

THE LEADING EDGE

VOL. 5 NO. 2
MARCH/APRIL



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COVER PHOTO: Walt Schalk Jr. and his "Coffee Pot" oddroc at the NIRA club launch. Plans for the model are in this issue.

MONTHLY NIRA MEETING March 5
Glen Ellyn Civic Center 7:30 PM

Bring your new models for the Model of the Month Contest!

BUILDING SESSION March 20
Bob Kaplow's house 1:00 PM

Call Hullet at 934-1160 for directions to the Palatine mansion.

MONTHLY NIRA MEETING April 2
Glen Ellyn Civic Center 7:30 PM

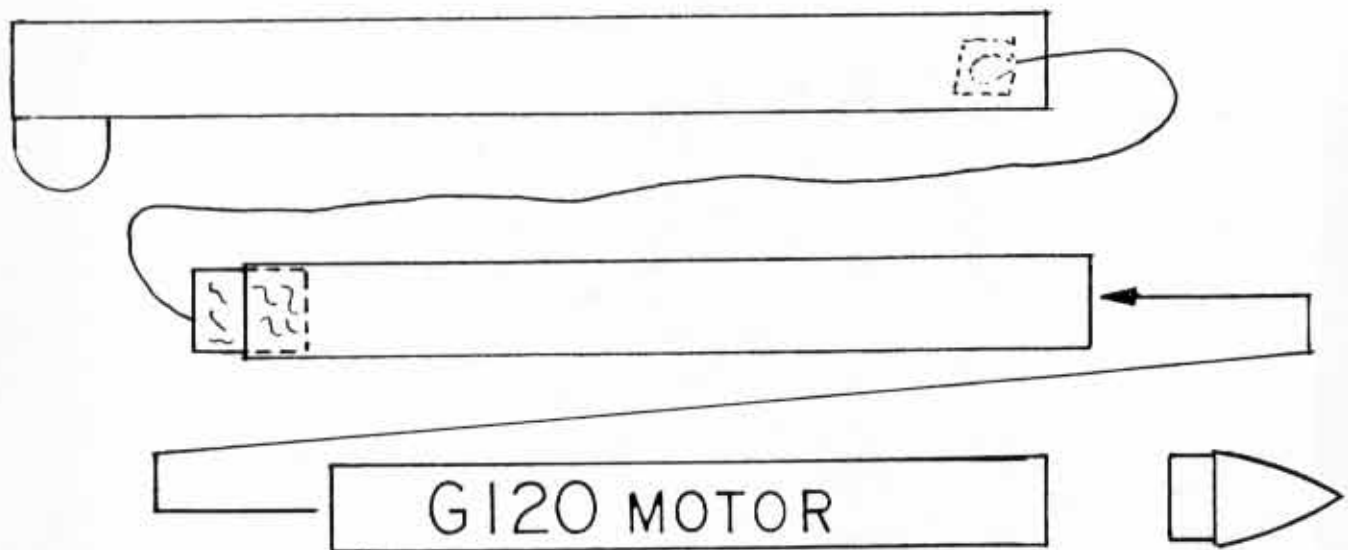
Report on the Kent State Convention plus planning for the first launch of 1982!



NOMID-82 CONTEST May 8-9

Fenton, MI; Events: E EL. Alt.,
D SD, B RG, D HD, C EG, $\frac{1}{4}$ A EG,
Sp Sc. Contact M. Zienkiewicz,
28811 Sutherland, Warren, MI 48093

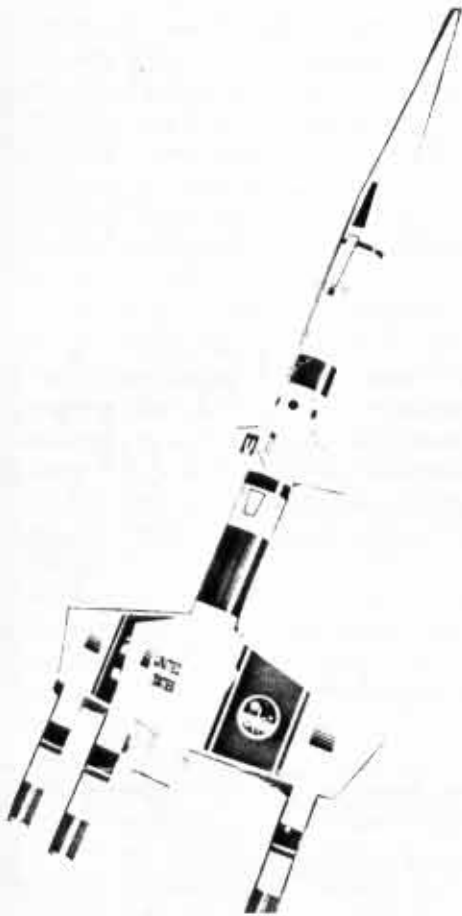
VAGARY A G120 PAYLOAD MODEL



②

BY
SHIRLEY U JEST

MODEL OF THE MONTH WINNERS



The January Model of the Month winner is Jeff Adams with his Starship Vega. Congratulations, Jeff!



