



Team Pittsburgh

Newsletter of the Pittsburgh Space Command NAR #473



Volume 12, Issue 2

#89

March/April, 2000

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What's the 89? This is our 89th PSC Newsletter! In the early years of the club, issues were printed with an issue number instead of the "Volume/Issue" label. Over the past 8 months, our advisor Art Nestor and Newsletter Editor Richard Freed have assembled an archive of all newsletters printed since the formation of PSC in 1986. A big thank you to Mort Binstock and Rod Schafer for their assistance in this project. An index of all the issues will appear soon in *Team Pittsburgh*.



Dragon's Fire Launches resume April 29 @ Jonestown Site
See info on page 10 & Schedule on Page 11

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Pittsburgh Space Command
is dedicated to the
advancement of safe model
rocketry.

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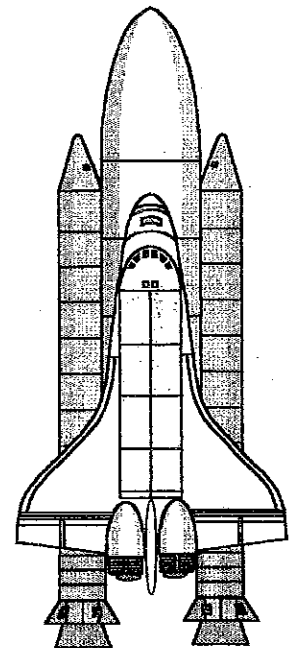
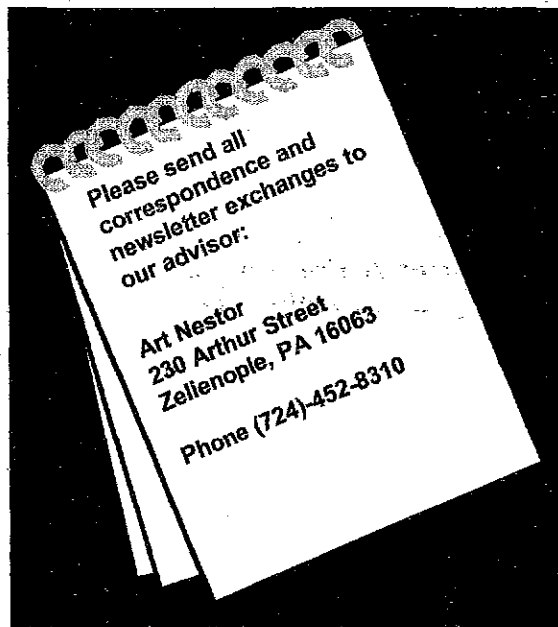
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Mort's Column By Mort Binstock, NAR 27182

Y2K: My computers survived Y2K! One computer is so old it has no clock to worry about, my other old computer has a clock fortunately still good for another 20 or 40 years.

I did, at Y2K, improve my "Team Pittsburgh" mailing labels. The improvement is simple however it did take some reprogramming effort on my part.

I print PSC's newsletter labels. I have done so for years using my old dot matrix printer. The dot matrix works OK except when a label comes loose during printing, sticks to the printer roller, & jams everything up. I have to then clear the printer and rerun all the labels.

This newsletter's labels are now printed on 8 1/2" by 11" label paper using my ink jet printer. Each page of label paper holds 30 labels. This ink jet printer is easier to use, faster, and produces a nicer looking label. Y2K progress!

CARNEGIE MUSEUM: Dr. Jay Apt, former Pittsburgh rocketeer and Space Shuttle astronaut, is now director of the Carnegie Museum of Natural History. I recently visited the museum and found it refreshingly improved. My past images included displays of dinosaurs and other animals. The museum is modernized.

The older static displays are still there. Added are robots that cruise the floor providing interactive information, realistic fossil digs (you actually dig for a fossil), interactive educational miniature golf, etc. I was impressed with the improvements and modernization!

I was disappointed when Dr. Apt returned to Pittsburgh with no further interest in the NAR or our club. I can guess, from my museum visit, why he has not been interested in the NAR or our club; too busy. A lot of hard work was required for this museum upgrade.

[Editor's note: it was rumored at the February Launch that Dr. Apt has resigned his position at the museum.]

CA GLUE TIPS: These tips were inspired by information provided by JOSEPH PEKLICZ. JOSEPH's "last tip to me for the 20th century" is: For Balsa fins with sharp leading & trailing edges, run a bead of super glue (CA) along the edges. Let dry then sand. The CA will harden the edges providing protection from recovery damage. This technique of using CA to harden soft balsa also protects balsa nose cone tips.

