



CIA
CENTRAL ILLINOIS AEROSPACE

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Greg Smith preps his Et 2. Photo by Jonathan Sivier.

GARLO 2007

By Jonathan Sivier

The theme for GARLO 2007 was “The Golden Age of Model Rocketry”. This was in honor of the 50th anniversary of beginning of model rocketry as a hobby. To celebrate this we

had contest categories based on classic model rockets. We set the cutoff date for a kit to be considered as a classic as 1975. In addition we had a separate category for Sputnik models to celebrate the 50th anniversary of the flight of Sputnik.



Lon Westfall's Estes Interceptor, an original from the early '70s, lifts off. Photo by Greg Smith.

The wind was light, but it was from the east, so we ended up setting up the range head near the north-east corner of the south half of the park. This meant carrying the equipment out

into the field. Other than that it was a fairly good day overall.

There were many fine flights during the course of the day. Here are the ones that were given awards.

Best Looking

1. Greg Smith's Et 2
2. Lon Westfall's upscale Estes Bandit
3. Alan Carroll's Jules Verne
4. David Harris' Aerotech Phoenix

Best Flight

1. Lon Westfall's Hawk Mountain Transonic II on an H999
2. Chris Deem's Chief Cherokee on a Rocketflite H220 SilverStreak
3. Will Carney's Mongoose BB 2 stage on D12/B6-6 combination
4. Ben Evans' Estes Eagle boost glider

Best Classic Kit

1. Lon Westfall's Estes Interceptor
2. Chris Deem's Estes Gyroc
3. Jonathan Sivier's Centuri Mach 10
3. Chris Deem's Centuri Laser X, signed by Lee Peister
4. Jonathan Sivier's Estes Star Blazer on an Estes A5-4S from 1971

Best Classic Clone

1. Greg Smith's Estes Cobra on 3 x C6-7
2. Greg Smith's Estes Orbital Transport on a C6-3
3. Chris Deem's Carlisle Roc-A-Chute Mark I on an A3-4T
4. Greg Smith's Estes Alpha on a C6-7

Best Classic Upscale

1. Chris Deem's Chief Cherokee on a Rocketflight H220 SilverStreak
2. Lon Westfall's Hawks Hobby upscale Bandit on a Roadrunner F45-5
3. Chris Deem's Cherokee II on a Roadrunner F45-5

Closest Landing To Marker

1. Alan Carroll – 30 units from the marker.

2. Daniel and Andrew Steltzer – 32 units.
3. Laura Brandt - 35.5 units.
3. Chris Deem - 35.5 units.

Editor's note: Chris Deem forgot to bring the measuring tape used to determine the closest landing to the marker. So we used some of the Caution tape. The units are repeats of the word Caution on the tape. It was approximately 1 foot.

Sputnik

1. Chris Deem's 8" Sputnik-Too!
2. Jon Sivier's Spudnik
3. Chris Deem's 6" Sputnik-Too!



Liftoff of Christopher Deem's upscale Sputnik-Too! replica. Photo by Greg Smith

There were a few Prang awards given out for flights that went less than perfectly. Will Carney was given a 1st place Prang award for his Flame Delta on a Roadrunner G80 when the motor and motor mount shot out of the saucer while it remained on the pad. Another 1st place Prang was given to Mark Smith for his Cosmic Cobra which lawn-darted.

A 2nd place Prang award went to Brian Smith for his unstable Space Ship 1 model. A 3rd place Prang went to Preston Harris for his Totally Tubular which was unstable on its first flight and, surprisingly enough, still unstable on its second flight. ☺

Another flight that didn't go quite as planned was Lon Westfall's Hawk Mountain Transonic II on an Aerotech H999. It flew fine, with an amazingly fast takeoff, but it came down on the power lines along Bradley on the south edge of the field. After much trouble the power company did recover the rocket. Hopefully we can avoid having this happen again in the future.

GARLO 2008

"50 Years of U.S. Spaceflight"

The Great Annual Rocket Launch Of 2008 will be held on Saturday, June 28, 2008. It will run from 10 a.m. to 4 p.m. at Dodds Park in Champaign. This is our biggest annual event, a purely-for-fun rocket launch. We will be awarding ribbons and prizes for winners of 7 fun events.

Since this year is the 50th anniversary of the founding of NASA the main theme for the day will be "50 Years of U.S. Spaceflight." Any models of rockets used by the U.S. in the space program will be eligible to win awards.

