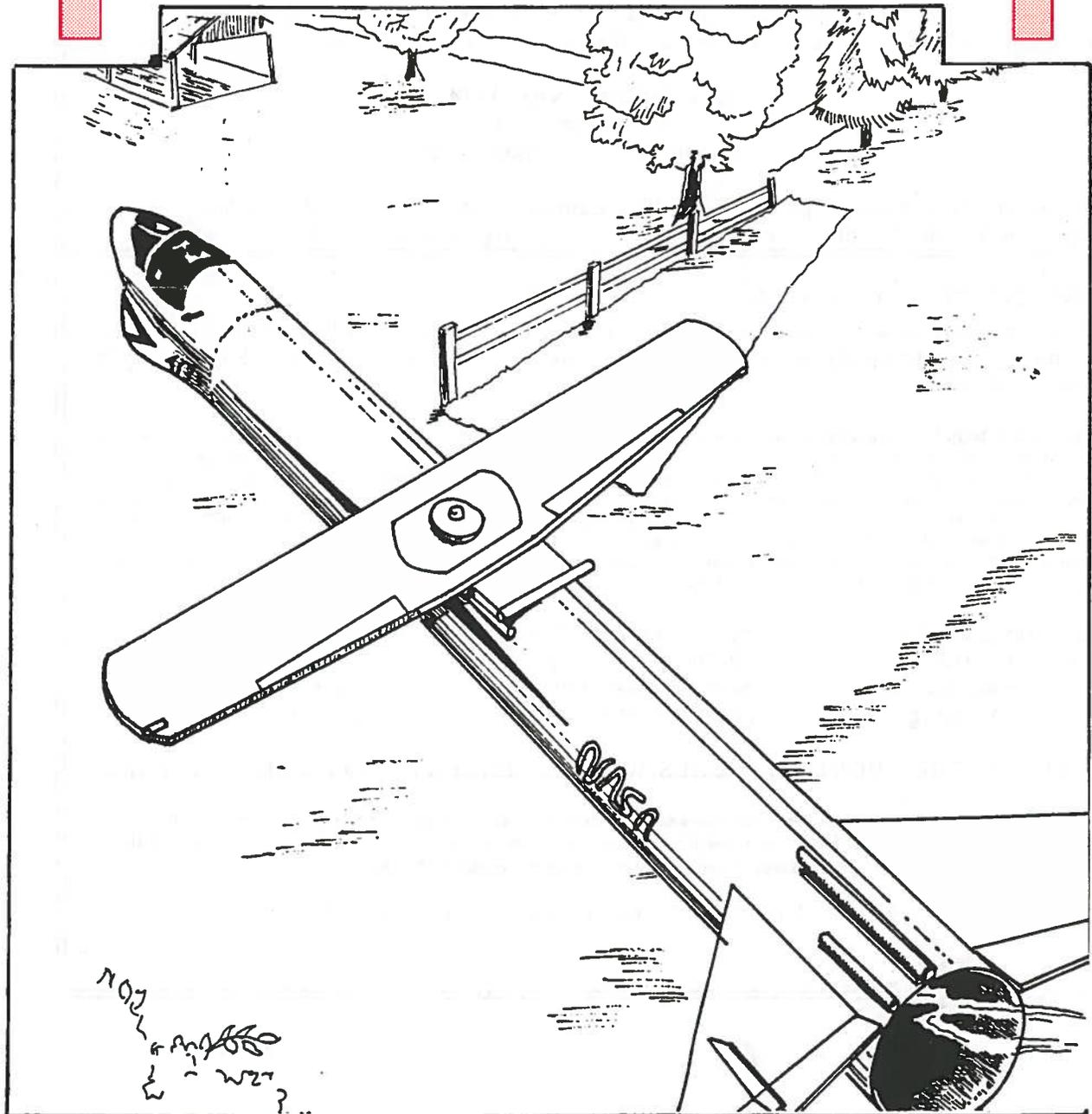


LAUNCH RACK

Journal of New Jersey's Oldest NAR Section

ISSUE 130(63)



The Launch Rack

The Official Publication of The
Garden State Spacemodeling Society

MAY/JUNE 1999

ISSUE 130(63)

The *Launch Rack* is the official publication of the *Garden State Spacemodeling Society* (Section 439 of the National Association of Rocketry) and is published for the enlightenment and entertainment of its membership.

Others interested in receiving this publication may do so for the annual subscription rate of \$7.50 for 6 issues. Overseas subscriptions are \$17.50. Please send this money payable in USD to **Arnold Klein, 2 Oneida Avenue, Rockaway, NJ 07866.**

The Editor invites and encourages all to submit articles, photographs, plans, letters to the editor, etc., for future publication. In addition to articles, the Editor welcomes and encourages constructive feedback on each an every issue. Please send all material to:

**Jack Sarhage, NAR 31745
875 River Road
Piscataway, NJ 08854-5549**

Non-copyrighted material published in *The Launch Rack* may be used by other publications provided proper credit is given to the original author and this newsletter.

