INSIDE THIS POP!

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- "Lost April 1st Article"
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May June 2016
Spring Vol 2

The WOOSH POP - Newsletter of the Wisconsin Organization of Space Hobbyists

SPRING WOOSH POP

May June 2016 Vol 2

Dear Readers,

It's Springtime (soon to be summer) and another WOOSH POP! The cover photo is Paul Kinzer's Estes Snitch "CHAD" staged using a D12-0 to C motor combination. Don Krause caught the moment of staging. For our feature Tom Disch has written his perspective on the Jolley Logic Chute Release. A terrific article.

In honor of Memorial Day I've pulled from the WOOSH newsletter archive a previous interview of Fred Jarosch written by Paul Smith with some updated links. We have the announcement of our July 30th Make It Take It session at our host Hobby Town!

Also out of the unknown the "Lost April 1st article " thought to have perished it was recovered in an altimeter bay found at Bong and made it somehow to my laptop! Plus more pictures of rockets. This pop I"m trying some thing new..... hyperlinks to Youtube Video's!

Our WOOSH club meetings continue each month at the new location of Hobby Town USA. located at 1704 S. 108th St. West Allis, WI. Club meetings are open to all members. Check the WOOSH website, forum, and Facebook pages for the most current updates.

*External Hyperlinks are supported these are **BLUE***

John Cieslak - Newsletter Editor Nar #13628

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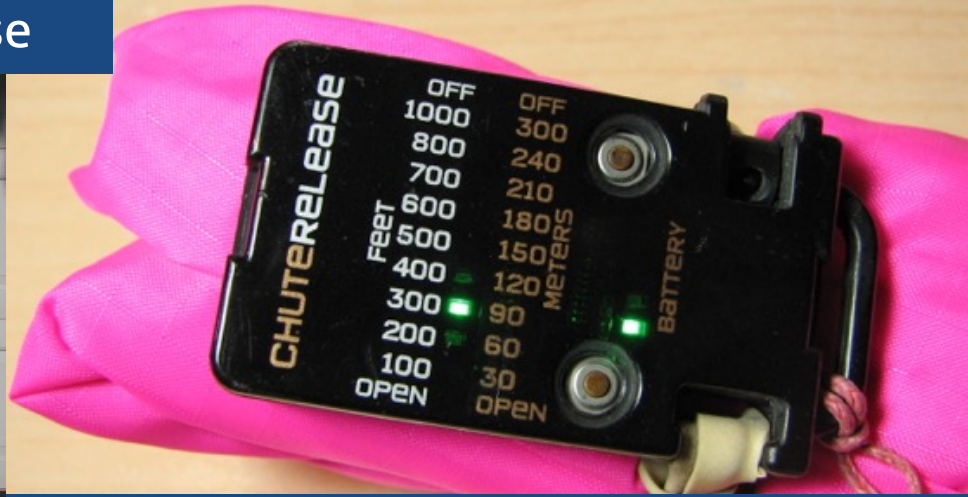
Jolly Logic Chute Release



My Experiences with Chute Release by Tom Disch NAR 98142

How would you like to fly your rocket with larger motors but your launch site is surrounded by trees? What if you want to bring your latest futuristic creation down gently on a bigger parachute but are afraid it will drift into the next county? Maybe you're not up for a ½ mile hike through the tall weeds or deep snow?

A new product from Jolly Logic may be just what you are looking for. As the name implies, Chute Release is an electronic device that releases your parachute at a pre-designated altitude. The motor ejection charge pops off the nose cone and parachute at or near apogee but instead of the parachute immediately opening the Chute Release restrains it with a strong elastic band. The rocket descends rapidly with only the drag from the nose cone, and the wadded up parachute to slow it down. When the pre-set altitude is reached, a small pin holding the rubber band is retracted and the parachute opens normally.

Flight Performance

Jolly Logic Chute Release

".....I also think Chute Release helps prevent zippers because a high speed ejection will not put as much force on the shock cord without the parachute opening. I had a late ejection at Bong with the rocket moving very fast with no zipper damage. " Tom Disch

So how has Chute Release performed? Out of the 15 times I remembered to turn on the Chute Release I have a 100% success rate. I have set the altitude as low as 100 feet successfully but I now set it between 200 or 300 feet for my flights. I have flown it in five different rockets with motors ranging from E12-4 to a G53-5FJ. Flights have ranged from 435 to 1088 ft in altitude. It was flown three times on a very windy day at the Sod Farm recently and a Mega Mosquito flight to 868 feet on an E20-4W would definitely have been lost if not for Chute Release.

