

FLYING LINES



NEWS OF NORTHWEST CONTROL LINE MODEL AVIATION

1073 WINDEMERE DRIVE NW
SALEM, OREGON 97304

EDITOR: MIKE HAZEL

FEBRUARY 1987

ISSUE NUMBER 80

INSIDE.....

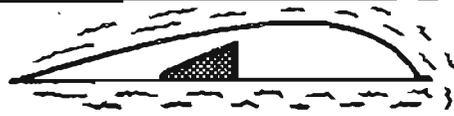
-Drizzle Circuit #3 Report
-Flight School by Jim LaBarge
- O.S. 40FP Stunt Engine, by Don McClave
-Cheap Imitation plan ($\frac{1}{2}$ A Combat)
-OOPS, guess that's about it

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_____ M _____

COCKPIT CHATTER



NOTES FROM THE EDITORS' DESK

Greetings! The first thing you will undoubtedly notice about this issue, is that it went on a diet. This is due to a number of factors, the least of which is the effort just to get this thing out every month or so. However, the main reason is to just get back on cycle. You will note that this is the February issue, and it is still February!

Also, there is not a lot to share at the moment. Please don't feel cheated however, as there are usually two issues a year that more than compensate. (and they are real bears to put out!) Fair is fair.

Last month an updated contest calendar was promised. Oops, and sorry. It did not materialize. The listing this month is a duplication. However, here are some notes which brings things a bit closer to accuracy. First of all, The Spring Tune-up, typically held in Spanaway, Wash., is still tentative, but details should be known soon. The Clambash in Astoria, Oregon is tentatively set for June 14th. Events there will be much the same as last year.

There may also be a Stuntathon this year, details here very tentative. One meet that has been firmed up is the Summer Record Trials in Kent, Wash. This will be held August 15-16, and is for all CL rule book record events. This includes all speed, carrier, and endurance.

Lastly and certainly not leastly, the Bladder Grabber is still on the tentative list. Howard???? Again, hope to have the complete calendar pretty well focused by the end of March.

Another reason for this issues brevity is the other activities of ye olde editor. Yes Virginia, I try to fly model airplanes as well as write about them. The end of the month is usually a double barrel situation for me, as I have a firm deadline for my Model Builder column manuscript. (which is coming right up immediately after I finish this!)

Lots of projects in the cooker and on the drawing board. Dick Peterson and I are working on a Formula 40 project that will make our current design look like a Ringmaster. But it is top secret and I have said too much already. Also in the works is the FAI team race program with Dick Salter. This event is so much fun that I might quit my job, mortgage off my home, and become a diesel derelict.

Coming up on the California contest circuit is a speed and racing meet in Merced on March 15th. I mention this for the benefit of my buddies in Cal, see you there! (that should be fair warning).

Speaking of Cal meets, here is a mention for the Money Nats, being held in South El Monte (LA) on April 4th and 5th. This is for triple elimination AMA Fast Combat only, and top prize is one thousand bucks in real cash-ola. If you fly combat, you probably already know about this one, but in case you don't, there it is. For more info write to: Steve Hills, 20 - 25th St., Hermosa Beach, Calif 90254.

You combat fliers who have been patiently awaiting the release of the Fox Combat Special Mk VI should have one in your hands by now, that is if you paid for one! I received mine on the 19th. This sucker looks hot! We will probably be sharing some performance information from the Combat department very soon.

That's about it for now. Besides the contest calendar update next month, also be looking for an update on NW Competition Records and NW Competition Standings. We also have some reader mail to catch up on.

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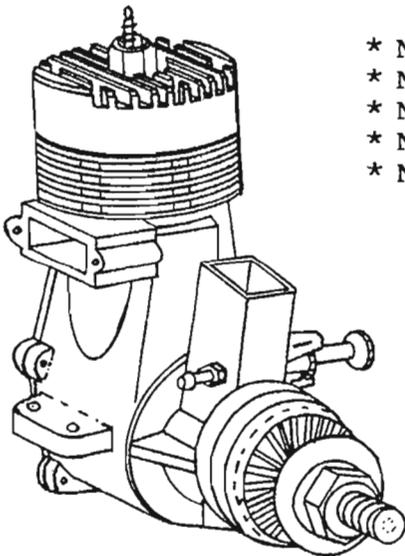
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49	50	51	52	53	54
57	60	61	62	64	65
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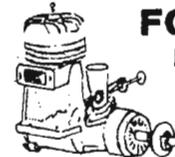
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WHERE THE ACTION IS

CONTESTS and EVENTS THAT ARE COMING UP

Next month this department will be given what should be a more or less final update. That will include firm dates, details, etc. Contest directors, club honchos, please let us know ASAP. Next month we will also integrate the VGMC schedule, which is listed separately.