LAUNCH WINDOW:

Anyone wishing to attend any GSSS activity should call the GSSS hotline (908) 658-9417 the morning of, to verify the event is still on. If the event is cancelled, the recording will be updated at 9AM.

A NOTE ON NORTH BRANCH PARK. Please keep in mind that the park and weather conditions dictate what we allow to fly. Just because a rocket is under the one pound limit, do not assume it is an automatic launch. If the RSO does not feel the model can be safely flown or recovered within the park's boundaries, it will not be flown regardless of the weight or impulse. If some other activity shows up and starts using the adjoining fields, the RSO will reduce impulse for all flights. So, bring some small stuff just in case. **REMEMBER, WE SHARE THE PARK.** We do not pay a fee and most of us are not a resident of that county. Rocket flying fields in New Jersey are in short supply, and we are protective of the fields we have. If you're unhappy with this limitation, then we invite you to help us in gaining legal access to privately owned, large, open fields.

Sat., May 22, 1999

10:00 am - 3:00 pm
Section Sport Launch
and Club Meeting

Sat., June 26, 1999

10:00 am - 3:00 pm
Section Sport Launch
and Club Meeting

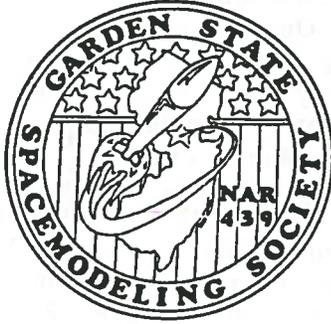
Sat., July 31, 1999

10:00 am - 3:00 pm
Section Sport Launch
and Club Meeting

ALL OF THE ABOVE LAUNCHES WILL BE HELD AT NORTH BRANCH PARK

ON OUR COVER: The cover of Issue 126 showed this "Crusader; Swing Wing Glider sitting on Ye Ole Editor's workbench waiting completion. In this pen and ink drawing I give you my imagined view as it might appear making it's final approach correction to land at North Branch Park; now that the model is finished.

NOTE: DEADLINE FOR NEXT ISSUE IS JUNE 19!



News From Section 439

THANK YOU.....

First, a BIG thank you to Steve Smith (also known as "Wild Weasel Rocket Engineering") for the Estes Launch Controller Modification plans. We are presenting two of the four sheets in this issue in order to cover all the news to be included. Like Bob Novak's report of the East Coast Hobby show on page 6. Thank you Bob for covering this for the newsletter.

FEBRUARY LAUNCH.....

To paraphrase William Shakespeare, "a launch by any other name, would still smell of burnt sulfur" and, smell it did as attendees at the February sport launch worked through the alphabet of engines; from A3-4T's to F64's.

It was nice to see so many new faces; Craig and Eli Bisgeier, and newly arrived from South Africa, Clive McAdam being a past member of the South African Amateur Rocket Society. They had found out about GSSS and the launch through our website.

There were a lot of "old" faces as well. Why what would a launch be without Arnie Klein and some of his 'mazin' flying things like his retro firing flying saucer, (Arnie, if you draw up how you go about doing it, I'll print it. Ed. Note) or, Steve Pantuck of photog fame. Of course if Bob Zabriskie wasn't on hand the launch equipment would not have been ready when you arrived to fly. Bob's flight of the day was a 16-year old *Comet* (Estes 1368). Ye Ole Editor was on hand with a pine tree seeking *Nike-Ajax* rescued by Arnie. A second flight with an *Intruder* floated back to the launch area only to be caught by... yep you guessed it, Arnie. Tom Whymark, with grandson Alex, made several flights. *Ferd's Folly* launched with a cluster of mini-A's is spectacular to watch. Tom provide information for this model in last month's issue of the newsletter. He

also launched a vintage *WREN* on an E15. This model was received as a door prize at NARAM 33 in 1990.

There were also faces that are becoming more and more familiar at the monthly launches. Steve Smith and son Grant with friend Danny Wood. Steve had a couple oldies in the form of an SR-71 and a "space plane" which had been modified when "it flew through a chain-link fence". Tom Meerwarth flew a *Comanche-3* with two stages that took home a sample of North Branch Park when the parachute failed to appear. He had more success with his D-powered *Seahawk*. Tom also flew a *Phoenix* that proved if built with care they will fly in the direction aimed. Matthew, Michael and Hannah Lieben flew a nice R2-D2. Giving Arnie a little competition in the flying saucer arena they flew the prettiest chartreuse craft seen in awhile. If there was a "been there, done that" award it would also go to them for the D21 cato in an AIM-3. It was agreed upon that it was the first Aerotech engine anyone had seen cato like that. Not only are their faces becoming familiar so is the F64 engined *Patriot* the Tom and Cliff Morehead team launches. Grandson Jeffrey and Grandmother came along, too, to encourage and help retrieve.