I also think Chute Release helps prevent zippers because a high speed ejection will not put as much force on the shock cord without the parachute opening. I had a late ejection at Bong with the rocket moving very fast with no zipper damage.

Tips

First of all, practice makes perfect. Practice packing your chute, practice releasing the chute with the self-test feature, and practice shaking the parachute to make sure it does not open before the proper altitude. John Bean (Jolly Logic) also recommends a “puff” test by blowing into the motor mount tube to see if you can eject the nose cone and parachute. The added benefit is that you may get a taste of AP or black powder residue when you do this J

Everyone has their own ideas about how to pack a parachute. Keep in mind the parachute will have an

Jolly Logic Chute Release

TOM'S TESTING SPANNED SEVERAL MONTHS

FROM COLD TO WARM TEMPERATURE ZONES

elastic band wrapped around it preventing it from opening so the optimum technique will most likely be different from what you are used to.

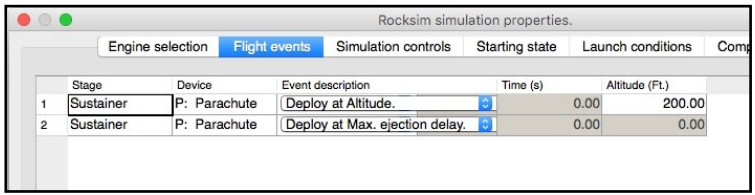
I simply lay the parachute out, bring the shroud lines up to the top and then back down to the bottom. I pull the sides of the parachute over to cover the shroud lines and then do either a single fold or a z-fold depending on my length restrictions. I usually have to pull the sides in a little more to pull the elastic band around and snap in the pin. If you have forgotten to attach the tether to a shroud line at this point you will curse softly and start over. The Jolly Logic website has a video showing an alternate way to pack your parachute and of course TRF (The Rocketry Forum) members have many thoughts about the "only" proper way to do it.

It is probably a good idea to put some type of marking on your rocket that you remove when the Chute Release is turned on. This would have prevented my earlier "oops". I also think it is a good idea to keep black powder residue from entering the micro USB connector at the bottom of Chute Release. You can buy small rubber plugs from Amazon.com for this purpose or just use a small piece of tape. Dino Chutes sells a protector bag for CR that looks like it should work well.

A word of caution regarding water. Should you dunk your CR in a pond like I did at Bong, Jolly Logic recommends immediately opening the case, disconnecting the battery, and drying it out. This is to prevent "killing" the battery. Reinstall the battery, charge it up and you should be good to go.

Simulation

If you want to simulate Chute Release on your rocket you will need to obtain a copy of Rocksim software. The trick is to add a drogue parachute to



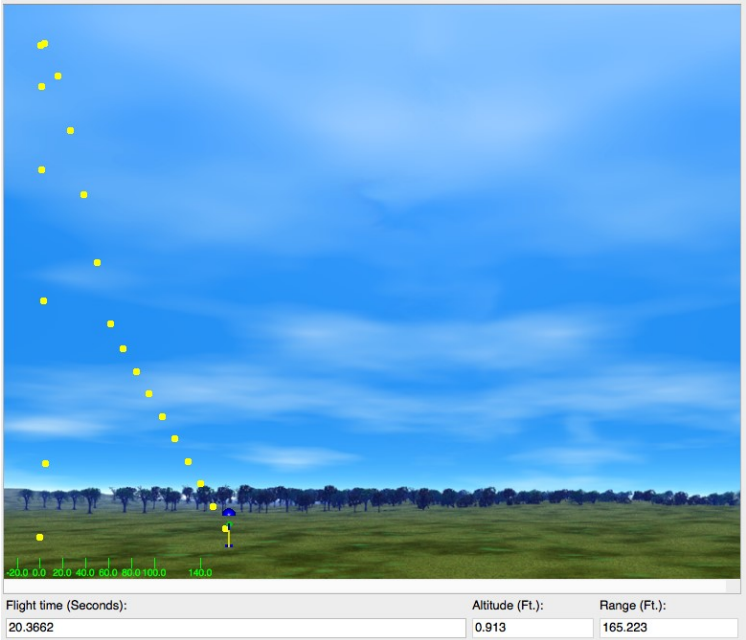
your rocket that you set to "Deploy at Max Ejection Delay". That will simulate the drag of your nose cone and wadded-up parachute. For your main

parachute set “Deploy at Altitude” and put in the altitude Chute Release is set for. I am not aware whether this can be done with Openrocket.

