

MAX FAX



Journal of the D. C. Maxecuters

... home of the dreaded POTOMAC PURSUIT SQUADRON of the Flying Aces

Editor: Stew Meyers

MAY - JUNE 2012

TERN AERO ISSUE



\$1.50

GONE GOOSE KIT NO.101

17 IN.



de HAVILLAND Tiger Moth



\$2.50

KIT NO.105 de HAVILLAND
17 IN. Tiger Moth



GONE GOOSE

COMING ATTRACTIONS

INDOOR FLYING HAS RESUMED AT BAUER CENTER
MONDAYS AND WEDNESDAY FROM 12:45 TO 2:15

October 6,7 & 8 2012 GATHERING OF THE TURKEYS
Pensacola Navy Site 8A, FL

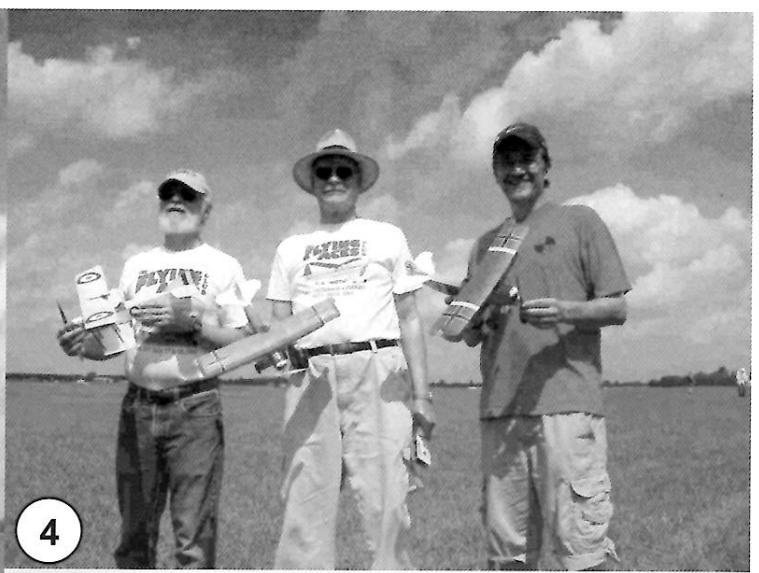
CD: George White 850-473-0866, White76@cox.net
(entry form on <http://www.pensacolafreeflight.org>)

October 20-21, 2012 BARRON FIELD AIR RACES
Barron Field, Wawayanda, NY

CD: Tom Hallman 484-547-3016 John Houk 610-488-6235
(entry form at tom@hallmanstudio.com)



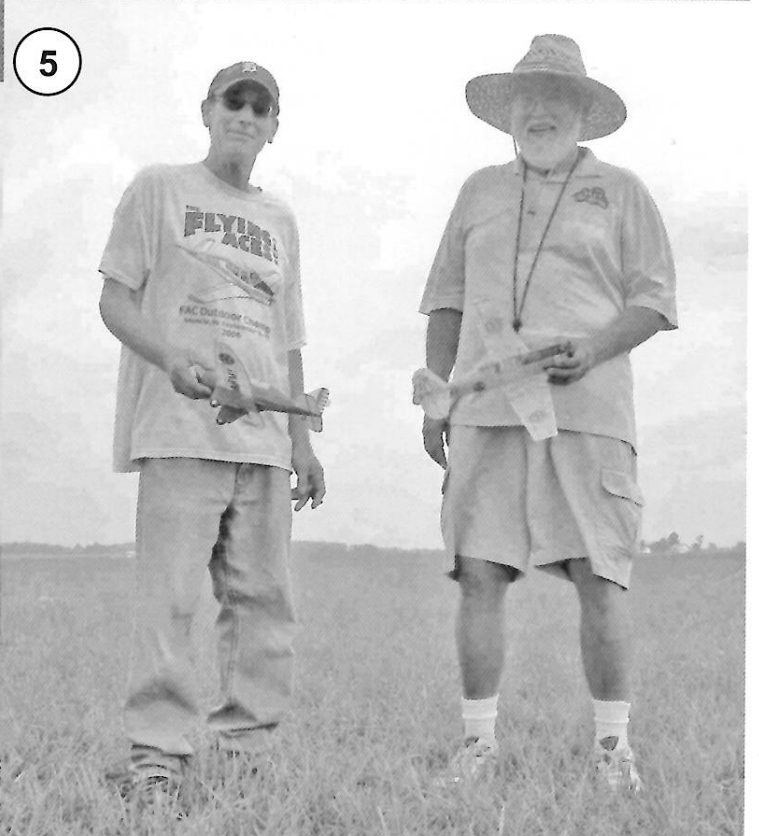
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MaxFax MAY-JUN 2012

Stew Meyers Editor

TERN AERO ISSUE

I am running so late getting these issues out that I think I ought to rename them as 2012-1 to 2012-6. That makes this issue 2012-3. I also notice I have left the membership renewal information out of them so here it is in the box to the left. We will get six issues out this year!

The theme for this issue is TERN AERO. This line of models came out in the 1970's. We have two plans in this issue, the *Gone Goose* and *Tiger Moth*. I built both of these way back when. I recently picked up kits for both of these kits, so I have fresh scans of the plans. A history of TERN AERO is elsewhere in this issue.

We have Tom Hallman's Muncie report with great photos and of course the results. A bit of history of that golden glue, Ambroid and an article by George White on using it. We also have flyers for Tom's WaWa contest and the Gathering of Turkeys.

My *Gone Goose* was built for an ad-hoc contest at work. At that time NASA Goddard's Sounding Rockets branch was located in a warehouse behind a gas station. We had previously been in another warehouse a mile or two away. There was a field behind the building that would soon become an apartment complex. We gathered there at lunch time to fly models.

I put my *Gone Goose* in the trunk of my Rover 2000 TC when I went to work. Unfortunately, there was a recycling effort under way at the time and I also had a stack of newspapers in my trunk. I had an emergency stop on my 23 mile commute to work. When I opened the trunk the *Gone Goose* was flattened. I pinned it to the wall in my office like a butterfly. That noon one of the guys who had never built a model before had his *Gone Goose* go OSS on its first flight. That was his first and last model airplane. Needless to say, these really fly!

PAGE 2 PHOTOS BY Tom Hallman

1. Chris Starleaf's magnificent Jumbo B-24 off to a great flight.
2. John Houck demonstrating his launch form with a peanut Bellanca.
3. Dave Franks launching his Jumbo Waco
4. WWI mass launch winners: Wally Farrell 2nd, Frank Rowesome 1st, Tom Hallman 3rd.
5. Paul Boyanowski's sweet little Burd Seversky BT-8 in the Low Wing Military Trainer mass event that just ached out John Houck who took second with his AT-6...
6. Dave Niedzielski launching a Tom Nallen designed Kharkov kitted by Easy Built of course..

ATTENTION!

We are changing our Red X policy starting in 2013 to be the same as the FAC's. The FAC news letter sends out only one Red X and that is the last issue you receive. Currently we send out several issues with increasing numbers of X's. Some wait until they get three which results in them being six months in arrears. Now it will be one and done!

Membership is \$20 a year, the check should be made out to DC Maxcuters and sent to

DC MAXECUTERS	You can also renew on line!
% STEW MEYERS	Go to MaxFax on the website
8304 WHITMAN DR	www.dcmxecuter.org
BETHESDA, MD. 20817	

The other models in this first round of Tern Aero models were a semi scale parasol *Starduster Sportplane* that I converted to CO2 and a *Traveler Sailplane* that I did not build.

When the *Tiger Moth* came out, I built it and it amazed me by doing nice ROGs and flying around the gym. It also flew well out side. Not all that scale but a great flier.

I am looking for plans for #103 the *Starduster Sportplane*. I have a kit with the printwood, but not the plans. I would also like to get a set of plans for #102 the *Traveler Sailplane*. If any one will send me these I will scan them and return them. I will then post them on the web site. I have plans for the #107 Porterfield Collegiate, #109 Ryan ST, #111 Curtiss Robin, and #112 Aeronca C-3.

MUNCIE REPORT

We rather lucked out on the weather the Muncie FAC Outdoor Champs. When we arrived on Wednesday afternoon, it was raining off and on. The rain ended in the early evening and the guys were able to fly until dark. Thursday morning there was thick fog. This burned off before the contest started. The wind came up a bit but wasn't too bad. Rain was forecast for the next day so we decided to run the contest until 6pm and fly day two events except for the mass launches. Friday morning the weather was great, but we knew the rain would come in the afternoon. We called the contest at one pm when the skies started to be really threatening. I hurriedly printed out the winners and packed up my computers. Immediately after the awards were handed out the wind hit and then the rain started.

There were 51 contestants. Wally Farrell was the grand champion again. Amazingly very few models were lost. Mike Midkiff did lose his electric power dH- 2 to the corn.

A short history of Tern Aero

Lifted from KAPA

Vito M. Garofalo had joined Comet after his return from service in WWII. Vito was a meticulous worker and an outgoing person as well. Over the succeeding few years, Comet increasingly concentrated on flying scale rubber models. However, the mass market for such models was declining as plastic models and cheap 1/2A Control Liners began to flood the market. The Struct-O-Speeds were phased out and the more craftsmanly stick-and-tissue kits again became king, as they are to this day in Comet's line.