KEN GOOD wrote a while back about using CA as an excellent sanding sealer. Paint the fins with a thin CA

first, sand when dry.

One of my techniques for gluing two difficult to position items is to spray one item with instant accelerator, coat the other with CA. Carefully align the two items then press together for a truly instant bond.

CUDA PROGRESS UPGRADE: No construction to report. I have been, however, researching the radio equipment.

R/C equipment is going through an evolution now, but one must pick carefully. The CUDA needs R/C gear that is small and light. Most R/C receivers weigh 3/4 ounce and up. I explored a new HiTech receiver called the Feather and HiTech's older Shredder.

The Feather initially looked like the right choice, very small, 4 channels, FM, and weighing only 1/4 ounce. Most receivers' range are advertised, "for as far as you can see". The Feather's range is a mere 500'. HiTech saved weight by elimination a sensitivity stage. The Feather is designed for small indoor or slow close by flyers.

I estimate the CUDA will climb vertically 500' during rocket boost pushing the Feather's range. I think I've settled on the 1/2 ounce (discarding its case reduces the weight further) Shredder. The Shredder is 2 channels, AM and offers two advantages applicable to the CUDA. The Shredder's advertised range is 500-1,000 feet, HiTech's companion Focus 3 transmitter provides electronic mixing.

Mixing, electronic or mechanical, is required with "V" tail operation. A traditional rudder (steering)/elevator (up/down) has two distinct very separate control surfaces (rudder/elevator). The "V" tail does not! Its common control surfaces provide steering, up/down, and both combined.

This combination control surface complicates things, however the mixer allows both functions from the two "V" tail common control surfaces. Moving the two "V" tail surfaces together provides up, down, opposed operation provides steering. Electronic mixing requires no on board mechanical mixers. The aircraft is therefore simpler, lighter, & more reliable.

Flyers at NARAM did not, to save weight, use an on/off switch. They simply unplugged the battery. I plan to use a Radio Shack 2.5mm stereo earphone plug and jack as a combination on/off switch and battery charging jack. I have standardized successfully on this combination. Pluses are light weight, reliability, and no risk of reverse charging the battery.

There is also less risk of launching the plane with the radio turned off. This is a real risk. I have read and heard of flying with the R/C turned off horror stories. If the plug is out, the R/C is ON!

**Mort's Column
(Continued)**

I will use either a 3 cell 0.050 or 0.100 mAh nicad rechargeable battery and recharge after each flight. Battery life is difficult to predict, mostly dependant upon the servo usage. Tables I have suggest 24 & 50 minutes from 0.050 and 0.100 mAh batteries respectively. Battery selection will be determined by my comfort level of weight vs battery life.

TV: I have successfully experimented launching small film cameras. I recently saw an ad for a small color video pod for a model airplane. This pod advertises, "crystal clear in-flight video". Included is, "pod with camera and transmitter, ground receiver unit and cables ready to connect to your TV/VCR." Price is \$349.95 from Stanford Instruments (CA) 1-408-732-2846.

Not sure what the transmitter's range is, a rocket would require more range than a R/C controlled model aircraft. Any one with money interested? Pushing this frontier is comparable in cost as to high power reload casing and fuel?

RUBBER BANDS: I am always on the look out for hard to get small rubber bands. These bands are used in various rocket gliders to deploy the wing.

I have seen small rubber bands at Giant Eagle displayed with ethnic hair products. I recently saw even smaller rubber bands (the size used with teeth braces) at The Pet Corral in the Jonnet Plaza Monroeville. These bands were displayed along with dog hair bows. Next time you see a cute dog with a hair bow, that bow is held on with these small bands. Price about \$1.29 for a small bag.

See you at the next launch!
Mort Binstock NAR 27182



Phoenix water lands after successful flight!

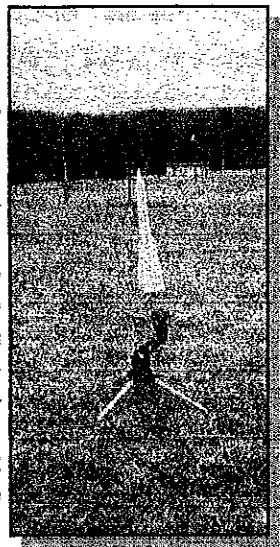
**Vinter Vunderlaunch III
Reported by Francis Graham**

The January, 2000 sport launch at Camp Lutherlyn, near Prospect, PA, was unusual for a winter launch--no snow!! Snow had been on the ground for the previous two Vinter Vunderlaunches--at Seven Fields in 1998 and Camp Lutherlyn in 1999. But not this time! Well, grumbling about global warming won't do any good unless you own a major oil company, so we just have to look on the bright side--at least we had gusty winds and chilly, falling temperatures!