You can tweak the size of the drogue chute to match your actual descent more closely. Those of you who have recording altimeters should be able to measure the descent velocity before the main chute opens and “fine tune” the size of your drogue chute to match that velocity for a very accurate simulation. The next column has a screenshot of what it looks like in Rocksim using Chute Release on a D12-3 powered rocket:

To show the difference it can make, I used Rocksim to simulate a Mega Mosquito flight without and with Chute Release. I modeled an E30-7T motor in a 3-7mph light wind with zero rod angle and a large 24” parachute. Without Chute Release, Rocksim says you will hike 700 feet to get your rocket. With CR the simulation says you will walk 158 feet to pick up your rocket.

I would like to add using Chute Release does not eliminate the need for good rocketry skills and



common sense. Flying a 14oz rocket with a G64 motor on a windy day at the Sod Farm is probably not a good idea regardless which recovery system you are using.

So there you have it. I think Chute Release is the

Jolly Logic Chute Release

best new rocketry innovation in recent memory. I think it's going to have a big impact on Mid-power rocketry and possibly some on High-power as well. Give it a try. Now where did I put that G64 reload?

Tom Disch

NAR 98142

Editor's note: Tom's article is a overview of his real world flights and thorough testing he has performed. I was fortunate enough at the May Sod farm launch to capture his Mega Mosquito launch with Chute Release **click for You Tube** Enjoy

2015 Membership	WOOSH Membership	Current 2016 Membership
88	**Adult**	72
19	**Youth**	16
107	**Total**	88

RSO and LCO REQUESTS for using the Chute Release at BONG

When filling out your flight card please write that you are using the Chute Release on the card and indicate the altitude for the dual deployment.

Consider using a streamer with larger mid power or HPR rockets in addition to the parachute.

Editor's Note: Each summer at our annual Eat Cheese Or Fly ECOF launch we have an event called the Jarosch Cup. Fred was a WOOSH Vice President His wife Darlene was the treasurer, both of them were very active participants in our section. In honor of Memorial Day I thought it would be fitting to revisit and post the original interview from November of 2007 with the inclusion of 2016 hyperlinks.

Flying the Real Nike Hercules

An Interview with Fred Jarosch By Paul Smith

Before coming to fly model rockets with us at Bong, WOOSH member Fred Jarosch spent some time flying far larger rockets. Beginning about 50 years ago, he was involved in assembling and flying Nike Hercules missiles with the U.S. Army. I asked him a

few questions about those experiences.

Paul: When and where was it that you worked with the rockets?

Fred: In 1958 the draft was still in place. In May of 1958 I was drafted into the Army. I did my 8 weeks of basic training at Ft. Leonard Wood, Missouri. After basic training I was sent down to Fort Bliss in Texas, on the Mexican border near the city of El Paso. For the next four months I went to missile school. After completion of school our whole group was transferred to a missile base in Okinawa. For the next sixteen months I worked on assembly and maintenance of the Nike Hercules missile. How did I end up working in rockets? In the Army there is no set rule to their logic. It's more of a matter of how many men they want for what job. In today's Army you can pick your job and most likely get it.

Darlene and Fred Jarosch at the Sod Farm

Paul: Tell us about those missiles.

Fred: A Hercules missile is a ground to air missile with a range of approximately 100 miles. I'm not sure how big they were. I'm not sure how fast they were either but Mach 2 seems to ring a bell. The Hercules is a two stage missile, the booster stage is a cluster rocket with 4 solid propellant motors and the main is a single solid propellant motor.

Paul: What kind of work did you do with them?

Fred: The missile base on Okinawa was rather new, so we had the job of assembling roughly fifteen missiles for the site. After assembling the missiles we also had the job of maintaining them. Missiles came to us in parts. Most of them were packed in containers 5 feet in diameter and 15 feet long. All of the parts were mounted on slide rails which we pulled out and assembled.

We assembled the missiles the Army way: one man reading the instructions and the other four doing the work. Each part was assembled in order and by the book, down to the torque on each screw. Periodically we were tested on the assembly of the rocket, with the big brass looking over our shoulders to make sure that we followed the assembly to the letter.

Okinawa is located off the coast of our enemy, communist China. Since Okinawa was a new missile site the big brass wanted us up and running in the shortest amount of time. They had us working roughly 12 to 16 hour days. We had one guy fall asleep walking back to the barracks.

Paul: How about a few stories?

Fred: Okay. The base was located on a peninsula with Nana Air Force base. The Air Force base was on one side of us, and on the other side was the China Sea. The weather on Okinawa is semi-tropical, so the temperature rarely got below 50 degrees. While there we went through one typhoon, with winds topping out at 105 knots. We were lucky that all of our buildings were constructed of cement blocks. The rockets themselves were kept underground.

