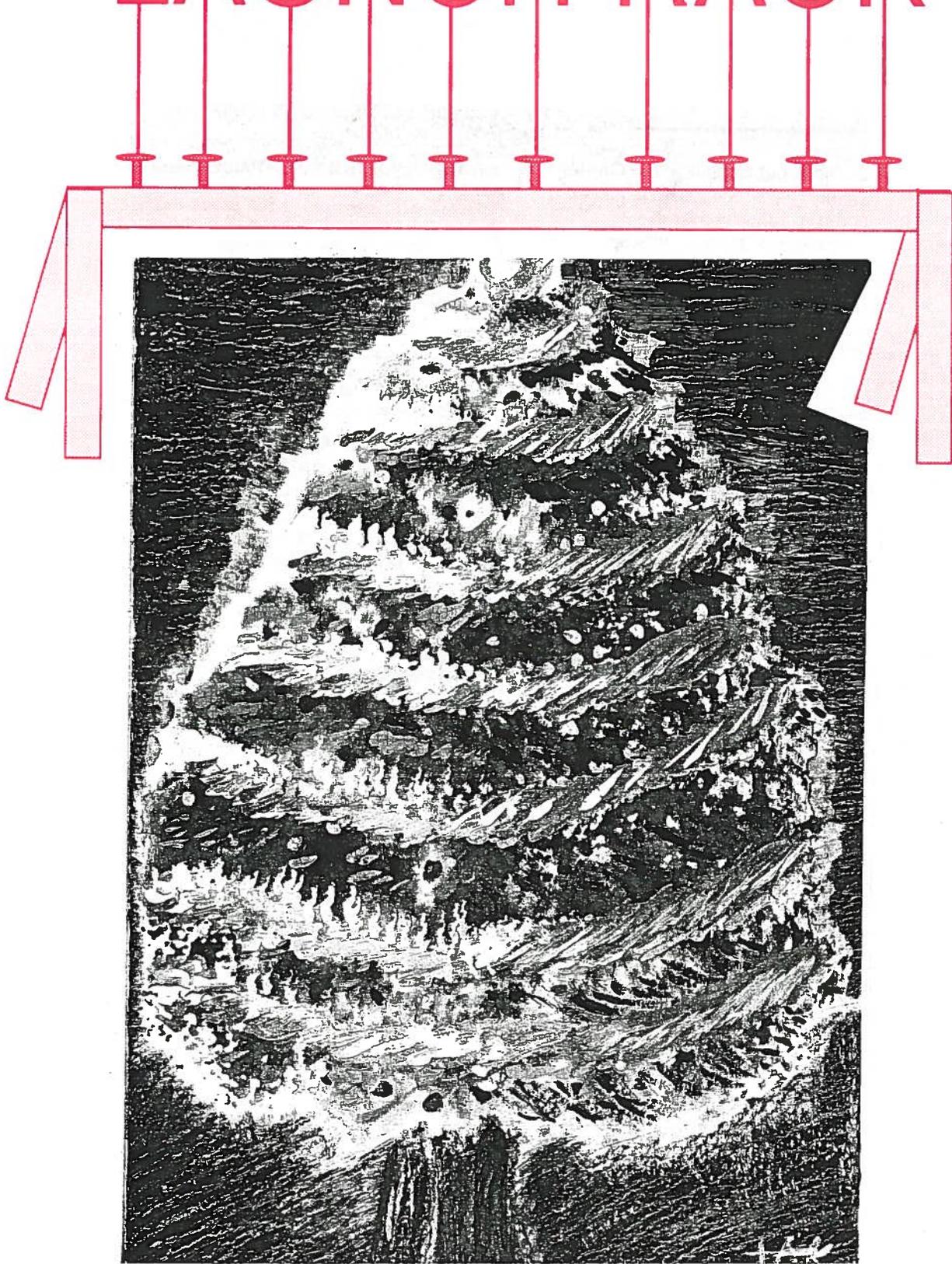


LAUNCH RACK



**Do You Remember The “Christmas Tree” Launches?
Tell Us Your Recollections of Them!**

The Launch Rack

The Official Publication of The

Garden State Spacemodeling Society

November – December 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:

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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.