The February Model of the Month winner is (gasp!) Bunny with his Pilgrim Observer plastic model conversion. Congratulations, Bunny!



THE LEADING EDGE

is published bimonthly by and for members of the Northern Illinois Rocketry Association (NIRA), NAR Section #117, and is dedicated to the idea that Model Rocketry is FUN! Suggestions for articles and plans are welcome. Articles, plans, other newsletters and news items of interest should be sent to the editor:

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Any material in the Leading Edge may be reprinted if proper credit is given.

VOL.5 NO.2
MAR./APR.82

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TRACKING THE GREAT WHITE NORTH

With Bob + Doug Mc Kato



JANUARY BUILDING SESSION

NIRA's first building session of the new year was about average for our affairs of this type. Ten NIRA-ites showed up at Bob Kaplow's new house on January 10 to spend a few hours building models in Bullet's spacious basement workshop. The Northfield carpool of Gaff, Pastrick and London (Sounds like a vauderville team to me. - MBB) arrived first. They found Bullet replacing his car's 12 volt ice cube. The Schaumburg carpool of Darth, Jedi George and Pat Peterson arrived a little later. Tom Eckels and the Schmitt Brothers, Scott and Mark, rounded out the attendance. Considering it was the coldest day ever in Chicago, the turnout was pretty good. Since the event wasn't listed in the NIRA calendar, other members may have simply not known about it.

Strangely enough, some building was actually done at the building session. Mark Schmitt worked on a glider of his own design. (Remember! Schmitt took at fourth places in B BG at NARAM-23!) Larry London was constructing a Centuri "Skylab" kit. Tom Eckels started work on an Estes Sissor-wing transport. Everyone else was content to "shoot the breeze". (It was too cold and snowy to shoot the rockets!)

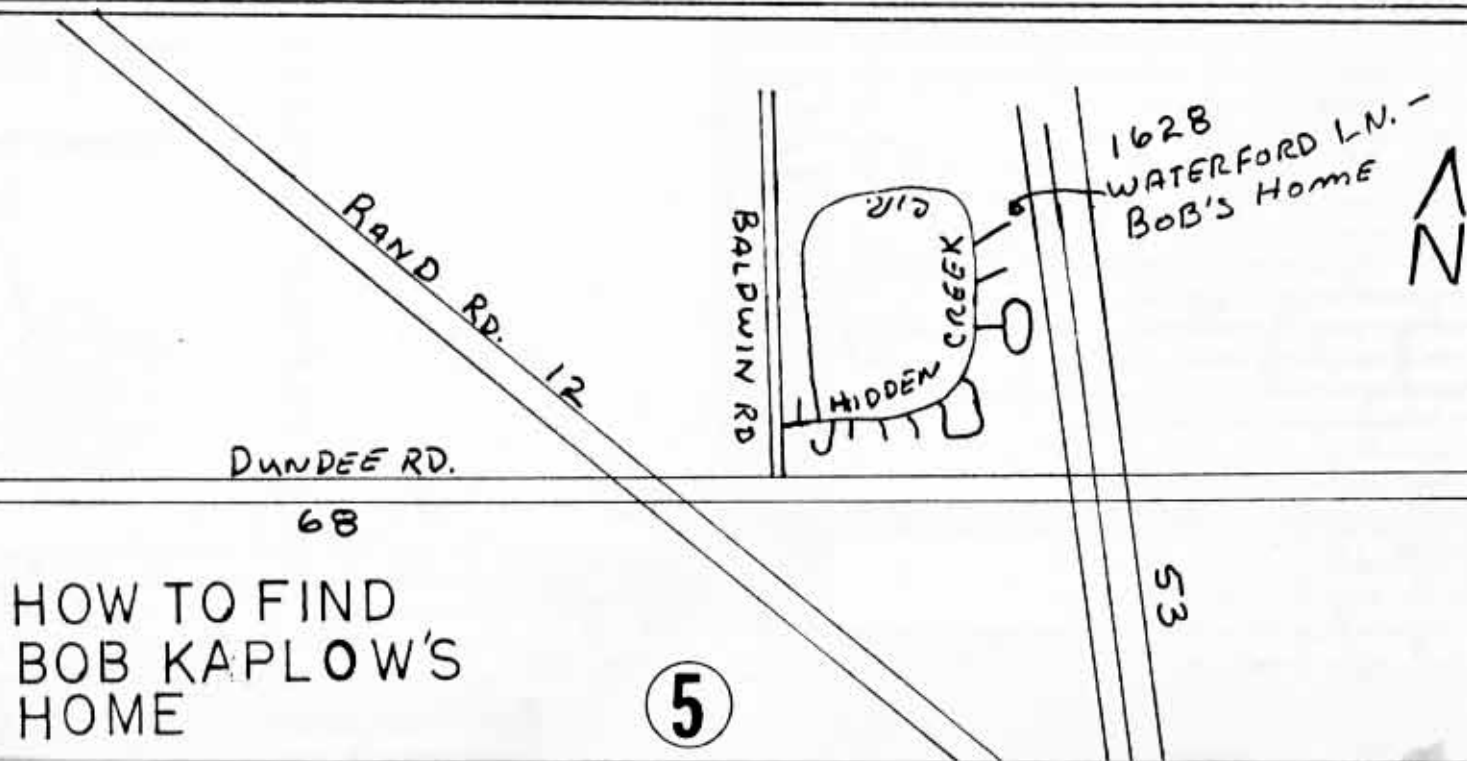
The session broke up after about three hours. Since his house was still standing Bullet volunteered to do it again. Check the calendar for date and time, and be there!!!