Our site consisted of three separate underground storage areas. The above ground and lower consisted of a rail system. When not in use the rockets were kept under ground. When on alert you had missiles above ground on the launching pads in a ready position, ready to be raised and fired. During the typhoon we were able to put everything that was loose underground. With the exception of a few broken branches we got away with zero amount of damage.

One story I will never forget is my close brush with death while over there. One day our site was on alert. We were one of four missile batteries on the island. The Air Force had longer range radar than

ours and so they could pick up airplanes coming off the China coast and alert us of the situation so we would be ready for incoming problems. This particular morning the alert came in and the section that was on alert was told of the warning that there was activity coming off the coast of China.

Fred: (cont.) The duty section was busy readying their birds for flight. A few of us guys in the area heard about the alert and decided to ready one of the unmanned sections. We went down below ground and put one of the rockets on the elevator. Above ground two of us rolled it to its launch pad. The next step was to plug in the boosters and then raise the missile. Upon reaching the launch pad we both looked at each other and he said to me “why don’t you go downstairs and raise the missile after I plug it in? I’ll let you know over the intercom”.

After I got downstairs I turned our unit on and waited for him to tell me to raise the missile. A matter of seconds went by and then I heard a loud rumble that sounded like a rocket being fired. At that moment a thousand things went through my mind. I thought that the manned battery was firing, and I thought for sure that we were at war. After a few seconds a guy came downstairs by me and I saw that he was burned over half of his body. I couldn’t touch him because he was burned so badly, so I talked him back into going upstairs. Upon getting upstairs I informed somebody to get medical aid for this guy. Looking around I noticed the bird we had been getting ready on the ground approximately 300 yards in front of our site. The rocket had fired by mistake. It had gone off in the down position and one of the back fins caught him between the rail and the booster fin, cutting him in half. That could have been me. The guy that I helped upstairs was in the guard shack directly in back of the rocket when it went off. The fireball blew out the windows in the guard shack and burned the entire one side of his body.

For the next approximately three months we were bombarded by the big brass and even a couple of Senators, all trying to find the reason behind it. At one point they even asked if I fired it. They concluded after three months that there was stray voltage in the launch pad. The voltage was just on one pin and only one of the four boosters fired.

Aside from the guy who was cut in two there was a guy walking in the area who was hit in the rear end by a piece of metal from the rocket. It was only about an inch square. At the hospital they gave him a shot of Penicillin. They did not realize he was allergic to it. He died on the way to the hospital in Japan due to the reaction from the Penicillin.

Links for additional information

NIKE HERCULES YOU TUBE VIDEO - Look for Mark Bundick of FVR at the end of this video

Wikipedia entry - Nike Hercules

The Nike Historical Society

The Nike Missile System A Concise Historical Overview

Missile Threat - A Project of the George C. Marshall and Claremount Institutes

Ed Thelen's Nike Missile Web Site

NAR News

By now you probably received in the mail the annual ballot for voting in NAR trustees. This year we are bombarded with election material. Ask your self how many presidential candidates talked about space exploration this year ?? Did you hear the sound of crickets?

Back to the annual ballot, this is an election that is important to us rocketeers. Namely we get to vote in three trustees. I encourage everyone to read the bio's that are provided. You will see at least one name that is familar to WOOSH. I don't want to tell you whom to vote for. But I do wish to encorage you to vote as this is an important process for the NAR. Did you know you can vote online?

Link to trustee voting

Bong Launch Data

	2016 Bong Flights													
	Jan	Feb	Mar	Apr	May - Saturday	May - Sunday	Jun - Saturday	Jun - Sunday	Jul - Saturday	Jul - Sunday	Aug - Saturday	Aug - Sunday	Sept - Saturday	Sept - Sunday
Club Totals	45	23	30	104	94	89								

Flight Results					Flights		Motor Impulse												
Successful (Good Flights)	Under Powered Unstable	Motor/CATO	Recovery System Failure	Air Frame Failure	Total Flights	% Success	A	B	C	D	E	F	G	H	I	J	K	L	M
354	6	6	18	2	386	92%	15	25	49	22	19	82	47	56	31	25	12	1	2

By Carl Riley

Lost April 1st Report

A digital fragment of the first WOOSH POP April 1st article was recovered and restored to the editor's laptop. Or was it all a dream?

Today in the News:

The White House announced today that Trip Barber will head the National Aeronautic and Space Agency NASA. Describing Trip Barber career as a Navy Officer as impressive and his special dedication to the **National Association of Rocketry** NAR and how he has organized the **Team America Rocket Challenge** TARC. The President stated America needs someone like Trip to Focus and Propel NASA forward!

