

THE LEADING EDGE



Newsletter of the Northern Illinois Rocketry Association, NAR Section #117
Volume 12, Number 5 - September/October 1989

USA-USSR Team Flyoff

by Bunny

The July Flyoff in Allentown, PA to select members of the USA-USSR Cultural Exchange Team was the best attended flyoff since the 1979 version in Houston. A total of 21 competitors slugged it out in 4 events over two days. NIRA's own Jedi George qualified for his third US team, finishing second in the RC RG event.

FAI events differ from US events in that model dimensions and weights are strictly controlled, and flights must occur during specified "rounds". Each event has a maximum flight time per round, and contestants tied after the first three rounds advance to the flyoff. Flyoff maxes are increased with each round until only one winner remains.

In Parachute and Streamer Duration, contestants struggled with new rules requiring a 30mm (1 1/8") diameter model. Everyone went with various boattailed birds, and nearly all were fiberglass. Only the NIRA contingent flew paper "Sad Sacks". Jedi and Bunny did pretty well in the altitude department, but only George was able to qualify in SD. SD models in particular needed lots of lift to max. Only one max was recorded during all the SD flying.

PD was different. With substantial room in the 30 mm tubes, a HUGE chute can be flown. Sizes centered around 30-36", though Bunny flew a couple of flights on 24" versions. Quarter-mil

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Launch Highlights

by Lawrence Bercini

Those members missing the last few club launches have missed some creative modeling as well as some hilarious flights. NIRA-ites put on their thinking caps and created new and unusual models to enter our, ahem, unusual events.

Team Kitbash kicked off the March meeting. Four teams of about four persons each were given a Viking kit, two Mosquito kits and an hour to complete an entirely new design. The resultant models were so dissimilar it was amazing!

Andy Rechnagel's group produced the "Moon Ringer", a kind of cross between an Infinite Loop, and an Alien Explorer. Matt Price's team produced a sport scale version of the Incom T-65, or X-Wing Fighter to you uninitiated. They even went so far as to roll instruction sheets into tiny tubes for the laser cannon. The Anti-Personnel Weapon was the brainchild of Tom Price's bunch. Their design was quite similar to the Estes Excalibur, but with a more lethal appearance. Finally, but most strangely was Andy Linder's Viking King 10, which was more like a typical sport model with the middle missing and splints to hold the top and bottom together.

Each youngster took his team's model home for decoration and preparation for the April Launch. Model were then judged for Creativity

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T Minus 1 - NIRA Events

MONTHLY MEETINGS

September 1, 1989

October 6, 1989

November 3, 1989

All meetings start at 7:30 PM, and include refreshments, entertainment and a brief business meeting. Don't forget a model for "Model of the Month" voting. We need volunteer speakers to entertain the troops after the business meeting, so call Lawrence Bercini at 561-8098 if you have a topic to present, or if you have ideas about interesting topics others can speak on.

1989 LAUNCH DATES

All launches start at 2:00 PM at Ackerman Park, intersection of St. Charles and Swift Roads in Glen Ellyn. BYOL (bring your own launcher). NAR Insurance required or else RSO must launch your model.

September 17, 1989 - A Engine Heavy Roc
Duration: Winner gets the maximum duration in seconds times weight in grams. Sorta like Design Efficiency for klunky rockets.

October 15, 1989 - Separation: New rule for 1989 is that, to count, parts separated must be structural. Barb Bundick will have trouble defending her title with that rule in place.

November 19, 1989 - Oddroc Model per last year's rules.

OTHER INTERESTING ITEMS

September 4, 1989 - 26th Annual Labor Day Demonstration Launch, Newton Park, Glen Ellyn. Make sure you're there by 1 PM to

help set up and prep models. Call Lawrence Bercini (561-8098) if you have questions.

October 9, 1989 - SIG Plant Visit. Bunny's organizing a trip to Montezuma, IA to visit Sig Manufacturing to tour the plant, then rummage through the balsa stacks for the best wood. Contact Bunny at 293-9343 if you're interested.

November 3-5, 1989 - RCHTA Show, O'Hare Expo Center. NIRA will man the NAR display, and we need good models, and volunteers to assist in answering questions and passing out flyers. You get to see the show free if you help out (hint!).

November 4-5, 1989 - Rich McBroom's HPR launch coupled with a high-power NAR contest including F Alt, F BG, G Dual Eggloft, G SD. (Don't worry, Pat. It'll all comply with the 3-48 rule.) Currently scheduled in conflict with the RCHTA show, we'll let you know if the date changes.