Bob Kaplow and Tom Eckles discuss a fine point of rocketry.



Mark Schmitt and Larry London show us your lark pack!



HOW TO FIND
BOB KAPLOW'S
HOME

CRASHING CONCLUSION

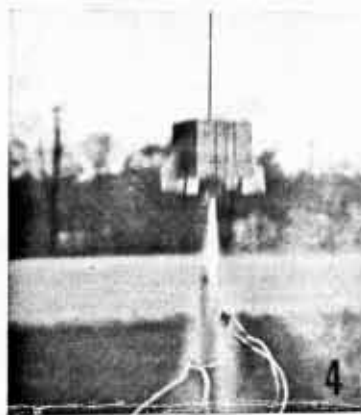
For the past several years, it seems that our fall launches have more than the usual number of prangs. Maybe it's post-Labor Day letdown. In any case, the 1981 version of the November launch kept true to form. There were more prangs than successful flights.

Oddrocs are becoming very popular with NIRA. Walt Schalk's "Coffee Pot", fresh from a Model of the Month win, turned in one of the few successful flights. Son Wayne's Rubik's Cube didn't fare as well. There was just too much side panel area for it to be stable. Ric Gaff brought out a bright red D12 powered Pyramid. It flew great single staged. When CHAD staged, it made a great anti-personnel weapon.

Speaking of weapons, the field at times looked as though it were the setting for a World War III dogfight. Ric flew his rip-snortin' D! powered MIG 21 plastic model. It sort of screwed off toward the highway, then stripped its parachute. Not deterred, Larry London stepped up for the Soviet Air Force with a MIG 15. On an A3, this model traveled all of 10 feet and crashed. The Allies fared little better. Brian Stout's SR-71 boosted well, but like Ric's MIG, snapped its shock cord. Tom Pastrick returned with his Corsair. While repaired from the previous launch, there hadn't been any other modifications. It crashed, breaking a wing.

After the smoke of air combat cleared, the RC crowd took over. Bunny's latest "Hyperdrive" pulse model flew nearly straight up on a D12, but spiraled in to destroy his fourth radio in four flights. Tom Pastrick marched his electric Cardinal out far into the field, and amazed those sticking around the launch site by doing aerobatics. It turned out Tom had interference problems, and the aerobatics were unintentional. He crashed, too. Jedi George's Gentle Lady flew OK for the umpteenth time. Last but not least, Mark Schmitt brought out an RC car, leading some of the rocket fliers to mutter something about helping to stamp out MS as the car pattered through the launch area.

All in all, the last launch of the '81 season left us with some things to rebuild, and some funny stories to tell. See you in the spring!



1. Walt Schalk Jr. got double duty from his "Coffee Pot" oddroc.
2. Brian Stout preps his Centuri SR71.
3. Tommy P's purrrrfectly finished "Top Kat".
4. Wayne Schalk's "Rubic's Cube " was perfectly stable ... for three feet!
5. Tommy P's Corsair buys much farru.
6. Mark Schmitt helps Bunny prep another pulse RC BG for planting.
7. Mark Schmitt's "Deli Special" had great taste, but poor stability.

1982 CATALOGUE REVIEW

Estes and Centuri have finished printing their 1982 catalogues. If you've ordered from either company in the last year, the catalogue should show up in your mailbox. Otherwise, you can order the catalogues from the companies for \$1.00 each.

Both companies now have a launch controller featuring the Polaroid "Pola-Pulse"tm battery. The battery is 3.7" x 3" x .18" and produces 6 volts. The controller costs \$9.95 without a battery. Batteries are \$3.25. These batteries are also available in packs of Polaroid film. After you finish with the film, rip the film pak apart and salvage the battery. Batteries obtained in this fashion are said to be good for at least 50 launches.

Centuri introduces four new kits. The Bull Dog is a near-scale version of the Marine Corps AGM-83A missile. Lil' Ivan is a beginner's kit with Russian decor. In the Magnum series, we get a Magnum SAM -3, a D powered version of the surface-to-air missile. We also get a Magnum Sprint.

Estes puts out 15 new kits. They also claim to have spruced up the Alpha. New models include a Mini Mean Machine, three feet of BT-20. The Maxi-Streak, a D powered, streamer recovered mutant of its little relative, will soon litter the countryside. Another D model, the Comanche-3, is a three stager with a D12 booster. Finally, a semi-scale Phoenix missile rounds out the high-power end of the kit line. Innovative is the word for the Soaring Eagle. This is a flex-wing glider with ejectable pod. Fourteen kits bite the dust, including the Apogee II and Mercury Redstone.

