CENTRAL INDIANA AEROMODELLERS

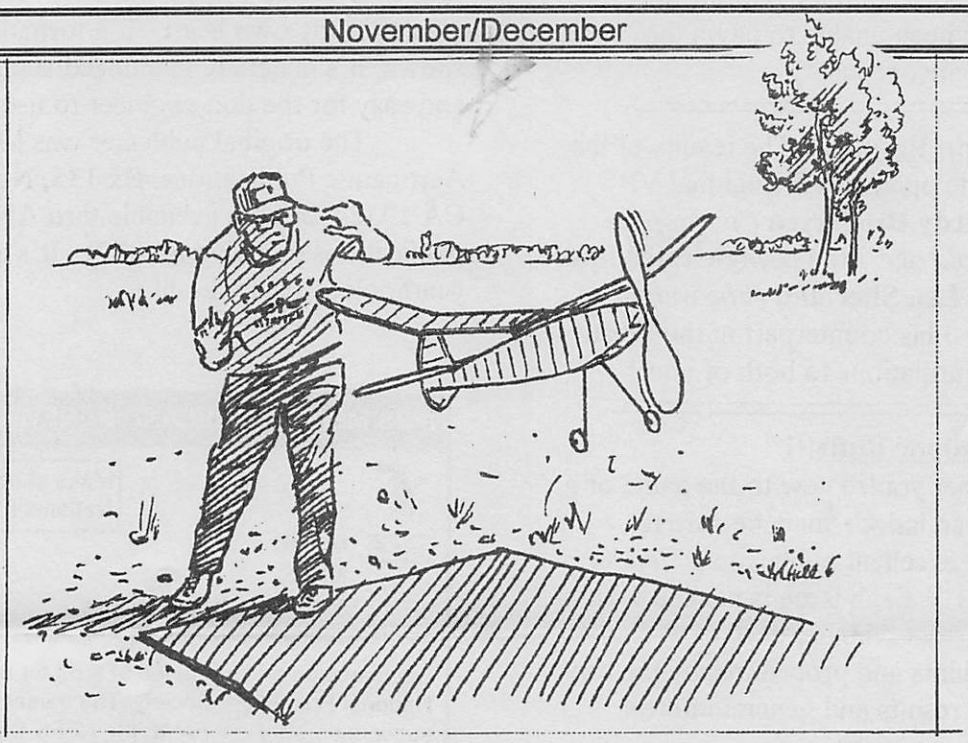
CIA INFORMER

FREE FLIGHT NEWS OF THE MIDWEST

** The Weather **
Rain and snow compete for airtime...

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

Issue # 6/97 | November/December | Price $7.50/yr.



C.I.A Winter Banquet Time Again!

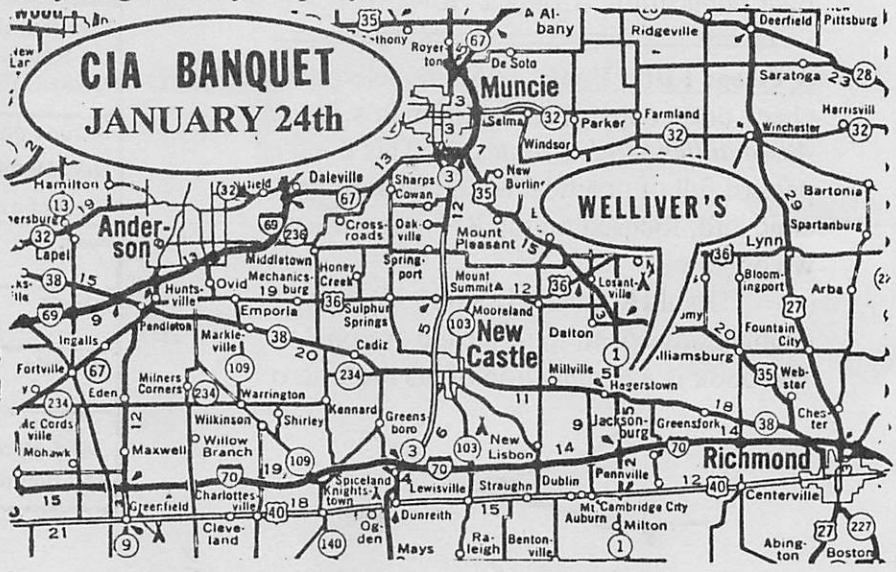
After T'giving and Santa's visit comes our annual CIA Awards Banquet - staged at our usual haunt: **Guy Welliver's** smorgy in Hagerstown, IN. The date for this event is Saturday, January 24, 1998. Come one, come all!! There'll be door prizes, attaboys and insults! Don't miss it!!

Dinner tabs are: Adults = $16.50; youngsters 10-11 = $8; 7-9 = $6 and 2-6 = $3. The chow line forms at 7pm sharp - come earlier for 'happy hour'. The food never runs out!

Please contact **Les Hallgarth** - 847 Glen Echo Dr., Anderson, IN 46012; Ph (765) 649-8833 - by Monday, Jan. 19 so we may confirm the number of attendees to Guy, to insure we'll have plenty of space to squat! Please supply the names and ages of youngsters in your party.

Last year's CIA Club Prexy Dick Covalt will be weilding the ol' baton, with some aid from his partners in crime! The coveted "Crash & Burn" trophy will again be awarded to some well-deserving recipient - along with a few other happenings that haven't been dreamed up, yet!

Don't fret if the weatherman predicts snow, ice, or whatever - because it hasn't materialized for about 7 years! Plus you have all day Sunday to get back home! Let's have a banner turnout. See ya thar!



CIA Election Results!! The new officers for the 1998 CIA activities are as follows:
President - **Mark Wood**.
Vice President - **Sean Cochran**.
Sec'y/Treasurer - **Les Hallgarth**.
(Moe Whittemore continues as Informer editor, having been unable to pawn the chores off on anyone else!)