A number of Comet stick-and-tissue kits were (and still are!) carryovers of pre-war kits dating from 1936 to 1941. However, during Vito Garofalo's tenure as chief designer, there were also a number of new, well-designed kits introduced.

In 1970, Vito Garofalo left Comet to found a new company, Tern Aero Co., Inc., also located in Chicago. The first advertising for the new company appeared in February 1971. A single kit was offered, the Gone Goose. This was a non-scale 17-inch rubber-powered flying model that sold for \$1.25 postpaid. By March, another model was added to the line: the Traveler sailplane with a 24-inch wingspan and also priced at \$1.25 postpaid. In the next month, another new model was advertised, the Starduster Sportplane. This was a semi-scale single cockpit parasol, as pictured in the advertisements reproduced with this article. These three models continued as the sole Tern Aero entries for about a year. Then in April of 1972, the non-scale Nighthawk, Skipper and Dipper were added, along with the first flying scale rubber kit from Tern Aero. This scale job was the de Havilland Tiger Moth, Tern Aero kit #105. Its wingspan was 17 inches and it sold for \$2.50. The plan was very reminiscent of Vito's late Comet plans.

The kit included a plastic propeller and wheels that were tooled up to Vito's design. Additional scale models continued to be added during 1972 through 1974, including #107 Porterfield Collegiate, #109 Ryan S-T, #111 Curtiss Robin and #112 Aeronca C-3. All have a similar plan format and have wingspans of 17 or 18 inches (Walnut Scale).

A Tern Aero advertisement published in November 1973 shows a new kind of model for the Tern Aero line. It was a double-size Starduster for single channel Radio Control (RC) and .020 engine, kit #401, called the Super Starduster. Some time after the Super Starduster introduction, Tern Aero's national advertising ended. Subsequently Vito negotiated a deal with the Hi-Flier Manufacturing Co. of Decatur, Illinois, selling his business to them and joining them as chief designer.

Hi-Flier had been known for many years as a leading kite manufacturer. Hi-Flier had also been a model airplane kit manufacturer before World War II, offering a fairly extensive line of low-priced kits. These included 100 and 250 solids and three series of flying scale models, priced at 50, 100 and 250, with wingspans ranging from 10 to 30 inches. The prewar kit plans were

drawn and signed with the personal logos of several different designers, including Jerry D Kit and Dot's Kit and some others less legible. Bill Hannan tells me that Hi-Flier employed a female kit designer at that time (presumably that would be Dot), a bit of a rarity before World War II.

The Hi-Flier slogan at this time was printed in the title block of the plans: "The World's Largest Manufacturers of Aerial Toys." A unique feature of the 100 and 250 flying models was a patented stabilizer incidence adjustment device that consisted of a stamped metal ratchet that was located in the fuselage where it was engaged by a pre-formed music wire pawl mounted on the leading edge of the stabilizer.

The 1975 Hi-Flier business plan was to offer the former Tern Aero kits under the Hi-Flier name and to extend the line by updating selected kits from Hi-Fliers pre-war line of 10 cents models. All the kits were to be packaged in a classy new Hi-Flier box, and this longer line of models was expected to provide a better base for sales to both hobby distributors and retail hobby shops.

The former Tern Aero kits were easily converted to Hi-Flier by simply changing the title block on the drawing, removing the "T" from the plastic prop mold, and packing it in the new box. Underneath the Aeronca C-3 plan, you can see the two title blocks, which were the distinction between kit plans produced for Tern Aero and Hi-Flier kits.

Hi-Flier's second entry into manufacturing model airplane kits proved to be fairly short lived. When the kit manufacturing was discontinued, Vito left the model kit manufacturing industry. He returned to the Chicago area, where he continued doing product design outside the model industry until his retirement.

Vito and his wife Antoinette had three sons. One of the sons, Michael became vice president of operations for Waukegan Aero, a fixed-base operator located at the Waukegan Regional Airport just north of Chicago.

In 1994, Vito and son Michael went to the EAA Fly-in at Oshkosh, Wisconsin, flying a restored 1942 Vultee BT-1 3. Tragically, both Vito, age 73, and Michael, age 37, were killed in the crash of the BT-13 while en route home from Oshkosh the evening of July 28, 1994.

TERN AERO MODELS:

- 101 Gone Goose*
- 102 Traveler Sailplane
- 103 Starduster Sportplane
- 104 Skipper Glider/Dipper Stick Model
- 105 de Havilland Tiger Moth*
- 106 Nighthawk Sportster
- 107 Porterfield Collegiate*
- 108 Drifty Primary Glider*
- 109 Ryan ST*
- 110 Aerobug
- 111 Curtiss Robin*
- 112 Aeronca C-3*

* have the plans.

Muncie Report

TomHallman

Arrived home late afternoon on Saturday after five days in Muncie. Was so good to see Frank Rowsome and his FAC Nats winning Chambermaid, Dave Franks with his Waco and Jumbo Judy, Ted Allebone with his electrics, Jack Moses' cute British trainer, PresBruning's flying fish...really...incredible...Wally Farrell and ALL of his ozone flying ships, Mike Midkiff's big DH-2 electric go OOS after 8 mins...WW1 final round where all five lasted 2+ mins...a final round in WW2 that (darn-it) I broke three strands so couldn't join in...but it was a joy to watch Farrell and Midkiff rock the last round with long flights landing just seconds apart...(THIS FIELD IS AMAZING and contains flights of a lifetime that would otherwise be in the next county or deep in the woods or crops elsewhere...). Let me take a breath.

Chris Starleaf's Jumbo B-24 getting WAY up there!!...see attached. His Cessna twin in FAC Scale. Beautiful flights.

Paul Boyanowski's sweet little trainer in the Low Wing Military Trainer mass event event that just aced out John Houck who took second...

yeah...John Houck, what an incredible travel companion. 600 miles through PA, Ohio and Indiana easily went by like watching a compelling movie....never a dull moment, great conversation, salt of the earth, that guy and his family.

Charlie Sauter winning the Greve race after a dry spell of a few years in that event...he was pumped...we were pumped for him!

My DH-2 peanut electric flying up to 500' at 9AM into the foggy low ceiling, nearly losing her in the mist as the sun was trying to break thru..then spiraling home...straight, dead spiral, nose first into the turf....minimal damage!! Best and most memorable scale-like flight in her 10 year history...Thank you Hung.

Wally Farrell again...too many flights to post...most memorable the late afternoon back n forth with the Dimer Staggerwings...Jim Detar, myself & Wally. What a trip, flying in a round robin approach as we tried our best to catch the late day thermals and ace each other out. So much fun..congrats, WF!

8PM sundaes each night at the Muncie Frozen Custard...nuf said.

Arriving safely at 5:30PM on Tues. with John Houck, having the field to ourselves, 'cept for a curious dog who looked as if he wanted to chase balsa...

John putting up 5-6 of his fleet on a perfect evening. Humid, sticky air, but calm and glowing orange, blue sky.

Switching the DO-X that night to Tan 1 rubber, getting incredibly high flights...leaping cleanly skyward...oh! Then getting bit by a broken motor a day later. Dorkus, in Muncie.

Flying from 9-12 noon on Wed....again, perfect weather. Rain storm came in and chased us to the AMA museum for 2-3 hours or hangar talk and such. Terrific. What a museum. Came outside @ 4 to dead calm, flew til 8:30 with some of the troops. So good.

Next day, the contest begins from the far south end of the field, in a blanket of fog. Let the games begin. Most of all it was so good to fly with all of these guys above. A few were in hospital beds only months ago...yet they were running after their ships in Muncie. F/F...the natural cure.

I hate to miss a classic F/F photo opportunity, of which there were many in Muncie...so the pocket camera was always with me as I chased, stooged, or walked the flight line. Paid off...there was always something happening. Can't wait to see what I missed from other flyers taking pix. Charlie Sauter? Dave Franks? Would love to see your stuff.

BTW, an interesting side note that led to a very long first day of contest flying. Around noon, word came about that the contest would not end at 4:30, but instead at 6PM !! The severe second day forecast brought about this very smart move, but man, was this became a marathon. To help get all of the events in, they also allowed you to fly any of the timed events from the second day's list on the first day. Forecast was for the front to roll in around noon - 1PM on Friday, but it held off until just after 2, when the contest ended. It was like Hung flipped a switch after the last award was presented. The wall of wind, thunder and rain came at us full force.

If I hadn't made it clear, Wally Farrell took Grand Champ honors again...and had to squeeze that big trophy back into the van. Like I said to Wally, he should have tried for a 2 for 1 discount when he had the engraving done a couple weeks back....H-a-w-w-w-w.

Kidding aside, major kudos for his solid flying and especially his Staggerwing dimer that was finished just days before the contest!!! Great trim sessions on Wed. nailed the potential for the eventual results with this ship.

OK, last of the pix for now. Enjoy. Had the best time flying with all of the flyers in Muncie. Time well spent.

Thx to all who put on another good show. Can't wait for 2013. And it you haven't been there already, seriously...time to move this date up to the top of your bucket list !!! It's the best field in the Eastern half of the US for sure, and not to be missed.

Cheers.