December 21, 2002

IN THIS ISSUE:

Internet Virus Strikes Again

Alex Bruccoleri Sweeps NARAM 44 B Division !

Contests 2003

Important Rule Change – Reminder

Open Skies 2002 Results

Summer Challenge Results

Rocket plan – The Long Boy

ON THE COVER:

Photo by: *Theresa Flynn*

Prez' Mess

HAPPY NEW YEAR!

This issue is tardy because yours truly got bogged down with the Christmas rush and the days just went by faster than I imagined. I regret the delay Steve.

The President's Newsletter...will not be a separate issue this quarter and is incorporated within.

SECTION MEETINGS

Attending section meetings has never been very high on our member's list of "Things To Do"...which has always been a sore spot with me, because I believe that as a member of an organization you are responsible for supporting it and its leaders. It really does not hurt anyone to sacrifice (?) one night a month and attend a club meeting. Oh, well!

Saying that the meetings we did hold were poorly attended would be an understatement at best. For the most part it was Arnie Klein and myself.

With the above fresh in every ones mine we are going to have Section Meetings at the monthly sport launches as we have in the past. The range will be closed down at 1130 hours and reopened after the meeting is completed.

TEAM AMERICA

Although we contacted several school that indicated an interest they did not get back to us with a commitment. Bob Gill, our coordinator for this, contacted over 100 New Jersey high schools. As of this date (January 1, 2003) I do not know if there was any contact with him.

The deadline of November 15 has come and gone so any school not registered is too late. There are over 800 schools signed up nationwide.

ELECTIONS OF CLUB OFFICERS

Although early, this being an odd numbered year, it is a good time to start thinking about the four positions that are filled by members elected by you...another responsibility of belonging to an organization. The positions are President, two Vice Presidents and the Secretary/Treasurer.

This is also a good time to think about running for one of the positions yourself. More about this later.

CONTESTS AND LAUNCH DATES

Contest director, Steve Flynn, has been busy organizing contests to complete our contest year. This is another way to support you club.

At this time we do not have confirmation of our launch dates at North Branch Park. They are usually held the last Saturday of the month. Bob Zabriskie will keep us updated via the hotline at 908-658-9417.

NARAM TRIP

With the National event being held in Evansville, IN it is a reasonable distance for GSSS members to attend.

Yours truly has over 20 years experience in planning group tours and would like to know if you would be interested in going as a group. The price of the trip would be all inclusive: hotel, transportation, some sightseeing, etc. The contest fees would be paid direct to the NARAM organizers.

Let me know if this is something that would be of interest. Meanwhile, I will make some inquiries as to charter bus prices, hotels, etc.

Let me know at the next launch, email me at jacknmel@optonline.net.

CONGRATULATIONS, ALEX!

Alex has always been one of our consistent contest participants...read, he wins a lot! Thank you for making GSSS look good.

Well, that uses up my space for this issue. Hope you have a great Christmas and I wish all the Best of New Years.

Keep 'm flying...

Jack

The Launch Rack

Internet Virus Strikes Again

This is the second time the Flynn family's home computer has been hit with a virus. This time the system files were contaminated resulting in the wiping of the whole hard drive. In terms of the newsletter, only pictures were lost. In terms of e-mail addresses, all addresses and correspondence with GSSS and other organizations such as Sojars were lost. The source of the virus this time was an e-mail from someone in Sojars. I believe that it must have been the same virus that infected our machine last time perhaps as a return mail that came back from the prior time.

I need everyone who reads this newsletter to do two things for me:

First, check their computers for viruses. These viruses tend to distribute themselves via e-mail so all e-mail must be verified to be virus free.

Second, since our PC is always being upgraded for virus detection, the chances of being hit with the virus again are much less. So please send me e-mail to teri@eclipse.net so that I may create a mailing list (and back it up this time).

On another matter of snafus, the Summer Challenge results were left out of the prior issue so we published them in this issue.

Alex Bruccoleri Sweeps NARAM 44 B Division !

