

STAR-DATE 4.87

Volume 1, Number 5
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STAR-DATE is published by the Albany Schenectady Troy Rocket Enthusiasts (ASTRE), Section 471 of the National Association of Rocketry. STAR-DATE is edited by Jeff Vincent, Box 95, New Scotland, NY, 12127, (518) 439-2055. Articles, plans, or suggestions for publication should be sent to me at this address. Advertisers should contact me for information on publication of their ads. STAR-DATE is provided to ASTRE members as a membership benefit. STAR-DATE is available at a low-low subscription rate of \$4.00 for eight issues (approx. one year). Send subscriptions to the same address.

EDITOR'S THERMAL

Hello again, everyone. This month's editorial proved to be unsuitable for publication. In the interest of expediency, I will paraphrase by saying that competitors should pay closer attention to the Pink Book (maybe even read it). We also need contributions to the newsletter, unless you want to keep reading my ramblings.

Why is the April issue coming out in May? Well, it was scheduled for after Pearl River, but I wasn't feeling so hot, so it slid and I decided to cover our section meet. Then the section meet was rained out and the date slid into late April. All I can say is May Fool!

Jeff

The Pearl River Seminar

The weekend of April 3-4 brought us the 16th Annual Pearl River Model Rocket Seminar. The Seminar is the largest model rocket convention held in the country and it is hosted by Dick Nelson and the Pearl River Vulture Squadron.

ASTRE attended en masse, with nine members present. This article is a short review of the weekend, for those of you who couldn't make it down to the Seminar.

The Seminar got underway early Friday evening. After a short opening address, the participants had a choice of several mini-lectures, conducted by experienced rocketeers from throughout the East coast. The famous Kit-Bash was held next. Modelers are given a kit (in this case, an Estes Delta Wedge) and an hour to build a unique rocket, using only the parts included in the kit. The models are judged on the basis of originality and craftsmanship. At the same time, groups were conducted on rubber-powered model airplane and kite construction.

The manufacturer's store was also open, giving people a chance to peruse and purchase both new items and old collectable kits, as well as just hang out and talk to other rocketeers. The Glow-in-the-Dark Model Contest, also held that evening, was won by our own Etienne LaVallee and his creation based on an Estes Delta Wedge. After these activities, everyone headed back to their hotels or to the home of Art and Janet Rose for a party (more about this later).

Saturday morning began with a demo of indoor rubber-powered airplanes. The participants next flocked to the cafeteria to construct this year's kit: the "Torp". (This one looks like it might even be flyable.) The afternoon was filled with mini-lectures. Topics included Building Flex-Wings, Construction Techniques, High-Power Rocketry, Photography, and Engine Static Testing. Due to the rain, the official launch was cancelled, although it cleared just before dinner and a group of people ventured out to fly some models. The Seminar concluded with the traditional spaghetti dinner, prepared by the parents of the Vulture Squadron members.

March Sport Launch

Despite dire predictions, the weather was perfect for ASTRE's first sport launch of the year. (That should put a real jinx on our contest schedule.) Those gathered on March 28 were rewarded with temperatures in the low fifties and minimal winds. Of course, this also meant that we had to cope with the mud (and other things), but it was a welcome change from winter.

We began flying about noon, with Jeff Vincent demonstrating how to rip the rotors off a mini-Tazmanian Devil with a mini-B engine. One particularly interesting model was Jeff's Centuri UFO/mini-Taz, flown C6-0/A3-2T. It boosted the Taz up to a decent altitude and was a lot of fun to watch. Jeff also flew a B14 pyramid and took a quick trip (wade?) into the horse corral to recover a mini-Rotaroc.

Jim Nolan had a number of interesting flights. He tested the "rolling start" concept with a two-stage model with a 1/2A6-0 booster (the booster reached all of ten feet). He also pulled out an old Centuri super-roc which had a good flight on a D12. One of the best flights was Jim's D-Region Plus, a stretched Estes kit. The Aerotech E28 gave it a straight and fast trajectory.

Etienne LaVallee took the occasion to do some test flying, trying out his B R/G and mini-Rose-roc. (He almost flew his mini-R/G, but I broke it for him trimming it. Never ask your prime competitor to trim your models!) Etienne also flew his Penn Crud on its first flight with an E28. Quite impressive. The other Arianer, John LaVallee, once again proved that you can't trust those plans in AmSpam, flying an unstable mini-Bomarc.