The launch was not well attended--maybe the lack of proper winter conditions kept many away. I mean, who would go to a beach party without a beach? Or a food fight without food? So I imagine a Vinter Vunderlaunch without a wintery snow was a turn-away. Nonetheless, the Pittsburgh Space Command did have some regulars there. Prez Rod Schafer did his duty and brought a launcher, although not the big rack customarily used. Section Advisor Art Nestor Art Nestor also did his duty and was present to advise those who needed it--and requested it. Dick Freed, the editor of the PSC's excellent pub, *Team Pittsburgh*, was also there.

Mort Binstock brought a small number of vintage rockets, including the tiny *Streak* with the red nose that not quite 35 days prior--seems like a century ago--klunked down on a roof and required retrieval. He also fired a *Hercules 2* (quiz question: who made that kit?) and the *Gyroc*, the quasi-amazing twisting-recovery rocket that gyroked into our hearts so long ago.

The Wasilewski family also made the day work for them, though they often waited blue-lipped and shivering for the cold north wind to subside, as if King Boreas himself needed a breather. Their nice *Python* did a mid air separation; the booster got a bit stubbed upon landing like a cigarette in a prematurely-ended smoke. Their two stage *Longshot* flew very impressively, both stages recovered nice in a farm field. They launched their *Phoenix* twice, and it worked well both times. Last but not least, up went their LOC *Initiator* on a G reload, but down it went when the ejection charge malfunctioned. The thuddaceous impact cracked the nosecone. Luckily I'd been carrying around the nosecone from the *Zontar* prang since November,



it fit Cinderelleanly into the wanting body tube and made me happy to help them restore their rocket. I must clean my car more often.

Christine Rial was there and flew a few of her smaller birds. Dave Gibson, the only other Tripoli Pittsburgh member besides Tom Blazanin and I to ever attempt a monocopter, came by also, but decided not to fly his nice two-stage rocket in the high winds. I don't blame him; it's a long way to chase a parachute to Tipperary. (Quiz question: where is Tipperary?)

Speaking of monocopters, I flew two, in spite of the gusts. Like the Wasilewskis, I had to patiently wait for pauses in the wind. The styrofoam wing YT-18 *Samara*, a *Melpomene* duplicate, flew better than ever at Lutheryn at last. But the better was the XT-17 *Polyhymnia*, refabricated with a rack-engine power-pod—an idea from Joe Peklicz. It had a nice slow windup, takeoff to about 10 feet over the ground, and then a chopping descent. Thanks for the idea, Joe! It worked the first time! I was so happy—so redeemed—I forgot all about the two conventional rockets I was going to fly.

In spite of no snow, we all had a great time. Hopefully next year we'll have some really boss winter conditions for our Vinter Vunderlaunch. Maybe a couple of feet of icy hardpack and howling arctic gales and frigid sleet. Then we can all stare at each other through hoarfrost-covered eyelashes and wonder which of us is going to even attempt *one* rocket. Now that would be a real Vinter Vunderlaunch!

Contest Schedule — PSC Regionals

April 15-16 "Rocket into Spring VI"

- 1/2 A Helicopter Dur
- 1/2 A Rocket Glider Dur
- A SuperRoc Dur
- B Streamer Dur (MR)
- C Eggloft Duration

May 20-21 "Keep 'em Flyin' High VI"

- 1/4 A Parachute Dur (MR)
- 1/2 A Helicopter Dur
- A Boost Glider Dur
- B Streamer Dur
- C SuperRoc Duration
- Set Duration (40 sec.)

June 10-11 "Reach for the Sky XII"

- 1/4 A Boost Glider Dur
- 1/4 A Helicopter Dur
- 1/2 A Streamer Dur (MR)
- B SuperRoc Dur
- C Eggloft Duration

October 15 "Fall Flyer VII"

- 1/4 A Flexwing Dur
- 1/4 A Helicopter Dur
- C Dual Eggloft Duration
- Random Duration
- (2000-2001 Flying Season)

MAKE A WIND SPINNER

PARTS NEEDED

- 1/2" balsa (drill four 1/8" holes)
- REG. SILE FASTER EGG (Plastic) (3)
- SMALL E.E. (CAP)
- 1/2" x 3/16" WOOD DOWEL (Sharpen end)
- 1/4" x 5/8" WOOD DOWELS (3)
- WIRE COAT HANGER (1)
- PLASTIC STRAW 2 1/4" (SMALL STIRRER TYPE)

ASSEMBLY (FULL SIZE) SIDE VIEW

TOP VIEW

2/1/00
DESIGN & DRAWN BY:
Johnson Park
425 S Lane Hwy
Marble Ferry, OH 43028-1228

STRANGER

IMPORTANT!
ADD 1/2 oz. NOSEWEIGHT
FOR A STABLE FLIGHT

FAST BUILD
NEARLY UNBREAKABLE

PNC-20
FLAT BLACK

TIP: USE TESTORS CEMENT
FOR WOOD MODELSON THE SHROUD.
IT WON'T WARP THE PAPER.