TH

MUNCIE 2012 OUTDOOR CHAMPS RESULTS

Event#	EVENT NAME	# Ent	NAME	PLANE	
1	FAC Peanut Scale	15	DENNIS RUHLAND	FOLKERTS SK-2	1
1	FAC PEANUT SCALE		TOM HALLMAN	MARTINSYDE BUZZARD	2
1	FAC PEANUT SCALE		PRESTON BRUNING	ARADO 198	3
2	FAC RUBBER SCALE	19	CHRIS STARLEAF	CESSNA 310	1
2	FAC RUBBER SCALE		JIM DETAR	GREAT LAKES	2
2	FAC RUBBER SCALE		WALLY FARRELL	MILES FALCON	3
3	FAC JUMBO SCALE	8	TOM HALLMAN	MIG-DIS	1
3	FAC JUMBO SCALE		CHRIS STARLEAF	B-24	2
3	FAC JUMBO SCALE		TIM LAVENDER	FOCKWOLFE 190-D	3
5	FAC POWER SCALE	7	TOM HALLMAN	DH-2	1
5	FAC POWER SCALE		TED ALLEBONE	VICKERS VIMY	2
5	FAC POWER SCALE		MIKE MIDKIFF	BESSON M B411	3
6	LOW-WING MILITARY TRAINER	6	PAUL BOYANOWSKI	SEVERSKY BT-8	1
6	LOW-WING MILITARY TRAINER		JOHN P. HOUCK	AT-6	2
6	LOW-WING MILITARY TRAINER		PAT MURRAY	T-34	3
7	GOLDEN AGE COMBINED	14	WALLY FARRELL	DH-29	1
7	GOLDEN AGE COMBINED		TOM HALLMAN	FAIRCHILD F-24	2
7	GOLDEN AGE COMBINED		JIM DETAR	PIPER J-5	3
10	OLD TIME RUBBER STICK	5	DAN DRISCOLL	SMITH STICK	1
10	OLD TIME RUBBER STICK		STEWART CUMMINS	GOLLYWOK	2
10	OLD TIME RUBBER STICK		TED ALLEBONE	WANDERER	3
11	OLD TIME RUBBER FUSELAGE	12	JACK TISINAI	GULL	1
11	OLD TIME RUBBER FUSELAGE		MARK RZADCA	MOTH	2
11	OLD TIME RUBBER FUSELAGE		STEWART CUMMINS	MISS CANADA	3
14	OLD TIME GAS REPLICA	4	MARK RZADCA	NEW RULER	1
14	OLD TIME GAS REPLICA		TED ALLEBONE	PLAYBOY	2
14	OLD TIME GAS REPLICA		LESLIE BURDSAL	STRATO STREAK	3
16	DIME SCALE	11	WALLY FARRELL	STAGGERWING	1
16	DIME SCALE		TOM HALLMAN	STAGGERWING	2
16	DIME SCALE		JIM DETAR	REAWIN CLOUDSTER	3
19	EMBRYO ENDURANCE	23	DAN DRISCOLL	NIT-2	1
19	EMBRYO ENDURANCE		JACK BREDEHOFT	BIG CAT	2
19	EMBRYO ENDURANCE		HARRISON KNAPP	DEBUT	3
23	GREVE RACE	15	CHARLIE SAUTER	KR-4	1
23	GREVE RACE		WALLY FARRELL	MR. SMOOTHIE	2
23	GREVE RACE		DAVID NIEDZIELSKI	CHAMBERMAID	3
24	GOODYEAR / FORMULA RACE	5	JACK TISINAI	HURLBERT HURRICANE	1
24	GOODYEAR / FORMULA RACE		WALLY FARRELL	POGO	2
24	GOODYEAR / FORMULA RACE		GEORGE BREDEHOFT	FALCON SPECIAL	3
25	WWI COMBAT	11	FRANK ROWSOME	FOKKER D-7	1
25	WWI COMBAT		WALLY FARRELL	MARTINSYDE BUZZARD	2
25	WWI COMBAT		TOM HALLMAN	FOKKER D-7	3
26	WWII COMBAT	17	WALLY FARRELL	JUDY	1
26	WWII COMBAT		MIKE MIDKIFF	F6F	2
26	WWII COMBAT		TIM LAVENDER	FW 190 D-9	3
29	1/2 WAKEFIELD	4	TED ALLEBONE	HALF A WAKE	1
29	1/2 WAKEFIELD		JACK MOSES	CANADA CHAMP	2
29	1/2 WAKEFIELD		R. PRESTON BRUNING	HALF A WAKE	3
98	AMA P-30	8	DAN DRISCOLL	DD-2	1
98	AMA P-30		WALLY FARRELL	BOOMER	2
98	AMA P-30		GARY H. MORTON	MARIE	3
99	ERIE DAILY TIMES	3	STEWART CUMMINS	EOD	1
99	ERIE DAILY TIMES		JACK MOSES	EOD	2
99	ERIE DAILY TIMES		CHRIS BOEHM	EOD	3



2012 Gathering of the Turkeys

PENSACOLA, FLORIDA - 6,7 and 8 October 2012

Sanction # 12- 1910 A Category III National Cup Event

CONTEST DIRECTOR: George White, 10100 Hillview Drive., #234, Pensacola, FL 32514 Email: White76@cox.net

ASSISTANT CD For FAC Events: Jack Coyle, 4170 Spinnaker Drive, #1224H, Gulf Shores, AL 36542, jandpc@coyle.com

FLYING SITE: Navy Helo Field Site 8A. Exit Interstate 10 at Exit 5 onto US Highway 90A West. Go 1.7 miles to the south gate.

AWARDS: Contest Balsa (First place), Useful tools (Second & Third Place)

ENTRY FEE: PREGISTRATION PRIOR TO 1 OCTOBER: \$20 flies all events, (If under 19 - \$2)

AFTER 1 OCTOBER: \$25, (Under 19 - \$3)

SPECIAL INFORMATION:

1. Max Flight Times and Fly-off Rules will be contained in a schedule provided to each contestant and will be basically in accord with appropriate rule books and subject to wind conditions.
2. *SAM Commercial Rubber/FAC Old-Time Rubber Cabin will be hand launched. . If a FAC eligible model achieves first place, it will be also awarded a Kanone if winner is a member of the FAC.
3. All Model aircraft flown in AMA events must conform to AMA identification requirements.
4. Flight times and **name of model** will be recorded with the C/D after each flight except for CAT/HL Glider
5. ** One winner will be recognized in this contest for this event, but each class will be reported for Nat'l Cup points.
6. All AMA events are Category III
7. For information please contact web site: www.pensacolafreeflight.org
8. @ This is a special event — see our website — www.pensacolafreeflight.org

EVENTS LIST & ENTRY FORM

Saturday 0800-1600	Sunday 0800-1600	Monday 0800-1500
1. AMA 1/2A Gas JSO	14. AMA 1/2A Classic Gas SO	27. AMA A/B/ Gas Combo** JSO
2. AMA C/D Gas Combo ** JSO	15. AMA 1/2A Classic Gas (Junior only)	28. AMA A/B/C/D Classic Gas Combo** JSO
3. NOS A Gas	16. NOS 1/2 A & Early NOS 1/2A Gas **	29. NOS B/C Gas **
4. 1/4A NOS Gas	17. AMA P-30 SO	30. SAM Small Rubber Stick
5. AMA P-30 (Junior only)	18. AMA Moffett JSO	31. AMA OHLG SO
6. AMA Mulvihill JSO	19. SAM Large Rubber Stick	32. AMA Cat Glider SO
7. SAM Rubber Small/Large Fuselage	20. AMA OHLG J	33. NFFS E36
8. NFFS Classic Towline Glider	21. AMA Cat Glider J	34. SAM OT Pylon/Cabin A/B/C Gas
9. FAC Modern Military/Civil	22. FAC Two-Bit Rubber	35. FAC Power Scale
10. FAC Embryo	23. FAC Dime Scale	36. SAM Comm'l Rubber/FAC OT Rubber Cabin *
11. FAC Thompson/Greve Race Mass Launch 0900	24. FAC Jet Cat Scale Glider	37.. FAC WWII Mass Launch 0900
12. FAC Rubber Scale	25. FAC WWI Mass Launch 0900	38. FAC Golden Age Civil/Military
13. FAC Peanut	26. Flying Aces Magazine Non-Scale Special@	

Release. I the undersigned contestant/parent do hereby release any and all organizations connected with this meet from all claims. I certify that I am the Builder of all models entered and flown by me.

Signature _____ Date _____ Age if Under19 _____

NAME (PRINTED) _____ AMA# _____ VERIFIED

ADDRESS _____ CITY _____ STATE _____ ZIP _____

EMAIL ADDRESS _____ PHONE# _____

I ALSO WANT TO DONATE THE FOLLOWING AMOUNT TO THE NAVY/MARINE CORPS RELIEF SOCIETY

\$

ENTRY FEE PAID

\$

Cell # _____

CONTESTANT # _____

History of Ambroid Glue

While cruising the web, I stumbled across this fascinating history:

Before Ambroid glue, you patched the birch bark or canvas on your canoe with spruce gum. It was an art and an ordeal. You gathered dried knots of pitch from spruce or pine trees. These were nurtured with patience from the trees by creating gumming notches. You harvested the knots and took them on trip with you. When you sprung a leak you started up a fire and rendered them with fat. The gum was applied while still hot. And if you didn't get your mix just right!