On the other side of the fence, Joanne LaVallee was practicing for the upcoming contest season. Her partner, Pat Perrella, provided a treat for those that missed PMC last year, flying her Ariane PMC. Pete Hryniak and his father also showed up to get a little bit of flight time, after the long winter. Chuck Hemker provided one of the more interesting flights with a C Big Bertha egglofter. It got stuck on the rod temp-

orarily (giving it a short ride) and then lobbed itself into the vacant corral.

Chuck Weiss had a couple of entertaining shots. He flew his Estes U-2 with an Aerotech E10, watching it disappear into the sky, only to glide back near the launch pads on its yellow chute. This launch also saw the demise of Chuck's "big white rocket". The six foot model, powered by three D12's, had a D hiccup about fifty feet off the pad. This blew out the nose and chute and altered the trajectory somewhat, while the two remaining engines sent it on a long arcing flight downrange. Needless to say, it was not a pretty site.

In the midst of all this fun, we had also convened to complete a serious task: we came to drag, maaann. That's right, we flew drag race, that pinnacle of NAR competition. Jeff arranged the random pairings, John volunteered to be the judge, and we were ready to go.

In the first round Jeff's UFO flirted a "red-light", but cruised to a victory over Pete's Maverick. Etienne's Space Shuttle got the jump on Pat's Sandpiper and advanced to the next round. (Now let me get this straight; the Solid Rocket Boosters fly Arianes and the Arianes fly Space Shuttles. Right? Right!) Chuck Weiss' PD model got first motion, eked out low altitude, and had a super duration, knocking Jim out of the running. In the final heat Joanne used a Groove tube to best Chuck Hemker's Tazmanian Devil.

The second round saw the best start of the day, as Etienne got first motion on Jeff's UFO to move into the final. The other heat had the worst start, with Joanne accidentally launching at T-3, giving the win to Chuck Weiss. (The SRB's have since gotten a real launch system for the next time.) In the final round, Chuck Weiss got first motion and maximum duration, giving him the win over Etienne.

After the smoke had cleared, we all packed up and headed for home. If this launch is any indication, it looks like it will be a busy year at Bruce's. I hope we will have a chance to see all of you out there flying this summer.

Pyramid

by Lawrence Bercini

The Pyramid is a model designed purely for sport and for "shock-appeal." Experienced modelers have been known to scoff at this one—but not after they see its stable flight path and gentle, floating return. In flight, it generates a huge exhaust plume and often "crabs" horizontally while ascending, all the while sounding like a D-powered model. An eye-grabber and fun-flier, the *Pyramid* is a very simple odroc to build.

Draw the body and the centering square full size on the dull side of a piece of poster board and cut out. The body is made of four equilateral triangles. Don't skimp on the size of the glue tab—it will be hidden inside the model anyway.

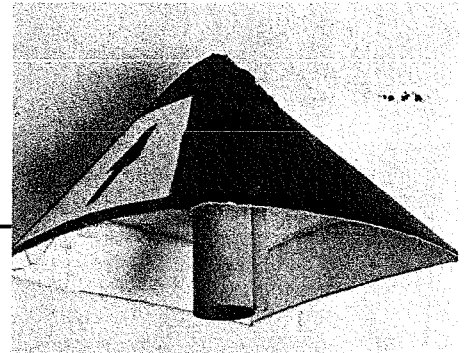
Use a straightedge and a ballpoint pen to draw the fold marks (on the dull side of the paper). Fold the body, dull side in, and fit it together. Then smear glue on the shiny side of the glue tab, glue the body together, and let it dry. A paper clip or clothespin can be used to hold it together while it dries.

Locate the center of the square by drawing an "X" from the corners. Center the body tube on the square and trace its outline. Carefully cut out the hole so that the body tube just fits through it. Now make a small slot on one of the diagonals of the square for the lug, and another on one of the edges of the pyramid, $\frac{3}{8}$ " (10mm) from the point.

