

The Launch Rack

The Official Publication of The

Garden State Spacemodeling Society

September – October 2002

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 in USD to **Arnold Klein, 2 Oneida Avenue, Rockaway, NJ 07866.**

The Editors invite and encourage all to submit articles, photos, plans letters to the editor, etc., for future publication. In addition to articles, etc., the Editors welcome and encourage feedback on each and every issue. Please send material to:

Stephen and Theresa Flynn

1 Ridgeway Ave.

Blairstown, NJ 07825

e-mail: teri@eclipse.net

Visit the GSSS web site at www.robnee.com/gsss/

As an added note, we especially welcome e-mail attachments in ASCII (.txt), MS Works, or Adobe format as well as digital graphics and digital photos. Photos that work well when converted to black and white would be the best.

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.

Your Club Officers

President Jack Sarhage

Vice President Bob Gill

Vice President Steve Pantuck

Treasurer/Secretary Arnold Klein

Section Advisor Bob Zabriskie

LAUNCH SCHEDULE

Anyone wishing to attend any GSSS activity should call the **GSSS Hotline 908-658-9417** the morning of the event to verify if the event is still on. If the event is canceled, the recording will be updated at 9:00 am.

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 adjoining fields, the RSO may 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 of privately owned, large, open fields.

UNLESS NOTED ALL LAUNCHES WILL BE HELD AT NORTH BRANCH PARK from 10:00 AM to at least 3:00 PM your Contest Director can get clearance to launch longer into the afternoon. All launches are on Saturdays and are at least Sport Launches. Some contests have yet to be decided.

Meeting – November 8, 2002 – Ramada Limited, South Plainfield

November 23, 2002

December 21, 2002

IN THIS ISSUE:

Other Events

Important Rule Change – Insurance Required

Rocketry on the Internet

News From Section 439

Prez Message

Building Reliable Rockets

Book Review

Rocket plan - Webbie

ON THE COVER: The Long Boy by Stephen E Flynn

Photo by: Stephen E Flynn

The Launch Rack

Other Events:

Here is a list of upcoming contests.

Open Skies 2002

Come on all you GSSS flyers. Come down to Gloucester Community College and fly with Sojars in the largest NAR contest in NJ. Let's take on the "other" NJ club with events for everyone.

Where- Gloucester Community College, Sewell NJ

Date- October 20, 2002

Starting at 11:00 AM. People may come earlier to set up for the meet.

NAR Events:	Weighting Factor
B Eggloft Duration	17
A Rocket Glider	20
1/2A Streamer Duration	8
Streamer Spot Landing	4
Set Duration	8

Fun Event: Micro Maxx Streamer Duration.

The Set Duration time for everyone to match is 30 seconds.

This is both a Funtest and a NAR Open Meet. The top flyer in each age division wins a trophy.

Still In the Rumor Mill – August 2003 – NARAM 45 in Ohio? If this happens should GSSS rent some kind of bus for a group trip?

Important Rule Change !!!!! **Insurance Required !!!!!**

It was decided at the October meeting that, as of January 1, 2003, the GSSS would now require that all people who wish to launch engines over a "D" power at club launches must be insured by the NAR, TRA or AMA. These organizations provide insurance to their members as part of their basic membership dues.

Rocketry On The Internet

By Stephen E. Flynn (written "@ home")

Perhaps the idea of writing about the Internet is trite or redundant nowadays but perhaps a little coverage is needed to help people "flush out" some interesting and useful sites. Another matter is to assist with getting to the correct sites. For instance, what happens when you enter www.nar.com ?

One great big portal to check out is the map off of the NAR's main web page www.nar.org. When you go there to "find the club nearest you", you can certainly visit all the available NAR section websites. All you do is click on a dot on the U.S. map and you at an address in the NAR's section list. With any luck, you'll be able to click on the club's name and go directly to their website or communicate with their main contact via e-mail.

Another important use of the Web is for obtaining some of the more useful and more intriguing hobby supplies. You may have noticed that not everyone is flying Estes or Quest rockets. Even when some GSSS members fly Estes kits they do not always use the kit parts nor the manufacturer's engines. Where do you find these other hobby vendors?

Please start by trying these two sites:

Apogee Components- www.apogeerockets.com – competition kits, large scale models, parts and Kevlar shock cord.