NFFS Election Results!! The results of the election for the open NFFS Regional VP posts find **Hardy Brodersen** *('a skipping stone; lively old age')* the newly-elected East Director, and **Len Sherman** *('the weight of years of work')* his counterpart in the West.

Congratulations to both of you!!

Attention, Indoor Buffs!!!

Whether you're new to the game or a grizzled veteran indoorsman, be sure to check out the excellent publication *"Indoor News & Views"*. Each issue is packed with 3-views of current winning designs, construction hints and procedures by the top dogs, contest results and general interest photos.

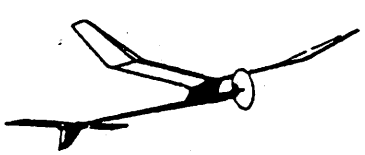
For subscriptions ($9/yr.), contact:
Howard Henderson (INAV),
444 Bryan, St. Louis, MO 63122.
Ph: (314) 822-3980, or by e-mail at:
aerobat77@aol.com (Steve Gardner)
h piet h@aol.com (Howard Henderson)

By the way, the current producers of this great rag are seeking volunteers to take over publication! Contact Howard.

A Great Little Book.... All modelers should check out a copy of R. J. Hoffman's *"Model Aeronautics Made Painless"*. This thing is packed full of practical/empirical aerodynamic info, focused on the RN range where we operate!

Raul Hoffman (1884-1956) was a member/advisor to the Chicago Aeronuts. The book is a compilation of his life's aero work. It's done up in lab notebook fashion, loaded with sketches. It has a definite "50's look" and the amount of information within is incredible, touching all phases of modeling (practical aerodynamics, props, engine & rubber formulae - you name it!!). He's a man after my own heart - if a formula is shown, it's generally minimized/simplified and easy for the non-engineer to use!

The original publisher was Model Aeronautic Publications, Bx 135, Northridge CA 19324, but it's available thru AMA publications (Catalog # 3079). It's a Zaic yearbook series look-alike.



NFFS MEMBERSHIP AND RENEWAL APPLICATION

Make checks payable to:
National Free Flight Society

NFFS Mail to:
NFFS
3317 Pine Timbers Drive
Johnson City, TN 37604-1404

Dues include an annual fee of $.50 for membership in the National Free Flight Society. The balance of the dues is for subscription to *Free Flight*, the NFFS Digest. Subscriptions or memberships are not available separately.

Age 19 & over (US only)	1 year $20.00 2 years $39.00
Junior (US only) Age 18 & under Ages are as of July 1 of the current year. Supply proof of age.	1 year $7.50 2 years $13.50
All Non-US Residents	1 year $24.00 2 years $47.00
Life Memberships US Residents Non-US Residents	 $450.00 $500.00

Include payment in US dollars and this form:
New Member ☐ Renewal ☐ Address change ☐
Current expiration date: Mo. Yr.

Name	AMA # (US only)
Address	Telephone # (US only)
City, State	Zip

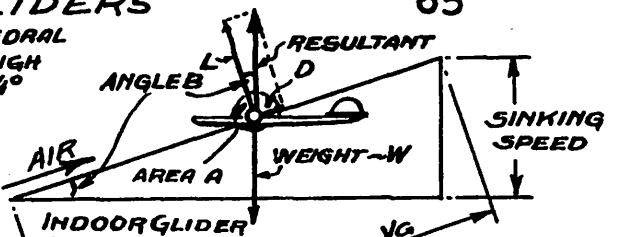
Send *all* renewals, changes-of-address, new applications, and membership questions to the Membership Office.

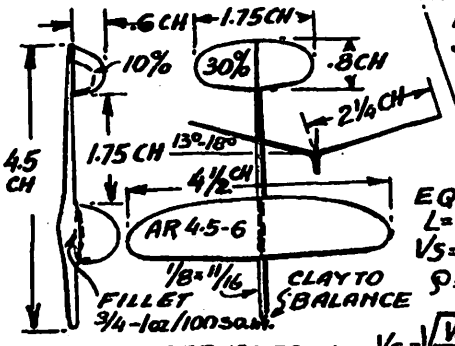
Sample page from the Raul Hoffman publication...



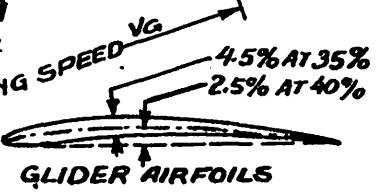
NATURE'S BEST GLIDER

DIHEDRAL AS HIGH AS 24°





OUNCES PER 100 SQ.IN



GLIDER AIRFOILS

EQUATIONS

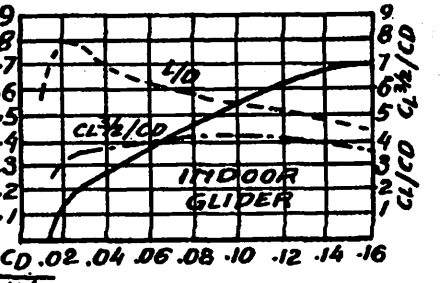
$L = W \cos B$

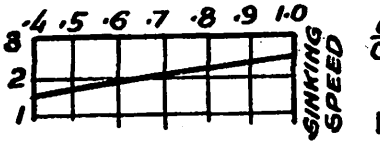
$V_S = V_G \sin B$

$\rho = .00238$

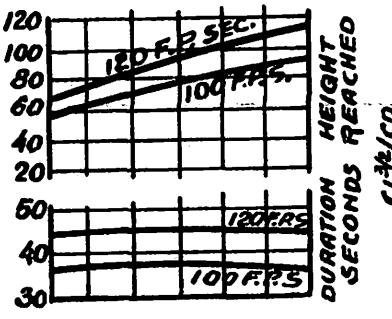
$V_S = \sqrt{\frac{W}{A \times \rho/2} \frac{\cos B C_D}{C_L^{3/2}}}$

$\frac{C_D}{C_L^{3/2}}$ = POWER FACTOR

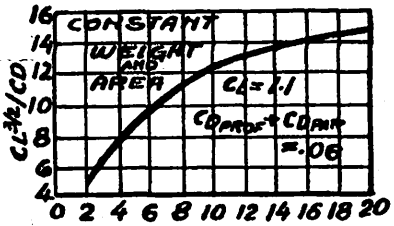




V_G F.P.S $= \sqrt{\frac{7550 W_{oz} \cos \frac{1}{2} B}{A \text{ SQ.IN } C_L}}$



SINKING SPEED + A.R.