In short, it was beautiful day. The sun was out. The temperature was warmish. Even the North Branch wind failed to take its usual form. I think all, in attendance, would agree Launch No. 2 of 1999 was a huge success.

"Beware the ides of March." HmMMM, there's that Shakespeare fellow again. Ah, what does his old Soothsayer know.....

A SPORT LAUNCH IN MARCH, (by the numbers).....

In this day and age, numbers, seem to be everything and, everybody. We have account numbers, social security numbers, pin numbers, phone numbers, beeper numbers, etc. In fact, we are becoming more de-humanized because of it. To help prove this point I thought it would be interesting to describe this month's launch "by the numbers". In this case NAR numbers.

"Ye ole 31745" arrived at North Branch Park to find 73---- (he did not know his number and so it could be said that maybe he does not exist) trimming out a glider. No, not a boost-glider, but a well flown yellow rubber powered job referred to as the "Sun Catcher". Later, he

thrilled us with the 200th flight of a foam boost-glider. I say "thrilled us" because it hung up on the launch rod and when it finally left it headed toward the cow-wash fence and us. 36036 was the third to arrive. He said he was late because he "over slept". No harm done and the launch equipment was set up in no time. He flew a vintage (10-year old) Estes Aerospace Club rocket called the *Viper*. 31745 got his flights in using a *Tri-F-O*; one of the flights going toward the All-Season Rocketeer Award. 36202 was there and when asked what he was flying stated, "my camera". 39095, with friend Dave Teichman, always provides something to remember and this time it was with his proven chad-staged flying saucer. 30556 flew a 2-stage *Mongoose* and a scratch built model with an altimeter to deploy the parachute. It did not work exactly as planned and landed in a tree near the ranger's house. Not to fear, 39095 with trusty pole rescued same. 64874 flew another qualifying flight toward his All-Season Rocketeer Award. 73536 again awed folks with his now famous *Patriot* on an F62. I also saw a *Ninja* flown by the same member. Grandpa 9220 and Alex have become quite a team. Alex is now learning to prep rockets.

How many of the "numbers" above can you identify? How many of you prefer to be known only as a number? Sure is boring isn't it?

There are other "numbers" connected with this launch that may be of interest. There were somewhere between 20 and 25 people flying, watching, learning, and just enjoying the outdoors. It was the third successful launch of 1999. Some would say we are 3 for 3. We are batting 1.000 are the "numbers" others would use. And, what would a launch be without, "5-4-3-2-1" before each flight.

It is interesting to note that we missed the "ides of March" because we launched on the 27th. Did you know that the "ides" refers to the 15th of the month? You did! Well, do you know you can also have "ides" in May, July, and October?

The "numbers" say I have use my allotted space for this report.

MARCH MEETING.....

GSSS President Jack Sarhage called a meeting under the pavilion at 1130 hours. Treasurer Arnie Klein reported the club "solvent" with \$744.41; half of which will go toward the production of

the newsletter, rechartering the club as a section of the NAR. It was discussed on how best to use some of the rest. One idea was the purchase of another retrieving pole. No action was taken on this due to the only known cost of \$350.00.

It was agreed that we would hold the postponed Section Meet; to be known at the Ted Rebetje Memorial at the June 26th launch. Events are Open Spot Landing, 1/2A Parachute Duration, 1/2A Boost-glider Duration, and A Streamer Duration. Rules for these are in the U.S. Model Rocket Sporting Code ("Pink Book").

Also, agreed upon was that Section Advisor, Bob Zabriskie would purchase some rocket kits to be used as prizes for the Section Meet and "Fun-Test 1999". Events selected as of the meeting date were A Streamer Duration in April, A Parachute Duration in May, and Open Spot Landing in June.

NEW MEMBERS.....

Since January 1, and as of March 27, we would like to **WELCOME!!** the following new members: Robert Kline, Matawan, NJ; Jim Menoutis, Somerset, NJ; Thomas Meerwarth, Morristown, NJ; and Thomas Moorhead, Budd Lake, NJ. Come on out and be sure to introduce yourself to the rest of the gang.

RENEWING MEMBERS.....

We need to thank those that have stayed with us by "re-uping" for another year. Bob Novak, Steve Pantuck, Tom and Matt Whymark, Ken Goddard, Mark Wagstrom and Robert Nee.



JERRY'S HOBBY CENTER
&
Raceway
336 Rt. 22 W. Greenbrook, N.J. 08812

Radio Controlled Planes, Cars & Boats	Nascar Licensed Products (732) 752-6030
--	--

Store Hours are Monday-Saturday 10:00am to 6:00pm.
Wednesdays the store is open until 9:00pm. When I was there on April 2 they were offering 10% off the Estes Kits.