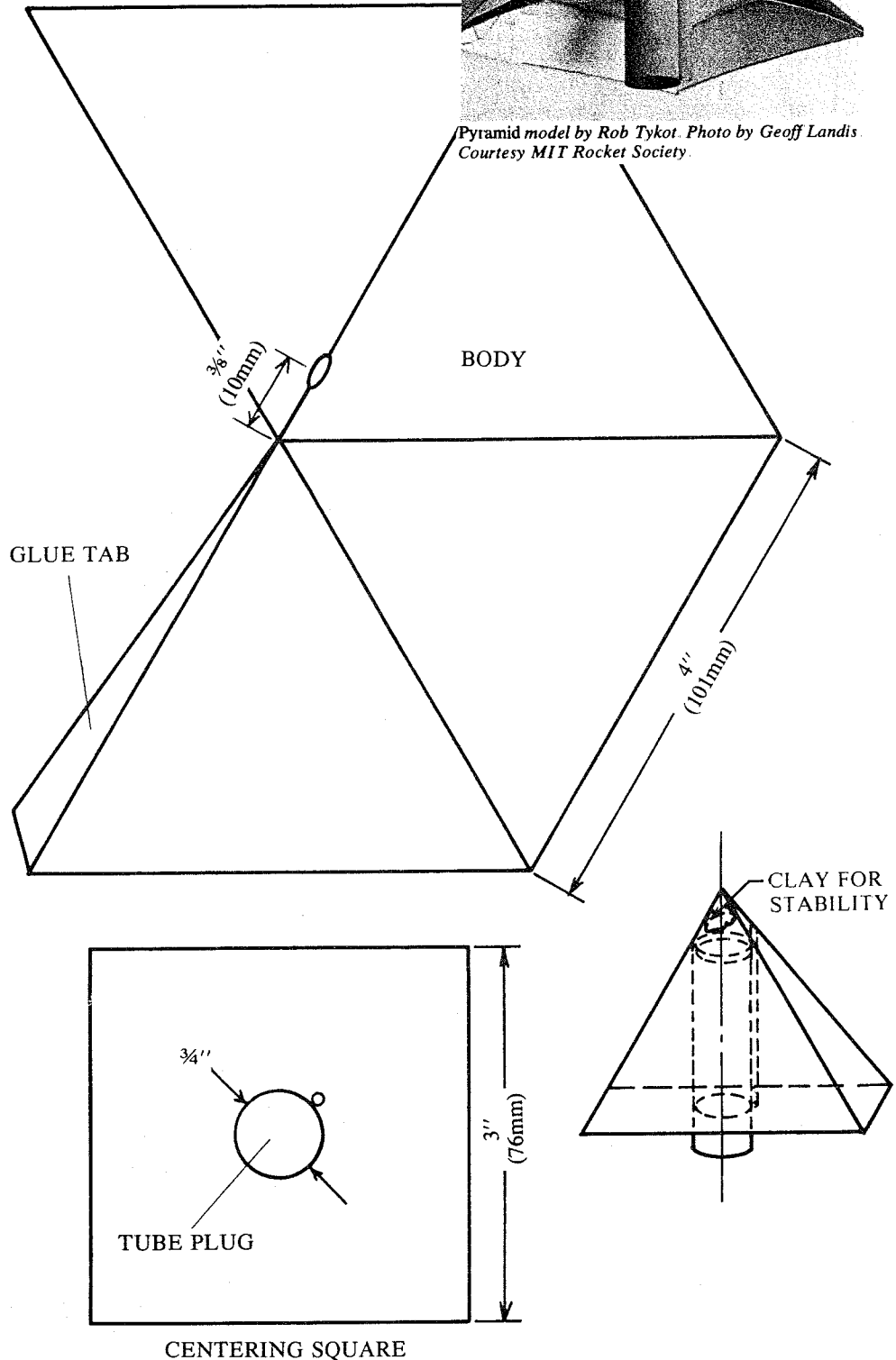
Cut the lug to 3" (76mm) and glue it even with the bottom end of the tube. Cut the tube plug from a piece of poster paper to fit exactly inside the body tube and glue it into the top end of the tube.

Pinch off just about enough clay weight to fill the point of the pyramid in front of the body tube, and insert it into the pyramid. Place the tube into the pyramid, lining up the lug with the hole in the edge of the pyramid. Slide the centering square into place and glue securely, both around the pyramid and around the tube. Cut off any excess launch lug.

Fly the model with a C6-3. Pyramid Power forever!



Pyramid model by Rob Tykot. Photo by Geoff Landis. Courtesy MIT Rocket Society.



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PARTS LIST

- 1 BT-20, cut to $2\frac{3}{4}$ " (70mm)
- 1 Launch lug (e.g. Estes #2326)
- 1 Poster board (1 ft²)
- Clay for nose weight



ESTES INDUSTRIES
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MURPHY'S LAWS AS APPLIED TO MODEL ROCKETRY

By Chris Pearson

The following is reprinted, with tongue firmly in cheek, from the SNOAR NEWS. This rocketeer magazine is published by a rocketeer club in Ohio. The material reprinted originally appeared in 1976.