SEMI-TRANSPARENT SHOULD FLEX IN LAUNCH WHEN USING UNDER CAMBER, STRAIGHT DIHEDRAL.

INDOOR GLIDER:

WING	.19 oz.
TAIL	.04"
FUSE	.07"
30 SQ.IN	.30 OZ.

FOR LARGE ANGLES OF ATTACK 30°-90°

USE $C_R = (C_D^2 + C_L^2)^{1/2}$

COMPARATIVE VALUES FOR V_S

$V_S \cong C_D / C_R^{3/2}$

INDOOR: WEIGHT ¾-1 oz/100 SQ.IN

LEADING EDGE: WIRE, HARDWOOD, SCOTCH TAPE.

WING TO FLEX., FUSE. ⅛"

LEAD. EDGE CUBIC PARABOLA

TRAIL. EDGE ELLIPSE

ADD WEIGHT FOR OUT DOOR

FOR TURN TO LEFT IN GLIDE CLAY ON LEFT TIP OR LEFT L.E. OF STAB UP AND RIGHT T.E. DOWN.

GLIDER BODY; TESTED 1950 R.J.H.

C_D OF CROSS-SECTION



HAND LAUNCHED GLIDER

MATHEMATICAL DEVELOPMENT of HAND LAUNCHED GLIDER

FORCE REQUIRED $f = m \times a = m\, dv/dt$ DRAG = CONSTANT $\times V^2$ LESS WEIGHT

$m\, dv/dt = -KV^2 W$ $W = m \times g = m \times 32.2$ $V = ds/dt$, $1/dt = V/ds$

$mV\, dv/ds = -KV^2 W$ $ds = mV\, dv/(-KV^2 W)$ INTEGRATING

$\int ds = \int m\, dv/(-KV^2 W)$ $S = -\left[\frac{m}{2K} \text{Log}(KV^2 + mg)\right]_{V_o} + C$ TO FIND C ASSUME

$S = 0$ INITIAL SPEED V_o $S = m/(2K) \times \text{Log}[(KV_o^2 + mg)/(KV^2 + mg)]$

AT MAXIMUM HEIGHT V IS ZERO. THEN THE HEIGHT REACHED

$S = m/2K \text{Log}[(KV_o^2 + mg)/mg]$ DURATION = S / SINKING SPEED

S = HEIGHT, $mg = W$, $K = A \times .00119 \times C_{D\,MIN}$, V_o INITIAL SPEED FT/SEC

COMBINING WITH SINKING SPEED $V_S = 29 W^{1/2} \times \cos B^{3/2} C_D / (C_L^{3/2} A^{1/2})$

$\cos B^{3/2} \sim 1.0$ DURATION $= .0005 \frac{W^{1/2} A^{1/2}}{K} \left[\text{Log}_e \frac{KV^2 + W}{W}\right] \frac{C_L^{3/2}}{C_D}$

1998 CIA AREA FREEFLIGHT CONTEST CALENDAR

Jan	18	1998 Can-Am Indoor Meet	Buffalo, NY
	24	CIA Annual Banquet	Hagerstown, IN
Mar	1	IMAC (formerly IFFF) Kat II Indoor Kontest	Indianapolis, IN
Apr	3,4,5	R/C Expo (Collecto Apr 3?)	Toledo, OH
May	3,4	CAAMA/SAM Contest	Cuckoo, VA
	4	MECA Collecto	Columbus, OH
	10	Mother's Day	—
	17,18	Thermaleers FF Contest	AMA - Muncie, IN
	25	Memorial Day	—
May 28-Jun 1		USIC/AMA Indoor Nats	Johnson City, TN
May 31-Jun1		COFFC FF Meet	AMA - Muncie, IN
Jun	3,4	CIA OT & NosGas FF Meet	AMA - Muncie, IN
	7,8	FF Practice Session	WPAFB, Dayton, OH
	14,15	FFMAS FF & Intra-City FAI Meet	WPAFB, Dayton, OH
	27,28	MAM OT FF Meet/RC Assist + Phantom Fury (Collecto on the 27th)	Sturgis, MI
	28	Aeronuts Fun Fly	Bong, WI
Jul	4,5	4th of July weekend	—
	12	IMAC Annual	Bong, WI
	19	MAM OT Rubber, Slag, OT Gas Combos	Sturgis, MI
	19	Aeronuts Spring OT FF Meet	Bong, WI
Jul 28-Aug 1		AMA FF NATS	AMA - Muncie, IN
Aug	8,9,10	Empire State FF Champs	Fayette, NY
	9	Bong Eagles Annual FF Meet	Bong, WI
	12,13,14	Great Grape Gathering FF & RC Assist	Gananoque, Ont.
	16	Pelicans OT Meet	Bong, WI
	16,17	Cuckoo Challenge FF Meet	Cuckoo, VA
	16,17	NOFFA FF Meet	WPAFB, Dayton, OH
	23	Aeronuts Fall OT FF	AMA - Muncie, IN
	24	Aeronuts Midwestern States FF Meet	AMA - Muncie, IN
Sep	5,6,7	Labor Day Weekend	—
	6,7	FF Practice Session	WPAFB, Dayton, OH
	13	Bong Eagles Special Meet	Bong, WI
	13,14	CIA AAA FF Contest	AMA - Muncie, IN
	13,14	Hoosier Cup (Am cup meet)	AMA - Muncie, IN
	20,21	CAAMA Fall FF Meet + 1/2A RC Texaco	Cuckoo, VA
	22-29	SAM Champs	Las Vegas, NV
Oct	4,5	Tri-County Aero Club FF Meet	Lawrenceville, IL
	11,12	FF Practice Session	WPAFB, Dayton, OH
	18,19	CIA Fall Scramble	AMA - Muncie, IN
Nov	9	MECA Collecto	Columbus, OH

