	28-29		
Nov	5	Columbus, OH	MECA Collecto

Any comments, revisions, additions, or cancellations to the above should be directed to Harry Murphy, 3824 Oakwood Blvd., Anderson, IN 46011 (317) 642-7377.

This schedule as of April 24, 1995

(*) Added.
(**) Deleted.