Elon Musk of SpaceX announced the **Richard Bong Recreation Center of Kansasville** WI was selected as "an alternate to a secondary backup of an emergency tertiary landing zone" Mr. Musk cited last years scaled down barge landing by Sabrina Sager and Kelly Ranum as part of the reason for this alternate spot. "Besides we would get access to high quality cheese curds as well" SpaceX would work with the DNR to obtain all local permits.

Anthony Bourdain in his new CNN series describes his attempt to "upscale space station food" aboard the ISS. He asserts that the food is already elevated since it is orbiting 400 km above the earth....."that just because it is a packaged in a tube there is no reason for it to be

bland and tasteless...."

Finally it was revealed that the executive board of WOOSH has sent a bid proposal to the NAR Special events subgroup outlining the 1st Interplanetary Sport Launch (IPSL) on Mars for the year 2028. This bid is based on the following sequence of events to happen.

First **Zefram Cochrane** the nephew of outgoing NAR president Ted Cochran (yes the spelling is different) will invent the first practical (as opposed to impractical) warp drive. Second the mostly speed of light drive MSL, will make the travel to Mars in just under four hours as this is the time limit for what most rocketeers are willing to travel for a sport launch.

Technically Mars is not yet colonized so this launch will require that you Bring Your Own Oxygen (BYOO) as well as everything else that you need to survive such as space suits, food, water, radiation shielding, chromosome damage repair kit, and preprinted flight cards, as pens don't work so well in the thin Martian air.

President Mark Hackler stated that "we did this now as we felt it was important for our section to prepare for this future eventuality...." If the warp drive is not invented by 2028 than the IPSL will be rescheduled...In the mean time we know where to get Warp 9 propellent.

NOTE: This is all fictitious as we don't have an onsite vendor yet but I'm pretty sure the Wildman would volunteer to be on Mars.

LAUNCH EVENTS 2016

SOD FARM Launches

New Berlin, WI

- June 4 - Fly your Christmas rocket
- July 2 - Charlie Fox Trot
- Triathalon - TBD
- Aug 6 - Flis Kits Rockets
- Sept 3 - Helicopter Recovery
- Oct 1 - October sky's
- Nov 5 - Halloweenies
- Dec 3 - Santa Loft
- **First Saturday of each month (Most Months)**

Johnson Creek Launches

- June 19 - Sun
- July 17 - Sun
- Aug 21 - Sun
- Sept 18 - Sun
- Oct 16 - Sun
- Nov 20 - Sun
- Dec 18 - Sun 7
- **3rd Sunday of the month (Most Months)**

Richard Bong HPR Launches

- June 18 - HPR - Sat
  June 19 - HPR - Sun
- July 23 - HPR - Sat
  July 24 - HPR - Sun
- **Aug 27 - HPR - Sat ECOF**
  Aug 28 - HPR - Sun ECOF
- Sept 17 - HPR - Sat
  Sept 18 - HPR - Sun
- **Check the WOOSH Calendar on the web site For Up to date Listings**

Extra! Extra! -Late Breaking News- Extra! Extra!

MAKE IT TAKE IT EVENT

WOOSH will run a Model Rocket Make It Take It (MITI) program for up to thirty 30 Kids ages 9-12 years old. Our MITI will be held on Saturday July 30 at ***Hobby Town USA.*** in West Allis where we hold our monthly meetings. **Hobby Town Facebook**

The member led MITI will likely be held in two (2) sessions one morning and one afternoon depending on response. Sign up will be held during the month of July and will be on a first come- first serve basis. Cost for each kid will be $10 each payable at the time of sign up.

The kit that we will be building is the FlisKits THING-A-MA-JIG. For those who may not know- the THING-A-MA-JIG is one of Jim Flis' special rockets designed to be an easy "first build" for kids. It features a brilliant fin configuration that lends itself to insuring quick and accurate fin placement on a BT 20 air frame. It's a fun build and should be a real hit at Sod Farm.

As part of the program we will be inviting all the kids to come out to the Sod Farm on the following Saturday August 6 to launch their models with motors provided by WOOSH. The monthly theme for the August Launch is FlisKits Rockets!

This should be one of the most fun events on the 2016 WOOSH calendar. And of course, we are seeking the involvement of club members to help with set up, building, supervising, and flying. The MITI will be a hot topic at the next meeting.

Anyone who would like to help please plan to attend the June meeting. If you are interested but can't attend the meeting please contact Walt Evans at **wevans@wi.rr.com** or through the clubs email list.