Tech Tip-022

Narhams Night Launch History & Techniques:

Dedicated to the dissemination of detailed model building methods and techniques.
Materials and methods presented here are not intended as the best or only solutions to the modeling challenge(s) discussed, rather as methods and procedures which have a proven record of success in actual use. Please keep experimenting with new materials and techniques as this is the only way to expand the fields of knowledge.
Researched, Compiled & Written by: John E. McCoy Sr. NAR-15731

Author's Forward: This Tech Tip is intended to be both an information technical look at Building and Flying various "Night Illuminated Tracking Equipment" N.I.T.E. packages, their launch vehicles and a historical look back at how this club began more than 20 years ago working with the FAA to obtain "Legal" ways to fly Model and Mid power rockets between Sun-Set and Sun-Raise during a period that this activity was strictly forbidden.

Let us begin at the beginning. The year was 1990. In the winter of 1990 as New Years Eve approached I had the weird idea of launching a Model Rocket as the ball dropped in New York City. Frankly I do not recall what brought me to this thought but it seemed like a fun & interesting idea at the time. I must admit at this time I was blissfully unaware that such activity was strictly forbidden by FAA regulations FAR-101. I was aware that the little strip park across the street from my house is only about 2miles from Reagan National Airport & directly under the East-West landing flight path. However; at that time Reagan National shut down air traffic at 10:00pm to eliminate noise in the surrounding housing areas. That fact, lead me to believe our first attempt at a Night Launch would not endanger either planes or pilots. The week before New Years I selected a 13mm model to do the honors. An Old Sparrow kit was found and hastily built. Instead of standard paint Glo-in-the-Dark yellow/green paint was applied in several layers on the nose cone and all four fiberboard fins. Next the entire body was wrapped with High intensity White Scotchlite adhesive backed vinyl with trim red and green standard Scotchlite just for fun. Black Magic Marker inked my Nar number and the club name as well as the date and time of the expected lift-off (01-01-91- 00-00-01) Yes I'm aware of the time difference between D.C. and N.Y. City but for this first flight I didn't think it mattered that much.

As the day approached, plans were made to drag heavy extension cords across 2nd Street to the park from my back yard to power a portable TV so we could sink up with Dick Clark's Rock'in New Years Eve ball drop. I invited one of our neighbors Ed Stewart, wife Mary, and Daughter Kathleen who would do the launch officer duty as I took the photos and Mary ran the video. All plans came together well, the night was clear and COLD. Range Safety (Me) and the Launch Officer had a little exchange about the cold but she relented and stayed to complete the mission. Nearing mid-night I armed the Sparrow waiting on my little 6volt Lantern battery launcher, checked continuity and handed the controller over the Kathleen as the Ball began to drop in New York. 5,-4,-3,-2,-1, Happy NEW YEAR rang out as the button was pushed and the Little Sparrow powered by a 1/2A3-2T Zoomed off the pad.

We all followed the amazingly bright motor burn streak until burnout then HUM…Nothing the Glow paint and other stuff were invisible. We kept looking for the mylar Streamer with a hi-power flashlight and a few seconds later it was spotted coming down just to the right side of the little 50ft wide park, about 50yards for the launcher. YEAH! That was spectacular…well pretty neat anyway. I'm Hooked on Night Flying!

For the next 5 years the McCoy family held these New Years Eve Launches annually, using small 13mm models with cyalume and weak LED lighting systems until November 9, 1996. Correction! After postponement due to very bad weather our first NARHAMS club night launch occurred December 14, 1996.

During that interim, April, 1992; Narhams as a Model Rocket club began looking into what would be involved in organizing and running a Club Night Launch. As Senior Advisor at the time; I began making a few phone calls to various FAA sites in Washington D.C., Virginia and finally our Northeast Regional Headquarters at JFK Airport in New York. Along the way we were introduced to FAR-101's unmanned rocket and balloon section. Ugh! One very prominent section read:

"***Flying of unmanned Balloons and unmanned Rockets between the hours of Sun-Set to Sun-Raise is strictly forbidden***".

The FAA folks were however interested in what the club had in mind and ask for a written request to waiver this regulation. Correspondence went on for the next 3-1/2 years. With each iteration our proposals became more technical. Each proposal included a bit more field safety layout drawings, aircraft spotter plans also incorporating Night Launch Vehicle visibility recommendations suggested by the FAA. "All night flying rockets must be visible from Launch to touch-down with a minimum 2000mcd light source visible at 2000ft."

The next few lines are of utmost importance to ALL or Anyone flying model rockets at night:

The FAA stressed over and over with each correspondence that all safety measures included in our range plans MUST be directed at the **Unaware Civil Aviation Pilots and their aircraft**. Our range safety measures are First and Foremost for the safety of these pilots. All other measures of crowd control and range personal safety are of secondary concern.

April 1994 Sport Rocketry Magazine published an article by David Sollberger from the SRA section #342 club in Texas. Apparently SRA had held as many as 9 Night Launches. It is my understanding that this club was working with the FAA Southern region HQ in the 1993-94 time frame. Apparently Southern Region HQ had no knowledge of what we were doing with FAA HQ at JFK NY. In any event they got their waivers to launch and most went very well. Their Article was based on a fairly large ACE rocket that appears to be 2.6"+/- in diameter and perhaps 4feet long. No real attention was given to the model in the article which did a very nice job of outlining the various means and methods of finding and mounting a variety of Nite Illumination Tracking Equipment. When I found this article and spoke about it with the FAA folks at JFK they acknowledged that they were not aware of these night flights in Texas. I sent them a copy of the article along with our latest proposal update which at the time had to include the number of rockets to be flown, Size, Mass, Motor(s) and expected altitude. I believe my contact person at that point told me "John, We want to know how big a Rock you intend to throw into the air". We laughed and went on from there.

During Narhams yearly planning session for flying year 1996 the Club scheduled and passed our first Night Launch date for November 9, 1996. Shortly after the Planning meeting the Clubs yearly waivers and field permission requests were documented, sent in and eventually approved by both the Middletown Park and Recreation and FAA. Now all that was needed were a few Models properly equipped. Some newly developed Night Launch Range procedures & equipment.

As a club we started out fairly small. As "Mr.-Fix-it" I developed a number of small diameter 3 & 4 LED N.I.T.E. packages designed to fit in our normal BT-50 clear payload sections for model in the B6-2 & C6 18mm motor range. While fairly crude they were each very easy to build and more importantly inexpensive. I also decided to retrofit a large 2.6" 5- D12 Cluster converted North Coast Rocketry BrightHawk. This Model had a Heavy Cardstock Payload section & Solid Foam NC. I decided to add a cluster of 500mcd Red LEDs on two sides of the payload section, a ring of low mcd LEDs around the payload section and run a single 10mm, 12000mcd orange Led in the tip of the nose. While looking for brighter N.I.T.E. light sources we quickly discovered that high powered strobes were not only expensive to purchase but were also quite fragile, easily broken if not packed very carefully and required large 9V or better power source that weighed quite a bit. Incandescent lamps and blubs had the same fragile temperament making them susceptible to breaking during launch and landings. We tried several of these set-ups along the way. Conclusion: Use Strobe & incandescent bulbs at your own risk. But fly them ONLY with LED secondary backup lighting.

After experimenting we found it fairly easy to string as many as 8- 500 to 2000mcd Super-Bright LEDs together on a single resistor or as many as 12 LED's with individual 57 to 68ohm resistors. These strings can then be bundled with other strings up to 10 strings, powered by a 3v or 6v Lithium coin cells, a pair of AA or AAA batteries. Below are a couple photos of these very early LED lighting systems.

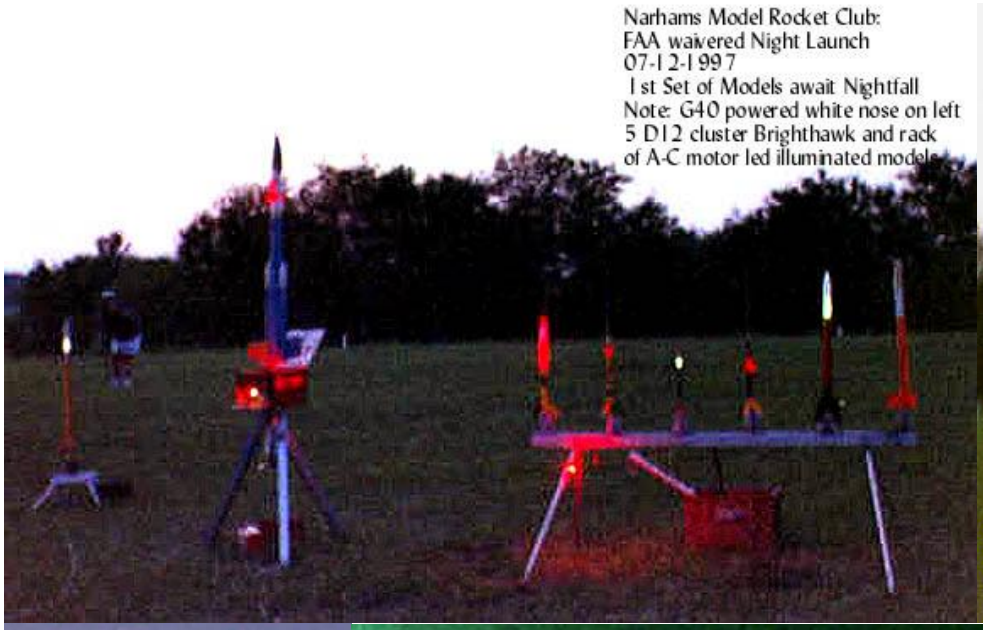
NARHAMS Night Launch #1: My first custom adaptation was to retrofit an Estes Warp-II 2-Stage kit. The large BT-60 clear payload section, Styrene nose cone & Transition were loaded with 27 various color 6.3mcd to 2000mcd LEDs powered by 2- AAA batteries housed inside the BT-55 payload bay core. For its first flight a single C6-3 motor was used to boost the sustainer only. Later this model would fly single and 2-staged many times. In fact this model is still flying today over 20 years later.

Unfortunately the first club Night Launch Scheduled for Nov. 9th had to be postponed due to bad weather. Our alternate date had to wait for the waiver paperwork to be altered and returned from the FAA. After all the rescheduling, our first actual Night Launch took place Dec. 14, 1996. Still not well attended, as one might expect, the weather that day/night was downright COLD. My Flight log states the Temp for the day started at 42.1 degrees with overcast skies and surface breeze 0-8mph with gusts to 15. After the Sun Set the Temperature dropped quickly into the mid 30's. IIRC Jim Filler, the McCoy's along with Paul & Andrew Millers were the only flying members that our first waivered launch but it was worth the wait & cold to see some of our models flying and illuminating the night. The four photos below are all that I have or could round up from this first club night launch. My log says we flew 5 night models. I don't have any other info beyond the Estes Warp-II & Nova Payloader I flew. Jim Filler reminded me while looking for other photos and info that he made a very loud point that our future club night launches should be flown in WARMER weather, I have to agree. LOL!

Narhams Night Launch #2: The Clubs Next Narhams Night Launch was put on the schedule at our yearly planning session for July 12, 1997. That's right we moved this launch to July to ensure warmer flying conditions LOL! In the mean time several of our members were designing and building larger more complex night flying rockets. Jim Filler Building his first 4X4, a BT-80 size 4- D12 clustered LED illuminated payload rocket. I was busy with two large models, converting that North Coast Rocket "BrightHawk" from a single APCP to 5-D12 Clustered motors with LED's surrounding the Payload section and a 12,000 mcd orange LED embedded in the foam nose. My Second Larger model is a 3X Upscale of the Estes Nova Payloader. I named this BT-80 Upscale the Nova Payloader-II which is powered by a 4-D12 Cluster. The PNC-80K styrene nose cone and 12" x 2.6" clear mailing tube payload section were illuminated by 51 various color 500mcd to 5500mcd LEDs powered by 2- AA batteries. During a later retrofit the AA's were replaced by 3-3v Lithium coin cells. This year several other club members were trying their hand at night flight packages. One of our HPR members decided to use a Pratt Hobbies White strobe in his 2.6" Heavy "Aerotech" kit model flying first on a G80 APCP motor. He also outfitted another of his existing 2.6" diameter models with a C Cell Flashlight in the nosecone. Flying the flashlight illuminated model on a G40. When the launch button was pushed on this G40 motor the flashlight went dark due to acceleration depressing the battery contact spring. Luckily at ejection the flashlight came back on.

When ready for launch, the G80 Strobe vehicle flashed once every 3 seconds. The dark between flashes was enough to lose sight of the model against the Bright, Starry night sky. Luckily at ejection we initially picked up the strobe flashing but lost it again to the upper level winds between those 3 second interval flashes. As luck would have it, another flyer found the model on the ground later while out recovering another rocket. The Strobe had broken on landing. Lessons learned from that Strobe flight: #1) Have solid burning LED's along with the Strobe to maintain constant visual contact in the night sky. #2) Ensure batteries are fastened in place so that contacts cannot be broken with Acceleration, Ejection and/or Landing. #3) Strobe Lamps must be packaged in some form of shock absorbing material to avoid breakage during flight and landing.

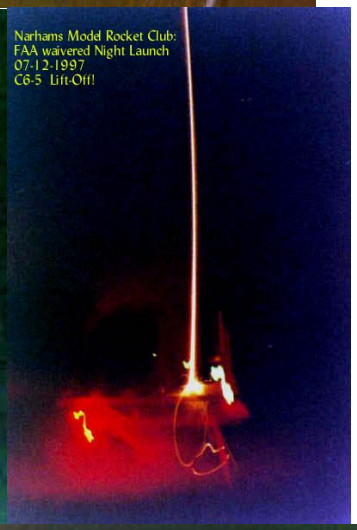
Our 07-12-97 Launch was somewhat better attended with as many as 8 Narhams members flying several night vehicles with B6 and C6 motors most using small LED packages, dollar store LED illuminated pieces or a combination of LED and cyalume glow-sticks. Some of our biggest surprises came with the Clustered D12 model Launches. It was amazing to see the amount of flame and fire these clusters put out compared to what we see during daylight. Below are a few photos from this Launch. Please remember these are our very first night time clustered launch photos so sorry for the blurriness but these are on actual film☺ Photos below are of our 6 position rack with 6 models waiting for Dusk to fall and two large BT-80 models on "away pads".

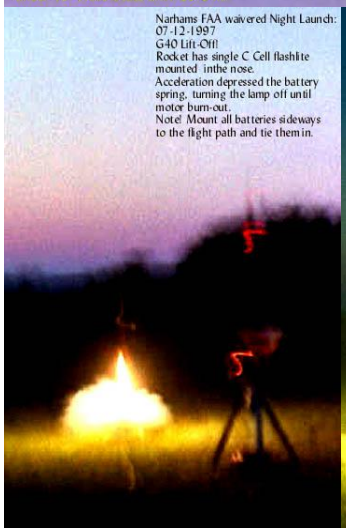

Narhams Model Rocket Club:
FAA waivered Night Launch
07-12-1997
1st Set of Models await Nightfall
Note: G40 powered white nose on left
5 D12 cluster Brighthawk and rack
of A-C motor led illuminated models


Narhams Model Rocket Club:
FAA waivered Night Launch
07-12-1997
Model 068: Hercules single stage
C6-3 Lift-Off with 4 500mcd leds
in the payload bay 2-N-cell power.


Narhams Model Rocket Club:
FAA waivered Night Launch
07-12-1997
Model 068: Hercules single stage
under 15" Hemi chute after C6-3 flt.


Narhams Model Rocket Club:
FAA waivered Night Launch
07-12-1997
B6-4 Lift-Off! rack Launcher


Narhams Model Rocket Club:
FAA waivered Night Launch
07-12-1997
C6-5 Lift-Off!


Narhams FAA waivered Night Launch:
07-12-1997
G40 Lift-Off!
Rocket has single C Cell flashlite
mounted inthe nose.
Acceleration depressed the battery
spring, turning the lamp off until
motor burn-out.
Note! Mount all batteries sideways
to the flight path and tie them in.

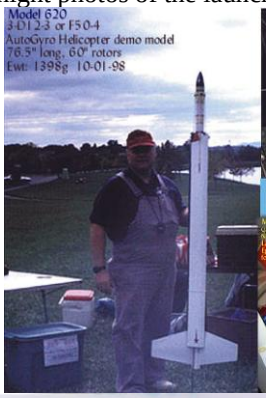

Narhams FAA waivered Night Launch:
07-12-1997
G80 Lift-Off!
Rocket has 9volt powered Strobe in
the nose. Photo taken between 3
Second strobe flashes Darn!

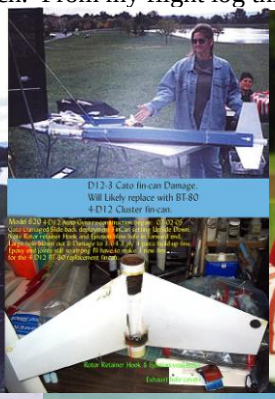

J.McCoy's 4D cluster Super Nova payloader Lift-off
Middletown Park, Middletown, Md.
First Narhams night launch.
July 12,1997

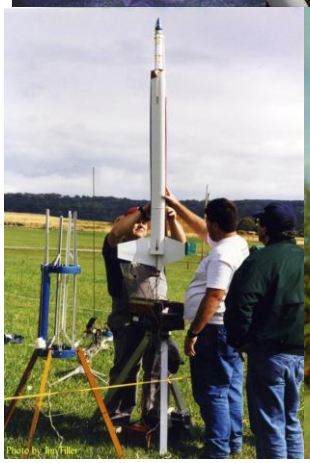
Our next scheduled Night Launch #3 was set for July 07, 1998: Again, had to be postponed due to heavy rain. Getting the FAA waiver altered pushed the Night launch back to October 10, 1998.

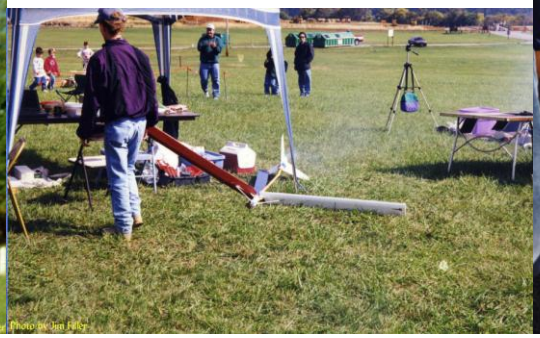
This date was a conglomeration of 3-Narhams event; HQSM-32 contest, a 3 event section meet, Sport Launch & Picnic and our third Night Launch. This proved to be a very long day but had a little bit of everything for our members. As it turned out the weather for the most part was pleasant. I guess the only complaint being that nasty W word. The breezy conditions continued blowing 8-14mph most of the day with higher gusts to 20-22mph. During daytime qualifying flights for the night launch I attempted to fly my brand new 3- D12 clustered 60" illuminated rotor Auto-Gyro helicopter. Unfortunately one of the 3- D12-3 motors Cato'ed blowing out part of the side of the motor mount fin can. At almost 76.5" long and 1398g lift-off weight it was an impressive bird. To this day I still have not rebuilt the ultra light sliding Fin-can motor mount but hope to in the future. Photo sequence below from Jim Filler.

As for the night launch my log shows 5 great A8-3 to 5-D12 clustered night flights and 2 misfires. I guess with all that flying I got too busy to even replace igniters, as it did not show the two misfire rocket being reloaded or flown. For some reason I didn't take any night photos of the launch. From my flight log this was a very well attended launch with a large crowd of family and spectators.








As time passed more club members became interested in night flying model rockets with all sorts of different N.I.T.E. Illumination packages. We all began looking for different forms of lighting packages to illuminate our small LPR and MPR Mod-Roc Vehicles. In these early years cyalume "Glow-Sticks" seemed to have a growing following especially among our younger night flying members. Glow-Sticks have a very limited range, regardless of glow-sticks size. Through extensive experimenting with all makes & sizes of Glow-Stick packages we discovered most were only good on fairly small to mid size rockets, Gliders and Helicopters in the B thrust category and below. Over the years there have been a few very special exceptions but as a club we have adopted a firm Night Launch Rule: NO Glow-Stick or Cyalume illumination as the primary light source for any model flying with motors above B impulse.

Cyalume "glow-sticks"; in the 1"to 1-1/2" long x ¼" diameter (fishing lure lighting) work really well on 1/8A –B motor gliders and competition style helicopters. These rockets generally fly below 500ft which is about the maximum Glow-sticks can be seen in the sky. Yes; there have been a few larger motor Mono-copters flown with large 5" and 6" Cyalume "glow-sticks", but these are very special, low altitude exceptions that must be pre-approved and daytime qualify flown before being considered for inclusion at a publicly attended Club Night launch. Again these restrictions reflect our commitment to protecting "the unaware Pilots" as well as our personal range safety issues. Cyalume sticks can be used as secondary "accent" Lighting on larger higher powered models but they are never to be used as the sole lighting source for any Night Flying Vehicle with motors over B impulse.

