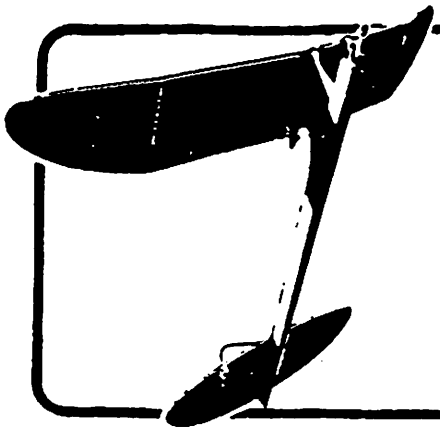


MINNEAPOLIS MODELER

Published six times per year by the Minneapolis Model Aero Club
1011 Highland Ave., So. St. Paul, Mn. 55075

ESTABLISHED 1937 -- CHARTER No. 379

Annual Dues: Open.... $15.00 Senior.... $5.00 Junior.... Free
Subscription rate for non-members.... $6.00/year

President	**Gary Oakins**	**429-3150**
Secretary	**Tony Saunderson**	
Treasurer	**Mike Spiess**	
Editor	**Dave Braun**	**457-2264**

No. 248 **Jan. - Feb. 1996**

Coming Events

January 28, 1996 **Gary Oakins *429 - 3150***

Peanut Scale	Walnut Scale	Bostonian
No - Cal Scale	Penny Plane	Easy B
Parlor Mite	Phantom Flash	HLG (SO)
HLG (J)	Junior Rubber	

February 18, 1996 **Hank Liljequist *545 - 8178***

Peanut Scale	Walnut Scale	Bostonian
No - Cal Scale	Penny Plane	Easy B
Mini - Stick	Catapult Glider	HLG (SO)
HLG (J)	Junior Rubber	

Entry Fees: Senior/Open ..... ***$5.00*** 1st Event ***$3.00*** 2d Event
$2.00 each additional event or scale entry
Junior ..... ***$1.00*** each event **($2.00 Maximum)**

Time: Contests will be from **1:00 PM** to **6:00 PM** ***(Must be out by 6:15)***
Registration: Registration shall remain open until the commencement of official flights in an event or event grouping.
Note: All ages combined except as noted
Site: ***Mpls. Junior Academy*** 3500 Williston Rd., Minnetonka Mn.

O'Leary Ink -

- Epilogue -

Hey. it's been great filling in for Don Spehn as your erstwhile Prez for the last eight months. My thanks to Jim Ladwig who really got the short end of the stick serving as interim secretary and doing a neckuva job. And a heartfelt.Thank You! for Gary Fessler who did a marvelous job as treasurer for many years. keeping us solvent.keeping our appetite for expenditure in check and for introducing the monthly club meeting raffle.And a final kudo for Dennie Sussman for his effort as prize and award's honcho.

Our club will be ably guided by Gary O.. Tony S. & Mike S. for 1996.

This leadership team may be faced with the formidable problem of finding a new field for our outdoor activity. as evidenced by the "FOR SALE" sign smack dab in the middle of the sod farm. Let's hope for the best. but focus on finding a suitable alternate site within a sixty mile radius. The '95/'96 indoor season is underway:keep it alive by building some new planes.and bringing a guest or two to the contests. It's my contention that the growth in club membership in recent years is partially due to visitors to the indoor meets getting interested. and having their questions answered.