Date	City / Site	Meet	Contest Director
Feb 8	Portland/ Delta Park	Drizzle Circuit #3	Gene Pape
Feb 28	Seattle/ Carkeek Park	Skyraiders Beginners Day	?
Mar 8	Portland/ Delta Park	Drizzle Circuit #4	Mike Hazel
Mar 22	Seattle/ Carkeek Park	Skyraiders 3X1	?
Apr 12	Portland/ Delta Park	Drizzle Circuit #5	Wayne Spears
Apr ?	????????????????????	Spring Tune Up (Skyraiders)	tentative
May 22-24	Eugene/ Mahlon Sweet	NW Regionals	Dave Green
Jun ?	Astoria / ?	ClamBash	Dave Green ?
Jul 11-19	Lincoln, Nebraska	AMA Nationals	
Aug ?	Kent/ Boeing Center	NW Record Trials	Dick Peterson
Sep 19-20	Kent/ Boeing Center	Raider Roundup	
Summertime	Somewhere	Bladder Grabber ?	

1987 V.G.M.C. CONTEST SCHEDULE FOR CONTROLINE AT RICHMOND FIELD

A	MARCH 1,	FIRST ANNUAL 1/2A SNAPPER EVENT (Stunt, Spot Landing, Beauty)
A	MARCH 15	VGMC SPORT RACING SERIES No 1 (NW Sport Race, 15 Sport Race)
A	APRIL 12	VGMC SPORT RACING SERIES, No 2 " "
AA	MAY 17	SPRING UKIE TUNE UP (33 1/3, Sport Race, 15 Combat, Snapper)
A	JUNE 14	VGMC SPORT RACING SERIES No 3 (NW Sport Race, 15 Sport)
AA	JUNE 20/21	NORTHWEST C/L SPEED CHAMPIONSHIPS (All Classes C/L Speed)
A	JULY 26	WEST COAST FAI TEAM TRIALS (FAI Speed)
A	AUGUST 2	VGMC SPORT RACING SERIES No 4 (NW Sport Race, 15 Sport Race)
AAA	SEPT 5/6	43rd VGMC INTERNATS (18 events for STUNT, RACING, SPEED, CARRIER COMBAT, SCALE & SPORT EVENTS)
AA	OCT 4	VGMC SPORT RACING GRAND FINALE (NW SPORT RACE \$250 in prizes)

FLIGHT SCHOOL

by: Jim Labarge



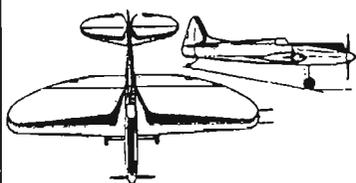
Butterflies and first flights.....

As with any sport, and ours is a sport, you must be in shape for it. The biggest worry for a beginner is getting dizzy, falling down and crashing. Overcoming the dizzy problem is easy. The old timers used to say to practice spinning until you can spin 25-50 times, stop and not be dizzy. Good idea, you don't need to spin fast, just practice turning at a 2-3 second revolution and do it a bit at a time. Don't try to go 50 times the first time. One thing that helps in real flight situations is that you are watching the model and since it is turning at the same speed that you are, things don't seem to be moving. Don't try to be like Mike Hazel and his jet speed model, just be ready.

Now that you are used to the spinning motion it is time for that fateful time, first flight. Lay out the lines and handle, whether dacron or steel no twists or damage is allowed, remember, no lines, no control and that equals disaster. A good length for an .049 model is 26' from handle to model. Connect up the lines, check the movement of the elevator. Using a straight arm if you raise your hand the elevator should go up, lower your hand and the elevator should go down. The hardest thing for a beginner to do is to use small movements of their arm, we don't want to be all over the sky just fly straight and level. Now if possible get an experienced flier to help with the first few flights out in the center of the circle with you. A good pilot can recover the model if you just let him, even if you are in pretty bad position.....if no one is there to help, well try and relax, fill the tank $\frac{1}{2}$ full, start the motor, get it running well, let your helper hold the model and walk out to the handle. Take a deep breath, relax, (ha ha) and motion your helper to release the model. Your hand should be at horizontal and leave it that way for a moment until the model builds up speed. Many models will take off by themselves so don't get froggy on the handle. The idea is to survive the first few flights, pilot and model, so just try to fly straight and level. If all goes well you should run out of fuel in a few laps and the motor will stop. Don't quit flying the model just because the engine stops, fly it until it lands.....

