

## **Rocket Scientist**

The snow was still spotting the ground around the muddy test site; the moist March sky hovered over us in dull gray clouds. There were few to witness the tense activity as we ran through the final pre-launch protocols.

“Battery reading?” “Positive!”

“Launch pad?” “Clear!”

“Wind speed?” “Zero!”

Fueled and fully loaded, the rocket gleamed in shiny metallic bronze, standing upright on three triangular aluminum fins. The nose was a little funky, but there’s a limit to what I could do with a ball-peen hammer and body filler. After sanding and painting, it was fine from any side. We were going to show the Soviets what American ingenuity could accomplish. Sputnik had humbled us the year before, beep-beeping across the sky, thumbing its commie nose. It beat us to the punch. The final horror was the hurried launch of the sleek US built Vanguard.

It was all on television. The family sat in the living room, transfixed as we listened to the countdown, three, two, one, just like Commander Corey on Space Patrol. Now we were at the threshold of space, which we proceeded to trip right over in prime time. The motor ignited, there was a billowing cloud of white smoke and the silver bullet slowly rose from the pad, vibrating just a little bit. Then it rose less slowly. Then it sort of stayed put on its flame as if somebody at mission control had just had a second thought. Then it slowly sank back down to the pad. But it didn’t stop, it got worse. It slowly toppled over on the side opposite the gantry and blew up, just blew up, in front of the entire world.

A week later WRGB was offering basic Russian in the morning, at 6:00 A.M. I decided to get to know my opponent. I wanted know what Ivan knew. The time slot was murder, however. One week later, I realized these people didn’t even have a normal alphabet. N was an H and they had weird letters with names like “yackishnak”, which actually sounds a little like “Caddyshack” but looks like a trapezoid. No wonder they got up there first, their children were geniuses just to learn how to write it. This six AM torture wasn’t going to prepare me fast enough.

With the help of a Russian phrase book by father had purchased and the WRGB pronunciation drills, I had it

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worked out in a week. Soon I could say, in perfect Russian “Strasviche tovrish, Mir y dhrushba! Nakonyets ya svoboda!” “Welcome comrade, Peace and Friendship. At last we’re free!” I could see Lt. Ivan calling for his general. “Here is the person to put in charge of Loudonville, General Kropotkin! I’d be the boy commissar. That would shut them up until I could figure out how to abuse their trust and blow up something.

However the Russians never invaded, so my clever ploy was a total waste of time for nearly forty years. Now exactly same phrase, will start a friendly conversation with any Russian émigré. The short life of secret agent Laurence, boy commissar, soon re-crystallized into Laurence, boy rocket scientist, and we were headed for the moon. Or at least over the McNamee’s barn.

Model rocket clubs these days can’t imagine what it was to make your own in 1958 from scratch. We couldn’t buy a “rocket motor” to snap into a pre-built hobby rocket. Today super-techno geek rocket amateurs with huge real rockets launch once a year in the desert, the Burning Man of do-it-yourself Sky Captains, but in the fifties I was scanning the Scientific American cover to cover. One month, The Amateur Scientist section had plans for a four-foot tall solid fuel aluminum sounding rocket, including the fuel recipe, zinc dust and sulfur. Burns at the rate of five feet a second. Any laboratory supply house has both; they’re perfectly legal. Still are.

Within days the heavy carton arrived. I had prepared static firing tests of the rocket motor in three directions. That is I mixed it up, funneled a half-cup of the greenish powder into a brass pipe hammered shut at one end, and stuck in a fuse and stuck the pipe in the lawn. Would the thrust send it to China? The next was anchored in a cement block at a 45-degree angle, and finally, on a sled with clamps anchored horizontally.

The first two demonstrated one problem. Five feet a second is much too fast for what anyone could consider a controlled burn. This creates a launch sequence expressed simply as “three, two, one, zero, Fah-TOOOM”. The rocket shoots straight up on a pillar of white smoke. No stately Tom Corbett rise on a tail of flame, not even the standard bottle rocket hissing up on its arc of orange sparks. More like a July 4th fireworks mortar. One “Fah-TOOOM” and it’s over except to clean up the zinc oxide.

The first test Fah-TOOM’d a belch of white smoke but buried itself no further in the ground. The second Fah-TOOM’d at an angle like a carbide cannon, but much more smoke. The last test was the last test because it Fah-TOOMED right out of

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its clamps, shot off the sled and nearly embedded itself in the clapboard of the house. "What's all this?" called my father, standing in the doorway. He'd been awakened from an afternoon siesta in the Barcalounger. There was a chunk out of the front of the house and I moved in front of it.

"Don't worry, I'm wearing my goggles". He retreated back inside the house.

Inside I was shivering because the brass pipe that had carved out a piece of the house had missed me by less than six inches. Until the day they died, neither parent knew about that one. On one hand, it was a sure-fire rocket fuel. On the other hand, after the Sunday afternoon tests, we moved the launch pad to Danno McNamee's large driveway and gave it a subtle tilt towards his huge front yard.

Danno's mother inherited a small brokerage firm, Cooley & Company, and her entrepreneurial husband Dan had renamed it First Albany and was hoping his four sons would follow in his footsteps. Ultimately, Danno's younger brother George McNamee did just that, and now First Albany has offices all over the place like Merrill Lynch. That day, however, George was hiding behind the door as we unrolled the launch wires back to the garage.

It wasn't a sleek Vanguard, it was barely two feet tall. The rocket nozzle was actually fashioned from the bolts that held the fins on. It stood on a small platform in the middle of the driveway in the midst of mud and melting snow, waiting for the call to flight. We had a little switchbox and the firing mechanism was simplicity itself: a flash bulb with glass removed, making a little cup with a squib that could be fired with a battery. We had no idea what a Vanguard cost, but the originally christened ARSOL-1 (from the Amateur Rocket Society of Loudonville, until we took a look at the initials and changed the name) was a cheapie. Ten dollars would have been a high bid.

Trying to sound very official, we started the countdown. "Zero minus one minute and counting."

Mrs. McNamee quickly ducked behind the screen door.

After these long we had finally arrived at the mantra we had all been preparing for.

"Zero minus ten, nine, eight, six, six, five, four, three, two, one, launch ...." I threw the switch.

It stood for a moment. My veins turned to ice. This couldn't be happening, not a misfire. Then came a "pfffft" and a half-hearted cough sending it about fifty feet in the air, just high

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enough to curve over the barn before dropping heavily onto a flat side roof covered with oxidized red galvanized panels. The shock must have redistributed the fuel because now it tried to do the "Fah-TOOM" excepting that it was horizontal, more like a bazooka. What was it with these horizontal missiles from hell we kept launching?

Trailing white smoke, it shot across the McNamees back yard at a height of about twenty feet before dropping to the ice-patched lawn where, with a final burp, it pin-wheeled to a pit stop next to the porch where it lay smoking and steaming like a deranged plumbing fixture. We gazed at the scene in disbelief and disappointment, only lightened by the fact that George was seriously amazed at what his older brother was up to.

Mrs. McNamee was also seriously amazed at what she'd witnessed, imagining what might have happened to their pony, also downwind from the launch vehicle and the Loudonville cosmodrome was shut down forthwith before we even had a second chance. We calculated that it had actually gotten about twenty feet higher than the Vanguard, and at least fifty feet in the air is horizontally. The Soviets were spared again, and my interested shifted to Tesla coils.

-- Laurence McKinney

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