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THE LEADING EDGE

is published bi-monthly 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! Membership dues are \$3.00 per year and include a six issue subscription to the Leading Edge. Non-member subscriptions are available for \$5.00 per six issues. All membership applications, subscriptions, articles, plans, other newsletters, and news items of interest should be sent to Mark Bundick, Editor, 1350 Lilac Lane, Carol Stream, IL 60188. Any item appearing in the Leading Edge may be reprinted by American Spacemodeling with the proper credit given; all other uses require written permission of the Northern Illinois Rocketry Association.

Heard on the Street

Rumors and such, with apologies to the Wall Street Journal

Damon Notes - An August 25 deadline for "expressions of interest" to be turned in to Drexel Burnham Lambert on the sale of Estes/Hi-Flyer has passed with over 100 persons, toy manufacturers and financial firms seeking preliminary prospectuses. An attempt by Bunny to interest First Chicago Venture Capital in bidding failed. Top bidders will now tour the plant for an inspection and review of more detailed company records. The sale, most likely to a toy company, will probably close sometime in the fourth quarter. In other news, Damon Biotech announced a \$2 million second quarter loss and indicated it faced severe cash flow problems without new investment. Nomad Partners, the group that acquired Damon, is still trying to unload Damon's 61% interest in Damon Biotech.

Looping Lawrence - Congratulations to Lawrence Bercini, who left ASA Systems on August 25 for a new position in the data processing division of Marshall Fields. He joins Bunny and Dave Price as NIRA members camped out downtown for work. Hope you like the Loop, Lawrence.

Balsa Bits - A recent conversation with Hazel Sig, president of Sig Manufacturing, shed light on why good balsa wood may be getting even harder to find. Ecuador, where 90+% of the world's balsa is grown, is chopping down more and more rain forest for cultivation, particularly in lower elevations. Lower elevations, with higher moisture content, grow lighter balsa. While higher elevation rain forests remain, their relative humidity is less and the balsa grows much denser.

Tea Time, Comarade? - Britain and the Soviet Union signed an agreement for a British astronaut to fly aboard a Soviet booster on a mission to the Mir Space Station, some time in 1991. The eight day mission code

named Juno, will cost the British \$24.9 million dollars, which is \$9 million more than the Japanese are paying to fly the world's first journalist into space.

Expanding Markets - NARAM packets contained a single four color flyer announcing the return of Cox Hobbies to model rocketry. The product line is the same one we oldtimers knew back in the 70's, and includes the Saturn V and Saturn 1B. Additional scuttlebutt at NARAM centered on probable new product introductions by both Aerotech and MRC at the fall trade shows. NIRA is in a good position to "scoop" the news with the upcoming Chicago RCHTA show. There's really big news to come from this one, folks.

Apt's Appointment Changed - The STS-37 mission, on which NAR member Jay Apt will be a crewmember, has been rescheduled for June 4, 1990. Later schedule changes may be likely, with the Gallileo and Ulysses missions having the top priorities in the Shuttle scheduling game for 1989 and 1990.

Single Payload - Congratulations to Jim Hogue, a proud father for the second time on July 11. Jack Daniel checked in at 8 lbs., 8 oz. and 21" long. Mom, Dad and Jack are all well and doing fine!

Truth in Advertising - Someone finally got around to testing those big black powder HPR motors reported on by Bullet Bob. Touted as G100's, seems they're actually G89's, with 89 Nt-sec of total impulse and burn times of one second. No further word on commercial production, but the motors contain too much propellant for NAR certification.

TREK NAR'S LAMENT

By popular demand, our chain novel returns. The first four episodes led Trek and his main squeeze, Erica, into the middle of a galactic civil war. Erica is lamenting her failure to support the Progeni in the war, when we pick up the story in this issue.

"A Fast Paced Environment" by Larry Mika

"Yes, you've failed." The voice thundered like a bazooka hitting a K-car. "You are now prisoners of the Beta P'ystns, rulers of the South Galaxy!" "South?" questioned Trek, his face twisted as if he'd found an anchovy on a pepperoni pizza. Trek and Erica spun to face their captor.

"Yes, South," stated the figure. "I am the Merdeman Hra the Seventh, Director of Human Resources for the Beta P'ystns Battle Fleet. I am the second highest officer in the Beta fleet. I am the Dan Quayle of the mighty Master P'ystov himself, so don't try any funny stuff. I am told I exude an air of great strength."