OVERRUN! HSM

The following quiz was stripped from the pages of the 11/97 issue of Bob Stalick's WMC PATTER newsletter. Take the quiz and then check your answers against the correct ones to be found elsewhere in this INFORMER issue - then zip back here and we shall expound on the topic a bit more.....

++

RUMINATING WITH WALT

I receive quite a number of free flight oriented newsletters from around the country, and I found the following "quiz" in the TTOMA (Thermal Thumbers of Metro Atlanta) Newsletter. It was concocted by Walt Rozelle. See how well you can answer these common questions about timing outdoor free flight.

"In the following examples, assume you are timing at a Cat III contest. Decide what you should do in each of these scenarios. Write down your answers, then turn to see how you did (Don't Cheat!) If you doubt the correctness of your answers, check them out in the AMA, FAI, SAM or NFFS Nostalgia rules books.

1). You time a hand launch glider flight. The watch reads 43.99 seconds. What time do you record?
2). You are timing an AMA Power model. Your watch says the engine run was 7.29 seconds. What should you immediately tell the contestant? What should you record on the timecard?
3). What should you have said if your watch read 7.00 seconds? What should you have recorded?
4). A Mulvihill model makes a flight of 39.99 seconds. What should you tell the contestant? What must the contestant do?
5). What should you have done if your watch recorded 40.01 seconds?
6). You time a P-30 flight at 20.01 seconds. What should you do?
7). You are timing a Coupe contestant. On one flight, your watch reads 18.66 seconds; on the second flight, it was 19.66 seconds. What should you have recorded for each flight?
8). How far can you move from your original spot while timing a flight in an AMA or SAM event?
9). How far downwind from the line of parked cars must a contestant b e when launching any model?
10). You are the CD at a contest that combines SAM and AMA events. You observe a contestant flying in a SAM event launch his model from a spot where he obviously used a mylar streamer to help pick lift prior to his launch. A fellow contestant files a complaint. What should you do?

++

.... If you are like me, you winched a few times when your answers did not agree with the correct ones, Right! I doubt if anyone scored a perfect 100, however, Walt's quiz flags a situation for which it might be beneficial to address prior to the upcoming '98 flying season.

Sure, we all fly our favorite events within our chosen free flight disciplines of rubber, gas, glider, scale, etc., but who times our flights and records the flight times on our flight cards? More often than not it will be one of our fellow modelers who in turn may well ask you to time his flights, etc. Therefore, in this day and age we freeflighters are often compelled to serve as"official timers" in a sanctioned contest in which we are also "competitors". Consequently, it could be said that we may have the power to determine who wins and loses ina given event - even one in which we ourselves are competing. Man, talk about the "honor system", huh? Obviously, we could all do each other a favor by perusing through some of the various rule books this winter and bone-up on those pages and pages of rules.

Here is a typical - and all too often - example of what an "official timer" is faced with at many contests: Should the rules for a given FF gas event specify a "7 second max. engine run", what do you do should your watch read "7.001 sec. ? By the rules this is an illegal engine run, correct? If you let it go are you an inefficient "contest official"? In reality, I doubt if any of us would declare the 7.001 reading for what it is by succumbing to the old argument that "nobody can be that accurate using a hand-operated stopwatch", On the other hand, suppose your watch read exactly "7.000 seconds"? Could not the same argument be made"that the ER was probably longer by a few fractions of a second because "nobody is that accurate with a hand-operated stopwatch"? Try that one on your flying buddy the next time he is "right-on-the-money!" - and see how far you can run before he catches you.... (Sorry, a 119.999 second flight time is not a max. either!)

Then there is the scenario where the Wakefield flier asks you to time his flight wherein he gets a bad launch and promptly sticks his model in the ground in exactly "20 seconds". Does the FAI rule that governs this event specify that an attempt is "20 seconds or under" or does it say "anything 20 seconds and over"constitutes an official flight"? Hell, what do I know? I'm

not a rubber flyer that alone a FAI member - plus I don't even own an official FAI Rule Book - nor am I going to dash around looking for one before I record this guy's flight for posterity! Help! What's a body to do?

We have AMA rules, FAI rules, SAM rules, NFFS Nos Gas rules, and asorted "Mickey Mouse" event rules, etc. Show me the guy who can rattle-off the correct answers to any quiz that a person could make up from all those sources. There is the problem, smart guy - what's your solution?

Ahem.... Well, as stated previously, read the various rule books in place of your PLAYBOY magazine before you drift off into dreamland each night this winter. That in itself should offer a whole new perspective on how you should approach situations in the future; 2) carry a supply of "rule books" in a briefcase to the flight line in addition to your tool box, umbrella and chair soyou will be prepared to properly "officiate" when called upon to do so; 3) drag the contest CD in on all questionable situations and let him make the final decision thereby letting the flyer know he is getting Royal attention to his problem. The CD, in most cases won't know the answer either, but it will get you off the hook; and above all, 4) be realistic! Calling a 7.001 sec. ER illegal is abit ridiculous and won't set well with your flying buddies, but if your watch should read "7.002 seconds" yell "OVERRUN"... then run-like-Hell!