In 1900 the canvas canoe was on the cusp of revolutionizing canoeing and launching the canoe-building industry. Charles Seavern, president of Howe & French, Inc. a Boston chemical company, was an ardent trout fisherman and canoeist. He was more than familiar with the time-consuming, messy gumming process from his Maine fishing trips in birch bark canoes.

Howe & French processed used tortoise-shell glasses to recover camphor. The leftover celluloid was burned. Celluloid had made its debut as the first plastic. It was little more than cellulose, obtained from plants such as cotton, and camphor the plasticizer. As plastic was waterproof, it occurred to Seavern that a replacement for gum could be made from this waste. No more pitch gathering. No more fires. No more rendering. Just open a tin can and apply. It might have some color problems but the bottom of a birchbark canoe was not a designer's paradise. And since his company had waste celluloid to burn, the price of the raw material couldn't be beat.

With testing, Seavern found that his glue exceeded his original hopes as an adhesive, not only for birch bark, but the new canvas canoes as well. It was fast-drying, flexible, strong and above all, waterproof — as the packaging would later boast. Two words, amber (its color) and celluloid were combined to create the brand name Ambroid.

The liquid plastic was sold in small, round tins to sporting-goods outlets and in larger one-gallon cans to canoe-repair shops. Old Town Canoe Company became one of the first customers of the Ambroid Company, apparently even for a time, providing a tube with each canvas canoe sold. Old Town still sells Ambroid in its Wood/Canvas Repair Kit. Hudson's Bay Company became another early customer, selling large quantities across Canada through its posts and inland stores to hunters, trappers, surveyors, prospectors and natives. Ambroid is still sold by the successor, The North West Company, which operates the inland stores.

Old-time builders swear by the stuff for patching canvas. "I had an old canoe come into my shop with a complete double bottom of canvas glued on with Ambroid," says Rollin Thurlow, of Northwoods Canoe Co. in Maine.

Northern Ontario-based Camp Keewaydin, founded in 1894, is the world's oldest canoe-trip operator. As one of the few institutions still running whitewater in wood-canvas canoes, its six-week trips into remote areas carry a pound and a half of Ambroid. As you can imagine, the staff are adept at handed-down, backwoods, canvas-repair tricks like double-patching and burning on a patch, all with Ambroid.

The reconstituted tortoise-shell glasses did not immediately go into lead tubes because the lead caused the cement to gel. Citric acid was eventually added as a preventive. With the adoption of the tube, it replaced tin cans on canoe trips. Old-timers have told the Ambroid Company that it lasts for decades in the tubes. (Today, lead tubes have been replaced for safety and health with annealed-aluminum tubes.)

Not only was the amber liquid one of the world's first plastic glues (chemists like to point out it is not a glue but a cement), but it became one of the most widely-known brand names in the wood-canvas canoe industry. You didn't leave home without it. Its ease of use revolutionized repairs and must have helped accelerate the popularity of the canvas canoe.

The original Ambroid, marketed as Original Liquid Cement, is still popular with hobbyists who use it on wood models because it bonds so well to porous materials. It is widely available at hobby shops. Though sales of Ambroid to canoeists have fallen with the decline in wood-canvas canoe use over the past three decades, the first commercial canvas cement is still holding on patches and outshining today's high-tech glues.

WAWA INFO

Entry fee is \$20. You must have a valid AMA card.

Contest Directors:

Tom Hallman 610-395-5656, John Houck 610-488-6235
e-mail: tom@hallmanstudio.com
jphouck@comcast.net

Directions: www.hallmanstudio.com/vawamap.jpg

GPS Address: 340 Lower Road New Hampton, NY 10958



BARRON FIELD AIR RACES

OCTOBER 20-21, 2012

FLYING ACES CONTEST IN WAWAYANDA, NY

Saturday, October 20th

9AM-5PM

- * FAC Scale
- * Peanut Scale
- Embryo
- *** No-cal
- ++ Half Wakefield
- **** Simplified Scale
- ** GA & Modern Civilian combined
- 10:00** WWI Mass Launch (biplanes)
- 11:30** Fiction Flyer Mass Launch
- 12:30** Golden Age Racers Mass Launch
(Greve & Thompson combined)
- 2:00** Goodyear Racer Mass Launch
- 4:00** BLUR Race

Sunday, October 21st

8:30AM-4PM

- * Jumbo Scale
- * Power Scale
- **** Dime Scale
- ** Low Wing Military Trainer
- ++ 2-bit+1 OT Rubber - ROG
- ***** Catapult Jet Scale
- 10:00** WWII Mass Launch
- 11:00** Modern Military Mass Launch
- 1:00** Contra Rotating Prop Mass Launch
- 3:30** Flying Horde (any scale model that
did not 'place' in prior events)
- Harvey Wallbanger Award
- High Point Junior

ADDITIONAL RULES

- * Scale events may be flown either day. Best of three flights is your flight score. Scale judging takes place at 12 noon each day. Bring models to GHQ.
- ++ Verify eligibility of aircraft at GHQ before 11AM each day.
- ** Total of three flights is your score. 2 minute max. No bonus points added. Bring plan to GHQ before first flight to verify eligibility of aircraft.
- *** Total of three flights is your score. No max.
- **** Total of three flights is your score. 2 minute max. Bonus points added once. Bring plan to GHQ before first flight to verify eligibility of aircraft.
- ***** Best 3 of 6 flights is your score. No min or max.

100% power for all mass launches

THE DEMISE OF WALMART DUCO

By George White

When I first came back into this model building game I initially thought that the only reliable way to join balsa was by using Ambroid. I was eventually disabused of that idea by Bob Isaacks, who's often referred to as the "Duco Guru." I tried Duco and sure enough, no more yellow around the joints! Then Buzz Trabbic convinced me that using Duco straight out of the tube was not the best plan. He advised buying a 1/4 oz needle cap bottle from Tim Goldstein's A2Z (<http://www.peck-polymers.com/store>) together with a 20 gauge needle cap. Then, he recommended using that bottle to apply Duco which had been diluted 50% with acetone. He theorized that the thinner glue would better soak into the fibers of the wood — **provided** you double glue each joint and don't leave obscene gaps in the joint. Without double gluing, the bond will be too weak. I tried his scheme and have been hooked on the plan ever since. One caution, keep a short piece of .020" wire handy — the needle will tend to clog.



Life was especially good insofar as Duco was concerned — I could buy the stuff at our ever-so friendly Walmart for \$1 per tube. Then, the other day Lou Cumpston, our moneybags, dropped the bad news that Walmart no longer carries Duco. I have to wonder if the scumbag lawyers convinced the Walmart bean counters that one of us might sniff the stuff!!! So much for that good deal. Joe Josephs tells me that he can buy Duco at Dollar Stores, and Bob Isaacks tells me that it's also available at Ace

Hardware stores and auto supply stores, but not at Walmart prices. I found the 1 oz. Duco at O'Reilly's Auto Parts store for \$2.30 and Lou Cumpston has found some stuff called "Fix-All Adhesive" at a Dollar Tree store which seems to have all the ingredients of Duco at \$1 for 5/8oz. If you want to get into the national spirit of "change," I've gotten recommendations from a couple of very learned folks for some glues which in their opinion are just as good or perhaps better than Duco.

Gene Smith says he has used Duco and Sigmint interchangeably and successfully for quite a while, diluting both with acetone. The cheapest I've found Sigmint was at Penn Valley Hobby Center where you can get a 2 oz. tube for \$2.25 or 4 oz. for \$3.34, all plus shipping. Since the \$1 Duco at Walmart was a 1 oz tube, that's not a bad price if you don't let the shipping get out of hand.

(<http://www.pennvalleyhobbycenter.com/controlline/Supplies/glues.htm>)

Then, Rich Weber (aka Wingnut) advises that he has found Beacon 527, diluted 50% with acetone to have the same strength as Duco and is slightly more flexible. 527 glue, in what looks like 2 oz. tubes is available at Hobby Lobby and Michaels for \$4.

Our local hobby shop tells me that 527 is getting difficult to obtain. In the event you don't find it locally, I found 527 glue for \$3.25 at: (<http://www.mcmowdirect.com/bond-adhesive-p-1500.html>).

A couple of other highly skilled builders, Wally Farrell and Rich Adams, are convinced that Ambroid is still the way to go, and per fluid ounce, is cheaper than Duco. The only significant difference between Ambroid and Duco seems to be the addition of mustard seed oil in Ambroid to keep us rascally modelers from sniffing it while we build!!! With that you get a bit of yellow in your joints. Some folks around the country have heard from their hobby shops that Ambroid is being discontinued. However, our local Bobe's Hobby Center says they have plenty. Who knows!! After hearing about the demise of Walmart Duco, Paul Grabski did some more research and advises we won't have to switch from model building to stamp collecting due to the high cost of Duco. He's found it for \$1 at a Family Dollar store. I was afraid that \$1 Walmart deal was too good to last. But with Family Dollar Store to the rescue, joy and glad tidings can continue to exist throughout the land!!!

Thinned Ambroid can also be applied with this bottle to a completed joint to form a light fillet.