SKY WATCH

Contributing Editor: Bob Zabriskie

MAY

VENUS & MARS dominate the evening sky in May. Venus, the brightest "star" in the West and Mars glowing gold- orange in the Southeast. On May 1st, Mars will be closest to Earth since 1990. "Watch out for little green men", Bob adds.

JUPITER & MERCURY are together in the East just before dawn during the first week. After that, Mercury disappears in the Sun's glare, but Jupiter will appear higher as the month progresses.

MOON'S PHASES: Last quarter, 8th; new, 15th; First Quarter, 21st; Full, 29th. On the 17th and 18th The Moon is near Venus. On the 21st the star *Regulus* is occulted (or hidden) by The Moon. On the 21st The Moon is near Mars.

JUNE

VENUS is still the brightest "star" in the sky, although not as high as last month and will sink lower each week. Around the 12th, The Beehive star cluster (M44) and Venus will be close. It should make a nice scene in binoculars.

MERCURY, around the 15th, will emerge from the Sun's glare well below and to the right of Venus.

MARS is still bright but, fading in the Southern sky all month very close to the star *Spica* during the first half of the month.

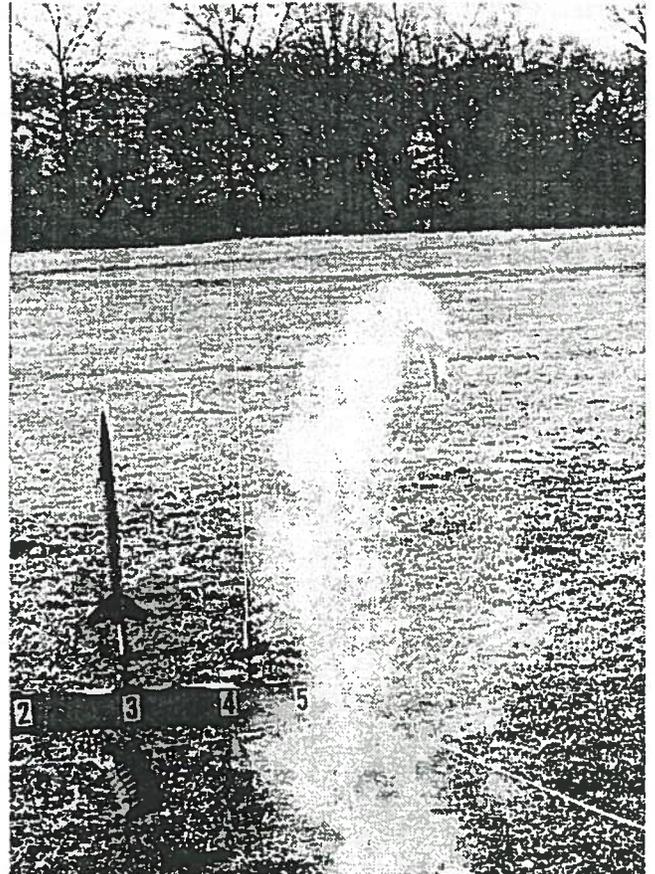
JUPITER rises higher each week in the pre-dawn sky.

SATURN, below Jupiter, and not as bright. It also will be moving higher as the month goes on. By September/October they will once again dominate the evening sky.

MOON PHASES: Last quarter, 7th; New, 13th; First Quarter, 20th; Full Moon, 28th. On the 9th, to the right of Jupiter and on the morning of the 11th below Saturn. On the night of the 15th "the crescent moon" will be to the left of Mercury. On the next night will appear close to Venus. On

the 22nd The Moon, Mars, and the star *Spica* make beautiful sight after sunset.

SUN on the 21st, at 3:49pm, the June Solstice occurs. The Sun is as far North in the Heavens and marks the start of Summer for the Northern Hemisphere.



I'm not quite sure what is happening in the photo. It looks as though the launch rod of Pad 5 is being bent by whatever "rocket" is being launched. Is there anyone that attended this launch that call help out?
Photo by Steve Pantuck

AROUND THE CRACKER BARREL

Beginning in the next issue I want to start this new column as a place to discuss, pro and con, important issues that will affect model rocketry. Like: Do we want an "unregulated HPR hobby"? As the NAR seems to deem required. Do we need HPR? Why don't we see more young people in the hobby? How do we attract them?

Now is the time to come to the aid of your hobby.

A SPECIAL REPORT

Contributing Editor: Bob Novak

'99 East Coast Hobby Show

The weekend of March 13-14 was the occasion of the 5th Annual East Coast Hobby Show. It was the second that we've been to, my son and I, having also gone last year. While a variety of hobbies, and toys, are represented, my opinion is that it could be sub-titled the "East Coast Train Show". That would be fine by me, as it is also an area of interest. (*Ye Ole Editor's, too!*)

But on to rocketry. Again, Estes had a premier location, easily seen as one came through the entrance. They were running "Make it/Take it" rocket building event throughout the weekend. Chris (last name not provided) could be seen moving among the budding rocketeers, dispensing advice on how to construct the rocket kits, having volunteered through his PARA club it is believed. In my opinion, Estes seemed to be promoting the "toy aspect" of rockets, as most of the models on exhibit, and propaganda on hand were showing the ready-to-fly models and "Mighty Mites". The whole series of good old-fashioned rocket building kits were not readily promoted.