"Perhaps you should bathe more often," remarked Erica, startled at the odor crawling like a wounded wombat from the five armpits of the he-being. Hra had three heads and nine necks, quite a topology problem. His skin was mauve, the chic pastel favored by interior decorators. His eyes were chartreuse, surrounded by black ellipses, much like rotting oysters on the half shell. The light glistened from a small bit of drool hanging from the lower lip of his left head, third neck. Erica had heard many stories about Hra from the Progeni; his reproductive system was truncated in a bizarre gardening accident years ago. Erica thought to herself, "This is the last Hra."

"You have been recruited as Psi Fighters for the attack on the Gammas. If you excel in battle, you will be promoted to Nova Fighters. We lost several super Novas in an encounter with the Tri-Delts, due to a lack of vision support equipment. The Novas responsible for the disaster have been cut down to Psis. The successful candidate will

enjoy a flexible, high visibility position in a fast paced environment which offers competitive wages and an excellent benefits package. Besides, if you decline, you will be given a job so vile that your peers will wish you a thousand agonizing deaths." "Telemarketing?", questioned Trek, to which Hra nodded. Trek's heightened breathing sounded like the last of a Slurpee sucked through a soda straw. He pulled at the collar of his flight suit, certain that Hra didn't know its secret contents.

"We demand to see the Master," blurted Erica. Trek turned to her with a bizarre query burning in his mind. What perfume was Erica wearing, and what effect could it have in the wrong hands?

"No one sees the Master Beta. It is not permitted." Two guards led Trek and Erica to the training center by laserpoint, afraid that needlepoint was an insufficient deterrent. As they passed the Master's chambers, they heard giggling and sensed the distinct aroma of people enjoying themselves.

"Perhaps the guards can be disarmed by pleasure," Erica whispered. Trek immediately checked his calendar watch and breathed a sigh of relief that would have filled a large paper bag. Before Erica could proceed, they were shoved roughly into a sensory deprivation chamber for brainwashing. "We passed an old Gnarli-shuttle on the way," noted Erica. "It's our only hope." "Yes, Erica, but we must escape this hippie hell chamber before they start the mind melting, and our brains turn to jelly. After escape, we must elude Hra and run!" The chamber rumbled and emitted a mild hum.

Trek and Erica relaxed and lost capability for rational thought. A soft, comforting voice came from the dynovybe reverb speaker. "How many Zen Masters does it take to screw in a light bulb?" asked the invisible instructor. "A willow swaying in the breeze," replied Trek correctly, having been overcome by the Zen imprinting.

TO BE CONTINUED

USA-USSR Team Flyoff (con't from Page 1)

drop cloth plastic was the material to use, with no aluminized mylar chutes flown at all. Chuck Weiss of ASTRE won with 4 maxes.

B Boost Glide saw Phil Barnes put on quite an exhibition. When he lost his second model in Round #3, he promptly went back to the dorm and built a third model. It flew as well as the first two and Phil won the event going away. Bunny managed only one good flight, shredding two models. Overall, people flew pretty standard BG models of about 35 sq. in. wing area, with a plethora of pod designs and attachments. Oddly enough, the only Red Barons were by Art Rose designed Sling Pods.

E RC RG brought only 4 contestants. Mike Micei crashed in Round 1 due to piloting error, and NIRA's Ben Roberto got shot down due to radio failure. That left Jedi and Phil Barnes to duke it out when Ben's backup ship got out of trim. Jedi dropped 29 seconds in Round 3, but otherwise the flying was pretty evenly matched. Those of you who watched Jedi at recent launches know what kind of flying he's capable of.

Good weather and sufficient help from the Garden State and NOVAAR sections combined to produce an excellent contest. Let's hope that the NARAM-32 flyoff to select the remaining 5 team members will be as much fun.

Recent Launch Highlights (con't from Page 1)

Use of Parts and Decoration. The models ranked, from first to fourth as: Moon Ringer (555 pts.), Viking King 10 (540 pts.), Incom

T-65 (525 pts.) and Anti- Personnel Weapon (500 pts.). As with all previous kitbash entries, it is really flight and safety which determine the winner.