Now let's talk about the most used Night Flying Light Source: LED's or "light emitting diodes". These small electronic devices have been around for decades. But until the early 2000's , most were available in very low output packages, measured in mcd's between 6.3 & 500. In the beginning we were looking for LED's in 5mm or 10mm diameter with an output of between 500 and 2000mcd's. While harder to find, most of us non-electronic engineers found our supplies at Radio Shack or Allied electronics. Still it was tough to find these larger output LED's in anything other than RED. Sometime in 1998 I purchased a couple Radio Shack electronic project books hoping to learn enough about wiring and powering LED's to be able to put some interesting packages together…mostly I just learned enough to be dangerous LOL. Two things jumped out as important: LED's are polarity sensitive and resistors are always soldered to the positive (+) Lead. LED's longer Lead is the Positive anode lead.

One of the most important things I did pick-up from those pamphlets: I want to pass along is the formula for figuring what resistor is needed for the LED's & power source involved. I've learned over time that while it is possible to string as many as 8 or 10 LED's protected by a single resistor, it is often much better to add a resistor to each LED in the string, thus allowing more LED's to be added for given power source optimizing the operating voltage and current draw of each individual LED.

This formula is not hard to use and given the couple variables has proven to be a great tool in building our own LED circuits from a single low power LED to 85 Hi-powered LEDs running on one or two AAA, AA, 3v lithium coin cells or a LiPoly battery package depending on the weight and volume needed to house the entire package.

The Formula: $R = \frac{V - V_{led}}{C}$ where R= Resistance, V = supply voltage. V led = forward voltage from LED specs. Where C = Current in Milliamps.

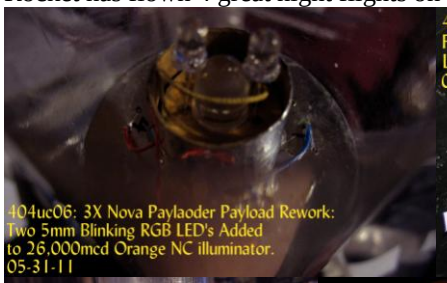
Example: Using a 3v lithium coin cell as the power source. We have a single Red, 5mm, T 1-3/4 LED with a forward voltage of 1.85v operating at 20ma. Inserting the numbers we have: 3V – (1.85V) div by 20ma (.02) Give us 57.5 ohm resistor. From your local resistor chart the closest available resistor will be 57ohm.

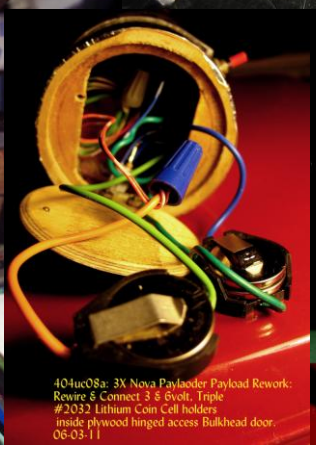
It is possible to go up or down as much as 10% in resistor value to get the closest match to the LED and power source value beginning used.

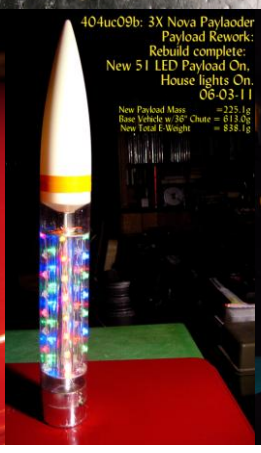
As a general observation Red, Yellow & Orange LED's have a required forward voltage of between 1.5 and 2.85volts. White, Blue & Green LED's required voltage is usually 3.4 to 4.5volts. Some of the extremely High Output 2 to 5 watt LEDs can require as high as 12volt DC power.

Most night flying rockets should NOT use white LED's or strobes without some sort of colored filter. White light out on a night flight range simply KILL's members "Night Vision". To that end another of the clubs standing Rules for Night Launches require all flashlights or other white light sources to have a RED Lens filter.

Using the formula above: I was able to construct the Payload & PNC-80K nose cone package for my 3X upscale Nova Payloader-II. This Clear Polycarbonate mailing tube Payload section houses 6- 8 LED strips spaced around a mirrored mylar covered BT-50 Core in the payload bay. 2 blinking RGB 5mm LEDs & 1- 26000mcd orange, steady burn LED illuminate the nosecone. As a complete package the payload bay & nose cone combine for a total of 51 various output LED's powered by 3- 3v lithium coin cells. A single 3v coin-cell for the red, yellow and orange LED's and a stack of two- 3v coin-cells = 6v for the Blue & Green LED's. So far the Rocket has flown 4 great night flights on those same 3- 3volt lithium batteries.





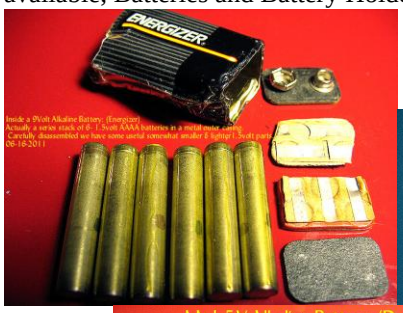


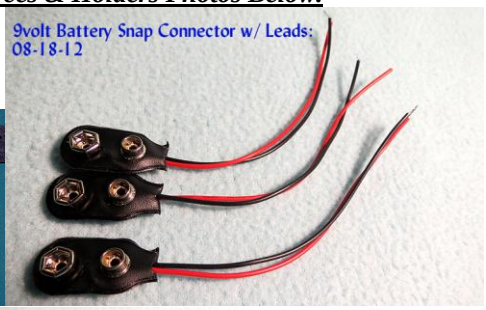
While we're talking about components: Let's also look at the various battery holders and some of the potential problems with these batteries and holders.

If you recall in the beginning years most of our light sources were powered by AAA, AA or 9volt batteries. Why? Because we didn't know any better. These batteries & holders are readily available and fairly inexpensive to purchase. All that said: We've come a long way since the 1990's. While AAA, AA & 9volt alkali batteries are still widely used, there are MUCH better power sources available today that not only supply higher current levels for longer time periods but also in many cases are lighter and require much smaller volume areas to house these packages. Today we enjoy 1.5v AAA & AA Lithium batteries that are lighter than our old carbon or alkaline cells. While these batteries have the same dimensions as the older AAA & AA batteries they also use the same WEAK Spring single, double and higher cell holders. If this type battery holder is chosen to power our lighting package then there are a number of extra precautions that must be followed to ensure these batteries do not loose contact during acceleration, ejection and on landings. Please Read our Night Launch Tech Tip-22b; Attached to the end of this Tech-Tip. TT-22b is an Additional 3 page report on Battery Pack Orientation to address most of these fairly simple fix applications. Long story short: AAA & AA batteries housed in these weak spring holders must be taped or wired in so they cannot move and the package oriented diagonally to the line of travel.

Today better power sources are 20mm, 12.5mm & 10.5mm, 3volt Lithium Coin Cells along with 3.7v & 11.1 volt LiPoly Lithium battery packs. LiPoly packages do have their own set of cautions while Charging and storage but offer very high current, long running times within small to medium size packages that often weigh far less than a single 9Volt alkaline battery.

Did you know that all 9V batteries are actually 6- 1.5v round AAAA cells housed in an aluminum wrapper. Sometimes it makes more sense to take a 9v apart and use the smaller AAAA cells alone or in strings. Below are some photos of different LED Power packs available, Batteries and Battery Holders and the inside of those 9v packages**.** ***Power Sources & Holders Photos Below.***






2- 3.7v - 20mAh Tiny Lipoly Batteries:
.80g ea (Used with Adrel Alt-Led Altimeter)
Also good for some Night LED apps.
04-21-2013


Fire Bird: 4.8v - 600mAh Ni-MH 4cell battery Packs.
RC Firebird Electric Aircraft.
12-21-2003
FIRE BIRD (2)
Ni-MH 4.8V 600mAh
Ni-MH
4.8V, 600mAh


Sonyo (110AAA) 4.8v - 50mAh
Ni-Mh 4cell battery Pack
RCRG Archie Boost-Glider.
06-02-2002


Lectron Pro- 11.1v - 950mAh Lipoly Battery:
71.1g (2.51oz) Used with lots of Hi-intensity LED strip applications.
On the heavy side but works will in 2.6" (BT80) projects.
@ 25.00 - 09-05-2014
LECTRON PRO
NEWEST TECHNOLOGY - HIGHEST QUALITY - LOWEST PRICES
30C 11.1v-950mAh
#3S950-30-L
28.5 AMPS MAX CONTINUOUS DISCHARGE / 57 AMPS MAX BURST
2C CHARGE RATE
www.CommonSenseRC.com
10.6Wh
71.1g =
2.5ozs


ONYX
5000
11.1V 5000mAh 25C 56Wh LiPo BATTERY
Duratrax
ONYX 11.1v - 5000mAh 25C 56Wh LiPo Battery.
(Mary's Ceramic's Show Sign.)
Will run 5m RGB programable LED String for up to 8 hours.
To Large and Heavy for LPR or MPR rocketry use.
@ 93.00 - 11-10-2015


SafeCharge Lipoly Battery Charge Bag:
Fire Prevention & Storage bag.
30.00 - 11-10-2015
SAFECHARGE
LiPo Battery Charge Bag
Rated for up to 3S 3200mAh LiPo Battery Packs


Prophet Sport Li-Po 2S - 3S Smart Charger:
@ 40.00 - 10-01-2015
Prophet Sport Li-Po
2S - 3S LiPo CHARGER
WARNING:
LiPo ONLY!

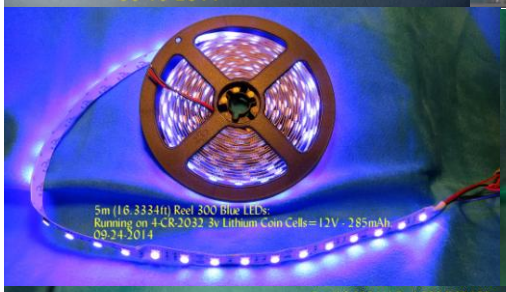

Panasonic
CR2032
3V
Made in Indonesia
Panasonic
3V
BR1225
JAPAN
Panasonic
CR1025
3V
JAPAN
3 volt Lithium Coin Cells
CR-2032 (20mm), BR-1225 (12.5mm) & Cr-1025 (10 MM)

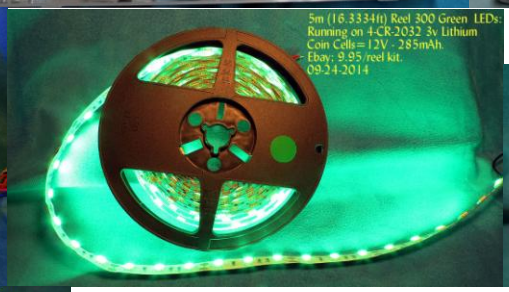

6 Coin Cell Battery Holders: 07-30-06
2-Cell 20mm Holder
1-Cell 20mm holders
1- Cell 10mm Holder
1- Cell 12mm Holder


2-Cell (3volt) AA Battery Holder w/
Snap-on (9v connector) Leads:
08-18-12


P&G Inc.,
Toronto, ON M5W 1C5
AA
Alkaline
MN1500
1.5 V
LR6
MAR 2017

Individual LED's & 5m reel LED's photos:



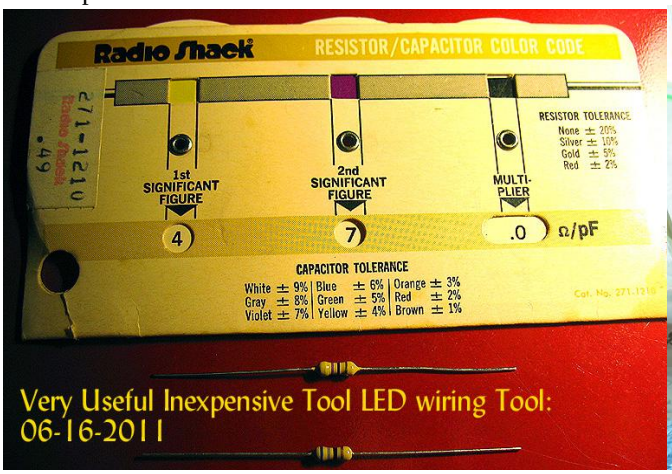


Resistor and Color Code wheel Selector:

I've had at least one Resistor/Capacitor Color Code Selector for about as long as I've been soldering up electronic circuits. Got my first one from Radio Shack the same time I purchased those Electronic Project Work books in the 90's. I've also seen them in most every electronic supply company catalog so the very useful cardboard tool is still readily available. The Double sided folded cardboard cover has Resistor information and 3 colors wheels on one side, Capacitor info and color wheels on the other.

I don't know how most folks store their spare resistors but I have a couple plastic draw cabinets with several different value resistors in each multi sectioned draw. While they mostly remain where they should be, hasty replacement in the drawer or inadvertent misplacing of these small parts can cause some resistor value mistakes if one doesn't have an easy way to check the color code to get the correct value of an individual resistor or small capacitor.

Once we start collecting these inexpensive electronic parts it is always a good idea to prominently mark the outside of the package with the Ohms or uf value for easy identification. Below are a couple photos of my resistor "collection" and a view of a color code selector for you reference. I've found that one of the very cheapest places to buy resistor is www.superbriteleds.com they have an extensive inventory of just about any package LED type you'd like to buy at very reasonable prices along with support packages, Resistors, and power supplies. My second go to electronics supplier is www.alliedelect.com for some LED's and other electronic and electric parts.

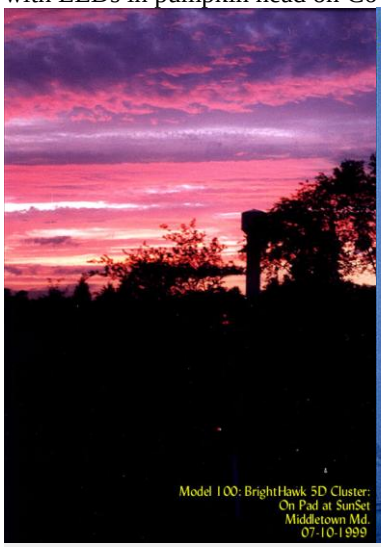


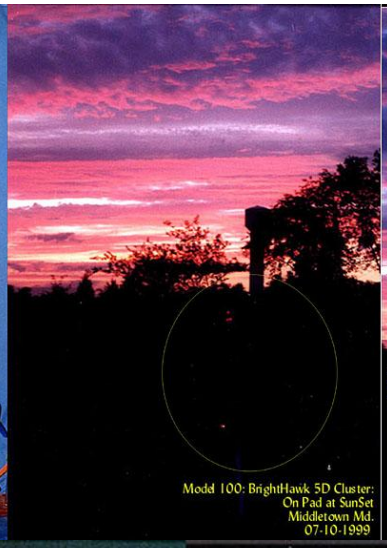
Narhams Night launch #4: July 10, 1999 – Middletown Park, Md.

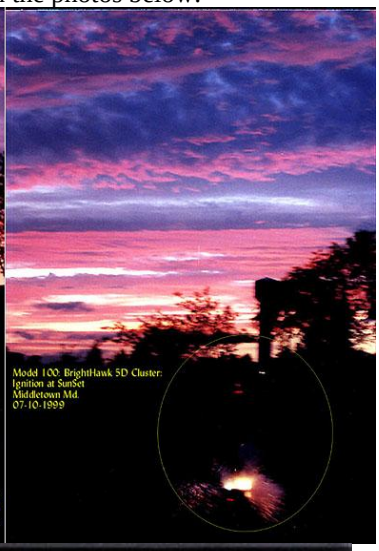
Our next Narhams Night Launch was scheduled for July 10 1999. I have to say it was one of the most gorgeous Sun Sets I've ever seen. Unfortunately; Zog-43 at the time was printed in b&w so the article in the August 1999 Zog-43 has a nice write-up by Jim Filler but no photos. According to our Zog-43, Tom Lyon earned the CATO award when his Thoy Peacock 3 D12 cluster suffered 2 motor Cato about 15ft above the pad. Apparently Jim Filler has some photos of this event we'll try to secure. Jim Attemped to fly his new 4-D12 cluster model with a White Strobe but the model only ignited 1-of-4 motors causing a much less than ideal fight profile. Robert Edmonds flew a couple Edmonds Aerospace; Ecee Thunder and Canard Glider on a pair of D12's.

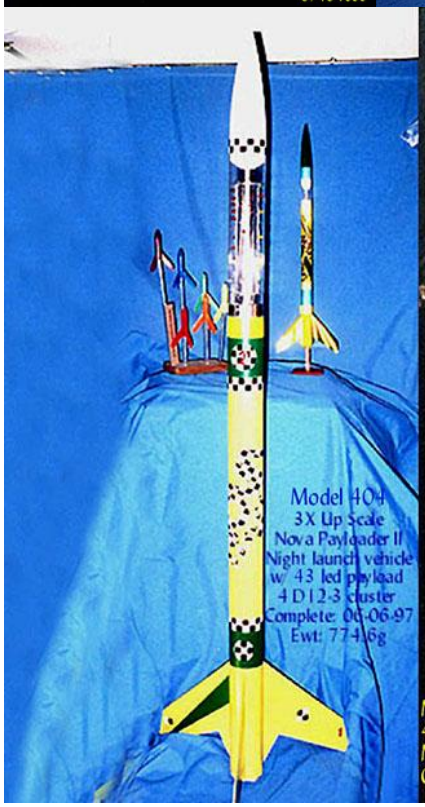
My personal flight log and photos are also limited to the two large clustered models flown that evening. It was truly a great Day & Night Launch! Our records show 22 flights burning 38motors including 4-clusters and 1- Staged flight.

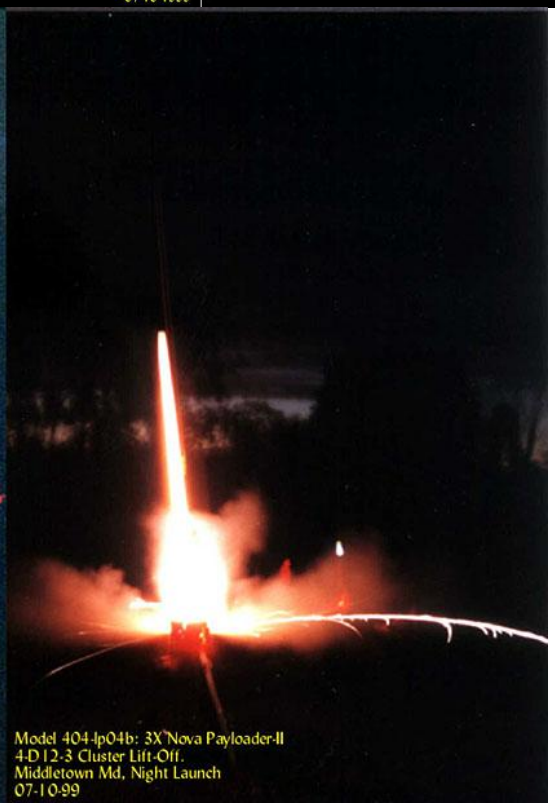
My Log gives the air temp at 87.9degrees with a SW 0-15mph breeze most of the day. I logged 9 Night Flights including a new X-Ray 13mm, A10-3T flight (LED lit), Nova Payloader on C6-5 (4x500mcd LED package), Dusk Thingy- Glo-in-the-Dark Painted body & fins experiment with 3- 500mcd LED package in red payload section (NOTE- Glow Paint completely invisible outdoors at night). Upper stage of Hercules and Magnum staged models on C6-5 & C6-3 with LED Packs in Payload bays. Our FIRST 2-Stage Flight; using my Warp-II, C6-0/C6-5 staging successful but needs to add cyalume or LEDs to booster stage (almost lost it). New Jack-O-Lantern Odd-Roc with LEDs in pumpkin head on C6-7. And the two 4 and 5 D12 motor clustered models in the photos below.



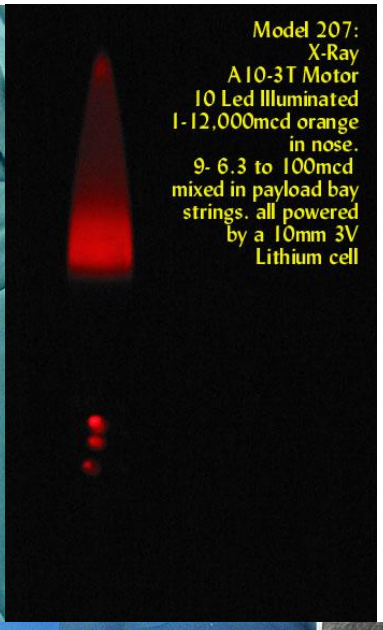


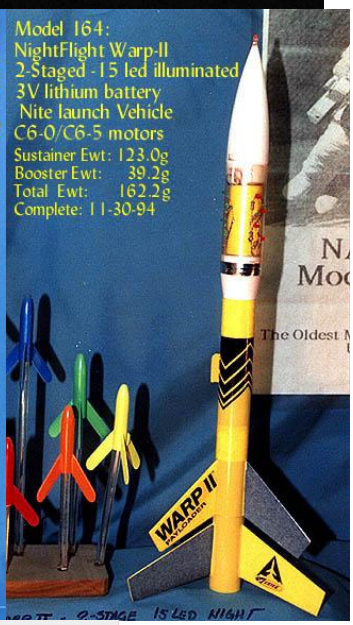


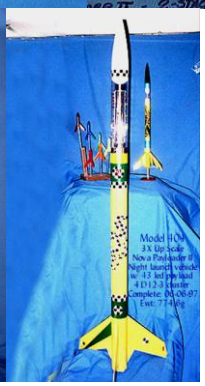




This page contains static photos of some of the Basic Payload Models adapted to use the early 3 & 4 LED BT-50 clear or red payload section rockets. Most of these rockets were and are still being flown on a regular basis. While these "Standard" Payload bay models are very easy to adapt with simple LED payloads you'll see as we progress how these models and payloads can be advanced to much higher and brighter levels. Most of these N.I.T.E. payloads are removable so the rocket can be used for other things. Exceptions to this removable payload scheme are the Warp-II 2-stage and Up-Scale 3X Super Nova Payloader-II which were designed to be Night Flying Vehicles. Converting the 13mm motor X-ray with a BT-20 payload bay was also a bit of a challenge. In future 18mm payload bays I'll use much brighter LED's.