I'm sure that at one time or another, all of us have thought up a great idea that we thought would revolutionize the sport of Model Rocketry. Unfortunately, the odds are that at least four-hundred and twenty-seven other people have thought of it too at one time or another. But does this stop us? No way! So off we go, ignorant that the old proverbial deck is stacked against us from the very beginning. So in an effort to inform prospective experimental project designers of the odds against them, we list the following:

In any field of scientific endeavor, anything that can go wrong will go wrong. (Derivation of Murphys First Law).

Left to themselves, things will always go from bad to worse.

If there is the possibility of several things going wrong, the one that will go wrong will be the one that will cause the greatest amount of damage.

Mother Nature always sides with the hidden flaw.

If everything seems to be going well, you have obviously overlooked something.

Nothing is as easy as it looks. Everything takes longer than you expect. And if anything can go wrong it will, at the worst possible moment.

Well, the following derivations of these laws have been compiled through tedious work and research over a period of about fifteen minutes and are reproduced here for the edification and gratification of all.

First and foremost, **REMEMBER!**, all constants are variables and should be treated as such.

Experience is directly proportional to the amount of building materials ruined during construction.

A triple-checked C.P. calculation will always have a large enough margin of error so that the model will be unstable.

Any part of a model weighed in advance to determine a C.G. will have changed weight when the model is assembled.

All commercial nose cones will be the wrong size for your scale model.

If a model requires a special part, or tool, you will not have it. And neither will the local hobby shop. And when you order it, it is guaranteed that you will get the wrong part.

The most important part of any kit is lost immediately upon opening said kit.

Parts that absolutely cannot be assembled incorrectly, will be.

Any body tube that you cut to custom length will always end up being .01 inches too short.

If a model requires three of a part, you will have only two of them and your local hobby shop won't have one either.

Nothing ever works right at a demonstration launch, or at a NARAM either, for that matter.

A parachute will always get caught in the biggest or only tree in the entire area, both of which are totally unclimbable.

A boost or rocket glider that hand-glides perfectly will not fly at all under power.

All flip-flop-flex wing or swing wing BG or RG designs which are proven "fail-safe" will fail.

All material loaned on the flying field automatically becomes the property of the borrower.

The contest director will always pick some half-wit to judge your scale entry. (And he will damage it in the process.)

Your worst flight of the day will be tracked and closed but your best flight of the day will do neither.

One engine in a cluster will always fail to ignite.

Some turkey, whom you consider totally incompetent, will win all the events through default.

And finally, everything that you had planned, failed. And everything that you had never dreamed of, happened.

But you must realize. Do not pray for miracles, rely on them!

ADDITIONS TO "MURPHY'S LAWS"

THE WISDOM OF THE GIANTS, DISTILLED AND CONDENSED FOR YOUR EDIFICATION.

PATRICK'S THEOREM: If an experimental design works, you have done something wrong.

FINAGLE'S CONSTANT: Defined as the quantity which, when added to, subtracted from, multiplied by, or divided into, gives you the answer you should have gotten for your predicted altitude.

ALLEN'S AXIOM: When all else fails, read the instructions.

GUMBERSON'S LAW: The probability of a given glider design functioning correctly is inversely proportional to its desirability.

THE ORDERING PRINCIPLE: The quantities of material needed for tomorrow's contest must be ordered no later than noon today.

THE COMPENSATION COROLLARY: An R&D project must be considered successful if no more than half of your data must be discarded to obtain correspondence with your theory.

CARSON'S CONSOLATION: No demonstration launch is ever a complete failure for it can also be used as a bad example.

LAW OF SELECTIVE GRAVITATION: A descending model will always fall in the way which causes the greatest amount of damage.

GUIDELINES FOR YOUR R&D PROJECT

1. When you don't know what you're doing, do it neatly.
2. Experiments must always be reproducible; They should all fail the same way.
3. First draw the curves, then plot the data.
4. Experience is directly proportional to the amount of expensive equipment ruined.
5. A record of data is essential. It indicates that you have been working.
6. To study a subject best, understand it thoroughly before you start.
7. In case of doubt, make it sound convincing.
8. Do not believe in miracles; rely on them.
9. Team work is essential; it allows you to blame someone else.