The Moon Ringer became a Transformer by shedding all its rings during boost, but remained surprisingly stable. Both the Incom T-65 and Viking King 10 suffered from low altitude flights. This caused a near tragedy for the Incom, but meant a "fatal attraction" between rocket and asphalt for the Viking King. Only the Anti-Personnel Weapon produced a safe and normal flight. In the end, the rankings were completely reversed, with the Anti-Personnel Weapon in the top slot.

"Launch a Landmark" was a reaction to Tim Marcy and Lawrence Bercini's Flying Castle and Eiffel Tower entries in last year's Oddroc contest. Why not have everyone's model be a recognizable landmark? Entries weren't restricted to, but ended up being all architecture. After static judging, Lawrence Bercini's Water Tower led Tim Marcy's Sears Tower, Glen Thiel's Water Tower, and Harland Pell's St. Louis Arch.

At the May launch, contestants had to hurriedly prep to beat an approaching thunderstorm. Glen Thiel's entry was first off the pad. Constructed of standard parts, it turned in a perfect flight. That put the pressure on the remaining contestants. Tim's Sears Tower came from a cardboard kit, sported no fins, and thus sported no stability. Sorry, Tim.

Lawrence, drawing on his Eiffel Tower experience, made his Water Tower out of posterboard. Much to the surprise of the

Recent Launches (con't from Page 5)

of the onlookers, the model rose from the pad, shed the lower part of the building, and ignited a second stage! The strong breeze weathercocked the model severely to purchase "much agricultural real estate" downrange. Harland's Arch kept getting tugged by the wind on the pad before finally igniting and making a short "worm burning" flight. Glen Thiel thus took home the win because of his flight characteristics. Then it did rain!



"Mmmm! Toasted glider!" says Larry Mika

Lemans Start begged an interesting question.

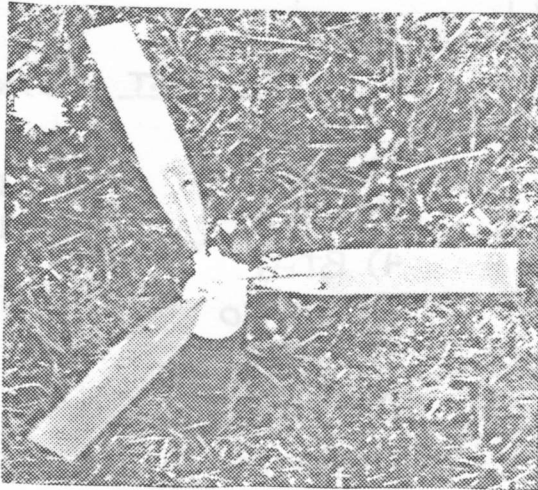
What event would we have if each entry also carried a marshmallow which the contestant had to eat after returning his rocket to the starting line? Why, Lemans Eat, of course! The event generated different strategies for carrying the marshmallow.

Andy Linder chose to mount an egg capsule on a cardboard carry-out tray. Unfortunately, his innovative attempt at fast food wasn't fast enough to place. Tim Marcy, reigning CHAD master of NIRA, jammed the candy between the pods of an old Centuri Fireflash. Bercini speared his on a UFO antenna, Harland Pell enclosed his puffy treat in a TV dinner box, and Bullet Bob Kaplow used an HPR model, underpowered with a D, and a payload section taped to the model. If the design problems weren't enough, contestants had to deal with the hecklers, i.e. the rest of the club too scared to try the event, who spent the time trying to "psych-out" the flyers. Heckling was particularly popular during the difficult "eating" portion of the event.



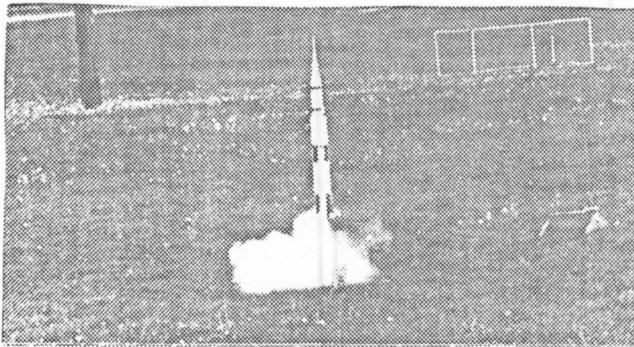
Andy Apel and Thomas "The Throat" Price display their winning entries in Lemans Eat.