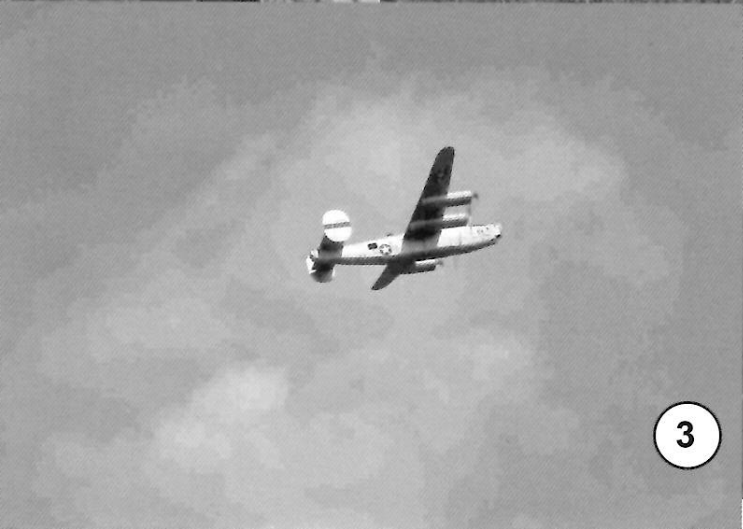
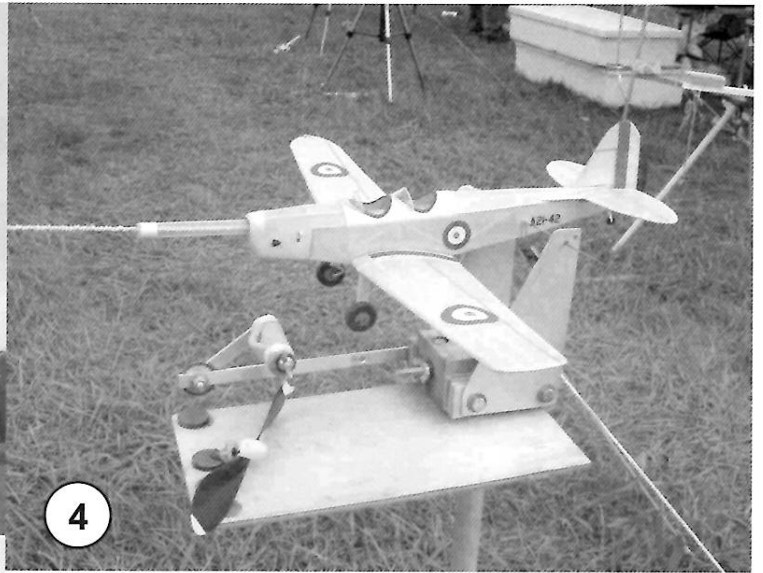
A to Z's Cap25 Needle Cap w/black scabbard 25 ga and their 1/4 oz bottle makes a good dispenser for acetone and CA accelerator. I put an "O" ring around the neck of my CA accelerator bottle to differentiate them.

Stew.....

PAGE 19 PHOTOS BY TOM HALLMAN

1. Ted Allebone's electric power Vickers Vimy came in second to Tom Hallman's Dh-2 by two scale points.
2. Pres Bruning's Flying Fish one of several of his whimsical Embryos. Yes it flies.
3. Chis Starleaf's four engined rubber power jumbo on one of its impressive flights. It really got up there.
4. Jack Moses' rubber scale dH Moth Minor on the stooge.
5. Grand Champ Walley Farrell launching his winning Rich Weber designed Dime Scale Stagger wing embodies the spirit of the meet.

**MORE MUNCIE FAC OUTDOOR CHAMPS PHOTOS
BY TOM HALLMAN**



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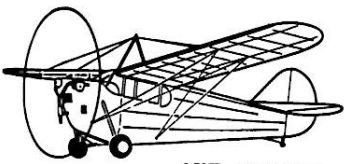
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- TERN AERO #101 *GONE GOOSE*
- TERN AERO #105 *TIGER MOTH*
- AMBROID GLUE
- MUNCIE REPORT
- MUNCIE RESULTS
- MUNCIE PICTURES
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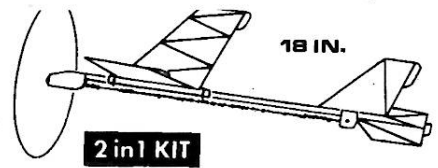


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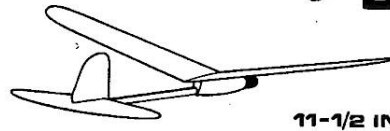


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TRAVELER Sailplane
KIT NO.102
24 IN.

\$2.00
KIT NO.104



18 IN. **2 in 1 KIT**
SKIPPER Glider DIPPER Stick Model



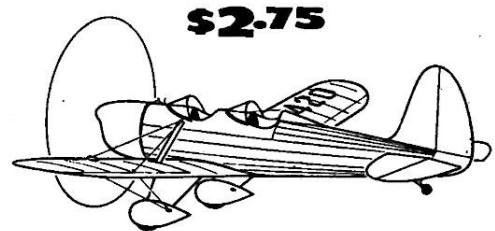
11-1/2 IN. **DRIFTY Primary Glider**



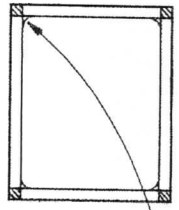
\$1.75
KIT NO.103
18-1/2 IN. **STARDUSTER Sportplane**



\$1.50
KIT NO.108
18 IN. **RYAN ST**



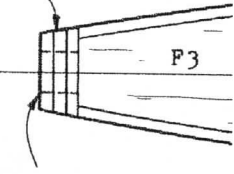
\$2.75
KIT NO.109
17 IN. **RYAN ST**



A dab of glue at each joint makes the fuselage stronger.

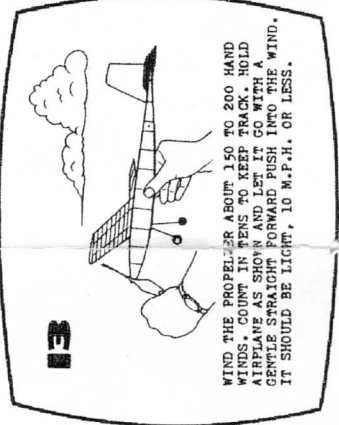
Bend propeller shaft as shown for free wheeler action.

Formers F1. Glue three together

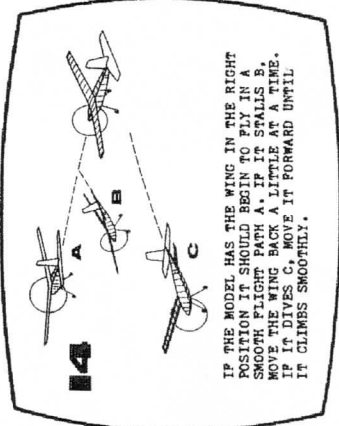


6" dia. plastic propeller

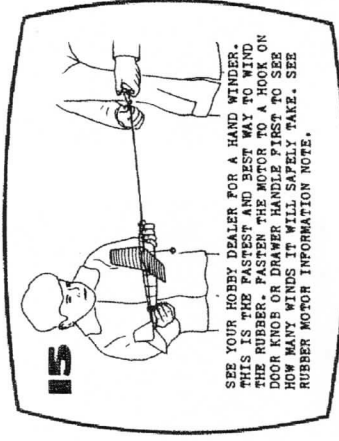
DUE TO SIZE CONSTRAINTS THIS GONE GOOSE PLAN HAS BEEN REARRANGED TO FIT ON TWO "B" SIZED (11X17) SHEETS. ALL OF IT IS HERE. I WOULD LEAVE THE LANDING GEAR OFF AND OPEN UP FORMER F4 FOR MORE RUBBER CLEARANCE. I WOULD ALSO INSTALL A REMOVABLE NOSE BLOCK ABOUT A HALF AN INCH BACK TO ALLOW EASY INSTALLATION OF THE MOTOR.



WIND THE PROPELLER ABOUT 150 TO 200 HAND WINDS. COUNT IN PENS TO KEEP TRACK. HOLD AIRPLANE AS SHOWN AND LET IT GO WITH A STRAIGHT FORWARD PUSH INTO THE WIND. IT SHOULD BE LIGHT, 10 M.P.H. OR LESS.

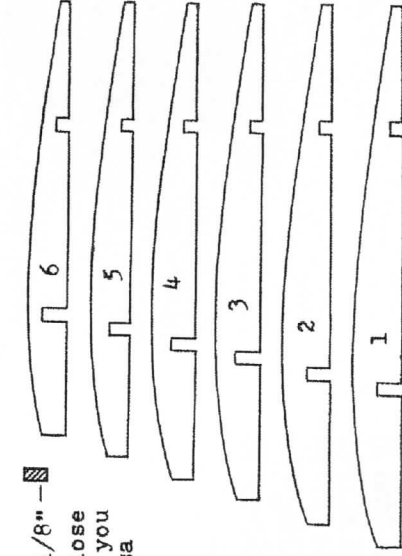


IF THE MODEL HAS THE WING IN THE RIGHT POSITION IT SHOULD BEGIN TO FLY IN A SMOOTH FLIGHT PATH A. IF IT STALLS B. MOVE THE WING BACK A LITTLE AT A TIME. IF IT CLIMBS SMOOTHLY.