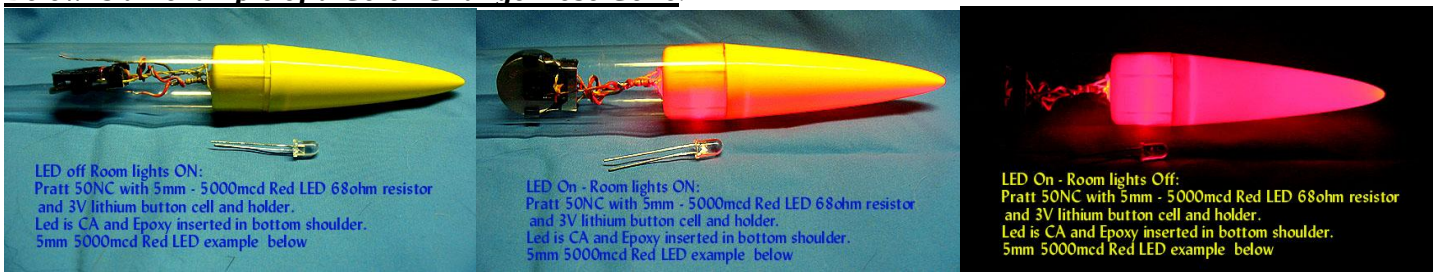




An interesting discovery ***Color Changing Nose Cones***: Came about by accident down in the Mod-Roc dungeon late one winter night. I was looking for ways to increase the light output of a Pratt Bt-50 yellow styrene plastic two piece nose cone by using a high output yellow LED. Apparently while getting parts for the experiment I mistakenly picked up a 5000mcd red led instead. To my amazement when the LED was energized the whole Nose cone glowed bright RED. From there the experimentation was on with different color Styrene nose cones. Of course the best lighting is to use any white molded nose cone. Pratt Hobbies very thin wall .010" thick Styrene are by far the best but ANY Estes, Quest, and even some of the very thick Aerotech cones will illuminate well with the addition of 1to10, 5mm or 10mm various color LED's. Over time I've discovered that any 5000mcd or higher LED will illuminate these white nose cones brilliantly. I'm particularly Happy with the way a single 12,000mcd orange 10mm LED and two blinking 5mm RGB LED's illuminate stock Estes PNC-80k nose cones mated to any BT-80 (2.6"OD) body.

Plastic Shop theory dictates that using the same color wave length light source behind a colored plastic (just about any plastic that is not to dense or opaque to transmit light), will be brighter than if the plastic is illuminate with the entire spectrum of white light. Examples: Red LED's behind translucent red Styrene, Acrylic or Polycarbonate plastic. Yellow LED's behind translucent Yellow plastics, and so on with other color plastics & LED as long as they are Translucent. To create a color change cone pick a translucent Styrene cone and as large an output LED as possible. Mounting the LED inside the shoulder. Using any color LED will effectively convert a white, yellow, light red, light blue, or light green cone into whatever the LED's color is. Of course any color LED placed inside a White Nose cone will change that cone to the LED's color.

Below is an example of a Color Change Nose Cone.



The Big Switch to September Narhams Night Launch #5 had to carry on without their ROMC due to a major back injury early in Feb 2000. I was laid up for 4 months & the back has never been the same. But that is another story.

Narhams scheduled our annual night launch for September 9, 2000. This was another change to get better control over our night flying conditions. July was great weather wise but we had to wait forever into the night before Night-fall actually happened. By moving to September the thinking was we would be flying right around the time change back to Eastern Standard Time. Sun-Set would be more like 6:45 to 7:00pm rather than 8:30 or 9:00pm. The park service still wanted us off the field by 10:00pm which allowed only an hour or so to get everyone's night vehicles flown. Moving to September was and is one of the best ideas we've had since beginning our Club Scheduled Night Launches.

Night Launch Range Equipment: We haven't talked about Night Launch Range gear yet. ROMC never actually ask for funding to adapt our range equipment for Night Launch Safety. We were aware of the items needed to satisfy the FAA's requests and I knew we would need New items to illuminate the pads and range-head without destroying every ones night vision using white lights. So I just invented stuff that would do the job and loan it to the club every year. To this day it is still the situation☺. My experience as a Scout and Scout Leader out camping every month made the how very easy. We needed red lens filters for all lighting, sort of like in a dark-room. The launch pads were going to need some fairly bright lighting so folks can clearly see to hook up micro-clips on igniter leads. My first thought was 10watt halogen 12v camper lighting. But these blubs get super hot. How to red filter very hot halogen lamps became my next project. After researching the temperature range our 10watt bulbs operated within I was faced with a problem I had not seen. No material in my possession had anywhere near the heat shielding ability needed. Sign Man to the rescue!

As an electric sign mechanic, purchasing agent and chief estimator I'd been involved in all phases of the industry. One fascinating part of sign lighting is NEON or more properly expressed "Luminous Tubing". One of the very best examples of this luminous tubing is an imported, leaded stained glass tubing named Ruby Red. In the Clear un-coated condition it is transparent with a very deep rich RED color. I obtained a couple 5 foot sticks of 15mm Clear Ruby Red and with my Bunsen burner at home fashioned bonnets for our 8-10watt halogen lamps. These wired lamp & cover combination were then attached to .080" aluminum discs held with 2 small screws and sealed with 3000degree ceramic putty. Our completed lamp fixtures were wired with 16/2 lamp cord fitted with 30amp battery clips. An inline switch was added to the first two lamp Rack combo but I realized the switch was unnecessary. We made up four sets; 3 for use at each launch, 2 for the Launch Racks and 1 set of two to be strung between two away pads. Our forth light set as a back-up should one in service fail. All were powered by 26amp/hr orange gel-cells donated to the club be Tom Lyon before NARAM-35. Each fixture is mounted to the launch rack or away pad with a thumb screw or spring clip as needed.

Some years later, these very hot lamps would be replaced by Harbor Freight Company 10watt halogen spot light which have been fitted with red lens covers. Not only are these spot light cheaper to buy but much easier to maintain.

At every night launch either the RSO or Check-in guy (usually me) has a file folder with Rubylith red lithograph film that we can cut into just about any size needed for member white light flash lights. These 8-1/2" x 11" sheets are a god-sent to keep our member and spectator from ruining our valuable night vision.

The same Rubylith film was used to cover the entire globe of one of my camping electric lanterns for use at the range head. The club buys 2 to 4 year supplies of 4" mixed color Cyalume Glow sticks to be used along our perimeter rope to prevent trip hazards. As the years passed our range gear improved.

Narhams Night Launch #5a- September 09, 2000:

Narhams next scheduled night launch was set for September 09, 2000. Year 2000's launch manager and RSO would be Jim Filler. I suffered a major back injury in February that had me laid up for a bit over 4 months. As it turned out, I did make this night launch but wasn't in any shape to be doing much tooting or range operations duties. I did manage to get in a couple flights with the help of my always better 2/3rds Mary, as my recovery crew flying my veteran Super Nova Payloader-II, 4- D12 clustered Payload rocket and a first attempt at a Micro Maxx night vehicle, the newly fashioned Cyalume illuminated payload MMX-I night flying rocket, I was pleasantly surprised this little rocket did pretty well.

According to our Z03-43 we had a number of members flying a total of 23 night flights. 1flight using MMX-I motor, 12 flying B6 motors, 6 using C6 motors and 3- models with either D12 or Clusters of D12 motors. Jim & I both flying 4- D12-3 Clusters, Jim's 4x4 suffered from only getting 2 of the 4 to ignite making for a very low but safe returning flight. Tom Anderson flew his Tri-FO with mini cyalume sticks attached to the three sides. Kevin Johnson used the same trick on a standard size competition helicopters rotors making for a very interesting night flight. Best flight of the night went to Robert Edmonds for his Ivee Thunder D12 boost glider with cyalume wing tip lighting making a very interesting glider flight.

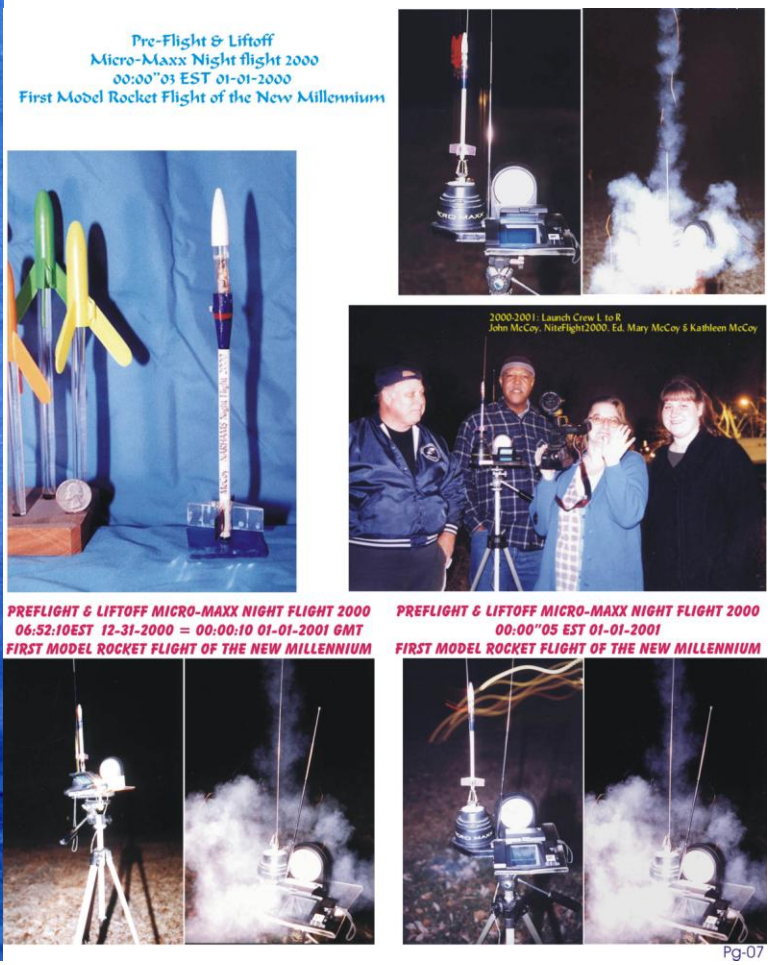
With the help of Jennifer Ash-Poole who ran the range most of the night, Mike Howie flew a boat load of models during the day but didn't have anything for the night launch so did a bang up job at Check-in for the night portion of the launch. As usual we shut the range down, cleaned up and were off the field before 10:00pm. ***All Photos by Jim Filler:***

First Model Rocket Flights of the NEW Millennium:

Being the mod-roc family we've been the McCoy's decided to do another Ball Drop Sink-Up with Dick Clarks Rock'in New Years Eve, Dec. 31, 1999 into 01-01-2000. Yes; I know most believe the new Millennium didn't start until Dec 31, 2000 into 01-01-2001. I am still not convinced as to which date actually started the New Millennium, so we flew on both New Years Eve's just to cover all bases. A new Micro Maxx powered LED Illuminated "2000" model was designed and built which would fly at least 3 flights. The "Nite-2000" is illuminated by an 8000mcd, 10mm yellow LED in the 10.5mm Pratt styrene nosecone and 10.5mm battery in the clear payload section.

First New Millennium flight was flown 01-01-2000- 00.00.03. Streamer recovered about 30yards down range from the launcher.

Since we wanted to be sure to get in (as far as we can tell) the very first model rocket flown in the new millennium we did the math to ensure our first flight would go off at exactly 06:52:10 EST 12-31-2000. That would equal 00:00:10 GMT 01-01-2000.
Then a 2nd flight was set up timed for 00:00:05 EST 01-01-2001 with the ball drop. Both flights went off synchronized with the naval observatory atomic clock set right by the launcher. On hand for all 3 launcher were myself, Better 2/3rds Wife Mary, College Girl Kathleen, and Friend and across the street neighbor Ed Stewart. All three flights were fun and not nearly as cold as some of our earlier Ball Drop adventures.



Narhams Night Launch #6a scheduled for April 21, 2001:

During our yearly planning meeting the club decided to try scheduling two night launches for 2001. This was a first for the club; #6a would be April 21, 2001 followed on September 8th by 6b giving other another chance to see and/or fly at the second.

Our April day/night launch was a combination of Opossum-5, a 5 event Open competition during daylight flying hours then change over for night flying at about 7:30pm. For April the weather was pretty dicey! As we gathered for opening words for Opossum-5 the sky was overcast with light sprinkles falling now and then. As we progressed the clouds grew thicker and about 1:30pm the sky opened pouring rain for about an hour. This however gave the Sport scale judges time to go over the entries and about the time we wanted to start flying again things seemed to be getting better. Daytime temps hovered in the low 60's with normal rainy day humidity at 55%. Barometer @ 29.99" raising, with breezy conditions from the NW 10-18 mph most of the day.

As day light range shut-down time approached our luck held as the sky cleared a bit and the breeze diminished to 0-6mph as the temp fell into the mid 50's. Zog-43 coverage of this launch was very sketchy. My log shows I flew at least 5 N.I.T.E. equipped rockets ranging from a Micro Mass X-Ray and Night Launch 2000 model both on 1/8A.5-1 MMX-II motors, Standard size Nova Payloader (B6-4) and Upper Stage Warp-II (C6-3) and Clustered 4-D12-3 Super Nova Payloader-II. All made good flights with undamaged recoveries. Kevin Johnson had purchased a few ready-made LED payloads from "American Science & Surplus" www.sciplus.com which is still in business and makes available all sorts of strange and funny things that can be converted into some very nice night flying LED payloads. Some of these are strings of LEDs on headbands and other interesting do-dad's.

While this launch was well attended I have zero photos of this launch. I assume I was concentrating on Team "Grumpy Old Men" flying in the Open meet? So far I haven't found photos from either the day or night April launch. The usual alternate photo sources Jim Filler or Chris Kidwell also have no photos from this busy Flying day.

Narhams Night Launch #6b scheduled for Sept. 08, 2001:

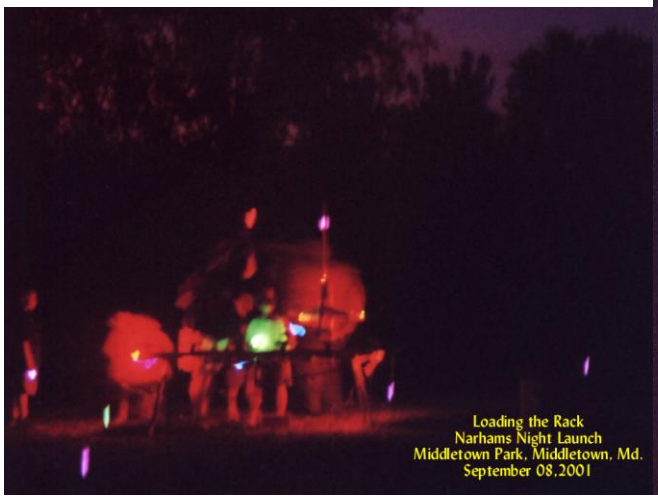
Narhams second launch of 2001 went off as scheduled. Our usual daytime launch was delayed until 1:00pm to shorten the rather long days flying that always happens on Day/Night launch occasions. Jim Filler ran the day launch & local Homeowners were invited to visit for a standard demo and a bit of explanation concerning rocket drifting onto property and our desire to obtain permission to retrieve such rockets before entering the property. All in all our day flyers launched 70 rockets not including those used for the demo.

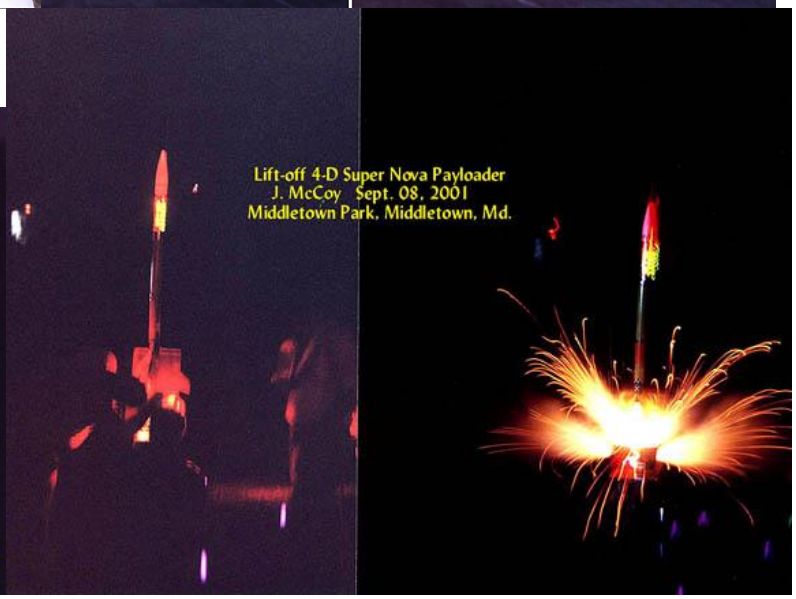
We were pleased to see about10 homeowners coming out to watch our night launch which began just about 7:00pm. Our weather was exceptional, with the exception of the "Middletown Breeze" which Plagued us all day from the south to S.S.W. 10-17mph. This direction breeze is most undesirable as it drifts our rockets into the nearby "rocket eating trees and September CORN just beyond. All in all we had a very well attended night launch with 10 flyers, launching 17 different rockets on 26 successful flights. These flights consumed 33 motors from 1/8A, A8, B4, C6, D12, & 2 E28 motors.

Some of the newer offerings at this launch were a couple A-Division members flying newly built Night models. Matthew Filler flew a Big Bertha with a 12,000mcd orange LED in the Nose. Upon recovery he added a cyalume illuminated "Alien" Bail Out buddy. Unfortunately the Alien fowled in the Rockets shroud-lines causing a rather hard landing. Alistair Andonlis brought along Mom, Dad and a couple of his friends to watch and help recovery his freshly built Gamma Ray with cyalumes on the fins flown 3 times on A8-3's.

Friend of Narhams, Chris Taylor came down from PA to launch the most models of the night with 7, Tom Anderson and I tied for second with 6 flights each. Most were standard models with LED payloads. Of my 6 night flying models I flew one 1/8A.5-1 Micro Max (X-Ray) and to prove that it is possible to fly UFO's on C6 motors using LED lighting I converted one of my existing Estes Plastic UFO's to fly with 24 Low output LEDs powered by a single 3V lithium coin cell. Jim Fillers 4x4 made an outstanding flight on 4 D12-5 motors and my usual Super Nova Payloader-II made an OK flight with 3 of 4 motors. Jim & I were both flying from my Solar Launcher with added 40amp Relay and at the pad 26amp 12v gel-cell battery. (OH man! Does a RELAY ignition system pay-off for clusters flying Day or Night).

A couple photos from the Night Launch-6b_September 08, 2001:





<u>Narhams Night Launch #7, September 14, 2002 Middletown, Md.:</u>

This was one of those Day/Night launches starting out with overcast cloudy, drizzly day flights. As the day wore on the clouds began to break as the night launch time approached. With temps at 86deg f, high humidity @ 67% and a steady breeze for the SSW @ 0-18mph gusting to 22, we were skeptical of how this night launch would turn out.

This was the first year I added 20watt halogen lighting to the Launch Racks, and 2 away pads. These new additions were powered by our old stand-by orange 26amp/hr Gel-Cells we've been using since they were donated by Tom Lyon in 1993! Yeap! These old gel-cells have pulled their weight at club cluster launches and night launches since.

As night began to fall (about 7:00pm) all was ready for night operations. One of the first flights of the evening was a Test flight of a Pratt Hobbies Locater with red LED. While the sound is great, it must be noted the LED just doesn't have the intensity to be used as a primary N.I.T.E. illuminator. It and some of the other rockets flown had trouble being recovered from the Chest High Grass down range.

Another "First" for Night Launches the Ha's introduced us to RAVE jewelry for NITE flying. These little magnetic pieces have some pretty strong LED output from 3 tiny coin cells. Tom flew a group of 4 inside a standard BT-50 clear payload section with great success. The Blinking did cause some concern as the rocket was coming down from its B6-4 flight.