++

ANSWERS TO THE QUIZ

1). Record the time as 43 seconds. Reason: you drop fractions of seconds in all AMA events except indoor hand launch glider.
2). Tell the contestant the engine had an overrun. Reason: In Cat. III, anything over 7 seconds is an overrun. Record "ATT (7.29)."Writing down the engine run is an aid to contestants in adjusting their timers.
3). It is a legal run. Tell the contestant the actual time of the run.
4). Immediately tell the contestant the time, and ask if it should be declared official. Under 40 seconds is an attempt. The contestant must immediately decide if the flight will be ruled as official or an attempt. It is the contestant's discretion.
5). Tell the contestant the time, and that it is an official flight.
6). Record it as an official flight. In P-30, any flight of 20 seconds or more is an official.
7). The first flight is an attempt (less than 20 seconds). The second flight, under FAI rules, is official. Following an attempt, the next flight is official regardless of duration.
8). You can move 100 feet in any direction. At a recent contest I (Walt Rozelle) observed someone chasing the model in a car. A few moments later, the timecard was returned to the desk in that car by the contestant and the timer. The timer accompanied the flier in retrieving the model; they picked up the model and returned in a beeline to deliver the timecard. Clearly illegal.
9). AMA insurance rules clearly state that the flight line must be at least 100 feet downwind from the line of parked cars, spectators, etc.
10). You must tell the contestant the flight is invalid. Reason: SAM Rules prohibit using any type of artificial means for thermal detection.

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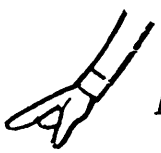
Bruce Augustus on How To Make AME Engines Run

The AME engine is a nice piece of machinery, but not all of them are created equal. More recent versions have improved manufacturing techniques and tend to be of higher overall quality. However, none is ready for free flight competition "out of the box." What is nice about these engines, however, is that with a minimum of fiddling, and practically no extra cost, you can make yours into a runner. Recently, Bruce Augustus, who has done his share of winning with AME engines shared with me his "secrets" to making these relatively inexpensive little mills perform. Here is what Bruce does:

"The first thing to do with the AME .06 engines is to make a backplate cover gasket out of stationery stock or thin gasket material (note: Norvel sells backplate gaskets). Every engine I have ever seen leaks at the backplate.

Next, the needle valve should be

(Continued elsewhere...)



More "good stuff" from Stalick's rag. This's very good info should you be an AME user.

RUMOR MILL....

Les Hallgarth returned from California a few weeks ago claiming the word out there is that Estes will produce Cox .020's in January, but at $80 a piece! How many do you want? Also, I just rec'd an order from MRL where I had ordered Cox .049 glow heads @ $30/dozen. Out-of-stock came the reply.... and if and when new stock arrives they shall be $8.45 each! We may have to switch to FAI fuel in 1/4A and 1/2A to prevent glow head burnouts as much as possible. "Progress is our most important problem!"

Bruce Augustus on AME Engines - Continued

replaced with one made by Doug Galbreath, Joe Klause (Kustom Kraftsmanship) or Henry Nelson. The Galbreath needles are the lightest of the three. A Galbreath head made for the Nelson plug should also be used.

I break in the engines on a test bench starting with the stock head and FAI fuel, using an APC 5.5 x 2 prop. I used a surgical tubing bladder filled with about 10-12cc of fuel. For the first run, set it as rich as possible but keep it running, and run out the bladder. Let it cool completely between runs, then run it progressively faster, but always rich of peak, until the black stuff stops coming out of the crankshaft and exhaust. When it gets loose enough to hold a needle setting at max rpm (usually only two or three runs), increase the nitro to 15% and run at max rpm 2 or 3 runs or until it will hold a setting at peak rpms. Don't overlean.

Repeat the peak rpm runs with 25%, 40% and finally 45-50% nitro fuel. Never run more than about 10cc at a time through the engine before shutting down and allowing to cool. You should see the rpms increase from about 24,000 to about 27,000 during this process.

About the time you get to the high nitro, the stock glow plug will probably fail. When it does, replace it with the Nelson head. If the stock plug survives the above procedure, replace it anyway. By this time the engine should be running about 27K. It may pick up some rpm with the Nelson head. If not, it probably indicates that the compression is too low. I then put the head in my lathe and take off about .006. If the rpm increases, I take off some more until I see about 28K. Then I quit. Keep in mind that my testing occurs at 6000 ft. elevation, so your rpm numbers may be higher.

My experience is that these engines get faster with age, so I don't try to set them up for any faster than 28K when new. I have not measured the head clearance or deck height of my engines, but I have broken in three .06 and 2 .049 engines with the same results. By the way, I use the same process and prop with the .049 but get about 1000 rpms less than with the .06."

A couple of comments from Bob Stalick about the AME engines: "I have found that the stock needle valve can be used with the following modifications: take the spray bar out of the engine and solder the fuel orifice shut. Redrill in the same location with a smaller diameter hole. The stock diameter of this hole is .052. It should be more like .02 or so. Replace the coil spring with a piece of silicon tubing to make the adjustments more precise. Reinstall the unit. Next, experiment with different glo heads. Some of mine run better with a Cox head, others seems to like the GloBee. The other change to make is to use a Texas Timers backplate mount. This little ring mount is a very lightweight and compact mounting system. The cost is $6.50 each plus $2.50 per order postage. Order from Texas Timers, 3317 Pine Timbers Drive, Johnson City, TN 37604."