Alex delivered success again for yet another year of great flying to bring home the NARAM B Division first place trophy as well as fourth place over all in B Division for the year! Alex has consistently represented GSSS, flying with us at Open Skies 2001. At NARAM 44 this summer in McGregor Texas he place in most events as follows: (source- Sport Rocketry Magazine)

C Helicopter Duration	2 nd Place	198 seconds
B Eggloft Duration	1 st Place	73 seconds
B Altitude	1 st Place	616 seconds
B Boost Glider	4 th Place	76 seconds
C Rocket Glider	3 rd Place	33 seconds
½A Parachute Duration	1 st Place	480 seconds
Sport Scale	4 th Place	740 points

with a Mercury Redstone

Research and Development 1st Place

with Comparing and Contrasting Advanced Fiberglassing Techniques

This is a phenomenal effort!

GSSS had yet another person representing the club in far-off Texas. Anita Rodgers flew for us to bring us 450 more points. Anita and Alex, please let your club CD know more about what you would like to fly in future GSSS contests.

Over all, GSSS came in 10th amongst sections at NARAM. Point standings for the year shall be published in the next bulletin. Many thanks to all who supported us by participating in NAR competition this year. May you come back to fly with us this year.

Contests 2003:

The next NARAM is in Evansville Indiana....

Events:

- 1/4A Boost Glider
- A Helicopter Duration
- A Altitude
- B Parachute Duration (multi-round)
- C Super Roc
- E Streamer Duration
- F Dual Egg Loft (pending approval, may change to D)
- Open Spot Landing
- Peanut Sport Scale
- Plastic Model Conversion
- R&D (special awards, NOT for NARAM points)

(SOURCE- Russ Mozier)

There is a saying that life is what you make it. Well, here is your CD once again looking for feedback on some of the proposals for the next half of the contest year. Chances are good, that you may get your wish if you want to compete in a particular event and you e-mail, call or write to your CD with the request.

Remember that the contest year goes from July 2002 through June 2003 and, as far as your CD knows, GSSS only has flown for 2 Competition factors out of a total of 12 allowed for the contest year. Please, someone, also let me know if any GSSS members have flown in any other contests since the end of June, 2002 (except NARAM) so that I can plan accordingly. Since the next NARAM is set for Indiana (relatively close to the East Coast), we should push to fly all of our contest factors.

The immediate situation for flying fields in NJ is quite positive. Currently there appear to be four fields where contests can be held. The two fields that are constants for contest use are the fields in Bridgewater and Sewell. The larger fields that appear to be up for consideration are the St. Pauls Abbey field in Andover and a new Sojars field 25 miles south of Sewell – a large sod farm that should be available for the months outside of the growing season. This sounds like Sojars may have a giant lawn at their disposal! Assuming that all goes well with their first launches at the field, I am proposing that GSSS and

The Launch Rack

Sojars have another Open or a Local meet to take advantage of their new turf (pun intended).

Perhaps we could offer prizes at the contests. The prizes are usually based on the top Funtest winners. That means non-NAR members can compete for the prizes. *Your CD was thinking that we could offer a free NAR membership to the top non-NAR member in each Division. This may also help with insurance issues in future launches (see the rule change later in this issue).*

On top of all these local launch opportunities, three states near NJ are hosting regional meets. Since the Contest Factor is worth 3 at these meets (as opposed to 2 at the Open meets), and they have more events at the meets, each successful flight can score more points and there are more chances to place. There are regional meets coming up in Virginia, Maryland and western Pennsylvania.

Regionals:

Reach for the Sky XV May 3-4 near Pittsburgh
ECRM-30 May 17-18 in Maryland by NARHAMS
NOVAR regional June 21-22 in Virginia

(SOURCE- Russ Mozier)

If we could get a few GSSS members to attend these meets then we would not have to consider flying so many open meets at the GSSS field. The reason why we haven't had a regional meet at our club is that we need a certain percentage of the NAR participants to be from another state and most of the local clubs in PA do not fly in competitions. Of course if **YOU** could get enough competitors in from out-of-state then your CD would consider having a regional meet.

GSSS Contests Proposed Thus Far:

February - Proposed NAR Open Meet with Sojars – Location Sojars large new sod farm field in Sewell, NJ. Both a NAR contest and a Funtest. Trophies for top A+B and top C Division. Rain date in March.

Proposed Events	WF
B Rocket Glider	21
C Super Roc Duration	15
B Streamer Duration	9
Random Duration	10

March – How Low Can You Go 2003 - This proposed contest is a resurrection of a GSSS contest of old.