No doubt your legs are shaking, and you are tired, rest a few minutes and do it all over. As with any skill the more you practice the more you grow in that skill. It is not a bad idea to spend the first few flying sessions doing nothing but trying to fly level and get used to everything... later comes even more fun, aerobatics, and other neat games. Now that you are flying you can see why we spend so much time and work building our models, FUN.....

Next time.....We're flying, now what.....



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The O.S. 40FP engine has attracted a considerable amount of attention as a potential new engine for the stunt fraternity. Budding champion Jack Pitcher has been running one with some success all summer, and we recently spent a day-- and some 20 flights-- testing a wide range of engine combinations. The result may be of interest to those considering the engine.

The stunt version of the O.S. 40FP is designated the "FP-S". It comes with two venturies, a .280 (installed) and a .265. A control line needle valve assembly is installed and the engine is assembled with two .016 head gaskets, instead of the single head gasket found in the R/C version. Otherwise, the two engines are identical.

At 8.1 ounces (without muffler), the .40FP is the lightest engine to come along in years, comparable to the old McCoy .35 or K & B Torpedo .35 of the 1950's (I realize the this comparison dates me!). O.S. quality is among the best in the industry, so durability should be quite good. The lapped piston means no ring gaps or seals to worry about.

The FP is a Schneurle ported engine, which means easy starting and more power than other porting configurations. Unfortunately, in the past, this also meant a nearly uncontrollable tendency to surge-- especially in outside maneuvers. Not so with the FP. It has extremely mild port timing and does not have the typical Schneurle tendency to break just when you don't want it to.

Now, what to do to make the engine run well? To begin with, throw away the stock muffler. Besides being heavy, there seems to be no way to get it to run well. There's too much back pressure, but opening up the exhaust hole turns the thing into a tuned pipe. In about two laps, the engine "comes in" and away you go in a ninety m.p.h. stunt flight. Hal DeBolt would have loved it-- shades of the Stuntwagon!

Instead of the stock muffler, use the same S.S.T. muffler that you use on your S.T. 60 with 16 - 20 holes open. Unlike the FSR engine series, the FP doesn't like much back pressure. To install the S.S.T. muffler, just run a 6 - 32 tap through the muffler attachment holes in the crankcase and egg out the mounting holes in the muffler slightly.

The FP comes with two .016 head gaskets installed, which seems to be optimum. A third gasket results in a power loss without any noticeable benefit, while using only one gasket makes the engine run rough and break excessively during maneuvers.

Like all stunt motors, the FP loves "Northwest Blend" stunt fuel; that is, 10% nitromethane, 25% castor oil and 65% methanol alcohol. It runs better on this fuel than on synthetic or castor/synthetic blends and will last longer.

The owner's manual suggests using an O.S. 25FP venturi if necessary to smooth out the engine run. Frankly, it was quite difficult to notice any change in run smoothness, but the power definitely was less using this set-up. Jack started using the .25 size venturi because his plane was originally built for a .35 and had just a four ounce tank. That's the only reason to consider using a small venturi, because the larger venturi definitely provides more power.

Power is the FP's only weak spot. Weak, that is, if you think of it in the same terms as an FSR .40. It's more like a very strong .35 and should perform quite well in Noblers, Chipmunks, Cobras and the like weighing around 40 - 45 ounces. Jack's Twister and Paul Walker's Cobra fly quite well in the wind with FP .40's, and the engine is light and small enough to fit nicely in these aircraft. Just put in a five ounce uniflow tank (Taff makes one for \$5.95), mount a 10½ or 11 -6 prop and you're likely to be quite pleased with the result.

One final note. The needle valve assembly is of traditional O.S.

design, but with finer threads. It's perfectly acceptable, but installing a Kustom Kraftsmanship universal needle valve assembly is a good idea because it gives a very fine adjustment. If you choose to do this, you'll have to drill out the case and venturies slightly to accept the K.K. assembly. No big deal, just remember to put tissue in the case before you drill it to keep metal particles out of the engine.