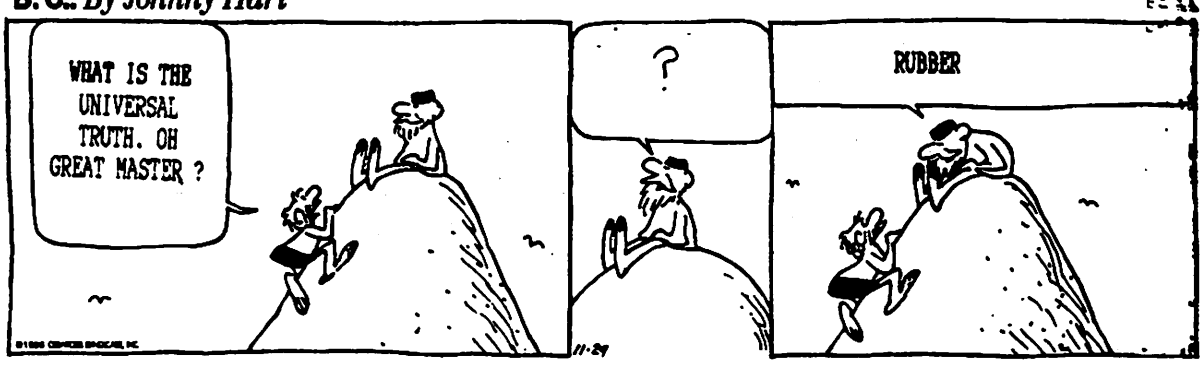
Some club members have questioned the value of the MMAC's participation in the public schools' and Boy Scouts' aero-ed programs citing the indisputable fact that the kids don't show at contests or club meetings. While contest participation would be one measure of success.other criteria are equally valid.Those of us involved in the youth programs hope we are demonstrating the value of deferred rewards rather than instant gratification.that we're transmitting a love of craftmanship and pride in constructing an object that works as per plan. And finally, the youth programs may be about us old geezers touching base with the next generation and satisfying our need to pass on some of our values before we check out to that great skyport in the sky. I'm sure that the interchange between the kids and the geezers is two-way. We find out that the youngsters.in spite of their bad press,are much like we were at that age and the kids become aware that these old codgers have something to offer.

A final thank you for Gary Oakins for hosting the Christmas party on Dec.2nd.I regret I can't give a firsthand report absenting myself at home with the stomach flu. but I know everyone had a great time.

HAPPY YULETIDE. EVERYONE!!

John

B.C.: *By Johnny Hart*



MEETING MINUTES of MINNEAPOLIS MODEL AERO CLUB
NOVEMBER 3, 1995 DONALDSON COMPANY, INC.

Called to order at 8:14 P.M. by Interim President Jack O'Leary.

SECRETARY'S REPORT- Minutes approved as published in the newsletter on motion by Gary Oakins, seconded by Aaron Petersen.

TREASURER'S REPORT- Treasurer Gary Fessler reported balance looks better than anticipated, due to good income from contest fees.

CORRESPONDENCE- none reported.

OLD BUSINESS-
1. Turkey Shoot reviewed by CD Petersen. Bridges taken up at day's end.

2. Jim Ladwig said AMA YES funding has been applied for.

3. Hentges Sod Farm is displaying a sign "80 Acres, Industrial Zoning."

NEW BUSINESS-
1. Trim session at Minnetonka Christian Academy on Nov. 19, 1-6 P.M.

2. Christmas Party on Dec. 2 at Oakins. Bring what you like for potluck. Announcement will be by special mailing.

3. Reminder that AMA ballot is due there by November 13.

4. District 7 column in Model Aviation described Aaron Petersen's youth programs, but implied he was a member of St. Paul R/C Club.

5. Don Patterson has made up a manual for youths in our model airplane classes. Some material was obtained from MnDOT Office of Aeronautics.

6. Don is planning to visit Golden Age Reproductions in Massachusetts, and can pick up materials for club members.

7. Aaron Petersen says a meeting with Metrodome management is needed.

8. Health status of several missing members was presented.

ELECTION RESULTS-

Treasurer -	Mike Spiess
Secretary -	Tony Saunderson
President -	Gary Oakins

Saunderson promised to join AMA and MMAC before January 1, 1995.

Dennis Sussman moved and Don Berggren seconded to adjourn at 8:37 P.M.

SHOW & TELL- Bob Knutson from Austin described purchase of an Anderson Pylon model at an auction of Alva Anderson's models, and gave some history of it and of Bob's early experience. He once built a Comet Zipper powered by two O&R 23's, which was quite successful.

Respectfully submitted by Jim Ladwig, Interim Secretary.

MEETING MINUTES of MINNEAPOLIS MODEL AERO CLUB
DECEMBER 1, 1995 DONALDSON COMPANY, INC.

Called to order at 8:07 P.M. by Interim President Jack O'Leary, with a goodly number of members present. (Clyde White and Gary Oakins missing.)

