

January 2018

WHAT'S UP



Newsletter of the Syracuse Rocket Club / NAR section 566 / TRA Prefecture 53
Volume 13 Number 1



The Renshaws' V-2s

JULY IN OCTOBER

Temperature in the mid 70s, clear skies, almost no wind... you sure that was an October launch? No kidding, the October SRC launch at Weigand's Field was among the best launch weather we had all year (and we had a good year at that). Rich Holmes celebrated his birthday by acting as Launch Director for the first few hours, then James Shattell took over.

Dennis Friend started off with a couple of CRC rockets, a Pong (A3-4T) and an SLV (B6-4), before moving on to his F-107 (B6-2), Attack Plane Storm Cloud (D12-5), and two flights of the USS Wilhelm Roentgen (B6-2 and C6-3).

Scott Renshaw led off with his MLAS (B6-4), definitively winning the closest to the pad recovery title when the chute caught on a neighboring launch rod. He also flew his October-ish Witch Craft (B6-4), Eye-In-The-Sky (E20-4), and Bat Ray (E20-4) as well as his AGM12D BullPup (F32-6). His Tubular on an Apogee D21-4 suffered a weird late mini cato. His Haulin' Oats on a G80-7 may perhaps be cursed: it core sampled in September and again in October. Sue Renshaw seemed to be mostly on a classics binge with an Astron Sprint (D12-5), Red Max (C6-5), Big Bertha (C6-7), Mini Fat Boy (A10-3T), and Quinstar (C6-0). She and Scott also drag raced their V-2s on E9-4 motors.

Rich flew his seasonally appropriate Pumpnik twice, first on a B6-2 and then on a C6-3. This was made out of parts from the dollar store, Home Depot, and the stash, and probably cost less to build than it did to buy the motors. Also from Rich were his Mega Mosquito (E9-6), cardstock Mini Satellite Interceptor (1/2A3-2T), Lunar Eclipse Jr. (E9-6), and the slightly shortened Ventris (AT F44-8).

Tim Catterson flew his Gray Box on a C6-0, LBW-II on an E30-4, Rock It on a D12-5, and Starship Vega on an E20-4. His Mark's Discovery went to 2285 feet on an H87-9. He also flew a LOC IV on an A8-5. Okay, it was a *small* LOC IV.

The MOST's somewhat larger LOC IV went up four times on various G motors (G76, G64, G126, G53) for some altimeter test data. Dave Grimes sent up his Onyx on a G74-9, Stretch on an H210, and Star Orbiter on a G74.

The highest impulse flight of the day was Paul Gagnon's Gitty Up on a CTI J-357.

And that was it for the 2017 season. No rain-outs, lots of good flights, and a few... entertaining ones. May's just four months away!