JUST REMEMBER "MURPHY'S MOTTO" . . SMILE!
TOMORROW WILL BE WORSE!

ASTRE CALENDAR

May 5 - Club meeting. Meetings are held in room 223 of the Classroom Building of Fulton-Montgomery Community College. The Board of Directors meet at 6:00pm and the general meeting is 6:30 - 9:00 pm. This month we will be discussing the Pink Book and how meets are run.

May 9 - ASTRO-5 Open meet. Pred Dur, 1/2A IPD, B SD, 1/2A HD, D ELDur, 1/2A IB/G, Plastic Model Conversion. (Rain date - May 10). Contact Jeff Vincent.

May 22 or 23 - Sport launch (date tentative - possibly early June).

May 30 - "Rocketry For Beginners" sport launch/demo. Canajoharie Library - 10-11 am. Volunteers should contact Linda Otto (673-2122).

June 2 - Club meeting.

June 6 - MINUTEMAN II CMASS Open. Acton, MA. 1/2A IB/G (rigid-wing), A HD, B SD, B ELDur, B R/G, D SRDur. Contact Chris Tavares, 11 Ontario Drive, Hudson, MA, 01749, (617) 562-9484.

June 20-21 - WUBBA-10 Regional meet. Center Valley, PA. F SRDur, B HD, A R/G, C ELDur, Sport Scale, 1/2A B/G, 1/2A PD. Contact Art Rose, 8 Sandusky Rd., New City, NY, 10956.

June 30 - Club meeting.

July 28 - Club meeting.

August 1 - Not Necessarily NARAM Open meet. 1/2A IPD, A SD, A B/G (no flexies), B ELDur, B HD, Sport Scale, Pred Dur, OSL. (Rain date - Aug 2). Contact Jeff Vincent. (This replaces ASTRO-6.)

August 2-7 - NARAM-29 National meet. Fountain Valley (L.A.), CA. See AmSpam for details.

August 25 - Club meeting.

August 29-30 - Flight '87 Airshow.

Planning should begin now if we want a demo or display.

early Sept - Open meet Goddard Society. NH. Events to be announced.

Sept 26-27 - JOISEE IV GSSS Regional. Bridgewater, NJ. Contact Bob Kreutz, 1301A Comanche Ave., Point Pleasant, NJ 08742.

Oct 10-11 - NEMROC-III New England Model Rocket Convention. Hudson, MA. Contact Jim Flis, 6 Thornton St., Merrimack, NH 03054.

BALSA SCRAPS

ROCKET CLASS...Linda Otto will be conducting a rocket class for children in May. The classes will be conducted Saturday mornings at the Canajoharie Library. ASTRE members will be participating in the launch on May 30. Details will be discussed at the next meeting.

HERE BUNNY, BUNNY...Due to the delays encountered in getting out this issue, Easter has passed. You should have gotten your plastic eggs at that time. If not, rumor has it that plain white plastic eggs can be found at your local Agway store. (Not as fashionable, but eminently usable.)

AND HERE'S BUNNY...Emerging from the rotating door known as the National Contest Board Chairmanship is none other than Mark Bundick. After Terry Lee's disappearance and Chas Russell's transfer, Mark has been named the new chairman. Direct correspondence (such as team registration forms) to him at 1523 Cleveland St., Evanston, IL 60202.

GLUB, GLUB, GLUB...CMR has been taken over by Howard Kuhn's son and the consensus is that the future of the company is less than bright. Send your orders now, if you dare.

BOOK REVIEW...I have acquired a copy of Aerofax's North American X-15 book. Within 64 pages it contains a written history of the X-15's design and development, a mission summary, basic scale drawings, numerous detail photos, and ten color photos. For those with an interest in the aircraft, it provides a comprehensive look at this program. For the modeler, it provides complete Sport Scale data (although it is lacking somewhat in dimensional data for Scale). In conclusion, a good resource on a unique aircraft. It is available from Squadron mail-order for \$10.95.

ASTRE CONTEST SCHEDULE

Come Join the Albany Schenectady Troy Rocket Enthusiasts (ASTRE), the upstate New York NAR section. We'll be flying a busy schedule of meets this Spring and Summer and we hope to see you there. Whether you're a beginner or a grizzled veteran, you'll enjoy yourself.

ASTRE's field is a rancher's hay field about ten miles west of Amsterdam, NY (see map). While the terrain is not perfect, we have over 100 acres at our disposal in the immediate area and much of the surrounding area is open for easy recovery. ASTRE's launch system is a four pad satellite system equipped with 1/8" and 3/16" launch rods. You are welcome to bring your own launch pad to be used with our launch controller.