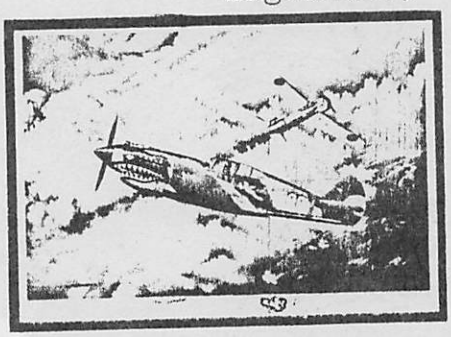
FOR THE RECORD: The AVG - or - "Flying Tigers" (American Volunteer Group - recorded 297 Japanese kills plus 153 probables from 12/41 to 7/42 - amere 7 months. On the minus side they lost 12 P-40's and only 4 pilots.

The CATF (China Air Task Force) replaced the AVG until March '43 - a nine month interim - before they in turn were replaced by the 14th Air Force of the USA. This stint cost the Japanese 149 planes and 85 probables at a tax of 16 P-40's.

The CATF also flew 65 bombing missions losing a single B-25.

All this with meager supplies at the end of a supply-line which stretched half-way around the world. Some Record!!

(Source: Aviation History magazine.)



NEW RUBBER LUBE

by Glenn Bearry

Radio Shack now carries a new product, Archer "Lube Gel", which is a Teflon-based lubricant intended for general use that's non-toxic, suitable for rubber, and good at temperatures that range from -55 to + 650 degrees Fahrenheit. A product with these characteristics should be at least as good as the Dow Corning 33 silcon-based lube that many of us are currently using. It also has two major advantages: it's cheaper at $ 2. 89 for three ounces, and more widely available since Radio Shack has stores just about everywhere.

Via The Windy Sock, Joe Joseph, Editor (via Scale Staffel, 8/97)

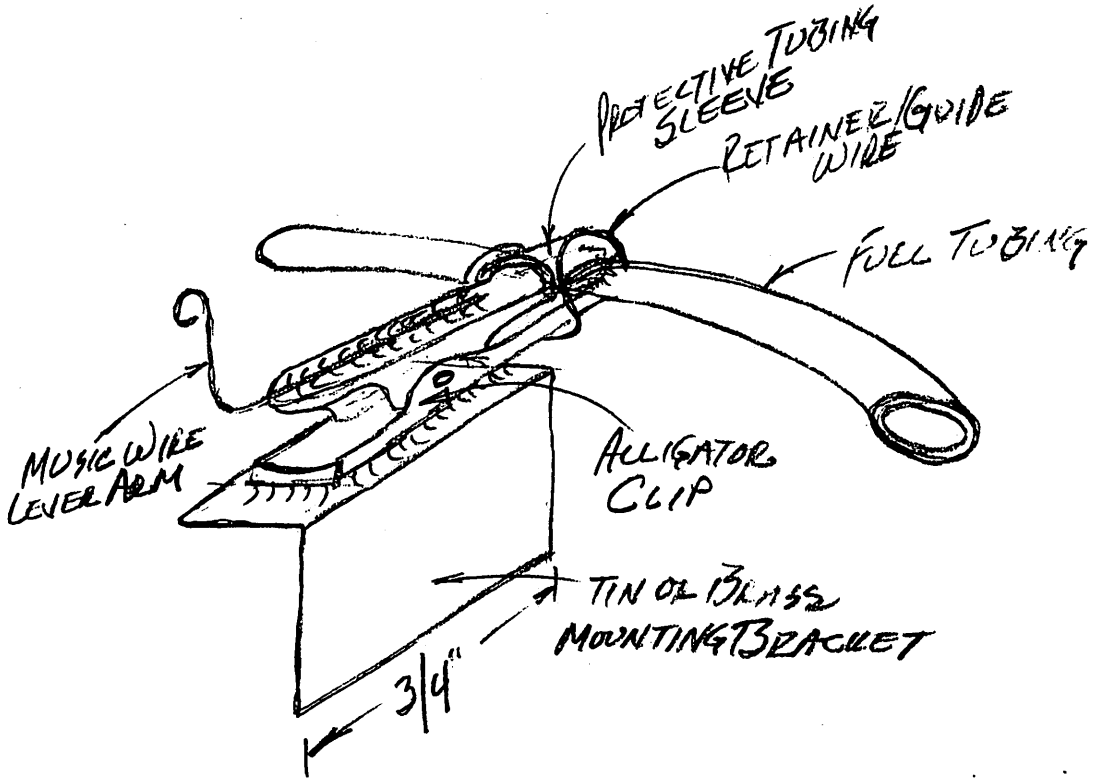
VIA: "BAT SHEET", TED BAILIN, ED.

VIA: "MINN. MODELER," BOB HUETTL, ED.

"RUB (PASS) IT AROUND!"

This space is "For Rent"!

- Tom Kirsch's Fuel Shutoff Unit -



Sez Agent **Tom Kirsch** ....

Everybody has their own version of a fuel shutoff to use with a Seelig-type rotating disc timer. Shown is mine...

The alligator clip is from Radio Shack - Part # 270-380. These come in a 12-pack for about $1.25. First, I grind off the teeth on the jaws, then I solder a copper wire loop to the underside of the jaw to make a fuel line retainer/positioner.

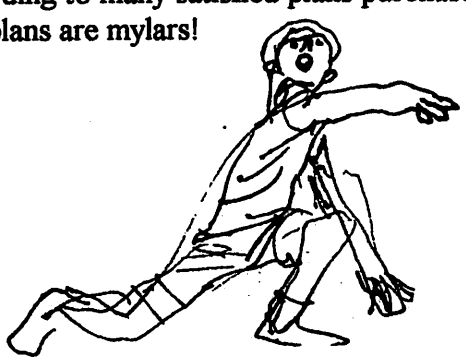
Make an angle to mount to the engine lug bolts. Solder the alligator clip to the mounting bracket (angle). Position the alligator clip on the angle so that the fuel line retainer lines up with the open end of the spray bar. I add the music wire lever arm to the clip to get some mechanical advantage, add the pull wire to the timer, and there you have it!!

The whole thing takes 20-30 minutes to construct. Works great on any size engine!