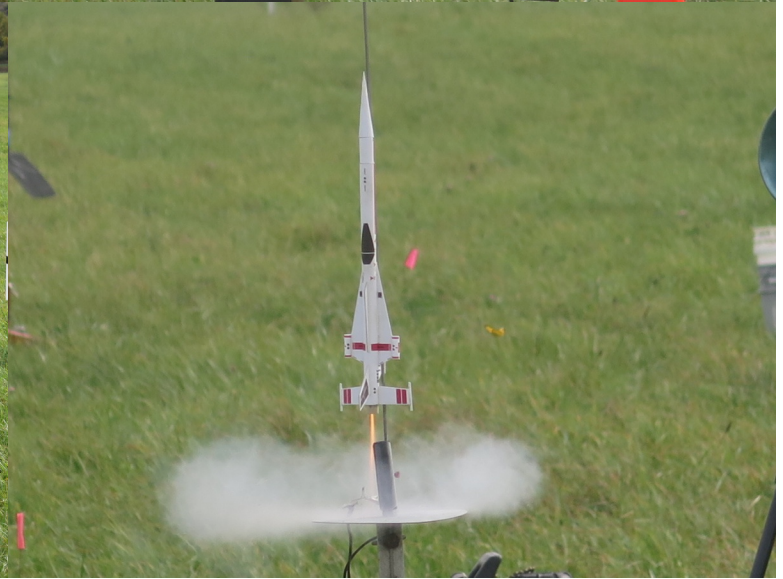
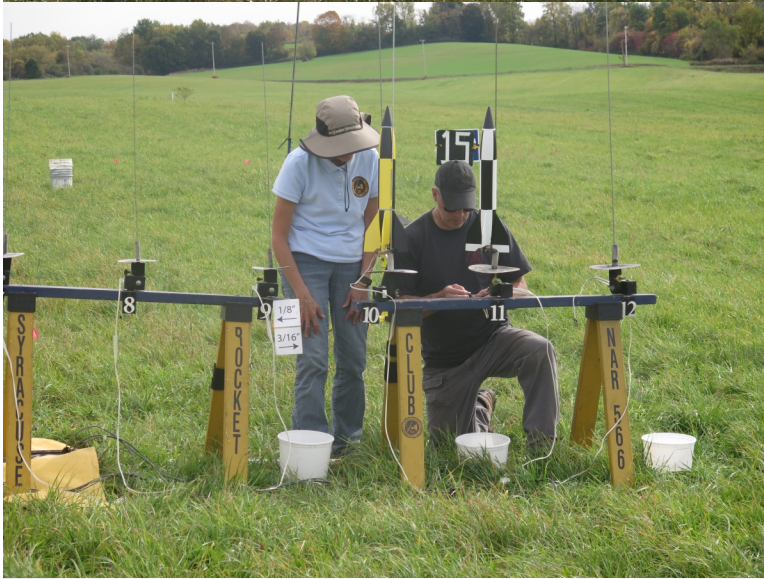
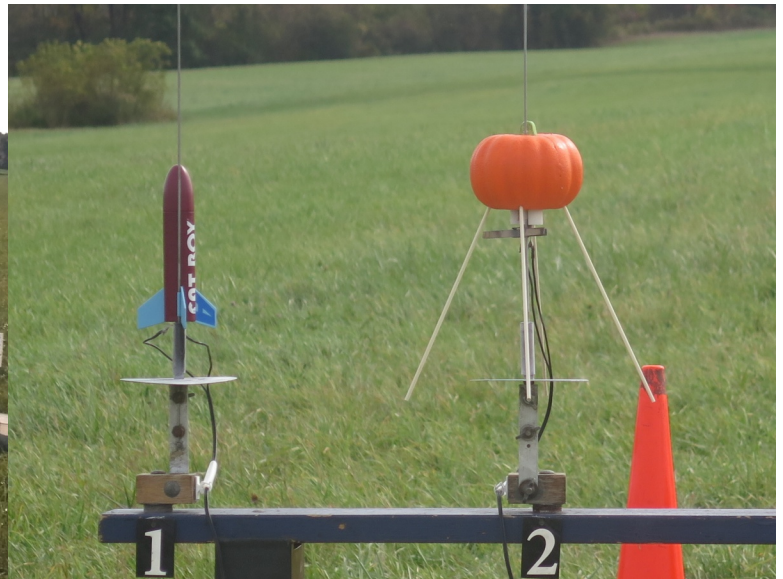


**Tim's Mark's
Discovery**



Clockwise from top left: Scott's Eye-In-the-Sky, Tim's Starship Vega and Rich's Lunar Eclipse Jr., Scott's Bat Ray, MOST LOC IV.





Clockwise from top left: Scott's MLAS left pad 2 and returned to pad 5, Sue's Mini Fat Boy and Rich's Pumpnik, Rich's cardstock Mini Satellite Interceptor, Caleb's Crayon, Sue and Scott prep their V-2s.

AT WALT'S

October meeting:

Paul Gagnon reports the new tubes for the Saber repair have been glassed and epoxied, and that he is testing a flame retardant we might want to use for ground blankets.