In a booth not too far, was a gentleman and his "bottle rockets". Inverted 2-liter soda bottles filled with water, clamped to a PVC-type pipe, and launched after pumped up with air pressure. His constantly playing video tape showed various aspects of "rocket launching", including a race between a "rocket" and a rubber-burning stretch limo in a non-empty parking lot. In my opinion, he went to unusual lengths to market his product.

Venturing further into the show floor, we found the Quest booth. Wow! What they have coming - supposedly around May 1. Miniature rockets launching on engines the diameter of a pencil, and about an inch or so long. The rockets themselves are about 3 inches long. Chris Taylor had few at the March launch - he had talked them out of the Quest representative. The whole set-up for about \$20 gets you the launcher, which looks like a 3" diameter space vehicle when closed, a couple of rockets and several engines. A \$15 version has fewer supplies, and I believe you assemble the launcher. The rockets will launch to about 200-feet, pop open (not apart), and flutter down with a streamer. I know, after

my diatribe earlier about Estes and the "toy aspect", but in my opinion these are, well, "cute". I for one, can't wait for the first of May. I hope they are out in time so I can use my store coupon Allied Hobbies was giving out at the retail store area of the show.

One other both we enjoyed, though not rockets, but unique, was West Coast Blimps. At first we were disappointed, because we didn't see them where they were last year, but they were in a different location. Essentially, they are mylar type balloons filled with helium, with some framework to support motors, propellers, and run on remote control. One was outfitted with a miniature camera broadcasting back to a TV at the booth, as it was flying around the show. In my opinion, it is amazing what can be accomplished in hobbies with spare time and spare funds.

Already I am looking forward to next year.

The logo for Apogee Components features the word "APOGEE" in a large, bold, sans-serif font. A stylized arrow points from the top of the letter 'A' towards the right, passing over the 'P' and 'O'. Below "APOGEE", the word "COMPONENTS" is written in a smaller, all-caps, sans-serif font.

1431 Territory Trail
Colorado Springs, CO 80919-3323

Apogee Components' catalog 1999#1 arrived awhile back "introducing the world's first line of all wood rocket kits and construction materials, and Apogee Components" is the "exclusive distributor!" There are three of these kits by Retro Rocket Works shown, all Skill Level 4 with prices ranging from \$115 to \$175.

The other rocket kits described in the catalog are in the budgets of most model rocketeers, including kits from Edmonds Aerospace; *Delta* and *Cici* boost-gliders, and a rocket-glider called *Ecee*.

Two rockets of interest to this writer are the *Delta III*, a 107th scale model that can be built "as either a display model, or a real 'flying model rocket' by attaching the die-cut fins". The other, *SR-72 Darkbird* is a SR-71 style rocket using the 10.5 or 13mm engines.

In a future issue of our newsletter watch for an interesting "flex-wing" glider, *The Bat* designed by none other than Apogee Components' Tim Van Milligan.

ESTEES LAUNCH CONTROLLER MODIFICATION

THIS MODIFICATION IS INTENDED TO ALLOW THE ESTEES ELECTRON BEAM LAUNCH CONTROLLER TO BE USED WITH THE ORIGINAL "DOUBLE A" BATTERIES OR WITH A 12 VOLT AUTOMOTIVE BATTERY.

NOTE:

1. THIS MODIFICATION SHOULD ONLY BE ATTEMPTED BY AN ADULT OR UNDER ADULT SUPERVISION
2. YOU MUST REMOVE THE "DOUBLE A" BATTERIES BEFORE ATTEMPTING TO CONNECT TO AN AUTOMOTIVE BATTERY.
3. YOU SHOULD BE FAMILURE WITH SOLDERING TECHNIQUES AND SAFTY PROCEDURES BEFORE ATTEMPTING THIS MODIFICATION.