EVERYTHING IS
FULL SIZE

REC. ENGINES

B6-4
C6-5

CARDSTOCK SHROUD

PRE CURL
W/ PENCIL

1/2" x 18" SHOCK CORD

SC. MOUNT

6" BT-20
GOLD

MOTOR BLOCK
2 1/2"

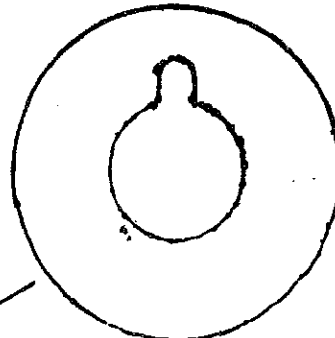
Better
(TAKE YOUR PICK)
CG. W/
C6-5 INSERTED

CA.

1/8" L.L.

FLAT BLACK

OVERLAP TAB



CARDBOARD RING
(EVEN WITH END OF TUBE)

1/11/00

DESIGN & DRAWN BY:

Joseph Peklicz
635 S Zane Hwy
Martins Ferry, OH 43935-1236



RECOVERY: STREAMER OR 9" CHUTE (ASPHALT)

DESIGN & DRAWN BY:



Joseph Peklicz
635 S Zane Hwy
Martins Ferry, OH 43935-1236

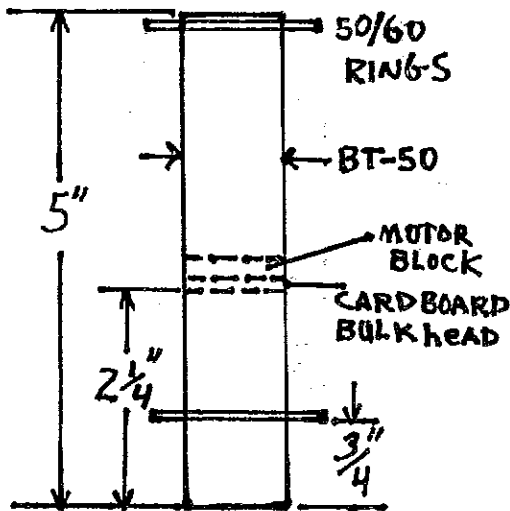
PSYCLONE 2

AMAZING GYROC RECOVERY!