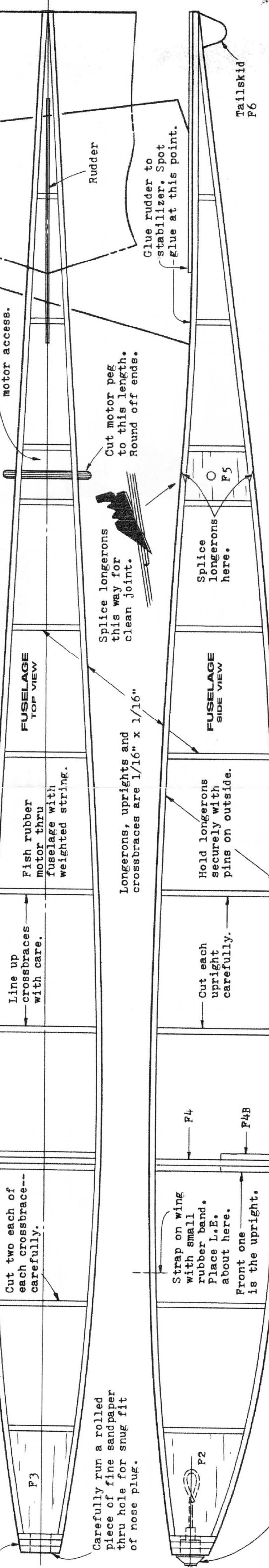
SEE YOUR HOBBY DEALER FOR A HAND WINDER. THIS IS THE FASTEST AND BEST WAY TO WIND THE RUBBER. FASTER THE MOTOR TO A HOOK ON DOOR KNOB OR DRAWER HANDLE FIRST TO SEE HOW MANY WINDS IT WILL SAFELY TAKE. SEE RUBBER MOTOR INFORMATION NOTE.

Front spar is 1/16" x 1/8" - Should you break or lose any rib--cut the one you need, stick onto balsa and cut out.



Use lighter color tissue on wing--darker color on fuselage. Tail natural balsa.

Power model with 2 strands of 1/8" flat rubber.



Rubber power will vary--usually. Even keeping the size the same is no assurance you will get the same results. Some rubber gives good power ---some gives better power---some gives WOW power. Visit your hobby shop.

Lubricate the rubber with a mixture of 1 part Green soap and 1 part of glycerin.

Bend a small straight pin like this with pliers and glue to strut.

Cut each landing gear strut to this length and round off the end so it will go into F4 easily.

Rubber power will vary--usually. Even keeping the size the same is no assurance you will get the same results. Some rubber gives good power ---some gives better power---some gives WOW power. Visit your hobby shop.

Let glued F4 unit dry well before installing. See illustration 3

Attach wheel discs into hubs with clear dope.

Model may be flown without landing gear.

Glue 3 F1 formers together with odd grained one in middle. Cut holes undersize. Use sandpaper to clean up hole.

Wheel discs

Attach wheel discs into hubs with clear dope.

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GONE GOOSE

A CABIN MODEL FOR YOUNG GUYS

TERN AERO CO. CHICAGO, ILL., 60666

Fly your model outdoors when the wind is 10 M.P.H. or less. It will fly well in winter air---better in summer air. Indoors all year 'round ---with some room. Remember, cold air makes the rubber act sluggish---it also may break easier---allow for it.

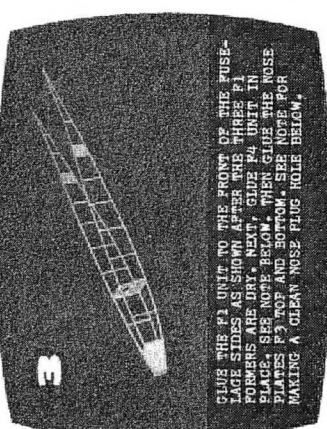
GONE GOOSE

A CABIN MODEL FOR YOUNG GUYS

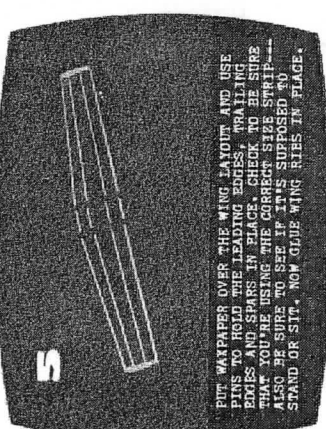
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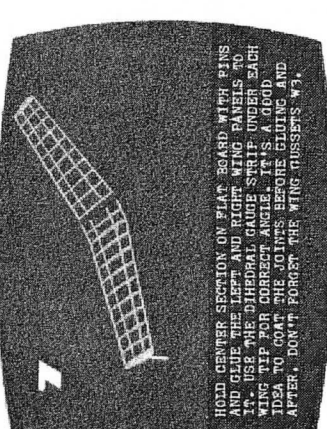
CUT OUT EACH PART CAREFULLY FROM THE PRINTED SHEET WITH A SHARP-END RAZOR BLADE AS SHOWN HERE ON PLAN. TRIM ALL NOTCHES AS SHOWN. USE YOUR FINGER NAILS FOR CURVING. MAKE SURE YOU HAVE ENOUGH LEFT OVER FOR BALSAWOOD AND CLEAR DOPE FOR TISSUE.



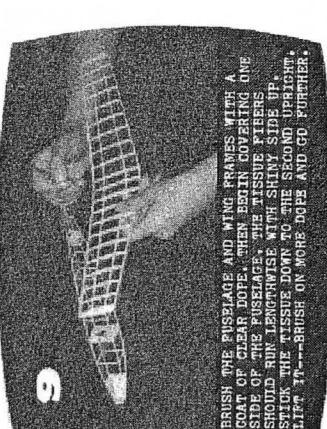
GLUE THE F3 UNIT TO THE FRONT OF THE FUSELAGE AS SHOWN. AFTER THE THREE F1 PLANKS ARE IN PLACE, TRIM THE FUSELAGE PLANKS TO THE CORRECT SIZE. MAKE SURE YOU HAVE A CLEAN NOSE PLUG HOLE BELOW.



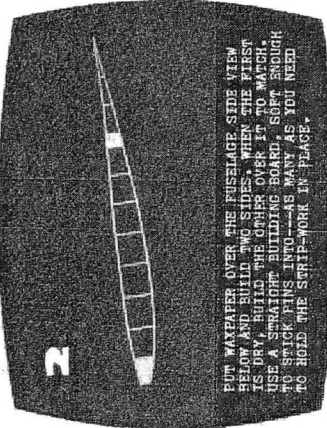
PUT WAXPAPER OVER THE WING LAYOUT AND USE PINS TO HOLD THE LEADING EDGES, TRAILING EDGES AND SPARS IN PLACE. CHECK TO BE SURE THE DIHEDRAL GAUGE STRIP UNDER EACH WING IS AT THE CORRECT ANGLE. IT'S A GOOD IDEA TO BRUSH THE TISSUE DOWN TO THE LEADING AND TRAILING EDGES. DON'T FORGET THE WING GUSSETS (F3).



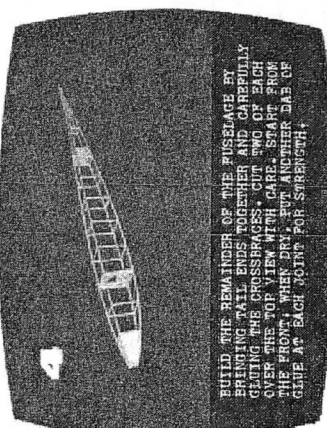
HOLD CENTER SECTION ON FLAT BOARD WITH PINS AND GLUE THE LEFT AND RIGHT WING PANELS TO IT. USE THE DIHEDRAL GAUGE STRIP UNDER EACH WING FOR CORRECT ANGLE. IT'S A GOOD IDEA TO BRUSH THE TISSUE DOWN TO THE LEADING AND TRAILING EDGES. DON'T FORGET THE WING GUSSETS (F3).



BRUSH THE FUSELAGE AND WING FRAMES WITH A COAT OF CLEAR DOPE. ALWAYS COVER THE INSIDE OF THE FUSELAGE WITH THE SHINY SIDE UP. SHOULD YOU LENGTHWISE WITH SHINY SIDE UP. STICK THE TISSUE DOWN TO THE SECOND UPRIGHT. LIFT IT UP AND BRUSH ON MORE DOPE AND GO FURTHER.



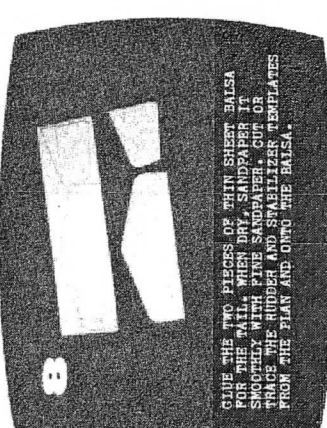
PUT WAXPAPER OVER THE FUSELAGE SIDE VIEW BELOW AND BUILD TWO SIDES. WHEN THE PAPER IS DRY, BUILD THE OTHER OVER IT TO MATCH. USE A STRAIGHT BUILDING BOARD. GOPT ENOUGH TO HOLD THE STRIP-PANEL IN PLACE.