SECRETARY'S REPORT- Interim Secretary Jim Ladwig read the minutes of the November meeting. Minutes approved on motion by Terry Taylor, seconded by Karl Nitardy and will be published in the next newsletter.

TREASURER'S REPORT- Treasurer Gary Fessler reported a moderate balance in the treasury, with no bills unpaid. Gary said 22 members have paid 1996 dues, of 48 1995 members, in answer to a question from the floor.

CORRESPONDENCE-
Gary Fessler reported Willard Anderson sent his dues along with news of his broken hip (in June) and his son's promotion to Major General.

O'Leary said that Free Flight Digest told of the death of Bob Isaacson in an auto accident. While never a member of MMAC, Bob had Minnesota connections and flew with Hugh Langevin at the Hastings Trials.

OLD BUSINESS-
Jim Ladwig reported MMAC has received a $500 check from the AMA YES fund to finance the MMAC Youth Outreach program. He made a motion that this money be accounted separate from other club funds and that a committee be formed to control the funds. Gary Fessler amended the motion to call for a separate checking account, and Karl Nitardy amended it to have the committee appointed by the MMAC President. Motion passed unanimously.

Visitor Jeff Welliver then announced that the Pete Simonson Memorial Fund would add their $200 donation to the MMAC Youth Outreach program. A hearty thanks was heard from the club members.

Dennis Sussman reported that placques have been prepared for the 1995 Champions - Jorge Triana, Overall; Aaron Petersen, Outdoor; Jorge Triana, Indoor and Cody Spiess, Junior. Congratulations to all!

NEW BUSINESS- None presented.

GENERAL ITEMS-
1. Don Patterson reported on his visit to Golden Age Reproductions in Massachusetts, and will buy items for club members on future visits.

2. Dennis Sussman urged that the MMAC Auction be promoted in the next edition of the club newsletter, since February is not that far away.

3. Don Monson asked if 1996 dues are due, and was assured they are.

4. Dennis Sussman is looking for plans for a Spitfire indoor model.

5. Terry Taylor led a round of applause for the retiring officers. He then said they are expected to show up next month with new models.

Don Patterson moved and Dennis Sussman seconded to adjourn at 8:47 P.M.

SHOW & TELL- Ken Mason showed his very nice white & red SIG Tiger.

Respectfully submitted by Jim Ladwig, Interim Secretary.

From The Editor's Desk or Thoughts While Glued to an EZB Wing

I apologize for bailing out as CD for the last indoor meet and would like to thank Don Berggren and Hank Liljequist for stepping in at the last minute to run the show. I hear there were site problems as well as low attendance.... Jorge Triana has a new band (***Latin Blue***) and can still be found on Wednesday nights at **Chang O'Hara's** in St. Paul and at **Garcia's** (also in St. Paul) on Friday and Saturday nights. Hows about draggin' yourselves out of the balsa dust and nitrate fumes and into the fresh air of the local nightclub scene and watch Jorge bend the strings. Clean MMAC T-shirts required!... I just returned from a few days in Chicago and while doing some shopping at one of the Outlet Malls (they call them outlets because 90% of the people there appeared to have been let out of somewhere), I saw what we've all seen at one time or another at malls, craft shows, etc.; namely the booth that features the small all-foam gliders doing perfect loops when thrown straight up in the air, then caught behind the back or on a paper plate. All pretty ho-hum stuff to ***"us pros"*** but it usually draws a crowd. As I watched, I couldn't help but let my mind wander a little as I dreamed of tearing off my jacket to proudly display the club colors, whipping out a Mini-Stick and putting up a five minute flight that bounced (seemingly under thought control) off the walls and ceilings while the adoring crowd bowed to their new God. We modelers are easily entertained... **The Christmas party** was a hoot and a big thanks to Judy and Gary Oakins for hosting.... Received some correspondence from Willard Anderson indicating that he suffered a broken hip this past June, thus explaining his absence during the contest season. Willard also says that son Kurt was recently promoted to Major General in the Air Force. A very proud moment I'm sure. Take care of that hip Andy and we'll see you this summer... Bill Hoffman silently contributes to each issue of the newsletter by supplying me with the address labels for which I'm grateful. This time around, Bill joins the ranks as a contributing columnist with an excellent article on Fuel Mixing. Don't let the math scare you off as Bill lays it out very nicely. Hey, Bill... If a train leaves New York at 4 PM an another leaves Denver at 2 PM and goes 27 MPH for three hours and.....Remember the Auction in February and bring lots of stuff. Last year Don Monson cleaned out his basement; maybe this year he'll clean out his barn. What am I bid for this wind tunnel?...Lastly, thanks to the outgoing administration for their services rendered, and Huzzahs for the new Triumvirate of Gary, Tony, and Mike....