1/7/00

①

MOTOR MOUNT ASSEMBLY



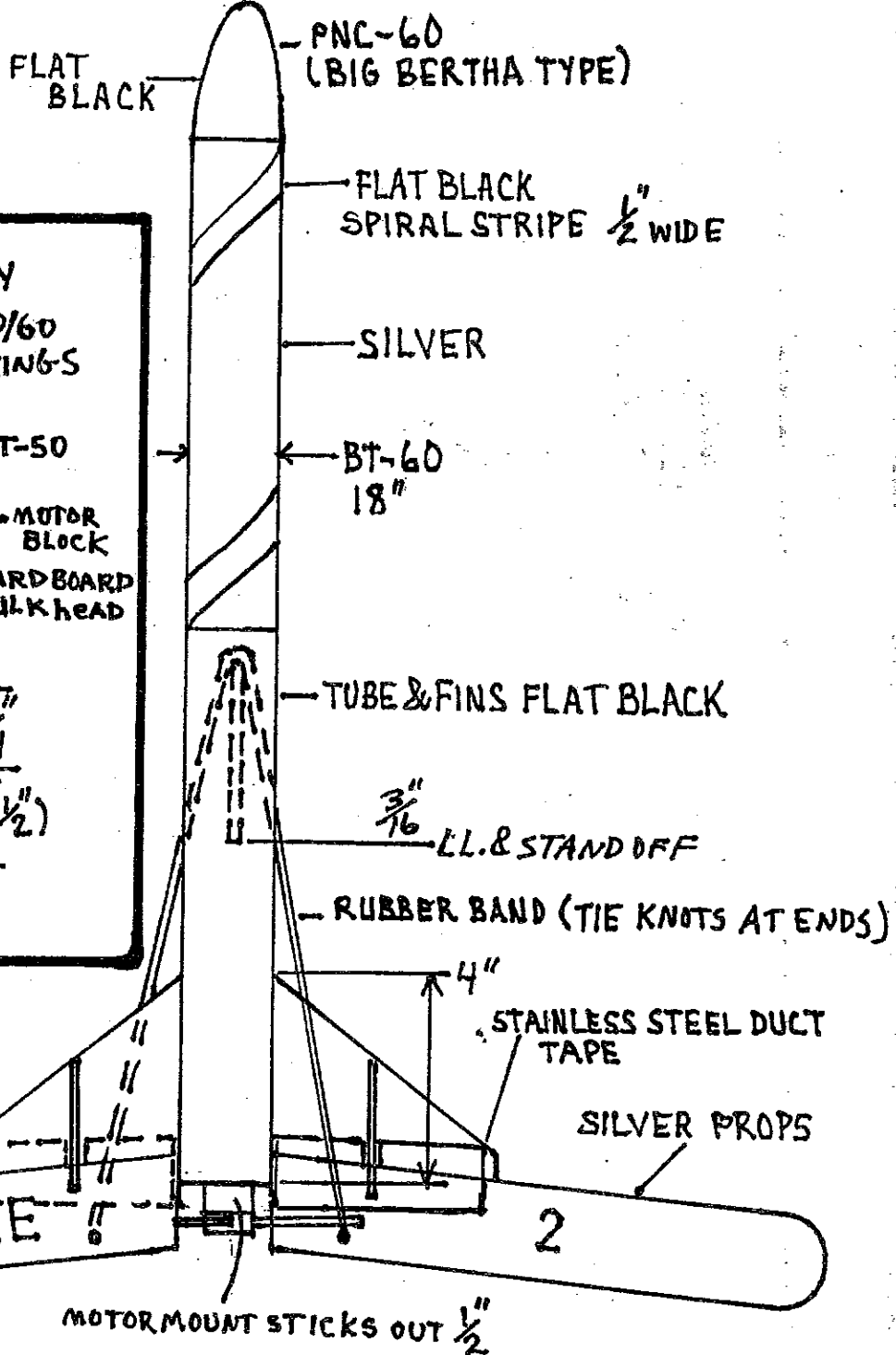
(MOTOR STICKS OUT 1/2")
D12-5 EJECTS AT
APDGE

3/4" RED VINYL LETTERS
& NO.

PSYCLONE

2

MOTOR MOUNT STICKS OUT 1/2"



PNC-60
(BIG BERTHA TYPE)

FLAT
BLACK

FLAT BLACK
SPIRAL STRIPE 1/2" WIDE

SILVER

BT-60
18"

TUBE & FINS FLAT BLACK

3/16" LL. & STAND OFF

RUBBER BAND (TIE KNOTS AT ENDS)

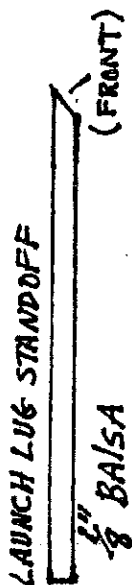
4"
STAINLESS STEEL DUCT
TAPE

SILVER PROPS

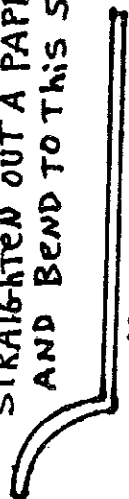
PSYCLONE 2 FULL SIZE PATTERNS

Joseph Peklicz
635 S Zane Hwy
Martins Ferry, OH 43935-1236

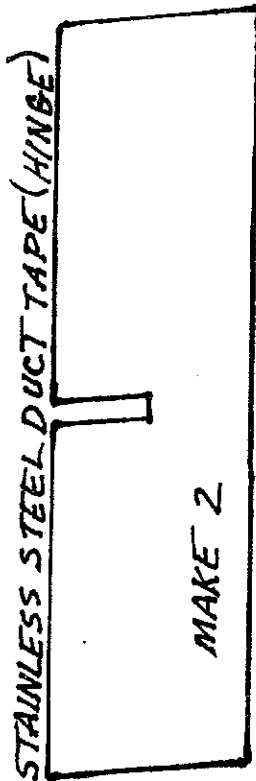
117100 (2)



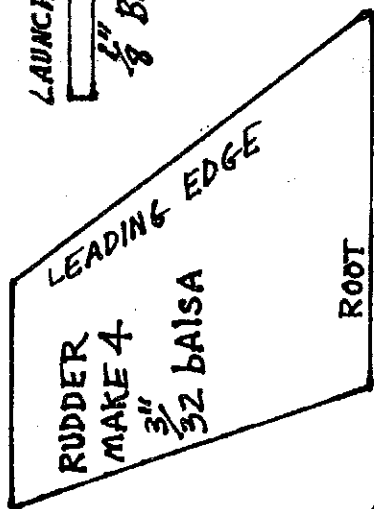
STRAIGHTEN OUT A PAPER CLIP AND BEND TO THIS SHAPE