For my NARAM-23 R&D report, I did breaking tests on balsa wood. I tested untreated balsa as well as covered balsa. Covering materials used in the tests were Jap tissue, domestic tissue, Silkspan, and Monokote. Strips of wood 1/16" x 1" x 9" were used. Clamped to a table, weight was added to the strip until it broke. The amount of weight added was recorded. I also measured the angle of deflection of the strip as I added weight. The only thing I noticed was the strips always broke at 45°.

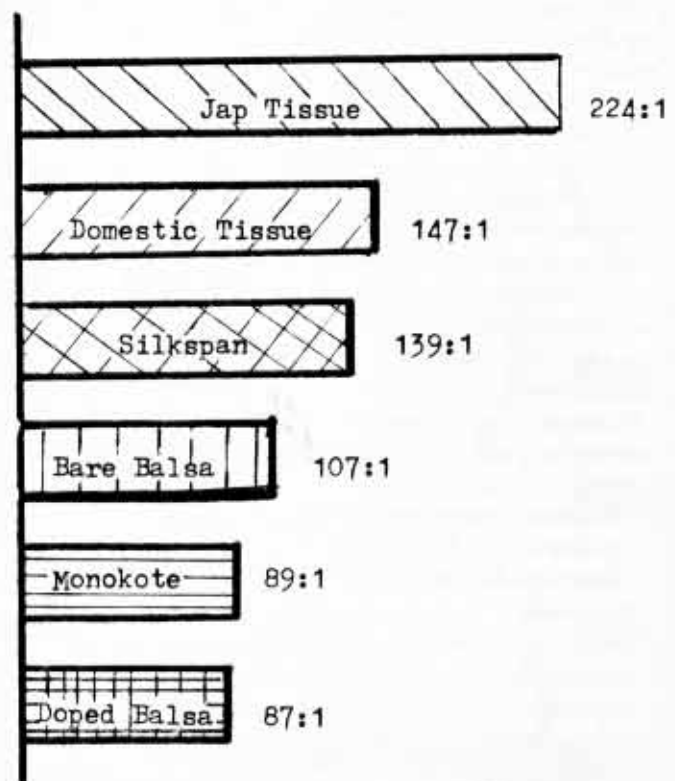
Silkspan strengthened balsa the most, but it practically doubled the weight of the strip. Jap tissue was next in absolute strength, followed closely by domestic tissue. Monokote seemed to work poorly, adding little strength and much weight.

When I calculated strength to weight ratios, I found Jap tissue to be the best with domestic tissue second.

While these results may not be the last word on balsa coverings, I think they give use a better insight on how coverings affect our glider wings. For more details, check out the results summarized below.

Pat Peterson

Strength-to-Weight Ratios



BOARD OF TRUSTEES MEETING

Nine NAR Trustees gathered in Houston for the last meeting of the 1979-82 Board. The meeting was more relaxed than previous affairs, and ran less than the usual 18 hours for these mid-year meetings.

Among committee reports, the NFPA committee chaired by Harry Stine reported that the ICC exemption for shipping motors had been renewed for two years. The difficulties with air shipment of motors remains a problem.

NARTS products are back in stock. Chas Russell reported that 93% of the catalog items will be in stock by March. Some books remain out of print, but film and slide set back orders are being filled.

The Model Rocketeer ran in the black last year, due in large measure to the hobby shop sales program. Some costs are expected to rise in 1982, but a new promotional campaign to get more shops selling the magazine will hopefully offset that.

The Contest Board reported that NARAM-22 awards and patches were sent out. Pink Book reprinting will be completed in March, and plans for NARAM-24 are going well. There's even a preliminary bid for NARAM-25 in Houston.

The Static Spacemodeling Committee has a new Chairman. Vince Bonkowski, a well-known Midwesterner, takes over for Mike Banks.

John Worth reported that our insurance coverage has been increased up to \$2 million at no increase in cost. John also reported progress toward getting 50 new RC channels. Pat Miller reported that he continues to work at clearing up problems with CNA orders. Everyone was supposed to have gotten refunds by 2/1/82.

The By-Laws Revision Committee presented five amendments for consideration. These will be presented for a membership vote in August.

Financially, things were OK with a tiny surplus for 1981. No dues increase is needed for now, but the situation will require review by the new Board at NARAM.

Reports of several NAR members engaged in amateur activities were discussed by the Board. Two members are facing disciplinary hearings now, and

other investigations are pending. The Board adopted the policy that the NAR will not certify any motor with greater than 80 Nt.-sec. total impulse. The Board also changed the wording of the Safety Code to allow only NAR Safety Certified motors. Finally, a special committee to investigate other possible policy actions on high-powered motor use will be formed.

The Board moved on to consider future growth programs for the NAR. Several novel ideas were presented for increasing member interaction and for increasing the renewal rate. Most were referred to committee chairmen for action.

All in all, the Board had yet another good meeting, rounding out a very successful term. The Association stands in a very strong position to move ahead during the rest of the Eighties.