Zeppelin Hobbies – www.zephobby.com – a NJ hobby shop for HPR and model rocket supplies.

This may be free advertising showing these sites in our bulletin but it may be necessary to give these sites out as references to entice newer hobbyists to explore the world outside of the standard store-bought kits.



News From Section 439

A "GUSTY" SPORT LAUNCH...or maybe it should be "gutsy" to describe the type of fortitude needed at the August launch. Although Arnie's wind-gauge recorded 7-8 mile breezes my red cheeks and ears indicated otherwise.

The usual set-up crew, **Bob Zabriskie, Arnie Klein and Steve Pantuck** were already in action when your reporter arrived. Being a Saturday during the long Labor Day weekend had us wondering who else would show, if anyone.

They did show. Fifteen came to fly with 6 or 7 other folks making up the spectator gallery. **Arnie** had the first launch of the day with his flying saucer, sans chad staging. Later, he did chad stage a "D" to a "C" to the delight of all, especially the first timers.

Speaking of "first timers"...**Mitch Corrado** and his nephew, **Matt Ellengold** brought two beautifully constructed scale models; a Mercury-Atlas (Sigma 7 version) that was launched with an Aerotech E. The malfunctioning delay charge resulted in the model's destruction. This on its first flight and after 9 months work. They also flew a Mercury-Redstone with flawless results several times.

Ralph and his son **Mike Hildreth** were with us as new comers, too. The major lessons learned where that igniters can be a pain and that parachutes on windy days reduces your fleet quickly, including, a nicely built and straight as an arrow flight of their Comanche III with all stages igniting.

Dave Teichman continues to wow us with his "trash-rocs." He said he figures his rockets "cost about 3-cents worth of paint and 5-cents of glue" being the only store bought material.

Bob Z. flew a Standard ARM and later drag raced his flying saucer against another. Sorry, I did not get the results.

Eddie Eng flew several of his rockets that he decorates as NASCAR look alikes using decals he makes himself. Look for a future "Member in Focus" column as soon as I can retake some photos. One beauty was a Blue Ninja that became trout food when it landed in the North Branch.

Charles Louder loaded an F27 into his Initiator which "chugged" several times before lifting off. This was a good example of why it is said to "wait one minute before approaching a model with an apparent igniter burn through."

There were many models sailing across the river and one of Arnie's that landed in a tree. Seems this rocket, a Cheetah, has an affinity for trees being where he found it a while back. We want to credit Arnie with the quote of the day, "black powder motors are more like the real thing, slow lift off and gradually gathering speed...and they smell good, too!"

The "prang award" was presented to **Mitch Corrado** for the Mercury-Atlas crash. Some way to greet a new comer, right? He's a good sport and showed it by wearing the ribbon all afternoon. Oh! We can hardly wait to see the V-2 model he's working on.

Others that arrived while the writer was there were **The Bob Gills** and **Howard** and **Michael Teichman**. The Teichmans launched a Totally Tubular.

For a holiday weekend the turn out was good and fun was had by all. Hey, would your reported lie?

September LAUNCH...was a repeat of last month as far as the "gusty" conditions were concerned. In fact it was even more "gusty" than August, which may have led to the small number of flyers.

I had not planned on being reporter for this launch so I did not make the notes I usually do.

The regular set-up bunch was at it when I got there. What is becoming a tradition at monthly sport launches is the first flight, that of **Arnie Klein's** Flying Saucer.

Dave Teichman launched another of his recycled material rockets that looked somewhat like a Russian space probe. This one cost a little more because he used a dime as weight in the nose.

What there wasn't in quantity there was in quality.

Reported by: *Jack Sarhage*



Prez' Mess

SECTION MEETINGS... have never been something GSSS members run to, even though they should, as what happens there has a bearing on them and their flying model rockets as part of the club.

First, I want to remind you that these meetings are open to any and all members; Senior, Leader, and Junior. Fact is, GSSS is one of the few clubs that invite and want its Leader and Junior members to take an active part, and this includes elections.

Secondly, I want to let you know of some of the decisions made by the members of the Executive Board at the September and October meetings.