The main event will be Best Scale Model of any rockets from the U.S. space program. Then we will have two secondary events. In keeping with our theme of the early years of the space program and rockets of the 50's we will be awarding ribbons for the best model of a rocket designed by or inspired by Wernher von Braun. This will include the V-2 of course, as well as the Russian rockets derived from it. The other contest will be for the best looking and most imaginative rocket in the style of the 50's, with big fins, etc.

Then, of course, there will be the events we hold every year, Best of Show (Static), Best of Show (Flying) and Spot Landing (uncontrolled

and controlled). We also have a large number of "Prang" ribbons as consolation prizes. It should be a great day of flying and I hope everyone will plan on being there.

Dances With Rockets

By Jonathan Sivier

In December of 2007 I was hired to teach English Country Dancing at a dance camp called Terpsichore's Holiday run by the Lloyd Shaw Foundation at a resort in West Virginia between Christmas and New Years. They also like to have various arts and crafts workshop, especially for the kids, at these camps and when the organizers learned that I was involved in model rocketry they thought a model rocket workshop would be fun and interesting for the kids. So for four afternoons I taught a dance class in one room and then went across the hall and led a model rocket building workshop.

The kids were very excited to be building and flying real rockets. The girls in the class thought some of the small rockets that I brought to show, like my Estes Mosquito and my 6 inch scale model of the V-2, were, "So cute!"



The kids show off their rockets just before the launch. Photo by Wendy Gregory.

We started out with 16 kids between the ages of 10 and 12 in the class. Due to illnesses and some other unfortunate events 3 of the kids had to drop out. However the remaining 13 completed and flew their rockets.



Three of the rockets on the pads, ready to go. Photo by Wendy Gregory.

The rockets used for the class were Estes Generic E2X kits. We flew them on A8-3 motors. In case of bad weather I brought along a bunch of Flis Kits Nebula paper rockets for the kids to cut out, assemble and decorate. I also brought a stomp rocket launcher so we could fly them indoors if need be. However the weather ended up be fairly good during the time we were there, and very nice for that time of year on the day we launched, so I didn't need to use the paper rockets.

The class periods were one hour and we spent the first two days building the rockets. Most of the kids did an excellent job of following instructions and getting their rockets together correctly. A couple of the shock cord mounts were inserted into the body tube backwards, but that didn't cause any real problem. One kid put the motor clip on incorrectly so that the clip was hanging over both ends of the motor tube, rather than being offset. I don't think he had his motor block in place at all, or if it was I'm not sure where it was glued. With a little bit of persuasion with a pair of pliers I was able to get a motor into the motor mount, but I'm not sure if it will be possible to get it out. It certainly won't come out without a lot of effort.

However my primary intention was that everyone would get at least one flight with their rocket, so getting the motor in was all I was concerned with.

During the third class period the kids decorated their rockets, which were all white, with markers and stickers. Some were very imaginatively and colorfully decorated. While they were working on their rockets I showed our introductory slideshow and some of Greg's rocket videos on my laptop computer. The kids were very impressed by the videos.



One of the rockets taking off. Photo by Wendy Gregory.

On the fourth day, New Year's Day, we flew the rockets during the class period. Luckily it turned out to be a very nice day for the time of year. The temperature was around 40, the wind was light and the sky was clear. We set up in a location that seemed to make sense based on the wind direction, but just as we began to launch the wind shifted. When one of the first rockets landed in a tree we moved the launch pads to try to compensate for the new wind direction. This mostly worked. We had another rocket land in a tree and another landed on the roof of the nearby park building, but it was recoverable. The rest of the rockets flew without incident. There were no failures of the recovery systems and no lawn darts or other prangs.

All in all the class was very successful. It was quite a challenge to oversee a class of young kids like this, even with the assistance of Wendy Gregory and a few of the parents. However after all of the rockets had flown successfully I felt very good about the whole experience.

Rocket Memories

By David Harris

The recent request from the NAR for a historical look at the club sent me down the memory trail of my rocketry experience. While I had launched rockets previously (I first shot off a Big Bertha for my 7th grade science project in Decatur IL in 1968), my earliest recollection of a launch in Mahomet/Champaign was in my 8th grade science class at the old Mahomet Junior High School. It was mid-September, 1969.

As I recall, I needed to set up for the launch ahead of time so I was allowed to leave math class early. Mark Page (we were both new in school) came up and handed me a motor, a B4-6 if memory serves. So as I left class, I made Mark my 'wingman' and he got out early as well. We met my dad in the front of the school and drove around to the football field. It was a blustery fall day so we set up at the north end of the field. I had two rockets, an Estes Falcon and my trusty orange Big Bertha. I had just placed the Falcon on the pad loaded with Mark's motor when the wind blew it over, breaking the launch lug off (lug issues would continue to haunt me for years) and damaging one of the wings. So I prepared Big Bertha.