Our meets will be flown from 10 am to 6 pm. Sport Scale and Plastic Model Conversion turn-in will be by 12 noon. Spot Landing and Predicted Duration events may be limited to a specific window. Sport flights will be permitted, although contest flights shall have precedence. Ribbons will be given for First through Fourth places. The open meet entry fees are: A Div - \$2.00, B Div - \$3.00, and C Div - \$5.00. Be sure to bring your NAR card (and have your parent or guardian sign your CB-1-70 entry blank if you are under 21).

If you need additional information, write or call:
Jeff Vincent, Box 95, New Scotland, NY 12127, (518) 439-2055.
Chuck Weiss, 883-8805 (local).

April 18 (raindate April 25)
Apollo 16 Section Meet
1/2A Int Parachute
A Int Streamer
B Helicopter
A Super-roc Duration
Sport Scale
Unofficial event:
1/2A Rocket/Glide

May 9 (raindate May 10)
ASTRO-5 Open Meet
Predicted Duration
1/2A Int Parachute
B Streamer
D Eggloft Duration
1/2A Helicopter
1/2A Int Boost/Glider
Plastic Model Conversion

August 1 (raindate August 2)
Not Necessarily NARAM
..... Open Meet
1/2A Int Parachute
A Streamer
A Boost/Glider (no flexies)
B Eggloft Duration
B Helicopter
Sport Scale
Predicted Duration
Open Spot Landing

ASTRE MEMBERSHIP APPLICATION

Name _____ Birthdate _____

Address _____

Phone # _____ NAR # _____ JR LDR SR (circle one)

Membership dues are \$4.00 per year Junior (under 16 as of Jan 1)
\$6.00 per year Leader (under 21 as of Jan 1)
\$10.00 per year Senior (21 or over as of Jan 1)

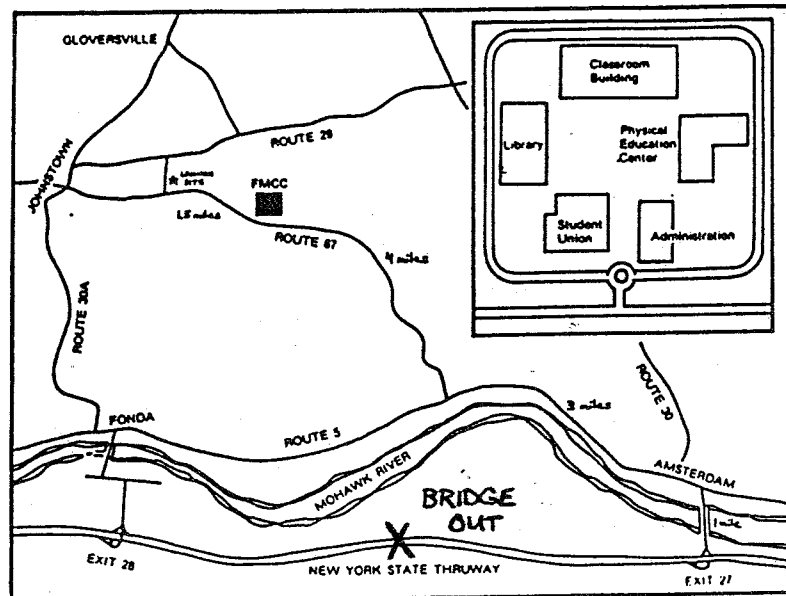
Make dues check or money order payable to Pat Perrella
Send to: Pat Perrella, 16 Country Club Dr., Gloversville, NY 12078.

"I pledge to abide by the NAR Safety Code in my rocketry activities."

Signature _____ Date _____

HOW TO GET THERE

- * Take the Amsterdam exit (#27) off the Thruway.
- * Take a right and follow Route 30 North for one mile.
- * Take a left at the second light after the bridge (Route 5 West).
- * Follow Route 5 for 3 miles. Take a right onto Route 67.
- * Follow Route 67 for 4 miles and FMCC will be on your right.
- * To find the flying field, continue 1.5 miles on Route 67. Take a right on the small road by Ed's Auto Service (look for the plane). After 1/2 mile you will see JBJ Equine on your right. Follow the driveway and park in the parking lot and walk to the range.



ASTRE
Box 95
New Scotland, NY
12127