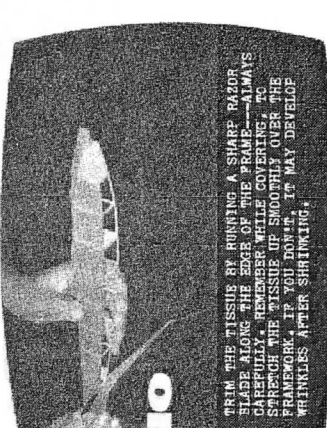
BUILD THE REMAINDER OF THE FUSELAGE BY JOINING THE CROSSBRACES. CAREFULLY GLUE THE CROSSBRACES. CUT TWO OF EACH OVER THE TOP VIEW WITH CARE. STAPLE FROM ONE END TO THE OTHER. MAKE SURE YOU HAVE A CLEAN NOSE PLUG HOLE BELOW.



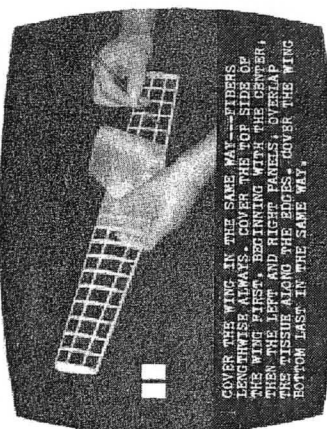
REMOVE THE FINISHED WING PANELS FROM THE BOARD AND CAREFULLY SANDPAPER THE LEADING AND TRAILING EDGES TO THE SHAPES SHOWN AT CENTER SECTION. ALSO, LIGHTLY SANDPAPER THE WING LEAD IN LAMPS OR THEY'LL SHOW THROUGH THE COVERING.



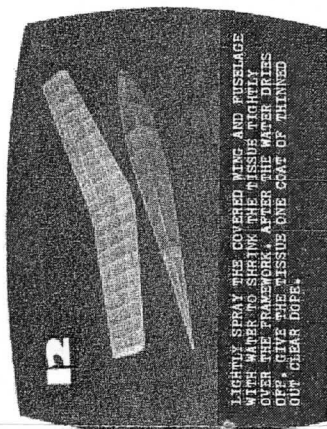
GLUE THE TWO PIECES OF WHITE SHEET BALSA FOR THE TAIL. WHEN DRY, SANDPAPER TO SMOOTHLY WITH FINE SANDPAPER. CUT OR TRACE THE RUDDER AND STABILIZER TEMPLATES FROM THE PLAN AND ONTO THE BALSA.



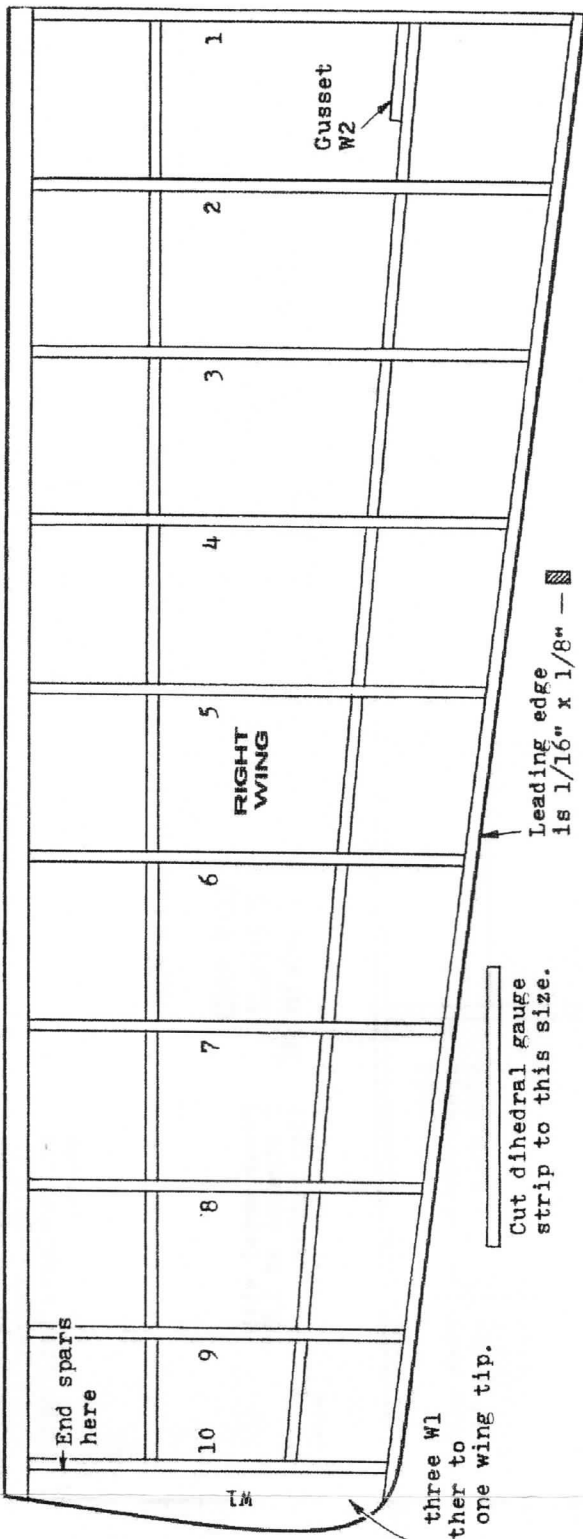
TRIM THE TISSUE BY POINTING A SHARP RAZOR BLADE ALONG THE EDGE OF THE FRAME. ALWAYS STRETCH THE TISSUE UP SMOOTHLY OVER THE FRAMEWORK. IF YOU DON'T, IT MAY DISTORT AFTER SHRINKING.



COVER THE WING IN THE SAME WAY AS THE FUSELAGE. ALWAYS COVER THE TOP SIDE OF THE WING FIRST, BEGINNING WITH THE CENTER. THEN THE BOTTOM. MAKE SURE YOU HAVE A CLEAN NOSE PLUG HOLE BELOW. COVER THE WING BOTTOM LAST IN THE SAME WAY.

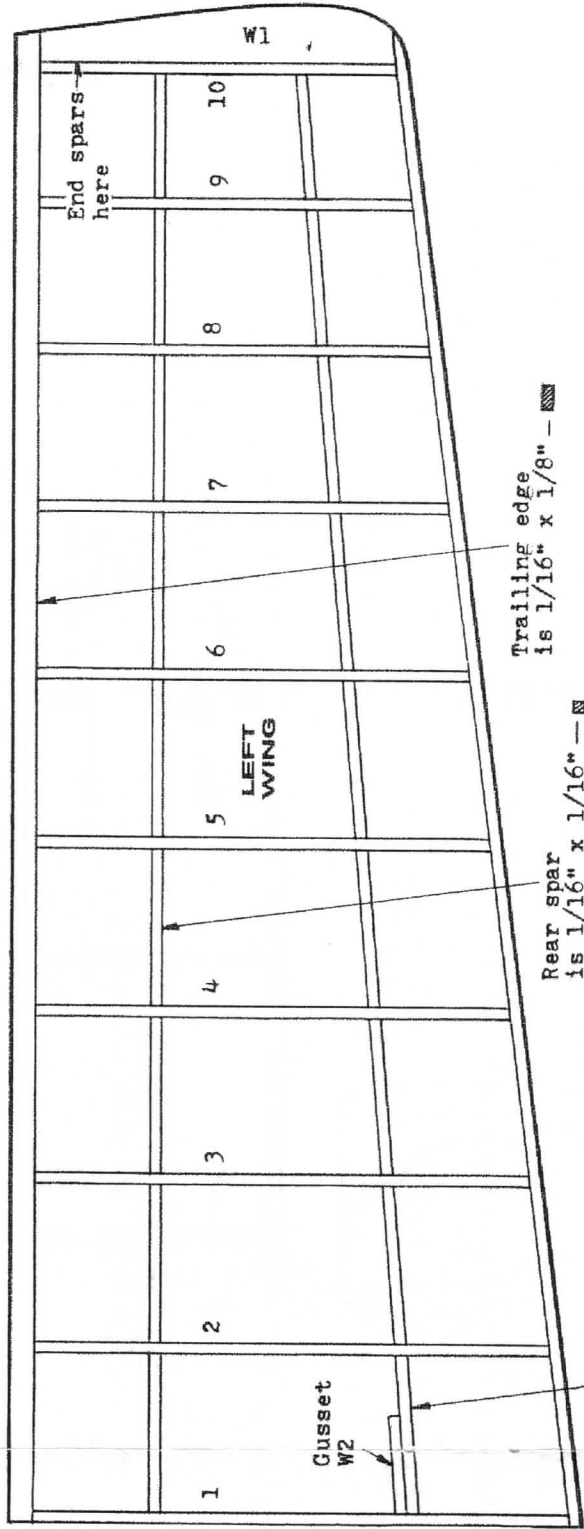


LIGHTLY SPRAY THE COVERED WING AND FUSELAGE WITH WATER TO SHRINK THE TISSUE INTO PLACE. OVER THE FRAMEWORK. AFTER THE WATER DRIES OFF, GIVE THE TISSUE ONE COAT OF THINNED OUT CLEAR DOPE.