F100 POWERED V-2
AT SHOOTING STAR-6

THIS IS A PERKY LITTLE MODEL, ENJOY!

THE AMUSING FLYING

COFFEE POT



PARTS LIST

one pound oatmeal box
6 3/4" BT-50 body tube
EM-2050 engine mount
1/16" cardboard or balsa
.030 clear plastic
one nosecone, rounded
one small screw eye
18" shock cord
18" Estes parachute kit
launch lug, 2" long
two black pipe cleaners

1. Cut off the bottom of the oatmeal box, leaving it 6 1/8" long. Trim the overhang from the lid to 5/16".
2. Cut four tube spacers from either balsa or cardboard. The spacers are 5 1/2 x 1 1/2. Grain should run along the short dimension. Glue these spacers to the BT-50 as shown in Figure 2. They should be flush with the end of the tube. Glue on a launch lug as shown.
3. Assemble the engine mount as per kit instructions. Install the mount so the end of the BT-20 sticks out 1/2". See Figure 3.
4. Assemble the shock cord mount. When dry, install it into the BT-50 as shown in Figure 3.
5. If needed, fillet the body tube-spacer joints. When the entire BT-50 assembly is dry, slide it into the oatmeal box and test the fit. Trim the spacers until you get a sliding fit. Glue into place.

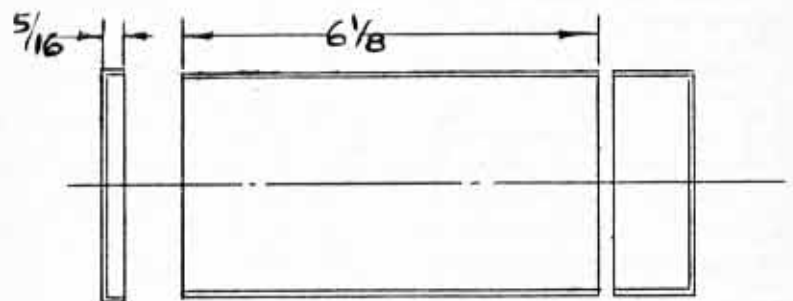


FIGURE 1

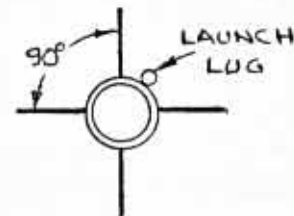


FIGURE 2

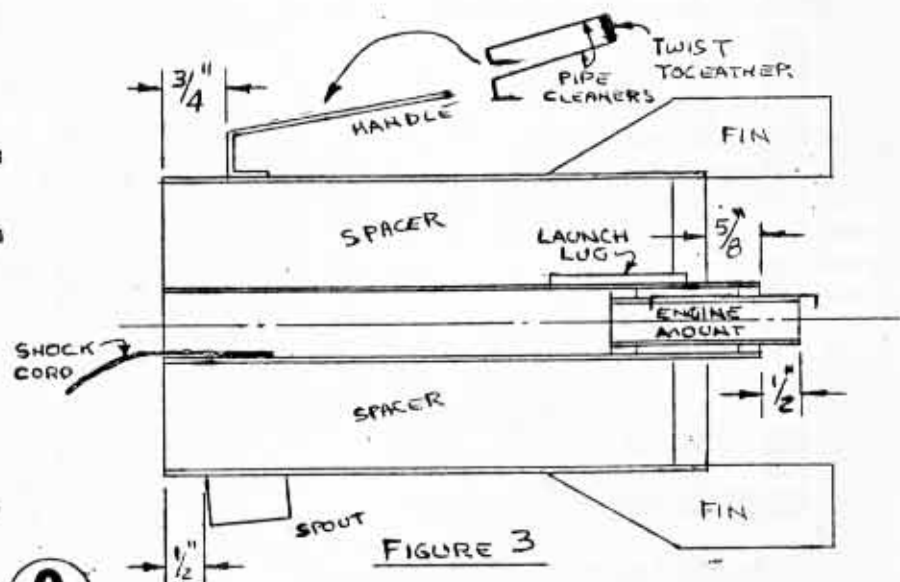


FIGURE 3

6. Shape the nosecone to resemble a coffee pot perculator knob. You can carve your own or modify a commercial nosecone. Make a hole in the center of the lid just large enough to accept the smaller diameter of the knob. Glue into place. See Figure 4.
7. The spout can be made from cardboard or clear plastic. See the full sized layout. Roll the spout into shape and glue to the pot as shown in Figure 3.
8. Spray paint the lid and container with dull aluminum paint. This is important for realism. You may want to seal the oatmeal box with a couple of coats of clear dope first. Paint the knob black.
9. Cut a disk as shown in Figure 5. Use clear plastic, form it to shape, and glue it to the lid. The disk must fit on the lid and knob at the same time. This cone helps cut drag and improve performance.
10. Twist the pipe cleaners together and bend to a handle shape. Glue to the pot. See Figure 3.
11. Use the full size layout and cut four (4) fins from clear plastic. Glue the fins to the pot in the same spots as the spacers. The fins are attached to the outside with epoxy. See Figure 3.
12. Assemble the parachute. Tie all the recovery system parts together and you're done!