1. Steve Flynn was confirmed as the editor of *The Launch Rack*.
2. Steve Flynn was confirmed as the Chairman (read Contest Director) of the Contest and Records Committee (C&R) for the 2002-2003 contest year.
3. Arnie Klein was given the go ahead to purchase another retrieval pole for the use of the club members.
4. Effective January 1, 2003 anyone that wants to launch a model rocket using motors larger than D, must show they have insurance by presenting a membership card from the NAR, AMA or Tripoli. No exceptions.
5. Bob Gill has accepted the position of coordinator of the Team America Challenge.
6. For 2003 we will set up "rain dates" for our monthly sport launches. Bob Zabriskie will reserve the last Saturday of the month at North Branch Park as we have in the past. Steve Flynn will set up "rain dates" on the Saturday following the regular launch date. In actuality you will have a choice of two dates to fly your rockets each month. One at North Branch and the other at The Abbey.

There are two other Standing Committees that need leaders beside C&R. The Operations Committee. It is in charge of the club's model rocket range, monitors the experimental and technical activities and safety. The chairman is to be a Senior and becomes the Range Safety and Control Officer.

We also need a Chair-person of the Activities Committee. It makes arrangements for meetings, conducting membership campaigns, public relations. This committee is responsible for our "outreach" programs.

If you are interested please contact any of the Board members.

Winding up this "mess" I want to report that the club is solvent, with over 800-dollars in the bank.

After the first of the year the meetings will probably be held at my house until such time as more room is needed.

Don't forget to bring something with you for the "Show and Tell" portion.

Next two meetings are November 1 and December 6. Hope to see you.

ELECTIONIC NEWSLETTER... I was asked to take a survey of the membership to see what interest there is in going the way of some clubs having an electronic newsletter instead of, or in addition to, the paper and ink variety. What say you?

To make this change would require an amendment to the club's by-laws taking a majority voting to have it pass. Meanwhile, let ME know if there is any interest.

We would also need an electronic newsletter editor. Are YOU ready to take this position?

Well, that about does it for this time. There are many exciting things in the works that you will want to be a part of, both, as a participant and as a mover. WE CAN DO IT! WE WILL DO IT!

Keep 'em flying,

Jack Sarhage

The Launch Rack

Building Reliable Rockets

By Stephen E. Flynn

One of the most disappointing, wasteful things about building rockets from the popular manufacturers' kits is the matter that many of the models fail during the first flight. Fins can fall off, engines eject. Nose cones and payload sections separate from rocket bodies causing the major part of the rocket to crash.

The situation got so bad with kits in the 1970's that, at times, various people in the NAR used to mock and openly, verbally abuse manufacturers representatives during rocketry conventions. How many times would people trusted to introduce rocketry to the general public sell dubiously reliable goods? Rocketry could have enough occasional minor malfunctions without further problems involving cheaply made kits. The sale of these kits to first-time flyers easily lead to discouragement.

Luckily, there is always someone developing some technology to make a stronger or more reliable rocket. One great benefit of belonging to a club like the GSSS, the NAR and the TRA is that people can learn the techniques needed to improve their rockets chances of survival.

One of the most typical design errors in the kits is the shock cord. How many times can one stand seeing the nose cone separate from body of the rocket where the body falls to the ground and the nose cone heads out of the park? One can thank the "parallel universe" of High Power Rocketry for some of the development on better shock cords. HPR Model builders saw that the need to have reliable cords since 10 pounds of rocket body falling 1000 feet is a heck of a difference than a fall of most model rocket kits.

Before throwing out your nose cone in flight, consider throwing out your shock cord and replacing it with a longer one and a more durable material. First of all length- make your shock cord around 3 times the length of your rocket. Three materials are available for model rockets that can replace the commercial shock cords:

Sewing elastic – This can be obtained from any sewing store and can be obtained in a wider size than the original shock cord, making it stronger.

Kevlar Line – This stuff is what bullet proof vests are made of. It comes in varying thicknesses and is identified by the pounds of force it can handle. It is thinner than the sewing elastic which make it great for external shock cords in streamer duration. You can get it at the sources cited in the Internet article. It can also be combined with a rubber band tied to the nose cone to act as a shock absorber.

Bungee cord – Consider this for large HPR rockets. A thin version of the cord is available at Zeppelin Hobbies (see the Internet article again). The small cord is still too thick to be manageable in most model rockets.