Another first for our Night flying Chris Kidwell brought out a Super Alpha spiral wrapped with a 3" wide blue-white Electro-Luminescent strap powered by a 9v battery and inverter which made the Super Alpha on the heavy side. Chris first (test) flight was on a D12-3 which sent the rocket arching over landing about two feet from Doug Pratt's family group. Suffered only a broken fin the rocket was hastily CA repaired and fitted with an Aerotech E15-4 APCP motor. This gave the rocket a great boost phase flight but the Bonus ejection time (about 7 seconds) had the rocket ejection occurring about three feet off the ground…Crunch! Chris muttered "I'm Done".

Our A & B division kids didn't disappoint the spectators. Alistair Andrulis, Kris Bittle & Mathew Filler gave us 5 outstanding A, B & C motor flights. Vince Pearman's 4-18mm motor modified Fat Boy carrying a strobe in the nose made a very interesting flight on 3 B6-4's and 1- C6-5, a most interesting combination.

Jim Filler also chose to fly a strange combination in his 4x4 Ford Rocket, 2 C11-5's & 2 D12-P BP motors which may explain part of rough flight with only 2 of the 4 motors giving the model thrust. Mike Howie tied for most night flights with 5 using A & B motors illuminated by clusters of tiny ¼" x 1" fishing Cyalume Glo-Sticks.

We had a number of "Firsts" at this night launch. Our illumination diversity is ever increasing, while our range equipment and procedures continue to improve. All in all this Night Launch had 14 flyers launching 31 flights using a total of 44 motors. We had one 5-motor cluster, three 4-motor clusters, and 2 illuminated Gliders by Robert Edmonds. Motors used: 14 D12's, 13 B6's along with many A8's, & C6 motors. Largest motor flown was a G35-7w white lighting but I'm not sure if the owner ever got the model back which landed Way down Range in the outer Farmer's field.

Let me pass along the source for the electro-luminescent panels available to this day from www.nightlaunch.com which also has a wide range of other Night flying components.

After some searching Jim Filler came up with a few photos from this Night Launch:

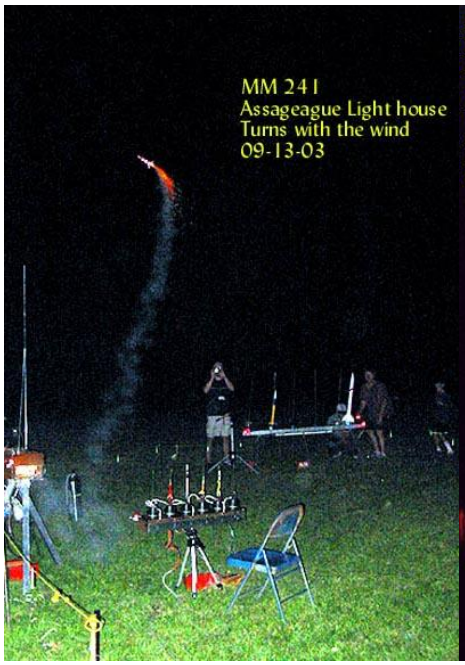
Narhams Night Launch #8, September 13, 2003 @ Middletown Park, MD:

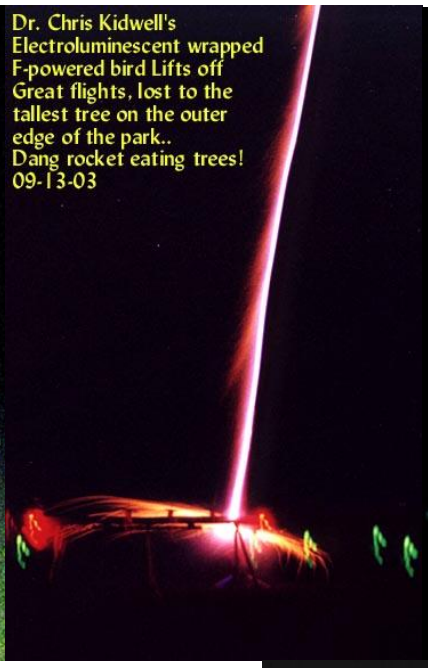
As we arrived at the field for Day/Night Launch #8, the weather was anything but inviting. Rain off and on, drizzle with very low cloud ceiling. Heavy Dark clouds hovered around 100-200ft with very low visibility, generally dismal conditions. Bands of rain moved through the valley periodically, dashing hopes that the day launch would happen at all. Many of us milled around the parking lot in the rain, talking, swapping stuff, & trying to keep a good attitude towards the weather and the day. Several of the group voted to pack it up and call it a day. The remaining folks in the group were just about to close up shop when things started looking a little better, the drizzle stopped, clouds begin to break-up and the ceiling seemed to be lifting. Several of us went out on the field to see how soft the ground was and decide if we could begin to set up. By this time it was almost 2:00pm.

We sit up a single launch rack and my micro rack hoping to get a few low power flights in as it looked pretty dark grey over the mountains to the east. Turned out to be a fairly good launch day,(not counting the wet shoes). I flew all 8 micro models I had prepared for the day.

Daytime operations ceased at 5:30pm to change over for night flights adding a Cluster pad, Micro Maxx 6 position rack with 20watt red Halogen lamps, Red rack lighting, Range head lantern with red lens. We were ready for action by 6:30pm. We broke for dinner and to prepare our night launch rockets.

Even with many of the normal flyers going home early we still had 10 flyers with a bunch of night flying models. We actually got dusk flying started at 7:40pm and continued until 9:15pm when we ran out of rockets;) One of the most interesting and Last flight of the night was Robert Edmonds Dual Deltie Thunder Glider combo that suffered a D12-5 Cato on the pad. Robert did have several very nice Glider flights with both LED and/or Cyalume illumination. The author flew all 6 of his micro night flying rockets, sporting mostly tiny LED packages or 1" fishing cyalume glo-sticks. I also flew again my single C6-0 Estes UFO fitted with 24 low powered LED's and single 3v Gel-Cell battery & holder. Chris Kidwell flew his www.nightlaunch.com electro-luminescent strip rocket on a F25-6 APCP motor that managed to find the top of the tallest tree on the FAR-side of the Middletown pond just inside the park boundary. The Jarkeys flew a G powered strobe illuminated flying saucer that was lost in the heavy high brush and brambles. All in all we had 10 flyers launching 35 rockets on everything from 1/8A.5-1 to G80 motors. I can't believe I wore myself out to the point I was too tired to prep and set up my 4 & 5 D12 clustered rockets. Photos from Narhams Night Launch #8, September 13, 2003:


MM 241
Assageague Light house
Turns with the wind
09-13-03


Dr. Chris Kidwell's
Electroluminescent wrapped
F-powered bird Lifts off
Great flights, lost to the
tallest tree on the outer
edge of the park..
Dang rocket eating trees!
09-13-03


Robert Edmond's
D powered Deltie Thunder
Lift-Off
09-13-03


Mars over Middletown, Md. photo by Chris Kidwell 09-13-03


Night Launch 09-13-2003
Middletown, Md


David Jarkey
G-40 powered Saucer
Lift-Off
09-13-03


Jim Fillers C6 powered
Big Bertha Lift-Off
09-13-03


Edmonds
D12 glider
CATO
09-13-03

Narhams Night Launch #09, September 11, 2004.

This year's scheduled Night launch at Middletown Park, Md. gave the group a lot of firsts. The day time launch and pre-approval of NEW night vehicles proved the practice is a sound and prudent part of any Night Launch. Several of the New Vehicles didn't pass muster this year, even a couple Cyalume illuminated B-Motor models proved unstable in their original configuration.

I'll note here the problem with asymmetric loading on the outside of any mod-roc air frame almost guarantee the rocket will not remain stable through the entire flight. Strapping a long (about 8") x 1/4" glo-stick along one side of an Alpha rocket proved completely unstable as it left the launch rod. Adding a second identical glo-stick to the other side balanced out the load and allowed the little B powered rocket to fly with only a slight wobble.

One of our higher power flyers designed an extremely interesting Lampshade floor Lamp Odd-Roc. This Odd-Roc was set up to allow only the Lampshade to fly free from it's black iron 6 foot floor lamp fixture on a G40 motor. While the documentation seemed to suggest the model would be stable the day time approval flight showed otherwise. At ignition the Lampshade leaped from the Fixture and went into all kinds of wild gyrations about 8-10feet about the ground. Bounced off the ground twice, land-sharking along the ground until burn-out. I'm so glad we called an extreme "HEADS UP" and placed the Fixture way out on an away pad.

This DOES bring up another of the Rules that really need to be Stressed. ALL first time flights of Unproven or NEW designs MUST Be test flown in as near absolute isolation as possible…NEVER at a public launch of any kind. If for some reason one can't find a suitable isolated launch field before a Big Club Launch then the rocket should be test flown very early or Very late in the day at least a month before a night launch which always produces many extra spectators.

Our night launch operations began around 6:40pm with enough dusk light to allow a couple late comers qualifying flights. We also had a fairly large group of Scouts from Troop 1062 trying to get in a last flight or two. Day time operations were completely suspended at 7:15pm with our first flight of the night by the authors 5-D12 clustered Night BrightHawk Roaring off the pad on another perfect very bright flaming flight. Our breeze had picked up some with from the ENE pushing everything toward the tree-line.

As Luck would have it the BrightHawk pass over the trees into the next field on one of Mary's fine 36" hemi- nylon chutes. Lot's of Glo-Sitck and LED illuminated A, B & D powered models flew while Jim Filler set-up his new Triple Delight powered by 3-D12-5's for this flight. The lift-off and flight were perfect deploying a large Chute carrying the model over the tree line as well. Kevin Johnson launched his "Rising Star" an orange lens covered Strobe rocket flying on an F21-4 motor. A Very Bright and Quick fight.

It was then about 8:20pm that Old Man Murphy decided to visit for several strange flights. Normally, perfectly stable rockets that had flown well previously and/or during the qualifying process went haywire all over the place. A, B & C motor models would get about 15-20 feet off the rod and just whirl around in mid-flight. A long LED Illuminated rocket suffered a complete ejection malfunction that had the model coming in ballistic while completely dark (Very Scary). The Authors 4th flight of "One LONG Night"

Decided to strip off it's over the top shroud line Chute coming in hard enough to bury the nose cone deep enough in the grass it was not recoverable. Than Doug Pratt gave us another Narhams Night Launch First: Flying a very nicely done Loc-IV Strobe Nose, Electro-luminescent panels logo LMR powered by a Ellis Mountain G35-7 took a very long Arching flight path and the 7 second delay turned out to be more than 9 second flying into Middletown Pond direct Splash down…We never saw or heard an ejection.

Another Murphy's Law Oops hit the author while wiring my 4-D12-3 "Super Nova Payloader" mis-reading wire color in the red launcher glow making this fairly heavy rocket lift off with only 2 of the 4 motors making a very low (50ft) flight ejecting only 10feet above the ground right in front of our group of Troop 1062 Scouts. No damage to rocket or scouts☺

Luckily that was about the end of Murphy's mischief. The rest of the night went pretty much as planned. We had a very diverse group of models and N.I.T.E. payloads. This included a New 24 LED C6-0 powered UFO, Jim Filler launched a great B6-0/B4-4 Loadstar 2-stage Cyalume illuminated flight. Robert Edmonds flew 2 of 3 very nice night glider flights. One was a 4 quadrant strap-on gliders that made some impressive back loops and stalls into wonderful glides each of the 4 gliders with tiny 1" multi-color cyalume sticks taped under the wings. And last but not least was a G-powered mono-copter that only rose about 40feet but the spiral flame trail has to be seen to be believed.

All in all we had 39 total flights by 24 flyers. 16 individuals from the club, along with 8 members of Troop 1062.

We Flew: 3- Multi-Motor Clusters, 1- 2-Stage rocket, 4-Glider flights, (8 gliders if counted individually). 1- Mono-Copter, 1-LED lighted UFO, 29 other Rockets. We burned 4-A motors, 22-B motors, 5-C motors, 15-D motors, 2-E motors, 1-F motor, & 2 G's.

We were packed up and off the field by 9:50pm. With All those flights we only have two photos from this Launch, both of which were from the daytime qualifying flights.

Narhams Night Launch #10: May14, 2005, Middletown Park, MD:

Our First Scheduled Night Launch of 2005 was coupled with Opossum-9 Open meet & sport launch at Middletown Park, Md. In the morning we were met with ominous sky's looking like rain but it held off most of the day until 6:00-7:15pm when the sky opened up and it rained pretty hard. By 7:30pm the sky was clearing and we were treated to a beautiful double rainbow just as dusk set in.

This particular Launch was not covered in our Zog-43 for some reason. This launch is reported only in my notes and photos here. The Record trials are covered in the October 2005 Zog-43 along with the Night launch report for Sept. 10, 2005 but nothing more about the May Night launch.

As it turned out I was the Night Launch Manager again this year so my Photo time was limited. Most of the Photos are by Chris Kidwell. Thanks Chris for taking some photos for the record.

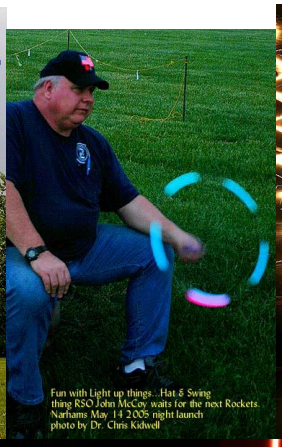
According to my notes we broke for dinner about 5:30pm which was ahead of the rain and allowed time to prep (Undercover) while the storm moved through the valley. The temp was 70deg. with a south breeze 5-11 mph most of the day, in the storm we had gusts to 45mph but the air calmed down quickly after the rain passed.

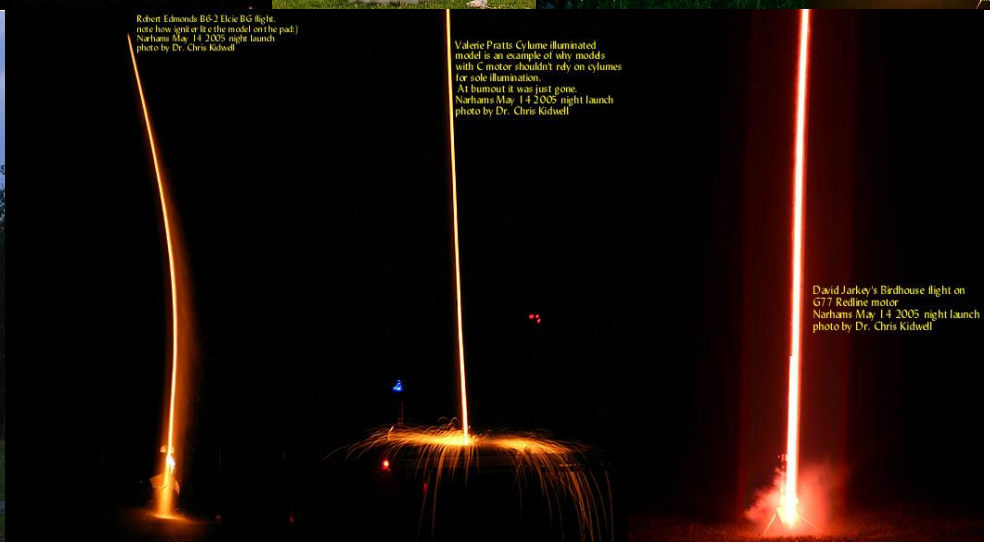
Our people seemed to get sparse after the shower with only about 7 members staying to fly some interesting Night Rockets.

We started off about 7:30 with a great Dusk flight of a Barracuda on an F25-4 motor. I was able to fly one rocket, the C6-0 powered 24 LED UFO for a very nice flight. While we waited for the Rack to load the RSO had a little fun playing with LED Illuminated Hat and flashing spinning thing. I still have the Swing thing but don't know what happened to my hat!

Robert Edmonds made an excellent Ecie Glider flight. Valerie Pratt made an outstanding B6 flight with a Quest B6 motor. David Jarkey had a couple impressive G motor Odd-Roc flights. First an outstanding Birdhouse converted to fly on a G77 red-line motor. Wow! What a streak. We ended the launch early about 8:55pm with David flying his G powered Mono-Copter on a G20 the trail has to be seen. LOL! We packed up and were off the field by 9:20pm …Leaving early? That has to be a Narhams First.

Photos of this Zog-43 ignored Club Night Launch below:





Narhams Night Launch #11: September 10, 2005, Middletown Park, MD:

Another Long Day & Record Attempt Trials Sport Launch ended about 5:30PM leading to a very relaxing evening flying this year's SECOND and better attended night launch.

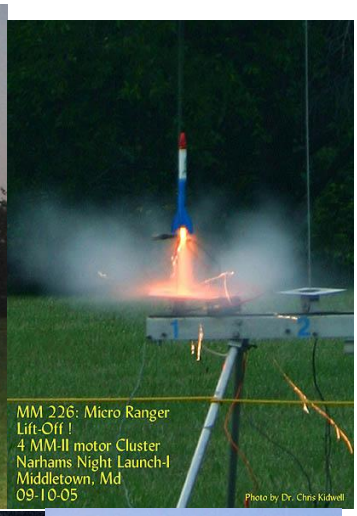
Dr. Chris Kidwell did the honors taking most of the Record Trial and Night Launch photos. Being September it seemed like the Sun just did not want to retire for the night. We had the Range changed over by 6:30pm putting away all non-essential personal and club equipment, attached cyalume sticks to our perimeter rope and installed the single Launch rack & away pad ruby red lens covered 20watt halogen lamp lighting with necessary 12v batteries at the ready. The evening weather as near perfect for a night launch as could be expected with temperature at about 78degees with low humidity (30%) and very light breeze from the ESE at 0-3 mph most of the evening. As the sun finally began to set behind the western mountains Dr. Kidwell caught a very nice Sun-Set photo.

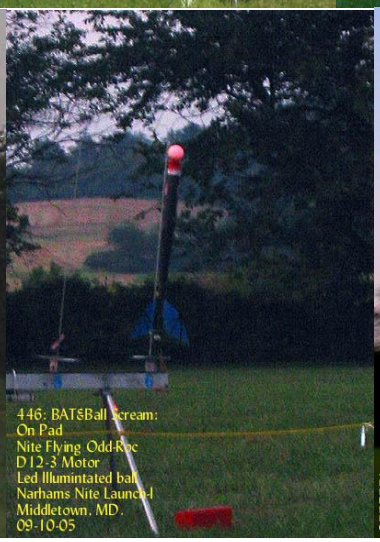
Over the last year one of the things I'd been considering was a clustered Micro Maxx powered BT-20 size downscale of the Old Estes Ranger. The rocket came out pretty good and using some freshly pyrogen dipped Quest Q2 igniters the little rocket was set-up on a standard 1/8" x 36" launch rod. That proved to be not such a good idea. Using a range box relay and spare 7amp/hr 12v battery the first dusk launch of the evening began the countdown…5-4-3-2-1- ignition and we had a great flaming liftoff of the 4 MMX-II (1/8A.5-1) motors. But the rocket hung on the rod very near the top, de- rats. Lesson Learned: Always fly Micro models regardless of number of motors from a .049" x 12 to18" launch rod! The Micro Ranger has made additional very successful flights for a normal MMX launcher.

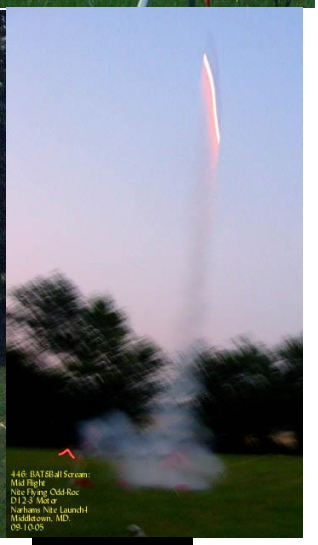
By 7:50pm most of the folks had been holding back started loading rockets on the rack and away pads. While waiting for the rack to load I had a chance to take a head count of all the folks who had gathered to view our night launch. Most of the 36 people in attendance this evening were locals with about 13 club members and family.

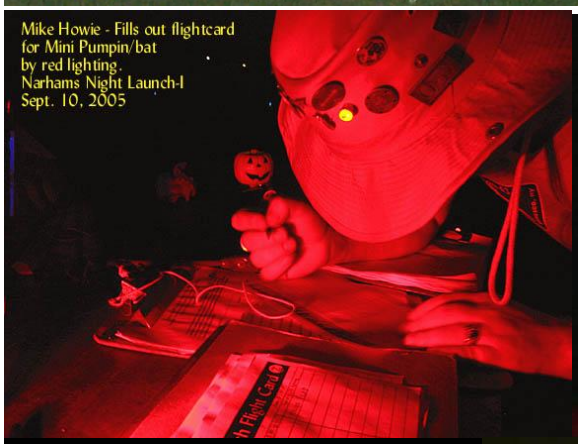
Jim Filler had his Triple Delight ready on his HD pad with a cluster of 3-D12-3's. Using another Range box relay and 12v 7amp/hr battery his flight went off splendidly giving a high deployment and return on 30" nylon chute. Several of the younger members flew several A & B powered models equipped with Glo-Sticks and/or some "Dollar Store" purchased LED "fixtures". All made fine flights recovering without incident. We put 5 different Odd-Rocs up this year all with some form of LED lighting. One was a reconstructed "Bat & Ball Scream". This Odd-Roc is a Bat winged dollar store black baseball bat with an LED lit 4" white plastic ball. Flying on a D12-3 it made a very nice flight though the 3 orange LED's in the Ball were just barely enough to light up the rocket. It would seem my showing the club how to use LED's on C6-0 powered Flying Saucers paid off, this year we had 3 new ones plus my original. Dr Chris Kidwell flew one of his clustered models which give us a total of 3 clustered rocket flights for the evening. Robert Edmonds treated us to 3- night glider flights which are always very impressive. David Jarkey flew 3 higher powered rockets the most impressive being his G80 powered Mono-copter. All in all we burned 38 motors with impulse of 1/8A, A B C D F and 3 G's. a grand total of 30 flights from 13 flyers. We were packed up and off the field by 9:45pm. Dr. Kidwell's photos along with a couple from the author below.