James Shattell talked about commercially available blankets. Smaller ones are \$35 and \$75 but a 20' square is \$600! Cheaper to put together smaller ones.

Walt's Secret Santa was discussed.

There were cookies. Maple pecan.

For the National Sport Launch we've been asked to run a hospitality tent and giveaway rockets for the kids.

We're discussing calendars with the nearby clubs to avoid conflicts.

We talked about our winter project, building versions of a single rocket. (See p.) After some discussion of sport vs. military and space models we voted on a sport rocket. The Estes Sprite was the winner. Maybe we'll select a military/space rocket later.

There was some discussion of club publicity including stickers for rocket kits and flyers at Walt's.

November meeting:

We talked about the 2018 schedule, and adjustments to avoid conflicts. Schedule a project build session for January? We decided to just bring our rockets in progress to the meetings. Sprites will be launched in June.

James talked about possible club goals for 2018.

We will have a work party at the field on April 14. We'll make a bridge over the ditch and clear some brush.

Current officers will be up for re-election.

We decided Scott should proceed with applying for an NAR grant for a new launch controller. Ground blankets were discussed again.

So was Walt's Secret Santa.

There were cookies again.

Walt's Secret Santa:

Lousy weather meant we didn't launch anything, and may have suppressed turnout. But we were there, and quite a few people stopped by to talk and take a flyer. Hopefully we'll see some of them this summer.



December meeting:

2017 awards will be on the agenda for January.

Rich Holmes showed a Semroc Sprite clone kit, and a Semroc BNC-80D nose cone for an upscale.

James gave a post mortem report on his Level 3 attempt. A defective M6000 motor was certainly to blame — there were voids in the propellant. Aerotech will replace, and in fact will make two motors one of which they will ground test.

James proposed some objectives for the club for 2018, which we agreed on:

- Set up every launch by 10:00 am. This requires several people (and the equipment) be on the field by 9:00 am.
- Get membership up to 90 members.
- Give away 50 rockets.
- Work day as discussed previously.

There were still more cookies.

WINTER CLUB PROJECT

For this winter's project, Scott Sellers proposed we choose a classic kit and then individually build versions of it — clones, downscales, upscales. We passed around some catalogs at the October meeting, took a vote, and ended up choosing the Estes K-15 Astron Sprite.

The Sprite was introduced in 1964 and made its first catalog appearance in 1966 (at a price of \$0.75). Its designer was Gene Street. Based on a BT-30 body tube and standing 5.3", it was designed for tumble recovery, in which the ejection charge pushes the motor backward, but not loose. That shifts the center of gravity to presumably close to the center of pressure, destabilizing the rocket so it tumbles to earth rather than coming in ballistic. The Sprite used the short "Series III" motors which later were discontinued in favor of the newer 13 mm motors.

The Sprite was discontinued after 1973. Around 2006 Thrustline produced a reproduction kit, and near the same time Hawks Hobbies started selling the Super Sprite, a 2.6" diameter (BT-80) upscale. Neither company is around any more. In 2012 Semroc introduced their "Retro Repro" Sprite kit, a clone of the K-15 that includes adaptors to allow flights on 13 mm motors. Semroc, of course, very nearly went defunct too, but is now part of eRockets and the Semroc Sprite is currently available.

A couple of other rescales, or re-semi-scales, also are available at present. FlisKits sells the Tumbleweed, which appears to be a pretty accurate downscale of the Sprite to a BT-5 body tube with a 13 mm motor mount. 3D Rocketry has the Circulus 2, Circulus 3, and Circulus 4, which use, respectively, 2.26", 3", and 4" diameter body tubes and 29 mm, 29 mm, and 38 mm motor mounts. These are not exact upscales; they are stretched a little compared to the original.