Proposed Events	WF
1/4A Boost Glider	18 (Preparation for NARAM)
C Eggloft Duration	16 (B Eggloft is just too low)
1/4A Super Roc Duration	13
1/2A Streamer Duration	8 (In case we run out of 1/4A's)
Spot Landing	4 (The spot should be relatively close to the launcher to go with the theme)

April – Another Open Meet?

May – Yet another Open Meet?

Participation – Your CD did an analysis on the point totals of some of the winning sections at this past NARAM and found that many of the winning NAR sections must have had quite a few members flying in their contests. The contestants not only took places for their sections but many also must have scored Flight Points. Flight Points are scored when a competitor flies an event successfully but either does not get a score high enough to be in the top four places or flies a qualifying flight under certain circumstances that go outside the parameters for an event. An example of exceeding a parameter is when a contestant lands over 50 meters from the spot in Spot Landing. If a contestant gets “only” Flight Points, the contestant still scores national points for him/her self and GSSS. The “moral of the story” is, GSSS needs all of our members to come out and fly the contests so that we can make our stand for high national point standing and to pursue NAR section of the year.

Important Rule Change !!!!! Reminder

Your Editors decided to reprint this note just to emphasize the change so that everyone can plan accordingly for their advancement using larger engines.

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.

Open Skies 2002 Results

Contestant	Section	B Eggloft Duration		A Rocket Glider		1/2A Streamer Duration		Streamer Spot Landing	Set Duration			
		Flight 1	Flight 2	Best	Flight 1	Flight 2	Total			Flight 1	Flight 2	Total
Daniel Flynn	GSSS	6.84	5.08	7			15.66	20	DQ Sep	4.80%		
Steven A. Bastow	Sojars	4.98	4.29	5			4.53	5	35.789 m	DQ Sep		
Barry M Berman	Sojars						DQ Sep		48.748 m	64.70%		
Edward F Blair	Sojars	13.39	9.51	13	DQ Eject	DQ Shred	0	6.37	13	53.254	29.60%	
Joe Libby	Sojars	DQ Egg	8.37	8	DQ Eject		33.03	33	10	23.457 m	FP 80.7%	
Russ Mozier	Sojars				1:08.03	56.61	125					
Ed Romani	Sojars	DQ Sep	6.04	6	40.31	36.37	77	DQ Sep	52.13	52	DQ Sep	59.60%
Hyperspace Team	GSSS	10.37	DQ Egg	10	34.16	30.22	64	DQ Sep	DQ No Dep	22.631m	39.80%	

- Notes:
- All times in Minutes:Seconds.Hundreths of a second. Times are rounded for final score.
 - Eggloft time score is based on best of two flights. A R/G and 1/2A SD scores are based on sum of two flights.
 - DQ means Disqualification.
 - Specific DQ Abbreviations
 - DQ Egg - Broken Egg
 - DQ Eject - Engine Ejected
 - DQ Shred - A part of a glider broke off, i.e., a piece of the wing.
 - DQ Sep - Part of the Rocket separated from the rest of the rocket, i.e., a nose cone.
 - DQ No Dep - Recovery System did not deploy.

NAR Points

Contestant	Section	B Eggloft Duration		A Rocket Glider		1/2A Streamer Duration		Streamer Spot Landing	Set Duration	Total	
		Place	Points	Place	Points	Place	Points				Place
Daniel Flynn	GSSS	4th	68			2nd	96		0	160	324
Steven A. Bastow	Sojars	FP	34			FP	16	3rd	32	0	82
Barry M Berman	Sojars						0	4th	16	16	32
Edward F Blair	Sojars	1st	340		0	3rd	64	FP	8	96	508
Joe Libby	Sojars	3rd	136	4th	80	4th	32	2nd	48	16	312
Russ Mozier	Sojars			1st	400						400
Ed Romani	Sojars	FP	34	2nd	240	1st	160		0	32	466
Hyperspace Team	GSSS	2nd	204	3rd	160		0	1st	80	64	508