A second cause of separation – the un-intentional

separation of the nose part from the body, is the shock cord mount. Folding one piece of paper with a shock cord in it or finding some other means to glue the cord to the side of the body can easily cause separation for shock cords. It can also block the streamer or parachute from coming out. Here are some alternatives:

On duration models – put a small hole at the base of the fin and run Kevlar line through the hole. Put a knot in the Kevlar line as a stop. Glue the Kevlar to the fin using yellow carpenter's glue or epoxy. Do not use super glue or white glue. You can make the glue part of the fillet at the bottom of the fin. In duration models you should also glue this shock cord on the body near the center of gravity of the rocket when it is in recovery mode – nose cone off and spent engine in rocket. This causes the rocket to provide drag to slow itself down during recovery increasing your flight time.

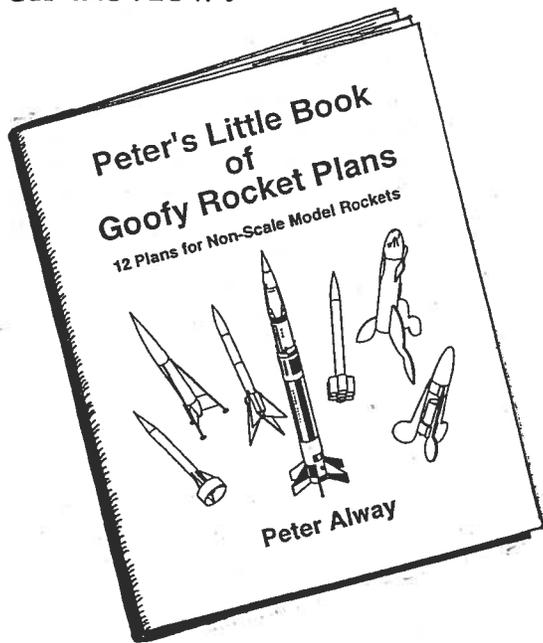
For internal mounts, attachment points can include – around the ring of the engine mount, attached to slits cut in a tube coupler. For larger models, a metal eyelet can be attached to the forward bulkhead of the engine mount.

A partial internal mount involves cutting two slits in the side of the body tube and running the shock cord through the slits with a knot at the back end of the shock cord to keep it in place. Glue can be applied on the outside of the rocket where the shock cord comes out of one slit and then back into the other.

Another problem nowadays deals with plastic parts such as plastic fins. Kit instructions tend to recommend the use of plastic glue such as polystyrene glue that is normally used on static plastic kits. This is not a very durable idea. If the model doesn't come apart sometime on the first launch, it most likely have something come loose in one of the next launches. This solution- do what some of the static modelers do – use super glue – Krazy Glue, CA glue, etc. If you are careful, especially with the very thin varieties of the glue, you'll have an extremely solid plastic rocket. If you are not careful, you could glue yourself to the model! If you intend to build a successful model, this stuff is a must.

Do you have any ideas on better quality model rockets or any high power techniques that you would like to share? Please send these to us so that we can publish them.

Book Review:



Peter's Little Book of Goofy Rocket Plans

The Peter in the title is, of course, Peter Alway. Best known for his *Rockets of the World: A Modelers Guide* and its annual supplements, it may be a surprise that there is a non-scale side to this prolific artist.

Growing up with three brothers who were "habitual scratchbuilders" it is no wonder that in Peter's mind "kits were for sissies" and his first model was of his own design.

That first rocket is included along with eleven others that first appeared in his section's newsletter, T Minus 5. Some you may have seen, such as The Finite Loop and Hyperion. Others are "new" as least to this reviewer; Zeta II, a flying rabbit named, Zvezdotchka ACM, the Saturn IV and near scale-like model, Webbie, just to name a few, and the one I decided to build, Zubenelgenubi. Look for it at a launch.

All of the models are built from readily available parts. Alway does not leave you hanging and gives you the names and addresses of where to get them, if not in your local hobby shop. Also he shares many construction tips that are worth the price of this booklet alone.

He states the *raison d'être* for the booklet is he "figured some folks might enjoy them, and (he) could use a few bucks to pay for (his) trips to launches," but, he was "too lazy to sell (it) by mail order through Saturn Press.

Now don't you be lazy send \$5.00 plus S&H (\$4.00) to NARTS, P. O. Box 1482, Saugus, MA 01906 for your copy. Who knows maybe Peter will be able to afford to come to one of our launches.