However, I had only had packed C6-3s, the wrong motors for a windy day. We decided to use the B motor-definitely the wrong motor for a Bertha, but the show had to go on. The bell rang and a few minutes later, the class appeared. I did a little demo speech and it was time. Back then, we used the old reliable direct method of ignition. Hood up, 12 volts, 300 amps through 14 gauge zip cord. It always worked.

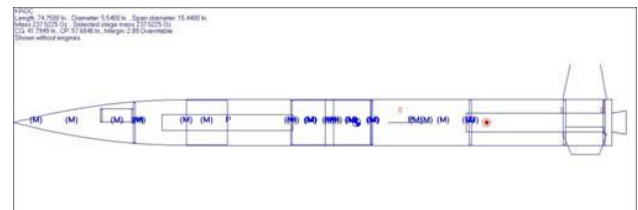
Bertha went up maybe 200 feet, slowly rolled over, started down and kept coming down. It was heading right into the middle of the crowd that had gathered on the football field to retrieve it.

We've all experienced it at some point; that gut feeling that this was not going to end well and there is nothing you can do except hope. And even hope runs out when trees and houses enter your line of site. I'll never forget that image: a group of clueless 8th graders reaching up to catch a fluorescent orange Big Bertha at terminal velocity.

Suddenly at 15' above the ground, there was a 'pop'. The long delay had worked, the chute snapped open and somebody caught it. Everyone cheered and clapped.

We had impressed our classmates. Or at least we had cemented our status as rocket nerds. It was good day!

Editor's note: As Dave says the NAR is putting together information on the history of the sections for its 50th anniversary this year. Accordingly we have been working on putting together the story of the CIA. Our club has its roots in three separate groups of kids who flew rockets in Champaign, Urbana and Mahomet in the 1960's and 70's. I hope to include the finished article in a future edition of The Informant.



The RockSim plan of Tim Dixon's Level 2 Loc IROC.

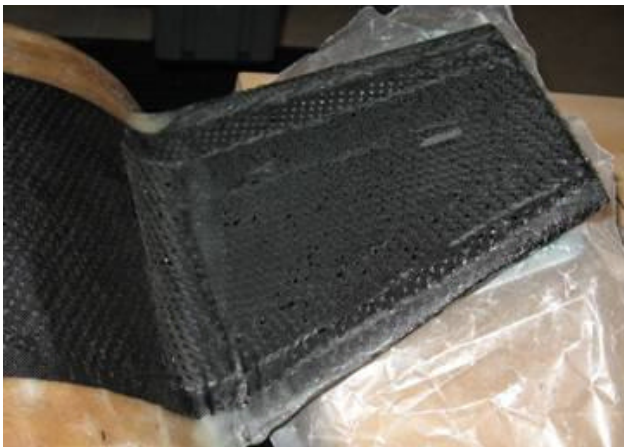
High Power Level 2: Part 1

By Tim Dixon

My interest in completing my Level 2 High Power certification started within a week of getting my Level 1 certification when I saw a

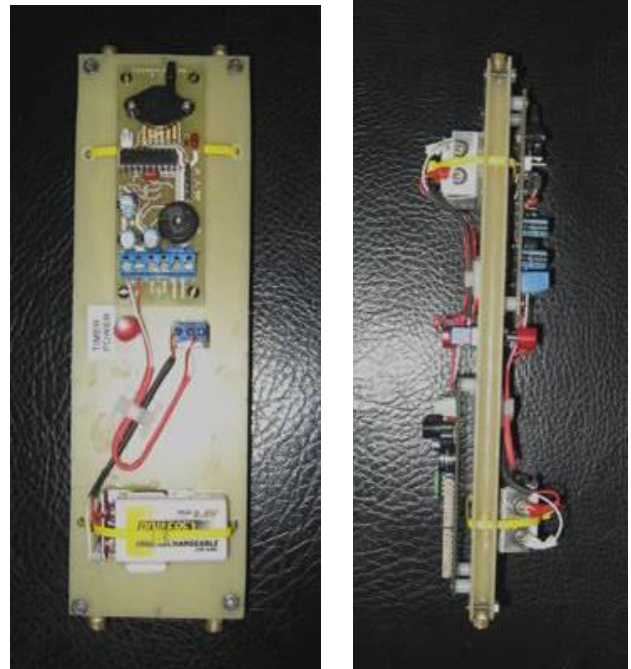
LOC IROC kit listed in an auction on Rocketry Online. The kit was customized by adding a payload bay along with an upgrade to a 54mm motor mount. That combination seemed to fit well with the 5.5" airframe. Considering it was listed at a decent price, I thought I might as well move forward in high power. Unfortunately best intentions don't always work out. I ended up moving three times in a two year period and the kit stayed well packed and padded in a big box. During those two years though, I picked up many of the additional parts I would need including a custom motor retainer from Rowe's Retainers in Great Britain, a LOC electronics bay, some carbon fiber cloth, a Missileworks PET2 timer and a set of 54mm motors. Also in the meantime I was able to spend time with RockSim and plan, and re-plan the build. The diagram above shows the high-level design.