NOTE: The fins, handle and plastic nose disk must be put on after the pot is painted. If done properly, the glue dries clear and will not be noticeable. Also remember to put a hole in the lid so the launch rod can clear.

The "Coffee Pot" was flown with a C6-3 and flew just fine. Many thanks to Bunny, Bullet and Ric for suggestions. Good luck with your latest model, good to the last flight!

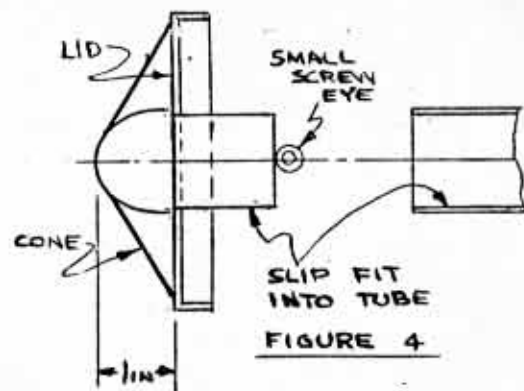


FIGURE 4

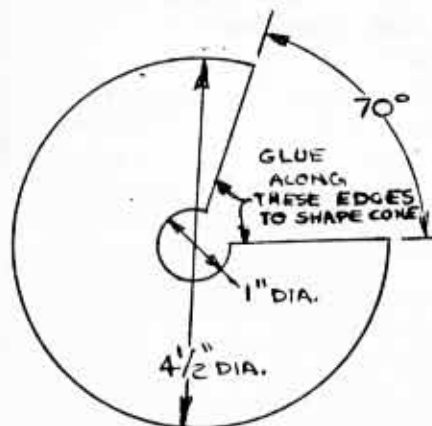
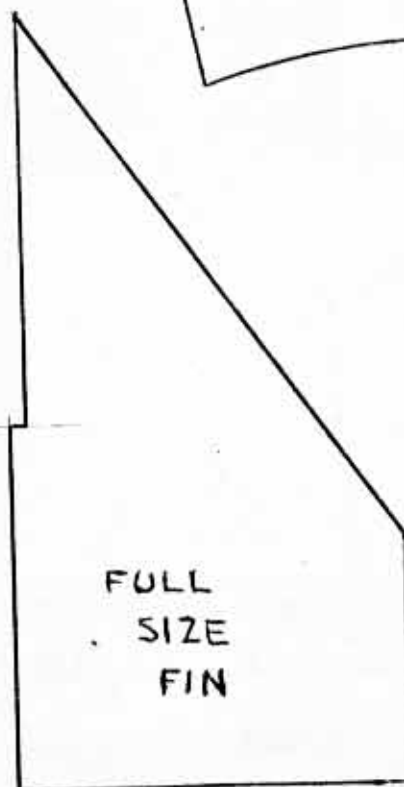
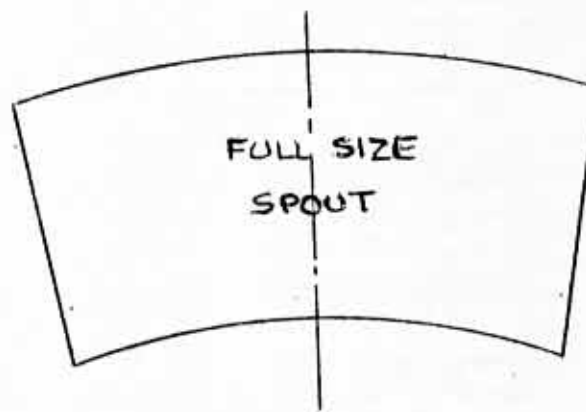