Winning the event in Seniors was Andy Apel, using the antenna on an ASP as a convenient spot for the marshmallow, and a few quick chomps to turn in a 30 second score. In Juniors, Thomas Price scored a stunning 26 second win. His weapon? The model was based on a typical egg capsule, but Thomas used a highly trained set of jaws to clench his victory.



Andy R's "Helichopper", AKA Geological Tool

Interesting sport flights interspersed between competition crazies included Bob Kaplow's Maxi-Sprite. The two inch diameter version of the old ring tailed Estes kit performed quite well. Bob didn't explain why he didn't opt for tumble recovery. Kleve Slober and Rich McBroom both joined the Warp Speed Club and sent a couple of large sport models to Kane County. Who said you can't fly E motors at Ackerman Park?



Rich McBroom's Saturn V takes to the skies.

Chris Spink widened some eyes with his small V-2 model. Marginally stable, the bird swiveled, fishtailed and danced all over the sky. Shades of Bernie Biales! David Price experimented with a novel helicopter recovery rocket. When last seen, the rocket part worked perfectly. Don't miss the remaining 1989 launches. Bring your models and an attitude geared for fun to Ackerman!

NIRA'S BIRTHDAY CORNER

Joyce Guzik - September 3
 Alan Jones - September 20
 Dale Toberman - September 26
 Bullet Bob Kaplow - October 18
 Ritchie Sollis - October 20
 Andy Apel - October 29

NIRA'S CLASSIFIEDS

NEED TO PLACE A CLASSIFIED?

Remember, classified ads are free to any NIRA member! Just get your ad to Bunny before the next issue.

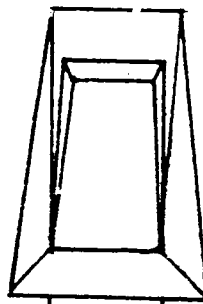
Mueller 34C Solid Copper Micro Clips

8 for \$1.00! Less than what our favorite big rocket company charges for two of lesser quality. About the same price as your local electronics store charges for junk. Repair your launch system from the ravages of this season's flying. Include an SASE (1 oz. per set, any excess postage returned), to: Bob Kaplow, C/O KGB Aerospace, 1628 Waterford Lane, Palatine TWP, IL 60074

WABBIT'S SOFTWARE SALE

Quality software for IBM and true compatibles. Yours at a fraction of original cost. Send Bunny an SASE for a complete list of GOOD public domain programs like PC Magazine's Utilities, PCBoss DOS Shell, File Express database, Fred's Checkbook home accounting program and AsEasyAs Spreadsheet. FOR IMMEDIATE SALE: Microsoft Multiplan spreadsheet - \$50; DAC Easy Accounting - \$25; Turbo Tax 1987 - \$12

Mephisto



PARTS LIST (ESTES)

- 1) BT-50 9 1/2" LONG
- 1) BT-20 9" LONG
- 4) BT-5 3 3/4" LONG
- 1) PNC-50

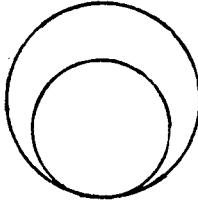
- 1) SHOCK CORD
- 1) 12" PARACHUTE
- 1) EB-20