Reviewed by Jack Sarhage

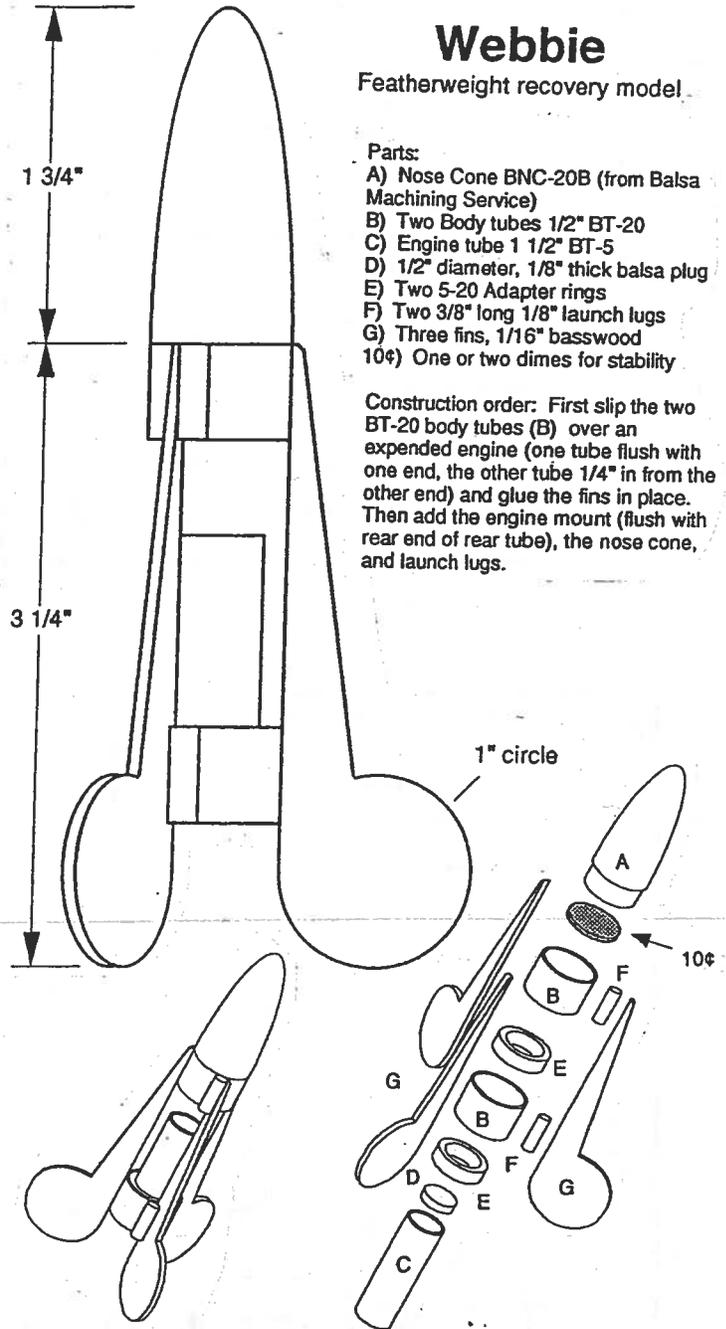
Webbie

Featherweight recovery model.

Parts:

- A) Nose Cone BNC-20B (from Balsa Machining Service)
- B) Two Body tubes 1/2" BT-20
- C) Engine tube 1 1/2" BT-5
- D) 1/2" diameter, 1/8" thick balsa plug
- E) Two 5-20 Adapter rings
- F) Two 3/8" long 1/8" launch lugs
- G) Three fins, 1/16" basswood
- 10¢) One or two dimes for stability

Construction order: First slip the two BT-20 body tubes (B) over an expended engine (one tube flush with one end, the other tube 1/4" in from the other end) and glue the fins in place. Then add the engine mount (flush with rear end of rear tube), the nose cone, and launch lugs.



This odd little featherweight model was inspired by the Japan Association of Rocketry web page.

**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,
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

KILMER P&DC NJ 10/24/02 22:39 13



TO:

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

THE LAUNCH RACK

NEWSLETTER OF NEW JERSEY'S SPACEMODELING SOCIETY