DB

MMAC Indoor Meet - Dec. 17, 1995

Walnut Scale (4)

		Plane	*Scale*	*Flight*	*Tot.*
1.	Jorge Triana	Mac-Bird	49	68	117
2.	Aaron Petersen	Brown B-2	58	20	78
	Jim Anderson	Bebe Jodel	51		
	Bill Thomas	Stinson 105	49		

Peanut Scale (7)

1.	Aaron Petersen	Ord-Hume	52	41	93
2.	Jorge Triana	Maubousin	57	32	89
3.	Jim Jorgensen	Farman	48	36	84
	Jim Anderson	Huntington	49	35	84
5.	Don Berggren	Ganagobie	54	25	80
	Jim Anderson	Fike	54		
	Bill Thomas	Heath	52		
	Hank Liljequist	Fike	48		

No-Cal Scale (6)

1.	Aaron Petersen	132
2.	Hank Liljequist	113
3.	Jim Anderson	91
4.	Bill Thomas	86
5.	Tery Taylor	44

Penny Plane (4)

1.	Bill Thomas	5:26
2.	Jorge Triana	5:02
3.	Jim Jorgensen	3:24
4.	Bob Oppegard	1:39

Mini-Stick (1)

1.	Jorge Triana	4:31

Bostonian (7)

1.	Jorge Triana	72
2.	Jim Jorgensen	61
3.	Hank Liljequist	42
4.	Steve Metz	33

Easy B (4)

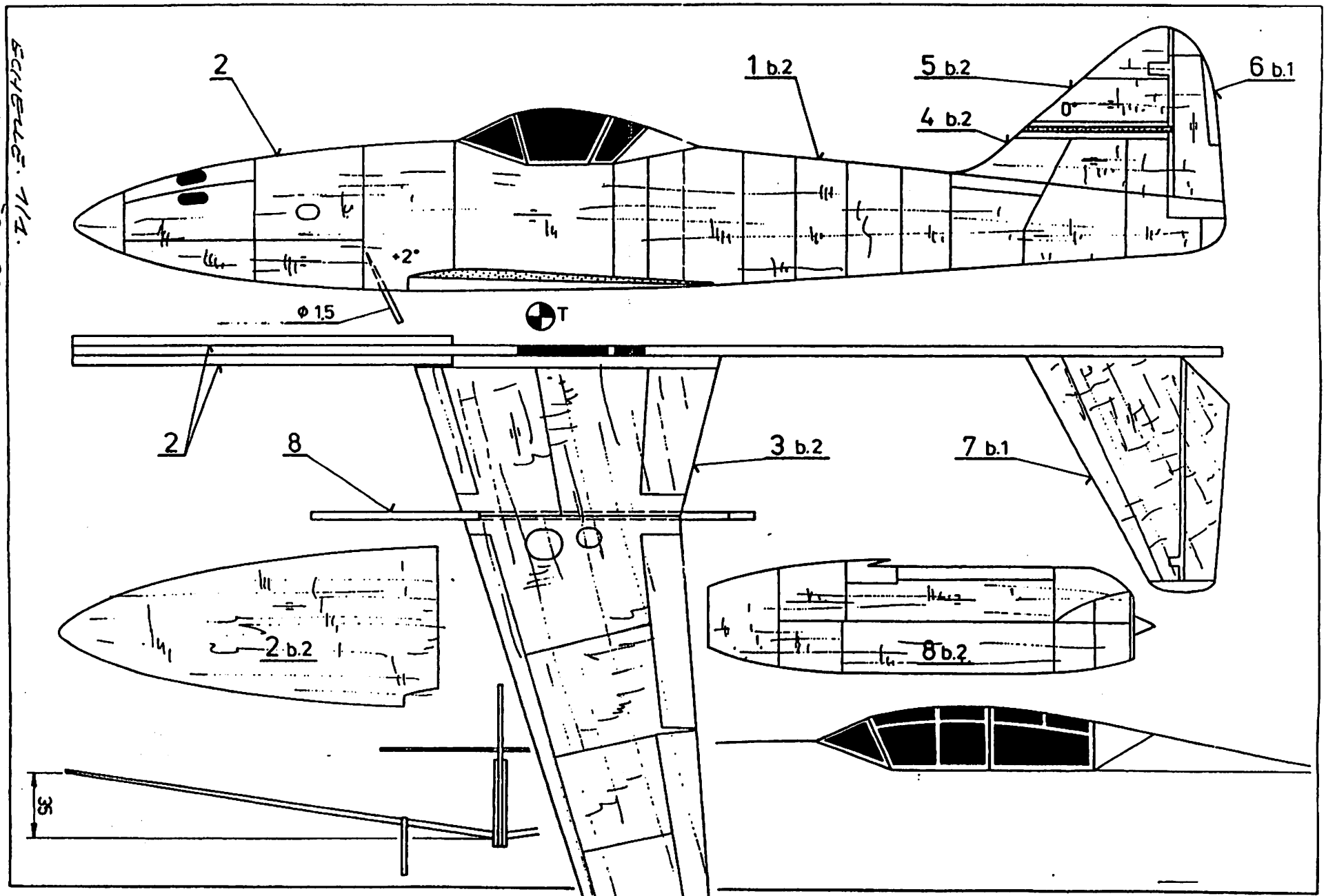
1.	Bob Oppegard	5:47
2.	Jorge Triana	4:49
3.	Bill Thomas	2:33
4.	Jim Jorgensen	2:15