Finally early last year I reached a point where I could begin to unpack some boxes. As I lined up all the parts, I really began to get excited. Then looking at the fins I began to get worried. I realized that somehow the dimensions I had been using for two years in my simulations were wrong with the fins actually being about 2/3rds the size I had been modeling. I'm not sure how this occurred. It may have been a holdover from a downloaded RockSim file from www.rocketreviews.com. However, regardless of how it happened, the original design now became marginal and I would have to be careful during the building process and continually check the actual build weights.



Carbon fiber on the IROC's fin. Photo by Tim Dixon.

In addition the fin material was only 1/8" plywood versus my assumed 1/4". This fact made me go out and purchase FinSim to do some modeling of the fins and their susceptibility to flutter. I found that the geometry along with the thin material would be a problem exhibiting flutter at approximately 600 feet per second with only a 5 degree angle of attack. This limitation would keep me from flying anything larger than a small J-motor so, although I had been debating it for some time, I decided to reinforce the fin area with fin-to-fin carbon fiber (along with the layers of fiberglass already planned for the airframe and fin area). A picture of the carbon fiber application on the fin can in a nearly completed state is shown.



The electronics sled. Photos by Tim Dixon.

Another area that was of some concern was the electronics bay. Although I had done dual deployment a number of times before, this would be the first time I had done dual deployment with redundant electronics. I had much experience with my original altimeter, a Transolve P6K, but I had purchased a Missileworks PET2 timer as my backup controller. In the end, I found the Missileworks timer to be easy to use, but the parameter range was somewhat limited, as expected, since it was designed mainly for staging and air starts. Yet

with my planned motor, a J460T, after a number of simulations, I was confident that the dual timer parameter ranges would work just fine for both the apogee and main deployment backups.

I decided to use a sandwiched construction for the internal electronics sled with the power pushbuttons mounted on the board and accessed through the sampling ports. Although in past designs I used either a shunt or a disconnect for each e-match connection, I decided to forego this added feature and simplify the internal wiring. A couple of pictures of the electronics sled are shown above, along with a picture of the aft end of the electronics bay itself.



The aft end of the electronics bay. Photo by Tim Dixon.

In the next newsletter don't miss Part 2 of this article. I will discuss both the innovation and mistakes I made in the recovery system; and then finally a report on a nail-biting maiden flight.

Goddard and Stumpy

By Mark Page

Episode eight was a collaboration between myself and my brother Ward. I have never seen this attempted....at least not this way. One of my 2 fans didn't get the punch line "Roz Well AFB NeX Tegzit gasfoO dLodging 10-11.77 LiteYEe RZ" Read it quickly and you should recognize the classic roadside billboard written for alien visitors. I actually did the math on the 10 to the minus 11.77 light years. It should be

about 20 miles, or maybe 100, ah heck, what's a few light years here or there. (On page 9)

Other Clubs

Tripoli Central Illinois

The Tripoli Central Illinois folks launch from November to April at the Tuscola Airport on various Sundays. They have a 10,000' waiver. Newcomers are always welcome. They do require that people who fly motors larger than G be NAR or Tripoli members with insurance.

Contact: Don Reasor

Phone: 217-253-2586

Email: Don.Reasor@netcare-il.com

http://www.tripoli.org/launches/TRA_Central_IL.shtml

Fox Valley Rocketeers

Monthly launches and meetings. Northwest of Chicago.

<http://www.foxvalleyrocketeers.org/>

Illinois Society of Amateur Rocketry

Monthly launches and meetings. Suburban Chicago area.

<http://www.isar-rocketry.com/>

Northern Illinois Rocketry Association

NIRA holds regular launches in the Chicago area

<http://www.NIRA-rocketry.org/>

Peoria Area Rocket Society

PARS is a model rocket club serving Peoria, IL and surrounding communities.

<http://www.piars.us/>

NAR of the Quad Cities

Tripoli Quad Cities

Model and High Power rocketry for Eastern Iowa and North Western Illinois.