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3/32 x 2	.40	1/16 x 3/8 .10
1/8 x 2	.43	1/16 x 1/2 .14
3/16 x 2	.49	3/32 x 1/4 .12
1/4 x 2	.56	3/32 x 3/8 .16
1/32 x 3	.37	3/32 x 1/2 .18
1/20 x 3	.37	1/8 x 1/8 .08
1/16 x 3	.37 .49 .31	1/8 x 1/4 .11 .16
3/32 x 3	.44 .58 .37	1/8 x 3/8 .12 .18
1/8 x 3	.54 .71 .45	1/8 x 1/2 .18 .24
3/16 x 3	.62 .82 .56	3/16 x 3/16 .11 .18
1/4 x 3	.73 .95 .81	3/16 x 3/8 .17
5/16 x 3	.86	3/16 x 1/2 .22 .30
3/8 x 3	.88 1.24 .71	1/4 x 1/4 .16 .24
1/2 x 3	1.10 1.55	1/4 x 3/8 .19 .26
3/4 x 3	1.65	1/4 x 1/2 .21 .30
1/16 x 4	.58 .76 .48	1/4 x 3/4 .34 .44
3/32 x 4	.70 .94 .56	1/4 x 1 .40
1/8 x 4	.80 1.06 .66	5/16 x 5/16 .21 .28
3/16 x 4	.93 1.22 .75	3/8 x 3/8 .27 .37
1/4 x 4	1.10 1.34 .84	3/8 x 1/2 .32 .46
3/8 x 4	1.65 2.25	3/8 x 3/4 .42 .55
1/2 x 4	2.25 2.61	3/8 x 1 .52
		1/2 x 1/2 .36 .53
		1/2 x 3/4 .46 .62
		1/2 x 1 .58
		5/8 x 5/8 .48
		3/4 x 3/4 .67

BALSA TRIANGLES 36"

1/4 x 1/4	.25
3/8 x 3/8	.30
1/2 x 1/2	.35
3/4 x 3/4	.45
1" x 1"	.55

BALSA PLANKS 36"

1 x 1	.85
1 x 2	1.50
1 x 3	2.00
1 x 4	2.80
1 1/2 x 3	2.75
1 1/2 x 4	3.60
2 x 2	2.25
2 x 3	3.25
2 x 4	4.35
3 x 3	4.95
3 x 4	6.88

TAPERED SHEETS 36"

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1/4 x 3	.85
3/8 x 2	.68
3/8 x 3	.98
1/2 x 3	1.20

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1/20 x 3	.49
1/16 x 3	.49
3/32 x 3	.56
1/8 x 3	.67
3/16 x 3	.85
1/4 x 3	.85
3/8 x 3	1.15
1/2 x 3	1.39
3/4 x 3	2.20
1" x 3	3.00
1 1/2 x 3	.78
1 1/2 x 4	.91
3/32 x 4	1.00
1/8 x 4	1.17
3/16 x 4	1.38
1/4 x 4	2.07
3/8 x 4	2.82
1/2 x 4	2.82

BASSWOOD 48"

3/16 x 3/16	.26
3/16 x 1/4	.30
3/16 x 3/8	.38
3/16 x 1/2	.46
3/16 x 3/4	.60
1/4 x 1/4	.42
1/4 x 3/8	.49
1/4 x 3/4	.80
3/8 x 3/8	.60
3/8 x 1/2	.70
3/8 x 3/4	.90
1/2 x 1/2	.90
1/2 x 3/4	1.00

PINE STICKS 36" 48"

1/8 x 1/8	13 .17
1/8 x 1/4	16 .23
1/8 x 3/8	20 .27
3/16 x 3/16	17 .24
3/16 x 3/8	23 .32
3/16 x 1/2	30 .40
1/4 x 1/4	28 .37
1/4 x 3/8	30 .42
1/4 x 1/2	34 .47
3/8 x 3/8	37 .52

HARD MAPLE 18"

1/4 x 3/8	.40
3/8 x 3/8	.45
3/8 x 1/2	.50
3/8 x 3/4	.58
1/2 x 3/4	.69

SPRUCE STICKS 36" 48"

1/8 x 1/8	.15
1/8 x 1/4	.18 .24
1/8 x 3/8	20 .29
3/16 x 3/16	25 .34
1/4 x 1/4	31 .45
1/4 x 3/8	36 .50
3/8 x 3/8	45 .63
3/8 x 1/2	55 .70
1/2 x 1/2	60 .80
1/2 x 3/4	68 .88