Jr. Rubber (1)

1.	Erick Sears	3:51

MMAC INDOOR HIGH TIMES since 1992 (~21' ceiling)

PEANUT SCALE	AARON PETERSEN	67.8	4/17/94
WALNUT SCALE	AARON PETERSEN	85.3	4/17/94
NO CAL SCALE	AARON PETERSEN	159.0	3/20/94
BOSTONIAN	JORGE TRIANA	100.8	4/17/94
EASY B	JORGE TRIANA	8:25	4/25/93
PENNYPLANE	BOB OPPEGARD	8:09	4/25/93
MINI STICK	JORGE TRIANA	5:22	4/23/95
PARLOR MITES	JORGE TRIANA	5:16	2/14/93
PHANTOM FLASH	JACK O'LEARY	163.1	2/19/95
JUNIOR RUBBER	ERICK SEARS	6:08	3/12/95
HLG	GARY CRAWFORD	59.1	3/12/95
CAT. GLIDER	GARY CRAWFORD	54.2	4/17/94



ECHELLE: 1/4.
- MODELAR- C2..

I had a lot of fun a few years ago with a simple profile F-15 that flew quite well. This ME-262 should be no different.. In addition to being easy to build, it ranks high on the *Cool - O - Meter.* I'm sorry that I can't credit the source as I can't recall the newsletter that I swiped it from. Also, it should be no problem whatsoever to take this simple concept and turn it into squadrons of F-86 Sabres, Mig 15s, etc.