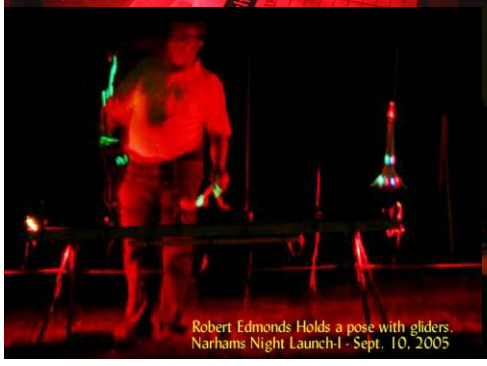
Additional September 10, 2005 Night Launch photos:











Narhams Night Launch #12: Sept. 16,2006 – Old Nat'l Pike Park, Mt. Airy, Maryland.

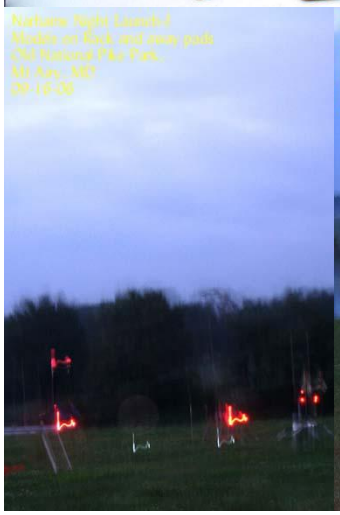
This year's annual Day/Night Launch seems to have again been unreported by our Zog-43 and not well documented by the club or the author. We only have my Flight Log account and photos. Weather data 11:20am Temp 67.6degF, Humidity 82%, Barometer 29.5" falling with NE breeze @ 5-8mph. The breeze would stay with us all day but did slack off as night fell. As dusk approached the temp began to fall but into the lower 60's. The sky was heavily overcast all day with dark foreboding clouds drifting by without a single drop of rain.

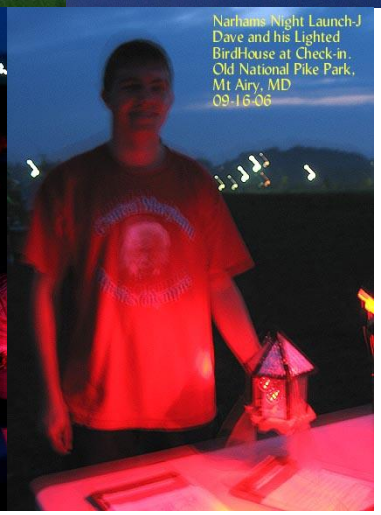
During the day light, sport flying I was engaged in OOP Motor tests flying 23 UFO rockets on 1970's A3-0T, A10-0T 1/2A6-0, A8-0 & B6-0 booster motors along with several ½-A6S short, B4-3m, B4-6, B8-5 B14-5 & 4-C5-3 motors . All 39 flights preformed as intended without a single incident further proving very old BP motor can be used safely if stored properly during their long life. Just for fun I also sport flew two new Micro Maxx models, 3x downscale Trident-III and Galileo satellite.

Night launch prep went about as normal with the day time range shutting down at 5:30PM allowing the range crew to remove one rack and most of the unnecessary gear, add up lighting to the rack and away pads, add perimeter rope Glow-Sticks and set up the Check in and Launch control lighting. Our Check-in Table was decorated this year with our 4th place section trophy from Naram holding our red lens spot light☺

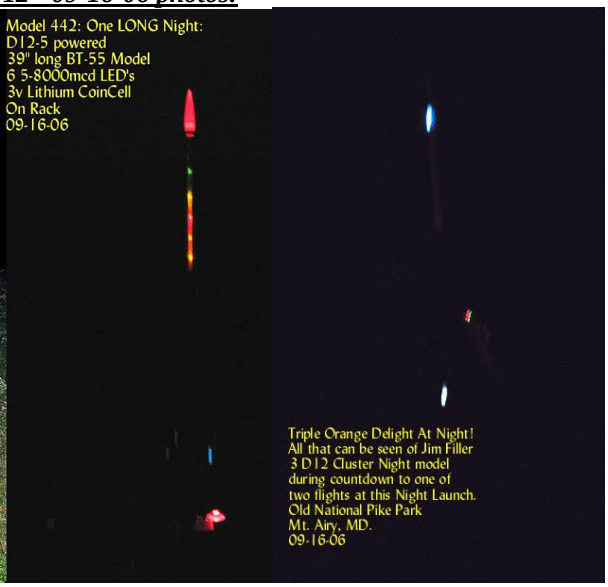
By my record night operations began at 7:10pm with about 20 in attendance. Unfortunately no record was made of how many fliers or rockets were flown. I can report only on those that I took photos of.

It would seem that Odd-Rocs are a prime contender for conversion to night flying. David Jarkey (G-80 Monocopter flier from last year) has a new and different Illuminated Odd-rod for this year. At Wooden bird house with stuffed bird, flying on a G40. It would make a very nice flight that unfortunately my camera missed getting only the smoke trail. Luckily I did get a couple shots of the Odd-Roc at check-in. Jim Filler flew his now veteran 3- D12 clustered Triple-orange-delight-at-night on a good flight with use of our range box relay system. I've made another convert LOL! The author made 4 flights first a micro 3x down-scale Constellation with 1" fishing cyalume sticks in its payload section. Next was another D12-3 flight of the Bat & Ball Scream, 8th flight of my C6-0 powered UFO, and the rebuild booster section lost last year of my "One Long Night" D12-3 powered LED and Cyalume on the fin tip rocket recovering on a much to large 24" X-form chute (sorry to Mary my recovery crew). That's as much as can be reported about this Night launch. I'm encouraged by the new thinking and ingenuity of our night rocket builders. We seem to have something a little different each year. Limited photos below.





Remaining Night Launch #12 - 09-16-06 photos:



Narhams Night Launch#13: Sept. 15, 2007- Old Nat'l Pike Park, Mt. Airy Md.

Narhams annual Day/Night Launch for September 15, 2007 also did not make our Zog-43 news letter reasons unknown. Researching my back issues of Zog-43 I did find a couple random night launch photos from this launch in the June 2008 issue. That said we'll have to rely on my flight log and personal photos for this launch.

The day started at 10:05am with a temperature of 83.5deg f, Humidity 55%, Barometer 29.45"falling, morning breeze 5-12mph from the SSW, visibility 10miles, sky's very high wispy clouds.

During the day launch portion I flew 3 standard size rockets: 3rd flight of my KC-6 Space Shuttle on a great C6-3 flight with the mother ship gliding to a fine landing but the little shuttle gliding very fast into the top of one of the 80foot Oak trees. Repeated attempts to locate the little powered shuttle failed. (authors note- this shuttle was successfully found on the ground the following month suffering no ill effects of a month out in the weather). A brand new 4-3/4" Odd-Roc Spool "Spool Daz" made two interesting flights on C6-0 motors. Lastly a qualifying flight for my just completed Phantom Nike-Apache all illuminated clear lexan & styrene LED night flying rocket. The Phantom Nike-Apache made an outstanding and higher than expected flight on a C6-3 motor.

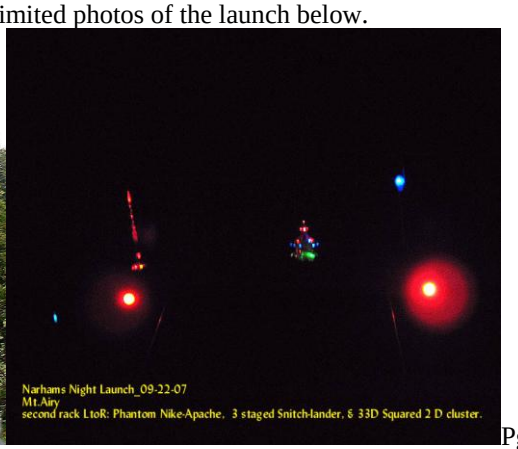
During the afternoon hours I flew 5 Micro-Maxx powered models including; Micro Chapstick Odd-roc, Micro 1-1/2" diameter Spool rocket that flies as well as the 4-3/4" Spool Daz". Micro scale all cardstock 1:42.7 scale Iris, Micro cardstock Alpha and a 6x1/8A in-line clustered PMC XB-70 Valkyrie. The XB-70 made a very short 12-15foot flight recovering on an 8" chute receiving a single snapped wing-tip that is easily repairable. Sorry but I have no other info on others flying during the day.

We broke down the day range at 5:30PM giving the range crew time to get some dinner and set up the night equipment. Temperature at 6:20PM had risen to 91.4deg f, Humidity had dropped to 45%, Barometer 29.39" falling. As the day turned to dusk we also noticed heavy dew forming on most of the exposed surfaces.

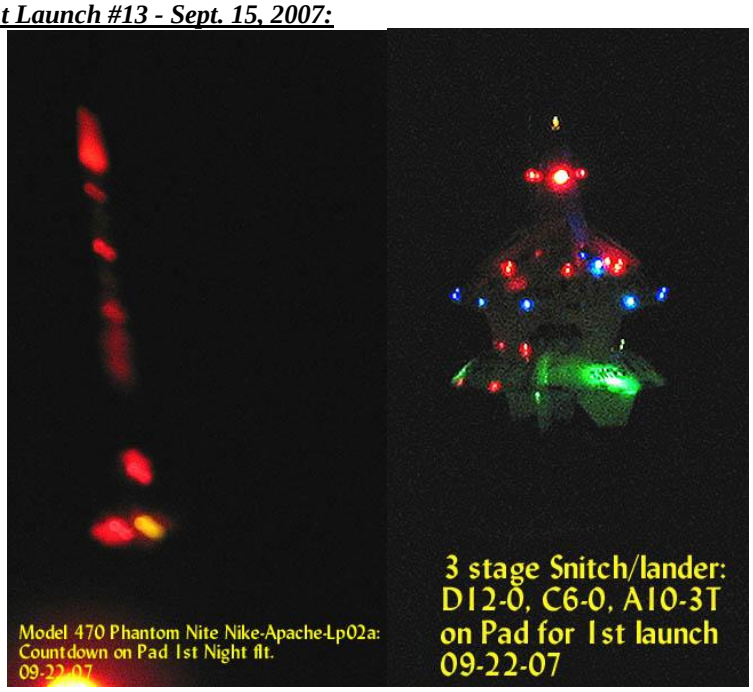
I'm not sure who else attended this Night Launch nor do I have any info on how many spectators and other flyers were in attendance. I do recall we had a local Scout troop in attendance but that's about it.

My night launch rockets were a new 3-stage UFO consisting of two Snitch UFO's and an altered Mini-Mars Lander also LED illuminated. This new configuration flew on a D12-0, C6-0, A10-0 motor combination. Very impressive flight!

Next up was flight #2 of the Phantom Nike-Apache while this rocket is almost invisible during daylight flying it is Awesome when all 30 LED are lit including each of the 4- Nike fins. The rocket made an outstanding flight recovering on a 12" chute. My other flights were the veteran One Long Night and Warp-II upper stage. Sorry for the poor coverage and limited photos of the launch below.



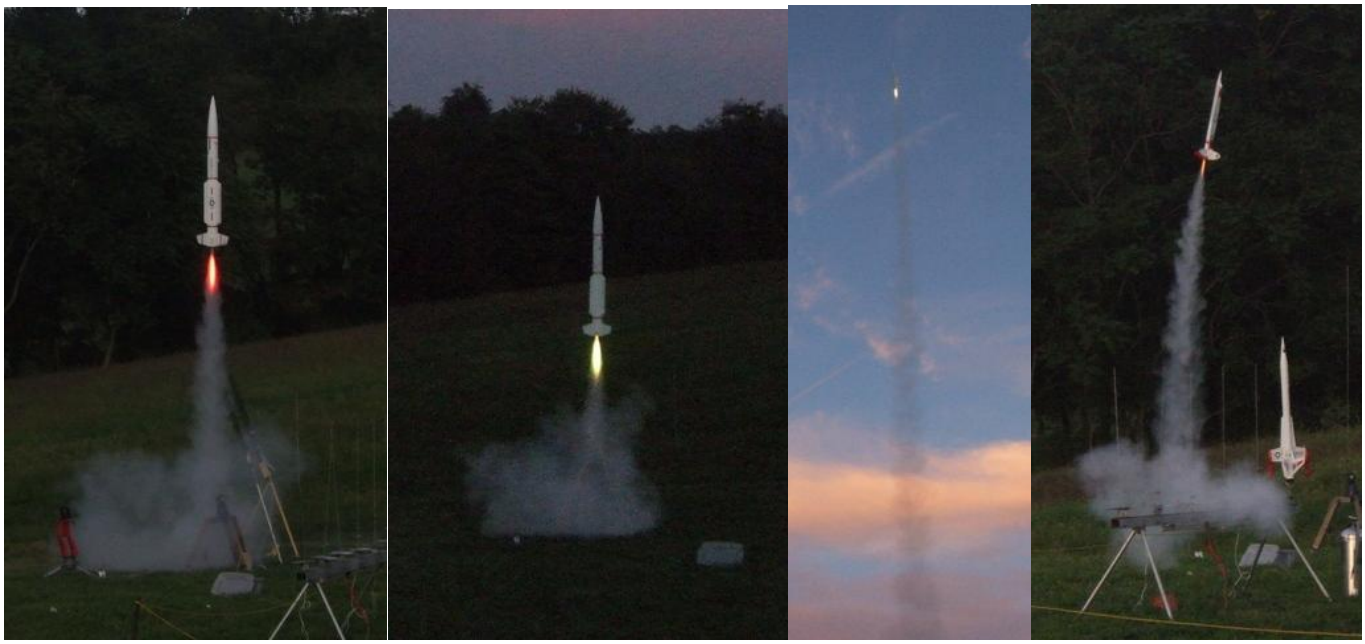
Last couple photos from Night Launch #13 - Sept. 15, 2007:



Narhams Night Launch#14: Sept. 20, 2008 – Old Nat'l Pike Park, Mt. Airy, MD:

2008 was a very strange year! Wall-street collapse, hard business times and other factors delayed the McCoy's usual mid-August vacation to late September, meaning I'd miss our clubs Night Launch #14.

Jim Filler would be RSO and take charge of most of my Night Launch range equipment so the club would have everything needed. Jim's report didn't make the Zog-43 until January 2009 issue with most of the coverage being about the day launch. Weather started out at 10:00am with temperature at 72deg. f, with very little to no breeze at all. Flying seems to have been a slow day on the range with plenty of time for those who attended to get in lots of daytime flights and several long term RCRG flights as well. Flying day time flights until a bit after 6:00pm the range was switched over for Night flying by 7:00pm and continued until about 9:15PM with 26 night flights and get this 202 day time flights. Interviewing Jim much later his recollections of the launch were most of the flights were Low power B6, C6, & D12 with a few of the usually clustered D12 mid-power and a couple larger motor flights. He had 4 photos shown below.



Narhams Night Launch #15:- September 19, 2009 - Old Nat'l Pike Park, Mt. Airy, Md:

Our September 19, 2009 Day/Night sport launch was prepared and presented as usual. Our crew arrived just before noon to set up the day range which would open for flights just before 1:00PM. The weather started out at 72.5deg f with 42% humidity, Barometer 29.65" steady. With brilliant blue cloudless skies most of the day, unlimited visibility.

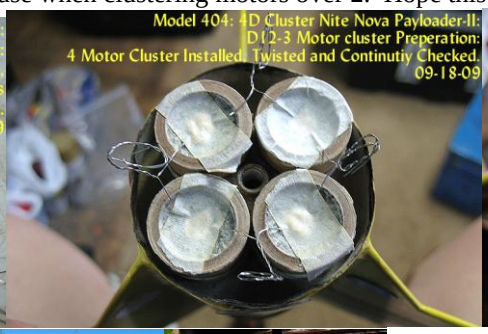
This launch was again missing from Zog-43 news letter coverage. I have only my notes, flight log and photos to document this Day Night launch. My recollections of the day launch are that we also flew a "fun contest" Ping pong ball bail-out spot landing. My entry was a bit unorthodox as I used a Micro Maxx 3x down scale Sentinel with the ping pong ball punch through by the long nose cone. Also flown were 3 more Micro's: a 3x down-scale Astron Drifter, a new FlisKit "Big Honkin Rocket" and 3x down scale Estes Midget 2-stage. The Midget flying on a brand new Quest MMX-II-NE to MMX-II motors. The .82sec delay between booster cut-off and upper stage ignition is heart stopping ☺ Jim Filler flew his brand new Up-Scale Mercury-Redstone on an APCP motor just as dust set in.

Because this launch was not covered by Zog-43 and I wasn't involved with the flight card tally I have no idea of how many Narhamsters flew at this night launch; that said I did take a number of day and night launch photos so we do have a little bit of a record. I can report on the night rockets I personally flew. These night flights began with a dusk launch of my micro Assateague Light House LED Illuminated Odd-Roc. The Light House made a fine 60ft flight recovering on a ¾" x 12" red Teflon tape streamer. Next Night Micro flight was a second flight of a 2-staged micro maxx rocket, a 3x down scale Warp-II with 3- 1" long glow sticks in the payload section. The Warp-II was also a dusk launch as the lower stage was unlit tumbling back but was successfully recovered with the upper stage reached impressive altitude recovering on a ½" x 18" mylar streamer. Last of the Micros was a 4-motor cluster 3x down scale Ranger on 4- MMX-II motors. This 4th flight of the Micro Ranger made a brilliant ignition and liftoff to a nice 120foot flight recovering on an 8" mylar chute. Moving on to Standard size night flight rockets all veterans of earlier night launches were the 3rd flight of the D12 powered "One Long Night", Second C6-3 night flight of the 15 LED completely illuminated "Phantom Nike-Apache reaching about 1000feet and recovering on a small 12" plastic chute. This year I cut back to the original 2-stage 54LED UFO flying on the usual D12-0/C6-0 motors. The UFO flight & staging was caught well by Dr. Kidwell from far up the hill to the East.

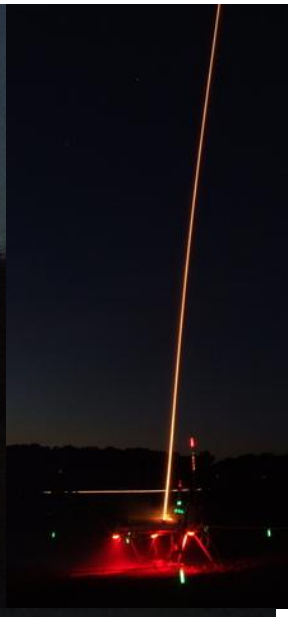
My final flight was the old standby 3x Up Scale Nova Payloader-II with its old not so bright 43 led payload & nose section. Cluster flying at night is a bit more involved as color separation at the relay launchers is much more difficult under red lighting. This year I'm using Jim Fillers heavy duty away pad launcher with 6' x ¼" stainless launch rod. This is the 3x Nova Payloader's 20th flight on 4-D12-3 motors. What a great flight recovering on one of Mary's 36" nylon hemi chutes.

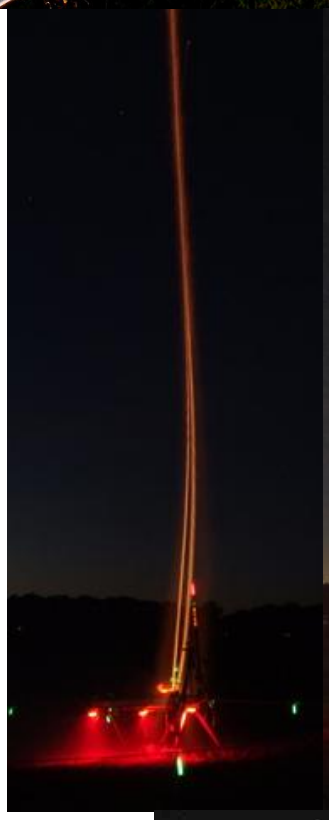
Photo 15b shows Thomas Henderson's 3-D12 clustered "The Walrus" BT-80 rocket from one of the away pads using our range box relay and battery to move the power from the controller side of the circuit to the launcher. The Walrus had a fine flight and recovery. Photo NL 15c is a C6 flight of unknown owner. Photo NL 15d is another Narhamster's LED illuminated Fliskit "Deuce's Wild" on a pair of C6-5 motors. I'm pretty sure photo NL 15e is my 3X Nova Payloader 4- D12-3 Clustered BT-80 night flying veteran lift-off shot by Dr. Kidwell, we normally don't see that much fire and smoke unless it's from 4-D12 motors. If you look closely you can see the Big Dipper in the night sky background. Not sure who flew it but photo NL15f is of an APCP motor flying saucer from the rack liftoff . Photo NL15g Shows another Arrow straight liftoff of an unknown rocket. Photo NL 15h is my 2-stage UFO flight that Dr. Kidwell caught including staging. Last photo NL 15i, from the night launch was Jim Filler veteran 4x4 on D12-5 motors on a very nice flight to close out the evening. We packed up and were off the field by 9:55pm by my log.