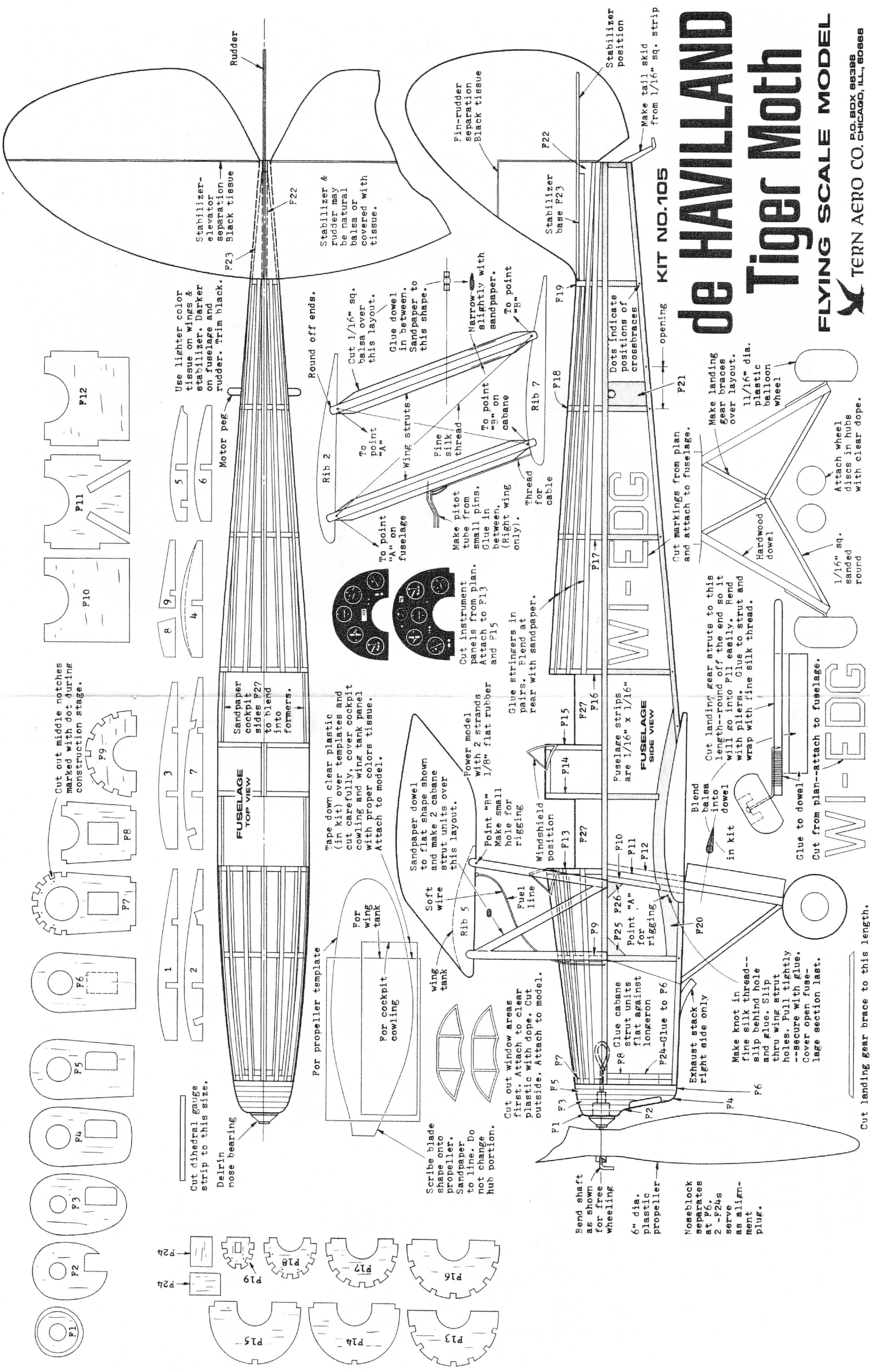


Glue three W1 together to form one wing tip.

Cut dihedral gauge strip to this size.



THE SHEET SUPPLIED FOR THE TAIL FEATHERS IN THE TERN AERO KIT WAS 1/32 THICK BALSA. IT WAS PRONE TO WARPING. IF NOT FLYING IN AN FAC EVENT WHY NOT USE 1MM DEPRON?



Cut out middle notches marked with dot during construction stage.

Cut dihedral gauge strip to this size.
Delrin nose bearing

Use lighter color tissue on wings & stabilizer. Darker on fuselage and rudder. Trim black.

Round off ends.
Cut 1/16" sq. balsa over this layout.
Glue dowel in between. Sandpaper to this shape.

Make pitot tube from small pins. Glue in between. (Right wing only).
Thread for cable

Make knot in fine silk thread--slip behind hole and glue. Slip thru wing strut holes. Pull tightly. Cover open fuselage section last.

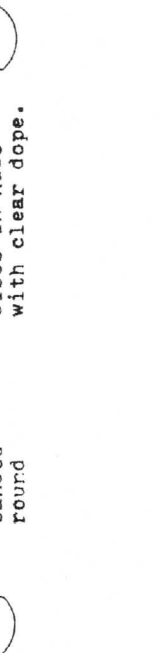
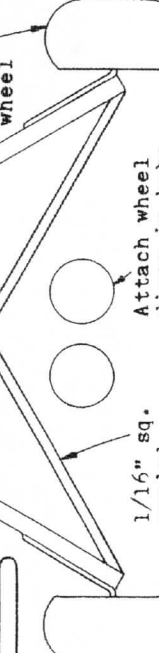
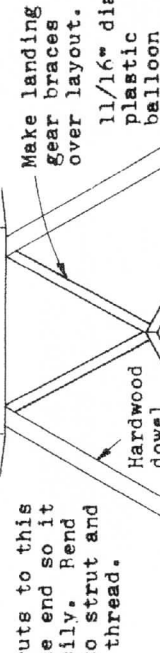
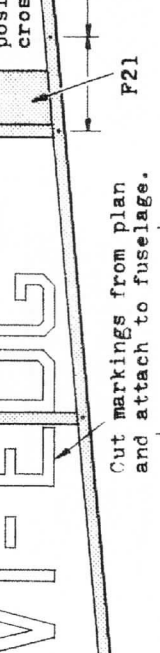
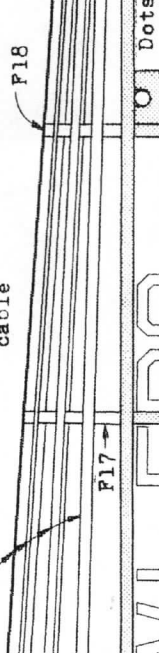
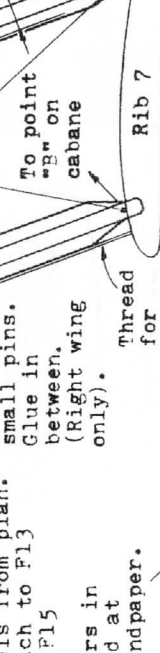
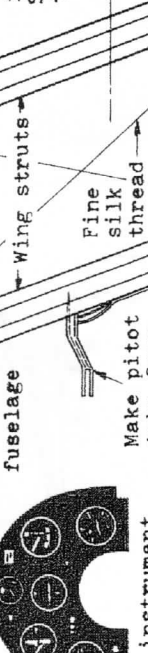
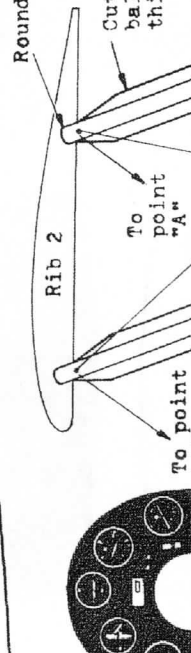
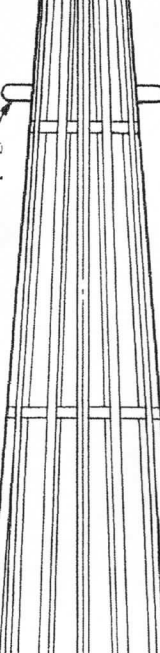
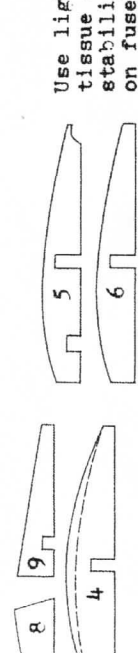
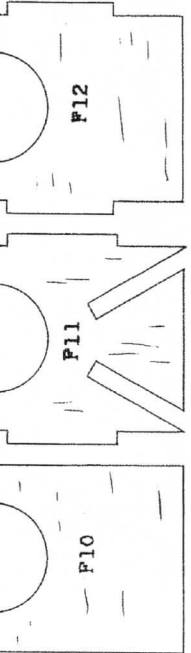
Exhaust stack right side only
Make knot in fine silk thread--slip behind hole and glue. Slip thru wing strut holes. Pull tightly. Cover open fuselage section last.

Noseblock separates at P6. 2 - P24s serve as alignment plug.

Blend balsa into dowel in kit
Cut landing gear struts to this length--round off the end so it will go into P11 easily. Bend with pliers. Glue to strut and wrap with fine silk thread.

Glue to dowel
Cut from plan--attach to fuselage.

Attach wheel discs in hubs with clear dope.



de HAVILLAND

Tiger Moch

FLYING SCALE MODEL

TERN AERO CO. CHICAGO, ILL., 60666