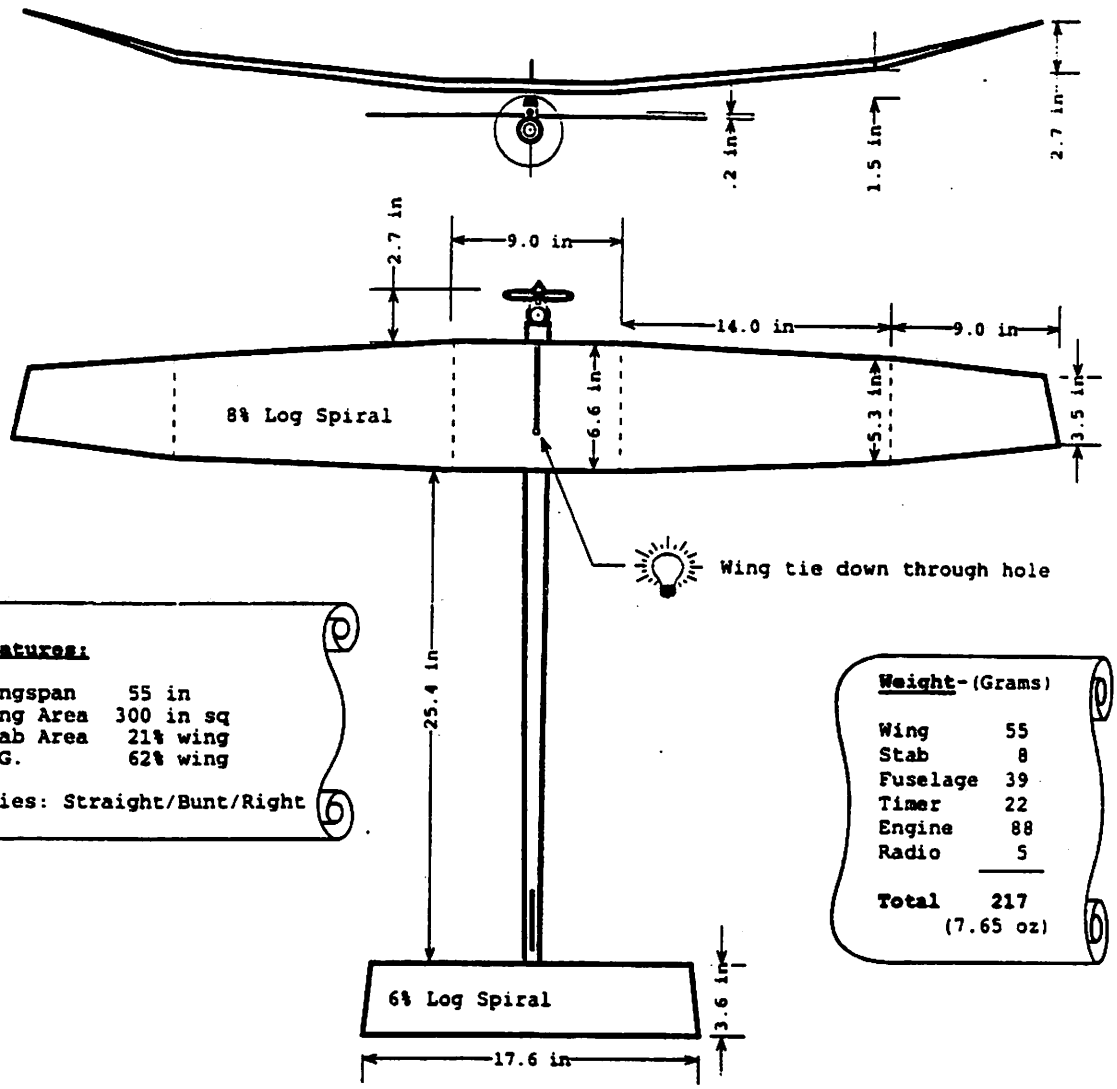
ME.262

NIBBLE "300"

F1J and 1/2 A Gas
Designed: Norman D. Poti
Date: Jan 1995

Cat III 1/2 A Gas
19:31
4 June 95

National Record



Features:

Wingspan	55 in
Wing Area	300 in sq
Stab Area	21% wing
C.G.	62% wing

Flies: Straight/Bunt/Right

Weight-(Grams)

Wing	55
Stab	8
Fuselage	39
Timer	22
Engine	88
Radio	5
Total	**217**
	(7.65 oz)

** FUEL MIX **

For those of us that may not be *Rocket Scientists.* or maybe you just don't remember things like you use to. this may be of some help to you also. I developed it so when all I wanted was just a Fuel formula. I did not want to have to start back with a crash course in *Math 101.* I wanted something I could follow and, with some degree of certainty, come out with the correct answer. It is just a matter of finding the example that fits your needs and plugging in your own percentage values and quantities and follow the same procedure. If you add another ingredient, add it in the same manner as the oil.