3 PLY BIRCH 48"

1/64 x 12	5.25
1/32 x 12	4.25
1/16 x 12	4.35
1/8 x 12	4.50

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20-3/32 x 3 x 36	8.45
15-3/32 x 4 x 36	9.55
15-1/8 x 3 x 36	7.15
10-1/8 x 4 x 36	6.75
15-3/16 x 3 x 36	9.00
10-3/16 x 4 x 36	8.10
10-1/4 x 3 x 36	6.30
10-1/4 x 4 x 36	8.90
10-3/8 x 3 x 36	8.50
5-3/8 x 4 x 36	6.25
5-1/2 x 3 x 36	5.40
5-1/2 x 4 x 36	8.55
10-3/32 x 4 x 48	8.45
5-1/8 x 4 x 48	4.85
5-3/16 x 4 x 48	5.85
5-1/4 x 4 x 48	6.25

SPRUCE TRIANGLES 36"

3/8 x 3/8	.45
1/2 x 1/2	.61
3/4 x 3/4	.77

5 PLY BIRCH 48"

3/32 x 12	5.70
1/8 x 12	5.85
3/16 x 12	5.85
1/4 x 12	6.00

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THE DRIZZLE CIRCUIT

ROUND and ROUND in the RAIN?



The third installment of the 1987 Drizzle Circuit took place on Feb. 8th. The entry was up slightly over the January race. Circuit points for NWSR were juggled a bit as a result of the placings. Jim Cameron did not make the final, so fell from first rung down to third. The SHT team strengthened their hold on first place (they tied last month with Jim), and Dave Green is close behind. Wayne Drake is in fourth place, which for this event, is the "bubble". With two races left to go, racer's luck dictates that fourth or fifth place could still be in the money.

In the Super Sport class, the top three places were unchanged for circuit points. The S&S team pulled off a victory, however, putting them in the fourth place "bubble" status.

The secondary event was $\frac{1}{2}$ A Combat. Although there can only be one first place, in my book anyone cranking on TeeDees in the winter deserves a prize.

Here's the full layout, including accumulated circuit points:

Secondary Event: $\frac{1}{2}$ A Combat (5 entries) 1st- Glenn Salter;
2nd- Bill Varner; 3rd- Dick Salter; 4th- Richie Salter

NW SPORT RACE (9 entries)

heat winners: round 1: Dave Green 4:14; S&S Team 5:16; Dick Peterson 4:41
round 2: Dick Peterson 4:32; SHT Team 4:31; Wayne Drake 4:28

Final:	1st	8:45	Dave Green
	2nd	8:53	Wayne Drake
	3rd	9:42	SHT Team
	4th	12:44	Dick Peterson

NW SUPER SPORT RACE (8 entries)

heat winners: round 1: Dave Green 4:01; SHT Team 4:26; S&S Team 3:46;
round 2: Bob Danielson 3:55; Dick Peterson 4:29; S&S Team 4:02

Final:	1st	7:52	S&S Team
	2nd	8:48	Dave Green
	3rd	9:39	Bob Danielson

(heat: 4th 4:14 SHT Team

-----DRIZZLE CIRCUIT POINTS STANDINGS-----

NW SPORT RACE			NW SUPER SPORT RACE		
1.	SHT Team	23	1.	Dave Green	21
2.	Dave Green	21	2.	SHT Team	14
3.	Jim Cameron	18	3.	Dick McConnell	12
4.	Wayne Drake	17	4.	S&S Team	10
5.	Bob Danielson	11	5.	Bob Danielson	9
6.	Dick Peterson	10	6.	Jim Cameron	5
7.	S&S Team	6	7.	George Mickey	4
	Dick McConnell	6	8.	Dick Peterson	3
9.	George Mickey	3			
10.	Dan Burdick	2			