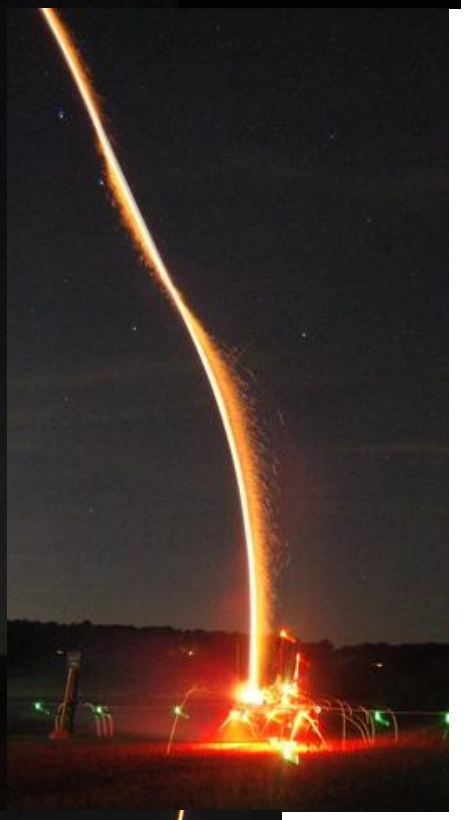
Before adding the next couple pictures perhaps a bit of explanation is in order. Cluster Ignition is always a challenge, most just try to twist all igniters into two contact points, this twisted contact creates very bad situation with other then two motors. Below is a close up of the custom APCP NiChrome igniters I use when clustering motors over 2. Hope this helps give a little clarity to the process.



Remaining Night Launch 15 photos:





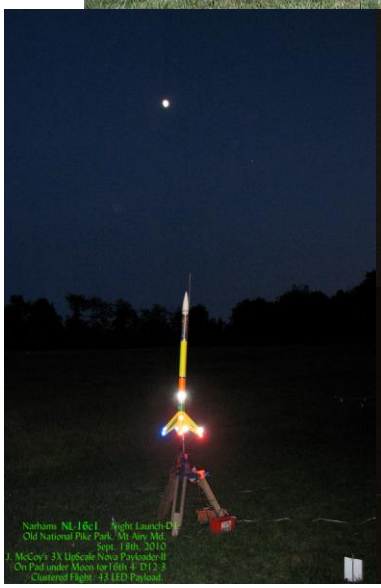


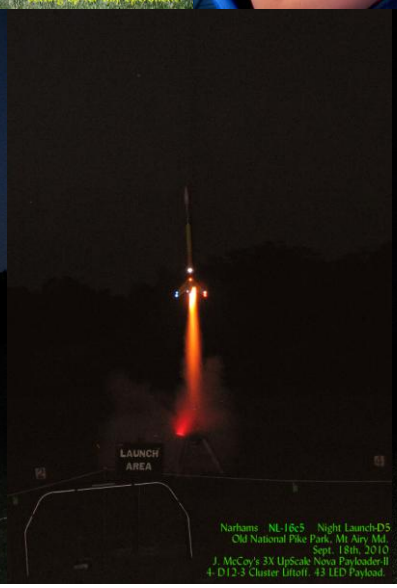
Narhams Night Launch #16: September 18, 2010 – Old Nat'l Pike Park, Mt. Airy, MD.

Narhams Night Launch #16 scheduled for Sept. 18, 2010 – Day/Night Launch began as most others with the range crew arriving at the park about 10:00am with all the launch range gear from the storage unit. Jim Filler was again the Launch Manager/RSO for both day and night launch with assistance from Dr. Chris Kidwell and others during the day. I'm happy to report both day and night launch activities made the Sept/Oct issue of Zog-43 although the night launch coverage was very limited to a few words from a first time attendee and 2 pages of black & white photos. Jim's report on the day's activities list 159 flights, burning 171 total motors.

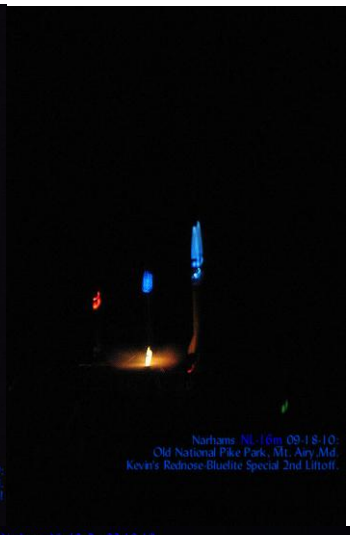
While the night launch crowd and actual flyer and or motor tally are missing I have my log and a good amount of photos that might help fill in part of the blanks. Personally I only flew 1 daytime flight this year, an experimental B helicopter which needs more rotor balancing to straighten out the duration phase. Grandson Kyle & I had an instructional day working with LED assembly on the field. We then, instead of flying during the day, used the time to ready 7 standard size night flying rockets. My plan was to start of f the Night Launch with a just dark 26th flight of my 3X Up-Scale Nova Payloader-II from Jim's HD away pad as the full moon rose over the field. Following the Nova Payloader –II clustered flight we went through 3 B6-4 LED illuminated standard payload bay rockets, my second 2-stage Warp-II night flight on C6-0/C6-3, another flight of the first LED illuminated Estes UFO on a C6-0 and another outstanding flight of the 2-stage UFO on the usual D12-0/C6-0. All worked well and recovered without damage or lighting failure. We were also treated by Allen Williams to a converted standard Payload rocket with blue led payload on a C6 motor, Kevin Johnson flew at least two rocket with dollar store red & blue LEDs on B6 and C6 motors. Bruce had 2 good flights on C6 motors. Mike Howie flew a new night rocket on an E30 APCP motor for a great flight. Jim Filler flew his dual night Shuttle rocket in full darkness nearly loosing one of the shuttles, but another pattern search turned it up. Jim Finished up the night's flying with his 4X4 Clustered BT-80 on a wonderful flight and recovery. While there were a few New LED packages at this launch there were not any new actual layouts or advances other than a number of Narhamsters converting "Dollar Store" items into LED lighting for Standard payload models. This was in part due to Alex Mankevich and his presentation at the Clubs August meeting. We packed up and were off the field will within the required 10:00PM.

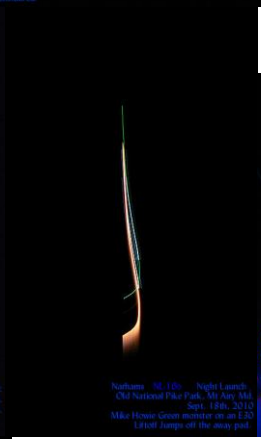
Most of the photos below were taken by the author from the Check-in station.





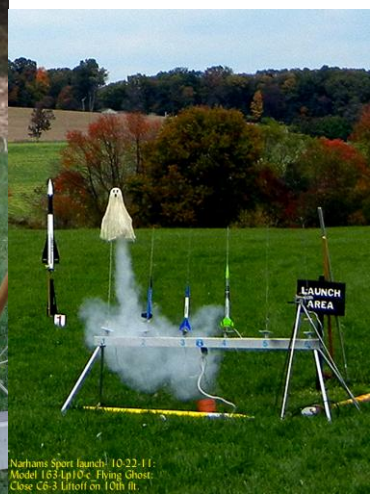
Additional Narhams Night Launch #16: Sept. 18,2010 photos:





Narhams Night Launch #17: September 17, 2011 – Old Nat'l Pike Park, Mt. Airy, MD.

Talk about a bad year! 2011 is the very first time we had to cancel our scheduled Night Launch due to very high winds and heavy rain. Unfortunately this particular year we had not planned for a rain date so the September 17, 2011 Paratrooper bailout sport contest & Night Launch had to be cancelled. We did try to have an adhoc dusk launch at our October 15th sport launch but because we did not have park permission to stay after dark. Only 3 early dusk launches were made by the Author and we were packed up and off the field by 6:20pm. Unfortunately I have only a couple photos of two of the three dusk rockets flown.



Narhams Night Launch #18: Sept. 20, 2012- Old Nat'l Pike Park, Mt. Airy, Md:

September 20, 2012 came with much anticipation as it had been two years since our last successful club Day Night launch. Jim Filler was again Launch Manager and RSO for the day launch. We arrived at the usual 11:30pm set-up time to have the range open for sport flying by Noon. Weather for today was pretty good 12:00noon temp at 73.2 deg f, with 42% humidity, Barometer reading 29.35" & falling. A bit more breeze then wanted running 0-10mph gusting to 16 most of the afternoon. Skies were nearly clear with very high Alto-Cirrus clouds wafting by. Many great flights were recorded during the day launch which ran until 6pm close down for change over to night range configuration. Jim reported in the Sept/Oct. issue of Zog-43 that we flew 92 flights burning 96 motors including two clusters and two multi-staged flights.

Breaking for dinner after range change over, the dusk night range opened around 7:18pm. This First Rack and one away pad were loaded early awaiting dust to get a little darker before actually beginning just about 7:30pm. On the first rack we noticed the beginning of a disturbing trend this year. Flight #4 which had a very nicely lit LED package went completely dark at ignition and did not relight after burnout. As this was the first "Dark Flight" we had seen in awhile, neither Jim nor I thought much about it. Only commenting that Dark Flights are unsafe and hoped the modeler got his rocket back and could correct the problem. 7th flight of the night was my Old stand-by 3x 4-d12 cluster Up-Scale Nova Payloader –II that had an outstanding flight and recovery on 4-D12-3 motors. The Big Nova Payloader-II flown at dust allowed the entire flight and recovery to be photographed. Just about all rockets in the first rack were new this year with a very interesting White LED rear lit Big Daddy, and Tom Ha's very Bright Blue Strip LED lit Super Alpha-III, both flown on D12 motors. Rack-2 was another full rack mix of previously flown & new NITE outfitted models.

Rack-3 contained my 2-stage UFO and Jack-O-Lantern odd –rocs along with an outstanding BT-80 size V-2 with a Bright blue LED illuminated Nose cone. Rack-4 held only 4 rockets as the evening worn on highlighted by away pad 2-1 flight of a 3-D12-3 cluster rocket. Rack-5 as another 4 rocket rack with a repeat "Dark Flight" by a member of the same family who's rocket went dark during the first round. The RSO ask that the modeler return the model to check-in to see if we could trouble shoot the problem. As it turned out it was the batter & battery holder orientation and location causing the holder spring to compress under thrust letting the battery disengage. It should be noted when using spring held battery holders that the battery should also be taped or wired in to prevent it from moving during boost and at ejection. It is also advisable to orient the battery package as diagonally as possible to the line of thrush. This diagonal position will help lessen the compression on the spring during thrust & ejection. Last flight during Rack-5 was Jim Fillers stand-by 4x4 flying on 4-D12-5's on another great flight. Rack-6 was a sparsely loaded rack with only 3 rockets readied.

The first rocket on rack-6, pad -1 was new from Kevin Johnson. Kevin Named this scratch built rocket "Pink Fins of Manhood" with a pink paint scheme and nicely PINK lit nose cone which flew great. The 2nd flight was a very nice C11-3 flight and then it happened again (same flyer family) another nice looking LED payload rocket flying on an E9-4 which went completely dark on ignition.

This condition is really dangerous as these heavier payload rocket with or without recovery event could severely harm someone if hit by the incoming rocket. The RSO & Check-in officer talked to the father of this family at length with regard to how to correct this problem before the rocket involved would be allowed to fly again. Rack-7 would close the Night launch for the evening with 3 fine flights. All total we logged 41 night flights burning 51 motors including 3 clusters and 1 staged flight. Log also shows dark flights on rack-1=C6 motor, rack-2= B6 motor, and rack-6=E9 motor . Between the club president, RSO and Check-in officers it was decided to bring this Dark flight problem up at the next business meeting with the intent of coming up with info and/or instruction on how to prevent these dangerous flight conditions.

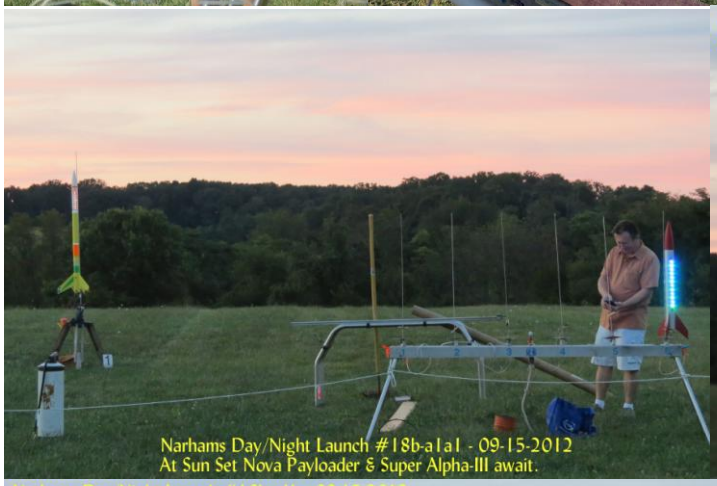
Photos to follow on the next page or two.


Narhams Day/Night Launch #18a-a - 09-15-2012
Don Carlson looking Up B Rd Contest Glider

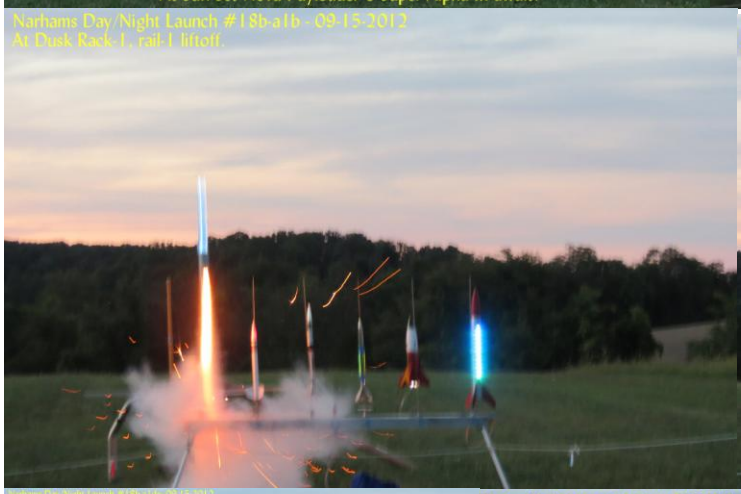

Narhams Day/Night Launch #18a-b1 - 09-15-2012
J McCoy's Lexan Disk "Spool Daz" on Pad for C6-0 flight.


Narhams Day/Night Launch #18a-c1 - 09-15-2012
McCoy's MAGPIE all Cardstock AFO-PT on Pad.


Narhams Day/Night Launch #18a-d1 - 09-15-2012
McCoy's Teeny Triskelion on Pad.


Narhams Day/Night Launch #18b-a1a1 - 09-15-2012
At Sun Set Nova Payloader & Super Alpha-III await.

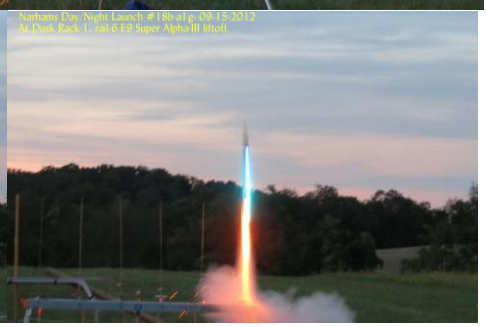

Narhams Day/Night Launch #18b-a1a2 - 09-15-2012
At Sun Set- Full Rack-1await.


Narhams Day/Night Launch #18b-a1b - 09-15-2012
At Dusk Rack-1, rail-1 liftoff.

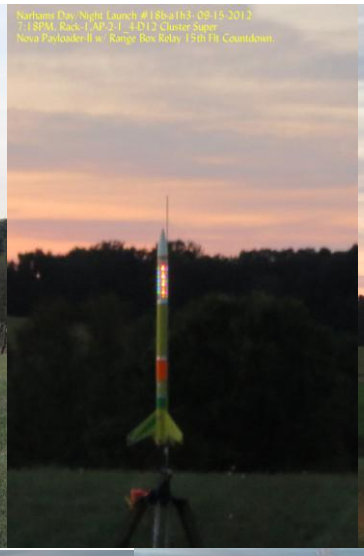

Narhams Day/Night Launch #18b-a1c - 09-15-2012
At Dusk Rack-1, rail-2 liftoff.

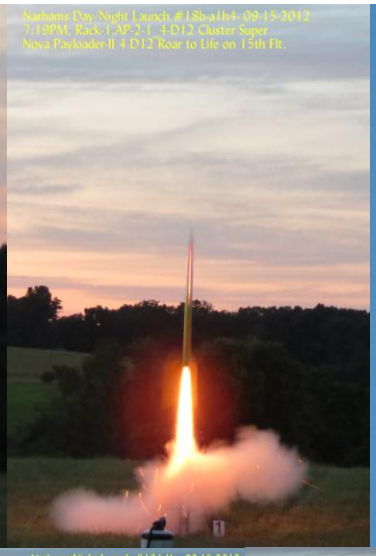

Narhams Day/Night Launch #18b-a1de- 09-15-2012
At Dusk Rack-1, rail-4 &5 liftoff.
Red Battery location - Rocket is DARK.


Narhams Day/Night Launch #18b-a1f- 09-15-2012
At Dusk Rack-1, rail-5 D12 Big Daddy liftoff.


Narhams Day/Night Launch #18b-a1g- 09-15-2012
At Dusk Rack-1, rail-6 E9 Super Alpha-III liftoff.


Narhams Day/Night Launch #18b-a1h1 - 09-15-2012
At Dusk Rack-1_AP-2-1_4-D12 Cluster Super
Nova Payloader-II Awaits Countdown.


Narhams Day/Night Launch #18b-a1h3 - 09-15-2012
7:18PM, Rack-1_AP-2-1_4-D12 Cluster Super
Nova Payloader-II w/ Range Box Relay 15th Flt Countdown.


Narhams Day/Night Launch #18b-a1h4 - 09-15-2012
7:19PM, Rack-1_AP-2-1_4-D12 Cluster Super
Nova Payloader-II 4 D12 Roar to Life on 15th Flt.


Narhams Day/Night Launch #18b-a1h5 - 09-15-2012
7:19PM, Rack-1_AP-2-1_4-D12 Cluster Super Nova Payloader-II,
Under 36" Hemi Canopy Way Up there(15th Flt).

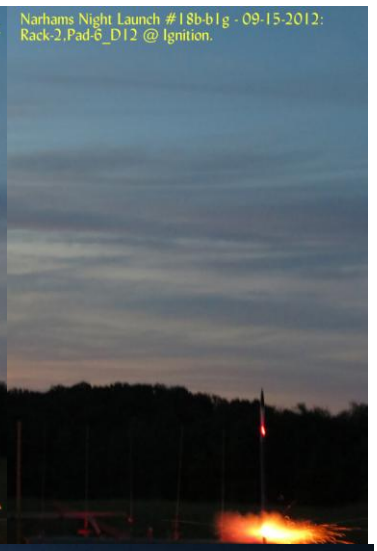

Narhams Night Launch #18-b1a - 09-15-2012:
Second Full Rack of Night Rockets.

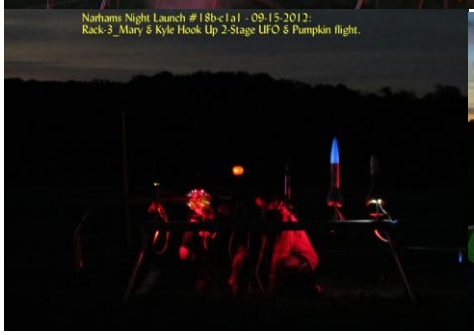

Narhams Night Launch #18-b1b - 09-15-2012:
Rack-2,Pad-1 Sparky C6 Liftoff.


Narhams Night Launch #18b-b1c - 09-15-2012:
Rack-2,Pad-2_Small Saucer A10 Liftoff.

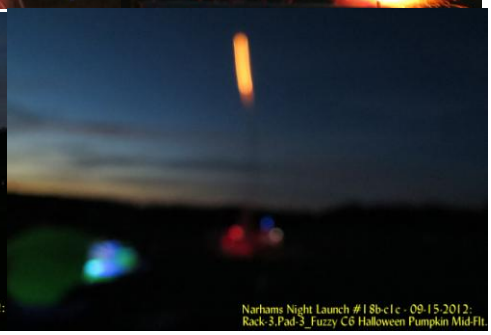

Narhams Night Launch #18b-b1e - 09-15-2012:
Rack-2,Pad-4_B6 Liftoff - Bad Battery placement (Rocket DARK).


Narhams Night Launch #18b-b1f - 09-15-2012:
Rack-2,Pad-5_D12 Liftoff - Great Looking Blue LED payload.


Narhams Night Launch #18b-b1g - 09-15-2012:
Rack-2,Pad-6_D12 @ Ignition.