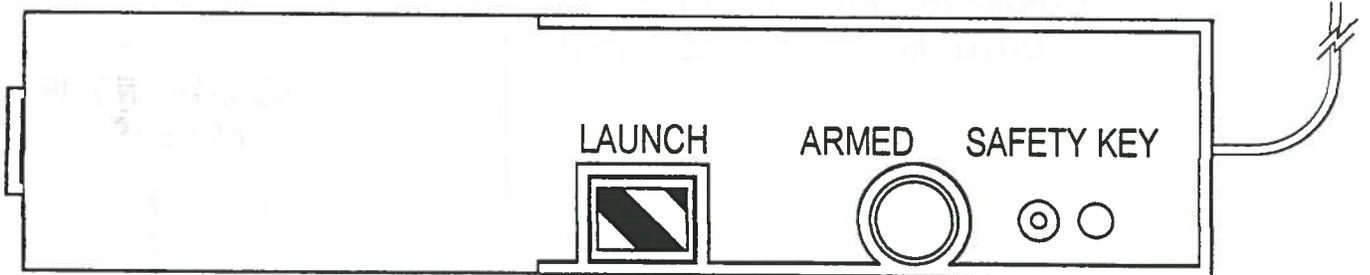
BILL OF MATERIALS

MFGR	MFG'S P/N	DESCRIPTION	QTY
RADIO SHACK	274-251	JACK, PHONE, MINI, 1/8", TWO CONDUCTOR	1
RADIO SHACK	274-286	PLUG, PHONE, 1/8", TWO CONDUCTOR	1
ESTES	EST 302220	CONTROLLER, LAUNCH,	1
RADIO SHACK	274-343D	CLIP, TERMINAL, BATTERY	2
BELDEN		CABLE, 18/2, LAMP CORD	20 FT
		NAIL, FINISHING, 4D	1

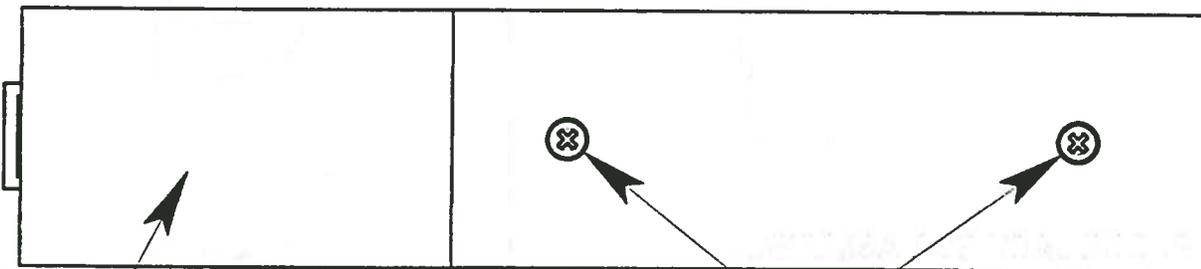
TOOL LIST

- SOLDERING IRON, 45 WATT MAX
- ROSIN SOLDERING FLUX
- SOLDER, 60/40, ROSIN CORE
- WIRE STRIPPERS
- #1 PHILLIPS SCREW DRIVER
- 1/4" TWIST DRILL
- NEEDLE NOSE PLIERS

STEP 1



FRONT VIEW



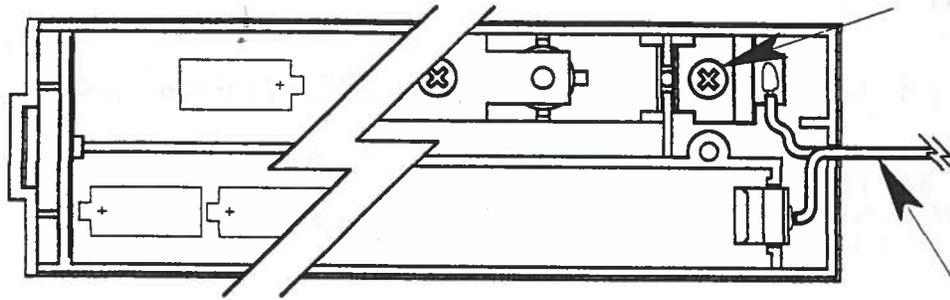
REMOVE BATTERY
ACCESS COVER

REMOVE COVER SCREWS

BACK VIEW

STEP 2

REMOVE COPPER TERMINAL
RETAINING SCREW AND
REMOVE TERMINAL (DO NOT
DISCONNECT SOLDER
CONNECTION)

