

Avro Arrow (in miniature) soars again

BY KELLY EGAN



LYNN BALL, THE OTTAWA CITIZEN

Thom Cholowski readies Arrow for launch.

Out on the soccer field at Osgoode High School, on a faultless winter day, Thom Cholowski, a seriously stressed 19-year-old, places his hand on an electrical switch and prepares to launch two years of planning into the sky.

"If this screws up, I'm dead."

With that, Mr. Cholowski, an OAC student, banged the dimmer switch and sent a model of the legendary Avro Arrow screaming across the field. Osgoode, we have lift-off.

Powered by two cylinders of rocket fuel, the custom-made aircraft took off from its 45-degree launch, rose about 10 metres, flew more or less horizontally for 80 metres and landed in the snow with its parachute deployed but not inflated. Osgoode, we have touch-down.

"Son-of-a-bitch, Albert, it flew," Mr. Cholowski screamed at Albert Cardarelli, 39, lunging at the school's multi-media technician who commissioned the aircraft.

While the flight lasted only a couple of seconds, it culminated a mammoth amount of work by Mr. Cholowski, a Russell resident who has been building models since he was a child.

He estimates he's built 500 plastic kit aircraft, perhaps 30 wooden ones. He's become so accomplished that he's sold close to 20 models, including this one to Mr. Cardarelli for \$200.

It's a labour of love, to be sure: Mr. Cholowski spent \$190 on materials.

The model, less than 50 centimetres long and weighing 13 grams, contains 980 parts, including

a small paint chip of an original Avro Arrow, no. 206, from the National Aviation Museum.

Mr. Cholowski's model-building journey took him through the fields of rocket science, aerodynamics, plastic making and the principles of wind tunnels.

He began with an existing Arrow kit, but found the fuselage was too heavy. So, working with his father, he built a vacu-form box that allowed him to mould a lighter piece of plastic over the frame.

The guts of the model are made from five metal cigar holders, fitted together so they form a long Y shape. The rockets, about the size of a roll of pennies, fit in the rear two chambers, just where the engines were in the Arrow.

Once the rockets are spent, they backfire to blow the cone off the aircraft's tip and release the parachute, made with a green plastic garbage bag.

There were several difficult questions to answer on the drawing board. How much weight should there be in the front of the aircraft, to counter the weight of the heavy rockets in the rear?

How could the two rockets be fired at exactly the same moment so that the plane didn't cart-wheel out of control from a late-firing power source? How would he know if the aircraft were balanced?

After canvassing hobbyists who work with rockets and models, Mr. Cholowski said he was told: "It'll never work." This warning did not turn him off; it made him work harder.

Working in his shop class at school and with the support of technical department head Alex

Kiskis, who also happens to be a pilot, Mr. Cholowski built a roughly 1:48 model, though he had to adapt the wings.

He also constructed a wind tunnel, using an ordinary household floor fan, pieces of wood, cardboard and plexiglass and duct tape. (He investigated using the National Research Council's tunnel, but found the cost prohibitive.)

"I've researched the hell out of this."

Mr. Cholowski, who admits to being bored with school, says he may take a year off his studies next year before pursuing courses in aviation or professional model-building.

He was hoping to have an official launch of the aircraft on Friday, but yesterday's test flight left the model with a broken tail, fractured cone and rattled frame. Osgoode, we have a problem.

The Arrow was a Canadian-designed supersonic jet — considered way ahead of its time — that was killed by the Conservative government of John Diefenbaker in 1959.

It was considered an engineering marvel and the shut-down is now part of aviation folklore in Canada.

Mr. Cholowski, who is not short of opinions when it comes to matters flighted, calls it "the stupidest decision Canada ever made" and refers to Dief as a "narrow-minded Prairie politician."

What is even more appalling, he adds, is that all six Arrows were destroyed, never to fly again. Until yesterday.

"You've made Canadian history," said Mr. Cardarelli, in the soccer-field hubbub that followed the initial flight. "The Avro Arrow 201 and the 206 actually flew."