FIGURE 5



NIRA MEMBERSHIP LIST BY BOB KAPLOW

ADAMS, JEFF	1043 N EAGLE	NAPERVILLE	IL	60540	N	312/420-7976
AXFORD, JEFF	406 INDIAN HILL RD	OFFFIELD	IL	60015	N	312/945-1011
BAKER, ALFRED S	2327 S WESTMINSTER	WHEATON	IL	60187	N *	312/699-1511
BEACH, TOM	318 E COMMON ST	WATERVILLE	MN	56006	N	507/362-8211
BORN, JOHN	842 LUTHER LN	CHICAGO HTS	IL	60411	N	312/756-2042
BUNDICK, MARK	1025 N HUDSON AV	CHICAGO	IL	60614	N P *	312/642-9028
BURKHEAD, BOB	8 BIRCHWOOD CT	STREAMWOOD	IL	60103	N	312/843-0075
BURKHEAD, DAVE	8 BIRCHWOOD CT	STREAMWOOD	IL	60103	N	312/843-1075
CADIZ, ALBERT	150 GREEN MEADOW	GLENDAL HTS.	IL	60137	N	312/665-4717
CHARRONNEAU, JONATHAN	210 SHAWNEE DR	CAROL STREAM	IL	60187	*	312/665-7281
CHMIELOWICZ, SCOTT	137 CAROLINE	ELMHURST	IL	60126	N	312/279-1894
CHRISTIAN, BILL	1004 N CHESTNUT	ARLINGTON HTS	IL	60004	N G	312/259-4617
ECKLES, TOM	1020 E PRATIE	WHEATON	IL	60187	N	312/653-9276
FRTSMAN, LEE	476 N EMROY	ELMHURST	IL	60126	N	312/834-8284
FWOLDT, DAVID	1382 FERRY RD	GLENDAL HTS	IL	60137	N	312/469-6557
FLEMING, PATRICK	144 PROSPECT	GLFN ELLYN	IL	60137	N	312/790-1198
FLYNN, BOY	21668 KENSINGTON RD	GLFN ELLYN	IL	60137	N	312/469-6173
FOUNTAIN, ROBERT R	23540 N CEDAR LN	LAKE ZURICH	IL	60047	N	312/438-7555
GAFF, RICHARD	331 THIRD ST	NORTHFIELD	IL	60093	P N	312/724-2975
GODRON, F. SCOTT- WORK	476 MAIN ST	GLFN ELLYN	IL	60137	N W	312/469-9596
HALL, TAN	590 N WILLOW	ELMHURST	IL	60126	N	312/279-6337
HUBER, MARTIN F.	1636 S HIGHLAND AV	ARLINGTON HTS	IL	60025	N	312/439-3800
KAPLOW, ROBERT G.	1628 WATERFORD LN	PALATINE	IL	60067	N G D	312/934-1160
KNOFF, KYL	1105 ELMWOOD PL	DEERFIELD	IL	60015	N P	312/945-5821
LENTINI, TONY	600 N ROBERTA	NORTHLAKE	IL	60160	N	312/455-7756
LONDON, LARRY	1811 LAWRENCE	HIGHLAND PARK	IL	60035	N P	312/831-5370
MILLER, BRAXTON	PO BOX 551	MORTON GROVE	IL	60053	N P	312/296-0250
MUTSCHELLER, ARRON	424 GREENFIELD ST	GLFN ELLYN	IL	60137	N	312/858-9237
MUTSCHELLER, CHUCK	424 GREENFIELD ST	GLFN ELLYN	IL	60137	N	312/858-9237
NEWITT, CHRIS	403 S WOODLAWN	WHEATON	IL	60187	N	312/668-4926
NEWITT, DAN	403 S WOODLAWN	WHEATON	IL	60187	N	312/668-4926
NORRIS, BRUCE	4629 W 80TH PL	HOMETOWN	IL	60456	N	312/425-5110
PATRICK, THOMAS E.	7769 N NORDICA	NTLES	IL	60648	N P	312/470-1390
PELLISO, JOHN	403 S WOODLAWN	WHEATON	IL	60187	N	312/668-4926
PUDA, WILLIAM	17 FOREST HILL DR	GLFN ELLYN	IL	60137	N	312/469-3632
RADAVICH, PAUL	214748 22ND ST	GLFN ELLYN	IL	60137	N	/ =
RADAVICH, RICKY	214748 22ND ST	GLFN ELLYN	IL	60137	N	/ =
RIDDER, JEFF	3245 184TH	LANING	IL	60438	N	312/474-1712
RIFRESEHL, GEORGE #800	1125 W LOYOLA AV	CHICAGO	IL	60626	N P	312/973-7850
RIFRESEHL, GEORGE & RR	513 BROCKTON LANE	SCHAUMBURG	IL	60193	N P	312/894-4739
ROBERTO, BEN	17 CARLA LN	SCOTTSPURG	IN	47170	N	812/752-3711
RANGERMAN, STEVE	3010 CRESTWOOD	NORTHROOK	IL	60062	N	312/498-5693
SCHAIK, WALTER W JR	141 CAROLINE	ELMHURST	IL	60126	N	312/279-7196
SCHAIK, WAYNE A	141 CAROLINE	ELMHURST	IL	60126	N	312/279-7196
SCHMITT, MARK	214716 BUCKINGHAM RD	GLFN ELLYN	IL	60137	N P	312/469-9076
SCHMITT, SCOTT	214716 BUCKINGHAM RD	GLFN ELLYN	IL	60137	N	312/469-9076
SERAFIN, ANTHONY J	RT 2 BOX 2300	ELGTON	IL	60120	N	312/464-6214
SHOIT, BRIAN	214705 BUCKINGHAM RD	GLFN ELLYN	IL	60137	N	312/858-1103
TORBERMAN, DALE	1017 SOUTHPORT	LTSLE	IL	60532	P N	312/963-7277
TULFJA, BILL	117 JULIE RD	ROLLINGROOK	IL	60439	N	312/739-9190
VELDENZ, HENRY	810 N CUYLER	DAK PARK	IL	60392	N	312/386-6238

PETERSON

IN THE NEXT ISSUE OF THE LEADING EDGE

OUTER LIMITS- the Moondipper

THIS OLD ROCKET

REDUCING DRAG AND IMPROVING ENGINE
PERFORMANCE WITH ORGONE ENERGY.