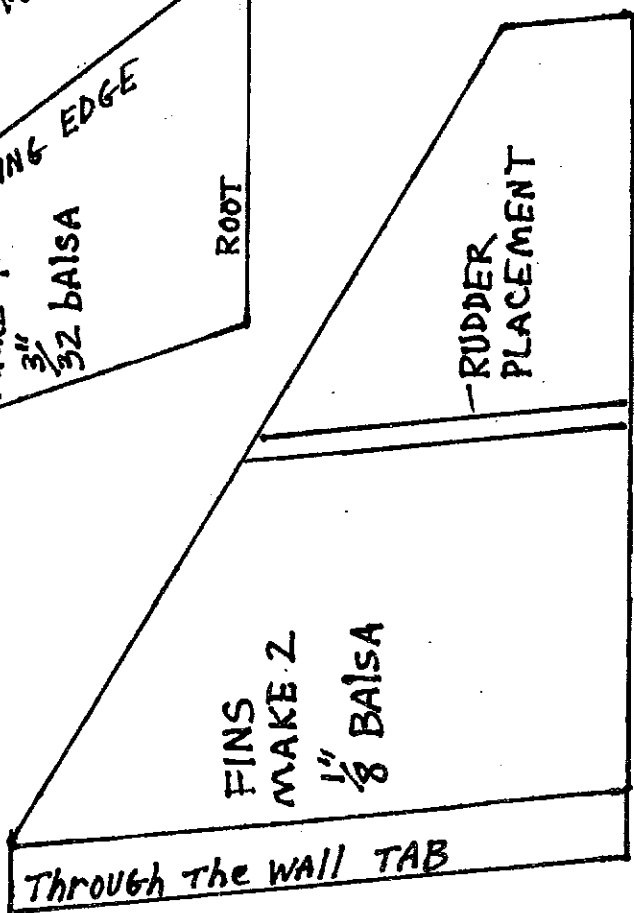
MAKE 2
TIP. BEND IT AGAINST A SPENT "D" MOTOR



MAKE 2



FINS MAKE 2
1/8 Balsa



LEADING EDGE

PROP MAKE 2
1/8 Balsa

DEPRESSION FOR PAPER CLIP
(USE 5 MIN. EPOXY)

o - hole for RUBBER BAND

NARAM-2000 -- Come Fly at Estesland!

By Tim Van Milligan

This year, the two Colorado clubs of C.R.A.S.H. (Denver) and C.O.S.R.O.C.S. (Colorado Springs) will be hosting NARAM. The dates are July 29 through August 4, 2000.

The primary purpose of NARAM is to host a rocketry competition championship to select the best modelers in different age brackets, as well as the best teams and clubs. The events in this contest are:

Research and Development

Giant Sport Scale

D Engine Superroc Altitude

4XA Engine Cluster Altitude (no airstarts and no boosted darts allowed)

C Engine Eggloft Duration

1/4A Engine Parachute Duration (Multi-round)

A Engine Boost Glider Duration

B Engine Streamer Duration

1/2A Engine Helicopter Duration

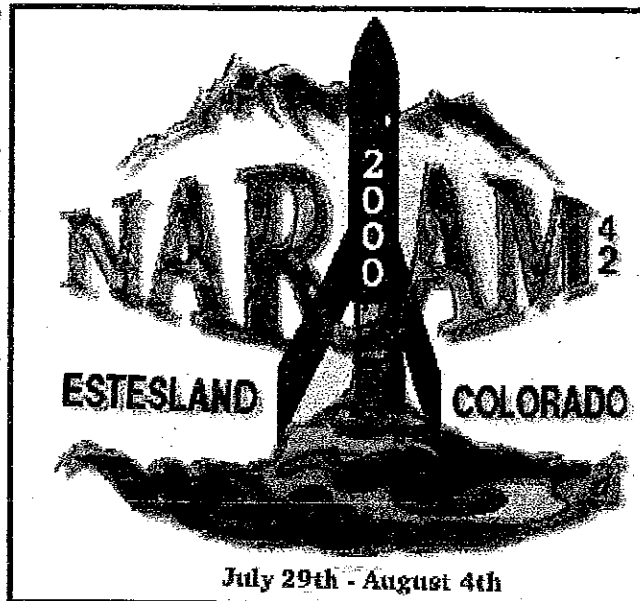
D Engine Rocket Glider Duration

The rules to these contest events can be found on the NAR's web site at: www.nar.org. The Contest Director is Ken Mizoi. He can be reached at (303)-368-5209 or email: kenmizoi@rmi.net.