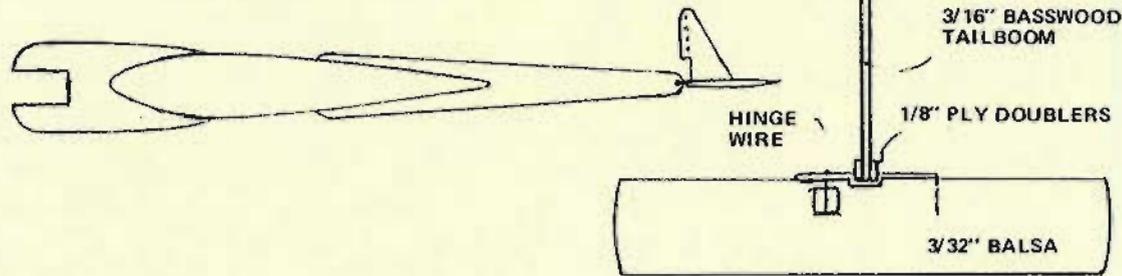
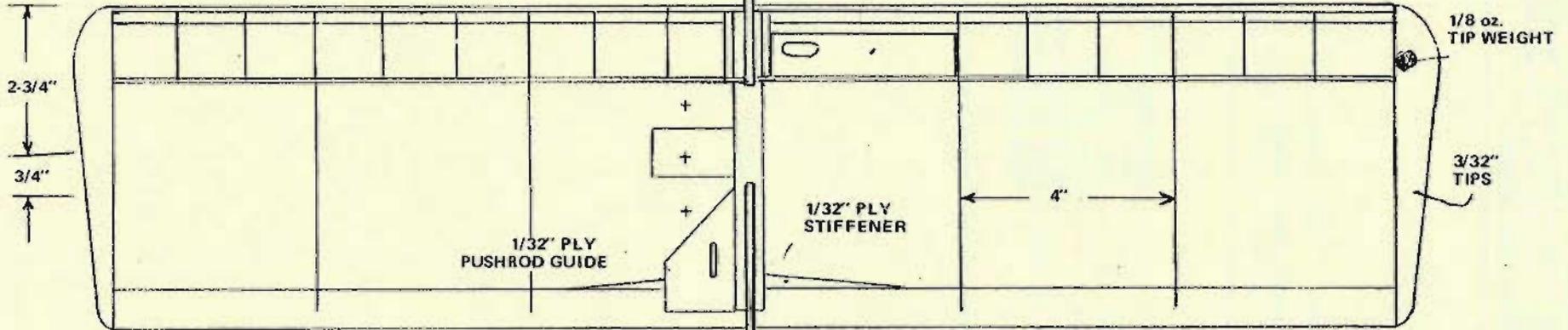
1/3 SIZE SHOWN:

OFFSET MOTOR MOUNT
1-2 DEGREES TO OUTSIDE

1" DIAMETER
BLADDER TUBE

WING CONSTRUCTION:

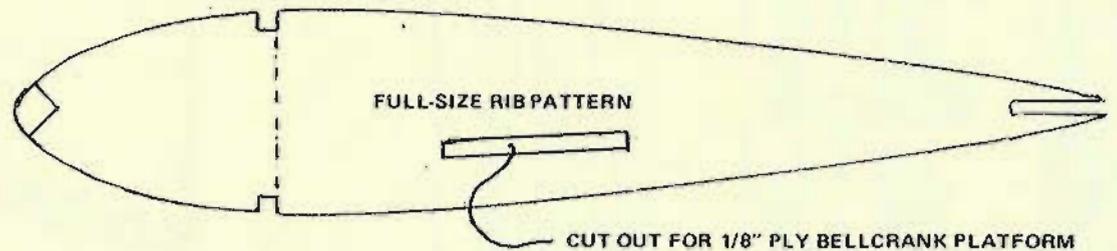
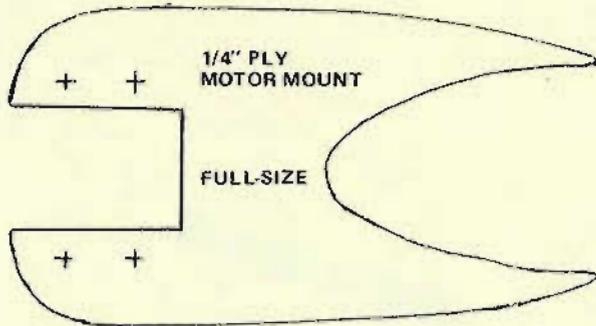
- 1/4" SQ. SPRUCE L.E. 1/8" SQ. SPRUCE SPARS
- 1/16" Balsa RIBS & FALSE RIBS
- 1/2" Balsa CENTER RIB & 3/16" FRONT DOUBLERS
- TRAILING EDGE: 3/32x3/4" Balsa



cheap imitation
for 1/2A combat

BY: GENE PAPE & JOHN THOMPSON
DRAWING: MIKE HAZEL

See CL column in May 1986
Model Builder for const. text.



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