<http://www.tripoliquadcities39.com/>

Tri-State Rocketry

Serving Quincy, Illinois and surrounding communities.

http://www.geocities.com/tri_state_rocketry

Indiana

There are various clubs in Indiana who hold regular launches.

<http://www.indyrockets.org/>

St. Louis

The St. Louis Rocketry Association holds model and high power launches approximately monthly.

<http://www.stlouisrocketry.org/>

Local Vendors

Here are some local places to get rocketry supplies.

Hobby Lobby: 2102 N. Neil St. in Champaign near Market Place mall. Check the paper and their web site for occasional 40% coupons. <http://www.hobbylobby.com/>

Leisure Time Pet & Hobby: 807 N. Mattis.

Rocket R&D: Call Gary Buck at 217-841-4777 for parts.

Slot and Wing Hobbies: Just north of I-74 on the east side of Prospect.

Call for Submissions

If you have something to share with the other members we would love to hear from you. Possibilities for submissions include: reports on launches or other events, technical articles, rocket plans, contest and flying tips and hints, reviews of models or motors, books, software or other items of interest to rocketeers and photos taken at launches. If you have something in mind to submit for the next issue, hopefully in August of 2008, contact the editor.

CIA Officers

Here is the contact information for the officers of the CIA.

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Director of Operations: Greg Smith, 217-840-1678, GregS@uiuc.edu

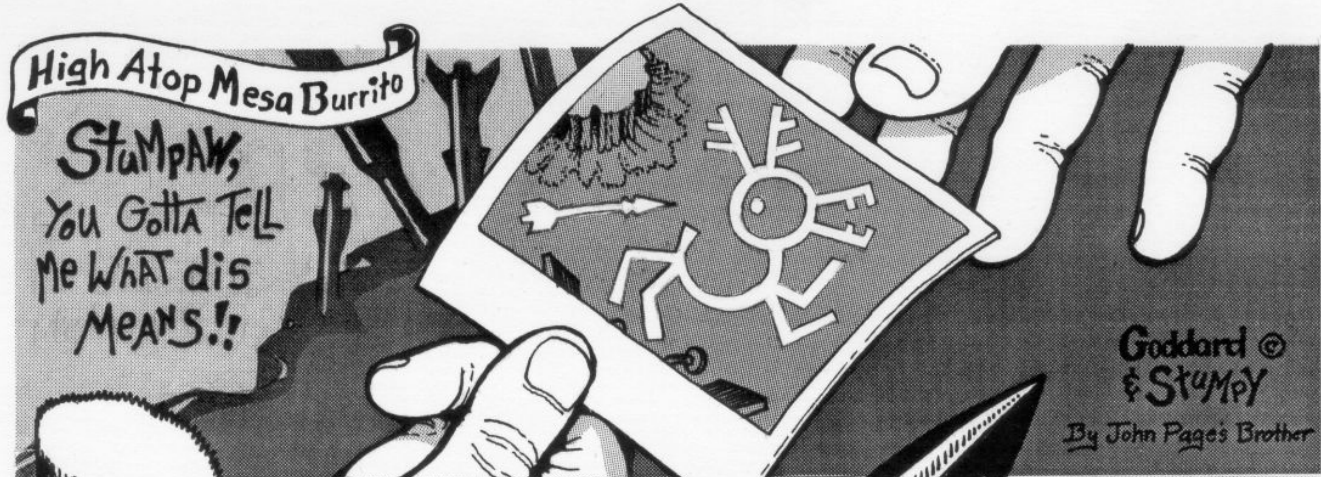
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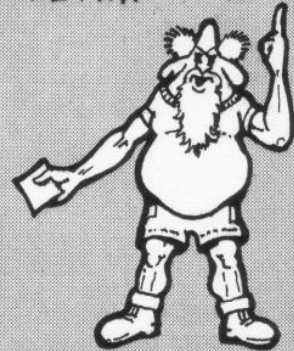
StampAK,
You Gotta Tell
Me WHAT dis
MEANS!!

Goddard ©
& Stampy
By John Page's Brother



I SHOT It With My POLA-Rok!
Stupid Goddard MADE Me Add
THIS CHUTE so it WOUDNT
do LOOPS.

STUMP, THIS CAN
ONLY MEAN ONE THING!



ALIENS IN ROCKETS
MAKE
CROP CIRCLES!!

Let's CONSULT
my ALIEN
Rosetta
STONE
AND
TRANSLATE
THIS
HEIRO-
GLIFFITI



...It Says...

ROZ WELL
AFB NeX
TEGZIT
SASF00
dLdGing
10-11.77
LitEe RZ