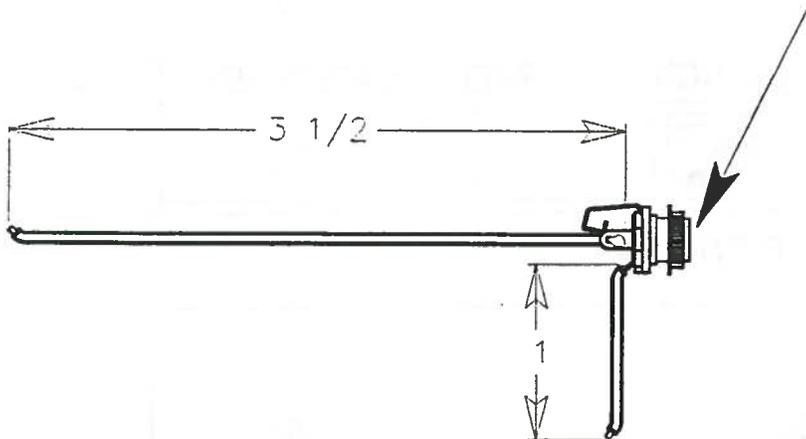


EXISTING TWO-WIRE ZIP CORD FOR
IGNITION CLIPS

BACK OF LAUNCH CONTROLLER WITH COVERS
REMOVED

STEP 3

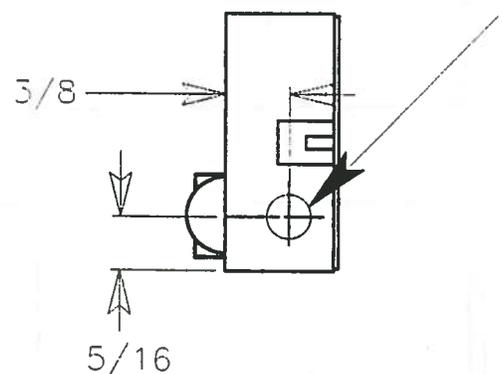
BEFORE INSTALLING, SOLDER LEADS
ONTO 1/8" MINI JACK AS SHOWN



PHONE JACK SUB-ASSEMBLY

STEP 4

LOCATE AND DRILL 1/4"
HOLE AS SHOWN



END VIEW

Estes Industries Rocket Plan No. 19

LOADLIFTER 1-A

Winning Design
Favorite Design Contest
by Merrell Lane

Assembly Instructions

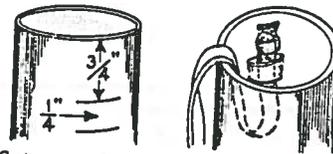
Spread glue around the inside of one end of the 6-1/2" long body tube as far in as you can reach with your little finger. Insert an engine block and push it forward into the body tube with an empty engine casing. Move the block forward until the end of the engine casing is even with the end of the body tube (and the engine block is 2-3/4" from the end of the body). Remove the engine casing immediately.

Cut out four fins and glue them to the body tube. Be sure to match the grain on the balsa with the grain direction indicated on the fin pattern. Align each fin by sighting along the body and adjusting it until the fin is parallel to the body and projects straight away from it. After the glue has dried run a fillet of glue along each of the fin-body joints.

Glue the launching lugs into place as shown in the drawing. Apply glue to the large end of the balsa adapter and insert it into one end of the payload section tube. The nose cone should fit tightly in the other end of the payload tube. If it is too loose wrap its shoulder with tape to increase the diameter.

Attach the shock cord and recovery system as shown in the illustration. Paint the model and apply decals.

Shock Cord Installation



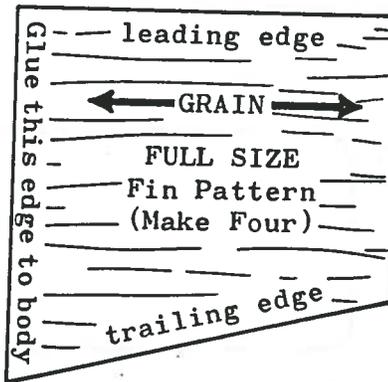
Cut two slits and push section inward. Thread cord through and knot. Restore body tube contour and seal with glue.