Ever wonder what happened to the great, old Cleveland Models? The Company is alive and kicking, thanks to new owner John Jacox. The acquisition and preservation of this historic company has progressed from a labor of love with John, to a going enterprise!

The last few years has seen an upgrading of most of that great original plan inventory by digitizing them, then printing/plotting them using modern practice - an unbelievable chore for one person. The results are well worth the effort, according to many satisfied plans purchasers. Gone are the hard-to-decode crinkly blue-lines; the new plans are mylars!

Attention, Hand Launch Glider Flyers ....
Keep up
your pushups
or you'll soon be flyin'
Straight-Ups ....



SEPT 17/18 1997 C.O.F.F.C CONTEST RESULTS

Saturday Sept 17,1997

OPEN

	F1J		A OT Pylon/Cabin		Moffett	
1st.	Keith Fulmer	600 sec.	Harry Murphy	310 sec.	O.C. Stewart	960 sec.
2nd.	Brad Bane	597 "	Ted Dock	292 "	Joe Williams	690 "
3rd.	Jack Marsh	592 "	Elmer Jordan	267 "	Ed Sneed	483 "

	Pee-Wee 30		C/D AMA Gas		OT Stk/Cab Rubber(Large)	
1st.	Larry Willis	3200 Points	Richard Covalt	1444 Sec.	Larry Willis	360 Sec.
2nd.	Bill Hale	3033 "	Gilbert Robbins	725 "	Bob Laybourne	336 "
3rd.	Bill Barr	2162 "	Bob Johannes	536 "	Bob johnson	331 "

	H.H. Catapult		P-30/Coupe		ABC Nostalgia	
1st.	Bob Johannes	247 Sec.	Joe Williams	690 Sec.	Keith Fulmer	720 Sec.
2nd.	Guy Scott	230 "	Brad Bane	348 "	Bill Hale	336 "
3rd.	Tom Jones	217 "	Steve Sova	338 "	Brad Bane	319 "

	P-30		JUNIOR H.H. Catapult	
1st.	Adam Marsh	48 Sec	Jason Poti	130 Sec.
2nd	Alex Marsh	21 "	Adam Marsh	124 "
3rd.	None		Alex Marsh	117 "

Sunday Sept 18,1997

OPEN

	1/2A AMA Gas		Mulivhill Rubber		1/2A Nostalgia	
1st.	Keith Fulmer	991 Sec.	Joe Williams	1080 Sec.	Jack Marsh	600 Sec.
2nd.	Gilbert Robbins	564 "	Larry Willis	1000 "	Steve Sova	572 "
3rd.	Norm Poti	472 "	Ed Sneed	917 "	Bill Hale	549 "

	AMA H.L.G.		.020 Rep/1/4A Nostalgia		A/B AMA Gas	
1st.	Charlie Jones	313 Sec.	Charlie Mortimer	467 Sec.	Bob Johannes	5163 Sec.
2nd.	Bob Larsh	236 "	Bill Hale	360 "	Norm Poti	750 "
3rd.	Bill Reuter	115 "	Shel Myers	356 "	Brad Bane	728 "

	OT B/C Plyon/Cabin		OT Stk/Cab Rubber(Small)		.010 Fly Anything	
1st.	Harry Murphy	480 Sec.	Joe Williams	466 Sec.	Bill Hale	220 Sec.
2nd.	Bob Larsh	410 "	Bob Laybourne	360 "	Larry willis	183 "
3rd.	Dick Patton	325 "	Walt Tomasch	353 "	Bill Barr	176 "

	Jimmy Allen	
1st.	Bob Laybourne	265 Sec.
2nd.	Ted Dock	194 "
3rd.	Roger Lane	120 "

JUNIOR

	AMA H.L.G.		1/2A AMA Gas		JUNIOR HIGH POINT
1st.	Adam Marsh	100 Sec.	Jason Poti	338 Sec.	ADAM MARSH
2nd.	Jon Reuter	96 "	Adam Marsh	268 "	
3rd.	John Heina	60 "	Alex Marsh	229 "	