Scans of the original K-15 instructions and fin patterns are available at <http://www.spacemodeling.org/jimz/estes/k-15.pdf>. These are very useful for anyone wanting to do a scratch build. The Sprite body tube was BT-30, 2.75" long, and its ring fin was BT-70, 0.69" long. The nose cone was a BNC-30D. These tubes and nose cones are available from eRockets or from Balsa Machining Company. eRockets especially has balsa nose cones in other diameters suitable for Sprite rescales.

Sprite clones will be the discussion topic for our February club meeting. Bring your Sprite clone building project to display and discuss. Finish your build by June, because the June 16 launch theme is Estes Sprite clones and other classic kits. Bring your Estes Sprite clones to launch. We should have Sprite clones from MicroMaxx to high power sizes. Bring along other original or clone classic kits to fly or display.

Sprite information (v. 1.3)

Original:

(From Rocketry Forum:)



MODEL NAME: **Astron Sprite** *Also known as: Sprite*

NUMBER: **K-15** or **#1215**

Introduced: 1964

Final Year: 1973

Designer: Gene Street

Type: Sport

Motor Mount: 1x18mm [short motors]

Recovery: Tumble

Stages: 1

Length: 5.3"

Diameter: 0.765"

Span:

Weight: 0.3 oz

Kit builds

Clone kit

Semroc Sprite <http://www.erockets.biz/semroc-flying-model-rocket-kit-sprite/>

(Updated for 13 mm motors)

Cost: \$11.00 (as of 1/1 on sale for \$9.99)

Build thread <http://www.rocketryforum.com/showthread.php?42473-Semroc-Sprite>

Downscale kit

FlisKits Tumbleweed http://www.fliskits.com/products/rocketkits/kit_detail/tumbleweed.htm

13 mm diameter, 13 mm motor mount

Cost: \$9.95

Upscale kits

3D Rocketry Circulus2, Circulus 3

These are not exact upscales, body length is proportionally longer

Circulus 2 http://3drocketry.com/index_4.htm

2.6" diameter, 29 mm motor mount

Cost: \$38.95

Circulus 3 http://3drocketry.com/index_5.htm

3" diameter, 29 mm motor mount

Cost: \$44.95

Circulus 4 http://3drocketry.com/index_6.htm

4" diameter, 38 mm motor mount

Cost: \$54.95

Scratch builds

Original instructions, fin scans <http://www.spacemodeling.org/jimz/estes/k-15.pdf>

Cloning:

Original body tube BT-30, 2.75" long

Original ring fin BT-70, 0.688" long

Nose cone BNC-30D

All available from eRockets or Balsa Machining Service.

Rescaling:

Similarly proportioned nose cones available from eRockets:

BT-5 Semroc BC-510S (not quite the same shape)

BT-70 Semroc BNC-70AJ or BNC-70D (D is closer to the right shape but a little long)

BT-80 Semroc BNC-80D

More approximate matches:
 BT-20 Semroc BNC-20L (elliptical)
 BT-55 Semroc BNC-55CT (Bezier)
 BT-60 Semroc BNC-60L (rounded ogive)

I haven't found anything even close for BT-50.

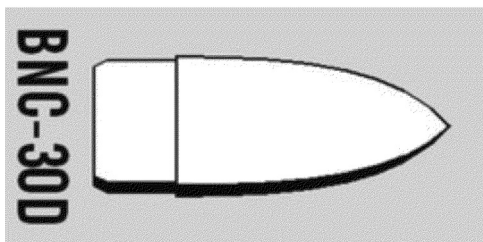
For most rescales, you would need to adjust the fins for a slightly off scale ring fin, or come up with a non standard size ring fin to go with scale fins.

Fin pattern and marking guide

Scale to match marking guide to your body tube diameter.

Nose cone

Length (excluding shoulder) is 1.5".