INDEX CARD STOCK

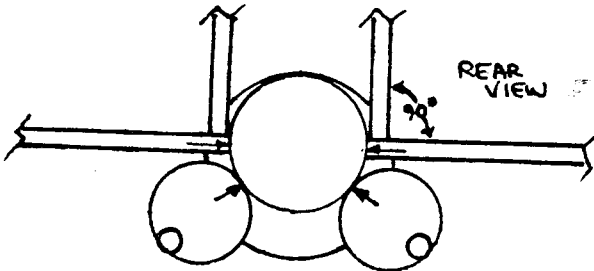
1/8" DOWEL

3/16" BALSA SHEET

- 1) 1/8" LAUNCH LUG 1 1/4" LONG

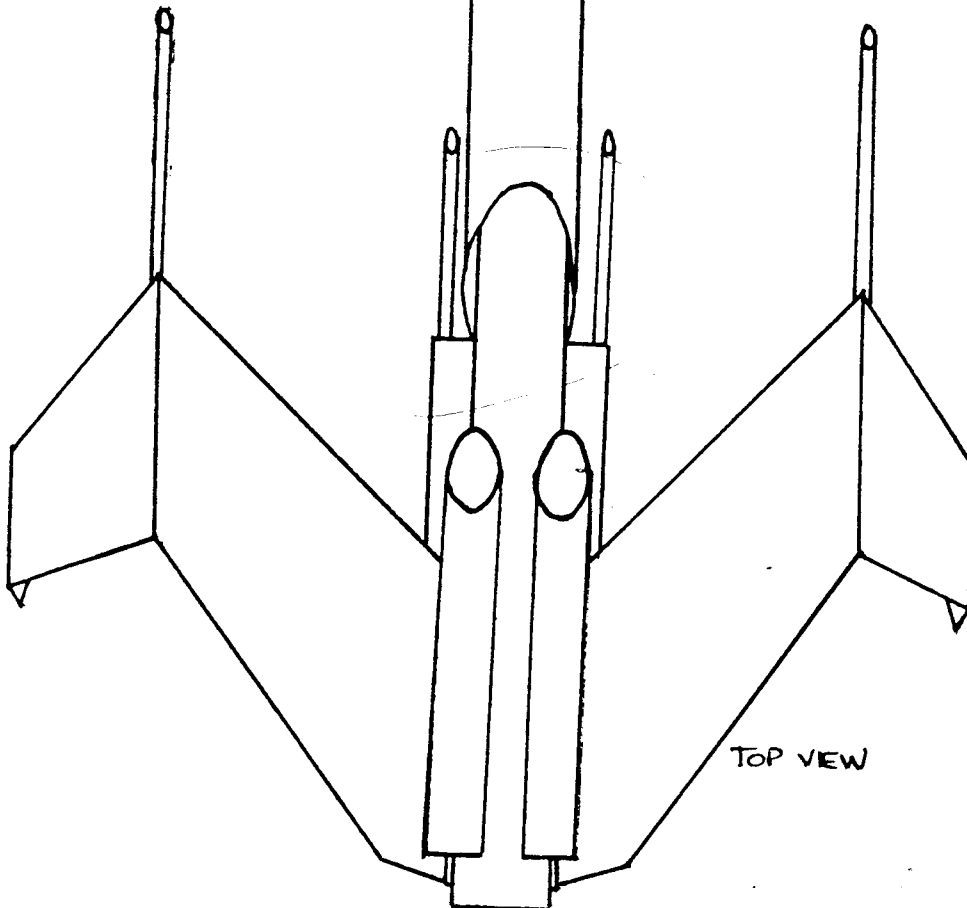


CENTERING RING
MAKE 2
FROM CARD STOCK