- - - BASIC FORMULA - - -

Total Mix × Strength(%) = Amount of ingredient

Example: #1

Have 1 qt. 15% Fuel -- Want 35% using 100% Nitro

	Quantity	Percent	Amt. Ingt.
Fuel/Nitro	1 qt.	15	1×0.15
Nitro	X	100	1.0×X
Nitro-Mix	1 qt.+X	35	0.35×(1+X)
Oil	.35X	25	0.25×(.35X)

$(1\times0.15) + (1\times X) = 0.35\times(1+X) + (.25\times.35X)$

$0.15 + X = 0.35 + 0.35X + 0.0875X$

$X - 0.35X - 0.0875X = 0.35 - 0.15$

$0.5625X = 0.2$

$X = 0.2 \div 0.5625 = 0.3556$ qt. × 32 = **11.4 ozs.**

Oil = 0.3556 × 0.25 = 0.0889 qt. × 32 = **2.8 ozs.**

Check: Str.(%) = Amt. Nitro ÷ Total Mix

$= (0.15 + 0.3556) \div (1 + 0.3556 + 0.0889)$

$= 0.5056 \div 1.444 =$ **35%**

* * * * * * * * * * *

Example: #2

Have 1 qt. 35% Fuel - Want 15%, using 100% Alky.

	Quantity	Percent	Amt. Ingt.
Fuel/Alky	1 qt.	100−35	1×0.65
Alky	X	100	1.0×X
Alky.-Mix	1 qt.+X	100−15	0.85×(1+X)
Oil	.15X	25	0.25×.15X

$(1\times0.65) + (1\times X) = 0.85\times(1+X) - (0.25\times.15X)$

$0.65 + X = 0.85 + 0.85X - 0.0375X$

$X - 0.85X + 0.0375X = 0.85 - 0.65$

$0.1875X = 0.2$

$X = 0.2 \div 0.1875 = 1.0667$ qt. = **1 qt. 2.1 ozs.**

Oil = 1.0667 × 0.25 = 0.2667 qt. × 32 = **8.5 ozs.**

Check: Str.(%) = Amt. Nitro ÷ Total Mix

$= 0.35 \div (1 + 1.0667 + 0.2667)$

$= 0.35 \div 2.3333 =$ **15%**

* * * * * * * * * * *

Example: #3

Have 1 qt. 15% Fuel -- Want 25%, using 35% Fuel.

**Also want to add 5% Oil. if not, omit this line.

Note: This will also work if adding 15% to 35%.

	Quantity	Percent	Amt. Ingt.
Fuel/Nitro	1 qt.	15	1×0.15
Nitro	X	35	0.35×X
Fuel/Nitro	1 qt.+X	25	0.25×(1+X)
Oil **	.25X	5	.05×.25X

$(1\times0.15)+(0.35\times X) = 0.25\times(1+X) + (.05\times.25X)$

$0.15 + 0.35X = 0.25 + 0.25X + .0125X$

$0.35X - 0.25X - .0125X = 0.25 - .015$

$0.0875X = 0.1$

$X = 0.1 \div 0.0875 = 1.1429$ qt. × 32 = **36.6 ozs.**

Oil = 1.1429 × .05 = .0571 qt. × 32 = **1.83 ozs.**

Check: Str.(%) = Amt. Nitro ÷ Total Mix

$= (0.15+(0.35 \times 1.1429)) \div (1 + 1.1429 + 0.0571)$

$= (0.15 + 0.4) \div 2.2 =$ **25%**

* * * * * * * * * * *

Example: #4

Add 1 qt., 15% Fuel to 1 pt., 35% Fuel = What? %

	Quantity	Percent	Amt. Ingt.
Fuel/Nitro	1 quart	15	1 × 0.15
Fuel/Nitro	1 pint	35	0.5 × 0.35
Total Mix	1.5 qt.	X	1.5 × X

$(1 \times 0.15) + (0.5 \times 0.35) = 1.5 \times X$

$0.15 + 0.175 = 1.5X$

$0.325 = 1.5X$

$.0325 \div 1.5 = X =$ **21⅓%**

* * * * * * * * * * *

Example #5

Want 1 quart (32 ozs.) of 35% Fuel & 25% Oil

Ingredient	Quantity	Strength	Amount
Nitro	32 ozs.	.35	**11.2 ozs.**
Oil	32	.25	**8.0 ozs.**
Alky	32−11.2−8	1.0	**12.8 ozs.**
	Total:		32.0 ozs.