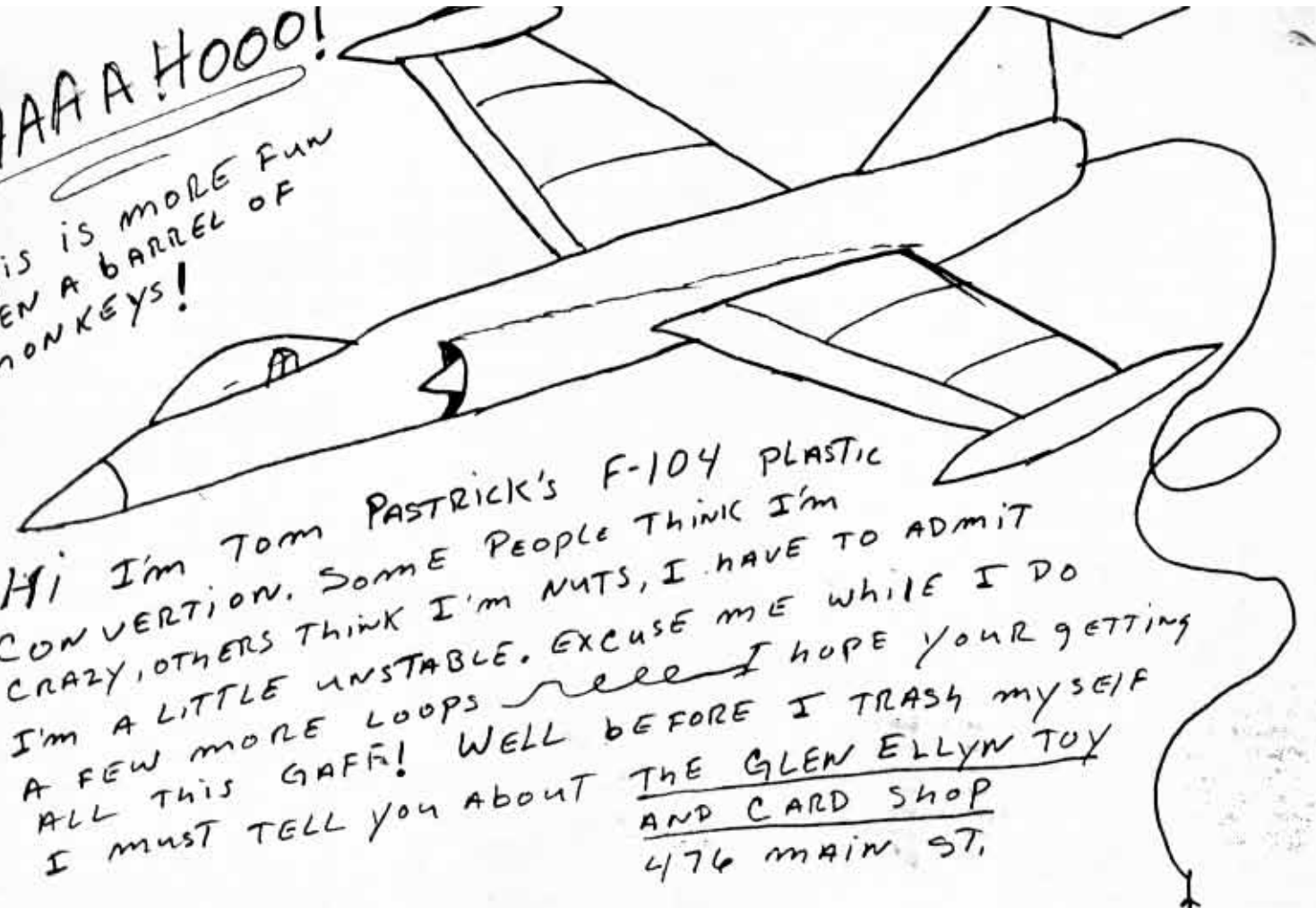
LOTS OF OTHER GREAT STUFF.

FLASH!!! The Leading Edge has just learned that long-time SNOAR member Chris Pearson has resigned his NAR membership in order to pursue amateur rocketry. The impact of this event on SNOAR's activities remains to be seen.



"KAPLOW doesn't need any help, thanks."

YAAA A HOOO!
THIS IS MORE FUN
THEN A BARREL OF
MONKEYS!



Hi I'm Tom PASTRICK'S F-104 PLASTIC
CONVERSION. SOME PEOPLE THINK I'M
CRAZY, OTHERS THINK I'M NUTS, I HAVE TO ADMIT
I'M A LITTLE UNSTABLE. EXCUSE ME WHILE I DO
A FEW MORE LOOPS llll I HOPE YOUR GETTING
ALL THIS GAFF! WELL BEFORE I TRASH MYSELF
I MUST TELL YOU ABOUT THE GLEN ELLYN TOY
AND CARD SHOP
476 MAIN ST.

RIC GAFF
331 THIRD ST.
NORTHFIELD IL
60093