Sojars 1800
GSSS 832

Summer Challenge 2, June 2002 Results

Events

A Division	Streamer	Parachute	1/4A Streamer	1/2 Parachute	Predicted	D Dual Eggloft
	Spot Landing (meters)	Spot Landing (meters)	Duration (seconds)	Duration (seconds)	Duration (Percent Difference)	Duration
Daniel Flynn	DQ	--	42	42	39.4	--
Emily Flynn	--	--	--	DQ 16	--	--
Micheal Humphrey	20.599	8.788	--	--	48.5	--
Michael Teichman	--	27.439	--	--	--	--
C Division						
Bruce Canino	14.338	21.438	DQ 15	15 NR 72	72	.7 Cato
Stephen E. Flynn	22.86	50+	9	9	23	23 19
Steve Humphrey	20.091	40.843	--	3	3	42.6 --
Arnold Klein	DQ	--	--	--	--	--

Places determined by NAR points. Divisions were combined where necessary.

The letter before the name stands for the club affiliation G = GSSS, S = SoJars, I = Independent

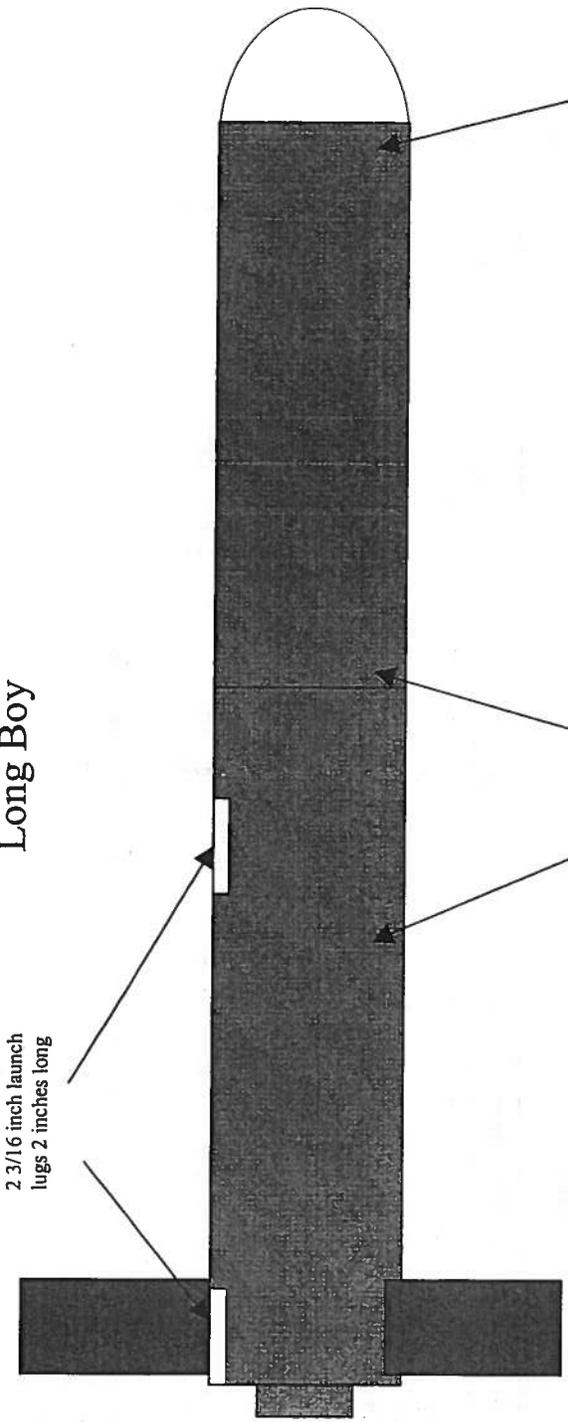
NAR Contest Results

Overall Place	Contestant	Events		Total
		Para. Meters	Spot Place	
A Division				
1st G	Daniel Flynn	DQ	42 1st AC	39.4 1st A 320
2nd I	Michael Humphrey	20.599 1st A	8.788 1st AC	48.5 2nd A 256
3rd G	Emily Flynn	--	--	56
C Division				
1st G	Stephen Flynn	22.86 3rd C	50+ FP AC	9 3rd AC 19 1st C 792
2nd S	Bruce Canino	14.338 1st C	21.438 2nd AC	15 2nd AC 72 1st AC 524
3rd I	Steve Humphrey	20.091 2nd C	40.843 3rd AC	3 4th AC 42.6 2nd C 204