Check: Str.(%) = Amt. Nitro ÷ Total Mix

$= 11.2 \div 32 =$ **35%**

* * * * * * * * * * *

- - - CONSTANTS - - -

16 ounces = 1 Pint

2 Pints = 1 Quart

4 Quarts = 1 Gallon

1 Quart = 0.9463 Liters

* * * * * * * * * * *

...from Bill Hoffman

YOUTH PROGRAM GRANT FROM AMA

The Minneapolis Model Aero Club has been awarded a grant from the Academy of Model Aeronautics to fund the MMAC Youth Outreach program. An additional grant to this program, from the Pete Simonson Memorial Fund, has been announced by Jeff Welliver.

This program is a continuation and extension of the model airplane building classes initiated by Harry Gerrish and Charlie Fetter at Burroughs School back in 1987, and the classes run by Aaron Petersen in St. Paul and by Tim Johnson in Richfield.

The funding will allow us to purchase materials, most notably winders for rubber motors, that have been beyond the financial ability of the club and of the students. Educational materials, such as model airplane magazine subscriptions and books, can now be made available to the classes.

MMAC has certain responsibilities related to the AMA grant. They can best be understood by study of the AMA announcement in the official AMA publication. Relevant portions of that announcement are given here.

(This information taken from Model Aviation of September '95, page 19.)

"Moved: That a fund be created called Youth Educational Stipend (YES) designed to provide monies to AMA chartered clubs or chapters for youth programs. These programs are to be developed and implemented by the clubs/chapters working in conjunction with educational institutions or community agencies for the instruction of youth in aeromodelling.

"Each club/chapter may apply for grants in two successive years. The requests will be screened by an Educational Committee composed of the AMA Educational Director, one Executive Council member, and a member at large. Grants up to $1000 may be awarded for each of two sucessive years. Intent to maintain the program for a second year and to request for second year's funding is required. Renewal of the grant beyond a two year period or at a future date may be considered through Executive Council action.

"Each club/chapter awarded a grant must agree to the following:

1. To provide a minimum of two reports about the activity status during and at the conclusion of the program. A photographic record is encouraged.
2. To provide a general accounting of the manner in which the funds were expended.
3. To retain any equipment purchased with the funds as property of the club/chapter.
4. To allow the AMA to distribute and/or promote the program information through its membership service."

MMAC has agreed to these stipulations in its application for the grant, and intends to provide the required reports and to apply for a grant again in the following year.

AMA GRANT (continued)

Our major effort this year is with the after-school class at Northview Junior High in Brooklyn Park. Five of last year's eight students are active again this year, two having moved out of the District. Four new students began this fall, and three more joined the program at the last meeting on December 13.

Models range from the double-delta winged Starbird, kitted by Aaron Petersen, to Bostonian and Embryo kits by Peck Polymers and a Slow Poke from Indoor Model Supplies. All are recommended in Aaron's literature.

With twelve students of varying levels of experience and ability, the mentors have a great deal to do. Any club members or friends that have time available on Wednesday afternoons are encouraged to come and help instruct in building and flying techniques.

MMAC Auction February 2 ***MMAC Auction February 2*** ***MMAC Auction February 2***

(1)



Okay! Who'll start the bidding on this beautiful **O.S. Pet .09**?

(2)



This little gem hasn't been run in over twenty years....

(3)



...cuz that's when it seized up.

(4)



Sold! ... to Woodhouse for thirty two bucks.

Bring some old stuff, bring some new stuff, bring some junk and tried and true stuff. Bring 16lb balsa and old fuel that smells funny. If not, bring yourself and plenty of money.



Quail Ridge Highland Meadows

Condos and Executive Homesites

(Formerly a Peat Bog)