Document history:

v. 1.1 changes:

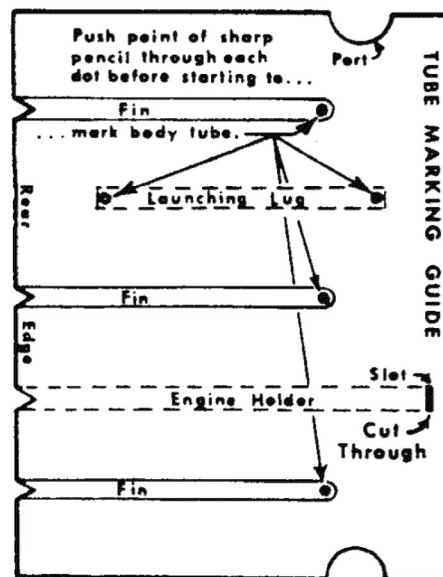
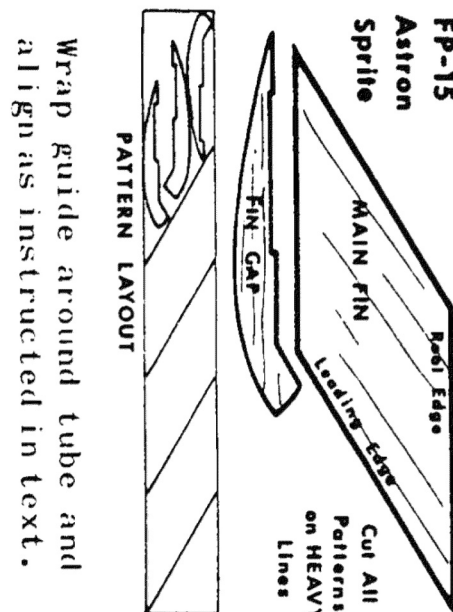
Added Semroc build thread link
 Corrected BT80 nose cone (D, not VE), added D for BT70 and added some notes
 Added fin pattern and marking guide
 Minor tweaks

v. 1.2 changes:

Added original body tube and ring fin lengths
 Added image of nose cone and its length

v. 1.3 changes:

Circulus 4 now available



UPCOMING SRC EVENTS

(Abbreviated; for details and full year see <http://syracuserocketclub.org/calendar.html>)

Date	Time	Location	Event
Jan. Mon. 8th	7:00 PM	Walt's Hobby	Club Meeting, Discussion Topic: 2017 awards, new club safety and launch equipment needs.
Feb. Mon. 5th	7:00 PM	Walt's Hobby	Club Meeting, Discussion Topic: Estes Sprite Clones. Bring your Sprite clone building projects to display and discuss.
Mar. Mon. 5th	7:00 PM	Walt's Hobby	Club Meeting, Discussion Topic: Building give-away rockets for new launch attendees.
Apr. Mon. 2nd	7:00 PM	Walt's Hobby	Club Meeting, Discussion Topic: Preparation of club launch equipment for May launch. Training for launch equipment setup.
Apr. Sat. 14th	10:00 AM	Weigand's Field	Work Day. Build ditch bridge, clear brush.
May Mon. 7th	7:00 PM	Walt's Hobby	Club Meeting, Discussion Topic: Central New York Rocket Team Challenge preparation. Planning for National Sport Launch.

Please check web site (<http://syracuserocketclub.org>) for changes, cancellations, and last minute events! Go/no go status of each launch will be posted on the web the evening before.

Directions to Walt's HobbyTown: From I-690, take Exit 5 (State Fair Blvd./Lakeland). Turn right onto Van Vleck Rd. Take the first right onto Dwight Park Dr. Walt's is immediately on your right.

Directions to Weigand's Field: From I-690, take Exit 2 (Jones Rd.). Turn left onto Jones Rd. Take the first right onto Van Buren Rd. After 1.6 miles turn left onto Connors Rd. After 1.0 miles turn left onto Canton Street Rd. Launch site is about 0.4 miles on your left; look for sign. Park in designated area. Please do not drive onto field without launch director's permission.