The site for NARAM-2000 is a 400 acre field that is owned by Vernon Estes, the original founder of Estes Industries. In honor of Vern, the site has been named "Estesland" by the two host clubs. Estesland is located between the two Colorado cities of Cañon City, and Penrose. It is about 38 miles southwest of Colorado Springs.

On rocket range number two at Estesland will be the sport and high power field. The sport launch starts the weekend before the contest and runs the entire seven days of the event. The large field can handle most any size models, and a waiver to 10,000 feet AGL will be in place throughout the week, with windows to even higher altitudes available. All NAR and Tripoli certified motors will be allowed on the range. But if you plan on launching a rocket with a motor larger than a K class, you will be required to submit details to Ken Mizoi by July 1.

NARAM-2000 will also play host to an educational rocketry convention. At this special convention, teach-



ers from all over America will come in and be taught how model rocketry can be used to motivate students to learn. They will be taught the finer points of rocketry like: how to track a rocket to measure its altitude, using a computer to design a rocket, and how to perform a launch with large groups of students. If you know a teacher that would like to attend and who needs some extra college credit, please let them to visit the NARAM 2000 web site.

At this time, the two clubs are setting up a variety of special events to coincide with the

NARAM launches. This will include tours of the factories where the real space launch vehicles are assembled. More information on these activities and other exciting events will be forthcoming, and will be posted on the special web site: www.naram2000.org

Registrations for NARAM-2000 are now being accepted. You can download a .pdf file registration form from the NARAM web site, or you can use the one that will be printed in the March/April issue of *Sport Rocketry Magazine*. Finally, you can also call the Contest Director, and request a registration form.

The official headquarters of NARAM-2000 is the Cañon Inn (tel: 719-275-8676). The rooms at this hotel have already sold out, but there are plenty of other motels that are close by. The NARAM-2000 web site contains alternate lodging information and info on local attractions. If you don't have access to the internet, please contact the Cañon City Chamber of Commerce at: 1-800-876-7922 and ask for their free vacation guide. It lists all the lodging choices, and all the great tourist attractions in the Fremont County area.

Additionally, we have made arrangements at a nearby prep-school to accept lodging accommodations for attendees. For as little as \$15 per night per person, you can stay at the Holy Cross Abby dormitories. For reservations, call Paula Sheagly at: 1-888-588-8631 ext 239.

We urge people that are interested to make hotel reservations by early spring, as summer in Colorado is peak tourist season, and hotel rooms become filled quickly.

This event is open to all modelers, teachers, students, and space enthusiasts. It is not necessary to participate in the contest to enjoy all the activities surrounding this big event.

**NAR & TRA File Suit
against BATF
(press release)**

The National Association of Rocketry (NAR) and Tripoli Rocketry Association (TRA) on Friday, February 11, 2000, jointly filed a four count civil complaint against the US Bureau of Alcohol, Tobacco and Firearms (ATF) in Federal District Court in Washington, D.C. We have not taken this action lightly or without a full and lengthy review, with counsel, of the available options for resolving our dispute with ATF. This action became necessary only after repeated meetings and exchanges of correspondence with ATF made it clear that ATF intends to proceed with rulemaking on rocket motors that is both onerous and unnecessary.

TRA and NAR assert that ATF has no legal authority to regulate sport rocket hobby motors, which have been used safely for decades and which are already heavily regulated by other US Government agencies. We are seeking both declaratory judgment preventing ATF regulation of these motors, and full recovery of the costs of the litigation to resolve these issues. A full copy of the complaint may be found at our website (www.nar.org, www.tripoli.org).

We are not at this time encouraging media coverage of this issue, but if you receive an inquiry, please refer all media inquiries to John Kyte of our Washington counsel team at 202-530-4557. We respectfully ask for your understanding that the sensitive nature of litigation requires that we limit media interaction to a single point of contact.

Mark B. Bundick Bruce E. Kelly
NAR President Tripoli President

**Notes From the Prez
By Rod Schafer, PSC President**

A report on the February sport launch at Camp Luthertyn...