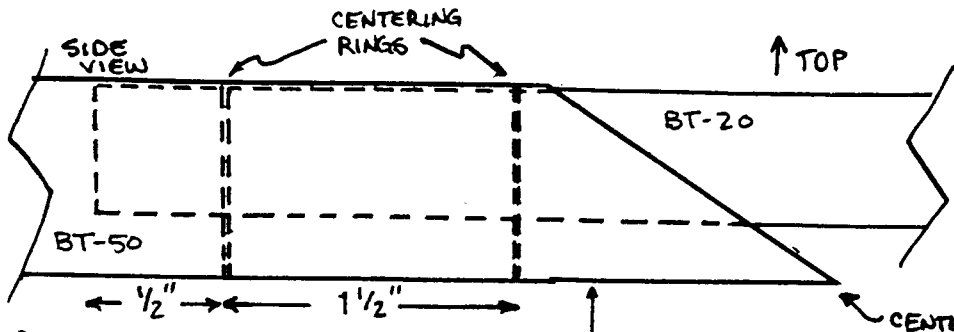


REAR VIEW

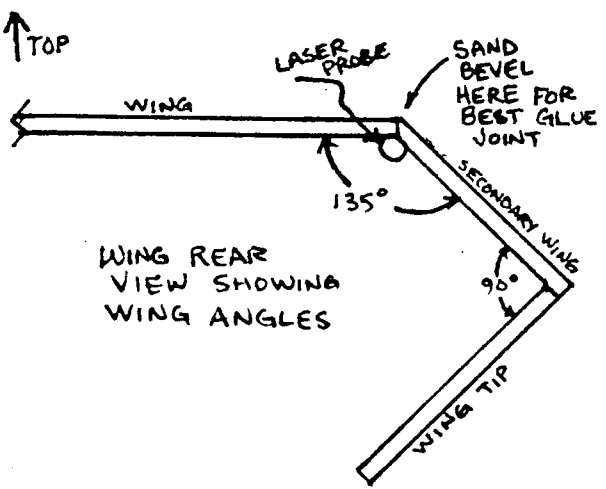
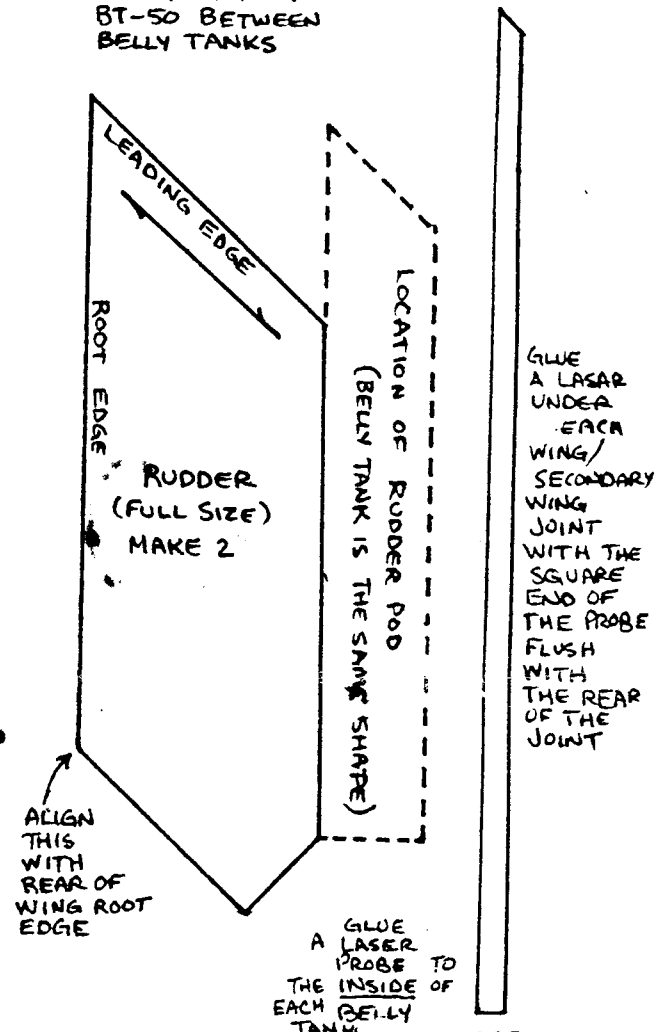
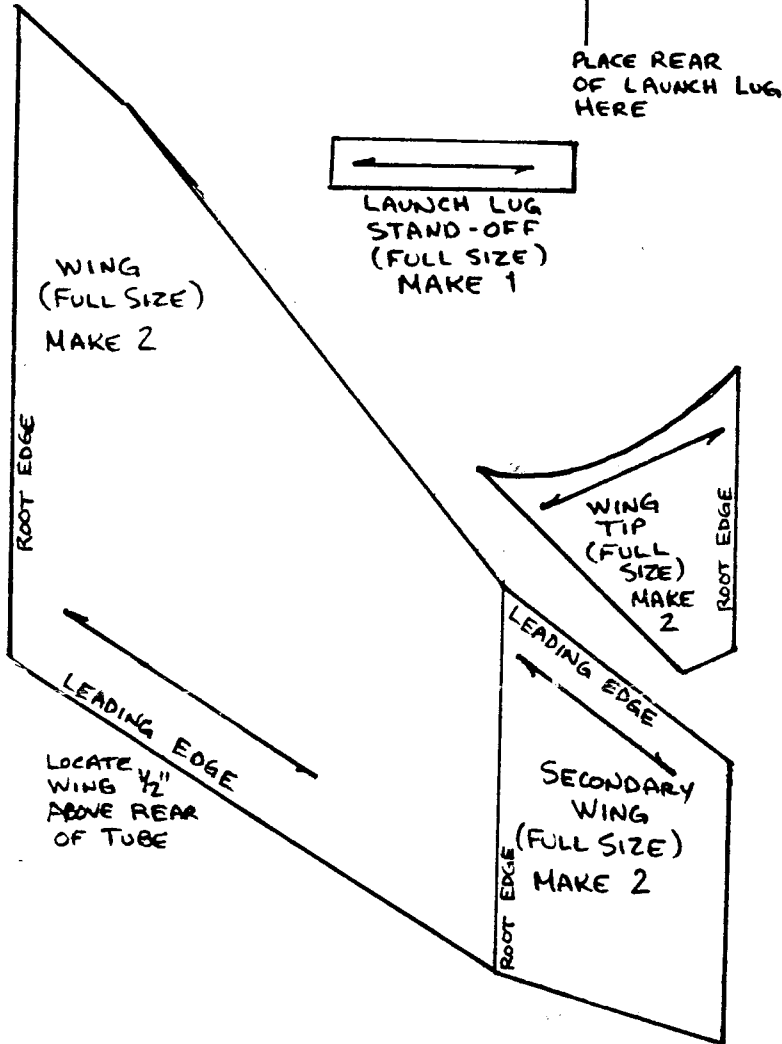
WING, RUDDER AND BELLY TANK
PLACEMENT GUIDE