PARTS LIST

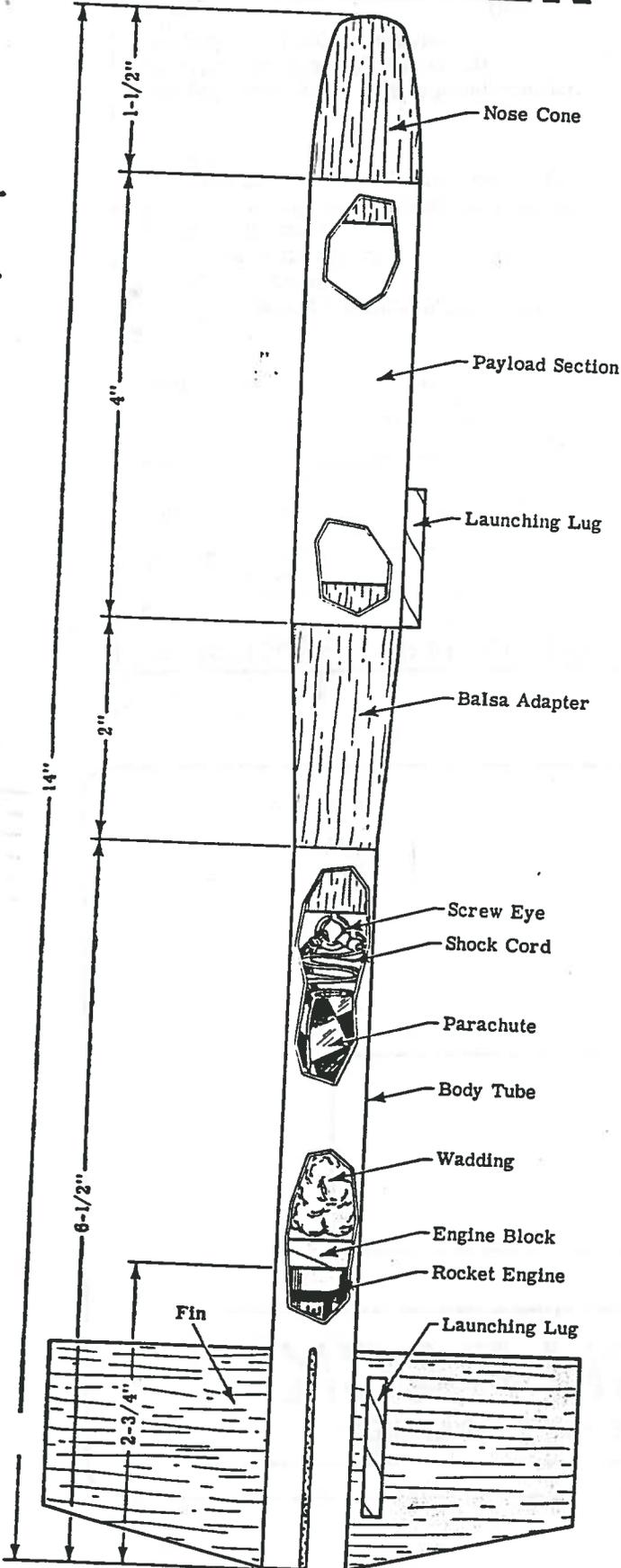
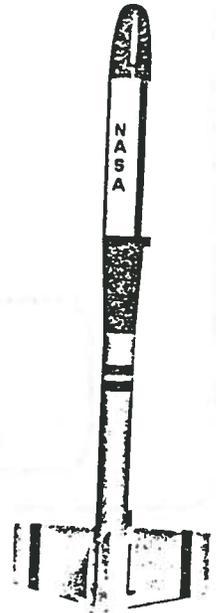
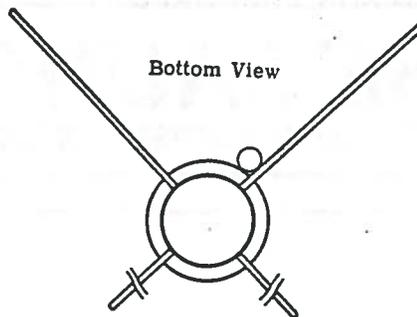
- | | |
|------------------|----------|
| 1 Nose Cone | #BNC-50J |
| 1 Body Tube | #BT-50S |
| 2 Launching Lugs | #LL-1A |
| 1 Balsa Adapter | #TA-2050 |
| 1 Screw Eye | #SE-1 |
| 1 Shock Cord | #SC-1 |
| 1 Parachute | #PK-12 |
| 1 Body Tube | #BT-20D |
| 1 Engine Block | #EB-20A |
| Balsa Fin Stock | #BFS-20 |

Recommended Engines

- | | |
|---------|------|
| 1/2A6-2 | A5-2 |
| A8-3 | B6-4 |
| B4-4 | C6-5 |
| B14-5 | |



Bottom View



**DIRECTIONS TO NORTH BRANCH
PARK LAUNCH SITE**

North Branch Park is very near the traffic circle junction of NJ Routes 22, 28, 202, and 206, near Somerville. Follow 202 South from the circle for 2 miles, past Ortho Pharmaceutical and Harris Corp. under railroad trestle marked "4H is Tops", to right turn onto Milltown Road. Make first left after firehouse and 4H Center on right; follow path to open field. Monthly launches from 10-4.

FROM NORTH

NJ Turnpike South to Exit 10, 287 North to Exit 13, 202/206 South to Circle

FROM SOUTH

202 North to Milltown Rd.; or 206 North to Circle

FROM EAST

287 North to Exit 13, 202/206 South to Circle

FROM WEST

Rt. 78 or Rt. 80 East to 287 South to Exit 13, 202/206 South to Circle

GSSS MEMBERSHIP APPLICATION

Name _____

Address _____

City _____ State _____

Zip _____ Birthdate _____

Phone Number _____

NAR number _____ GSSS number _____

Membership Category (Check One)

- Junior (Under 16).....\$5.00
- Leader (16 through 20).....\$7.00
- Senior (21 or over).....\$10.00
- Family Plan (Deduct \$2.00 for each additional family member, only one Launch Rack will be sent.)

I pledge to abide by the NAR/HIA Safety Code and GSSS Constitution and Bylaws in all my non-professional rocketry activities.

Signed _____ Date _____

Send this application along with check for dues payable to: Arnold Klein, 2 Oneida ave Rockaway N.J. 07866

GARDEN STATE SPACEMODELING SOCIETY -- NAR SECTION #439

Robert Zabriskie
3 Peachtree Road
Basking Ridge, NJ 07920



TO:

Robert Nee
222 Willow Avenue - #2A
Hoboken NJ 07030

THE LAUNCH RACK

NEWSLETTER OF NEW JERSEY'S SPACEMODELING SOCIETY