On February 20th, seven die-hard Rocketeers showed up for PSC's monthly club launch. Those attending were Francis Graham, Steve Foster, Richard Freed, John Pace, Mort Binstock, Dave Gibson, and myself. The weather was down right cold, with snow flurries in the air and a hard crust of ice covering a couple inches of snow on the ground. A total of 4 flights were made, and get this, they were all gliders! Mort flew a Edmonds rocket glider on a A10-3T that made a few nicely trimmed circles overhead and landed downrange, coming to a sliding stop on the hard covering of ice. Next up was Steve with a competition style Rocket Glider on a C6-3. Steve and the rest of us doubted it would get very much altitude on boost due to its size. The glider proved us wrong! Upon launch it boosted about as straight as an arrow and attained a respectable altitude. The glider transitioned into glide mode and the wind carried it downrange and into the trees where we lost sight of it. Steve and John went out to search for it but came back empty handed.

Lastly, I flew two micro-sized Boost Gliders (length 5") on 1/8A Micro Maxx motors. Boost was around 50 feet on both flights, however the wind was too strong for these little gliders and the first glider was tossed around like a falling leaf. The second glider never got a chance to be tossed around, it stayed attached to its pod and Red Baroned to the snow covered ground. Hopefully the weather will be a little calmer next time and I'll give the gliders another try.

A big Thank you to Dave for bringing out his portable propane stove and heating up water for some "on the spot" hot chocolate and a dozen donuts to go with it. It was a very nice touch to a cold winter afternoon.

Until next time...
Fly'em High,

Rod

Dragon's Fire Launch information:

All Dragon's Fire launches will be conducted according to following guidelines:

FAA waiver: 5,000 ft AGL

Flyer's fee: \$5.00 (per flyer or family)

Set-up: 8:00 AM

Flyer's meeting: 9:00 AM (range opens following meeting)

Range closes: 5:00 PM

Only Tripoli or NAR certified motors may be used.

Up through I-range motors permitted without advance application.

J-motor flights require advance application/approval, subject to launch day flying conditions.

Contact Prefect Ken Good to apply for J-motor flights.

Important Note: Due to the launch site's proximity to an interstate highway, the RSO will reserve the right to lower the permitted motor range and/or limit launches as required by conditions.

**PSC
Launch Windows 2000**

LUTHERLYN:

- MAR 19: SPORT LAUNCH**
- APR 15-16: REGIONAL CONTEST**
- APR 16: SPORT LAUNCH**
- MAY 20-21: REGIONAL CONTEST**
- MAY 21: SPORT LAUNCH**
- JUN 10-11: REGIONAL CONTEST**
- JUN 11: SPORT LAUNCH**
- JUL 16: SPORT LAUNCH: MELVIN VII**
- AUG 20: PICNIC SPORT LAUNCH: R&R VI**
- SEP 17: SPORT LAUNCH**
- OCT 15: REGIONAL CONTEST & SPORT LAUNCH**
- NOV 12: SPORT LAUNCH**
- DEC 10: SPORT LAUNCH**

CONTESTS BEGIN AT 10 A.M., SPORT LAUNCH AT 1 P.M.

JONESTOWN: (DRAGON'S FIRE)

- APR 29 — DF XIV**
- JUN 3 — DF XV**
- AUG 5 — DF XVI**
- SEP 30 — DF XVII**
- OCT 28 — DF XVIII**

SEE INFORMATION ON DF LAUNCHES ELSEWHERE IN THIS NEWSLETTER.

CANON CITY, CO

JUL 29 - AUG 4 — NARAM 42

GENESECO, NY

NAR NATIONAL SPORT LAUNCH

Map to Dragon's Fire Launches At Jonestown Site

FROM I-79: Take I-79 south to Washington, PA. Take exit for I-70 East (Toward New Stanton). Continue for approximately 20 miles to Exit 13.

FROM PA TURNPIKE: Get off at Exit 8, New Stanton, and follow I-70 West for approximately 23 miles to Exit 13.

AT EXIT 13: Follow route 481 for 0.2 miles to Grange Road. At this point, look for signs that will direct you to the launch area that will be used for the day.

Map to Camp Lutherlyn PSC Launch Site

FROM 422 —
Get off at Prospect exit (528) and head south. Continue to blinker light about 0.3 miles from exit. Go straight through this intersection. Continue south on 528 for approximately 3 miles — look for a sign on the east (left) side of the road which says "Lutherlyn Rustic Retreat Center". Turn left onto dirt road and continue approx 1/4 mi to the launch site.



July 29th - August 4th

CONTEST EVENTS:

- Research and Development
- Giant Sport Scale
- D Engine Superroc Altitude
- 4XA Engine Cluster Altitude (no airstarts and no boosted darts allowed)
- C Engine Eggloft Duration
- 1/4A Engine Parachute Duration (Multi-round)
- A Engine Boost Glider Duration
- B Engine Streamer Duration
- 1/2A Engine Helicopter Duration
- D Engine Rocket Glider Duration

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