Some Events were flown in combined divisions where AC = A and C divisions combined

Section	Standings	Points
GSSS:	1st	1168
SoJars:	2nd	524
Independents:	3rd	460

Long Boy



2 3/16 inch launch lugs 2 inches long

Estes nose cone for BT80 tube ("Fat Boy" nose cone)

2 Estes BT80 tubes 14 inches long
Connect with coupler or slit piece of BT 80 tube

1 3/8 inches

6 inches

5/8 inch

Small metal eyelet (poorly drawn)
Fasten with nuts on both sides of ring. Then epoxy into place.
Attach 5 ft. shock cord here.

24 mm engine mount tubing - to fit engines: Estes D 12 - 5

Aerotech E 15, E30 and F21

Use longer tube for larger F and G engines such as G55. Always check CG.

1/2 inch

3+ inches

General Assembly Instructions

Parts List:

- | Qty | Part |
|-----|--|
| 2 | BT80 Tubes |
| 1 | BT80 Tube Coupler – original made from spare BT80 tubing slit. |
| 1 | BT80, Fat Boy style nose cone. |
| 2 | Wooden centering rings (possibly PML) to fit 24 mm engine tube inside BT80 Tube. |
| 1 | BT50 Tube or similar tube for 24 mm engines. |
| 1 | Small metal eyelet with nuts for mounting to . |
| 3 | 1/8 in. Thick pine, basswood or plywood fins. |
| 1 | 5 ft. 100 pound test (or greater) Kevlar shock cord tied to a 1 ft. diameter loop of 3/8" sewing elastic. Alternately, 6 ft. of 3/8" sewing elastic could be used. |
| 1 | 18 in. parachute and optional parachute protector. |

Use epoxy and super glue for all parts. Do not use super glue on any Kevlar line. Also, do not get epoxy on your skin. It can cause an allergy to the epoxy.

Note that the only expensive hobby shop parts that are absolutely necessary are the tubes, nose cone and possibly the 1/8 in. wood. If the sewing elastic is substituted for the Kevlar and the wooden parts are scratch built, the cost of the project would likely be half of the cost of a store bought kit. I appears that sewing elastic loses strength over the years so this is a lesser option.

Construction:

Build the engine mount / fin assembly first. Draw out the lines for the fins on the engine mount. Also draw a line for the launch lugs on the BT80 tube. Since the fins attach through the wall of the body tube, all alignment must be done on the engine tube. Glue on the lower centering ring.

Next cut out the fins, round the leading, trailing and tip edges of each fin. This rocket was not considered to be a high performance rocket so no airfoiling was done.

Glue each fin to the engine mount with the back of the fin also glued to the centering ring.

Drill a hole in the top centering ring for the eyelet. Glue the top ring to near the top of the engine mount, allowing a little tube extension for a fillet.

Attach the eyelet using nuts. Then cover the nuts with epoxy to keep them from coming loose. Fillet all joints with epoxy.

Hold the back of the engine mount/fin unit up to a body tube and mark the positions of the fins. Cut slots for the fins at those positions. Also tie the shock cord to the eyelet at this time.

Put beads of Epoxy glue inside the tube and on the edges of the slots and slide the mount into the tube making sure that the lower ring fits inside the body tube.

Now the body tube coupler may be glued to the bottom BT80 followed by the top BT80. Follow with launch lugs and fin fillets to cover gaps in slots.

Add nose weight if necessary and tie on elastic loop, nose cone and parachute.

Finishing:

Original model was painted with filler coat lacquer followed by fluorescent green, yellow and orange free form mod look. Next, add a protective coat of gloss clear.

Flying:

It was fun to launch this bright, colorful rocket in a NAR precision altitude contest when some one noticed the I was implying that the altitude trackers were blind and needed such a rocket in order to successfully do their job (a very old joke).

Although the model has yet to be flown on anything but a D12-5 it is built tough enough to fly on any 24 mm motor up to a G engine. If you are going to try it on a G, please use check to see if the model is stable or whether you should add weight in the nose cone to compensate for the added weight of the larger engine.