1997 MID AMERICA F.F. CHAMPS

A1/A2 Towline Glider
1. Bill Schlarb
2. Jack Marsh
3. Jackie Shaffer

Coupe
1. Vickie Wicks
2. Nick Walton
3. Bob Thoren

1/2A Texaco
1. John Schhifko
2. Frank Mehetiens
3. Don Sachtjen

Moffet
1. Joe Williams
2. Ed Konefes
3. John O'Leary

NosGas (ABC comb)
1. Dick Bloomquist
2. Keith Fulmer
3. Jack Marsh

O.T. Rubber Stick
1. O.C. Stewart
2. Larry Willis
3. Joe Williams

1/2A RC Scale
1. John Shifko

1/2A Gas
1. Bob Johannes
2. Keith Fulmer
3. Gib Robbins

OHLG
1. Bill Schlarb
2. Joe Huettel
3. Bob Thoren

O.T. Gas
1. Gene Bowers
2. Richard Kikel
3. Bob Placier

P-30
1. Joe Huettel
2. Roger Lane
3. Steve Sova

B Gas
1. Tony Italiano
2. Don Diggs
3. Gary Oakins

Mulvihill
1. Ed Konefes
2. Larry Willis
3. Bob Rother

Peanut Scale
1. Roger Lane
2. Norman Baker

O.T. Rubber Cabin
1. Joe Williams
2. Ed Konefes
3. Bob Perkins

Catapult Glider
1. Ralph Schlarb
2. Bill Schlarb
3. Jackie Shaffer

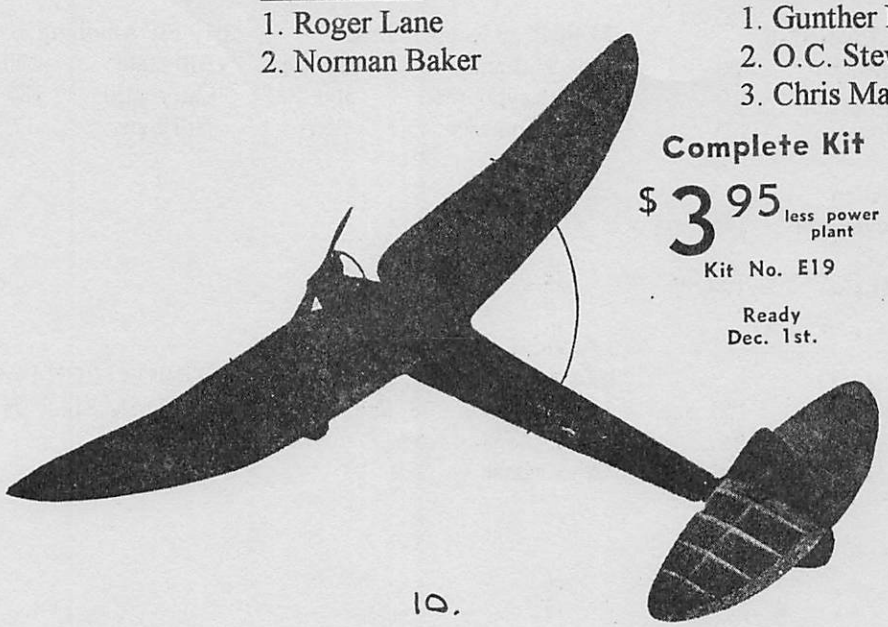
.020 Replica
1. Gene Wicks
2. Gene Bowers
3. Gary Oakins

Pre-'50 Wakefield
1. Larry Willis

A Gas
1. Bob Johannes
2. Tony Italiano
3. Dick Bloomquist

C/D Gas
1. Dick Covalt
2. Jack Marsh
3. Bob Johannes

Wakefield
1. Gunther Novak
2. O.C. Stewart
3. Chris Matsuno



OCT. 18 & 19, 1997 --- CIA FALL SCRAMBLE FF RESULTS

NON-POWERED CATEGORY

F1A - A2 TOWLINE

Jim Thornberry	1766
Larry Willis	49

FIH - A1 TOWLINE

No Entries

HAND LAUNCHED GLIDER

Jim Thornberry	226
Nick Walton	194
Paul Wicks Jr.	138
Brian Turnbull	130
Larry Willis	118
Roger Staton	41
Jason Poti (Jr)	27
J. B. M. Griner	25

HAND HELD CATAPULT

Guy Scott	310
Larry Willis	261
Nick Walton	210
Sean Cochran	179
Roger Lane	103
Roger Staton	100
J. B. M. Griner	81
Jason Poti (Jr)	80
Paul Wicks Jr.	42

RUBBER POWERED CATEGORY

BIG E

Joe Williams	2819
Larry Willis	2672
Sherman Ovelmen	360

DAWN UNLIMITED

Joe Williams	486
Ed Konefes	380
Larry Willis	365
Sherman Ovelmen	200

P-30

Moe Whittemore	349
Vicki Wicks	340
Roger Lane	309
Ed Konefes	274
Ken Johnston	260
Les Hallgarth	63
Paul Wicks Jr.	8

FIG - COUPE d'HIVER

Nick Walton	600
Ed Konefes	423
Jeff Annis	307

FIB - WAKEFIELD

Bill Kozak	360

MULVIHILL

Ed Konefes	2213
Jeff Annis	1323
Bob Perkins	780
Nick Walton	737
Moe Whittemore	158
Jason Poti (Jr)	143

HELICOPTER

Roger Lane	200
Jim Thornberry	119
Nick Walton	15

MOFFETT

Joe Williams	1080
Ed Konefes	680

BOSTONIAN (14gm)

Roger Staton	128

ROCKET, AUTOGIRO, CO2, & ORNITHOPTER

No Entries

GAS POWERED CATEGORY

PAYLOAD

Elmer Jordan	321
Roger Lane	139

1/2A GAS

Norm Poti	1189
Brian Turnbull	560
Les Hallgarth	469
Gib Robbins	322
Bob Placier	284
Tom Kerr	182
Gene Wicks	162
Dan Harshman	82

A GAS

Dick Covalt	1540
Jason Poti (Jr)	351
Tom Kerr	335

B GAS

Gib Robbins	600
Guy Scott	570
Norm Poti	240

C GAS

Gib Robbins	354
Norm Poti	269

D GAS

Guy Scott	683

CIA CLASSIC POWER

Gene Wicks	360
Bob Edelstein	269
Keith Hoover	114
Les Hallgarth	91

NOSTALGIA GAS

Elmer Jordan	564
Gene Wicks	480
Les Hallgarth	355
Larry Willis	325
Bob Edelstein	320
Bob Placier	233

F1J - SMALL POWER

Gib Robbins	1576
Norm Poti	780
Bob Perkins	580
Tom Kerr	377

F1C - POWER

Keith Hoover	128

ELECTRIC

No Entries

ALL EVENT WINNERS

1 oz Muncie Model Supply CA

TROPHY CHAMPIONS & PRIZE

GRAND CHAMPION OPEN
Larry Willis - AME .049
GRAND CHAMPION Jr-Sr
Jason Poti - Jesse James A1 Kit
NON-POWERED
Jim Thornberry - 2# FAI Rubber
(Selected & Delivered by Ed Konefes)
RUBBER POWERED
Ed Konefes - Souper Coupe Kit
GAS POWERED
Norm Poti - 2 Camping Chairs

Richard Covalt, CD 10/21/97

The **INFORMER**

2348S, 700W
New Palestine,
IN
46163

1998 President
Mark Wood

Vice President
Sean Cochran

Sec'y/Treasurer
Les Hallgarth

Issue No. 6 - 97