Narhams Night Launch #18b-c1a1 - 09-15-2012:
Rack-3_Mary & Kyle Hook Up 2-Stage UFO & Pumpkin flight.


Narhams Night Launch #18b-c1b - 09-15-2012:
Rack-3,Pad-1_Little Rocket on C6 Liftoff.


Narhams Night Launch #18b-c1c - 09-15-2012:
Rack-3,Pad-3_Fuzzy C6 Halloween Pumpkin Mid-Flt.


Narhams Night Launch #18b-c1d - 09-15-2012:
Rack-3,Pad-4_Blinking Red LED at Ignition.


Narhams Night Launch #18b-c1e - 09-15-2012:
Rack-3,Pad-5_Blue LED Nose V-2 D12-3 Mid-Flt.

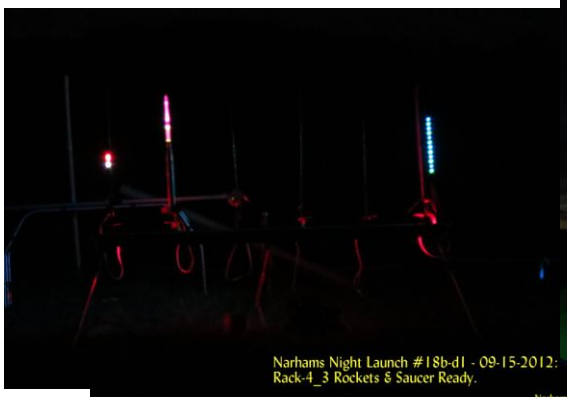

Narhams Night Launch #18b-c1f - 09-15-2012:
Rack-3,Pad-6_Rear ill Big Daddy E9 Mid-Flt.


Narhams Night Launch #18b-c1e - 09-15-2012:
Rack-3,Pad-5_Blue LED Nose V-2 D12-3 Mid-Flt.

Narhams Night Launch #18b-d1b - 09-15-2012:
Rack-4,pad-1_C6 Spark Trail.

Narhams Night Launch #18b-c1f - 09-15-2012:
Rack-3,Pad-6_Rear ill Big Daddy E9 Mid-Flt.

Narhams Night Launch #18b-c1f - 09-15-2012:
Rack-3,Pad-6_Rear ill Big Daddy E9 Mid-Flt.


Narhams Night Launch #18b-d1 - 09-15-2012:
Rack-4_3 Rockets & Saucer Ready.


Narhams Night Launch #18b-d1c - 09-15-2012:
Rack-4,pad-2_B6 @ Ignition.

Narhams Night Launch #18b-d1d - 09-15-2012:
Rack-4,pad-3_Mini Saucer A10 Mid-Flt.

Narhams Night Launch #18b-d1g - 09-15-2012:
Rack-4,pad-6_Blue Lit D12 Liftoff.

Narhams Night Launch #18b-e1a - 09-15-2012:
Rack-5,Pad-1_RedLED Lit C6 Flight.

Narhams Night Launch #18b-e1b - 09-15-2012:
Rack-5,Pad-2_Sparky C6 Flight.

Narhams Night Launch #18b-e1d - 09-15-2012:
Rack-5,Pad-4_Another C6 Flight.


Narhams Night Launch #18b-d1h - 09-15-2012:
Rack-4,AP 2-1_4 D12 Cluster Ignition.

Narhams Night Launch #18b-e1f - 09-15-2012:
Rack-5,Pad-5_Nice D12 liftoff.

Narhams Night Launch #18b-e1g - 09-15-2012:
Rack-5,Pad-6_Dark E9 Liftoff (Bad Battery Placement).

Narhams Night Launch #18b-e1h - 09-15-2012:
Rack-5,AP2-2_Jim Filler 4-D12 4x4 Cluster liftoff.

Narhams Night Launch #18b-f1b2 - 09-15-2012:
Rack-6,Pad-2_Kevin Johnson Pink Fins of Manhood C6 Liftoff.


Narhams Night Launch #18b-f1e - 09-15-2012:
Rack-6,Pad-5_Another Dark E9 Liftoff(Bad Battery Placement).

Narhams Night Launch #18b-f1c - 09-15-2012:
Rack-6,Pad-3_C11 Spark Trail.

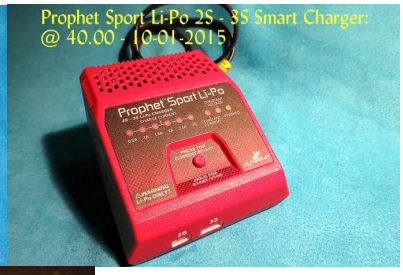
Narhams Night Launch #19: Sept. 14, 2013 – Old Nat'l Pike Park, Mt. Airy, Maryland.

This year I & Family were away on vacation on Chincoteague Island, Virginia, causing us to miss this year's scheduled night launch. I have no photos or log entry for this year luckily Zog-43 has a very nice account authored by Jim filler which I'll highlight here and attempt to scan the small photos that accompany the article.

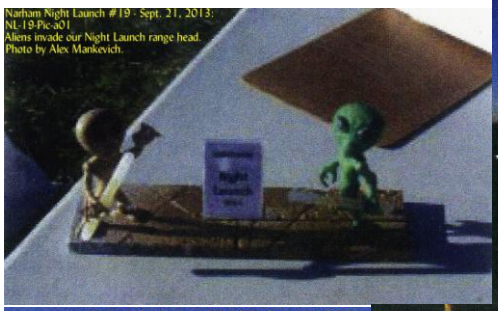
From the Sept/Oct. Zog-43 Jim Filler reports the following: Set up the range for some Late summer flying between noon and 6pm . We had 110 flights made in the daytime that used 115 motors. Several club members flew some very nice mid-power flights that pleased the crowd. Mike Kelly & Jef Fineran both made several text book flights. We also had the ABC triathlon event going on as a fun contest.

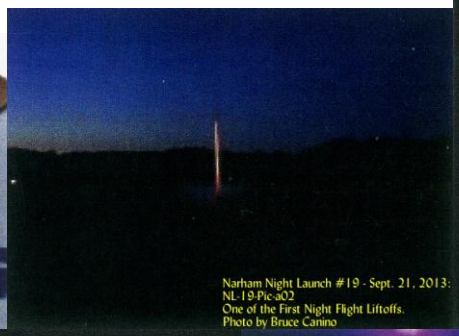
At 6pm we shut down daytime operations to all the range crew a break to get some dinner and a chance to deploy some night launch equipment. Thanks to John McCoy for loaning the night lights for the club to use from this launch. We added red lenses lights to the rack and away pads. Then add black light boxes at check in and the RSO tables to be able to see the glow in the dark flight cards without having to use any white lights. The final touch is to add light sticks to the perimeter rope so everyone can see what they are doing and where they are walking. At 7pm the sun is just going over the horizon and the first flights always show the sparks and fire the motors produce under thrust that you don't see in the daytime. The ejection charges are also much better seen after dusk. Once things started getting a little darker, things really started picking up. If you were at the launch and you missed my "4x4" flight which flew on a cluster of 4 D12-5's and lit up with 36 LED's contained in the payload bay you must have been sleeping. It was loud, it had lots of smoke and fire, and of course it really lit up the sky with the LED lighting. The other really notable flight in my mind was made by Scott Branche. His model named "Seizure" earned its name once he turned on the LED lighting system which went the entire length of the model and was actually controlled by an on board control unity changing the flashing and sequence. This model flew on an E30 APCP motor and really lit up the night with all the fire, smoke and its LED lights. If you saw this flight my account of it does not do it justice. For anyone interested in creating your own LED model, they have become much easier with the availability of the LED lighting coming prewired and mounted on adhesive backed strips. Stop by and see Scott at Hobby Works and he will fil you in on the details of putting one of these super models together for the next night launch. We had 47 night launch flights made that burned 53 motors. Thanks to everyone that showed up to set up the range and those that helped pack up the range. Thanks to everyone that worked range duty and special thanks to Dr. Chris Kidwell for working the night launch as RSO. Motor count as follows: A=3, B=11, C=28, D=8, E=2 & F=1.

Only 8 photos were printed in the Zog-43, I'll attempt to scan and add them a little later. I do want to add photos of the Strip LED's, controllers and battery pack that we have been fortunate to find on E-bay and other places allowing use of 11.1 volt Li-poly RC battery to make for some simple to assembled flashing and scrolling LED systems without a huge amount of wiring or soldering. These systems need to be placed in BT-80 Airframes but do make for some very nice displays.

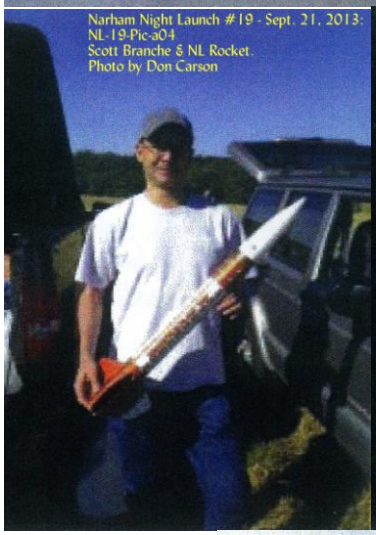


Night Launch #19 scanned Zog-43 Sept/Oct photos:

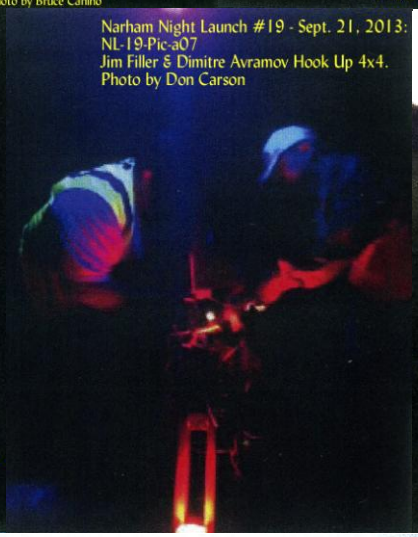

Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a01
Aliens invade our Night Launch range head.
Photo by Alex Mankevich.


Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a02
One of the First Night Flight Liftoffs.
Photo by Bruce Canino

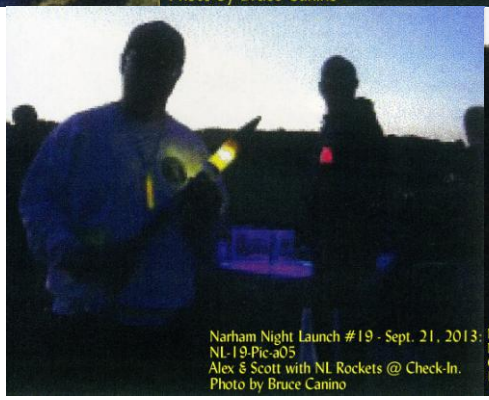

Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a03
One of the Night Flight Liftoffs.
Photo by Bruce Canino

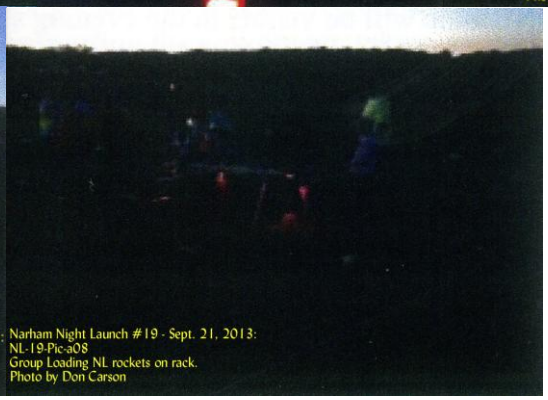

Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a04
Scott Branche & NL Rocket.
Photo by Don Carson


Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a06
Another Rack Lift-off.
Photo by Bruce Canino


Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a07
Jim Filler & Dimitre Avramov Hook Up 4x4.
Photo by Don Carson


Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a09
Jim Filler & Dual shuttle NL rocket.
Photo by Alex Mankevich


Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a05
Alex & Scott with NL Rockets @ Check-In.
Photo by Bruce Canino


Narham Night Launch #19 - Sept. 21, 2013:
NL-19-Pic-a08
Group Loading NL rockets on rack.
Photo by Don Carson

Zog-43's Sept/Oct 2013 Issue also has a very interesting article on "Night Launch Rockets-Inside & Out". Pages 13-15 cover dollar store & other inexpensive and easily converted products into LED Night Launch Payloads. I scanned some of the photos.

Sept-Oct.2013 Zog-43 article by Alex & Don:
Pgs 13-15, NL rocket Inside & Out_pic-02.
3- Walmart LED Necklace parts.
Photo by Alex Mankevich


Sept-Oct.2013 Zog-43 article by Alex & Don:
Pgs 13-15, NL rocket Inside & Out_pic-01.
3- Walmart LED Necklace Payload.
Photo by Alex Mankevich


Sept-Oct.2013 Zog-43 article by Alex & Don:
Pgs 13-15, NL rocket Inside & Out_pic-04.
Glowing foam core rocket. - Photo by Alex Mankevich


Sept-Oct.2013 Zog-43 article by Alex & Don:
Pgs 13-15, NL rocket Inside & Out_pic-05.
Glow-Stick & Mini Flashlight Payload.
Photo by Alex Mankevich


Sept-Oct.2013 Zog-43 article by Alex & Don:
Pgs 13-15, NL rocket Inside & Out_pic-06.
LED Strip Airframe Lighting. Photo by Don Carson


Sept-Oct.2013 Zog-43 article by Alex & Don:
Pgs 13-15, NL rocket Inside & Out_pic-07.
LED Strip Airframe Lighting Close Up.
Photo by Don Carson

Narhams Night Launch #20: September 20,2014 – Old Nat'l Pike Park, Mt. Airy, Maryland:

September 20, 2014 came on quickly in a busy club year. Night Launch #20 is well covered in Sept/Oct issue if Zog-43 article written by Jim Filler. Weather wise it was a bit warmer than most with the evening temperature @ 81degess F. As this sun set we were happy the 8 to 12mph breeze from the S.E. had calmed and shifted to almost due south. As night fell the dew began to accumulate quickly on rocket and equipment. The Air temp dropped about 15degrees by 6:50, my weather station reported a new air temp of 66 degrees and falling. Our Sky was clear as a bell, with the occasional very high broken wispy Alto-cirrus clouds drifting by. A beautiful night for star gazing and flying N.I.T.E. lighted Rockets.

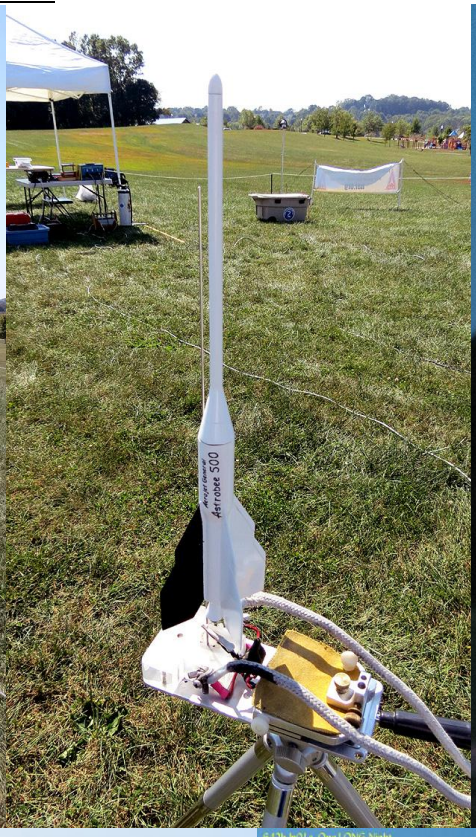
I'll recap this year's day/night sport/ABO & night launch with the highlights. The Day launch was set-up and running by Noon more or less as usual. By about 2pm things started getting busy and we were joined with a fairly large Cub & Boy Scout invasion around 3pm. Lots of club members were qualifying their new N.I.T.E. equipped rockets, while Dr. Chris Kidwell conducted year #2 of the ABO fun contest. Where the O replaced C motor spot landing which last year was so ridiculously difficult with Open spot landing which would be far easier for the contestants to content with. By Jim's report we had launched 162 rockets burning 162 motors by day time range shut down at 6pm. This year during our hour break to change over the range for night flights and catch a little dinner the Ha family treated us to homemade chili, corn bread and salad for those who hadn't brought dinner or wanted to visit the golden arches or other fast food eateries in the area. Big Thanks to the Ha's for such a great meal.

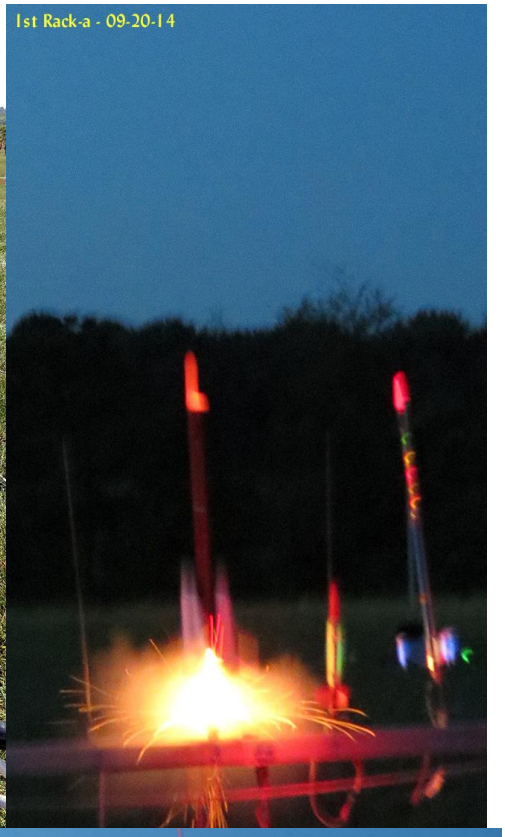
Change over went as usual: add red lens lamps to the rack & remaining away pads, set up UV LED fixtures at the check-in & RSO/Launch table, and add glow-sticks to the perimeter rope along with taking down as much club & personal gear as possible to make range clean-up and take down much easier and quicker. All was ready for flying to begin by a little after 7pm .

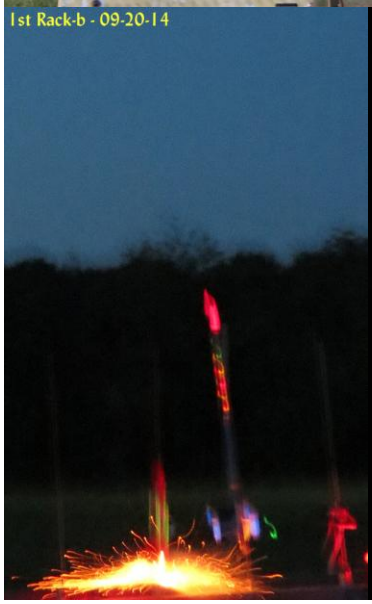
To Quote Mr. Filler "Each year the night launch vehicles get a little better and the lighting also get better". I have to agree as many more LED packages are now being flown by more and more club members replacing the dollar store lights and cyalume glow-sticks lit rockets. This year as Safety Check-in officer I was pleased with the attention paid by the builders to battery placement and overall construction of the new night flying rockets. I flew only two rockets this year a second flight of "One Long Night" after rebuilding the booster lost last year and the 9th 2-stage flight of my 2-stage UFO. Both were outstanding D12-5 and D12-0/C6-0 fights. By the time we ran out of rockets our night launch at flown 42 models in just under 2 hours. We logged 1- Staged flight, and 2- Clustered flights. While Zog-43 didn't publish any night launch photos the authors log has a few that are shown below.

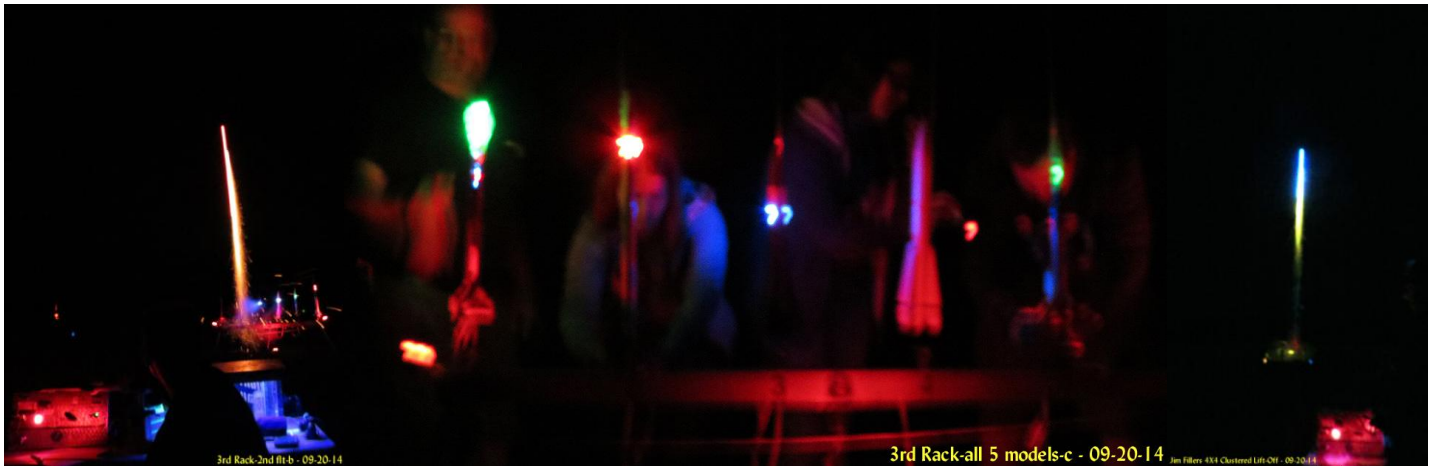
This was also the first Launch were our RC flyers had a chance to bring out their various Quad Copters to fly & record some of the evening and dusk action. Kevin Johnson had his in the air where photos could be taken. RSO Jim Filler and Scott Branche also had Quads in the air during the late evening and until just after dark. Narhams Night Launch #20 Photos:

Narhams Night Launch #20 - Photos Continued









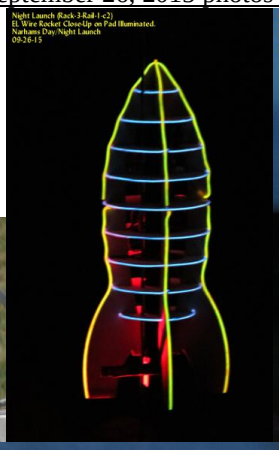
Narhams Night Launch #21: September 26, 2015- Old Nat'l Pike Park, Mt. Airy, Maryland.