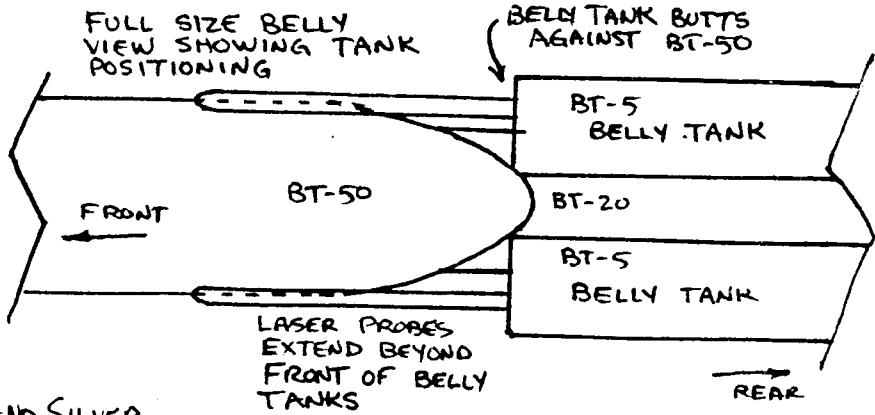
TOP VIEW



NOTE: ALL ANGLE CUTS ARE 45°



MOTOR PROTRUDES 1/4" OUT OF TUBE



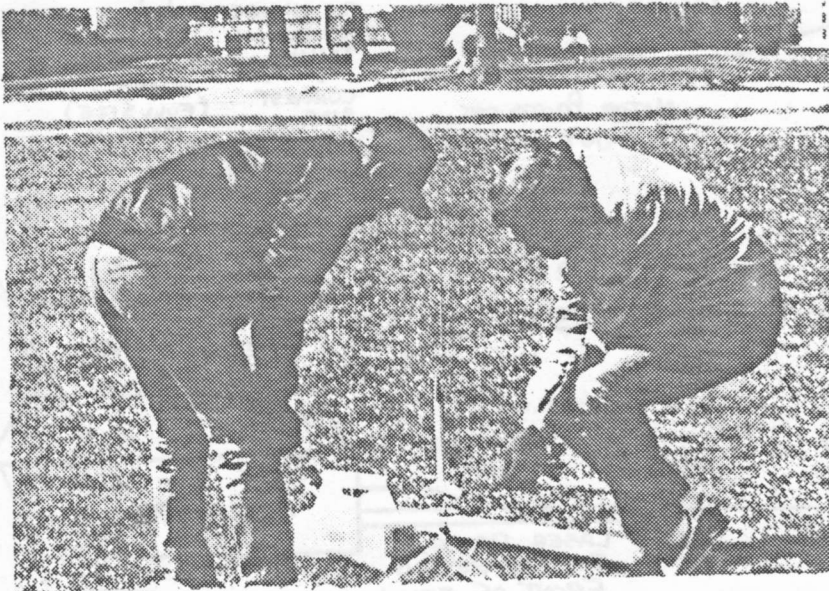
PAINT THE MEPHUSTO GLOSS BLACK AND SILVER

Gaff, Richard #2S 9999
18386 Michael Todd Tr. NP
Glenview IL 60025



THE LEADING EDGE
c/o 1350 Lilac Lane
Carol Stream, IL 60188

26TH ANNUAL LABOR DAY LAUNCH



ATTENTION NIRA MEMBERS!

Don't forget the 26th Annual Labor Day Demonstration Launch, Monday, September 4, at 2 PM. Launch Site: Newton Park, Glen Ellyn (near the intersection of Route 53 and Roosevelt Road). Be there by 1 PM to help set up the range, and don't forget your models. Call Bunny, 293-9343 for details!