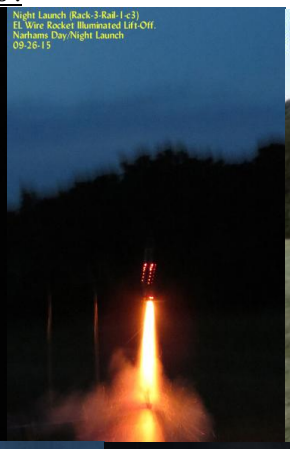
Narhams Day/Night club launch #21 was a busy launch. Our original date of 09-12-2015 had to be scrubbed for two weeks due to bad weather. The Range went up in the usual way and we opened for day flights shortly after noon. Jim Miers was the Launch Manager for this launch with 78 flights logged during the day. The Day flights included lots of shake down flight for new night vehicles, several "Narhams Gold" finished models, at least four plastic model conversions (Just for fun) and one Micro Maxx although more were planned but the gusty 10 to 17mph winds kept them from first flights.

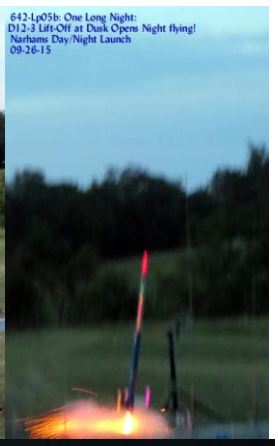
Weather when we arrived was a pleasant 70.5 degrees at 12:16pm which did not change much during daylight hours. Dark cloud deck seemed to hang off to the northwest, most of the afternoon but moved across our field in late evening. It was the constant 10 to 12mph breeze all day that kept many model on the ground with random gust to 17-18mph from the ENE. Humidity stayed up most of the day @ 52%. While the cloud deck stayed above our flight ceiling our visibility was over 10miles on a raising barometer.

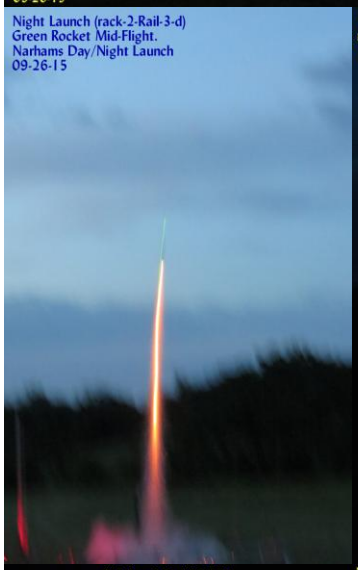
When we shut down the range for night operation change-over the breeze stayed pretty much with us instead of falling off as we were usually more accustomed to with our night activities. By 7:00pm the range was set and the rack filled for the first "dusk" flights. As luck would have it we were blessed with a fall super moon raising just as we began true night flights which really set off the night sky. While the autor and David Fuller took lots of photos only a few made it into the Sept/Oct issue of Zog-43. Very little flight or motor break-down was noted in the article. As the author was doing Safety check-in duty during night operations I only flew one rocket a 4th flight of the rebuilt "One Long Night" LED Illuminated D12 powered model. Ed Jackson made his first attempt at flying an EL wire illuminated very impressive rocket. From Jim Miers notes we know the night produced 37 night flights but very little is known about what kind of vehicles took to the air. From my notes and photos I can say we had 7 rounds of flights from the rack and at least 5 larger rockets flown from the away pads. It was also noted this year a return of the dreaded "DARK flights" due in part to poor battery placement, 4 of these flights were recorded. The club will again have to be discussed and try to find a way to prevent these dangerous night flights.

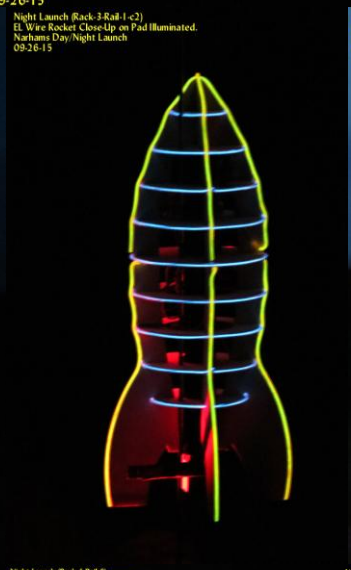
Narhams Night Launch #21- September 26, 2015 photos :

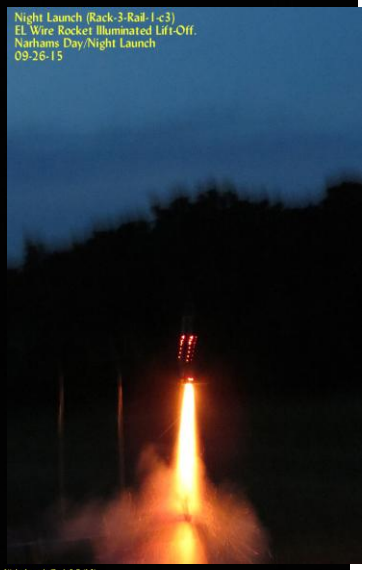


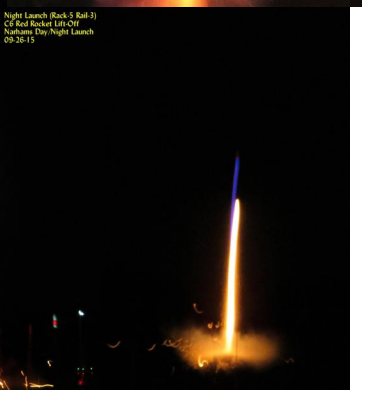












Narhams Night Launch #21 – September 27, 2015 photos:

Narhams Night Launch #22 –September 17, 2016 – Old Nat'l Pike Park, Mt. Airy, Maryland.

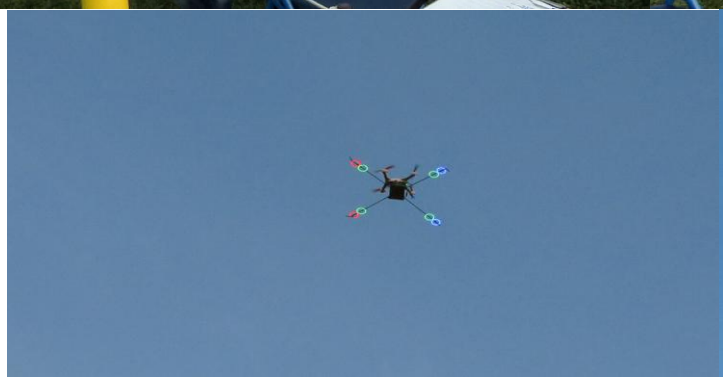
This year we have a great article in the Sep/Oct Zog-43 with lots of photos from both day and night launch written by Launch Manager Jim Filler. Our Zog-43 article has some outstanding photos of both day 156 flights and night flights totaling 32 by Bruce Canino. I've tried to download these photos from our web site without success so I'll add only some of my 32 lift-off photos taken from the Check-in table a bit later. If we can get some of the other photos from other photographers we'll add them as they come in.

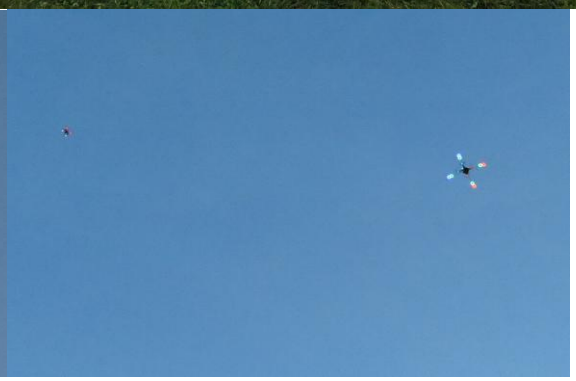
Weather for this launch was really pretty nice. Our arrival around 10:30am had the range set-up and ready to go by noon. Morning temperature was 79.2degrees F, with 64% humidity a raising barometer at 29.28" with Light SW Breeze 5-7 mph just about all day. Visibility on the range was 10miles + with low broken cloud cover. Just as we were about to break down for the evening a full harvest Moon was raising helping to light the field (about 8:50pm).

Jim opened the range just after noon for day flying and qualification night vehicle test flights. During the day 18 new night flight vehicles were testes some worked well others didn't make the cut. We also had a new box added to our flight cards for the www.jollylogic.com/products/chuterelease. As the afternoon worn on we had 12 flyers take advantage of this very nifty new electronic chute bundle release altimeter which allows the rocket to eject the chute but remain closed until a preselected altitude is reached as the model descends. An outstanding addition to the electronics we have available for the mid-power model flyer today.

As usual the day launch wound down around 6pm so we could change over the range, remove unneeded personal and club equipment and add lighting to the remaining rack and away pads along with UV lighting flight card readers for check-in and launch officer tables. Better 2/3rds Mary added glo-sticks to the perimeter rope just before 7pm . Jim opened the range for dusk and night flying shortly there after . This was the second year we had Quad-copters in the air filming the action. Kevin Johnson, Scott Branche and Jim Filler all had their Quads in the air for at least part of the day and dusk launches.

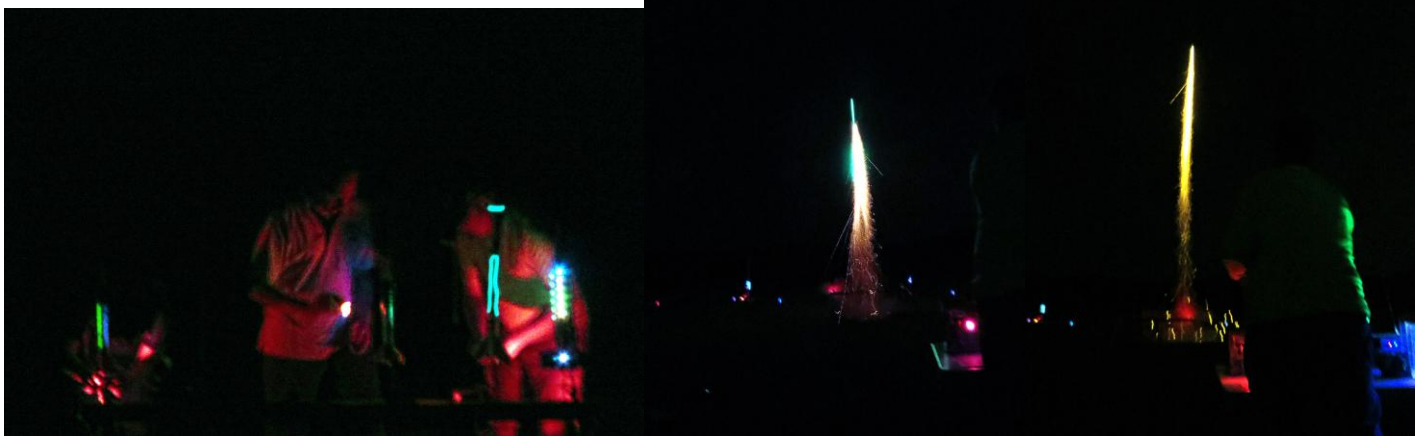
I decided not to fly anything this year so I could concentrate on checking in Night Launch vehicles, examining battery placements and overall construction to hopefully limit the number of "Dark flights" we had seen last year. Apparently it worked as we had 0 dark flights this year. Last Head count of the flyers and spectators came to 65 including Robert Edmonds who just made it by the time we were packing up. This year the vehicle lighting really stepped up with only 3 flight being made using cyalume sticks. They were used by first time flyer Michel Mershed and his family who flew his Red Rover ARF rocket 3 times with the Glo-Sticks taped to the airframe on B6-4 motors. Great job Michel! 16 of the other flights had multi-LED packages, 10 had programmable Multi-led packages and 3 were El Wire illuminated (electro-luminescent). All in all; 32 wonderful night flights with zero problems or mishaps. We had 4 very nice clustered flights; 1 by Kevin Johnson, 2 by RSO Jim Filler and 1 by Tom Jackson. Most launches for the evening was a 4-way tie between Jim Filler, Mike Kelly, Ed Jackson and Kevin Johnson all with 4 flights each. We were all packed up and back at the storage unit by 9:30pm . While there were no NEW technology vehicles this year several did use advanced programmable LED and EL wire lighting systems. Hopefully the controllers for these LED strips can be made smaller to fit Standard size model rocket in the near future.





Narhams Night Launch #22 Photos – 09-17-16:

Narhams Night Launch #22 – September 17, 2016 Photos Continued:



Narhams Night Launch #22 Photos Continued:

Narhams Night Launch #23: Sept. 16, 2017 – Mt. Airy Maryland.

Before getting into this year's night launch I feel a need to type just a little about the almost perfect flying conditions we had on this 16th day of September 2017! In a word the day was Spectacular! Arriving at the field about 10:30am we were greeted with a bluebird blue sky without a single cloud anywhere to be seen. First check-in temp at 79.8deg f. 55% humidity, Barometer reading 29.9" and rising. Breeze 0-5mph from the North, later switching to the NE. WOW! One could not ask for a more perfect Sport Flying Day.

If there was any down side to this perfect weather it would be the lack of air movement also means 0% lift. This makes for very short walks for Chute recovered rockets but is not very conducive to getting good duration flights for our scheduled NNRC-1 contest or 1/8A motor duration National record attempts. The author had some awesome 1/8A micro piston flights with 0 chance of record due to lack of lift☺. I didn't catch much of the NNRC-1 flights but did see a Swing-flop wing glider that made a nice up flight with very little duration (NO lift) at all. I'll let RSO & Launch Manager Jim Filler fill in all the details for the Day time Sport flights, NNRC-1 as he as all the flight cards and witnessed most of those flights.

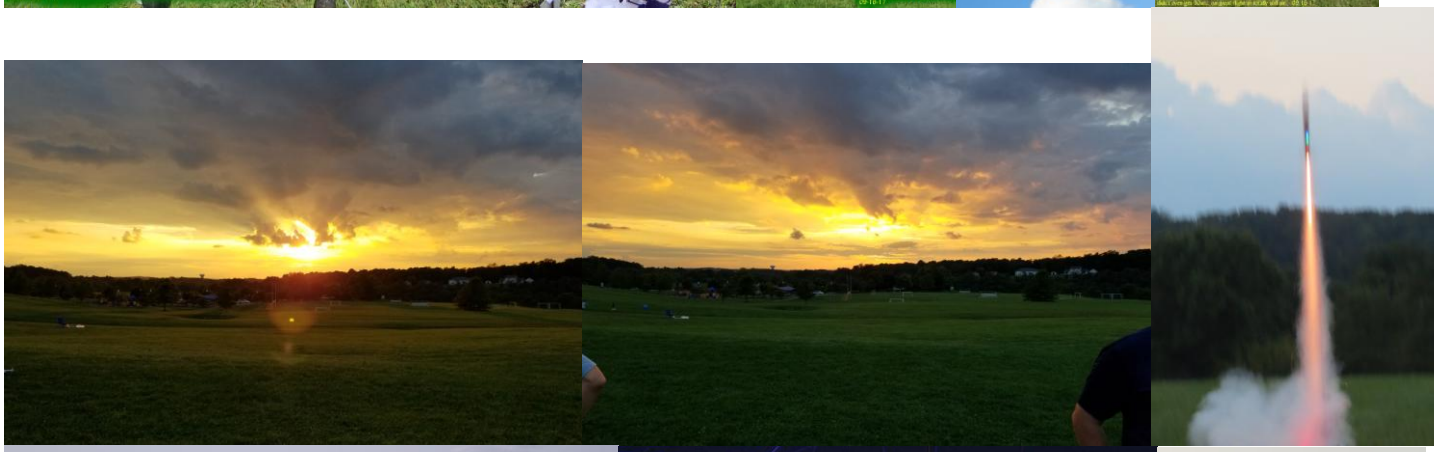
Our night launch-23, preparations began as usual shutting down the day range at 6:00pm. Changing over for night operations, removing one launch rack, adding red lens 10watt halogen up-lights to the remaining rack and 2 of the 4 Away pads. Setting up the UV LED Check-in table and Launch Control table illuminated fixtures while stowing and putting away as much of our other equipment as possible to shorten the range take down time. 25- 5" Cyalume Glo-sticks were hung on our perimeter rope to help with visibility. Now we had time for a quick dinner and waited for the sun to set behind the high clouds to with west. While we waited a single large black cloud drifted over giving us a very light refreshing sprinkle before leaving the area resulting in only high broken clouds and again very little to no breeze at all. As the Sun set Jim Filler opened the launch range for night flights at 7:10pm. Our first dusk flight was Jim's dual shuttle boosted on an E9-4 with the twin foam LED illuminated shuttles gliding down very nicely with the booster under chute.

As the evening progressed and the area got darker more folks begin coming up with their glow-in-the-dark rockets shining brightly. By the time all were done, we had flown a total of 33 flights from 16 flyers being watched by 60 folks in attendance. We flew rockets with motor impulse from A8- to F24 which I'll break down a bit later. We had 7- single flight flyers, 5- flying 2 rockets, 1- A Div. young lady, Nora C flying 3 times, Ed Jackson & Jim Filler each flying 4 rockets and Mike Kelly takes home the "Most flights" honors with 5 very nice night flights. The Shafer Gang led by John Shafer with daughters Natalie & Rachel each flew their Red & Blue Lighting payload Rockets on D12-5 & 2- E9-6 impressive flights. Daughter-in-Law Vicky McCoy and John McCoy Jr. flew their brand new night flying Odd-roc "Princess Vicky's Outrigger Canoe" LED illuminated Odd-roc with tethered bail-out hula girl on a D12-3. Hula girl had an LED up/down Light fixture added to her 12" recovery chute while the main body came down on a 16" nylon canopy.

We Burned through 3-A8-3, 1-B6-4, 8-C6, 4-C11, 16-D12, 3-E9, 2-E18 & 3-F24 motors. Mr. Filler flew 2- clustered motor rockets along with Tom Jackson flying a single clustered night rocket, 1-Dual glider Illuminated rocket by Jim Filler, 1- 2-staged UFO by Mary McCoy, and several new EL wire lighted rockets by Ed & Tom Jackson. Of all the Rockets flown we only had two mishaps: John McCoy's Phantom Nike-Apache split a clear lexan fin under thrust causing it to go unstable. Scott Branch's very nice E18-4 LED Lit "Seizure" had an ejection malfunction sending it in ballistic for the Ouch of the Night honors. We closed the range down a little before 9:00pm after running out of rockets for the first time. These day/night Launches make for a very long day but they are so worth the time and trouble.

Several new rockets were presented this year. While we've had EL Wire illuminated rockets before Ed & Tom Jackson have been experimenting with reduced weight controllers powered by 3.7v Lithium batteries rather than the usual 9v or 11.1v heavy systems. Tom lined the outside of his "Blue Neon" 2-D12 clustered model with several strands of blue El Wire running on single 3.7v Lithium Cell in bottom & top sections. Sitting on the pad in the early Dew waiting for launch caused the upper section to run out of power just before launch. Still a very nice flight recovered using the lower lighting for spotting. Ed Jackson rewired his EL Wired Spaceship from last year but had last minute moisture connection problems so the rocket did not fly. New this year an F24-4 powered "Quinta Super Star" Spinning UFO structured EL Wire & LED lighted model was very impressive at night. Another new comer to the night launch this year Bradley Lowekamp, created a dynamic LED payload for an Estes Astron Sprint rocket.

This nose mounted LED package and controller was motion activated making a very nice night display flown twice on C11-3 motors. As always most of the 11.1v Lithium powered multi-strip LED payload rockets made their presents known out on the away pad clustered D12 or APCP E & F motor flights. These really easy to assemble BT-80 x 12" payload bays make for some awesome lighting and the extra room can handle the large 11.1 Lithium battery packs and LED controllers with ease.



Photos by John & Mary McCoy and Alex Mankevich.

Narhams Night Launch #23 – September 16, 2017 photos continue;

Narhams Night Launch #23- September 16,2017_Photos Continue: